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December 3, 2025

Re: November 4, 2025 Municipal Election Results Processing Assessment

I.   Introduction

On Election Night on November 4, 2025, technical errors were inadvertently made by a technician from LHS, Associates, Inc (LHS) that affected the preliminary unofficial results. The City contracts with LHS to provide a variety of election services, including but not limited to technical support, election equipment purchase and maintenance, election software purchase and support, election day/night onsite technical support, and technical assistance in producing election results. LHS is the ImageCast Precinct Tabulator and ImageCast Central (high speed scanner) exclusive authorized vendor in the New England region. Therefore, LHS is the only company that can provide services, such as the services listed above, for the ImageCast Tabulators. After discovering these technical errors, Election Commission staff worked with its retained election auditor and Jeff Silvestro, President of LHS, to identify and correct the errors in advance of releasing updated Municipal Election unofficial results on Friday, November 7.

The following report provides a summary of findings regarding how these errors occurred, how they were discovered, how they were corrected, and steps the Election Commission and LHS are taking to prevent these or similar errors from reoccurring in future elections. This report also provides additional background information regarding how the Election Commission prepares for elections, how ballots are processed for municipal elections in Cambridge, and the reasons why Election Night results are always announced as preliminary and unofficial only.

II.   Pre-Election Testing

Before any election, Election Commission staff conduct pre-election Logic and Accuracy Testing of the City's election equipment and systems to ensure that they tabulate accurately, work reliably, and are properly calibrated and configured for the specific election in question. The process for testing the tabulators and systems is called the "Test Deck" because it involves creating a "deck" of ballots that is used to test each tabulator. The Election Commission uses ImageCast Precinct Tabulators at each precinct on Election Day. The ImageCast Precinct Tabulator is a ballot scanning device that scans and counts ballots cast by voters at the precinct. The Election Commission must test each ImageCast Precinct Tabulator before each election to make sure that the devices are accurately scanning and tabulating the ballots.

In addition to the ImageCast Precinct Tabulators, the Election Commission also uses a high-speed tabulator called the ImageCast Central (ICC) for tabulating ballots both before and after Election Day as permitted by state law. For example, the Election Commission can employ the ICC tabulator to process Absentee and Early Voting ballots prior to Election Day when authorized. The ICC tabulator consists of an off-the-shelf digital scanner which is connected to a Windows laptop that runs the ImageCast Central software (ICC laptop). Unlike the precinct tabulators, which process ballots one at a time, the ICC tabulator can process a stack of dozens of ballots in seconds. The tabulated results of each stack of scanned ballots are saved on the ICC laptop as a "batch." Each batch is saved in a numbered folder. Those folders are saved in folders for each of the City's precincts. In all of the City's election software, batches are indivisible and unchangeable, but they can be added and removed.

For the November 4, 2025 Municipal Election, the Election Commission prepared a Test Deck of 98 ballots to be run through each tabulator. The Test Deck consisted of 45 ballots for City Council, 43 ballots for School Committee, and 10 ballots for the Ballot Question. For the test of the ICC tabulator, the Test Deck's 98 ballots were randomly split into three batches of 31, 32, and 35 ballots respectively, which were kept consistent for all 33 precincts:

Batch	City Council	School Committee	Ballot Questions	Total
T1	6	23	2	31
T2	19	11	2	32
T3	20	9	6	35
Total	45	43	10	98

For a detailed outline of the Test Deck ballots and procedure, please see Appendix A.

III.   Advance Processing

In elections with high numbers of early voting ballots, the Election Commission staff performs a process known as "Advance Processing." In Advance Processing, the Election Commission identifies precincts with large numbers of returned early voting ballots and securely opens and tabulates them prior to Election Day. These voted early voting ballots are scanned by the ICC tabulator. By engaging in Advance Processing, the Election Commission is able to reduce the number of ballots that the poll workers at the selected precincts will have to process on Election Day. This makes the voting process at the precincts faster, easier, and more efficient for voters and poll workers on Election Day.

For the November 4, 2025 Municipal Election, precincts 2-3, 9-1, 9-3, 10-1, 10-2, 11-2, and 11-3 were chosen for Advance Processing due to the high volume of early voting ballots received. The early voting ballots scanned in Advance Processing are added to the results from Election Day after the polls close. The November 4, 2025 Municipal Election was the first municipal election in which the Election Commission used Advance Processing. The Election Commission has been using Advance Processing for state elections since 2020.

IV. How the Election Commission Produces Election Results

To tabulate the results of elections, the City, through its contract with LHS, uses software called Results, Tally & Reporting (RTR). RTR is an election management software suite produced by the manufacturers of the City's ImageCast Precinct and ImageCast Central Tabulators which are purchased through LHS. An LHS technician runs RTR on a dedicated laptop, which is used for no other purpose than calculating the results and is not connected to any network. RTR aggregates the results from each tabulator in each precinct for both state and municipal elections. As voters cast their ballots through the tabulators, the tabulators' memory cards record their votes and the markings on their ballots. For municipal elections, at the close of the polls the City's election commissioners collect the memory cards from each tabulator and bring them to the City's designated election tabulation center for processing. For the November 4, 2025 Municipal Election, the City's designated election tabulation center was the Citywide Senior Center, located at 806 Massachusetts Avenue.

For each precinct that had ballots scanned by the ICC tabulator during Advance Processing, an LHS technician will produce a "results tape" text file from the ICC laptop. The format of those text files closely resembles that of the physical results tapes printed by the precinct tabulators. The technician will also copy the ballot data from the ICC laptop onto external storage, which is then connected to the RTR laptop, so the data can be imported into RTR. As the memory cards come in, the LHS technician imports their data into RTR by inserting the memory cards into a card reader connected to the RTR laptop and loading their data into RTR.

For municipal elections, once all of the memory cards from the precinct tabulators and all of the data from the ICC tabulator are imported into RTR, the LHS technician uses RTR to generate a summary report for the preliminary unofficial results of any ballot questions. For City Council and School Committee contests, RTR generates PRM files. PRM files are formatted text files where each line represents the content of one ballot, including information about which precinct the ballot was cast in, how it was tabulated, what ballot rotation it had, and how the ballot was voted. These PRM files can then be parsed by Choice Plus Pro, the software the Election Commission uses to produce the election results for the City's Ranked Choice Proportional Representation count. The PRM files are copied onto external storage and provided to the Senior Program Technician hired by the City to operate Choice Plus Pro. On a Windows laptop solely dedicated to running Choice Plus Pro, the Senior Program Technician runs Choice Plus Pro to generate the files showing each count and the results of each election.

On Election Night, the Election Commission releases preliminary unofficial results as soon as they are available from RTR or the Senior Program Technician. These preliminary unofficial results are released with an explicit disclaimer that results are preliminary only and may change. This is because no candidate can be declared elected until all ballots have been counted and the Election Commission announces the official results 10 days after the election.

The 10 day period is required by state law to give time for overseas absentee ballots postmarked by election day to be returned by mail. This period also provides the Election Commission with time to count the thousands of ballots which could not be immediately tabulated by the machines and provides time to audit each step of the tabulation process and ensure that the final official results reflect all properly-cast ballots received by the Election Commission.

V.   **November 4, 2025 Municipal Election Discrepancies**

After the 2025 Test Deck was completed, the LHS technician purged the test deck data from the ICC software and the RTR software. However, the data files containing the batches from the Test Deck inadvertently remained on the external storage used to copy the data from the ICC laptop to the RTR laptop. On Election Night, the LHS technician used the same external storage to transfer the Advance Processing batches from the ICC laptop to the RTR laptop, copying both the Advance Processing data and Test Deck data into the same folder on the desktop of the RTR laptop. In the process of copying files, the LHS technician copied file folders with the same names on top of each other, causing some batches to be overwritten. When the data from this folder was imported into RTR, the technician imported most of the batches from Test Deck as well. For a detailed chart showing all of the batches the ICC tabulator scanned before the election and which batches were included in the preliminary unofficial results from Election Night, see Appendix B.

For many precincts (1-1, 1-2, 1-3, 2-1, 2-2, 3-1, 3-2, 3-3, 4-1, 4-2, 4-3, 5-1, 5-2, 5-3, 6-2, 7-1, 7-2, 7-3, 9-2, 10-3, 11-1), all three batches from Test Deck were imported. For other precincts (6-1, 6-3, 8-1, 8-2, 8-3), only two of the Test Deck batches were imported. In six of the precincts with Advance Processing (9-1, 9-3, 10-1, 10-2, 11-2, 11-3), the three batches from Test Deck were imported *instead* of three of the batches from Advance Processing.

During the Test Deck, when the ICC data for precinct 2-3 was being uploaded into RTR, there were 4 batches instead of 3. Since this was unexpected, the record of the Test Deck data was erased from the ICC software, and the three Test Deck batches were scanned again. Our review later discovered that batch 4 from the first scan of precinct 2-3 was a batch of zero ballots. Our review also discovered that even though the ICC laptop had been re-zeroed, the files from the first time precinct 2-3 was scanned were still on the external storage device. On Election Night, some batches from the first test and some from the second test were uploaded in lieu of four batches from Advance Processing. For details showing which ballots were included in precinct 2-3 in the Election Night preliminary unofficial results, please see Appendix B.

VI.   **Identifying and Correcting the Discrepancies**

A. Election Night
By 11:42pm on Election Night, the Senior Program Technician had generated the preliminary unofficial results for City Council and School Committee on the dedicated Choice Plus Pro laptop. At some point between 12:05am and 12:20am, the City's election auditor first

observed discrepancies between the total number of ballots which RTR reported counting for each contest citywide and the total number of ballots reported on the physical results tapes printed out by each precinct tabulator. The numbers from the precinct tabulator tapes had been hand-entered into an Excel spreadsheet by the auditor as they were received from poll workers arriving at the designated election tabulation center. By midnight, the auditor had typed over 1,300 numbers into his Excel spreadsheets from the precinct tapes, poll worker clerk sheets, and auxiliary ballot counts. As such, there was a significant possibility that the discrepancies the auditor observed between 12:05am to 12:20am were caused by a typo or an omission of one of the hand-entered numbers or a formula error in the auditor's Excel spreadsheet.

The auditor initially reported this observation to the LHS technician and the Assistant Director. Consideration was given at that time of possibly re-checking all of the hand-entered numbers in the Excel spreadsheet. However, it was determined that it would take hours to thoroughly audit those numbers, which would be in addition to the more than 20-hour workday to work the election. Staff concluded that a thorough investigation of any discrepancies would have had to resume later that morning, as performing it now would be impossible due to worker fatigue, post-Election Day closeout procedures, and to ensure experienced staff were available who were adept at the meticulous work of auditing hundreds of numbers.

Another option could have been to announce to the public that Election Night preliminary unofficial results needed further auditing and would not be released until the audit was complete. Not releasing preliminary unofficial results would have allowed additional time to determine if the observed discrepancies were caused by just a typo, an Excel formula error, or something else. However, staff concluded that candidates and media outlets who had already waited hours for the preliminary unofficial results on Election Night would likely be distressed by the withholding of the unofficial results, especially if it was later determined that the discrepancies were caused by a simple typo or Excel formula error instead of an issue with the results, as seemed likely at the time.

The Assistant Director discussed these concerns with the Executive Director, and the preliminary unofficial results were printed out, copied, and disseminated to the Election Commissioners. At 12:26am, on Wednesday morning, the preliminary unofficial results for all three election contests were announced and shared with the public, along with the usual disclaimers that results were only preliminary, unofficial, and may be subject to change. The Election Commission releases three sets of results for every municipal election, the preliminary unofficial results released on Election Night, the unofficial results after the auxiliary ballots are added, and the official results 10 days after the election when the provisional and overseas absentee ballots are counted.

While the commissioners were announcing the results, the auditor received a report from RTR which reported the number of ballots cast in each contest, broken down by precinct. The numbers in that report were compared to the hand-entered tape results on the auditor's Excel

spreadsheet. By 12:35am, when the Commissioner meeting was adjourned and many members of the public had already left, the auditor noticed that the ballot totals in 21 out of 33 precincts were off by the same three numbers of ballots: the City Council race had 43 extra ballots, the School Committee race had 41 extra ballots, and the Ballot Question race had 9 extra ballots. He speculated that the Test Deck data could possibly have been included in the RTR data used to generate election results. However, the observed differences with the extra ballots (43, 41, 9) were not *identical* to the number of ballots in the Test Deck (45, 43, 10), so that speculation was met with some skepticism. It would later be discovered that the report from RTR omits ballots over-voted in the first rank from the totals it reports, so the two over-voted City Council, two over-voted School Committee, and one over-voted Ballot Question ballots in the test deck were simply absent in that particular report. They were, however, included in the PRM files used to generate the election results.

The LHS technician who operated RTR insisted that the test deck data had been purged from ICC and RTR before Election Day. Sometime between 12:35am and 1:13am, the auditor discussed his new hypothesis with the Assistant Director and the Executive Director. By 1:13am, it became clear to them that the situation could not be resolved (or even properly investigated) until Jeff Silvestro, President of LHS, could examine the RTR data.

B. Post-Election Day Investigations

On November 5 at 9:00am, staff returned to the tabulation center. Between 10:00am and 11:00am, Mr. Silvestro examined the RTR system and was able to confirm that Test Deck data from the ICC tabulator had been included in the unofficial preliminary results. To ameliorate the situation, Mr. Silvestro removed all of the ICC tabulator batches from RTR and then reimported only the data from Advance Processing. He then gave the auditor a new version of the report from RTR which lists the total number of ballots cast in each contest in each precinct (excluding overvotes). This new report contained, among other things, 99 numbers describing the total number of cast ballots in each of the three contests in each of the 33 precincts. Mr. Silvestro did not have access to the physical precinct tapes from Election Night, nor could he see the numbers in the auditor's spreadsheet. Nonetheless, 97 of the 99 numbers derived from the new RTR report matched the numbers that the auditor had expected hours earlier. Because of the infinitesimal probability of guessing all of those numbers by chance, we are therefore confident that the methods Mr. Silvestro used to clean up the data in RTR were consistent and accurate. To view the chart comparing the tape results to the RTR reports from Election Night and Wednesday morning, please see Appendix C.

On Wednesday, it was also determined why 2 of those 99 numbers did not match expectations. The total ballot counts for precinct 11-2 for the City Council and School Committee races still differed from expectations by 1 and 2, respectively. Further inquiry would show that one City Council ballot and two School Committee ballots from Advance Processing were overvoted in the first ranking, which meant they were not included in the RTR report. Those votes are still counted in the tapes produced by the ICC tabulator and are included in the

PRM files used to generate election results. Normally, those ballots would have been auxiliary ballots since all overvoted ballots should be ejected and reviewed by the Commissioners before they are counted. However, when the 11-2 Advance Processing ballots were tabulated by ICC, the setting to eject overvotes was set incorrectly, and those ballots were tabulated earlier than they should have been.

Once Mr. Silvestro confirmed that he had properly removed the test data, the Executive Director shared the preliminary findings of the investigation with the following:

- o the City Manager, who oversees the administration of all City departments, commissions, boards and officers,
- o the Law Department, who advise City staff on all legal matters, and
- o the City's Communications Office, in accordance with the City's Media Relations Policy.

A decision was made to wait until all auxiliary ballots were counted before releasing any more results. That way, there would be time to fully understand the discrepancies and compose a statement to release along with the unofficial results. By releasing a single set of updated results that included the corrections from Wednesday as well as the ballots counted over the rest of the week, the results provided to the Board of Election Commissioners and the public would be clear, accurate, complete, and accompanied with a statement vetted by designated city staff.

There were additional concerns that the results would change again after counting the auxiliary ballots. If revised preliminary unofficial results were released on Wednesday, not only would there be a list of preliminary unofficial elected candidates that was disseminated Election Night, there would also be a different list of preliminary unofficial elected candidates that represents what *should* have been disseminated on Election Night, and still a third, possibly different list of unofficial elected candidates made after the thousands of auxiliary ballots had been counted, causing confusion with candidates and the public.

The entire process of counting auxiliary ballots at the designated election tabulation center is a posted public meeting of the Board of Election Commissioners. Apprising the Election Commissioners of these discrepancies on Wednesday would have required that information be issued to them as part of the public meeting. It would certainly have required releasing a second set of preliminary unofficial results to the public, risking the confusion illustrated above.

While Mr. Silvestro had resolved the discrepancies from Election Night, a full understanding of what had caused the discrepancies to occur was still lacking. Releasing results without full determination of what originally caused the discrepancies would have elicited a deluge of questions with no means to answer them. In short, staff did not have a clear picture of what happened, and presenting one part of that picture to the Board, and by extension the public, would have elicited questions that we could not as of yet answer.

We determined later that even waiting until Friday, November 7 didn't give us enough time to fully understand how best to explain the discrepancies to the Election Commissioners and the public. For example, the numbers of "extra ballots included" in the statement released on November 7 included overvoted ballots in the City Council and School Committee contests but did not include overvoted ballots in the Ballot Question contest. This fact only became apparent with further research the following week, when it was determined that this discrepancy was caused by the different sources that were used to get total ballot counts for the different contests. The numbers used to compare the City Council and School Committee contests came from Choice Plus Pro, which properly counts overvoted ballots, but the Ballot Question totals came from the RTR reports, which, as we saw with precinct 11-2, simply omits any overvoted ballots.

In addition, the impression staff had as of Friday, November 7, was that the Test Deck data had not been cleared from RTR. It wasn't until November 17 that it was confirmed that the Test Deck data actually *had* been purged from RTR, but it was erroneously reimported along with the Advance Processing data. So while it was known that the right ballot data was in RTR before the unofficial results were released on November 7, there was insufficient time between Election Day, November 4, and Friday, November 7, to fully investigate and understand all the details of what caused the discrepancies.

C. Post-Election Auxiliary Ballot Counting Obligations

Furthermore, investigations into the Election Night discrepancies could not be prioritized due to the ongoing obligations with counting the auxiliary ballots and making sure that the count was accurate. During those three days after November 4, the Election Commission processed a total of 7,465 auxiliary ballots. This included 1,034 ballots that could not be read by a scanner in a way that reflected voter intent. Every single one of those ballots required an interpretation by the Election Commission, a vote by the Board on the veracity of that interpretation, and the creation of a "hand-count tabulation form" to be marked in a way that reflects voter intent. This labor-intensive process required the full attention of the Board, the auditor, and Mr. Silvestro, who as a consequence could not take time out to investigate the technical specifics of how Tuesday night's discrepancies occurred. That investigation, involving LHS and Election Commission staff, was not fully completed until November 24, 2025.

VII. <u>Moving Forward</u>

These events have uncovered a number of misconceptions around the release of preliminary unofficial results among even the most well-informed members of the public. On Election Night, candidates, the media, and the public are all engaged and eager to receive the results of the election, and the Election Commission has tried to accommodate that interest for both state and municipal elections by releasing the results from the tabulators. Those results do not include any ballots that have to be reviewed by hand or ballots that have to be counted separately. Those results have not been audited, either by comparing them to the printed tapes from the tabulators, or by comparing them to the lists of people who have voted. For state

elections, partial results are also released to the Associated Press (AP) and other news organizations. These initial reports to the AP do not follow a vote by the commissioners or any vetting process, nor do they claim to be complete. For example, in November 2024, the AP was provided with two reports before results were complete: one report with 16 of the City's 42 precincts reporting, and one with 37 of 42 precincts reporting.

There should always be a balance between releasing unofficial results to the public as soon as possible and ensuring that those results are vetted and complete. The Election Commission believed that the best way to achieve that balance was to release the preliminary unofficial results on Election Night with the disclaimer that they may change. This experience has shown us that the disclaimer needs to be embedded within every documentation of those results.

Discrepancies found on Election Night can usually be resolved by re-counting whatever has been counted by hand (e.g., the number of auxiliary ballots, the number of recorded voters). Reconciling those kinds of discrepancies could not change the content of the preliminary unofficial results, because the preliminary unofficial results were made only from the ballots scanned by tabulators. Before this election, Test Deck data had never been included in any results. Given that Test Deck data is intentionally cleared from every tabulator before Election Day, we did not believe that including Test Deck data in the results was even possible. This incident has disproved such assumptions.

The Election Commission is examining ways to prevent errors like these in future elections. At this time, the Election Commission is implementing the following solutions:

- This was the first municipal election to employ Advance Processing. If Advance Processing is to be employed in future municipal elections, an additional procedural step will be added on Election Night to check the PRM files after the Advance Processing data has been loaded but before the precinct tabulators are loaded, to make sure that the batches in the export match the batches recorded during Advance Processing (number of batches and number of ballots in each batch).

- The Election Commission is developing a checklist to be used before the release of future preliminary unofficial results that would check for specific things. For example, the preliminary unofficial results should not contain any write-in votes, as those votes should have been ejected to be hand-counted. The preliminary unofficial results should not have any blank ballots or ballots where a voter gave the same rank to multiple candidates. The preliminary unofficial results should also not have any ballots where a voter gave a candidate more than one rank. If any of those conditions are violated, it is a strong indication that there is a problem with the preliminary unofficial results. The Election Commission already makes sure that two people operating Choice Plus Pro on different computers have the same results, but the Election Commission will be adding additional

items to check for in the future that would indicate test ballots were accidentally included in the results.

- Going forward, the Election Commission will wait to release any municipal results until the LHS technician can generate a report from RTR that lists the number of ballots cast in each precinct. That report has been traditionally disregarded during municipal elections because it does not properly count ballots that are over-voted or ballots where the voter didn't give the first rank to anyone. However, the "43, 41, 9" pattern in the numbers from that report was the first indication that Test Deck ballots had been present in the results. This election has shown that this report is invaluable to the auditing process because it can reveal patterns which cannot be seen by comparing citywide totals alone.

- Explicit plans and procedures will be established regarding what happens after LHS has collected the ballot data from all the precincts. In the past, going from RTR having the ballot data to Election Commission staff having correct results has been a very simple process, offering few, if any, points where errors could be introduced. But with the introduction of Advance Processing and the use of multiple tabulators per precinct, the ballot data collection process has become far more complex and error prone. Our procedures for Election Night have been focused on coordinating the work of hundreds of poll workers, but this election has also revealed the need to create explicit expectations for the coordination between external vendors and Election Commission staff. Future procedures will include a detailed list of what data should be produced, who is expected to produce that data, who is expected to receive that data, and what validations should be expected by each member of the team before they move forward with the next part of the process. These procedures are still in development and certain process questions remain to be addressed. For example, should the Director of the Count get results from the auditor or from the Senior Program Technician who runs Choice Plus Pro? Should the Director of the Count be the only one allowed to print out results? Should the auditor have to explicitly endorse preliminary unofficial results? The Election Commission will address these and similar questions before the next election.

- At a future meeting, the Election Commission will discuss its processes regarding the auditing and the timing associated with the release of preliminary unofficial election results.

- Mr. Silvestro plans to retrain the staff at LHS on the procedures for transferring Advance Processing data from the ICC laptop to the RTR laptop, and he is confident that the errors that occurred in this election will not happen again.

Detailed Outline of Test Deck Procedures

The process that the Election Commission calls the "Test Deck" involves making a "deck" of ballots used to test the Logic and Accuracy of the City's tabulators and the tabulating software before each election.

The Test Deck has several steps, including:

1. Creating a plan for marking the ballots
2. Marking the ballots
3. Hand-tallying the ballots
4. Testing the tabulators
5. Checking the output from the tabulators to ensure they match expectations

Creating a Plan for Marking the Ballots

The sets of ballots marked for City Council and School Committee must each meet the following conditions:

- There must be several "exception" ballots, which should elicit specific error messages and be ejected from the tabulators. These include:
    1. A Blank Voted Ballot: a ballot must be completely blank, with no ovals filled in
    2. A Multi-Voted Candidate Ballot: a ballot must have one candidate who is given multiple rankings
    3. A Duplicate-Rank Ballot: a ballot must have two candidates who are both given the same ranking
    4. A To-Be-Hand-Counted Ballot: a ballot must have at least one write-in oval filled in
    5. A Multiple-Overvote Ballot: a ballot must have a multi-voted candidate, a duplicate rank, and a write-in
- In order to ensure that candidates don't receive an unfair advantage because of their alphabetical order, multiple versions of each ballot are printed. Those versions are called ballot rotations, because each one rotates the alphabetical list of candidates. This ensures that all candidates are equally likely to be listed first. For example, if there were 18 candidates, there would be 18 different ballot rotations, one with each of the candidates at the top of the list. The Test Deck must include examples of every ballot rotation. In fact, each ballot rotation must be included at least twice in the Test Deck: once from the Election Day ballots and once from the absentee/early-voting/folded ballots.
- The Test Deck must include one of each type of Hand Count Tabulation Form (HCTF). In the days following the election, HCTFs are filled out and cast in lieu of ballots which cannot be properly read by the tabulators for one reason or another. They are printed separately from the other ballots, so it is important to test them as well.
- The Automark is an accessible voting device used at the polls and during in-person early voting to allow voters with disabilities to mark ballots independently. If the Automark is ready for the election before the Test Deck starts, the Test Deck must include one ballot

marked by the Automark. The Automark is ready when the Election Commission receives the Automark memory cards from the vendor. If the cards haven't arrived yet, another ballot marked randomly by hand is included, to be replaced by an Automark ballot when the memory cards arrive.

- The ballots that are not ejected by the tabulators must be marked so that every voting oval in the grid on the ballot is tested in both the "filled-in" and "un-marked" state at least once. This ensures that the tabulators are reading every oval properly.

- The ballots must be marked so that every candidate has at least one first-choice ranking. This ensures that the tabulation programming will properly allocate a first-place vote to every candidate.

- The results tape printed by the precinct tabulators used at the polls only displays the number of first-place rankings given to each candidate. Therefore, the plan to mark the ballots must ensure that not all candidates have exactly the same number of first-choice rankings. If all candidates were to have the same first-choice totals, that might not catch a programming error where all of Candidate A's votes end up going to Candidate B, and all of Candidate B's votes end up going to Candidate A. If certain randomly chosen candidates are expected to have a different number of first-place votes than the others, that provides a way to check that the results tape reflects the way the ballots were marked.

When there is a municipal election with a ballot question, the ballots created to test that contest are far simpler than those for ranked-choice contests. The 2025 Municipal Election had a ballot question, so the 2025 Test Deck included ten Ballot Question ballots marked as follows:

- Two "exception" ballots were marked as follows to ensure they are ejected by the tabulators and that the proper messages were displayed:
  1. Blank Voted Ballot: a ballot was completely blank with no ovals filled out
  2. Overvoted Ballot: a ballot had both the "Yes" and "No" ovals filled in
- Five ballots were voted "Yes" (2 early/absentee ballots and 3 Election Day ballots)
- Three ballots were voted "No" (2 early/absentee ballots and 1 Election Day ballot)

Marking the Ballots

The ballots for the Test Deck are marked by Election Commission staff in the weeks before the Test Deck and checked to ensure they match the plan set out earlier. If a ballot does not follow the plan, it is either spoiled and replaced with one that does, or the plan is updated to reflect the change. For municipal elections, where all voters throughout the city are given ballots with the same choices on them, staff mark three identical[1] versions of the Test Deck. This allows three staff members to test three tabulators simultaneously.

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[1] For the 2025 Test Deck, one set of ballots contained one City Council ballot that was marked slightly differently than that ballot was in the other two sets. All three ballots voted for identical candidates for ranks 1 and 5-11 and left ranks 12-15 blank. But one of them voted for different candidates for ranks 2-4. This set of ballots was used for precinct 1 in every ward.

Hand-Tallying the Ballots

Two sets of tally sheets are marked showing both the first-choice ranking on each ballot for City Council and School Committee, and the "Yes"/"No" votes for the Ballot Question. The first set of tally sheets includes only ballots that are accepted by the precinct tabulators. This set can be compared to the results tapes that the precinct tabulators print out. The second set includes those ballots that the precinct tabulators eject. That set can be compared to the results tapes produced by the high-speed tabulator, which is programmed to accept all ballots.

Testing the Tabulators

Election Commission staff first tests the precinct tabulators that are sent to the precincts on Election Day. Each of the 33 precincts in the city receives two tabulators, making 66 total.

- First, the staff feeds the "exception" ballots for City Council, School Committee, and Ballot Question into the tabulators one ballot at a time. When each ballot is ejected, the auditor checks off that the ballot was ejected and that the message displayed by the tabulator was the correct one.
- Next, the staff feeds the remaining ballots from the Test Deck through the tabulator. Ballots are fed one at a time, in multiple orientations (right side up, upside down, head-first, foot first) to ensure the tabulator can properly tabulate a ballot no matter its orientation.
- At any point during the test, if a tabulator breaks down, has trouble reading ballots, or in any way behaves unexpectedly, then it is replaced with a spare tabulator, and its test begins again. Even the exception ballots are tested again, ejected again, and witnessed again by the auditor.
- When all ballots from the Test Deck have been fed through, the auditor verifies that the tabulator displays the correct number of counted ballots (86 for 2025).
- The staff then run the "Close the Polls" program on the tabulator and print out two results tapes. One tape will be sent to the Secretary of State's office, and one will be kept as a record in the Election Commission office.
- The auditor checks both results tapes to ensure they match the hand tally of first-choice votes for City Council and School Committee as well as the hand tally of the votes for Ballot Question. They then sign both tapes.
- One of the tabulator's two memory cards is removed from the tabulator by LHS staff and put into a memory card reader attached to a laptop running a program called Results Tally & Reporting (RTR). RTR is the election management software associated with the city's ImageCast Precinct Tabulators. The card's data is then uploaded into RTR.
- The memory card is returned into the tabulator, and the tabulator is "re-zeroed", meaning the records of the Test Deck ballots are erased. The auditor witnesses this re-zeroing to ensure the tabulator is ready for Election Day.
- Seals are placed around the memory card to lock the card into the tabulator. Each seal number is recorded, and the tabulator is packed away for use on Election Day.

Four spare tabulators are also tested in a similar way, so election staff can confirm they are fit for use on Election Day, if one of the previous 66 tabulators fails. However, there are a few important differences:

- Each spare tabulator borrows a set of cards from one of the 66 assigned tabulators. After the spares are tested, the cards are returned to their original tabulator, re-zeroed, and sealed.
- The data from the spare tabulators is not uploaded into RTR.
- No cards are sealed into the spare tabulators, since there is no way to know which precinct they might serve on Election Day, if any.
- Their serial number is recorded by the auditor, since the spare tabulators don't have identifying precinct labels like the 66 assigned tabulators sent to the polls.

Once all 70 precinct tabulators have been tested, the high-speed tabulator called ImageCast Central (ICC) is tested. The ICC tabulator consists of an off-the-shelf digital scanner which is connected to a Windows laptop that runs the ICC software (ICC laptop). The ICC tabulator can scan stacks of ballots very quickly – hundreds of ballots can be scanned in a few minutes.

- The ICC laptop is set up with 33 folders – one for each precinct. Each stack of ballots scanned is saved as a "batch" into a sub-folder of the folder representing the precinct that is being tested.
- The ICC software is programmed to accept all ballots for the Test Deck – even the "exception" ballots. So, for the 2025 Test Deck, ICC will report 98 ballots counted in each precinct, instead of 86 like the precinct tabulators do.
- For the 2025 Test Deck, the 98 ballots were divided into three batches of ballots for scanning. Each batch contained a mix of City Council, School Committee, and Ballot Question ballots:

Batch	City Council	School Committee	Ballot Questions	Total
T1	6	23	2	31
T2	19	11	2	32
T3	20	9	6	35
Total	45	43	10	98

  o All of the exception ballots were in T1.
  o The three batches were not scanned in a consistent order. Sometimes T1 was first; sometimes T2 or T3 was first.
  o The batches were scanned 33 times, once for each precinct, and the batches were saved in the appropriate folder for each precinct. The batches of ballots were maintained in the scanning for all 33 precincts.
- Once all 33 precincts were complete, the "polls were closed" for each precinct and ICC produces "results tapes". The tapes are actually text files which closely resemble the format of the physical tapes printed out by the precinct tabulators. The 33 "tapes" are given to the auditor, who ensures that the results reported by ICC match the tally sheets.

Checking the output from the tabulators

- The 33 folders with the ballot data are then copied onto external storage which is then disconnected from the ICC laptop and connected to the RTR laptop, so that the ballot data can be uploaded into RTR.
- On the RTR laptop, the data from ICC is imported into RTR.
- The ICC software is then "re-zeroed" for every precinct and produces 33 "zero tapes" confirming that fact. Each "zero tape" is a text file which attests to the fact that ICC has not retained any record of any votes.
- After all of the data from the 66 precinct tabulators and the 33 high-speed tabulators has been uploaded to RTR, RTR is used to generate "PRM" files. PRM files are formatted text files where each line represents the content of one ballot, including information about which precinct it was cast in, which tabulator counted it, what ballot rotation it had, and how the ballot was voted. PRM files can be parsed by Choice Plus Pro, the software that the Election Commission uses to produce election results. There is a separate PRM file for each precinct, and there are separate PRM files for City Council and School Committee. But each PRM file contains information from every tabulator assigned to that precinct. For the Test Deck, each precinct has three tabulators assigned to it – the two precinct tabulators and the ICC tabulator. Because the same "normal" ballots are scanned through each tabulator, each "normal" ballot will appear in the final PRM files three times, while the "exception" ballots will only appear once from the high-speed tabulator. In the 2025 Test Deck, the PRM file for City Council had 125 ballots ($3 \times 40 + 5$) and the PRM file for School Committee had 119 ballots ($3 \times 38 + 5$).
- The PRM files are copied to external storage and provided to a consultant from MK Elections who runs Choice Plus Pro on a Windows laptop dedicated only to running Choice Plus Pro. They ensure that Choice Plus Pro is working and that it can accept a set of PRM files and produce results. The PRM files are also provided to the auditor and Election Commission staff, who ensure that all of the metadata and all of the rankings for every line are in keeping with the plan set out at the start of this process. If there are any discrepancies between the plan and the actual ballots, they ensure that the PRM files properly reflect the actual ballots.

Closing Remarks:

There are several differences between the Test Deck procedure for state elections and the procedure for municipal elections. The biggest difference is that in Test Decks for state elections, RTR is not involved at all. The physical and digital tapes produced by the tabulators are checked to ensure they match the hand-tally of the ballots and then the tabulators are immediately re-zeroed. For municipal elections, this is not sufficient test of the tabulators, because the results tapes don't show any rankings beyond the first. So, all the Test Deck data must be imported into RTR so it can produce PRM files which record all the rankings on a ballot. Staff can then check those PRM files to ensure that all rankings are being read correctly throughout the process.

High-Speed Tabulator Batch Status on Election Night

An account of all batches processed by the ICC tabulator before Election Day and whether they were included or should have been included in the preliminary unofficial election results

Batch Identification			Batch Status Election Night		Ballot Counts				
Ward-Precinct	Batch ID	Source	Expected Election Night?	Included Election Night?	City Council	School Committee	Ballot Question	Total Ballots	Batch Notes
1-1	T1	Test Deck	No	Yes	6	23	2	31	
1-1	T2	Test Deck	No	Yes	19	11	2	32	
1-1	T3	Test Deck	No	Yes	20	9	6	35	
1-2	T1	Test Deck	No	Yes	6	23	2	31	
1-2	T2	Test Deck	No	Yes	19	11	2	32	
1-2	T3	Test Deck	No	Yes	20	9	6	35	
1-3	T1	Test Deck	No	Yes	6	23	2	31	
1-3	T2	Test Deck	No	Yes	19	11	2	32	
1-3	T3	Test Deck	No	Yes	20	9	6	35	
2-1	T1	Test Deck	No	Yes	6	23	2	31	
2-1	T2	Test Deck	No	Yes	19	11	2	32	
2-1	T3	Test Deck	No	Yes	20	9	6	35	
2-2	T1	Test Deck	No	Yes	6	23	2	31	
2-2	T2	Test Deck	No	Yes	19	11	2	32	
2-2	T3	Test Deck	No	Yes	20	9	6	35	
2-3	T1	Test Deck	No	Yes	6	23	2	31	From either scan. Same as T1 in other precincts
2-3	T2	Test Deck	No	Yes	19	11	2	32	From 1st scan. Same as T2 in other precincts
2-3	T3	Test Deck	No	Yes	19	11	2	32	From 2nd scan. Same as T2 in other precincts
2-3	T4	Test Deck	No	Yes	0	0	0	0	A batch that had zero ballots
2-3	T5	Test Deck	No	No	6	23	2	31	From either scan. Same as T1 in other precincts
2-3	T6	Test Deck	No	No	20	9	6	35	From 1st scan. Same as T3 in other precincts
2-3	T7	Test Deck	No	No	20	9	6	35	From 2nd scan. Same as T3 in other precincts
2-3	A1	Advance Processing	Yes	No	13	0	0	13	
2-3	A2	Advance Processing	Yes	No	40	0	0	40	
2-3	A3	Advance Processing	Yes	No	47	0	0	47	
2-3	A4	Advance Processing	Yes	No	47	0	0	47	
2-3	A5	Advance Processing	Yes	Yes	0	42	0	42	
2-3	A6	Advance Processing	Yes	Yes	0	43	0	43	
2-3	A7	Advance Processing	Yes	Yes	0	39	0	39	
2-3	A8	Advance Processing	Yes	Yes	0	18	0	18	
2-3	A9	Advance Processing	Yes	Yes	0	0	50	50	
2-3	A10	Advance Processing	Yes	Yes	0	0	49	49	
2-3	A11	Advance Processing	Yes	Yes	0	0	50	50	
2-3	A12	Advance Processing	Yes	Yes	0	0	17	17	
3-1	T1	Test Deck	No	Yes	6	23	2	31	
3-1	T2	Test Deck	No	Yes	19	11	2	32	
3-1	T3	Test Deck	No	Yes	20	9	6	35	
3-2	T1	Test Deck	No	Yes	6	23	2	31	
3-2	T2	Test Deck	No	Yes	19	11	2	32	
3-2	T3	Test Deck	No	Yes	20	9	6	35	
3-3	T1	Test Deck	No	Yes	6	23	2	31	
3-3	T2	Test Deck	No	Yes	19	11	2	32	
3-3	T3	Test Deck	No	Yes	20	9	6	35	

High-Speed Tabulator Batch Status on Election Night

An account of all batches processed by the ICC tabulator before Election Day and whether they were included or should have been included in the preliminary unofficial election results

Batch Identification			Batch Status Election Night		Ballot Counts				
Ward-Precinct	Batch ID	Source	Expected Election Night?	Included Election Night?	City Council	School Committee	Ballot Question	Total Ballots	Batch Notes
4-1	T1	Test Deck	No	Yes	6	23	2	31	
4-1	T2	Test Deck	No	Yes	19	11	2	32	
4-1	T3	Test Deck	No	Yes	20	9	6	35	
4-2	T1	Test Deck	No	Yes	6	23	2	31	
4-2	T2	Test Deck	No	Yes	19	11	2	32	
4-2	T3	Test Deck	No	Yes	20	9	6	35	
4-3	T1	Test Deck	No	Yes	6	23	2	31	
4-3	T2	Test Deck	No	Yes	19	11	2	32	
4-3	T3	Test Deck	No	Yes	20	9	6	35	
5-1	T1	Test Deck	No	Yes	6	23	2	31	
5-1	T2	Test Deck	No	Yes	19	11	2	32	
5-1	T3	Test Deck	No	Yes	20	9	6	35	
5-2	T1	Test Deck	No	Yes	6	23	2	31	
5-2	T2	Test Deck	No	Yes	19	11	2	32	
5-2	T3	Test Deck	No	Yes	20	9	6	35	
5-3	T1	Test Deck	No	Yes	6	23	2	31	
5-3	T2	Test Deck	No	Yes	19	11	2	32	
5-3	T3	Test Deck	No	Yes	20	9	6	35	
6-1	T1	Test Deck	No	Yes	6	23	2	31	
6-1	T2	Test Deck	No	No	19	11	2	32	
6-1	T3	Test Deck	No	Yes	20	9	6	35	
6-2	T1	Test Deck	No	Yes	6	23	2	31	
6-2	T2	Test Deck	No	Yes	19	11	2	32	
6-2	T3	Test Deck	No	Yes	20	9	6	35	
6-3	T1	Test Deck	No	Yes	6	23	2	31	
6-3	T2	Test Deck	No	No	19	11	2	32	
6-3	T3	Test Deck	No	Yes	20	9	6	35	
7-1	T1	Test Deck	No	Yes	6	23	2	31	
7-1	T2	Test Deck	No	Yes	19	11	2	32	
7-1	T3	Test Deck	No	Yes	20	9	6	35	
7-2	T1	Test Deck	No	Yes	6	23	2	31	
7-2	T2	Test Deck	No	Yes	19	11	2	32	
7-2	T3	Test Deck	No	Yes	20	9	6	35	
7-3	T1	Test Deck	No	Yes	6	23	2	31	
7-3	T2	Test Deck	No	Yes	19	11	2	32	
7-3	T3	Test Deck	No	Yes	20	9	6	35	
8-1	T1	Test Deck	No	Yes	6	23	2	31	
8-1	T2	Test Deck	No	Yes	19	11	2	32	
8-1	T3	Test Deck	No	No	20	9	6	35	
8-2	T1	Test Deck	No	Yes	6	23	2	31	
8-2	T2	Test Deck	No	Yes	19	11	2	32	
8-2	T3	Test Deck	No	No	20	9	6	35	
8-3	T1	Test Deck	No	Yes	6	23	2	31	
8-3	T2	Test Deck	No	No	19	11	2	32	
8-3	T3	Test Deck	No	Yes	20	9	6	35	

High-Speed Tabulator Batch Status on Election Night

An account of all batches processed by the ICC tabulator before Election Day and whether they were included or should have been included in the preliminary unofficial election results

Batch Identification			Batch Status Election Night		Ballot Counts				
Ward-Precinct	Batch ID	Source	Expected Election Night?	Included Election Night?	City Council	School Committee	Ballot Question	Total Ballots	Batch Notes
9-1	T1	Test Deck	No	Yes	6	23	2	31	
9-1	T2	Test Deck	No	Yes	19	11	2	32	
9-1	T3	Test Deck	No	Yes	20	9	6	35	
9-1	A1	Advance Processing	Yes	No	38	0	0	38	
9-1	A2	Advance Processing	Yes	No	39	0	0	39	
9-1	A3	Advance Processing	Yes	No	40	0	0	40	
9-1	A4	Advance Processing	Yes	Yes	41	0	0	41	
9-1	A5	Advance Processing	Yes	Yes	47	0	0	47	
9-1	A6	Advance Processing	Yes	Yes	0	29	0	29	
9-1	A7	Advance Processing	Yes	Yes	0	37	0	37	
9-1	A8	Advance Processing	Yes	Yes	0	39	0	39	
9-1	A9	Advance Processing	Yes	Yes	0	28	0	28	
9-1	A10	Advance Processing	Yes	Yes	0	45	0	45	
9-1	A11	Advance Processing	Yes	Yes	0	33	0	33	
9-1	A12	Advance Processing	Yes	Yes	0	0	49	49	
9-1	A13	Advance Processing	Yes	Yes	0	0	51	51	
9-1	A14	Advance Processing	Yes	Yes	0	0	52	52	
9-1	A15	Advance Processing	Yes	Yes	0	0	47	47	
9-1	A16	Advance Processing	Yes	Yes	0	0	34	34	
9-2	T1	Test Deck	No	Yes	6	23	2	31	
9-2	T2	Test Deck	No	Yes	19	11	2	32	
9-2	T3	Test Deck	No	Yes	20	9	6	35	
9-3	T1	Test Deck	No	Yes	6	23	2	31	
9-3	T2	Test Deck	No	Yes	19	11	2	32	
9-3	T3	Test Deck	No	Yes	20	9	6	35	
9-3	A1	Advance Processing	Yes	No	45	0	0	45	
9-3	A2	Advance Processing	Yes	No	44	0	0	44	
9-3	A3	Advance Processing	Yes	No	34	0	0	34	
9-3	A4	Advance Processing	Yes	Yes	40	0	0	40	
9-3	A5	Advance Processing	Yes	Yes	0	43	0	43	
9-3	A6	Advance Processing	Yes	Yes	0	41	0	41	
9-3	A7	Advance Processing	Yes	Yes	0	44	0	44	
9-3	A8	Advance Processing	Yes	Yes	0	44	0	44	
9-3	A9	Advance Processing	Yes	Yes	0	0	44	44	
9-3	A10	Advance Processing	Yes	Yes	0	0	46	46	
9-3	A11	Advance Processing	Yes	Yes	0	0	49	49	
9-3	A12	Advance Processing	Yes	Yes	0	0	50	50	

High-Speed Tabulator Batch Status on Election Night

An account of all batches processed by the ICC tabulator before Election Day and whether they were included or should have been included in the preliminary unofficial election results

Batch Identification			Batch Status Election Night		Ballot Counts				
Ward-Precinct	Batch ID	Source	Expected Election Night?	Included Election Night?	City Council	School Committee	Ballot Question	Total Ballots	Batch Notes
10-1	T1	Test Deck	No	Yes	6	23	2	31	
10-1	T2	Test Deck	No	Yes	19	11	2	32	
10-1	T3	Test Deck	No	Yes	20	9	6	35	
10-1	A1	Advance Processing	Yes	No	0	0	37	37	
10-1	A2	Advance Processing	Yes	No	0	0	33	33	
10-1	A3	Advance Processing	Yes	No	0	0	49	49	
10-1	A4	Advance Processing	Yes	Yes	0	0	48	48	
10-1	A5	Advance Processing	Yes	Yes	0	0	48	48	
10-1	A6	Advance Processing	Yes	Yes	32	0	0	32	
10-1	A7	Advance Processing	Yes	Yes	40	0	0	40	
10-1	A8	Advance Processing	Yes	Yes	38	0	0	38	
10-1	A9	Advance Processing	Yes	Yes	44	0	0	44	
10-1	A10	Advance Processing	Yes	Yes	48	0	0	48	
10-1	A11	Advance Processing	Yes	Yes	0	58	0	58	
10-1	A12	Advance Processing	Yes	Yes	0	46	0	46	
10-1	A13	Advance Processing	Yes	Yes	0	45	0	45	
10-1	A14	Advance Processing	Yes	Yes	0	46	0	46	
10-2	T1	Test Deck	No	Yes	6	23	2	31	
10-2	T2	Test Deck	No	Yes	19	11	2	32	
10-2	T3	Test Deck	No	Yes	20	9	6	35	
10-2	A1	Advance Processing	Yes	No	47	0	0	47	
10-2	A2	Advance Processing	Yes	No	42	0	0	42	
10-2	A3	Advance Processing	Yes	No	49	0	0	49	
10-2	A4	Advance Processing	Yes	Yes	46	0	0	46	
10-2	A5	Advance Processing	Yes	Yes	0	45	0	45	
10-2	A6	Advance Processing	Yes	Yes	0	47	0	47	
10-2	A7	Advance Processing	Yes	Yes	0	45	0	45	
10-2	A8	Advance Processing	Yes	Yes	0	52	0	52	
10-2	A9	Advance Processing	Yes	Yes	0	0	48	48	
10-2	A10	Advance Processing	Yes	Yes	0	0	45	45	
10-2	A11	Advance Processing	Yes	Yes	0	0	29	29	
10-2	A12	Advance Processing	Yes	Yes	0	0	23	23	
10-2	A13	Advance Processing	Yes	Yes	0	0	52	52	
10-3	T1	Test Deck	No	Yes	6	23	2	31	
10-3	T2	Test Deck	No	Yes	19	11	2	32	
10-3	T3	Test Deck	No	Yes	20	9	6	35	

High-Speed Tabulator Batch Status on Election Night

An account of all batches processed by the ICC tabulator before Election Day and whether they were included or should have been included in the preliminary unofficial election results

Batch Identification			Batch Status Election Night		Ballot Counts				
Ward-Precinct	Batch ID	Source	Expected Election Night?	Included Election Night?	City Council	School Committee	Ballot Question	Total Ballots	Batch Notes
11-1	T1	Test Deck	No	Yes	6	23	2	31	
11-1	T2	Test Deck	No	Yes	19	11	2	32	
11-1	T3	Test Deck	No	Yes	20	9	6	35	
11-2	T1	Test Deck	No	Yes	6	23	2	31	
11-2	T2	Test Deck	No	Yes	19	11	2	32	
11-2	T3	Test Deck	No	Yes	20	9	6	35	
11-2	A1	Advance Processing	Yes	No	49	0	0	49	Contained 1 ballot which gave rank 1 to mult. cand.
11-2	A2	Advance Processing	Yes	No	28	0	0	28	
11-2	A3	Advance Processing	Yes	No	38	0	0	38	
11-2	A4	Advance Processing	Yes	Yes	38	0	0	38	
11-2	A5	Advance Processing	Yes	Yes	49	0	0	49	
11-2	A6	Advance Processing	Yes	Yes	0	44	0	44	Contained 2 ballots which gave rank 1 to mult. cand.
11-2	A7	Advance Processing	Yes	Yes	0	49	0	49	
11-2	A8	Advance Processing	Yes	Yes	0	39	0	39	
11-2	A9	Advance Processing	Yes	Yes	0	56	0	56	
11-2	A10	Advance Processing	Yes	Yes	0	0	32	32	
11-2	A11	Advance Processing	Yes	Yes	0	0	41	41	
11-2	A12	Advance Processing	Yes	Yes	0	0	38	38	
11-2	A13	Advance Processing	Yes	Yes	0	0	36	36	
11-2	A14	Advance Processing	Yes	Yes	0	0	43	43	
11-3	T1	Test Deck	No	Yes	6	23	2	31	
11-3	T2	Test Deck	No	Yes	19	11	2	32	
11-3	T3	Test Deck	No	Yes	20	9	6	35	
11-3	A1	Advance Processing	Yes	No	27	0	0	27	
11-3	A2	Advance Processing	Yes	No	43	0	0	43	
11-3	A3	Advance Processing	Yes	No	45	0	0	45	
11-3	A4	Advance Processing	Yes	Yes	46	0	0	46	
11-3	A5	Advance Processing	Yes	Yes	0	48	0	48	
11-3	A6	Advance Processing	Yes	Yes	0	45	0	45	
11-3	A7	Advance Processing	Yes	Yes	0	24	0	24	
11-3	A8	Advance Processing	Yes	Yes	0	42	0	42	
11-3	A9	Advance Processing	Yes	Yes	0	0	49	49	
11-3	A10	Advance Processing	Yes	Yes	0	0	46	46	
11-3	A11	Advance Processing	Yes	Yes	0	0	32	32	
11-3	A12	Advance Processing	Yes	Yes	0	0	41	41	

Ballots Tabulated At Polls

Ballots tabulated by precinct tabulators at polls on Election Day (11/04/2025)

Ward-Precinct	City Council	School Committee	Ballot Question	Total Ballots
1-1	307	275	318	900
1-2	139	115	140	394
1-3	656	605	652	1913
2-1	654	597	653	1904
2-2	689	648	675	2012
2-3	360	339	377	1076
3-1	581	550	560	1691
3-2	747	687	754	2188
3-3	727	667	728	2122
4-1	980	939	1010	2929
4-2	775	699	781	2255
4-3	823	780	828	2431
5-1	768	673	734	2175
5-2	85	63	82	230
5-3	746	712	761	2219
6-1	948	864	953	2765
6-2	394	361	417	1172
6-3	909	857	943	2709
7-1	786	755	805	2346
7-2	500	497	530	1527
7-3	163	145	169	477
8-1	689	662	706	2057
8-2	695	691	751	2137
8-3	148	144	159	451
9-1	998	1015	1065	3078
9-2	945	925	967	2837
9-3	810	814	829	2453
10-1	953	920	975	2848
10-2	1006	992	1045	3043
10-3	898	855	905	2658
11-1	568	524	577	1669
11-2	567	524	522	1613
11-3	875	846	902	2623
City	21889	20740	22273	64902

City Council on Election Night

An account of all ballots which should have been included (or were included) in the preliminary unofficial election results, as individual ballots and as high-speed batches.

Ward-Precinct	Ballots (Tabulated At Polls and By High-Speed Tabulator)					High-Speed Tabulator Batches	
	Tabulated At Polls	Expected High-Speed	Expected Total	Actual Total	Exp. − Act. Difference	Expected Batches	Actual Batches
1-1	307	0	307	352	-45		T1 – T3
1-2	139	0	139	184	-45		T1 – T3
1-3	656	0	656	701	-45		T1 – T3
2-1	654	0	654	699	-45		T1 – T3
2-2	689	0	689	734	-45		T1 – T3
2-3	360	147	507	404	103	A1 – A4	T1 – T4
3-1	581	0	581	626	-45		T1 – T3
3-2	747	0	747	792	-45		T1 – T3
3-3	727	0	727	772	-45		T1 – T3
4-1	980	0	980	1025	-45		T1 – T3
4-2	775	0	775	820	-45		T1 – T3
4-3	823	0	823	868	-45		T1 – T3
5-1	768	0	768	813	-45		T1 – T3
5-2	85	0	85	130	-45		T1 – T3
5-3	746	0	746	791	-45		T1 – T3
6-1	948	0	948	974	-26		T1, T3
6-2	394	0	394	439	-45		T1 – T3
6-3	909	0	909	935	-26		T1, T3
7-1	786	0	786	831	-45		T1 – T3
7-2	500	0	500	545	-45		T1 – T3
7-3	163	0	163	208	-45		T1 – T3
8-1	689	0	689	714	-25		T1 – T2
8-2	695	0	695	720	-25		T1 – T2
8-3	148	0	148	174	-26		T1, T3
9-1	998	205	1203	1131	72	A1 – A5	A4 – A5; T1 – T3
9-2	945	0	945	990	-45		T1 – T3
9-3	810	163	973	895	78	A1 – A4	A4; T1 – T3
10-1	953	202	1155	1200	-45	A6 – A10	A6 – A10; T1 – T3
10-2	1006	184	1190	1097	93	A1 – A4	A4; T1 – T3
10-3	898	0	898	943	-45		T1 – T3
11-1	568	0	568	613	-45		T1 – T3
11-2	567	202	769	699	70	A1 – A5	A4 – A5; T1 – T3
11-3	875	161	1036	966	70	A1 – A4	A4; T1 – T3
City	21889	1264	23153	23785	-632	31 batches	107 batches

School Committee on Election Night

An account of all ballots which should have been included (or were included) in the preliminary unofficial election results, as individual ballots and as high-speed batches.

Ward-Precinct	Ballots (Tabulated At Polls and By High-Speed Tabulator)					High-Speed Tabulator Batches	
	Tabulated At Polls	Expected High-Speed	Expected Total	Actual Total	Exp. − Act. Difference	Expected Batches	Actual Batches
1-1	275	0	275	318	-43		T1 – T3
1-2	115	0	115	158	-43		T1 – T3
1-3	605	0	605	648	-43		T1 – T3
2-1	597	0	597	640	-43		T1 – T3
2-2	648	0	648	691	-43		T1 – T3
2-3	339	142	481	526	-45	A5 – A8	A5 – A8; T1 – T4
3-1	550	0	550	593	-43		T1 – T3
3-2	687	0	687	730	-43		T1 – T3
3-3	667	0	667	710	-43		T1 – T3
4-1	939	0	939	982	-43		T1 – T3
4-2	699	0	699	742	-43		T1 – T3
4-3	780	0	780	823	-43		T1 – T3
5-1	673	0	673	716	-43		T1 – T3
5-2	63	0	63	106	-43		T1 – T3
5-3	712	0	712	755	-43		T1 – T3
6-1	864	0	864	896	-32		T1, T3
6-2	361	0	361	404	-43		T1 – T3
6-3	857	0	857	889	-32		T1, T3
7-1	755	0	755	798	-43		T1 – T3
7-2	497	0	497	540	-43		T1 – T3
7-3	145	0	145	188	-43		T1 – T3
8-1	662	0	662	696	-34		T1 – T2
8-2	691	0	691	725	-34		T1 – T2
8-3	144	0	144	176	-32		T1, T3
9-1	1015	211	1226	1269	-43	A6 – A11	A6 – A11; T1 – T3
9-2	925	0	925	968	-43		T1 – T3
9-3	814	172	986	1029	-43	A5 – A8	A5 – A8; T1 – T3
10-1	920	195	1115	1158	-43	A11 – A14	A11 – A14; T1 – T3
10-2	992	189	1181	1224	-43	A5 – A8	A5 – A8; T1 – T3
10-3	855	0	855	898	-43		T1 – T3
11-1	524	0	524	567	-43		T1 – T3
11-2	524	188	712	755	-43	A6 – A9	A6 – A9; T1 – T3
11-3	846	159	1005	1048	-43	A5 – A8	A5 – A8; T1 – T3
City	21889	1256	23145	23366	-1370	30 batches	125 batches

Ballot Question on Election Night

An account of all ballots which should have been included (or were included) in the preliminary unofficial election results, as individual ballots and as high-speed batches.

Ward-Precinct	Ballots (Tabulated At Polls and By High-Speed Tabulator)					High-Speed Tabulator Batches	
	Tabulated At Polls	Expected High-Speed	Expected Total	Actual Total	Exp. − Act. Difference	Expected Batches	Actual Batches
1-1	318	0	318	328	-10		T1 – T3
1-2	140	0	140	150	-10		T1 – T3
1-3	652	0	652	662	-10		T1 – T3
2-1	653	0	653	663	-10		T1 – T3
2-2	675	0	675	685	-10		T1 – T3
2-3	377	166	543	549	-6	A9 – A12	A9 – A12; T1 – T4
3-1	560	0	560	570	-10		T1 – T3
3-2	754	0	754	764	-10		T1 – T3
3-3	728	0	728	738	-10		T1 – T3
4-1	1010	0	1010	1020	-10		T1 – T3
4-2	781	0	781	791	-10		T1 – T3
4-3	828	0	828	838	-10		T1 – T3
5-1	734	0	734	744	-10		T1 – T3
5-2	82	0	82	92	-10		T1 – T3
5-3	761	0	761	771	-10		T1 – T3
6-1	953	0	953	961	-8		T1, T3
6-2	417	0	417	427	-10		T1 – T3
6-3	943	0	943	951	-8		T1, T3
7-1	805	0	805	815	-10		T1 – T3
7-2	530	0	530	540	-10		T1 – T3
7-3	169	0	169	179	-10		T1 – T3
8-1	706	0	706	710	-4		T1 – T2
8-2	751	0	751	755	-4		T1 – T2
8-3	159	0	159	167	-8		T1, T3
9-1	1065	233	1298	1308	-10	A12 – A16	A12 – A16; T1 – T3
9-2	967	0	967	977	-10		T1 – T3
9-3	829	189	1018	1028	-10	A9 – A12	A9 – A12; T1 – T3
10-1	975	215	1190	1081	109	A1 – A5	A4 – A5; T1 – T3
10-2	1045	197	1242	1252	-10	A9 – A13	A9 – A13; T1 – T3
10-3	905	0	905	915	-10		T1 – T3
11-1	577	0	577	587	-10		T1 – T3
11-2	522	190	712	722	-10	A10 – A14	A10 – A14; T1 – T3
11-3	902	168	1070	1080	-10	A9 – A12	A9 – A12; T1 – T3
City	21889	1358	23247	23820	-189	32 batches	124 batches

Released on December 3, 2025   Election Commission of the City of Cambridge, Massachusetts

Ballots - Counted by Tabulators vs. RTR on Election Night

A comparison between the number of ballots counted by tabulators and those reported by RTR at 12:19AM on Wednesday, November 5, 2025, for City Council (CC), School Committee (SC), and Ballot Question (BQ)

Ward-Precinct	Tabulators At Polls			High-Speed Tabulator			Totals from Tabulators			Totals from RTR, 12:19AM			Difference (Tabulators − RTR)		
W-P	CC - Polls	SC - Polls	BQ - Polls	CC - HST	SC -HST	BQ - HST	CC - Total	SC - Total	BQ - Total	CC - RTR	SC - RTR	BQ - RTR	CC - Diff	SC - Diff	BQ - Diff
1-1	307	275	318	0	0	0	307	275	318	350	316	327	-43	-41	-9
1-2	139	115	140	0	0	0	139	115	140	182	156	149	-43	-41	-9
1-3	656	605	652	0	0	0	656	605	652	699	646	661	-43	-41	-9
2-1	654	597	653	0	0	0	654	597	653	697	638	662	-43	-41	-9
2-2	689	648	675	0	0	0	689	648	675	732	689	684	-43	-41	-9
2-3	360	339	377	147	142	166	507	481	543	402	524	548	105	-43	-5
3-1	581	550	560	0	0	0	581	550	560	624	591	569	-43	-41	-9
3-2	747	687	754	0	0	0	747	687	754	790	728	763	-43	-41	-9
3-3	727	667	728	0	0	0	727	667	728	770	708	737	-43	-41	-9
4-1	980	939	1010	0	0	0	980	939	1010	1023	980	1019	-43	-41	-9
4-2	775	699	781	0	0	0	775	699	781	818	740	790	-43	-41	-9
4-3	823	780	828	0	0	0	823	780	828	866	821	837	-43	-41	-9
5-1	768	673	734	0	0	0	768	673	734	811	714	743	-43	-41	-9
5-2	85	63	82	0	0	0	85	63	82	128	104	91	-43	-41	-9
5-3	746	712	761	0	0	0	746	712	761	789	753	770	-43	-41	-9
6-1	948	864	953	0	0	0	948	864	953	972	894	960	-24	-30	-7
6-2	394	361	417	0	0	0	394	361	417	437	402	426	-43	-41	-9
6-3	909	857	943	0	0	0	909	857	943	933	887	950	-24	-30	-7
7-1	786	755	805	0	0	0	786	755	805	829	796	814	-43	-41	-9
7-2	500	497	530	0	0	0	500	497	530	543	538	539	-43	-41	-9
7-3	163	145	169	0	0	0	163	145	169	206	186	178	-43	-41	-9
8-1	689	662	706	0	0	0	689	662	706	712	694	709	-23	-32	-3
8-2	695	691	751	0	0	0	695	691	751	718	723	754	-23	-32	-3
8-3	148	144	159	0	0	0	148	144	159	172	174	166	-24	-30	-7
9-1	998	1015	1065	205	211	233	1203	1226	1298	1129	1267	1307	74	-41	-9
9-2	945	925	967	0	0	0	945	925	967	988	966	976	-43	-41	-9
9-3	810	814	829	163	172	189	973	986	1018	893	1027	1027	80	-41	-9
10-1	953	920	975	202	195	215	1155	1115	1190	1198	1156	1080	-43	-41	110
10-2	1006	992	1045	184	189	197	1190	1181	1242	1095	1222	1251	95	-41	-9
10-3	898	855	905	0	0	0	898	855	905	941	896	914	-43	-41	-9
11-1	568	524	577	0	0	0	568	524	577	611	565	586	-43	-41	-9
11-2	567	524	522	202	188	190	769	712	712	697	751	721	72	-39	-9
11-3	875	846	902	161	159	168	1036	1005	1070	964	1046	1079	72	-41	-9
City	21,889	20,740	22,273	1,264	1,256	1,358	23,153	21,996	23,631	23,719	23,298	23,787	-566	-1,302	-156

Ballots - Counted by Tabulators vs. RTR on Wednesday Morning

A comparison between the number of ballots counted by tabulators and those reported by RTR at 11:13AM on Wednesday, November 5, 2025, for City Council (CC), School Committee (SC), and Ballot Question (BQ)

Ward-Precinct	Tabulators At Polls			High-Speed Tabulator			Totals from Tabulators			Totals from RTR, 11:13AM			Difference (Tabulators − RTR)		
W-P	CC - Polls	SC - Polls	BQ - Polls	CC - HST	SC -HST	BQ - HST	CC - Total	SC - Total	BQ - Total	CC - RTR	SC - RTR	BQ - RTR	CC - Diff	SC - Diff	BQ - Diff
1-1	307	275	318	0	0	0	307	275	318	307	275	318	0	0	0
1-2	139	115	140	0	0	0	139	115	140	139	115	140	0	0	0
1-3	656	605	652	0	0	0	656	605	652	656	605	652	0	0	0
2-1	654	597	653	0	0	0	654	597	653	654	597	653	0	0	0
2-2	689	648	675	0	0	0	689	648	675	689	648	675	0	0	0
2-3	360	339	377	147	142	166	507	481	543	507	481	543	0	0	0
3-1	581	550	560	0	0	0	581	550	560	581	550	560	0	0	0
3-2	747	687	754	0	0	0	747	687	754	747	687	754	0	0	0
3-3	727	667	728	0	0	0	727	667	728	727	667	728	0	0	0
4-1	980	939	1010	0	0	0	980	939	1010	980	939	1010	0	0	0
4-2	775	699	781	0	0	0	775	699	781	775	699	781	0	0	0
4-3	823	780	828	0	0	0	823	780	828	823	780	828	0	0	0
5-1	768	673	734	0	0	0	768	673	734	768	673	734	0	0	0
5-2	85	63	82	0	0	0	85	63	82	85	63	82	0	0	0
5-3	746	712	761	0	0	0	746	712	761	746	712	761	0	0	0
6-1	948	864	953	0	0	0	948	864	953	948	864	953	0	0	0
6-2	394	361	417	0	0	0	394	361	417	394	361	417	0	0	0
6-3	909	857	943	0	0	0	909	857	943	909	857	943	0	0	0
7-1	786	755	805	0	0	0	786	755	805	786	755	805	0	0	0
7-2	500	497	530	0	0	0	500	497	530	500	497	530	0	0	0
7-3	163	145	169	0	0	0	163	145	169	163	145	169	0	0	0
8-1	689	662	706	0	0	0	689	662	706	689	662	706	0	0	0
8-2	695	691	751	0	0	0	695	691	751	695	691	751	0	0	0
8-3	148	144	159	0	0	0	148	144	159	148	144	159	0	0	0
9-1	998	1015	1065	205	211	233	1203	1226	1298	1203	1226	1298	0	0	0
9-2	945	925	967	0	0	0	945	925	967	945	925	967	0	0	0
9-3	810	814	829	163	172	189	973	986	1018	973	986	1018	0	0	0
10-1	953	920	975	202	195	215	1155	1115	1190	1155	1115	1190	0	0	0
10-2	1006	992	1045	184	189	197	1190	1181	1242	1190	1181	1242	0	0	0
10-3	898	855	905	0	0	0	898	855	905	898	855	905	0	0	0
11-1	568	524	577	0	0	0	568	524	577	568	524	577	0	0	0
11-2	567	524	522	202	188	190	769	712	712	768	710	712	1*	2*	0
11-3	875	846	902	161	159	168	1036	1005	1070	1036	1005	1070	0	0	0
City	21,889	20,740	22,273	1,264	1,256	1,358	23,153	21,996	23,631	23,152	21,994	23,631	1*	2*	0

*During Advance Processing, 3 over-voted ballots (1 City Council, 2 School Committee), were tabulated for 11-2, even though they should have been sent to be counted with other auxiliary ballots. The RTR report used to generate this chart simply omits overvotes, so the totals for 11-2 CC and SC are off by 1 and 2, respectively.