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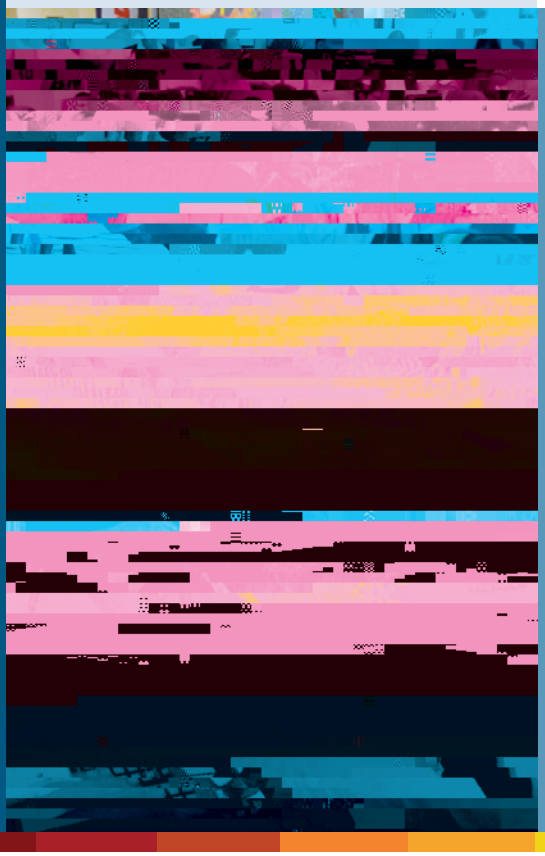

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The third and final test of the baseline survey occurred during the May 10, 2010, Philippines elections.[4] The 2010 Philippines elections were the first in which a nationalized system of optical mark recording devices would be used in the country. The Carter Center sent three electoral technology experts to the Philippines to observe pre-election testing, auditing, and public education. These experts were joined by another seven observers on election day. The Philippines mission allowed The Carter Center a final opportunity to make final revisions to the baseline survey.

This handbook revises and expands upon the 2007 *Developing a Methodology for Observing Electronic Voting* publication, incorporating the cumulative recommendations and lessons learned over the course of the three missions and serving as a supplement to the other tools and resources available to Carter Center observers. The Carter Center hopes the general focus of the baseline survey will allow users to apply it to any number of voting technologies, while the comprehensive framework of questions will provide necessary detail to facilitate a solid understanding of the system in use.

[4] The final report from the Philippines mission is available at http://www.cartercenter.org/resources/pdfs/news/peace_publications/election_reports/philippines-may%202010-elections- nalrpt.pdf.

Observation of voting technologies is only one aspect of a larger election assessment that should focus on evaluating whether a number of fundamental human rights are ful lled throughout the electoral process. Outlined in the following section of the handbook are the roles and responsibilities of key staff members and the impact of e-voting technologies on the recruitment and training of observers as well as on the collection and analysis of data. This handbook is intended as a supplement to other Carter Center tools and resources for observing elections.

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Ideally, LTOs also will be deployed throughout the country by the time testing begins so that they can collect data and send it back to the e-voting expert and core team for review.

It is also critical that staff focused on the use of voting technologies remain in-country throughout the electoral dispute resolution process, or at least until any disputes related to the use of technology have been resolved. While assessing the electoral dispute resolution process also may be a key responsibility of the mission's legal analyst, knowledge of and familiarity with the e-voting expert's technology processes may be critical in deepening the team's understanding of the legitimacy of legal claims.

Resources and Observation Tools

In addition to the Baseline Survey for Observing Electronic Voting, there are a number of tools and resources that can assist in the collection and analysis of data on e-voting technologies. First and foremost among these is the Database of Obligations for Democratic Elections, which will help the e-voting experts and the rest of the core team understand the obligations to which the host country has committed regarding the use of e-voting.[5] As outlined in subsequent sections of this handbook, there are few international obligations or commitments specifically regarding the use of e-voting. However, those commitments that do exist can help provide an understanding of international good practice with regard to the introduction and use of e-voting technologies. In addition, a growing number of publications on e-voting technologies can provide guidance as necessary. A non-exhaustive bibliography of such resources is included in Appendix G of this handbook.

E-voting experts undoubtedly will refer heavily to the election laws of the host country and any rules and decrees or policies and procedures disseminated by the election management body (EMB). These resources are critical to the successful analysis of the system and should be collected as early as possible in the life of the mission.

Long-term election observers (LTOs) can serve as primary data collectors for the e-voting expert. E-voting technologies should be included as an area of assessment in the LTOs' weekly reporting templates, and the e-voting expert should work closely with the LTO coordinator to analyze and comment on the data collected by the LTOs. Areas of assessment for the LTOs can be drawn from the baseline survey, as well as from the e-voting experts' own experiences in the capital city. In addition, the e-voting expert and the LTO coordinator should work together to develop checklists for LTOs to use to collect quantitative data throughout the pre-election testing processes.

[5] http://www.cartercenter.org/des-search/des/

Training for Observers

The Carter Center selects observers with a wealth of experience and knowledge. However, in many cases these observers have not participated in a mission assessing voting technologies before or are not familiar with the particular type of technology employed in an observed state. This makes training for observers critical to the success of the mission. While not all observers will be expected to focus primarily on assessing voting technologies, it is a central part of the electoral process as a whole and one with which all observers must be familiar.

Long-Term Observers

At least a half day of the mission's LTO training should focus on issues related to the use of voting technologies. Long-term observers need not be familiar with all technological details of a system's internal components. However, they should understand:

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Training for observers should include the following essential elements

Short-Term Observers

Training for STOs should provide a basic understanding of the system in use, including the functionality of the voting technology and what security protocols they should expect to nd in place at the polling station and tabulation centers. This “issue spotting” is particularly important at critical times in the day like poll opening and poll closing. To ensure observers internalize the lessons about voting technologies, it is best to have some sessions that focus only on the technology, while other sessions may integrate potential issues within a larger framework of the election day processes.

Role of the Long-Term Observer

While LTOs do not bear primary responsibility for the completion of the baseline survey, they do play a pivotal role in the collection of data regarding the preparation, testing, or auditing of voting technologies outside the capital city. The e-voting experts should work closely with the LTO coordinator to make sure that LTOs are collecting appropriate, accurate, and useful information regarding the use of the voting technologies and are effectively reporting on this aspect of the process in their weekly reports. The technology in use should not become an overwhelming preoccupation of the LTOs, who must continue to observe other aspects of the unfolding electoral process as well.

The ability of LTOs to effectively observe aspects of the adoption of voting technologies often hinges on the success of the training they receive upon arrival in country. Again, while it is not necessary for LTOs to be familiar with all technical aspects of internal data transmission or retention, they should be comfortable looking at, evaluating the functioning of, and communicating about the electoral technology in use.

In some cases it may be useful to recruit LTOs with a nontraditional skill set, such as a background in computer science, who may be paired with an LTO with a strong understanding of the electoral process and the host country. In such cases, the eld of ce director, LTO coordinator, and e-voting expert should work closely with Atlanta staff to ensure that suitable LTO candidates are identi ed and recruited.

Role of T. complhEeir weekly reports

Working closely with the LTO coordinator and other key staff, the e-voting expert should provide input on the questions to be included in the STO checklists. The e-voting experts may wish to provide special communication lines for observers to call if they note a problem with the electoral technology. This can be very helpful to STOs as they collect information in the time period immediate to election day.

3. accountability for the impact of the technology on the integrity of the electoral process
4. accuracy and speed in the voting and vote counting process
5. sustainability and cost-effectiveness of the system based on the realities of the country in which it is being introduced
6. security of the system

These principles are outlined in *Observing Electronic Voting*, a document prepared for the Fifth Meeting on the Implementation of the Declaration of Principles for International Election Observation (Atlanta, Ga., October 2010), which may provide guidance to Carter Center EOMs observing e-voting technologies. This document distills the common experiences of endorsers of the Declaration of Principles (based on key publications of these organizations) into a short set of guiding principles. The full text of this document can be found in Appendix C.

This section of the handbook draws heavily from guidance on electoral processes found in public international law. To identify and determine assessment criteria for international obligations for democratic elections, four types of international human rights sources are referenced. These sources include:

- Obligations clearly codified in treaties
- Interpretation of treaty obligations by treaty monitoring mechanisms (such as the Human Rights Committee) or international courts (such as the European Court of Human Rights)
- Nonbinding instruments such as declarations or other political commitments, which serve as evidence of state practice and customary law
- Handbooks, manuals, and other sources that can provide additional evidence of state practice (customary law) with regard to electoral processes

Every footnote reference includes a marker indicating whether the source document is an obligation, interpretative document, political commitment, or a source that can serve as evidence of state practice. The relative weight given in the source document by the EOM staff should correspond to this hierarchy. For more on how to use international obligations to assess elections, please refer to the Carter Center website.

A N A A

The legal framework should lay the foundation for the use of the e-voting technologies and for ensuring that fundamental human rights are ful lled through their use. Early assessment of the laws and regulations governing an election helps observers identify potential problems, recognize inconsistencies between sources of law, and develop a sound understanding of the role of e-voting technologies in the electoral process.

The key activities, responsible team members, and outputs of an assessment of the legal framework for the use of e-voting are summarized below.

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process, and applying measures that prevent voters from casting more than one electronic ballot into the electronic ballot box.[8]

In particular, the rights to vote[9] by secret ballot, to be elected,[10] and to participate in public affairs should be protected, and special consideration

should be given within the legal framework to the potential impact of e-voting technologies on these rights.[11] Further, the legal framework must guarantee that the use of voting technologies does not undermine equal suffrage and the ability of all persons to participate in elections free from discrimination.[12] At a procedural level, this will require measures that prevent a voter from casting multiple ballots[13] as well as efforts to ensure the participation of persons with disabilities, those who are illiterate or computer illiterate, or who otherwise may be unable to effectively use the chosen electoral technology.[14]

Where Internet or other remote voting procedures are used, provision should be made to allow voters the alternative of casting their ballots in a secure and controlled environment.[15] To the extent possible, steps should be taken to ensure the secrecy of the ballot in unsupervised environments.[16]

Carter Center EOMs should consider not only whether the legal framework provides for such rights but also whether it provides for audits and other procedures to ensure that rights are protected.

THE LEGAL FRAMEWORK SHOULD BE CLEAR AND CONSISTENT AND ANY CHANGES TO IT MADE WELL IN ADVANCE OF ELECTION DAY.

It is important that the legal framework be clear and consistent and that,

in law and in other procedures, such as the testing and certi cation of equipment. Overall, Carter Center observers should assess the degree to which legal provisions regarding certi cation, tests, and audits create a meaningful accountability mechanism.

THE ROLE OF KEY STAKEHOLDERS IN THE PROCESS SHOULD BE MADE CLEAR WITHIN THE LEGAL FRAMEWORK.

The use of e-voting technologies can introduce a number of new stakeholders to the election process or may increase the signi cance of the role of traditional stakeholders. For example, technology vendors can play a more important role in electronically enabled elections. Civil society and political parties have a critical role to play in all electoral processes.[18] In the context of elections that use e-voting technologies, the importance of this role is ampli ed since the transparency of the process is often decreased by the introduction of e-voting technologies. The roles of all such stakeholders should be clearly outlined in law.

Observers should evaluate the roles and responsibilities of these actors—both traditional stakeholders such as election management bodies and nontraditional stakeholders such as certi cation bodies, vendors, and contractors—as outlined by law and focus speci cally on their legally enforceable accountability. Carter Center observers should consider the degree of access granted by the legal framework to domestic observer groups, candidates, and political party agents (in addition to members of international observation delegations) in all aspects of the electoral process, including the testing and auditing of technologies.

THE LEGAL FRAMEWORK SHOULD DETERMINE THE LEGAL RELATIONSHIP BETWEEN ELECTRONIC AND PAPER BALLOTS AND ACTIONS TO BE TAKEN IN CASES OF DISCREPANCY BETWEEN THEM.

A voter veri ed paper audit trail (VVPAT) allows a voter to cast a ballot electronically and then verify that the machine has accurately recorded the vote by checking a paper ballot that captures the voter's choice. This paper receipt or ballot should then be placed in a secure ballot box that protects the secrecy of the ballot. The use of VVPATs and mandatory audits of those paper vote records are the most effective way of ensuring that the vote is counted as cast, and provision for such safeguards should be included in the electoral code. If the audits are conducted on the basis of a statistical sample of machines, the sampling method should be clear and be consistently applied, and sound statistical sampling practices should be followed produce meaningful results that can be extrapolated to the universe of machines in use.

[19] OB: UN, ICCPR, art. 25(b) (right to participate in public affairs)

The legal framework should determine the legal relationship between electronic and paper records, as well as what constitutes the legal record of the vote (the electronic ballot vs. a paper ballot). It should provide clear and consistent guidance on the steps to be taken in the event that the veri cation processes nd discrepancies or anomalies between election results and other records of the vote.

A Carter Center mission should have as clear as possible an understanding of the relationship between the electronic and paper ballots and the potential impact this will have on audits, recounts, complaints, and appeals. For example, if the ballot or legal record is the electronic ballot only, then a recount of paper ballots may have far less meaning. In addition, observers should consider whether the framework provides for a system of checks and balances that promotes and strengthens electoral integrity when e-voting technologies are used.

THE LEGAL FRAMEWORK SHOULD INCLUDE A CLEAR ELECTORAL CALENDAR, INCLUDING THOSE ASPECTS RELATED TO E-VOTING.

The obligation to hold periodic elections[20] requires that a clear calendar for electoral activities be in place in advance of the election. The period of time in which voting can take place should be clearly established.[21] The electoral calendar should be coherent and allow enough time for each phase of the process to be ful lled, including all pre-election tests, certi cation, and other processes.[22]

Observers should carefully assess the degree of impact the electoral calendar has on the implementation of the election. In addition, time should be allowed to effectively respond to the outcomes of these processes.

THE LEGAL FRAMEWORK SHOULD PROVIDE A MECHANISM FOR THE IMPLEMENTATION OF EFFECTIVE REMEDIES FOR VIOLATIONS OF RIGHTS.

Genuine elections require effective electoral dispute resolution bodies that function in a timely and transparent manner, fostering public con dence.22

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The details of the e-voting system and its method of introduction can greatly impact the exercise of fundamental rights and freedoms during the electoral process.

The key activities, responsible team members, and outputs of an assessment of the e-voting technology are summarized below.

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be elected, the right to participate in public affairs, and the right to a secret ballot. Voting systems should be usable, and steps should be taken to ensure that the relevant software and services can be used by all voters.[32] If necessary, alternative means of voting should be provided.[33]

It is critical that election observation missions understand how and why the technology was introduced and how the system works. Through interviews and other means, Carter Center observers should assess the process through which the technology was introduced, including the degree to which the process was inclusive, transparent, and open to public scrutiny.

E-VOTING SYSTEMS SHOULD FUNCTION CORRECTLY AND RESIST MALFUNCTIONS.

To protect the right to vote, it is essential that e-voting technologies meet a number of general criteria. Speci cally, e-voting systems should contain measures to prevent and resist malfunction, breakdowns, and denial-of-service attacks.[34] In addition, the system should ensure that its components

operate in accordance with speci cations and that the various components of

provide safeguards to ensure that only the appropriate number of votes are cast per voter and that voters can cast only one ballot via one voting channel.[43]

Voting systems should offer an authentic ballot to voters to ensure that their votes are accurately represented,[44] and voters should be able to alter their choice before casting their ballot, for example, if they have mistakenly pressed the wrong button.[45] Additionally, voters should be able to cast a blank ballot,[46] and the voting system should indicate clearly to the voter when their ballot has been cast and should prevent them from changing their vote once they have voted.[47]

Voter Education: Public Awareness and Confidence and Accessibility of Voting Technologies

to ensure that voters understand and have con dence in the e-voting system in use[50] and know that their ballot will be secure and their vote will remain secret.

Carter Center EOMs often assess whether voter education is provided by the state.

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Electoral administration is central to the success of any election, with electoral administrators playing a critical role in interpreting the electoral law, implementing electoral procedures, educating the electorate, and ensuring the protection of suffrage rights for all citizens.

The key activities, responsible team members, and outputs of an assessment of the administration of e-enabled elections are summarized below.

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administration sections of the baseline survey should complement the Carter Center mission's understanding of the election administration structure, providing an overview of those institutions and their responsibility for the implementation of e-voting technologies.

ELECTION MANAGEMENT BODIES SHOULD ENSURE THE FULFILLMENT OF FUNDAMENTAL RIGHTS.

As an arm of the state, EMBs are responsible for taking necessary steps to ensure the ful llment of fundamental human rights.[57] This obligation is no

less critical when considering adoption of voting technologies. Election administrators choosing to adopt voting technologies must ensure that such technologies protect—not hinder—the central obligations of genuine elections.[58] In particular, considerations of voter education[59] and the right of all citizens to vote[60] and have their vote counted accurately[61] are central to any choice to adopt voting technologies. Also of critical importance when employing new technologies is careful consideration of the electoral calendar, with special efforts taken to ensure adequate time is allotted for implementation, testing, and contingency planning.[62] Access to information is promoted through transparent electoral processes, including the meetings of the EMB.[63]

THE RESPONSIBILITIES OF ELECTION ADMINISTRATORS AND OTHERS SHOULD BE ESTABLISHED IN LAW.

The responsibilities of election administrators should be clearly de ned in legislation. Typically, they include acquiring and distributing voting materials, goods, and supplies; contracting and training support personnel; coordinating and training other temporary electoral entities and political party poll watchers, according to the electoral legislation; and designating and installing the voting centers and polling stations. In elections employing e-voting technologies, EMBs bear the additional responsibility of implementing a new system of voting and managing the relationship with technology vendors.

Further, electoral administrators must balance budgetary concerns, institutional capacity, and the identi ed needs of the electorate in determining appropriate voting technologies. In order to effectively carry out their task in the context of e-voting, election administrators must have the necessary expertise to understand the technical aspects of e-voting.

It is, therefore, critical that EOMs assess the training programs for election of cials as well as the role the of cials play in adopting and implementing

[58] OB: UN, ICCPR, art. 25(b)op23 /T1eB Tm (58)Tj ET EMC /Span <</MCID 120479.1 0 12 138.0 5.247 89.

voting technologies. This may require them not only to review the training program and other materials produced by the EMB but also to direct observation of poll worker training sessions.

ELECTION MANAGEMENT BODIES SHOULD ENSURE THE RELIABILITY AND SECURITY OF THE E-VOTING SYSTEM.

As an organ of the state, the EMB bears responsibility for ensuring that the rights to vote and be elected as well as other rights are ful lled. In the context of e-voting technologies, this requires that they ensure the reliability and security of the system and take all steps necessary to avoid the possibility of fraud or unauthorized intervention with the system throughout the voting

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In the context of elections in which e-voting technologies are used, other aspects of the EMB's work, such as procurement, take on added signi cance.

The key activities, responsible team members, and outputs of an assessment of the process of procuring e-voting technologies are summarized below.

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voting technologies, and role of technology vendors

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technology vendors to evaluate the process of tender and procurement

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process of procurement

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process of tender and procurement, including an evaluation of how chosen voting technologies respond to the stated needs of the electoral commission and country in the decision to adopt electoral technology

process.[64] In addition, electoral authorities have overall responsibility for compliance with these security requirements, which should be assessed by independent bodies.

Carter Center observers should assess the degree to which the EMBs have taken the steps necessary to ensure that the system is secure. This will include assessment of many aspects of the process, data about which will be collected via completion of other sections of the baseline survey (e.g., security, contingency planning, voter education.)

Criteria for procurement should be established well in advance of election day and should be based on the needs of the electorate.

The process of procuring voting technologies is critical to the successful implementation of an electronic system, impacting public con dence, accountability, and transparency. In the context of electoral processes that utilize e-voting, procurement can include hardware and software for electoral administration, voter registration, voting, counting, and tabulation.

E-voting technologies should be responsive to the needs of the electorate.[65] An open and competitive tendering and procurement process is crucial to ensure voting technologies are chosen for their utility and ability to meet the needs of the electorate, not private interests. Criteria for the selection of the technology should be clear well in advance of the election.

Just as important as technical security and security of data are the physical security measures put in place to prevent interference with the voting equipment. In addition, it is essential that plans be in place in the event of technical failure.

The key activities, responsible team members, and outputs of an assessment of the security and contingency planning for the e-voting system are summarized below.

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that citizens can hold their EMBs accountable. Observers should consider whether key documents and contracts relevant to the procurement process are publicly available.

Voting Operations: Security Measures and Contingency Planning

Just as important as technical security and security of data are the physical security measures put in place to prevent interference with the voting equipment. In addition, it is essential that plans be in place in the event of technical failure. The Carter Center baseline survey thus allows observers to collect information on the processes and procedures that are in place to regulate physical access to all e-voting equipment and the central tabulating computers as well as on the degree to which contingency plans and procedures are clear to election of cials, that they are implemented

throughout the electoral process, and that they are adequate to protect the rights of voters.[68]

THE ELECTION AUTHORITIES SHOULD ENSURE THAT THE TECHNOLOGY OPERATES CORRECTLY.

The ultimate aim of any security system should be to guarantee that all citizens who are entitled to vote can do so by secret ballot and that after the close of

For example, rewalls must be set up, vote information must be encrypted and decrypted, and cyber attacks must be countered.

It is thus important that a robust security system be in place at all levels. To the degree possible, Carter Center observers should gain an understanding of all the technical security procedures in place. It is important that an EOM understand the chain of custody and physical security procedures in order to assess whether they can effectively prevent unauthorized interference with the technologies.[75]

THERE SHOULD BE A CONTINGENCY PLAN IN CASE OF TECHNOLOGICAL FAILURE, AND POLL WORKERS SHOULD BE TRAINED ON HOW TO IMPLEMENT THIS PLAN.

The preparation and dissemination of a carefully constructed contingency plan are critical to the success of an electronic election, even if it is never used. In order to ensure adequate protection for the electorate's suffrage rights, EMBs should have clear and consistent rules in place in case of machine failure. The plans should be designed to ensure that voting processes may promptly continue, either electronically or manually, in a manner that neither infringes upon equality or universality of suffrage nor impedes ballot secrecy and that no polling data is lost due to technical failure.[76]

VOTING OPERATIONS: CERTIFICATION AND PRE-ELECTION TESTING

Certi cation and testing of e-voting technologies in the pre-election period provide an important means of identifying and addressing issues in advance of election day, thereby protecting the rights of the voters and candidates to participate in a genuine election. Completion of the relevant sections of the baseline survey should provide an EOM with an overview of the certi cation and pre-election testing procedures in place.

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Certi cation and testing of e-voting technologies in the pre-election period provide an important means of identifying and addressing issues in advance of election day, thereby protecting the rights of the voters and candidates to participate in a genuine election.

The key activities, responsible team members, and outputs of an assessment of the certi cation and testing of the technology are summarized below.

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States should engage in comprehensive processes of impartial, independent, and transparent certification as well as open pre-election testing.

Any deviations or malfunctioning by such technologies has the potential to undermine the quality of an election, impacting the accuracy of vote tabulation and equality of suffrage.[80] To negate the potential of such effects, states employing e-voting technology must engage in comprehensive processes of certi cation and pre-election testing. The purpose of certi cation is to verify independently, at the outset of the electoral process, that an e-voting system complies with all the speci cations and requirements for the technology. Certi cation applies to hardware and software. Impartial, independent, and transparent certi cation measures should be in place to ensure that the system meets national or international standards, the requirements of the election jurisdiction, and the technological speci cations outlined by the vendor.[81]

Observers should consider the process for inspecting and certifying the software used in e-voting systems, with particular focus on the independence of the certifying body and its relationship with other stakeholders in the process as well as the access to the certi cation process granted to domestic observers, candidates and their agents, and others.[82] The certi cation process may well be complete before the start of the EOM; however, analysis of

OBSERVERS AND CANDIDATES AND THEIR AGENTS SHOULD HAVE ACCESS TO CERTIFICATION AND TESTING PROCESSES.

Because observers (both domestic and international) and candidates and their agents should have unimpeded access to all stages of the e-voting process, except those that would violate the secrecy of the vote, domestic and international observers should have adequate access to various phases of the certi cation and testing processes. Accordingly, these should be conducted in an impartial and open manner, with access for domestic observers, political parties, civil society organizations, and the public as appropriate.[84] As in a

A N N A

Detailed election day procedures that are easily understood and followed by polling station workers are necessary to ensure proper administration of an e-voting process. Such procedures must respond adequately to the needs of the electorate, including the ability to vote independently and by secret ballot, cast votes for or against any candidate, and seek resolution for election-related disputes.

The key activities, responsible team members, and outputs of an assessment of election day procedures are summarized below.

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handbooks, and relevant directives

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and other information to gain an understanding of election day procedures

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contingency planning, and staff training (prior to election day), based on the relevant baseline suo58007D00CA00CC006900560085009800 9C008F009Cther information t

traditional, paper-based election, the physical security of electronic election materials is an essential measure for protecting the integrity of the election.[85]

International EOMs should be mindful to not certify electronic election technologies and should make clear to the authorities of the host country and the EOM that such responsibilities are beyond the mandate of international election observers. The role of the observer is to provide an impartial assessment of the electoral process as a whole.

Voting Operations: Election Day Procedures

Detailed election day procedures that are easily understood and followed by polling station workers are necessary to ensure proper administration of an e-voting process. Such procedures must respond adequately to the needs of the electorate, including the ability to vote independently and by secret ballot;[86] cast votes for or against any candidate, and seek resolution for election-related disputes.[87] The Election Day Procedures section of the baseline survey is intended to give observers a sound understanding of how the process should unfold on polling day.

In particular, observers should consider whether polling stations are set up to protect the secrecy of the ballot[88] and whether voters can remove evidence of how they voted from the polling place as a means of participating in vote buying.[89] The obligations that are relevant to paper-based elections remain relevant in elections that utilize e-voting. Carter Center observers should ensure that they are using the wide array of tools and resources developed for missions to assess this aspect of the process.

Vote Counting and Dispute Resolution: Ballot Counting, Audit, and Recount Procedures

The accurate and fair counting of votes is critical to ensuring the electoral process is democratic. International and regional agreements recommend that votes be counted by an independent and impartial electoral management body, with a counting process that is public, transparent, and free of corruption.[90]

[85] There is a widely recognized need to ensure election materials are stored securely both before and during election day. This requirement is equally applicable to systems of e-voting. See, for example, EISA and Electoral Commission Forum of SADC Countries, Principles for Election Management, Monitoring, and Observation in the SADC Region, p. 25; European Union, Handbook (2d edition), p. 70; OSCE/ODIHR, Legal Framework, p. 25.

[86] OB: UN, ICCPR, art. 25(b); UNHRC, General Comment 25, para. 20 (IN)

[87] OB: UN, ICCPR, art. 2(3); AU, African Charter on Democracy, Elections, and Governance (ACDEG), art. 17(2) (OB); ECOWAS, Protocol on DGG, art. 7 (OB)

[88] OS: SADC Parliamentary Forum Norms and Standards for Elections in the SADC Region (March 25, 2001) (SADC Parliamentary Forum Plenary Assembly Windhoek, Namibia, 2001), para. 9

[89] PC: CoE, Standards, art. 52

[90]

THE VOTING PROCESS SHOULD BE TRANSPARENT AND FREE OF CORRUPTION, AND SAFEGUARDS SHOULD BE IN PLACE TO ENSURE THE ACCURACY OF THE VOTE COUNT.

Voting technologies often are employed as a means of eliminating human error in vote counting and tabulation and increasing the ef ciency of these processes. However, the potential advantages must be weighed against the decreased transparency inherent in counting and tabulation by non-observable software. Strong audit and recount systems are therefore critical

DATA SHOULD BE PROTECTED DURING THE TRANSMISSION OF RESULTS.

Integrity of data transmission is also critically important in the postelection period. Ballot tallies must be transmitted to higher levels in an open manner.[99] Steps should be taken to effectively protect the transmission of data and prevent illegal access,[100] and the observation mission should assess the extent to which steps have been taken to protect the integrity of the data transmission.

Data transmission is dif cult to observe; however, Carter Center EOMs should consider deploying a team of observers to tabulation centers if possible. Tabulation center observers may be able to coordinate with teams deployed at polling stations to verify whether results transmitted match polling-station-level results.

THE E-VOTING SYSTEM MUST BE AUDITABLE.[101]

An audit trail needs to be established for all aspects of the systems used in the election so that all changes and decisions can be explained and defended.[102] It is also important that audit procedures be in place for every part of the e-voting process, including the electoral voter register (if used), voting, counting, archiving, and destruction of votes. The audit system should provide the ability to cross-check and verify the correct operation of the e-voting system and the accuracy of the result in order to detect voter fraud and to prove that all counted votes are authentic and that all votes have been counted.[103]

When a recount is necessary, the electoral process must allow for it.[104] It is crucial that any recounts be performed in the most transparent way possible. In addition, the grounds and procedures for a recount should be communicated to all stakeholders.

Accordingly, observers should consider the size, scope, and methods of conducting audits or recounts of any paper records of votes cast during the use of e-voting, as well as whether the results of the paper count can be used as the basis for a legal challenge to the election results.[105] Carter Center observers should also assess the degree to which third parties are able to conduct audits independent of those conducted by the host government.

[99] OS: CoE, Handbook for Observers of Elections, para. 4.6

[100] OB: UN, UNCAC, art. 18

[101] PC: CoE, Standards, art. 56 and 100

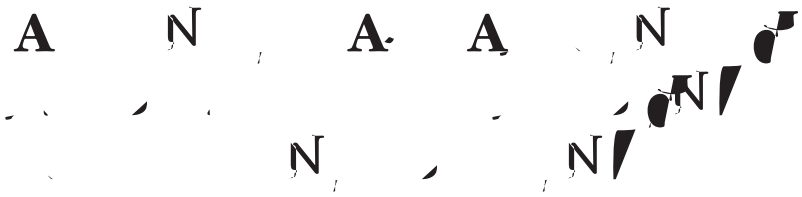
[102] PC: CoE, Standards, art. 103

[103] PC: CoE, Standards, art. 107

[104] PC: CoE, Standards, art. 26

[105] It is internationally recognized good practice that the right to challenge electoral results be provided for by law. See, for example: SADC, Principles and Guidelines, para. 2.1.10 (OS); OSCE/ODIHR, Legal Framework, p. 36 (OS); UN, Human Rights and Elections, para. 112.

Appendix A, which follows, includes the Baseline Survey for Observing Electronic Voting. Appendix B offers a selection of examples of election day checklists developed by The Carter Center for use in assessing voting technologies in Venezuela, the United States, and the Philippines. These checklists are necessarily bound by their speci c country context and do not represent questions appropriate to all missions.



BASELINE SURVEY — ELECTRONIC VOTING SYSTEMS[106]

INSTRUCTIONS FOR COMPLETION

This baseline survey is intended to help observers collect and process relevant data associated with the use of e-voting technologies in this election. The information gathered by answering these questions should create a comprehensive picture of the voting system and thus allow a more thorough evaluation of its use.

The baseline survey provides a series of overarching, analytical questions for the EOM to answer. In addition, a nonexhaustive list of subquestions or issues to consider also are included. While not all of these questions will be

Carter Center's Assessment Methodology: A Human-Rights-Based Approach

The Carter Center assesses elections on the basis of human rights obligations, determined by the domestic and international commitments of a state and the international community as a whole. Therefore, the impact of technology on the electoral process and the enjoyment of fundamental rights is a central concern of the baseline survey. While this baseline survey focuses only on the aspects of the electoral process dealing with electoral technology, it is critical that observers understand and assess such technology against these human rights commitments. Voting technologies can be an important tool to help ful ll obligations. This is particularly true given their ability to make voting accessible to historically disenfranchised communities. However, malfunctions or misapplication of such technologies can undermine such critical obligations.

The Carter Center has identi ed 21 obligations based in public international law that are of critical importance to the electoral process:

1. **.** That the will of the people shall form the basis of the auth rity of government was rst established in the Universal Declaration of H man Rights and subsequently made legally binding in art. 25 of the Inte national Covenant on Civil and Political Rights (ICCPR).
2. **.** The holding of genuine elections is an essential obligation. It is generally understood to mean that the election offers voters a real choice and that a wide array of other fundamental rights have been ful lled.
3. **.** The obligation to hold pe odic elections as established in the ICCPR and other treaties and instrume ts is generally understood to mean that e ections must take place at reaso able intervals.
4. **.** Public international law requires that the state take steps to ensure effective realiz tion of the rights contained in the relevant international instruments.
5. **.** Implicit in the international human rights treaties and instruments is the obligation of the state to abide by the rule of law. While not explicitly articulated as an obligation in the ICCPR, the rule of law is recognized as an essential condition for the ful llment of human rights and

right that requires that every voter be granted a vote of equal value to that of other voters.

8. **[redacted].** Voting must be by secret ballot; that is, the cast ballot cannot be identified with the voter who cast it. That secrecy must be maintained throughout the entire electoral process.

9. **[redacted].** While recent anticorruption instruments lay the foundations for transparency, they also obligate the state to regulate the behavior of public officials.[107]

10. **[redacted].** While universal suffrage establishes a collective right to vote and be elected, the right of every citizen to vote is an individual right.

11. **[redacted].** Similar to the right to vote,

extends to the right to make monetary contributions to political candidates or parties.

18. **A . . . . . .** Closely related to the right to freedom of opinion and expression and the obligation of transparency is the right of access to information. Everyone has the right to seek and receive public information. In addition to being an important right in and of itself, it is also a critical means of ensuring transparency and accountability throughout the electoral process.

19. **. . . . . .** The right to security of the person includes not only protection from arbitrary arrest, detention, and exile but, in the context of the electoral process, also the protection of voters, candidates and their agents, poll workers, and domestic and international observers from interference, coercion, or intimidation.

20. **. . . . . .** Everyone has the right to a fair and public hearing in the determination of their rights in a lawsuit. This right includes the ability to have your case heard publicly and expeditiously by an impartial tribunal, to have equal access to the judicial proceedings, and equality of arms.

21. **. . . . . .** International law requires that an effective and timely remedy by a competent administrative, legislative, or judicial .

Legal Framework

Please prepare a written analysis of the laws, with a focus on their impact on voting technologies. The overarching analytical questions and issues to consider, outlined below, are intended to provide general guidance. Please note that Analytical Questions regarding the legal framework AND other parts of the survey can be found in this section.

Summary Criteria for Assessment

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2. Is the legal framework clear and consistent	

7. What tests or certi cation of the system is legally required?	U ÊÃÃÊÊ V i À Ì ˆ w V > Ì ˆ œ ˜ Ê œ v Ê Ì … i Ê Û œ Ì ˆ ˜ } Ê Ì i V … ˜ œ • œ } Þ Ê À i µ Õ ˆ À i U ÊoÊi Ã Ê Ì … i Ê • > Ü Ê À i µ Õ ˆ À i Ê Ì … > Ì Ê > V V i « Ì > ˜ V i Ê Ì i Ã Ì ˆ ˜ } Ê Ì > Ž i Ê « U ÊoÊi Ã Ê Ì … i Ê • > Ü Ê À i µ Õ ˆ À i Ê Ì … > Ì Ê « À i ‡ i • i V Ì ˆ œ ˜ Ê Ì i Ã Ì ˆ ˜ } Ê Ì > Ž i U Ê.Ê œ Ê ˆ Ã Ê À i Ã « œ ˜ Ã ˆ L • i Ê v œ À Ê « À i ‡ i • i V Ì ˆ œ ˜ Ê Ì i Ã Ì ˆ ˜ }] Ê > ˜ ` Ê ` tests be conducted by an independent body? U ÊoÊi Ã Ê Ì … i Ê • > Ü Ê - • i } ˆ Ã • > Ì ˆ œ ˜ Ê > ˜ ` É œ À Ê Ã Õ L Ã i µ Õ i ˜ Ì Ê ` i V ˆ Ã ˆ regulations) require that pre-election testing include the following? – Testing the power-up of every machine – A simulation of likely voting orders, patterns, and ranges – Stress testing with large numbers of votes – Vote tally checking – Correct date and time information testing – Date set to election day run-throughs – Simulations of error conditions in order to evaluate system response to problems and mistakes – Reboot/restart functionality testing – Testing equipment recovery from system crashes – Testing for unexplained ashing or otherwise inconsistent or potentially suspicious behavior – Checking for complete list of candidate names, party af liations, ballot initiatives, or proposition options – Testing the use of an independent log to compare the system count and the selections made by the voter – Testing the use of an independent log to compare the paper ballots (if used) produced with the system count and the selections made by the voter – Testing of display calibration – Testing of audio ballot functionality – Testing of the security and authentication techniques used in connecting the voting machines to the network (if applicable) – Testing to ensure that the ballot information for each precinct is correct – Other (please describe) U ÊoÊÊ Ì … i Ê • i } > • Ê « À œ Û ˆ Ã ˆ œ ˜ Ã Ê À i } > À ` ˆ ˜ } Ê V i À Ì ˆ w V > Ì ˆ œ ˜] Ê Ì i meaningful accountability mechanism?
8. Please describe the election day procedures as outlined in law.	U Ê•Ê> Ã i Ê ` i Ã V À ˆ L i Ê Ì … i Ê ˆ ˜ Ì À ˆ V > V ˆ Ã Ê œ v Ê i • i V Ì ˆ œ ˜ Ê ` > Þ Ê « À o the election law and/or the rules and regulations of the EMB. Consider the following: – Poll opening and setup of all equipment (including production of zero tape, ensuring that all items are present and accounted for) – Connectivity of equipment during the course of the day (including when, why, and how long the machines are connected to a network and what security and authentication measures are in place) – The voting process – Storage of spare equipment – Poll closing procedures – Vote counting and tabulation procedures – Storage and transportation of polling place results U ÊoÊi Ã Ê Ì … i Ê • > Ü Ê À i µ Õ ˆ À i Ê Ì … > Ì Ê / Ê Ì i V … ˜ ˆ V ˆ > ˜ Ã Ê L i Ê « À i Ã i ˜ so, what are the quali cations for such technicians? U Ê.Ê > Ì Ê ˆ Ã Ê Ì … i Ê À i • > Ì ˆ œ ˜ Ã … ˆ « Ê L i Ì Ü i ˜ Ê Ã Õ V … Ê Ì i V … ˜ ˆ V ˆ > ˜ Ã

Cont. next page

TECHNOLOGY OVERVIEW

Please provide an analysis of the e-voting system in use. The overarching analytical questions and issues to consider, outlined below, are intended to provide general guidance.

SUMMARY CRITERIA FOR ASSESSMENT

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U/Ê.Êi Ê i ‡ Û œ Ì ˆ ˜ } Ê Ã Þ Ã Ì i “ Ê Ã ... œ Õ • ` Ê v Õ ˜ V Ì ˆ œ ˜ Ê V œ À À i V Ì • Þ Ê Ì ... À œ Õ } ... œ Õ Ì Ê Ì ... i Ê

14. How does the e-voting system work?	U Ê.Ê ˆ V … Ê Ì Þ « i Ã Ê œ v Ê Û œ Ì ˆ ˜ } Ê Ã Þ Ã Ì i “ Ê Ì i V … ˜ œ • œ } Þ Ê > À i Ê Õ Ã i ` – Direct recording electronic device (DRE) – Precinct count optical scan equipment – Central count optical scan equipment – Lever machines – Electronic poll book – Ballot marking devices U Ê.Ê > Ì Ê Û i À Ã ˆ œ ˜ Ê œ À Ê Û i À Ã ˆ œ ˜ Ã Ê œ v Ê > • • Ê … > À ` Ü > À i Ê > ˜ ` Ê Ã c number) are deployed in the voting system technologies, including but not limited to any version of: – Smart card devices – Firmware used in touch-screens – Vote-counting server – Other (please describe) U Ê œ Ê i Ã Ê Ì … i Ê Ã Þ Ã Ì i “ Ê « i À v œ À “ Ê À i } Õ • > À Ê V … i V Ž Ã Ê Ì œ Ê i ˜ Ã Õ À i Ê correctly? U Ê Ê

VOTER EDUCATION: PUBLIC AWARENESS, CONFIDENCE, AND VOTER ACCESSIBILITY

Please provide a written evaluation of the ef cacy and comprehensive nature of electoral education efforts, focused on the adoption of voting technologies, in all relevant regions of the country (assisted by long-term observers) and analyze the public's understanding and familiarity with the voting technologies in use. The overarching analytical questions and issues to consider, outlined below, are intended to provide general guidance.

SUMMARY CRITERIA FOR ASSESSMENT:

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Voting Operations: Security Measures and Contingency Planning

Please provide an analysis of the security and contingency plans in place for this election. The overarching analytical questions and issues to consider, outlined below, are intended to provide general guidance.

Summary Criteria for Assessment

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  and they should satisfy themselves that the technology operates correctly.
- UÊÊÃÊÃ ... œÕ•`Ê Ì>ŽiÊÃÌi«ÃÊÌœÊ«ÀiÛi˜ÌÊÕ˜>ÕÌ ... œÀˆâi`Ê ˆÌiÀviÀi˜ViÊÜˆÌ ... Ê
- U/Ê.Êi Ê i‡ÛœÌˆ˜}ÊÃÞÃÌi“ÊÃ ... œÕ•`Ê ˆ˜VÕ`iÊ>VViÃÃÊVœ˜ÌÀœ•ÃÊÃœÊÌ ... >ÌÊœ˜'
  equipment and should require effective user authentication for any action carried out. B009C009800C30088004C008

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22. Who has access to the e-voting technology, and how is access regulated and recorded?	U ÊÊ> Ãi Ê « À œ Û ˆ ` i Ê > Ê ` i Ì > ˆ • i ` Ê ` i Ã V À ˆ « Ì ˆ œ ˜ Ê œ v Ê Ì ... i Ê Ì i V ... ˜ œ • the physical security of the e-voting system before, during, and after election day, including who is allowed physical access to the equipment, what measures are taken to prevent physical tampering (i.e.

23. What measures are in place to ensure that materials and data are secure throughout the	

25. What inspection and audit procedures are in place to ensure that the system complies with speci cations?	U ÊÃÊÊ > ˜ Þ Ê œ v Ê Ì … i Ê Û œ Ì ˆ ˜ } Ê Ã Þ Ã Ì i “ Ê Ã œ v Ì Ü > À i Ê œ « i ˜ Ê Ã œ Õ À V i include information on location and availability. U Ê Ê œ Ê ˆ Ã Ê À i Ã « œ ˜ Ã ˆ L • i Ê v œ À Ê ˆ ˜ Ã « i V Ì ˆ ˜ } Ê Ì … i Ê Ã œ v Ì Ü > À i Ê Õ / system? U Ê Ê œ Ê … > Ã Ê > V V i Ã Ã Ê Ì œ Ê Ì … i Ê Ã œ v Ì Ü > À i Ê Õ Ã i ` Ê ˆ ˜ Ê Ì … ˆ Ã Ê i • i U Ê Ê i À Ê Ü … > Ì Ê V œ ˜ ` ˆ Ì ˆ œ ˜ Ã Ê ` œ i Ã Ê Ì … i Ê œ v w V ˆ > • Ê Ã œ v Ì Ü > À i Ê Please provide a detailed description of the software inspection process, including the length of time allotted for the inspection and the means of inspection. U Ê œ Ê i Ã Ê Ì … i Ê • > Ü Ê À i µ Õ ˆ À i Ê Ì … > Ì Ê Ì … i Ê À i Ã Õ • Ì Ã Ê œ v Ê Ì … i Ê œ v w public? Who has access to the results of the audit? U Ê Ê > Ì Ê Ü > Ã Ê Ì … i Ê À i Ã « œ ˜ Ã i Ê œ v Ê Ì … i Ê Ê Ì œ Ê Ì … i Ê À i Ã Õ • Ì Ã Ê Were any changes made? U Ê œ Ê i Ã Ê Ì … i Ê Ã œ v Ì Ü > À i Ê ˆ ˜ Ã « i V Ì ˆ œ ˜ Ê - i ˆ Ì … i À Ê L Þ Ê > ˜ Ê ˆ ˜ ` i « i ˜ ` i ˆ of cial organization responsible) include checking the source code against the executable code? U Ê Ê œ Ê ˆ Ã Ê À i Ã « œ ˜ Ã ˆ L • i Ê v œ À Ê V À i > Ì ˆ ˜ } Ê Ì … i Ê i Ý i V Õ Ì > L • i Ê V œ and is this process (above) subject to independent veri cation? U Ê Ê i À Ê Ü … > Ì Ê V œ ˜ ` ˆ Ì ˆ œ ˜ Ã Ê > À i Ê ˆ ˜ ` i « i ˜ ` i ˜ Ì Ê Ã œ v Ì Ü > À i Ê ˆ ˜ Ã « i V representatives of political parties and civil society) conducted? Please provide a detailed description of the inspection process, including the length of time allotted for the inspection and the tools that inspectors are allowed to use. U Ê œ Ê i Ã Ê Ì … i Ê • > Ü Ê Ã « i V ˆ v Þ Ê Ü … i Ì … i À Ê ˆ ˜ ` i « i ˜ ` i ˜ Ì Ê Ã œ v Ì Ü > À i Ê ˆ conducted by a guided walk-through, such as on an LCD screen with the mouse controlled by an election of cial, or by a hands-on review? U Ê À Ê Ì … i À i Ê > ˜ Þ Ê V œ ˜ ` ˆ Ì ˆ œ ˜ Ã Ê V ˆ Û ˆ • Ê Ã œ V ˆ Ì Þ Ê > ˜ ` Ê « œ • ˆ Ì ˆ V > must ful ll in order to be allowed to conduct a software review? U Ê > Ê Ü i Ê Ì … i Ê V ˆ Û ˆ • Ê Ã œ V ˆ Ì Þ Ê > ˜ ` Ê « œ • ˆ Ì ˆ V > • Ê « > À Ì Þ Ê À i « À i Ã i ˜ results of their software review? What are their technical quali cations?
26. What contingency plans have been made, and have they been appropriately disseminated?	U Ê Ê > Ì Ê V œ ˜ Ì ˆ ˜ } i ˜ V Þ ‡ « • > ˜ ˜ ˆ ˜ } Ê Ì À > ˆ ˜ ˆ ˜ } Ê ˆ Ã Ê ˆ ˜ Ê « • > V i Ê v œ À Ê « describe and attach any pertinent information. U Ê Ê > Ì Ê V œ ˜ Ì ˆ ˜ } i ˜ V Þ Ê « • > ˜ Ã Ê > À i Ê ˆ ˜ Ê « • > V i Ê ˆ ˜ Ê V > Ã i Ê œ v Ê Ì i V . election day? U Ê Ê > Ì Ê « • > ˜ Ã Ê > À i Ê ˆ ˜ Ê « • > V i Ê v œ À Ê Ì À > ˆ ˜ ˆ ˜ } Ê « œ • • ˆ ˜ } Ê œ v w V ˆ procedures? Please describe and attach any pertinent information. U Ê œ Ê Ü Ê ` œ Ê « œ • • ˆ ˜ } Ê « • > V i Ã Ê > ˜ ` Ê V i ˜ Ì À > • Ê œ v w V i Ã Ê V œ “ “ Õ ˜ ˆ V technical issues with equipment or external emergencies, such as power outages, telecommunications failure, etc. Is there a hotline number available for polling staff to call? Who staffs the response center? U Ê Ê > Ì Ê … > « « i ˜ Ã Ê ˆ v Ê > Ê “ > V … ˆ ˜ i Ê ˆ Ã Ê v œ Õ ˜ ` Ê Ì œ Ê … > Û i Ê L i i ˜ Ê describe any contingency plans that may be in place for such an event. U Ê Ê > Ì Ê V œ ˜ Ì ˆ ˜ } i ˜ V Þ Ê « • > ˜ Ã Ê > À i Ê ˆ ˜ Ê « • > V i Ê ˆ ˜ Ê Ì … i Ê i Û i ˜ Ì Ê œ v tabulating computer? Please describe.

Cont. next page

27. What measures are in place to ensure that the system is independently veri able?	U ÊÀÃi Ê Ì … i À i Ê « À œ V i ` Õ À i Ã Ê ˆ ˜ Ê « • > V i Ê Ì … > Ì Ê i ˜ V œ Õ À > } i Ê ˆ ˜ ` i « the transmission of data, such as printing of polling place election results prior to transmission to the central tabulating computer, which can then be compared to the nal or interim results? U ÊvÊÈ Ì … i À i Ê > À i Ê « À ˆ ˜ Ì œ Õ Ì Ã Ê œ v Ê Ì … i Ê À i Ã Õ • Ì Ã Ê > Ì Ê Ì … i Ê « œ • Who is designated to receive copies of the results? Is there any local promulgation of the results, such as a sign on the wall at the polling center?

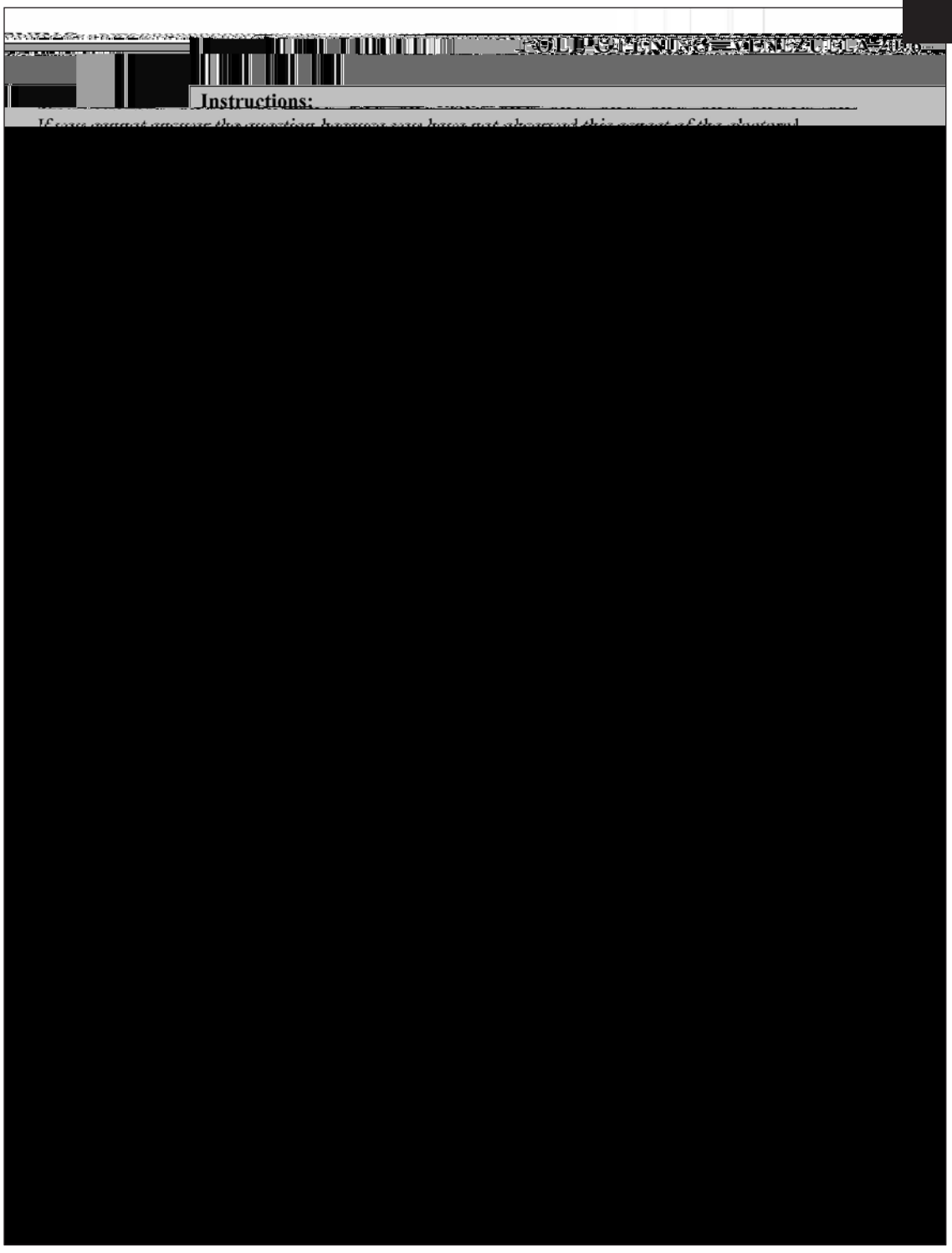
Cont. next page

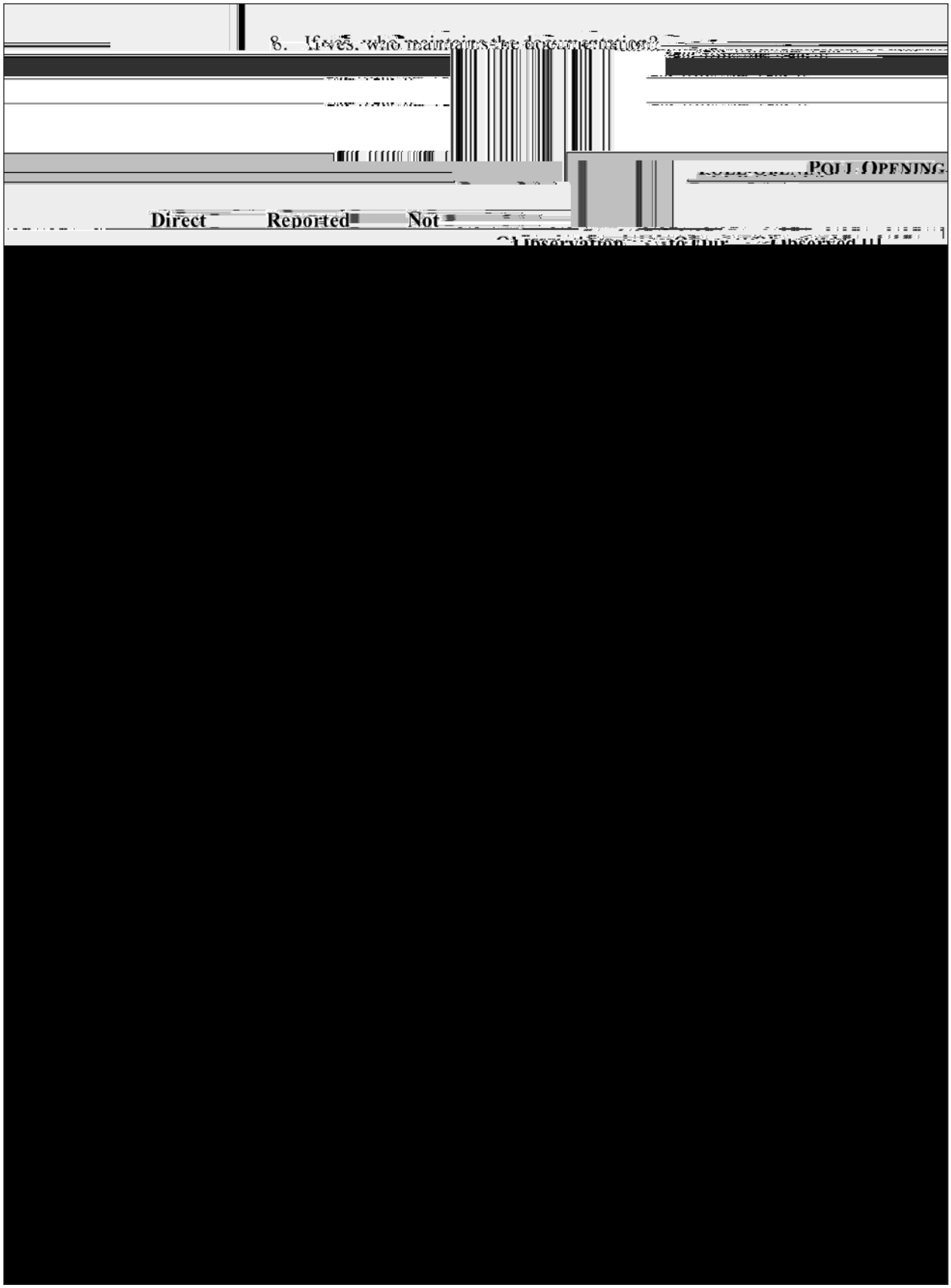
30. What pre-election tests, including acceptance testing, mock elections, etc., are required, and what do they include?	U Êœ Ê i Ã Ê Ì … i Ê Ã Ì > Ì i Ê … > Û i Ê À i V œ “ “ i ˜ ` ` i ` Ê « À œ V i ` Õ À i Ã Ê v œ À Ê Ì … each type of election equipment? If so, please describe these procedures and attach any supporting documentation. U Ê Ê > Ì Ê ˆ Ã Ê Ì … i Ê Ì ˆ “ i Ì > L • i Ê v œ À Ê « À i ‡ i • i V Ì ˆ œ ˜ Ê Ì i Ã Ì Ã] Ê > ˜ ` ` Ê Ü (in a central location, provincial locations, or elsewhere)? Please provide further details and any relevant documentation. U Ê œ Ê Ü Ê “ > ˜ Þ Ê “ > V … ˆ ˜ i Ã Ê > À i Ê Ì i Ã Ì i ` ¶ Ê * • i > Ã i Ê « À œ Û ˆ ` ` i Ê ` i Ì > ˆ • Á method used to conduct the pre-election tests. U Ê Ê œ Ê ` i Ã ˆ } ˜ Ã Ê > ˜ ` ` Ê Ü … œ Ê V œ ˜ ` Õ V Ì Ã Ê Ì … i Ê « À i ‡ i • i V Ì ˆ œ ˜ Ê Ì i Á U Ê Ã Ê Ê i µ Õ ˆ « “ i ˜ Ì Ê Ì œ Ê L i Ê À i Ì i Ã Ì i ` Ê > v Ì i À Ê i Û i À Þ Ê Õ « } À > ` i Ê > ˜ ` Ê U Ê Ê > Ã i Ê > Ì Ì > V … Ê > ˜ Þ Ê À i • i Û > ˜ Ì Ê ` œ V Õ “ i ˜ Ì > Ì ˆ œ ˜ Ê œ Õ Ì • ˆ ˜ ˆ ˜ } Ê Ì procedures for pre-election testing. U Ê Ê > Ã i Ê ` i Ã V À ˆ L i Ê Ì … i Ê > V V i « Ì > ˜ V i Ê Ì i Ã Ì ˆ ˜ } Ê « À œ V i Ã Ã] Ê ˆ ˜ V • conditions under which the tests are conducted, who is responsible for the testing, who designs the testing, how often/when testing occurs, who pays for acceptance testing, and what was done with machines that did not meet speci cations. U Ê Ã Ê Ê Ì … i À i Ê > ˜ Ê i Ý « i V Ì i ` Ê v > ˆ • Õ À i Ê À > Ì i Ê œ v Ê “ > V … ˆ ˜ i Ã Ê ` Õ À ˆ U Ê À Ê Ê “ œ V Ž Ê i • i V Ì ˆ œ ˜ Ê i Ý i À V ˆ Ã i Ã Ê À i µ Õ ˆ À i ` Ê L Þ Ê • > Ü ¶ Ê U Ê i Ê À i Ê Ì … i Ê i • i V Ì ˆ œ ˜ Ê Ã ˆ “ Õ • > Ì ˆ œ ˜ Ê i Ý i À V ˆ Ã i Ã Ê > ˜ Ê œ Û i À > • • Ê Ã issues revealed? U Ê Ê > Ì Ê v > ˆ • Õ À i Ã Ê œ À Ê L À i > Ž ` œ Ü ˜ Ã] Ê ˆ v Ê > ˜ Þ] Ê œ V V Õ À À i ` ¶ Ê U Ê Ê > Ì Ê « i À V i ˜ Ì > } i Ê œ v Ê L > • • œ Ì Ã Ê Ü i À i Ê À i • i V Ì i ` Ê œ À Ê Ã « œ ˆ • i U Ê Ê Ê Ì … i Ê i Ý i À V ˆ Ã i Ê ˆ ˜ V • Õ ` i Ê Ì À > ˜ Ã “ ˆ Ã Ã ˆ œ ˜ Ê œ v Ê À i Ã Õ • Ì Ã Ê Ì œ what was the transmission time? U Ê Ê > Ì Ê > Ã « i V Ì Ã Ê œ v Ê Ì … i Ê i Ý i À V ˆ Ã i Ã Ê ` i Û ˆ > Ì i ` Ê v À œ “ Ê V œ ˜ ` ˆ polling station? Were expert technicians on hand to help resolve technical hiccups? Was the roster of mock voters cherry-picked from relatively educated people? How many mock voters took part? The same as at an average polling station? Were they instructed to come at staggered times? U Ê Ê > Ì Ê Ü > Ã Ê Ì … i Ê « Õ À « œ Ã i Ê œ v Ê Ì … i Ê “ œ V Ž Ê i • i V Ì ˆ œ ˜ ¶ Ê œ ˜ Á – To conduct a real live- re test – To carry out a test in a limited and controlled environment from which some lessons might still be drawn – Voter education U Ê Ê i Ê À i Ê « œ • • ˆ ˜ } Ê œ v w V ˆ > • Ã Ê > ˜ ` Ê Û œ Ì i À Ã Ê Ã Þ Ã Ì i “ > Ì ˆ V > • • Þ Ê ˆ ˜ ˜ observations and inputs on the process and how it could be improved?

Voting Operations: Election Day Procedures	

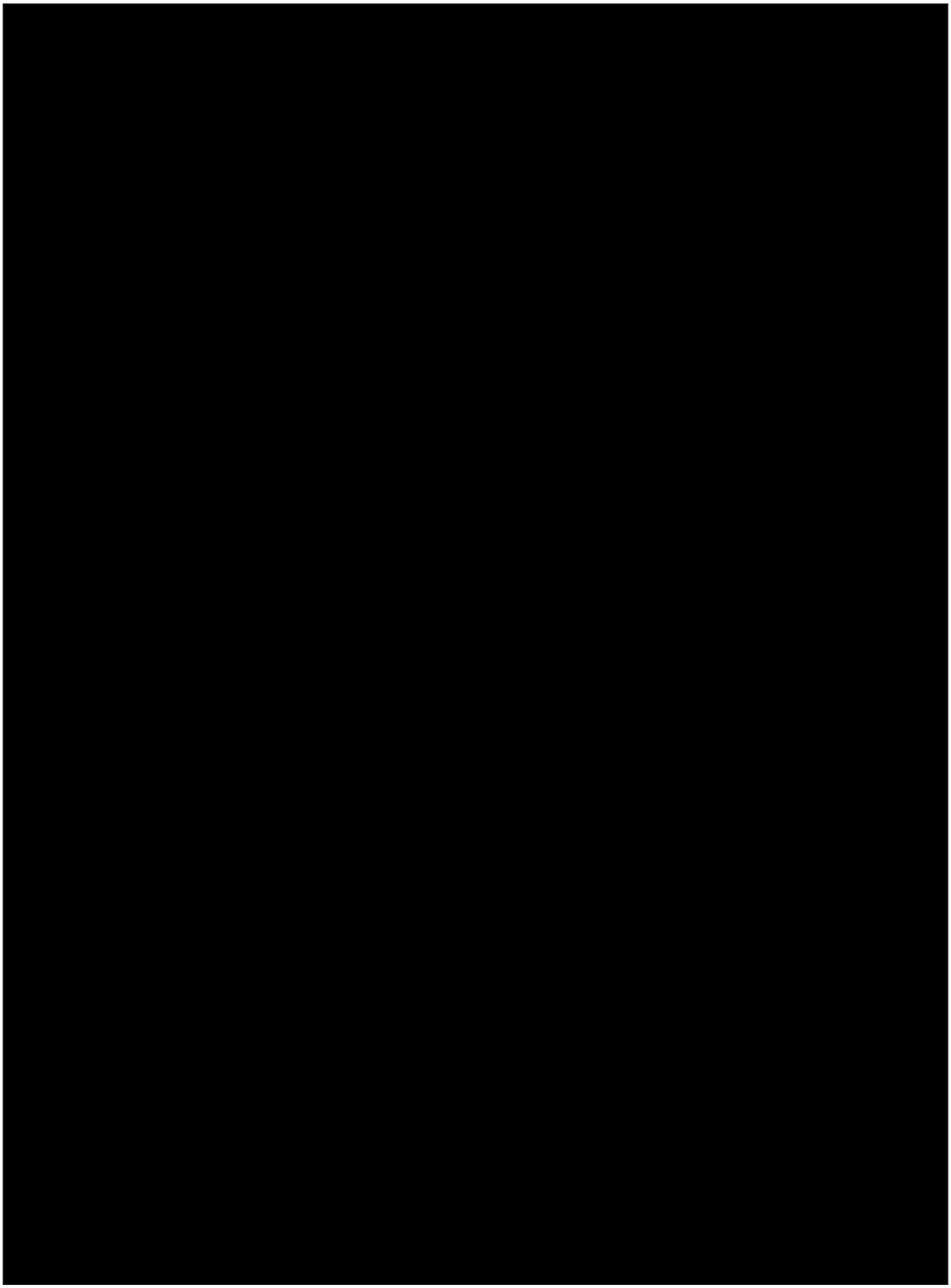
Vote Counting and Dispute Resolution: Counting, Tabulation, Audits, and Recounts

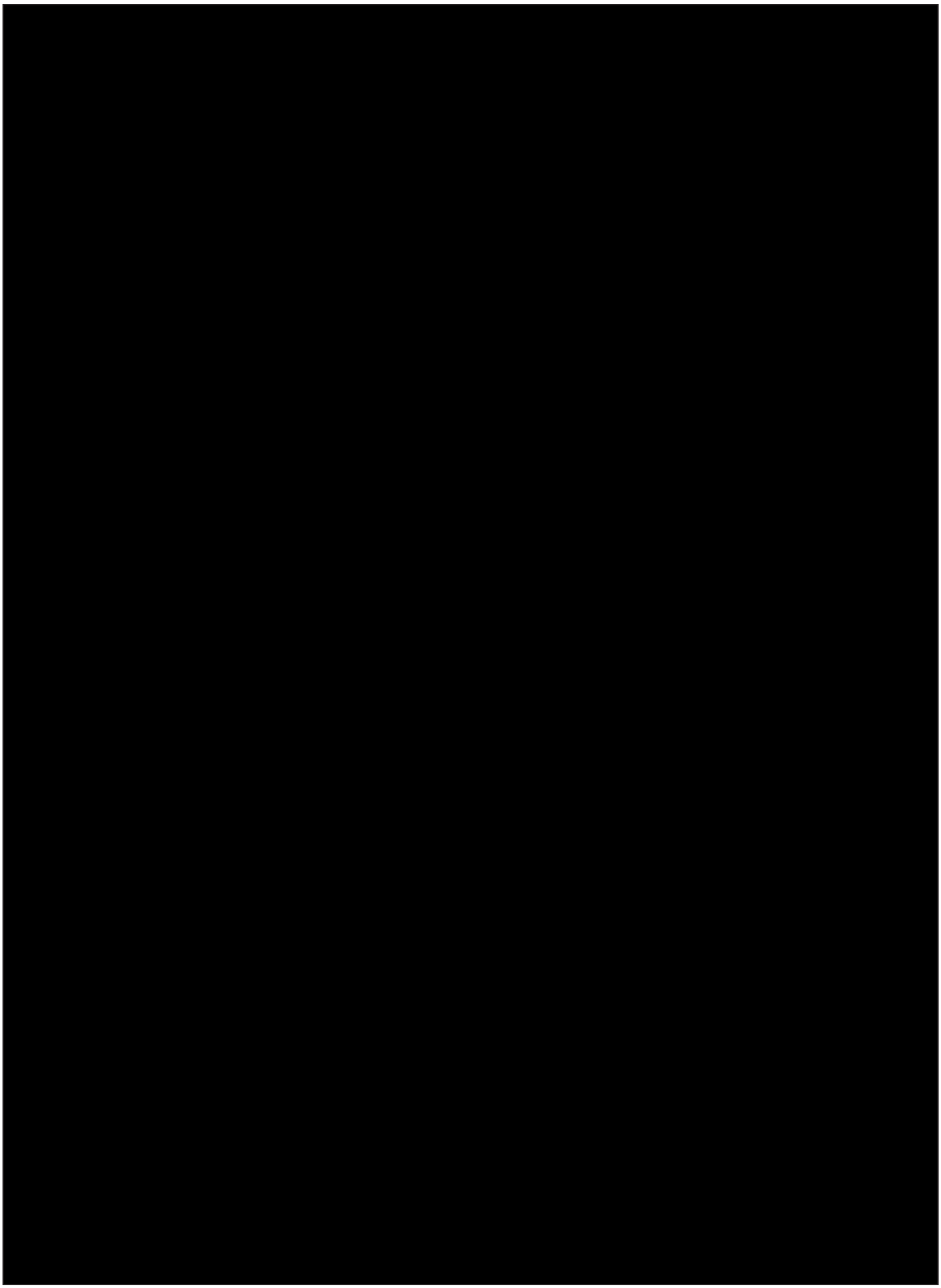
35. Does the counting process protect fundamental rights?	U Ê>Ê Ê > Ê V > Ã Ì Ê L > • • œ Ì Ê L i Ê • ˆ ˜ Ž i ` Ê Ì œ Ê > Ê Û œ Ì i À Ê ` Õ À ˆ ˜ } Ê Ì ... i Ê U Ê.Ê > Ì Ê “ i > Ã Õ À i Ã Ê > À i Ê ˆ ˜ Ê « • > V i Ê Ì œ Ê i ˜ Ã Õ À i Ê Ì ... i Ê > V V Õ À > V Þ prevent tampering with the results? U ÊÀÊi Ê Ì ... i Ê À i Ã Õ • Ì Ã Ê Ì œ Ê L i Ê À i • i > Ã i ` Ê ˆ ˜ Ê > Ê Ì ˆ “ i • Þ Ê “ > ˜ ˜ i À ¶ Ê U ÊÀÊi Ê Ì ... i Ê À i Ã Õ • Ì Ã Ê Ì œ Ê L i Ê « Õ L • ˆ V • Þ Ê « œ Ã Ì i ` ¶ Ê U ÊÃÊÊ Ì ... i Ê V œ Õ ˜ Ì ˆ ˜ } Ê « À œ V i Ã Ã Ê œ « i ˜ Ê Ì œ Ê œ L Ã i À Û > Ì ˆ œ ˜ ¶ Ê U ÊÀÊi Ê œ L Ã i À Û i À Ã] Ê V > ˜ ` ˆ ` > Ì i Ã] Ê > ˜ ` Ê Ì ... i ˆ À Ê > } i ˜ Ì Ã Ê } ˆ Û i ˜ Ê V œ protocol?
36. How are results transmitted and tabulated?	U Ê.Ê > Ì Ê ˆ Ã Ê Ì ... i Ê « À œ V i ` Õ À i Ê v œ À Ê Ì ... i Ê Ì À > ˜ Ã “ ˆ Ã Ã ˆ œ ˜ Ê œ v Ê À U ÊÀÊi Ê Ì ... i À i Ê Ã i « > À > Ì i Ê Ì À > ˜ Ã “ ˆ Ì Ì > • Ê « > Ì ... Ã Ê v œ À Ê Õ ˜ œ v w V ˆ > •
37. What is the process for conducting postelection audits?	U Ê.Ê > Ì Ê > À i Ê Ì ... i Ê « À œ V i ` Õ À i Ã Ê v œ À Ê > Ê « œ Ã Ì i • i V Ì ˆ œ ˜ Ê > Õ ` ˆ Ì ¶ U ÊvÊÊ Ì ... i Ê > Õ ` ˆ Ì Ê ˆ Ã Ê V œ ˜ ` Õ V Ì i ` Ê œ ˜ Ê > Ê Ã > “ « • i Ê œ v Ê “ > V ... ˆ ˜ i Ã ] created (e.g., with dice, computer algorithms)? U Ê.Ê i ˜ Ê ` œ i Ã Ê Ì ... i Ê « œ Ã Ì i • i V Ì ˆ œ ˜ Ê > Õ ` ˆ Ì Ê œ V V Õ À Ê À i • > Ì ˆ Û i Ê Ì œ results? U ÊÀÊi Ê Ì ... i Ê « Õ L • ˆ V ] Ê « > À Ì Þ Ê > } i ˜ Ì Ã ] Ê > ˜ ` Ê œ L Ã i À Û i À Ã Ê > • • œ Ü i ` postelection audit? U ÊÃÊÊ « Õ L • ˆ V Ê ˜ œ Ì ˆ w V > Ì ˆ œ ˜ Ê } ˆ Û i ˜ Ê œ v Ê Ì ... i Ê Ì ˆ “ i Ê > ˜ ` Ê « • > V i Ê œ and if so, how? U Ê.Ê > Ì Ê « i À Ã œ ˜ ˜ i • Ê V œ ˜ ` Õ V Ì Ê > Ê « œ Ã Ì i • i V Ì ˆ œ ˜ Ê > Õ ` ˆ Ì ¶ Ê U ÊvÊÊ > Ê ` ˆ Ã V À i « > ˜ V Þ Ê ˆ Ã Ê À i Û i > • i ` Ê L Þ Ê > Ê « œ Ã Ì i • i V Ì ˆ œ ˜ Ê > Õ ` ˆ results — original or audited — take precedence?

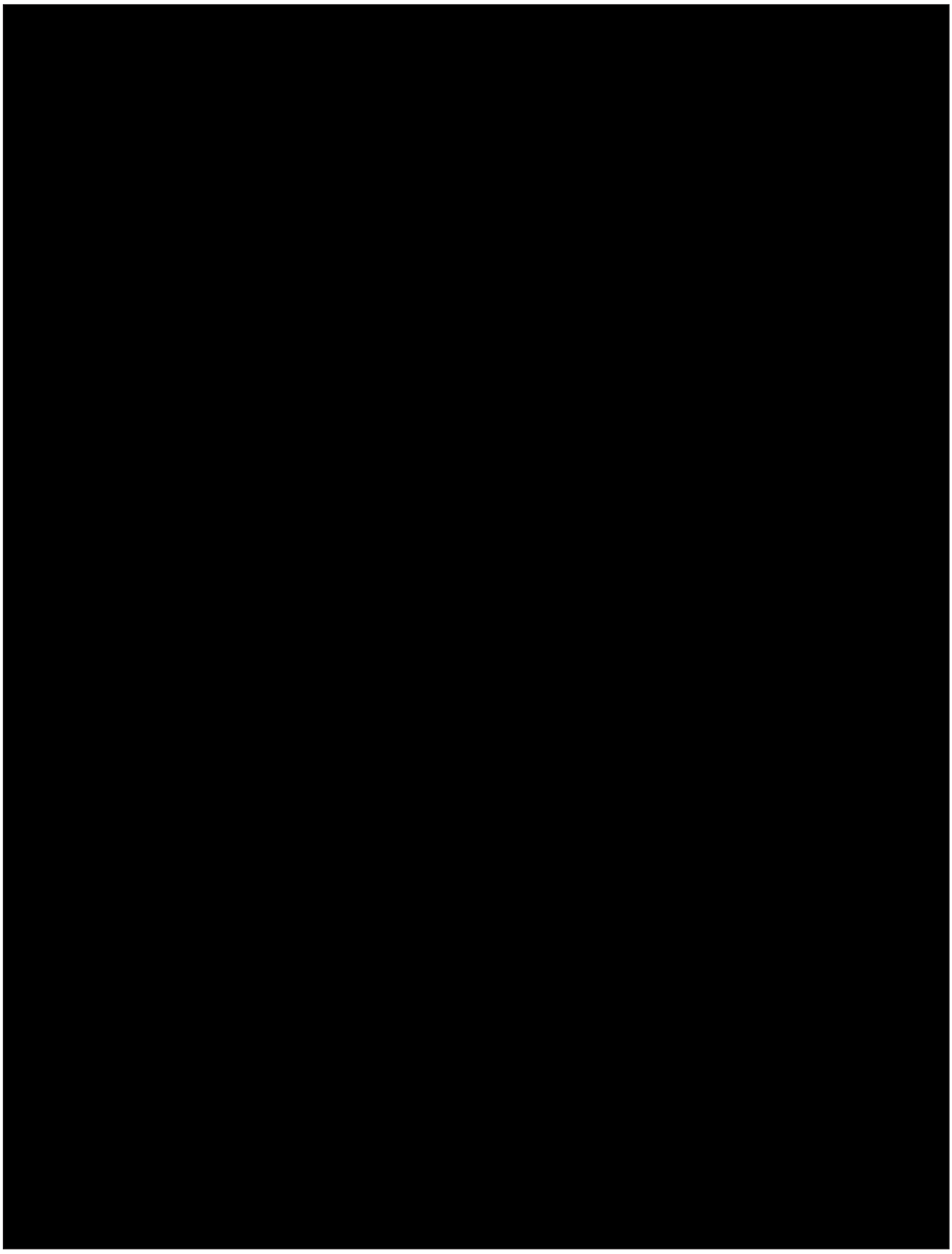

Instructions:

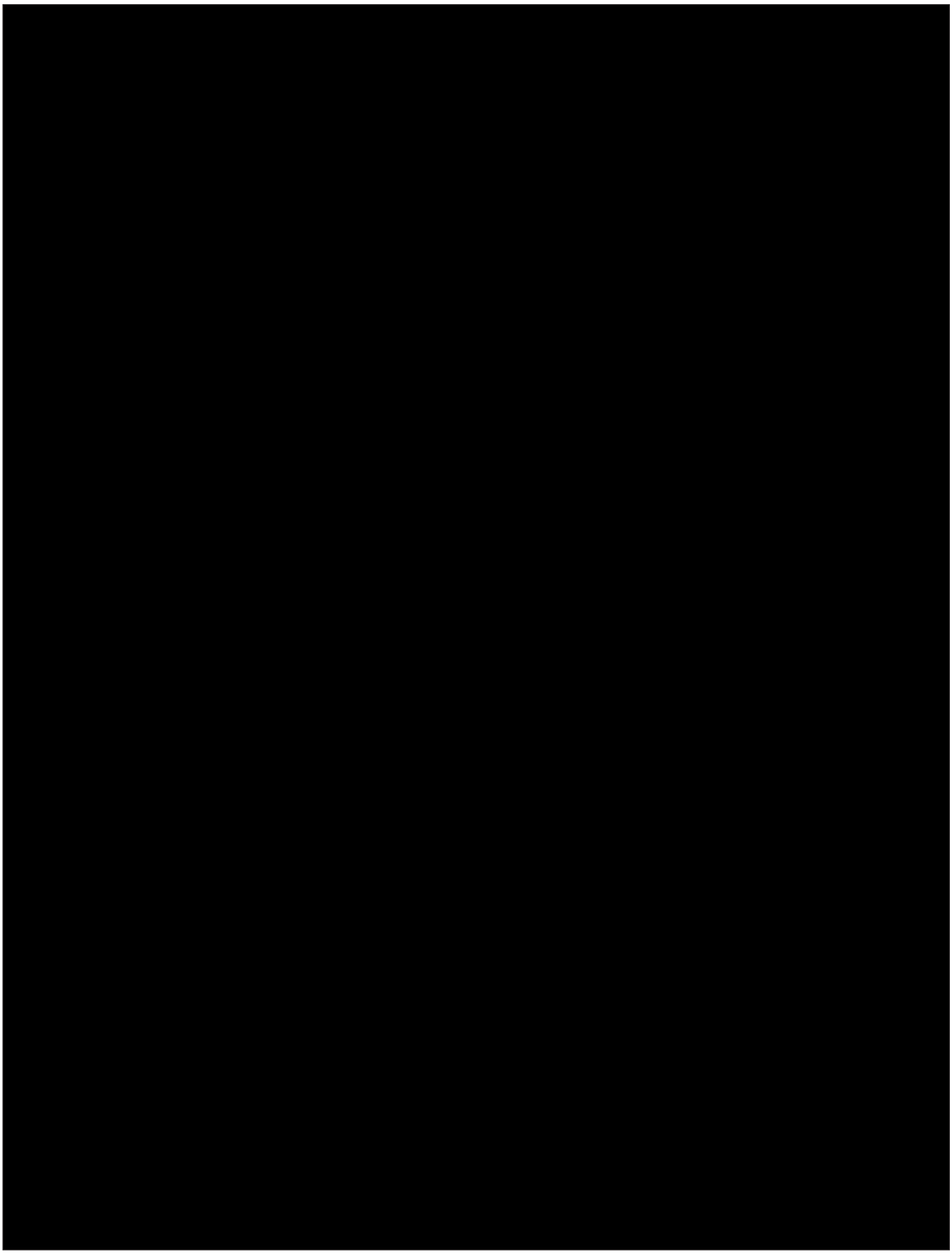

8. If yes, who maintains the documentation?
POLL OPENING
Direct
Reported
Not

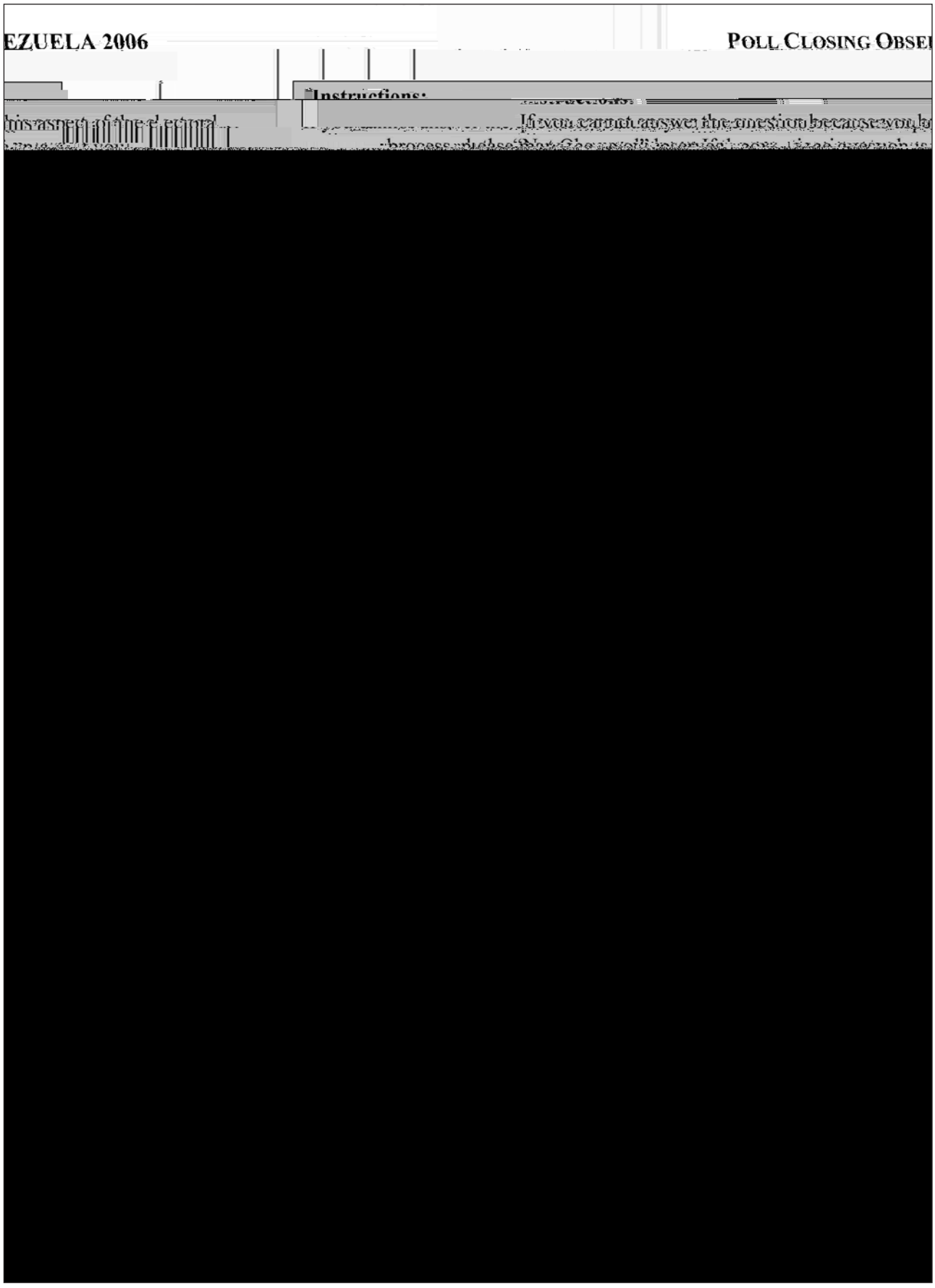

in, did each machine produce a Yes No Yes No 14. Befo
CERO")
zero
each machine as it was opened and prepared for the
election?

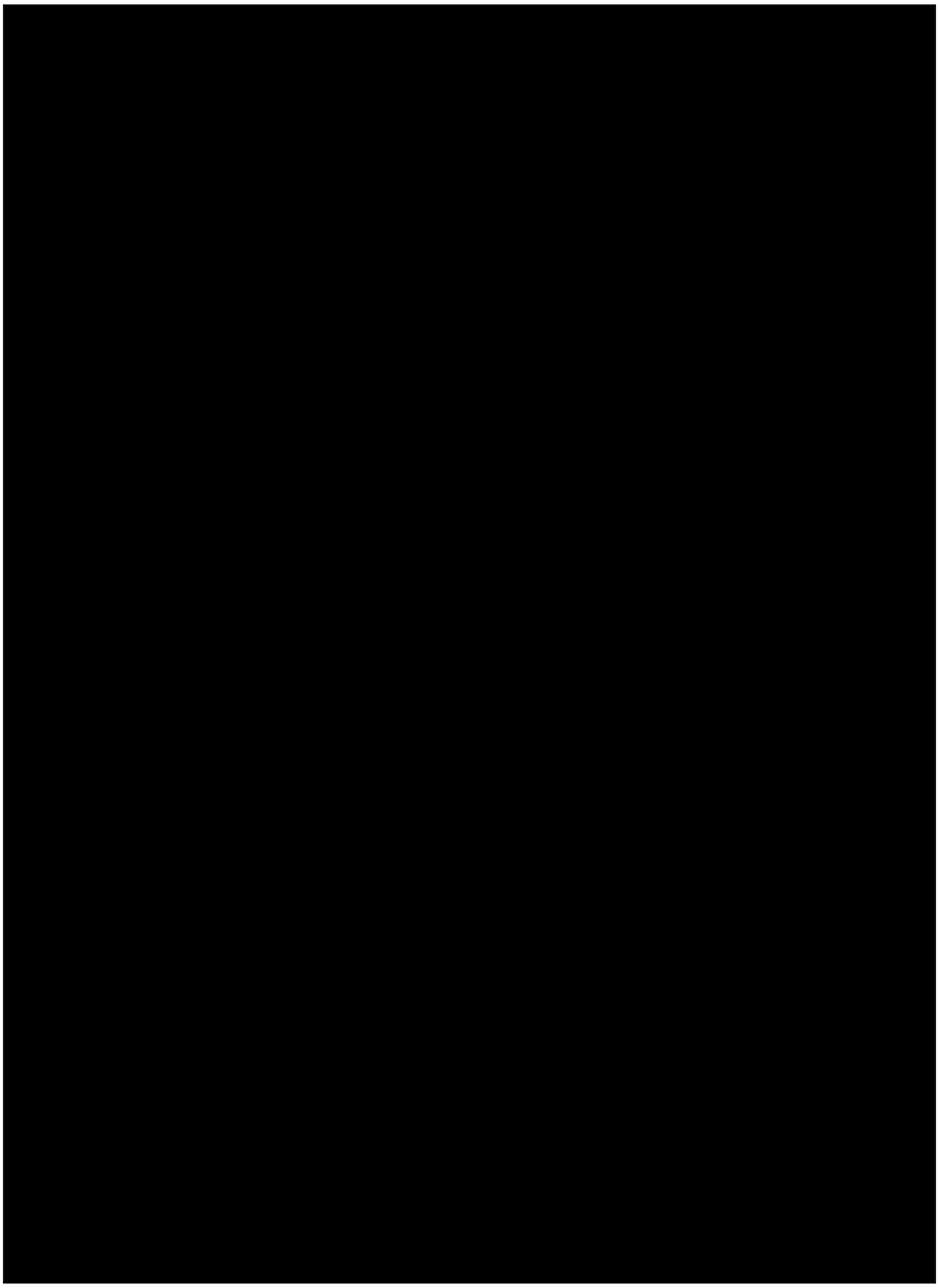


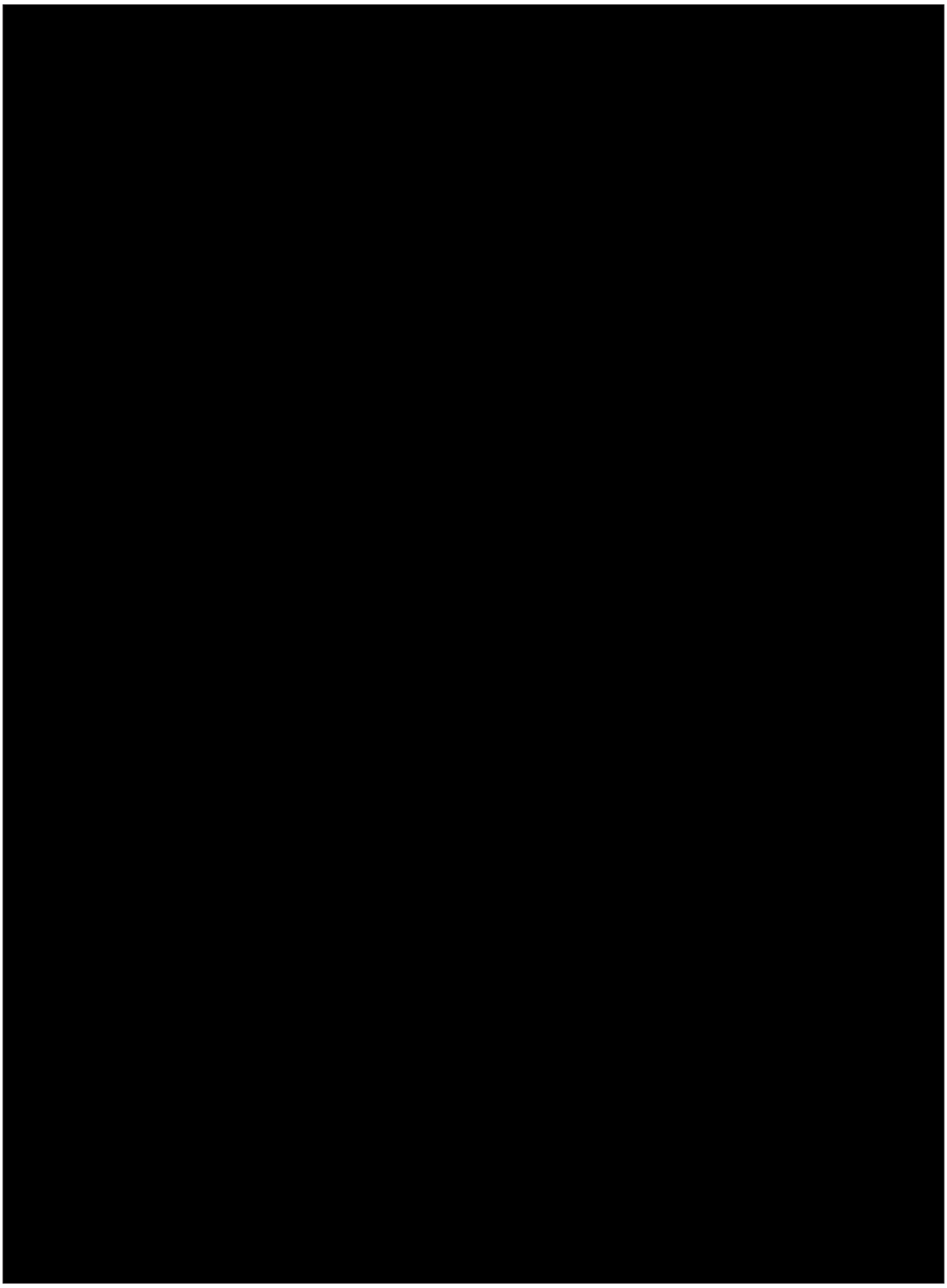






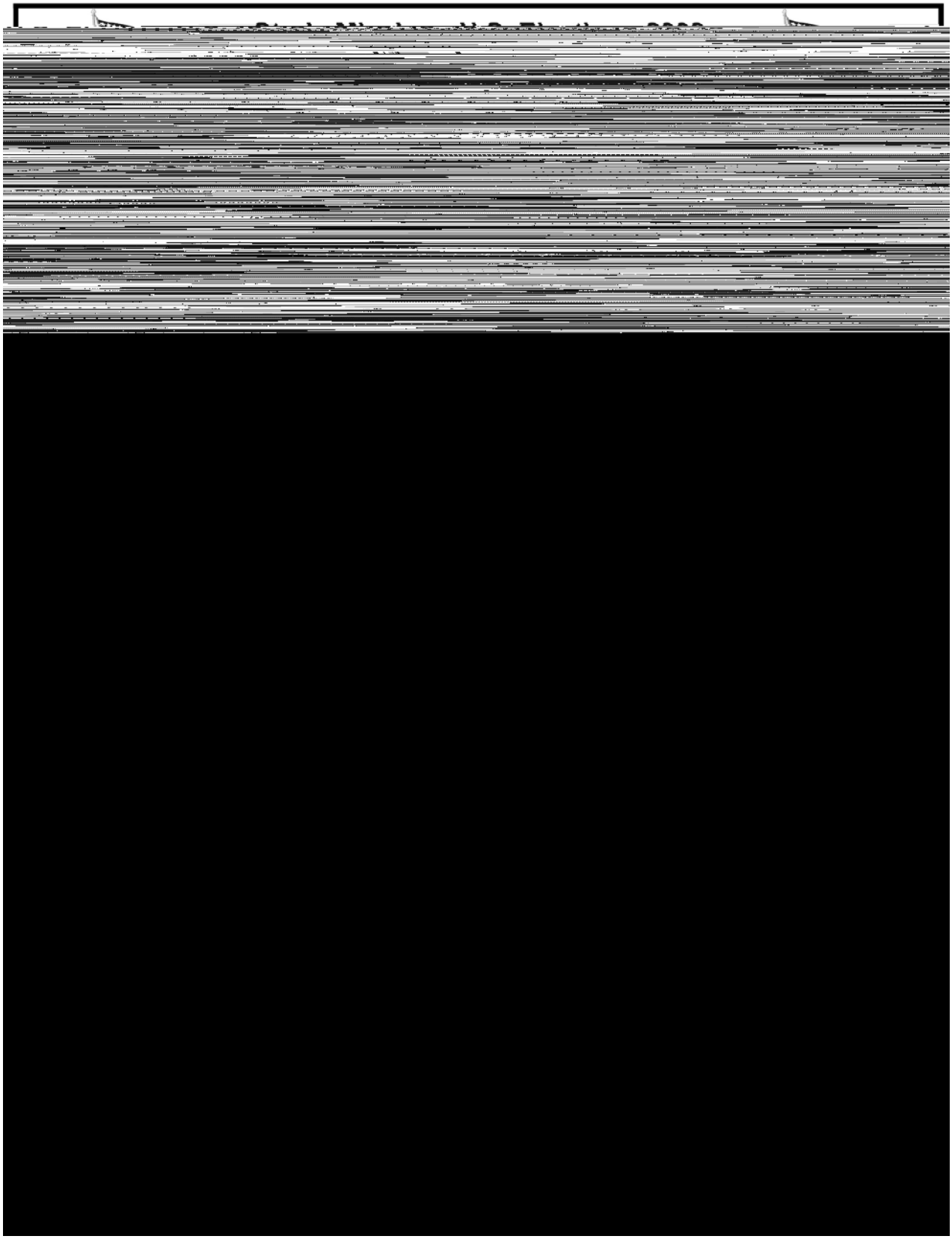

EZUELA 2006
POLL CLOSING OBSE
Instructions:

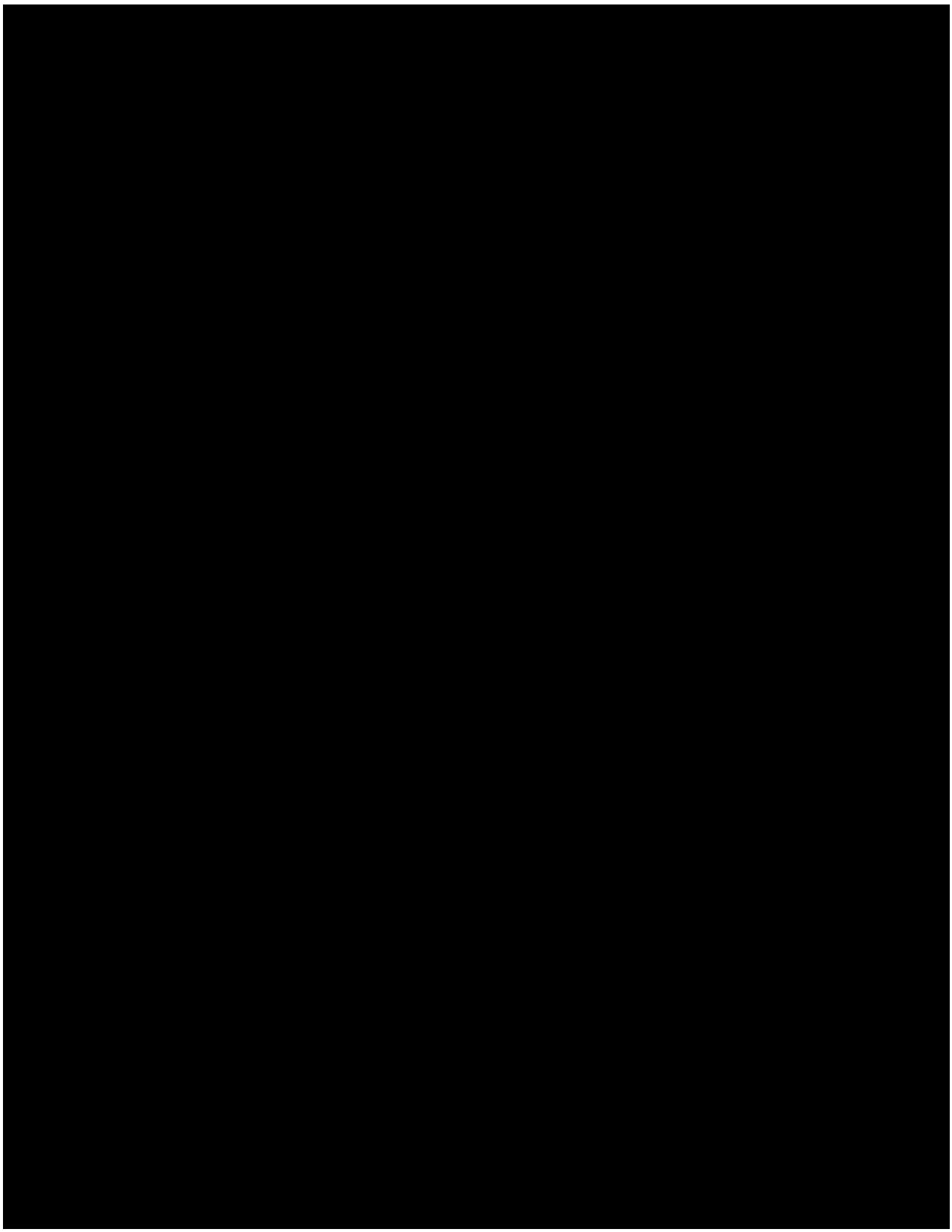


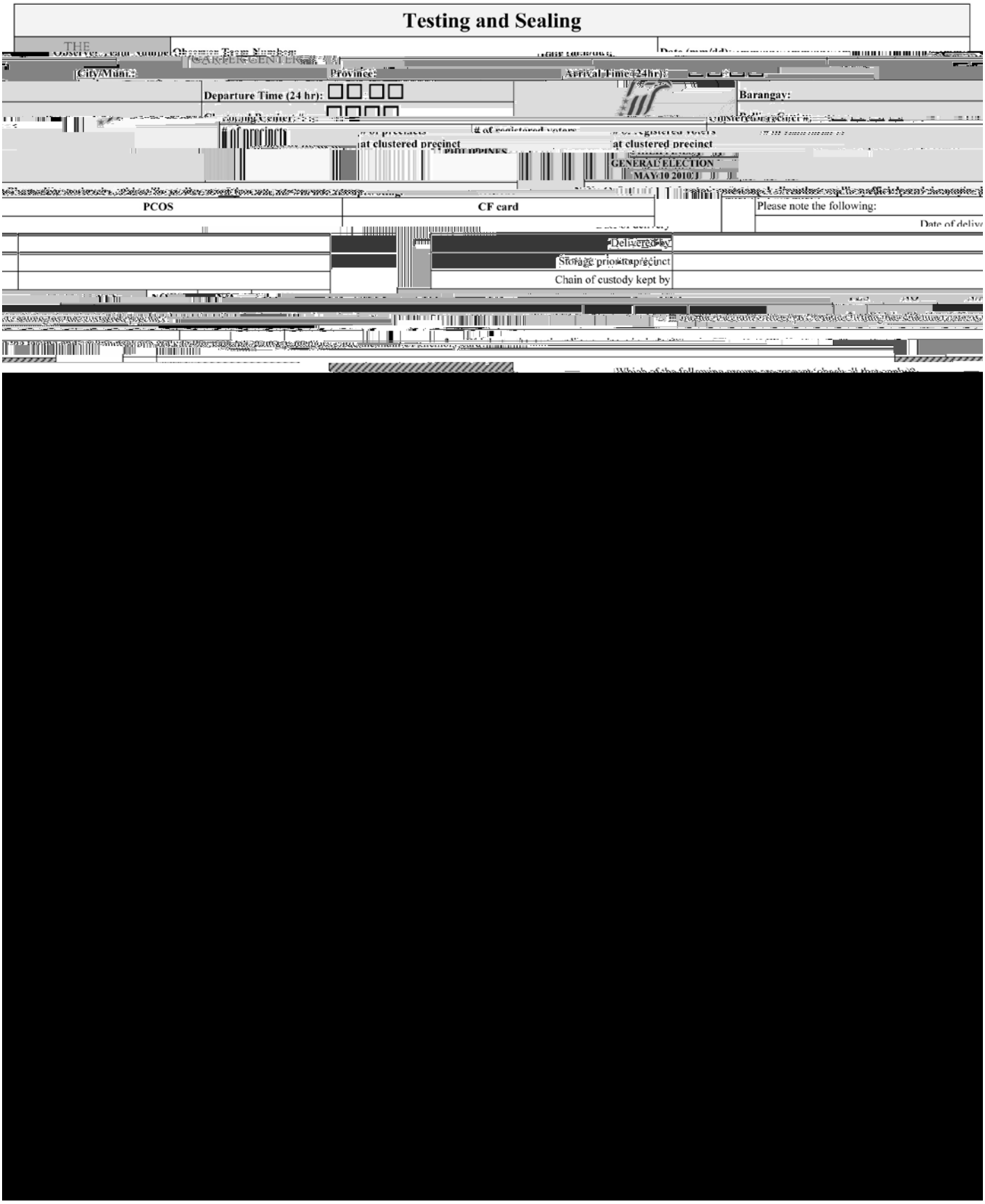


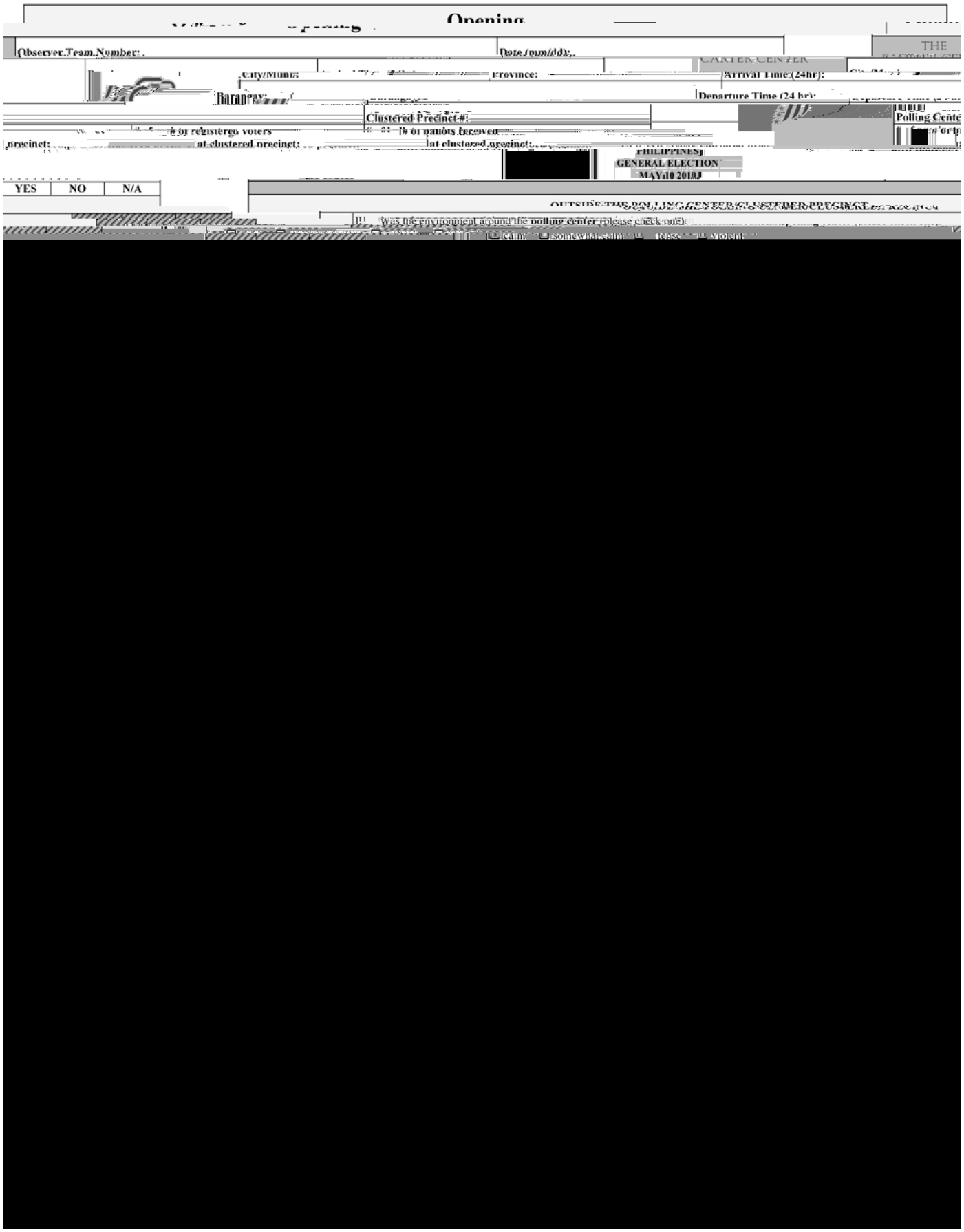
began?

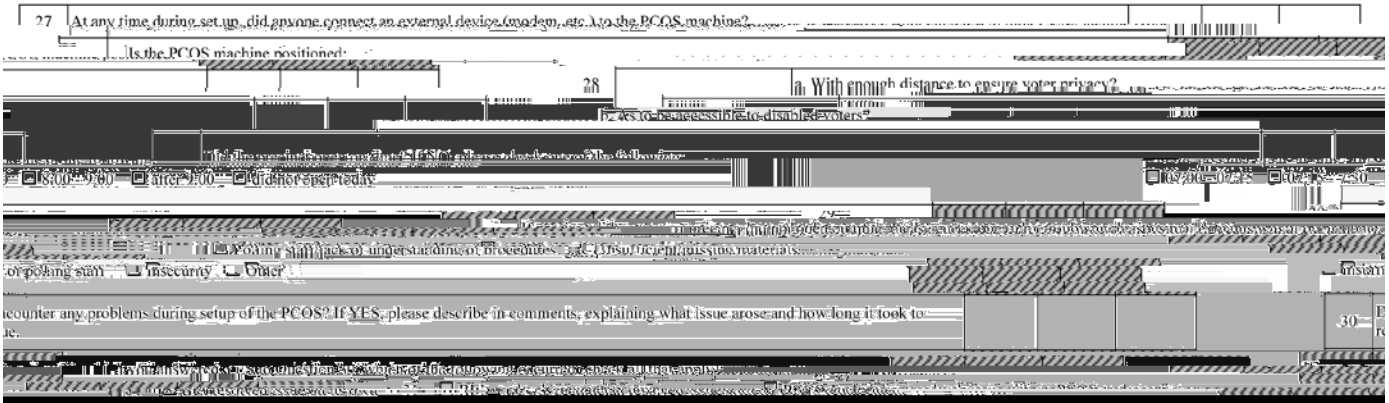
as

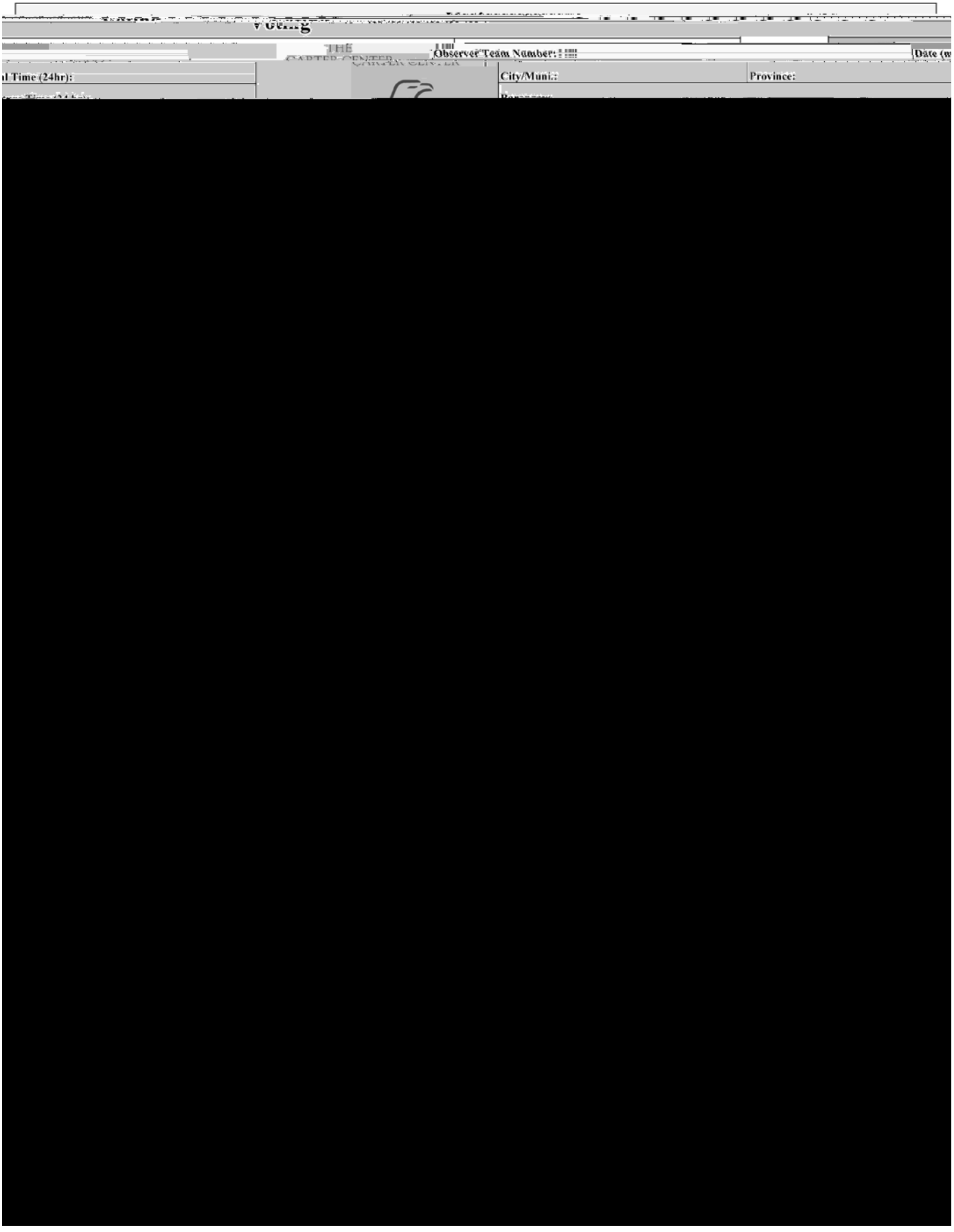





Testing and Sealing
City/Muni:
Province:
Arrival Time (24 hr):
Departure Time (24 hr):
Barangay:
# of precincts
at clustered precinct
# of registered voters
at clustered precinct
PHILIPPINES
GENERAL ELECTION
MAY 10 2010
PCOS
CF card
Please note the following:
Delivered by
Storage prior to precinct
Chain of custody kept by


Opening
Observer Team Number:
Date (mm/dd):
THE
CARTER CENTER
City/Muni:
Province:
Arrival Time (24hr):
Barangay:
Departure Time (24 hr):
Clustered Precinct #:
Polling Cente
# of registered voters
# of ballots received
precinct:
at clustered precinct:
at clustered precinct:
PHILIPPINES
GENERAL ELECTION
MAY10 2010
YES
NO
N/A
OUTSIDE THE POLLING CENTER/CLUSTERED PRECINCT
Was the environment around the polling center (please check one):
Calm
Somewhat calm
Tense
Violent


27
At any time during set up, did anyone connect an external device (modem, etc.) to the PCOS machine?
Is the PCOS machine positioned:
28
a. With enough distance to ensure voter privacy?
b. As to be accessible to disabled voters?
8:00 – 9:00
after 9:00
did not open ready
Voting staff lack of understanding of procedures
Insufficient supplies/materials
of polling staff
Insecurity
Other
ncounter any problems during setup of the PCOS? If YES, please describe in comments, explaining what issue arose and how long it took to
ue.
30

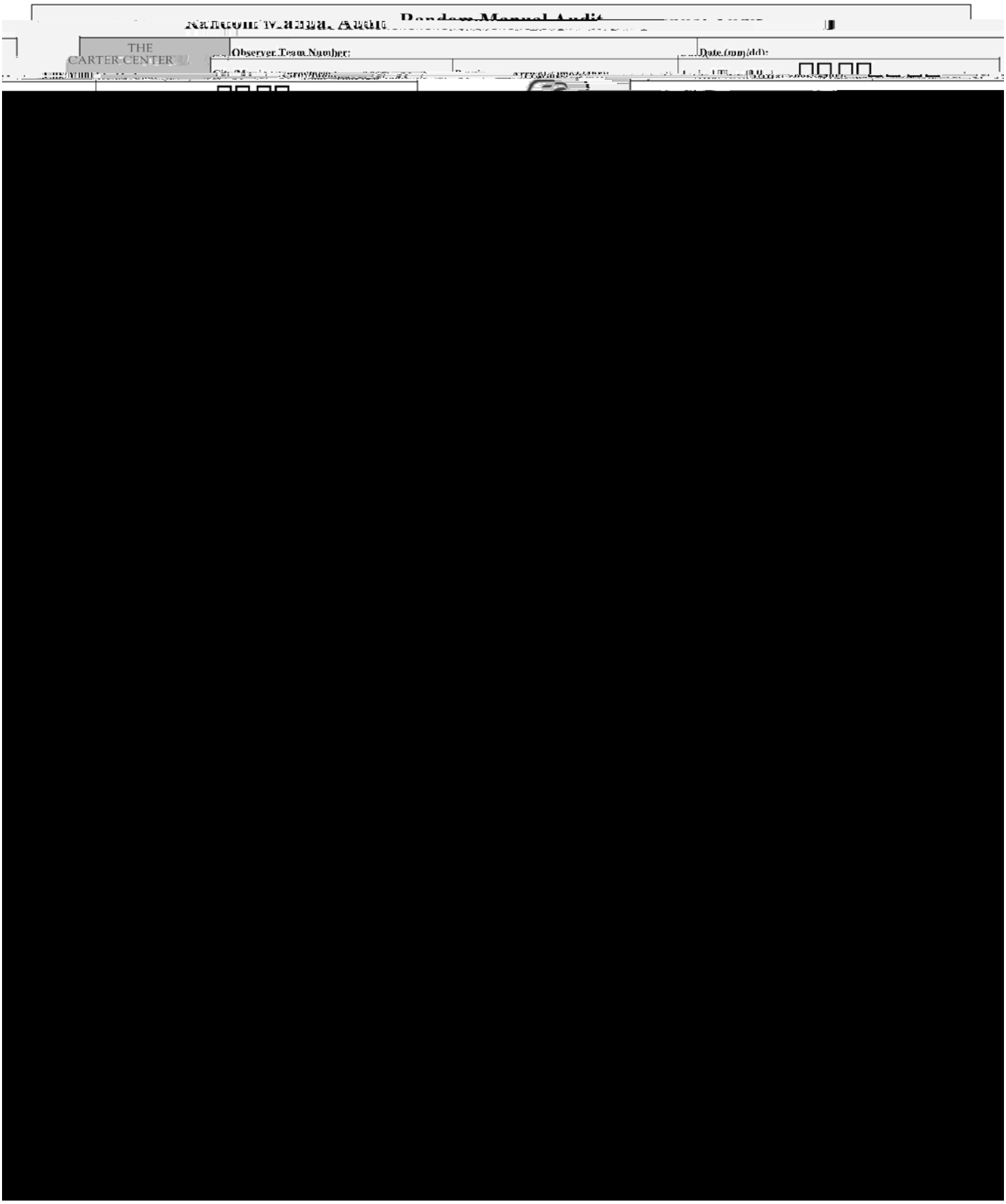

Observer Team Number:
City/Muni.:
Province:

	f. Other _____:					
24.	Does the BEI explain to voters how to handle returned ballots?					

[redacted]

OFFICIAL COMPLAINTS			
31	Were any objections or complaints related to the closing of the PCOS machines reported to BEI staff?		
32	If yes, provide a copy of the complaint(s) received and BEI's response to these complaints.		

[redacted]


Observer Team Number:
Date (mm/dd):

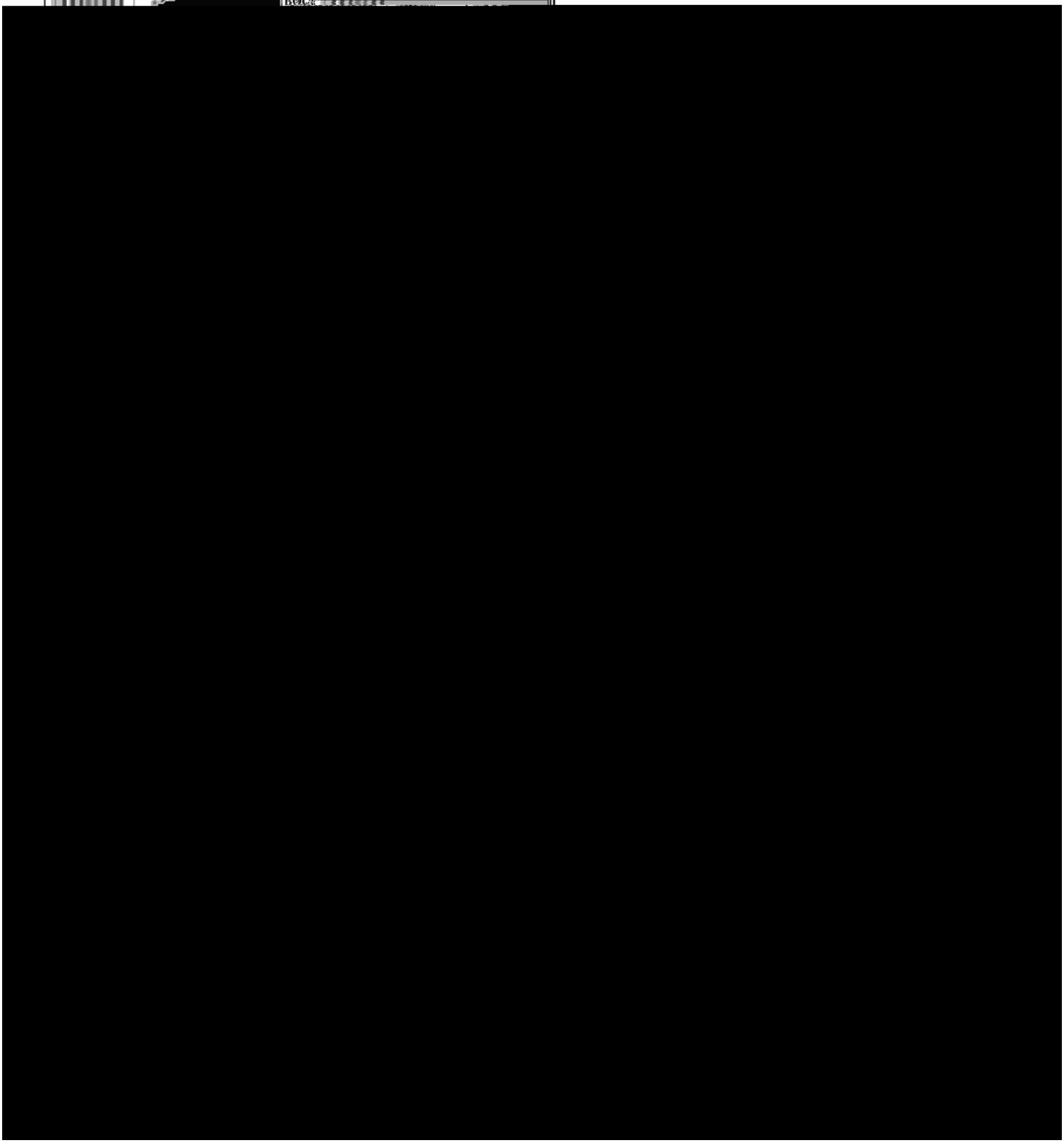
Board of Canvassers

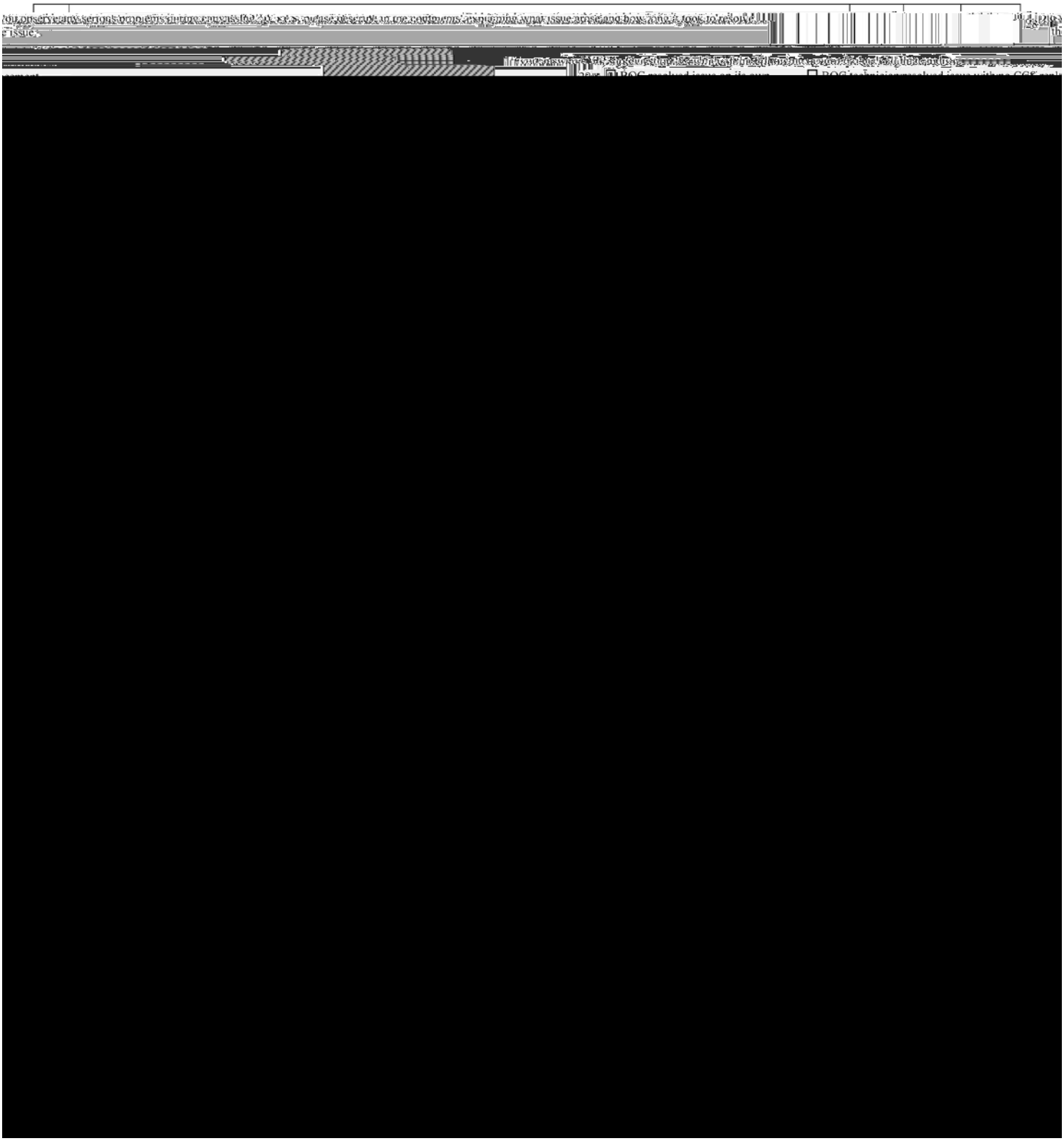
THE CARTER CENTER

City/Muni.:

Province:

Arrival Time (24hr): ☐☐:☐☐





of countries around the world.[110] On the one hand, these technologies[111] have the potential to facilitate and improve electoral processes and are adopted for a number of reasons, including the perceived advantages in increasing voter access, the possibility of decreased costs (in the long term), facilitation of the conduct of simultaneous or complex elections, earlier announcement of results, potentially limiting opportunities for retail fraud, and reducing errors by both voters and poll workers.

On the other hand, however, these technologies pose risks to the integrity of the electoral process that can quickly erode public con dence. Such risks include the possibility of technical failure, external interference with the system, internal malfeasance, and the loss of oversight by and accountability of the election management bodies. These threats have the potential to violate fundamental electoral rights and to subvert the will of the people on a large scale and in an undetectable manner

Faced with the reality of e-voting technologies, observers must respond to the very real challenges they pose to observation itself. There are aspects of e-voting systems that are inherently unobservable. While observers can directly observe that the secrecy of the vote is respected, that the ballot is cast, and that vote counting takes place according to procedures in paper-based elections, this is not always the case in e-enabled elections. In addition, intellectual property concerns and the need to ensure the security of the system may prevent observers (both international and domestic) from having full access to it.

The introduction of e-voting also poses quite practical challenges. It requires specialized knowledge and technical expertise of the different technologies and methods of conducting e-voting that are used. Like all technologies, automated voting solutions will continue to evolve and will do so rapidly, and observers likewise will have to continue to develop and adapt their observation methodologies.

While the election management bodies (EMBs) and other relevant authorities have a special responsibility to balance the pros and cons of introducing e-voting technologies, it is critical that the electoral process continue to belong to the citizens of the country upon whose will the authority of government is based. Election observation organizations, therefore, have a responsibility to respond to the challenges that such technologies pose to our work so that

[110] E-voting can be de ned as the use of electronic means to cast, record, and count votes.

[111] E-voting devices may include those in polling stations, Internet voting, mixed systems, voting by mobile telephone, etc. Within the category of voting machines in polling stations, there are DREs, DRE devices with a VVPAT, optical scan devices, and others. In some of these systems, votes are recorded on each voting machine; in others, all votes are stored on a single device in the polling station; and in some, the votes are sent to a central server exterior to the polling station.

we may continue to promote the rights of citizens to genuine democratic elections. Endorsers of the Declaration must ensure that observation continues to serve as an effective tool to promote the transparency, credibility, and integrity of electoral processes, regardless of the technology used.

Finally, although international obligations and commitments for democratic elections apply to electronic as well as paper-based elections, there are few international obligations and commitments speci c to e-voting that would provide a clear basis for assessment (for instance, regarding requirements for a VVPAT, audits, open source code, and certi cation).[112] However, in addition to those obligations and commitments that do exist, a number of critical, overarching principles may be identi ed based on the collective experience of international election observation organizations that are relevant to the introduction of 3 Tm r0/T1_0 1 sT1_0/o4or dem.ir1_0 1 sT1_ystem of the technology used.

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either case, the paper record should be retained in the polling station for immediate review and then securely stored for subsequent audits that take place prior to the announcement of of cial results, if needed, and pending the conclusion of any potential complaints.

Such a system can ensure the integrity of the electronic results only if the paper record is counted as a cross-check against the electronic results or, at a minimum, if a statistically valid and randomly selected sample of the record is audited prior to the announcement of results.

Adding a paper record can, however, increase the cost and complexity of the process as well as the potential for error, technical failures, and discrepancies in results.

8. The legal framework should determine the legal relationship between electronic and paper records as well as what constitutes the legal record of the vote (the electronic ballot vs. a paper ballot). It should provide clear and consistent guidance on the steps to be taken in the event that veri cation processes nd discrepancies or anomalies between election results and other records of the vote. In addition, open and fair dispute resolution processes that provide effective remedy for rights violations resulting from the use of the technology should be in place.

Guiding Principles on the Observation of E-voting Technologies

9. Observers should have unimpeded access to all stages of the e-voting process without discrimination. This includes access to the certi cation process, testing, and audits and to all reports and documentation on the system. Election observation organizations must not be required to enter into con dentiality or other nondisclosure agreements in order to obtain access.[114]

10. As in all elections, the international election observation mission must follow the laws of the country and must not interfere in the election process.[115] In this context, international election observation missions may examine and test devices and software outside the voting period for the purposes of understanding their design and functioning, but they should not attempt to reverse engineer, hack, or otherwise tamper with any device or software.

[114] DoP, para. 12(b) “Guarantees unimpeded access of the international election observer mission to all stages of the election process and all election technologies, including electronic technologies, the certi cation processes for e-voting, and other technologies, without requiring election observation missions to enter into con dentiality or other nondisclosure agreements concerning technologies or election processes.”

[115] DoP para. 9 “International election observation missions must respect the laws of the host country…” DoP para. 4 “International election observation should offer recommendations for improving the integrity of and effectiveness of the electoral and related processes, while not interfering in and thus hindering such processes.”

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While international election observation missions can assess some aspects of remote e-voting—including context, legal framework, design, certi cation, testing, voter education, access of domestic observers, and public con dence —they may not be able to reach de nitive conclusions about the degree to which the process meets international obligations and commitments for democratic elections. If they choose to deploy a mission in such a context, the mission should include multiple experts with relevant expertise, especially in Internet security where Internet voting is allowed.

14. Organizations conducting international election observation should additionally consider the following as they develop their methodologies for the observation of e-voting:

    a. The context in which the technology was introduced. Observers should consider, for example, the reasons for the introduction/use of e-voting, potential advantages over the previous system, the method of choosing the system, and any previous legal challenges. International election observation missions should seek to hear the views of all major political parties, political contestants, civil society organizations, and academics with regard to the introduction and use of e-voting technologies and the degree to which there is public con dence in the system.

    b. The extent to which the legal framework adequately regulates the e-voting process. When reviewing the legal framework, observation missions should determine whether it includes adequate provision for certi cation of the technology, data protection, audits, access by observers and political contestants, recounts, and adjudication of disputes and potential remedies. Consideration also should be given to how changes to the system are accommodated in law and in certi cation procedures.

    c. The extent to which checks and balances exist. In addition, observers should consider whether a system of checks and balances exists that, in practice, promotes and strengthens electoral integrity when e-voting technologies are used. Such a system could be, but does not necessarily have to be, regulated by law.

    d. The degree to which the system upholds international obligations and commitments for democratic elections. Observers should seek to understand the impact that the hardware, software, and processes of the e-voting system may have on the secrecy of the vote, the protection of voters from intimidation or coercion, and the honest counting of the votes. In addition, observers should consider whether the accurate reporting of results is ensured and can be veri ed by the host

government and independent third bodies. Observers must understand the security measures in place to protect against potential internal and external threats and should assess the usability of the system, the impact of the technology on ballot design and vice versa, and voter accessibility. The use of an electronic voter register or other electronic technologies should be considered in this context, particularly with respect to secrecy of the vote.

e. Procurement. The use of e-voting technologies may increase observer interest in understanding the procurement process. While observers often arrive after procurement is complete, consideration may still be given to the extent to which the process was open and transparent and followed recognized good practice in tendering.

f. Documentation related to the use of e-voting technologies. International election observation missions should review of cial documentation related to the e-voting system as well as reports made by certi cation and testing authorities. Consideration also should be given to assessments of the system made by others, whether partisan, nonpartisan, academic, or of cial. International election observer missions must be careful to reach their own conclusions based on the evidence gathered.

g. The source codeWhile it is unlikely that international observers will have the time, resources, or access necessary to conduct a thorough review of the source code, international election observation missions should determine whether domestic observers or others have meaningful access to the source code and have reviewed it and whether it is possible to verify that the reviewed source code is identical to that used on election day.

h. Certi cation and testing of e-voting devices.Certi cation should be performed by an independent, quali ed body. Certi cation requirements should be carefully written to adequately cover all aspects of the e-voting process, including security against external and internal threats and accessibility for observers. Certi cation should be done prior to each election after any software or hardware changes have been made to the system. There should be a cutoff point de ned, after which no changes to the software should be made. Certi cation reports should be fully available to international and domestic observation organizations, academics, and other interested parties. Testing should be comprehensive and conducted with adequate time to respond to any errors or anomalies that may arise. Domestic observation organizations should have the opportunity to conduct their own tests.

i. The role of election management bodies. Observers should scrutinize the division of responsibility and accountability between election officials and vendors, particularly in cases where the vendor continues to play an active role throughout the electoral process, such as providing technical assistance. The capacity of the EMB at all levels to fulfill its function when implementing an e-enabled election is of paramount importance, and so observers should assess the efficacy of training programs for election officials. In addition, missions should consider the procedures related to e-voting and their implementation before, during, and after election day (e.g., updating, distribution, storage, operation of devices). The accuracy and extent of voter education also should be considered.

j. Tabulation and reporting of results. Observers should consider the impact that technologies may have on the tabulation and reporting of results, including the steps taken to ensure that the results reported at each level of tabulation are accurate and open to verification by domestic and international observers and political contestants.

k. The conduct of verification and audit procedures. Observers should consider the size, scope, and methods of conducting audits or recounts of any paper records of votes cast during the use of e-voting as well as the means used to determine statistical samples (if used). Observers should have sufficient access to assess such verification and audit processes themselves, but they should also assess the degree to which third parties are able to conduct audits independent of those conducted by the host government. Where appropriate, observers may consider conducting their own audits or other statistical analyses.

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17. In line with the commitment to share approaches and harmonize methodologies, international election observation missions will undertake to publish their methodologies on observation of e-voting and will provide suf cient training to long-term and short-term observ rAd]TJ Eoaches and harmonize

Direct Recording Electronic Voting Machine (DRE)

DREs are fully computerized systems in which voters complete and cast their ballots in an electronic format. A DRE consists of a software program that provides voters with a digital ballot image, which may be marked by voters either via touch-screen technology or using appropriate machine prompts.

After completion of a ballot, the voter may prompt the machine to cast the ballot. Following appropriate veri cation procedures,[124] the voter's choice will be recorded via the DRE's internal memory. In order to ensure the security and integrity of such systems, DRE machines commonly require physical sealing of all ports and openings in the machine as well as visual con rmation by observers, polling station staff, and the public that the machine is in no way connected to an external network or the Internet.

Election observers and practitioners increasingly recognize the need for DREs to provide a VVPAT A VVPAT consists of a paper copy of the voter's choices, which may be reviewed for correctness but must remain in secure possession of the polling station. This VVPAT allows for the conduct of audits to ensure the accuracy of electronic vote tabulations and may serve as the vote of record in election disputes, dependent upon the electoral law.

Internet-Based Voting

Although not widely employed to date, countries have begun exploring the potential of allowing eligible voters to cast their ballot via the Internet. Internet voting may occur either in polling stations or assigned kiosks, where voters are asked to cast their ballots on machines directly connected to the election commission's main Actualtedy6t their ballr.0595 28nttrough revote Internet(votins,)]TJ ET E

Internet voting poses questions regarding security, particularly regarding the potential for Internet elections to be subject to hacking or other in uences. Additionally, the ability to verify voter identity and thus dissuade voter fraud is signi cantly decreased by remote Internet voting options. The development of systems for auditing votes absent any securely maintained VVPAT is also of particular importance for countries considering the adoption of Internet voting systems.

Optical Mark Recognition (OMR) Technology

OMR systems are designed to recognize predetermined marks on a physical ballot.

may increase system failure due to nonrecognition and require increased auditing and review to ensure accuracy. The paper ballots cast by voters may, therefore, necessarily serve as a VVPAT, against which the accuracy of electronically recorded votes may be assessed.

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	Council of Europe
	Declaration of Principles for International Election Observation
	Direct recording electronic device/equipment
A	Economic Community of West African States
	Election management body
	Election observation mission
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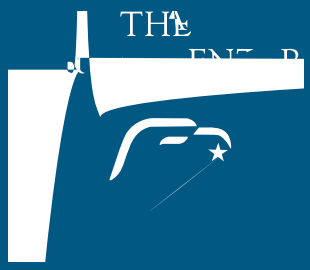

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