**Testimony of Bo Lipari, Executive Director New Yorkers for Verified Voting
On Draft Voting Systems Standards to the New York State Board of Elections**

Albany, NY
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To: Commissioners and Staff of the New York State Board of Elections

My name is Bo Lipari. I am the executive Director of New Yorkers for Verified Voting, a grassroots citizen advocacy group concerned with the ensuring integrity of our vote in an age of computers. I had a long career as a software engineer developing commercial and custom software, and managing software development teams and projects for several companies. Most recently I held the position of Senior Software Engineer in the Ithaca NY branch office of Autodesk, the fifth largest software company in the world. I have spent the last three years educating the public, state, county and town officials, about the potential problems with computerized electronic voting systems, and advocating for adoption of a paper ballot based systems using precinct based optical scanners and ballot marking devices for the disabled.

I understand that the purpose of these hearings is to comment on the Draft Voting Systems Standards, and I will do so in just a moment. In a few weeks, New Yorkers for Verified Voting will submit to the State Board of Elections a technical analysis detailing the significant problems and omissions of the proposed standards. Today, due to the time limitations, I will only present a high level overview of the problems with the Draft Standards. But before I do that, I would like to first comment on the State Board of Elections approach to this important moment in New York State.

We are on the cusp of fundamental and far reaching changes to our elections. New York State has not seen such deep seated changes in generations. The public has a vested interest in the integrity, accuracy, and security of our elections, and citizens all around this great state have been voicing their concerns and demanding a transition process that is open and fully visible to the public. We have demanded that all types of voting systems be objectively evaluated and analyzed, and that fair, accurate and thorough evaluations of voting systems in widespread use throughout the United States be performed and presented to the public.

This is what the public has demanded of the State Board. Unfortunately, none of this has happened.

Lately it seems like the State and local Boards of Elections have forgotten something essential – **You work for the public.** You have been hired to administer our elections. You work for us. You are the public's employees. Your responsibility is to protect the public's interest, and preserve and guarantee the integrity of our elections. **Yet, at this moment in time, to the citizens of New York, it appears that you have forgotten your responsibilities and duties to those you serve.**

Let me give you a few examples. Consistently, local and state elections officials have given insider access to vendors of voting equipment while excluding the public. Consistently, local and state elections officials have not allowed citizen advocates to present and discuss viable

alternatives to electronic touch voting at Board of Elections conferences and events. Consistently, state elections officials have told the public one thing about the machine selection process while doing another. Consistently, local and state elections officials have failed to keep the public, your bosses, informed. Consistently, you have failed to independently evaluate and assess different types of voting systems, but have been content to use vendor supplied talking points to spread disinformation about HAVA compliant alternatives to electronic touch screen voting.

I'm not making this up. Let me give you what is unfortunately, only the most recent example.

This week, in the Hamilton Morrisville Tribune, State Board spokesman Lee Daghlian is quoted as saying:

"The civic groups, for some reason, prefer optical scan machines," Mr. Daghlian said "Those are the kind where you write in pencil on a card, then the card is scanned and you have a paper trail. The electronic machine is cheaper.

Here we have a good example of subtle editorializing in favor of electronic touch screen voting by a supposedly 'objective' representative of the State Board. "*The civic groups, **for some reason**, prefer optical scan machines*". Since the public and the press have been discussing the optical scan alternative and the compelling reasons for its adoption quite openly for well over a year now, the very solid and substantive reasons for our preference are surely abundantly clear. But yet this statement implies that it is quite incomprehensible that anyone would support such a system.

He continues "*Those are the kind where you **write in pencil on a card**, then the card is scanned and you have a paper trail.*" Surely at this point in time, Mr. Daghlian is aware that an optical scan ballot is formal, official ballot, and not a 3x5 index card like his statement implies. Surely Mr. Daghlian is aware that pencils, which can be erased and could potentially invalidate the ballot, are not used to mark optical scan ballots, but indelible pens are used. His statement's unstated implication is to undermine an accurate, auditable and accessible voting system used in one third of the United States and with a successful 20 year track record, stating that this is nothing more than pencils and index cards, more like a kindergarten exercise than a viable voting system.

He says "*The electronic machine is cheaper...*" This is categorically false. Electronic machines are unquestionably far more expensive to acquire than optical scan systems. You need more of the touch screen voting machines in each polling place, and they cost more per unit. Acquisition cost studies which demonstrate the lower cost of paper ballot based system are readily available. Indeed, even the New York City Board of Elections issued a study which demonstrates that scanners would be less expensive to acquire than DREs. Operational costs studies are available of other states which compare the actual costs of counties using optical scanners to those using touch screen machines, and these consistently show that optical scan systems, even including the cost of printing paper ballots, are less expensive to operate in real elections. This information is readily available. But yet, here we have a State Board official quoting inaccurate vendor talking points.

Mr. Daghlian then goes on to say:

"*I don't know why, but it seems these groups just don't trust us.*"

Le me say this to the Commissioners and staff of our County and State Boards of Elections. It's something we teach our children and should not need to be explained, but let me be clear.

Trust is not automatic. IT MUST BE EARNED. The State Board has thus far done nothing, nothing, to earn the public's trust. You have obfuscated, delayed and denied. You have told us you will do one thing and then done another. You have consistently FAILED to keep the public informed about the machine selection and certification process, and have resisted, and continue to resist citizens demands for full visibility into and full disclosure of each and every step of this process which is so vital to the integrity of our democracy.

I repeat, if you want our trust, you must earn it.

The State Board seems to feel that if only they can weather this current storm, if they can just get through the process of selecting machines while giving out as little information to the public as possible, we will then return to the days when citizens didn't pay much attention to what the Board did.

But this is a new day, a new era. The 21st century presents us with many challenges, and the valid concerns about impact of computerized technologies on the veracity and accuracy of our elections are of great interest to the public. From here forward, we will no longer simply trust that everything is okay. From here forward, we will demand, and we will obtain, accountability from our election officials.

The Board seems to hope that we will soon return to the days when as long as there was a working lever machine in the polling place on Election Day, the public didn't much concern itself with how our Boards of Elections conduct our elections.

Let me be clear as I can. I am here to tell you, on behalf of concerned citizens from Buffalo, to Watertown, to New York City, **THOSE DAYS ARE OVER.**

Remember, you work for us. You can approach us with respect, keeping us fully informed, accepting our input, and treating us as the citizens you are hired to serve. There is still time for you to earn our trust. If you do that, together we can make New York State a model of cooperation between the public and election officials. I hope that is your choice as we move forward.

But if you don't, let me assure you if it is not evident already. We, the public, your employers, will not be denied.

Notes on Draft Standards

`Now, briefly, let me comment on the Draft Voting System Standards. As they are currently written, they are very poor and do little to protect the integrity of our vote. In their present form, they are unacceptable and must not be approved.

Why? Because these standards determine what voting machines can be used here in NYS, and what vendors must do to submit and certify their machines, and describes the nature and rigor of testing and performance standards. This is not a trivial matter. But in their current form, a vendor could certify a ham sandwich if it had a full face ballot.

In a few weeks, New Yorkers for Verified Voting will submit to the State Board of Elections a technical analysis detailing the significant problems and omissions of the proposed standards. Today, due to the time limitations, I will only present a high level overview of the problems with the Draft Standards.

Not only that, but with lax standards such as these, a vendor could force NYS to certify their machine, as has happened in the past.

These standards are vital to protecting the integrity and accuracy of our vote. Why? Because there is broad and deep consensus among computer scientists, software engineers like myself, network administrators and other computer professional that today's computerized voting systems are very poorly designed with regards to security -- passwords are widely known and are rarely changed, breakable forms of encryption are used, and systems are connected to networks, phone lines, and memory devices without "best practices" in security. Once they are delivered, election systems are rarely under tamper-proof seal from the point at which known certified software is loaded.

Regarding certification and testing: it is a maxim in computer science: "Testing can only show the presence of errors, never the absence of errors." Likewise, testing cannot prove the absence of malicious code or the absence of opportunities for intrusion.

The Draft Voting systems standards do little to protect the public from these known problems. It is as if the State Board has not heard a word that computer scientists have been saying. If this is the best the Board can do, I'm afraid it validates our concern that there is insufficient expertise and a true lack of understanding of the nature of computer based voting systems.

Let me give just a few examples:

1) In general, vendors are given too much latitude in this document to define and satisfy tests.
2) It allows the vendor to define what they consider to be proprietary, and makes no allowance for independent public review and analysis of documentation. It is imperative that the code not be considered proprietary of the manufacturer, but in the public domain so that the software can be reviewed by independent auditors or third parties.
3) It is insufficient in calling for full access and independent review of vendor source code and other materials.
4) The Standards allow the State BOE to waive any part of the requirements they choose if the vendor submits test reports on its own! (Section 6209.6 B) But we know that the vendors use so-called Independent Testing Authorities (ITAs) to produce these reports that are neither independent, conduct adequate tests, or are authorities. There should be no reason that any part of the test and other requirements can simply be waived by the State BOE. This makes even the best regulations meaningless.
5) Vague definition of crucial terms. For example, The Standards say (Section 6209.6 B.1) "All subsequent changes to the software baseline configuration shall be subject to re-examination." But with no definition of what is the "baseline configuration," and what constitutes a change that would require re-examination?
6) Paper ballot based systems are held to a standard that DREs are not. There are substantial differences in rigor for DREs and Paper Ballots.

7) The Standards must clearly state that the conduct of the certification tests shall be open and transparent, and performed in public and the results of those tests shall be made readily available to the public.