Los Angeles County Registrar-Recorder/County Clerk

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RRCC ePollbook Bridge Functional Requirements

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1 Introduction

The purpose of this document is to identify all of the functional requirements for the Registrar-Recorder/County Clerk (RRCC) ePollbook Bridge Service.

In March 2020, a new election system is being implemented called Voting Solutions for all People (VSAP). The VSAP system will modernize the voting experience with new interfaces and processes and the adoption of the vote center model. With the vote center model, voters will no longer be tied to a specific polling location but be able to vote at any of the 1000 voter centers across the county. To accomplish this an ePollbook solution was purchased, replacing an existing paper roster process.

The RRCC is working with KnowInk, a company that developed the ePollbook solution being used for the new VSAP voting experience. The RRCC has their own voting systems called DimsNet that holds over 5 million voter records for the entire Los Angeles County. This system will be used along with ePulse, the KnowInk web application environment to provide voters access to an electronic voting experience.

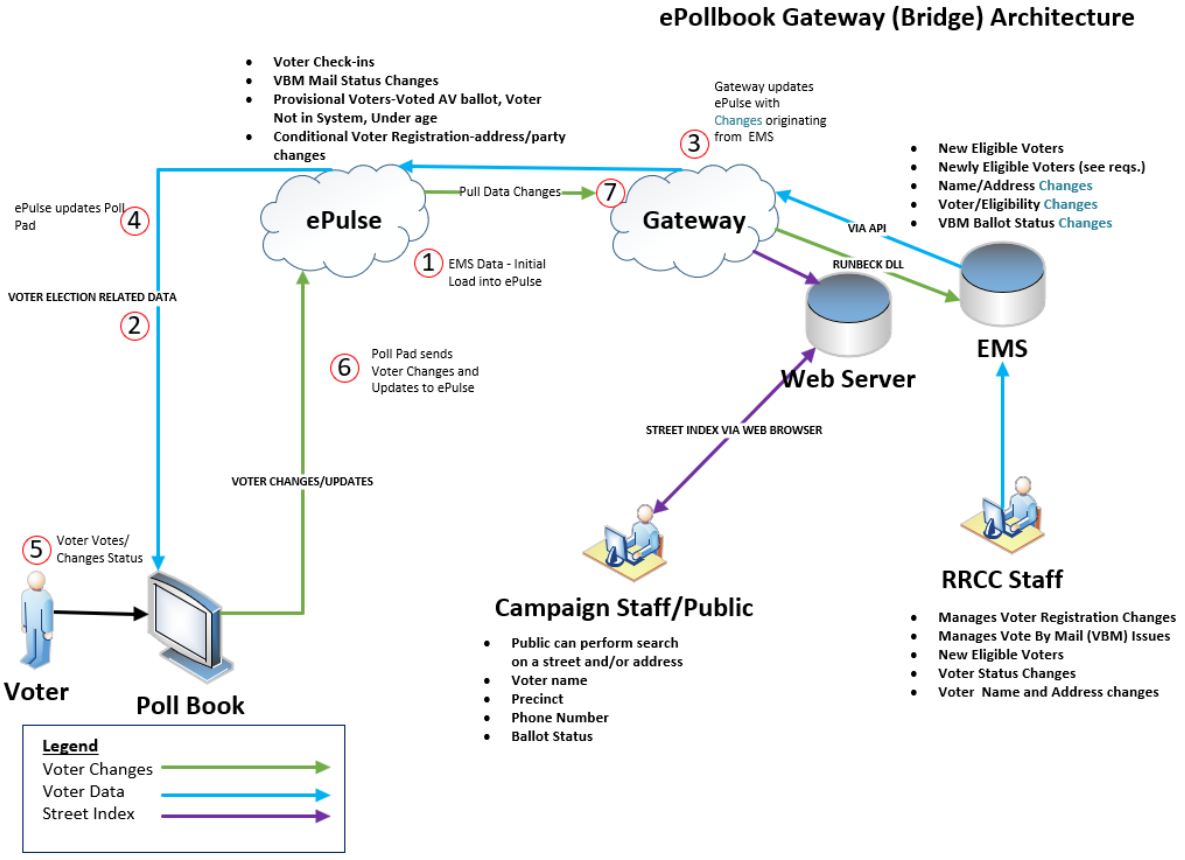
This document will identify in detail how DimsNet, ePulse and Street Index systems will communicate with each other to make sure that all systems are updated dynamically as changes are taking place during the election period to ensure that data integrity and accuracy is always maintained.

2 Functional Requirements

2.1 System Requirements

The RRCC DimsNet, ePulse and Street Index are standalone systems that do not communicate with each other. For Communication to take place, a Service needs to be developed to allow for updates from one system to be dynamically pushed to the others at 2 minutes time intervals. This service will be called the "RRCC ePollbook Bridge." Below are the different types of updates that have been identified and will need to be developed.

Below is a high-level diagram of the proposed RRCC ePollbook bridge:



2.1.1 Update Types from ePulse

These updates will take place in the ePollbook application running on the Poll Pads. Any data updates will be pushed to the RRCC ePollbook bridge that will in turn update DimsNet and the Street Index with the changes.

1. **Voter Check Ins**. When voters arrive at a vote center, they will check in with the vote center staff that will search for them in the system using a poll pad. If voters are found and information is accurate, they can be issued a ballot. As soon as voters are checked in, the ePulse system changes their voter status to "Voted at Vote Center". Since an update took place, the poll pad will push data to the ePulse website every 2 minutes. The ePulse website prepares the data by creating records of the fields that were updated. The RRCC ePollbook bridge service checks the ePulse website at specific intervals for new data. If data is found, it is pushed to DimsNet and the Street Index at the same time so that these two systems can be updated. In DimsNet, the voter history record is updated, and the Street Index website is updated with the new voter status of "Voted at Vote Center".

2. **Vote by Mail Ballot Status Change**. Voters that are issued an AV ballot may still be able to vote at a vote center. Below are the 3 rules that may apply:

    a. **Suspension of AV Ballot.** If VBM voters have their AV ballots on hand, they can surrender their AV ballot and be issued a new one to vote at a vote center. The vote center staff will update the voters AV Ballot to "Suspended" to allow them to vote. Since the voter no longer has and AV ballot, this update needs to be pushed to DimsNet to update the voter record. It will also be pushed to the Street Index website to update the voter status to "Voted at Vote Center". Note: the VBM is not required to be returned for the suspension process.

    b. **AV Ballot Returned.** If voters have already returned their AV ballots and have casted their ballots via mail, they will be able to vote at a vote center via a provisional vote. Provisional votes are not casted until they are researched during the Canvas process to find out if voters are eligible. Provisional updates through the ePollbook are not sent as updates to DimsNet or Street Index since the voter is already flagged as voted or VBM returned.

    If a voter record contains VBM ballot status change, an MBV disposition file will be created for use in the VBM intake process. Voter history from ePulse needs to be applied to the following:

1. AV challenge code. Voter history from ePulse needs to challenge outstanding active AV ballots.
2. Periodic disposition file. This will need to be run every 3 to 5 minutes. MBV disposition file will be created. For use in the VBM intake process

3. **Provisional.** Provisional means that voters are not eligible to vote, voter information is not found, or that they may have already voted via AV ballot. All provisional votes are not cast and will be researched during Canvas process at the Norwalk Headquarters. Below are the rules that may apply:

    a. **Voted AV Ballot.** When the voter is searched in the system, it states that the voter has already voted via AV ballot.

    b. **Voter Not in System.** If voters are not found in system, they are still allowed to vote provisionally until voters can be verified that they are allowed to vote based on their voter status. The process takes place after election night.

    c. **Under Age.** If voters are under age, they may still be allowed to vote provisionally until it can be verified in the system that the voter is under age.

    Note: These provisional scenarios do not fire an update to DimsNet or Street Index through the ePollbook Bridge. These scenarios are listed for informational purposes only.

4. **Conditional Voter Registration (CVR). [Proposed change].** In March 2020 conditional voter registration will be implemented allowing for same day registrations and voter re-registrations. Voters will need to completely fill out a new registration form on the ePollbook to make any changes. Re-registrations can include and is not limited to address change, party change and name change. The ePollbook will need to validate and send this information to the ePollbook bridge to register the voter. Once the voter is registered and verified thru VoteCall, voter data needs to be pushed via the ePollbook bridge to the pool books. CVR may include updating street and precinct data from DimsNet to the ePulse system via the ePollbook bridge. Felon voters (incarcerated or on probation), will need to be blocked from CVR and moved to provisional.

5. **Fatal Pends. [Proposed change].** If a voter record is deficient in one or more pieces of data, such as birth date, mailing address, or signature, it is proposed that a CVR is not required and the voter can clear that deficiency by providing the missing data. After the missing data is provided and validated, data will be pushed

to ePollbook bridge in order to update DimsNet. Then the voter should be eligible to vote, and a ballot can be issued.

2.1.2 Update Types from DimsNet

These updates will take place in DimsNet and the data will be pushed to the ePollbook bridge that will in turn update the ePulse environment with the changes.

1. **New Eligible Voters.** During the election period, new registrations are accepted for new voters. Users can go online or send in a paper registration. Once the new registration gets processed, the voter will get a new voter ID and a new voter record will be created. New voters registered in DimsNet will be allowed to vote at a vote center once the data is pushed to the ePulse website. The ePollbook bridge service, checks for new data or updates at specific intervals. If data is found, it is pushed to the poll books.

2. **Newly Eligible Voters.** Voters that already are registered but move to a new precinct that is part of an election they are now eligible for that election (similarly if a voter is inactive but become active are newly eligible). Examples:
    a. **Address changes into active election – record will not be on ePollbook and will need to be pushed**
    b. **Inactive Votes – activated for whatever reason (i.e. felon)**

3. **Name/Address Change.** During the election period, voters send in new voter registrations due to name or address change. In this case, the current voter Id is cancelled and a new one is issued with the new name or address and a new voter record gets created in DimsNet. Since DimsNet has new data, the ePollbook bridge service checks at specific intervals for new data and if found, it is pushed to the ePulse website and to the poll books respectively. Voters will be able to vote at a vote center as soon as the data is pushed to the poll pads.

4. **Voter Status Change.** Any changes to voter status should be pushed to the ePollbook service. For the first iteration of the ePollbook bridge handle the following status changes:
    a. **Active**
    b. **Inactive**
    c. **Cancelled**

5. **VBM Status Change.**

    a. **Voters Request AV Ballots.** During the election period, voters may request to be issued an AV ballot. If one is mailed, DimsNet will update the

voter record with the ballot status of "VBM Issued". This update will be pushed to the ePulse website and to the poll pads.

b. **Voters Return AV Ballots.** During election period, voters return their Av ballot and DimsNet is updated with the ballot status of "VBM Returned". This means that voters have casted their ballots. This update will be pushed to the ePulse website and to the poll books.

2.1.3 Street Index Update Types

Street Index updates originate in either DimsNet or ePulse and the data will be pushed to the Street Index via the ePollbook bridge.

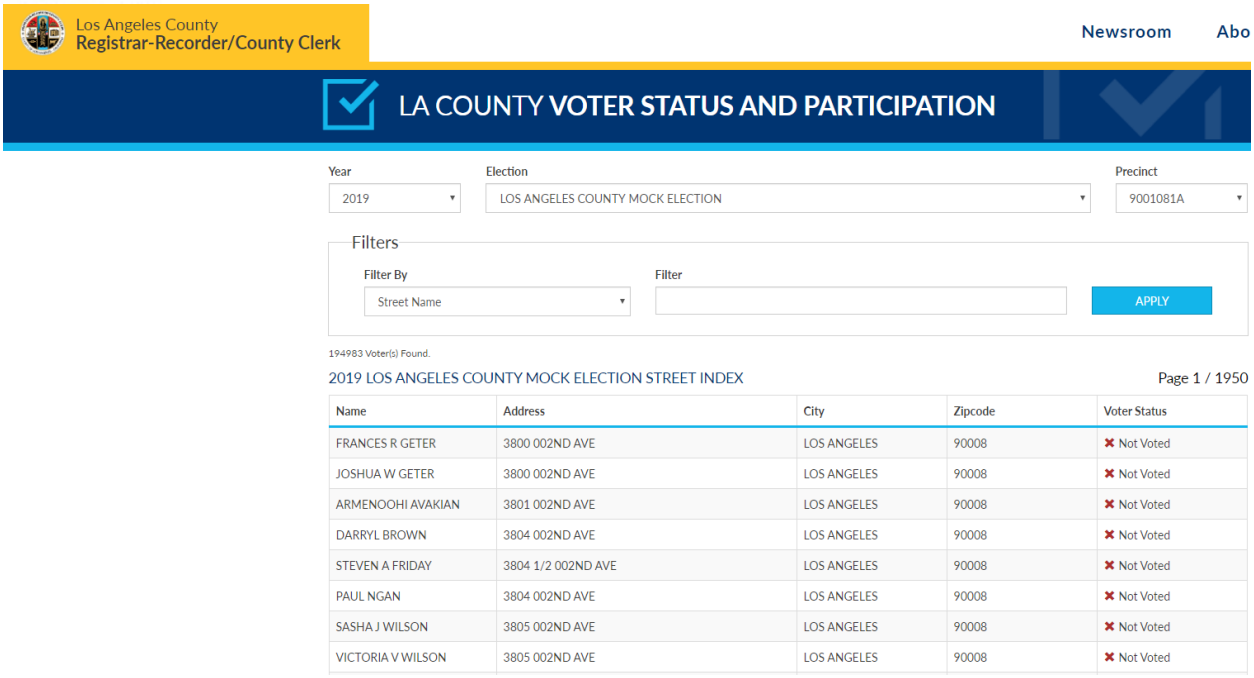
Street Index is a website that provides the public with updated voter participation history. Therefore, once data is updated in DimsNet and/or ePulse environment, it will be pushed to the Street Index to display the most updated eligible voter data and participation history.

Updates will include the following:

1. New Eligible Voters – New Registrations
2. Newly Eligible voters
    a. Address change into active election
    b. Voter status became activated after being inactive
3. Address Change
4. Name Change
5. Voter Status Change
    a. Active
    b. Inactive
    c. Cancelled
6. Vote by Mail Status Change
    a. Suspension of AV ballot
    b. Voters requests for AV ballots
    c. Voters return AV ballots

Street Index will display the following fields:

1. Voter name
2. Address
3. Precinct
4. Ballot status
5. Phone number (TBD)



2.1.4 Controlled Batch Updates to Prevent DDoS

Updates to voter records will take place very often. However, to prevent server overload and distributed denial of service (DDoS), the RRCC ePollbook bridge service will need to have configurable time intervals that will dictate when the updated records will be pushed to all servers. If updates are not monitored and they are pushed to servers too frequently, servers may get overloaded causing updates and/or servers to fail.

2.1.5 Tracking Database to Track Updates

Every time an update takes place, a log number will be created. All updates will need to be tracked to make sure they were applied or if they failed. To keep a history of all updates, a database needs to be developed where all updates will be stored for later review. At the beginning, only the log number of the update and the state (applied or failed) will be stored, but later, all fields that were updated on a specific log number may be stored as well.

2.1.6 Batch Inserts for Speed

For the sake of speed and accuracy, updates to all servers will need to be done in batches instead of individual updates. Multiple updates will be batched together and pushed to the appropriate servers. The total number of updates that will be included in a batch will need to be configurable.