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2. ASCII File Format

2.1. Overview

Although all pre-election and election night messages vary in content, some formatting characteristics remain consistent throughout all message files. The characteristics are:

- All messages start with an open bracket '[' and terminate with a close bracket ']'. (**Note:** This is a change from previous elections.)
- A vertical bar '|' separates fields within all messages.
- A carriage return and line feed indicate the end of a record.
- Leading zeros '0' are suppressed on numeric fields.
- A single zero '0' represents a numeric field that contains a zero value.
- A single blank character ' ' represents an alphanumeric field that contains no data.
- All messages begin with the following three data fields:

Field	Length	Data Type	Message Description																		
Message Type	1	Alpha	Identifies the type of message <table><thead><tr><th><u>Message</u></th><th><u>Description</u></th></tr></thead><tbody><tr><td>B</td><td>Beginning of a message set</td></tr><tr><td>E</td><td>End of a message set</td></tr><tr><td>A</td><td>County reporting status</td></tr><tr><td>C</td><td>Candidate information</td></tr><tr><td>P</td><td>Precinct numbers by county</td></tr><tr><td>R</td><td>Contest codes and descriptions</td></tr><tr><td>S</td><td>County codes and names</td></tr><tr><td>V</td><td>Voting results</td></tr></tbody></table>	<u>Message</u>	<u>Description</u>	B	Beginning of a message set	E	End of a message set	A	County reporting status	C	Candidate information	P	Precinct numbers by county	R	Contest codes and descriptions	S	County codes and names	V	Voting results
<u>Message</u>	<u>Description</u>																				
B	Beginning of a message set																				
E	End of a message set																				
A	County reporting status																				
C	Candidate information																				
P	Precinct numbers by county																				
R	Contest codes and descriptions																				
S	County codes and names																				
V	Voting results																				
File Source	3	Alpha	Identifies the <u>C</u> alifornia <u>S</u> ecretary of State’s office as the source of the file <ul style="list-style-type: none">• The value will always be ‘CAS’.																		

Field	Length	Data Type	Message Description
Sequence Number	Variable 1-4	Numeric	Sequential number assigned to each record <ul style="list-style-type: none"> The sequence number for the first record in the file will always be '1'. The sequence number is incremented by 1 for each subsequent message. To ensure all messages are received correctly, the sequence numbers in each message file should be checked.

2.2. File Name and Size

The file name for the ASCII file is MyyEE.txt where:

M Message Type

<u>Value</u>	<u>Description</u>
C	Candidate message
P	Precinct message
R	Contest message
S	County codes message
V	Voting results message

yy Election Year

EE Election Type

<u>Value</u>	<u>Description</u>
PP	Presidential Primary
PG	Presidential General
DP	Direct Primary
GP	Gubernatorial Primary
GG	Gubernatorial General
SS	Statewide Special

The file names are case sensitive. The file names for the 2016 Presidential Primary Election are listed in the table below:

Message Type	Presidential Data	Non-Presidential Data
C	C16PP.txt	C16DP.txt
P	P16PP.txt	P16DP.txt
R	R16PP.txt	R16DP.txt
S	S16PP.txt	S16DP.txt
V	V16PP.txt	V16DP.txt

2.3. Election Night Results

The data files created during the semi-official canvass include the 'A' messages (county reporting status) and the 'V' messages (voting results) in **one** file. The set of 'A' messages will appear in the file first, followed by the set of 'V' messages. The file includes the following messages:

Message	Description
B	Beginning of 'A' messages
A	County status
E	End of 'A' messages
B	Beginning of 'V' messages
V	Election results
E	End of 'V' messages

2.4. Message Description

Descriptions of the first three fields in each message file (Message Type Indicator, 'CAS', and Sequence Number) are noted previously in this document, and therefore are omitted from each of the following descriptions.

2.4.1. 'B' - Begin Messages

The 'B' message indicates the beginning of a new set of messages.

Sample

[B|CAS|1|20101102|2119040]

[	B	|	CAS	|	SEQ NBR "1"	|	Date YYYYMMDD	|	Time HHMMSSST]
			3 bytes		1 byte		8 bytes		7 bytes	

Field	Length	Data Type	Message Description
Date	8	Numeric	Date the message was created - YYYYMMDD
Time	7	Numeric	Time the message was created - HHMMSSST

2.4.2. 'E' - End Messages

The 'E' message indicates the end of a set of messages.

Sample

[E|CAS|61|20101102|2120140]

[	E	|	CAS	|	SEQ NBR	|	Date YYYYMMDD	|	Time HHMMSSST]
			3 bytes		1 to 4 bytes		8 bytes		7 bytes	

Field	Length	Data Type	Message Description
Date	8	Numeric	Date the message was created - YYYYMMDD
Time	7	Numeric	Time the message was created - HHMMSSST

2.4.3. 'A' - County Reporting Status Messages

The 'A' message provides the county reporting status for the semi-official canvass.

File Structure

Message	Description
B	Beginning of message set
A	County status
E	End of message set

Sample File

```
[B|CAS|1|20120419|1331130]
[A|CAS|2|01|R|0|0|795|1004|79.2|571897|744707|76.8|201204191324|201204191324]
...
...
[A|CAS|60|59|R|0|0|18388|22249|82.6|13658159|17028290|80.2|201204191324|201204191329]
[E|CAS|61|20120419|1334460]
```

[	A	CAS	SEQ NBR	County Code	Report Type	Report Number	Correction Report Number	Precincts Reporting	Total Precincts	Precincts Reporting Percentage	Voter Turnout	Total Registered Voters	Voter Turnout Percentage	First Report Timestamp	Last Report Timestamp]
		3 bytes	1 to 2 bytes	1 to 2 bytes	0 to 1 byte	1 byte	1 byte	0 to 6 bytes	1 to 6 bytes	0 to 5 bytes	0 to 8 bytes	1 to 8 bytes	0 to 5 bytes	0 to 12 bytes	0 to 12 bytes	

Field	Length	Data Type	Message Description
County Code	2	Alphanumeric	Identifies the county <ul style="list-style-type: none"> The counties are numbered in ascending sequential order proceeding alphabetically. County 59 identifies a record that contains statewide information.

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Field	Length	Data Type	Message Description
Report Type	Variable 0-1	Alphanumeric	Type of report submitted <ul style="list-style-type: none"> Null – No Report No report has been received by the county or all previous reports were removed by the county due to corrective action. R – Regular Report The county submits regular reports during the semi-official canvass until the Final Report. F – Final Report The county has completed the reporting for the semi-official canvass. The precincts reporting will equal the total precincts in the county for statewide contests. U – Update Report The county submits update reports after a Final Report is submitted whenever the number of votes for a candidate or a ballot measure changes. The update reports are considered part of the semi-official canvass. S – County Canvass Complete Returns are updated as county elections officials complete the official canvass and process ballots during the 28-day post-election canvass period.
Report Number	1	Numeric	Defaults to zero.
Correction Report Number	1	Numeric	Defaults to zero.
Precincts Reporting	Variable 0-6	Numeric	Number of precincts reporting <ul style="list-style-type: none"> If zero, the field is null.
Total Precincts	Variable 1-6	Numeric	Total number of precincts for the contest <ul style="list-style-type: none"> The Total Precincts is subject to change if a county needs to adjust the total precinct counts prior to submitting the Final Report.
Precincts Reporting Percentage	Variable 0-5	Numeric	Percentage of precincts reported <ul style="list-style-type: none"> If zero, the field is null. The number will never be 100% until the county submits the Final Report.
Voter Turnout	Variable 0-8	Numeric	Number of ballots cast <ul style="list-style-type: none"> If zero, the field is null.
Total Registered Voters	Variable 1-8	Numeric	Number of registered voters <ul style="list-style-type: none"> The field will contain test data until the 15-day close of voter registration.

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Field	Length	Data Type	Message Description
Voter Turnout Percentage	Variable 0-5	Numeric	<p>Percentage derived by dividing voter turnout by total registered voters</p> <ul style="list-style-type: none"> The field is null until a county submits a report. The display is one-tenth of a percent, but the decimal point is present only when the tenth of a percent digit is not zero.
First Report Timestamp	Variable 0-12	Numeric	<p>Time the county submitted the earliest report.</p> <p>Note: This field has changed to include the Year and is now twelve bytes instead of eight.</p> <p>Timestamp Format YYYYMMDDhhmm, where:</p> <p>YYYY Is a four-digit number that represents the year when the report was submitted.</p> <p>MM Is a two-digit number, ranging from 01 to 12, that represents the month when the report was submitted.</p> <p>DD Is a two-digit number, ranging from 01 to 31, that represents the day of the month when the report was submitted.</p> <p>hh Is a two-digit number, ranging from 00 to 23, that represents the hour when the report was submitted.</p> <p>mm Is a two digit-number, ranging from 00 to 59, that represents the minute.</p> <p>For the county 59 record, the field contains the timestamp of the first county to report.</p>

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Field	Length	Data Type	Message Description
Last Report Timestamp	Variable 0-12	Numeric	<p>Time the county submitted the latest report</p> <p>Note: This field has changed to include the Year and is now twelve bytes instead of eight.</p> <p>Timestamp Format YYYYMMDDhhmm, where:</p> <p>YYYY Is a four-digit number, that represents the year when the report was submitted.</p> <p>MM Is a two-digit number, ranging from 01 to 12, that represents the month when the report was submitted.</p> <p>DD Is a two-digit number, ranging from 01 to 31, that represents the day of the month when the report was submitted.</p> <p>hh Is a two-digit number, ranging from 00 to 23, that represents the hour when the report was submitted.</p> <p>mm Is a two digit-number, ranging from 00 to 59, that represents the minute.</p> <p>If the county has not submitted a report, the field is null.</p> <p>For the county 59 record, the field contains the timestamp of the latest county to report.</p>

2.4.4. 'V' - Vote Messages

The 'V' message provides the election results.

Candidate names within a specific contest may not be presented in the same order as found in 'C' messages. Results are presented in numerical county sequence with county 59 representing statewide results as the **first** set of results for each contest.

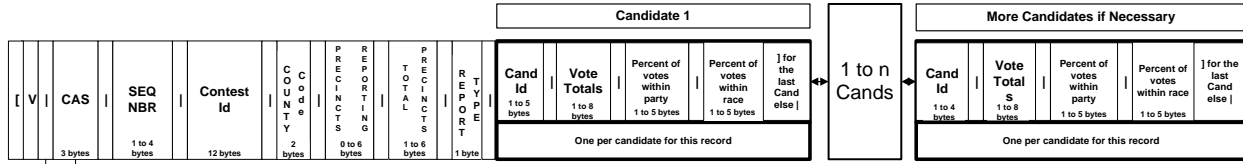
File Structure

Message	Description
B	Beginning of message file
V	Election results
E	End of message file

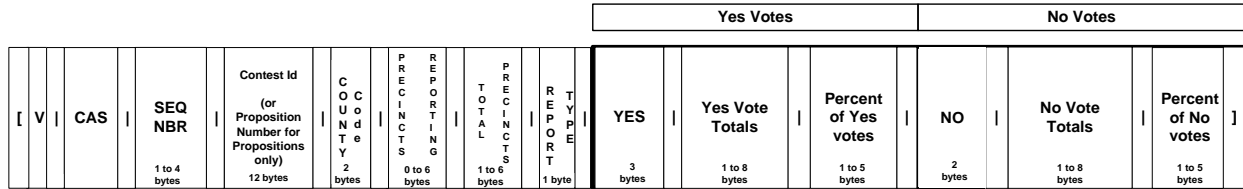
Sample File

```
[B|CAS|1|20120419|1331130]
[V|CAS|2|100000000001|59|18388|22249|R|173|3567502|27.1|26.1|158|6517954|49.4|
47.7|265|1637195|12.4|12.0]
...
...
[V|CAS|658|190000000029|58|38|46|R|YES|4081|18.0|NO|18592|82.0]
[E|CAS|659|20120419|1334460]
```

For a candidate contest:



For a ballot measure contest:



Field	Length	Data Type	Message Description
Contest Id	12	Alphanumeric	Identifies the type of contest Note: See Appendices at www.sos.ca.gov/media for detailed information on the structure of the Contest Id.
County Code	Variable 1-2	Alphanumeric	Identifies the county <ul style="list-style-type: none"> The counties are numbered in ascending sequential order proceeding alphabetically. County 59 identifies a record contains statewide information.
Precincts Reporting	Variable 1-6	Numeric	Number of precincts reporting
Total Precincts	Variable 1-6	Numeric	Total number of precincts in this contest <ul style="list-style-type: none"> The total number of precincts is subject to change if a county needs to adjust the total precinct counts prior to submitting the Final Report.

Field	Length	Data Type	Message Description
Report Type	1	Alphanumeric	Type of report submitted <ul style="list-style-type: none"> Null – No Report No report has been received by the county or all previous reports were removed by the county due to corrective action. R – Regular Report The county submits regular reports during the semi-official canvass until the Final Report. F – Final Report The county has completed the reporting for the semi-official canvass. The precincts reporting will equal the total precincts in the county for statewide contests. U – Update Report The county submits update reports after a Final Report is submitted whenever the number of votes for a candidate or a ballot measure changes. The update reports are considered part of the semi-official canvass. S – County Canvass Complete Returns are updated as county elections officials complete the official canvass and process ballots during the 28-day post-election canvass period.
Candidate Id	Variable 1-5	Alphanumeric	Uniquely identifies the candidate <ul style="list-style-type: none"> Assigned by the Secretary of State's office. There is no maximum number of candidate Id's per message record.
Votes	Variable 1-8	Numeric	Number of votes for the candidate OR Number of yes/no votes
Percent within Party	Variable 1-5	Numeric	Candidate's percentage of votes within his/her respective party <ul style="list-style-type: none"> The display is one-tenth of a percent, but the decimal point is present only when the tenth of a percent digit is not zero. Leading zeros are suppressed. Zero percent displays as 0. The sum of the percent by party for all candidates in a multiple-party contest can and will exceed 100.0%.

Field	Length	Data Type	Message Description
Percent within Contest	Variable 1-5	Numeric	<p>Candidate's percentage of votes within his/her respective party</p> <ul style="list-style-type: none"> The display is one-tenth of a percent, but the decimal point is present only when the tenth of a percent digit is not zero. Leading zeros are suppressed. Zero percent displays as 0. The sum of percentages for all candidates in a contest will always total 100.0%.

2.4.5. 'C' - Candidate Messages

The 'C' message links candidates with a particular contest or contests. In the rare case where a candidate is running in more than one contest monitored by the Secretary of State's office, the candidate will receive a unique Candidate Id for each qualified contest.

File Structure

Message	Description
B	Beginning of message file
C	Candidate
E	End of message file

Sample File

```
[B|CAS|1|20120418|1018510]
[C|CAS|2|100000000001|158||Fernald|Colleen|Shea|01|Colleen Shea Fernald]
...
...
[C|CAS|582|1900000000029|||Cigarette Tax|||Cigarette Tax]
[E|CAS|583|20120418|1355490]
```

[	C	CAS	SEQ NBR	Contest Id	Cand Id	I N C U M B E N T	Last Name or Ballot Measure Name	First Name	Middle Name	Party Code	Candidate Name as it Appears on the Ballot]
		3 bytes	1 to 4 bytes	12 bytes	1 to 5 bytes		1 to 50 bytes	1 to 25 bytes	1 to 25 bytes	2 bytes	1 to 50 bytes	

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Field	Length	Data Type	Message Description																						
Contest Id	12	Alphanumeric	Identifies the type of contest Note: See Appendices at www.sos.ca.gov/media for detailed information on the structure of the Contest Id.																						
Candidate Id	Variable 1-5	Alphanumeric	Uniquely identifies the candidate <ul style="list-style-type: none">Assigned by the Secretary of State's office.The number is unique to the candidate and the contest in which the candidate is running.For ballot measure contests, the field is null.																						
Incumbent Indicator	1	Alphanumeric	Identifies the candidate as the current officeholder seeking re-election <ul style="list-style-type: none">If the candidate is the current officeholder, the value is a single asterisk character (*).If the candidate is not the incumbent, the value is null.																						
Last Name OR Ballot Measure Name	Variable 1-50	Alphanumeric	Last name of the candidate as it appears on the ballot OR Ballot measure name																						
First Name	Variable 1-25	Alphanumeric	First name of the candidate as it appears on the ballot																						
Middle Name	Variable 1-25	Alphanumeric	Middle name of the candidate as it appears on the ballot																						
Party Code	2	Alphanumeric	Candidate's party affiliation <table><thead><tr><th><u>Value</u></th><th><u>Description</u></th></tr></thead><tbody><tr><td>Blank</td><td>Not Applicable</td></tr><tr><td>00</td><td>Not a Party Contest</td></tr><tr><td>01</td><td>Democratic Party</td></tr><tr><td>02</td><td>Republican Party</td></tr><tr><td>03</td><td>American Independent Party</td></tr><tr><td>04</td><td>Green Party</td></tr><tr><td>05</td><td>Libertarian Party</td></tr><tr><td>08</td><td>Peace and Freedom Party</td></tr><tr><td>13</td><td>Nonpartisan</td></tr><tr><td>14</td><td>No Party Preference</td></tr></tbody></table>	<u>Value</u>	<u>Description</u>	Blank	Not Applicable	00	Not a Party Contest	01	Democratic Party	02	Republican Party	03	American Independent Party	04	Green Party	05	Libertarian Party	08	Peace and Freedom Party	13	Nonpartisan	14	No Party Preference
<u>Value</u>	<u>Description</u>																								
Blank	Not Applicable																								
00	Not a Party Contest																								
01	Democratic Party																								
02	Republican Party																								
03	American Independent Party																								
04	Green Party																								
05	Libertarian Party																								
08	Peace and Freedom Party																								
13	Nonpartisan																								
14	No Party Preference																								
Candidate Name as it Appears on the Ballot	Variable 1-50	Alphanumeric	The full name of the candidate as it will appear on the ballot																						

2.4.6. 'P' - Precinct Messages

The 'P' message provides the number of precincts for each county.

The number of precincts for each county is not available until after the 15-day close of voter registration. For the 2016 Presidential Primary Election, the 15-day close of voter registration is Monday, May 23, 2016.

This file will contain test data until the actual precinct counts are received from all counties. Whenever a county changes the precinct count, media clients will be notified by the Secretary of State's office.

File Structure

Message	Description
B	Beginning of message file
P	Precinct
E	End of message file

Sample File

```
[B|CAS|1|20120418|1018510]
[P|CAS|2|100000000001|59|30615]...
...
[P|CAS|658|190000000029|58|46]
[E|CAS|659|20120418|1355540]
```

[	P	|	CAS	|	SEQ NBR	|	Contest Id	|	County Code	|	Total Precincts]
			3 bytes		1 to 4 bytes		12 bytes		2 bytes		1 to 6 bytes	

Field	Length	Data Type	Message Description
Contest Id	12	Alphanumeric	Identifies the type of contest Note: See Appendices at www.sos.ca.gov/media for detailed information on the structure of the Contest Id.
County Code	2	Alphanumeric	Identifies the county <ul style="list-style-type: none"> The counties are numbered in ascending sequential order proceeding alphabetically. County 59 indicates the record contains statewide information.
Total Precincts	Variable 1-6	Alphanumeric	Total number of precincts for the contest The total number of precincts is subject to change if a county needs to adjust the total precincts count prior to submitting the Final Report.

2.4.7. 'R' - Contest Messages

The 'R' message provides the contest identifiers and the description.

File Structure

Message	Description
B	Beginning of message file
R	Contest description
E	End of message file

Sample file

```
[B|CAS|1|20120418|1018510]
[R|CAS|2|100000000001|US Senate - 1|DP]
[R|CAS|3|110000010000|United States Representative District 1|DP]
...
[R|CAS|157|190000000029|Tax on Cigarettes for Cancer Research|DP]
[E|CAS|158|20120418|1355570]
```

[	R	|	CAS	|	SEQ NBR	|	Contest Id	|	Contest Description	|	Election Type]
			3 bytes		1 to 3 bytes		12 bytes		1 to 40 bytes		2 bytes	

Field	Length	Data Type	Message Description														
Contest Id	12	Alphanumeric	Identifies the type of contest Note: See Appendices at www.sos.ca.gov/media for detailed information on the structure of the Contest Id.														
Contest Description	Variable 1-40	Alphanumeric	Name of the office, ballot measure (short description) or judgeship confirmation														
Election Type	2	Alphanumeric	Identifies the type of election: <table><thead><tr><th><u>Value</u></th><th><u>Description</u></th></tr></thead><tbody><tr><td>PP</td><td>Presidential Primary</td></tr><tr><td>PG</td><td>Presidential General</td></tr><tr><td>DD</td><td>Direct Primary</td></tr><tr><td>GP</td><td>Gubernatorial Primary</td></tr><tr><td>GG</td><td>Gubernatorial General</td></tr><tr><td>SS</td><td>Statewide Special</td></tr></tbody></table>	<u>Value</u>	<u>Description</u>	PP	Presidential Primary	PG	Presidential General	DD	Direct Primary	GP	Gubernatorial Primary	GG	Gubernatorial General	SS	Statewide Special
<u>Value</u>	<u>Description</u>																
PP	Presidential Primary																
PG	Presidential General																
DD	Direct Primary																
GP	Gubernatorial Primary																
GG	Gubernatorial General																
SS	Statewide Special																

2.4.8. 'S' - Statewide Messages

The 'S' message associates the county name with the county code.

File Structure

Message	Description
B	Beginning of message file
S	Statewide
E	End of message file

Sample

```
[B|CAS|1|20120418|1018510]
[S|CAS|2|01|Alameda]
...
...
[S|CAS|60|59|California]
[E|CAS|61|20120418|1355580]
```

[	S	|	CAS	|	SEQ NBR	|	County Code	|	County Name]
			3 bytes		1 to 2 bytes		2 bytes		1 to 15 bytes	

Field	Length	Data Type	Message Description
County Code	2	Alphanumeric	Identifies the county <ul style="list-style-type: none"> The counties are numbered in ascending sequential order proceeding alphabetically. County 59 indicates the record contains statewide information.
County Name	Variable 1-15	Alphanumeric	County name