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9 PLAINTIFFS

10 **IN THE SUPRIOR COURT OF THE STATE OF ARIZONA**
11 **IN AND FOR THE COUNTY OF MARICOPA**

12 **KELLI WARD,**

13 **Plaintiff,**

14 **vs.**

15 **CONSTANCE JACKSON, FELICIA**
16 **ROTELLINI, FRED YAMASHITA,**
17 **JAMES MCLAUGHLIN,**
18 **JONATHAN NEZ, LUIS ALBERTO**
19 **HEREDIA, NED NORRIS, REGINA**
20 **ROMERO, SANDRA D. KENNEDY,**
21 **STEPHEN ROE LEWIS, and STEVE**
22 **GALLARDO,**

23 **Defendants.**

Case No. CV 2020-015285

DECLARATION OF DAVID W.
SPILSBURY

JUDGE RANDALL H. WARNER

24 I, David Spilsbury, attorney for proposed Intervenor-Plaintiffs, hereby declare as
25 follows.

- 26 1. I am an attorney licensed to practice law in the State of Arizona.
- 27 2. Attached to this Declaration as Exhibit A is a copy of Matthew Braynard's Expert
28 Report.
3. Attached to this Declaration as Exhibit B is a copy of Qianying Jennie Zhang's
Expert Report.

1 4. I declare under penalty of perjury the foregoing is true and correct.
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3 Dated this 2nd day of December, 2020 s/David W. Spilsbury
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**IN THE SUPRIOR COURT OF THE STATE OF ARIZONA
IN AND FOR THE COUNTY OF MARICOPA**

KELLI WARD,

Plaintiff,

v.

CIVIL ACTION NO.: CV2020-015285

**CONSTANCE JACKSON, FELICIA ROTELLINI, FRED YAMASHITA, JAMES
MCLAUGHLIN, JONATHAN NEZ, LUIS ALBERTO HEREDIA, NED NORRIS, REGINA
ROMERO, SANDRA D. KENNEDY, STEPHEN ROE LEWIS, and STEVE GALLARDO,**

Defendants.

EXPERT REPORT OF MATTHEW BRAYNARD

I. INTRODUCTION

I have been retained as an expert witness on behalf of Proposed Intervenor-Plaintiffs James Stevenson, Baron Benham, Lynie Stone, and Jessica Chambers in the above captioned proceeding. I expect to testify on the following subject matters: (i) analysis of the database for the November 3, 2020 election for the selection of Presidential Electors in the State of Arizona (“State”); (ii) render opinions regarding whether individuals identified in the State’s voter database actually voted; and (iii) render opinions regarding whether individuals identified in the State’s voter database were actually qualified to vote on election day.

This is a statement of my relevant opinions and an outline of the factual basis for these opinions. The opinions and facts contained herein are based on the information made available to me in this case prior to preparation of this report, as well as my professional experience as an election data analyst.

I reserve the right to supplement or amend this statement on the basis of further information obtained prior to the time of trial or in order to clarify or correct the information contained herein.

II. DOCUMENTS REVIEWED

I reviewed the following documents in arriving at my opinions.

1. The voter records and election returns as maintained on the State’s election database;

2. Records maintained by the National Change of Address Source which is maintained by the United States Postal Service and which is available for licensed users on the internet. I am a licensed member.
3. Records developed by the staff of my call centers and social media researchers; and
4. A national voter database maintained by L2 Political;

In addition, I discussed the facts of this matter with Petitioner's attorney Erick G. Kaardal and members of his legal team.

III. PROFESSIONAL QUALIFICATIONS

I have attached hereto as Exhibit 1 a true and correct copy of my resume. As detailed in the resume, I graduated from George Washington University in 2000 with a degree in business administration with a concentration in finance and management information systems. I have been working in the voter data and election administration field since 1996. I have worked building and deploying voter databases for the Republican National Committee, five Presidential campaigns, and no less than one-hundred different campaigns and election-related organizations in all fifty states and the U.S. Virgin Islands. I worked for eight years as a senior analyst at the nation's premier redistricting and election administration firm, Election Data Services, where I worked with states and municipalities on voter databases, delineation, and litigation support related to these matters. Also, while at Election Data Services, I worked under our contract with the US Census Bureau analyzing voting age population. Since 2004, I have worked for my own business, now known as External Affairs, Inc., providing

statistical and data analysis for local, state, and federal candidates and policy organizations in the areas of voter targeting, polling/research, fundraising, branding, and online development and strategy. My firm has worked for over two-hundred candidates from president to town council and over a dozen DC-based policy/advocacy organizations.

With respect to publications I have authored in the last 10 years, I have not authored any publications in the last ten years.

IV. COMPENSATION

I have been retained as an expert witness for Petitioners. I am being compensated for a flat fee of \$40,000.

V. PRIOR TESTIMONY

I have not provided testimony as an expert either at trial or in deposition in the last four years.

VI. STATEMENT OF OPINIONS

As set forth above, I have been engaged to provide expert opinions regarding analysis in the November 3, 2020 election of Presidential electors. Based on my review of the documents set forth above, my discussions with statisticians and analysts working with me and at my direction, my discussions with the attorneys representing the Petitioners, I have the following opinions:

1. It is my opinion, to a reasonable degree of scientific certainty, that in the State, the State's database for the November 3, 2020 election show 2,181,959 individuals voted early or applied for and the State sent an absentee or mail-in ballot, and 518,560 voters whom the state marks as having requested and been sent an

absentee ballot did not return it. It is my opinion, to a reasonable degree of scientific certainty, that in my sample of this universe, 44.20% of these absentee voters in the State did not request an absentee ballot.

2. From the State's database for the November 3, 2020 election and our call center results, it is my opinion to a reasonable degree of scientific certainty that 481,022 individuals whom the State's database identifies as having not returned an absentee ballot, that in my sample of this universe, 17.32% of those absentee voters did in fact mail back an absentee ballot to the clerk's office.
3. From the State's database for the November 3, 2020 election, the NCOA database, and our call center results, it is my opinion to a reasonable degree of scientific certainty that out of the 19,997 individuals had changed their address before the election, that in my sample of this universe, 0.41% of those individuals denied casting a ballot.
4. From the State's database for the November 3, 2020 election and the NCOA database and other state's voter databases, it is my opinion to a reasonable degree of scientific certainty, that at least 5,726 absentee or early voters were not residents of the State when they voted.
5. From the State's database for the November 3, 2020 election and comparing that data to other states voting data and identifying individuals who cast early/absentee ballots in multiple states, it is my opinion to a reasonable degree of scientific certainty, that at least 157 individuals in the State voted in multiple states.

VII. BASIS AND REASONS SUPPORTING OPINIONS.

It is my opinion that due to the lax controls on absentee voting in the November 3, 2020 election that the current unofficial results of that election include thousands of individuals who were not eligible to vote or failed to record ballots from individuals that were.

First, State maintains a database for the November 3, 2020 election which I obtained from L2 Political and which L2 Political obtained from the State's records on, among other things, voters who applied for an absentee or early voter status. I received this database from L2 Political in a table format with columns and rows which can be

searched, sorted and filtered. Each row sets forth data on an individual voter. Each column contained information such as the name of the voter, the voter's address, whether the voter applied for an absentee ballot, whether the voter voted and whether the voter voted indefinitely confined status.

Second, we are able to obtain other data from other sources such as the National Change of Address Database maintained by the United States Postal Service and licensed by L2 Political. This database also in table format shows the name of an individual, the individual's new address, the individual's old address and the date that the change of address became effective.

Third, I conducted randomized surveys of data obtained from the State's database by having my staff or the call center's staff make phone calls to and ask questions of individuals identified on the State's database by certain categories such as absentee voters who did not return a ballot. Our staff, if they talked to any of these individuals, would then ask a series of questions beginning with a confirmation of the individual's name to ensure it matched the name of the voter identified in the State's database. The staff would then ask additional questions of the individuals and record the answers.

Fifth, attached as Exhibits 2 is my written analysis of the data obtained.

Below are the opinions I rendered and the basis of the reasons for those opinions.

1. It is my opinion, to a reasonable degree of scientific certainty, that in the State, the State's database for the November 3, 2020 election show 2,181,959 individuals voted early or applied for and the State sent an absentee or mail-in ballot, and 518,560 voters whom the state marks as having requested and been sent such a ballot did not return it. It is my opinion, to a reasonable degree of scientific certainty, that in my sample of

this universe, 44.20% of these voters in the State did not request such a ballot.

I obtained this data from the State via L2 Political after the November 3, 2020, Election Day. This data identified 2,181,959 individuals as having voted early or applied for an absentee and the State sending an absentee/mail-in ballot to these individuals who requested it. This data also identified 518,560 absentee voters who were sent a ballot but who failed to return the ballot.

I then had my staff make phone calls to a sample of this universe. When contacted, I had my staff confirm the individual's identity by name. Once the name was confirmed, I then had staff ask if the person requested an absentee ballot or not. Staff then recorded the number of persons who answered yes. My staff then recorded that of the 2,050 individuals who answered the question, 1,144 individuals answered yes to the question whether they requested an absentee ballot. My staff recorded that 906 individuals answered no to the question whether they requested an absentee ballot. Attached as Exhibit 2 is my written analysis containing information from the data above on absentee voters. Paragraph 2 of Exhibit 2 presents this information.

Next, I then had staff ask the individuals who answered yes, they requested an absentee ballot, whether the individual mailed back the absentee ballot or did not mail back the absentee ballot. Staff then recorded that of the 708 individuals who answered the question, 355 individuals answered yes, they mailed back the absentee ballot. Staff recorded 353 individuals answered no, they did not mail back the absentee ballot. Paragraph 2 of Exhibit 2 presents this information.

Based on these results, 17.32% of our sample of these voters in the State did not request an absentee ballot.

2. From the State's database for the November 3, 2020 election and our call center results, it is my opinion to a reasonable degree of scientific certainty that 518,560 individuals whom the State's database identifies as having not returned an absentee ballot, that in my sample of this universe, 17.32% of those absentee voters did in fact mail back an absentee ballot to the clerk's office.

This opinion includes the analysis set forth above. Among the 708 who told our call center that they did request an absentee ballot and answered the second question, 355 told our staff that they mailed the absentee ballot back, which is 17.32% of the total sample of 2,050 whom the State identified as having not returned the absentee ballot the State sent them. Paragraph 2 of Exhibit 2 presents this information.

3. From the State's database for the November 3, 2020 election, the NCOA database, and our call center results, it is my opinion to a reasonable degree of scientific certainty that out of the 19,997 individuals had changed their address before the election, that in my sample of this universe, 0.41% of those individuals denied casting a ballot.

On Exhibit 2, in paragraph 4, I took the State's database of all absentee or early voters and matched those voters to the NCOA database for the day after election day. This data identified 19,997 individuals whose address on the State's database did not match the address on the NCOA database on election day. Next, I had my staff call the persons identified and ask these individuals whether they had voted. My call center staff identified 1,219 individuals who confirmed that they had casted a ballot. My call center staff identified 5 individuals who denied casting a ballot. Our analysis shows that 0.41%

of our sample of these individuals who changed address did not vote despite the State's data recorded that the individuals did vote.

4. From the State's database for the November 3, 2020 election and the NCOA database and other state's voter databases, it is my opinion to a reasonable degree of scientific certainty, that at least 5,726 absentee or early voters were not residents of the State when they voted.

On Exhibit 2, in paragraph 1, I took the State's database of all absentee or early voters and matched those voters to the NCOA database for the day after Election Day. This data identified 5,084 individuals who had moved of the State prior to Election Day. Further, by comparing the other 49 states voter databases to the State's database, I identified 744 who registered to vote in a state other than the State subsequent to the date they registered to vote in the State. When merging these two lists and removing the duplicates, and accounting for moves that would not cause an individual to lose their residency and eligibility to vote under State law, these voters total 5,726.

5. From the State's database for the November 3, 2020 election and comparing that data to other states voting data and identifying individuals who cast early/absentee ballots in multiple states, it is my opinion to a reasonable degree of scientific certainty, that at least 157 individuals in the State voted in multiple states.

On Exhibit 2, in paragraph 2, I had my staff compare the State's early and absentee voters to other states voting data and identified individuals who cast early/absentee ballots in multiple states. My staff located 157 individuals who voted in the State and in other states for the November 3, 2020 general election.

**VIII. EXHIBITS TO BE USED AT TRIAL TO SUMMARIZE OR EXPLAIN
OPINIONS**

At the present time, I intend to rely on the documents produced set forth above as possible exhibits.

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SIGNATURE PAGE TO FOLLOW

Dated: 11/20/2020


Matthew Braynard

MATT BRAYNARD

1521 Boyd Pointe Way #3001, Vienna VA 22182 | 202.423.5333 (c) | matt@braynard.com

Matt Braynard is the president of both political consulting firm External Affairs, Inc., and a voter-registration non-profit, Look Ahead America.

CURRENT EMPLOYMENT

External Affairs, Inc.

Principal

2004 – Present

External Affairs, Inc. works for local, state, and federal candidates and policy organizations in the areas of voter targeting, polling/research, fundraising, branding, and online development and strategy. The firm has worked for over two-hundred candidates from president to town council and over a dozen DC-based policy/advocacy organizations.

Look Ahead America, Inc.

President

March 2017 – Present

Matt founded LAA, a 501(c)(3), along with over thirty other former Trump campaign staffers with the goal of registering and turning out disaffected, patriotic voters.

PREVIOUS EMPLOYMENT

Donald J. Trump for President, Inc.

Director, Data Division

October 2015 – March

2016

Matt was responsible for developing the voter contact strategy, building technology infrastructure, managing vendor relationships, recruiting the data division staff, and supporting and auditing state efforts on door-to-door, phone, mail, and email operations.

Election Data Services, Inc.

Senior Analyst

2001-2005

Matt Braynard was responsible for analyzing and redistricting states and municipal political boundaries, as well as analyzing election result administration data.

Republican National Committee

Political Analyst

1996, 1998-2001

Matt Braynard worked in the political analysis department developing and deploying voter targeting databases, and directed the precinct election result research project.

Luntz Research Companies

Research Consultant

1997-2001

Matt Braynard analyzed survey topline and cross tabulations to create executive presentation materials.

EDUCATION

Columbia University

2018

Master of Fine Arts

Writing Program

The George Washington University

Bachelors of Business Administration

2000

Concentrations in Finance and Management Information Systems

Date: November 19, 2020

From: Matt Braynard
External Affairs, Inc.
matt@braynard.com
202.423.5333
November 19, 2020

Re: Arizona Voter Integrity Project: Illegal Ballots Preliminary Results

This is an outline of the six analysis methods we have applied to the State of Arizona ("State") and the results we have obtained as of the date set forth above.

1. Residency Violations

We have evaluated early and absentee voters who were matched to the national change of address database (NCOA) or are found to have registered to vote in other states subsequent to their registration in target states (OOSSR), strongly indicating a violation of residency requirements.

	NCOA	OOSSR	Merged
AZ	5,084	744	5,790

The OOSSR would be much higher, but we limited due to the lack of full dates of birth available to us from many states' voter databases. A full, complete birthdate is necessary for our match process.

2. Double Voting (Early/Absentee ONLY)

We compared the target state early and absentee voters to other states voting data and identified individuals who cast early/absentee ballots in multiple states.

AZ: 157

3. Confirmation of "Unreturned" Absentee Ballots

I obtained data from the State via L2 Political after the November 3, 2020, Election Day. This data identified 518,560 voters who were sent an absentee ballot but who failed to return the absentee ballot.

We then called a sample of these voters totaling 2,050 individuals to ask if they requested the absentee ballot. Of the 2,050 individuals our call center contacted and spoke with whom the State data identified as having requested an absentee ballot but the data identified as having not returned the ballot, our call center identified 906 individuals who did not request an

absentee ballot. Among those who said they had requested an absentee ballot and answered whether they had mailed the ballot back, 355 individuals told our call center that they returned a ballot

State	Did Not Request	Percentage of 2,114 Sample
Arizona	1144	44.20%

State	Returned	Percentage of 2,114 Sample
Arizona	355	17.32%

4. Confirmation of National Change of Address Voters

We contacted individuals who have been recorded having voted but filed a national change of address to confirm that they did indeed cast a ballot. Once again, our call center staff contacted a random sample of 1,224 individuals from the State data. From these calls, our staff identified 1,219 individuals who told our call center staff they did cast a ballot and 5 individuals who told our call center staff they did not cast a ballot. The following counts and percent of people we reached by phone told us they did NOT cast an early or absentee ballot despite the state recording such a ballot.

State	Total	Percentage of Sample
Arizona	5	0.41%

5. Confirmation of Low Propensity in Heavy Turnout Precincts

We reached out to Individuals who were marked as having voted despite never voting, not voting in many years, or just recently registered. We concentrated this in precincts with unusually high turnout.

State	Total	Percentage of Sample
Arizona	21	0.94%

**IN THE SUPERIOR COURT OF THE STATE OF ARIZONA
IN AND FOR THE COUNTY OF MARICOPA**

KELLI WARD,

Plaintiff,

vs.

**CONSTANCE JACKSON,
FELICIA ROTELLINI, FRED
YAMASHITA, JAMES
MCLAUGHLIN, JONATHAN
NEZ, LUIS ALBERTO
HEREDIA, NED NORRIS,
REGINA ROMERO, SANDRA
D. KENNEDY, STEPHEN ROE
LEWIS, and STEVE
GALLARDO,**

Defendants.

Case No. CV 2020-015285

**EXPERT REPORT OF QIANYING
JENNIE ZHANG**

JUDGE RANDALL H. WARNER

I. INTRODUCTION

I have been retained as an expert witness on behalf of Proposed Intervenor-Plaintiffs James Stevenson, Baron Benham, Lynie Stone, and Jessica Chambers in the above captioned proceeding. I expect to testify on the following subject matters: (i) a statistical analysis report on the database analysis conducted by Matthew Braynard conducted for the State of Arizona (“State”).

This is a statement of my relevant opinions and an outline of the factual basis for these opinions. The opinions and facts contained herein are based on the information made available to me in this case, prior to preparation of this report, as well as my professional experience as an assistant professor of Finance at Hillsdale College in the Department of Economics and Business Administration teaching, among other courses, college level statistics.

I reserve the right to supplement or amend this statement on the basis of further information and deposition testimony obtained prior to the time of trial, or in order to clarify or correct the information contained herein.

II. DOCUMENTS REVIEWED

I reviewed the following documents in arriving at my opinions.

1. The expert report of Matthew Braynard;
2. The data documents Matthew Braynard relied on in preparing his expert opinion.

In addition, I discussed the facts of this matter with attorney Ian Northon and members of his legal team.

III. PROFESSIONAL QUALIFICATIONS

I am an assistant professor of finance and economics at Hillsdale College. I obtained a B.S. degree in economics and mathematics from East China Normal University in 2009, a M.S. degree in economics from the University of Illinois, Urbana-Champaign in 2010, and a Ph.D. in economics from Florida International University in 2016. As an assistant professor of Finance at Hillsdale College in the Department of Economics and Business Administration. My research areas are in empirical asset pricing and applied time-series econometrics. I teach college level courses in statistics. I am currently teaching Econometrics, Quantitative Analysis and Business and Economic Statistics at Hillsdale College. I am also a member of Mensa and a CFA Level II candidate.

With respect to publications I have authored in the last 10 years, I have not authored any publications in the last ten years.

IV. COMPENSATION

I have been retained as an expert witness for Petitioners. I am being compensated at a flat fee of \$5,000.

V. PRIOR TESTIMONY

I have not provided testimony as an expert either at trial or in deposition in the last four years.

VI. STATEMENT OF OPINIONS

As set forth above, I have been engaged to provide expert opinions regarding a statistical analysis of the November 3, 2020 election of Presidential electors. I have reviewed the data analysis performed by Matthew Braynard and his call center staff who contacted absentee voters in the State. My opinions are predicated on the assumption that the responders to these calls are a representative sample of the population of registered voters in the State who requested an absentee ballot and responded accurately to the questions during the phone calls. As of November 23, 2020, there were 2,181,959 individuals voted early or applied for and the State sent an absentee or mail-in ballot. In addition, the State's database also shows 518,560 voters whom the State marks as having requested and been sent an absentee ballot but who did not return it.

Matthew Braynard's call center staff conducted a random phone survey from a sample this universe. When contacted, Matt Braynard's staff confirmed the individual's identity by name. Once the name was confirmed, Matt Braynard's staff asked if the person requested an absentee ballot or not. The staff then recorded the number of persons who answered yes. Of the 2,050 individuals who answered the question, 1,144 individuals answered yes to the question whether they requested an absentee ballot. Matt Braynard's staff recorded that 906 individuals answered no to the question whether they requested an absentee ballot.

Next, Matt Braynard's staff asked the individuals who answered yes, they requested an absentee ballot, whether the individual mailed back the absentee ballot or did not mail back the absentee ballot. Staff then recorded that of the 708 individuals who

answered the question, 355 individuals answered yes, they mailed back the absentee ballot. Staff recorded 353 individuals answered no, they did not mail back the absentee ballot. Paragraph 2 of Exhibit 2 presents this information.

1. Absentee Ballots Not Requested. From the State's database identifying 518,560 individuals the State identifies (i) as having requested an absentee ballot, (ii) the State mailed an absentee ballot to the individual and (iii) for whom the State's database identifies not having returned the absentee ballot to the State, Braynard's call center staff contacted and spoke with a random sample of 2,050 of these individuals. In response to Braynard's staff's question whether those 2,050 absentee voters contacted actually requested an absentee ballot from the State, 906 said they did not request an absentee ballot. This is a ratio of 44.20% of the 2,050 absentee voters contacted. Based on my statistical analysis of these numbers, it is my expert opinion to a reasonable degree of scientific certainty that there is a 95% confidence interval for the probability of the percentage of absentee voters who did not request an absentee ballot from the list of absentee ballot voters who did not return an absentee ballot in the State of between 42.05% and 46.34%. Based on my statistical analysis of these numbers, it is my further expert opinion to a reasonable degree of scientific certainty that there is a 99% confidence interval for the probability of the percentage of absentee voters who did not request an absentee ballot from the list of absentee ballot voters who did not return an absentee ballot in the State of between 41.37% and 47.02%. Using these percentages and applying them to the number of absentee ballots identified above of 518,560, based on my statistical analysis, there is a 95% confidence interval that between 218,030 and 240,326 of such absentee ballots were not requested by an eligible State voter and there is a 99% confidence interval that between 214,526 and 243,830 of the absentee ballots the State issued were not requested by an eligible State voter.
2. Absentee Ballots Returned But Not Counted. From the State's database identifying 518,560 individuals who the State further identifies (i) as having requested an absentee ballot, (ii) the State mailed an absentee ballot to the individual and (iii) for whom the State's database identifies not having returned the absentee ballot to the State but who answered yes that they requested an absentee ballot, Braynard's call center staff contacted and spoke with a random sample of 708 of these individuals. In response to Braynard's staff's question whether those 708 absentee voters actually mailed back an absentee ballot from the State, 355 of these absentee voters said they did mail back an absentee ballot to the State. This is a ratio of 50.14% of the 708 absentee voters contacted. Based on my statistical analysis of these numbers, it

is my expert opinion to a reasonable degree of scientific certainty that there is a 95% confidence interval for the probability of the percentage of these absentee voters who did mail back an absentee ballot in the State of between 46.46% and 53.82%. Based on my statistical analysis of these numbers, it is my further expert opinion to a reasonable degree of scientific certainty that there is a 99% confidence interval for the probability of the percentage of these absentee voters who did return an absentee ballot of between 45.30% and 54.98%. Using these percentages and applying them to the estimated number of requested absentee ballots of 289,382 based on my statistical analysis, there is a 95% confidence interval that between 134,442 and 155,758 of the absentee ballots the State issued and did not count were returned to the State by an eligible State voter and there is a 99% confidence interval that between 131,092 and 159,107 of the absentee ballots the State issued and did not count were returned to the State by an eligible State voter.

VII. BASIS AND REASONS SUPPORTING OPINIONS.

The basis and reasons supporting my opinions are set forth below. First, I received a data set of responses to a phone survey given to absentee voters in the State who were sent an absentee ballot but whom failed to return the absentee ballot. Out of 2,181,959 individuals identified as having applied for an absentee ballot and the State sending an absentee ballot to these individuals, there were 518,560 (23.77%) such voters. Matthew Braynard's staff contacted 2,050 of the 518,560 absentee voters identified on the State's database. For purposes of this report, I assume that the 2,050 individuals who responded to Mr. Braynard's staff are a representative sample of this population and responded accurately to the questions posed to them. These respondents were asked whether they had requested an absentee ballot. Of the 2,050 respondents, 906 (44.20%) denied having requested an absentee ballot.

Under our assumptions, I can use these survey results regarding the individuals who responded to the question of whether they requested an absentee ballot to the larger

population of interest. Applying a standard statistical formula,¹ I can say with certainty that there is a 95% confidence interval for the probability of the percentage of absentee voters who individuals the State identifies (i) as having requested an absentee ballot, (ii) the State mailed an absentee ballot to the individual and (iii) for whom the State's database identifies not having returned the absentee ballot to the State, the percentage of such absentee voters who did not request an absentee ballot in the State is between 42.05% and 46.34%. Based on my statistical analysis of these numbers, it is my further expert opinion to a reasonable degree of scientific certainty that there is a 99% confidence interval for the percentage of these same absentee voters of between 41.37% and 47.02%. Using these percentages and applying them to the number of absentee ballots identified above of 518,560, based on my statistical analysis, there is a 95% confidence interval that between 218,030 and 240,326 of such absentee ballots were not requested by an eligible State voter and there is a 99% confidence interval that between 214,526 and 243,830 of the absentee ballots the State issued were not requested by an eligible State voter.

Second, I received a data set of responses to a phone survey given to absentee voters the State's database shows did not return an absentee ballot but who said they did

¹ If each person from the population of size N is independently chosen to be in the sample of size n , and each person has the same probability p of having the desired property, then the number of people in the sample with the property can be approximated by a normal distribution. We have 95% within 1.96 standard deviations and 99% is within 2.576 standard deviations. This leads to the following confidence intervals, where below p is the observed sample proportion having the property ($p = x/n$) :

$$CI(95\%) = p \pm 1.96 \sqrt{\frac{p(1-p)}{n}}; CI(99\%) = p \pm 2.576 \sqrt{\frac{p(1-p)}{n}}.$$

To extrapolate to the entire population of interest, we multiple the above equations by N .

return an absentee ballot. Out of 2,181,959 individuals identified as having applied for an absentee ballot and the State sending an absentee ballot to these individuals, there were 518,560 (23.77%) voters who failed to return the absentee ballot. Matthew Braynard's staff contacted 2,050 of these 518,560 absentee voters identified on the State's database. For purposes of this report, I assume that the 708 individuals who responded to Mr. Braynard's staff are a representative sample of this population, and responded accurately to the questions posed to them. These respondents were asked whether they had returned an absentee ballot to the State. Of the 708 respondents, 355 (50.14%) said they returned the ballot to the State and the State did not count the ballot.

Under our assumptions, I can use these survey results regarding the individuals who responded to the question of whether they requested an absentee ballot to the larger population of interest. Applying the same standard statistical formula set forth in footnote 1, I can say with certainty that there is a 95% confidence interval for the probability of the percentage of absentee voters who individuals the State identifies (i) as having requested an absentee ballot, (ii) the State mailed an absentee ballot to the individual and (iii) for whom the State's database identifies not having returned the absentee ballot to the State but who said they did return the absentee ballot, the percentage of such absentee voters who did return an absentee ballot in the State is between 46.46% and 53.82%. Based on my statistical analysis of these numbers, it is my further expert opinion to a reasonable degree of scientific certainty that there is a 99% confidence interval for the percentage of these same absentee voters of between 45.30% and 54.98%. I estimate that there are 289,382 voters who solicited ballots using the product of the number of people

that were sent a ballot but whom failed to return the absentee ballot and the proportion of respondents in Braynard's analysis who confirmed soliciting a ballot (518,560 times 55.80%). Using the percentages and applying them to the number of absentee ballots identified above of 289,382, based on my statistical analysis, there is a 95% confidence interval that between 134,442 and 155,758 of such absentee ballots were not requested by an eligible State voter and there is a 99% confidence interval that between 131,092 and 159,107 of the absentee ballots the State issued were not requested by an eligible State voter.

VIII. EXHIBITS TO BE USED AT TRIAL TO SUMMARIZE OR EXPLAIN OPINIONS

At the present time, I intend to rely on the documents produced set forth above as possible exhibits.

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Dated: December 2, 2020

Qianying Zhang
Qianying Jennie Zhang