



## Polling Locations and Wait Times

### *Elections Assistance Commission Clearinghouse 2020 Awards Outstanding Innovations in Elections Application*

The Maricopa County Elections Department respectfully requests that the Elections Assistance Commission consider Maricopa County’s polling location webpage, with searchable functions and live voter wait times, as an example of *Outstanding Innovations in Elections*.

The global pandemic created unprecedented challenges for elections administrators across the county. As COVID-19 cases surged in Arizona, the Maricopa County Elections Department found solutions to increase voter access to the ballot, while also ensuring voter safety and elections security.

Even with a robust ballot-by-mail system, Maricopa County still expected upwards of 300,000 voters to cast a ballot in person for the 2020 General Election. Given this projection and the potential of COVID-19 exposure the longer voters waited at voting locations, the Elections Department built an election model that would safely accommodate that volume of voters.

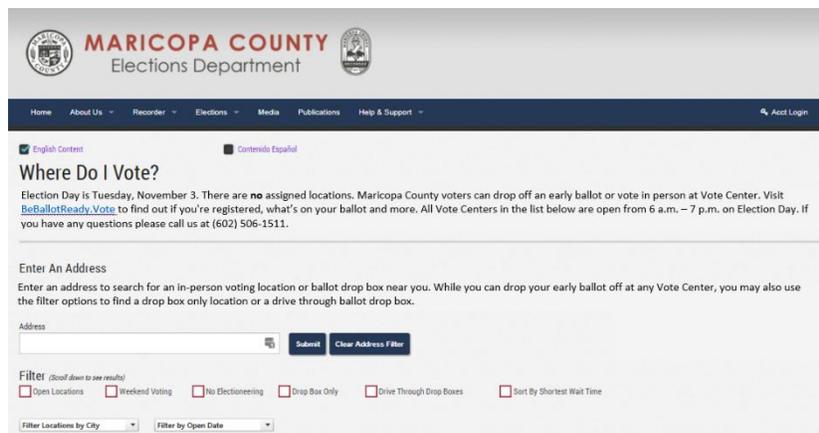
#### **Election Model**

In the 2020 Primary and General Election, Maricopa County moved to a Vote Center election model (vote anywhere sites) with robust early in-person voting options. For the General Election in November, Maricopa County provided voters with 175 Vote Centers on Election Day, phasing in the opening of most of the locations prior to November 3. This expansion included opening Vote Centers on weekends and during evening hours. The county also opened 23 secure ballot drop boxes and 15 drive through drop boxes. For comparison, in 2016, Maricopa County provided voters with just one in-person early voting location and used a precinct model on Election Day, where voters could only vote at one location.

Because of the need to provide for physical distancing and other COVID-19 safety precautions, many of the 2020 Vote Centers were in new locations. The county proactively moved traditional polling locations out of senior living facilities and small conference rooms into large spaces like convention centers, retail facilities and even sports arenas.

#### **The Solution**

Maricopa County needed an innovative solution to allow voters to quickly search for voting locations because of the new locations with unique hours, an increased number of early voting locations, and the ability to choose from any location. The elections team developed a unique webpage, [Locations.Maricopa.Vote](http://Locations.Maricopa.Vote), which allowed voters to quickly search by any Maricopa County address to find a convenient Vote Center, ballot drop box or drive through drop box location. In addition to the search feature, the webpage also provided voters with estimated wait times and the estimated number of voters at each location. Voters could filter by city, date, locations that were currently open, drop box locations and more!





# MARICOPA COUNTY

## Elections Department

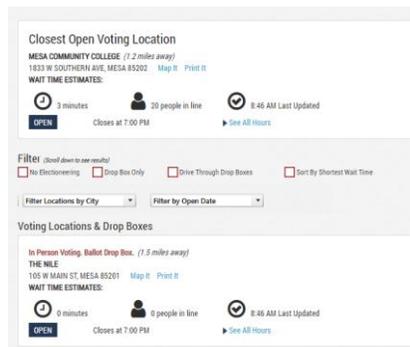


Once a voter typed in an address, the website would highlight the closest open voting location, and filter by all locations in that area. The website provided voters with the distance from the address, the ability to get directions, and the hours of operation.

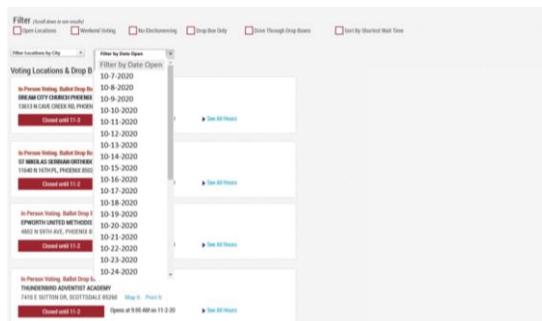
Information Technology experts in the Maricopa County Recorder’s Office developed the wait time feature in-house. The wait time program is housed in the county’s unique SiteBook check-in system and poll workers were trained to update it every 30 minutes. Wait times are calculated by the average check-in time (165 seconds) multiplied by the number of people in line. The SiteBook program then divided that number by the number of check-in stations at the location. The website divided that figure by 60 to give the estimate in minutes.

$$\left( \frac{\text{Number of voters in line} \times 165 \text{ seconds}}{\text{Number of Check in Stations at Site}} \right) / 60 = \text{estimated wait time}$$

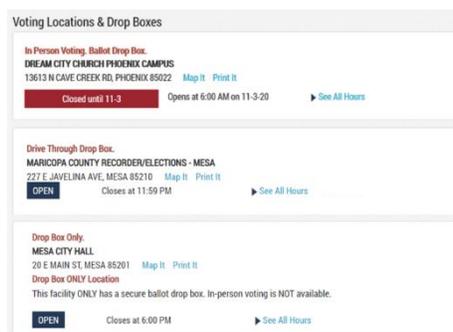
The Elections Department used this system internally in past elections as an indicator of potential issues at a location, which allowed staff to help poll workers quickly troubleshoot any potential issues, but 2020 was the first year it became available to the public.



The sort-by-date feature allowed voters to plan ahead and see all nearby locations, and decide what day, time and location fit best in their schedule.



Each location also had a customized title to provide voters with information about what voting services the Elections Department offered at that location.





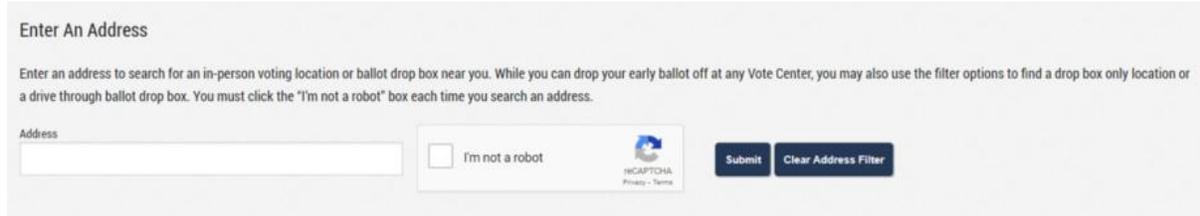
### IT and Cybersecurity Features

In addition to the features for voters, Maricopa County also worked to implement robust database and cybersecurity measures on the page to ensure it could facilitate the millions of expected views.

The website was migrated to new web servers. Maricopa County added CAPTCHA controls, which mitigate against automated attacks by requiring a user to prove they are human. In addition, Maricopa County's IT team rewrote the address autocomplete functionality after the primary election to be much more efficient and resistant to abuse.

The county also collaborated with Cloudflare and their Project Athenian to implement additional distributed denial of service (DDoS) protections. Cloudflare's reverse proxy caching increased performance and user experience on [Locations.Maricopa.Vote](https://Locations.Maricopa.Vote) and reduced the load on county servers. Additionally, the county implemented rate limiting, which adjusts how quickly an IP address can make a request against the web server and require additional CAPTCHA from any overseas visitors to our website.

All of these additions ensured the stability, resiliency, and performance of our website, ensuring voters were able to quickly and safely find voting locations.



### The Outcome

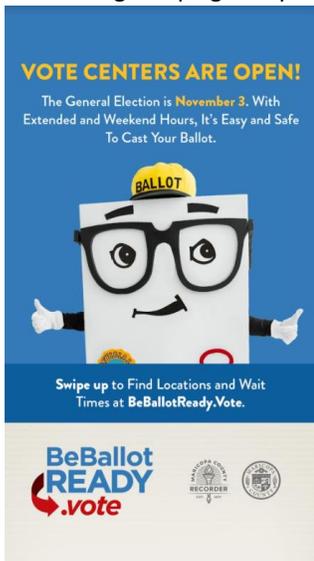
In an effort to better serve voters, the county created a shortlink for the website, [Locations.Maricopa.Vote](https://Locations.Maricopa.Vote). This page was a critical piece to the success of the election. It was shared broadly with voters through:

- Public board meeting [presentations](#)
- Wait-Time Remediation [Plan](#), Election Day [Plan](#) and Early Voting [Plan](#)
- Maricopa County's voter dashboard at [BeBallotReady.Vote](https://BeBallotReady.Vote).
- Social media
  - In the Election Department's [social media toolkit](#) shared with political parties, cities and towns, election groups, government agencies and others.
  - Directly on [@MaricopaVote Facebook](#) and [Twitter](#) and on [@MaricopaRecorder Facebook](#), [Twitter](#) and [Instagram](#).





- Advertising campaigns in print, social media, billboards, [TV](#) and more!



- Direct mailers to all voters that did not request a ballot in the mail

MARICOPA COUNTY ELECTIONS DEPARTMENT  
111 S. 3rd Ave.  
Phoenix, Arizona 85003

**Sample Ballot**  
NOVEMBER GENERAL ELECTION  
November 3, 2020  
Maricopa County, Arizona

**Boleta de Muestra**  
ELECCIÓN GENERAL DEL 2020  
3 de noviembre, 2020  
Condado Maricopa, Arizona

Only one sample ballot has been mailed to each household containing one or more registered voters.  
Sólo se ha enviado una boleta de muestra a cada hogar que contiene uno o más votantes registrados.

**IN PERSON VOTING**  
Voting locations in Maricopa County are open from October 7-November 3, including some evenings and weekends. There are **NO** assigned locations this election. Find a location and time that works in your schedule.  
Locations.Maricopa.Vote or call (602) 506-1511

Los lugares de votación en el Condado Maricopa están abiertos del 7 de octubre al 3 de noviembre, incluyendo algunas tardes y fines de semana. **No** hay ubicaciones asignadas en esta elección. Encuentre una ubicación y horario que funcione mejor para usted.  
Ubicaciones.Maricopa.Voto o llame al (602) 506-1511

**VOTACIÓN EN PERSONA**

NOVEMBER 3  
ONLY  
US POSTAGE  
NECESSARY  
IF MAILED  
PERMIT NO. 3423

**OFFICIAL ELECTION MAIL**

1 501 \*\*\*\*\*10703528 9 0101 80014  
JOHN LO VOTER  
4740 N 87TH ST  
PHOENIX AZ 85018

**OFFICIAL ELECTION NOTICE**

**WHERE TO VOTE**

Maricopa County voters can cast a ballot in-person between now and Election Day on November 3 at any Vote Center, including some evenings and weekends. All locations have heightened safety and cleaning measures. Voters may also request a ballot in the mail. The deadline is October 23 at 5 p.m. Visit [Request.Maricopa.Votes](#).

**Safety at the Polls**  
**PHYSICAL DISTANCING**  
All check-in stations and voting booths at least six feet apart.  
**HEIGHTENED CLEANING**  
We'll be frequently cleaning high touch surfaces and providing soil wipers with masks and gloves.  
**GLOVES & MASKS FOR VOTERS**  
We will provide all voters with gloves and masks when checking in and will disinfect pens after each use.

**AVISO OFICIAL DE LA ELECCIÓN**

**DÓNDE VOTAR**

Los votantes del Condado Maricopa pueden emitir su voto en persona desde ahora hasta el Día de la Elección el 3 de noviembre en cualquier Centro de Votación, incluyendo algunas tardes y fines de semana. Todos los lugares cuentan con altas medidas de seguridad y limpieza. Los votantes también pueden solicitar una boleta por correo. La fecha límite es el 23 de octubre para las 5 p.m. Visite [Solicite.usd.Maricopa.Votos](#).

**Seguridad en las Urnas**  
**DISTANCIAMIENTO FÍSICO**  
Todas las terminales de registro y las cabinas de votación tendrán al menos seis pies de distancia.  
**LIMPIEZA INTENSIFICADA**  
Estaremos limpiando frecuentemente superficies de alto tacto y proporcionaremos a los votadores electrónicos mascarillas y guantes.  
**GUANTES Y MASCARILLAS PARA LOS VOTANTES**  
Proporcionaremos a todos los votantes guantes y mascarillas al registrarse y desinfectaremos plumas después de cada uso.

**NO ASSIGNED LOCATIONS**  
Pick a vote center that works for you! Go online or call us to find one.  
**(602) 506-1511**  
[Locations.Maricopa.Vote](#)

**NO HAY UBICACIONES ASIGNADAS**  
Elija un centro de votación que funcione para usted! Visite nuestro sitio web o llámenos para encontrar uno.  
**(602) 506-1511**  
[Ubicaciones.Maricopa.Voto](#)

Maricopa County is not aware of any other jurisdiction that provides voters with live wait time data. This was crucial during the pandemic when crowds could present serious health concerns.

Moving forward, Maricopa County will continue to provide this option for voters. It provides voters with an easily searchable tool that places the choice about when and where to vote in voters' hands. Since this system was created internally, there will be no issues or costs associated with continuing to provide this page to Maricopa County voters.

The outcomes show that this innovative webpage was a success with more than 2.12 million page views from Oct. 1-Nov. 4, 2020. Voters spent an average of 1.5 minutes on the page, which shows they were quickly able to search and find a voting location or ballot drop box. But, the impact didn't stop at just page views. Maricopa County served



# MARICOPA COUNTY

## Elections Department



more than 395,000 in-person voters, and more than 1.1 million voters visited a Vote Center or Ballot Drop Box. That is more than all the voters who returned a ballot in the mail. The county was able to keep wait times low, averaging just under three minutes on Election Day. Some locations were busier than others, with one location exceeding an hour wait time. But just a few miles away, voters could select a location with a much shorter wait time.



Although Maricopa County created the wait time system and website in-house, other jurisdictions looking to provide voters with more access to information about voting options could implement the concept.

Given the abundance of voting options in Maricopa County coupled with COVID-19 concerns, the website provided the public a tool to make a safe voting choice that best fit their needs.