Best Practices
Designing Ranked Choice Voting Ballots

Guidelines for Ranked Choice Voting ballot layout and design.

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Introduction

At CCD, we know that good ballot design and effective voter education make informed and confident voters. It can be a challenge to fit everything on a ballot, especially on mixed contest ballots with multiple languages and many candidates. But, good design will help you fit everything you need to and support both novice and advanced RCV voters.

For us at CCD, a successful RCV vote means that:

- Voters understand how to mark the ballot to express their intent.
- Voters make their own decision about ranking.
- Voters feel confident that their voice will be heard.

Who are these guidelines for?

These guidelines are for anyone designing a RCV or mixed contest ballot.

Why follow these guidelines?

Poorly designed ballots lead to:

- Voters not voting in a way that reflects their intent.
- Higher over and undervote rates.
- Voter confusion.

What’s included in these best practices?

- RCV ballot layout styles.
- How to divide contests on a mixed contest ballot.
- What to include in RCV ballot instructions.

What are these guidelines based on?

- Our research on what works for voters. (See Page 24 for more details)
- The experience of elections offices and other groups in their successful campaigns.
Best Practices
Designing Ranked Choice Voting Ballots

First, you’ll need to choose a RCV ballot style that works for you, your election system, and your voters.

No matter what style of RCV ballot you’re designing:

- **Follow the EAC’s best practices for ballot designs.** Best practice design helps voters focus on their intent, not the mechanics of marking the ballot. [Page 12]

- **Write clear, short instructions.** Write those instructions in plain language to make ranking understandable. [Page 13]

- **Include visual instructions.** Use illustrations that show how to correctly and incorrectly fill out a RCV ballot. [Page 14]

- **Put instructions where voters need them.** Include instructions at the top of the ballot and within each contest. Provide full instructions in supplementary materials. On Ballot Marking Devices, tell voters how many ranks they have left and include a review screen with undervote alerts. [Page 15]

- **Arrange multilingual ballots to support bilingual readers.** Lay out multilingual material with languages side-by-side (vertically or horizontally). [Page 19]

- **Clearly separate RCV and non-RCV contests.** Ballot layout is often constrained by the legal order of contests. Depending on your state’s restrictions use a page turn, clear headers, and/or instructions to divide contest types. [Page 20]

Read more about our research and best practices for Ranked Choice Voting at [civicdesign.org](http://civicdesign.org)
Ballot Styles

In our research we have tested several styles of RCV ballot. Each has its own advantages and disadvantages.

You’ll need to choose a RCV ballot style that works for you, your election system, and your voters. You know your jurisdiction best!

These best practices include the following RCV ballot layouts:

- Grid [Page 5]
- Adapted optical scan [Page 7]
- UOCAVA Combined for overseas voters [Page 8]
- Hand-ranked [Page 10]
- Accessible [Page 11]

**Key questions to ask yourself** when picking a RCV ballot style are:

- Is ranking new for your voters?
- How many contests will include ranking? Where are those contests in the overall ballot order?
- What are your legal requirement for ballot design, especially requirements for the number of choices ranking?
- Does your voting system support RCV ballot layout?
RCV Ballot Style
Grid — up to 5 ranks

Ranks are in columns and each candidate is a row. This ballot style is the most common accommodates different numbers of rankings within the limit of paper width.

Up to 5 ranks is a good number of ranks to use so that you can fit two contests side by side. Any more ranks than that make it difficult to fit two contests beside each other with large enough text.

Numerals read from left-to-right. Using just the number is okay, especially on a multilingual ballot.

Ballot Design Tip!
Make sure that you’re lining up all marking targets along timing marks.

With up to 5 rankings, many ballots can fit contests side-by-side.

Center bubbles in the space, vertically and horizontally, to help voters stay on the right row/column.

Light horizontal lines make rows clear.
RCV Ballot Style
Grid — up to N ranks

It is possible to rank more than 5 candidates, but the challenge is that they take up more space. To create a well designed ballot with more than 5 ranks, you will only be able to fit 1 column of contests. You will only use as many ranks as candidates, so rank-10 will have wide variation in different contests!
RCV Ballot Style
Adapted Optical Scan

If you can’t use the grid style, this is for you! Each rank is laid out like a separate contest.

This ballot style works well with all tabulators, include those that don’t have a RCV module. It can be a transition between formats.

Ballot Design Tip!

This example shows rank-3, but rank-6 is also possible by using two rows for each contest.

This layout is a minimal change from a normal ballot layout. There is a rank in each of the three columns, and one contest per row.

Make sure that you clearly separate contests with a heavy rule and/or color bar with contest name.
RCV Ballot Style
Election and Runoff combined

When there is a runoff election, there is often not enough time for overseas voters to receive and return their ballots. Some states use RCV so UOCAVA voters can vote in both the general election and any possible runoff at the same time.

This version combines both steps. One research participant said “I like how it's broken down, the two steps close together. I like this one better because it's easier to read.”

Explain that the ballot includes 2 elections.
Explain that the design of these ballots helps UOCAVA voters save time and effort.
Instructions that explain how to correctly mark a RCV ballot.
A plain language definition of what a runoff is.
Thick vertical rule clearly divides the first choice and additional rankings in case of a runoff.
RCV Ballot Style

Election and Runoff as separate ballots

This version puts the two steps on different sides of the ballot or on different ballot papers.

Both Election and Runoff worked well in testing. Read more about our UOCAVA RCV research at civicdesign.org/projects/rcv

**Step 1**
Voters mark a single choice for the general election.

**Step 2**
Voters rank candidates to be used in case of a runoff. The challenge is that voters must vote for their 1st choice again.

Each ballot is shown as a separate step.

A plain language definition of what a runoff is.

Instructions that explain how to correctly rank candidates.
RCV Ballot Style

Hand-ranked

Voters enter the ranking numbers by hand.

This style is easy to explain and allows for a three column ballot, but has challenges for implementation.

- Voters in our research had difficulty ranking long contests.
- It requires optical character recognition or hand counting.

Voters write in numbers to rank. The instructions say to “Give each candidate you rank a different number.”
**RCV Ballot Style**

**Accessible RCV on Ballot Marking Devices**

Navigation and ranking interactions are designed for to work with a wide range of voters’ abilities while remaining efficient. Voters select candidates in the order they want to rank them.

**Audio script** combines on-screen text with status information and instructions.

**Pauses** separate chunks of text providing “space’ for the voter to interrupt the audio.

**Up/Down** key moves around the screen to every screen element.

**Select** key activates the button currently in focus (blue dotted box), and completes the action the button represents.

A **Put in Order** button reorders candidates by rank order at any time.

Ranking progress is shown as a prompt and visually in the list of candidates.

When a candidate is selected, rank number changes but candidate order doesn’t, so voters don’t lose where they are in the candidate list.

**Review screen** shows list of selections and how many candidates are not ranked.
Follow the EAC’s best practices for ballot designs.

Best practice design helped voters understand, so they can focus on their intent.

Clear design makes a ballot easier for voters to fill out as they intend.

Learn more:
- EAC’s Designing Polling Place Materials
- Field Guide Vol 1 Designing Usable Ballots

Ballot header is visible, but not intrusive.

Instructions where needed. Short text with visual explanations. Nothing below the instructions if they are in the first column.

Easy to read candidates. Large enough text, white space, and separator lines.

Contests headings. Shaded headings and dark divider lines help separate contests.
Write clear, short instructions.

Clear instructions help voters accurately mark their ballots.

Concise ballot instructions tell voters only what they absolutely need to know to vote. They will also help you save space on crowded ballots.

The below instructions come from many rounds of usability testing. Copy and use the full text of these instructions on Page 22.
Include visual instructions.

Use illustrations that show how to correctly and incorrectly fill out a RCV ballot.

At a minimum, include an illustration of the correct way to mark the ranked choice contests on the ballot.

Clearly distinguish correct and incorrect ways of marking so that the correct way sticks out in voters minds’. To make the difference clear, use:

- **Scale.** Make the correct example larger than the incorrect example.
- **Symbols.** Slashed circles and Xs mean “Do not”. Check marks and open circles mean “Do”.
- **Color.** Make sure the colors you choose are accessible to colorblind voters.

Bottom examples from NYC (2021).
Include instructions at the top of the ballot and within each contest.

Ballot instructions also use a bite-snack-meal framework. Instruction “bites” and “meals” are included on the ballot.

The instructions “snack” goes at the top of the ballot page above or next to the first ranked choice voting contest.

The most important “bite” of an instruction goes inside the contest, including the correct number of ranking options.
Put instructions where voters need them.

Provide full instructions on supplementary materials.

A full “meal” of ballot instructions can be included on:
- Ballot privacy sleeves
- Mail ballot inserts
- Poll signage

In the below example from NYC, an evergreen ballot privacy sleeve includes full instructions for non-RCV (on the left page) and RCV contests (on the right page). The privacy sleeve is about 20 x 20 inches unfolded.

Example from NYC (2021).

The ballot privacy sleeve fits detailed instructions in up to 5 languages.
Put instructions where voters need them.

On Ballot Marking Devices, tell voters how many ranks they have left.

Ballot Marking Devices can prevent both under and overvotes by telling people how many rankings are left.

Bite-size instructions at the top of the screen include the total number of candidates and how many ranks remain.

Put in order button at the bottom of the screen re-orders the candidates by rank number.
Put instructions where voters need them.

On Ballot Marking Devices, include a review screen with undervote alerts.

BMD review screens are another opportunity to prevent undervotes in RCV elections. The review screen must easily allow voters to return and change their selections.
Lay out multilingual material with languages side-by-side (vertically or horizontally).

Each language should be visually distinct so that it is easy to compare the English version and translations.

Copy and paste our RCV instruction text written based on our research in English, Spanish, and Simplified Chinese from Page 22.

<table>
<thead>
<tr>
<th>Language</th>
<th>Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>Any mark or writing outside the spaces for voting may void your ballot. You have a right to a replacement ballot. If you make a mistake, ask a poll worker for a new ballot.</td>
</tr>
<tr>
<td>Spanish</td>
<td>Ningún marcado o escriba fuera de los espacios para votar puede anular su boleta. Tiene derecho a una boleta de reemplazo. Si comete un error, pídale a un trabajador electoral una boleta nueva.</td>
</tr>
<tr>
<td>Simplified Chinese</td>
<td>任何标志或书写在投票区域外将导致选票作废。您有权要求更换选票。如果您犯了错误，请问一名工作人员为您换一张选票。</td>
</tr>
</tbody>
</table>
Best Practices: Designing RCV Ballots

Clearly separate RCV and non-RCV contests.

Separate contests with a page turn or full width header and instructions.

We hear many concerns about whether voters will understand the difference between RCV and non-RCV contests on mixed contest ballot.

The solution is good ballot design, clear divisions between contest types, and instructions where voters need them to show when voters are transitioning between contest types.

Separate with page turn

Instructions are at the top of each side of the ballot.

Separate with a full width header and instructions

If the ballot is very short, make sure the RCV instructions are before the first RCV contest.
Checklist
Designing RCV Ballots

Follow the EAC’s best practices for ballot designs.

- Is your text large enough?
- Does the ballot include white space so that candidate names are easy to read?
- Do contest headings and divider lines clearly separate contests and candidates?

Choose a ballot style that works for your jurisdiction.

- What ballot style will you use?
- Does your election system include RCV tabulation or not?

Write clear, concise instructions.

- Are the ballot instructions written in plain language?

Include visual instructions.

- Does the ballot include an illustration of how to correctly mark?
- Are correct and incorrect ballot marking illustrations visually distinct from each other?

Put instructions where voters need them.

- Have you included full instructions on supplementary materials?

Arrange multilingual ballots to support bilingual readers.

- Are multilingual ballots laid out in a way that supports multilingual learning?

Clearly separate RCV and non-RCV contests.

- How will you separate contest types of your ballot layout?

Make sure to test your demo ballot with voters!

- Do you have a plan to test your ballots before the election?
Copy & Paste
RCV Instructions Text

**Snack.** At the top of the ballot page before the first RCV contest.

<table>
<thead>
<tr>
<th>English</th>
<th>Spanish</th>
<th>Simplified Chinese</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rank candidates in the order of your choice.</td>
<td>Clasifique a los candidatos en el orden de su elección.</td>
<td>根据您的选择给候选人排名。使用标有选择 1、2、3 等字样的竖列中的椭圆，以此类推。</td>
</tr>
<tr>
<td>Use the ovals in the columns marked choice 1, 2, 3, and so on.</td>
<td>Use los óvalos en las columnas marcadas como opción 1, 2, 3, y así sucesivamente.</td>
<td>请勿在投票空间外写字或做任何标记, 否则将导致您的选票作废。</td>
</tr>
</tbody>
</table>

**Wrong:** Mark no more than 1 oval in a column.
You may mark as many or as few candidates as the columns allow.

<table>
<thead>
<tr>
<th>English</th>
<th>Spanish</th>
<th>Simplified Chinese</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incorrecto: Marque solamente 1 óvalo en una columna.</td>
<td>Puede marcar tantos candidatos como lo permitan las columnas.</td>
<td>错误：一位候选人标记不超过 1 个椭圆。各列允许标记多少位候选人，您就可以标记多少位。</td>
</tr>
</tbody>
</table>

**Wrong:** Mark no more than 1 oval for a candidate.
Ranking more candidates will not hurt your first choice candidate.

<table>
<thead>
<tr>
<th>English</th>
<th>Spanish</th>
<th>Simplified Chinese</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incorrecto: Marque solamente 1 óvalo para un candidato.</td>
<td>Clasificar más candidatos no perjudicará a su candidato de primera elección.</td>
<td>为一位候选人标记不超过 1 个椭圆。为多个候选人排名不影响您的首选候选人。</td>
</tr>
</tbody>
</table>

Any mark or writing outside the spaces for voting may void your ballot.

<table>
<thead>
<tr>
<th>English</th>
<th>Spanish</th>
<th>Simplified Chinese</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cualquier marca o escritura fuera de los espacios para votar puede anular su boleta.</td>
<td>请勿在投票空间外写字或做任何标记, 否则将导致您的选票作废。</td>
<td>您有权更换选票。如果不小心出错, 请联系投票点工作人员索取新的选票。</td>
</tr>
</tbody>
</table>

**Bite.** Inside each contest.

<table>
<thead>
<tr>
<th>English</th>
<th>Spanish</th>
<th>Simplified Chinese</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rank up to 5 candidates. Mark only one oval in each column.</td>
<td>Clasifique hasta 5 candidatos. Marque solo un óvalo en cada columna.</td>
<td>最多可排列 5 名候选人。每一列中只标记一个椭圆。</td>
</tr>
</tbody>
</table>
The research behind these best practices

2017 Research for Best Practices for RCV ballots and materials

In this project with Fair Vote and the Ranked Choice Voting Resource Center, we tested in locations with and without RCV including Southern California, NJ, Minneapolis, San Francisco/Oakland, Denver, and Maine. We worked with almost 200 people who identified as first-time voters, experienced voters, and a few non-voters.

Most of the studies were qualitative interviews with a few people, but we also ran a large-scale study in which voters tried voting on three different ballot styles. In another, we talked to voters immediately after voting in an RCV election in Maine to learn how they approached the challenge of ranking.

Our goal was to learn what helped voters understand and use RCV successfully. Participants used a simple voter education flyer, marked ballots, and answered questions about their reactions to RCV as a concept based on the materials used in the test. We updated the instructions and education flyer between studies, refining the approach.

Overseas voters and runoff elections

Five states use ranked choice voting to allow overseas voters to participate in runoff elections by ranking their preferences for a runoff if their first choice is not a winner. Helping them do so successfully required explaining runoffs in addition to how to mark their ballot. This research included a survey of voting experiences with 79 voters. The usability test included 17 voters.

Designing an accessible ranked choice ballot

We used the Anywhere Ballot interface as the basis for research into how to support voters who are blind or very low vision, have limited or no use of their hands, or have cognitive or attention disabilities. The research with 15 participants including voters with no use of their hands, autism or other attention and cognitive disabilities, and 6 blind voters used an interactive prototype.

Read more about our research for Ranked Choice Voting at civicdesign.org
Additional Resources

Learn from our Civic Design Skill resources at civicdesign.org

Plain Language
Field Guide Vol 1 Writing instructions voters understand
Field Guide Vol 4 Effective poll worker materials

Information Design
Workbook Designing a voter guide to an election
  ● Using colors effectively
  ● Planning for multiple languages
Toolkit Civic icons and images
Toolkit Election materials color palette (accessible colors in 4 shades)

Usability Testing
Field Guide Vol 3 Testing ballots for usability
Toolkit Usability testing kit

Language Access
Workbook Planning Language Access