



2021 EMERGING AND ADVANCED TECHNOLOGY PROMOTION

CONTENTS

I. BACKGROUND 2

II. PROGRAM DESCRIPTION..... 2

III. ELIGIBILITY REQUIREMENTS.....3

 A. Pre-Approval Process

 B. Mailpiece Content Requirements

 1. Directional Copy Requirements

 2. Website Requirements-Relevance

 3. Website Requirements-Mobile Optimization

 4. Restrictions on Barcode Placement

 5. Multi-mail piece/marriage mailers

 C. Technology Options/Requirements

 1. Extended Reality (XR)

 i. Augmented Reality (AR)

 ii. Mixed Reality (MR)

 iii. Virtual Reality (VR)

 2. Digital to Direct Mail

 3. Near Field Communication (NFC)

 4. Video in Print

 5. Integration with Voice Assistants

V. PROGRAM OFFICE CONTACT INFORMATION.....10

VI. REVISION HISTORY.....11

VII. APPENDIX.....12

NEW This document contains information about how to design a mailpiece and mailing that meets the requirements for the Emerging and Advanced Technology Promotion. There are additional registration, mail preparation and mail entry requirements that are required to participate in the promotion. These requirements are now part of a separate document titled “2021 PROMOTIONS GENERAL PARTICIPATION GUIDE”. This document includes information about the following topics:

- Registration Requirements
- Mailing Submission Requirements
- Requirements at Mail Acceptance and Post - Mailing

The new document can be found on PostalPro at:
<https://postalpro.usps.com/promotions/2021-guide>

2021 EMERGING AND ADVANCED TECHNOLOGY PROMOTION
PROGRAM REQUIREMENTS

I. BACKGROUND

Businesses have a variety of electronic and digital options available and are relying heavily on email marketing and social media to communicate with their customers in marketing their products and services. As mobile and other print technologies continue to evolve, mail has the potential to offer greater value by engaging customers in various platforms. Due to the distinct advantages mail offers as a direct marketing channel along with the amplified results that can be achieved from an integrated print and digital campaign, we encourage customers to explore opportunities to incorporate technologies such as Near Field Communication (NFC), “Enhanced” Augmented Reality, Video in Print (ViP), Virtual Reality, Digital to Direct Mail and other developing technologies like Mixed Reality and Integration with Voice Assistants. This strategy provides substantial advantages and opportunities for the integration of innovation in the mail now and in future years.

II. PROGRAM DESCRIPTION

The use of technology is a proven force in the marketing landscape for today’s savvy marketing professionals. This promotion will build upon previous promotions and continue our strategy of encouraging mailers to integrate direct mail with advances in technology. To participate in the promotion, the mailpiece must incorporate any of the following technologies: NFC technology, Video in Print (ViP), an “Enhanced” Augmented Reality, Virtual Reality, Mixed Reality, Integration with Voice Assistants, and Digital to Direct Mail. These technologies will allow the recipient to engage in an interactive experience using the mailpiece and mobile devices, tablets, etc.

NOTE: The mailpiece must use at least one form of the approved emerging or advanced technologies referenced above in order to receive the promotion discount.

Registration Period: January 15 – August 31, 2021
Program Period: March 1 – August 31, 2021
Discount Amount: 2% of eligible postage. The discount is calculated in **PostalOne!**[®] and applied to the postage statement at the time of mailing. The 2% discount is deducted from the postage amounts of qualifying product categories that are paid at the time of mailing. Normal postage prices listed in the published Price List (Notice 123) apply to the mailing and the discount is applied to those prices.

Eligible Mail Classes: First-Class Mail[®] letters, cards & flats
USPS Marketing Mail[™] letters and flats
Nonprofit USPS Marketing Mail[™] letters and flats

Ineligible Mail Classes: Periodicals
Bound Printed Matter
Media Mail

**Only one promotion discount can be applied to a mailpiece or mailing. The use of multiple qualifying technologies and/or print treatments on or within a mailpiece will not increase the discount amount.*

THE DISCOUNT MUST BE CLAIMED AT THE TIME OF MAILING DURING THE PROMOTION PERIOD AND CANNOT BE REBATED AT A LATER DATE.

2021 EMERGING AND ADVANCED TECHNOLOGY PROMOTION
PROGRAM REQUIREMENTS

III. ELIGIBILITY/PRE APPROVAL REQUIREMENTS

Past acceptance/approval in prior year promotions does not guarantee acceptance/approval in current year promotions. Please review this document to ensure that the mailpiece meets all 2021 Program Requirements.

A. Pre-Approval Process

The Program Office **requires** that **ALL** mailpieces using **any** of the technologies listed below be sent for review via email to EmergingTechPromo@usps.gov **no later than one week** prior to the mailing.

- Prototypes, mock-ups, previously used mailpieces, etc. can be submitted as the representation of the final mailpiece to see if the proposed concept would meet the Emerging Technology Promotion criteria.
- Each mailpiece design is reviewed individually and each individual mailpiece must meet the program requirements.
- If substantive changes are made to the mailpiece design, the revised mailpiece needs to be reviewed for approval.
- Any final mailpieces that deviate from the prototypes, mock-ups or examples submitted for pre-verification, shall be subject to the loss of the discount.
- If it is not approved in writing prior to entry date, the mailing will not qualify for the discount.**
- The promotions office responds to all inquiries **within 4 business days upon receipt.**
- Pre-approval notification e-mail is for the technology implementation. The mailpiece must also satisfy all of the remaining requirements in Sections III.B.1.2.3., Sections III.D.E.F., and Section IV of this document in order to achieve the promotion discount.
- The **mailer or MSP** must provide **One** Point of Contact (POC) who will be responsible for the mailpiece throughout the evaluation process.

If you have any questions about pre-approvals or reviews, please contact the Program Office via email at EmergingTechPromo@usps.gov

B. Mailpiece Content Requirements

1. **Directional Copy Requirement:** The mailpiece must contain text near the logo, icon, or image, etc., providing guidance to the consumer to engage using the technology trigger provided. The location of the directional copy must be *prominently* displayed to ensure the customer sees it. The directional copy must clearly state what element on the physical mailpiece must be engaged in order to activate the technology. This copy must be present on any page where the technology trigger (i.e., logos, icons, instructions, etc.) resides. Finally, if the viewing experience is only available on a specific mobile device (either IOS or Android only) then the directional copy must clearly state which platform and/or tool the experience is available on (e.g., this experience is only available on Android devices).

Examples include (but are not limited to):

2021 EMERGING AND ADVANCED TECHNOLOGY PROMOTION PROGRAM REQUIREMENTS

- Scan here to play an interactive game/experience
- Scan the logo, image, icon, etc., for an interactive experience
- Download our app & scan this page to see your mailpiece come to life
- Tap here with your NFC enabled phone
- Wave your NFC enabled phone here
- Assemble your viewer, download the app, insert your mobile device and prepare for an undersea adventure!

If the directional copy does not meet the requirements listed above for legibility and proper placement, it will not qualify.

2. Website Requirements – Relevance: The destination page(s) must contain information relevant to the content of the marketing message included in the mailpiece.

3. Website Requirements – Mobile Optimization: A mobile optimized experience must be specifically designed for optimum performance when viewed on mobile devices. Activating the technology, must lead to a complete mobile optimized experience regardless of the platform being used.

Links to a traditional desktop site do not meet the requirements for this promotion.

~~See Appendix for additional information on mobile optimization.~~

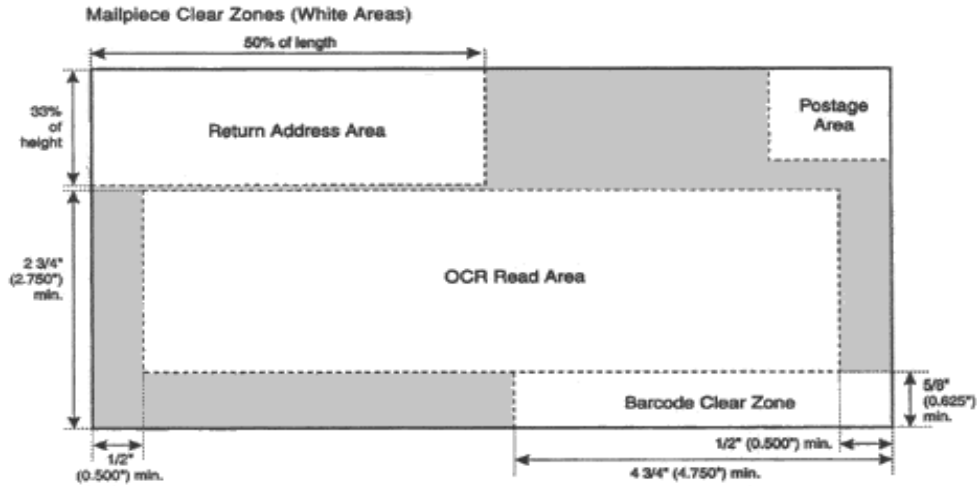
4. Restrictions on Barcode Placement

- technology trigger/logo must be clearly visible on the mailpiece
- must be with the marketing message
- can be on the inside or outside of the mailpiece
- **cannot** be placed on a:
 - Detached Address Label (DAL)
 - Unattached or blow-in card enclosed within the mailpiece
 - Unattached reply envelope/card

The technology cannot be placed in the indicia zone or the barcode clear zone on the outside of the mailpiece.

Further information can be found in Appendix C.

2021 EMERGING AND ADVANCED TECHNOLOGY PROMOTION PROGRAM REQUIREMENTS



5. Multi-mail piece / marriage mailers: The main purpose of the mailpiece and / or marketing message must be enhanced by the technology used. The technology and directional copy must be prominently located to ensure the recipient knows whether and how to engage with the technology. The technology used must meet all program requirements. The Program Office will render all decisions regarding the approval/disapproval of these types of mailings.

C. Technology Requirements

~~Helpful web links to information on all of the following technologies can be found in the appendix~~

- The mailpiece can incorporate one or more of the treatments (or any combination) on the outside of the envelope, on the mailpiece or both.
- All treatments must be *visible* and *distinguishable*

1. Extended Reality (XR)

Extended Reality (XR) is the broadest level of virtual immersive technology. For purposes of this promotion, we have defined XR into three distinct subsets: *Augmented Reality*, *Mixed Reality*, and *Virtual Reality*. All of these technologies and their requirements are described below.

Enhanced Augmented Reality (AR) Requirements:

“Enhanced” Augmented Reality (AR) is a technology that superimposes 3D digital images on a physical world. This experience is normally triggered by downloading an app or scanning an image with your mobile device camera to launch in AR implementation from a printed mailpiece.

The experience must include the following elements:

1. 3D elements or modules
2. Animation
3. An interplay between the physical (mailpiece) and the digital that actively uses the person’s perspective

2021 EMERGING AND ADVANCED TECHNOLOGY PROMOTION PROGRAM REQUIREMENTS

“Enhanced” AR **excludes** the use of static, pop-up, worded displays that do not engage the recipient in any experience other than reading or simply clicking a button. 2-dimensional AR images do not qualify. All AR images must be 3D.

Examples of augmented reality can be found by clicking on this link:

<https://www.irresistiblemail.com/augmented-reality>

Mixed Reality (MR) Requirements:

Mixed Reality combines both augmented and virtual experiences through a combined immersive technology that can include site, sound, and touch. Mixed Reality can include different experiences but some of the most common include blending physical and virtual experiences via a head-set.

For purposes of the promotion, the direct mail piece must have a trigger which leads to a Mixed Reality experience in the same way that augmented reality and virtual reality currently function in the promotion. The Mixed Reality experience must be related to the message included in/on the printed mailpiece.

The mailpiece and MR experience must meet machinability requirements per USPS regulations. If mailing goggles/viewing devices, the mailing must meet letter & flat requirements--**parcels are not eligible**.

Virtual Reality (VR) Requirements:

Virtual Reality, also known as immersive multimedia or computer-simulated reality, is commonly defined as a computer technology that creates replicas of an environment, real or simulated, that includes a user’s physical presence to allow for user interaction. Virtual realities artificially create sensory experiences, which can include sight, touch and hearing.

A VR experience must be related to the message included on/in the printed mailpiece. The mailpiece **may** include goggles/viewers or devices that allow the recipient to engage in the VR experience. Participants may consider incorporating a QR Code or an NFC chip to add ease of use in engaging the VR experience through the use of a mobile device and goggles/viewers.

The mailpiece and VR experience must meet machinability requirements per USPS regulations. If mailing goggles/viewing devices, the mailing must meet letter & flat requirements--**parcels are not eligible**.

Examples of virtual reality can be found by clicking on this link:

<https://www.irresistiblemail.com/virtual-reality>

2. Digital to Direct Mail Requirements:

Please contact the Program Office via email (EmergingTechPromo@usps.gov) to set up a discussion regarding your technology implementation and reporting solution prior to mailing. Once we have agreed upon the technology and reporting requirements, the Program Office will issue a formal letter providing authorization to participate in the promotion using Digital to Direct Mail technology. If it is

2021 EMERGING AND ADVANCED TECHNOLOGY PROMOTION
PROGRAM REQUIREMENTS

not approved in writing prior to the mail entry date, the mailing will not qualify for the discount.

Digital to Direct Mail (also known as automated/re-targeted direct mail) is dynamically printed, targeted messaging that is automatically triggered based on a digital interaction. Digital to direct mail is marketing messaging that is sent via First-Class mail to a customer or consumer based on their online actions (e.g., shopping on a website).

To qualify for the promotion the mailer must:

- Produce a hard copy, personalized, dynamically printed mailpiece based on a digital interaction
- Have the mailing pre-verified by the Program Office
- Provide an official pre-approval letter from the Program Office to the BMEU clerk at mail submission
- Provide the program office and the BMEU clerk with a postage statement and end of production report in order to confirm the mailing came out of a real time system (is trackable) with known mail owners clearly identified in the by/for section of the postage statement and is a part of the promotion.
- Enter the mailpiece at the postal facility **within 48 hours** of consumers online activity via **First-Class mail only**

Examples of digital-to-direct can be found by clicking on this link:

<https://www.irresistiblemail.com/digital-to-direct>

For technology solutions where the direct mailing precedes or initiates a digital marketing element, Marketing Mail pieces may qualify. All technologies must be approved by the Program Office prior to implementation.

3. Near Field Communication (NFC) Requirements:

Near Field Communication (NFC) technology generally consists of embedding a small chip or other form of technology into a carrier (mailpiece or other item) that can be recognized by a NFC enabled device such as smartphones, tablets or items embedded with NFC chips, tags or similar technology. The interaction is initiated by touching the mobile device on the NFC embedded item or by placing the device within close proximity of the NFC embedded item.

To qualify for the promotion, the mailpiece must incorporate the use of NFC technology to engage the mobile device in providing an interactive experience for the user.

Examples of NFC can be found by clicking on this link:

<https://www.irresistiblemail.com/near-field-communication>

2021 EMERGING AND ADVANCED TECHNOLOGY PROMOTION
PROGRAM REQUIREMENTS

4. Video in Print Requirements:

Video in Print (ViP) is video advertising that integrated into a printed piece that is featured in print catalogs and/or mailpieces.

Simply linking to video content (ie. a YouTube video) **is not adequate to meet the criteria** for Video in Print.

ViP can be integrated in the following ways:

- a. Integrated video screen within a printed, mailable piece
- b. Integrated Video/Picture utilizing translucent paper
- c. Personalized Interactive Video
- d. Shoppable Video

If you have other implementations of video in print which are included in the examples listed above then please contact the Program Office.

a. Integrated Video Screen within a Printed, Mailable Piece

A physical mailpiece that incorporates small, integrated LED, AMOLED or LCD screen that can be triggered to autoplay associated video content. The advantage of using this technology is that it puts a video message in the hands of an offline consumer using printed material that is portable, reusable, and long-lasting, thus generating multiple impressions over and over to your customers. The video is embedded in a printed piece like direct mailpieces (i.e., postcards, brochures), catalogs, etc. The video screen can automatically launch upon the opening of that page of material.

b. Integrated Video/Picture utilizing translucent paper

This technology allows a static image to become animated when combined with a digital screen. A physical, printed mailpiece printed on semi-translucent paper stock, that when placed over a tablet or mobile device, plays video content visible through the paper that appears to bring the mailpiece “to life”. These pieces may leverage tools such as Cineprint or similar technology to create or “play” the video-in-print experience.

c. Personalized Interactive Video (PIV)

A physical mailpiece that links the reader to an online interactive video experience where the user can interact with the video, and make selections throughout the experience to tailor the options and video content they receive and view. This category may also incorporate marketing automation and CRM software to automate the creation and preparation of additional mailpieces, product catalogs or other printed, mailable materials based upon user selection and inputs. These auto-generated pieces may also be eligible for the discount if prepared and entered as defined by program requirements documentation. If you are interested in pursuing this option, you must seek Program Office approval to discuss the required documentation needed to support the discount on the additional pieces.

d. Shoppable Video

Shoppable Video is the process by which a user can view videos and make a purchase without having to navigate to a retailers’ website on their own. The experience involves viewing a video which contains clickable spots on the video where you can make a purchase. Shoppable Video is platform

2021 EMERGING AND ADVANCED TECHNOLOGY PROMOTION PROGRAM REQUIREMENTS

agnostic but can often be viewed through social media platforms like Facebook, Instagram, and Snapchat as well as e-commerce sites. For purposes of this promotion, the physical mailpiece must include a trigger (i.e., AR-based app or QR Code) which leads to a Shoppable Video via mobile device. Using vertical video is recommended as it maximizes viewing space and opens opportunities for increased advertising messaging.

Examples of Video in Print can be found by clicking on this link:

<https://www.irresistiblemail.com/video>

5. Integration with Voice Assistants Requirements:

If you use this technology option and it is not approved in writing from the Promotions Office prior to your mail entry date, the mailing will not qualify for the discount.

Americans are increasingly using voice assistants in their daily lives as a way to help simplify their busy lifestyles. Direct mail can be an effective way to educate recipients about the benefits of voice branding and how to interact with voice assistants. To qualify for the promotion, the mailpiece must include directional copy with clear and specific instructions that enables the recipient to engage with assistants like chatbots or voice assistants (i.e., Siri, Cortana, Alexa, Google Home/Nest, etc.) to accomplish qualified business tasks that are part of the mailers audio branding.

The mailer must align their branded voice assist command specifically to the marketing message on the printed mailpiece in order to accomplish a qualified business task—a qualified business task allows for the purchase of a particular product, provides a business related “tip of the day,” etc. Some examples of a qualifying experience where the mailpiece engages with audio branding includes, but is not limited to, the following examples:

- A spirits company that helps customers access specific cocktail recipes
- A detergent company that provides advice about removing stains caused by different substances
- A food company that provides a voice to cooking instructions as you cook
- A banking/financial services company that allows you to complete account tasks by a voice command
- A retailer that offers product fulfillment via a voice command

The promotion **does not** allow for a mailpiece which results in a generic skill or a voice version of a general search to retrieve information that could be achieved via an online search. Commands like getting directions to a business location, listing store hours, opening a webpage in a browser etc., would not qualify.

In order to meet the program requirements for this technology, the marketer/mailer will need to use the appropriate tool for their platform (e.g., modeling tools like Alexa Skills Kit, Actions on Google Console or dialog and response tools like Dialogflow, Siri Shortcuts/SiriKit) when developing the voice assistant skill or action. The skill or action must be accurate so when triggered by a voice command, it fulfills the specific business intent listed on the mailpiece.

2021 EMERGING AND ADVANCED TECHNOLOGY PROMOTION PROGRAM REQUIREMENTS

The marketer/mailer should also make sure to follow all best practices for issues like synonyms, proper distance for voice command, etc., in order to ensure a good user experience that blends the direct mail marketing message with the proper voice response/fulfillment.

Please contact the Program Office to discuss any concepts/ideas that you may be considering for this technology.

(NEW) 2021 Promotions General Participation Guide

Registration information including mailing submission and mail acceptance requirements for all Promotions (excluding Earned Value) has been moved to its own document. This information was moved to create a more user friendly experience by cutting down the length of each Promotion's requirements document. Readers will now have easier access to the relevant information they are looking for.

Link to the new document: <https://postalpro.usps.com/promotions/2021-guide>

V. PROGRAM OFFICE CONTACT INFORMATION

Questions can be directed to the Program Office.

Email: emergingtechpromo@usps.gov
Facsimile: 202-268-0238
Mail: US Postal Service
2021 Emerging and Advanced Technology Promotion
P.O. Box 23282
Washington, DC 20026-3282

FedEx and UPS do not deliver to PO Box addresses.

To ensure delivery to the Program Office, please use Postal products or services.

All PO Box mailings must include information about the sample, contact information and an email address for responses.

The Program Office responds to all inquiries within 4 business days upon receipt of mock ups, in the promotion inbox emergingtechpromo@usps.gov or the PO Box.

Information and resources will also be posted online at:

<https://postalpro.usps.com/promotions>.

DISCOUNT MUST BE CLAIMED AT THE TIME OF MAILING DURING THE PROMOTION PERIOD AND CANNOT BE REBATED AT A LATER DATE.


2021 EMERGING AND ADVANCED TECHNOLOGY PROMOTION
PROGRAM REQUIREMENTS

VI. REVISION HISTORY

Date	Section	Reason For Revision	Version

2021 EMERGING AND ADVANCED TECHNOLOGY PROMOTION
PROGRAM REQUIREMENTS

VII. APPENDIX A

1. Does the mailpiece contain any of the following technologies?	<input type="checkbox"/>	<input type="checkbox"/>	If not, this mailing does not qualify for this promotion.
<p>A. Mixed Reality. B. Virtual Reality C. Digital to Direct Mail D. Enhanced Augmented Reality—is launched using an app which is available either proprietarily or it can be a branded solution. E. NFC (Near Field Communication)—does the piece have this type of chip/sticker/attachment on the mailpiece? These are just examples.</p>  <p>F. Video in Print (ViP)—this is video advertising that is featured in print catalogs and/or mailpieces. G. Integration with Voice Assistants</p>			
2. Does the mailpiece have directional copy near the logo?	<input type="checkbox"/>	<input type="checkbox"/>	If not, this mailing does not qualify for this promotion
<p>Directional copy is part of mobile marketing best practices. This copy is used to explain what the code is, what it does and why and how the consumer should scan it. This simple element will help and encourage consumer participation. If the viewing experience is only available on a specific mobile device (either IOS or Andriod only) then the directional copy must clearly state which platform and/or tool the experience is available on (e.g., this experience is only available on Android devices). Examples would include but are not limited to:</p> <ul style="list-style-type: none"> • <i>Scan here to play an interactive game</i> • <i>Scan the barcode for an interactive experience</i> • <i>Download our app and scan this page to see your mailpiece come alive</i> • <i>Download our app for an interactive experience</i> • <i>Tap here with your NFC enabled phone</i> • <i>Wave your NFC enabled phone here</i> 			
3. Have you received Pre-Approval from the Program Office and presented the official letter from the Program Office to the BMEU?	<input type="checkbox"/>	<input type="checkbox"/>	If not, it does not qualify
<ul style="list-style-type: none"> • Preapproval are mandatory for all Technology options for this promotion: 			
4. Have you registered on the Business Customer Gateway at least 2 hours prior to submitting mail at your postal facility?	<input type="checkbox"/>	<input type="checkbox"/>	If not, this mailing does not qualify for this promotion.
5. Have you claimed the discount at the time of mailing?	<input type="checkbox"/>	<input type="checkbox"/>	If not, you will not be able to claim it after the fact.

2021 EMERGING AND ADVANCED TECHNOLOGY PROMOTION
PROGRAM REQUIREMENTS

VII. APPENDIX B

Promotion Checklist

Have you met the program requirements? Make sure that your review/preapproval will be successful. Complete the checklist below:

- Directional Copy
- Website Relevance
- Website Mobile Optimization (if driving customer to a mobile site)
- Scannable Mobile Technology
 1. Mixed Reality
 2. Virtual Reality (VR)
 3. Digital to Direct Mail
 4. Near Field Communications (NFC)
 5. Enhanced Augmented Reality
 6. Video in Print (ViP) examples:
 - Integrated Video Screen with a Printed, Mailable Piece
 - Integrated Video/Picture utilizing translucent paper
 - Personalized Interactive Video (PIV)
 - Shoppable Video
 7. Integration with Voice Assistants

VII. APPENDIX C

Barcode Placement

The technology engagement feature can be placed on the inside or outside of the mailpiece. The technology/logo/etc. cannot be placed on a detached address label (DAL) or card that is not attached to or enclosed within the mailpiece (e.g., unattached blow-in card).

The technology cannot be placed in the indicia zone or the barcode clear zone on the outside of the mailpiece. Additional guidance is provided below:

Barcode Clear Zone

Barcode Clear Zone for Letters: The barcode clear zone for letters is defined in the Domestic Mail Manual (DMM®) section below. DMM design requirements (DMM Sections 202.5.1) must be met:

DMM® 202.5.1 Barcode Clear Zone: Each letter-size piece in an automation price or an Enhanced Carrier Route price mailing must have a barcode clear zone unless the piece bears an Intelligent Mail barcode with a delivery point routing code (see 708.4.3) in the address block. The barcode clear zone and all printing and material in the clear zone must meet the reflectance standards in 708.4.4.

The barcode clear zone is a rectangular area in the lower right corner of the address side of cards and letter-size pieces defined by these boundaries:

- Left: 4 3/4" inches from the right edge of the piece
- Right: right edge of the piece
- Top: 5/8 inch from the bottom edge of the piece
- Bottom: bottom edge of the piece

A pictorial description of the barcode clear zone on letters can be found in Quick Service Guide 602 at this link: <http://pe.usps.com/text/gsg300/Q602.htm>

Barcode Clear Zone for Flats: For flats, the technology/logo/etc. should not be placed within 1/8" of the actual routing Intelligent Mail barcode.

Indicia Zone

The "Indicia Zone" is two inches from the top edge by four inches from the right edge of the mailpiece; in addition, the mobile barcode should not be placed within two inches of the actual postage indicia when the indicia is not placed in the described "indicia zone."

Indicia Zone for Flats: For optimal processing, avoid placing the barcode, images, or tags in the destination address block and indicia.

Indicia Zone for Letters: The "Indicia Area" on letter mail is the top-right corner. The Postal Service's Barcode Sorters look for these Information-Based Indicia (IBI) codes in the zone 2" from the top edge x 4" from the right edge of the mailpiece. Barcodes, images, or tags cannot be used in this area.

2021 EMERGING AND ADVANCED TECHNOLOGY PROMOTION
PROGRAM REQUIREMENTS

Appendix
Additional resources

Virtual Reality

- <http://www.cnet.com/special-reports/vr101/>
- <http://www.recode.net/2015/7/27/11615046/whats-the-difference-between-virtual-augmented-and-mixed-reality>

Near Field Communication

- <https://irresistiblemail.com/#/near-field-communication>

Enhanced Augmented Reality

- <https://irresistiblemail.com/#/augmented-reality>
- <https://badgeville.com/wiki/Gamification>

Video In Print

- https://www.google.com/search?q=video+in+print&espv=2&rlz=1C1NHXL_enUS691US691&biw=1280&bih=899&tbm=isch&tbo=u&source=univ&sa=X&ved=0ahUKEwif3cWAXNXOAhXGKx4KHf3sDgEQsAQIVA
- <http://www.vlinklive.com/explore-live-streaming/frequently-asked-uestions/what-is-live-video-streaming-or-livecasting/>

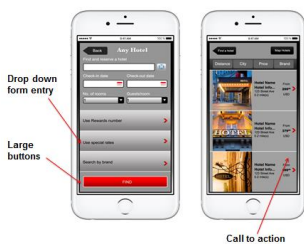
Appendix Mobile Optimization

Mobile Optimized Sites



Why is design for mobile web different? Mobile users are ...

- goal oriented, looking for a specific piece of information or task
- on the go, and may view content while walking
- viewing on smaller screens with tiny keyboards or touch screens

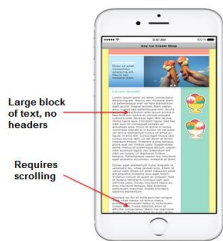


Copy

- **Keep it short:** traditional webpages have 250-400 words, on a mobile device only the first 80-90 are visible on the screen.
- **Use readable font:** it should be slightly larger than the font size used for desktop viewing, and [kept simple](#) font to ensure compatibility across devices
- **Make it action oriented:** use headings to break up blocks text so users can easily find what they're looking for, as they often have a specific piece of information or task in mind, and will scroll through pages quickly

**Appendix
Mobile Optimization
Continued**

Non Mobile Optimized Sites



Navigation & Design

- **Use hierarchy, menus and drop downs:** these help avoid scrolling, get users to their goal quicker, and avoid time consuming typing
- **Consider page orientation:** the design needs to work in both vertical and horizontal orientation
- **Include strong calls to action:** the more prominent, the better – mobile websites can be good conversion tools if well designed
- **Avoid accidental clicks:** design should be “thumb-friendly” with sufficient space between large buttons, avoiding frustrating navigation errors

Back-end

- **Make it compatible:** mobile sites need to be browser-independent, avoid elements like Flash that may not work on many devices, and take advantage of native content (
- **Constantly evolve:** use analytics tracking to understand what people are actually using your site for, and make that content easiest to access.