



***PROGRESS REPORT ON ACCESSIBILITY AT
THE FDR MEMORIAL***

By Cheryl Fogle-Hatch, Ph.D.

July 25, 2022

Image Description: A round logo with a dark gold illustrated version of the FDR wheelchair statue in the center. Above and below the graphic, white text on a curved navy-blue background reads: FDR Memorial Legacy Committee.

CONTENTS

<i>Introduction</i>	3
<i>Key Findings</i>	3
<i>Observations Preparing for and Completing the Site Visit</i>	4
<i>A Note on Definitions</i>	4
<i>Lobby Exhibits</i>	4
1. New Braille Text in Lobby Exhibits.....	6
2. Braille Brochure	6
3. Tactile Maps	7
4. Waysides	8
5. Listening Devices and Audio Descriptions	11
6. Features of Individual Waysides	11
<i>Recommendations</i>	14
1. Updated Recommendation for Interpreting the Artistic Braille.....	14
2. Update Braille Brochure.....	17
3. Feature Suggestions for the Waysides	17
<i>Update On Other Concerns</i>	18
1. Mobile Guide and Wayfinding	18
2. Safety Concerns.....	19
<i>Conclusion</i>	21

Introduction

This report documents improvements to the accessibility of the FDR Memorial made by the National Park Service, (NPS) between my original site visit in March 2021 and my second visit in May 2022 after they installed new accessible exhibits. When I wrote the [2021 report titled “Exploring Accessibility of the FDR Memorial”](#), my intent was to experience the Memorial as a first-time visitor. In the months since that visit, I have deepened my knowledge of the Memorial through interactions with the FDR Memorial Legacy Committee and NPS staff. Therefore, I have modified some of my original recommendations from 2021 to reflect this new knowledge.

Although my observations and recommendations are primarily for people who are blind or have low vision, I also discuss some aspects of the Memorial that may affect people with other disabilities. The first section discusses new exhibits in the lobby and outdoor panels that the NPS calls waysides. These waysides include have print, Braille, audio, and tactile models. In the second section, I make recommendations that would enrich the NPS interpretation and accessibility efforts. The third section presents an updated discussion of website accessibility and safety concerns that I noted in my original report.

Key Findings

This report highlights the following improvements in accessibility

1. Through the installation of waysides throughout the FDR Memorial, information is provided in various formats: print, Braille, audio, and tactile models.
2. Tactile maps are now installed to help individuals orient themselves to the Memorial.

This report identifies areas for ongoing attention and concern:

1. My comment about the NPS website from the 2021 report remains the same:
“A well-designed website can provide information to everyone. It can be written in plain language to help people with cognitive disabilities and include descriptions of images and text directions useful to people who are blind. A mobile guide accessed by smartphone lets people with disabilities use their preferred accessibility settings to read the information.”
2. The NPS website should clarify the use of artistic Braille in the Memorial describing the artistic intent for creating Braille at a scale that is too large to read by touch. This would be a service to all visitors.
3. NPS guidelines for waysides call for their ongoing maintenance. As the waysides are essential features of accessibility, this maintenance must be prioritized.
4. Enhancements to the waysides that should be considered include:
 - a. Braille labeling for the photos
 - b. Adding Bluetooth beacon service to locate the waysides using a smartphone
 - c. Allowing the audio control to have a pause and stop feature.
5. Not all statues at the Memorial are available in tactile models. A tactile model for the heroic statue of Eleanor Roosevelt would be helpful, and additional tactile models should be considered.

6. Braille materials should be updated to the currently applicable codes set forth by the Braille Authority of North America.
7. As widely reported, flooding at the Memorial remains a safety concern for all visitors including people who are blind or have low vision.
8. In May 2022, one water fountain was not functioning and a temporary, yet movable, stanchion was in front of the nonfunctioning fountain. It is critical for safety reasons that the stanchions are in the proper place and maintained.
9. Automatic doors should be added for the bathrooms and the lobby entrance.

Observations Preparing for and Completing the Site Visit

To prepare for my visit, I checked for updates to the FDR Memorial website. Since my visit in March 2021, the NPS created a page with information on [accessibility at the FDR Memorial](https://www.nps.gov/frde/planyourvisit/accessibility.htm) (<https://www.nps.gov/frde/planyourvisit/accessibility.htm>). As of May 3, 2022, the page mentions accessible exhibits, the waysides with Braille and tactile models, and the availability of Braille brochures on-site. They provided a link to download an audio described version of the FDR Memorial brochure. I will discuss that in more detail below.

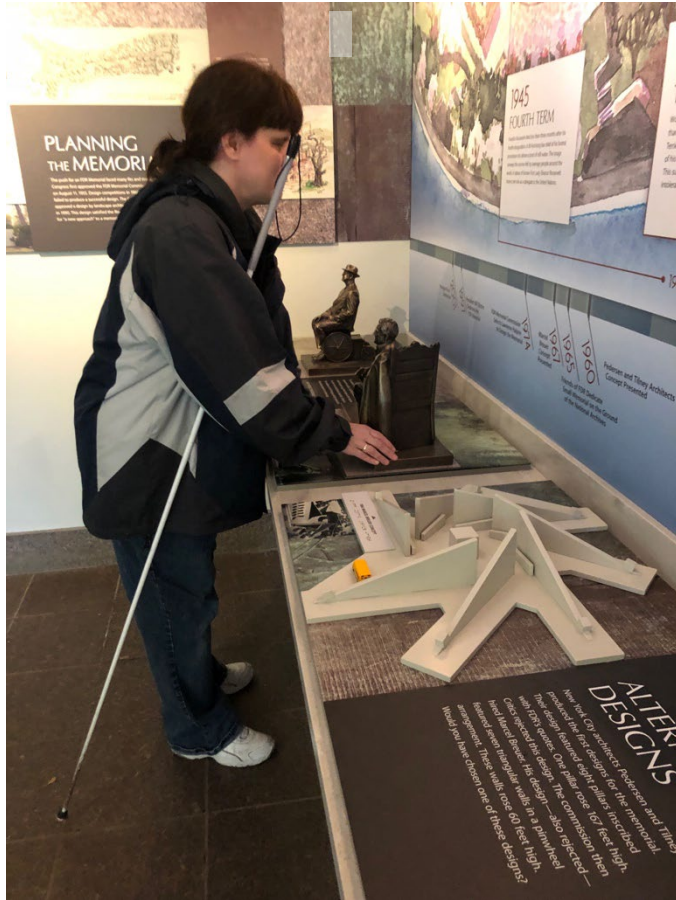
We visited the FDR Memorial on May 4, 2022. My colleague, Topher Bellavia, served as my guide and photographer. We explored the new tactile exhibits in the lobby and then visited the outdoor rooms. When we found school groups in the Prologue Room, we continued into Room 1, walked through rooms 2-4 and onto the pathway to the Tidal Basin stopping before we reached a flooded area. Then we returned to the Prologue Room at the end of our visit.

A Note on Definitions

In this report, I discuss tactile models, Braille text, and artistic rendering of Braille. These terms are not interchangeable. Tactile models are small statues mounted in the lobby exhibits and on the waysides. The stone sculptures and carvings on the FDR Memorial are art that can be explored both by touch and by vision. Following the same convention, the readable Braille text is written on the new exhibits installed in the lobby, and on all the waysides, while the artistic renderings of Braille are on the walls of the FDR Memorial itself. It is useful to think of tactile models and Braille text as NPS interpretive media reserving the term art for stone sculptures and quotes that are on the walls of the Memorial.

Lobby Exhibits

The new exhibits in the lobby are mounted on a long table against the right wall of the room. The exhibits include tactile models of the wheelchair statue and the sculpture of FDR with Fala. These models of the FDR wheelchair statue by Robert Graham in the Prologue Room and the heroic FDR with the cape by Neil Estern in Room 3, allow for an exploration of the contrasting presentations of the president and his wheelchair.



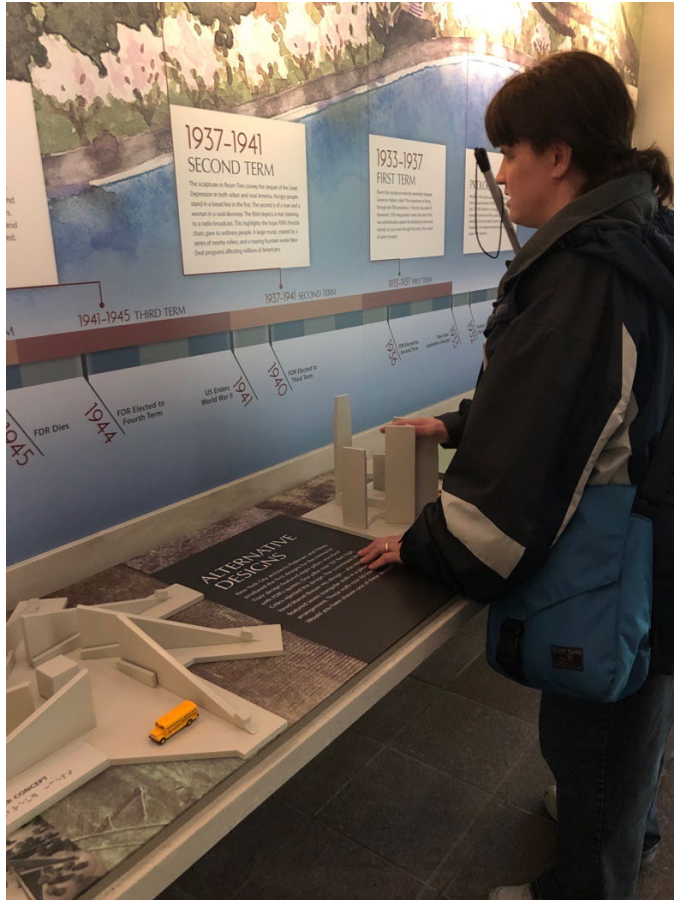
Dr. Fogle-Hatch explores the new tactile model displays in the lobby area of the FDR Memorial bookstore.

Photo credit: Topher Bellavia, 2022

ALT TEXT: A picture of a woman with dark hair and a black jacket holding a long cane under her arm while she touches a miniature replica statue of Franklin Roosevelt in the lobby of the Memorial.

A life-size replica wooden wheelchair is placed on a platform, and it is surrounded by low metal bars. I was struck by the hard wooden seat that reminds me more of a wooden dining table chair or bar stool than a modern wheelchair with a cushioned seat.

Tactile models of two proposed memorial designs, created in 1961 and 1966, have tall columns that enclose a small geographic area relative to the design that was accepted for construction. The proposed designs are displayed next to a tactile map of the Memorial as it is today. When the models and the map are displayed together, visitors can explore the changes in design leading to the open plan by Lawrence Halprin that was chosen for the Memorial.



Dr. Fogle-Hatch explores the new tactile model displays in the lobby area of the FDR Memorial bookstore.
Photo credit: Topher Bellavia, 2022

ALT TEXT: A picture of a woman with dark hair that is wearing a black jacket with a blue bag exploring the tactical map of the Memorial with her hands.

1. New Braille Text in Lobby Exhibits

There are Braille labels in front of each tactile model and a copy of the exhibit text. The Braille text for the exhibit panels is written on plastic pages in a binder mounted on the right end of the table. Braille text on the new exhibits and the waysides follows the Unified English Braille (UEB) code adopted by the [BRAILLE AUTHORITY OF NORTH AMERICA](http://www.brailleauthority.org/) (<http://www.brailleauthority.org/>) in 2016 following standards set by the [International Council on English Braille](http://www.iceb.org/ueb.html) (<http://www.iceb.org/ueb.html>). The Braille Authority of North America is a member of the International Council on English Braille, an organization that coordinates the use of Braille throughout the English-speaking world.

2. Braille Brochure

As advertised on the NPS FDR Memorial Accessibility page, Braille brochures are available on-site. We found Braille and print brochures in the lobby. The title page of the brochure indicates that it is a Braille transcription of Visitor Information Brochure FDRM 2011-365-615/8067. Since I read the Braille brochure on my 2021 visit, I checked the title and returned it to the rack.

The Braille visitor brochure was produced in an older Braille code, the North American English Braille code that was replaced by Unified English Braille in 2016. The use of current Braille codes will be discussed in the recommendations section of this report.

3. Tactile Maps

There are three tactile maps at the Memorial: one in the lobby exhibit space, and two at the entrances to the memorial. One is outside the Prologue Room, and the other one is at the exit by the Tidal Basin. Each map includes a key with Braille and raised print symbols for each room (P for the Prologue Room, 1 for Room One etc.). Fountains and planter beds are shown as squares or rectangles with different patterns of lines inside them. The use of keys and textures is consistent with the Braille Authority of North America's [Guidelines and Standards for Tactile Graphics](http://www.brailleauthority.org/tg/web-manual/index.html) (<http://www.brailleauthority.org/tg/web-manual/index.html>).

The two tactile maps located outside are mounted on waysides that include audio descriptions about the spatial layout of the memorial. The description says that the waysides are in a standard location in each room on the right; that applies if you are walking with the walls of the memorial on your left. We did not find that direction to be helpful because we bypassed the first tactile map when we walked around a school group in the Prologue Room. I learned of the description for locating the waysides when I examined the second tactile map on the pathway to the Tidal Basin near the end of our visit.



Dr. Fogle-Hatch using the tactile map at the FDR Memorial. Photo credit: Topher Bellavia, 2022

ALT TEXT: An outdoor picture of a woman with dark hair and a long cane standing on a sidewalk with trees behind her. She is examining a tactical map of outside of the Memorial and reading the Braille key.

4. Waysides

“Wayside exhibits are large-format outdoor sign-like exhibits that the National Park Service employs either to orient visitors arriving to a new location, or to reveal the stories hidden in the view. These panels combine photographs, artwork, diagrams or maps, and texts that are written to be easy to read aloud.” (Programmatic Accessibility Guidelines for National Park Service Interpretive Media, Version 2.4 October 2019).

Six of the seven waysides are installed flush against a mulch bed so the visitor must approach them from the front with the Braille labels facing them. The wayside titled “United Nations” is not against a mulch bed. All waysides have a Braille label reading “quotes from the memorial” in a consistent location at the top front edge of the wayside. There is a slight slope towards the visitor, and all elements are on the top of this horizontal panel.



Dr. Fogle-Hatch reads the Braille on the wayside at the FDR wheelchair statue in the Prologue Room at the FDR Memorial. Photo credit: Topher Bellavia

ALT TEXT: An outdoor picture of a woman with dark hair wearing a dark jacket and blue bag reading the Braille text from the front of a miniature replica of the wheelchair statue.

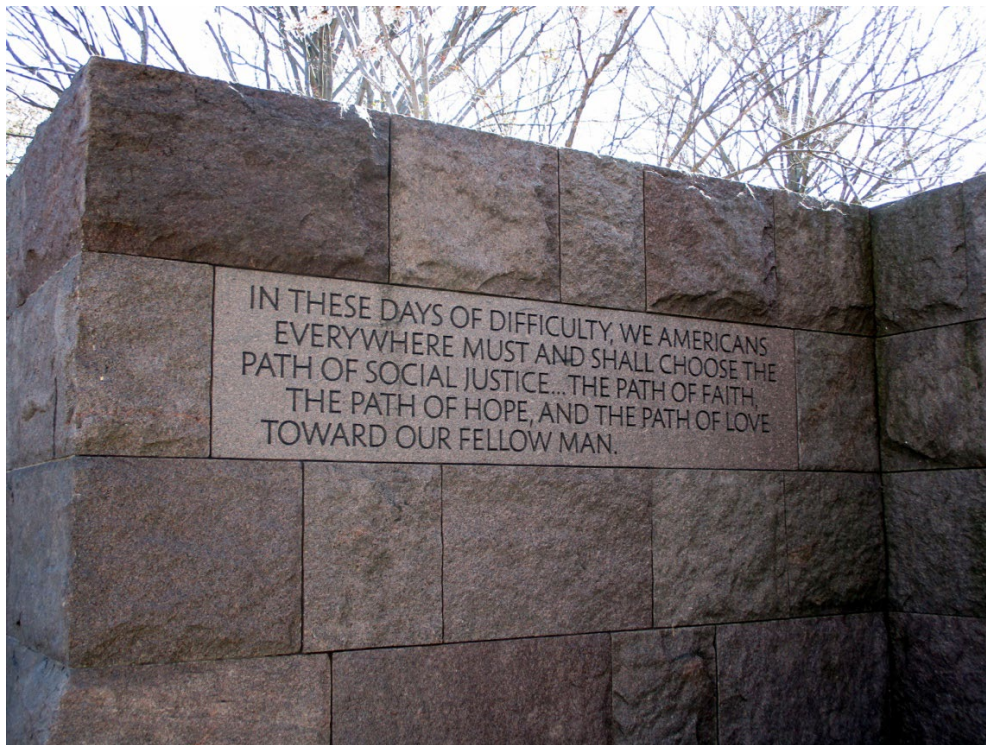
The standardized layout of the waysides helped me locate the Braille text on all the waysides and the tactile models that are on the waysides in the Prologue Room, Room 3, and Room 4. From left to right, the elements on the waysides are print, photo, text in Braille, and tactile models or tactile line drawings. I will use this left-to-right order to discuss the elements on the waysides.

Some of the waysides have a photo in print on the far left. The print photos are not labeled in Braille; however, they are included in the audio description.

Columns of quotes in print and Braille are located in the middle of the waysides. The Braille was produced at a readable scale. The requirements for readable Braille are found in chapter 7.33 of the [Architectural Barriers Act Accessibility Standards](https://www.access-board.gov/aba/chapter/ch07/) (https://www.access-board.gov/aba/chapter/ch07/) published by the U.S. Access Board.

The text is on what felt like a thin sheet of metal. It was damp from the rain that fell overnight before my visit. I read the Braille by touch while my colleague read the print by sight. He confirmed that my hand did not block his view. This design is inclusive because it can be used by mixed groups of blind and sighted visitors concurrently.

The quotes from FDR that are available in Braille text and audio on the waysides significantly improve access to this material. Quotes were inscribed on the walls of the Memorial by stone carver John Benson, but they are at a height that prevented exploration by touch. Reading the print visually at that height may have been difficult for some visitors.



A quote from President Franklin D. Roosevelt engraved on stones. Photo credit: Autistic Reality
ALT TEXT: A picture of the wall stacked from large stones that reads, “In these days of difficulty, we Americans everywhere must and shall choose the path of social justice...the path of faith...the path of hope, and the path of love toward our fellow man.”

The quote that was placed on the wall behind the wheelchair statue in the Prologue Room was produced in bas relief. The letters in print and Braille are raised and they are low enough to allow a person of average height to touch them and to get up close to see them. I will discuss this quote

in more detail in the section on artistic Braille on the Memorial itself.



A bas relief in the Prologue Room that contains a quote from Eleanor Roosevelt. Photo credit: Autistic Reality
ALT TEXT: A picture of a large stone wall with the quote: “He had to think out the fundamentals of living and learn the greatest of all lessons-infinite patience and never-ending persistence.”

When they are present, tactile models are on the right of the waysides. The models of statues felt like they are metal, including the wheelchair statue, and FDR with Fala.



A newly installed wayside. Photo credit: Topher Bellavia, 2022
ALT TEXT: A picture displaying the outside tactile model of FDR with Fala displaying both text and Braille writing describing FDR as the Wartime President.

I think that cut stone was used for the model of the jumbled stone blocks on the wayside titled “I Hate War” in Room Three. I do not know how the tactile line drawings and maps were constructed. All materials are easily explored by touch, and I think that they will withstand exposure to weather.

5. Listening Devices and Audio Descriptions

The NPS accessibility page for the FDR Memorial states that the waysides “include audio listening devices”, but the website does not provide information about how to find or use these devices. During my visit, I discovered that the listening device is located on the front right of the waysides. It has three components: a speaker, a large button, and a solar panel to charge it. I found the solar panel first because it is located at the top right edge of the wayside facing up to absorb sunlight. My colleague identified the solar panel for me because at first, I wondered if the grid of squares that I touched was a tactile model and a part of the interpretive media on the wayside.

A speaker is located in the front of the wayside facing the visitor. The grill of the speaker is identifiable by touch, and I checked around it for controls. Pressing a large button found immediately below the speaker plays an audio text. I had to bend down to push the button. I think this places the buttons in a zone that can be reached by children and wheelchair users.

An audio text is read aloud when the button is pressed. The main text is voiced by a synthesized voice, with the FDR quotes voiced by another synthesized voice. I liked this presentation because the quotes were distinguishable from the narration that describes key features of the memorial that are near each wayside.

I noticed that a word count was spoken when the button was pushed, and I wonder if the text was taken from the [audio described tour](https://www.nps.gov/frde/planyourvisit/frdedescribe.htm) available from the NPS website (<https://www.nps.gov/frde/planyourvisit/frdedescribe.htm>). The audio described tour was published online in July 2021 and can be accessed in three ways. The first option is to Download the UniDescription app from the app stores for Apple or Google. The second option is to play the audio via an embedded player on the NPS website. The third option is to download and save files from the NPS website. The download is a large (8 megabytes) compressed folder that must be unzipped to access a series of mp3 recordings. There is a temporarily installed poster that contains information including a QR code for an audio tour.

6. Features of Individual Waysides

There are seven waysides in the FDR Memorial. There is a single wayside in the Prologue Room, Room One and Room Two. There are two waysides in Rooms Three and Four.

The wayside in the Prologue Room displays the quote from Eleanor Roosevelt in Braille and print that is on the bas relief behind the wheelchair statue. The Braille text on the wayside is written at a readable scale. In the middle of the panel are tactile line drawings of the wheelchair showing both side and top views. To the right is a tactile model of the FDR wheelchair statue designed by Robert Graham.

The wayside in Room One shows quotes from FDR’s first term. It includes the famous quote: "The only thing we have to fear is fear itself." March 4, 1933. This wayside does not have a tactile model mounted on it.

The wayside in Room Two titled “Combatting Depression” is about the New Deal programs. Acronyms are listed on the left of the wayside; examples are WPA and CCC. Next to each acronym is the full program name, Works Progress Administration, Civilian Conservation Corps and the year that the program was established. This wayside is located near the mural and columns on which these acronyms appear in both print and Braille letters. Although the raised Braille letters on the mural are recognizable, the acronyms are difficult to read by touch because of differences in horizontal and vertical spacing between the raised Braille dots. The audio description gives the interpretation of the mural and the columns as cylinders of a printing press. I will discuss this interpretation in more detail in the section on artistic Braille depicted on the memorial itself.

There are two waysides in Room Three: “I Hate War” and “War Time President”. The wayside “I Hate War” displays a tactile model of the jumbled stone blocks visible in that room. The wayside titled “War Time President” shows a tactile model of the FDR sculpture with Fala. Both waysides include several quotes from FDR on the subject of war.

There are two waysides in Room Four: “He Died in Harness” and the “United Nations”.



The newly installed wayside. Photo credit: Topher Bellavia, 2022
ALT TEXT: A picture of the wayside titled “The United Nations” with a tactile model of jumbled stone blocks with both print and Braille.

The wayside titled “He Died in Harness” displays a tactile line drawing of FDR’s funeral procession. It shows the horse pulling the cart with his flag-draped coffin. First, I identified the spokes on the wheel of the cart. Then I found the horse, the coffin, and the procession of mourners.



A newly installed wayside. Photo credit: Topher Bellavia, 2022
ALT TEXT: A picture of the wayside titled "He Died in Harness" displays a tactile line drawing of FDR's funeral procession. It shows the horse pulling the cart with his flag-draped coffin and contains both written and Braille text. In the background is the actual bas-relief of the funeral cortege. In front of the bas-relief is a pool of still water.

The audio description for the wayside titled "United Nations" says that the wayside is near the statue of Eleanor Roosevelt, but there is no tactile model of that statue. I climbed onto the pedestal of the larger-than-life statue of Eleanor Roosevelt, and I could reach her shoulders by extending my arm above my head. Visitors who cannot walk or are uncomfortable climbing onto the pedestal cannot explore the statue by touch.



Dr. Fogel-Hatch reaching to touch the shoulder of the statue of Eleanor Roosevelt. Photo credit: Topher Bellavia, 2022
ALT TEXT: A picture of a woman with dark hair wearing a dark jacket, dark pants, and a blue bag, holding a long cane and smiling next to a statue of Eleanor Roosevelt.

Recommendations

This section includes recommendations that would enrich the NPS interpretation and accessibility of the FDR Memorial.

1. Updated Recommendation for Interpreting the Artistic Braille

In this section, I present knowledge that I have gained about the artistic rendering of Braille on the walls of the FDR Memorial. There are three artistic renderings of Braille depicted on the walls of the FDR Memorial: the quote in the Prologue Room and the letters on the workers mural and the letters on the columns in Room Two. In my 2021 report, I noted the differences in horizontal and vertical spacing of the artistic Braille and the contrast between raised and indented dots. I also described the large scale at which the Braille was produced. These facts remain true, but I have learned more about the art from NPS interpretive media and from a conversation with Steven Graham - President, Robert Graham Studio. His father, Robert Graham, created the artistic Braille that is on the stone walls of the FDR Memorial itself.

For the quote on the Prologue room wall, Robert Graham placed each Braille letter immediately below the corresponding print letter. This shows that both print and Braille are writing systems; each group of Braille dots, and the print symbol above it, form the same letters. In my 2021 visit, I identified the carved print letters above and then I recognized the Braille dots grouped immediately below as the corresponding letter. There is about an inch of space between the Braille letters, and I had trouble determining where one word stopped and the next one started. In my 2021 report, I compared reading this quote to “solving a puzzle”.

Steven Graham said his father intended to make the artistic Braille at a larger scale, just as he made the artistic print at a larger scale. Steven and I are glad that the new waysides show people the usual scale at which Braille is written, and easily read by touch. We agree that the Braille that is part of the artwork in the Memorial is artistic. I recommend that NPS staff update interpretive media to reflect differences between readable Braille on the waysides and the large-scale artistic rendering of Braille on the walls of the memorial.

The artistic Braille in Room Two, letters on the workers mural and on the columns, is more complicated. The mural is printed in positive relief, and the Braille dots are raised along with the raised images of print letters, faces, hands, and other elements. I could read the raised Braille dots as letters, but I could not recognize the acronyms as words. The columns represent cylinders of a printing press, and the carvings are indented so that they are in negative relief and they cannot be read as Braille letters by touch. Steven Graham endorses the NPS interpretation of the cylinders representing a printing press and that they are a negative rendering of the mural.



Social Programs artwork. Photo credit: Mike Olliver, 2021

ALT TEXT: An outdoor picture of five stone columns and a stone wall with bas relief artwork surrounded by trees.



Social Programs artwork. Photo credit: Mike Olliver, 2021

ALT TEXT: A close up picture of a mural with raised images of Braille and faces.



A bronze cylinder that is part of the Social Programs artwork. Photo credit: Mike Olliver, 2021
ALT TEXT: A close up picture of a column with negative relief images and Braille.

When I visited the FDR Memorial in 2021, my intent was to experience it as a first-time visitor, and I did not research the artwork beforehand. I did not know the interpretation of the columns as cylinders of a printing press that printed out the mural. At that time, the information was not available to me in audio or Braille formats. I noted the differences in size and spacing in the artistic rendering of Braille letters. In 2021, I wrote that the indentations in the columns feel like holes in the stone, and they are not recognizable as dots. The murals and the columns are not readable by touch.

In 2022, I have access to more information about the artwork in Room 2. The new wayside titled “Combatting Depression” displays readable Braille text of the acronyms for the New Deal Programs, and the audio description explains the interpretation of the artwork. I recommend that NPS build on this interpretation by explaining that the artistic Braille differs in size and spacing from readable Braille. This would be a significant step towards acknowledging facts that people who read Braille reported to [The Washington Post in an article](#) 25 years ago when the memorial was opened.



A newly installed wayside. Photo credit: Topher Bellavia, 2022

ALT TEXT: A picture of the new wayside titled “Combating Economic Depression” which displays readable Braille text of the acronyms for the New Deal Programs, and printed information.

2. Update Braille Brochure

This recommendation is repeated from my 2021 report because I think the Braille brochures are copies of the same publication that I examined last year. In 2021, I wrote: “The title page indicates that it is a Braille transcription of Visitor Information Brochure FDRM 2011-365-615/8067 published by National Park Service Harpers Ferry Center publications PO Box 50, Harpers Ferry, WV 25425.” I think that 2011 references the year of transcription and publication because the brochure predates the Unified English Braille (UEB) code adopted in 2016 to follow standards set by the [International Council on English Braille](http://www.iceb.org/ueb.html) (<http://www.iceb.org/ueb.html>). There are minor, but consistent, differences between the older North American English Braille code used in the 2011 brochure and UEB that is in use now.

“Braille shall be produced in full conformance with the currently applicable codes set forth by the Braille Authority of North America (BANA). Use the latest edition.” (Programmatic Accessibility Guidelines for National Park Service Interpretive Media, Version 2.4, October, 2019).

3. Feature Suggestions for the Waysides

The NPS document “Trailhead Signage Annotated Examples: Outdoor Developed Areas”, dated April 20, 2017, indicates that waysides should be maintained, and that they should be replaced every few years to keep up with technological change. I recommend that Braille labels be added that identify the print photos.

When maintenance or replacement is scheduled, it would be helpful to include a Bluetooth beacon that could broadcast the location of the waysides. This would make finding the waysides easier and would supplement the description of their location on the audio description included with the tactile maps. People are familiar with receiving locations on their smartphones when they enter a particular geographic area.

I recommend changes to improve the audio player controls on the waysides. They should have a pause/stop button and a volume control. Adding a pause/stop button would let people stop the audio if they did not want to hear the entire description. Since the memorial is in the flight path to National Airport, the sound of planes frequently overpowers the voices in the audio description, and a volume control might be useful. Adding a headphone jack might help the listener isolate the audio description from the airplane noise, but I am not in favor of that possibility because the wires would limit my ability to move around the wayside to explore its content.

Update On Other Concerns

This is an updated discussion of website design and safety concerns that I noted in my 2021 report.

1. Mobile Guide and Wayfinding

NPS is planning to redesign the FDR Memorial website. This presents an opportunity to improve content and increase accessibility. The FDR Memorial Legacy Committee has given NPS staff feedback on ways to improve the accuracy of the audio descriptions, and I will add the following items on the FDR Memorial accessibility page to that review.

This text is an example of website content that benefits from a more nuanced interpretation of the artistic rendering of Braille on the Memorial itself. The largest and most misunderstood tactile is in Room 2. There are five bronze bas relief panels with individual sections representing Roosevelt's 54 New Deal programs, and five bronze freestanding cylinders covered with the negative (or reverse) images of textural elements on the wall. The artist interspersed some elements of Braille in the bronze reliefs.

The text about the listening devices reads: "Accessible Waysides - There are several accessible waysides throughout the memorial. Each contain the nearby inscriptions in braille. Most also include tangible models of elements of the memorial." I think that the word tangible should be replaced by tactile.

Accessibility is essential. I repeat the recommendations from my 2021 report because an accessible website benefits everyone.

In my 2021 report, I wrote: "The FDR Memorial website could be updated to include a mobile guide. A well-designed website can provide information to everyone. It can be written in plain language to help people with cognitive disabilities and include descriptions of images and text directions useful to people who are blind. A mobile guide accessed by smartphone lets people with disabilities use their preferred accessibility settings to read the information."

Now, putting the audio described tour on a website allows people to use their own mobile device to hear the audio description. Sometimes people who use hearing aids connect them to their phone by Bluetooth, and this might provide them with an alternative method to control the volume of the audio description.

2. Safety Concerns

This report updates my comments about safety concerns with the barriers around the fountains. In my 2021 report, I wrote that I could not find the stanchions that were used to rope off the fountains. In 2022, I found sturdy wooden barriers around two of the fountains; the non-working fountain labeled Tennessee Valley Authority, and the in-ground pool that is flush with the sidewalk. These barriers are detectable by a person using a white cane and more obviously perceived by everyone. Although these barriers can be moved, I hope they will remain in place.



Dr. Fogle-Hatch navigates the FDR Memorial and the stanchions protecting the broken fountain area. Photo credit: Topher Bellavia, 2022

ALT TEXT: A picture of a woman with dark hair wearing a dark jacket and pants holding a long cane standing in an outdoor stone room with trees peeking over the top and a nonfunctioning fountain with two barricades behind her.

The pump room has been repaired since my 2021 visit. When the pumps are turned on the fountains are audible from a distance, and the sound of flowing water can be heard long before a blind visitor would find the stairs or any barriers around the fountains. At close range, I could

sometimes smell chlorine in the water.



A working fountain at the FDR Memorial. Photo credit: Topher Bellavia, 2022
ALT TEXT: A picture of water flowing through a fountain made of large rocks.

Flooding of the Tidal Basin continues to be a primary safety concern. During both our 2021 and 2022 visits, we found flooding on the pathway to the Tidal Basin. Water covered the stairs down to the MLK Memorial.



Stairs leading from the FDR Memorial to the MLK Memorial were covered in flood water from the Tidal Basin. Photo credit: Topher Bellavia, 2022
ALT Text: A stone walkway containing stairs with railings and a flooded pathway.

Conclusion

The recent accessibility improvements are a welcome addition to the FDR Memorial. Tactile models, Braille text, and audio descriptions make content accessible to visitors who are blind or have low vision. Displaying print text alongside of the Braille text includes a general sighted audience, and the waysides show Braille at a normal scale for reading by touch.

I made recommendations that would enrich the NPS interpretation and accessibility efforts. The most important of these concerns the artistic Braille. Now readable Braille text is written on the exhibits and waysides, and artistic renderings of Braille are on the walls of the FDR Memorial itself. It is useful to think of tactile models and Braille text in the lobby exhibits and on the waysides as NPS interpretive media reserving the term art for stone sculptures and carvings.

I made additional recommendations for improving accessibility at the FDR Memorial. In both the 2021 and 2022 reports, I suggested enhancements for the planned website re-design making it more accessible and usable for everyone. In this update, I suggested technological improvements to the waysides including adding a Bluetooth beacon to announce its location and adding a pause/stop button and a volume control to the listening device. Finally, I updated my discussion of safety concerns to reflect that the new barriers around the fountains are cane detectable. As in 2021, I noted flooding of the Tidal Basin that affects all visitors.

The improvements made since 2021 are a welcome addition to equalizing access and inclusion at the FDR Memorial.