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Narrative Description

This report covers the reporting period from 5/1/16 to 6/30/17, which comprises the entirety of project activities as originally proposed. While there were slight deviations in the details of the project plan, all of the primary goals were accomplished inside this period.

Project Activities - Project Planning and Initiation

The goal of the *TourSites for WordPress* project was to create a digital platform that combines the usability, extensibility and administrative strength of WordPress with the user experience and story-focused delivery of humanities content by Curatescape into a new open-source platform for cultural heritage institutions. As originally proposed, the project would achieve this goal through the following objectives:

- Develop a conceptual framework and toolset for WordPress that facilitates the development of indoor and outdoor tours that are tailored to the needs of public history and the humanities;
- Develop a conceptual framework and toolset for managing and displaying cross-institutional tours in a WordPress Network environment;
- Develop an additional WordPress plugin that allows for the integration of visual resources from CONTENTdm libraries without duplication of effort;
- Implement the platform and produce rich multimedia experiences for 3-5 historic sites in the Ohio History Connection's statewide network as a test case;
- Test the usability of the modified platform by evaluating visitor behavior and the perceived value of digital experiences during in-person visits at each site.

The Project Team met to start the project on 5/31/16. This represented a slight delay in the original schedule due to the difficulty of scheduling for an in-person meeting. The exception was advisor Dr. Conn, who was unable to travel and participated by phone conferencing. An initial framework was established that prioritized the end-user experience and provided flexibility and ease-of-use for content producers. This framework centered on creating custom WordPress Page types for "Locations" and "Tours" that would scaffold up using WordPress-hosted Media, text and other content to create media-rich tours with a simple interface. One important decision was to include several display options Media items for content creators to choose from. This came from a discussion about the flexibility necessary to create "linear" tours versus "nodal" tours that do not follow a traditional, linear narrative and instead allow visitors to engage with the content in a way not tied to a specific narrative. An example of this is a historic home tour, where one room may contain several

different objects and stories that are not firmly bound together by a contextual narrative. The platform would need to display these items in such a way that users can engage with each object or item as its own "mini-narratives" co-located in the same Location.

The Project Team also reviewed potential test sites and selected the Fort Ancient State Memorial, the Harriet Beecher Stowe House and the John Rankin House. These sites were selected due to the quality of available content and because the Team could test use cases for exterior tours (Fort Ancient) and interior tours (Stowe House and Rankin House). Additionally, the two historic homes have very different visitor experiences despite interpreting the history of abolitionism; The John Rankin House has been fully restored to be period-correct for the mid-1800s and has a consistent interpretive experience that directly ties to the physical site; Alternatively, the Harriet Beecher Stowe House has not been restored, its visitor experience is greatly dependent on whether users take a guided tour and the interpretation is more focused on the life and ideas that Harriet Beecher Stowe formed while living in Cincinnati, as opposed to specific events that occurred in the house itself.

Project Activities - Development, Production and Evaluation

Development on the main TourSites plugin progressed steadily through June and July, resulting in a testable prototype as scheduled. The prototype features drag-and-drop functionality for adding Media items to Locations, and subsequently Locations to Tours. The public-facing theme for the project then displays this content in a mobile-responsive layout that presents clickable thumbnails of Media items in each Location. Upon clicking/tapping, the image opens up in a modal overlay with basic metadata (title, description, etc.) displayed as a caption on the image.

Production was scheduled to run concurrently with platform development work to meet the project's deadlines for testing at the selected sites. Production on the three tours' media content was somewhat delayed due to the fact the kickoff meeting didn't happen until the end of May and because several unrelated projects that the Ohio History Connection's production staff were committed to overlapped the start of the project. Despite those delays, video content for all three tours was produced in time to create the tours that would be tested with visitors at all three sites according to the project's timeline and goals.

As with any digital project, the Project Team made several adjustments to the work plan in order to adapt for success. Three deviations from the initial development plan involved the presentation of video content and the default page configuration. Originally, video content was to be hosted on YouTube and displayed by the platform as WordPress Media items, however the team discovered that WordPress requires any Media items to be hosted on the same server as the WordPress installation. Given that dedicated, streaming media server space is extremely expensive, this

methodology would adversely impact the user experience or place an untenable cost burden on content producers, which is one of several reasons why YouTube was intended to provide robust streaming services for the project. To address this concern, video content for TourSites is hosted on YouTube and then the clips are embedded in the body of the Location and Tour page content using the built-in embedding features of WordPress. This choice has several positive effects; First, content producers can take advantage of YouTube's exceptional streaming capabilities at no cost, creating an excellent user experience for video content; Second, it presents the video content as primary information for each Tour and Location, rather than secondary or supplemental, which reflects the media-first approach of the platform; and Third, content producers will also benefit from having their content available on YouTube for additional users to discover and engage with.

The second deviation was in the default page configuration. The first prototype had all of the page content displayed at once, resulting in Tour pages that presented users with pages that were extremely long to scroll through and, due to the media involved, took a long time to load. Since the platform prioritizes mobile use on location at sites, the Project Team decided to change the default page loading scheme; Locations were collapsed into a list view of thumbnail images and titles that, when clicked/tapped, twirl open to load that Location's content. This allowed for a faster page load at the Tour level and provided a lightweight navigational structure for users as they move through various parts of each tour, instead of forcing them to scroll many screens of content.

A third deviation from the proposed plan involved the development of a CONTENTdm plugin for WordPress that would allow content producers to easily import images and other records from CONTENTdm repositories for use in tours. Originally, this was to be in place for use when building the test tours, however it was deprioritized to focus on additional improvements to the main TourSites plugin. A plugin was adapted for the project, however it was developed while onsite testing was underway and was tested afterward to include as a resource for institutions using TourSites in the future. Based on the workflows used to create the three tours in this project, the CONTENTdm plugin will drastically reduce the time needed to incorporate image library content when creating tours.

Based on this framework, the Project Team developed the custom content types necessary for implementation. The Location level provides several features for content producers: a drag-and-drop interface allows users to quickly find, select and organize Media items from the WordPress installation's Media Library; a drop-down list provides multiple display options for the selected Media items once presented to the public; and a mapping feature allows precise GPS coordinates to be selected for the Location. The Tour level uses a similar drag-and-drop interface to find, select and add Locations to the Tour and allows content producers to combine multiple Locations with additional text and media content into a rich digital experience (Please see *Appendix C – TourSites "Alpha" Design and Experience* for more detail). By leveraging WordPress's native ability to embed media from

cloud-based sources like YouTube and SoundCloud, content producers can take advantage of the robust streaming capabilities such services provide to improve the end-user experience. The platform is packaged as a plugin, making it extremely easy to install into any WordPress site.

A custom theme was also developed to provide a positive end-user experience; the customized content for Tours, Locations and Media items scaffold effectively and are presented as a seamless experience that is optimized for mobile devices and incorporates current best practices in user experience design. This decision recognizes that most institutions lack the expertise to customize existing themes for bespoke use. While larger institutions with robust digital capacity can use WordPress's extensibility to create custom experiences, the Project Team felt it was paramount to provide a working theme "out of the box" for institutions that prefer to focus their resources on content design and engagement.

Tour content was created for three historic sites in OHC's statewide network: the Fort Ancient State Memorial, the Harriet Beecher Stowe House and the John Rankin House. These sites were selected due to the quality of available content and because the Team could test use cases for exterior tours (Fort Ancient) and interior tours (Stowe House and Rankin House).

Accomplishments

Overall, the project was very successful and achieved all its stated goals and objectives. The Project Team succeeded in producing a working platform and a supplementary plugin to streamline adding content from CONTENTdm libraries. End-user testing validated *TourSites* as a positive solution and reinforced the need for an open-source mobile tour platform. The products of this grant project and the knowledge gained formed the basis of a second-round proposal to the National Endowment for the Humanities Office of Digital Humanities, which is under review at the time of this writing.

Anecdotally, the project has garnered attention as a way for cultural institutions to bypass the high-cost, high-complexity options currently available and produce content more effectively and with greater autonomy. The excitement for the platform by organizations of many different types and sizes underscores the need for an open-source tour delivery platform and validates the importance of this work.

Audiences

Given the prototype nature of the project, the audience for this first development phase was limited. Going forward, the primary audience for the *TourSites* platform will be museums and cultural heritage institutions. The end-user audiences for content distributed using the platform will consist of onsite

visitors to museums and cultural heritage institutions, with demographics dependent on the constituencies of each producing institution.

It is also worth noting that during the course of the project, and in the time since the prototype phase was completed, several institutions have approached the Project Team with interest in using the site. Several have been for educational use – teachers at the secondary and post-secondary level who wish to use *TourSites* for classroom projects. This is an interesting use case and one the Project Team would like to support, as the goals of providing a simple, low-cost platform for content production and distribution would certainly have benefit as part of a curriculum. Additionally, the Project Team feels that offsite end-users, and particularly K12 classrooms, will be a significant user of content produced by TourSites institutions, and we have made note of how to optimize content for onsite and offsite use.

Evaluation

Evaluation with onsite visitors was performed at all three sites in September 2016 and October 2016. The Project Team collaborated with the Ohio History Connection's Visitor Studies department and ultimately partnered with the Center for Research and Evaluation Lifelong Learning Group (LLG) to perform the onsite evaluations. Despite some technical difficulties unrelated to the platform, evaluation results were positive and provided excellent feedback to consider going forward with regards to platform development/implementation and the behavior and disposition of users and technology at historic sites.

Evaluation with onsite visitors was performed at all three sites using the *TourSites* tours and the overall results were positive; 93% of the visitors tested indicated that the tours were "Very Useful" or "Moderately Useful" and a majority indicated they would use this type of experience again and/or at another site. It was also determined that historic sites without guided tours would especially benefit from tours delivered via *TourSites*.

One thing that was noticeably lacking from the evaluation data was actionable feedback on user experience design (UX), content design and more specific preferences. While this is not surprising given that the evaluation was designed to assess the overall value of such experiences, the Project Team feels this data would be helpful in developing the platform further. As such, the Project Team would like to test the platform with small groups of users in one-on-one UX tests to ascertain specific improvements to the content, layout and design that would be beneficial to users.

While it does not constitute formal feedback, even in its "alpha" form, the platform has garnered quite a bit of interest and positive energy. The Project Team has been approached by multiple

institutions interested in using the platform for their own digital projects, even in its current form, and the Project Team is working through the best way to support these organizations as early adopters of the platform.

Continuation of the Project

The Project Team has continued to work on the platform since completion of the grant activities, both from a development standpoint and from a promotional one. The Project Team has made slight adjustments to the platform's theme so that the Ohio History Connection can put it into live production, and OHC's Media Team has refined content on two of the three prototype tours with the intention of launching them for public use in early 2018. Certainly, this project has strengthened the partnership between OHC and the Center for Public History + Digital Humanities, and this partnership continues to drive the potential of the *TourSites* platform.

The Ohio History Connection has registered TourSites.org which will serve as the online home for the project and include links to the grant products and codebases, resources for institutions, blog articles on the platform's use and links to tours created by partner institutions.

As Project Director, Mr. Pierce has also begun to preview the platform at conference presentations. Most notably, he presented to Ohio audiences at the WYSO Digital Humanities Symposium and to international audiences at Museums and the Web 2017. In both cases, initial feedback for the concept and the "alpha" platform was very positive, and Mr. Pierce is in discussions to partner with several interested institutions.

The primary continuation for the TourSites platform has been the preparation and submission of a grant proposal to secure second-round funding. In June 2017, Mr. Pierce submitted a proposal to the National Endowment for the Humanities Digital Humanities Advancement Level III Grant program entitled *TourSites for WordPress Version 2: Implementing Digital Tour Experiences for Multi-site Museum Networks*. If funded, this two-year project will execute two separate development cycles and incorporate up to 10 cultural heritage organizations as test sites. The result will be a full, public release of *TourSites for WordPress* as an open-source platform with all the necessary support documentation and training materials. In this way, the Project Team hopes to fulfill the platform's potential to enable institutions of all sizes to create, deploy and maintain digital tour experiences across multi-location networks and bridge the gap between institutions' needs to connect users to their stories and the resources necessary to do so.

Long Term Impact

Already the *TourSites* platform has proven to be impactful for OHC. It has provided us with a way to produce and deliver digital humanities content to our users in a user-friendly and cost-effective way, and it has positioned OHC as a resource for other institutions wishing to engage their audiences using digital content. OHC is now planning multiple content projects using the "alpha" version of *TourSites*, with the intent to upgrade as the platform evolves.

Ultimately the long-term impact of the platform will be determined by the outcome of the second-round grant proposal that is currently under review; if funded, that two-year project will increase the impact of this project exponentially.

Grant Products

At the time of this writing, the primary grant products are the open-source codebases for the TourSites plugin, theme and the CONTENTdm plugin. These will be made available on the upcoming TourSites.org site as the project continues to evolve.

Appendix A – Evaluation Conclusions and Recommendations

The following represent a set of conclusions and recommendations specific to the prototype testing completed during this grant period. While these are specific to the prototype platform and the use cases implemented at the three OHC test sites, they are provided for additional context and in case any of the findings may prove helpful for other types of digital humanities projects.

Conclusions – Based on the findings of this study, LLG concludes the following:

1. Visitors liked and valued using the apps because they added to their visitor experience by providing additional information at OHC sites through videos, text, figures, and pictures.
2. Some visitors are willing to use their own devices (i.e. cell phones) to access and use the apps tours.
3. iPads linked to the apps tours are beneficial at OHC sites as an alternative for those unable to use their cell phones or who prefer a larger screen.
4. Sites that do not have tour guides would especially benefit from having the apps tours.
5. Confusion at one site that resulted from the site map not being aligned or matched to the apps may have resulted in visitors not experiencing the fill benefit benefit of the app.
6. The visitor experience using the apps depends on effective, dependable, and consistent technology at sites.
7. The value and benefit of the apps may not be realized with a population of visitors who have misgivings about technology and therefore about using the app.

Recommendations – Based on the findings and conclusions of this study, LLG provides the following recommendations:

1. Continue to provide the types of information and videos on future apps that are included on the apps that were tested.
2. Provide QR codes at sites for visitors to quickly and easily connect the apps.
3. Have iPads available at sites for visitors to use who cannot, or choose not to, use their cell phones or other personal devices for the app.
4. Provide headphones at sites to use especially with the audio part of the apps so as not to distract visitors who are not using the apps.
5. Focus efforts on providing apps to sites that do not have paid or volunteer tour guides.
6. Continue to monitor and address technological issues that prevent apps from operating efficiently and effectively.
7. Have apps numbered to coincide with numbers and titles that match physical maps at OHC sites (i.e. Fort Ancient).

Appendix B – TourSites "Alpha" Design and Experience

The following annotated screen shots depict the CMS and end-user experience of the TourSites "alpha" project.

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Figure C-1: TourSites CMS Navigation – Navigation Menu

This figure depicts the left-hand navigation of a standard WordPress CMS installation with the addition of the *TourSites* plugin. Note the addition of the "Tours" and "Locations" as integrated parts of the CMS for users to easily create and manage content. By adding the TourSites components as "native" functions to WordPress, it ensures that TourSites will remain simple and user-friendly.

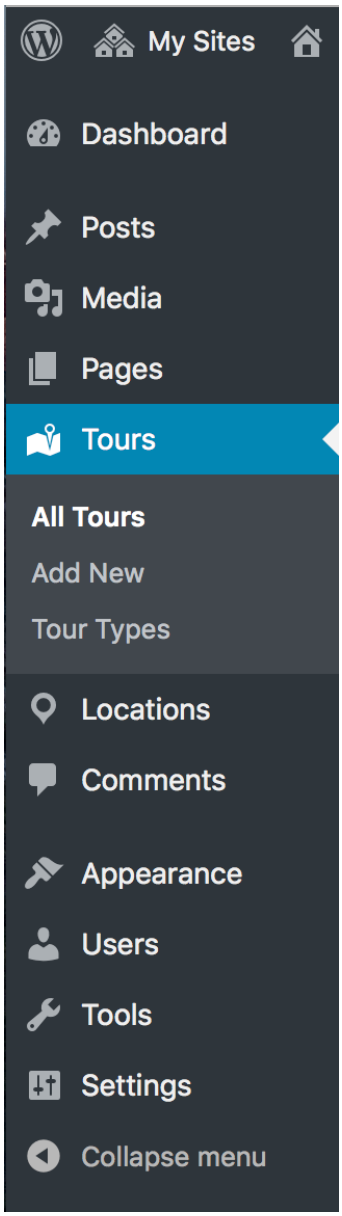


Figure C-2: TourSites CMS Navigation – Tour Edit Page

This figure depicts the "Edit Tour" page. This is accessed from the left-hand navigation in exactly the same manner as WordPress users create and manage Page and Post content, making it very intuitive. Tour and Location content are edited using the same layout and tools as standard WordPress content, which allows content creators to begin work with very little training or prior knowledge. The "Tour Image" selection in the bottom-right serves as the representative image for the Tour, and the plugin retains the same Publishing options as WordPress.

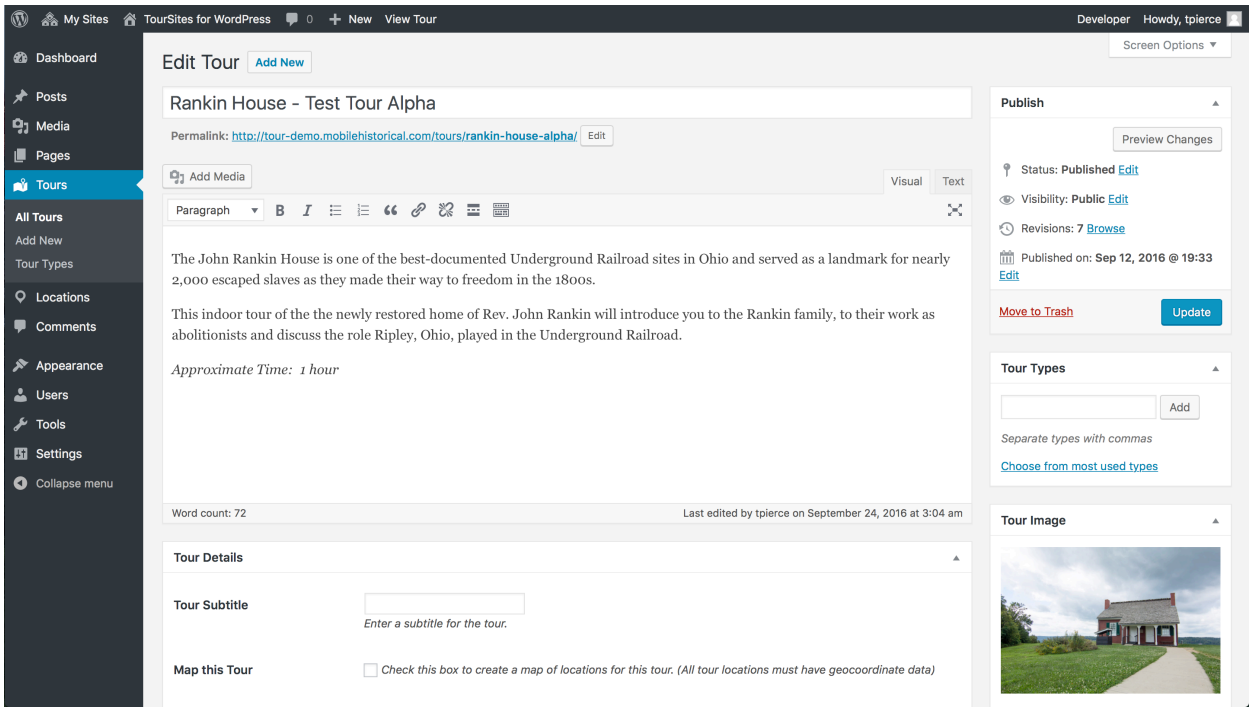


Figure C-3: TourSites CMS Navigation – Location Drag-and-drop Picker

This figure depicts the drag-and-drop picker inside the "Edit Tour" page. The left-hand box lists any Locations created in the CMS, and users simply drag them to the right-hand side to include them in the Tour. Users can then reorder the right-hand side to update the order in real time. These simple feature additions help lower the barrier to entry for museum staff and let them focus on content and storytelling, rather than layout and code.

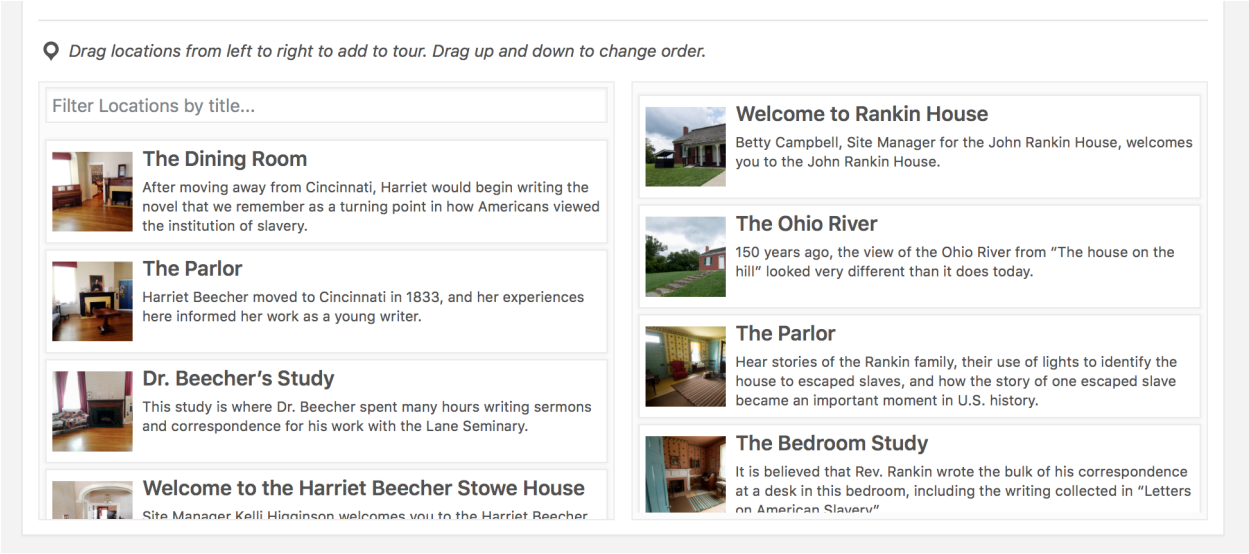
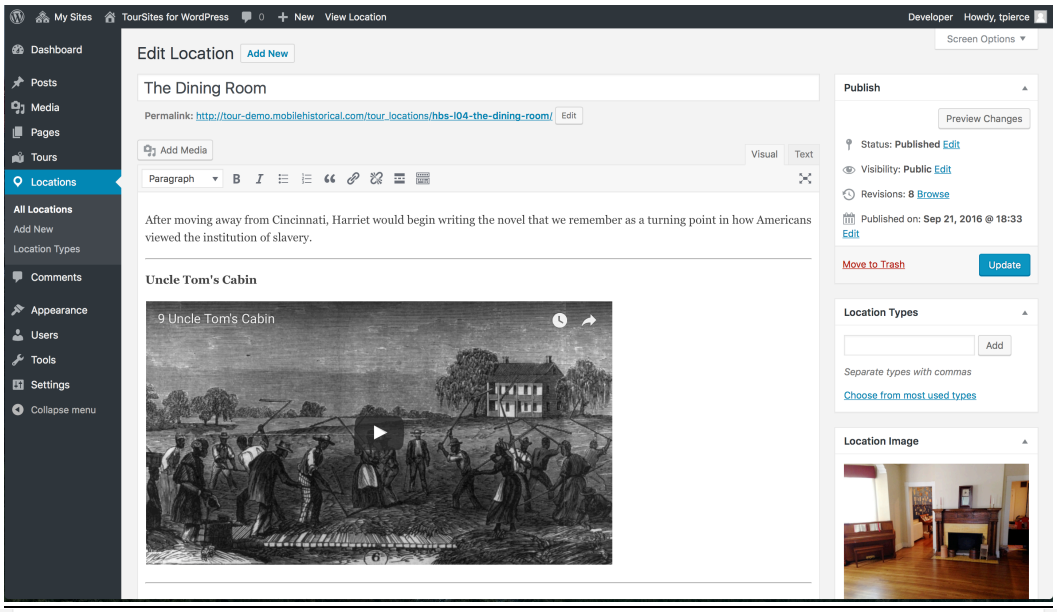


Figure C-4: TourSites CMS Navigation – Location Edit Page, Media Drag-and-drop Picker

This figure depicts the "Edit Location" page. Content for each Location can be added to the main body of the Location's text field, or users can add Media items through a drag-and-drop picker similar to the one found on the "Edit Location" page, except this one selects from uploaded Media items in the WordPress Media Library (images, etc.) and adds them to the Location. The "Location Image" at the bottom-right represents this location as a thumbnail image in the public view, allowing content creators to "guide" users around with visual cues that confirm each tour's Location.



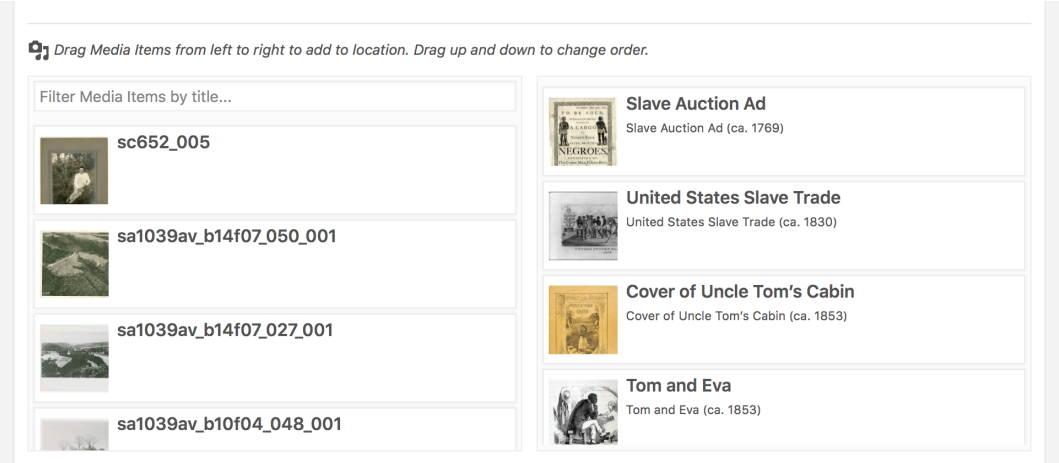


Figure C-5: TourSites Public View – Desktop Version

This figure depicts the public experience on desktop devices. The Project Team decided to include a custom theme for the project so that institutions have a solution ready "out of the box" that optimizes the content for an excellent user experience. One possible revision is to include additional text for each Location using the WordPress Subtitle or Excerpt fields.

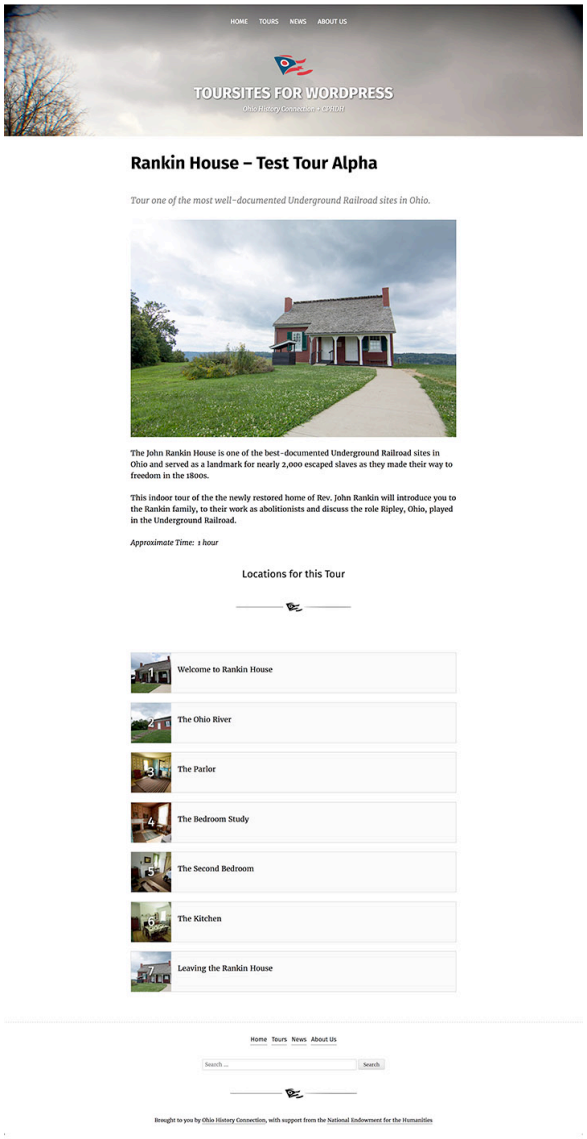
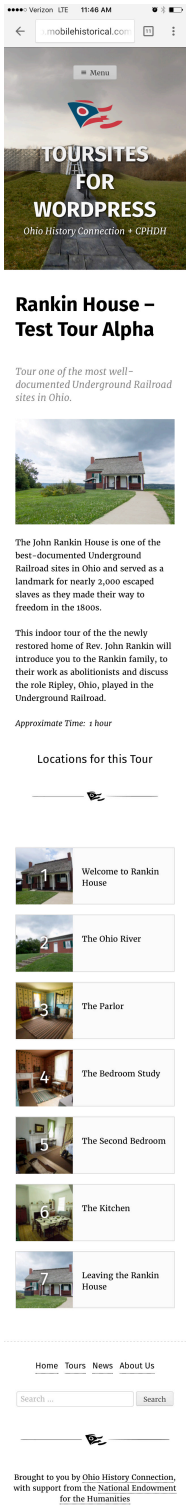


Figure C-6: TourSites Public View – Mobile Version

This figure depicts the public experience on mobile devices. Users tap on each Location, which twirls open to display that Location's content. The decision to collapse Location content into a list view was made to reduce the load times for Tour pages and improve the user experience; As more content is added to the Tour, displaying it all at once made load times extremely long and also presented users with an excessive screen length to scroll through. The collapsed Location display was a simple solution to both these issues.