

Supplementary Listing Record

NRIS Reference Number: SG100004219

Date Listed:

Property Name: Fort D

County: Cape Girardeau

State: MO

This Property is listed in the National Register of Historic Places in accordance with the attached nomination documentation subject to the following exceptions, exclusions, or amendments, notwithstanding the National Park Service certification included in the nomination documentation


Signature of the Keeper

8-1-19
Date of Action

=====

Amended Items in Nomination:

Fort D in Cape Girardeau, Missouri, is listed in the National Register at the state level of significance. Although nominated at the national level of significance, the case is not made for national significance based on an association with John Wesley Powell. The property is of statewide significance, based on the association with Powell and as the only extant redan remaining in Missouri.

The MISSOURI SHPO was notified of this amendment.

DISTRIBUTION:

National Register property file

Nominating Authority (without nomination attachment)

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in National Register Bulletin, *How to Complete the National Register of Historic Places Registration Form*. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional certification comments, entries, and narrative items on continuation sheets if needed (NPS Form 10-900a).

1. Name of Property

Historic name Fort D

Other names/site number N/A

Name of related Multiple Property Listing N/A

2. Location

Street & number 920 Fort Street

N/A

not for publication

City or town Cape Girardeau

N/A

vicinity

State Missouri

Code MO

County Cape Girardeau

Code 031

Zip code 63703

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended,

I hereby certify that this X nomination request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60.

In my opinion, the property X meets does not meet the National Register Criteria. I recommend that this property be considered significant at the following level(s) of significance:

X national X statewide X local

Applicable National Register Criteria: X A X B X C D

Signature of certifying official/Title

[Signature] Deputy SHPO / Deputy Division Director
JP Date 06/13/19

6/13/19

Missouri Department of Natural Resources
State or Federal agency/bureau or Tribal Government

In my opinion, the property meets does not meet the National Register criteria.

Signature of commenting official

Date

Title

State or Federal agency/bureau or Tribal Government

4. National Park Service Certification

I hereby certify that this property is:

 entered in the National Register

 determined eligible for the National Register

 determined not eligible for the National Register

 removed from the National Register

 other (explain:)

Signature of the Keeper

Date of Action

Fort D

Name of Property

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County and State

5. Classification

Ownership of Property

(Check as many boxes as apply.)

<input type="checkbox"/>	private
<input checked="" type="checkbox"/>	public - Local
<input type="checkbox"/>	public - State
<input type="checkbox"/>	public - Federal

Category of Property

(Check only **one** box.)

<input type="checkbox"/>	building(s)
<input checked="" type="checkbox"/>	district
<input type="checkbox"/>	site
<input type="checkbox"/>	structure
<input type="checkbox"/>	object

Number of Resources within Property

(Do not include previously listed resources in the count.)

Contributing	Noncontributing	
1		buildings
		sites
3	2	structures
2	1	objects
6	3	Total

Number of contributing resources previously listed in the National Register

0

6. Function or Use

Historic Functions

(Enter categories from instructions.)

DEFENSE/fortification

DEFENSE/military facility

RECREATION AND CULTURE/museum

SOCIAL/meeting hall

Current Functions

(Enter categories from instructions.)

RECREATION AND CULTURE/outdoor recreation

RECREATION AND CULTURE/monument/marker

LANDSCAPE/park

7. Description

Architectural Classification

(Enter categories from instructions.)

OTHER/Earthworks fortification – redan

(earthworks)

OTHER/WPA Rustic

Materials

(Enter categories from instructions.)

foundation: STONE – limestone

walls: STONE – limestone (building)

EARTH (walls)

BRICK (building)

roof:

other:

X

NARRATIVE DESCRIPTION ON CONTINUATION PAGES

Fort D

Name of Property

Cape Girardeau County, Missouri

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8. Statement of Significance

Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

☒ A Property is associated with events that have made a significant contribution to the broad patterns of our history.

☒ B Property is associated with the lives of persons significant in our past.

☒ C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.

☐ D Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations

(Mark "x" in all the boxes that apply.)

Property is:

☐ A Owned by a religious institution or used for religious purposes.

☐ B removed from its original location.

☐ C a birthplace or grave.

☐ D a cemetery.

☐ E a reconstructed building, object, or structure.

☐ F a commemorative property.

☐ G less than 50 years old or achieving significance within the past 50 years.

☒ X

STATEMENT OF SIGNIFICANCE ON CONTINUATION PAGES

Areas of Significance

Military

Architecture

Engineering

Period of Significance

1861-1865

1937

Significant Dates

1861

1937

Significant Person

(Complete only if Criterion B is marked above.)

Powell, John Wesley

Cultural Affiliation

N/A

Architect/Builder

Powell, John Wesley (earthworks)

Flad, Henry (earthworks)

WPA (blockhouse)

9. Major Bibliographical References

Bibliography (Cite the books, articles, and other sources used in preparing this form.)

Previous documentation on file (NPS):

☐ preliminary determination of individual listing (36 CFR 67 has been requested)

☐ previously listed in the National Register

☐ previously determined eligible by the National Register

☐ designated a National Historic Landmark

☐ recorded by Historic American Buildings Survey # _____

☐ recorded by Historic American Engineering Record # _____

☐ recorded by Historic American Landscape Survey # _____

Primary location of additional data:

☒ State Historic Preservation Office

☐ Other State agency

☐ Federal agency

☒ Local government

☐ University

☐ Other

Name of repository: City of Cape Girardeau Division of Planning Services

Historic Resources Survey Number (if assigned): _____

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10. Geographical Data

Acreage of Property 2.7 acres

Latitude/Longitude Coordinates

Datum if other than WGS84: _____
(enter coordinates to 6 decimal places)

1	37.290860 Latitude:	- 89.526430 Longitude:	3	_____ Latitude:	_____ Longitude:
2	_____ Latitude:	_____ Longitude:	4	_____ Latitude:	_____ Longitude:

UTM References

(Place additional UTM references on a continuation sheet.)

 X NAD 1927 or NAD 1983

1	16S Zone	276033 Easting	4129926 Northing	3	_____ Zone	_____ Easting	_____ Northing
2	_____ Zone	_____ Easting	_____ Northing	4	_____ Zone	_____ Easting	_____ Northing

Verbal Boundary Description (On continuation sheet)

Boundary Justification (On continuation sheet)

11. Form Prepared By

name/title R. Scott House*, Patti M. House**, William R. Eddleman, PhD.*** Amber K. Cox****
organization *Cave Research Foundation, **Association of the Turner
Brigade, ***State Historical Society of Missouri, ****MO SHPO date 1 July 2018
street & number 1606 Luce Street telephone 573-651-3782
city or town Cape Girardeau state MO zip code 63701
e-mail scott_house@hotmail.com

Additional Documentation

Submit the following items with the completed form:

- **Maps:**
 - A **USGS map** (7.5 or 15 minute series) indicating the property's location.
 - A **Sketch map** for historic districts and properties having large acreage or numerous resources. Key all photographs to this map.
- **Continuation Sheets**
- **Photographs**
- **Owner Name and Contact Information**
- **Additional items:** (Check with the SHPO or FPO for any additional items.)

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C.460 et seq.).

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Estimated Burden Statement: Public reporting burden for this form is estimated to average 18 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Office of Planning and Performance Management, U.S. Dept. of the Interior, 1849 C. Street, NW, Washington, DC.

Photographs

Submit clear and descriptive photographs. The size of each image must be 1600x1200 pixels (minimum), 3000x2000 preferred, at 300 ppi (pixels per inch) or larger. Key all photographs to the sketch map. Each photograph must be numbered and that number must correspond to the photograph number on the photo log. For simplicity, the name of the photographer, photo date, etc. may be listed once on the photograph log and doesn't need to be labeled on every photograph.

Photo Log:

Name of Property: **Fort D**

City or Vicinity: **Cape Girardeau**

County: **Cape Girardeau**

State: **Missouri**

Photographer: **R. Scott House**

Date

Photographed: **13 September 2018**

Description of Photograph(s) and number, include description of view indicating direction of camera:

(See Figure 29 for key to photos.)

- 1 of 14: Sidewalk and gateway looking northeast.
- 2 of 14: Looking southeast along south walls of fort.
- 3 of 14: Looking northeast along west walls of fort.
- 4 of 14: Looking northeast at blockhouse and interpretive signs.
- 5 of 14: Looking northeast at front or southwest façade of blockhouse.
- 6 of 14: Looking south at northwest façade of blockhouse.
- 7 of 14: Looking southwest at rear or northeast façade of blockhouse.
- 8 of 14: Looking north at southeast façade of blockhouse.
- 9 of 14: Looking northwest at south walls of fort.
- 10 of 14: Looking southwest along west walls of fort.
- 11 of 14: Looking south along west walls of fort and blockhouse.
- 12 of 14: Looking south from northwest gun ramp at interior of fort.
- 13 of 14: Interior of blockhouse from door, looking northeast.
- 14 of 14: Sidewalk of entrance, looking northeast.

Figure Log:

Include figures on continuation pages at the end of the nomination.

Figure 1: Locator map.

Figure 2: Locator satellite image.

Figure 3: Aerial view of fort.

Figure 4: Oblique aerial view of fort.

Figure 5: Scan of portion of Cape Girardeau 7.5' topographic map showing the location of Fort D.

Figure 6: Map of site.

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- Figure 7: Portion of the 1865 Military Map of Cape Girardeau showing Forts D and C.
- Figure 8: Portion of the 1865 Military Map of Cape Girardeau showing Forts A, B, and C.
- Figure 9: Portion of the 1865 Military Map of Cape Girardeau showing batteries and rifle pits.
- Figure 10: Design for similar forts in St. Louis MO.
- Figure 11: Sketch of Fort D by soldier.
- Figure 12: Floor plan of blockhouse today.
- Figure 13: Portion of 1915 plat of Fort D Highlands.
- Figure 14: Portion of 1923 Sanborn map of Cape Girardeau.
- Figure 15: Comparison of 1915 plat with 1865 military map, modern survey and aerial photo.
- Figure 16: View of south walls prior to 1936.
- Figure 17: Postcard view of south walls prior to renovation.
- Figure 18: Work on fort in 1936.
- Figure 19: Construction of blockhouse.
- Figure 20: Blockhouse as finished.
- Figure 21: View of Fort Davidson.
- Figure 22: View of wall of Fort Benton.
- Figure 23: View of earthwork in Reynolds County.
- Figure 24: View of earthwork in Cooper County.
- Figure 25: View of fort and blockhouse 2004.
- Figure 26: View of south walls and interpretive event.
- Figure 27: View of blockhouse and interpretive event.
- Figure 28: View of blockhouse entrance and interpretive event.
- Figure 29: Map showing photo locations.
- Figure 30: John Wesley Powell in 1861.
- Figure 31: Redan walls at Fort Stevens, Oregon.
- Figure 32: Stockade Redan in Vicksburg, Mississippi.

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Continuation Sheet

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Fort D
Name of Property Cape Girardeau County, Missouri
County and State N/A
Name of multiple listing (if applicable)

SUMMARY

Fort D, located at 920 Fort Street, City of Cape Girardeau, Cape Girardeau County, Missouri, is an existing original earthworks structure, a redan, from the American Civil War. The earthen walls are today about seven feet high from the inside and ten feet high relative to the encircling trenches on the outside. Built as two walls of a triangle, the earthworks have a total length of approximately 600 feet. Between the two furthest ends, the fort is 410 feet long, and from the middle vertex it is 210 feet deep. The fort was one of four earthworks structures around three sides of the city of Cape Girardeau, the fourth side being the Mississippi River. The purpose of the forts was to prevent attack from the land sides of the city, the Mississippi River protecting the city on its eastern flank. "Four forts, named respectively A, B, C, and D, commanding the approaches to the town on all sides, were built."¹ The forts, A, B, C, and D, were arranged on higher, strategic points protecting the city on its north, west, and south sides. In addition, two additional earthworks, termed Battery A and Battery B, were later constructed along with rifle pits in several locations. With the exception of Fort D, all remnants of the other Cape Girardeau Civil War earthworks have disappeared. Fort D is notable, not only as an existing earthwork, but as a visual monument to the various individuals involved, many of whom were local men, in constructing and manning the forts. It is also an important site where John Wesley Powell, who was important to the expansion of geographic knowledge and scientific study of the western United States, earned the friendship of a man who would facilitate his future career and work – Ulysses S. Grant. Further, Fort D is the only remnant of Missouri's numerous "city" forts, which were forts surrounding Missouri centers of population during the Civil War. The redan walls are a single contributing structure, built in 1861 (see Figures 3 & 4 for aeriels and Figure 6 for the boundary map and location of resources).

A contributing building – the blockhouse – and a contributing structure – the gateway – within the confines of the walls, were completed in 1937 during the "monumental" era of Civil War remembrance. They are excellent examples of Works Progress Administration (WPA) rustic architecture. Today the blockhouse is used for interpretive purposes (see Photo 4). Although the site has been enveloped by residential development (Figures 1 & 2), the intact earthwork walls, existent since 1861, help it retain its integrity. From the inside of the fort, the walls shield the viewshed enough that a feel of the time can be obtained. Further, the blockhouse and gateway, though they have seen a few changes since constructed in the late 1930s, continue to clearly embody WPA architecture.

Fort D also houses three additional structures: a contributing interconnected series of sidewalks (1937) and two noncontributing strips of concrete (c.1970) that make up a shuffle board court. The resource count also includes three objects: two contributing objects that served as cannon

¹ Goodspeed Company, ed., *Goodspeed's History of Southeast Missouri*, (The Goodspeed Company, 1888, reprinted Cape Girardeau, MO: Ramfre Press, 1978), 498.

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N/A

Name of multiple listing (if applicable)

bases (1937) and one noncontributing object, a plaque on an exposed aggregate concrete pedestal (c.1940). There is also one noncontributing site (not included in the resource count): a small gravel area for parking (c. 1960). These are discussed further below.

ELABORATION

SETTING

Fort D is located in Fort D Park, also known as Fort D Historic Site, in the southeastern part of the City of Cape Girardeau (see Figures 1-5). The site is well known to heritage tourists. A brief description of Cape Girardeau by American Heritage tells that “During the Civil War it was occupied by Union troops. The earthworks and a moat surrounding a small parade ground at **Fort D**, one of the area’s chief defenses, have been preserved in a public park.”² A 1949 national travel book notes that the “earthworks, moat, & parade ground” were “preserved in a public park.”³ One Civil War guide includes this information: “Fort A, one of four forts built by Union troops in 1861, was located at the east end of Bellevue St.; Fort B was on grounds of present Southeast Missouri State College, Normal and Henderson Ave.; Fort C, at the end of Sprigg St.; Fort D, on northeast corner of Locust and Fort St. Fort D was one of the major defenses of the town when Gen. Marmaduke attacked on April 17, 1863.”⁴ Another such guide mentions the purpose of the fort thusly: “Four forts – designated A, B, C, and D – were built to protect the town from a land attack.” The book goes on to describe a driving guide of the city, in which the “highlight of the tour is Fort D, which has been restored and is a public park.”⁵ Yet another guide mentions that Cape Girardeau was “an important port and supply depot on the Mississippi River, protected by four forts.”⁶ A reference to Civil War river forts notes, not quite correctly that, “of the numerous earthen Civil War forts that once existed in the state, this is believed to be the lone survivor.”⁷ Today it forms part of a three-acre municipal park owned by the city of Cape Girardeau (see Figure 6). The Cape Girardeau Historic Preservation Plan of 1999 calls Fort D “The most important” of the four forts.⁸

² Richard M. Ketchum, ed., *The American Heritage Book of Great Historic Places*, (New York: Simon and Schuster, Inc., 1957), 244.

³ Henry G. Alsberg, ed., *The American Guide*, (New York: Hastings House, 1949), 623.

⁴ Alice Hamilton Cromie, *A Tour Guide to the Civil War, The complete State-by-State Guide to Battlefields, Landmarks, Museums, Relics, and Sites*, (Nashville, TN: Rutledge Hill Press, 1990), 154.

⁵ Michael Weeks, *The Complete Civil War Road Trip Guide*, (Woodstock, VT: The Countryman Press, 2009), 75.

⁶ Frances H. Kennedy, ed., *The Civil War Battlefield Guide*, (New York: Houghton Mifflin Co., 1998), 178.

⁷ Ron Field, *American Civil War Fortifications (3) The Mississippi and River Forts*, (Oxford, UK: Osprey Publishing 2007), 61. NB: Forts at Pilot Knob, Patterson, and a trench near Ellington all still exist and are on the National Register. An extensive earthworks near Otterville has not been nominated.

⁸ Thomason and Associates Preservation Planners, *Cape Girardeau Historic Preservation Plan*. Nashville, TN, June, 1999, 8.

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County and State N/A
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Today, railroad tracks and the river are to the east of the fort, while residential development fills the blocks to the west and south. A school sits to the immediate southwest. Immediately north newer construction is minimal. To the northeast of the fort sits a small gated electrical station. It is on a separate parcel. The area around the fort has continued to develop, though modestly, and from within the walls of the fort the overall feeling of security is largely maintained.

The site is grassy with relatively minimal tree coverage; trees have been removed as they have died or fallen and have not been replanted. Noncontributing resources included in the resource count, such as the sidewalks and shuffle board courts, are discussed further below. Not included in the resource count is a wooden Quaker cannon immediately northeast of the blockhouse (noted on Figure 6). This is movable and impermanent. Also not included in the resource count is a noncontributing site: a gravel area for parking.

CONTRIBUTING RESOURCES

Original Earthworks, 1861, 1 contributing structure

The fort originally consisted of a continuous earthwork called a redan that resembles two sides of a triangle with wings (see Figures 7 and 10). The third side of the triangle was not made of earth, but rather was a simple wooden palisade wall or fence, of indeterminate height, that served to define the rear of the redan, an area called a gorge.⁹ Redans were designed to be used in places where the perceived threat would not be manifested to the rear.¹⁰ Often redans were used in connection with outlying linear earthworks but they could also be self-standing, as in this case. The designer perceived that there was no threat from the rear of the fort, because the city of Cape Girardeau lay to the rear, therefore an entire enclosed earthwork was deemed to be unnecessary.¹¹ Also to the rear of the fort is the Mississippi River, approximately ¼ miles distant and nearly 100 feet lower in elevation. The siting of the fort, even though on a relatively low ridge, meant that it could guard the southwest approaches to the city. The Benton Road, leading south to Scott County was to the west and southwest of the fort and was easily within rifle range, much less cannon range. The fort was equipped with large cannons capable of firing one mile with minimal (5 degrees) of elevation; at higher elevations, the cannons could reach two miles or more.¹² That gave Fort D the capability of hitting the Bloomfield Road at distance, the Bloomfield Road being the main avenue of approach to the city from the southwest. The fort could also, with one gun

⁹ Ron Field, *American Civil War Fortifications (2) Land and field fortifications*, (Oxford, UK: Osprey Publishing, 2005), 19.

¹⁰ David C. Chuber, *Field Fortifications during the American Civil War: A Tactical Problem*, Masters Thesis, US Army Command and General Staff College, Fort Leavenworth, KS, 1996, 110.

¹¹ To the "rear" is a military term referring to the back side of a position. A redan would not be used unless the "rear" was deemed safe, in this instance the rear is occupied by the city and the river.

¹² The term elevation in this instance refers to the angle of the cannon from a minimum zero on up. The higher the elevation the further the cannon could range, albeit at a lesser velocity.

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Fort D

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N/A

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only (emplaced guns could only turn so far), fire for a great distance downstream on the Mississippi River, theoretically protecting the city from enemy gunboats; in reality, however, because of the fortification of Cairo, Illinois, downstream, the river was not considered a security threat, despite years of local lore to the contrary.¹³

The layout of the fort is bilaterally symmetrical (see Figures 6 and 7). Each side consists of three line segments and those measurements are reflected. The two long walls are almost exactly 150 feet long with the two shorter sides 55 feet long (see Photos 2, 3, 10-12, and 14). The sides leading to the two opposing gun ramps are slightly different due to road construction in the renovation phase of the 1930's; the northern side is over 90 feet while the opposite end is only 70 feet. Both ends may have been slightly truncated and possibly were originally slightly longer. A theoretical modification on the southern end may have been done to permit a road access, but this is hypothetical. A description of the cross-section of the fort walls from the outside to the inside begins with the glacis or the natural, unmodified slope upwards toward the fort; as with other earthworks Fort D was sited at the highest point in its immediate area, with the ground sloping upwards toward it. Today, the glacis is gone, having been paved by street development. The glacis was interrupted by an exterior ditch, today about three feet deep on the exterior side and about eight feet wide (see Photos 2 and 3). Since the glacis was never a part of the earthworks per se, the loss of that incidental feature is not detrimental to the earthworks.¹⁴ To the inside of the ditch was the parapet, several feet higher than the glacis but more than eight feet higher than the bottom of the ditch. In Civil War earthworks, the top of the parapet was generally flattened and this is the case even today at Fort D (see Photo 10). The exterior of the parapet wall was steep and could not be easily traversed by a man in leather-soled boots. Sod would have been compacted into the wall to provide erosion control. Inside of the parapet was probably a firing step, called a banquette, which provided a platform for infantry to fire over the parapet. Normally the inside wall was shored up by retaining walls: vertical logs with horizontal planks between them.¹⁵ No trace of these wooden walls exists today but it would have been the norm for Civil War earthworks to have them. Below the level of the banquette would have been the flattened area within the fort, called the terreplein. In more formal structures, the terreplein would be higher than the rest of the interior "floor" but there is no evidence that this distinction existed at any of the earthworks forts of Cape Girardeau.¹⁶

¹³ A fabricated story about Fort D firing on a Confederate boat is repeated in Snider and Collins, 1956, on page 49.

¹⁴ The glacis at Fort Davidson, for example, is gone on one side and apparently modified on the others. Fort Davidson, located in Iron County, Missouri, is listed in the National Register of Historic Places. Charla A. Piggott. Fort Davidson. National Register of Historic Places Registration Form. Listed 2/26/70. Available online: <https://dnr.mo.gov/shpo/nps-nr/70000332.pdf>

¹⁵ Field, *American Civil War Fortifications (3) The Mississippi and River Forts*, 23.

¹⁶ U.S. Army, *Military Map of Cape Girardeau*, 1865.

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N/A

Name of multiple listing (if applicable)

At the rear of the fort was a wooden wall, perhaps a palisade or even merely a fence, which defined the boundaries of the fort. There is no information about the height of this structure except that it was likely low enough to see over (otherwise it would have been useless, unless an elaborate walking and firing platform were also built). A gate in the middle of the palisade allowed entry into the fort (see Figure 11). Directly in the center of the enclosed fort was a powder house or blockhouse or armory. This would have been a structure dug into the ground and covered with logs and earth; with the roof it would have risen above the ground level for some feet, perhaps as much as 8 feet. A door would have provided entry into the structure, where ammunition would have been kept. Being made of simple wood and exposed to the elements, the powder house probably caved in within a few years of abandonment and is no longer extant.

WPA Blockhouse, 1937, 1 contributing building

Located within the earthwork walls is a museum structure, constructed in 1937 by the WPA. This museum was also built to be the meeting house for the American Legion. The style of the building is WPA Rustic. The walls of this structure, locally referred to as the blockhouse, are made of limestone that was salvaged from another building. The foundation is concrete. The structure is in two parts (see Photos 5-8). The front part is rectangular, 40 feet wide by 24 feet deep; the rear of the building is another shorter element that is 30 feet wide and 15 feet deep. The walls are 12 feet in height in the front and 10 high in the rear. The roof line of the building resembles a castellated parapet, giving the building a distinct, small-scale castle-like appearance. The original window frames are mostly missing and have been replaced by steel bars welded to fit into place, but not drilled into the structure.

The front of the building, which faces southwest, has an entrance area with door aperture and six window apertures (see Photo 5). The entrance makes up the central bay and projects out from the rest of the building; buttresses are located at each end of the projecting central bay and at the corners of the façade. Three narrow window openings are situated to either side of the central bay. They have concrete sills. Instead of window elements they harbor metal bars. The doorway is slightly arched, with a metal gate serving as the entry door, above which is a circular emblem for the American Legion.

The northwest elevation shows how the front section of the building is wider than the rear section (see Photo 6). The rear or northeast section houses a barred window, partially infilled with brick, and a doorway, infilled with concrete block, reached by a set of four concrete stairs. Below the window, two basement windows sit in the concrete foundation – one is infilled with brick and the other is barred. The front or southwest section of this elevation, with buttresses at either end, has a small circular window opening up high, filled by brick, below which are three more barred basement windows, one wider than the others.

The rear or northeast side has a single door aperture and three small window apertures: from left to right (or southeast to northwest) is a large window opening followed by a narrow window, a

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County and State

N/A

Name of multiple listing (if applicable)

doorway, and another narrow window (see Photo 7). All feature bars rather than window or door elements. The doorway is reached by a concrete platform, with five steps ascending from the southeast and five from the northwest. At the southeast corner of this elevation is a small modern water fountain.

The southeast elevation has one door aperture, situated in the rear or northeast portion of the building which today has a steel gate. The door is reached by a concrete platform with two steps. One small round window aperture, since filled with brick, is situated in the front or southwest portion of this elevation (see Photo 8). In the foundation, on the front portion, are three barred windows, the central one smaller than the other two. The front section also has buttresses at either end. The front portion of the building also houses a narrow window aperture facing northeast.

No original plans exist for the inside of the structure. Later, probably in the 1950's, at least one interior wall was added when the building was used as a residence; perhaps this was to allow for the construction of a frame wall to separate a bedroom from the living area. This later interior wall was demolished in 2006.

Today the interior, with concrete flooring, brick walls, and a brick chimney, is largely open to the elements due to the collapse of the roof. A frame structure, with a roof, was built inside the fort in 2006-2007 to house interpretive materials for the site (see Photo 13 and Figure 12).

WPA Gateway, 1937, 1 contributing structure

Located at the top of the southwest gun ramp is a stone gateway, also constructed by the WPA (see Photo 1). This is made of salvaged limestone blocks, the same materials as used in the blockhouse. The gate consists of two pillars, each 6 feet tall and 21 inches in diameter, located 7 feet apart. Stone walls or wings, 3 feet in height and 5 feet long extend from both sides of the pillar. A concrete sidewalk or ramp leads from the street up to the gateway. A wooden sign supported by metal posts reads "CITY OF CAPE GIRARDEAU, FORT D HISTORIC SITE, PARKS & RECREATION DEPT." The wooden portion has been replaced over the years as needed.

Sidewalks, 1937, 1 contributing structure

A series of interconnected sidewalks provide access to the fort/park. These were added when the WPA constructed the blockhouse and gateway, retain their overall layout, and are therefore contributing. They start at the southwest corner and head northeast, going over the earthwork walls and through the WPA Gateway. This sidewalk originally had steps leading up to the gateway but was modified to a ramp at some time in the past, probably the early 1960's (see Photo 14). Historically, the sidewalks separated as they approached the fort and then came together again directly in front of the fort creating a narrow oval shape before splitting again to surround the blockhouse and extend to the northwest and southeast. Today, the area between

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them has also been paved with concrete and serves as an interpretive area, though it is clear which portions of concrete are newer. The sidewalks narrow again right before reaching the blockhouse where they then extend out to the northwest and southeast as they did historically. They also wrap around the blockhouse. There are 11 small interpretive signs, six of which are situated within the interpretive area in front of the blockhouse and the rest of which are along the sidewalks to the north and northwest of the blockhouse, near the Quaker cannon.

Cannon bases, 1937, 2 contributing objects

Two concrete pyramidal structures in front of the blockhouse doors originally held tubes of cannons. The cannons may have been removed during metal drives of World War II but the bases are extant and easily recognizable in Figure 20, the historic photo c.1937.

NONCONTRIBUTING RESOURCES

Plaque on Pedestal, c. 1940, 1 noncontributing object

Within the interpretive area is a descriptive plaque on an exposed aggregate concrete pedestal. Though relatively small, it is being counted here as an object due to its permanence. It is noncontributing as it was added after the periods of significance.

Shuffle Board Courts, c. 1970, 2 noncontributing structures

Two strips of concrete are to the north of the blockhouse. These were utilized as shuffle board courts, likely when the blockhouse and grounds were utilized as a senior citizens' center from 1967 to 1975.¹⁷ These are noncontributing due to their construction date.

Gravel Parking Area, c. 1960, 1 noncontributing site (not in resource count)

A small gravel area for parking, allowing roughly eight vehicles, is situated to the southeast of the blockhouse. It is entered via Fort Street. It is considered a noncontributing site as it was developed after the periods of significance but, as a noncontributing site, it is not included in the resource count.

INTEGRITY

Fort D was constructed as an urban fort, to protect a city from attack. It was located just to the southwest of the city and adjacent to the city fairgrounds. Today the city has grown to partially envelope the fort. Viewed from the outside, the fort appears similar to its Civil War appearance; the walls have been stabilized for many years. From the interior, the fort walls screen much of the view of the city helping it retain its sense of a military installation. In this regard, Fort D is similar

¹⁷ John Wesley Powell's Fort D Historic Site, "Fort D Cape Girardeau, Missouri: A Brief History," Accessed May 29, 2019, <http://fortdhistoricsite.com/fortd/History.htm>

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to Fort Davidson in Pilot Knob, Iron County, MO (NR 2/26/1970).¹⁸ The original design and layout of the fort is intact; the walls, as laid out by John Wesley Powell, are preserved. Only the rear wooden wall (or palisade or fence) with gate and the partially subterranean powder house have disappeared over time. During the renovation of the fort, earthworks were patched with hand tools and a new entrance paved over the southwest gun ramp (see Photo 1). Ten years prior to renovation the fort was described as “one of two perfectly preserved Civil War forts in Missouri” and was “still standing in perfect condition.” The description continued, stating that “the inclined embankment... up which the cannons could be run... is still in a perfect state just as it was originally made.” Additionally, the article noted that “two other inclines on which cannon were located can still be easily traced at two other corners of the fort.” The article also described the trenches, one running “toward South Sprigg Street” and another “running parallel to the river.”¹⁹ Views of the fort prior to renovation have been found and show walls and trenches intact (see Figures 15-17). Trees visible in early photographs have been allowed to die and not be replaced with new plantings.

The Fort D earthworks have been slightly modified in places to combat erosion and provide visitor access; this is little different from other listed earthworks in Missouri. The earth walls of Fort Davidson (Iron County) have also been patched and gravel has been placed on the top of the works to prevent visitor-caused erosion. More obviously, the original entrance to Fort Davidson was filled and a new entrance (for visitors) dug in a different location (see Figure 21). The moat at that point was also filled with dirt. The south rifle pit tunnel entrance was filled and the walls patched at that point. The north and south rifle pits were filled with dirt and no longer exist. At Fort Benton (Wayne County) a house was once built within the earthworks, a cellar and cistern were dug, and one corner of the earthworks was removed to provide access (see Figure 22). The earthworks near Ellington (Reynolds County) are only minimally noticeable (see Figure 23). The date of any possible modification or filling of the trenches is not known. Since there is no written Civil War record of this particular site, it is difficult to tell the extent of any modification or if the trenches were even complete when built.

An entrance for visitors to Fort D was created. Originally this appears to have been sets of steps that led down into the trenches and then up again to the gateway. At some point, this was modified into a ramp to allow easier access to the site; this may have been done at the time of usage as a senior citizens center (see Photo 14). Sidewalks were created to provide access throughout the site, widened at one point to perhaps reflect the outline of the armory, and at some point a concrete shuffleboard court was added to the rear of the original fort perimeter.²⁰ Interpretive signs have been added.

¹⁸ This and all other “NR” listings are referenced through a spreadsheet accessed at <https://www.nps.gov/subjects/nationalregister/database-research.htm>

¹⁹ “Four Historic Forts in Cape”, *Southeast Missourian*, (Cape Girardeau, MO), September 11, 1925.

²⁰ Being non-contributing and disused, the shuffleboard court may be removed by the city when possible.

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Modifications to the structure of the blockhouse are numerous but do not detract from the overall historic appearance of the building (see Figure 20 for a historic image – the building today looks much as it did in 1937). The original roof collapsed prior to 2006, leaving a shell with the ruins of the roof within it.²¹ The apertures of the windows and doors are intact. Originally the windows had glass, which was broken out many years ago. The doors were apparently standard wooden slabs. These were later replaced with plywood as the structure was boarded up. In 2006 the plywood was removed and steel bars welded in place to prevent entry. Two small side circular windows were bricked up prior to 2005, probably in the 1960's.

²¹ The roof debris and supporting beams were removed circa 2006.

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SUMMARY

Fort D, 920 Fort Street, is in the south part of the City of Cape Girardeau, Cape Girardeau County, Missouri. Fort D is historically significant under Criterion A for Military significance (local level), Criterion B for its association with John Wesley Powell (national level), and Criterion C for the engineering significance of the extant redan (state level) and the architectural significance of the WPA construction (local level). See Table 1 for a quick summation of the key arguments for the Fort's significance, including associated periods of significance. Constructed during the American Civil War (1861-1865) it was one of numerous "city forts" built around Missouri population and government centers for the purpose of protecting them from secessionist attack. Today Fort D is the only one of these that remains. The fort was important to the protection of Cape Girardeau during the conflict, and the city itself was significant as a part of the protection and supply network of the Union army (local significance, Criterion A, Military). Under Criterion B, John Wesley Powell began his long and important national governmental and scientific service through his military career here and meeting future president Ulysses S. Grant in Cape Girardeau as they inspected the fortifications then under construction; Powell located, designed, and engineered the construction of Fort D and was stationed here from July 1861 to March 1862. Powell also recruited local men to work on the fort and man it when completed. Powell's experience and interaction with Grant here made his later, nationally significant career as explorer and scientist possible. Further, Fort D is significant at the state level as an excellent example of one type of Civil War earthworks, the redan (Criterion C). Few such earthworks still remain from the Civil War and none of this type still exist in Missouri. Lastly, a building and structure within the confines of the walls, built during the "monumental" era of Civil War remembrance, are excellent local examples of Works Progress Administration (WPA) rustic architecture; the blockhouse is listed as potentially eligible under Criterion C for Architecture in the Cape Girardeau Historic Preservation Plan. While it is possible that the fort site is significant under Criterion D, this could not be determined without test excavations which have not been done; the likelihood is that its redevelopment in the 1930's along with the building of the blockhouse caused a loss of some archaeological integrity. However, the fort is listed as one of sixteen historic archaeological sites listed in the Cape Girardeau Historic Preservation Plan.²²

Table 1. Summation of Criteria, Areas, Periods and Levels of Significance

Criterion	Area	Period	Level	Reasoning
A	Military	1861-1865	Local	Importance related to Civil War events in Cape Girardeau
B	Military	1861-1862	National	Consequential associations with the career of John Wesley Powell ²³
C	Engineering	1861	State	Only extant redan – a standard type of military earthworks fortification – remaining in Missouri
C	Architecture	1937	Local	WPA Rustic architecture; resources representative of the

²² Thomason, p. 54

²³ See page 15 of the National Register bulletin *How to Apply the National Register Criteria for Evaluation* as it relates to significance under Criterion B: "A property can also be eligible if it has brief but consequential association with an important individual."

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				style and the only examples in Cape Girardeau
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Context & Historical Significance

Fort D and the Civil War: Criterion A Military Significance

At the beginning of the American Civil War, Missouri was a divided state, torn by conflicting loyalties. As a slave state, many citizens favored secession and agitated for the state to join the fledgling confederacy of southern states.²⁴ The majority of Missourians, however, did not favor this, and events unfolded that caused Missouri to remain in the union. Southeast Missouri, with a relatively (for Missouri) high slave population was a dangerous place for Unionists. Many of the Unionists were of German heritage, a majority being relatively recent immigrants, who were largely opposed to the concept of slavery; Cape Girardeau was noted as an area with a substantial German population in 1859.²⁵ Further, the Germans were already disliked by the somewhat xenophobic population of the slave-holding citizenry located mostly to the south and west of Cape Girardeau. At the onset of war, irregular secessionists took out their frustrations on the Germanic farmers, attacking their farms and settlements. This was exacerbated by the May 11, 1861, events of the Camp Jackson Affair in St. Louis in which Unionist troops, including many Germanic militiamen, captured a camp of secessionists in west St. Louis. Civic protests following the capture resulted in the deaths of 28 civilians, which deaths were largely blamed, somewhat incorrectly, on the German-American militias.²⁶

Cape Girardeau lies at a strategic point because it is the first piece of high ground upriver of the Ohio that connected to the rest of Missouri without going through seasonally-impenetrable swamps. Good roads connected it to the north and northwest. In the strategic scheme of the war, it would become an important site for stockpiling war supplies while also providing training grounds and hospital facilities. For the local citizenry, Cape Girardeau would be a safe haven from the guerrilla conflict that ravaged the area. Early in the war, Union strategists could see that control of the Mississippi River was key to invading and dividing the southern states. Union commanders in St. Louis realized the importance of the city and soon dispatched the 20th Illinois Regiment from St. Louis to Cape Girardeau. The men of the 20th boarded a steamer on July 10, 1861, and traveled all day to Cape Girardeau, arriving at twilight. The citizenry were reported to be "orderly and well behaved."²⁷ One soldier reported that the populace welcomed the 20th's arrival by waving hats and handkerchiefs and noted that the "people were as a rule loyal; yet they had been constantly plundered, threatened by rebel bands that infested that part of the state, and

²⁴ James Denny and John Bradbury, *The Civil War's First Blood, Missouri, 1854-1861*, (Booneville MO: Missouri Life, Inc., 2007), 14-15.

²⁵ Robyn Burnett and Ken Luebbering, *German Settlement in Missouri*, (Columbia: University of Missouri Press, 1996), 58.

²⁶ *Ibid.*, 22.

²⁷ Mary Ann Andersen, ed., *The Civil War Diary of Allen Morgan Geer, Twentieth Regiment, Illinois Volunteers*, (Denver: Robert C. Appleman, 1977), 6.

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now they saw their relief at hand, and rejoiced..."²⁸ Colonel C.C. Marsh of the 20th became post commander.

The threat was real. Confederate Brigadier General M. Jeff Thompson was leading an irregular force throughout Southeast Missouri, occasionally threatening Cape Girardeau. Early in August, Thompson's men, perhaps without orders, attacked the town of Hamburg (now New Hamburg) in Scott County "scattering the Dutch in all directions." Thompson's men shot down the German men, who were believed to be of the Unionist Home Guard "although unarmed, and killed 1, mortally wounded 5, seriously wounded several others, and brought away 13 prisoners."²⁹ Allen M. Geer of the 20th Illinois reported rumors that Confederate forces were "preparing to make a raid" on Cape Girardeau.³⁰ Another soldier reported that the soldiers and town "were kept in a constant state of excitement" from the reported threats.³¹ Thompson himself was serious, reporting on August 7th, 1861, that he had initiated a "demonstration which I made yesterday on Cape Girardeau with my dragoons..."³² Further, Thompson was anxious to initiate a fight with Colonel Marsh's men and vowed to "run him through a thrashing machine."³³

Within a week of being in Cape Girardeau, Marsh directed 2nd Lieutenant John Wesley Powell to "look over the ground, select a camp, and prepare a plan for the entrenchment of the camp." Powell "studied the country about the camp and made a map of it, and prepared a plan of works for the defense of the town... but no work was done in the field to carry out this plan."³⁴ This marked Powell's first experience with military engineering, surveying, or cartography; his initial work would be put to use shortly thereafter.

By the end of July, Cape Girardeau still had no artillery to protect the city, and still lacked regular fortifications for that purpose.³⁵ On July 25, 1861, General John C. Fremont was assigned the command of the U.S. Western Military District, which included Missouri. Despite a number of personal and professional faults, Fremont was an experienced military leader who quickly worked to put Missouri on a war footing.³⁶ Fremont soon ordered major fortifications to be built around a select number of Missouri cities, including St. Louis (which would have ten forts) and Cape

²⁸ Nancy Ann Mattingly, ed., *I Marched With Sherman, Ira Blanchard's Civil War Memoirs of the Illinois 20th Infantry*, (Lincoln, NE: toExcel, 2000), 25.

²⁹ U. S. War Department, *The War of the Rebellion: A Compilation of the Official Records of the Union and Confederate Armies*, (Washington, DC: Government Printing Office, 1880-1901, Series 1 Vol. 3,) 132.

³⁰ Andersen, *The Civil War Diary of Allen Morgan Geer, Twentieth Regiment, Illinois Volunteers*, 7.

³¹ Mattingly, *I Marched With Sherman, Ira Blanchard's Civil War Memoirs of the Illinois 20th Infantry*, 29.

³² *Official Records*, (Washington, DC: Government Printing Office, 1880-1901, Series I Vol. 3), 632.

³³ *Ibid.*, 662.

³⁴ Mrs. M. D. Lincoln, "John Wesley Powell, The Soldier", *The Open Court*, Volume 17, No.1, (Chicago: Open Court Publishing Company), January 1903, 15. The work was begun less than a month later to Powell's plans.

³⁵ *Official Records*, (Washington, DC: Government Printing Office, 1880-1901, Series I Vol. 3), 407.

³⁶ M.F. Force, *Campaigns of the Civil War, From Fort Henry to Corinth*, (Edison, NJ: Castle Books, 1888 (reprinted 2002), 7.

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Girardeau. On July 28, 1861, Fremont sent Captain Franz Kappner, a German-American military engineer, to make recommendations on fortifying Cape Girardeau. A week later, as Fremont and his staff visited the city, Kappner was joined by Henry Flad, another German-American with an engineering degree. Fremont left additional orders with Flad that directed him to cause the forts to be built.³⁷ Colonel Marsh directed Powell to submit his map and plan to the staff.

On August 4th, Marsh reported that he was “fortifying the Windmill Hill, and will hold out as long as possible.” The Windmill Hill became Fort A, its distinctive wind-powered grist mill being a landmark. Ira Blanchard of the 20th reported that their previous camp was “struck” (tents taken down) and moved to “a hill a little back of town” where the men arranged their camp “in a semi-circle, piling up our tents in front of us by way of breast works.”³⁸ It is highly possible that this site was to become Fort D.

On August 6, 1861, soldier A. M. Geer of the 20th Illinois noted that work was initiated on Fort D: “Regular scientific fortifications were begun on the Ridge, engineered by Lieut. Powell in the form of a triangle with a bastion at each angle raking the trenches.”³⁹ Of the four forts that were built, only Fort D matches this description; the “ridge” being the high ground above the low areas of the city along the river. The work continued the next day and for several months thereafter as the four forts were constructed and improved on simultaneously.

Being something of a renaissance man, John Wesley Powell had (on his own) studied military engineering before the war, being convinced that a war was indeed impending.⁴⁰ Colonel Marsh assigned Powell the task of engineering (surveying and laying out) at least some, if not most, of the fortifications, working with Henry Flad, and utilizing standard military fortification concepts. The 20th Illinois worked on at least Forts A and D, and perhaps others.⁴¹

Work on the rest of the forts (B and C) were begun at some point after A and D (see Figures 7 and 8 for locations of the various forts). On August 7th two companies (A and B) of volunteer engineers arrived, part of Josiah Bissell’s Engineers of the West, newly created in St. Louis; “they at once set to work on the fortifications at the place under Captain Henry Flad.”⁴² Kappner finished his plan of fortification, apparently based on Powell’s work, and it was approved on August 15 by Fremont. Fremont also promised additional tools and 200 men, but perhaps this was

³⁷Henry Flad, “Orders for Flad to help construct forts at Cape Girardeau”, Henry Flad Papers, Special Collections and Archives, Southeast Missouri State University, August 3, 1861.

³⁸ Mattingly, *I Marched With Sherman*, Ira Blanchard’s Civil War Memoirs of the Illinois 20th Infantry, 31.

³⁹ Andersen, *The Civil War Diary of Allen Morgan Geer Twentieth Regiment, Illinois Volunteers*, 9.

⁴⁰ Donald Worster, *A River Running West, The Life of John Wesley Powell*, (New York: Oxford University Press, Inc., 2001), 86-87.

⁴¹ Darrah, William Culp. *Powell of the Colorado*. Princeton, NJ: Princeton University Press, 1951, 49. Darrah states that eventually “thousands” of men worked on the forts but that is likely an exaggeration.

⁴² Dr. W. A. Neal, ed., *An Illustrated History of the Missouri Engineers and the 25th Infantry Regiments* (Chicago, IL: Donohue and Henneberry, 1889), 15.

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a belated order for the engineers who had already moved.⁴³ With his work completed, Kappner was ordered back to St. Louis, and Flad was left in charge for the time being.⁴⁴

At the end of the month (August 28, 1861) Fremont ordered Brigadier General Ulysses S. Grant to take command of the district of Southeast Missouri which included southern Illinois. Grant traveled to Cape Girardeau, arriving on August 30th, at which point he assumed command. Grant had done a good job thus far in Missouri, serving in northeast Missouri before commanding a brigade at Pilot Knob in Iron County. Now he was promoted to command an entire army, which eventually would become known as the Army of the Tennessee. On the day he arrived, Grant inspected the fortifications with the staff, including Powell, and noted that “the fortifications here are in a considerable state of forwardness...” and “were being pushed forward with vigor.” Grant also noted that a number of African-Americans (escaped slaves or “contrabands”) were employed to work on the forts, “apparently much to their satisfaction.”⁴⁵

Grant moved his headquarters on to Cairo, Illinois, soon thereafter; the 20th Illinois was sent on to Cairo and Birds Point as well, but without Lieutenant Powell, whom Grant had detached and left in charge of finishing the fortifications while also raising him to the rank of captain.⁴⁶ Grant continued to monitor the Cape Girardeau situation, reminding the post commander to “push the works of fortifying as rapidly as possible to completion” and also stating his belief that, when completed, the forts would be “sufficient to hold the place against any force that can be suddenly brought against it.”⁴⁷ Grant returned to Cape Girardeau on September 7th, and a week later the post commander, Colonel John Cook, responded that his harried troops had once again “commenced work in earnest on the fortifications” and “owing to the insufficiency of citizen labor have issued a genl [sic] order for detail of fifty privates” to finish this work.⁴⁸ Grant again visited the Cape on September 20th (this time to solve a landowner problem at Fort B) and found that overall the work on the fortifications was “progressing fairly...”⁴⁹

Powell, meanwhile, was busy working with the local German men to finish the forts. As the earthworks neared completion Grant returned to Cape Girardeau once more on October 8th to inspect the work. Powell approached Grant with a request to be allowed to recruit the displaced local men into the army and form an artillery company (or battery as it is usually known). This

⁴³ Flad Papers, Fremont letter to Kappner, August 15, 1861.

⁴⁴ Ibid., Fremont letter to Flad, August 17, 1861.

⁴⁵ John Y. Simon, ed., *The Papers of Ulysses S. Grant, Volume 2*, (Carbondale, IL: Southern Illinois University Press, 1969), 155.

⁴⁶ John Y. Simon, ed., *The Papers of Ulysses S. Grant, Volume 3*, (Carbondale, IL: Southern Illinois University Press, 1969), 30. The exact order has not been found, but this is not unusual because orders for detached service and other directives were common and frequently written as simple notices. Being detached from the 20th Illinois meant that Powell now fell directly under the command of Grant.

⁴⁷ Simon, *The Papers of Ulysses S. Grant, Volume 2*, 219.

⁴⁸ Ibid., 244.

⁴⁹ Ibid., 287.

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Grant readily agreed to, writing that he had “authorized Capt. Powell an efficient officer of the 20th Ill Vols who has been acting as engineer, to raise a company to manage the siege Guns. He reports that the company can be raised in two days at Cape Girardeau. This authority was given subject to the approval of the comdr of Department.”⁵⁰ Grant also noted that the fortifications in Cape Girardeau were in a “highly defensible state.”⁵¹

The local German men Powell would recruit had been forced from their homes; they and their families now lived in Cape Girardeau or the families had been moved to further safety in St. Louis or Illinois. Powell began recruiting the men almost immediately and within a day or two he had the minimum number needed for a battery, a little over 100 men. Grant designated Powell as captain, and Powell named his brother Walter as lieutenant, nominally second in command. Although virtually all of the original recruits were from the Cape Girardeau area of Missouri, the unit would be designated as Company F of the 2nd Illinois Light Artillery. This was a necessity since Grant and Powell’s commissions were through the governor of Illinois, not Missouri.

The countryside continued to be unsafe for Unionist people. As one Union officer on patrol from Cape Girardeau noted in early 1862: “Here there are no forces to fight but a few hundred bushwhackers that will lie by the roadside in the swamp, and I believe they would murder Jesus Christ if they thought he was a Union man. We failed in doing what we wanted to the last trip, but I believe we’ll get even with them yet. I’d hate mightily to get killed by such a pack of murderers, but that isn’t my business.”⁵²

In addition to soldiers such as the 20th Illinois, the engineers, and the welcome addition of African-Americans (either freemen, escaped slaves or slaves of disloyal owners⁵³) the workers included additional local men, mostly of German heritage, many of whom continued to be displaced from their rural farms by marauding secessionist guerrillas. These latter men were also paid for their work on the forts and many responded by later joining various army units.⁵⁴ A number of them joined the engineer regiment and were mustered in as Company G of the Engineers of the West on September 17, 1861.

⁵⁰ Simon, *The Papers of Ulysses S. Grant, Volume 3*, 28-29.

⁵¹ *Ibid.*, 30.

⁵² Mary E. Kellogg, comp., *Army Life of an Illinois Soldier, Letters and Diary of Charles W. Wills*, (Carbondale and Edwardsville, IL: Southern Illinois University Press, 1996), 62.

⁵³ As an example, an order to repair the fortifications, dated May 12, 1863, from the post commander John McNeil, called for “all the able bodied Negroes you can find except Officers private Servants and Slaves who are the property of Loyal owners.” Special Orders No. 16, McNeil to Burrough, Special Collections and Archives, Southeast Missouri State University.

⁵⁴ Marge Thompson, “Civil War Fortifications Claims List – Cape Girardeau Militia” , *Collage of Cape County*, 24:13-14, June 2004, Cape Girardeau County Genealogical Society.

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To the northeast of Fort D lay St. Vincent's Seminary (NR 9/30/2005) first begun in 1843. Located to the northwest of the fort was the pre-war fairground, a large level area of roughly 0.5 miles long by 0.25 miles wide or roughly 80 acres. This was used as the primary Union campground during the war. At the north end of these camps was Fort C, at the head of Bloomfield Road where it ended at Pacific Street. Being adjacent to the infantry camps forts C and D probably received staffing from those camps, a duty which would have been assigned by the post commander. At other times, troops were assigned to live at the fort. One such group was Company G of the 17th Illinois. This company was largely comprised of recruits from Eureka College, Illinois; known as "the Eureka boys" their company was captained by one of their college instructors, O. A. Burgess. One of the members of the company, Benjamin Radford, later wrote his recollections, once at least in a letter to a Cape Girardeau area resident.⁵⁵ Radford gave numerous details of the fort and life in it; while he was stationed at the fort in 1861 he drew an inexact map of the fort, including angle measurements and armament notations (see Figure 11).⁵⁶ The fort initially had three large gun emplacements at the vertices of the near-triangle. These consisted of ramps leading up to the guns, 32-pounder seacoast cannon, probably model 1829.⁵⁷ These guns were placed *en-barbette*, a barbette being a large carriage, fixed to an underpinning, that allowed the cannon to swivel from one side to the other but could not otherwise be moved. Radford also notes the presence of two 24-pounders located at angles between the larger guns' positions. These would likely have been mounted on siege carriages which, with enough horses, could be moved from place to place.⁵⁸ Because these additional cannon do not show on the 1865 military map, it is likely that they were sent with the army, perhaps to Pittsburg Landing, Tennessee, in early 1862.

For most of the war, the forts of Cape Girardeau were perfunctorily staffed and used, by one transient unit or another, or manned by local militia. The system of local militias was known as the Enrolled Missouri Militia (EMM), and it was expected of every loyal able-bodied man that they would serve. Serving meant being called forth when needed; drill, uniforms and other aspects of war behavior were generally ignored, so long as men showed up with their own arms as needed. The Cape Girardeau unit was the 56th EMM and it was commanded by a local German immigrant George Thilenius. Throughout the war, the 56th would fill in as needed to patrol or man the forts. Another unit that manned the forts and the city was the 1st Nebraska Infantry, periodically stationed in southeast Missouri after the Battle of Shiloh. The Nebraskans occasionally had to man the forts, one of them writing "I was sent to Fort C, located right here by the camp. In each

⁵⁵ K.J. H. Cochran, "Memories of a Civil War soldier at Fort D", *Bulletin-Journal*, October 2, 1983, 4D.

⁵⁶ The original has not been found and only poor quality photocopies of it exist.

⁵⁷ Jack Coggins, *Arms and Equipment of the Civil War*, (Garden City, New York: Doubleday and Company Inc., 1962), 88. The 32-pounder cannon, like a number of other cannon, is named for the weight of a solid round shot projectile, which was designed for smoothbore cannons. The range of the 32 pounder, fired with 8 pounds of gunpowder at a minimal five-degree elevation, was 1922 yards.

⁵⁸ A siege carriage is what most readers would consider a normal gun carriage, with two wheels. In the case of the 24-pounders, the tube alone weighing nearly three tons, it would have taken eight to ten horses to pull the cannon as attached to a special limber.

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of the four forts only one post is set up with orders to let no one in. Here we had a tent with a stove.”⁵⁹

A fort with armament requires staffing. Few details are available to us regarding who served where and in what function to man the forts. We do know that a number of army units which were stationed in Cape Girardeau were assigned to the forts. The “Eureka Company” of the 17th Illinois, for example, spent the winter of 1861-1862 at Fort D. Boredom, not danger, was the rule. Being educated young men, they spent some time having fun while fighting off the boredom and cold. Reading about Confederate Quaker cannons in the eastern theater, they built some at Fort D.⁶⁰ They also built a crude bowling alley inside the fort, crafting pins (“three inches in diameter and eighteen inches long” said Radford) and using the 32 pound solid shot as bowling balls.⁶¹ The cannonballs “were effective, when hit, and gave strength to our arms.”⁶² Most of the garrison slept in tents outside the fort but Radford’s mess group of four men (as well as several other messes) dug barracks into the side of the hill just to the northeast of the fort. The room was eight feet by ten feet and had a roof plus a fireplace and chimney at the rear. Here they stayed warm, but building the hut “took some work and soldiers are indisposed to that, and most of the messes wintered in their tents.”⁶³

The forts were highly visible. On passing down the river from the landing downtown in early 1863, one of the Nebraskans, August Scherneckau, noted the view: “we went on farther around the peninsula; on its tip – reaching farthest into the river, rests the Catholic seminary, or cloister, high up and beautiful, an attractive building. On the other side of this peninsula, we caught a glimpse of our old camp, until the bluffs and the walls of Fort D removed it from our view.”⁶⁴ Surgeon J. V. Lauderdale passed Cape Girardeau on a steamer in April of 1862 and easily noted “a fort on top of a hill in rear of the town.”⁶⁵ This visibility of the forts was one of the main purposes of the fortifications. Naturally, infantry fighting from behind walls is more emboldened to fight and walls “enabled a force to hold in check a superior one...”⁶⁶ As one expert on Civil

⁵⁹ August Scherneckau, James E. Porter and Edith Robbins, eds., Edith Robbins., trans., *Marching with the First Nebraska, A Civil War Diary*, (Norman, OK: University of Oklahoma Press, 2007), 111.

⁶⁰ A Quaker cannon was a log, shaped like a cannon and painted black, pointing in the general direction of the enemy. From a distance they could be mistaken for real cannon, but since they could not fire, they were humorously referred to as “Quakers.”

⁶¹ “April 26th Was Anniversary of Cape Girardeau Battle”, *The Community*, (Cape Girardeau, MO), April 1925, 7, 8.

⁶² Ibid.

⁶³ Ibid., A mess is defined as an eating group. Messes frequently were eight men but four men (known as comrades of four) could also be a mess. These would also be men who would drill and fight side by side.

⁶⁴ Scherneckau, *Marching with the First Nebraska, A Civil War Diary*, 118.

⁶⁵ Peter Josyph, ed., *The Wounded River, the Civil War Letters of John Vance Lauderdale, M.D.*, (East Lansing, MI: Michigan State University Press, 1993), 45-46. He must have noted either Fort A or D as B and C would not have been visible from the river.

⁶⁶ Francis Trevelyan Miller, ed., *The Photographic History of The Civil War, Forts and Artillery*, (first published in 1911), (New York: Castle Books, reprinted 1957), 194.

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War tactics noted “officers and soldiers alike seem to feel that their positions were truly secure only if they had been improved with the spade and the axe.”⁶⁷

“Because Cape Girardeau was so heavily fortified” the forts were truly tested only once.⁶⁸ In April of 1863, Confederate General John Marmaduke raided into Southeast Missouri. After a series of small fights, his troops moved to positions outside of Cape Girardeau which was protected by “a chain of hills, which overlooked the city and its approaches. On four of these hills were earthwork forts, Forts A, B, C, and D, supported by artillery.”⁶⁹ Colonel Jo Shelby’s adjutant John Edwards noted that Cape Girardeau was “protected by strong forts.”⁷⁰ The attack failed because artillery from the forts proved too much for the attackers, the counter fire from the forts described as “heavy shot and screaming shell” as the Union “forts and batteries continued to play upon our battery for more than one hour without intermission.”⁷¹ Fort B suffered the brunt of the attack, while Fort C stood by with loaded cannons and may have fired a few rounds. Two smaller additional earthworks, known as Batteries A and B also fired cannon during the battle; B in particular was in the heat of the fight (see Figure 9 for location of the batteries and rifle pits). The forts nearest the river, A and D did not, so far as anyone can tell, fire their guns during the fight. Reportedly Fort D was manned by the 56th EMM during the fight, and given the dispositions of the rest of the troops during the battle, this makes sense, as regular U.S. volunteer troops and Missouri state militia were positioned along the remainder of the defensive perimeter. The post commander would not have left the two remaining forts unmanned.⁷² The battle was not a major one; a Union Captain William Black of the 37th Illinois, veteran of major fights at Pea Ridge and Prairie Grove AR, arrived at the end of the battle and commented that it “didn’t amount to a row of peas.” Black and his men camped “in Fort C” indicating that the forts were temporarily manned with veteran infantry. Black did note that Cape Girardeau was “very strongly fortified – four forts mounting some 12 or 15 siege guns, mostly 24 pounders.”⁷³

During Confederate General Sterling Price’s 1864 raid into Missouri, Confederate raiders came as close as Jackson (10 miles northwest of Cape Girardeau) and the city’s defenses were put in a

⁶⁷ Paddy Griffith, *Battle in the Civil War, Generalship and Tactics in America 1861-65*, (Nottinghamshire, England: Fieldbooks, 1986), 34.

⁶⁸ Thomason, p. 8.

⁶⁹ Deryl P. Sellmeyer, *Jo Shelby’s Iron Brigade*, (Gretna, LA: Pelican Publishing Company, Inc., 2007), 96.

⁷⁰ John Newman Edwards, *Shelby and His Men*, (Waverly, MO: General Joseph Shelby Memorial Fund, 1993), 156.

⁷¹ *Official Records*, (Washington, DC: Government Printing Office, 1880-1901, Series 1 Vol. 22 Part 1), 290. While this report is Col. Shelby’s official report, the style and language easily identify it as coming from Adjutant Edwards, a gifted, if not honest, writer.

⁷² Steve Pledger, Director, Cape Girardeau County Archives. Personal communication, 2013.

⁷³ William Black, see Michael E. Banasik, ed., *Duty, Honor and Country, The Civil War Experiences of Captain William P. Black, Thirty-Seventh Illinois Infantry*, (Iowa City, IA: Camp Pope Bookshop, 2006), 232-235.

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high state of readiness.⁷⁴ U.S. Grant recommended that General A.J. Smith's 16th Corps disembark at Cape Girardeau and put those men into a good defensive position.⁷⁵

The rest of the war saw Cape Girardeau as the host of numerous "scouts" into the hinterland but after Price's Raid, no major threats materialized. After the end of the war, only a few efforts were made to protect Civil War sites and "little remains today of the forts and earthworks that played such a vital role in operations along the Mississippi."⁷⁶ Other partially-preserved Civil War earthworks along the middle Mississippi can be found at Columbus, KY, and Fort Pillow, TN. Remains of fort earthworks (Fort Defiance) can be found at Cairo, IL, but are in poor condition and virtually indistinguishable owing to the construction of a water treatment plant on the site.

In sum, as outlined above, Fort D played a key and noticeable role in the defense of the City of Cape Girardeau during the American Civil War, strongly deterring attacks, and it saw many major Civil War figures pass behind its fortified walls. The fort is therefore locally significant under Criterion A, Military, with a period of significance from 1861-1865 as an important site to Civil War history and the only one remaining extant in Cape Girardeau.

Criterion B Significance of Associated Persons: John Wesley Powell

The relationship between two men of prominence, who first met at the forts of Cape Girardeau, is of particular importance. Since this relationship, founded in Cape Girardeau, was formative in the career of John Wesley Powell his career is of great relevance and significance to this site. Powell was the first known explorer of the Grand Canyon, founded the Bureau of Ethnology, and became the second director of the U. S. Geological Survey. Powell's governmental career began with his engineering and construction work on the forts of Cape Girardeau, including Fort D.

John Wesley Powell

"It is seldom realized how one man can, by his own acts, set in motion movements which change the minds of great masses of people."⁷⁷ John Wesley "Wes" Powell was born March 24, 1834 in Mount Morris, New York, of Methodist parents who had emigrated from Shrewsbury, Shropshire, England. Powell's father was Welsh while his mother was from Yorkshire. In 1838 the Powell family moved to Jackson in southern Ohio, where, in addition to common schooling, young Wesley was tutored by a self-made naturalist George Crookham. Crookham's dog-trot school had a classroom on one side and a museum on the other filled with stuffed animals, Indian

⁷⁴ Bryce A. Suderow and R. Scott House, *The Battle of Pilot Knob, Thunder in Arcadia Valley*, (Cape Girardeau, MO: Southeast Missouri State University Press, 2014), 132.

⁷⁵ *Official Records*, (Washington, DC: Government Printing Office, 1880-1901, Series 1, Vol. 41, Part 3), 175.

⁷⁶ Ron Field, *American Civil War Fortifications (3) The Mississippi and River Forts*, (Oxford, UK: Osprey Publishing 2007), 56.

⁷⁷ Darrah, *Powell of the Colorado*, xi.

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relics, a variety of rocks and such science books and maps as could be obtained. Once, when Crookham led geologist William Mather on field trips to study Ohio geology, they took a very young Wesley with them. As one science historian wrote “the influence of these early associations on Powell cannot be over-estimated.”⁷⁸ Like the Powells, Crookham was an abolitionist living too close to people who not only approved of slavery but occasionally made money by catching runaways that had escaped north across the Ohio River.⁷⁹ Crookham’s school was burned, the Powell family’s belongings were vandalized and shortly thereafter the family moved, first to Wisconsin and then to Illinois. As Wesley became more educated, he took on a job of teaching, first back in Wisconsin and then, in central Illinois, near Decatur. Lacking much of a formal education, Powell had to teach himself, obtaining books as he could and studying them incessantly. Much of his learning focused on science and geography, and when the 1860 census registered him, his occupation was listed as “naturalist.”⁸⁰ Leading to that point, Powell took such college courses as he was interested in at a variety of new, small institutions such as Oberlin College, Ohio, Illinois Institute in Wheaton, and Illinois College in Jacksonville, the latter an abolitionist school.⁸¹ When not taking classes, he was teaching them at, for instance, Clinton in Dewitt County. These schools all failed to hold Powell’s interest as he could not find the math and science courses that he most desired.

During one summer Powell traveled west to the Mississippi River, bought a skiff (perhaps near Hannibal MO or Quincy IL) and rowed upstream to St. Paul, Minnesota, a distance of at least 500 miles. Along the way he collected specimens - mollusks, rocks and minerals, plants - which he sent home to Wheaton. He then walked across much of Wisconsin and Michigan’s Upper Peninsula, crossing to the lower at Mackinac before visiting long-detached family in Detroit. This was the Dean family and here he met his cousin, Emma.⁸² The next summer he returned to St. Paul, bought another boat, and floated to New Orleans, naturalizing as he went. In the summer of 1857, he took two trips. In the first, he boated down the Ohio from Pittsburgh then up the Wabash River, finally trekking home. Later that year he journeyed from St. Louis to Iron Mountain, Missouri, probably walking most of the way, to collect mineral specimens, probably passing Henry Flad, who was engineering the unfinished railroad. As his interests grew so did the

⁷⁸ William Culp Darrah, Ralph V. Chamberlin, Charles Kelly, eds., *The Exploration of the Colorado River in 1869 and 1871-1872*, (Salt Lake City, UT: The University of Utah Press, 1947), 19.

⁷⁹ *The Telegram*, Jackson, Ohio, November 9, 2012. In 2012 the commissioners of Jackson County officially named a creek in town after Crookham, restoring a name that had long been forgotten. A newspaper article calls Powell, Crookham’s “most famous pupil.”

⁸⁰ Worster, *A River Running West, The Life of John Wesley Powell*, 60. Powell’s declaration came only months after the publication of Charles Darwin’s book *On the Origin of Species*. Darwin, like Powell’s parents, was from Shrewsbury, England.

⁸¹ Illinois College, “Our History,” accessed May 29, 2019, <https://www.ic.edu/about/history>. The school’s first president was Edward Beecher brother to abolitionist Henry Ward Beecher and Harriet Beecher Stowe, author of *Uncle Tom’s Cabin*.

⁸² Worster, *A River Running West, The Life of John Wesley Powell*, 83. Powell’s uncle was a half-brother to Powell’s mother Mary, hence Emma was his half-first cousin.

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collection in his parents' house: thousands of pressed plants, mineralogical specimens, and preserved reptiles.⁸³ Finally Powell got a good teaching job at Hennepin, Illinois, on the Illinois River, where as principal teacher, he received \$100 a month salary. During his first summer there, he again floated down part of the Mississippi and then up the Des Moines River deep into Iowa. Powell joined the new Natural History Society of Illinois, and late in 1860 won 2nd prize at a state competition for his display of mollusks of Illinois. (Throughout this time, Powell also found time to collect mollusks in locations near to Detroit, giving him opportunities to visit his cousin.) During the spring of 1860 Powell embarked on an arranged speaking tour which took him through Kentucky, Tennessee, and Mississippi. Here he sensed the tension over the slavery issue, heard the invectives, and came home convinced that only war would decide the matter.⁸⁴

When the war came, Abraham Lincoln asked for volunteers and almost immediately Powell enlisted as a private in the 20th Illinois Volunteers. The men elected him sergeant and by June he was made a second lieutenant.⁸⁵ The regiment went into training at Joliet and while there, Powell made a trip to Chicago to order an officer's uniform but also to purchase books on military engineering (see Figure 30 for photo reportedly taken at this time) and with the help of these books was later "able to supervise the construction of fortifications at Cape Girardeau."⁸⁶ The self-instructed Powell was not done self-instructing. He also made another trip to Detroit, and thus became engaged to Emma. In early July his regiment was sent to St. Louis and then on to Cape Girardeau, arriving at twilight on July 10, 1861. Immediately, Powell was directed by Colonel C. C. Marsh to "look over the ground, select a camp, and prepare a plan for entrenchment of the camp."⁸⁷ Within a week Powell had "studied the country about the camp and made a map of it, and prepared a plan of works for the defense of the town."⁸⁸ When the order came to fortify the town, C. C. Marsh, colonel of the 20th offered up Powell's services in laying out the forts. Powell worked on engineering the forts. Engineering in the Civil War military sense meant building something; there was no division of work like the modern duties of architect and builder. The math would be worked out, surveys would be done, specifications designed, materials obtained, and work supervised. Powell initially worked with Franz Kappner of General Fremont's staff to designate locations, but Kappner spoke no English, and shortly thereafter Henry Flad, who was fluent in English, arrived to work with Powell. Powell served as Flad's assistant and the experience was "a good school of engineering for the young lieutenant."⁸⁹ At the end of August, 1861, Ulysses S. Grant was put in command of the military District of Southeast Missouri and immediately arrived in Cape Girardeau. Grant toured the forts with, at least, Powell

⁸³ Ibid., 77-80.

⁸⁴ Ibid., 83-84.

⁸⁵ Ibid., 85.

⁸⁶ Goetzmann, *Exploration and Empire*, 532.

⁸⁷ Lincoln, "John Wesley Powell, The Soldier", 15; and Darrah, *Powell of the Colorado*, 49.

⁸⁸ Lincoln, "John Wesley Powell, The Soldier", 16.

⁸⁹ Ibid.

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and Flad and likely Marsh as well; “Grant reviewed Wes’s plans.”⁹⁰ Impressed with Powell, Grant detached Powell from the 20th, attaching him to his own general staff, and left him in charge of finishing the forts of Cape Girardeau. This was a substantial move. Within an army there are divisions, within divisions there are brigades, within brigades there are regiments and a regiment is comprised of ten companies. Within a company there is a captain and at least two lieutenants, sometimes three. Out of Grant’s new military district there were many, many second lieutenants, but Powell was elevated to the general staff with control over many men, contractors, and volunteers. Only a general officer can make this kind of move. When done, it is possible to assign the lieutenant to a variety of roles. In this case, it would be as an acting engineer. This was quite a leap for a second lieutenant⁹¹ of infantry because an engineer duty constituted “a compliment, indicating that the officer possessed a knowledge beyond his duties in the line... the Engineer’s duties, it had always been conceded, require a greater and more varied knowledge of military science than those of any other officer of the Army.”⁹² Correct pursuit of his duties required the development of a skill set that would greatly benefit Powell in the remainder of his public career: “another and entirely different kind of knowledge, pertaining to the disbursement of money, the purchase of materials, the direction of mechanics and other workmen” all the while demonstrating “care and accountability.”⁹³ Powell would learn to thread his way through a military bureaucracy while simultaneously engineering the work to be done and obtaining the volunteers and soldiers necessary to accomplish the task; this was “no random military assignment. Powell had furiously studied all he could of army physical infrastructure.”⁹⁴

Why was Powell put in this position, and why not Flad? The answer is relatively simple: Powell, being an Illinois infantry officer, was subject to Grant’s command, whereas Flad was already a captain in a Missouri regiment, the Engineers of the West, which was not subject to his immediate command, but instead answered directly to Fremont. The appointment was fortuitous and meaningful to all involved, most of all Powell, who became a life-long friend of Grant.⁹⁵

Grant returned to Cape Girardeau in mid-September, and again in October, when he authorized Powell to enlist men for an artillery company to man the big guns of the forts. At this time, Powell was named acting captain, a rank that would not become official until December.⁹⁶ The detachment of Powell and subsequent reassignment was, as Powell’s most recent biographer put it, “a rare action for a general to take toward so junior an officer, even in the feverish expansion

⁹⁰ Worster, *A River Running West*, 89.

⁹¹ Powell had not yet been promoted to the rank of captain which probably occurred in October when he signed up men for his company. Initially this may have been “acting” captain until the official muster in December 1861.

⁹² August V. Kautz, *Customs of Service for Officers of the Army*, (Philadelphia: Lippincott, 1866), 188-200. (Reprinted by Stackpole Books, Mechanicsburg, PA, 2002.)

⁹³ Ibid.

⁹⁴ Michael P. Ghiglieri, *First Through the Grand Canyon*, (Flagstaff AZ: Puma Press, 2010), 31.

⁹⁵ Worster, *A River Running West, The Life of John Wesley Powell*, 87-88.

⁹⁶ Darrah, *Powell of the Colorado*, 50.

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of Union forces. A deep vote of confidence, indeed.”⁹⁷ Powell turned to the local men, mostly German, who had been working on the forts and in two days had enough men enlisted to fill a company. Grant returned again in November, toured the forts, and dined with Powell on board the steamer that had brought him. Powell used the opportunity to ask Grant for a leave of absence so that he could get married. Grant agreed and Powell accompanied Grant back to Cairo to get on a train. He rushed to Detroit, arrived at 6 P.M., was duly married at her father’s house, and was back on the train, with Emma, by 8 P.M. Wes and Emma spent their honeymoon in Cape Girardeau.⁹⁸ Powell did complain to Grant that his men had not yet been mustered in as regular soldiers, and Grant soon wrote to the St. Louis bureaucracy insisting this be done. Finally on December 11, 1861, the 132 men were officially mustered in as Company (or Battery) F of the 2nd Illinois Light Artillery.⁹⁹ Clearly Grant did not intend for them to remain in Cape Girardeau or they might have had some other unit designation.¹⁰⁰

Powell and his men spent the winter in Cape Girardeau, finally leaving on March 11th of 1862; Powell had now spent eight months in Cape Girardeau, a longer period of time than he would eventually spend in the Grand Canyon. Company F, now also known as Powell’s Battery, made its way up the Tennessee River to Savannah, Tennessee, and from there just upstream to Pittsburg Landing, arriving on March 14.¹⁰¹ Here, Grant’s army was being assembled for an eventual strike at Corinth, Mississippi. Grant’s army, spread over a large area inland from the landing, was not yet organized into a series of Corps, but was for the time, grouped into divisions. Powell’s Battery was, on paper, moved from one division to another without physically moving from its camp just above the landing. On the morning of April 6, 1862, they were not assigned to any particular division at all. Early that morning, several miles away, beyond a Methodist log chapel known as the Shiloh Meeting House, the Confederate army struck the complacent Union forces. The fighting was intense but Powell’s Battery, being unassigned, was not called into battle. Finally, Captain Powell ordered his men toward the sound of the battle. Taking a wrong turn, they ran into Confederates and lost two guns and several men captured. Quickly retreating, they found themselves with the divisions of Generals William H. L. Wallace and Benjamin Prentiss who had formed a salient line at an area that Confederates later called “The Hornets’ Nest.” Here, Powell broke his battery into two sections of two guns each, and went with one of the sections to the back side of the action, where Confederates were threatening to surround the detachment. The guns unlimbered at the edge of Wicker Field at about, as Powell later remembered “four o’clock, as I have always remembered.” As Confederates formed across the field, the guns were aimed and

⁹⁷ John F. Ross, *The Promise of the Grand Canyon: John Wesley Powell’s Perilous Journey and His Vision for the American West*, (New York: Viking Press, 2018), 50.

⁹⁸ *Ibid.*, 89.

⁹⁹ William Culp Darrah, *Powell of the Colorado*, (Princeton, NJ: Princeton University Press, 1951), 52. A battery is the artillery equivalent of a company.

¹⁰⁰ A light artillery unit was intended to have field guns and be mobile, while a heavy artillery unit manned mostly immovable pieces such as most of the emplaced guns at Cape Girardeau. Coggins, *Arms and Equipment of the Civil War*, 61.

¹⁰¹ Darrah, *Powell of the Colorado*, 53.

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Powell raised his arm preparatory to dropping it and signifying for them to fire. A bullet smashed into his wrist and traveled up the arm. Bleeding profusely, Powell was unable to get on his horse, but General Wallace rode up, dismounted and “picked me up, as he was a tall, athletic man, and put me on my horse and directed the sergeant to take me to the landing.”¹⁰² Powell was taken to Savannah on a steamer and three days later, with Emma by his side, his right arm was amputated just below the elbow.¹⁰³ Powell suffered months in recovery, but recover he did, and eventually returned to duty. To aid in his recovery and keep his outlook positive, Grant issued a military pass to Emma allowing her to use, free of charge, any mode of transportation needed to keep her near Wesley. He served in Grant’s Vicksburg campaign in the summer of 1863 and spent his free time looking for fossils in the loess bluffs around that besieged city. His arm continued to be painful and after the fall of Vicksburg he had it operated on again, suffering another amputation. He again returned to duty, serving with Grant, William Sherman, John A. Logan, and O.O. Howard in campaigns that took him through Mississippi, Tennessee, and Georgia.¹⁰⁴ Later he was chief of artillery for General George Thomas at the Battle of Nashville in December 1864.¹⁰⁵ Thereafter, at the same time Battery F mustered out, he submitted his resignation seeing that the war was soon to end. He had been elevated to the rank of major, a title that stayed with him the rest of his life.¹⁰⁶

The Civil War had affected John Wesley Powell in many ways, some not so obvious. He had become lifelong friends with powerful leaders such as Ulysses Grant and William Sherman, he had learned that he could keep his head in adverse situations, he had become a leader of men, and he learned that despite physical hardship he could continue to persevere and give his all for a cause in which he believed.¹⁰⁷ He also learned how to deal with a massive bureaucracy. All of these would help him in the years ahead. Powell accepted a position as professor of natural history at Illinois Wesleyan College where he could teach botany, zoology, anatomy, geology, and other natural sciences. Despite this perfect match Powell was looking west. Helping create a new state museum, Powell also got appropriations to take a collecting trip out west, obtaining in-kind support from a variety of institutions. With this support, he went to Washington D.C. where he got military support from Grant for his trip.¹⁰⁸ His initial goal was the Black Hills but he wisely listened to Sherman who warned him to stay away from Sioux sacred ground. Powell’s first trip included students, teachers, relatives (including Emma), and other amateur naturalists. The party

¹⁰² Worster, *A River Running West, The Life of John Wesley Powell*, 92-93. Original quotes are in a letter from Powell to Colonel Cornelius Cardle, 15 May, 1896, Shiloh National Military Park.

¹⁰³ The military surgeon who amputated his arm had no specific training and had been a druggist before the war.

¹⁰⁴ *Official Records*, Series I, Vol. 39, Part 2, 618-619. Howard called Powell “a straightforward and attentive officer.” Also see William H. Goetzmann, *Exploration and Empire, The Explorer and the Scientist in the Winning of the American West*, (New York: History Book Club, 2006), 533.

¹⁰⁵ Stanley F. Horn, *The Decisive Battle of Nashville*, (Knoxville TN: University of Tennessee Press, 1968), 171. NB: the book mis-spells Powell’s name.

¹⁰⁶ He was also named a brevet-lieutenant colonel but was never commissioned at that rank.

¹⁰⁷ Goetzmann, *Exploration and Empire*, 533.

¹⁰⁸ Darrah, *Powell of the Colorado*, 81.

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spent the summer of 1867 exploring the Colorado Rockies and the “parks” nestled between the ranges. The group climbed Pike’s Peak, Emma being one of the first women ever to make the ascent, where Powell remarked “The trouble with climbing a mountain is you can’t stay on top.”¹⁰⁹ At the end of the summer the Major and Emma spent additional months over the mountain passes exploring the headwaters of the Grand River.¹¹⁰ Returning to Illinois, Powell spent time working on a return trip for 1868, obtaining support from a variety of sources, including Congress and Grant, who was by now Secretary of War.¹¹¹ This time the party of nearly thirty people crossed the passes west of Denver and into Middle Park, where they collected numerous specimens, examined geology and climbed the peaks of the Gore Range. In August of 1868 Powell and six others made the first successful ascent of Longs Peak, then believed to be the highest mountain in the Rockies, in what is now Rocky Mountain National Park.¹¹² Over a bottle of wine that someone had managed to bring along, Powell made a speech at the top in which he predicted that their success that day was an “augury of yet greater achievements” in similar pursuits.¹¹³ Powell’s party then spent time going further west along the Grand (Colorado) River, spending the winter along the White River in far western Colorado and eastern Utah. Here Powell spent time with friendly Native Americans, learning much of their language and customs.¹¹⁴ He then scouted out the Green River before returning east in the spring.

Powell prepared for another trip that summer. This time he planned on filling the largest piece of blank map in the west, the course of the Colorado River, a place where, other than Native Americans, few men had gone before. No one had ever negotiated the river through the canyon and the geography of the river was virtually unknown. Powell stopped in Chicago long enough to order four boats built, three of them of heavy oak; the fourth was lighter, more delicate, and made of pine. Returning to Washington, Powell obtained additional support from the usual sources, including the army, courtesy of Grant.¹¹⁵ His team this time would be an odd assortment of old hands who had been on his previous trips, including his brother Walter.¹¹⁶ Added to the team was a soldier the Major had met at Fort Bridger during his last trip; this man said he would “explore the River Styx” if Powell could get him out of the army. Grant signed the order giving the man his

¹⁰⁹ C.W. Buchholtz, *Rocky Mountain National Park, A History*, (Boulder, CO: Colorado Associated University Press, 1983), 58.

¹¹⁰ The Grand has since been renamed as the Colorado.

¹¹¹ The expedition encountered Grant again at Denver and followed him to the base of the Rockies near Central City.

¹¹² Goetzmann, *Exploration and Empire*, 537.

¹¹³ Buccholtz, *Rocky Mountain National Park, A History*, 59.

¹¹⁴ Frederic J. Athearn, “Chapter III: Exploration in Northwestern Colorado,” in *An Isolated Empire: A History of Northwest Colorado* (BLM Cultural Resource Series, Colorado, No. 12), Accessed May 29, 2019, https://www.nps.gov/parkhistory/online_books/blm/cultresser/co/2/chap3.htm

¹¹⁵ Darrah, *Powell of the Colorado*, 112; and Goetzmann, *Exploration and Empire*, 536. Most of this support was in the form of rations from army posts, saving not just money but logistics as well.

¹¹⁶ Other than Powell, none had a science background, perhaps a curious omission, but the odds of success were not good.

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honorable discharge and Powell's crew was pretty much filled. The boats were tried out in Lake Michigan, and then were transported along with a heavy load of men, equipment, and supplies, by two railroads, at no charge, to Green River Station in Wyoming.¹¹⁷ Nearly two weeks of preparations followed, and on May 24, 1869, the four boats, led by the light boat *Emma Dean*, were pushed into the Green River from the riverside camp. What followed is the stuff of American legend.

No one knew what lay down the Green and Colorado Rivers. All knew that the Green joined with the Grand and became the Colorado. Some humans had visited various parts of the Colorado's course and Native Americans had inhabited parts of it at various times, but those places were few and far between. A great or "grand" unexplored canyon lay ahead and the Colorado eventually debouched from the canyon at the mouth of the Virgin River, not far from modern Las Vegas. The distance to be floated was unknown to Powell (actually about 900 miles) but he did have a good idea that the river dropped over a mile in that distance. Were there really, as some had suggested, waterfalls that would dwarf Niagara or did the river perhaps go underground at some point? Powell packed provisions that should last the party ten months but he hoped that it would not take half that long. In fact, the trip took 98 days and when the six survivors in two boats reached the Virgin River on August 30, 1869, they encountered Mormon settlers who had been watching the river for signs of wreckage, as it was apparently believed that all had been lost somewhere upstream.¹¹⁸ The team made it back to civilization and Powell became an instant hero of the nation.

Newspapers across the country shouted the successes of Powell and his party. Later that year, the Major went on a series of lecture tours. The expedition had been a success of exploration but much of the scientific material had been lost in the numerous wrecks. Powell now received Congressional authorization for a "Geographic and Topographical" survey of the Colorado River region. Preparatory for another trip down the river, Powell spent time exploring the uplands of the Colorado Plateau.¹¹⁹ In 1871-72 Powell led another trip down the Colorado, which ended at the mouth of Kanab Creek in the Grand Canyon. Aided by congressional funds and support from President Grant, he continued his work on the Colorado Plateau, establishing baselines for

¹¹⁷ Despite a lack of a paper trail, this could not have been easy to accomplish, given that the Union Pacific was trying to finish the transcontinental railroad at this exact time. It is too coincidental that Grant was now president of the United States and familiar with the presidents of the railroads.

¹¹⁸ John Wesley Powell, *The Exploration of the Colorado River and Its Canyons*, originally published in 1875 (New York: Penguin Books, 2003), 286; Wallace Stegner, *Beyond the Hundredth Meridian*, (New York: Penguin Books, 1992), 110; Worster, *A River Running West*, 196; Edward Dolnick, *Down the Great Unknown*, (New York: HarperCollins, 2001), 280; and Goetzmann, *Exploration and Empire*, 531-532. One man quit along the way and walked out. Three others quit just two days before the end of the trip at what is now called Separation Rapids and were later found murdered on the plateau above the canyon. Most researchers believe that Native Americans killed the men in a case of mistaken identity. Short-handed for those last rapids, Powell left the small boat *Emma Dean* behind.

¹¹⁹ Goetzmann, *Exploration and Empire*, 553.

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detailed topographic and geologic surveys.¹²⁰ This body of work enabled Powell to establish precedents of American geomorphology, first proposing the drainage terms of antecedent, consequent, and superimposed valleys.¹²¹ Powell expanded his surveys by including the ethnography of the Native Americans of the area and published his findings in a landmark study of their languages in 1877.¹²² He followed this up the next year with another landmark study on the “Lands of the Arid Region of the United States.”¹²³ In 1879 Congress created the United States Geological Survey; they also created the Bureau of Ethnology – a subset of the Smithsonian Institution – and named Powell as its first director – a position he held for the rest of his life. The next year saw the first of many annual reports of the Bureau.¹²⁴ In Powell’s work with Native Americans, he frequently took their side in disputes and occasionally blamed the disputes with whites on the military presence in the natives’ lands.¹²⁵ Powell became an outspoken advocate for the natives and his urgings led his friend and colleague Professor O.C. Marsh of Yale University to make a complete expose of the wretched situation of the Red Cloud Indian Agency. The ensuing investigation resulted in President Ulysses Grant meeting with Marsh three times before requesting and accepting the resignation of the Secretary of the Interior, Columbus Delano.¹²⁶

In 1881 Powell was named as the second director of the U.S. Geological Survey. During his thirteen years as director, Powell greatly expanded the Survey’s mission, funding, and results. Powell continued the Survey’s work on arid lands in the west but his prescient suggestion that future western state boundaries be organized along drainage basins went nowhere. He added Marsh to his staff as head of a new section on paleontological studies. Powell championed the use of one geodetic and mapping system, basically still in use today. As part of his work, Powell had to design standards for topographic and geologic maps and Powell “pushed through a system that has become the American standard.”¹²⁷ He advocated for, and obtained, funding for a national series of detailed topographic mapping. This was perhaps Powell’s greatest contribution to science, for the ensuing maps could be used for a multitude of purposes including determination of water balances, highway construction, land acquisition for farming, geologic interpretation, historical records, and land development. Powell himself declared that the government could not

¹²⁰ Stephen J. Pyne, *How the Canyon Became Grand*, (New York: Penguin Books, 1999), 59.

¹²¹ William D. Thornbury, *Principles of Geomorphology*, (New York, John Wiley & Sons, 1954), 9-10; and James M. Aton, *Powell: His Life and Legacy*, (Salt Lake City, Bonneville Books, 2010), 11.

¹²² Powell’s work became the standard manual for further studies on the topic. See Powell, Introduction to the Study of Indian Languages, Washington DC U.S. Government Printing Office, 1877.

¹²³ William DeBuys, *Seeing Things Whole, The Essential John Wesley Powell*, (Washington, DC: Island Press, 2001), 27.

¹²⁴ J. W. Powell, *First Annual Report of the Bureau of Ethnology*, (Washington, DC: Government Printing Office, 1881).

¹²⁵ Goetzmann, *Exploration and Empire*, 569.

¹²⁶ Report of the Special Commission, US Printing office, July 1875; Goetzmann, *Exploration and Empire*, 570-571; and Chernow, *Grant*, 831.

¹²⁷ Aton, *Powell: His Life and Legacy*, 19. Also see J. W. Powell, *Sixth Annual Report of the Director of the United States Geological Survey*, (Washington, DC: Government Printing Office, 1886).

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do anything of more value than by “causing the construction of proper topographic maps” of the country.¹²⁸ Powell knew the effort would take a long time to do properly; in fact the 1:24K series of maps of the continental United States were not finished until late in the 20th century.¹²⁹ Modern digital topographic maps are based on the original plan, conceived by Powell and Chief Cartographer Henry Gannett.

Powell became involved in a number of institutions, organizations, and clubs. He was elected president of the American Association for the Advancement of Science in 1888, a post generally reserved as the highest honor for an American scientist. He was also instrumental in establishing the Geological Society of America. On November 16, 1878, Powell called a group of science friends together to his front parlor, and they created the Cosmos Club, a “social headquarters for Washington’s intellectual elite.”¹³⁰ The Cosmos Club still exists in Washington D.C. today.¹³¹ Ten years later, the idea blossomed into a national level organization that would promote geographic knowledge. On January 13, 1888, more than thirty scientists and explorers, including Powell and Alexander Graham Bell, met at the Cosmos Club and established the National Geographic Society, which also exists to this day.¹³²

After a series of devastating droughts in the west, Congress began to listen to Powell’s exhortations that the west was too arid for small farms to subsist. Powell felt that the entire homesteading program was short-changing settlers, restricting them to an unsustainable 160 acres in an arid regime, stating “it would be almost a criminal act” to allow “hundreds of thousands of people to establish homes where they cannot maintain themselves.”¹³³ Further settlement was put on hold for a period while the Survey tried to research the problem. This effort failed as Congress lost patience and insisted that the settlement ban be lifted.¹³⁴ Powell was blamed and eventually Congress cut the USGS budget; Powell finally resigned in 1894 citing the unsolved issue of his war wound as the prime reason but general weariness with politics was probably the greater cause.¹³⁵

Powell’s health declined rapidly but his legacy remained intact. Congress began increasing the size of homestead tracts and in June 1902 passed the National Reclamation Act, acknowledging the truth that successful use of much of the west depended on irrigation. Powell passed away three

¹²⁸ Worster, *A River Running West*, 418.

¹²⁹ USGS, “National Geospatial Program,” U.S. Department of the Interior. Accessed May 29, 2019: <https://nationalmap.gov/ustopo/history.html>. See also, Richard Evans and Helen Frye, *History of the Topographic Branch*, Circular 1341, U.S. Geologic Survey, Washington DC, 2009.

¹³⁰ Stegner, *Beyond the Hundredth Meridian*, 242.

¹³¹ Cosmos Club Washington D.C., “Welcome,” Accessed May 29, 2019: <https://www.cosmosclub.org>

¹³² Worster, *A River Running West*, 440.

¹³³ Stegner, *Beyond the Hundredth Meridian*, 333.

¹³⁴ In 1904, Congress passed the Kinkaid Amendment which allowed for homesteads of up to 640 acres in certain areas of the west.

¹³⁵ Worster, *A River Running West*, 534.

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months later, in September of 1902; he is buried in Arlington National Cemetery. Emma lived until 1924 and is buried at Powell's side.

Powell's legacy is great; he was: a Civil War hero, leader of the first exploration of the Grand Canyon of the Colorado River, first director of the American Bureau of Ethnology, second director of the United States Geological Survey, one of the founders of the Cosmos Club of Washington DC, one of the founders of the National Geographic Society, "foremost among men of science" and author of hundreds of articles and books (an annotated bibliography is more than 200 pages long).¹³⁶ Powell "laid the foundation for the American school of geomorphology."¹³⁷ Today, in an era of climate change we remember that Powell's proposals for protecting the arid regions of the west are "recognized as masterpieces of government."¹³⁸ As a recent biography of Powell has stated: "If Powell was here today, he would be at the forefront of climate change, working to inform the public about the relationship of a warming climate and flooding, drought, rising sea levels, and bad storms."¹³⁹

The following are named for John Wesley Powell: Mount Powell, Eagle and Summit Counties, CO; Powell Peak, Rocky Mountain National Park, Grand County CO; Lake Powell, Glen Canyon National Recreation Area, Utah and Arizona; valley of Powell Park, Rio Blanco County CO; Powell Point, Garfield County UT; Powell Point and Powell Plateau, Grand Canyon National Park, AZ; City of Powell WY¹⁴⁰; Powell Middle School, Littleton CO; Powellite, a rare mineral;¹⁴¹ the Powell Building, headquarters of the U.S. Geological Survey, Reston VA; the John Wesley Powell Award, given by the U.S. Geological Survey; The Powell Museum, Page AZ; and the John Wesley Powell River Museum, Green River UT.

Memorials include an outdoor statue of John Wesley Powell, Sweetwater County Museum, Green River WY; the Powell Point Memorial, Grand Canyon National Park AZ; and a monument at Expedition Island in Green River WY. Position markers for Powell's Battery are located in Shiloh (TN) and Vicksburg (MS) National Military Parks and at Corinth MS.

¹³⁶ Stegner, *Beyond the Hundredth Meridian*, 347; Marcia Thomas, *John Wesley Powell – An Annotated Bibliography*, (Westport, CT: Praeger Publishers, 2004), xi-xii; Arlington National Cemetery, "John Wesley Powell," accessed May 29, 2019: <http://www.arlingtoncemetery.net/jwpowell.htm>

¹³⁷ Thornbury, *Principles of Geomorphology*, 9.

¹³⁸ Darrah, *Powell of the Colorado*, 399.

¹³⁹ Ross, *The Promise of the Grand Canyon: John Wesley Powell's Perilous Journey and His Vision for the American West*, 342.

¹⁴⁰ The area of Powell became productive after Powell's concepts of shared water irrigation were adapted at the site, which was originally unproductive arid land. The small farms of the valley share in all water rights. See City of Powell, "About Powell," Accessed May 29, 2019: <http://cityofpowell.com/assets/pages/community/aboutpowell.aspx>

¹⁴¹ Charles A. Sorrell, *Minerals of the World*, (New York: Golden Press, 1973), 256-257; Wikipedia. "Powellite." Last modified September 29, 2017. Accessed December 21, 2018: <https://en.wikipedia.org/wiki/Powellite>

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Two sites associated with John Wesley Powell are listed on the National Register of Historic Places and are classified as National Historic Landmarks:

-Desolation Canyon, Carbon County UT (NR and NHL 11/24/1968). Powell named this deep canyon which he was likely the first to navigate. The boundaries of Desolation Canyon are not precisely defined.

-Expedition Island, Sweetwater County WY (NR and NHL 11/24/1968). This island in the city of Green River is where Powell began his 1871 trip. It is not known if this locale was also used in 1869.¹⁴² The feature is still an island and today a city park and recreation area called Island Park.

In regards to other resources associated with Powell, he lived at 910 M Street NW in Washington D.C.¹⁴³ That property has since been demolished and replaced with an apartment building.

According to the Smithsonian Institution Archives Powell had an office in the Adams Building on F Street in Washington D.C.¹⁴⁴ That building still stands, but currently houses the International Spy Museum and has likely been greatly reconfigured. A summer bungalow in Haven, Brooklin, Maine along Steamboat Road remains; it was built by Powell and/or his family in 1899. He died here on September 23, 1902, having arrived in May.¹⁴⁵

The Society for History in the Federal Government gives out an annual prize for achievement in historic preservation. Named after the “federal administrator whose work demonstrated early recognition of the importance of historic preservation and historical display” it is called the John Wesley Powell Prize.¹⁴⁶

John Wesley Powell revolutionized American science. Before Powell, most scientific explorations were either authorized by the military (Lewis and Clark or John Fremont) or were supported by private academia. From 1870 on, Powell brought forth the concept of non-military government support for science. This was, at the time, a new concept, and was not without controversy. By the time Powell retired, government-supported science had become a solid concept. One Powell researcher noted that Powell is “revered in the West, both as an explorer and as a prophetic voice urging the cautious development of the vast region’s arid lands.” In the East, Powell’s

¹⁴² “No conclusive information has been found to indicate the precise campsite or embarkation point of the first expedition” Lissandrello, Stephen. Preparer. National Register Of Historic Places Inventory – Nomination Form, Expedition Island, Green River, WY, 1976. 8.

¹⁴³ See the 1887 edition of Boyd’s Directory of the District of Columbia. Also see discussion here: H-Net Humanities and Social Sciences Online, “Discussion Networks,” January 2011, Accessed May 29, 2019, <https://lists.h-net.org/cgi-bin/logbrowse.pl?trx=vx&list=h-dc&month=1101&week=c&msg=RUaV7zQGOaCbfsQw9PKeg&user=&pw=>

¹⁴⁴ Smithsonian Institution Archives, “Major John Wesley Powell,” Accessed May 29, 2019, https://siarchives.si.edu/collections/siris_sic_8315; Library of Congress, “Adams Building, 816 F Street, Northwest, Washington, District of Columbia, DC,” Accessed May 29, 2019, <https://www.loc.gov/item/dc0001/>

¹⁴⁵ Worster, *A River Running West: The Life of John Wesley Powell*, 562 & 568. There does not appear to be a specific street address for this property (located at these coordinates: 44°15'51.1"N 68°35'14.5"W).

¹⁴⁶ Accessed through <http://shfg.wildapricot.org/page-18274>

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“considerable reputation rests with the establishment of the modern federal science bureaucracy.”¹⁴⁷ “John Wesley Powell was an American original... the first of a new breed of public servant: part scientist, part social reformer, part institution builder.”¹⁴⁸ Powell “promulgated the practical benefits of government science.”¹⁴⁹ As Powell gathered more functions within the USGS umbrella there continued to be “the old argument of civilian versus military control of science.” Powell’s great legacy is that the civilians won.¹⁵⁰ Powell’s work turned the Geological Survey into what was at the time “the largest scientific organization in the world.”¹⁵¹ Nonetheless, Powell was always distrustful of concentrating too much power in government, but “the alternative was worse.”¹⁵² In the end, Powell’s ideas and beliefs about the American West and its water issues were vindicated, and in the year of his passing, the Newlands Reclamation Act began the long process of federally-supported “reclamation” of the West.

The relationship between John Wesley Powell and Ulysses Grant was a close and beneficial one. A commanding general rarely makes personal friendship with 2nd lieutenants, but in this case it did happen. At the forts of Cape Girardeau, Grant and Powell met, and “Powell entered into one of the most important relationships of his life.”¹⁵³ It was Grant who promoted Powell and put him on his own staff, Grant who requested Powell to assemble an artillery company, Grant who allowed Powell to take leave to get married, Grant who gave Emma Dean a travel pass after Powell’s wounding, and Grant who allowed the captain to return to duty. Grant enabled Powell’s first exploration trips to Colorado, and it was again Grant who supported Powell in his later Colorado River expeditions.¹⁵⁴

John Wesley Powell’s formative time in the Civil War changed him and gave him the tools, experiences, and contacts necessary for his future endeavors. He had learned “how to solve problems on the fly and lead small units through unimaginably harrowing conditions.”¹⁵⁵ Despite his many other accomplishments Powell is best known for his famed trip down the Green and Colorado Rivers, a journey that lasted three months. By comparison, Powell spent eight months in Cape Girardeau, and during most of that time he was in charge of planning, constructing or manning the forts. One of those forts still exists, and it is a fitting monument to his Civil War

¹⁴⁷ Bill Steinbacher-Kemp, “John Wesley Powell”, *Illinois Heritage*, Vol. 4, No.1, 2001.

¹⁴⁸ DeBuys, *Seeing Things Whole*, 1.

¹⁴⁹ Thomas, *John Wesley Powell – An Annotated Bibliography*, xii.

¹⁵⁰ Mary C. Rabbitt, *The United States Geological Survey 1879-1989*. US Geological Survey Circular 1050, Reston, VA 1989, 13.

¹⁵¹ Dave Watt, “John Wesley Powell,” Essay, accessed May 29, 2019, http://oldmain.illinoisstate.edu/stories_spaces/floors.shtml

¹⁵² Stegner, *Beyond the Hundredth Meridian*, 363.

¹⁵³ Ross. *The Promise of the Grand Canyon*, 50; and deBuys, *Seeing Things Whole*, 8.

¹⁵⁴ Stegner, *Beyond the Hundredth Meridian*, 19; and Darrah, et al, *The Exploration of the Colorado River in 1869 and 1871-1872*, 10.

¹⁵⁵ Ross, *The Promise of the Grand Canyon*, 68.

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experience. He learned mapping skills and “became something of an expert on fortifications.”¹⁵⁶ His time in Cape Girardeau was not inconsequential and this turning point in his life is noted in numerous references.¹⁵⁷ His most recent biographer John Ross, in a recent (September, 2018) email to the principal author, wrote “I position Powell’s Civil War experiences as critical to his future successes. Cape Girardeau and his relationship with Grant figure prominently...” Powell’s experience mapping the city helped him understand landscapes and how they are created, an important skill for his geographic and geologic work in the west. He “had long been a student of landscape... deciphering the topographic curvatures and vantages at Cape Girardeau.”¹⁵⁸

Because John Wesley Powell decided to learn military engineering and had a science background, he was put in charge of mapping the terrain of Cape Girardeau, designing and building forts, including Fort D. That duty led him to an acquaintance with Ulysses Grant. Grant changed Powell’s life, taking him out of the infantry and putting him on his own staff. Years later, Grant would help his friend Powell, enabling Powell’s expeditions to the west which led to the rest of his productive career. Without Grant’s friendship and patronage, Powell would have lacked the support needed for his later expeditions, which were clearly significant to national history. Thus, Powell’s time spent in Cape Girardeau and at the forts there – including Fort D – was consequential to his future endeavors. Fort D is therefore also significant under Criterion B at the state level for its consequential association with John Wesley Powell.

Criterion C Significance for Engineering and Architecture

Earthworks (engineering significance, state level, 1961):

Fort D is a redan, a standard type of military earthworks fortification; the name is of French origin and reflects that country’s history of planning military engineering. The exact type and relative dimensions were textbook standard and appeared in a number of period treatises. From that respect, Fort D is not an unusual type but it is an excellent example, the best surviving north of Vicksburg, Mississippi.¹⁵⁹ As discussed in Section 7, a redan is a continuous earthwork that resembles two sides of a triangle with wings (see Figures 7 and 10). The third side of the triangle was not made of earth, but rather was a simple wooden palisade wall or fence, of indeterminate height, that served to define the rear of the redan, an area called a gorge.¹⁶⁰ Redans were designed

¹⁵⁶ Stegner. *Beyond the Hundredth Meridian*, 19.

¹⁵⁷ Geo. P. Merrill, “The Obituary of Major John Wesley Powell”, *The American Geologist*, Volume XXXI, No. 6, Washington DC. 1903. Reprinted by the John Wesley Powell Museum, Page AZ. Undated.

¹⁵⁸ Ross, *The Promise of the Grand Canyon*, 178.

¹⁵⁹ Various other earthworks survive, notably at Columbus-Belmont State Park in Kentucky, and Fort Pillow State Historic Site in Tennessee, but these were long, irregular earthworks built to match the terrain, not in a standard style.

¹⁶⁰ Ron Field, *American Civil War Fortifications (2) Land and field fortifications*, (Oxford, UK: Osprey Publishing, 2005), 19.

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to be used in places where the perceived threat would not be manifested to the rear.¹⁶¹ Often redans were used in connection with outlying linear earthworks but they could also be self-standing, as in this case. A redan “is a work consisting of two faces; the gorge, or entrance in the rear, being open. This work is used to cover a point in its rear; such as a bridge, defile, ford, &c. Having no flank defences [sic] its salient is unprotected, and to obtain a fire in the direction of its capital a short face, denominate a pan coupe, is sometimes made in its salient angle.”¹⁶² In simpler terms, the bastions at the corners jut out, providing a broader field of fire. While this was standard sometimes redan variations existed: “two faces, each thirty to sixty yards long; ... Flanks perpendicular to the faces are sometimes added.”¹⁶³ Of special note to the situation at Cape Girardeau is that redans were “generally constructed on the side of a river running through a garrison town.”¹⁶⁴ Redans were particularly favored when “it is employed as an advanced work to defend hollow ground which cannot be seen from the principal work.”¹⁶⁵ This explains the use of the redan at Fort D; the ground behind it slopes off dramatically and cannot be seen from any attacker’s point of view. Lastly, to make the rear more secure a designer could place “along the gorge... palisades, if time and materials abound.”¹⁶⁶ This was done at Fort D.

The redan at Fort D no longer has the fencing that would have defined the rear of the redan, but it maintains good integrity otherwise, and the shape of a typical redan is still clearly visible on aerial maps today (see Figure 3). See Figure 11 for an early sketch map of Fort D, and Figure 10, which shows the plans for the no longer extant redans in St. Louis. These figures help indicate the standard redan design that Fort D retains. Furthermore, Figure 15 shows the outline of Fort D’s redan from the military map of Cape Girardeau (Figure 7) over a recent aerial map of Fort D. The shape and layout of Fort D is still very clearly recognizable as a Civil War era redan.

Fort D’s redan was built of earth, reinforced by wood, not only because the materials were inexpensive, but because the result was protective and durable. In the years after the War of 1812, U.S. coastal fortifications were durable, primarily made of stone and brick, were large and imposing, and very slow and expensive to build. Fort Pulaski, Georgia, and Fort Sumter, South Carolina, are good examples. But during the Civil War both were quickly reduced by large cannon fire and made to surrender. Fort McAllister, Georgia, on the other hand, was made of sand and wood, and resisted bombardment or capture for most of the war. Similarly Fort Fisher, North Carolina, could not be reduced until attacked from the land. Earthen works simply absorb the

¹⁶¹ David C. Chuber, *Field Fortifications during the American Civil War: A Tactical Problem*, Masters Thesis, US Army Command and General Staff College, Fort Leavenworth, KS, 1996, 110.

¹⁶² D. H. Mahan, *A Treatise on Field Fortification*, (New York: John Wiley, 1852), 12.

¹⁶³ William P. Craighill, *Army Officer’s Pocket Companion*, (New York: D. Van Nostrand, 1862, 220. (Reprinted by Stackpole Books, Mechanicsburg, PA, 2002.)

¹⁶⁴ Louis Le Grand, *The Military Handbook*, (New York: Beadle and Company, 1861), 132-133. (Reprinted sans publisher date or other information.)

¹⁶⁵ Egbert L. Viele, *Hand-Book for Active Service*, (New York: D. Van Nostrand, 1861), 103-104. (Reprinted by Johnson Graphics, Decatur MI. No date.)

¹⁶⁶ *Ibid.*, 104

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shock and explosions of solid shot and shell while rigid masonry constructs are easily torn apart by the massive cannon that had been developed. The repair of earthen works usually involves only shovels and manpower and could be quickly accomplished. The use of redans was widespread, even Fort Stevens in Oregon (built in 1863 at the mouth of the Columbia River) is styled after a redan (see Figures 31 and 32 for aeriels and images of other types of extant redans in the US).¹⁶⁷

Of the ten forts built to protect the city of St. Louis, at least three were redans, similar in construction to Fort D.¹⁶⁸ The five city forts around Springfield were mostly star or rectangular forts; no redans were built but otherwise these were standard designs. Fort 1, for example, closely resembled Fort C at Cape Girardeau.¹⁶⁹ Two forts protected Rolla, Fort Wyman was a rectangular redoubt; like Fort D, the interior included only a “log powder magazine, a well and the artillery emplacements.”¹⁷⁰ Jefferson City was protected by a series of earthworks but little detail of them is available; perhaps they were redans. None of the other city forts in the state survive, and if the redan was typical of them, Fort D is the only example left. Other Civil War earthworks, not built to protect centers of population, survive in Missouri, and three are on the National Register. None of these are redans. Fort Davidson (NR 2/26/1970) at Pilot Knob MO, built in 1863, is a small octagonal earthwork of standard design. However, the engineering was not particularly exact; while it has eight sides, several of the sides are of different lengths. Fort Benton or Camp Patterson (NR 10/21/2002) near Patterson MO is a very small square redoubt which acted as a lookout post only; it was too small and inconveniently located to have held large cannons. A small lunette near Ellington MO is known today (but not historically) as Fort Barnesville (NR 7/1/1998); it represents a relatively hasty entrenchment type of work. Missouri Civil War earthworks not on the National Register include shallow trenches at Van Buren (deemed eligible by the National Park Service), and massive long walls at Otterville, built to protect a railroad bridge (see Figure 24). Relatively close to Cape Girardeau were extensive works at, and near, Cairo IL; some of the walls of its largest earthwork, Fort Defiance, still survive as part of the levee system but a sewage treatment plant now occupies the site.¹⁷¹

Exact plans of Fort D do not appear to exist except as shown on the Military Map of Cape Girardeau. Despite this, the excellent plan of Fort Four in St. Louis acts as a guide (see Figure 10). However, the plans for construction of that fort may have been different from what was actually built. At Fort Four, a large blockhouse plus a powder magazine were both designed, but is not known if the elaborate blockhouse was actually built. At Fort D, the sketch map by Benjamin Radford shows a gate house of small size, but no large blockhouse.

¹⁶⁷ Lindstrom, D. “The Civil War Earthworks”, Friends of Old Fort Stevens, Hammond, OR, 1990.

¹⁶⁸ Plan of Fort Four, St. Louis MO, National Archives and Records Administration, Washington DC.

¹⁶⁹ The Battle of Springfield, “Fort Number 1 Schematic,” accessed May 29, 2019, <http://www.springfield1863.org/#/locations/01>

¹⁷⁰ See Fort Wyman, Historical Marker, Mo. Dept. of Natural Resources, Rolla MO.

¹⁷¹ A Fort Defiance park at Cairo is nearly a mile south of the real site and is not to be confused with the original earthworks.

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In sum, no other redans are extant in Missouri. Fort D's redan is significant at the state level under Criterion C for its significance in engineering as an excellent and rare example of an intact Civil War era redan. Though the WPA did work on the site in the 1930s (as discussed further below), they did not reconstruct or rebuild the redan, but rather patched it as needed for preservation purposes.

Blockhouse and Gate (architectural significance, local level, 1937):

Like most Civil War earthworks, the Cape Girardeau forts were abandoned to their original landowners and three gradually disappeared. Fort A, at the east end of Bellevue Street, became upscale housing, including the summer home of Henry Flad. Fort B was developed as part of what would eventually become Southeast Missouri State University. Fort C was turned into a brickyard, and reportedly the earthworks became part of manufactured bricks.¹⁷² The remains of Fort C do show up on a Birds' Eye View of Cape Girardeau, drawn in 1888. Only Fort D managed to survive. The fort was on land belonging to Mary Giboney who basically had been given the property in 1860 for \$1.00 plus "love and affection."¹⁷³ She married local railroad entrepreneur Louis Houck in 1873.¹⁷⁴ The Houck family eventually developed the lots around Fort D during the period of 1911 – 1922.¹⁷⁵ New streets were laid out, some of which cut into the edge of the fort and a new school was built across the street. But the fort itself was left intact. New sewer taxes were levied on the property and in exchange for dismissing the charges, Giboney Houck, son of Louis and Mary, offered to give the property to the city. Yet the proposed exchange was never acted on by the city.

Local citizenry, aided by the Southeast Missourian newspaper, continued to press for preservation of the site. Several local prominent women of the Civic Improvement Association tried to purchase the fort, ostensibly as a playground, but the price of \$5000 was too much for the association. With contracts laid for additional streets, more people clamored for action saying "it will be a great mistake to have this historical and beautiful spot wiped out." The newspaper went on to note that "Fort D stands today as it was left by the soldiers during the Civil War."¹⁷⁶ Within another day or two the newspaper opined "The final call has now been made for the preservation of Fort D" noting that "unless this property is bought now it will be cut up into residence lots and forever wiped off the map as the one remaining historic spot in the city."¹⁷⁷ The

¹⁷² Felix Eugene Snider and Earl Augustus Collins, *Cape Girardeau: Biography of a City*, (Cape Girardeau, MO: Ramfre Press, 1956), 49-50.

¹⁷³ Larry Powers, *Fort D: A Survivor From Times Past*, Masters Thesis, 1992, 21; Abstract of Title for Fort D, 1820 – 1936, City Clerk's Office Cape Girardeau, 31.

¹⁷⁴ Joel P. Rhodes, *A Missouri Railroad Pioneer, The Life of Louis Houck*, (Columbia, MO: University of Missouri Press, 2008), 54.

¹⁷⁵ Powers, *Fort D: A Survivor From Times Past*, 21.

¹⁷⁶ "Picturesque Fort D to be Divided for Building Lots Unless City Acts at Once", *Southeast Missourian*, (Cape Girardeau, MO), September 24, 1924.

¹⁷⁷ "Save Fort D", *Southeast Missourian*, September 25, 1924.

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newspaper repeated their opinion the next day calling out city officials “who must now decide the fate of Fort D? Vision is what is needed most.”¹⁷⁸ The streets were built but Fort D was not subdivided.

In May of 1935 the Louis K. Juden Post of the American Legion voted to buy the property in order to preserve it for the city. Mary Houck sold it to them for \$1000 and the post invested another \$500 in materials for some purpose, perhaps signage. The post drew up plans for development including restoration of the field works and the rebuilding of a replica block house to serve as a military museum and American Legion meeting house. The Post sought the help of the Works Progress Administration which had previously toured the fort, and the WPA agreed to help.¹⁷⁹ Work began within months and included a replica of a powder house (see Figures 18-20 for views of this work). Despite later claims to the contrary, the new work did not resemble a Civil War earthen and wood bunker. Limestone blocks for the building were donated by Giboney Houck, from a dismantled Houck railroad depot at Pochontas MO. The work was completed in July of 1937.

This building, the current blockhouse, was erected, theoretically “on the site of the ammunition house” using “original plans” to guide the construction.¹⁸⁰ This assertion has been repeated and perhaps magnified to “original plans provided by the War Department.”¹⁸¹ Modern researchers have been unable to find these designs in the National Archives. What does exist, however, are original plans for some of the St. Louis forts, including Forts 3 and 4 (see Figure 10). These are both plans for redans, similar to Fort D. However, these plans differ from Fort D’s construction in several details, including the use of dirt walls all around, two gates to the rear, and having only two (not three) barbette emplacements. The biggest difference is that the plans show a massive blockhouse at the center of the rear wall; the two entrances would have been on either side. Fort D had only one entrance with, apparently, a small gate house in the middle of the palisade wall. It is surmised that the builders of the 1937 blockhouse at Fort D used these plans or something similar to “recreate” that which did not exist at Fort D and may not have existed in St. Louis either. This does not at all detract from the architectural qualities of the blockhouse that was built, which is significant in its own right for its association with WPA architecture and the architectural significance of WPA work. The Works Progress Administration, one of several “New Deal” agencies, was created in 1935 for the purpose of employing as many otherwise-unemployable people as possible. In its 8-year history it built or helped build thousands of structures.

¹⁷⁸ “Vision is Needed”, *Southeast Missourian*, September 26, 1924.

¹⁷⁹ “Legion Votes to Buy Fort D”, *Southeast Missourian*, May 7, 1936. Interestingly the WPA had already worked at the site as part of a malarial control program. This probably involved the remains of the original powder house which would have sunk in and collected water.

¹⁸⁰ Hill, *Biography of Historic Cape Girardeau County*, Jess E. Thilenius, comp., 53.

¹⁸¹ Powers, *Fort D: A Survivor From Times Past*, 28.

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Operating off the footprint of the St. Louis forts' plans, the blockhouse was built. The front part is rectangular, 40 feet wide by 24 feet deep; the rear of the building is shorter element, 30 feet wide and 15 feet deep. The walls are 12 feet high in the front and 10 high in the rear. The tops of the walls were crenellated to resemble, perhaps, a castle.¹⁸² While in no way being an authentic representation of an American Civil War fort, they are architecturally noteworthy. To build the blockhouse, the WPA architect/builders probably utilized their style books which contained such details.¹⁸³ A gate or entrance structure was constructed at the southwest gun ramp. It is of similar style (and is a contributing structure).

WPA Rustic is a style used by the National Park Service in reference to work done in parks by the WPA. It describes numerous buildings (and other structures built by the WPA during the 1930's) having a "rustic" nature. More specifically, "rustic" architecture, as it was applied to construction within parks, was defined as an architectural style that "through the use of native materials in proper scale, and through the avoidance of rigid, straight lines, and over-sophistication, gives the feeling of having been executed by pioneer craftsmen with limited hand tools. It thus achieves sympathy with natural surroundings and with the past."¹⁸⁴ While the ultimate execution of WPA "rustic" architecture may vary depending on the architect, construction crew, or needs of each park, these resources are frequently of relatively simple local stone construction.¹⁸⁵ Rustic architecture might be described as an American variant growing out of the Romantic Movement.¹⁸⁶ While the WPA built many structures, a number of them are in this wide-spanning style. Defining elements not only include the rustic nature, but that the WPA intent was pragmatic, trying to solve a problem (creation of a facility) while simultaneously using available materials and as much hand labor as possible. The style is mostly defined by the works of Albert Good and Herbert Maier who assembled books and guides to designing and building such structures.¹⁸⁷

Fort D's blockhouse and gateway are both representative of this time period and style of construction. Made of locally available limestone (reused from a previous building) and of relatively simple stone construction, these resources were constructed as part of a project not only to help preserve and revitalize the fort (as work was also done to preserve the redan at this time) but also to provide some park facilities. While there were a few other New Deal associated

¹⁸² Cyril M. Harris, ed., *Illustrated Dictionary of Historic Architecture* (New York: Dover Publications, Inc., 1977), 55 & 146. Crenellations originally had a defensive purpose, allowing archers to stand behind the high part and fire an arrow through the lower gap.

¹⁸³ History Colorado, "WPA Rustic," accessed May 29, 2019, <https://www.historycolorado.org/wpa-rustic>. The books contained "examples of features built... with the explicit intent these designs not be copies but instead adapted to the local topography, conditions, and cultural influences."

¹⁸⁴ Albert Good quoted in Linda Flint McClelland, *Building the National Parks: Historic Landscape Design and Construction* (Baltimore, MD: The Johns Hopkins University Press, 1998), 434.

¹⁸⁵ See McClelland's book for a thorough examination of this.

¹⁸⁶ Kathryn S. Love, et al., *National Register of Historic Places Registration Form*, Alton Club, Eminence, MO, 2004.

¹⁸⁷ History Colorado, "WPA Rustic," accessed May 29, 2019, <https://www.historycolorado.org/wpa-rustic>

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projects in Cape Girardeau, Fort D is the only local construction of its type. The AC Brase Arena at 410 Kiwanis Drive was constructed from 1937 to 1939, likely as part of a New Deal project, but it is a large scale building in the Art Deco style.¹⁸⁸ The only other known New Deal related project in Cape Girardeau, constructed in 1937 by the Federal Emergency Administration of Public Works, is the Lorimier School at 401 Independence Street.¹⁸⁹ This is a large, multi-story, brick building in the Tudor Revival style.¹⁹⁰

In Missouri, most of the rustic construction was done by the Civilian Conservation Corps (CCC) on U.S. Forest Service lands (e.g. Clearwater Beach Bathhouse, Noblett Lake – HABS MO-18754), or Missouri State Parks (e.g. Washington State Park Historic District, NR 3/4/1985). However, other works at Sam A. Baker State Park (Historic District, NR 2/27/1985), the hotel/dining lodge at Roaring River State Park (NR 3/4/1985), Rosalie Tilles Park in Ladue (NR 4/19/18), and the former Gipsy School in Gipsy were built by the WPA.¹⁹¹

Rustic architecture became common in national forests, national parks, state parks, and similar conservation areas. Somewhat less common was usage in towns and cities. Nonetheless the style appears in numerous city parks and municipal buildings. Like the Fort D blockhouse, salvaged stones were used at places such as the WPA-built Milaca, Minnesota, town hall (NR 9/11/1985) in order to keep costs down and preserve the rustic look.¹⁹² The WPA caretaker's house at Willow Creek Park in Lamar, Colorado, is also similar in style and construction (NR 8/7/2007). The Two Buttes, Colorado, Gymnasium (NR 12/20/2009) has an interesting double façade with slight crenellations at the corners and a raised center piece. Most of these buildings are in smaller towns, where growth and development has not threatened their continued existence. On the other hand, existent rustic architecture of the 1930's appears to be uncommon in Missouri cities and many have disappeared or been modified with time. In southeastern Missouri, examples of WPA Rustic can be found at school structures near the towns of Gypsy and Lowndes, a school at Wilderness, a National Guard armory in Doniphan and a few other sites, but there are no other WPA Rustic structures in Cape Girardeau. The Governor's Mansion in Jefferson City has a

¹⁸⁸ "AC Brace Arena – Cape Girardeau MO." The Living New Deal. Department of Geography, University of California. Accessed 10/30/2018: <https://livingnewdeal.org/projects/ac-brace-arena-cape-girardeau-mo/>. Note the correct spelling is Brase, not Brace.

¹⁸⁹ "Former Lorimier School (Current City Hall) – Cape Girardeau MO." The Living New Deal. Department of Geography, University of California. Accessed 10/30/2018: <https://livingnewdeal.org/projects/former-lorimier-school-city-hall-cape-girardeau-mo/>

¹⁹⁰ The school is contributing to the Courthouse-Seminary Neighborhood Historic District. Julie Ann LaMouria. Courthouse-Seminary Neighborhood Historic District. National Register of Historic Places Registration Form. Listed 9/09/10: <https://dnr.mo.gov/shpo/nps-nr/10000723.pdf>

¹⁹¹ James Denny, The New Deal, the CCC, and Missouri State Parks, *OzarksWatch*, Vol. VII, No. 3, Spring 1994. "Gipsy School (Former) – Gipsy MO," The Living New Deal. Department of Geography, University of California. Accessed 10/30/2018: <https://livingnewdeal.org/projects/gipsy-school-former-gipsy-mo/>

¹⁹² The Milaca town hall has been preserved as a museum. Despite the use of granite stones, its façade is similar to the Fort D blockhouse and was also built in 1936.

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garden area (Carnahan Memorial) with rock walls and other structures, a good example of WPA Rustic.¹⁹³

Locally the blockhouse and gateway at Fort D are excellent examples of WPA era rustic park architecture, and they are the only resources of their kind in Cape Girardeau.

Fort D After 1937

After the WPA completed the work Fort D was managed by the American Legion. As touched on above, this included a museum. The museum was never a great success and after a series of thefts, it was closed by 1945; the American Legion then ceased using the building. In 1945 the site was deeded to the Girl Scouts who used it for a few years before finding it unsuitable for their purposes. The fort was then deeded over to the city where it remains today.¹⁹⁴

During the years that the fort and its blockhouse have been in city ownership there have been many uses. Civil Defense authorities used it for a time in the 1950's, the museum was converted into a private residence, and it was the site of the Senior Citizen's Club from 1967 until the mid-1970's.¹⁹⁵ The Junior Optimists club used the building for two years in the 1980's but continuing problems with a leaky roof caused them to leave as well.¹⁹⁶ Since that time the building was abandoned and the roof continued to deteriorate. As a previous biographer of the fort wrote, it now faced "a new battle, neglect and vandalism."¹⁹⁷ Beginning in 2005 a group of local Civil War historians and reenactors worked with the city to clean and maintain the fort grounds, add interpretative displays, and do living history presentations at the site. Today regularly scheduled public events interpret the history and associations of the site, and the grounds are open to visitation throughout the year (see Figures 25-28).

CONCLUSION

Fort D is an existent earthwork of the American Civil War, built in 1861. Unlike other forts in Cape Girardeau, it was saved from development by civic action. It is the sole remnant of numerous forts and earthworks built to protect Missouri urban areas during the conflict. It

¹⁹³ "Projects in Missouri," The Living New Deal. Department of Geography, University of California. Accessed 10/30/2018, <https://livingnewdeal.org/us/mo/>

¹⁹⁴ Robert R. Hill, "Fort D Old Stronghold", *Biography of Historic Cape Girardeau County*, Jess E. Thilenius, comp. (A project of the Bicentennial Commission of Cape Girardeau, 1976), 53. In size and shape the new building more closely emulates the wooden gate house that Benjamin Radford had drawn.

¹⁹⁵ Ibid, 53.

¹⁹⁶ Powers, *Fort D: A Survivor From Times Past*, 31.

¹⁹⁷ Ibid., 33.

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represents a style of Mississippi River earthwork that is not in existence elsewhere north of Vicksburg MS.

During the Civil War, Fort D (along with the other forts of Cape Girardeau) was instrumental in protecting the city from land attack. The fort also served as a training ground for itinerant troops on their way elsewhere.

The fort achieves greatest importance as a site where John Wesley Powell embarked on his government science and administrative career, supervising the building of the fortifications. Here he first learned techniques of surveying and mapping that would help him in his future endeavors. It was here that he first met Ulysses S. Grant and formed a friendship that resulted in Powell's groundbreaking exploration of the Colorado River. Powell subsequently became an important person in the history of the western United States; as director of the United States Geological Survey he initiated the great watershed surveys of the arid regions of the West, and he initiated the topographic mapping program which resulted in a national map series – finished 100 years later. Powell's time in Cape Girardeau – and at the forts there, including Fort D – laid the foundation for his highly influential career, and according to the National Register Bulletin *How to Apply the National Register Criteria for Evaluation*, in relation to eligibility under Criterion B, "A property can also be eligible if it has brief but consequential associations with an important individual."¹⁹⁸ Powell's work at Fort D and his meeting Grant here qualify as consequential associations that had a substantial impact on his future career. Thus Fort D is considered nationally significant for its association with Powell.

Fort D was important to the lives of local men as well, who organized themselves into militias, joined Union regiments, and formed bonds that led Cape Girardeau into commercial success over the subsequent years of growth.

Lastly, improvements to the site under the aegis of the Works Progress Administration created a "monumental" blockhouse building and gateway to the site, both examples of WPA Rustic style of architecture. It is the only WPA structural site in the local area and has been a city park for many years.

¹⁹⁸ National Register Bulletin *How to Apply the National Register Criteria for Evaluation*, last revised 1997, 15.

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Name of multiple listing (if applicable)

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N/A

Name of multiple listing (if applicable)

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Verbal Boundary Description (Describe the boundaries of the property.)

Fort D Park is bounded on the west side by West Fort Street, on the south side by Fort Street, to the north by Elm Street, and on the east side by Giboney Street. The side boundaries of the park are about 400ft each. One part of the original park was separated at an unknown time in the past and now contains an electrical substation. Under separate ownership, it is not included. See Figure 6.

Boundary Justification (Explain why the boundaries were selected.)

The platted boundaries of the park were used.

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Figure 1. Locator map.

Latitude/longitude coordinates: 37.290860, -89.526430

SOURCE: Bing Maps, 2018: <https://www.bing.com/maps>

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N/A

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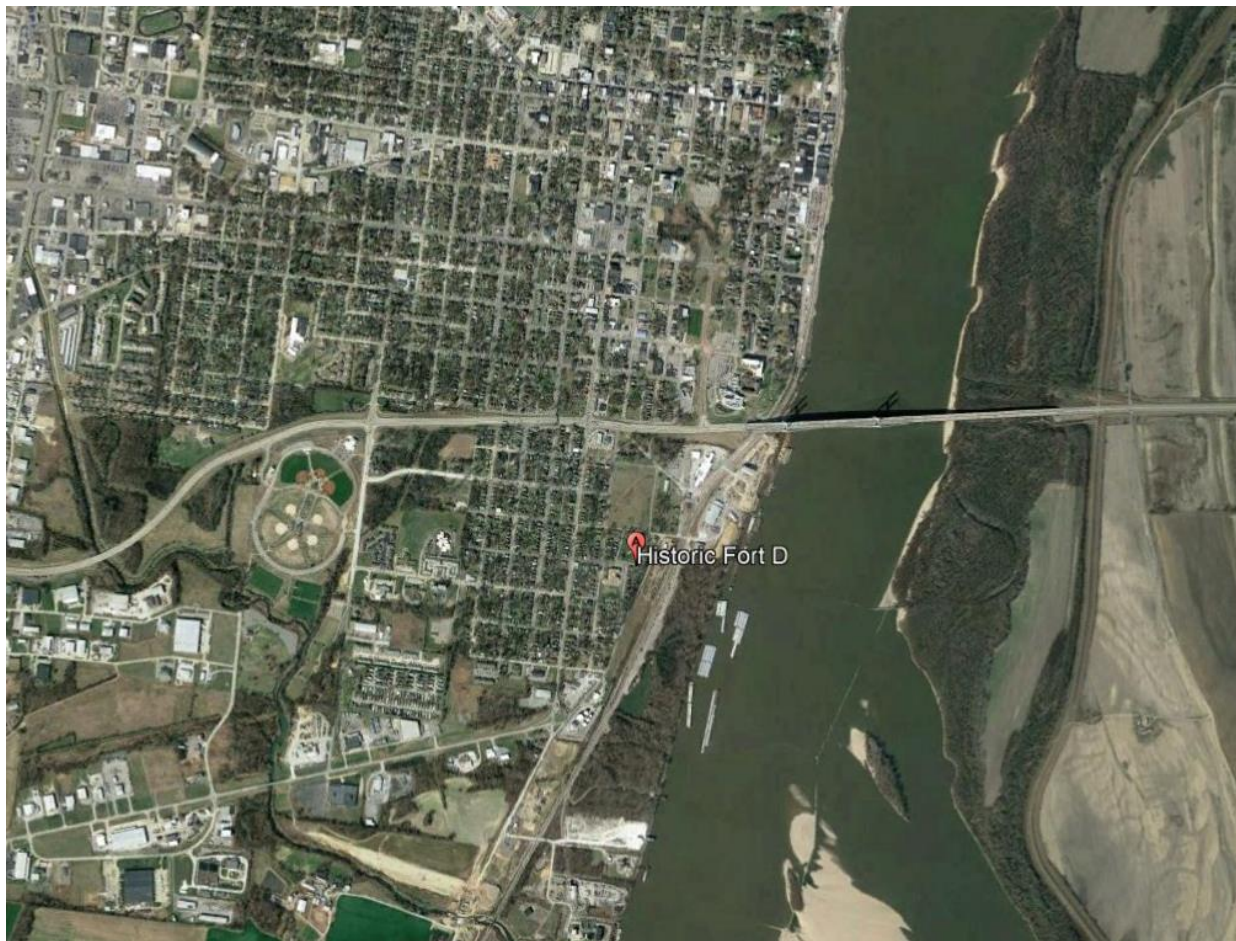


Figure 2. Satellite Locator
Latitude/longitude coordinates: 37.290860, -89.526430
SOURCE: Google Maps, 2018: <https://www.google.com/maps>

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Figure 3. Aerial view of Fort D.
Latitude/longitude coordinates: 37.290860, -89.526430
SOURCE: City of Cape Girardeau GIS Department.

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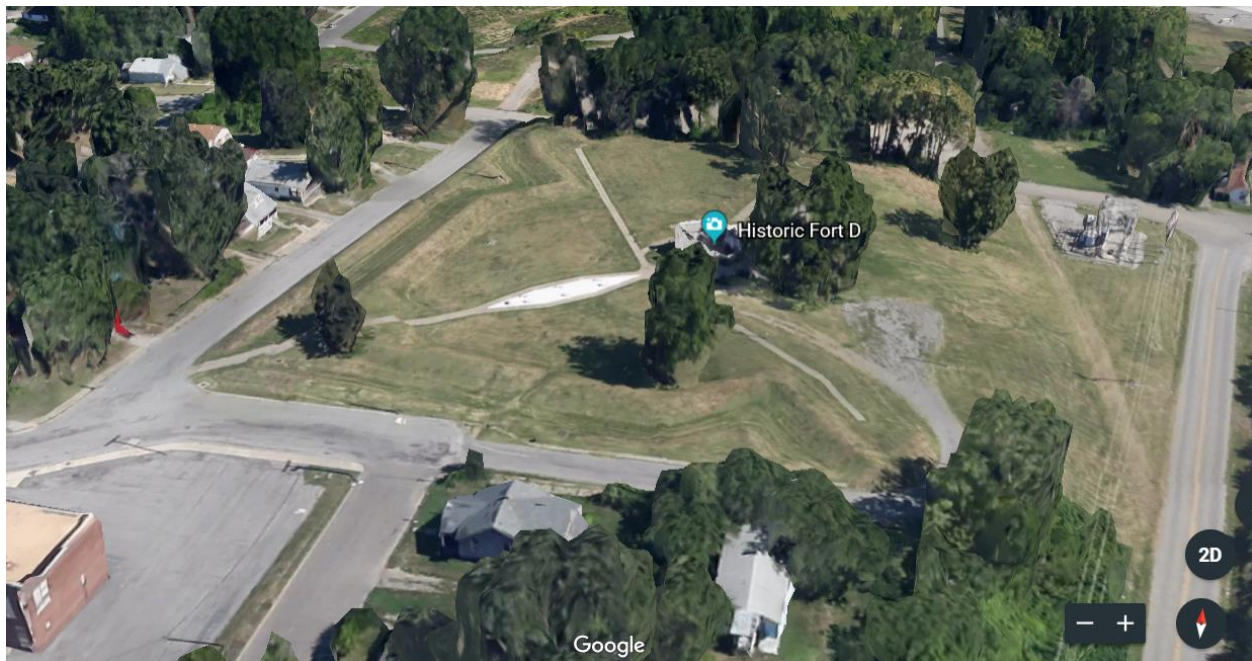


Figure 4. Oblique aerial view of Fort D looking north.
Latitude/longitude coordinates: 37.290860, -89.526430
SOURCE: Google Earth, 2018: <https://www.google.com/earth/>

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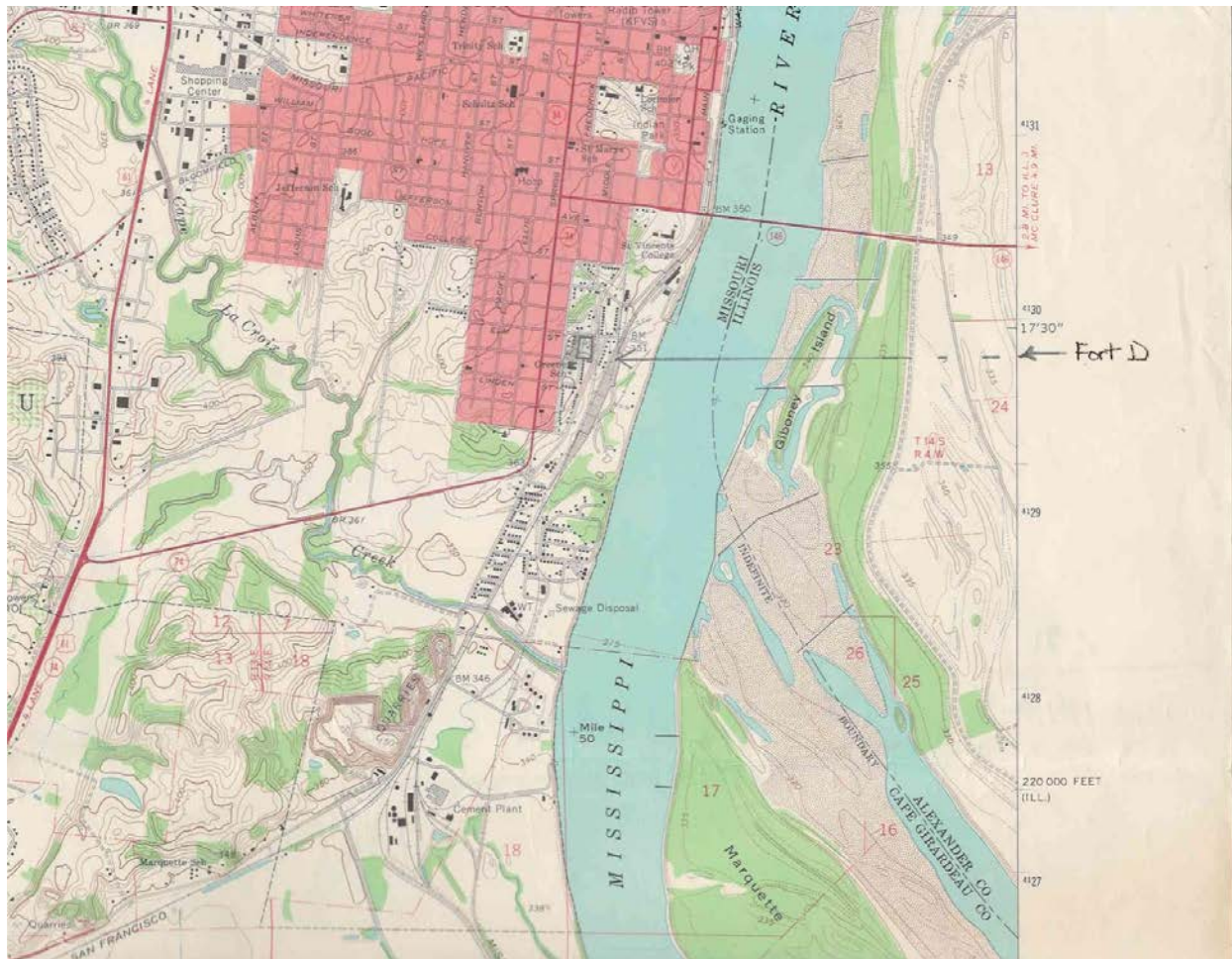


Figure 5. Portion of the Cape Girardeau, MO. – Ill. 7.5' Quad. (1967)

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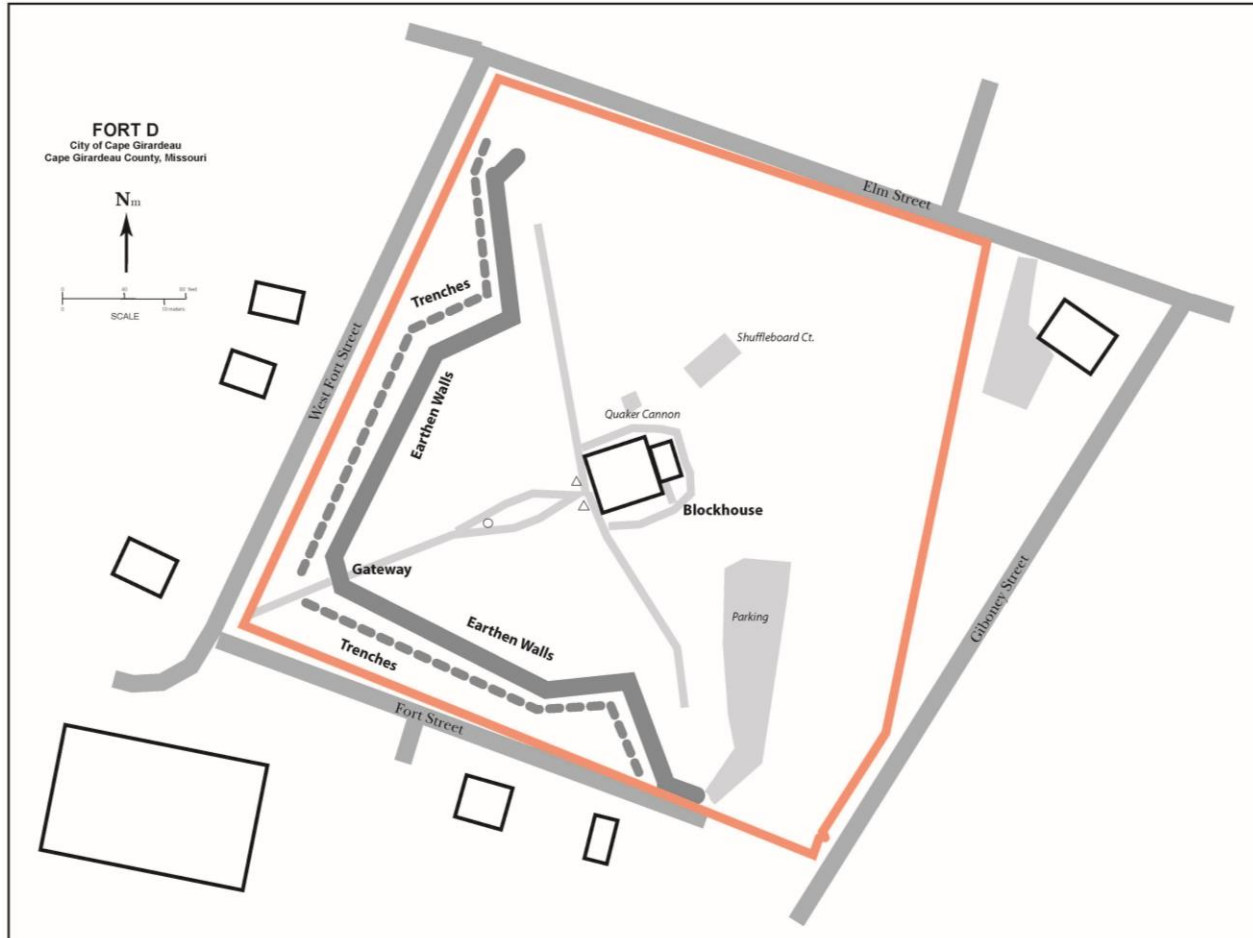
Name of Property

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N/A

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CONTRIBUTING		
Resource	Type	Year
Redan – Earthen Walls & Trenches	1 Structure	1861
WPA Blockhouse	1 Building	1937
WPA Gateway	1 Structure	1937
Sidewalks – denoted via light gray pathways	1 Structure	1937
Cannon bases – triangles in front of blockhouse	2 Objects	1937
NONCONTRIBUTING		
Plaque on Pedestal – circle between Gateway & Blockhouse	1 Object	c. 1940
Shuffle Board Courts – 2 strips of concrete	2 Structures	c. 1970
Gravel Parking – light gray area labeled parking (not in resource count)	1 Site	c. 1960
ORANGE DENOTES NATIONAL REGISTER BOUNDARIES		

Figure 6. Plan of site.
Latitude/longitude coordinates: 37.290860, -89.526430
SOURCE: Friends of Fort D. 2018.

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N/A

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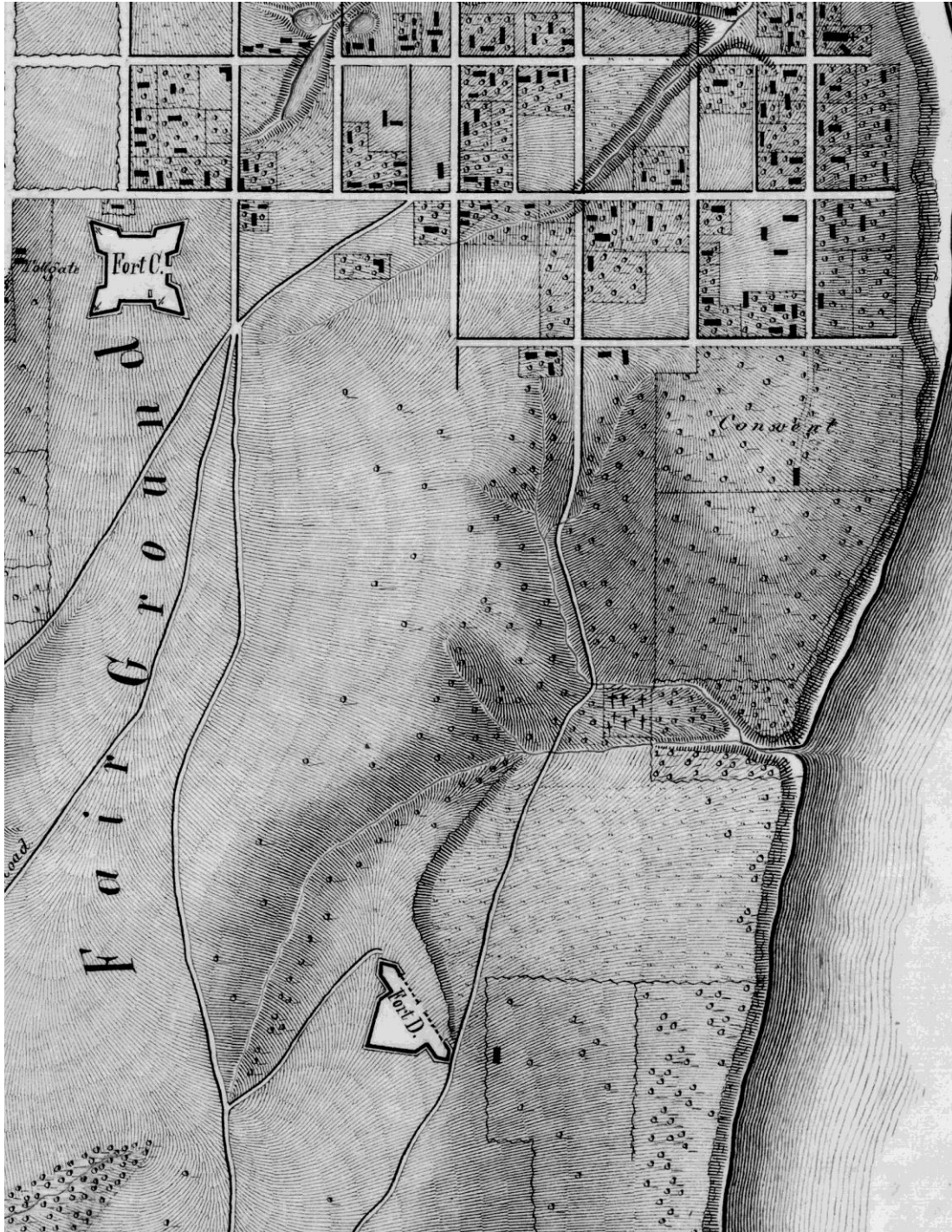


Figure 7. Portion of Military Map of Cape Girardeau (1865) showing Fort D, Fort C, and Catholic Seminary, mislabeled as "Convent."

SOURCE: National Archives and Records Administration.

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N/A

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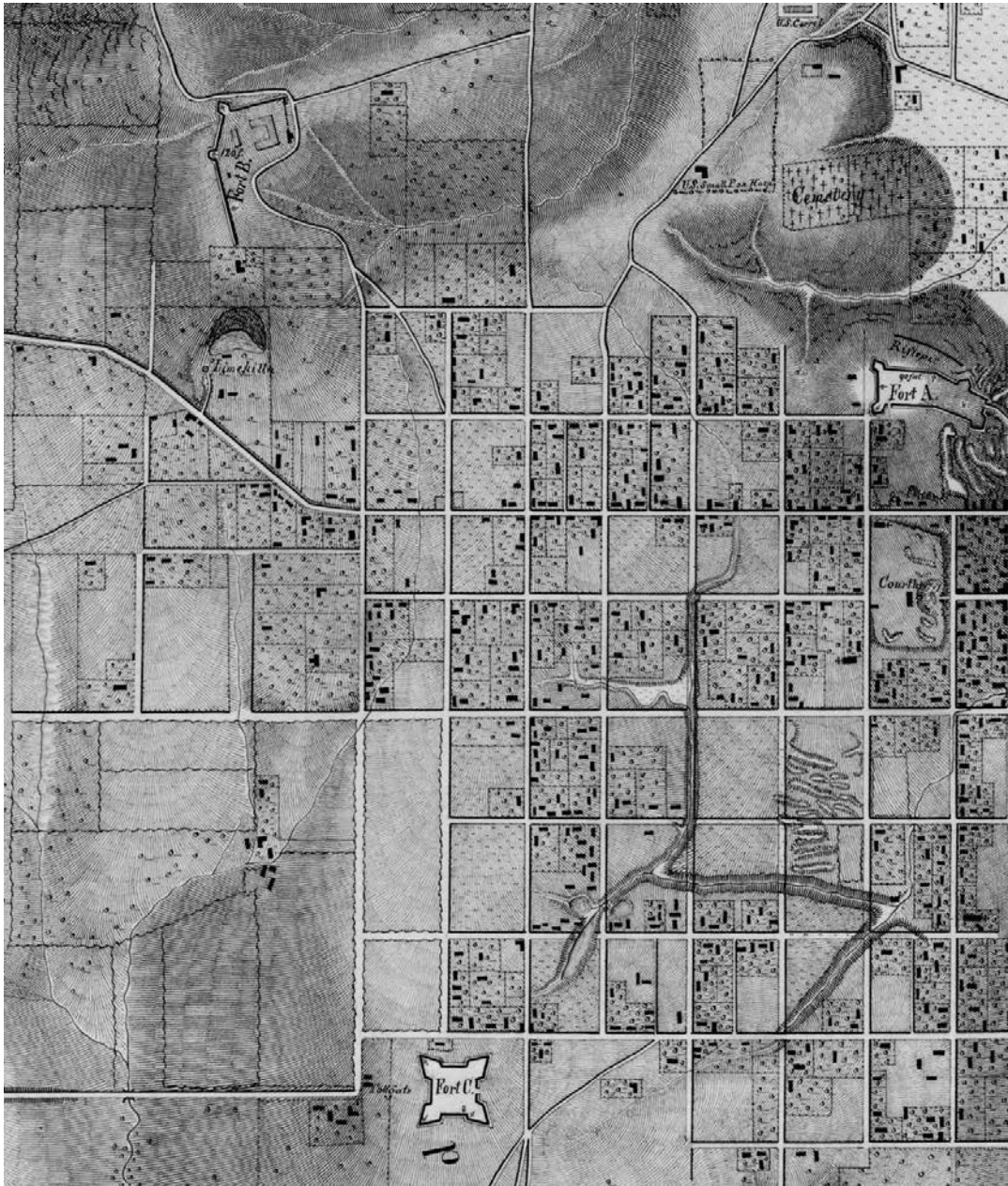


Figure 8. Portion of Military Map of Cape Girardeau (1865) showing Forts C, B, and A.
SOURCE: National Archives and Records Administration.

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Figure 9. Portion of Military Map of Cape Girardeau (1865) showing Fort B, Batteries A and B, and rifle pits along Jackson Road (today Broadway).

SOURCE: National Archives and Records Administration.

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N/A

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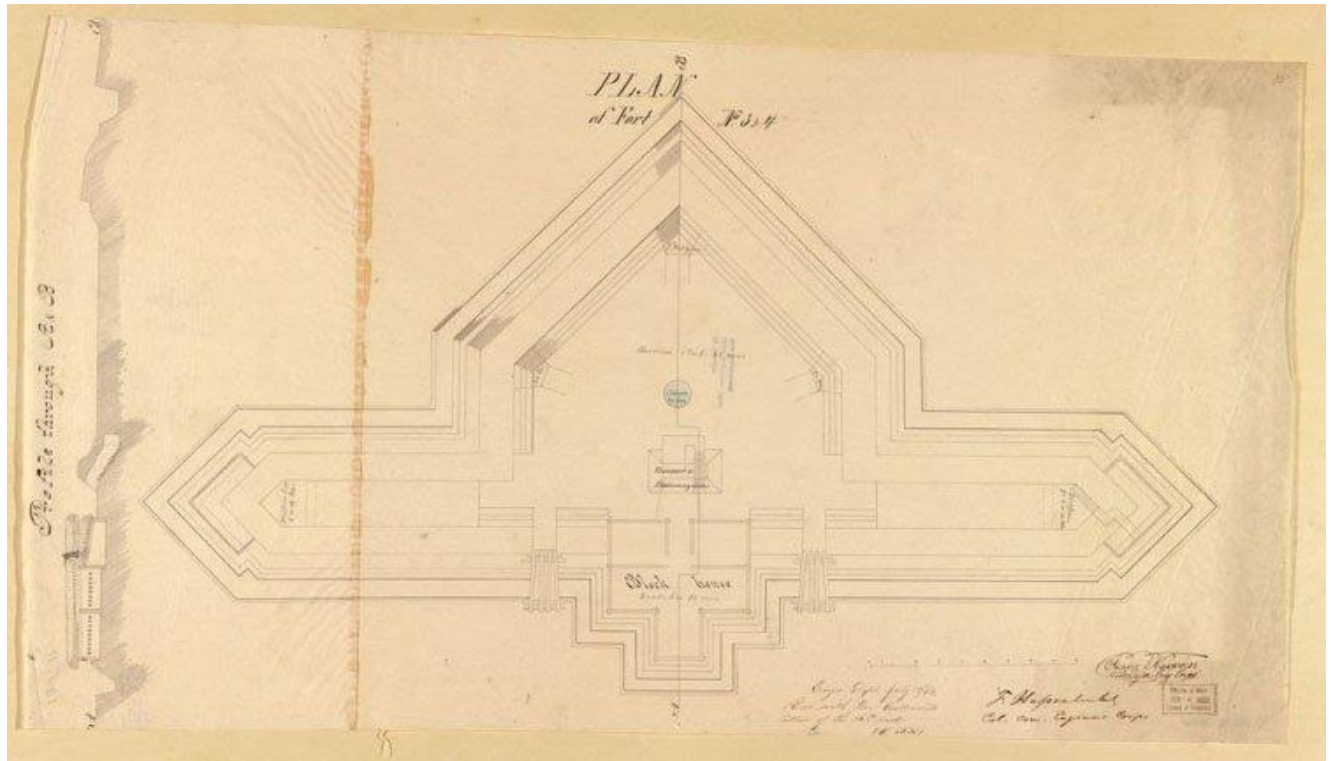


Figure 10. Plan of Forts 3 & 4 in St. Louis shows basic footprint of a Civil War redan. Note that the structure, when built, was probably less elaborate.
SOURCE: National Archives and Records Administration.

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Fort D

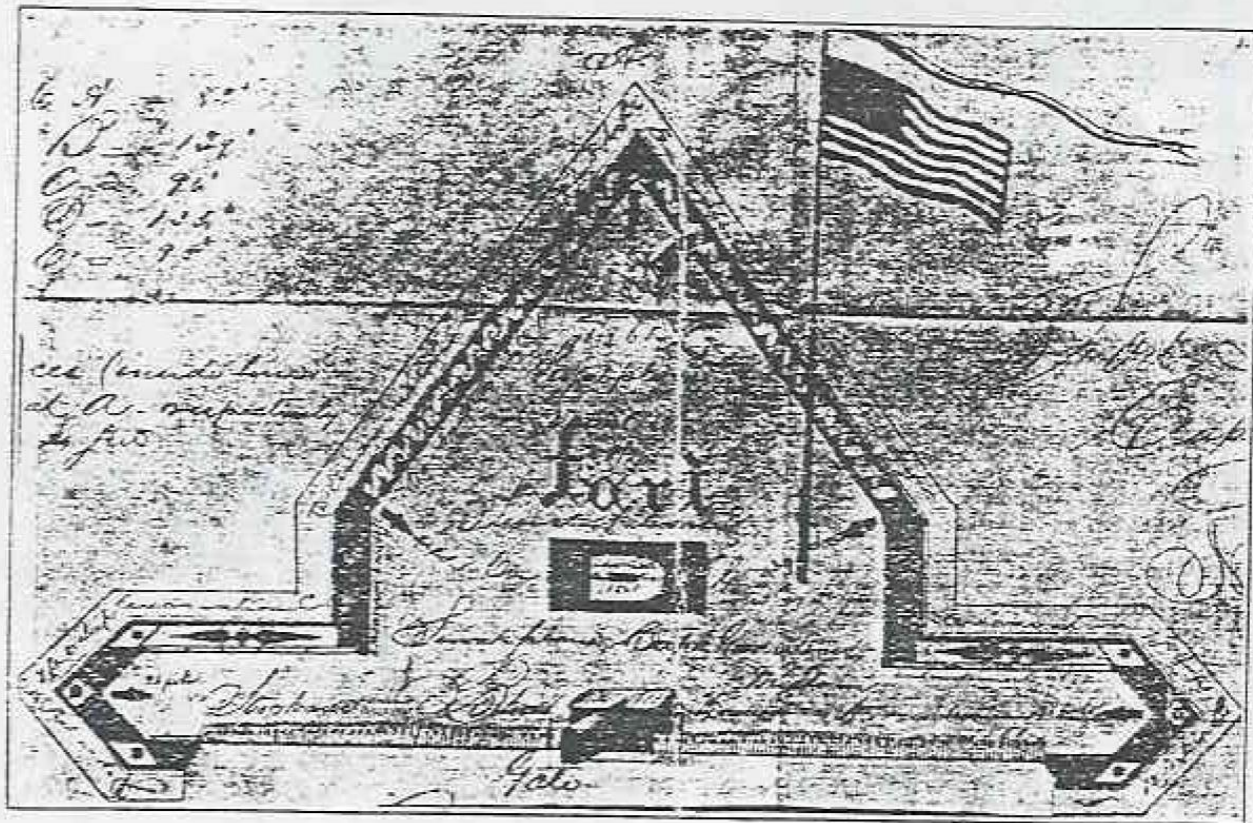
Name of Property

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N/A

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Fort D, from sketch made by Private Radford in 1861.

Figure 11. Fort D, from sketch made by Benjamin Radford, 1861. Original date of this drawing is unknown.

SOURCE: Published in the Cape Girardeau Community newspaper, August 27, 1936. No copy of the newspaper is now known to exist, scan of photocopy of a photocopy from files of Cape Girardeau Public Library, 2007.

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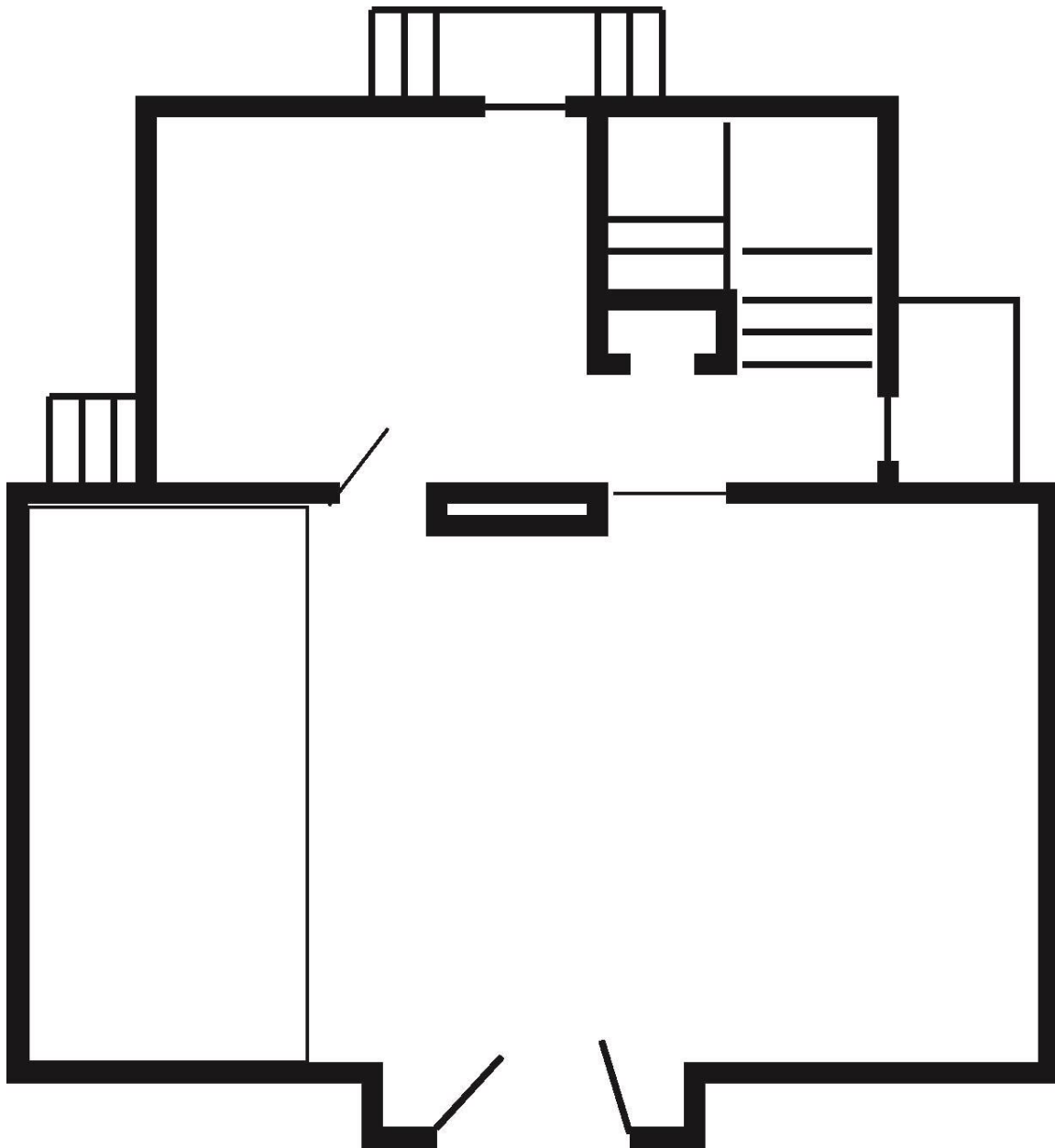


Figure 12. Floor plan of 1936 blockhouse structure today. Floor layout varied over time but excepting the shed roof, these are the permanent walls. Stairs lead into the basement and a fireplace is central to the building.

SOURCE: Friends of Fort D.

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[illegible]

SOURCE: City of Cape Girardeau.

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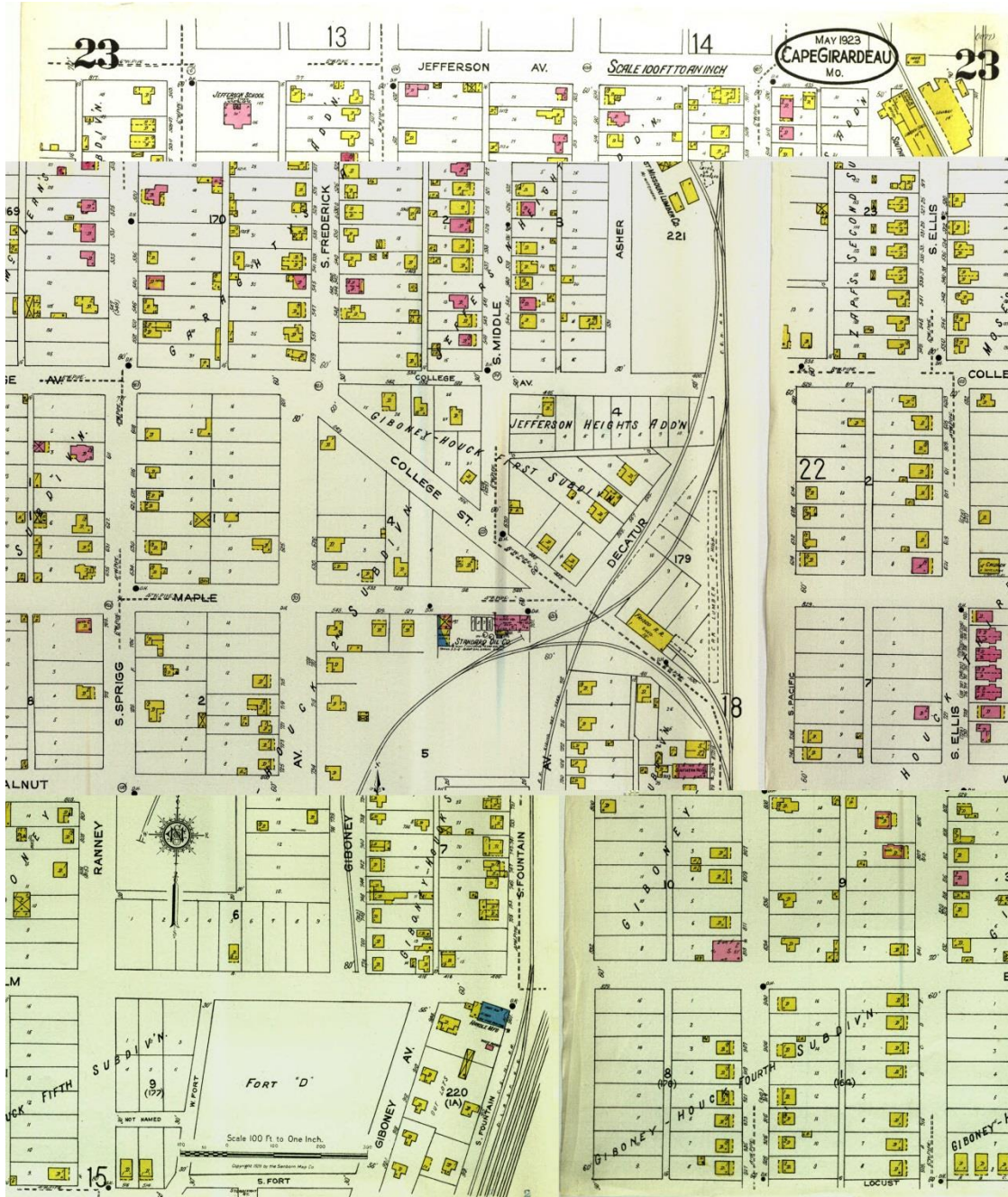


Figure 14. 1923 Sanborn map of portion of Cape Girardeau. Fort D property shown at lower left.

Map shows some streets never built. City of Cape Girardeau.

SOURCE: "Cape Girardeau, Missouri, 1923 May, sheet 23," University of Missouri Digital Library.

Accessed December 21, 2018: <https://dl.mospace.umsystem.edu/mu/islandora/object/mu%3A139709>

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Figure 15. From top to bottom: Portion of the Military Map of Cape Girardeau, map scaled to aerial photograph with plat outlines superimposed, plat outlines superimposed directly on modern aerial photo. The plat book shows that the upper (northwest) portion of the fort earthworks would be impacted but when the street alignment was finished, the earthwork and northwest gun emplacement was not removed. The plat outline was verified by a pocket transit and tape survey. SOURCE: Friends of Fort D.

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Figure 16. The south walls of Fort D, sometime between 1928 and 1936, looking northeast. Renovation had not yet occurred but the 1928 Mississippi River bridge is visible in the background.

SOURCE: Photographer and source unknown but probably Southeast Missourian.

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Figure 17. Postcard showing Fort D “rifle pits” ca. 1936 (probably south walls looking east) before renovation. Note incorrect state abbreviation.

SOURCE: Unknown photographer. Courtesy Special Collections and Archives, Southeast Missouri State University.

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Figure 18. Workmen using hand tools to patch earthworks 1936 looking southwest.
SOURCE: Courtesy of Southeast Missourian newspaper.

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N/A

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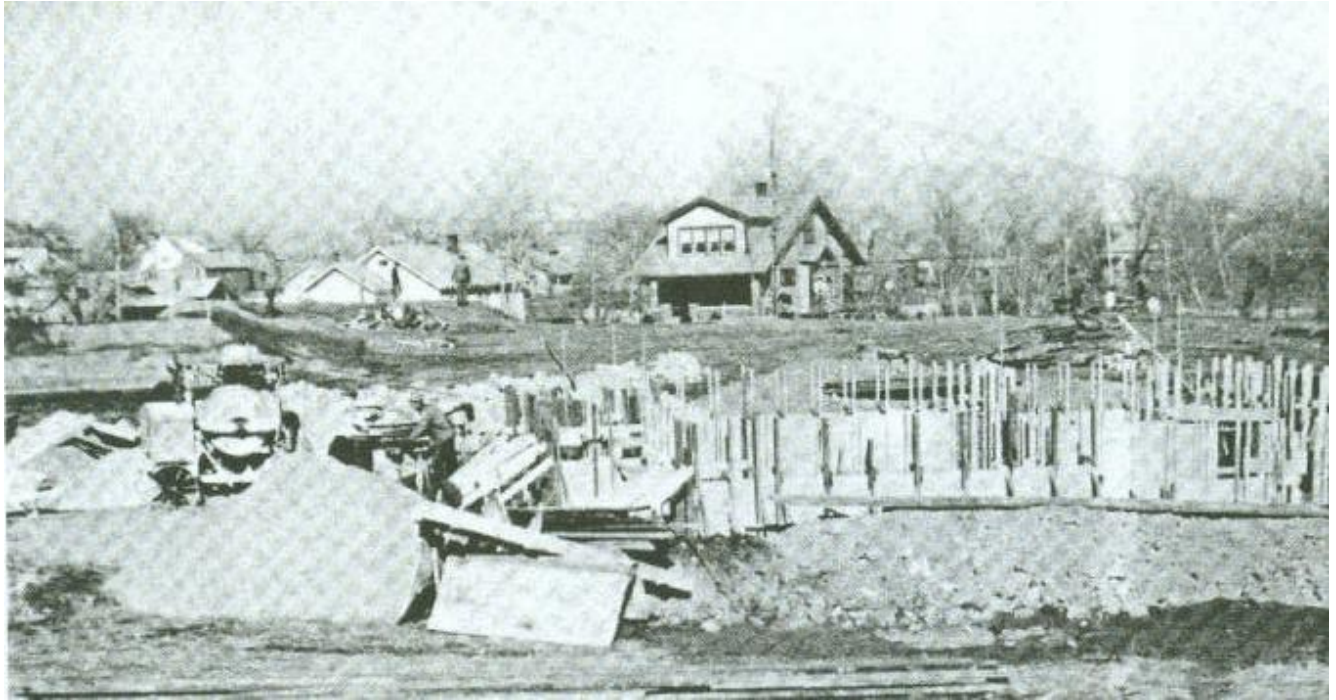


Figure 19. Construction underway on the blockhouse/museum structure looking west.

SOURCE: Courtesy of Southeast Missourian.

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Figure 20. Finished site circa 1937 looking east.

SOURCE: Courtesy of Southeast Missourian.

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Figure 21. Looking south at earthen walls of Fort Davidson, Iron County, Missouri. Entrance in photo is not original to fort.

SOURCE: Photo by Scott House, 2013.

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N/A

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Figure 22. Looking north along east walls of Fort Benton, Wayne County, Missouri. Numerous trees and brush have since been removed.

SOURCE: Photo by Scott House, 2004.

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Figure 23. Looking southwest at trench works near Ellington, Reynolds County, Missouri.
SOURCE: Photo by Scott House, 2005.

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Figure 24. Looking southeast at one section of earthen walls (Lamine River cantonment) near Otterville, Cooper County, Missouri.
SOURCE: Photo by Scott House, 2017.

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Figure 25: Looking northeast at south wall and blockhouse, prior to most recent renovation and interpretive works. 2004.
SOURCE: Friends of Fort D.

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**Figure 26: Looking west at interior of south wall and southwest gun ramp during a school tour.
2006.**

SOURCE: Friends of Fort D.

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Figure 27: Living history demonstration (school tour) and north side of blockhouse. 2010.

SOURCE: Friends of Fort D.

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Figure 28: Memorial Day observance at front of blockhouse. 2011.

SOURCE: Friends of Fort D.

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N/A

Name of multiple listing (if applicable)

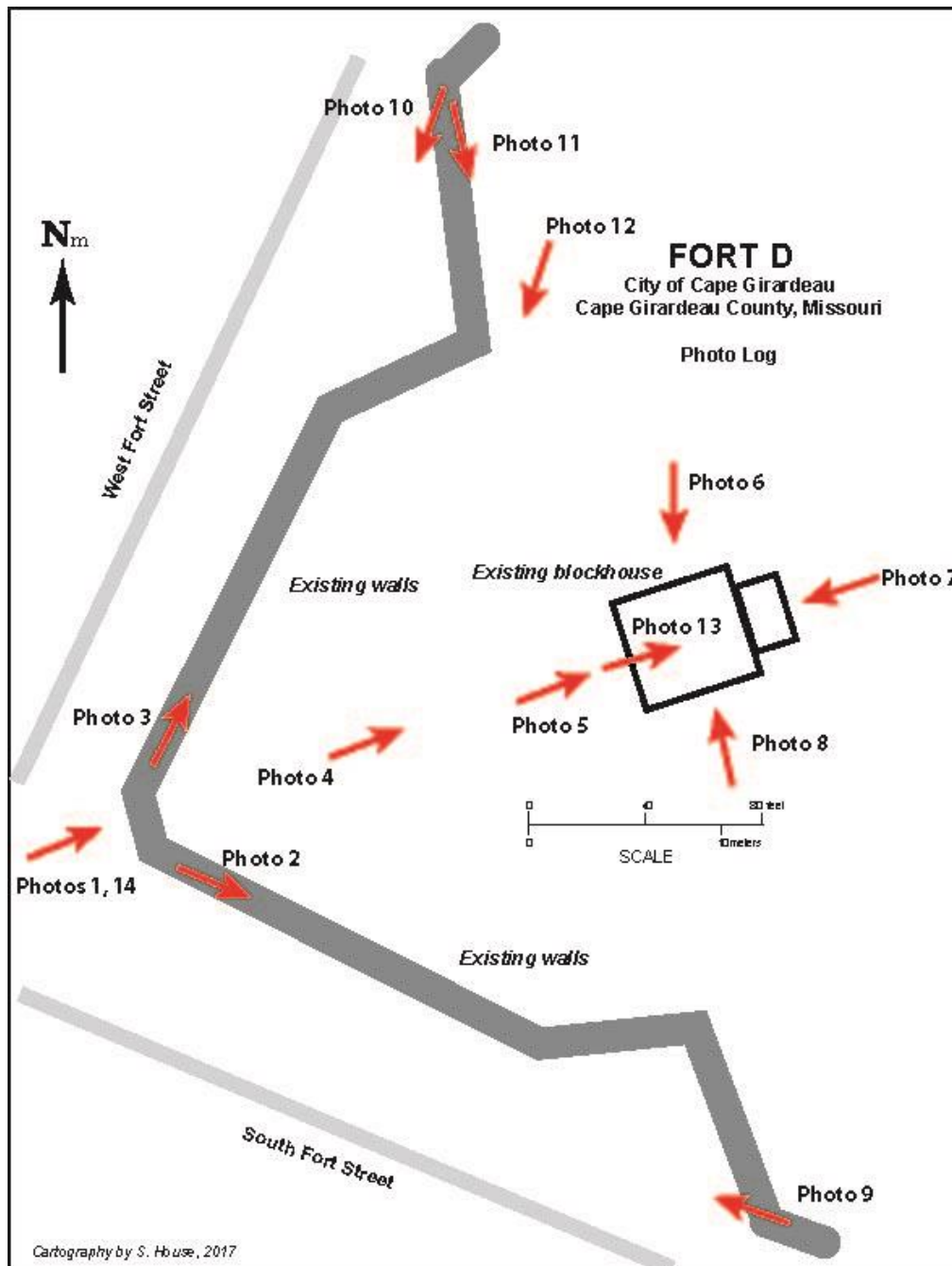


Figure 29: Photopoints.
SOURCE: Scott House

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Figure 30: John Wesley Powell in 1861.
SOURCE: U.S. Geological Survey.

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N/A

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Figure 31. Redan walls at Fort Stevens, Oregon.
SOURCE: Google Maps, 2018 & Photo by Scott House

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N/A

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Figure 32. Stockade Redan in Vicksburg, Mississippi.
SOURCE: Google Maps, 2018 & Photo by Scott House



CITY OF CAPE GIRARDEAU
FORT O' HISTORIC SITE
PARK & RECREATION DEPT.

























