

YORKTOWN BATTLEFIELD TOUR ROADS
Yorktown vicinity
York County
Virginia

HAER No. VA-117

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VA
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PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

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HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
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HISTORIC AMERICAN ENGINEERING RECORD

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YORKTOWN BATTLEFIELD TOUR ROADS
Colonial National Historical Park
HAER No. VA-117

Location: Tour roads are located entirely within the Yorktown battlefield, Yorktown vicinity, York County, Virginia.
Quads: Yorktown, VA, Poquoson West, VA
UTM: 18/366700/4121350

Date of Construction: Continuous 1930s-1957

Type of structure: Interpretive tour roads.

Use: Vehicular traffic

Designer/Engineer: Eastern Division of the Branch of Plans and Design, National Park Service; Bureau of Public Roads, U.S. Department of Agriculture.

Builder: Various

Owner: National Park Service

Significance: Following both existing roads and historic road traces, the nearly nine miles of battlefield tour roads provide for visitor access to significant sites associated with the siege and battle of 1781. Engineers, landscape architects, and historians worked closely to develop the tour route to recreate the colonial feel of eighteenth century Yorktown. Part of the original interpretive program of the park, the tour roads are an important component of the park's road system which directs the circulation of visitors while in the park.

Project Information: Documentation of the Yorktown battlefield tour roads is part of the Colonial National Historical Park Roads and

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Bridges Project, conducted in summer
1995 by the Historic American
Engineering Record.

Project Historian:

Michael G. Bennett, HAER Historian,
1995.

COLONIAL NATIONAL HISTORICAL PARK ROAD SYSTEM

By the 1920s, National Park Service landscape architects and engineers began to develop loop or circuit roads to provide visitors access to areas of scenic and historical significance. These roads were specially designed to allow visitors to leave and reenter primary park roads without stopping, backing up, or making unnecessarily sharp turns. Loop roads derive from the romantic landscape theories of Andrew Jackson Downing, and were adopted by Frederick Law Olmsted in his design of nineteenth century urban parks. Apart from their recreational function, these roads are integral to park's road system, serving specific functions within the overall circulation of a park.¹

As the main scenic corridor unifying Jamestown and Yorktown, the Colonial Parkway (HAER No. VA-115), constructed between 1931 and 1957, was the park's primary roadway. But for visitor access, it failed to incorporate either the Yorktown battlefield or Jamestown island, the two primary land holdings of the park. Plans to develop tour roads in the battlefield were established in the 1930s during the initial planning for the 1931 celebration of the battle's sesquicentennial anniversary. The need to provide adequate circulation of the celebration grounds necessitated the restoration of many Revolutionary era roads through the battlefield. Loop roads on Jamestown island, however, were not constructed until the 1950s with the redevelopment plans in preparation for the 350th anniversary of the settlement of Jamestown. Supplemented with historical markers and interpretive exhibits, both of these road systems provide a more intimate experience of a specific area within the park.

YORKTOWN BATTLEFIELD TOUR ROAD

At the time of the Yorktown Sesquicentennial celebration in 1931, there were three main commercial roads through the battlefield

¹Linda Flint McClelland, *Presenting Nature: The Historic Landscape Design of The National Park Service, 1916 to 1942* (Washington, DC: National Park Service, 126-127.

area, including Virginia Route 170 connecting Lee Hall with U.S. 60, U.S. 17 (Route 704), a main north/south corridor, and Goosley Road (Route 238), a primary road through the Lower Neck peninsula which enters park lands from the west. Historic roads that served local traffic included Grove Road, a low standard road connecting Lee Hall with Yorktown, the Old York-Hampton Road (Surrender Rd.) which formed a southern traffic entrance to the Yorktown area from Norfolk, and Warwick Road which entered the park from the south and connected with the Old York-Hampton Road. The Virginia Department of Highways was responsible for grading, laying gravel, and oiling roads in Yorktown in preparation for the celebration.² The state appropriated over \$30,000 for road improvements in the battlefield area and for approach roads into Yorktown.³

In February 1931, Charles E. Peterson, chief of the Eastern Division of the Branch of Plans and Design, began to develop a land use plan for the Yorktown battlefield. By June, Bureau of Public Roads engineers surveyed the area to create construction specifications and circulation plans for the battlefield roads. Prior to the October celebration, the state completed simple grading and surfacing of roads while NPS staff mounted historical markers and descriptive road signs. Because transportation in the tidewater region was generally poor, the development of historic roads took on a greater importance to facilitate movement during the celebration.⁴

²Oliver Taylor, Superintendent's Monthly Narrative Reports, April-September 1931, Colonial National Historical Park, file 207.02.3.

³Yorktown Sesquicentennial Association, *The Yorktown Book: The Official Chronicle And Tribute Book* (Richmond, VA: 1932), 94.

⁴Taylor, Superintendent's Monthly Narrative Reports, February-June, 1931; Yorktown Sesquicentennial Association, *Official Program of the Yorktown Sesquicentennial, Yorktown, Virginia, 1931* (Richmond, VA: Lewis Printing Company, 1931), 48-49.

Between the celebration of 1931 and 1933, little additional work was completed to develop the battlefield tour roads. In 1933 the park issued its first "Outline of Development" to guide all future development of the Park. The document established the emphasis on the "visualization of the past" through the restoration and preservation of colonial era material culture, including roads. According to the Outline, the battlefield tour roads were to be multifunctional, serving both the interpretation and conservation mission of the park. The roads were to provide access to scattered historical sites around the battlefield area to preserve the "revolutionary picture" of Yorktown. The park relied upon historical map research and field surveys of road traces to provide the routes for a continual drive through the battlefield. Beyond their historical function,

The restoration of the colonial roads and paths on the battlefield will, as far as practicable, provide for the conservation and preservation of the flora and fauna of the region as an element in the enjoyment of the people.⁵

For the battlefield programs, the outline identified Surrender Road (old York-Hampton Rd.) as the "natural axis" to guide development. East of Surrender Road were the primary siege lines, as well as the Moore House where the terms of surrender were signed. To the west of the road were the encampment and headquarter sites associated with the siege. Following this east-west split, tour roads were designed for visitor use only and no commercial development was allowed. Contractors were directed to limit cutting and avoid over building that would distract from the colonial character of the roads. Contrasting with the parkway, the alignment of the tour roads followed the easiest gradient in the metes and bounds fashion characteristic of colonial road building. According to the outline,

The road designers will always have in mind that obvious grade prisms and artificialities of landscaping are to be rigidly eschewed in favor of the simplicity of appearance

⁵William M. Robinson, "Outline of Development, 1933," 51, Colonial National Historical Park.

which characterized colonial highway practices.⁶

Central to the park's plan for development of the battlefield area, through roads were to be relocated outside the park boundaries, and roads to be incorporated into the battlefield tour, such as Grove Road, were to be cut off at the park boundary to limit and control access to park lands. This plan, however, was at odds with the state's plans for road development in the peninsula which dictated traffic patterns apart from Park Service considerations. In the 1930s, for instance, the park advocated the relocation of U.S. 17 along the north boundary of the park by Ballard Creek. This was unacceptable to the state, which eventually enlarged the road in the 1950s (and again in the 1960s) with the construction of the Coleman Memorial Bridge to Gloucester Point.⁷

During the 1930s and early 1940s, the construction of the battlefield tour roads was completed through Emergency Conservation Works programs. In July 1933, two black Civilian Conservation Corps camps were established in Yorktown (see HAER No. VA-115). CCC Camp No. 1, under the supervision of Eugene A. Gissey, was responsible for the restoration of the battlefield area and the clearing of tour roads. BPR engineers and park historians mapped and staked the routes to be grubbed by CCC crews, after which contractors were hired to grade and surface the roads with marl to simulate their original surface. Research into eighteenth and nineteenth century diaries revealed that roads around Yorktown were surfaced with a mixture of marl and shells. CCC crews also set directional signs, historical markers and interpretive exhibits (cannons, flags, etc.) to help the visitor in the "visualization of the events of the siege of

⁶Robinson, 212-213.

⁷Relocation plans are advocated in the 1933 "Outline of Development," and subsequent Master Plans for the park. Information concerning the Coleman Bridge from Edward Hummel, Superintendent's Monthly Narrative Reports, 1949-1952. The current enlargement of the bridge was opposed by the park which advocated a tunnel to remove the visual intrusion from Yorktown.

1781."⁸

To supplement the tour roads and provide a needed function in the park's circulation system for both fire control and visitor access, two trail units were constructed through the battlefield. The two units, including a "Headquarters" route and "Campsite" route, provided over 20 miles of foot trails which extended from parking areas linked to the auto-tour by spur roads. The trails provided access to more remote areas not accessible by automobile.⁹ Many utility, or truck roads were also built through the battlefield area, linked to maintenance areas and scattered water pumps.

By the 1950s, the single-lane battlefield tour road was considered a primary park road, known as NPS routes 6 and 5 (Route 5 was primarily east of Surrender Road). The marl surfaced road extended through the western, southern, and eastern section of the battlefield, creating a U around the perimeter of the park. From Route 238, the road travelled south across Route 60 and Grove Road (Route 637; both grade crossings) toward the site of General Washington's headquarters. From there the road eaded north to an intersection with the Old York-Hampton Road. At the intersection the tour turned right onto the road for about half a mile until heading north again toward Wormley Pond and the Moore House onto NPS Route 5. According to the records available, the only bridges along the route were single-lane timber structures across Baptist Run and Wormley Pond. The Wormley Pond bridge was modified in 1939 with a reinforced concrete deck with molded side panels that simulated wood, and timber guardrails. The deck was

⁸Edward Riley, "A Brief History of Colonial National Historical Park," 30 June 1947, 9, Colonial National Historical Park.

⁹B. Floyd Flickinger, "Master Plan for Colonial National Historical Park, 1936," np. Colonial National Historical Park, Engineer's office, Maintenance Division.

supported on steel I-beams, providing a 11'-4" roadway surface.¹⁰ According to the 1950 road system plan, there were approximately seventeen other roads, primarily loop or spur roads, providing access to areas in the battlefield. These included a loop around the Moore House, spurs to headquarter sites, campsites, earthworks, Tobacco Roll Road and parking areas.¹¹

In preparation for the 350th anniversary of the founding of Jamestown, portions of the tour roads were relocated and new sections were built along with separated grade structures to upgrade the tour and enhance the traffic flow. In December 1955, H. W. Blevins of the Roanoke office of the Bureau of Public Roads surveyed the battlefield and set flags along the proposed pavement line. The W. H. Scott Company of Franklin, Virginia, the contractor for the Jamestown loop roads, received the contract for work on the battlefield tour roads in October 1956.¹² The project called for the widening and relocation of sections of the battlefield tour, the relocation of secondary state routes to eliminate through traffic, the construction of a bridge over Grove Road, various parking areas and new marl surfacing for the entire tour road system.

Following cross sections prepared by the Bureau of Public Roads, the W. H. Scott Co. began clearing for the relocation of Grove Road and Warwick Road. Tour roads were designed with a maximum

¹⁰U.S. Department of the Interior, National Park Service, Drawing NHP-COL 8025-A, "Reconstruction of Wormley Pond Bridge, 5 May 1939," Colonial National Historical Park, Engineer's office, Maintenance Division.

¹¹U.S. Department of the Interior, National Park Service, Eastern Office of Design and Construction, "Road System Plan, Colonial National Historical Park, 1 June 1950," Colonial National Historical Park, Engineer's office, Maintenance Division.

¹²Information from monthly reports of park engineers, Colonial National Historical Park file A-2827, "Monthly Reports (Park Engineers) January 1954 to December 1957."

degree of curvature of 28° 39' for a maximum speed of 25 m.p.h. (although the posted limit was, and continues to be 15 m.p.h.) Clearing continued until 22 April 1957 on Route 6B loop road, south and north sections, Route 6A east of Route 637; Route 5A; Route 6A northeast of Route 637; Route 6A by Surrender Field; Route 5B; Route 20; and ended with Route 63.¹³

Two Euclid scrapers were utilized for roadway excavations beginning in November 1956 and ending in June 1957. The typical tour road section has a 12' roadway with two 4' vegetated shoulders. These dimensions were generally widened 2' at approaches to bridges. During grading operations, drainage culverts were constructed on both Grove and Warwick roads. A course of selected borrow (marl) from park borrow pits was spread and leveled by a D-7 Caterpillar Bulldozer, and was shaped by a No. 12 Caterpillar grader and a pneumatic tire roller. Old roads and parking areas were obliterated, and new top soil was laid, fertilized and seeded. Seeding operations continued from the spring to the fall of 1957.¹⁴

The only major structure built as part of the contract was a separated grade structure over Grove Road. On 11 November 1956 the bridges foundations were excavated, followed by the con-

¹³U.S. Department of Commerce, Bureau of Public Roads, "Final Construction Report, Project No. 3A1-5A1-5B1-5C1-6A1-6B1-8A1-9A1-20A1-22A1-55A1-63A1-23A1," Colonial National Historical Park, Engineer's office, Maintenance Division. Appropriate maps for this study were not found during initial research. It is extremely difficult to put together a clear picture of the development of the tour roads. Route 6 is generally west of Route 17, while Route 5 is east of 17. Additional research is needed on these roads, in particular, the identification and incorporation of historic road traces.

¹⁴"Final Construction Report, Project 3A1-5A1-5B1-5C1-6A1-6B1-8A1-9A1-20A1-22A1-55A1-63A1-23A1," 10; and Monthly Report of the Park Engineer, 1 April 1957, Colonial National Historical Park file A-2827; "Monthly Report (Park Engineer) January 1954 to December 1957."

struction of form work, the placement of reinforcement steel and the pouring of concrete. The entire structure was completed in the first week of April 1957. The bridge (FHWA Structure No. 4290-003P) is a simple continuous concrete deck structure with an open span of 27' and a maximum clearance of 14'. The bridge carries two lanes of the tour road Route 6B, with a 18' pavement width and a 2' left shoulder and 3' right shoulder. The post-and-rail guardrail is 2'-8" high.¹⁵

At the time of this work, a temporary connection was constructed at the intersection of the tour road and U.S. 17. Site surveys of 1956 and 1957, established the location of a bridge over Rt. 17 just south of the existing at-grade crossing. Constructed in 1959, the bridge (FHWA Structure No. 4290-004) was 20'-5" out to out, with a 16' roadway for two lanes. The deck was supported by transverse steel I-beams and longitudinal prestressed concrete reinforcement beams. From abutment face to abutment face, the bridge measured 106'-4 3/4" and all four wingwalls were 16'-5". The bridge had a span of 51'-11 1/2" between two reinforced concrete piers, with a centerline clearance of 15'. Unlike bridges along the Colonial Parkway, the U.S. 17 bridge had 2'-4" cast aluminum post-and-rail guardrails manufactured by Alcoa.¹⁶

In the mid-1960s, the Virginia highways department widened U.S. 17 into a four lane divided highway, necessitating the extension of the existing bridge over all four lanes. Designed and constructed by VDOT in 1967-1968, the bridge was enlarged to a 162'-6", three pier bridge following the same architectural

¹⁵U.S. Department of Transportation, Federal Highway Administration, "Bridge Safety Inspection Report, Yorktown Battlefield Over Road VA RTE. 637, Colonial NHP, 6 April 1993," Colonial National Historical Park, Engineer's office, Maintenance Division.

¹⁶ U.S. Department of Commerce, Bureau of Public Roads, "Plans for Proposed Project No. BA2, Bridge over Highway U.S. No. 17, York County, Virginia," February 1958, collection of the Colonial National Historical Park, Engineer's office, Maintenance Division, Yorktown, Virginia.

treatments as the original structure. The Park Service reimbursed the state after the construction of the bridge.¹⁷

In 1971, the Park Service initiated a comprehensive study of the structural and interpretive conditions of the Yorktown battlefield tour roads. Not only did the study advocate a reconstruction of some portions of the road to improve safety and drainage, but it also proposed the construction of additional spurs to better integrate the road into the significant battlefield sites. According to the proposals set forth by the survey, private land ownership within the battlefield area was a major deterrent to redevelopment plans. Along with basic reconditioning of the roadway's surface and drainage structures, fairly ambitious ideas were raised by the survey team, including beginning the tour east of the parkway bridge over U.S. 17 and constructing a tunnel to take the road under the parkway and onto a spur road to the outer earthworks area. The survey also proposed the construction of "conveyance tour road" primarily around the Grand French Battery and Moore House sections of the tour to limit visitor use of Rt. 238. Bus tours were utilized at some point during the 1970s, but were discontinued due to lack of funds. As for surfacing the road, the plan advocated a marl-cement mixture that would limit dust and "maintain the desired pastoral character of the roadways."¹⁸

Many of the proposals set forth by the 1971-1972 survey were never acted upon, but during the 1970s the tour roads were reconditioned at various times in anticipation of increased traffic during the Bicentennial. In January 1973, for instance, repairs were made to sections of the tour where erosion had destroyed parts of the roadway surface. An earth and aggregate mix was dumped and bladed to grade, then coated with calcium

¹⁷ Lawrence C. Hadley, Superintendent's Monthly Narrative Reports, 1967, collection of the Colonial National Historical Park.

¹⁸Roy C. Slatkavitz, team captain, "Design Directive-Battlefield Tour Road," September 1971, file D-30, "Colonial Parkway--General, 1972-1977," Colonial National Historical Park.

chloride to prevent excessive dust.¹⁹ The following year, the Bishop & Settle Company, who had been working on shoulder stabilization at Bellfield Plantation and Jamestown island, was awarded a contract to resurface the entire battlefield tour road.

The lateral limits of the reconditioning included the road surface, shoulders and drainage ditches. After removal of the unsuitable material, a 6" sub base and 6" selected borrow surface course were laid upon the roadway. Shoulders were covered with 2" of top soil, and a new turf was established through seeding and sod. By December of 1974, 80 percent of the resurfacing was reportedly complete, and plans were drawn for the construction of a pre-laminated timber bridge over Beaver Dam Creek (FHWA Structure No. 4290-002P).²⁰ Completed in February 1975 by the Kopper's Construction Company, the bridge is a grade level, 72' long multi-beam structure on timber deck, girders and piles. The bridge deck width is 18', with 1' shoulders on each side and 10 3/4" timber wheel guards.

To aid visitor use, the tour roads are divided into the Yellow and the Red Tour. The Yellow Tour incorporates the roads west of U.S. 17 that encompass the allied siege lines and encampment and headquarters areas. The Red line, however, is located entirely east of U.S. 17, and focuses primarily on the most significant sites associated with the siege of Yorktown, including Surrender Field, the Grand French Battery, Redoubts 9 and 10 and the Moore House Road. Other than basic maintenance, resurfacing with bituminous concrete and asphalt, and a reversal in the direction cars travel on the road, no major changes have occurred on the battlefield tour since the 1970s. As part of the 1993 General

¹⁹James R. Sullivan, Superintendent's Staff Meeting Minutes, January 1973, Colonial National Historical Park.

²⁰Sullivan, Superintendent's Monthly Staff Meeting Minutes, December 1974; U.S. Department of Transportation, Federal Highway Administration, "Plans for Proposed Project 3A2, 4A2, 5AB2, 6A3, B2, 8A2, 20A2, Yorktown Battlefield Roads, 17 May 1974," Colonial National Historical Park, Engineer's office, Maintenance Division.

Management Plan, the park reaffirmed its desire to see the relocation of Rt. 238 to "remove a major intrusion between the British line and the second American siege line." If this occurs, the park will construct a tour road from the Grand French Battery to the road between Redoubts 9 and 10 and Wormley Pond. The park also advocates the use of bus transport as a way of saving energy and enhancing the interpretive experience of the battlefield.²¹

²¹Alec Gould, U.S. Department of the Interior, National Park Service, "General Management Plan, September 1993, Colonial National Historical Park, Virginia," Colonial National Historical Park.

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