

Colonial National Monument Parkway,
Capitol Landing Underpass
Milepost 11.96 of the Colonial Parkway
Williamsburg City
Virginia

HAER No. VA-48-B

HAER
VA,
100-YORK,
18-B-

PHOTOGRAPHS
WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
National Park Service
Department of the Interior
Washington, DC 20013-7127

HISTORIC AMERICAN ENGINEERING RECORD

COLONIAL NATIONAL MONUMENT PARKWAY:
CAPITOL LANDING UNDERPASS

HAER No. VA-48-B

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Location: Milepost 11.96 of the Colonial Parkway (0.5 miles northeast of the intersection of the parkway and Lafayette Street), Williamsburg City, Virginia.

UTM: 18.350130.4126850
Quad: Williamsburg

Architect: Charles E. Peterson

Date of Construction: December, 1935-June, 1937

Builder: C.Y. Thomason
Greenwood, South Carolina

Present Owner: Mid-Atlantic Region
National Park Service
U.S. Department of the Interior
Customs House
Second and Chestnut Streets
Philadelphia, Pennsylvania 19106

Present Use: Vehicular bridge carrying Page Street (Virginia State Routes 5 and 31) and U.S. Route 60 over the Colonial Parkway.

Significance: The Capitol Landing Underpass represents a typical 1930s brick-faced single arch reinforced concrete bridge constructed on the Colonial Parkway. While using stylistic elements of colonial architecture such as arches and English bond brickwork, this bridge also reflects the effort on the part of the designers to have the underpass complement the natural environment of the Tidewater area through its subdued exterior decorations and color as well as its relatively short physical dimensions.

Historian: Joseph P. Meko, 1983

Built during the second phase of construction along the Colonial Parkway, the Capitol Landing Underpass took its name from Williamsburg's Capitol Landing Road (now known as Page Street), a street that passed the colonial capitol where the Virginia House of Burgesses met. Although construction of the Capitol Landing Underpass began in 1936, this particular site had long been a topic of discussion among numerous state and federal highway officials. In April, 1931, Charles E. Peterson, then Assistant Landscape Architect with the National Park Service, received a letter from Virginia Highway Commissioner H.G. Shirley regarding Peterson's initial plans for the route of the parkway and its impact on the proposed Virginia State By-Pass Road (U.S. Route 60) around Williamsburg.¹ Shirley argued against the subordination of this critical thoroughway to "any of the local or other schemes which will have recreational purposes. This one of the roads mean [sic] bread and meat to our citizens and it is necessary that it be on the proper alignment, grade and location."²

Over the next two years, officials from the Bureau of Public Roads, National Park Service, the Virginia Department of Highways, and the Williamsburg Restoration suggested and criticized proposals for the highways as well as overpasses, underpasses, and graded crossings at their intersection. Colonial Monument park superintendent Robinson noted that an underpass at the site appeared to be out of the question because of the expensive redesigning required for the State By-Pass and the deep cut needed to increase the parkway's downward grade. A Colonial Parkway/By-Pass crossing farther to the east for the parkway's connection to Williamsburg seemed more feasible because a location could be found "which would pass discreetly to the east and south of the Bassett Hall property,"³ land owned by John D. Rockefeller, the restorer of Colonial Williamsburg. While H.J. Spelman, the principal highway engineer for the Bureau of Public Roads, suggested in late May, 1933, an overpass or a traffic circle as means of resolving this intersection problem,⁴ the National Park Service continued to defer to the wishes of Mr. Rockefeller. Horace Albright, the Director of the National Park Service, wrote

¹ A June, 1933, article in the Newport News Daily Press noted that the purpose of the State By-Pass "is to route heavy and through traffic away from the city [Newport News], relieving congestion here and taking heavy traffic from the restoration area in Williamsburg. The restoration interests have been urging the by-pass for some time, it is said." ("Right of Way for By-Pass Being Sought; Will Start Construction Immediately" 1933.)

² Shirley 1931.

³ Robinson 1933.

⁴ Spelman 1933a.

I want to be absolutely sure that the Restoration wants the parkway on the location that has been tentatively selected. I think it would be well for the whole thing to be reviewed with Mr. Rockefeller while he is down here this week. It ought to be gone over very carefully with him so there is no doubt in his mind as to where he wants the parkway to be.⁵

In July, 1933, Charles Peterson, having now attained the position of chief of the eastern division of the National Park Service's Branch of Plans and Designs, proposed intersecting the State By-Pass, Capitol Landing Road, and the Colonial Parkway at one location. A decision in favor of an underpass, however, had to wait until June, 1934.⁶ Peterson first set forth in December, 1934, his conception of the Capitol Landing Underpass in a preliminary drawing.⁷ The entire underpass measured 129 feet in length and had abutment footings in the shape of giant steps buried behind sloped soil. The single arch in this reinforced concrete structure covered a roadway base thirty-eight feet eight inches wide (thirty feet for the parkway and the remainder for two brick gutters) and spanned a distance of forty feet at its springing points. The interior of the arch vault had not been detailed. A three and one-half foot arch ring rose to a maximum height of seventeen feet three inches above the roadway and contained a four foot tall limestone keystone. Limestone also appeared at the cornered skewbacks at the arch's springing points; a brick wash went from the skewback along the spandrel walls. Brick retaining walls ran out from the arch along both sides of the parkway. Having a width of one and one-half feet, the parapet sloped continuously from a height of three and one-half feet at its center to two feet at its flared ends. The paths of the State By-Pass and Capitol Landing Road remained unspecified on the top view of the underpass.

Subsequent alterations to the preliminary plans for the Capitol Landing Underpass changed the initial design's details and dimensions. The January,

⁵ Albright 1933. In the next sentence, Albright reiterated Superintendent Robinson's concerns about the roadways and the Rockefeller property. "Frankly, I cannot get away from the feeling that the route which is now tentatively selected for the parkway may yet be the one chosen for the bypass, in which event I think we ought to find some way to get around Williamsburg to the east and south even if we have to go considerably beyond the Bassett Hall property."

⁶ Spelman 1933b; Peterson 1934a. In his letter to Peterson, Spelman continued to adhere to the idea of a traffic circle for the intersection of the three roads. Once a contour map of the area in question had been made, "we can get a better idea of just what can be done here, to fit the country properly, obtain a pleasing and satisfactory alignment for the parkway, and if possible, tie up the three roads in one circle."

⁷ Peterson 1934b.

1935, plan⁸ increased the width of the arch at its springing point to fifty-one feet, a distance equivalent to the forty-foot wide roadway intersection, the two four-foot concrete walks, and the parapets on the top of the bridge. The new keystone measured six and one-half feet in height. Inside the arch vault, two standard log guardrails flanked both sides of the Colonial Parkway. The next alteration in February⁹ increased the length of the bridge to 130 feet and its width to seventy-four and one-half feet. The parapets now had center camber sections three feet high and fifty-five feet eight inches long; the parapet portions on either side of the center length sloped down to a height of two feet at their more pronounced flared ends. The log guardrails had disappeared. The first revision in March, 1935,¹⁰ marked the first appearance of the five brick ribs in the arch vault's interior; these ribs had greater widths on the vault's toe walls. The second March, 1935, revision¹¹ specified the brickwork details. English bond (alternating rows of headers and stretchers) covered the arch vault interior, the arch ring, and the spandrel walls.

By July, 1935, the final plans for the Capitol Landing Underpass had solidified.¹² The center lines of the State By-Pass and Capitol Landing Road intersected at an angle of fourteen degrees twenty-one minutes. This very acute angle made it possible for the underpass to carry the entire State By-Pass and Capitol Landing Road intersection over the Colonial Parkway. The single arch reinforced concrete bridge kept its overall length of 130 feet but reduced its width to sixty-four feet and seven and one-half inches. The arch still had its fifty-one foot spring line but now had an English Portland stone

⁸ Peterson 1935a.

⁹ Peterson 1935b.

¹⁰ Peterson 1935c.

¹¹ Peterson 1935d. The brick pattern of three rows of stretchers and one row of headers on the interior of the vault suggests a possible link to the 1860 brick arch viaduct of the Central of Georgia Railway that spanned West Boundary Street and the Savannah and Ogeechee Canal in Savannah, Georgia. This viaduct provided Peterson with inspiration for the C & O Railroad Underpass. For information on the viaduct, see the Historic American Engineering Record documentation report HAER No. GA-1, Central of Georgia Railway: Savannah Repair Shops, 124-25, and HAER No. GA-4, Central of Georgia Railway: 1860 Brick Arch Viaduct. For information on the C & O Railroad Underpass, see the documentation report HAER No. VA-48-C.

¹² Bureau of Public Roads 1935a, Sheet G-151 ("Plan and East Elevation"). Although the Bureau of Public Roads exercised immediate project supervision, the National Park Service nevertheless had to approve all plans and accept completed work. For more information on the construction of the Colonial Parkway, see the Historic American Engineering Record documentation report HAER No. VA-48, especially 3-5, 9, 10.

keystone¹³ measuring six feet seven and one-half inches in height. Complete with the original limestone skewbacks, brick wash, and brick retaining walls, the bridge achieved its maximum clearance at seventeen feet four and one-half inches. The interior vault's decorative ribs now measured two feet three and one-half inches wide (wider on the toe walls) and had intervening spaces of thirteen feet one inch between them. The center section of the underpass' parapet had increased its length by three inches and this section's height now reached six feet seven and one-half inches. The lengths of the parapets outside the center sections had a downward slope of one-fourth of an inch for every foot, arriving at the ends with less curvature than the previous design.

Even before the final plans had been completed, the National Park Service began to consider how to contract the construction work for the Capitol Landing Underpass. Although the argument had been advanced for separate contracts for the Capitol Landing and C & O Railroad underpasses,¹⁴ the Bureau of Public Roads nevertheless eventually decided to combine the two projects into a single venture. Offered on September 23, 1935, the contract for Colonial Parkway Project 1-C-2--1-D-2 went to C.Y. Thomason of Greenwood, South Carolina, who submitted the low bid of \$175,389.30.¹⁵ The original schedule called for only 365 days to complete both structures at an original allotment of \$236,000 for construction and \$24,000 for engineering. The Bureau of Public Roads gave Thomason its approval to begin construction on December 20, 1935, but heavy snows and cold weather prevented any significant work from being accomplished. After halting construction on Christmas Eve, Thomason resumed work on January 13, 1936, and started the excavation for the Capitol Landing Underpass. Despite the first delay, Bureau of Public Roads associate highway engineer William H. Smith reported that Thomason would likely finish his contract before the close of 1936.¹⁶

¹³ Peterson 1988.

¹⁴ Spelman 1935. In his letter, this Bureau of Public Roads' district engineer believed that both underpasses would each "be of sufficient size to attract good bids from bridge contractors."

¹⁵ Bureau of Public Roads 1935b; Flickinger "Superintendent's Monthly Narrative Report" (October, 1935), 8.

In July, 1933, B. Floyd Flickinger replaced William M. Robinson, Jr. as park superintendent; Robinson held the position from October, 1931 to June, 1933. Flickinger remained in office until January, 1939. The park superintendent filed his monthly report (hereafter abbreviated "SMNR") during the month following the month stated in the title.

"Project 1-C-2" refers to the planning and construction of the Capitol Landing Underpass. "Project 1-D-2" indicates the planning and construction of the C & O Railroad Underpass.

¹⁶ Flickinger, "SMNR" (December, 1935), 7; "SMNR" (January, 1936), 10-11.

Cold weather continued to hamper the construction of the parkway underpasses, resulting in the loss of most of February and pushing the probable completion date well into 1937.¹⁷ Although March brought more favorable weather and completion of most of the excavation for the Capitol Landing Underpass, another problem from nature arose. "A soft strata of subsoil has been encountered, and it will be necessary to drive piles for at least a portion of the foundation for this structure."¹⁸ In order to increase the strength of the bridge's base, the first two "steps" of the abutment footings on either side of the arch received a total of 254 timber pilings tied together with steel and covered with concrete.¹⁹ Improved weather conditions made possible the completion of the reinforced concrete abutment walls and the foundation piles by June. During the next three months, Thomason tackled the construction of the arch and began laying the brickwork. By October, 1936, all concrete except for the toe walls had been poured and work continued on the brick facing and waterproofing. The facing on the bridge consisted of polychromatic English bond brickwork which incorporated bright shades of grey, salmon, rust, brown, and black. Brickwork and backfilling the arch constituted the construction activities at the underpass for the remainder of 1936.²⁰ Constructing the toe walls, finishing all brickwork, completing the road grading, and smoothing the soil slopes against the spandrel walls occupied the first five months of 1937. Thomason finished his contract on June 19, 1937 at an estimated final cost of \$225,000. The total building time required had increased from an initial 365 days to 471 days, thirty-three of those days coming from allowed extra time and seventy-three days lost to four stop work orders.²¹

The Capitol Landing and the C & O Railroad Underpasses, "two of the largest highway projects to be done in the State in recent years," fulfilled the goal of Colonial Parkway planners in limiting traffic because these bridges brought the parkway "into Williamsburg without touching existing highways at any point."²² Like the other brick-faced Colonial Parkway bridges, the Capitol Landing Underpass reflected the decision on the part of the designers to have the structure complement the surroundings. This bridge neither added to nor detracted from the environment. The structure contained no "sophisticated engineering" such as an open spandrel or dramatic exterior

¹⁷ Flickinger "SMNR" (February, 1936), 12.

¹⁸ Flickinger "SMNR" (March, 1936), 11.

¹⁹ Bureau of Public Roads 1936, Sheet G-271 ("Pile Layout").

²⁰ Flickinger "SMNR" (June, 1936), 11; "SMNR" (July, 1936), 13; "SMNR" (October, 1936), 10; "SMNR" (November, 1936), 9.

²¹ Monthly Narrative Reports of Bureau of Public Roads Engineers: Colonial National Monument Parkway. April and June, 1937.

²² "Motorists Anxious for Completion of Parkway Pavement" 1937.

decorations that would draw attention to the bridge. The sizeable parapet decreased the amount of traffic crossing the underpass seen by a motorist on the Colonial Parkway. While using an arch with subdued brick facing as "colonial" motifs, the brickwork and the bridge's relatively small dimensions did not give the underpass a massive heavy appearance. The Capitol Landing Underpass thus embodied not only a structure done in the colonial architectural style but also one successful example in the effort to integrate the Colonial Parkway into the Tidewater natural environment.²³

²³ For additional information on the relationship between the Colonial Parkway's bridges and the environment, see the documentation report HAER No. VA-48, 7-8.

Bibliography

Colonial National Historical Park is abbreviated CNHP. Entries labelled "Navy Mine Depot" and "Parkway: HLW" can be found respectively in File No. 630-Navy Mine Depot and File No. 630-Parkway: Hubbard's Lane to Williamsburg. Both these files are located in the Colonial Parkway Original Construction Specification files, Engineer's Office, CNHP Maintenance Division, Yorktown.

Albright, Horace M. 1933. Letter from Albright, Director of the National Park Service, to Kenneth Chorley, Williamsburg Restoration, Inc. May 31, 1933. [Located in Navy Mine Depot.]

Bureau of Public Roads, U.S. Department of Agriculture. 1935a. Drawings for "Colonial National Monument Parkway: Underpass at Intersection of Virginia State By-Pass and Capitol Landing Road." 9 sheets (G-149 to G-154 and 3 sheets from Eastern Division, Branch of Plans & Design, National Park Service). July, 1935. Document COL 935, Denver Service Center, National Park Service.

_____. 1935b. Typed transcript of the bid notice for Colonial Parkway Project 1C2-1D2. September 23, 1935. [Located in Parkway: HLW]

_____. 1936. Drawings for "Colonial National Monument Parkway: Underpass at Intersection of Virginia State By-Pass and Capitol Landing Road." 7 sheets (reference number 256-71). March, 1936. [Located at U.S. Department of Transportation, Federal Highway Administration, Arlington, Virginia.]

Federal Highway Administration, U.S. Department of Transportation. 1983. "Bridge Safety Inspection Report: Virginia Route 31 or Page Street over Colonial Parkway, Colonial National Historical Park, Structure No. 4290-018P." June 27, 1983. [Located at U.S. Department of Transportation, Federal Highway Administration, Arlington, Virginia.]

Flickinger, B. Floyd. "Superintendent's Monthly Narrative Reports, Colonial National Historical Park." File No. 207-002.3 or 207-02.3. [Located in Historian's Office, CNHP Headquarters, Yorktown.]

The park superintendent filed these reports during the month following the month stated in the title. Flickinger held the position of park superintendent from July, 1933, to January, 1939. Information on the parkway bridges can be found under the headings "170-Plans, Maps, and Surveys: Bureau of Public Roads" and "230-New Construction: Parkway." Citations in the narrative use the abbreviation "SMNR" and give the month being reviewed.

Monthly Narrative Reports of Bureau of Public Roads Engineers: Colonial National Monument Parkway. April and June 1937. Record Group 79 (National Park Service), Entry 28, National Archives, Washington, D.C.

"Motorists Anxious for Completion of Parkway Pavement." 1937. Newport News Daily Press, February 7, 1937. [Located in Parkway: HLW.]

Peterson, Charles E. 1934a. Memorandum from Peterson, Chief of the Eastern Division of the National Park Service's Branch of Plans and Design, to A.E. Demaray, Senior Assistant Director of the National Park Service. June 4, 1934. [Located in Parkway: HLW.]

_____. "Preliminary Architectural Plan--Underpass at Intersection of Va. State By-Pass and Capitol Landing Road, Colonial National Monument Parkway." Eastern Division, Branch of Plans & Designs, National Park Service. Documents COL 1213, 1213 A-F, 9 sheets (1213D and 1213F each contain 2 sheets), Denver Service Center, National Park Service.

From December, 1934, to July, 1935, Peterson and the Eastern Division made a series of preliminary plans for the underpass. The document numbers, their dates, and citation dates in the narrative are as follows:

<u>DOCUMENT NUMBER</u>	<u>DATE</u>	<u>CITATION DATE</u>
COL 1213	12-18-34	1934b
COL 1213A	1-4-35	1935a
COL 1213B	2-25-35	1935b
COL 1213C	3-18-35	1935c
COL 1213D	3-25-35	1935d
COL 1213E	7-1-35	-----
COL 1213F	6-18-35	-----

_____. 1988. Personal interview. August 19, 1988.

"Right-of-Way For By-Pass Being Sought; Will Start Construction Immediately." 1933. Newport News Daily Press, June 21, 1933. [Located in Navy Mine Depot.]

Robinson, William M., Jr. 1933. Letter from Robinson, Colonial National Monument Park Superintendent, to Charles E. Peterson, Chief of the Eastern Division of the National Park Service's Branch of Plans and Design. May 19, 1933. [Located in Navy Mine Depot.]

Shirley, H.G. 1931. Letter from Shirley, Virginia Highway Commissioner, to Charles E. Peterson, National Park Service assistant landscape architect. April 13, 1931. [Located in Navy Mine Depot.]

Spelman, H.J. 1933a. Letter from Spelman, the Bureau of Public Roads' principal highway engineer, to A.E. Demaray, Senior Assistant Director

of the National Park Service. May 29, 1933. [Located in Navy Mine Depot.]

_____. 1933b. Letter to Charles E. Peterson, Chief of the Eastern Division of the National Park Service's Branch of Plans and Design. July 11, 1933. [Located in Navy Mine Depot.]

_____. 1935. Letter to A.E. Demaray, Associate Director of the National Park Service. February 18, 1935. (Letter signed by "District Engineer.") [Located in Parkway: HLW.]

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INDEX TO PHOTOGRAPHS

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Colonial National Monument Parkway,
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HAER No. VA-48-B

Photographer: Jet T. Lowe, October 1988

VA-48-B-1	EAST ELEVATION.
VA-48-B-2	WEST ELEVATION.
VA-48-B-3	DETAIL OF ABUTMENT AND SPRING OF SKEWED ARCH.
VA-48-B-4	DETAIL OF NORTHWEST END POST FROM SIDEWALK.
VA-48-B-5	DETAIL OF NORTHWEST END POST FROM WEST SIDE.



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HAER No. VA-48-B-2







HAER No. 14-98-11-1



HAGER No. 14-98-5-1