

VLR-12/11/84

United States Department of the Interior
National Park Service

For NPS use only

National Register of Historic Places
Inventory—Nomination Form

received

date entered

See Instructions in How to Complete National Register Forms

Type all entries—complete applicable sections

(DHL File # 118-209)

1. Name

historic JAMES RIVER AND KANAWHA CANAL SITES IN LYNCHBURG, VIRGINIA (Thematic Nomination)
(~~DHL FILE NOS. 118-8, 118-206, 118-207~~) all inc. here

and or common N/A

2. Location

street & number (See Continuation Sheet #1) N/A not for publication

city, town Lynchburg N/A vicinity of

state Virginia code 51 county (city) code 680

3. Classification

Category	Ownership	Status	Present Use
<input type="checkbox"/> district	<input type="checkbox"/> public	<input checked="" type="checkbox"/> occupied	<input type="checkbox"/> agriculture
<input type="checkbox"/> building(s)	<input type="checkbox"/> private	<input type="checkbox"/> unoccupied	<input type="checkbox"/> commercial
<input checked="" type="checkbox"/> structure	<input checked="" type="checkbox"/> both	<input type="checkbox"/> work in progress	<input type="checkbox"/> educational
<input checked="" type="checkbox"/> site	Public Acquisition	Accessible	<input type="checkbox"/> entertainment
<input type="checkbox"/> object	<input type="checkbox"/> in process	<input checked="" type="checkbox"/> yes: restricted	<input type="checkbox"/> government
	<input type="checkbox"/> being considered	<input type="checkbox"/> yes: unrestricted	<input checked="" type="checkbox"/> industrial
	<u>N/A</u>	<input type="checkbox"/> no	<input type="checkbox"/> military
			<input type="checkbox"/> museum
			<input type="checkbox"/> park
			<input type="checkbox"/> private residence
			<input type="checkbox"/> religious
			<input type="checkbox"/> scientific
			<input checked="" type="checkbox"/> transportation
			<input type="checkbox"/> other:

4. Owner of Property

name Multiple

street & number N/A

city, town N/A N/A vicinity of state N/A

5. Location of Legal Description

courthouse, registry of deeds, etc. Lynchburg City Courthouse, Clerk's Office

street & number Court and Ninth Streets

city, town Lynchburg state Virginia 24501

6. Representation in Existing Surveys

title Historic American Engineering Record
Lower Basin Survey has this property been determined eligible? yes no

date Summer, 1977 federal state county local

depository for survey records Historic American Engineering Record, Library of Congress

city, town Washington, DC state

7. Description

Condition		Check one	Check one
<input type="checkbox"/> excellent	<input checked="" type="checkbox"/> deteriorated	<input type="checkbox"/> unaltered	<input checked="" type="checkbox"/> original site
<input type="checkbox"/> good	<input type="checkbox"/> ruins	<input checked="" type="checkbox"/> altered	<input type="checkbox"/> moved date <u>N/A</u>
<input checked="" type="checkbox"/> fair	<input type="checkbox"/> unexposed		

Describe the present and original (if known) physical appearance

SUMMARY DESCRIPTION

Lynchburg was the terminus of the First Grand Division of the James River and Kanawha Canal. As the expected center of a great deal of commerce, and as the result of a number of natural and manmade features which had to be accommodated at the city's waterfront, Lynchburg was given a number of major components of the work. Only in a few short stretches through the city did the canal resemble the tranquil waterway with attendant towpath that characterized its approximately hundred and fifty-mile course upstream from Richmond. When the first boats arrived in Lynchburg in 1841, the major portions of the canal in Lynchburg consisted of the Lynchburg Basin (later to be termed the Lower Basin), a stone bridge carrying Water (now Ninth) Street over the canal, a major aqueduct over Blackwater Creek, and a dam supplying water both to the canal and to the city's pumphouse for its own water supply. Only between the aqueduct and the dam did the waterway assume the traditional appearance of a canal.

Although the canal bed can still be traced and records and plats do exist to pinpoint the locations of its various original features, a Historic American Engineering Record survey of the Lower Basin conducted in the summer of 1977 revealed that only a few of the Lynchburg portions of the long-abandoned canal exist in anything resembling their original state. Both the Lower Basin and a later Upper Basin survive primarily in name only--as the traditional designations of the two major centers of the city's industrial activity on the banks of the James River. Both basins have been filled in, paved over, or built upon. In addition to buildings, a number of railroad tracks crisscross the spaces once occupied by the basins. Only at its upstream end, where the Lower Basin approached the Ninth Street Bridge, is there a relatively undisturbed, though filled, remnant of this feature. Only these portions of the canal, that are in relatively original condition, form components of this thematic nomination. These portions are divided into three sections, corresponding to the three nominated sites:

- A.: Upper portion of Lower Basin and Ninth Street Bridge
- B: Blackwater Aqueduct
- C: Waterworks dam, James River dam and guard locks

ARCHITECTURAL ANALYSIS

A: Upper Portion of Lower Basin and Ninth Street Bridge

In the two-block area from Eleventh to Ninth streets, and between Jefferson Street and the former Norfolk and Western Freight Depot, portions of the bed of the canal have been paved for parking while other parts present a grassy, unused stretch of land. Although the bed of the canal at this point is below the present grade level, later infill is not as deep as in other sections, and the outlines of this upper limit of the Lower Basin are easily established. In addition, portions of the walling on either side are still present. As noted in the 1977 Lower Basin study undertaken by the Historic American Engineering Record, a restored section of canal basin at this point could serve as an interpretive display area, with the possible recreation of loading facilities and a packet boat. However, a major city sewer line runs just below grade through this portion of the canal bed, and unless it can be relocated, any rewatering of the basin would have to be very shallow. This stretch of

8. Significance

Period	Areas of Significance—Check and justify below			
<input type="checkbox"/> prehistoric	<input type="checkbox"/> archeology-prehistoric	<input type="checkbox"/> community planning	<input type="checkbox"/> landscape architecture	<input type="checkbox"/> religion
<input type="checkbox"/> 1400-1499	<input type="checkbox"/> archeology-historic	<input type="checkbox"/> conservation	<input type="checkbox"/> law	<input type="checkbox"/> science
<input type="checkbox"/> 1500-1599	<input type="checkbox"/> agriculture	<input type="checkbox"/> economics	<input type="checkbox"/> literature	<input type="checkbox"/> sculpture
<input type="checkbox"/> 1600-1699	<input type="checkbox"/> architecture	<input type="checkbox"/> education	<input type="checkbox"/> military	<input type="checkbox"/> social/ humanitarian
<input type="checkbox"/> 1700-1799	<input type="checkbox"/> art	<input checked="" type="checkbox"/> engineering	<input type="checkbox"/> music	<input type="checkbox"/> theater
<input checked="" type="checkbox"/> 1800-1899	<input checked="" type="checkbox"/> commerce	<input type="checkbox"/> exploration/settlement	<input type="checkbox"/> philosophy	<input checked="" type="checkbox"/> transportation
<input type="checkbox"/> 1900-	<input type="checkbox"/> communications	<input checked="" type="checkbox"/> industry	<input type="checkbox"/> politics/government	<input type="checkbox"/> other (specify)
		<input type="checkbox"/> invention		

Specific dates 1836-1882 **Builder/Architect** Charles Ellet, Engineer

Statement of Significance (in one paragraph)

STATEMENT OF SIGNIFICANCE

The James River and Kanawha Canal was one of the nation's major commercial and transportation arteries during the mid-19th century. Lynchburg was the terminus of the "First Grand Division," which extended 146½ miles from the Richmond basin to a feeder dam just above Lynchburg. This section was opened to traffic in December 1840, and was the only one of the three divisions which was ever completed. During the 1850s, the canal enjoyed its greatest prosperity and assisted in Lynchburg's development as the major commercial and industrial center of the Piedmont. The canal suffered some damage late in the Civil War, and during the 1870s was severely harmed by two disastrous floods. In 1880 the newly organized Richmond and Alleghany Railway Company was authorized to take over the canal company's property. By 1881, tracks had been laid on the towpath and trains were running from Richmond through Lynchburg to Clifton Forge. Although the remains of the Lynchburg portions of the canal have been largely ignored in the 20th century, three important features still remain: The 9th Street Bridge and canal right-of-way, Blackwater Aqueduct, and the Scots Mill Dam. Considered as a thematic group, these sites provide important information on the development of engineering and transportation technology in the first three-quarters of the 19th century. In addition, they are key monuments to the commercial development of the state as well as tangible reminders of the water power necessary for industrial development in the 19th century.

HISTORICAL BACKGROUND

The formal organization of the James River and Kanawha Company in 1835 was in part the culmination of attempts to improve James River navigation which had begun during the previous century. In 1785, the Virginia General Assembly created the James River Company, whose mandate was stated in its act of establishment: "An Act for clearing and improving the navigation of James River." Some work was done under the company's aegis as far as Buchanan. In 1812, the Assembly appointed a commission to investigate the James from the town of Lynchburg westward and mark out the course of a turnpike from the headwaters of the James across the mountains to the westward flowing rivers beyond. Although the commission, which met in Lynchburg, reported quite favorably on the prospects, it was not until February 17, 1820, that legislation reorganizing the James River Company as an agency of the Commonwealth was enacted. Again, a great deal of work was accomplished, some of it beyond and across the mountains to the west of Lynchburg. Nothing affecting the town, or located within its bounds, was built during the fifteen years the company operated as a state agency, however.

In 1832, the legislature sought to broaden the base of responsibility for the Commonwealth's major east-west transportation artery by chartering the James River and

9. Major Bibliographical References

Dunaway, Wayland Fuller. History of the James River and Kanawha Company. New York, 1922.
 Druyvesteyn, Kent. "With Great Vision; the James River and Kanawha Canal." Virginia Cavalcade, 21:3 (Winter, 1972).

(See Continuation Sheet #10)

10. Geographical Data

Acreeage of nominated property A: 1-1/3 acre ; B: less than one acre; C: less than one acre

Quadrangle name Lynchburg, VA

Quadrangle scale 1:24000

UMT References

A

1	7
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6	6	4	6	2	0
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4	1	4	2	3	8	0
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 Zone Easting Northing

B

1	7
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6	6	4	5	4	0
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4	1	4	2	5	5	0
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 Zone Easting Northing

C

1	7
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6	6	4	4	4	0
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4	1	4	3	3	4	0
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D

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Verbal boundary description and justification Boundary Justification: The site boundaries conform to the areas where above surface canal features are best preserved and best exemplify the historic context and significance of the canal system within the
 (See Continuation Sheet #10)

List all states and counties for properties overlapping state or county boundaries

state	N/A	code	county	N/A	code
state	N/A	code	county	N/A	code

state	N/A	code	county	N/A	code
-------	-----	------	--------	-----	------

11. Form Prepared By

name/title T. Gibson Hobbs, S. Allen Chambers,
and VIRGINIA HISTORIC LANDMARKS COMMISSION STAFF

organization N/A **date** 1984

street & number 221 Governor Street **telephone** (804) 786-3144

city or town Richmond **state** Virginia 23219

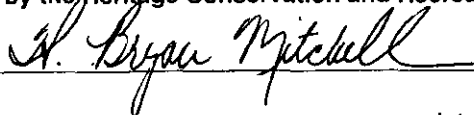
12. State Historic Preservation Officer Certification

The evaluated significance of this property within the state is:

national state local

As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the Heritage Conservation and Recreation Service.

State Historic Preservation Officer signature



H. Bryan Mitchell, Director
title VIRGINIA HISTORIC LANDMARKS

date September 29, 1985

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I hereby certify that this property is included in the National Register

date

Keeper of the National Register

Attest:

date

Chief of Registration

United States Department of the Interior
National Park Service

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JAMES RIVER AND KANAWHA CANAL SITES IN LYNCHBURG, VA

Continuation sheet #1

Item number 2, 7

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2. LOCATION

- A. Lower Basin and Ninth Street Bridge - between Jefferson Street and James River, and between 11th Street and 9th Street.
- B. Aqueduct - between Norfolk and Western Railroad tracks and Chesapeake and Ohio Railroad tracks, crossing Blackwater Creek.
- C. Waterworks Dam and James River Dam and Guard Locks - in grounds of Griffin Foundry Company at lower end of Daniel's (formerly Cabell's) Island. James River Dam extends across James River from Lynchburg corporate limits to northern shore in Amherst County.

Note: See attached copy of 1891 map for additional locational references.

7. DESCRIPTION -- Architectural Analysis

the canal bed is easily accessible from the business center of Lynchburg, which lies only two blocks away.

At the upstream end of this part of the canal is the Ninth Street Bridge, the least changed segment of all. Although little maintenance has been afforded the bridge over the past several decades, it still carries occasional heavy traffic over the almost fifty-foot wide canal bed. The bridge itself is built of sandstone laid in rough courses, above an arch of finished three-foot high sandstone voussoirs. It is flanked by 14-foot long by 10-foot wide by seventeen-foot high stone abutments. The bridge itself has a forty-eight-foot span and is thirty-three feet wide. At its keystone, the elliptical arch rises seven feet above the springing line of the arch. The bottom of the canal lies five feet below the springing level. Just beyond the upstream end of the bridge, the bed of the canal has been filled in to a greater height than downstream, and paved over as a parking lot. Thus, only the crown of the arch is visible from the upstream end. Above the keystone is a finished sandstone block, set into the wall above the arch. This "signature" stone carries the legend "BUILT AD 1839 BY J.S. KING."

B: Blackwater Creek Aqueduct

In the short distance of approximately 300 feet between the Ninth Street Bridge and the aqueduct, the course of the canal has been completely obliterated. The canal itself has been covered over, and several railroad tracks have been laid over the former bed. This area was, in the 1890s, utilized as part of an approach to the Union Station. Although the station has been demolished, the tracks still remain in active use.

Just beyond the banks of Blackwater Creek, the course of the canal is again revealed by the aqueduct. The aqueduct remains consist of four stone piers and two

(See Continuation Sheet #2)

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7. DESCRIPTION -- Architectural Analysis

abutments, all in various states of completeness and repair. The piers are spaced about twenty-five feet apart in the creek. The bases are about six feet wide and are finished with $\frac{1}{2}$ -round capstones approximately six feet in diameter. Instead of the wooden trestle carrying the canal and towpath which they originally supported, they now serve to carry a steel sewer pipe over Blackwater Creek, near its mouth. Because of the dense growth along the steep banks of the creek, the aqueduct remains are visible only from the creek itself, or from the later railroad trestle which crosses its northwestern end. During the summer of 1979, a limited amount of archaeological exploration on the northwestern abutment revealed a small section of the original wooden trunk timbers still in place.

C: Waterworks dam, James River dam, and Guard Locks

To the northwest of the aqueduct, the path of the canal can once again be traced, as many of the now abandoned industrial buildings which once were built alongside follow the curve which the waterway took at this point. Although the path can be traced, this section has also been filled in and the greater portion covered with railroad tracks or pavement. Within the grounds of the Griffin Foundry, beyond the line of Seventh Street, was the Upper Basin, now completely lost to sight with later filling and construction. Almost half a mile above the aqueduct is the third section of the canal proposed for nomination to the National Register of Historic Places. This consists of a variable radius waterworks stone dam between the southern shore of the James River and the lower tip of Daniel's Island, and the longer, later straight, dam from the northern shore of the island's tip to the northern bank of the river in Amherst County. The entire length of the dam is 200 feet. Both structures are constructed of massive stone and rise approximately twenty feet above the riverbed. Work on the curved dam (the Waterworks dam) was begun in 1836 to replace the old dam which had been destroyed in a freshet. Although numerous repairs have been made, and the dam heightened, much of the original stonework remains. The larger dam across the main channel of the river was finished early in 1883, though plans for its construction had been made much earlier. As the canal had gone into receivership by this time, the contractor was allowed to take much of the stone of which this dam is built from earlier canal construction. Also included in this portion of the nominated property is the stone-lined inlet to the later separate waterway constructed to supply the city waterworks. Walls of the inlet are constructed of massive blocks of sandstone. It was at this point, at the waterworks dam, that the First Grand Division of the canal terminated.

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JAMES RIVER AND KANAWHA CANAL SITES IN LYNCHBURG, VA

Continuation sheet #3

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8. SIGNIFICANCE - Historical Background

Kanawha Company as a joint stock corporation, and only after this reorganization would Lynchburg see tangible evidence of the project. After adequate subscriptions were affirmed, the company was officially organized in May 1835. The initial subscription was 46,718 shares, of which the Commonwealth of Virginia held 30,000. The Corporation of Lynchburg pledged itself to 5,000. Other corporate contributors were Richmond and the Bank of Virginia.

By its act of incorporation, the company was given three options to realize its goal of connecting the James and Kanawha rivers. Options one and two called for a combination network of canal and railroad. Option three, proposed the construction of a railroad extending the entire course from Richmond to the Ohio, with no mention of a canal; hence the fact that nowhere in the corporate name of the company did the work "canal" appear. The directors, however, decided to undertake a version of their first option.

Under the plan, a canal would be built from Richmond to Covington, a railroad would carry traffic over the mountains to the Kanawha, and that river would be cleared and improved to its confluence with the Ohio.

The construction history of the many components of the canal is well documented in the annual reports of the company, which were issued from 1835 (No. 1) to 1877-80 (No. 46). Each report contained a full statement from the company's president, the first being Joseph C. Cabell, and usually contained as well a complete account of the work accomplished by the chief engineer and his assistants during that year.

Early in their planning, the directors of the company decided to divide the construction of their project into three sections, which were termed Grand Divisions. The first of these, on which initial construction focused, extended from Richmond to the pre-existing waterworks dam just above Lynchburg. The total distance traversed in this First Grand Division was 146 45/100 miles, and it was divided further into three smaller sections. A principal assistant engineer was appointed to direct the course of work within each section, under the general supervision of the company's Chief Engineer. Charles Ellet, Jr. was the assistant appointed to carry out the work on the third section, which extended from Tye River in Nelson County to the waterworks dam, a distance of 39 miles.

Ellet, who was soon to be appointed chief engineer, had accomplished his initial reconnaissance of his section in time for his recommendations to be published in the First Annual Report, which was issued early in 1836.

Beginning at the terminus of the Third Grand Division, the waterworks dam, Ellet recommended that that structure be heightened by two feet. This would enable the dam to act as a feeder for the canal, increase the depth of the pond formed upstream, and would provide a greater force of water to supply the canal downstream. At the time, however, the waterworks dam extended only from the southern shore of the river to

(See Continuation Sheet #4)

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8. SIGNIFICANCE - Historical Background

Daniel's Island. The main stream of the river, from the island to the northern shore, continued to flow without impediment.

From the dam to the pumphouse, Ellet suggested that the new canal conform in location to the pre-existing waterworks canal, but proposed that this section be increased to a width of sixty feet. This recommendation was made both because he felt this section, which was already developing as a manufacturing center, would have a great amount of boat traffic, and because it would increase the availability of water required by the growing town of Lynchburg. It was necessary, however, to have approval from the town to accomplish these aims, and on November 16, 1835, the town council gave its full approval to Ellet's proposals. For its part, the company promised that the flow of water from the dam to the town's pumphouse would be unobstructed, and assumed pre-existing contracts between the town and certain manufacturing establishments concerning the amount of water to be supplied to them. The stretch of the canal from the dam to the pumphouse eventually came to be known as Lynchburg's Upper Basin, and continued to be a center of the town's antebellum manufacturers, justifying the engineer's suggestion that it be made wider than the normal sections. In fact, by 1854, it became necessary to widen the canal into a basin. Downstream from the pumphouse, Ellet curved the line of the canal to the south, allowing it to cross Blackwater Creek at a right angle. Downstream from the aqueduct, the canal assumed a reverse curve, and again paralleled the course of the river. Approximately 300 feet from the aqueduct, the canal would pass under Water (now Ninth) Street, one of the main streets of the town, which led to the single bridge across the James River. The street would be carried over the canal by a stone bridge, which the company would construct. After passing Water Street, the canal would once again be widened "into a convenient and capacious basin." This, the last major canal segment in the town and originally formed the Lynchburg Basin, would become the Lower Basin, and would become even more important than the Upper Basin as the major industrial area of pre-Civil War Lynchburg.

Work on the Lynchburg components of the canal began early in 1836, and in March of that year Elijah Fletcher, who lived on the hill above the site of the Lower Basin, noted that crews had begun work below his garden. In June 1836, a freshet damaged the waterworks dam to the extent that it was almost entirely rebuilt, rather than merely heightened as Ellet had originally planned. Meeting in Lynchburg soon after the flood, the directors decided to let contracts immediately to rebuilt the dam and to enlarge the existing waterworks canal according to Ellet's proposal. By the time of the Second Annual Report, issued early in 1837, president Cabell reported that work on the dam was two-thirds completed. Also printed in this report was a list of property owners whose lands had been acquired by the canal company, and the amounts paid for their acquisition. In the Lynchburg sections, William Daniel received the largest compensation (\$2,800) for the taking of land from his Point of Honor estate. Next in the amount paid was John Percival, who was to receive \$808. Percival, however, was one of the few property owners who objected to the taking of his land through the power of condemnation granted by the legislature to the company, and the ensuing litigation between him and the company caused a long and costly delay.

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8. SIGNIFICANCE - Historical Background

Work progressed throughout the length of the First Grand Division during 1837, to the extent that president Cabell could report that "the contractors and their throngs of labourers and teams (form) a line almost unbroken of the most lively and cheering industry for 120 miles." Some of these laborers were Scotch-Irish stonemasons and German mechanics, who had been imported by the company. Cabell also noted in his statement printed in the Third Annual Report that the contract for the Blackwater aqueduct had been let and work had commenced on it.

Ellet's report of the progress of construction printed in the Fourth Annual Report carried the happy announcement that there was "every reason to believe" that the whole distance of the First Grand Division would be opened to traffic by the end of 1839. That pronouncement was not realized, however, and in the Fifth Annual Report, issued in December of that year, Cabell acknowledged that progress "had been less rapid than was anticipated." The reasons, he went on to explain, were both physical and moral. An unusually hot summer had caused a number of the Irish laborers to leave and seek employment in the north. In addition, it was announced at a meeting of the board of directors in July 1839 that salaries would have to be postponed. This notification resulted in the resignation of "not less than one half of the whole white force." Cabell gave his opinion that the number would have been even greater had not the company taken the precaution to furnish the laborers with a supply of "ardent spirits." Also contributing to the delay was the matter of John Percival's property, "a space of only 300 yards." It was not until 1840, in fact, that the company was able to acquire Percival's property and cross it.

Although the canal was not opened by the time the 1839 report was printed, the major elements of the Lynchburg portion had been completed and were given a full description by the company's president. Amplifying Ellet's earlier report and beginning at the downstream portion, Cabell announced that "within the limits of the town (the canal) is expanded into a capacious basin 600 feet long and 125 feet wide, supported by a wall 8 feet high throughout the whole extent of its upper side." This, the Lower Basin, was separated from the nearby river "by 300 feet of slope wall, averaging 17 feet in height, and by 500 feet of riprap wall averaging 10 feet high." Above the basin was the Water Street bridge, which was "built of solid masonry founded on timber resting upon clay. The width of this bridge exclusive of the wings is 40 feet, including the wings 60 feet; thus occupying the whole breadth of the street." Three hundred feet upstream from the bridge was the completed aqueduct, which "rests upon two abutments and 4 piers." The president described this important construction in far greater detail:

The piers are 56 feet long, 5 feet thick, and 8½ feet high, and are placed 20 feet apart; thereby making the total space between the abutments 120 feet. On the tops of the piers, both on the lower and upper sides, parapets constructed of stone form foundations for the flooring of the berm and tow-path above, and supports for the timbers in the sides of the wooden trunk. These parapets are 8 feet thick at bottom and 7 feet 2 inches at top, and 8½ feet high; the courses of masonry as they were carried up being dowelled together with iron pins let three

(See Continuation Sheet #6)

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8. SIGNIFICANCE - Historical Background

inches into the lower course and two inches into those above; thus preventing any danger from sudden shocks from drift wood in freshets. The water-way of the aqueduct is 35 feet wide at bottom and 36 feet at top. The bottom is formed of 37 timbers each 1 foot square and of various lengths, laid close in contact and resting on the piers and abutments. These timbers are also pinned together every ten feet of their length, and kept firm in place by 90 iron anchors passing down on the sides of the piers and sunk 2 feet in the rock of the foundation. The sides of the trunk are formed of timbers 12 inches square laid one upon top of the other and pinned together, and are fortified on the exterior by 5 strips of timber attached to each interval between the parapets, each strip being secured by 3 bolts passing through it to the inside of the trunk.

The aqueduct is founded on good rock, and the masonry, which is of the character of "rock work," is well laid in hydraulic cement. The stone was procured on the opposite side of the river, and the wood was hauled over land 17 miles.

Cabell's report concluded the discussion of the work which had been accomplished on the First Grand Division with a description of the dam and guard lock above. Noting that the new dam replaced the one damaged in 1836, he stated that it was:

...constructed of rubble masonry in the form of an arc of a circle, the diameter of which is 120 feet and versed sine 20 feet. It is 15 feet high and 12 feet thick at the base, and 6 feet on top; the batter on the lower side being 1 inch to a foot. The whole has been covered with good coping 6 feet long and 2 feet thick, secured to one another by iron clamps. The abutments are 38 feet long and 25 feet high, and are of solid masonry. The guard lock is of cut stone, and is 15 feet wide and 16½ feet high. The stone for the coping of the dam was transported over land 13 miles; that for the residue of the dam was obtained from a quarry on the opposite side of the river, and that for the guard lock from a short distance up the river.

During the late summer of 1840 water was introduced into sections of the canal, and by December, work was at last complete. On the third of that month:

...the freight boat General Harrison, accompanied by a similar boat, both laden with merchandize from the city of Richmond, entered the basin at Lynchburg, and were received with cheers and acclamations by the inhabitants of the town, who had assembled to witness their arrival.

Throughout the 1840s and 1850s, the company's annual reports cited growing revenues and expectations of continuous construction to realize their aim of connecting the James and Kanawha rivers. In the meantime, other transportation networks were established which initially aided the canal, though they were ultimately to assist in its demise. In 1851, the Virginia and Tennessee Railroad had reached Salem, and in

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JAMES RIVER AND KANAWHA CANAL SITES IN LYNCHBURG, VA

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1856 the line was completed from Lynchburg to Bristol, on the Virginia-Tennessee border. The V & T depot was located adjacent to the Water Street bridge of the canal, and behind it were freight and passenger platforms, allowing easy transfer of goods and people from the canal to the trains and vice versa. In 1853, aided at least in part because of the goods shipped from the railroad to the canal at Lynchburg, the James River and Kanawha Company recorded the highest amount in gross revenues it would ever produce, nearly three hundred thousand dollars. Set against these expectations of continued growth, however, were the increasing competition from railroad lines which were being constructed, and the damages which continually needed repair on the canal. Freshets occurred almost annually, and funds which would otherwise have gone to continue the westward path had to be diverted to repairing breaches, washed out culverts, and damaged bridges. Still, a number of improvements were accomplished. By 1851, the Second Grand Division had reached Buchanan, some fifty miles west of Lynchburg. In 1854, the 20th annual report noted that the rapid growth of the city of Lynchburg required more wharfage. To satisfy this demand, the company contracted to widen the Upper Basin and provide a public landing. By 1855, the company had spent \$12,970.82 on this project, which by then also included the construction of a feeder canal from the waterworks dam to the pumphouse, parallel to the James River and Kanawha Canal. This canal was built specifically to serve the city water supply, and was deemed necessary because the increased use of water by the city and the nearby industries often caused currents in the basin which made it difficult for the packet boats and barges to maneuver. At the same time, it was proposed to heighten the waterworks dam to provide an additional flow of water. By September 10, 1856, the total of \$17,544 had been spent on the basin, and although it was then estimated that an additional \$1,000 would be required to complete the work, the lower portion of this Upper Basin had already been put into use in July. Also by September 1856, a total of \$15,294 had been spent on the new feeder canal to the waterworks pumphouse.

On October 1, 1856, it was reported that the wooden superstructure of the Blackwater aqueduct had been completely rebuilt during the summer of that year. Although the dam had not yet been heightened by this time, the new walls of the aqueduct were built two feet higher than those of the old one in anticipation of the work to be done on the dam.

In 1857, the Twenty-third Annual Report was issued and announced that the Lynchburg (Upper) basin was completed with ample dock space in January 1857. The feeder canal, however, was not completed until July 1860. Three years before, on March 26, 1857, the company had entered into a contract for raising the waterworks dam. Even by the time of the Twenty-seventh Annual Report (1861), however, construction of the dam heightening had not begun, although the company could announce that "a large quantity of stone has been prepared for the Lynchburg dam." By this time, of course, the Civil War had broken out, and practically all such work had to be suspended. By 1862, forty-two of the freight boats which had plied the canal had been withdrawn from commercial service by their owners to serve the Confederate cause. Although they were

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8. SIGNIFICANCE - Historical Background

still used on the canal, largely to transport troops and bring the wounded from various battlefields to the Lynchburg hospitals, the tariff they once provided to the company was severely reduced. State law required that in time of war carriers of troops had only to pay one fourth of the normal tolls. Completely in sympathy with the Southern cause, the company's directors even extended this provision to apply to boats carrying munitions, baggage and other items needed by the Confederate forces. Realizing the importance of the canal as a vital element in the Confederate network, the Union forces sought to put it out of commission. On March 6, 1865 troops under General Sheridan partially succeeded in this aim, and although service was soon restored after the war on parts of the line, the war dealt the canal a serious blow.

More disastrous than the war were two additional freshets, one in 1870 and the second in 1877. Soon after 1870, the company again broached the subject of raising the Lynchburg dam. As a short-term expedient, a temporary plank barrier eighteen inches high was placed along the top of the waterworks dam. Acknowledging this to be but a stopgap measure, the president noted in his 1871 report that the only permanent improvement would be not only to raise the waterworks dam two feet, but also to construct a new stone dam of the same height, extending from the north abutment of that dam to the opposite side of the river. It was felt that with water power available on both shores, water power available to Lynchburg would be quadrupled. In his Forty-second Annual Report (1876), the president again urged the raising of the old dam and the construction of the new, and reminded his readers that a great deal of money had been spent in preparing the stonework for the incomplete dam. He also announced that the company could not complete the dam due to financial difficulty at the present time. In his next report, the president again dealt with the dam, and urged the city of Lynchburg to assist in the completion of the dam. Again reminding his audience of the large quantity of stone already prepared, he estimated that the dam could be built for \$60,000.

In the Forty-fourth Annual Report for 1878, the president's statement opened with the dire announcement that since the last annual meeting, "a disaster of almost unprecedented extent has befallen this company. Its property has been damaged upon almost every mile of its entire length." He was referring to the freshet of November 23, 1877, which was recorded as the greatest flood of the James River in a century. A last-ditch effort to restore the canal to service between Lynchburg and Richmond was undertaken through the use of convict labor, but all hopes were abandoned of repairing the portions west of Lynchburg. Added to the woes caused in 1877 was another flood, in September 1878. Even so, the president remembered to comment in this report that he now believed that the city would build the dam from the north abutment of the waterworks dam to the Amherst shore. It was not until 1883, however, that the successor railroad completed the dam as agreed with the city. The city had advanced \$50,000 to help the canal company repair the damages of the 1870 and 1877 floods which debt the railroad assumed. This was cancelled in return for completion of the dam by the railroad. Even at the time of this report, the 1877-78 session of the Virginia General Assembly had introduced a bill to transform the canal system into a railroad.

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8. SIGNIFICANCE - Historical Background

A February 27, 1879 act incorporated the Richmond and Alleghany Railroad Company and authorized it to take over the canal company's property. The canal company would not agree to the terms and it was not until early 1880 that the actual transfer took place.

Beginning in March 1880, starting from Clifton Forge and Richmond ties and rails were placed on the towpath. As the two rail lines approached Lynchburg boat operations were contracted to match. On August 17, 1881 the first train of the R & A line reached Lynchburg and canal operations ceased except for traffic on the North River which continued a few months. In early 1883, the railroad completed the stone dam across the river. As the canal was no longer in use as a transportation artery, stone from culverts and locks both upstream and downstream from Lynchburg in addition to the stone already stockpiled for the construction, were used for the dam.

Damage to the Lynchburg portions of the canal as a result of the railroad and the construction of the dam was not as extensive as it might have been, however. In taking over the canal company's assets, the Richmond and Alleghany was also legally bound to honor the contractual agreements which had been entered into by the earlier organization. One of these was the 1835 contract, with its amendments, which guaranteed water rights to the city and to the manufacturing establishments along the banks of the two basins. In fact, item 6 of the charter of the Richmond and Alleghany Railroad specifically called on the company to maintain the water supply along the Lynchburg level, and not to "obstruct or destroy" the canal "between the water works dam above Lynchburg and the first lock below Lynchburg, as to lessen the present water supply."

Because of these restrictions, the company had initially planned to keep these sections of the canal intact, and construct tracks alongside. However, the two other railroads whose tracks already occupied much of the available level land objected and forced the new competitor to stay within its bounds. The solution to the problem of providing ample water for the city and its industries, while at the same time giving room for the tracks, was ingenious enough, but potentially fraught with danger. In 1882, a bulkhead was constructed in the center of the canal, with water kept on one side and the tracks laid on the other. The tracks were far below the surface of the water, and protected from it only by the thin sheet metal bulkhead. Passengers looking out of coach windows found themselves at eye level with the narrowed surface of the canal.

Officials of the competing lines and the city were sufficiently impressed--both with the solution and the determination which had fostered it, and eventually agreed to let the R & A utilize adjacent space. In November 1887, the sunken tracks were removed and rebuilt at grade level. The construction of a Union Station to service the several lines in 1890 required more filling of the canal bed, but the two basins were in large part intact as recently as 1940. In 1938 the Chesapeake and Ohio Railroad (the successor company to the Richmond and Alleghany) successfully sued the city to rescind the contract requiring the canal to be kept for a water supply.

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JAMES RIVER AND KANAWHA CANAL SITES IN LYNCHBURG, VA

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8. SIGNIFICANCE - Historical Background

In 1907 the city had constructed a reservoir for its water supply, making Lynchburg no longer dependent on the increasingly polluted James River for its water. Since that time, practically all traces of the upper and lower basins as they formerly existed have disappeared. At present, the Upper Basin lies almost entirely within the grounds of the Griffin Pipe Foundry. While the basin has been filled, the feeder waterway leading to the city pumphouse is still intact. The lower portions of this waterway have been repaired and incorporated in a pleasant landscaped area near the company's main office. The other portions of the canal have been largely forgotten in recent years. In the late 1970s, T. Gibson Hobbs, Jr. of Lynchburg, conducted a number of archaeological explorations in the area, and found that though much of the canal was overgrown, a number of elements remained. In particular, Mr. Hobbs brought to the attention of the public the fact that the aqueduct piers and abutments survive in surprisingly good condition. This survival is due, at least in part, to the fact that they continue in service as supports for a large welded steel sewer pipe feeder. The Ninth Street Bridge is the most unchanged component of the canal in Lynchburg, and still carries vehicular traffic over the semi-filled bed of the canal below.

Attention was also focussed on the canal during the summer months of 1977 when the Historic American Engineering Record surveyed the area. Titled the Lower Basin study, the survey made recommendations for the restoration and adaptive reuse of a number of presently underutilized industrial structures in what was once Lynchburg's waterfront. The study also suggested that portions of the canal could be reactivated to serve as both an interpretive historical park and recreation area. To date, no concrete actions have resulted from these proposals.

9. MAJOR BIBLIOGRAPHICAL REFERENCES

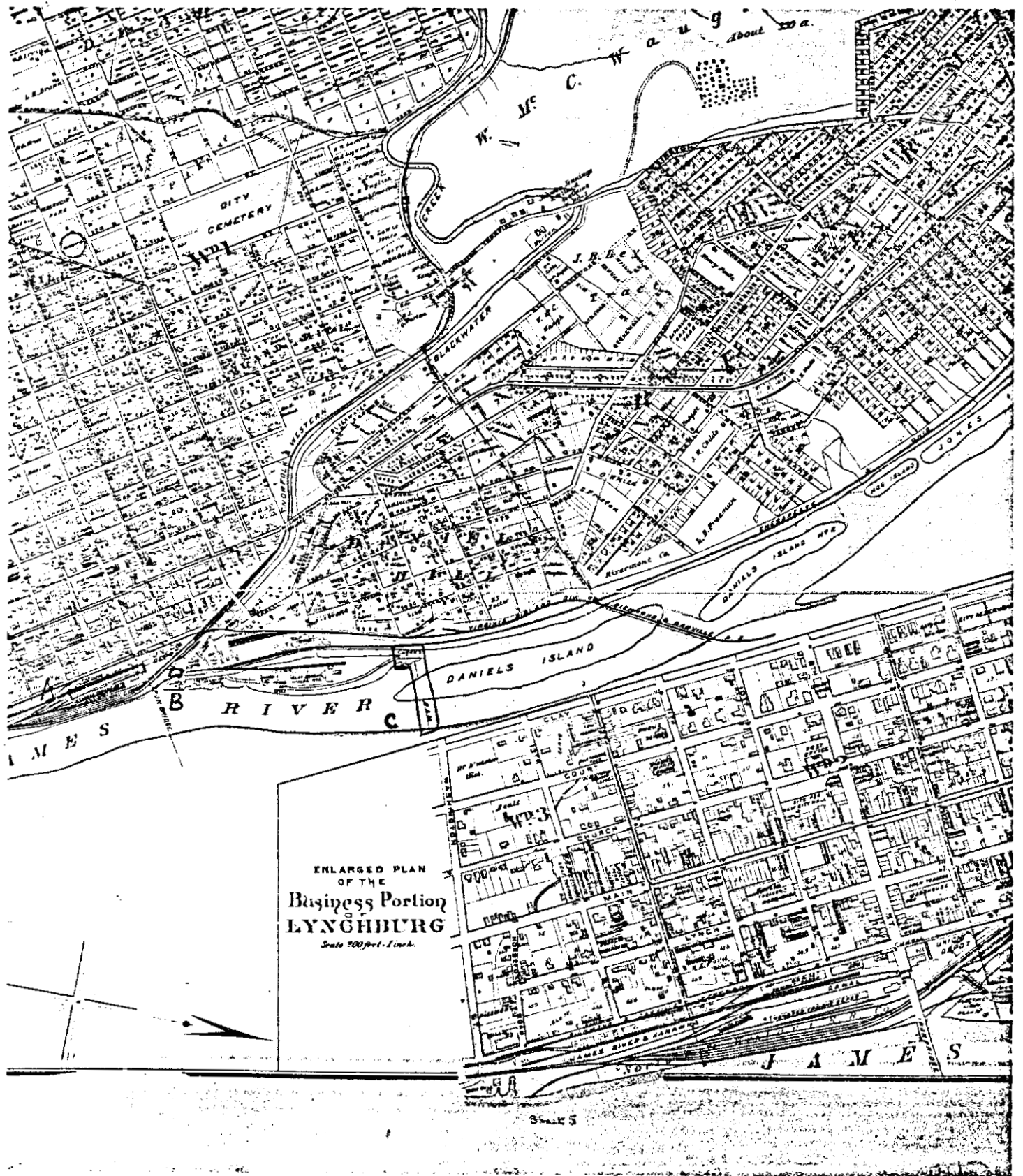
James River and Kanawha Company. Annual Reports (1-44, 1836 to 1877-78).
Hobbs, T. Gibson, Jr., Lynchburg. Interview, summer 1980.

10. GEOGRAPHICAL DATA - Boundary Justification & Verbal Boundary Description

environs of the city of Lynchburg. These features form portions of larger land parcels and thus lack legal descriptions.

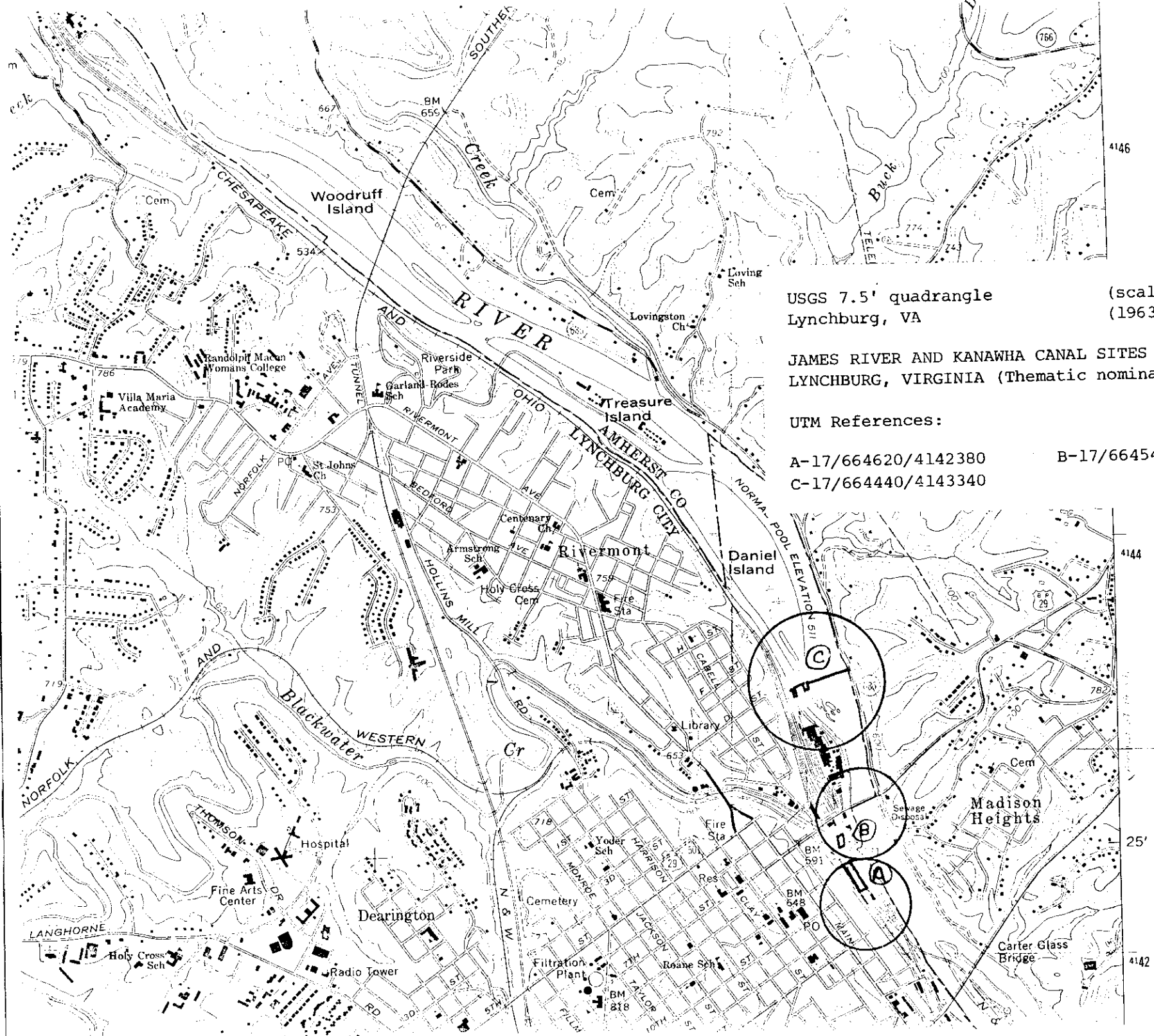
Verbal Boundary Description:

- A: Upper Portion of Lower Basin and Ninth Street Bridge
See section 7 (A) and continuation sheet #1
- B: Blackwater Creek Aqueduct
See section 7 (B), continuation sheet #1 and #2
- C: Waterworks dam, James River dam, and Guard Locks
See section 7 (C), continuation sheet #2



From: Map of Lynchburg and Vicinity by G. W. Baist, Philadelphia, 1891

FIGURE: 1



USGS 7.5' quadrangle
Lynchburg, VA

(scale:1:24000)
(1963 PR 1978)

JAMES RIVER AND KANAWHA CANAL SITES IN
LYNCHBURG, VIRGINIA (Thematic nomination)

UTM References:

A-17/664620/4142380
C-17/664440/4143340

B-17/664540/4142550