North Carolina Department of Natural and Cultural Resources

State Historic Preservation Office

Ramona M. Bartos, Administrator

Governor Roy Cooper
Secretary Susi H. Hamilton

Office of Archives and History
Deputy Secretary Kevin Cherry

September 5, 2019

MEMORANDUM

TO: Vanessa Patrick
Human Environment Unit
NC Department of Transportation

FROM: Renee Gledhill-Earley
Environmental Review Coordinator

SUBJECT: Historic Structures Survey Report, BR-0021, Replace Bridge 51 on NC 48 over Roanoke River, PA 17-12-0060, Halifax County, ER 19-2432

Thank you for your July 31, 2019, memorandum transmitting the above-referenced report. We have reviewed the report and concur that the following properties are eligible for listing in the National Register of Historic Places.

- Roanoke Navigation and Water-Power Company Plant (HX1079) under Criteria A and C
- Roanoke Rapids Power Company Power Plant Complex (HX1559) under Criteria A, C and D

We concur that the Roanoke Canal Historic District (HX0009), which is listed in the National Register, remains eligible under C for Commerce, Engineering and Transportation.

We also agree that the Roanoke Rapids Paper Company (HX1082) is not eligible for listing for the reasons outlined in the report.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-814-6579 or environmental.review@ncdcr.gov. In all future communication concerning this project, please cite the above referenced tracking number.

cc: Mary Pope Furr, NCDOT, mfurr@ncdot.gov

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

ER 19-2432

To: Renee Gledhill-Earley, NCHPO

From: Vanessa E. Patrick, NCDOT

Due -- 9/5/19

Date: July 31, 2019

H- ER Letters Due 8/30

Subject: *Historic Structures Survey Report for TIP No. BR-0021, Replace Bridge No. 51 on NC 48 over Roanoke River, Halifax County, North Carolina. WBS No. 67021.1.1. PA Tracking No. 17-12-0060.*

The North Carolina Department of Transportation (NCDOT) is conducting planning studies for the above-referenced project. Enclosed for your review is a report presenting the evaluation of historic architectural resources in the BR-0021, Halifax County project area (one hard copy and one CD-ROM). Survey photographs, GIS data, and site forms are also included on the CD-ROM, and hard copies of the site forms are also provided.

The report considers four resources, the Roanoke Canal Historic District (HX0009), the Roanoke Navigation and Water Power Company Plant (HX1079), the Roanoke Rapids Paper Company (HX1082), and the Roanoke Rapids Power Company Power Plant Complex (HX1559). The National Register listing of the historic district is confirmed, and both the Roanoke Navigation and the Roanoke Rapids Power Company are recommended as eligible for listing in the National Register of Historic Places. Initial screening of the project area by NCDOT Historic Architecture identified which resources warranted additional study.

We look forward to receiving your comments on the report. Should you have any questions, please do not hesitate to contact me at vepatrick@ncdot.gov or 919-707-6082. Thank you.

V.E.P.

Attachments

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1020 BIRCH RIDGE DRIVE
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HISTORIC STRUCTURES SURVEY REPORT

Replace Bridge No. 51 on NC 48 over Roanoke River
Halifax County, North Carolina

TIP # BR-0021
WBS # 67021.1.1
PA # 17-12-0060

Prepared For:

Environmental Analysis Unit
North Carolina Department of Transportation

Prepared By:
AECOM Technical Services of North Carolina, Inc.
701 Corporate Center Drive
Raleigh, NC 27607

Marvin A. Brown, Principal Investigator

Sarah Potere

May 2019

HISTORIC STRUCTURES SURVEY REPORT

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Sarah Potere

May 2019

Marvin A. Brown, Principal Investigator **Date**
AECOM Corporation - North Carolina

Mary Pope Furr, Supervisor **Date**
Environmental Analysis Unit, Historic Architecture Team
North Carolina Department of Transportation

MANAGEMENT SUMMARY

This project is subject to review under the Section 106 Programmatic Agreement for Minor Transportation Projects between the North Carolina Department of Transportation (NCDOT), the North Carolina Historic Preservation Office (NCHPO), the Federal Highway Administration (FHWA), and the United States Forest Service (USFS) of 2015. An NCDOT architectural historian defined an Area of Potential Effects (APE) and conducted preliminary research and a reconnaissance-level survey to identify and assess all resources of approximately 50 years of age or more within the APE. Following this initial survey, NCDOT staff identified three individual resources and one historic district that warranted an intensive evaluation of individual eligibility for the National Register of Historic Places (NRHP). These individual resources and the historic district are the subject of this report. NCDOT architectural historians determined that all other resources and districts are not worthy of further study and evaluation due to lack of historical significance and/or integrity.

The project involved the evaluation of the three resources and historic district located within the APE in support of NCDOT's proposed replacement of Bridge No. 51 on NC 48 over the Roanoke River in Halifax County, North Carolina (TIP No. BR-0021; WBS No. 67021.1.1; PA No. 17-12-0060) (Figure 1). As part of this project, AECOM intensively evaluated the resources and provided a written report that included photographs of the resources and landscapes; historic and architectural contexts (as needed); evaluations of NRHP eligibility; comparisons to similar types of resources; and carefully delineated and justified NRHP boundaries, as appropriate.

AECOM prepared this report in 2019 from March through May. As a result of its analyses, AECOM recommends that the Roanoke Navigation and Water Power Company Power Plant (HX1079) merits NRHP eligibility under Criteria A and C and the Roanoke Rapids Power Company Power Plant Complex (HX1559) merits NRHP eligibility under Criteria A, C and D. AECOM further believes that the Roanoke Canal Historic District continues to merit NRHP eligibility with the recommended expansion to its boundary. The following table identifies the resources requiring evaluation and summarizes the recommendations regarding their eligibility.

Resource Name	NC HPO Survey Site #	NRHP Eligibility Recommendation and Criteria
Roanoke Canal Historic District	HX0009	Listed as NRHP Historic District in 1976 under the following areas of significance: Commerce, Engineering, and Transportation
Roanoke Navigation and Water Power Company Power Plant	HX1079	Recommended NRHP eligible under Criterion A and C
Roanoke Rapids Paper Company	HX1082	Recommended not NRHP eligible
Roanoke Rapids Power Company Power Plant Complex	HX1559	Recommended NRHP eligible under Criterion A, C and D

TABLE OF CONTENTS

I. PROJECT DESCRIPTION AND METHODOLOGY

This project is subject to review under the Section 106 Programmatic Agreement for Minor Transportation Projects between the NCDOT, NCHPO, FHWA, USFS of 2015. An NCDOT architectural historian defined an Area of Potential Effects (APE) and conducted preliminary research and a reconnaissance-level survey to identify and assess all resources of approximately 50 years of age or more within the APE. Following this initial survey, NCDOT staff identified three individual resources and one historic district that warranted an intensive evaluation of individual eligibility for the National Register of Historic Places (NRHP). These individual resources and the historic district are the subject of this report. NCDOT architectural historians determined that all other resources and districts are not worthy of further study and evaluation due to lack of historical significance and/or integrity.

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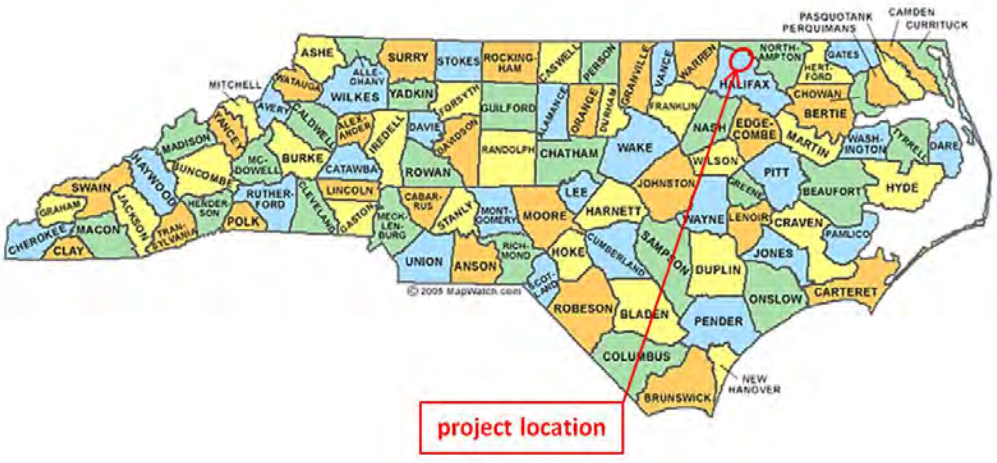


Figure 1. Project location map

In January 2018 AECOM evaluated the resources as required, in compliance with the requirements of Section 106 of the National Historic Preservation Act of 1966, as amended, other state and federal regulations, and NCDOT's current Historic Architecture Group Procedures and Work Products and the NCHPO Report Standards for Historic Structure Survey Reports/Determinations of Eligibility/Section 106/110 Compliance Reports in North Carolina. AECOM prepared this report from March through May 2019. As a result of its analyses, AECOM recommends that the Roanoke Navigation and Water Power Company Power Plant (HX1079) merits NRHP eligibility under Criteria A and C and that the Roanoke Rapids Power Company Power Plant Complex (HX1559) merits NRHP eligibility under Criteria A, C and D. AECOM further believes that the Roanoke Canal Historic District continues to merit NRHP eligibility with the recommended expansion to its boundary. AECOM senior architectural historian Marvin A. Brown and AECOM architectural historian Sarah Potere, both of whom meet the Secretary of Interior's qualifications for architectural history (CFR 36 CFR Part 61), conducted fieldwork, research

and analyzed the resources, and drafted this report. As part of this effort, they visited, documented, and photographed the resources and conducted supplementary research. This effort included reviewing Halifax County deeds, GIS data, plat maps, property and tax records; conducting research at the State Library of North Carolina in Raleigh, the Roanoke Rapids Public Library in Roanoke Rapids, and Halifax County Public Library in Halifax; speaking with knowledgeable local residents; studying the Wake County files of the North Carolina HPO; reviewing architectural histories and reports, and partially surveying Halifax County for comparable resources; and conducting online historical research.

The project's APE is located entirely within Halifax County. It is depicted in Figure 2. The locations of the resources are plotted in Figure 3.

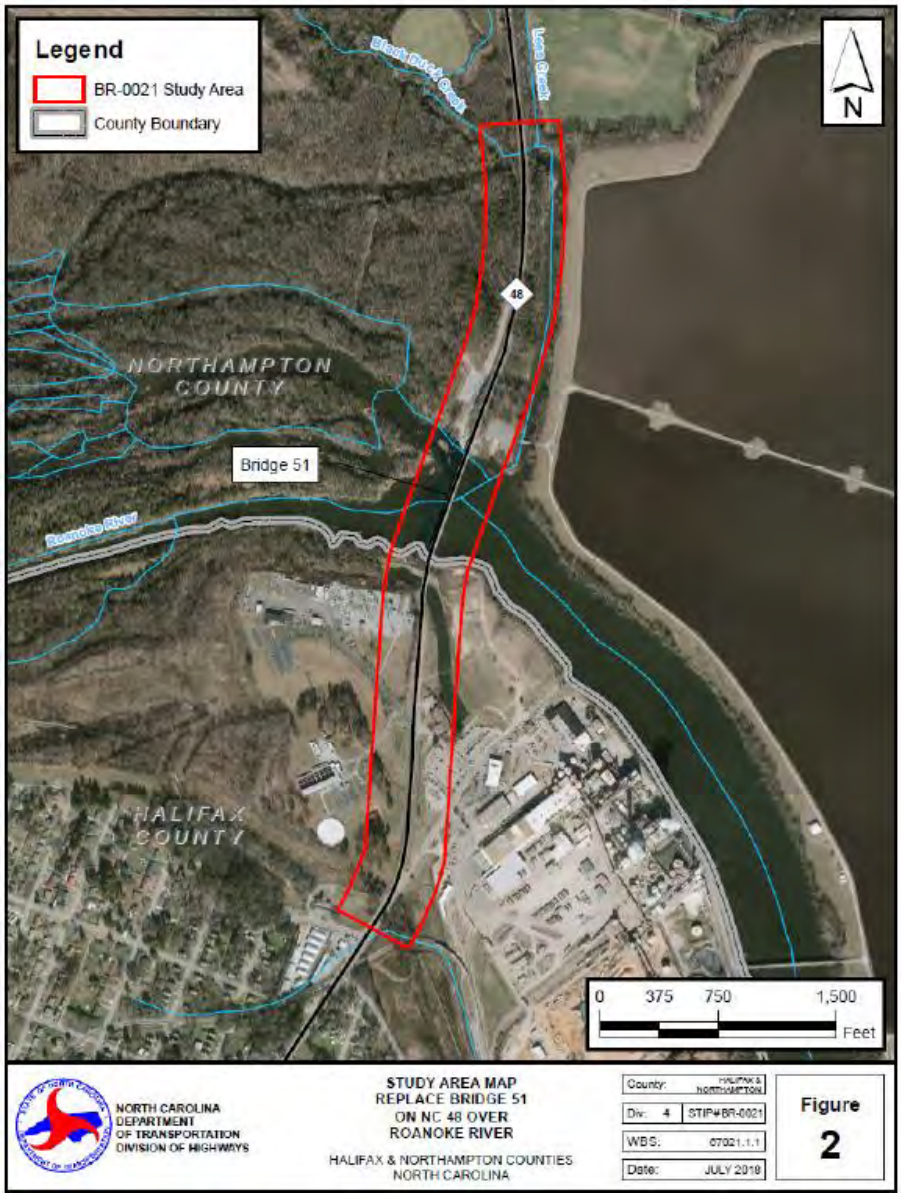
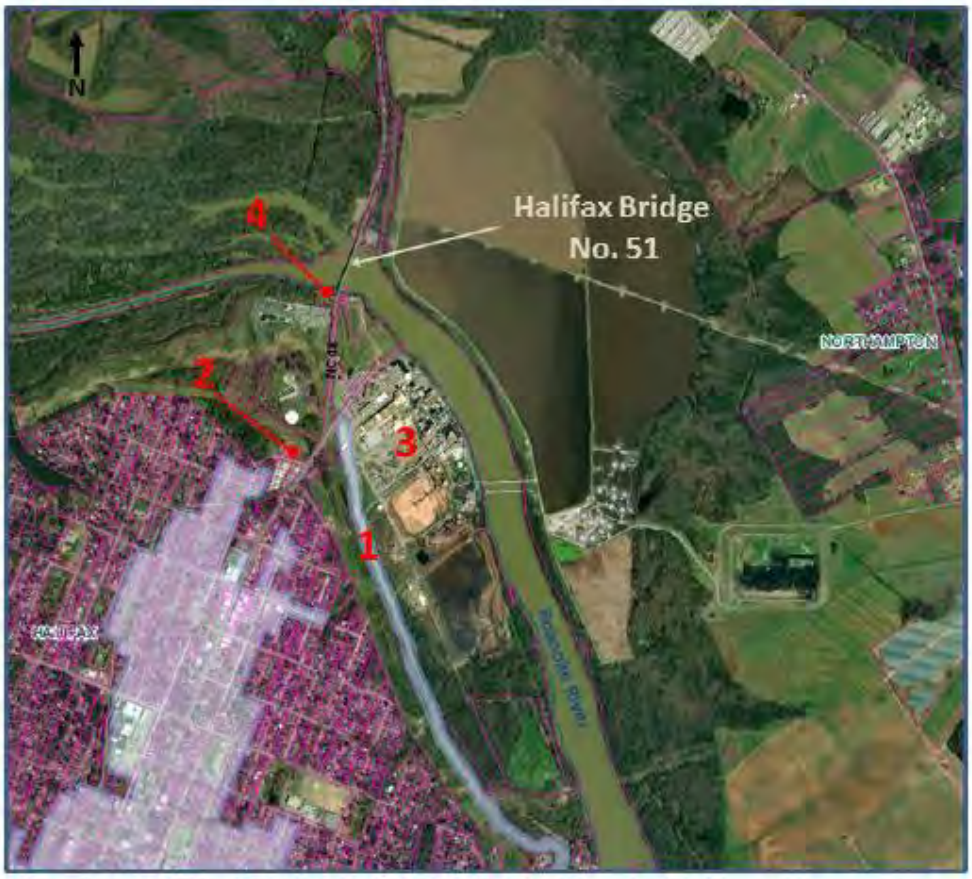


Figure 2. Project APE (figure courtesy of NCDOT)



BR-0021 Bridge No. 51 Replacement Halifax and Northampton Counties

Resources to be Evaluated

1. Roanoke Canal Historic District (HX0009-NR). 15 Jackson Street Extension. Parcel No.: multiple.
2. Roanoke Navigation and Water Power Plant (HX1079). 15 Jackson Street Extension. Parcel No. 0909341.
3. (former) Roanoke Rapids Paper Company (HX1082). Roanoke Avenue. Parcel No.: 0900081.
4. Virginia Electric Power Company (HX1559). Highway 48. Parcel No.: 0900082.

NCDOT – Historic Architecture
August 2018
Tracking No. 17-12-0060

Figure 3. Map depicting locations of resources to be individually evaluated (NCDOT)

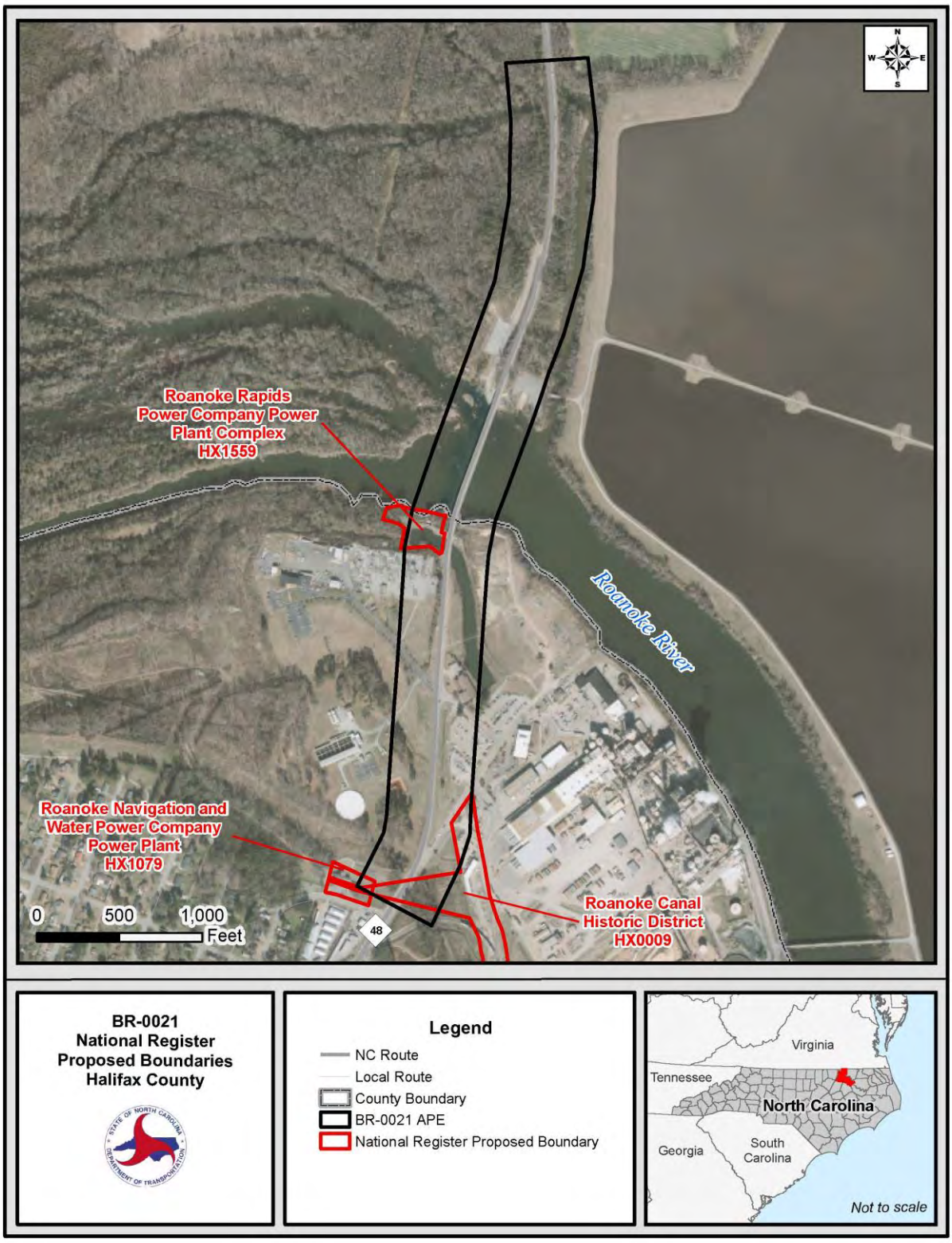
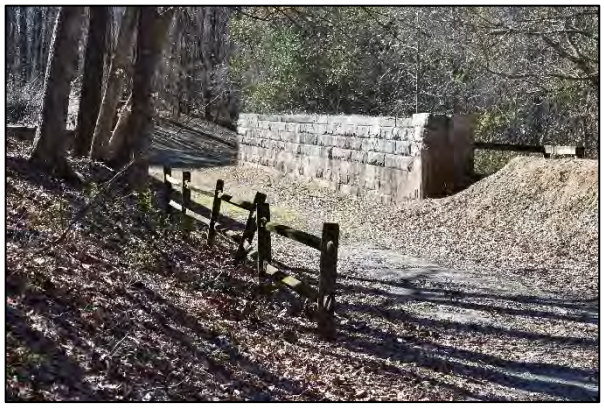


Figure 4. Map depicting proposed boundaries of resources recommended eligible

II. INVENTORY AND EVALUATIONS

Roanoke Canal Historic District



Resource Name	Roanoke Canal Historic District
HPO Survey Site #	HX0009
Location	Southwest of Roanoke River from Roanoke Avenue/NC 48 in Roanoke Rapids to Roanoke River in Weldon
Parcel No.	various
Date of Construction	Ca. 1822
Recommendation	NRHP listed in 1976 (criteria not specified)

ARCHITECTURAL DESCRIPTION

The NRHP nomination for the Roanoke Canal Historic District describes the resource as follows (Survey and Planning Unit 1976):

> The canal began at Rock Landing along the Roanoke River, a spot a little more than three miles above what is now Roanoke Rapids. At the entrance to the canal, a dam and guard lock were constructed (1822) [Figure 5]. Hamilton Fulton… called for a stone dam of dry coursed rubble construction, 6 feet wide at the bottom and narrowing to a width of 1½ feet at the top. The guard lock, located about 400 feet below the dam and built of ashlar stonework, was 75 feet long and 16 feet wide with walls 8 feet thick at the bottom and 6 feet wide at the top. By 1899 both structures were in ruins and their site is under the waters of the Roanoke Rapids Lake.
>
> The first three miles of the canal runs through deep cuts in the bedrock, some as high as 20 feet, and across several valleys and streams which required four culverts… The middle Lift Locks are located a little more than three miles from the entrance. There were four locks 'built of the best description of hewn stone, neatly dressed' consisting of two sets of two lifts each. Each was 100 feet long and 16 feet wide… North Carolina Highway 48 runs through what was once the basin between the sets of double locks. One-half of the second double locks has been partially torn away for a railroad track [Figure 6] and the other half is not visible…


Figure 5. Views of canal prism between northwest terminus of canal and the Roanoke Navigation and Water Power Company Power Plant outside of NRHP-listed boundaries


Figure 6. Views of step-lock ruins located on the east side of NC 48/Roanoke Avenue outside of NRHP-listed boundaries

For the next four miles below the locks, the canal winds along the river bank, without deep cuts or culverts, but with high embankments on the river side. Occasionally there are stone spillways in the bank, built to control excess water (Figure 6).

One mile from the lower end of the canal is its most outstanding structure, the aqueduct that carries the canal over Chockoyotte Creek… the present structure is a single arch of thirty-foot span… 'it is formed of hewn stone, very neatly dressed, and of the most durable quality, resting on a rock foundation. It is 110 feet long, its greatest height 35 feet, and it has a clear width of waterway of 18 feet; the arch has a span of 30 feet, is 29 feet wide, and is elevated 22 feet above the surface of the creek at common height.' The aqueduct, except for repairs in the 1890s, remains as it was at the time of construction (1821-1823). The masonry joints are extremely fine, roughly one-eighth inch wide, with remnants of a yellow clayey mortar. Of coursed ashlar, the aqueduct spans the creek in a single, impressive arch. Voussoirs define the archivolt and smooth coursed ashlar frames the voussoirs [Figure 7 and Figure 8].

A mile east of the aqueduct, the canal terminated in a large basin beside the Roanoke River at Weldon.

Figure 7. Left, view of aqueduct arch over Chockoyotte Creek; right, view of canal channel spanning the creek

Figure 8. Left, view of approach to aqueduct over creek; right, detail of carefully hewn ashlar blocks

The canal and its features appear little altered since their NRHP listing in 1976 as the Roanoke Canal Historic District, apart from continued organic growth along the canal prism. Today, the canal and its features are included within the Roanoke Museum and Canal Trail, a roughly eight-mile trail which follows the old canal path. The trail highlights features from the Roanoke Navigation Canal (such as the aqueduct and prism) and includes additional elements such as remnants of a bulkhead from the competing Roanoke Rapids Power Company Canal.

HISTORY AND SIGNIFICANCE

The statement of significance included within the Canal's current nomination summarizes the resource's history and significance (Survey and Planning Unit 1976):

> The seven-mile length of the Roanoke Canal contains some of the most impressive and best-preserved early nineteenth century canal construction in the nation. Begun before 1819 and completed in 1823, the canal was part of the ambitious Roanoke Navigation System, planned to connect the Blue Ridge Mountains and the Atlantic. The Roanoke Canal required the greatest engineering skill and produced the most significant structures of the entire system. Much of the construction was supervised by English engineer

> Hamilton Fulton… Although the project was conceived as early as 1783, it was not until 1823 that the Canal was completed and not until 1828 that the Navigation [sic] was prepared for Salem, Virginia, in the Blue Ridge Mountains to Norfolk on the coast, a distance of over 400 miles.

INTEGRITY

The Roanoke Canal Historic District appears to retain essentially the same level of integrity as it did when it was NRHP listed in 1976. It is therefore believed to continue to merit NRHP listing. A proposed boundary expansion within the APE is discussed below.

ROANOKE CANAL HISTORIC DISTRICT		
Element of Integrity	**Level of Integrity**	**Assessment**
Location	High	The Roanoke Canal Historic District (including its individual features) remains at the location where it was built and retains the land associated with it when it was NRHP listed.
Design	High	The Roanoke Canal Historic District retains the same form and design it had when it was NRHP listed.
Setting	High	The Roanoke Canal Historic District retains the rural setting associated with it at the time of its NRHP listing.
Materials	High	The individual features comprising the Roanoke Canal Historic District (including the aqueduct and locks) retain the materials and finish they had at the time of the district's NRHP listing.
Workmanship	High	The individual features comprising the Roanoke Canal Historic District (including the aqueduct and locks) retain the workmanship and finish they had at the time of the district's NRHP listing.
Feeling	High	The Roanoke Canal Historic District retains, since it was NRHP listed, high integrity of location, design, setting, materials, and workmanship; it therefore retains high integrity of feeling.
Association	High	The Roanoke Canal Historic District retains, since it was NRHP listed, high integrity of location, design, setting, materials, workmanship, and feeling; it therefore retains high integrity of association.

CURRENT NATIONAL REGISTER BOUNDARY AND PROPOSED EXPANSION WITHIN APE

The current NRHP boundary for the Roanoke Canal Historic District is depicted below at (Figure 9).

Figure 9. Current NRHP boundary for the Roanoke Canal Historic District as denoted on NC HPO web

It is recommended that this boundary be expanded near its northwest terminus. The expansion would extend west—up to, across, and beyond NC 48—and terminate at the western edge of the fully extant stone stair-step lock that stands adjacent to the Roanoke Navigation and Water Power Company Power Plant (HX1079) (Figure 10). This expansion would bring into the district the first stair-step lock (located on the south side of the Power Plant), in addition to the remaining elements of the second stair-step lock located on the eastern side of NC 48 and perhaps also beneath the road (Figure 12). Both of these locks were integral to and original features of the Navigation Canal, as discussed in the district's National Register nomination. A further extension of the boundary to or near the canal's original northwest terminus, which would encompass visible portions of the canal prism (Figure 5, above) and perhaps other components as well, was not explored, as it is far beyond the project's APE. Further research and survey would be required to determine if this section of the canal retains sufficient integrity to merit further expansion of the current boundaries.

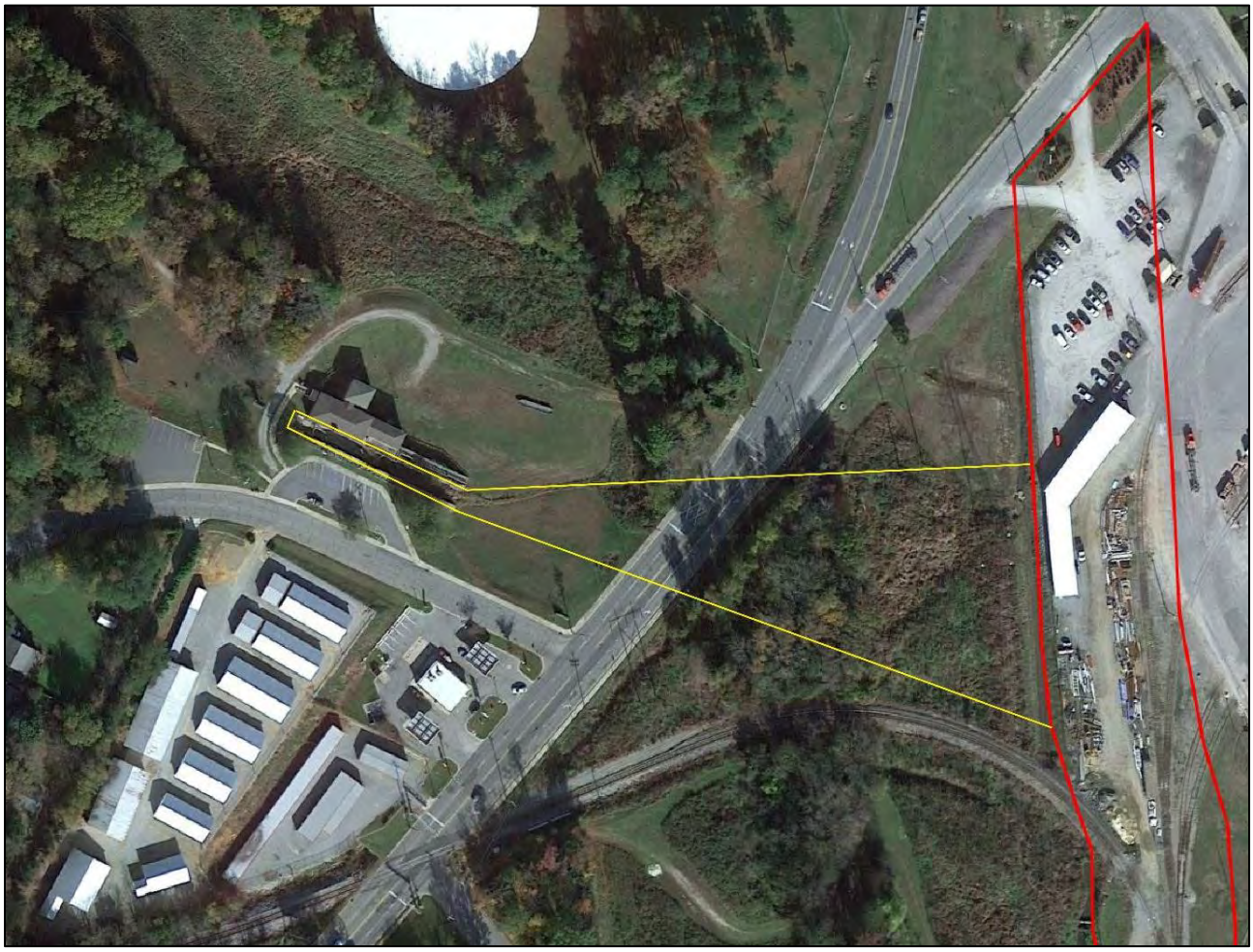


Figure 10. Proposed boundary expansion for the Roanoke Canal Historic District denoted in yellow

Figure 11. Left, looking west from shoulder of NC 48 at second stair-lock to first stair-lock and Roanoke Navigation and Water Power Company Power Plant; right, looking east from near shoulder of NC 48 at second stair-lock toward northwest end of NRHP boundary

Roanoke Navigation and Water Power Company Power Plant

Resource Name	Roanoke Navigation and Water Power Company Power Plant
HPO Survey Site #	HX1079
Location	15 Jackson Street Extension, Roanoke Rapids
Parcel No.	0909341
Date of Construction	1900
Recommendation	Recommended NRHP eligible under Criterion A and C

ARCHITECTURAL DESCRIPTION

The Roanoke Navigation and Water Power Company Power Plant (Power Plant) sits on the east side of NC 48, roughly one-half mile south of the Roanoke River. The building occupies much of its 1.03-acre parcel, which is bounded to the north, west, and east by lands of Dominion Power. A small paved parking lot stands between the building and Jackson Street Extension, which bounds the parcel to the south.

The linear building, which is oriented to the west, is built of brick and is laid in five-over-one common bond. The building is composed of three distinct sections: a larger western block, a smaller eastern block, and modern two-story addition which extends from the building's northern elevation (Figure 12). All three sections are capped with hipped roofs with asphalt shingles and are trimmed with a corbelled brick cornice.

Figure 12. Left, view of western and southern elevations; right, view of northern elevation with modern elevator shaft in foreground

The building's larger western block stands five bays wide on its northern and southern elevations and three bays deep on the shorter east and west elevations. Four sets of paired one-over-one light sash are found on the southern elevation with a later exterior brick chimney (added by 1940 according to historic photographs) rising from the central bay (Figure 13). Segmental brick arches top each window opening and appear original in their placement except the first bay, which was once a door (according to historic photographs). The northern elevation of the western block features an exposed basement level and displays the same pilaster divisions as the southern elevation. A two-story, two-bay square addition extends from this northern elevation (Figure 12, right) and holds modern offices and an elevator shaft. This addition was constructed in the early 2000s as part of the building's conversion to the Roanoke Canal Museum. The building's smaller eastern block stands four bays wide by three bays deep and displays the same pilaster bay delineations as the western block. Given its smaller scale, this eastern block contains single one-over-one sash windows as opposed to paired (Figure 13).


Figure 13. Left, view of southern elevation (photo credit: flickr); right, view southeastern corner with original "step-stair lock" with wooden staircase

Adjacent to the Power Plant, and masking the building's basement level on its southern elevation, is the largely intact step-stair lock, which was once part of the Navigation Canal (Figure 14 and Figure 15). Two stepped walls built of course ashlar granite rock remain in addition to their lock channel. Predating the Power Plant by almost 100 years, this feature was integral to the function of the Power Plant as it assisted in the creation of a water reservoir, which was necessary for the plant's operation.


Figure 14. Left, view of eastern elevation; right, view into step-stair lock looking north toward Power Plant


Figure 15. Left, view down into lock (looking east); right, view into lock (looking west)

Today the lock is utilized as an interpretative exhibit and houses a wooden bateau, a type of light wooden barge that was used to move goods up and down the historic Navigation Canal.

Given the building's current function as a museum, the first floor of the building's interior is now a wide-open space (as opposed to the two separate spaces suggested by Sanborn Maps throughout the first part of the twentieth century). The building does retain, however, a clear delineation between the western and eastern blocks in the form of a brick wall. Original exposed brick walls are visible throughout the first and second floors of the building, in addition to original concrete floors. The building's roof framing members, including queen post trusses, are exposed at the building's first floor (Figure 16).


Figure 16. Interior views of first floor of Power Plant, now the Roanoke Canal Museum and Trail

The building's basement level has likewise been converted to interpretative museum space. A large hole is found in southern wall of the eastern block (Figure 17 and Figure 18). Museum interpretative signage reveals that this eight-foot opening once housed a large intake pipe that fed the electricity turbine housed within the Power Plant's basement (Roanoke Canal Museum 2019c):

> [the building's basement level housed] a vast eight-foot tall intake pipe, called a penstock, that funneled water through a horizontal turbine. The turbine was attached to a power rod that passed through the low passage in the wall to the right before connecting to a generator. After the water passed the turbines, it was diverted down through the floor and flowed out of two archways into the tailrace channel behind the building.


Figure 17. Views of Power Plant basement museum exhibits


Figure 18. Left, interior view of large hole for intake pipe; right, exterior view of intake pipe hole

HISTORICAL BACKGROUND

The dissolution of the Roanoke Navigation Canal in 1875, at the direction of the North Carolina General Assembly, resulted in the complete abandonment of the canal's resources; however, less than ten years later, in 1882, the canal property was purchased by the Roanoke Navigation and Water Power Company (Joyner 2006; Roanoke Canal Museum 2019d).

The newly formed company, which did not achieve formal incorporation until early spring 1883, saw the potential of the abandoned canal as a power source and quickly set into motion their plans to create one of the earliest hydroelectric plants in the country (*Wilmington Morning Star* 1883). The Navigation Company, whose Board of Directors hailed from Pennsylvania and Virginia, began their survey of the canal in Spring 1885, according to an article published in the *Roanoke News*. The article also reported that the company's principal office was situated at Petersburg, Virginia, although a representative was stationed locally in the community of Weldon (*Roanoke News* 1885). By 1887 advertisements were placed in local newspapers for contractors to begin work on the Navigation Company's new plans for the Canal (*News and Observer* 1887). These development plans were supported by the community of Weldon through the form of tax incentives as described in the *Wilmington Messenger* (Wilmington Messenger 1889):

> … the citizens had come to an understanding with the Roanoke Navigation and Water Power Company from which good results would flow. The town is not to tax mills and factories for twenty years and to subscribe $10,000 to aid in the work development. This will at once bring into effective use its vast water-power…

Research completed by Roanoke Canal Museum, on display within the Power Plant's exhibits, reports that the new owners of the canal had "plans to produce mechanical power equivalent to 20,000 horse power. A corn mill, a grain elevator, a cotton mill, and a power plant were completed in Weldon in 1892" (Roanoke Canal Museum 2019).

In 1900 the Roanoke Navigation and Water Power Company constructed the Power Plant building. The building was part of the effort to support the Navigation Company's power supply competition with the Great Falls Water, Power, Manufacturing, and Improvement Company (later Roanoke Rapids Power Company). The Power Plant was built to supply power to the town of Roanoke Rapids, textile mills, and residences (NC HPO, Roanoke Navigation and Water Power Company Power Plant survey file). The Roanoke Canal Museum discusses the building's site selection as follows (Roanoke Canal Museum 2019):

> The site was chosen because the old locks made a perfect reservoir once a dam was installed in place of the middle gates. The reservoir, combined with the channel, allowed enough water to flow into the power plant and turn the turbines before being released into the tailrace at the back of the building. The turbines, in turn, spun a generator that produced electricity.

A November 1900 article published in the Kinston *Daily Free Press* reports the Navigation Company's construction of a:

> 1,000 horse-power electric and lighting plant at Roanoke Rapids where the Roanoke Navigation & Water Power company's plant is. The plant will furnish power and lights for Putnam Textile company silk mill and cotton mill and for several other plants, and lights for the town of Weldon (*Daily Free Press* 1900).

The first visual documentation of the Power Plant comes from a photograph of the building taken about ten years after its construction (Figure 19). The image is of the building's southern elevation, which looks much as it does today. Both the building's larger western block and smaller eastern block were constructed by this time. Paired two-over-two windows punctuate the five bays of the main building, except the first bay, which appears to hold a set of double doors. Two corbelled chimneys, which no longer remain, project through the roof. Today, the center bay holds an exterior brick chimney and the first bay door has been replaced with a window. The eastern block does not display any of the windows which are in place today. A door occupies the first bay of the eastern block (as is the case today) and is just visible in the photograph.

Figure 19. Power Plant, ca. 1910 (image credit: Roanoke Canal Museum and Trail)

The plant was operated by the Roanoke Navigation and Water Power Company until 1912 when "a court case over water rights with an adjacent power canal forced the removal of diversion dams upstream and left this canal without reliable flow" – the adjacent canal being the Roanoke Rapids Power Company (Roanoke Canal Museum 2019). The Richmond *Times Dispatch* reports the sale of the Roanoke Navigation and Water Power Company to the Roanoke River Development Company shortly thereafter, in May 1913 (Richmond *Times Dispatch* 1913).

The Power Plant appears in the 1915 Sanborn Maps of Roanoke Rapids (Figure 20, left) three years after the building's ceased power production. Labeled as the Roanoke River Development Company Auxiliary Power Station, the building consists of the same two sections, both denoted as single-story 18-foot masses with brick cornice. A note is made that a 720 horse-power wheel is contained within the building, which stands empty with no watchman. The tail race is depicted as flowing from the eastern side of the larger block; however this is incorrect as the tail race flows from the rear/northern side of the smaller block (as denoted in later maps). The 1919 Sanborn Maps (Figure 20, right) provides the same details as the 1915 map, in addition to depicting the supply race running to the south of the building. A wooden bridge is denoted crossing the race and providing access to the building, and the tail race is drawn closer to its current location. The building is still labeled as vacant.

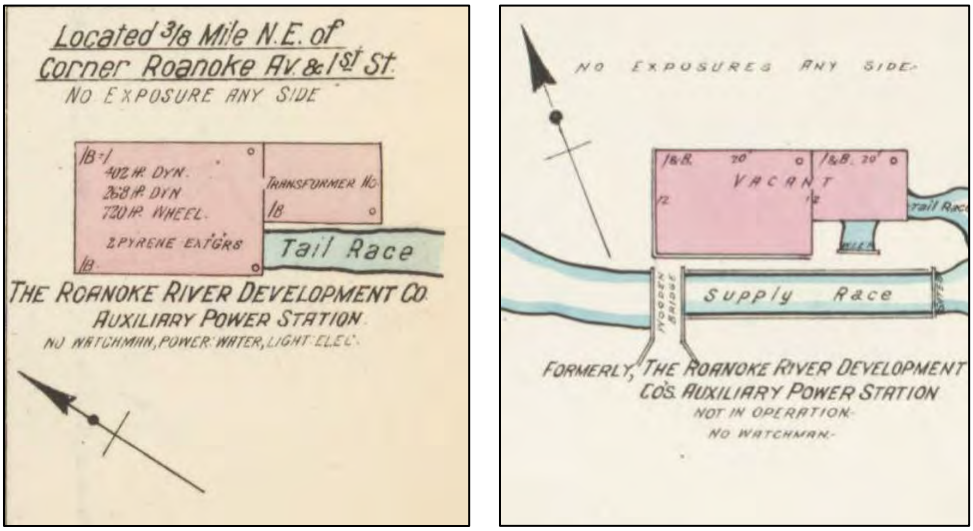


Figure 20. Left, 1915 Sanborn Map; right, 1919 Sanborn Map

The Roanoke Rapids Power Company purchased the Roanoke River Development Company between 1919 and 1925 (*News and Observer* 1924). Despite this fact, interpretative signage within the museum suggests that the building was utilized as machine shop during the 1920s. It is unclear if the building served as a mechanical shop for the Power Company or if it was rented to a private tenant. The 1925 Sanborn Map labels the building as Roanoke Rapids Power Company Plant No. 3 (Figure 21). The building's footprint is identical to the 1919 Sanborn Map. The 1925 map provides further detail as to layout, dividing the building into three distinct spaces—the first and second rooms divided by a brick wall and the second and third rooms divided by a frame partition. The label of the eastern-most room is the only legible text inside the building and bears the label "Wheel Ho" or wheelhouse. The tail race is correctly placed at the rear (north) of the building and the head/supply race drawn along the southern side. Additionally, this map denotes the location of the wall comprising the stair-step lock, which had been omitted from previous maps of the building.

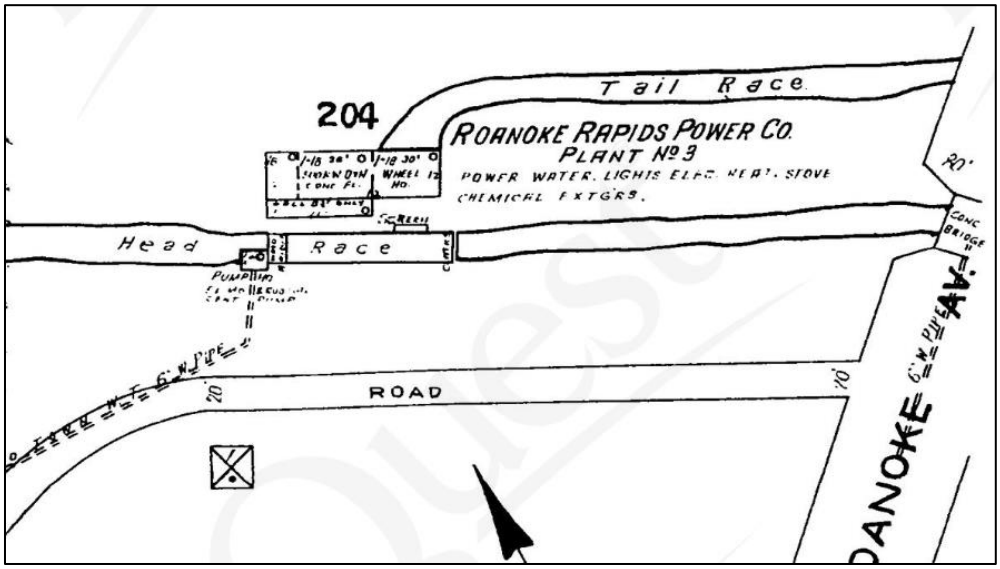


Figure 21. 1925 Sanborn Map

Little is known about the function of the building throughout the 1930s and 1940s. The updated 1935 Sanborn Map reveals the building passed to the Virginia Electric and Power Company (VEPCO) between 1925 and 1935, when it purchased the Roanoke Rapids Power Company. The building is labeled as Warehouse and a note indicates that all of the windows have been boarded and admittance to the building by insurance inspectors was refused.

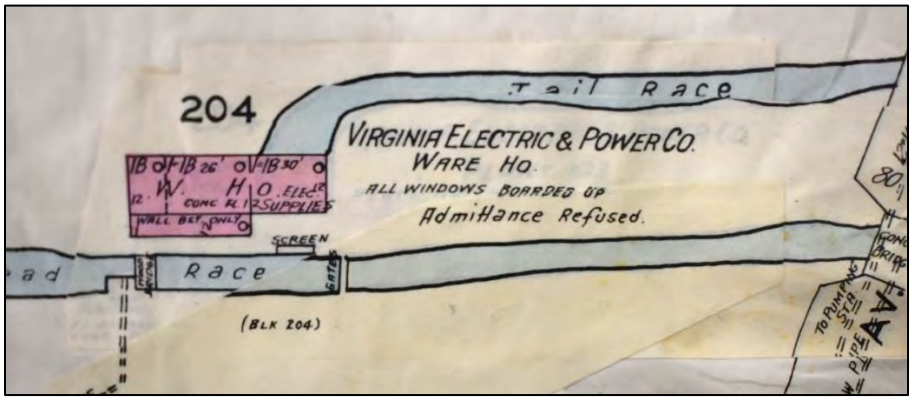


Figure 22. 1925 Sanborn Map updated 1935/1940

An image on display at the Roanoke Canal Museum shows the Power Plant ca. 1940 following a major flooding event (Figure 23). The picture features the rear (eastern) elevation of the building, although it seems to be an inverted image as the stair-step lock appears to be on the northern elevation as opposed to its actual placement adjacent the southern elevation. With this in mind, the windows are seen along the northern elevation of the main mass, and the exterior brick chimney is seen at the third bay. The building's survey file at the NCHPO suggests the chimney was added to the building in the 1920s or 1930s. The building's original interior corbelled chimneys are not readily visible on the roofline, suggesting that they may he been removed by this time. Additionally, four windows have appeared along the northern elevation of the smaller eastern mass. Water is seen pooled in the tailrace which had not yet been filled in.

Figure 23. View of Power Plant rear during a flood ca. 1940 (image credit: Roanoke Canal Museum and Trail)

According to research compiled by the Roanoke Canal Museum, the building operated as a general rental space from 1950 until 1975. The 1925 Sanborn Map–updated in 1958–labels the building as a "Recreation Hall" (Figure 24). The building itself, however, remains the same within the Sanborn depiction. No alterations are denoted, including the chimney on the southern elevation. A photograph (Figure 25, left) shows the northeastern corner of the building ca. 1968. A line of windows are seen marching down the building's northern elevation, and a single window punctuates the eastern elevation as is the case today. The empty tail race remains visible.

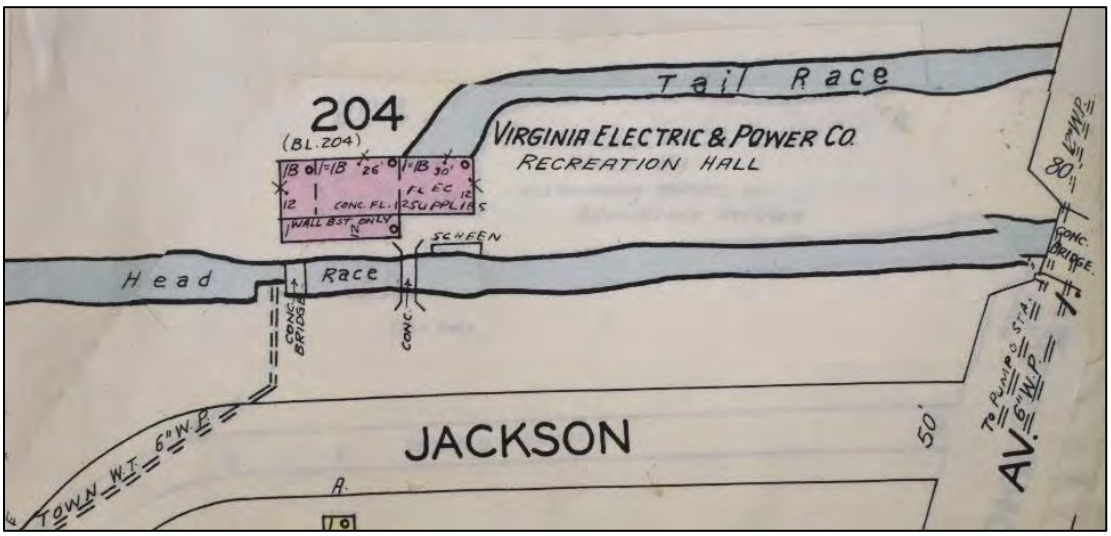


Figure 24. 1925 Sanborn updated 1958

Figure 25. Left, northeast corner of Power Plant ca. 1968 before infill of tail race (source: Roanoke Canal Museum and Trail); right, current view of eastern elevation/filled-in tail race

In 1975 the property was purchased by the City of Roanoke Rapids and served for a time as an art center for the Roanoke Valley Arts Council. The building was surveyed in 1990 by Allison and David Black. Images from this survey reveal a number of differences in the building's exterior appearance in comparison to the building's current-day look. Four-over-four sash (many of which have been painted over or boarded up on the northern elevation) occupy the building's numerous openings. A large opening found in the first bay on the southern elevation (which originally held a set of double doors) has been bricked up and a smaller six-paneled door installed. However, the other openings, the brickwork, and the roof are unchanged and look much as they do at present. The building is approached on this elevation via a ramp which spans the stair-step lock (Figure 26).

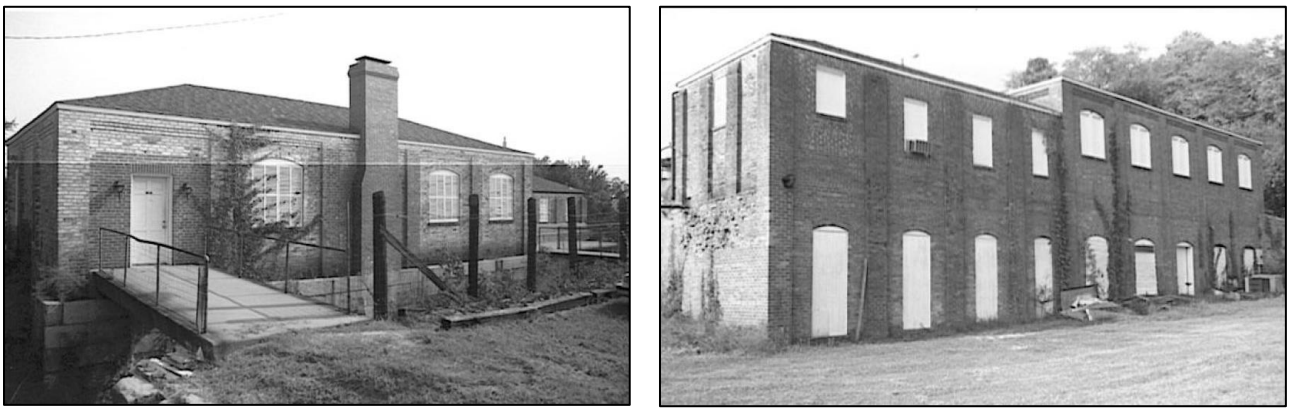


Figure 26. Left, 1990 view of southern elevation; right, 1990 view of northern elevation (photo credit: Allison and David Black)

The Blacks additionally noted that the eastern section of the building had been remodeled for staff offices and the western section was utilized as a gallery. On the southern wall of the building's western section the Blacks noted the presence of a Craftsman style brick mantel (likely added in conjunction with the addition of the exterior brick chimney). It was also noted that the building's truss work remained visible, much like it does today (Figure 27) (NC HPO, Power Plant survey file).

Figure 27. Left, interior view of painted over paired four-over-four sash; right, view of open truss work (photo credit: Allison and David Black)

In the early 2000s the building was renovated to serve as the Roanoke Canal Museum. During this time, the elevator shaft which extends from the building's northern elevation was added in addition to the extensive stair system which overlooks the original stair-step lock abutting the building (Figure 25, right).

NATIONAL REGISTER OF HISTORIC PLACES EVALUATION

The number of surviving early power plants in North Carolina is small, and the number of those that retain a significant degree of architectural integrity is even smaller. A search of the NC HPO online survey database utilizing the keyword "power" returned roughly 64 resources relating to power generation (i.e. power plants, power house, etc.) As of April 2019, only five such resources had been listed on the National Register. Four are discussed below (the fifth resource, Narrows Dam and Power Plant Complex (ST0002), was determined non-comparable due to its large scale).

The North Carolina Electrical Power Company Electric Generating Plant (BN0373) (Figure 28) is located in Buncombe County and was listed in the National Register in 1999 under Criteria A and C. Its nomination form describes the building and discusses its significance as follows (Survey and Planning Unit 1999):

> Tall, one-story plus a basement in height, this brick and concrete, early twentieth century industrial-style electric power house… [is] rectangular in shape, with a width of seventy-eight feet, and a lengthy of 165 feet. A small, one-story portion extends to the north of the building… The original brick smokestack… has been removed. Bands of brick corbelling decorate the cornice of the building…
>
> The North Carolina Electrical Power Company Electric Generating Plant was completed on July 1, 1916….to meet the growing demands for electrical power in the booming mountain community. [It] is significant under Criterion C, in the area of architecture a rare, highly intact example of an early twentieth-century industrial-style building along the river and is significant under Criterion A for its contributions to the industrial development of Asheville.

Recent images of the building reveal it has undergone a significant renovation, and adaptive reuse efforts applied. The plant appears to have been converted to office space and is utilized as a city municipal office. Despite the renovation, the building appears to retain its original footprint and fenestration patterns.

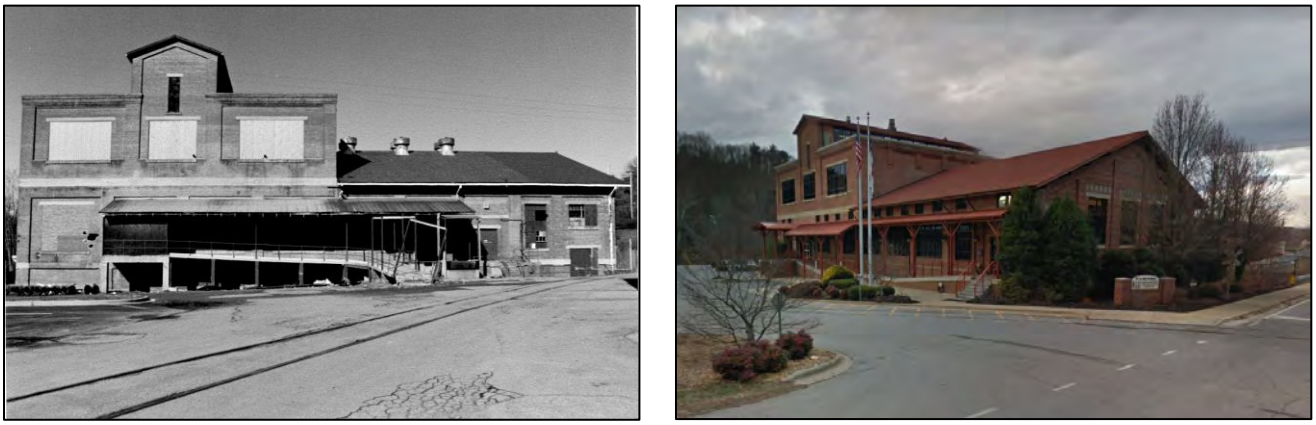


Figure 28. Left, North Carolina Electrical Power Company Electric Generating Plant (BN0373) at the time of NRHP listing (photo credit: NC HPO); right, ca. 2017 view of electric plant (image credit: Google Streetview)

Situated along the Deep River in rural Chatham County, the Lockville Dam, Canal, and Powerhouse (CH0018) (Figure 29) was listed in the National Register in 1984 under Criteria A, C and D. Its

nomination form provides the following information about its history and significance (Survey and Planning Unit 1984):

> The powerhouse, constructed in 1922, is a simple brick and concrete structure resting on a massive stone foundation. The building… possibly, replaced the old lock structure which was associated with the canal's use as part of an early navigation system. The water in the canal flows under the powerhouse and back into the river. The powerhouse is laid in 6:1 common bond and is devoid of ornamentation except for a parapet wall on the east façade and a very slightly projecting row of brick corbelling at the top. The structure has a flat roof. Much of the building's metal sash has been vandalized or removed, as have the loading doors…
>
> In the early to mid-19th century, strong interest in improved river transportation systems resulted in the construction and use of a canal works at the site. The canal was put back into service, beginning in 1922, to provide water power to a newly established hydroelectric facility at the site. This power plant brought electricity to part of Chatham County and aided in the movement to bring electricity to piedmont North Carolina in the early twentieth century.

Aerial images and photographs from GoogleEarth suggest the building has changed little since its NRHP listing in the 1980s. The building's original footprint and fenestration patterns remain intact. The building additionally looks to retain some of its original windows. Although it does not appear to currently function in any way, the building looks actively maintained and continues to rest on the ruins of the old canal.

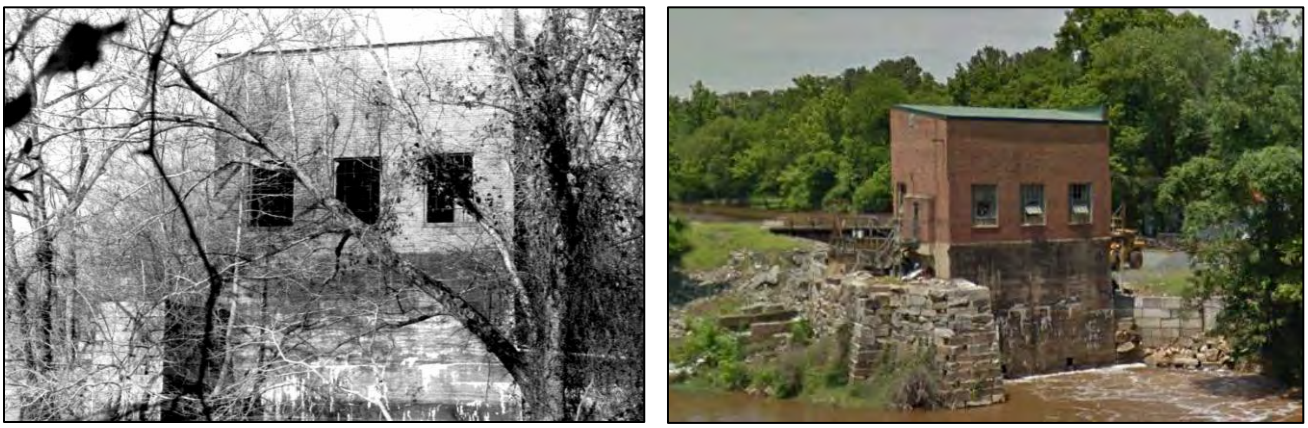


Figure 29. Left, Lockville Dam, Canal, and Powerhouse (CH0018) at the time of NRHP listing (photo credit: NC HPO); right, ca. 2013 view of powerhouse (image credit: Google Streetview)

The Rocky Mount Electric Power Plant (NS0088) (Figure 30) in Nash County was constructed in 1901 as the first power plant in the city. It earned its NRHP listing in 1982 and described as follows in its nomination (Survey and Planning Unit 1982):

> Built in 1901 as a one-story brick facility, the power planted operated here until c. 1910. Probably around 1920 the building was raised to its present height of two stories, and a rear addition was made as well. The two-story structure which incorporates the original power plant is constructed of hand-made brick laid in 5:1 common bond. The gable roof is sheathed in corrugated metal over wood and asphalt; four metal ventilators and a brick chimney stack pierce the roof. Parapet gables

> outlined in stretcher bond rise at the east and west gable ends... [the plant] was the first power plant in the city. Built by prominent local contractor David J. Rose at a time when less than 10% of the population of North Carolina had access to electricity, the construction of this power plant was indicative of the emergence of Rocky Mount in the early twentieth century as a commercial and transportation center in the heavily eastern section of the state.

The Plant (NS0088) was listed under Criterion A as it was "crucial to the extensive growth and to the progress of early twentieth century Rocky Mount, being the first electric power generating plant to be established there at this time." It was also listed under Criterion B for its association with prominent local builder David J. Rose. Today the building appears vacant, although boarded up and little altered (at least on its exterior) from the time of its NRHP listing in the early 1980s.

Figure 30. Left, Rocky Mount Electric Power Plant (NS0088) at the time of NRHP listing (photo credit: NC HPO); right, ca. 2017 view of power plant (image credit: Google Streetview)

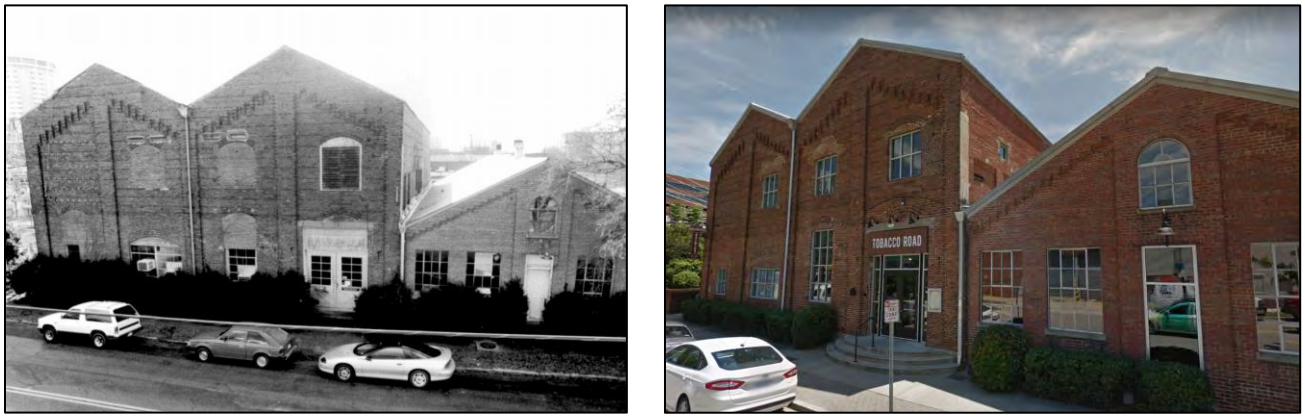


Figure 31. Left, Raleigh Electric Company Power House (WA2495) at the time of NRHP listing (photo credit: NC HPO): right, ca. 2019 view of Power House (image credit: Google Streetview)

The Raleigh Electric Company Power House (WA2945) (Figure 31) was NRHP listed in 1997 under Criterion A. Its nomination form describes the resource and its significance as follows (Survey and Planning Unit 1997):

> The Raleigh Electric Company Power House is an early twentieth century electrical power generation facility… composed of two original ca. 1910 two-story blocks on

> the east and a 1930 one-story replacement block on the west end. Originally built as a coal-fired steam plant and substation, it is now used as a wiring and maintenance building… [the] Power House is locally significant under criterion A as an extremely rare surviving example of an early twentieth-century industrial facility which provided electrical power… The (former) Power House was the central element of this original complex… [and] exhibits a then-advanced structural system of steel framing system, with common brick forming its exterior skin.
>
> … the (former) Raleigh Electric Company Power House is locally significant under criterion A as an extremely rare surviving example of an early twentieth-century industrial facility which provided electrical power to the capital city of Raleigh

Since the building's NRHP nomination in the late 1990s, the building has been adaptively reused for yet another function – a sports bar. The building appears to retain its façade and exterior materials, although the building's interior has been heavily altered.

An examination of the NC HPO online survey database revealed only three surveyed resources within Halifax County related to power generation. These included the Roanoke Navigation and Water Power Company Power Plant (HX1079), Virginia Electric Power Company (HX1559)–also evaluated as part of this survey–and the Enfield Electric Power Plant and Water Works (HX0408) which was placed on the Study List in 1991.

The Enfield Electric Power Plant and Water Works (Figure 32) was constructed in 1922 and is situated on the southwestern edge of the small town of Enfield, roughly 20 miles south of the project area. The building's NC HPO survey file provides the following description (NC HP Enfield Electric Power Plant survey file):

> The classically-influenced brick building of the Enfield Electric Power Plant and Water Works is little changed from its appearance in a 1920s documentary photograph… The structure rises for two stories of one-to-six common bond brickwork above a rusticated concrete foundation and water table to a flat roof with encircling parapet. Below the cornice are large multi-pane, flat-arched windows with concrete sills and keystone lintels.

The building was placed on the North Carolina Study List in 1991. Recent aerial views reveal that the building is empty but appears relatively unchanged since its 1990 survey.

Figure 32. Top, Enfield Electric Power Plant and Water Works (HX0408) at time of 1990 survey (photo credit: NC HPO); bottom, ca. 2013 view of power plant (image credit: Google Streetview)

Historic Significance (Criterion A) - Industry

The Roanoke Navigation and Water Power Company Power Plant is recommended as eligible for NRHP listing under Criterion A in the area of Industry. One of just three surveyed resources of its type within Halifax County, the Power Plant stands as a unique and significant example of early-twentieth-century industrial architecture. A pioneer in the field of hydroelectric power, the Roanoke Navigation and Water Power Company's utilization of the earlier Roanoke Navigation Canal in its endeavors to generate power for the community of Roanoke Rapids was certainly distinct. While other plants eventually utilized this technology, the Power Plant appears to be one of, if not the earliest, plant to utilize this technology in North Carolina (the Lockville Dam, Canal and Power House (CH0018), which was also constructed along an old canal, was not built until 1922) The decision to construct the Power Plant adjacent to the extant stair-step lock in a successful effort to utilize it as part of the hydroelectric power creation process was a notable endeavor.

Architectural Significance (Criterion C) – Architecture and Engineering

The Roanoke Navigation and Water Power Company Power Plant is additionally recommended eligible for NRHP listing under Criterion C in the areas of Architecture and Engineering. Despite ceasing to operate as a hydroelectric power plant over 100 years ago, the resource retains a high degree of material

integrity. The Power Plant retains its original form (excepting a small and clearly discernable two-story addition to its northern elevation), fenestration pattern, decorative exterior brick pilasters, and cornice. The building's interior retains original exposed brick walls, roof framing members, as well as the large intake pipe hole at its basement level. Additionally, the Power Plant retains is original relationship with the Navigation Canal stair-step lock, a unique feature in the building's design and one that sets it apart from other resources of its type. For these reasons the Power Plant is believed NRHP eligible under Criterion C.

Association and Information Potential Significance (Criteria B and D)

The Roanoke Navigation and Water Power Company Power Plant has no known association with significant persons of our past and is unlikely to yield further historic information. It is therefore not recommended as NRHP eligible under Criteria B or D.

ROANOKE NAVIGATION AND WATER POWER COMPANY POWER PLANT		
Element of Integrity	**Level of Integrity**	**Assessment**
Location	High	Sits on site where it was built
Design	Medium/High	The building retains its original footprint, which includes the adjacent stair-step lock. Although its windows are replacement, it retains its early fenestration patterns. The building's interior is still easily deliniated between to the two building sections and the basement level. A two-story addition extends from the building's northern elevation, but is clearly discernble as new.
Setting	Medium/High	A small buffer of greenspace remains within the immediate vicinity of the building. Impressions of the building's original tail race can be seen to the building's north, and the canal chanel remains along the building's southern elevation. Expansion of modern development (i.e. encroachment of NC 48 and commercial enterprises such as the gas station across the street) threaten the building's overal setting.
Materials	High	The building retains its orignal brick cladding and foundation in addition to its decorative brick pilasters. Its windows have been replaced with period appropriate replacements, and it retains an early fenestration pattern. Original exposed framing members (including roof trusses) are found on the building's interior in addition to original concrete floors and exposed brick walls.
Workmanship	High	The building retains its original footprint (with the exception of the northern two-story addition) and a significant amount of original materials which presents a high degree of workmanship integrity.
Feeling	High	High integrity of location, materials, and workmanship, and medium/high integrity of design and setting; therefore high integrity of feeling

Association	High	High integrity of location, materials, workmanship and feeling, and medium/high integrity of design and setting; therefore high integrity of association

NATIONAL REGISTER PROPOSED BOUNDARY

The proposed NRHP boundary of the Roanoke Navigation and Water Power Company Power Plant encompasses the entire 1.03-acre parcel (Parcel ID: 0909341) currently associated with the resource as depicted in Figure 33. The entire Power Plant building, in addition to the extant elements of the adjacent stair-step lock, are encompassed by this boundary, which does not extend into the NC 48 right-of-way. It is believed that this boundary provides a sufficient setting for the Power Plant as it currently stands.

Figure 33. Proposed NRHP boundary for the Roanoke Navigation and Water Power Company Power Plant

Roanoke Rapids Power Company Power Plant Complex

Resource Name	Roanoke Rapids Power Company Plant Complex: Plant No. 1, Plant No. 2 and Switch House
HPO Survey Site #	HX1559
Location	Highway 48, Roanoke Rapids
Parcel No.	Parcel 0900082 holding Plant No. 2 and small portion of Parcel DOMINION holding Switch House and Plant No. 1
Date of Construction	Ca. 1919-1935
Recommendation	Recommended NRHP eligible under Criteria A, C and D

ARCHITECTURAL DESCRIPTION

Figure 34. Current aerial view of Power Plant No. 1, Power Plant No. 2, and Switch House locations (image credit: Google Earth)

Roanoke Rapids Power Company Plant No. 2 (contributing)

The Roanoke Rapids Power Company Plant No. 2 is situated on the southern bank of the Roanoke River, just to the west of the NC 48 bridge (Figure 34). The small masonry building is constructed of five-over-one common bond brick and stands roughly 20 feet by 20 feet in its dimensions. Constructed in 1924 (1925 Sanborn Map of Roanoke Rapids) the power plant is built into the bank of the river, allowing it to stand one story tall with an exposed concrete basement level on its northern, eastern, and western elevations (Figure 35 and Figure 36). The industrial building is topped with a flat roof and crowned with a corbelled brick cornice. Large rectangular openings centered on each elevation originally held multi-pane louvered windows. This original fenestration is retained on the building's northern elevation. Corrugated metal sheathing fills the openings on the remaining three elevations.

A modern metal ramp with handrails spans the water and leads to the southwestern corner of the building where a wood door is located. This door is likely an early, or perhaps original, entrance to the building as modern double steel doors are located just to the right, centered in an original window opening. The metal ramp continues downhill along the western side of the building, leading to the river's edge. A square water retention pool is located directly to the building's rear (south) and appears to be associated with the building, although modern in its construction. The building is owned by the Kapstone Paper Corporation and appears to be in active use. Interior access was not possible.

Figure 35. Plant No. 2—left, view of southwest corner; right, view of northern elevation, with Plant No. 1 in background

Figure 36. Plant No. 2—left, view of southeast corner; right, view of southern elevation

Roanoke Rapids Power Company Switch House (contributing)

The Switch House stands roughly 120 feet to the west of Power Plant No. 2 on land owned by Dominion Power. Although currently on a separate parcel, the building is historically part of a larger power plant complex which included Power Plant Nos. 1 and 2 in addition to multiple other buildings (see history for further discussion).

Erected with fireproof construction of brick—probably not long after the 1924 construction of Power Plant No. 2—the building rests on a raised concrete foundation and stands one-story tall. Like Plant No. 2, the Switch House is plain in its design and features a five-over-one common bond and is capped by a flat roof with unadorned brick and concrete coping. Concrete lintels top centrally placed doorways on the eastern and western elevations, which are reached by concrete stairs. The openings have lost their original doors and instead are filled with iron bars to deter trespassing. Two window openings resting on concrete sills and topped with concrete lintels stand to either side of the doorways and also display the iron bars. Remnants of original eight-light window panes with glass shards hang at the top of each window (Figure 37).

Figure 37. Switch House—left, view of southeast corner; right, view of western elevation

The building's northern and southern elevations are characterized by window openings of the same style. Five window openings appear to have originally punctuated each elevation, although only the northern elevation retains this original pattern. All windows except the central opening have been bricked in on the building's southern elevation (Figure 38).

Views into the building's interior revealed a largely empty shell, which is composed of a single room with a concrete floor. A concrete ceiling with exposed steel beams tops the room. Hole marks in the ceiling identify where switching equipment was anchored or perhaps extended through the roof. Projecting from the floor and running in two rows east to west (one along the northern elevation and one along the southern) are rows of metal pipes. The pipes rise approximately six inches and are spaced at random intervals (Figure 39). They too likely anchored switching equipment. The room is otherwise bare.


Figure 38. Switch House—left, view of southern elevation with Plant No. 2 and river in background; right, view of northern and eastern elevations


Figure 39. Switch House—left, view of interior looking to east; right, view of interior looking to west

Roanoke Rapids Power Company Plant No. 1 (contributing)

The architectural remains of the Roanoke Rapids Power Company Plant No. 1 are situated on the southern bank of the Roanoke River, about 50 feet west of the Switch House (see Figure 34). A large concrete foundation rests along the river's edge and features three stone arches for water intake or release. Remnants of a brick wall (originally comprising the building's first floor) can be seen along the top of the concrete foundation. Views into the ruins reveal a complex network of concrete walls, piers, archways, and channels which have been heavily overgrown (Figure 40 and Figure 41).


Figure 40. Plant No. 1—left, north and west walls from river edge; right, view with walls


Figure 41. Plant No. 1—left, looking east over plant wall with Switch House in background; right, view of Switch House at left and plant wall along water at right

HISTORICAL BACKGROUND

In 1885 the Roanoke Navigation and Water Power Company began formulating their plans to breathe new life into the old Roanoke Navigation Canal by capitalizing on its potential as a hydroelectric power source. In 1890, local Weldon resident and former Confederate officer, Major Thomas L. Emry, desired to participate in the endeavor and offered to sell to a large tract of land to the Navigation Company. The land was prime in its location, situated to the northwest of Weldon and bordering the old canal, and seemed a lucrative investment for the newly founded company; however, due to an alleged personal disagreement between Emry and one of the Navigation Company's investors the transaction never took place. In what appeared to be retaliation against his rejection, Emry chose to create his own enterprise, the Great Falls Water Power, Manufacturing and Improvement Company (Great Falls Company). The plan behind Emry's competitive company involved the creation of a "short canal to tap the river's energy and enjoining the other company from diverting the river for their longer canal" (Robinson 1997:227).

By 1893 the Great Falls Company had secured the funds to complete their canal and had also formulated plans for numerous manufacturing facilities along the river. It was intended that these industries be powered by the canal, but the Great Falls Company lacked the additional necessary capital to immediately realize their plan. An 1894 article of the *Wilmington Messenger* reports the sale of a half-

interest in the company to raise additional capital, a name change to the "Roanoke Rapid Power Company," and foretells the founding of the town of Roanoke Rapids (Wilmington Messenger 1894):

> Several years ago a company was organized to develop the splendid water power at Weldon, N.C… and a magnificent canal was built three miles above Weldon on the Roanoke river with 7,000 horse-power. But the company did not have the means for establishing industries and things remained in statu[s] quo until yesterday when a half interest in the property was sold to northern capitalists… [who] agree at once to erect a knitting factory and a cotton factory… cottages for operatives and other necessary buildings. A new town will be built on the property and there is little doubt that a manufacturing city will in time be built up on the banks of the Roanoke at that point.

In 1906 Joseph T. Chase, who would eventually become mayor of Roanoke Rapids, assisted in the construction of the first Gaston Bridge as well as a paper mill, hydroelectric power plant, and diversion dam for the Roanoke Rapids Power Company (Robinson 1997:28).

A 1909 promotional booklet published by Joseph H. Wallace & Co. Industrial Engineers provides further insight into the Power Company's early hydroelectric plant. Although Chase is credited for the building's construction, Wallace & Co. were credited for the design. This early plant is the first building to stand on the site of the current-day Power Plant No. 1. Wallace & Co. provides the following information about the operations of the early plant building (Armstrong 1909:66):

> The hydro-electric power development for the Roanoke Rapids Power Co.,… was undertaken during the month of July, 1906, and consists of a concrete dam across the Roanoke River, additions and extensions to several small hydraulic structures… two sets of headgates, the installation of a penstock… the enlargement of the power canal, and the construction and equipment of a hydro-electric power plant… The hydro-electric power plant will furnish power for lighting purposes, machine shops, and for additional factories and extensions to those in existence.
>
> The canal proper is about one mile long. About ¾ mile below the gates the hydro-electric plant is located. Four sliding headgates located in a concrete bulkhead control the water used for operating this plant. The water is diverted to the water wheels from the canal through steel penstocks, and then into the river… (Figure 42).

The industrial engineer's brochure continues on to provide the following physical description of the building and images of its completed interior (Armstrong 1909:67-70) (Figure 43 and Figure 44):

> The foundations of the Power House are entirely of Portland cement concrete and rest upon solid ledge throughout. The superstructure is of red brick, with wooden roof covered with tar and gravel roofing, the roof being supported by steel roof trusses. The floors are of concrete and steel, upon which is laid a hard wood top flooring.
>
> The general arrangement can be seen on the plan. The first installation consists of one pair of 39" McCormick turbines in a steel case mounted on horizontal shaft to which is direct connected a 750 K.W. alternating generator.
>
> Upon a gallery in the generator room is located the switchboard and all other devices for the operation of the plant. An overhead traveling crane is provided for handling the generators.

Provision has been made for the future installation of a duplicate of the present equipment, also for the addition of an auxiliary turbine in direct connection with each unit if required.

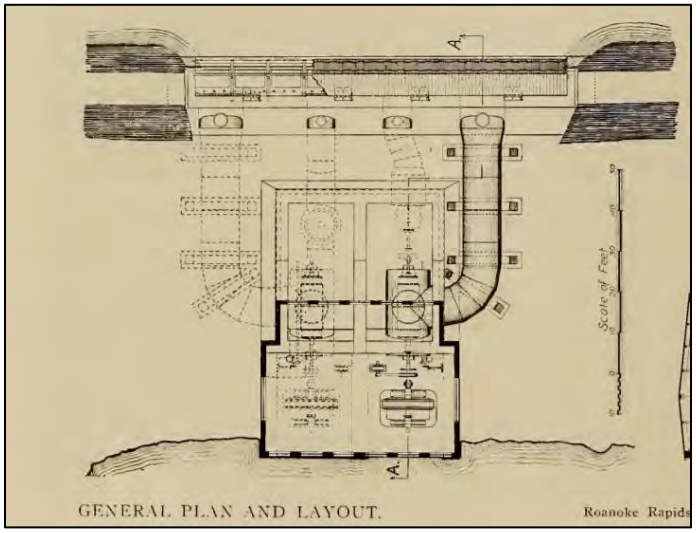


Figure 42. Plan view of 1906 Power House. The concrete bulkhead with sliding headgates is depicted at the top (south) of the image along the canal, with a steel penstock connecting it to the power building. The left (east) side of the building is drawn with broken lines indicating planned future growth. The Roanoke River runs across the north-facing bottom of the drawing (image credit: Armstrong, 1909)

Figure 43. Completed original hydroelectric power plant designed by Wallace (photo credit: Armstrong, 1909)

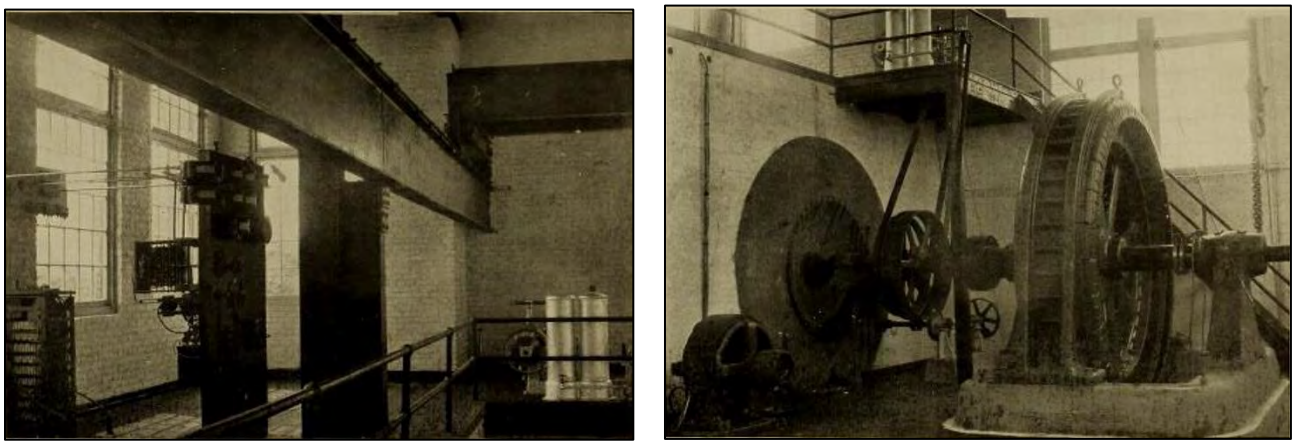


Figure 44. Interior views showcasing large steel beam ceiling supports on left and water wheel to right

In 1912 a decision was handed down by the Supreme Court of North Carolina ruling on the water rights of the Roanoke River. The subject had been contested between the Roanoke Rapids Power Company and the Roanoke Navigation and Water Power Company since the conception of both companies. The court ruled in favor of the Roanoke Rapids Power Company, which was granted permission to file "an injunction restraining the defendant [the Roanoke Navigation and Water Power Company] from cutting off water by means of a canal" (Wilmington *Dispatch*, 1912). This ruling effectively put the latter company out of business, and the lands of the Roanoke Navigation and Water Power Plant were sold at auction in 1913 to the Roanoke River Development Company (Robinson 1997:227).

A Roanoke Rapids Power Company power plant building is depicted on the 1915 Sanborn Map of Roanoke Rapids (Figure 45, left). Situated on the southern bank of the Roanoke River, with the canal running immediately to the south, this is likely an expanded version of the 1906 Wallace/Chase power plant. The Sanborn map identifies the building as a single-story brick structure with a basement. A wing labeled "transformer house" extends from the building's southern elevation. The hydroelectric plant operated around the clock. The building housed two 750-horsepower dynamos and two 1000-horsepower wheels. The plant provided power to various mills under the purview of the Roanoke Rapids Power Company, including the new Roanoke Mills facility constructed in 1915 (Roanoke Rapids *Herald* 1917).

In July 1918 a fire originated in the plant's transformer room (Roanoke Rapids *Herald* 1918a):

> … the damage done by the blaze… is certainly not less than twenty thousand dollars. The roof of the plant has fallen in, two generating units seem completely gutted, the big switchboards are entirely demolished, the transformers burnt out a good deal of the equipment of the new steam power plant now in process of erection

The event was reported as catastrophic to the town as at this time the plant was responsible for providing power for "all of the industries of the community, except the plant of the Rosemary Manufacturing Company" (Roanoke Rapids *Herald* 1918a). The initial report was overblown, for an article in the *Herald* just one week later stated that the plant was once again up and running and efforts were being taken to update it to prevent further risk of fire, including the installation of a steel and concrete roof (Roanoke Rapids *Herald* 1918b).

A February 1919 advertisement published in the *Herald* for General Contractor J.W. Smoot states that Smoot "re-built the plant of the Roanoke Rapids Power Company" (Roanoke Rapids Herald 1919). The newly published Sanborn Map of 1919 depicts a building with a larger footprint than that depicted in the

1915 (Figure 45, right) suggesting that the Roanoke Rapids Power Company invested a significant amount of time and money into the plant following the fire. It may also reflect the completion of the "new steam power plant" under construction at the time of the fire. How much of the "re-built" plant incorporated the earlier building (or buildings) is unclear. (Further research and archaeological investigation might untangle any overlap between the 1906 building, the one depicted on the 1915 Sanborn, and the building pictured on the 1919 map.)

The 1919 building (Plant No. 1) stood one-story tall with a basement, as did the 1915-pictured building. However, it was wider and longer. The building is divided into four defined spaces: the generator room at the front, a hot water room in the middle, a boiler room at the rear, and a switch room which extends slightly past the building's overall boxy footprint. Two of the building's rooms are separated by single iron doors, with the exception of switch and generator rooms which are separated by a double iron door. Two 125-feet-high chimneys rose from the boiler room. The building, which operated continually, was constructed of brick with cement floors and a reinforced-concrete roof with exposed steel rafters on the interior. A coal track was attached to the eastern elevation of the switch room, revealing that the plant was no longer solely water-powered. Two small single-story frame buildings stood just to the west.

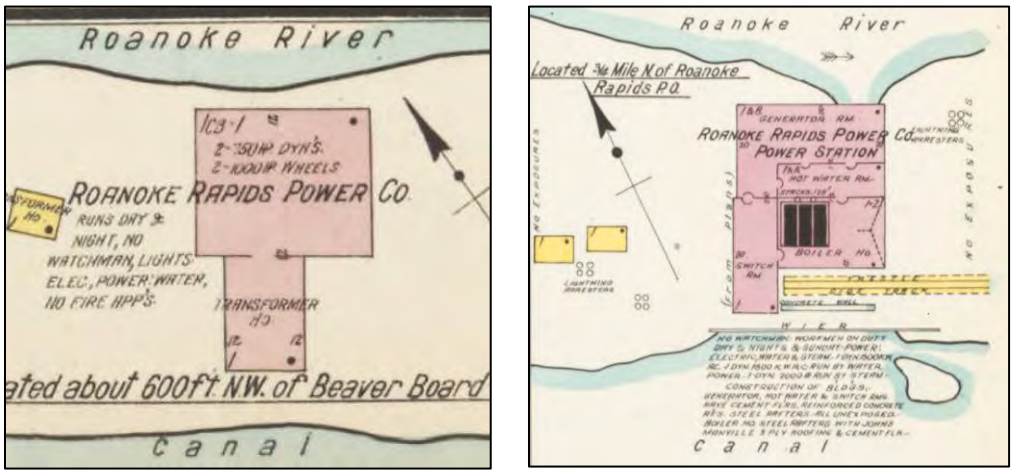


Figure 45. Left, 1915 Sanborn Map; right, 1919 Sanborn Map

The 1920s proved a significant period of industrial transition for Roanoke Rapids, as many of its industrial founding fathers died. These included W.M. Habliston (1855-1922), who at his death headed the Roanoke Rapids Power Company and was a director of the Roanoke and Patterson Mills and the Halifax Paper Company. Two years after his passing, the Virginia Railway and Power Company purchased the Roanoke Rapids Power Company (Robinson 1997:31), which in 1925 was renamed the Virginia Electric and Power Company (VEPCO) (Dominion 2019; King 2010:117). (VEPCO now operates under the name Dominion Energy.) The 1925 Sanborn Map depicts an expanded complex, although it retains the Roanoke Rapids Power Company name. By 1925 Plant No. 1 had grown and internally changed to some extent. It had acquired a third chimney stack and some small buildings stood to its west. Most notably, a second power facility, identified on the Sanborn as Plant No. 2, had been built about 200 feet to the east, presumably by the new corporate owners.

Plant No.2 is a nearly square, still largely intact, brick building measuring about 35 by 35 feet (Figure 46). The 1925 Sanborn identified it as dating from 1924 and having fireproof construction. Situated on the southern bank of the Roanoke, it stands one-story tall with a basement level exposed at its northern elevation along the river.

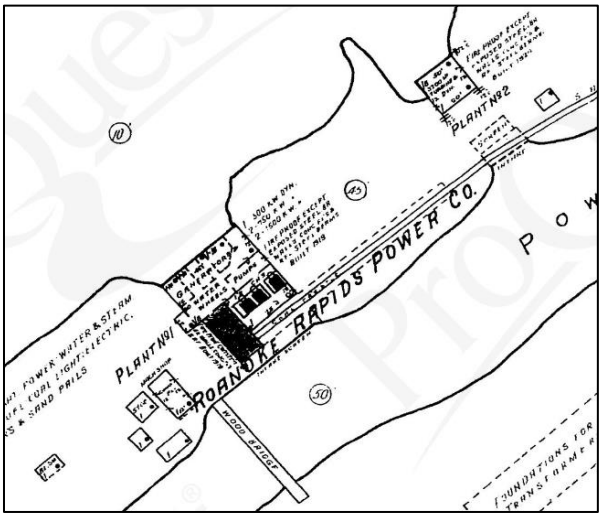


Figure 46. 1925 Sanborn Map

A photographic postcard likely dating from the late 1920s pictures the Power Plant complex looking southwest across the Roanoke River with all three resources considered here standing and intact (Figure 47). At the left (east) is Plant No.2, with all its original windows in place. Near the center is the Switch House, complete with the concrete staircase on its eastern elevation. Directly to its right is Plant No. 1. The three large stacks are seen rising from the boiler room, which the photograph reveals to have had a gabled roof. The generator room sits closest to the river and stands upon the large concrete arched foundation, the ruins of which remain today. Behind the buildings a large transformer grid crosses the skyline. A current photograph depicts the three resources in the same configuration, although only the basement level of Plant No. 2 survives (Figure 48).

Figure 47. Likely late-1920s postcard view from the Roanoke River of Power Plant No. 2 at left, the Switch House at center, and Power Plant No. 1 at right (photo credit: North Carolina Collection at UNC Chapel Hill)

Figure 48. Modern image mirroring Figure 47 with concrete walls of Power Plant No. 2 at far right

A second historic photograph (Figure 49) appears to date from a similar time period as the postcard image and depicts the power complex from the rear (or looking north). It includes the southern elevations of Plant No. 1 and the Switch House, though not Plant No. 2. Notably visible are the coal track and canal in the foreground. A single-story gabled brick building to the left of Plant No. 1 is likely the machine shop, which no longer stands. The rear elevation of the Switch House mirrors that of the front shown on the postcard. This image, however, appears to show a network of metal rods and wires atop, rather than behind, the building.

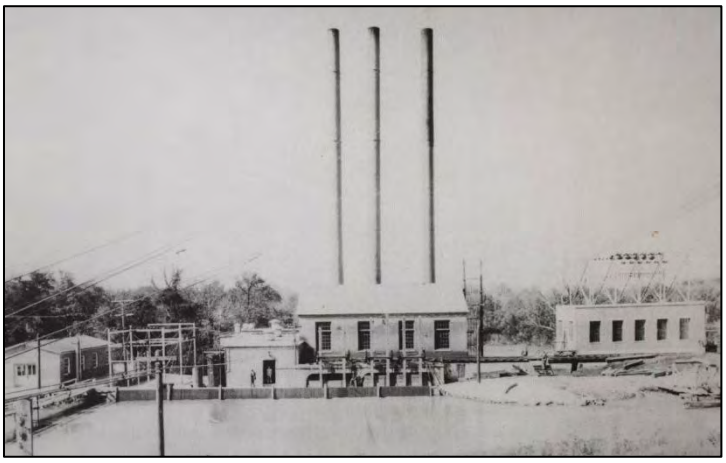


Figure 49. Post-1934 view of southern side of Power Plant No. 1 at center and Switch House at right complex (photo credit: Robinson, 1997)

The updated 1935/1940 Sanborn Maps (Figure 50) reveal little change to the complex. This could be largely due in part to a note on the updated maps stating that admittance to the buildings was denied. From the exterior notes, however, both Plants No. 1 and 2 appear to retain their 1925 footprints, as does the Switch House.

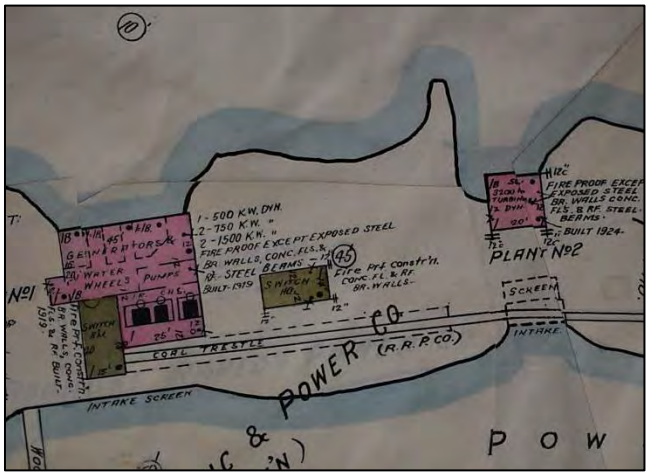


Figure 50. 1925 Sanborn Map updated 1935/1940 with Plant No. 1 at left, Switch House at center, Plant No. 2 at right, and Roanoke River to north at top of image

In 1950 a resolution in support of VEPCO's plan to construct a large hydroelectric dam on the Roanoke River was passed by the City Council. Despite opposition from the federal government and the Army Corps of Engineers, the project was completed in 1955. Upon its completion, the dam was VEPCO's largest electric plant, with a production capacity of 104 megawatts (Robinson 1997:56-57; King 2010:117). The completion of this large hydroelectric facility, which still operates, would have negated the need for the former Roanoke Rapids Power Plant. Over time the plant's buildings have been gutted or removed leaving just the two buildings and the foundation that stand today. In 1990 Plant No. 2 was surveyed, although no mention of supporting buildings was made on its survey form, suggesting that Plant No. 1 had been decapitated by this time and that the Switch House may have been overgrown. Today, Plant No.2 is owned by the WestRock Paper Mill and appears to be in working order, although its role in the mill's power production, if any, is unknown.

NATIONAL REGISTER OF HISTORIC PLACES EVALUATION

(See Roanoke Navigation and Water Company Power Plant evaluation for discussion of comparable power plant resources within the state of North Carolina)

Historic Significance (Criterion A) – Industry

The Roanoke Rapids Power Company Power Plant Complex is recommended as eligible for NRHP listing under Criterion A in the area of Industry. One of just three surveyed resources of its type within Halifax County, the Power Plant Complex stands as a unique and significant example of early-twentieth-century industrial architecture. The complex retains a largely intact early-twentieth-century Power Plant building in addition to an early-twentieth-century Switch House. Both buildings retain their original footprint and extensive original exterior materials. While interior access into Plant No. 1 was not available, the building's continued use as a power generating building throughout its entire history is certainly an unusual occurrence. In turn, the Switch House, while no longer operational, retains a unique amount of original material. The building additionally serves as a visual link between Plant No. 1 and the ruins of Plant No. 2, allowing the collection of buildings to retain the feel of a cohesive complex despite the amount of time that has passed and the deterioration that has taken place. This continued use over time, in addition to its cohesiveness, presents the complex as an excellent example of an early-

twentieth-century power plant and an excellent addition to the narrative of early-twentieth-century hydroelectric power in North Carolina.

Association Significance (Criterion B)

The power complex has no known close association with any persons significant in our past. It is therefore not recommended eligible under Criterion B.

Architectural Significance (Criterion C) – Architecture and Engineering

The Roanoke Rapids Power Company Power Plant Complex is additionally recommended eligible for NRHP listing under Criterion C in the areas of Architecture and Engineering. Both the Switch House and Plant No. 2 retain a high degree of material integrity retaining their original footprints and exterior cladding. While some of the Switch House windows have been filled on its southern elevation, the building's original fenestration pattern is clearly visible through ghost marks. Additionally, the building retains its original exposed steel beams, concrete roof and floors, and concrete stairs on its eastern and western elevations. Plant No. 2 in turn retains a set of original windows on its northern elevation, and its original fenestration pattern on its remaining elevations (although they have been filled in with metal sheathing). Another notable element retained between the buildings is their surviving close relationship and setting, which is absent in the identified comparable resources. The two buildings are further supported by the remains of Plant No. 2, which adds to their strength as a significant and distinguishable entity that represents multiple elements of electric power production in the early twentieth century. As a group, the three are recommended as NRHR-eligible under Criterion C for their architectural and engineering, which are inextricably entwined.

Information Potential Significance (Criterion D)

The Roanoke Rapids Power Company Power Plant Complex is also recommended eligible under Criterion D for its information potential, particularly the remains of Plant No. 2, which consist of components of three early-twentieth-century power plants run by both hydro and coal power.

ROANOKE RAPIDS POWER COMPANY POWER PLANT COMPLEX		
Element of Integrity	**Level of Integrity**	**Assessment**
Location	High	The buildings have not been moved, but rather stand on site where there were originally built.
Design	Medium	The buildings which remain retain their original footprint and form, although some buildings have disappeared from the complex. Both the Switch House and Power Plant 2 are complete buildings with four walls and a roof. Both buildings additionally retain their original fenestration patterns although the Switch House has lost all of its original windows and Power Plant 2 only retains original windows on its northern elevation. Power Plant 1 retains only ruins of its original footprint, but its continued presense at the site assists in the interpretation of the complex as a whole.
Setting	Medium to High	The buildings remain situated along the bank of the Roanoke River, and are surrounded by a small amount of greenspace. Located directly to the south of the complex is a mdoern power transformer. Historic maps/images

		indicate this area historically housed earlier power production equimpment, although on a smaller scale. The complex is threatened by the encroachment of NC 48 in addition to lapsed maintenance (inevitably resulting in contined loss of original material and a continued loss of setting).
Materials	Medium	Both the Switch House and Power Plant No. 2 retain their original brick walls and roof structures (althoguh their roof materials are likely replacement). Original windows are found on the northern elevation of Plant No. 2 and original openings/ghost openings are found on all elevations of the Switch House. The Switch House retains only ghosts of original interior switch equipment, and interior access to Plant No. 2 was not available. Plant No. 1 sits in ruin on its original concrete base with a small amount of brick material standing on top where full walls once stood. Additionally the complex has lost numerous other buildings once associated with the plant.
Workmanship	Medium	The buildings which still stand (Switch House and Plant No. 2) retain a significant amount of original material and design integrity. However, Plant No. 1has lost most of its material integrity and stands as a ruin. Additionally the complex as a whole has lost multiple buildings that were once part of the complex. Given these factors, the power complex retains only a medium degree of workmanship integrity.
Feeling	Medium to High	High integrity of location, medium to high integrity of setting, and medium integrity of design, materials and workmanship; therefore medium to high integrity of feeling
Association	Medium to High	High integrity of location, medium to high integrity of setting, and medium integrity of design, materials and workmanship; therefore medium to high integrity of association

NATIONAL REGISTER PROPOSED BOUNDARY

The proposed NRHP boundary of the Roanoke Rapids Power Company Power Plant Complex encompasses the entire 1.08-acre parcel (Parcel ID: 0900082) on with Plant No. 2 sits in addition to roughly 0.4 acres of a 381 acre parcel (Parcel ID: DOMINION), which surrounds the smaller parcel and holds the Switch House and ruins of Plant No. 1 (Figure 51). The inclusion of the entire parcel associated with Plant No. 2, as well as the small portion of the larger parcel owned by Dominion, encompasses all three extant architectural resources historically associated with the Power Plant Complex. The proposed boundary is bounded on the north by the Roanoke River, on the west and south by lands of Dominion Power, and on the east by the edge of the 1.08-acre parcel, which does not extend into the NC 48 right-of-way.

Figure 51. Proposed NRHP boundary for the Roanoke Rapids Power Company Power Plant Complex

Former Roanoke Rapids Paper Company (Halifax Paper Corporation)

Resource Name	former Roanoke Rapids Paper Company (Halifax Paper Corporation)
HPO Survey Site #	HX1082
Location	Roanoke Avenue, Roanoke Rapids
Parcel No.	0900081
Date of Construction	1906, 1919, 1958 and later
Recommendation	Not NRHP-eligible due to loss of integrity

ARCHITECTURAL DESCRIPTION

Construction of the former Roanoke Rapids Paper Plant or Halifax Paper Mill began in 1906 and it opened in 1907. As described at its history in the following section, it was built to anticipate growth, and has changed, modernized, and expanded on numerous occasions from 1907 to the present (Figure 52).

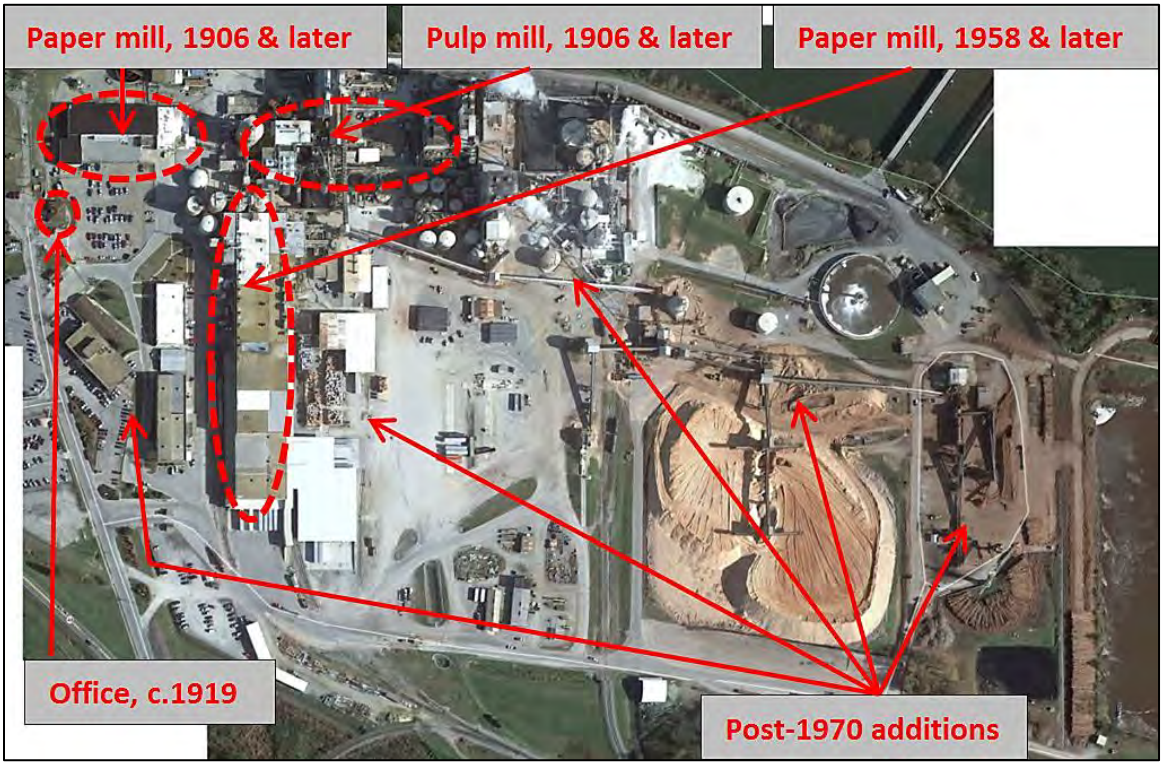


Figure 52. Annotated modern aerial with Roanoke River to north at top

The facility was erected with two principal components, a paper mill at the northwest and a chemical (or soda or sulphate/sulfate) pulp mill at the northeast. From its construction into the 1930s, it began a planned transition from a mostly frame and brick-veneered facility to a more fire-resistant and somewhat expanded plant. The changes were initially subtle, although a careful study of the various Sanborn maps—which display a curious initial mix of brick, frame, metal, and removable frame walls—makes the intent clear. From 1915 to 1919, for example, the paper mill was expanded at its northwest corner by a brick addition and partial brick rebuilding of the original structure (Figure 53 and Figure 54).

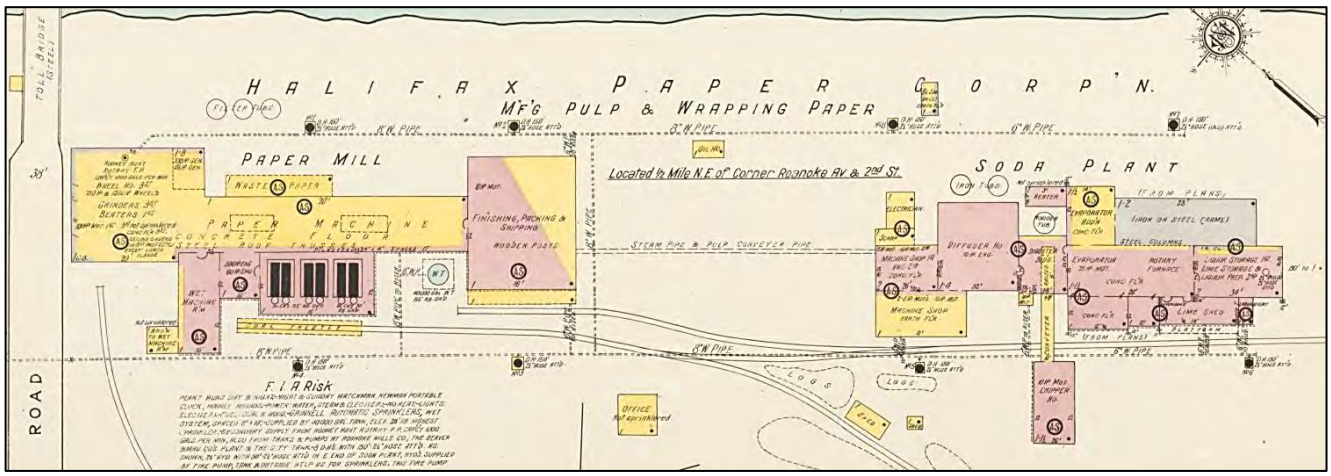


Figure 53. Halifax Paper Company in 1915 (source: Sanborn Map Company)

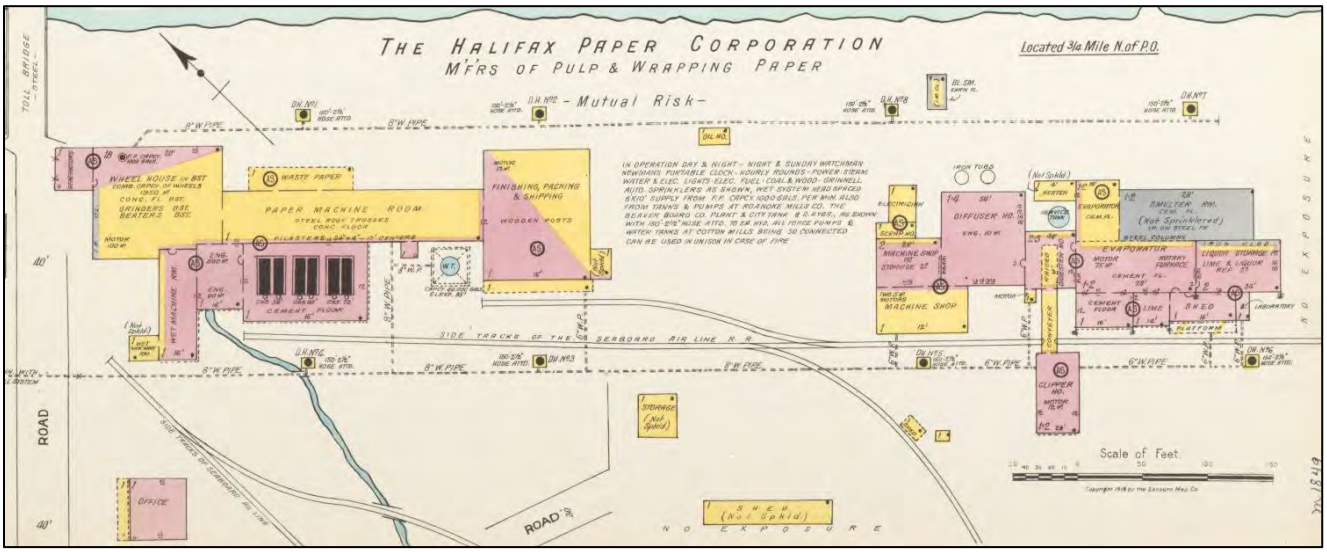


Figure 54. Halifax Paper Company in 1919 (source: Sanborn Map Company)

No color version of the 1925 Sanborn map could be located, but the version updated in 1935/1940 depicts the original plans coming to fruition (Figure 55 and Figure 56). The paper machine room at the paper plant was pushed out north toward the river and completely brick-veneered. Only a few small sections of frame construction remained. Likewise, the chemical pulp mill was greatly expanded in brick and metal to the west and north. It retained virtually no frame components. Also, a new array of "liquor tanks" stood to the pulp mills northwest and southeast.

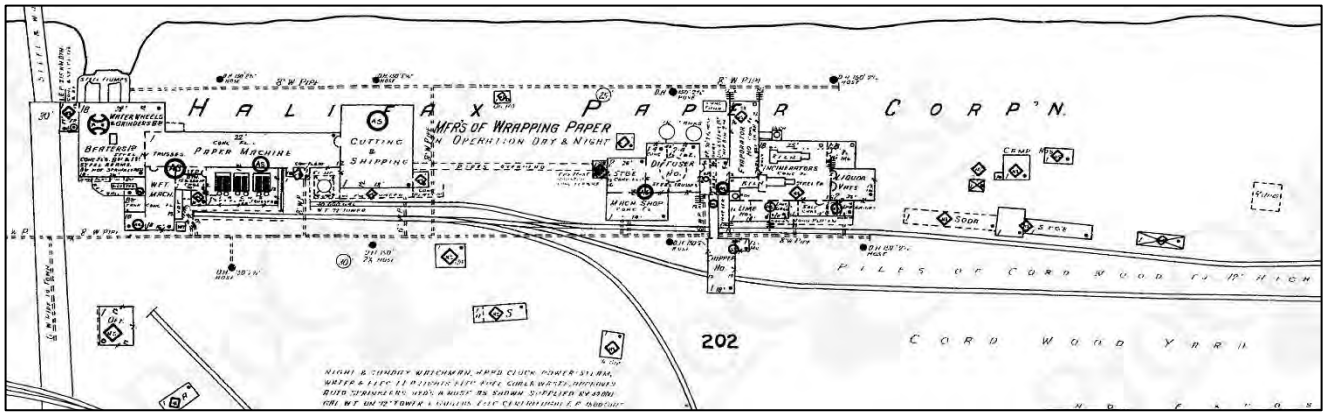


Figure 55. Halifax Paper Company in 1925 (source: Sanborn Map Company)

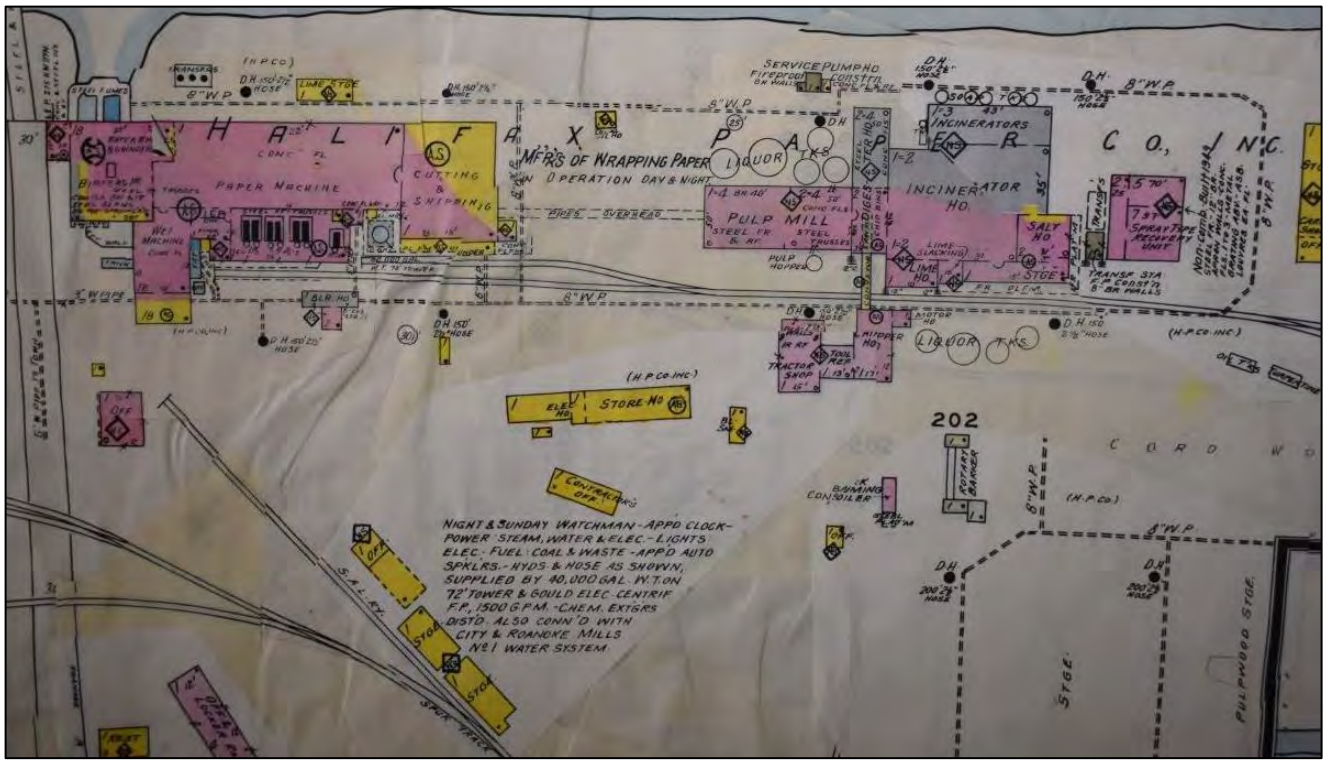


Figure 56. Halifax Paper Company in 1925, with 1935 and 1940 updates (source: Sanborn Map Company)

Some portions, or at least walls, of the original paper mill survive. Their most notable elements are their built-up bands of corbels. Otherwise, they reflect the many changes to the mill over time. Their windows and other openings have been filled by a mix of brick, concrete block, and cinder block. They have also been cut back in sections and extended in others, reflecting the changes to the mill depicted on the Sanborns.

Figure 57. Left, south elevation of early portion of paper mill with all original bays filled in; right, west elevation

Figure 58. Composite view of west elevation of paper mill; note that all bays are filled in

Figure 59. Left, north elevation of paper mill retaining brick wall with altered bays; left, west elevation corbels

A few basic building volumes at the chemical mill appear to look like those visible in the Sanborn maps and a 1945 photograph. However, they have been re-faced, filled-in, added to, appended with modern equipment, and otherwise changed to such an extent that they have lost their architectural integrity.

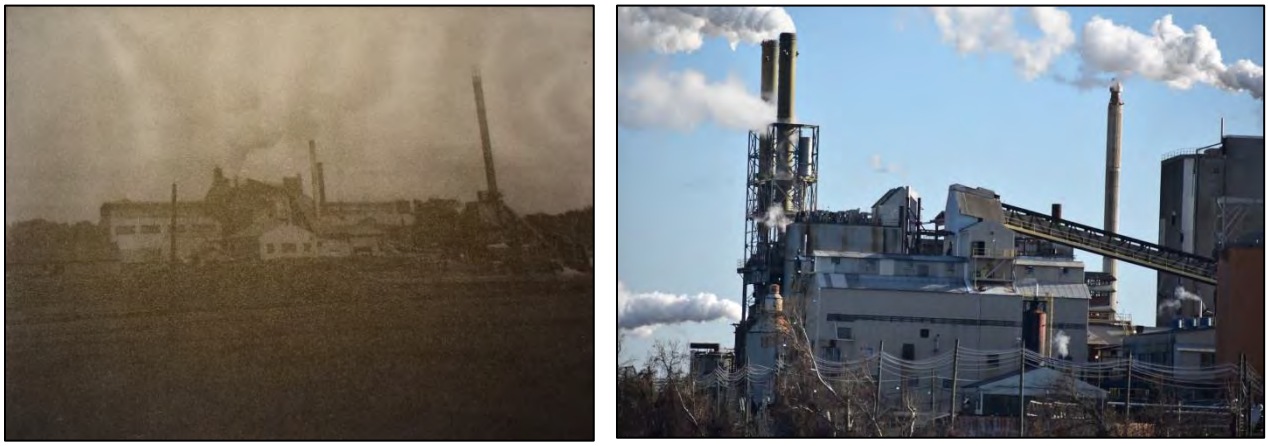


Figure 60. Left, looking southeast at chemical pulp mill in 1945 and, right, at present

Figure 61. Left, looking west at chemical pulp mill with one-story, original/early walls of paper mill visible in foreground; right, looking northwest at mill at chemical pulp mill with numerous modern appendages and accretions of processing equipment

The only early building at the complex that remains largely recognizable is the former office, which Halifax Paper occupied in 1919. It was erected by local contractor J.W. Smoot, who advertised himself as having "built more private homes in Roanoke Rapids than any other builder." His previous commissions included paper company president Job Taylor's home, the Presbyterian Church, the Rosemary School, eight brick store buildings, a cotton mill and warehouse, and the rebuilding of the Roanoke Rapids Power Company plant (Roanoke Rapids *Herald* 1919a). The Roanoke Rapids *Herald* (1919b) noted: "The new and handsome office of the Halifax Paper Corporation has been occupied by the clerical force. The building is a modern one and adds much to appearances down on the river." The new brick building was adjacent to the road, south of a railroad siding and the paper mill.

The 1919 Sanborn map shows a boxy, one-story, brick building with a full-facade, frame porch across its front (west) elevation (Figure 62, left). A ca.1935 photograph pictures a hipped roof, a small hipped dormer centered on the facade, window lintels with keystones and corner quoins, striped awnings, and a classical surround at the front entry. The porch has been removed (Figure 62, right).

The building currently retains its form, brick walls, and hipped roof. However, it has lost its dormer, original windows and door, and the pilasters at its entry. The lintel treatments remain as does, curiously,

the unsupported triangular pediment over the entry. Only the front windows openings, now filled with Plexiglas or a similar material, survive. The remainder of the bays have been filled in or only partially left open. These losses compromise the building's integrity.

Figure 62. Left, office building shortly after construction on 1919 Sanborn map; right, ca.1935 image of office building with paper mill to its left (source: Roanoke Rapids *Daily Herald*, *Looking Back* 2001)

Figure 63. Former office building—north and west front elevations, at left, and west front elevation, at right

Figure 64. Former office building—south side elevation, at left, and south side and east rear elevations, at right

One other major resource that is more than 50 years old stands at, and indeed dominates, the facility, the 1958 paper mill. This long, tall, flat-roofed is built, according the contemporary Sanborn account, with a steel frame, concrete floors and slab, and brick and asbestos siding. The long band of windows that runs across the top of its front (west) elevation is simply expressed, mid-century-modern or International-style elements. More mundanely, however, it allows some natural light to filter down to the papermaking machines and those who attend to them (Figure 65 and Figure 66).

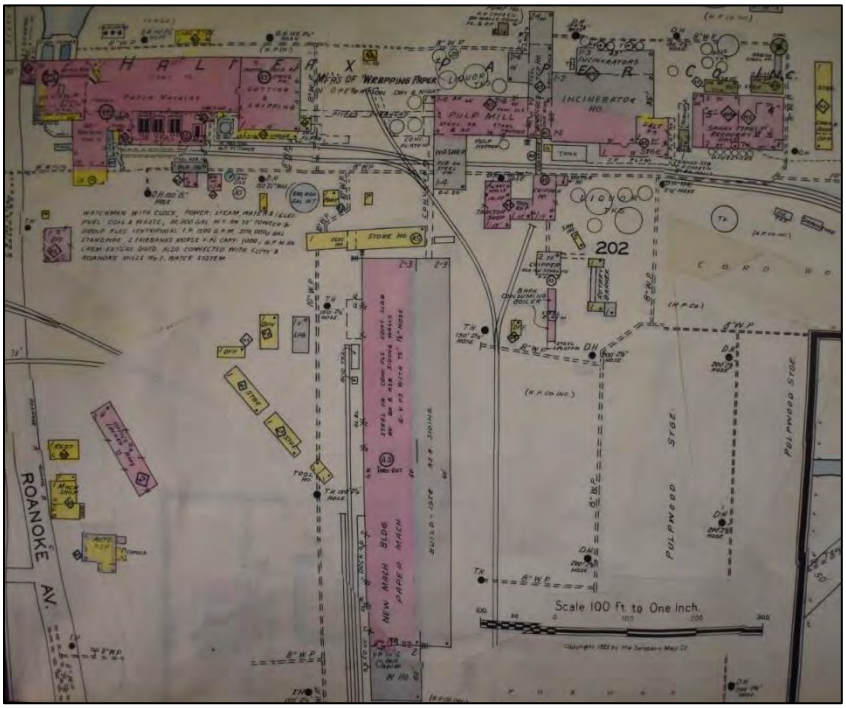


Figure 65. Halifax Paper Company on 1925 Sanborn map updated to 1958; note new paper mill extending north to south and taking center stage at the complex

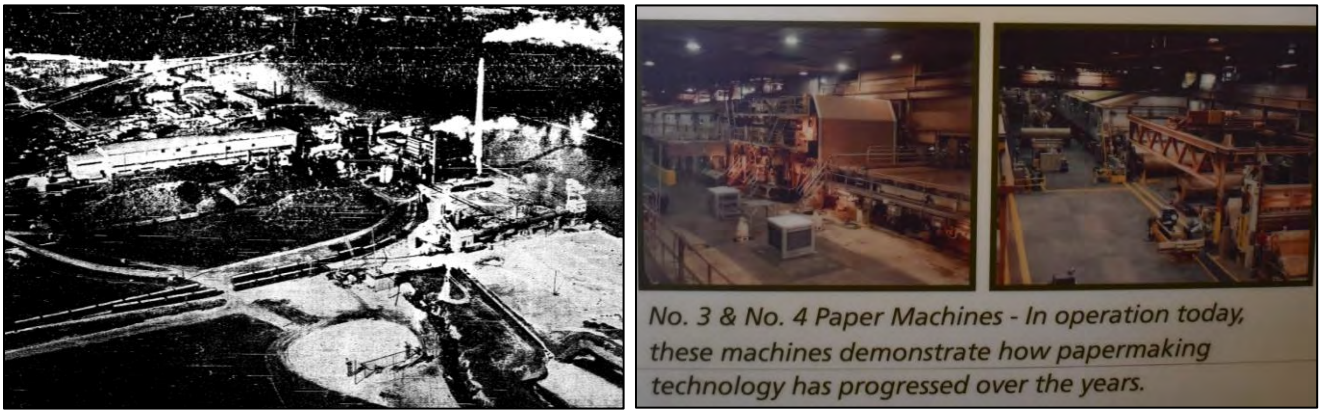


Figure 66. 1965 aerial looking west with modern paper mill at center (source: Raleigh *News and Observer* 1965)

Like the other earlier buildings, the 1958 paper mill has received modern appendages. It appears, however, to remain largely intact (Figure 67 and Figure 68).

Figure 67. 1958 paper mill building viewed from northwest, at left, and southwest, at right

Figure 68. Left, detail of west elevation of 1958 paper mill building; right, view from southeast of mill with 1958 building looming on skyline at center left

Numerous modern buildings and extensions, along with an array of conveyors to carry wood chips and large cranes and grapples to shift logs, stand on the property with the early buildings. The most notable is a ca.1970, two-story, brick-veneered office building the west of the 1958 mill. Narrow, recessed, spandrels holding windows that extend up the elevations, along with a tall, plain, widely overhanging cornice, suggest a New Formalism aesthetic, even though the building lacks columns (Figure 69). No architect was identified. The other resources at the facility are newer and purely functional, designed with the efficiency of kraft paper production foremost in mind (Figure 70 and Figure 71).

Figure 69. North side and west front elevations of ca.1970 office building and full-height lobby

Figure 70. Looking east into paper mill complex with early buildings obscured at upper left or outside of image

Figure 71. Loaded truck within mill complex with rolls of kraft paper stacked in background; Roanoke Canal Museum display of kraft paper products recently produced at mill

HISTORICAL BACKGROUND

The principals of the Roanoke Rapids Paper Manufacturing Company (later the Halifax Paper Company and subsequent names) had big plans for the enterprise they incorporated in 1906. Their facility, which opened in 1907, was to include multiple one- and two-story buildings encompassing more than 28,000 square feet and numerous support facilities and equipment—railroad trestles and siding, waterwheels and boilers, pulp beaters and papermaking machinery. It was to manufacture 20 tons of wrapping (or kraft) paper a day (Richmond *Times Dispatch* 1906b). They quickly reached and exceeded their initial goals.

The company engaged the consulting industrial engineering firm Joseph H. Wallace & Co. of New York City to design the facility. A power and paper mill specialist, Wallace had opened his own firm in 1897. By 1917 it specialized in pulp, paper, and fibre mills (Richmond *Times Dispatch* 1906a and 1906c; *Engineering Record* 1903:220; *Paper* 1917:225, 254-255). The hiring of an expert industrial designer was key to the success of the planned ground-breaking enterprise.

A North Carolina Highway Historical Marker on Roanoke Avenue, placed adjacent to the mill complex in 1973, carries the text: "FIRST CRAFT PULP IN UNITED STATES—Was made here by the sulphate process using southern pine in 1909, by the Roanoke Rapids Paper Manufacturing Company." A brief history of the Halifax Paper Company, taken from the essay that supported the marker, states in part (North Carolina Department of Natural and Cultural Resources 2014):

> On February 26, 1909, the…Company produced the first sulphate processed kraft paper in the United States. The sulphate name refers to the use of sodium sulphate, or sulphur. Kraft paper has long been used in applications ranging from butcher paper to concrete sacks. It is usually coarse and strong and is often light brown in color.
>
> The pulp mill, constructed between 1907 and 1909, was part of the greater Roanoke Rapids Manufacturing Company, incorporated in 1905. At the outset of production, the mill generated between 15 and 18 tons of pulp per day, and that daily amount was soon increased to 25 tons.
>
> Between 1909 and 1912, the finished product of the paper mill was made from ground wood pulp and sulphate pulp. Kraft paper was manufactured entirely from sulphate pulp after 1912. In 1913, the name of the business was changed to Halifax Paper Company, and improvements were made to the plant…to boost production to 35 tons per day.

Almost from the beginning, the plant had two principal components—a mill that made kraft paper and a chemical pulp mill—along with a mill attached to the chemical facility that mechanically ground wood pulp. (This mechanical facility was intended to be supplanted by the chemical pulp mill and almost from the first was of secondary importance.) The chemical pulping process converted the wood—small, local, Southern pine—into a solution that was transported to the paper mill, where it was turned into relatively thin but tough kraft paper (*Charlotte Sunday Observer* 1921; Raleigh *News and Observer* 1914). The plant was the first to exploit Southern pine at a large scale; previously American kraft paper was produced in the North. *The Timberman* industry magazine reported in 1921 that "With no precedents of successful operation to follow, [Halifax] had to struggle against infinite difficulties of detail….[but by 1921, as others followed suit] the era of southern paper making from the longleaf, loblolly, and other natives species [was] fully inaugurated" (De Kalb 1921).

The original appearance of the mill and much of its machinery is captured in a remarkable series of photographs taken shortly after it opened. In 1909 Joseph H. Wallace & Co. produced a book that included descriptions and photographs of 15 representative pulp, paper, and power plants it had entirely engineered. Among these were the Roanoke Rapids Paper Manufacturing Company and the nearby Roanoke Rapids Power Company plant assessed above.

According to the engineers (Joseph H. Wallace & Co. 1909:98), the plant was built with the growth of individual buildings and the overall complex in mind. First erected was the paper mill on the west, near the road and river. That mill was a connected group of brick and frame buildings with concrete or reinforced-concrete floors and some steel framing. A penstock led from the Roanoke Rapids Power Company's canal into the basement of the westernmost part of the complex, where power was generated and provided to the wood-grinding machines in the basement, the beating machines on the ground level, and the original single paper machine in the long building attached to the east. The engineers described their flexible planning: "Walls are brick where their location is a part of the ultimate two machine plant as designed, and are of wooden construction of a temporary character, where the future addition of a second machine will necessitate their removal." Following are some of the images of the paper mill, its plan, and its equipment included in the book (Figure 72 through Figure 76).

Figure 72. Looking northeast at paper mill in 1909; Roanoke runs left to right just behind building and trees

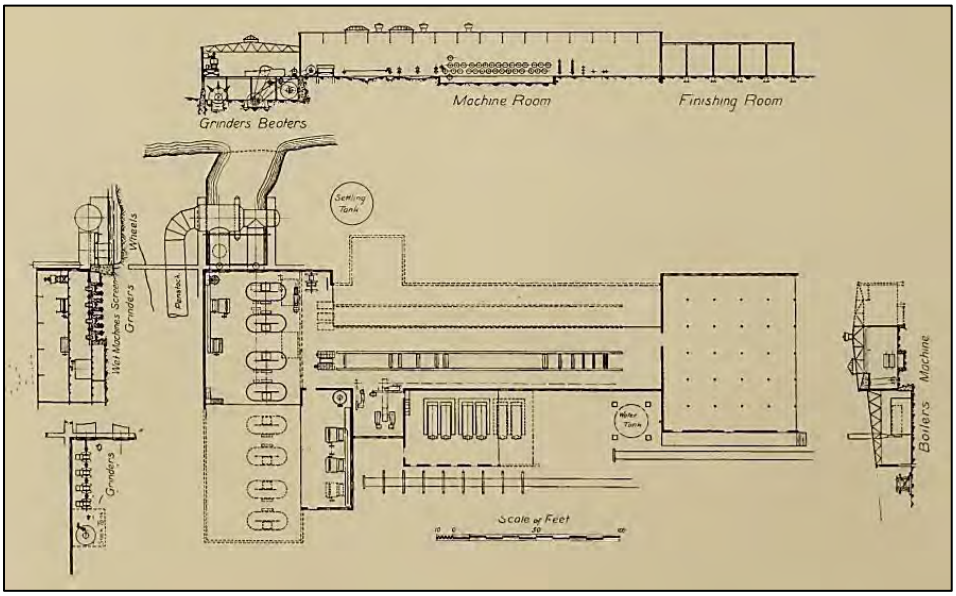


Figure 73. Floor plan of paper mill in 1909 with sections along the margins (pairs of stacks and water tower at bottom center provide orientation to above photograph)

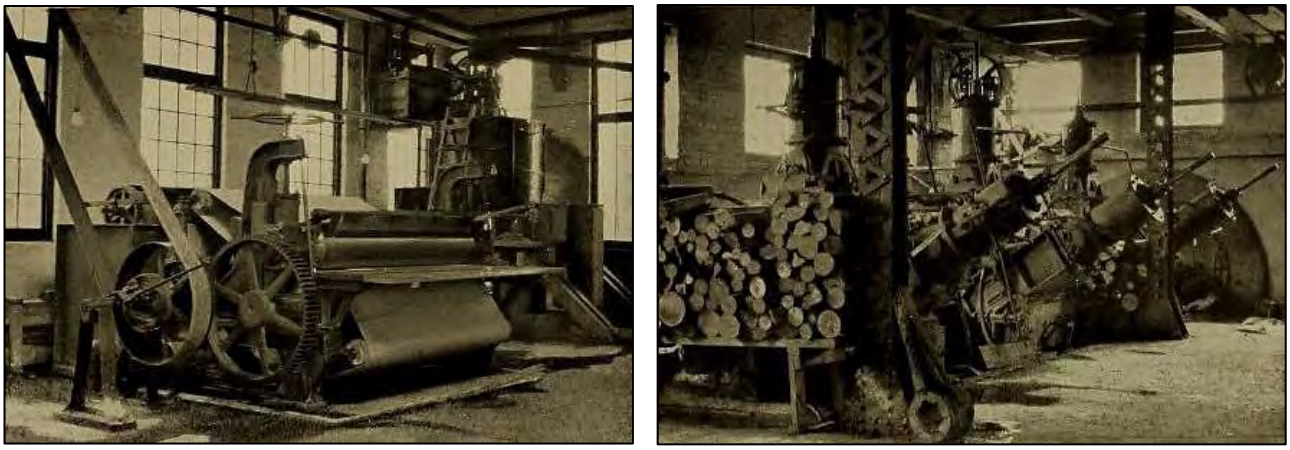


Figure 74. "Paper mill screens, wet machines, and grinders," 1909

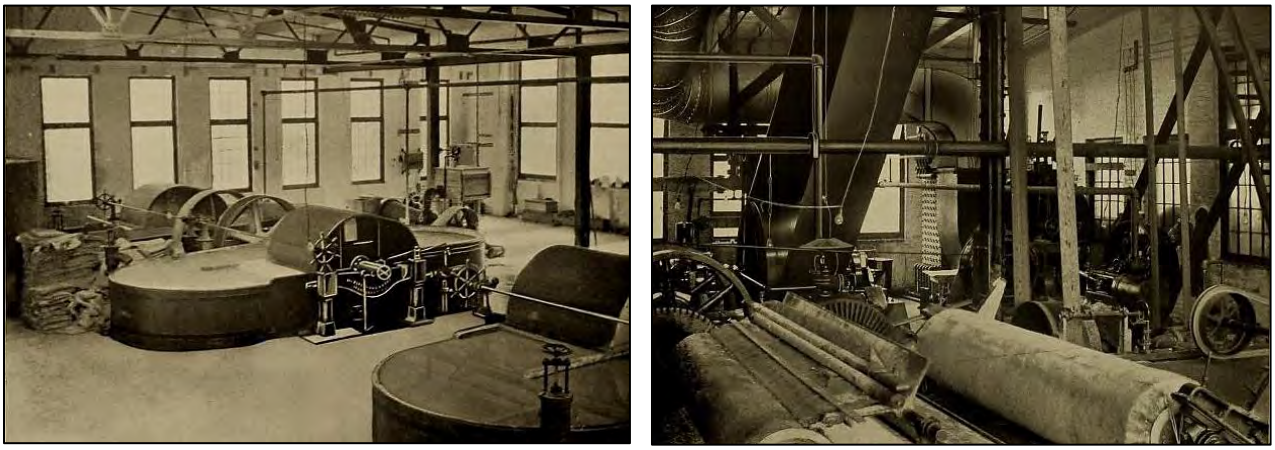


Figure 75. "Beating engine room," at left, and "engine room from machine," at right, 1909

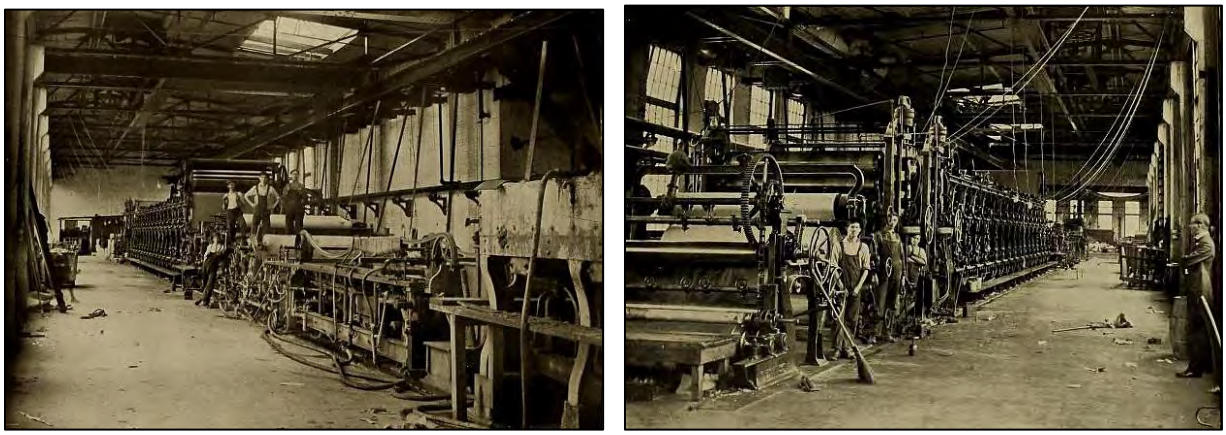


Figure 76. "[Paper] machine room from wet [west] end," at left, and "from dry [east] end," at right, 1909

These images picture steel beams, joists, and trusses, brick walls, and concrete floors. Also shown are boxy clerestories and long, closely spaced, casement windows. A 1914 photograph (Figure 77) of the paper mill from the same angle as that of Figure 72 shows little change to the building's brick southern section, other than the addition of the third set of smokestacks shown on the 1909 plan at Figure 73.

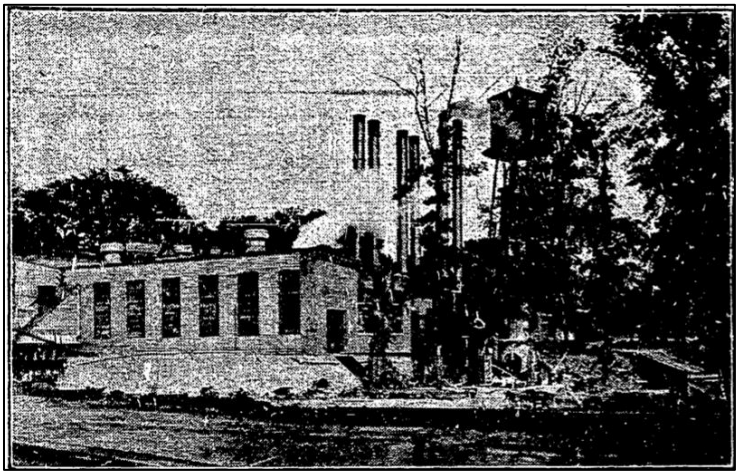


Figure 77. Paper mill in 1914 (source: Raleigh *News and Observer*)

The 1915 Sanborn insurance map image of the paper mill largely conforms with the 1909 description (Figure 78). It is particularly useful in confirming the location of machinery and identifying which portions of the complex were built of frame, brick, and a combination of the two, indicating the planned temporary nature of many walls. It also shows iron cladding on the far western elevation.

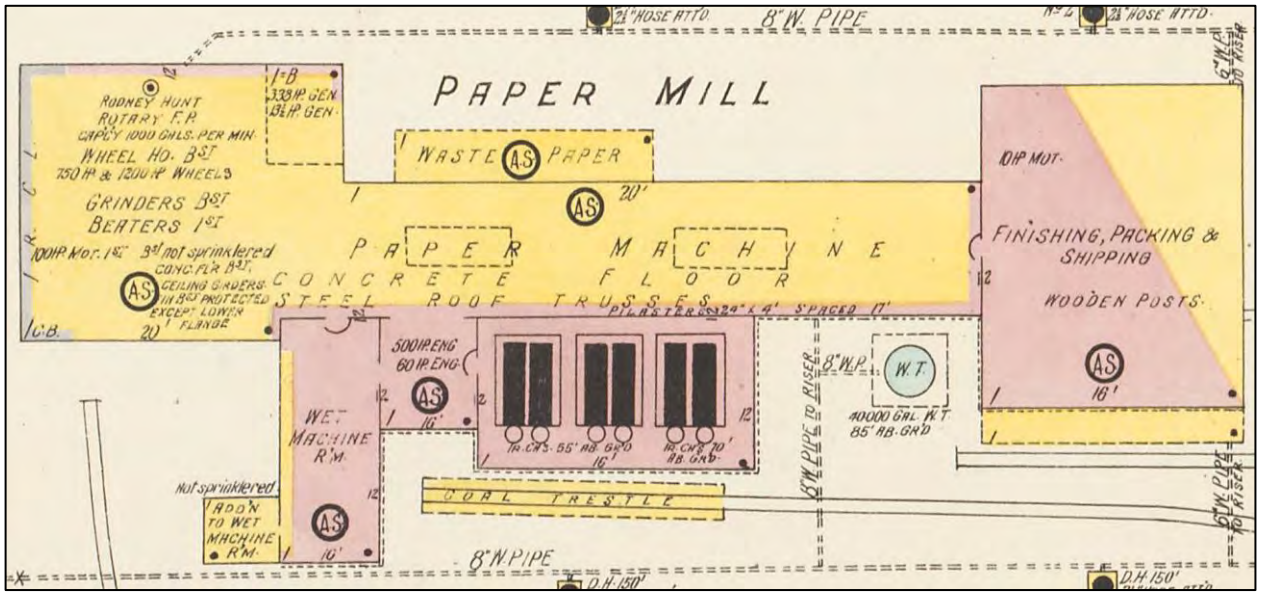


Figure 78. 1915 Sanborn map image of paper mill (source: Sanborn Map Company)

The most noteworthy part of the plant was the chemical pulp processing building, called the "sulphate fibre mill" by the engineers and the "soda plant" by the Sanborn company. Perhaps because of the new processes it used, or its limited use in 1909, the engineers included only a single exterior image of it in their account of the facility and did not describe or picture its equipment (Figure 79). They wrote (Joseph H. Wallace & Co. 1909:98):

> The fibre plant, the second step in the development, has recently been put into operation. The product is strong sulphate pulp for "Kraft" Papers (the first pulp of its kind in the United States) and the product of the paper mill has been extended to include "Kraft" lines of wrapping papers.
>
> The "Kraft" Pulp is produced by the methods of Carl P. Carlson, the noted Swedish chemical engineer, who is associated with this organization in all matters of sulphate pulp production.

Carl Carlson was a Swedish engineer who refined and improved the sulphate process. Joseph Wallace, while in England around 1907, learned of Carlson and traveled to Copenhagen to meet him. Wallace associated with the man he called "the wizard of the sulphate mill" in order to design and erect the Roanoke mill (Lockwood Trade Journal Co 1940:32-33).

Figure 79. View of "Sulphate fibre mill" from south, 1909, at left (source: Joseph H. Wallace & Co.); view from same direction, perhaps 1920s, at right (source: Images of North Carolina)

Fortunately, the 1915 Sanborn map includes further detail on the building's materials and contents (Figure 80). Like the paper mill, it had surprisingly placed frame walls and buildings, suggesting the planned temporary nature of its initial build-out.

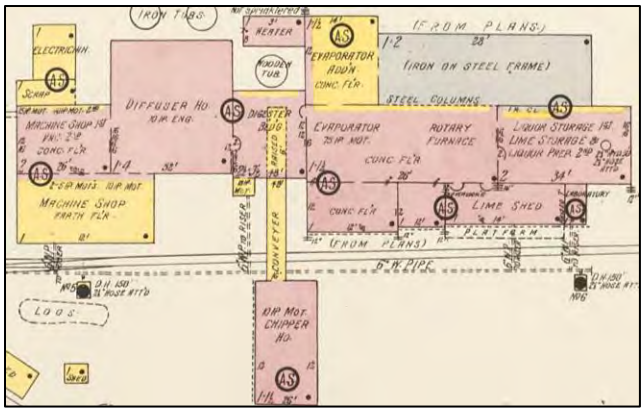


Figure 80. Pulp processing section of Halifax Paper in 1915; note narrow elevated frame conveyor at center, shown in above photographs (source: Sanborn Map Company)

As indicated by changes in the Sanborn maps of 1919 and 1925, along with updates to the 1925 map in 1940, 1950, and 1958, the plant continued to evolve. Numerous changes were made to the original paper plant during this time, although some altered sections of the original and early brick walls of the paper mill remain in place. The sulfate pulp mill also may contain pieces of its early buildings. If so, they are obscured by numerous additions, alterations, and processing changes since 1958 and could not be identified. (Due to the potentially dangerous processes that continue at the facility, no interior access to industrial buildings was provided and even exterior access was limited.) The remainder of the facility, outside of the early office building, is essentially modern.

Newspaper reports capture some of the changes to the buildings and, in particular, their machinery, as well as internal company difficulties. In 1924 "with the perfecting of the Kraft process entirely new machinery was installed" at the plant (Raleigh *News and Observer* 1932). In 1933 Halifax Paper was to be sold at auction for debts, although the matter was apparently resolved short of bankruptcy (Raleigh *News and Observer* 1933; Richmond *Times Dispatch* 1933). In 1937 the Albemarle Manufacturing Company acquired the facility (Rocky Mount *Telegram* 1959a).

In August 1940 heavy flooding on the Roanoke killed at least five and left 100s homeless and 1,000s without jobs. In Roanoke Rapids, the Roanoke Cotton Mill and Manchester Paper Company were heavily damaged. The extent of the damage to Halifax Paper is unclear. One newspaper (Burlington, NC *Daily News* 1940) reported: "Fire threatened a large plant of the Halifax Paper corporation here when a freight car of lime blazed up but firemen, unable to use regular equipment, made their way to the scene in boats and brought it under control." A second reported that in spite of fighting the blaze from boats, "a large plant of the Halifax Paper Corporation burst into flames and was virtually destroyed" (Richmond *Times Dispatch* 1940). The latter account is likely an overstatement.

Major changes came to the plant in 1958, when an approximately 550'-long, steel-frame, paper plant (discussed at the description section above) was built perpendicular to and south of the original paper and pulp plants (Figure 81). A 1959 article described and pictured the Halifax Paper operation with emphasis on its recent changes. It colorfully summarized the plant's early history and the production and uses of kraft paper (Rocky Mount *Telegram* 1959a): "A local log might travel to a far off city to walk up and down the streets as a shopping bag. Or, it could return to a Tar Heel farm carrying a load of fertilizer." The plant's "four giant paper machines" produced 600 tons of paper a day. The plant began with one machine; the fourth, dubbed the "Dixie Queen" was installed in the new building in 1959, doubling capacity. With the increased capacity, the plant employed 800. The transformation from raw logs to refined kraft paper had many steps, largely unchanged since the plant was established: the pulping process required bark removal and then wood chipping; chemical cooking in pressure-cooker-like digesters; forcing fibers apart in blowing tanks; and washing and screening (Figure 82 and Figure 83). The papermaking process, in the new giant fourdrinier papermaking machines, consisted of soaking the pulp on screens, which interlocked the fibers, and then passing the fibers through heavy steam rollers to produce the paper. (A fourdrinier or Fourdrinier machine produced paper in a continuous web.)

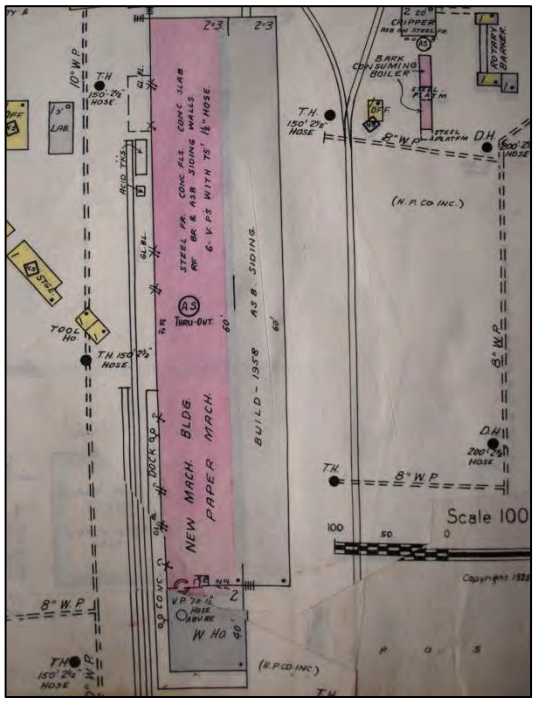


Figure 81. 1925 Sanborn map corrected through 1958, with new paper mill building at center and altered and expanded paper and sulfate mills at top (source: Sanborn Map Company)

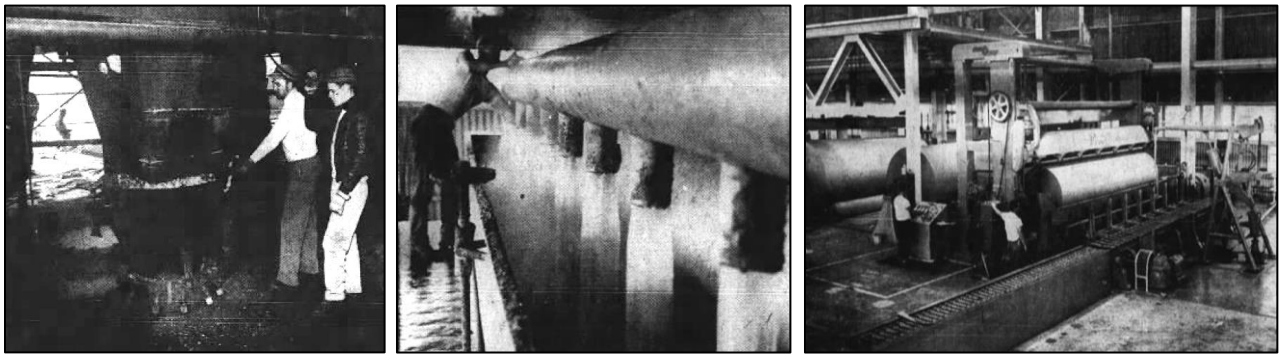


Figure 82. Cooking in the digester, left; washing and cleaning, center; the newest fourdrinier machine in the new plant, right; all in 1959

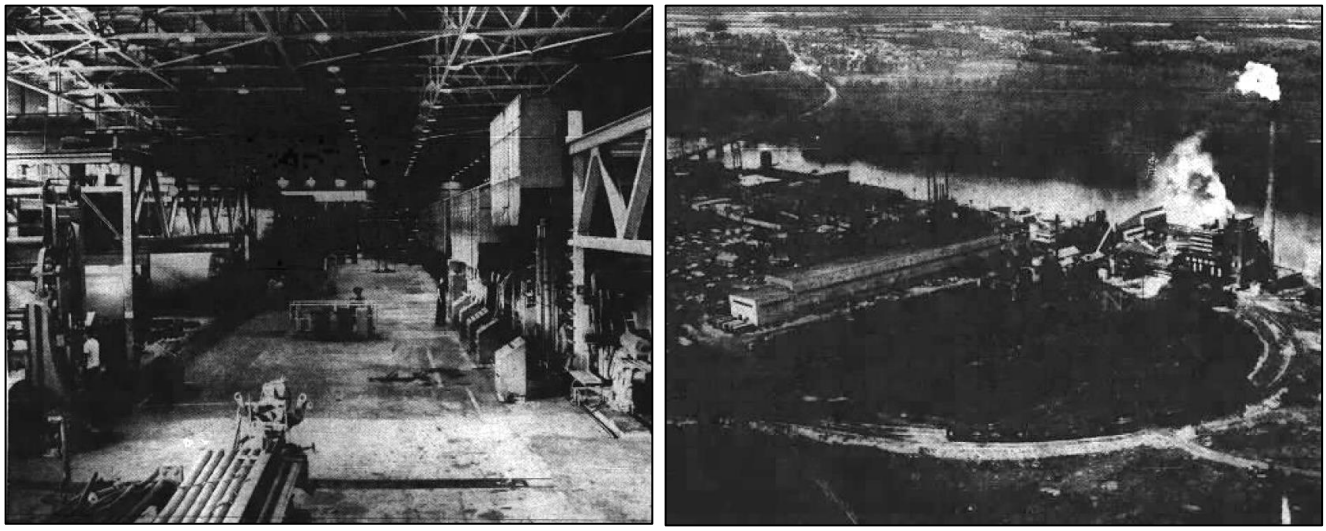


Figure 83. Left, the two new fourdrinier machines in the new plant, 1959; right, aerial view of plant, dominated by new building, 1959; note many changes to pulp plant at upper right

Ownership change accompanied the major late-1950s changes to the physical plant. By 1959 Halifax Paper was an operating division of the Albemarle Paper Manufacturing, Co. (Rocky Mount *Telegram* 1959b). In 1965, by which date the Ethyl Corporation of Richmond owned Albemarle, further big plans were afoot for the Halifax facility, which already had a large impact on the area (Raleigh *News and Observer* 1965):

> At Roanoke Rapids, N.C., the pulp and paper mill of Albemarle Paper Manufacturing Company uses more than half a million cords of wood annually—about a cord a minute, 24 hours a day, seven days a week. Most of it is purchased from tree farmers, through dealers and contractors, within 100 miles of the plant . . .
>
> Some 1500 people are engaged in producing and delivering the pulpwood requirements. These purchases add about $10,000,000 annually to the economy of the area. Approximately 900 people are employed at the plant, which has an annual payroll of $5,500,000. Production there has been tripled in the past decade. Current expansion costing more than $10,000,000 will add a power plant and other improvements which will provide additional paper capacity.

> The company's foresters operate throughout eastern North Carolina, assisting land owners in carrying out improved forestry practices to grow more and better trees. Albemarle also maintains a pine seed orchard for production of genetically superior seed. Each year the company gives to land owners in its area, on a matching basis, approximately 2,000,000 pine seedlings.

By 2013, under the ownership of KapStone Kraft Paper, the Halifax facility was still operating around the clock. In that year its production was expected to reach 440,000 tons of paper products (Anonymous 2013). In 2018 WestRock Company purchased KapStone and thereby the Halifax plant. WestRock is the facility's current owner and operator (US Security and Exchange Commission 2018; Roanoke Rapids *Daily Herald* 2018).

NATIONAL REGISTER OF HISTORIC PLACES EVALUATION

Historic, Association, Architectural, and Information Potential Significance (Criteria A, B, C, and D)

The former Roanoke Paper Company (Halifax Paper Corporation) facility is not recommended eligible under any of the NRHP's Criteria. It retains only small portions of its early buildings and these overall these have been heavily altered. It is largely a modern facility. It therefore is not believed to retain sufficient integrity to support any significance under Criteria A, for its history, or C, for its architecture. None of its resources are individually eligible for their architecture and, due to its many alterations and additions, it further lacks sufficient integrity to support eligibility as a significant and distinguishable entity or historic district. No significant persons had an important association with the facility and it is therefore not believed to be eligible under Criterion B. It is also not recommended as NRHP-eligible under Criterion D, for its resources are not likely to yield important information that is not available from other sources.

FORMER ROANOKE RAPIDS PAPER COMPANY (HALIFAX PAPER CORPORATION)		
Element of Integrity	**Level of Integrity**	**Assessment**
Location	High	This industrial complex stands on the location where it was built.
Design	Low to Medium	The surviving original and early portions of the complex have been heavily alterated through rebuilding, filling of bays, and significant addition; however, the 1958 paper mill retains much of its integrity of design
Setting	Medium	Other nearby mills have been removed, but the complex remains spreadout on the bank of the Roanoke River
Materials	Low to Medium	The surviving original and early portions of the complex have been heavily alterated through rebuilding, filling of bays, and significant addition; however, the 1958 paper mill retains much of its integrity of materials
Workmanship	Low to Medium	The surviving original and early portions of the complex have been heavily alterated through rebuilding, filling of bays, and significant addition; however, the 1958 paper mill retains much of its integrity of workmanship
Feeling	Low to Medium	High integrity of location, medium integrity of setting, and low to medium integrity of design, materials and workmanship; therefore low to medium integrity of feeling
Association	Low to Medium	High integrity of location, medium integrity of setting, and low to medium integrity of design, materials and workmanship; therefore low to medium integrity of association

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