North Carolina Department of Cultural Resources

State Historic Preservation Office

Ramona M. Bartos, Administrator

Governor Pat McCrory
Secretary Susan Kluttz

Office of Archives and History
Deputy Secretary Kevin Cherry

May 16, 2014

Lynn L. Hicks llhicks@fs.fed.us
US Forest Service
160 Zilliccoa Street, Suite A
Asheville, NC 28801-1082

RE: Catawba Falls Hydroelectric Complex Historic Documentation and NRHP Evaluation, Grandfather Ranger District, Pisgah National Forest, McDowell County, ER 10-2309

Dear Mr. Hicks:

Thank you for your March 20, 2014, letter transmitting the above-referenced document. We apologize for our delayed response, but staff shortages have caused a backlog in our reviews and we wanted to make sure that staff members in our Western Office had ample opportunity to review the report.

The evaluation report is very thorough and we are prepared to concur with the assessment that the Catawba Falls Hydroelectric Complex, including resources MC0207-MC0210 are eligible for listing in the National Register of Historic Places. However, additional information and steps in the Section 106 process are needed.

- While showing the resources as eligible for the Register, we are unable to locate a statement of which National Register criteria the Complex meets. One would assume that it might meet all four criteria, but without specific statements of which criterion is met or not met and why, the evaluation is not complete.

- There needs to be a brief statement of the complex's historical significance and specific dates tied to that significance.

- There is no map that clearly outlines the boundaries of the historic property. Do you intend for the Y-shaped area shown on pages 3 and 4 to be the boundaries for the eligible property?

We note that you are asking that we accept the report as mitigation for the adverse effect that will result from several activities planned by the USFS in the project area. This seems to be "getting the cart before the horse," as we do not have a clear understanding of all of the activities proposed.

Please provide the plans for the activities that are referenced in the assessment as having an adverse effect upon the historic property. We understand that you submitted plans in December of 2010 for several activities in the area, but we need a complete record of what is currently proposed that will adversely affect the Complex. Once we have that information, our agencies need to enter into consultation to develop a Memorandum of Agreement to resolve the adverse effect. Certainly, the assessment is excellent documentation of the Complex, but minus a better understanding of what is proposed and what will be lost, we are unable to agree that the report is the only mitigation needed.

Please contact me at 919-807-6579 or renee.gledhill-earley@ncdcr.gov so that we may discuss this matter in greater detail and move forward towards resolution.

Sincerely,

Renee Gledhill-Earley
Environmental Review Coordinator

cc: Scott Ashcraft, USFS sashcraft@fs.fed.us
Rodney Snedekeer, USFS rsnedeker@fs.fed.us

Lynn & Linda / Annie
I have scanned the NR evaluation report & put it on server so that Linda & Annie can review & comment
Need - 1 - agree it is NRelig.
2 - agree w/ proposed mitigation as we will need MOA -

Forests in North Carolina
or's Office

160 ZILLICOA ST STE A
ASHEVILLE NC 28801-1082
828-257-4200

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RIC PRESERVATION OFFICE

File Code: 2360-3 / 1500
Date: March 20, 2014

ER 10 - 2309

H-

A-

Dear Ms. Bartos:

Due 4/15/14

Enclosed for your review and comment is the report *Catawba Falls Hydroelectric Complex Historic Documentation and National Register of Historic Places Evaluation, Grandfather Ranger District, Pisgah National Forest, McDowell County, North Carolina.*

The complex has been found to be eligible to the NRHP. The area receives heavy and increasing recreation use and there are visitor safety concerns as well as watershed restoration needs to decrease flood hazards. The current project proposal calls for pedestrian bridge installations along the existing old road / current trail below the lower powerhouse and crossing Chestnut Branch; partial removal of the lower dam and associated powerhouse remnant walls along the trail; trail improvement / hazard tree felling for first 0.3 mile of the trail; and viewing platforms at the lower and upper falls.

The dam removal is necessary to reduce the amount of silt held and then released during rain events (water quality); to reduce gravel, boulders, logs and other debris from being trapped in the breached area thus causing a potential dam failure (affecting the recreation users and landowners downstream); and to reduce the amount of woody debris from moving through / down the stream channel that affects aquatic habitat. It is planned to leave a portion of the dam that is tied into the rock cribbing which supports the old road / trail.

To mitigate potential adverse effects the bridges and viewing platforms will include historic interpretation. The recent documentation includes approximately 900 photographs. The lower bridge is designed to keep users away from the powerhouse and a raised metal hipped roof along with grated openings will prevent access and better preserve the structure.

We appreciate the efforts of your staff at the Office of State Archaeology and Historic Sites to facilitate completion of this report.

Sincerely,

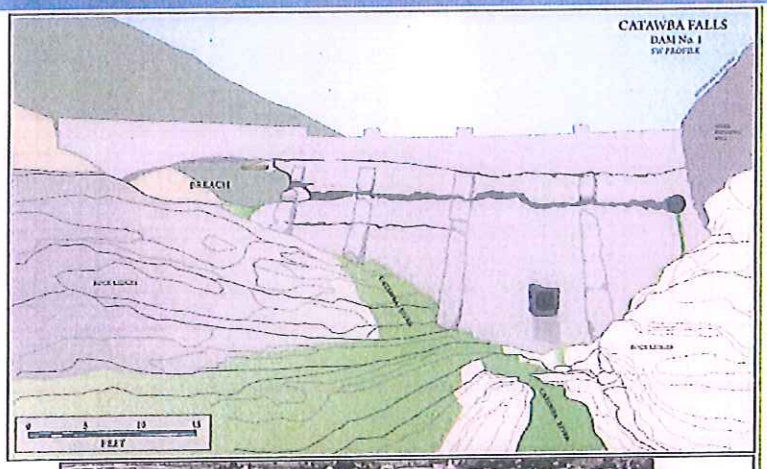
LYNN L. HICKS
Engineering, Heritage Resources and
Recreation Staff Officer

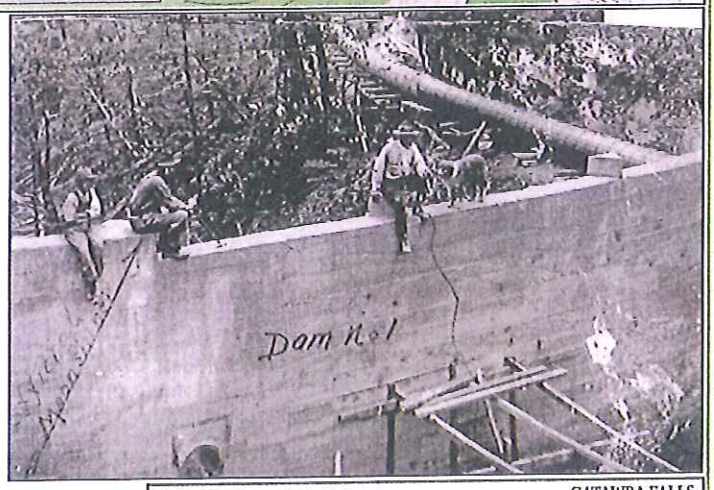
Enclosures: 4

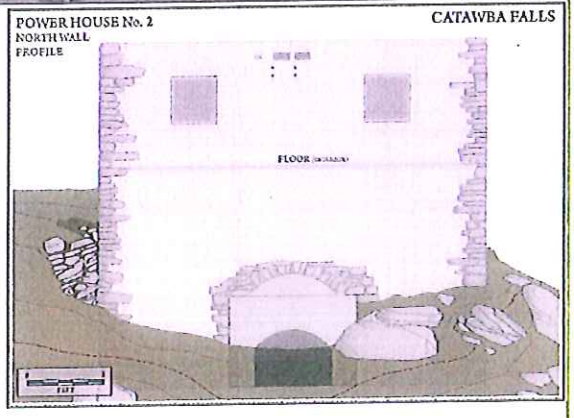
cc: Grandfather Ranger District
Pisgah Zone Archeologist
Pisgah NEPA Planner

2014

Catawba Falls Hydroelectric Complex Historic Documentation and National Register of Historic Places Evaluation, Grandfather Ranger District, Pisgah National Forest, McDowell County, North Carolina







Scott Shumate

With Contributions by:
Lorie Hansen, Scott Ashcraft, Rodney Snedeker, & Sam Shumate

Blue Ridge Archaeological Consultants

Catawba Falls Hydroelectric Complex Historic Documentation and National Register of Historic Places Evaluation, Grandfather Ranger District, Pisgah National Forest, McDowell County, North Carolina

Final Report

Submitted to:

A. Scott Ashcraft
Archaeologist
Pisgah National Forest
National Forests in North Carolina
632 Manor Road
Mars Hill, NC 28754

Submitted by:

Scott Shumate
Blue Ridge Archaeological Consultants

With Contributions by:
Lorie Hansen, Scott Ashcraft,
Rodney Snedeker, & Sam Shumate

February 11, 2014

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ABSTRACT AND MANAGEMENT SUMMARY

The 2013 investigation of the Catawba Falls Hydroelectric Complex conducted by BRAC included photo-documentation and measured drawings of two concrete dams (Dam Nos. 1 and 2), one concrete power house remnant (Power House No. 1), one stone power house (Power House No. 2), one stone wall, and one section of stone cribbing. A third stone dam reported to be located just above Upper Falls is herein designated Dam No. 3. Dam No. 1 is located closely adjacent to Powerhouse No. 1, and together with a number of other associated structures are collectively designated Structure MC 207 under the coding system employed by the Survey and National Register Branch of the North Carolina State Historic Preservation Office. Dam No. 2 is located upstream of Dam No. 1 on Chestnut Branch and is given the Structure MC 208 designation. Power House No. 2 lies in close proximity to a low stone wall and a section of stone cribbing, and collectively these three structures share the MC 209 designation. Dam No. 3 located above Upper Falls rounds out the list of those structures associated with the Catawba Falls Hydroelectric Complex and is designated MC 210. Each of these several architectural structures and features, though widely dispersed across the upper reaches of the Catawba River and one of its tributaries, is recommended as a contributing element of the larger Catawba Falls Hydroelectric Complex.

Proposed improvements to the current project area will clearly have an adverse effect on Dam No. 1 and Power House No. 1 at MC 207. Removal of the dam is also likely to have an adverse effect on the expansive stone retaining wall that begins at/abuts the southwest end of the concrete dam. Proposed improvements to the trail in the area of the lower power house and associated rock features at MC 208 will likely result in easier access and increased visitation to these structures. As Power House No. 2 at MC 208 is arguably the flagship of the entire Catawba Falls Hydroelectric Complex, measures should be taken to insure its continued preservation, improve its condition, and enhance visitor safety. Efforts should also be made to stabilize the low stone wall and stone cribbing associated with the lower power house at MC 208. Trail improvements/and or relocation and the proposed new viewing platform to be constructed approximately half way up the side of the Upper Falls will provide an end destination of sorts, and as such should discourage visitation in the vicinity of Dam No. 3 (MC 210) above the Upper Falls. Construction of the new viewing platform will otherwise have no effect on Dam No. 3. Nevertheless, it is recommended that measures be taken to improve the integrity of these remnant foundations. Proposed improvements to the Catawba Falls Trail and Hydroelectric Complex are expected to have no effect on the integrity of Dam No. 2 at MC 209 along Chestnut Branch. No additional investigation of Dam No. 2 is recommended. In conclusion, it is hoped that the photo-documentation, measured drawings, and historical context developed in this report may be considered to have met HABS/HAER Level II documentation standards. As such, and in addition to the stabilization efforts and interpretive measures planned by the USFS at each of these structure locations and at other points along the Catawba Falls Trail, we propose that such measures constitute an adequate and effective means of mitigating any adverse effects accruing from planned improvements within the Catawba Falls project area. No further work is recommended in association with the proposed undertaking.

ARCHITECTURAL FIELD REPORT

PROJECT TITLE: Catawba Falls Hydroelectric Complex Historic Documentation and National Register of Historic Places Evaluation, Grandfather Ranger District, Pisgah National Forest, McDowell County, North Carolina

DATES OF RESEARCH: October 8-10, & 31, 2013
ARCHAEOLOGISTS: Scott Shumate & Lorie Hansen
USFS CONTACTS: Scott Ashcraft & Rodney Snedeker

PROJECT DESCRIPTION: At the request of the National Forests in North Carolina (USFS), archaeologists Scott Shumate and Lorie Hansen of Blue Ridge Archaeological Consultants (BRAC) recently conducted an architectural documentation and evaluation of the Catawba Falls Hydroelectric Complex in west-central McDowell County, North Carolina (Figure 1). The project scope-of-work drawn up by Pisgah National Forest Archaeologist Scott Ashcraft and Forest Archaeologist Rodney Snedeker called for: 1) field documentation of all hydroelectric complex-related structures, to include digital photographs with and without scales of all dams, buildings, and associated structures or features; 2) measured drawings of project-related structures and features; 3) area reconnaissance for other structure or feature remnants (e.g. rock walls, flumes, metal flume bands, etc.); 4) evaluation of all structures and features for their potential to be nominated to the National Register of Historic Places, and where recommended as eligible for nomination to this register, identify elements as either contributing or non-contributing; 5) provide an assessment of the effects of proposed improvements to the Catawba Falls Trail and proposed demolition of certain structures along the trail. More specifically, proposals have been made to improve the existing corridor of the Catawba Falls Trail with the addition of gravel and new drainage measures where needed. Plans also call for the construction of at least one bridge at a river crossing along the trail, and one viewing platform adjacent to the Upper Catawba Falls. A proposal for the relocation of the uppermost section of the existing trail in areas between the Upper and Lower Falls is also being considered. Finally, the demolition of several structures along the Catawba Falls Trail, including the remains of a comparatively modern Boy Scouts of America cinder block building and the concrete Dam No. 1 and its adjacent Power House No. 1 remnant structure, have also been proposed. Along with Dam No. 1 and Power House No. 1, structures specifically targeted for documentation and evaluation are Dam No. 2 located on Chestnut Branch, Power House No. 2 located on the Catawba River downstream of Dam No. 1, a low stone wall feature thought to be associated with Power House No. 2, and a section of stone cribbing or retaining wall located along the two-track road that provides access of Power House No. 2. While not initially included in this scope-of-work, a description and evaluation of a probable third dam (Dam No. 3) located above the Upper Falls is offered below and based on recent USFS photo-documentation. The Boy Scouts of America facility was not further documented. A low and poorly constructed stone wall located to the northeast of this structure and immediately adjacent to the Catawba Falls Trail was documented in the field, but as it is considered associated with the Boys Scouts facility, no further discussion is offered.

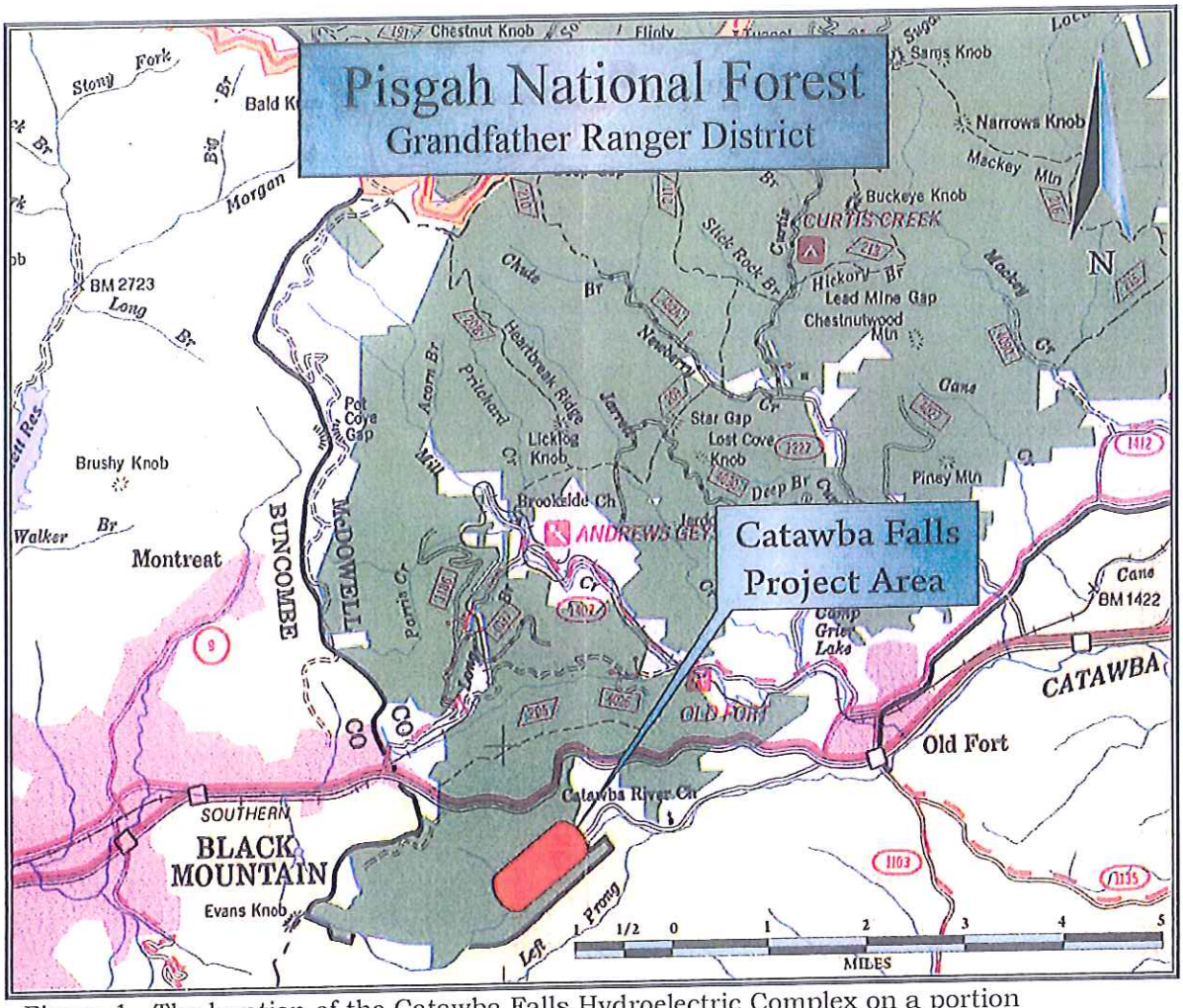

Figure 1. The location of the Catawba Falls Hydroelectric Complex on a portion of the USFS Grandfather Ranger District map.

PROJECT LOCATION: The general Catawba Falls Hydroelectric Complex project area may be described as located within the south-central portion of the Pisgah National Forest and near the southwestern most tip of the Grandfather Ranger District in the western mountains of North Carolina (see Figure 1). The historic structures and features associated with this hydroelectric complex are located along the upper reaches of the Catawba River in the western portion of McDowell County and for the most part within one to two miles east of the common McDowell and Buncombe county border. In addition, the location of the Catawba Falls project area may be described as situated approximately 2.5 linear miles southwest of Old Fort, North Carolina; 1.6 miles southeast of the community of Ridgecrest; and 2.9 miles east/southeast of Black Mountain (Figures 2 and 3). From central Old Fort, the Catawba Falls project area can be reached by traveling approximately four-tenths of a mile south along SR 1103 to reach SR 1274 at that point where it departs to the west from the I-40 east bound off ramp. Follow SR 1274 for a

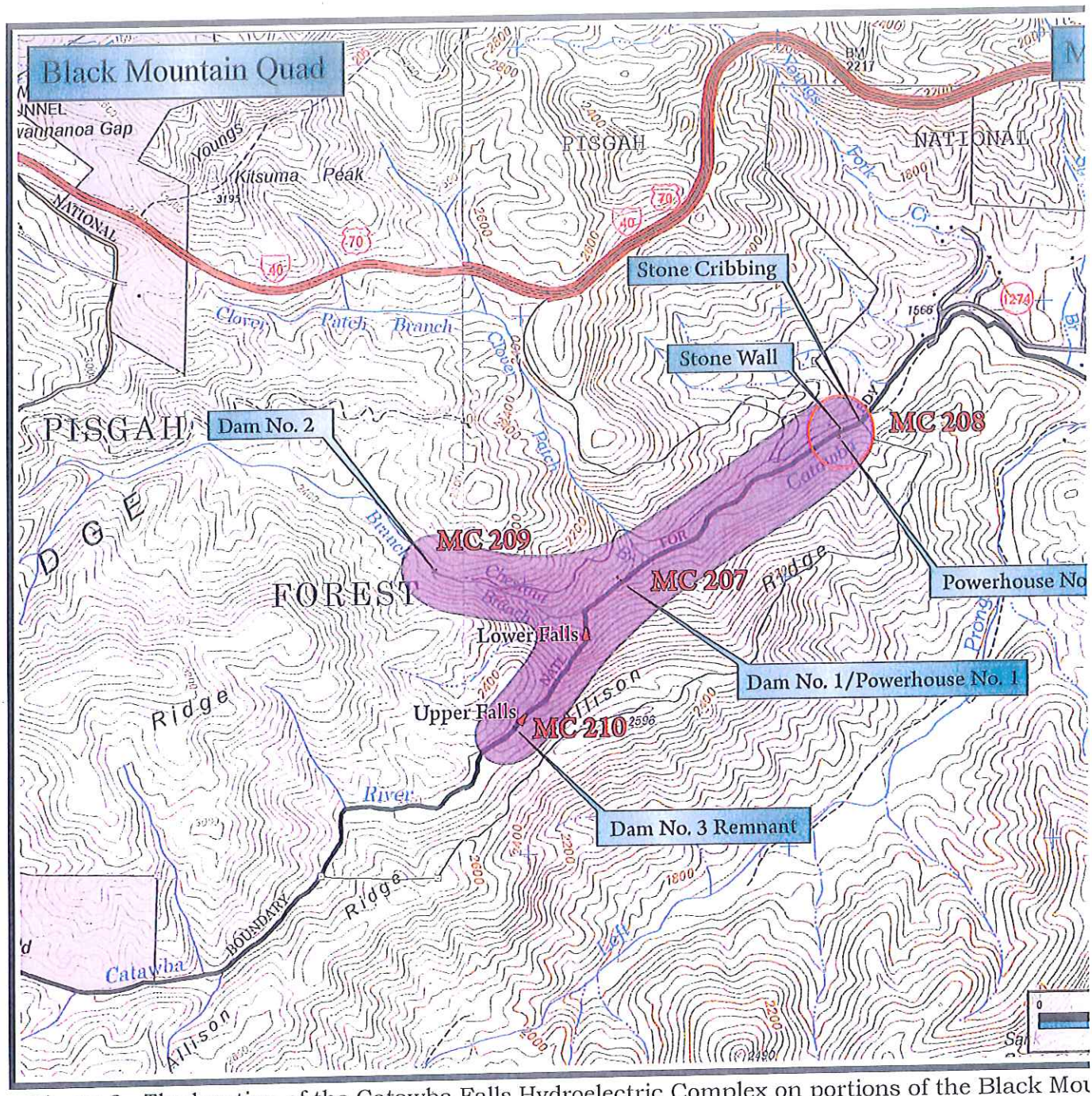

Figure 2. The location of the Catawba Falls Hydroelectric Complex on portions of the Black Mou
Hill, NC topographic quadrangles.

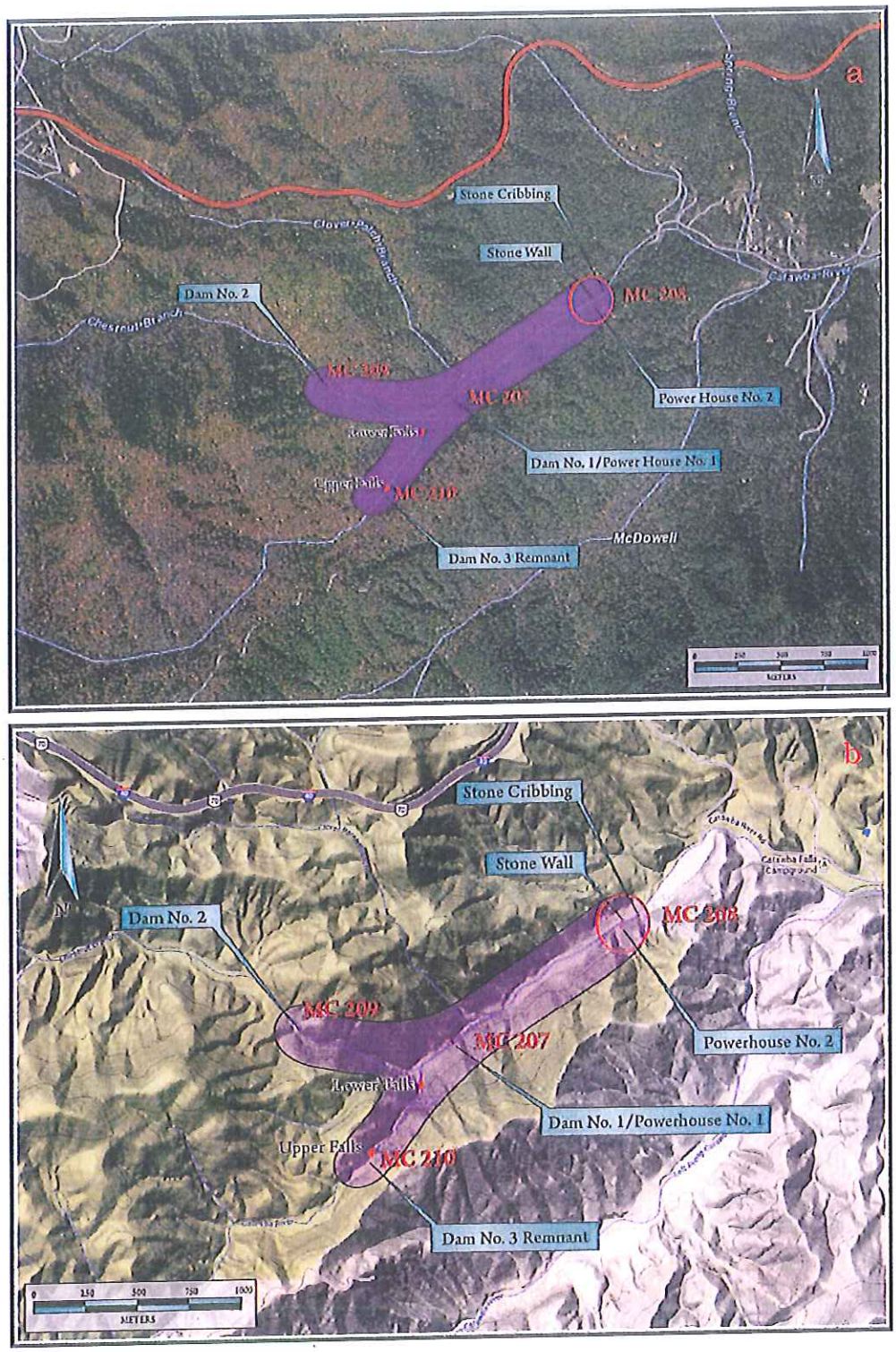

Figure 3. The location of the Catawba Falls Hydroelectric Complex on a recent aerial photograph (a) and a 2014 terrain map (b) of the general project area.

distance of approximately three miles to the point at which this road terminates at the Catawba River. As the narrow bridge across the Catawba has been deemed unsafe for vehicular traffic, continue on foot across the bridge to reach the new USFS parking and restroom facilities. The Catawba River Trail begins at the southwest end of the new parking lot and roughly parallels the southwest to northeast course of the river along its south/southeast side. Continue along this trail for a little over a tenth of a mile (~760 feet) to reach the first crossing of the Catawba River, passing the low "Boy Scout" wall along the way. At the intersection of the trail and the river at this first crossing, a narrow path continues along the south side of the river and quickly joins with a largely abandoned two-track road that formerly provided access to Power House No. 2. A section of stone cribbing associated with this old road and the power house can also be found along the northern edge of the two-track road and the south bank of the Catawba. From the first crossing, the stone cribbing lies approximately 180 feet southwest along the old road, while the stone walls of Power House No. 2 lie approximately 420 feet southwest of the crossing. A low stone wall considered to have been constructed at the same time as Power House No. 2 lies on the opposite (north) side of the river and a short distance downstream of the old power house. This stone wall and most of the other structures documented during the recent survey can be found at various points immediately adjacent to or within a short distance of the Catawba Falls Trail. The foundations of what is here designated Dam No. 3 lie the farthest to the southwest along the trail and just above Upper Falls at a distance of approximately 1.2 miles from the beginning of the trail at the southwest end of the USFS parking lot. The location of Dam No. 2 along the upper reaches of Chestnut Branch—a south/southeast trending tributary of the Catawba River—provides the only exception to those resources otherwise accessible along the Catawba River Trail. Project area elevations range from approximately 2290 feet AMSL at the top of Upper Catawba Falls and the area of Dam No. 3, to 1580 feet at the USFS parking lot. The site of Dam No. 2 located along Chestnut Branch is nearly equal to the elevation of Dam No. 3.

HISTORICAL CONTEXT: The Catawba Falls Hydroelectric Complex was the creation of Col. Daniel Weisiger Adams—a civil engineer, forester, and inventor who moved to Old Fort, North Carolina in early 1913. However, his work with United States Forest Service likely had Adams in the area by at least 1912, if not earlier still. As a purchasing agent for the USFS, his efforts resulted in some of the nation's very first land acquisitions for the purpose of creating a national forest in the east. The Weeks Act of March of 1911 provided the mechanism (i.e. money) that the US government needed to begin to acquire lands designated for the country's national forest. By the end of the same month, the USFS had already secured the approvals necessary for the creation of an Appalachian Forest Reserve with forested tracts located in the Pisgah, Nantahala, Mount Mitchell, and Yadkin areas of western North Carolina (Boland *et al.* 1979:86-93). The very first piece of land acquired under the Weeks Act was an 8100-acre parcel known as the Curtis Creek Tract located a few miles to the north of Old Fort (Ashcraft and Snedeker 2006:20). If not directly involved with this particular purchase, then Col. Adams

followed closely on the heels of it. He had joined the Forest Service in 1905—the same year that the former Division of Forestry reorganized under the name of the United States Forest Service. He had been stationed in Arkansas as late as 1911 (where the Arkansas National forest had formed in 1907), and prior to moving permanently to Old Fort in 1913, he had been charged with purchasing forest land in the Shenandoah Valley of Virginia. Whether he was then working to acquire land for the Shenandoah National Forest or the Shenandoah National Park is somewhat in question. A 1997 oral interview with his daughter Mary Virginia "Binkie" Adams (then aged nearly 83) records that her father "was surveying for Pisgah National Forest in the Shenandoah National Park" when he first met his future wife, her mother (in Stevens 1997). As the Shenandoah National Park was not created until 1918 and the Shenandoah National Park until 1926, it is unclear for which preserve Adams was a purchasing agent in Virginia. As he was then an employee of the young US Forest Service, it is most likely that his work there constituted some of the earliest acquisitions towards the formation of a later forest preserve under the name of the Shenandoah National Forest. His daughter's somewhat muddled recollection may include a suggestion that her father was at that time (between 1911 and 1913) dividing his time and his acquisition efforts between western North Carolina and the Shenandoah Valley of Virginia. Writing for *The McDowell News* in August 1986, staff writer Etta Smith either clarifies or confuses the issue further, with her comment that Col. Adams "wrote the proposal for the establishment of a Daniel Boone National Forest Park, which today encompasses the Blue Ridge Parkway and part of the Pisgah National Forest. While buying land for the park service that was to be used for Pisgah National Forest, he also purchased land for himself."

Whatever the case, no doubt Daniel Adams would have considered his greatest success at that point in his life to have been the acquisition of a new partner and wife. According to his daughter's recollection, the two had met in Staunton, Virginia, while he was a lodger at a hotel that was run by his future wife's aunt. A family history recorded in edited *McDowell County Heritage, North Carolina* (Johnston 1992:117-118) records that Daniel and his new wife Rebecca Pearl Cross came to Old Fort in the early months of 1913 immediately following a Canadian honeymoon. She had been raised largely by her aunts, had attended Mary Baldwin College in Staunton, and had been a grammar school teacher at the time that she met Daniel. He had been born in 1872, in the gate house of the Bowie Plantation at Lake St. Charles, Louisiana. The son of Brigadier General Daniel W. Adams, Sr. of the Confederate Army and his wife Mary Virginia Calloway, young Daniel had never known his father who died six months before his birth. His mother had been from Ashe County, North Carolina and it was there that Dan, Jr. was raised. She was the daughter of Dr. James Calloway, who accompanied the Cherokee on their 1838-39 forced march along the Trail of Tears. She is also said to have been the great grandniece of Daniel Boone (Smith 1986). Whatever else her lineage and accomplishments, through her birth, accomplishments, and/or marriage, Mrs. Adams was apparently well off enough to send young Daniel to Bingham Military Academy in Mebane, North Carolina, and when he turned 25

years of age, she gave him 10,000 acres of land in Ashe County. It was here that Daniel Adams founded the community of Glendale Springs, North Carolina. The Glendale Springs Hotel that he built just off Highway 16 southeast of West Jefferson and adjacent to the Blue Ridge Parkway survives to the present-day, and as recently as 2008 served as a Bed and Breakfast. Presumably Adams also maintained connections with his father's family in Louisiana, as it was from Haggman [or Hagmann] Engineering College in New Orleans that he graduated with a degree as a civil engineer.

During his tenure with the US Forest Service, Adams quickly distinguished himself. For example, he is credited with the concept and construction of this nation's first fire tower. When at first he met with resistance to the idea from his superiors, Adams paid for the construction of the first tower in the Arkansas National Forest (now the Quachita) with money from his own pocket. With the benefits to early detection of fires on the forest quickly proven, other towers were soon built in Arkansas and in other newly formed forests across the country. Daniel's contributions to the nation's forests and their preservation did not end there. He is credited with being the first to promote the use of the triangulation method for greater accuracy in pinpointing of the location of wildfires. When sightings were called in from three or more fire towers on the location of a given fire, then fire crews were able to reach the fire and begin fighting to extinguish it that much sooner. Not surprisingly, the method proved far more successful than earlier attempts to chase smoke from ground level or from one sighting only. By one estimate, albeit one that is undoubtedly inflated, Adam's fire towers and the triangulation method reduced fire damage to less than 10 percent of previously estimated losses on the Arkansas National Forest, and across the nation saved the country billions of dollars in lost timber resources (unreferenced manuscript in USFS Land Acquisition Files:211). The same account claims that his methods were extended to other US forests with similar success and were soon adopted by other countries around the world. Not one to rest on his laurels, Adams is also credited with the invention of a flame retardant foam that used one-third of the water required of similar agents (Smith 1986).

Internal documents curated by the Forest History Society indicate that by for a brief period during the first part of 1910, Adams appears to have been stationed on the Sitgreaves National Forest in Arizona. In that year he filed a report on grassland conditions for that particular national forest entitled, *Twenty-Five year Working Plan for the Sitgreaves National Forest* (http://foresthistory.org/ASPNET/Publications/region/3/history/chap12.aspx). In any case, his stay in Arizona appears to have been rather short-lived, as by July of 1910 he is listed as Forest Supervisor for the Arkansas National Forest, and working from Hot Springs (http://www.foresthistory.org/ASPNET/Publications/region/3/early_days/3/appd.pdf). He held this position for less than a year, and by April of 1911 (one month after passage of the Weeks Act) he had most likely begun his work as a purchasing agent in North Carolina and Virginia. That he was working from western North Carolina by at least September of 1911 is evident from a letter that he sent to Forester

William Hall. Posted from Aquone, North Carolina in Macon County, Adams wrote "The people generally, particularly on the Mt. Mitchell Unit, have been decidedly skeptical as to the purchase of lands by the government ..." (http://www.foresthistory.org/ASPNET/Publications/region/8/history/chap2.aspx). From this letter it is clear that Adams was working from a number of different locations in western North Carolina, including those several counties that were being appraised for their potential inclusion in the Pisgah (Mt. Mitchell Unit) and Unaka forest preserves.

It is unclear at what date Adams left the US Forest Service, but if not when he married and moved to Old Fort in early 1913, then quite likely his departure coincided with his enlistment in the army during World War I in 1917. That his employment with the USFS likely continued through at least 1912 is indicated by his publication that year of a bulletin entitled, *Methods and Apparatus for the Prevention and Control of Forest Fires, as Exemplified on the Arkansas National Forest.* In an August 31, 1989 article written for *The Bulletin*—Old Fort's local paper—Mary Virginia Adams claimed that, beginning in 1912 and continuing over the next 50 years year, her father purchased numerous tracts of land that would become the family's Catawba River property. As Col. Adams died in 1957 (aged 85), it is more likely that he made purchases in the Old Fort area from circa 1912 to no later than 1957—a span of 45 years. According to Mrs. Adams, the tract that includes Catawba Falls (Upper and Lower?) was an early purchase, and had been acquired from Mildred Allison Morrison, whom Mary Virginia credited with having preserved the falls and their surrounding area in their "natural state." Estimates for the total number of acres acquired by Adams in the Catawba Falls area range from approximately 3400 to 3800 acres.

In 1914, the young couple Daniel and Pearl Adams purchased the Westerman house built in ca. 1887 and located a short distance to the northwest of central Old Fort. Bishir et al. (1999:169) describe the Westerman-Adams House (MC 11) as a "turreted, gabled Queen Anne cottage with spreading porches." Elsewhere, the house has been described as "irregularly massed, ornately decorated" and "one of the few remaining high-style Queen Anne houses left in Old Fort and McDowell County." The house is also believed to have been the first home in Old Fort to receive electricity (Johnston 1992:110). Into their new home, Daniel and Pearl also received their first child Mary Virginia Adams, born that same year—in 1914. Perhaps as early as 1913, but certainly by 1914 Daniel Adams began to make plans, if not concrete progress, to bring both a public water system and electric power to Old Fort. In a bi-annual trade journal dating from January 3 to June 27, 1914, the following announcement was made:

> Old Fort, N.C.—The White Coal Co., recently incorporated, is planning to build a hydroelectric power plant at Catawba Falls, Old Fort. The equipment will include one 800-hp impulse waterwheel, Lombard oil-pressure waterwheel governors, one 600-kva generator, with switchboard equipment, and transformers. One substation will be erected and 4 miles of copper or aluminum wire will be used.

> Contracts for construction of plant will be awarded about July 1. Daniel W. Adams, Legal Building, Asheville, N.C. is engineer in charge.

This short paragraph offers a wealth of information, not only in regards to the proposed hydroelectric complex, but it also provides greater detail on the life and projects of Daniel Adams. Apparently he operated his newly formed company out of the Legal Building on Pack Square in Asheville. While other accounts indicate that the Catawba Falls project did not begin until the 1920s, this document makes it clear that Adams plans were well advanced even in 1914. But that was June of 1914. The following month the world was at war. Although the United States did not enter the conflict until April of 1917, the effects of the war appear to have been felt almost immediately, even in rural Old Fort, North Carolina. Adams must have changed gears just a quickly. The Catawba Falls hydroelectric project was put on hold, and instead he seems to have focused his attentions on bringing fresh, reliable drinking water, "running water" to the town that he and his wife had so recently adopted. Mary Virginia Adams (in Johnston 1992:117-118) recalled that her father's company dammed Jarrett's Creek at a point located approximately three miles northwest of town, and from this reservoir piped water down the adjacent slopes into the town's center. He constructed four fountains, one of which was located at his own home, and another of which, located at the commercial center of Old Fort, he gave to the town. The latter survives to the present-day at the site of the town's central monument—a 14-foot tall Arrowhead said to have been designed by Adams (Argintar 2011:8). Whereas previously, Old Fort had relied upon a number of springs and hand-dug wells, some of which were undoubtedly unreliable, if not unhealthy, by 1916 Adams had established the town's first reliable, municipal water system. In her 1997 interview, Mary Virginia also recalled that with the construction of the Jarrett's Creek reservoir, her father had "founded Pure Mountain Water" (in Stevens 1997). If the name of a new commercial enterprise, then it would seem that Adams was the founder and principal head of at least two companies then working in the Old Fort and Asheville area. Elsewhere there is mention of his work designing, if not also constructing a dam on Mill Creek (Argintar 2011:8). Whether or not this is correct or an error on the part of Argintar or Mary Virginia, remains to be seen. However, it should be noted that there is in fact a small reservoir located along Jarrett's Creek northwest of Old Fort. Jarrett's Creek forms a smaller tributary of Mills Creek. The latter runs from northwest to southeast and for the most part to the west of Jarrett's Creek. Mills Creek does include the waterworks known as Andrews Geyser, but that 80-foot tall fountain was the construction of the railroad in 1885. After falling into disuse at the turn of the century, the "geyser" was restored in 1911. It seems unlikely that Adams had a hand in this restoration effort, while otherwise fully engaged with the USFS at that time.

Argintar's (2011:12) search through the early twentieth-century *Town Minute Books* of Old Fort offers other interesting fragments of information that add further detail to the early efforts of Daniel Adams (and those of the Town of Old Fort) to bring water and light to the community. She notes that in the Minutes of December

of 1912, the Board of Aldermen began to discuss the installation of an electric light system throughout the town of Old Fort. By November of 1913, the town accepted a bid from the "White Coal Power Company, of Washington, D.C." to construct both a water and electric system. It is difficult to imagine that the White Coal Power Company and Daniel Adams' White Coal Company were not one and the same. In fact, later documents clearly identify his company as the White Coal Power Company of North Carolina.

If the proposed hydroelectric station on the Catawba River below the Catawba Falls was designed to bring electricity to Old Fort, it is tempting to suggest that at least some portion of the water issuing from the Jarrett's Creek reservoir may have also been harnessed as white coal—the name commonly given to electricity or power generated by turbines linked to reservoirs or free flowing rivers and streams. If Daniel Adams is credited with creating the first municipal water system in Old Fort by 1916, might he also have used the same reservoir to generate electricity for the town by this date? That appears to have been his mandate and the contract to which his company had agreed to in November of 1913. Perhaps Adams and company shelved their plans for the hydroelectric station at Catawba Falls, at least temporarily, in favor of the Jarrett Creek facility. Whatever the case, certainly the great flood of July 1916 did not do either drainage, or the town of Old Fort for that matter, any favors. Recovery would have taken many months, and in April of the following year, the United States entered the "war to end all wars" in Europe. At the age of 45, Daniel Adams of Old Fort volunteered. He attended officer's training school stateside, then shipped out for France, where he was subsequently wounded in action. Six months after his enlistment, the war was over and he was discharged in December of 1918 with the rank of Lieutenant-Colonel (Johnston 1992:118). Perhaps it was during his time at war, during his spare time, that Adams invented the "pilot ejection seat, which [not surprisingly] would allow airplane pilots to be ejected from their seat in the case of an emergency" (Smith 1986).

From 1918 to 1920, the historical record is quiet where Col. Adams and the White Coal Power Company are concerned. At home in Old Fort, Daniel and his wife Pearl lost their third child—Joseph Franklin who was stillborn in 1918. Their third daughter, June Carol Adams, was likely born at some point between 1919 and 1920. By the latter year, if not in fact earlier, Col. Adams had formed the English Knob Mining Company at Spruce Pine in Mitchell County. His company, said to have been listed on the New York Stock Exchange and producing dividends to its stockholders for the next 50 years, was in the business of mining mica and feldspar (Johnston 1992:118; Smith 1986).

To the best of her recollection, Mary Virginia Adams puts the date at which her father resumed his earlier (ca. 1914) plans to construct a hydroelectric complex on the upper reaches of the Catawba River at some point around 1923-1924 (in Johnston 1992:118). During a later interview conducted in 1997, recalling that she had been 10 years old at the time, she suggested that the year had been 1924, but

also noted that the construction of the Catawba Falls complex "took about two to three years" (in Stevens 1997). Though it is unclear precisely what records are being referenced, a recent exchange of emails between Lorie Hansen of BRAC and John—a customer service representative with Duke Energy—produced the following information:

> November 27, 1929
> Old Fort No. 1 Hydro Station; Old Fort No. 2 Hydro Station
> Formerly known as Catawba Falls Hydro Stations; constructed by White Coal Power Company and first operated in 1922. Conveyed to Southern Public Utilities Company by Jupollo Public Service Company and White Coal Power Company on November 27, 1929. Stations retired on April 19, 1937 and equipment removed in 1952. Unfortunately, we do not have the drawings or plans of the dams.

As will be detailed more fully below, Duke Energy eventually became the owner of the two hydro stations located in the Catawba Falls project area. More importantly, Duke Energy's records seem to indicate that both hydro stations were already fully operational by 1922. If Mary Virginia Adams' estimate that her father had spent two to three years in the construction of the two hydro stations is correct, and likely included all dams, water flumes, power houses, and other related structures, then Col. Adams and crew may have already begun construction by 1919. Figure 4a below offers a view of "Dam No. 1" under construction. According to the caption beneath the photo, which accompanies a newspaper article written in 1989 by Mary Virginia Adams, the man at the center of the dam is her father Col. Daniel W. Adams, and the family dog to his right was named Smoke. As Prohibition in this country effectively began on January 17, 1920, for the gentlemen seated to the left of the Colonel to be labeled an "Official Moonshiner" might imply that Prohibition was already in effect by the date that this photograph was taken. As Dam No. 1 and its wooden flume appear to lack only the rising waters of the Catawba River, it is likely that this photograph dates to late 1921 or early 1922. Figures 4b and 4c offer views of Power House No. 2 located approximately six-tenths of a mile downstream of Dam No. 1 and its accompanying Power House No. 1. The scaffolding that surrounds the stone walls of Power House No. 2 in Figure 4b suggests that the structure was still under construction, but appears nearly complete. Note that windows do not yet appear to have been installed, and the three transmission lines that extend from the canvas (?) covered addition to the north wall of the structure do not yet include corresponding lines above, as seen in the later photograph. It is tempting to suggest that the structure as recorded in Figure 4c may document its very last years of occupation (ca. 1937?). Note the diameter of the tree located off the northeast corner of the building in Figure 4c and the absence of this same tree in Figure 4b. This "absence" may only be a matter of camera angle, or it may not.

As may be inferred from those dates listed above in Hansen's correspondence with Duke Energy, if the two hydro stations constructed by Col. Adams and crew first came on line in 1922, but were retired by 1937, then the 15 year span in which

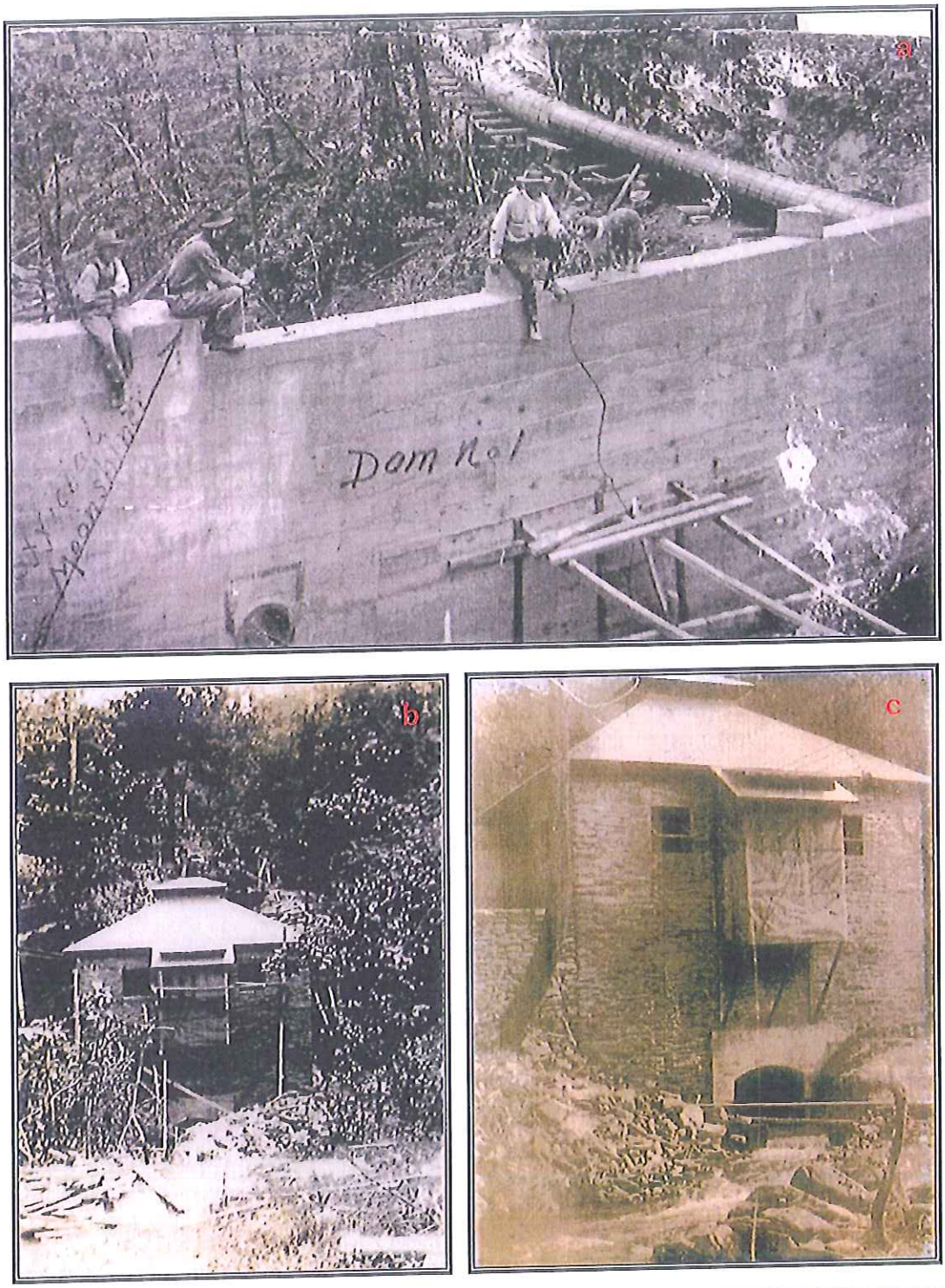

Figure 4. a) Col. Daniel Adams (center) on Dam No. 1 under construction, view to northeast; b) Power House No. 2 nearing completion, view to south; b) Power House No. 2 in operation, view to southwest.

they were operational seems too short a time, given the tremendous efforts that undoubtedly went into their construction. In 2007, reporter Elizabeth Leland visited the Catawba Falls area and while approaching the Upper Falls from upstream she came upon the remains of a stone dam (Dam No. 3 at MC 210), which she attributed to the work of Col. Adams. Leland (2007) writes, "Jutting into the river there are remains of a stone dam built by an entrepreneur who tried to harness this part of the Catawba for electricity the way Duke Power did downstream. Col. Dan Adams abandoned his plans after a drought in 1925, when the Catawba ran so low, grass grew on exposed river bottoms." She fails to credit Adams with the construction of Dam No. 1 farther downstream and instead seems to think Duke Power created that structure. Nevertheless, if her sources are in other respects correct, then the drought of 1925 may have strongly influenced Col. Adams' decision to divest himself and the White Coal Power Company from their interests in the hydroelectric complex that they had created along the upper reaches of the Catawba River.

The November 27, 1929 sale of the Catawba Falls hydro stations lists Jupollo Public Service Company, a Delaware Corporation, the White Coal Power Company, a North Carolina Corporation, and D.W. Adams and wife. R. P. Adams, as parties of the first part, and the Southern Public Utilities Company, a corporation of Maine as party of the second part (Deed Book 71 Page 368). If not the head of the White Coal Power Company, then Col. Adams was at least a partner of that firm. This 1929 sale of the hydroelectric complex at Catawba Falls implies that Adams and company had, at some point after the construction of the facility in circa 1922, if not before, gone into partnership with Jupollo Public Service Company. This Delaware based company had other holdings and other hydroelectric interests in western North Carolina in the early twentieth century. For example, in her investigation of the Lake Emory area at Franklin, North Carolina, Joy (2002:11) records that the hydroelectric plant constructed along the Lake Emory portion of the Little Tennessee River in 1925 was sold to the Jupollo Public Service Company in 1928. Court records from 1930 document the company's presence in McDowell County as early as December of 1928. At that time the company was engaged in replacing power line poles along an existing line somewhere within McDowell County, and possibly in the Catawba Falls project area. These court records document the case of wrongful death brought against the Jupollo Public Service Company by the family of Fred Grant, a contractor who died while replacing one of the transmission line poles owned by the company. The case went to trial in August of 1929 and in June of 1930 was decided against Jupollo and in favor of the plaintiff (https://www.casetext. com/case/jupollo-public-service-co-v-grant/). Like the drought of 1925, this case against Jupollo may have influenced Col. Adams' decision to get out of the hydroelectric power business in McDowell County.

While Adams (along with Jupollo and White Coal Power companies) sold off their interests in the Catawba Falls hydro stations in 1929, the Colonel and his family retained ownership of the 1000 or more acres surrounding these facilities. The deed transferring title of ownership to the Southern Public Utilities Company

identifies two small, postage-stamp-sized lots known as the Power House Lots. The larger of these two lots totaled 3.43 acres and included "the lower power house, the caretaker's house, the transmission line or lines, the road on the north side of the Catawba River ..." (Deed Book 71 Page 368). The smaller parcel totaled 3.0 acres and was listed as including "the upper power house, the concrete dam, and all other improvements ...". Item No. 2 of this document essentially covered all the remaining bases, insuring that Southern Public Utilities Company acquired all that was necessary to continue and to profit from the operation of both power plants, including the client to whom the power was intended (i.e. the town of Old Fort). In this regard, the document transferred title to:

> ... the entire electric light and power plants formerly of the White Coal Power Company, situate upon the two lots of land above described, including all machinery and equipment owned, used and/or held for use in connection therewith, and all water rights, flood rights, flume pipe lines, and dams, and all transmission lines, right-of-ways, substation transformers, and station meters, and the entire street lighting system in and about the Town of Old Fort, and all other property rights, privileges, and easements formerly belonging to or used by the White Coal Power Company, now by the Jupollo Public Service Company, in generating and distributing electric current for light, power, and any other purposes, including a certain franchise granted to the said White Coal Power Company by the Town of Old Fort, giving the said company the right to construct and maintain poles, wires, and other instrumentalities over and upon the Streets and alleys of the said Town of Old Fort (Deed Book 71 Page 368).

This document also transferred title to all riparian rights, all timber rights, and all necessary right-of way for power lines and for telephone lines between the power plants and Old Fort, and all rights of ingress, egress, and regress to the two lots. The deed further stipulates that D.W. Adams, his heirs and associates were to have the right to fish and hunt these tracts and to use the road running through them. Southern Public Utilities Company also indemnified themselves against any responsibility for the safety of anyone visiting these tracts or reservoirs. Said lakes [plural] might be raised or lowered at the will of Southern Public Utilities Company, and they accepted no obligation to maintain the roads leading to or through these tracts. The use of the plural in describing "lakes" is a bit of a mystery. If the reservoir constructed on Chestnut Branch is that other lake being referred to here, in addition to the area impounded by Dam No. 1, then that lake and its low concrete dam (No.2) is not otherwise mentioned in this document.

Finally, this November 1929 deed of title is significant in that it describes an earlier conveyance between White Coal Power Company and D.W. Adams and wife, R.P. Adams of the first part and Jupollo Public Service Company of the second part. Recorded in Deed Book 71 at Page 154, it documents the conveyance of the same two hydro station lots by the former parties to Jupollo on October 15, 1928. It is not clear why Adams and wife and the White Coal Power Company were required to sign over title along with Jupollo in November of 1929 to the Southern Public Utilities Company, when it appears that they had already conveyed the hydro

station lots to Jupollo in October of 1928. In any event, it is clear that by late 1929, at the age of 57, Col. Adams retired from the hydroelectric business, and the pursuit of white coal, at least in the Catawba Falls area.

It is difficult to imagine Col. Daniel Adams easing into retirement at any age. He lived to be 85 years old and carried out the rest of his life in Old Fort at the Westerman-Adams house just west of the heart of town. He had been a forester and Forest Supervisor. His work as a purchasing agent for the USFS contributed to some of the very first acquisitions in the eastern United States of land that soon became national forest. He is credited with conceptualizing and constructing the nation's first fire tower, and his method of triangulating the locations of wildfires, along with the fire tower concept was widely adopted across America and exported abroad. His 1912 publication on the subject of forest fire prevention and control allows him to count author among his many accomplishments. His not-unrelated invention of a fire retardant substance that sounds suspiciously like slurry, and his invention of the pilot ejection seat, earn him the title of inventor. Other titles, occupations, and accolades include small business owner, trout farm operator, financier, town planner, telephone company owner, hydroelectric plant builder and operator, engineer, miner, geologist, conservationist, forest guide, big game hunter, soldier, town founder, hotel builder and owner, and according to one glowing report—the "world's foremost authority on underground excavations," whose talents or methods were somehow employed or otherwise adopted at such landmark sites as the Rock of Gibraltar, the Cliffs of Dover, Washington, D.C., and apparently a few random oil wells in Texas (USFS Land Acquisition Files: Forest Fire Lookout Tower His Monument).

Once the Catawba Falls Hydroelectric Complex passed out of the control and ownership of Col. Adams, and was only briefly controlled by Jupollo Public Service Company, it likely remained in the hands of the Southern Public Utilities Company any equally short time. At some point between 1929 and 1937, the nearly six and one-half acres that included the two hydro stations within separate tracts, and all structures and related-machinery, etc. located within these two tracts, were conveyed to Duke Power Company (now Duke Energy). Mary Virginia Adams recalled that, "Duke Power came in after he [her father] sold it to some little power company. Then that little company sold it to Duke. Duke was already ready to come in there" (in Stevens 1997). According to the records of Duke Energy, the company retired the Catawba River Hydroelectric Complex within only a few short years, and may in fact have shut it down very soon after their purchase at some point during the 1930s. The company seems to have been in no hurry to recover any of the machinery or equipment associated with their Catawba Falls acquisition, as it was not until 1952 (15 years after the two plants closed) that Duke Power salvaged the contents these two hydro stations.

In May of 1969, Duke Power Company sold the same two small hydro stations and their surrounding 6.43 acreage to the Crescent Land and Timber Corporation of South Carolina (Deed Book 206 Page 867), who perhaps saw these

micro-purchases as a way of gaining a foothold in the area, perhaps with the hope of acquiring the larger prize of several thousand acres of surrounding woodlands owned by the Adams family and others. Mary Virginia Adams and her siblings and their children held on to the more than 1000 acres of land at the headwaters of the Catawba River that surrounded these two isolated hydro station lots until August of 1989, when they sold the property to the United States of America to be included in the Pisgah National Forest (Deed Book 401 Pages 301 & 597). Within a matter of days Crescent Land and Timber Corporation (by then Crescent Resources, Inc.) conveyed the two insular tracts that contain the remains of the two hydro stations to the United States of America.

While the hydro station tracts and their surrounding acreage within the Catawba river drainage were reunited and now under the protection and stewardship of the USFS, Pisgah National Forest, access to this tract and the historic architectural sites and waterfalls within it was limited, until those parcels of land situated between the end of the Catawba River Road (SR 1274) and the beginning of the Catawba Falls Trail could also be acquired by the USFS. In 2005, the Foothills Conservancy of North Carolina purchased 65 of the 88 acres lying between the state road and the Catawba Falls Trail, and in 2007 they acquired the remaining 23 acres. Their conveyance of these 88 acres to the United States of America in March of 2010 effectively linked the state road to the trial, and for the first time in many years access to the falls was guaranteed from this northeastern approach.

In 2011, USFS archaeologist Scott Ashcraft conducted an archaeological survey of the newly acquired and combined 88-acre parcel and identified a single expansive prehistoric and historic archaeological site (31MC352). Artifact density and variety were limited and additional testing revealed limited potential for the occurrence of significant cultural features or artifact concentrations. Ashcraft (2011) determined the site to be ineligible for nomination to the NRHP and recommended clearance for any proposed improvements to the tract. In 2012, the USFS constructed an expansive new parking lot, restroom facililty, and formal trailhead to the beginning of the Catawba Falls Trail. A commemorative plaque celebrating the life and accomplishments of Colonel Daniel Weisiger Adams has been placed at the very beginning of the trail.

METHODS OF INVESTIGATION: As outlined above in the *Project Description* section of this report, the scope-of-work agreed to between the USFS and BRAC called for the documentation and evaluation of those buildings, structures, and architectural objects and features identified within the Catawba Falls Hydroelectric Complex project area. Field investigations were conducted on October 8th-10th, and the 31st of 2013 by BRAC archaeologists Scott Shumate and Lorie Hansen. In many instances, buildings and architectural features identified during this survey required significant cleaning (i.e. clearing of leaves, weeds, vines, shrubs, fallen trees, etc.) prior to their photo-documentation. All photographs were made in digital format. Nearly 900 photographs were taken—the vast majority of which

represent different exposures and different angles of the same few subjects. Each subject building, dam, or other structure was photographed with and without a metric scale. Note, however, that the scale of all drawings presented here and all measurements below are given in feet and inches. Field sketches, both plan and profile, were accomplished with the aid of a flexible reel tape and hand-held compass. In some instances, a temporary site grid was established using colored pin flags to mark even-interval grid nodes. A battery of measurements was recorded for each structure to assist with field sketches and site and structure descriptions. In addition to these measurements, field notes also included descriptions of construction details, materials used, landform modifications, and site and structure condition. At each site, at corners, center points, and/or terminal points on major structures, a number of locational coordinates were recorded using a hand-held GPS unit.

The field documentation of structures within the Catawba Falls project area is complemented by the brief historical context presented above. The purpose of this archival research effort was to provide a context within which to measure the significance of those structures included in this investigation, and through this means arrive at an evaluation as to the potential of each to be nominated to the National Register of Historic Places. This background research was conducted at various stages during the investigation by Hansen and Shumate, and was aided and augmented by the earlier research of Pisgah National Forest Archaeologist Scott Ashcraft. Forest Archaeologist Rodney Snedeker also assisted the investigation by securing photographs of Dam No. 3 above Upper Falls, and by gathering other photographs and data needed to locate structures in the field. Primary sources of information used in the development of the historical context above include those Land Acquisition Files curated by the National Forests in North Carolina in Asheville; regional libraries and museums such as those in Old Fort; informant interviews with area residents and former property owners such as Duke Energy; and online databases such as the Forest History Society, the Forest Service Database, and ~~Montgomery~~ McDowell County Register of Deeds.

INVESTIGATION RESULTS: The 2013 investigation of the Catawba Falls Hydroelectric Complex conducted by BRAC included the documentation of two concrete dams (Dam Nos. 1 and 2), one concrete power house remnant (Power House No. 1), one stone power house (Power House No. 2), one stone wall, and one section of stone cribbing. A third stone dam reported to be located just above Upper Falls is herein designated Dam No. 3. However, its description and evaluation are based solely on recent photographs provided by the USFS. Dam No. 1 is located closely adjacent to Powerhouse No. 1, and together with a number of other associated structures are collectively designated Structure MC 207 under the coding system employed by the Survey and National Register Branch of the North Carolina State Historic Preservation Office. Dam No. 2 is located upstream of Dam No. 1 on Chestnut Branch and is given the Structure MC 208 designation. Power House No. 2 lies in close proximity to the stone wall and stone cribbing features described more fully below, and collectively these three structures share the MC

209 designation. Dam No. 3 located above Upper Falls rounds out the list of those structures associated with the Catawba Falls Hydroelectric Complex and is designated MC 210. Figures 2 and 3 above provide the locations of these several buildings, structures, and architectural features, while each is discussed, drawn, and photo-documented in greater detail below.

⌖ MC 207 Dam No. 1/Power House No. 1

Location (UTM's from NAD WGS 84; Zone 17):
@ center of Dam No. 1: **Northing:** 3941014 **Easting:** 387400
@ SW corner of Power House No. 1: **Northing:** 3941029 **Easting:** 387382
Quad Sheet: Moffitt Hill, NC
Land Form: spanning Catawba River; first terrace (nw)
Elevation: ~545 meters or 1785 feet AMSL
Site Size: ~45 meters (ne-sw) x 40 meters; ~150 feet (ne-sw) x 130 feet
Cultural/Temporal Affiliations: early to mid-20th-century
Site Functions/Features: concrete dam, power house remnant, intake pipe, remnant, concrete rubble & retaining wall; stone retaining walls; log road supports
Vegetation/Site Surface: mixed hardwoods and conifers; rock ledges, alluvial fan; two-track roadway access
Soils: Ostin cobbly loamy sand, 1-5% slopes, frequently flooded (PtB); Chestnut-Ashe complex, 25-80% slopes, stony (CaF; on slopes to nw)
Site Condition: moderately stable; significant cracks & large breach in Dam No. 1
NRHP Recommendation: eligible

Designated Structure MC 207, this portion of the Catawba Falls Hydroelectric Complex includes the largely intact Dam No. 1, portions of the walls of Power House No. 1 and its intake line, concentrations of concrete rubble, stone and concrete retaining walls, and a log structure that serves to support the shoulder of the two-track road that provides site access. Collectively, these several structures and associated site features lie within an area measuring approximately 19,500 square feet (or ~1800 square meters). From the USFS parking lot located at the northeast beginning of the Catawba Falls Trail, this portion of the larger Catawba Falls Hydroelectric Complex can be reached by hiking approximately nine-tenths of a mile southwest along the trail (see Figures 2 and 3). The intersection of the trail with Clover Branch (a southeast-trending tributary of the Catawba River) lies only approximately 120 meters (~400 feet) northeast/downriver of MC 207. The trail follows the path of the original two-track road constructed to reach the various hydroelectric complex facilities located along this portion of the Catawba River. Dam No. 1 and Power House No. 1 are located immediately adjacent to this old road and trail. The former spans the breadth of the river and the latter is situated only a dozen yards or so to the northwest of the river and dam (Figure 5).

Dam No. 1

Of the several architectural features and associated components of MC 207, Dam No. 1 is easily the most monumental (Figures 6, 7, and 8). Constructed of concrete in sections whose gravel/rock inclusions vary in size and quantity from section to section, the gently arching wall of Dam No. 1 measures a linear length of approximately 66 feet (i.e. from end to end; not allowing for the curve). Dam height measures a maximum of approximately 19 feet (~5.84 meters)—a height that occurs

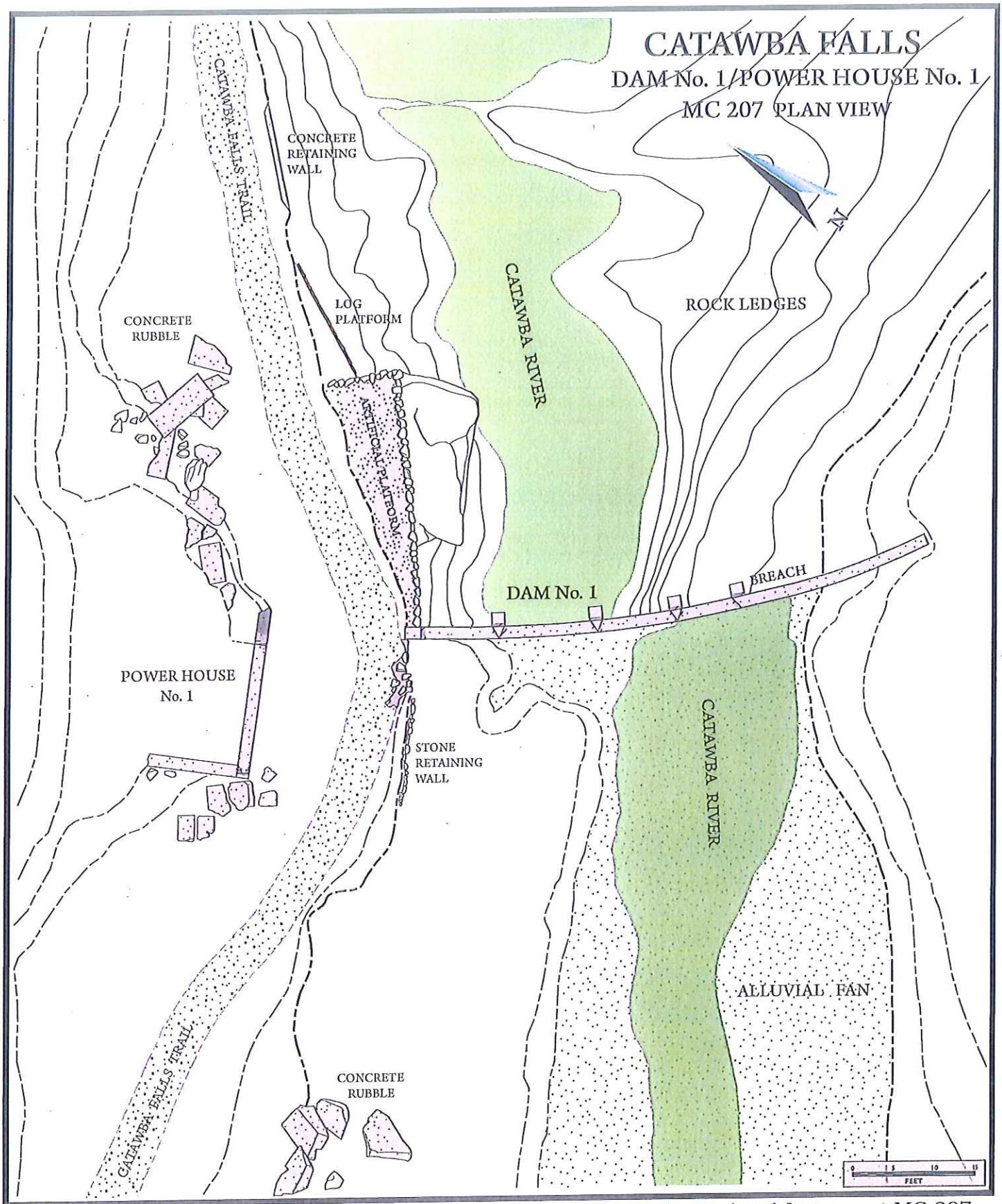

Figure 5. Plan view drawing of Dam No. 1, Power House No. 1, and associated features at MC 207.

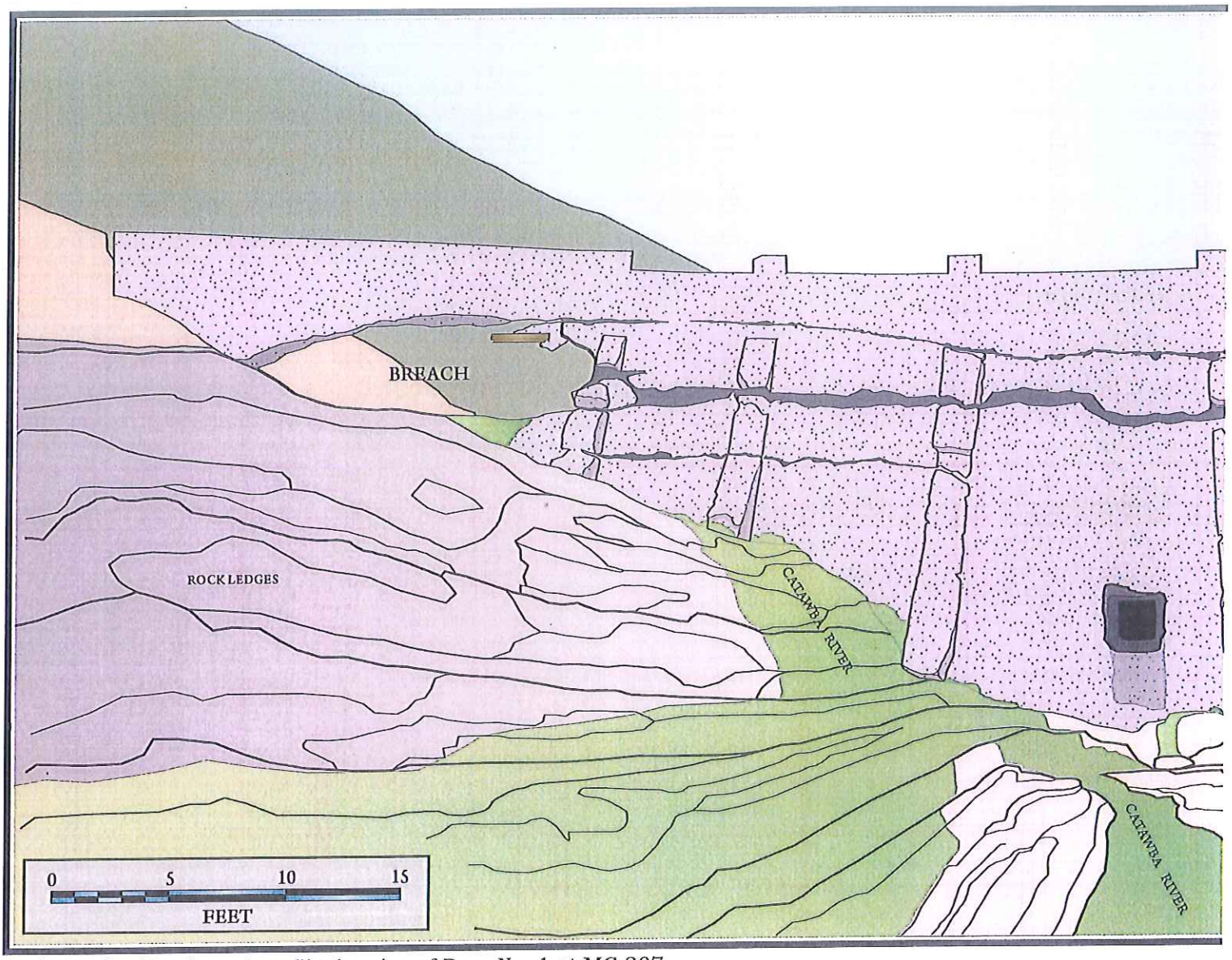

Figure 6. Southwest profile drawing of Dam No. 1 at MC 207.

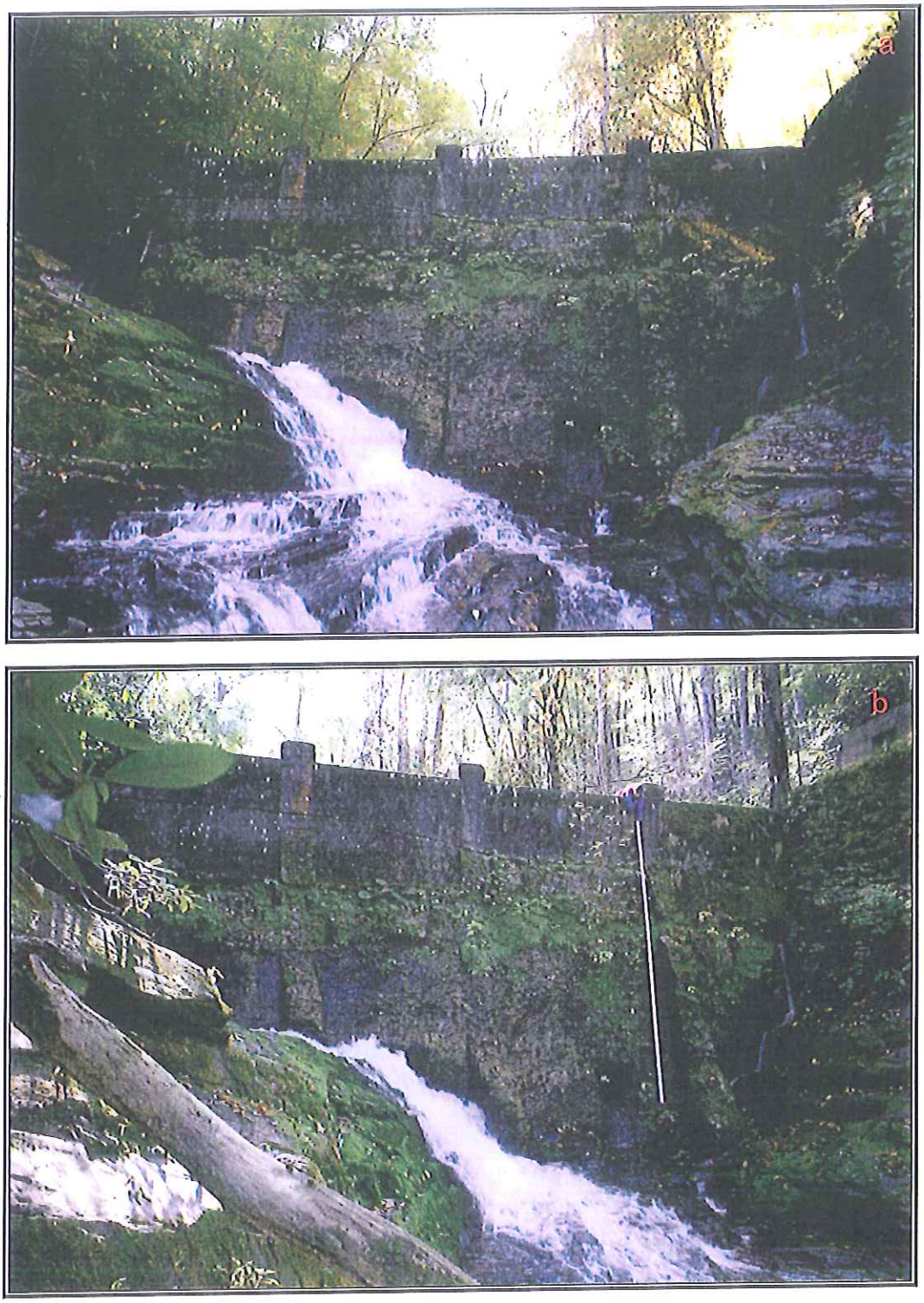

Figure 7a-b. Overview photographs of the exterior/front of Dam No. 1 at MC 207: a) view to southwest; b) view to west.

Figure 8a-d. Overview photographs of Dam No. 1 at MC 207: a) interior wall, view to southeast; b) exterior wall (top), view
c) exterior wall (bottom), view to west; d) breach at southeast end of dam, view to the north.

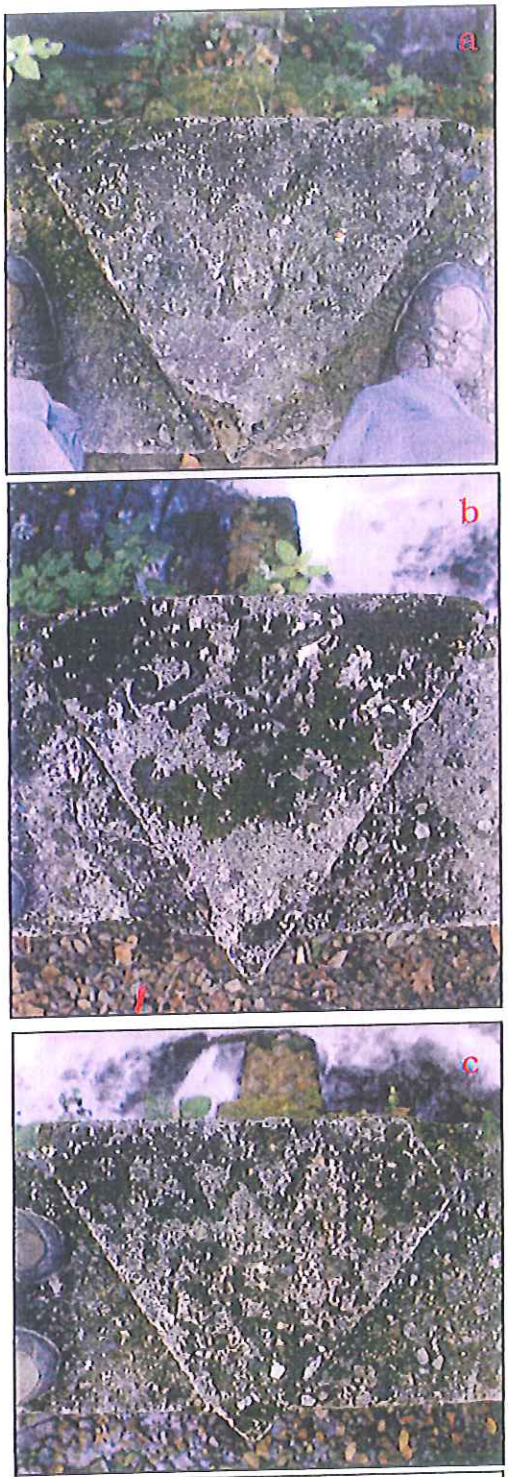

Figure 9a-c. West, center, and east merlons on Dam No. 1.

significantly west of center. Elsewhere, dam height rises quickly to the east and west—as determined by the V-shaped bedrock channel of this portion of the Catawba River. The top of the dam is broadly crenelated, including two stepped spans at each end with depths of approximately 11 and a quarter inches, and between these steps three irregularly spaced, triangular merlons of equal height/depth and an average measurement of approximately 19 inches on a side. The top surface of each of these three merlons is inscribed with initials—presumably those of the workman that constructed Dam No. 1. Figures 9 a-c provide illustrations of these inscriptions from west to center to east along the top of the dam. The initials "J.W.B." occur on both the west and east merlons. Other sets of initials are less certain, but appear to include "___.D.S." on the western triangle, "Q.K.W." on the central triangle, and "R.E." on the easternmost triangle. None of these sets of initials correspond with those masons' names that are inscribed beneath the arched opening on the north wall of Power House No. 2 downstream (see below).

The average width of the dam wall at its top is slightly less than that of its decorative merlons (or ~15.75 inches). However, the width of the wall flares as it approaches its base. As the upstream side is now silted in to a height of within six feet or less of its top, a determination of wall width at the base of the dam is not currently possible. On the downstream side of the dam, the structure is also reinforced with a series of concrete buttresses. These buttresses are unevenly spaced and coincide with the locations of the three merlons located directly above, and in one instance with the stepped portion of the dam's top in its eastern half (see Figures 5 and 6). Each buttress measures approximately the same width as the merlons above. Each begins

at approximately 4.4 feet below the top of the dam and tapers from zero to approximately 1.5 feet thick at its base. All are now cracked and spalled, and otherwise reduced from their original forms.

As illustrated in the circa 1922 photograph above (see Figure 4a), the water impounded by Dam No. 1 was forced to exit the area through a metal-banded, tongue-and-groove, wooden pipe located high on the east side of the dam wall. From here the water was channeled through the wooden pipe to Power House No. 2 at MC 208 located approximately six-tenths of a mile downstream and at an elevation of nearly 165 feet lower than Dam No. 1. The outflow pipe at Dam No. 1 measured at least two feet in diameter and, judging from the early photograph, may have been twice that large. A more precise measurement cannot currently be determined as most of that portion of the dam wall that included the exit opening for this pipe has broken away. The Catawba River now flows through this breach. Two other openings can also be seen on the exterior wall of the dam. Of these two, the smaller, circular opening exhibits a diameter similar to that of the pipe that fed water to Power House No. 1 (see below). It may have been used to quickly lower the level of the water on the southwest side of the dam at times of heavy rainfall. The square opening located near the base of the dam was likely used only during the construction stage, when it would have been advantageous to allow the river to continue along its more usual channel, while concrete was being poured and allowed to harden around it. Presumably, this opening was closed once the dam construction was complete. Though thoroughly silted in on the upstream side of the dam, a small stream of water currently finds its way out of both of these openings.

In addition to the wide breach observed in the easternmost portion of the dam, a number of other fault lines are apparent in the concrete and rock surface of Dam No. 1. The largest and deepest of these cracks extends from the breach in the east to the small, circular opening located near the west end of the dam. This fault occurs at approximately 8-10 feet below the top of the dam. A smaller, though no less lengthy fracture can be seen above it at approximately halfway between the lower crack line and the top of the dam. A third fracture can be seen in the eastern half of the dam at several feet below the long, deep fracture, and may in fact join with it farther to the west along the dam wall. Moss and ferns now cover the area where they may or may not join. Significant portions of these fault lines appear to coincide with differences apparent in the concrete of the exterior wall surface. For example, the bottom two-thirds of the dam appears to include much larger gravels and fist-sized stones, while that portion located above this line appears to have employed only small gravels, and/or was more completely finished/smoothed than the wall below. Shallow ridges apparent on the surface of both sides of the wall indicate that the structure was raised in a series of shallow pours of concrete, each approximately 12-14 inches high (i.e. the height of the boards used to form the molds into which the concrete was poured.

Power House No. 1

Located approximately 17 feet west/northwest of Dam No. 1, the remnants of Power House No. 1 can be found on a slightly elevated terrace a few feet higher than the top of the dam (see Figures 5, 10, and 11). Like the dam, the concrete walls of the power house structure appear to have been poured as narrow bands—each the width of the boards used as forms. However, some of the large, rectangular concrete blocks that now lie in surrounding areas to the northeast and southwest of the building beg the question as to whether or not some of these wall sections may have been constructed as pre-fabricated blocks, then set into place in the walls of the power house. Narrow grooves observed in the bottoms and tops of these fragments and larger slabs indicate that a mortise and tenon-type joinery may have been employed.

Though fragmented at its southwest upper corner, the south wall of Power House No. 1 is the most intact of the four. It measures approximately 16.5 feet (ne-sw) by 12.5 feet tall and includes an average thickness of 15.7 inches. A smaller and now broken knee wall extends from the northeast end of the larger south wall. The upper half of the south wall includes a roughly square window opening that averages nearly three feet on a side. A shallow mortise was set at the center of each side of the window to receive a similarly shaped tenon. Iron pins or dowels also appear to have been used to fix some form of casement window in place. Below the window in the south wall, a roughly oval shaped opening (measuring a maximum of 29 inches tall by 20 inches wide) was later sealed shut with concrete. At best, the broken west wall of the power house measures 4.6 feet high and 12.5 feet long. There is little or no trace of the north and east walls of the structure other than those concrete fragments located at a distance to the northeast and southwest of the power house.

The interior of Power House No. 1 consists of a level earthen floor that is artificially raised a few feet above the level of the surrounding landform. No evidence of former machinery is apparent within this space. On the steep ridge slope located immediately west and northwest of the power house and at a distance of approximately 65 feet from it, a small concrete retaining wall includes within it a section of open cast iron pipe (Figures 12a and 12b). This half-inch thick pipe would have served to carry water from Dam No. 2 located on Chestnut Branch at a distance of approximately one half mile (minimum) and over an elevation change of nearly 500 feet. Pipe diameter measures a little over 14 inches. The concrete retaining wall surrounding the pipe measures nearly nine feet wide at its top and includes a vertical height of approximately 3.6 feet at center. On the slope below this retaining wall and pipe lies a longer flanged section of cast iron pipe, the exposed portion of which measures nearly four and a half feet, while an unknown length continues down into the ground in the direction of Power House No. 1. Although no pipe is apparent within the limits of the power house, the oval-shaped opening (now sealed) in the base of the south wall of this structure may have served

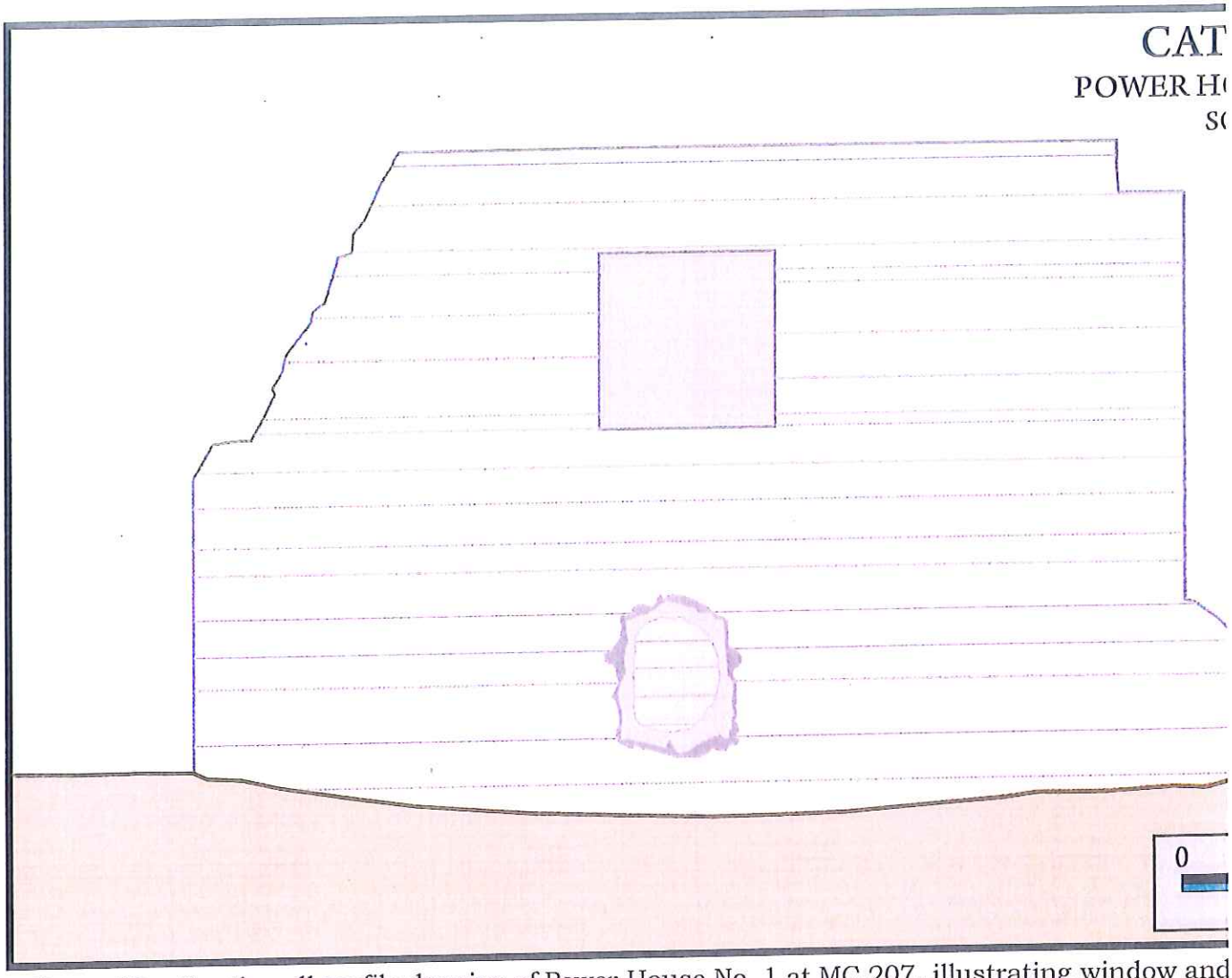

Figure 10. South wall profile drawing of Power House No. 1 at MC 207, illustrating window and locations.

Figure 11a-e. Overview photographs of Power House No. 1 at MC 207: a) south wall, view to northwest; b) south and west
c) south and west walls, view to west; d) west wall remnant and rubble, view to the south; e) concrete rubble

Figure 12. Concrete retaining wall (a) and cast iron pipe (b) on slope above Power House No. 1.

for an exit pipe carrying water that had passed through the turbine, and then on to join with the waters of the Catawba River on the upstream side of Dam No. 1.

Structure MC 207 Miscellaneous Features

Other features associated with MC 207 include a number of stone, concrete, and log retaining walls or horizontal supports whose primary function appears to have been to widen and/or shore up the narrow two-track road that served as access to the dam and power house, and which today is incorporated as a portion of the Catawba Falls Trail. As illustrated in Figure 5 above and in Figures 13a-d below, these features include from northeast to southwest a section of concrete retaining wall, an expanse of horizontally laid log supports, a massive angled section of stone retaining walls that serve to create a roughly triangular artificial platform adjacent to the road, and a less well-constructed section of stone retaining wall (no photograph included) located to the southwest of the dam and southeast of the power house.

Of these several support features, the large, angled retaining wall and the platform created through its subsequent infill is monumental in scale and construction (see Figures 13a & b). From the west end of the dam the stones of this dry-laid retaining wall extend to the northeast for a distance of more than 30 feet and exhibit a height of more than 15 feet at center. The northeast half of the retaining wall incorporates a massive, natural boulder as part of its foundation. At its northeast end, the rubble-filled interior of the retaining wall creates an artificial platform that widens the shoulder of the two-track road by at least eight feet. Angling to the north of the northeast end of the stone retaining wall is a log platform that serves the same function (see Figures 13b & c). Farther still to the

Figure 13a-d. Overview photographs of various features at MC 207: a) stone retaining wall/artificial platform, view to nor platform; view to west; c) log platform, view to northwest; d) concrete retaining wall, view to west.

northeast along the same precipitous road edge, a narrow span of concrete serves as a retaining wall along this formerly fragile edge (see Figure 13d). Embedded into the edge of the road shoulder just north of the concrete retaining wall are a small diameter iron pipe and a large iron eye-hook, whose functions remain unknown. South of Dam No. 1, a more informal dry-laid stone retaining wall helps to create a more level platform for a bend in the two-track road—most other sections of which in this area were constructed by means of cut and fill. Indeed, that section of road located to the northeast of the power house appears to have been cut from the nearly vertical rock face.

Structure MC 207 Condition and Evaluation

The ninety plus years following the construction of Dam No. 1 and Power House No. 1 and their nearby supporting structures have not been entirely kind. Documentary research and informant interviews suggest that operation of the facility was rather short-lived. Both this station and that one located downstream (i.e. Power House No. 2) were retired in 1937. Equipment was removed some 15 years later. Perhaps it was at this later date, in 1952, that Power House No. 1 at MC 207 was significantly and somewhat rudely dismantled. To remove any generator and/or turbine from the interior, it may have been easier to breach the walls of this structure than to dismantle the equipment and carry it through the doorway. While the integrity of Dam No. 1 has been significantly compromised by the large breach in its east end, and a series of deepening cracks along its exterior/downstream façade, the structure is currently stable. Whether or not it can withstand another flood like those of 2004 remains to be seen. The associated stone retaining wall located to the northwest of Dam No. 1 remains in surprisingly good condition given its height and method of dry-laid construction. The northeast corner of this structure at its base does exhibit signs of weakness and a cavity has begun to open on that corner. The log platform that angles from the stone retaining wall back to the road edge is remarkable in that it is still standing (or intentionally lying as the case may be) after all these years. Neither structure is the sort to hold a public gathering on. Nor would it be wise to park a vehicle on either platform. The wire fencing that separates these structures from the road edge is a justified precaution, if somewhat temporary and insubstantial in nature. With the possible exception of Dam No. 1, none of the other individual elements of MC 207 may be considered eligible for nomination to the National Register of Historic Places. However, when considered as a whole, and included with the larger hydroelectric complex represented by structures at MC 208-MC210, site MC 207 is recommended as eligible for nomination to this register. The importance of this site is elevated by its association with Col. Daniel Adams—a figure of local historical significance in McDowell County and of national significance for his role in the United States Forest Service.

⌖ MC 208 Power House No. 2/ Stone Wall/Cribbing Complex

Location (UTM's from NAD WGS 84; Zone 17):
@ NE corner of Power House No. 2: **Northing:** 3941545 **Easting:** 388215
@ NE corner of Stone Wall: **Northing:** 3941548 **Easting:** 388243
@ center of Stone Cribbing: **Northing:** 3941572 **Easting:** 388283
Quad Sheet: Moffitt Hill, NC
Land Form: first terrace of Catawba River (nw & se of river)
Elevation: ~494 meters or 1620 feet AMSL
Site Size: ~80 meters (ne-sw) x 20 meters; ~270 feet (ne-sw) x 65 feet
Cultural/Temporal Affiliations: early to mid-20th-century
Site Functions/Features: 2-story, stone power house; stone & mortar wall; dry-laid stone cribbing
Vegetation/Site Surface: mixed hardwoods and conifers; two-track roadway access to Power House No. 2 & stone cribbing; trail access to stone wall
Soils: Evard-Cowee complex, 25-60% slopes (EwE; at Power House No. 2 & cribbing); Ostin cobbly loamy sand, 1-5% slopes, frequently flooded (PtB; at stone wall)
Site Condition: all moderately stable; stone wall broken at SW end; large tree down on stone cribbing
NRHP Recommendation: eligible

Designated Structure MC 208, this portion of the Catawba Falls Hydroelectric Complex includes the largely intact stone walls and interior concrete generator pad of Power House No. 2, collapsed portions of the structure's water intake line, a low stone and mortar wall, and a section of dry-laid stone cribbing. Collectively, these several structures and associated site features lie within an area measuring approximately 17,000 square feet (~1600 square meters). From the USFS parking lot located at the northeast end of the Catawba Falls Trail, the easternmost portion of this complex of structures (i.e. the stone cribbing) can be reached by hiking approximately one-fifth of a mile (~290 meters) southwest along the trail. At the first crossing of the trail and the Catawba River, remain on the south/southeast bank of the river and follow an abandoned two-track road southwest to reach the stone cribbing. Power House No. 2 is located at a distance of approximately 250 feet (75 meters) farther to the southwest along this old, two-tract road. The low stone and mortar wall also listed among the structures of MC 208 is located on the north/northwest bank of the Catawba River at a distance of approximately 75 feet (23 meters) northeast of Power House No. 2 (see Figures 2 and 3). The remains of a cinder block building that formerly served the Boy Scouts of America lie only a few dozen yards to the northwest of the low stone wall and northwest of the Catawba Falls Trail.

Power House No. 2

Early twentieth-century photographs indicate that Power House No. 2 was constructed as a two-story stone building with a hipped metal roof erected at the base of a steep northwest-facing ridge slope and immediately adjacent to the

Catawba River (see Figures 4b-c and 14). Although the hipped roof with its taller central cupola is now gone, much of the original fabric of this approximately 90-year old structure remains intact (Figures 15-18). If quarried from locally available stone, then the rocks of Power House No. 2 likely qualify as either a type of schist, gneiss, or granite, or some combination thereof. As no attempt was made to more formally dress the large, tabular blocks used for the construction of the power house, it may be characterized as "rubble" built (McKee 1973:9-39). The mortar bond between these stones is intentionally raised and rounded to the exterior. The sills and jambs of all three windows and the jambs and threshold of the single door in the east wall of the structure have been more formally finished with the application of a smoothed cement bond. The same material and treatment was applied to the interior walls of the second floor. Note that this second floor has the appearance of a first floor, when entering the building from the east side. However, a least a partial, if not a full "basement" exists beneath this floor, and it was through this space that the water—once channeled through the blades of the turbine located beneath the concrete pad and generator on the second floor—was allowed to pass through the building, exiting on its north side, where it then returned to the Catawba River located approximately eight feet to the north. The north wall of the power house includes at the center of its base a more formalized concrete arch through which the water was allowed to exit. A poured concrete cap creates a second arch, above which the wall returns to stone rubble construction. Letters inscribed into the surface of this arch identify the structure's "MASONS" as: "J N MORRIS," "JOHN MILLS," "JOHN DINKINS," and "ALF BOYCE"—though the letters of the last name are not as certain as the others (see Figure 19a below).

Power House No. 2 is a much larger facility than the poured concrete building that served the same function at MC 207 located upstream. This stone power house at MC 208 measures at least 25.5 feet (e-w) wide, while the stones of the south wall extend to an even 26 feet at the top of the wall. Currently, the maximum expanse of exposed stone on the north side of the building includes a height of approximately 19.4 feet from ground surface to the top of the second story wall. However, the foundation of the building, at least on this north side, extends below the ground surface for at least another 2.5 to 3.0 feet. Whether or not the south wall of the power house extends as deeply into the ground is unknown, but given its construction at the base of a steep ridge slope, it is perhaps somewhat less likely to reach as deep on that side. The east and west walls of the building measure an average of 23.5 feet long. All four walls exhibit an average thickness of nearly two feet. In addition to the arched opening at its base, the north wall also includes two square windows—each of which measures approximately 35 inches on a side. Early twentieth-century photographs of this structure indicate that single-paned louvered windows were set within these openings and were fixed with centrally located pins on each side that allowed the windows to be tilted open. A third window of the same dimensions was seated in the uppermost center of the south wall of the power house and the east wall includes a fourth window located slightly less than two feet north of the door. The opening for the single door that allowed access onto the second floor through the east wall measures 6.3 feet wide

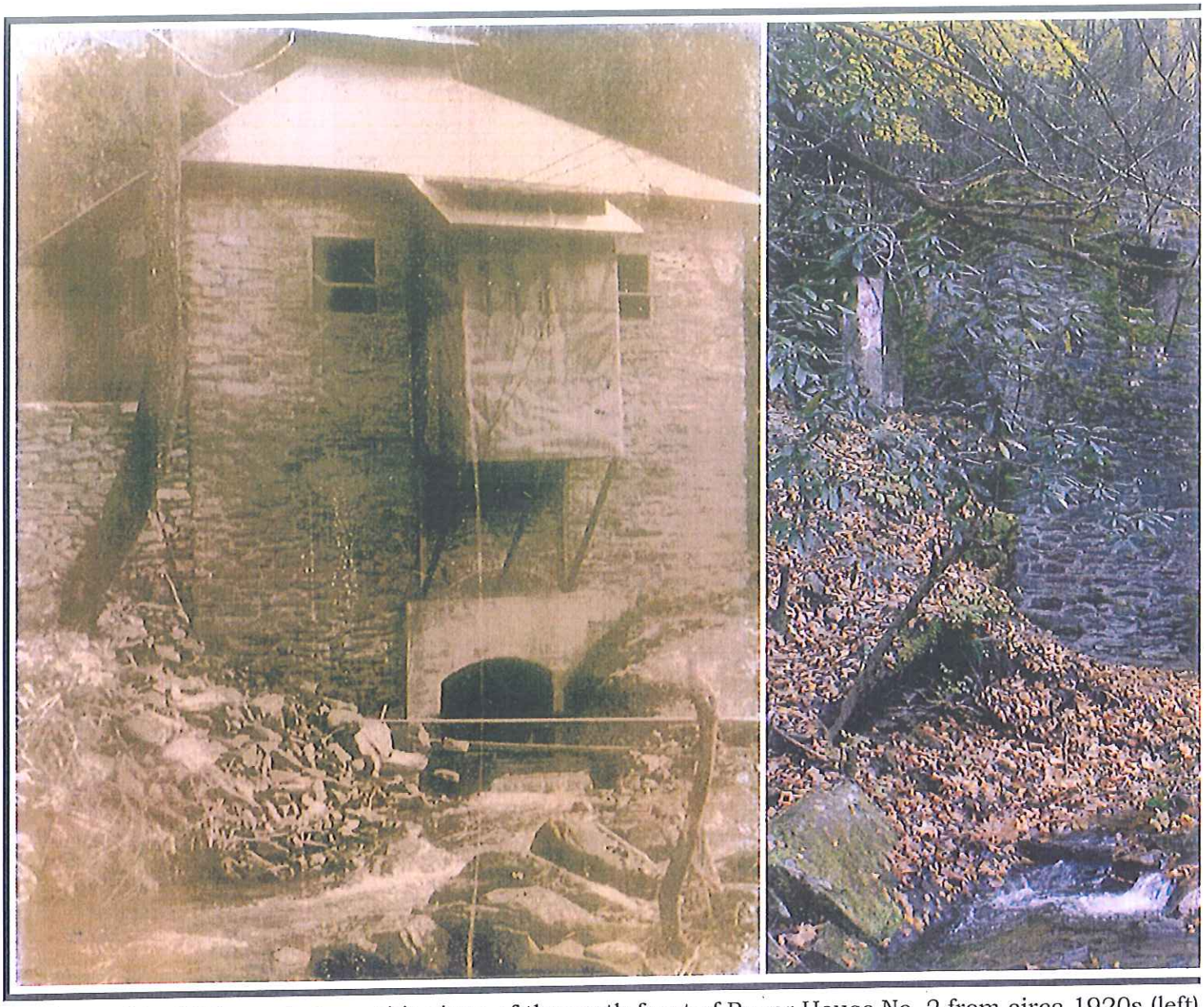

Figure 14. Oblique photographic views of the north front of Power House No. 2 from circa 1920s (left) to southwest.

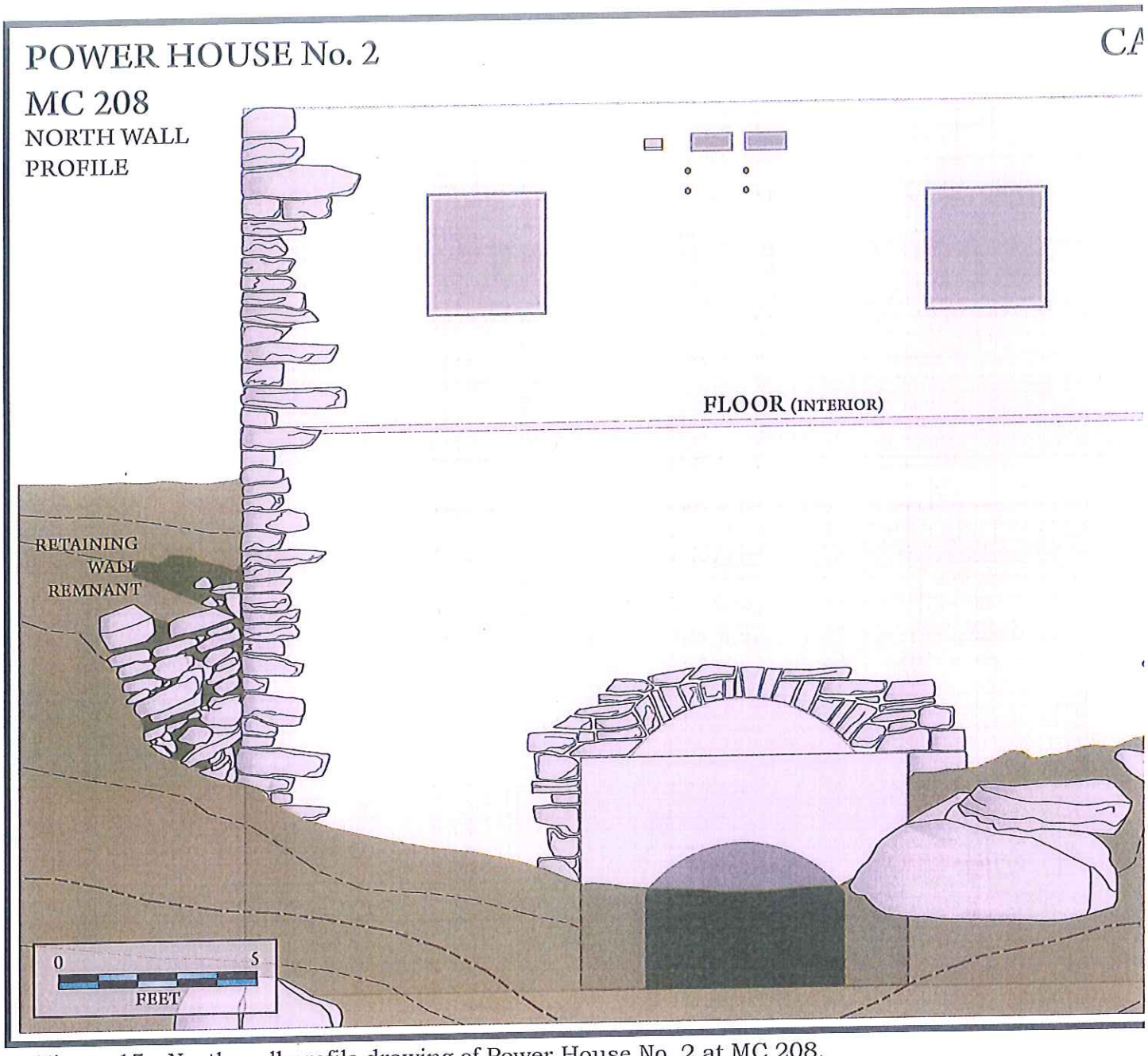

Figure 15. North wall profile drawing of Power House No. 2 at MC 208.

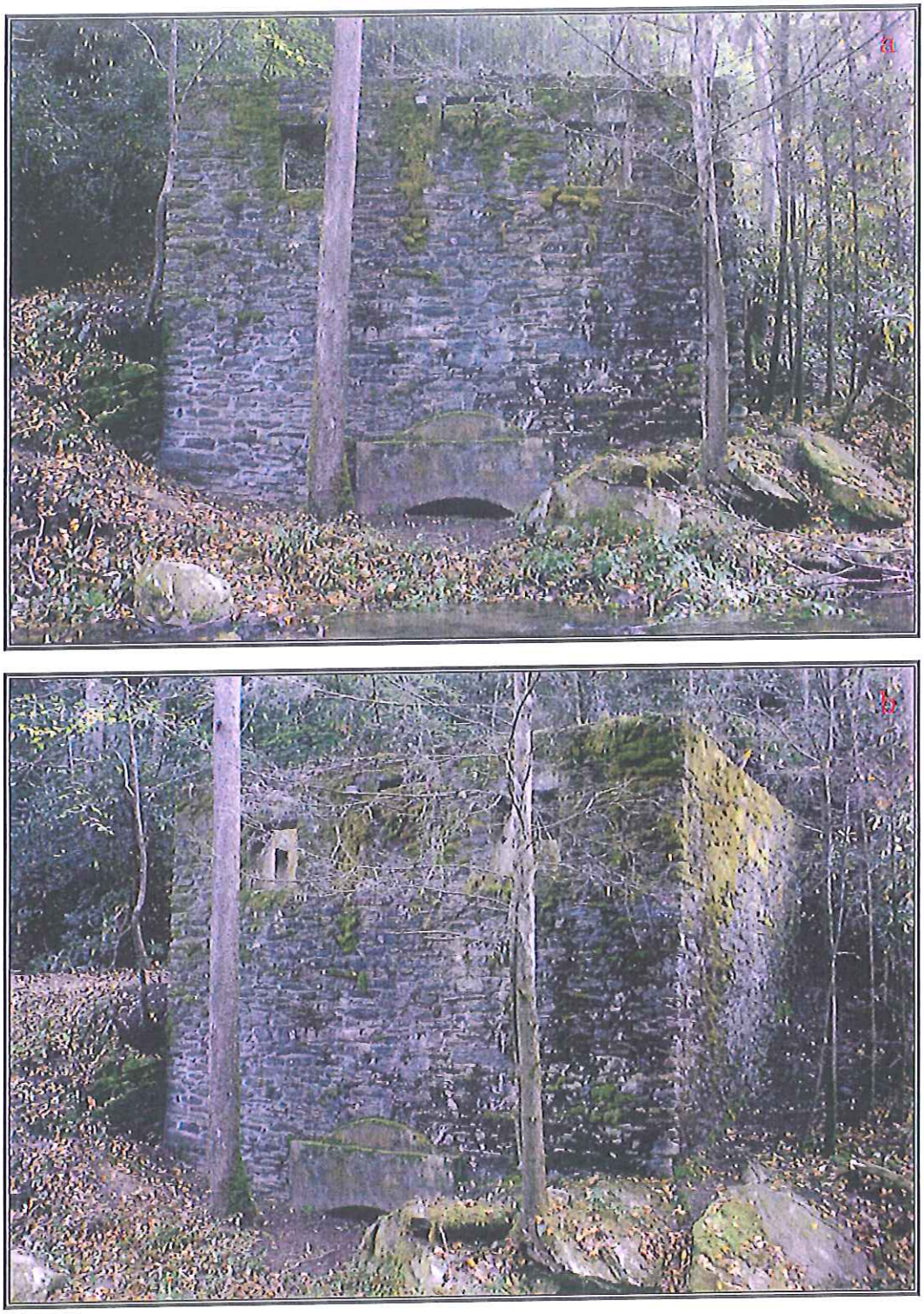

Figure 16. a) North wall front view of Power House No. 2, view to south; b) oblique view of north and west walls of Power House No. 2, view to southeast.

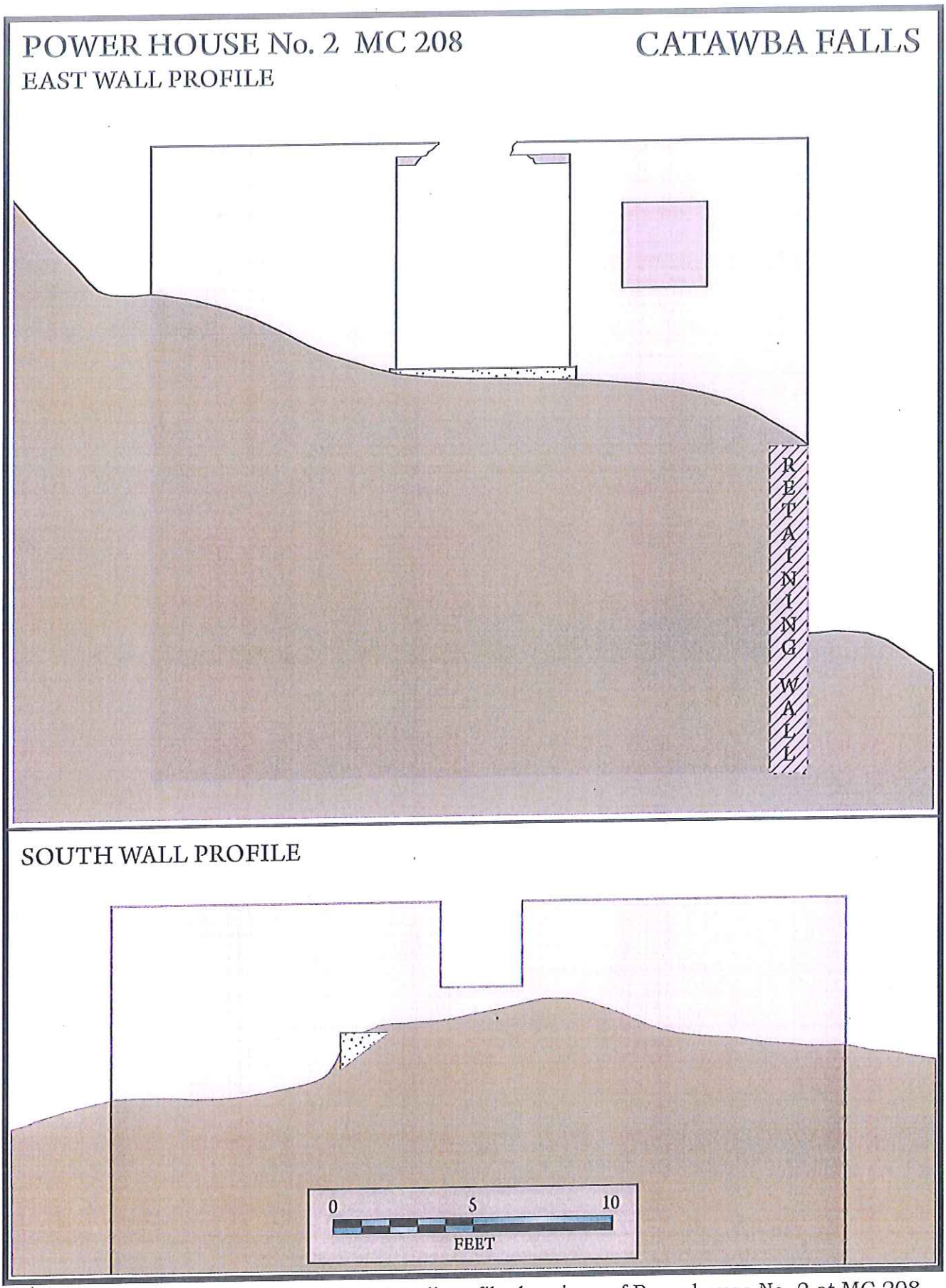

Figure 17. East (top) and south (btm) wall profile drawings of Powerhouse No. 2 at MC 208.

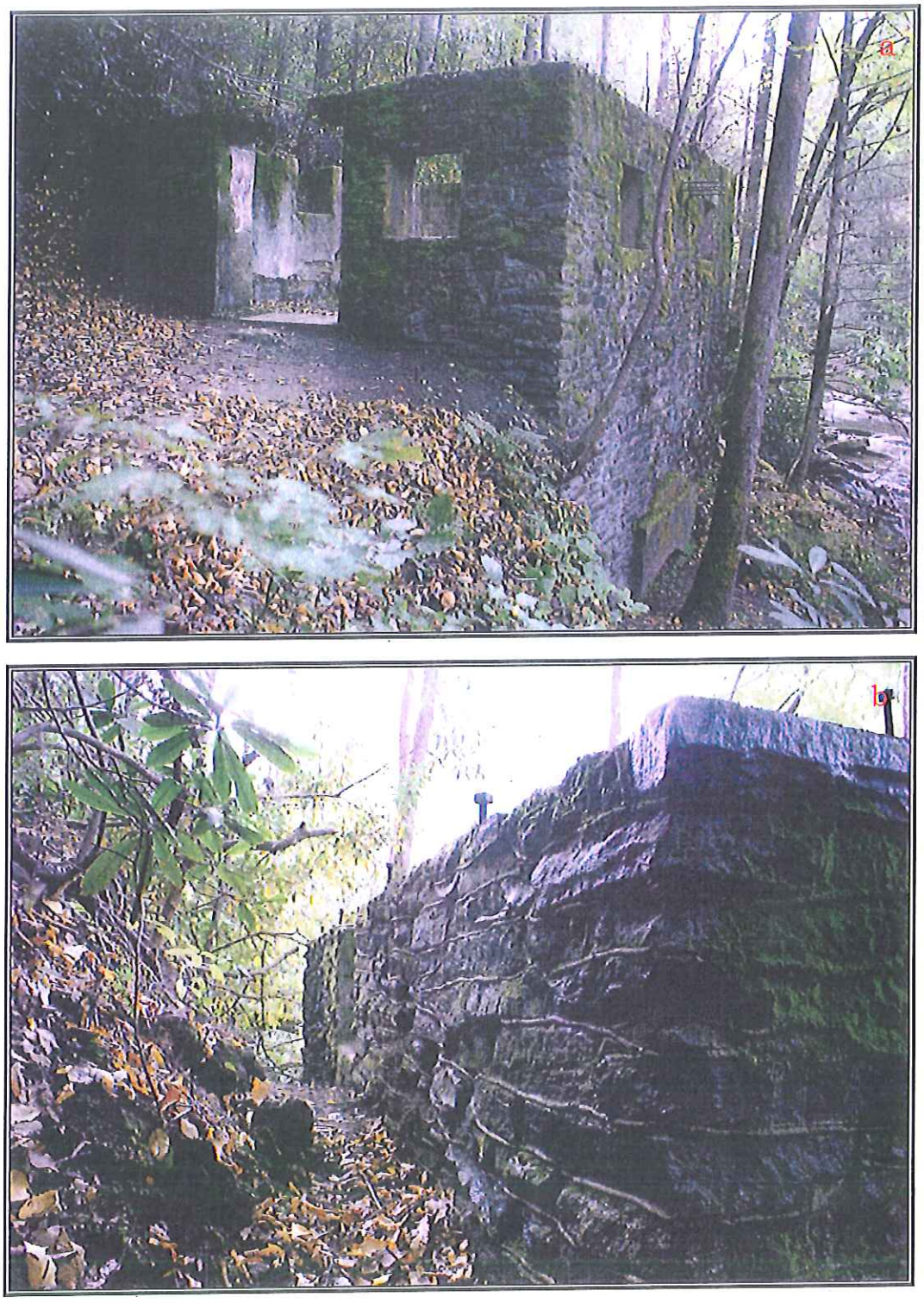

Figure 18. a) Oblique view of east wall at Power House No. 2, view to southwest; b) oblique view of south wall, view to west/northwest.

by approximately 7.2 feet tall. The top sill of the doorway has been broken away, despite the inclusion of iron reinforcement bars below. The west wall of Power House No. 2 includes no openings of any kind. Finally, the north wall also includes two very small openings near the top center of the wall, each of which measures approximately 13 inches (e-w) long by 4.7 inches tall. The precise function of these narrow slots is difficult to discern, but the proximity of an electrical junction box to their left and four iron bars almost immediately below suggests that they served in some capacity for the passage or support of those electric transmission lines that formerly attached to the building at this juncture (see Figures 14, 15, 16a and 18a above and Figure 19b below).

The second floor interior currently includes a thick mantle of decomposed and decomposing organic material, which over the years has developed into a layer of black, organic soil. The depth of this soil was not tested, but presumably a wooden floor lies beneath at least some portion of this surface. Particularly in the north half of the building, the floor sounds hollow below. Much of the central and westernmost portion of this floor area is occupied by a thick concrete pad on which the machinery of the power house formerly rested (Figures 20-21). Openings in the west half of the pad reveal a set of stacked pipes below, that would have directed the water through the blades of a turbine located beneath these pipes, and from there the water would have passed into the arched exit passage below. Portions of the floor surface located to the south of the concrete pad also include slabs of concrete. Perhaps the south half of the structure includes rock fill and/or native bedrock capable of supporting the heavy concrete slabs and machinery above, while the north half of the building remains largely open beneath a section of wooden floor. A roughly square wooden panel can be seen in the northeast interior of the building, but if it formerly served as a hatch allowing access to the pipes and blades of the turbine below, then it is no longer in place, and no such opening is currently obvious anywhere within the building's interior.

Water channeled through iron-banded wooden pipes from Dam No. 1 at a distance of six-tenths of a mile upstream was carried through the south wall of Power House No. 2 through an opening located below and west of the centrally-located window in that wall (see Figures 20 and 21b). This opening in the structure's south wall measures approximately 25 inches and likely admitted a pipe that included a two-foot diameter. The rusted fragments of the former metal bands that secured the tongue-and-groove members of the wooden water pipe can be seen collapsed within a channeled groove in the concrete pad within the power house, and are even more numerous along a similar channel that ran between the south wall of the building and a concrete retaining wall located some 16 feet farther to the south on the steep ridge slope behind the building (see Figure 19c). Most of these rusted bands exhibit a width of one and half inches.

Figure 19a-c. Miscellaneous features associated with Power House No. 2 at MC 208: a) decorative, signed arc
b) electric transmission line junction box and support bars, view to west; c) collapsed intake pi

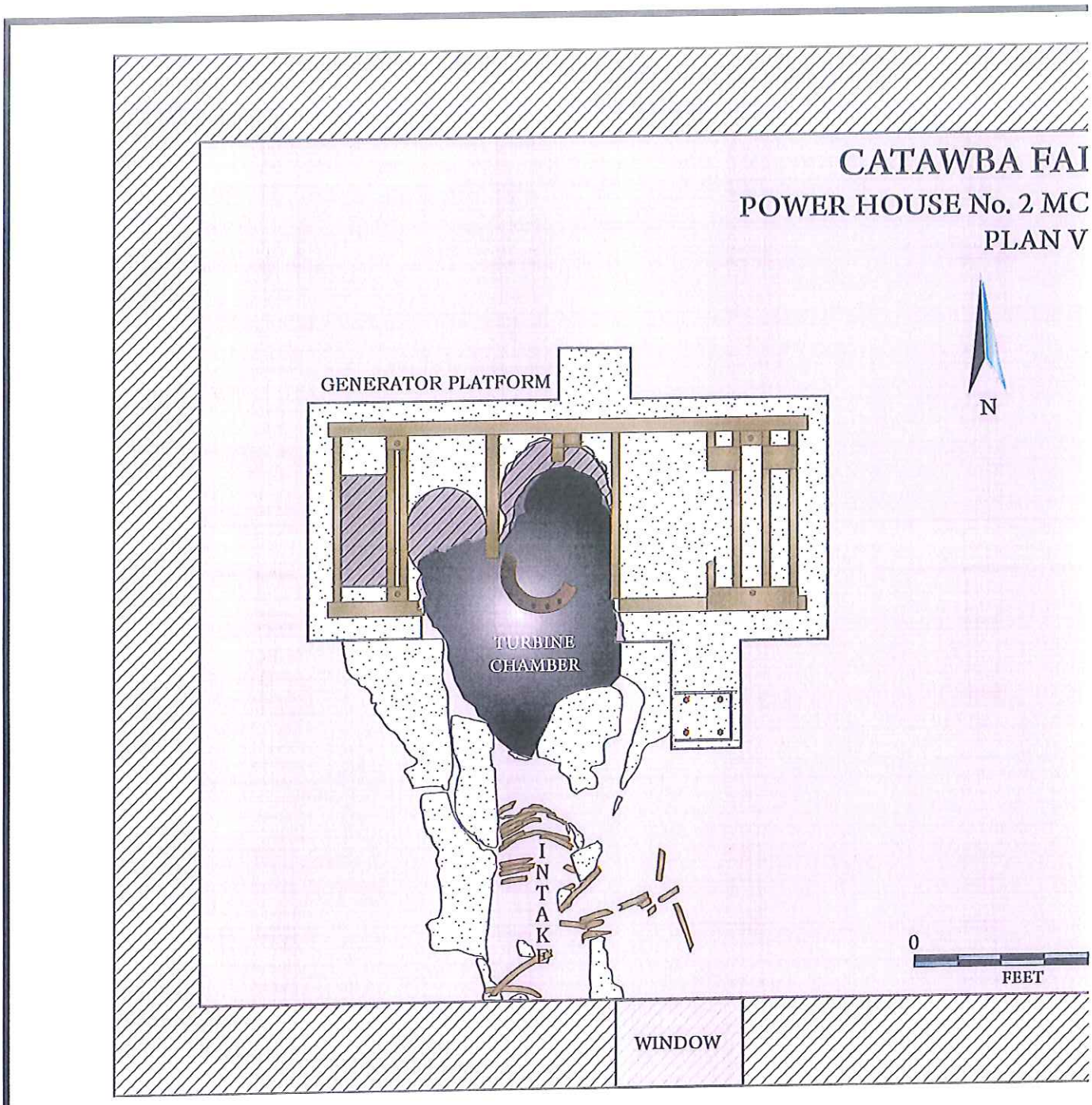

Figure 20. Plan view drawing of Power House No. 2 at MC 208 illustrating interior machinery

Figure 21. Photographs of generator platform at Power House No. 2: a) view to north; b) view to south.

Stone Wall

Located approximately 75 feet northeast of the northeast corner of Power House No. 2, and approximately 12 feet north of the water's edge, a low stone wall of similar materials and construction details can be seen perched on the edge of the first terrace adjacent to the Catawba River (see Figures 2-3 and 22-23). Constructed in the same "rubble"-built manner and employing the same rough-cut, roughly rectangular stones as those used in the walls of Power House No. 2, the structure does not, however, include the same rounded, intentionally extruded mortar bonds as that building. In fact, most of the stones of this low wall located on the north side of the Catawba River appear to have been dry-laid. However, the mostly level top surface of the wall includes copious amounts of carefully smoothed mortar. While not offering complete coverage of those stones at the top of the wall, nevertheless this mortar or cement plaster appears to have served more as a prepared and finished surface, than as a bond intended to hold the stones together. For this reason, it is suggested that (for the most part) the current height of this stone wall represents its final intended elevation, and not some partially dismantled portion of a larger, higher wall or structure. Currently, this low stone wall measures approximately 37 feet long (nw-se) by an average of two feet wide, with a maximum height of nearly 30 inches. The original structure likely included another two – three feet of length, but the southwest end of the wall is now broken and a large section measuring two feet in width and several feet in length now lies below and on a different angle from the more intact wall section located to its northeast. Quite likely this broken fragment was formerly the southwest end of the wall, and as in the case of a similar angled section of stone at the northeast end, this southwest end section may have extended a few feet to the north/northwest. Together these two end caps and the longer straight wall that ran between and perpendicular to them would have formed a long, shallow [-shaped structure. As no soil has been banked up against either side of this wall, and as no corresponding foundation of any kind is apparent to the north of this structure, it most likely served as a kind of curb to define the edge of a parking area for those working at or visiting the nearby hydro station. The narrow, two-track road that parallels the south bank of the river and leads directly to and terminates at Power House No. 2 is little wider than the width of a single vehicle. Parking on the more spacious and level river terrace opposite the power house would have been more convenient, if not in fact necessary, when more than one vehicle were in attendance.

Stone Cribbing

Located downstream of and on the opposite river bank from the stone wall at MC 208 (see Figures 2 and 3) is a section of dry-laid stone cribbing, that in contrast to the stone wall upstream, does very much appear to have been constructed as a retaining wall (Figures 24-25). The south edge of the Catawba River lies approximately eight feet to the north of this rock feature, while the north edge of the two-track road that leads to Power House No. 2 lies approximately 15 feet south of

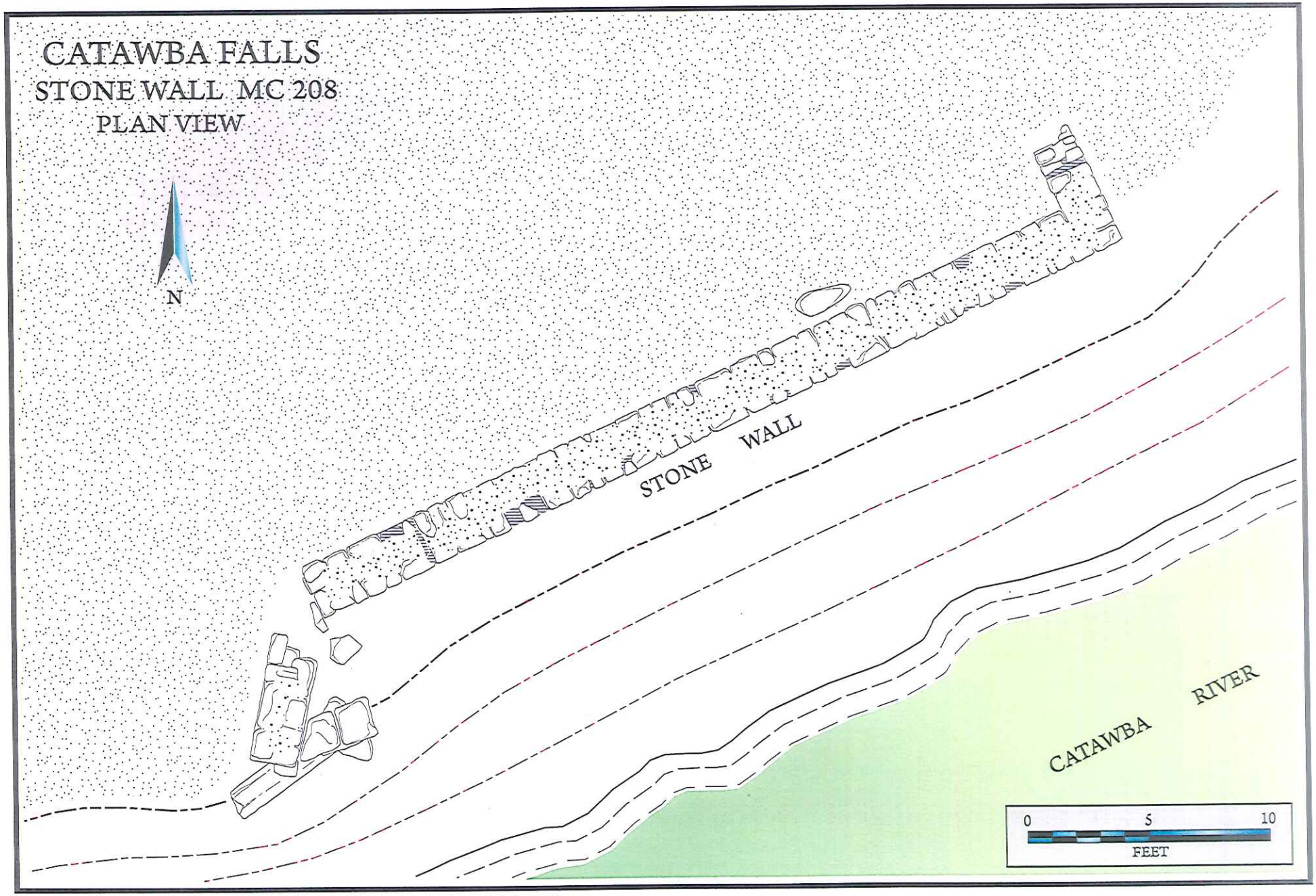

Figure 22. Plan view drawing of stone wall at MC 208.

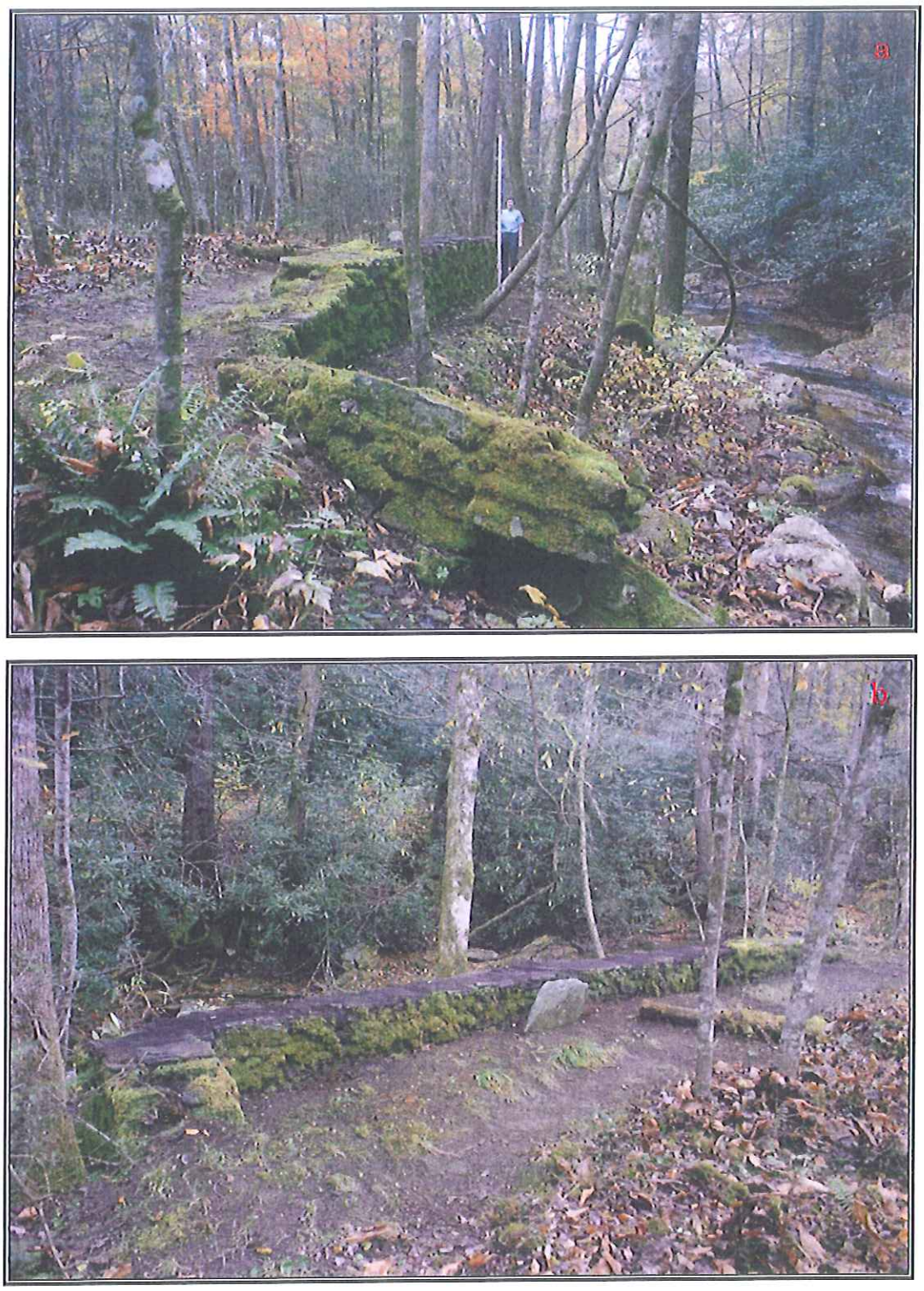

Figure 23. Photographs of low stone wall at MC 208: a) view to northeast; b) view to south.

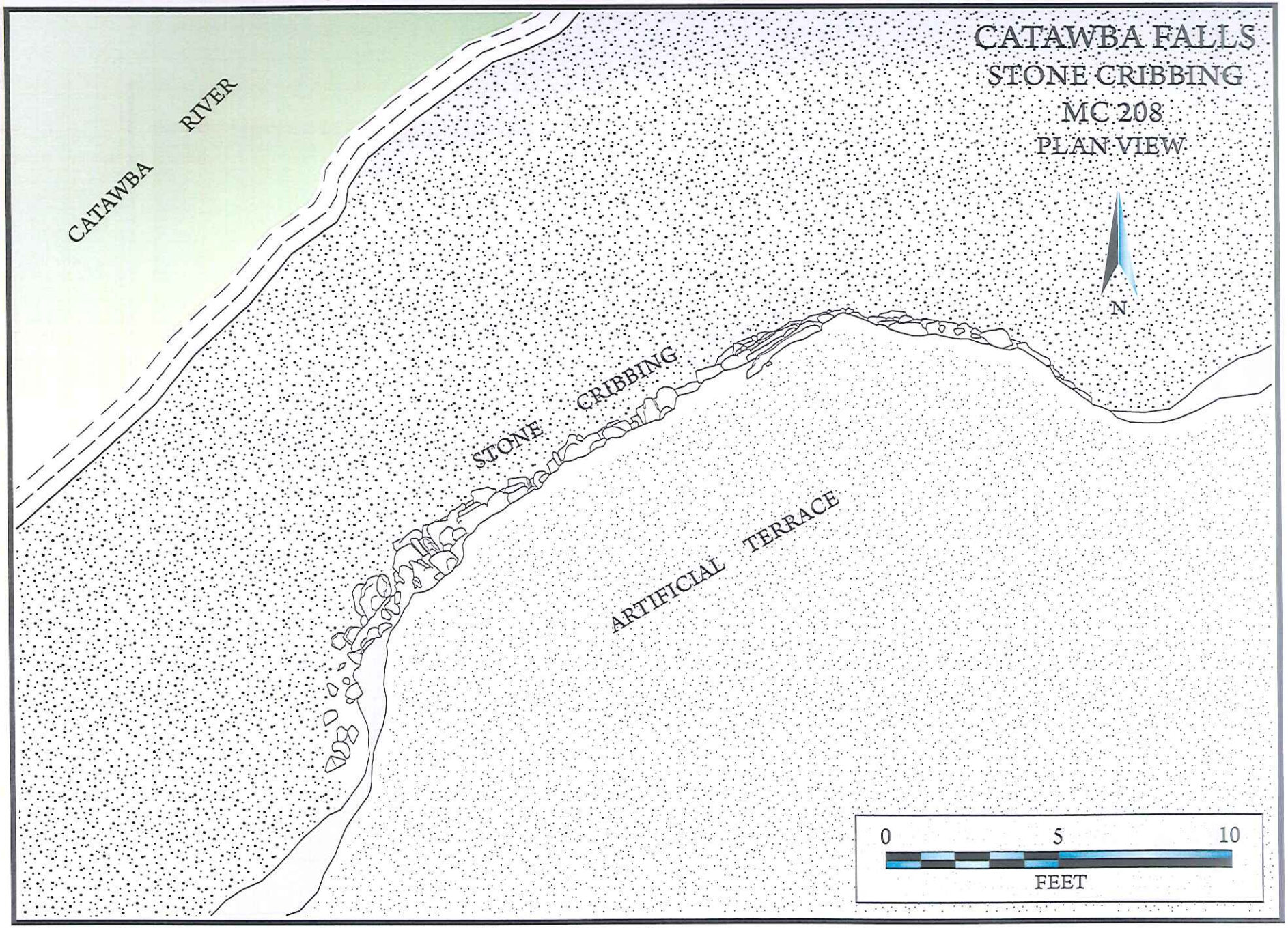

Figure 24. Plan view drawing of stone cribbing at MC 208.

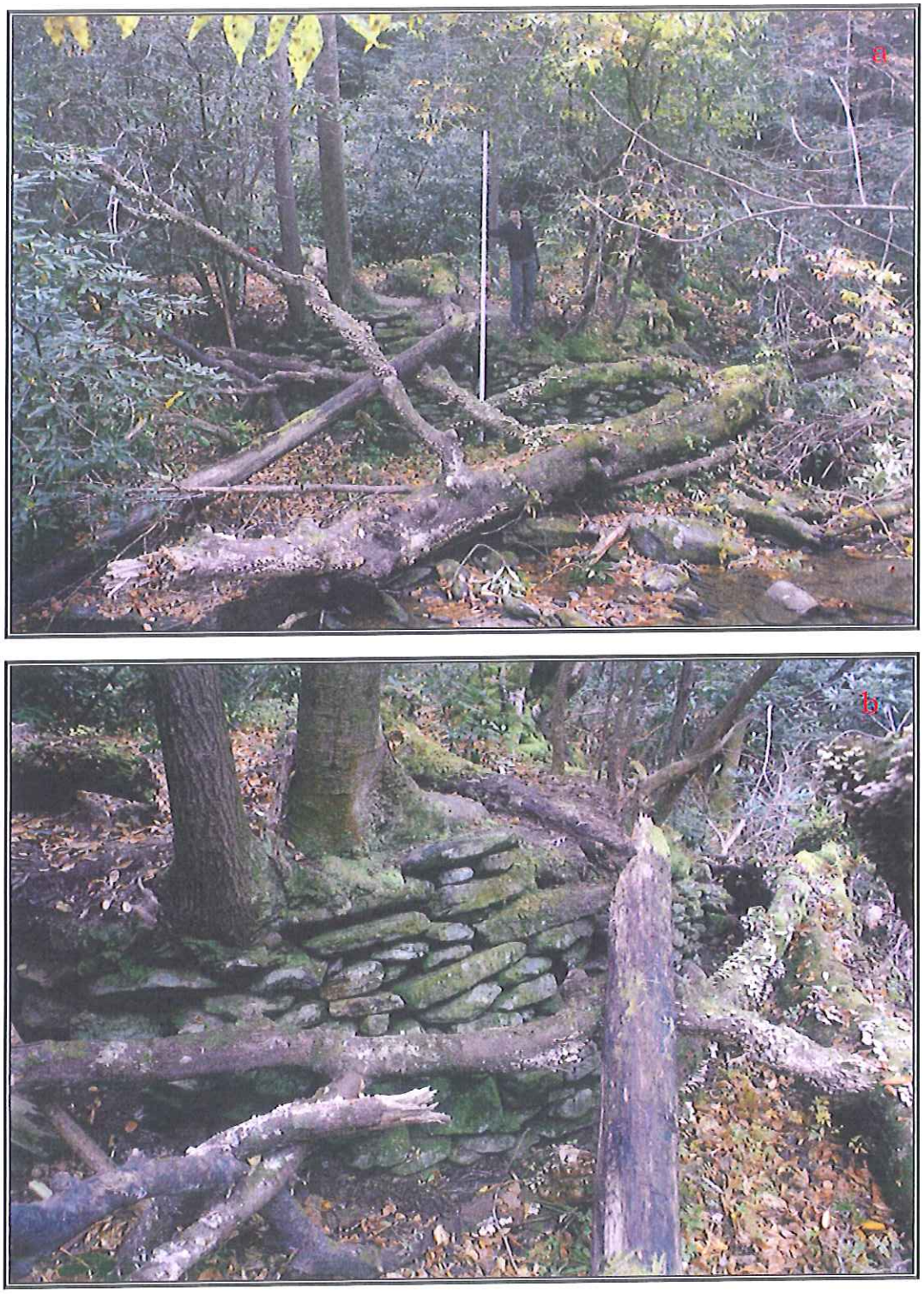

Figure 25. Photographs of stone cribbing at MC 208: a) view to southeast; b) view to southwest.

this rock retaining wall. The east wall of this hydro station facility is located nearly 250 feet southwest of the stone cribbing. Constructed to a height of nearly five feet above the river and measuring approximately 25 feet in length (ne-sw), the retaining wall includes large and medium-sized tabular stones. While similar to those of the nearby stone wall feature and those of the power house, the rock used in the cribbing is, on the whole, of a thinner sort. At least some, if not most of these stones may have been foraged directly from the Catawba River. This stone cribbing feature may have been constructed at the same time as Power House No. 2 and the narrow two-track road that services it. As the road itself was constructed from cut and fill taken from the base of the adjacent ridge slope, and as most of its surface lies at an elevation of from five to 10 feet above the river, the rock cribbing at MC 208 was most likely constructed to serve as a means by which visiting vehicles might turn themselves around without fear of pitching over the road edge and down into the river. The curved surface of the rock retaining wall and the fill behind it create a semi-circular platform that, together with the two-track road, are sufficient to turn around most vehicles.

Structure MC 208 Condition and Evaluation

As the principal element of Structure MC 208, Power House No. 2 is also arguably in the best condition of the three separate structures that comprise this resource. With the exception of the thin lintel above the doorway in the east wall of the building, at least the exterior surfaces of all four walls are in remarkably good condition. The beaded mortar bond appears to have served the structure very well in this regard. If there is a chink in the armor of Powerhouse No. 2, then it lies in the top surface of each of the four walls, which since the collapse or removal of the metal roof that once protected this surface, has been left exposed to the elements. Prior to photographing the structure as part of the 2013 documentation effort, BRAC archaeologists removed an abundant growth of poison ivy, grasses, moss, and even small saplings that had taken root in the flat surface of each of these four walls. Some of the roots of these plants had softened or more fully compromised the mortar bond, such that crumbling edges were not uncommon at the top of the wall. Rainwater penetration and its subsequent freezing and thawing in these crevices has also diminished the integrity of this surface. The same forces have been at work with ill effect on the cement bond or plaster used to finish interior wall surfaces on the upper floor of the building. While most of this plaster remains in moderately good condition, the rising damp along the south wall of the power house has loosened or otherwise destroyed the cement finish up to several feet from the surface of the floor. Elsewhere hairline fractures are common, and a process of crystallization appears to be underway where moisture finds its way through these cracks. Many include a white powdery substance that may be saltpeter. Other threats to the integrity of Powerhouse No. 2 include potential damage from falling trees. One large branch was removed prior to photo-documentation. Anything of larger size would more likely leave a mark. Finally, human visitation has left its mark in the form of graffiti—most often sprayed onto the surfaces of interior walls, but can also be seen "decorating" the structure's door jambs. While Power House

No. 2 is in danger from even more destructive forms of vandalism, visitors to this structure may also be in danger if the suspected wooden floor in the interior should give way or if walking the tops of the walls (which are easily accessed from the south) one should fall.

Of the two stone features associated with the power house at MC 208, the low stone wall is perhaps more vulnerable to human defacement or destruction, as it is located almost immediately adjacent to the popular Catawba Falls Trail. The lower elevation of the section of stone cribbing located on the south side of the Catawba River is more susceptible to the destructive forces of the rising river. A near miss from a fallen maple tree of considerable size points to another source of potential damage for both. Yet, at the present time, both structures remain in moderately good condition. While neither of these two stone features are individually eligible for nomination to the National Register of Historic Places, taken together with the nearby Power House No. 2, these three structures of MC 208 are recommended as eligible for nomination to this register. Their association with each of the other contributing elements of the larger Catawba Falls Hydroelectric Complex, and their presumed construction at the hands of Col. Daniel W. Adams—a figure of locally and national significance—lends still greater weight to their potential to be nominated to the NRHP.

⌖ MC 209 Dam No. 2

Location (UTM's from NAD WGS 84; Zone 17):
@ center of Dam No. 2**: Northing:** 3941116 **Easting:** 386625
Quad Sheet: Black Mountain, NC
Land Form: spanning Chestnut Branch
Elevation: ~695 meters or 2285 feet AMSL
Site Size: ~25 meters (ne-sw) x 5 meters; ~80 feet (ne-sw) x 15 feet
Cultural/Temporal Affiliations: early to mid-20th-century
Site Functions/Features: concrete dam
Vegetation/Site Surface: mixed hardwoods and conifers; rock ledges, alluvial fan; foot trail access
Soils: Chestnut-Ashe complex, 25-80% slopes, stony (CaF)
Site Condition: stable; breach in northeast half of dam
NRHP Recommendation: eligible

Designated Structure MC 209, this portion of the Catawba Falls Hydroelectric Complex includes the largely intact, low-walled, concrete dam across Chestnut Branch. Presumably, a metal-banded, tongue-and-grooved wooden pipe formerly extended from this dam, followed the east bank of Chestnut Branch to reach the base of the ridge slope along the northwest bank of the Catawba River, and then down this slope to reach Power House No. 1 located adjacent to Dam No. 1. From the USFS parking lot located at the northeast end of the Catawba Falls Trail, Dam No. 2 can be reached by hiking nearly one mile southwest along the trail to the point at which the trail intersects with Chestnut Branch. Follow the creek for a short distant to reach an unmarked and informal trail on the east bank of the creek, which ascends steeply to intersect with an older northwest-southeast trending trail. Follow this trail to the northwest as it roughly parallels the east bank of Chestnut Branch for a distance of approximately three-tenths of a mile to reach Dam No. 2 where the trail returns to and intersects with Chestnut Branch (see Figures 2 and 3).

The concrete dam across Chestnut Branch at MC 209 is the only structure documented at this site. No other cultural or architectural features or landform modifications are associated with the dam (Figures 26-28). Currently, the poured concrete wall of Dam No. 2 rises a maximum height of little more than 37 inches at a point near its center, along its northeast to southwest oriented span. This span measures approximately 74 feet in length. Wall thickness varies considerably and includes a range of 7.6 inches to as much as 31.5 inches, and an average of approximately 14 inches. The rapidly tapering northeast end of the dam takes advantage of natural bedrock and rests directly against it on its south/southeast side. Elsewhere along the length of this span, the dam continues to take advantage of somewhat lower, natural bedrock ledges that angle from northeast to southwest along this portion of Chestnut Branch. Near the center of the span, the dam is perforated by two openings—one small and square (5.5 inches on a side) and the other round with a diameter of 17.7 inches. The larger opening includes a

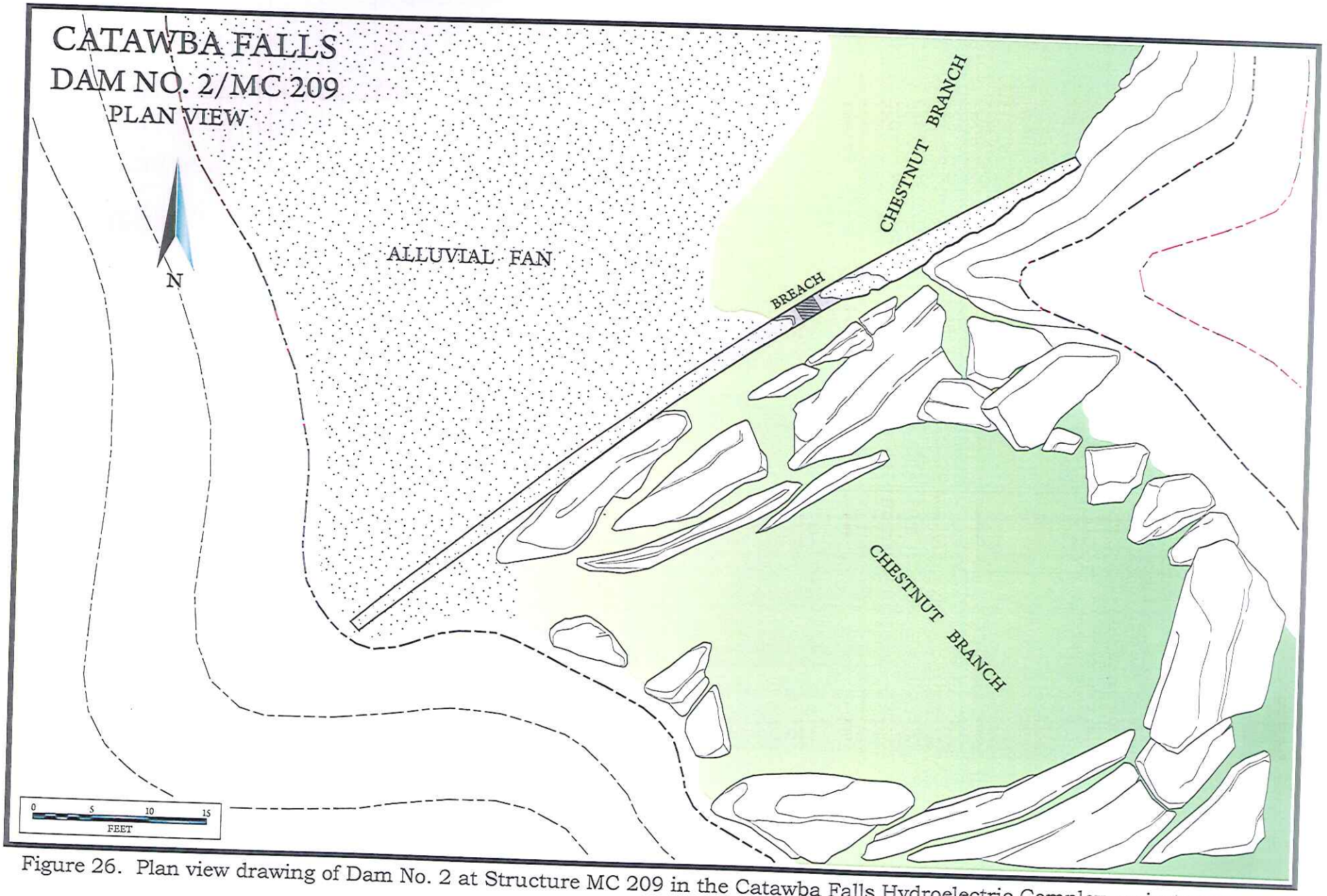

Figure 26. Plan view drawing of Dam No. 2 at Structure MC 209 in the Catawba Falls Hydroelectric Complex project area.

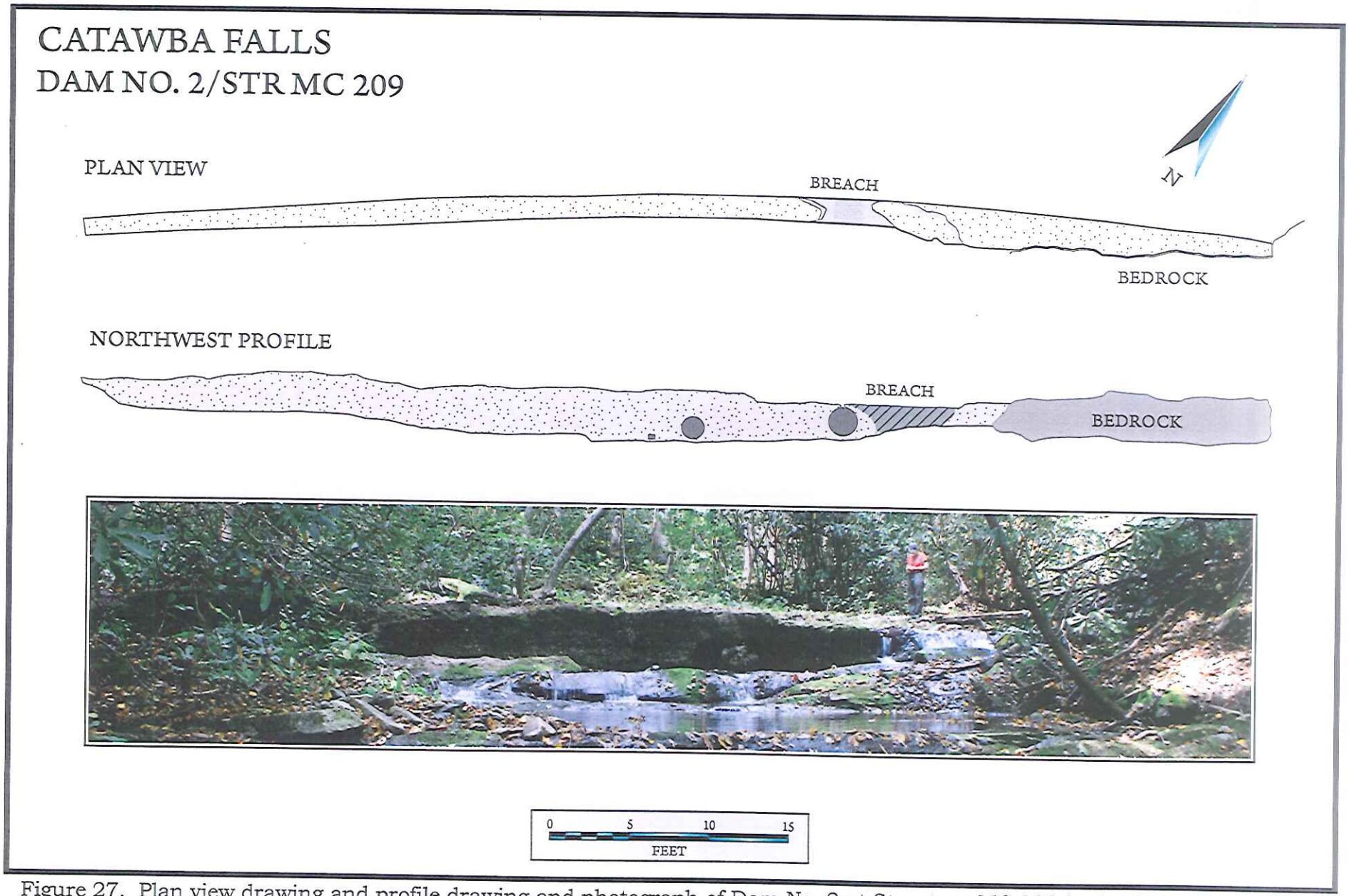

Figure 27. Plan view drawing and profile drawing and photograph of Dam No. 2 at Structure MC 209 in the Catawba Falls Hydroelectric Complex project area.

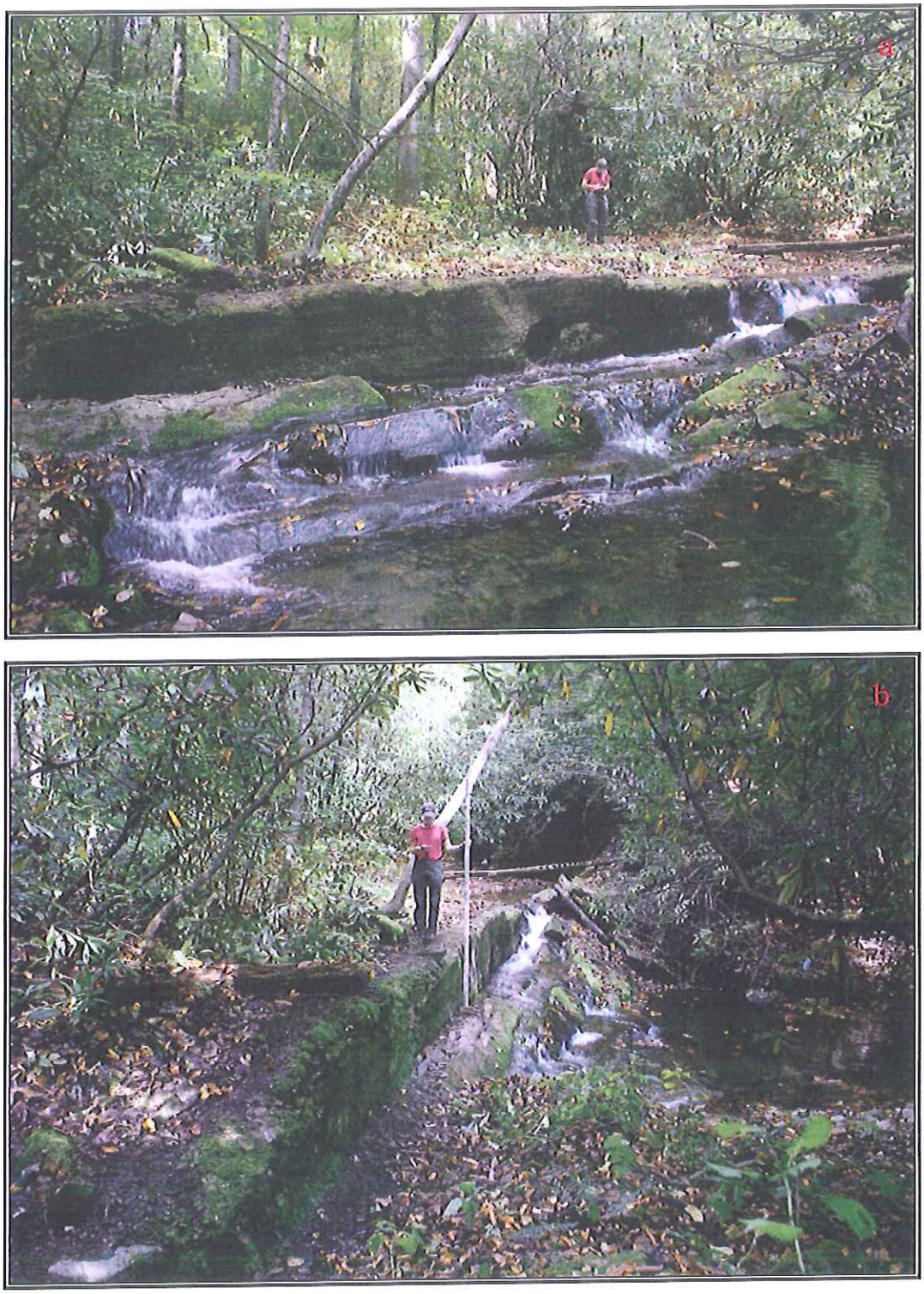

Figure 28. a) Front view photograph of Dam No. 2 at MC 209, view to north/northwest; b) oblique view of Dam No. 2, view to northeast.

metal pipe around which the concrete was poured. This "pipe" appears to have been constructed of closely spaced metal bands. For the most part, both openings are currently clogged with rock, smaller gravels, and sand, but both admit at least a trickle of water to flow through. At approximately 7.5 feet farther to the northeast along the front/downstream side of the dam, a third and still larger round opening can be seen. This opening measures approximately 21.3 inches in diameter. Instead of the flat metal bands observed in the smaller, round opening, this larger cavity includes at least two round wire metal hoops, both of which are joined at their ends by a flat metal connecting piece. One of these hoops appears hinged to the outer edge of the opening, but otherwise seems to have been expelled from it and hangs to the outside of the dam's vertical surface. At Dam No. 2, the concrete at the topmost portion of this opening is broken away, while an even larger section of concrete is missing immediately northeast of this former pipe location, and together they form a breach over which Chestnut Branch now flows. Presumably, water impounded by Dam No. 2 flowed through a pipe formerly connected to the larger opening, through this pipe down the adjacent ridge slopes, and included a southeastern terminus at Power House No. 1 at MC 207. Elsewhere along the upstream side of the dam at MC 209, the river channel is currently completely filled in with alluvial gravels, sand, silt, and larger cobbles up to the very top of the dam.

The condition of Dam No. 2 at MC 209 is relatively good. Although the top surface of the dam is uneven and spalled in many places, there is little reason to believe that the dam formerly extended significantly higher than it currently does. No large fragments of concrete were observed downstream of the dam and the elevation at which the outflow pipe (or pipes) perforates the dam suggests that little additional dam height would have been necessary. The breach that occurs in the northeast half of the dam does not extend the full width of the wall and the remaining portion of concrete in this area appears to be holding. Given the low height and largely intact condition of Dam No. 2, it likely poses no danger to those willing to make the trek up the unmarked trail to view it. Nor is it likely to be significantly impacted by future floods given the height of the stony fill that current rests behind it. As a contributing element of the larger Catawba Falls Hydroelectric Complex, Dam No. 2 at MC 209 is recommended as eligible for nomination the NRHP.

⌖ MC 210 Dam No. 3

Location (UTM's from NAD WGS 84):
@ center of Dam No. 3**: Northing:** 3940531 **Easting:** 387014
Quad Sheet: Moffitt Hill, NC
Land Form: spanning Catawba River above Upper Falls
Elevation: ~705 meters or 2310 feet AMSL
Site Size: ~not determined
Cultural/Temporal Affiliations: early 20th-century(?)
Site Functions/Features: stone foundations/remnants of dam; iron pilings in bedrock
Vegetation/Site Surface: mixed hardwoods and conifers; adjacent to Upper Falls; foot trail access
Soils: Chestnut-Ashe complex, 25-80% slopes, stony (CaF)
Site Condition: poor; broken ends of stone dam
NRHP Recommendation: eligible (contributing element of larger complex)

Designated Structure MC 210, this portion of the Catawba Falls Hydroelectric Complex includes the remnants of a stone dam located on both sides of the Catawba River and only a short distance above and southwest of Upper Catawba Falls. Associated with these stone dam foundations is a row of steel pilings driven into adjacent bedrock. From the USFS parking lot located at the northeast end of the Catawba Falls Trail, Dam No. 3 can be reached by hiking nearly one mile southwest along the trail to reach the base of Lower Catawba Falls. Continue southwest along the steeply ascending trail located on the west bank of the river for a distance of approximately one-fifth of a mile to reach the top of Upper Catawba Falls. Though not confirmed through a more recent BRAC field visit (i.e. not initially included as part of the project scope-of-work), USFS personal note that the remains of Dam No. 3 are located only a few dozen yards upstream of the Upper Falls (see Figures 2 and 3).

Photographs of Dam No. 3 at MC 210 taken by USFS personnel in 2011, record the terminal ends of what appears to have once been a stone dam that spanned the narrow, upper reaches of the Catawba River (Figures 29 and 30). Based on these photographs, these stone foundations appear to measure approximately two feet thick. Those stones located on the southeast side of the river, which at this point is only a few feet wide, extend well into the stream. Only a few courses of the bottommost stones of this particular section of dam currently survive in situ. A few feet to the northwest, the stream edge coincides with a large slab of bedrock. At least four steel pilings have been driven into this tabular bedrock surface. Each measures less than a foot tall and approximately one inch in diameter. Though closely aligned with each other and sharing the same northwest to southeast alignment as the stone foundation on the opposite river bank, the position of these pilings seems to suggest that they were driven into bedrock at points close to, but just downstream of the former stone foundation (see Figures 29a and 29b). As such, they were likely added after the construction of the dam,

Figure 29a-e. Overview photographs of Dam No. 3 remnants at MC 210: a) stone foundation and iron pilings, view to southeast; b) stone foundation and iron pilings; view to south/southeast; c) stone foundation on SE bank, view to south/southeast; d) stone foundation on NW bank, view to west/northwest; and e) stone foundation on NW bank, view to south.

Figure 30. a) Overview photograph of Upper Catawba Falls below Dam No. 3 at MC 210, view to southwest; b) cast iron pipe fragment below Upper Falls, view to north.

and most likely served as added support or buttressing to prevent the stones at the base of the dam from moving downstream. The stone foundation recorded on the northwest bank of the Catawba River at MC 210 is of the same medium-sized stone construction and same approximate width as that fragment documented on the southeast side of the river. This foundation fragment sits higher on the river terrace and does not currently reach to the water's edge (see Figures 29d and 29e). If its top course represents the former top of the dam, and this top surface continued from northwest to southeast at approximately the same elevation, then the overall structure may have stood as much as five to six feet tall at its center.

In 2007, a reporter for the *Charlotte Observer* visited the Upper Falls area of the Catawba River. Her description of a stone structure in the area above the Upper Falls closely matches that of the photographs provided by the USFS of Dam No. 3. Approaching the Upper Falls from above (hiking southwest to northeast or downriver), Leland (2007) observed:

> Jutting into the river there are remains of a stone dam built by an entrepreneur who tried to harness this part of the Catawba for electricity the way Duke Power did downstream. Col. Dan Adams abandoned his plans after a drought in 1925, when the Catawba ran so low, grass grew on exposed river bottoms. The river forces its way between what's left of the dam, a passage a few feet wide. It swells again, then suddenly drops from sight.

From her description it is clear that she can hear the Upper Falls from the site of the old stone dam, but she writes that she then "hurried down the trail" and "rounded a corner," before first catching site of the Upper Falls. From this description it would seem that Dam No. 3 is located at least a few dozen yards from the top of the falls. Note that her assumption that Dam No. 3 was built by Col. Adams may be no more correct than her implied assertion that it was Duke Power that had constructed Dam No. 1 farther downstream. Alternatively, her assumption that it was Adams that had constructed Dam No. 3 may in fact be correct.

While there is currently no evidence above the falls that the dam at MC 210 served to create the same kind of reservoir as Dam Nos. 1 and 2, from which pipes carried water to turbines at power houses down stream of their locations, a large section of cast iron pipe discovered just below the Upper Falls (see Figures 30a and 30b) may represent a portion of a similar conduit. This heavy iron fragment measures nearly an inch thick by 32 inches long, by at least 13 inches in diameter. The curved surface of the iron pipe fragment suggests that ultimately its diameter was even larger than 13 inches. As such a large and heavy fragment is unlikely to have swum upstream, it is tempting to interpret this cast iron pipe fragment as having derived from above the Upper Falls and perhaps serving as a portion of a series of connected pipes designed to channel and carry water impounded by Dam No. 3. If such was in fact the case, then the question of its destination arises, but is not easily answered. In each of the other two dam and power house facilities

located farther downstream along the Catawba River and Chestnut Branch, the outflow pipe and the power house to which it was connected were located on the same side of the river. If a pipe exited Dam No. 3 above the Upper Falls, and if Power House No. 2 at MC 208 was its destination, then it was a long haul compared to the other two known water lines. Finally, it should be noted that the stone construction of Dam No. 3 is unlike that of either of the other two concrete dams. It is tempting to suggest that Dam No. 3 is earlier than the other two, and as such may represent the very first attempt to harness the power of the upper Catawba River.

As detailed more fully above, the condition of Dam No. 3 at MC 210 is relatively poor. The surviving foundations are so fragmented that it is easy to imagine them being overlooked unless specifically searching for them. If some form of hydraulic cement was initially used to bond these stones together, then it is no longer apparent, at least not in the photographs illustrated above. As such, it is remarkable that these foundations have survived to the present-day. Future floods will likely continue to erode the fabric of these resources, especially the foundation that is located on the southeast side of the river and partially within it. Given the low height of the surviving fragments of Dam No. 3, it likely poses no danger to those willing to make the trek up the unmarked trail to view it. While not considered eligible in its own right, nevertheless as a contributing element of the larger Catawba Falls Hydroelectric Complex, Dam No. 3 at MC 210 is recommended as eligible for nomination the NRHP.

SUMMARY REMARKS AND RECOMMENDATIONS: The recent 2013 BRAC architectural survey efforts at the Catawba Falls Hydroelectric Complex in McDowell County have provided photo-documentation and measured drawings of all those structures and associated features (i.e., MC 207 – MC 210) that comprise this early twentieth-century industrial facility. For example, the survey of Structure MC 207 documented Dam No. 1, Power House No. 1, and a series of stone and concrete retaining walls located above and below the dam. A log platform that serves to widen the shoulder of the old two-track road leading up to the dam and power house was also documented. The survey of MC 208 included documentation of the stone Power House No. 2, a low stone wall or foundation fragment, and a section of stone cribbing interpreted as a roadway vehicle turnaround feature. Structures MC 209 (Dam No. 2) and MC 210 (Dam No. 3) include the remains of a second concrete dam located on Chestnut Branch and remnant portions of a stone dam located above the Upper Falls, respectively. Each of these several architectural structures and features, though widely dispersed across the upper reaches of the Catawba River and one of its tributaries, is recommended as a contributing element of the larger Catawba Falls Hydroelectric Complex.

In summary, the proposed improvements to the Catawba Falls project area include a refurbishing of trail surfaces with new gravel where needed, improvements to trail drainage, a new bridge to be located below the lower power house (No. 2), trail relocation or decommission between the Upper and Lower Falls,

an overlook platform to be constructed adjacent to and approximately half way up the Upper Falls, removal of Dam No. 1 and Power House No. 1 at MC 207, and removal of a comparatively modern (<than 50 years of age) Boy Scout structure located in the vicinity of the lower power house at MC 208. Earlier plans for the improvement of public access to Catawba Falls through the construction of a new parking lot and toilet facility were completed in 2012. All proposed improvements are designed to enhance user safety and access to the falls, as well as provide for stream stabilization and lower sedimentation.

These proposed improvements will clearly have an adverse effect on Dam No. 1 and Power House No. 1 at MC 207. Removal of the dam is also likely to have an adverse effect on the expansive stone retaining wall that begins at/abuts the southwest end of the concrete dam. Proposed improvements to the trail in the area of the lower power house and associated rock features at MC 208 will likely result in easier access and increased visitation to these structures. As Power House No. 2 at MC 208 is arguably the flagship of the entire Catawba Falls Hydroelectric Complex, measures should be taken to insure its continued preservation, improve its condition, and enhance visitor safety. For example, the restoration of its former hipped, metal roof above the walls of this structure would provide protection from the elements to both the walls and interior spaces of this building, and prevent possible accidents along its walls. Secure closures at the door and windows on the east and south walls may be necessary to prevent future vandalism within the structure's interior. Efforts should also be made to stabilize the low stone wall and stone cribbing associated with the lower power house at MC 208. The proposed new bridge to be constructed below the lower power house and in the area between its associated stone wall and stone cribbing will provide safe access to trails and structures located on both sides of the river at MC 208. The new bridge will also prevent or significantly reduce trail and stream bank damage caused by visitors that historically have crossed the river at any number of places along this portion of the Catawba. Side rails of the new bridge will include photographs and other interpretive details of the lower power house and associated structures. Trail improvements/and or relocation and the proposed new viewing platform to be constructed approximately half way up the side of the Upper Falls will provide an end destination of sorts, and as such should discourage visitation in the vicinity of Dam No. 3 (MC 210) above the Upper Falls. Construction of the new viewing platform will otherwise have no effect on Dam No. 3. Nevertheless, it is recommended that measures be taken to improve the integrity of these remnant foundations. Such measures might include removal of any vegetation that threatens to compromise structure integrity, stream bank stabilization efforts, and possibly repointing of the cement or other bond between the stones of these foundations, if accomplished in such a way that the original fabric of these foundations is not compromised or otherwise significantly altered in their form or appearance. Proposed improvements to the Catawba Falls Trail and Hydroelectric Complex are expected to have no effect on the integrity of Dam No. 2 at MC 209 along Chestnut Branch. Access to this structure is currently along a different and unmarked trail that is unknown to most visitors. Should that remain the case

going forward, then no additional investigation of Dam No. 2 is recommended. In conclusion, it is hoped that the photo-documentation, measured drawings, and historical context developed in this report may be considered to have met HABS/HAER Level II documentation standards. As such, and in addition to the stabilization efforts and interpretive measures planned by the USFS at each of these structure locations and at other points along the Catawba Falls Trail, we propose that such measures constitute an adequate and effective means of mitigating any adverse effects accruing from planned improvements within the Catawba Falls project area. No further work is recommended in association with the proposed undertaking.

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