United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Name of Property

County and State

Name of multiple property listing (if applicable)

Section number _____ Page _____

SUPPLEMENTARY LISTING RECORD

NRIS Reference Number: 100001468 Date Listed: 8/11/2017

Property Name: Fort Loudoun Hydroelectric Project (TVA Hydroelectric System, 1933-1979 MPS)

County: Loudon State: TN

This property is listed in the National Register of Historic Places in accordance with the attached nomination documentation subject to the following exceptions, exclusions, or amendments, notwithstanding the National Park Service certification included in the nomination documentation.

Signature of the Keeper

8.11.2017
Date of Action

Amended Items in Nomination:

Section 5: Number of Resources within Property

The number of Contributing Structures is hereby changed to 4; the number of Noncontributing Structures is hereby changed to 0

The total number of Contributing resources is 13; the total number of Noncontributing resources is 4.

Section 7: Description

Resource #2, the J Carmichael Greer Bridge is hereby changed to a contributing structure. The dam was designed to take a bridge over its superstructure, and this bridge is an integral part of the transportation network that resulted from the dam's construction.

Section 8: Area(s) of Significance

INDUSTRY and SOCIAL HISTORY are hereby deleted as areas of significance. Neither is well-supported in the nomination.

The TVA FPO and the Tennessee State Historic Preservation Office was notified of this amendment.

MP-1469

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in National Register Bulletin, *How to Complete the National Register of Historic Places Registration Form.* If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions.

1. Name of Property

Historic name: Fort Loudoun Hydroelectric Project

Other names/site number: Fort Loudoun Dam

Name of related multiple property listing: Historic Resources of the Tennessee Valley Authority Hydroelectric Project, 1933-1979

2. Location

Street & Number: 1280 City Park Drive

City or town: Lenoir City State: Tennessee County: Loudon

Not For Publication: N/A Vicinity: N/A Zip: 37772

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended,

I hereby certify that this X nomination ___ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60.

In my opinion, the property X meets ___ does not meet the National Register Criteria. I recommend that this property be considered significant at the following level(s) of significance:

[ ] national [X] statewide [X] local

Applicable National Register Criteria: [X] A [ ] B [X] C [ ] D

Patricia Barnard Eggell 11-9-16

Signature of certifying official/Title: **Date**

Sr. Program Mgr., Tribal Relations & History & Federal Preservation Officer

State or Federal agency/bureau or Tribal Government

In my opinion, the property ✓ meets ___ does not meet the National Register criteria.

Signature of Commenting Official: Date 11-28-16

Deputy State Historic Preservation Officer,
Tennessee Historical Commission

Title: **State of Federal agency/bureau or Tribal Government**

Fort Loudoun Hydroelectric Project | Loudon County, Tennessee
Name of Property | County and State

4. National Park Service Certification

I hereby certify that this property is:

✓ entered in the National Register
___ determined eligible for the National Register
___ determined not eligible for the National Register
___ removed from the National Register
___ other (explain:) _____

Signature of the Keeper | 8.11.2017 Date of Action

5. Classification

Ownership of Property
(Check as many boxes as apply.)

Private	☐
Public – Local	☐
Public – State	☐
Public – Federal	X

Category of Property
(Check only **one** box.)

Building(s)	☐
District	X
Site	☐
Structure	☐
Object	☐

Number of Resources within Property
(Do not include previously listed resources in the count)

Contributing	Noncontributing	
7	4	buildings
2	0	sites
3	1	structures
0	0	objects
12	5	Total

Number of contributing resources previously listed in the National Register 0

Fort Loudoun Hydroelectric Project | Loudon County, Tennessee
Name of Property | County and State

6. Function or Use

Historic Functions (Enter categories from instructions)	Current Functions (Enter categories from instructions)
INDUSTRY/PROCESSING/EXTRACTION/ Energy Facility	INDUSTRY/PROCESSING/EXTRACTION/ Energy Facility
RECREATION AND CULTURE/Outdoor Recreation	RECREATION AND CULTURE/Outdoor Recreation
TRANSPORTATION/Water-related	TRANSPORTATION/Water-related
TRANSPORTATION/Road-related	TRANSPORTATION/Road-related

7. Description

Architectural Classification

MODERN MOVEMENT: Streamlined Moderne
OTHER: Hydroelectric Dam

Materials:
Principal exterior materials of the property: CONCRETE; STEEL; GLASS; ROCK; EARTH; PORCELAIN

Narrative Description

The Fort Loudoun Hydroelectric Project is located at mile 602.3 on the Tennessee River, three-tenths of a mile above its confluence with the Little Tennessee River (Watts Bar Reservoir). The project site is one mile south of Lenoir City (2014 est. pop. 9,034) in Loudon County and twenty-three miles southwest of Knoxville. To the immediate southwest is the Tellico Hydroelectric Project, which was completed in 1979. The Fort Loudoun Project impounds the Fort Loudoun Reservoir (also called Fort Loudoun Lake), which extends from the head of the Watts Bar pool to Knoxville in Knox County. The reservoir has a flood-storage capacity of 111,000 acre-feet. The Fort Loudoun Reservoir has 379 miles of shoreline in Loudon, Knox, and Blount Counties. The primary purpose for construction of the dam and locks was to improve navigation on the Tennessee River.[1] Construction of the project began in 1940 and was completed in 1944.

[1] ñFort Loudoun Reservoir,ò at TVA webpage http://www.tva.gov/sites/fortloudon.htm accessed July 21, 2015.

INVENTORY

The Fort Loudoun Hydroelectric Project (*see Photos 1, 2*) originally consisted of the concrete dam across the river, powerhouse on the left bank, and navigational lock on the right bank.

1. Fort Loudoun Dam, 1944 (Contributing Structure)

The Fort Loudoun projectôs dam is a concrete gravity non-overflow dam and spillway.[2] The non-overflow section is a concrete gravity bulkhead located between the hillside and the service bay of the powerhouse and measures 144.5 feet in length. Its maximum height is sixty-five feet. Its top level is at an elevation of 728.5 feet above sea level and aligns with the parapet along the upstream side of the powerhouseôs upper deck. The spillway of the dam connects the powerhouse at the right bank with the navigational lock on the left bank. Its length provides for fourteen (14) radial gates measuring thirty-two feet high and forty feet wide, divided by piers six-and-one-half feet thick (*see Photo 3*). The spillway has an ogee-type overfall section and a crest at an elevation of 783 feet above sea level. The piers dividing the gates rise thirty-nine feet above the crest to an operating deck. On this deck are two traveling gate hoists that operate the gates (*see Photo 4*). The deck has metal hand railing. There is an apron below the spillway extending 190 feet downstream.[3]

The spillway is designed to discharge 385,000 cubic feet per second with headwater at an elevation of 815 feet above sea level. The blocks of the spillway were designed to be stable under all conditions of headwater and tailwater. When the tailwater is above the crest elevation, each spillway bay operates as a submerged weir. Under ordinary conditions, each bay operates as a free orifice. Construction of the dam used 575,000 cubic yards of concrete. Construction of the main embankment used 1,783,000 cubic yards of rolled earthfill.[4]

2. J. Carmichael Greer Bridge, 1963 (Non-Contributing Structure)

On top of the dam is a bridge constructed in 1963 when U.S. Highway 321 (State Route 73) was built across the Tennessee River. Named the J. Carmichael Greer Bridge, this is a two-lane concrete and steel bridge supported by steel piers which are attached to the damôs concrete surface. The bridge has metal railing and chain-link fencing on the east and west sides (*see Photos 2 and 3*). The bridge was evaluated by the Tennessee Department of Transportation (TDOT) as part of a bridge replacement project. When the bridge was evaluated in 2008 it was less than fifty years old and determined not to possess notable architectural or historical significance. The bridge is to be demolished when the new bridge, currently under construction, is completed approximately 2000 feet downstream from the dam.

[2] Commonly, dam design includes a section that permits the overflow of water from the reservoir (the spillway) and other sections that do not allow the passage of water (non-overflow). Together, these sections contribute to the total length of the dam structure that impounds the reservoir. A gravity type dam is one constructed of concrete or stone and uses the sheer weight of the structure to resist the horizontal pressure of the water pushing against it. Gravity dams are designed in sections that are independently stable.

[3] Tennessee Valley Authority, *The Fort Loudoun Project: A Comprehensive Report on the Planning, Design, Construction, and Initial Operations of the Fort Loudoun Project, Technical Report No. 11,* (Washington, D.C.: U.S. Government Printing Office, 1949), 71, 74.

[4] Ibid., 4, 74.

3. Powerhouse, 1944 (Contributing Building)

The powerhouse is located on the right (north) bank of the river. The powerhouse superstructure is built of structural steel and concrete. It is a semi-outdoor type structure[5] with a 225-ton capacity gantry crane for its four generators (*see Photos 5*). The semi-outdoor type powerhouse has a roof level three feet above the elevation of maximum design tailwater. The control building section of the powerhouse is on the land side of the service bay and rises two stories above the upper deck of the service bay. The control building houses the machine shop, control room, visitor facilities, and various mechanical equipment. The control room and visitor facilities are located above the service bay. The service bay acts as a bulkhead dam and unloading deck serviced by the powerhouse crane. The intake, located between the service bay and the spillway dam, is integral to the powerhouse. The intake and the substructure of the powerhouse together form a monolith for resisting water loads.[6]

At the east end of the powerhouseôs control building is a five-story section; three stories are visible on the façade (north), and all five stories are visible on the rear (south) elevation. On each of the three façade levels there are three pairs of horizontal, aluminum awning windows. The roof of this section is flat, and there is a metal hand railing around the roofline. On the façade, projecting from the west end of the three-story section is the one-story visitor lobby. The entrance has five bays, with three central two-light glass and aluminum doors flanked by full-height, two-light, aluminum, fixed windows, each with a fixed single-light transom. Above the entrance is a flat canopy, and above that is lettering with the project name Fort Loudoun. Doors were originally wood, as were the letters of the project name. These features were replaced with aluminum elements in 1949. After the war, visitors were permitted into the guard tower, then used for observation.[7] The guard tower rises above the three-story section of the façade and has four walls of fixed, three-part, full-height, aluminum-frame windows and a flat roof. This feature is borrowed from the Cherokee and Douglas Hydroelectric Projects (*see Photo 6*).

The east elevation of the powerhouse has an entrance on the ground level, which is the third level of the five-story section on this elevation. The entrance is recessed and has a glass and metal door. The fourth and fifth levels on this elevation each has a large horizontal, metal, louvered vent (*see Photo 7*).

The south elevation of the powerhouseôs control building is five stories at the east end. The bottom level has an entrance with three two-light glass and metal doors. The second through fifth floors of this section each has three pairs of horizontal, aluminum awning windows. Extending to the west from the five-story section is a three-story section (*see Photo 8*). The bottom level has no fenestration. The middle level has a continuous bank of fixed, square-light aluminum windows, each with a horizontal, fixed transom above and a horizontal casement window below. The window bank has a continuous, concrete, flat canopy. The window bank and canopy wrap around to the west elevation within a projecting bay on that elevation. The top floor of the three-story sections is the visitor lobby with observation windows across the south elevation. The windows are three-light, full-height. This wall of windows is recessed across the south elevation to provide for a balcony, which has a closed, concrete rail and a flat canopy. These elements wrap around to the west elevation, with the balcony resting on the projecting bay on the floor below (*see Photo 9*).

[5] Four of TVAôs hydroelectric powerhouses (Fort Loudoun, Hiwassee, Watts Bar, and Wheeler) are of the semi-outdoor type, with the tops of the generators extending through the roofline. The units are covered with metal sheathing and are serviced by a gantry crane on the exterior of the powerhouse.
[6] Tennessee Valley Authority, *The Fort Loudoun Project*, 54, 92-93.
[7] Ibid., 111-12.

Extending from the rear (south) elevation of powerhouseôs control building section is the service bay and intake. The roof is flat and has metal hand railing around the roofline. The four generator tops are visible, protruding from the roof top. Each generator top is surrounded by a metal hand rail. On the south elevation of the service bay, there is a metal staircase (*see Photo 10*). The intake of the powerhouse consists of four blocks, each seventy feet long and sixty feet, three inches wide at the base and is stepped back to twenty-eight feet wide at the operating deck. Each intake passage divides into three passages, in order to deliver water to the turbines at a proper angle and velocity to achieve a normal maximum flow of 9,500 cubic feet per second under a head of fifty-one-and-one-half feet. Flow is diminished for greater heads to maintain the power output at the generatorôs rated capacity.[8] The twelve sluice gates on the downstream side of the powerhouse correspond with the twelve intake passages in front of the turbines (*see Photo 11*).

Visitors enter the powerhouse on the north elevation into a spacious reception room (*see Photo 12*). The entrance has a foyer with original marble drinking fountains at each end. These are recessed within a concave wall (*see Photo 13*). The foyer has an interior set of original doors that open onto a lobby with terrazzo floors and curved marble walls. On the ceiling is an original circular light fixture, a design used at other projectsô visitor lobbies. One wall has a photo mural with the words ñ1940 ï BUILT FOR THE PEOPLE OF THE UNITED STATES OF AMERICA ï 1944ò above (*see Photo 14*). A wide balcony is adjacent to the reception room. The stairwells in the control building has glazed ceramic tile walls and terrazzo floors (*see Photo 15*). One level below the visitor lobby has offices and an assembly room with a structural glass block wall (*see Photo 16*). Interior doors are solid metal with a central vertical louver vents. The restrooms retain original terrazzo floors, ceramic tile walls, and marble stall fixtures. The next level down in the control building contains the control room with equipment cabinets (*see Photo 17).* The control room of the control building is adjacent to the generator room of the powerhouse (*see Photo 18*).

The levels of the powerhouse from the bottom are: the draft tube access gallery, the pipe gallery, the generator room floor, the cable gallery floor, and the roof. The lowest level has valves connecting each unit to unwatering lines. The next level has access to the turbine pit (*see Photo 19*) and sufficient space for unobstructed runs of air, oil, water, and CO2. Each floor can be accessed from the generator room via circular staircases. The floor of the generator room is also the location of actuator cabinets and tanks, as well as low-voltage switch gear and unit control boards in the electrical bay, located on the downstream side. The generator room and downstream electrical bay are between the downstream face of the intake and a heavy reinforced concrete wall. The gantry crane that services the units spans these two walls. Initially, the facility operated with two of four 44,000-horsepower Kaplan adjustable blade, propeller-type turbines with 35,555 kilovolt-ampere generating units, at 0.9 power factor, or 32,000 kilowatts. After the installation of the third and fourth units, total generating capacity reached 128,000 kilowatts. The electrical bay extends the length of the generator room. The cable gallery caries the main generator leads as well as ventilating equipment.[9]

4. Navigational Lock, 1944 (Contributing Structure)

The U.S. Army Corps of Engineers (USACE) designed the navigational lock, which measures sixty feet in width by 360 feet in length (*see Photo 20*). The lock is located on the left (south) bank and has walls of concrete and steel. Some of the wall ends of curved. The lock raises and lowers watercraft seventy to eighty feet between reservoirs. The lock was designed to allow for future installation of a second lock, 110 feet by 600 feet, if required. The center line of the lock intersects the base line of the dam on a perpendicular angle, sixty-four-and-

[8] Ibid., 84.
[9] Ibid.,.

one-half feet downstream. The top of the chamber walls is at an elevation of 822 feet above sea level, seven feet above maximum headwater. The maximum height of the chamber walls is 130 feet. On the west end of the lock there are switchback staircases of metal descending to the lower lock walls (*see Photo 21*).[10]

Each leaf of the upper lock gate measures thirty-five feet wide by forty-one feet high. Each leaf is built of horizontal steel girders between the miter post and quoin post. The upstream side has a water-tight skin plate. Each leaf of the lower lock gates measures thirty-seven feet wide by ninety-five feet high. Each leaf is built of horizontal arched steel girders between the miter and quoin posts. The upstream side has a water-tight skin plate. The lower gate is subject to the differential load between maximum headwater and minimum tailwater[11] (*see Photo 22*).

Segmental valves control the flow of water through culverts for filling or emptying the lock. Each valve and leaf gate is operated by machinery recessed below the lock deck and controlled from panels above the deck. The machinery consists of an adjustable gate strut attached to the top of each gate leaf, a crank arm, a horizontal sector gear and pinion, two speed reducers, and a motor with brake and limit switches. The design is identical for the valve machinery.[12]

5. Lock Control Building 1, 1944 (Contributing Building)

At the east end of the lock is a small, one-story control building with a ca. 1980 hip roof of aluminum. The walls are concrete block on the lower half and fixed, metal-frame windows on top. On the east and west elevation there is a single-light glass and metal panel door. Beside the door is a sliding-track window (*see Photo 23*).

6. Lock Control Building 2, 1944 (Contributing Building)

At the west end of the lock is a small, one-story control building with a ca. 1980 hip roof of aluminum. The walls are concrete block on the lower half and fixed, metal-frame windows on top. On the east and west elevation there is a single-light glass and metal panel door. Beside the door is a sliding-track window.

7. Lock Operation Building, 1944 (Contributing Building)

This building is one-story with a second-story observation level (*see Photo 24*). The building has a flat roof and an exterior of limestone panels. On the façade (north), there is a central, recessed bay flanked by continuous banks of original, fixed, three-part horizontal windows overlooking the lock. The roof of the first floor is a balcony with a steel rail. In the center of the roof is a second-floor breezeway flanked by offices. The north elevations of the offices are chamfered and have banks of original, fixed, three-part horizontal windows overlooking the lock. The entire second story is under a flat roof. Entrances into the offices are on the inner walls of the breezeway and have single-light glass and metal doors.

The east elevation has one set of fixed, three-part horizontal windows and aluminum lettering spelling FORT LOUDOUN. The west elevation is similar and rests above a basement level that is integral to the lock. On the west elevation, this basement level has a one-bay, metal, overhead-tracking door and a solid metal pedestrian door (*see Photo 25*). The rear (south) elevation of the lock control building has horizontal, single-light windows in its one-story section and circular porthole windows in its two-story section (*see Photo 26*).

[10] Ibid., 55-56, 97,
[11] Ibid., 60-61.
[12] Ibid., 62.

The interior of the building retains original terrazzo floor and ceramic tile walls. Interior doors are original solid aluminum design with central vertical louvered vents. At the base of the stairwell to the second floor is a nautical-motif fixed circular porthole window (*see Photo27*).

8. Lock Maintenance Building, 1993 (Non-Contributing Building)

This is a one-story building of split faced concrete block construction and concrete panels in the upper portion on each elevation. The building has a flat roof of rolled asphalt material. The façade (east) has four bays, three with garage doors, and one with a pedestrian entrance, which has a solid metal door with glass walls beside and above the entrance The three garage bays have aluminum overhead-track doors. The north elevation has a bank of eight single-light windows and a recessed entrance with a solid metal door (*see Photo 28*). The south elevation is the same as the north, plus it has a garage bay with an overhead-tracking metal door.

9. Switchyard and Transmission Lines, 1944 (Contributing Structure)

The switchyard is located north of the powerhouse. It is composed of steel framework and a series of transformers resting on concrete foundations. The switchyard is rectangular in design within a chain link enclosure and has a gravel surface. It was located so as not to interfere with a future bridge on the axis of the dam[13] (*see Photo 29*). The Fort Loudoun Project was located within a triangular transmission system formed by Norris, Watts Bar, Knoxville, and Alcoa. Fort Loudoun was designed to join the system with as little switching as possible, with connection to the 154-kilovolt lines or a 110-kilovolt line concurrently operating between Lenoir City, Knoxville, and Cleveland Junction. With initial installation of Units 1 and 2, the plan adopted was connection to the latter system through a single transformer bank and three lines. Units 3 and 4 were later connected to the 154-kilovolt system through a second transformer bank.[14] The transformer bank for the first two units was rated at 13,200-115,000/161,000 volts, delta-wye, 63,000 kilovolt-amperes, self-cooled, and 84,000 kilovolt-amperes force-air cooled. The transformer bank for Units 3 and 4 were designed with the same capacity.[15]

10. Switchyard Building, ca. 2000 (Non-Contributing Building)

Within the switchyard enclosure is a ca. 2000, one-story building with aluminum siding and a low-pitched gable roof of metal. It has an original metal and single-light door on the north elevation and a concrete foundation.

11. Fishing Pier Area, ca. 1950 (Contributing Site)

Located to the southwest of the dam on the north bank of the river is the fishing pier area planned by TVA. It includes a parking area, bathhouse, and fishing pier. The hillside down to the river is stabilized with limestone riprap (*see Photo 30*).

12. Bathhouse 1, ca. 1950 (Contributing Building)

This bathhouse is located on the right (north) bank of the river, downstream of the dam. It is a one-story building of concrete block which is a standardized plan used by TVA for its recreational facilities. It has concrete walls and a saltbox roof of asphalt shingles. The façade (north) has an integral recessed entrance bay with a solid steel door on each inner wall. The gable fields have asymmetrical fixed aluminum windows (*see Photo 31)*.

[13] Ibid., 141.
[14] Ibid., 138-39.
[15] Ibid., 141.

13. Picnic Area, ca. 1950 (Contributing Site)
On north bank of the river to the northeast of the dam is an abandoned picnic area that consists of a bathhouse and original concrete picnic benches and tables. The area is hilly and has mature trees and has a concrete sidewalk through it. These facilities are currently not open to the public (*see Photo 32*).

14. Bathhouse 2, ca. 1950 (Contributing Building)
Bathhouse 2 is a one-story building of concrete block which is a standardized plan used by TVA for its recreational facilities. It has concrete walls and a saltbox roof of asphalt shingles. The façade (east) has an integral recessed entrance bay with a solid steel door in each inner wall. The gable fields have asymmetrical fixed aluminum windows. The building is closed to the public.

Maintenance Area, ca. 1955 – 3 resources

The maintenance area is located to the west of the dam and switchyard and was built with standardized plans used at other TVA facilities. The maintenance area consists of a main office building and two equipment sheds:

15. Maintenance Office Building, ca. 1955 (Contributing Building)
The maintenance office building is of concrete block construction with a side gable roof of asphalt shingles. The main (west) façade has five bays of overhead track doors of horizontal panels and a center row of three lights. At the north end of the façade is a pair of one-over-one, wood-sash windows. The main entrance is within an integral recessed porch and has single-light and aluminum double doors. Next to the porch and flush with the façade wall are four, one-over-one sash vinyl windows. The south elevation has four similar windows, and in the west half of the asymmetrical gable field there is vinyl siding. (*see Photo 33*).

16. Maintenance Equipment Shed, ca. 2010 (Non-Contributing Building) This is a ca. 2010 equipment shed with two open bays on the façade. It has corrugated metal siding, metal framing, and a metal roof (*see Photo 34*).

17. Shed, ca. 2010 (Non-Contributing Building)
This is a ca. 2010 ten-bay equipment shed, open-air in design with a back wall of concrete block. The shed roof is supported by canted posts (*see Photo 35*).

Fort Loudoun Hydroelectric Project | Loudon County, Tennessee
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8. Statement of Significance

Applicable National Register Criteria
(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- [X] A Property is associated with events that have made a significant contribution to the broad patterns of our history.
- [ ] B Property is associated with the lives of persons significant in our past.
- [X] C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- [ ] D Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations N/A
(Mark "x" in all the boxes that apply.)
Property is:

- [ ] A Owned by a religious institution or used for religious purposes.
- [ ] B removed from its original location.
- [ ] C a birthplace or grave.
- [ ] D a cemetery.
- [ ] E a reconstructed building, object, or structure.
- [ ] F a commemorative property.
- [ ] G less than 50 years old or achieving significance within the past 50 years.

Areas of Significance
(Enter categories from instructions.)
ARCHITECTURE
ENGINEERING
INDUSTRY
RECREATION
SOCIAL HISTORY
TRANSPORTATION

Period of Significance
1940-1965

Significant Dates
1940-1944

Significant Person
(Complete only if Criterion B is marked above.)
N/A

Cultural Affiliation
N/A

Architect/Builder
Architect: Tennessee Valley Authority; U.S. Army Corps of Engineers; Roland Wank; Rudolph Mock; Mario Bianculli
Builder: Tennessee Valley Authority

Statement of Significance Summary Paragraph

The Fort Loudoun Hydroelectric Project meets National Register Criteria A and C for its historical and architectural and engineering significance at the state and local levels as an integral part of the Tennessee Valley Authority Hydroelectric Project. Its period of significance is from 1940, when the project commenced, to 1965, in keeping with the fifty-year guideline. The Fort Loudoun Hydroelectric Project is significant in the improvement of navigation of the Tennessee River, expansion of energy, and improvement of quality of life through transmission of electricity, control of seasonal flooding, and creation of public recreational facilities. The Fort Loudoun Hydroelectric Project was one of twenty-five (25) dam sites constructed by the Tennessee Valley Authority (TVA) for the purpose of generating electrical power from, improving navigation of, and controlling seasonal flooding of the river system of the region. The main objective of the 1933 Tennessee Valley Authority Act was the creation of a continuously navigable nine-foot channel from the mouth of the Tennessee River to Knoxville, as well as flood control, power generation, and public benefits. The Fort Loudoun Hydroelectric Project was the last of seven main-river dam projects proposed by TVA in its 1936 report to Congress. For architecture, it is significant for its Streamlined Moderne style, embodying the TVAôs mission of progress in its economy of adornment, as well as the industry of the machine age. The projectôs significance in engineering is reflected in TVAôs overall plan for an integrated system of river management through site-specific designs tested on scaled models. The significance of the project in industry is seen through the increase of household electricity use and in war-related manufacturing, as well as increased commercial traffic on the river. The Fort Loudoun project is significant in recreation because of the extensive outdoor opportunities it fostered. It was significant in social history for its role in employment, housing, and improve of quality of life. Lastly, the project is significant in transportation for contributing to the 652-mile navigable channel of the river from Paducah to Knoxville. The Fort Loudoun Hydroelectric Project meets the registration requirements set forth in the Multiple Property Documentation Form, ñHistorical Resources of the Tennessee Valley Authority Hydroelectric Project, 1933-1979.ò

Narrative Statement of Significance

The Tennessee Valley Authority (TVA) was created under President Rooseveltôs New Deal program as part of his ñFirst One Hundred Days.ò Roosevelt envisioned ña corporation clothed with the power of government but possessed of the flexibility and initiative of a private enterprise.ò To this end, Congress passed the TVA Act on May 18, 1933.[16] The multi-purpose legislation sought to improve navigation and flood control of the Tennessee River, spur agricultural and industrial development in the Tennessee Valley, and provide for national defense via government facilities in the proximity of Muscle Shoals, Alabama (Sec. 1). The act authorized the TVA Corporation to acquire real estate for the construction of dams, reservoirs, power houses, transmission lines, or navigations projects at any point along the Tennessee River and its tributaries (Sec. 4i).[17]

The Fort Loudoun Hydroelectric Project takes its name from the historic site of Fort Loudoun, a key military garrison built in the French and Indian War (1754-1763) by the colony of South Carolina in response to French activity in the Mississippi Valley. The fort site had been abandoned for close to two centuries by the time the Fort London Hydroelectric Project was proposed in 1939. The TVA Board of Directors requested funding of the

[16] ñHistory of the Tennessee Valley Authority,ò at TVA website http://www.policyalmanac.org/economic/archive/ tva_history.shtml accessed April 16, 2015.
[17] Tennessee Valley Authority Act of 1933, at TVA website http://www.policyalmanac.org/economic/archive/tva_history.shtml, accessed April 16, 2015.

project in fiscal year 1941. The timing of initiating construction was based on the release and availability of the Hiwassee projectôs labor force following its anticipated completion. The bill recommending $1,000,000 to start the Fort Loudoun project passed both Houses of Congress and was signed by the President on April 18, 1940. TVA formally approved the project on July 3, 1940. The closure of the dam and filling of the reservoir began August 2, 1943. Of the first two generating units placed in operation, Unit 2 was placed in service November 9, 1943, followed by Unit 1 on January 15, 1944. A third and a fourth similar units were authorized and placed in service in 1948 and 1949.[18] Additionally, the original TVA plan for Fort Loudoun included a canal to connect Fort Loudon Reservoir with a future auxiliary dam and reservoir on the adjacent Little Tennessee River. This conduit directed water from the Little Tennessee into the Fort Loudoun facility, enhancing power generation, as well as flood control capacities the of Fort Loudoun hydroelectric project.

Total land costs for the project amounted to $4,364,867, which included acquisition by fee or condemnation proceedings, flowage easements, and highway relocation. Direct construction costs, such as labor, materials, equipment, transportation, totaled $26,291,093. Indirect construction costs, including accounting, timekeeping, office supplies, and police service, came to $1,314,466. Design and engineering expenditures, which included salaries and expenses of executive engineers, technicians, and inspectors, amounted to $1,993,373. These amounts plus other categorized costs brought the total project to $36,209,067.[19]

The project required relocation of 317 families from the reservoir. Of these 293 were permanent residents. Though the area was largely agricultural, just twenty-six families were farm owners, fifty-six were farm tenants, and the remainder were non-farming families. Of the 16,000 acres acquired for the project, 12,000 was cleared farmland. Chief crops included corn, hay, tobacco, and vegetables for the Knoxville market. There were also several large dairy operations, as well as cattle and hog farms. Also displaced were three schools, six churches, four stores, three mills, and one filling station.[20]

The Fort Loudoun project required the acquisition of 16,255 acres of land, a relatively low amount in proportion to the reservoir area, which was 14,600 acres. Of the total land, ninety-two percent was acquired through voluntary sale, and eight percent was condemned. The project also required the relocation of 878 graves. TVA surveyed and mapped all cemeteries within the reservoir. Mapping used a symbol system to convey data such as location, condition, and type of marker. Individual records plats were made for affected cemeteries, as well as re-interment cemeteries.[21]

After World War II the planned recreational facilities were finally completed and included a campground, picnic area and boat launch ramp along the west shore of the reservoir and east of the dam. A maintenance area was also built to provide upkeep and regular maintenance for the facility and grounds.

Since their construction the powerhouse, control building and visitor lobby have not been significantly altered and retains their original exterior and interior design and detailing. Of particular note is the intact original lobby with its marble walls, murals and terrazzo floors. The dam was altered in 1963 with the construction of the U.S. 321 (State Route 73) bridge which was attached to the top of the dam by steel support piers. This two-lane bridge was designed to connect the north and south sides of the river at this point. In 2015, a new bridge was

[18] Tennessee Valley Authority, *The Fort Loudoun Project*, 1-3.
[19] Ibid., 365, 367.
[20] Ibid., 12, 336-338.
[21] Ibid., 309, 324-325.

under construction downstream from the Fort Loudoun Hydroelectric Project and the bridge on top of the dam is proposed for demolition and removal in coming years.

SIGNIFICANCE IN ARCHITECTURE

TVAôs hydroelectric projects were designed to embody its mission for social progress. The goals and achievements of these projects - power production, navigation, flood control, malaria prevention, reforestation, and erosion control ï reached across the Valley region penetrating Americaôs social and economic strata. Architect Roland Wank impressed upon a receptive board of directors that government projects were beholden to their real stockholders, the American taxpayers, and should be open for public viewing. Further, Wank stated that the design of powerhouses should both welcome the public and convey strength in purpose. Thus, TVA powerhouses were designed as massive monoliths with visitor reception areas.[22] A prominently displayed message in every TVA powerhouse would emphasize the project as ñBuilt for the People of the United States of America.ò

The pre-World War II TVA projects exemplify the Streamline Moderne style, a late version of the Art Deco style popular during this period. Streamline Moderne was an expression of progress, a particularly important underpinning of the New Deal agenda. Stylistic elements that manifested this ideology include the use of geometric shapes, basic and pure in form, sleek and shiny materials evoking machinery and movement, and restrained décor suggesting an economical design ethic. Streamline Moderne architecture often emphasized curved forms and horizontal lines, sometime including nautical motifs.

The design of the Fort Loudoun dam, powerhouse and lock control building reflects the ñmodernismò that the TVA architects and engineers strived for in the 1930s and early 1940s. The dam was built utilizing the most advanced methods of its time, and the powerhouse was built with Streamline Moderne characteristics on both its exterior and interior. The powerhouse has sleek surfaces of marble, terrazzo, glazed tile, and aluminum handrails throughout. Original interior doors of metal have narrow rectangular, louvered insets. The generating units themselves convey the Streamline Moderne style, with their smooth-finish metal housing and perfectly cylindrical form. These elements express the streamline minimalism of the Streamline Moderne architectural style. The Fort Loudoun powerhouse retains several elements expressing the style. The generating units themselves convey the Streamline Moderne style, with their smooth-finish metal housing and perfectly cylindrical form. The powerhouse lobby also retains original water fountains that have marble basins and are set within curved recesses of the walls. Original interior doors of metal have narrow rectangular, louvered insets. These elements express the streamlined minimalism of the Streamline Moderne architectural style.

On the exterior, the powerhouseôs geometric block form is Streamline Moderne in style and expresses utilitarian simplicity (Photo 61). The dam itself embodies progress, in its engineering and its design. Its massive scale represents the immensity of the project, spatially and philosophically. The architectural design of the dam employs smooth surfaces of concrete, and its steel elements such as spillway gates, emphasize geometric forms and horizontal lines. The support structure consists of concrete piers with triangular bases. (Photo 82).

[22] North Callahan, *TVA ï Bridge Over Troubled Waters: A History of the Tennessee Valley Authority*, (Cranbury, NJ: A. S. Barnes and Co., Inc., 1980), 33; and Erwin C. Hargrove, *Prisoners of Myth: The Leadership of the Tennessee Valley Authority, 1933-1990*, (Princeton, NJ: Princeton University Press, 1994), 30-33.

The lock control building is two-stories in height and is distinguished by its large banks of aluminum windows. The second story features chamfered corners suggestive of the curved streamlined corners of the Streamline Moderne style. The buildingôs maritime theme is reflected in the round porthole window on the north elevation. The interiorôs terrazzo floors and tile walls reflect the minimalism of this style.

SIGNIFICANCE IN ENGINEERING

The Fort Loudoun Hydroelectric Project is an integral part of the overall engineering design of the TVA system. Fort Loudoun Damôs releases connect to the upper end of the Watts Bar Reservoir downstream and provide power to the Watts Bar Hydroelectric Project. Above Fort Loudoun Dam, the Fort Loudoun Reservoir extends upstream to the tailwaters of Cherokee and Douglas Dams. The releases of these last two dams provide power to the Fort Loudon Hydroelectric Project. Additionally, the Fort Loudoun powerhouse gains twenty-three megawatts of power via the diversion canal connecting the Fort Loudoun and Tellico Reservoirs.

In terms of site preparation, the Fort Loudoun project required more than the usual amount of detailed engineering investigation and planning, due to its location in the most highly developed section of the Tennessee River. More than one-third of the land tracts surveyed and mapped were less than two acres in area. Large-scale topographical maps had to be prepared for numerous areas with population concentrations, at Knoxville, Louisville, and Concord. These maps were used to determine the location of the project, plan the plant layout, and determine operating pool levels. Surveying and mapping included basic control surveys, aerial photography of 320 square miles, land ownership reconnaissance surveys on small-scale photographic mosaics and deed copying of 54,350 acres, marking and mapping contours of 368 miles, planning an mapping relocation of roads, rail lines, and utility lines, drainage surveys for malaria control, and numerous other adjustments and computations and the work progressed.[23]

All of the larger TVA hydroelectric projects, such as Fort Loudoun, were designed from investigative tests conducted on small-scale models. All model tests were conducted at a laboratory at Norris. These tests addressed erosion control, energy dissipation, and navigation conditions specific to each site. The tests for the Fort Loudoun project included studying the effects of the location of structures on navigation. Tests were also completed to study the effect of water flow from the Little Tennessee River, which joins the Tennessee River immediately below the dam, on navigation. Apron models were also studied to determine the optimum specifications of the structure in terms of energy dissipation for both erosion control and reducing disturbances on navigation below the dam.[24]

Navigation studies were conducted on a 1:130-scale model. Two different spillway designs were tested, one with twenty gates, and another with fifteen. The latter was adopted with the provision of an auxiliary dam with its own spillway across the Little Tennessee River (the Tellico Dam was completed in 1979). The locations of the spillway and powerhouse were determined based on the best foundation conditions. Numerous studies were performed to obtain satisfactory navigation conditions at the lower lock to reduce cross currents towards the left (south) bank and rapid eddies in the lock approach. At the upper lock, model barges had difficulty heading upstream to the right due to cross current. Lengthening and curving the guard wall deflected a portion of the main channel flow and created an eddy that helps direct boats leaving the lock into a slack water area.[25]

[23] Ibid., 310.
[24] Ibid., 463.
[25] Ibid., 463, 465.

The proximity of the Fort Loudoun dam to the confluence of the Little Tennessee with the main river required a series of tests on effects to navigation. The main concern was the possibility of floods on the Little Tennessee during times when discharges on the Tennessee would be reduced by storage behind the Fort Loudoun dam. Equal discharges at the two rivers created generally satisfactory navigation conditions. Model tests with greater discharge from the Little Tennessee, however, created cross currents that greatly interfered with navigation below the dam. Different combinations of various discharges and dam configurations on the Little Tennessee were tested. The best results were obtained in a model with two low spur dikes when enough water overtopped the dikes to prevent the formation of eddies behind them.[26]

SIGNIFICANCE IN INDUSTRY

At the nationôs peak of war-time activity in 1942, the TVA was in the process of building twelve hydroelectric facilities, including Fort Loudoun. Of the 12 billion kilowatt hours of energy produced among the TVA system, sixty-six per cent was devoted to the war effort. TVA's series of locks and channels created a navigable course from Knoxville to the Mississippi River, effectively boosting the economy of the region.

By the end of the World War II, TVA had completed a 650-mile navigation channel from Knoxville to the mouth of the Tennessee River. At that time, TVA was the nationôs largest electricity supplier. Yet increasing demand for electricity continued to out-pace TVAôs capacity to produce power from hydroelectric dams. TVAôs total electric production capacity during the immediate post-war period equaled 2,513,102 kilowatts (an increase of 127 percent since 1940).[27]

Cheap electricity lured new industry to the region, influencing diversification of economy in the heretofore agriculturally-based economy of the Tennessee Valley. The workforce employed in manufacturing grew from 222,000 jobs to 382,000 from 1929 to 1950. The pay rate for a manufacturing job in the region increased by 442 percent compared with the national average gain of 282 percent.[28]

Since then TVA has continued to recruit industry with attractive affordable power. Economic development is a critical component of TVA's mission. In 2013, TVA Economic Development helped attract or retain almost 52,000 jobs and generate nearly $5.0 billion in capital investment across the TVA region. In recent decades TVA has continued to recruit industry with attractive affordable power.[29] The Fort Loudoun Hydroelectric Project contributes electrical power to industries throughout the region with four generating units having a net dependable capacity (average daily power produced minus what is used by the dam itself) of 162 megawatts.[30]

SIGNIFICANCE IN RECREATION

Following World War II, as middle class American households gained wealth and electricity, a by-product was outdoor leisure time. The TVAôs contribution to recreational activities is noteworthy. The agencyôs hydroelectric projectsô reservoirs attract outdoor enthusiasts who enjoy fishing, boating, camping, and hiking in

[26] Ibid., 467.
[27] W. Bruce Wheeler, ñTennessee Valley Authority,ò at Tennessee Encyclopedia of History and Culture webpage, https://tennesseeencyclopedia.net/entry.php?rec=1362 accessed May 29, 2015.
[28] Patricia Bernard Ezzell, ñTennessee Valley Authority in Alabama (TVA),ò available at Encyclopedia of Alabama website http://www.encyclopediaofalabama.org/article/h-2380, accessed April 22, 2015.
[29] ñEconomic Development,ò at TVA webpage http://www.tva.com/econdev/index.htm accessed May 5, 2015.
[30] ñFort Loudoun Reservoir,ò at TVA webpage http://www.tva.gov/sites/fortloudon.htm accessed July 21, 2015.

the environs the TVA helped create, re-forest, and conserve. The agency operates some 100 public recreation areas throughout the TVA region.

Recreational opportunities were investigated during the planning process for the Fort Loudoun Hydroelectric Project. The natural rolling terrain, nearby Great Smoky Mountains, hundreds of miles of shoreline, and winding river course contributed to the potential for recreational development. Pollution from Knoxville industrial sites, however, hindered swimming and perhaps fishing opportunities at the time the project was completed. TVA therefore focused its planning only in the area of the immediate vicinity of the project, and plans for a visitors building there were deferred until after the war. By 1949, TVA completed overlook parking areas, picnic facilities, and a visitor reception lobby within the powerhouse. TVA recommended private development of a marina on the reservoir, as well as seven prime sites for public municipal or county parks. These included a 530-acre site at Concord in west Knox County and a 158-acre site five miles southwest of the University of Tennesseeøs Agricultural Farm near modern U.S. Highway 129. Also recommended were a community park at Louisville in Blount County and a water-front park at the base of the cliff of downtown Knoxville. By acquiring these land tracts, TVA contributed to the long-range planning goals for recreation on Fort Loudoun Reservoir.[31]

In 1933, the Tennessee General Assembly purchased the abandoned historic site of Fort Loudoun and created the Fort Loudoun Association to manage it. Reconstruction of the fort occurred under the Works Progress Administration beginning in 1935. The site was designated a National Historic Landmark in 1965. In 1977, during the halt on construction of TVAøs Tellico project, the historic site became a Tennessee State Park. Backfill from the Tellico project raised the site seventeen feet. Today the reconstructed fort and the ruins of the 1794 Tellico Blockhouse at the 1,200-acre Fort Loudoun State Park overlook TVAøs Tellico Reservoir.

SIGNIFICANCE IN SOCIAL HISTORY

During the 1930s, TVAøs Fort Loudoun project in the Tennessee Valley included improving the land and the lives of its people, devastated by the Depression. The land was over-worked, de-forested, and unproductive. In the process of the Fort Loudon project, the TVA helped create new employment opportunities and provided instruction to farmers on improving soil and developing long-term farming practices. From a social point of view, through previous projects, TVA developed protocol regarding the families displaced by its hydroelectric projects.

Due to the proximity of the Fort Loudoun project site to Lenoir City, Knoxville, and numerous smaller towns, TVA anticipated that much of the skilled and unskilled labor for the project would be derived from with commuting distance. Pressure from the growing need for national defense, however, widened the radius of available workers, requiring the construction of housing at the construction site. At the height of the war, all available housing was occupied due to the proximity of the Oak Ridge war plants. Segregated menøs dormitories and womenøs dormitories were constructed, as well as a dining hall with a 142-person seating capacity. The TVA also moved by barge twenty-seven houses from Guntersville in the fall of 1943 to accommodate power operators transferred to the project. Employment at the Fort Loudon project peaked at approximately 2,600 workers in November of 1942.[32]

[31] Ibid., 377-379.
[32] Ibid., 11, 225-226.

The TVA established a family readjustment program similar to that at its previous projects. Through this program, the TVA worked in cooperation with local, state, and federal agencies The Tennessee Agricultural Extension Service assisted families with readjustment and relocation. The Knoxville Family Welfare Bureau and the Red Cross aided families displaced from along the riverfront.[33]

The village of Louisville, with a population of 350, presented an unusual situation in that only part of the community was to be affected. Residents organized a committee to explore, with assistance from TVA and the State Planning Commission, the possibility of re-establishing the village to keep the entire community intact and contiguous. No land, however, could be secured for this purpose, and affected families relocated to meet individual needs.[34]

Lenoir City, with a population of 4,373, was located within a mile of the Fort Loudon dam site. The proximity created new problems such as an unprecedented housing demand. In response, the city created a planning commission in 1940 for immediate problem-solving and long-term planning. A land-use survey was conducted, and a zoning ordinance was adopted. An unincorporated area within five miles of the city was designated as a planning region, and a major street plan was prepared. Post-war, the commission followed through on a recreational plan for the city.[35]

Due to the Fort Loudon project, the Knoxville City Planning Commission re-evaluated its existing riverfront development plans. Meetings on the subject involved representatives from the University of Tennessee, Southern Railway, the Louisville & Nashville Railroad, and TVA. The resulting plan included a riverfront drive along with commercial and recreational development opportunities. These improvements included elimination of blight areas and the creation of a historic preserve encompassing two of the cityôs oldest buildings.[36]

SIGNIFICANCE IN TRANSPORTATION

In 1933, prior to the installation of navigational locks at hydroelectric projects, freight traffic on the Tennessee River was 35-million ton-miles (tons of freight times the distance traveled).[37] The Fort Loudoun Reservoir was opened to navigation on October 10, 1943, completing the 652-mile, nine-foot channel extending from Paducah, Kentucky to Knoxville. The first barge to travel the length of the river delivered 1,600 tons of grain to the Knoxville Public Terminal on February 14, 1944. Commercial navigation rapidly ensued. In 1948, half the petroleum products moving on the entire river were shipped to Knoxville.[38] A diversion dam constructed in the 1970s between Fort Loudoun and Tellico Reservoirs contributed water from the Little Tennessee River to the Fort Loudon facility for power production. The canal also affords circumvention of the Fort Loudoun lock by commercial barges accessing Tellico. Barges passing through the Fort Loudoun lock carry about half a million tons of cargo per year.[39]

[33] Ibid., 336-338.
[34] Ibid., 339.
[35] Ibid., 334-335.
[36] Ibid., 336-337.
[37] Tennessee Valley Authority, *The Nickajack Project: A Comprehensive Report on the Planning, Design, Construction, Initial Operations, and Costs, Technical Report No. 16*, (Washington, D.C.: U.S. Government Printing Office, 1972), 5.
[38] Tennessee Valley Authority, *The Fort Loudoun Project*, 371.
[39] Fort Loudoun Reservoir,ò at TVA webpage http://www.tva.gov/sites/fortloudon.htm.

Increased traffic volume on the Tennessee River during the 1950s led TVA to study new and larger navigational locks at its dams. TVA foresaw the economic growth of the region and its reliance on river transportation, allowing room for future installation of larger locks at several of its dams, including Fort Loudoun, Wheeler, Pickwick Landing, and Guntersville Dams. A second lock was added at Wheeler Dam in 1963, at Guntersville in 1965, and at Pickwick Landing in the late 1970s. The 1967 Nickajack Hydroelectric Project replaced the pre-TVA Hales Bar Dam and improved river navigation with the installation of two large locks, 600 and 800 feet in length. Freight traffic on the Tennessee River reached a record 3.5 billion ton-miles in 1970, a volume approximately 100 times the river traffic in 1933. Shippers using the river in 1970 saved $51.4 million in transportation costs, a figure six times the costs of operating the waterway that year. Between 1933 and 1970, total savings to shippers was $548 million, versus TVAôs $141.2 million in operational costs during the same period.[40] The improvements in the Tennessee Riverôs transportation system helped to increase volume on the river, and in 1975 the river bore an estimate 27.1 million tons of commercial freight ranging from automobiles to sand.[41]

SUMMARY

The Fort Loudoun Hydroelectric Project is one of twenty-five projects constructed by the Tennessee Valley Authority (TVA) for the purpose of generating electrical power from, improving navigation of, and controlling seasonal flooding of the river system of the region. The project brought construction jobs and later electricity to the rural area. During planning and construction, TVA provided technical assistance in local schools, municipal land use planning, road relocation and improvement, and shoreline development. While some individual families expressed a sense of loss in displacement from their homes, the Fort Loudoun Hydroelectric Project brought new opportunities and spurred economic development in the surrounding counties. The Fort Loudoun project is an important component in the vast TVA system of flood control and power generating, as well as contributing to management of river navigation.

The Fort Loudoun Hydroelectric Project retains much of its integrity from its original design in the 1940s and later improvements in following decades. The powerhouse and lock operation building have not been significantly altered and display their original Streamline Moderne design in their exterior and interior detailing. The project continues to be an integral part of the TVA system. The Fort Loudoun Hydroelectric Project meets the registration requirements set forth in the Multiple Property Documentation Form, ñHistorical Resources of the Tennessee Valley Authority Hydroelectric Project,ò and this MPDF contains additional contextual information concerning TVA and its hydroelectric system.

[40] Tennessee Valley Authority, *The Nickajack Project: A Comprehensive Report on the Planning, Design, Construction, Initial Operations, and Costs, Technical Report No. 16*, (Washington, D.C.: U.S. Government Printing Office, 1972), 5.
[41] Thomas D. Clark, ñThe Tennessee Valley Authority,ò in *The Encyclopedia of Southern History*, edited by David C. Roller and Robert W. Twyman, (Baton Rouge: Louisiana State University Press, 1979), 1206.

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Fort Loudoun Hydroelectric Project | Loudon County, Tennessee
Name of Property | County and State

Previous documentation on file (NPS):		Primary location of additional data:	
	preliminary determination of individual listing (36 CFR 67 has been requested)	**X**	State Historic Preservation Office
	previously listed in the National Register		Other State agency
	previously determined eligible by the National Register	**X**	Federal agency
	designated a National Historic Landmark		Local government
	recorded by Historic American Buildings Survey #		University
	recorded by Historic American Engineering Record #		Other
	recorded by Historic American Landscape Survey #	Name of repository: Tennessee Valley Authority Knoxville, TN	
Historic Resources Survey Number (if assigned):			

10. Geographical Data

Acreage of Property å 645 acres **USGS Quadrangle** Concord 138 SW

Latitude/Longitude Coordinates

A. Latitude: 35.800482 Longitude: -84.260997

B. Latitude: 35.800133 Longitude: -84.236133

C. Latitude: 35.775807 Longitude: -84.261708

D. Latitude: 35.775730 Longitude: -84.236840

Verbal Boundary Description

The boundary for the Fort Loudoun Hydroelectric Project is depicted as a dashed line on the accompanying US Quadrangle map and TVA site plan map. The National Register boundary is consistent with the overall Fort Loudoun reservation boundary on the north and northwest, then departs from the reservation boundary in crossing Watts Barr Lake on the west. The boundary meets again with land at a point of a peninsula jutting from the south shore of Watts Bar Lake and follows the western shoreline of this peninsula until it meets with Tellico Parkway on the south. The boundary line then follows the curve of Tellico Parkway in an easterly direction to Highway 321 on the north bank of the canal that connects Fort Loudoun Lake with Tellico Lake. From this point, the boundary continues along the shoreline to the north, then angles to the northeast into the reservoir to encompass the east end of the Fort Loudoun navigational lock, then continues to the northwest until it reaches the shoreline of the north bank of the lake. The boundary then continues to the northeast following the shoreline until it meets with the Loudoun reservation boundary on the north.

Boundary Justification

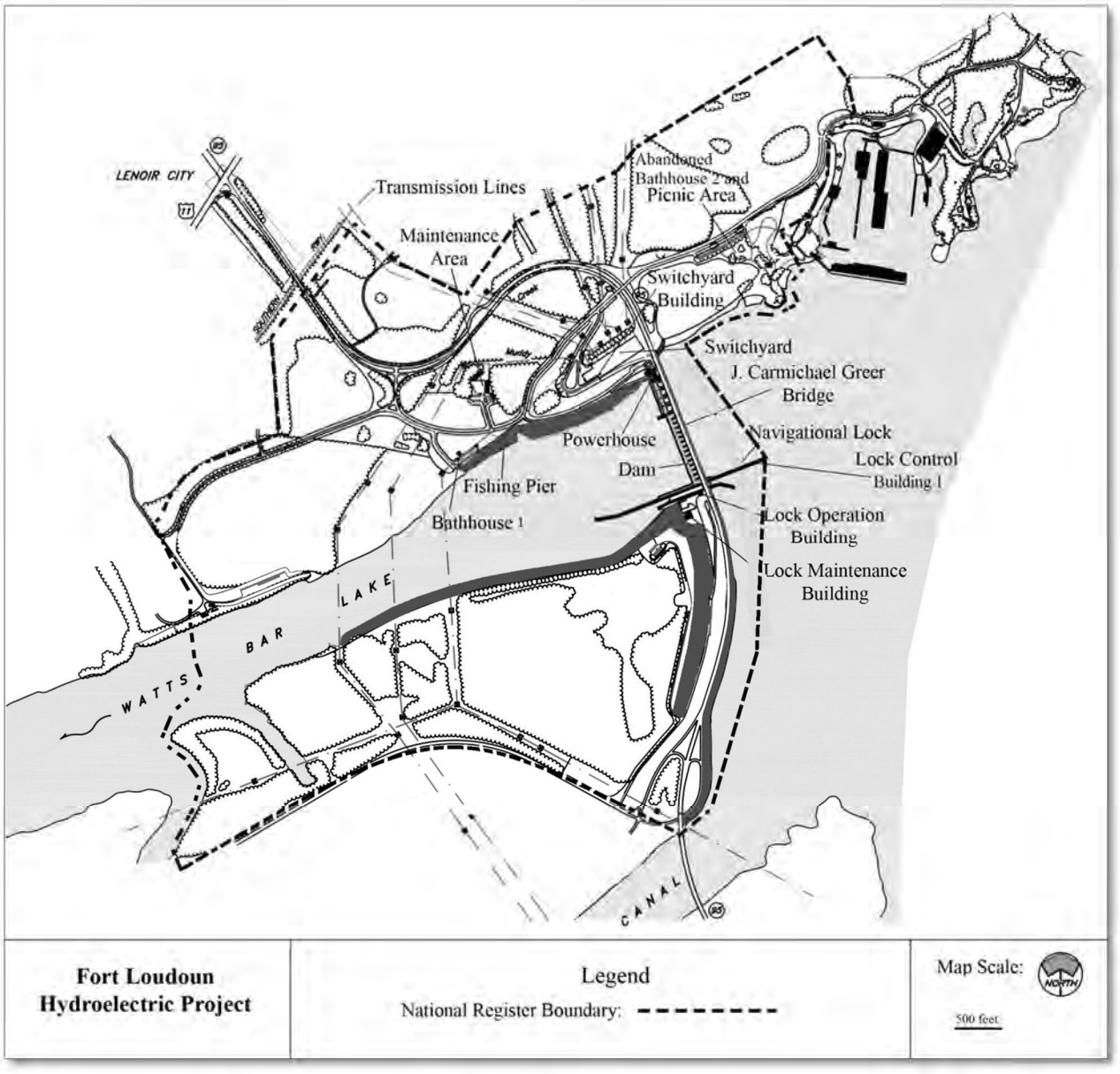
The boundary includes all facilities necessary for the operation of the hydroelectric project and/or associated with the mission of TVA of power generation, navigation, and public recreation. The boundary omits other TVA lands not directly associated with hydroelectric production.

Fort Loudoun Hydroelectric Project | Loudon County, Tennessee
Name of Property | County and State

Concord TN USGS Topographical Quadrangle depicting the National Register Boundary for Fort Loudoun Hydroelectric Project

SCALE 1:24 000

1 0.5 0 KILOMETERS 1 2
1000 500 0 METERS 1000 2000
1 0.5 0 1
MILES
1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000
FEET



Site Plan and National Register Boundary for Fort Loudoun Hydroelectric Project
(see 11 x 17" map for enlarged view)

Fort Loudoun Hydroelectric Project | Loudon County, Tennessee
Name of Property | County and State

11. Form Prepared By

Name	Andra Kowalczyk Martens; Phil Thomason				
Organization	Thomason and Associates				
Street & Number	P.O. Box 121225	Date	October 6, 2016		
City or Town	Nashville	Telephone	615-385-4960		
E-mail	Thomason@bellsouth.net	State	TN	Zip Code	37212

Additional Documentation

Submit the following items with the completed form:

- **Maps:** A **USGS map** or equivalent (7.5 or 15 minute series) indicating the property's location.
- **Sketch map** for historic districts and properties having large acreage or numerous resources. Key all photographs to map.
- **Photographs (**refer to Tennessee Historical Commission National Register *Photo Policy* for submittal of digital images and prints**)**
- **Additional items:** (additional supporting documentation including historic photographs, historic maps, etc. should be included on a Continuation Sheet following the photographic log and sketch maps)

Photographs

Photo Log

Name of Property: Fort Loudoun Hydroelectric Project
City or Vicinity: Lenoir City
County: Loudon State: TN
Photographer: Philip Thomason
Date Photographed: July 20, 2015.

Photo 1 of 35 General view of dam, view to east.

Photo 2 of 35 East side of Dam from picnic area, view to southwest.

Photo 3 of 35 Dam and bridge from locks, view to northeast.

Photo 4 of 35 Spillway crane, view to southeast.

Photo 5 of 35 Powerhouse crane, view to north.

Photo 6 of 35 Powerhouse, north elevation, view to south.

Photo 7 of 35 Powerhouse, south and east elevations, view to northwest.

Photo 8 of 35 Powerhouse, south elevation, view to north.

Photo 9 of 35 Powerhouse, west elevation, view to southeast.

Photo 10 of 35 Powerhouse, south end, view to north.

Photo 11 of 35 Powerhouse and sluice gates, view to southeast.

Photo 12 of 35 Powerhouse interior, reception room.

Photo 13 of 35 Powerhouse interior, lobby water fountain.

Photo 14 of 35 Powerhouse interior, visitor lobby.

Photo 15 of 35 Powerhouse interior, staircase.

Photo 16 of 35 Powerhouse interior, assembly room, glass block wall.

Photo 17 of 35 Powerhouse interior, Control Room.

Photo 18 of 35 Powerhouse interior, Generator Room.

Photo 19 of 35 Powerhouse interior, turbine #2 wheel pit access.

Photo 20 of 35 Interior of lock, view to southwest.

Photo 21 of 35 West side of locks, view to northeast.

Photo 22 of 35 Lock west entrance gates, open, view to south.

Photo 23 of 35 Lock control building #1 at east end of lock, view to east.

Photo 24 of 35 Lock operation building, north elevation, view to south.

Photo 25 of 35 Lock operation building, west elevation, view to east.

Photo 26 of 35 Lock operation building, south elevation, view to north.

Photo 27 of 35 Lock operation building, interior stairwell and porthole.

Photo 28 of 35 Lock maintenance building, northeast elevation, view to southwest.

Photo 29 of 35 Transmission lines at north switchyard, view to northeast.

Photo 30 of 35 Fishing area parking and ramp, view to southwest

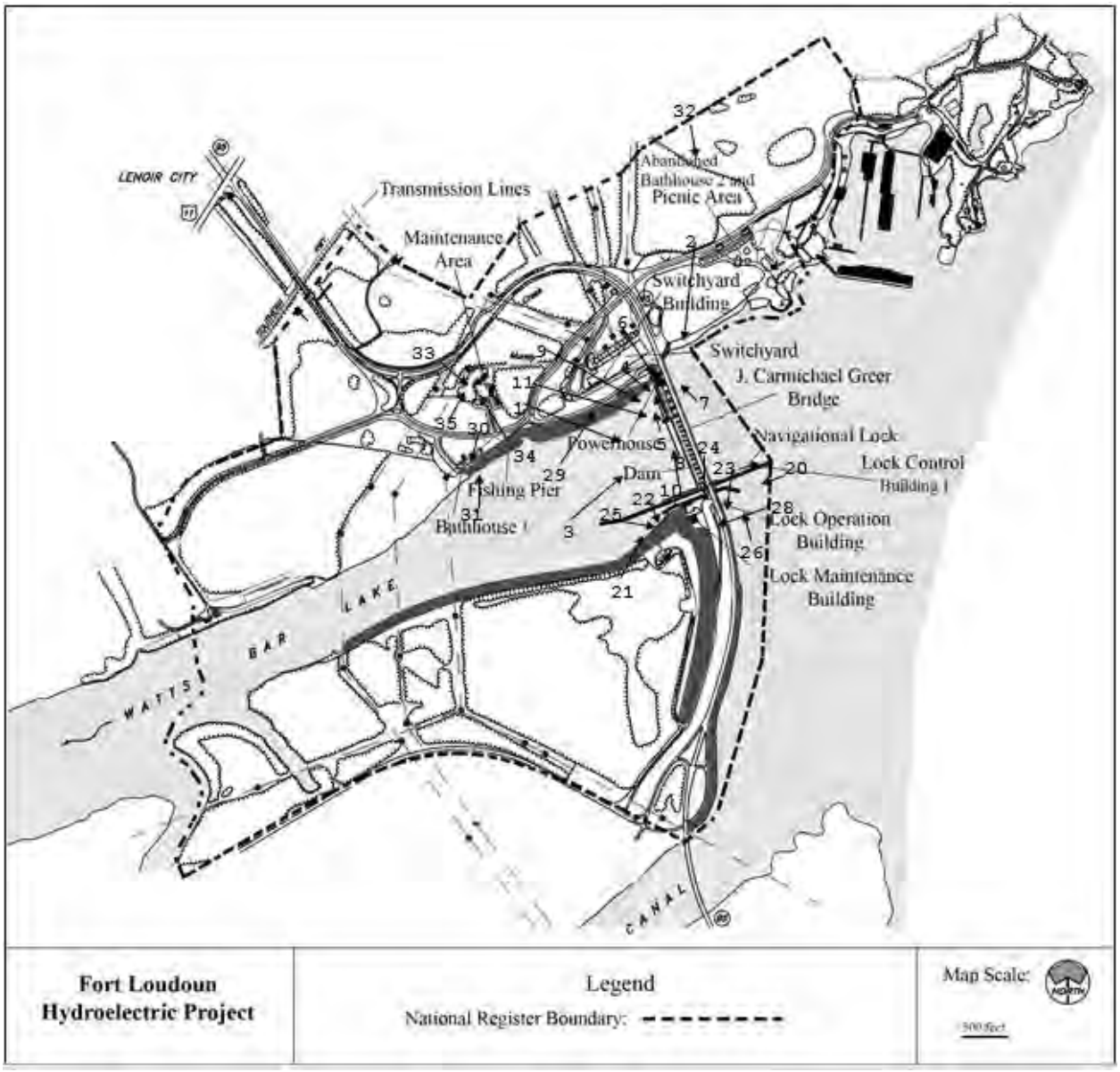
Photo 31 of 35 Bath house at fishing area, view to north.

Photo 32 of 35 Abandoned Picnic Area northeast of dam, view to south.

Photo 33 of 35 Maintenance, main building, west elevation, view to southeast.

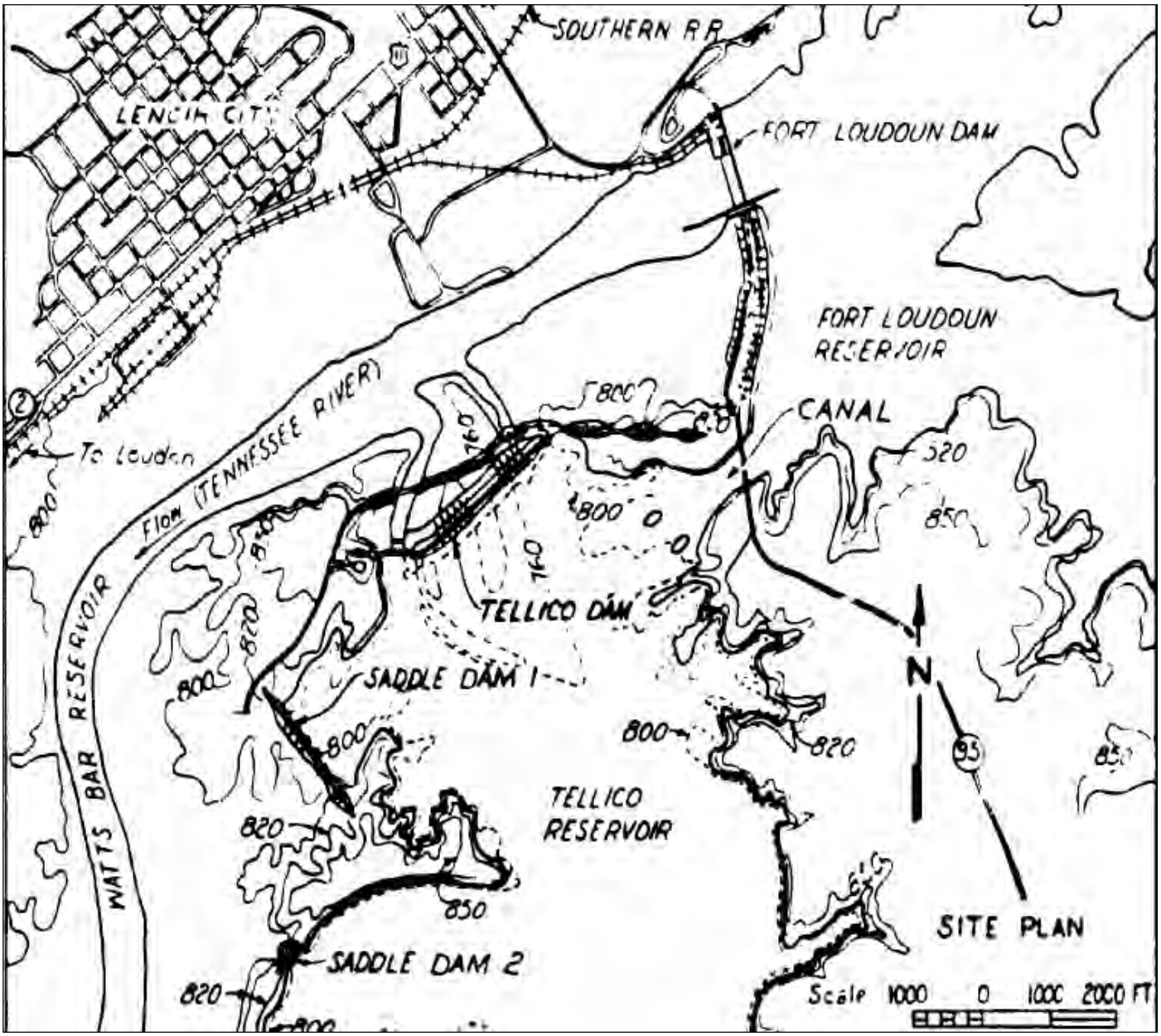
Photo 34 of 35 Maintenance, new equipment shed, view to north.

Photo 35 of 35 Maintenance, open air equipment shed, view to north.



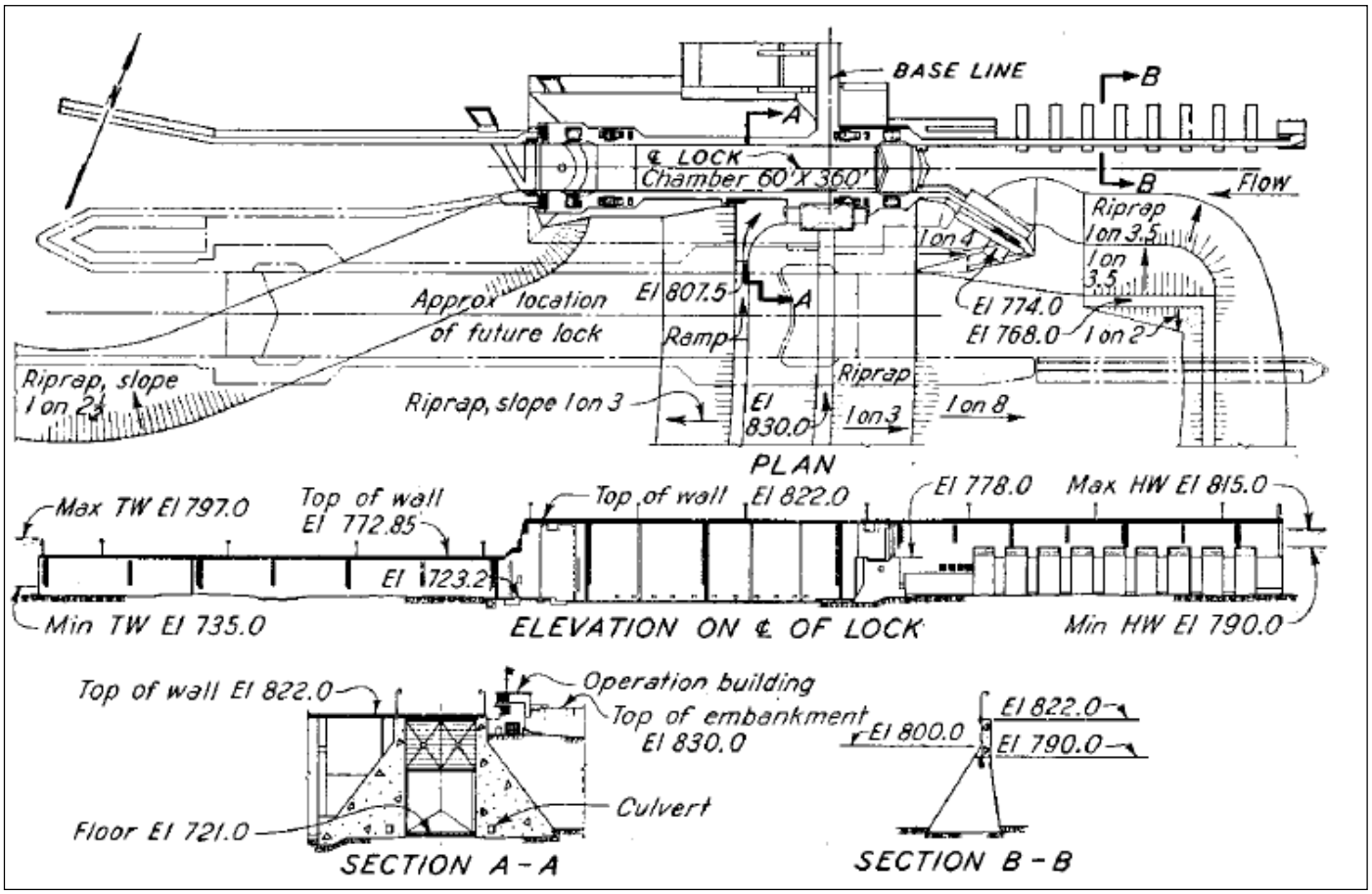
Fort Loudoun Hydroelectric Project Photo Key Map
(See 11 x 17" Photo Key Map)

Site Plan

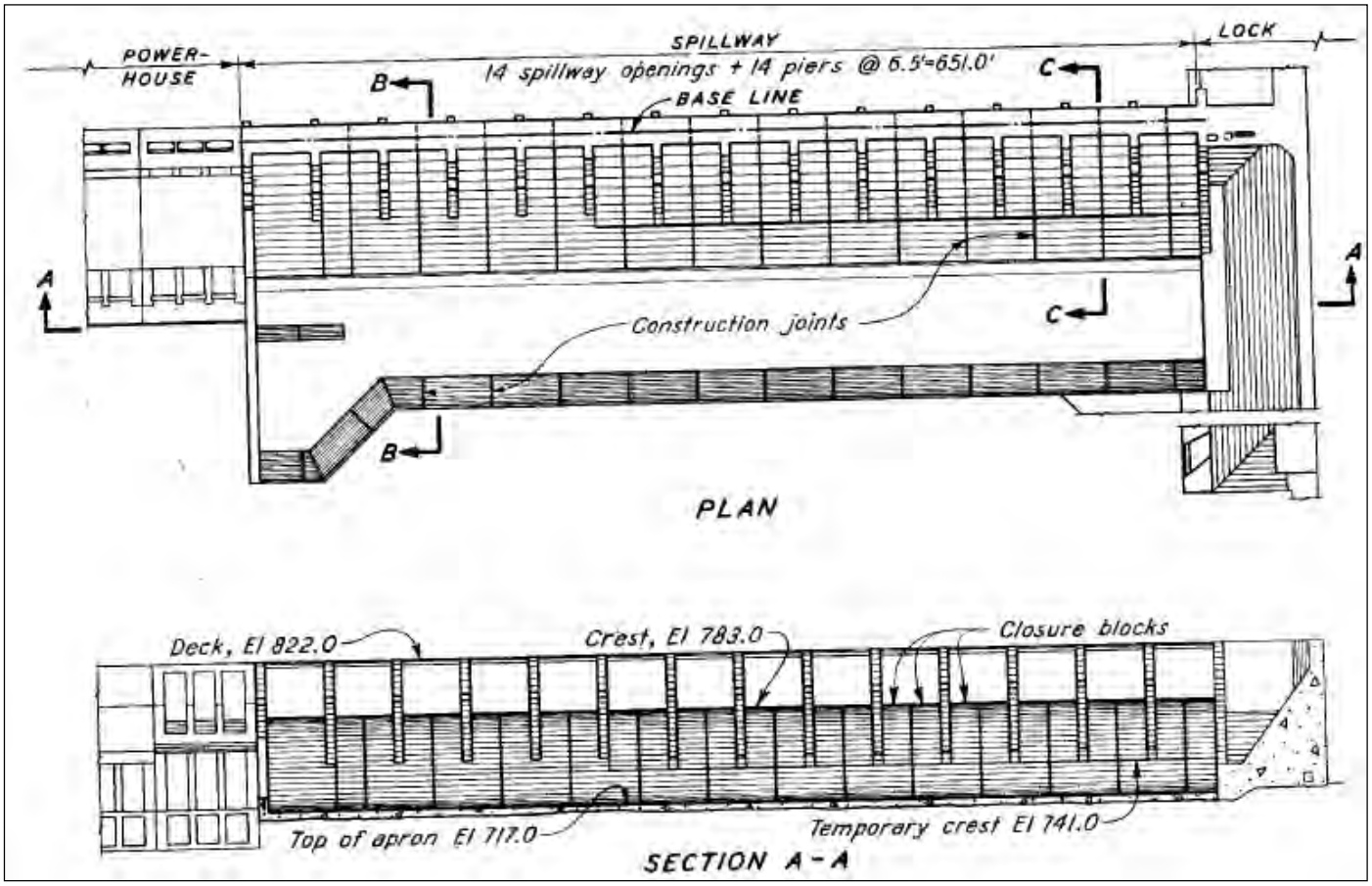


Ca 1979 Site Plan of Fort Loudoun Hydroelectric Project (image courtesy of TVA)

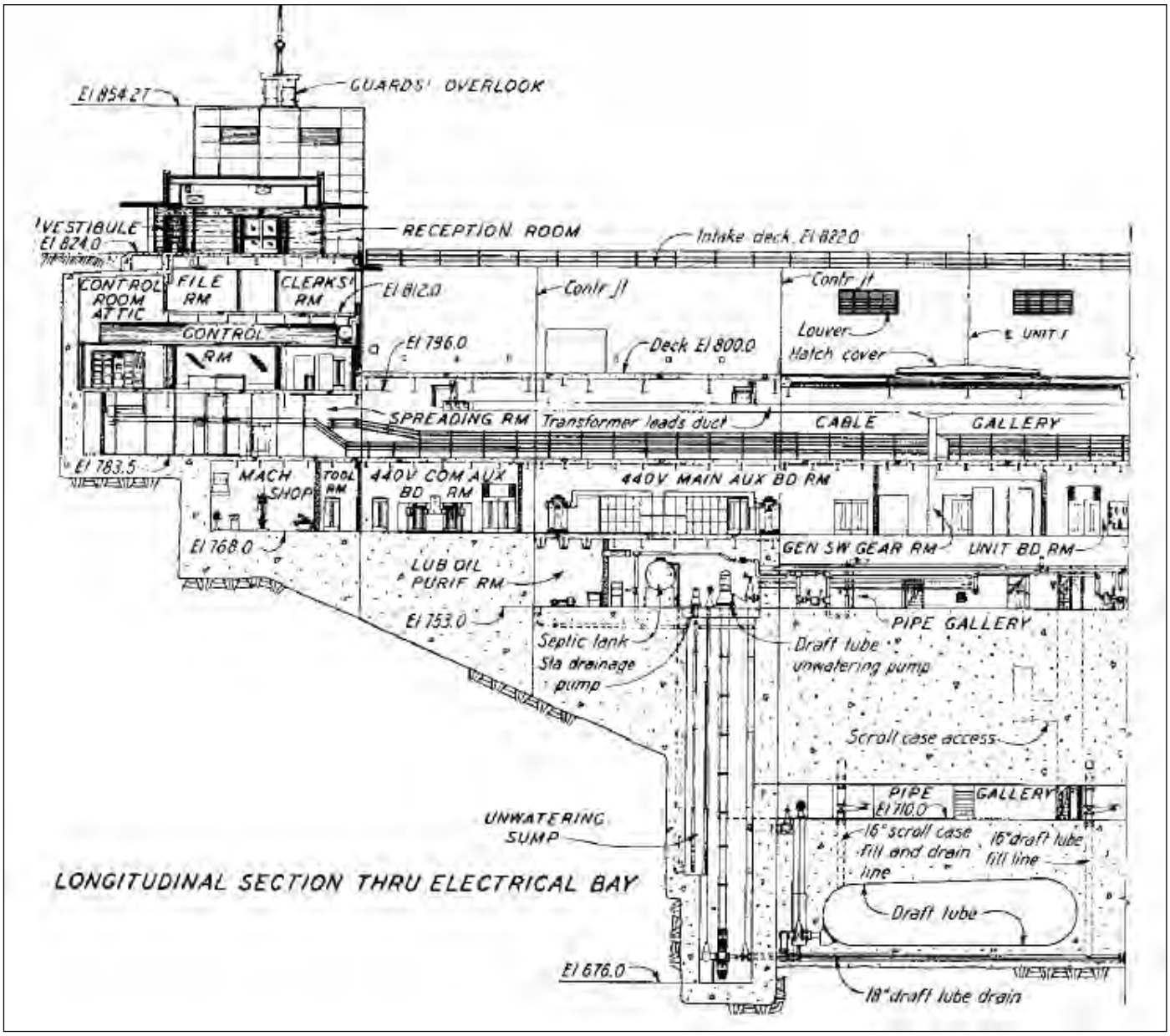
Schematics



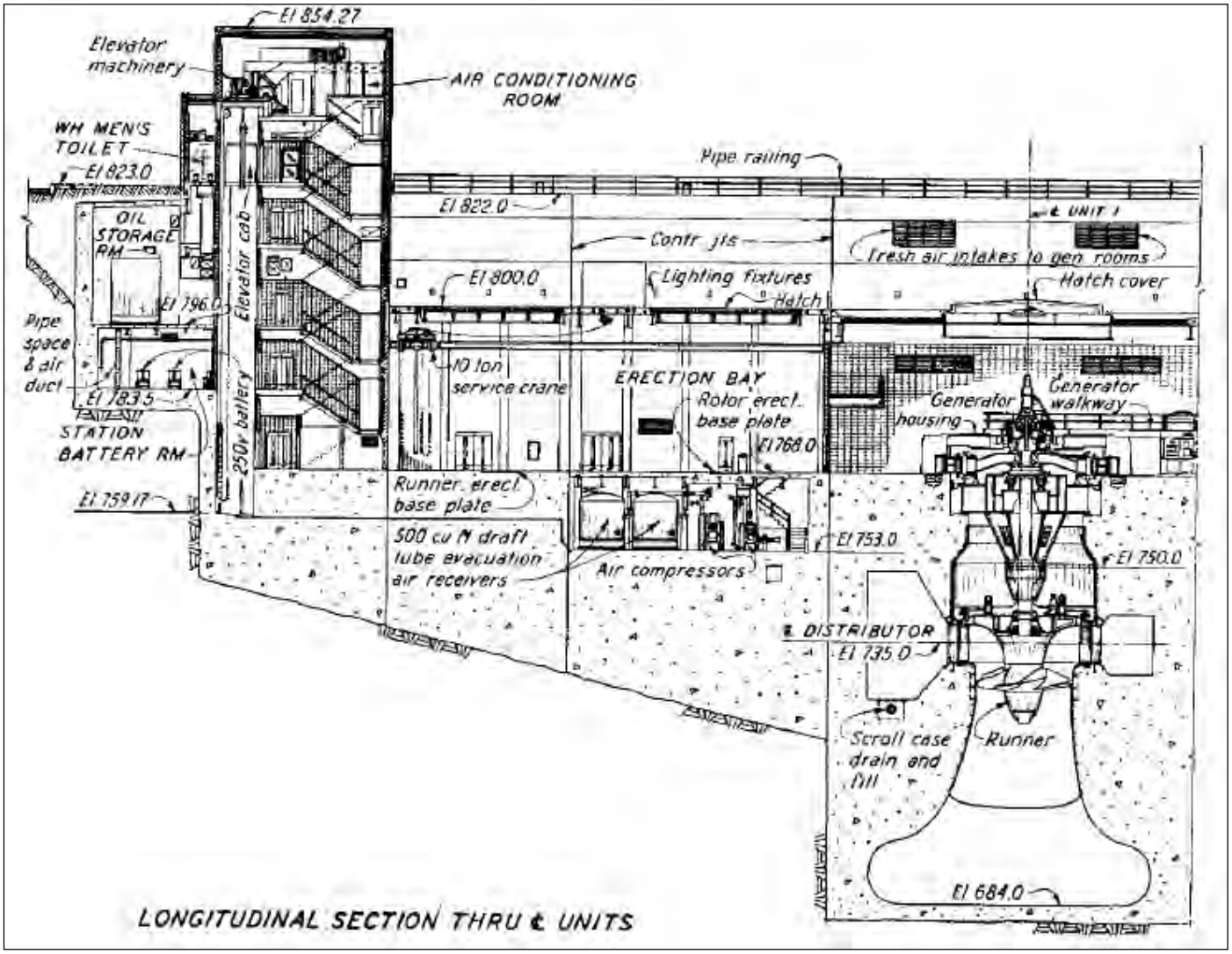
Navigational Lock, Plan Elevation, and Sections



Spillway Plan and Section



Longitudinal Section Thru Electrical bay



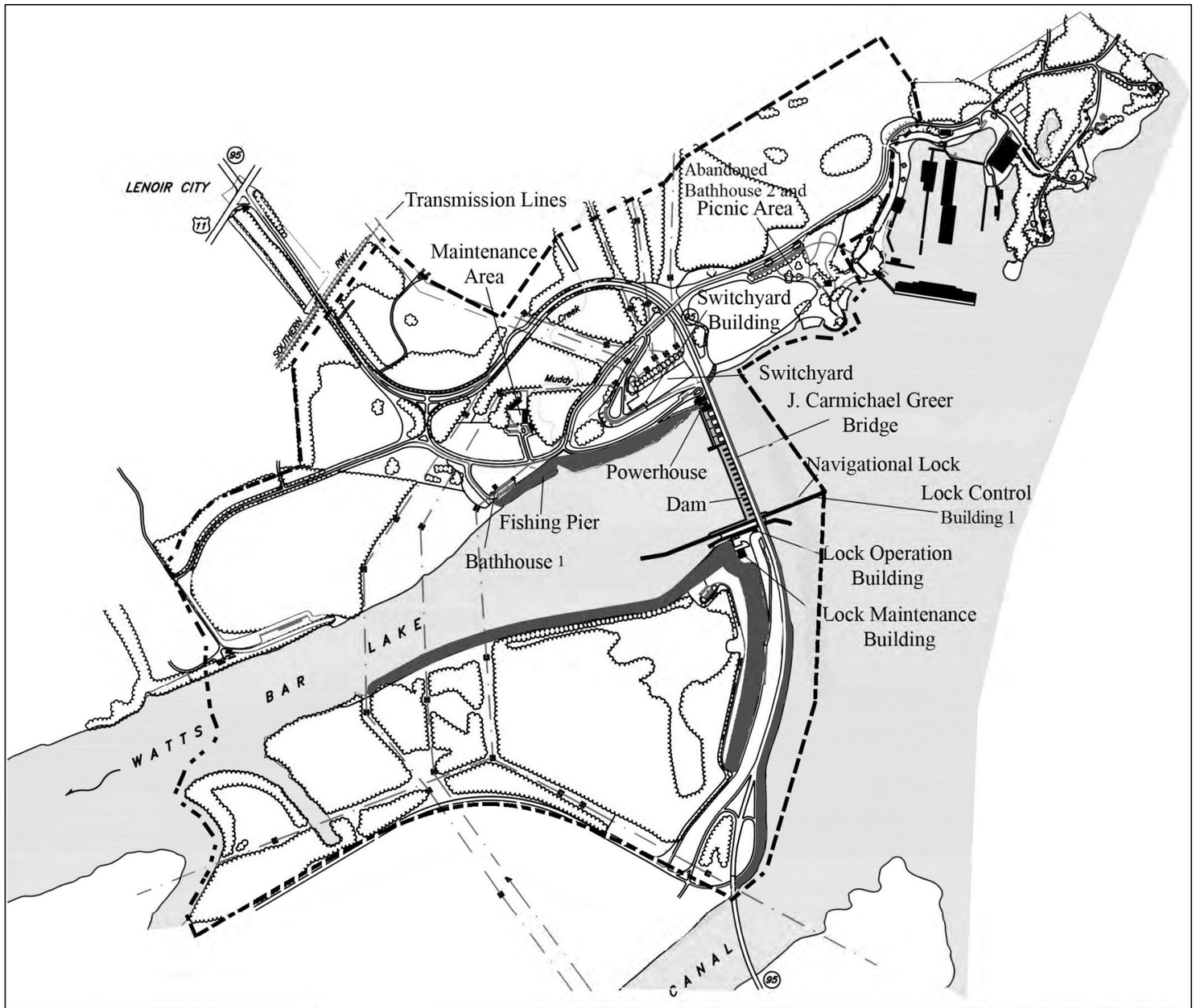
Longitudinal Section Thru Units

Property Owner:

(This information will not be submitted to the National Park Service, but will remain on file at the Tennessee Historical Commission)

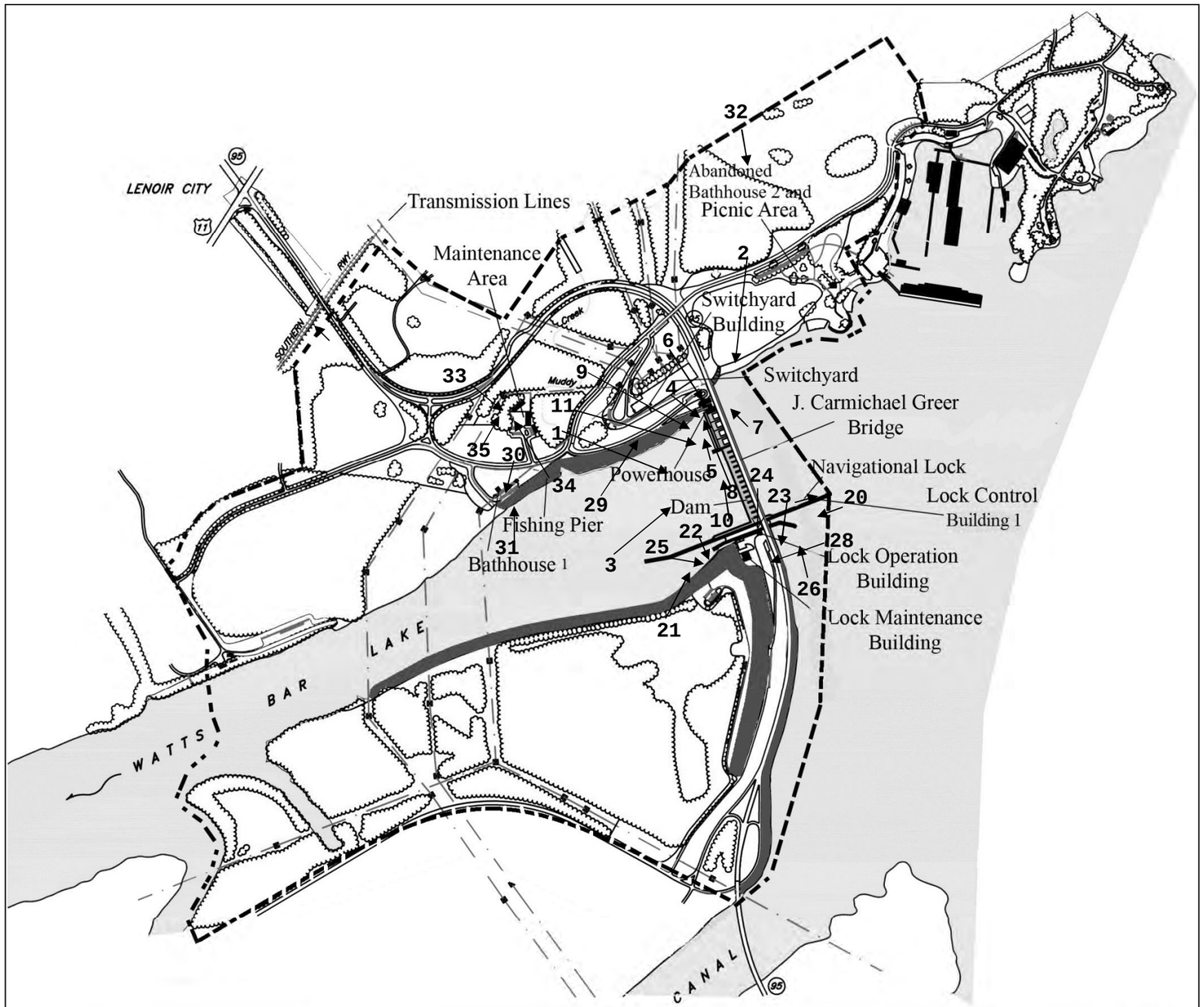
Name	Tennessee Valley Authority ï Pat Ezzell		
Street & Number	400 West Summit Hill Drive 460WT7D-K	Telephone	865-632-6461
City or Town	Knoxville	State/Zip	TN 37902

Site Plan and National Register Boundary for Fort Loudoun Hydroelectric Project



Fort Loudoun Hydroelectric Project	Legend National Register Boundary: - - - - - - - -	Map Scale: NORTH 500 feet

Photo Key Map for Fort Loudoun Hydroelectric Project



Fort Loudoun Hydroelectric Project	Legend National Register Boundary: - - - - - - -	Map Scale: NORTH 500 feet


TVA
Fort Loudoun


FORT LOU


HIGH VOLTAGE
Authorized Personnel Only


Fort Loudoun


MELTON H
ASTER PLAN


1940 BUILT FOR THE PEOPLE OF THE UNITED STATES
THE WATERWHEEL GENERATOR
FORT LOUDOUN MASTER PLAN


CAUTION


FORT LOUDOUN
DANGER
NO SMOKING
DURING LOCKAGE
OF FLAMMABLE
CARGO
Miter Sill
50
Fort Loudoun
Lock


FORT LOUDOUN


KUBOTA

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
EVALUATION/RETURN SHEET

Requested Action:	Nomination
Property Name:	Fort Loudon Hydroelectric Project
Multiple Name:	Tennessee Valley Authority Hydroelectric System, 1933-1979 MPS
State & County:	TENNESSEE, Loudon

Date Received:	Date of Pending List:	Date of 16th Day:	Date of 45th Day:	Date of Weekly List:
6/30/2017	7/27/2017	8/11/2017	8/14/2017	

Reference number:	MP100001469
Nominator:	State

Reason For Review:

__ Appeal	__ PDIL	__ Text/Data Issue
__ SHPO Request	__ Landscape	__ Photo
__ Waiver	__ National	__ Map/Boundary
__ Resubmission	__ Mobile Resource	__ Period
__ Other	__ TCP	__ Less than 50 years
	__ CLG	

__X__ Accept _____ Return _____ Reject __8/11/2017__ Date

Abstract/Summary Comments:	Meets registration requirements of MPS. Add bridge as Contributing structure and delete Industry and Recreation as areas of significance
Recommendation/ Criteria	Accept / A & C

Reviewer Jim Gabbert Discipline Historian

Telephone (202)354-2275 Date _____

DOCUMENTATION: see attached comments : No see attached SLR : **Yes**

If a nomination is returned to the nomination authority, the nomination is no longer under consideration by the National Park Service.

Thomason&Associates
preservation planners

June 21, 2017

Paul Loether
National Register of Historic Places, Keeper
Mail Stop 7228
1849 C Street NW
Washington, D. C. 20240

Dear Mr. Loether,

The Tennessee Valley Authority (TVA) contracted with Thomason and Associates, Preservation Planners to complete nominations to the National Register of Historic Places (NRHP) for twenty-five of its hydroelectric projects. Three nominations - for the Norris, Guntersville, and Wheeler Hydroelectric Projects - were previously submitted, resulting in listing in the NRHP in 2016. The TVA proposes the nomination of the remaining twenty-two hydroelectric projects. The enclosed disks contain the true and correct copies of the nominations of:

Georgia: the Nottely Hydroelectric Project;
Kentucky: the Kentucky Hydroelectric Project;
North Carolina: the Apalachia, Chatuge, Fontana, and Hiwassee Hydroelectric Projects; and
Tennessee: the Boone, Cherokee, Chickamauga, Douglas, Fort Loudoun, Fort Patrick Henry, Melton Hill, Nickajack, Normandy, Ocoee No. 3, Pickwick Landing, South Holston, Tellico, Tims Ford, Watts Bar, and Watauga Hydroelectric Projects.

The overall context for these nominations, the MPDF "Historic Resources of the Tennessee Valley Authority Hydroelectric System, 1933-1979" was approved by your office on March 12, 2016. The enclosed nominations have been reviewed by TVA as well as the respective State Review Boards and enclosed are the twenty-two physical signed copies of the signature pages of each nomination. All local governments have been notified of the intent to list these hydroelectric projects in the National Register.

We are pleased to submit these nominations to you which recognize the diverse history and contributions made by the Tennessee Valley Authority to our nation.

Please contact me if any additional information is needed.

Sincerely,

Philip Thomason
Principal

cc. Pat Ezell, Senior Program Manager, TVA

Enc/

Tennessee Valley Authority, 400 West Summit Hill Drive, Knoxville, TN 37902

August 9, 2017

Mr. Paul Loether
National Register of Historic Places, Keeper
Mail Stop 7228
1849 C Street NW
Washington, D. C. 20240

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Please contact me if any additional information is needed.

Sincerely,

Pat Bernard Ezzell

Patricia Bernard Ezzell
Federal Preservation Officer
Communications

Enclosures