NAME: Bridge Mill Power Plant
LOCATION: 25 Roosevelt Avenue
OWNER: Blackstone Valley Electric Company
P.O. Box 1111
Lincoln, RI

CONDITION: Good; altered; original site

DESCRIPTION:

The Bridge Mill Power Plant of 1893-94 is located on the western bank of the Seekonk River approximately 125 feet below Pawtucket Falls. Formerly a densely built-up industrial district just outside Pawtucket's commercial core, this neighborhood currently displays a smattering of unpretentious modern structures among the parking lots and weed-grown embankments of urban renewal. The Bridge Mill Power Plant building is the lone nineteenth-century survivor.

The Bridge Mill Plant is an electric generating station designed to be run by water and/or steam. A flat-roofed two- and three-story building constructed of red brick, the above-ground plant is composed of three major sections--gatehouse, power house, and boiler house (from north to south). The eastern, riverfront side of the building is built atop a coursed granite ashlar retaining wall. Buried behind this retaining wall is a 130-foot-long brick conduit, 17½ feet in diameter, which runs northward from the gatehouse to the contemporary brick dam above Pawtucket Falls. The walls of the three sections of the plant were originally pierced with regularly spaced, chiefly round-headed, windows; many of these have since been sandblasted, and the original brick cornices have given way to a new metal flashing.

The interior of the power plant follows the three-part arrangement suggested by its exterior form. The small, north block of the building sits atop the 17½-foot conduit from the dam and contains the gates and hoists required to control the flow of water into the power house. The central, power house section contains five pairs of 33-inch McCormick turbines in the basement, or wheel-room, level; each turbine was originally linked, via pulleys and belts, to a dynamo and a Lombard governor mounted in the engine room one floor above. When fully operational, these turbines, operating on 17 feet of head, could produce fully 1300 h.p. For back-up during dry seasons, a parallel system of belts and pulleys originally connected the dynamos to a pair of Westinghouse compound automatic engines, with cylinders of 15" and 27", and 16" strokes, which were also located in the engine room. These Westinghouse engines were provided with steam from two Heine water-tube boilers which were located in the third (southernmost) section of the

(See Continuation Sheet #145)

plant--the boiler house. The engines and boilers have all been removed but the McCormick turbines (one with a broken shaft) and the Lombard governors remain in place.

PERIOD: 1800-1899
AREAS OF SIGNIFICANCE: Architecture; Engineering
DATE: 1893-94
ARCHITECT: Stone, Carpenter & Willson

SIGNIFICANCE:

The Bridge Mill Power Plant is one of the earliest surviving electric-power generating plants in Rhode Island, with its hydraulic system and much of its original equipment intact. Architecturally, the plant is perhaps the finest nineteenth-century example of this building type remaining in Rhode Island.

In the mid-1880s, members of the Goff family of Pawtucket began buying up the various small lots and the much-divided water privileges on the western side of Pawtucket Falls. Ownership of a large chunk of property here, both land and water rights, was finally consolidated by the Goffs in 1893 and the development of the Bridge Mill Power Plant on this site was immediately begun. The electric-generating plant, however, was only one part of a much grander overall development plan. The Goffs' original intention was to build a new, 700' long street through their newly acquired property, to erect a whole range of new, commercial and light manufacturing buildings along this street, and to construct other, larger buildings for heavy manufacturing closer to the riverfront, with power for all of the myriad operations planned for these new buildings to be provided by means of electric motors driven by the Goffs' new power plant. That plant, however, appears to have been the only portion of this grand scheme to materialize. Shortly after its completion, the Goff-owned Bridge Mill Power Company which had built it, was merged into the Pawtucket Electric Lighting Company (owned by the Pawtucket Gas Company) to form the new Pawtucket Electric Company. The electricity generated by the new water-powered station was then used to augment the production of the Electric Lighting Company's older, steam-fired plant located a half-mile further south.

The hydraulic engineers for the Bridge Mill plant were Shedd & Sarle of Providence with J. Herbert Shedd as consulting engineer. Everson & Liddle of Providence built the heavy granite retaining wall and were responsible for all other masonry construction. Stone, Carpenter & Willson designed the building, while the Rodney Hunt Machine Company of Orange, Massachusetts, installed the water wheels, flumes, and power transmission systems.

(See Continuation Sheet #147)

Electricity was last generated at the Bridge Mill plant in the 1960s and the station has since been unused.

VERBAL BOUNDARY DESCRIPTION:

The nominated property is Pawtucket Assessor's Plat 53B, lot 583, and includes the power plant and its immediate surroundings.

ACREAGE: less than one
LEVEL OF SIGNIFICANCE: State
UTM: 19 302140 4638580

(See Continuation Sheet #148)