



State of New Jersey

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

NATURAL & HISTORIC RESOURCES

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MEMORANDUM

TO: Susan Michniewski, Project Review Officer
Land Use Regulation

FROM: Daniel D. Saunders, Administrator
Historic Preservation Officer

SUBJECT: Essex, Middlesex, Morris, Somerset & Union Counties, Multiple Municipalities
PSE&G North Central Reliability Project
LUR File# 0000-11-0008.1

DATE: May 3, 2012

Tue Historic Preservation Office (HPO) appreciates receiving for our review and comments *Intensive-Level Architectural Survey, North Central Reliability Project, PSE&G Services Corporation, Essex, Morris, Somerset, Union, and Middlesex Counties, New Jersey*, prepared by Richard Grubb and Associates, Inc., and dated February 2012.

Summary: (New SHPO Opinions): Twelve (12) newly identified historic properties have been evaluated in the submitted report as eligible for listing in the National Register of Historic Places: **(1) Public Service Electric and Gas Company Northern Inner Ring Transmission Line; (2) West Orange Switching Sub-Station; (3) Metuchen Switching Sub-Station; (4) Force Farmhouse, 339 Mount Pleasant Avenue, Livingston Township; (5) Phebe Beach House, 76 Beaufort Avenue, Livingston Township; (6) Squiretown Public School (Horizon School), 51 Old Road, Livingston Township; (7) Anderson Squire House, 144 Walnut Street, Livingston Township; (8) Darling-Noe-Miller House, 184 Southern Boulevard, Chatham Township; (9) Southern Boulevard School, 192 Southern Boulevard, Chatham Township; (10) S.G. Milosy Greenhouses, 1325 Terrill Road, Scotch Plains Township; (11) Sea Captain Brown's House, 1391 Raritan Road, Scotch Plains Township; (12) Mount Saint Mary Academy, 1645 Route 22 West, Watching Borough.** The project as currently described will have an **adverse effect** on three (3) historic properties, **Public Service Electric and Gas Company Northern Inner Ring Transmission Line, Littell-Lord Farmstead at 23 and 31 Horseshoe Road, and Gershom and Elizabeth Frazee House.**

Identification of Historic Properties

The North Central Reliability Project will convert and increase the capacity of an existing Public Service Electric and Gas (PSE&G) Company 138 kV transmission line and three switching sub-stations to 230kV. The project will affect sections of a 138 kV transmission line known historically as the Northern Inner Ring Transmission Line. The sections to be affected by the North Central Reliability Project operate between PSE&G Company's West Orange, Roseland, and Metuchen Switching Sub-stations,

I concur with the conclusion of the submitted report that the following twenty-one (21) previously identified historic properties are within the delineated Area of Potential Effects (APE) of the proposed project:

Llewellyn Park Historic District, New Jersey and National Registers of Historic Places (NJ&NRHP) listed
Pennsylvania-New Jersey Interconnection, SHPO Opinion of Eligibility, September 9, 2011
Roseland Switching Station, New Jersey State Historic Preservation Office (SHPO) Opinion of Eligibility, September 9, 2011
Washington Place Schoolhouse, SHPO Opinion of Eligibility, November 20, 1981
Dickinson House, SHPO Opinion of Eligibility, November 20, 1981
10 Garden Place, SHPO Opinion of Eligibility, November 20, 1981
Old Main Delaware, Lackawanna, and Western Railroad (DL&WRR), SHPO Opinion of Eligibility, April 24, 1996
Union Avenue Bridge, SHPO Opinion of Eligibility, January 20, 1999
Lafayette Avenue Bridge, SHPO Opinion of Eligibility, January 20, 1999
Passaic River Parkway, SHPO Opinion of Eligibility, March 18, 2005
Nathaniel Smith House, NJ&NRHP listed
Gladstone Branch of the DL&WRR, SHPO Opinion of Eligibility, October 20, 2010
Littell-Lord House (Farmstead), 23 and 31 Horseshoe Road, NJ&NRHP listed
Fanwood Park Historic District, NJ&NRHP listed
Fanwood Railroad Station, NJ&NRHP listed
Central Railroad of New Jersey Mainline Historic District, Determination of Eligibility (November 30, 1995) and SHPO Opinion of Eligibility (June 1, 1991)
Lampkin House, SHPO Opinion of Eligibility, April 28, 1989
Gershom and Elizabeth Frazee House, NJ&NRHP listed
Ash Brook Golf Course and Reservation, SHPO Opinion of Eligibility, March 18, 2005
Homestead Farm at Oak Ridge, NJ&NRHP listed
Lehigh Valley Railroad Historic District, SHPO Opinion of Eligibility, March 15, 2002.

I also concur with the recommendation of the submitted report that the following eleven (11) historic properties are eligible for listing in the National Register of Historic Places (NRHP). These are **new SHPO Opinions of Eligibility**.

The **Public Service Electric and Gas (PSE&G) Company Northern Inner Ring Transmission Line** is described by the submitted report as a "132,000-volt, double-circuit transmission line" that "extends for approximately 52 miles and is carried on standard square, tapered [lattice braced] steel transmission towers from the Kearny [Hudson County] Generating Station to four switching/ sub-stations at Athenia [Clifton], Roseland, West Orange, and

Metuchen." The Northern Inner Ring was constructed between 1926 and 1928 and "encircles" PSE&G's "northern service territory and the state's historically urban and industrial core." The report notes that "The Northern Inner Ring eventually formed part of the infrastructure necessary for PSE&G to function effectively and to help it implement the company's more ambitious plans for a 220,000-volt power pool known as the Pennsylvania-New Jersey Interconnection between itself, Philadelphia Electric Company (PECO), and Pennsylvania Power and Light (PP&L), completed in 1932" and cites character-defining features as the "tall narrow steel transmission towers, long straight stretches of remote right of way, widely spaced outdoor switching substations [each] with adjacent multi-story brick support building housing a control room, offices, storage space, and a tall transformer repair shop."

The justification of eligibility concludes that the Northern Inner Ring Transmission Line is "eligible for listing in the National Register at the state level under Criterion A in the area of Engineering, Industry, and Commerce and under Criterion C as a significant and distinguishable entity. The Northern Inner Ring Transmission Line established a means to back up and supplement power to the utility's internal system of generation and radial distribution networks by means of a 132,000-volt transmission line and four new switching/ sub-stations." The system "facilitated the distribution of dependable electrical energy to the state's historically urban northern industrial core, helping to meet the region's increasing demand for electricity and transforming industry in the process. In conjunction with other high-voltage transmission lines built at the same time by PSE&G and other utilities, the Northern Inner Ring Transmission Line formed the first part of the utility's comprehensive plans to integrate its entire system through 132,000-volt transmission."

The justification of eligibility also notes that the National Register of Historic Places eligible Northern Inner Ring Transmission Line continues beyond the limits of the current North Central Reliability Project and that "future surveys of other sections of the line may lead to changes in the property's period of significance and boundaries." The period of significance of the portions of the Northern Inner Ring Transmission Line that will be affected by the North Central Reliability Project is identified as from 1927, with the beginning of construction, to 1951, with changes resulting from the opening of the Sewaren generating station.

The **West Orange Switching Sub-Station** and **Metuchen Switching Sub-Station** are described as "retaining the same Art Deco styling and overall form as the [individually National Register of Historic Places eligible] Roseland Sub-station." The justification of eligibility concludes that both the West Orange and Metuchen Switching Sub-stations are eligible for inclusion in the National Register of Historic Places under Criterion A in the area of Architecture as a distinctive and well-preserved example of Industrial Art-Deco-style architecture associated with the electrical utility industry. The West Orange Sub-station includes the central brick control room and repair shop, brick gate house, and brick and cast-iron perimeter fence. The Metuchen Substation consists of the central brick building containing the control room and transformer repair shop. Both the West Orange and Metuchen Switching Sub-stations are key-contributing buildings to the PSE&G Northern Inner Ring Transmission Line.

The **Force Farmhouse, 339 Mount Pleasant Avenue, Livingston Township**, is described in the report as "a well preserved and an excellent example of Gothic Revival style architecture" and a "building that retains nearly all of its building fabric and detail." These features include "wood clapboards, wood sash windows, bracketed cornices, ornately decorated porches, and double wood central doors." The justification of eligibility concludes that, because the Force Farmhouse

"still conveys the feeling of a prosperous rural farmhouse associated with the locally well-established Force family," the building is eligible for inclusion in the National Register of Historic Places under Criterion C.

The **Phebe Beach House**, 76 Beaufort Avenue, Livingston Township, is described by the report as a "one-and-a-half story, wood-shingled vernacular frame dwelling built in three stages, beginning circa 1730" and "reported to be the oldest remaining structure in Livingston Township." The Phebe Beach House is significant as a "well preserved example of eighteenth-century residential architecture" associated with the Beach Family, "who were early settlers to the region, local landowners, farmers, and, during the eighteenth century, shoemakers." The justification of eligibility concludes that the Phebe Beach House is eligible for inclusion in the National Register of Historic Places under Criterion A and Criterion C.

Squiretown Public School (Horizon School), 51 Old Road, Livingston Township, is described by the report as eligible for inclusion in the National Register of Historic Places under Criterion C as "an excellent example of the Collegiate Gothic style retaining a high integrity of materials and design" and under Criterion A for "its historical associations with the development of public education in Livingston Township."

The **Anderson Squire House, 144 Walnut Street, Livingston Township**, is described as "an intact and well-preserved example of a multi-generational farmstead with a mid-eighteenth century vernacular central block and early nineteen century Federal style northern block." Agricultural outbuildings on the property include a barn, corncrib, and shed all "dating from the late nineteenth century to circa 1940." The Anderson Squire House is associated with the "settlement of Livingston Township and the locally well-established Squire Family." The Squire Family, "who were among the earliest settlers of western Essex County, from which the local place name Squiretown is derived,... owned and occupied the Anderson Squire House for 200 years." Because of its historical associations with the settlement of Livingston Township, the "well preserved northern block, which is an excellent example of Federal-style architecture," and the surviving outbuildings, the Anderson Squire House is eligible for inclusion in the National Register of Historic Places under Criterion A and Criterion C.

The **Darling-Noe-Miller House, 184 Southern Boulevard, Chatham Township**, associated with the early and long-term Chatham residents William Darling, Lewis Noe, and Smith M. Miller, is described as "a well preserved and intact farmhouse originally built circa 1750 and expanded through the 1830s" and "one of the oldest remaining dwellings in Chatham Township." The building is described as having an original circa 1750 two-bay section possibly built by Thomas Darling and modification and additions through the 1830s that attest to the changing lifestyle and architectural taste of subsequent owners, Lewis Noe and Smith M. Miller. The justification of eligibility concludes, because the house is associated with prominent early Chatham residents William Darling, Lewis Noe, and Samuel M. Miller and "retains most of its historic building fabric," the Darling-Noe-Miller House is eligible for inclusion in the National Register of Historic Places under Criterion A and Criterion C.

Southern Boulevard School, 192 Southern Boulevard, Chatham Township, is described as "a good example of the Colonial Revival style and retains a high integrity of materials and design" and, therefore, is eligible for inclusion in the National Register of Historic Places under Criterion C. The Southern Boulevard School is also an important building in the history of

education in Chatham Township and the justification of eligibility concludes: "For its association with the history of public education in Chatham, and as [a] representative example of early twentieth century school architecture, the Southern Boulevard School is recommended eligible under Criterion A as well."

The **S.G. Milosy Greenhouses, 1325 Terrill Road, Scotch Plains Township**, are described as a series of commercial greenhouses constructed circa 1925 with later additions and alterations dating from the 1930s. The facility includes a "two-story, brick main block on the south" and a "power plant on the north" with a work shed between them and greenhouses extending "from both sides of the work shed, with 4 large buildings on the northeast and 11 smaller greenhouses on the southwest." The power plant has "an attached, tapered cylindrical brick smokestack with the name Milosy laid in glazed brick on its west side." The significance statement concludes that, because the S.G. Milosy Greenhouses are "architecturally significant as a representative, intact example of greenhouses constructed between 1925 and 1939, primarily for the cultivation of orchids," the property is eligible for the National Register of Historic Places at the local level of significance under Criterion C.

Sea Captain Brown's House, 1391 Raritan Road, Scotch Plains Township, is described as a locally significant example of a two-thirds Georgian house with kitchen wing constructed circa 1775. Because it has retained "notable elements of the style," and "the design reflects its original appearance, and the survival of interior features including five-corner fireplaces, a cooking hearth, and wainscoting is notable," the justification of eligibility concludes that Sea Captain Brown's House is eligible for inclusion in the National Register of Historic Places under Criterion C. The survey form also notes that the house may have additional significance under Criterion A for its association with the Revolutionary War in the Scotch Plains, "in particular the hardships suffered by local residents as British and American troops passed through the area in 1777, culminating with the Battle of Short Hills."

Mount Saint Mary Academy, 1645 Route 22 West, Watching Borough, is described as "an outstanding example of a Beaux Arts style educational facility and as a representative work of William A. Boring, a noted architect and architectural educator." The base survey forms describes Mount Saint Mary Academy as an "academic campus comprised of The Mount, a three story [Beaux Arts style building with a low pitched hipped roof and right faced stone walls] building with basement constructed in 1908 and rebuilt after a fire in 1912; Gabriel Hall (1913); the Chapel of the Immaculate Conception (1955); Saint Joseph Hall (1960); and the House of Prayer (1908)." Additional buildings on the campus include McCauley Hall (circa 1965), a gymnasium (circa 1980), athletic stadium (2008), and landscaped gardens. The Mount and Gabriel Hall are located along the south face of First Watchung Mountain. William A. Boring, a prominent New York area architect, designed numerous public and private office and commercial buildings and residential estates in the New York City region, including the East Orange Municipal Building and, in partnership with Edward L. Tilton, the United States Immigration Station at Ellis Island. Boring also taught architecture at Columbia University and, in 1931, became the school's first Dean of the School of Architecture.

The justification of eligibility concludes that Mount Saint Mary Academy is eligible for inclusion in the National Register of Historic Places under Criterion C in the area of architecture because The Mount is "a representative example of a Beaux Arts style educational institution and the work of William A. Boring, a notable architect working in New York City from 1891-1915. It

is also significant for the Chapel of Immaculate Conception, which was the work of the noted mid-twentieth century architectural firm of Eggers and Higgins. "The boundary of the eligible property is described as the entire Mount Saint Mary Academy campus on the north side of Route 22 (Block 6402, Lot 5) in the Borough of Watchung.

Assessment of Adverse Effects

The document *PSE&G Senices Corporation, North Central Reliability Project, Historic Architectural Investigation Protocol and Area of Potential Effects Delineation* (hereafter *Protocol*), December 20, 2011, described the appropriate criteria for evaluating the direct and indirect effects of the project on historic properties, both listed on and eligible for listing on the National Register of Historic Places. This document, approved by the HPO in letter A2012-174, January 25, 2012, included the following criteria for a direct adverse effect:

"If the transmission line itself is evaluated as a National Register of Historic Places eligible resource and the proposed undertaking involves significant replacement or alteration of contributing infrastructure or equipment "

The proposed removal and replacement of transmission line towers, in accordance with the adverse effect criteria of the *Protocol*, will have an **adverse effect to the Northern Inner Ring Transmission Line**.

The *Protocol* also acknowledged that an adverse indirect effect would arise under the following circumstances:

"If the installation or alteration of a transmission line would significantly interfere with the public's ability to interpret and appreciate the qualities of a historic cultural facility, including impairment of the vista or view shed if experiencing the view from the site is an important part of experiencing the site."

"Anticipated project impacts will be assessed as being more likely to constitute an adverse effect on historic properties if: The resource impacted is an interpreted historic site open to the public or the resource impacted has been identified as a significant historic resource by a municipal or local historic preservation survey or plan."

Using the above criteria for determining an indirect adverse effect, the New Jersey and National Registers of Historic Places listed **Littell-Lord Farmstead at 23 and 31 Horseshoe Road** (Berkeley Heights) and **Gershon and Elizabeth Frazee House** (Scotch Plains Township) will be adversely affected by the installation of monopoles within the viewshed of these two historic properties.

Resolution of Adverse Effects

Consultation between the HPO and PSE&G has determined that the technical specifications for the North Central Reliability Project preclude consideration of any alternatives that would avoid or minimize the adverse effects by, for example, retaining and rehabilitating existing transmission towers, constructing new lattice towers in place of the proposed monopoles or relocating towers to

avoid or reduce visual adverse effects to historic properties. Consequently, the resolution of adverse effects will require mitigation as described below. The HPO requests the following as permit conditions:

1) Northern Inner Ring Transmission Line

Recordation

Prior to the commencement of any demolition activities, the National Register of Historic Places eligible Northern Inner Ring Transmission Line shall be documented according to the standards of the Historic American Engineering Records (HAER). At a minimum, the documentation will include: digital photographic recordation of the transmission line corridor, typical transmission tower types (standard suspension, dead end, and turning), construction details, and important alterations completed during the resource's period of significance. Photographs of the switching substations at Athenia, Roseland, West Orange, and Metuchen should be included as a means of contextualizing the transmission line in relation to its connections with the wider electrical system. The recordation shall include an historic context element that documents the reasons for the construction of the Northern Inner Ring Transmission Line; the technology and engineering used in its development; and the role the Northern Inner Ring Transmission Line played in the growth of PSE&G and industrial New Jersey. To the extent practical and within the constraints imposed by current security considerations, the recordation effort should seek out and duplicate selected historic photographs, drawings, plans, or other primary source records pertaining to the line.

Preparation of New Jersey Intrastate Transmission Line National Register of Historic Places Assessment Guidelines

An additional mitigation effort shall involve the preparation of a document that will serve to provide context and guidelines for future National Register of Historic Places evaluations of elements of New Jersey's pre-1946 intrastate electrical transmission grid. The overarching purpose of this work will be to establish a framework for differentiating between truly historic and technologically significant resources and those that are extensively modified and less historically noteworthy. Focusing primarily on the technological contributions of the transmission line network, the document will recommend methods for establishing character-defining features, contributing / non-contributing elements, periods of significance, and resource boundaries. The impacts of typical past upgrade modifications to towers and other infrastructure will be considered as part of the process of developing a protocol for the assessment of overall transmission line historic integrity. This work will focus on infrastructure constructed for the purpose of the bulk transmission of electrical power over distances rather than for the distribution of power to individual consumers. With this in mind, only transmission line infrastructure with an original capacity of 13 kV or higher will be considered. The 13kV minimum takes into account the earliest long-distance transmission lines, which were built beginning in the first decade of the twentieth century as part of an industry-wide move towards consolidation, interconnection, and new central plant construction, and which marked the beginning of large-scale long distance transmission. A digital map of major

intrastate public utility constructed transmission lines constructed in New Jersey prior to 1946 will be provided as part of this effort.

2) Littell-Lord House (Farmstead)

The permittee shall donate the sum of \$32,500 to the Township of Berkeley Heights (Union County), the owner of the Littell-Lord House (23 and 31 Horseshoe Road), to enhance the pastoral quality of this previously agricultural historic property through the preparation of a landscape plan.

3) Frazee House

The permittee shall donate the sum of \$32,500 to the Rotary Club of Fanwood-Scotch Plains, the owner of the Gershom and Elizabeth Frazee House, to fund further stabilization of this historic house in accordance with the existing Gershom and Elizabeth Frazee House Preservation Plan.

The results of Phase I/II archaeological survey and project adverse effects on archaeological site 28-Un-52 was addressed under a separate letter dated March 12, 2012 (HPO-C2012-99 PROD). Upon HPO approval of the archaeological mitigation and site avoidance plan, site mitigation work on archaeological site 28-Un-52 may commence.

Additional Comments

If you need any further assistance, please contact Charles Scott at (609) 633-2396 or Charles.Scott@dep.state.nj.us for above-ground architectural and engineering resources or Vincent Maresca at (609) 633-2395 or Vinny.Maresca@dep.state.nj.us for archaeological resources..

C: Mr. Raymond Tripodi, PSE&G
Ms. Jennifer Leynes, Richard Grubb and Associates, Inc.

11-1547-S PSE&G North Central Reliability Project