

Narragansett Electric Company d/b/a National Grid

Southern Rhode Island Transmission
Project

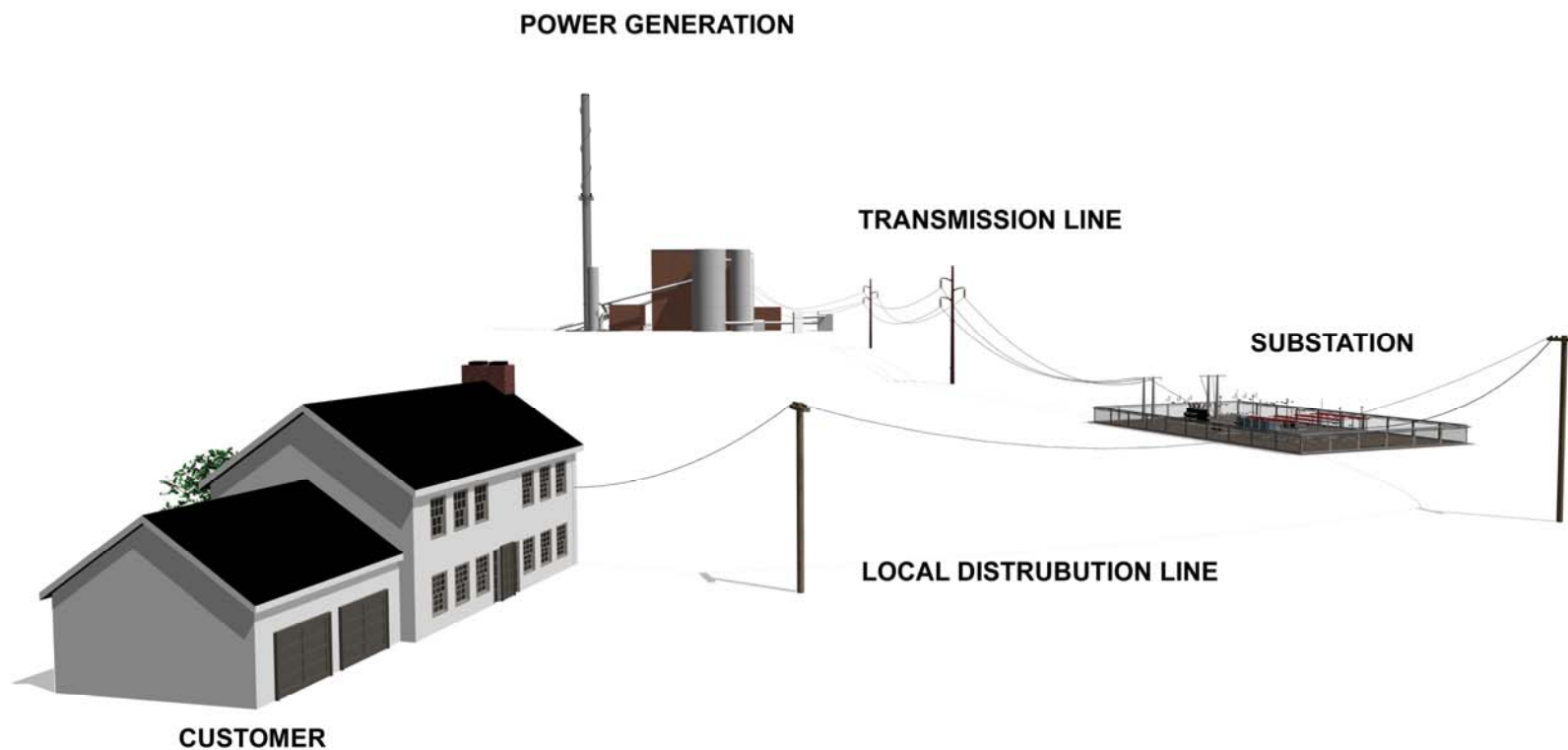
Permitting Process

- ◆ RI Energy Facility Siting Board
 - ◆ Application filed November 2005
 - ◆ Preliminary hearing
 - ◆ Local hearings
 - ◆ Seeking advisory opinions from local boards and state agencies
- ◆ NK Zoning Board of Review
 - ◆ Criteria for Special Use Permit
 - ◆ Criteria for Use Variance
- ◆ NK Planning Commission
 - ◆ Criteria for Development Plan Review
- ◆ Other local boards/departments
- ◆ Advisory opinions due to be sent by September 5, 2006 to RI EFSB

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The electric system that serves you



EDR
Prepared by Environmental Design and Research

nationalgrid

Proposed Projects

The Southern Rhode Island Transmission Reinforcement Project consists of multiple components

Transmission Line Reconductoring

Replacement of existing wires and some poles with new wires that can carry more electricity

New Transmission Lines in Existing Right of Way

This is a new circuit on new poles placed adjacent to the existing transmission line

Distribution Substations

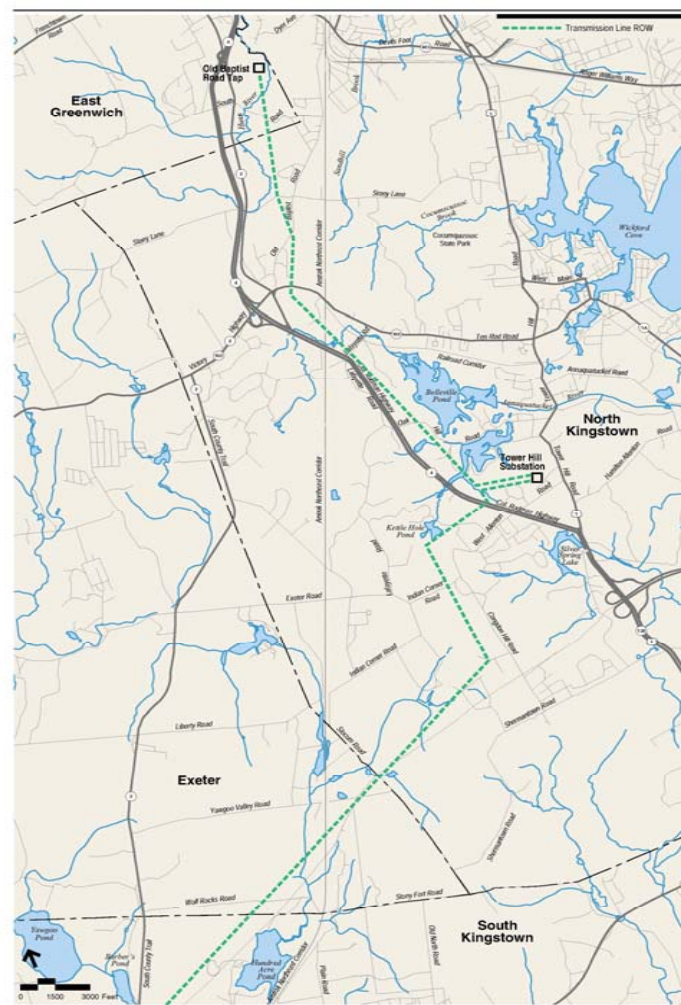
A new substation to serve increased electric demand in the North Kingstown area.

Modifications to an existing substation in South Kingstown to accommodate the proposed transmission line.



Work in North Kingstown

- ◆ Addition of 6.8 miles of new 115 kV transmission line in an existing right of way
- ◆ New distribution substation on 13 acre site off Tower Hill Road
- ◆ New 0.5 mile 115 kV tap lines from transmission line right of way to proposed substation

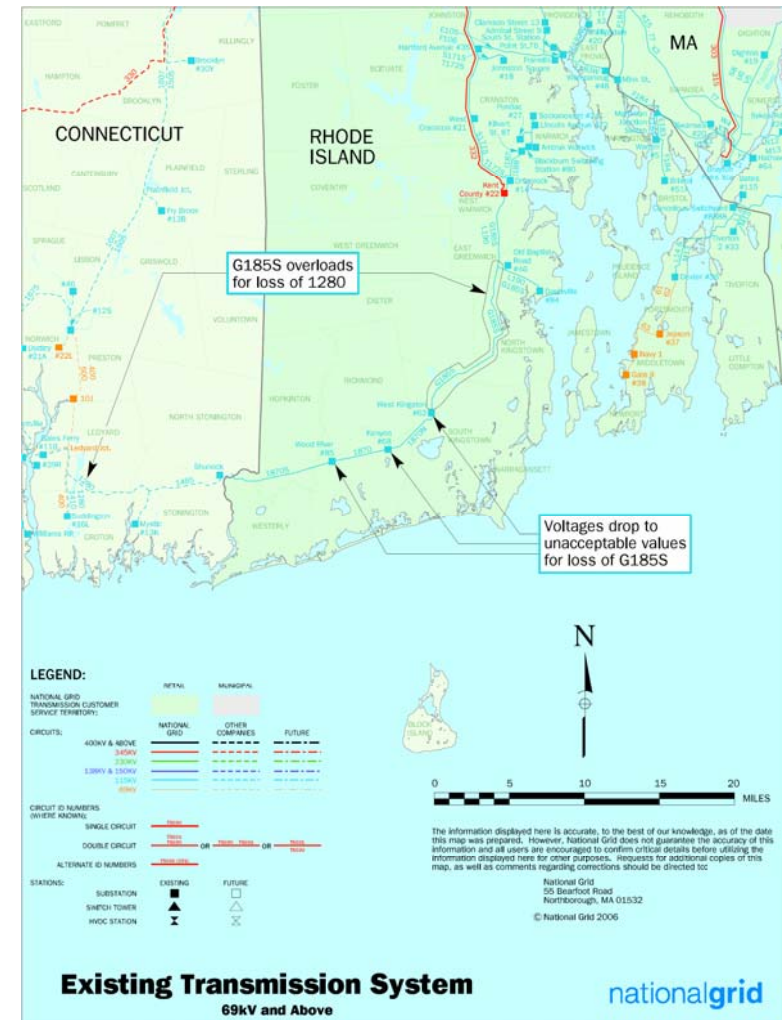


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Why the Transmission Projects are Needed

- ◆ The existing Transmission System is at risk for potential,
 - ◆ Low voltages which can cause lights to dim, motors to malfunction and possible equipment damage
 - ◆ Excessive loading which can cause potential safety hazards with sagging wires
- ◆ The peak demand for electricity has grown 21% in the past 6 years. It is expected to grow another 19% over the next 6 years
- ◆ During extreme hot weather, customers may experience service interruptions and rolling blackouts



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Why the Tower Hill Substation is Needed

North Kingstown customers are presently supplied from several area substations. These substations are at or near full capability during hot summer conditions. If left unaddressed,

- ◆ Customers could experience **longer outages** when there are system problems such as a car hitting a pole or during thunderstorms
- ◆ There could be **power shortages** (customer outages) during peak electric use periods
- ◆ It becomes increasingly **difficult to provide service** to new customers and the expanding requirements of existing customers

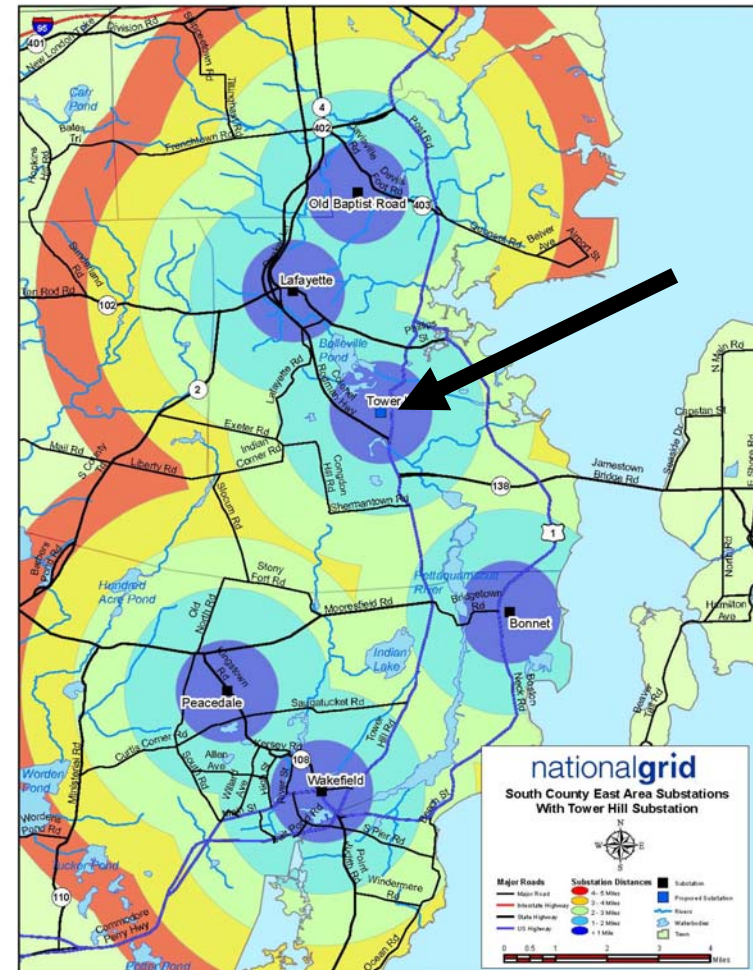
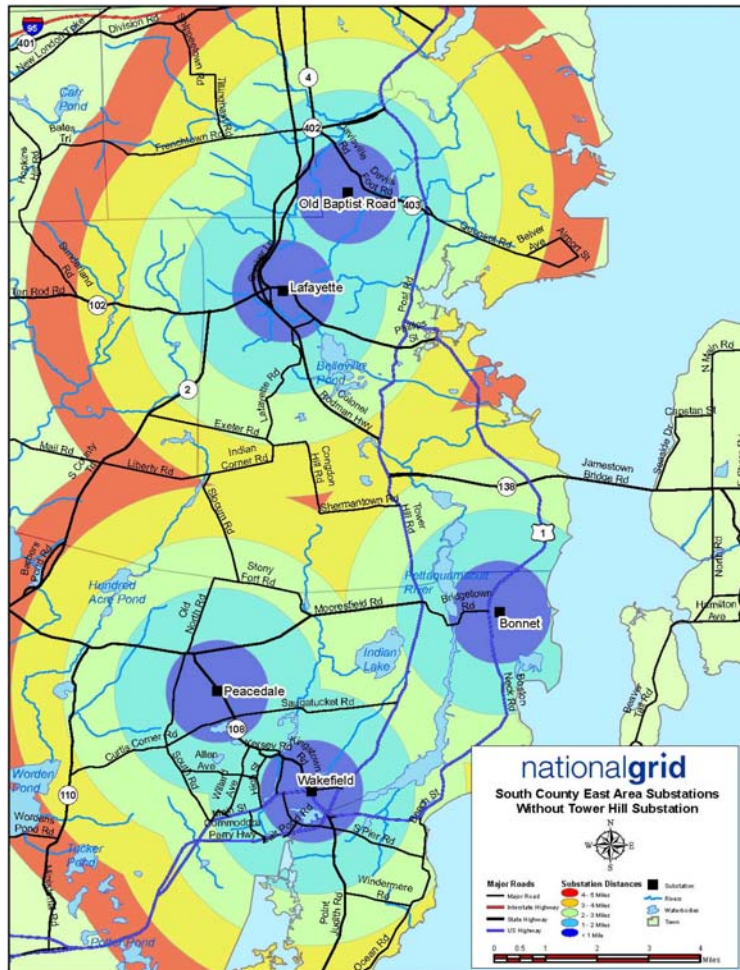
Why the Tower Hill Substation is Needed

- ◆ Customers could experience **increasing difficulty with their appliances** such as:
 - ◆ Personal computer problems
 - ◆ Air conditioners that will not start
 - ◆ Appliance failures
 - ◆ Flickering and/or dimming lights

The Tower Hill Substation will be a new power supply point located where it is needed to resolve these problems.

Existing Substations

With Tower Hill



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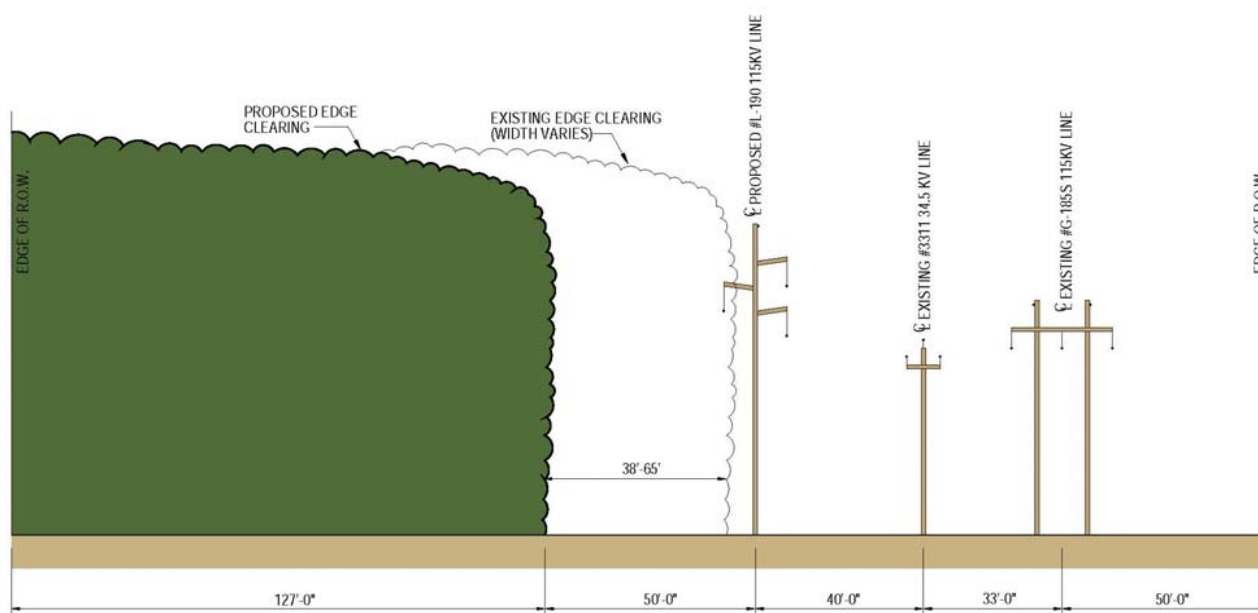
New Transmission Lines in North Kingstown

- ◆ 3.8 miles in existing 300 foot wide ROW north of Route 4
- ◆ 3.0 miles of new line in existing 200 foot wide ROW south of Route 4
- ◆ Proposed tap lines 0.5 miles in length
- ◆ New poles will be single shaft made of brown colored steel
- ◆ Pole locations will be approximately adjacent to existing line structures
- ◆ 101 new pole structures over 7.3 miles
- ◆ Heights vary from 35 feet to 90.5 feet

New Transmission Lines in North Kingstown

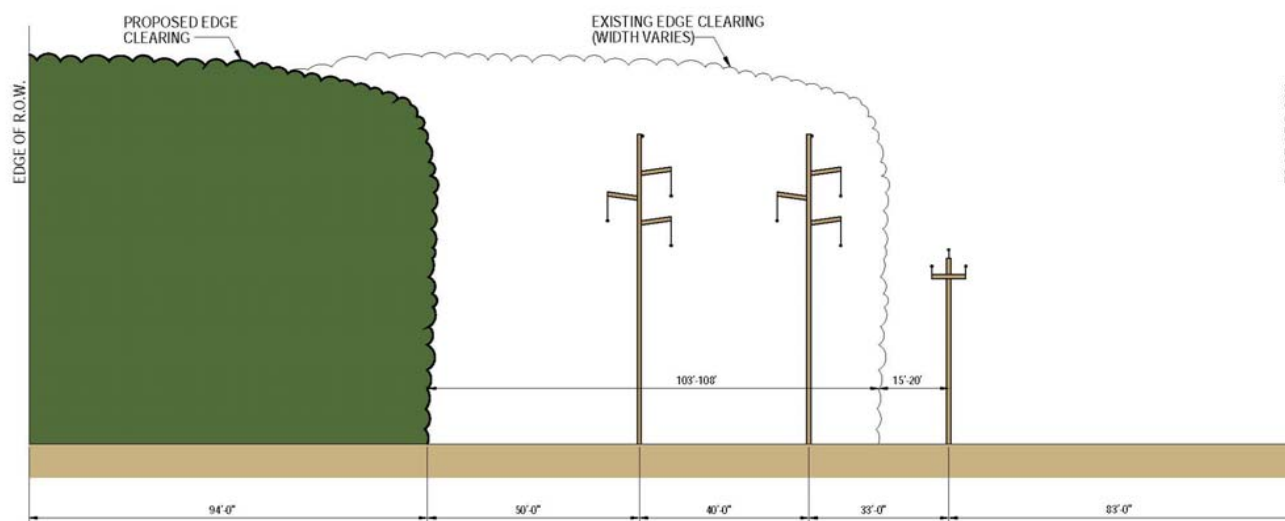
- ◆ **Tree clearing will be required in some areas**
- ◆ **Property owned and used by Narragansett since the 1960's**
- ◆ **New Poles will be single shaft made of brown colored steel**
- ◆ **Existing 34 kV sub-transmission line will remain**

What Will the New Line Look Like?



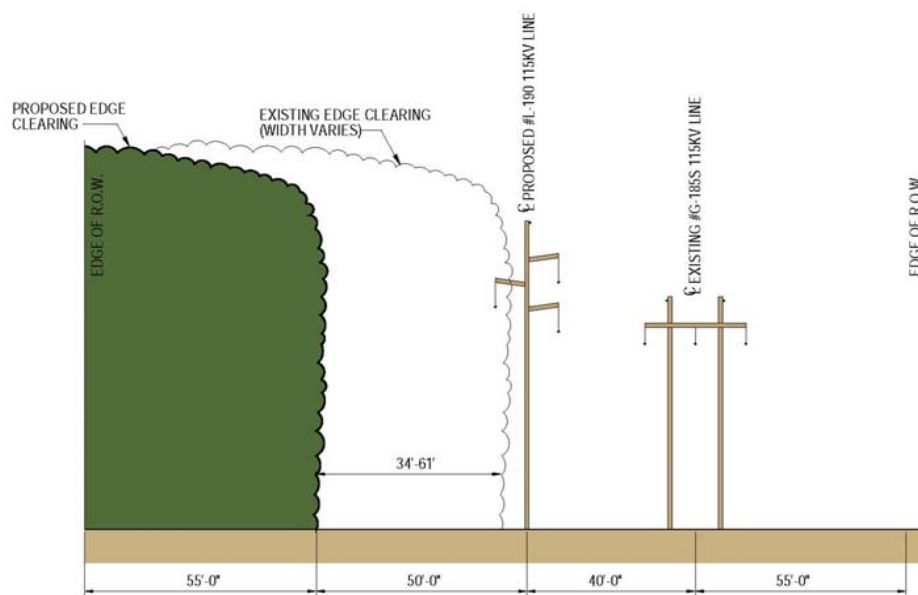
Old Baptist Road to Tower Hill Tap point – view facing north

What Will the New Line Look Like?



Tower Hill Tap lines with existing 34kV line – view facing west

What Will the New Line Look Like?

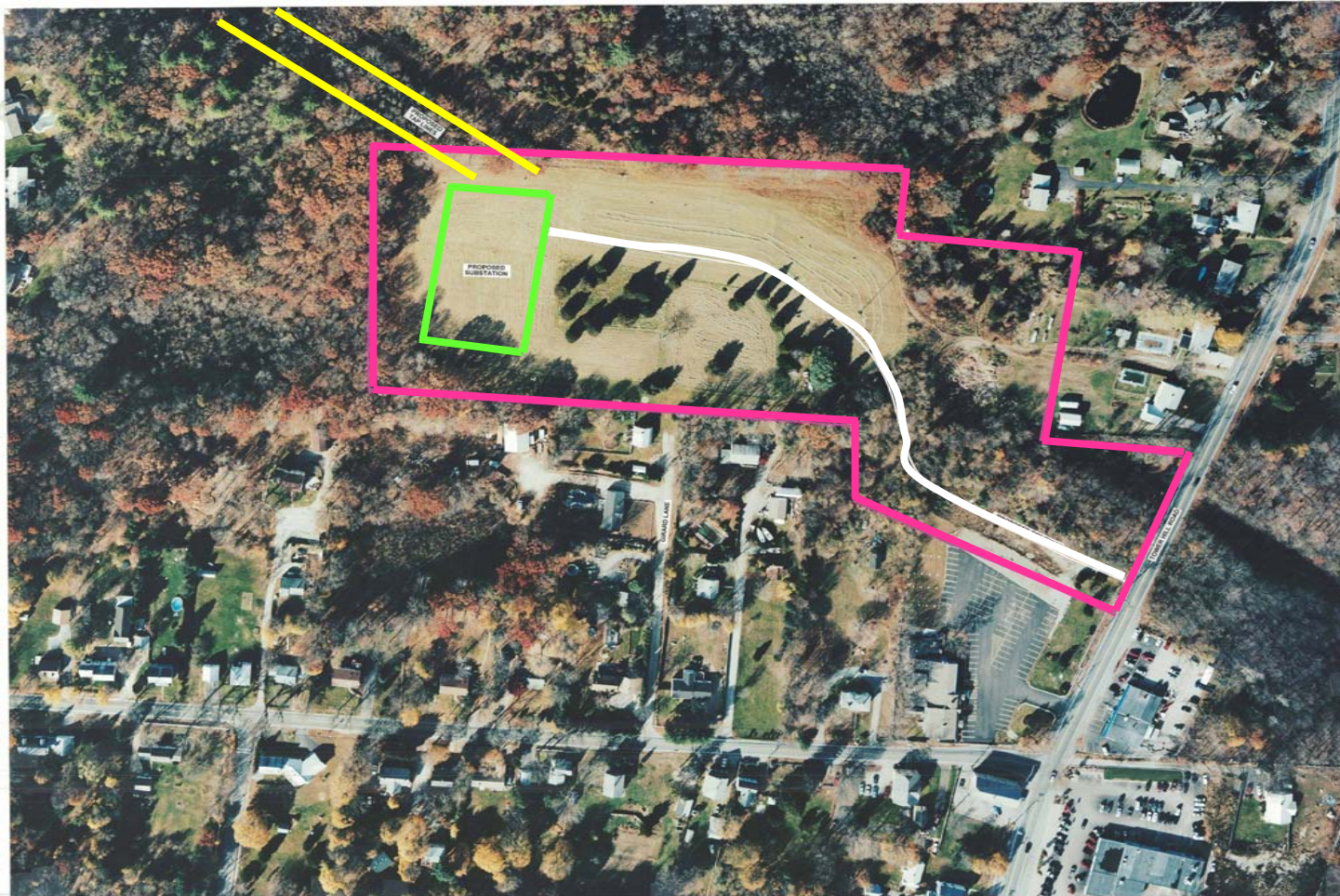


Tower Hill Tap point to W. Kingston Substation – view facing north

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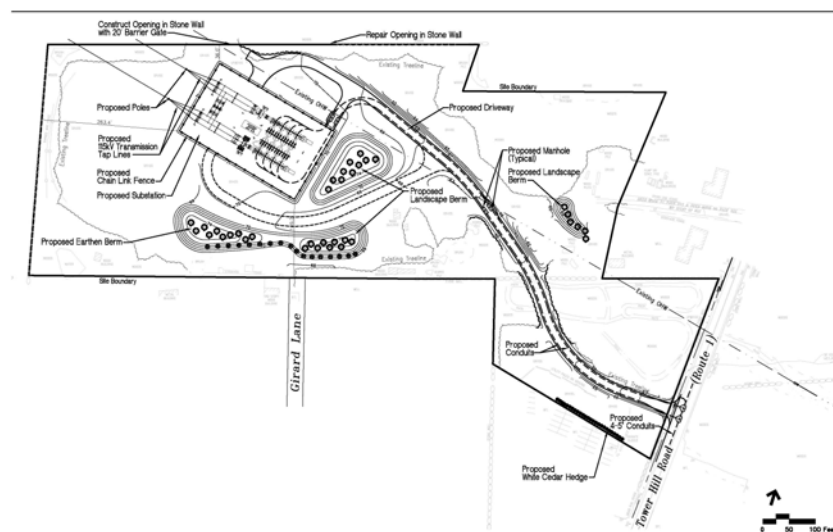
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Proposed Tower Hill Substation Site

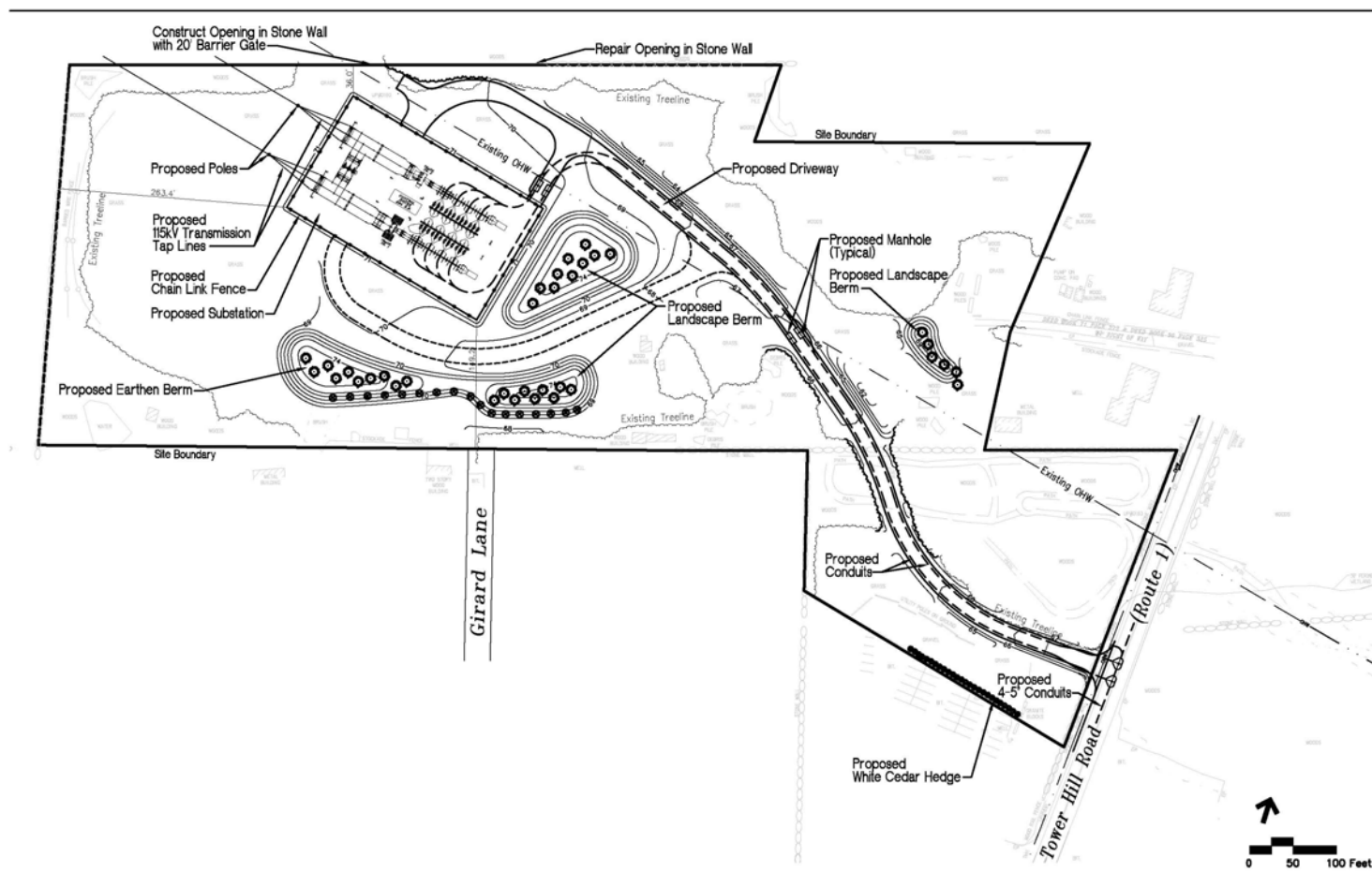


Proposed Tower Hill Substation

- ◆ The proposed substation will be set back approximately 1,000 feet from Tower Hill Road. A barrier gate will be located on the driveway entrance at Tower Hill Road
- ◆ The substation will be enclosed in a 155 x 250 feet fenced area
- ◆ Landscape berms will be constructed for screening purposes
- ◆ The substation will be located in the open field area to maximize setbacks to abutters
 - ◆ Closest house on Girard Lane 170 feet
 - ◆ Closest house on Tower Hill Road 690 feet
 - ◆ Closest house on Pinecrest Drive >700 feet
- ◆ Distribution lines leaving the substation will be underground



Tower Hill Substation Site Plan



Metal Clad versus Open Air Design

- ◆ Metal Clad refers to installing the 12.47 kV substation equipment inside a building
- ◆ The 115 kV equipment remains same as open air design
- ◆ The substation fenced area remains the same



What will the Substation look like?



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http://www.nationalgridus.com/narragansett/about_us/trans_project.asp