

# Narragansett Electric Company d/b/a National Grid

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Southern Rhode Island Transmission  
Project

# Permitting Process

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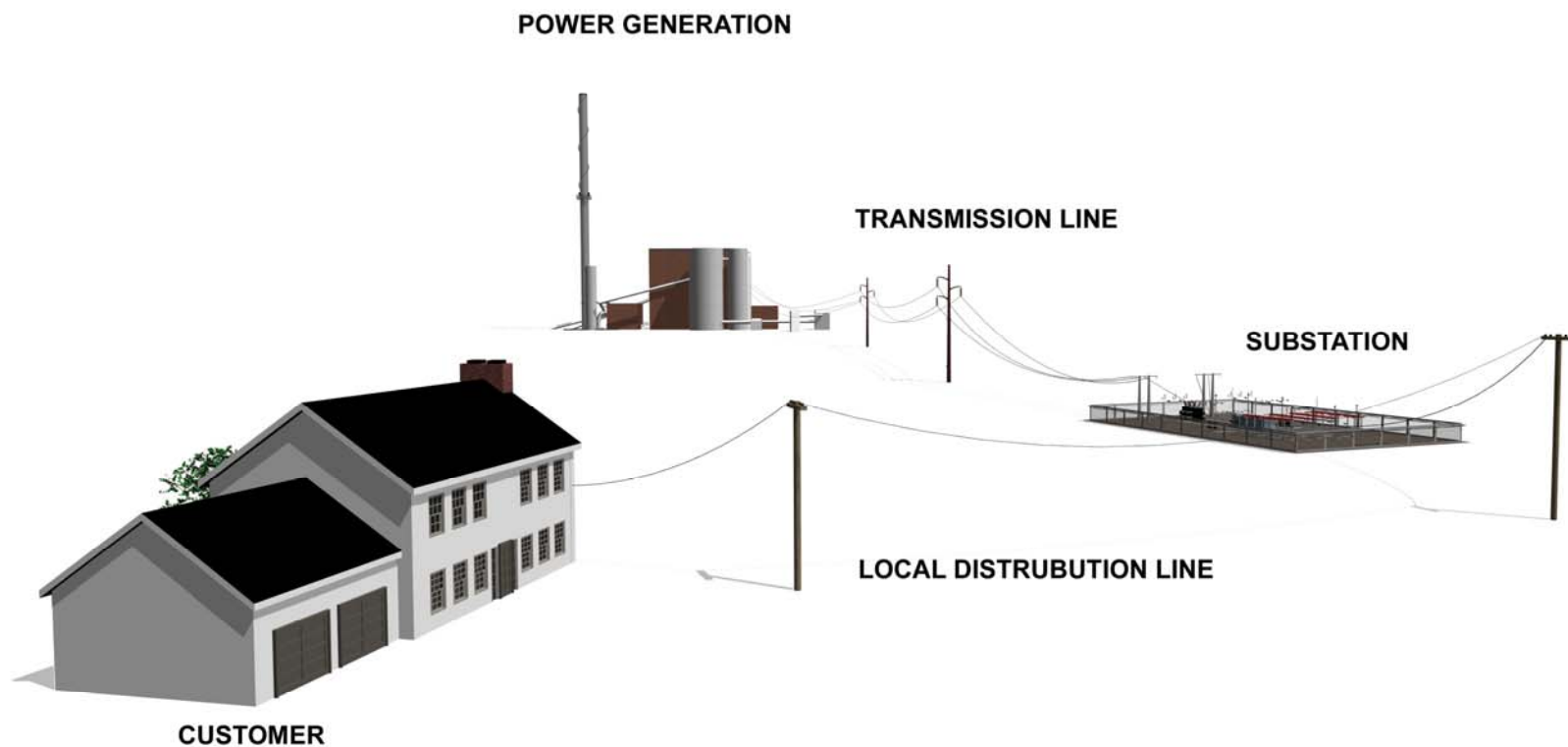
- ◆ RI Energy Facility Siting Board
  - ◆ Application filed November 2005
  - ◆ Preliminary hearing
  - ◆ Local hearings
  - ◆ Seeking advisory opinions from local boards and state agencies
- ◆ NK Zoning Board of Review
  - ◆ Criteria for Special Use Permit
  - ◆ Criteria for Use Variance
- ◆ NK Planning 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

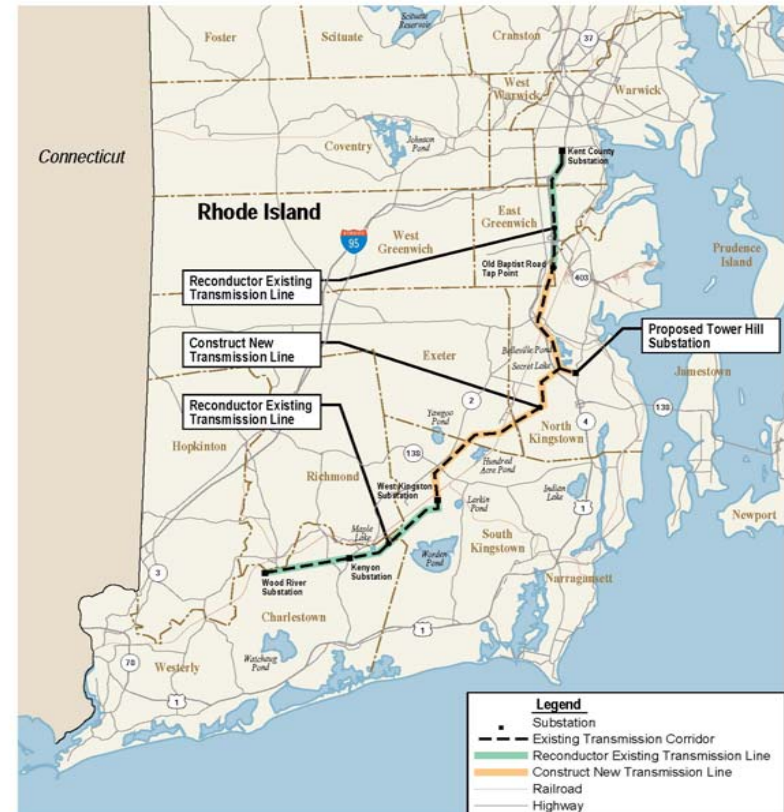
## New Transmission Lines in Existing Right of Way

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

## Distribution Substations

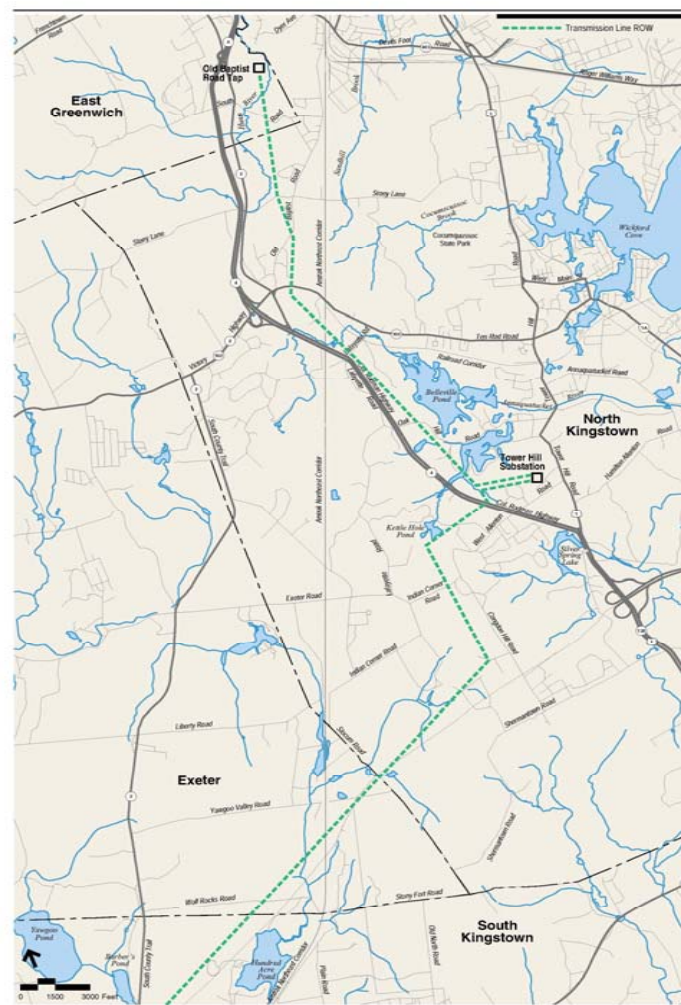
A new substation to serve increased electric demand in the North Kingstown area.

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



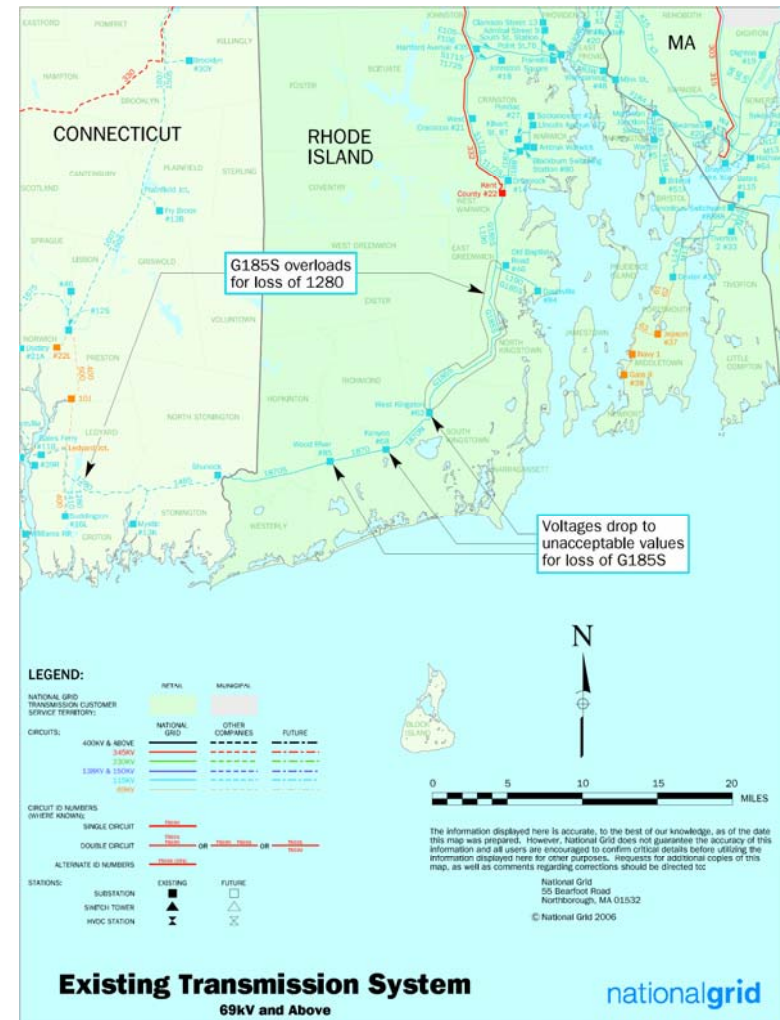
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# Why the Transmission Projects are Needed

- ◆ 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

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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

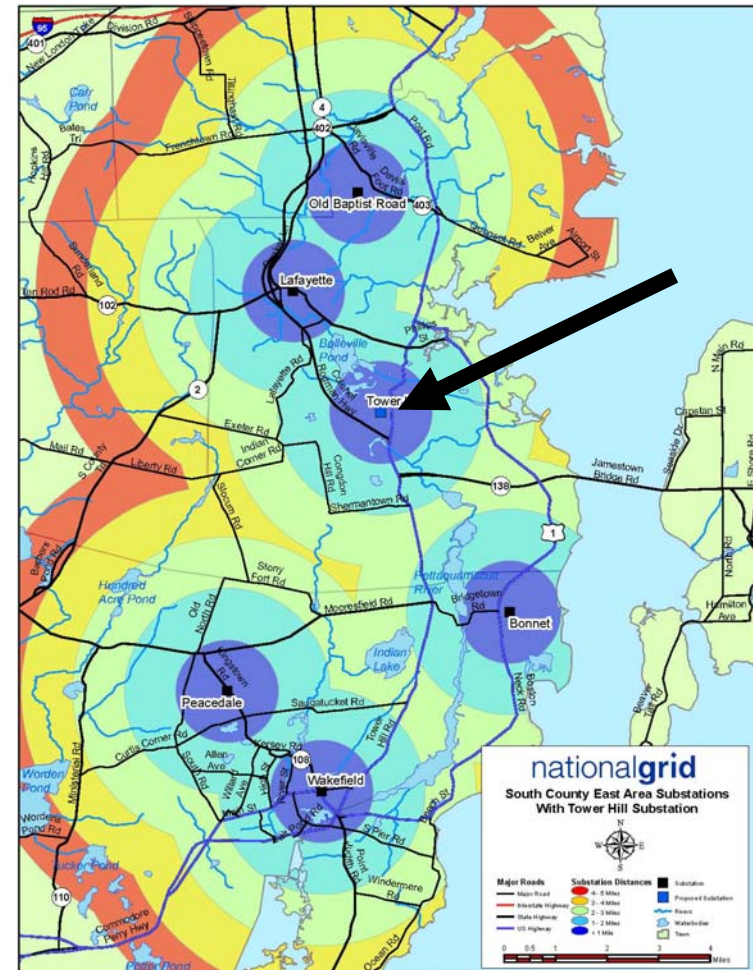
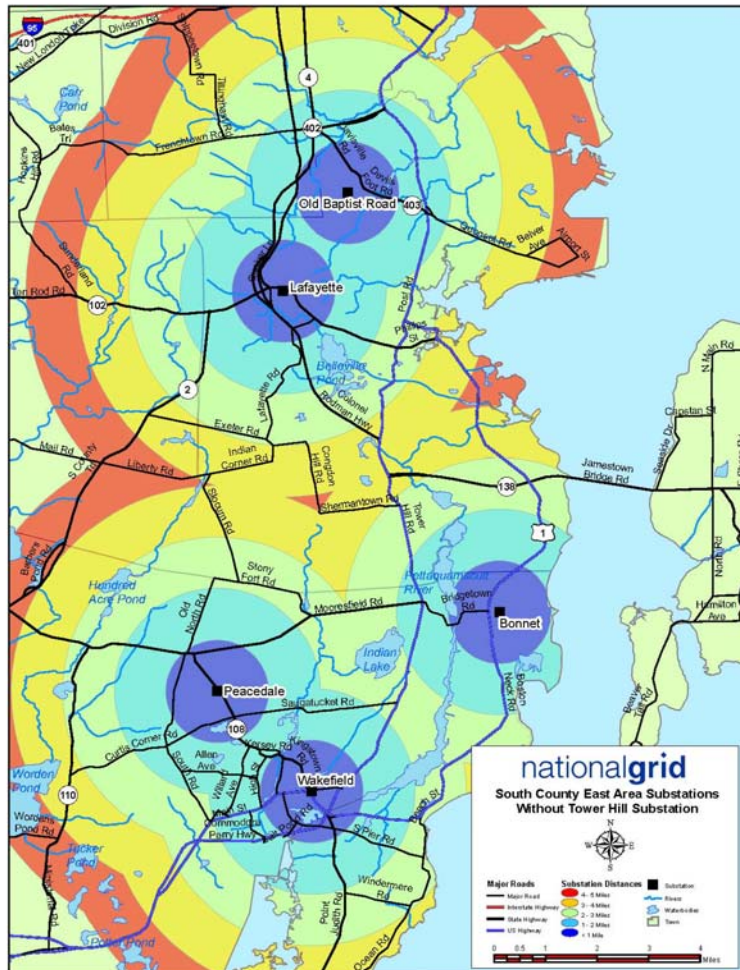
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- ◆ Customers could experience **increasing difficulty with their appliances** such as:
  - ◆ Personal computer problems
  - ◆ Air conditioners that will not start
  - ◆ Appliance failures
  - ◆ Flickering and/or dimming lights

**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

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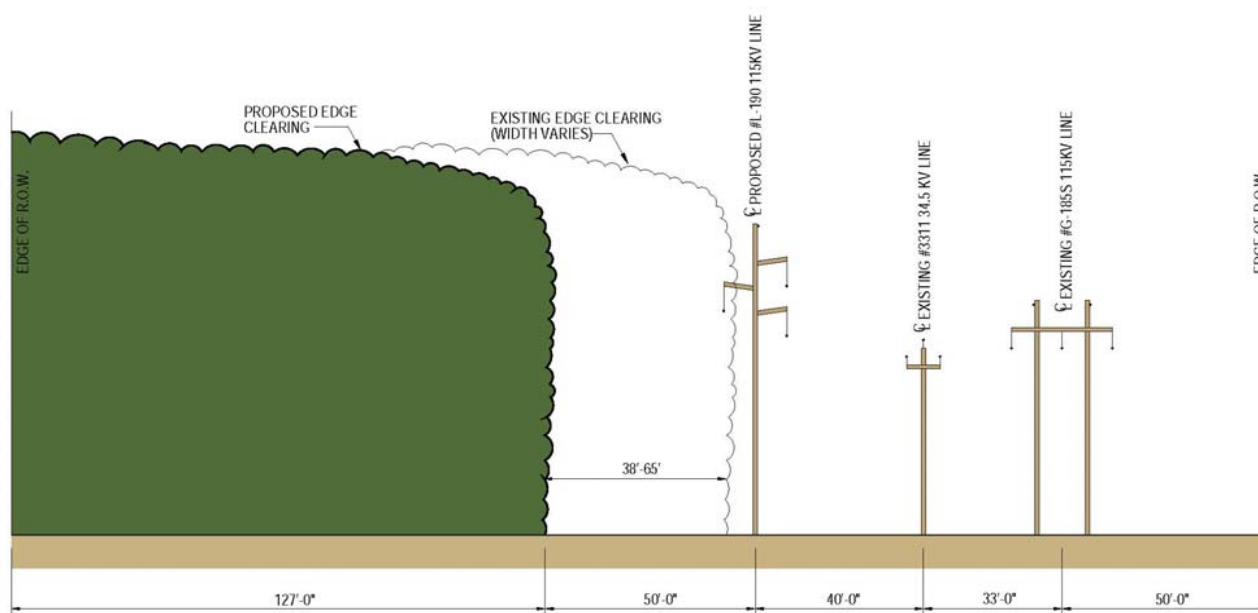
- ◆ **3.8 miles in existing 300 foot wide ROW north of Route 4**
- ◆ **3.0 miles of new line in existing 200 foot wide ROW south of Route 4**
- ◆ **Proposed tap lines 0.5 miles in length**
- ◆ **New poles will be single shaft made of brown colored steel**
- ◆ **Pole locations will be approximately adjacent 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

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- ◆ **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**

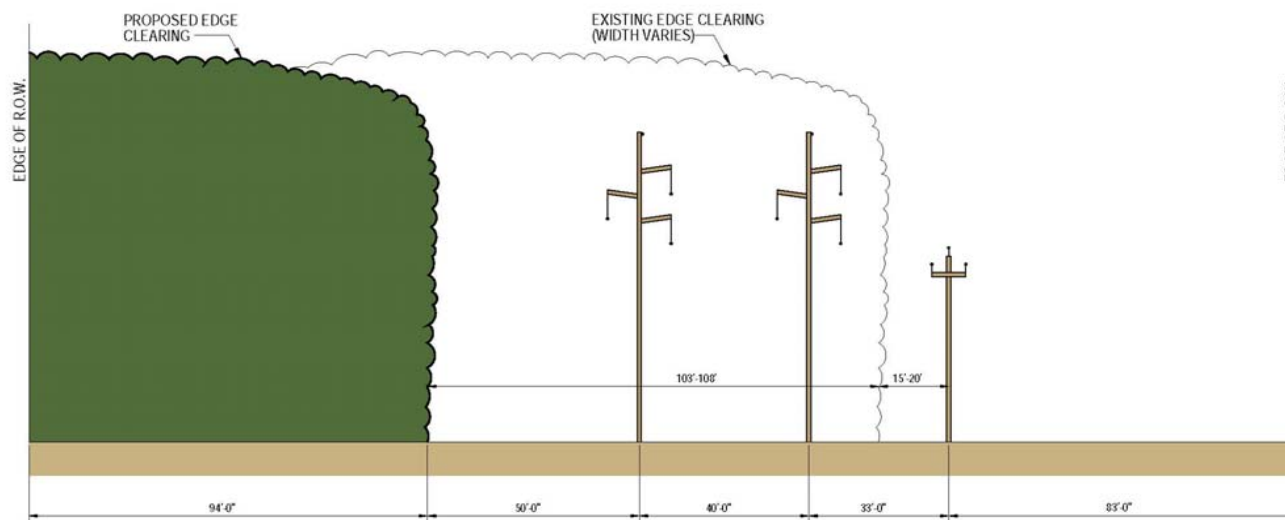
# What Will the New Line Look Like?



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

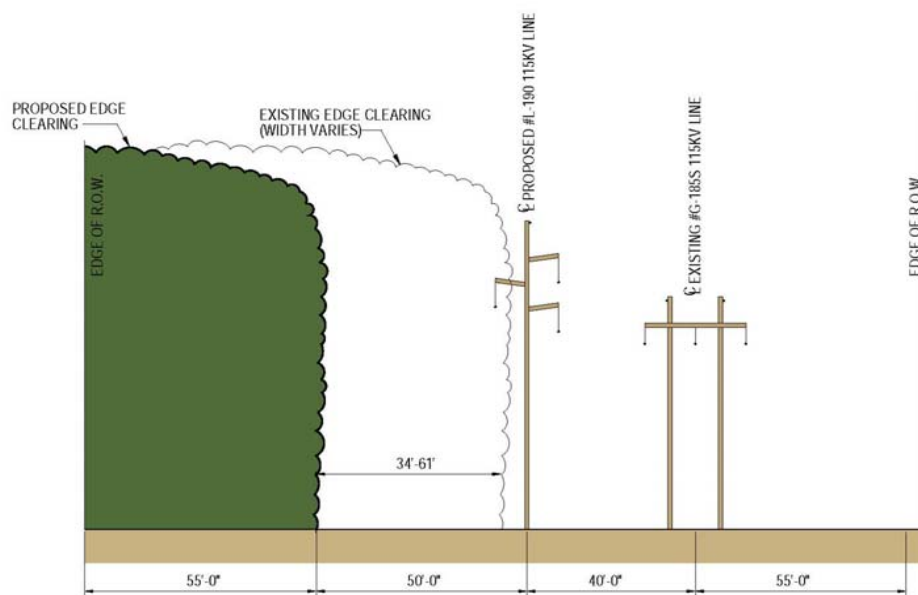


# What Will the New Line Look Like?



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

# What Will the New Line Look Like?



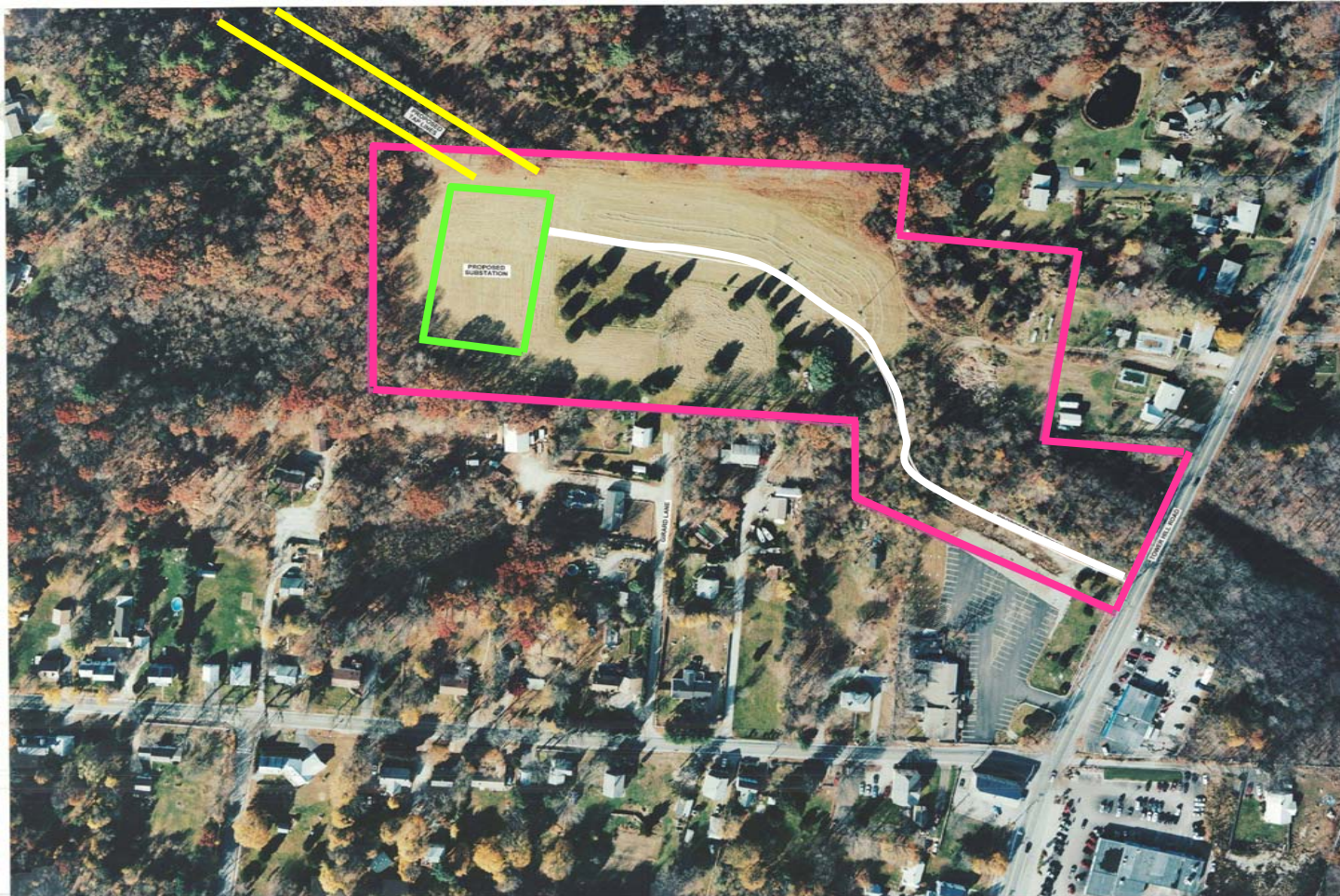
Tower Hill Tap point to W. Kingston Substation – view facing north

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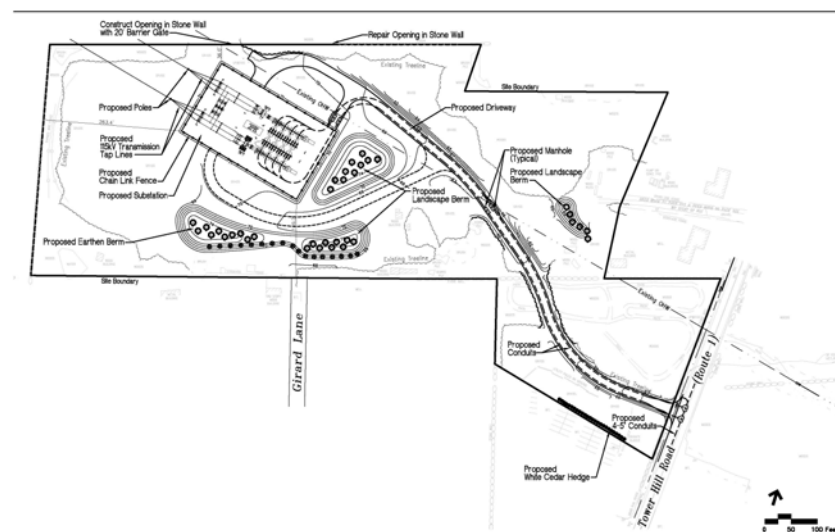
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# Proposed Tower Hill Substation Site

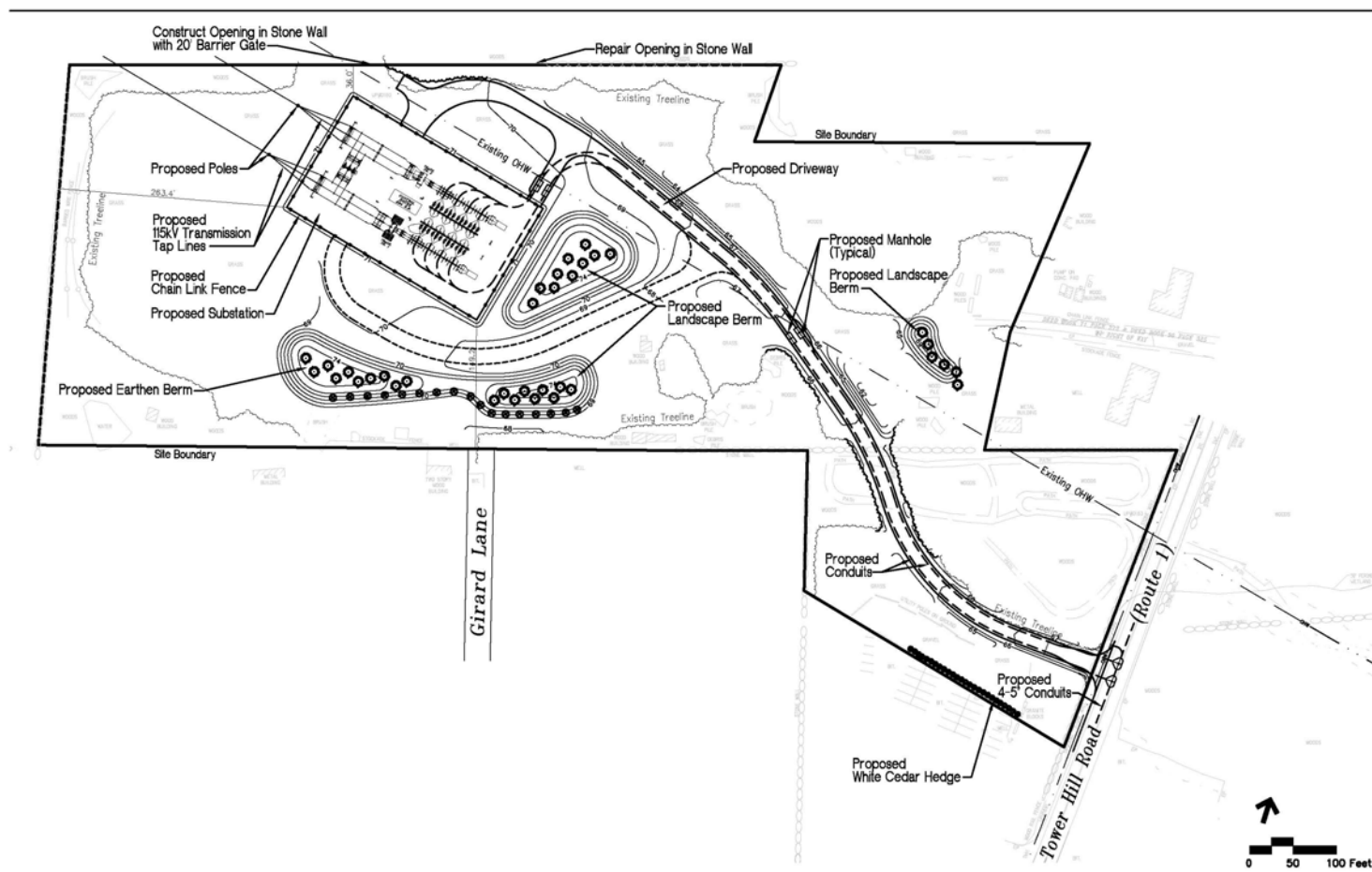


# Proposed Tower Hill Substation

- ◆ 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

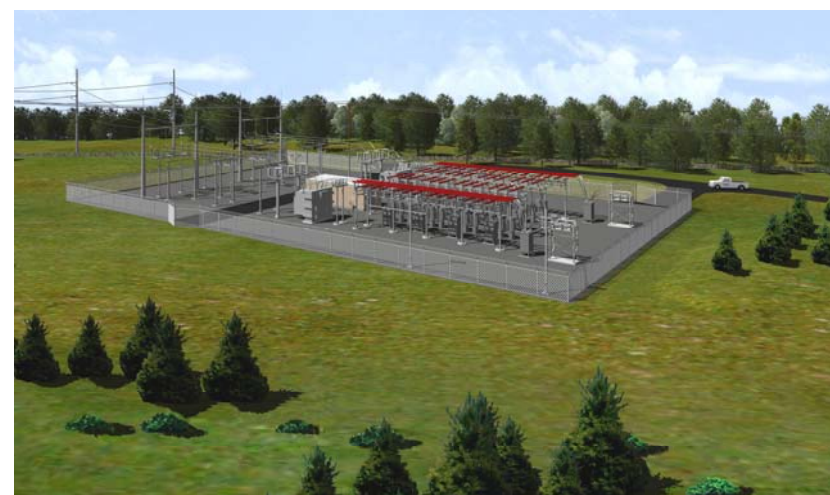


# Tower Hill Substation Site Plan



# 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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## Southern Rhode Island Transmission Project

[http://www.nationalgridus.com/narragansett/about\\_us/trans\\_project.asp](http://www.nationalgridus.com/narragansett/about_us/trans_project.asp)