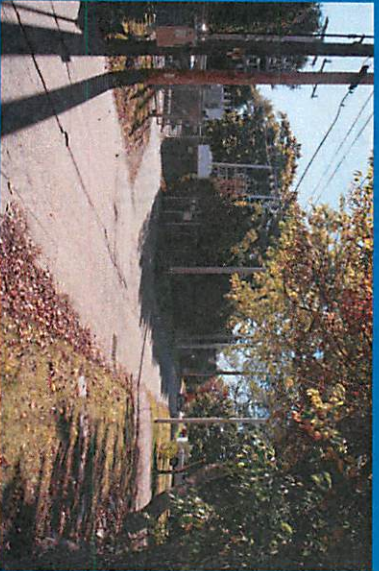


# Clarke St. Substation Equipment Replacement Project



Town Meeting  
December 2, 2014

## Tonight's Presentation

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- Introductions
- Project Overview & Need
- EMF
- Noise
- Safety
- Aesthetics
- Project Timeline & Construction Impacts

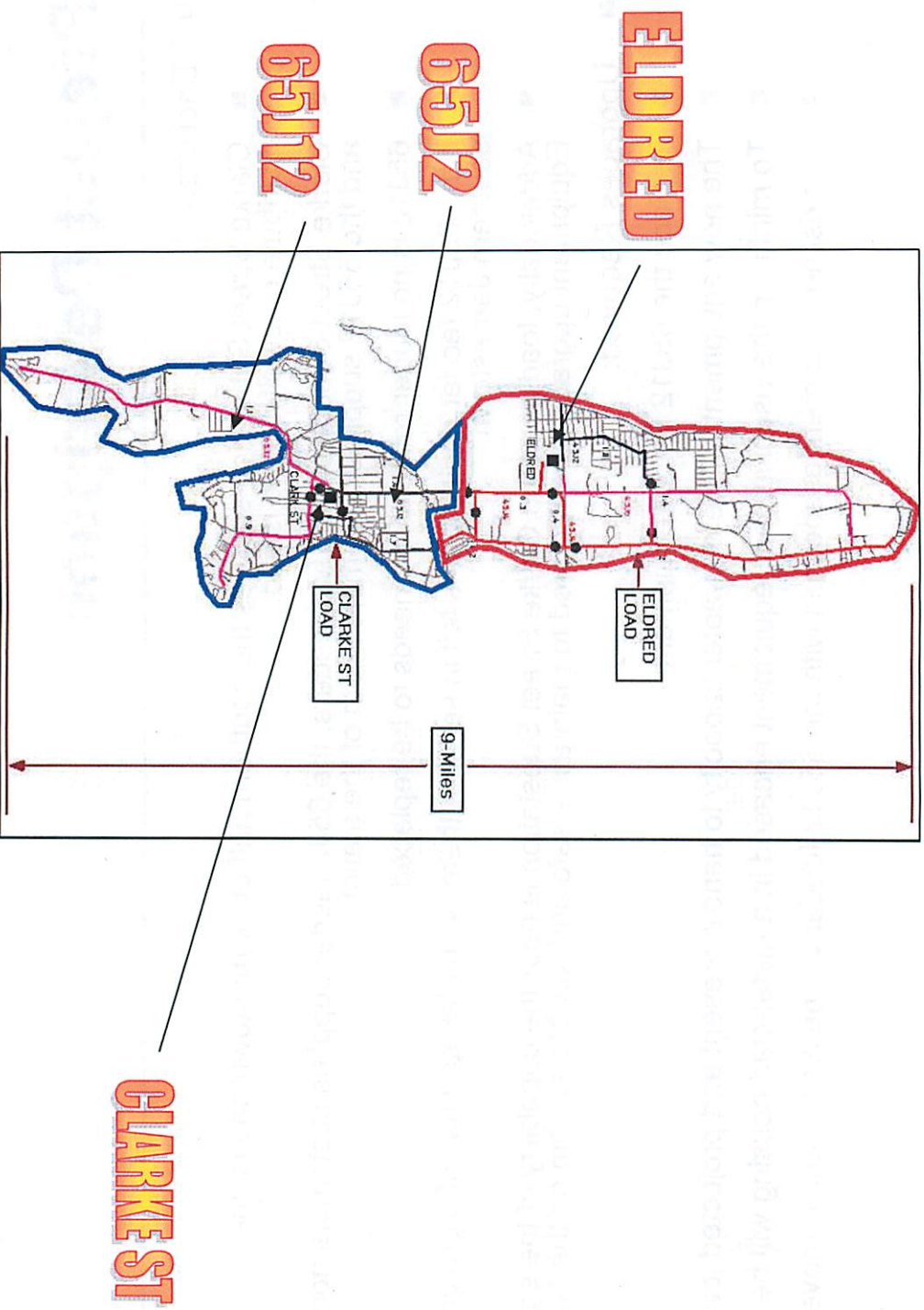
# Project Description

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- Background:
  - Clarke Street Substation supplies the southern half of Jamestown and is one of two stations that distribute electricity to the island.
  - Clarke Street Substation has two feeders, the 65J2 feeder supplies customers north of the station and the 65J12 supplies customers south of the station.
  - 65J12 is no longer reliable and needs to be replaced.
  - If the 65J12 feeder equipment is left in service, there is an elevated risk of a prolonged outage in southern Jamestown.
  - Additionally, loading at the Clarke Street Substation is near the capability of the equipment. Equipment upgrades are required to maintain a safe and reliable system on the Island.
- Upgrades Required:
  - Replace the 65J12 feeder equipment.
  - The new equipment will be of greater capacity to handle present and projected loading.
  - To minimize the visual impact, equipment encased in a metal-clad housing will be utilized.
  - All existing equipment associated with the 65J12 feeder will be retired and removed from the site.

# Existing Distribution System

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nationalgrid

## Clarke St. Substation – Existing View

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nationalgrid

## Existing Transformer to Be Replaced

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View facing Clarke St

# Clarke St. Substation – Proposed

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## Proposed MITS Skid

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- MITS Dimensions: 10' Wide x 39' Long x 10' 5" High
- Walkway not pictured



## EMF

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- Electromagnetic Field Study Results at Clarke St
  - Review of Existing Condition
  - Review of Proposed Condition Model

## Noise

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- Sound Study Results
  - Review of Existing Source of Noise
  - Review of Proposed Condition Model
- Proposed Mitigation
  - Fencing: 6, 8, 10 ft and impacts on sound

# Sound Study Results

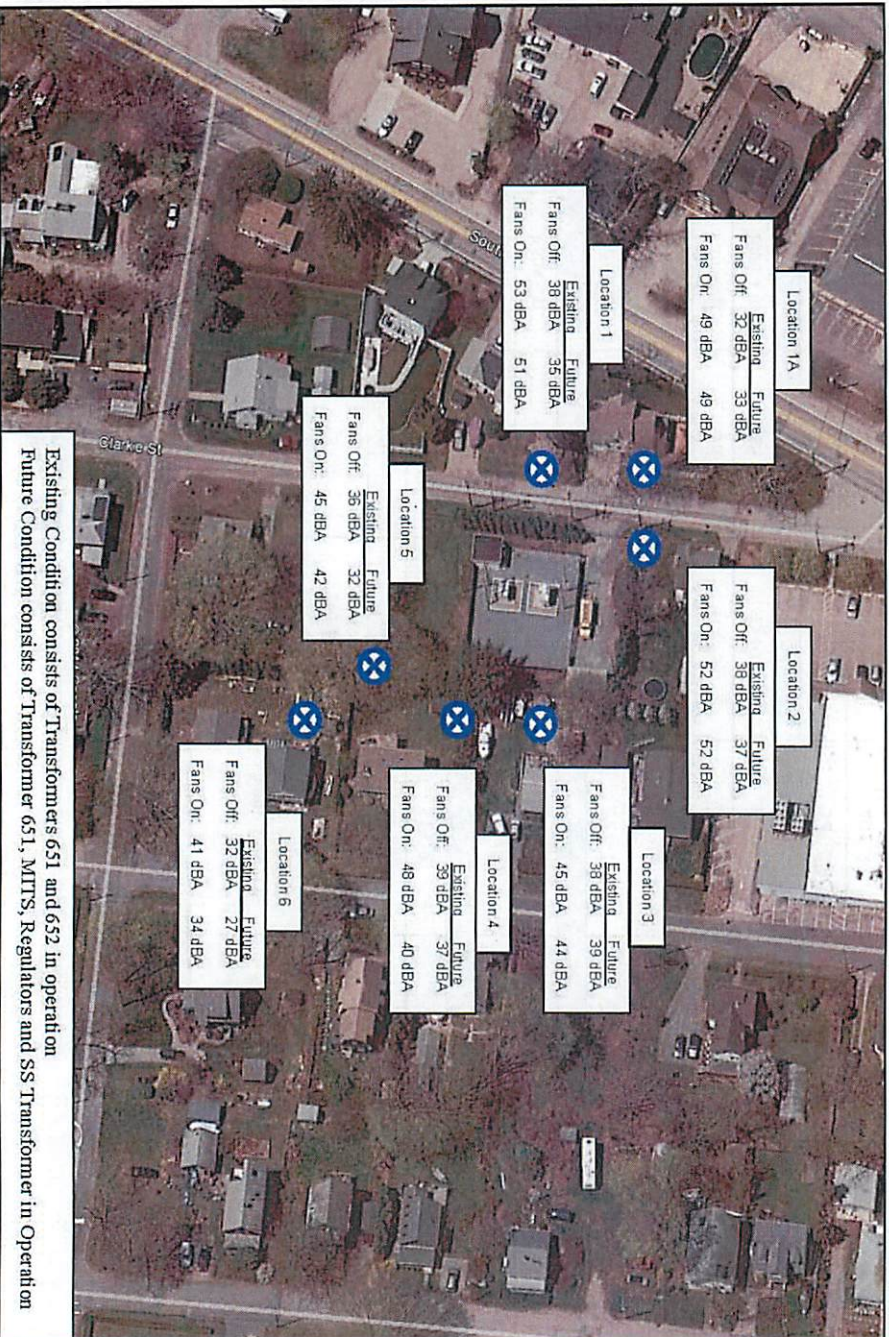
Table 1 Comparison of Existing to Future Noise Levels (dBA)

Location	Operating Scenario	Existing Condition Modeled Sound Levels	Future Modeled Sound Levels (MITS Test Data)	Future Modeled Sound Levels (MITS Test Data)	Future Modeled Sound Levels (MITS Test Data)	Future Modeled Sound Levels (MITS Test Data)
			No Fence	6ft Fence	8ft Fence	10ft Fence
Location 1	Fans Off	38	36 (-2)	35 (-3)	33 (-5)	32 (-6)
	Fans On	53	52 (-1)	51 (-2)	48 (-5)	47 (-6)
Location 1A	Fans Off	32	33 (+1)	33 (+1)	33 (+1)	32 (0)
	Fans On	49	49 (0)	49 (0)	48 (-1)	48 (-1)
Location 2	Fans Off	38	37 (-1)	37 (-1)	36 (-2)	32 (-6)
	Fans On	52	52 (0)	52 (0)	52 (0)	47 (-3)
Location 3	Fans Off	38	41 (+3)	39 (+1)	37 (-1)	33 (-5)
	Fans On	45	45 (0)	44 (-1)	43 (-2)	37 (-8)
Location 4	Fans Off	39	38 (-1)	37 (-2)	35 (-4)	32 (-7)
	Fans On	48	40 (-8)	40 (-8)	41 (-7)	40 (-8)
Location 5	Fans Off	36	32 (-4)	32 (-4)	32 (-4)	27 (-9)
	Fans On	45	39 (-6)	41 (-4)	42 (-3)	38 (-7)
Location 6	Fans Off	32	28 (-4)	27 (-5)	25 (-7)	23 (-9)
	Fans On	41	34 (-7)	34 (-7)	34 (-7)	30 (-11)

Notes: Numbers in parenthesis show change over the current condition.

# Sound Study Results

Figure 3 Comparison of Existing to Future Noise Levels – Vendor MITTS data, 6ft fence



## Safety

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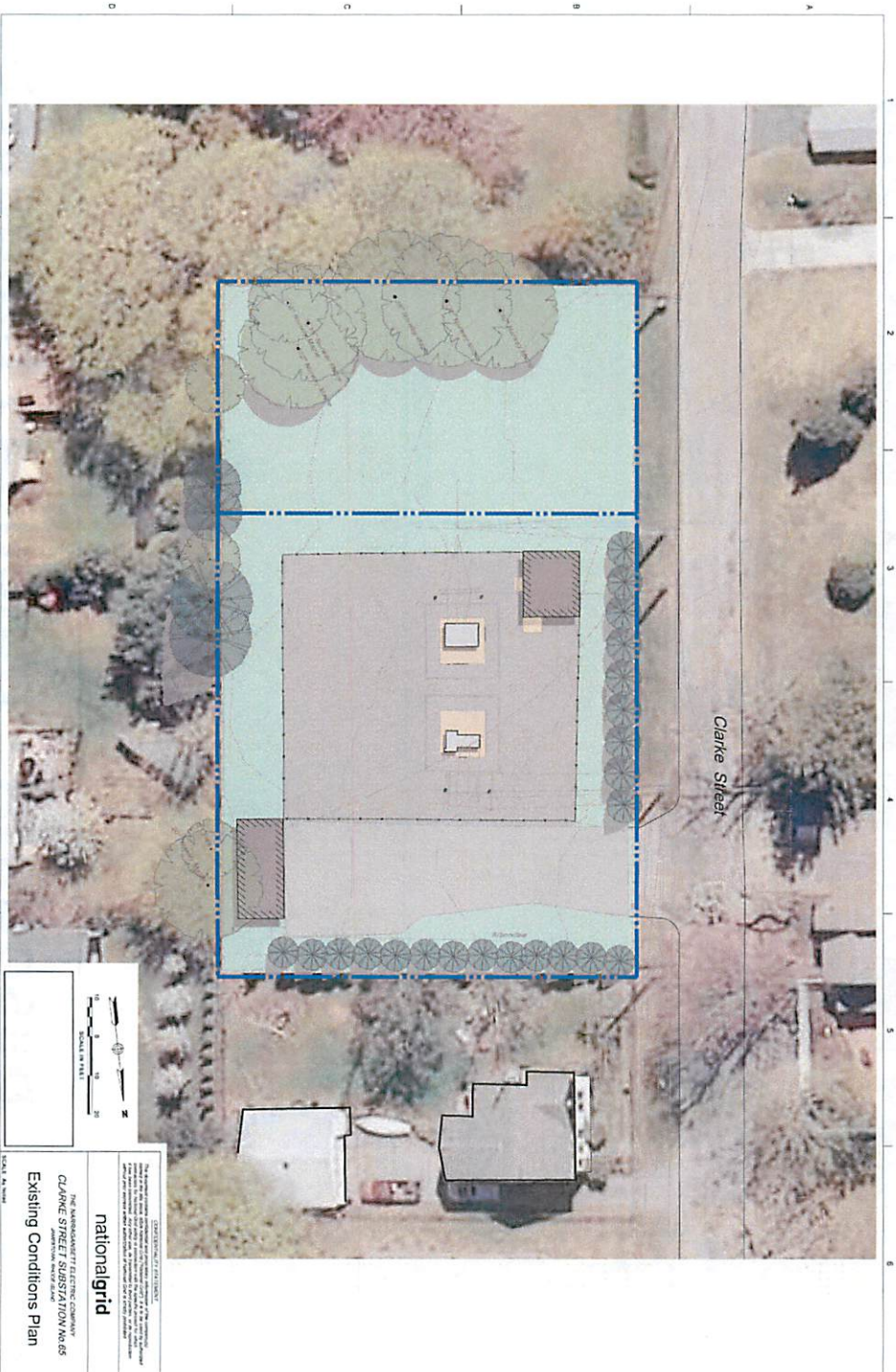
- Substation Grounding
- Substation Security

## Aesthetics

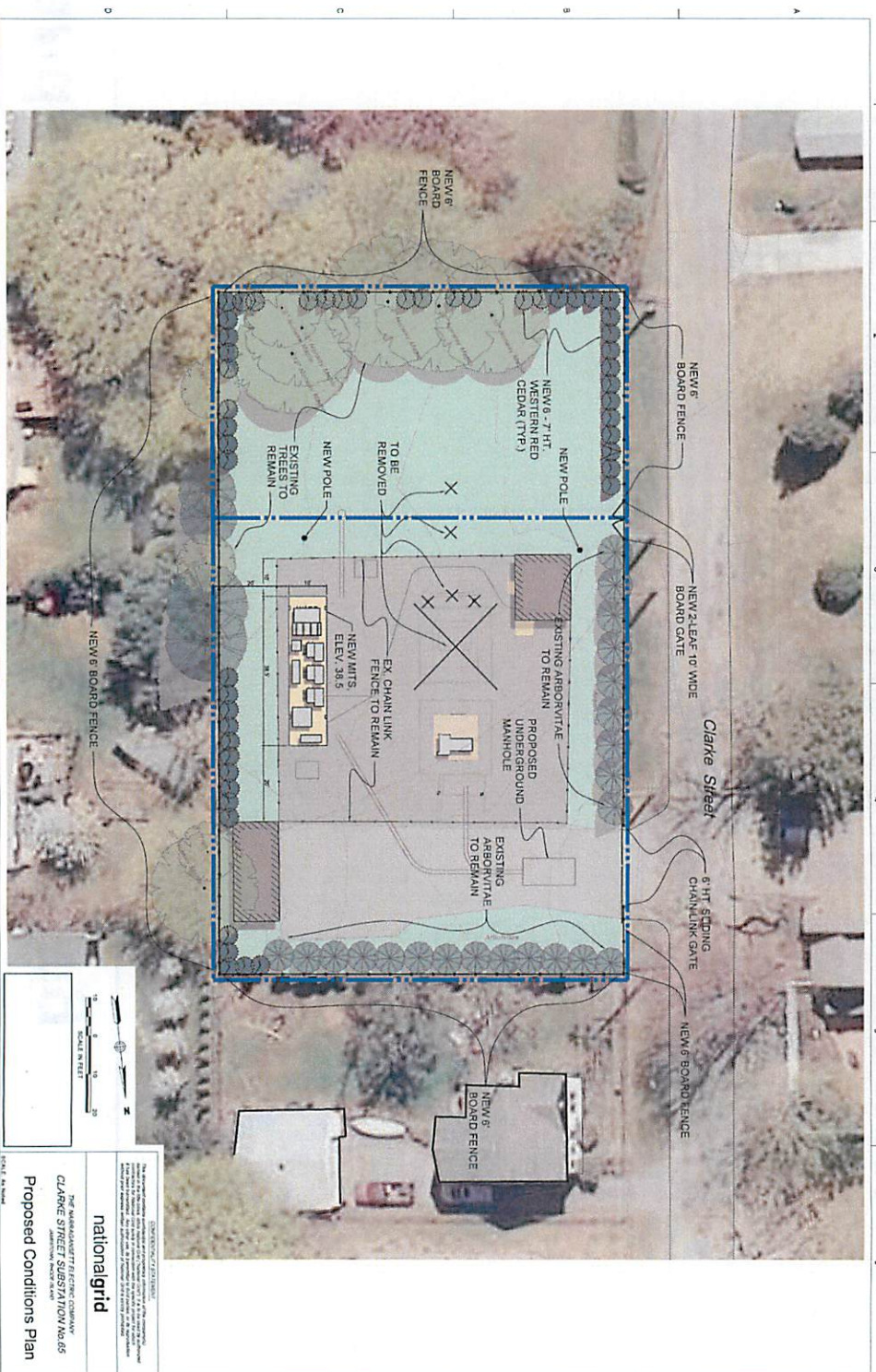
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- Fencing
  - Height, Material, Location
- Equipment
  - Removals
  - New Equipment Height, Size Comparison
- Landscaping
  - Existing Planting protection
  - Proposed Plantings
  - Maintenance
- Views from Clarke Street
- Other Issues

# Landscaping / Fencing - Existing



# Landscaping / Fencing - Proposed





## Proposed – Photo Simulation

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## Proposed – Photo Simulation

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## Project Timeline

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- April 2015 – Mobilize
- April 2015 – May 2015
  - Foundations for new equipment
  - Duct Banks and Manhole with Substation Yard
  - Duct Bank Installation on Clarke St to Southwest Ave
- May 2015:
  - MITS Delivery and Installation
  - Load Break Installation: Clarke St Utility Poles
- May 2015 – October 2015
  - Wiring and Cable
- October - 2015
  - Energization of new equipment
- October 2015 – December 2015
  - Removal of Existing Transformer and old equipment

## Construction

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- Review of Construction Concerns
  - Noise
  - Driveway Access
  - Clarke St Access
  - Equipment Delivery and Removal
  - No Customer Outages Anticipated

## Questions or Concerns

If you would like to speak to our  
Stakeholder Specialist about the project

Contact:

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[stacy.blundell@nationalgrid.com](mailto:stacy.blundell@nationalgrid.com)