

# Eagle Substation - 345/115 kV Autotransformer Replacement

TCA Submittal Presentation  
ES-22-TCA-41  
(ISO-NE ACL #TBD)

NEPOOL Reliability Committee Meeting

January 18, 2023

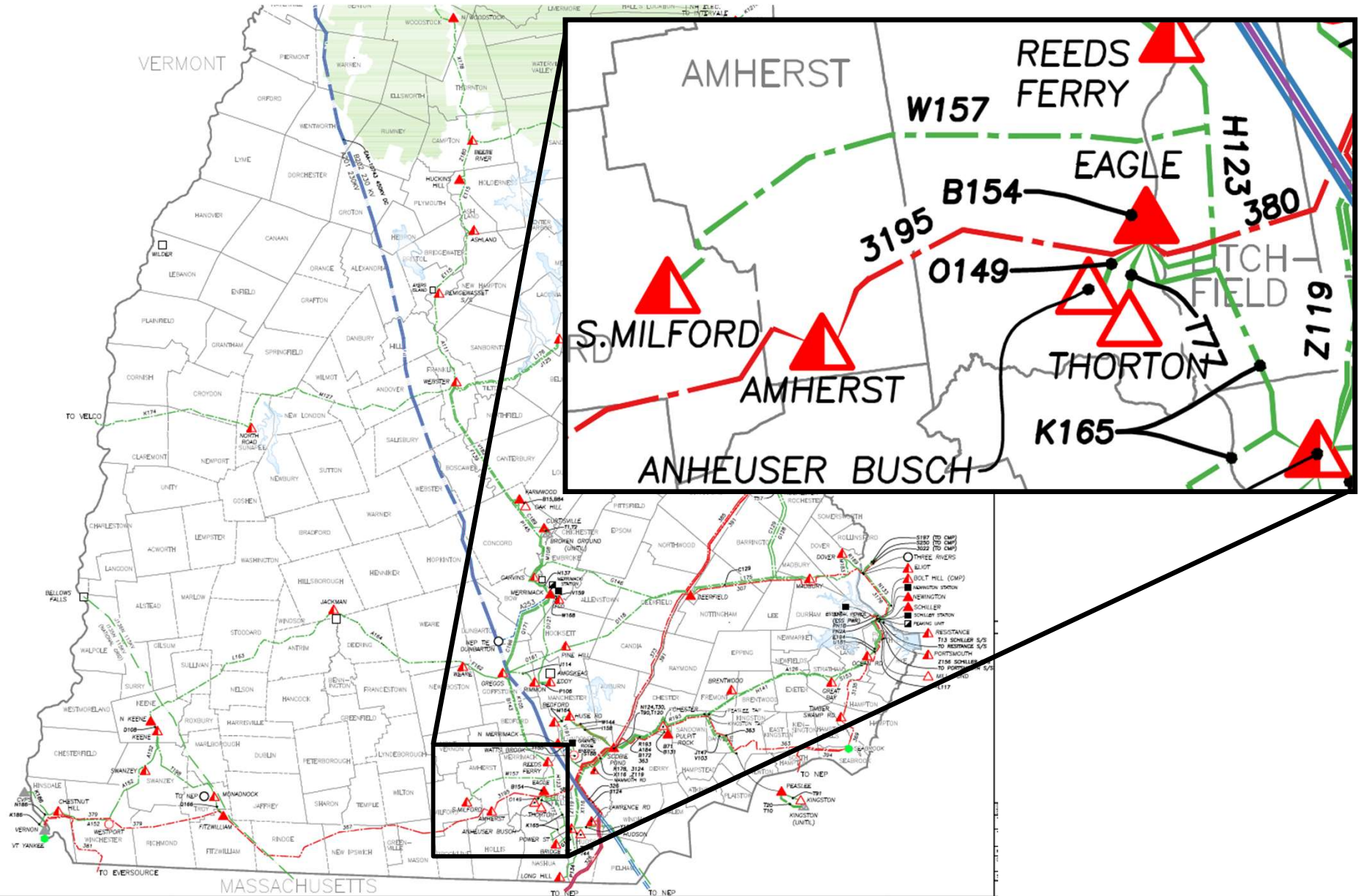
# Agenda

- Project Background
- Project Location
- Project Need
- Project Summary

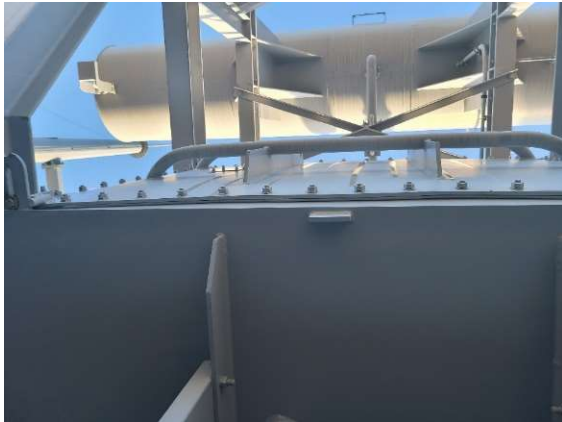
# Project Background

- Eversource is replacing the 345/155 kV TB154 autotransformer at Eagle substation, located in Merrimack, New Hampshire due to failure after a fault occurred in May 2022. This project was presented to the Planning Advisory Committee in [August 2022](#).
- Project Drivers/History
  - Eagle 345/115 kV autotransformer TB154 was installed and placed into service in 2016
  - Operated reliably prior to fault that occurred in May 2022
  - On-site crews identified Load Tap Changer (LTC) leakage, bulging door; oil analysis identified acetylene in the main tank oil volume
    - When LTC was drained of oil, it was determined that barrier board was compromised

# Project Location



# Project Need



TB154 - LTC door warped due to force of equipment trip



TB154 - Evidence of active oil leak on LTC door



TB154 – Barrier board comprised and cracked



TB154 - Evidence of arcing within LTC cabinet

# Project Summary

- Modify existing TB154 autotransformer foundation and oil containment system to accommodate TB150 spare autotransformer
- Relocate TB150 345/115 kV autotransformer system spare currently located at Scobie Pond to Eagle substation
- Perform cable/conduit and wiring modifications to connect the spare autotransformer at Eagle substation

## **Total estimated cost of this project \$6.375M**

- TB150 spare cost is not included in this figure, system spares are typically purchased as non-PTF assets
- Both transformers have previously been capitalized, once TB150 is placed in-service it will become a PTF asset

**In-service Date: (Mar-2023)**

# Questions

