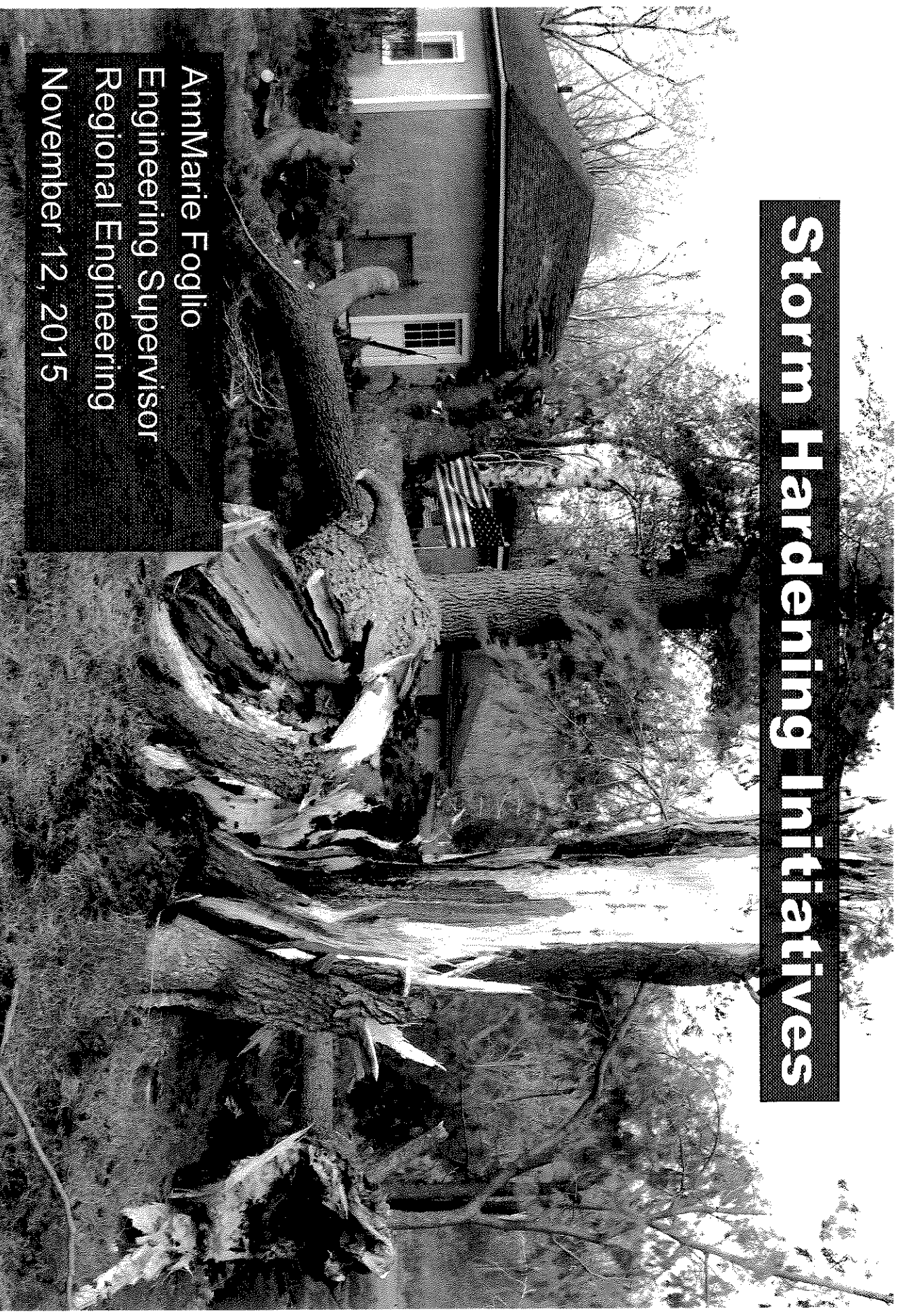


Storm Hardening Initiatives

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Regional Engineering
November 12, 2015



Westchester Overhead System

- Serves 317,000 customers
- 100 autoloops
- 98 unit substations
- 28,000 overhead transformers
- 92,000 poles
- 15,000 miles of wire

Sandy's Impact: Significant Damage to Overhead System



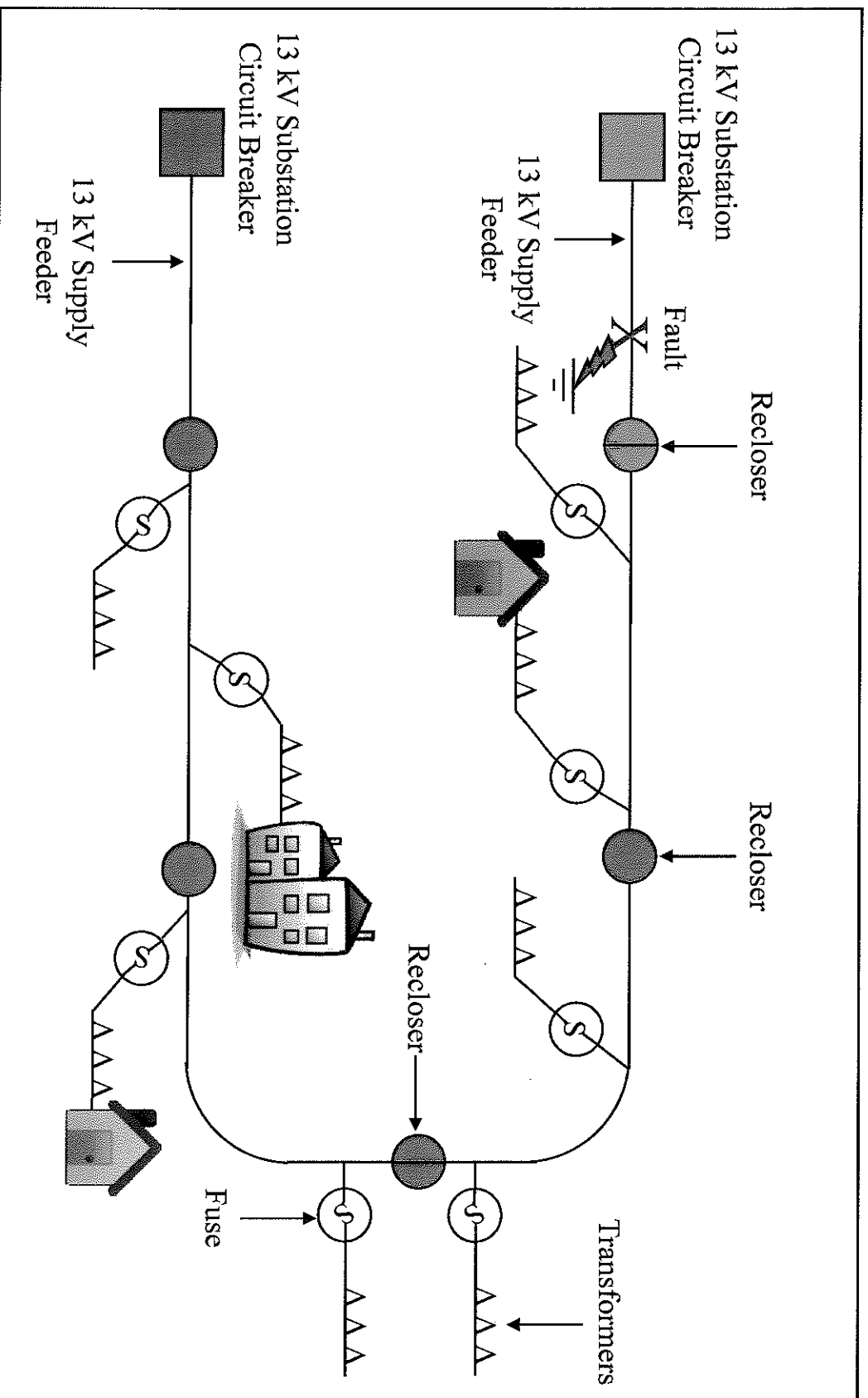
Estimated Pole & Transformer Usage			
SANDY Totals			
Location	Poles	Transformers	Cable [miles]
Bronx/Westchester	699	718	72.06
Brooklyn/Queens	209	93	60.63
Staten Island	64	111	10.76
Total CECONY	972	922	143.46
IRENE Totals			
Location	Poles	Transformers	Cable [miles]
Bronx/Westchester	46	133	12.30
Brooklyn/Queens	15	14	17.03
Staten Island	30	15	1.78
Manhattan	-	1	0
Total CECONY	91	163	31.11

- Primary concern of safety
- Worked with city and municipalities to clear roads of trees and debris
- 70 percent of customers served by overhead systems lost power ³

Wind / Tree Damage Hardening Strategy

Approach	Solution
Protect Infrastructure	Tree Trimming Selective Undergrounding
Harden Components	New Pole Designs Resilient Cable Designs
Mitigate Impact	Increased Automation Reduced Circuit Customer Density Smart Switches Isolation Devices Sacrificial Components
Facilitate Restoration	Enhanced Communications Remote Monitoring and Control Automatic Meter Infrastructure

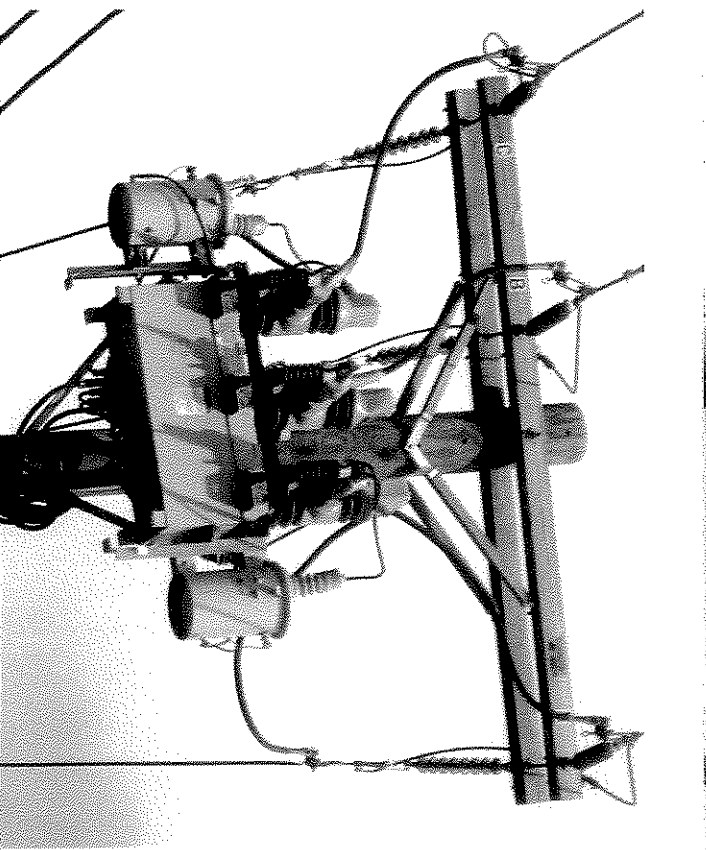
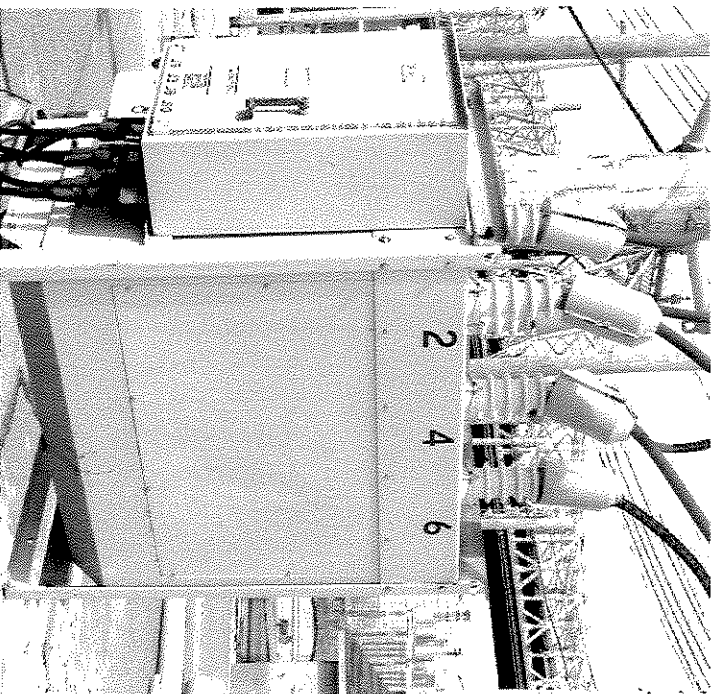
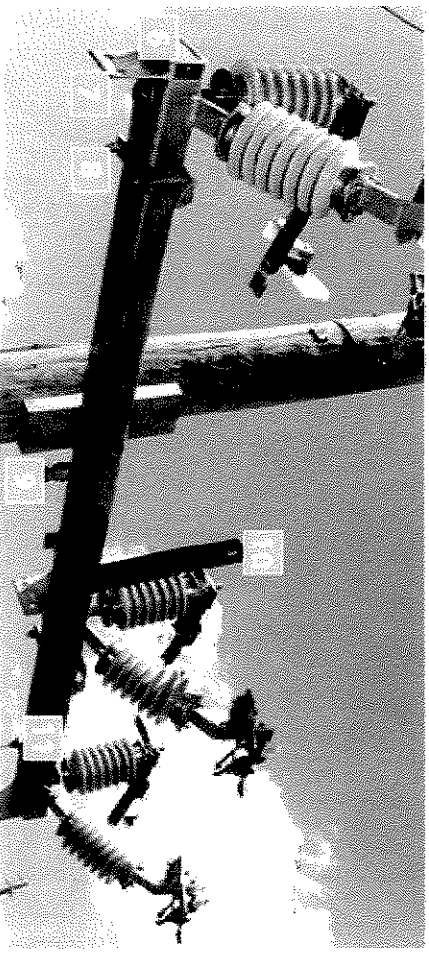
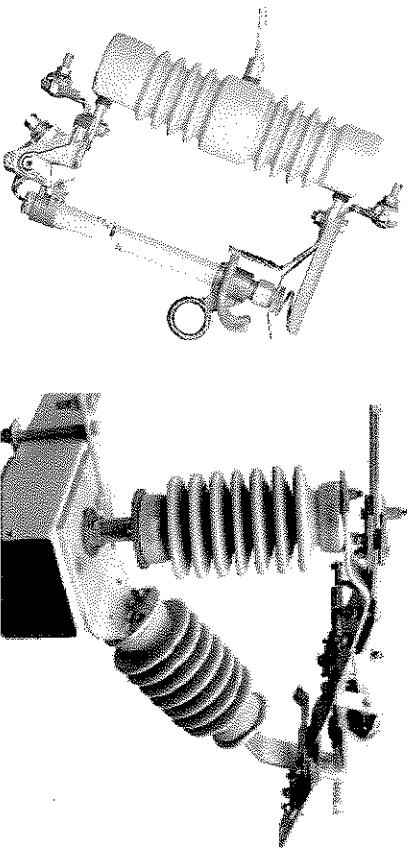
Autoloop System



Protect, Harden, Mitigate and Facilitate: Improve Autoloop Reliability

- Upgrade wire and pole sizes to improve resiliency
- Use of more resilient aerial cable, Hendrix
- Additional supply feeders
 - Divide large autoloops into smaller loops
- Reduce feeder segment circuit size to under 500 customers
 - Reduces customers interrupted per event
- Smart switches
- Install fuse isolation devices to protect branch lines
 - Sacrificial components to minimize damage

Mitigate Impact/Facilitate Restoration:



7

Overhead Distribution Initiatives: Loop Split Overview

- Extend new feeder
- Split loop into two loops
- New storm hardened cable

