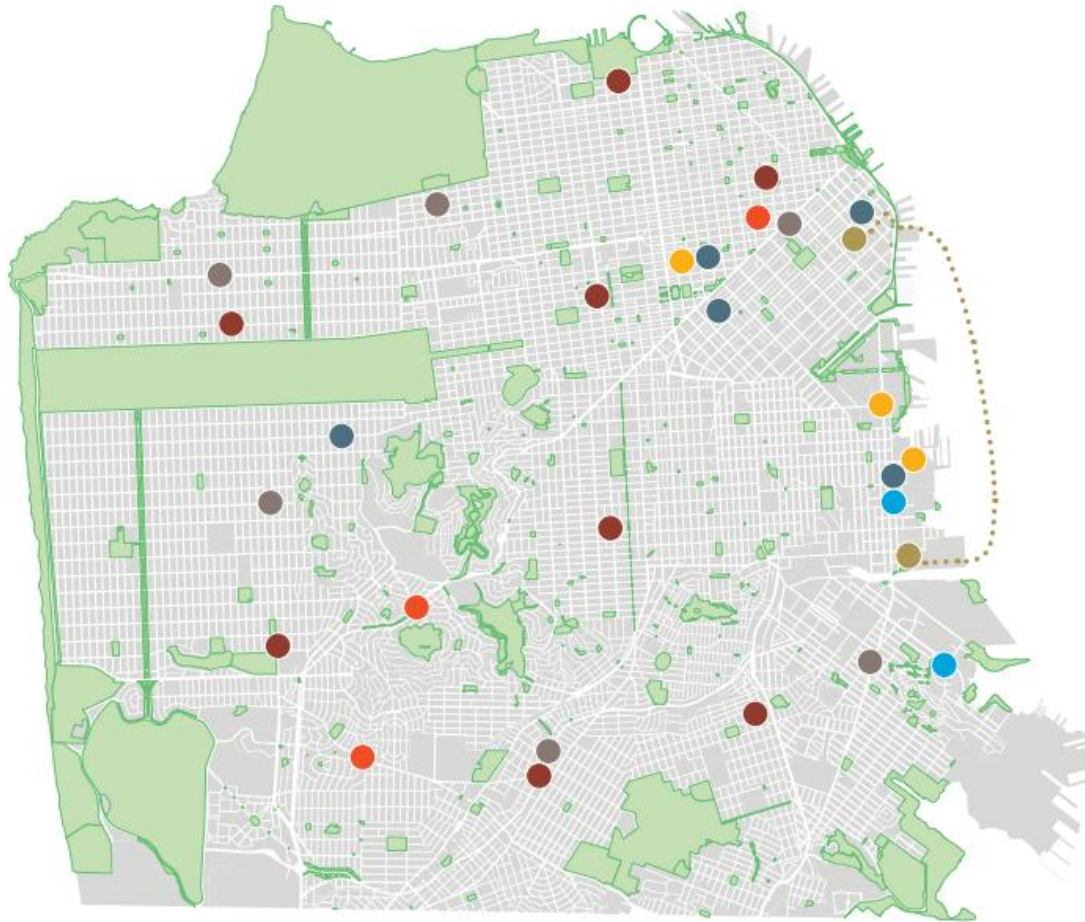




PG&E's San Francisco Infrastructure Improvements
Lifelines Council: April 4, 2013

San Francisco Infrastructure Improvement Map



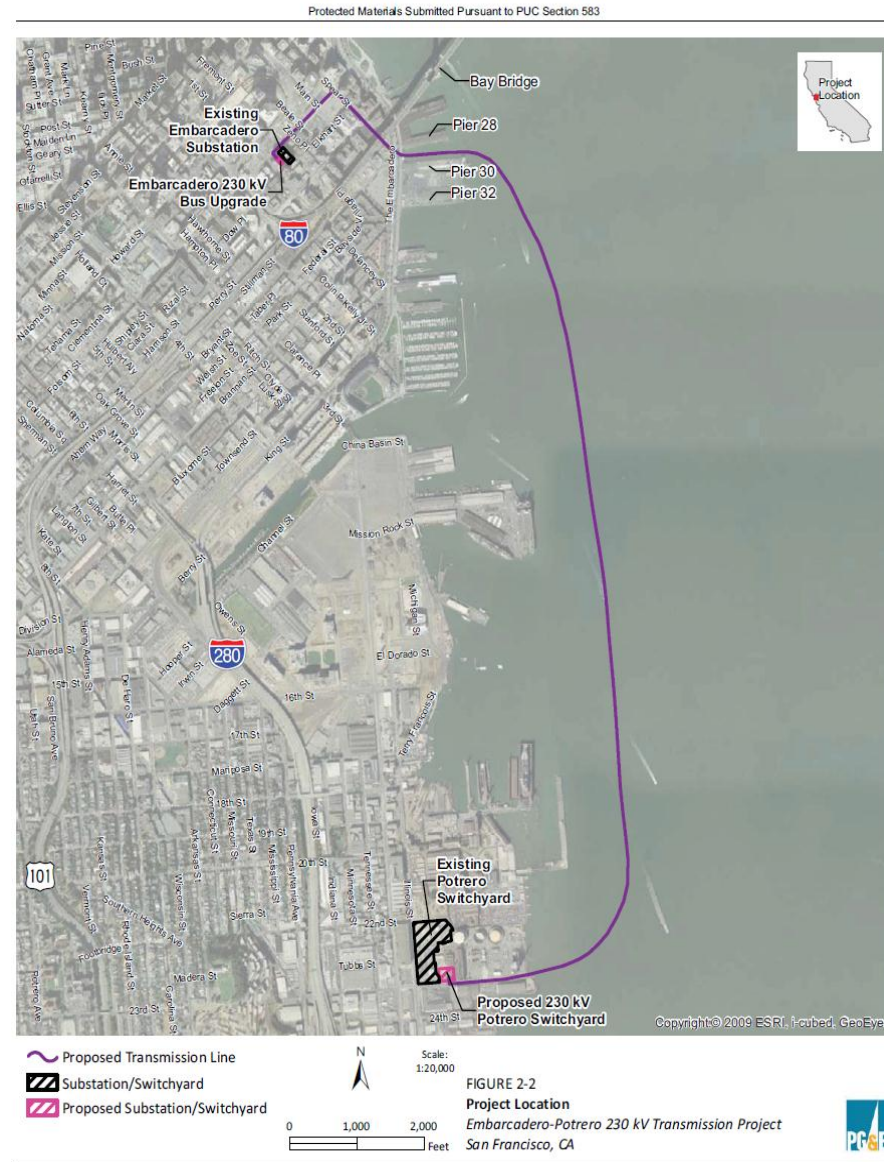
- SUBSTATION UPGRADES
- ENVIRONMENTAL REMEDIATION
- CAPACITY AND REDUNDANCY PROJECTS
- ELECTRIC RELIABILITY
- STREETLIGHT UPGRADES AND REPLACEMENTS
- GAS PIPELINE REPLACEMENT PROGRAM
- TRANSMISSION PROJECTS

Embarcadero-Potrero (ZA-1) Transmission Project

- Project to enhance reliability to San Francisco by providing redundancy to Embarcadero Substation, which serves the downtown area.
- Proactive support of existing transmission capacity *before* failure or compromise of existing facilities.
- Prolonged outage to major substations could cause lasting transportation impacts to BART/Muni, SF Port and the residents and businesses in the Embarcadero Substation service area.

Construction start date: 9/2014

Proposed in service date: 12/2015



Electric Distribution Projects

- Distribution upgrades include the installation of intelligent switches to help isolate trouble and shorten the duration of power outages.
- Other projects will target older distribution lines for cable and switch replacement to improve service reliability.

Substation Projects

- \$400+ million of upgrades to Potrero, Larkin, Mission and Embarcadero substations to increase reliability.
- Upgrades includes restoration of internal and external infrastructure, including improvements to the building façades; landscaping and lighting that will help the facility blend in with the surrounding community.



Gas Transmission and Distribution Upgrades

- PG&E's Gas Pipeline Replacement Program (GPRP) is an initiative to replace old cast iron gas distribution pipelines with modern plastic piping that is more resistant to corrosion and earth movement.
- PG&E has replaced more than 95% of the more than 800 miles of cast iron mains in PG&E's service territory since the program began.
- In San Francisco alone, GPRP will result in the replacement of approximately 270 miles of pipeline. About 26 miles of cast iron pipe remains in San Francisco and all of it is scheduled for replacement by the end of 2015.
- PG&E performed a successful hydrostatic test of Gas Transmission Line 132 in 2012.

