



Wadsworth Pumping Plant Control and Protection Upgrades

Engineering & Operations Committee

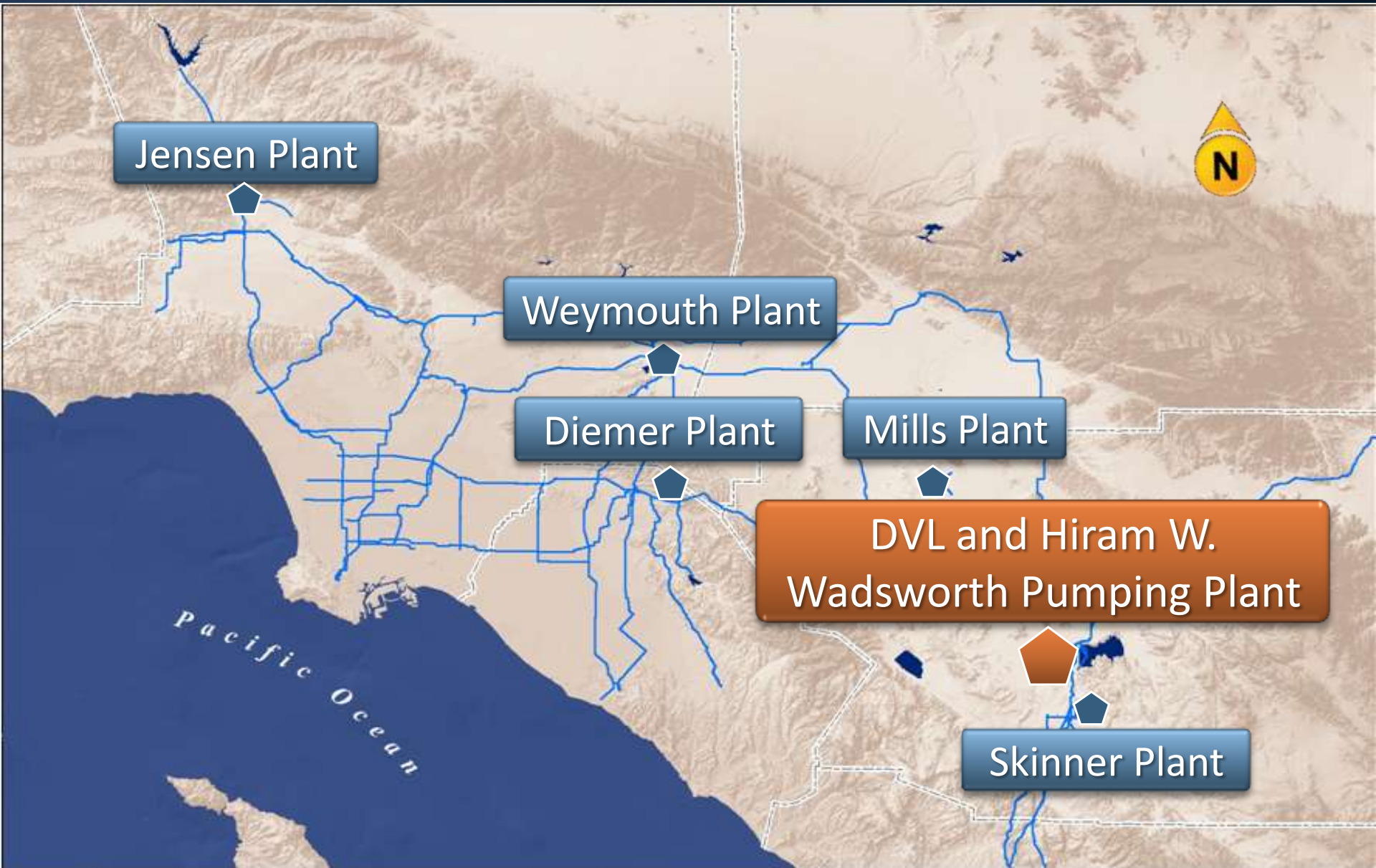
Item 7-8

March 11, 2013

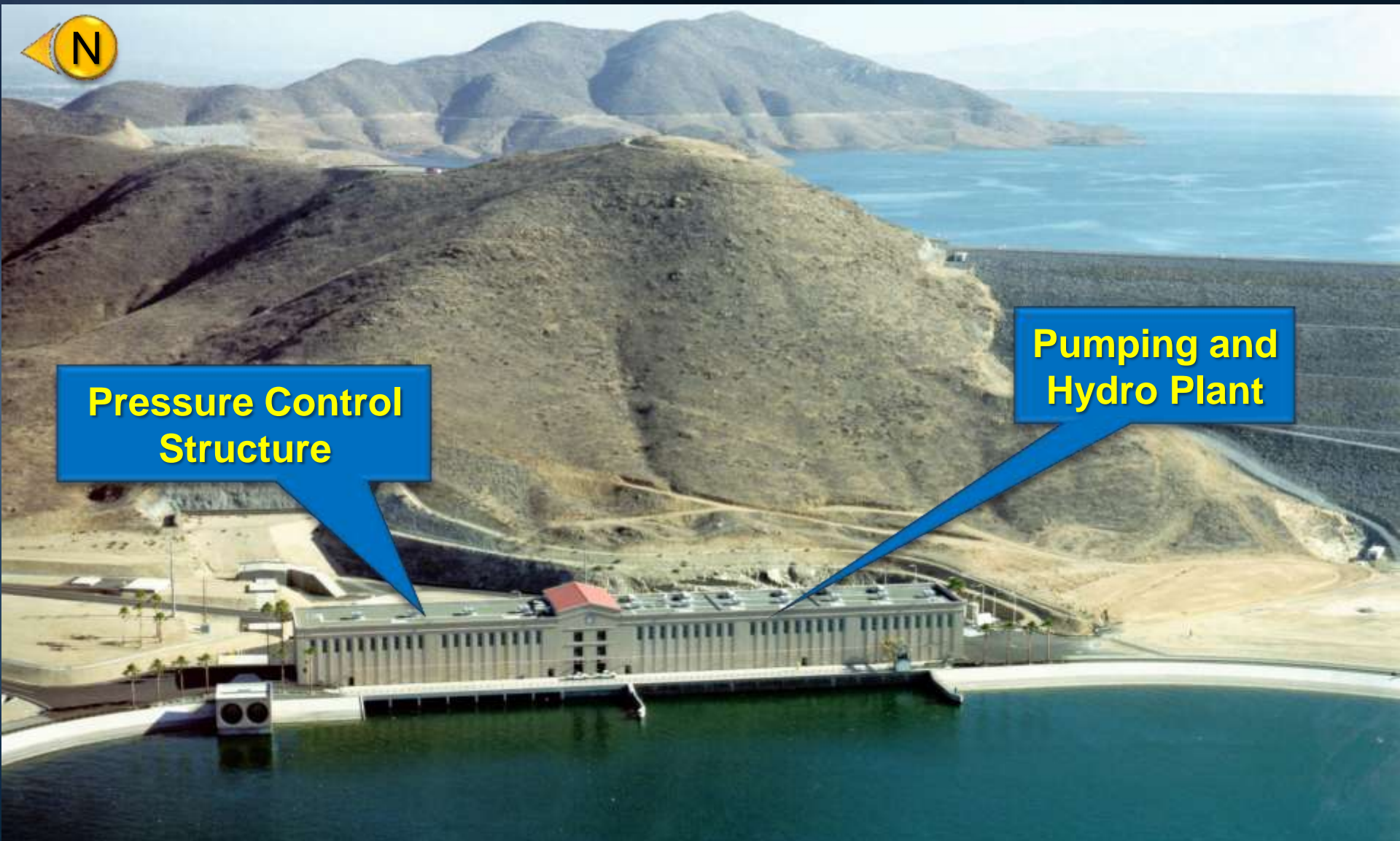
Current Action

- Authorize amendment to professional services agreement with Power-Tech Engineers, Inc.
- No additional funds required; sufficient funds previously appropriated

Distribution System



DVL and Wadsworth Pumping Plant



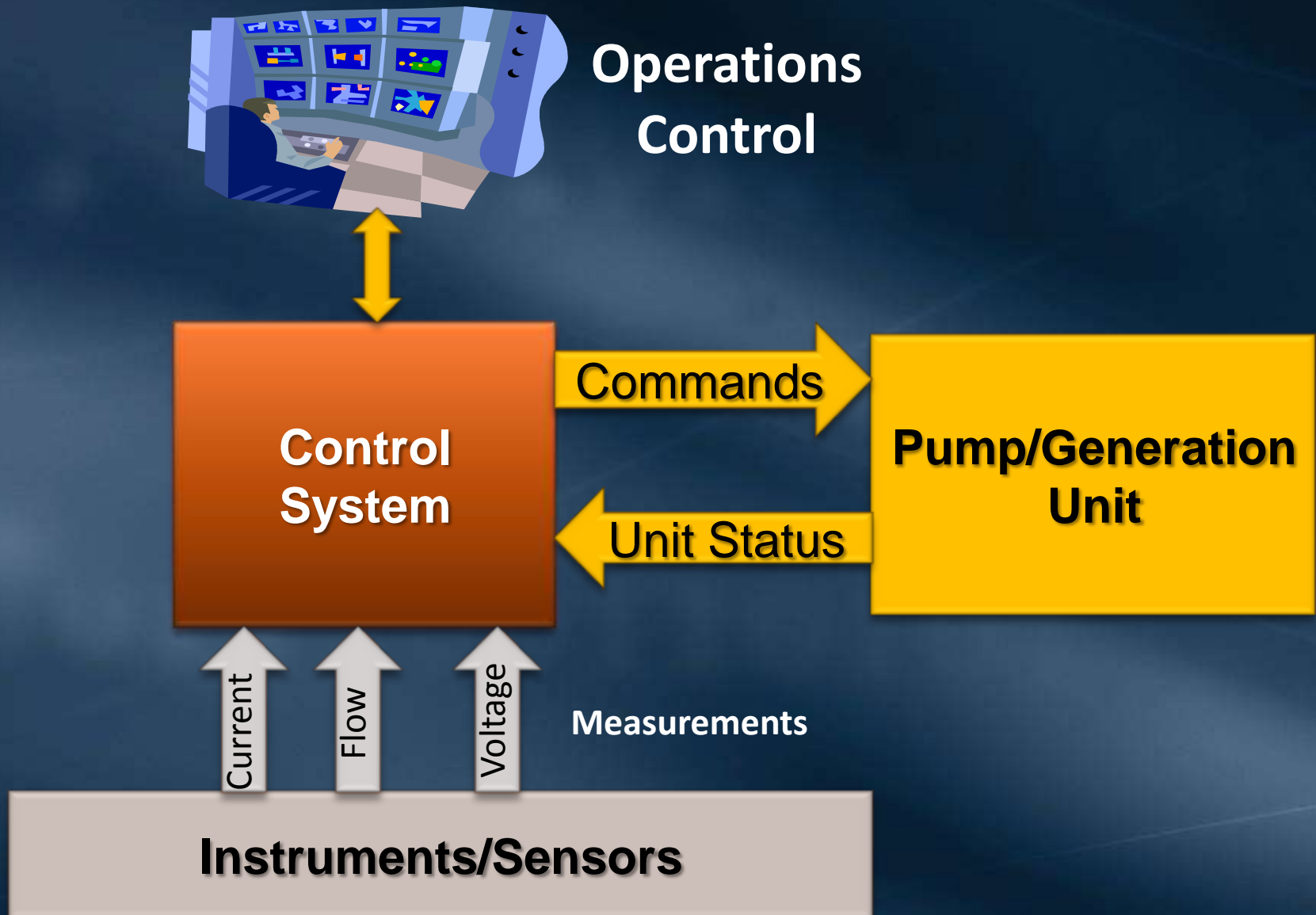
**Pressure Control
Structure**

**Pumping and
Hydro Plant**

Background

- Major equipment is aging and failure rates are increasing:
 - Control system hardware and software (PLC's)
 - Protection relay systems
 - Vibration monitoring systems
 - Pump/generator power control components
 - Communication networks
- Currently in Preliminary Design Phase to replace above items

Pump/Generation Operation & Control



Typical Pump/Generator Controls



**Programmable
Logic
Controller**



**Automatic
Voltage
Controller**

Scope of Prototype Development and Testing

- Install a new PLC, in place of an old one, on a single pump/generator unit
- Connect to plant communications network
- Prepare and install necessary code for pump/generator control
- Physically test pump/generator operation on new PLC and control code

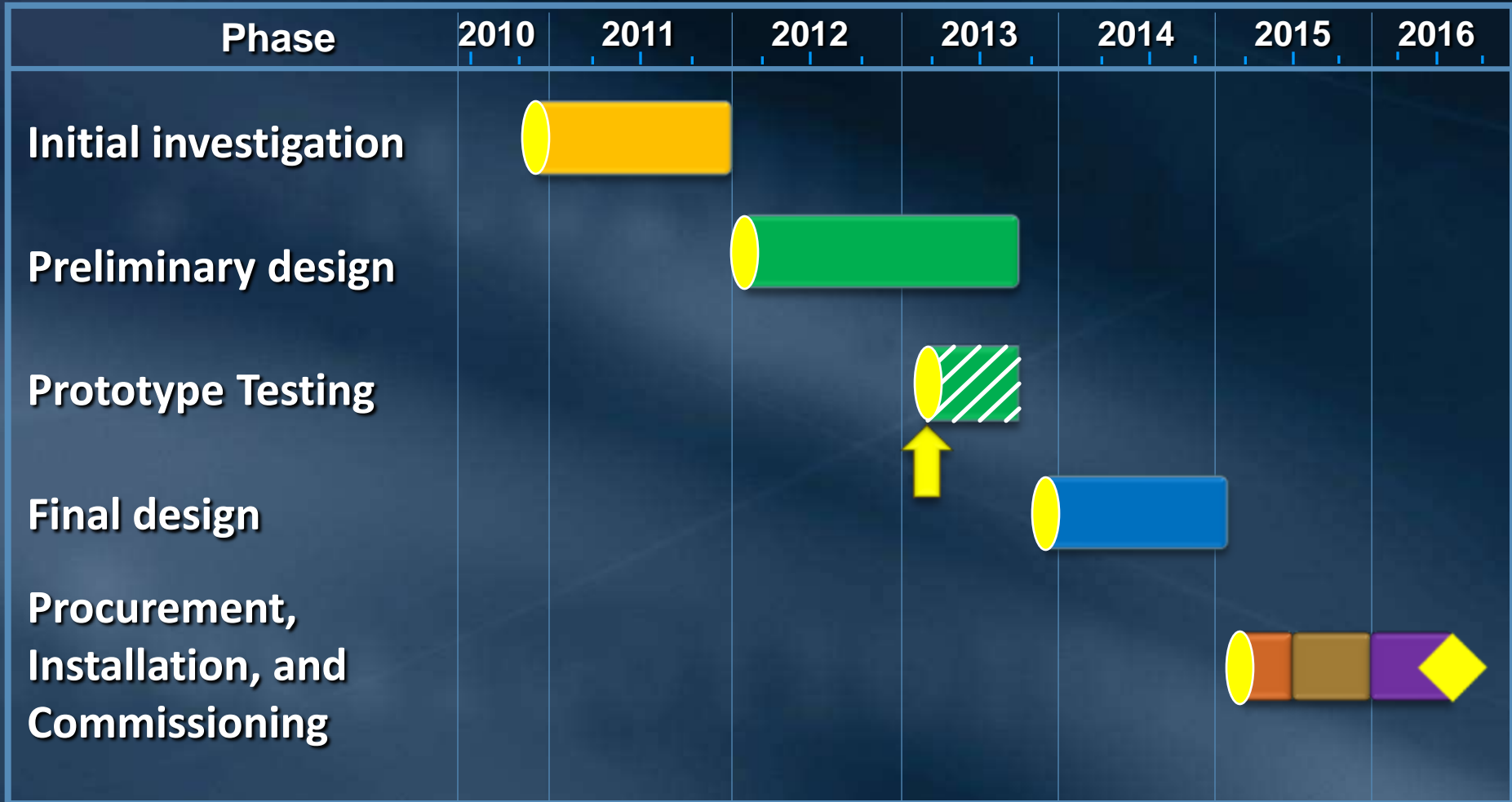
Prototype Testing Benefits

- Standard procedure, required before going live
- Early confirmation of Preliminary Design decisions
- Assures operability
- Minimizes operational and project risks
- Enhances Metropolitan's leverage and position in Final Design negotiations of scope, budget

Professional Agreement Amendment

- Power-Tech Engineers, Inc.
 - Existing agreement for Preliminary Design Owner's Engineering Services: \$298,000
 - Amendment for Prototype Development and Testing: \$206,000
 - New Preliminary Design Owner's Engineering Services: \$504,000
 - Competitively selected (RFP 989)
 - SBE participation level: 100%

Project Schedule



Board Action



Complete Construction

Board Options

- Option #1
 - Adopt CEQA determination
 - Authorize amendment to agreement with Power-Tech Engineers, Inc.
- Option #2
 - Do not authorize the amendment

Staff Recommendation

- Option #1

