# FAARM Collaboration Meeting

## LUX Water Purification System

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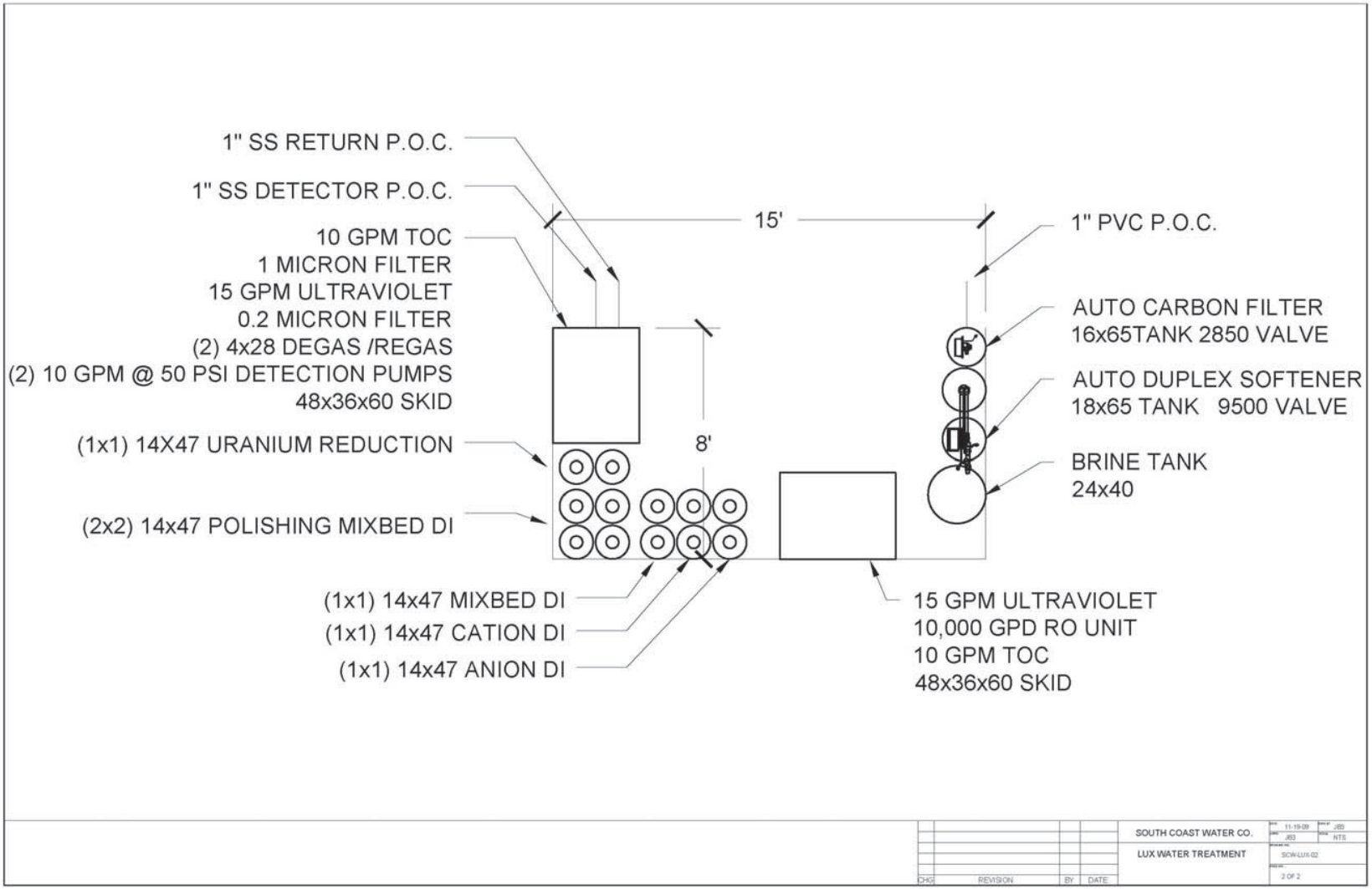
# Status

- SDSTA retained South Coast Water to provide the water system
- Schematic design has been submitted

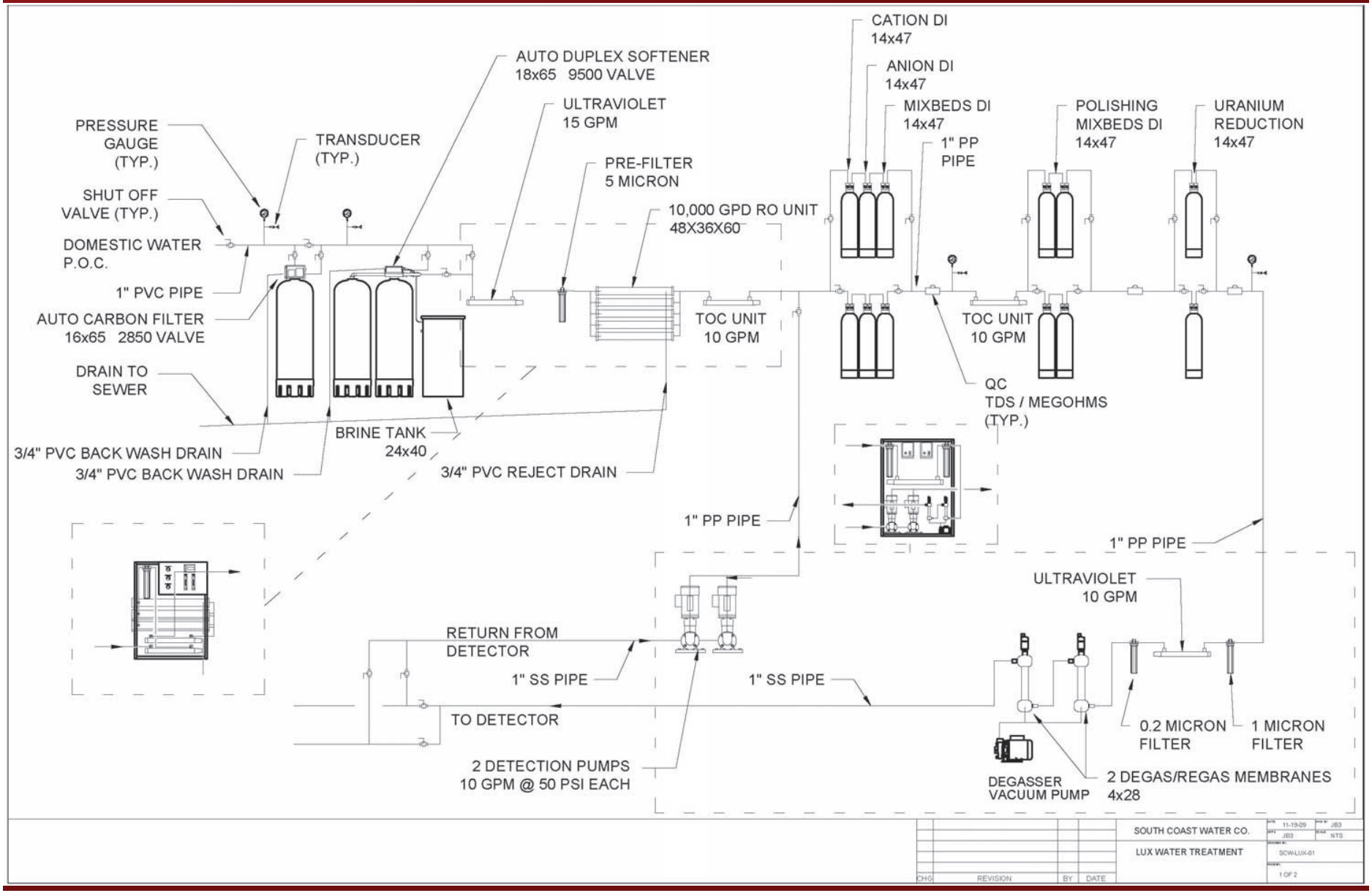
# Specifications

- Fill and recirculate water at least 7 gpm
- Electrical resistivity at least 18 MΩ/cm @ 298 K (25 degrees C)
- Coliform bacteria less than less than 10/1000ml
- Total organic carbons less than 50 ppb
- Water degassed via vacuum degasification & regassed with nitrogen
- Uranium shall be <0.002 ppb (tested via UCD ICPMS)
- Thorium shall be <0.004 ppb (tested via UCD ICPMS)
- Dissolved Oxygen shall be <0.5 ppm
- Filtered via ultrafiltration in two stages: 5 microns followed by 0.2 microns

# Water Treatment Plan



# Water Treatment Schematic



# Radon Control

- System uses non-metallic components
- Subject to radon transmission
- Options
  - Non-metallic components 60 percent more
  - Radon controlled enclosure (e.g. sprayed lining like Tekflex)

# Instrumentation

- Resistivity Monitoring
  - Supply and Return
- Flow Rate Monitoring
  - Fill Rate, Supply and Return
- Temperature
  - Supply and Return
- Dissolved Oxygen
  - Supply and Return

# Cost

- $118,000

- Questions?