

Placing a 6.0 MG Tank and Pump Station within a Residential Neighborhood



Skagit PUD Overview

- Formed in 1937
- Largest water system in Skagit County
- 23,000 active services
- 24 MGD treatment capacity
- 27 pressure zones
- 22 reservoirs
- 29,881,000 gallons of storage capacity
- 589 miles of pipe



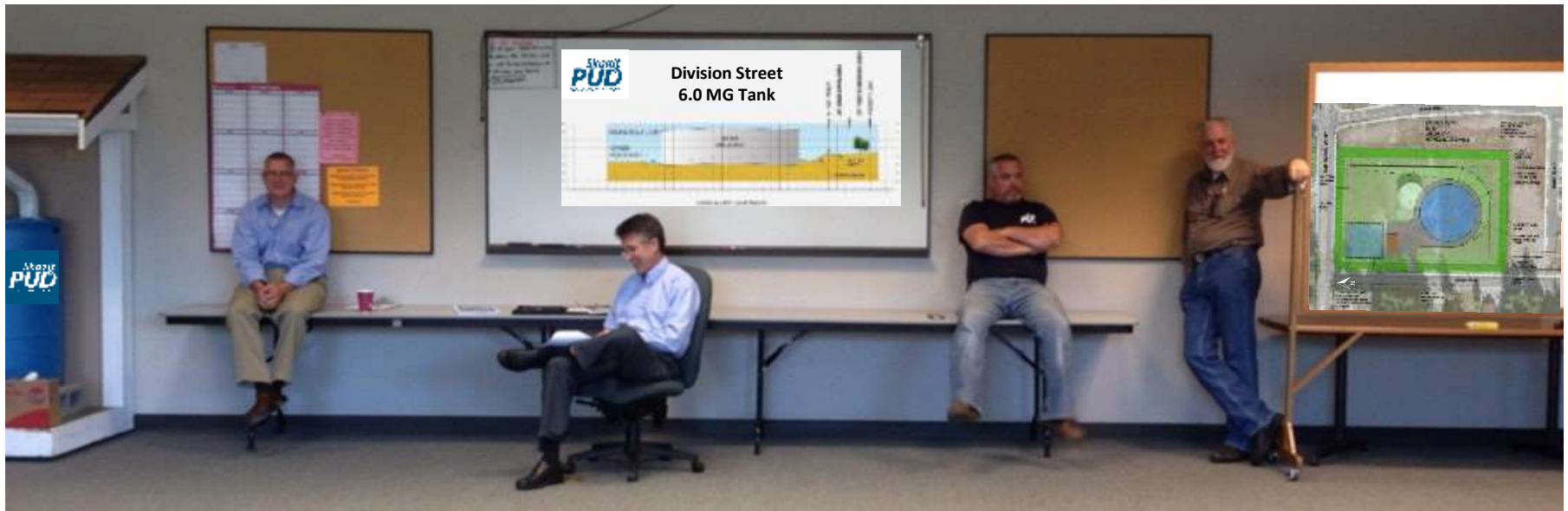
Why Are We Doing This Project?

- Additional storage needed
- Existing 1.0 MG tank requires ongoing O&M
- Only one pump station serves 560 Zone



Public Outreach

- District newsletter
- District website
- Press release and news articles
- Budget article
- Door to door visits
- Public information /open house meetings



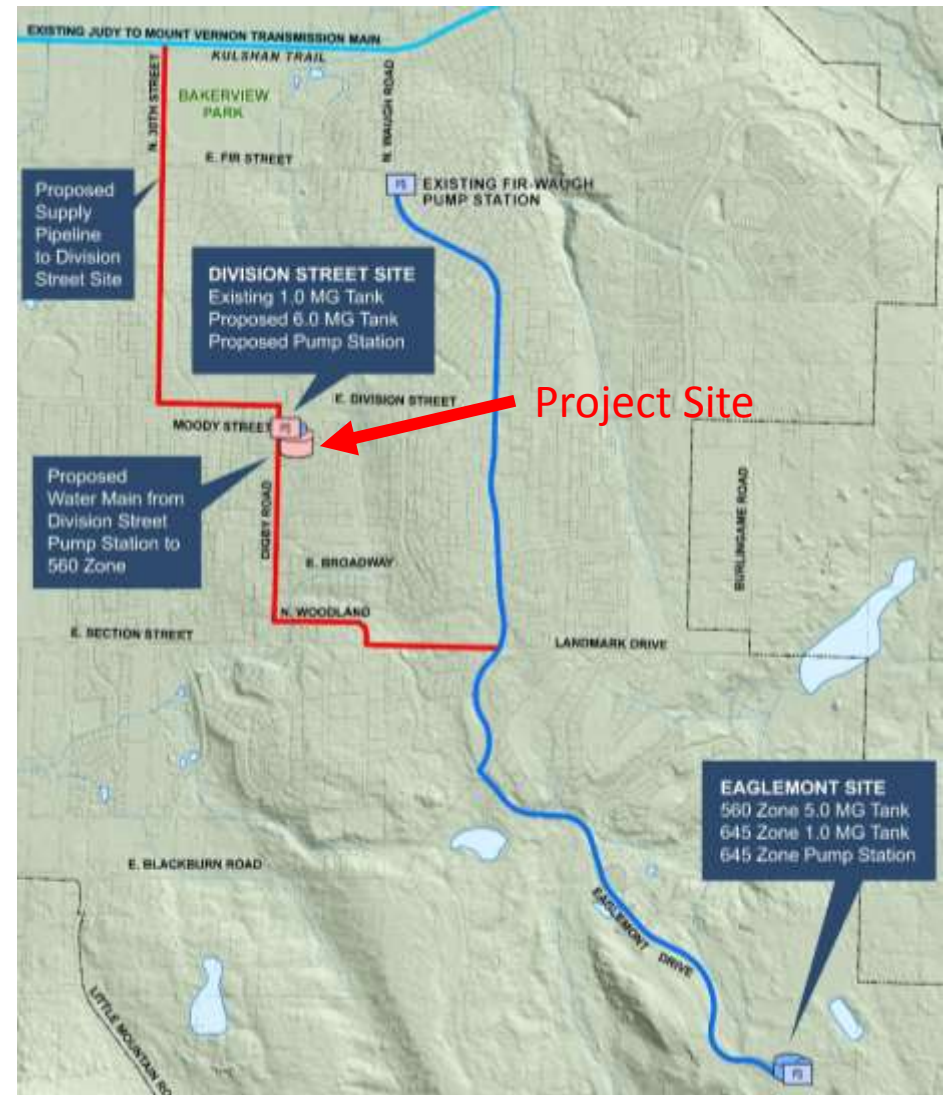
Team Approach

Designed by Skagit PUD

- Supply pipeline: 7000' of 18"
- Pump station pipeline: 2500' of 12"

Designed by MSA

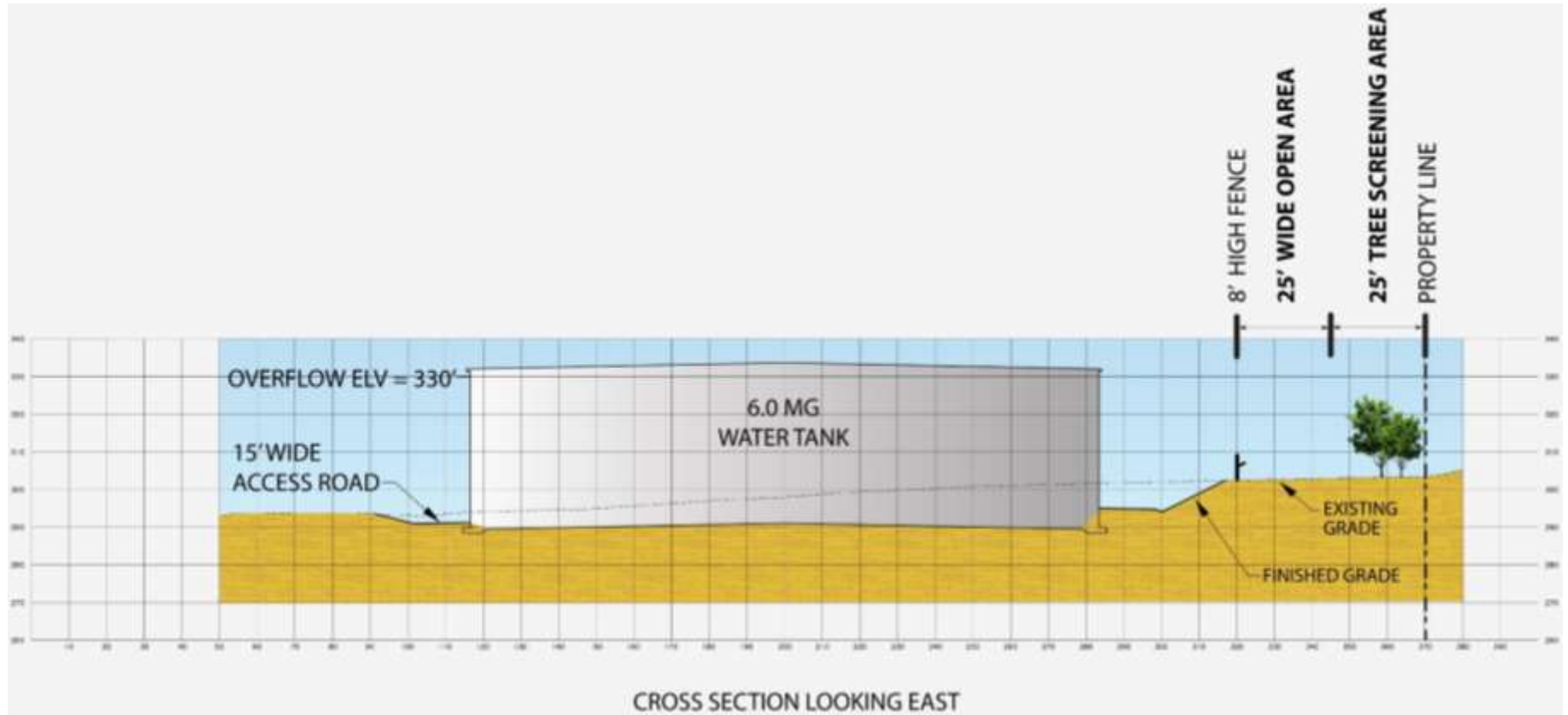
- 6.0 MG prestressed concrete tank
- 1500 gpm pump station



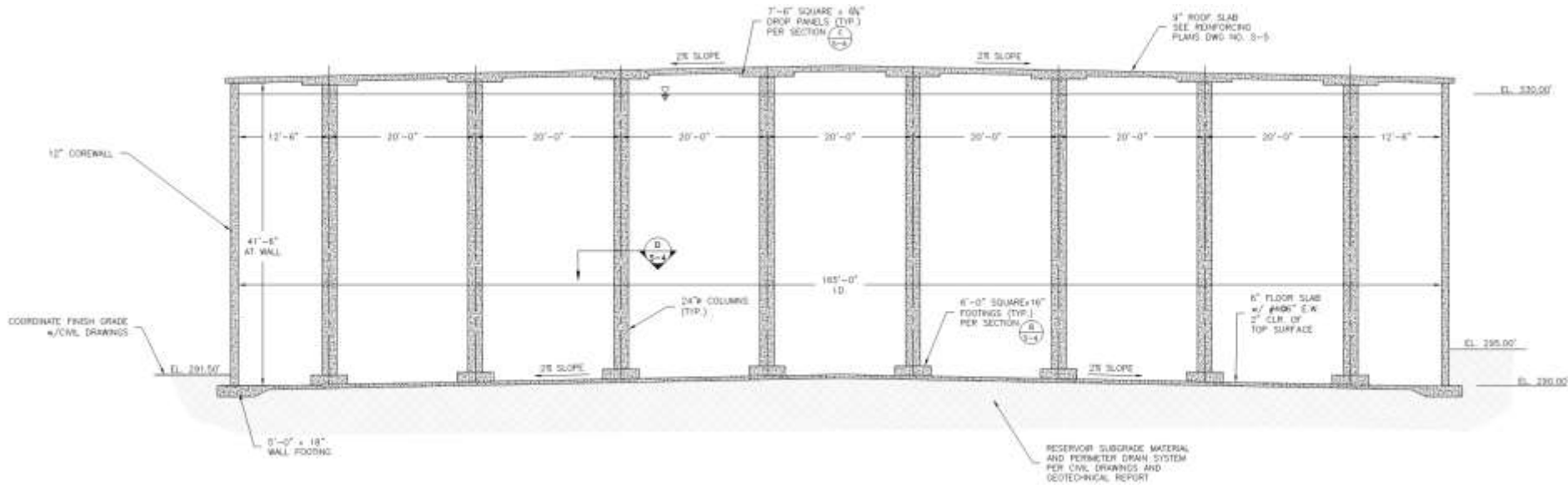
Project Overview



Proposed 6.0 MG Tank Conceptual Profile



Proposed 6.0 MG Tank Section



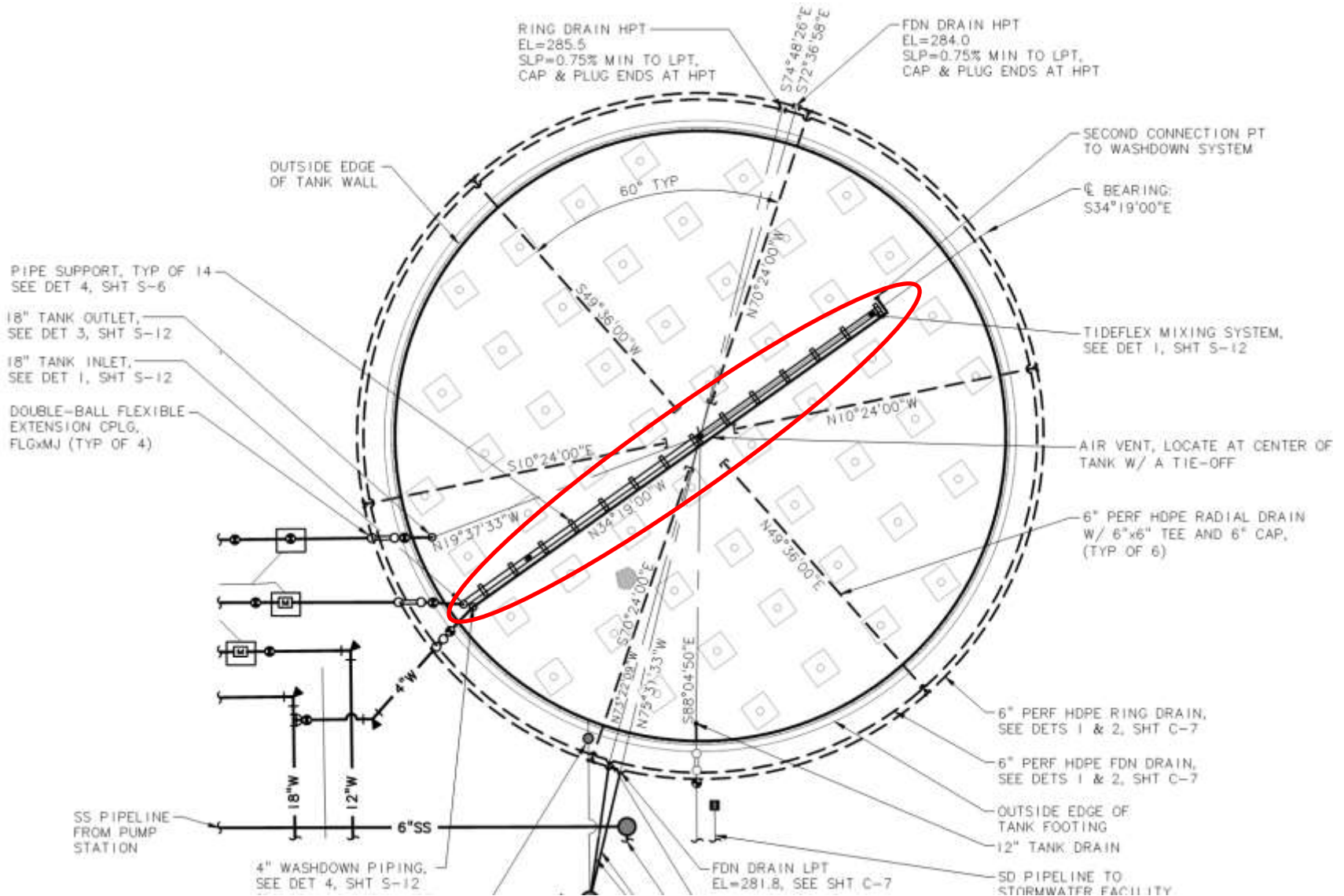
- Type I prestressed concrete tank
- Diameter = 165', wall height = 41.5'
- (52) 24" diameter columns

Maintaining Water Quality

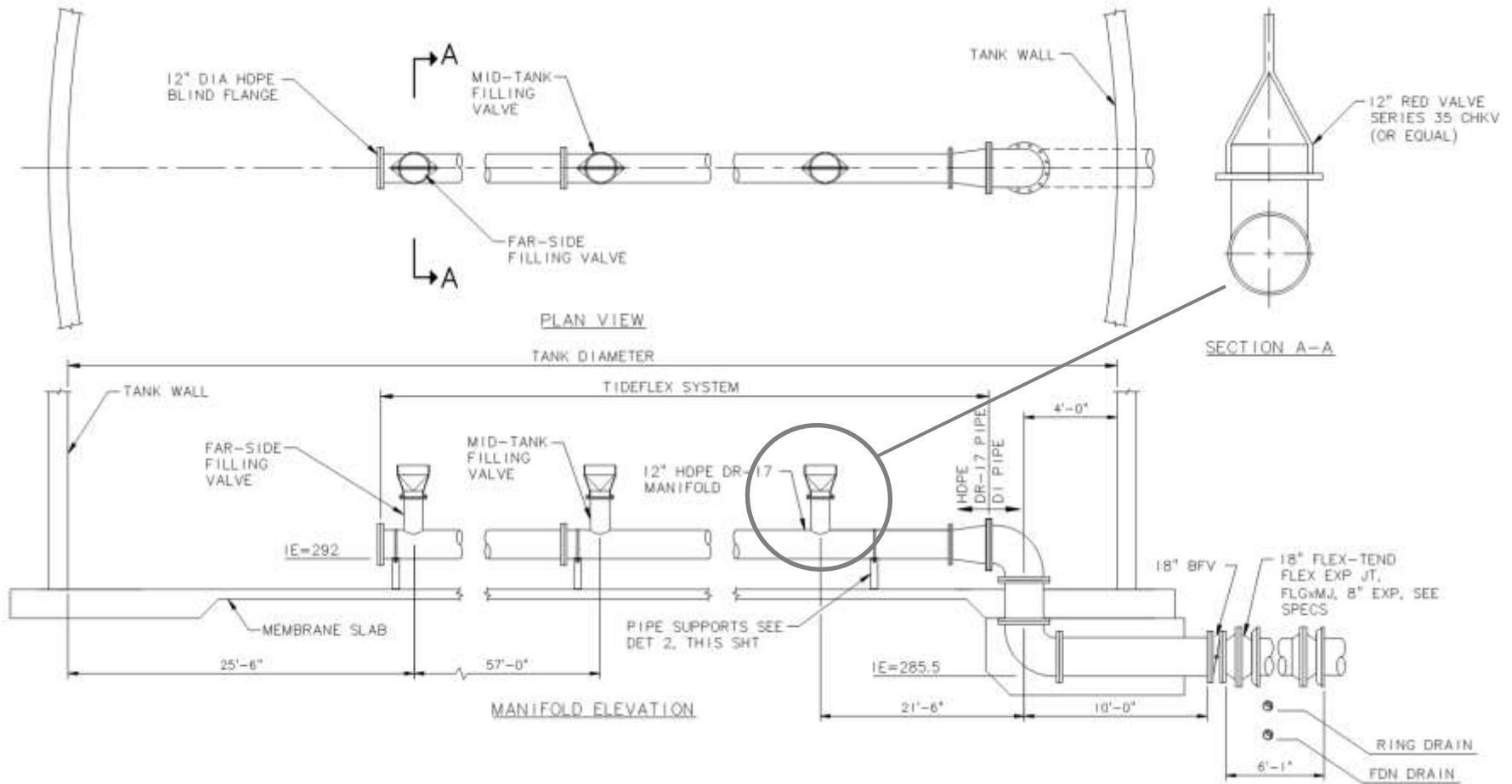
- New dedicated supply inlet to tank
- All supply to 330 Zone goes through tank
- Tideflex manifold system to achieve mixing



Tank Inlet Mixing System



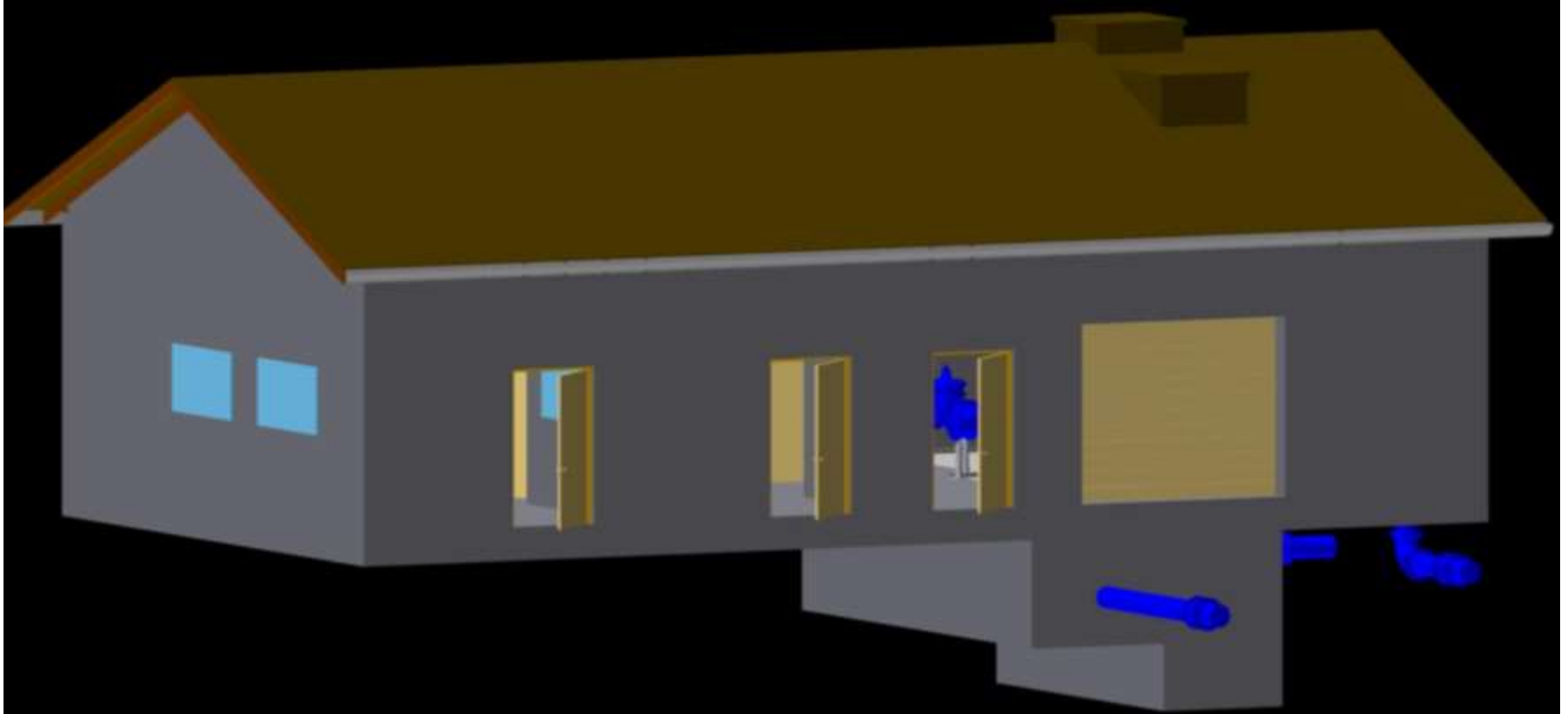
Tank Inlet Mixing System



Example - Completed Prestressed Concrete Tank

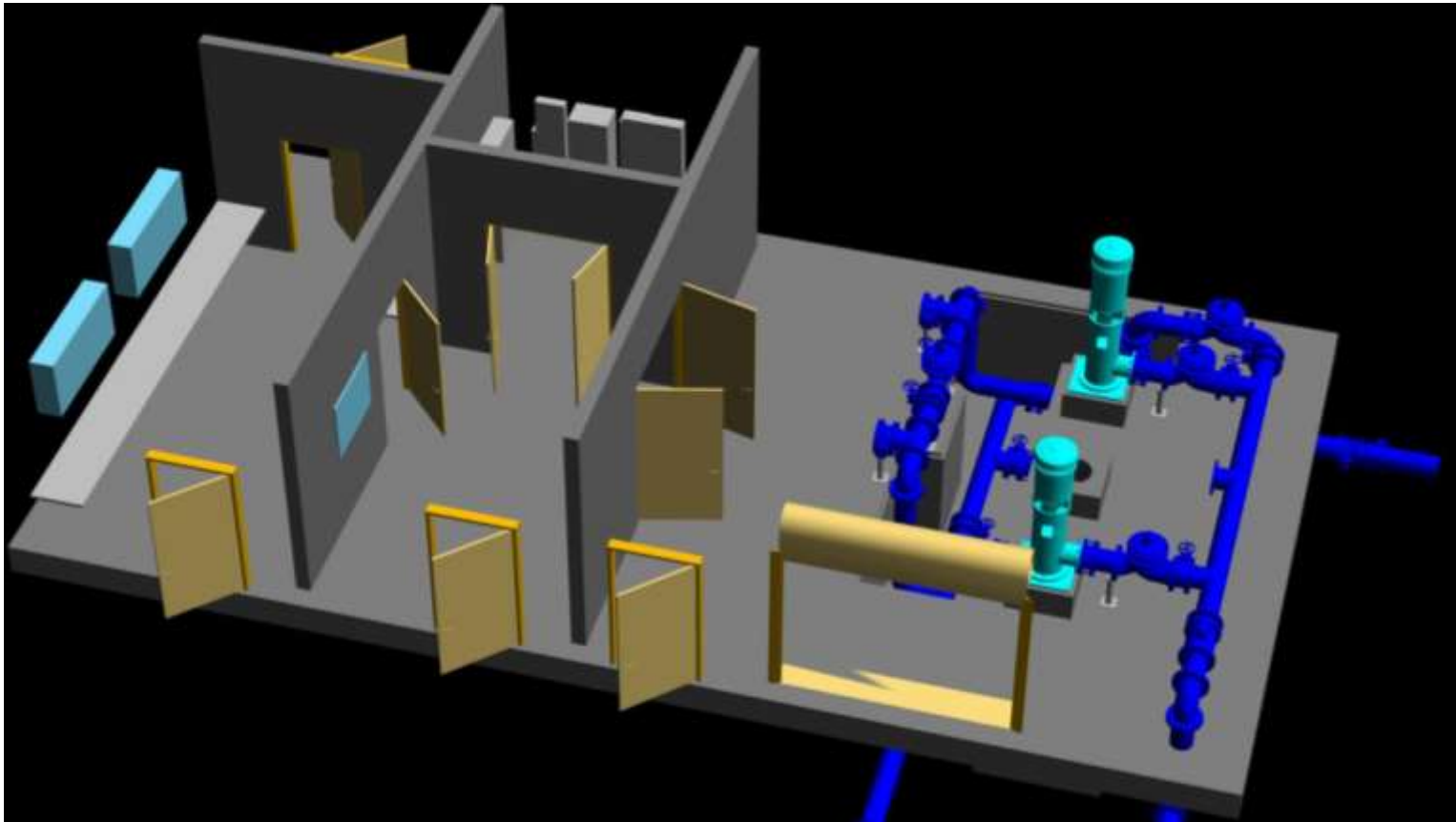


Proposed 1500 gpm Pump Station



- 30' x 55' building with operations room
- Split-face CMU block walls
- Standing seam metal roof

Proposed 1500 gpm Pump Station



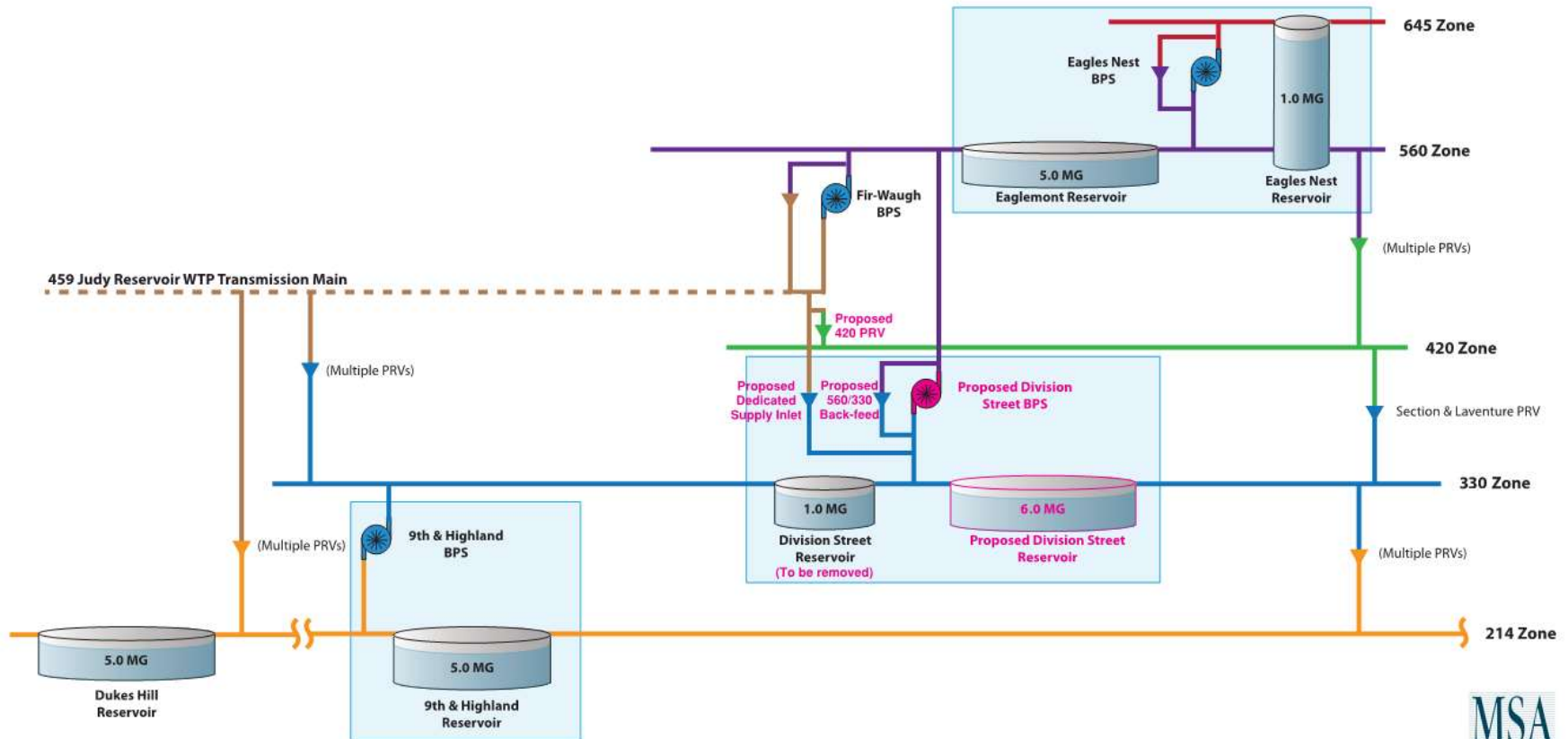
- Vertical turbine pumps with VFDs
- Supply from 6.0 MG tank or transmission main
- Back-feed multiple zones

Operational Improvements

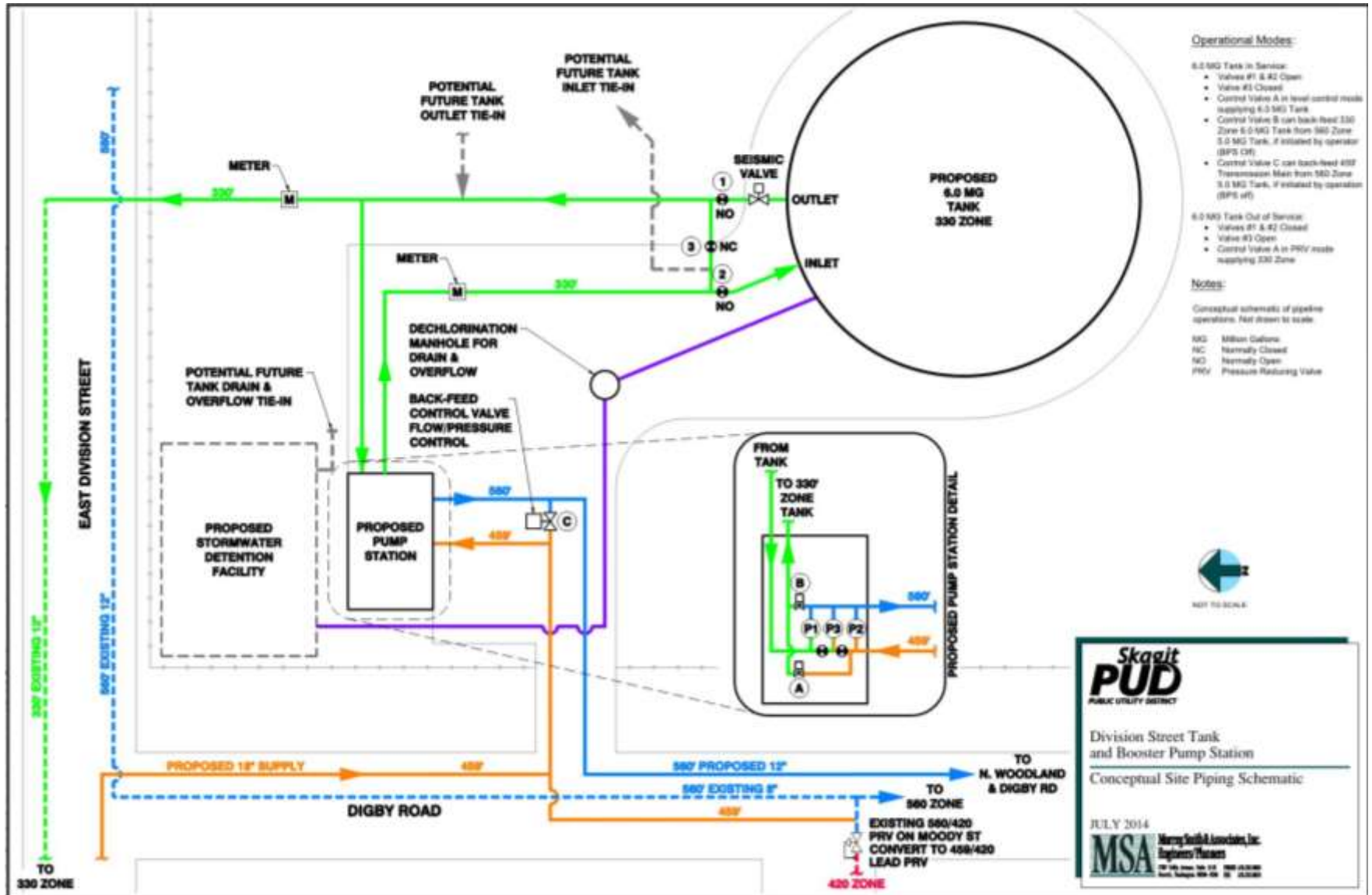


Judy System Hydraulic Profile Mount Vernon Major Facilities

North ← → South



Operational Improvements



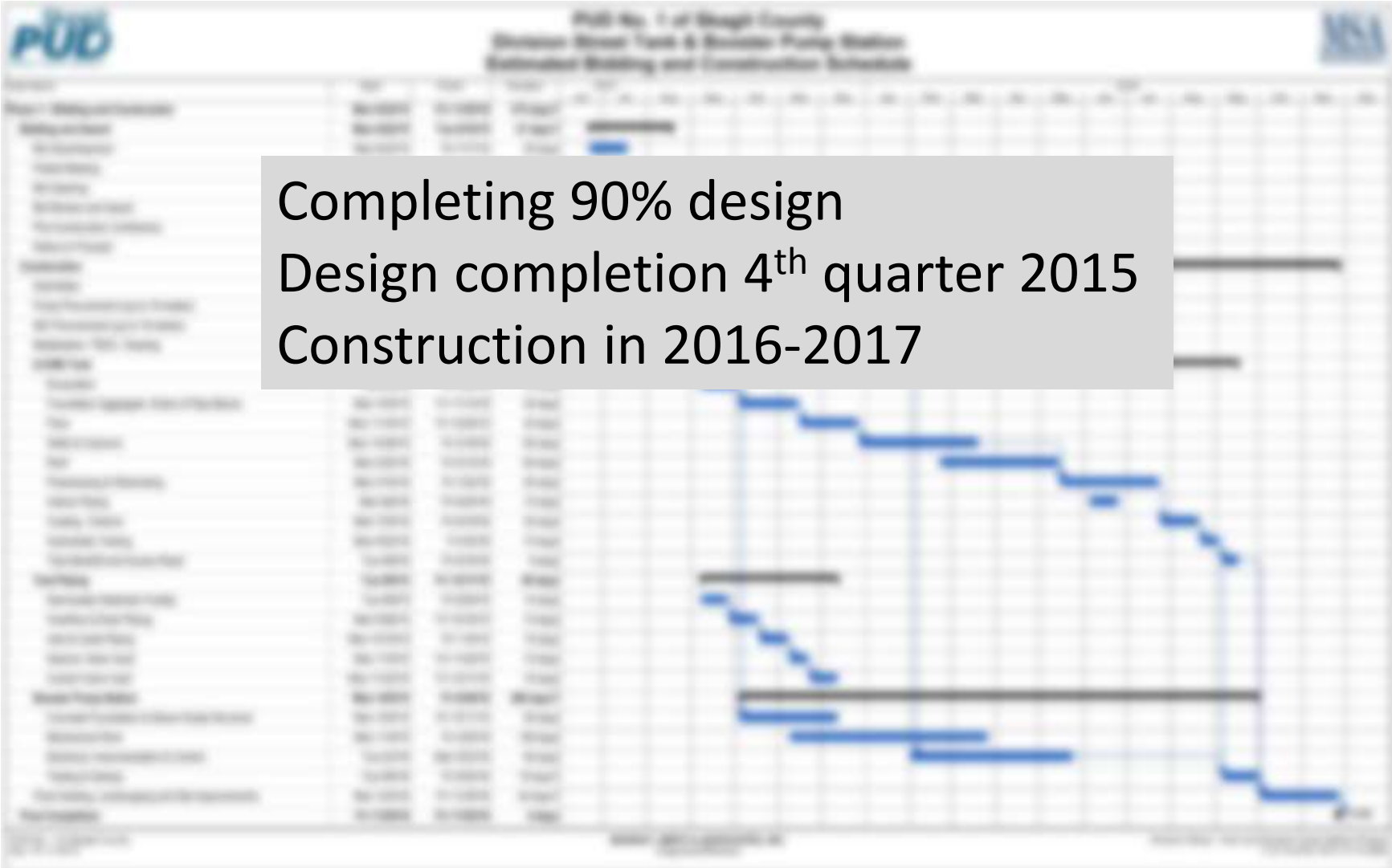
Skagit PUD
 PUBLIC UTILITY DISTRICT

Division Street Tank and Booster Pump Station
 Conceptual Site Piping Schematic

JULY 2014

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Project Status



Completing 90% design
Design completion 4th quarter 2015
Construction in 2016-2017

Questions

