

**Project Identifier:** BP-2

**CIP Budget:** \$30,000

**Project Name:** 21<sup>st</sup> Street Booster Suction  
Transmission Main Modifications

**Funding Source:** Rates

**PROJECT DESCRIPTION:** This project interconnects the existing parallel 16-inch converse steel and 16-inch cast iron transmission mains near the intersection of 16<sup>th</sup> Avenue and 29<sup>th</sup> Street adjacent to the High Reservoir and adds an isolation valve.

**NEED OR JUSTIFICATION:** All flow to the suction side of the 21<sup>st</sup> Street Booster is currently handled by a single 16-inch converse steel transmission main. During high demand periods, operation of the booster station at 3,800 gpm can reduce system pressure on the suction side of the pumps to as little as 7 psi due to excessive head loss in the suction main. Interconnecting these two mains so they function in parallel will reduce head loss and provide additional suction pressure to the booster pumps during peak day demand based. These suction pressure improvements were evaluated based on hydraulic modeling simulation of the local transmission and distribution system.

**Project Identifier:** BP-3

**CIP Budget:** \$120,000

**Project Name:** Southport No. 1 Booster Intertie

**Funding Source:** Rates

**PROJECT DESCRIPTION:** This system intertie project will allow the existing non-operational Southport No. 1 Booster station to transfer water supply from Well No. 5 reservoir to the Southwest reservoir. Prior to construction of the existing Southport booster station, the Southport Service Level was pressurized by the Southport No. 1 booster station located adjacent to the Well No. 5 Reservoir. The booster station is not currently in use, but remains in operational condition. This project will add yard piping and isolation valves to connect the Well No. 5 Reservoir to the suction side of the Southport No. 1 booster station, and the discharge side to the transmission main connecting the Well No. 5 Reservoir and the Southwest Reservoir. This will allow the booster pumps to transfer water from the Well No. 5 Reservoir to the Southwest Reservoir, which is not currently possible.

The booster station is equipped with flow and pressure measurement instrumentation and is already integrated into the City's SCADA system, so extensive instrumentation upgrades will not be necessary. Modifications to the booster station programming will be required to allow the station to operate correctly when pumping to the Southwest Reservoir instead of the Southport Service Level.

**NEED OR JUSTIFICATION:** The West System lacks adequate firm capacity to meet peak design demand. This project would address this deficiency by allowing excess Well No. 5 capacity to be utilized in the West System, and also provides a redundant source of supply for the West System.