

**TOWN OF EARL PARK
WATER WELL NO. 3 AND TRANSMISSION MAIN
CONTRACTS A & B**

Summary

- The project includes installation of approximately 4050 feet of open cut water main pipe, installation of a well pump utilizing variable frequency drives (VFD) to operate the pump, installation of variable frequency drives (VFD) on the two existing well pumps, installation of an access road to maintain the new well, fencing, generator, electrical, and controls.
- Loan Amount = \$110,00
- Estimated construction cost = \$527,000
 - Pump, Motor, and VFD's = \$71,307
 - Other Costs = \$452,000
- **The total GPR portion of the total project cost is \$71,307, based on bids. This falls into the energy efficiency category of the GPR components.**

Background

- The project involves the installation of a new well for the Town. The existing wells (Well #1 and #2) have experienced problems over the years producing inadequate water quality and quantities to the residents. Pump Tests have revealed that the proposed well site has sufficient water quality and capacity to serve the community.
- The distribution system contains two horizontal storage tanks, 20,000 gallon and 22,000 gallon. These tanks are elevated approximately two (2) feet above the floor level and are connected to an air compressor that helps maintain pressure in the system. The system pressure ranges between 45 and 55 psi and is maintained by the head pressure from the well and the air pressure system.

Results

- Well No. 3 will be a 7.5 hp pump rated at 100 gpm at 250 feet TDH and will use a VFD. The existing two wells (10 hp and 15 hp) will also be retrofitted with VFD's.

Annual Energy Savings

Well #1	\$114
Well #2	\$72
Well #3	\$69

Conclusion

- At 5.5 cents per kW, energy reductions from the pumps utilizing VFD technology will save approximately \$255 annually.