



## CITY COUNCIL AGENDA ITEMS

**To:** Mayor Graham and City Council  
**From:** Dennis Sullivan, Director of Engineering & Public Works  
Walter Denton, City Administrator  
**Date:** March 15, 2010  
**Subject:** MOTION – Variable Frequency Drive Installation, Orbital Oxidation Ditch

**List of committees that have reviewed:** None

**Background:** The air entrainment disks that put oxygen into the orbital ditch at the City of O'Fallon Wastewater Treatment Plant (WWTP) are driven by 10 electrical, high-wattage motors that run at 100% capacity. They are currently operated either on or off. Optimal treatment of the wastewater in the ditch can be achieved everyday with less than 100% usage. Variable frequency drives (VFDs) are needed to control motor speed and reduce electrical consumption. Currently under an Illinois Department of Commerce and Economic Opportunity (DECO) program, the City of O'Fallon qualifies for an 80% rebate for the installation cost of the VFDs. (A program similar to the traffic light conversion program carried out several years ago by the City.) The 80% rebate is based on a set formula that takes into account the amount of electrical savings that can be generated by the VFD installation. The electrical savings are estimated conservatively at \$30,000 per year. Two installers that have provided electrical services to the City before provided bids on the installation of the 10 VFDs. The bids were \$61,136 and \$59,810 as the cost for the drive manufacturers is very competitive and the installation is the smaller fraction of the total cost. .

**Legal Considerations, if any:** None, beyond contracting for construction services.

**Budget Impact:** Funding for the installation will come from funds set aside for maintenance and repair of equipment at the WWTP in the current FY10 operation budget.

**Staff Recommendation:** Staff recommends that the VFDs be procured and installed by the low bidder, Illinois Electric Works of Granite City, based on their quote of \$59,810. The rebate amount should be \$47,818, resulting in the final cost to the City of \$11,962 with a payback period of less than 6 months..