



# Tech notes



[www.romtecutilities.com](http://www.romtecutilities.com)

Pre-engineered Package Lift Stations for Wastewater and Stormwater

March 2006

Product Information & Updates • Installation & Technical Tips

## THIS EDITION OF

**TECH NOTES** looks at the importance of designing lift stations in accordance with municipal standards. Standards are generally established for these areas:

- structural
- mechanical
- electrical
- communication

Romtec Utilities places a high priority on understanding and meeting these standards before the lift station is specified or built. This gives our customers the assurance that key parts of the system will not have to be modified to meet standards at a later date. When sizing and/or configuring stations, our goal at Romtec Utilities is to design the lift station in accordance with your particular municipal standards from the very beginning. We make you look good, and we make your lift station work better.

ITT Flygt is a strategic partner of Romtec Utilities and the world's leading manufacturer and supplier of submersible pumps and monitoring systems.



Romtec Utilities is a dedicated integrator of submersible pumps and lift station equipment manufactured by ITT Flygt.

## Meeting city standards

Over time, virtually every public water or wastewater agency has established "collection system standards" for pump stations. These standards typically cover the structural, mechanical, electrical and communication of pump station design, engineering, fabrication and operation.

Some of these standards are simple. Only concrete wells are allowed, or perhaps the wells have to be lined or have certain material requirements within the wells. Valve vaults may have to have certain levels of bypass or levels of coating.

Some of the standards are more complex, particularly within the electrical and communication areas. What are the redundancy and back-up requirements? At what point are VFDs needed in terms of horsepower? Is it a SCADA

system? What are the communication requirements? Is sound attenuation is

needed? Does the system have air injection/chemical feeds/odor control?

*(continued)*

**MUNICIPAL LIFT STATION STANDARDS**

<p><b>ELECTRICAL</b></p> <ul style="list-style-type: none"> <li>■ Standby Power</li> <li>■ Redundancy</li> <li>■ Accommodation for Odor Control, Chemical Feed, Air Injection</li> </ul>	<p><b>COMMUNICATIONS</b></p> <ul style="list-style-type: none"> <li>■ Specific Controller</li> <li>■ Compatible SCADA Software</li> <li>■ Means of Telemetry</li> <li>■ Redundancy</li> </ul>
<p><b>STRUCTURAL</b></p> <ul style="list-style-type: none"> <li>■ Uplift/Seismic (i.e., concrete only)</li> <li>■ Lined or Unlined Wetwell</li> </ul>	<p><b>MECHANICAL</b></p> <ul style="list-style-type: none"> <li>■ Valve Vault Configuration</li> <li>■ Discharge Piping Size</li> <li>■ Flow Metering</li> </ul>

# ROMTEC UTILITIES

18240 North Bank Rd., Roseburg, OR 97470  
541.496.3541 • [info@romtecutilities.com](mailto:info@romtecutilities.com) • [www.romtecutilities.com](http://www.romtecutilities.com)



# Tech notes

Product Information & Updates • Installation & Technical Tips

## ROMTEC UTILITIES

18240 North Bank Rd., Roseburg, OR 97470

• 541.496.3541 • [info@romtecutilities.com](mailto:info@romtecutilities.com) •

[www.romtecutilities.com](http://www.romtecutilities.com)

### Pre-engineered Package Lift Stations for Wastewater and Stormwater

#### The problem

Whatever they are, the standards exist and it's important to maintain them. But the unfortunate

truth is that many times standards are unknown or ignored until pump station development is well under way. This results

in expensive last-minute changes to the system, and reflects poorly on the planning skills of the engineer or contractor.

If an engineer discovers that a lift station has to fit into a particular SCADA system after the design phase, for example, he has a problem. Changes to meet that standard must be made to the communication system, to the electrical system and perhaps even the mechanical and structural components. The communication standard should have been factored in at the beginning of the design process, rather than being an afterthought.

#### The solution

The first rule of thumb when developing pumping systems within a particular water district is to ask the district for the published standards relative to lift stations. In particular, be mindful of electrical and communication standards, which are frequently exacting.

At Romtec Utilities, we always have the big picture in mind. We pride ourselves on meeting whatever standards already exist. Before doing

anything, we get a full grasp of municipal standards. Our application engineers will discuss it with the agency, and will even make a site visit if necessary.

Our goal is to design and build your lift station in accordance with your standards from the very beginning of the process.



Electrical and communication systems are often subject to complex municipal standards that are most efficiently dealt with during the lift station's design phase. At top, an enclosed the Cummins standby generator is housed in a QuietSite II sound-attenuation closure, a common standard in many municipalities. It is also common to find guidelines for the look of a finished submersible lift station site, at bottom.

### FOR MORE INFORMATION:

As part of its complimentary design and engineering services, Romtec Utilities, Inc., supplies complete engineered plans and specifications valid in all states, plus technical support for system sizing and configuration.

The lift stations are designed for ease of installation, efficient and reliable operation and low maintenance.

The entire lift station and all components arrive at the job site in a single shipment ready for installation.

For more information, call Romtec Utilities at 541-496-3541 or visit our website at [www.romtecutilities.com](http://www.romtecutilities.com).