



# *Safety Rest Area Pump Station Review and Assessment*

## **Are Rest Area Repairs Overwhelming Your Budget? Know When It's Time to Replace.**

### **PROBLEM**

At 4 of the safety rest areas in Southwest Virginia (Bristol Welcome Center, Abingdon Truck Rest Area, Atkins Rest Area, and Ironto Rest Area) the existing wastewater pump stations were reaching end of life or experiencing higher than normal levels of repairs.

### **SOLUTION**

VDOT requested PILLAR to perform a condition assessment on general site, structural, mechanical, and electrical conditions along with the pumping performance measurements and make recommendations for either repair or replacement. PILLAR performed site visits at the 4 locations to condition assess each system. We recommended 3 systems be replaced at a cost of \$470,000, \$797,000, and \$972,000 respectively. The 4th system could be refurbished or replaced.

### **APPROACH**

Our professionals thoroughly examined each component of the 4 lift stations. They noted general site observations as well as structural, mechanical, and electrical observations. Their condition assessment included:

- Documenting findings with photos
- testing electrical connections
- examining and evaluating all piping and valves.
- activating pumps and conducted drawdown tests to determine pumping performance.
- reviewing historical maintenance records
- interviewing rest area attendants to determine issues and routine operating procedures or workarounds.
- activating back-up generators and cycling through a pump run-time.

They compiled a report detailing the system components and findings from the assessment along with recommendations for each system. Findings included:

- Bristol – fair operating condition, poor physical condition due to corroded drywell piping and leaking valves. Either rehab or replace.
- Abingdon – poor physical condition, fair operating condition; confined space entry, age of station, excessive maintenance, excessive stormwater infiltration and moderate to severe corrosion, recommend new pumping station be installed.
- Adkins – fair physical and operating condition but because of severely corroded wetwell piping, fittings, and pump, along with inadequate vehicular site access, age, failing run capacitors, replace with new.
- Ironto – fair condition but due to age, poor security, lack of access and inadequate site drainage, new station be installed.