

**LANCASTER COUNTY WATER & SEWER DISTRICT
SEWER LIFT STATION
GENERAL PROVISIONS**

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- I. **SEWER LIFT STATION:** The Contractor shall furnish and install (substantially to the lines, grades, elevations, and dimensions as shown on the plans) one complete lift station with all needed equipment in a pre-cast concrete wet well or other District approved manufactured wet wells. The station shall be furnished of sufficient dimensions as outlined on the District approved plans.

OPERATING CONDITIONS: Each pump supplied shall be submersible, unless specified by the District, sewer pumps capable of delivering the specified GPM at the specified total dynamic head with operation of between 4-6 pump cycles per hour. Every effort shall be made to utilize the pumps and motors of the highest available efficiencies. The horsepower rating of each pump motor shall be sufficient to operate the pump under normal operating conditions without overburdening. For all non-clog pumps, all openings shall be large enough to permit the passage of a sphere 3" in diameter or any trash that can pass through a 4" opening.

II. OPERATING AND PERFORMANCE STANDARDS: Lift Stations shall be of the wet well type with two submersible pumps and shall be sized to pass the peak daily design flow. The pump cycle rate shall operate between 4-6 per hour for any individual pump. Force main velocity shall be at least 2 fps and not greater than 8 fps with the station operating at its capacity. A daily peak velocity of at least 3.5 fps is desirable to re-suspend settled solids.

Where the pump station flow design criteria is equal to 100,000 GPD or greater, the lift station shall be required to be equipped with an on site standby generator at the site. For all lift stations below 100,000 GPD, the stations shall be equipped with a generator set or the lift station shall have enough storage capacity in the wet well that it shall store 12 hours of capacity during peak flow. The 12 hours of storage capacity shall be measured using the peak design formula equation for the lift station and taking into consideration the lowest elevation in the sewer system for an overflow situation. The stations not required to have a generator set shall be equipped with a District approved manual transfer switch and receptacle plug for connection to portable standby power equipment. Any station not being able to supply 12 hours of storage capacity with a smaller diameter wet well will be required to install an on site standby power generator or enlarge the size of the wet well to the required 12 hours of storage capacity (which ever is more feasible). All electrical components and the generator will be required to be located in a District approved building (See Section 8). All lift stations serving industrial parks and/or sites will be required to install an on site standby power generator with building as listed above.

All lift stations shall be equipped with a telemetry alarm system as specified by the District, at the Contractor's expense. This system will be installed at the Contractor's expense.