

VIRGINIA DEPARTMENT OF HEALTH
ENGINEERING DESCRIPTION SHEET

DATE: 15 February 1983

INSTALLATION: Hillcrest View Subdivision - Community
COUNTY: Franklin
LOCATION: North of and adjacent to State Route 40, 1.4 miles east
of Ferrum
OWNER: Aubon Water Company
104 ~~Randolph Street~~ 215 North Main St.
Rocky Mount, Virginia 24151
(703-483-1286)
OPERATOR: G. Ray Boone using private lab
(703-483-1286) 1/24/87 B.E.V.
PERMIT NUMBER: 5067325
DATE ISSUED: 14 April 1980
TYPE OF TREATMENT: ~~None~~ Chlorination
SOURCE: One drilled well
DESIGN BASIS: 16 equivalent residential connections (ERC)

DESCRIPTION OF SYSTEM:

This system consists of one well, one 3000-gallon atmospheric tank, a booster pump, one 550-gallon pressure tank, and distribution system.

Well - Is 448 feet in depth and cased with 6-inch casing to a depth of 82 feet and grouted to the same depth. The well casing extends approximately 12 inches above the concrete floor. The well has a reported yield capacity of 25 gpm. The well is equipped with a submersible pump driven by a 5 Hp, 3450 RPM electric motor. The pump has a rated capacity of 20 gpm. The well is provided with a water meter, blowoff, control pressure switch, check valve, gate valve, pressure gauge, casing vent, sanitary seal, and sample tap. The well is housed in a 1' x 3' x 2' high brick structure with a metal cover.

Atmospheric Storage Tank, Booster Pump, and Pressure Tank - Water is pumped from the well to a 3000-gallon atmospheric storage tank which is provided with an overflow and access manhole. A booster pump is provided. The pump is driven by a 3/4 Hp, 3450 RPM motor and operates between 40 to 50 psi. The pump discharges to a 550-gallon pressure tank which discharges to the distribution system.

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(continued)

Chlorination - Chem Tech 100/030 chemical
metering pump & 15 gal solution tank
for feeding hypochlorite solution

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DESIGN BASIS:

Source Capacity - well yield = 25 gpm

$$25 \text{ gpm} \div 0.5 \text{ gpm/ERC} = 50 \text{ ERC}$$

Well Pump Capacity - well pump = 20 gpm

$$20 \text{ gpm} \div 0.5 \text{ gpm/ERC} = 40 \text{ ERC}$$

Booster Pump Capacity - insufficient information

$$\text{Storage Capacity} - \frac{(3000 \text{ gallons}) + (550 \text{ gallons} \times 1/3)}{200 \text{ gallons/ERC}} = 16 \text{ ERC}$$

This system is limited to 16 equivalent residential connections.

TVP/lbj