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Brilliant Disguise

A PENNSYLVANIA CLEAN-WATER PLANT MASQUERADES AS A RED BARN TO BLEND IN WITH ITS SCENIC, ROLLING-HILL SURROUNDINGS

By Jeff Smith

When it comes to hiding a wastewater treatment plant in plain sight, the Hilltown Township Water & Sewer Authority has done it in a way that would be hard to top. Nestled in the rolling hills of Bucks County, Pennsylvania, the 150,000 gpd (design) Highland Park Wastewater Treatment Facility is housed in a beautiful red barn.

"This isn't your typical barn — it just looks like one," says Jim Groff, manager of water and sewer for the community in eastern Pennsylvania. Behind the clapboard-covered concrete walls, false barn doors, false windows and a high-pitched roof are two of the first sequencing batch reactors (Aqua-Aerobic Systems) installed in the area.

A concrete post-equalization tank, UV disinfection system (TrojanUV) and a scrubber system (Century) operate out of public view. Sound absorbing panels in the blower room quiet the eight Sutorbilt blowers (Gardner Denver). A false chimney serves as an exhaust stack for the 350 hp diesel standby generator (Cummins Power Products).

CAREFUL PLANNING

The natural undulations and varied elevations at the plant site provided some challenge to the designers. A three-tiered approach to blending in with landscape meant the screen building is on a higher elevation, the SBRs are at midlevel, and the control building is at the bottom.

"We wanted to do the best we could to make it fit into the landscape and make it look like a Bucks County farm," Groff says. "It blends in as well as it could." A car dealership backs up to the plant on one side but is shielded by a large stand of hardwood trees. On two other sides, the facility abuts residential neighborhoods. The fourth side is open to more than 5 acres of wetlands, grasslands and varied landscaping.

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JIM GROFF

NATIVE PLANTINGS

Before construction, designers conducted a review of the site to evaluate it and create a hierarchy of natural resources. Objectives were established, such as managing stormwater runoff and preserving wetlands. Protection of lowland and upland meadows was important, as was maintaining a hedge-row of lowland hardwoods and a stand of white pines. The facility and complex underground piping system were located so as to limit disturbances to those areas.

"The facility is well landscaped," Groff says. "We planted native plants in the stormwater wetland basin and black-eyed Susans and mums near a split-rail accent fence in the front near the road." A renovated farmhouse on the site houses the authority's administrative offices. Before construction of the plant, the township pumped its wastewater to a nearby community.

"This was a cooperative effort between a township and a municipal authority to deal with sewage issues while producing a facility that fits well into the landscape and community," Groff says. In 2004, the plant received the Pennsylvania Arbor Society Award of Excellence for saving and planting trees during construction.

In 2005, the Pennsylvania Horticultural Society presented the facility with the Suburban Growing Greener Award, recognizing the site's plantings. Groff says, "We actually have had truck drivers making deliveries call us as they drive right by and don't think it's a facility." **tpo**