



## Lehigh County Authority Reservoir Project

ARRO provides popular solution for the Lehigh County Authority Reservoir Project.

### Background

In the early 1990s, Lehigh County Authority began planning for improving its Central Lehigh Service Division through the installation of an additional water storage facility. It was clear in the authority's mind that to ensure long-term reliable water service to certain service areas, they would need to supplement the existing reservoirs so that user service in those areas would not be interrupted should the local distribution system somehow be compromised. The search began for a suitable property for the project.

### Challenges

The selected property – a former Christmas tree farm on a wooded hillside – was an excellent location to satisfy the needs of the authority; however, it was clear that the surrounding residents and municipality would be concerned with the visual impact of any large facility in a very rural neighborhood.

Accordingly, ARRO and the authority began an extensive public outreach program to ensure the project's successful completion, including:

- Informing residents of the intended project
- Listening and addressing some of the local concerns
- Making several presentations to collect public feedback and incorporate those concerns
- Showing how construction would not alter the character of the surrounding neighborhood

### The Solution

To ensure that the authority would yield the greatest return on their investment, ARRO performed a comprehensive cost comparison between steel and concrete to assist in determining the final design choice. As a result, the authority authorized ARRO to begin designing a 2-million gallon, above-ground, wire-wound, prestressed concrete tank (AWWA D110, Type III). ARRO shepherded the project through the municipal and other regulatory agency approval processes.

#### PROJECT:

Lehigh County Authority  
Reservoir Project

#### CHALLENGE:

Constructing a large facility in a rural setting with nominal effect on character, environmental impact and visual setting of the neighborhood.

#### SOLUTION:

In concert with the authority, ARRO prepared and conducted an extensive public outreach program, which included GIS and 3-D AutoCAD renderings that took into consideration numerous concerns expressed by residents and the local municipality.



Throughout construction, the ARRO plan called for:

- Daily Resident Project Representative services on-site to ensure that construction occurred in accordance with the design plans
- Freeing up the authority to focus on its normal daily activities, rather than imposing the added effort on the already busy staff
- A large volume of earth moving to accommodate the staging and construction areas
- An emphasis on retaining as much of the surrounding vegetation as possible
- Control over erosion and sedimentation issues to ensure protection of natural resources
- Compliance with permitting requirements

### The Results

Although construction is in the final completion stage, it is certain that the project will be completed on schedule and within budget. More importantly, the response from the community, especially those directly affected by the construction and the resulting structure, has been overwhelmingly positive.

### In Their Own Words

"ARRO HAS BEEN AN INTEGRAL PLAYER IN EVERY ASPECT OF THIS PROJECT – FROM INITIAL CONCEPTS TO DESIGN AND CONSTRUCTION - EFFECTIVELY MEETING THE NEEDS OF THE AUTHORITY."

— LANCE M. BABBITT  
CAPITAL WORKS PROJECT MANAGER, LEHIGH COUNTY AUTHORITY



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