

**City of Amsterdam, NY
Wastewater Treatment Plant
Bulk Lime Storage and Feed System**

Facility Contacts:

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System Description:

The new sludge dewatering facility at the City's wastewater treatment plant consists of sludge conditioning, belt filter press dewatering, post-lime stabilization, and dewatered sludge hauling. For the lime stabilization, a bulk storage and conveyance system was installed.

The lime system consists of a lime receiving dust collector, bin activator, knife gate valve, level indication, volumetric screw feeder, and lime conveyor. The Zimpro WHM® system provided the City with a factory-engineered system. This minimized installation and field erection requirements. The system is designed to convey hydrated lime to the belt filter press discharge cake conveyor. Stabilized sludge is then ready for final off-site disposal.

Equipment Components and Basis of Design

Lime Silo Components

- ↓# Skirt-supported Lime Silo
- ↓# Silo Ladder and Safety Items
- ↓# Manhole and Pressure Relief Valve
- ↓# Dust Filter and Bin Activator
- ↓# Volumetric Screw Feeder
- ↓# Silo Level and System Instrumentation
- ↓# Main Control Panel
- ↓# Fan, Heater, Lights, Truck Fill Station

Basis of Design

- ↓# Nominal Storage Volume: 2,500 ft³
- ↓# Overall Height: 38' 6"
- ↓# Silo Diameter: 12' 0"
- ↓# Lime Bulk Density: 30 to 40 lbs/ft³
- ↓# Feed Capacity: 70 ft³/hour
(2,100 lbs/hour at 30 lbs/ft³)
- ↓# OSHA-approved safety features