## Project Challenges
- Multiple utilities in the area: water, storm, sanitary, gas, steam, and irrigation.
- Stabilizations performed in three separate tie-in areas.
- Sidewalk had to be stabilized as possible emergency vehicle access route.
- Differing subsurface materials.

## Solution
- Inject URETEK polyurethane at multiple depths and rows to lock together materials and allow for excavation to proceed without undermining adjacent structures.

## Support
- Pre-estimate meeting with utility contractors, geotechnical engineers, and owner.
- Designed injection quantity and depths.
- Second round of meetings and estimates when excavation requirements changed.
- On-site installation and adjustments to injection plan.

## Outcome
- **Minimal impact:** Excavation work was able to begin the day after URETEK’s work was completed.
- **Soils stabilized:** Soils were stabilized and the structures adjacent to the excavation area were protected.

### Groundworksolutions.com

**ORNL Pre-Excavation Stabilization**

Oak Ridge, TN

Stabilization to support minimal-layback excavation and shore catch basin