Utility Monitoring Point

Applications

Utility monitoring points (UMP) are used to monitor underground utilities for potential displacement from excavating, dewatering, tunneling, trenching, and other construction activities.

UMPs can also serve as automated heave-settlement points to monitor ground loss or heave in foundation soils.

Operation

A UMP consists of a riser rod within a PVC sleeve. The riser is in contact with the utility. The sleeve allows the rod to follow any vertical movements of the utility. Displacements are detected by monitoring the top of the riser.

Monitoring Options

AMTS System: A prism is fitted to the top of the riser. The AMTS monitors the elevation of the prism. One AMTS system can monitor multiple UMPs.

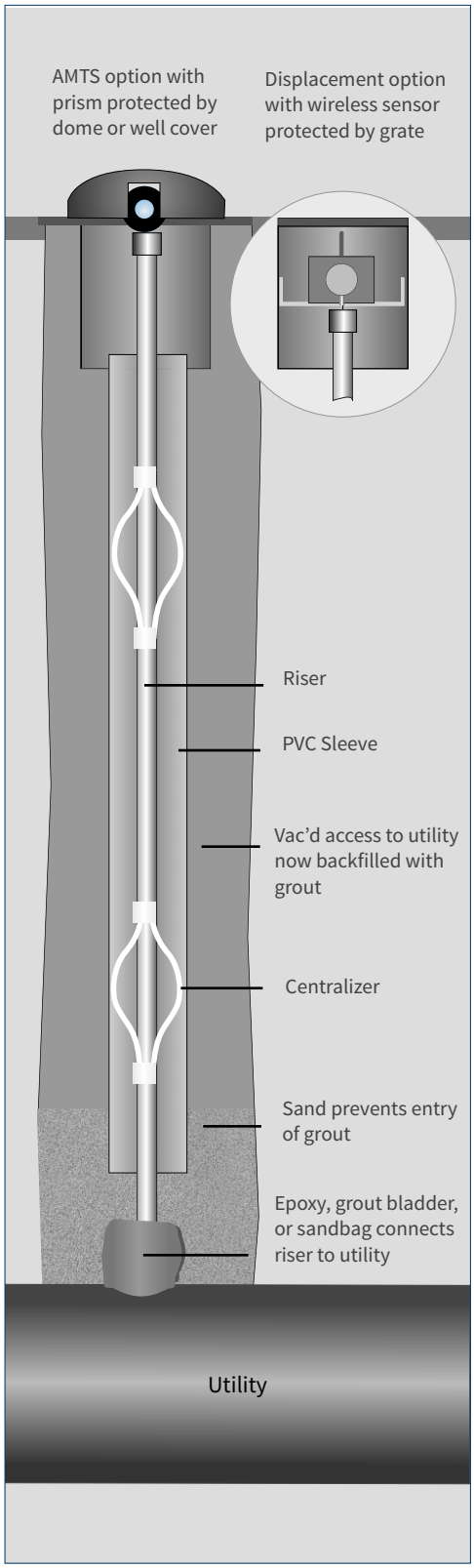
Displacement Sensor: A wireless displacement sensor monitors the the top of the riser. This option is especially useful if consistent line-of-sight is not available.

Combined: AMTS and displacement sensor systems can be combined to offer redundancy and real-time readings for critical applications.

Manual Verification: An optional manual-read feature works with either system, allowing verification readings with a depth gauge.

Advantages

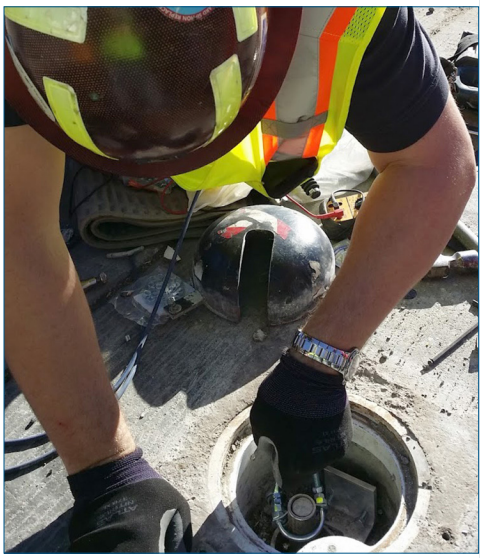
- **Low Profile:** The UMP does not interfere with traffic or construction activities. It can be installed completely flush with roadways or under a low-profile, heavy-duty dome on construction sites.
- **Safe & Cost Effective:** Automated monitoring eliminates the need and expense of survey crews and traffic control.
- **Timely Data:** All measurements are relayed to a GeoCloud server that checks for alarm conditions and sends alerts to desktop PCs and smartphones.



Main components and sensor options for UMP

Prism fitted to top of riser.

Well cover with slot for prism.



Fitting prism and displacement sensor under dome