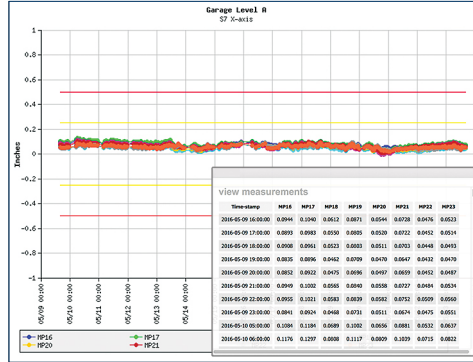
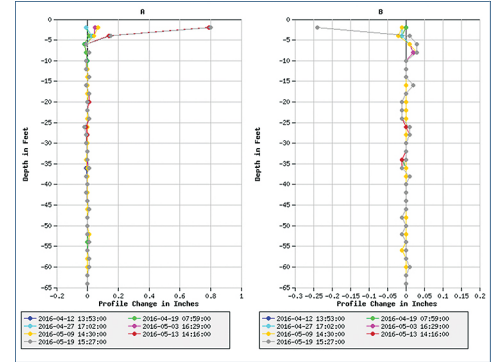


Plan View



Trend Plot



Profile Plot

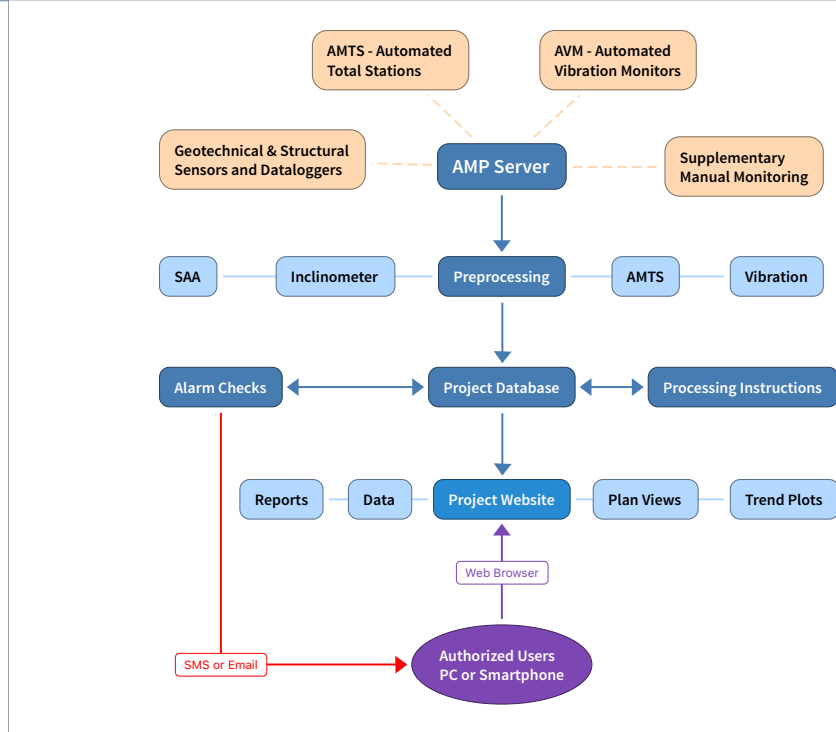
AMP Data Visualization

AMP is a web application that processes sensor readings and makes the data available on a project website. AMP automates repetitive tasks, standardizes processing and presentation, and provides timely access to data.

AMP Functions

In the diagram at right, orange boxes represent monitoring devices, and blue boxes represent AMP functions.

- AMP accepts measurements from a wide range of monitoring devices. Measurements are typically transferred from the project site to the AMP server by cellular-to-internet communications.
- Incoming measurements are preprocessed as needed and then formatted for import into the project database. For example, AMTS measurements are directed to the Monstar application for least-squares adjustment and reformatting before import.
- The project database provides centralized storage for measurements, calibration factors, processing instructions, and alarm thresholds.
- Processing instructions can include most math functions, perform unit conversions, calculate changes, and correct for variations in temperature and barometric pressure.
- Measurements are checked against alarm thresholds, and alarm notifications are sent out as emails or text messages.
- Authorized users log in to the project website for access to plan views, plots, and reports, which are generated on demand with the most current data.



AMP Advantages

Web Access: The project website provides access to data wherever there is an internet connection. It works with web browsers on PCs, tablets, and smartphones.

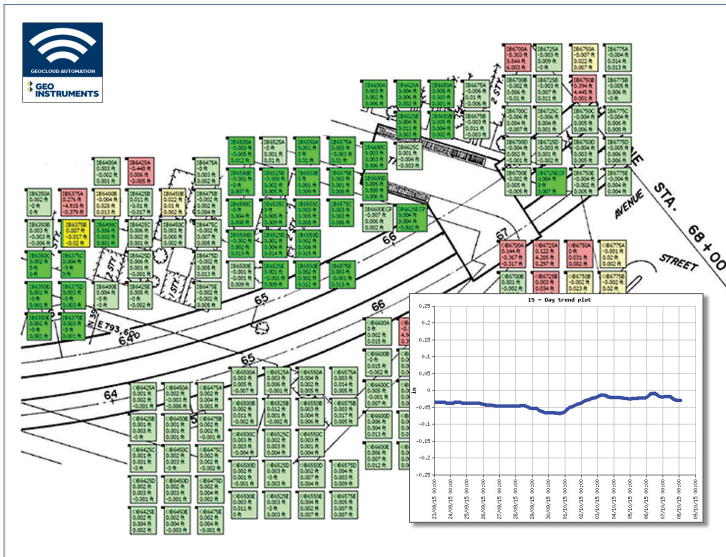
Continuous Availability: AMP operates 24 hours a day, automating the repetitive tasks of importing and processing readings, checking for alarms, and generating plots and reports.

Consistent Calculations: AMP processes data according to instructions stored in the project database. Changes to calculations or calibrations take effect immediately across all plan views, plots, and reports.

Consistent Presentations: Plan views, plots, and reports are preconfigured to ensure consistent scales, terminology, and sensor selection. Values are updated automatically.

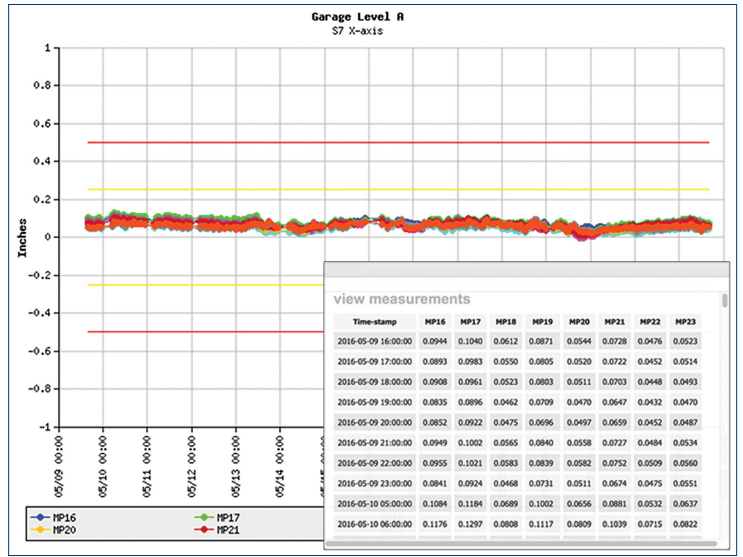
Wide Compatibility: Specialized preprocessing applications extend AMP's functionality and provide compatibility with nearly any type of monitoring device.

Centralized Data Storage: AMP stores all types of measurements in the project database, maintaining traceability, eliminating data silos, and simplifying access.



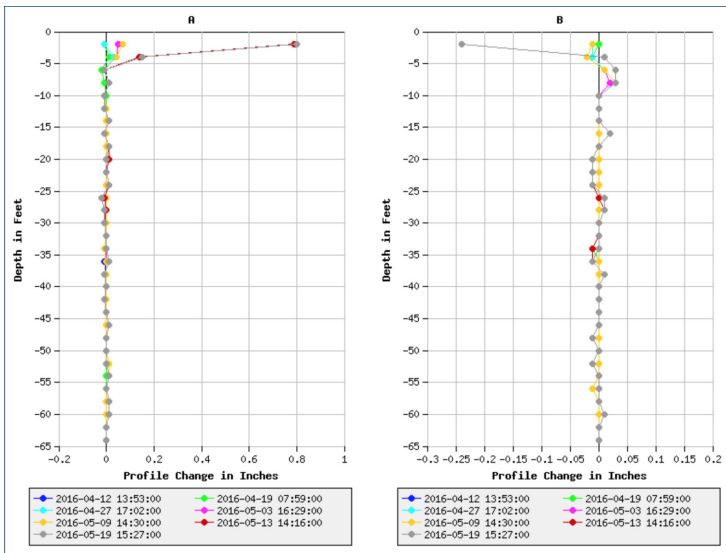
Plan Views

Plan views are site drawings or photographs that show the location, current reading, and alarm status of all the sensors at a site. Sensors are represented as icons or data boxes that change color to indicate their alarm status: green for normal and yellow or red for alarms. Readings update automatically while the plan view is displayed. Clicking on a reading calls up a trend plot, as shown above.



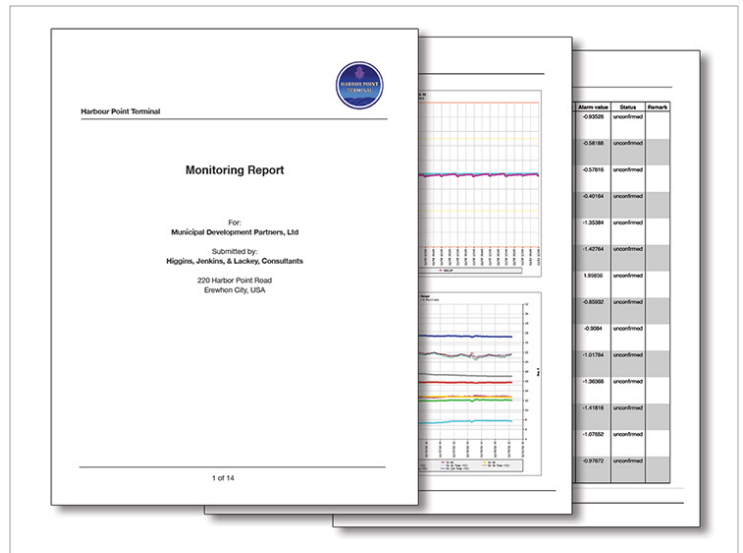
Trend Plots

Trend plots show data values against time. Plots are preconfigured for quick access but always generated with the most recent measurements. Two Y scales allow different types of sensors to be shown on the same plot. Clicking the plot displays a table of the values used in the plot, as shown above. Plots can be saved, printed, attached to emails, or used in documents.



Profile Plots

Profile plots show displacement data from inclinometers, shape arrays, liquid levels, and beam sensors. AMP employs a preprocessing script to compare and accumulate values from data arrays. Profiles can be presented vertically or horizontally, according to the orientation of the sensors on site.



PDF Reports

PDF Reports can be emailed to users on a daily, weekly, or monthly schedule. Reports can contain a cover page, plan views, plots, alarm tables, and tabular data. Data can also be downloaded for analysis in other programs.