

UMS Group Inc. Collection of Transmission Structure Elevations



OVERVIEW

UMS Group automated the collection of elevation data for ~100,000 transmission structures. Elevation data is important for asset management analyses and strategies needed by the LOBs, e.g. linking to climate variations, max expected wind speeds, and impact on asset insulation values and design standards, operating practices and Maintenance strategies.



METHODOLOGY

Google's Application Programming Interface (API) allows connection or integration with Google Services and can provide access to data such as elevation records.

Simplistically, the lat-long coordinates from all transmission structures in the database were loaded and cross referenced against the lat-long coordinates, and the corresponding elevations recorded in the Google dataset utilizing the API.

We were able to process ~30,000 structures per day, which resulted in a 5-day run time (after the upfront coding and setup).



DATA UTILIZED

- Structure database including lat-long coordinates
- Google public elevation data.

Case Study: Collection of Transmission Structure Elevations



CHALLENGES

General data quality issues.



SUCCESS

Successful development and deployment of a process to calculate fields utilizing a large dataset through a 3rd party API, with very accurate results.



Elevation profiles as seen in the UMS Group analysis platform.