

To support civil engineering and road activities or safety interventions, geotechnical and geomechanical analyses are carried out with advanced survey techniques, offering 2D and 3D representation of criticalities using well-established models and methods of verification.

GGA services are developed and offered in partnership with:
GEO Engineering - geol. Ennio Chiesurin

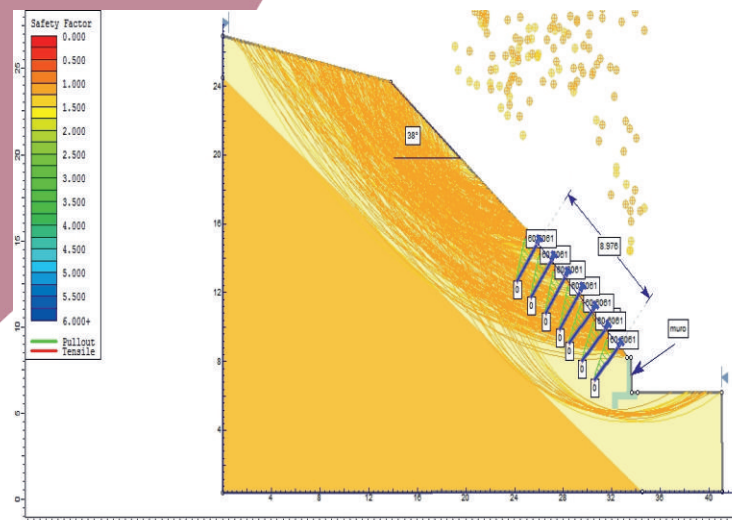
Geotechnical analysis:

- **Geotechnique of building foundations** and verification of the load-bearing capability and estimation of sagging assessment, permissible stresses and limit states;
- Interpretation of geotechnical tests **on site and laboratory data**;
- **Overall stability analysis** work-land for consolidation or preconsolidation of excavation;
- Limit states of finite elements (FEM) **geotechnical verification of landslides in loose material** and design of consolidation interventions;
- **Road geotechnique**.

Geomechanical analysis:

- Geomechanical analysis of **rocky escarpment** (even with working on rope in vertical rock wall) with the methods outlined by international standards I.S.R.M. (International Society for Rock Mechanics);
- Stability analysis of rock walls by **DRONE helicopter**, with **photo-interpretation on 3D images**;

- Stability analysis of **slopes due to rock excavation** or of **different rock slopes** with design of interventions of consolidation;
- Survey for verification of **rolling rocks 2D and 3D**, with probabilistic analysis, indication and sizing of the consolidation and protection works.



- **Survey for the construction of tunnels:** geo-structural analysis, geomechanical classification and determination of rock mass parameters for projects, stress finite elements analysis (FEM), with indication of the consolidation interventions.

Related packages:

DBM - Database Build and Management
RNM - Road Network Manitenance

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