



STUDIO CAMPIONI

• power line design and topographical surveys

Via A. Meucci n° 4
41051 Montale R. (MO) Italia
Tel.: +39 375 5453281
@: davide@studiocampioni.com
VAT CODE: 03803450364

THE COMPANY

The technical office Campioni was established in Montale Rangone in the province of Modena, by Davide Campioni, enrolled in the Modena Register of Surveyors since 2007, registration no. 2713.

The studio is based on the know-how gained in the field of topography and design over the last twenty years, which have seen Geometra Campioni and his collaborators working in Italy and abroad on behalf of some of the most important companies, bodies and societies in the civil engineering sector.

Today we are able to respond to all our clients' design requirements and provide definitive and executive projects using the most sophisticated and modern techniques, instruments and software.

The firm is specialised in the design of overhead and underground power lines, in the design of primary substations and electrical stations and in the design of photovoltaic systems. It also has the PES, PAV, PEI qualification for activities in the electrical field.

The firm uses Power Line System Inc. software, such as PLS CADD and PLS TOWER, to draw up the projects it acquires. This software is recognised worldwide and is requested in the tender phase by most electricity companies worldwide.

The firm employs a number of professionals, each specialised in their own field, and is able to provide:

TOPOGRAPHY:

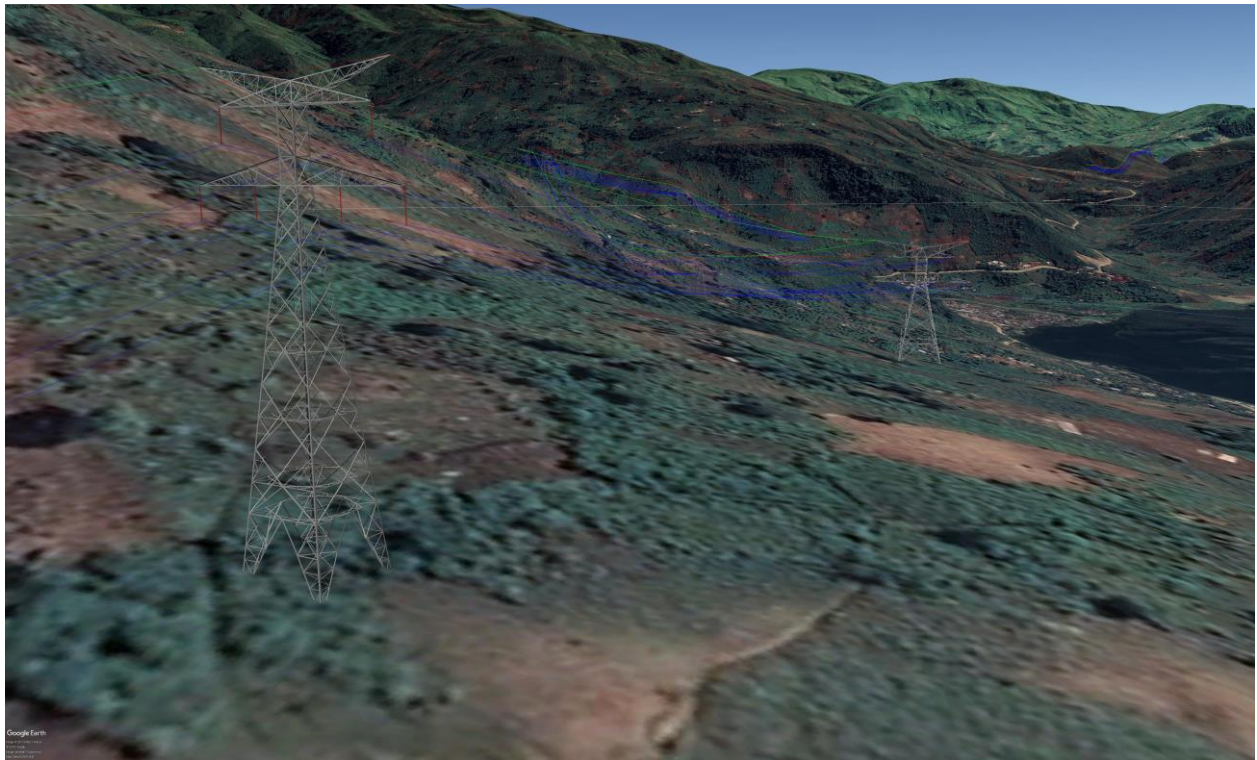
<i>Activity</i>	<i>Description</i>
Geodetic grid	Materialisation and topographic survey of geodetic grid using GPS instrumentation in static mode and post-processing data processing.
Route study	Study of the route of power lines in accordance with current regulations, identification of the best technical/economic route according to administrative and environmental constraints using the optimum spotting application.
Topographical surveys and profiles	Plano-altimetric survey of power line profiles, graphic restitution and piling using Power Line System's PLS CADD software.
Staking out	Staking out of towers and survey of diagonal sections.
Soil resistivity measurements	Measurements of soil resistivity for selecting the type of ground connection to be adopted on the towers.
Works Management, CSP and CSE	Supervision of works, excavation, site assistance during erection of towers and stringing of the power line.Coordinamento per la sicurezza CSP e CSE.
Aerophotogrammetric, SAPR and LIDAR surveys	Aerophotogrammetric surveys using on-board georeferenced cameras, drone surveys (SAPR), LIDAR surveys.



Topographic surveys of power lines in West Africa



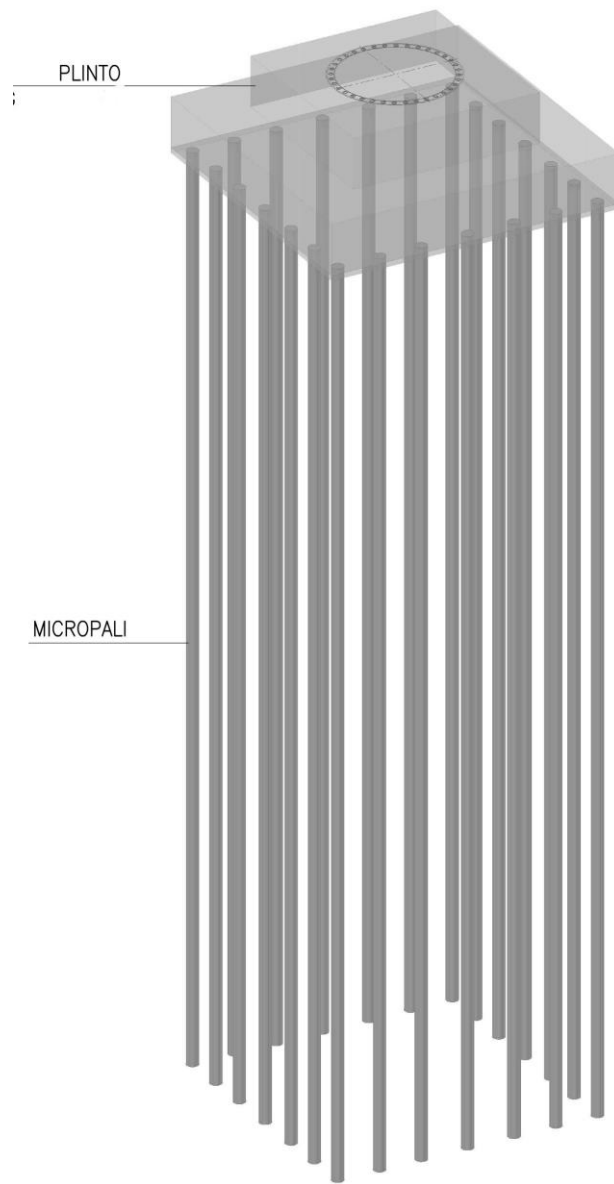
Study of the Galloping phenomenon on a power line in Peru



Study of the route of a power line in Congo in 3D on Google Earth

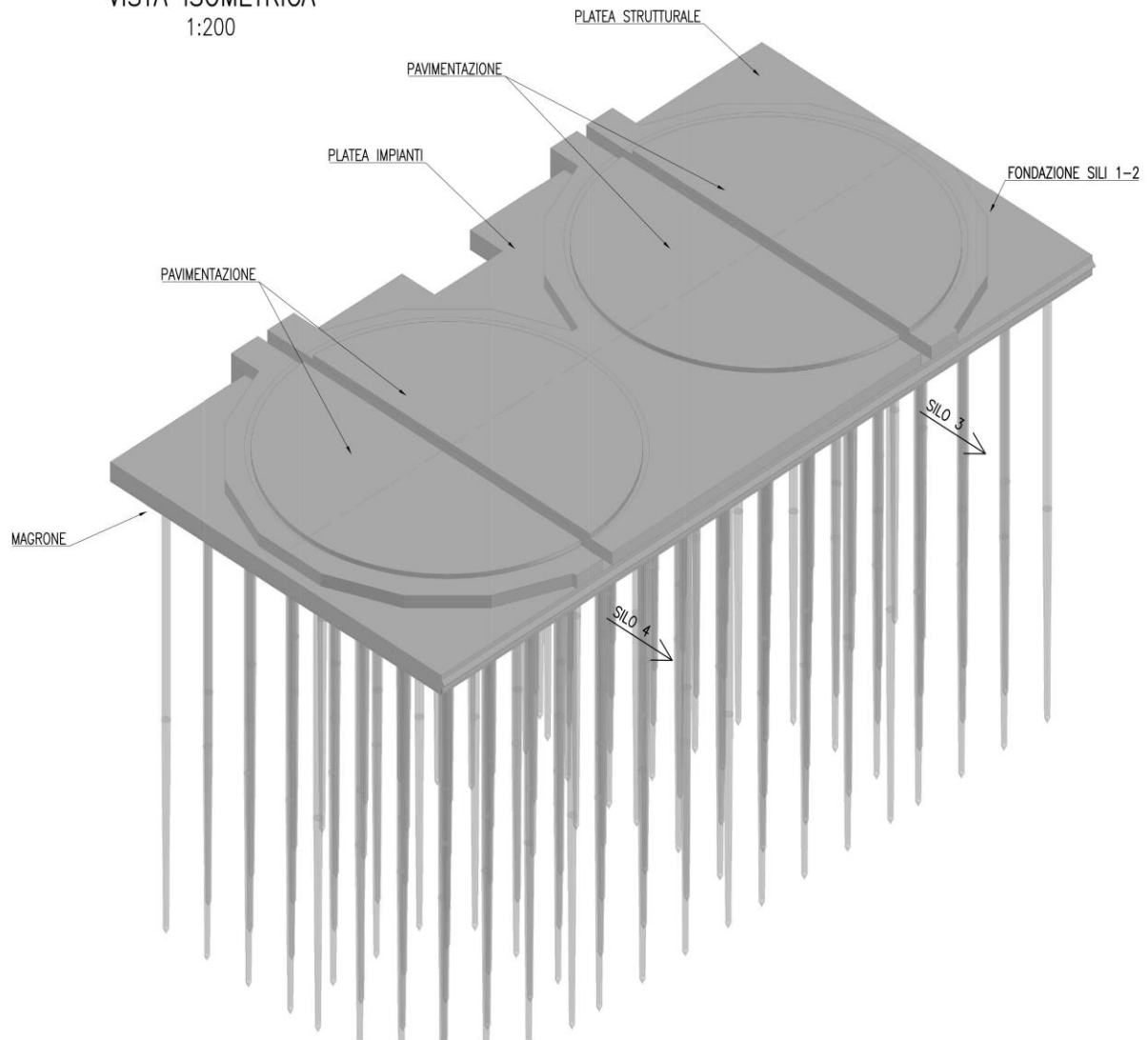
FOUNDATIONS DESIGN:

<i>Activity</i>	<i>Description</i>
foundations	Definition of the series of foundations to be used (single block, separate footings, on drilled or micropiles, etc.)
Structural dimensioning	Structural dimensioning based on geotechnical design.
Calculation reports	Reinforced concrete calculation reports.
Drawings	Preparation and drafting of site drawings



Example of isometric view foundation on micropiles

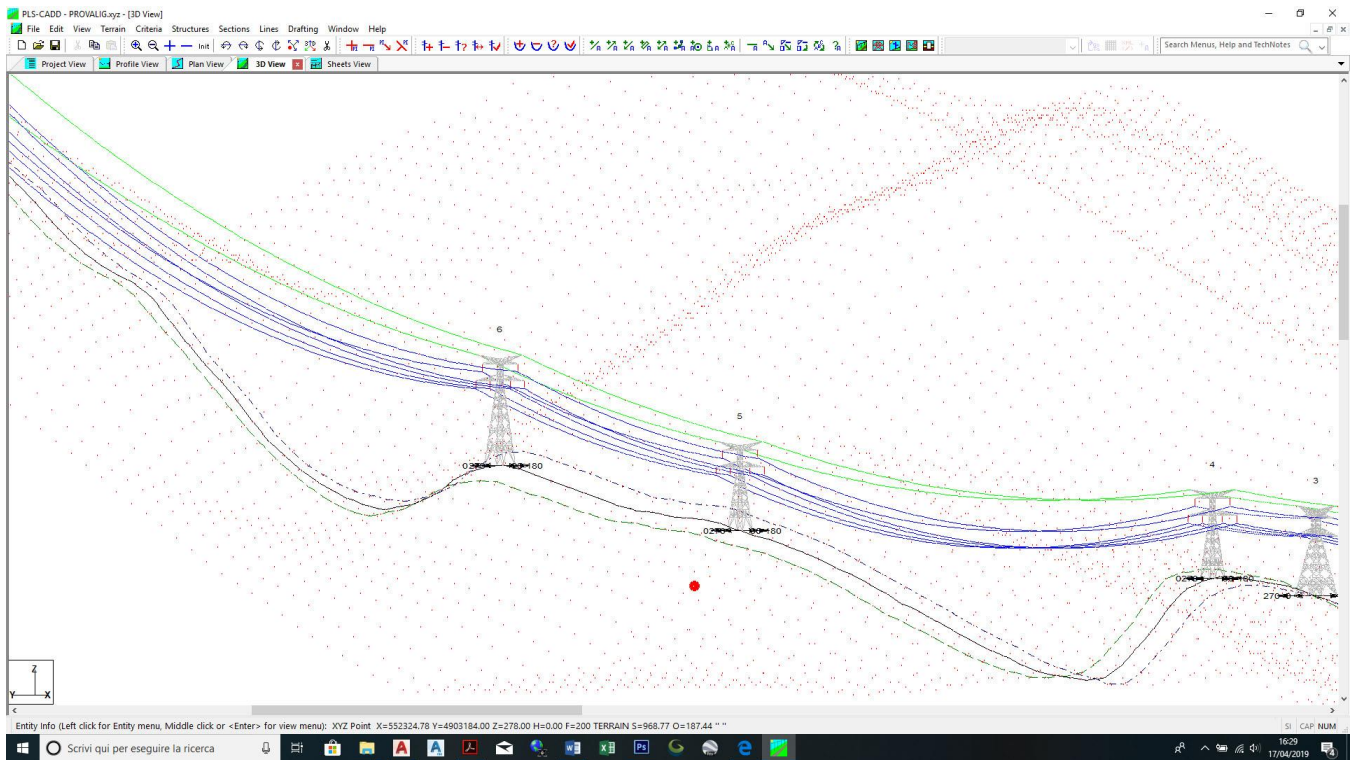
VISTA ISOMETRICA
1:200



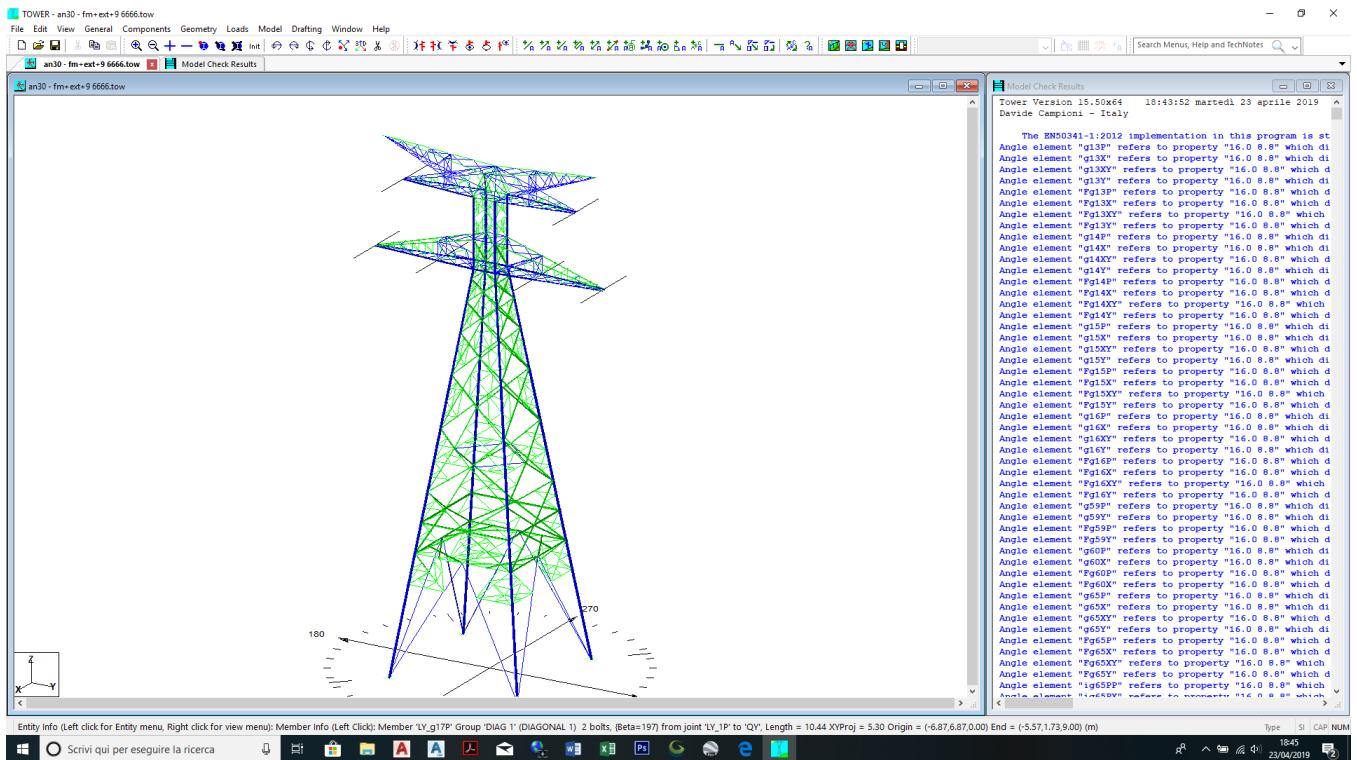
Example of isometric view Silo foundation

MECHANICAL DESIGNS

<i>Activity</i>	<i>Description</i>
Study of conductors	Mechanical study of the conductors to determine the "distribution parameter", and the tensions in the various environmental conditions required by the regulations in force.
Profile piling	Definition of the position of the supports. Definition of the spans. Definition of the "types" of supports.
Design of Towers	Definition of the "type" Definition of fittings. Definition of single-line diagrams. Calculation of external loads. Structural design of supports. Workshop drawings and material tables.
Staking tables	Preparation of the staking-out table, which is a summary printout containing the data listed in the previous points.
Stringing table	Drawing up of the stringing table, calculation of the tension, of the arrows and the adjustment distances to be used during the installation and tensioning of the conductors and the earth wire, taking into account the permanent deformation (creep).
Special technical specifications Special technical specifications are generally complete with a list of quality plans and tests to be produced for each type of material.	Drafting of special technical specifications with the aim of defining the following activities: Acquisition of materials Execution of civil works Installation of conductor supports.



Example of Profile developed with PLS CADD software



Example of Lattice frame designed with PLS TOWER software

MAIN PROJECTS:

<i>Year</i>	<i>Description</i>	<i>Client</i>
<i>In progress</i>	OHTL 380 kV T.839 "Rondissone - Turbigo" Survey and Design 75 Km	TERNA RETE ITALIA
<i>In progress</i>	OHTL 380 kV T.L18 "Cassando D'adda - Chiari" Survey and Design 85 Km	TERNA RETE ITALIA
2020	OHTL 132 kV T.839 "Bobbio – Genova Molassana" Maintenance project 50 Km	TERNA RETE ITALIA
2019	Rehabilitation of the Florence Metropolitan High Voltage Network. Project to underground approximately 10 km of overhead power line.	SIRTI
2019	OHTL 132 kV T.844 "Vizzà – Sestri Levante" Maintenance project 150 Km	TERNA RETE ITALIA
2018	OHTL 220 kV "Goma - Buhandahanda" Survey and Design 80 Km	AEE POWER
2018	Gaza Electricity Master Plan GIS data processing	CESI S.P.A.
2016	Ethiopia – Sudan Extra High Voltage Power System Topographic Survey Report 500 Km	CESI S.P.A.
2015	OHTL 161 kV "Achimota - Mallam" Ghana 50 Km	GRIDCo
2014	Cerro Pabellon Geothermal Site Study of the route of the high-voltage connection	ENEL GREEN POWER
2013	OHTL 220 kV "Cotaruse - Socabaya" in Perù Topographical surveys and study of the Galloping phenomenon	CESI S.P.A.
2010	Gibe III Hydroelectric project - OHTL 66 kV in Ethiopia Survey and design	SALINI
2008	OHTL 220kV "Tlemcen – Gazahouet" - Algérie Survey and design	SAE POWER LINES