Committed to Excellence in Civil Engineering Works

Civil & Structural Engineering
# Services

## Structural Design
- Front End Engineering Design, FEED.
- Detailed Structural Engineering.
- Structural Assessment
- Structural Restoration and Rehabilitation
- Value Engineering
- Construction and Management Support
- General Structural Engineering Consulting
- Legal Structural Engineering Consulting

## Peer Review
- Structural Peer Review.
- Seismic Peer Review
- Third-Party Check

## Constructability Review
- Constructability Review before Bidding
- Constructability Optimization of Existing Projects under Construction
- Constructability Consulting for Projects under Design Process
- Design of Construction Stages
- Development of Erection Plans

## Technology Transfer
### Lectures-Seminars
- Lecturing on New Structural Technologies.
- Lecturing on Detailing and Application of Codes.

### Knowledge transfer
- Joint Venture with Managers on PPP and Design-Build Projects
- Joint Venture with Contractors on PPP and Design-Build Projects.

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**GeoStatic LTD**

*Civil & Structural Engineering Branch*
Projects – Steel Industrial Buildings

Structural design and constructional detailing of a new one-story steel building with 36.0m span and 48.0m long and extension of the existing steel complex industrial facility with a 30.0m by 12.0m bay, by strengthening and increasing the span, for the Balakanakis Bros L.t.d. in Argos, Peloponisos, Greece.

Owner: Balakanakis Bros Ltd
Architect: Balakanakis Studio
Steel Fabricator: Xanthos Steel Structures Ltd
Completion: 2002
Structural evaluation of the existing building, design of a new steel roof as well as design of a steel story addition of approx. 200 m² based on a strengthened story of an existing reinforced concrete structure for Nikolaidis L.t.d. in Ioannina, Greece.

Owner: Nikolaidis Ltd
Steel Fabricator: Xanthos Steel Structures Ltd
Completion: 2002
Structural estimation (in purposes of bid), preliminary, final structural design and constructional detailing of one-storey industrial building with 49.0m clear span, 15.0m clear height of the column, 4500m², used as freezing facility for fishes, with special floors resisting up to –30°C for Amasa S.A. in Sindos, Thessaloniki, Greece.

Owner: Amasa S.A.
General Contractor: Midelkos-Amakat Ltd
E.O.R. for civil eng. works: Midelkos Ch
Steel Fabricator: Vemekep S.A.
Completion: 2003-2004
Structural cost estimation, preliminary, final structural design and constructional detailing of steel industrial facility, used as logistics center of fruits and vegetables, of 10,000m² with interior spaces of 950 m² offices, 1500m² electromechanical corridors and 500m² machine rooms for Limpartsis S.A. in Mesovouni, Thiba, Greece.

Owner: Limpatsis S.A  
General Contractor: Midelkos-Logikon Ltd  
E.O.R. for civil eng. works: Midelkos Ch  
Steel Fabricator: Vemekep S.A.  
Completion: 2003-2004
Structural optimization, final design and constructional detailing of steel industrial building with 40.0m span and 110.0m long, used as paper factory, with additional external 200m² offices for Salco Paper S.A. company in Sindos, Thessaloniki, Greece.

Owner: Salco Paper S.A
Architectural design: Dinamiki A.T.E. Arambatzoglou
Engineer of record: Dinamiki A.T.E. Arambatzoglou
General Contractor: Domotechniki S.A
Steel Fabricator: Domotechniki S.A
Completion: 2004
Structural assessment of an existing reinforced concrete structure and design of a new steel building 16.0m by 54.0m on the reinforced concrete structure for Senekis L.t.d. in Sindos, Thessaloniki, Greece.

**Owner:** Senekis Ltd  
**General Contractor:** Midelkos Ltd  
**Steel Fabricator:** Midelkos Ltd  
**Engineer of record:** Midelkos Ch.  
**Completion:** 2005-2006
Structural design of an industrial steel building of about 1.200m² with 10 ton capacity traveling cranes and about 200m² interior office spaces for Frost L.t.d. in Sindos, Thessaloniki, Greece.

Owner: Frost Ltd
General Contractor: Midelkos Ltd
Steel Fabricator: Meteko S.A.-KES
Engineer of record: Midelkos Ch.
Completion: 2007-2008
Structural verification of the existing steel structure and design of a new product line, in extension, developing a plant with a total area of 41,400sqm. The construction is a complex building composed by units of 150.0 m x 54.0 / 42.0m (with a transversal span of 30.00m and in longitudinal direction of 54.0m / 42.0m). A check was performed for the additional action of the snow to the valleys and further a seismic verification was carried out for the units. The building is based in a seismic zone of 0.24g and serves the well-known industry of Greek Cheeses.

Owner: Kollios S.A.
General Contractor: Midelkos Ltd
Engineer of record: Midelkos Ch.
Completion: 2008-2010
In the framework of collaboration with general contractor Midelkos Ltd, in the period 2007-2009, we analyze and design a great number of industrial facilities, aprox. 30,000 sqm, mainly extensions of existing buildings, with spans between 18.0m-32.0m, as well as a number of special industrial facilities as machine bases, cranes, towers, special industrial freezing floors, etc.
Projects—Multistorey steel-composite buildings

Structural optimization and redesign of a new three story residential building with two stories of steel structure and a basement of reinforced concrete. Detailing of the structure and supervision of the hole project.

**Owner:** Papagioanis I & Konstantinidou A
**Hortiatis region**
**Engineer of record:** Noulis & Partners
**Completion:** 2002-2004
Structural design of a new three story office building with central span of 13.0m of about 600m² area with two stories of steel structure and one story from steel embedded in reinforced concrete, forming the basement.

Owner: EKO S.A.
Architectural design: Karfopoulou E
Mechanical design: Samaras & Partners
Engineer of record: Varis Ath.
Completion: 2007-2008
Constructional design, detailing and supervision of a composite steel-concrete 3 story residential building with pilotis, and basement, in Polichni region of Thessaloniki, Greece.

**Owner:** Eleftheriaids D.
**Steel fabricator:** Vassilas Ltd
**Engineer of record:** A.S. Anastasiadis
**Completion:** 2004-2006
Structural analysis and design of steel industrial building with about 3000m² area for logistics use and a statically independent 2-story with a basement steel-composite building of about 1.300m² area.

**Owner:** K.L.T S.A.
**Architectural design:** Karfopoulou E
**Mechanical design:** Samaras & Partners
**Engineer of record:** Varis Ath.
**Completion:** 2007-2008
• Structural design of a new two story parking building developed on a grid of 8.0*8.0m of about 1.200m² area with two stories of steel structure and another one story, at the basement, from steel embedded in reinforced concrete.

Owner: Papoutsoglou Ltd
Architectural design: Karfopoulou E
Mechanical design: Samaras & Partners
Engineer of record: Varis Ath.
Completion: 2007-2008
Preliminary structural analysis and design of a closed swimming pool with a clear span of 56.0m, of about 4,600 m² free space for different athletically events. The design contains the steel exterior shell, the reinforced concrete foundation and the basement as well as the tiers of the stadium.

**Owner:** Municipality of Lagadas, Thessalonikis  
**Architectural design:** Chatzopoulos, Chatzisava & Associates  
**Mechanical design:** Christoforidis & Associates  
**Completion:** Bidding
Structural optimization, comparison with different solutions, cost evolution and structural design of steel residential building with 5 stories and basement of about 1300m² in Cyprus.

Architectural design: Vassiliou D & Partners
Completion: 2007-2008
The complex is composed by 5 buildings, (3 finished at present moment). Each building has Basement (used for garage)+Ground Floor+Mezanin+5 Stories plus Penthouse. The structure is composed by composite steel-concrete frames, with a central reinforced concrete tube. The composite beams are constructed by reinforced concrete plates and castellated beams with circular openings.

**Beneficiary:** S.C. Modatim Investment S.A.  
**Architecture:** S.C. Andreescu & Gaivoronsci S.R.L.  
**Structural design:** S.C. H.I.Struct S.R.L. si SC Maison Styl SRL  
**Earthquake detailing consultant:** M.Mosoarca, A.S.Anastasiadis  
**Completion:** 2008-2013
Constructional design, detailing and supervision of a steel suspended structure from an rc floor creating an intermediary space of about 1000m². All the structure is suspended from the reinforced concrete plate, existing rc columns and some parametrical rc walls.

**Owner:** Mexil S.A.
**Steel fabricator:** Kizketilis L.t.d.
**Engineer of record:** Sklavenitis D
**Completion:** 2008-2009
Structural design of photovoltaic supporting steel structure with a proposal of alternative foundation systems as a function of local geotechnical conditions. Investigation of alternative solutions.

Owner: Koutsikos O.E.
Steel Fabricator: Koutsikos O.E.
Certification: QMSCERT / TUV HELLAS
Completion: 2011-2012
A significant number of projects, acting as a principal engineer, peer reviewer or as a subcontractor for other firms, concerning structural analysis and design of steel or steel-concrete structures, are provided. There were performed studies for complete structures or isolated elements.
Projects-Braced cuts, steel scaffolds, staircases, steel in art

Structural design of steel collars in a top down construction methodology in order to support flat slabs for the development of 5 stories basement and 5 upper stories in a building with parking and residential usage.

Steel fabricator: Tsitsimakas Steel structures
Geotechnical contractor: Themeliodomi S.A.
Completion: 2007
Structural design for retaining the walls of deep excavation in some of our projects or for general contractors, in collaboration with geotechnical engineers, when there is a need due to high level of gravitational forces of the adjacent buildings.
Design of different scaffolding solutions using steel elements.

Design of different staircases and façade closures solutions using steel elements.
Consulting and Structural design for the development of a “steel tree”, for the period of Cinematograph festival, carrying glass elements. A slender structure constructed adjacent to sea suffering from abrupt winds.

**Owner:** Ministry of Macedonia and Thrace  
**Architectural design:** Tsasis D  
**Steel fabricator:** Voghiatzoglou Steel structures  
**Completion:** 2008
Projects - Rehabilitation of building structures

Consulting and Structural design for the transformation of the unused space of 400m² under a wood roof to a luxury office of the CEO. Using steel elements we change the structural system creating free space with a central span of approximately 13.50m.

Owner: Papistas Office, Vari Attikis
Architectural design: Vassiliou D & Partners
Completion: 2006-2007
Consulting and Structural design for the transformation of the unused space filled with rubble, in front of the building, in a three story subterranean space with suspended swimming pool and playrooms.

**Owner:** *****, Panorama, Thessaloniki  
**Architectural design:** Vassiliou D & Partners  
**Completion:** 2007
Structural rehabilitation of an old residential building constructed in 1925, protected by law, to a new small office consecrating the exterior shell and developing a new steel structure which support elastically the exterior façade.

**Owner:** Vamvakos, Sindos  
**Architectural design:** Vassiliou D & Partners  
**Completion:** 2008-2009
Structural rehabilitation of an old residential traditional stone building protected by law, using irreversible and ecological solutions such as steel, wood and stone elements.

Owner: Ioannidis, Tsotili Kozani
Architectural design: Vassiliou D & Partners
Completion: 2008-2009
Structural rehabilitation of an old residential traditional stone building, protected by law, to a luxury hotel using irreversible and ecological solutions such as an interior steel skeleton supporting elastically the parametrical stone walls. The building is in a highly traditional protected area.

Owner: Dimou Ltd, Kastoria
General contractor: Akrolithos A.T.E.
Architectural design: Goutzimanis Architects
Engineer of record: Anastasiadis, Soxopoulos
Completion: 2009-210
The project rehabilitation consists of structural plan, which considers the strengthening of the basement, ground floor and upper floors. The intervention consists in using four steel tubes in order to carry out the seismic actions. In the same time, by bracing the timber floors, rigid horizontal diaphragms were created.

**Beneficiary:** SC Eco Trust SRL  
**Architecture:** SC Architecture Design SRL - Architect Constantin Ciocan  
**Structural design:** S.C. H.I. Stuct S.R.L. si SC Maison Style SRL  
**Earthquake consultant:** M. Mosoarca, A.S. Anastasiadis  
**Completion:** 2008-2009
A significant number of private dwellings have been designed. Each project consists of the architectural and structural design as well as mechanical equipments design. Also our firm was responsible for superintending and managing of each project. All dwellings have been constructed in Thessaloniki and Chalkidiki region, in towns like Anchialos, N. Michaniona, Arethousa, Sarti, etc.
A significant number of projects, acting as a principal engineer or as a subcontractor for other firms, concerning structural analysis and design of reinforced concrete building structures are provided. Furthermore, we also have designed a significant number of tanks, for swage, fireproofing, as well other projects of civil engineering works (r/c foundations for machines, retaining walls, etc)
Structural surveying, quality control and assessment of a 6 story reinforced concrete building in the central Thessaloniki region.

**Owner:** ***, Thessaloniki
**Client:** Nikoulis Architects
**Completion:** 2002
Participation in the framework of collaboration with I.Xanthos-Steel Structures Ltd, which was the leader, in technical consulting for construction problems arising in steel arches and frameworks used for the construction of Driskos Tunnel (the longest tunnel in Greece), 2002.

Participation in the framework of collaboration with I.Xanthos-Steel Structures Ltd, which was the leader, in technical consulting for the checking of structural design and also resolving constructional problems of the New klinker production unit of Titan S.A. Cement Company in Thessaloniki, Greece, 2002.

Developed an innovative methodology for the evaluation of seismic vulnerability of existing reinforced concrete multi-storey buildings and applied this methodology in some cases in the city of Thessaloniki, Greece. The method is also valuable for the earthquake insurance purposes and was presented in different national and international conferences, 2003.

Structural consultant and supervisor, in collaboration with Histruct and Themeliodomi S.A., for the implementation of Romanian and European codes, in the geotechnical design for the construction of the Physical Refining and Biodiesel Plant of the Biomart Energia S.A. at Bucharest, 2005.
Structural screening and strength assessment of 2 story reinforced school in highly seismic zone, constructed in ‘90s. Different seismic scenarios were produced and proposals for a feasible rehabilitation were made. In the near proximity of the school of about 800m there is a seismic fault.

Owner: Municipality of Thermaikos, Thessaloniki Region

Structural screening and strength assessment of 2 story reinforced school in highly seismic zone, constructed in 80’s. Different seismic scenarios were produced and proposals for a feasible rehabilitation were made. In the near proximity of the school of about 100m there is a seismic fault.

Owner: Municipality of Thermaikos, Thessaloniki Region

Our office has undertaken, in collaboration with Mr. Kastanidis I, Arch Eng., the Rapid Visual Screening of a multi-storey reinforced concrete building constructed in the 70s, situated in Delfon region, Thessaloniki. Based on the observed failures, we prepare a study for the repair of critical components by applying the EN 1504.
Our implementation in many phases of a project, from the early conception to the final construction, lead us to occupy with some legal issues regarding civil engineering works.

A significant number of technical expertises, in the framework of the Court of Thessaloniki, mainly concerning ascertaining of structural deficiencies, structural assessment of building structures as well as contractual disputes was executed.

Technical consultancy, to law firms, private persons and contractors, regarding drafting of contract documents, drafting or readaptation of technical specifications, has been provided.

Technical Consulting on the behalf of the ‘‘1997 Thessaloniki, European Capital of Culture’’ and Greek Ministry of Finance verifying more than 500 projects of different type for the disputes and claims against the Project Managers. This was the first Mega-Project in Greece.

Valuation for the Mortgage Service of the Greek Ministry of Finance, department of Thessaloniki, acting as an expert accredited from the Court of Thessaloniki.
Based upon `3L` virtues: Lore, Liability and Loyalty,
We are Committed to Excellence making easier our complex world´´

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