Structure

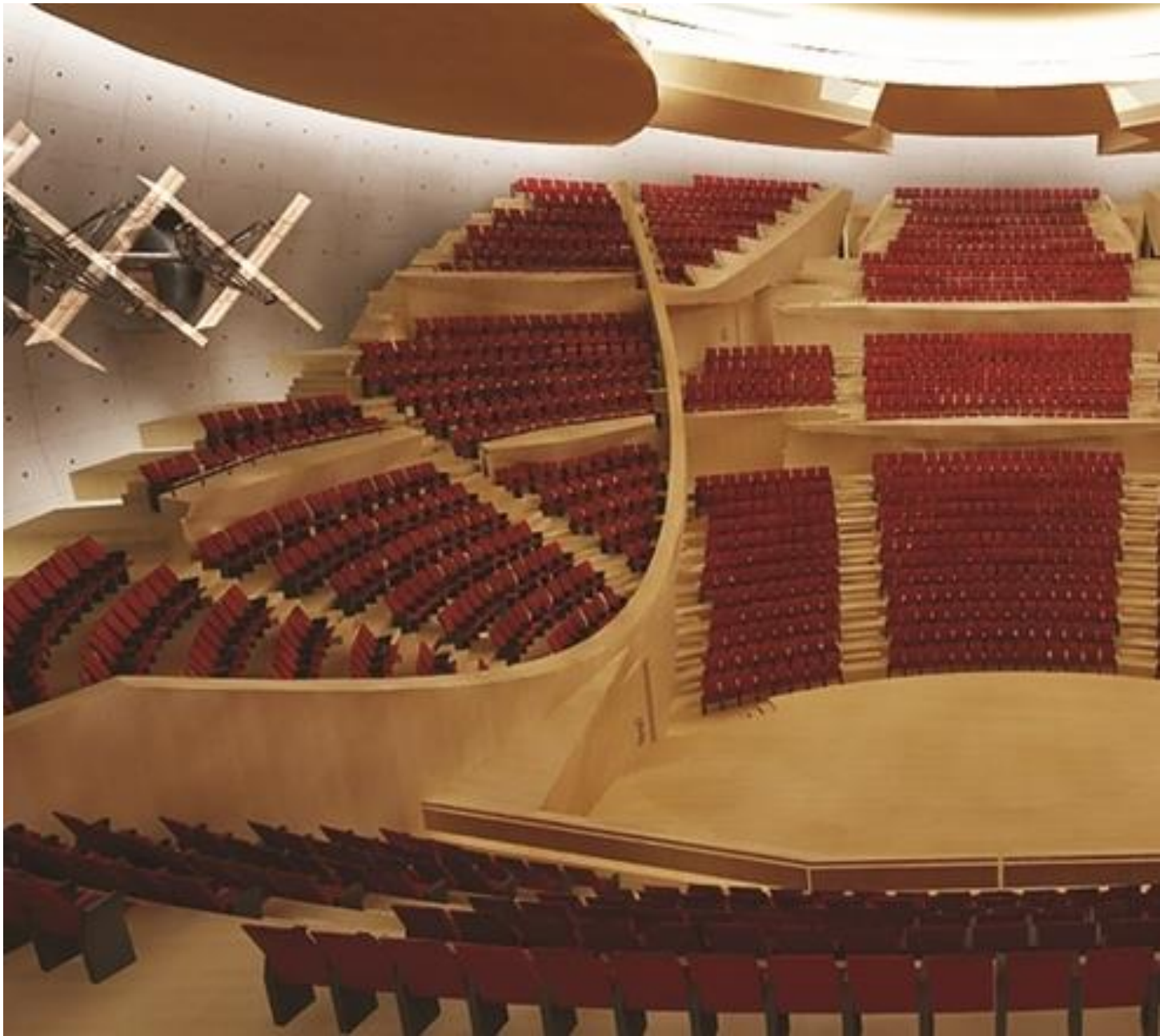
Reliable Structures for Future

Introduction

Prota was established in 1985 and went into engineering profession with an initial focus on building design. In a short period of time, the company has specialized in high rise buildings, industrial structures, health structures, important public buildings, shopping malls, sport complexes and historical structures with its unique design approach and innovative performance.

Ever since its establishment, Prota has extended the scope of services and activities including building design, transportation engineering, infrastructure, urban design and regional planning, earthquake engineering, research and development, project management, design and construction supervision and quality control and contract management and has undertaken various projects around the globe with its staff composed of more than 170 technical experts.

Today, Prota has become one of the Turkey's leading engineering and consultancy firms with its innovative approach and its success lies in over 25 year experience, its inter-disciplinary nature and its capability to provide integrated and creative solutions.



Context

Prota Business Principles

As the pioneer in the Turkish engineering and consultancy sector, Prota has been employing business and management policies and professional values that it has developed along the way. Today, the Prota principles focus not only on customer satisfaction but also on the professional development of its personnel within an environment that adopts the “sincere at relations, responsive at work” spirit.

Using its vision as a springboard, Prota aims to fulfil its social responsibility obligations by maintaining the motto, “Reinforcing the Future”.

Prota’s objectives have been to provide services that are effective in the consultancy sector on both national and international levels, that ensure high level customer satisfaction, and that utilize the latest technologies.

As a FIDIC member, Prota is liable to follow business policies compliant with the FIDIC Code of Ethics.

As Prota, we hereby commit ourselves to:

- Improving our knowledge and skills by following technological and scientific developments,
- Focusing on research, development, and renovation projects,
- Offering reliable and timely services,
- Meeting the latest quality standards in our projects and working units,
- Strictly conforming to in-house training policies at all levels,
- Maintaining a managerial policy that encourages innovation and integrity, and extending team spirit in this direction,
- Ensuring high level customer satisfaction,
- Achieving customer dependency,
- Abiding by national and local environmental policies and current environmental management standards in all of our activities.

Why Prota?

Prota Engineers and Architects have so far designed structures having construction sites more than 21 million m2 in more than 15 countries around the globe.

Prota takes an active part in the adaptation of Turkish standards and codes to EU norms, in particular regarding to building design and construction materials and methods.

Continuous in-house training is an essential feature of Prota tradition...

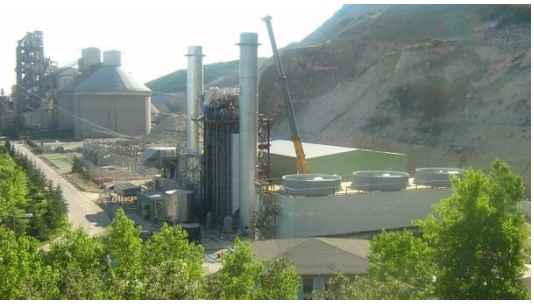
... A management policy encouraging innovation and integrity...

Prefabricated concrete, reinforced concrete, steel, cabled suspended structures, composite, pre-stressed, and posttensioned reinforced concrete systems are some examples of such structural systems…

For almost all the projects designed and managed, feasibility studies, cost and quantity estimations, technical specifications, and procurement consultancy services are provided by Prota. In some cases, Prota provides construction quality management and supervision services during construction of the designed facilities.

Prota engineers keep abreast of the literature and latest developments in their fields, and are thus able to propose innovative system models in order to produce solutions that are economical and aesthetically pleasing.

Our Services



Engineering has proven experience in providing professional, multi-disciplinary services for construction, maintenance and research and development projects. These projects have included (i) Structures: light and heavy industrial buildings, high-rise buildings, warehouses, underground and earth retaining structures, tanks, seismic assessment and retrofit works, (ii) Infrastructure: transportation systems including above & underground rail and road structures, site development and (iii) Planning: urban and regional plans and assessment management plans.

Design Phase

- Architectural Design and Engineering Services (all disciplines)
- Restoration
- Damage Assessment and Land Surveying
- Development Techniques and Methodology
- Urban and Regional Planning
- Geological/Geotechnical Investigation and Design
- Research and Development Projects
- Feasibility Studies
- Technical Consultancy
- Preparation of Tender Documents and Specifications

Procurement Phase

- Tendering Support and Technical Assistance
- Bid Evaluation and Contract Negotiations Support

Construction Phase

- Project and Construction management
- Construction Supervision and Technical Consultancy
- Commissioning Assistance
- Technical Training Services
- Operation Consultancy
- Acceptance of Work

Building Design

Since its foundation, Prota has been specializing in building design, and has undertaken thousands of structural designs and provided supervision and consultancy in a number of countries. These projects are business centers, shopping malls, residential buildings, housing complexes and satellite cities, office buildings, educational buildings, healthcare facilities, transportation structures and stations, industrial buildings, public buildings, sports fields and centers, recreation and social structures, and underground and above-ground parking facilities.

Prota's success lies in its inter-disciplinary nature that combines architecture, civil, structural, electrical, mechanical engineering and landscaping design within its body which allows offering holistic solutions to the customers. Besides engineering and architectural services, Prota also provides initial and complementary services during the design stage, such as feasibility studies, cost and quantity estimations, and technical specifications preparations, and inspection and quality control services.

Prota design solutions aims to provide the most cost-effective answers by employing a wide range of structural system solutions. These include prefabricated concrete, reinforced concrete, masonry, steel, cabled suspended structures, composite, and pre-stressed and post-tensioned reinforced concrete systems.

Prota engineers, who keep abreast of the literature and latest developments in their fields, and are well equipped to propose innovative system models in order to produce solutions that are economical and aesthetically pleasing. Prota takes an active part in the adaptation of Turkish standards and codes to EU norms, in particular regarding to building design and construction materials and methods.

Turkish Broadcasting Company / TRT Izmir Studios (Izmir/Turkey)

Building which is designed by architecture Özhan Sökmen is the second largest production center of our country. Prota has been providing construction consultancy, architectural and structural project analysis and design for the İzmir Production center, the second biggest production center in Turkey. The total area of the building is 60,000 m². The work was being carried on within the framework of the consulting services provided by the German TV, ZDF. In the scope of the project, the steel inner shells, RC grid systems, box systems, RC shell systems, were solved. The studio steel inner shells' acoustic systems, stage technique systems, mobile seat systems, and such were solved, the spring calculations were done and the springs were designed. Prota has become a leader firm in Turkey with this project and deserved the administration of T.R.T. The project services were rendered in 1987-94.

Social Security Institution Building

The project studies which were awarded to Architect Merih Karaaslan through a competition began in the middle of 1990. The project services had been rendered in 1992 and renewed according to the new earthquake code in 2002. The total construction area of the building is 44,000 m². Since the area is big the structure was divided into 9 blocks. The structure group has 10 stories.

In the scope of the project, following services were provided: 1/100 and 1/200 project study and reports, Geologic and topographic area studies, Structural analysis and design and application projects, Steel design and Preparation of investigations and quantity estimations.

Technology Research Center (Gebze-Kocaeli/Turkey)

The center is located on the Istanbul-Ankara highway, in the vicinity of Gebze. The building has a circular plan layout with a reception hall at the center and radially distributed spaces separated by curved corridors. The total area of the center is 5,500 m². The reception hall has a 3-dimensional steel structural roof system while the other parts of the structure are designed as a reinforced concrete structure. The project services were rendered in 1996.

Gubkina Residents – Moscow, Russia

Building which was made by EMT A.Ş. on the Lenin Boulevard that is one of the busiest residential and business districts in Moscow consists of 3 blocks with 16, 27 and 10 floor. Architectural project consultancy, structural application project and technical consultancy of building which is planned architectural preliminary project by Moscow Project Institution has realized by our company. Building has total 30.000 m² construction area and has been designed in 1994.

METU Education Foundation Private School - Ankara

Steel and concrete carrier system and technical consultancy services of conference center and atelier structure which is designed by architecture Semra Teber are provided by our company. Project studies are realized in 1997. Closed construction area of building is about 10.000 m².

Middle East Technical University Museum of Technology (Ankara / Turkey)

The technology museum building of METU Ankara Campus is designed by Prota architects and engineers. The suspended steel structure and R/C foundation project of the museum building has been performed by Prota in 2003. In the scope of the project structural engineering services, infrastructure and quantity estimation services were rendered.

The steel carrier system has been used in the construction of the complex. The museum was opened to public in 2005. It consists of 10,000 m² open space exhibit area and 3,500 m² closed area. The structural system of the building consists of suspended steel structure and R/C foundation. Beside structural design, infrastructural system design and quantity estimation services were rendered by Prota.

METU Dormitories

Since its foundation, METU as an international research university has been the leading university in Turkey. The university gives education for both national and international students. The METU Isa Demiray Dormitories provides accommodation as a one of the identical dormitory in the METU Campus with a 604 beds capacity.

The dormitory designed with a total closed area of 10,400 m². The dormitory buildings are made of steel structural system. There are 148 rooms with living unit for 4 students and 6 rooms with living unit for 2 students.

Prota provided complete design services for the dormitories including architectural, structural, Electrical and mechanical designs. Designs have been finalized in 1997.

Since 20 years Prota Engineers and Architects worked for many education buildings, dormitories, conference centers, sport halls, ateliers, multi-purpose halls for many university campuses, high and primary schools. Total school building area is about 1,180,000 m² in more than 150 education campuses.

Prota engineers designed the first steel school and dormitory buildings in Turkey as Hacettepe University Dormitories and Kent College in Ankara.

Different structural system were applied to education facility buildings such as cast in place concrete framed systems, steel, prefabricated concrete structures, composite structures, etc.

METU Dormitories (KKTC/Cyprus)

Dormitory District of METU Northern Cyprus Campus covering 120,000 m² is situated on southern hillside of campus area. Dormitories will accommodate 6000 students. This large complex will become a real "student village" having more population than many local villages around.
The steel and R/C structural projects of the dormitory buildings have been performed by Prota for the first phase having a total closed area of 14,000 m².

In the scope of the project structural engineering services, infrastructure and quantity estimation services were rendered.

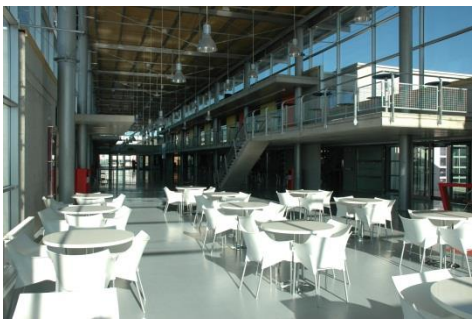
Gençlerbirliği Sport Facilities

The project study of the building was completed in 1998. Design services have been performed by our company and project works include architectural and structural designs, E&M designs, detailed drawings, cost estimations, construction supervision and technical consultancy services.

'75. Yıl' Rehabilitation Center - Ankara

Building construction was undertaken by Emek Const. Adm. Inc. and projected in 2000. Prota has taken place in the project by making civil engineering project and technical consultancy services. Total construction area of building is 34.000 m².

Turkish Education Foundation TED (Ankara/ Turkey)



- The biggest educational campus in Turkey with 141.000 m² of enclosed area and over 309.000 m² of open area.
- The whole campus designed by architects Semra and Özcan Uygur contains of 41 blocks recreational facilities including classrooms, 3,000 spectator capacity indoor sports hall, stadium, 3 indoor sport hall, laboratories, restaurant, indoor and outdoor swimming pools, student clubs, healthcare center, fitness center, 1500 spectator capacity theatre, a school museum,6 seminar rooms, social activity center, administrative building and technical spaces.
- The whole campus contains of 41 blocks.
- TED Ankara College provides modern education for kindergarten, primary and high school level in Turkey.

Undertaken works by Prota include: Topographical services, application on site, geological and geotechnical investigations and reporting, structural analysis and structural designs, preliminary and final designs and detailed drawings, preparation of construction tender documents, technical specifications and Bill of Quantities and cost estimates.

Republic of Turkey Ministry of National Education- EFİKAP Project

Project and technical consultancy works of 1.region constructions have undertaken by UBM-Prota partnership with in the context of the project which is carried out by Republic of Turkey Ministry of National Education, Investment and Establishment Head of Department. Within the context of the work architectural and engineering project services of 41 education campus which has about 350.000 m² construction areas have been provided. In this context, with a total construction area of about 105.000 m², schools, workshops, dormitories, dining hall, indoor sports hall, adult education center 24 units of various types and the original project was prepared by the earthquake and climate zones. Pre-application/ detail projects, bill of quantity, preparation of specifications and tender documents, making infrastructure projects and geological studies have undertaken within the context of the project. Construction was completed in a year such a short time, provisional acceptance is made.

Belyaeva Residential and Office Complex – Moscow, Russia

Complex which has been constructed at newly improved Belyaeva region of Moscow has involved houses of various sized, bank, market, workplace and shop. Total construction area of complex is about 130.000 m². Project studies were realized in 2002-2003.

METU Dormitories - Ankara

Project studies of dormitories donated to METU by Sonmak A.Ş. was completed in 2001. Its total construction area is about 10,300 m². All project services of the 600-student capacity building were provided by our company.

Leninsky Prospect 123-125 Office Complex- Moscow, Russian Federation

The complex is located on the most rapidly growing street in Moscow. Building design and analysis studies were undertaken in 2003. Total construction area is 107,000 m² and the complex is composed of 8 blocks with different heights. The highest one is 32-story and 114 meters high. In the scope of this project; Prota provided R/C Structural project study and reports, final design and quantity survey reports.

Leninsky Prospect 131-135 Apartment and Office Building- Moscow, Russian Federation

Building design and analysis studies were undertaken in 2004. Total construction area is 128,000 m². The complex is composed of 8 blocks in different heights. The highest one is 35-story and 118 meters high. In the scope of this project; Prota provided R/C Structural project study and reports, final design and quantity survey reports.4

Dobrinisky Luxurious Apartments - Moscow, Russia

Project is located in Dobrininsky, Moscow. Project services were completed in 2004 and construction services were undertaken by EMT Cons. Inc. The total construction area is 60.000 m² and the highest building is 18-story and 60 meters high. In the scope of this project; Prota provided R/C Structural project study and reports, final design and quantity survey reports.

Residential Complex- Tyumen, Russia

The project area is located in the most prestigious region of Tyumen. The complex consists of 9 blocks in total and project studies were carried by Prota in 2009. The total construction area is 66,879 m².

Cer Modern – Ankara

The project designed by architects Semra and Özcan Uğur for Ministry of Culture, was transformed from the disused train wagon repair building into a contemporary art center of Ankara. Within the scope of this project, preparation of new structure and retrofitting projects, quantity survey reports and technical consultancy services were carried out by Prota. The building spreading over an area of 11,000 m² consists of two sections in terms of old and new. Project studies were conducted in 2001 and construction of the structure is still ongoing.

Narodnaya Apartments- Russia

Project is located in the St. Petersburg's most prestigious region, Norodnaya. Structural project services were undertaken in 2004. In the scope of this complex composed of 3 residential blocks; R/C Structural project study and reports, structural analysis and preparation of quantity survey reports were the services provided by Prota.

Mega Nizhny Novgorod Shopping Center

The building consists of two floors; one is car parking area and the other is shopping mall. The building is constructed by using different techniques such as continuous and pile foundations,

precast columns and slabs, cast in place concrete columns, beams and slabs, steel roof structure, etc. The total construction area of the complex is 288,000 m².

Mega Dybenko Shopping Center - St. Petersburg's, Russia

The complex lies within the borders of the city St Petersburg. The building consists of two floors; one is car parking area and the other is shopping mall. The building is constructed by using different techniques such as continuous and pile foundations, precast columns and slabs, cast in place concrete columns, beams and slabs, steel roof structure, etc. The studies of the project that was realized by Prota were begun in 2006. The total construction area of the complex is 292,000 m².

Mega Belaya Dacha Shopping Center - Moscow, Russia

The complex lies within the borders of the city Moscow. The building designed by architect Kerem Yazgan consists of three floors; one is car parking area and the others are shopping mall. The building is constructed by using different techniques such as continuous and pile foundations, precast columns and slabs, cast in place concrete columns, beams and slabs, steel roof structure, etc.

In the scope of building a new tubular concrete column / steel deck pedestrian bridge is designed.

All of the structural calculations were performed according to Russian SNIP and Eurocode. The below stated services were given in the scope of the study.

- R/C, steel and precast structural project, details and reports,
- Structural dynamic analysis,
- Design and detailed projects,
- Preparation of quantity measurements.
- Structural Consultancy services.

The total construction area of the complex is 315,000 m².

The studies of the project were realized by Prota in 2006 and 2007.

Altınoran Residence - Ankara

The complex located in Oran, Ankara is the largest themed-project in Turkey and consists of residential buildings and commercial spaces.

The project contains 37 residential blocks in which the tallest one is 15-story, 2 42-story office blocks and social facilities. Prota has undertaken the structural projects of the lot called P2 and the total construction area is about 550,000 m². Approximately 1750 residential and 260

conventional units are located within this part of the area as well as social facilities and closed car parks.

Pulkova Airport Terminal Building - St. Petersburg, Russia

Prota is working as part of a team to design a new terminal for Pulkovo Airport, St Petersburg, Russia. Pulkovo Airport is located approximately 20 km from the city center.

The updated Pulkovo will be the fourth largest airport in Russian Federation. After the completion of the project airport will reach 14 million passenger capacity annually.

Our engineering services cover the structural design of the following structures; 95, 475 m² new terminal building, 11,600 m² Business Center, 200 Rooms 4 Stars Hotel, 98,000 m² Open Car Park and Closed Car park, 485,000 m² Passenger Apron, 50,000 m² Cargo Apron, North Pier, Forecourt, Fixed Link.

Sabiha Gökçen Airport (Istanbul, Turkey)

Sabiha Gökçen International Airport is one of the two international airports serving Istanbul, Turkey. The facility is located 35 km southeast of central Istanbul; it is on the Asian side of the bi-continental city.

Undertaken works by Prota:

- Provision of seismic safety with Triple Pendulum Seismic Isolation System, checking the applied loads, structural model evaluation, design review report preparation for Car park Structure,
- Review of pile foundation system and preparation of geotechnical report for terminal building,
- Selection of seismic isolator systems for terminal building, preparation of respective technical specifications, and evaluation of seismic system proposals, inspection of isolator products, structural system selection,
- Structural modelling and calculations of terminal building, review of seismic design of isolator systems, checking the designs of buried concrete base structure, steel composite superstructure,
- Infrastructural design for flyover bridges and underground structures, evaluation of the structural model, checking the analyses by independent computer modelling, preparation of design review report.

Pristina Airport

Pristina International Airport, is located approximately 15 km away from south-east of Pristina, the capital city of Kosovo.

The new terminal building with a closed area of 45.000 m² will be constructed with all utilities and equipment for operational functioning and with an exceptional and impressive design resembling the independence of Kosovo.

Prota has provided all optimization, structural engineering design services for New Terminal Building, Air Traffic Control Tower, MEP Building in addition to preparation of statical projects of apron taxiway, apron extension, resa apron, connection roads and car park, and the preparation of infrastructure projects of all the Airport.

Cairo International Airport Terminal Building 2

Cairo International Airport is the busiest airport in Egypt located to the north-east of the city around 15 kilometers from the business area of the city; it has an area of approximately 37 kilometers square.

With a built-up area of 170,000 m2 the project comprises the renovation of the existing Terminal Building 2, the construction of new buildings which includes a new departure hall, and a new airside pier, doubling the existing total built-up area of TB 2. The terminal will include larger and more modern retail areas and will also include Airbus A380 gates. Upon completion in 2015 the passengers can expect a highly modern terminal offering international standard service levels and more passenger conveniences, including large retail areas and lounges.

Prota provides all optimization and engineering design services for the renovation of the B Block of TB 2 having a total closed area of approx. 35,000 m².

Incek Loft - Ankara

This project composed of residents and offices was established by Akfen in İncek, Ankara and architectural project studies were carried out by Tabanlıoğlu Architecture.

Structural and geotechnical projects of Incek Loft located on an area of about 110.000 m² were undertaken by Prota. Within the context of the project, approximately 900 houses and 50 commercial units have been under construction. The project consists of 35 blocks in which the highest one is 32-storey. Project works were realized in 2012-2013 and during this process, rock mechanics and geotechnical works gained importance due to soil conditions of the area.

Van Healthcare Center

Van Healthcare Campus Project will be one of the most technologically advanced hospitals in Middle East. Van Healthcare Complex located at the center of Van City in Turkey is spread over an area of 136,000 m² comprising of hospital buildings and auxiliary health units spanning in total 49,000 m² area.

The campus will consist of Van 200 Bed Cardiovascular Hospital, 300 Bed Obstetrics, Gynecology and Children Diseases State Hospital with a total bed capacity of 500.

Prota provides consultancy services for structural design using base-isolation system and preparation of BoQs, and technical specifications.

Erzurum Healthcare Campus

The Erzurum Healthcare Complex will be the largest medical complex in eastern Turkey and located at the center of Erzurum City in Turkey next to the existing Erzurum Region Research and Training Hospital. The campus is spread over quite a large area comprising of hospital buildings and auxiliary health units with a total bed capacity of 1,500 spanning in a total area of 550,000 m².

The campus includes Obstetrics, Gynecology, and Maternity Hospital (300 bed), Oncology Hospital (150 bed), Chest Diseases Hospital (150 bed) Cardiovascular Hospital (150 bed) in a closed construction area of 190,000 m².

Prota provided consultancy services for structural design using base-isolation system, electrical, mechanical and infrastructural design and preparation of BoQs, and technical specifications.

Cagdas Hospital (Mersin/Turkey)

Hospital building is designed by Prota Engineers and architects. The project studies began in 1999 and completed. The hospital contains 110 beds and other facilities. Within the framework of the project, architectural preliminary and detail projects, Geologic and Topographic area studies, structural, mechanical and electrical projects, quantity measurement and consultancy services were rendered. Total construction area is 10,500 m².

Karadeniz Technical University Farabi Hospital (Trabzon/Turkey)

Structural engineering services were provided for the project which was prepared by Hasan Öncüoğlu, Architect. The project studies began in 1995 and completed. Total construction area is 15,000 m².The hospital contains 300 beds and other facilities. Within the framework of the project the structural project and preparation of tender document works had been performed.

Fethiye Hospital (Mugla/Turkey)

Structural engineering services were provided for the project. The project studies performed in 1995. Total construction area is 15,000 m².The hospital contains 200 beds and other facilities. Within the framework of the work the structural project and tender document works had been prepared.

Haydarpasa Chest Hearth & Surgery Hospital (Istanbul/Turkey)

Hospital building is designed by Prota Engineers and architects. The complex consists of a 23-story main building and a 5-story annex building. The lateral stability of the main building is maintained with a reinforced concrete core wall system in the middle of the building and peripheral shear walls at the short edges. Being located in a seismic region, dynamic response spectrum analyses were carried to make the building earthquake resistant. The structural system of annex building is composed of steel frames.

The project works had been performed in 1995. Total area of the building is 21,000 m².

Metropolitan Municipality Gate Complex (Istanbul / Turkey)

The Istanbul Gate complex, the first of the Municipality's series to reshape Ankara's visual and symbolic structure is also an interesting area for national and international activities.

The project includes a commercial center of 20,000 m², social –cultural areas, recreational and sport areas and the Landmark 13 October Istanbul City Gate. The entrance of the city is constituted of 64 m height "Time Tower " and 90X90 m dimensioned "Bridge Square". Time Tower was planned to be built with rotten proof, high resistant steel and vertical and diagonal elements. The Tower is in the form of right triangle and the base area has the dimensions of 32x8 m. It is covered with glass. The time tower is rise up in the circular hollow, in the middle of the concrete Bridge-Square which is located on highway.

In the scope of the project the shop drawings, structural and dynamic analysis, precast design, pre and post tensioned beam design, steel design, bridge-square cast in place concrete design, quantity estimations, tender file, rain water drainage, sewer system, water system project services were rendered.

Turkish Parliaments Office Building (Ankara / Turkey)

The Turkish Parliament Office Building designed by Semra and Özcan Uygur is established in Ankara in the Campus of Parliament.

To provide modern offices for the member of the Turkish Parliament the biggest campus of Turkey was designed. The offices capacity of the building is 550. The whole building contains 8 main blocks. The campus consists of offices, meeting rooms, working places, restaurant, recreational facilities and technical spaces. The total construction area of the buildings is 72,000 m².

The steel and R/C structural project services, consultancy, quantity estimation, geotechnical study services were rendered in 1998.

Akçakoca Mosque

Instead of the conventional approach the project of the Akçakoca Mosque was prepared with a modern architectural understanding. The mosque designed by Ergün Subaşı spread to an area of around 4200 m². On the ground in an area of 1200 m² situated the mosque with its 500 m² balcony and two each 380 m² prayer sections. The floor width of the mosque's main building is 36X36 m². The roof cover was built with a reinforced concrete shell, particular to the architectural style applied. With the aid of computers, the shell system was resolved using a three dimensional model and finite elements. The minarets, on the other hand, were analyzed and resolved considering the soil and earthquake probabilities. In numbers; the dome height of the mosque is 31 m, minaret height is 58m.

Presidential Concert Hall (Ankara/Turkey)

As the biggest concert hall of Turkey, all the reinforced concrete and steel solutions were performed by Prota. Since the difference of the structural systems, the complex is divided into 8 blocks. 5 blocks are designed for office; garage, study rooms, cafeteria, etc. are solved by using R/C structural system. The total area of the complex is 65,000 m². The small hall block that has spherical shape solved by using the finite element method as shell structure. The foyer block has 3-D wedge shape. The system is solved by placing 3-D steel trusses between two big shear walls to the sides. The main hall block has the egg like shape. It is solved by using ribbed shell structural system. The project works had been performed between the years 1996-2000. Construction works is still continuing.

F Type Prisons (Denizli & Diyarbakır/Turkey)

The project was performed under the code of European Union. Architectural and engineering services were performed by Prota. The building is the first of the new modern type of prisons in

Turkey. The structural analysis was performed by modeling the structure in 3-dimensional model. The total area of the construction is 38,000 m². The project works had been performed in 1997.This project was repeated for Denizli district in 1998.

Mercedes Benz Region Headquarters and Service Centers (Ankara – Istanbul - Tarsus / Turkey)

Three Mercedes Benz service and spare part center plants have been designed for Koluman Motors between 1994 and 1998. The total area of projects is 49,000 m² and consist of service facilities, spare part depots, accessories production hall, offices, cafeteria, petrol station, recreational areas, etc. The following services were rendered by Prota in the scope of the project:

- Architectural planning and detailing (Ankara),
- The structural R/C and steel calculations and drawings,
- Electrical and Mechanical engineering projects,
- R/C prefabricated system analysis,
- Soil and foundation system design,
- Construction consultancy and site supervision,
- Quantity estimations and surveying,
- Preparation tender documents and quantity estimation,
- Infra-structural facilities piling and drainage projects.

High-Rise Buildings

The field, that Prota is most experienced in, is perhaps high rise building design. With its accomplished team of engineers and the broad range of engineering software, either developed by Prota researchers and/or those found in its comprehensive library, Prota has implemented a great number of high rise building designs worldwide.

Prota's services regarding high rise buildings have mostly focused on structural engineering and system selection consultancy. For almost all the projects designed and managed, feasibility studies, cost and quantity estimations, technical specifications, and procurement consultancy services are provided by Prota.

Prota engineers keep abreast of the literature and latest developments in their fields, and are thus able to propose innovative system models in order to produce solutions that are economical and aesthetically pleasing. Prota has established its expertise by using "Top-down methodology", in which steel and cast-in-place piles are used as columns and the structure is constructed from top to bottom, in cases where the buildings are located in dense settlement areas and on relatively poor soil conditions. The method has proven to be a cost effective way to achieve safety for the neighboring buildings during construction.

Mersin Tax Office (Mersin / Turkey)

The 28 storey building located in Mersin; a large city and a port on the Mediteranean coast of southern Turkey. The building designed by architects Semra and Özcan Uygur has 27,800 m² construction area.

Prota's responsibilities included the geologic and topographic studies, preparation of technical feasibility reports, structural analysis, design and detailing projects, preparation of investigations and quantity estimations. Construction consultancy services were also provided by Prota.

Yugo- Zapadny No: 137 Residential Complex – Moscow, Russia

The building built by EMT A.Ş. in Yugo- Zapadny, Moscow is 28-story and composed of 4 blocks. Prota provided architectural project consultancy services, carrier system final designs and technical consultancy/supervision services as well as infrastructure project design. Project studies were completed in 1995 and construction works last 2 years. Its total construction area is 40,000 m².

Portakal Çiçeği Residence - Ankara

The building designed as a residence by Semra Teber is located inside the Portakal Çiçeği Valley in the heart of Ankara. As the tallest building in Ankara the building has 40-storeys with a height of 142.00 m. This residential skyscraper is rising on a 3,500 m² lot within a 5,913 m² area providing a panoramic view of the city.

The residence consist of 35 residence floors and 5 underground floors containing luxury residences, indoor swimming pool, recreational areas, closed garage with 222 vehicle capacity, meeting room, lobby, shelter, etc.

Altınkoza Residence – Ankara

The structure designed by architects Nami and Yeşim Hatırlı has been built by Koza Group. The 57-story building is located in Dikmen Valley, Ankara and its total height is 235 m.

Except the car parking floors, the building was designed as a residence. Within the scope of this R/C framed structure, Prota provided structural analysis and design, wind and earthquake measurements, dynamic analysis and the final design in 2012-2013.

Gorkogo Park Shopping Mall &Towers – Kiev / Ukraine

The complex lies within the borders of the city Kiev. The building consists of several blocks; including garage, mall, residential and office blocks. The 6 basement floor of the building is constructed by top-down method.

Three high-rise reinforced concrete residential blocks have 27 floors and 118.50 m height. Three high-rise office blocks have different floor numbers such as 27, 31 and 35 and with the max height of 143.0 m. These blocks are to be constructed by steel frames with R/C walls. The slabs are constructed as R/C with mesh on steel decks. The studies of the project that was realized by Prota were begun in 2008. The total construction area of the complex is 630,000 m².

All of the structural calculations are performed according to Russian SNIP and EUROCODE norms.

Construction management and planning, Architectural shop drawings, Geotechnical projects and calculations, Top-down construction process design and methodology, R/C and Steel structural project, details and reports, Design and application projects, Preparation of investigations and quantity measurements.

Balem Tower (Bursa/Turkey)

Architectural and structural final projects were performed by Prota. The office building project was performed in 1996. Total floor area is 38,000 m². The building has 25 floors. In the scope of the project; Structural calculations and drawings, Piling and foundation system design, Steel structure project, Quantity estimations and Site Supervision services were provided.

Dnepropetrovsk (Tower–Ukraine)

The complex lies within the borders of the city Dnepropetrovsk. The building designed by the architect Kerem Yazgan consists of several blocks; including garage, mall, and residential blocks. The 28 floor height building has 6 half basement floors. The preliminary structural projects were performed by Prota in 2004.

Glotur Complex (Almaty/Kazakhstan)

The complex consists of two blocks; Residence and office blocks. The building designed by architects Erkut Şahinbas and İzzet Fikirlier is constructed by cast in place concrete columns, beams and slabs and steel roof structure. The studies of the project that was realized by Prota were begun in 2007. The total construction area of the complex is 85,000 m².