




sebatek
engineering

SEBATEK MÜHENDİSLİK – your new solution partner with experienced personnel and relevant areas of activity in the rapidly developing engineering and construction sector.

SEBATEK ENGINEERING operates on the basis of its international work practice, management knowledge and experience, innovative engineering foundation and principles of measurement and evaluation together with its expert stakeholders in the field.

Vision;

Our vision is to recreate a new success story by making a difference with the help of experience, courage, innovation and competition.

Mission;

Our mission is to deliver consulting and engineering services, as well as to create and construct projects within the scope of our management concept with principles, our professional organization structure with the priority for high quality and occupation health and safety, our ability to adapt to new circumstances, and our principle for maximum efficiency based on measurement and evaluation.



Fields of Activity

- **Engineering & Consultancy**
- **Contract**
- **Geotechnics**

• CONSULTANCY

Foundation pile / soil improvement methods, needed as deep excavation and structuring, which are necessary for the contemporary structures increasing both in their height and depth, have become abundant on soft soil as well, are widely used. Because of the high costs involved in the implementation of these methods, a small error in the calculations increases the project costs by a large amount or decreases them in a negative sense (unsafe systems). Consultancy services related to the control of manufacturing / project items to be implemented or prevention of such unsafe systems or over-design products that may occur due to such miscalculation are provided by Sebatek Engineering.

• DESIGN

- Geotechnical Design
- Shoring Project
- Soil Improvement Project
- Foundation Pile Systems
- Route Projects
- Tunnel Projects
- Design of Engineering Structures
- Foundation pile and soil works

• INVESTIGATION OF SOIL

The field and laboratory tests listed below and all of the field-laboratory tests specifically requested apart from these are conducted by Sebatek Engineering. With the help of its authorized engineers, Sebatek Engineering also provides an objective evaluation by on-site observations to the field tests carried out by other companies.

• FIELD TESTS

In geotechnical engineering, field tests play an important role. Design values are obtained following the calculations and analysis conducted in the light of theoretical knowledge in the soil/rocky areas with an uncertain and heterogeneous structure. The optimization of these values can be provided as a result of field tests. Additionally, tests are carried out to control performed works.

The main field tests applied are:

- Drilling • Research Pits • Standard Penetration Test • Cone Penetration Test • Pressuremeter Test • Plate Loading Test • Axial Pile Loading Test • Axial Pile Pulling Test • Sand Cone Test • Continuity / Integrity Test • Geophysical Tests (Resistivity, Seismic Refraction, Seismic Reflection)

• LABORATORY TESTS

- Water Content Test • Natural Unit Volume Weight • Dry Unit Volume Weight • Specific Weight • Sieve Analysis • Hydrometer • Atterberg Limits • Ground Classification • Shear Box Test (UU) • Consolidation free - Drainage free • Shear Box Test (CU) • Consolidated - Drainage free • Shear Box Experiment (CD) • Consolidated - Drained • Shear Box Experiment (Residual) • Triaxial Compression Test (UU) • Consolidation free - Drainage free • Triaxial Compression Test (CU) • Consolidated - Drainage free • Triaxial Compression Test (CD) • Consolidated - Drainage free • Free Pressure Test • Consolidation Test • Free Swelling Percentage Test • Free Swelling Pressure Test • CBR Test • Standard Proctor Test • Modified Proctor Test

• MAPPING AND APPLICATION

Otoyol, Havaalanları, büyük şehir altyapı ve diğer projelerde Ulusal boyutta A derece ağlara dayalı uluslararası koordinat sisteminde B derece ağ sistemi kurarak jeodezik ağ oluşturulur. Harita projelendirme ve uygulamaları için C derece (poligon) ağ sistemi oluşturulur. Kurulan sistem ile GNSS-RTK tekniği kullanarak çift frekanslı GPS alıcıları ile topografik ölçümler yapılır ve 3 boyutlu harita üretim altlıkları oluşturulur. Arazi ölçümlerinin ofis ortamında koordinat hesapları ve krokileri yapılarak CAD ortamında (AutoCAD, MicroStation, NetCad vb.) ölçekli uc boyutlu olarak sayısal harita üretimi yapılır. Projelerin saha harita uygulama işleri için uzman ekip ve ekipman hizmeti verilir.

- JEODEZİK AĞ TASARIMI
- HARİTA PROJELENDİRME
- HALI HAZIR HARİTA PROJELENDİRME
- SAHA HARİTA ÖLÇÜM VE DEĞERLENDİRME

• QUALITY CONTROL

A quality management system is established by creating a quality plan that complies with the project contract and technical specifications. ITP, MoS (construction methods) and project technical documentation are prepared based on the relevant project features and details. Through laboratory installation and services in accordance with the technical requirements requirements and details, field quality control, test, and test application reporting are performed.

- Establishment of quality system
- Preparation of quality plan, ITP, MoS technical project documents
- Laboratory installation and services
- Field quality test applications and reporting
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• Transportation & Infrastructure



Ashgabat - Turkmenbashi Highway

TÜRKMENİSTAN 2016-2018

The project is designed as a part of the trans Asian transportation on the historical Silk Road, with the highway length of 564 km, section width of 34,5 m, 1 Cloverleaf Interchange, 7 Trump Interchanges, 1 roundabout, 69 bridges, 434 culverts, 83 underpasses, 16 recreation areas, 4 service areas, 6 maintenance facilities, 9 toll booths, green space of 768.000,00 m2

The brief information about the main production sizes of the project is given below.

- Excavation Amount: 45.658.000,00 m3
- Fill Amount: 73.825.000,00 m3
- Sub-Base Amount: 10.060.000,00 tons
- Plant Mix Amount: 9.570.000,00 tons
- Asphalt Amount: 8.962.000,00 tons
- Bitumen Amount: 358.510,00 ton
- Concrete Amount: 550.000,00 m3



Boeing 777 Aircraft Hangar

TÜRKMENİSTAN 2011-2012

Completed in Ashgabat International Airport, the project is equipped with an 85x95 m aircraft hangar, a 100.000 m2 apron and taxiway, an equipment park and a barrack.

Within the scope of the hangar structure, it is equipped with a 3.200 tons of steel installation special hangar door with 75x18 m dimensions, maintenance workshops, working offices and training rooms.



Ashgabat International Airport TÜRKMENİSTAN 2013-2016

Both nationally and internationally award-winning Ashgabat International Airport Project with its enormous dimensions and grandeur has become Turkmenistan's new door to the world in the city of Ashgabat, a rising star and historical, cultural and civilization center of Central Asia. The airport has been constructed on a 1.2000-ha area and it consists of terminal buildings, runway-apron and taxiways, airside and landside facilities and new fuel facilities.

The new Ashgabat International Airport has a capacity of 1600 passengers per hour and it is equipped with a terminal building and apron consisting of a 165.851 m2 closed area with a total capacity of 14 million passengers per year and 30 passenger boarding bridges, VIP terminal and apron, T2 terminal and apron with a capacity of 280 passengers per hour, and both underground and ground parking lots with a capacity of 30.000 vehicles

Airside and landside are equipped with a total of 160 buildings

Within its airside, the airport is equipped with a 65 mt high 6.500 m2 air traffic control tower, 33.000 m2 C-Check aircraft maintenance hangar and apron with a capacity of 5 aircrafts including 3 Boeing 777 with a dimension of 100*200 mt, Cargo Terminal and apron with an annual capacity of 200.000 tons, Catering Building, Emergency-fire station buildings, ground services equipment park and workshops, parking lots with a canopy and technical centers

Within its landside, the airport is equipped with a Pilot training school and a dormitory building, Logistics management and warehouse buildings, a hospital, indoor and outdoor sports centers, a simulator building, Turkmenistan Airlines Administrative Building, Police Center, Workshops, ESTOP-BERTOS Building, Cabin Crews Building, parking lots with a canopy and technical centers

The new airport is equipped with a new 3800 mt long CAT-III, Code F runway and parallel taxiway where Airbus A380 and Boeing 747 capacity aircrafts with a total covered area of 2.450.000 m2 can take off and taxi, a 3800 mt long existing renovated runway, the main terminal apron with automated filling and VDGS automatic parking system, VIP terminal apron, Cargo Terminal apron, the Maintenance Hangar apron, T2 terminal apron, heliports, an isolated aircraft parking area and training areas.

New fuel facilities equipped with 14 gasoline and diesel tanks with a total capacity of 20.000 tons of fuel, a total of 11,110 mt pipeline with 16-inch, 12-inch, 10-inch and 6-inch diameters, 155 fuel pits, filling and discharge pumping stations, a tank filling area, a landside vehicle fuel station are constructed at the new airport.

Within the scope of airport security, the new airport is equipped with a CCTV building, camera systems, 30 km precast perimeter security wall and road, access control buildings.



Chandybil Roads

TÜRKMENİSTAN 2010-2011

The project, the construction of which was completed as 28.5 km to the south of Ashgabat city, consists of the main road with 8 traffic lanes (4 entrance and 4 exit lanes) with a platform width of 80 mt, the service road with 4 traffic lanes (2 entrance and 2 exit lanes) and parallel roads. Within the scope of the project, there are 4 bridge interchanges constructed with the post tensioning system, 5 roundabouts, 8 underpasses, 17 km energy and communication lines service gallery, 236,241,00 m² pedestrian road, 298 km curbs, 78 km rainwater drainage system, 44,880 mt precast trapezoidal rainwater channel, 530.000 m² green area landscaping, 13 water reservoirs, LED traffic guidance system, camera radar system and 48 passenger stops..



Turkmenbashi International Airport

TÜRKMENİSTAN 2009-2010

Completed in Turkmenbashi city, the project is equipped with 34.000 m² domestic and international passenger terminal with a capacity of 800 passengers per hour, 3.500 m long (248.600 m²) aircraft runway, 74.587 m² aprons with 6 fuel pit, 65 m high traffic control tower, cargo terminal, VIP passenger terminal, a closed car park with a capacity of 252 vehicles, a fuel farm with a capacity of 8,000 m³, a 6 inch wide and 10,000 m long fuel pipeline and technical buildings.

Industrial & Energy



Fuel Plants

TÜRKMENİSTAN 2013-2016

Within the scope of the new Ashgabat International Airport Project, new fuel facilities equipped with vertical fuel storage tanks with the capacity of 20,000 tons (3 with 6,000 tons, 1 with 2000 tons of capacity), 14 horizontal tanks (avgas, gasoline, diesel, kerosene), a total of 11,110 m pipeline with 16-inch, 12-inch, 10-inch and 6-inch diameters, valve chambers, 155 fuel pits, filling-discharge pump stations, a pipeline filtering and pumping station, a tanker filling unit, a landside vehicle fuel station, a wagon unloading station and operation and leak detection automation systems have been constructed.



BTC PT3 Pump Station

TÜRKIYE 2003- 2006

The station was constructed between 2003 and 2006 at an altitude of 2300 m in Bashkoy, in Chayrly District of Erzincan along Baku-Tbilisi-Ceyhan crude oil pipeline, and it was put into operation in 2006.

The pump station consists of a pump building equipped with 4 Wartsilla pumps, absorption towers, a piping building, a fire building and fire water tank, an automation and administrative building workshop, a relief building and tanks, a security building, a canteen building, lodging buildings, technical buildings, a treatment plant and a heliport.

• **Superstructure**



Esentai Tower Complex
KAZAKISTAN 2008-2009

The complex, opened in the commercial and financial center of Central Asia, Almaty, consists of a forty-four-storey tower with a 64.500 m² closed construction area (general service areas, office areas, hotel floors, residence floors, technical floors, BOH and FOH areas), a ballroom, a shopping mall and 3 twenty-two-storey residences.



Marriot Executive Apartments
KAZAKISTAN 2006-2008

The hotel is designed for executives of oil companies and their families in Central Asia, Atyrau city, was opened in 2008 with a covered area of 24,500 m², and consists of an entrance hall, Adidas restaurant, Il Patio Sushi, HSBC Bank, hotel floors (entrance hall, bedroom, kitchen, guest room and bathroom), fitness room, as well as technical rooms. The hotel floor consists of 95 single, 32 double, triple and 1 quad suites.

• **Mobilization Camp And Support Facility Installation**



Central Camp and Support Facilities
TÜRKMENISTAN 2012-2013

The Central camp and auxiliary facilities of Polimeks Inshaat is located in Choganly region of Ashgabat and is equipped with a camp residence area of 5000 people on 25 hectare area, social facilities, open and closed hangar areas, a machinery repair-maintenance workshop, a wood works workshop, precast production area.

• **Demolition and Dismantling Works**



Ashgabat International Airport – Demolition and dismantling works
AŞGABAT 2013- 2015

Within the framework of the new project of the Ashgabat airport, work on the dismantling and demolition of existing old buildings of the airport was carried out in stages in accordance with the plan of the construction work schedule. The demolition and dismantling of existing terminal buildings, tower, landside and airside structures, the old existing runway- aprons-taxiways, which in total are 96 units, as well as transportation of construction debris of 1 million m³ were carried out.



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