



Lepingu raames rajati 14-korruseline äri- ja büroohoone ning kuue maapealse ja 1,5 maa-aluse korrusega parkimismaja. Projekti pea-projekteerimine toimus BIM mudelis. Lisaks kasutati mudelprojekti ehitusmahtude arvutamiseks, hangete korraldamiseks ja tööde plaanimiseks.

Büroohoone ja parkimismaja on rajatud vaivundamendile vaiade pikkusega kuni 19 meetrit. Büroohoone kandev karkass on monoliitset raudbetoonist post-plaat süsteem. Kasutati poste diameetriga 400–700 mm ja sammuga kuni 8,6 meetrit. Postidele toetuv monoliitne vahelaeplaat on paksusega 300 mm.

Hoone ruumiline jäikus ja stabiilsus tagatakse hoone keskosas paikneva jäikussüdamikuga, mis moodustub liftišahtide ja trepikodade monoliitsetest 200–300 mm paksustest raudbetoonseintest. Horisontaalkoormused kantakse südamikule vahelagede kaudu. Kogu hoone horisontaalkoormus kantakse pinnasele hoone all asuvate roostvärkide ja vaiade kaudu, mistõttu on esimese korruse põrand lahendatud tava-

pärase pinnasele toetuva põrandaplaadi asemel 285 mm paksuse roostvärkidele toetatud ja roostvärkidega seotud kandva plaadina.

Konsoolse hooneosa vahelagede kandmiseks on esimese ja teise korruse vahelagedes postidele toetuvad järelpingestatud konsoolsed talad. Kuna esimese korruse vahelae talad on madalamad ja lühemad, kantakse osa esimese korruse koormusest teise korruse vahelae taladele üle konsooli esiservas olevate tõmbide abil.

Parkimismaja karkassi moodustavad monoliitbetoonist seinad ja postid ning järelpingestatud sarrusega monoliitbetoonist vahelagi. Vahelagede silded on valdavalt sammuga 17,3 X 7,5 meetrit. Vahelagi on projekteeritud järelpingestatud 550 mm kõrguste taladega ja 190 mm paksuse plaadiga.

Hoone pälvis 2017. aasta ehitusprojektide konkursil Majandus- ja Kommunikatsiooniministeeriumi väljastatud aasta parima digi-ehituse eriauhinna.

TELIA BÜROOHOONE

Aadress
Tellija
Kategooria ja ehitise tüüp
Lepingu tüüp ja tööde iseloom
Ehitusperiood
Brutopind

Mustamäe tee 3 ja 3a, Tallinn
Ekerepol OÜ
Hooned -> äri-, büroo- ja administratiivhooned
Projekteerimis- ja ehitusleping -> Uus ehitis
2016–2017
Büroohoone 11 144 m² + parkimismaja 10 695 m²





For this contract, a 14-storey business and office building and a parking garage with six levels above ground and 1.5 underground levels were built. The main design of the project was done using a BIM model. The BIM model was also used to calculate construction volumes, organise procurements and plan the works.

The office building and parking garage were built on a pile foundation with piles of up to 19 m. The load-bearing frame employs a monolithic reinforced concrete post-tensioned slab system. Posts with a diameter of 400 to 700 mm and an increment of up to 8.6 m are used. The monolithic ceiling slab supported on the columns is 300 mm thick.

The spatial rigidity and stability of the building is ensured by a rigid core in the central part of the building, which is made up of the 200-300-mm-thick reinforced concrete walls of the elevator shafts and stairwells. The horizontal loads are transferred to the core via the ceilings. The horizontal load of the entire building is transferred to the ground through the pile caps and piles under the building, meaning the floor of the ground level is designed as a load-bearing

285 mm slab supported and anchored to the pile caps, not as a conventional floor supported by the ground itself.

To support the ceilings in the projecting part of the building, the first and second-storey ceilings have projecting post-tensioned beams supported by posts. As the beams of the ground floor ceiling are lower and shorter, part of the ground floor load is transferred to the beams of the second-floor ceiling using connecting rods along the front edge of the projecting part.

The frame of the parking garage is made of monolithic concrete walls and posts and a monolithic concrete ceiling with post-tensioned reinforcement. The spans of the ceilings are mainly 17.3 X 7.5 m. The ceiling is designed with post-tensioned 550-mm-high beams and a 190-mm-thick slab.

The building won a special prize for the best digital construction, awarded by the Ministry of Economic Affairs and Communications at a 2017 construction project competition.

TELIA OFFICE BUILDING

Address
Customer
Category and building type
Contract type and nature of the work
Construction period
Gross area

Mustamäe tee 3 and 3a, Tallinn
Ekerepol OÜ
Buildings -> Business, office and administrative buildings
Design-build contract -> New building
2016-2017
Office building 11,144 m² + parking garage 10,695 m²

