

S61 Ostrów Mazowiecka - Szczuczyn section "Łomża Zachód" interchange (with interchange) - "Kolno" interchange (without interchange)

Łomża, Poland

Preparation of a technological design with the development of test stands for carrying out test loads of driven piles (static and dynamic)



The project

Load testing of 400x400 mm driven piles as part of the foundation of MS-11, MS-19 and WD-22 structures in the course of the under construction expressway No. S61 Ostrów Mazowiecka - Szczuczyn

The challenge

The project included the design of the stands and the method of performing twenty-two static and sixty dynamic test loads on driven piles.

The solution

The design of the (static) load test stand consisted of the following components:

- a hydraulic actuator that induces a pushing force on the head of the test pile,
- a system of steel beams transferring loads from the actuator to the anchor piles,
- anchor piles transferring pullout loads from the structure to the ground ground.

An actuator was used to induce a force on the test pile of the design load a hydraulic actuator with a lifting capacity of min. 2.2 MN.

Dynamic tests, i.e. strain and displacement measurements, were performed using two strain gauges and two accelerometers and a PDA (Pile Driving Analyzer) recorder from PDI.

Project facts

Owner(s)

GDDKiA

Keller business unit(s)

GEO-Instruments Polska

Main contractor(s)

Intercor Sp. z o.o.
Conway STF Sp. k.

Engineer(s)

Jerzy Pieronkiewicz - Technical Director

Services

Deep foundations testing

Markets

Infrastructure

Technologies

Deep foundation load tests