



In Hamburg Hafencity in the area of the former Grasbrook, a shopping centre, a cruise terminal, two hotels and various entertainment facilities are under construction. The site is characterised by its former use of Hamburg's gas works. Old building structures like foundations and pile remains are to be expected.

In spring 2017, F+Z Baugesellschaft received an order to produce 58 vibro injection piles (RI-piles) to support a diaphragm wall as excavation pit shoring in the area of the existing Chicagokai. A side offer was awarded with optimised RI piles which have been developed as combined piles by the in-house design-office in cooperation with the work preparation department. Considerable material savings were achieved by using a pipe in the area of the subsequent excavation pit.

In the run-up to the work, a test pile was installed both by means of vibration driving and driving. These tests were accompanied by the client. The measurements of the vibrations at the nearby Underground Line 4 showed no significant differences. Since the impact pile driving can be assessed more favourably than the vibration pile driving with regard to possible obstacles in the ground, the choice finally fell on the impact pile driving with a pulling device for pulling piles in the case of obstacles close to the surface.

The work was carried out from Chicagokai using the company's own staff and equipment. The approx. 30 m long piles were driven to depth at an inclination of 1:1 with simultaneous grouting with cement slurry using the ramming method.



F+Z Baugesellschaft

ZNL Hecker Bau GmbH & Co. KG
 Hans-Henny-Jahn-Weg 49 · 22085 Hamburg
 Telefon +49 40 22923-0 · Fax +49 40 22923-240
 info@fz-bau.de · www.fz-bau.de

Stand 10/2017

F+Z BAUGESELLSCHAFT

CHICAGO QUAY RI-PILES

Überseequartier Hamburg

Contract Value:

1,355 € Mio

Executed by:

F+Z Baugesellschaft
 ZNL Hecker Bau GmbH & Co. KG

Employer:

JV Spezialtiefbau USQ

Construction period:

2017

Site:

Hamburg

Specifications / Main quantities:

RI-Piles 1:1	58 pcs
Pipe 640x12	200 to
Beams HTM 600/136	115 to
Cement slurry/ Doroflow F	150 m ³
Pile equipment	12 to

