HILTI

REF-A12 | **STEEL BASEPLATE CONNECTION TO CONCRETE FOR PERMANENT FASTENING**

PROJECT — **Cycle pedestrian crossing**
Across Rhine river

LOCATION — Italy, Bologna
CLIENT —
DESIGNER — SgLab
INSTALLATION — Tender process, planned for 2025

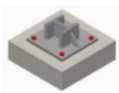| Application	Connection of steel beams to concrete
Design std.	EN 1992-4 (post-installed anchors)
Hardware	HILTI HIT-RE 500 V4
Software	PROFIS Engineering (anchor to concrete)
Services	On-site testing

LOAD/ CONDITIONS Static / Seismic

CHALLENGES

- Cost controll
- Hight loads
- Approved solution

HILTI TOTAL SOLUTION

- ✓ Design in PROFIS Engg software and submission
- ✓ Designed and approved product
- ✓ On-site testing to check the performance
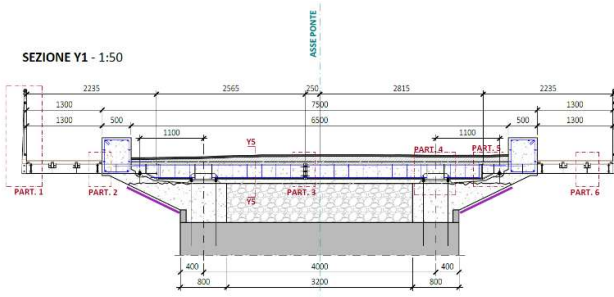- ✓ On-time technical support from design team

PROJECT HIGHLIGHT Efficient design user friendly software and close collaboration with project team

APPLICATION AND REQUIREMENT
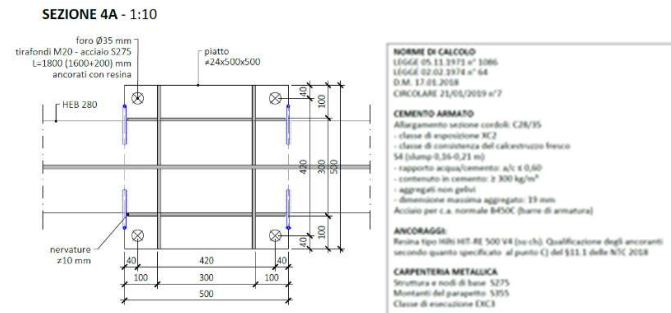

Application Details: ROCS

The design consists of reinforcing and installing steel frame over the bridge that will accommodate the cycling-pedestrian lanes. The beams of the steel frame will have a variable section and a total length of 10.1 m, arranged at a constant centre to centre distance of 4.15 m.

The steel structure will be anchored in several points on the concrete structure of the bridge

Suitable and cost effective solution

The objective is to create a cycle-pedestrian crossing adjacent to the existing road bridge over the Reno River. Given the very limited economic resources, it is not possible to create a new structure, so it was decided to renovate by widening the existing bridge in order to create two additional cycle-pedestrian lanes ones (one for each direction of travel, with a useful width of 130 cm each).

APPROACH TOWARDS SOLUTION

Hilti anchor with seismic approval

Seismic verification was one of the primary criteria for post-installed anchor selection. Hilti proposed a certified solution and the possibility of testing the anchors with pull out test on jobsite.

Post-installed anchors and other tools

- Post-installed chemical anchors **HIT RE 500 V4** with **HAS-U 8.8 M16** is selected.
- Automatic cleaning of the hole with a hollow point **TE-CD**

THE FINAL OUTCOME

Ongoing anchor installation and finished post-installed connection