



**Contract Period**  
1988-1990

**Completion**  
1990

**Construction cost**  
NOK 200 mill

**Services rendered**

- Preliminary design and Cost Estimates
- Establishment of dynamic wind climate including site measurements
- Dynamic Wind Analysis
- Detailed Design and Specifications
- Tender documents
- Construction Engineering
- Construction Drawings

**Client**

Norwegian Public Roads  
Administration

## Helgeland Bridge

The Helgeland Bridge is a high level, concrete cable-stayed bridge across Leirfjord in Northern Norway close to the Arctic Circle with a ship channel that is 43.5 x 80 m. The cable-stayed bridge has a main span of 425 m between diamond shaped towers and side spans each of 177.5. The main foundations in the sea were down to a water depth of 31 m. The approach viaducts have total lengths of 182.25 and 102.5 m respectively. The main bridge deck has a total width of 11.95 m and a depth of 1.20 m, which provide for an extremely slender bridge

The bridge site is located in an area with an extremely severe wind climate, due the nearby North Atlantic (Norwegian) ocean and the closeness of rugged mountains. The design wind gust speed at deck level is 70 m/s, which was a challenge both for the bridge engineers and the contractor.

