



Contract Period
1999-2005

Completion
2005

Construction cost
NOK 500 mill

Services rendered

- Competition proposal in co-operation with Lund & Slaatto Arkitekter A/S
- Extended Prel. Design incl. static and dynamic wind and seismic analyses
- Tender Documents
- Construction follow-up

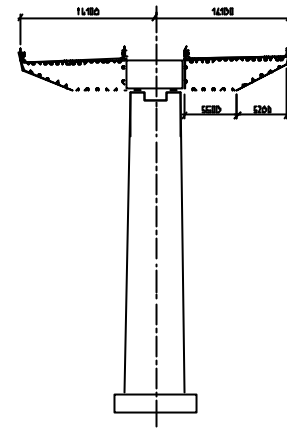
Client

Norwegian Public Roads
Administration/ Vegverket Sweden

New Svinesund Bridge

The New Svinesund Bridge is the new bridge link on the European highway E6 on the border between Norway and Sweden. It crosses the Iddefjord in the south of Norway with a ship channel of 55 x 70 m. The main bridge consists of a slender, central concrete arch with a span of 247 m and suspended steel box decks on each side with a typical span of 26 m. The approach viaducts on each shore consist of centrally located columns and twin steel box decks on each side with a typical span of 75 m (fig. 2). The total length is 704 m. The bridge was opened as a part of Norway's celebration of 100 years as an independent country.





New Svinesund Bridge, cont'd

The competition concept made by Lund & Slaatto / Aas-Jakobsen used a basic idea of equality between two countries implying that an arch structure was suitable. We wanted it to be as slender as possible and with the arch as a centre placed structure, with the bridge deck tied to the arch, not only supported. This led to several design and construction challenges.

The arch has considerable 2. order effects like out-of-plane buckling, but is in fact supported by the bridge deck it supports itself, making them symbiotic dependant on each other.

In the same way as the bridge deck in main span, the bridge deck in the approaches is tied down directly to the columns without visible underlay supports. This gives an elegant flow look of the bridge, when it is seen from the side and from below.

The construction technique was described by Aas-Jakobsen to be with cantilever scaffolding system with temporary support towers for the arch, and incremental launching for the viaducts. The material transport was supposed to be by a cable crane with tiltable towers. These methods were also used by the Contractor.

