

= Skarnsund Bridge =

Skarnsund Bridge (Norwegian : Skarnsundet bru or Skarnsundbrua) is a 1 010 metre (3 310 ft) long concrete cable stayed bridge that crosses the Skarnsundet sound , in Inderøy , Norway . When finished in 1991 , it replaced the Vangshylla ? Kjerringvik Ferry and it gives the communities in Mosvik and Leksvik easier access to the central areas of Innherred . The bridge is the only road crossing of the Trondheimsfjord , and is located on Norwegian County Road 755 .

The bridge has a span of 530 metres (1 739 ft) , making it the longest of its type in the world for two years . The two 152 metre (499 ft) tall pylons are located at Kjerringvik in Mosvik on the west side , and at Vangshylla in Inderøy on the east side . Following the opening , there was a seventeen year collection of tolls , needed to finance 30 % of the NOK 200 million investment . In 2007 , the bridge was listed as a cultural heritage .

= Background =

Prior to its 2012 merger with Inderøy , Mosvik was a separate municipality on the Fosen peninsula and part of Nord Trøndelag county . The first automotive transport from Mosvik to the more populated area of Innherred commenced in 1958 , when the ferry company Innherredsferja started the Levanger ? Hokstad ? Vangshylla ? Kjerringvik ? Venneshamn route . In 1964 , the road between Kjerringvik and Venneshamn , both in Mosvik , opened , and a new ferry was purchased , establishing the Vangshylla ? Kjerringvik Ferry .

The ferry , and subsequently the bridge , is located at the narrowest section of Skarnsundet , between the villages of Kjerringvik and Vangshylla . In addition to Mosvik , the bridge also caters for the larger municipality Leksvik , further out along the fjord . The bridge is the only one to cross the Trondheimsfjord .

= History =

The first meeting of local commercial and political interests to establish a bridge was made in 1972 . By 1983 , it was formalized by the establishment of the company AS Skarnsundsbrua to finance construction . The Parliament of Norway passed the plans in 1986 , and construction started two years later . The main contractor was Aker ; and after the bridge was finished , maintenance was taken over by the Nord Trøndelag Public Roads Administration . The bridge cost NOK 200 million . The bridge was opened by King Harald V on 19 December 1991 , after he had taken the last ferry across the fjord . A monument , the King 's Stone , bearing the signature of the king , is located at the resting place on the Mosvik side .

Following the opening , it won several awards : Betongtavlen (1992) ; Beautiful Roads Award (1994) ; and the international FIP Award (1994) . In 2008 , the Norwegian Directorate for Cultural Heritage listed the bridge as a protected cultural heritage . In 2010 , the bridge came in second in a competition held by Teknisk Ukeblad to declare Norway 's most beautiful road bridge .

= Specifications =

The bridge is one of the world 's longest cable stayed bridges , with a length of 1 010 metres (3 310 ft) . The span is 530 metres (1 740 ft) , while the two towers are 152 metres (499 ft) above sea level . The deck is 2 15 metres (7 1 ft) deep , and 13 metres (43 ft) wide , with two lanes for automobiles and one for pedestrians and bicycles . It is the longest concrete cable stayed span . The sailing height is 45 metres (148 ft) . The bridge was , on its completion , the longest cable stayed bridge in the world by the length of main span , but has since lost the title .

The original construction work also included 1 6 kilometres (1 0 mi) of new road , including a resting place on the Mosvik side . In the construction of the bridge , 19 600 cubic metres (25 600 cu yd) concrete was used and the 208 cables , with a total length of 33

kilometres (21 mi) , weighed 1 @, @ 030 tonnes (1 @, @ 010 long tons ; 1 @, @ 140 short tons) . The cables have diameters varying between 52 and 85 millimetres (2 @. @ 0 and 3 @. @ 3 in) and can , if needed , be replaced separately . The bridge 's foundations are bedrock below the seabed under each tower . The bridge was built to withstand winds up to 48 @. @ 5 metres per second (159 ft / s) (century storms) and has been designed to withstand earthquakes .

= = Financing = =

Toll collection started the day after the opening , and lasted until 24 May 2007 . Seventy percent of the costs were to be covered by the state , and thirty percent through toll fees . The debt was borrowed by the private company that was given a concession to operate a toll plaza on the Inderøy side . Including interest , NOK 80 million was collected , and the bridge was paid off three years before schedule . The Vanvikan @-@ based company was disestablished following the closure of the plaza . Until only a few years before the closing , it was the only toll plaza in Nord @-@ Trøndelag . There were several price increases during the toll period . The bridge was free for pedestrians and cyclists , but all motor vehicles were charged , although discounts were available for frequent travelers . The plaza was manned , and did not take into use Autopass , like many other plazas .