

**DESIGN STRUCTURE OF CABLE STAYED BRIDGE  
GUNUNG NAGO PADANG**



**THESIS**

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## ABSTRACT

*Cable stayed bridges are one of several types of long span bridges. The bridge that relies on the cable as a load-bearing is reserved for inter-island passages normally separated by rivers, valleys or on flat ground. The beauty of cable configuration is the main attraction for the bridge.*

*This final project discusses the design of Cable stayed bridge of Gunung Nago, Padang with Two Vertical plane system that connects the area of Gunung Nago with Limau Manis, Padang, West Sumatera. This bridge has a total span of 140 meters divided into one main span with a length of 100 meters and a side span with a length of 40 meters. This bridge has a width of 9 meters which has 1 path, 2 lanes, and 2 sidewalks. Material from the floor of the vehicle is reinforced concrete, Bridge girders use post-tensioned prestress concrete I girder construction, As well as pylon structure is reinforced concrete. As for the cable and anchor using VSL 7-wire strand. This plan uses SAP2000 software for structural analysis, and AUTOCAD for final drawing.*

*The result of this design is to get the dimension of deck, girder, pylon, cable, abutment, foundation and Cost estimation by using the rule reference SNI-02-2005, SNI-12-2004, BMS '92, 08 / SE / M / 2015 , FHWA Driven Pile, and SNI-1725-2016.*

**Key Word** : *Cable stayed, Design, Cable, Two Vertical Planes System, Fan System, Pylon.*