

# TUNNEL PATNITOP (CHENANI – NASHRI)

## Detail design supervision and technical support during construction

**Country:** India (Jammu and Kashmir)  
**Client:** Leighton Welspun Contractors Ltd. (USA)  
**Year:** 2011 - 2013

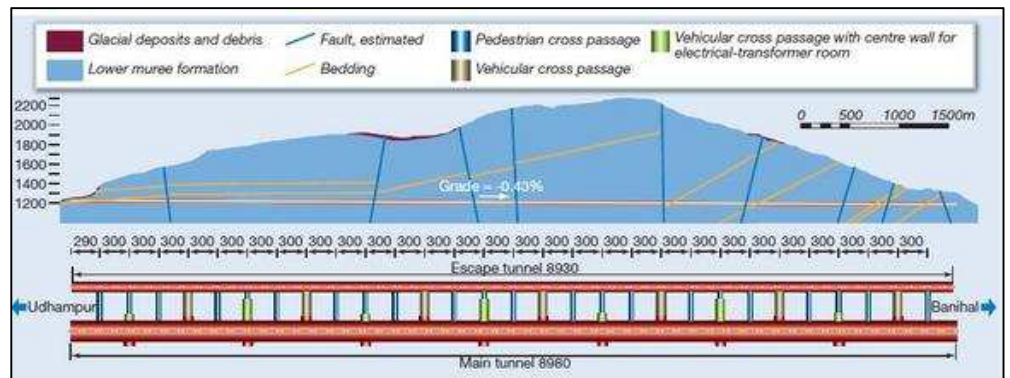
### PROJECT DESCRIPTION:

An operated road from Jammu to Srinagar in northern Indian state of Jammu and Kashmir is located in a very complicated terrain of Himalaya foothills. The road runs on steep slopes, through areas of frequent landslides, and crosses mountain ridges on its way to the central Kashmir valley. The decision about four-laning of the road has been made as a part of infrastructure development program for Northern India. A very long road NATM tunnel has been proposed for the Patnitop range (2030 m above sea level) crossing. A single tube road tunnel is 9120 m long, the maximum tunnel overburden is 1050 m, the tunnel profile is from 147 m<sup>2</sup> to 175 m<sup>2</sup>. The two-lane tunnel is bidirectional.



### PROJECT CONTRIBUTION:

3G Consulting Engineers s.r.o. assisted to contractor and evaluated encountered geological conditions.



### SERVICES PROVIDED:

- Regular technical assistance during tunnel excavation
- Detail design supervision
- Tunnel face mapping, optimisation of the NATM support classes.
- Geotechnical monitoring supervision, monitoring evaluation and interpretation.
- Construction quality control