


प्रारूप-33

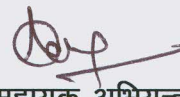
परियोजना का विवरण:- जनपद टिहरी गढ़वाल में नरेन्द्रनगर विधान सभा क्षेत्र के अन्तर्गत कौड़ियाला से गंगलसी तक मोटर मार्ग नव निर्माण हेतु वनभूमि का हस्तान्तरण प्रस्ताव।
(लम्बाई 2.00 कि०मी०)

भू-वैज्ञानिक की आख्या

— संलग्न हैं। —

(भू-वैज्ञानिक)
नाम व मुहर सहित


कनिष्ठ अभियन्ता
निर्माण खण्ड, लो०नि०वि०
नरेन्द्रनगर।


सहायक अभियन्ता
निर्माण खण्ड, लो०नि०वि०
नरेन्द्रनगर।

कार्यालय प्रमुख अभियन्ता एवं विभागाध्यक्ष
उत्तराखण्ड लोक निर्माण विभाग
देहरादून।

भू-गर्भीय निरीक्षण आख्या एस0जी0- 845/सड़क/पुल समरेखण/गढवाल/2015

Geological Assessment of 12 km (2+10km) long alignment
corridor proposed for Kaudiyala to Gang Lassi motor road in
Narendranagar Block, Distt. Tehri Garhwal

17-अगस्त-2015

Geological Assessment of 12 km (2+10 km) long alignment corridor proposed for Kaudiyala to Gang Lassi motor road in Narendranagar Block, Distt. Tehri Garhwal

Vijay Dangwal

17.08.2015

1. Introduction:- The Construction Division, Public Works Department Narendranagar vide G.O. No. 3930/111(2)/09-08 (एम0एल0ए0)/08 टी0सी0 दिनांक 02.03.2015 and G.O. No. 813813/111(2)/15-03 (मु0म0घो0)/2015 दिनांक 17.03.2015 has been entrusted for the construction of 12 km (2+10 km) long motor road namely Kaudiyala to Gang Lassi motor road in Narendranagar Block, Distt. Tehri Garhwal. On the request made by Shri. M.A Khan, Executive Engineer, C.D, PWD, Narendranagar I carried out the geological assessment of the proposed alignment corridor on 16.08.2015. Er. Viveka Prasad Semwal, Asst. Engineer and Er. Sandeep Rawat Kumar, Jr. Engineer, PWD, Narendranagar accompanied the site visit.

2. Location:- The alignment corridor proposed for the above said road originates from km 267 of NH 58 and its further extension will join at km 6 of Pao ki Devi Inter College motor road located in Narendranagar Block, Distt. Tehri Garhwal.

3. Geological Assessment:- Geologically, the alignment corridor proposed for the above said motor road lies in a part of Outer Lesser Himalayan Belt which is exposed by the quartzites, phyllites, dolomites, shales and slates belonging to Chandpur, Nagthat, Krol and Tal Formations. The cross slopes of the alignment corridor are inclined at low, moderate and steep angles at various stretches. The rock masses exposed along the alignment corridor are physically competent and exhibits "Uniaxial Compressive Strength" ranging between 50 MPa to 100 MPa as per the manual tests performed at the site. These rock masses have undergone various degrees of exogenic alterations and their weathering grade was found ranging between W0-W2 Grade. These rock masses have been traversed by four prominent joint sets which are closely spaced at places and generally moderate to widely spaced in nature. The surfaces of these joints are smooth and sometimes seal by the secondary inclusions. The geometry of the joints do not interplay any possibility for the failure of rock slopes in the form of wedge/translational failure. It has been observed that most of the alignment slopes are enveloped by the thick cover of overburden material ranging between 1 m -5m order. At places the alignment passes across the slopes altered in the form of stepped like cultivated fields. The hand-picked stone walls constructed on the Outer boundaries of these fields do not manifest signatures related to the ground deformation as these do not bear any outward bulging and differential settlement.

The overburden material deposited on and across this alignment is naturally dense and fully compacted in nature. It does not contain any soft/dispersive soils.

According to the assessment made at the site the "Undrained Shear Strength" of the rock masses exposed was found ranging between 350 KPa - 450 KPa.

Presently the entire alignment corridor and its surrounding areas do not exhibit any slush like ground conditions, ground subsidence i.e marks of sink/pot holes.

The "Undrained Shear Strength" of the overburden material deposited on the cross slopes of alignment was found ranging between 300 KPa - 400 KPa.

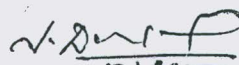
By and large the entire slopes of the proposed road are stable and free from any sliding/mass wasting activities.

On the basis of the geological / geotechnical studies carried at the site and the facts mentioned above the following recommendations are being made for the construction of the proposed road failing to these this report will stand as cancelled.

4. Recommendation:-

1. Form the road by half cut - half fill method and compact the fill material properly by dynamic compaction.
2. Do not blast the rock slopes by explosives.
3. Do not dispose the excavated waste on the lower slopes.
4. Construct suitably designed retaining walls/ breast walls all along the road.
5. Construct large size lined long drain all along the hill side of the road and make adequate cross drainage arrangements.
6. Make adequate arrangements to dispose the drained water on the safe/ stable ground.
7. The drainage work must be taken up immediately after the excavation of the hill slopes.
8. All the construction activity must be carried out as per the standard codes of practice and standards and norms laid by the BIS/MORTH.

5. Conclusion:- On the basis of the geological / geotechnical studies carried at the site and with the above recommendations, the site was found geologically suitable for the construction of 12 km (2+10km) long motor road namely Kaudiyala to Gang Lassi motor road in Narendranagar Block, Distt. Tehri Garhwal.


17/8/15

(Vijay Dangwal)
Sr. Geologist

Office of the Engineer in Chief,
PWD Dehradun