



परियोजना का नाम	:- जनपद रुद्रप्रयाग में प्रधानमंत्री ग्रामीण सड़क योजना के अर्न्तगत प्रस्तावित स्नबैण्ड सन स्यूंग सतेराखालमोटर मार्ग (लम्बाई 2800 कि०मी०) के नव निर्माण हेतु हस्तान्तरण प्रस्ताव।
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भू-वैज्ञानिक की संस्तुतियों/सुझावों का अनुपालन किये जाने का प्रमाण-पत्र।

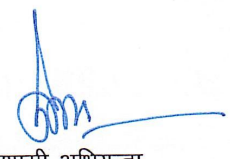
प्रमाणित किया जाता है कि विषयगत परियोजना के निर्माण हेतु भू-वैज्ञानिक द्वारा दिये गये सुझावों / संस्तुतियों का अनुपालन सुनिश्चित किया जायेगा।


कनिष्ठ अभियन्ता

पी०एम०जी०एस०वाई०, सिचाई खण्ड,
रुद्रप्रयाग


सहायक अभियन्ता

पी०एम०जी०एस०वाई०, सिचाई खण्ड,
रुद्रप्रयाग


अधिशाली अभियन्ता

पी०एम०जी०एस०वाई०, सिचाई खण्ड,
रुद्रप्रयाग

कार्यालय प्रमुख अभियन्ता एवं विभागाध्यक्ष
उत्तराखण्ड लोक निर्माण विभाग,
देहरादून।

भू - गर्भीय निरीक्षण आख्या एस0जी0-456 / सड़क / पुल समरेखण / गढ़वाल / 2013

Geological Assessment of the alignment proposed for the
Extension of Saterakhal to Syund motor road, Distt.
Rudraprayag.

25-अक्टूबर-2013

Geological Assessment of the alignment proposed for the Extension of Saterakhal to Syund motor road, Distt. Rudraprayag.

Vijay Dangwal

25-10-2013

- 1. Introduction:-** The Provincial Division, Public Works Department Rudraprayag, has proposed 2 km extension of Saterakhal to Syund motor road in Agastymuni Block District Rudraprayag. On the request of Er. Indrajeet Bose, Executive Engineer, P.W. Rudraprayag, I carried out the geological/ geotechnical assessment of the proposed alignment on 17-10-13 and 28-04-2013 in presence of Er. Arjun Singh Panwar, the Asst. Engineer and Er. Pradeep Kumar Katariya, the Additional Asst. Engineer, P.W. Rudraprayag.
- 2. Location:-** The proposed 2.00 km extension of Saterakhal to Syund motor road is located in Agastymuni Block, Distt. Rudraprayag.
- 3. Geological Assessment:-** Saterakhal-Syund hamlets and its environs falls within the Garhwal Lesser Himalayan Belt which are occupied by the quartzites of Garhwal Group and siltstones and greywakes of Damta Group. These rocks are massive to thinly foliated, slightly weathered and oxidized in nature and have been traversed by five prominent sets of joints. The slopes across which the alignment passes are inclined at low to moderate angle i.e., 20° - 30° in N070 direction and mostly the rockmass on these slopes is enveloped with the overburden material comprised of angular boulders, cobbles and pebbles embedded in clay-silt matrix. It has been observed that the rock mass forming the hill slope is sheared/shattered and tectonized in nature. Therefore, it exhibits contrast values of physical competence. The "Uniaxial Compressive Strength" of the quartzites exposed on it have been estimated ranging between 10 MPa to 100 MPa, values obtained corresponding to rock mass category "weak" and "strong" rock classes respectively. The overburden material deposited on the alignment slopes is of composite nature and it contains scanty boulders of the rock embedded in clay-silt matrix.

The overburden material deposited on the alignment slope is naturally dense and compact.

By and large the alignment slopes are stable and presently free from any landslides/mass wasting.

The overburden materials consisting the slope forming material do not contain any soft soil.

On the basis of the above and the study carried at the site the following recommendations are being made for the construction of the proposed road.

4. Recommendations:-

1. Form the road by half cut-half fill technique and compact the fill material properly.
2. The road must have extra large size hill side drain with adequate cross drainage arrangement and do not dispose the drained water on the weak ground, it is very much essential for the stability of the hill slopes.
3. The road must be sealed through or paved shoulder to shoulder, this is so as to check the water ingress into the sub surface material.
4. Construct suitably designed retaining walls/ breast walls all along the road.
5. Do not dispose the excavated waste on the lower slopes, otherwise it should be dumped on the pre-identified suitable dump yard.
6. Plantation work preferably vitex grass on the either side slopes will enhance the stability of the alignment/road slopes.
7. All the construction activity must be carried out as per the standards and norms following the BIS codes prescribed for the similar civil construction in Himalayan Zone.

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 extension of Saterakhal to Syund motor road, Distt. Rudraprayag.

(Vijay Dangwal)

Sr. Geologist

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