2.28

प्रपत्र– 33

परियोजना का नामः– राज्य योजना के अन्तर्गत जनपद बागेश्वर में रावतसेरा–डोबरगड़ा धारी–मध्या–रैंतोली मोटर मार्ग का निर्माण।

भू–वैज्ञानिक की आख्या

––––––––––संलग्न है––––––

नोट– प्रयोक्ता ऐजेन्सी द्वारा भू–वैज्ञानिक की आख्या प्राप्त कर प्रस्ताव के साथ संलग्न की जायेगी।

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

भू–गर्भीय निरीक्षण आख्या एस0जी0–247 / सड़क / पुल सम्रेखण / कुमांऊ / 2015

Geological Assessment 5 km long alignment corridor proposed for Rawatsera to Dobargad-Dhari Madhya motor road in Kapkot Constituency, Distt. Bageshwar, Uttarakhand.

26–अगस्त–2015

Geological Assessment 5 km long alignment corridor proposed for Rawatsera to Dobargad-Dhari Madhya motor road in Kapkot Constituency, Distt. Bageshwar, Uttarakhand.

Vijay Dangwal
26-08-2015

1. Introduction:- The Provincial Division, PWD, Bageshwar vide G.O. No-1154(1)/ III(2)14–58 (प्रा0अनु0)/2013 as been entrusted for the construction of 5 km long alignment corridor proposed for Rawatsera to Dobargad-Dhari Madhya motor road in Kapkot Constituency District Bageshwar Uttarakhand. On the request made by Shri. R.K Punetha, Executive Engineer I carried out the geological/geotechnical assessment of the proposed alignment corridor on 15.08.2015. Er. B. C. Joshi, Astt. Engineer and Er. Chanchal Singh Koranga, Junior Engineer, PWD, Bageshwar was present during the site visit.

Two alternative alignments i.e Alignment No.1 and Alignment No.2 was proposed for the construction of the above said motor road. On the basis of the various geological, geotechnical, geo-morphological parameters and vis-a-vis study, the alignmen No.1 was found suitable for the construction of the above said motor road. The present repor is being generated based for the proposed alignment No. 1.

2. Location:- The proposed alignment of the above said motor road originates from km 3(of Kanda Sanudiyar Rawatsera motor road located in Kapkot Constituency Distt. Bageshwar.

or Banspaton-Rawatsera motor Road : 1 cm 2

3. Geological Assessment:- Geologically, this alignment corridor lies in a part of Kumaon Lesser Himalaya Belt exposed by the quartz chlorite schists belonging to Almora Group. The cross slopes of this alignment are inclined at moderate to steeply inclined hill slopes. Mostly this alignment corridor is occupied by the overburden materia comprising the residual soils. At few places the rock masses are exposed on and across thi alignment. The rocks are "Fair" in physical competency only in dry conditions; otherwis abrupt change in their physical behaviour has been reported after getting wet and saturated These rocks have undergone physical alteration to W_1 Grade. According to an estimatio made at the site the "Uniaxial Compressive Strength" of the rock masses was found rangin between20 M Pa to 50 M Pa. The bed rocks have been traversed by four prominent joint se which are closely spaced and are almost smooth and planer.

The overburden material deposited on the cross slopes of this alignmer measures thickness between 2 m to 5 m order as assessed at the site. This material is dense hard and compact in nature and its "Undrained Shear Strength" was assessed rangir between 250 K Pa-350 K Pa. This material contains rock chips and angular fragments firm embedded in the silty clay matrix. It has been noticed at the site that it contains a goo amount of clay minerals which are more or less plastic in nature.

The entire visible cross slopes of this alignment are free from slush like conditions and nowhere sink/pot holes were encountered during the walkover survey. Presently, the entire visible slopes across which this alignment passes looks stable and are free from ground subsidence and mass movement.

By and large the alignment slopes are stable and presently free form any landslide/ mass wasting activities.

On the basis of the above and the study carried at the site the followin recommendations are being made for the construction of the proposed road, failing to thes the report will be treated as cancelled.

4. Recommendations:-

1. Form the road by half cut - half fill method and compact the fill material properly by dynamic compaction.
2. Avoid box cut, otherwise in order to form the bench excavate the hill maintaining the angle of repose i.e 30^0.
3. Do not dispose the excavated waste on the lower slopes, otherwise it will threat the overall stability of the hill slopes.
4. Construct suitably designed retaining walls/ brest walls all along the road.
5. Construct large hill side lined drain all along 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 an standards and norms laid by the BIS/MORTH.

5. Conclusion:- On the basis of the geological studies carried at the site and with above recommendations, the proposed site was found geologically suitable for construction of 5 km long alignment corridor proposed for Rawatsera to Dobargad-Dh Madhya motor road in Kapkot Constituency District Bageshwar Uttarakhand.

Photo Copy Attested

Assistant Engineer
P.W.D. Bageshwar

26/8/15

(Vijay Dangwal)
Sr. Geologist
Office of the Engineer in Ch
PWD Dehradun