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

भू – गर्भीय निरीक्षण आख्या एस0जी0–785/सड़क/पुल समरेखण/ गढ़वाल/2015

Geological Assessment of the 4.00 km long alignment corridor proposed for Naagjagai Phegu Barmwadi motor road, Distt. Rudraprayag.

09–मई–2015

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Vijay Dangwal
09.05.2015

1- Introduction:- The Construction Division, Public Works Department Ukhimath been entrusted for the proposed the construction of 4.00 km long alignment corridor proposed for Naagjagai Phegu Barmwadi motor road, vide District Plan No. 2555/III(2)/(प्रा0मा0) दिनांक 08.09.2006, Distt. Rudrapryag. In response to the request made by Er. Manoj Das, Executive Engineer, P.W.D Ukhimath, I carried out the geological assessment of the proposed alignment on 21.04.2015 in presence of Er. Sandeep Semwal, Astt. Engineer and Er. Maan Singh, Jr. Engineer, P.W.D. Ukhimath.

2- Location:- The proposed alignment corridor of this road originates from km 10 HM 4-6 of Mayali Guptakahsi motor road and it connects villages Pheggu-Naag Jagai-Timriya and their surroundings to the National Highway No. 107.

3- Geological Assessment:- Naagjagai Phegu Barmuwadi villages and their surrounding area falls in a part of Lesser Himalayan Belt of Garwal region. Mostly the quartzites which are a places interbedded with the thin parting of phyllites/schists are exposed in this area. These rock masses are blocky/disturbed/seamy-folded with angular blocks sheared/shattered/disintegrated and formed of many intersecting discontinuities sets. The terrain containing this alignment is marked by the steeply inclined hill slopes which at places bears the signature of ancient landslide which by now looks stabilized naturally and do not manifest any signature related to re-activation. The entire alignment passes through the right bank slopes of river Mandakinin which during the unprecedent over flooding generated some fresh landslides/landslips all along its river course especially down stream of the alignment slopes. Some fresh scars are marked on the hill slopes of this alignment. The entire alignment of the proposed road passes across the slope comprised of the river born material and the composite soils. The slope forming material exposed on and across this alignment is largely comprised of the rounded boulders, cobbles, gravels and pebbles which are embedded in the sandy silty matrix. It has been apprehended that the deep excavation on the hill slopes, especially at the toe part will lead the hill slope in-stability therefore, the lower two arm of the road must be constructed by the walling only. At places some small scars related to the sliding are visible along the Mandakini river. If excavated waste will be disposed on these scars may threat slope instability.

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

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, failing to these the report will be treated as cancelled.-

4- Recommendations:-

1- Construct the lower arms of the road by walling only. Any type of excavation on the hill slope will threat the hill slope inslability.
2- Do not dispose the excavated waste on the lower slopes.
3- Protect the either side hill slopes by constructing properly designed retaining and breast walls.
4- The road must have adequate long and cross drainage arrangements and the drain water must be disposed off on the stable ground.
5- Protect the hill slope by green engineering solutions/plantation.
6- All the construction activity must be carried out as per the standard codes of practice laid by the BIS and 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 4.00 km long alignment corridor proposed for Naagjagai Phegu Barmwadi motor road, Distt. Rudrapryag.

9/5/14

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