प्रपत्र:-28

<u>परियोजना का नामः</u> Improvement and up-gradation of NH-74 (New NH-30) stretch from Bareilly to Sitarganj under Bharatmala Pariyojana Lot-4/Package-2 in the state of Uttar Pradesh and Uttarakhand

Task Force Certificate

(1) Lay out of the Land-be followed as far as possible.

(ii) Heavy cutting/filling be avoided-as far as possible. The technology of cut and fill method is to be adopted. Steep hill slopes also to be avoided.

(iii) Unstable/slide-prone areas to be avoided. For identifying such areas the advice of Geotechnical engineers and geologists to be taken during the survey for alignment.

(iv) Comparison of various possible alignments with reference to crossing potential be made and the alignment involving minimum crossing risks be preferred.

Apart from the stage of planning the road alignment, effective steps are also required to be taken by ground engineer during the process of road construction for minimized ecological disturbance to the hill roads broadly the measures to be taken have been identified as

(i) Cut and fill method to be adopted while excavating for road formation and heavy earth cutting is to be avoided Box cutting is to be avoided to the extent possible.

(ii) Blasting by explosives is to be restricted to the minimum. Lay out of holes to be drilled for blasting is to be planned keeping in view the line of least resistance and the existence of joints Controlled blasting should be repeated using low charge and care be taken to avoid activating slide zones or widening fissures and cracks in road. Use of delay detonators in large scale basting work is to be made for aniline dispersion of shock waves, so that minimum disturbance is caused to the rock stratum as a result of the blasting process.

(iii) All cut slopes, unusable hill side and slide prone crossing prone areas are to be provided with suitable correction measures by using one or the other of the techniques developed by CRRI Several techniques have been sponsored by CRRI. Like simple vegetative turning, bitumen muck treatment and slide treatment by jute netting coir netting of these. Simple vegetative turning seems to be the most appropriate preventive measure in many situations. This should be established in the denuded slopes immediately after the excavation is made.

(iv) Adequate drainage measures and protective structures like intercepting catch water drains, longitudinal drains/culverts, breast walls, retaining walls are to be provided for purpose of establishing the slips Growth vegetative cover is to be stimulated in the disturbed hill slops above the road level by planting suitable fast growing shrubs and plants. In

(v) Over the past few years the roads wing of the Ministry of Shipping and transport has issued instruction laying down broad guidelines and check list of the preparation of road construction projects which provide an inbuilt mechanism of tackling landslides/erosion control. for the guidance and follow up action by engineers of state 'PWD' Border Roads Organization and others engaged in construction of hill roads, these should be observed.

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परियोजना निदेशक भारतीय राष्ट्रीय राजमार्ग प्राधिकरण रियोजना कार्यान्वयन इकाई, बरेली (२००) वन क्षेत्राधिक है बाराकोली वन क्षेत्र, शिताएग तराई पूर्वी प्रभाग हन्हा

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प्रमाणित किया जाता है कि योजना आयोग द्वारा गठित टास्क फोर्स द्वारा प्रदत्त उक्त संस्तुतियों का परियोजना के निर्माण के दौरान अनुपालन सुनिश्चित किया जायेगा हैं।

লতে বিষ্ণাই শূৰ্মা হাজ্যৰ এব নিগ্ৰাহ্মক হাজ্যৰ নিগ্ৰাহ্মক

वन क्षेत्राधिक हैं बाराकोली वन क्षेत्र, सितारगंज तराई पूर्वी प्रभाग, हटहारी

परियोजना निदेशक हैं ०/ भारतीय राष्ट्रीय तस्मागर्फ फोरेक्सी क्रियोजना कार्यान्वयन इकाई, बरेली (उ०ग्र)

Bundie