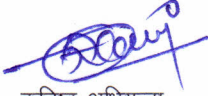


परियोजना का नाम:-

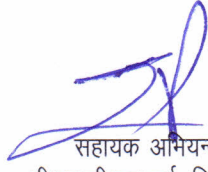
जनपद उत्तरकाशी में प्रधान मंत्री ग्राम सड़क योजना फेज-8 के अन्तर्गत सिमलसारी से गैर मोटर मार्ग के नव निर्माण हेतु वन भूमि हस्तान्तरण प्रस्ताव। (लम्बाई कि०मी० 8.400)

भू-वैज्ञानिक के सुझावों का अनुपालन किये जाने का प्रमाण पत्र

प्रमाणित किया जाता है कि जनपद उत्तरकाशी में प्रधान मंत्री ग्राम सड़क योजना फेज-8 के अन्तर्गत सिमलसारी से गैर मोटर मार्ग लम्बाई कि०मी० 8.400 का निर्माण हेतु भू-वैज्ञानिक के द्वारा दिये गये सुझावों का अनुपालन किया गया है।



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अधिशोषी अभियन्ता
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Task Force Certificate

- Lay out of the Land be followed as far as possible.
- Heavy cutting/filling be avoided as far as possible. The technology of cut and fill method is to be adopted. Steep hills slopes also to be avoided.
- 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.
- Comparison of various possible alignments with reference to erosion potential be made and the alignment involving minimum erosion risks be preferred.

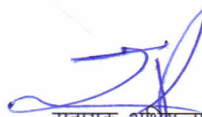
A part from the stage of planning the road alignment, effective steps are also required to be taken by ground engineer during the process of construction for minimized ecological disturbance to the hill roads. Broadly the measures to be taken have been identified as :

- 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.
- 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 delay detonators in large scale blasting work is to be made for avoidance of chock waves, so that minimum disturbance is caused to the rock stratum as a result of the blasting process.
- All cut slopes, unusable hill side and slide prone erosion 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 mulch 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.
- Adequate drainage measure and protective structures like intercepting catch water drains, longitudinal drains/culverts, breast walls, retaining and the walls are provided for purposes of establishing the slope. Growth vegetative cover is stimulated in the disturbed hill slopes above the road level by planting suitable fast growing shrubs and plants. In certain selected unstable areas terraced afforestation has also been plasticized as a stabilizing measure with good results.
- Over the past few years the roads wing of the Ministry of Shipping and transport has issued instruction laying down broad guideline and check list of the preparation of road construction projects which provide an inbuilt mechanism of tackling land slides/erosion control for the guidance and follow up action by engineers of state 'PWD' Border Roads Organization and other engaged in construction of hill roads these should be observed.

प्रमाणित किया जाता है कि योजना आयोग द्वारा गठित टास्क फोर्स की उपरोक्त संस्तुतियों याचक विभाग को मान्य है।



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