

Full Title of the proposal:- Construction of New 2 Lane with Paved Shoulder of Hamirpur Bypass of NH-88 (New NH-103& NH-03) (Design Chainage-Km.121+175 to Km.138+295, Design Length-17.120 Km) in the State of Himachal Pradesh

File No. : FP/HP/ROAD/151932/2022

Date of Proposal: 2 Feb 2022

### CHECK-LIST SERIAL NO. - 11a

#### ALTERNATIVES EXAMINED

The proposed Hamirpur bypass was finalized by studying three alternative options as mentioned below.

- Option-1: Greenfield alignment towards LHS of the existing Bypass
- Option-2: Widening of the existing Hamirpur Bypass
- Option-3: Greenfield alignment towards RHS of the existing Bypass

The alignment options superimposed on SOI Toposheet is also enclosed. The comparative analysis of the alternative options is provided in the table below.

Description	Option 1 (Greenfield)	Option 2 (Existing)	Option 3 (Greenfield)
Project Length (Km)	17.12	22.3	23.8
Tunnel length (Km)	Nil	Nil	3.6
Structure length (m)	638.5	200	810
VOP / VUP / ROB	1 No VOP	Nil	3 VUP
Horizontal Geometry	Good, As per standards	Poor, Sharp and sub-standard radius	Good, As per standards
Vertical Geometry	Good, As per standards	Poor, Steep gradients at few locations	Good, As per standards
Forest land (ha)	12.8537	7.92	14.835
Trees	5566	3429	6424
Impact on existing permanent structure	Least	Highest	More than proposed alignment but less than existing alignment

**Conclusion:** It may be inferred from the above comparison that the Greenfield alignment towards LHS of the existing bypass (Option-1) is the most suitable option from techno-economical, social and environmental point of view as:

- Actual diversion of forest land and trees affected is lesser (approx. 12.8537 ha & 5566) than Option 3. Option 2 has the least diversion of forest land and no. of trees but is not the suitable option as the alignment has substandard geometry, poor gradient and will impose highest impact on permanent structures.
- Least length of 17.120 km with minimum number of structures and no tunnels hence construction cost per km will be the most economical
- Minimum impact on existing permanent structure thereby reducing the Rehabilitation and Resettlement (R&R) cost

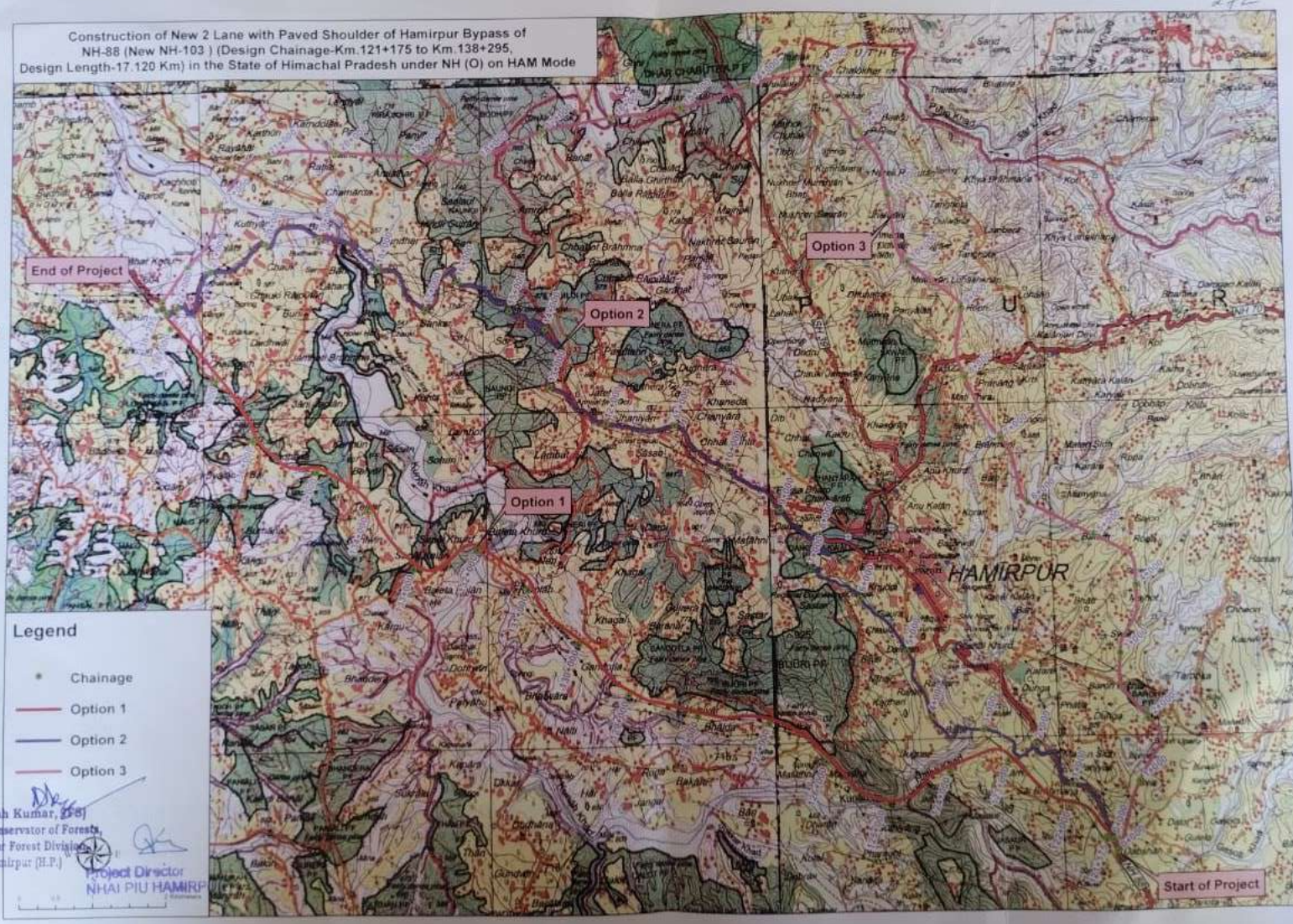
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 NH-88 (New NH-103 ) (Design Chainage-Km.121+175 to Km.138+295,  
 Design Length-17.120 Km) in the State of Himachal Pradesh under NH (O) on HAM Mode



- Legend**
- \* Chainage
  - Option 1
  - Option 2
  - Option 3

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