

CONSTRUCTION OF LINK ROAD FROM NH10(NEAR OLD INDIA PRESS,BURTUK)TOWARDS ICDS AND GURUNG GAON,BURTUK VIA GURUNG CREMATORIUM IN EAST SIKKIM (PART-I)500.00METERS.

REPORT

1.0 INTRODUCTION

SIKKIM spread over 7096 sq.km this 22nd state of India sub-continent's total population of 5,40,493 as per 2001 census and is divided into four district viz. East ,West, north and South with its capital 'Gangtok 'in East Sikkim. It enfolds the upper valley of the Teesta River ,which is one of the major tributaries of the holy Ganga River. The state is unique in the geographical location, biological wealth, environment setting and cultural diversity. It beholds one of the most magnificent ranges of snow -clad mountain popularly knows as the Kanchendzong range.

2.0ROAD CONNECTIVITY IN SIKKIM

Connectivity is the main indicator of development of a region or a country. All the development process has taken place at the regions which are well connected either by roads, air, rail or water ways. A better road network has multiplier impact not only in term of socio-economy of the region but also for tourism factor contributing to major major ratio of GDP, it deserves to have good road network. In Sikkim situation road transport is only for of connectivity and strengthening of road network is the fundamental requirement of the state. However air and rail links are also upcoming connectivity already under way to boom the transport mechanism in Sikkim. The state is rather land locked with its three sides sharing international boundary with Bhutan, Nepal and china and also one side open for access to other india territory through West Bengal. The arterial road NH10 is the life line of the Sikkim, this being the single linkage of the state to rest of the mission. The entire state being mountainous with the human habitation at elevation level of over 5500 mtrs, providing connectivity to all the areas of habitants in rather a big challenges to rugged and intricate geographical condition. The hilly terrain by itself is a major factor impending road construction to many interior region of the state. Nevertheless, over a relatively short span of time, the state has undergone visit network programme. This has been possible with the guardian financial support under different programme like PMGSY, BADP, PSPY, NLCPR and NABARD etc. Most of the remote village of Sikkim are now linked by road and many left out are being connected. However the hill roads are more susceptible to

damage especially due to factors like Landslide and land sinking apart from other natural calamities that causes road maintenance not only difficult but also very costly compared to the plain area.

In Sikkim, allocation of business of State Government defines few department for development and maintenance of road network in the state which include Roads and Bridges Department, Rural Management Department and Urban Development and Housing Department. The Arterial road NH10 and some of the state highway are still being managed by the border roads Organization. The Road and Bridges Department is the pioneer in development of the interior roads in Sikkim and it has the control over 1800 Km of road inclusive of all categories (State highways, major district roads and other district roads), whereas the Rural Development Department provides connectivity mostly to the rural belts and its activities are more focused in relation to the PMGSY schemes. In the year 2008-2009, a new policy was defined that allocated the UD&HD to take permission of all the urban roads for its development and maintenance.

The category of roads being developed by the State Government includes state highways (SH), Major Districts roads (MDR) and Other District Roads (ORD). The categorization are based on varied logistics such as important of the region being connected, linkage within the District or one District to the other, important of the road in term of potential traffic volume etc. Each category will decide the geometrics of the roads in terms of its formation width, carriageway, slope, design and other technical parameters. In Sikkim situation, Bituminous Roads are most suitable due to geographic and climatic factor and as such almost all the roads are bituminous. While, all the roads must have Black-Top status, but some roads especially in the outer regions of the state are still WBM and earthen requiring upgradation.

3.0 Project Necessity: The current proposal is to provide link roads from India Press gate to Burtuk Junior High School via Gurung Crematorium and ICDS Centre. The road after construction shall largely benefit the local people, school teachers and students of the Burtuk JHS and ICDS and above the carry dead bodies to the Crematorium. The road will also benefit during the time calamities and transportation of sick people as well as essential commodities to and from the nearby town. The proposal will also greatly help in decongestion of car- parking along the highway especially at night. It will also help in commercial and economical growth of the areas. Besides, the proposed road will have immense prospective impact in boosting the socio-economy of the entire region along with tremendous boost in net present value (NPV) of the land in its vicinity.

Hence, the current proposal is amply justified in term of all technical angles as well as cost benefit aspects.

4.0 Technical Features: The various technical features of the proposed link road that has been incorporated in the detailed estimate are as under:-

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| a) Total length: | 500.00 mtrs. |
| b) Maximum gradient (longitudinal slope): | 1:10 |
| c) Formation width: | 6.0 mtrs |
| d) Carriage width: | 3.75 mtrs |
| e) Type: | Single lane |
| f) Category: | ODR |
| g) Proposed status: | Bituminous Top(BT) |
| h) Cross drainage: | 4nos. |
| i) Culverts: | 1 nos. |
| j) Protective works: | Provided wherever necessary as per site condition |

5.0 Design Criteria: The road, culverts and cross drainage work has been designed as per the standard guidelines of the Sikkim Public Work to cater to the optimum traffic flow and prospective growth within next 15 years. The type of proposed road is single lane ODR based on requirement. The proposed road will have smooth Gradient all along with maximum longitudinal slope of 1:12 (ruling gradient) for short lengths which is technically acceptable on safety aspects. Most of the lengths shall have gradient range of 1:15 to 1:20. The necessary protective work required for obtaining smooth road gradient has been provided in the proposal, since the requirement of protective work is quite huge to the side condition, it has the major cost implementation in the project cost. The pavement works on GSB I, GSB ii, GSB III shall be finished with 50mm thick BM and 25mm thick SDBC as per the standard practice. The proposed culverts and bridges shall have the standard approved design of Sikkim PWD for different span. The provision of road drainage in box as necessitated has been provided and the runoff the road drains shall be safety disposed off the natural jhora.

6.0 ROAD ALIGNMENT & LAND:

The length of the proposed road shall align entirely on the forest land. The proposed road besides providing connectivity will also greatly benefit

the public sector. There is adequate area outside the constructed area and the road width shall not be obstructed alignment has been fixed as per the soil condition given by Mines & Geology department during survey works.

7.0 ENVIRONMENT:

The proposed road alignment is devoid of trees and thick vegetation and hence the project is not likely to damage the environment & ecology of the region. Since the proposed road works shall not involve the use of huge construction equipment; there shall be no threat to the natural status-quo of the region. The nominal degradation of the hill slope due to construction process shall be made good with adequate protective measures, the provision for which has been amply kept in the estimate as per the site conditions.

8.0 ESTIMATED COST:

The estimate has been based on the state government approved SPWD schedule of rates (SOR-2012). The abstract of cost of various component of the project forming the detailed estimate is as under:

SL.No	Components	In lakh
1.	Hill cutting	18.95
2.	Protective work	115.09
3.	Pavement work	42.18
4.	Drainage works	10.45
5.	3.00 meter span culvert (1nos)	8.17
6.	Cross drain (2 nos)	3.43
	Total for civil works	198.27
7.	Contingency @ 0.5%	0.99
8.	Land Compensation	11.00
9.	Cost escalation 37%(7.5% For five years)	74.35
10.	Provision for shifting of pipe lines.	6.00
	Total Rs	290.61
	Say Rs. 291.00 lakhs	

9.0 COST ESCALATION:

Since the schedule of rate is based on latest SOR – 2012, cost escalation @ 7.50% for five years i.e 37.5% provision has been incorporated in the estimate.

10.0 TECHNICAL SPECIFICATION:

The implementation of all work programs quality of stock or non-stock materials, workmanship, etc. involved in the project shall confirm to relevant IS specifications with its latest amendments being in practice in State PWD.

11.0 COMPLETION TIME:

The time required to complete the entire work covered on the DPR would take about 24 months from the date of sanction of the project.

12.0 MODE OF EXECUTION:

The work shall be executed through resourceful contractor of appropriate class enlisted under Sikkim PWD after inviting tenders as per the prevailing norms and procedure of the State Government. The requisite tender formalities shall proceed soon after the accord of administrative approval and financial sanction of the project.

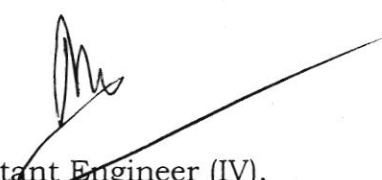
13.0 IMPLEMENTING AGENCY:

The project shall be implemented under the technical supervision of the Roads & Bridges Department, Government of Sikkim as per relevant guidelines provided under SPWD codes and manual in vogue. The engineering faculty of R&B comprise of adequate technical manpower under Civil engineering and architectural disciplines headed by the Chief Engineer (Civil). The specifications and quality of work shall be strictly ensured through periodically quality test that would be conducted earlier at site or at the specimen testing laboratories within the State or outside as the case maybe.

14.0 CONCLUSION:

The implementation of the proposed project shall have an immense impact in boosting socio economic condition of large section of people besides rendering benefits to the public. Apart from large social objectives the project will also help in decongestion of vehicular parking along the National Highway of the proposed road would enable large numbers of private vehicles to park in private garages. The project will distinctly help to bring about an economic boom in the region due to upsurge of land values as this

region being in close proximity to the capital town. The proposal is in complete order and is technically most justified in terms of its feasibility and cost benefit aspects.



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