

परियोजना का नाम:- उत्तराखण्ड राज्य में ऑल वेदर रोड़ परियोजना के अंतर्गत जनपद टिहरी गढ़वाल के राष्ट्रीय राजमार्ग-58 के कि०मी० 253.000 से कि०मी० 254.000 के मध्य में सड़क के चौड़ीकरण एवं सृढ़ीकरण हेतु हॉट मिक्सिंग प्लांट के लिए राष्ट्रीय राजमार्ग लोक निर्माण विभाग श्रीनगर का वन भूमि हस्तान्तरण प्रस्ताव।

प्रारूप-5

परियोजना की वित्तीय/प्रशासनिक स्वीकृति का प्रमाण-पत्र

प्रमाणित किया जाता है कि वित्तीय वर्ष 2015-2016 के अन्तर्गत सड़क, परिवहन और राजमार्ग मंत्रालय की प्रस्तावित परियोजना की प्रशासनिक एवं वित्तीय स्वीकृति प्राप्त है तथा पृष्ठ संख्या पर संलग्न है।



अधिशाली अभियन्ता
राष्ट्रीय राजमार्ग, लोक निर्माण विभाग
श्रीनगर, उत्तराखण्ड

भारत सरकार
सड़क परिवहन एवं राजमार्ग मंत्रालय
(अनुभाग एनएचओ-2)

सड़क मार्ग परिवहन मंत्रालय
नई दिल्ली-110 001

फाइल नं: एनएचओ 12014/52/2015/यूओजे/एनएचओ-2

दिनांक 20 सितम्बर, 2016

सेवा में

प्रमुख सचिव,
लोक निर्माण विभाग, उत्तराखण्ड शासन,
यमुना कालोनी, देहरादून

विषय: Widening of existing single lane road to two lane with paved shoulders configuration from Km. 235.000 to Km 268.000 of NH-58 including 600m Marine Drive viaduct portion near Byasi in the State of Uttarakhand on EPC mode.

संदर्भ: मुख्य अभियन्ता (राजमार्ग), लोनिवि, देहरादून पत्रांक 3089/84(T)-NH-(UA/2016-17 dated 26.08.2016 and DPR Consultant letter No. AECOM/HW/MoRT&H/2014/UK/DELD13132 dated 21.09.2015 & 25.08.2016.

(Job No. NH-58-UR-2016-17-477)

महोदय,

मुझे तकनीकी नोट में दी गई शर्तों के अधीन निम्न ब्यौरे के अनुसार विषयक शीर्षक में उल्लिखित निर्माण कार्य के लिए प्राक्कलन हेतु राष्ट्रपति की प्रशासनिक, तकनीकी अनुमोदन एवं वित्तीय संस्वीकृति सूचित करने का निर्देश हुआ है:-

(रुपये करोड़ में)

(i) राज्य द्वारा भेजे गए उक्त कार्य के लिए प्राक्कलन में उल्लिखित राशि	रु. 240.36
(ii) तकनीकी अनुमोदन की राशि(सभी प्रकार सहित)	रु. 248.22
(iii) वित्तीय एवं प्रशासनिक की स्वीकृति की राशि	रु. 248.22
(रुपये दो सौ अड़तालीस करोड़ और बाईस लाख केवल)	

2. यह स्वीकृति निम्नलिखित शर्तों पर आधारित है-

- सक्षम अधिकारी द्वारा अनुमोदित आरएफओब्यू के अनुसार ठेकेदारों का चयन किया जाएगा।
- यह कार्य सक्षम अधिकारी द्वारा अनुमोदित Modle EPC Contract Document के तहत पूर्ण किया जाएगा।
- इस स्वीकृत आगमन के Construction Cost में निम्नलिखित Centages सम्मिलित है।
 - Contingency @ 2.8%
 - Escalation during construction @ 5% of the construction cost per annum for 2 years(Total 10%)
 - Construction Supervision charges @ 3%
 - Agency charges @ 3%
 - Quality control @ 0.25%
 - Road safety audit charges @ 0.25%
 - Maintenance cost @ 5% of the construction cost for four years.

P.T.O.

P/M-1.

(v) कार्य सम्पूर्ण होने के पश्चात् उत्कृष्टतम (Extant) निम्नानुसार Toll वसूल जाएगा।

(vi) इस मसला के प्रारम्भिक आदेश क्र. 35044/10/2002-एस एंड आर (आर) दिनांक 01.01.2003 एवं 31 दिसम्बर, 2003 द्वारा प्रदर्शन पर प्रदर्शित करने के संबंध में जो अनुदेश जारी किए गए हैं उनका साखी से अनुपालन किया जाए।

(vi) कार्य का broad break-up निम्नानुसार है:-

(Amount Rs. in Cr.)

Sl. No.	Details	Estimated Cost (Rs. in lakh)
1	Earthwork incl. Site Clearance, Dismantling etc.	1867.38
2	Pavement including base & sub-base	4811.72
3	CD works & Protection works	9613.05
4	Misc. including road safety & way side amenities	2523.78
5	Total Civil construction works	18815.93
6	Contingencies @ 2.8% of (1)	526.85
7	Escalation @ 10 % of (1)	1818.59
8	Maintenance charges @ 5% of (1)	940.80
9	Supervision charges @ 3% of (1+2)	580.28
10	Agency charges @ 3% of (1+2)	580.28
11	Quality Control @ 0.25% of (1+2)	48.36
12	Road Safety @ 0.25% of (1+2)	48.36
13	Pre-construction activities(L.S.)	
(i)	Utility Shifting	100
(ii)	Environment mitigation cost and tree cutting	300
(iii)	Provision for LA, R&R, and other pre-construction activities cost. LS	1000
	Total	24822.45

3. यह व्यय मुख्यशीर्ष 5054-सड़क और पुल संबंधी पूंजीगत परिव्यय, उप-मुख्य शीर्ष 01-राष्ट्रीय राजमार्ग; लघु शीर्ष 01.337- सड़क कार्य; 01- सड़क पक्ष के द्वारा निर्माण कार्य; 01.02-अन्य योजनाएं 01.02.53-मुख्य कार्य के नाम डाला जाएगा जिसके लिए चालू वित्त वर्ष 2016-2017 के लिए संगत मांग संख्या 74-सड़क परिवहन एवं राजमार्ग मंत्रालय है।

4. अनुमोदन प्राक्कलन की एक प्रति अलग से मुख्य अभियन्ता (रा0मा0) देहरादून, को भेजी जा रही है।

5. The work is to be awarded within 6 months from the date of issues of the sanction. Further in case the work is not awarded within 12 months from the dated of sanction the work stands de-sanction automatically

P.T.O.

6. सभी संयोजक कार्यों की तरह विहित प्रणाल में 5 करोड़ से ज्यादा के कार्यों के लिए मासिक प्रगति रिपोर्ट एवं 5 करोड़ से कम कार्यों के लिए तिमाही प्रगति रिपोर्ट उत्तर मंत्रालय को भेजी जाएगी।

7. निम्नलिखित वस्तुगत और वित्तीय लक्ष्य (Cumulative) निम्नीय दी जाएगी/होना चाहिए।

Year	Physical	Cumulative progress			
		Financial (Rs. in lakh.)			Total
		Construction	Pre-construction activities	Maintenance	
2016-17	10%	2388.17	1400	0.00	3788.17
2017-18	80%	19105.32	0.00	0.00	19105.32
2018-19	100%	23881.65	0.00	0.00	23881.65
2019-20			0.00	94.08	23975.73
2020-21			0.00	188.16	24163.89
2021-22			0.00	282.24	24446.13
2022-23			0.00	376.32	24822.45

7. यह संयोजक वित्त पक्ष की सहमति से उनके यूओओ संख्या 2168/TF-11/2016 दिनांक 30.08.2016 के द्वारा जारी की जाती है।

संलग्नक: यशोधरि

(एनएच) चौधरी
अवर सचिव, भारत सरकार

अनुलग्नकों के साथ प्रतिलिपि प्रेषित:-

1. महालेखाकार, उत्तराखण्ड, देहरादून-248 001।
2. प्रधान लेखा परीक्षा निदेशक, आर्थिक एवं सेवा मंत्रालय, एजीसीआर बिल्डिंग, आई पी एस्टेट, नई दिल्ली।
3. भुगतान एवं लेखा अधिकारी, सड़क परिवहन एवं राजमार्ग मंत्रालय, आई.डी.ए. बिल्डिंग, जामनगर हाऊस, नई दिल्ली।

(एनएच) चौधरी
अवर सचिव, भारत सरकार

अनुलग्नकों के साथ प्रतिलिपि प्रेषित:-

1. मुख्य अभियन्ता(राष्ट्रीय राजमार्ग), लोक निर्माण विभाग, उत्तराखण्ड सरकार, देहरादून-248 001।
2. क्षेत्रीय अधिकारी, सड़क परिवहन एवं राजमार्ग मंत्रालय, 48/1, कैनाल रोड, जालन, देहरादून-248 001।
3. कार्यपालक अभियन्ता परियोजना क्रियान्वयन इकाई देहरादून (PIU), सड़क परिवहन एवं राजमार्ग मंत्रालय, यमुना कालोनी, देहरादून।
4. मुख्य अभियन्ता(पी-2)/एसई(चारधाम)/एसई(पी-2)/ईई(पी-2)/एसई(मानिटरिंग)/मानिटरिंग प्रजोक्त/डब्ल्यू एंड ए अनुभाग/वित्त पक्ष(टी एफ-2 अनुभाग)/परियोजना अनुभाग/ राईट फाईल

(प्रदीप कुमार अवस्थी)
अनुभाग अधिकारी
दूरभाष-011-23716776



GOVERNMENT OF INDIA
MINISTRY OF ROAD TRANSPORT & HIGHWAYS

No. RW/NH/-12014/52/2015/UR/NH-II

Dated: 27 Sept, 2016

TECHNICAL NOTE

1	Name of work	Widening of existing single lane road to two lane with paved shoulders configuration from Km 235.000 to Km 268.00 of NH-58 including 560m Marine Drive viaduct portion near Byasi in the State of Uttarakhand on EPC Mode	
2	State	Uttarakhand	
3	NH No.	58	
4	Estimated cost including 3% agency charges	As proposed by the CE(NH) Uttarakhand, Dehradun (Rs. in Lakh.)	As processed in the Ministry (Rs. in Lakh.)
		24036.83	24822.45
5	Length (in km)	30.8	30.8
6	Cost per km (Rs. in cr.)	7.80	8.06
7	Reference	CE, NH, Uttarakhand PWD, Dehradun letter no. 3089/84(I)-NH-(UA)/2016-17 dtd 26-08-2016 DPR Consultant letter No. AECOM/HW/MoRT&H/2014/UK/DELD13132 dated 21.09.15& dated 25.08.2016.	

COMMENTS

1. Scope of the project:

Widening of existing single lane road to two lane with paved shoulders configuration from Km 235.000 to Km 268.00 of NH-58 including 560m Marine Drive viaduct portion near Byasi in the State of Uttarakhand on EPC Mode.

2. Estimate provisions:

2.1 Pavement Design:

2.1.1 The pavement designed based on the survey and field investigation report & analysis of soil characteristic both in situ and at the borrow pit, soaked sub-grade CBR value of 10% and traffic of 25 MSA for 15 years design period as per IRC 37 -2012.

2.2.2 Following crust composition has been adopted while working at the estimate cost of the project.

Design Chainage		Design Traffic (MSA)	Pavement Composition		
From	To		CBR (%)	New Pavement	Widening / Overlay Section
235/300	266/100	25	10	250 mm CT Sub Base+ 95 mm CT base + 100 mm Aggregate Inter	40mm BC+90mm DBM+250mm WMM+200mm GSB

			Layer+ 50mm BC	over water: 80 portion and 40mm BC over existing C/V
			Total	495 mm
				580mm/40mm

2.3 At this stage provisions are allowed for the estimate purpose only. Since the work is being taken up on EPC basis, the broad requirement as recommended by M/s AECOM Asia Pvt. Ltd. may be adopted in the Schedule.

2.4 M/s AECOM Asia Pvt. Ltd. has mentioned that the all structures have been designed for a design life of 100 years considering seismic zone 5, maximum precipitation (single day) of 676mm, geological features/faults and design loading as per IRC/BIS codes.

2.5 **Land acquisition:** It has been reported that the requirement of land acquisition is 39.17 Hectare out of which 3.82 Hectares (9.2%) is Private land, 5.59 Hectare (14.3%) is Government land and 29.96 Hectare (76.5%) is Forest land. Accordingly, the private land to be acquired is only 7 % of the total land area of 72.96 Hectare. In order to avoid any contractual/legal implications, CE, NH, Uttarakhand PWD, Dehradun shall ensure acquisition of requisite land, forest clearance and utility shifting before the award of work in accordance with Ministry's circular no. NH 15017/181/2014-P&M dated 29.12.2014. 3A notification for this stretch has been published on 16.03.2016 and 05.04.2016. 3D schedule data is being collected and scheduled to be submitted by 2nd week of September 2016 as reported by PD PIU Dehradun.

2.6 **Forest clearance:** The DPR consultant has reported that Forest clearance is to be obtained between km. 235 to km. 288. CE, NH, Uttarakhand PWD, Dehradun shall take expeditious action for necessary forest clearance, if any required and complete the same in 2 months so that the progress of the work is not affected. FRA NOC has been obtained from Gram Sabha. FRA clearance is awaited from SDM committee level and likely to be obtained by 06.09.2016 and the proposal is likely to be uploaded on MOEF website on 09.09.2016 as reported by PD PIU Dehradun.

2.7 **Utilities shifting-** DPR Consultant has reported that there is requirement for shifting of utilities. However, CE, NH, Uttarakhand PWD, Dehradun shall take necessary action, to ensure shifting of the utilities well in advance before award of work so that the progress of the work is not affected. Consolidated Utility Shifting estimate amounting to Rs. 74.07 Cr has been sanctioned for entire Chardham connectivity NH projects.

2.8 Since the work shall be executed on EPC mode, all the relevant schedules shall be finalised by CE (NH) Uttarakhand PWD, Dehradun in consultation with the Project Coordination Consultant (PCC) and got approved from RO Dehradun before tendering. CE, NH, Uttarakhand PWD, Dehradun shall take necessary action to ensure shifting of existing utilities (electrical/water supply/sewer lines, etc.), land acquisition & forest clearance well in advance so that the progress of the work is not affected. In this regard, CE, NH, Uttarakhand PWD, Dehradun shall ensure that these activities will be completed before the award of work.

2.9 Geometric Design:

The Consultant has reported that all geometric features have been designed for ruling speed of 40 kmph conforming to hilly terrain as per IRC Specifications, except in the approach of Viaduct (Marine Drive) from km 253+807 to Km 254+367 of NH-58 where the speed is restricted to 30 kmph.

2.10 New Major Bridges

(i)	Major bridge at km 249+700 (Design chainage)	1x82.1m
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2.11 New Minor Bridges

(i)	Minor bridge at km 250+245 (Design chainage)	(1x30.0m)
(ii)	Minor bridge at km 258+500 (Design chainage)	(1x15.0m)

2.12 New Viaduct

(i)	From km 253+807 to km 254+367 (Design chainage)	(16x35m), Total length 560m
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2.13.1 Re-Constructions of culverts: Reconstruction of 110 nos culverts are proposed along this stretch. Precast box culverts are proposed in 2 sizes i.e. 1.5m x1.5m & 2mx 2m. Culverts having span more than 2m shall be cast in -situ.

2.13.2 Construction of New Culvert: - Constructions of 37 nos. of new Box Culvert (1x1.5m Span) is also proposed along in this stretch.

2.13.3 Widening of Culverts: - Widening of 03 nos. existing culvert is also proposed along in this stretch.

2.14 Minor Intersections: There are 03 minor intersections in this stretch.

S.No.	Location of Intersection (Existing Ch)	Type of intersection	Side LHS/RHS	Other feature (Destination)
1	Km 238/200	Y Intersection	RHS	To Neelkanth Temple
2	Km 263/260	Y Intersection	LHS	To Bharapur Rd
3	Km 266/100	Y Intersection	LHS	To Hotel

2.15 Major Intersections: Nil

2.16 Rest Area: - One Rest Area is proposed at Km 259+500

2.17 Highway Lighting: Consultant has reported that provision for highway lighting considered in the estimate.

2.18 River training works.

River training works, if any required as per site condition shall be as per MoRTH specifications (5th revision) 2013.

3. At this stage provisions are allowed for the estimate purpose only. Since the work is being taken up on EPC basis, the broad requirement as recommended by CE, NH, Uttarakhand PWD Dehradun based on the report of Consultant are included in the estimate. The Project Coordination Consultant (PCC) has also recommended the proposal to be taken up on EPC contract due to uncertainty of data assumed in the design and non-availability of Geotechnical and Hydrology report.

4. Design specifications: CE, NH, Uttarakhand PWD Dehradun shall ensure that All material, design and construction operations for the project are proposed conforming to the IRC:SP:73:2015, Manual of specifications and standards for two-laning of Highways with paved shoulders.

5. Specifications

5.1 Traffic management during construction: -Traffic management should be done as per clause 112 of Ministry's specification, during the construction period it may be insured that the traffic is regulated in conformity to Ministry's guidelines stipulated in clause No.8.2.3 "Manual for construction and supervision of bituminous work."

5.2 The nomenclature and clause numbers of the items shall be specified as per MORTH specification for Road and Bridge work 2013 (5th revision) and all the works shall be

executed strictly as per Ministry's specifications/ Ministry's circular/ guidelines issued from time to time

6. Contract Documents:

6.1 Single stage two-cover bidding on EPC mode is to be adopted as per instructions conveyed vide Ministry's letter no. RW/NH-37010/4/2010/PIC dated 06.05.13. RFP and draft contract documents shall be as per the Model RFP circulated vide Ministry's letter no. RW/NH-37010/4/2010-PIC (PI-RFP) dated 27.05.2014 and incorporating subsequent amendments and circulars issued by Ministry till date.

6.2 Construction period for this work has been proposed as 24 months including the rainy period. Defects liability period and maintenance period shall be 4 years as specified in the amendments to Model EPC Document issued vide Ministry's letter no. RW/NH-37010/4/2010/ PIC dated 15.01.2014.

6.3 Circular on amendment to Schedule-I of Contract Agreement for NH works on EPC mode issued vide RW/NH-39013/17/2015-NHDP IVA dated 22nd July 2015 may be followed.

7. Invitation of tenders and award of works:

7.1 The procedure for tendering shall be as per instructions conveyed vide Ministry's letter no. RW/NH-24035/4/2008/P&M/PIC-EAP dated 31.03.2016 is to be adopted for award of works.

7.2 The time limit for awarding of this work is 6 months from the date of sanction and should be strictly followed as per the instructions communicated to all State PWDs vide this Ministry's letter no. RW/NH-15015/29/2001-PL dated 05.07.2001 and compliance reported to the Ministry. If the work is not awarded within the stipulated time, it may lead to de-sanction of the work unless Ministry's prior approval to extension of the time limit is obtained.

7.3 CE (NH) Uttarakhand PWD Dehradun will intimate this Ministry about award of contract/commencement of work immediately as per instructions contained in this Ministry's letter no. RW/NH-11060/1/98-(DO-I) dated 05.11.1998.

7.4 E procurement must be adhered to while inviting tender for the work. In this connection Ministry's circular RW/NH-37010/4/2010/PIC-EAP(Printing) dt. 08.08.2016 regarding fixing of timelines for tendering may be followed.

7.5 The tenders for the work shall be invited on EPC mode as per guidelines issued by this Ministry vide circular letter No. RW/NH-24035/4/2008-P & M/PIC dated 21.05.2011. In addition to guidelines issued by this Ministry vide circular letter No. RW/NH-11024/3/99-US (D-1) dated 9.3.2000, No. RW/NH-24035/4/2008-P&M dated 21.05.2010 and No. NH-12037/67/2010/LWE dated 2.8.2010. The work shall be awarded as per guidelines issued by the Ministry vide letter No. NH-15015/29/2001-PL dated 05.07.01.

7.6 While accepting tenders that the overall cost of estimate at tender rates including contingencies, work charge establishment and agency charges does not exceed by more than 5% of sanctioned cost.

7.7 Excess in tender cost is caused only by routine factors such as increase in cost of labour or material.

7.8 Excess due to change of scope or enlargement / reduction of work or specifications as already approved in the sanctioned estimate would require prior approval of Ministry.

9 General

- 9.1 The provision of contingencies should be utilized as per Ministry's circular letter no. RW/G-20011/8/98-WA(R) dated 16.08.2002 with the approval of the Ministry. The estimates for carrying out the activities under the provision of contingencies including change in scope of work will be approved by Ministry on assurance/certification by Authority's Engineer/ CE, NH, Uttarakhand PWD Dehradun that the amount provided against contingencies is available and the same has not been indirectly utilized by accepting higher tender rates. Authority's Engineer/ENC/ CE, NH, Uttarakhand PWD Dehradun shall also certify that approval of estimates to be charged to contingencies will not cause revision of the sanctioned estimate.
- 9.2 Collection of material on the roadside should be so planned that it should commensurate with the physical progress of work and the collected material should not cause any hindrance to the traffic. It must be ensured that the contractor arranges for separate land for storage of road construction material and machinery and these shall not be allowed to be stacked on roadside.
- 9.3 No work beyond the scope of the sanctioned estimate leading to increase in the scope of the work or change in specification should be undertaken without obtaining prior written approval of the Ministry. In case, the estimate needs revision due to change in rates/tender rates for any reasons, the revised estimate shall be submitted immediately for Ministry's approval. No expenditure beyond permissible in this connection, this Ministry's letter No. RW/NH/III/Coord/32/84 dated 19.5.84 and NH-11026/299-US (DI) dated 29.10.2001 may be referred.
- 9.4 In order to ensure that there is no slippage in achieving the targets, the progress may be closely monitored by ENC/ PD, PIU MORTH Dehradun quarterly status report be furnished to the Ministry in the prescribed proforma.
- 9.5 During the course of execution, the traffic may be regulated in accordance with guidelines laid down vide Ministry's letter no. NH/III-33 (126)/72 dated 20.03.1973 and letter No. RW/NH-11060/1/1998-D.O.1 dated 07.10.1987. Smooth flow of the traffic may be ensured by providing adequate traffic control devices in accordance with stipulation of IRC: SP: 55:2014 "Guidelines on Safety in construction Zone".
- 9.6 It is suggested that work may be taken up at all four locations for speedy implementation of work. Suitable provisions in the contract shall be incorporated for proper traffic management.
- 9.7 The display boards on development activities of the work shall be made as per guidelines issued vide Ministry's letter no. RW/NH-33044/10/2002-S&R (R) dated 26th May, 2003. The cost of the same will be met out of the provision of contingencies allowed in the estimate.
- 9.8 The provision for centages (contingencies, quality control etc) should be utilized as per Ministry's circular Letter No. RW/G-20011/8/98-WA dated 16th August 2002. For any other item, which is not covered in paras 1.1.1 to 1.1.7 of above circular letter, necessary approval of Ministry (in principle) with the recommendation of ELO Dehradun should be taken before execution. However, sub-estimate for the same should be got approved from ELO Dehradun before execution.
- 9.9 Provision for quality control @ 0.25% has been allowed. The work is to be carried out in accordance with the "Hand Book of Quality control for construction of Roads and Runways (Second Revision)-IRC SP-11-1968", observing strict quality control instructions contained in the Ministry's letter No. NH-III/PA/83 dated 19 April 1984 and permanent records maintained thereof.

- 8.10 The independent quality control tests of all items from any of the accredited laboratories as per IRC: SP-94-2011 shall be carried out from the quality control provision in estimate to ensure the quality of work.
- 8.11 Neither the work nor any item of work shall be split into small parts for awarding the work to a number of contractors. In this regard, instructions issued in this Ministry's letter No NH III/P/25/84 dated 4/8/1984 may be referred.
- 8.12 Guidelines for Road Safety vide Ministry's letter No. RW/NH-33072/04/2004-S&R(R) dated 27.04.2012 shall be followed wherever applicable.
- 8.13 Splitting may be allowed for the item of highway side plantation and its maintenance. The executing agency shall explore best possible agency/firm/govt institution having adequate knowledge of flora and fauna of the area, for plantation of locally surviving species of plant. The plants helpful in stabilization of hill side slopes may also be explored for plantation along hill slopes.
- 8.14 As regards, expenditure on account of Authority Engineer(AE) for EPC works and delegation of power for selection of AE, Ministry's circular no. RW/NH-11014/7/2013-P&M(Pt) dt. 6.05.2016 may be followed.
9. **Rates** The Consultant has reported that the estimate is based on PWD Uttarakhand Schedule of Rates (SOR) 2015-16 for Narender Nager (Tehri) block and/or non-SOR items, rate analysis has been done separately by them.
10. **Cost:** The estimated cost works out to Rs. 24822.45 Lakh. In the light of the above observations and comments as per details given below:-

S.No.	Details	Estimated Cost (Rs. in lakh.)
1	Earthwork incl. Site Clearance, Dismantling, etc.	1867.38
2	Pavement including base & sub-base	4811.72
3	CD works & Protection works	9613.05
4	Misc. including road safety & way side amenities	2523.78
5	Total Civil construction works	18815.93
6	Contingencies @ 2.8% of (1)	526.85
7	Escalation @10% of (1)	1818.59
8	Maintenance charges @ 5% of (1)	940.80
9	Supervision charges @ 3% of (1+2)	580.28
10	Agency charges @ 3% of (1+2)	580.28
11	Quality Control @ 0.25% of (1+2)	48.36
12	Road Safety @ 0.25% of (1+2)	48.36
13	<u>Pre-construction activities(L.S.)</u>	
(i)	Utility Shifting	100
(ii)	Environment mitigation cost and tree cutting	300
(iii)	Provision for LA, R&R, and other pre-construction activities cost.	1000
	Total	24822.45

11. Phasing of expenditure: Phasing of expenditure is as under:
The Year wise phasing of expenditure is as under:

Year	Cumulative progress				
	Physical	Financial (Rs. in lakh.)			Total
		Construction	Pre-construction activities	Maintenance	
2016-17	10%	2388.17	1400	0.00	3788.17
2017-18	80%	19105.32	0.00	0.00	19105.32
2018-19	100%	23881.65	0.00	0.00	23881.65
2019-20			0.00	94.08	23975.73
2020-21			0.00	188.16	24163.89
2021-22			0.00	262.24	24446.13
2022-23			0.00	378.32	24822.45

(Sandeep Gaur)
Executive Engineer
For Director General (RD) & Special Secretary