

No. RW/NH-12014/1496/2021/Ladakh/Zone-II
Government of India
Ministry of Road Transport & Highways
(Zone-II)
Transport Bhawan, 1, Parliament Street, New Delhi-110001

Dated: 03rd November, 2021

To

The Regional Pay and Accounts Officer (NH)
Ministry of Road, Transport & Highways,
6th floor, Kendriya Sadan, sector 9A,
Chandigarh.

Subject:-Financial Sanction of Rs.426.14 Crores for the work of "Construction of realignments (3 Nos i.e. Drass, Kharboo and Kargil realignment) between Pandrass - Pashkyum (Net length-27.10 km.) on road Zozila-Kargil-Leh (NH-1) to 2 lane under Project Vijayak (BRO) on EPC mode in the UT of Ladakh.

(Job No. NH-1-Ladakh-2021-22/01)

Ref:Border Roads Organization vide letter No. 24040/DGBR/VJK/Z-K-L/45/EPC dated 12.03.2021.

Sir,

I am directed to convey the financial sanction of the President of India for the above mentioned work having Job no. NH-1-Ladakh-2021-22/01 amounting of Rs. 426.14 Crores (Rupees Four hundred twenty Six Crores and Fourteen Lakhs only) including agency charges and other charges.

2. The expenditure shall be allowed to be incurred as per the year wise phasing details for the total sanction amount as mentioned below in accordance with the terms and conditions of the work sanction letter and technical note:-

Financial Year	Cumulative Physical progress in %	Cumulative Financial Progress (Rs. in Crore)			
		Pre-Construction Activities	Construction Cost i/c centages	Maintenance	Total Cost
2021-2022	40%	79.14	136.00	-	215.14
2022-2023	100%	-	419.28	-	419.28
2023-2024	100%	-	419.28	-	419.28
2024-2025	100%	-	419.28	1.37	420.65

2024-2025	100%	-	419.28	1.37	420.65
2025-2026	100%	-	419.28	2.74	422.02
2026-2027	100%	-	419.28	4.11	423.39
2027-2028	100%	-	419.28	6.86	426.14

6. This sanction issues with the concurrence of IFD vide Note # 29 dated: 12-04-2021.

Encl: As above

Yours faithfully,

(Kamal Parkash)

Under Secretary to the Government of India

Copy with a copy of Technical Note forwarded to:

1. The Accountant General, Govt. of UT of Ladakh.
2. The Pay & Accounts Officer, M/o Road Transport & Highways(RW), IDA, Building, Jamnagar House, Shahjahan Road, New Delhi.
3. The Principal Director of Audit, Economic & services Ministries, AGCR Building, I.P estate, New Delhi.
4. The Chief Engineer- Regional Officer, MORTH, Chandigarh.
5. The Chief Engineer (Vijayak), BRO, UT of Ladakh.

(Kamal Parkash)

Under Secretary to the Government of India

Copy also to:

ADG(Z-II), CE(Z-II) / SE (Z-II) / EE (Z-II)/ W&A Section /TF-II Section/Finance wing/ Guard Folder.



Digitally Signed by Kamal
Parkash
Date: 09-11-2021 15:07:58
Reason: Approved

Coordinator(Zone-2)

No. RW/NH-12014/1496/2021/Ladakh/Zone-II
Government of India
Ministry of Road Transport & Highways
(Zone-II)
Transport Bhawan, 1, Parliament Street, New Delhi - 110001

Dated: 09th November, 2021

TECHNICAL NOTE

(Job No. NH-1-Ladakh-2021-22/01)

1.	Name of work	Construction of realignments (3 Nos i.e. Drass, Kharboo and Kargil realignment) between Pandrass - Pashkyum (Net length-27.10 km) on Road Zozila-Kargil-Leh (NH-1) to 2 lane under Project Vijayak (BRO) on EPC mode in the UT of Ladakh	
2.	State /UT	Ladakh	
3.	NH No.	NH-1	
4.	Estimated Total Project Cost (Rs. in Cr)	As proposed by BRO (Rs. in Cr)	As modified/allowed by RW (Rs. in Cr)
		410.50	426.14
7.	Reference	DGBR, Border Roads Organization, letter No. 24040/DGBR/VJK/Z-K-L/45/EPC Cell dated 12.03.2021	

COMMENTS

1. The work envisaged for construction of realignment between Pandrass - Pashkyum (Net length-27.10 km) on Road Zozila-Kargil-Leh (NH-1) to 2 lane under Project Vijayak (BRO) on EPC mode in the UT of Ladakh.

2. Improvement Allowed:

2.1 Pavement Design: - Flexible pavement is recommended for the current project of realignments i.e. Drass realignment (9.30 km), Kharboo realignment (6.30 km) & Kargil alignment (11.50 km) of NH-1. The Flexible pavement design has been carried out by using IRC: 37- 2018.

2.2 Proposed Crust: - The detail of crust proposed is as follows.

Layer Composition	Proposed Flexible Pavement Design Details
BC	30 mm
DBM	50 mm
WMM	250 mm
GSB	150 mm
Total	480 mm

Sub-grade shall be designed for CBR requirement of 8% for flexible pavement as per design, prior to construction of pavement.

2.3 Retaining Wall/Breast Wall: Retaining wall for a length of 4738 m and breast wall for a length of 21608 m is proposed. The details of the same as follows:

Description	Length (m)	Height (m)
Retaining Wall	1638	2
	1670	3
	1430	4
Breast Wall	7178	1
	5590	2
	3330	3
	5710	4

2.4 Land acquisition Details:- Land required for improvement of Project highway is 50.400 Ha including Govt. land 33.012 Ha, Agriculture land 3.24 Ha and Barren land 4.148 Ha. Cost of the Land acquisition proposed by BRO is Rs. 78.00 Crores which may be allowed, additional cost of land if required then BRO shall be borne from its own resources.

Total additional Land to be acquired	: 32.52 Ha Govt. Land - 24.85 Ha Forest Land-0.32 Ha Pvt. Land -7.35 Ha
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2.5 Re-construction/New construction of bridges/culverts: As per the proposed Project realignments 09 Minor Bridge and 107 culverts are proposed. All Major and Minor Bridges have been proposed to 2-lane configurations.

2.6 Provision of Drains: Roadside drains are proposed for a total length of 27.060 km, the details are as under:

Sr. No.	Description	Length (km)
1.	PCC Lined Drain	27.060

2.7 Earthen shoulders for a width of 0.90m with granular material are proposed on both sides of the road, as per IRC SP:48 (Hill road Manual).

2.8 Camber & Super elevation:-2.5 % camber on carriage way and 3 % camber on both shoulders have been proposed. For Horizontal curve correction the designed super elevation will be met out of the available provisions in the estimate.

2.9 Road Safety:-Provision of retro reflectorised cautionary, mandatory and informatory sign boards has been made and Provision of delineator has been made in required location. Provision of crash barrier for safety measures has been made as per guidelines of the ministry.

2.10 LA, Forest clearance& Shifting of Utilities: - In this estimate provision has been made for the followings: -

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Sr. No.	Description	Estimated cost (Rs in crore)
1.	LA	78.00
2.	Shifting of Utilities	1.14
	Total	79.14

2.11 Tree cutting & avenue plantation: There is 7500 no. tree cutting are involved in said stretch.

2.12 Roadside furniture: Provisions of pavement markings, road markings, traffic signs, delineators, boundary stones, hectometer/kilometer stone etc shall be done as per Ministry's specification/guidelines.

3. Comments & modifications:

- The work is to be executed on EPC mode as per latest EPC Document dated 05.03.2019 and subsequent amendments.
- Construction period has been kept as 24 months. The defect liability period and maintenance period for the work is kept as 5 years as per latest EPC document.
- Contingencies @1%, Agency & Supervision Charges @3% each and Maintenance @ 2.5% (as per article 14 of the latest standard EPC document) & the escalation charges have been modified to 5% of civil cost per annum for period exceeding one year.
- The thickness of crust of the pavement shall not be less than the values mentioned in para 2.2 above.
- The quantities are taken only for estimation purposes in the proposal.
- The Defect Liability Period for the above work shall be as per extant guidelines of the Ministry i.e. maintenance charges 2.5% for 5 years on Civil work cost as per EPC mode of execution.
- DBM and BC layer should be provided strictly in accordance with IRC:111-2009 after carrying proper job mix design (section 4). Further, construction operations (section 5), and quality controls (section 6) in conjunction with Ministry's specifications for Road and Bridge works (5th revision) need to be strictly adhered. The work of GSB & WMM shall be executed as per Clause 401 & 406 respectively of Ministry's specifications for Road and Bridge works (5th revision).
- The source of procurement of bitumen / modified bitumen is always a concern from the point of view of homogeneity and quality. As such, the bitumen / modified bitumen shall be procured from the refineries only (As per Ministry Circular No.RW/NH-37072/05/2018-S&R(P&B) Dated: 24 August 2018). Modified bitumen (using polymer/crumbed rubber /natural rubber) or VG - 40 grade of bitumen has to be used. In such cases shearing mill is to be mandatory used (in case of Bitumen modified with crumb rubber /natural rubber so as to ensure proper mixing of the bitumen and the modifier. Other measures to be ensured at the time of using the modified bitumen for construction of wearing coat as as per Ministry Circular No.RW/NH-37072/05/2018-S&R(P&B) Dated 24 August 2018.
- RFP is proposed to be invited from fresh bidders as per Ministry's standard RFP document (as per standard RFP vide Ministry's letter dated 05.03.2019) & subsequent amendments therein. The work will be executed and supervised by BRO.

4. Specifications:

4.1 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 of 'Manual for construction and supervision of bituminous work.'.

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

4.3 It may be ensured that the shoulder improvement is done simultaneously with carriageway improvement. The shoulder improvement shall be strictly executed as per Clauses 408 and 3003 of Ministry's Specifications for Road & Bridge works (5th Revision).

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4.4 The work shall be carried out as per the provisions mentioned in manual "Specifications for Road & Bridge Works" 5th Revision 2013 and all the works shall be executed strictly as per Ministry's specifications/Ministry's circulars/guide lines issued from time to time.

5. Tender:

5.1 The entire work under the Job shall be executed through EPC Contract. RFP and draft contract documents to be adopted as per the latest draft Model RFP and EPC documents approved by the Ministry (March 2019) after making project specific changes as well as subsequent amendments circulated by Ministry. Bidders eligibility criteria modified vide Ministry's letter no. NH-35014/35/2020-II, dated 02.11.2020 may also be incorporated. All schedules required for EPC mode of execution of work may be prepared by the BRO in duly vetted by RO, Chandigarh in line with the approved estimate and technical note.

5.2 Use of BIMS portal (www.bims.nic.in) for procurement of highway contracts on EPC Mode as per Ministry's guidelines no. RW/NH-J5014/34/2017-H (Part-II) dated 19.06.2018 shall be followed during e-tendering process.

5.3 The bids for the work should be invited through e-tendering system as per the instructions issued vide Ministry's letter no. RW/NH/33044/2/2010-S&R I, dated 17.11.2011. Single stage two cover bidding is to be adopted as per instructions conveyed vide Ministry's letter no. RW/NH-37010/4/2010/PIC dated 06.09.2013 Advertisement for invitation of tenders shall be done as per Ministry's letter no. RW/NH-34066/14/2018-S&R(R&B) dated 25.06.2018.

5.4 It shall also be ensured that guidelines vide Ministry's letter No.24035/4/2008-P&M/PIC Vol II dated 17.09.2018 "Guidelines regarding procedures to be adopted for Roads & Bridges works on National Highways and Centrally Financed schemes (for NH works being funded by the Ministry of Road Transport & Highways and the BRO as implementing agency)" are strictly adhered.

5.5 The work is to be awarded within six months from the date of issue of sanction. In this connection, the Ministry's Circular No. RW/NH Page 6 of 11 24035/4/2008-P&M/PIC Vol.II dated 17.09.2018 is to be referred. 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 sanction validity is obtained.

5.6 In accordance with the Ministry's Circular No.RW/NH-24035/4/2008-P&M/PIC Vol.II dated 17.09.2018 if the cost of tender exceeds 5% of sanctioned estimated cost, the revised estimate be got sanctioned from the Ministry and all the works above Rs.5.00 crore are mandatory to be taken up on EPC mode and works less than Rs.5.00 crore may be on SBD/EPC mode. Further, the instructions contained in the Ministry's circular letter No RW/NH-33044/12/2019-S&R (P&B) dated 24.03.2019 would be ensured while accepting tenders.

5.7 The contractor should possess all required machinery such as Batch mix plant, paver finisher, road roller, wheel barrows, bitumen boiler, sprayer etc. and should be able to procure all required materials including bitumen to execute the work as per Ministry specifications.

5.8 The BRO will intimate this Ministry and Ministry's Regional Officer about award of contract/commencement of work immediately as per instructions contained in this Ministry letter No RW/NH-11060/1/98-(DO-I) dated 05.11.1998.

5.9 All relevant Circulars and amendments regarding tender procedures issued from time to time by Ministry shall be followed. Pre, During and Post Tendering process shall be in adherence with the guidelines circulated by Central Vigilance commission such as Circular No. 4/3/07 dated 03.03.2007 for "negotiations with L1 Bidders", Circular no. 01/01/11 dated 11.02.2011 regarding "Transparency in Tendering System", Circular no. 01/04/14 dated 29.04.2014 regarding "Shortcomings in Bid Documents", Circular No. 04/03/2016 dated 04/03/2016 regarding "acceptance of Bank Guarantee (BG)", Circular no. 02/01/2017 dated 13.01.2017 regarding "Revised SOP for Integrity Pact".

6. General:

- 6.1 The provisions made in the estimate are accepted for estimate purpose only. Any savings (in the provisions in the estimate) during execution of the work shall be credited to the estimate.
- 6.2 The work is to be carried out in accordance with Ministry's Specifications for Road & Bridge Works (5th Revision), 2013 and the "Manual for quality control in Road & Bridge Works- IRC SP 112-2017", observing strict quality control instructions contained in the Ministry's letter RW/NH 34066/01/2020-QCZ dated 1.10.2020. BRO/RO Chandigarh may get necessary testing done for quality control of the work.
- 6.3 Video and Still Photography of the stretch to be improved/ renewed before and after execution of the work should be invariably done and records sent to the Ministry through this office for appreciation of work done.
- 6.4 Condition of the road should be recorded by Network Survey vehicle in accordance with Ministry's Circular No. RW/NH-33044/32/2019-S&R (P&B) dated 25.02.2020 shall be followed and same shall be updated on PMIS portal as per Ministry's Circular no. RW/NH-22044/32/2019-S&R (P&B) dated 28.02.2020.
- 6.5 Collection of material on the roadside, if any, should be commensurate with the physical progress of work, so as to avoid any hindrance to traffic. It must be ensured that contractor arranges for separate land for storage of road construction material and machinery and these shall not be allowed to be stacked on the roadside.
- 6.6 In conformity to this Ministry's circular No. RW/NH/Coord/32/84 dated 19.5.84, no work beyond the scope of the sanctioned estimate leading either to increase in the scope of the work or change in specifications should be undertaken without obtaining prior written approval of the Ministry.
- 6.7 Wherever applicable, the stipulations of IRC -37 2018 shall be followed for design of the flexible pavement.
- 6.8 The work shall be executed as per Ministry's "Specifications for Road and Bridge Works" and instructions issued by this Ministry from time to time.
- 6.9 During execution of the work, traffic management shall be done in accordance with the guidelines contained in IRC: SP: 55-2014 "Guidelines on Traffic Management in Work Zones".
- 6.10 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.
- 6.11 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.
- 6.12 Guidelines for Road Safety issued vide Ministry's letter No. RW/NH 29011/01/2015-P&M(RSCE) dated 20.09.2019 shall be strictly followed.
- 6.13 The provision of Project contingencies and agency charges should be utilized as per Ministry's circular letter no. RW/NH-24035/4/2008-P&M/PIC Vol-II dated 23.02.2018 and NH-15017/17/2016-P&M, dated 29.01.2019.
- 6.14 Provisions for road markings have been allowed as proposed. The road markings may be provided as per IRC: 35, 2015. Further, Ministry's guideline issued vide letter no. RW/NH-33044/105/2018-S&R(P&B), dated 07.01.2019 may

be followed. The work of road marking with stipulated paint (Thermoplastic) shall be done as per Cl. 803 of Ministry's latest specifications.

6.15 Engagement of Authority Engineer for the work shall be done as per guidelines/standard documents issued vide Ministry's letter No. RW/NH- 34048/7/2013-S&R (B) dated 29th October, 2018 & 15th March, 2019 and letter no. RW/NH-33044/88/2021-S&R-(P&B), dated 09.09.2021.

xvi. Submissions of monthly progress report as desired vide Ministry's letters No. RW/ NH- 33044/10/2002-S&R (R) dated 26.05.03 shall be ensured.

6.16 It may be ensured that the site is free from any encumbrances before taking up the work.

7. Splitting of work: Neither the work nor any item of work shall be split into small parts for awarding the work to a number of contractors.

8. Award for the work: The work shall be awarded within 6 months of Administrative sanction. The works shall be awarded as per Ministry's norms for EPC projects and tenders evaluated as per Ministry's circular no. RW/NH/37010/4/2010 EAP printing vol(IV) dated 28.12.2018 & as per Ministry's extant guidelines.

9. Completion period: The Scheduled completion date shall occur on the 24 months from the appointed date.

10. Cost estimate: The details of the modified cost estimate are as follows:

Sl. No.	Particulars	Drass Realignment	Kharboo Realignment	Kargil Realignment	proposed cost for all realignment by BRO	Modified cost for all realignments by MoRTH
1	Bill No. 1: Site Clearance	0.09	0.07	0.11	0.28	0.28
2	Bill No. 2: Earth Work	30.54	9.82	29.00	69.36	69.36
3	Bill No.3 : Sub Base and Base Courses	6.22	4.25	7.55	18.02	18.02
4	Bill No. 4: Pavement Courses	11.78	8.10	14.33	34.21	34.21
5	Bill No. 5 : Culverts	9.99	5.66	10.33	25.98	25.98
6	Billno.6: Major & Minor Bridges	14.77	20.51	16.48	51.76	51.76
7	Bill No. 7: Traffic signs, Road markings and other road appurtenances	1.75	1.20	1.92	4.87	4.87
8	Bill No.8: Environmental Plan	2.93	2.93	2.93	8.79	8.79
9	Bill No.9: Protection Works	16.06	9.88	35.09	61.03	61.03
	A) Total of Civil Cost	94.13	62.43	117.74	274.31	274.31
	Centages as Per Ministry's policy					
	i) GST 12%	11.30	7.49	7.55	32.92	32.92

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ii) Contingencies @ 1 % of (A)	2.64	1.75	14.33	7.68	2.74
iii) Supervision Consultancy Charges @ 3% of (A)	2.82	1.87	10.33	8.23	8.23
iv) Agency Charges @3% of (A)	2.82	1.87	16.48	8.23	8.23
v) Escalation Charges @5% per year of (A)	0.00		0.00	0.00	13.72
vi) Maintenance for 5 years @ 2.5% of (A)	0.00	0.00	0.00	0.00	6.86
B) Total of centages	19.58	12.99	24.49	57.06	72.69
Total of A+B	113.71	75.42	142.23	331.36	347.00
LA and Utility Shifting					
i) Electrical works (Actual estimate)	0.24	0.02	0.01	0.27	0.27
ii) Water supply works (Actual estimate)	-	-	0.88	0.88	0.88
iii) Land acquisition	28.00	5.00	45.00	78.00	78.00
C) Total of LA & utilities shifting	28.24	5.02	45.89	79.14	79.14
Total Project Cost (A+B+C)	141.94	80.44	188.12	410.50	426.14

11. Phasing of expenditure: Following phasing of Expenditure shall be aimed at depending upon the availability of funds:-

Financial Year	Cumulative Physical progress in %	Cumulative Financial Progress (Rs. in Crore)			
		Pre-Construction Activities	Construction Cost i/c centages	Maintenance	Total Cost
2021-2022	40%	79.14	136.00	-	215.14
2022-2023	100%	-	419.28	-	419.28
2023-2024	100%	-	419.28	-	419.28
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2025-2026	100%	-	419.28	2.74	422.02
2026-2027	100%	-	419.28	4.11	423.39
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 (Rakesh Meena)
 Executive Engineer (Zone-II),
 for DG (Road Development) & Special Secretary

**UNDERTAKING FOR PAYMENT OF COST OF COMPENSATORY
AFFORESTATION**

I, SE (Civ) Ajay Kumar Singh, Project Director, HQ 762 BRTF Vijayak, Kargil, do hereby undertake on behalf of BRO to pay the entire amount of Compensatory Afforestation in lieu of the 0.3625 Ha of forest land for diversion of forest land for **"Construction of realignment between Pandrass-Pashkyum (Net length – 27.10 Km) on road Zozila-Kargil-Leh (Nh-I) to 2 lane specifications i.e. Drass realignment (9.30 Km), Kharboo realignment (6.30 Km) and Kargil realignment (11.50 Km) under project Vijayak (BRO) in the U.T of Ladakh on EPC mode"** as per prevailing wage rate at the time of plantation.

Date



01 Feb 2024

Place

(Ajay Kumar Singh)
SE (Civ)
Project Director

UNDERTAKING FOR PAYMENT OF NET PRESENT VALUE (NPV) OF FOREST AREA

It is certified that I, **SE (Civ) Ajay Kumar Singh**, Project Director, HQ 762 BRTF Vijayak, **Kargil**, do hereby undertake on behalf of BRO that we have applied for diversion of **0.3625 Ha** of forest land for **"Construction of realignment between Pandrass-Pashkyum (Net length – 27.10 Km) on road Zozila-Kargil-Leh (Nh-I) to 2 lane specifications i.e. Drass realignment (9.30 Km), Kharboo realignment (6.30 Km) and Kargil realignment (11.50 Km) under project Vijayak (BRO) in the U.T of Ladakh on EPC mode"** as per prevailing wage rate at the time of plantation.

// We here by undertake to pay the amount of Net Present Value (NPV) of the above forest land and other cost if any, as decided by the state Government. In case of revision of rates, the difference amount will also be paid by the user agency.




(Ajay Kumar Singh)
SE (Civ)
Project Director