

National Highways & Infrastructure Development Corporation Limited

Construction, Operation and Maintenance of 2-Lane Bi-Directional Zojila Tunnel with Parallel Escape (Egress) Tunnel excluding approaches on Srinagar-Leh section connecting NH-1 at Km 95.00 and at Km 118.00 in the State of Jammu & Kashmir on EPC mode.

Amendment No.-4

Sl No.	Clause	Existing Provision	Modified Provision (To be read as)
1.	Notice Inviting Bid, RFP	-----	Insert new para as under: As part of the Standard Operating Procedure for adoption of Integrity Pact, Dr. Satyanarayana Dash, IAS (Retd.) has been appointed as Independent External Monitor (IEM) in NHIDCL, as per approval of the Central Vigilance Commission and Ministry of Road Transport & Highways, Govt. of India. The contact details of Dr. Satyanarayana Dash, IEM, NHIDCL are as under: HIG-206, Kanan Vihar Phase I, Chandrasekharpur, Bhubaneswar Odisha-751024 Email-id: satya8may@yahoo.co.in Tel: 9776751669
2.	Article 28 Definition of 'Project Highway' [Page 130 of EPC Agreement (R-1)]	"Project Highway" means the site (New alignment) comprising the proposed construction of 2-lane bi-directional mined tunnel (14.083 Km) with egress tunnel (14.200 Km), Cut and Cover tunnel on both Eastern and Western portal of lengths 37 m and 30 m respectively <i>and its approaches on this alignment (Total length of Project Highway including approaches =20.090 Km approx.) connecting NH-1 at Km 95.00 and at Km 118.00</i> and all Project Assets, and its subsequent development and	"Project Highway" means the site (New alignment) comprising the proposed construction of 2-lane bi-directional mined tunnel (14.083 Km) with egress tunnel (14.200 Km), Cut and Cover tunnel on both Eastern and Western portal of lengths 37 m and 30 m respectively <i>along with approaches of length 0.0825 Km on West portal and 0.0775 Km on East Portal side</i> , and all Project Assets, and its subsequent development and augmentation in accordance with this Agreement.

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		augmentation in accordance with this Agreement.	
3.	Schedule-B [Page 166 of EPC Agreement- (R-1)]	5.9 <i>Missing clause.</i>	5.9 Deleted.
		5.11 Snow galleries Snow galleries are <i>required on the western approach road as per detailed requirements as per the report by SASE.</i>	5.11 Snow galleries Snow galleries are <i>to be provided, if so required depending upon actual site conditions as per Contractor's detailed design in consultation with SASE and the Authority Engineer.</i>
		5.12 Avalanche Protection Measures Avalanche protection measures <i>will be required in the Project area as per detailed requirements spelt out by SASE.</i> The Contractor shall provide the protection measures wherever required in the Project. 5.12.1 Details of Various structures/ techniques recommended by SASE are as under:- (i) At Km. 2.850 on approach road to Western Portal, there is 700 mt. long avalanche path which is a deep nallah in upper portion and fans out near the existing highway. 150 mt. long snow gallery is proposed at this location with suitable wing walls at both ends of the gallery to guide the avalanche flow over its length only. Structural design considerations, material specifications and other details have been given in the study report. (ii) At avalanche site SL 40, where the affected length of road is 600m each (existing and new) SASE recommends "OMBRELLO" (Umbrella) type snow retaining structures. (iii) At avalanche sites SL 41 and 42, the existing road is in the track zone of the two avalanches. SASE recommends provision of retarding mounds of suitable geometry in this location. (iv) Avalanche site SL 43 is a major and frequent	5.12 Avalanche Protection Measures Avalanche protection measures <i>required in the Project area depending upon actual site conditions as per Contractor's detailed design are to be provided in consultation with SASE and the Authority Engineer.</i> The Contractor shall provide the protection measures wherever required in the Project. 5.12.1 Deleted.

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		<p>(iv) Avalanche site SL 43 is a major and frequent avalanche site and has a tendency to fan out in the run out zone. SASE recommends a combination of mounds and catch dam for this site. A catch dam of 350m length and three rows of mounds will be required to prevent avalanche debris from reaching the approach road. 21 mounds will be required. The height of mounds will be 7 m and height of catch dam will be 8 m on upstream side.</p> <p>(v) Avalanche site SL 44 is the biggest avalanche site on this stretch and has as huge catchment area and large run out zone. The affected road length is 700m. SASE recommends combination of mounds and catch dam exactly similar to that at SL 43.</p> <p>The detailed report of SASE is as per Appendix-C.</p>									
		<p>5.12 Utilities Provision of accommodating utilities shall be made both over as well as underground wherever required,</p> <p>5.13 Rainwater Harvesting</p> <p>As per Ministry of Environment and Forests Notification, New Delhi dated 14. 01.1997(as amended on 13.01.1998, 05.01.1999 & 6.11.2000), the construction of Rain water harvesting structure is mandatory in and around water crisis area, notified by the Central Ground water Board. State Govt rules shall be complied with.</p>					<p>5.14 Utilities Provision of accommodating utilities shall be made both over as well as underground wherever required,</p> <p>5.15 Rainwater Harvesting</p> <p>As per Ministry of Environment and Forests Notification, New Delhi dated 14. 01.1997(as amended on 13.01.1998, 05.01.1999 & 6.11.2000), the construction of Rain water harvesting structure is mandatory in and around water crisis area, notified by the Central Ground water Board. State Govt rules shall be complied with.</p>				
4.	Schedule-H Table under clause 1.2 Sl. No. 5 [Page 696 of EPC Agreement (R-1)]	5	Site Facility and Time Dependent Costs	24.603%	S&T:A- Site Facility*	75.44%	5	Site Facility, <i>Avalanche Protection Measures for west and east portals</i> and Time Dependent Costs	24.603%	S&T:A- Site Facility*	75.44%
					Avalanche Protection Measures for west and east portals	4.39%				Avalanche Protection Measures for west and east portals	4.39%
					S&T:B- Time Dependent Costs**	20.17%				S&T:B- Time Dependent Costs**	20.17%

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5.	Schedule-H Table under clause 1.2 [Page 677 of EPC Agreement- (R-1)]	A-1: Investigation & Detailed Design (Project Layout, Mined Tunnel, Egress Tunnel, West and East Portals, Ventilation, Ventilation Shafts 1&2, Ventilation Shaft 3, Ventilation Cavern, Service Buildings, E&M Works, Drainage works, <i>Approach roads to both West and East Portal</i> including design of structures and approach road alignment and design etc.)			1.84%		1.84%	A-1: Investigation & Detailed Design (Project Layout, Mined Tunnel, Egress Tunnel, West and East Portals, Ventilation, Ventilation Shafts 1&2, Ventilation Shaft 3, Ventilation Cavern, Service Buildings, E&M Works, Drainage works, including design of structures and approach road alignment and design etc.)	1.84%		1.84%
6.	Schedule-H Clause 1.1 and 1.1.1 [Page 690 of EPC Agreement- (R-1)]	1.1 Procedure of estimating the value of work done. 1.1.1 Road works including approaches to minor bridges, Major Bridges and Structures (excluding service roads).						1.3 Procedure of estimating the value of work done. 1.1.1 Deleted.			
7.	Schedule-H Table 1.3.1 [Page 700 of EPC Agreement (R-1)]	F- Site Facility and Time Dependent Costs	24.603%	(a) Site Facility cost @ 30% of the Cost shall be paid on the commencement of mined tunnel excavation and completion of excavation upto 25 m along the length of the tunnels, provided the Contractor has completed the components of works to the extent mentioned in the Milestone-I of Schedule-J of this Agreement. The remaining cost shall be payable quarterly in equal instalments each year for the remaining 6 years. (b) The payment for Time Dependent Cost (20.17%) from				F- Site Facility, <i>Avalanche Protection Measures for west and east portals and Time Dependent Costs</i>	24.603%	(a) Site Facility cost @ 30% of the Cost shall be paid on the commencement of mined tunnel excavation and completion of excavation upto 25 m along the length of the tunnels, provided the Contractor has completed the components of works to the extent mentioned in the Milestone-I of Schedule-J of this Agreement. The remaining cost shall be payable quarterly in equal instalments each year for the remaining 6 years. (b) <i>The payment of Avalanche</i>	

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				<p>commencement of construction to the end of construction shall be paid as under:</p> <p>(i) Commencement of construction to commencement of mined tunnel excavation and completion of excavation upto 25m along the length of the tunnels shall be paid at the end of first year.</p> <p>(ii) Commencement of tunnel excavation to end of concrete works shall be paid per month.</p> <p>(iii) From the end if concrete works to the end of construction work shall be paid per month.</p>			<p><i>Protection works shall be made as per the cost of actual work carried out at site as per requirement and certified by the Authority Engineer. The payment shall however be restricted to the maximum limit specified under the Avalanche protection Measures at Sl. No. 5 in the table under clause 1.2 of Schedule-H.</i></p> <p>(c)The payment for Time Dependent Cost (20.17%) from commencement of construction to the end of construction shall be paid as under:</p> <p>(i) Commencement of construction to commencement of mined tunnel excavation and completion of excavation upto 25m along the length of the tunnels shall be paid at the end of first year (7.14%).</p> <p>(ii) Commencement of tunnel excavation to end of concrete works shall be paid per month (75.00%).</p> <p>(iii) From the end if concrete works to the end of construction work shall be paid per month (17.86%).</p>
8.	Schedule-H Table 1.3.1 [Page 694 of	@	For example, if the total length of excavation work (e.g. Mined Tunnel) to be done is 14083 m, the cost per km of excavation work shall be determined as follows:	@	For example, if the total length of excavation work (e.g. Mined Tunnel) to be done is 14083 m, the cost per m of excavation work shall be determined as follows:		

(Signature)

	EPC Agreement-(R-1)]	Cost per km = $P \times \text{weightage for Main Tunnel} \times \text{weightage for Underground excavation} \times (1/L)$ Where P = Contract Price. L = Total length in meters.	Cost per m = $P \times \text{weightage for Main Tunnel} \times \text{weightage for Underground excavation} \times (1/L)$ Where P = Contract Price. L = Total length in meters.
9.	Clause 2.2.24 (iii) of RFP [Page 18 of RFP-(R-1)]	For requirement of 2.2.2.2 (iii) (a), the work should have been completed by any of the JV partner in the capacity of sole member or a member having majority share in the consortium/JV for that project.	For requirement of 2.2.2.2 (iii) (a), the work should have been completed by any of the JV partner in the capacity of sole member or a member having majority share or atleast 40% share in the consortium/JV for that project.
10.	Appendix VII Integrity Pact Format Article 8 Clause 1 [Page 84 of RFP-(R-1)]	Article- 8: Independent External Monitor (IEM) (1) The Principal has appointed Shri. R.S. Gujral as Independent External Monitor (herein after referred to as —Monitor) for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.	Article- 8: Independent External Monitor (IEM) (1) The Principal has appointed Dr. Satyanarayana Dash, IAS (Retd.) as Independent External Monitor (herein after referred to as “Monitor”) for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.

Satyanarayana Dash
30.03.2017