# NATIONAL HIGHWAY AND INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED



Ministry of Road Transport & Highways, (Govt. of India)

#### **National Competitive Bid**

(Through CPP Portal, E-Tendering Mode) **For** 

"Renovation, Repair, Re-surfacing & Construction of of 32 Nos. of urban link roads at Ward no 1,2,3 &13 of LEH (PKG-3), in UT of Ladakh (2<sup>nd</sup> Call)"

Through Percentage Contract

O/o Executive Director (Projects)

National Highways & Infrastructure Development Corporation Ltd Regional Office, Ladakh Yartsa House, Near Changspa Farm, Leh -194101, Ladakh

Corporate Head Quarters

National Highways & Infrastructure Development Corporation Ltd

3rd floor, PTI Building, 4-Parliament Street, New Delhi – 110001

CIN No: U45400DL2014GOI269062

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## **Notice Inviting Tender (NIT)**

Tender No: NHIDCL/Infra/Ladakh/2022

Dated: 26.05.2022

RFP No.: 27/RO-Ladakh/2022

The Ministry of Road Transport & Highways through National Highways & Infrastructure Development Corporation Limited (NHIDCL) is engaged in the development of National Highways and Infrastructure works. NHIDCL RO-Ladakh for and on behalf of Director Urban Local Bodies Department, Union Territory of Ladakh invites "Online Tenders" on "Percentage Mode" from experienced and competent bidders, meeting prescribed eligibity criteria as mentioned in tender document.

Details of the work;

Name of the work	Estimated Cost	Completion Period	Defect Liability Period
"Renovation, Repair, Re-surfacing & Construction of of 32 Nos. of urban link roads at Ward no 1,2,3 &13 of LEH (PKG-3), in UT of Ladakh (2 <sup>nd</sup> Call)"	14,67,92,310/-	08 months	One Year

The complete BID document can be viewed from official portal of the CPPP website <a href="https://eprocure.gov.in/eprocure">https://eprocure.gov.in/eprocure</a> and website <a href="https://ewww.nhidcl.com/tenders">www.nhidcl.com/tenders</a>. The intending Bidder can download the tender, and must submit the technical bid and financial Bid at <a href="https://eprocure.gov.in/eprocure">https://eprocure.gov.in/eprocure</a> only. The Updates/Corrigendum/Addendum shall be followed up to submission of tender and it will be the part of tender. The notifications on updates/Corrigendum/Addendum will only be notified in <a href="https://eprocure.gov.in/eprocure">https://eprocure.gov.in/eprocure</a>.

The following Date schedule is to be followed for this project:

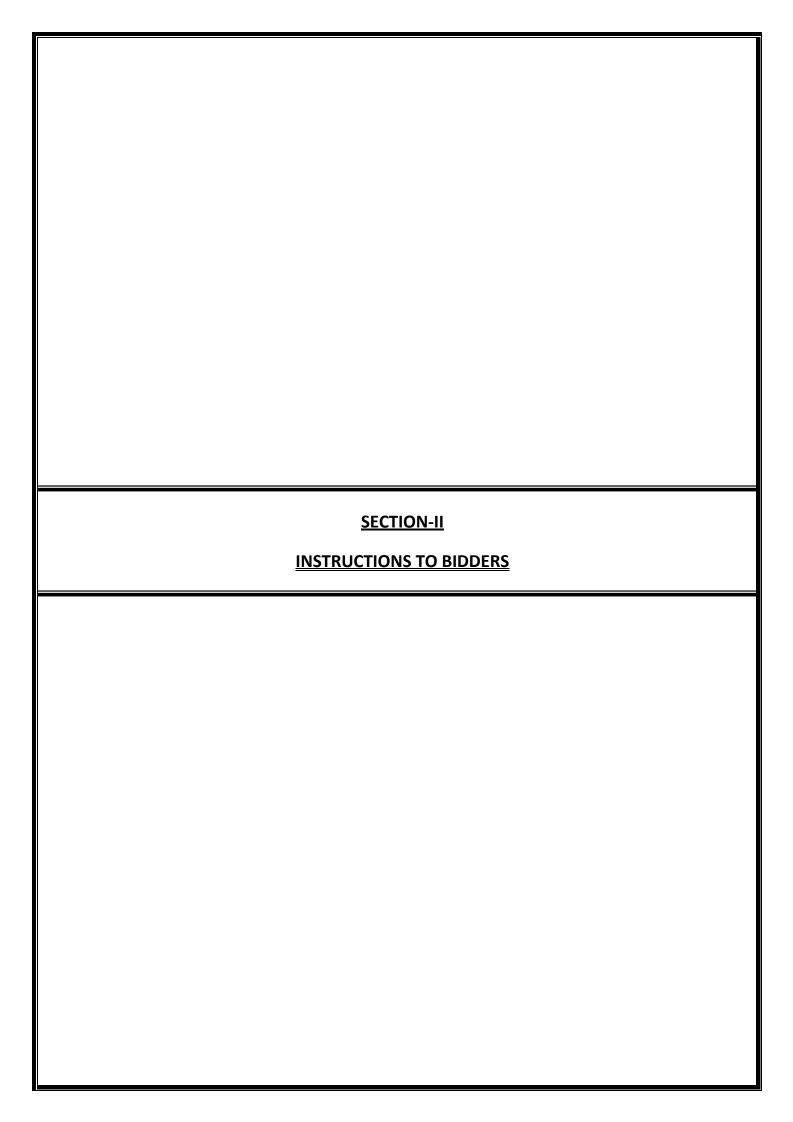
	Particulars	Date
Sr. No.	Bid Document Download/ Start Date	26.05.2022
1	Clarification /Pre bid queries Start Date	26.05.2022
2	Clarification / Pre bid queries End Date	28.05.2022 (1100 Hrs.)
3		28.05.2022 (1500 Hrs.)
4	Pre bid meeting	28.05.2022
5	Bid submission Start date	03.06.2022 (1100 Hrs.)
6	Bid submission End date	04.06.2022 (1100 Hrs.)
7	Opening date of Technical Bids	

The complete BID document can be viewed / downloaded from official portal of the CPPP website https://eprocure.gov.in/eprocure/app from 26/05/2022 to 03/06/2022 (upto 1100 hrs IST). Bidder must submit its Technical bid and Financial Bid at https://eprocure.gov.in/eprocure/app on or before 03/06/2022 (up to 1100 hrs IST)

The Instructions to bidder is attached with this NIT which shall be a part of RFP and the contract agreement. Please note that the NHIDCL reserves the right to accept or reject all or any of the BIDs without assigning any reason whatsoever.

Col. Rajeev Kumar (Retd.) Executive Director (P) NHIDCL RO-Ladakh, Yartsa House near Changspa, Leh, UT of Ladakh – 194101

Phone: 01982-295517 E-mail: nhidcl.leh@gmail.com



## **INSTRUCTIONS TO BIDDERS (ITB)**

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#### **Instructions to Bidders (ITB)**

#### A. General

#### 1. Name and Scope of Work:

The Executing Agency (as defined in the Appendix to ITB) invites bids "Renovation, Repair, Re-surfacing & Construction of 32 Nos. of urban link roads at Ward no 1,2,3 &13 of LEH (PKG-3), in UT of Ladakh (2<sup>nd</sup> Call)"

**1.1.** Throughout these bidding documents, the terms "bid" and "tender" and their derivatives (bidder/tenderer, bid/tender, bidding/tendering, etc.) are synonymous.

#### 2. Source of Funds

2.1. The expenditure on this project will be provided by the Director, Urban Local Bodies Department Government of UT of Ladakh to the National Highways & Infrastructure Development Corporation Limited (NHIDCL).

#### 3. Eligible Bidders

- 3.1. For the registered government contractors: The bid is open to contactors who are registered in the appropriate class with the government departments in CPWD/AIR/Railways/MES/BRO/ and PSU's of state and Central Governments such as BSNL, NHPC, NBCC etc. in the Public works Departments of state governments, Union Territories and its allied departments viz. Roads and Buildings, Irrigation, Public Health etc.
- 3.2. For the non-registered contractors: Bidder may be an individual, private entity, sole or partnership firm, company incorporated and registered in India, having prior experience of executing road works are eligible for bidding for this work.
- 3.3 Bidders shall not be under a declaration of ineligibility for corrupt and fraudulent practices by the Central Government, the State Government or any public undertaking, Autonomous body, authority by whatever name called under the Central or the State Government.
  - The eligible bidders at 3.1 and 3.2 above shall scan and upload the documents stated under Clause 11.2 as per their category to participate in the technical bid.

#### 4. One Bid per Bidder

**4.1.** Each Bidder shall submit only one Bid for the work. A Bidder who submits more than one Bid will cause the proposals with the Bidder's participation to be **disqualified.** 

#### 5. Cost of Bidding

5.1. The Bidder shall bear all costs associated with the preparation and submission of his Bid, and the Executing Agency will, in no case, be responsible or liable for those costs.

#### 6. Site/Drawings details

- 6.1. i) The site for the work is available.
  - ii) The indicative Drawings showing the location of the proposed roads along with approaximate length attached with the bid document.
- 6.2. The Bidder, at his own cost, responsibility and risk, is encouraged to visit, examine and familiarise himself with the Site of Works, road conditions, road geometrics and its surroundings including source of earth, water, materials such as aggregates, bitumen, binder material etc. and obtain all information that may be necessary for preparing the Bid and entering into a contract for construction of the Works. The costs of visiting the Site shall be at the Bidder's own expense. He may contact the person whose contact details are given in the Appendix to ITB.

#### **B.** Bidding Documents

#### 7. Content of Bidding Documents

7.1. The bidder is expected to examine the Schedule of Quantites enclosed with bid document, indicative tender drawings, Technical and Particular specifications, contract conditions and special conditions of contract and access the site locations and include all transportation and miscellaneous cost while quoting the bid. The bill of quantities enclosed is financial bid in which the bidder is to quote a fixed percentage against the estimated cost given in the BOQ excluding GST which will be the contract price for this bid.

7.2. The bidder is expected to examine carefully all instructions, conditions of contract, contract data, forms, terms, and specifications, Schedule of Qunatities, bill of quantities, forms and drawings in the Bid Document. Failure to comply with the requirements of Bid Documents shall be at the bidder's own risk. Pursuant to clause 22 hereof, bids, which are not substantially responsive to the requirements of the Bid Documents, shall be rejected.

#### 8. Clarification of Bidding Documents

8.1. A prospective Bidder requiring any clarification on the bid document may notify the Executing Agency in writing or by e-mail (scanned copy) at the Executing Agency's address indicated in the Notice Inviting Tender. The Executing Agency will respond to any request for clarification received earlier than 7 days prior to the deadline for submission of bids through mail incase of valid queries however the bidders are instructed to forward their queries before the prebid meeting preferably. Copies of the Executing Agency's response will be hosted on website or which are required in the opinion of the Executing Agency including a description of the enquiry, but without identifying its source for the queries received prior to pre bid meeting.

#### 9. Amendment of Bidding Documents

- 9.1. Before the deadline for submission of bids, the Executing Agency may modify the bidding documents by issuing addenda.
- 9.2. Any addendum thus issued shall be part of the bidding documents and shall be hosted on the NHIDCL website/e-procurement portal only.
- 9.3. To give prospective bidders reasonable time in which to take an addendum into account in preparing their bids, the Executing Agency shall extend, as necessary, the deadline for submission of bids, in accordance with Clause 17.

#### C. Preparation of Bids

#### 10. Language of Bid

10.1. All documents relating to the Bid shall be in English and all correspondence would be in the same language.

#### 11. Documents Comprising the Bid

11.1. The e-bid submitted by the bidder shall be in two separate parts.

Part-I: Technical Bid Part-II: Financial Bid.

11.2. **A) Technical Bid:** The intending bidders must read the terms & conditions of tender documents carefully. The Technical Bid shall be uploaded with scanned copies of following documents. All the documents must be Serial wise as stated below along with check list.

#### For the registered government contractors:

Sr. No.	Particular of Document	Yes	No
1.	1. Letter of Application on bidder's original letter Head to submit Technical Bid as per		
	Annexure-A		
2.	Receipt of Bid Document Cost		
3.	Qualification Information (SECTION- III)		
4.	The enlistment certificate in the appropriate class in which the bidder is registered with		
	the concerned department. The enlistment of the contractor should be valid on the last		
	date of submission of Bid		
	(Note: In case the last date of submission of bid is extended the enlistment of contractor		
	should be valid on the original date of submission of bid.)		
5.	Proof of Payment of Bid Security		
6.	<b>Experience certificate</b> in works of a similar nature and size for each of the last Seven years		
	(ending previous day of last day of submission of bids) with certificates from the concerned		
	officer of the minimum rank of Executive Engineer-in-Charge or equivalent;		
	One similar completed work* costing not less than amount equals to 80% of estimated		
	cost put to tender. or		
	Two similar completed works* costing not less than amount equals to 60% of estimated		
	cost put to tender. or		

	Three similar completed works* costing not less than amount equals to 40% of estimated cost put to tender.	
	(*The "similar work" means Construction/Upgradation/restoration of road works (flexible or rigid pavements)and its allied works)	
	Note: The value of executed work shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum, calculated from the date of completion to the last date of submission of bids.	
7.	Bidder shall submit Information regarding litigation or arbitration history during the last five years as per format given in Qualification Information point 4.	
8.	Bidder shall submit affidavit on the Stamp Paper, duly attested from the Notary Public that the information furnished with the bid documents is correct in all respects as per format given in Annexure-C.	
9.	Bidder shall submit Undertakings as per Annexure –D.	

For the non-registered contractors with government Department:

For t	he non-registered contractors with government Department:		
Sr. No.	Particular of Document	Yes	No
1.	Letter of Application on bidder's original letter Head to submit Technical Bid as per		
	Annexure-A		
2.	Receipt of Bid Document Cost		
3.	Qualification Information (SECTION-III)		
4.	Power of Attorney as per Annexure-E		
5.	Proof of Payment of Bid Security		
6.	Scanned copy of Original document of Registration Certificate (defining the constitution or		
	legal status, ownership details, place of registration, and principal place of business)		
7.	Experience certificate in works of a similar nature and size for each of the last Seven years (ending previous day of last day of submission of bids) with certificates from the concerned officer of the minimum rank of Executive Engineer-in-Charge or equivalent; One similar completed work* costing not less than amount equals to 80% of estimated cost put to tender.  Two similar completed works* costing not less than amount equals to 60% of estimated cost put to tender.  Three similar completed works* costing not less than amount equals to 40% of estimated cost put to tender.  (*The "similar work" means Construction/Upgradation/restoration of road works (flexible or rigid pavements)and its allied works)  Note: The value of executed workshall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum, calculated from the date of completion to the last date of submission of bids.		
8.	Bidder shall submit Information regarding litigation or arbitration history during the last five years as per format given in Qualification Information point 4.		
9.	Bidder shall submit affidavit on the Stamp Paper, duly attested from the Notary Public that the information furnished with the bid documents is correct in all respects as per format given in Annexure-C.		
10.	Bidder shall submit Undertakings as per Annexure –D.		
11.	Scanned copy of GST and PAN Registration		

#### Financial Bid (Applicable to both registered and non-registered government contractors)

To be submitted online on GoI e-tendering portal (https://eprocure.gov.in/cppp) on or before Schedule time given in NIT/Appendix to ITB.

11.3. The following documents forms the entire bid and the contract document. The bidders are informed that the following documents which are uploaded with the RFP are uploaded for information and for the purpose of

understanding of the nature and scope of work for the bidders. The documents will form part of the bid and subsequently part of the contract agreement with the successful bidder.

Sections	Particular
Section VIII	Conditions of Contract and Contract Data Including Annexures
Section IX	Scope of Work & Technical Specifications
Section X	Particular Specifications
Section XI	List of Approved Makes of Materials

#### 12. Bid Prices

- 12.1. The Contract shall be in the mode of Percentage rate tender viz. the bidder is to quote a fixed percentage below/above/ at par (in figures as well as in words) against the total estimated cost given in the BOQ (excluding GST) which will be the contract price for this tender this amount is for the full scope of work stated in the Schedule of Quantities and as per the indicative drawings, specifications.
- 12.2. The bidder shall quote bid prices on appropriate format enclosed as part of tender document on <a href="https://eprocure.gov.in/eprocure/app">https://eprocure.gov.in/eprocure/app</a>.
- 12.3. The bidder is required to quote the amount excluding GST. GST at the existing rate & applicable laws will be paid to the contractor along with the each bill; however, the contractor has to submit the proof of GST payment to government before next bill. In case, of non-submission of GST proof, the same will be recovered in the next bill.
- 12.4. Based on the percentage quoted, the contract prices shall be fixed for the duration of the Contract and shall not be subject to adjustment, except otherwise specified in relevant clauses of contract if any in the contract clauses.
- 12.5. The tender submitted shall betreated as invalid if:
  - 1) The contractor does not quote percentage above/ below/ atpar on the total amount of estimated cost
  - 2) The percentage above / below /atpar is not quoted in figures and words
  - 3) The percentage above / below /atpar is different in figures and words against the estimated cost.
  - 4) Bids which proposed any alteration in the works specified / time allowed / which contents any other conditions of any sort including conditional rebates.
- 12.6. Incase the lowest tender amount (estimated cost plus or minus the percentage quoted by the bidder) of 2 or more contractors is same such lowest contractors will be asked to submit sealed revised offer in the form of letter mentioned in percentage above/ below / atpar against the estimated cost of tender, subjected to that the revised offered percentage quoted above / below/ atpar against the estimated cost should not be higher than the percentage quoted at the time of submission of initial bid. The successful bidder shall be the lowest bid received on the basis of revised offer. Incase if any of such bidder refuses to submit the revised offer within the prescribed time than it shall be treated as withdrawl of his tender and such bidder will not have any claim on his and deemed to have accepted that his bid is rejected.

#### 13. <u>Currencies of Bid and Payment</u>

13.1. The price shall be quoted by the bidder entirely in Indian Rupees. All payments shall be made in Indian Rupees.

#### 14. Bid Validity and Bid Document Cost

- 14.1. Bids shall remain valid for a period of **120 days** after the final deadline date for bid submission specified in Clause 17.
- 14.2. In exceptional circumstances, prior to expiry of the original time limit, the Executing Agency may request that the bidders may extend the period of validity for a specified additional period. The request and the bidders' responses shall be made in writing or by e-mail. A bidder may refuse the request without forfeiting his bid security. A bidder agreeing to the request will not be required or permitted to modify his bid, but will be required to extend the validity of his bid security for a period of the extension, and in compliance with Clause 15 in all respects.
- 14.3. The Bidder is required to pay a non-refundable fee as of Rs. 590/- towards cost of Bid Document through RTGS/ NEFT/ other online mode to the NHIDCL's designated bank account. Details of designated bank account are as under:

Sr.No.	Particulars	Details
1.	Name of Beneficiary	NHIDCL ESTABLISHMENT ACCOUNT
2.	Beneficiary Bank Account No.	76513070002321
3.	Beneficiary Bank Branch Name and	Canara Bank (erstwhile Syndicate Bank) Leh Branch, Tsaskan Complex near

	Address	LIC Office, Distt. Public library Road, Leh-194101
4.	Beneficiary Bank Branch IFSC	CNRB0017651

The Bidder must upload Copy of the online payment receipt (UTR/ Reference No. / Transaction ID) towards payment of cost of Bid document.

14.4. Any bid not accompanied by Bid document fee/cost, shall be summarily rejected by the Executing Agency as **non-responsive.** 

#### 15. Bid Security Detail

**15.1** The Bidder is mandatorily required to pay an amount of Rs 29,35,800 (2 % of the estimated cost put to tender) towards the bid security through NEFT/RTGS/IMPS/online mode only to the NHIDCL's designated bank account. Details of designated bank account are as under:

S.No.	Particulars	Details
1.	Name of Beneficiary	National Highways & Infrastructure Development Corporation
		Limited NHIDCL UT Ladakh Project Account
2.	Beneficiary Bank Account No.	362305000136
3.	Beneficiary Bank Branch IFSC	ICIC0003623
4.	Beneficiary Bank Branch	3623 Leh Ladakh Branch
	Name	
5.	Beneficiary Bank Address	ICICI Bank,Leh-194101

Any bid not accompanied by Bid proof of payment of Bid Security amount shall be summarily rejected by the Executing Agency as **non-responsive** 

#### 15.3 The Bid Security will be forfeited:

- a) if the Bidder withdraws the Bid after its submission during the period of Bid validity; or
- b) if the Bidder does not accept the correction of the bid price, pursuant to Clause 23; or
- c) in the case of a successful Bidder, if the Bidder fails within the specified time limit to
  - i. Sign the Agreement; and/or
  - ii. Furnish the required Performance Security; and/or
  - iii. Submit the original documents as specified in Clause 11.2;
  - iv. Corrupt or Fraudulent Practices as specified in Contract Agreement.

#### 16 Alternative Proposals by Bidders

16.1. Bidder shall submit offers that fully comply with the requirement of the bidding document including conditions of contract, conditional offer or alternate offer will not be considered further in the process of tender evaluation and the bid will be declared **non-responsive**.

#### D. Submission of Bids

#### 17 Schedule for Submission of Bids

- 17.1. Complete E-Bid to be uploaded on e-procurement portal before due date & time as mentioned in NIT. The bidders viz. those registered with the government agencies and not registered with the government agencies shall upload the scanned documents as enlisted under para 11.2. The bidders shall upload the technical bid and financial bid before the stipulated date and time as prescribed in NIT.
- 17.2. The Executing Agency may extend the deadline for submission of bids by issuing an amendment in accordance with Clause 9, in which case all rights and obligations of the Executing Agency and the bidders previously subject to the original deadline will then be subject to the new deadline.
- 17.3. The detailed schedule for submission of bid shall be, as given in NIT/Appendix to ITB.

#### 18 Modification and Withdrawal of Bids

- 18.1. Bidders may modify or withdraw their e-bids before the deadline prescribed in NIT/Appendix to ITB.
- 18.2. No bid may be modified after the deadline for submission of Bids.

18.3. Withdrawal of a Bid between the deadline for submission of bids and the expiration of the original period of bid validity specified in Clause 14.1 above or as extended pursuant to Clause 14.2 shall result in the forfeiture of the Bid security pursuant to Clause 15.

#### E. Bid Opening and Evaluation

#### 19 Bid Opening

- **19.1.** Bid opening shall be carried out in two stages. Firstly, 'Technical Bid' of all the bids received shall be opened on the date and time mentioned in the NIT/Appendix to ITB. 'Financial Bid' of those bidders whose technical bid has been determined to be technically responsive shall be opened on the subsequent date through online process of e-tender, which will be notified to such bidders.
- 19.2. The Executing Agency will open the "Technical Bid" of all the bids received within due date and time, in the presence of the bidders/bidders' representatives who choose to attend at the time, date and place specified in the NIT. In the event of the specified date for the submission of bids being declared a holiday for the Executing Agency, the Bids will be opened at the appointed time and location on the next working day.
- 19.3. The Executing Agency at the opening of Technical Bid, will announce the bidders' names and such other details.
- 19.4. The Executing Agency will prepare minutes of the Bid opening, including the information disclosed to those present in accordance with Clause 19.1.
- 19.5. The bids accompanied with bid security declaration will be taken up for evaluation with respect to the Qualification Information and other information furnished in para 11.2
- 19.6. As soon as possible, the Evaluation Committee will finalize the list of technically responsive bidders whose financial bids are eligible for consideration.
- 19.7. The Executing Agency shall inform the bidders, whose technical bids are found technically responsive, of the date, time and place of opening of the financial bids. The technical responsiveness/non-responsiveness of the bidders will be uploaded in the CPP Portal and the financial bids will be opened after 7 days from the uploading of the results of the technical bids. The bidders so informed, or their representative, may attend the meeting of opening of financial bids.
- 19.8. The financial bids of only the technically responsive bidders will be opened. The technically responsive bidders' names, the Bid prices, the total amount of each bid and such other details as the Executing Agency may consider appropriate will be announced by the Executing Agency at the time of bid opening.
- 19.9. The Executing Agency shall prepare the minutes of the opening of the Financial Bids.

#### 20 Process to be Confidential

**20.1.** Information relating to the examination, clarification, evaluation, and comparison of bids and recommendations for the award of a contract shall not be disclosed to bidders or any other persons not officially concerned with such process until the award to the successful Bidder has been announced. Any attempt by a Bidder to influence the Executing Agency's processing of bids or award decisions may result in the rejection of his Bid.

#### 21 Clarification of Bids and Contacting the Executing Agency

- 21.1. To assist in the examination, evaluation, and comparison of Bids, the Executing Agency may, at his discretion, ask any Bidder for clarification. The request for clarification shall be given in writing or by email asking the tenderer to respond by a specified date, and also mentioning therein that, if the tenderer does not comply or respond by the date, his tender will be liable to be rejected. Depending on the outcome, such tenders are to be ignored or considered further. No change in prices or substance of the bid including specifications, shall be sought, offered or permitted. No post-bid clarification at the initiative of the bidder shall be entertained. The shortfall information/ documents should be sought only in case of historical documents which pre-existed at the time of the tender opening and which have not undergone change since then. So far as the submission of documents is concerned with regard to qualification criteria, after submission of the tender, only related shortfall documents should be asked for and considered.
- 21.2. Subject to clause 21.1, no Bidder shall contact the Executing Agency on any matter relating to his bid from the time of the bid opening to the time the contract is awarded. If the Bidder wishes to bring additional information to the notice of the Executing Agency, he should do so in writing.

21.3. Any effort by the Bidder to influence the Executing Agency in the Executing Agency's bid evaluation, bid comparison or contract award decisions may result in the rejection of the Bidders' bid.

#### 22 Examination of Bids and Determination of Responsiveness

- 22.1. During the detailed evaluation of "Technical Bids", the Executing Agency will determine whether each Bid
  - (a) meets the eligibility criteria defined in Clause 11.2;
  - (b) the required documents uploaded by the bidder are in order; and
  - (c) is substantially responsive to the requirements of the bidding documents. During the detailed evaluation of the "Financial Bids", the responsiveness of the bids will be further determined with respect to the remaining bid conditions, i.e., priced bill of quantities.

#### 23 Correction of Errors.

- 23.1. Financial Bids determined to be technically responsive will be checked by the Executing Agency for any arithmetic errors.
- 23.2. The amount stated in the Financial Bid will be corrected by the Executing Agency for the correction of errors and shall be considered as binding upon the Bidder. If the Bidder does not accept the corrected amount, the Bid will be rejected, and action will be invoked on the bidder in accordance with Clause 15.1.

#### 24 Evaluation and Comparison of Financial Bids.

- 24.1. The Executing Agency will evaluate and compare only the bids determined to be technically responsive in accordance with Clause 22.
- 24.2. In evaluating the bids, the Executing Agency will determine for each Bid the evaluated Bid price by adjusting the Bid price after making any correction for errors pursuant to Clause 23;
- 24.3. If the Bid of the successful Bidder is unrealeastic or erratic then an irrevocable and unconditional guarantee from a Bank should also be submitted in the same form given in Annexure-H an Additional Performance Security (the "Additional Performance Security") for an amount calculated as under:
  - a) If the Bid Price offered by the Selected Bidder falls between 15% to 20% lower than Estimated Project Cost, then the Additional Performance Security shall be 10% of the Bid Price offered by the selected Bidder.
  - b) If the Bid Price offered by the Selected Bidder falls between 20% to 30% lower than Estimated Project Cost, then the Additional Performance Security shall be 20% of the Bid Price offered by the selected Bidder.
  - c) If the Bid Price offered by the Selected Bidder is lower than 30% of the Estimated Project Cost and which cannot be substantiated satisfactorily by the bidder, will be rejected as non-responsive.
  - d) This Additional Performance Security shall be treated as part of the Performance Security.
- 24.4. A bid, which is quoted unrealistically/freakishly low or high and which cannot be substantiated satisfactorily by the bidder, may be rejected as non-responsive.

#### F. Award of Contract.

#### 25 Award Criteria.

25.1. Subject to Clause 27, the Executing Agency will award the Contract to the Bidder whose Bid has been determined, to be technically responsive in the technical bid and who has offered the lowest financial Bid price in the financial bid.

#### 26 Executing Agency's Right to accept any Bid and to reject any or all Bids

26.1. Notwithstanding Clause 30, the Executing Agency reserves the right to accept or reject any Bid, and to cancel the bidding process and reject all bids, at any time prior to the award of Contract, without thereby incurring any liability to the affected Bidder or bidders or any obligation to inform the affected Bidder or bidders of the grounds for the Executing Agency's action.

#### 27 Notification of Award and Signing of Agreement.

- 27.1. The bidder who's Bid has been accepted will be notified of the award by the Executing Agency. The excuting agency will issue the "Letter of Acceptance". The LOA will state the sum that the Executing Agency will pay to the Contractor in consideration of the execution, completion and maintenance of the works, by the Contractor as prescribed in the contract.
- 27.2. The letter of acceptance and subsequent issuance of letter of commencement will be a part of the contract document.
- 27.3. The successful bidder shall have to sign the contract agreement within 10 days of the issue of LOA by the excuting agency. The executing agency will issue the letter of commencement on the date of the signing of the contract agreement which will be a part of agreement. The date of signing of the contract agreement will be treated as the date of commencement viz. the appointed date.

#### 28 Performance Security.

- 28.1. Within 60 (sixty) days after signing of contract agreement, the successful Bidder shall deliver to the Executing Agency a Performance Security i.e. Five (5%) percent of the Contract Price plus the GST applicable for the work, valid for the period of 60 days beyond the stipulated date of completion. The bid security amount of the successful bidder will be refunded after 30 days from the receipt of the confirmation from the bank and on the request of the successful bidder.
- 28.2. The bidder shall also has to pay the additional performance security if any Bid in accordance with clause 24.3 of ITB along with the performance security for the same period. The extent rules applicable in the executing agency department are binding on the successful bidder.
- 28.3. The performance security shall be either in the form of a Bank Guarantee in the name of the Executing Agency, from a Bank as per the details specified below or can be submitted by online mode directly into the NHIDCL's bank account as per Annexure-H. Bank Guarantee shall be accepted from Public Sector Banks or Scheduled Private Sector Banks having Net Worth of Rs. 1,000/- Crores or more as per latest annual report of the bank. Authority reserves the right to add or remove any of names bank on which BG shall be accepted based on advisory from the Government/RBI. The BGs issued by 'Foreign Banks' and 'Banks not mentioned in the list below' shall not be accepted. The bank garuntee can be initially taken for a period of not less than one year and shall has to be extended from time to time for the total period as mentioned in 28.1 above, incase if the bank norms do not give the Bank Garauntee for the specified period at one stretch.

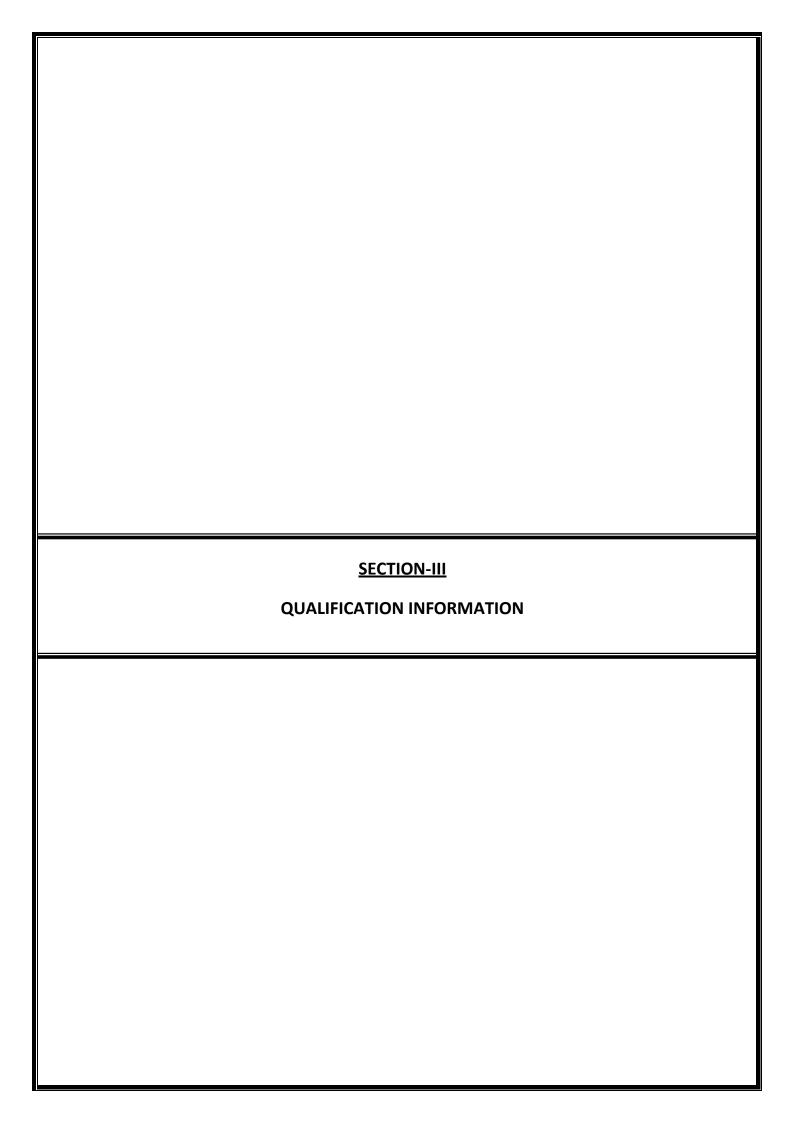
	List of Public Sector Banks	
Bank of Baroda	Indian Bank	State Bank of India
Bank of India	Indian Overseas Bank	Union Bank of India
Bank of Maharashtra	Punjab National Bank	Central Bank of India
Canara Bank	Punjab & Sind Bank	UCO Bank

	List of Scheduled Private Sector Ba	nks
Axis Bank Ltd.	Bandhan Bank Ltd.	CSB Bank Ltd.
City Union Bank Ltd.	DCB Bank Ltd.	Federal Bank Ltd.
HDFC Bank Ltd.	ICICI Bank Ltd.	Indusind Bank Ltd.
IDFC First Bank Ltd.	Jammu & Kashmir Bank Ltd.	Karnataka Bank Ltd.
Karur Vysya Bank Ltd.	Kotak Mahindra Bank Ltd.	Lakshmi Vilas Bank Ltd
RBL Bank Ltd.	South Indian Bank Ltd.	Tamilnadu Mercantile Bank Ltd.
Yes Bank Ltd.	IDBI Bank Ltd.	

- 28.4. Failure of the successful bidder to comply with the requirement of sub-clause 28.1 shall constitute sufficient ground for cancellation of the contract and debarment for a period of one year from the date of debarment.
- 28.5. The bid security amount paid by the all remaining unsuccessful bidders will be refunded on submission of request the same after 30 days from the date of opening of financial bids on submission of their request.

### **Appendix to ITB**

Clause		Instructions to Bidd	ders	
Reference				
1.1	Executing	g Agency		
	Designat	ion: Executive Director (P)		
	Address:	NHIDCL, RO-Ladakh, Leh		
	Email: nh	nidcl.leh@gmail.com		
7.1	Engineer	-in-Charge		
	Designat	ion: General Manager (P)		
		NHIDCL, PMU-Infra, Leh		
		nidcl.infraleh@gmail.com		
14.3	Bid Docu	ment Cost: Rs.590/- (inclusive of GST)		
15.1	Bid Secu	ecurity Amount: Rs 29,35,800/- to be paid through NEFT/RTGS/IMPS to NHIDCL		
	account			
20.3 & 22.1	Schedule	for submission of Bids:		
	Sr. No.	Particulars	Date	
	1	Bid Document Download/ Start Date	26.05.2022	
	2	Clarification /Pre bid queries Start Date	26.05.2022	
	3	Clarification /Pre bid queries End Date	28.05.2022 (1100 Hrs.)	
	4	Pre bid meeting	28.05.2022 (1500 Hrs.)	
	5	Bid submission Start date	28.05.2022	
	6	Bid submission End date	03.06.2022 (1100 Hrs.)	
	7	Opening date of Technical Bids	04.06.2022 (1100 Hrs.)	
33.1	Performa work.	nce Security: Five (5%) percent of the Contrac	ct Price plus the GST applicable for the	



### **QUALIFICATION INFORMATION**

[The information is to be filled and submitted by the intending bidder along with their technical bid.]

Constit	for Individual Bidders (Applicable to contractors not registered with government dept.) stitution or legal status of Bidder load scanned copy of Original)								
Details	of Ownershi	p:							
Place o	f registration	n:							
Princip	al place of bu	usiness:							
-	ver of attorned scopy		ry of E	Bid <b>(Appl</b> i	icable to co	ntractors (	not registered	with governm	nent dept.)
app sati (Ap	roved by Exe sfied (in the	ecuting Agen same name contractors	cy will e) on v	l also be works of	considered, a similar r	, provided nature dur	further that a ing the last <b>F</b>	ll other qualifi <b>ive</b> years to q	- contractor duly cation criteria are ualify as per ITB. : registered with
Project Name	Name of the Executing Agency*	Description o Work	f	Contract No.	Value Contract (Rs. Crore)	Date of issue of work order	Stipulated period completion	Actual date completion*	Remarks explai reasons for delay work Completed
Note equi obta	e: In case of ivalent of the nined.	nominated so Prime Execu	ub-contub uting A	tractor, a agency sho to contra	certificate fould be obt	rom the mained from	whom an app	of Executive Eng proval for subco	gineer-in-Charge or ontractor has been o contractors not
Bido	registered with government dept.) Bidder shall submit Information regarding litigation or arbitration history during the last five years in which th Bidder is involved, the parties concerned, the disputed amount, and the matter in bidder Letter Head								
	er Party /Depcuting Agenc	-	Ca	ause of D	ispute	Amoun	t involved	Remarks s Present	-
to c		egistered wi	th gov	ernment	dept. and				fter: - (Applicable overnment dept.)

(ii) Undertaking as per format given in Annexure- D

SECTION-IV	
ANNEXURES	

## FORM OF LETTER OF APPLICATION (On Bidder's letter Head)

To,
The Executive Director (P)
NHIDCL, RO-Ladakh
Yartsa House, Changspa,
Leh, UT of Ladakh-194101

Name of Work: "Renovation, Repair, Re-surfacing & Construction of 32 Nos. of urban link roads at Ward no 1,2,3 &13 of LEH (PKG-3), in UT of Ladakh (2<sup>nd</sup> Call)"

Sir,

Having examined the Bid Document, Instruction to Bidders, Qualification Information, Scope of works, etc. for the subject work. We, hereby submit our technical and financial bid for the subject work.

It is certified that the information furnished in this document is true and correct. The proposal is unconditional and unqualified. We undersigned accept that NHIDCL reserves the right to reject any or all application without assigning any reason.

Thanking you,

Yours faithfully,

(Name) (Authorized Signatory) (Official-Seal)

For and on behalf of M/s_	
Date:	

Mobile No.: Email Id:

Bid Security Deceleration  The bid security declaration is deleted in view of recent guidelines from the NHIDCL headquater and in view of restoration of payment of bid security amount.	ANNEXURE-
The bid security declaration is deleted in view of recent guidelines from the NHIDCL headquater and in view of restoration of payment of bid security amount.	Bid Security Deceleration
	The bid security declaration is deleted in view of recent guidelines from the NHIDCL headquater and in view of restoration of payment of bid security amount.

#### <u>AFFIDAVIT</u> (To be notarized by Notary)

1.	I, the undersigned, do hereby certify that all the state correct.	ements made in the required attachments are true and
2.	The undersigned also hereby certifies that neither or abandoned any work on National Highways in India no rescinded, during last <b>Five</b> years prior to the date of thi	or any contract awarded to us for such works have been
3.		ny bank, person, firm or corporation to furnish pertinent e Department to verify this statement or regarding my
4.	The undersigned understand and agrees that further of furnish any such information at the request of the Dep	qualifying information may be requested, and agrees to partment Project implementing agency.
5.	I/ We undertake and confirm that eligible similar contractor on back to back basis.	works have not been got executed through another
	-	(Signed and sealed by an Authorized Officer of the Firm)
	-	Title of Officer
		Name of Firm
		DATE

#### <u>UNDERTAKING</u> (On Bidder's letter Head)

I, the undersigned do hereby undertake on behalf of our firm M/s [Name of the bidder], that we shall not withdraw or modify our bid during the period of validity from the bid submission date.

I, on behalf of the bidder, [Name of the bidder], also accept the fact that in case the bid is withdrawn or modified
during the period of its validity or if we fail to sign the contract in case the work is awarded to us or we fail to submit
a performance security before the deadline defined in the Bid, then [Name of the bidder] will be debarred for
participation in the tendering process for the works of NHIDCL and other works under other Centrally Sponsored
Schemes, for a period of two year from the bid due date of this work.

igned and sealed by an Authorized Officer of the Firm		
,	( · C	
Title of Officer		
Name of Firm		
DATE		
5/112		

#### FORMAT FOR POWER OF ATTORNEY FOR SIGNING OF BID (To be notarized by Notary)

Know all men by these presents, We (name of the firm and address of the registered office) do hereby irrevocably constitute, nominate, appoint and authorize Mr./Ms (name), son/daughter/wife of (Name) and presently residing at (Address), who is presently employed with us/the Lead Member of our Joint Venture and holding the position of (Designation), as our true and lawful attorney (hereinafter referred to as the "Attorney") to do in our name and on our behalf, all such acts, deeds and things as are necessary or required in connection with or incidental to submission of our BID for the Project proposed or being developed by the National Highways & Infrastructure Development Corporation Ltd. (the "Authority") including but not limited to signing and submission of all applications, BIDs and other documents and writings, participate in Pre-BID and other conferences and providing information/responses to the Authority, representing us in all matters before the Authority, signing and execution of all contracts including the agreement and undertakings consequent to acceptance of our BID, and generally dealing with the Authority in all matters in connection with or relating to or arising out of our BID for the said Project and/ or upon award thereof to us and/or until the entering into of the Contract with the Authority.

always be deemed to have been done by us. IN WITNESS WHEREOF WE,	, THE ABOVE NAMED PRINCIPAL HAVE EXECUTED THIS
POWER OF ATTORNEY ON THISDA	OF 20
	For
(Signature, n	ame, designation and address) of person authorized by Board Resolution (incase of Firm/ Company)/ partner in case of
Witnesses:	Partnership firm
1.	
2.	
Accepted	
(Signature)	60 · · · · · · · · · · · · · · · · · · ·
(Name, Title and Address of the Attorney)	(Notarised)
	Person identified by me/ personally appeared before me/
	Attested/ Authenticated*
	(*Notary to specify as applicable)
	(Signature Name and Address of the Notary)
	(Seal of the Notary)
	Registration No. of the Notary
	Date:
Notes:	

- accordance with the required procedure.
- Wherever required, the Bidder should submit for verification the extract of the charter documents and documents such as a board or shareholders' resolution/ power of attorney in favour of the person executing this Power of Attorney for the delegation of power hereunder on behalf of the Bidder.
- For a Power of Attorney executed and issued overseas, the document will also have to be legalised by the Indian Embassy and notarised in the jurisdiction where the Power of Attorney is being issued. However, the Power of Attorney provided by Bidders from countries that have signed the Hague Legislation Convention 1961 are not required to be legalised by the Indian Embassy if it carries a conforming Appostille certificate.

#### **FORM OF BANK GUARANTEE**

[Performance Security/Additional Performance Security]

[National Highway and Infrastructure Development Corporation Limited]

[Yartsa House near Changspa Farm,	Changspa, Leh, UT of Ladakh-194101]		
WHEREAS	[name and address of Contractor] (herea	after ca	alled the
"Contractor") has undertaken, ir	n pursuance of Letter of Acceptance (LOA) No. Dated		for
construction of [name of the Proje	ect] (hereinafter called the"Contract")		
AND WHEREAS the Contract require	es the Contractor to furnish an {Performance Security/ Additiona	l Perfo	rmance
Security) for due and faithful perfo	ormance of its obligations, under and in accordance with the Co	ontract	:, during
the {Construction Period/ Defects	Liability Period and Maintenance Period} in a sum of Rs		Cr.
(Rupees	Crore) (the <b>"Guarantee Amount"</b> 1).		
AND WHEREAS we,	through our branch at	(the	"Bank")
have agreed to furnish this Bank Gu	arantee (hereinafter called the <b>"Guarantee</b> ") by way of Perform	ance S	ecurity.
NOW, THEREFORE, the Bank hereby	, unconditionally and irrevocably, guarantees and affirms as follo	ows:	

- 1. The Bank hereby unconditionally and irrevocably guarantees the due and faithful performance of the Contractor's obligations during the {Construction Period/ Defects Liability Period and Maintenance Period} under and in accordance with the Contract, and agrees and undertakes to pay to the Authority, upon its mere first written demand, and without any demur, reservation, recourse, contest or protest, and without any reference to the Contractor, such sum or sums up to an aggregate sum of the Guarantee Amount as the Authority shall claim, without the Authority being required to prove or to show grounds or reasons for its demand and/or for the sum specified therein.
- 2. A letter from the Authority, under the hand of an officer not below the rank of [Offg. Executive Director, of National Highways & Infrastructure Development Corporation Limited], that the Contractor has committed default in the due and faithful performance of all or any of its obligations under and in accordance with the Contract shall be conclusive, final and binding on the Bank. The Bank further agrees that the Authority shall be the sole judge as to whether the Contractor is in default in due and faithful performance of its obligations during and under the Contract and its decision that the Contractor is in default shall be final and binding on the Bank, notwithstanding any differences between the Authority and the Contractor, or any dispute between them pending before any court, tribunal, arbitrators or any other authority or body, or by the discharge of the Contractor for any reason whatsoever.
- 3. In order to give effect to this Guarantee, the Authority shall be entitled to act as if the Bank were the principal debtor and any change in the constitution of the Contractor and/or the Bank, whether by their absorption with any other body or corporation or otherwise, shall not in any way or manner affect the liability or obligation of the Bank under this Guarantee.
- 4. It shall not be necessary, and the Bank hereby waives any necessity, for the Authority to proceed against the Contractor before presenting to the Bank its demand under this Guarantee.
- 5. The Authority shall have the liberty, without affecting in any manner the liability of the Bank under this Guarantee, to vary at any time, the terms and conditions of the Contract or to extend the time or period for the compliance with, fulfillment and/ or performance of all or any of the obligations of the Contractor contained in the Contract or to postpone for any time, and from time to time, any of the rights and powers exercisable by the Authority against the Contractor, and either to enforce or forbear from enforcing any of the terms and conditions contained in the Contract and/or the securities available to the Authority, and the Bank shall not be released from its liability and obligation under these presents by any exercise by the Authority of the liberty with reference to the matters aforesaid or by reason of time being given to the Contractor or any other forbearance, indulgence, act or omission on the part of the Authority or of any other matter or thing whatsoever which under any law relating to sureties and guarantors would but for

.

To

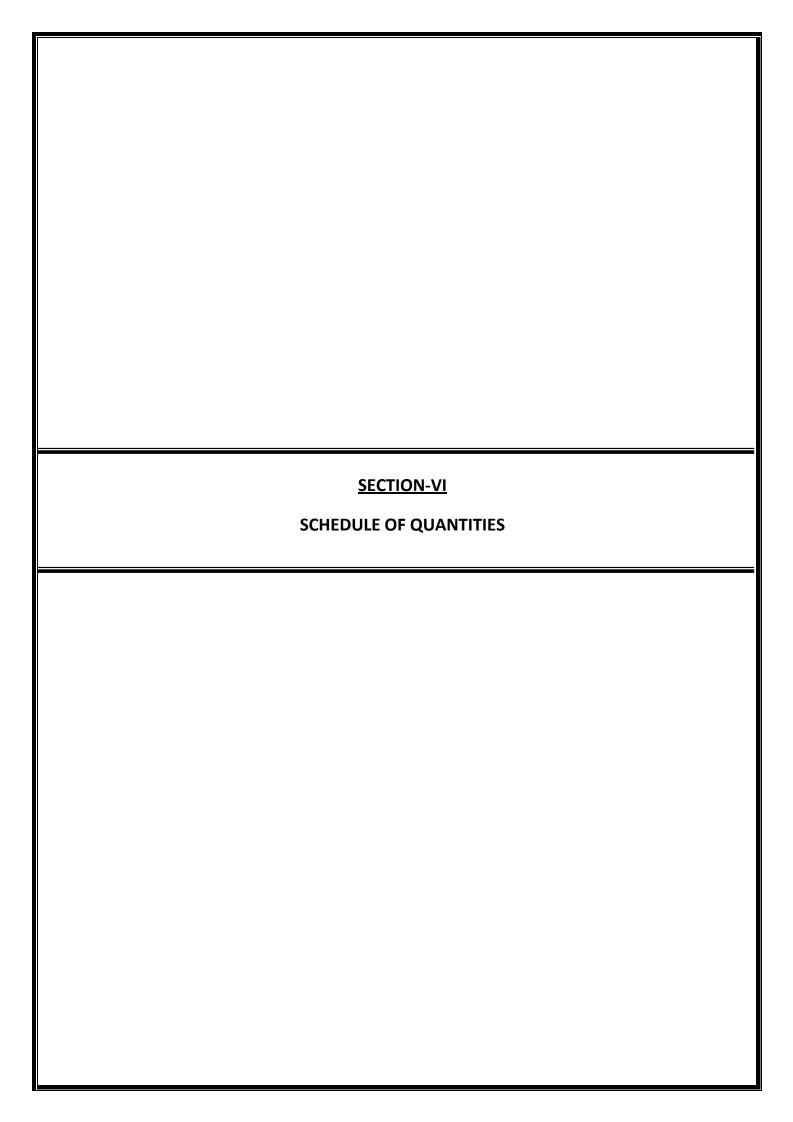
<sup>&</sup>lt;sup>1</sup> Guarantee Amount for Performance Security and Additional Performance Security shall be calculated as per Contract.

- this provision have the effect of releasing the Bank from its liability and obligation under this Guarantee and the Bank hereby waives all of its rights under any such law.
- 6. This Guarantee is in addition to and not in substitution of any other guarantee or security now or which may hereafter be held by the Authority in respect of or relating to the Contract or for the fulfillment, compliance and/or performance of all or any of the obligations of the Contractor under the Contract.
- 7. Notwithstanding anything contained hereinbefore, the liability of the Bank under this Guarantee is restricted to the Guarantee Amount and this Guarantee will remain in force for the period specified in paragraph 8 below and unless a demand or claim in writing is made by the Authority on the Bank under this Guarantee all rights of the Authority under this Guarantee shall be forfeited and the Bank shall be relieved from its liabilities hereunder.
- 8. The Guarantee shall cease to be in force and effect on \*\*\*\*. Unless a demand or claim under this Guarantee is made in writing before expiry of the Guarantee, the Bank shall be discharged from its liabilities hereunder.
- 9. The Bank undertakes not to revoke this Guarantee during its currency, except with the previous express consent of the Authority in writing, and declares and warrants that it has the power to issue this Guarantee and the undersigned has full powers to do so on behalf of the Bank.
  - Any notice by way of request, demand or otherwise hereunder may be sent by post addressed to the Bank at its above referred branch, which shall be deemed to have been duly authorized to receive such notice and to effect payment thereof forthwith, and if sentby post it shall be deemed to have been given at the time when it ought to have been delivered in due course of post and in proving such notice, when given by post, it shall be sufficient to prove that the envelope containing the notice was posted and a certificate signed by an officer of the Authority that the envelope was so posted shall be conclusive.
- 10. This Guarantee shall come into force with immediate effect and shall remain in force and effect for up to the date specified in paragraph 8 above or until it is released earlier by the Authority pursuant to the provisions of the Contract.
- 11. This Guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758, except that the supporting statement under Article 15 (a) is hereby excluded.
- 12. This guarantee shall also be operatable at our ICICI Branch at Leh, UT of Ladakh, from whom, confirmation regarding the issue of this guarantee or extension / renewal thereof shall be made available on demand. In the contingency of this guarantee being invoked and payment there-under claimed, the said branch shall accept such invocation letter and make payment of amounts so demanded under the said invocation.
- 13. The guarantor/bank hereby confirms that it is on the SFMS (Structural Finance Messaging System) platform & shall invariably send an advice of this Bank Guarantee to the designated bank of [MoRT&H/NHAI/ NHIDCL/State PWD/BRO], details of which is as under:

S.No.	Particulars	Details							
1	Name of Beneficiary	National Highways & Infrastructure Development							
		Corporation Limited NHIDCL UT Ladakh Project Account							
2	Beneficiary Bank Account No.	362305000136							
3	Beneficiary Bank Branch IFSC	ICIC0003623							
4	Beneficiary Bank Branch Name	3623 Leh Ladakh Branch							
5	Beneficiary Bank Address	ICICI Bank,Leh-194101							

Signed and sealed this ....... day of .......... 20....... at .........

<u>SECTION-V</u> TENDER DRAWINGS
uploaded along with the RFP and as part of Contract Document



### List of Works to be executed under this Contract

The Following is the list of indicative works to be executed under this Contract Agreement:-

Sr. No	Name of the Work	Tentative Cost	Length of the
		(exclusive of GST)	road (m)
1	Construction of link road from thakskan spurka road to Angdu Spurka house Leh, UT of Ladakh	13,44,873.00	200
2	Construction of link road from thakskan spurka road to doktuk rigzen house, Leh UT of Ladakh	13,44,873.00	200
3	Construction of link road from Gangles to Govt. School , Leh UT of Ladakh	25,92,737.00	30
4	Construction of link road from Gayu yontan to Gyamtsa Leh, UT of Ladakh	1,14,48,344.00	1200
5	Construction/ Resurfacing of Gonpa Gangles Main Road , Leh UT of Ladakh	3,57,53,933.00	2400
6	Construction of link road from GURU House to SPON HOUSE, Leh UT of Ladakh	27,47,799.00	2000
7	Construction of link road from Jingmal to Ichangri, Leh UT of Ladakh	32,90,668.00	500
8	Construction of link road from Lamdon school to Nawang Jago, Leh UT of Ladakh	1,32,431.00	50
9	Construction of paver block road from langto House to Tikchupa &Chakzot pa House, Leh UT of Ladakh	32,59,465.00	200
10	Construction of link road from Main road to Horzey masjid , Leh UT of Ladakh	16,00,496.00	240
11	Construction of link road from Community halll to Mitik House, Leh UT of Ladakh	12,87,121.00	200
12	Construction of paver block Road from Niran Hotel to Chutay Rantak, Leh UT of Ladakh	10,68,705.00	100
13	Construction of footpath from new petrol pump to chube katpa at Sankar Ward, Leh UT of Ladakh	4,56,515.00	60
14	Construction of link road from Hotel Sankar Three Roses to Horpo Standuks House, Leh UT of Ladakh	6,73,294.00	120
15	Construction of link road from SSK (Alim Jan) to Kalon House , Leh UT of Ladakh	37,87,428.00	350
16	Construction of link road from SSK to Gyamtsa , Leh UT of Ladakh	2,14,38,123.00	3200
17	Construction of link road from Thakskan to Spurka, Leh UT of Ladakh	74,81,262.00	900
18	Construction of link road from Thaltsi to Digur, Leh UT of Ladakh	1,83,72,888.00	1800
19	Construction of link road from Yourtung Bridge to Skyang chiks , Leh UT of Ladakh	35,81,593.00	550
20	Construction of link road from Yourtung community hall to Nesar Rai , Leh UT of Ladakh	7,97,439.00	400

21	Re-surfacing of link road from Yourtung to Taisuru road, Leh UT of Ladakh	13,44,873.00	430
22	Construction of link road from Leh Palace Main road to Hotel Hill top view, Skamapari Leh UT Ladakh	14,17,513.00	220
23	Construction of link road from Leh Palace Main road to Hotel Ladakh View, Skampari, Leh UT Ladakh	7,78,448.00	120
24	Construction of link road from Skampari Market to Maney sermo, Skampari Leh UT Ladakh	9,06,263.00	140
25	Construction of link road from Pologround gate to backside of Picture hall, Leh UT Ladakh	7,43,797.00	120
26	Repairing of Footpath from Jamia Masjid to DB2, Leh UT Ladakh	7,11,857.00	120
27	Repairing of Footpath from Jamia Masjid to Shia Masjid, Leh UT Ladakh	7,41,519.00	125
28	Construction of link road from Changspa Bridge to Goba Kunzes House, Changspa, Leh UT Ladakh	51,24,076.00	800
29	Construction of link road from Changspa farm to Chunka house Changspa, Leh UT Ladakh	20,04,569.00	135
30	Construction of link road from Lanagon guest house to taktok house Changspa, Leh UT Ladakh	3,90,821.00	90
31	Construction of link road from Ecology road to Shanti stupa road, Leh UT Ladakh	90,70,606.00	800
32	Construction of link road from ABC centre to Rabsal House, Leh UT Ladakh	10,97,981.00	170
	Total (Rs)	14,67,92,310.00	17970

#### Note:

- 1. Single tender percentage shall be quoted by the bidder in the BOQ (Priced schedule) which shall be applicable for all works mentioned above.
- 2. Work shall be awarded to the bidder whose overall bid amount worked out as lowest based on quoted percentage among the responsive tenders.
- 3. Separate work orders shall be issued for each of the above-mentioned works by Engineer-in-charge in case of necessity based on availability of land, approval from the competent authority for each work.
- 4. Separate running and final bills shall be prepared for each of the above-mentioned works.
- 5. Separate site registers shall be maintained for each of the above-mentioned works.
- 6. Separate extension of time, if any, shall be applied for each of the above-mentioned works in case of necessity.
- 7. The Schedule of Quantities for each of the work mentioned above is enclosed with RFP.

		DETAILED ESTIMATE						
Name o	f work : Con Reference	struction of link road from thakskan spurka road to Angdu Spurka ho	use Leh	, UT of Lad	akh			
S.N0	of Rates JK SOR 2020 Code	DESCRIPTION	Unit	Qty		Rate (Rs)	Aı	mount (Rs)
	no.				JK SoR	NS	JK SoR	NS
		ROAD WORK						
1	16.1	Preparation of subgrade by excavating earth to an avarage of 22.5 cm depth, dressing to camber and consolidation with road roller of 8-12 tonne capacity including making good the undulation etc. and disposal of surplus earth upto 50 meters	Sqm	1160.00	139.40		161704	
2	16.82.2	Construction of <b>granular sub-base</b> by providing close graded material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by trippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge. (in Two Layer)						
		With material conforming to Grade-II (size range 53 mm to 0.075mm) having CBR Value-25	Cum	60.00	1077.15		64629	
3	16.83	Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm) to <b>Wet Mix Macadam</b> (WMM) specification including premixing the material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all leads & lifts, laying in uniform layers with mechanical paver finisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.	Cum	77.00	1041.50		80196	
4	Non Schedule	Providing and applying prime coat with bitumen emulsion Grade SS-1 complying with IS:8887 on prepared surface of granular base including cleaning of road surface with compressed air and spraying primer at the rate of 0.80kg/sqm using pressure distributer as per clause 502 of MoRTH specifications complete.  On WMM surface @0.80kg/sqm	Sqm	770.00		53.47		41172.00
		On Willia Surface @ 0.00kg/sqm	Sylli	770.00		33.47		41172.00
5	JKSoR derived Rate from 16.63.1	Providing and laying bituminous macadam using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by trippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge.50 to 100mm average compacted thickness with bitumen of VG-10 @3.5% (percentage by weight of total mix) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	37.50	5917.98		221924	
6	16.38.2	Providing and applying <b>Tack Coat</b> using hot straight run bitumen of grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and prepared the existing road surface as per specifications.						
	ļ	On bitumen surface @0.50 kg/sqm	sqm	750.00	42.10		31575	
7	JKSoR derived Rate from 16.65.1	Providing and laying <b>Bituminous concrete</b> using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	Cum	30.00	9004.58		270137	
8	16.48	Providing <b>seal coat</b> of premixed fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing with road all complete.	sqm	750.00	78.15		58613	

		Cross Drains						
9	NS	Supply, transportation to site and laying of 300 mm dia mild steel pipe as directed by Engineer-in-charge (minimum thickness of pipe 4.50mm)	m	8.00		5500.00		44000
10	4.4.3	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:2:4 ( 1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	Cum	1.37	5877.45		8058	
11	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return wall, walls ( any thickness) including attached pilasters butteresses, plinth ans string coarse fillets, kerbs and steps etc.	sqm	8.16	573.85		4683	
		ROAD MARKINGS AND SIGN BOARDS						
12	16.58	Providing and fixing Glow studs of size 100x20mm made of heavy duty body shall be moulded ASA (Acrylic styrene Acryloretrite) or HIP (High impact Polystyrene) or ABS having electronically welded micro-prismatic lens with abrasion resistant coating as approved by Engineer-in-charge. The Glow stud shall support a load of 13635 kg tested in accordance with ASTM D4280. The slope of retro-reflective surface shall be 35 +/- 5 degrees to base. The reflective panels on both sides with at least 12cm of reflective area up each side. The luminance intensity should be as per the specification and shall be tested as described in ASTM I: 809 as recommended in BS : 873 part 4 : 1973. The studs shall be fixed to the road surface using the adhesive conforming to IS, as per procedure recommended by the manufacturer complete and as per direction of Engineer-in-charge	each	4.44	193.85		862	
13	16.69	Providing and applying 2.5mm thick road marking strips (retro-reflective) of specified shade/colour using hot thermoplastic material by fully/semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour, T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and accordance with applicable specifications.		10.00	604.50		6045	
14	16.66	Manufacturing supplying and fixing retro reflective sign boards made up of 2mm thick aluminum sheet, face to be fully covered with high intensity encapsulated type heat activated retro reflective sheeting conforming to type-IV of ASTM-D-4956-01 in blue and silver white or other colour combination including subject matter, message (bi-lingual), symbols and borders etc. as per IRC: 67-2001, pasted on substrate by an adhesive backing which shall be activated by applying heat and pressure conforming to class -2 of ASTM-D-4956-01 and fixing the same with suitable sized aluminum alloy rivets @ 20cm c/c to back support frame of M.S. angle iron of size 25x25x3mm along with theft resistant measures mounted and fixed with 2 nos. M.S. angles of size 35x35x5mm to a vertical post made upto M.S. Tee section ISMT 50x50x6mm welded with base plate of size 100x100x5mm at the bottom end and including making holes in pipes, angle flats, providing and fixing M.S. message plate of required size steel work to be painted with two or more coats of synthetic enamel paint of required shade and of approved brand & manufacture over priming coat of zinc chromate yellow primer (vertical M.STee support to be painted in black and white colours). Backside of aluminum sheet to be painted with two or more coats of epoxy paint over and including appropriate priming coats including all leads and lifts etc. complete as per drawing, specification and direction of Engineer-in-charge.						
14.1	16.66.1	Mandatory/Regulatory sign boards of 900 mm diameter with part as length of 3750 mm	each	1.00	5795.50		5796	
14.2	16.66.2	Cautionary/warning sign boards of equilateral triangular shape having each side of 900 mm support length of 3650mm.	each	1.00	4260.80		4261	
		FOOTPATH WORK						
15	Derived from JKSoR	Providing and laying 200 mm thick compacted bed of Stone soling including spreading, well ramming, consolidating including finishing smooth etc. complete as per direction of Engineer-in-charge		18.00	1396.82		25143	
16	4.9.2	Providing & fixing at or near ground level precast cement concrete in kerbs, edging etc as per approved patterns and setting in position with cement mortar 1:3 (1 cement:3 coarse sand) including the cost of required centring, shuttering and curing complete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)	cum	6.00	6213.80		37283	
17	4.4.5	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	cum	9.00	4943.40		44491	
	l							

18	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return walls, walls (any thickness) including attached pilasters butteresses, plinth and string course fillets, kerbs and steps etc.		10.00	573.85		5739	
19	16.74	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grade made by block making machine with strong vibratory compaction and of approved size and design/shape laid in required colour and pattern over and including 50mm thick compacted bed of fine sand, filling the joints with coarse sand etc. all complete as per direction of Engineer-in-charge.	sqm	90.00	770.60		69354	
						Total (Rs)	1100493	
		Add 25% approximate cost index on JK Schedule ite	ems				275123	
							1375616	85172
				To	otal (Rs) Jk	( SoR + NS	1460788	
	Add contingencies @5%							
	Total (Rs)							
		E	stimated	cost of the	work inclu	sive of GST	1533828	•
		Estimated cost	put to Te	ender ( Excl	uding GST	@ 14.05%)	13,44,873	

Name o		DETAILED ESTIMATI struction of link road from thakskan spurka road to doktuk rigzen ho		h UT of La	dakh			
S.N0	Reference of Rates JK SOR 2020 Code no.	DESCRIPTION	Unit	Qty		Rate (Rs)	A	mount (Rs)
		ROAD WORK			JK SoR	NS	JK SoR	NS
1	16.1	Preparation of subgrade by excavating earth to an avarage of 22.5 cm depth, dressing to camber and consolidation with road roller of 8-12 tonne capacity including making good the undulation etc. and disposal of surplus earth upto 50 meters	Sqm	1160.00	139.40		161704	
2	16.82.2	Construction of <b>granular sub-base</b> by providing close graded material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by trippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge. (in Two Layer)						
		With material conforming to Grade-II (size range 53 mm to 0.075mm) having CBR Value-25	Cum	60.00	1077.15		64629	
3	16.83	Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm) to <b>Wet Mix Macadam</b> (WMM) specification including premixing the material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all leads & lifts, laying in uniform layers with mechanical paver finisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.	Cum	77.00	1041.50		80196	
4	Non Schedule	Providing and applying prime coat with bitumen emulsion Grade SS-1 complying with IS:8887 on prepared surface of granular base including cleaning of road surface with compressed air and spraying primer at the rate of 0.80kg/sqm using pressure distributer as per clause 502 of MoRTH specifications complete.  On WMM surface @0.80kg/sqm	Sqm	770.00		53.47		41172.00
5	JKSoR derived Rate from 16.63.1	Providing and laying <b>bituminous macadam</b> using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by trippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge.50 to 100mm average compacted thickness with bitumen of VG-10 @3.5% (percentage by weight of total mix) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	37.50	5917.98		221924	
6	16.38.2	Providing and applying <b>Tack Coat</b> using hot straight run bitumen of grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and prepared the existing road surface as per specifications.						
		On bitumen surface @0.50 kg/sqm	sqm	750.00	42.10		31575	
7	JKSoR derived Rate from 16.65.1	Providing and laying <b>Bituminous concrete</b> using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	Cum	30.00	9004.58		270137	
8	16.48	Providing <b>seal coat</b> of premixed fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing with road all complete.	sqm	750.00	78.15		58613	

		Cross Drains						
9	NS	Supply, transportation to site and laying of 300 mm dia mild steel pipe as directed by Engineer-in-charge (minimum thickness of pipe 4.50mm)	m	8.00		5500.00		44000
10	4.4.3	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:2:4 ( 1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	Cum	1.37	5877.45		8058	
11	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return wall, walls ( any thickness) including attached pilasters butteresses, plinth ans string coarse fillets, kerbs and steps etc.	sqm	8.16	573.85		4683	
		ROAD MARKINGS AND SIGN BOARDS						
12	16.58	Providing and fixing Glow studs of size 100x20mm made of heavy duty body shall be moulded ASA (Acrylic styrene Acryloretrite) or HIP (High impact Polystyrene) or ABS having electronically welded micro-prismatic lens with abrasion resistant coating as approved by Engineer-in-charge. The Glow stud shall support a load of 13635 kg tested in accordance with ASTM D4280. The slope of retro-reflective surface shall be 35 +/- 5 degrees to base. The reflective panels on both sides with at least 12cm of reflective area up each side. The luminance intensity should be as per the specification and shall be tested as described in ASTM I: 809 as recommended in BS: 873 part 4: 1973. The studs shall be fixed to the road surface using the adhesive conforming to IS, as per procedure recommended by the manufacturer complete and as per direction of Engineer-in-charge	each	4	193.85		862	
13	16.69	Providing and applying 2.5mm thick road marking strips (retro-reflective) of specified shade/colour using hot thermoplastic material by fully/semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour, T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and accordance with applicable specifications.	sqm	10.00	604.50		6045	
14	16.66	Manufacturing supplying and fixing retro reflective sign boards made up of 2mm thick aluminum sheet, face to be fully covered with high intensity encapsulated type heat activated retro reflective sheeting conforming to type-IV of ASTM-D-4956-01 in blue and silver white or other colour combination including subject matter, message (bi-lingual), symbols and borders etc. as per IRC: 67-2001, pasted on substrate by an adhesive backing which shall be activated by applying heat and pressure conforming to class -2 of ASTM-D-4956-01 and fixing the same with suitable sized aluminum alloy rivets @ 20cm c/c to back support frame of M.S. angle iron of size 25x25x3mm along with theft resistant measures mounted and fixed with 2 nos. M.S. angles of size 35x35x5mm to a vertical post made upto M.S. Tee section ISMT 50x50x6mm welded with base plate of size 100x100x5mm at the bottom end and including making holes in pipes, angle flats, providing and fixing M.S. message plate of required size steel work to be painted with two or more coats of synthetic enamel paint of required shade and of approved brand & manufacture over priming coat of zinc chromate yellow primer (vertical M.STee support to be painted in black and white colours). Backside of aluminum sheet to be painted with two or more coats of epoxy paint over and including appropriate priming coats including all leads and lifts etc. complete as per drawing, specification and direction of Engineer-in-charge.						
14.1	16.66.1	Mandatory/Regulatory sign boards of 900 mm diameter with part as length of 3750 mm	each	1.00	5795.50		5796	
14.2	16.66.2	Cautionary/warning sign boards of equilateral triangular shape having each side of 900 mm support length of 3650mm.	each	1.00	4260.80		4261	
		FOOTPATH WORK						
15	Derived from JKSoR	Providing and laying 200 mm thick compacted bed of Stone soling including spreading, well ramming, consolidating including finishing smooth etc. complete as per direction of Engineer-in-charge	sqm	18.00	1396.82		25143	

16	4.9.2	Providing & fixing at or near ground level precast cement concrete in kerbs, edging etc as per approved patterns and setting in position with cement mortar 1:3 (1 cement:3 coarse sand) including the cost of required centring, shuttering and curing complete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)	cum	6.00	6213.80		37283	
17	4.4.5	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:3:6 (1 cement: 3 coarse sand: 6 graded stone aggregate 20 mm nominal size)	cum	9.00	4943.40		44491	
18	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return walls, walls (any thickness) including attached pilasters butteresses, plinth and string course fillets, kerbs and steps etc.	sqm	10.00	573.85	_	5739	
19	16.74	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grade made by block making machine with strong vibratory compaction and of approved size and design/shape laid in required colour and pattern over and including 50mm thick compacted bed of fine sand, filling the joints with coarse sand etc. all complete as per direction of Engineer-in-charge.	sqm	90.00	770.60		69354	
		· · · · · · · · · · · · · · · · · · ·				Total (Rs)	1100493	
		Add 25% approximate cost index on JK Schedule it	ems				275123	
							1375616	85172
				To	otal (Rs) Jk	( SoR + NS	1460788	
		Add contingencies @5%					73039	
			, and the second	•		Total (Rs)	1533828	
						sive of GST	1533828	
		Estimated cos	t put to T	ender ( Excl	luding GST	@ 14.05%)	13,44,873	

DETAILED ESTIMATE Name of work : Construction of link road from Gangles to Govt. School , Leh UT of Ladakh								
S.NO	Reference of Rates JK SOR 2020 Code no.	DESCRIPTION	Unit	Qty		Rate (Rs)		Amount (Rs
		Retaining Wall			JK SoR	NS	JK SoR	N:
1	2.7.1	Earth work in bulk excavation by mechanical means (hydraulic excavator) over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10m^2 on plan) including disposal of excavated earth lead upto 50m and lift upto 1.5m, as directed by Engineer-in-Charge						
		All kinds of soil :	cum	45.00	188.75		8494	
2	2.11	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead upto 50m and lift upto 1.5 m.	cum	20.25	198.70		4024	
3	4.4.7	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size)  Below Retaining Wall (PCC)	cum	6.30	4419.85		27845	
4	4.5.3	Providing and laying cement concrete in retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchors blocks, plain window sills, fillets etc upto floor V level, including curing but excluding the cost of centring, shuttering and finishing with.  1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)						
		Coping over retaining wall	cum	0.90	7542.40		6788	
5	7.1.1	Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20mm nominal size) upto plinth level and curing complete with :						
		Cement mortar 1:6 (1 cement : 6 coarse sand).	cum	51.00	4435.25		226198	
6	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return wall, walls ( any thickness) including attached pilasters butteresses, plinth ans string coarse fillets, kerbs and steps etc.						
		PCC for retaining wall & for Coping	sqm	12.00	573.85		6886	
7	16.1	ROAD WORK Preparation of subgrade by excavating earth to an avarage of 22.5 cm depth, dressing to camber and consolidation with road roller of 8-12 tonne capacity including making good the undulation etc. and disposal of surplus earth upto 50 meters		120.00	139.40		16728	
8	16.82.2	Construction of <b>granular sub-base</b> by providing close graded material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by trippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and comp[acting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.						
		With material conforming to Grade-II (size range 53 mm to 0.075mm) having CBR Value-25	cum	9.00	1077.15		9694	
9	16.83	Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm ) to <b>Wet Mix Macadam</b> (WMM) specification including premixing the material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all leads & lifts, laying in uniform layers with mechanical paver finisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.	cum	11.55	1041.50		12029	

10	Non Schedule	Providing and applying prime coat with bitumen emulsion Grade SS-1 complying with IS:8887 on prepared surface of granular base including cleaning of road surface with compressed air and spraying primer at the rate of 0.80kg/sqm using pressure distributer as per clause 502 of MoRTH specifications complete.  On W.B.MW.M.M @0.80Kg/sqm	sqm	115.50		53.47		6176
11	JKSoR derived Rate from 16.65.1	Providing and laying <b>bituminous macadam</b> using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by tippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in Charge.50 to 100mm average compacted thickness with bitumen of VG-10 @3.5% (percentage by weight of total mix) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	5.63	5917.98		33289	
		Providing and applying Tack Coat using hot straight run bitumen of						
12	16.38.2	grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and prepared the existing road surface as per specifications.						
		On bitumen surface @0.50 kg/sqm	sqm	112.50	42.10		4736	
13		Providing and laying <b>Bituminous concrete</b> using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	210.00	9004.58		1890962	
14	16.48	Providing <b>seal coat</b> of premixed fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing with road all complete.	sqm	4.50	78.15		352	
		Add 05% ammoniments cost index on II/ Cabadala is				Total (Rs)	2248025	
		Add 25% approximate cost index on JK Schedule it	terns				562006 2810031	6176
					Total (Rs)	JK SoR + NS	2816207	20
		Add contingencies @5%				Total (D-)	140810	
-			Estimat	ed cost of th	ne work incl	Total (Rs) lusive of GST	2957017 2957017	
				T @ 14.05%)	25,92,737			

		DETAILED ESTIMA						
Name of	Reference	struction of link road from Gayu yontan to Gyamtsa Leh, UT of Ladak	th					
S.N0	of Rates JK SOR 2020 Code no.	DESCRIPTION	Unit	Qty		Rate (Rs)		Amount (Rs)
		ROAD WORK			JK SoR	NS	JK SoR	NS
1	16.1	Preparation of subgrade by excavating earth to an avarage of 22.5 cm depth, dressing to camber and consolidation with road roller of 8-12 tonne capacity including making good the undulation etc. and disposal of surplus earth upto 50 meters	Sqm	6960.00	139.40		970224	
2		Construction of <b>granular sub-base</b> by providing close graded material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by trippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge. (in Two Layer)						
		With material conforming to Grade-II (size range 53 mm to 0.075mm) having CBR Value-25	Cum	360.00	1077.15		387774	
3	16.83	Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm) to <b>Wet Mix Macadam</b> (WMM) specification including premixing the material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all leads & lifts, laying in uniform layers with mechanical paver finisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.	Cum	462.00	1041.50		481173	
4	Non Schedule	Providing and applying prime coat with bitumen emulsion Grade SS-1 complying with IS:8887 on prepared surface of granular base including cleaning of road surface with compressed air and spraying primer at the rate of 0.80kg/sqm using pressure distributer as per clause 502 of MoRTH specifications complete.  On WMM surface @ 0.80kg/sqm	Sqm	4620.00		53.47		247031.00
		<u> </u>	Oqiii	1020.00		00.47		247001.00
5	JKSoR derived Rate from 16.63.1	Providing and laying <b>bituminous macadam</b> using crushed stone aggregates of specified grading premixed with bituminous binder, ransported to site by trippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge.50 to 100mm average compacted thickness with bitumen of VG-10 @3.5% (percentage by weight of total mix) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	231.00	5917.98		1367053	
6	16.38.2	Providing and applying <b>Tack Coat</b> using hot straight run bitumen of grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and prepared the existing road surface as per specifications.						
		On bitumen surface @0.50 kg/sqm	sqm	4620.00	42.10		194502	
7	JKSoR derived Rate from	Providing and laying <b>Bituminous concrete</b> using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	Cum	180.00	9004.58		1620824	
8	16.48	Providing <b>seal coat</b> of premixed fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing with road all complete.	sqm	4500.00	78.15		351675	
		Side Drain						
9	2.8	Earth work in excavation by manual means in trenches for foundations, drains, pipes, cables etc. (not exceeding 1.5 m in width) and for shafts, wells, cesspits and the like not exceeding 10 sqm on plan, including dressing of sides and ramming of bottoms lift upto 1.5 m, including getting out excavated earth and disposal of surplus excavated earth as directed:  Rate for a lead upto 25 meters beyond 1meter from cutting edge						

		2.8.1. All kinds of soil :	cum	446.25	524.40		234014	
		2.8.2 Ordinary Rock	cum	148.75	922.35		137200	
10	4.4.3	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with: 1:2:4 ( 1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	240.00	5877.45		1410588	
11	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return wall, walls ( any thickness) including attached pilasters butteresses, plinth ans string coarse fillets, kerbs and steps etc.	sqm	2600.00	573.85		1492010	
		Cross Drains						
12	NS	Supply, transportation to site and laying of 300 mm dia mild steel pipe as directed by Engineer-in-charge (minimum thickness of pipe 4.50mm)	m	24.00		5500.00		132000
13	4.4.3	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:2:4 ( 1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	Cum	4.72	5877.45		27722	
14	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return wall, walls (any thickness) including attached pilasters butteresses, plinth ans string coarse fillets, kerbs and steps etc.	sqm	24.48	573.85		14048	
		ROAD MARKINGS AND SIGN BOARDS						
15	16.58	Providing and fixing Glow studs of size 100x20mm made of heavy duty body shall be moulded ASA (Acrylic styrene Acryloretrite) or HIP (High impact Polystyrene) or ABS having electronically welded micro-prismatic lens with abrasion resistant coating as approved by Engineer-in-charge. The Glow stud shall support a load of 13635 kg tested in accordance with ASTM D4280. The slope of retro-reflective surface shall be 35 +/-5 degrees to base. The reflective panels on both sides with at least 12cm of reflective area up each side. The luminance intensity should be as per the specification and shall be tested as described in ASTM I: 809 as recommended in BS : 873 part 4: 1973. The studs shall be fixed to the road surface using the adhesive conforming to IS, as per procedure recommended by the manufacturer complete and as per direction of Engineer-in-charge	each	26.67	193.85		5169	
16	16.69	Providing and applying 2.5mm thick road marking strips (retro-reflective) of specified shade/colour using hot thermoplastic material by fully/semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour, T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and accordance with applicable specifications.	sqm	60.00	604.50		36270	
17	16.66	Manufacturing supplying and fixing retro reflective sign boards made up of 2mm thick aluminum sheet, face to be fully covered with high intensity encapsulated type heat activated retro reflective sheeting conforming to type-IV of ASTM-D-4956-01 in blue and silver white or other colour combination including subject matter, message (bi-lingual), symbols and borders etc. as per IRC: 67-2001, pasted on substrate by an adhesive backing which shall be activated by applying heat and pressure conforming to class -2 of ASTM-D-4956-01 and fixing the same with suitable sized aluminum alloy rivets @ 20cm c/c to back support frame of M.S. angle iron of size 25x25x3mm along with theft resistant measures mounted and fixed with 2 nos. M.S. angles of size 35x35x5mm to a vertical post made upto M.S. Tee section ISMT 50x50x6mm welded with base plate of size 100x100x5mm at the bottom end and including making holes in pipes, angle flats, providing and fixing M.S. message plate of required size steel work to be painted with two or more coats of synthetic enamel paint of required shade and of approved brand & manufacture over priming coat of zinc chromate yellow primer (vertical M.STee support to be painted in black and white colours). Backside of aluminum sheet to be painted with two or more coats of epoxy paint over and including appropriate priming coats including all leads and lifts etc. complete as per drawing, specification and direction of Engineer-in-charge.						
17.1	16.66.1	Mandatory/Regulatory sign boards of 900 mm diameter with part as	each	1.00	5795.50		5796	
17.2	16.66.2	length of 3750 mm Cautionary/warning sign boards of equilateral triangular shape having	each	1.00	4260.80		4261	
		each side of 900 mm support length of 3650mm.					:=31	

18	16.67.1	Manufacturing supplying and fixing retro reflective overhead signage boards made up of 2mm thick aluminum sheet, face to be fully covered with high intensity and encapsulated lens type heat activated retro reflective sheeting conforming to type-III of ASTM-D-4956-01 as approved by Engineer-in-charge; letters, borders etc. as per IRC: 67-2001 in silver white with blue colour background and with high intensity grade, pasted on substrate by pressure sensitive adhesive backing which shall be activated by applying pressure conforming to class -II of ASTM-D-4956-01 and fixing the same to the plate of structural frame work by means of suitable sized aluminum alloys, rivets or bolts and nuts @ 300mm c/c all along the periphery as well as in two vertical rows along with theft resistant measures including the cost of painting with two or more coats of epoxy paint in grey colour on the back side of aluminum sheet including appropriate priming coat. The rate includes the cost of rounding off the corners, lowering down the structural frame work from the gantry, fixing and erecting the same in position all complete as per drawing, specification and direction of Engineer-incharge (Structural frame work including M.S. plate to be provided separately. Rectangular area of the sheet only shall be measured for payment):  Overhead informatory road signage	each	1.00	5651.25		5651	
		FOOTPATH WORK						
19	Derived from JKSoR	Providing and laying 200 mm thick compacted bed of Stone soling including spreading, well ramming, consolidating including finishing smooth etc. complete as per direction of Engineer-in-charge	sqm	108.00	1396.82		150857	
20	4.9.2	Providing & fixing at or near ground level precast cement concrete in kerbs, edging etc as per approved patterns and setting in position with cement mortar 1:3 (1 cement:3 coarse sand) including the cost of required centring, shuttering and curing complete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	36.00	6213.80		223697	
21	4.4.5	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	cum	54.00	4943.40		266944	
22	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return walls, walls ( any thickness) including attached pilasters butteresses, plinth and string course fillets, kerbs and steps etc.	sqm	60.00	573.85		34431	
23	16.74	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grade made by block making machine with strong vibratory compaction and of approved size and design/shape laid in required colour and pattern over and including 50mm thick compacted bed of fine sand, filling the joints with coarse sand etc. all complete as per direction of Engineer-in-charge.	sqm	540.00	770.60		416124	
						Total (Rs)	9838007	
		Add 25% approximate cost index on JK Schedule ite	ms				2459502	
		Add contingencies @3%		Тс	otal (Rs) Jh	( SoR + NS	12297509 <b>12676540</b> 380296	379031
		Add Contingencies @370				Total (Rs)	13056836	
		E	stimated	cost of the	work inclu	sive of GST	13056836	
		Estimated cost					1,14,48,344	
					-		, , ,	

Name of	f work : Cons	DETAILED ESTIMA truction/ Resurfacing of Gonpa Gangles Main Road , Leh UT of Lada						
S.NO	Reference of Rates JK SOR 2020 Code no.	DESCRIPTION	Unit	Qty		Rate (Rs)		Amount (Rs)
		Retaining Wall			JK SoR	NS	JK SoR	NS
1	15.9.2	Demolishing stone rubble masonry manually/ by mechanical means including stacking of serviceable materials and disposal of unserviceable material within 50 meters lead as per direction of Engineer-in Charge ( The stacked stones shall be used for reconstruction of the retaining wall to the extent required. The remaining quantity of recovered stones will be used in the nearby roadworks for which the contractor is to transport the stones at his own cost and nothing will be paid extra on this account.) In Cement Mortar		77.00	4500.05		440700	
			cum	75.00	1583.05		118729	
2	2.7.1	Earth work in bulk excavation by mechanical means (hydraulic excavator) over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10m^2 on plan) including disposal of excavated earth lead upto 50m and lift upto 1.5m, as directed by Engineer-in-Charge						
		All kinds of soil :	cum	150.00	188.75		28313	
3	2.11	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead upto 50m and lift upto 1.5 m.	cum	67.50	198.70		13412	
		Providing and laying in position cement concrete of specified grade						
4	4.4.7	including curing but excluding the cost of centring and shuttering. All work upto plinth level with: 1:4:8 (1 cement: 4 coarse sand: 8 graded stone aggregate 40 mm						
		nominal size) Below Retaining Wall (PCC)	cum	21.00	4419.85		92817	
5	4.5.3	Providing and laying cement concrete in retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchors blocks, plain window sills, fillets etc upto floor V level, including curing but excluding the cost of centring, shuttering and finishing with.  1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)						
		Coping over retaining wall	cum	3.00	7542.40		22627	
6	J&KSoR derived 7.1.1	Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20mm nominal size) upto plinth level and curing complete with ( Stones recovered from the dismantlement						
	donvou 7.1.1	are to be used to the full extent for this item. The rate shall be excluding of the cost of stones.)  Cement mortar 1:6 (1 cement : 6 coarse sand).	cum	170.00	3750.99		637668	
7	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return wall, walls ( any thickness) including attached pilasters butteresses, plinth ans string coarse fillets, kerbs and steps etc.						
		PCC for retaining wall & for Coping	sqm	40.00	573.85		22954	
		ROAD WORK						
8	16.81	Scarifying the existing bituminous road surface to a depth of 50mm and disposal of scarified material within all lifts and lead upto 1 km (by mechanical means).	Sqm	4000.00	4.90		19600	
9	16.1	Preparation of subgrade by excavating earth to an avarage of 22.5 cm depth, dressing to camber and consolidation with road roller of 8-12 tonne capacity including making good the undulation etc. and disposal of surplus earth upto 50 meters	sqm	9600.00	139.40		1338240	

10	16.82.2	Construction of <b>granular sub-base</b> by providing close graded material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by trippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and comp[acting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.  With material conforming to Grade-II (size range 53 mm to 0.075mm)	cum	720.00	1077.15		775548	
		having CBR Value-25	Juill	, 20.00	1011.10		773346	
11	16.83	Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm ) to <b>Wet Mix Macadam</b> (WMM) specification including premixing the material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all leads & lifts, laying in uniform layers with mechanical paver finisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.	cum	960.00	1041.50		999840	
12	Non Schedule	Providing and applying prime coat with bitumen emulsion Grade SS-1 complying with IS:8887 on prepared surface of granular base including cleaning of road surface with compressed air and spraying primer at the rate of 0.80kg/sqm using pressure distributer as per clause 502 of MoRTH specifications complete.  On W.B.MW.M.M @0.80Kg/sqm	sqm	9600.00		53.47		513312
13	JKSoR derived Rate from 16.65.1	Providing and laying bituminous macadam using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by tippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in Charge.50 to 100mm average compacted thickness with bitumen of VG-10 @3.5% (percentage by weight of total mix) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	480.00	5917.98		2840630	
14	16.38.2	Providing and applying <b>Tack Coat</b> using hot straight run bitumen of grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and prepared the existing road surface as per specifications.		40000 05	10.15			
<u> </u>		On bitumen surface @0.50 kg/sqm	sqm	13600.00	42.10		572560	
15		Providing and laying <b>Bituminous concrete</b> using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	680.00	9004.58		6123114	
16	16.48	Providing <b>seal coat</b> of premixed fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing with road all complete.	sqm	13600.00	78.15		1062840	
17	Non Schedule	Cross drain Supply, transportation to site and laying of 300 mm dia mild steel pipe as directed by Engineer-in-charge (minimum thickness of pipe 4.50mm)	m	24.00		5500		132000
18	4.4.3	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with: 1:2:4 ( 1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	4.72	5877.50		27722	
19	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return walls, walls ( any thickness) including attached pilasters butteresses, plinth and string course fillets, kerbs and steps etc.  PCC	sqm	24.48	573.85		14048	
	I		24.11	_ =	2. 3.00		1-10-10	
		Side Drain  Earth work in excavation by manual means in trenches for foundations,						
20	2.8	drains, pipes, cables etc. (not exceeding 1.5 m in width) and for shafts, wells, cesspits and the like not exceeding 10 sqm on plan, including dressing of sides and ramming of bottoms lift upto 1.5 m, including getting out excavated earth and disposal of surplus excavated earth as directed:  Rate for a lead upto 25 meters beyond 1 meter from cutting edge						

		2.8.1. All kinds of soil : 2.8.2 Ordinary Rock	cum	1517.25 505.75	524.40 922.35	795646 466479	
			Culli	505.75	922.33	400479	
21	4.4.3	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)	cum	816.00	8577.50	6999240	
22	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return wall, walls (any thickness) including attached pilasters butteresses, plinth ans string coarse fillets, kerbs and steps etc.	sqm	8840.00	573.85	5072834	
		ROAD MARKINGS AND SIGN BOARDS					
23	16.58	Providing and fixing Glow studs of size 100x20mm made of heavy duty body shall be moulded ASA (Acrylic styrene Acryloretrite) or HIP (High impact Polystyrene) or ABS having electronically welded micro-prismatic lens with abrasion resistant coating as approved by Engineer-in-charge. The Glow stud shall support a load of 13635 kg tested in accordance with ASTM D4280. The slope of retro-reflective surface shall be 35 +/- 5 degrees to base. The reflective panels on both sides with at least 12cm of reflective area up each side. The luminance intensity should be as per the specification and shall be tested as described in ASTM I: 809 as recommended in BS : 873 part 4 : 1973. The studs shall be fixed to the road surface using the adhesive conforming to IS, as per procedure recommended by the manufacturer complete and as per direction of Engineer-in-charge	each	76	193.85	14646	
24	16.69	Providing and applying 2.5mm thick road marking strips (retro-reflective) of specified shade/colour using hot thermoplastic material by fully/semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour, T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and accordance with applicable specifications.	sqm	170.00	604.50	102765	
25	16.66	Manufacturing supplying and fixing retro reflective sign boards made up of 2mm thick aluminum sheet, face to be fully covered with high intensity encapsulated type heat activated retro reflective sheeting conforming to type-IV of ASTM-D-4956-01 in blue and silver white or other colour combination including subject matter, message (bi-lingual), symbols and borders etc. as per IRC: 67-2001, pasted on substrate by an adhesive backing which shall be activated by applying heat and pressure conforming to class -2 of ASTM-D-4956-01 and fixing the same with suitable sized aluminum alloy rivets @ 20cm c/c to back support frame of M.S. angle iron of size 25x25x3mm along with theft resistant measures mounted and fixed with 2 nos. M.S. angles of size 35x35x5mm to a vertical post made upto M.S. Tee section ISMT 50x50x6mm welded with base plate of size 100x100x5mm at the bottom end and including making holes in pipes, angle flats, providing and fixing M.S. message plate of required size steel work to be painted with two or more coats of synthetic enamel paint of required shade and of approved brand & manufacture over priming coat of zinc chromate yellow primer (vertical M.STee support to be painted in black and white colours). Backside of aluminum sheet to be painted with two or more coats of epoxy paint over and including appropriate priming coats including all leads and lifts etc. complete as per drawing, specification and direction of Engineer-in-charge.					
25.1	16.66.1	Mandatory/Regulatory sign boards of 900 mm diameter with part as	each	5.00	5795.50	28978	
25.2	16.66.2	length of 3750 mm  Cautionary/warning sign boards of equilateral triangular shape having each side of 900 mm support length of 3650mm.	each	5.00	4260.80	21304	
26	16.67.1	Manufacturing supplying and fixing retro reflective overhead signage boards made up of 2mm thick aluminum sheet, face to be fully covered with high intensity and encapsulated lens type heat activated retro reflective sheeting conforming to type-III of ASTM-D-4956-01 as approved by Engineer-in-charge; letters, borders etc. as per IRC: 67-2001 in silver white with blue colour background and with high intensity grade, pasted on substrate by pressure sensitive adhesive backing which shall be activated by applying pressure conforming to class -II of ASTM-D-4956-01 and fixing the same to the plate of structural frame work by means of suitable sized aluminum alloys, rivets or bolts and nuts @ 300mm c/c all along the periphery as well as in two vertical rows along with theft resistant measures including the cost of painting with two or more coats of epoxy paint in grey colour on the back side of aluminum sheet including appropriate priming coat. The rate includes the cost of rounding off the corners, lowering down the structural frame work from the gantry, fixing and erecting the same in position all complete as per drawing, specification and direction of Engineer-in-charge (Structural frame work including M.S. plate to be provided separately. Rectangular area of the sheet only shall be measured for payment):	each	1.00	5651.25	5651	
		FOOTPATH WORK					

27	Derived from JKSoR	Providing and laying 200 mm thick compacted bed of Stone soling including spreading, well ramming, consolidating including finishing smooth etc. complete as per direction of Engineer-in-charge		306.00	1396.82		427427	
28	4.9.2	Providing & fixing at or near ground level precast cement concrete in kerbs, edging etc as per approved patterns and setting in position with cement mortar 1:3 (1 cement:3 coarse sand) including the cost of required centring, shuttering and curing complete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)	cum	96.00	6213.80		596525	
29	4.4.5	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:3:6 (1 cement: 3 coarse sand: 6 graded stone aggregate 20 mm nominal size)	cum	144.00	4943.40		711850	
30	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return walls, walls (any thickness) including attached pilasters butteresses, plinth and string course fillets, kerbs and steps etc.	sqm	160.00	573.85		91816	
31	16.74	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grade made by block making machine with strong vibratory compaction and of approved size and design/shape laid in required colour and pattern over and including 50mm thick compacted bed of fine sand, filling the joints with coarse sand etc. all complete as per direction of Engineer-in-charge.	sqm	1440.00	770.60		1109664	
						Total (Rs)	31155487	
	<u> </u>	7788872	<u> </u>					
			38944359	645312				
		JK SoR + NS						
		Add contingencies @3%				Total (Rs)	1187690 40777361	
			Fstimat	ed cost of th	e work incl	usive of GST	40777361	
		Estimated c					3,57,53,933	
	1	1		•	• • •	,	-,0.,00,000	

Name of	f work : Cons	DETAILED ESTIMA truction of link road from GURU House to SPON HOUSE, Leh UT of						
S.N0	Reference of Rates JK SOR 2020 Code no.	DESCRIPTION	Unit	Qty		Rate (Rs)		Amount (Rs
		Retaining Wall			JK SoR	NS	JK SoR	NS
1	2.7.1	Earth work in bulk excavation by mechanical means (hydraulic excavator) over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10m/2 on plan) including disposal of excavated earth lead upto 50m and lift upto 1.5m, as directed by Engineer-in-Charge						
		All kinds of soil :	cum	225.00	188.75		42469	
2	2.11	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead upto 50m and lift upto 1.5 m.	cum	101.25	198.70		20118	
3	4.4.7	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size)  Below Retaining Wall (PCC)		31.50	4419.85		139225	
		Delow Retaining Wall (PCC)	Cum	31.50	4419.65		139225	
4	4.5.3	Providing and laying cement concrete in retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchors blocks, plain window sills, fillets etc upto floor V level, including curing but excluding the cost of centring, shuttering and finishing with.  1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)						
		Coping over retaining wall	cum	4.50	7542.40		33941	
5	7.1.1	Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20mm nominal size) upto plinth level and curing complete with :						
		Cement mortar 1:6 (1 cement : 6 coarse sand).	cum	255.00	4435.25		1130989	
6	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return wall, walls (any thickness) including attached pilasters butteresses, plinth ans string coarse fillets, kerbs and steps etc.						
		PCC for retaining wall & for Coping	sqm	60.00	573.85		34431	
7	16.1	ROAD WORK  Preparation of subgrade by excavating earth to an avarage of 22.5 cm depth, dressing to camber and consolidation with road roller of 8-12 tonne capacity including making good the undulation etc. and disposal of surplus earth upto 50 meters		1160.00	139.40		161704	
8	16.82.2	Construction of <b>granular sub-base</b> by providing close graded material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by trippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and comp[acting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.						
		With material conforming to Grade-II (size range 53 mm to 0.075mm) having CBR Value-25	cum	60.00	1077.15		64629	
9	16.83	Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm ) to <b>Wet Mix Macadam</b> (WMM) specification including premixing the material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all leads & lifts, laying in uniform layers with mechanical paver finisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.	cum	77.00	1041.50		80196	

10	Non Schedule	Providing and applying prime coat with bitumen emulsion Grade SS-1 complying with IS:8887 on prepared surface of granular base including cleaning of road surface with compressed air and spraying primer at the rate of 0.80kg/sqm using pressure distributer as per clause 502 of MoRTH specifications complete.	sqm	770.00		53.47		41172
		On W.B.M/W.M.M @ 0.80Kg/sqm						
11	JKSoR derived Rate from 16.65.1	Providing and laying bituminous macadam using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by tippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in Charge.50 to 100mm average compacted thickness with bitumen of VG-10 @3.5% (percentage by weight of total mix) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	37.50	5917.98		221924	
12	16.38.2	Providing and applying <b>Tack Coat</b> using hot straight run bitumen of grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and prepared the existing road surface as per specifications.		750.00	10.10			
		On bitumen surface @0.50 kg/sqm	sqm	750.00	42.10		31575	
13		Providing and laying <b>Bituminous concrete</b> using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	30.00	9004.58		270137	
14	16.48	Providing <b>seal coat</b> of premixed fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing with road all complete.	sqm	750.00	78.15		58613	
	1			1				
15	Non Schedule	Cross drain Supply, transportation to site and laying of 300 mm dia mild steel pipe as directed by Engineer-in-charge (minimum thickness of pipe 4.50mm)	m	8.00		5500		44000
16	4.4.3	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with: 1:2:4 ( 1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	1.37	5877.50		8058	
17	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return walls, walls ( any thickness) including attached pilasters butteresses, plinth and string course fillets, kerbs and steps etc.		0.40	570.05		4000	
		PCC	sqm	8.16	573.85		4683	
18	16.58	ROAD MARKINGS AND SIGN BOARDS  Providing and fixing Glow studs of size 100x20mm made of heavy duty body shall be moulded ASA (Acrylic styrene Acryloretrite) or HIP (High impact Polystyrene) or ABS having electronically welded micro-prismatic lens with abrasion resistant coating as approved by Engineer-in-charge. The Glow stud shall support a load of 13635 kg tested in accordance with ASTM D4280. The slope of retro-reflective surface shall be 35 +/-5 degrees to base. The reflective panels on both sides with at least 12cm of reflective area up each side. The luminance intensity should be as per the specification and shall be tested as described in ASTM I: 809 as recommended in BS: 873 part 4: 1973. The studs shall be fixed to the road surface using the adhesive conforming to IS, as per procedure recommended by the manufacturer complete and as per direction of Engineer-in-charge	each	4.00	193.85		775	
19	16.69	Providing and applying 2.5mm thick road marking strips (retro-reflective) of specified shade/colour using hot thermoplastic material by fully/semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour, T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and accordance with applicable specifications.	sqm	10.00	604.50		6045	

20	16.66	Manufacturing supplying and fixing retro reflective sign boards made up of 2mm thick aluminum sheet, face to be fully covered with high intensity encapsulated type heat activated retro reflective sheeting conforming to type-IV of ASTM-D-4956-01 in blue and silver white or other colour combination including subject matter, message (bi-lingual), symbols and borders etc. as per IRC: 67-2001, pasted on substrate by an adhesive backing which shall be activated by applying heat and pressure conforming to class -2 of ASTM-D-4956-01 and fixing the same with suitable sized aluminum alloy rivets @ 20cm c/c to back support frame of M.S. angle iron of size 25x25x3mm along with theft resistant measures mounted and fixed with 2 nos. M.S. angles of size 35x35x5mm to a vertical post made upto M.S. Tee section ISMT 50x50x6mm welded with base plate of size 100x100x5mm at the bottom end and including making holes in pipes, angle flats, providing and fixing M.S. message plate of required size steel work to be painted with two or more coats of synthetic enamel paint of required shade and of approved brand & manufacture over priming coat of zinc chromate yellow primer (vertical M.STee support to be painted with two or more coats of aluminum sheet to be painted with two or more coats of epoxy paint over and including appropriate priming coats including alleads and lifts etc. complete as per drawing, specification and direction of Engineer-in-charge.						
20.1	16.66.1	Mandatory/Regulatory sign boards of 900 mm diameter with part as length of 3750 mm	each	1.00	5795.50		5796	
20.2	16.66.2	Cautionary/warning sign boards of equilateral triangular shape having each side of 900 mm support length of 3650mm.	each	1.00	4260.80		4261	
		FOOTPATH WORK						
		FOOTFATH WORK						
13	Derived from JKSoR	Providing and laying 200 mm thick compacted bed of Stone soling including spreading, well ramming, consolidating including finishing smooth etc. complete as per direction of Engineer-in-charge	sqm	18.00	1396.82		25143	
14	4.9.2	Providing & fixing at or near ground level precast cement concrete in kerbs, edging etc as per approved patterns and setting in position with cement mortar 1:3 (1 cement:3 coarse sand) including the cost of required centring, shuttering and curing complete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)	cum	6.00	6213.80		37283	
15	4.4.5	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:3:6 (1 cement: 3 coarse sand: 6 graded stone aggregate 20 mm nominal size)	cum	9.00	4943.40		44491	
16	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return walls, walls ( any thickness) including attached pilasters butteresses, plinth and string course fillets, kerbs and steps etc.	sqm	10.00	573.85		5739	
17	16.74	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grade made by block making machine with strong vibratory compaction and of approved size and design/shape laid in required colour and pattern over and including 50mm thick compacted bed of fine sand, filling the joints with coarse sand etc. all complete as per direction of Engineer-in-charge.	sqm	90.00	770.60		69354	
		Add 25% approximate cost index on JK Schedule it	tems			Total (Rs)	2319569 579892	
		Add 23 /0 approximate cost index on 3N Schedule in	CIIIO				2899461	85172
					Fotal (Rs) J	IK SoR + NS	2984633	
		Add contingencies @5%				Total (Rs)	149232 3133865	
						lusive of GST	3133865	
		@ 14.05%)	27,47,799					

		DETAILED ESTIMA	ΓE					
Name of	f work : Con Reference	struction of link road from Jingmal to Ichangri , Leh UT of Ladakh		1			<u> </u>	
S.N0	of Rates	DESCRIPTION	Unit	Qty	Rate (Rs)		Amount (Rs)	
	110.				JK SoR	NS	JK SoR	NS
		ROAD WORK						
1	16.1	Preparation of subgrade by excavating earth to an avarage of 22.5 cm depth, dressing to camber and consolidation with road roller of 8-12 tonne capacity including making good the undulation etc. and disposal of surplus earth upto 50 meters	Sqm	2900.00	139.40		404260	
2	16.82.2	Construction of <b>granular sub-base</b> by providing close graded material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by trippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge. (in Two Layer)						
		With material conforming to Grade-II (size range 53 mm to 0.075mm) having CBR Value-25	Cum	150.00	1077.15		161573	
3	16.83	Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm) to <b>Wet Mix Macadam</b> (WMM) specification including premixing the material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all leads & lifts, laying in uniform layers with mechanical paver finisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.	Cum	192.50	1041.50		200489	
4	Non Schedule	Providing and applying prime coat with bitumen emulsion Grade SS-1 complying with IS:8887 on prepared surface of granular base including cleaning of road surface with compressed air and spraying primer at the rate of 0.80kg/sqm using pressure distributer as per clause 502 of MoRTH specifications complete.						
		On WMM surface @0.80kg/sqm	Sqm	1925.00		53.47		102930.00
5	JKSoR derived Rate from 16.63.1	Providing and laying <b>bituminous macadam</b> using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by trippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge.50 to 100mm average compacted thickness with bitumen of VG-10 @3.5% (percentage by weight of total mix) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	93.75	5917.98		554811	
6	16.38.2	Providing and applying <b>Tack Coat</b> using hot straight run bitumen of grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and prepared the existing road surface as per specifications.						
		On bitumen surface @0.50 kg/sqm	sqm	1875.00	42.10		78938	
7	JKSoR derived Rate from 16.65.1	Providing and laying <b>Bituminous concrete</b> using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	Cum	75.00	9004.58		675344	
8	16.48	Providing <b>seal coat</b> of premixed fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing with road all complete.	sqm	1875.00	78.15		146531	
-		Cross Drains			-			-
		Cross Drains						

9	NS	Supply, transportation to site and laying of 300 mm dia mild steel pipe as directed by Engineer-in-charge (minimum thickness of pipe 4.50mm)	m	12.00		5500.00		66000
10	4.4.3	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:2:4 ( 1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	Cum	2.21	5877.45		12974	
11	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return wall, walls ( any thickness) including attached pilasters butteresses, plinth ans string coarse fillets, kerbs and steps etc.	sqm	12.24	573.85		7024	
		ROAD MARKINGS AND SIGN BOARDS						
12	16.58	Providing and fixing Glow studs of size 100x20mm made of heavy duty body shall be moulded ASA (Acrylic styrene Acryloretrite) or HIP (High impact Polystyrene) or ABS having electronically welded microprismatic lens with abrasion resistant coating as approved by Engineer-in-charge. The Glow stud shall support a load of 13635 kg tested in accordance with ASTM D4280. The slope of retro-reflective surface shall be 35 +/- 5 degrees to base. The reflective panels on both sides with at least 12cm of reflective area up each side. The luminance intensity should be as per the specification and shall be tested as described in ASTM I: 809 as recommended in BS: 873 part 4: 1973. The studs shall be fixed to the road surface using the adhesive conforming to IS, as per procedure recommended by the manufacturer complete and as per direction of Engineer-in-charge	each	11	193.85		2154	
13	16.69	Providing and applying 2.5mm thick road marking strips (retro-reflective) of specified shade/colour using hot thermoplastic material by fully/semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour, T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and accordance with applicable specifications.	sqm	25.00	604.50		15113	
14	16.66	Manufacturing supplying and fixing retro reflective sign boards made up of 2mm thick aluminum sheet, face to be fully covered with high intensity encapsulated type heat activated retro reflective sheeting conforming to type-IV of ASTM-D-4956-01 in blue and silver white or other colour combination including subject matter, message (bi-lingual), symbols and borders etc. as per IRC: 67-2001, pasted on substrate by an adhesive backing which shall be activated by applying heat and pressure conforming to class -2 of ASTM-D-4956-01 and fixing the same with suitable sized aluminum alloy rivets @ 20cm c/c to back support frame of M.S. angle iron of size 25x25x3mm along with theft resistant measures mounted and fixed with 2 nos. M.S. angles of size 35x35x5mm to a vertical post made upto M.S. Tee section ISMT 50x50x6mm welded with base plate of size 100x100x5mm at the bottom end and including making holes in pipes, angle flats, providing and fixing M.S. message plate of required size steel work to be painted with two or more coats of synthetic enamel paint of required shade and of approved brand & manufacture over priming coat of zinc chromate yellow primer (vertical M.STee support to be painted in black and white colours). Backside of aluminum sheet to be painted with two or more coats of epoxy paint over and including appropriate priming coats including all leads and lifts etc. complete as per drawing, specification and direction of Engineer-in-charge.						
14.1	16.66.1	Mandatory/Regulatory sign boards of 900 mm diameter with part as length of 3750 mm	each	1.00	5795.50		5796	
14.2	16.66.2	Cautionary/warning sign boards of equilateral triangular shape having each side of 900 mm support length of 3650mm.	each	1.00	4260.80		4261	
		FOOTPATH WORK						
15	Derived from JKSoR	Providing and laying 200 mm thick compacted bed of Stone soling including spreading, well ramming, consolidating including finishing smooth etc. complete as per direction of Engineer-in-charge	sqm	45.00	1396.82		62857	
16	4.9.2	Providing & fixing at or near ground level precast cement concrete in kerbs, edging etc as per approved patterns and setting in position with cement mortar 1:3 (1 cement:3 coarse sand) including the cost of required centring, shuttering and curing complete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)	cum	15.00	6213.80		93207	

17	4.4.5	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	cum	22.50	4943.40		111227	
18	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return walls, walls (any thickness) including attached pilasters butteresses, plinth and string course fillets, kerbs and steps etc.	sqm	25.00	573.85		14346	
19	16.74	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grade made by block making machine with strong vibratory compaction and of approved size and design/shape laid in required colour and pattern over and including 50mm thick compacted bed of fine sand, filling the joints with coarse sand etc. all complete as per direction of Engineer-in-charge.	sqm	225.00	770.60		173385	
						Total (Rs)	2724290	
		Add 25% approximate cost index on JK Schedule its	ems			, ,	681073	
							3405363	168930
				To	otal (Rs) Ji	( SoR + NS	3574293	
		Add contingencies @5%					178715	
	Total (Rs)							
	Estimated cost of the work inclusive of GST							
		Estimated cost	put to Te	ender ( Excl	uding GST	@ 14.05%)	32,90,668	

		DETAILED EST	IMATE					
Name o	of work : Co	nstruction of link road from Lamdon school to Nawang Jago,	Leh UT of	Ladakh				
S.NO	Reference of Rates	DESCRIPTION	Unit	Quantity		Rate (Rs)	Ame	ount (Rs)
					JK SoR	NS	JK SoR	NS
		ROAD WORK						
1	16.81	Scarifying the existing bituminous road surface to a depth of 50mm and disposal of scarified material within all lifts and lead upto 1km (by mechanical means).		200	4.9		980	
2	16.38.2	Providing and applying <b>Tack Coat</b> using hot straight run bitumen of grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and prepared the existing road surface as per specifications.						
		On bitumen surface @0.50 kg/sqm	sqm	200	42.1		8420	
			·					
3	JKSoR derived Rate from 16.65.1	Providing and laying <b>Bituminous concrete</b> using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge:: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	Cum	10	9004.58		90045.8	
4	16.48	Providing <b>seal coat</b> of premixed fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing with road all complete.	eam	200	78.15		15630	
						Total (Rs)	115075.8	
		Add 25% approximate cost index on JK S	chedule i	items			28768.95	
							143844.75	
						Total (Rs)	143844.75	
		Add contingencies @5%					7192.2375	
						Total (Rs)	151036.9875	
				stimated cost of			151037	
		Estim	nated cost p	out to Tender (E	xcluding GST	@ 14.05%)	1,32,431	

DETAILED ESTIMATE

Name of work : Construction of paver block road from langto House to Tikchupa &Chakzot pa House , Leh UT of Ladakh

S.NO	Reference of Rates JK SOR 2020 Code no.	DESCRIPTION	Unit	Qty	Rate (Rs)		An	nount (Rs)
					JK SoR	NS	JK SoR	NS
		Road Works						
1	16.1	Preparation of subgrade by excavating earth to an avarage of 22.5 cm depth, dressing to camber and consolidation with road roller of 8-12 tonne capacity including making good the undulation etc. and disposal of surplus earth upto 50 meters.	Cam	1110.00	139.4		154734	
2	Derived from JKSoR	Providing and laying 200 mm thick compacted bed of Stone soling including spreading, well ramming, consolidating including finishing smooth etc. complete as per direction of Engineer-in-charge	cum	150.00	776.57		116486	
3	4.4.3	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size	Cum	75.00	5877.45		440809	
4	4.7.1	Providing and laying cement concrete in kerbs, steps and the like at or near ground level including curing, excluding the cost of centring, shuttering, and finishing.  1:1½:3(1 cement :1½ coarse sand :3 graded stone aggregate 20 mm nominal size)	Cum	31.80	6624.8		210669	
5	4.6.2	Centering and shuttering including strutting, propping etc. and removal of form work for: Retaining walls, return walls, walls (any thickness) including attached pilasters buttresses, plinth and string course fillets, kerbs and steps etc	sqm	344.00	573.85		197404	
6	16.94	Providing and laying factory made chamfered edge Cement Concrete paver blocks in footpath, parks, lawns, drive ways or light traffic parking etc, of required strength, thickness & size/ shape, made by table vibratory method using PU mould, laid in required colour & pattern over 50mm thick compacted bed of sand, compacting and proper embedding/laying of inter locking paver blocks into the sand bedding layer through vibratory compaction by using plate vibrator, filling the joints with sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand complete all as per direction of Engineer-in-Charge.	sqm	750.00	864.25		648188	
		80 mm thick C.C. paver block of M-30 grade with approved color design and pattern.						
		Cross drain						
7	Non Schedule	Supply, transportation to site and laying of 300 mm dia mild steel pipe as directed by Engineer-in-charge (minimum thickness of pipe 4.50mm)	m	16.00		5500		88000
8	4.4.3	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with: 1:2:4 ( 1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)		3.04	5877.50		17890	

4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return walls, walls ( any thickness) including attached pilasters butteresses, plinth and string course fillets, kerbs and steps etc.  PCC	sqm	16.32	573.85	9365	
	011 0					
	Side Drain					
2.8	Earth work in excavation by manual means in trenches for foundations, drains, pipes, cables etc. (not exceeding 1.5 m in width) and for shafts, wells, cesspits and the like not exceeding 10 sqm on plan, including dressing of sides and ramming of bottoms lift upto 1.5 m, including getting out excavated earth and disposal of surplus excavated earth as directed: Rate for a lead upto 25 meters beyond 1meter from cutting edge					
	3 - 3					
	2.8.1. All kinds of soil:	cum	80.25	524.40	46803	
<b>†</b>	2.0.2 Stuffary Noon	Juli	20.70	522.00	2,440	
4.4.3	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:					
	1:2:4 ( 1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	48.00	8577.50	411720	
4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return wall, walls (any thickness) including attached pilasters butteresses, plinth ans string coarse fillets, kerbs and steps etc.	sqm	520.00	573.85	298402	
	FOOTPATH WORK					
Derived from JKSoR	Providing and laying 200 mm thick compacted bed of Stone soling including spreading, well ramming, consolidating including finishing smooth etc. complete as per direction of Engineer-in-charge	sqm	18.00	1396.82	25143	
4.9.2	Providing & fixing at or near ground level precast cement concrete in kerbs, edging etc as per approved patterns and setting in position with cement mortar 1:3 (1 cement:3 coarse sand) including the cost of required centring, shuttering and curing complete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)	cum	6.00	6213.80	37283	
4.4.5	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:3:6 (1 cement: 3 coarse sand: 6 graded stone aggregate 20 mm nominal size)	cum	9.00	4943.40	44491	
4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return walls, walls ( any thickness) including attached pilasters butteresses, plinth and string course fillets, kerbs and steps etc.	sqm	10.00	573.85	5739	
	2.8  4.4.3  4.6.2  Derived from JKSoR  4.9.2	etc. and removal of formwork for: Retaining wall, return walls, walls (any thickness) including attached pilasters butteresses, plinth and string course fillets, kerbs and steps etc.  PCC  Side Drain  Earth work in excavation by manual means in trenches for foundations, drains, pipes, cables etc. (not exceeding 1.5 m in width) and for shafts, wells, cesspits and the like not exceeding 10 sqm on plan, including dressing of sides and ramming of bottoms lift upto 1.5 m, including getting out excavated earth and disposal of surplus excavated earth as directed. Rate for a lead upto 25 meters beyond 1meter from cutting edge  2.8.1 All kinds of soil: 2.8.2 Ordinary Rock  Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:2.4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)  Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return wall, walls (any thickness) including attached pilasters butteresses, plinth ans string coarse fillets, kerbs and steps etc.  FOOTPATH WORK  Providing and laying 200 mm thick compacted bed of Stone soling including spreading, well ramming, consolidating including finishing smooth etc. complete as per direction of Engineer-in-charge  Providing & fixing at or near ground level precast cement concrete in kerbs, edging etc as per approved patterns and setting in position with cement mortar 1:3 (1 cement:3 coarse sand) including the cost of required centring, shuttering and curing complete  1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)  Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:3:6 (1 cement: 3 coarse sand: 6 graded stone aggregate 20 mm nominal size)  Centering and shuttering including strutting, propping etc. and removal of formwork for: Retai	etc. and removal of formwork for: Retaining walf, return walls, walls (any thickness) including attached pliasters butteresses, plinth and string course fillets, kerbs and steps etc. PCC sqm  Side Drain  Earth work in excavation by manual means in trenches for foundations, drains, pipes, cables etc. (not exceeding 1.5 m in width) and for shafts, wells, cesspits and the like not exceeding 10 sqm on plan, including dressing of sides and ramming of bottoms lift upto 1.5 m, including getting out excavated earth and disposal of surplus excavated earth as directed: Rate for a lead upto 25 meters beyond 1meter from cutting edge  2.8.1. All kinds of soil: cum 2.8.2 Ordinary Rock cum  Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:2.4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)  Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return wall, walls (any thickness) including attached pliasters butteresses, plinth ans string coarse fillets, kerbs and steps etc.  FOOTPATH WORK  Providing & fixing at or near ground level precast cement concrete in kerbs, edging etc as per approved patterns and setting in position with cement mortar 1:3 (1 cement:3 coarse sand) including the cost of required centring, shuttering and curing complete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)  Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:3:6 (1 cement: 3 coarse sand: 6 graded stone aggregate 20 mm nominal size)  Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return walls, walls (any thickness) including attached pliasters butteresses, plinth and string course fillets, was made and removal of formwork for: Retaining wall, return	tetc. and removal of formwork for: Retaining wall, return walls, walls (any thickness) including attached pilasters butteresses, plinth and string course fillets, kerbs and steps etc.  PCC sqm 16.32  Side Drain  Earth work in excavation by manual means in trenches for foundations, drains, pipes, cables etc. (not exceeding 1.5 m in width) and for shafts, wells, cesspits and the like not exceeding 10 sqm on plan, including dressing of sides and ramming of bottoms lift upto 1.5 m, including getting out excavated earth and disposal of surplus exexavated earth and disposal of surplus executed earth and executed earth and disposal executed earth and disposal executed earth and disposal executed earth and executed earth exe	etc. and removal of formvork for: Retaining wall, return walls, walls (any thickness) including attached plasters butteresses, plinth and string course fillets, webs and steps etc.    Side Drain	etc. and removal of formwork for: Retaining well, return walls, walls of synthickness) including attached pilasters butteresses, plinth and string course fillets, kerbs and steps etc.  PCC sqm 16.32 573.85 9365  Side Drain  Earth work in excavation by manual means in trenches for foundations, drains, pipes, cables etc. (not exceeding 15 m in width) and for sharts, wells, cesspits and the like not exceeding 10 synthy in the control of the pipes of synthy in the pipe shart in t

N	· · · · · · · · · · · · · · · · · · ·	DETAILED ESTIMATI						
Name o	Reference	struction of link road from Main road to Horzey masjid , Leh UT of La	adakh					
S.N0	of Rates	DESCRIPTION	Unit	Qty		Rate (Rs)	A	mount (Rs)
	110.				JK SoR	NS	JK SoR	NS
		ROAD WORK						
1	16.1	Preparation of subgrade by excavating earth to an avarage of 22.5 cm depth, dressing to camber and consolidation with road roller of 8-12 tonne capacity including making good the undulation etc. and disposal of surplus earth upto 50 meters	Sqm	1392.00	139.40		194045	
2	16.82.2	Construction of <b>granular sub-base</b> by providing close graded material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by trippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge. (in Two Layer)						
		With material conforming to Grade-II (size range 53 mm to 0.075mm) having CBR Value-25	Cum	72.00	1077.15		77555	
3	16.83	Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm) to <b>Wet Mix Macadam</b> (WMM) specification including premixing the material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all leads & lifts, laying in uniform layers with mechanical paver finisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.	Cum	92.40	1041.50		96235	
		Providing and applying primes seek with hiterary and him or a control of the cont						
4	Non Schedule	Providing and applying primer coat with bitumen emulsion Grade SS-1 complying with IS:8887 on prepared surface of granular base including cleaning of road surface with compressed air and spraying primer at the rate of 0.80kg/sqm using pressure distributer as per clause 502 of MoRTH specifications complete.						
		On WMM surface @0.80kg/sqm	Sqm	924.00		53.47		49406.00
5	JKSoR derived Rate from 16.63.1	Providing and laying <b>bituminous macadam</b> using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by trippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge.50 to 100mm average compacted thickness with bitumen of VG-10 @3.5% (percentage by weight of total mix) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	45.00	5917.98		266309	
6	16.38.2	Providing and applying <b>Tack Coat</b> using hot straight run bitumen of grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and prepared the existing road surface as per specifications.						
		On bitumen surface @0.50 kg/sqm	sqm	900.00	42.10		37890	
7	JKSoR derived Rate from 16.65.1	Providing and laying <b>Bituminous concrete</b> using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with power finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	Cum	36.00			324165	
8	16.48	Providing <b>seal coat</b> of premixed fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing with road all complete.	sqm	900.00	78.15		70335	

		Cross Drains						
9	NS	Supply, transportation to site and laying of 300 mm dia mild steel pipe as directed by Engineer-in-charge (minimum thickness of pipe 4.50mm)	m	8.00		5500.00		44000
10	4.4.3	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:2:4 ( 1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	Cum	1.37	5877.45		8058	
11	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return wall, walls ( any thickness) including attached pilasters butteresses, plinth ans string coarse fillets, kerbs and steps etc.	sqm	8.16	573.85		4683	
		ROAD MARKINGS AND SIGN BOARDS						
12	16.58	Providing and fixing Glow studs of size 100x20mm made of heavy duty body shall be moulded ASA (Acrylic styrene Acryloretrite) or HIP (High impact Polystyrene) or ABS having electronically welded micro-prismatic lens with abrasion resistant coating as approved by Engineer-in-charge. The Glow stud shall support a load of 13635 kg tested in accordance with ASTM D4280. The slope of retro-reflective surface shall be 35 +/- 5 degrees to base. The reflective panels on both sides with at least 12cm of reflective area up each side. The luminance intensity should be as per the specification and shall be tested as described in ASTM I: 809 as recommended in BS: 873 part 4: 1973. The studs shall be fixed to the road surface using the adhesive conforming to IS, as per procedure recommended by the manufacturer complete and as per direction of Engineer-in-charge	each	5	193.85		1034	
13	16.69	Providing and applying 2.5mm thick road marking strips (retro-reflective) of specified shade/colour using hot thermoplastic material by fully/semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour, T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and accordance with applicable specifications.	sqm	12.00	604.50		7254	
14	16.66	Manufacturing supplying and fixing retro reflective sign boards made up of 2mm thick aluminum sheet, face to be fully covered with high intensity encapsulated type heat activated retro reflective sheeting conforming to type-IV of ASTM-D-4956-01 in blue and silver white or other colour combination including subject matter, message (bi-lingual), symbols and borders etc. as per IRC: 67-2001, pasted on substrate by an adhesive backing which shall be activated by applying heat and pressure conforming to class -2 of ASTM-D-4956-01 and fixing the same with suitable sized aluminum alloy rivets @ 20cm c/c to back support frame of M.S. angle iron of size 25x25x3mm along with theft resistant measures mounted and fixed with 2 nos. M.S. angles of size 35x35x5mm to a vertical post made upto M.S. Tee section ISMT 50x50x6mm welded with base plate of size 100x100x5mm at the bottom end and including making holes in pipes, angle flats, providing and fixing M.S. message plate of required size steel work to be painted with two or more coats of synthetic enamel paint of required shade and of approved brand & manufacture over priming coat of zinc chromate yellow primer (vertical M.STee support to be painted in black and white colours). Backside of aluminum sheet to be painted with two or more coats of epoxy paint over and including appropriate priming coats including all leads and lifts etc. complete as per drawing, specification and direction of Engineer-in-charge.						
14.1	16.66.1	Mandatory/Regulatory sign boards of 900 mm diameter with part as length of 3750 mm	each	1.00	5795.50		5796	
14.2	16.66.2	Cautionary/warning sign boards of equilateral triangular shape having each side of 900 mm support length of 3650mm.	each	1.00	4260.80		4261	
		FOOTPATH WORK						
15	Derived from JKSoR	Providing and laying 200 mm thick compacted bed of Stone soling including spreading, well ramming, consolidating including finishing smooth etc. complete as per direction of Engineer-in-charge	sqm	21.60	1396.82		30171	

16	4.9.2	Providing & fixing at or near ground level precast cement concrete in kerbs, edging etc as per approved patterns and setting in position with cement mortar 1:3 (1 cement:3 coarse sand) including the cost of required centring, shuttering and curing complete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)	cum	7.20	6213.80		44739	
17	4.4.5	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:3:6 (1 cement: 3 coarse sand: 6 graded stone aggregate 20 mm nominal size)	cum	10.80	4943.40		53389	
18	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return walls, walls (any thickness) including attached pilasters butteresses, plinth and string course fillets, kerbs and steps etc.	sqm	12.00	573.85		6886	
19	16.74	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grade made by block making machine with strong vibratory compaction and of approved size and design/shape laid in required colour and pattern over and including 50mm thick compacted bed of fine sand, filling the joints with coarse sand etc. all complete as per direction of Engineer-in-charge.	sqm	108.00	770.60		83225	
	•		•	•		Total (Rs)	1316030	
		Add 25% approximate cost index on JK Schedule it	ems				329008 1645038	93406
	Total (Rs) JK SoR + NS						1738444	93406
	Add contingencies @5%							
Total (Rs)							1825366	
	Estimated cost of the work inclusive of GS							
		Estimated cos	t put to T	ender ( Excl	uding GST	@ 14.05%)	16,00,496	

		DETAILED ESTIMAT						
Name o	of work : Co	onstruction of link road from Community hallI to Mitik House,	Leh UT	of Ladakh I			<u> </u>	
S.N0	of Rates JK SOR 2020 Code	DESCRIPTION	Unit	Qty		Rate (Rs)	Ai	mount (Rs)
	no.				JK SoR	NS	JK SoR	NS
		ROAD WORK						
1	16.1	Preparation of subgrade by excavating earth to an avarage of 22.5 cm depth, dressing to camber and consolidation with road roller of 8-12 tonne capacity including making good the undulation etc. and disposal of surplus earth upto 50 meters	Sqm	800.00	139.40		111520	
2	16.82.2	Construction of <b>granular sub-base</b> by providing close graded material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by trippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge. (in Two Layer)						
		With material conforming to Grade-II (size range 53 mm to 0.075mm) having CBR Value-25	Cum	60.00	1077.15		64629	
3	16.83	Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm) to <b>Wet Mix Macadam</b> (WMM) specification including premixing the material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all leads & lifts, laying in uniform layers with mechanical paver finisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.	Cum	77.00	1041.50		80196	
		Providing and applying primer coat with hitumen acculation Costs 2004						
4	Non Schedule	Providing and applying primer coat with bitumen emulsion Grade SS-1 complying with IS:8887 on prepared surface of granular base including cleaning of road surface with compressed air and spraying primer at the rate of 0.80kg/sqm using pressure distributer as per clause 502 of MoRTH specifications complete.						
		On WMM surface @0.80kg/sqm	Sqm	770.00		53.47		41172.00
5	JKSoR derived Rate from 16.63.1	Providing and laying <b>bituminous macadam</b> using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by trippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge.50 to 100mm average compacted thickness with bitumen of VG-10 @3.5% (percentage by weight of total mix) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.		37.50	5917.98		221924	
6	16.38.2	Providing and applying <b>Tack Coat</b> using hot straight run bitumen of grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and prepared the existing road surface as per specifications.						
		On bitumen surface @0.50 kg/sqm	sqm	750.00	42.10		31575	
7	JKSoR derived Rate from 16.65.1	Providing and laying <b>Bituminous concrete</b> using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	Cum	30.00			270137	
8	16.48	Providing <b>seal coat</b> of premixed fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing with road all complete.	sqm	750.00	78.15		58613	

		Cross Drains						
9	NS	Supply, transportation to site and laying of 300 mm dia mild steel pipe as directed by Engineer-in-charge (minimum thickness of pipe 4.50mm)	m	8.00		5500.00		44000
10	4.4.3	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:2:4 ( 1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	Cum	1.37	5877.45		8058	
11	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return wall, walls ( any thickness) including attached pilasters butteresses, plinth ans string coarse fillets, kerbs and steps etc.	sqm	8.16	573.85		4683	
		ROAD MARKINGS AND SIGN BOARDS						
12	16.58	Providing and fixing Glow studs of size 100x20mm made of heavy duty body shall be moulded ASA (Acrylic styrene Acryloretrite) or HIP (High impact Polystyrene) or ABS having electronically welded micro-prismatic lens with abrasion resistant coating as approved by Engineer-in-charge. The Glow stud shall support a load of 13635 kg tested in accordance with ASTM D4280. The slope of retro-reflective surface shall be 35 +/- 5 degrees to base. The reflective panels on both sides with at least 12cm of reflective area up each side. The luminance intensity should be as per the specification and shall be tested as described in ASTM I: 809 as recommended in BS: 873 part 4: 1973. The studs shall be fixed to the road surface using the adhesive conforming to IS, as per procedure recommended by the manufacturer complete and as per direction of Engineer-in-charge	each	4	193.85		862	
13	16.69	Providing and applying 2.5mm thick road marking strips (retro-reflective) of specified shade/colour using hot thermoplastic material by fully/semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour, T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and accordance with applicable specifications.	sqm	10.00	604.50		6045	
14	16.66	Manufacturing supplying and fixing retro reflective sign boards made up of 2mm thick aluminum sheet, face to be fully covered with high intensity encapsulated type heat activated retro reflective sheeting conforming to type-IV of ASTM-D-4956-01 in blue and silver white or other colour combination including subject matter, message (bi-lingual), symbols and borders etc. as per IRC: 67-2001, pasted on substrate by an adhesive backing which shall be activated by applying heat and pressure conforming to class -2 of ASTM-D-4956-01 and fixing the same with suitable sized aluminum alloy rivets @ 20cm c/c to back support frame of M.S. angle iron of size 25x25x3mm along with theft resistant measures mounted and fixed with 2 nos. M.S. angles of size 35x35x5mm to a vertical post made upto M.S. Tee section ISMT 50x50x6mm welded with base plate of size 100x100x5mm at the bottom end and including making holes in pipes, angle flats, providing and fixing M.S. message plate of required size steel work to be painted with two or more coats of synthetic enamel paint of required shade and of approved brand & manufacture over priming coat of zinc chromate yellow primer (vertical M.STee support to be painted in black and white colours). Backside of aluminum sheet to be painted with two or more coats of epoxy paint over and including appropriate priming coats including all leads and lifts etc. complete as per drawing, specification and direction of Engineer-in-charge.						
14.1	16.66.1	Mandatory/Regulatory sign boards of 900 mm diameter with part as length of 3750 mm	each	1.00	5795.50		5796	
14.2	16.66.2	Cautionary/warning sign boards of equilateral triangular shape having each side of 900 mm support length of 3650mm.	each	1.00	4260.80		4261	
		FOOTPATH WORK						
15	Derived from JKSoR	Providing and laying 200 mm thick compacted bed of Stone soling including spreading, well ramming, consolidating including finishing smooth etc. complete as per direction of Engineer-in-charge	sqm	18.00	1396.82		25143	

		Estimated cos					1467961 <b>12,87,121</b>	
Total (Rs)  Estimated cost of the work inclusive of GST								
Add contingencies @5%								
	Total (Rs) JK SoR + NS							
		<u> </u>					1312886 <b>1398058</b>	85172
		Add 25% approximate cost index on JK Schedule ite	ems				262577	
						Total (Rs)	1050309	
19	16.74	kerbs and steps etc.  Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grade made by block making machine with strong vibratory compaction and of approved size and design/shape laid in required colour and pattern over and including 50mm thick compacted bed of fine sand, filling the joints with coarse sand etc. all complete as per direction of Engineer-in-charge.	sqm	90.00	770.60		69354	
18	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return walls, walls (any thickness) including attached pilasters butteresses, plinth and string course fillets,	sqm	10.00	573.85		5739	
17	4.4.5	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:3:6 (1 cement: 3 coarse sand: 6 graded stone aggregate 20 mm nominal size)	cum	9.00	4943.40		44491	
16	4.9.2	Providing & fixing at or near ground level precast cement concrete in kerbs, edging etc as per approved patterns and setting in position with cement mortar 1:3 (1 cement:3 coarse sand) including the cost of required centring, shuttering and curing complete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)	cum	6.00	6213.80		37283	

		DETAILED ESTIM						
S.NO	Reference of Rates JK SOR 2020 Code no.	DESCRIPTION	Rantak, Unit		f Ladakh Rate (Rs)		An	nount (Rs)
		Road Works			JK SoR	NS	JK SoR	NS
1	16.1	Preparation of subgrade by excavating earth to an avarage of 22.5 cm depth, dressing to camber and consolidation with road roller of 8-12 tonne capacity including making good the undulation etc. and disposal of surplus earth upto 50 meters.	Sqm	375.00	139.40		52275	
2	Derived from JKSoR	Providing and laying 200 mm thick compacted bed of Stone soling including spreading, well ramming, consolidating including finishing smooth etc. complete as per direction of Engineer-in-charge	cum	75.00	1396.82		104761	
3	4.4.3	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size	Cum	37.50	5877.45		220404	
4	4.7.1	Providing and laying cement concrete in kerbs, steps and the like at or near ground level including curing, excluding the cost of centring, shuttering, and finishing.  1:1½:3(1 cement :1½ coarse sand :3 graded stone aggregate 20 mm nominal size)	Cum	15.90	6624.8		105334.32	
5	4.6.2	Centering and shuttering including strutting, propping etc. and removal of form work for: Retaining walls, return walls, walls (any thickness) including attached pilasters buttresses, plinth and string course fillets, kerbs and steps etc	sqm	172.00	573.85		98702	
6	16.94	Providing and laying factory made chamfered edge Cement Concrete paver blocks in footpath, parks, lawns, drive ways or light traffic parking etc, of required strength, thickness & size/ shape, made by table vibratory method using PU mould, laid in required colour & pattern over 50mm thick compacted bed of sand, compacting and proper embedding/laying of inter locking paver blocks into the sand bedding layer through vibratory compaction by using plate vibrator, filling the joints with sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand complete all as per direction of Engineer-in-Charge.	sqm	375.00	864.25		324094	
		80 mm thick C.C. paver block of M-30 grade with approved color design and pattern.						
		Cross drain						
7	Non Schedule	Supply, transportation to site and laying of 300 mm dia mild steel pipe as directed by Engineer-in-charge (minimum thickness of pipe 4.50mm)	m	4.00		5500		22000
8	4.4.3	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with: 1:2:4 ( 1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	0.53	5877.50		3142	
9	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return walls, walls (any thickness) including attached pilasters butteresses, plinth and string course fillets, kerbs and steps etc.						
		PCC	sqm	4.08	573.85		2341	

Total (Rs)	911053	
Add 25% approximate cost index on JK Schedule items	227763	
	1138817	22000
Total (Rs) JK SoR + NS	1160817	
Add contingencies @5%	58041	
Total (Rs)	1218858	
Estimated cost of the work inclusive of GST	1218858	
Estimated cost put to Tender ( Excluding GST @ 14.05%)	10,68,705	

Name o	f work : Cons	struction of footpath from new petrol pump to chube katpa	at Sanka	ar Ward, I	_eh UT of l	Ladakh				
S.NO	Reference of Rates JK SOR 2020 Code no.	DESCRIPTION	Unit	Qty	Rate (Rs)		Am	Amount (Rs)		
					JK SoR	NS	JK SoR	NS		
		Road Works								
1	Derived from JKSoR	Providing and laying 200 mm thick compacted bed of Stone soling including spreading, well ramming, consolidating including finishing smooth etc. complete as per direction of Engineer-in-charge		141.00	1396.82		196952			
2	4.4.6	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with: 1:3:6 (1 cement: 3 coarse sand: 6 graded stone aggregate 40 mm nominal size)		14.10	4908.2		69206			
3	16.75	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement in position to the required line, level and curvature jointed with cement mortar 1:3 (1 cement 3 coarse sand) including making joints with or without grooves (thickness of the joints except at sharp curve shall not to be more than 5mm) including making drainage opening wherever required complete etc. as per direction of Engineer-in charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge).	cum	1.80	8328.3		14990.94			
4	4.6.2	Centering and shuttering including strutting, propping etc. and removal of form work for: Retaining walls, return walls, walls (any thickness) including attached pilasters buttresses, plinth and string course fillets, kerbs and steps etc		12.00	573.85		6886			
5	16.74	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grade made by block making machine with strong vibratory compaction and of approved size and design/shape laid in required colour and pattern over and including 50mm thick compacted bed of fine sand, filling the joints with coarse sand etc. all complete as per direction of Engineer-in-charge.	sqm	141.00	770.6		108655			
	·					Total (Rs)	396690			
		Add 25% approximate cost index on JK Schedul	le items		•		99172			
							495862	C		
				T	otal (Rs) J	IK SoR + NS	495862			
		Add contingencies @5%				Tetal (Da)	24793			
	1		atimate d	0004 of 41-	a wark in si	Total (Rs) usive of GST	520655			
	<del> </del>	Estimated cost					520655			
	1	Estillated Cost	par to 10	naer (⊏XC	naunny GS	· · · · · · · · · · · · · · · · · · ·	4,56,515			

		DETAILED ESTIMATI						
Name o	f work : Con Reference	struction of link road from Hotel Sankar Three Roses to Horpo Stand	uks Hou	se , Leh U	T of Ladaki	<u> </u>	Ī	
S.N0	of Rates JK SOR 2020 Code no.	DESCRIPTION	Unit	Qty		Rate (Rs)	Aı	mount (Rs)
					JK SoR	NS	JK SoR	NS
		ROAD WORK						
1	16.1	Preparation of subgrade by excavating earth to an avarage of 22.5 cm depth, dressing to camber and consolidation with road roller of 8-12 tonne capacity including making good the undulation etc. and disposal of surplus earth upto 50 meters	Sqm	480.00	139.40		66912	
2	16.82.2	Construction of <b>granular sub-base</b> by providing close graded material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by trippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge. (in Two Layer)						
		With material conforming to Grade-II (size range 53 mm to 0.075mm) having CBR Value-25	Cum	36.00	1077.15		38777	
3	16.83	Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm ) to <b>Wet Mix Macadam</b> (WMM) specification including premixing the material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all leads & lifts, laying in uniform layers with mechanical paver finisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.	Cum	46.20	1041.50		48117	
		Providing and applying primer cost with hitumen equilates Cost 1- 00.4				-		-
4	Non Schedule	Providing and applying primer coat with bitumen emulsion Grade SS-1 complying with IS:8887 on prepared surface of granular base including cleaning of road surface with compressed air and spraying primer at the rate of 0.80kg/sqm using pressure distributer as per clause 502 of MoRTH specifications complete.						
		On WMM surface @0.80kg/sqm	Sqm	462.00		53.47		24703.00
5	JKSoR derived Rate from 16.63.1	Providing and laying bituminous macadam using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by trippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge.50 to 100mm average compacted thickness with bitumen of VG-10 @3.5% (percentage by weight of total mix) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	22.50	5917.98		133155	
6	16.38.2	Providing and applying <b>Tack Coat</b> using hot straight run bitumen of grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and prepared the existing road surface as per specifications.						
		On bitumen surface @0.50 kg/sqm	sqm	450.00	42.10		18945	
7	JKSoR derived Rate from 16.65.1	Providing and laying <b>Bituminous concrete</b> using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.		18.00	9004.58		162082	
8	16.48	Providing <b>seal coat</b> of premixed fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing with road all complete.		450.00	78.15		35168	
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		Cross Drains						
9	NS	Supply, transportation to site and laying of 300 mm dia mild steel pipe as directed by Engineer-in-charge (minimum thickness of pipe 4.50mm)	m	8.00		5500.00		44000
10	4.4.3	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:2:4 ( 1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	Cum	1.37	5877.45		8058	
11	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return wall, walls (any thickness) including attached pilasters butteresses, plinth ans string coarse fillets, kerbs and steps etc.	sqm	8.16	573.85		4683	
		ROAD MARKINGS AND SIGN BOARDS						
12	16.58	Providing and fixing Glow studs of size 100x20mm made of heavy duty body shall be moulded ASA (Acrylic styrene Acryloretrite) or HIP (High impact Polystyrene) or ABS having electronically welded micro-prismatic lens with abrasion resistant coating as approved by Engineer-in-charge. The Glow stud shall support a load of 13635 kg tested in accordance with ASTM D4280. The slope of retro-reflective surface shall be 35 +/- 5 degrees to base. The reflective panels on both sides with at least 12cm of reflective area up each side. The luminance intensity should be as per the specification and shall be tested as described in ASTM I: 809 as recommended in BS : 873 part 4 : 1973. The studs shall be fixed to the road surface using the adhesive conforming to IS, as per procedure recommended by the manufacturer complete and as per direction of Engineer-in-charge	each	3	193.85		517	
13	16.69	Providing and applying 2.5mm thick road marking strips (retro-reflective) of specified shade/colour using hot thermoplastic material by fully/semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour, T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and accordance with applicable specifications.	sqm	6.00	604.50		3627	
14	16.66	Manufacturing supplying and fixing retro reflective sign boards made up of 2mm thick aluminum sheet, face to be fully covered with high intensity encapsulated type heat activated retro reflective sheeting conforming to type-IV of ASTM-D-4956-01 in blue and silver white or other colour combination including subject matter, message (bi-lingual), symbols and borders etc. as per IRC: 67-2001, pasted on substrate by an adhesive backing which shall be activated by applying heat and pressure conforming to class -2 of ASTM-D-4956-01 and fixing the same with suitable sized aluminum alloy rivets @ 20cm c/c to back support frame of M.S. angle iron of size 25x25x3mm along with theft resistant measures mounted and fixed with 2 nos. M.S. angles of size 35x35x5mm to a vertical post made upto M.S. Tee section ISMT 50x50x6mm welded with base plate of size 100x100x5mm at the bottom end and including making holes in pipes, angle flats, providing and fixing M.S. message plate of required size steel work to be painted with two or more coats of synthetic enamel paint of required shade and of approved brand & manufacture over priming coat of zinc chromate yellow primer (vertical M.STee support to be painted in black and white colours). Backside of aluminum sheet to be painted with two or more coats of epoxy paint over and including appropriate priming coats including all leads and lifts etc. complete as per drawing, specification and direction of Engineer-in-charge.						
14.1	16.66.1	Mandatory/Regulatory sign boards of 900 mm diameter with part as length of 3750 mm	each	1.00	5795.50		5796	
14.2	16.66.2	Cautionary/warning sign boards of equilateral triangular shape having each side of 900 mm support length of 3650mm.	each	1.00	4260.80		4261	
		Add 25% approximate cost index on JK Schedule ite	ems			Total (Rs)	530098 132525	
		<u> </u>		Tr	otal (Rs) .Ik	SoR + NS	662623 <b>731326</b>	68703
		Add contingencies @5%			() 51		36566	
						Total (Rs) sive of GST	767892 767892	
Estimated cost put to Tender ( Excluding GST @ 14.05%)								

Name of	f work : Cons	DETAILED ESTIMA truction of link road from SSK (Alim Jan) to Kalon House , Leh UT of						
S.NO	Reference of Rates JK SOR 2020 Code no.	DESCRIPTION	Unit	Qty		Rate (Rs)		Amount (Rs)
		Retaining Wall			JK SoR	NS	JK SoR	NS
1	2.7.1	Earth work in bulk excavation by mechanical means (hydraulic excavator) over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10m^2 on plan) including disposal of excavated earth lead upto 50m and lift upto 1.5m, as directed by Engineer-in-Charge						
		All kinds of soil :	cum	300.00	188.75		56625	
2	2.11	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead upto 50m and lift upto 1.5 m.	cum	135.00	198.70		26825	
3	4.4.7	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size)  Below Retaining Wall (PCC)		42.00	4419.85		185634	
			Cum	42.00	4410.00		103034	
4	4.5.3	Providing and laying cement concrete in retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchors blocks, plain window sills, fillets etc upto floor V level, including curing but excluding the cost of centring, shuttering and finishing with.  1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)						
		Coping over retaining wall	cum	6.00	7542.40		45254	
5	7.1.1	Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20mm nominal size) upto plinth level and curing complete with :						
		Cement mortar 1:6 (1 cement : 6 coarse sand).	cum	340.00	4435.25		1507985	
6	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return wall, walls ( any thickness) including attached pilasters butteresses, plinth ans string coarse fillets, kerbs and steps etc.  PCC for retaining wall & for Coping		80.00	573.85		45908	
		ROAD WORK	sqm	00.00	373.00		45906	
7	16.1	Preparation of subgrade by excavating earth to an avarage of 22.5 cm depth, dressing to camber and consolidation with road roller of 8-12 tonne capacity including making good the undulation etc. and disposal of surplus earth upto 50 meters		1225.00	139.40		170765	
8	16.82.2	Construction of <b>granular sub-base</b> by providing close graded material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by trippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and comp[acting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.						
		With material conforming to Grade-II (size range 53 mm to 0.075mm) having CBR Value-25	cum	91.88	1077.15		98963	
9	16.83	Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm ) to <b>Wet Mix Macadam</b> (WMM) specification including premixing the material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all leads & lifts, laying in uniform layers with mechanical paver finisher sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.	cum	122.50	1041.50		127584	

10	Non Schedule	Providing and applying prime coat with bitumen emulsion Grade SS-1 complying with 1S:8887 on prepared surface of granular base including cleaning of road surface with compressed air and spraying primer at the rate of 0.80kg/sqm using pressure distributer as per clause 502 of MoRTH specifications complete.  On W.B.MW.M.M @0.80Kg/sqm	sqm	1225.00		53.47		65501
11	JKSoR derived Rate from 16.65.1	Providing and laying bituminous macadam using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by tippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in Charge.50 to 100mm average compacted thickness with bitumen of VG-10 @3.5% (percentage by weight of total mix) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	61.25	5917.98		362476	
		Desired the Test Contains to the desired to the Contains of th						
12	16.38.2	Providing and applying <b>Tack Coat</b> using hot straight run bitumen of grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and prepared the existing road surface as per specifications.						
		On bitumen surface @0.50 kg/sqm	sqm	1225.00	42.10		51573	
13		Providing and laying <b>Bituminous concrete</b> using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	49.00	9004.58		441224	
14	16.48	Providing <b>seal coat</b> of premixed fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing with road all complete.	sqm	1225.00	78.15		95734	
		ROAD MARKINGS AND SIGN BOARDS						
15	16.58	Providing and fixing Glow studs of size 100x20mm made of heavy duty body shall be moulded ASA (Acrylic styrene Acryloretrite) or HIP (High impact Polystyrene) or ABS having electronically welded micro-prismatic lens with abrasion resistant coating as approved by Engineer-in-charge. The Glow stud shall support a load of 13635 kg tested in accordance with ASTM D4280. The slope of retro-reflective surface shall be 35 +/- 5 degrees to base. The reflective panels on both sides with at least 12cm of reflective area up each side. The luminance intensity should be as per the specification and shall be tested as described in ASTM I: 809 as recommended in BS: 873 part 4: 1973. The studs shall be fixed to the road surface using the adhesive conforming to IS, as per procedure recommended by the manufacturer complete and as per direction of Engineer-in-charge	each	8	193.85		1508	
16	16.69	Providing and applying 2.5mm thick road marking strips (retro-reflective) of specified shade/colour using hot thermoplastic material by fully/semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour, T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and accordance with applicable specifications.	sqm	17.50	604.50		10579	

17	16.66	Manufacturing supplying and fixing retro reflective sign boards made up of 2mm thick aluminum sheet, face to be fully covered with high intensity encapsulated type heat activated retro reflective sheeting conforming to type-IV of ASTM-D-4956-01 in blue and silver white or other colour combination including subject matter, message (bi-lingual), symbols and borders etc. as per IRC: 67-2001, pasted on substrate by an adhesive backing which shall be activated by applying heat and pressure conforming to class -2 of ASTM-D-4956-01 and fixing the same with suitable sized aluminum alloy rivets @ 20cm c/c to back support frame of M.S. angle iron of size 25x25x3mm along with theft resistant measures mounted and fixed with 2 nos. M.S. angles of size 35x35x5mm to a vertical post made upto M.S. Tee section ISMT 50x50x6mm welded with base plate of size 100x100x5mm at the bottom end and including making holes in pipes, angle flats, providing and fixing M.S. message plate of required size steel work to be painted with two or more coats of synthetic enamel paint of required shade and of approved brand & manufacture over priming coat of zinc chromate yellow primer (vertical M.STee support to be painted with two or more coats of epoxy paint over and including appropriate priming coats including all leads and lifts etc. complete as per drawing, specification and direction of Engineer-in-charge.						
17.1	16.66.1	Mandatory/Regulatory sign boards of 900 mm diameter with part as length of 3750 mm	each	1.00	5795.50		5796	
17.2	16.66.2	Cautionary/warning sign boards of equilateral triangular shape having each side of 900 mm support length of 3650mm.	each	1.00	4260.80		4261	
						Total (Rs)	3238694	
		Add 25% approximate cost index on JK Schedule it	ems				809674	
							4048368	65501
				·	Total (Rs)	IK SoR + NS	4113869	
		Add contingencies @5%				Total (Da)	205693	
		T	Ectimot	od cost of th	no work incl	Total (Rs) usive of GST	4319562 4319562	
		C @ 14.05%)						
		Estillated C	usi pui io	Telluel (EX	cidding GS	i ⊎ 14.05%)	37,87,428	

Reference of Pates IK	lame of	work : Cons	DETAILED ESTIMA struction of link road from SSK to Gyamtsa , Leh UT of Ladakh	ΙΤΕ					
Retaining Wall  Earth work in role for conception by methanical impacts (pytration of the conception by methanical impacts (pytration of the conception of t	S.NO	Reference of Rates JK SOR 2020		Unit	Qty	Rate (Rs)		Amount (Rs)	
Earth work in bulk occavation by machanical means (hydrausic executation) over stress (executation) over stress (executation) over stress (executation) of the supplication of the supplic			Retaining Wall			JK SoR	NS	JK SoR	NS
conceived by over areas (excoeding 30 cm in deght, 1.5 m in width as well and the provided glasses and exceeding 40 cm in deght, 1.5 m, as directed by Engineer-in-Charge and the provided glasses and glasse									
2 2.11 cased of tonditions etc in layers not exceeding 20 cm in depth, sides of foundations etc in layers not exceeding 20 cm in depth, common conducting each deposited keys by morning and westering, dear upto 200-80 for 18 upto 1.5 m.  2 2.11 cased of the providing and laying is position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plant lever west.  2 2.12 carrier 14 cases sand : 8 graded stone aggregate 40 mm concrete control of the providing and laying cement concrete in retaining wells, return wals, work (any) thickness) including statistical plasters, colmrus, piers, abutments, pilots, anchors blocks, plain window wills.  4 4.5.3 plain window wills.  2 2.72451  4 5.5.3 plain window wills.  5 7.1.1 carrier 12 carrier 20 upto 20	1	2.7.1	excavator) over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10m^2 on plan) including disposal of excavated earth lead upto 50m						
2 2.11 sides of foundations etc in syers not exceeding 20 cm in depth, cum 202.50 198.70 40237  202.50 198.70 198.70 40237  3 4.17 Providing and larging in position coment concrete of specified grade encluding curing but excluding the cost of certifing and shuttering. All work upto plinth level with: 3 4.2.7 Read (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm normal size). 4 Providing and laying coment concrete in retaining walls, return walls, within the cost of certifing and plastes, columns, piers, abutments, pillars, posts, atting or lacing courses, prarpets, coping, bed blooks, anchora blooks, posts window sills, and the cost of certification of including making pool of certification of certification including premising the c			All kinds of soil :	cum	450.00	188.75		84938	
1.4.2   Cemert   1.4   Coarse sand   2.8   Early   E	2	2.11	sides of foundations etc in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead upto	cum	202.50	198.70		40237	
Below Retaining Wall (PCC)  Providing and laying carnent concrete in retaining walls, return walls, walls (any thickness) including attached plisters, columns, piers, abutments, pillars, posts, strus, buttresses, pillar and strustering including strutting, propping etc. and removal of formwork for, Retaining wall, return wall, walls (any thickness) including attached plaisters buttresses, pillar has string coarse fillets, korts and steps etc.  Cerreting and shuttering including strutting, propping etc. and removal of formwork for, Retaining wall, return wall, walls (any thickness) including attached plaisters buttresses, pillar has string coarse fillets, korts and steps etc.  ROAD WORK  Proparation of subgrade by excavating earth to an avarage of 22.5 cm  ROAD WORK  Construction of subgrade by excavating earth to an avarage of 22.5 cm  Construction of subgrade by excavating earth to an avarage of 22.5 cm  Construction of granular sub-base by providing close graded material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by trippers to work site, for all leads & lifts, spropping or mixed material by tripper to several power files or appreciate store aggre	3	4.4.7	including curing but excluding the cost of centring and shuttering. All work upto plinth level with:						
Providing and laying cement concrete in retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pilars, posts, struts, buttresses, struts, struts, buttresses, struts, strut			nominal size)	01100	62.00	4410.9E		270454	
walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, plain window sills, and inshing will covered the properties of certification and pillars, and inshing will be a supplied to the properties of the				cum	03.00	<del>-4</del> 13.05		2/8451	
Coping over retaining wall  Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20mm nominal size) upto plinth level and curing complete with :  Cement mortar 1:6 (1 cement : 6 coarse sand).  Centering and shuttering including strutting, propping etc. and removal of formwork for. Retaining wall, return wall, walls (any thickness) including attached pliasters butteresses, plinth ans string coarse fillets, kerbs and steps etc.  PCC for retaining wall & for Coping  ROAD WORK  ROAD WORK  7 16.1  Construction of granular sub-base by providing close graded material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by trippers to work site, for all leads & lifes, spreading in uniform layers of specified thickness with motor grader on prepared surface and complacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.  With material conforming to Grade-II (size range 53 mm to 0.075mm) having CBR Value-25  Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm) to Wet Mix Macadam (WMM) specification including premixing the material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all leads & life, specification including premixing the material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all leads & life, specification including premixing the material with water at OMC in mechanical amix plant, carriage of mixed material by tipper to site, for all leads & life, specification including premixing the material with water at OMC in mechanical amix plant, carriage of mixed material by tipper to site, for all leads & life, specification and compacting with vibratory roller of 8 to 10 tonn capacity to chairleve the desired density.	4	4.5.3	walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchors blocks, plain window sills, fillets etc upto floor V level, including curing but excluding the cost of centring, shuttering and finishing with.  1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm						
Total control to the control of th			,	cum	9.00	7542.40		67882	
Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return wall, walls ( any thickness) including attached pilasters butteresses, plinth ans string coarse fillets, kerbs and steps etc.  PCC for retaining wall & for Coping  ROAD WORK  Preparation of subgrade by excavating earth to an avarage of 22.5 cm depth, dressing to camber and consolidation with road roller of 8-12 tonne capacity including making good the undulation etc. and disposal of surplus earth upto 50 meters.  Construction of granular sub-base by providing close graded material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by trippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and complacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.  With material conforming to Grade-II (size range 53 mm to 0.075mm) having CBR Value-25  Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm ) to Wet Mix Macadam (WMM) specification including premixing the material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all leads & lifts, laying in uniform layers with mechanical paver finisher in sub-base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density.	5	7.1.1	including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20mm nominal size) upto plinth level						
4.6.2 formwork for: Retaining wall, return wall, walls ( any thickness) including attached pilasters butteresses, plinth ans string coarse fillets, kerbs and steps etc.  PCC for retaining wall & for Coping sqm 120.00 573.85 68862  ROAD WORK  Preparation of subgrade by excavating earth to an avarage of 22.5 cm depth, dressing to camber and consolidation with road roller of 8-12 tonne capacity including making good the undulation etc. and disposal of surplus earth upto 50 meters.  Construction of granular sub-base by providing close graded material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by trippers to work site, for all leads & lifts, spreading in uniform layers of specifications and directions of Engineer-in-Charge.  With material conforming to Grade-II (size range 53 mm to 0.075mm) having CBR Value-25  Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm) to Wet Mix Macadam (WMM) specification including premixing the material with water at OMC in mechanical mix plant, carriage of mixed material with water at OMC in mechanical mix plant, carriage of mixed material with water at OMC in mechanical mix plant, carriage of mixed material with water at OMC in mechanical mix plant, carriage of mixed material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all leads & lifts, laying in uniform layers with mechanical paver finisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density,			Cement mortar 1:6 (1 cement : 6 coarse sand).	cum	510.00	4435.25		2261978	
ROAD WORK Preparation of subgrade by excavating earth to an avarage of 22.5 cm depth, dressing to camber and consolidation with road roller of 8-12 tonne capacity including making good the undulation etc. and disposal of surplus earth upto 50 meters.  Construction of granular sub-base by providing close graded material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by trippers to work site, for all leads & lifts, spreading in uniform layers of specifications and directions of Engineer-in-Charge.  With material conforming to Grade-II (size range 53 mm to 0.075mm) having CBR Value-25  Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm) to Wet Mix Macadam (WMM) specification including premixing the material with valer at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all leads & lifts, laying in uniform layers with mechanical paver finisher in sub-base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density,	6	4.6.2	formwork for: Retaining wall, return wall, walls (any thickness) including attached pilasters butteresses, plinth ans string coarse fillets, kerbs and						
Preparation of subgrade by excavating earth to an avarage of 22.5 cm depth, dressing to camber and consolidation with road roller of 8-12 tone capacity including making good the undulation etc. and disposal of surplus earth upto 50 meters  Construction of granular sub-base by providing close graded material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by trippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and comp[acting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.  With material conforming to Grade-II (size range 53 mm to 0.075mm) having CBR Value-25  Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm ) to Wet Mix Macadam (WMM) specification including premixing the material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all leads & lifts, laying in uniform layers with mechanical power finisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density,			PCC for retaining wall & for Coping	sqm	120.00	573.85		68862	
conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by trippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and comp[acting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.  With material conforming to Grade-II (size range 53 mm to 0.075mm) cum 960.00 1077.15 1034064  Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm) to Wet Mix Macadam (WMM) specification including premixing the material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all leads & lifts, laying in uniform layers with mechanical paver finisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density,	7	16.1	Preparation of subgrade by excavating earth to an avarage of 22.5 cm depth, dressing to camber and consolidation with road roller of 8-12 tonne capacity including making good the undulation etc. and disposal of	sqm	18560.00	139.40		2587264	
Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm ) to <b>Wet Mix Macadam</b> (WMM) specification including premixing the material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all leads & lifts, laying in uniform layers with mechanical paver finisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density,	8	16.82.2	conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by trippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and comp[acting with vibratory power roller to achieve the desired density, complete as per specifications and directions of						
(size range 53 mm to 0.075 mm) to <b>Wet Mix Macadam</b> (WMM) specification including premixing the material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all leads & lifts, laying in uniform layers with mechanical paver finisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density,				cum	960.00	1077.15		1034064	
	9	16.83	(size range 53 mm to 0.075 mm) to <b>Wet Mix Macadam</b> (WMM) specification including premixing the material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all leads & lifts, laying in uniform layers with mechanical paver finisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density,	cum	1232.00	1041.50		1283128	

10	Non Schedule	Providing and applying prime coat with bitumen emulsion Grade SS-1 complying with IS:8887 on prepared surface of granular base including cleaning of road surface with compressed air and spraying primer at the rate of 0.80kg/sqm using pressure distributer as per clause 502 of MoRTH specifications complete.  On W.B.MW.M.M @0.80Kg/sqm	sqm	12320.00		53.47		658750
11	JKSoR derived Rate from 16.65.1	Providing and laying bituminous macadam using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by tippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in Charge.50 to 100mm average compacted thickness with bitumen of VG-10 @3.5% (percentage by weight of total mix) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	600.00	5917.98		3550788	
12	16.38.2	Providing and applying <b>Tack Coat</b> using hot straight run bitumen of grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and prepared the existing road surface as per specifications.  On bitumen surface @0.50 kg/sqm		12000.00	42.10		505200	
		On bitumen surface @0.50 kg/sqm	sqm	12000.00	42.10		505200	
13		Providing and laying <b>Bituminous concrete</b> using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	480.00	9004.58		4322198	
14	16.48	Providing <b>seal coat</b> of premixed fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing with road all complete.	sqm	12000.00	78.15		937800	
		Cross drain						
15	Non Schedule	Supply, transportation to site and laying of 300 mm dia mild steel pipe as directed by Engineer-in-charge (minimum thickness of pipe 4.50mm)	m	16.00		5500		88000
16	4.4.3	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with: 1:2:4 ( 1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	3.04	5877.50		17890	
17	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return walls, walls (any thickness) including attached pilasters butteresses, plinth and string course fillets, kerbs and steps etc.  PCC	sqm	16.32	573.85		9365	
18	2.8	Side Drain  Earth work in excavation by manual means in trenches for foundations, drains, pipes, cables etc. (not exceeding 1.5 m in width) and for shafts, wells, cesspits and the like not exceeding 10 sqm on plan, including dressing of sides and ramming of bottoms lift upto 1.5 m, including getting out excavated earth and disposal of surplus excavated earth as directed:  Rate for a lead upto 25 meters beyond 1meter from cutting edge  2.8.1 All kinds of soil:  2.8.2 Ordinary Rock	cum cum	133.88 44.63	524.40 922.35		70204 41160	
		2.5.2 Ordinary Noon	Juill	77.03	JZZ.JJ		41100	
19	4.4.3	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:2:4 ( 1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	72.00	8577.50		617580	
20	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return wall, walls ( any thickness) including attached pilasters butteresses, plinth ans string coarse fillets, kerbs and steps etc.	sqm	780.00	573.85		447603	
		ROAD MARKINGS AND SIGN BOARDS						

21	16.58	Providing and fixing Glow studs of size 100x20mm made of heavy duty body shall be moulded ASA (Acrylic styrene Acryloretrite) or HIP (High impact Polystyrene) or ABS having electronically welded micro-prismatic lens with abrasion resistant coating as approved by Engineer-in-charge. The Glow stud shall support a load of 13635 kg tested in accordance with ASTM D4280. The slope of retro-reflective surface shall be 35 +/- 5 degrees to base. The reflective panels on both sides with at least 12cm of reflective area up each side. The luminance intensity should be as per the specification and shall be tested as described in ASTM I: 809 as recommended in BS: 873 part 4: 1973. The studs shall be fixed to the road surface using the adhesive conforming to IS, as per procedure recommended by the manufacturer complete and as per direction of Engineer-in-charge	each	71	193.85	13785	
22	16.69	Providing and applying 2.5mm thick road marking strips (retro-reflective) of specified shade/colour using hot thermoplastic material by fully/semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour, T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and accordance with applicable specifications.	sqm	160.00	604.50	96720	
23	16.66	Manufacturing supplying and fixing retro reflective sign boards made up of 2mm thick aluminum sheet, face to be fully covered with high intensity encapsulated type heat activated retro reflective sheeting conforming to type-IV of ASTM-D-4956-01 in blue and silver white or other colour combination including subject matter, message (bi-lingual), symbols and borders etc. as per IRC: 67-2001, pasted on substrate by an adhesive backing which shall be activated by applying heat and pressure conforming to class -2 of ASTM-D-4956-01 and fixing the same with suitable sized aluminum alloy rivets @ 20cm c/c to back support frame of M.S. angle iron of size 25x25x3mm along with theft resistant measures mounted and fixed with 2 nos. M.S. angles of size 35x35x5mm to a vertical post made upto M.S. Tee section ISMT 50x50x6mm welded with base plate of size 100x100x5mm at the bottom end and including making holes in pipes, angle flats, providing and fixing M.S. message plate of required size steel work to be painted with two or more coats of synthetic enamel paint of required shade and of approved brand & manufacture over priming coat of zinc chromate yellow primer (vertical M.STee support to be painted with two or more coats of epoxy paint over and including appropriate priming coats including all leads and lifts etc. complete as per drawing, specification and direction of Engineer-in-charge.					
23.1	16.66.1	Mandatory/Regulatory sign boards of 900 mm diameter with part as length of 3750 mm	each	5.00	5795.50	28978	
23.2	16.66.2	Cautionary/warning sign boards of equilateral triangular shape having each side of 900 mm support length of 3650mm.	each	5.00	4260.80	21304	
24	16.67.1	Manufacturing supplying and fixing retro reflective overhead signage boards made up of 2mm thick aluminum sheet, face to be fully covered with high intensity and encapsulated lens type heat activated retro reflective sheeting conforming to type-III of ASTM-D-4956-01 as approved by Engineer-in-charge; letters, borders etc. as per IRC: 67-2001 in silver white with blue colour background and with high intensity grade, pasted on substrate by pressure sensitive adhesive backing which shall be activated by applying pressure conforming to class-II of ASTM-D-4956-01 and fixing the same to the plate of structural frame work by means of suitable sized aluminum alloys, rivets or bolts and nutse 300mm c/c all along the periphery as well as in two vertical rows along with theft resistant measures including the cost of painting with two or more coats of epoxy paint in grey colour on the back side of aluminum sheet including appropriate priming coat. The rate includes the cost of rounding off the corners, lowering down the structural frame work from the gantry, fixing and erecting the same in position all complete as per drawing, specification and direction of Engineer-in-charge (Structural frame work including M.S. plate to be provided separately. Rectangular area of the sheet only shall be measured for payment):  Overhead informatory road signage	each	1.00	5651.25	5651	
		FOOTPATH WORK					
25	Derived from JKSoR	Providing and laying 200 mm thick compacted bed of Stone soling including spreading, well ramming, consolidating including finishing smooth etc. complete as per direction of Engineer-in-charge	sqm	288.00	1396.82	402284	
26	4.9.2	Providing & fixing at or near ground level precast cement concrete in kerbs, edging etc as per approved patterns and setting in position with cement mortar 1:3 (1 cement:3 coarse sand) including the cost of required centring, shuttering and curing complete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)	cum	96.00	6213.80	596525	
27	4.4.5	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	cum	144.00	4943.40	711850	

4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return walls, walls (any thickness) including attached pilasters butteresses, plinth and string course fillets, kerbs and steps etc.	sqm	160.00	573.85		91816	
16.74	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grade made by block making machine with strong vibratory compaction and of approved size and design/shape laid in required colour and pattern over and including 50mm thick compacted bed of fine sand, filling the joints with coarse sand etc. all complete as per direction of Engineer-in-charge.	sqm	1440.00	770.60		1109664	
					Total (Rs)	18393030	
	Add 25% approximate cost index on JK Schedule it	tems			` '	4598258	
							746750
Total (Rs) JK SoR + NS							
	Add contingencies @3%					712141	
					Total (Rs)	24450179	
		Estimat	ed cost of the	ne work incl	lusive of GST	24450179	
	Estimated c	ost put to	Tender (Ex	cluding GS	T @ 14.05%)	2,14,38,123	
		formwork for: Retaining wall, return walls, walls (any thickness) including attached pilasters butteresses, plinth and string course fillets, kerbs and steps etc.  Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grade made by block making machine with strong vibratory compaction and of approved size and design/shape laid in required colour and pattern over and including 50mm thick compacted bed of fine sand, filling the joints with coarse sand etc. all complete as per direction of Engineer-in-charge.  Add 25% approximate cost index on JK Schedule in Add contingencies @3%	4.6.2 attached pilasters butteresses, plinth and string course fillets, kerbs and steps etc.  Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grade made by block making machine with strong vibratory compaction and of approved size and design/shape laid in required colour and pattern over and including 50mm thick compacted bed of fine sand, filling the joints with coarse sand etc. all complete as per direction of Engineer-in-charge.  Add 25% approximate cost index on JK Schedule items  Add contingencies @3%  Estimat	4.6.2 formwork for: Retaining wall, return walls, walls (any thickness) including attached pilasters butteresses, plinth and string course fillets, kerbs and steps etc.  Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grade made by block making machine with strong vibratory compaction and of approved size and design/shape laid in required colour and pattern over and including 50mm thick compacted bed of fine sand, filling the joints with coarse sand etc. all complete as per direction of Engineer-in-charge.  Add 25% approximate cost index on JK Schedule items  Add contingencies @3%  Estimated cost of the same strong stro	4.6.2 formwork for: Retaining wall, return walls, walls (any thickness) including attached pilasters butteresses, plinth and string course fillets, kerbs and steps etc.  Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grade made by block making machine with strong vibratory compaction and of approved size and design/shape laid in required colour and pattern over and including 50mm thick compacted bed of fine sand, filling the joints with coarse sand etc. all complete as per direction of Engineer-in-charge.  Add 25% approximate cost index on JK Schedule items  Total (Rs).  Add contingencies @3%  Estimated cost of the work incl	4.6.2 formwork for: Retaining wall, return walls, walls (any thickness) including attached pilasters butteresses, plinth and string course fillets, kerbs and steps etc.  Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grade made by block making machine with strong vibratory compaction and of approved size and design/shape laid in required colour and pattern over and including 50mm thick compacted bed of fine sand, filling the joints with coarse sand etc. all complete as per direction of Engineer-in-charge.  Total (Rs) JK SoR + NS Add contingencies @3%	4.6.2 formwork for: Retaining wall, return walls, walls (any thickness) including attached pilasters butteresses, plinth and string course fillets, kerbs and steps etc.  Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grade made by block making machine with strong vibratory compaction and of approved size and design/shape laid in required colour and pattern over and including 50mm thick compacted bed of fine sand, filling the joints with coarse sand etc. all complete as per direction of Engineer-in-charge.  Total (Rs) 18393030  Add 25% approximate cost index on JK Schedule items  Total (Rs) JK SoR + NS 23738038  Add contingencies @3%  Total (Rs) JK SoR + NS 24450179  Estimated cost of the work inclusive of GST 24450179

### ROAD WORK    ROAD WORK	Nama a	fanle. Ca	DETAILED ESTIMAT						
SAID OF Rates (Ps)  ARAD WORK  1 191  191  191  191  191  191  191	Name o		onstruction of link road from Thakskan to Spurka , Len UT of Lac	dakn					
ROAD WORK  ROAD WORK  ROAD WORK  REPRESENT of subgrade by exceeding earth to an average of 22.5 cm  The subgrade of the subgrade by exceeding earth to an average of 22.5 cm  The subgrade of the subgrade by exceeding earth to an average of 22.5 cm  The subgrade of the subgrade by exceeding graded average of 8.10 cm  The subgrade of the subgrade by exceeding graded average of 8.10 cm  Correstruction of granular sub-base by providing close graded material  Correstruction of granular sub-base by providing close graded material  Correstruction of granular sub-base by providing close graded material  Correstruction of granular sub-base by providing close graded material  Corresponding of most manular by trappers to now than, for all such & Sites  prepared surface and compositing with vibratory power role to achieve the  decident of critical conforming to Circade-II (sizes range 8.5 mm to 0.075 mm)  With material conforming to Circade-II (sizes range 8.5 mm to 0.075 mm)  With material conforming to Circade-II (sizes range 8.5 mm to 0.075 mm)  Providing, laying, screaking and compacting graded stone aggregate  Providing, laying, screaking and compacting graded stone aggregate  Providing and supplies to 10 mm capacity to achieve the decident of complex compacts and supplies to 10 mm capacity to achieve the decident of complex supplies and compacting with vibratory rolle of 8 to 10 mm capacity to achieve the decident of complex supplies and compacting with vibratory rolle of 8 to 10 mm capacity to achieve the decident of complex supplies and compacting with supplies and directions of granular based of complex supplies and compacting with supplies and	S.N0	of Rates JK SOR 2020 Code	DESCRIPTION	Unit	Qty		Rate (Rs)	,	Amount (Rs)
Preparation of subgrade by excavaling earth to an avarage of 22.5 cm						JK SoR	NS	JK SoR	NS
1 15.1 double graining to cambier and consolidation with road roller of 8-12 surplus certifying making good the undufation etc. and disposal of surplus certifying 50 meters.  Construction of granular sub-base by providing doise graded material undufation of the providing of the grant of 10 meters of 10			ROAD WORK						
conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed marketish by typess to work sets, for all backs & Rife, spreading in uniform layers of specified thickness with motor grador on the chesied devisity, complete as per specifications and directions of Engineer-in-Charge, (in Two Layer)  With material conforming to Grade-II (size range 53 mm to 0.075mm)  With material conforming to Grade-II (size range 53 mm to 0.075mm)  Provising, Skyraly-go, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm ) to Wef Mix Macadam (WMM) specification including permissing the material with water at OMC in mechanical mix plant, carriage of mixed material by type-or to slate. For all specifications and directions of the specification can directions of Engineer-in-Charge.  Provising and applying prime core with hitumen emulsion. Grade 55 complying with ISSBR7 on prepared surface and compacting with vibratory roller of 8 to 10 tone capacity to achieve the desied density.  Provising and applying prime core with hitumen emulsion. Grade 55 complying with ISSBR7 on prepared surface of specifications and directions of Engineer-in-Charge.  Provising and applying prime core with hitumen emulsion. Grade 55 complying with ISSBR7 on prepared surface of specifications and directions of Engineer-in-Charge.  Provising and applying pluminous macadam using cached stone aggregates of specifications on achieve the desied compaction.  All State from 16-83.1 Charge 5-10 (10 mixed with compacting previous) with bluminous binder with prove finisher equipped with electronic sensor to the required grade.  By Provising and applying pluminous macadam using cached stone aggregates of specifications to achieve the desied compaction.  Provising and applying pluminous macadam using cached stone aggregates of specifications to achieve the desied compaction and achieve with prove finisher equipped with electronic sensor to the required grade stone of the cached and stone of the cached and stone of the	1	16.1	depth, dressing to camber and consolidation with road roller of 8-12 tonne capacity including making good the undulation etc. and disposal of		5220.00	139.40		727668	
Providing and applying prime cost with bitumen emulsion Grade SS-1 complying with IS-8887 on prepared surface of granter as the tested of 200 (200 complete as per specifications and directions of Engineer-in-Charge.)  Providing and applying prime cost with bitumen emulsion Grade SS-1 complying with IS-8887 on prepared surface of Granter as the tested density of the tested of 20 (200 complete as per specifications and directions of Engineer-in-Charge.)  Providing and applying prime cost with bitumen emulsion Grade SS-1 complying with IS-8887 on prepared surface of grantal rate including cleaning of road surface with companying primers at the feater of 20 (200 kg/sgrum using pressure distributor as per clause 502 or Modified and surface with companying primers at the rate of 20 (200 kg/sgrum using pressure distributor as per clause 502 or Modified and surface with companying primers at the rate of 20 (200 kg/sgrum using pressure distributor as per clause 502 or Modified and tested with progress and companying primers at the rate of 20 (200 kg/sgrum using pressure distributor as per clause 502 or Modified Primers and Providing and surface with progress and companying primers at the rate of 20 (200 kg/sgrum using pressure distributor as per specifications soft desired compaction of the required grade, level and alignment and rolling with smooth wheelest, vibratory, and transported to sate by trippers, laid cover a previously prepared using a compaction of the section of prograde of the compaction of the section of	2	16.82.2	conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by trippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of						
size range 53 mm to 0.075 mm ) to Wet Mix Macadam (WMM) specification including premixing the material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all sade 3. Mits. larging in uniform signs with mechanical paver finisher in sub-base / base course on well prepared surface and compacting with biburatory valid or 80 not 10 none aggregate to echieve the cleared density, complete as per specifications and directives of Engineerin-Charge.  Providing and applying prime cost with biburene mulsion Grade SS-1 complying with 15887 or prepared surface of granular base including cleaning of road surface with compressed air and spraying primer at the fact of 1.086/gagm using pressure distributor as per clause 502 of MoRTH specifications complete.  Providing and laying bituminous macadam using crushed stone aggregates of specified grading premixed with bituminous binder, transported to set by hippers, silo over a previously prepared surface flate from 16.63.1  16.63.1  16.63.1  16.63.2  Providing and laying bituminous macadam using crushed stone aggregates of specified grading premixed with bituminous binder, transported to set by hippers, silo over a previously prepared surface level and alignment and rolling with smooth wheeled, vibratory and tandam rollors as per specifications to achieve the desired compaction and admart, complete as per specifications and directions of Engineer-in Charge-501 of 10mm average compacted thickness was per specifications.  On bitumen surface @0.50 kg/sgm  Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filling, transporting the to mix to vox site by typeps, site on adjunct and onlying the compact of the stone and transported thickness and transported thickness and transported to the stone aggregates of specified grading, premixed with bituminous binder and filling, transporting the tot mix to works site by typeps. In a stone of the stone of the stone of the stone				Cum	270.00	1077.15		290831	
omphyling with IS-8887 on prepared surface of granular base including cleaning of road surface with compressed air and spraying primer at the second cleaning of road surface with compressed air and spraying primer at the second cleaning of road surface with compressed air and spraying primer at the second cleaning of road surface with one of 380kg/sgm Sqm Sqm 3465.00 53.47 18527  Tryoking and laying bituminous macadam using crushed stone aggregates of specified grading premixed with bituminous binder transported to site by trippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, ever and alignment and rolling with smooth wheeled, vibratory and rander molters as per specifications to achieve the desired compaction charges of 10 r00mm average compacted bitusens with bitumen of VG-10 @3.5% (percentage by weight of total mix) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.  Providing and applying Tack Coat using hot straight run bitumen of grade-VG-10, including healing the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boller, cleaning and prepared the existing road surface as per specifications.  On bitumen surface @0.50 kg/sgm sqm sqm 3465.00 42.10 145877  Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by typers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandern ollors on achieve the desired compaction and density as per specification.  In Scar and the providing seal coat of premixed fine aggregate propared in Batch Type Hot Mix Plant of 100-120 TPH capacity.  Providing seal coat of premixed fine aggregate propagate and 0.60 cum on fine aggregate and 0.60 cum on fine agg	3	16.83	(size range 53 mm to 0.075 mm) to <b>Wet Mix Macadam</b> (WMM) specification including premixing the material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all leads & lifts, laying in uniform layers with mechanical paver finisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density,	Cum	346.50	1041.50		360880	
Providing and laying bituminous macadam using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by trippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications of Engineer-in-Charge. 50 to 100mm average compacted thickness with bitumen of VS-10 @3.5% (percentage by weight of total mix) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.  Providing and applying Tack Coat using hot straight run bitumen of grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boller, cleaning and prepared the existing road surface as per specifications.  On bitumen surface @0.50 kg/sqm sqm sqm 3465.00 42.10 145877  Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification.  Cum 135.00 9004.58 1215618  Providing seal coat of premixed fine aggregate by weight of total mix) and lime filler @3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.  Providing seal coat of premixed fine aggregate (passing 2.36mm and retained on 180 micron sleve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate including rolling mad finishing with road all complete.	4		complying with IS:8887 on prepared surface of granular base including cleaning of road surface with compressed air and spraying primer at the rate of 0.80kg/sqm using pressure distributer as per clause 502 of MoRTH specifications complete.		3465.00		53.47		185274.00
aggregates of specified grading premixed with bituminous binder, transported to site by trippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and and elements of providing and alignment and rolling with smooth wheeled, wibratory and and elements of providing and applying Tack Coat using hot straight run bitumen of grade-VC-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit littled on bitumen boller, cleaning and prepared the existing road surface as per specifications.  Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specifications of Engineer-in-Charge: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of total mi			On Willia Surface @0.00kg/3qm	Sqiii	3403.00		33.47		103274.00
grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and prepared the existing road surface as per specifications.  On bitumen surface @0.50 kg/sqm	5	derived Rate from	aggregates of specified grading premixed with bituminous binder, transported to site by trippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge.50 to 100mm average compacted thickness with bitumen of VG-10 @3.5% (percentage by weight of total mix) prepared in Batch Type	cum	173.25	5917.98		1025290	
Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.  Providing seal coat of premixed fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing with road all complete.	6	16.38.2	grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and						
aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.  Providing seal coat of premixed fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing with road all complete.    Aggregate sof specified grading, premixed with bituminous binder and filler, transporting with paver finisher equipped paver finisher equipped with paver finisher equipped pave			On bitumen surface @0.50 kg/sqm	sqm	3465.00	42.10		145877	
retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing with road all complete.  78.15  263756	7	derived Rate from	aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in	Cum	135.00	9004.58		1215618	
Side Drain	8	16.48	retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing		3375.00	78.15		263756	
			Side Drain						

9	2.8	Earth work in excavation by manual means in trenches for foundations, drains, pipes, cables etc. (not exceeding 1.5 m in width) and for shafts, wells, cesspits and the like not exceeding 10 sqm on plan, including dressing of sides and ramming of bottoms lift upto 1.5 m, including getting out excavated earth and disposal of surplus excavated earth as directed:  Rate for a lead upto 25 meters beyond 1meter from cutting edge						
		2.8.1. All kinds of soil :	cum	178.50	524.40		93605	
		2.8.2 Ordinary Rock	cum	59.50	922.35		54880	
		2.8.2 Ordinary Nock	Cum	39.30	922.33		54000	
10	4.4.3	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with: 1:2:4 ( 1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	96.00	5877.45		564235	
11	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return wall, walls ( any thickness) including attached pilasters butteresses, plinth ans string coarse fillets, kerbs and steps etc.		1040.00	573.85		596804	
		Cross Drains		-				
12	NS	Supply, transportation to site and laying of 300 mm dia mild steel pipe as directed by Engineer-in-charge (minimum thickness of pipe 4.50mm)	m	24.00		5500.00		132000
13	4.4.3	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:2:4 ( 1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	Cum	4.72	5877.45		27722	
14	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return wall, walls ( any thickness) including attached pilasters butteresses, plinth ans string coarse fillets, kerbs and steps etc.	sqm	24.48	573.85		14048	
		ROAD MARKINGS AND SIGN BOARDS						
15	16.58	Providing and fixing Glow studs of size 100x20mm made of heavy duty body shall be moulded ASA (Acrylic styrene Acryloretrite) or HIP (High impact Polystyrene) or ABS having electronically welded micro-prismatic lens with abrasion resistant coating as approved by Engineer-in-charge. The Glow stud shall support a load of 13635 kg tested in accordance with ASTM D4280. The slope of retro-reflective surface shall be 35 +/- 5 degrees to base. The reflective panels on both sides with at least 12cm of reflective area up each side. The luminance intensity should be as per the specification and shall be tested as described in ASTM I: 809 as recommended in BS: 873 part 4: 1973. The studs shall be fixed to the road surface using the adhesive conforming to IS, as per procedure recommended by the manufacturer complete and as per direction of Engineer-in-charge		20.00	193.85		3877	
16	16.69	Providing and applying 2.5mm thick road marking strips (retro-reflective) of specified shade/colour using hot thermoplastic material by fully/semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour, T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and accordance with applicable specifications.		45.00	604.50		27203	

		truction of link road from Thaltsi to Digur , Leh UT of Ladakh						
S.N0	Reference of Rates JK SOR 2020 Code no.	DESCRIPTION	Unit	Qty		Rate (Rs)		Amount (Rs
		Retaining Wall			JK SoR	NS	JK SoR	N:
1	2.7.1	Earth work in bulk excavation by mechanical means (hydraulic excavator) over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10m^2 on plan) including disposal of excavated earth lead upto 50m and lift upto 1.5m, as directed by Engineer-in-Charge						
		All kinds of soil :	cum	900.00	188.75		169875	
2	2.11	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead upto 50m and lift upto 1.5 m.	cum	405.00	198.70		80474	
3	4.4.7	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size)						
		Below Retaining Wall (PCC)	cum	126.00	4419.85		556901	
4	4.5.3	Providing and laying cement concrete in retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchors blocks, plain window sills, fillets etc upto floor V level, including curing but excluding the cost of centring, shuttering and finishing with.  1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)						
		Coping over retaining wall	cum	18.00	7542.40		135763	
5	7.1.1	Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20mm nominal size) upto plinth level and curing complete with :						
		Cement mortar 1:6 (1 cement : 6 coarse sand).	cum	1020.00	4435.25		4523955	
6	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return wall, walls ( any thickness) including attached pilasters butteresses, plinth ans string coarse fillets, kerbs and steps etc.						
		PCC for retaining wall & for Coping	sqm	240.00	573.85		137724	
7	16.1	ROAD WORK  Preparation of subgrade by excavating earth to an avarage of 22.5 cm depth, dressing to camber and consolidation with road roller of 8-12 tonne capacity including making good the undulation etc. and disposal of surplus earth upto 50 meters	sqm	10440.00	139.40		1455336	
8	16.82.2	Construction of <b>granular sub-base</b> by providing close graded material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by trippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and comp[acting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.						
		With material conforming to Grade-II (size range 53 mm to 0.075mm) having CBR Value-25	cum	540.00	1077.15		581661	
9	16.83	Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm ) to <b>Wet Mix Macadam</b> (WMM) specification including premixing the material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all leads & lifts, laying in uniform layers with mechanical paver finisher is sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.	cum	693.00	1041.50		721760	

	Non	Providing and applying prime coat with bitumen emulsion Grade SS-1 complying with IS:8887 on prepared surface of granular base including		6930.00		F2 47		270547
10	Schedule	cleaning of road surface with compressed air and spraying primer at the rate of 0.80kg/sqm using pressure distributer as per clause 502 of MoRTH specifications complete.  On W.B.MW.M.M @0.80Kg/sqm	sqm	6930.00		53.47		370547
11	JKSoR derived Rate from 16.65.1	Providing and laying <b>bituminous macadam</b> using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by tippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in Charge.50 to 100mm average compacted thickness with bitumen of VG-10 @3.5% (percentage by weight of total mix) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	337.50	5917.98		1997318	
		Providing and applying <b>Tack Coat</b> using hot straight run bitumen of						
12	16.38.2	grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and prepared the existing road surface as per specifications.						
		On bitumen surface @0.50 kg/sqm	sqm	6750.00	42.10		284175	
13		Providing and laying <b>Bituminous concrete</b> using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	270.00	9004.58		2431237	
14	16.48	Providing <b>seal coat</b> of premixed fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing with road all complete.	sqm	6750.00	78.15		527513	
		Cross drain						
15	Non Schedule	Supply, transportation to site and laying of 300 mm dia mild steel pipe as directed by Engineer-in-charge (minimum thickness of pipe 4.50mm)	m	40.00		5500		220000
16	4.4.3	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with: 1:2:4 ( 1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	8.06	5877.50		47386	
17	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return walls, walls ( any thickness) including attached pilasters butteresses, plinth and string course fillets, kerbs and steps etc.						
<u> </u>		PCC	sqm	40.80	573.85		23413	
<b>-</b>		Side Drain						
18	2.8	Earth work in excavation by manual means in trenches for foundations, drains, pipes, cables etc. (not exceeding 1.5 m in width) and for shafts, wells, cesspits and the like not exceeding 10 sqm on plan, including dressing of sides and ramming of bottoms lift upto 1.5 m, including getting out excavated earth and disposal of surplus excavated earth as directed:  Rate for a lead upto 25 meters beyond 1meter from cutting edge 2.8.1. All kinds of soil:  2.8.2 Ordinary Rock	cum cum	44.63 14.88	524.40 922.35		23401 13720	
		Droviding and loving in position account account of a configuration						
19	4.4.3	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:2.4 ( 1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	24.00	8577.50		205860	
20	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return wall, walls (any thickness) including attached pilasters butteresses, plinth ans string coarse fillets, kerbs and steps etc.	sqm	260.00	573.85		149201	
		ROAD MARKINGS AND SIGN BOARDS						

21	16.58	Providing and fixing Glow studs of size 100x20mm made of heavy duty body shall be moulded ASA (Acrylic styrene Acryloretrite) or HIP (High impact Polystyrene) or ABS having electronically welded micro-prismatic lens with abrasion resistant coating as approved by Engineer-in-charge. The Glow stud shall support a load of 13635 kg tested in accordance with ASTM D4280. The slope of retro-reflective surface shall be 35 +/- 5 degrees to base. The reflective panels on both sides with at least 12cm of reflective area up each side. The luminance intensity should be as per the specification and shall be tested as described in ASTM I: 809 as recommended in BS: 873 part 4: 1973. The studs shall be fixed to the road surface using the adhesive conforming to IS, as per procedure recommended by the manufacturer complete and as per direction of Engineer-in-charge	each	40	193.85	7754	
22	16.69	Providing and applying 2.5mm thick road marking strips (retro-reflective) of specified shade/colour using hot thermoplastic material by fully/semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour, T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and accordance with applicable specifications.	sqm	90.00	604.50	54405	
23	16.66	Manufacturing supplying and fixing retro reflective sign boards made up of 2mm thick aluminum sheet, face to be fully covered with high intensity encapsulated type heat activated retro reflective sheeting conforming to type-IV of ASTM-D-4956-01 in blue and silver white or other colour combination including subject matter, message (bi-lingual), symbols and borders etc. as per IRC: 67-2001, pasted on substrate by an adhesive backing which shall be activated by applying heat and pressure conforming to class -2 of ASTM-D-4956-01 and fixing the same with suitable sized aluminum alloy rivets @ 20cm c/c to back support frame of M.S. angle iron of size 25x25x3mm along with theft resistant measures mounted and fixed with 2 nos. M.S. angles of size 35x35x5mm to a vertical post made upto M.S. Tee section ISMT 50x50x6mm welded with base plate of size 100x100x5mm at the bottom end and including making holes in pipes, angle flats, providing and fixing M.S. message plate of required size steel work to be painted with two or more coats of synthetic enamel paint of required shade and of approved brand & manufacture over priming coat of zinc chromate yellow primer (vertical M.STee support to be painted with two or more coats of epoxy paint over and including appropriate priming coats including all leads and lifts etc. complete as per drawing, specification and direction of Engineer-in-charge.					
23.1	16.66.1	Mandatory/Regulatory sign boards of 900 mm diameter with part as length of 3750 mm	each	3.00	5795.50	17387	
23.2	16.66.2	Cautionary/warning sign boards of equilateral triangular shape having each side of 900 mm support length of 3650mm.	each	3.00	4260.80	12782	
24	16.67.1	Manufacturing supplying and fixing retro reflective overhead signage boards made up of 2mm thick aluminum sheet, face to be fully covered with high intensity and encapsulated lens type heat activated retro reflective sheeting conforming to type-III of ASTM-D-4956-01 as approved by Engineer-in-charge; letters, borders etc. as per IRC: 67-2001 in silver white with blue colour background and with high intensity grade, pasted on substrate by pressure sensitive adhesive backing which shall be activated by applying pressure conforming to class-II of ASTM-D-4956-01 and fixing the same to the plate of structural frame work by means of suitable sized aluminum alloys, rivets or bolts and nutse 300mm c/c all along the periphery as well as in two vertical rows along with theft resistant measures including the cost of painting with two or more coats of epoxy paint in grey colour on the back side of aluminum sheet including appropriate priming coat. The rate includes the cost of rounding off the corners, lowering down the structural frame work from the gantry, fixing and erecting the same in position all complete as per drawing, specification and direction of Engineer-in-charge (Structural frame work including M.S. plate to be provided separately. Rectangular area of the sheet only shall be measured for payment):  Overhead informatory road signage	each	1.00	5651.25	5651	
		FOOTPATH WORK					
25	Derived from JKSoR	Providing and laying 200 mm thick compacted bed of Stone soling including spreading, well ramming, consolidating including finishing smooth etc. complete as per direction of Engineer-in-charge	sqm	162.00	1396.82	226285	
26	4.9.2	Providing & fixing at or near ground level precast cement concrete in kerbs, edging etc as per approved patterns and setting in position with cement mortar 1:3 (1 cement:3 coarse sand) including the cost of required centring, shuttering and curing complete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)	cum	54.00	6213.80	335545	
27	4.4.5	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	cum	81.00	4943.40	400415	

28	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return walls, walls ( any thickness) including attached pilasters butteresses, plinth and string course fillets, kerbs and steps etc.	sqm	90.00	573.85		51647	
29	16.74	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grade made by block making machine with strong vibratory compaction and of approved size and design/shape laid in required colour and pattern over and including 50mm thick compacted bed of fine sand, filling the joints with coarse sand etc. all complete as per direction of Engineer-in-charge.	sqm	810.00	770.60		624186	
						Total (Rs)	15802730	
		Add 25% approximate cost index on JK Schedule it	tems				3950683	
							19753413	590547
					Total (Rs)	JK SoR + NS	20343960	
		Add contingencies @3%			` `		610319	
						Total (Rs)	20954279	
			Estimat	ed cost of the	ne work inc	lusive of GST	20954279	
		Estimated c	ost put to	Tender (Ex	cluding GS	T @ 14.05%)	1,83,72,888	

Nama a		DETAILED ESTIMATI		.I.L				
Name of	Reference	struction of link road from Yourtung Bridge to Skyang chiks , Leh UT	of Lada	ikh				
S.N0	of Rates JK SOR 2020 Code no.	DESCRIPTION	Unit	Qty		Rate (Rs)		Amount (Rs)
	110.				JK SoR	NS	JK SoR	NS
		ROAD WORK						
1	16.1	Preparation of subgrade by excavating earth to an avarage of 22.5 cm depth, dressing to camber and consolidation with road roller of 8-12 tonne capacity including making good the undulation etc. and disposal of surplus earth upto 50 meters	Sqm	3190.00	139.40		444686	
2	16.82.2	Construction of <b>granular sub-base</b> by providing close graded material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by trippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge. (in Two Layer)						
		With material conforming to Grade-II (size range 53 mm to 0.075mm) having CBR Value-25	Cum	165.00	1077.15		177730	
3	16.83	Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm) to <b>Wet Mix Macadam</b> (WMM) specification including premixing the material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all leads & lifts, laying in uniform layers with mechanical paver finisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.		211.75	1041.50		220538	
4	Non Schedule	Providing and applying primer coat with bitumen emulsion Grade SS-1 complying with IS:8887 on prepared surface of granular base including cleaning of road surface with compressed air and spraying primer at the rate of 0.80kg/sqm using pressure distributer as per clause 502 of MoRTH specifications complete.						
		On WMM surface @0.80kg/sqm	Sqm	2117.50		53.47		113223.00
5		Providing and laying <b>bituminous macadam</b> using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by trippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge.50 to 100mm average compacted thickness with bitumen of VG-10 @3.5% (percentage by weight of total mix) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	Cum	103.13	5917.98		610292	
6	16.38.2	Providing and applying <b>Tack Coat</b> using hot straight run bitumen of grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and prepared the existing road surface as per specifications.						
		On bitumen surface @0.50 kg/sqm	sqm	2062.50	42.10		86831	
7	JKSoR derived Rate from 16.65.1	Providing and laying <b>Bituminous concrete</b> using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	Cum	82.50	9004.58		742878	
8	16.48	Providing <b>seal coat</b> of premixed fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing with road all complete.		2062.50	78.15		161184	
		Canada Dusina						
		Cross Drains						

9	NS	Supply, transportation to site and laying of 300 mm dia mild steel pipe as directed by Engineer-in-charge (minimum thickness of pipe 4.50mm)	m	8.00		5500.00		44000
9	NO	as directed by Engineer in charge (minimum unoxiness or pipe 4.50min)		0.00		3300.00		44000
10	4.4.3	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:2:4 ( 1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	Cum	1.37	5877.45		8058	
11	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return wall, walls ( any thickness) including attached pilasters butteresses, plinth ans string coarse fillets, kerbs and steps etc.	sqm	8.16	573.85		4683	
		ROAD MARKINGS AND SIGN BOARDS						
12	16.58	Providing and fixing Glow studs of size 100x20mm made of heavy duty body shall be moulded ASA (Acrylic styrene Acryloretrite) or HIP (High impact Polystyrene) or ABS having electronically welded microprismatic lens with abrasion resistant coating as approved by Engineer-in-charge. The Glow stud shall support a load of 13635 kg tested in accordance with ASTM D4280. The slope of retro-reflective surface shall be 35 +/- 5 degrees to base. The reflective panels on both sides with at least 12cm of reflective area up each side. The luminance intensity should be as per the specification and shall be tested as described in ASTM I: 809 as recommended in BS: 873 part 4: 1973. The studs shall be fixed to the road surface using the adhesive conforming to IS, as per procedure recommended by the manufacturer complete and as per direction of Engineer-in-charge	each	12	193.85		2369	
13	16.69	Providing and applying 2.5mm thick road marking strips (retro-reflective) of specified shade/colour using hot thermoplastic material by fully/semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour, T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and accordance with applicable specifications.	sqm	27.50	604.50		16624	
14	16.66	Manufacturing supplying and fixing retro reflective sign boards made up of 2mm thick aluminum sheet, face to be fully covered with high intensity encapsulated type heat activated retro reflective sheeting conforming to type-IV of ASTM-D-4956-01 in blue and silver white or other colour combination including subject matter, message (bi-lingual), symbols and borders etc. as per IRC: 67-2001, pasted on substrate by an adhesive backing which shall be activated by applying heat and pressure conforming to class -2 of ASTM-D-4956-01 and fixing the same with suitable sized aluminum alloy rivets @ 20cm c/c to back support frame of M.S. angle iron of size 25x25x3mm along with theft resistant measures mounted and fixed with 2 nos. M.S. angles of size 35x35x5mm to a vertical post made upto M.S. Tee section ISMT 50x50x6mm welded with base plate of size 100x100x5mm at the bottom end and including making holes in pipes, angle flats, providing and fixing M.S. message plate of required size steel work to be painted with two or more coats of synthetic enamel paint of required shade and of approved brand & manufacture over priming coat of zinc chromate yellow primer (vertical M.STee support to be painted with two or more coats of epoxy paint over and including appropriate priming coats including all leads and lifts etc. complete as per drawing, specification and direction of Engineer-in-charge.						
14.1	16.66.1	Mandatory/Regulatory sign boards of 900 mm diameter with part as length of 3750 mm	each	1.00	5795.50		5796	
14.2	16.66.2	Cautionary/warning sign boards of equilateral triangular shape having each side of 900 mm support length of 3650mm.	each	1.00	4260.80		4261	
		FOOTPATH WORK						
15	Derived from JKSoR	Providing and laying 200 mm thick compacted bed of Stone soling including spreading, well ramming, consolidating including finishing smooth etc. complete as per direction of Engineer-in-charge	sqm	49.50	1396.82		69143	
16	4.9.2	Providing & fixing at or near ground level precast cement concrete in kerbs, edging etc as per approved patterns and setting in position with cement mortar 1:3 (1 cement:3 coarse sand) including the cost of required centring, shuttering and curing complete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)	cum	16.50	6213.80		102528	

17	4.4.5	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	cum	24.75	4943.40		122349	
18	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return walls, walls ( any thickness) including attached pilasters butteresses, plinth and string course fillets, kerbs and steps etc.		27.50	573.85		15781	
19	16.74	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grade made by block making machine with strong vibratory compaction and of approved size and design/shape laid in required colour and pattern over and including 50mm thick compacted bed of fine sand, filling the joints with coarse sand etc. all complete as per direction of Engineer-in-charge.	sqm	247.50	770.60		190724	
						Total (Rs)	2986455	
		Add 25% approximate cost index on JK Schedule ite	ems				746614	
							3733069	157223
				To	otal (Rs) Jk	( SoR + NS	3890292	
		Add contingencies @5%					194515	
						Total (Rs)	4084806	
						sive of GST	4084806	
		Estimated cost	put to Te	ender (Excl	uding GST	@ 14.05%)	35,81,593	

Name a	· · · · · · · · · · · · · · · · · · ·	DETAILED ESTIMA		Ladald				
Name of	Reference	struction of link road from Yourtung community hall to Nesar Rai , Lo	en UI of	Ladakn				
S.N0	of Rates JK SOR 2020 Code no.	DESCRIPTION	Unit	Qty		Rate (Rs)		Amount (Rs)
	110.				JK SoR	NS	JK SoR	NS
		ROAD WORK						
1	16.1	Preparation of subgrade by excavating earth to an avarage of 22.5 cm depth, dressing to camber and consolidation with road roller of 8-12 tonne capacity including making good the undulation etc. and disposal of surplus earth upto 50 meters	Sqm	400.00	139.40		55760	
2	16.82.2	Construction of <b>granular sub-base</b> by providing close graded material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by trippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge. (in Two Layer)						
		With material conforming to Grade-II (size range 53 mm to 0.075mm) having CBR Value-25	Cum	30.00	1077.15		32315	
3	16.83	Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm) to <b>Wet Mix Macadam</b> (WMM) specification including premixing the material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all leads & lifts, laying in uniform layers with mechanical paver finisher sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.	Cum	38.50	1041.50		40098	
4	Non Schedule	Providing and applying prime coat with bitumen emulsion Grade SS-1 complying with IS:8887 on prepared surface of granular base including cleaning of road surface with compressed air and spraying primer at the rate of 0.80kg/sqm using pressure distributer as per clause 502 of MoRTH specifications complete.  On WMM surface @0.80kg/sqm	Sgm	385.00		53.47		20586.00
		on vinin ounded Cotsongraphi	Oqiii	000.00		00.41		20000.00
5	JKSoR derived Rate from 16.63.1	Providing and laying bituminous macadam using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by trippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge.50 to 100mm average compacted thickness with bitumen of VG-10 @3.5% (percentage by weight of total mix) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	19.25	5917.98		113921	
6	16.38.2	Providing and applying <b>Tack Coat</b> using hot straight run bitumen of grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and prepared the existing road surface as per specifications.						
		On bitumen surface @0.50 kg/sqm	sqm	385.00	42.10		16209	
7	JKSoR derived Rate from 16.65.1	Providing and laying <b>Bituminous concrete</b> using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	Cum	15.00	9004.58		135069	
8	16.48	Providing <b>seal coat</b> of premixed fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing with road all complete.		375.00	78.15		29306	
		Side Drain						

9 10	4.4.3	Earth work in excavation by manual means in trenches for foundations, drains, pipes, cables etc. (not exceeding 1.5 m in width) and for shafts, wells, cesspits and the like not exceeding 10 sqm on plan, including dressing of sides and ramming of bottoms lift upto 1.5 m, including getting out excavated earth and disposal of surplus excavated earth as directed:  Rate for a lead upto 25 meters beyond 1meter from cutting edge  2.8.1. All kinds of soil:  2.8.2 Ordinary Rock  Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with: 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)  Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return wall, walls (any thickness) including attached pilasters butteresses, plinth ans string coarse fillets, kerbs and	cum	22.31 2.98 16.80	524.40 922.35 5877.45		11701 2744 98741	
11	4.6.2	steps etc.	sqm	182.00	573.85		104441	
		Cross Drains						
12	NS	Supply, transportation to site and laying of 300 mm dia mild steel pipe as directed by Engineer-in-charge (minimum thickness of pipe 4.50mm)	m	4.00		5500.00		22000
13	4.4.3	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:2:4 ( 1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	Cum	0.53	5877.45		3142	
14	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return wall, walls ( any thickness) including attached pilasters butteresses, plinth ans string coarse fillets, kerbs and steps etc.	sqm	4.08	573.85		2341	
		ROAD MARKINGS AND SIGN BOARDS						
15	16.69	Providing and applying 2.5mm thick road marking strips (retro-reflective) of specified shade/colour using hot thermoplastic material by fully/semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour, T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and accordance with applicable specifications.	sqm	5.00	604.50		3023	
16	16.66	Manufacturing supplying and fixing retro reflective sign boards made up of 2mm thick aluminum sheet, face to be fully covered with high intensity encapsulated type heat activated retro reflective sheeting conforming to type-IV of ASTM-D-4956-01 in blue and silver white or other colour combination including subject matter, message (bi-lingual), symbols and borders etc. as per IRC: 67-2001, pasted on substrate by an adhesive backing which shall be activated by applying heat and pressure conforming to class -2 of ASTM-D-4956-01 and fixing the same with suitable sized aluminum alloy rivets @ 20cm c/c to back support frame of M.S. angle iron of size 25x25x3mm along with theft resistant measures mounted and fixed with 2 nos. M.S. angles of size 35x35x5mm to a vertical post made upto M.S. Tee section ISMT 50x50x6mm welded with base plate of size 100x100x6mm at the bottom end and including making holes in pipes, angle flats, providing and fixing M.S. message plate of required size steel work to be painted with two or more coats of synthetic enamel paint of required shade and of approved brand & manufacture over priming coat of zinc chromate yellow primer (vertical M.STee support to be painted in black and white colours). Backside of aluminum sheet to be painted with two or more coats of epoxy paint over and including appropriate priming coats including all leads and lifts etc. complete as per drawing, specification and direction of Engineer-in-charge.						

16.2	16.66.2	Cautionary/warning sign boards of equilateral triangular shape having each side of 900 mm support length of 3650mm.		4261				
		oddir odd or ood min ddpport longin or ddddinin.				Total (Rs)	658868	
		Add 25% approximate cost index on JK Schedule ite	ems			( - /	164717	
		823585	42586					
		866171						
		43309						
		909480						
		909480						
		Estimated cost	put to Te	ender (Excl	uding GST	@ 14.05%)	7,97,439	

		DETAILED ESTIMA						
Name o	f work : Re-	surfacing of link road from Yourtung to Taisuru road, Leh UT o	t Ladaki	) 				
S.NO	of Rates JK SOR 2020 Code no.	DESCRIPTION	Unit	Qty		Rate (Rs)	Ar	nount (Rs)
					JK SoR	NS	JK SoR	NS
		ROAD WORK						
1	16.81	Scarifying the existing bituminous road surface to a depth of 50mm and disposal of scarified material within all lifts and lead upto 1 km (by mechanical means).	sqm	1720.00	4.90		8428.00	
2	16.38.2	Providing and applying <b>Tack Coat</b> using hot straight run bitumen of grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and prepared the existing road surface as per specifications.						
		On bitumen surface @0.50 kg/sqm	sqm	1720.00	42.10		72412	
3	JKSoR derived Rate from 16.65.1	Providing and laying <b>Bituminous concrete</b> using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge:: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	86.00	9004.58		774394	
4	16.48	Providing <b>seal coat</b> of premixed fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing with road all complete.		1720.00	78.15		134418	
		011 0						
5	2.8	Earth work in excavation by manual means in trenches for foundations, drains, pipes, cables etc. (not exceeding 1.5 m in width) and for shafts, wells, cesspits and the like not exceeding 10 sqm on plan, including dressing of sides and ramming of bottoms lift upto 1.5 m, including getting out excavated earth and disposal of surplus excavated earth as directed:  Rate for a lead upto 25 meters beyond 1meter from cutting edge 2.8.1. All kinds of soil:		31.24	524.40		16381	
		2.8.2 Ordinary Rock	cum	4.46	922.35		4116	
6	4.4.3	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with: 1:2:4 ( 1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)		24.00	5877.45		141059	
7	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return wall, walls (any thickness) including attached pilasters butteresses, plinth ans string coarse fillets, kerbs and steps etc.		260.00	573.85		149201	
		Cross Drains						
8	NS	Supply, transportation to site and laying of 300 mm dia mild steel pipe as directed by Engineer-in-charge (minimum thickness of pipe 4.50mm)	m	20.00		5500.00		110000
L	l							

	•						
9	4.4.3	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:2:4 ( 1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)		3.88	5877.45	22806	
10	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return wall, walls ( any thickness) including attached pilasters butteresses, plinth ans string coarse fillets, kerbs and steps etc.	sqm	20.40	573.85	11707	
		ROAD MARKINGS AND SIGN BOARDS					
11	16.58	Providing and fixing Glow studs of size 100x20mm made of heavy duty body shall be moulded ASA (Acrylic styrene Acryloretrite) or HIP (High impact Polystyrene) or ABS having electronically welded micro-prismatic lens with abrasion resistant coating as approved by Engineer-in-charge. The Glow stud shall support a load of 13635 kg tested in accordance with ASTM D4280. The slope of retro-reflective surface shall be 35 +/- 5 degrees to base. The reflective panels on both sides with at least 12cm of reflective area up each side. The luminance intensity should be as per the specification and shall be tested as described in ASTM I: 809 as recommended in BS : 873 part 4 : 1973. The studs shall be fixed to the road surface using the adhesive conforming to IS, as per procedure recommended by the manufacturer complete and as per direction of Engineer-in-charge	each	9.56	193.85	1852	
12	16.69	Providing and applying 2.5mm thick road marking strips (retro-reflective) of specified shade/colour using hot thermoplastic material by fully/semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour, T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-incharge and accordance with applicable specifications.	sqm	21.50	604.50	12997	
13	16.66	Manufacturing supplying and fixing retro reflective sign boards made up of 2mm thick aluminum sheet, face to be fully covered with high intensity encapsulated type heat activated retro reflective sheeting conforming to type-IV of ASTM-D-4956-01 in blue and silver white or other colour combination including subject matter, message (bi-lingual), symbols and borders etc. as per IRC: 67-2001, pasted on substrate by an adhesive backing which shall be activated by applying heat and pressure conforming to class -2 of ASTM-D-4956-01 and fixing the same with suitable sized aluminum alloy rivets @ 20cm c/c to back support frame of M.S. angle iron of size 25x25x3mm along with theft resistant measures mounted and fixed with 2 nos. M.S. angles of size 35x35x5mm to a vertical post made upto M.S. Tee section ISMT 50x50x6mm welded with base plate of size 100x100x5mm at the bottom end and including making holes in pipes, angle flats, providing and fixing M.S. message plate of required size steel work to be painted with two or more coats of synthetic enamel paint of required shade and of approved brand & manufacture over priming coat of zinc chromate yellow primer (vertical M.STee support to be painted in black and white colours). Backside of aluminum sheet to be painted with two or more coats of epoxy paint over and including appropriate priming coats including all leads and lifts etc. complete as per drawing, specification and direction of Engineer-in-charge.					
13.1	16.66.1	Mandatory/Regulatory sign boards of 900 mm diameter with part as length of 3750 mm	each	1.00	5795.50	5796	
13.2	16.66.2	Cautionary/warning sign boards of equilateral triangular shape having each side of 900 mm support length of 3650mm.	each	1.00	4260.80	4261	
		FOOTPATH WORK					_
		-					
14	Derived from JKSoR	Providing and laying 200 mm thick compacted bed of Stone soling including spreading, well ramming, consolidating including finishing smooth etc. complete as per direction of Engineer-incharge		38.70	1396.82	54057	

15	4.9.2	Providing & fixing at or near ground level precast cement concrete in kerbs, edging etc as per approved patterns and setting in position with cement mortar 1:3 (1 cement:3 coarse sand) including the cost of required centring, shuttering and curing complete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)	cum	12.96	6213.80		80531			
16	4.4.5	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	cum	19.44	4943.40		96100			
17	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return walls, walls (any thickness) including attached pilasters butteresses, plinth and string course fillets, kerbs and steps etc.	sqm	21.60	573.85		12395			
		·								
18	16.74	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grade made by block making machine with strong vibratory compaction and of approved size and design/shape laid in required colour and pattern over and including 50mm thick compacted bed of fine sand, filling the joints with coarse sand etc. all complete as per direction of Engineer-in-charge.	sqm	194.40	770.60		149805			
	Total (Rs)									
	Add 25% approximate cost index on JK Schedule items									
							2190895	0		
				To	tal (Rs) JK	SoR + NS	2190895			
	•	Add contingencies @5%		•			109545			
						Total (Rs)	2300440			
						sive of GST	2300440			
		@ 14.05%)	20,17,045							

2020 Code no.  ROAD WORK  Preparation of subgrade by excavating earth to an avarage of 22.5 cm depth, dressing to camber and consolidation with road roller of 8-12 tonne capacity including making good the undulation etc. and disposal of surplus earth upto 50 meters.  Construction of granular sub-base by providing close graded material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by trippers to work site, for all leads & lifts, spreading in uniform layers of specifications and directions of Engineer-in-Charge. (in Two Layer)  With material conforming to Grade-II (size range 53 mm to 0.075mm) With material conforming to Grade-II (size range 53 mm to 0.075mm) With material conforming to Grade-II (size range for material with water at OMC in mechanical mix plant, carriage of mixed material by the water at OMC in mechanical mix plant, carriage of mixed material by the water at OMC in mechanical mix plant, carriage of mixed material by those of the desired density, complete as per specifications and directions of Engineer-in-Charge.  1 16.83  1 16	Name -	-f C-	DETAILED ESTIMATI		Cleans	: I ala II	T I adalah		
Name	Name C		onstruction of link road from Len Palace Main road to Hotel Hill	top vie	w, Skamar	oari Len U	i Ladakn		
ROAD WORK  ROAD WORK  Papparation of subgrade by executiving each to an awarage of 22.5 mm seek, diseasing to camber and consolication with road olding of 8-12 times capacity including making good the undulation etc. and disposal seek, diseasing to camber and consolication with road olding of 8-12 times capacity including making good the undulation etc. and disposal seek, diseasing to a meta-inclination land of surplus earth upon 50 milestra.  Constitution of granular sub-base by providing cases graded material conforming to specifications, mining in a mechanical mix plast at OMC, carriage of mixed material by repress to work set, for all leads & list, supposed surface and comparing with vibration y power rolls to achieve the desired drawing, complete as per specificational and directions of Engineerin-Charge, (in Two Layer)  Providing jurying, spreading and comparing graded since aggregate with set and office of the desired drawing, complete as per specifications in the set of all sets (angle 53 mm to 0.075 mm).  Providing jurying, spreading and comparing graded since aggregate with sets and comparing with water at OMC in achieving case (in two Layer).  Providing jurying, spreading and comparing graded since aggregate with sets and comparing with water at OMC in achieving case (in two Layer).  Providing and septing prime post with blumms embed disease, complete as per specifications and directions of Engineer-in-Charge.  Providing and septing prime post with blumms embed desirably, complete as per specifications and directions of Engineer-in-Charge.  Providing and septing prime post with blumms embed desirably complete as per specifications and directions of Engineer-in-Charge.  Providing and septing prime post with blumms embed storage case of the section of	S.N0	JK SOR 2020 Code	DESCRIPTION	Unit	Qty		Rate (Rs)	Aı	mount (Rs)
Proparation of subgrade by excavating earth to an average of 22.5 on depth, designing to camble and consolidation with road rolle of 8-12 or depth, designing to camble and consolidation with road rolle of 8-12 or depth of surplus earth upto 50 meters.  Continuation of granular sub-base by providing does graded investigation and displaced of 8-12 or depth of surplus earth upto 50 meters.  Continuation of granular sub-base by providing does graded investigation and consolidation with read of 8-12 or depth of 8-12		110.				JK SoR	NS	JK SoR	NS
depth, drossing to camber and consolidation with road roller of 8-12 camber of camber and consolidation with road roller of 8-12 camber of surface camber, building making good the undulation etc. and disposal of surface camber of surface and consolidations, mixing in a mechanical mix plant at OMC, carriage of mixed material by trippers to work site, for all backs a first prepared surface and compacting with violatory power forther to achieve the desired density, complete as per specifications and directions of Engineer-in-Christipe, in Two Luyer?  With material conforming to Grade-II fake range 53 mm to 0.075mm) Cum. 66.00 1077.15 71092 his providing always providing control of the conforming to Grade-II fake range 53 mm to 0.075mm) Cum. 66.00 1077.15 71092 his providing always providing of mixed material by trippers to set, for all lacks at list, surjace in uncompacting providing the material with water at OMC in mechanical mix plant, carriage of mixed material by trippers to set, for all lacks at list, surjace in uncompacting of mixed material by trippers to set, for all lacks at list, surjace in uncompacting of mixed material by trippers to set, for all lacks at list, surjace in uncompacting of mixed material by trippers to set, for all lacks at list, surjace in uncompacting of mixed material by trippers and compacting of mixed material by trippers and compacting of the co			ROAD WORK						
conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by triports to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on a configuration of the desired dampt, complete as per specifications and directions of Engineer-in-Charge. (in Two Layer)  With material conflorming to Grade-II (size range 53 mm to 0.075mm)  Twiving DBN Value-25  With material conflorming to Grade-II (size range 53 mm to 0.075mm)  Twiving DBN Value-25  Twiving Layers, screading and compacting graded stone aggregate (size range 53 mm to 0.075 mm ) to Wet Mix Macadam (VMM) specification including premising the material with water at OMC in mechanical mix plant, carriage of mixed material by toport to sale, for all such takes / has course on well prepared surface and compacting with without y coller of 8 to 10 tonne capacity to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.  Providing and applying prime coat with bitumen emulsion Grade-SS-1 complying with 5.8987 on prepared surface of granular base including that the surface of granular base including the surface of granular	1	16.1	depth, dressing to camber and consolidation with road roller of 8-12 tonne capacity including making good the undulation etc. and disposal	Sqm	1276.00	139.40		177874	
having CBR Value-25 Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm ) to Wet Mix Macadam (WMM) specification including premixing the material with water at OMC in mechanical mix plant, carraige of maked material by lipper to site, for all such base? Lake course on well prepared surface and compacting with vibratory older of 5 to 10 tone capacity to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.  Providing and applying prime cost with bitumen emulsion Grade SS-1 complying with 15:8887 on prepared surface and compacting with vibratory older of 5 to 10 tone capacity to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.  Providing and laying bituminous macadam using crushed stone aggregates of specified grading premixed with bituminous binder with part of 10 80% (per specified grading) premixed with bituminous binder of grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired organic and density of 10 8.3% (percentage by weight of total mix) prepared in Batch Type flot Mx. Plant of 100-120 TPH capacity.  Providing and applying Tack Coat using hot straight run bitumen of grade. Level and dispread and office of 10 8.3% (percentage by weight of total mix) prepared in Batch Type flot Mx. Plant of 100-120 TPH capacity.  Providing and laying Bituminous concrete using crushed stone aggregates of specified grade, level and alignment and rollers as per specifications.  On bitumen surface 80.59 kg/lgcm per perixed with bituminous binder and filler, transporting the hor mix to work site by tippers, laying with paver finisher equipped with electronic per perixed with bituminous binder and filler, transporting the hor mix to work site by tippers, laying with paver finisher equipped with electronic per perixed with bituminous per perixed with bituminous binder and filler, transporting the hor mix to work site	2	16.82.2	conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by trippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of						
sexe range 53 mm to 0.075 mm ) to Wet Mix Macadam (WMM) specification including premising the material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all leads & lifts, laying in uniform layers with mechanical power finisher in Cum loss-base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 nome capacity to achieve the desired denetisty, complete as per specifications and directions of Engineer-in-Charge.    Providing and applying prime coat with bitumen emulsion Grade SS-1 complying with IS-887 on prepared surface of granular base including cleaning of road surface with compressed air and spraying prime at the rate of 0.80kg/sgm using pressure distributer as per clause 502 of MoRTH specifications complete a grade of 0.80kg/sgm strained and surface with compressed air and spraying primer at the rate of 0.80kg/sgm using pressure distributer as per clause 502 of MoRTH specifications complete and surface with other interest of 0.80kg/sgm using pressure distributer as per clause 502 of MoRTH specifications complete and surface with paver infinisher equipped with electronic sensor to the required distributer as per specifications and directions and directions and directions and directions and clause of the primer of the complete as per specifications and directions and d			, ,	Cum	66.00	1077.15		71092	
A Schedule  Non	3	16.83	(size range 53 mm to 0.075 mm) to <b>Wet Mix Macadam</b> (WMM) specification including premixing the material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all leads & lifts, laying in uniform layers with mechanical paver finisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density,	Cum	84.70	1041.50		88215	
Complying with IS-3887 on prepared surface of granular base including cleaning of road surface with compressed air and spraying primer at the rate of 0.30k/g/sgm using pressure distributer as per cleause 502 of MoRTH specifications complete.  On WMM surface @0.80k/g/sgm  Providing and laying bituminous macadam using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by trippers, lad over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge.50 to 100mm average compacted thickness with bitumen of VG-10 @3.5% (percentage by weight of total mix) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.  Providing and applying Tack Coat using hot straight run bitumen of grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and prepared the existing road surface as per specifications.  Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specifications.  Cum  33.00 9004-58  297151  Providing seal coat of premixed fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen of grade VG-10 bitumen per cum of fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate (passing 2.36mm and one aggregate con the pageregate per			Description and analysis a primary and with hit many anything Conda CC 4						
Providing and laying bituminous macadam using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by trippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions with bitumen of VG-10 @3.5% (percentage by weight of total mix) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.  Providing and applying Tack Coat using hot straight run bitumen of grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and prepared the existing road surface as per specifications.  On bitumen surface @0.50 kg/sgm sqm lagregate of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers of achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.  Providing seal coat of premixed fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine garde vg-10@ 5.5% (percentage) by weight of total mix) and lime filler @ 3% (percentage by weight of aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	4		complying with IS:8887 on prepared surface of granular base including cleaning of road surface with compressed air and spraying primer at the rate of 0.80kg/sqm using pressure distributer as per clause 502 of MoRTH specifications complete.						
aggregates of specified grading premixed with bituminous binder, transported to site by trippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge: 50 to 100mm average compacted thickness with bitumen of VG-10 @3.5% (percentage by weight of total mix) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.  Providing and applying Tack Coat using hot straight run bitumen of grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and prepared the existing road surface as per specifications.  On bitumen surface @0.50 kg/sqm			On WMM surface @0.80kg/sqm	Sqm	847.00		53.47		45289.00
grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and prepared the existing road surface as per specifications.  On bitumen surface @0.50 kg/sqm sqm sqm 825.00 42.10 34733  Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.: 40/50 mm compacted thickness with bitumen of grade VG-10@5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.  Providing seal coat of premixed fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing sqm 825.00 78.15 64474	5	derived Rate from	aggregates of specified grading premixed with bituminous binder, transported to site by trippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge.50 to 100mm average compacted thickness with bitumen of VG-10 @3.5% (percentage by weight of total mix) prepared	cum	41.25	5917.98		244117	
Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.  Providing seal coat of premixed fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing sqm 825.00 78.15 64474	6	16.38.2	grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and						
Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.  Providing seal coat of premixed fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing  8 16.48 aggregate per 100 sqm of road surface including rolling mad finishing			On bitumen surface @0.50 kg/sqm	sqm	825.00	42.10		34733	
retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing sqm 825.00 78.15 64474	7	derived Rate from	Providing and laying <b>Bituminous concrete</b> using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in						
	8	16.48	retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing	sqm	825.00	78.15		64474	

		ROAD MARKINGS AND SIGN BOARDS					
9	16.58	Providing and fixing Glow studs of size 100x20mm made of heavy duty body shall be moulded ASA (Acrylic styrene Acryloretrite) or HIP (High impact Polystyrene) or ABS having electronically welded micro-prismatic lens with abrasion resistant coating as approved by Engineer-in-charge. The Glow stud shall support a load of 13635 kg tested in accordance with ASTM D4280. The slope of retro-reflective surface shall be 35 +/-5 degrees to base. The reflective panels on both sides with at least 12cm of reflective area up each side. The luminance intensity should be as per the specification and shall be tested as described in ASTM I: 809 as recommended in BS: 873 part 4: 1973. The studs shall be fixed to the road surface using the adhesive conforming to IS, as per procedure recommended by the manufacturer complete and as per direction of Engineer-in-charge	each	5	193.85	948	
10	16.69	Providing and applying 2.5mm thick road marking strips (retro-reflective) of specified shade/colour using hot thermoplastic material by fully/semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour,  T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and accordance with applicable specifications.	sqm	11.00	604.50	6650	
11	16.66	Manufacturing supplying and fixing retro reflective sign boards made up of 2mm thick aluminum sheet, face to be fully covered with high intensity encapsulated type heat activated retro reflective sheeting conforming to type-IV of ASTM-D-4956-01 in blue and silver white or other colour combination including subject matter, message (bi-lingual), symbols and borders etc. as per IRC: 67-2001, pasted on substrate by an adhesive backing which shall be activated by applying heat and pressure conforming to class -2 of ASTM-D-4956-01 and fixing the same with suitable sized aluminum alloy rivets @ 20cm c/c to back support frame of M.S. angle iron of size 25x25x3mm along with theft resistant measures mounted and fixed with 2 nos. M.S. angles of size 35x35x5mm to a vertical post made upto M.S. Tee section ISMT 50x50x6mm welded with base plate of size 100x100x5mm at the bottom end and including making holes in pipes, angle flats, providing and fixing M.S. message plate of required size steel work to be painted with two or more coats of synthetic enamel paint of required shade and of approved brand & manufacture over priming coat of zinc chromate yellow primer (vertical M.STee support to be painted with two or more coats of epoxy paint over and including appropriate priming coats including all leads and lifts etc. complete as per drawing, specification and direction of Engineer-in-charge.					
11.1	16.66.1	Mandatory/Regulatory sign boards of 900 mm diameter with part as length of 3750 mm	each	1.00	5795.50	5796	
11.2	16.66.2	Cautionary/warning sign boards of equilateral triangular shape having each side of 900 mm support length of 3650mm.	each	1.00	4260.80	4261	
		FOOTPATH WORK					
12	Derived from JKSoR	Providing and laying 200 mm thick compacted bed of Stone soling including spreading, well ramming, consolidating including finishing smooth etc. complete as per direction of Engineer-in-charge	sqm	19.80	1396.82	27657	
13	4.9.2	Providing & fixing at or near ground level precast cement concrete in kerbs, edging etc as per approved patterns and setting in position with cement mortar 1:3 (1 cement:3 coarse sand) including the cost of required centring, shuttering and curing complete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)	cum	6.60	6213.80	41011	
14	4.4.5	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:3:6 (1 cement: 3 coarse sand: 6 graded stone aggregate 20 mm nominal size)	cum	9.90	4943.40	48940	
15	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return walls, walls (any thickness) including attached pilasters butteresses, plinth and string course fillets, kerbs and steps etc.	sqm	11.00	573.85	6312	
15	4.6.2	of formwork for: Retaining wall, return walls, walls ( any thickness) including attached pilasters butteresses, plinth and string course fillets,	sqm	11.00	573.85	6312	

16	16.74	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grade made by block making machine with strong vibratory compaction and of approved size and design/shape laid in required colour and pattern over and including 50mm thick compacted bed of fine sand, filling the joints with coarse sand etc. all complete as per direction of Engineer-in-charge.	sqm	99.00	770.60		76289	
		1195520						
		Add 25% approximate cost index on JK Schedule ite	ems				298880	
							1494400	45289
				To	otal (Rs) Jk	SoR + NS	1539689	
	Add contingencies @5%						76984	
	Total (Rs						1616673	
	Estimated cost of the work inclusive of 0						1616673	
	Estimated cost put to Tender ( Excluding GST @ 14.0						14,17,513	

Name of work: Construction of fink road from Leh Palace Main road to Note! Ladash View, Shampari, Leh UT Ladash Reference  Reference  8.80 M 50R  8.00 BSCRPTION  Construction of subgrade by excessing parth to an example of 22.5 and 1.0 miles of 1.0 mil	Nama	of work . Co	DETAILED ESTIMATI		ou Skomr	ori Loh L	IT I adakh		
SNO M SORE 10.0  1	Name o	Reference	onstruction of link road from Len Palace Main road to Hotel Lac	akn vie	ew, Skamp	oari, Len C	JI Ladakn		
ROAD WORK  ROAD WORK  Preparation of subgrade by recovaring earth to an avanage of 25.5 cm  Preparation of subgrade by recovaring earth to an avanage of 25.5 cm  Preparation of subgrade by recovaring earth to an avanage of 25.5 cm  Preparation of subgrade by recovaring earth to an avanage of 25.5 cm  Preparation of subgrade by recovaring earth to an avanage of 25.5 cm  Construction of granular sub-base by providing close graded material conforming to specifications, ranging in a mechanical mix part at OMC, and a conforming of preparation by tropper to work site, for all leads 6 lits, avanage of moder almost by tropper to work site, for all leads 6 lits, separated surface and composing of select and directions of Engineerin-Charge, (in Two Layer)  With material conforming to Grade-II (size range 53 mm to 0.075/mm)  North Control (Charge, in Two Layer)  Provising, lering, speeding and composing graded stone aggregate file of the desired density, or complete as per specifications and directions of Engineerin-Charge, in Two Layers  Provising, lering, speeding and composing graded stone aggregate in the desired density to 0.075 mm to 0.075 mm)  In the desired density to 0.075 mm to 0.075 mm to 0.075 mm)  In the density of the control of	S.N0	JK SOR 2020 Code	DESCRIPTION	Unit	Qty		Rate (Rs)	Aı	mount (Rs)
Preparation of subgrade by excavating earth to an avarange of 22.5 cm dispht, designing to camber and consolidation with road roller of 3-12 of supplus earth upo 50 metals gover the underlation etc. and part of the consolidation with road roller of 3-12 of supplus earth upo 50 metals gover the underlation etc. and part of the consolidation of			POAD WORK			JK SoR	NS	JK SoR	NS
dispin, dressing to Camber and consolidation with road rollet of \$12 or one capacity including making good the undulation etc. and disposal of surplus earth upto 50 meters.  Constitution of granular sub-base by provising closes gooded material of surplus earth upto 50 meters. It is a constitution of granular sub-base by provising closes gooded material conforming to specifications, mining in a mechanical material and SMC, carriage of make material by tippers to work sate, for all leads & first, providing, large of make material by tippers to work sate, for all leads & first, properties and compacting with provising closes gooded material by tippers to work sate, for all leads & first, properties and compacting updated stores appreciation on the desired density, complete as per specifications and directions of Engineering Change (in You Luyer)  Writt material conforming to Grante-II (size targe 53 mm to 0.077 mm) to Wes (Mb Macedean WMM) in providing, large, speciation and compacting granted stores and CMC in mechanical mix plant, carriage of mixed material with vater at CMC in mechanical mix plant, carriage of mixed material with vater at CMC in mechanical mix plant, carriage of mixed material with vater at CMC in mechanical mix plant, carriage of mixed material with vater at CMC in mechanical mix plant, carriage of mixed material with vater at CMC in mechanical mix plant, carriage of mixed material with vater at CMC in mechanical mix plant, carriage of mixed material with vater at CMC in mechanical mix plant, carriage of mixed material with vater transport mixed with water transport mixed with selection of granular takes industry of granular transport mixed with the capacity of granular store including plant mixed with the capacity of the capacity of mixed with selection capacity in a mixed with selection capacity in a selection of granular transported with selection complete as per specifications and directions and directions of granular permixed with selection and directions and directions and directions and									
conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by trippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on the casered centrally, complete as per specifications and directions of Engineer-in-Charge. (in Two Layer)  With material conforming to Grade-III (size range S3 mm to 0.076mm) Curn  North the deserved density, complete as per specifications and directions of Engineer-in-Charge. (in Two Layer)  Providing, laying, permaning and compacting graded stone aggregate (size range S3 mm to 0.075 mm ) to Wet Mix Macadam (VMM) specification including preming the material with variety of the case of the	1	16.1	depth, dressing to camber and consolidation with road roller of 8-12 tonne capacity including making good the undulation etc. and disposal	Sqm	696.00	139.40		97022	
having CBR Value-25  Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm ) to Wet Mix Macadam (WMM) specification including premixing the material with water at OMC in mechanical plant (including premixing the material with water at OMC in mechanical plant (including premixing the material with water at OMC in least 6 life, laying in uniform layers with mechanical plant (including premixing the material with water at OMC in which water at the least of the control of 8 to 10 tones capacity to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.  Providing and applying prime coat with bitumen emulsion Grade SS-1 complying with IS:8887 on prepared surface of granular base including learning of road surface with compressed air and sparying primer at the rate of 0.80kg/spm using pressure distributor as per dause 502 of MoRTH specifications completes.  Providing and laying bituminous macadam using crushed stone aggregates of specified grading premixed with bituminous binder, with paver finisher equipped with electronic sensor to the required for grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge.50 to 100mm average compacted thickness with bitumen of VG-10 (0.83% (percatage by weight of total mix) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.  Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers of capital propared the existing roll and septiment of the desired compaction and desired prompaction and desired compaction and desired compaction and des	2	16.82.2	conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by trippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of						
specification including premising the material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all seads & lifts, larging in uniform layers with mechanical praver finisher in sub-base / base course on well prepared surface and compacting with vibratory relate of 8 to 10 toner capacity to active the desired density, complete as per specifications and directions of Engineer-in-Charge.  Providing and applying prime cost with bitumen emulsion Grade S-1.  On WMM surface 98.08kg/sgm using pressure distributer as per clause 502 of McRTH specifications complete.  On WMM surface 98.08kg/sgm using pressure distributer as per clause 502 of McRTH specifications complete.  On WMM surface 98.08kg/sgm using pressure distributer as per clause 502 of McRTH specifications complete.  On WMM surface 98.08kg/sgm using pressure distributer as per clause 502 of McRTH specifications complete.  On WMM surface 98.08kg/sgm using pressure distributer as per clause 502 of McRTH specifications complete.  On WMM surface 98.08kg/sgm using pressure distributer as per clause 502 of McRTH specifications complete.  On WMM surface 98.08kg/sgm using pressure distributer as per clause 502 of McRTH specifications complete.  This providing and laying bituminous macadam using crushed stone aggregates of specified grading premixed with bituminous binder, transported to list by trippers, ladd over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired grade, level and alignment and roll may be bitumen, approach with bitumine of VG-10 @15% (percentage by weight of total mix) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.  Providing and laying Bituminous concrete using crushed stone adjerts of the presence of the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers are presented			,	Cum	36.00	1077.15		38777	
Complying with IS:8887 on prepared surface of granular base including cleaning of road surface with compressed air and spraying primer at the road of 0.80kg/sgm using pressure distributer as per clause 502 of MoRTH specifications complete.  On WIMM surface @0.80kg/sgm  Providing and laying bituminous macadam using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by trippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wholeded, vibratory and tandern rollers as per specifications and directions of Engineer-in-Charge-50 to 100mm average compacted thickness with bitumen of 19-10-10.35% per specifications and directions of Engineer-in-Charge-50 to 100mm average compacted thickness with bitumen of 19-10-10.35% per specifications and directions of Engineer-in-Charge-50 to 100mm average compacted thickness with bitumen of 19-10-10.35% per specifications and directions of Engineer-in-Charge-50 to 100mm average compacted thickness with bitumen of 19-10-10.35% per specifications and directions of Engineer-in-Charge-30 to 100mm average compacted thickness with bitumen of 19-10-10.35% per specifications and directions of Engineer-in-Charge-30 to 100mm average compacted thickness with bitumen of grade-VS-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boller, cleaning and prepared the existing road surface as per specifications.  On bitumen surface @0.50 kg/sgm  Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bitumen of grade visit of specifications.  Cum  It is a specification of the specific	3	16.83	(size range 53 mm to 0.075 mm) to <b>Wet Mix Macadam</b> (WMM) specification including premixing the material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all leads & lifts, laying in uniform layers with mechanical paver finisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density,	Cum	46.20	1041.50		48117	
Complying with IS:8887 on prepared surface of granular base including cleaning of road surface with compressed air and spraying primer at the road of 0.80kg/sgm using pressure distributer as per clause 502 of MoRTH specifications complete.  On WIMM surface @0.80kg/sgm  Providing and laying bituminous macadam using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by trippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wholeded, vibratory and tandern rollers as per specifications and directions of Engineer-in-Charge-50 to 100mm average compacted thickness with bitumen of 19-10-10.35% per specifications and directions of Engineer-in-Charge-50 to 100mm average compacted thickness with bitumen of 19-10-10.35% per specifications and directions of Engineer-in-Charge-50 to 100mm average compacted thickness with bitumen of 19-10-10.35% per specifications and directions of Engineer-in-Charge-50 to 100mm average compacted thickness with bitumen of 19-10-10.35% per specifications and directions of Engineer-in-Charge-30 to 100mm average compacted thickness with bitumen of 19-10-10.35% per specifications and directions of Engineer-in-Charge-30 to 100mm average compacted thickness with bitumen of grade-VS-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boller, cleaning and prepared the existing road surface as per specifications.  On bitumen surface @0.50 kg/sgm  Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bitumen of grade visit of specifications.  Cum  It is a specification of the specific			Providing and applying prime coat with hitumen emulsion Grade SS-1						
Providing and laying bituminous macadam using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by trippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge-50 to 10 00mm average compacted thickness with bitumen of VG-10 @3.5% (percentage by weight of total mix) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.  Providing and applying Tack Coat using hot straight run bitumen of grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and prepared the existing road surface as per specifications.  On bitumen surface @0.50 kg/sqm sqm sqm 450.00 42.10 18945  Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and transporting the hot mix to work site of the part o	4		complying with IS:8887 on prepared surface of granular base including cleaning of road surface with compressed air and spraying primer at the rate of 0.80kg/sqm using pressure distributer as per clause 502 of MoRTH specifications complete.						
aggregates of specified grading premixed with bituminous binder, transported to site by trippers, laid voer a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandern rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charges 50 to 100mm average compacted thickness with bitumen of VC-10 @3.5% (percentage by weight of total mix) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.  Providing and applying Tack Coat using hot straight run bitumen of grade-VC-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and prepared the existing road surface as per specifications.  On bitumen surface @0.50 kg/sqm sqm sqm 450.00 42.10 18945  Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and alignment and rolling with smooth wheeled, vibratory and tandern rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charges: 40/50 mm compacted thickness with bitumen of grade VG-10@5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.  Providing seal coat of premixed fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing sqm 450.00 78.15 35168			On WMM surface @0.80kg/sqm	Sqm	462.00		53.47		24703.00
grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and prepared the existing road surface as per specifications.  On bitumen surface @0.50 kg/sqm	5	derived Rate from	aggregates of specified grading premixed with bituminous binder, transported to site by trippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge.50 to 100mm average compacted thickness with bitumen of VG-10 @3.5% (percentage by weight of total mix) prepared	cum	22.50	5917.98		133155	
Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.  Providing seal coat of premixed fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing sqm 450.00 78.15 35168	6	16.38.2	grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and						
aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.  Providing seal coat of premixed fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing sqm 450.00 78.15 35168			On bitumen surface @0.50 kg/sqm	sqm	450.00	42.10		18945	
retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing sqm 450.00 78.15 35168	7	derived Rate from	Providing and laying <b>Bituminous concrete</b> using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in						
	8	16.48	retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing	sqm	450.00	78.15		35168	

		ROAD MARKINGS AND SIGN BOARDS					
9	16.58	Providing and fixing Glow studs of size 100x20mm made of heavy duty body shall be moulded ASA (Acrylic styrene Acryloretrite) or HIP (High impact Polystyrene) or ABS having electronically welded micro-prismatic lens with abrasion resistant coating as approved by Engineer-in-charge. The Glow stud shall support a load of 13635 kg tested in accordance with ASTM D4280. The slope of retro-reflective surface shall be 35 +/-5 degrees to base. The reflective panels on both sides with at least 12cm of reflective area up each side. The luminance intensity should be as per the specification and shall be tested as described in ASTM I: 809 as recommended in BS : 873 part 4 : 1973. The studs shall be fixed to the road surface using the adhesive conforming to IS, as per procedure recommended by the manufacturer complete and as per direction of Engineer-in-charge	each	3	193.85	517	
10	16.69	Providing and applying 2.5mm thick road marking strips (retro-reflective) of specified shade/colour using hot thermoplastic material by fully/semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour, T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and accordance with applicable specifications.	sqm	6.00	604.50	3627	,
11	16.66	Manufacturing supplying and fixing retro reflective sign boards made up of 2mm thick aluminum sheet, face to be fully covered with high intensity encapsulated type heat activated retro reflective sheeting conforming to type-IV of ASTM-D-4956-01 in blue and silver white or other colour combination including subject matter, message (bi-lingual), symbols and borders etc. as per IRC : 67-2001, pasted on substrate by an adhesive backing which shall be activated by applying heat and pressure conforming to class -2 of ASTM-D-4956-01 and fixing the same with suitable sized aluminum alloy rivets @ 20cm c/c to back support frame of M.S. angle iron of size 25x25x3mm along with theft resistant measures mounted and fixed with 2 nos. M.S. angles of size 35x35x5mm to a vertical post made upto M.S. Tee section ISMT 50x50x6mm welded with base plate of size 100x100x5mm at the bottom end and including making holes in pipes, angle flats, providing and fixing M.S. message plate of required size steel work to be painted with two or more coats of synthetic enamel paint of required shade and of approved brand & manufacture over priming coat of zinc chromate yellow primer (vertical M.STee support to be painted in black and white colours). Backside of aluminum sheet to be painted with two or more coats of epoxy paint over and including appropriate priming coats including all leads and lifts etc. complete as per drawing, specification and direction of Engineer-in-charge.					
11.1	16.66.1	Mandatory/Regulatory sign boards of 900 mm diameter with part as length of 3750 mm	each	1.00	5795.50	5796	;
11.2	16.66.2	Cautionary/warning sign boards of equilateral triangular shape having each side of 900 mm support length of 3650mm.	each	1.00	4260.80	4261	
		FOOTPATH WORK					
12	Derived from JKSoR	Providing and laying 200 mm thick compacted bed of Stone soling including spreading, well ramming, consolidating including finishing smooth etc. complete as per direction of Engineer-in-charge	sqm	10.80	1396.82	15086	
13	4.9.2	Providing & fixing at or near ground level precast cement concrete in kerbs, edging etc as per approved patterns and setting in position with cement mortar 1:3 (1 cement:3 coarse sand) including the cost of required centring, shuttering and curing complete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)	cum	3.60	6213.80	22370	
14	4.4.5	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:3:6 (1 cement: 3 coarse sand: 6 graded stone aggregate 20 mm nominal size)	cum	5.40	4943.40	26694	
15	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return walls, walls (any thickness) including attached pilasters butteresses, plinth and string course fillets, kerbs and steps etc.	sqm	6.00	573.85	3443	3
		<u>l</u>				ı	1

16	16.74	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grade made by block making machine with strong vibratory compaction and of approved size and design/shape laid in required colour and pattern over and including 50mm thick compacted bed of fine sand, filling the joints with coarse sand etc. all complete as per direction of Engineer-in-charge.	sqm	54.00	770.60		41612	
	•				•	Total (Rs)	656672	
		Add 25% approximate cost index on JK Schedule it	ems				164168	
							820840	24703
				To	otal (Rs) Ji	( SoR + NS	845543	
		Add contingencies @5%					42277	
						Total (Rs)	887820	
,			Estimated	l cost of the	work inclu	sive of GST	887820	,
		Estimated cos	t put to Te	ender (Excl	luding GST	@ 14.05%)	7,78,448	

Reference   Refere		DETAILED ESTIMATE									
S.NO DISCORPTION  OR ROAD WORK  ROAD WORK  ROAD WORK  ROAD WORK  1 16.1  16.1	Name o		onstruction of link road from Skampari Market to Maney sermo,	Skamp	ari Leh U1	Ladakh					
ROAD WORK  Figuration of subgrade by excessioning earth is an average of 22.5 cm.  Programation of subgrade by excessioning earth is an average of 22.5 cm.  Programation of subgrade by excessioning earth is an average of 22.5 cm.  Programation of subgrade by excessioning the subgrade of 12.5 cm.  Constitution of granular sub-base by providing close grasted material conforming to specifications, mixing in a mechanical mix plant at OMC.  Constitution of granular sub-base by providing close grasted material conforming to specifications, mixing in a mechanical mix plant at OMC.  In a conforming to specifications, mixing in a mechanical mixing in a subgrade of the specification of granular sub-base by providing close grasted material conforming to find the desired density, complete as per specifications and directions of Engineerin-Change, In Two Layon  With material conforming to Grade-II (size range 83 mm to 0.075 mm) by With Mix Macadam (WMM) specification including premising the material with water at OMC in machinal mixing binn to 0.075 mm) by With Mix Macadam (WMM) specification including premising the material with water at OMC in dispersion of the property of the state of the specification including premising the material with water at OMC in dispersion of the specification including premising the material with water at OMC in dispersion of the specification including premising the material with water at OMC in dispersion of the specification including premising the material with water at OMC in dispersion of the specification including premising and specification of the specification of	S.N0	of Rates JK SOR 2020 Code	DESCRIPTION	Unit	Qty	Rate (Rs)		Amount (Rs)			
Preparation of subgrade by excavoling earth to an avanage of 22.5 cm depth, detaining to cumber and consolidation with noted rolet of 5-12 of subject with up to 50 meleties. Qualified and consolidation with noted rolet of 5-12 of subject with up to 50 meleties. Qualified and consolidation with noted rolet of 5-12 of subject with up to 50 meleties. Qualified and subject with the consolidation of grantism subject with the consolidation of the c		no.				JK SoR	NS	JK SoR	NS		
depth, dressing to Camber and consolidation with road roller of 8-12 common capacity building making good the undellation let. and disposeal Sym 812.00 139.40 113193 disputes cent upto 50 meters.  Construction of granular sub-base by providing close graded material conforming to specifications, mixing in a mechanical mix plant at CMC, carrilage of mixed material by tispers to work sets, for all leads & Bits, prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineerin-Change, in Two Layers in the desired density, complete as per specifications and directions of Engineerin-Change in Two Layers in the desired density, complete as per specifications and compacting private and CMC in mechanical mix plant, carrage of mixed material with vater at CMC in mechanical mix plant, carrage of mixed material with vater at CMC in mechanical mix plant, carrage of mixed material with vater at CMC in mechanical mix plant, carrage of mixed material with vater at CMC in mechanical mix plant, carrage of mixed material with vater at CMC in mechanical mix plant, carrage of mixed material with vater at CMC in mechanical mix plant, carrage of mixed material with vater funds of the complete as per specifications and directions of Engineer-in-Change.  3 16.83 by the complete as per specifications and directions of Engineer-in-Change.  Complete as per specifications and directions of Engineer-in-Change.  Complete as per specifications mixed with bituminous bidder. The complete as per specifications and directions and directions are complete as per specifications. A complete as per specifications and directions and directions are provided by prepared under with power finisher equipped with electronic sensor to the required with power finisher equipped with electronic sensor to the required with power finisher equipped with electronic sensor to the required with power finisher equipped with electronic sensor to the required provided with power finishe			ROAD WORK								
conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by trippers to work site, for the lack at life, spreading in uniform layers of appelled thickness with motor grader on the desired dening, complete as per specifications and directions of Engineer-in-Charge. (in Two Layer)  With material conforming to Grade-II (size range S3 mm to 0.075mm)  North Prividing, laying, spreading and compacting graded stone aggregate (size range S3 mm to 0.075 mm ) to Wet Mix Macadam (WMM) specification including premixing the material with values at OMC in mechanical mix plant, carriage of mixed material by tripper to site, for all sets of the specifications and directions of the set of the specification including premixing the material with values at OMC in mechanical mix plant, carriage of mixed material by tripper to site, for all sets of the specification including premixing the material with values at OMC in mechanical mix plant, carriage of mixed material by tripper to site, for all sets of the specifications and directions of Engineer-in-Charges. Set 10 flowers are per specifications and using crushed stone aggregates of specifications and specifications and using crushed stone aggregates of specifications and specifications. Set 10 flowers are per specifications and directions of Engineer-in-Charges 50 to 10 flowers are per specifications.  Providing and algoing flowers are perspectations.  Providing and algoing flowers are perspectations.  Providing and algoing flowers are perspectations.  On billumen surface 80.55 kg/spec specifications.  Providing and algoing flowers and dening perspect	1	16.1	depth, dressing to camber and consolidation with road roller of 8-12 tonne capacity including making good the undulation etc. and disposal	Sqm	812.00	139.40		113193			
having CBR value-25  Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm ) to Wet Mix Macadam (VMM) specification including premixing the material with water at OMC in mechanical map pent. Carriage of inhed material by typer to stell, for all commerciance of the pent of the commercian of th	2	16.82.2	conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by trippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of								
Second Continue   Second Con			, ,	Cum	42.00	1077.15		45240			
Complying with Is.8887 on prepared surface of granular base including cleaning of road surface with compressed air and spraying primer at the cell of 0.80kg/sgm using pressure distributer as per clause 502 of MoRTH specifications complete.  On WMM surface @0.80kg/sgm  Providing and laying bituminous macadam using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by trippers, lad over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, wibratory and tandem rollers as per specifications and directions of Engineer-in-Charge 50 to 100mm average compacted thickness with bitumen of year of the compact of the compac	3	16.83	(size range 53 mm to 0.075 mm) to <b>Wet Mix Macadam</b> (WMM) specification including premixing the material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all leads & lifts, laying in uniform layers with mechanical paver finisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density,	Cum	53.90	1041.50		56137			
Schedule Sch			complying with IS:8887 on prepared surface of granular base including								
Providing and laying bituminous macadam using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by trippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and trander rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge 5.0 to 100mm average compacted thickness with bitumen of VG-10 @3.5% (percentage by weight of total mix) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.  Providing and applying Tack Coat using hot straight run bitumen of grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and prepared the existing road surface as per specifications.  On bitumen surface @0.50 kg/sqm sqm sqm 525.00 42.10 22103  Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Sqgregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.  Providing seal coat of premixed fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing sqm	4		rate of 0.80kg/sqm using pressure distributer as per clause 502 of MoRTH specifications complete.	Corre	520.00		50.47		20020 00		
aggregates of specified grading premixed with bituminous binder, transported to site by trippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandern rollers as per specifications and directions of Engineer-in-Charges, 50 to 100mm average compacted thickness with bitumen of VG-10 @3.5% (percentage by weight of total mix) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.  Providing and applying Tack Coat using hot straight run bitumen of grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and prepared the existing road surface as per specifications.  Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandern rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.  Providing seal coat of premixed fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 syno for oad sulface including rolling made finishing sgm 525.00 78.15 41029			On winin surface @0.80kg/sqm	Sqm	539.00		53.47		28820.00		
grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and prepared the existing road surface as per specifications.  On bitumen surface @0.50 kg/sqm	5	derived Rate from	aggregates of specified grading premixed with bituminous binder, transported to site by trippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge.50 to 100mm average compacted thickness with bitumen of VG-10 @3.5% (percentage by weight of total mix) prepared	cum	26.25	5917.98		155347			
Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.  Providing seal coat of premixed fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing sqm 525.00 78.15 41029	6	16.38.2	grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and								
aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.  Providing seal coat of premixed fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing sqm 525.00 78.15 41029			On bitumen surface @0.50 kg/sqm	sqm	525.00	42.10		22103			
retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing sqm 525.00 78.15 41029	7	derived Rate from	Providing and laying <b>Bituminous concrete</b> using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in		21.00	9004.58		189096			
	8	16.48	retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing	sqm	525.00	78.15		41029			

		ROAD MARKINGS AND SIGN BOARDS					
9	16.58	Providing and fixing Glow studs of size 100x20mm made of heavy duty body shall be moulded ASA (Acrylic styrene Acryloretrite) or HIP (High impact Polystyrene) or ABS having electronically welded micro-prismatic lens with abrasion resistant coating as approved by Engineer-in-charge. The Glow stud shall support a load of 13635 kg tested in accordance with ASTM D4280. The slope of retro-reflective surface shall be 35 +/-5 degrees to base. The reflective panels on both sides with at least 12cm of reflective area up each side. The luminance intensity should be as per the specification and shall be tested as described in ASTM I: 809 as recommended in BS: 873 part 4: 1973. The studs shall be fixed to the road surface using the adhesive conforming to IS, as per procedure recommended by the manufacturer complete and as per direction of Engineer-in-charge	each	3	193.85	603	
10	16.69	Providing and applying 2.5mm thick road marking strips (retro-reflective) of specified shade/colour using hot thermoplastic material by fully/semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour,  T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and accordance with applicable specifications.	sqm	7.00	604.50	4232	
11	16.66	Manufacturing supplying and fixing retro reflective sign boards made up of 2mm thick aluminum sheet, face to be fully covered with high intensity encapsulated type heat activated retro reflective sheeting conforming to type-IV of ASTM-D-4956-01 in blue and silver white or other colour combination including subject matter, message (bi-lingual), symbols and borders etc. as per IRC: 67-2001, pasted on substrate by an adhesive backing which shall be activated by applying heat and pressure conforming to class -2 of ASTM-D-4956-01 and fixing the same with suitable sized aluminum alloy rivets @ 20cm c/c to back support frame of M.S. angle iron of size 25x25x3mm along with theft resistant measures mounted and fixed with 2 nos. M.S. angles of size 35x35x5mm to a vertical post made upto M.S. Tee section ISMT 50x50x6mm welded with base plate of size 100x100x5mm at the bottom end and including making holes in pipes, angle flats, providing and fixing M.S. message plate of required size steel work to be painted with two or more coats of synthetic enamel paint of required shade and of approved brand & manufacture over priming coat of zinc chromate yellow primer (vertical M.STee support to be painted in black and white colours). Backside of aluminum sheet to be painted with two or more coats of epoxy paint over and including appropriate priming coats including all leads and lifts etc. complete as per drawing, specification and direction of Engineer-in-charge.					
11.1	16.66.1	Mandatory/Regulatory sign boards of 900 mm diameter with part as length of 3750 mm	each	1.00	5795.50	5796	
11.2	16.66.2	Cautionary/warning sign boards of equilateral triangular shape having each side of 900 mm support length of 3650mm.	each	1.00	4260.80	4261	
		FOOTPATH WORK					
12	Derived from JKSoR	Providing and laying 200 mm thick compacted bed of Stone soling including spreading, well ramming, consolidating including finishing smooth etc. complete as per direction of Engineer-in-charge	sqm	12.60	1396.82	17600	
13	4.9.2	Providing & fixing at or near ground level precast cement concrete in kerbs, edging etc as per approved patterns and setting in position with cement mortar 1:3 (1 cement:3 coarse sand) including the cost of required centring, shuttering and curing complete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)	cum	4.20	6213.80	26098	
14	4.4.5	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:3:6 (1 cement: 3 coarse sand: 6 graded stone aggregate 20 mm nominal size)	cum	6.30	4943.40	31143	
15	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return walls, walls (any thickness) including attached pilasters butteresses, plinth and string course fillets, kerbs and steps etc.	sqm	7.00	573.85	4017	

16	16.74	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grade made by block making machine with strong vibratory compaction and of approved size and design/shape laid in required colour and pattern over and including 50mm thick compacted bed of fine sand, filling the joints with coarse sand etc. all complete as per direction of Engineer-in-charge.	sqm	63.00	770.60		48548	
						Total (Rs)	764443	
	Add 25% approximate cost index on JK Schedule items				191111			
							955554	28820
	Total (Rs) JK SoR + NS				984374			
	Add contingencies @5%				49219	·		
	Total (Rs)				1033592			
	Estimated cost of the work inclusive of GST					sive of GST	1033592	
	Estimated cost put to Tender ( Excluding GST @ 14.05%					@ 14.05%)	9,06,263	·

Name -	-f	DETAILED ESTIMATI		-U I -b 117	· I a dalah			
Name o	Reference	onstruction of link road from Pologround gate to backside of Pi	cture na	ali, Len U i	Ladakn			
S.N0	of Rates JK SOR 2020 Code no.	DESCRIPTION	Unit	Qty		Rate (Rs)	Aı	mount (Rs)
	110.				JK SoR	NS	JK SoR	NS
		ROAD WORK						
1	16.1	Preparation of subgrade by excavating earth to an avarage of 22.5 cm depth, dressing to camber and consolidation with road roller of 8-12 tonne capacity including making good the undulation etc. and disposal of surplus earth upto 50 meters	Sqm	480.00	139.40		66912	
2	16.82.2	Construction of <b>granular sub-base</b> by providing close graded material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by trippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge. (in Two Layer)						
		With material conforming to Grade-II (size range 53 mm to 0.075mm) having CBR Value-25	Cum	36.00	1077.15		38777	
3	16.83	Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm) to <b>Wet Mix Macadam</b> (WMM) specification including premixing the material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all leads & lifts, laying in uniform layers with mechanical paver finisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.	Cum	46.20	1041.50		48117	
		Providing and applying prime cost with hitures a seculation Cost 1, 2011						
4	Non Schedule	Providing and applying prime coat with bitumen emulsion Grade SS-1 complying with IS:8887 on prepared surface of granular base including cleaning of road surface with compressed air and spraying primer at the rate of 0.80kg/sqm using pressure distributer as per clause 502 of MoRTH specifications complete.	-					
		On WMM surface @0.80kg/sqm	Sqm	462.00		53.47		24703.00
5	JKSoR derived Rate from 16.63.1	Providing and laying <b>bituminous macadam</b> using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by trippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge.50 to 100mm average compacted thickness with bitumen of VG-10 @3.5% (percentage by weight of total mix) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	22.50	5917.98		133155	
6	16.38.2	Providing and applying <b>Tack Coat</b> using hot straight run bitumen of grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and prepared the existing road surface as per specifications.						
		On bitumen surface @0.50 kg/sqm	sqm	450.00	42.10		18945	
7	JKSoR derived Rate from 16.65.1	Providing and laying <b>Bituminous concrete</b> using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with pover finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	Cum	18.00	9004.58		162082	
8	16.48	Providing <b>seal coat</b> of premixed fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing with road all complete.	sqm	450.00	78.15		35168	

		ROAD MARKINGS AND SIGN BOARDS					
9	16.58	Providing and fixing Glow studs of size 100x20mm made of heavy duty body shall be moulded ASA (Acrylic styrene Acryloretrite) or HIP (High impact Polystyrene) or ABS having electronically welded micro-prismatic lens with abrasion resistant coating as approved by Engineer-in-charge. The Glow stud shall support a load of 13635 kg tested in accordance with ASTM D4280. The slope of retro-reflective surface shall be 35 +/-5 degrees to base. The reflective panels on both sides with at least 12cm of reflective area up each side. The luminance intensity should be as per the specification and shall be tested as described in ASTM I: 809 as recommended in BS : 873 part 4 : 1973. The studs shall be fixed to the road surface using the adhesive conforming to IS, as per procedure recommended by the manufacturer complete and as per direction of Engineer-in-charge	each	3	193.85	517	
10	16.69	Providing and applying 2.5mm thick road marking strips (retro-reflective) of specified shade/colour using hot thermoplastic material by fully/semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour, T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and accordance with applicable specifications.	sqm	6.00	604.50	3627	,
11	16.66	Manufacturing supplying and fixing retro reflective sign boards made up of 2mm thick aluminum sheet, face to be fully covered with high intensity encapsulated type heat activated retro reflective sheeting conforming to type-IV of ASTM-D-4956-01 in blue and silver white or other colour combination including subject matter, message (bi-lingual), symbols and borders etc. as per IRC : 67-2001, pasted on substrate by an adhesive backing which shall be activated by applying heat and pressure conforming to class -2 of ASTM-D-4956-01 and fixing the same with suitable sized aluminum alloy rivets @ 20cm c/c to back support frame of M.S. angle iron of size 25x25x3mm along with theft resistant measures mounted and fixed with 2 nos. M.S. angles of size 35x35x5mm to a vertical post made upto M.S. Tee section ISMT 50x50x6mm welded with base plate of size 100x100x5mm at the bottom end and including making holes in pipes, angle flats, providing and fixing M.S. message plate of required size steel work to be painted with two or more coats of synthetic enamel paint of required shade and of approved brand & manufacture over priming coat of zinc chromate yellow primer (vertical M.STee support to be painted in black and white colours). Backside of aluminum sheet to be painted with two or more coats of epoxy paint over and including appropriate priming coats including all leads and lifts etc. complete as per drawing, specification and direction of Engineer-in-charge.					
11.1	16.66.1	Mandatory/Regulatory sign boards of 900 mm diameter with part as length of 3750 mm	each	1.00	5795.50	5796	;
11.2	16.66.2	Cautionary/warning sign boards of equilateral triangular shape having each side of 900 mm support length of 3650mm.	each	1.00	4260.80	4261	
		FOOTPATH WORK					
12	Derived from JKSoR	Providing and laying 200 mm thick compacted bed of Stone soling including spreading, well ramming, consolidating including finishing smooth etc. complete as per direction of Engineer-in-charge	sqm	10.80	1396.82	15086	
13	4.9.2	Providing & fixing at or near ground level precast cement concrete in kerbs, edging etc as per approved patterns and setting in position with cement mortar 1:3 (1 cement:3 coarse sand) including the cost of required centring, shuttering and curing complete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)	cum	3.60	6213.80	22370	
14	4.4.5	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:3:6 (1 cement: 3 coarse sand: 6 graded stone aggregate 20 mm nominal size)	cum	5.40	4943.40	26694	
15	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return walls, walls (any thickness) including attached pilasters butteresses, plinth and string course fillets, kerbs and steps etc.	sqm	6.00	573.85	3443	3
		<u>l</u>				ı	1

16	16.74	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grade made by block making machine with strong vibratory compaction and of approved size and design/shape laid in required colour and pattern over and including 50mm thick compacted bed of fine sand, filling the joints with coarse sand etc. all complete as per direction of Engineer-in-charge.	sqm	54.00	770.60		41612	
						Total (Rs)	626562	
		Add 25% approximate cost index on JK Schedule ite	ems				156641	
							783203	24703
				To	otal (Rs) Jk	( SoR + NS	807906	
		Add contingencies @5%					40395	
						Total (Rs)	848301	
			Estimated	d cost of the	work inclu	sive of GST	848301	
	Estimated cost put to Tender ( Excluding GST @ 14.05%						7,43,797	

		DETAILED E	STIMAT	Έ				
Name o	f work : Rep	pairing of Footpath from Jamia Masjid to DB	2, Leh U	T Ladakh				
S.NO	Reference of Rates JK SOR 2020 Code no.	DESCRIPTION	Unit	Qty	F	tate (Rs)	Amo	unt (Rs)
					JK SoR	NS	JK SoR	NS
1	15.23.2	Dismantling tile work in floors and roofs laid in cement mortar including stacking material within 50 meters lead. For thickness of tiles above 25 mm and upto 40 mm.	sqm	420.00	81.65		34293	
2	16.74	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grade made by block making machine with strong vibratory compaction and of approved size and design/shape laid in required colour and pattern over and including 50mm thick compacted bed of fine sand, filling the joints with coarse sand etc. all complete as per direction of Engineer-incharge.	sqm	420.00	770.60		323652	
3	4.4.3	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with: 1:2:4 ( 1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	42.00	5877.5		246853	
4	4.6.2	Centering and shuttering including strutting, propping etc. and removal of form work for: Retaining walls, return walls, walls (any thickness) including attached pilasters buttresses, plinth and string course fillets, kerbs and steps etc	sqm	24.00	573.85		13772	
					_		045==5	
		Add 250/ approximate aget index II/ 0	- ایرام ماریا	itama.	Т	otal (Rs)	618570.00	
<u> </u>		Add 25% approximate cost index on JK S	cneaule	items			154642.50 773212.50	0.00
				Total /	Rs) JK S	OR + NS	773212.50 <b>773212.50</b>	0.00
-		Add contingencies @5%		i Utal (	ivaj un o	UN 7 113	38660.63	
		Add contingencies @576			Т	otal (Rs)	811873.125	
		Es	timated c	ost of the wo			811873	
		Estimated cost pu	t to Tende	er ( Excludino	GST @	14.05%)	7,11,857	

		DETAILS OF MEAS						
Name of		g of Footpath from Jamia Masjid to Shia Masj	id, Leh l	JT Ladakh				
S.N0	Reference of Rates JK SOR 2020 Code no.	DESCRIPTION	Unit	Qty	Rate	(Rs)	Amount (R	s)
					JK SoR	NS	JK SoR	NS
1	15.23.2	Dismantling tile work in floors and roofs laid in cement mortar including stacking material within 50 meters lead. For thickness of tiles above 25 mm and upto 40 mm.	sqm	437.50	81.65		35721.875	
2	16.74	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grade made by block making machine with strong vibratory compaction and of approved size and design/shape laid in required colour and pattern over and including 50mm thick compacted bed of fine sand, filling the joints with coarse sand etc. all complete as per direction of Engineer-in-charge.	sqm	437.50	770.60		337138	
3	4.4.3	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with: 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)	cum	43.75	5877.5		257138.4375	
4	4.6.2	Centering and shuttering including strutting, propping etc. and removal of form work for: Retaining walls, return walls, walls (any thickness) including attached pilasters buttresses, plinth and string course fillets, kerbs and steps etc	sqm	25.00	573.85		14346	
	<u> </u>				т	otal (Rs)	644344.31	
<u> </u>		Add 25% approximate cost index on JK Sche	dule ite	ms	I	ulai (NS)	161086.08	
		The 20 /0 approximate cost mack on the other	auto itel				805430.39	0.00
				Total (	Rs) JK S	oR + NS	805430.39	
		Add contingencies @5%					40271.52	
			•			otal (Rs)	845701.9102	
				t of the worl			845702	
		Estimated cost put	o rende	r ( Excluding	g GSI @	14.05%)	7,41,519	

		DETAILED ESTIMAT						
Name o	Reference	nstruction of link road from Changspa Bridge to Goba Kunzes H	louse, C	hangspa,	Leh UI La	dakh		
S.N0	of Rates JK SOR 2020 Code	DESCRIPTION	Unit	Qty		Rate (Rs)	A	mount (Rs)
	no.				JK SoR	NS	JK SoR	NS
		ROAD WORK						
1	16.1	Preparation of subgrade by excavating earth to an avarage of 22.5 cm depth, dressing to camber and consolidation with road roller of 8-12 tonne capacity including making good the undulation etc. and disposal of surplus earth upto 50 meters		4640.00	139.40		646816	
2	16.82.2	Construction of <b>granular sub-base</b> by providing close graded material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by trippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge. (in Two Layer)						
		With material conforming to Grade-II (size range 53 mm to 0.075mm) having CBR Value-25	Cum	240.00	1077.15		258516	
3	16.83	Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm) to <b>Wet Mix Macadam</b> (WMM) specification including premixing the material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all leads & lifts, laying in uniform layers with mechanical paver finisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.	Cum	308.00	1041.50		320782	
4	Non Schedule	Providing and applying prime coat with bitumen emulsion Grade SS-1 complying with IS:8887 on prepared surface of granular base including cleaning of road surface with compressed air and spraying primer at the rate of 0.80kg/sqm using pressure distributer as per clause 502 of MoRTH specifications complete.						
		On WMM surface @0.80kg/sqm	Sqm	3080.00		53.47		164688.00
5	JKSoR derived Rate from 16.63.1	Providing and laying <b>bituminous macadam</b> using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by trippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge.50 to 100mm average compacted thickness with bitumen of VG-10 @3.5% (percentage by weight of total mix) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	150.00	5917.98		887697	
6	16.38.2	Providing and applying <b>Tack Coat</b> using hot straight run bitumen of grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and prepared the existing road surface as per specifications.						
		On bitumen surface @0.50 kg/sqm	sqm	3000.00	42.10		126300	
7	JKSoR derived Rate from 16.65.1	Providing and laying <b>Bituminous concrete</b> using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	Cum	120.00	9004.58		1080550	
				i				
8	16.48	Providing <b>seal coat</b> of premixed fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing with road all complete.		3000.00	78.15		234450	
8	16.48	retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing		3000.00	78.15		234450	

9	16.58	Providing and fixing Glow studs of size 100x20mm made of heavy duty body shall be moulded ASA (Acrylic styrene Acryloretrite) or HIP (High impact Polystyrene) or ABS having electronically welded microprismatic lens with abrasion resistant coating as approved by Engineerin-charge. The Glow stud shall support a load of 13635 kg tested in accordance with ASTM D4280. The slope of retro-reflective surface shall be 35 +/- 5 degrees to base. The reflective panels on both sides with at least 12cm of reflective area up each side. The luminance intensity should be as per the specification and shall be tested as described in ASTM I: 809 as recommended in BS: 873 part 4: 1973. The studs shall be fixed to the road surface using the adhesive conforming to IS, as per procedure recommended by the manufacturer complete and as per direction of Engineer-in-charge  Providing and applying 2.5mm thick road marking strips (retro-reflective) of specified shade/colour using hot thermoplastic material by fully/semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour, T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and accordance with applicable specifications.	each	40.00	193.85		3446 24180	
11	16.66	Manufacturing supplying and fixing retro reflective sign boards made up of 2mm thick aluminum sheet, face to be fully covered with high intensity encapsulated type heat activated retro reflective sheeting conforming to type-IV of ASTM-D-4956-01 in blue and silver white or other colour combination including subject matter, message (bi-lingual), symbols and borders etc. as per IRC: 67-2001, pasted on substrate by an adhesive backing which shall be activated by applying heat and pressure conforming to class -2 of ASTM-D-4956-01 and fixing the same with suitable sized aluminum alloy rivets @ 20cm c/c to back support frame of M.S. angle iron of size 25x25x3mm along with theft resistant measures mounted and fixed with 2 nos. M.S. angles of size 35x35x5mm to a vertical post made upto M.S. Tee section ISMT 50x50x6mm welded with base plate of size 100x100x5mm at the bottom end and including making holes in pipes, angle flats, providing and fixing M.S. message plate of required size steel work to be painted with two or more coats of synthetic enamel paint of required shade and of approved brand & manufacture over priming coat of zinc chromate yellow primer (vertical M.STee support to be painted in black and white colours). Backside of aluminum sheet to be painted with two or more coats of epoxy paint over and including appropriate priming coats including all leads and lifts etc. complete as per drawing, specification and direction of Engineer-in-charge.						
11.1	16.66.1	Mandatory/Regulatory sign boards of 900 mm diameter with part as length of 3750 mm	each	1.00	5795.50		5796	
11.2	16.66.2	Cautionary/warning sign boards of equilateral triangular shape having each side of 900 mm support length of 3650mm.	each	1.00	4260.80		4261	
		FOOTPATH WORK						
12	Derived from JKSoR	Providing and laying 200 mm thick compacted bed of Stone soling including spreading, well ramming, consolidating including finishing smooth etc. complete as per direction of Engineer-in-charge	sqm	72.00	1396.82		100571	
13	4.9.2	Providing & fixing at or near ground level precast cement concrete in kerbs, edging etc as per approved patterns and setting in position with cement mortar 1:3 (1 cement:3 coarse sand) including the cost of required centring, shuttering and curing complete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)	cum	24.00	6213.80		149131	
14	4.4.5	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	cum	36.00	4943.40		177962	
15	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return walls, walls ( any thickness) including attached pilasters butteresses, plinth and string course fillets, kerbs and steps etc.	sqm	40.00	573.85		22954	
16	16.74	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grade made by block making machine with strong vibratory compaction and of approved size and design/shape laid in required colour and pattern over and including 50mm thick compacted bed of fine sand, filling the joints with coarse sand etc. all complete as per direction of Engineer-in-charge.	sqm	360.00	770.60	Total (Da)	277416	
		Add 25% approximate cost index on JK Schedule ite	ems			Total (Rs)	4320828 1080207	

	5401035	164688
Total (Rs) JK SoR + N	S 5565723	
Add contingencies @5%	278286	
Total (R	s) 5844009	
Estimated cost of the work inclusive of GS	T 5844009	
Estimated cost put to Tender ( Excluding GST @ 14.05%	51,24,076	

Nama	f work . Con	DETAILED ESTIMATI		IT I adalsh				
S.N0	Reference of Rates JK SOR 2020 Code	struction of link road from Changspa farm to Chunka house Changs	Unit	JI Ladakh Qty		Rate (Rs)	А	mount (Rs)
	no.				JK SoR	NS	JK SoR	NS
		ROAD WORK			JN SOR	NS	JN SUR	No
1	16.1	Preparation of subgrade by excavating earth to an avarage of 22.5 cm depth, dressing to camber and consolidation with road roller of 8-12 tonne capacity including making good the undulation etc. and disposal of surplus earth upto 50 meters	Sqm	783.00	139.40		109150	
2	16.82.2	Construction of <b>granular sub-base</b> by providing close graded material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by trippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge. (in Two Layer)						
		With material conforming to Grade-II (size range 53 mm to 0.075mm) having CBR Value-25	Cum	40.50	1077.15		43625	
3	16.83	Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm) to <b>Wet Mix Macadam</b> (WMM) specification including premixing the material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all leads & lifts, laying in uniform layers with mechanical paver finisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.	Cum	51.98	1041.50		54132	
4	Non Schedule	Providing and applying prime coat with bitumen emulsion Grade SS-1 complying with IS:8887 on prepared surface of granular base including cleaning of road surface with compressed air and spraying primer at the rate of 0.80kg/sqm using pressure distributer as per clause 502 of MoRTH specifications complete.  On WMM surface @0.80kg/sqm	Sqm	519.75		53.47		27791.00
5	JKSoR derived Rate from 16.63.1	Providing and laying <b>bituminous macadam</b> using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by trippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge.50 to 100mm average compacted thickness with bitumen of VG-10 @3.5% (percentage by weight of total mix) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	25.31	5917.98		149799	
6	16.38.2	Providing and applying <b>Tack Coat</b> using hot straight run bitumen of grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and prepared the existing road surface as per specifications.						
		On bitumen surface @0.50 kg/sqm	sqm	506.25	42.10		21313	
7	JKSoR derived Rate from 16.65.1	Providing and laying <b>Bituminous concrete</b> using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	Cum	20.25	9004.58		182343	
8	16.48	Providing <b>seal coat</b> of premixed fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing with road all complete.		506.25	78.15		39563	
		Side Drain	·					

2.8	Earth work in excavation by manual means in trenches for foundations, drains, pipes, cables etc. (not exceeding 1.5 m in width) and for shafts, wells, cesspits and the like not exceeding 10 sqm on plan, including dressing of sides and ramming of bottoms lift upto 1.5 m, including getting out excavated earth and disposal of surplus excavated earth as directed:  Rate for a lead upto 25 meters beyond 1meter from cutting edge					
	2.8.1. All kinds of soil :	cum	133.88	524.40 922.35	70204 41160	
	2.0.2 Ordinary Nock	Cum	44.03	922.33	41100	
4.4.3			72.00	5877.45	423176	
4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return wall, walls ( any thickness) including attached pilasters butteresses, plinth ans string coarse fillets, kerbs and steps etc.	sqm	780.00	573.85	447603	
	DOAD MADKINGS AND SIGN DOADDS					
16.58	Providing and fixing Glow studs of size 100x20mm made of heavy duty body shall be moulded ASA (Acrylic styrene Acryloretrite) or HIP (High impact Polystyrene) or ABS having electronically welded microprismatic lens with abrasion resistant coating as approved by Engineer-in-charge. The Glow stud shall support a load of 13635 kg tested in accordance with ASTM D4280. The slope of retro-reflective surface shall be 35 +/- 5 degrees to base. The reflective panels on both sides		3	193.85	582	
16.69	Providing and applying 2.5mm thick road marking strips (retro-reflective) of specified shade/colour using hot thermoplastic material by fully/semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour, T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and accordance with applicable specifications.		6.75	604.50	4080	
16.66	Manufacturing supplying and fixing retro reflective sign boards made up of 2mm thick aluminum sheet, face to be fully covered with high intensity encapsulated type heat activated retro reflective sheeting conforming to type-IV of ASTM-D-4956-01 in blue and silver white or other colour combination including subject matter, message (bi-lingual), symbols and borders etc. as per IRC: 67-2001, pasted on substrate by an adhesive backing which shall be activated by applying heat and pressure conforming to class -2 of ASTM-D-4956-01 and fixing the same with suitable sized aluminum alloy rivets @ 20cm c/c to back support frame of M.S. angle iron of size 25x25x3mm along with theft resistant measures mounted and fixed with 2 nos. M.S. angles of size 35x35x5mm to a vertical post made upto M.S. Tee section ISMT 50x50x6mm welded with base plate of size 100x100x5mm at the bottom end and including making holes in pipes, angle flats, providing and fixing M.S. message plate of required size steel work to be painted with two or more coats of synthetic enamel paint of required shade and of approved brand & manufacture over priming coat of zinc chromate yellow primer (vertical M.STee support to be painted in black and white colours). Backside of aluminum sheet to be painted with two or more coats of epoxy paint over and including appropriate priming coats including all leads and lifts etc. complete as per drawing, specification and direction of Engineer-in-charge.					
16.66.1	Mandatory/Regulatory sign boards of 900 mm diameter with part as length of 3750 mm	each	1.00	5795.50	5796	
16.66.2	Cautionary/warning sign boards of equilateral triangular shape having	each	1.00	4260.80	4261	
	FOUTFAIR WORK					
Derived from JKSoR			12.15	1396.82	16971	
	16.69  16.66.1  16.66.2  Derived from	drains, pipes, cables etc. (not exceeding 10 5m in width) and for shafts, essipts and the like not exceeding 10 sgm on plan, including dressing of sides and ramming of bottoms lift upto 1.5 m, including dressing of sides and ramming of bottoms lift upto 1.5 m, including dressing of sides and ramming of bottoms lift upto 1.5 m, including dressing of sides and ramming of the providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinht level with: 1:2-4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)  Centering and shuttering including strutting, propping etc. and removal of formwork for. Retaining wall, return wall, walls (any thickness) including attached pilasters butteresses, plinth ans string coarse fillets, kerbs and steps etc.  ROAD MARKINGS AND SIGN BOARDS  Providing and fixing Glow studs of size 100x20mm made of heavy dity body shall be moulded ASA (Acrylic styrene Acryloretrite) or HIP (High impact Polystyrene) or ABS harving electronically welded microprismatic lens with abrasion resistant coating as approved by Engineer-in-charge. The Glows stud shall support a load of 13635 kg tested in accordance with ASTM D4280. The slope of retro-reflective surface swith at least 12cm of reflective area up each side. The luminance with a study of the slope of retro-reflective surface described in ASTM 1: 809 as recommended in BS: 873 part 4: 1973. The study shall be as per the specification and shall be tested as described in ASTM 1: 809 as recommended by the manufacturer complete and as per direction of Engineer-in-charge and secretary of specified shade/colour using hot thermoplastic material by fully/semi automatic thermoplastic paint applicator machine little with profile shoe, glass beads dispenser, propane tank heater and profile shoe plass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including operator in continuity and pressu	drains, pipes, cables etc. (not exceeding 1 5 m in width) and for shafts, cesspits and the like not exceeding 10 5 m on plan, including dressing of sides and ramming of bottoms lift upto 1.5 m, including getting out excavated earth and disposal of surplus excavated earth as directed:  Rate for a lead upto 25 meters beyond 1 meter from cutting edge 2.8.1. All kinds of soil:  2.8.1 Cordinary Rock cut.  Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plint hevel with: 1.2.4 (1 cement: 2 coarse sand: 4 graded store aggregate 20 mm nominal size)  Certering and shuttlering including strutting, propping etc. and removal of formwork for: Retaining wall, return wall, walls ( any thickness) including attached pliasters butteresses, plinth ans string coarse fillets, kerbs and steps etc.  ROAD MARKINGS AND SIGN BOARDS  Providing and fixing Glow studs of size 100x20mm made of heavy duty body shall be moulded ASA (Acrylic styrene Acryloretrite) or HIP High impact Polystyreno or ASS having electronically welded micro-prismatic lens with abrasion resistant coating as approved by Engineerin-charge. The Glow stud shall support a load of 13638 kg tested in accordance with ASTM D4280. The slope of retro-reflective surface shall be 35 + 5 degrees to base. The reflective panels on both sides with at least 12cm of reflective area up each side. The luminance shall be 35 + 5 degrees to base. The reflective panels on both sides with at least 12cm of reflective area up each side. The luminance shall be 35 + 5 degrees to base. The reflective surface shall be 35 + 5 degrees to base. The reflective surface shall be 55 + 5 degrees to base. The reflective surface shall be 35 + 5 degrees to base. The reflective surface shall be 35 + 5 degrees to base. The reflective surface shall be 35 + 5 degrees to base. The reflective surface shall be 35 + 5 degrees to base commended in BS: 873 part 4: 1973. The study shall be fixed to the reflective shall	drains, pipes, cables etc. (not exceeding 1.5 m in width) and for sharts, wells, cessipils and the like not exceeding 10 sqn on plan, including dressing of sides and ramming of bottoms lift upto 1.5 m, including etting out excavated earth and disposed of surplus excavated earth as disposed earth and disposed of surplus excavated earth as disposed earth and since of the control o	trains, pipes, cables afte, find exceeding 1.5 m in width) and for shalfs, designing out excepted earth and disposal of 10 symlo path, including deteing out excepted earth and disposal of 10 symlo excepted earth as 18 per 18 p	drains, pipes, cables etc. (not exceeding 15 m) in width) and for shafts, veils, respects and the like not exceeding 10 am on plan, including descript of siction.  Responsible of the like not exceeding 15 m in including description. The company of the company o

		F	stimated	cost of the	work include	sive of GST	2286211	
						iotai (RS)	2200211	
		Add contingencies @5%				Total (Rs)	2286211	
		Add continuousics @F0/		To	otal (RS) JR	( SoR + NS	<b>2177344</b> 108867	
					(-1 (D -) ***	(O.D. NO	2149553	27791
		Add 25% approximate cost index on JK Schedule ite	ems				429911	
						Total (Rs)	1719642	
		complete as per unection of Engineer-III-Charge.				Total (Pa)	1710640	
19	16.74	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grade made by block making machine with strong vibratory compaction and of approved size and design/shape laid in required colour and pattern over and including 50mm thick compacted bed of fine sand, filling the joints with coarse sand etc. all complete as per direction of Engineer-in-charge.	sqm	60.75	770.60		46814	
18	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return walls, walls (any thickness) including attached pilasters butteresses, plinth and string course fillets, kerbs and steps etc.	sqm	6.75	573.85		3873	
17	4.4.5	including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	cum	6.08	4943.40		30031	
		Providing and laying in position cement concrete of specified grade						
16	4.9.2	Providing & fixing at or near ground level precast cement concrete in kerbs, edging etc as per approved patterns and setting in position with cement mortar 1:3 (1 cement:3 coarse sand) including the cost of required centring, shuttering and curing complete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)	cum	4.05	6213.80		25166	

220 Code  1. ROAD WORK  1. Proposition for subgrade by secanosting earth to an avariage of 22.5 cm properly and the subgrade by secanosting earth to an avariage of 22.5 cm and the subgrade of supple searth upto 50 meters.  2. Contribution of granular sub-base by providing close graded maerite contraining to specifications, making in a reconstruction subgrade of the subgrade of supple search upto 50 meters.  2. Subgrade of supple search upto 50 meters.  2. Subgrade of subgrade of the subgrade of the subgrade of the desired duringly, complete as per specifications and directions with more grade or the desired duringly, complete as per specifications and directions of Engineerin-Charge, in Two Layer)  3. Subgrade of the subgrade of the subgrade of the subgrade of the desired duringly, complete as per subgrade of the subgrade of the desired duringly, complete as per subgrade of the subgrade of the subgrade of the desired duringly, complete as per subgrade of the s	Name o	f work : Con	DETAILED ESTIMAT struction of link road from Lanagon guest house to taktok house Ch		Leh UT Lad	dakh			
ROAD WORK		Reference of Rates JK SOR 2020 Code	DESCRIPTION				Rate (Rs)	А	mount (Rs)
Preparation of subgrade by excavating earth to an avarage of 22.5 cm sheet. Meaning to combar and colocidation with road roled of 572 to sheet. Meaning to combar and colocidation with road roled of 572 of 1 dayshes centify upon 50 meters.  Constitution of granular sub-base by providing does graded material conforming to specifications, mining in a mechanical representation of the specific providing does graded material conforming to specifications, mining in a mechanical representation of the specification o			ROAD WORK			JK SoR	NS	JK SoR	NS
conforming to specifications, mixing in a mechanical mix plant at OMC.  arrange of mixed material by trippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on the control of the control	1	16.1	Preparation of subgrade by excavating earth to an avarage of 22.5 cm depth, dressing to camber and consolidation with road roller of 8-12 tonne capacity including making good the undulation etc. and disposal		297.00	139.40		41402	
having CBR value 25  Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm ) to Wet Mix Macadam (WMM) specification including premixing the material with water at CMC in specification including premixing the material with water at CMC in specification including premixing the material with water at CMC in such saids. All its, larging in uniform bytes with mechanically with facility in the saids at Mix larging in uniform bytes with mechanically with substancy relief of 8 to 10 none repaired surface and compacting with bitter or 16 to 10 none repaired surface of granular base including clearing of road surface with surface and compacting with bitter or 16 to 100 none pagate) to achieve the desired density.  Providing and applying prime coat with bitumen emulsion Grade SS-1 complying with 18.887 or prepared surface of granular base including clearing of road surface with surface with page 18 thin minors and the surface of granular base including clearing of road surface with page 18 thin minors and surface with page 18 thin minor	2	16.82.2	conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by trippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of						
Size range 53 mm to 0.075 mm ) to Wet Mix Macadam (VMM) specification including premising the material at wit water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all leads & lifts, laying in uniform larger with mechanical paver finisher in such base / base course on well prepared surface and compacting with bitument of 8 in 10 tones capacity in acid see the acid material paver finisher in such base / base course on well prepared surface and compacting with bitument of 8 in 10 tones capacity in acid see the acid material paver finisher in such base / base course on well prepared surface and compacting with bitument of 8 in 10 tones capacity in a compact of 8 in 10 tones capacity in 10 tones of 10 tones of 10 tones of 10 tones capacity in 10 tones of 1				Cum	22.28	1077.15		23994	
complying with IS&887 on prepared surface of granular base including cleaning of road surface with compressed air and spraying primer at the feater of 0.80kg/sgm using pressure distributer as per clause 502 of MoRTH specifications complete.  Providing and laying bituminous macadam using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by trippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, wibratory and tandern collers as per specifications and directions of Engineer-in-Charge,50 to 10 morm average compacted thickness with bitumen of VG-10 @3.5% (percentage by weight of total mix) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.  Providing and applying Tack Coat using hot straight run bitumen of grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and prepared the existing road surface as per specifications.  Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandern rollers with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.  Providing seal coat of premixed fine aggregate (pessing 2.36mm and retained on 180 micron sievel) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cur of fine aggregate and 0.60 cur on fine aggregate and 0.60	3	16.83	(size range 53 mm to 0.075 mm) to <b>Wet Mix Macadam</b> (WMM) specification including premixing the material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all leads & lifts, laying in uniform layers with mechanical paver finisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density,		29.70	1041.50		30933	
Providing and laying bituminous macadam using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by trippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions and directions of Engineer-in-Charge.50 to 10 form average compacted thickness with bitumen of VG-10 @ 3.8% (percentage by weight of total mix) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.  Providing and applying Tack Coat using hot straight run bitumen of grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and prepared the existing road surface as per specifications.  On bitumen surface @ 0.50 kg/sqm sqm sqm 297.00 42.10 12504  Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and landern rollers on achieve the desired compaction and density as per specification, complete and as per directions of Engineeri-n-Charge; 40/50 mm compacted thickness with bitumen of grade VG-10 bitumen per cum of fine aggregate (passing 2.36mm and relatined on 180 micron sleeve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate (passing 2.36mm and relatined on 180 micron sleeve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate (passing 2.36mm and relatined on 180 micron sleeve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate per 100 sqm of road surface including rolling mad finishing	4		complying with IS:8887 on prepared surface of granular base including cleaning of road surface with compressed air and spraying primer at the rate of 0.80kg/sqm using pressure distributer as per clause 502 of MoRTH specifications complete.						
aggregates of specified grading premixed with bituminous binder, with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tander nollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge.50 to 100mm average compacted thickness with bitumen of VG-10 @3.5% (percentage by weight of total mix) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.  Providing and applying Tack Coat using hot straight run bitumen of grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boller, cleaning and prepared the existing road surface as per specifications.  On bitumen surface @0.50 kg/sqm sqm sqm 297.00 42.10 12504  Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and tiller, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and siller, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and siller, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and siller, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and siller, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and siller, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade. Level and siller, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade. Level and siller, tran			On WMM surface @0.80kg/sqm	Sqm	297.00		53.47		15881.00
argade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and prepared the existing road surface as per specifications.  On bitumen surface @0.50 kg/sqm sqm 297.00 42.10 12504  Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.  Providing seal coat of premixed fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen or grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing with road all complete.  Total (Rs) 326900  Add 25% approximate cost index on JK Schedule items	5	derived Rate from	aggregates of specified grading premixed with bituminous binder, transported to site by trippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge.50 to 100mm average compacted thickness with bitumen of VG-10 @3.5% (percentage by weight of total mix) prepared	cum	14.85	5917.98		87882	
Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.  Providing seal coat of premixed fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing with road all complete.  Total (Rs) 326900  Add 25% approximate cost index on JK Schedule items	6	16.38.2	grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and						
aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.: 40/50 mm compacted thickness per directions of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.  Providing seal coat of premixed fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing with road all complete.  Total (Rs) 326900  Add 25% approximate cost index on JK Schedule items			On bitumen surface @0.50 kg/sqm	sqm	297.00	42.10		12504	
retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing with road all complete.  Total (Rs) 326900  Add 25% approximate cost index on JK Schedule items	7	derived Rate from	aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in	Cum	11.88	9004.58		106974	
Add 25% approximate cost index on JK Schedule items 81725	8	16.48	retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing		297.00	78.15		23211	
		l		l .	l		Total (Rs)		
1 4086251			Add 25% approximate cost index on JK Schedule it	ems				81725 408625	15881

424506	Total (Rs) JK SoR + NS	
21225	Add contingencies @5%	
445731	Total (Rs)	
445731	Estimated cost of the work inclusive of GST	
3.90.821	Estimated cost put to Tender ( Excluding GST @ 14.05%)	

		DETAILED ESTIMA						
Name o		struction of link road from Ecology road to Shanti stupa road, Leh U	T Ladakh	1			ī	
S.N0	Reference of Rates JK SOR 2020 Code no.	DESCRIPTION	Unit	Qty		Rate (Rs)		Amount (Rs)
					JK SoR	NS	JK SoR	NS
		Retaining Wall						
1	15.9.2	Demolishing stone rubble masonry manually/ by mechanical means including stacking of serviceable materials and disposal of unserviceable material within 50 meters lead as per direction of Engineer-in Charge ( The stacked stones shall be used for reconstruction of the retaining wall to the extent required. The remaining quantity of recovered stones will be used in the nearby roadworks for which the contractor is to transport the stones at his own cost and nothing will be paid extra on this account.)  In Cement Mortar	cum	640.00	1583.05		1013152	
2	2.7.1	Earth work in bulk excavation by mechanical means (hydraulic excavator) over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10m/2 on plan) including disposal of excavated earth lead upto 50m and lift upto 1.5m, as directed by Engineer-in-Charge						
		All kinds of soil :	cum	480.00	188.75		90600	
3	2.11	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead upto 50m and lift upto 1.5 m.	cum	216.00	198.70		42919	
4	4.4.7	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size)						
		Below Retaining Wall (PCC)	cum	67.20	4419.85		297014	
5	4.5.3	Providing and laying cement concrete in retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchors blocks, plain window sills, fillets etc upto floor V level, including curing but excluding the cost of centring, shuttering and finishing with.  1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)						
		Coping over retaining wall	cum	9.60	7542.40		72407	
6	J&KSoR derived 7.1.1	Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20mm nominal size) upto plinth level and curing complete with ( Stones recovered from the dismantlement are to be used to the full extent for this item. The rate shall be excluding of the cost of stones.)  Cement mortar 1:6 (1 cement : 6 coarse sand).	cum	544.00	3750.99		2040537	
7	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return wall, walls (any thickness) including attached pilasters butteresses, plinth ans string coarse fillets, kerbs and steps etc.  PCC for retaining wall & for Coping	ogm	128.00	573.85		73453	
		1 00 for recalling wall & for coping	sqm	120.00	373.03		1 3433	
		ROAD WORK						
8	16.1	Preparation of subgrade by excavating earth to an avarage of 22.5 cm depth, dressing to camber and consolidation with road roller of 8-12 tonne capacity including making good the undulation etc. and disposal of surplus earth upto 50 meters	Sqm	3200.00	139.40		446080	
9	16.82.2	Construction of <b>granular sub-base</b> by providing close graded material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by trippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge. (in Two Layer)						
		With material conforming to Grade-II (size range 53 mm to 0.075mm)	Cum	240.00	1077.15		258516	
	l	having CBR Value-25						

10	16.83	Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm) to <b>Wet Mix Macadam</b> (WMM) specification including premixing the material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all leads & lifts, laying in uniform layers with mechanical paver finisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.		308.00	1041.50		320782	
11	Non Schedule	Providing and applying prime coat with bitumen emulsion Grade SS-1 complying with IS:8887 on prepared surface of granular base including cleaning of road surface with compressed air and spraying primer at the rate of 0.80kg/sqm using pressure distributer as per clause 502 of MoRTH specifications complete.						
		On WMM surface @0.80kg/sqm	Sqm	3080.00		53.47		164688.00
12	JKSoR derived Rate from 16.63.1	Providing and laying <b>bituminous macadam</b> using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by trippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge.50 to 100mm average compacted thickness with bitumen of VG-10 @3.5% (percentage by weight of total mix) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	150.00	5917.98		887697	
13	16.38.2	Providing and applying <b>Tack Coat</b> using hot straight run bitumen of grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and prepared the existing road surface as per specifications.						
		On bitumen surface @0.50 kg/sqm	sqm	3000.00	42.10		126300	
14	JKSoR derived Rate from 16.65.1	Providing and laying <b>Bituminous concrete</b> using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	Cum	120.00	9004.58		1080550	
15	16.48	Providing <b>seal coat</b> of premixed fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing with road all complete.		3000.00	78.15		234450	
		ROAD MARKINGS AND SIGN BOARDS						
16	16.58	Providing and fixing Glow studs of size 100x20mm made of heavy duty body shall be moulded ASA (Acrylic styrene Acryloretrite) or HIP (High impact Polystyrene) or ABS having electronically welded microprismatic lens with abrasion resistant coating as approved by Engineer-in-charge. The Glow stud shall support a load of 13635 kg tested in accordance with ASTM D4280. The slope of retro-reflective surface shall be 35 +/- 5 degrees to base. The reflective panels on both sides with at least 12cm of reflective area up each side. The luminance intensity should be as per the specification and shall be tested as described in ASTM I: 809 as recommended in BS : 873 part 4 : 1973. The studs shall be fixed to the road surface using the adhesive conforming to IS, as per procedure recommended by the manufacturer complete and as per direction of Engineer-in-charge	each	18	193.85		3446	
17	16.69	Providing and applying 2.5mm thick road marking strips (retro-reflective) of specified shade/colour using hot thermoplastic material by fully/semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour, T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and accordance with applicable specifications.	cam	40.00	604.50		24180	

18	16.66	Manufacturing supplying and fixing retro reflective sign boards made up of 2mm thick aluminum sheet, face to be fully covered with high intensity encapsulated type heat activated retro reflective sheeting conforming to type-IV of ASTM-D-4956-01 in blue and silver white or other colour combination including subject matter, message (bi-lingual), symbols and borders etc. as per IRC: 67-2001, pasted on substrate by an adhesive backing which shall be activated by applying heat and pressure conforming to class -2 of ASTM-D-4956-01 and fixing the same with suitable sized aluminum alloy rivets @ 20cm c/c to back support frame of M.S. angle iron of size 25x25x3mm along with theft resistant measures mounted and fixed with 2 nos. M.S. angles of size 35x35x5mm to a vertical post made upto M.S. Tee section ISMT 50x50x6mm welded with base plate of size 100x100x5mm at the bottom end and including making holes in pipes, angle flats, providing and fixing M.S. message plate of required size steel work to be painted with two or more coats of synthetic enamel paint of required shade and of approved brand & manufacture over priming coat of zinc chromate yellow primer (vertical M.STee support to be painted with two or more coats of epoxy paint over and including appropriate priming coats including all leads and lifts etc. complete as per drawing, specification and direction of Engineer-in-charge.						
18.1	16.66.1	Mandatory/Regulatory sign boards of 900 mm diameter with part as length of 3750 mm	each	1.00	5795.50		5796	
18.2	16.66.2	Cautionary/warning sign boards of equilateral triangular shape having each side of 900 mm support length of 3650mm.	each	1.00	4260.80		4261	
		FOOTPATH WORK						
19	Derived from JKSoR	Providing and laying 200 mm thick compacted bed of Stone soling including spreading, well ramming, consolidating including finishing smooth etc. complete as per direction of Engineer-in-charge	sqm	72.00	1396.82		100571	
20	4.9.2	Providing & fixing at or near ground level precast cement concrete in kerbs, edging etc as per approved patterns and setting in position with cement mortar 1:3 (1 cement:3 coarse sand) including the cost of required centring, shuttering and curing complete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)	cum	24.00	6213.80		149131	
21	4.4.5	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	cum	36.00	4943.40		177962	
22	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return walls, walls ( any thickness) including attached pilasters butteresses, plinth and string course fillets, kerbs and steps etc.	sqm	40.00	573.85		22954	
23	16.74	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grade made by block making machine with strong vibratory compaction and of approved size and design/shape laid in required colour and pattern over and including 50mm thick compacted bed of fine sand, filling the joints with coarse sand etc. all complete as per direction of Engineer-in-charge.	sqm	360.00	770.60		277416	
		Add OFO/ commandered and the last of the l				Total (Rs)	7750174 1937544	
Add 25% approximate cost index on JK Schedule items								164688
	SoR + NS	9687718 <b>9852406</b>						
		Add contingencies @5%				Total (Rs)	492620 10345026	
			stimated	cost of the	work inclus	. ,	10345026	
Estimated cost of the work inclusive of GST Estimated cost put to Tender ( Excluding GST @ 14.05%)								

	f work . Co	DETAILED ESTIMAT		L				
S.N0	Reference of Rates JK SOR 2020 Code	nstruction of link road from ABC centre to Rabsal House, Leh U  DESCRIPTION	Unit	n Qty	/ Rate (Rs		A	mount (Rs)
	no.				JK SoR	NS	JK SoR	NS
		ROAD WORK						
1	16.1	Preparation of subgrade by excavating earth to an avarage of 22.5 cm depth, dressing to camber and consolidation with road roller of 8-12 tonne capacity including making good the undulation etc. and disposal of surplus earth upto 50 meters	Sqm	986.00	139.40		137448	
2	16.82.2	Construction of <b>granular sub-base</b> by providing close graded material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by trippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge. (in Two Layer)						
		With material conforming to Grade-II (size range 53 mm to 0.075mm) having CBR Value-25	Cum	51.00	1077.15		54935	
3	16.83	Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm) to <b>Wet Mix Macadam</b> (WMM) specification including premixing the material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all leads & lifts, laying in uniform layers with mechanical paver finisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.	Cum	65.45	1041.50		68166	
4	Non Schedule	Providing and applying prime coat with bitumen emulsion Grade SS-1 complying with IS:8887 on prepared surface of granular base including cleaning of road surface with compressed air and spraying primer at the rate of 0.80kg/sqm using pressure distributer as per clause 502 of MoRTH specifications complete.						
		On WMM surface @0.80kg/sqm	Sqm	654.50		53.47		34996.00
5	JKSoR derived Rate from 16.63.1	Providing and laying <b>bituminous macadam</b> using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by trippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge.50 to 100mm average compacted thickness with bitumen of VG-10 @3.5% (percentage by weight of total mix) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	31.88	5917.98		188636	
6	16.38.2	Providing and applying <b>Tack Coat</b> using hot straight run bitumen of grade-VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and prepared the existing road surface as per specifications.						
		On bitumen surface @0.50 kg/sqm	sqm	637.50	42.10		26839	
7	JKSoR derived Rate from 16.65.1	Providing and laying <b>Bituminous concrete</b> using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.: 40/50 mm compacted thickness with bitumen of grade VG-10@ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	Cum	25.50	9004.58		229617	
8	16.48	Providing <b>seal coat</b> of premixed fine aggregate (passing 2.36mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling mad finishing with road all complete.		637.50	78.15		49821	
		ROAD MARKINGS AND SIGN BOARDS						

9	16.58	Providing and fixing Glow studs of size 100x20mm made of heavy duty body shall be moulded ASA (Acrylic styrene Acryloretrite) or HIP (High impact Polystyrene) or ABS having electronically welded microprismatic lens with abrasion resistant coating as approved by Engineer-in-charge. The Glow stud shall support a load of 13635 kg tested in accordance with ASTM D4280. The slope of retro-reflective surface shall be 35 +/- 5 degrees to base. The reflective panels on both sides with at least 12cm of reflective area up each side. The luminance intensity should be as per the specification and shall be tested as described in ASTM I: 809 as recommended in BS : 873 part 4 : 1973. The studs shall be fixed to the road surface using the adhesive conforming to IS, as per procedure recommended by the manufacturer complete and as per direction of Engineer-in-charge	each	4	193.85	732	
10	16.69	of specified shade/colour using hot thermoplastic material by fully/semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour, T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and accordance with applicable specifications.	sqm	8.50	604.50	5138	
11	16.66	Manufacturing supplying and fixing retro reflective sign boards made up of 2mm thick aluminum sheet, face to be fully covered with high intensity encapsulated type heat activated retro reflective sheeting conforming to type-IV of ASTM-D-4956-01 in blue and silver white or other colour combination including subject matter, message (bi-lingual), symbols and borders etc. as per IRC: 67-2001, pasted on substrate by an adhesive backing which shall be activated by applying heat and pressure conforming to class -2 of ASTM-D-4956-01 and fixing the same with suitable sized aluminum alloy rivets @ 20cm c/c to back support frame of M.S. angle iron of size 25x25x3mm along with theft resistant measures mounted and fixed with 2 nos. M.S. angles of size 35x35x5mm to a vertical post made upto M.S. Tee section ISMT 50x50x6mm welded with base plate of size 100x100x5mm at the bottom end and including making holes in pipes, angle flats, providing and fixing M.S. message plate of required size steel work to be painted with two or more coats of synthetic enamel paint of required shade and of approved brand & manufacture over priming coat of zinc chromate yellow primer (vertical M.STee support to be painted in black and white colours). Backside of aluminum sheet to be painted with two or more coats of epoxy paint over and including appropriate priming coats including all leads and lifts etc. complete as per drawing, specification and direction of Engineer-in-charge.					
11.1	16.66.1	Mandatory/Regulatory sign boards of 900 mm diameter with part as length of 3750 mm	each	1.00	5795.50	5796	
11.2	16.66.2	Cautionary/warning sign boards of equilateral triangular shape having each side of 900 mm support length of 3650mm.	each	1.00	4260.80	4261	_
		FOOTPATH WORK					
12	Derived from JKSoR	Providing and laying 200 mm thick compacted bed of Stone soling including spreading, well ramming, consolidating including finishing smooth etc. complete as per direction of Engineer-in-charge	sqm	15.30	1396.82	21371	
13	4.9.2	Providing & fixing at or near ground level precast cement concrete in kerbs, edging etc as per approved patterns and setting in position with cement mortar 1:3 (1 cement:3 coarse sand) including the cost of required centring, shuttering and curing complete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)	cum	5.10	6213.80	31690	
14	4.4.5	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level with:  1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	cum	7.65	4943.40	37817	
15	4.6.2	Centering and shuttering including strutting, propping etc. and removal of formwork for: Retaining wall, return walls, walls (any thickness) including attached pilasters butteresses, plinth and string course fillets, kerbs and steps etc.	sqm	8.50	573.85	4878	

16	16.74	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grade made by block making machine with strong vibratory compaction and of approved size and design/shape laid in required colour and pattern over and including 50mm thick compacted bed of fine sand, filling the joints with coarse sand etc. all complete as per direction of Engineer-in-charge.	sqm	76.50	770.60		58951	
						Total (Rs)	926096	
		Add 25% approximate cost index on JK Schedule it	ems				231524	
							1157620	34996
				To	otal (Rs) Jk	SoR + NS	1192616	
	Add contingencies @5%							
Total (Rs)						1252247		
	Estimated cost of the work inclusive of GST						1252247	
_	Estimated cost put to Tender ( Excluding GST @ 14.05%)							

SECTION-VII BILL OF QUANTITIES	

## **Bill of Quantities**

## **Through Percentage Rate Contract**

Tender Inviting Authority: Executive Director (P), National Highways & Infrastructure Development Corporation Limited, RO-Ladakh

Name of Work: "Renovation, Repair, Re-surfacing & Construction of 32 Nos. of urban link roads at Ward no 1,2,3 &13 of LEH (PKG-3), in UT of Ladakh(2<sup>nd</sup> Call)"

RFP No: 27/RO-Ladakh/2022

Name of the Bidder/ Bidding Firm / Company:

## **BILL OF QUANTITIES**

(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevant columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only )

SI. No.	Item Description/Name of Work  "Renovation, Repair, Re-	Estimated Rate excluding GST in Rs. P	Percentage to be quoted by the bidder excluding GST (above/Below / atpar against EC) Rs. P	Percentage in words	TOTAL AMOUNT excluding GST
1	"Renovation, Repair, Resurfacing & Construction of 32 Nos. of urban link roads at Ward no 1,2,3 &13 of LEH (PKG-3), in UT of Ladakh (2 <sup>nd</sup> Call)"	14,67,92,310/-			INR - Only
Total	in Figures				
Quot	ed Rate in Figures		Select		0.00
Quot	ed Rate in Words				1