



NATIONAL HIGHWAYS AUTHORITY OF INDIA
(MINISTRY OF ROAD TRANSPORT & HIGHWAYS)
(GOVERNMENT OF INDIA)
(Through E-Tendering Mode only)

Construction and Maintenance of auxiliary lane and service road on road safety on Biaora to Dewas Section from Km. 191.200 to Km. 332.460 of NH- 52 (Old NH-3) in the State of Madhya Pradesh under Road safety improvement.

Notice Inviting e- Tender

Volume-II

June-2024

Office of the Regional Officer-Bhopal
National Highways Authority of India
Regional Officer-Bhopal, E-6/47, Smriti Parisar,
Near Sai Board, Arera Colony Bhopal (M.P.)-462016
Phone: 0755-2426638
E-mail: robhopal@nhai.org

VOLUME - II

SECTION: X BILL OF QUANTITIES

The Appendix forms part of Bid. Bidders are required to fill up all the blanks in the form of Bid and Appendix thereto)

FINANCIAL BID FORM

The Regional Officer,
National Highways Authority of India,
Regional Office,
E-6/47, Smriti Parishar, Near Sai Board,
Arera Colony, Bhopal (MP) 462016
Phone/Fax: 0755-2426638/0755-2426698
E-mail: robhopal@nhai.org

DESCRIPTION OF WORKS: Construction and Maintenance of auxiliary lane and service road on road safety on Biaora to Dewas Section from Km. 191.200 to Km. 332.460 of NH- 52 (Old NH-3) in the State of Madhya Pradesh under Road safety improvement.

Reference letter No.

Dear Sir,

Having examined the site of works and Bid Documents, comprising Instructions to Bidders, Scope of works, Conditions of Contract, Technical Specifications, Bill of Quantities and schedules for the execution of the above named works, we, the undersigned offer to execute and complete such works and remedy any defects therein in conformity with the said bid documents for the sum of Rs. _____ (Rupees _____) or such other sum as may be ascertained in accordance with the said Bid documents.

2. We undertake, if our Bid is accepted, to commence the work within fifteen (15) days of receipt of the order to commence, and to complete and deliver the sections and whole of the works comprised in the Contract within the period stated in the bid hereto.
3. If our Bid is accepted, we will furnish Performance Security (ies) in the form of a Bank Guarantee to be jointly and severally bound on us, in accordance with the Conditions of Contract.
4. We agree to abide by this Bid for the period of One Hundred & Twenty (120) days from the last date fixed for Bid Submission and it shall remain binding upon us and may be accepted at any time before the expiry of that period.

5. We confirm our agreement to treat the Bid documents and other records connected with the works as secret and confidential documents and shall not communicate information contained therein to any person other than the person authorized by the Employer or use such information in any manner prejudicial to the safety and integrity of the works.
6. Unless and until an agreement is prepared and executed, this Bid, together with your written acceptance thereof, shall constitute a binding Contract between us, but without prejudice to your right to withdraw such acceptance without assigning any reasons thereof.
7. We understand that you are not bound to accept the lowest or any bid you may receive.

Dated this _____ day of _____ 2024

Signature _____ in the capacity of _____ duly authorized ** to
sign Bid for and on behalf of

(In block capital letters)

Address: _____

Signature of Witness _____

Name of witness _____

Address of witness _____

** Certified copy of Power of Attorney/authorization for signature shall be furnished by the bidder.

Bill of Quantities

Preamble

1. The Bill of quantities shall be read in conjunction with the Instructions to Bidders, Conditions of Contract, Scope of Work and Specifications.
2. The quantities given in the Bill of quantities are estimated quantities. The basis of payment will be actual quantities of work indented and carried out and valued at the rates and prices tendered in the priced Bills of quantities, where applicable and otherwise at such rates and prices as the Engineer may fix within the terms of Contract.
3. The rates and prices tendered in the priced Bill of Quantities shall include all equipment, plant, tools, spares, labour, supervision, overheads, consumables, materials, erection, maintenance, testing of input material delivered, profit, taxes and duties together with all general risks, liabilities and obligations set out and implied in the Contract and other incidentals to comply with the requirements of technical specifications and scope of work.
4. The rates and prices shall be quoted entirely in Indian Currency.
5. A rate or price shall be entered as a single rate as Tender Premium % above / below on the amount in General Abstract.
6. The whole cost of complying with the provisions of the contract shall be included in the items provided in the priced Bill of Quantities and where no rates are provided the cost shall be deemed to be distributed among the rates and prices entered for the related items of work.
7. The contractor shall keep the entire carriageway neat and clean throughout the contract period. The contractor shall maintain guard rails, railings, crash barriers, road furniture etc in good condition by cleaning them frequently as advised/ required by using suitable detergents/chemicals.
8. The staff of the contractor shall wear safety jackets, shoes, helmets etc. while on duty and any violation will attract a fine of Rs. 5,000/- for each incident.
Failure to erect safety signage or trying to carry out the works without proper precautions/safety measures as required will attract a fine of Rs. 5,000/- for each incident.
9. General directions and descriptions of work and materials are not necessarily repeated or summarized in the Bill of Quantities. Reference to the relevant sections of the bidding document shall be made before entering rates or prices against each item in the Bill of Quantities.

Name of Work: Construction and Maintenance of auxiliary lane and service road on road safety on Biaora to Dewas Section from Km. 191.200 to Km. 332.460 of NH- 52 (Old NH-3) in the State of Madhya Pradesh under Road safety improvement.

ABSTRACT OF COST

<u>S.no.</u>	<u>Location</u>	<u>Financial Implication (Rs Cr.)</u>
<u>1</u>	At Ch. Km 258+400 to Km 259+800 (Panwadi village Jn) (for auxiliary lane at median opening)	27,10,455
<u>2</u>	Construction of service road from Ch km 261+560 to 261+640 (Abhaypur village)	1,63,56,149
<u>3</u>	Construction of service road from Ch km 269+650 to 270+000	1,89,49,164
<u>4</u>	Construction of service road at village Tonkkala, Ch. 317+200 to 318+260	56,06,936
Total Amount (without GST)		4,36,22,704

BOQ Estimate of Balance Service Road and RCC Drain Work at Ch. 317+200 to 318+260 BHS (Village: Tonk kala)

Sr. No.	Name of Item	Unit	BOQ	Rate	Amount (Rs.)	SOR Item No. & Page No. of MP PWD SOR-2022
Bill No : 1 Construction of Service Road						
1	Construction of embankment with approved material having CBR>7 obtained from borrow pits with all lifts and leads, transporting to site, spreading, grading to required slope and compacting to meet requirement of table 300-1, 300-2 and as per relevant clauses of section-300 in Service Road	Cum	1038.750	155	1,61,006	SOR Item No. 3.13 Pg. No. 20
2	Construction of Subgrade / Shoulders with approved material/selected soil i/c excavation all lifts & leads i/c grading to required slope & camber of 4% and compacting using vibratory roller of 80 to 100 kN static weight to meet requirement as per relevant clause of 400.	Cum	1038.750	186	1,93,208	SOR Item No. 4.13 A Pg. No. 25

Construction and Maintenance of auxiliary lane and service road on road safety on Biaora to Dewas Section from Km. 191.200 to Km. 332.460 of NH- 52 (Old NH-3) in the State of Madhya Pradesh under Road safety improvement.

3	Granular Sub-base with Well Graded Material (CBR>30 or more) (Table:- 400-1 & Table 400-2) Construction of granular sub-base by providing well graded material like natural sand crushed gravel or crushed stone having CBR >30, spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator or plant mix method at OMC, and compacting with vibratory rollers of 80 to 100 kN static weight to achieve the desired density, complete as per Clause 401 of Specification.	Cum	415.500	934	3,88,077	SOR Item No. 4.1 Pg. No. 23
4	Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver in sub- base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density in accordance to Table No. 400-12, 400-13 and as per clause of section 406 of specifications.	Cum	519.375	1493	7,75,427	SOR Item No. 4.11 Pg. No. 24
5	Providing & laying bituminous primer coat over granular surface with bitumen emulsion complete as per Technical Specifications Clause 502 @ 6.0 to 9.0 kg/10 sq.m.	Cum	2077.500	37	76,868	SOR Item No. 5.1 Pg. No. 28
6	Providing and applying tack coat with cationic bitumen emulsion (RS-1) using emulsion pressure distributor on the prepared granular surface cleaned with mechanical broom and as per relevant clauses of section-503 of specifications.	Cum	4155.000	14	58,170	SOR Item No. 5.2 (i) Pg. No. 28
7	Providing and laying dense bituminous macadam using crushed aggregates of specified grading, premixed with bituminous binder @	Cum	186.975	8657	16,18,643	SOR Item No. 5.5 a) (v) Page No. 29

Construction and Maintenance of auxiliary lane and service road on road safety on Biaora to Dewas Section from Km. 191.200 to Km. 332.460 of NH- 52 (Old NH-3) in the State of Madhya Pradesh under Road safety improvement.

	4.0 to 4.5% by weight of total mix of mix and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per clause 505 of specification complete in all respects. a (v) for Grading-II (19 mm nominal size) Bitumen Content minimum 4.5% with bitumen 30/40 (VG 40)					
8	Providing and laying bituminous concrete using crushed aggregates of specified grading, premixed with bituminous binder @ 5.4 to 5.6 % of mix and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per clause 507 of specification.	Cum	62.325	10182	6,34,593	SOR MP (Item 5.6 a (vi) page no. 30
9	Pavement marking with hot applied thermoplastic paints with reflectorising glass beads conforming to ASTM D36/BS-3262 (Part - I) as per drawing & MORT&H Specifications Clause 803. a) Lane/centre line / edge marking / transverse and any other marking	Sqm	55.400	661	36,619	SOR Item No. 8.26 Pg. No. 57
10	Providing and fixing of road stud 100x 100 mm, die cast in aluminium, resistant to corrosive effect of salt and grit, fitted with lense reflectors, installed in concrete or asphaltic surface by drilling hole 30 mm upto a depth of 60 mm and bedded	Nos	62.000	673	41,726	SOR Item No. 8.21 Pg. No. 56
11	Providing and laying reinforced cement concrete pipe 300mm dia NP-4 for service ducts below concrete pavement	meter	67.500	713	48,128	SOR Item No. 6.15 Pg. No. 39

Bill No : 2 DRAINAGE AND PROTECTIVE WORKS						
1	Earth work in excavation of foundation of structures as per drawing and technical specification, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom and backfilling with approved material. as per relevant clauses of section 300 & 2100	Cum	216.750	61	13,222	SOR Item No. 12.1 I(i) Pg. No. 77
2	Construction of open/covered drain complete as per drg. and MORT&H specifications sections 300, 1000, 1500, 1600, 1700, 2100 & 2200.					
a	a) Providing & laying cement concrete M-15 grade in levelling course including form work below foundations of Median drains, chute drains, bedding of pipe drains and dissipation basin etc. complete as per drg. and MORT&H specifications referred above.	Cum	43.350	4617	2,00,147	SOR Item No. 12.6 (A) Pg. No. 77
b	c) Providing and laying PCC/RCC M-25 grade for road side drain etc. including the cost of form work but excluding the cost of reinforcement complete as per drg. and MORT&H Specifications referred above.	Cum	170.670	5369	9,16,329	SOR Item No. 12.6 (E) Pg. No. 77
d	d) Providing & fixing in position HYSD / TMT Fe 415 grade bar reinforcement in base, walls and slab of drain complete as per drg. and MORT&H specifications sections 1600.	MT	5.381	81349	4,37,698	SOR Item No. 12.30 Pg. No. 77
3	Providing weep holes in Brick masonry/Plain/Reinforced concrete abutment, wing wall/return wall with 100 mm dia AC/PVC pipe, extending through the full width of the structure with slope of 1V :20H towards drawing face. Complete as per drawing and Technical	Rm	38.250	185	7,076	SOR Item No. 13.90 Pg. No. 83

specifications					
				Total Cost	56,06,936

Ch. Km 258+400 to Km 259+800 (Panwadi village Jn) (for auxiliary lane at median opening)

ITEM	DESCRIPTION	Unit	Quantity	MPPWD SOR dated 25.03.2022	Amount (Rs.)	Remarks
Bill No.: 1 : SITE CLERANCE AND DISMANTLING						
1.01	Clearing and grubbing road land, embankment, drain, cross drainage structures including uprooting rank vegetation, grass, bush scrubs, saplings and trees of girth up to 300mm, removal of stumps, disposal of unserviceable material and stacking of serviceable material up to a lead of 1000m from road boundary as per MORT&H specification clause 201.	Ha	0.106	22,918.00	2,429.31	
Sub Total					2,429.31	
Bill No.: 2 : EARTH WORK						
2.01	Construction of embankment with approved material from borrow with all leads and lifts, compacting to 95% of modified proctor density, all complete as per drawings and MORT&H Specifications Clause 305.	Cu.m	33.411	155.00	5,178.71	
2.02	Construction of subgrade and Earthen shoulder satisfying the requirements of minimum soaked CBR value as indicated in the drawings with approved material from borrow areas , with all leads & lifts, compacting to 97% of modified proctor density, all complete as per MORT&H Specifications Clause 305 & 407.	Cu.m	524.500	186.00	97,557.00	
Sub Total					1,02,735.71	
Bill No.: 3 : GRANULAR SUB-BASE AND BASE COURSES						

3.01	Providing, laying & compacting Granular Sub-base at OMC complete as per MORT&H Specifications Clause 401 (Grading-I of Table-400-1).	Cu.m.	209.800	934.00	1,95,953.20	
Sub Total					1,95,953.20	
Bill No.: 4 : BITUMINOUS COURSES/ RIGID PAVEMENT						
4.01	Providing & laying dry lean concrete sub-base including coarse and fine aggregate to the specified gradation with all leads and lifts etc. complete as per MORT&H specifications clause 601.	Cum.	130.913	2,767.00	3,62,236.27	
4.02	Providing & laying pavement quality concrete (PQC) of M-40 grade including 150micron thick impermeable plastic sheet membrane and fixing dowels, tie bars, seals for joints and finishing, with all leads and lifts complete as per MORT&H specifications clause 602.	Cum.	208.950	6,103.00	12,75,221.85	
	Dowel Bar in PQC	MT	2.298	63,587.00	1,46,151.54	
	Tie Bar in PQC	MT	0.230	68,297.00	15,697.72	
Sub Total					17,99,307.39	
Bill No.: 5 : TRAFFIC SIGNS, MARKINGS AND OTHER ROAD APPURTENANCES						
5.01	Pavement marking with hot applied thermoplastic paints with reflectorising glass beads conforming to ASTM D36/BS-3262 (Part - I) as per drawing & MORT&H Specifications Clause 803.					
	a) Lane/centre line / edge marking / transverse and any other marking	Sq.m.	52.000	636.00	33,072.00	
5.02	Supplying and fixing at site retro-reflectorised type sign boards/signs made of encapsulated lense type of reflective sheeting fixed over aluminum sheeting 2.0 mm thick with minimum coefficient of retro-reflection (determined in accordance with ASTM Standard E:810) as indicated in Table 800-1 complete including vertical pipes, angles, posts etc. all complete as per drawings and MORT&H Specifications clause 801.					
	A) Mandatory /Regulatory Signs					

Construction and Maintenance of auxiliary lane and service road on road safety on Biaora to Dewas Section from Km. 191.200 to Km. 332.460 of NH- 52 (Old NH-3) in the State of Madhya Pradesh under Road safety improvement.

	of Size.					
	i) Octagon 900 mm height (for "STOP").	Nr.	3.000	6,132.00	18,396.00	
	ii) Triangular 900 mm size (for "GIVE WAY").	Nr.	12.000	4,184.00	50,208.00	
	iii) Rectangular 800x600mm size Informatory Sign Board	Nr.	2.000	4,971.00	9,942.00	
5.03	Road Studs	No	27.000	673.00	18,171.00	
5.04	Tubular Steel Railing on Medium Weight Steel Channel (ISMC series) 100mm x 50mm Providing, fixing and erecting 50mm dia steel pipe (weighing 3.56kg per mts.) railing in 3 rows on medium weight steel channels (ISMC series) 100mm x 50mm, 1.2 metres high above ground, 2m centre to centre, painting etc. complete as per approved drawings.	Rmt	240.000	2,001.00	4,80,240.00	
Sub Total					6,10,029.00	
Total Amount (Rs.)					27,10,454.60	

Construction of service road from Ch km 269+650 to 270+000

ITEM	DESCRIPTION	Unit	Quantity	SOR NO.	Page No.	MPPWD SOR dated 25.03.2022	Amount (Rs.)	Remarks
Bill No : 1 SITE CLERANCE AND DISMANTLING								
1.01	Clearing and grubbing road land, embankment, drain, cross drainage structures including uprooting rank vegetation, grass, bush scrubs, saplings and trees of girth up to 300mm, removal of stumps, disposal of unserviceable material and stacking of serviceable material up to a lead of 1000m from road boundary as per MORT&H specification clause 201.	Ha	0.57	2.2A	15	22,918.00	13,154.93	
1.02	Dismantling upto 1.5 metre in foundation and/or 1.5 metre above ground level including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material with in a lead of 1000 metre complete as per MORT&H specifications clause 202.							
	a) Electric Poles	No.	11.00	2.9 C	17	42.00	462.00	
	d) Sign Boards / bill boards	Nos	5.00	2.9 B	17	210.00	1,050.00	
	k) Hectometer Stone	Nos	3.00	2.9 C	17	42.00	126.00	
1.0	Dismantling of Metal Crash barrier	Lm	200.00	2.1	16			

Construction and Maintenance of auxiliary lane and service road on road safety on Biaora to Dewas Section from Km. 191.200 to Km. 332.460 of NH- 52 (Old NH-3) in the State of Madhya Pradesh under Road safety improvement.

3						50.00	10,000.00	
1.0 4	Dismantling of Earthen Shoulder	Cum	376.20	3.3	19	55.00	20,691.00	
Sub Total							45,483.93	
Bill No. 2 EARTH WORK								
2.0 1	Earthwork in excavation necessary for construction of roadway including all leads and lifts complete as per MORT&H specifications clause 301.							
	(a) Excavation in all types of soils	Cu. m	5584.41	3.3	19	55.00	3,07,142.55	
2.0 2	Construction of embankment with approved material from borrow with all leads and lifts, compacting to 95% of modified proctor density, all complete as per drawings and MORT&H Specifications Clause 305.	Cu. m	6785.38	3.13	20	155.00	10,51,733.90	
2.0 3	Construction of subgrade and Earthen shoulder satisfying the requirements of minimum soaked CBR value as indicated in the drawings with approved material from borrow areas , with all leads & lifts, compacting to 97% of modified proctor density, all complete as per MORT&H Specifications Clause 305 & 407.	Cu. m	2182.50	4.13A	25	186.00	4,05,945.00	
2.0 4	Filling in median/island with approved material with all leads and lifts complete as per MORT&H Specifications Clauses 305 & 407.	Cu. m	217.05	4.14	25	141.00	30,604.17	
Sub Total							17,95,425.62	
Bill No. 3 GRANULAR SUB-BASE AND BASE COURSES								
3.0 1	Providing, laying & compacting Granular Sub-base at OMC complete as per MORT&H Specifications Clause 401 (Grading-I of Table-400-1).	Cu. m.	873.00	4.1	23	934.00	8,15,382.00	
3.0 2	Providing and laying Wet Mix Macadam base and profile corrective course of required thickness complete as per MORT&H Specifications Clause 406.	Cu. m.	1091.25	4.11	24	1,493.00	16,29,236.25	
Sub Total							24,44,618.25	
Bill No. 4 BITUMINOUS COURSES/ RIGID PAVEMENT								
4.0 1	Providing & laying bituminous primer coat over granular surface with bitumen emulsion complete as per Technical Specifications Clause 502 @ 6.0 to 9.0 kg/10 sq.m.	Sqm .	4365.00	5.1	28	37.00	1,61,505.00	
4.0 2	Providing & laying tack coat with bituminous Emulsion all complete as per MORT&H Specifications Clause 503							
	(i) On granular surface treated with primer or dry and hungry bituminous surface @ 2.5 to 3.0kg/10 sq.m.	Sq. m.	4365.00	5.2(ii)	28	16.00	69,840.00	
	(ii) On normal Bituminous surface @ 2.0 to 2.5 Kg/10 sq.m.	Sq. m.	2868.75	5.2(i)	28	14.00	40,162.50	

Construction and Maintenance of auxiliary lane and service road on road safety on Biaora to Dewas Section from Km. 191.200 to Km. 332.460 of NH- 52 (Old NH-3) in the State of Madhya Pradesh under Road safety improvement.

4.0 3	Providing & laying Dense Bituminous Macadam course of required thickness on prepared surface complete as per drawing and MORT&H Specifications Clause 507 (excluding milling quantity) (VG-40)	Cu. m.	360.45	5.5 a) (ii)	29	8,657.00	31,20,415.65	
4.0 4	Providing & laying Bituminous Concrete wearing course using bitumen grade VG-40, only refinery produced) complete as per drawing and MORT&H Specifications Clause 509 & 521. (VG-40)	Cu. m.	114.75	5.6 a) (vi)	30	10,182.00	11,68,384.50	
Sub Total							45,60,307.65	
Bill No. 5 DRAINAGE AND PROTECTIVE WORKS								
5.0 1	Earthwork in excavation for construction of surface unlined drains, ditch drain, open/covered drain, foundation of toe wall, head wall, retaining wall to required line and grade complete as per drg. or directed by Engineer and as per MORT&H specifications clauses 301 & 309							
	a) In all types of soil including marshy soil	Cum .	721.71	12.1 I (i)	77	61.00	44,024.31	
5.0 2	Construction of open/covered drain complete as per drg. and MORT&H specifications sections 300, 1000, 1500, 1600, 1700, 2100 & 2200.							
	a) Providing & laying cement concrete M-15 grade in levelling course including form work below foundations of drains, bedding of pipe drains and dissipation basin etc. complete as per drg. and MORT&H specifications referred above.	Cum .	44.55	12.6 A	77	4,617.00	2,05,687.35	
	b) Providing and laying PCC/RCC M-25 grade for lined drains, drainage chute median drain etc. including the cost of form work but excluding the cost of reinforcement complete as per drg. and MORT&H Specifications referred above.	Cum .	218.25	12.6G	77	5,369.00	11,71,784.25	
	c) Providing and laying PCC/RCC M-20 grade for drainage chute median separator. including the cost of form work but excluding the cost of reinforcement complete as per drg. and MORT&H Specifications referred above.	Cum .	6.48	12.6 B	77	5,162.00	33,449.76	
	d) Providing & fixing in position HYSD / TMT Fe 500 grade bar reinforcement in base, walls and slab of RCC drains complete as per drg. and MORT&H specifications sections 1600.	MT	19.64	12.30	80	81,349.00	15,97,897.73	
5.0 3	Providing weep holes in brick masonry / plain / reinforced concrete abutment, wing walls / return wall with 100mm dia AC pipe, extending through the full width of structure with slope of IV:20H towards draining face complete as per drg. and MORT&H specifications clause 2706.	Lm	90.00	13.9	83	185.00	16,650.00	
5.0 4	PCC M15 over Separator between RE wall and Service Road or MCW and Service Road	Cum .	19.72	12.6 A	77	4,617.00	91,045.95	
Sub Total							31,60,539.35	
Bill No. 6 TRAFFIC SIGNS, MARKINGS AND ROAD APPURTENCES.								

Construction and Maintenance of auxiliary lane and service road on road safety on Biaora to Dewas Section from Km. 191.200 to Km. 332.460 of NH- 52 (Old NH-3) in the State of Madhya Pradesh under Road safety improvement.

6.0 1	Pavement marking with hot applied thermoplastic paints with reflectorising glass beads conforming to ASTM D36/BS-3262 (Part - I) as per drawing & MORT&H Specifications Clause 803.							
	a) Lane/centre line / edge marking / transverse and any other marking	Sq. m.	138.60	8.25	57	636.00	88,149.60	
6.0 2	Providing and applying two coats of synthetic enamel paint including primer to concrete kerb surfaces etc. complete as per MORT&H Specifications clause 803.	Sq. m.	227.66	8.28	58	65.00	14,798.16	
6.0 3	Supplying and fixing at site retro-reflectorised type sign boards/signs made of encapsulated lense type of reflective sheeting fixed over aluminum sheeting 2.0 mm thick with minimum coefficient of retro-reflection (determined in accordance with ASTM Standard E:810) as indicated in Table 800-1 complete including vertical pipes, angles, posts etc. all complete as per drawings and MORT&H Specifications clause 801.							
	A) Mandatory /Regulatory Signs of Size.							
	i) Circular 900 mm dia.	Nr.	3.00	8.3 (i)	45	4,184.00	12,552.00	
	ii) Octagon 900 mm height (for "STOP").	Nr.	3.00	8.3 (vii)	45	6,132.00	18,396.00	
	iii) Triangular 900 mm size (for "GIVE WAY").	Nr.	12.00	8.3 (i)	45	4,184.00	50,208.00	
	(iv) Speed limit 600mm dia	Nr.	3.00	8.3 (iii)	45	3,779.00	11,337.00	
	a) Direction and Place Identification signs							
	i) Advance Direction/Destination signs 4500 x 4187.5mm	Nr.	37.68	8.13	53	12,398.00	4,67,193.83	
	ii) Direction signs 2000 x 1250 mm	Nr.	10.00	8.13	53	12,398.00	1,23,980.00	
	ii) Direction signs 2000 x 900 mm (Service Road Ahead)	Nr.	1.80	8.13	53	12,398.00	22,316.40	
	iii) Reassurance signs 1000 x 900mm (Traffic Merging)	Nr.	1.80	8.13	53	12,398.00	22,316.40	
6.0 4	Construction of plain cement concrete kerb M-20 grade complete as per drawing & MORT&H Specifications Clause 408.							
	a) I Kerb.	Lm	669.60	8.2	45	550.00	3,68,280.00	
6.0 5	Solar Studs	No	40.00	8.21	56	673.00	26,920.00	
6.0 6	Providing & erecting W metal beam Crash Barrier of dimension & location complete as per drawing & MORT&H Specifications clause 810 and additional Technical specifications.	Rmt	360.00	8.16A	54	4,500.00	16,20,000.00	
Sub Total							28,46,447.39	
Bill No. 7 HIGHWAY LIGHTING								

7.0 1	Supply, Erection, testing and commission of Street Light and 63 KVA transformer complete	Nos					40,96,341.62	
Sub Total							40,96,341.62	
Total Amount (Rs.)							1,89,49,163.81	

Construction of service road from Ch km 261+560 to 261+640 (Abhaypur village)

ITEM	DESCRIPTION	Unit	Quantity	SOR NO.	Page No.	MPPWD SOR dated 25.03.2022	Amount (Rs.)	Remarks
Bill No : 1 SITE CLERANCE AND DISMANTLING								
1.01	Clearing and grubbing road land, embankment, drain, cross drainage structures including uprooting rank vegetation, grass, bush scrubs, saplings and trees of girth up to 300mm, removal of stumps, disposal of unserviceable material and stacking of serviceable material up to a lead of 1000m from road boundary as per MORT&H specification clause 201.	Ha	0.09	2.2A	15	22,918.00	2,062.62	
1.02	Dismantling upto 1.5 metre in foundation and/or 1.5 metre above ground level including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material with in a lead of 1000 metre complete as per MORT&H specifications clause 202.						-	
	a) Sign Boards / bill boards	Nos	3.00	2.9 B	17	210.00	630.00	
	b) Reinforced Cement Concrete (Head Wall)	Cum	72.82	2.3 A	15	1,170.00	85,203.71	
1.03	Dismantling of Metal Crash barrier	Lm	120.00	2.1	16	50.00	6,000.00	
1.04	Dismantling of Earthen Shoulder	Cum	118.80	3.3	19	55.00	6,534.00	
Sub Total							1,00,430.33	
Bill No. 2 EARTH WORK								
2.01	Earthwork in excavation necessary for construction of roadway including all leads and lifts complete as per MORT&H specifications clause 301.							
	(a) Excavation in all types of soils	Cu.m	1713.30	3.3	19	55.00	94,231.50	

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2.02	Construction of embankment with approved material from borrow with all leads and lifts, compacting to 95% of modified proctor density, all complete as per drawings and MORT&H Specifications Clause 305.	Cu.m	4128.71	3.13	20	155.00	6,39,949.28	
2.03	Construction of subgrade and Earthen shoulder satisfying the requirements of minimum soaked CBR value as indicated in the drawings with approved material from borrow areas , with all leads & lifts, compacting to 97% of modified proctor density, all complete as per MORT&H Specifications Clause 305 & 407.	Cu.m	1575.00	4.13A	25	186.00	2,92,950.00	
2.04	Filling in median/island with approved material with all leads and lifts complete as per MORT&H Specifications Clauses 305 & 407.	Cu.m	120.58	4.14	25	141.00	17,002.32	
Sub Total							10,44,133.09	
Bill No. 3 GRANULAR SUB-BASE AND BASE COURSES								
3.01	Providing, laying & compacting Granular Sub-base at OMC complete as per MORT&H Specifications Clause 401 (Grading-I of Table-400-1).	Cu.m.	630.00	4.1	23	934.00	5,88,420.00	
3.02	Providing and laying Wet Mix Macadam base and profile corrective course of required thickness complete as per MORT&H Specifications Clause 406.	Cu.m.	787.50	4.11	24	1,493.00	11,75,737.50	
Sub Total							17,64,157.50	
Bill No. 4 BITUMINOUS COURSES/ RIGID PAVEMENT								
4.01	Providing & laying bituminous primer coat over granular surface with bitumen emulsion complete as per Technical Specifications Clause 502 @ 6.0 to 9.0 kg/10 sq.m.	Sqm.	3150.00	5.1	28	37.00	1,16,550.00	
4.02	Providing & laying tack coat with bituminous Emulsion all complete as per MORT&H Specifications Clause 503						-	
	(i) On granular surface treated with primer or dry and hungry bituminous surface @ 2.5 to 3.0kg/10 sq.m.	Sq.m.	3150.00	5.2 (ii)	28	16.00	50,400.00	
	(ii) On normal Bituminous surface @ 2.0 to 2.5 Kg/10 sq.m.	Sq.m.	3050.00	5.2 (i)	28	14.00	42,700.00	
4.03	Providing & laying Dense Bituminous Macadam course of	Cu.m.	274.50	5.5	29	8,657.00	23,76,346.50	

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	required thickness on prepared surface complete as per drawing and MORT&H Specifications Clause 507 (excluding milling quantity) (VG-40)							
4.04	Providing & laying Bituminous Concrete wearing course using bitumen grade VG-40, only refinery produced) complete as per drawing and MORT&H Specifications Clause 509 & 521. (VG-40)	Cu.m.	90.00	5.6	30	10,182.00	9,16,380.00	
Sub Total							35,02,376.50	
Bill No : 5 CULVERTS								
5.01	Earthwork in excavation of foundation for structures including pipe culverts in all types of soil including lead & lifts complete as per drawings and MORT&H specifications clauses 304 & 2903.	Cum.	143.51	12.1 I (i)	77	61.00	8,753.89	
5.02	Cement Concrete / Reinforced Cement Concrete in open foundation / levelling course including centering and shuttering but excluding reinforcement all complete as per drg. and MORT&H specifications sections 1500, 1700 and 2100.							
	M-15 grade	Cum.	118.73	12.6 A	77	4,617.00	5,48,173.39	
5.03	Providing, laying & jointing RCC NP4 pipe including testing complete as per drg. & MORT&H specifications section 2900.							
	a) 1000mm dia	m	19.65	9.2 A	62	7,012.00	1,37,785.80	
	b) 1200mm dia	m	59.22	9.2 B	62	9,544.00	5,65,195.68	
5.04	Providing & laying stone boulder apron complete as per drg. & MORT&H specifications section 2500.	Cum.	23.55	15.10	95	2,279.00	53,669.14	
5.05	Providing & laying filter material underneath stone boulder pitching on slopes complete as per drg. and MORT&H specifications section 2500.	Cum.	11.77	13.11	83	750.00	8,831.04	
5.06	Numbering of culverts including painting with synthetic enamel paint as per drg. and IRC-7-1971 and directions of the Engineer.	No.	10.00	10.22 (i)	73	123.00	1,230.00	
5.07	Painting two coats on parapet wall	Sqm.	65.74	8.28	58	65.00	4,273.36	
5.08	a) Rigid apron 150mm thick flat stone embedded in 300mm thick M-15 grade concrete as per	cu.m.						

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	drawing and technical specification Clause 2505							
5.09	plain cement concrete M-20 grade for head wall of culvert including centering and shuttering complete as per drawing and technical specification section 1500, 1700, 2100 and 2200.	cum	104.84	12.6 B	77	5,162.00	5,41,190.49	
5.10	Providing & laying 750mm thick Stone apron as per drawing and technical specification Clause 2505	cum	18.60	15.10	95	2,279.00	42,396.24	
Sub Total							19,11,499.02	
Bill No. 6 DRAINAGE AND PROTECTIVE WORKS								
6.01	Earthwork in excavation for construction of surface unlined drains, ditch drain, open/covered drain, foundation of toe wall, head wall, retaining wall to required line and grade complete as per drg. or directed by Engineer and as per MORT&H specifications clauses 301 & 309							
	a) In all types of soil including marshy soil	Cum.	400.95	12.1 I (i)	77	61.00	24,457.95	
6.02	Construction of open/covered drain complete as per drg. and MORT&H specifications sections 300, 1000, 1500, 1600, 1700, 2100 & 2200.							
	a) Providing & laying cement concrete M-15 grade in levelling course including form work below foundations of drains, bedding of pipe drains and dissipation basin etc. complete as per drg. and MORT&H specifications referred above.	Cum.	24.75	12.6 A	77	4,617.00	1,14,270.75	
	b) Providing and laying PCC/RCC M-25 grade for lined drains, drainage chute median drain etc. including the cost of form work but excluding the cost of reinforcement complete as per drg. and MORT&H Specifications referred above.	Cum.	121.25	12.6G	77	5,369.00	6,50,991.25	
	c) Providing and laying PCC/RCC M-20 grade for drainage chute median separator. including the cost of form work but excluding the cost of reinforcement complete as per drg. and MORT&H Specifications referred above.	Cum.	3.60	12.6 B	77	5,162.00	18,583.20	
	d) Providing & fixing in position HYSD / TMT Fe 500 grade bar reinforcement in base, walls and	MT	10.91	12.30	80	81,349.00	8,87,720.96	

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	slab of RCC drains complete as per drg. and MORT&H specifications sections 1600.							
6.03	Providing weep holes in brick masonry / plain / reinforced concrete abutment, wing walls / return wall with 100mm dia AC pipe, extending through the full width of structure with slope of IV:20H towards draining face complete as per drg. and MORT&H specifications clause 2706.	Lm	50.00	13.9	83	185.00	9,250.00	
6.04	PCC M15 over Separator between RE wall and Service Road or MCW and Service Road	Cum.	10.96	12.6 A	77	4,617.00	50,581.08	
Sub Total							17,55,855.19	
Bill No. 7 TRAFFIC SIGNS, MARKINGS AND ROAD APPURTENCES.								
7.01	Pavement marking with hot applied thermoplastic paints with reflectorising glass beads conforming to ASTM D36/BS-3262 (Part - I) as per drawing & MORT&H Specifications Clause 803.							
	a) Lane/centre line / edge marking / transverse and any other marking	Sq.m.	38.45	8.25	57	636.00	24,451.02	
7.02	Providing and applying two coats of synthetic enamel paint including primer to concrete kerb surfaces etc. complete as per MORT&H Specifications clause 803.	Sq.m.	126.48	8.28	58	65.00	8,221.20	
7.03	Supplying and fixing at site retro-reflectorised type sign boards/signs made of encapsulated lense type of reflective sheeting fixed over aluminum sheeting 2.0 mm thick with minimum coefficient of retro-reflection (determined in accordance with ASTM Standard E:810) as indicated in Table 800-1 complete including vertical pipes, angles, posts etc. all complete as per drawings and MORT&H Specifications clause 801.							
	a) Direction and Place Identification signs							
	i) Direction signs 2000 x 900 mm	Nr.	3.60	8.13	53	12,398.00	44,632.80	
	ii) Reassurance signs 1200 x 1800mm	Nr.	3.60	8.13	53	12,398.00	44,632.80	
	Hazard markers	Nr.	6.00	8.3 (v)	45	3,700.00	22,200.00	

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7.04	Construction of plain cement concrete kerb M-20 grade complete as per drawing & MORT&H Specifications Clause 408.							
	a) I Kerb.	Lm	372.00	8.1B	45	425.00	1,58,100.00	
7.05	Studs	No	11.00	8.21	56	673.00	7,403.00	
7.06	Providing & erecting W metal beam Crash Barrier of dimension & location complete as per drawing & MORT&H Specifications clause 810 and additional Technical specifications.	Rmt	200.00	8.16A	54	4,500.00	9,00,000.00	
Sub Total							12,09,640.82	
Bill No. 8 HIGHWAY LIGHTING								
8.01	Supply, Erection, testing and commision of Street Light and 63 KVA transformer complete	Lumsum					50,68,056.62	
Sub Total							50,68,056.62	
Total Amount (Rs.)							1,63,56,149.06	

ABSTRACT OF COST

S. No.	Description	Amount (in Rs.)
1	Grand Total of BOQ	4,36,22,704/-
2	I/We agree to execute the above works on the tender premium -----% above/below the Grand Total of the project Cost as given above.	%

All duties, taxes (excluding the Goods & Service tax), royalties and other levies payable by the Contractor under the Contract, or for any other cause, shall be included in the rates, prices, and total Bid price submitted by the Bidder. The employer will perform duties in regards to the deduction of such taxes at sources as per applicable Law. The GST shall be paid on reimbursement basis (as applicable) subject to production of proof of such payment by the Contractor (Proof should contain name of work).