

NATIONAL HIGHWAYS AUTHORITY OF INDIA
(MINISTRY OF ROAD TRANSPORT & HIGHWAYS,
GOVT. OF INDIA)

Name of the work: Annual Maintenance of Namakkal – Karur Section
Km 248+625 to Km. 292+600 of NH 44 in the State
of Tamilnadu for a period of 1 (one) year

**Tender No.: NHAI/RO Chennai/Annual Maintenance/Namakkal-
Karur/NH-44/2026-27/263**

VOLUME – II

Regional Office – Chennai
National Highways Authority of India
(Ministry of Road, Transport & Highways)
5th Floor, CMRL Building,
Poonamallee High Road, Koyambedu,
Chennai-600 107.

Phone No: 044 – 22252635 Fax No: 044 – 22252636

E mail: rochennai@nhai.org

July'2026

SECTION: IX

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

To

Regional Officer,
National Highways Authority of India
5th Floor, CMRL Building,
Poonamallee High Road, Koyambedu,
Chennai – 600107.
Phone No: 044 – 22252635
Fax No: 044 – 22252636
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Description of Works: Annual Maintenance of Namakkal – Karur Section
Km 248+625 to Km. 292+600 of NH 44 in the State
of Tamilnadu for a period of 1 (one) year

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 maybe as certain 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 thisday of20.....

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

9.0. Preamble

- 9.01. The Bill of quantities shall be read in conjunction with the Instructions to Bidders, Conditions of Contract, Scope of Work and Specifications.
- 9.02. 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.
- 9.03. 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.
- 9.04. The rates and prices shall be quoted entirely in Indian Currency.
- 9.05. A rate or price shall be treated as a single rate as Tender Premium % above/ below on the amount in General Abstract.
- 9.06. 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.
- 9.07. The contractor shall keep the entire carriage way neat and clean throughout the contract period. The contractor shall maintain guardrails, railings, crash barriers, road furniture etc. in good condition by cleaning them frequently as advised / required by using suitable detergents/chemicals.
- 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 work without proper precautions/safety measures as required will attract a fine of Rs.5,000/- for each incident.

- 9.08. The Tendered rate for incident Management shall include all equipment, labor, material, consumable, tools, spares and other incidentals to comply with the requirement of the scope of the work and technical specification.
- 9.09. 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.

Description of Work: Annual Maintenance of Namakkal – Karur Section Km 248+625 to Km. 292+600 of NH 44 in the State of Tamilnadu for a period of 1 (one) year

ABSTRACT OF COST

S. No.	Description	Amount (excl. GST)
1	Grand Total of BOQ	Rs.7,43,24,700/- (Rupees Seven Crore Forty Three Lakhs Twenty Four Thousand and Seven Hundred Only)
	I / We agree to execute the above works on the tender premium% above / below the Grand Total of the Project Cost as given above.	(In words) percent Above / Below

Annual Maintenance of Namakkal - Karur Section Km 248+625 to Km. 292+600 of NH 44 in the State of Tamilnadu for a period of 1 (one) year

A) ROAD MAINTENANCE

Item No.	Description of Items	Unit	Quantity	Rate (in Rs.)	Amount (in Rs.)
1.01	Maintenance of Earthen Shoulder (filling with fresh soil) Making up loss of material/ irregularities on shoulder to the design level by adding fresh approved soil and compacting it with appropriate equipment, as per section 3003 of MoRT&H Specification.	Sqm.	12000	68.00	8,16,000.00
1.02	Maintenance of Earth Shoulder (stripping excess soil) Stripping excess soil from the shoulder surface to achieve the approved level and compacting with plate compactor, as per Section 3003 of MoRT&H Specification. Note: The Earth stripped from earthen shoulders to be dumped on the side slopes locally for disposal.	Sqm.	2500	25.00	62,500.00
1.03	Carrying out proper cleaning, and removing of dust /silt / thrash/plastic / rubbish/garbage/waste from the carriageway, footpaths, verges, (excluding the verges or central median) by mechanical brooms established with vehicle tracking system and manually if required and as directed by the engineer -in-charge and disposing of the waste / cleared material shall be take away from the road. The payment will be made as per report of vehicle tracking system indicating the location and kilometres travelled and number of passes on that stretch covering the full kilometre. The cleaning includes full width of both sides of carriageway and confirming to 6.10 of scope of work of section-6 and as directed by the Engineer-in-charge. The payment will be deducted proportionately as per the report of VTS.				
	MCW (BS)	Km	496.5	10272.00	51,00,048.00
	Service Roads / Slip Roads including Underneath of VUps (Total / Year)	Km	500.976	5136.00	25,73,012.74

Name of the Work: Annual Maintenance of Krishinagiri-Thoppurghat-Thumbipadi Section Km 94+000 to Km. 180+000 of NH 44 in the State of Tamilnadu for a period of 1 (one) year

1.04	Removal of Rank vegetation/weeds & undesirable vegetation from Earthen shoulder, slopes upto ROW, including Service Road shoulder and Median. It includes cleaning of dust/dirt from existing MBCB/Guard Rail etc. with water and detergent within ROW. It also includes routine maintenance such as cleaning/straightening of all types of road signs, road studs and delineators etc. and also removal of unauthorized boards within ROW including transportation to nearest suitable location and as directed by the Engineer-in-charge. (Frequency for every 3 months/as and when instructed by Engineer).	Sqm	288105.00	8.00	23,04,840.00
1.05	Clearing road Lined drains of all sizes and bring them to original shape, drainage capacity including disposal of sediments, extraneous debris & vegetation growth blocking the free flow from site outside ROW with all leads and lifts complete in all respects as directed by the Engineer in charge and as per MoRT&H Specification.				
A)	Trapezoidal drain - Cleaning & Maintenance (Frequency will be Twice a Year)	Rm	0.00		-
B)	RCC Drain cum Footpath - Cleaning & Maintenance (Frequency will be Twice a Year)	Rm	1096.00	75.00	82,200.00
1.06	Cleaning slab/ box type culverts and pipe culverts including clearing, cleaning and reshaping of upstream and down stream faces of these culverts with in right of way. The job includes disposal of excess material recovered from site including vegetation outside ROW with all leads and lifts complete in all respect as per direction of Engineer In-Charge. (Frequency of cleaning will be one time in a year i.e before start of monsoon).				
A)	Minor Bridge	No.	5	21648.00	1,08,240.00
B)	Culverts (Box & Pipe)	No.	97	7506.00	7,28,082.00
1.07	Carrying out cleaning of Expansion Joints, Drainage spouts, Vegetation growth removal from the Structure and similar operation each time over Bridges/Flyovers/Culverts as directed by the Engineer-in-charge. (Frequency of cleaning will be quarterly)	Rm	4800.00	188.00	9,02,400.00

1.08	Carrying out proper cleaning, and removing of dust /silt /thrash / plastic/ rubbish/ garbage/waste from the carriageway, footpaths, verges (excluding the verges of central median) by mechanical brooms established with vehicle tracking system and manually if required and as per the report of vehicle tracking system indicating the location and kilometers travelled and number of passes on that stretch covering the full kilometer. The cleaning includes full width of both sides of carriageway and service road, if any.				
A)	Urban area (Built-up area), (Frequency of cleaning will be for every two months) Four lane MCW + service roads on either side	Km.	6.96	15801.00	1,09,974.96
B)	Rural area, where there is no Service road (Frequency of cleaning will be quarterly) Four lane MCW	Km.	160.86	10534.00	16,94,499.24
1.09	Repair and reconstruction of Lined Drain using Plain / Reinforced Cement concrete of specified mix as under with stone aggregates 20 mm nominal size mechanically mixed and vibrated in foundation, sub-structure and superstructure including shuttering/ formwork conforming to MOST Specification Clause no. 1000, 1500 & 1700.				
A)	Cement concrete M20 grade for Lining works (Trapezoidal Lined Drain)	Cum	50.00	7149.00	3,57,450.00
1.10	Repair of Joint Groves with Epoxy Mortar or Epoxy Concrete - MoRTH Specification No. 3005.1	Rm	100.00	882.00	88,200.00
1.11	Repair involving Removal of Old Joint Sealant and Sealing with Fresh Sealant in Cement Concrete Pavements-MoRTH Specification No. 3005.2	Rm	500.00	58.00	29,000.00
1.12	Repair of transverse joints of cement concrete pavement involving removal of old joint sealant and sealing with fresh sealant (Poly Sulphide) including repair of spalled/broken edges of joints with Epoxy mortar complete as per Clause no. 3005 of Technical Specifications.	Rm	150.00	90.00	13,500.00
1.13	Filling Pot-holes and Patch Repairs with Bituminous concrete, 40mm, Removal of all failed material, trimming of completed excavation to provide firm vertical faces,	Sqm	1000.00	475.00	4,75,000.00

	cleaning of surface, painting of tack coat on the sides and base of excavation as per clause 503, back filling the pot holes with hot bituminous material as per clause 504, compacting, trimming and finishing the surface to form a smooth continuous surface, all as per clause 3004.2 (Grading-II)				
1.14	Providing treatment and repair to pot holes/patch repair of all types of bitumen pavement by using instant patch repair cold readymix material complete as per technical specification Clause 3004.2 and as per direction of Engineer-in-charge. (Grading-II)	Sqm	300.00	443.00	1,32,900.00
1.15	Construction of granular sub-base (GSB) by providing close graded Material, mixing in a mechanical mix plant at OMC, carriage of mixed Material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per clause 401 for grading-IV Material	Cum	50.00	3530.00	1,76,500.00
1.16	Providing, laying, spreading and compacting graded stone aggregate 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, 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.	Cum	50.00	3538.00	1,76,900.00
1.17	Providing and applying primer coat with bitumen emulsion on prepared surface of granular Base including clearing of road surface and spraying primer at the rate of 0.60 kg/sqm using mechanical means	Sqm	300.00	69.00	20,700.00
1.18	Providing and laying dense graded bituminous macadam (DBM) with higher capacity batch type HMP using crushed aggregates of specified grading, premixed with bituminous binder @ 4.5 per cent by weight of total 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 MoRTH specification clause	Cum	50.00	10832.00	5,41,600.00

Name of the Work: Annual Maintenance of Krishinagiri-Thoppurghat-Thumbipadi Section Km 94+000 to Km. 180+000 of NH 44 in the State of Tamilnadu for a period of 1 (one) year

	No. 505 complete in all respects.- Grading-II				
1.19	Providing and applying tack coat with bitumen emulsion using emulsion pressure distributor at the rate of 0.20 to 0.30 kg per sqm on the prepared bituminous surface cleaned with mechanical broom.	Sqm	23000.00	13.00	2,99,000.00
1.20	Providing and laying bituminous concrete (BC) with higher capacity batch type hot mix plant using crushed aggregates of specified grading, premixed with bituminous binder @ 5.4 per cent 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 MORTH specification clause No. 507 complete in all respects - Grading-II	Cum	940.00	13232.00	1,24,38,080.00
1.21	Patching of damaged concrete surface with polymer concrete and curing compounds, initiator and promoter, available in present formulations, to be applied as per instructions of manufacturer and as approved by the Engineer as per section 2800 of MORTH Specifications (Revision-V)	Sqm.	100.00	2882.58	2,88,258.00
1.22	Sealing of crack / porous concrete with Epoxy Grout by injection through nipples complete as per clause 2803.1 of section 2800 of MORTH Specifications (Revision-V)	Kg	25.00	1942.05	48,551.25
1.23	Applying epoxy mortar over leached, honey combed and spalled concrete surface and exposed steel reinforcement complete as per section 2804 of MORTH Specifications (Revision-V)	Kg	10.00	955.51	9,555.10
1.24	Clearing and removing silt deposit abutting the Centre Median on both sides for an average width of 0.75m on either sides including collection and removing of silt deposit, loading including conveying away including conveyance charges, traffic diversion etc., complete (Median Chute Drain cleaning)	m	1500.00	39.06	58,590.00
1.25	Supplying and fixing GI DRAINAGE SPOUTS 100mm dia as per GOI drawing SD/205 with grating arrangements at top as shown in the drawing and 100mm dia drainage spout projecting atleast 300mm beyond the bottom of deck slab as shown in the	Nos.	50.00	2672.97	1,33,648.50

	drawing, including cost and conveyance of Galvanised iron pipes and flats and fixing them in position, etc., complete as per cl 2705 of MORT&H specification. (V Revision)				
1.26	Repair and Replacement of Rainwater Pipe line (100mm dia pvc pipe) complete as per drawing and Technical specification	Rm	300.00	459.80	1,37,940.00
1.27	Milling of distressed bituminous surface to required depth using milling machine fitted with loading conveyor for loading the milled material directly on to trucks for safe disposal with all leads and lifts complete in all respect as directed by Engineer-In-Charge. The rate quoted shall be inclusive of the rebate for the solvage value of the milled material.	Sqm	21000.00	28.72	6,03,120.00
		TOTAL (A)			3,05,10,289.79

B) ROAD PROPERTY MAINTENANCE

Item No.	Description of Items	Unit	Quantity	Rate (in Rs.)	Amount (in Rs.)
2.01	Maintenance of existing plants.				
	Maintenance of median and the existing plants in it by basin making, weeding-hoeing, cleaning, levelling and dressing of median, uprooting and removal of weeds, cutting gras, disposal of all much outside Row regularly to keep the median clean and plantation in healthy and good condition. The job also includes the cleaning and removal of spilled over earth from median to main carriageway in the portion adjacent to the kerbs all along the median besides cleaning of longitudinal and cross drains in the median. The operation of maintenance in addition to above will also cover and include the following activities.				

A)	Watering of each plant as and when required depending upon the climatic conditions of the locality /region/ season /strictly as per direction of Engineer in Charge. The main requirement is to keep the plants/shrubs in healthy, good and surviving condition. The casualty/damage to any plant/shrubs during the maintenance period will be the entire responsibility of the contractor and the contractor shall replace the dead & damaged plants/shrubs at his own cost with new plants of the same species, varieties, age and size etc.	50%	496.5	20,966.00	1,04,09,619.00
B)	Application of FYM or Sludge@ ½ cuft or 10kg/Plant two times a year during February / March and October/November plus 20 grams of NPK (12:32:16) or Bonermeal per plants two times a year as detailed above.	10%	496.5	4,193.20	20,81,923.80
C)	Application of insecticide / pesticide/ fungicide etc for control of insects pests and diseases as and when required as per direction of Engineer.	5%	496.5	2,096.60	10,40,961.90
D)	Training and pruning of all shrubs/plants as and when required to give them required shape, size and spread.	20%	496.5	8,386.40	41,63,847.60
E)	Replacement of dead, damaged plants from the median by healthy & well developed plant of similar species, vaneties, age and size etc, within 10 days of occurrence of causality as noticed/reported or as directed by the Engineer, In case, plant is not replaced as specified above, a penalty of Rs.1000/- per plant will be imposed.	15%	26.13	6,289.80	1,64,352.47
2.02	Painting with higloss synthetic enemal paint two coats to give an even and smooth surface for protection of exposed concrete portion of Bridges/CD works/parapet, kerb including RCC crash barrier painting and repairing wherever necessary, complete as per approval of Engineer.				
A)	Old Existing surface	Sqm.	53000.0	181.00	95,93,000.00
2.03	Painting all types of M.S/GI railing as when required with two coats of synthetic enamel paint of approved brand after cleaning the surface complete in all respect as				

	directed by the Engineer.				
a)	On existing Railing (Pedestrian Guard rail)	Per RM of full height of the railing	720.0	117.00	84,240.00
2.04	Painting two coats on old surface after minor repairs to give an even and smooth surface and printing letters and figures with 1st quality synthetic enamel paint of approved brand and manufacture complete in all respect conforming to respective IRC specification and as directed by Engineer-in-charge.				
A)	Hectometre stones	No.	412	44.00	18,128.00
B)	Kilometre stones	No.	80	268.00	21,440.00
C)	5 th Kilometre stones	No.	22	597.00	13,134.00
2.05	Supply and fixing of Kilometre stone of standard design and drawing as per IRC:8-1980 (second revision),including painting and numbering etc., and all other incidental charges etc., complete.	No.	6	2,197.00	13,182.00
2.06	Supply and fixing of HM stone of standard design and drawing as per IRC:26-1967, including painting and numbering etc., and all other incidental charges etc., complete.	No.	22	576.45	12,681.90
2.07	Supply and fixing of Boundary stone of standard design and drawing as per IRC:25-1967, including painting and numbering etc., and all other incidental charges etc., complete.	No.	100	1,107.00	1,10,700.00
2.08	Removal and Replacement of Damaged Mild Steel Railing (PGR) including Fixing as per drawing, Painting, Transportation, Loading/unloading, etc., complete.	Rm	36.0	3,781.38	1,36,129.68

	(salvage material will be contractor's property)				
2.09	Metal Beam Crash Barrier (Single faced) Providing and erecting a "W" metal beam crash barrier comprising of 3 mm thick corrugated sheet metal beam rail, 70 cm above road/ground level, fixed on ISMC series channel vertical post, 150 x 75 x 5 mm spaced 2 m centre to centre, 1.8 m high, 1.1 m below ground/road level, all steel parts and fitments to be galvanised by hot dip process, all fittings to conform to IS:1367 and IS:1364, metal beam rail to be fixed on the vertical post with a spacer of channel section 150 x 75 x 5 mm, 330 mm long complete as per Clause 810 (salvage material will be contractor's property)	Rm	125.0	3,459.00	4,32,375.00
2.10	Metal Beam Crash Barrier Type - A, "W" Double Guard Providing and erecting Single sided Double Guard Metal Beam Crash Barrier System 1.70m high, comprising of 3mm thick wall "W" beams posts and spacer channels shall be made by cold roll forming using HR conform to IS 5986 Fe 410/360 and dip galvanized having Zinc Mass of 550gms/ sqm, minimum 950mm above road/ ground level fixed on ISMC series channel vertical post 150x75x5mm spaced 2m center to center 312mm x 83mm flange width x 3mm thick, 4318mm long post directly embedded in the concrete (M15) pit size 350x350x800mm for a depth of 750mm below ground. All fixing bolts and nuts hot dip galvanized conforming to IS:1367 clause 4.60 all complete as per Technical Specification and as directed by the Engineer-in-charge (salvage material will be contractor's property)	Rm	0.0	6,500.00	-
2.11	Providing & erecting of Retro - Reflectorised Cautionary, Mandatory and Informatory signs (with definition board) made out of High Intensity Prismatic Grade Sheeting confirming to Type-XI standards of IRC-67: 2022 and ASTM D 4956 -09, specification and fixed over 2mm thick Aluminium sheet fixed over a back supporting frame of 25mmx25mmx3mm Mild Steel angle and supported on a mild steel angle post 75X75X6mm with a clear height of not less than 2.10m from the ground level to				

	the bottom of the sign board and 0.60m below ground level. The sign post should be painted as per IRC 67-2022 and firmly fixed to the ground by means of properly designed foundation with M25 grade cement concrete 45cmX45cmX60cm size including cost and conveyance of all materials, equipment, Machinery and labour with all leads and lifts, loading charges necessary for satisfactory completion of the work as directed by the engineer-in-charge. High intensity Retro - Reflectro sheet shall consist of minimum coefficient of Retro-reflection as per Table 6.9 of IRC 67-2022. The retro - reflective sheeting shall be covered under 7 year warranty issued for field performance and a certified copy of three years outdoor exposure report shall be obtained as per IRC 67:2022 . (as per MoRT&H Specification No.801)				
i)	120 cm equilateral triangle	No.	10	10,902.00	1,09,020.00
ii)	90 cm equilateral triangle	No.	10	8,365.00	83,650.00
iii)	75 cm equilateral triangle	No.	5	7,143.00	35,715.00
iv)	60 cm equilateral triangle	No.	8	6,198.00	49,584.00
v)	120 cm circular	No.	10	14,271.00	1,42,710.00
vi)	90 cm circular	No.	5	9,904.00	49,520.00
vii)	75 cm circular	No.	5	8,624.00	43,120.00
viii)	60 cm circular	No.	10	7,249.00	72,490.00
ix)	80 cm x 60 cm rectangular	No.	10	9,027.00	90,270.00
x)	120 cm high octagonal	No.	10	15,439.00	1,54,390.00
xi)	90 cm high octagonal	No.	8	10,905.00	87,240.00
xii)	75 cm high octagonal	No.	7	9,367.00	65,569.00
xiii)	50 cm x 60 cm Chevron	No.	7	7,138.00	49,966.00

xiv)	120 cm x 90 cm Crash Prone Area Board	No.	7	9,543.00	66,801.00
2.12	Providing and fixing Solar powered Traffic Blinkers of 30cm dia with Polycarbonate Dome 5mm Red of Led 150 Nos. i.e. each Red Blinkers Light - 1 No. with Red / White / Blue Led Blinkers Delineator Solar Panel : 12v 50w Solar Panel — 1 No. 12v 18 AH Battery - 1 No. with Box, Solar Circuit Controller Board Box. Straight Pole : MS Pole 3" dia 2.5mm thick 18 Feet height pole (1 No.) with 2 Feet under ground pole foundation, pole painting including transportation charges, installation charges etc., complete as per standard specification.	No.	7	28,342.75	1,98,399.25
2.13	Providing and Erecting of Retro - Reflectorised Hazard Marker Traffic Sign made out of High Intensity Prismatic Grade Sheeting confirming to Type-XI standards of IRC-67: 2022 and ASTM D 4956 –09, specification and fixed over 2mm thick Aluminium sheet fixed over a back supporting frame of 25mmx25mmx3mm Mild Steel angle and supported on a mild steel angle post 75X75X6mm and 0.60m below ground level. The sign post should be painted as per IRC 67-2022 and firmly fixed to the ground by means of properly designed foundation with M25 grade cement concrete 45cmX45cmX60cm size including cost and conveyance of all materials, equipment, Machinery and labour with all leads and lifts, loading charges necessary for satisfactory completion of the work as directed by the engineer-in-charge. High intensity Retro - Reflecto sheet shall consist of minimum coefficient of Retro-reflection as per Table 6.9 of IRC 67-2022. The retro- reflective sheeting shall be covered under 7 year warranty issued for field performance and a certified copy of three years outdoor exposure report shall be obtained as per IRC 67:2022. (as per MoRT&H Specification No.801) 30cm x 90cm rectangular	No.	40	4,000.00	1,60,000.00
2.14	Providing and erecting of Direction and Place Identification Retro-reflectorised Signs made out of Cube Corner Micro Prismatic Grade Sheeting confirming to Type-XI				

	standards of IRC-67: 2022 and ASTM D 4956 –09, specification and fixed over 2mm thick Aluminium sheet fixed over a back supporting frame of 25mmx25mmx3mm Mild Steel angle and supported on a mild steel angle post 75X75X6mm with a clear height of not less than 2.10m from the ground level to the bottom of the sign board and 0.60m below ground level. The sign post should be painted as per IRC 67-2022 and firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 45cmX45cmX60cm size including cost and conveyance of all materials, equipment, Machinery and labour with all leads and lifts, loading charges necessary for satisfactory completion of the work as directed by the engineer-in-charge. Micro Prismatic grade Retro - Reflectro sheet shall consist of minimum coefficient of Retro-reflection as per Table 6.9 of IRC 67-2022. The retro -reflective sheeting shall be covered under 10 year warranty issued for field performance and a certified copy of three years outdoor exposure report shall be obtained as per IRC 67:2022. (as per MoRT&H Specification No.801) (For location of black spot, curve, sharp bend, junction, ghat roads and critical zone applications)				
i)	Rate per sqm (for sign having area upto 0.9 sqm) Type XI	Sqm.	15.0	14,529.00	2,17,935.00
ii)	Rate per sqm (for sign having area more than 0.9 sqm) Type - XI	Sqm.	10.0	14,529.00	1,45,290.00
2.15	Road Markers/Road Stud with Lens Reflector Providing and fixing reflective road studs of 'category A' Raised pavement markers made out of polycarbonate / methyl methercrylate/ABS moulded body confirming to ASTM D 788 and reflective panels with micro prismatic lens capable of providing total internal reflection of the light entering the lens face with retro reflectance and chromaticity values conforming to ASTM D4280. The reflective raised pavement markers shall also confirm to the MORTH circular No RW / NH. 33023/10/ 97-DO.III dt 11.06.97. The height, width and length shall not be less than 15 mm, 90 mm and 100 mm and with minimum reflective area of 13 Sq.cm on each side and the slope to the base shall be 35 +/- 5 degree. Each reflector shall have a CIL not less than	No.	1500	232.00	3,48,000.00

	values specified in Table 2 of said MORTH circular. The strength of detachment of the integrated cylindrical shanks, (of diameter not less than 19 +/- 2mm and height not less than 30+/- 2 mm) from the body is to be a minimum value of 500 Kgf. Fixing will be by drilling holes on the road for the shanks to go inside, without nails and using epoxy resin based adhesive as per manufacturer's recommendation and complete as directed by the engineer. The marker shall support a load of 13635 Kg tested in accordance with ASTM D4280 and confirming to IRC 35 - 2015 guidelines and MoRT&H specification 804 etc., complete				
2.16	Providing and fixing retro-reflective stickers (Engineering grade) of size 10cm x 5cm on MBCBs and other structures as per Mo ST Cl.No.801 and as per approval of Engineer in charge.	Nos.	100	13.00	1,300.00
2.17	Providing and laying of hot applied Thermoplastic compound 2.5 mm thick including reflectorising glass beads @ 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes etc., complete as per MoRT&H specification No.803	Sqm.	4280.0	589.25	25,21,990.00
2.18	Repairing of damaged Kerb after dismantling of the Kerb upto minimum of 100 mm and making good the section with M-20 concrete to match with the existing section including form work, curing, painting with two coats of first quality synthetic enamel paint etc. complete in all respect conforming to relevant MOST Clauses and as per direction of Engineer.	rmt	1000.0	283.00	2,83,000.00
2.19	Maintenance of existing LED Solar Blinker including replacement of battery, LEDS and other accessories,. If required.	No.	50	7,000.00	3,50,000.00
2.20	Maintenance of Street Lights				
A)	Replacement of 250 W Sodium vapour lamp including fittings				

i)	MCB- Four Pole 63A, 10KA	Nos.	200	1,535.00	3,07,000.00
ii)	Single Pole 40A, 10KA	Nos.	150	338.00	50,700.00
iii)	DB Box 4 ways 3 phase DB, No. of ways incomer MCB/Isolator-4, No.of Ways incomer ELCB/RCD-4, No. of outgoing ways-12	Nos.	5	4,217.00	21,085.00
v)	63 Amps Porcelain Fuse Unit (500V)	Nos.	40	178.00	7,120.00
vi)	100 Amps Porcelain Fuse Unit (500V)	Nos.	40	323.00	12,920.00
vii)	10 Amps Fuse Wire	Kg	10	643.00	6,430.00
viii)	Supply,Laying, termination of 4Core X 25 sqm Aluminum cable	m	650	652.30	4,23,995.00
ix)	Supply,Laying, termination of 4Core X 16 sqm Aluminum cable	m	1000	548.90	5,48,900.00
B)	Replacement of Street light 250W	m	151	14,050.00	21,21,550.00
C)	Replacement of with 70W LED	Nos.	16	3,833.00	61,328.00
2.21	80 Cm Round Convex Mirror including cost of stand, labour charges for fixing etc., complete as per standard specification.	No.	20	6,527.00	1,30,540.00
2.22	100 Cm Round Convex Mirror including cost of stand, labour charges for fixing etc., complete as per standard specification.	No.	20	9,095.00	1,81,900.00
			TOTAL (B)		3,74,95,142.60

C) INCIDENT MANAGEMENT AND MISCELLANEOUS

Item No.	Description of Items	Unit	Quantity	Rate (in Rs.)	Amount (in Rs.)
3.01	Tow way crane - Removing all types of broken down/vehicles which have	Per	12.00	2,00,000.00	24,00,000.00

	met with accidents from the carriageway and toeing the same to proper locations i.e. nearest police stations or some suitable location by using 15 tonne or of more capacity pick and carry crane, as per clause 6.4 of Scope of Work and as per Clause 6.8 'Performance Standard' of scope of work.	Month			
3.02	Providing and supply of Following manpower for misc, work as when required basis as per instruction of the Engineer.				
A)	Mate / Supervisor	Per day	25.00	808.00	20,200.00
B)	Helper / Beldar / Coolie	Per day	100.00	628.00	62,800.00
3.03	Providing, running and maintaining route patrol vehicle 4x4 drive Patrol vehicles as stipulated Each vehicle shall accommodate including manpower (Highway serveillance inchage ,EMT,Driver) and to be removed Unauthorized access,Private hoardings ,dead animals etc. to be run (24x7)in the Highway .As Per NHA Circular	per Month	12.00	2,50,000.00	30,00,000.00
3.05	Traffic Cone Provision of red fluorescent with white reflective sleeve traffic cone made of low density polyethylene (LDPE) material with a square base of 390 x 390 x 35 mm and a height of 770 mm, 4 kg in weight, placed at 1.5 m interval, all as per BS 873	No.	120.00	562.00	67,440.00
3.06	Water Filling Barricades work zone sheeting Providing water filled barricade made up of LDPE to segregate the vehicular movement and work zone as per	No.	12.00	4,156.00	49,872.00
3.07	Providing following equipments in running condition on hire basis including running and maintenance charges as per instructions of the Engineer including P.O.L complete as per T.S.				
	(a) Tipper 10 Cum. Capacity	Per Hour	20.00	2,382.60	47,652.00
	(b) Tipper 6 Cum. Capacity	Per Hour	20.00	1,813.90	36,278.00
	(c) JCB	Per Hour	200.00	2,766.50	5,53,300.00

	(d) Tractor with trolly	Per Hour	40.00	960.30	38,412.00
	(e) Excavator 1 cum	Per Hour	24.00	1,581.80	37,963.20
3.08	Providing sand bags in the eroded berms including cost and conveyance of sand, supply of empty bags, loading & unloading, filling in bags with sand, shifting them and placing at eroded berms as directed by Engineer, etc., complete.	Nos.	100.00	53.50	5,350.00
		TOTAL (C)			63,19,267
Overall Total (A + B + C)					7,43,24,700/-

Note: (Note: The amount will be released only after submission of GPS based data for the items mentioned under D (i.e. Incident Management)