

**NAME OF WORK: Construction of Vaigai River North Bank Road Km 0/0 - 8/0 from Kamarajar Bridge to Varanasi Kanniyakumari Road (NH 44) Near Samayanallur**

Estimated Amount = 176.000 Crores

**Abstract Estimate**

Sl.No	Description of Work	Quantity	Unit	Rate	Amount
1	<b>Clearing and Grubbing Jungle</b> including uprooting trunk vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable materials to be used or auctioned, up to a lead of 1000 m including removal and disposal of top organic soil not exceeding 150 mm in thickness. as per Table - 201 MORT & H specification	Km 0/000 - 8/000	155520.00	Sqm	7.80 12,13,056.00
2	Earthwork excavation in all classes of soils except hard rock requiring blasting and depositing on bank with all leads and lifts as per SS20B including cost of all labour charges, materials, tools, equipments and all incidental charges, including compacting with power roller, watering, including all hire and fuel charges for all tools and plants, removal of other deleterious matter and obstructions, trimming of bottom of excavation back filling, clearing up the site and disposal of all surplus materials etc., complete as per standard specification as per cl. 305 of MoRT & H Specification (Vth Revision). <b>[For Embankment]</b>	Km 0/000 - 8/000	469973.00	Cum	435.21 20,45,36,949.00
3	Earthwork excavation in all classes of soils except hard rock requiring blasting and depositing on bank with all leads and lifts as per SS20B including cost of all labour charges, materials, tools, equipments and all incidental charges, including compacting with power roller, watering, including all hire and fuel charges for all tools and plants, removal of other deleterious matter and obstructions, trimming of bottom of excavation back filling, clearing up the site and disposal of all surplus materials etc., complete as per standard specification as per cl. 305 of MoRT & H Specification (Vth Revision). <b>[For sub grade &amp; Berms] [CBR 8% &amp; Lead 20Km]</b>	Km 0/000 - 8/000	73497.00	Cum	440.69 3,23,89,393.00
4	<b>Granular Sub-base with Graded Material</b> (Table:- 400-1) - Plant Mix Method Construction of granular sub-base 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 of MORTH Specification- for <b>Grading- V</b>	Km 0/000 - 8/000	18749.00	Cum	1637.85 3,07,08,050.00

Sl.No	Description of Work	Quantity	Unit	Rate	Amount
5	<b>Granular Sub-base with Graded Material (Table:- 400-1) - Plant Mix Method</b> Construction of granular sub-base 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 of MORTH Specification- for <b>Grading- III</b>	Km 0/000 - 8/000	12620.00	Cum	1733.07
					2,18,71,343.00
6	<b>Wet Mix Macadam (Table 400-13)</b> 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, Complete as per clause 406 of MORTH Specification.	Km 0/000 - 8/000	21267.00	Cum	1963.75
					4,17,63,071.00
7	<b>Prime coat</b> - Providing and applying primer coat with bitumen emulsion (SS-I type) on prepared surface of granular Base including clearing of road surface and spraying primer at the rate of 0.70 kg/sqm using mechanical means as per clause 502 of MORTH Specification over WMM	Km 0/000 - 8/000	85067.00	Sqm	75.88
					64,54,884.00
8	<b>Tack coat</b> - Providing and applying tack coat with bitumen emulsion(RS-I type) using emulsion pressure distributor at the rate of 0.25 kg per sqm on the prepared bituminous/ granular surface cleaned with mechanical broom as per clause 503 of MORTH Specification- over granular surfaces treated with primer	Km 0/000 - 8/000	85067.00	Sqm	17.11
					14,55,496.00
9	<b>Providing and laying 50mm Consolidated Dense Bituminous Macadam</b> using <u>VG30</u> bitumen for premixing per 10sqm including cost and conveyance of all materials to CMP site, heating the bitumen and aggregate to required temperature and mixing them in required temperature in central hot mix plant 20-30 ton capacity, conveying the mix by tipper trucks to paver site, spreading the mix to uniform thickness of 50mm with mechanical paver to the specified grades and cross sections and consolidated by 8-10 tonne Vibratory / Pneumatic Roller to the required density etc., including labour for attending to paver to site etc., including all other tools and plant required, including fuel and all other incidental charges etc., complete as per specification using CMP as per clause 504 of MORTH Rev-5	Km 0/000 - 8/000	4254.00	Cum	9617.84
					4,09,14,291.00

Sl.No	Description of Work	Quantity	Unit	Rate	Amount
10	Providing and laying Compacted <b>Bituminous Concrete to 30 mm</b> thick using VG30 bitumen for premixing per 10sqm including cost and conveyance of all materials to CMP site, conveying the mix to paver site, spreading the mix to uniform thickness with mechanical paver to the specified grades and cross sections and consolidated by 8-10 tonne Vibratory / Pneumatic Roller to the required density etc., including labour for attending to paver to site etc., including hire charges and fuel charges for CMP with bitumen boiler, tipper trucks, Paver Finisher Vibratory / Pneumatic roller and all other tools and plant required, including fuel and all other incidental charges etc., complete as per specification using CMP as per clause 507 of MORTH Rev-5				
	Km 0/000 - 8/000	2552.00	Cum	10435.55	2,66,31,524.00
<b>Provisions for Rigid Pavement</b>					
11	Construction of <b>Dry Lean Cement Concrete</b> Subbase over a prepared sub-grade with coarse and fine aggregate conforming to IS: 383, the size of coarse aggregate not exceeding 25 mm, aggregate cement ratio not to exceed 15:1, aggregate gradation after blending to be as per table 600-1, cement content not to be less than 150 kg/ cum, concrete strength not to be less than 10 Mpa at 7 days, mixed at site, compacted using vibrator, finishing and curing.				
	Km 0/000 - 0/225 [LHS] & Km 7/425 - 7/700 [LHS]	660.00	Cum	4923.16	32,49,286.00
12	Construction of reinforced, dowel jointed at expansion and construction joint only, plain cement concrete pavement, thickness as per design, over a prepared sub base, with 43 grade cement or any other type as per Clause 1501.2.2 <b>M40</b> (Grade), coarse and fine aggregates conforming to IS:383, maximum size of coarse aggregate not exceeding 25 mm, mixed in a concrete mixer of not less than 0.2 cum capacity and appropriate weigh batcher using approved mix design, laid in approved fixed side formwork (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the formwork as per drawing), spreading the concrete with shovels, rakes, compacted using needle, screed and plate vibrators and finished in continuous operation including provision of contraction and expansion, construction joints, applying debonding strips, primer, sealant, dowel bars, near approaches to bridge/culvert and construction joints, admixtures as approved, curing of concrete slabs for 14-days, using curing compound (where specified ) and water finishing to lines and grade as per drawing and Technical Specification clause 1501 ( <b>PQC</b> )				
	Km 0/000 - 0/225 [LHS] & Km 7/425 - 7/700 [LHS]	1364.00	Cum	10116.05	1,37,98,292.00

Sl.No	Description of Work	Quantity	Unit	Rate	Amount
13	Supply and fabrication of STEEL grade Fe500 D with suitable anticorrsive measure required for all the reinforced cement concrete items of work involved in the shedule including cost of steel, cost of fabrication, labour charges for cleaning the rods, straightening, cutting, bending, tying grills, hoisting and placing the reinforcement in position as specified in the drawing including cost of binding wire, provision of spacer bars, cover blocks and all other incidental charges etc., complete. For ( <b>Pavement Quality Concrete</b> )				
	Km 0/000 - 0/225 [LHS] & Km 7/425 - 7/700 [LHS]	12.03	MT	94804.27	11,40,495.00
<b>SUB - ESTIMATE</b>					
14	Construction of <b>Minor Bridge at Km 2/850</b> of Vaigai River North Bank Road from Kamarajar Bridge to Varanasi Kanniyakumari Road (NH 44) Near Samayanallur				2,04,66,248.00
15	Construction of <b>Minor Bridge at Km 6/200</b> of Vaigai River North Bank Road from Kamarajar Bridge to Varanasi Kanniyakumari Road (NH 44) Near Samayanallur				1,77,13,525.00
16	Construction of <b>Box culvert at Km 0/300, 0/725, 1/375, 1/700, 2/650, 3/325 , 3/725, 4/075, 5/325, 6/575, 7/175</b> of Vaigai River North Bank Road from Kamarajar Bridge to Varanasi Kanniyakumari Road (NH 44) Near Samayanallur				1,47,88,836.00
17	Construction of <b>PCC Retaining Wall</b> at km 0/000 - 0/050 [LHS], km 0/050 - 0/125 [LHS], km 7/375 - 7/525 [LHS], km 7/525 - 7/600 [B/S], km 7/600 - 7/700 [LHS] of Vaigai River North Bank Road from Kamarajar Bridge to Varanasi Kanniyakumari Road (NH44) Near Samayanallur				2,02,33,026.00
18	<b>Construction of RCC Retaining wall Km: 0/000 - 0/280 [Centre] of Vaigai River North Bank Road from Kamarajar Bridge to Varanasi Kanniyakumari Road (NH 44) Near Samayanallur</b>				2,31,33,681.00
19	<b>Construction of RCC Retaining wall Km: 0/125 - 0/225 of Vaigai River North Bank Road from Kamarajar Bridge to Varanasi Kanniyakumari Road (NH 44) Near Samayanallur</b> (LHS)				1,00,75,859.00
20	<b>Construction of RCC Retaining wall Km: 0/225 -0/500 of Vaigai River North Bank Road from Kamarajar Bridge to Varanasi Kanniyakumari Road (NH 44) Near Samayanallur</b> (LHS)				3,36,02,583.00
21	<b>Construction of RCC Retaining wall Km:0/500-1/000 of Vaigai River North Bank Road from Kamarajar Bridge to Varanasi Kanniyakumari Road (NH 44) Near Samayanallur</b> (LHS)				6,10,79,927.00

Sl.No	Description of Work	Quantity	Unit	Rate	Amount
22	Construction of RCC Retaining wall Km:1/000-1/500 of Vaigai River North Bank Road from Kamarajar Bridge to Varanasi Kanniyakumari Road (NH 44) Near Samayanallur (LHS)				6,98,80,416.00 ✓
23	Construction of RCC Retaining wall Km:1/500-2/000 of Vaigai River North Bank Road from Kamarajar Bridge to Varanasi Kanniyakumari Road (NH 44) Near Samayanallur (LHS)				6,98,80,416.00 ✓
24	Construction of RCC Retaining wall Km:2/000-2/600 of Vaigai River North Bank Road from Kamarajar Bridge to Varanasi Kanniyakumari Road (NH 44) Near Samayanallur (LHS)				6,29,08,754.00 ✓
25	Construction of RCC Retaining wall Km:2/600-3/000 of Vaigai River North Bank Road from Kamarajar Bridge to Varanasi Kanniyakumari Road (NH 44) Near Samayanallur (LHS)				4,19,47,950 4,19,47,255.00 ✓
26	Construction of RCC Retaining wall Km:3/000-3/600 of Vaigai River North Bank Road from Kamarajar Bridge to Varanasi Kanniyakumari Road (NH 44) Near Samayanallur (LHS)				4,75,16,251.00 ✓
27	Construction of RCC Retaining wall Km:3/600-4/000 of Vaigai River North Bank Road from Kamarajar Bridge to Varanasi Kanniyakumari Road (NH 44) Near Samayanallur (LHS)				3,16,83,515.00 ✓
28	Construction of RCC Retaining wall Km:4/000-4/675 of Vaigai River North Bank Road from Kamarajar Bridge to Varanasi Kanniyakumari Road (NH 44) Near Samayanallur (LHS).				4,42,49,767.00 ✓
29	Construction of RCC Retaining wall Km:4/675-5/000 of Vaigai River North Bank Road from Kamarajar Bridge to Varanasi Kanniyakumari Road (NH 44) Near Samayanallur (LHS)				2,54,80,737.00 ✓
30	Construction of RCC Retaining wall Km:5/000-5/125 of Vaigai River North Bank Road from Kamarajar Bridge to Varanasi Kanniyakumari Road (NH 44) Near Samayanallur (LHS)				99,23,107.00 ✓
31	Construction of RCC Retaining wall Km:5/125-5/500 of Vaigai River North Bank Road from Kamarajar Bridge to Varanasi Kanniyakumari Road (NH 44) Near Samayanallur (LHS)				3,94,36,813.00 ✓
32	Construction of RCC Retaining wall Km:5/500-6/000 of Vaigai River North Bank Road from Kamarajar Bridge to Varanasi Kanniyakumari Road (NH 44) Near Samayanallur (LHS)				5,25,45,616.00 ✓

Sl.No	Description of Work	Quantity	Unit	Rate	Amount
33	Construction of RCC Retaining wall Km:6/000-6/500 of Vaigai River North Bank Road from Kamarajar Bridge to Varanasi Kanniyakumari Road (NH 44) Near Samayanallur (LHS)				3,97,15,067.00 ✓
34	Construction of RCC Retaining wall Km:6/500-6/775 of Vaigai River North Bank Road from Kamarajar Bridge to Varanasi Kanniyakumari Road (NH 44) Near Samayanallur (LHS)				2,89,51,296.00 ✓
35	Construction of RCC Retaining wall Km:6/775-7/000 of Vaigai River North Bank Road from Kamarajar Bridge to Varanasi Kanniyakumari Road (NH 44) Near Samayanallur (LHS)				3,02,18,539.00 ✓
36	Construction of RCC Retaining wall Km:7/000-7/375 of Vaigai River North Bank Road from Kamarajar Bridge to Varanasi Kanniyakumari Road (NH 44) Near Samayanallur (LHS)				2,46,59,743.00 ✓
37	Construction of RCC Retaining wall Km:7/375-7/650 of Vaigai River North Bank Road from Kamarajar Bridge to Varanasi Kanniyakumari Road (NH 44) Near Samayanallur (Center portion)				2,18,64,623.00 ✓
38	Construction of Raised FootPath at km 0/000 -0/225 [LHS] of Vaigai River North Bank Road from Kamarajar Bridge to Varanasi Kanniyakumari Road (NH 44) Near Samayanallur				5,23,684.00 ✓
39	Construction of Raised FootPath at km 0/225 -7/375 [LHS] of Vaigai River North Bank Road from Kamarajar Bridge to Varanasi Kanniyakumari Road (NH 44) Near Samayanallur				5,85,97,016.00 ✓
40	Construction of Raised FootPath at km 7/375- 8/000 [LHS] of Vaigai River North Bank Road from Kamarajar Bridge to Varanasi Kanniyakumari Road (NH 44) Near Samayanallur				14,75,363.00 ✓
				Sub Total=	132,86,78,488 -132,86,77,793.00
41	Provision for GST 18 %				23,91,62,128 23,91,62,003.00
				Total (CV Value)=	156,78,40,616 -156,78,39,796.00

Sl.No	Description of Work	Quantity	Unit	Rate	Amount
	<b>Other Provisions</b>				
42	Provision for Labour Welfare Fund (1%)	L.S.			1,56,78,407 - 1,56,78,398.00
43	Provision for Quality Control Charges	L.S.			1,56,78, 1,00,00,000.00 1,56,79,000 -
44	Provision for Escalation Charges (4%) 5-1.	L.S.			6,27,13,592.00 7,83,93,000 -
45	Provision for Advertisement Charges	L.S.			8,00,000.00
46	Provision for Road furniture	L.S.			1,45,00,000.00
47	Provision for Shifting utilities	L.S.			50,00,000.00
48	Provision for Land Acquisition	L.S.			3,00,00,000.00
49	Provision for Road Safety Audit	L.S.			15,00,000.00
50	Provision for Surfing & Tree Plantation on Earthen Slope	L.S.			28,00,000.00
51	Provision for Staircase	L.S.			1,00,00,000.00
52	Construction of Protective wall for Existing Water Pipe Line	L.S.			80,00,000.00
53	Provision for PS and Contingencies	L.S.			98,08,977 - 3,11,68,214.00
	<b>Total</b>				<b>176,00,00,000.00</b>
				<b>in Crores</b>	<b>176.00 Crores</b>

DIVISIONAL ENGINEER (H)  
Construction and Maintenance  
MADURAI - 2

Assistant Divisional Engineer (H)  
C & M, Usilampatti

ASSISTANT ENGINEER (H)  
Construction and Maintenance  
Usilampatti

The Estimate for the Work of "Construction of Vaigai River North Bank Road Km 0/0-8/0 from Kamarajar Bridge to Varanasi Kanniyakumari Road (NH44) Near Samayandalu" is Technically Sanctioned for ₹. 176.00 Crore and Registered in C.E. Highway (C&M) No. 139 / 2023 - 2024.

SUPERINTENDING ENGINEER (HIGHWAYS)  
Construction And Maintenance

MADURAI-2

04/03/24 4324

5/3/24  
J.E.(H)  
Roads.

5/3/24  
A.C.E.(H)  
Roads.

5/3/24  
D.C.E.(H)  
Planning.

5/3/24  
C.E.(H)  
[C&M]

7  
8