


**General Abstract of Cost of Chandbali-Bhadrak-Anandpur  
(Balance Work)**

1	Site clearance and Dismantling	9,770,807.00
2	Earth Work	271,529,348.00
3	Sub-base and base courses	544,515,607.00
4	Bituminous courses	696,797,230.00
5	Culverts & Underpasses	275,589,681.00
6	Bridges	287,289,739.00
7	Drainage & Protective works	234,340,534.00
8	Miscellaneous items	160,613,469.00
9	Maintenance, Repair and Rehabilitation works	8,833,468.00
10	Environmental mitigation measures	37,298,141.00
	Sub total (A)	<b>2,526,578,024.00</b>
1	Total for Daywork: Labour	153,450.00
2	Total for Daywork: Materials	586,361.00
3	Total for Daywork: Contractor's Equipment	207,942.00
	Sub total (B)	<b>947,753.00</b>
	Subtotal (C=A+B)	<b>2,527,525,777.00</b>
1	Contingency (D = 1% of C)	25275258.00
2	Quality Control (E = 1% of C)	25,275,258.00
<b>Grand Total (F+G)</b>		<b>2,578,076,293.00</b>

SAY **2,578,076,000.00**

**Rupees Two Hundred Fifty Seven Crores Eighty Lakhs Seventy Six Thousand Only**

Revised Technical sanction is accorded for  
 Rs 2578076000/- (for two hundred fifty seven crore  
 eighty lakh seventy six thousand) only.

  
 Chief Engineer  
 World Bank Project  
 O/o the E.I.C.(Civil), O-502  
 Bhubaneswar.

  
 4/5/13

<b>B. Work Items</b>					
<b>Item No.</b>	<b>Description</b>	<b>Unit</b>	<b>Quantity</b>	<b>Rate</b>	<b>Amount</b>
<b>BILL NO.1 : SITE CLEARANCE</b>					
1.01	Clearing and Grubbing for road land complete as per Technical Specification Clause 201 and as per the direction of Engineer-in-charge.	Hectare	71.88	30945.30	2224348.16
1.02	Dismantling structures and pavement including disposal of resulting material and/or salvaging useful materials complete as per Technical Specification Clause 202, 2809 and as per the direction of Engineer-in-charge.				
	a) Brick/ Stone Structures of dry or in lime/cement mortar	Cum	526.15	171.00	89971.68
	b) Concrete/Reinforced concrete/ Prestressed concrete structures including cleaning straightening & cutting of bars and separating them out from RCC/PSC.				
	For Slab Culverts & Box Culverts and Bridges				
	i)P.C.C.	Cum	718.80	269.70	193860.36
	ii)R.C.C.	Cum	1165.40	454.10	529207.35
	c) Dismantling of all type of Pavement course	Cum	40107.00	164.80	6609633.60
	d) Hume pipe	Lm	593.00	96.70	57343.10
	e) Kerb	Lm	288.80	8.40	2425.92
	f) Dry stone pitching	Cum	119.40	118.90	14196.66
	g) RCC railing	Lm	13.80	41.70	575.46
	h) Expansion joint	Lm	126.00	123.80	15598.80
	i) Wearing coat				
	a) Bituminous concrete	Sqm	540.00	52.10	28134.00
	b) Cement concrete	Sqm	80.00	68.90	5512.00
				Total	9770807.08
				<b>Say,</b>	<b>9770807.00</b>
<b>BILL NO.2 : EARTH WORKS</b>					
2.01	Roadway excavation including removal of unsuitable soil necessary for construction of roadway complete as per Technical Specification Clause 301 and as per the direction of Engineer-in-charge.				
	a) All kinds of soil	Cum	512299.00	48.40	24795271.60
	b) softrock (blasting not required) (LS)	Cum	2000.00	58.20	116400.00
	c) Hard rock (blasting required) (LS)	Cum	2000.00	154.90	309800.00
	d) Hard rock (blasting not required) (LS)	Cum	1000.00	171.00	171000.00
2.02	Construction of embankment with approved material from approved borrow areas complete as per drawing and Technical Specification Clause 305 and as per the direction of Engineer-in-charge.	Cum	380997.00	257.20	97992428.40
2.03	Construction of subgrade and earthen shoulder with approved material as per drawing complete and Technical Specification Clause 305 and as per the direction of Engineer-in-charge.	Cum	473257.00	293.00	138664301.00

Item No.	Description	Unit	Quantity	Rate	Amount
2.04	Construction of embankment and subgrade with suitable material deposited at site from roadway and drainage excavation all complete as per drawing and Technical Specification Clause 305 and as per the direction of Engineer-in-charge.	Cum	77927.00	73.00	5688671.00
2.05	Loosening and recompacting the existing subgrade in all kinds of soil upto a depth of 300mm/500mm to meet the requirement of table 300-2 complete as per Technical Specification Clause 305 and as per the direction of Engineer-in-charge.	Cum	19313.00	43.00	830459.00
2.06	Earthwork with agriculture soil for filling of median/island complete as per Technical Specification Clause 407 and as per the direction of Engineer-in-charge.	Cum	5130.00	157.90	810027.00
2.07	Scarifying the existing bituminous surface layers without disturbing the base including carrying , processing , laying and disposal of waste material complete as per Technical Specification Clause 501 and as per the direction of Engineer-in-charge.	Sqm *	86997.00	3.50	304489.50
2.08	Stripping, storing of top soil by road side at 15 m interval and re-application on embankment slopes, cut slopes and other areas in localities where the available embankment material is not conducive to plant growth as directed by the Engineer and as per technical specification-305.	Cum	15000.00	123.10	1846500.00
				Total	271529347.50
				Say,	271529348.00
	<b>BILL NO.3 : SUB-BASE AND BASE COURSES</b>				
3.01	Construction of Granular Sub-base course by providing crushed stone aggregate conforming to Gr-I of Table 400-2 complete as per Technical Specification clause 401 and as per the direction of Engineer-in-charge.	Cum	177634.00	1621.10	287962477.40
3.02	Construction of wet mix macadam complete as per Technical Specification clause 406 and as per the direction of Engineer-in-charge.	Cum	137562.00	1865.00	256553130.00
				Total	544515607.40
				Say,	544515607.00
	<b>BILL NO.4 : BITUMINOUS COURSES</b>				
4.01	Providing bituminous Primer coat over granular surface complete all as per Technical specification clause 502 and as per the direction of Engineer-in-charge.	Sqm	531142.00	23.10	12269380.20
4.02	Providing Tack coat complete as per Technical Specification clause 503 and as per the direction of Engineer-in-charge.				
	a) Granular surface treated with primer	Sqm	531142.00	8.50	4514707.00
	b) over normal bituminous surface	Sqm	531142.00	8.50	4514707.00

Item No.	Description	Unit	Quantity	Rate	Amount
4.03	Providing dense bituminous macadam course complete as per Technical Specification Clause 507 and as per the direction of Engineer-in-charge.	Cum	35948.00	6971.50	250611482.00
4.04	Providing bituminous concrete wearing course using CRMB-55 complete as per Technical Specification Clause 509 & 521 and as per the direction of Engineer-in-charge.	Cum	24966.00	7932.30	198037801.80
4.05	Providing, laying and rolling of close-graded premix surfacing material of 20 mm thickness composed of 11.2 mm to 0.09 mm (Type-a) or 13.2 mm to 0.09 mm (Type-b) aggregates using penetration grade bitumen to the required line, grade and level to serve as wearing course on a previously prepared base, including mixing in a suitable plant, laying and rolling with a Smooth wheeled roller 8-10 tonne capacity, and finishing to required level and grade in spur roads complete as per technical specification clause 512 and as per the direction of Engineer.	Sqm	10108.00	155.10	1567750.80
4.06	Providing dry lean concrete subbase complete as per Technical Specification Clause 601 and as per the direction of Engineer-in-Charge.	Cum	16454.00	3040.10	50021805.40
4.07	Providing cement concrete pavement complete as per Technical Specification of MORD and as per the direction of Engineer-in-Charge.	Cum	33358.00	5253.90	175259596.20
				Total	696797230.40
				Say,	696797230.00
<b>BILL NO.5 : CULVERTS AND UNDERPASSES</b>					
5.01	Earthwork in excavation of foundation for structures complete as per drawing and technical specifications clause 304 including all leads and lifts and as per the direction of Engineer-in-charge.	Cum	13692.00	48.50	664062.00
5.02	Earth fill below pitching in quadrant portion with approved material complete as per drawing and Technical Specification Clause 305 with all leads and lifts and as per the direction of Engineer-in-charge.	Cum	11054.00	257.20	2843088.71
5.03	Providing and filling behind abutment, wing wall and return wall with granular material etc. and below pipe bed in layers not exceeding 150mm thick including All leads and lifts complete as per drawings, direction of the Engineer and Technical specification clause 304 and as per the direction of Engineer-in-charge.	Cum	4152.00	842.10	3496399.20
5.04	Providing filter media behind abutment, wing wall and return wall complete as per drawing and Technical Specification clause 2504, 2509, 2510 and as per the direction of Engineer-in-charge.	Cum	3198.00	2322.80	7428314.40

Item No.	Description	Unit	Quantity	Rate	Amount
5.05	Cement Concrete M-15 grade in leveling course etc. including centering and shuttering all complete as per Drawings and Technical Specification Sections 1500 and 1700 and as per the direction of Engineer-in-charge.	Cum	3535.00	4602.50	16269837.50
5.06	Cement Concrete M-15 grade in substructure & headwall including centering and shuttering all complete as per Drawings and Technical Specification Sections 1500, 1700, 2200 and as per the direction of Engineer-in-charge.	Cum	2024.00	4868.60	9854046.40
5.07	Reinforced cement concrete in all types of culverts as per drawing and technical specification Section 1500, 1700 & 2200 and as per the direction of Engineer-in-charge.				
	b) M-20 grade	Cum	3089.00	5724.40	17682671.60
	b) M-25 grade	Cum	4811.00	6238.20	30011980.20
5.08	Reinforced cement concrete M-30 grade in approach slabs including cost of reinforcement all complete as per Drawing and Technical Specification Clause 2704 and as per the direction of Engineer-in-charge.	Cum	1547.00	9057.60	14012107.20
5.09	HYSD(TMT) bar reinforcement complete as per drawing and technical specifications clause 1600 and as per the direction of Engineer-in-charge.	MT	1517.00	64100.10	97239851.70
5.10	Providing laying and joining NP-4(I.S 458) hume pipes for culverts complete as per drawing Tech. Specification section 2900 and IRC special publication no.13 and as per the direction of Engineer-in-charge.				
	a) 1m dia. hume pipe in single row	Lm	2346.00	5589.70	13113436.20
	b) 1m dia. hume pipe in double row	Lm	919.25	11318.10	10404163.43
	d) 0.3m dia in single row for utility duct	Lm	1285.00	2188.10	2811708.50
5.11	Providing and laying filter material underneath stone pitching in slopes complete as per drawings and technical specification section 2504, 2509, 2510 and as per the direction of Engineer-in-charge.	Cum	3572.00	2322.80	8,297,041.60
5.12	Providing and laying stone Pitching on embankment slopes complete as per drawing and technical specification Clause 2504 and as per the direction of Engineer-in-charge	Cum	9308.00	1523.00	14176084.00
5.13	Providing rubble stone flooring in Cement mortar (1 Cement:3 Sand) and joints complete as per Drawing and Technical Specification Section 1400, 2504 and as per the direction of Engineer-in-charge.	Cum	2838.00	4576.70	12988674.60
5.14	Providing weep holes in box portion, return wall, wing wall etc. all complete as per drawing and technical specification clause . 2706 and as per the direction of Engineer-in-charge.	Nos	7787.00	106.20	826979.40

Item No.	Description	Unit	Quantity	Rate	Amount
5.15	Supplying, fitting and fixing in position true to line and level tar paper bearings confirming to IRC-83 (para-II) section IX complete with all accessories as per drawings and technical specification clause 2011, IS 1398 and as per the direction of Engineer-in-charge.				
a)	Tar paper bearing	Sqm	18.00	50.00	900.00
5.16	Supplying and fixing Asphaltic Plug expansion joints complete as per Drawing and as per IRC: SP : 69-2005 and as per the direction of Engineer-in-charge.	Lm	2376.00	898.00	2133648.00
5.17	Reinforced cement concrete railing complete as per Drawing and Technical Specification Section 2700 (Including cost of Reinforcement) and as per the direction of Engineer-in-charge.	Lm	2101.00	1763.60	3705323.60
5.18	Bituminous wearing course 56mm thick comprising 50mm thick asphaltic concrete in a single layer over Bituminous mastic course 6mm thick with a prime coat complete as per Drawing and Technical Specification Section 2700, Clause 512 and as per the direction of	Sqm	11965.00	632.50	7567862.50
5.19	Synthetic enamel painting of culvert no. and span arrangement as per IRC - 7 - 1971 and as per the direction of Engineer-in-charge.	No.	388.00	68.30	26500.40
5.20	Providing and applying 2 coats of water based cement paint to unplastered concrete surface after cleaning the surface of dirt, dust, oil, grease, efflorescence and applying paint @ of 1 litre for 2 Sq.m. )	Sqm	1000.00	35.00	35000.00
				Total	275589681.13
				Say,	275589681.00
<b>BILL NO.6 : BRIDGES</b>					
6.01	Earthwork in excavation of foundation for structures complete as per drawing and technical specification clause 304 including all leads & lift and as per the direction of Engineer-in-charge.	Cum	35516.00	48.50	1722526.00
6.02	Providing and filling foundation and at the back of abutment, wing wall and return wall etc. and below pipe bed in layers not exceeding 150mm thick with granular material including all leads & lifts as per Technical specification Clause 304 and as per the direction of Engineer-in-charge.	Cum	61066.00	842.10	51423678.60
6.03	Providing Filter media behind abutment, wing wall and return wall complete as per drawing and technical Specification clause 2504 and as per the direction of Engineer-in-charge.	Cum	1280.00	2322.80	2973184.00
6.04	Cement concrete M-15 grade in leveling course etc including centering and shuttering all complete as per drawing and Technical specification Section 1500 and 1700 and as per the direction of Engineer-in-charge.	Cum	2311.00	4602.50	10636377.50

Item No.	Description	Unit	Quantity	Rate	Amount
6.05	Cement concrete in foundation and substructure etc including centering and shuttering all complete as per drawing and Technical specification Section 1500, 1700, 2100, 2200 and as per the direction of Engineer-in-charge.				
	a) M-15 Grade	Cum	3181.00	4868.60	15487016.60
6.06	Reinforced cement concrete in foundation complete as per drawing & Technical specification sections 1500, 1700, 2100, 2200 and as per the direction of Engineer-in-charge.				
	a) M-20 Grade	Cum	146.00	5412.00	790152.00
6.07	Reinforced cement concrete in substructure complete as per drawing & Technical specification sections 1500, 1700, 2200 and as per the direction of Engineer-in-charge.				
	a) M-20 Grade	Cum	859.00	5724.40	4917259.60
	b) M-25 Grade	Cum	8749.00	6238.20	54578011.80
	c) M-30 Grade	Cum	709.00	6270.00	4445430.00
	d) M-35 Grade	Cum	6302.00	6509.20	41020978.40
6.08	Reinforced cement concrete in super structure complete as per drawing and Technical specification section 1500, 1700, 2300 and as per the direction of Engineer-in-charge.				
	a) M-20 grade	Cum	27.00	6698.10	180848.70
	b) M-25 grade	Cum	10.00	7053.10	70531.00
	c) M-30 grade	Cum	462.00	7131.30	3294660.60
6.09	Reinforced cement concrete railing complete as per drawing and Technical specification section 2703 and as per the direction of Engineer-in-charge.	Lm	333.00	1763.60	587278.80
6.10	HYSD(TMT)bar reinforcement complete as per drawing and technical specifications clause 1600 and as per the direction of Engineer-in-charge.				
	a) in foundation	MT	9.00	64014.50	576130.50
	b) in substructure	MT	914.00	64100.10	58587491.40
	c) in superstructure	MT	8.00	64864.30	518914.40
6.11	Providing and fixing specified bearings complete as per Drawing and technical specification 2000 and as per the direction of Engineer-in-charge.				
	a) Elastomeric bearing	Cucm	144000.00	1.60	230400.00
	b) Tar paper bearing	Sqm	18.00	50.00	900.00
6.12	Reinforced cement concrete M-30 grade for in approach slabs complete as per Drawing and Technical specification section 1500, 1600, 1700, 2700 and as per the direction of Engineer-in-charge.	Cum	1537.00	9057.60	13921531.20

Item No.	Description	Unit	Quantity	Rate	Amount
6.13	Bituminous wearing course 56mm thick comprising 50mm thick asphaltic Concrete in a single layer over Bituminous mastic course 6 mm thick with a prime Coat Complete as per drawing and Technical Specification Section 509 & 2700 and as per the direction of Engineer-in-charge.	Sqm	1820.00	632.50	1151150.00
6.14	Providing and fixing Drainage Spouts Complete as per drawing and Technical Specification Clause 2705 and as per the direction of Engineer-in-charge.	No	50.00	847.20	42360.00
6.15	Providing and laying Stone pitching in slopes complete as per drawing and Technical Specification Section 2500 and as per the direction of Engineer-in-charge.	Cum	398.00	1523.00	606154.00
6.16	Providing as laying fitter material underneath Stone pitching in slopes Complete as per drawing and Technical Specification clause 2504 and as per the direction of Engineer-in-charge.	Cum	264.00	2419.80	638827.20
6.17	Providing weep holes in abutments, wing walls and return walls etc. as per drawing and Technical Specification clause 2706 and as per the direction of Engineer-in-charge.	Nos	5751.00	106.20	610756.20
6.18	Providing rubble Stone flooring in Cement mortar (1Cement:3 sand) and joints Complete as per drawing and Technical Specification Section 1400 and 2500 and as per the direction of Engineer-in-charge.	Cum	1090.00	4576.70	4988603.00
6.19	Supplying as fixing the following types of expansion joints Complete as per Drawing and as per IRC: SP : 69-2005 and as per the direction of Engineer-in-charge.				
	a) Asphaltic plug	Lm	242.00	898.00	217316.00
6.20	Synthetic enamel painting of culvert no. and span arrangement as per IRC - 7 - 1971 and as per the direction of Engineer-in-charge.	No.	20.00	68.30	1366.00
6.21	Carrying and Confirmatory bores up to required depth at locations of bridges as directed by Engineer complete in all respects, conducting all the tests required as directed by the Engineer and as per Technical Specification Section 2400 and interpretation of the bore data and presentation of the results and as per the direction of Engineer-in-charge.				
	a) In all types of soil (except rock)				
	i) depth from 0m to 10m	Lm	200.00	400.00	80000.00
6.22	Providing and painting of flood gauge on substructure is fall height and 500mm width and as per the direction of Engineer-in-charge.	Lm	15.00	422.90	6343.50
6.23	Providing and laying 150mm dia. HDPE Service pipe as per drawing and as per the direction of Engineer-in-charge.	Lm	614.00	300.00	184200.00



Item No.	Description	Unit	Quantity	Rate	Amount
6.24	Earth fill below pitching in quadrant portion with approved material complete as per drawing and Technical Specification Clause 305 with all leads and lifts and as per the direction of Engineer-in-charge.	Cum	712.00	257.20	183126.40
6.25	Sand Filling in Foundation Trenches as per Drawing & Technical Specification Clause 304, 305 and as per the direction of Engineer-in-charge.	Cum	9606.00	952.00	9144912.00
6.26	PCC in flooring as per Drawing & Technical Specification section 1700, 2500 and as per the direction of Engineer-in-charge.				
	a) M-15	Cum	316.00	4602.50	1454390.00
	b) M-20	Cum	106.00	5267.00	558302.00
6.27	Reinforced cement concrete crash barrier including cost of steel and its fabrication to bridge structures as per the approved drawing and Technical Specification clause 809, and section 1500, 1600, 1700 and as per the direction of Engineer-in-charge .	Lm	410.00	3476.26	1425265.37
6.28	Plastering with cement mortar (1:3 ) on brick work in sub-structure as per Technical Specifications	Sqm	335.00	99.60	33366.00
				Total	287289738.77
				Say,	287289739.00
<b>BILL NO.7 : RETAINING WALL, DRAINAGE AND PROTECTIVE WORKS</b>					
7.01	Retaining Wall				
(a)	Earthwork in excavation for foundation complete as per drawing and Technical Specification Clause 304 in Retaining wall for high embankment stretches as per the direction of Engineer-in-charge.	Cum	5985.00	48.50	290272.50
(b)	Filter media behind wall complete as per drawing and Technical Specification Clauses 2504 and as per the direction of Engineer-in-charge.	Cum	2268.00	2322.80	5268110.40
(c)	Plain cement concrete M -15 in foundation leveling course etc. including centering and shuttering all complete as per drawing and Technical Clauses 1500, 1700 and as per the direction of Engineer-in-charge.	Cum	399.00	4602.50	1836397.50
(d)	Cement concrete M -25 for reinforced concrete in foundation and substructure including centering and shuttering all complete as per drawing and Technical Clauses 1500, 1700, 2100 and as per the direction of Engineer-in-charge.	Cum	2247.00	6061.00	13619067.00
(e)	Providing steel reinforcement HYSD (TMT) for retaining wall complete as per drawing and Technical Specification Clause 1600 and as per the direction of Engineer-in-charge.	MT	179.76	64057.30	11514940.25
(f)	Providing guard post complete as per drawings and Technical specifications section 806 and as per the direction of Engineer-in-charge.	No.	1400.00	478.20	669480.00

Item No.	Description	Unit	Quantity	Rate	Amount
(g)	Providing weep holes in retaining wall complete as per drawing and Technical Specification Clause 2706 and as per the direction of Engineer-in-charge.	No.	400.00	106.20	42480.00
7.02	Providing and laying stone pitching on embankment slopes as per drawing and Technical Specification Clause 2504 and as per the direction of Engineer-in-charge.	Cum	4025.00	1523.00	6130075.00
7.03	Providing and laying filter material underneath stone pitching on embankment slopes as per drawing and Technical Specification Clause 2504 and as per the direction of Engineer-in-charge.	Cum	2013.00	2419.80	4871057.40
7.04	Turfing side slopes of main road and service road with grass sods complete as per Technical Specification Clause 307 and as per the direction of Engineer-in-charge.	Sqm	384976.00	21.90	8430974.40
7.05	Constructing precast saucer drain to the required lines and grades as per Drawing and Technical Specification and as per the direction of the Engineer.	Lm	55400.00	3279.20	181667680.00
				Total	234340534.45
				Say,	234340534.00
	<b>BILL NO-8 : MISCELLANEOUS ITEMS.</b>				
8.01	Providing and laying plain cement concrete kerb as per drawing and Technical Specifications Clauses 408, section 1500,1700 and as per the direction of Engineer-in-charge.	Lm	3337.05	255.00	850947.75
8.02	Providing service ducts with 150mm dia GI pipes over concrete base of M-15 under existing and proposed carriageways including cutting of trenches through existing roadway and reinstatement of the same as per design and specification and as per the direction of Engineer-in-charge.	Lm	5380.00	2188.10	11771978.00
8.03	Providing and fixing RCC boundary posts complete as per drawing and Technical Specification Clause 806 and as per the direction of Engineer-in-charge.	No	100.00	473.70	47370.00
8.04	Providing and fixing RCC/PCC hectometer, Kilometer and 5th kilometer stones complete as per Technical Specification Clause 804 and as per the direction of Engineer-in-charge.				
	a) No of (200) Hectometer Stone	No	352.00	428.20	150726.40
	b) No of Kilometer stone	No	69.00	1654.70	114174.30
	c) No. of 5th Kilometer Stone	No	19.00	2659.20	50524.80
8.05	Constructing footpath/ paved separator at toll plaza, passenger platform / paved part of medians and islands complete as per drawing and Technical Specifications Clause 409 and 407 and as per the direction of Engineer-in-charge.	Sqm	3090.00	2000.00	6180000.00

Item No.	Description	Unit	Quantity	Rate	Amount
8.06	Providing passenger shelters for Bus Bays as per drawing and Technical Specifications Section 1500, 1600, 1700, 2100, 2200, 2300 and as per the direction of Engineer-in-charge.	No	79.00	80000.00	6320000.00
8.07	Construction of temporary diversion including Cross drainage works where necessary and maintenance thereof including traffic control and safety complete as per Technical Specification Clause 112 and as per the direction of Engineer-in-charge.	Lm	3400.00	8492.10	28873140.00
8.08	Pavement marking with hot applies thermoplastic paints confirming to ASTM D86 / BS 3262-Part as per drawing and Technical specifications Clause 803.4 and as per the direction of Engineer-in-charge.				
	a) Lane line / Edge marking	sqm	34398.00	558.20	19200963.60
	b) Directional arrows and lettering etc.	No	739.00	710.00	524690.00
8.09	Supplying and fixing sign boards complete as per Technical Specifications Clause 801 and IRC:67-2012 including the cost of Posts, Fitting & fixing. Sheeting will be retro reflective type of high intensively grade and messages / boarders and as per the direction of Engineer-in-charge.				
(a)	Informatory Signs				
	(i) Facility Information (800 x 600)mm	No	48.00	5076.80	243686.40
	(ii) Direction Signs (1200 x 700 mm)	No	8.00	9125.30	73002.40
	(iii) Advance Direction (size 1800 x 1200mm) ,	No	8.00	9479.20	75833.60
	(iv) Re-Assurance Sign (1800 X 1200 mm) ,	No	8	9479.20	75833.60
	(v) Destination Sign (1500 X 900 mm) ,	No	8	7479.20	59833.60
	(vi) Place Identification (1500 X 900 mm) ,	No	112	7479.20	837670.40
	(vii) Toll Booth (1500 X 900 mm) ,	No	2	7479.20	14958.40
	(viii) Bus lane( 450 X 600 mm) ,	No	79	3579.90	282812.10
	(ix) Route Marker Sign (450mm x 600mm)	No	20	3579.90	71598.00
	(x) Other Informatory Signs (2100mm x	No	75	9479.20	710940.00
(b)	CAUTIONARY SIGNS triangular 900mm side	No	60	4150.20	249012.00
(c)	Mandatory signs				
	(i) Circular 600mm dia	No	120	3672.60	440712.00
	(ii) Octagon 900 mm height	No	100	6445.40	644540.00
	(iii) Triangular 900 mm side	No	200	4150.20	830040.00
8.10	Providing & fixing retro - reflectorised road delineators complete as per drawing , Technical specifications clause 805 and as per the direction of Engineer-in-charge.				
	( I ) Roadway delineator	No	1600.00	790.30	1264480.00
	( ii ) Hazard Marker	No	336.00	790.30	265540.80
	( iii ) Object Marker	No	64.00	790.30	50579.20
8.11	Providing and fixing RCC Guard post with reflective paint marking on the top 25mm width band complete including end anchorage as per drawing and Technical Specifications Clause 806 and as per the direction of Engineer-in-charge.	No.	8917.00	478.20	4264109.40

Item No.	Description	Unit	Quantity	Rate	Amount
8.12	Providing and fixing of metal beam crash barrier made out of cold rolled steel strip W profile of 3 mm thick having a minimum yield strength of 2400 kg/sqcm, width of 313 mm and depth of corrugation as 83 mm hot dip galvanized of zinc coating @ 550 gm/sq.m.The post and spacer channel is made out of cold rolled channel 150x75x5 mm having minimum yield strength of 2400 kg/sqcm and hot dip galvanized of zinc coating @ 550 gm/sq.m. The total length of post shall be 1900 mm and minimum height of post above concrete foundation shall be 800 mm. The length of spacer channel shall be 330 mm. Job includes neatly fixing new post in cement concrete of M-20 grade complete (cost included) as directed by the Engineer including fasteners and fixing etc. complete. The spacing of the Steel posts shall be about 2 m.The guard rail reflectors of 100 mm dia circular made out of 2 mm thick GI sheet duly fixed with micro-prismatic type sheeting with Type 9 ASTM D 4956-01 standards @ every 5 metersThe work is to be executed as per drawing, Specifications and as directed by the Engineer.	Rm	4400.00	2655.00	11682000.00
8.13	Providing and fixing Pedestrian guard rails in modules including painting with approved paint complete as per drawing and Technical Specification Clause 803,1008,1300 & 1700.	Rm	13956.00	2559.60	35721777.60
8.14	Supply of colour video coverage in CD form during construction as per Technical Specifications Clause 126 As per requirement and as per the direction of Engineer-in-charge.	set	32.00	20000.00	640000.00
8.15	Providing rumble strips for complete carriageway width at required places as per drawing and as per the direction of Engineer-in-charge.	No.	622.00	6261.70	3894777.40
8.16	Providing road hump complete at required places as per drawing and as per the direction of Engineer-in-charge.	No.	780.00	19604.50	15291510.00
8.17	Providing toll plaza as per drawing and technical specification and as per the direction of Engineer-in-charge.	No.	2.00	1564177.00	3128354.00

Item No.	Description	Unit	Quantity	Rate	Amount
8.18	Providing and fixing of bi-directional retro reflective raised pavement markers of approved colour, quality & make conforming to ASTM D-4280 as per approved drawing and locations provided in the schedule made from injection moulded high impact polymer including cleaning, preparation of surface and fixing at position with approved quality adhesives including cost of all materials, labour, transportation, taxes, duties, sundries, T&P etc. complete as per the technical specifications and direction of Engineer.	No.	23367.00	159.00	3715353.00
8.19	Supplying, erecting and commissioning 100kVA diesel powered generator of approved make for Toll Plaza at required place as per the direction & approval of Engineer including cost of all labour, transportation, taxes, duties etc. complete.	No	2.00	1000000.00	2000000.00
				Total	160613468.75
				Say,	160613469.00
<b>BILL NO.9 MAINTENANCE, REPAIR AND REHABILITATION</b>					
9.01	Restoration of Rain Cuts (Restoration of rain cuts with soil, moorum, gravel or a mixture of these, clearing the loose soil, benching for 300 mm width, laying fresh material in layers not exceeding 250 mm and compacting with plate compactor or power rammers to restore the original alignment, levels and slopes)	Cum	1069.00	172.20	184081.80
9.02	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.)	Sqm	47520.00	48.30	2295216.00
9.03	Maintenance of Earth Shoulder (stripping excess soil) (Stripping excess soil from the shoulder surface to achieve the approved level and compacting with plate compactor)	Sqm	47520.00	9.40	446688.00
9.04	Filling Pot- holes and Patch Repairs with open - graded Premix surfacing, 20mm. (Removal of all failed material, trimming of completed excavation to provide firm vertical faces, 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 511, compacting, trimming and finishing the surface to form a smooth continuous surface, all as per clause 3004.2)	Sqm	40838.00	134.70	5500878.60

Item No.	Description	Unit	Quantity	Rate	Amount
9.05	Removal of defective concrete, cleaning the surface thoroughly, applying the shotcrete mixture mechanically with compressed air under pressure, comprising of cement, sand, coarse aggregates, water and quick setting compound in the proportion as per clause 2807.1., sand and coarse aggregates conforming to IS: 383 and table 1 of IS: 9012 respectively, water cement ratio ranging from 0.35 to 0.50, density of gunite not less than 2000 kg/cum, strength not less than 25 Mpa and workmanship conforming to clause 2807.6. and as per direction of the Engineer-in-charge.	Sqm	268.00	324.80	87046.40
9.06	Sealing of cracks/porous concrete by injection process through nipples/Grouting complete as per Technical Specification. and as per direction of the Engineer-in-charge	Kg	495.00	56.90	28165.50
9.07	Repairing of wearing coat by providing and laying 75mm thick Cement concrete (M-20 grade )complete as per technical specification section 2700 and as per direction of the Engineer-in-charge.	Sqm	580.00	502.40	291392.00
					8833468.30
				<b>Say,</b>	<b>8833468.00</b>
<b>BILL NO.10 ENVIRONMENTAL MITIGATION MEASURES</b>					
10.01	<b>Earthwork</b> in excavation of foundation for structures complete as per the direction of Engineer-in-charge.	Cum	4939.00	48.50	239541.50
10.02	<b>Sand filling</b> below foundation of wing wall and return wall, pipe bed in layers not exceeding 150mm thick including All leads and lifts complete as per the direction of Engineer-in-charge.	Cum	1221.00	952.00	1162392.00
10.03	Providing & laying in position <b>Cement Concrete M-15 grade</b> in foundation, levelling course etc. including centering and shuttering all complete and Technical Specification Sections 1500 and 1700 and as per the direction of Engineer-in-charge.	Cum	3316.00	4602.50	15261890.00
10.04	Providing <b>weep holes</b> in PCC toe wall with 100mm dia AC pipe at 1mtrs horizontal interval all complete and Technical Specification section. 2700& 2200 and as per the direction of Engineer-in-charge.	Nos	3200.00	106.20	339840.00
10.05	Providing & laying in position <b>Reinforced cement concrete of M-20 Grade</b> in foundation complete & Technical specification sections 1700, 2100 & 2200 and as per the direction of Engineer-in-charge.	Cum	37.00	5267.00	194879.00
10.06	<b>HYSD(TMT) bar reinforcement</b> with anti-corrosive treatment coating complete and technical specifications clause 1600 and as per the direction of Engineer-in-charge.	MT	1.85	64014.50	118426.83

Item No.	Description	Unit	Quantity	Rate	Amount
10.07	Providing and laying filter material underneath pitching in slopes at water bodies and ponds as per technical specification Section 2500 and as per the direction of Engineer-in-charge.	Cum	1920.00	2419.80	4646016.00
10.08	Providing and laying pitching on slopes over filter media as per technical specification Section 2500 and as per the direction of Engineer-in-charge.	Cum	3840.00	1523.00	5848320.00
10.09	Providing Cement paint two coats to the walls as per the direction of Engineer-in-charge.	Sqm	525.00	30.00	15750.00
10.10	Construction of approach road with GSB and murrom topping well mixed and compacted as hard shoulder as per technical specification Cl.400-2 and as per the direction of Engineer-in-charge.	Lm	192.00	1200.00	230400.00
10.11	Maintenance of haulage road for 4 occurrences through out the construction period as per technical specification cl.no.3002 and as per the direction of Engineer-in-charge.	Lm	9856.00	73.00	719488.00
10.12	Stripping of top soil from borrow areas located in agriculture fields, storing at a suitable place, spreading and re-laying after taking the borrow earth to maintain fertility of the agricultural field, finishing it to the required levels and satisfaction of the farmer.(LS)Rate as per clause305 & MoRT&H analysis 3.21	Cum	60000.00	123.10	7386000.00
10.13	Providing and maintenance of oil & Grease traps detailed as per the Drawing No OSRP/SH/ENV/06	Nos	2.00	146524.80	293049.60
10.14	Silt fencing of water bodies to avoid increase of turbidity of water & avoid soil erosion by filled up sand in bags of cement/jute with support of non-sal bullahs 50mm dia of 1.0m above and 0.50m depth below soil and as per drawing No OSRP/CEG/SH/ENV-01	Lm	3788.00	196.00	742448.00
10.15	Grouting stone pitching on embankments of reptile *asses for making trap drain 23cm deep with Cement Concrete M15 grade using 20mm down stone aggregates as per drawing no-OSRP/CEG/ENV/14, technical specifications including cost of all Oaterials, labour, transportation, taxes, sundries, curing, T&P etc. and as per the direction of the Engineer.	Sqm	500.00	199.40	99700.00
				Total	37298140.93
				Say,	37298141.00

Sl. No.	Description	Unit	Quantity	Rate	Amount
<b>Schedule of Daywork Rates: 1. Labour</b>					
D101	Labour (Unskilled)	Day	200	150.00	30000.00
D102	Mason (Special)	Day	25	205.00	5125.00
D103	Carpenter (Special)	Day	10	205.00	2050.00
D104	Mason (2nd Class)	Day	25	190.00	4750.00
D105	Carpenter (2nd Class)	Day	10	190.00	1900.00
D106	Steelworker Erector	Day	35	205.00	7175.00
D107	Driver for vehicle up to 10 tons	Day	25	205.00	5125.00
D108	Operator for excavator, dragline, shovel or crane	Day	25	205.00	5125.00
D109	Operator for tractor with dozer blade or ripper	Day	25	205.00	5125.00
D110	Operator grader	Day	25	205.00	5125.00
D111	Operator in other construction equipment	Day	25	205.00	5125.00
D112	Chowkidars for watch & ward	Day	250	205.00	51250.00
				<b>Total</b>	<b>127875.00</b>
D113	Allow 20% percent of Subtotal for Contractor's overhead, profit, etc., in accordance with paragraph 3 (b) above				<b>25575.00</b>
				<b>Total</b>	<b>153450.00</b>
<b>Schedule of Daywork Rates: 2. Materials</b>					
D201	Cement, ordinary Portland or equivalent in bags conforming to IS:269:1989 and IS 455:1989	Per Mt	10	6321.00	63210.00
D202	HYSD reinforcing bars upto 25 mm dia conforming to IS:1786:1989	Per Mt	3	44497.00	133491.00
D203	Bricks of class designation 75 as per IS:1077:1992	Per 1000 Nos	10000	4899.50	48995.00
D204	Anti Corrosive Bituminous paint	Per Lit	5	160.00	800.00
D205	Enamel Paint of any shade & colour (IS:2932-1964 & IS 137-1975)	Per Lit	5	160.13	800.67
D206	Coarse Sand as per IS 1542	Per Cum	25	566.10	14152.50
D207	R.R. Stone for masonry	Per Cum	25	781.50	19537.50
D208	Crusher broken stone aggregates up to 25 mm nominal size	Per Cum	25	1152.60	28815.00
D209	Crusher broken stone aggregates Above 25 mm nominal size	Per Cum	25	1152.60	28815.00
D210	Portable water at site	Per 1000 ltr	2500	10.00	25000.00
D211	Garavel/ Moorum for road work	Cum	25	417.20	10430.00
D212	Bitumen-VG-30	MT	3	38195.86	114587.58
				<b>Total</b>	<b>488634.00</b>
D213	Allow 20% percent of Subtotal for Contractor's overhead, profit, etc., in accordance with paragraph 3 (b) above				<b>97727.00</b>
				<b>Total</b>	<b>586361.00</b>



Sl. No.	Description	Unit	Quantity	Rate	Amount
<b>Schedule of Daywork Rates: 2. Contractor's Equipment</b>					
D301	Excavator, face shovel, or dragging:				
0.1	Up to and including 1 m <sup>3</sup>	Hour	25	840.00	21000.00
0.2	Over 1 m <sup>3</sup> to 2 m <sup>3</sup>	Hour	15	840.00	12600.00
0.3	Over 2 m <sup>3</sup>	Hour	5	840.00	4200.00
D302	Tractor, including bull or angle dozer:				
0.1	Up to and including 150 kW	Hour	25	231.00	5775.00
0.2	Over 150 kW to 200 kW	Hour	15	231.00	3465.00
0.3	Over 200 kW to 250 kW	Hour	5	231.00	1155.00
D303	Tractor with ripper:				
0.1	Up to and including 200 kW	Hour	15	249.00	3735.00
0.2	Over 200 kW to 250 kW	Hour	5	249.00	1245.00
D304	Motor grader	Hour	20	249.00	4980.00
D305	Crane- 5 tonne	Hour	20	230.00	4600.00
D306	Diesel Road Roller, or Vibratory Compactor upto 10 t	Hour	20	738.00	14760.00
D307	Trucks, or Truck tipper, or Truck with mounted water tank or truck with crane for removal of accidental vehicles.	Hour	50	582.00	29100.00
D308	Tractor with trolley, or tractor with water tanker trailer, tractor with ripper Tractor with hydraulic scraper				
	(a) upto 25 HP	Hour	20	242.00	4840.00
	(b) For 25-40 HP	Hour	15	249.00	3735.00
D309	Bitumen mixture (10-14 Cft.) C.C Mix tyre (10-14 Cft.)	Hour	10	128.00	1280.00
D310	Water pumping sets mounted on trolley (diesel driven)with inlet & outlet pipes.				
	a) Sets up to 10 HP	Hour	5	108.00	540.00
	b) Sets 11 to 20 HP	Hour	5	166.00	830.00
	c) Sets above 20 HP	Hour	5	278.00	1390.00
D311	Generator sets mounted on trolley				
	a) Sets upto 5 Kva	Hour	5	240.00	1200.00
	b) Sets 5-15 Kva	Hour	5	240.00	1200.00
D312	Mobile Crane / Power winch	Hour	5	150.00	750.00
D313	Bull Dozer 100/110 Hp	Hour	5	2519.00	12595.00
D314	Plate compactors	Hour	5	100.00	500.00
D315	Jack hammers for dismantling	Hour	5	206.00	1030.00
D316	Utility Vehicles	Hour	5	206.00	1030.00
D317	Mini Hot Mix Plant (5TPH)	Hour	5	7150.00	35750.00
				<b>Total</b>	<b>173285.00</b>
D211	Allow _____percent of Subtotal for Contractor's overhead, profit, etc., in accordance with paragraph 3 (b) above				<b>34657.00</b>
				<b>Total</b>	<b>207942.00</b>