Doc. No. 1438/TRB/DFSR/REP-01

NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. (NHIDCL)

Ministry of Road, Transport & Highways

Government of India

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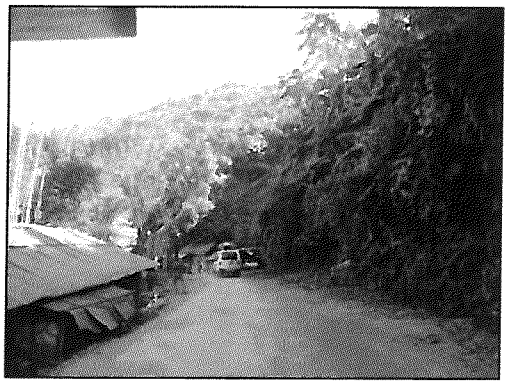
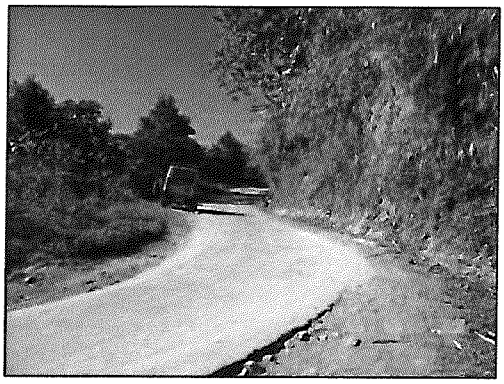

Consultancy Services for preparation of Feasibility Study and Detailed Project Report for Two laning of Joram - Koloriang Road (NH-713) from Km. 20.00 to Km. 70.00 & Km. 138.00 to Km. 158.00 (Total Length 70 Km) in the State of Arunachal Pradesh on EPC mode

DETAILED PROJECT REPORT

Volume VII -Cost Estimate

(Package IV: km 138+000 - km 154+036)

Revision : R0, September 2016

VOYANTS SOLUTIONS PVT LTD.

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ABSTRACT OF COST : PACKAGE IV (KM 138+000 TO KM 154+036)

Item	Description	Weightage in percentage to the	Amount (in RS)	Percentage Weightage vis a vis	References
	Design Length in Km	**16.036**			
	A- Widening and strengthening of existing road				
Road works including culverts, minor bridges, underpasses, overpasses, approaches to ROB/RUB/ Major Bridges/ Structures	(1) Earthwork up to top of the sub-grade including excavation in soil, soft rock and hard rock including Cleaning & grubbing with required site clearance etc.	72.23%	142289599	8.07%	Bill 1a,1b,1d,1e
	(2) Granular work (sub- base, shoulders)		39600004	2.24%	Bill 1a,1b,1d,1e
	(3) Bituminous work				
	a)DBM		44925451	2.55%	Bill 1a,1b,1d,1e
	b)BC with Tack coat and prime coat		24558083	1.39%	Bill 1a,1b,1d,1e
	c) Site Clearence		0	0.00%	Bill 1a,1b,1d,1e
	B - New 2-Lane alignment				
	(1) Earthwork up to top of the sub-grade including excavation in soil, soft rock and hard rock including Cleaning & grubbing with required site clearance etc.		376028474	21.32%	Bill 1c
	(2) Granular work (sub- base, shoulders)		98335542	5.57%	Bill 1c
	(3) Bituminous work				
	a)DBM		111238516	6.31%	Bill 1c
	b)BC with Tack coat and prime coat		60896469	3.45%	Bill 1c
	c)Site Clearence		0	0.00%	Bill 1c
	C- New culverts, minor bridges, underpasses, overpasses on existing road, realignments, bypasses:				
	(1)Box / Slab culvert		245928058	13.94%	Bill 4
	(2) Minor Bridges		130445450	7.39%	Bill 2
	D-Other Engineering Works				
Other Works	Major Junction	27.77%	2398057	0.14%	Bill 5
	Road Appurtenances		750600	0.04%	Bill 9
	Road side drain & toe wall		80828385	4.58%	Bill 10
	Traffic Sign		3306761	0.19%	Bill 9
	Pavement Marking		6352320	0.36%	Bill 9
	Crash barrier/W metal crash barrier		17153469	0.97%	Bill 10
	Rip-Rap protection work		2329600	0.13%	Bill 10
	Boundary stone, km Stone,5th km stone and hectometer stone		204397	0.01%	Bill 10
	Traffic blinker LED delineator,stud,reflective payment marker, tree reflector		463493	0.03%	Bill 10
	Bus bays and Bus Shelter		309158	0.02%	Bill 6
	Minor Junction		7194170	0.41%	Bill 5
	Vativer Plantation(Hydro seeding and Mulching)		0	0.00%	Bill 10
	Overhead signboard		643797	0.04%	Bill 10
	Plantation		29173920	1.65%	Bill 10
	Road side drain I/C chute drain, catch water drain		33572000	1.90%	Bill 10
	Maintanance of existing road		0	0.00%	Bill 11
	Passing Places		2532192	0.14%	Bill 8
	(vii)Protection Works				
	Breast Wall		234659095	13.30%	Bill 10
	Retaining Wall		63959850	3.63%	Bill 10
	Breast Wall Sausage Type		0	0.00%	Bill 10
	Parapet		4052620	0.23%	Bill 10
		Civil Cost	**1764129530**	**176.41**	
		Cost/KM at Civil Cost	110010572	11.00	
B	Contingency Charges @ 2.8% of Civil Cost (A)	2.80%	49395627	4.94	
C	**SUB TOTAL (A+B)**		**1813525157**	**181.35**	
D	Supervision @ 3% on C	3.00%	54405755	5.44	
E	Agency Charges @ 3% on C	3.00%	54405755	5.44	
F	Quality Control @ 0.25 % on C	0.25%	4533813	0.45	
G	Road Safety Cell Audit Charges @ 0.25% on C	0.25%	4533813	0.45	
H	**Sub-Total (C+D+E+F+G)**		**1931404292**	**193.14**	
I	Maintenance for 4 years @ 5% on C	5.00%	90676258	9.07	
J	Escalation @ 5% per annum for 3 years on C	5.00%	272028774	27.20	
K	***Grand Total (H+I+J)***		***2294109323***	***229.41***	
	Cost of Land Acquisition etc.		7796100	**0.78**	
	Solatium Charges @ 30% on land value		2338830		
	Establishment Charges @ 8% on land value		623688		
	Contingency Charges @ 2% on land value		155922		
	Total Cost of Land Acquisition etc.		10914540		
	Total Cost of R&R		7500000		
	Shifting of Utility Service		11471000	**1.15**	
	Environment Cost		22942000	**2.29**	
		Total Cost	**2346936863**	**234.69**	
		Cost/KM at Total Cost	**146354257**	**14.64**	

VOYANTS SOLUTIONS PVT. LTD. GURGAON

BILL OF QUANTITIES

Item	Description	Unit	No	Length (m)	Breadth (m)	Height (m)	Area (sqm)	Quantity	Rate	Amount
Bill No. 1 a :	**TCS I Typical Cross Section of 2 Lane C/W(Mountainous Terrain with Retaining Wall & Parapet)**			**1950.000**						
1.01	Clearing and grubbing road land including uprooting rank 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 material to be used or auctioned, up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.	Sqm	1	1950.000	17.500			34125.000	5.29	180442.76
1.02	Compacting original ground supporting subgrade (Loosening of the ground upto a level of500 mm below the subgrade level, watered, graded and compacted in layers to meet requirement of table 300-2 for subgrade construction.)	Cum	1	1950.000		0.500		975.000	63.00	61425.00
1.03	Construction of sub-grade and earthen shoulders with approved material obtained from borrow pits with all lifts & leads, transporting to site, spreading, grading to required slope and compacted to meet requirement of table No. 300-2									
a)	For Subgrade	Cum	1	1950.000	13.000	0.500		12675.000		
b)	For Earthen Shoulder	Cum	1	1950.000	0.500	0.370		360.750		
	Total of Subgrade							13035.750	242.00	3154651.50
1.04	Construction of lined trapezoidal surface drains (Ref. dwg. VSPL/1438/JK/DFSR/MISC-O5) in soil to specified lines, grades, levels and dimensions to the requirement of clause 301 and 309. Excavated material to be used in embankment within a lead of 50 metres (average lead 25 metres)	Rm	1	1950.000			1.870	3646.500	2398.00	8744307.00
1.05	Construction of granular sub-base by providing coarse graded material, spreading in uniform layers with motor grader on prepared surface, mixing by **mix in place method** with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, complete as per clause 401.	Cum	1	1950.000	12.440	0.200		4851.600	1479.00	7175516.40
1.06	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.	Cum	1	1950.000	10.500	0.250		5118.750	1861.00	9525993.75
1.07	Providing and applying Prime coat with bitumen emulsion on prepared surface of granular Base including clearing of road surface and spraying Prime at the rate of 0.60 kg/sqm using mechanical means.	Sqm	1	1950.000	10.500			20475.000	34.00	696150.00
1.08	Providing and applying **tack coat** with bitumen emulsion using emulsion pressure distributor at the rate of 0.20 kg per sqm on the prepared bituminous/granular surface cleaned with mechanical broom.	Sqm	2	1950.000	10.000			39000.000	13.00	507000.00

BILL OF QUANTITIES

Item	Description	Unit	No	Length (m)	Breadth (m)	Height (m)	Area (sqm)	Quantity	Rate	Amount
1.09	Providing and laying **bituminous concrete** with 100-120 TPH batch type HMP producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 5.4 to 5.6 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 No. 507 complete in all respects.	Cum	1	1950.000	10.000	0.040		780.000	12706.00	9910680.00
1.10	Providing and laying **dense graded bituminous macadam** with 100-120 TPH batch type hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 4.5 to 5. 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. 509 complete in all respects	Cum	1	1950.000	10.000	0.080		1560.000	11293.00	17617080.00
	Total of TCS I									**57573246.41**
Bill No. 1b :	**TCS II Typical Cross Section of 2 Lane C/W(Mountainous Terrain without Retaining and Parapet Wall)**			**1690.000**						
1.01	Clearing and grubbing road land including uprooting rank 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 material to be used or auctioned, up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.	Sqm	1	1690.000	20.000			33800.000	5.29	178724.26
1.02	Compacting original ground supporting subgrade (Loosening of the ground upto a level of500 mm below the subgrade level, watered, graded and compacted in layers to meet requirement of table 300-2 for subgrade construction.)	Cum	1	1690.000		0.500		845.000	63.00	53235.00
1.03	Construction of sub-grade and earthen shoulders with approved material obtained from borrow pits with all lifts & leads, transporting to site, spreading, grading to required slope and compacted to meet requirement of table No. 300-2									
a)	For Subgrade	Cum	1	1690.000	14.640	0.500		12370.800		
b)	For Earthen Shoulder	Cum	2	1690.000	1.990	0.370		2488.694		
	Total of Subgrade							14859.494	242.00	3595997.55
	Construction of lined trapezoidal surface drains (Ref. dwg. VSPL/1438/JK/DFSR/MISC-O5) in soil to specified lines, grades, levels and dimensions to the requirement of clause 301 and 309. Excavated material to be used in embankment within a lead of 50 metres (average lead 25 metres)	Rm	1	1690.000			1.870	1690.000	2398.00	4052620.00

BILL OF QUANTITIES

Item	Description	Unit	No	Length (m)	Breadth (m)	Height (m)	Area (sqm)	Quantity	Rate	Amount
1.05	Construction of granular sub-base by providing coarse graded material, spreading in uniform layers with motor grader on prepared surface, mixing by **mix in place method** with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, complete as per clause 401.	Cum	1	1690.000	12.910	0.200		4363.580	1479.00	6453734.82
1.06	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.	Cum	1	1690.000	10.500	0.250		4436.250	1861.00	8255861.25
1.07	Providing and applying Prime coat with bitumen emulsion on prepared surface of granular Base including clearing of road surface and spraying Prime at the rate of 0.60 kg/sqm using mechanical means.	Sqm	1	1690.000	10.500			17745.000	34.00	603330.00
1.08	Providing and applying **tack coat** with bitumen emulsion using emulsion pressure distributor at the rate of 0.20 kg per sqm on the prepared bituminous/granular surface cleaned with mechanical broom.	Sqm	2	1690.000	10.000			33800.000	13.00	439400.00
1.09	Providing and laying **bituminous concrete** with 100-120 TPH batch type HMP producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 5.4 to 5.6 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 No. 507 complete in all respects.	Cum	1	1690.000	10.000	0.040		676.000	12706.00	8589256.00
1.10	Providing and laying **dense graded bituminous macadam** with 100-120 TPH batch type hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 4.5 to 5. 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. 509 complete in all respects	Cum	1	1690.000	10.000	0.080		1352.000	11293.00	15268136.00
	Total of TCS II									**47490294.88**
Bill No. 1 c :	**TCS III (Typical Cross Section of Realignment By Hill Cutting)**			**11683.000**						
1.01	Clearing and grubbing road land including uprooting rank 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 material to be used or auctioned, up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.	Sqm	1	11683.000	20.500			239501.500	5.29	1266412.08

BILL OF QUANTITIES

Item	Description	Unit	No	Length (m)	Breadth (m)	Height (m)	Area (sqm)	Quantity	Rate	Amount
1.02	Loosening, leveling and Compacting original ground supporting embankment / Subgrade to facilitate placement of first layer of embankment / Subgrade, scarified to a depth of 150 mm, mixed with water at OMC and then compacted by rolling so as to achieve minimum dry density for construction of GSB layer.	Cum	1	11683.000	14.500	0.150		25410.525	63.00	1600863.08
1.03	Construction of sub-grade and earthen shoulders with approved material obtained from borrow pits with all lifts & leads, transporting to site, spreading, grading to required slope and compacted to meet requirement of table No. 300-2									
a)	For Subgrade	Cum	1	11683.000	0.000	0.500		0.000		
b)	For Earthen Shoulder	Cum	2	11683.000	0.500	0.370		4322.710		
	Total of Subgrade							4322.710	242.00	1046095.82
1.04	Construction of lined trapezoidal surface drains (Ref. dwg. VSPL/1438/JK/DFSR/MISC-O5) in soil to specified lines, grades, levels and dimensions to the requirement of clause 301 and 309. Excavated material to be used in embankment within a lead of 50 metres (average lead 25 metres)	Rm	2	11683.000			1.870	23366.000	2398.00	56031668.00
1.05	Construction of granular sub-base by providing coarse graded material, spreading in uniform layers with motor grader on prepared surface, mixing by **mix in place method** with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, complete as per clause 401.	Cum	1	11683.000	11.940	0.200		27899.004	1479.00	41262626.92
1.06	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.	Cum	1	11683.000	10.500	0.250		30667.875	1861.00	57072915.38
1.07	Providing and applying Prime coat with bitumen emulsion on prepared surface of granular Base including clearing of road surface and spraying Prime at the rate of 0.60 kg/sqm using mechanical means.	Sqm	1	11683.000	10.500			122671.500	34.00	4170831.00
1.08	Providing and applying **tack coat** with bitumen emulsion using emulsion pressure distributor at the rate of 0.20 kg per sqm on the prepared bituminous/granular surface cleaned with mechanical broom.	Sqm	2	11683.000	10.000			233660.000	13.00	3037580.00
1.09	Providing and laying **bituminous concrete** with 100-120 TPH batch type HMP producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 5.4 to 5.6 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 No. 507 complete in all respects.	Cum	1	11683.000	10.000	0.040		4673.200	12706.00	59377679.20

BILL OF QUANTITIES

Item	Description	Unit	No	Length (m)	Breadth (m)	Height (m)	Area (sqm)	Quantity	Rate	Amount
1.10	Providing and laying **dense graded bituminous macadam** with 100-120 TPH batch type hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 4.5 to 5. 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. 509 complete in all respects	Cum	1	11683.000	10.000	0.080		9346.400	11293.00	105548895.20
	Total of TCS III									**330415566.67**
Bill No. 1 e :	**TCS IV (Typical Cross Section at Built up Strech)**			**713.000**						
1.01	Clearing and grubbing road land including uprooting rank 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 material to be used or auctioned, up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.	Sqm	1	713.000	14.000			9982.000	5.29	52781.82
1.02	Loosening, leveling and Compacting original ground supporting embankment / Subgrade to facilitate placement of first layer of embankment / Subgrade, scarified to a depth of 150 mm, mixed with water at OMC and then compacted by rolling so as to achieve minimum dry density for construction of GSB layer.	Cum	1	713.000	10.000	0.150		1069.500	63.00	67378.50
1.03	Construction of sub-grade and earthen shoulders with approved material obtained from borrow pits with all lifts & leads, transporting to site, spreading, grading to required slope and compacted to meet requirement of table No. 300-2									
a)	For Subgrade	Cum	1	713.000	0.000	0.500		0.000		
b)	For Earthen Shoulder	Cum	0	713.000	0.000	0.000		0.000		
	Total of Subgrade							0.000	242.00	0.00
1.04	Construction of granular sub-base by providing coarse graded material, spreading in uniform layers with motor grader on prepared surface, mixing by **mix in place method** with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, complete as per clause 401.	Cum	1	713.000	10.000	0.200		1426.000	1479.00	2109054.00
1.05	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.	Cum	1	713.000	10.000	0.250		1782.500	1861.00	3317232.50
1.06	Providing and applying Prime coat with bitumen emulsion on prepared surface of granular Base including clearing of road surface and spraying Prime at the rate of 0.60 kg/sqm using mechanical means.	Sqm	1	713.000	10.000			7130.000	34.00	242420.00

BILL OF QUANTITIES

Item	Description	Unit	No	Length (m)	Breadth (m)	Height (m)	Area (sqm)	Quantity	Rate	Amount
1.07	Providing and applying **tack coat** with bitumen emulsion using emulsion pressure distributor at the rate of 0.20 kg per sqm on the prepared bituminous/granular surface cleaned with mechanical broom.	Sqm	2	713.000	10.000			14260.000	13.00	185380.00
1.08	Providing and laying **bituminous concrete** with 100-120 TPH batch type HMP producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 5.4 to 5.6 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 No. 507 complete in all respects.	Cum	1	713.000	10.000	0.040		285.200	12706.00	3623751.20
1.09	Providing and layin **dense graded bituminous concrete** with 100-120 TPH batch type hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 4.5 to 5. 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. 509 complete in all respects	Cum	1	713.000	10.100	0.080		576.104	11293.00	6505942.47
1.10	Providing RCC Covered Drain	Rm	2	713.000				1426.000	8415.00	11999790.00
	Total of TCS IV									**28103730.49**
Bill No. 1 e :	**Extra Widening**			**4311.000**						
1.01	Clearing and grubbing road land including uprooting rank 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 material to be used or auctioned, up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.	Sqm	1				3630.000	3630.000	5.29	19194.35
1.02	Compacting original ground supporting subgrade (Loosening of the ground upto a level of500 mm below the subgrade level, watered, graded and compacted in layers to meet requirement of table 300-2 for subgrade construction.)	Cum	1			0.150	3630.000	544.500	63.00	34303.50
1.03	Construction of sub-grade and earthen shoulders with approved material obtained from borrow pits with all lifts & leads, transporting to site, spreading, grading to required slope and compacted to meet requirement of table No. 300-2									
a)	For Subgrade	Cum	1			0.500	3630.000	1815.000	242.00	439230.00
	Total of Subgrade									
1.04	Construction of granular sub-base by providing coarse graded material, spreading in uniform layers with motor grader on prepared surface, mixing by **mix in place method** with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, complete as per clause 401.	Cum	1			0.200	3630.000	726.000	1479.00	1073754.00

BILL OF QUANTITIES

Item	Description	Unit	No	Length (m)	Breadth (m)	Height (m)	Area (sqm)	Quantity	Rate	Amount
1.05	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	Cum	1			0.250	3630.000	907.500	1861.00	1688857.50
1.06	Providing and applying Prime coat with bitumen emulsion on prepared surface of granular Base including clearing of road surface and spraying Prime at the rate of 0.60 kg/sqm using mechanical means.	Sqm	1			0.000	3630.000	3630.000	34.00	123420.00
1.07	Providing and applying **tack coat** with bitumen emulsion using emulsion pressure distributor at the rate of 0.20 kg per sqm on the prepared bituminous/granular surface cleaned with mechanical broom.	Sqm	2			0.000	3630.000	3630.000	13.00	47190.00
1.08	Providing and laying **bituminous concrete** with 100-120 TPH batch type HMP producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 5.4 to 5.6 per cent by weight of total mix and filler, transporting the hot mix to work site, laying with a	Cum	1			0.040	3630.000	145.200	12706.00	1844911.20
1.09	Providing and laying **dense graded bituminous macadam** with 100-120 TPH batch type hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 4.5 to 5. per cent of mix and filler, transporting the hot mix to work site, laying	Cum	1			0.080	3630.000	290.400	11293.00	3279487.20
	Total of Extra Widening									**8550347.75**
Bill No. 2 :	**Major Bridge (0 Nos) & Minor Bridge (05 Nos)**									
2.01	**Major Bridges**									
i	Major Bridge at Km -									
2.02	**Minor Bridges**									
i	Minor Bridge at Km -140+232									**29505460.00**
ii	Minor Bridge at Km - 144+065									**16659270.00**
iii	Minor Bridge at Km - 153+500									**41942730.00**
iv	Minor Bridge at Km - 142+930									**16488310.00**
v	Minor Bridge at Km - 146+025									**25849680.00**
	TOTAL OF BILL NO. - 02									**130445450.00**
Bill No.3 :	**Repair and Rehabilitation of Existing Bridges**									
3.01	@ 5% of New Construction Cost									
	TOTAL OF BILL NO. - 03									**0.00**

BILL OF QUANTITIES

Item	Description	Unit	No	Length (m)	Breadth (m)	Height (m)	Area (sqm)	Quantity	Rate	Amount
Bill No. 4 :	**Culverts**									
4.01	Excavation for Structure									
	Pipe Culvert									
	Box Culvert									
										245928057.61
	TOTAL OF BILL NO. - 04									
										245928058.00
Bill No. 5 :	**Junctions (01 Major & 11 Minor)**									
5.01	Clearing and grubbing road land including uprooting rank 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 material to be used or auctioned, up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.	Sqm	1				4120.000		5.29	**21785.00**
5.02	Construction of sub-grade and earthen shoulders with approved material obtained from borrow pits with all lifts & leads, transporting to site, spreading, grading to required slope and compacted to meet requirement of table No. 300-2	Cum	1			0.870	4120.000		242.00	**867425.00**
5.03	Construction of granular sub-base by providing coarse graded material, spreading in uniform layers with motor grader on prepared surface, mixing by **mix in place method** with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, complete as per clause 401.	Cum	1			0.150	4120.000		1479.00	**914022.00**
5.04	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.	Cum	1			0.250	4120.000		1861.00	**1916830.00**
5.05	Providing and applying Prime coat with bitumen emulsion on prepared surface of granular Base including clearing of road surface and spraying Prime at the rate of 0.60 kg/sqm using mechanical means.	Sqm	1				4120.000		34.00	**140080.00**
5.06	Providing and applying **tack coat** with bitumen emulsion using emulsion pressure distributor at the rate of 0.20 kg per sqm on the prepared bituminous/granular surface cleaned with mechanical broom.	Sqm	2				4120.000		13.00	**107120.00**
5.07	Providing and laying **dense graded bituminous macadam** with 100-120 TPH batch type HMP producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 4.0 to 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 No. 507 complete in all respects.	Cum	1			0.075	4120.000		11293.00	**3489537.00**

BILL OF QUANTITIES

Item	Description	Unit	No	Length (m)	Breadth (m)	Height (m)	Area (sqm)	Quantity	Rate	Amount
5.08	Providing and laying **bituminous concrete** with 100-120 TPH batch type hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 5.4 to 5.6 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. 509 complete in all respects	Cum	1			0.040	4120.000		12706.00	**2093949.00**
5.09	Construction of cement concrete kerb with top and bottom width 115 and 165 mm respectively, 250 mm high in M 20 grade PCC on M-10 grade foundation 150 mm thick, foundation having 50 mm projection beyond kerb stone, kerb stone laid with kerb laying machine	Rm	2					50.000	414.00	**41400.00**
	TOTAL OF BILL NO. - 5									**9592226.00**
Bill No. 6 :	**Bus Bays (0 Nos), BUS SHELTERS(01 Nos.)**									
6.01	Bus Shelters	Nos.	1					1.000	110000.00	**110000.00**
6.02	Chequered Tiles	Sqm	1	76.000	1.500			114.000	1195.00	**136230.00**
6.03	Construction of cement concrete kerb with top and bottom width 115 and 165 mm respectively, 250 mm high in M 20 grade PCC on M-10 grade foundation 150 mm thick, foundation having 50 mm projection beyond kerb stone, kerb stone laid with kerb laying machine	Rm	2	76.000				152.000	414.00	**62928.00**
	TOTAL OF BILL NO. - 6									**309158.00**
Bill No. 7 :	**Truck Lay bye (0 Nos)**									
7.01	Clearing and grubbing road land including uprooting rank 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 material to be used or auctioned, up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.	Sqm	0	2957.000				0.000	5.29	**0.00**
7.02	Excavation for roadwork in soil with hydraulic excavator of 0.9 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to the embankment location within all lifts and lead upto 1000m to match link road profile	Cum	0	2957.000		0.750		0.000	78.00	**0.00**
7.03	Construction of embankment with approved materials deposited at site **from roadway cutting and excavation** from drain and foundation of other structures graded and compacted to meet requirement of table 300-2.	Cum	0	2957.000		0.600		0.000	116.00	**0.00**
7.04	Construction of sub-grade and earthen shoulders with approved material obtained from borrow pits with all lifts & leads, transporting to site, spreading, grading to required slope and compacted to meet requirement of table No. 300-2	Cum	0	2957.000		0.400		0.000	242.00	**0.00**

BILL OF QUANTITIES

Item	Description	Unit	No	Length (m)	Breadth (m)	Height (m)	Area (sqm)	Quantity	Rate	Amount
7.05	Construction of granular sub-base by providing coarse graded material, spreading in uniform layers with motor grader on prepared surface, mixing by	Cum	0	2957.000		0.200		0.000	1479.00	**0.00**
7.06	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.	Cum	0	2957.000		0.250		0.000	1861.00	**0.00**
7.07	Providing and applying Prime coat with bitumen emulsion on prepared surface of granular Base including clearing of road surface and spraying Prime at the rate of 0.60 kg/sqm using mechanical means.	Sqm	0	2957.000				0.000	34.00	**0.00**
7.08	Providing and applying **tack coat** with bitumen emulsion using emulsion pressure distributor at the rate of 0.20 kg per sqm on the prepared bituminous/granular surface cleaned with mechanical broom.	Sqm	0	2957.000				0.000	13.00	**0.00**
7.09	**Dry Lean Cement Concrete Sub- base** (Construction of dry lean cement concrete Sub- base 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 1	Cum	0	2957.000		0.150		0.000	0.00	**0.00**
7.10	**Cement Concrete Pavement** (Construction of un-reinforced, dowel jointed, plain cement concrete pavement over a prepared sub base with 43 grade cement @ 400 kg per cum, coarse and fine aggregate conforming to IS 383, maximum size of coarse aggregate not exc	Cum	0	2957.000		0.340		0.000	0.00	**0.00**
7.11	Construction of cement concrete kerb with top and bottom width 115 and 165 mm respectively, 250 mm high in M 20 grade PCC on M-10 grade foundation 150 mm thick, foundation having 50 mm projection beyond kerb stone, kerb stone laid with kerb laying machine	Rm	0	50.000				0.000	414.00	**0.00**
7.12	Misc Items Like Tiles,Crash barriers, Road Markings etc	LS	0					0.000	350000.00	**0.00**
	TOTAL OF BILL NO. - 7									**0.00**
Bill No. 8 :	**Passing Places (1No.....@every 3km)**	**Sqm**	**6**	**235.000**						
8.01	Clearing and grubbing road land including uprooting rank 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 material to be used or auctioned, up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.	Sqm	1				1410.000	1410.000	5.34	**7523.00**
8.02	Excavation for roadwork in soil with hydraulic excavator of 0.9 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to the embankment location within all lifts and lead upto 1000m to match link road profile	Cum	1			0.750	1410.000	1058.000	79.00	**83582.00**
8.03	Construction of embankment with approved materials deposited at site **from roadway cutting and excavation** from drain and foundation of other structures graded and compacted to meet requirement of table 300-2.	Cum	1			0.600	1410.000	846.000	116.00	**98136.00**

BILL OF QUANTITIES

Item	Description	Unit	No	Length (m)	Breadth (m)	Height (m)	Area (sqm)	Quantity	Rate	Amount
8.04	Construction of sub-grade and earthen shoulders with approved material obtained from borrow pits with all lifts & leads, transporting to site, spreading, grading to required slope and compacted to meet requirement of table No. 300-2	Cum	1			0.400	1410.000	564.000	244.00	**137616.00**
8.05	Construction of granular sub-base by providing coarse graded material, spreading in uniform layers with motor grader on prepared surface, mixing by **mix in place method** with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, complete as per clause 401.	Cum	1			0.200	1410.000	282.000	1576.00	**444432.00**
8.06	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.	Cum	1			0.250	1410.000	353.000	2379.00	**839787.00**
8.07	Providing and applying Prime coat with bitumen emulsion on prepared surface of granular Base including clearing of road surface and spraying Prime at the rate of 0.60 kg/sqm using mechanical means.	Sqm	1				1410.000	1410.000	25.00	**35250.00**
8.08	Providing and applying **tack coat** with bitumen emulsion using emulsion pressure distributor at the rate of 0.20 kg per sqm on the prepared bituminous/granular surface cleaned with mechanical broom.	Sqm	2				1410.000	2820.000	10.00	**28200.00**
8.09	**Dry Lean Cement Concrete Sub- base** (Construction of dry lean cement concrete Sub- base 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 1	Cum	1			0.150	1410.000	212.000	0.00	**0.00**
8.10	**Cement Concrete Pavement** (Construction of un-reinforced, dowel jointed, plain cement concrete pavement over a prepared sub base with 43 grade cement @ 400 kg per cum, coarse and fine aggregate conforming to IS 383, maximum size of coarse aggregate not exc	Cum	1			0.340	1410.000	480.000	0.00	**0.00**
8.11	Construction of cement concrete kerb with top and bottom width 115 and 165 mm respectively, 250 mm high in M 20 grade PCC on M-10 grade foundation 150 mm thick, foundation having 50 mm projection beyond kerb stone, kerb stone laid with kerb laying machine	Rm	6	105.341				633.000	802.00	**507666.00**
8.12	Misc Items Like Tiles,Crash barriers, Road Markings etc	LS	1					1.000	350000.00	**350000.00**
	TOTAL OF BILL NO. - 8									**2532192.00**
Bill No - 9	**Traffic Signages, Road Marking and other appurtenances**			**16036.000**						
9.01	Road Marking: - Lane, Centre Line, Pedestrian crossing									
	Centre line on straight portion	Sqm	0.66	12828.800	0.150	-		1270.051		
	Centre line on curve portion	Sqm	1	3207.200	0.150	-		481.080		
	Edge Line at Paved Shoulder	Sqm	4	16036.000	0.100	-		6414.400		
	Add 15% for Misc. including Pedestrian X-ings etc							1224.830		
	Total							9391.000	668.00	**6273188.00**
9.02	Directional Arrows, letter marking etc.	Nos.						146.000	542.00	**79132.00**
9.03	Advance Direction signs size 1800X1200 mm	Nos.						17.000	12696.48	**215840.00**

BILL OF QUANTITIES

Item	Description	Unit	No	Length (m)	Breadth (m)	Height (m)	Area (sqm)	Quantity	Rate	Amount
9.04	Village name boards size 600X800 mm	Nos.						152.000	1622.16	**246568.00**
9.05	Place Identification signs size 1200X900 mm	Nos.						11.000	6348.24	**69831.00**
9.06	90 cm Triangle	Nos.						23.000	2608.00	**59984.00**
9.07	90 cm Octagon	Nos.						21.000	2670.00	**56070.00**
9.08	Hazard plate 300X900 mm	Nos.						113.000	2593.00	**293009.00**
9.09	800 x 600 mm Size	Nos.						45.000	2633.00	**118485.00**
9.10	60 Cm circular	Nos.						75.000	2595.00	**194625.00**
9.11	Road stud at center line and edges	Sqm	2680					2680.000	716.00	**1918880.00**
9.12	Over Head Sign Truss	MT	2					7.000	91971.00	**643797.00**
9.13	Boundary Stone (taken 10% of Qty)	Nos.	2	16036.000	0.005			163.000	618.00	**100734.00**
9.14	5th Km Stone -New	Nos.	1	16036.000				3.000	4649.00	**13947.00**
9.15	Ordinary Km Stone	Nos.	1	16036.000				15.000	2848.00	**42720.00**
9.16	Hectometer Stone	Nos.	1	16036.000				62.000	758.00	**46996.00**
9.20	Enamel Paint over MBCB	Sqm	1	4311.000	0.360				86.00	**133468.56**
	TOTAL OF BILL NO. - 10									**10507275.00**
Bill No. 10 :	**Other Miscellaneous Works**									
10.01	Parapet	Rm	1	1690.000				1690.000	2398.00	**4052620.00**
10.02	Breast Wall	Rm	1					1.000		**0.00**
	a)1.5m height			3750.000					13431.88	**50369550.00**
	b) 2.0m height			4050.000					16601.20	**67234860.00**
	c) 3.0m height			2950.000					34364.30	**101374685.00**
	d)Breast wall Sausage Type	Rm	1	2000.000					7840.00	**15680000.00**
10.03	Afforestation of trees	No	1160.000						1012.00	**1173920.00**
10.04	W Type metal Crash Barrier	LM								
	Along High Embankment		0					0.000		
	On Curves <360m		1	4311.000				4311.000		
	At Superelevtated Stretch		0					0.000		
	Total							4311.000	3979.00	**17153469.00**
10.05	River Training Works		0							**0.00**
10.06	Catch water trapezoidal drain (cut ht. >3.0m)	Rm	2	7000.000				14000.000	2398.00	**33572000.00**
10.07	Rumble Strips (Provision of 3 nos rumble strips covered with bituminous conctrete, 15-20 mm high at center, 250 mm wide placed at 1 m center to center at approved locations to control speed, marked with white strips of road marking paint.)	No	60						9630.00	**577800.00**
10.08	Provision of riprap protection at valley side	Rm		3640.000					640.00	**2329600.00**
10.09	Hydro seeding and mulching at hill side slope for errosion control	sqm		70000.000					400.00	**28000000.00**
10.10	Delineator at reataining wall	No	1213.33						382.00	**463493.33**
10.11	Convex Mirror at sharp curved	No	60						2880.00	**172800.00**
	TOTAL OF BILL NO. - 11									**322154797.00**
Bill No. 11 :	**Maintenance**									
11.01	Maintenance of Existing Road	Rm	1	8018.000				8018.000	5184.00	**41565312.00**

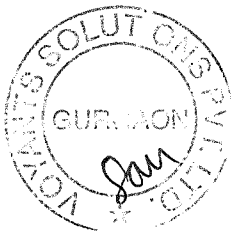
BILL OF QUANTITIES

Item	Description	Unit	No	Length (m)	Breadth (m)	Height (m)	Area (sqm)	Quantity	Rate	Amount
Agriculture Area :	Rs. 11 /Sq.m (Jhum Land)	366300								
Built up Area :	Rs. 86 / Sq.m	43800								
Fish Land (Standing) :	Rs. 300/ sq.m									
Total Area of acquisistion (sqm)	410100									
ost of acquisistion	7796100									

FFSR: KM 138TO KM 158
Earthwork

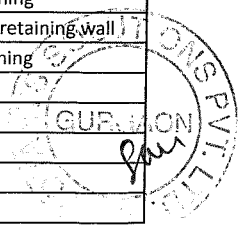
Item	Description	Unit	Qty	Rate	Amount
	Dismantling of flexible pavements and disposal of dismantled materials up to a lead of 1000 metres, stacking serviceable and unserviceable materials separately)				
	By Mechanical Means				
	Bituminous course	Cum	2625	328.00	861000.00
	Granular courses	Cum	5250	267.00	1401750.00
					2262750

Item	Earth work	Unit	Qty	Rate	Amount
1	*Excavation for roadwork in soil with hydraulic excavator of 0.9 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to the embankment location within all lifts and lead*				
(i)	*Ordinary Soil*	*Cum*	*206036.77*	*78.00*	*16070868.25*
(ii)	*Soft rock*	*Cum*	*1098862.79*	*302.00*	*331856561.49*
(ii)	*Hard rock*	*Cum*	*68678.92*	*383.00*	*26304027.95*
2	*Removal of unserviceable soil including excavation, loading and disposal upto 2000 metres lead but excluding replacement by suitable soil which shall be paid separately as per clause 305.*	*Cum*	*1306103.56*	*91.00*	*118855423.51*
3	*Construction of embankment with approved material* obtained from borrow pits with all lifts and leads, transporting to site, spreading, grading to required slope and compacting to meet requirement of table 300-2.	*Cum*	*16868.73*	*201.00*	*3390615.13*
4	*Construction of embankment with approved materials deposited at site f*rom roadway cutting and excavation from drain and foundation of other structures graded and compacted to meet requirement of table 300-2.	*Cum*	*67474.93*	*116.00*	*7827091.65*
	Total Earthwork Cost				***504304587.98***

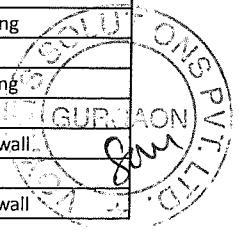


SCHEDULE OF TYPICAL CROSS SECTIONS OF NH-713

S.NO.	EXISTING CHAINAGE		DESIGN CHAINAGE		LENGTH	Ded.	CD	Final	TYPE	Remarks / Location
	FROM	TO	FROM	TO	(m)	(m)	(m)		TCS	
1			138000	138150	150			150	2	Reconstruction and widening
2			138150	138160	10			10	3	Realignment
3			138160	138200	40			40	1	Realignment with Retaining wall
4			138200	138300	100			100	1	Realignment with Retaining wall
5			138300	138350	50			50	3	Realignment
6			138350	138390	40			40	2	Reconstruction and widening
7			138390	138400	10			10	1	Reconstruction and widening with retaining wall
8			138400	138410	10			10	1	Realignment with Retaining wall
9			138410	138500	90			90	3	Realignment
10			138500	138530	30			30	1	Reconstruction and widening with retaining wall
11			138530	138550	20			20	2	Reconstruction and widening
12			138550	138700	150			150	3	Realignment
13			138700	138710	10			10	3	Realignment
14			138710	138910	200			200	3	Realignment
15			138910	138940	30			30	1	Realignment with Retaining wall
16			138940	138990	50			50	3	Realignment
17			138990	139000	10			10	1	Realignment with Retaining wall
18			139000	139040	40			40	1	Realignment with Retaining wall
19			139040	139160	120			120	3	Realignment
20			139160	139210	50			50	1	Realignment with Retaining wall
21			139210	139500	290			290	3	Realignment
22			139500	139620	120			120	1	Realignment with Retaining wall
23			139620	140450	830			830	3	Realignment
24			140450	140510	60			60	3	Realignment
25			140510	140550	40			40	3	Realignment
26			140550	140640	90			90	2	Reconstruction and widening
27			140640	140660	20			20	1	Reconstruction and widening with retaining wall
28			140660	140790	130			130	2	Reconstruction and widening
29			140790	140800	10			10	1	Reconstruction and widening with retaining wall
30			140800	140960	160			160	1	Realignment with Retaining wall
31			140960	141010	50			50	3	Realignment
32			141010	141090	80			80	1	Realignment with Retaining wall
33			141090	141100	10			10	3	Realignment
34			141100	141160	60			60	2	Reconstruction and widening
35			141160	141200	40			40	1	Reconstruction and widening with retaining wall
36			141200	141240	40			40	1	Realignment with Retaining wall
37			141240	141500	260			260	3	Realignment
38			141500	141650	150			150	2	Reconstruction and widening
39			141650	142350	700			700	3	Realignment
40			142350	142400	50			50	2	Reconstruction and widening
41			142400	142500	100			100	3	Realignment
42			142500	142550	50			50	1	Realignment with Retaining wall
43			142550	143210	660			660	3	Realignment
44			143210	143220	10			10	1	Realignment with Retaining wall
45			143220	143400	180			180	3	Realignment
46			143400	143650	250			250	2	Reconstruction and widening
47			143650	143700	50			50	3	Realignment
48			143700	143770	70			70	3	Realignment
49			143770	143870	100			100	1	Realignment with Retaining wall
50			143870	144100	230			230	3	Realignment
51			144100	144320	220			220	2	Reconstruction and widening
52			144320	144430	110			110	1	Reconstruction and widening with retaining wall
53			144430	144500	70			70	2	Reconstruction and widening
54			144500	144550	50			50	3	Realignment
55			144550	144660	110			110	3	Realignment
56			144660	144720	60			60	3	Realignment
57			144720	144840	120			120	3	Realignment
58			144840	144900	60			60	3	Realignment



S.NO.	EXISTING CHAINAGE		DESIGN CHAINAGE		LENGTH	Ded.	CD	Final	TYPE	Remarks / Location
	FROM	TO	FROM	TO	(m)	(m)	(m)		TCS	
59			144900	145000	100			100	2	Reconstruction and widening
60			145000	145020	20			20	3	Realignment
61			145020	145120	100			100	1	Realignment with Retaining wall
62			145120	145220	100			100	3	Realignment
63			145220	145250	30			30	1	Realignment with Retaining wall
64			145250	145340	90			90	3	Realignment
65			145340	145360	20			20	1	Realignment with Retaining wall
66			145360	145550	190			190	3	Realignment
67			145550	145610	60			60	1	Realignment with Retaining wall
68			145610	145670	60			60	3	Realignment
69			145670	145710	40			40	3	Realignment
70			145710	146200	490			490	3	Realignment
71			146200	146250	50			50	2	Reconstruction and widening
72			146250	146450	200			200	3	Realignment
73			146450	146460	10			10	1	Realignment with Retaining wall
74			146460	146900	440			440	3	Realignment
75			146900	146930	30			30	2	Reconstruction and widening
76			146930	147000	70			70	1	Reconstruction and widening with retaining wall
77			147000	147090	90			90	3	Realignment
78			147090	147170	80			80	3	Realignment
79			147170	147230	60			60	3	Realignment
80			147230	147250	20			20	3	Realignment
81			147250	147370	120			120	3	Realignment
82			147370	147410	40			40	1	Realignment with Retaining wall
83			147410	148400	990			990	3	Realignment
84			148400	148440	40			40	1	Realignment with Retaining wall
85			148440	148550	110			110	3	Realignment
86			148550	148570	20			20	1	Realignment with Retaining wall
87			148570	148830	260			260	3	Realignment
88			148830	148860	30			30	1	Realignment with Retaining wall
89			148860	148940	80			80	3	Realignment
90			148940	149000	60			60	1	Realignment with Retaining wall
91			149000	149100	100			100	3	Realignment
92			149100	149180	80			80	1	Realignment with Retaining wall
93			149180	149250	70			70	3	Realignment
94			149250	149270	20			20	1	Realignment with Retaining wall
95			149270	149310	40			40	3	Realignment
96			149310	149350	40			40	1	Realignment with Retaining wall
97			149350	149430	80			80	3	Realignment
98			149430	149450	20			20	3	Realignment
99			149450	149720	270			270	3	Realignment
100			149720	149770	50			50	3	Realignment
101			149770	149800	30			30	3	Realignment
102			149800	149810	10			10	1	Realignment with Retaining wall
103			149810	149990	180			180	3	Realignment
104			149990	150010	20			20	1	Realignment with Retaining wall
105			150010	150080	70			70	3	Realignment
106			150080	150100	20			20	1	Realignment with Retaining wall
107			150100	150300	200			200	3	Realignment
108			150300	150380	80			80	2	Reconstruction and widening
109			150380	150400	20			20	1	Reconstruction and widening with retaining wall
110			150400	150410	10			10	1	Realignment with Retaining wall
111			150410	150470	60			60	3	Realignment
112			150470	150490	20			20	1	Realignment with Retaining wall
113			150490	150750	260			260	3	Realignment
114			150750	150850	100			100	2	Reconstruction and widening
115			150850	151300	450			450	3	Realignment
116			151300	151400	100			100	2	Reconstruction and widening
117			151400	151620	220			220	3	Realignment
118			151620	151640	20			20	1	Realignment with Retaining wall
119			151640	151800	160			160	3	Realignment
120			151800	151810	10			10	1	Realignment with Retaining wall

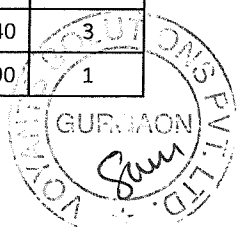


Schedule of Typical Cross Section

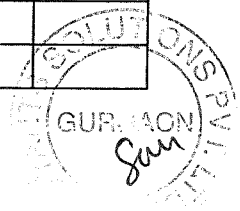
S.NO.	EXISTING CHAINAGE		DESIGN CHAINAGE		LENGTH	Ded.	CD	Final	TYPE	Remarks / Location
	FROM	TO	FROM	TO	(m)	(m)	(m)		TCS	
121			151810	152100	290			290	3	Realignment
122			152100	152110	10			10	1	Realignment with Retaining wall
123			152110	152220	110			110	3	Realignment
124			152220	152260	40			40	1	Realignment with Retaining wall
125			152260	152300	40			40	3	Realignment
126			152300	152340	40			40	1	Realignment with Retaining wall
127			152340	152540	200			200	3	Realignment
128			152540	152570	30			30	1	Realignment with Retaining wall
129			152570	152670	100			100	3	Realignment
130			152670	152690	20			20	1	Realignment with Retaining wall
131			152690	153323	633			633	3	Realignment
132			153323	154036	713			713	4	Realignment
					16036			**16036**		

1	1950	1	1.950	TCS I Typical Cross Section of 2 Lane C/W(Mountainous Terrain with Retaining Wall & Parapet)
2	1690	2	1.690	TCS II Typical Cross Section of 2 Lane C/W(Mountainous Terrain without Retaining and Parapet Wal
3	11683	3	11.683	TCS III (Typical Cross Section of Realignment By Hill Cutting)
4	713	4	0.713	TCS IV (Typical Cross Section at Built up Strech)

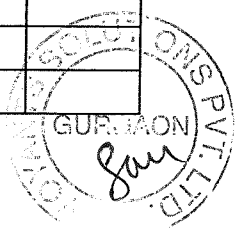
	BREAST WALL LEFT SIDE			RETAINING WALL LEFT SIDE		HEIGHT	BREAST WALL RIGHT SIDE			RETAINING WALL RIGHT SIDE		HEIGHT
	FROM	TO	H	FROM	TO	H	FROM	TO	H	FROM	TO	H
	138000	138020	4				138000	138020	1			
	138020	138150	3							138160	138200	4
	138150	138260	1							138200	138250	2
	138290	138370	2							138250	138280	3
	138370	138430	1							138280	138300	1
	138430	138510	3							138390	138410	2
	138510	138560	1							138500	138530	2
	138580	138670	4									
	138670	138710	1				138610	138690	2			
							138830	138860	2			
	138840	138880	3				138860	138900	1			
	138880	138900	1							138910	138940	3
										138990	139000	11
	139050	139140	1							139000	139040	5
	139200	139230	1									
	139230	139310	4							139160	139210	3
	139310	139390	1				139230	139320	2			
	139390	139440	2				139390	139490	1			
	139440	139500	2							139500	139620	3
	139500	139620	1				139660	139730	1			
	139620	139670	2				139730	140030	3			
	139670	140180	4				140030	140080	2			
	140180	140200	2				140080	140120	3			
							140120	140160	2			
							140160	140190	1			
	140270	140280	2									
	140280	140380	4				140290	140370	2			
	140380	140410	3									
	140410	140440	2									
										140640	140660	1
	140560	140570	2							140790	140800	1
	140570	140620	3							140800	140830	3
	140620	140720	1							140830	140880	6
	140720	140820	2							140880	140930	1
	140890	140940	2							140930	140960	2
	140940	141070	1									
	141070	141140	3							141010	141040	3
	141220	141240	1							141040	141090	1



	BREAST WALL LEFT SIDE			RETAINING WALL LEFT SIDE		HEIGHT	BREAST WALL RIGHT SIDE			RETAINING WALL RIGHT SIDE		HEIGHT
	141240	141410	3							141160	141200	2
										141200	141240	5
							141330	141400	1			
	141480	141500	2									
	141500	141580	3									
	141580	141640	2				141520	141560	2			
	141640	141660	3				142160	142210	1			
	141660	141690	1									
	141690	141760	2							142500	142550	1
	141760	141840	1				142730	142790	1			
	141870	141900	2				142790	142830	3			
	141950	141980	1				142830	142900	2			
	141980	142010	2									
	142010	142060	3				143000	143090	1			
	142060	142120	2							143210	143220	1
	142120	142210	4				143490	143510	1			
	142210	142290	1									
	142360	142400	1							143770	143870	4
	142400	142460	2				144110	144160	2			
	142460	142600	1				144160	144200	1			
	142600	142630	2									
	142630	142720	2									
	142720	142810	3									
	142810	142880	2									
	142880	142910	1									
	142980	143010	1				144840	144910	2			
	143060	143100	2				144910	144980	4			
	143160	143210	2				144980	145100	1			
	143210	143250	2				145100	145190	3			
	143330	143340	3				145250	145280	1			
	143340	143440	2				145280	145330	2			
	143460	143500	3				145330	145410	1			
	143500	143530	2				145410	145470	3			
	143550	143590	1				145470	145540	2			
	143660	143760	1				145620	145650	2			
	143870	144020	2				145750	145770	2			
Package -							145770	146090	4			

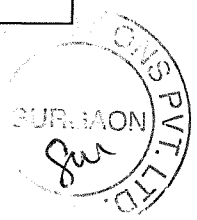


	BREAST WALL LEFT SIDE			RETAINING WALL LEFT SIDE		HEIGHT	BREAST WALL RIGHT SIDE			RETAINING WALL RIGHT SIDE		HEIGHT
IV							146090	146160	2			
				144320	144360	2	146160	146210	1			
				144360	144430	2	146210	146320	4			
							146320	146410	3			
							146410	146440	1			
							146480	146640	4			
							146640	146700	1			
							146700	146760	2			
144850	144910	1					146760	146930	3			
144910	144980	2					147020	147090	3			
			145020	145070	1		147090	147360	2			
			145070	145120	2		147430	147600	4			
145150	145180	1					148210	148250	2			
			145220	145250	2							
			145340	145360	2		148590	148630	2			
			145550	145610	2		148630	148720	4			
							148720	148780	1			
145770	145790	2					148880	148960	1			
145790	145880	4					149200	149220	1			
145880	145970	2					149540	149680	1			
145970	146070	3					150150	150210	1			
146070	146100	2					150210	150360	2			
146100	146140	1					150360	150380	1			
146210	146300	3					150560	150780	2			
146300	146370	2										
146370	146440	1					150870	151000	3			
			146450	146460	2		151000	151120	3			
146470	146510	2					151120	151200	1			
146510	146580	4					151430	151460	1			
146580	146630	2					152000	152080	1			
146810	146890	2					152130	152180	3			
			146930	147000	5		152290	152350	1			
147050	147070	3					152350	152400	3			
							152440	152660	4			
							152710	152830	4			
			147370	147410	4		152870	152910	2			
147450	147550	4					152940	152970	3			
							153000	153050	1			
			148400	148440	2		153050	153150	4			
			148550	148570	1		153150	153170	2			
148640	148690	1										



	BREAST WALL LEFT SIDE			RETAINING WALL LEFT SIDE		HEIGHT	BREAST WALL RIGHT SIDE			RETAINING WALL RIGHT SIDE		HEIGHT
				148830	148860	4	153260	153300	1			
	148900	148930	2				153430	153440	1			
				148940	149000	2	153580	153600	1			
				149100	149180	2	153770	153790	1			
				149250	149270	1						
				149310	149350	1						
	149530	149560	1									
				149800	149810	2						
				149990	150010	2						
				150080	150100	1						
	150160	150280	1									
				150380	150410	1						
				150470	150490	1						
	150620	150780	2									
	150880	151120	2									
	151120	151170	1									
	151620	151640	1	151620	151640	2						
				151800	151810	4						
	151860	151890	1									
				152100	152110	3						
	152140	152170	2									
				152220	152260	3						
				152300	152340	1						
	152440	152480	4									
	152480	152510	1									
				152540	152570	1						
	152610	152620	3									
	152620	152640	1									
				152670	152690	1						
	152720	152800	3									
	153090	153160	2									
	153270	153290	1									

Height	Breast WallL length	Retaining Wall length



	BREAST WALL LEFT SIDE			RETAINING WALL LEFT SIDE		HEIGHT	BREAST WALL RIGHT SIDE	RETAINING WALL RIGHT SIDE	HEIGHT
m	L(m)	R(m)	total(m)	L(m)	R(m)	total(m)			
1	2020	1730	3750	290	210	500			
2	2370	1680	4050	510	170	680			
3	1160	1240	1400	50	290	340			
4	1190	1360	1550	80	140	220			
Susage Wall	1000	1000	2000	70	80	150			
			0	10	50	60			
			0	0	0	0			
			12750			**1950**			

FFSR: KM 138 TO KM 158

Junctions: Summary

Major Junctions					
S.No.	**Junction Type**	**Nos**	**Per Junction Area (Sqm)**	**Total Area**	**Remarks**
	4 legged	1	820	820	
Total				**820**	1
Minor Junctions					
S.No.	**Junction Type**	**Nos**	**Per Junction Area (Sqm)**	**Total Area**	**Remarks**
1	Y/T Junctions	11	300	3300	
Total				***3300***	2
	Total (1+2)			**4120**	
				4120	

Retaining Wall					
Sl. No	Height	Conc. area($m^{2)}$	Avg. Conc. area(m^2)	Earthwork area(m^2)	Avg. Earthwork area(m^2)
	1m height	2.096		1.4	
	2m height	3.189	3.189	1.7	1.7
	3m height	4.984	4.984	2.2	2.2
	4m height	6.9365	6.9365	2.55	2.55
		Length	Avg Area	Rate	Amount
1	2m Height	1180	3763.02	7546.00	28395748.92
2	3m Height	340	1694.56	7546	12787149.76
3	4m Height	430	2982.695	7546	22507416.47
					63690315.15
Earthwork for retaining wall			Avg Area	Rate	Amount
1	1m to 2m Height	1180	1.7	70.00	140420
2	2m to 3m Height	340	2.2	70.00	52360
3	3m to 4m Height	430	2.55	70.00	76755
					269535
				Total	***63959850.15***
				Say	***63959850***

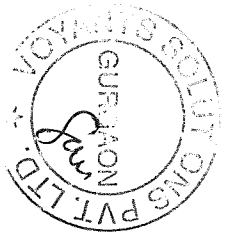
(i) Sausage Wall for 1.0m height			No	L(m)	B(m)	H(m)	Qty(cum)	Rate	Ammount
1	Eartwork in excavation	Cum		1	1	1.2	1.20	70.00	84
2	Sausage Wall(0.6 * 1 *1)	Cum	2	1	1	0.60	1.20	4274.65	5129.585
									5213.585
								Say	***5220***

(ii) Sausage Wall for 2.0m height			No	L(m)	B(m)	H(m)	Qty(cum)	Rate	Ammount
1	Eartwork in excavation	Cum		1	1	2	2.00	70.00	140
2	Sausage Wall(0.6 * 1 *1)	Cum	3	1	1	0.60	1.80	4274.65	7694.3775
									7834.3775
								Say	***7840***

(iii) Sausage Wall for 3.5m height			No	L(m)	B(m)	H(m)	Qty(cum)	Rate	Ammount
1	Eartwork in excavation	Cum		1	1	3.5	3.50	70.00	245
2	Sausage Wall(0.6 * 1 *1)	Cum	6	1	1	0.60	3.60	4274.65	15388.755
									15633.755
								Say	***15640***

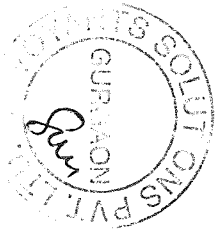
(iv) Sausage Wall for 5.0m height			No	L(m)	B(m)	H(m)	Qty(cum)	Rate	Ammount
1	Eartwork in excavation	Cum		1	1	5	5.00	70.00	350
2	Sausage Wall(0.6 * 1 *1)	Cum	8	1	1	0.60	4.80	4274.65	20518.34
									20868.34
								Say	***20870***

Sl. No.	Item Descrption	Unit	Nos	Length	Width	Height	Qty	Rate	Amount		Remarks
1. Drain with RCC per m											
a	Earthwork in Excavation										
	Ordiniary Soil	Cum	1	1	1.5	0.6	0.9				50% of Total
	Soft Rock	Cum	1	1	1.5	0.6	0.9				50% of Total
							1.8	70.00	126		
b	PCC M15 on bottom base	Cum	1	1	1.5	0.075	0.1125	7546.00	849		
c	RCC M20 in Vertical wall M15	Cum	2	1	0.15	1	0.3	8639.00	2592		
	PCC in Base M15	Cum	1	1	1.2	0.15	0.18	7546.00	1358		
d	Drain Cover RCC M20	Cum	1	1	1.5	0.1	0.15	8639.00	1296		
e	HYSD for Wall & Drain Cover	MT					0.027	81273.00	2194		
(i) Parapet Wall per m										**8415**	
a	Eartwork in excavation	Cum	1	1	0.75	0.7	0.525	70	36.75		Gap of 300 mm after every 900mm
b	PCC M10	Cum	1	1	0.75	0.1	0.075	7494	562.05		as per SoR HP page 136
c	Rubble Masonry in Parapet	Cum	1	1	0.6	1.2	0.72	4653	3350.16		as per SoR HP page 136
d	Coping 5.0 cm thick	Cum	1	1	0.6	0.05	0.03	7494	224.82	**4174**	

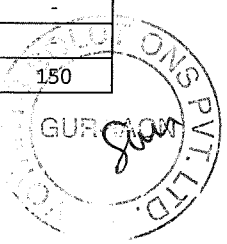


	Trapezoidal Lined Drain	Quantity					
		Area	Thickness	Vol.		Rate	Amount
1	PCC M20	1.870	0.150	0.281			
	Total	1.87	0.1	0.2805		8384.00	2352
2	Excavation	0.65		0.65		70.00	46
						Total	2398
		L	B	H	Area	Rate	Amount
	Road Maintainance						
a	Filling of Potholes with BC	1000	10	0.04	8000	451.00	3608000
b	Filling of Potholes with Open Graded Premix carpet	1000	10	0.04	8000	197.00	1576000
						Total for 1km	5184000
						For 1m	5184

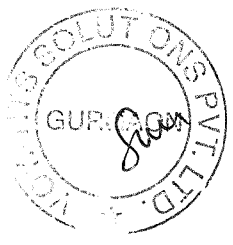
Breast Wall					
Concrete Area		Length	Area	Rate	Amount
1	1.5m Height	3750	1.78	7546.00	13431.88
2	2m Height	4050	2.2	7546.00	16601.2
3	3m Height	2950	4.46	7546.00	33655.16



Extra-Widening - Km 138 to Km 158								
SL. No	Design Chainage(m)		Length(m)	IRC-SP:73-2105		IRC-SP:48-1998		
				Radius of Curve		Radius of Curve		
	From	To		75-100	101-300	41-60	75-100	101-300
1	138+020.195	138+034.986	014.8	-	-	60	-	-
2	138+126.065	138+163.706	037.6	-	-	60	-	-
3	138+254.693	138+279.680	025.0	-	-	-	-	150
4	138+451.636	138+481.587	030.0	-	-	60	-	-
5	138+596.789	138+609.150	012.4	-	-	-	100	-
6	138+708.464	138+748.462	040.0	-	-	60	-	-
7	138+829.641	138+894.983	065.3	-	-	60	-	-
8	138+957.407	138+992.053	034.6	-	-	40	-	-
9	139+209.046	139+219.875	010.8	-	-	-	-	300
10	139+327.934	139+370.009	042.1	-	-	-	-	250
11	139+484.383	139+533.162	048.8	-	-	-	-	250
12	139+659.123	139+685.426	026.3	-	-	-	-	250
13	139+817.276	139+867.796	050.5	-	-	60	-	-
14	139+953.995	139+967.054	013.1	-	-	-	80	-
17	140+175.767	140+221.612	045.8	-	-	40	-	-
18	140+327.663	140+355.873	028.2	-	-	-	-	200
19	140+509.579	140+549.913	040.3	-	-	60	-	-
20	140+637.245	140+686.938	049.7	-	-	-	-	250
21	141+002.912	141+024.734	021.8	-	-	-	-	250
22	141+105.713	141+118.252	012.5	-	-	60	-	-
23	141+229.713	141+240.254	010.5	-	-	-	-	150
24	141+340.959	141+388.702	047.7	-	-	60	-	-
25	141+473.531	141+514.553	041.0	-	-	60	-	-
26	141+773.635	141+800.936	027.3	-	-	-	-	200
27	141+861.954	141+888.646	026.7	-	-	-	80	-
28	142+156.723	142+217.551	060.8	-	-	-	-	250
29	142+310.279	142+340.412	030.1	-	-	-	-	150
30	142+504.672	142+572.828	068.2	-	-	-	-	120
31	142+672.427	142+748.212	075.8	-	-	60	-	-
32	142+798.988	142+929.075	130.1	-	-	60	-	-
33	142+983.788	143+065.603	081.8	-	-	60	-	-
34	143+095.417	143+166.579	071.2	-	-	-	-	200
35	143+325.739	143+346.325	020.6	-	-	-	-	250
36	143+438.312	143+527.970	089.7	-	-	-	-	300
41	144+197.338	144+418.557	221.2	-	-	-	-	300
42	144+539.968	144+580.466	040.5	-	-	-	-	250
43	144+712.038	144+744.648	032.6	-	-	-	-	150
44	145+056.859	145+135.794	078.9	-	-	60	-	-
45	145+235.440	145+257.738	022.3	-	-	-	90	-
46	145+349.606	145+389.309	039.7	-	-	60	-	-
47	145+467.866	145+605.235	137.4	-	-	-	90	-
48	145+656.347	145+715.392	059.0	-	-	60	-	-
49	145+799.600	145+833.728	034.1	-	-	60	-	-
50	145+899.444	145+906.740	007.3	-	-	-	-	120
52	146+890.748	146+939.379	048.6	-	-	60	-	-
53	147+170.621	147+187.801	017.2	-	-	-	-	200
54	147+361.716	147+465.259	103.5	-	-	60	-	-
55	147+649.573	147+789.314	139.7	-	-	60	-	-
56	147+841.346	147+930.554	089.2	-	-	-	-	200
57	148+008.761	148+065.674	056.9	-	-	-	90	-
58	148+141.872	148+150.194	008.3	-	-	60	-	-
59	148+227.461	148+256.853	029.4	-	-	-	-	150



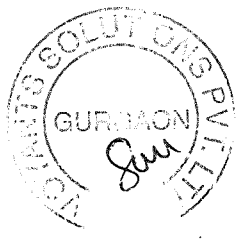
Extra-Widening - Km 138 to Km 158								
SL. No	Design Chainage(m)		Length(m)	IRC-SP:73-2105		IRC-SP:48-1998		
				Radius of Curve		Radius of Curve		
	From	To		75-100	101-300	41-60	75-100	101-300
60	148+333.591	148+349.562	016.0	-	-	60	-	-
61	148+407.344	148+418.295	011.0	-	-	-	-	120
62	148+590.392	148+596.579	006.2	-	-	-	-	150
63	148+744.248	148+754.003	009.8	-	-	60	-	-
64	148+868.995	148+890.351	021.4	-	-	-	90	-
65	149+065.496	149+071.198	005.7	-	-	60	-	-
66	149+189.667	149+234.098	044.4	-	-	60	-	-
67	149+310.931	149+413.500	102.6	-	-	60	-	-
68	149+501.317	149+556.886	055.6	-	-	60	-	-
69	149+643.043	149+680.717	037.7	-	-	60	-	-
70	149+834.017	149+862.094	028.1	-	-	60	-	-
71	150+032.296	150+081.529	049.2	-	-	-	-	300
72	150+398.511	150+423.681	025.2	-	-	60	-	-
73	150+499.143	150+556.825	057.7	-	-	60	-	-
74	150+626.984	150+634.003	007.0	-	-	-	80	-
75	150+685.255	150+712.991	027.7	-	-	40	-	-
76	150+766.145	150+828.650	062.5	-	-	40	-	-
77	150+900.268	150+916.455	016.2	-	-	-	-	120
78	150+969.582	150+979.342	009.8	-	-	60	-	-
79	151+026.608	151+049.796	023.2	-	-	50	-	-
80	151+107.013	151+226.876	119.9	-	-	43	-	-
81	151+228.063	151+262.101	034.0	-	-	60	-	-
82	151+342.705	151+357.772	015.1	-	-	60	-	-
83	151+533.453	151+561.714	028.3	-	-	60	-	-
84	151+656.326	151+729.117	072.8	-	-	-	-	150
85	151+832.955	151+909.706	076.8	-	-	60	-	-
86	151+964.457	151+992.180	027.7	-	-	60	-	-
87	152+107.225	152+177.658	070.4	-	-	-	90	-
88	152+285.211	152+361.607	076.4	-	-	50	-	-
89	152+417.194	152+450.703	033.5	-	-	60	-	-
90	152+533.850	152+607.245	073.4	-	-	-	-	150
91	152+690.221	152+705.349	015.1	-	-	60	-	-
92	152+782.914	152+887.980	105.1	-	-	48	-	-
93	152+964.953	153+031.938	067.0	-	-	60	-	-
94	153+087.909	153+168.660	080.8	-	-	60	-	-
95	153+201.935	153+278.699	076.8	-	-	-	70	-
96	153+348.403	153+379.192	030.8	-	-	-	-	250
97	153+435.886	153+459.322	023.4	-	-	-	90	-
98	153+622.316	153+648.131	025.8	-	-	60	-	-
100	153+774.027	153+782.684	008.7	-	-	-	90	-
102	153+854.831	153+884.543	029.7	-	-	-	-	150
103	153+925.682	153+931.151	005.5	-	-	-	80	-
		Total	**4310.8**					



Project : NH-713 (Joram - Palin - Koloriang Road)					
MNBr. : 140+975 (1x34.0)			Total	Rate	Ammount
	Excavation				
	Excavation in Hard Rock	Cum	**1120.83**	640.00	717333.12
	Excavation in Weathered Rock	Cum	**177.91**	190.00	33802.90
	Excavation in Soil	Cum	**0.00**		0.00
	Compacted Sand/Gravel Filling	Cum	**0.00**		0.00
	Concrete grade M 15 for levelling course	Cum	**53.37**	7546.00	402752.66
	Concrete grade M-15 in Open foundation of Retaining Wall	Cum	**147.62**	7546.00	1113940.52
	Concrete grade M-35 in Open foundation	Cum	**249.60**	9592.00	2394163.20
	Sand & boulder filling below raft	Cum	**0.00**		0.00
	Rock anchoring in rock (Open foundation)	No.	**0.00**		0.00
	Bored cast-in-situ M-35 grade RCC piles 1200mm dia		**0.00**		0.00
	In soil	RM	**0.00**		0.00
	Rock Socketing	RM	**0.00**		0.00
	Concrete grade M-35 in pile cap	Cum	**0.00**		0.00
	Cutting edge	MT	**0.00**		0.00
	Curb Concrete (M-25 Grade)	Cum	**0.00**		0.00
	Bottom Plug Concrete (M-25 Grade)	Cum	**0.00**		0.00
	Intermediate Plug Concrete(M-25 Grade)	Cum	**0.00**		0.00
	Well Steining concrete(M-25 Grade)	Cum	**0.00**		0.00
	Well Top Plug Concrete(M-25 Grade)	Cum	**0.00**		0.00
	Well cap concrete(M-25 Grade)	Cum	**0.00**		0.00
	Sand filling in well	Cum	**0.00**		0.00
	Well Sinking (Measured from well cap top)	Lin.m	**0.00**		0.00
	7m Dia Well		**0.00**		0.00
	0-3 m	Lin.m	**0.00**		0.00
	3 -10 m	Lin.m	**0.00**		0.00
	10m - 15m	Lin.m	**0.00**		0.00
	15m - 20m	Lin.m	**0.00**		0.00
	20m - 25m	Lin.m	**0.00**		0.00
	25m - 30m	Lin.m	**0.00**		0.00
	30m - 35m	Lin.m	**0.00**		0.00
	35m - 40m	Lin.m	**0.00**		0.00
	8m Dia Well		**0.00**		0.00
	0-3 m	Lin.m	**0.00**		0.00
	3 -10 m	Lin.m	**0.00**		0.00
	10m - 15m	Lin.m	**0.00**		0.00
	15m - 20m	Lin.m	**0.00**		0.00
	20m - 25m	Lin.m	**0.00**		0.00
	25m - 30m	Lin.m	**0.00**		0.00
	30m - 35m	Lin.m	**0.00**		0.00
	35m - 40m	Lin.m	**0.00**		0.00
	10m Dia Well		**0.00**		0.00
	0-3 m	Lin.m	**0.00**		0.00
	3 -10 m	Lin.m	**0.00**		0.00
	10m - 15m	Lin.m	**0.00**		0.00
	15m - 20m	Lin.m	**0.00**		0.00
	20m - 25m	Lin.m	**0.00**		0.00
	25m - 30m	Lin.m	**0.00**		0.00
	30m - 35m	Lin.m	**0.00**		0.00
	35m - 40m	Lin.m	**0.00**		0.00
	11m Dia Well		**0.00**		0.00
	0-3 m	Lin.m	**0.00**		0.00
	3 -10 m	Lin.m	**0.00**		0.00
	10m - 15m	Lin.m	**0.00**		0.00
	15m - 20m	Lin.m	**0.00**		0.00
	20m - 25m	Lin.m	**0.00**		0.00
	25m - 30m	Lin.m	**0.00**		0.00
	30m - 35m	Lin.m	**0.00**		0.00
	35m - 40m	Lin.m	**0.00**		0.00
	Concrete grade M-15 in substructure of Retaining Wall	Cum	**263.78**	7982.00	2105491.96
	Concrete grade M-35 in substructure	Cum	**291.70**	10393.00	3031648.49

Project : NH-713 (Joram - Palin - Koloriang Road)					
MNBr. : 140+975 (1x34.0)			Total	Rate	Ammount
	Back filling	Cum	**1610.89**	1070.00	1723650.16
	Filter media	Cum	**349.87**	2365.00	827447.28
	RCC in Slab,grade M-30	Cum	**0.00**		0.00
	RCC in Slab,grade M-35	Cum	**158.90**	11419.00	1814467.68
	RCC T-Girders concrete, grade M-35	Cum	**0.00**		0.00
	i)PSC T-Girders concrete, grade M-45	Cum	**182.70**	12623.00	2306184.23
	ii)PSC voided slab concrete, grade M-40	Cum	**0.00**		0.00
	iii)PSC box concrete, grade M-40	Cum	**0.00**		0.00
	PSC Plank concrete, grade M-40	Cum	**0.00**		0.00
	Reinforcement (HYSD Bar)		**0.00**		0.00
	Foundation	MT	**24.96**	79716.00	1989711.36
	Sub-Structure	MT	**29.17**	79871.00	2329517.59
	Super-Structure	MT	**56.68**	81273.00	4606228.55
	PSC Strands	MT	**11.88**	131872.00	1565980.00
	Void Former "800mm dia"	Lin.m	**0.00**		0.00
	Structural Steel	MT	**0.00**		0.00
	RCC Deck slab for Composite Girder M-35	Cum	**0.00**		0.00
	Elastomeric Bearings	Cucm	**17500**	1.00	17500.00
	POT-PTFE Bearings		**0.00**		0.00
	A. For 100 MT		**0.00**		0.00
	i)Fixed	No.	**0.00**		0.00
	ii)Free	No.	**0.00**		0.00
	iii)Sliding	No.	**0.00**		0.00
	B. For 200 MT		**0.00**		0.00
	i)Fixed	No.	**1.00**	42652.5	42652.50
	ii)Free	No.	**1.00**	34897.5	34897.50
	iii)Sliding	No.	**8.00**	52604.75	420838.00
	C. For 300 MT		**0.00**		0.00
	i)Fixed	No.	**0.00**		0.00
	ii)Free	No.	**0.00**		0.00
	iii)Sliding	No.	**0.00**		0.00
	D. For 400 MT		**0.00**		0.00
	i)Fixed	No.	**0.00**		0.00
	ii)Free	No.	**0.00**		0.00
	iii)Sliding	No.	**0.00**		0.00
	E. For 500 MT		**0.00**		0.00
	i)Fixed	No.	**0.00**		0.00
	ii)Free	No.	**0.00**		0.00
	iii)Sliding	No.	**0.00**		0.00
	F. For 600 MT		**0.00**		0.00
	i)Fixed	No.	**0.00**		0.00
	ii)Free	No.	**0.00**		0.00
	iii)Sliding	No.	**0.00**		0.00
	G. For 700 MT		**0.00**		0.00
	i)Fixed	No.	**0.00**		0.00
	ii)Free	No.	**0.00**		0.00
	iii)Sliding	No.	**0.00**		0.00
	Tar paper Bearings	Sqm	**9.60**	450	4320.00
	Seismic Restrainer(M40)	Sqm	**5.04**	18803.3333	94768.80
	Approch Slab		**0.00**		0.00
	M15 grade concrete	Cum	**17.52**	7256.00	127125.12
	M30 grade concrete	Cum	**33.60**	13363.00	448996.80
	RCC in Crash Barrier, Grade M-40	Lin.m	**82.00**	4371.00	358422.00
	Painting of RCC in Crash Barrier	Cum	**0.00**		0.00
	Pedestrian Railing	Lin.m	**0.00**		0.00
	Expansion joint		**0.00**		0.00
	Strip seal joints(40mm thick)	Lin.m	**32.00**	18494.00	591808.00
	Asphaltic Plug type joints(15mm thick)	Lin.m	**0.00**		0.00
	Wearing coat	sqm	**451.00**		0.00
	Drainage spouts	No.	**14.00**	1220.00	17080.00
	Weep holes	No.	**603.00**	155.00	93465.00

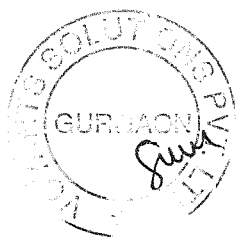
Project : NH-713 (Joram - Palin - Koloriang Road)					
MNBr. : 140+975 (1x34.0)			Total	Rate	Ammount
	RE Wall for across the road	Sqm	**0.00**		0.00
	Painting of structures	No.	**2.00**		0.00
	Raised Footpath M 25 Grade	cum	**0.00**		0.00
	Unmountable Krebs M25 Grade	cum	**0.00**		0.00
Bed Protection Work			**0.00**		0.00
	Excavation in soil	Cum	**0.00**		0.00
	Concrete grade M 15 for levelling course	Cum	**0.00**		0.00
	Rigid Apron	Cum	**0.00**		0.00
	Flexible Apron	Cum	**0.00**		0.00
	Curtain Wall M-15	Cum	**0.00**		0.00
	Guide Bund in Upstream side	Lin.m	**0.00**		0.00
	Filter media underneath stone pitching	Cum	**57.46**	2565.00	147384.90
	Launching Apron	Cum	**0.00**		0.00
	Stone Pitching on slopes	Cum	**114.92**	1252.00	143879.84
Rehabilitation			**0.00**		0.00
	Dismantling of Rcc Concrete	Cum	**0.00**		0.00
	Replacement of Railing M-30 Grade	M	**0.00**		0.00
	Providing Reinforced cement concrete M-30 Grade in approach slab including reinforcement for existing bridge	Cu.m.	**0.00**		0.00
	Providing 75mm thick concrete wearing course	Sq.m.	**0.00**		0.00
	Providing & fixing new drainage spouts in replacement of existing drainage spouts	No.	**0.00**		0.00
			OK		**29505460.00**



Project : NH-713 (Joram - Palin - Koloriang Road)					
MNBr. : 142+500 (1x10.0)			Total	Rate	Amount
	Excavation				
	Excavation in Hard Rock	Cum	**172.91**	640.00	110661.12
	Excavation in Weathered Rock	Cum	**288.48**	190.00	54811.58
	Excavation in Soil	Cum	**0.00**		0
	Compacted Sand/Gravel Filling	Cum	**0.00**		0
	Concrete grade M 15 for levelling course	Cum	**51.98**	7546.00	392241.08
	Concrete grade M-15 in Open foundation of Retaining Wall	Cum	**168.43**	7546.00	1270957.69
	Concrete grade M-30 in Open foundation	Cum	**181.66**	9592.00	1742444.35
	Sand & boulder filling below raft	Cum	**0.00**		0
	Rock anchoring in rock (Open foundation)	No.	**0.00**		0
	Bored cast-in-situ M-35 grade RCC piles 1200mm dia		**0.00**		0
	In soil	RM	**0.00**		0
	Rock Socketing	RM	**0.00**		0
	Concrete grade M-35 in pile cap	Cum	**0.00**		0
	Cutting edge	MT	**0.00**		0
	Curb Concrete (M-25 Grade)	Cum	**0.00**		0
	Bottom Plug Concrete (M-25 Grade)	Cum	**0.00**		0
	Intermediate Plug Concrete(M-25 Grade)	Cum	**0.00**		0
	Well Steining concrete(M-25 Grade)	Cum	**0.00**		0
	Well Top Plug Concrete(M-25 Grade)	Cum	**0.00**		0
	Well cap concrete(M-25 Grade)	Cum	**0.00**		0
	Sand filling in well	Cum	**0.00**		0
	Well Sinking (Measured from well cap top)	Lin.m	**0.00**		0
	7m Dia Well		**0.00**		0
	0-3 m	Lin.m	**0.00**		0
	3 -10 m	Lin.m	**0.00**		0
	10m - 15m	Lin.m	**0.00**		0
	15m - 20m	Lin.m	**0.00**		0
	20m - 25m	Lin.m	**0.00**		0
	25m - 30m	Lin.m	**0.00**		0
	30m - 35m	Lin.m	**0.00**		0
	35m - 40m	Lin.m	**0.00**		0
	8m Dia Well		**0.00**		0
	0-3 m	Lin.m	**0.00**		0
	3 -10 m	Lin.m	**0.00**		0
	10m - 15m	Lin.m	**0.00**		0
	15m - 20m	Lin.m	**0.00**		0
	20m - 25m	Lin.m	**0.00**		0
	25m - 30m	Lin.m	**0.00**		0
	30m - 35m	Lin.m	**0.00**		0
	35m - 40m	Lin.m	**0.00**		0
	10m Dia Well		**0.00**		0
	0-3 m	Lin.m	**0.00**		0
	3 -10 m	Lin.m	**0.00**		0
	10m - 15m	Lin.m	**0.00**		0
	15m - 20m	Lin.m	**0.00**		0
	20m - 25m	Lin.m	**0.00**		0
	25m - 30m	Lin.m	**0.00**		0
	30m - 35m	Lin.m	**0.00**		0
	35m - 40m	Lin.m	**0.00**		0
	11m Dia Well		**0.00**		0
	0-3 m	Lin.m	**0.00**		0
	3 -10 m	Lin.m	**0.00**		0
	10m - 15m	Lin.m	**0.00**		0
	15m - 20m	Lin.m	**0.00**		0
	20m - 25m	Lin.m	**0.00**		0
	25m - 30m	Lin.m	**0.00**		0
	30m - 35m	Lin.m	**0.00**		0
	35m - 40m	Lin.m	**0.00**		0
	Concrete grade M-15 in substructure of Retaining Wall	Cum	**271.76**	7982.00	2169188.32

Project : NH-713 (Joram - Palin - Koloriang Road)					
MNBr. : 142+500 (1x10.0)			Total	Rate	Amount
	Concrete grade M-30 in substructure	Cum	**134.33**	10393.00	1396112.48
	Back filling	Cum	**544.57**	1070.00	582684.55
	Filter media	Cum	**204.96**	2365.00	484730.4
	RCC in Slab,grade M-30	Cum	**159.62**	10948.00	1747475.97
	RCC in Slab,grade M-45	Cum	**0.00**		0
	RCC T-Girders concrete, grade M-35	Cum	**0.00**		0
	i)PSC T-Girders concrete, grade M-45	Cum	**0.00**		0
	ii)PSC voided slab concrete, grade M-40	Cum	**0.00**		0
	iii)PSC box concrete, grade M-40	Cum	**0.00**		0
	PSC Plank concrete, grade M-40	Cum	**0.00**		0
	Reinforcement (HYSD Bar)		**0.00**		0
	Foundation	MT	**18.17**	79716.00	1448120.86
	Sub-Structure	MT	**13.43**	79871.00	1072907.14
	Super-Structure	MT	**15.96**	81273.00	1297279.63
	PSC Strands	MT	**0.00**		0
	Void Former "800mm dia"	Lin.m	**0.00**		0
	Structural Steel	MT	**0.00**		0
	RCC Deck slab for Composite Girder M-35	Cum	**0.00**		0
	Elastomeric Bearings	Cucm	**0**	1.00	0
	POT-PTFE Bearings		**0.00**		0
	A. For 100 MT		**0.00**		0
	i)Fixed	No.	**0.00**		0
	ii)Free	No.	**0.00**		0
	iii)Sliding	No.	**0.00**		0
	B. For 200 MT		**0.00**		0
	i)Fixed	No.	**0.00**	0	0
	ii)Free	No.	**0.00**	0	0
	iii)Sliding	No.	**0.00**	0	0
	C. For 300 MT		**0.00**		0
	i)Fixed	No.	**0.00**		0
	ii)Free	No.	**0.00**		0
	iii)Sliding	No.	**0.00**		0
	D. For 400 MT		**0.00**		0
	i)Fixed	No.	**0.00**		0
	ii)Free	No.	**0.00**		0
	iii)Sliding	No.	**0.00**		0
	E. For 500 MT		**0.00**		0
	i)Fixed	No.	**0.00**		0
	ii)Free	No.	**0.00**		0
	iii)Sliding	No.	**0.00**		0
	F. For 600 MT		**0.00**		0
	i)Fixed	No.	**0.00**		0
	ii)Free	No.	**0.00**		0
	iii)Sliding	No.	**0.00**		0
	G. For 700 MT		**0.00**		0
	i)Fixed	No.	**0.00**		0
	ii)Free	No.	**0.00**		0
	iii)Sliding	No.	**0.00**		0
	Tar paper Bearings	Sqm	**10.32**	450	4644
	Seismic Restrainer	Sqm	**0.00**		0
	Approch Slab		**0.00**		0
	M15 grade concrete	Cum	**18.83**	7256.00	136659.504
	M30 grade concrete	Cum	**36.12**	13363.00	482671.56
	RCC in Crash Barrier, Grade M-40	Lin.m	**34.00**	4371.00	148614
	Painting of RCC in Crash Barrier	Cum	**0.00**		0
	Pedestrian Railing	Lin.m	**0.00**		0
	Expansion joint		**0.00**		0
	Strip seal joints(40mm thick)	Lin.m	**0.00**	18494.00	0
	Asphaltic Plug type joints(15mm thick)	Lin.m	**34.40**	3410.00	117304
	Wearing coat	sqm	**207.40**		0

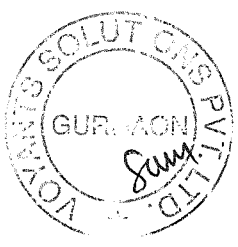
Project : NH-713 (Joram - Palin - Koloriang Road)					
MNBr. : 142+500 (1x10.0)			Total	Rate	Amount
	Drainage spouts	No.	**4.00**	1220.00	4880
	Weep holes	No.	**342.00**	155.00	53010
	RE Wall for across the road	Sqm	**0.00**		0
	Painting of structures	No.	**2.00**	86.00	172
	Raised Footpath M 25 Grade	cum	**0.00**		0
	Unmountable Krebs M25 Grade	cum	**0.00**		0
Bed Protection Work			**0.00**		0
	Excavation in soil	Cum	**509.79**	133.00	67801.405
	Concrete grade M 15 for levelling course	Cum	**12.94**	7546.00	97637.694
	Rigid Apron	Cum	**84.46**	1302.00	109965.618
	Flexible Apron	Cum	**139.05**	6016.00	836524.8
	Curtain Wall M-15	Cum	**85.78**	7546.00	647295.88
	Guide Bund in Upstream side	Lin.m	**0.00**		0
	Filter media underneath stone pitching	Cum	**36.00**	2565.00	92334.87
	Launching Apron	Cum	**0.00**		0
	Stone Pitching on slopes	Cum	**72.00**	1252.00	90138.992
Rehabilitation			**0.00**		0
	Dismantling of Rcc Concrete	Cum	**0.00**		0
	Replacement of Railing M-30 Grade	M	**0.00**		0
	Providing Reinforced cement concrete M-30 Grade in approach slab including reinforcement for existing bridge	Cu.m	**0.00**		0
	Providing 75mm thick concrete wearing course	Sq.m	**0.00**		0
	Providing & fixing new drainage spouts in replacement of existing drainage spouts	No.	**0.00**		0
			OK		**16659270**



Project : NH-713 (Joram - Palin - Koloriang Road)					
MNBr. : 145+500 (1x39.0)			Total	Rate	Amount
	Excavation				
	Excavation in Hard Rock	Cum	**1423.58**	640.00	911091.20
	Excavation in Weathered Rock	Cum	**268.60**	190.00	51034.00
	Excavation in Soil	Cum	**0.00**		0.00
	Compacted Sand/Gravel Filling	Cum	**0.00**		0.00
	Concrete grade M 15 for levelling course	Cum	**80.58**	7546.00	608056.68
	Concrete grade M-15 in Open foundation of Retaining Wall	Cum	**323.40**	7546.00	2440376.40
	Concrete grade M-35 in Open foundation	Cum	**329.60**	9592.00	3161523.20
	Sand & boulder filling below raft	Cum	**0.00**		0.00
	Rock anchoring in rock (Open foundation)	No.	**0.00**		0.00
	Bored cast-in-situ M-35 grade RCC piles 1200mm dia		**0.00**		0.00
	In soil	RM	**0.00**		0.00
	Rock Socketing	RM	**0.00**		0.00
	Concrete grade M-35 in pile cap	Cum	**0.00**		0.00
	Cutting edge	MT	**0.00**		0.00
	Curb Concrete (M-25 Grade)	Cum	**0.00**		0.00
	Bottom Plug Concrete (M-25 Grade)	Cum	**0.00**		0.00
	Intermediate Plug Concrete(M-25 Grade)	Cum	**0.00**		0.00
	Well Steining concrete(M-25 Grade)	Cum	**0.00**		0.00
	Well Top Plug Concrete(M-25 Grade)	Cum	**0.00**		0.00
	Well cap concrete(M-25 Grade)	Cum	**0.00**		0.00
	Sand filling in well	Cum	**0.00**		0.00
	Well Sinking (Measured from well cap top)	Lin.m	**0.00**		0.00
	7m Dia Well		**0.00**		0.00
	0-3 m	Lin.m	**0.00**		0.00
	3 -10 m	Lin.m	**0.00**		0.00
	10m - 15m	Lin.m	**0.00**		0.00
	15m - 20m	Lin.m	**0.00**		0.00
	20m - 25m	Lin.m	**0.00**		0.00
	25m - 30m	Lin.m	**0.00**		0.00
	30m - 35m	Lin.m	**0.00**		0.00
	35m - 40m	Lin.m	**0.00**		0.00
	8m Dia Well		**0.00**		0.00
	0-3 m	Lin.m	**0.00**		0.00
	3 -10 m	Lin.m	**0.00**		0.00
	10m - 15m	Lin.m	**0.00**		0.00
	15m - 20m	Lin.m	**0.00**		0.00
	20m - 25m	Lin.m	**0.00**		0.00
	25m - 30m	Lin.m	**0.00**		0.00
	30m - 35m	Lin.m	**0.00**		0.00
	35m - 40m	Lin.m	**0.00**		0.00
	10m Dia Well		**0.00**		0.00
	0-3 m	Lin.m	**0.00**		0.00
	3 -10 m	Lin.m	**0.00**		0.00
	10m - 15m	Lin.m	**0.00**		0.00
	15m - 20m	Lin.m	**0.00**		0.00
	20m - 25m	Lin.m	**0.00**		0.00
	25m - 30m	Lin.m	**0.00**		0.00
	30m - 35m	Lin.m	**0.00**		0.00
	35m - 40m	Lin.m	**0.00**		0.00
	11m Dia Well		**0.00**		0.00
	0-3 m	Lin.m	**0.00**		0.00
	3 -10 m	Lin.m	**0.00**		0.00
	10m - 15m	Lin.m	**0.00**		0.00
	15m - 20m	Lin.m	**0.00**		0.00
	20m - 25m	Lin.m	**0.00**		0.00
	25m - 30m	Lin.m	**0.00**		0.00
	30m - 35m	Lin.m	**0.00**		0.00
	35m - 40m	Lin.m	**0.00**		0.00
	Concrete grade M-15 in substructure of Retaining Wall	Cum	**630.30**	7982.00	5031054.60
	Concrete grade M-35 in substructure	Cum	**456.43**	10393.00	4743687.38
	Back filling	Cum	**2963.57**	1070.00	3171023.11
	Filter media	Cum	**516.67**	2365.00	1221929.28

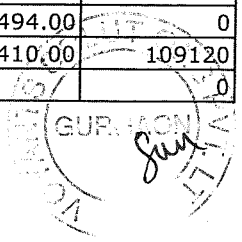
Project : NH-713 (Joram - Palin - Koloriang Road)					
MNBr. : 145+500 (1x39.0)			Total	Rate	Amount
RCC in Slab,grade M-30		Cum	**0.00**	10948.00	0.00
RCC in Slab,grade M-35		Cum	**180.51**	9592.00	1731461.51
RCC T-Girders concrete, grade M-35		Cum	**0.00**		0.00
i)PSC T-Girders concrete, grade M-45		Cum	**220.77**	12122.00	2676198.18
ii)PSC voided slab concrete, grade M-40		Cum	**0.00**	11482.00	0.00
iii)PSC box concrete, grade M-40		Cum	**0.00**		0.00
PSC Plank concrete, grade M-40		Cum	**0.00**		0.00
Reinforcement (HYSD Bar)			**0.00**		0.00
Foundation		MT	**32.96**	79716.00	2627439.36
Sub-Structure		MT	**43.57**	79871.00	3480219.08
Super-Structure		MT	**65.38**	81273.00	5313384.92
PSC Strands		MT	**14.35**	131872.00	1892363.20
Void Former "800mm dia"		Lin.m	**0.00**		0.00
Structural Steel		MT	**0.00**		0.00
RCC Deck slab for Composite Girder M-35		Cum	**0.00**		0.00
Elastomeric Bearings		Cucm	**17500**	1.00	17500.00
POT-PTFE Bearings			**0.00**		0.00
A. For 100 MT			**0.00**		0.00
i)Fixed		No.	**0.00**		0.00
ii)Free		No.	**0.00**		0.00
iii)Sliding		No.	**0.00**		0.00
B. For 200 MT			**0.00**		0.00
i)Fixed		No.	**0.00**	0	0.00
ii)Free		No.	**0.00**	0	0.00
iii)Sliding		No.	**0.00**	0	0.00
C. For 300 MT			**0.00**		0.00
i)Fixed		No.	**1.00**	46917.75	46917.75
ii)Free		No.	**1.00**	38387.25	38387.25
iii)Sliding		No.	**8.00**	57865.225	462921.80
D. For 400 MT			**0.00**		0.00
i)Fixed		No.	**0.00**		0.00
ii)Free		No.	**0.00**		0.00
iii)Sliding		No.	**0.00**		0.00
E. For 500 MT			**0.00**		0.00
i)Fixed		No.	**0.00**		0.00
ii)Free		No.	**0.00**		0.00
iii)Sliding		No.	**0.00**		0.00
F. For 600 MT			**0.00**		0.00
i)Fixed		No.	**0.00**		0.00
ii)Free		No.	**0.00**		0.00
iii)Sliding		No.	**0.00**		0.00
G. For 700 MT			**0.00**		0.00
i)Fixed		No.	**0.00**		0.00
ii)Free		No.	**0.00**		0.00
iii)Sliding		No.	**0.00**		0.00
Tar paper Bearings		Sqm	**9.60**	450	4320.00
Seismic Restrainer		Sqm	**5.04**	7220.48	36391.22
Approch Slab			**0.00**		0.00
M15 grade concrete		Cum	**17.52**	7256.00	127125.12
M30 grade concrete		Cum	**33.60**	13363.00	448996.80
RCC in Crash Barrier, Grade M-40		Lin.m	**92.00**	4371.00	402132.00
Painting of RCC in Crash Barrier		Cum	**0.00**		0.00
Pedestrian Railing		Lin.m	**0.00**		0.00
Expansion joint			**0.00**		0.00
Strip seal joints(40mm thick)		Lin.m	**32.00**	18494.00	591808.00
Asphaltic Plug type joints(15mm thick)		Lin.m	**0.00**	3410.00	0.00
Wearing coat		sqm	**506.00**		0.00
Drainage spouts		No.	**16.00**	1220.00	19520.00
Weep holes		No.	**885.00**	155.00	137175.00
RE Wall for across the road		Sqm	**0.00**		0.00
Painting of structures		No.	**2.00**	86.00	172.00
Raised Footpath M 25 Grade		cum	**0.00**		0.00
Unmountable Krebs M25 Grade		cum	**0.00**		0.00

Project : NH-713 (Joram - Palin - Koloriang Road)					
MNBr. : 145+500 (1x39.0)			Total	Rate	Amount
Bed Protection Work			**0.00**		0.00
	Excavation in soil	Cum	**0.00**	133.00	0.00
	Concrete grade M 15 for levelling course	Cum	**0.00**	7546.00	0.00
	Rigid Apron	Cum	**0.00**	1302.00	0.00
	Flexible Apron	Cum	**0.00**	6016.00	0.00
	Curtain Wall M-15	Cum	**0.00**	7546.00	0.00
	Guide Bund in Upstream side	Lin.m	**0.00**		0.00
	Filter media underneath stone pitching	Cum	**108.21**	2565.00	277556.09
	Launching Apron	Cum	**0.00**		0.00
	Stone Pitching on slopes	Cum	**216.42**	1252.00	270956.59
Rehabilitation			**0.00**		0.00
	Dismantling of Rcc Concrete	Cum	**0.00**		0.00
	Replacement of Railing M-30 Grade	M	**0.00**		0.00
	Providing Reinforced cement concrete M-30 Grade in approach slab including reinforcement for existing bridge	Cu.m	**0.00**		0.00
	Providing 75mm thick concrete wearing course	Sq.m	**0.00**		0.00
	Providing & fixing new drainage spouts in replacement of existing drainage spouts	No.	**0.00**		0.00
			OK		**41942730.00**



Project : NH-713 (Joram - Palin - Koloriang Road)					
MNBr. : 147+500 (1x7.0)			Total	Rate	Amount
	Excavation				
	Excavation in Hard Rock	Cum	**163.54**	640.00	104664.32
	Excavation in Weathered Rock	Cum	**272.25**	190.00	51726.93
	Excavation in Soil	Cum	**0.00**		0
	Compacted Sand/Gravel Filling	Cum	**0.00**		0
	Concrete grade M 15 for levelling course	Cum	**48.83**	7546.00	368448.542
	Concrete grade M-15 in Open foundation of Retaining Wall	Cum	**236.68**	7546.00	1785987.28
	Concrete grade M-30 in Open foundation	Cum	**97.44**	9592.00	934644.48
	Sand & boulder filling below raft	Cum	**0.00**		0
	Rock anchoring in rock (Open foundation)	No.	**0.00**		0
	Bored cast-in-situ M-35 grade RCC piles 1200mm dia		**0.00**		0
	In soil	RM	**0.00**		0
	Rock Socketing	RM	**0.00**		0
	Concrete grade M-35 in pile cap	Cum	**0.00**		0
	Cutting edge	MT	**0.00**		0
	Curb Concrete (M-25 Grade)	Cum	**0.00**		0
	Bottom Plug Concrete (M-25 Grade)	Cum	**0.00**		0
	Intermediate Plug Concrete(M-25 Grade)	Cum	**0.00**		0
	Well Steining concrete(M-25 Grade)	Cum	**0.00**		0
	Well Top Plug Concrete(M-25 Grade)	Cum	**0.00**		0
	Well cap concrete(M-25 Grade)	Cum	**0.00**		0
	Sand filling in well	Cum	**0.00**		0
	Well Sinking (Measured from well cap top)	Lin.m	**0.00**		0
	7m Dia Well		**0.00**		0
	0-3 m	Lin.m	**0.00**		0
	3 -10 m	Lin.m	**0.00**		0
	10m - 15m	Lin.m	**0.00**		0
	15m - 20m	Lin.m	**0.00**		0
	20m - 25m	Lin.m	**0.00**		0
	25m - 30m	Lin.m	**0.00**		0
	30m - 35m	Lin.m	**0.00**		0
	35m - 40m	Lin.m	**0.00**		0
	8m Dia Well		**0.00**		0
	0-3 m	Lin.m	**0.00**		0
	3 -10 m	Lin.m	**0.00**		0
	10m - 15m	Lin.m	**0.00**		0
	15m - 20m	Lin.m	**0.00**		0
	20m - 25m	Lin.m	**0.00**		0
	25m - 30m	Lin.m	**0.00**		0
	30m - 35m	Lin.m	**0.00**		0
	35m - 40m	Lin.m	**0.00**		0
	10m Dia Well		**0.00**		0
	0-3 m	Lin.m	**0.00**		0
	3 -10 m	Lin.m	**0.00**		0
	10m - 15m	Lin.m	**0.00**		0
	15m - 20m	Lin.m	**0.00**		0
	20m - 25m	Lin.m	**0.00**		0
	25m - 30m	Lin.m	**0.00**		0
	30m - 35m	Lin.m	**0.00**		0
	35m - 40m	Lin.m	**0.00**		0
	11m Dia Well		**0.00**		0
	0-3 m	Lin.m	**0.00**		0
	3 -10 m	Lin.m	**0.00**		0
	10m - 15m	Lin.m	**0.00**		0
	15m - 20m	Lin.m	**0.00**		0
	20m - 25m	Lin.m	**0.00**		0
	25m - 30m	Lin.m	**0.00**		0
	30m - 35m	Lin.m	**0.00**		0
	35m - 40m	Lin.m	**0.00**		0
	Concrete grade M-15 in substructure of Retaining Wall	Cum	**422.92**	7982.00	3375747.44

Project : NH-713 (Joram - Palin - Koloriang Road)					
MNBr. : 147+500 (1x7.0)			Total	Rate	Amount
	Concrete grade M-30 in substructure	Cum	**143.84**	10393.00	1494929.12
	Back filling	Cum	**939.32**	1070.00	1005068.12
	Filter media	Cum	**282.50**	2365.00	668121.96
	RCC in Slab,grade M-30	Cum	**94.08**	10948.00	1029987.84
	RCC in Slab,grade M-45	Cum	**0.00**		0
	RCC T-Girders concrete, grade M-35	Cum	**0.00**		0
	i)PSC T-Girders concrete, grade M-45	Cum	**0.00**		0
	ii)PSC voided slab concrete, grade M-40	Cum	**0.00**		0
	iii)PSC box concrete, grade M-40	Cum	**0.00**		0
	PSC Plank concrete, grade M-40	Cum	**0.00**		0
	Reinforcement (HYSD Bar)		**0.00**		0
	Foundation	MT	**9.74**	79716.00	776752.704
	Sub-Structure	MT	**14.38**	79871.00	1148864.46
	Super-Structure	MT	**9.41**	81273.00	764616.384
	PSC Strands	MT	**0.00**		0
	Void Former "800mm dia"	Lin.m	**0.00**		0
	Structural Steel	MT	**0.00**		0
	RCC Deck slab for Composite Girder M-35	Cum	**0.00**		0
	Elastomeric Bearings	Cucm	**0**	1.00	0
	POT-PTFE Bearings		**0.00**		0
	A. For 100 MT		**0.00**		0
	i)Fixed	No.	**0.00**		0
	ii)Free	No.	**0.00**		0
	iii)Sliding	No.	**0.00**		0
	B. For 200 MT		**0.00**		0
	i)Fixed	No.	**0.00**	0	0
	ii)Free	No.	**0.00**	0	0
	iii)Sliding	No.	**0.00**	0	0
	C. For 300 MT		**0.00**		0
	i)Fixed	No.	**0.00**		0
	ii)Free	No.	**0.00**		0
	iii)Sliding	No.	**0.00**		0
	D. For 400 MT		**0.00**		0
	i)Fixed	No.	**0.00**		0
	ii)Free	No.	**0.00**		0
	iii)Sliding	No.	**0.00**		0
	E. For 500 MT		**0.00**		0
	i)Fixed	No.	**0.00**		0
	ii)Free	No.	**0.00**		0
	iii)Sliding	No.	**0.00**		0
	F. For 600 MT		**0.00**		0
	i)Fixed	No.	**0.00**		0
	ii)Free	No.	**0.00**		0
	iii)Sliding	No.	**0.00**		0
	G. For 700 MT		**0.00**		0
	i)Fixed	No.	**0.00**		0
	ii)Free	No.	**0.00**		0
	iii)Sliding	No.	**0.00**		0
	Tar paper Bearings	Sqm	**9.60**	450	4320
	Seismic Restrainer	Sqm	**0.00**		0
	Approch Slab		**0.00**		0
	M15 grade concrete	Cum	**17.52**	7256.00	127125.12
	M30 grade concrete	Cum	**33.60**	13363.00	448996.8
	RCC in Crash Barrier, Grade M-40	Lin.m	**28.00**	4371.00	122388
	Painting of RCC in Crash Barrier	Cum	**0.00**		0
	Pedestrian Railing	Lin.m	**0.00**		0
	Expansion joint		**0.00**		0
	Strip seal joints(40mm thick)	Lin.m	**0.00**	18494.00	0
	Asphaltic Plug type joints(15mm thick)	Lin.m	**32.00**	3410.00	109120
	Wearing coat	sqm	**154.00**		0



Project : NH-713 (Joram - Palin - Koloriang Road)					
MNBr. : 147+500 (1x7.0)			Total	Rate	Amount
	Drainage spouts	No.	**3.00**	1220.00	3660
	Weep holes	No.	**471.00**	155.00	73005
	RE Wall for across the road	Sqm	**0.00**		0
	Painting of structures	No.	**2.00**	86.00	172
	Raised Footpath M 25 Grade	cum	**0.00**		0
	Unmountable Krebs M25 Grade	cum	**0.00**		0
Bed Protection Work			**0.00**		0
	Excavation in soil	Cum	**537.22**	133.00	71450.26
	Concrete grade M 15 for levelling course	Cum	**13.24**	7546.00	99916.586
	Rigid Apron	Cum	**96.80**	1302.00	126030.996
	Flexible Apron	Cum	**142.29**	6016.00	856016.64
	Curtain Wall M-15	Cum	**87.78**	7546.00	662372.788
	Guide Bund in Upstream side	Lin.m	**0.00**		0
	Filter media underneath stone pitching	Cum	**54.09**	2565.00	138735.72
	Launching Apron	Cum	**0.00**		0
	Stone Pitching on slopes	Cum	**108.18**	1252.00	135436.352
Rehabilitation			**0.00**		0
	Dismantling of Rcc Concrete	Cum	**0.00**		0
	Replacement of Railing M-30 Grade	M	**0.00**		0
	Providing Reinforced cement concrete M-30 Grade in approach slab including reinforcement for existing bridge	Cu.m	**0.00**		0
	Providing 75mm thick concrete wearing course	Sq.m	**0.00**		0
	Providing & fixing new drainage spouts in replacement of existing drainage spouts	No.	**0.00**		0
			OK		**16488310**

Project : NH-713 (Joram - Palin - Koloriang Road)					
MNBr. : 153+500 (1x25.0)			Total	Rate	Amount
	Excavation				
	Excavation in Hard Rock	Cum	**977.06**	640.00	625315.20
	Excavation in Weathered Rock	Cum	**184.35**	190.00	35026.50
	Excavation in Soil	Cum	**0.00**		0.00
	Compacted Sand/Gravel Filling	Cum	**0.00**		0.00
	Concrete grade M 15 for levelling course	Cum	**55.31**	7546.00	417331.53
	Concrete grade M-15 in Open foundation of Retaining Wall	Cum	**164.70**	7546.00	1242826.20
	Concrete grade M-35 in Open foundation	Cum	**249.60**	9592.00	2394163.20
	Sand & boulder filling below raft	Cum	**0.00**		0.00
	Rock anchoring in rock (Open foundation)	No.	**0.00**		0.00
	Bored cast-in-situ M-35 grade RCC piles 1200mm dia		**0.00**		0.00
	In soil	RM	**0.00**		0.00
	Rock Socketing	RM	**0.00**		0.00
	Concrete grade M-35 in pile cap	Cum	**0.00**		0.00
	Cutting edge	MT	**0.00**		0.00
	Curb Concrete (M-25 Grade)	Cum	**0.00**		0.00
	Bottom Plug Concrete (M-25 Grade)	Cum	**0.00**		0.00
	Intermediate Plug Concrete(M-25 Grade)	Cum	**0.00**		0.00
	Well Steining concrete(M-25 Grade)	Cum	**0.00**		0.00
	Well Top Plug Concrete(M-25 Grade)	Cum	**0.00**		0.00
	Well cap concrete(M-25 Grade)	Cum	**0.00**		0.00
	Sand filling in well	Cum	**0.00**		0.00
	Well Sinking (Measured from well cap top)	Lin.m	**0.00**		0.00
	7m Dia Well		**0.00**		0.00
	0-3 m	Lin.m	**0.00**		0.00
	3 -10 m	Lin.m	**0.00**		0.00
	10m - 15m	Lin.m	**0.00**		0.00
	15m - 20m	Lin.m	**0.00**		0.00
	20m - 25m	Lin.m	**0.00**		0.00
	25m - 30m	Lin.m	**0.00**		0.00
	30m - 35m	Lin.m	**0.00**		0.00
	35m - 40m	Lin.m	**0.00**		0.00
	8m Dia Well		**0.00**		0.00
	0-3 m	Lin.m	**0.00**		0.00
	3 -10 m	Lin.m	**0.00**		0.00
	10m - 15m	Lin.m	**0.00**		0.00
	15m - 20m	Lin.m	**0.00**		0.00
	20m - 25m	Lin.m	**0.00**		0.00
	25m - 30m	Lin.m	**0.00**		0.00
	30m - 35m	Lin.m	**0.00**		0.00
	35m - 40m	Lin.m	**0.00**		0.00
	10m Dia Well		**0.00**		0.00
	0-3 m	Lin.m	**0.00**		0.00
	3 -10 m	Lin.m	**0.00**		0.00
	10m - 15m	Lin.m	**0.00**		0.00
	15m - 20m	Lin.m	**0.00**		0.00
	20m - 25m	Lin.m	**0.00**		0.00
	25m - 30m	Lin.m	**0.00**		0.00
	30m - 35m	Lin.m	**0.00**		0.00
	35m - 40m	Lin.m	**0.00**		0.00
	11m Dia Well		**0.00**		0.00
	0-3 m	Lin.m	**0.00**		0.00
	3 -10 m	Lin.m	**0.00**		0.00
	10m - 15m	Lin.m	**0.00**		0.00
	15m - 20m	Lin.m	**0.00**		0.00
	20m - 25m	Lin.m	**0.00**		0.00
	25m - 30m	Lin.m	**0.00**		0.00
	30m - 35m	Lin.m	**0.00**		0.00
	35m - 40m	Lin.m	**0.00**		0.00
	Concrete grade M-15 in substructure of Retaining Wall	Cum	**294.30**	7982.00	2349102.60
	Concrete grade M-35 in substructure	Cum	**291.70**	10393.00	3031648.49

Project : NH-713 (Joram - Palin - Koloriang Road)					
MNBr. : 153+500 (1x25.0)			Total	Rate	Amount
	Back filling	Cum	**1691.72**	1070.00	1810137.19
	Filter media	Cum	**366.67**	2365.00	867179.28
	RCC in Slab,grade M-30	Cum	**0.00**		0.00
	RCC in Slab,grade M-35	Cum	**92.00**	10955.00	1007860.00
	RCC T-Girders concrete, grade M-35	Cum	**136.80**	11419.00	1562107.78
	i)PSC T-Girders concrete, grade M-45	Cum	**0.00**	12122.00	0.00
	ii)PSC voided slab concrete, grade M-40	Cum	**0.00**	11482.00	0.00
	iii)PSC box concrete, grade M-40	Cum	**0.00**		0.00
	PSC Plank concrete, grade M-40	Cum	**0.00**		0.00
	Reinforcement (HYSD Bar)		**0.00**		0.00
	Foundation	MT	**24.96**	79716.00	1989711.36
	Sub-Structure	MT	**29.17**	79871.00	2329517.59
	Super-Structure	MT	**45.26**	81273.00	3678659.80
	PSC Strands	MT	**0.00**	131872.00	0.00
	Void Former "800mm dia"	Lin.m	**0.00**		0.00
	Structural Steel	MT	**0.00**		0.00
	RCC Deck slab for Composite Girder M-35	Cum	**0.00**		0.00
	Elastomeric Bearings	Cucm	**17500**	1.00	17500.00
	POT-PTFE Bearings		**0.00**		0.00
	A. For 100 MT		**0.00**		0.00
	i)Fixed	No.	**0.00**		0.00
	ii)Free	No.	**0.00**		0.00
	iii)Sliding	No.	**0.00**		0.00
	B. For 200 MT		**0.00**		0.00
	i)Fixed	No.	**1.00**	42652.5	42652.50
	ii)Free	No.	**1.00**	34897.5	34897.50
	iii)Sliding	No.	**8.00**	52604.75	420838.00
	C. For 300 MT		**0.00**		0.00
	i)Fixed	No.	**0.00**		0.00
	ii)Free	No.	**0.00**		0.00
	iii)Sliding	No.	**0.00**		0.00
	D. For 400 MT		**0.00**		0.00
	i)Fixed	No.	**0.00**		0.00
	ii)Free	No.	**0.00**		0.00
	iii)Sliding	No.	**0.00**		0.00
	E. For 500 MT		**0.00**		0.00
	i)Fixed	No.	**0.00**		0.00
	ii)Free	No.	**0.00**		0.00
	iii)Sliding	No.	**0.00**		0.00
	F. For 600 MT		**0.00**		0.00
	i)Fixed	No.	**0.00**		0.00
	ii)Free	No.	**0.00**		0.00
	iii)Sliding	No.	**0.00**		0.00
	G. For 700 MT		**0.00**		0.00
	i)Fixed	No.	**0.00**		0.00
	ii)Free	No.	**0.00**		0.00
	iii)Sliding	No.	**0.00**		0.00
	Tar paper Bearings	Sqm	**9.60**	450	4320.00
	Seismic Restrainer	Sqm	**5.04**	18803.3333	94768.80
	Approch Slab		**0.00**		0.00
	M15 grade concrete	Cum	**17.52**	7256.00	127125.12
	M30 grade concrete	Cum	**33.60**	13363.00	448996.80
	RCC in Crash Barrier, Grade M-40	Lin.m	**64.00**	4371.00	279744.00
	Painting of RCC in Crash Barrier	Cum	**0.00**		0.00
	Pedestrian Railing	Lin.m	**0.00**		0.00
	Expansion joint		**0.00**		0.00
	Strip seal joints(40mm thick)	Lin.m	**32.00**	18494.00	591808.00
	Asphaltic Plug type joints(15mm thick)	Lin.m	**0.00**	3410.00	0.00
	Wearing coat	sqm	**352.00**		0.00
	Drainage spouts	No.	**10.00**	1220.00	12200.00
	Weep holes	No.	**631.00**	155.00	97805.00

Project : NH-713 (Joram - Palin - Koloriang Road)					
MNBr. : 153+500 (1x25.0)			Total	Rate	Amount
	RE Wall for across the road	Sqm	**0.00**		0.00
	Painting of structures	No.	**2.00**	86.00	172.00
	Raised Footpath M 25 Grade	cum	**0.00**		0.00
	Unmountable Krebs M25 Grade	cum	**0.00**		0.00
Bed Protection Work			**0.00**		0.00
	Excavation in soil	Cum	**0.00**	133.00	0.00
	Concrete grade M 15 for levelling course	Cum	**0.00**	7546.00	0.00
	Rigid Apron	Cum	**0.00**	1302.00	0.00
	Flexible Apron	Cum	**0.00**	6016.00	0.00
	Curtain Wall M-15	Cum	**0.00**	7546.00	0.00
	Guide Bund in Upstream side	Lin.m	**0.00**		0.00
	Filter media underneath stone pitching	Cum	**66.34**	2565.00	170151.84
	Launching Apron	Cum	**0.00**		0.00
	Stone Pitching on slopes	Cum	**132.67**	1252.00	166104.09
Rehabilitation			**0.00**		0.00
	Dismantling of Rcc Concrete	Cum	**0.00**		0.00
	Replacement of Railing M-30 Grade	M	**0.00**		0.00
	Providing Reinforced cement concrete M-30 Grade in approach slab including reinforcement for existing bridge	Cu.m.	**0.00**		0.00
	Providing 75mm thick concrete wearing course	Sq.m.	**0.00**		0.00
	Providing & fixing new drainage spouts in replacement of existing drainage spouts	No.	**0.00**		0.00
			OK		**25849680.00**

Summary of Quantity of each Box Culvert (138 Km to 158 Km)

S.No.	Description	unit	45	14	18	3	8	2	2	6	Total Qty.	Rate	INR Cost
			1x2X2	1x2.5x2.0	1x3x3	1x3.5x3	1x4x3	1x4.5x3	1x5x4	1x6x4			
1	**Earth work in excavation**	cum	4872.67	1707.43	3545.49	647.53	1909.04	505.82	606.47	2001.56	15796.02	70.00	1105721.46
2	**PCC M-15 for leveling course**	cum	380.36	139.70	223.57	41.84	128.67	35.22	38.27	133.13	1120.77	7546.00	8457364.38
3	**PCC M-15**	cum	208.80	64.96	83.52	13.92	37.12	9.28	9.28	27.84	454.72	7546.00	3431317.12
4	**PCC M-20 for curtain wall**	cum	114.75	42.84	69.77	13.16	40.80	11.22	12.24	42.84	347.62	7546.00	2623110.34
5	***For Box Barrel***												0.00
5.a.	RCC M-25 grade conc. For foundation	cum	405.00	151.20	246.24	57.28	192.00	52.80	79.20	277.20	1460.92	9413.00	13751602.31
5.b.	RCC M-25 grade conc. For sub-structure	cum	564.30	175.56	528.12	88.02	292.32	73.08	97.08	291.24	2109.72	10122.00	21354585.84
5.c	RCC M-25 grade conc. For super-structure (box)	cum	337.50	126.00	303.70	57.28	192.00	52.80	79.20	277.20	1425.67	10763.00	15344507.74
6	***For Return Wall***												0.00
6.a	M15 PLUM CONCRETE .For foundation	cum	1175.85	365.82	1264.85	214.19	578.88	144.72	186.53	559.58	4490.42	7546.00	33884712.34
6.b	M15 PLUM CONCRETE .For Sub-structure	cum	1009.13	313.95	1085.51	183.82	496.80	124.20	160.08	480.24	3853.72	7982.00	30760385.06
7	**Reinforcement**	Mt	98.01	33.96	80.85	45.04	50.72	13.40	19.16	1039.82	1380.97	81273.00	112235917.78
8	**Weep Hole**	No.	2340.00	728.00	1476.00	249.00	664.00	166.00	220.00	660.00	6503.00	155.00	1007965.00
9	**Filter media**	cum	1388.34	431.93	880.50	147.05	392.83	98.21	130.75	392.26	3861.87	2365.00	9133325.39
10	**450mm thk floor apron (flexible)**	cum	151.88	56.70	92.34	17.42	54.00	14.85	16.20	56.70	460.08	6016.00	2767841.28
11	**750 mm thk Stone Apron (floor)**	cum	253.13	94.50	153.90	29.03	90.00	24.75	27.00	94.50	766.80	1302.00	998373.60
12	**RCC Parapet Wall**	Rm	225.00	84.00	273.60	51.60	160.00	44.00	48.00	168.00	1054.20	2379.00	2507941.80
13	**Guard Stone**	No.	180.00	56.00	252.00	48.00	144.00	40.00	44.00	156.00	920.00	2336.00	2149120.00
14	**Mark Post**	No.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
15	**Back Filling**	cum	1247.08	387.98	498.83	83.14	221.70	55.43	55.43	166.28	2715.86	1070.00	2905965.56
16	**Stone Pitching on slop**	cum	458.75	142.72	183.50	30.58	81.56	20.39	20.39	61.17	999.06	1252.00	1250818.98
17	**Filter media under stone pitching**	cum	229.38	71.36	91.75	15.29	40.78	10.19	10.19	30.58	499.53	2565.00	1281290.21
												Total	***266951866.000***