

Item No.	Description	Unit	Box	Pipe	Total
BILL NO. 5 - CROSS DRAINAGE WORKS					
5.01	Earth work in excavation for foundation of structures in by mechanical means as per drawing and technical specification, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom and backfilling with approved material all complete as per Technical specifications and as directed by the Engineer-in-charge.				
a	Ordinary Soil - Depth Upto 3m	cum	994	1097	2,091.54
b	Ordinary Rock - (not requiring blasting)	cum			-
5.02	Providing and laying Plain cement concrete in Levelling Course, mechanically mixed and compacted, including centering and shuttering all complete as per drawings and Technical specifications and as directed by the Engineer-in-charge.				-
a	PCC Grade M10	cum			-
b	PCC Grade M15	cum	260	1344	1,603.76
c	PCC Grade M20	cum			-
5.03	Providing and laying Plain/Reinforced Cement Concrete in Foundation mechanically mixed including centering and shuttering but excluding cost of reinforcement, all complete as per drawing and Technical specifications and as directed by the Engineer-in-charge.				-
a	PCC Grade M20	cum			-
b	RCC Grade M20	cum			-
c	RCC Grade M25	cum			-
d	RCC Grade M30	cum			-
e	RCC Grade M35	cum			-
5.04	Providing and laying Reinforced Cement Concrete in Substructure, mechanically mixed and compacted, including centering and shuttering but excluding cost of reinforcement, all complete as per drawings and Technical specifications and as directed by the Engineer-in-charge.				-
a	PCC Grade M20	cum			-
b	RCC Grade M20	cum			-
c	RCC Grade M25	cum			-
d	RCC Grade M30	cum	1578		1,578.14
e	RCC Grade M35	cum			-
5.05	Providing and laying Reinforced cement concrete in super-structure including centering and shuttering but excluding cost of reinforcement, all complete as per drawing and Technical specifications and as directed by the Engineer-in-charge.				-
	Height up to 5m - For solid slab				-
a	RCC Grade M25	cum			-
b	RCC Grade M30	cum			-
c	RCC Grade M35	cum			-
5.06	Laying Reinforced cement concrete pipe NP4/prestressed concrete pipe for culverts on first Class Granular Bedding in single row including fixing collar with cement mortar 1:2 but excluding excavation, protection works, backfilling, concrete and masonry works in head walls and parapets all complete as per drawing and Technical specifications and as directed by the Engineer-in-charge.				-
a	900mm dia. (internal)	m			-
b	1000mm dia. (internal)	m			-
c	1200mm dia. (internal)	m		785	784.80
5.07	Supplying, fitting and placing HYSD bar reinforcement all complete as per drawing and Technical specifications and as directed by the Engineer-in-charge.				-
a	For Foundation	tonne		23	22.75
b	For Substructure	tonne			-

Item No.	Description	Unit	Box	Pipe	Total
BILL NO. 5 - CROSS DRAINAGE WORKS					
c	For Superstructure	tonne	174		173.60
5.08	Providing and laying Reinforced cement concrete of M30 grade for approach slab including reinforcement and formwork all complete as per drawings and Technical specifications and as directed by the Engineer-in-charge.	cum	238		237.53
5.09	Providing and fixing the Tar paper bearing complete as per drawing and Technical specifications and as directed by the Engineer-in-charge.	sqm			-
5.10	Supplying, fitting and fixing in position true to line and level elastomeric bearing conforming to IRC: 83 (Part-II) section IX and clause 2005 of MoRTH specifications complete including all accessories as per drawing and Technical Specifications.	cucm			-
5.11	Providing and laying 65 mm wearing course on top of deck slab consisting of 25 mm thick mastic asphalt wearing course and 40 mm thick Bituminous concrete laid to required level and slope after cleaning the surface, including providing antiskid surface with bitumen precoated finegrained hard stone chipping of 13.2 mm nominal size at the rate of 0.005cum per 10 sqm and at an approximate spacing of 10 cm center to center in both directions, pressed into surface when the temperature of surfaces is not less than 1000C, protruding 1 mm to 4 mm over mastic surface, all complete as per clause 507 and 516.	sqm	974		973.95
5.12	Providing and laying 75 mm wearing course on top of deck slab consisting of 25 mm thick mastic asphalt wearing course and 50 mm thick Bituminous concrete laid to required level and slope after cleaning the surface, including providing antiskid surface with bitumen precoated finegrained hard stone chipping of 13.2 mm nominal size at the rate of 0.005cum per 10 sqm and at an approximate spacing of 10 cm center to center in both directions, pressed into surface when the temperature of surfaces is not less than 1000C, protruding 1 mm to 4 mm over mastic surface, all complete as per clause 507 and 516.	sqm			-
5.13	Providing weep holes in Brick masonry/Plain/ Reinforced concrete abutment, wing wall/ return wall with 100 mm dia PVC pipe, extending through the full width of the structure with slope of 1V :20H towards drawing face. complete as per Technical specifications clause 2706 and as directed by the Engineer-in-charge.	nr	755		755.00
5.14	Back filling with granular material behind box culvert, wing walls and return walls complete as per drawing and Technical Specification clause 710.1.4.of IRC:78 & 305.4.4	cum	4091		4,091.43
5.15	Providing and laying of Filter media behind walls of box with granular materials/stone crushed aggregates satisfying the requirements laid down in clause 2504.2.2. of MoRTH specifications to a thickness of not less than 600 mm with smaller size towards the soil and bigger size towards the wall and provided over the entire surface behind abutment, wing wall and return wall to the full height compacted to a firm condition complete as per drawing and Technical specifications and as directed by the Engineer-in-charge.	cum	580		579.63
5.16	Construction of precast RCC railing of M35 Grade, true to line and grade, tolerance of vertical RCC post not to exceed 1 in 500, leaving adequate space between vertical post for expansion, complete as per drawing and Technical specifications and as directed by the Engineer-in-charge.	m			-
5.17	Provision of an Reinforced cement concrete crash barrier at the edges of the road, approaches to bridge structures and medians, constructed with M-40 grade concrete with HYSD reinforcement conforming to IRC:21 and dowel bars 25 mm dia, 450 mm long at expansion joints filled with pre-moulded asphalt filler board, keyed to the structure on which it is built and installed as per design given in the enclosure to MOST circular No. RW/NH - 33022/1/94-DO III dated 24 June 1994 as per dimensions in the approved drawing and at locations directed by the Engineer, complete as per drawing and Technical specifications clause 2703 and as directed by the Engineer-in-charge.	m			-

Item No.	Description	Unit	Box	Pipe	Total
BILL NO. 5 - CROSS DRAINAGE WORKS					
5.18	Providing and fitting Drainage Spouts complete as per drawing and Technical specifications and as directed by the Engineer-in-charge.	nr	18		18.00
5.19	Providing and fixing filler type expansion joint in slab bridges and culverts complete as per technical specification section 2600	m	101		101.20
5.20	Providing and laying of Asphaltic Plug joint to provide for horizontal movement of 25 mm and vertical movement of 2 mm, depth of joint varying from 75 mm to 100 mm, width varying from 500 mm to 750 mm (in traffic direction), covered with a closure plate of 200mm x 6mm of weldable structural steel conforming to IS: 2062, asphaltic plug to consist of polymer modified bitumen binder, carefully selected single size aggregate of 12.5 mm nominal size and a heat resistant foam caulking/backer rod, all as per approved drawings and specifications.	m			-
5.21	Providing and fixing RCC Marker posts of dimensions as shown in Drawings and as per Technical Specifications and as directed by the Engineer-in-charge	nr		104	104.00
5.22	Providing and laying Filter material underneath pitching in slopes complete as per drawing and Technical specification	cum			-
5.23	Providing and laying Pitching on slopes laid over prepared filter media including boulder apron laid dry in front of toe of embankment complete as per drawing and Technical specifications	cum			-
5.24	Providing and laying flooring laid over cement concrete bedding grade M-15 complete as per drawing and technical specifications Clause 1303				-
5.25	Flexible Apron :Construction of flexible apron 750 mm thick comprising of loose stone boulders weighing not less than 40 kg beyond curtain wall.	cum	15	108	122.31
5.26	Printing of culvert No. and span arrangement of any shade with synthetic enamel paint black or any other approved colour to give an even shade as complete as per Technical specifications and as directed by the Engineer-in-charge.	nr	20	18	38.00

SUMMARY OF QUANTITIES OF PIPE CULVERTS (RECON/WIDENING)

Sl. No	Description	Unit	Pipe Culvert
	Nos of Culverts		
1	NP-4 Hume pipe of dia		
(a)	0.75m	Lin.m	
(b)	0.9m	Lin.m	
(c)	1.0m	Lin.m	
(d)	1.2m	Lin.m	784.80
(e)	1.5m	Lin.m	
(f)	1.6m	Lin.m	
(g)	1.8m	Lin.m	
2	Excavation in soil	cum	1097.31
3	PCC M15 grade levelling course	cum	172.51
4	PCC M15 grade For Pipe Bedding	cum	792.33
5	PCC M15 Grade for Head Wall & Wing Wall	cum	379.21
6	RCC M30 Grade for Curtain Wall	cum	
7	Flexible Floor Apron	cum	107.73
8	Reinforcement	tonne	22.75
9	Marker Post	Nr.	104.00
10	Painting of str. Nr., span etc.	Nr.	18.00

1 Row 1.2m Dia Pipe Culvert

Si No.	Item	Unit	No.	L	W	D	Qty	No. of Culvert
1	Exc							1
	For Head wall	Cum	2	6.400	1.400	1.200	21.504	
	For Pipe Bedding		1	35.000	2.040	0.55	39.270	
							60.774	60.77
2	M15 PCC							
	For Head wall	Cum	2	6.400	1.400	0.100	1.792	
	For Pipe Bedding		1	35.000	2.040	0.100	7.140	
							8.932	8.93
3	M15 PCC for pipe bedding							
	For Pipe Bedding	Cum	1	35.000	2.040	0.550	39.270	
							39.270	39.27
4	M15 PCC for Head Wall							
		Cum	2	6.200	0.825	2.880	29.462	
							29.462	29.46
5	Reinforcement	MT	60	Kg/Cum			1.77	1.77
6	NP-4 Hume Pipe	M	1	37.40			37.400	37.00
7	Flexible Floor Apron	Cum						
	U/s Side		1	3.000	6.200	0.300	5.580	
	D/s Side		1	1.500	6.200	0.300	2.790	
							8.370	8.37
8	Marker Post	Nr.	2	4.00			8.000	8.00
9	Painting of str. Nr., span etc.	Nr.	2				2.000	2.00

2 Row 1.2m Dia Pipe Culvert

Si No.	Item	Unit	No.	L	W	D	Qty	No. of Culvert
1	Exc							4
	For Head wall	Cum	2	8.400	1.400	1.200	28.224	
	For Pipe Bedding		1	35.000	4.060	0.550	78.155	
							106.379	425.52
2	M15 PCC							
	For Head wall	Cum	2	8.400	1.400	0.100	2.352	
	For Pipe Bedding		1	35.000	4.060	0.100	14.210	
							16.562	66.25
3	M15 PCC for pipe bedding							
	For Pipe Bedding	Cum	1	35.000	3.860	0.550	74.305	
							74.305	297.22
4	M15 PCC for Head Wall							
		Cum	2	8.200	0.825	2.880	38.966	
							38.966	155.87
5	Reinforcement	MT	60	Kg/Cum			2.34	9.35
6	NP-4 Hume Pipe	M	2	37.40			74.800	299.00
7	Flexible Floor Apron	Cum						
	U/s Side		1	3.000	8.200	0.300	7.380	
	D/s Side		1	1.500	8.200	0.300	3.690	
							11.070	44.28
8	Marker Post	Nr.	2	5.00			10.000	40.00
9	Painting of str. Nr., span etc.	Nr.	2				2.000	8.00

3 Row 1.2m Dia Pipe Culvert

Si No.	Item	Unit	No.	L	W	D	Qty	No. of Culvert
1	Exc							4
	For Head wall	Cum	2	10.400	1.400	1.200	34.944	
	For Pipe Bedding		1	35.000	6.120	0.550	117.810	
							152.754	611.02
2	M15 PCC							
	For Head wall	Cum	2	10.400	1.400	0.100	2.912	
	For Pipe Bedding		1	35.000	6.120	0.100	21.420	
							24.332	97.33
3	M15 PCC for pipe bedding							
	For Pipe Bedding	Cum	1	35.000	5.920	0.550	113.960	
							113.960	455.84
4	M15 PCC for Head Wall							
		Cum	2	10.200	0.825	2.880	48.470	
							48.470	193.88
5	Reinforcement	MT	60	Kg/Cum			2.91	11.63
6	NP-4 Hume Pipe	M	3	37.40			112.200	448.80
7	Flexible Floor Apron	Cum						
	U/s Side		1	3.000	10.200	0.300	9.180	
	D/s Side		1	1.500	10.200	0.300	4.590	
							13.770	55.08
8	Marker Post	Nr.	2	7.00			14.000	56.00
9	Painting of str. Nr., span etc.	Nr.	2				2.000	8.00

SUMMARY OF QUANTITIES OF BOX CULVERTS

Sl. No.	Description	Unit	(1x2x2)	(2x3x6)	(1x5x6.5)	Quantity
			7	1	1	
1	Earthwork in excavation	cum	297.70	83.84	612.70	994.23
2	PCC M15 levelling course	cum	166.54	27.45	65.72	259.71
3	RCC M30 for structure	cum	329.90	240.39	1,007.86	1578.14
4	RCC M30 grade in Approach Slab	cum	206.66	30.87	-	237.53
5	RCC M40 grade for Crash barrier	lin.m				0.00
6	Filler board type expansion joint	lin.m	14.00	25.20	62.00	101.20
7	Drainage spouts	Nr.	14.00	2.00	2.00	18.00
8	Elastomeric Bearing	Cu.Cm.				0.00
9	Flexible Apron	cum	11.34	-	3.24	14.58
10	Filter media	cum	232.81	101.30	245.52	579.63
11	Back filling	cum	772.86	979.67	2,338.89	4091.43
12	RCC M25 in footpath	cum				0.00
13	PVC Pipe 100 mm dia	Nr.				0.00
14	Weep holes	Nr.	364.00	81.00	310.00	755.00
15	Reinforcement	Tonne	36.29	26.44	110.86	173.60
16	Wearing Coat 40mm thk	Sqm	801.33	172.62	-	973.95
17	Painting of structure no.	Nr.	14.00	4.00	2.00	20.00

S No.	Proposal	No of cells	Clear Span (a)	Clear Height (b)	Side offset (c)	Top slab Thk (d)	Bottom Slab Thk (e)	End Wall Thk (f)	Intermediate Wall Thk	Skew Angle	Proposed Width of Str	Width of Median	Total Width of widening	W1	Structure length	No. of culvert
1	New Construction	1	2.0	2.0	0.00	0.30	0.30	0.25	0.00	0.00	12.95	0.00	12.950	2.00	2.50	7
2	New Construction	2	3.0	6.0	0.00	0.30	0.35	0.35	0.35	0.00	13.50	0.00	13.500	6.35	7.05	1
3	New Construction	1	5.0	6.5	0.00	0.80	0.80	0.80	0.00	0.00	31.00	0.00	31.000	5.00	6.60	1
																9

Box Culvert		
No of Cell	1	
Total Proposed Width	12.95	m
Clear Span	2.00	m
Clear Height of Box	2.00	m
Depth of Top Slab	0.30	m
Depth of Bottom Slab	0.30	m
Thickness of Side Wall of Box	0.25	m
Thickness of middle Wall of Box		m
Projection of Bottom Slab		m
Width of wearing coat	12.95	m
No of approach slab	2	
Width of approach slab	3.50	m
Thickness of approach slab	0.35	m
Width of Footpath	1.50	m
Proposed Formation Level		m
Existing Ground Level (Avg)		m
STEEL for Box	110	kg/m ³
Invert Level		m
No of Footpath	2.00	
Width of PCC for Box	2.70	m
Thickness of PCC	0.10	m
Wearing Coat Thickness	0.065	m
No of Drain	2	
Width	1.50	m
Side Wall (Drain)	0.200	m

	Box Culvert	1 x 2	m.		No of Culvert		7
Sr. No	Description	Unit	Nos	Length	Width	Depth	Quantity
1	Earthwork in Excavation of foundation for structure complete as per drawing and Technical Specification Clause 304.						
	Box Portion		1	12.95	2.70	0.40	13.99
	Shear Key		2	1.20	2.70	1.30	8.42
	Curtain Wall		1	4.35	1.85	2.50	20.12
	Total	cum					42.53
2	Plain cement concrete M 15 grade complete						
	Box Portion		1	12.95	2.70	0.10	3.50
	Shear Key		2	1.20	2.70	0.10	0.65
	Curtain Wall		1	4.35	1.85	0.10	0.80
	Curtain Wall conc		1	4.35	2.50	0.93	10.06
	Catch Pit		1	2.90	1.20	0.10	0.35
	Approach Slab		2	12.05	3.50	0.10	8.44
	Total	cum					23.79

3	Structural Cement Concrete M 30 grade for plain / reinforced concrete for box portion including formwork, machinery and workmanship complete as per drawing and Technical Specification Sections 1500 and 1700.						
	Box Portion (Bottom Slab with Projection)		1	12.95	2.50	0.30	9.71
	Shear Key		2	1.20	2.70	0.60	3.89
	Box Portion (Side Wall)		2	12.95	2.00	0.25	12.95
	Haunch		4	12.95	0.011	Area	0.58
	Bracket		2	12.95	0.135	Area	3.50
	Top Slab		1	12.95	2.50	0.30	9.71
	Catch Pit		1	3.60	2.30	0.20	1.66
	Parapet Wall		2	9.50	0.45	0.60	5.13
	Total	Cum					47.13
4	Providing and fixing in position TMT deformed bars reinforcement complete as per drawing and Technical Specification Section 1600.						
	Box	Kg	110.00	47.13	(cum)		5184.11
	Total	MT					5.18
5	Providing and laying 65 mm thick bituminous concrete wearing coat in single layer over the top of deck slab complete as per drawings and Technical Specification Section 500 and 2700.						
	Road	Sqm	1	12.05	2.50		30.13
	Approach Slab	Sqm	2	12.05	3.50		84.35
	Total						114.48
6	Reinforced cement concrete M 30 grade in approach slab including reinforcement complete as per drawing and Technical Specification Section 1500, 1700 and 2700.	cum	2	12.05	3.50	0.35	29.52
7	Providing 20mm thick compressible filler type expansion joint for box type structure, capped with 10mm deep coarse sand mixed with Bitumen (6% by Weight) total depth of board shall be equal to the thickness of approach slab.	Rmt	2	12.05			24.10
8	Drainage spouts	No	2				2.00
9	Providing AC weepholes in retaining walls, abutments and return walls complete as per drawings and Technical Specification Clause 2706.	No	52.00				52.00
10	Painting of culvert number and span arrangement as per Technical Specification Section 800.	No	2				2.00
11	Protection to Suit (Rubble Pitching)	Cum	1	1.80	1.80	0.50	1.62
12	Filter Media	Cum	2	12.05	2.30	0.60	33.26
13	Backfill	Cum	2	12.05	1.992	2.30	110.41

Box Culvert		
No of Cell	2	
Total Proposed Width	13.50	m
Clear Span	3.00	m
Clear Height of Box	6.00	m
Depth of Top Slab	0.30	m
Depth of Bottom Slab	0.35	m
Thickness of Side Wall of Box	0.35	m
Thickness of middle Wall of Box		m
Projection of Bottom Slab		m
Width of wearing coat	13.50	m
No of approach slab	2	
Width of approach slab	3.50	m
Thickness of approach slab	0.35	m
Width of Footpath	1.50	m
Proposed Formation Level		m
Existing Ground Level (Avg)		m
STEEL for Box	110	kg/m³
Invert Level		m
No of Footpath	2.00	
Width of PCC for Box	6.90	m
Thickness of PCC	0.10	m
Wearing Coat Thickness	0.065	m
No of Drain	2	
Width	1.50	m
Side Wall (Drain)	0.200	m

	Box Culvert	2 x 3	m.		No of Culvert		1
Sr. No	Description	Unit	Nos	Length	Width	Depth	Quantity
1	Earthwork in Excavation of foundation for structure complete as per drawing and Technical Specification Clause 304.						
	Box Portion		2	13.50	6.90	0.45	83.84
	Total	cum					83.84
2	Plain cement concrete M 15 grade complete as per Technical Specification Sections 1700, 2100 and 2700.						
	Box Portion		2	13.50	6.90	0.10	18.63
	Approach Slab		2	12.60	3.50	0.10	8.82
	Total	cum					27.45
3	Structural Cement Concrete M 30 grade for plain / reinforced concrete for box portion including formwork, machinery and workmanship complete as per drawing and Technical Specification Sections 1500 and 1700.						
	Box Portion (Bottom Slab with Projection)		2	13.50	6.70	0.35	63.32
	Sump Projection		2	0.25	6.70	0.20	0.67

	Box Portion (Side Wall)		4	13.50	6.00	0.35	113.40
	Haunch		8	3.70	0.01	Area	0.33
	Bracket		2	3.70	0.14	Area	1.00
	Parapet		2	13.70	0.45	0.6	7.40
	Top Slab		2	13.50	6.70	0.30	54.27
	Total	Cum					240.39
4	Providing and fixing in position TMT deformed bars reinforcement complete as per drawing and Technical Specification Section 1600.						
	Box	Kg	110.00	240.39	(cum)		26442.35
	Total	MT					26.44
5	Providing and laying 65 mm thick bituminous concrete wearing coat in single layer over the top of deck slab complete as per drawings and Technical Specification Section 500 and 2700.						
	Road	Sqm	1	12.60	6.70		84.42
	Approach Slab	Sqm	2	12.60	3.50		88.20
	Total						172.62
6	Reinforced cement concrete M 30 grade in approach slab including reinforcement complete as per drawing and Technical Specification Section 1500, 1700 and 2700.						
		cum	2	12.60	3.50	0.35	30.87
7	Providing 20mm thick compressible filler type expansion joint for box type structure, capped with 10mm deep coarse sand mixed with Bitumen (6% by Weight) total depth of board shall be equal to the thickness of approach slab.						
		Rmt	2	12.60			25.20
8	Drainage Spout	No	2				2.00
9	Providing AC weepholes in retaining walls, abutments and return walls complete as per drawings and Technical Specification Clause 2706.						
		No	81.00				81.00
10	Painting of culvert number and span arrangement as per Technical Specification Secion 800.						
		No	4				4.00
11	Protection to Suit (Rubble Pitching)	Cum		1.80	1.80	0.50	
12	Filter Media	Cum	2	12.60	6.70	0.60	101.30
13	Backfill	Cum	2	12.60	5.802	6.70	979.67

Box Culvert		
No of Cell	1	
Total Proposed Width	31.00	m
Clear Span	5.00	m
Clear Height of Box	6.50	m
Depth of Top Slab	0.80	m
Depth of Bottom Slab	0.80	m
Thickness of Side Wall of Box	0.80	m
Thickness of middle Wall of Box		m
Projection of Bottom Slab		m
Width of wearing coat	31.00	m
No of approach slab	2	
Width of approach slab	3.50	m
Thickness of approach slab	0.35	m
Width of Footpath	1.50	m
Proposed Formation Level		m
Existing Ground Level (Avg)		m
STEEL for Box	110	kg/m³
Invert Level		m
No of Footpath	2.00	
Width of PCC for Box	6.80	m
Thickness of PCC	0.10	m
Wearing Coat Thickness	0.065	m
No of Drain	2	
Width	1.50	m
Side Wall (Drain)	0.200	m

	Box Culvert	1 x 5	m.		No of Culvert		1
Sr. No	Description	Unit	Nos	Length	Width	Depth	Quantity
1	Earthwork in Excavation of foundation for structure complete as per drawing and Technical Specification Clause 304.						
	Box Portion		1	31.00	6.80	0.90	189.72
	Shear Key		2	1.20	6.80	1.30	21.22
	Proposed Formation width		2	31.00	7.20	0.90	401.76
	Total	cum					612.70
2	Plain cement concrete M 15 grade complete as per Technical Specification Sections 1700, 2100 and 2700.						
	Box Portion		1	31.00	6.80	0.10	21.08
	Proposed Formation width		2	31.00	7.20	0.10	44.64
	Total	cum					65.72
3	Structural Cement Concrete M 30 grade for plain / reinforced concrete for box portion including formwork, machinery and workmanship complete as per drawing and Technical Specification Sections 1500 and 1700.						
	Box Portion (Bottom Slab with Projection)		1	31.00	6.60	0.80	163.68

	Shear Key		2	1.20	6.60	0.60	9.50
	Proposed Formation width		2	31.00	7.00	0.80	347.20
	Box Portion (Side Wall)		2	31.00	6.50	0.80	322.40
	Haunch		4	31.00	0.01	Area	1.40
	Top Slab		1	31.00	6.60	0.80	163.68
	Total	Cum					1007.86
4	Providing and fixing in position TMT deformed bars reinforcement complete as per drawing and Technical Specification Section 1600.						
	Box	Kg	110.00	1007.86	(cum)		110864.49
	Total	MT					110.86
5	Providing and laying 65 mm thick bituminous concrete wearing coat in single layer over the top of deck slab complete as per drawings and Technical Specification Section 500 and 2700.						
	Road	cum		31.00	6.60	0.04	
	Approach Slab	cum		31.00	3.50	0.04	
	Total						
6	Reinforced cement concrete M 30 grade in approach slab including reinforcement complete as per drawing and Technical Specification Section 1500, 1700 and 2700.	cum		31.00	3.50	0.35	
7	Providing 20mm thick compressible filler type expansion joint for box type structure, capped with 10mm deep coarse sand mixed with Bitumen (6% by Weight) total depth of board shall be equal to the thickness of approach slab.	Rmt	2	31.00			62.00
8	PVC Pipe	No	2				2.00
9	Providing AC weepholes in retaining walls, abutments and return walls complete as per drawings and Technical Specification Clause 2706.	No	310.00				310.00
10	Painting of culvert number and span arrangement as per Technical Specification Section 800.	No	2				2.00
11	Protection to Suit (Rubble Pitching)	Cum	2	1.80	1.80	0.50	3.24
12	Filter Media	Cum	2	31.00	6.60	0.60	245.52
13	Backfill	Cum	2	31.00	5.716	6.60	2338.89