

Schedule A

(See Clause 2.1 and 8.1)

SITE OF THE PROJECT

1. The Site

- (i) Site of the Project Highway shall include the land, buildings, structures and road works as described in Annex-I of this Schedule-A.
- (ii) The dates of handing over the Right of Way to the Contractor are specified in Annex-II of this Schedule-A.
- (iii) An inventory of the Site including the land, buildings, structures, road works, trees and any other immovable property on, or attached to, the Site shall be prepared jointly by the Authority Representative and the Contractor, and such inventory shall form part of the memorandum referred to in Clause 8.2 (i) of this Agreement.
- (iv) The alignment plans of the Project Highway are specified in Annex-III. In the case of sections where no modification in the existing alignment of the Project Highway is contemplated, the alignment plan has not been provided. Alignment plans have only been given for sections where the existing alignment is proposed to be upgraded. The proposed profile of the Project Highways shall be followed by the contractor with minimum FRL as indicated in the alignment plan. The Contractor, shall however, improve/upgrade the Road Profile as indicated in Annex-III based on site/design requirement.
- (v) The status of the environment clearances obtained or awaited is given in Annex-IV.

Annex - I
(Schedule-A)

Site

Note: [Through suitable drawings and description in words, the land, buildings, structures and road works comprising the Site shall be specified briefly but precisely in this Annex-I. All the chainages/locations referred to in Annex-I of Schedule-A shall be existing chainages.]

1. SITE

The Site of the Single Lane Project Highway comprises the section of Start from Taksing and Terminate at Lung Op. The Project road stretches in the State of Arunachal Pradesh. The starting point Taksing is having of Latitude & Longitude (28026'30''N, 93012'27''E) at an altitude of 2278.547 m above MSL. The termination point at Lung Op is having of Latitude & Longitude (28026'23''N, 93010'32''E) at altitude of 2451.731 m above MSL. The entire road length is Snow bound area. The land, carriageway and structures comprising the Site are described below.

2. Land

The Site of the Project Highway comprises the land (sum total of land already in possession and land to be possessed) described below:

S. No.	Chainage (km)		ROW (m)	Remarks
	From	To		
1	0+000	7+090	18 meter	New Alignment

3. Carriageway

The project road is greenfield therefore there is no existing road.

Sr. No.	Carriageway					
	Single Lane		Two Lane		Four Lane	
	From	To	From	To	From	To
Nil						

4. Major Bridges

The Site includes the following Major Bridges

Sr. No.	Existing Chainage (km)	Type of Structure			No. of Spans with span length (m)	Width (m)	Remarks
		Foundation	Sub-structure	Super structure			
Nil							

5. Road over-bridges (ROB)/ Road under-bridges (RUB)

The Site includes the following ROB/RUB:

Sr. No.	Existing Chainage (km)	Type of Structure		No. of Spans with Span length (m)	Width (m)	ROB/ RUB
		Foundation	Super Structure			
NIL						

6. Grade separators

The Site includes the following grade separators:

Sr. No.	Existing Chainage (km)	Type of Structure		No. of Spans with Span length (m)	Width (m)	ROB/ RUB
		Foundation	Super Structure			
NIL						

7. Minor bridges

The Site includes the following minor bridges:

Sr. No.	Chainage (km)	Type of Structure		No. of Spans with span length (m)	Width (m)
		Foundation	Superstructure		
NIL					

8. Railway level crossings

The Site includes the following railway level crossings:

Sr. No.	Existing Chainage (km)	Remarks
NIL		

9. Underpasses (vehicular, Non-vehicular)

The Site includes the following underpasses:

Sr. No.	Existing Chainage (km)	Type of Structure	No. of Spans with Span length (m)	Width (m)
Nil				

10. Culverts and causeway:

The Site has the following exiting culverts:

Sl. No.	Existing Chainage	Type	Size	Remarks
NIL				

11. Bus Stops

The details of bus Stops on the Site are as follows:

Sl. No.	Existing Chainage	Sides
NIL		

12. Truck Lay bays

The details of truck lay bays are as follows:

Sr. No.	Existing Chainage (Km)	Length (m)	LHS	RHS
Nil				

13. Road side drains

The details of the roadside drains are as follows:

Sr. No.	Location		Type	
	From km	To km	Masonry/cc	Earthen
			(Pucca)	(Kutcha)
NIL				

14. Major junctions

The detail of major junction is as follows:

Sr. No.	Existing Chainage	Type	Link	Direction	Remarks
Nil					

15. Minor junctions

The details of the minor junctions are as follows:-

SL. No.	Existing Chainage	Type of intersection	Direction	Type of Road	Going to
			Left/Right	Er/BT/CC	
NIL					

16. Bypasses

The details of the existing road sections proposed to be bypassed are as follows:

Sr. No.	Name of Bypass (Town)	Existing Chainage (Km)		Length (Km)	Carriageway	
		From	To		Width (m)	Type
Nil						

17. Other structures

Nil

Annex II
(Schedule-A)

Dates for providing Right of Way

The dates on which the Authority shall provide Right of Way to the Contractor on different stretches of the Site are stated below:

Sl. No	Design Chainage		Length (Km)	Proposed ROW Width (m)	Date of Providing proposed ROW
	From	To			
i) 90% of ROW (full width)	0.000	7.090	6.390	18 m	At Appointment Date
ii) Balance Right of way (width)	0.000	7.090	0.700		Within 150 days after the Appointed Date

Annex – III

(Schedule-A)

Alignment Plans

The existing alignment of the Project Highway shall be modified in the following sections as per the alignment plan indicated below:

- i) The alignment of the Project Highway shall be as per the alignment plan enclosed. However, the Contractor may have minor change / alter / modify the alignment plan as better engineering alternate by meeting codal provisions specified in document. In case of any modifications, the modified alignment must pass within ROW acquired and through the obligatory points in between points of ITBP but the start / end points cannot be modified / changed. **The entire road length is Snow bound area.**
- ii) Finished road level indicated in the alignment plan shall be followed by the contractor as minimum FRL. In any case, the finished road level of the project highway shall not be less than those indicated in the alignment plan. The contractor shall, however, improve/upgrade the Road profile as indicated in Annex-III based on site/design requirement.
- iii) Traffic Signage plan of the Project Highway showing numbers & location of traffic signs is enclosed. The contractor shall, however, improve/upgrade upon the traffic signage plan as indicated in Annex-III based on site/design requirement as per IRC: SP: 48-1998 & IRC: 67 and other IRC codes or manuals, if applicable

Annex – IV

(Schedule-A)

Environment Clearances

The required environment and forest clearances are being obtained. Forest diversion is being obtained for land width of 18m along with extra land for disposal of excess muck/cutting.

Schedule B

Development of the Project Highway

1 Development of the Project Highway

Development of the Project Stretch from Km 0+000 to Km 7+090 of Taksing-Ghora road shall include design and construction of the Project Highway as described in this Schedule-B and in Schedule-C.

2 Single Lane with granular shoulders

Single lane of new greenfield alignment with construction of granular shoulders as described in Annex-I of this Schedule-B and Annex-I of Schedule-C.

3 Specifications and Standards

The Project Highway shall be designed and constructed in conformity with the Specifications and Standards specified in Annex-I of Schedule-D.

Annex - I

(Schedule-B)

DESCRIPTION OF SINGLE LANING AND WITH HARD SHOULDER

1. New Highway

1.1 The Project Highway located in mountainous terrain shall follow the proposed alignment unless otherwise specified by the Authority and shown in the alignment plans specified in Annex III of Schedule-A. Geometric deficiencies, if any, in the existing horizontal and vertical profiles shall be corrected as per the prescribed standards for mountainous terrain to the extent land is available.

1.2 Width of Carriageway

1.2.1 The paved carriageway shall be 3.75 m wide having 1.25 m granular shoulders on both side in accordance with the TCS drawings.

Chainage in m (To)	Chainage in m (From)	Length (m)	Typical Cross-section type
0	7090	7090	(TCS I, II, III & IV)

1.2.2 Except as otherwise provided in this Agreement, the width of the paved carriageway shall conform to paragraph 1.2.1.

2. GEOMETRIC DESIGN AND GENERAL FEATURES

2.1 General

Geometric design and general features of the Project Highway shall be in accordance with Section 6 of the manual.

2.2 Design Speed

The project stretch shall be designed for minimum design speed of 30 kmph. However, where due to land and other constraints, it is not possible to achieve design speed of 30 kmph, minimum design speed of 25 kmph may be provided with the approval of AE. Proper road signs and safety measures shall be provided:

2.3 Details of Proposed Bypasses/ Realignment

Sl. No.	Name of Bypass/Realignment	Take Off Chainage	Merging Chainage	Length (m)
		NIL		

2.4 Right of Way

Details of Right of way are given in Annex-II of Schedule-A.

2.5 Type of Shoulders

The shoulder of 1.25 m width shall be of full thickness compacted layer of granular material having minimum 30% CBR. Grading of granular material shall confirm to the requirement as specified in MORTH specification 5th Edition.

2.6 Widening of Curves

Widening of Curves shall be done as per the para 6.8.5 of IRC: SP: 48-1998 manual.

2.7 Passing Places

Passing places shall be provided as the para 6.11 of IRC: SP: 48-1998 manual.

2.8 Sections requiring Footpath and Lined Drains

- a) In built-up section, shoulder shall be used for footpath portion. The development shall be within available land in built up area without dismantling any structure. In built-up sections, saucer drains are to be provided for drainage.

Sl. No.	Design Chainage (km)		Length(m)
	From	To	
	NIL		

- b) In open section, Lined drains shall be provided in the full length

Sl. No.	Design Chainage (km)		Length(m)	Remark
	From	To		
1	0.000	7.090	7.000	Total Length of Road after deducting culverts

2.9 Lateral and Vertical Clearances at Underpasses

The minimum vertical clearances at cliffs / overhang sections / C cuts / half tunnel sections shall be 5 meter from the top most level of the proposed carriageway. Required allowance must be kept for future up gradation works. Such sections shall be adopted only after proper investigation of the hill face and conducting required tests for the stability of the overhang sections.

2.10 Lateral and vertical clearance at overpasses

- a) *Lateral and vertical clearances at overpasses shall be as per para 2.11 of the Manual, however no overpass has been proposed.*
- b) *Lateral clearances: The width of the opening at the overpasses shall be as follows:*

Sr. No.	Location (Chainage) (From Km to Km)	Span / Opening (m)	Remarks
Nil			

2.11 Service roads/ Slip Road

(a) Details of service road

Sr. No.	Location of service road (From Km to Km)	Right hand side(RHS) /Left hand side (LHS)/or both sides	Length (Km) of service road
Nil			

(b) Details of Slip Road

Sr. No.	Existing Chainage		Design Chainage		Right Hand side (RHS) or Left-Hand side (LHS) or Both side	Length (m) of Slip Road	Remarks
	From	To	From	To			
Nil							

2.12 Cattle and Pedestrian underpass / over pass

Cattle and pedestrian underpass/overpass shall be constructed as follows: (as per IRC SP: 73:2018)

S. No.	Location	Type
Nil		

2.13 Typical Cross-Sections of the Project Highway

As per TCS enclosed.

3.0 INTERSECTIONS AND GRADE SEPARATORS

All intersections shall be as per Section 3 of the Manual. Existing intersections which are deficient shall be improved to the prescribed standards.

There are no intersections with cross roads having bituminous surfacing. The cross roads fall into the category of VRs. The Contractor has to construct the following:

Properly designed intersections shall be provided at the locations and of the types and features given in the tables below:

(a) At-grade Intersections

Sl. No	CHAINAGE	TYPE	SIDE	CONNECTING PLACES
NIL				

(b) Grade Separated Intersection With/Without Ramps

S. No.	Location	Salient features	Minimum length of viaduct to be provided	Road to be carried over / under the structures
Nil				

4. ROAD EMBANKMENT AND CUT SECTION

4.1 Widening and improvement of the existing road embankment/cuttings and construction of new road embankment/ cuttings shall conform to the Specifications and Standards given in the manual and the specified cross-sectional details.

5. PAVEMENT DESIGN

5.1 Pavement design shall be carried out in accordance with para 5.2 below.

5.2 Type of pavement

Pavement suitable for Snow bound area as per clause 10.22.3 of the manual shall be adopted for Project Highway. Pavement design has to be got approved from AE/ SASE or any institute of repute having experience of design of pavement in snow bound areas.

5.3 A minimum CBR of 8% for sub-grade shall be achieved. Even if higher CBR is obtained, the pavement shall be designed for CBR of 8 %.

5.4 Bituminous Grade VG 10 or VG 30 shall be used.

5.5 Realignment of Stretches

The stretches that are treated as new pavement is stated below:

DETAILS OF NEW CONSTRUCTION

Sl No	Chainage	Chainage	Length (m)	Proposal
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	From	To		
1	0	7.090	7090	New Construction

5.6 Details of Bypasses

At the following locations bypasses are proposed.

Sl No	Chainage From	Chainage To	Length (m)	Proposal
NIL				

6. ROADSIDE DRAINAGE

Drainage system including surface and subsurface drains for the Project Highway shall be provided as per Chapter 8 of the Manual.

Lined/Saucer drain of following length shall be provided:

Sr. No.	Length (except CD structures)	Side of construction
	(m)	Hill side/Both
1	7000	Lined Drain on entire Hill side length. For box cut sections on both sides

The length of side drains given above are minimum and it may vary as per site condition. In case of increase of length, no positive change of scope will be payable.

7. DESIGN OF STRUCTURES

7.1 General

7.1.1 All bridges, culverts and structures shall be designed and constructed in accordance with section 8 of the manual and referred other codes therein and shall conform to the cross-sectional features and other details specified therein.

7.1.2 Width of the carriageway of new bridges and structures shall be as follows:

All new structures shall have minimum width of 12 m including 7.5 m main carriageway and 1.5m foot path on both sides.

7.1.3 All bridges shall be high-level bridges.

7.1.4 Utility services to be carried over the structures

All Bridges and structures shall be designed to carry utility services (OFC, telephone and Electricity cables)

7.2 Culverts : New/Reconstruction

7.2.1 Overall width of all culverts shall be equal to the roadway width of the approaches.

7.2.2 Minimum of 37 Nos. new culverts shall be provided in the project stretch as under

S. No.	Type of Structure	Span	Width	Numbers
i	RCC Box/Slab	2.0 m	7.5 m	20
ii	RCC Box/Slab	3.0 m	7.5 m	14
iii	RCC Box/Slab	4.0 to 6.0 m	7.5 m	3

7.2.2.i Distance between any two culverts shall not be more than 200 m.

7.2.2.ii Minimum of five culverts per Km shall be provided.

7.2.2.iii The span and location of culverts shall be as per profile/site requirement and shall be approved by AE.

7.2.3 Repairs/ replacements of railing /parapets, flooring and protection works

Sl. No.	Design Chainage	Type of Structures	Repair work	Length (m)	Width (m)
Nil					

7.3 Bridges

7.3.1 Existing bridges to be re-constructed/widened /Repaired

a) Minor Bridges:

S. No.	Design Chainage	Proposed span arrangement (No. x l)	Remarks
Nil			

7.3.2 Additional New Bridges

New bridges at the following locations on the Project Highway shall be constructed

a) Major Bridge:

S. No.	Design Chainage	Proposed span arrangement (No. x l)	Remarks
Nil			

c) Minor Bridge:

Sl. No.	Design Chainage	Proposed Span Arrangement (No x l)	Width (m)	Remarks
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1	2+600	1 x 40 m	12	
2	6+700	1 x 40 m	12	

Note 1 :- The number, location and proposed span mention above is tentative/ suggested. The number of bridges, number of spans in each bridge and total length of each bridge shall be as per site requirement and provided as per approval of AE.

Note 2 :- Increase in the total length of all bridges provided beyond total length shown above shall not constitute a change of scope.

Note 3:- Any reduction in total length of all Minor Bridges constructed at site shall constitute a negative change of scope.

7.3.3 Drainage system for bridge decks

An effective drainage system for bridge decks shall be provided as specified in the manual.

7.3.4 Structures in Marine Environment:

Nil

7.4 Rail-road Bridges

7.4.1 Design, construction and detailing of ROB/RUB shall be as specified in section 7 of the Manual.

7.4.2 Road over Bridges (road over rail) shall be provided at the following crossings, as per GAD drawings attached:

S. No.	Design Chainage (km)	Span Arrangement / length of span in m	Remark
NIL			

7.4.3 Road under bridges (road under railway line) shall be provided at the following level crossings, as per GAD drawings attached:

S. No.	Location of level crossing	Number and length of span
NIL		

7.5 Grade Separated Structures

NIL

7.6 Repairs and Strengthening of Bridges of Structures

The existing structures to be repaired/ strengthened, and the nature and extent of repairs /

strengthening required are given below:

A - Bridges

i) Major Bridges

S. No.	Location of bridge (km) Design Chainage	Nature and extent of repairs/ strengthening to be carried out
		NIL

ii) Minor Bridge

S. No.	Location of bridge (km) Design Chainage	Nature and extent of repairs/ strengthening to be carried out
		NIL

B - ROB / RUB

S. No.	Location of bridge (km) Design Chainage	Nature and extent of repairs/ strengthening to be carried out
1		NIL

C - Overpasses/Underpasses and other structures

S. No.	Location of bridge (km) Design Chainage	Nature and extent of repairs/ strengthening to be carried out
1		NIL

7.7 List of Major Bridges and Structures

The following is the list of the Major Bridges and structures to be constructed

Sl. No	New Chainage	Proposed Span	Proposed Type	Proposal
1			Nil	

8. TRAFFIC CONTROL DEVICES AND ROAD SAFETY WORKS

- i. Traffic control devices and road safety works shall be provided in accordance with IRC 67-2012.
- ii. Traffic Signs: Traffic signs include roadside signs, overhead signs and curb mounted signs along the entire Project Highway and shall be provided conforming to IRC 67 and section 800 of MoRTH specification.
- iii. Pavement Marking: Pavement markings shall cover road marking for the entire Project Highway and shall be provided conforming to IRC 35-2015.
- iv. Reflectors shall be provided on hill face, parapet wall and sharp bends.

9. ROADSIDE FURNITURE

- i. Roadside furniture shall be provided in accordance with the provisions of the Manual.
- ii. Full width Overhead signs: Full width Overhead signs shall be provided as below:

Sl. No.	Design Chainage	Remarks
1	0+050	
2	7+000	

- iii. Delineators: Delineators for the entire Project Highway at the locations as per IRC-79 and directions of AE.

10. COMPULSORY AFFORESTATION

The number of trees which are to be planted by the Contractor as compulsory afforestation shall be as per Forest conservation Act.

11. HAZARDOUS LOCATIONS

Metal Beam crash barrier of minimum length of 2100 m (single runner, heavy duty and W-shape) shall be provided at the locations of bridge approaches and high embankments (3.0m and more), at sharp curves on the project at the locations finalized in consultation with AE. Increase in length if any as per site requirement will not constitute change of scope.

Rest of the complete length of the project shall have parapet wall as per section 9.4 of the IRC SP-48:1998 on valley side.

12. PROTECTION WORK

I. The following minimum protection works shall be provided as tabulated below:

Sr. No.	Items	Unit
1	Breast wall of RRM (2 m height)	2400 m
2	Breast wall of RRM (3 m height)	450 m
3	Breast wall of RRM (4 m height)	700 m
4	Retaining Wall of RRM (upto 6 m Height)	1800
5	Breast Wall- Gabion	4600 cum
6	Hydro Seeding	20,000 sqm

7	Seeding & Mulching with Geotextile (Jute/Coir)	10,000 sqm
8	Rockfall protection (Rockfall Barrier for the height more than 15 m)	120 RM

Note 1- *The Contractor shall be responsible for accurate assessment of the actual requirement as per site situation & prepare designs for slope protection & stabilization and submit the same to the AE for review through the proof consultant and implement it accordingly thereafter.*

Note 2- *Any increase in quantity over and above the minimum qty. as mentioned in above table or change in specifications will not be considered as change of scope. Therefore, contractor shall make thorough investigation at site and assess the requirement of slope protection and slide prone zone and other safety features at his own before submission of bid.*

Note 3- *The length of Retaining wall in RRM shown above is minimum, to be constructed at site for proper geometrics & will not be converted to Breast wall. Any reduction in the total length of Retaining wall constructed at site shall constitute of negative change of scope.*

II. Landslide Mitigation:

For the cut height, more than 8 meters, except for hard rock, the entire hill face shall be covered with proper land slide mitigation measures as per the manual or as directed by the AE.

13. CHANGE OF SCOPE

The length of Structures and bridges specified herein above shall be treated as an approximate assessment. The Contractor in accordance with the Specifications and Standards shall determine the actual lengths as required on the basis of detailed investigations. Any variations in the lengths specified in this Schedule- B shall not constitute a Change of Scope, save and except any variations in the length arising out of a Change of Scope expressly undertaken in accordance with the provisions of Article 13.

Schedule - H

(See Clauses 10.1 (iv) and 19.3)

Contract Price Weightages

1. The Contract Price for this Agreement is ₹ _____

Proportions of the Contract Price for different stages of Construction of the Project Highway shall be as specified below:

Item	Weightage in percentage to the contract price	Description of Items	Percentage Weightage	
Road works including culverts, Widening and repair of culverts.	48%	WIDENING AND STRENGTHENING OF EXISTING ROAD		
		A1.1	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.	0.00%
		A1.2	Sub-Base Course	0.00%
		A1.3	Non - Bituminous Base Course	0.00%
		A1.4	Bituminous Base Course	0.00%
		A1.5	Wearing Coat	0.00%
		A1.6	Widening and repair of culverts	0.00%
		RECONSTRUCTION/NEW 2-LANE ALIGNMENT/BYPASS (PAVEMENT SUITABLE FOR SNOW BOUND AREA)		
		A2.1	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.	50.00%
		A2.2	Sub-Base Course	14.00%
		A2.3	Base Course	9.00%
		A2.4	Wearing Coat	17.00%
		RECONSTRUCTION/NEW 2-LANE ALIGNMENT/BYPASS (RIGID PAVEMENT)		
		A3.1	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.	0.00%
		A3.2	Sub-Base Course	0.00%
		A3.3	Dry Lean Concrete(DLC) Course	0.00%
		A3.4	Pavement Quality Control(PQC) Course	0.00%

	RECONSTRUCTION/NEW SERVICE ROAD (FLEXIBLE PAVEMENT)			
	A4.1	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.	0.00%	
	A4.2	Sub-Base Course	0.00%	
	A4.3	Non Bituminous Base Course	0.00%	
	A4.4	Bituminous Base Course	0.00%	
	A4.5	Wearing Coat	0.00%	
	RECONSTRUCTION/NEW SERVICE ROAD (RIGID PAVEMENT)			
	A5.1	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.	0.00%	
	A5.2	Sub-Base Course	0.00%	
	A5.3	Dry Lean Concrete(DLC) Course	0.00%	
	A5.4	Pavement Quality Control(PQC) Course	0.00%	
	RECONSTRUCTION AND NEW CULVERTS ON EXISTING ROAD, REALIGNMENTS, BYPASSES			
	A6.1	Culverts and associated Protection Works	10.00%	
	Minor Bridges, Underpasses, Overpasses,	WIDENING AND REPAIR OF MINOR BRIDGES (Length > 6 m and < 60 m)		
		A7.1	[0.00%
		NEW MINOR BRIDGES (Length > 6 m and < 60 m)		
		A8.1	Foundation: On completion of the foundation work including foundations for wing wall and return walls, abutments, piers up to the abutment/pier cap.	0.00%
		A8.2	Sub Structures: On completion of the foundation work including foundations for wing wall and return walls, abutments, piers up to the abutment/pier cap.	0.00%
		A8.3	Super-structure: On completion of the super structure in all respect including wearing coat, bearings, expansion joints, hand rails, crash barriers, road signs & markings, tests on completion etc. complete in all respect.	0.00%
A8.4		Guide Bunds and River Training Works: On completion of Guide bunds and river training works complete in all respects.	0.00%	
WIDENING AND REPAIRS OF UNDERPASSES/ OVERPASSES				
A9.1	Underpasses/ Overpasses	0.00%		

	NEW UNDERPASSES/ OVERPASSES			
A10.1	Foundation + Sub Structures: On completion of the foundation work including foundations for wing wall and return walls, abutments, piers up to the abutment/pier cap.			0.00%
A10.2	Super-structure: On completion of the super structure in all respect including wearing coat, bearings, expansion joints, hand rails, crash barriers, road signs & markings, tests on completion etc. complete in all respect. Wearing Coat (a) in case of overpass-wearing coat including expansion joint complete in all respects as specified and (b) in case of underpass- Rigid pavement including drainage facility complete in all respects as specified.			0.00%
A10.3	Approaches: On completion of approaches including retaining walls/ Reinforced earth walls, stone pitching, protection works complete in all respect and fit for use.			0.00%
	WIDENING AND REPAIRS OF MAJOR BRIDGES			
	A11.1	Foundation		0.00%
	A11.2	Sub-structure		0.00%
	A11.3	Super-structure(including bearings)		0.00%
	A11.4	Wearing Coat including expansion joints		0.00%
	A11.5	Miscellaneous items like handrails, crash barriers, road markings etc.		0.00%
	A11.6	Wing walls/ Return walls		0.00%
	A11.7	Guide Bunds, River Training Works etc		0.00%
	A11.8	Approaches (including Retaining walls, stone pitching and protection works)		0.00%
	NEW MAJOR BRIDGES			
	A12.1	Foundation		0.00%
	A12.2	Sub-structure		0.00%
	A12.3	Super-structure(including bearings)		0.00%
	A12.4	Wearing Coat including expansion joints		0.00%
	A12.5	Miscellaneous items like handrails, crash barriers, road markings etc.		0.00%
	A12.6	Wing walls/ Return walls		0.00%
	A12.7	Guide Bunds, River Training Works etc		0.00%
	A12.8	Approaches (including Retaining walls, stone pitching and protection works)		0.00%
	WIDENING AND REPAIR OF ROB/RUB			
	A13.1	(a)	ROB	

		(i)	Foundation	0.00%	
		(ii)	Sub-structure	0.00%	
		(iii)	Super-structure(including bearings)	0.00%	
		(iv)	Wearing Coat in case of ROB-wearing coat including expansion joint complete in all respects as specified.	0.00%	
		(v)	Miscellaneous items like handrails, crash barriers, road markings etc.	0.00%	
		(vi)	Wing walls/ Return walls	0.00%	
		(vii)	Approaches (including Retaining walls, stone pitching and protection works)	0.00%	
		(b)	RUB		
	A13.2	(i)	Foundation	0.00%	
		(ii)	Sub-structure	0.00%	
		(iii)	Super-structure(including bearings)	0.00%	
		(iv)	Wearing Coat in case of RUB-Rigid pavement under RUB including drainage facility complete in all respects as specified.	0.00%	
		(v)	Miscellaneous items like handrails, crash barriers, road markings etc.	0.00%	
		(vi)	Wing walls/ Return walls	0.00%	
		(vii)	Approaches (including Retaining walls, stone pitching and protection works)	0.00%	
		NEW ROB/RUB			
		(a)	ROB		
	A14.1	(i)	Foundation	0.00%	
		(ii)	Sub-structure	0.00%	

	(iii)	Super-structure(including bearings)	0.00%
	(iv)	Wearing Coat in case of ROB-wearing coat including expansion joint complete in all respects as specified.	0.00%
	(v)	Miscellaneous items like handrails, crash barriers, road markings etc.	0.00%
	(vi)	Wing walls/ Return walls	0.00%
	(vii)	Approaches (including Retaining walls/ Reinforced earth walls, stone pitching and protection works)	0.00%
A14.2	(b)	RUB	
	(i)	Foundation	0.00%
	(ii)	Sub-structure	0.00%
	(iii)	Super-structure(including bearings)	0.00%
	(iv)	Wearing Coat in case of RUB-Rigid pavement under RUB including drainage facility complete in all respects as specified.	0.00%
	(v)	Miscellaneous items like handrails, crash barriers, road markings etc.	0.00%
	(vi)	Wing walls/ Return walls	0.00%
	(vii)	Approaches (including Retaining walls/ Reinforced earth walls, stone pitching and protection works)	0.00%
WIDENING AND REPAIR OF ELEVATED SECTION/ FLYOVERS/ GRADE SEPARATORS			
A.15.1	(i)	Foundation	0.00%
	(ii)	Sub-structure	0.00%

			(iii)	Super-structure(including bearings)	0.00%
			(iv)	Wearing Coat including expansion joint.	0.00%
			(v)	Miscellaneous items like handrails, crash barriers, road markings etc.	0.00%
			(vi)	Wing walls/ Return walls	0.00%
			(vii)	Approaches (including Retaining walls/ Reinforced earth walls, stone pitching and protection works)	0.00%
		NEW ELEVATED SECTION/ FLYOVERS/ GRADE SEPARATORS			
		A.16.1	(i)	Foundation	0.00%
			(ii)	Sub-structure	0.00%
			(iii)	Super-structure(including bearings)	0.00%
			(iv)	Wearing Coat including expansion joint.	0.00%
			(v)	Miscellaneous items like handrails, crash barriers, road markings etc.	0.00%
			(vi)	Wing walls/ Return walls	0.00%
			(vii)	Approaches (including Retaining walls/ Reinforced earth walls, stone pitching and protection works)	0.00%
		OTHER WORKS			
		A17.1	<i>Toll Plaza</i>		0.00%
		A17.2	<i>Road side drain</i>		
			(A)	Lined Drains	5.00%
			(B)	Unlined Drains	0.00%
			(C)	Covered Drains	0.00%
			(D)	Catchpit drains	0.00%
17	44%				

A17.3	<i>Road signs, marking, Km stones, Safety devices etc.</i>		1.00%
A17.4	<i>Road Markings and Studs</i>		1.00%
A 17.5	<i>Crash Barriers</i>		4.00%
A17.6	<i>Project Facilities</i>		
	(A)	Bus Bays/shelter	1.00%
	(B)	Wayside Amenities	0.00%
	(C)	Toe Wall	0.00%
A17.7.1	<i>Retaining wall</i>		22.00%
A17.7.2	<i>Breast Wall</i>		24.00%
A17.7.3	<i>Gabion Wall</i>		11.00%
A17.10	<i>Parapet Wall</i>		15.00%
A17.11	<i>Rockfall protection work</i>		2.00%
A17.12	<i>Advance Traffic Management Systems (ATMS)</i>		0.00%
A17.13	<i>Rain Water Harvesting</i>		0.00%
A17.14	<i>Road side Plantation including Horticulture in Wayside Amenities</i>		0.00%
A17.15	<i>Protection Works other than approaches to the bridges, elevated sections/ flyover/ grade separators and ROB/ RUBs</i>		11.00%
A17.16	<i>Safety & Traffic Management during const.</i>		0.00%
A17.17	<i>Other miscellaneous works</i>		
	(A)	<i>Connecting road Etc</i>	0.00%
	(B)	<i>Junction under Grade separator</i>	0.00%
A17.18	<i>Site clearance and Dismantling</i>		0.00%
A17.19	<i>Maintenance of Road</i>		0.00%
A17.20	<i>Project facilities including Telecommunication system</i>		1.00%
A17.21	<i>Project facilities for Authority</i>		2.00%

Procedure of estimating the value of work done

(i) Road works

Procedure for estimating the value of road work done shall be as follows:

Table 1.3.1

Stage of Payment	Percentage - Weightage	Payment Procedure
1	2	3
A-Widening and strengthening of Existing Road		
(1) Earthwork up to top of the sub-grade	0.00%	Unit of measurement is linear length. Payment of each stage shall be made on pro rata basis on completion of a stage in a length of not less than 5 (five) percent of the total length.
(3) Sub-Base Course	0.00%	
(4) Non Bituminous Base course	0.00%	
(5) Bituminous Base course	0.00%	
(5) Wearing Coat	0.00%	
(6) Widening and repair of culverts	0.00%	Cost of completed culverts shall be determined on pro rata basis with respect to the total number of culverts. Payment shall be made on the completion of five culverts.
B.1- Reconstruction/New 8-lane realignment/bypass (Pavement suitable for snow bound area)		
(1) Earthwork up to top of the sub-grade	50.00%	Unit of measurement is linear length. Payment of each stage shall be made on pro rata basis on completion of a stage in full length or 5 (five) percent of the total length, whichever is less
(2) Sub-Base Course	14.00%	
(3) Base course	9.00%	
(4) Wearing Coat	17.00%	
B.2- Reconstruction/New 8-lane realignment/bypass (Rigid Pavement)		
(1) Earthwork up to top of the sub-grade	0.00%	Unit of measurement is linear length. Payment of each stage shall be made on pro rata basis on completion of a stage in full length or 5 (five) percent of the total length, whichever is less
(2) Sub-Base Course	0.00%	
(3) Dry Lean Concrete (DLC) Course	0.00%	
(4) Pavement Quality Concrete (PQC) Course	0.00%	
C.1- Reconstruction/New Service Road (Flexible Pavement)	0.00%	
(1) Earthwork up to top of the sub-grade	0.00%	Unit of measurement is linear length. Payment of each stage shall be made on pro rata basis on completion of a stage in full length or 5 (five) percent of the total length, whichever is less
(2) Earthwork in shoulders	0.00%	
(3) Sub-Base Course	0.00%	
(4) Non-Bituminous Base Course	0.00%	
(5) Bituminous Base Course	0.00%	
(6) Wearing Coat	0.00%	

Stage of Payment	Percentage - Weightage	Payment Procedure
1	2	3
C.2- Reconstruction/New Service Road (Rigid Pavement)		
(1) Earthwork up to top of the sub-grade	0.00%	Unit of measurement is linear length. Payment of each stage shall be made on pro rata basis on completion of a stage in full length or 5 (five) percent of the total length, whichever is less
(2) Sub-Base Course	0.00%	
(3) Dry Lean Concrete (DLC) Course	0.00%	
(4) Pavement Quality Concrete (PQC) Course	0.00%	
D- Reconstruction and New Culverts on existing road, realignments, bypasses:		
(1) Culverts (Length < 6m)	10.00%	Cost of each culvert shall be determined on pro rata basis with respect to the total number of culverts. Payment shall be made on the completion of at least five culverts.

Note: The length affected due to law and order problems or litigation during execution including the length not handed over to the Contractor under clause 8.3 of this Contract Agreement due to which the Contractor is unable to execute the work, may be deducted from the total project length for payment purposes. The total length calculated here is only for payment purposes and will not affect and referred in other clauses of the Contract Agreement

(ii) Minor Bridges and Underpasses/Overpasses

Procedure for estimating the value of Minor bridge and Underpasses/Overpasses shall be as stated in table 1.3.2:

Table 1.3.2

Stage of Payment	Percentage - Weightage	Payment Procedure
1	2	3
A.1. Widening and Repair of minor bridges (length >6m and < 60m)	0.00%	Cost of each minor bridge shall be determined on pro- rata basis with respect to the total linear length of the minor bridges. Payment shall be made on the completion of widening and repair works of a minor bridge.
A.2.- New Minor bridges		
Foundation: On completion of the foundation work including foundations for wing wall and return walls, abutments, piers up to the abutment/pier cap.	0.00%	Foundation: Cost of each Minor bridge shall be determined on pro- rata basis with respect to the total linear length(m) of the minor bridges. Payment against foundation shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of foundation of each bridge. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
Sub Structures: On completion of the foundation work including foundations for wing wall and return walls, abutments, piers up to the abutment/pier cap.	0.00%	Sub-structure: Cost of each minor bridge shall be determined on pro- rata basis with respect to the total linear length (m) of the minor bridges. Payment against sub- structure shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of sub-structure of each bridge.
Super-structure: On completion of the super structure in all respect including wearing coat, bearings, expansion joints, hand rails, crash barriers, road signs & markings, tests on completion etc. complete in all respect.	0.00%	Super-structure: Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super structure of at least one span in all respects as specified in the column of "Stage of Payment" in this sub- clause.
Guide Bunds and River Training Works: On completion of Guide bunds and river training works complete in all respects.	0.00%	Guide Bunds and River Training Works: Payment shall be made on pro-rata basis on completion of one approach including Stone pitching and protection works etc complete in all

Stage of Payment	Percentage - Weightage	Payment Procedure
1	2	3
		respects as specified.
(5)Guide Bunds and River Training Works: On completion of Guide Bunds and river training works complete in all respects	0.00%	Guide Bunds and River Training Works: Payment shall be made on pro-rata basis on completion of a stage i.e. completion of Guide Bunds and River training Works in all respects as specified
(6)Other Ancillary Works: On completion of wearing coat, expansion joints, hand rails, crash barriers, road signs & markings, tests on completion in all respect.	0.00%	Other Ancillary Works: Payment shall be made on pro-rata basis on completion of a stage in all respects as specified
B.1. Widening and repair of underpasses/overpasses	0.00%	Cost of each underpass/overpass shall be determined on pro- rata basis with respect to the total linear length of the underpasses/overpasses. Payment shall be made on the completion of widening and repair works of a underpass/overpass.
B.2. New Underpasses/Overpasses		
(1) Foundation: On completion of the foundation work including foundations for wing and return walls, abutments, piers.	0.00%	Foundation: Cost of each Underpass/ Overpass shall be determined on pro-rata basis with respect to the total linear length (m) of the Underpasses/Overpasses. Payment against foundation shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of foundation of each Underpasses/ Overpasses. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(2) Sub-structure: On completion of abutments, piers up to the abutment/ pier cap including wing/ return/ retaining wall up to top	0.00%	Sub-structure: Cost of each Underpass/ Overpass shall be determined on pro- rata basis with respect to the total linear length (m) of the Underpasses/ Overpasses. Payment against sub-structure shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of sub-structure of each

Stage of Payment	Percentage - Weightage	Payment Procedure
1	2	3
		Underpasses/Overpasses.
(3) Super-structure: On completion of the super-structure in all respects including Girder, Deck slab, bearings	0.00%	Super-structure: Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super-structure of at least one span in all respects as specified in the column of "Stage of Payment" in this sub-clause. In case of structures where pre-cast girders have been proposed by the Contractor, 50% of the stage payment shall be due and payable on casting of girders for each span and balance 50% of the stage payment shall be made on completion of stage specified as above
(4) On completion of Retaining / Reinforced earth walls complete in all respect and fit for use	0.00%	Payments shall be made on pro rata basis on completion of 20% of the total area.
(5) Approaches and Other Ancillary Works: On completion of wearing coat, expansion joints, hand rails, crash barriers, road signs & markings, stone pitching, protection works, tests on completion in all respect.	0.00%	Payment shall be made on pro-rata basis on completion of a stage in all respects as specified
Wearing Coat (a) in case of Overpass- wearing coat including expansion joints complete in all respects as specified and (b) in case of underpass-rigid pavement including drainage facility complete in all respects as specified	0.00%	Payment shall be made on pro-rata basis on completion of a stage in all respects as specified

(iii) Major Bridge works, ROB/RUB and Structures

Procedure for estimating the value of Major Bridge works, ROB/RUB and Structures Work shall be as stated in table 1.3.3:

Table 1.3.3

Stage of Payment	Percentage - Weightage	Payment Procedure
1	2	3
A.1.- Widening and Repairs of Major Bridges		
(1) Foundation: On completion of the foundation work including foundations for return walls, abutments, piers.	0.00%	Foundation: Cost of each Major Bridge shall be determined on pro rata basis with respect to the total linear length(m) of the Major Bridge. Payment against foundation shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of foundation of the major Bridge. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(2) Sub-structure: On completion of abutments, piers up to the abutment/ pier cap	0.00%	Sub-structure: Payment against sub-structure shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of sub-structure of major bridge.
(3) Super-structure: On completion of the super-structure in all respects including Girder, Deck slab, Bearings	0.00%	Super-structure: Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super- structure including bearings of at least one span in all respects as specified. In case of structures where pre-cast girders have been proposed by the Contractor, 50% of the stage payment shall be due and payable on casting of girders for each span and balance 50% of the stage payment shall be made on completion of stage specified as above
(4). Wearing Coat including expansion joints	0.00%	Wearing Coat: Payment shall be made on completion of wearing coat including expansion joints complete in all respects as specified.
(5) Miscellaneous Items like hand rails, crash barrier, road markings etc.	0.00%	Miscellaneous: Payments shall be made on completion of all miscellaneous works like hand rails, crash barriers, road markings etc. complete in all respects as specified.
(6) Wing walls/return walls up to top	0.00%	Wing walls/return walls: Payments shall be made on completion of all wing walls/return walls complete in all respects as specified.

(7) Guide bunds, River Training works etc.	0.00%	Guide Bunds, River Training works: Payments shall be made on completion of all guide bunds/river training works etc. complete in all respects as specified.
(8) Approaches (including Retaining walls, stone pitching and protection works)	0.00%	Approaches: Payments shall be made on pro rata basis on completion of 10% of the scope of each stage.
A.2. New Major Bridges		
(1) Foundation: On completion of the foundation work including foundations for return walls, abutments, piers.	0.00%	Foundation: Cost of each Major Bridge shall be determined on pro rata basis with respect to the total linear length (m) of the Major Bridge. Payment against foundation shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of foundation of the major Bridge. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(2) Sub-structure: On completion of abutments, piers up to the abutment/ pier cap	0.00%	Sub-structure: Payment against sub-structure shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of sub-structure of major bridge.
(3) Super-structure: On completion of the super-structure in all respects including Girder, Deck slab, Bearings	0.00%	Super-structure: Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super- structure including bearings of at least one span in all respects as specified. In case of structures where pre-cast girders have been proposed by the Contractor, 50% of the stage payment shall be due and payable on casting of girders for each span and balance 50% of the stage payment shall be made on completion of stage specified as above
(4). Wearing Coat including expansion joints	0.00%	Wearing Coat: Payment shall be made on completion of wearing coat including expansion joints complete in all respects as specified.
(5) Miscellaneous Items like hand rails, crash barrier, road markings etc.	0.00%	Miscellaneous: Payments shall be made on completion of all miscellaneous works like hand rails, crash barriers, road markings etc. complete in all respects as specified.
(6) Wing walls/return walls up to top	0.00%	Wing walls/return walls: Payments shall be made on completion of all wing walls/return walls complete in all respects as specified.
(7) Guide bunds, River Training works etc.	0.00%	Guide Bunds, River Training works: Payments shall be made on completion of all guide bunds/river training works etc. complete in all respects as specified.

(8) Approaches (including Retaining walls, stone pitching and protection works)	0.00%	Approaches: Payments shall be made on pro rata basis on completion of 10% of the scope of each stage.
B.1.- Widening and repairs of		
(a) ROB		
(b) RUB		
(1) Foundation	0.00%	Foundation: Cost of each ROB/RUB shall be determined on pro rata basis with respect to the total linear length(m) of the ROB/RUB. Payment against foundation shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of foundation of the ROB/RUB. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(2) Sub-structure	0.00%	Sub-structure: Payment against sub-structure shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of sub- structure of ROB/RUB.
(3) Super-structure (including bearings)	0.00%	Super-structure: Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super- structure including bearings of at least one span in all respects as specified. In case of structures where pre-cast girders have been proposed by the Contractor, 50% of the stage payment shall be due and payable on casting of girders for each span and balance 50% of the stage payment shall be made on completion of stage specified as above
(4) Wearing coat (a) in case of ROB – wearing coat including expansion joints complete in all respects as specified and (b) in case of RUB – rigid pavement under RUB including drainage facility complete in all respects as specified	0.00%	Wearing Coat: Payment shall be made on completion (a) in case of ROB- wearing coat including expansion joints complete in all respects as specified and (b) in case of RUB-rigid pavement under RUB including drainage facility complete in all respects as specified.
(5) Miscellaneous Items (like hand rails, crash barriers road marking etc.)	0.00%	Miscellaneous: Payments shall be made on completion of all miscellaneous works like hand rails, crash barriers, road markings etc. complete in all respects as specified.
(6) Wing walls/return walls up to top	0.00%	Wing walls/return walls: Payments shall be made on completion of all wing walls/return walls complete in all respects as specified.

(7) On completion of Retaining/Reinforced earth walls complete in all respect and fit for use	0.00%	Payments shall be made on pro rata basis on completion of 20% of the total area.
(8) Approaches and Other Ancillary Works: On completion of wearing coat, expansion joints, hand rails, crash barriers, road signs & markings, stone pitching, protection works, tests on completion in all respect.	0.00%	Payment shall be made on pro-rata basis on completion of a stage in all respects as specified
B.2.- New		
(a) ROB		
(b) RUB		
(1) Foundation	0.00%	Foundation: Cost of each ROB/RUB shall be determined on pro rata basis with respect to the total linear length (m) of the ROB/RUB. Payment against foundation shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of foundation of the ROB/RUB. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(2) Sub-structure	0.00%	Sub-structure: Payment against sub-structure shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of sub- structure of ROB/RUB.
(3) Super-structure (including bearing)	0.00%	Super-structure: Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super- structure including bearings of at least one span in all respects as specified. In case of structures where pre-cast girders have been proposed by the Contractor, 50% of the stage payment shall be due and payable on casting of girders for each span and balance 50% of the stage payment shall be made on completion of stage specified as above
(4) Wearing Coat including expansion joints in case of ROB. In case of RUB-rigid pavement under RUB including drainage facility as specified	0.00%	Wearing Coat: Payment shall be made on completion (a) in case of ROB- wearing coat including expansion joints complete in all respects as specified and (b) in case of RUB-rigid pavement under RUB including drainage facility complete in all respects as specified.

(5) Miscellaneous Items like hand rails, crash barrier, road markings etc.	0.00%	Miscellaneous: Payments shall be made on completion of all miscellaneous works like hand rails, crash barriers, road markings etc. complete in all respects as specified.
(6) Wing walls/return walls	0.00%	Wing walls/return walls: Payments shall be made on completion of all wing walls/return walls complete in all respects as specified.
(7) On completion of Retaining / Reinforced earth walls complete in all respect and fit for use	0.00%	Payments shall be made on pro rata basis on completion of 20% of the total area.
(8) Approaches and Other Ancillary Works: On completion of wearing coat, expansion joints, hand rails, crash barriers, road signs & markings, stone pitching, protection works, tests on completion in all respect.	0.00%	Payment shall be made on pro-rata basis on completion of a stage in all respects as specified
C.1- Widening and repairs of Elevated Section/Flyovers/Grade Separators		
(1) Foundation	0.00%	Foundation: Cost of each structure shall be determined on pro rata basis with respect to the total linear length (m) of the structure. Payment against foundation shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of foundation of the structure. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(2) Sub-structure:	0.00%	Sub-structure: Payment against sub-structure shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of sub- structure of structure.
(3) Super-structure: On completion of the super-structure in all respects including Girder, Deck slab, bearings	0.00%	Super-structure: Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super- structure including bearings of at least one span in all respects as specified. In case of structures where pre-cast girders have been proposed by the Contractor, 50% of the stage payment shall be due and payable on casting of girders for each span and balance 50% of the stage payment shall be made on completion of stage specified as above.

(4) Wearing Coat including expansion joints.	0.00%	Wearing Coat: Payment shall be made on completion of wearing coat including expansion joints complete in all respects as specified.
(5). Miscellaneous items like hand rails, crash barriers, road markings etc	0.00%	Miscellaneous: Payments shall be made on completion of all miscellaneous works like hand rails, crash barriers, road markings etc. complete in all respects as specified.
(6) Wing walls/return walls	0.00%	Wing walls/return walls: Payments shall be made on completion of all wing walls/return walls complete in all respects as specified.
(7) On completion of Retaining / Reinforced earth walls complete in all respect and fit for use	0.00%	Payments shall be made on pro rata basis on completion of 20% of the total area.
(8) Approaches and Other Ancillary Works: On completion of wearing coat, expansion joints, hand rails, crash barriers, road signs & markings, stone pitching, protection works, tests on completion in all respect.	0.00%	Payment shall be made on pro-rata basis on completion of a stage in all respects as specified
C.2- New Elevated Section/Flyovers/Grade Separators		
(1) Foundation	0.00%	Foundation: Cost of each structure shall be determined on pro rata basis with respect to the total linear length (m) of the structure. Payment against foundation shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of foundation of the structure. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(2) Sub-structure:	0.00%	Sub-structure: Payment against sub-structure shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of sub- structure of structure.

(3) Super-structure: On completion of the super-structure in all respects including Girder, Deck slab, bearings	0.00%	Super-structure: Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super- structure including bearings of at least one span in all respects as specified. In case of structures where pre-cast girders have been proposed by the Contractor, 50% of the stage payment shall be due and payable on casting of girders for each span and balance 50% of the stage payment shall be made on completion of stage specified as above
(4) Wearing Coat including expansion joints.	0.00%	Wearing Coat: Payment shall be made on completion of wearing coat including expansion joints complete in all respects as specified.
(5). Miscellaneous items like hand rails, crash barriers, road markings etc	0.00%	Miscellaneous: Payments shall be made on completion of all miscellaneous works like hand rails, crash barriers, road markings etc. complete in all respects as specified.
(6) Wing walls/return walls	0.00%	Wing walls/return walls: Payments shall be made on completion of all wing walls/return walls complete in all respects as specified.
(7) On completion of Retaining / Reinforced earth walls complete in all respect and fit for use	0.00%	Payments shall be made on pro rata basis on completion of 20% of the total area.
(8) Approaches and Other Ancillary Works: On completion of wearing coat, expansion joints, hand rails, crash barriers, road signs & markings, stone pitching, protection works, tests on completion in all respect.	0.00%	Payment shall be made on pro-rata basis on completion of a stage in all respects as specified

Note:

- (1) In case of innovative Major Bridge projects like cable suspension/cable stayed/ Extra Dozed and exceptionally long span bridges, the schedule may be modified as per site requirements before bidding with due approval of DG (RD) &SS, MoRT&H.
- (2) The Schedule for exclusive tunnel projects may be prepared as per sit requirements before bidding with due approval of DG (RD) &SS, MoRT&H.

(iv) Other Works.

Procedure for estimating the value of other works done shall be as stated in table 1.3.4:

Table 1.3.4

Stage of Payment	Percentage -Weightage	Payment Procedure
1	2	3
(i) Toll Plaza	0.00%	Unit of measurement is each completed toll plaza. Payment of each toll plaza shall be made on pro rata basis with respect to the total of all toll plaza.
(ii) Road side drains		Unit of measurement is linear length in km. Payment shall be made on pro rata basis on completion of a stage in a length of not less than 5% (five per cent) of the total length.
(a) Lined Drain	5.00%	
(b) Unlined Drain	0.00%	
© Covered Drain	0.00%	
(iii) Road signs, safety Devices, Road Furniture etc.	1.00%	
(iv) Road markings & Studs	1.00%	
(v) Crash Barrier	4.00%	
(vi) Project facilities		Payment shall be made on pro rata basis for completed facilities.
(a) Bus Bays	1.00%	
(b) Truck Lay-Byes	0.00%	
(vii) Retaining wall	22.00%	Unit of measurement is linear length in RM. Payment shall be made on pro rata basis on completion of a stage in a length of not less than 5% (five per cent) of the total length.
(viii) Breast Wall	24.00%	
(ix) Gabion Wall	11.00%	Unit of measurement is CUM. Payment shall be made on pro rata basis on completion of a stage in a quantity of not less than 5% (five per cent) of the total quantity.
(x) Parapet Wall	15.00%	Unit of measurement is linear length in RM. Payment shall be made on pro rata basis on completion of a stage in a length of not less than 5% (five per cent) of the total length.
(xi) Rockfall protection work	2.00%	Unit of measurement is SQM. Payment shall be made on pro rata basis on completion of a stage in a quantity of not less than 5% (five per cent) of the total quantity.
xii) Advance Traffic Management Systems (ATMS)	0.00%	
(xiii) Rain Water Harvesting	0.00%	
(xiv) Road side	0.00%	

Stage of Payment	Percentage -Weightage	Payment Procedure
1	2	3
Plantation including Horticulture in Wayside Amenities		
(xv) Protection Works other than approaches to the bridges, elevated sections/ flyover/ grade separators and ROBs/ RUBs		Unit of measurement is SQM. Payment shall be made on pro rata basis on completion of a stage in a quantity of not less than 5% (five per cent) of the total quantity.
(a) Hydro Seeding & Mulching	7.00%	
(b) Seeding & Mulching using Geotextile	4.00%	
(xvi) Safety & Traffic Management during const.	0.00%	Payment shall be made on prorata basis every six months.
(xvii) Other miscellaneous works including Connecting road & Junction under Grade separator	0.00%	Payment shall be made on Prorate basis on completion of each stage
(a) Connecting Road etc.	0.00%	
(b) Junction	0.00%	
(Xviii) Site clearance and Dismantling	0.00%	Unit of measurement is linear length. Payment shall be made on pro rata basis on completion of a stage in a length of not less than 10% (ten per cent) of the total length.
(xix) Maintenance of Road	0.00%	
(xx) Project facilities including Telecommunication system	1.00%	Payment shall be made on pro rata basis for completed facilities. 70% payment shall be made on installation and rest 30% shall be made on completion of Construction period.
(xxi) Project facilities for Authority Engineer	2.00%	

2. Procedure for payment for Maintenance

- (a) The cost for maintenance shall be as stated in Clause 14.1 (v).
- (b) Payment for Maintenance shall be made in accordance with the provisions of Article 14 and Article 19