

Schedule-A

(See Clauses 2.1 and 8.1)

Site of the Project

1 The Site

- (i) Site of the [Two-Lane] Project Highway/Bridge 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 GAD of the Project Highway/Bridge are specified in Annex-III. The proposed profile of the Project Highways/Bridge shall be followed by the contractor with minimum FRL as indicated in the GAD. The Contractor, however, improve/ upgrade the Road/Bridge 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

1. Site

The Site of the “**Construction of 02 Lane bridge over River Dhasan along with both side Approach roads and Protection works on Kachir-Majhgawan Marg (Rath-Garautha) in Distt. Jhansi** is in the State of Uttar Pradesh. The land, carriage way and structures comprising the Site are described below.

2. Land

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

S.No.	Chainage (km)		Right of Way (m)	Remarks
	From	To		
1.			 Hectare total land require

3. **Old Major Bridges-NIL**
4. **Road over-bridges (ROB)/Road under-bridges(RUB): NIL**
5. **Grade separators: NIL**
6. **Minor bridges: NIL**
7. **Railway level Crossings: NIL**
8. **Under passes (vehicular, non-vehicular) : NIL**
9. **Culverts: NIL**
10. **Busbays: NIL**
11. **Truck Lay byes: NIL**
12. **Road side drains: NIL**
13. **Major junctions: NIL**
14. **Minor junctions: NIL**
15. **Bypasses: NIL**
16. **Other structures: NIL**

Annex-II
(As per Clause 8.3(i))
(Schedule-A)

Dates for providing Right of Way of Construction Zone

S. No.	Work Detail	Date
1	90% ROW	On the appointed date
2	Remaining 10% ROW	After 90 days from appointed date

Annex - III

(Schedule-A)

Alignment Plans/GAD

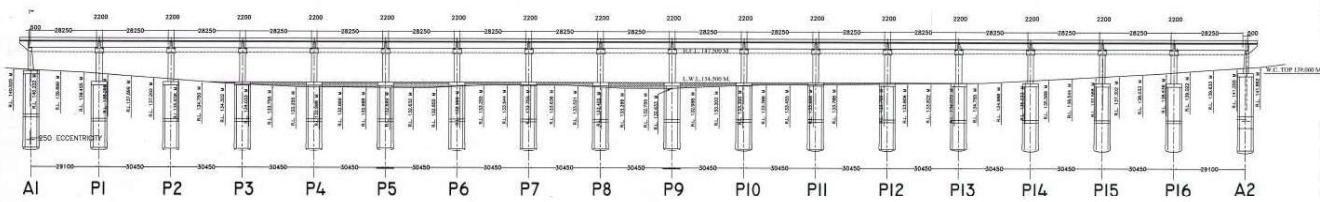
The alignment of the Project Highway/bridge is enclosed as GAD. Finished road level /formation level of the bridge indicated in the GAD shall be followed by the contractor as minimum FRL. In any case, the finished road level of the project highway shall not be less than those indicated in the GAD. The contractor shall, however, improve/upgrade the Road profile as indicated in Annex-III based on site/design requirement.

Encl:GAD/Alignment

TO KACHIR GHAT SIDE

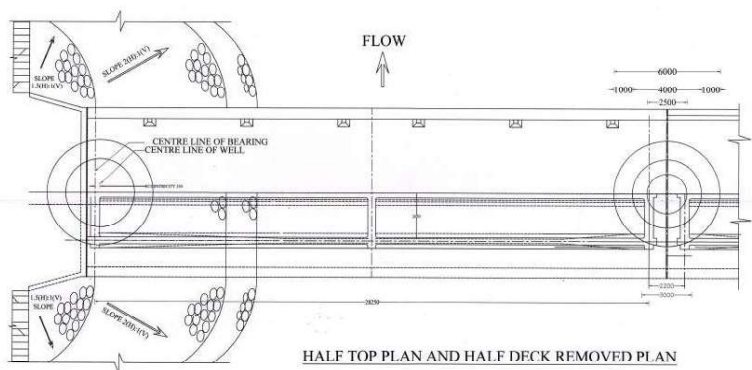
TO MAJHAGAWAN SIDE

TOTAL LENGTH OF BRIDGE = 516.530 M (17 X 28.25 M C/C OF BEARINGS)

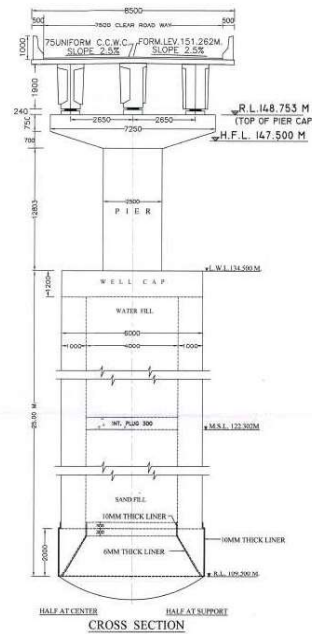


GENERAL ELEVATION

- NOTES
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.
 2. DIMENSIONAL DETAILS OF DIFFERENT COMPONENTS ARE TYPICAL & SHALL BE CHECKED AT THE SITE BEFORE ORDERING.
 3. ALL WEIGHTS/STRENGTHS SHALL BE FOLLOWED AS SHOWN UNLESS OTHERWISE SPECIFIED.
 4. GRADE OF CONCRETE IN DIFFERENT COMPONENTS (TYPICAL):
 - (A) - WELL CORE M30
 - (B) - WELL BEARING M30
 - (C) - ARCHITECTURAL FINISHING M30
 - (D) - PIER WELLS CAP M30
 - (E) - PIER CAP M30
 - (F) - ARCHITECTURAL FINISHING M30
 - (G) - ABUTMENT WELLS CAP M30
 - (H) - ABUTMENT FINISHING M30
 - (I) - PILE BEAM M30
 - (J) - ARCHITECTURAL FINISHING M30
 - (K) - DECK SLAB M30
 - (L) - ARCHITECTURAL FINISHING M30
 5. THICKNESS OF CONCRETE SHALL BE PROVIDED.
 6. THE DIRECTION OF FLOW OF WATER IN EACH PIERS IS AS SET TO THE CENTER LINE OF THE BRIDGE.
 7. HORIZONTAL CLEAR WAY SHALL BE AS FOLLOWS:
 - (A) - HIGHEST FLOOD LEVEL 147.500 M
 - (B) - LOW WATER LEVEL 145.000 M
 8. THE DESIGN DISCHARGE HAS BEEN TAKEN AS 1480.0 CUMEC. (PROPOSED)
 9. GEOMETRICAL DATA:
 - (A) - DESIGN SPEED 40 KM/H
 - (B) - DESIGN FLOOR LEVEL 147.500 M
 - (C) - LOW WATER LEVEL 145.000 M
 - (D) - HIGHEST FLOOD LEVEL 147.500 M
 - (E) - DESIGN DISCHARGE 1480.0 CUMEC
 10. DIMENSIONS:
 - (A) - BRIDGE ZONE 1:40
 - (B) - APPROACH ZONE 1:20
 - (C) - SIDE SLOPE 1:1
 - (D) - ROADWAY 1:1
 - (E) - SIDEWALK 1:1
 - (F) - SIDEWALK 1:1
 11. RETAINING AND ARCHES SHALL BE PROVIDED AS PER CALCULATED DATA.
 12. ALL DIMENSIONS SHALL BE CHECKED AT THE SITE BEFORE ORDERING.
 13. ALL DIMENSIONS SHALL BE CHECKED AT THE SITE BEFORE ORDERING.
 14. ALL DIMENSIONS SHALL BE CHECKED AT THE SITE BEFORE ORDERING.



HALF TOP PLAN AND HALF DECK REMOVED PLAN



CROSS SECTION

GENERAL ARRANGEMENT DRAWING FOR REFERENCE/SECTION

U.P. STATE BRIDGE CORPORATION LTD.
B. C. U. JHANSI

NAME OF PROJECT: BRIDGE OVER RIVER DHANAN ON MAJHAGAWAN KACHIR GHAT IN DISTT. JHANSI

SCALE: 1:1000

DATE: 20/11/2017

DESIGNED BY: S. K. SINGH

CHECKED BY: S. K. SINGH

APPROVED BY: S. K. SINGH



Annex – IV *(Schedule-A)*

Environment Clearances

NO clearance required

Schedule - B

(See Clause 2.1)

Development of the Project Highway/Major Bridge

1. Development of the Project Highway/Bridge

Development of the Project Highway/Bridge shall include design and construction of the Project Highway/Bridge as described in this Schedule-B and in Schedule-C. The GAD of the Project on the location is specified as appended **in Annex-III of Schedule A** and shall be deemed to be part of this Schedule B.

2. Work

The work shall include “**Construction of 02 Lane bridge over River Dhasan along with both side Approach roads and Protection works on Kachir-Majhgawan Marg (Rath-Garautha) in Distt. Jhansi**, installation of road furniture and metal crash barrier, etc as described in Annex-I of this Schedule-B and in Schedule-C.

3. Specifications and Standards

The Project Highway/Bridge 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 Project

1 Construction of New 02 Lane bridge over River Dhasan along with both side Approach roads and its Protection works

The Project shall constructed as per the alignment plan as specified in Annex-III of Schedule-A, unless otherwise specified by the Authority. Geometric deficiencies, if any, in the existing horizontal and vertical profiles shall be corrected as per the prescribed standards for plain/rolling terrain to the extent land is available.

Width of Carriageway/Formation width

The width of the structures shall be as specified in the following table:

S.No.	Type of structure	Formation width	Carriageway width	Remark
1	Bridge portions	8.5 m	7.5 m	
2	Approaches	12 m	7.0 m	
3	Additional approaches	10 m	7.0 m	

2. GEOMETRIC DESIGN AND GENERAL FEATURES

General

Geometric design and general features of the Project Highway shall be in accordance with Section 2 of the Manual of Specification and Standards as specified in Schedule D.

Design Speed

The design speed shall be as specified in Schedule D.

Improvement of the existing road geometrics

In the stretches, where improvement of the existing road geometrics to the prescribed standards is not possible, the existing road geometrics shall be improved to the extent possible within the given right of way and proper road signs and safety measures shall be provided.

Right of way

Refer to paragraph 2.3 of the Manual. The right of way is available as per the Plan & profile.

Note: No additional land will be provided than above, as such wherever required Toe wall/ Retainingwall of suitable heights shall be provided to confine free side slopes of highway embankment for main carriageway/service road, etc. on either side to accommodate the typical cross sections as given in Schedule – B within the proposed RoW without any additional cost to the Authority.

3 Design parameters of the Project

General

All structures and Approach/Culverts etc. shall be designed and constructed in accordance with the Manual **as specified in** Schedule D and shall conform to the cross-sectional and other features specified below:

I	New Major River Bridge		
A	Structural Arrangement		
(i)	Span Arrangement	17x28.25	Refer GAD
(ii)	The total length of the Bridge	516.53 m	
(iii)	Minimum Vertical Clearance over HFL	1.5 m	
(iv)	Formation Width of Major Bridge	8.50 m	7.5 m Carriageway + 2 x 0.50 m RCC Crash Barrier
B	Hydraulics & levels		
(i)	Minimum design Discharge	19500 cu-mecs	Refer to GAD Note 8
(ii)	H.F.L	RL 147.500 m	
(iii)	L.W.L	RL 134.500 m	
(iv)	Maximum Scour Level for pier	RL 122.302 m	Can't be higher than these levels whatever the reason.
(v)	Maximum Scour Level for Abutment	RL 122.302 m	
C	A minimum grade of Concrete		
(i)	PSC Superstructure	M 45	Minimum exposure grade Refer to GAD
(ii)	RCC Substructure	M 35	
(iii)	RCC Crash barrier	M 40	
(iv)	RCC well Foundation	M 30	
D	Seismic Parameters		
(i)	Importance Factor	1.2	
(ii)	Seismic Zone	II	
E	Silt factor (scour Zone)	1.90	Can't be higher than this whatever the reason.
F	Type of Expansion Joint	Strip seal joint	
G	Type of Bearing	Elastomeric bearing	
H	RCC Crash barrier with hand rails	each side	
I	Wearing Coat (CC)	75 mm	
2	Approach Road (both sides)		
(i)	Formation Width	12.00 m	7.00m(Carriageway) + 2 x 2.50m(Earthen shoulder)
(ii)	Paved Carriageway	7.00 m	

(iii)	Total Length		
a)	Kachir Side	200 m	
b)	Mahagawan side	200 m	
3	Additional Approach Road (both sides)		
(i)	Formation Width	10.00 m	7.00m(Carriageway) + 2 x 1.50m(Earthen shoulder)
(ii)	Paved Carriageway	7.00 m	
(iii)	Total Length		
a)	Kachir Side	2450 m	
b)	Mahagawan side	7800 m	
4	Length of Metal crash barrier	2 x 2 x 200 m	Total length 800 m
5	New Culverts in additional approaches		
(i)	RCC Box culvert	2No. x 6m	
(ii)	RCC Box culvert	4No. x 5m	
(iii)	RCC Box culvert	3No. x 3m	
(iv)	Hume pipe culvert	16 No. x 350 mm dia	
(v)	Hume pipe culvert	2 No. x 600 mm dia	
(vi)	Hume pipe culvert	14 No. x 1000 mm dia	

Note:

- (i) No major change in span arrangement given in tentative GAD as appended in Schedule A shall be entertained unless it is required as per constraint(s) and approved by the Authority. Any excess financial implication due to required such changes shall be borne by the EPC contractor.
- (ii) Any variation in the length specified in this Clause of 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.
- (iii) The formation level indicated in the GAD 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 GAD. The contractor shall, however, improve/upgrade the Road profile as indicated in Annex-III based on site/design requirements.
- (iv) Both banks of the river shall be protected by protection work around each abutment and along each approach along with KC drain/chutes etc. as per codal and/or design requirements, and specifications utilizing the existing embankment.

Foundation

All piers shall be supported on well foundation as per IRC :78.

Substructure/Superstructure

The Substructure/Superstructure shall be designed and constructed in accordance with section 7 of the Manual and shall conform to the cross-sectional features and other details specified therein.

4 Pavement design of Approach/Service Road

Type of Pavement

The flexible pavement shall be designed for the Main carriageway and Service/Slip Roads as per section 5 of the Manual and in conformity with the IRC: 37-2018 for the minimum **design life of 20 years**. The crust composition for the Main carriageway & service road, entry/ exit ramps shall be not less than as given below:

Sr. No.	Description of item	Minimum pavement Composition of Flexible Pavement (mm) for the Main Carriageway
1	Bituminous Concrete (BC)	30
2	Dense Bituminous Concrete (DBM)	50
3	ETA	100
4	Wet Mix Macadam (WMM)	150
5	Granular Sub base (GSB)	150

Design Traffic

Notwithstanding anything to the contrary contained in this Agreement or the Manual, the concessionaire shall design the pavement for the Main Carriageway minimum design traffic of 13.74 MSA or as per the actual traffic at the time of construction whichever is higher.

5 RETAINING/RE WALLS & PROTECTION WORKS

Provide Retaining/RE walls in approaches to structures and at any other locations as per site conditions to contain the project facility within the available right of way as per the cross section provisions mentioned in Schedule-B conforming to Schedule "D".

In any case no free slope will be permitted then Approaches shall be confined by RE walls only (due to land/utility/space constraint) and in addition, RCC Breast wall of suitable dimensions (Length, width, height) shall be designed and provided to facilitate slip roads within the available right of way.

Note: Any additional length required as per site conditions shall not constitute a Change of Scope, save and except any variations arising out of a Change of Scope expressly undertaken in accordance with the provisions of Article 13.

6 DRAINAGE SYSTEM FOR BRIDGE DECKS

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

7 TRAFFIC CONTROL DEVICES AND ROAD SAFETY WORKS

The traffic control devices and road safety works shall be provided in accordance with Section 9 of the Manual. The reflective sheeting shall be provided in accordance with section 9.2.3 of the Manual and in conformity with the IRC: 67-2022.

8 ROADSIDE FURNITURE

Roadside furniture like Road Boundary Stones, km/Hectometer Stones, Railings, Traffic Impact Attenuators, and Delineators shall be provided in accordance with the provisions of Section 9 of the manual.

9 USE OF FLY-ASH

Use of fly-ash shall be considered in the construction as per latest NHAI guidelines/Policy circular's/MOEF guidelines dated 27/08/2018, No. 24028/14/2018-H.

10 CHANGE OF SCOPE

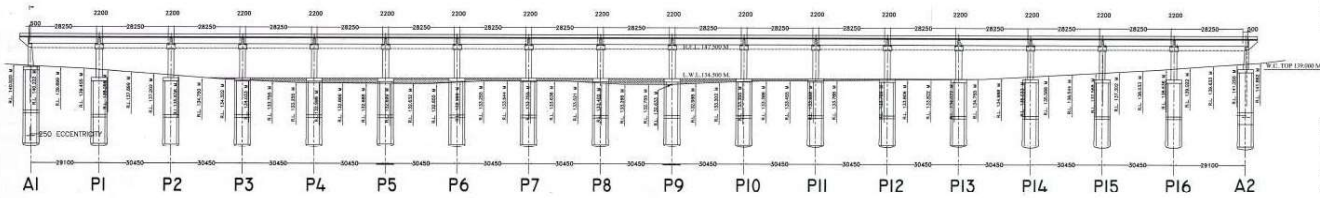
Any variations in the lengths specified in this Schedule-B shall not constitute a Change of Scope, save and except any variations in the length arising out of a Change of Scope expressly undertaken in accordance with the provisions of Article 13.

Typical Sections

TO KACHIR GHAT SIDE

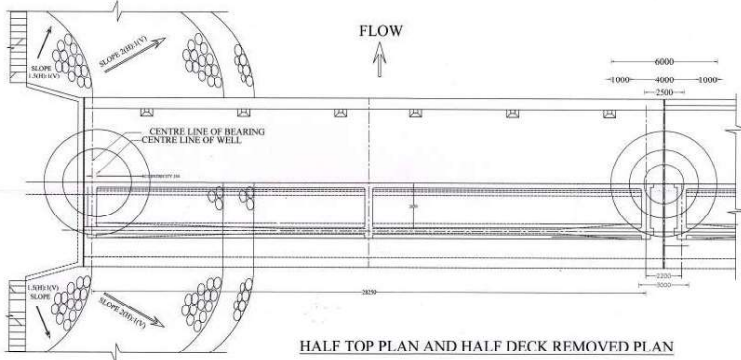
TO MAJHAGAWAN SIDE

TOTAL LENGTH OF BRIDGE = 516.530 M (17 X 28.25 M C/C OF BEARINGS)

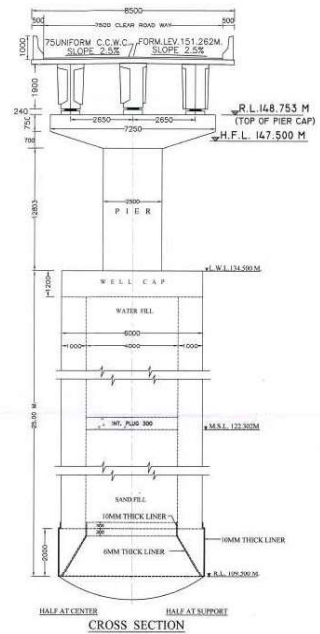


GENERAL ELEVATION

- NOTES
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.
 2. DIMENSIONAL DETAILS OF DIFFERENT COMPONENTS ARE TYPICAL & SHALL BE CHECKED AT THE SITE BEFORE ORDERING.
 3. ALL WEIGHTS/STRENGTHS SHALL BE FOLLOWED AS SHOWN UNLESS OTHERWISE SPECIFIED.
 4. GRADE OF CONCRETE IN DIFFERENT COMPONENTS (TYPICAL):
 - (A) - WELL CORE M30
 - (B) - WELL BEARING M30
 - (C) - ARCHITECTURE FINISHING M30
 - (D) - PIER WELLS CAP M30
 - (E) - PIER CAP M30
 - (F) - ARCHITECTURE WELLS CAP M30
 - (G) - ARCHITECTURE FINISHING M30
 - (H) - PILE BEARING M30
 - (I) - PILE BEARING M30
 - (J) - ARCHITECTURE FINISHING M30
 5. THICKNESS OF CONCRETE SHALL BE PROVIDED.
 6. THE DIRECTION OF FLOW OF WATER IN BRIDGE IS AS SHOWN TO THE RIGHT OF THE BRIDGE.
 7. INTERNAL CLEARANCE SHALL BE TAKEN AS FOLLOWS:
 - (A) - LOWEST FLOOD LEVEL 147.500 M
 - (B) - LOW WATER LEVEL 146.000 M
 8. THE DESIGN DISCHARGE HAS BEEN TAKEN AS 1480.0 CUMEC (ESTIMATED).
 9. GEOMETRICAL DATA:
 - (A) - DESIGN SPEED 40 KM/H
 - (B) - DESIGN FLOOR LEVEL 147.500 M
 - (C) - LOW WATER LEVEL 146.000 M
 - (D) - DESIGN DISCHARGE 1480.0 CUMEC
 10. DIMENSIONS (TYPICAL):
 - (A) - BRIDGE WIDTH 7.50 M
 - (B) - BRIDGE WIDTH 7.50 M
 - (C) - BRIDGE WIDTH 7.50 M
 11. RETAINING AND ARCHES SHALL BE PROVIDED AS PER CALCULATED DATA.
 12. ALL DIMENSIONS SHALL BE TAKEN AS SHOWN UNLESS OTHERWISE SPECIFIED.
 13. ALL DIMENSIONS SHALL BE TAKEN AS SHOWN UNLESS OTHERWISE SPECIFIED.



HALF TOP PLAN AND HALF DECK REMOVED PLAN



CROSS SECTION

GENERAL ARRANGEMENT DRAWING FOR REFERENCE/SECTION

U.P. STATE BRIDGE CORPORATION LTD.
B. C. U. JHANSI

NAME OF PROJECT: BRIDGE OVER RIVER DHANAN ON MAJHAGAWAN KACHIR GHAT IN DISTT. JHANSI

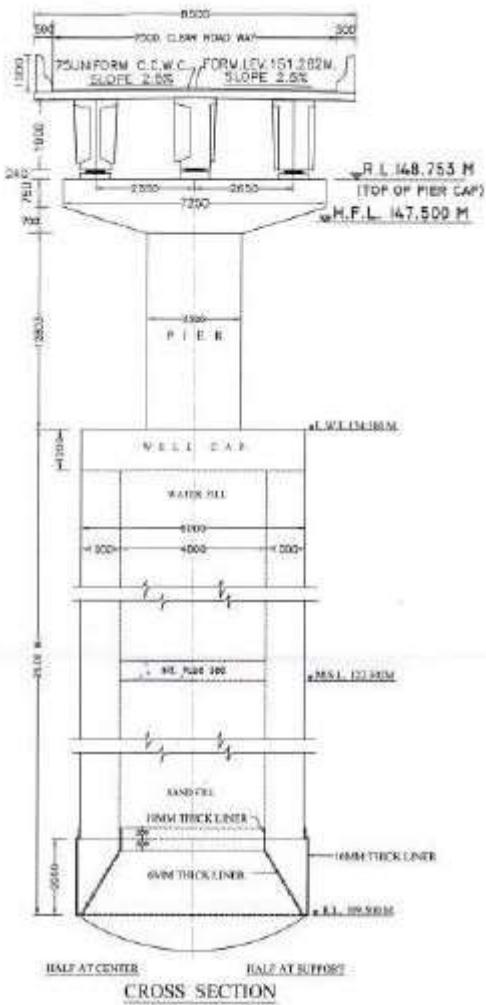
SCALE: 1:1000

DATE: 10/11/2017

DESIGNER: S. K. SINGH

CHECKER: S. K. SINGH

APPROVER: S. K. SINGH



Schedule-C

(See Clause 2.1)

Project Facilities

1. Project Facilities

The Contractor shall construct the Project Facilities in accordance with the provisions of this Agreement. Such Project Facilities shall include:

- (a) Toll plaza[s]; Nil
- (b) Road side furniture; As per manual. However Minimum No. /quantity shall be provided as mentioned below:
 - a) cat eyes -----620 no. on bridge portion
 - b) road marking-----129.13 sq m on bridge portion
 - c) road marking----- 100 sq m on approaches
 - d) Reflective sign boards----- 10 No.
- (c) Pedestrian facilities; Nil
- (d) Tree plantation; Nil
- (e) Truck lay-byes; Nil
- (f) Bus-bays and bus shelters; Nil
- (g) Rest areas; and others to be specified: Nil

SCHEDULE - D

SPECIFICATIONS AND STANDARDS

1 Construction

The Contractor shall comply with the Specifications and Standards outlined in Annex-I of this Schedule-D for the construction of the Project Highway.

2 Design Standards

The Project Highway including Project Facilities shall conform to the design requirements set out in the following documents:

- Manual of Specifications and Standards for Two Laning of Highways (IRC: SP: 73-2018) referred to herein as the Manual as applied to proposed highway.
- IRC:SP: 88-2019
- **IRC:SP: 90-2010**
- IRC: 99-2018 & IRC:SP 102-2014
- IRC: SP 21-2009
- IRC: SP 55-2014
- IRC: SP: 113-2018
- IRC: SP 119-2015

Design standards are included in the tables below.

S. No	Description	Design Code
1.	Geometric Designs & standards	IRC:38 Guidelines for the design of horizontal curves
		IRC: SP-23 – Vertical curves for Highways
		IRC:39 – Standards for Road rail level crossings
		IRC:64– Capacity of Roads in Rural Areas
		IRC:66 – Sight Distance on Rural Highways
		IRC:73 – Geometric Design Standards for Rural (non-urban) Highways
		IRC:75 – Guidelines for design of High Embankment
		IRC:86 – Geometric Design standards for urban roads in plains
2.	Design of Pavement	IRC:37 – Guidelines for Design of Flexible Pavement
		IRC:58 – Guidelines for Design of Rigid Pavements
		IRC:115 – Guidelines for strengthening of flexible pavements
3.	Junctions/Intersections/ interchanges	IRC:65- Traffic Rotaries
		IRC:92 - Guidelines for Design of Interchanges
		IRC: SP:41 – Design of At grade junctions
4.	Kilometer stones, 200m stones, and boundary pillar	IRC:81 – Type Design for Highway kilometer stones
		IRC:26 -Type design for 200m stones
		IRC:25 -Type design for boundary stones
5.	Traffic Signs	IRC:31 – Route marker signs for state routes
		IRC:67 – Code of practice for road signs
		IRC:79– Recommended practice for Road Traffic signs

S. No	Description	Design Code
		IRC:SP:31 – Road Traffic signs
6.	Road Markings	IRC:35 – Code of practice for road markings, road delineators
7.	Ancillary Works	IRC:80 – Type design for pick-up bus stops on Rural Highways IRC: SP: 12 – Guidelines on the provision of parking areas.
8.	Drainage	IRC: SP:42 – Guidelines on Road Drainage IRC: SP:50 – Guidelines on urban drainage
9.	Safety Measures	IRC:103 – Guidelines for pedestrian facilities IRC:SP:44 – Highway Safety Code IRC: SP:55 – Guidelines for safety in construction zones
10.	Bridges and Structures	IRC: 5 – Standard Specification and Code of Practice for Road Bridges, Section 1 – General Features of Design IRC: 6 – Standard specifications and code of practice for Road bridges (Section: II) Loads and Load combinations IRC: 21 – Standard Specification and Code of Practice for Road bridges, Section III – Cement Concrete (Plain and reinforced) IRC: 112 – Code of practice for concrete road bridges IRC: SP:13– Guidelines for the design of small bridges and culverts IRC: 78 – Standard Specification and Code of Practice for Road Bridges, Section VII – Foundation and Substructure IRC: 83- (Part I) – Standard Specification and Code of Practice for Road bridges, Section IX – Bearing, Part I: Roller & Rocker Bearing IRC: 83- (Part II) – Standard Specification and Code of Practice for Road bridges, Section IX – Bearing, Part II: Elastomeric Bearings IRC: 83- (Part III) – Standard Specification and Code of Practice for Road bridges, Section IX – Bearings, Part III: POT, PIN, Metallic Guide and Plane Sliding Bearings IRC: 89 - Guidelines for design and construction of River Training and Control Works for Road Bridges IRC: SP:35 – Guidelines for inspection and Maintenance of Bridges IRC: SP: 40 – Guidelines on Repair, Strengthening, and Rehabilitation of Concrete Bridges. IRC: SP: 114 – Guidelines for seismic design of road bridges
		IRC: SP:65-2018: Guidelines for Design and Construction of Segmental Bridges (First Revision)
		-2016: Guidelines for Design of Continuous Bridges (First Revision)

Annex - I

(Schedule-D)

Specifications and Standards for Construction

1 Specifications and Standards

All Materials, works, and construction operations shall conform to the Manual of Specifications and Standards for Six-Laning of Highways (IRC: SP: 87-2019), as the case may be referred to as the Manual, and MORTH Specifications for Road and Bridge Works 5th Revision 2013. Where the specification for a work is not given, Good Industry Practice shall be adopted to the satisfaction of the Employer's Representative.

2 Deviations from the Specifications and Standards

The terms "Concessionaire", "Independent Engineer" and "Concession Agreement" used in the Manual shall be deemed to be substituted by the terms "EPC Contractor", "Employer's Representative" and "Agreement" respectively.

Notwithstanding anything to the contrary contained in Paragraph 1 above, the following specifications and standards shall apply to the project highway, and for purposes of this agreement; the aforesaid specifications and standards shall be deemed to be amended to the extent set forth below. Measures shall be provided to mitigate safety and other hazards arising from each of the following deviations from the Specifications and Standards. Measures to mitigate safety hazards shall address any recommendations contained in the Road Safety Audit Reports.

Sl. No.	Clause No.	Description	Deviation
1	Clause 2.2	Design Speed: Ruling or minimum Design speed shall be followed	The minimum design speed shall be 80 kmph and as per Plan & Profile drawing as appended in Schedule A.
2	Clause 2.6	Type and width of Shoulders	The type and Width of shoulders shall be as per the Typical cross sections as per GAD as enclosed in Schedule A & B
3	Clause 2.17 of IRC: SP:87-2019	Typical Cross Sections	Typical Cross Sections shall be as per the GAD as enclosed in Schedule A & B
4	Clause 4.2	Road Embankment: Principles for the height of the embankment	The minimum FRL shall be followed as per the GAD as appended in Schedules A & B.
5	Clause 5.2 & 5.2.1	Provision of Flexible or Rigid pavement	The type of Pavement shall be flexible.
6	Clause 5.4.1 (i)	Design period of Flexible Pavement	Flexible Pavement shall be designed for a minimum design period of 20 years.
7	Clause 5.11	Earthen Shoulders	Earthen Shoulders on either side of the road shall be of selected earth with MDD not less than 17.5 kN/cu.m. and 4-day soaked CBR of min 9% at min 97% of dry density, placed on top of granular sub-base (that is an extension from pavement upto the daylight). The PI and LL shall not exceed 6 and 25 respectively. The remaining portion shall conform to section 300 of MoRTH Specifications.
8	Clause 7.3 (ii)	Deck Width of bridge	The deck width of bridge shall be as per TCS given in GAD as appended in Schedule A & B.
9	MoRTH Specification no.	Hot mix plant for Bituminous Mixes	All bituminous courses (bituminous base course/wearing course) shall be carried out using a type

SCHEDULE - H
See Clauses 10.1 (iv) and 19.3
Contract Price Weightages

The contract price for this agreement is **Rs. (excluding GST)**

Proportions of the Contract Price for different Stages of Construction of the Project Highway shall be considered.

Item	Weightages in Percentage to the contract Price	Stage of Payment	Percentage Weights
1	2	3	4
1. Approach Road (Flexible pavement)	46.28%	i) - Earthwork	38.09%
		ii) - Sub grade + GSB	17.40%
		iii) - WMM + Bituminous work + Approach slab	43.82%
		iv) Metal Crash Barrier (Both Sides)	0.69%
2. Major Bridge	39.24%	(i) Foundation	56.22%
		(ii) Sub Structure	10.63%
		(iii) Super Structure i/c Bearing	29.83%
		(iv) Wearing Coat i/c Expansion Joint	1.51%
		(v) Miscellaneous work (Crash Barrier + Hand Rail + Weep Holes + Drain Pipe)	1.81%
3. Other works	14.48%	(i) Protection Work & KC drains/chutes etc.	74.89%
		(ii) Road markings + Road Signage + Overhead Sign Board + Painting (Crash Barrier, Kerb)+ km stones etc.	0.09%
		(iii) Culverts	25.02%

The procedure for estimating the value of work done :

Road Works:

Stage of Payment	Payment Procedure
1	2
Construction of Approach Road (Flexible pavement)	
i) – Earthwork	The unit of measurement is linear length. Payment of each stage shall be made on a pro-rata basis on completion of a stage in full length.
ii) - Sub grade + GSB	
iii) - WMM + Bituminous work + Approach Slab	
iv) Metal Crash Barrier (Both Sides)	

For example, if the total length of bituminous work to be done is 100 km, the cost per km of bituminous work shall be determined as follows:

$$\text{Cost per km} = P \times \text{Weightages for road work} \times \text{Weightage for bituminous work} \times (1/L)$$

Where P= Contract Price

L = Total length in Km

Similarly, the rates per km for other stages shall be worked out accordingly.

Note: The length affected due to law and order problems or litigation during execution 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 refer to other clauses of the Contract Agreement.

Major Bridge

Stage of Payment	Payment Procedure
1	2
(i) Foundation	The cost of each foundation shall be determined on a pro-rata basis with respect to the total number of foundations. Payment against the foundation shall be made on a pro-rata basis on completion of a stage i.e. completion of at least one foundation up to pile cap level. In case load testing is required for the foundation, the trigger of the first payment shall include load testing where specified.
(ii) Sub Structure	Payment against Sub-structure shall be made on a pro-rata basis on completion of a stage i.e. the completion of one sub-structure of abutment/pier up to its cap level.
(iii) Super Structure i/c Bearing	Payment shall be made on a 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. 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 on completion of stage as above.
(iv) Wearing Coat i/c Expansion Joint	Payment shall be made on completion of the wearing coat including expansion joints complete in all respects as specified.
(v) Miscellaneous work (Crash Barrier + Hand Rail + Weep Holes + Drain Pipe)	Payments shall be made on completion of all miscellaneous works like handrails, crash barriers, road markings, etc. complete in all respects as specified.

Other works

Stage of Payment	Payment Procedure
1	2
Other works	
(i) Protection Work & KC drains/chutes etc.	Payments shall be made on completion of all works.
(ii) Road markings + Road Signage + Overhead Sign Board + Painting (Crash Barrier, Kerb)+ km stones etc.	The unit of measurement is linear length in km. Payment shall be made on a pro-rata basis on completion of a stage in a length of not less than 50 % (Fifty percent) of the total length.
(iii) Culverts	Payments shall be made on completion each culvert.