

TECHNICAL SCHEDULES

Schedule-A

(See Clauses 2.1 and 8.1)

Site of the Project

1. The Site

- (i) Site of the 2-lane project highway shall include 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**. The proposed profile of the Project Highways shall be followed by the contractor with minimum FRL as indicated in the alignment plan. The Contractor, 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

1. Site

The site of the 2-lane project highway comprises section of National Highway-244commencing from km 31+449 (Khellani at km 44+946)to km 51+700 (Premnagar at km 68+617)of length 20+251 km i.e. Khellani-Kishtwar-Chattoo_Khanabal section in the Union Territory of Jammu &Kashmir. The land, carriageway and structures comprising the Site are described below.

2. Land

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

Sr. No.	Chainage (km)		Right of Way (m)	Remarks
	From	To		
1	31+500	31+900	7	
2	31+900	32+040	5	
3	32+040	35+280	Realignment	Pul Doda
4	35+280	36+200	6.5	
5	36+200	36+300	Curve improvement	
6	36+300	37+100	5	
7	37+100	37+235	Curve improvement	
8	37+235	37+600	5.5	
9	37+600	38+200	7	
10	38+200	38+500	8	
11	38+500	40+000	6	
12	40+000	40+400	8	
13	40+400	43+100	6	
14	43+100	43+700	7	
15	43+700	46+500	6	
16	46+500	47+600	7	
17	47+600	47+750	Curve improvement	
18	47+750	49+450	6	
19	49+450	50+300	7	
20	50+300	51+050	6	
21	51+050	51+700	7	

3. Carriageway

The existing carriage way is of 7 m width without paved shoulders.

4. Major Bridges

The Site includes the following Major Bridges:

Sr. No.	Ex Chainage (km)	Type of Structure			No. of Spans with span length (m)	Overall Width (m)
		Foundation	Sub-structure	Super-structure		
1	53+800	Open	RCC	Steel Truss	1X70	13.25

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

The Site includes the following ROB (road over railway line)/RUB (road under railway line):

Sr. No.	Chainage (km)	Type of Structure		No. of Spans with span length (m)	Width (m)	ROB/ RUB
		Foundation	Superstructure			
Nil						

6. Grade separators

The Site includes the following grade separators:

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

7. Minor bridges

The Site includes the following minor bridges:

Sr. No.	Ex Chainage (km)	Type of Structure			No. of Spans with span length (m)	Overall Width (m)
		Foundation	Sub-structure	Super-structure		
1	63+050	-	RCC	Solid Slab	1X9.0	10.5
2	64+875	Open	Masonry	Steel Plate Girder	1x22.5	8.7
3	68+050	Open	Masonry	Steel Plate Girder	1x24.5	8.9

8. Railway level crossings

The Site includes the following railway level crossings:

Sr. No.	Location (km)	Remarks
Nil		

9. Underpasses (vehicular, non-vehicular)

The Site includes the following underpasses:

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

10. Culverts

The Site has the following culverts:

Sr. No.	Existing chainage	Type of Structure	Span Arrangement		Width in m
			No.	Clear Span (m)	
1	44+900	Slab	1	1.60	10.50
2	45+100	Slab	1	2.00	10.30
3	45+500	Slab	1	2.00	9.80
4	45+800	Slab	1	1.20	10.00
5	45+900	Slab	1	2.00	10.90
6	46+000	Slab	1	1.00	9.60
7	46+300	Slab	1	2.00	10.30
8	46+800	Slab	1	2.00	13.00
9	47+100	Slab	1	2.00	10.20
10	47+200	Slab	1	2.00	10.20
11	47+500	Slab	1	2.00	10.30
12	47+800	Slab	1	3.00	10.30
13	47+850	Slab	1	2.00	10.30

Construction & Up gradation to 2 lane with paved shoulder from Design Km. 31.449 to Km 51.700 of Khellani-Khanabal Section on NH-244 (Pkg-I)

Sr.No.	Existing chainage	Type of Structure	Span Arrangement		Width in m
			No.	Clear Span (m)	
14	48+500	Slab	1	1.60	10.20
15	48+600	Slab	1	1.60	10.20
16	48+700	Slab	1	1.60	10.20
17	48+850	Slab	1	Blocked	
18	48+900	Slab	1	2.00	10.30
19	49+000	Slab	1	1.60	10.20
20	49+100	Slab	1	2.20	10.20
21	49+300	Slab	1	2.00	10.20
22	49+600	Slab	1	2.00	10.30
23	50+000	Slab	1	2.00	10.20
24	50+300	Slab	1	2.00	10.30
25	50+500	Slab	1	2.00	10.30
26	50+600	Slab	1	3.00	10.20
27	50+750	Slab	1	2.20	10.30
28	50+900	Slab	1	2.00	10.20
29	51+100	Slab	1	2.00	10.30
30	51+200	Slab	1	2.00	10.20
31	52+400	Slab	1	Blocked	
32	52+700	Slab	1	1.00	10.20
33	52+800	Slab	1	3.00	10.20
34	53+250	Slab	1	2.00	10.00
35	53+800	Causeway	1	4.00	
36	54+264	Slab	1	2.00	12.00
37	56+900	Slab	1	2.00	10.30
38	57+260	Slab	1	2.00	12.00
39	57+400	Pipe	2	0.90	10.20
40	57+750	Slab	1	2.00	10.20
41	58+270	Slab	1	2.00	10.30
42	58+405	Pipe	1	0.60	10.20
43	58+540	Causeway	1	4.00	10.20
44	58+850	Slab	1	3.00	10.30
45	59+080	Slab	1	2.00	10.20
46	59+250	Slab	1	3.00	10.20
47	59+570	Slab	1	3.00	10.20
48	60+100	Slab	1	1.00	10.30
49	60+370	Pipe	1	0.60	10.20
50	60+675	Slab	1	2.00	10.30
51	61+170	Slab	1	3.00	10.20
52	61+510	Slab	1	2.00	10.20
53	61+785	Pipe	1	0.60	10.20
54	62+175	Slab	1	2.00	10.30
55	62+520	Slab	1	2.00	10.30
56	62+770	Pipe/Slab	1	0.6/1.6	10.30
57	63+265	Slab	1	2.00	10.20
58	63+590	Pipe	1	0.60	10.20
59	63+660	Slab	1	1.50	10.20
60	63+755	Slab	1	1.50	10.30
61	63+945	Slab	1	2.00	10.20
62	65+415	Slab	1	1.50	10.30
63	65+500	Slab	1	2.80	10.20
64	65+775	Slab	1	2.80	10.20

Sr.No.	Existing chainage	Type of Structure	Span Arrangement		Width in m
			No.	Clear Span (m)	
65	66+050	Slab	1	2.80	10.20
66	66+700	Slab	1	2.80	10.20

11. Bus bays

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

Sr. No.	Chainage (km)	Length (m)	Left Hand Side	Right Hand Side
Nil				

12. Truck Lay byes

The details of truck lay byes are as follows:

Sr. No.	Chainage (km)	Length (m)	Left Hand Side	Right Hand Side
Nil				

13. Roadside drains

The details of the roadside drains are as follows:

Sr. No.	Location		Type	
	From km	to km	Masonry/cc (Pucca)	Earthen (Kutch)
Nil				

14. Major junctions

The details of major junctions are as follows:

Sr. No.	Location		At grade	Separated	Category of Cross Road			
	From km	to km			NH	SH	MDR	Others
Nil								

(NH: National Highway, SH: State Highway, MDR: Major District Road)

15. Minor junctions

The details of the minor junctions are as follows:

Sr. No.	Existing Chainage	Remarks	Side	Type
1	46+910	Minor Junction	RHS	Y
2	48+150	Minor Junction	RHS	Y
3	53+082	Minor Junction	LHS	Y
4	53+950	Major Junction	RHS	Y
5	54+210	Minor Junction	LHS	Y
6	57+050	Minor Junction	RHS	Y
7	60+680	Minor Junction	RHS	Y
8	61+750	Minor Junction	RHS	Y

16. Bypasses

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

Sr. No.	Name of bypass (town)	Chainage (km) From km to km	Length (in Km)
Nil			

17. Others

Nil

(As per Clause 8.3 (i))

(Schedule-A)

Dates for providing Right of Way of Construction Zone

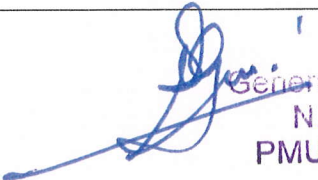
The dates on which the Authority shall provide Right of Way of Construction Zone to the Contractor on different stretches of the Site are stated below:

Sl. No.	From (Km)	To (Km)	Length (Km)	Width (m)	Date of providing Right of Way*
1	2	3	4	5	
(i) Full Right of Way (Full Width)	31+449	33+335	1886	21	150 (one hundred and fifty) days after the Appointed Date
	33+335	33+840	505	24	
	33+840	34+675	835	29	
	34+675	34+940	265	30	
	34+940	35+340	400	24	
	35+340	35+650	310	22	
	35+650	36+270	620	24	
	36+270	37+100	830	22	
	37+100	37+235	135	16	
	37+235	37+900	665	24	
	37+900	44+755	6855	22	
	44+755	44+825	70	20	
	44+825	45+000	175	18	
	45+000	47+550	2550	22	
	47+550	47+880	330	20	
	47+880	50+950	3070	23	
	50+950	51+160	210	20	
	51+160	51+700	540	23	
(ii) Part Right of way	31+500	31+900	400	7	On the appointed date
	31+900	32+040	140	5	
	35+280	36+200	920	6.5	
	36+300	37+100	800	5	
	37+235	37+600	365	5.5	
	37+600	38+200	600	7	
	38+200	38+500	300	8	
	38+500	40+000	1500	6	
	40+000	40+400	400	8	
	40+400	43+100	2700	6	
	43+100	43+700	600	7	
	43+700	46+500	2800	6	
	46+500	47+600	1100	7	
	47+750	49+450	1700	6	

Construction & Up gradation to 2 lane with paved shoulder from Design Km. 31.449 to Km 51.700 of Khellani-Khanabal Section on NH-244 (Pkg-I)

Sl. No.	From (Km)	To (Km)	Length (Km)	Width (m)	Date of providing Right of Way*
1	2	3	4	5	
	49+450	50+300	850	7	
	50+300	51+050	750	6	
	51+050	51+700	650	7	

*The dates specified herein shall in no case be beyond 150 (one hundred and fifty) days after the Appointed Date.


General Manager (P)
N.H.I.D.C.L.
PMU-Doda (J&K)

Annex - III

(Schedule-A)

Alignment Plans

The 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 is enclosed in alignment plan and indicated below. 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.



Annex – IV
(Schedule-A)
Environment Clearances

As per EIA notification 2006 and its amendment S.O.2559 (E) Dt 22nd August 2013, S.O 996(E) Dt 10th April 2015, S.O 382(E) Dt 3rd February 2015 Environmental Clearance Exempted from the purview of the Environmental Impact Assessment.

[To be published in the Gazette of India, Extraordinary, Part II, Section 3,
Sub-section(ii)]

**MINISTRY OF ENVIRONMENT AND FORESTS
NOTIFICATION**


New Delhi, the 22nd August, 2013

S.O. 2559 (E).- Whereas by notification of the Government of India in the Ministry of Environment and Forests vide number S.O.1533(E), dated the 14th September, 2006 issued under sub-section (1) and clause (v) of sub-section (2) of section (3) of the Environment (Protection) Act, 1986 read with clause (d) of sub-rule (3) of rule 5 of the Environment (Protection) Rules, 1986, the Central Government directed that on and from the date of its publication, the required construction of new projects or activities or the expansion or modernization of existing projects or activities listed in the Schedule to the said notification entailing the capacity addition with change in process or technology and or product mix shall be undertaken in any part of India only after prior environmental clearance from the Central Government or as the case may be, by the State level Environment Impact Assessment Authority, duly constituted by the Central Government under sub-section (3) of section 3 of the said Act, in accordance with the procedure specified therein;

And whereas the Government of India in the Ministry of Environment and Forests had constituted a High Level Committee under the Chairmanship of Member (Environment and Forests and Science and Technology), Planning Commission, vide OM No.21-270/2008-IA.III dated the 11th December, 2012 to review the provisions of Environmental Impact Assessment Notification, 2006 relating to granting Environmental Clearances for Roads, Buildings and Special Economic Zone projects and provisions under the OM dated the 7th February, 2012 issued by the Ministry of Environment and Forests regarding guidelines for High Rise Buildings;

And whereas one of the terms of reference (ToR) of the Committee was to review the requirement of Environmental Clearance for highway expansion projects upto the right of way of 60 meters and length of 200 kms under Environmental Impact Assessment notification;

And whereas the Committee has submitted its report to the Ministry and on this ToR, the Committee has recommended exempting highway expansion projects from the requirement of scoping and that Environmental Impact Assessment or Environment Management Plan for highway expansion projects may be prepared on the basis of model ToRs to be posted on Ministry's website and in respect of requirement of environmental clearance, **the Committee has recommended that expansion of National Highway projects up to 100 kms involving additional right of way or land acquisition upto 40 mts on existing alignments and 60 mts on re-alignments or by-passes may be exempted from the preview of the notification;**


General Manager (P)
N.H.I.D.C.L.
PMU-Doda (J&K)

Schedule - B

(See Clause 2.1)

Development of the Project Highway

1. Development of the Project Highway

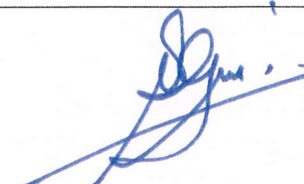
Development of the Project Highway shall include design and construction of the Project Highway as described in this Schedule-B and in Schedule-C.

2. Rehabilitation and augmentation

Nil

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.


General Manager (P)
N.H.I.D.C.L.
PMU-Doda (J&K)

Annex – I
(Schedule-B)

Description of the Project

Construction & up-gradation to 2 Lane with paved shoulder from Km 31+449 (Existing km 44+946) to Km 51+700 (Existing km 68+617) of length 20.251 Km on Khellani – Kishtwar – Chattroo - Khanabal section of NH-244 in the Union Territory of Jammu and Kashmir on EPC Mode.

1. Widening of Existing Highway

- i. The Project Highway shall follow the existing 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 hill/mountainous terrain to the extent land is available.

SL. No.	Design Chainage (km)		Length (km)	Remarks
	From	To		
1	31+449	31+900	0.451	Widening with 2- lane with PS
2	31+900	35+350	3.450	New 2-lane with PS
3	35+350	51+700	16.350	Widening with 2- lane with PS

- ii. Width of Carriageway

- (a) 2-Laning with paved shoulders shall be undertaken for main road. The paved carriageway shall be 10m wide in accordance with the typical cross section's drawings attached along with Schedule B.
- (b) Except as otherwise provided in this agreement, the width of the paved carriageway and cross-sectional features shall conform to paragraph 1.1 above.

2. Geometric Design and General Features

(i) General

Geometric design and general features of the Project Highway shall be in accordance with Section 2 of the Manual.

(ii) Design speed

The design speed shall be the maximum design speed of 60 Km/hr. and minimum design speed of 40 km/hr. for mountainous/hilly terrain as per IRC: SP-73:2018 and IRC: SP-48:1998

(iii) Improvement of the existing road geometrics

In the following sections, where improvement of the existing road geometrics to the prescribed standards.

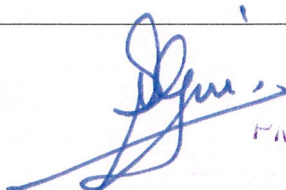
Sl. No.	Stretch (from km to km)	Type of deficiency	Remarks
Nil			

(iv) Right of Way

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

(v) Type of shoulders

- (a) In built-up sections, footpaths/fully paved shoulders shall be provided in the following stretches:


P.W.D. Jammu (M&T)

Sl.No.	Stretch(from km to km)	Fully paved shoulders/ footpaths	Reference to cross section
Nil			

- (b) In open country/hilly areas, paved shoulders of 1.5m width shall be provided on either side and balance 1.0m width earthen shoulder at valley side only shall be covered with 150 mm thick compacted layer of granular material for main road.
- (c) Design and specifications of paved shoulders and granular material shall conform to the requirements specified in the relevant Manual.

(vi) Lateral and vertical clearances at underpasses

- (a) Lateral and vertical clearances at underpasses and provision of guardrails/crash barriers shall be as per the provision of relevant Manual.
- (b) Lateral clearance: The width of the opening at the underpasses shall be as follows:

Sl.No.	Location (Chainage) (from km to km)	Span/ opening (m)	Remarks
NIL			

(vii) Lateral and vertical clearances at overpasses

- (a) Lateral and vertical clearances at overpasses shall be as per the provision of relevant Manual.
- (b) Lateral clearance: The width of the opening at the overpasses shall be as follows:

Sl.No.	Location (Chainage) (from km to km)	Span/ opening (m)	Remarks
Nil			

(viii) Service roads

Service roads shall be constructed at the locations and for the lengths indicated below:

Sl.No.	Location of service road (from km to km)	Right hand side (RHS)/Left hand side (LHS)/ or Both sides	Length (m) of service road
NIL			

(ix) Grade separated structures

- (a) Grade separated structures shall be provided as per provision of the relevant Manual. The requisite particulars are given below:

Sl. No.	Location of structure	Length (m)	Number and length of spans (m)	Approach gradient	Remarks, if any
Nil					

In the case of grade separated structures, the type of structure and the level of the Project Highway and the crossroads shall be as follows:

Sl. No.	Location	Type of structure Length (m)	Cross road at			Remarks, if any
			Existing Level	Raised Level	Lowered Level	
Nil						

(x) Cattle and pedestrian underpass/overpass

Cattle and pedestrian underpass/ overpass shall be constructed as follows:

Sl. No.	Location	Type of crossing
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Nil

(xi) Typical cross-sections of the Project Highway

Following typical cross sections shall be provided for the Project Highway However to be designed as per manual.

Sr. No.	Design Chainage		Design Length	TCS Detail	TCS Type
	From	To			
1	31+449	31+493	43.5	Two Lane C/W With PS With one side cut & one Side Fill & Protection as Applicable (Reconstruction)	TCS-3
2	31+493	31+508	15	Viaduct	Viaduct
3	31+508	31+560	52.5	Two Lane C/W With PS with Both Side Fill & Protection as Applicable (Reconstruction)	TCS-1A
4	31+560	31+650	90	Two Lane C/W With PS With one side cut & one Side Fill & Protection as Applicable (Reconstruction)	TCS-3
5	31+650	31+810	160	Two Lane C/W With PS With Both Side Fill & Protection As Applicable (Reconstruction)	TCS-1A
6	31+810	31+900	90	Two Lane C/W With PS With one side cut & one Side Fill & Protection As Applicable (Reconstruction)	TCS-3
7	31+900	31+970	70	Two Lane C/W With PS With one side cut & one Side Fill & Protection As Applicable (New Construction)	TCS-2
8	31+970	32+070	100	Two Lane C/W With PS With Both Side Fill & Protection As Applicable (New Construction)	TCS-1
9	32+070	32+180	110	Two Lane C/W With PS With one side cut & one Side Fill & Protection As Applicable (New Construction)	TCS-2
10	32+180	32+230	50	Two Lane C/W With PS With Both Side Fill & Protection As Applicable (New Construction)	TCS-1
11	32+230	32+350	120	Two Lane C/W With PS With Both Side Cut & Protection As Applicable (New Construction)	TCS-4
12	32+350	32+390	40	Two Lane C/W With PS With one side cut & one Side Fill & Protection As Applicable (New Construction)	TCS-2
13	32+390	32+420	30	Two Lane C/W With PS With Both Side Fill & Protection As Applicable (New Construction)	TCS-1
14	32+420	32+470	50	Minor Bridge	Minor Bridge
15	32+470	32+560	90	Two Lane C/W With PS With one side cut & one Side Fill & Protection As Applicable (New Construction)	TCS-2
16	32+560	32+718	157.5	Two Lane C/W With PS With Both Side Cut & Protection As Applicable (New Construction)	TCS-4
17	32+718	32+733	15	Minor Bridge	Minor Bridge
18	32+733	32+780	47.5	Two Lane C/W With PS With Both Side Fill & Protection As Applicable (New Construction)	TCS-1
19	32+780	33+440	660	Two Lane C/W With PS With one side cut & one Side Fill & Protection As Applicable (New Construction)	TCS-2

Sr. No.	Design Chainage		Design Length	TCS Detail	TCS Type
	From	To			
20	33+440	33+700	260	Two Lane C/W With PS With Both Side Cut & Protection As Applicable (New Construction)	TCS-4
21	33+700	33+850	150	Two Lane C/W With PS With one side cut & one Side Fill & Protection As Applicable (New Construction)	TCS-2
22	33+850	34+100	250	Two Lane C/W With PS With Both Side Cut & Protection As Applicable (New Construction)	TCS-4
23	34+100	34+160	60	Two Lane C/W With PS With Both Side Fill & Protection As Applicable (New Construction)	TCS-1
24	34+160	34+198	37.5	Two Lane C/W With PS With one side cut & one Side Fill & Protection As Applicable (New Construction)	TCS-2
25	34+198	34+273	75	Bridge Cum Viaduct	Bridge Cum Viaduct
26	34+273	34+340	67.5	Two Lane C/W With PS With one side cut & one Side Fill & Protection As Applicable (New Construction)	TCS-2
27	34+340	34+950	610	Two Lane C/W With PS With Both Side Cut & Protection As Applicable (New Construction)	TCS-4
28	34+950	35+050	100	Viaduct	Viaduct
29	35+050	35+308	257.5	Two Lane C/W With PS With one side cut & one Side Fill & Protection As Applicable (New Construction)	TCS-2
30	35+308	35+323	15	Minor Bridge	Minor Bridge
31	35+323	35+360	37.5	Two Lane C/W With PS With one side cut & one Side Fill & Protection As Applicable (New Construction)	TCS-2
32	35+360	35+480	120	Two Lane C/W With PS With one side cut & one Side Fill & Protection As Applicable (Reconstruction)	TCS-3
33	35+480	35+530	50	Two Lane C/W With PS With Both Side Fill & Protection As Applicable (Reconstruction)	TCS-1A
34	35+530	35+570	40	Two Lane C/W With PS With one side cut & one Side Fill & Protection As Applicable (Reconstruction)	TCS-3
35	35+570	35+630	60	Two Lane C/W With PS With Both Side Fill & Protection As Applicable (Reconstruction)	TCS-1A
36	35+630	36+200	570	Two Lane C/W With PS With one side cut & one Side Fill & Protection As Applicable (Reconstruction)	TCS-3
37	36+200	36+240	40	Two Lane C/W With PS With Both Side Fill & Protection As Applicable (Reconstruction)	TCS-1A
38	36+240	36+260	20	Minor Bridge	Minor Bridge
39	36+260	37+112	852	Two Lane C/W With PS With one side cut & one Side Fill & Protection As Applicable (Reconstruction)	TCS-3
40	37+112	37+202	90	Major Bridge	Major Bridge
41	37+202	41+280	4078	Two Lane C/W With PS With one side cut & one Side Fill & Protection As Applicable (Reconstruction)	TCS-3