

**NATIONAL HIGHWAYS AND INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED
(MINISTRY OF ROAD TRANSPORT & HIGHWAYS)
GOVT. OF INDIA**

Consultancy Services for Preparation of DPR for Development of Economic Corridors, Inter Corridors and Feeder Routes to Improve the Efficiency of Freight Movement in India under Bharatmala Pariyojana



Lot-1 : Package-IV

(Section-3: Km 55+000– Km 82+514 of NH515)

DRAFT DETAILED PROJECT REPORT

**Volume – IX
Drawings**

**January 2023
Rev. – R1**

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ROAD WORKS

≡ **List of Drawings** ≡

PATH: C:\Shampa\01Project\1718082_Bharatmala_Asam_P-4\NH-515\3.January_2022\Drawing_Vol_NH-515_Sec-3\1.List of Drawing\List of Drawing_Sec-3_NH-515.dwg

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3.0	Typical Cross Section & Schedule	VSPL/1718-082/DPR/PKG-4/NH-515/TCS-01 TO 07	R1	07
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CLIENT :



NATIONAL HIGHWAYS AND INFRASTRUCTURE
DEVELOPMENT CORPORATION LTD.
(MINISTRY OF ROAD TRANSPORT AND HIGHWAYS)
GOVERNMENT OF INDIA

PROJECT :

CONSULTANCY SERVICES FOR PREPARATION OF
DETAILED PROJECT REPORT FOR DEVELOPMENT OF
ECONOMIC CORRIDORS, INTER CORRIDORS AND FEEDER
ROUTES TO IMPROVE THE EFFICIENCY OF FREIGHT
MOVEMENTS IN INDIA UNDER BHARATMALA PARIYOJANA
(LOT-1:PACKAGE IV)

DESIGN CONSULTANT:



VOYANTS SOLUTIONS PVT LTD.
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Detailed Project Report

REV.	DATE	DESCRIPTION

DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY
PD/PS	SS/SP	DGR	SKC
SCALE :	N.T.S.	SHEET SIZE	A2

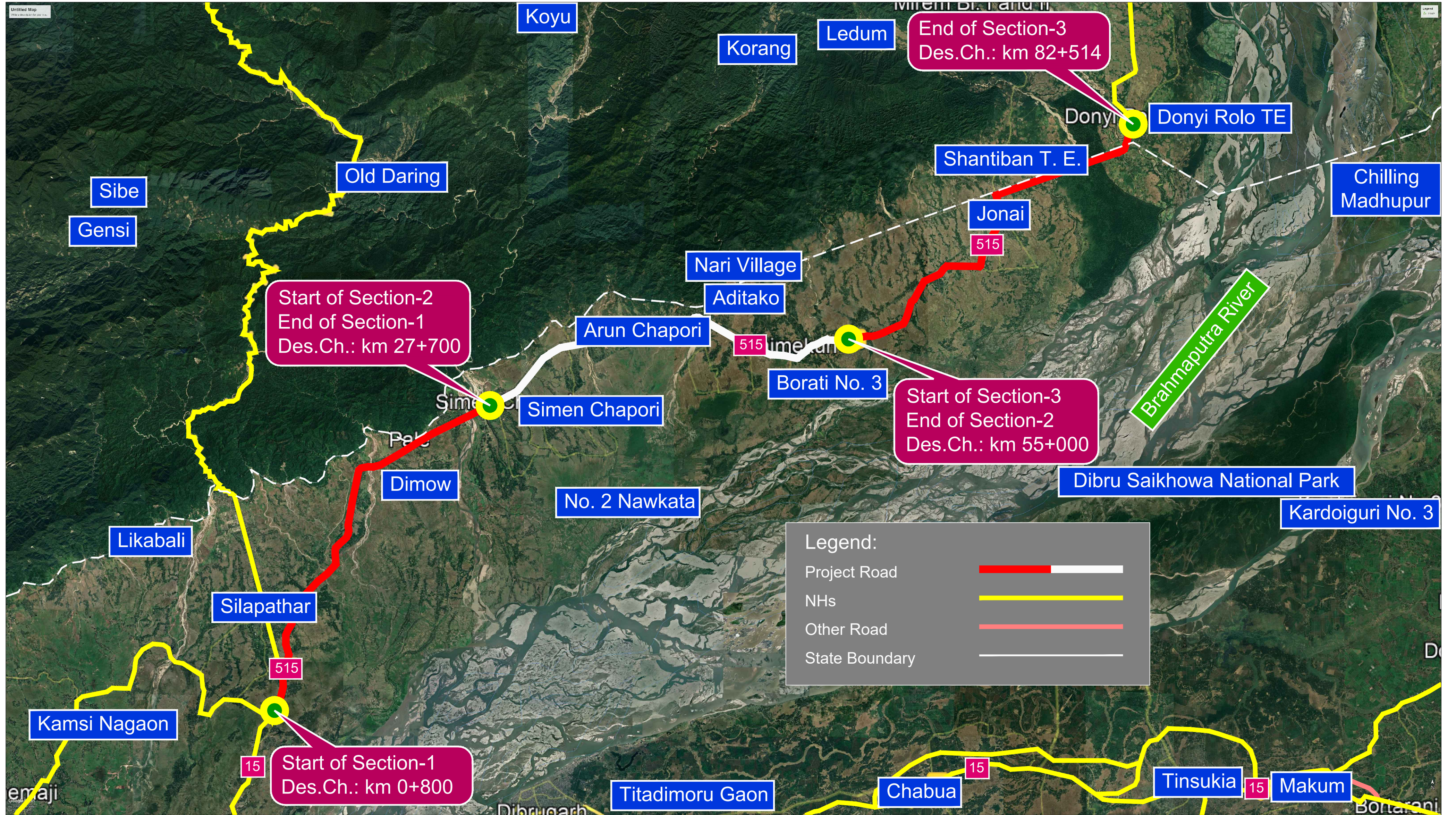
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List of Drawings

DRG. No. :
VSPL/1718-082/DPR/PKG-4/NH-515/MIS- 01

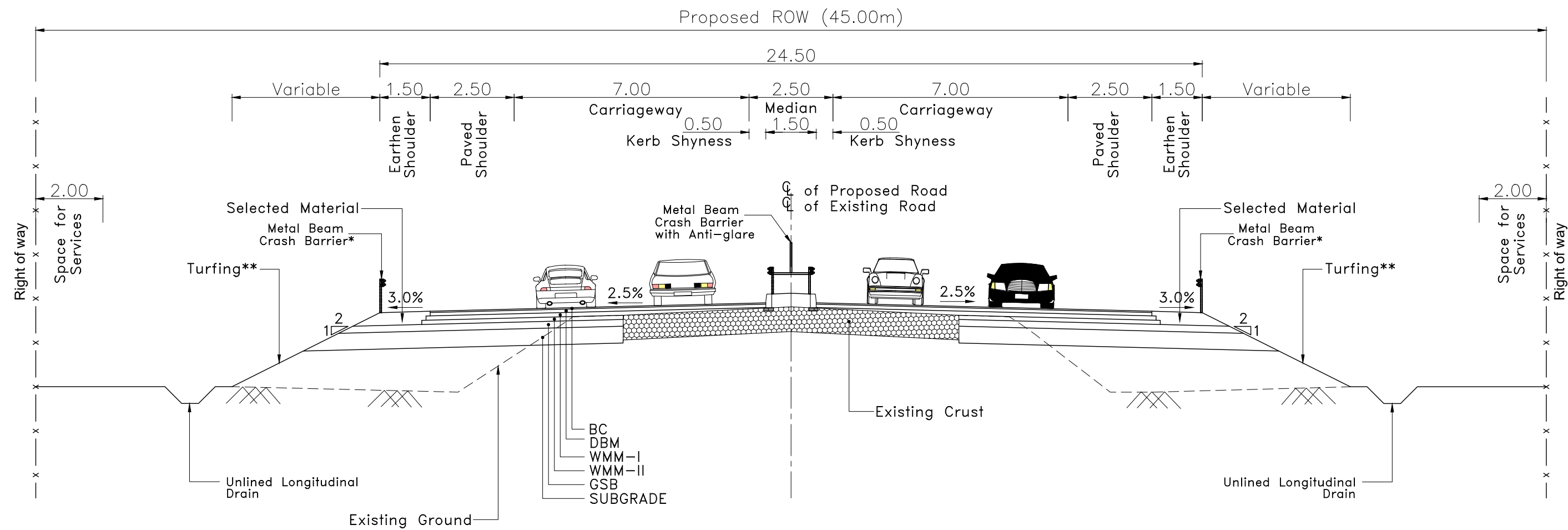
REVISION:R1 January 2023

≡ ***Index Map*** ≡

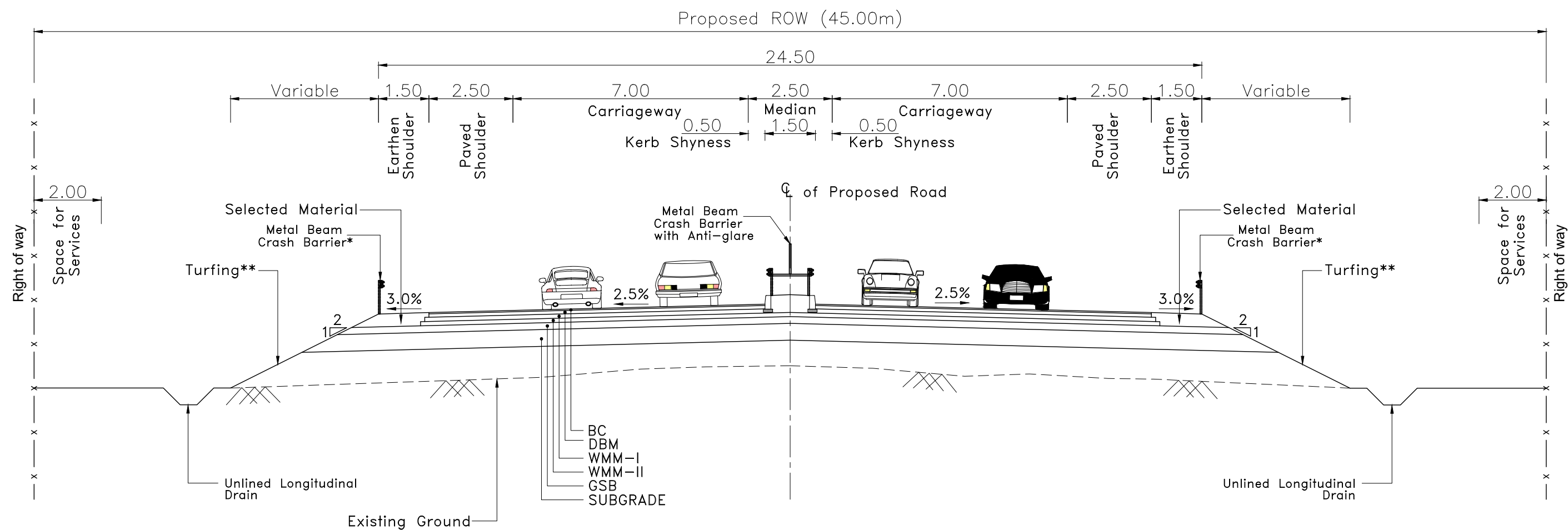


CLIENT :  NATIONAL HIGHWAYS AND INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. (MINISTRY OF ROAD TRANSPORT AND HIGHWAYS) GOVERNMENT OF INDIA	PROJECT : CONSULTANCY SERVICES FOR PREPARATION OF DETAILED PROJECT REPORT FOR DEVELOPMENT OF ECONOMIC CORRIDORS, INTER CORRIDORS AND FEEDER ROUTES TO IMPROVE THE EFFICIENCY OF FREIGHT MOVEMENTS IN INDIA UNDER BHARATMALA PARIYOJANA (LOT-1:PACKAGE IV)	DESIGN CONSULTANT:  VOYANTS SOLUTIONS PVT LTD. 403, 4th Floor, Park Centra, Sector-30, NH-8 Gurugram-122001, Haryana, India CIN- U74140HR2004PTC046918 Ph: 0124-4598200, Fax: 0124-4019051, E-mail: info@voyants.in, www.voyants.in	Detailed Project Report				DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY	TITLE : INDEX MAP		
							PD/PS	SS/SP	DGR	SKC			
													
							SCALE :		N.T.S.	SHEET SIZE	A2		
			REV.	DATE	DESCRIPTION								
DRG. No. : VSPL/1718-082/DPR/PKG-4/NH-515/IM- 01													
REVISION:R1										January 2023			

||| **Typical Cross Section & Schedule** |||



TYPE-01 : TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN RURAL AREA (CONCENTRIC WIDENING)



TYPE-01A : TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN BYPASS / REALIGNMENT STRETCHES

Note:
 1. All dimensions are in meter unless otherwise specified.
 2. * Applicable where embankment height is >3.0m
 3. ** Applicable where <3.0m embankment height Turfing with sods of perennial turf forming grass.

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DESIGN CONSULTANT:

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PD/PS	SS/SP	DGR	SKC
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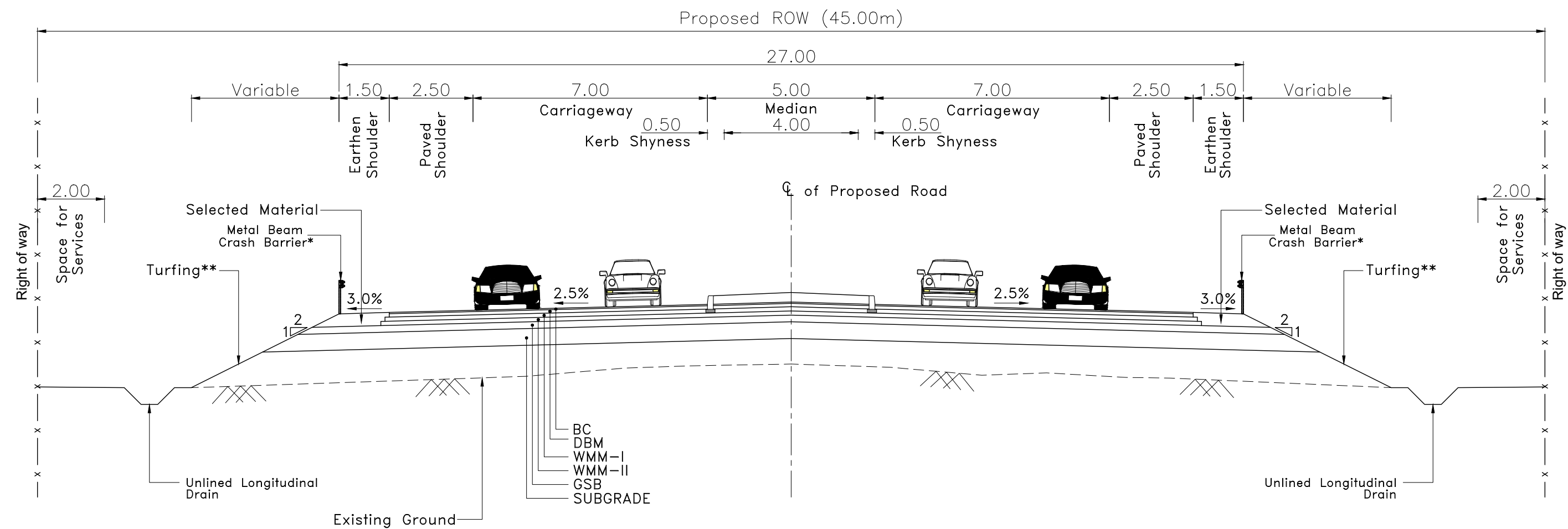
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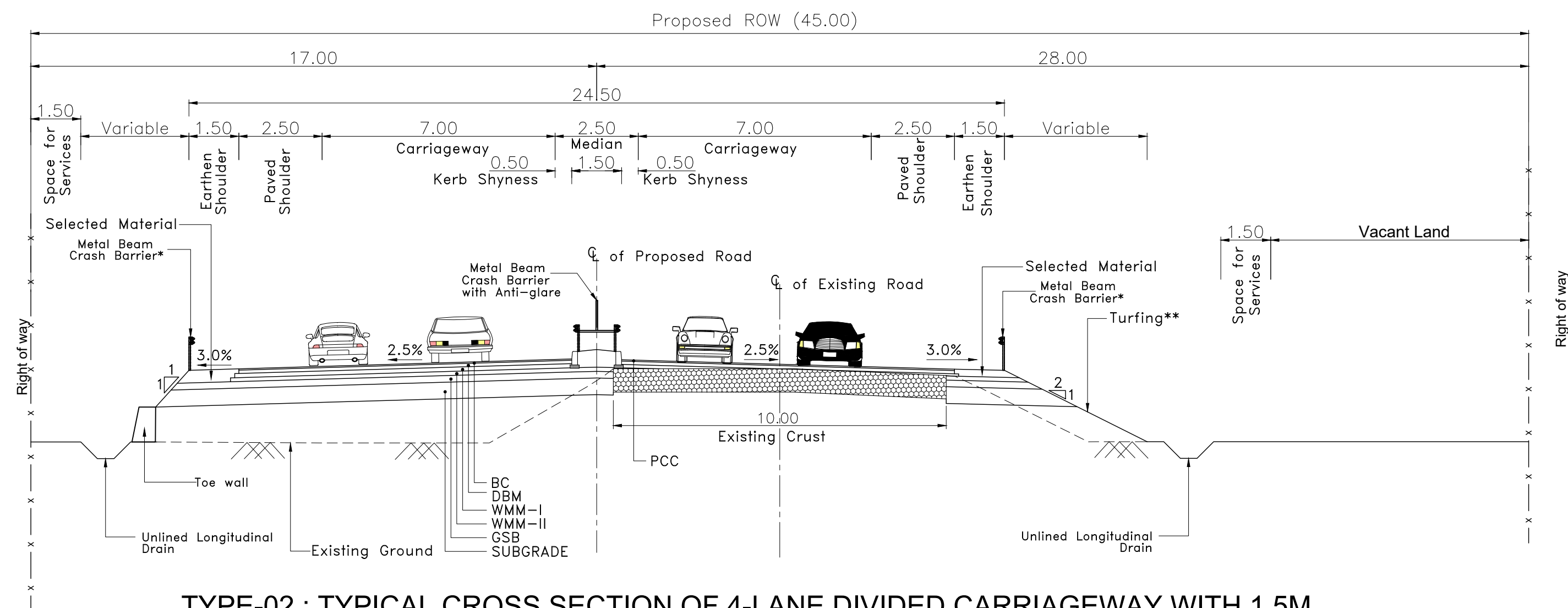
DRG. No. :
 VSPL/1718-082/DPR/PKG-4/TCS- 01

REVISION:R1

JANUARY 2023



TYPE-01B : TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 4.0M WIDE RAISED MEDIAN IN BYPASS / REALIGNMENT STRETCHES



TYPE-02 : TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN RURAL AREA (ECCENTRIC WIDENING)

Note:
1. All dimensions are in meter unless otherwise specified.
2. * Applicable where embankment height is >3.0m
3. ** Applicable where <3.0m embankment height Turfing with sods of perennial turf forming grass.

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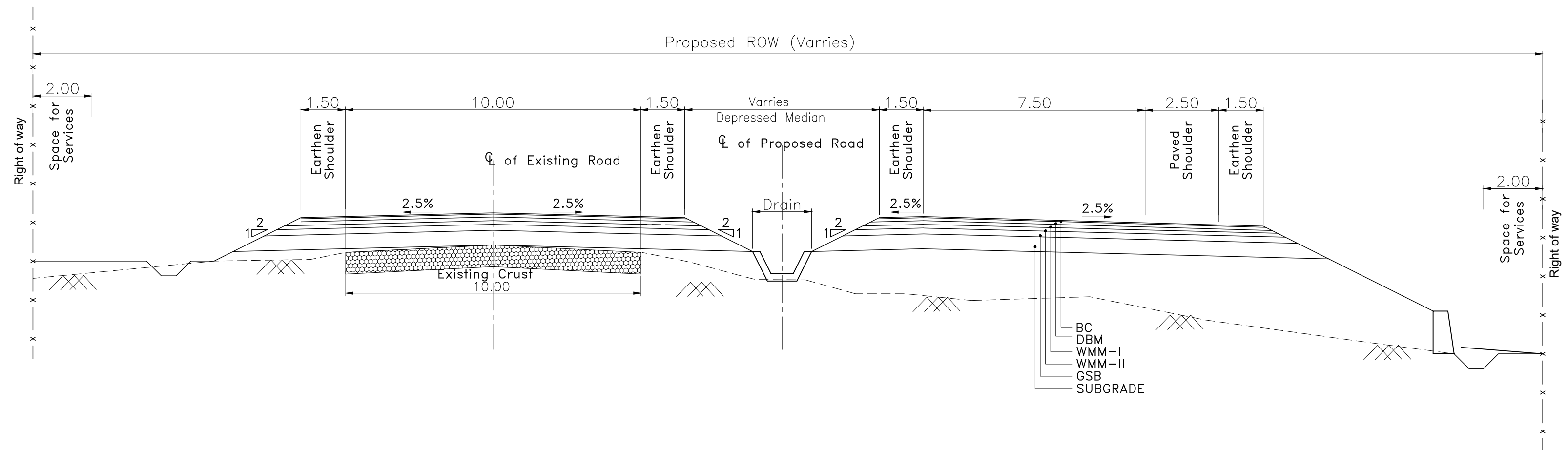
DESIGN CONSULTANT:

VOYANTS SOLUTIONS PVT LTD.
403, 4th Floor, Park Centra,
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Gurgaon-122001, Haryana, India
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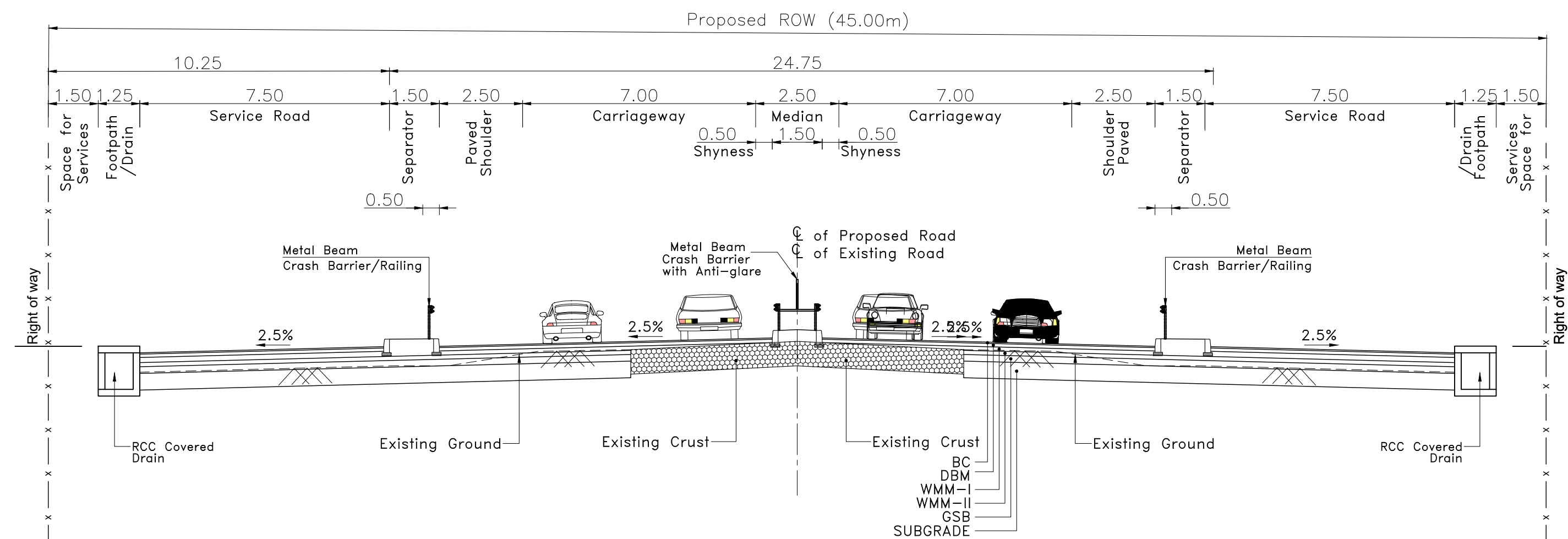
Detailed Project Report

REV.	DATE	DESCRIPTION

DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY	TITLE :
PD/PS	SS/SP	DGR	SKC	Typical Cross Section
SCALE :	1:250	SHEET SIZE	A2	DRG. No. : VSPL/1718-082/DPR/PKG-4/TCS- 02
				REVISION:R1
				JANUARY 2023



TYPE-02A : TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH DEPRESSED MEDIAN (VARRYING WIDTH) IN RURAL AREA AT MAJOR BRIDGE APPROACH (ECCENTRIC WIDENING)



TYPE-03 : TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN AND WITH 7.5M SERVICE ROAD ON BOTH SIDES IN BUILT-UP AREA

Note:
1. All dimensions are in meter unless otherwise specified.
2. * Applicable where embankment height is >3.0m
3. ** Applicable where <3.0m embankment height Turfing with sods of perennial turf forming grass.

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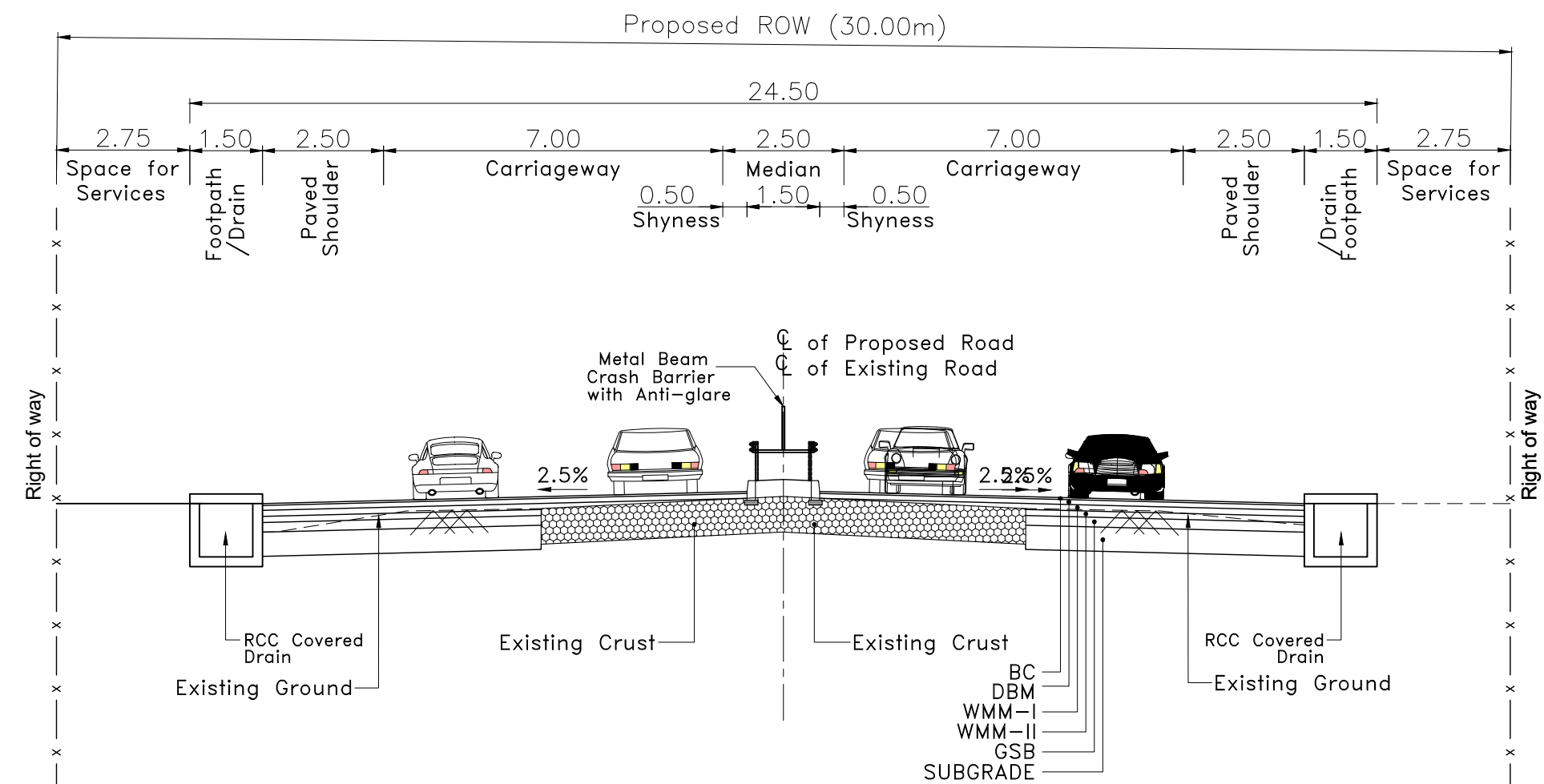
DESIGN CONSULTANT:

VOYANTS SOLUTIONS PVT LTD.
403, 4th Floor, Park Centra,
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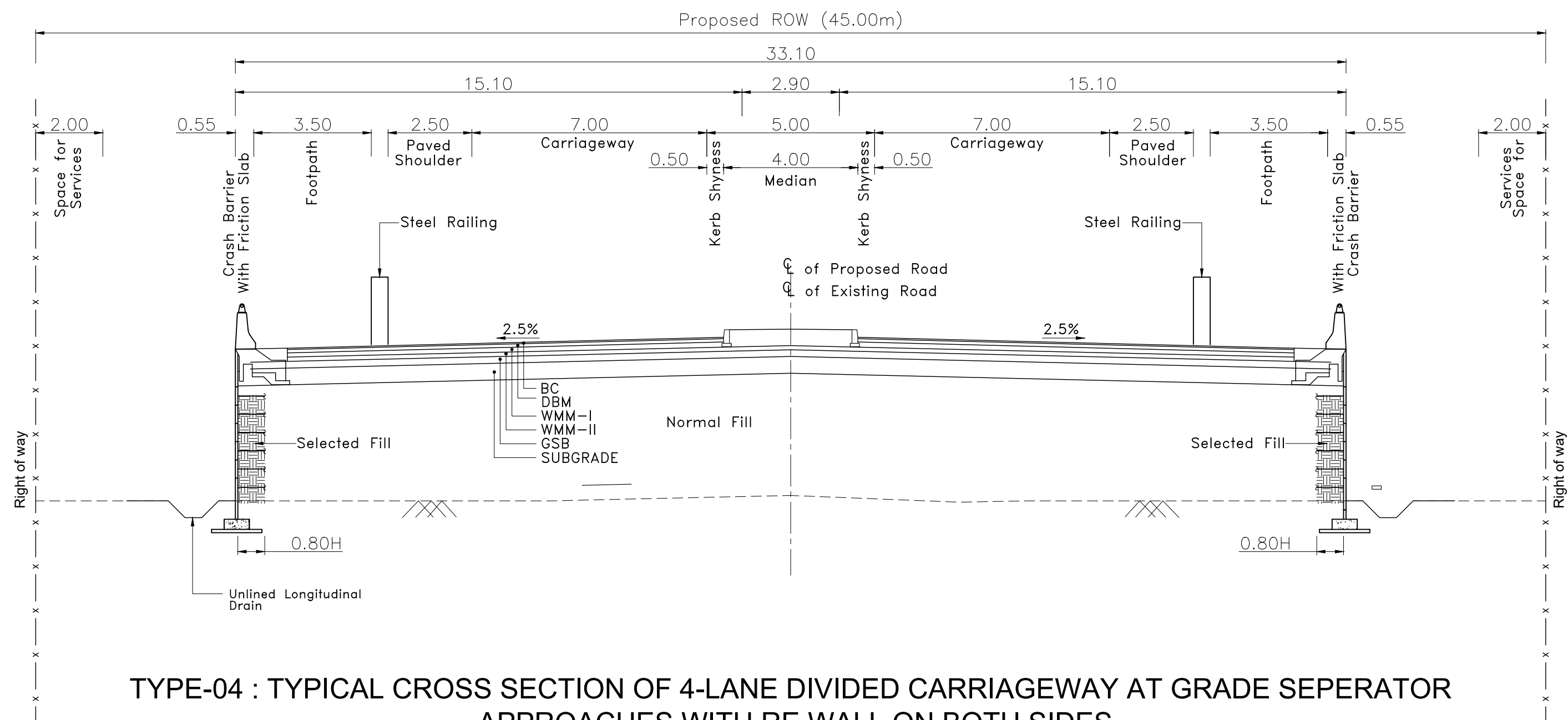
Detailed Project Report

REV.	DATE	DESCRIPTION

DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY	TITLE :
PD/PS	SS/SP	DGR	SKC	Typical Cross Section
SCALE :	1:250	SHEET SIZE	A2	DRG. No. : VSPL/1718-082/DPR/PKG-4/TCS- 03
				REVISION:R1
				JANUARY 2023



TYPE-03A : TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN BUILT-UP AREA



TYPE-04 : TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY AT GRADE SEPERATOR APPROACHES WITH RE WALL ON BOTH SIDES

Note:
1. All dimensions are in meter unless otherwise specified.
2. * Applicable where embankment height is >3.0m
3. ** Applicable where <3.0m embankment height Turfing with sods of perennial turf forming grass.

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Detailed Project Report

REV.	DATE	DESCRIPTION

DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY
PD/PS	SS/SP	DGR	SKC
<i>Sas.</i>	<i>Sas.</i>	<i>Sas.</i>	<i>Sas.</i>
SCALE :	1:250	SHEET SIZE	A2

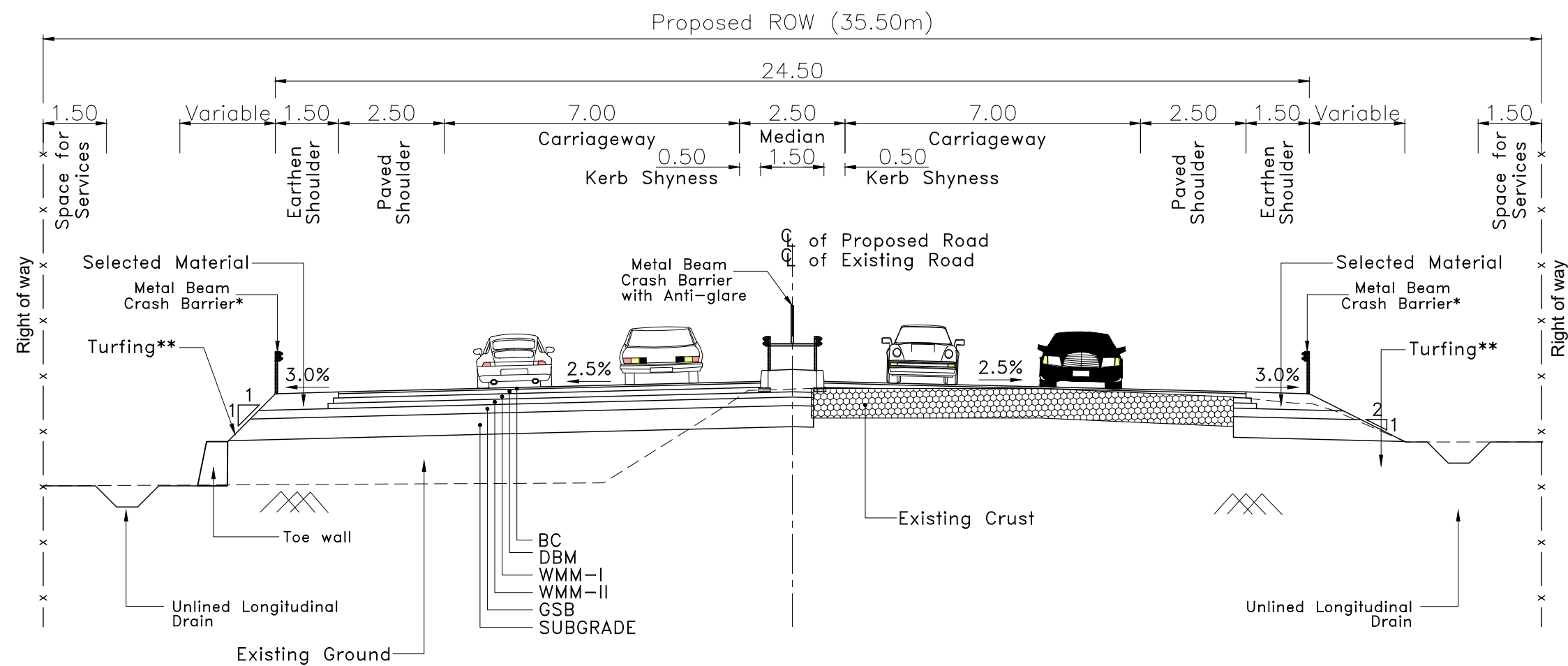
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Typical Cross Section

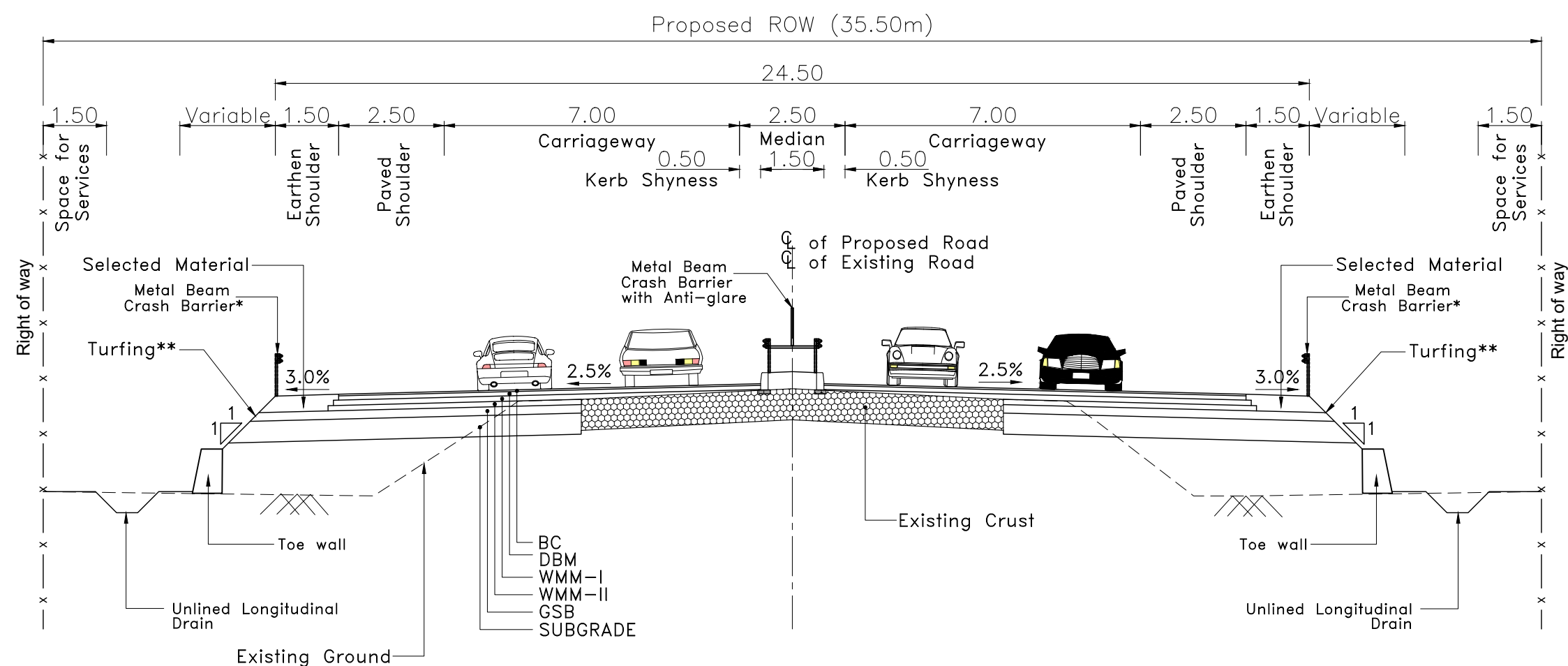
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VSPL/1718-082/DPR/PKG-4/TCS- 04

REVISION:R1

JANUARY 2023



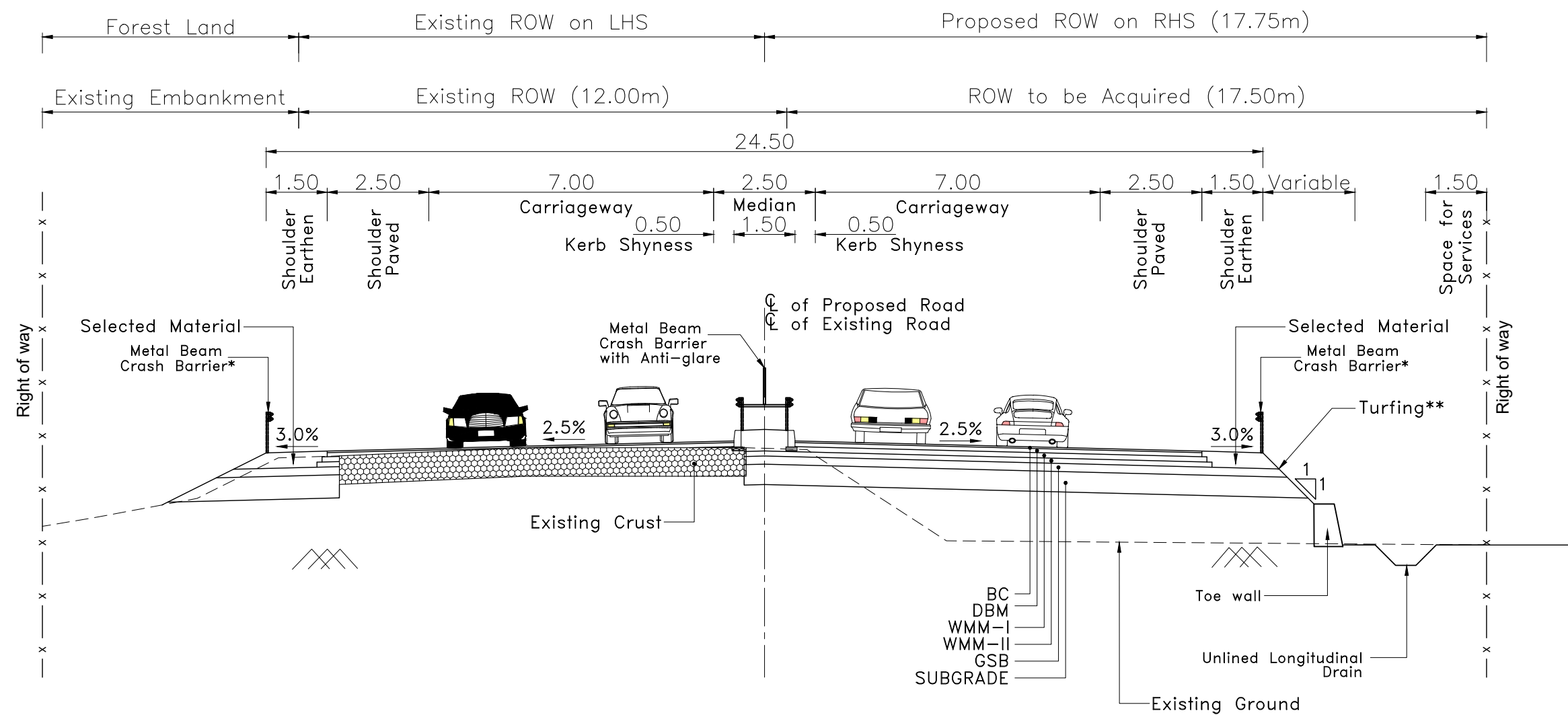
TYPE-05 : TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN WITH MINIMUM LAND ACQUISITION (ECCENTRIC WIDENING)



TYPE-05A : TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN WITH MINIMUM LAND ACQUISITION (CONCENTRIC WIDENING)

Note:
 1. All dimensions are in meter unless otherwise specified.
 2. * Applicable where embankment height is >3.0m
 3. ** Applicable where <3.0m embankment height Turfing with sods of perennial turf forming grass.

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											DRG. No. : VSPL/1718-082/DPR/PKG-4/TCS- 05		
											REVISION:R1 JANUARY 2023		
			REV.	DATE	DESCRIPTION		SCALE :		1:250	SHEET SIZE	A2		



TYPE-05B : TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN AT POBA RESERVE FOREST STRETCH (ECCENTRIC WIDENING)

Note:
1. All dimensions are in meter unless otherwise specified.
2. * Applicable where embankment height is >3.0m
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DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY	TITLE :
PD/PS	SS/SP	DGR	SKC	Typical Cross Section
				DRG. No. : VSPL/1718-082/DPR/PKG-4/TCS- 06
SCALE :	1:250	SHEET SIZE	A2	REVISION:R1
				JANUARY 2023

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Typical Cross Section of NH-515 (Section-3)						
Sl. No.	From	To	Length (m)	TCS	Description	Widening Side
1	55000	55200	200	Type - 05A	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN FOREST AREA(CONCENTRIC WIDENING)	Left
2	55200	55328	128	Type - 05	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN FOREST AREA (ECCENTRIC WIDENING)	
3	55328	55342	14	STR	Minor Bridge	
4	55342	56752	1410	Type - 05	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN FOREST AREA (ECCENTRIC WIDENING)	Left
5	56752	56779	27	STR	Minor Bridge	
6	56779	57019	240	Type - 05	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN FOREST AREA (ECCENTRIC WIDENING)	Left
7	57019	57041	22	STR	Minor Bridge	
8	57041	57140	99	Type - 05	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN FOREST AREA (ECCENTRIC WIDENING)	Left
9	57140	57180	40	Type - 05A	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN FOREST AREA(CONCENTRIC WIDENING)	
10	57180	58204	1024	Type - 05	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN FOREST AREA (ECCENTRIC WIDENING)	Right
11	58204	58226	22	STR	Minor Bridge	
12	58226	58899	673	Type - 05	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN FOREST AREA (ECCENTRIC WIDENING)	Right
13	58899	58921	22	STR	Minor Bridge	
14	58921	59320	399	Type - 05	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN FOREST AREA (ECCENTRIC WIDENING)	Right
15	59320	59380	60	Type - 05A	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN FOREST AREA(CONCENTRIC WIDENING)	
16	59380	59480	100	Type - 05	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN FOREST AREA (ECCENTRIC WIDENING)	Left
17	59480	59520	40	Type - 05A	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN FOREST AREA(CONCENTRIC WIDENING)	
18	59520	60920	1400	Type - 05	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN FOREST AREA (ECCENTRIC WIDENING)	Right
19	60920	61060	140	Type - 01A	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN BYPASS / REALIGNMENT STRETCHES	
20	61060	61960	900	Type - 03	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN AND WITH 7.5M SERVICE ROAD ON BOTH SIDES IN BUILT-UP AREA	
21	61960	62040	80	Type - 05A	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN FOREST AREA(CONCENTRIC WIDENING)	
22	62040	62640	600	Type - 05	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN FOREST AREA (ECCENTRIC WIDENING)	Right
23	62640	62680	40	Type - 05A	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN FOREST AREA(CONCENTRIC WIDENING)	
24	62680	63854	1174	Type - 05	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN FOREST AREA (ECCENTRIC WIDENING)	Left
25	63854	63927	73	STR	Major Bridge	
26	63927	64160	233	Type - 05	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN FOREST AREA (ECCENTRIC WIDENING)	Left
27	64160	64240	80	Type - 05A	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN FOREST AREA(CONCENTRIC WIDENING)	
28	64240	64320	80	Type - 05	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN FOREST AREA (ECCENTRIC WIDENING)	Left
29	64320	64360	40	Type - 05A	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN FOREST AREA(CONCENTRIC WIDENING)	
30	64360	64560	200	Type - 01A	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN BYPASS / REALIGNMENT STRETCHES	
31	64560	64610	50	Type - 05A	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN FOREST AREA(CONCENTRIC WIDENING)	
32	64610	66000	1390	Type - 05	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN FOREST AREA (ECCENTRIC WIDENING)	Left
33	66000	66198	198	Type - 01B	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 4.0M WIDE RAISED MEDIAN IN BYPASS / REALIGNMENT STRETCHES	Jonai Bypass
34	66198	66223	25	STR	Minor Bridge	Jonai Bypass
35	66223	66672	449	Type - 01B	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 4.0M WIDE RAISED MEDIAN IN BYPASS / REALIGNMENT STRETCHES	Jonai Bypass
36	66672	66728	56	STR	Minor Bridge	Jonai Bypass
37	66728	66810	82	Type - 04	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 4.0M WIDE RAISED MEDIAN AT APPROACH OF VUP/LVUP WITH RE WALL IN BYPASS / REALIGNMENT STRETCHES	Jonai Bypass
38	66810	66830	20	STR	VUP	Jonai Bypass
39	66830	67250	420	Type - 04	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 4.0M WIDE RAISED MEDIAN AT APPROACH OF VUP/LVUP WITH RE WALL IN BYPASS / REALIGNMENT STRETCHES	Jonai Bypass
40	67250	67850	600	Type - 01B	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 4.0M WIDE RAISED MEDIAN IN BYPASS / REALIGNMENT STRETCHES	Jonai Bypass
41	67850	68080	230	Type - 04	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 4.0M WIDE RAISED MEDIAN AT APPROACH OF VUP/LVUP WITH RE WALL IN BYPASS / REALIGNMENT STRETCHES	Jonai Bypass
42	68080	68087	7	STR	SVUP	Jonai Bypass
43	68087	68350	263	Type - 04	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 4.0M WIDE RAISED MEDIAN AT APPROACH OF VUP/LVUP WITH RE WALL IN BYPASS / REALIGNMENT STRETCHES	Jonai Bypass
44	68350	69598	1248	Type - 01B	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 4.0M WIDE RAISED MEDIAN IN BYPASS / REALIGNMENT STRETCHES	Jonai Bypass
45	69598	69613	15	STR	Minor Bridge	Jonai Bypass
46	69613	69670	57	Type - 01B	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 4.0M WIDE RAISED MEDIAN IN BYPASS / REALIGNMENT STRETCHES	Jonai Bypass

Typical Cross Section of NH-515 (Section-3)						
Sl. No.	From	To	Length (m)	TCS	Description	Widening Side
47	69670	69680	10	STR	Minor Bridge	Jonai Bypass
48	69680	69700	20	Type - 01B	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 4.0M WIDE RAISED MEDIAN IN BYPASS / REALIGNMENT STRETCHES	Jonai Bypass
49	69700	69930	230	Type - 04	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 4.0M WIDE RAISED MEDIAN AT APPROACH OF VUP/LVUP WITH RE WALL IN BYPASS / REALIGNMENT STRETCHES	Jonai Bypass
50	69930	69942	12	STR	LVUP	Jonai Bypass
51	69942	70143	201	Type - 04	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 4.0M WIDE RAISED MEDIAN AT APPROACH OF VUP/LVUP WITH RE WALL IN BYPASS / REALIGNMENT STRETCHES	Jonai Bypass
52	70143	70158	15	STR	Minor Bridge	Jonai Bypass
53	70158	70200	42	Type - 04	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 4.0M WIDE RAISED MEDIAN AT APPROACH OF VUP/LVUP WITH RE WALL IN BYPASS / REALIGNMENT STRETCHES	Jonai Bypass
54	70200	70797	597	Type - 01B	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 4.0M WIDE RAISED MEDIAN IN BYPASS / REALIGNMENT STRETCHES	Jonai Bypass
55	70797	70804	7	STR	SVUP	Jonai Bypass
56	70804	70940	136	Type - 01B	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 4.0M WIDE RAISED MEDIAN IN BYPASS / REALIGNMENT STRETCHES	Jonai Bypass
57	70940	71020	80	STR	Major Bridge	Jonai Bypass
58	71020	72550	1530	Type - 01B	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 4.0M WIDE RAISED MEDIAN IN BYPASS / REALIGNMENT STRETCHES	Jonai Bypass
59	72550	72791	241	Type - 04	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 4.0M WIDE RAISED MEDIAN AT APPROACH OF VUP/LVUP WITH RE WALL IN BYPASS / REALIGNMENT STRETCHES	Jonai Bypass
60	72791	72798	7	STR	SVUP	Jonai Bypass
61	72798	73000	202	Type - 04	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 4.0M WIDE RAISED MEDIAN AT APPROACH OF VUP/LVUP WITH RE WALL IN BYPASS / REALIGNMENT STRETCHES	Jonai Bypass
62	73000	73901	901	Type - 01B	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 4.0M WIDE RAISED MEDIAN IN BYPASS / REALIGNMENT STRETCHES	Jonai Bypass
63	73901	73916	15	STR	Minor Bridge	Jonai Bypass
64	73916	74350	434	Type - 01B	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 4.0M WIDE RAISED MEDIAN IN BYPASS / REALIGNMENT STRETCHES	Jonai Bypass
65	74350	74606	256	Type - 04	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 4.0M WIDE RAISED MEDIAN AT APPROACH OF VUP/LVUP WITH RE WALL IN BYPASS / REALIGNMENT STRETCHES	Jonai Bypass
66	74606	74613	7	STR	SVUP	Jonai Bypass
67	74613	74870	257	Type - 04	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 4.0M WIDE RAISED MEDIAN AT APPROACH OF VUP/LVUP WITH RE WALL IN BYPASS / REALIGNMENT STRETCHES	Jonai Bypass
68	74870	75180	310	Type - 01B	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 4.0M WIDE RAISED MEDIAN IN BYPASS / REALIGNMENT STRETCHES	Jonai Bypass
69	75180	75230	50	Type - 01	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN RURAL AREA (CONCENTRIC WIDENING)	
70	75230	75450	220	Type - 02	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN RURAL AREA (ECCENTRIC WIDENING)	Left
71	75450	75570	120	Type - 01	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN RURAL AREA (CONCENTRIC WIDENING)	
72	75570	75712	142	Type - 02	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN RURAL AREA (ECCENTRIC WIDENING)	Right
73	75712	75768	56	STR	Minor Bridge	
74	75768	75900	132	Type - 05	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN FOREST AREA (ECCENTRIC WIDENING)	Right
	75900	78282	2382	Type - 05A	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN FOREST AREA(CONCENTRIC WIDENING)	
75	78282	78306	24	STR	Minor Bridge	
76	78306	78950	644	Type - 05A	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN FOREST AREA(CONCENTRIC WIDENING)	
77	78950	80585	1635	Type - 02	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN RURAL AREA (ECCENTRIC WIDENING)	Right
78	80585	80610	25	STR	Minor Bridge	
79	80610	80980	370	Type - 02	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN RURAL AREA (ECCENTRIC WIDENING)	Right
80	80980	81080	100	Type - 01	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN RURAL AREA (CONCENTRIC WIDENING)	
81	81080	81231	151	Type - 02A	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH RAISED MEDIAN (VARRYING WIDTH) IN RURAL AREA AT MAJOR BRIDGE APPROACH (ECCENTRIC WIDENING)	Left
82	81231	81369	138	STR	Major Bridge	
83	81369	81500	131	Type - 02A	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH RAISED MEDIAN (VARRYING WIDTH) IN RURAL AREA AT MAJOR BRIDGE APPROACH (ECCENTRIC WIDENING)	Left
84	81500	81680	180	Type - 02	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN RURAL AREA (ECCENTRIC WIDENING)	Left
85	81680	81740	60	Type - 01	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN RURAL AREA (CONCENTRIC WIDENING)	
86	81740	82110	370	Type - 01A	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN BYPASS / REALIGNMENT STRETCHES	
87	82110	82514	404	Type - 03A	TYPICAL CROSS SECTION OF 4-LANE DIVIDED CARRIAGEWAY WITH 1.5M WIDE RAISED MEDIAN IN BUILT-UP AREA	
Total =			27514			

CLIENT :



**NATIONAL HIGHWAYS AND INFRASTRUCTURE
DEVELOPMENT CORPORATION LTD.
(MINISTRY OF ROAD TRANSPORT AND HIGHWAYS)
GOVERNMENT OF INDIA**

PROJECT :

**CONSULTANCY SERVICES FOR PREPARATION OF
DETAILED PROJECT REPORT FOR DEVELOPMENT OF
ECONOMIC CORRIDOR, INTER CORRIDOR AND FEEDER
ROUTES TO IMPROVE THE EFFICIENCY OF FREIGHT
MOVEMENTS IN INDIA UNDER BHARATMALA PARIYOJANA
(LOT-1:PACKAGE II)**

DESIGN CONSULTANT:



VOYANTS SOLUTIONS PVT LTD.
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Sector-30, NH-8
Gurugram-122001, Haryana, India
CIN- U74140HR2004PTC046918
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E-mail: info@voyants.in, www.voyants.in

Detailed Project Report

REV.	DATE	DESCRIPTION

DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY
PD/PS	SS/SP	DGR	SKC
SCALE :	1:250	SHEET SIZE	A2

TITLE :

**Typical Cross Section
Schedule**

DRG. No. :
VSPL/1718-082/DPR/PKG-4/TCS- 07

REVISION:R1

JANUARY 2023

≡ **Horizontal Alignment Report** ≡

PATH: C:\Shampa\0\Project\1718082_Bharatmala_Assam_P-4\NH-515_3.January_2022_Drawing_Vol_NH-515_Sec-3\4-HAR_NH-515_SEC-3\HAR_NH-515_SEC-3.dwg

Horizontal Alignment Report of NH-515 (Section-3)																		
Sl. No.	Circular Curve Start			Circular Curve End			Radius	Hand of Arc	Transition Details				Horizontal Intersection Point			Delta	Speed (kmph)	Superelevation
	Chainage	Northing	Easting	Chainage	Northing	Easting			Start	L1	L2	End	Chainage	Northing	Easting			
1	55+220.564	3071789.683	708705.36	55+235.487	3071790.519	708720.26	500	LEFT	55+175.564	45	45	55+280.487	55+228.026	3071789.990	708712.816	01° 42' 36.3843"	80	5.00%
2	55+620.784	3071835.472	709102.903	55+663.225	3071843.121	709144.645	900	LEFT	55+545.784	75	75	55+738.225	55+642.005	3071838.805	709123.864	02° 42' 06.6785"	100	4.94%
3	56+223.227	3071978.745	709687.963	56+272.296	3071990.951	709735.49	5000	LEFT					56+247.762	3071984.731	709711.756	00° 33' 44.2504"	100	NC
4	56+630.455	3072081.743	710081.95	56+682.378	3072095.166	710132.108	5000	LEFT					56+656.417	3072088.325	710107.064	00° 35' 41.9995"	100	NC
5	56+847.054	3072136.541	710291.461	56+914.599	3072143.835	710358.547	450	RIGHT	56+772.054	75	75	56+989.599	56+880.827	3072142.710	710324.730	08° 36' 00.4116"	80	5.00%
6	57+150.171	3072136.466	710593.928	57+197.354	3072141.297	710640.835	400	LEFT	57+075.171	75	75	57+272.354	57+173.763	3072137.496	710617.524	06° 45' 30.6703"	80	5.00%
7	57+619.411	3072246.757	711049.421	57+689.818	3072270.644	711115.628	800	LEFT	57+544.411	75	75	57+764.818	57+654.615	3072257.243	711083.050	05° 02' 33.0457"	100	5.00%
8	58+356.585	3072551.845	711720.18	58+393.877	3072567.758	711753.906	5000	LEFT					58+375.231	3072559.739	711737.073	00° 25' 38.3912"	100	NC
9	59+044.588	3072847.62	712341.361	59+256.874	3072928.588	712537.49	2000	RIGHT					59+150.731	3072893.314	712437.275	06° 04' 53.4796"	100	NC
10	59+339.654	3072958.969	712614.432	59+516.303	3073078.48	712741.067	301	LEFT	59+264.654	75	75	59+591.303	59+427.979	3072999.593	712695.805	33° 37' 30.9808"	80	7.00%
11	59+808.038	3073346.295	712856.507	60+028.994	3073554.418	712930.378	2000	LEFT					59+918.516	3073448.314	712899.196	06° 19' 47.7207"	100	NC
12	60+738.877	3074235.499	713130.533	60+758.128	3074253.995	713135.872	2000	LEFT					60+748.503	3074244.734	713133.247	00° 33' 05.4680"	100	NC
13	60+940.431	3074428.425	713188.559	61+044.359	3074515.237	713244.746	300	RIGHT	60+865.431	75	75	61+119.359	60+992.395	3074476.746	713209.058	19° 50' 55.1587"	80	7.00%
14	61+202.942	3074621.809	713362.032	61+236.656	3074647.765	713383.518	300	LEFT	61+127.942	75	75	61+311.656	61+219.799	3074634.183	713373.505	06° 26' 19.6475"	80	7.00%
15	61+961.926	3075286.745	713726.001	62+030.721	3075347.41	713758.436	2000	RIGHT					61+996.324	3075317.357	713741.696	01° 58' 14.9968"	100	NC
16	62+156.299	3075457.119	713819.541	62+185.253	3075482.515	713833.447	2000	LEFT					62+170.776	3075469.767	713826.586	00° 49' 46.1063"	100	NC
17	62+568.949	3075818.814	714017.963	62+686.456	3075899.025	714102.812	301	RIGHT	62+493.949	75	75	62+761.456	62+627.703	3075867.307	714052.458	22° 22' 03.2046"	80	7.00%
18	63+040.387	3076051.756	714421.98	63+080.280	3076068.803	714458.047	5000	LEFT					63+060.334	3076060.207	714440.048	00° 27' 25.6987"	100	NC
19	63+697.995	3076334.986	715015.468	63+857.104	3076437.473	715134.75	301	LEFT					63+777.550	3076370.089	715088.977	30° 17' 11.6913"	80	7.00%
20	63+965.548	3076527.178	715195.685	64+059.490	3076606.098	715246.628	2000	LEFT					64+012.519	3076566.040	715222.083	02° 41' 28.5005"	100	NC
21	64+178.411	3076705.888	715311.228	64+597.950	3076907.327	715665.813	510	RIGHT	64+083.411	95	95	64+692.950	64+388.181	3076883.941	715444.587	47° 07' 58.7225"	100	5.00%
22	64+861.160	3076913.132	715928.887	64+901.157	3076912.119	715968.87	1200	RIGHT	64+811.160	50	50	64+951.157	64+881.159	3076912.959	715948.887	01° 54' 35.0847"	100	3.70%
23	64+981.282	3076907.436	716048.856	65+141.759	3076903.795	716209.249	2000	LEFT					65+061.521	3076902.396	716128.980	04° 35' 50.4597"	100	NC
24	65+292.340	3076906.418	716359.807	65+327.790	3076906.721	716395.255	2000	RIGHT					65+310.065	3076906.727	716377.530	01° 00' 56.0575"	100	NC
25	65+827.093	3076906.569	716894.558	65+851.776	3076906.714	716919.24	2000	LEFT					65+839.435	3076906.565	716906.900	00° 42' 25.6051"	100	NC
26	66+070.370	3076914.844	717137.515	66+107.466	3076922.29	717173.843	400	LEFT	65+955.370	115	115	66+222.466	66+088.918	3076917.724	717155.852	05° 18' 49.2289"	100	5.00%
27	66+997.741	3077258.297	717998.021	67+018.486	3077267.183	718016.765	900	LEFT	66+927.741	70	70	67+088.486	67+008.114	3077262.632	718007.444	01° 19' 14.2668"	100	5.00%
28	67+188.784	3077344.303	718168.543	67+228.546	3077358.245	718205.77	500	RIGHT	67+093.784	95	95	67+323.546	67+208.665	3077352.014	718186.879	04° 33' 23.2295"	100	5.00%
29	67+485.586	3077418.149	718455.662	67+876.320	3077467.133	718842.687	2000	RIGHT					67+680.953	3077461.604	718646.774	11° 11' 37.3008"	100	NC
30	68+570.311	3077487.043	719536.391	70+617.618	3078603.351	721121.479	1800	LEFT	68+510.311	60	60	70+677.618	69+593.965	3077538.658	720685.668	65° 10' 04.1178"	100	NC
31	71+214.634	3079159.44	721338.711	71+721.702	3079650.039	721461.419	2000	LEFT					71+468.168	3079396.920	721431.329	14° 31' 35.1979"	100	NC
32	73+662.442	3081577.21	721690.516	74+497.185	3082381.84	721902.366	3000	RIGHT					74+079.814	3081994.358	721740.106	15° 56' 32.6618"	100	NC
33	74+981.055	3082825.814	722094.248	75+194.675	3082971.766	722246.751	400	RIGHT	74+866.055	115	115	75+309.675	75+087.865	3082919.649	722150.536	30° 35' 55.5838"	100	5.00%
34	75+371.021	3083037.759	722410.12	75+485.265	3083074.138	722518.4	2000	RIGHT					75+428.143	3083057.495	722463.741	03° 16' 22.2069"	100	NC
35	75+587.068	3083103.79	722615.79	75+712.104	3083143.924	722734.188	2000	LEFT					75+649.586	3083122.006	722675.617	03° 34' 55.2408"	100	NC
36	75+794.358	3083172.751	722811.225	75+817.656	3083181.043	722832.998	2000	LEFT					75+806.007	3083176.834	722822.136	00° 40' 02.7854"	100	NC
37	75+889.534	3083207.017	722900.018	75+923.851	3083219.142	722932.121	2000	RIGHT					75+906.693	3083213.217	722916.018	00° 58' 59.1723"	100	NC
38	77+670.702	3083822.339	724571.524	77+697.180	3083831.515	724596.362	10000	LEFT										

≡ **Vertical Report** ≡

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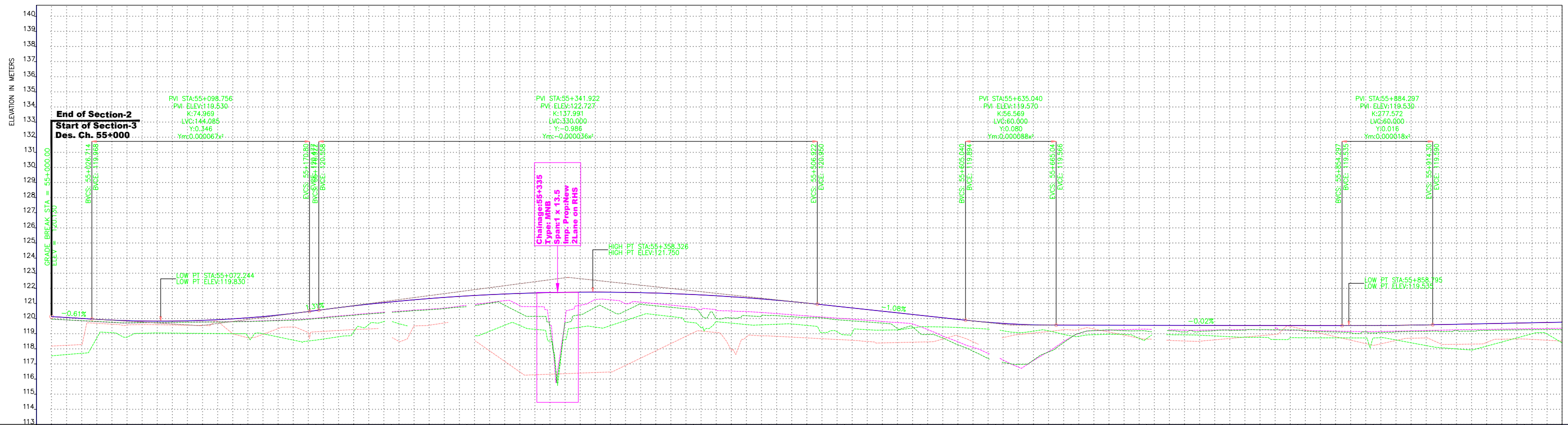
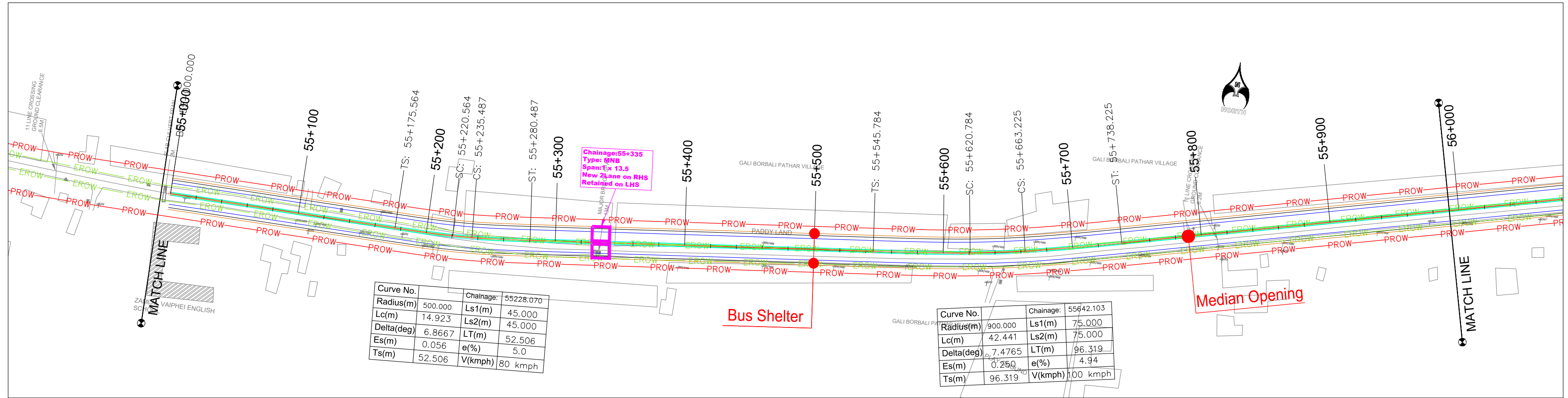
VERTICAL ALIGNMENT REPORT OF NH-515 (SECTION-3)												
PVI	PVI			Grade		Diff. in Grade	Chainage(m)		Level(m)		Type Of Curve	K Value
	Chainage (m)	Level (m)	Curve Length (m)	IN (%)	OUT (%)	(%)	Start of Curve	End of Curve	Start of Curve	End of Curve		
1	55+098.76	119.530m	145	-0.61%	1.31%	1.92%	55+026.71	55+170.80	119.968m	120.477m	Valley	74.969
2	55+341.92	122.727m	330	1.31%	-1.08%	-2.39%	55+176.92	55+506.92	120.558m	120.950m	Crest	137.991
3	55+635.04	119.570m	60	-1.08%	-0.02%	1.06%	55+605.04	55+665.04	119.894m	119.566m	Valley	56.569
4	55+884.30	119.530m	60	-0.02%	0.20%	0.22%	55+854.30	55+914.30	119.535m	119.590m	Valley	277.572
5	56+396.09	120.553m	60	0.20%	-0.10%	-0.30%	56+366.09	56+426.09	120.493m	120.524m	Crest	200.857
6	56+488.38	120.462m	60	-0.10%	1.37%	1.47%	56+458.38	56+518.38	120.492m	120.873m	Valley	40.906
7	56+629.84	122.397m	190	1.37%	0.00%	-1.37%	56+534.84	56+724.84	121.098m	122.397m	Crest	138.888
8	56+846.96	122.397m	115	0.00%	-1.39%	-1.39%	56+789.46	56+904.46	122.397m	121.597m	Crest	82.639
9	57+035.38	119.775m	100	-1.39%	0.79%	2.18%	56+985.38	57+085.38	120.471m	120.172m	Valley	45.787
10	57+202.02	121.096m	110	0.79%	-0.02%	-0.81%	57+147.02	57+257.02	120.660m	121.086m	Crest	135.687
11	57+584.52	121.026m	60	-0.02%	0.39%	0.41%	57+554.52	57+614.52	121.032m	121.144m	Valley	146.47
12	57+828.49	121.981m	60	0.39%	0.21%	-0.18%	57+798.49	57+858.49	121.864m	122.045m	Crest	334.384
13	58+000.00	122.345m	80	0.21%	0.79%	0.58%	57+960.00	58+040.00	122.260m	122.659m	Valley	139.336
14	58+139.79	123.443m	110	0.79%	0.00%	-0.79%	58+084.79	58+194.79	123.011m	123.443m	Crest	139.929
15	58+291.61	123.443m	100	0.00%	-0.73%	-0.73%	58+241.61	58+341.61	123.443m	123.077m	Crest	136.396
16	58+414.65	122.541m	60	-0.73%	-0.08%	0.65%	58+384.65	58+444.65	122.761m	122.518m	Valley	91.584
17	58+790.66	122.248m	60	-0.08%	0.44%	0.52%	58+760.66	58+820.66	122.271m	122.379m	Valley	116.91
18	58+907.06	122.755m	130	0.44%	-0.50%	-0.94%	58+842.06	58+972.06	122.472m	122.431m	Crest	139.43
19	59+042.36	122.082m	60	-0.50%	0.02%	0.52%	59+012.36	59+072.36	122.231m	122.089m	Valley	115.232
20	59+199.92	122.119m	60	0.02%	-0.08%	-0.10%	59+169.92	59+229.92	122.112m	122.096m	Crest	592.461
21	59+428.08	121.942m	60	-0.08%	0.16%	0.24%	59+398.08	59+458.08	121.965m	121.990m	Valley	250.97
22	59+814.16	122.564m	60	0.16%	0.09%	-0.07%	59+784.16	59+844.16	122.516m	122.593m	Crest	897.322
23	60+037.65	122.775m	60	0.09%	0.28%	0.19%	60+007.65	60+067.65	122.747m	122.860m	Valley	320.47
24	60+220.72	123.291m	60	0.28%	0.05%	-0.23%	60+190.72	60+250.72	123.207m	123.305m	Crest	255.567
25	60+343.77	123.349m	60	0.05%	0.33%	0.28%	60+313.77	60+373.77	123.335m	123.448m	Valley	212.182
26	60+571.58	124.100m	60	0.33%	-0.10%	-0.43%	60+541.58	60+601.58	124.001m	124.070m	Crest	139.95
27	60+783.25	123.890m	60	-0.10%	0.49%	0.59%	60+753.25	60+813.25	123.920m	124.037m	Valley	101.837
28	61+079.19	125.341m	100	0.49%	-0.13%	-0.62%	61+029.19	61+129.19	125.096m	125.277m	Crest	162.051
29	61+368.46	124.973m	200	-0.13%	0.58%	0.71%	61+268.46	61+468.46	125.100m	125.558m	Valley	280.934
30	61+795.78	127.473m	60	0.58%	0.42%	-0.16%	61+765.78	61+825.78	127.298m	127.600m	Crest	374.222
31	62+022.65	128.436m	60	0.42%	0.64%	0.22%	61+992.65	62+052.65	128.309m	128.630m	Valley	272.424
32	62+161.07	129.329m	60	0.64%	0.52%	-0.12%	62+131.07	62+191.07	129.135m	129.484m	Crest	468.922
33	62+629.67	131.751m	250	0.52%	-0.33%	-0.85%	62+504.67	62+754.67	131.105m	131.338m	Crest	294.978
34	63+283.23	129.590m	60	-0.33%	-0.14%	0.19%	63+253.23	63+313.23	129.690m	129.549m	Valley	312.248
35	63+550.16	129.221m	80	-0.14%	1.40%	1.54%	63+510.16	63+590.16	129.276m	129.779m	Valley	52.146
36	63+773.28	132.335m	190	1.40%	0.00%	-1.40%	63+678.28	63+868.28	131.009m	132.335m	Crest	136.134
37	64+076.27	132.335m	255	0.00%	-1.87%	-1.87%	63+948.77	64+203.77	132.335m	129.955m	Crest	136.601
38	64+278.45	128.561m	90	-1.87%	0.04%	1.91%	64+233.45	64+323.45	129.401m	128.577m	Valley	47.314
39	64+418.54	128.610m	60	0.04%	0.35%	0.31%	64+388.54	64+448.54	128.600m	128.716m	Valley	189.89
40	64+538.52	129.032m	100	0.35%	-0.36%	-0.71%	64+488.52	64+588.52	128.856m	128.854m	Crest	141.506
41	64+764.97	128.227m	60	-0.36%	0.34%	0.70%	64+734.97	64+794.97	128.334m	128.329m	Valley	86.208
42	64+850.39	128.518m	70	0.34%	-0.11%	-0.45%	64+815.39	64+885.39	128.399m	128.478m	Crest	153.7
43	65+222.66	128.091m	60	-0.11%	0.25%	0.36%	65+192.66	65+252.66	128.126m	128.166m	Valley	164.494
44	65+327.05	128.352m	100	0.25%	-0.45%	-0.70%	65+277.05	65+377.05	128.227m	128.126m	Crest	142.452
45	65+504.79	127.549m	60	-0.45%	-0.06%	0.39%	65+474.79	65+534.79	127.684m	127.532m	Valley	151.574
46	65+666.00	127.458m	60	-0.06%	-0.41%	-0.35%	65+636.00	65+696.00	127.475m	127.335m	Crest	168.818
47	65+824.47	126.806m	60	-0.41%	0.06%	0.47%	65+794.47	65+854.47	126.930m	126.823m	Valley	128.021
48	65+949.34	126.878m	60	0.06%	0.29%	0.23%	65+919.34	65+979.34	126.860m	126.964m	Valley	260.126
49	66+379.36	128.115m	150	0.29%	2.35%	2.06%	66+304.36	66+454.36	127.899m	129.878m	Valley	72.719
50	66+824.70	138.583m	640	2.35%	-2.36%	-4.71%	66+504.70	67+144.70	131.061m	131.045m	Crest	135.995
51	67+309.66	127.160m	110	-2.36%	-0.21%	2.15%	67+254.66	67+364.66	128.455m	127.046m	Valley	51.182
52	67+766.56	126.217m	110	-0.21%	1.81%	2.02%	67+711.56	67+821.56	126.331m	127.211m	Valley	54.612
53	68+085.75	131.988m	490	1.81%	-1.80%	-3.61%	67+840.75	68+330.75	127.558m	127.585m	Crest	135.932
54	68+455.64	125.341m	150	-1.80%	0.25%	2.05%	68+380.64	68+530.64	126.689m	125.527m	Valley	73.388
55	68+763.02	126.101m	150	0.25%	-0.15%	-0.40%	68+688.02	68+838.02	125.915m	125.987m	Crest	375.771
56	69+620.09	124.797m	110	-0.15%	1.83%	1.98%	69+565.09	69+675.09	124.881m	125.802m	Valley	55.572
57	69+959.13	130.992m	500	1.83%	-1.84%	-3.67%	69+709.13	70+209.13	126.424m	126.395m	Crest	136.383
58	70+267.24	125.326m	100	-1.84%	0.21%	2.05%	70+217.24	70+317.24	126.246m	125.431m	Valley	48.834

VERTICAL ALIGNMENT REPORT OF NH-515 (SECTION-3)												
PVI	PVI			Grade		Diff. in Grade	Chainage(m)		Level(m)		Type Of Curve	K Value
	Chainage (m)	Level (m)	Curve Length (m)	IN (%)	OUT (%)	(%)	Start of Curve	End of Curve	Start of Curve	End of Curve		
59	70+527.79	125.870m	100	0.21%	2.20%	1.99%	70+477.79	70+577.79	125.766m	126.968m	Valley	50.328
60	70+765.88	131.099m	300	2.20%	0.00%	-2.20%	70+615.88	70+915.88	127.805m	131.099m	Crest	136.622
61	71+192.80	131.099m	270	0.00%	-1.95%	-1.95%	71+057.80	71+327.80	131.099m	128.472m	Crest	138.767
62	71+400.05	127.066m	100	-1.95%	0.20%	2.15%	71+350.05	71+450.05	128.039m	127.168m	Valley	46.538
63	72+455.32	129.209m	100	0.20%	2.01%	1.81%	72+405.32	72+505.32	129.108m	130.215m	Valley	55.276
64	72+724.33	134.622m	380	2.01%	-0.75%	-2.76%	72+534.33	72+914.33	130.799m	133.200m	Crest	137.634
65	73+115.36	131.694m	60	-0.75%	-0.27%	0.48%	73+085.36	73+145.36	131.919m	131.613m	Valley	125.853
66	73+363.76	131.019m	60	-0.27%	0.09%	0.36%	73+333.76	73+393.76	131.100m	131.045m	Valley	167.609
67	74+199.98	131.738m	100	0.09%	2.21%	2.12%	74+149.98	74+249.98	131.695m	132.842m	Valley	47.119
68	74+611.68	140.829m	610	2.21%	-2.29%	-4.50%	74+306.68	74+916.68	134.094m	133.839m	Crest	135.552
69	75+045.64	130.883m	125	-2.29%	0.32%	2.61%	74+983.14	75+108.14	132.316m	131.082m	Valley	47.903
70	75+336.37	131.807m	90	0.32%	-0.28%	-0.60%	75+291.37	75+381.37	131.664m	131.680m	Crest	150.198
71	75+463.80	131.448m	100	-0.28%	1.80%	2.08%	75+413.80	75+513.80	131.588m	132.350m	Valley	47.95
72	75+642.16	134.665m	110	1.80%	0.00%	-1.80%	75+587.16	75+697.16	133.673m	134.665m	Crest	60.98
73	75+835.52	134.665m	100	0.00%	-1.51%	-1.51%	75+785.52	75+885.52	134.665m	133.909m	Crest	66.162
74	75+951.37	132.914m	80	-1.51%	-0.29%	1.22%	75+911.37	75+991.37	133.519m	132.799m	Valley	65.386
75	76+259.08	132.028m	200	-0.29%	0.29%	0.58%	76+159.08	76+359.08	132.316m	132.316m	Valley	347.104
76	76+752.38	133.450m	60	0.29%	0.40%	0.11%	76+722.38	76+782.38	133.364m	133.570m	Valley	538.992
77	76+905.04	134.060m	60	0.40%	0.15%	-0.25%	76+875.04	76+935.04	133.940m	134.106m	Crest	242.359
78	77+289.22	134.644m	60	0.15%	0.24%	0.09%	77+259.22	77+319.22	134.598m	134.715m	Valley	707.043
79	77+450.91	135.027m	90	0.24%	-0.36%	-0.60%	77+405.91	77+495.91	134.920m	134.864m	Crest	150.109
80	77+591.80	134.516m	60	-0.36%	-0.06%	0.30%	77+561.80	77+621.80	134.625m	134.499m	Valley	196.603
81	77+769.17	134.414m	60	-0.06%	-0.08%	-0.02%	77+739.17	77+799.17	134.431m	134.389m	Crest	2,356.36
82	78+103.03	134.137m	100	-0.08%	1.91%	1.99%	78+053.03	78+153.03	134.178m	135.094m	Valley	50.083
83	78+296.16	137.833m	230	1.91%	-1.85%	-3.76%	78+181.16	78+411.16	135.632m	135.707m	Crest	61.135
84	78+514.82	133.791m	110	-1.85%	0.21%	2.06%	78+459.82	78+569.82	134.808m	133.909m	Valley	53.342
85	78+852.71	134.513m	60	0.21%	0.38%	0.17%	78+822.71	78+882.71	134.449m	134.627m	Valley	357.725
86	79+193.56	135.813m	60	0.38%	0.83%	0.45%	79+163.56	79+223.56	135.699m	136.063m	Valley	133.238
87	79+353.47	137.143m	190	0.83%	-0.50%	-1.33%	79+258.47	79+448.47	136.353m	136.671m	Crest	143.059
88	79+508.39	136.374m	60	-0.50%	-0.15%	0.35%	79+478.39	79+538.39	136.523m	136.330m	Valley	171.583
89	79+650.84	136.165m	60	-0.15%	0.24%	0.39%	79+620.84	79+680.84	136.209m	136.238m	Valley	153.956
90	79+934.37	136.854m	60	0.24%	0.02%	-0.22%	79+904.37	79+964.37	136.781m	136.860m	Crest	270.633
91	80+140.90	136.898m	60	0.02%	0.31%	0.29%	80+110.90	80+170.90	136.892m	136.991m	Valley	206.762
92	80+219.87	137.144m	60	0.31%	-0.06%	-0.37%	80+189.87	80+249.87	137.051m	137.126m	Crest	162.007
93	80+396.56	137.040m	80	-0.06%	1.81%	1.87%	80+356.56	80+436.56	137.064m	137.763m	Valley	42.889
94	80+503.68	138.975m	110	1.81%	0.00%	-1.81%	80+448.68	80+558.68	137.981m	138.975m	Crest	60.894
95	80+681.44	138.975m	70	0.00%	-1.05%	-1.05%	80+646.44	80+716.44	138.975m	138.608m	Crest	66.757
96	80+851.97	137.187m	150	-1.05%	2.48%	3.53%	80+776.97	80+926.97	137.973m	139.046m	Valley	42.516
97	81+123.65	143.923m	200	2.48%	0.00%	-2.48%	81+023.65	81+223.65	141.444m	143.923m	Crest	80.661
98	81+468.27	143.923m	130	0.00%	-1.59%	-1.59%	81+403.27	81+533.27	143.923m	142.893m	Crest	82.016
99	81+676.23	140.627m	180	-1.59%	2.51%	4.10%	81+586.23	81+766.23	142.053m	142.883m	Valley	43.983
100	81+903.25	146.319m	220	2.51%	0.02%	-2.49%	81+793.25	82+013.25	143.561m	146.339m	Crest	88.38
101	82+394.09	146.408m	120	0.02%	-0.73%	-0.75%	82+334.09	82+454.09	146.398m	145.972m	Crest	160.854

≡ **Plan & Profile** ≡

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CLIENT :

NATIONAL HIGHWAYS AND INFRASTRUCTURE DEVELOPMENT CORPORATION LTD.
(MINISTRY OF ROAD TRANSPORT AND HIGHWAYS)
GOVERNMENT OF INDIA

PROJECT :
CONSULTANCY SERVICES FOR PREPARATION OF DETAILED PROJECT REPORT FOR DEVELOPMENT OF ECONOMIC CORRIDORS, INTER CORRIDORS AND FEEDER ROUTES TO IMPROVE THE EFFICIENCY OF FREIGHT MOVEMENTS IN INDIA UNDER BHARATMALA PARIYOJANA (LOT-1:PACKAGE IV)

DESIGN CONSULTANT:

VOYANTS SOLUTIONS PVT LTD.
403, 4th Floor, Park Centra,
Sector-30, NH-8
Gurgaon-122001, Haryana, India
CIN: U74140HR2004PTC046918
Ph: 0124-4598200, Fax: 0124-4019051,
E-mail: info@voyants.in, www.voyants.in

Detailed Project Report

REV.	DATE	DESCRIPTION

DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY
PD/PS	SS/SP	DGR	SKC
SCALE : HOR 1:2500 VER 1:250	SHEET SIZE	A2	

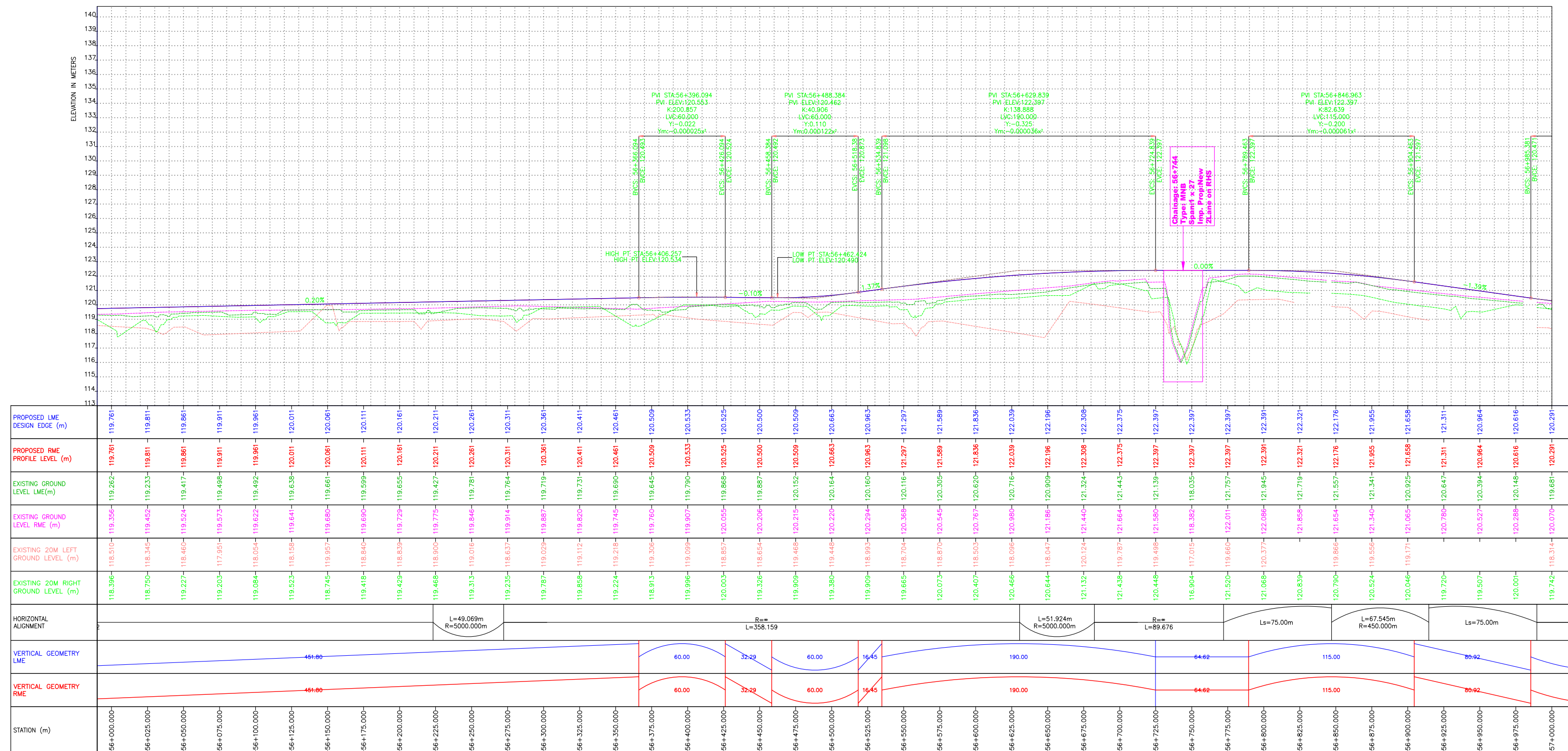
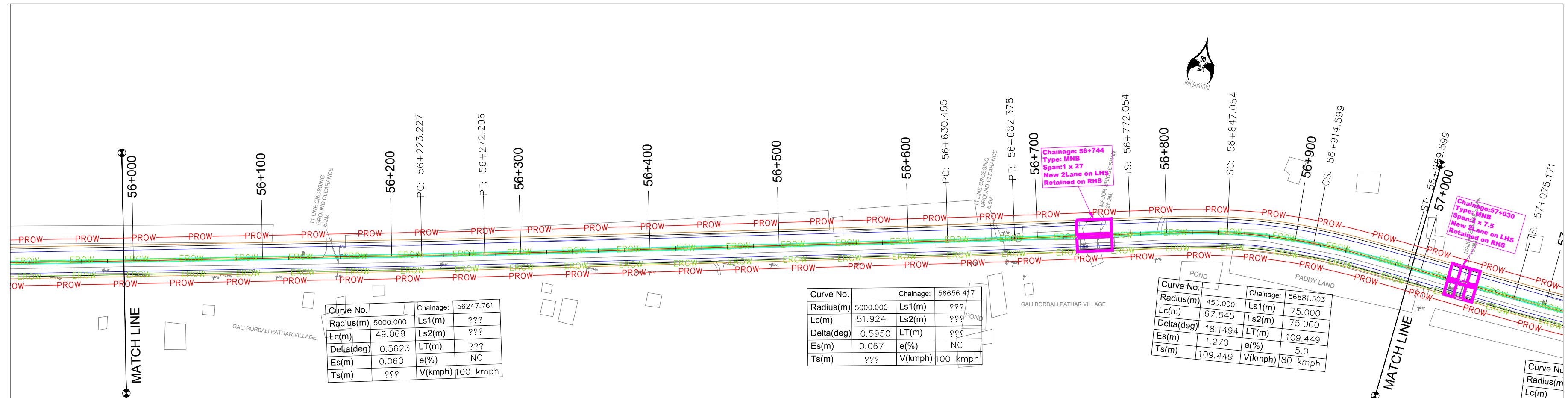
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Plan and Profile
(km 55+000 to km 56+000)

DRG. No. :
VSPL/1718-082/DPR/PKG-4/NH-515/PP- 01

REVISION:R1
January 2023

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Detailed Project Report

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DRAWN BY

CHECKED BY

APPROVED BY

TITLE :

Plan and Profile (km 56+000 to km 57+000)

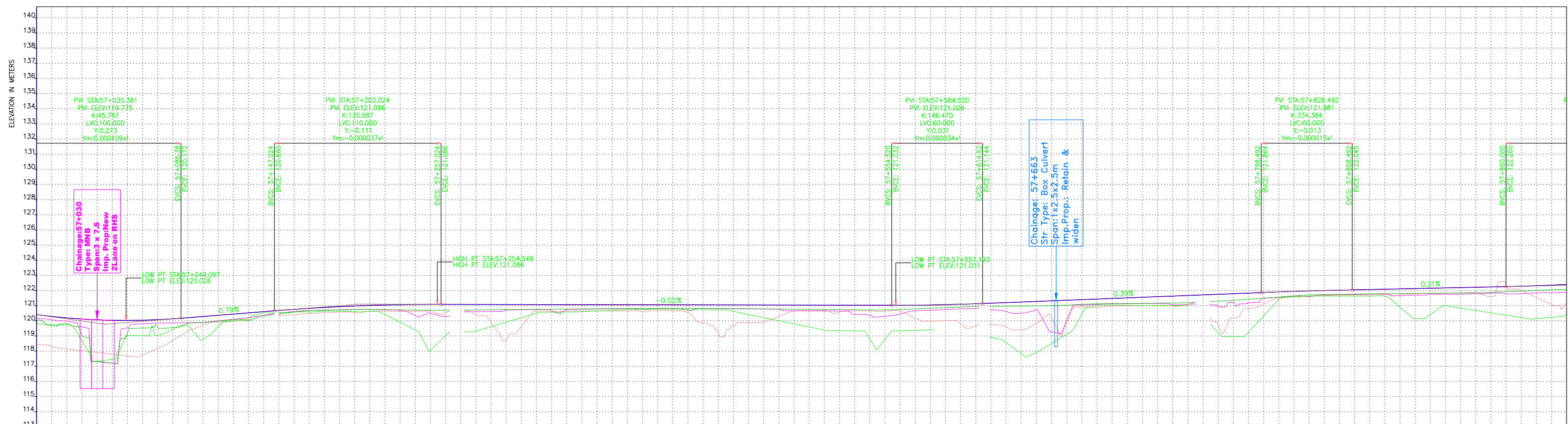
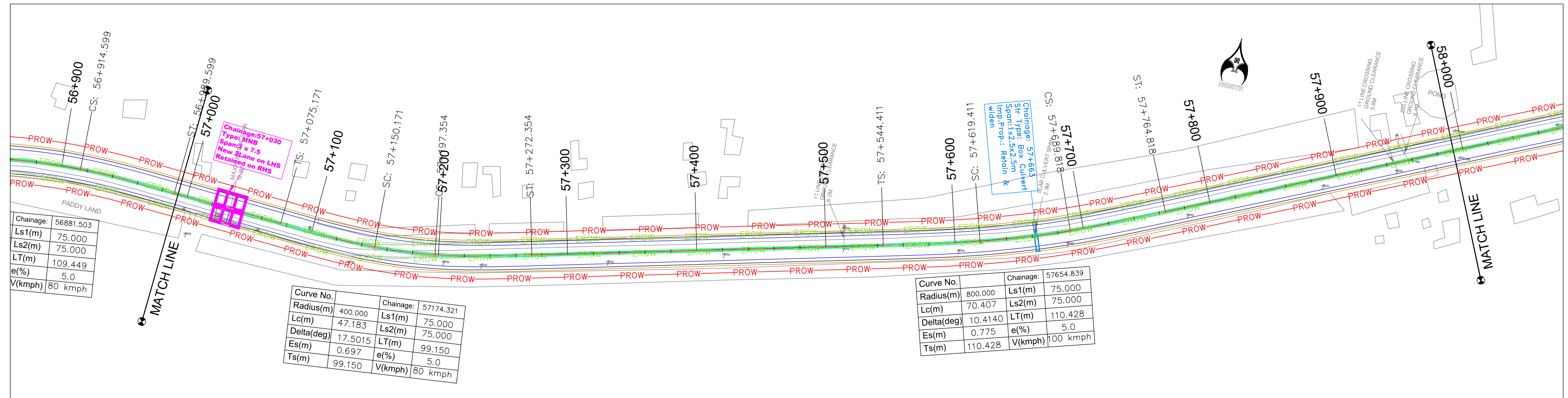
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VSPL/1718-082/DPR/PKG-4/NH-515/PP- 02

REVISION:R1

January 2023

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Detailed Project Report

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Plan and Profile
(km 57+000 to km 58+000)

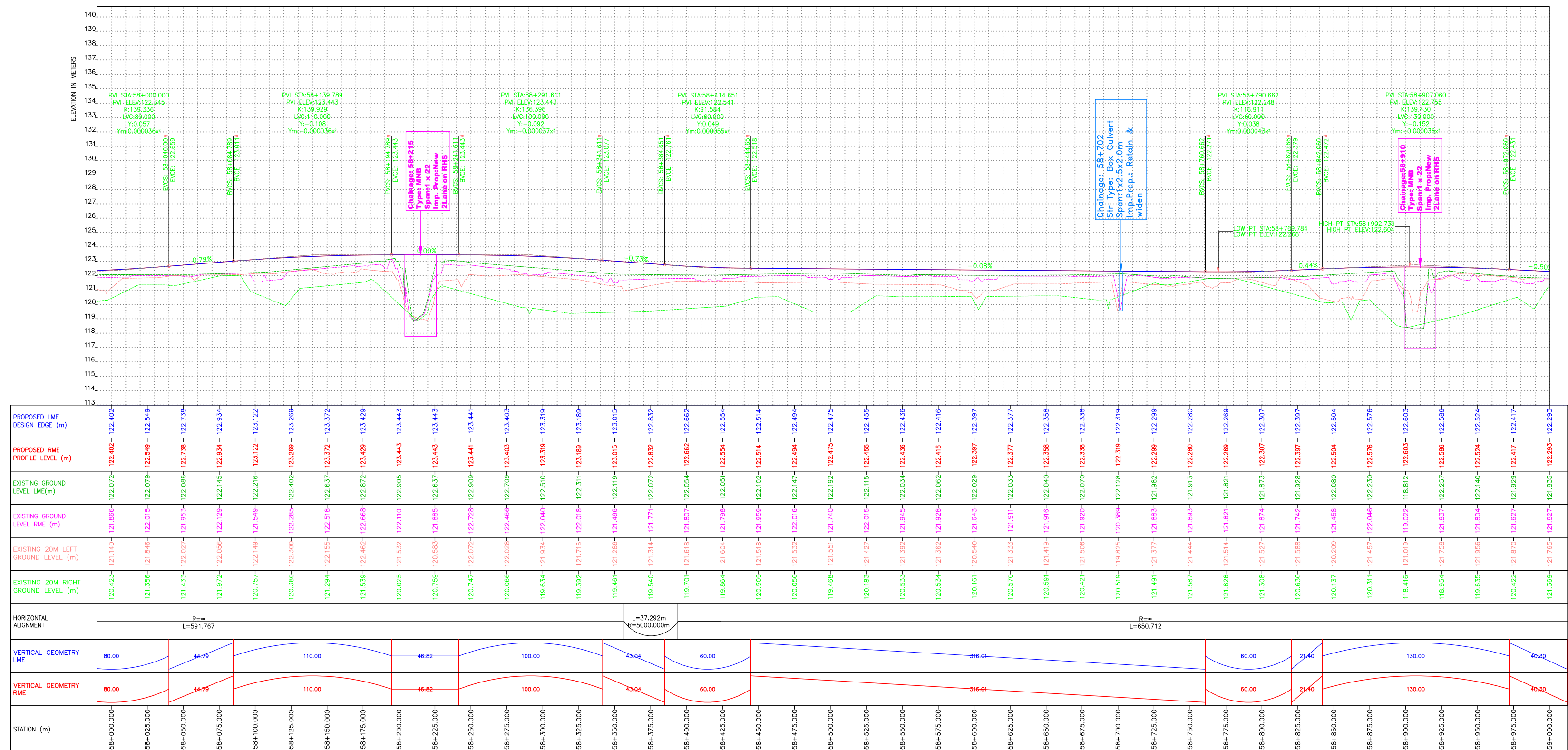
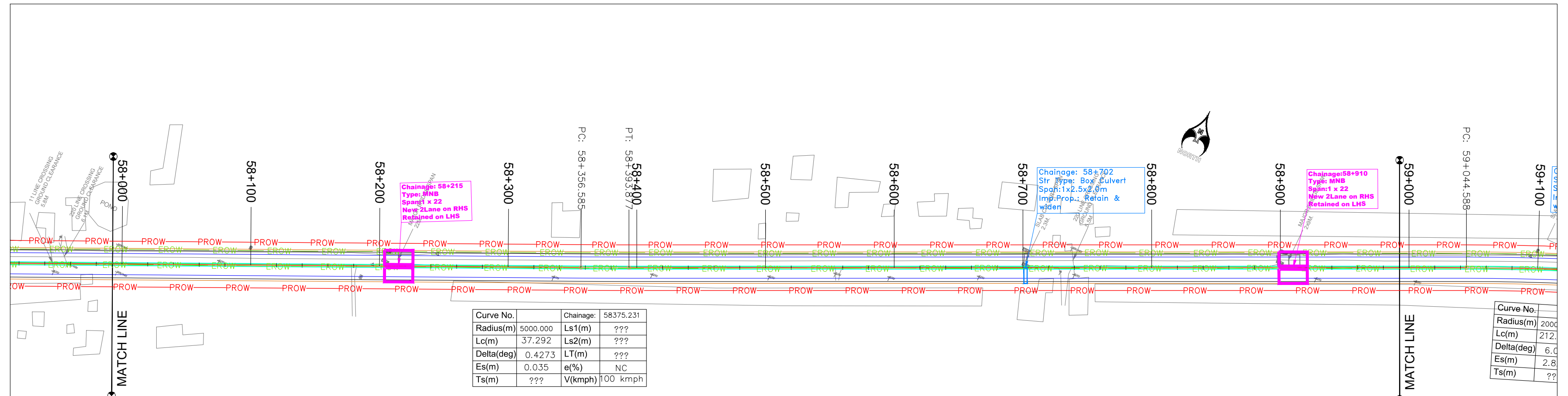
DRG. No. :

VSPL/1718-082/DPR/PKG-4/NH-515/PP- 03

January 2023

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Detailed Project Report

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SHEET SIZE

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TITLE :

Plan and Profile (km 58+000 to km 59+000)

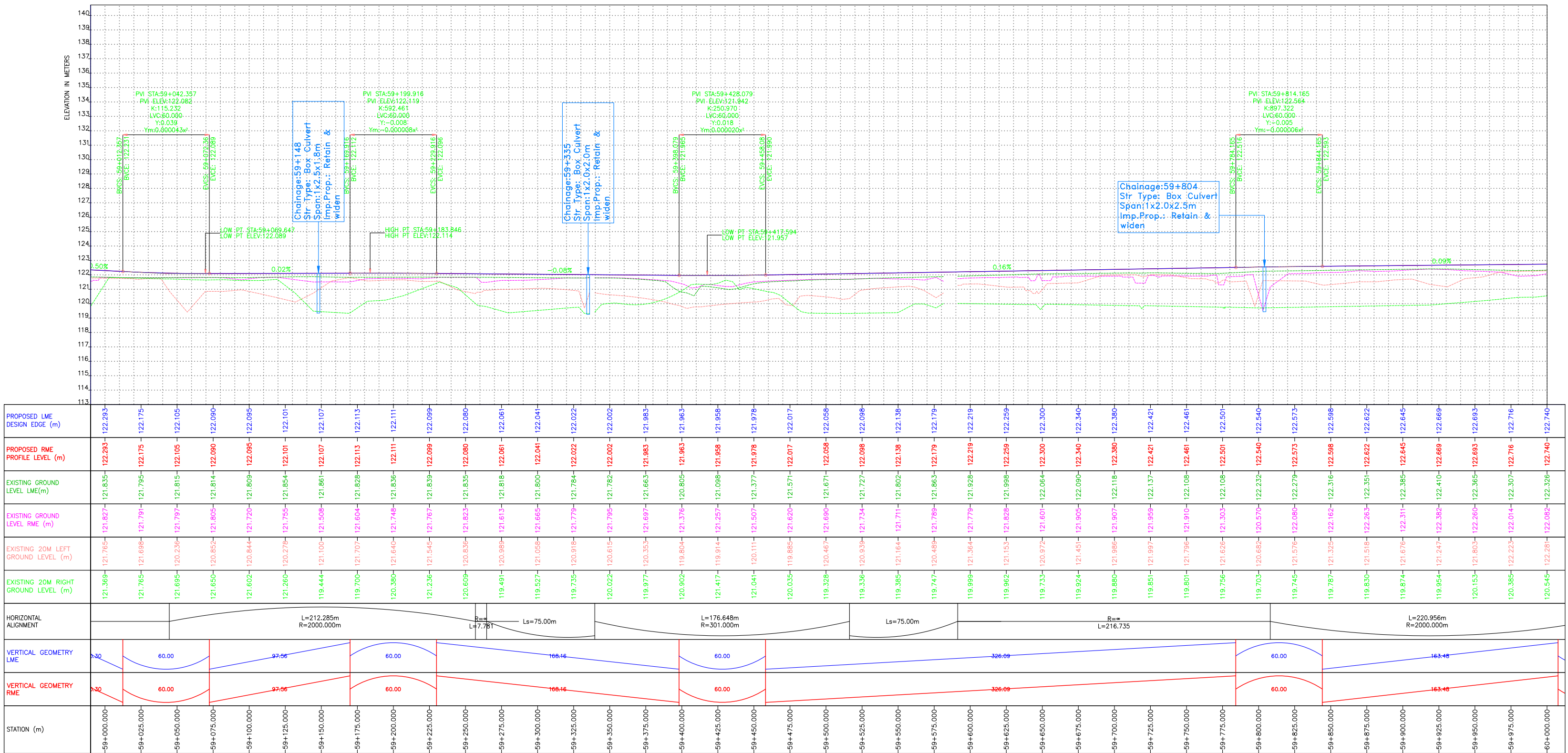
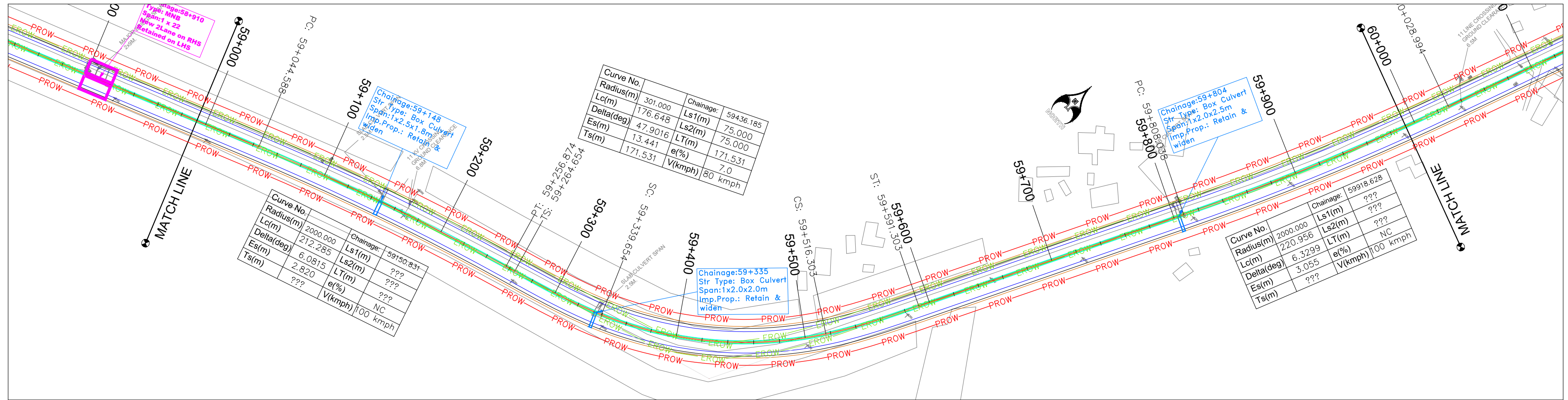
DRG. No. :	VSPL/1718-082/DPR/PKG-4/NH-515/PP- 04
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REVISION:R1

January 2023

← MORAN

DIGBOI →



CLIENT :



NATIONAL HIGHWAYS AND INFRASTRUCTURE DEVELOPMENT CORPORATION LTD.
(MINISTRY OF ROAD TRANSPORT AND HIGHWAYS)
GOVERNMENT OF INDIA

PROJECT :

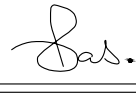
CONSULTANCY SERVICES FOR PREPARATION OF DETAILED PROJECT REPORT FOR DEVELOPMENT OF ECONOMIC CORRIDORS, INTER CORRIDORS AND FEEDER ROUTES TO IMPROVE THE EFFICIENCY OF FREIGHT MOVEMENTS IN INDIA UNDER BHARATMALA PARIYOJANA (LOT-1:PACKAGE IV)

DESIGN CONSULTANT:

VOYANTS SOLUTIONS PVT LTD.
403, 4th Floor, Park Centra,
Sector-30, NH-8
Gurgaon-122001, Haryana, India
CIN: U74140HR2004PTC046918
Ph: 0124-4598200, Fax: 0124-4019051,
E-mail: info@voyants.in, www.voyants.in

Detailed Project Report

REV.	DATE	DESCRIPTION

DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY
PD/PS	SS/SP	DGR	SKC
			

SCALE :	HOR 1:2500 VER 1:250	SHEET SIZE	A2

TITLE :

Plan and Profile
(km 59+000 to km 60+000)

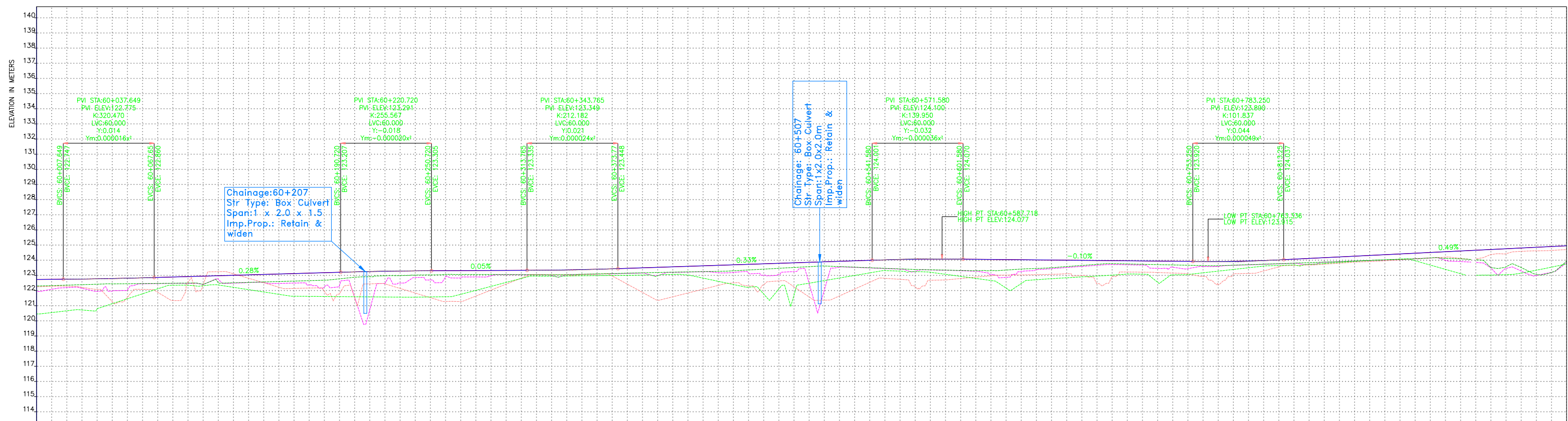
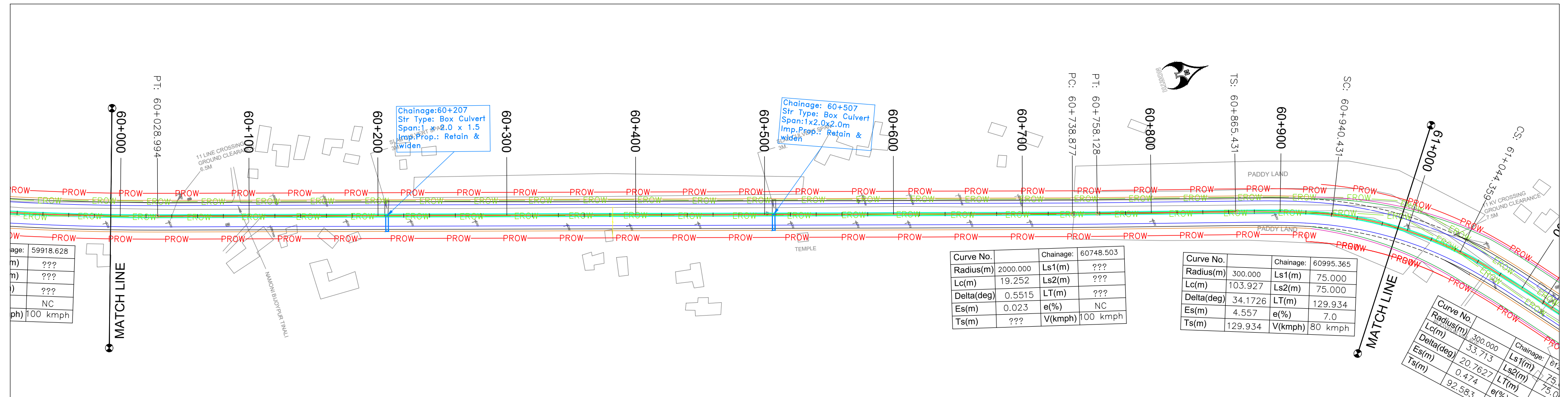
DRG. No. :
VSPL/1718-082/DPR/PKG-4/NH-515/PP- 05

REVISION:R1

January 2023

← MORAN

DIGBOI ➡

[illegible]

CLIENT :



**NATIONAL HIGHWAYS AND INFRASTRUCTURE
DEVELOPMENT CORPORATION LTD.
(MINISTRY OF ROAD TRANSPORT AND HIGHWAYS)
GOVERNMENT OF INDIA**

PROJECT :

**CONSULTANCY SERVICES FOR PREPARATION OF
DETAILED PROJECT REPORT FOR DEVELOPMENT OF
ECONOMIC CORRIDORS, INTER CORRIDORS AND FEEDER
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E-mail: info@voyants.in, www.voyants.in

Detailed Project Report

REV.	DATE	DESCRIPTION

DESIGNED BY

DRAWN BY

CHECKED BY

APPROVED BY

TITLE :

Plan and Profile
(km 60+000 to km 61+000)

DRG. No. :
VSPL/1718-082/DPR/PKG-4/NH-515/PP- 06

REVISION:R1

January 2023