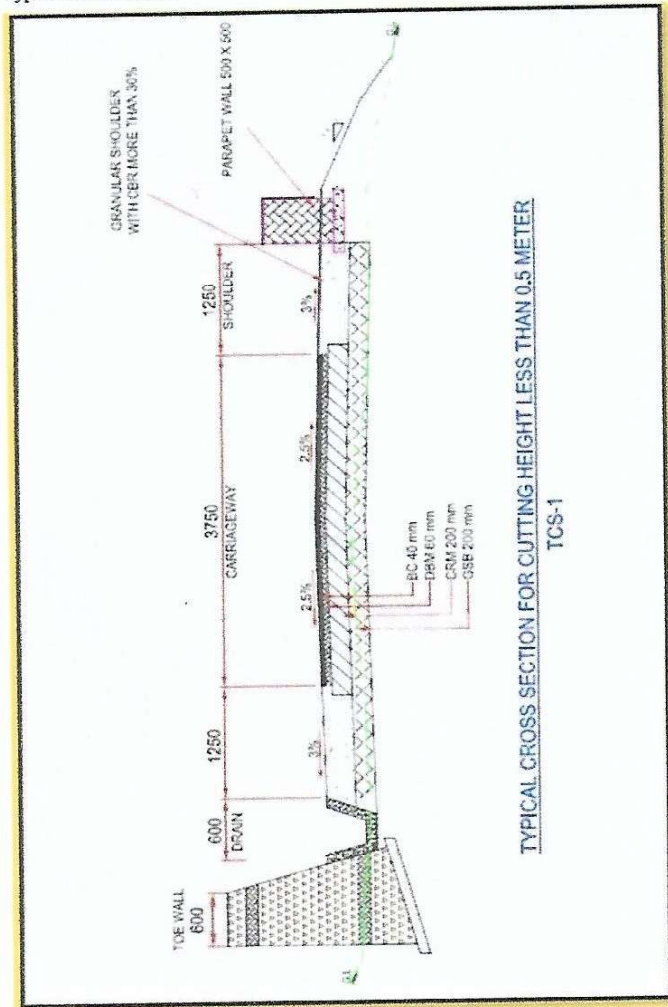
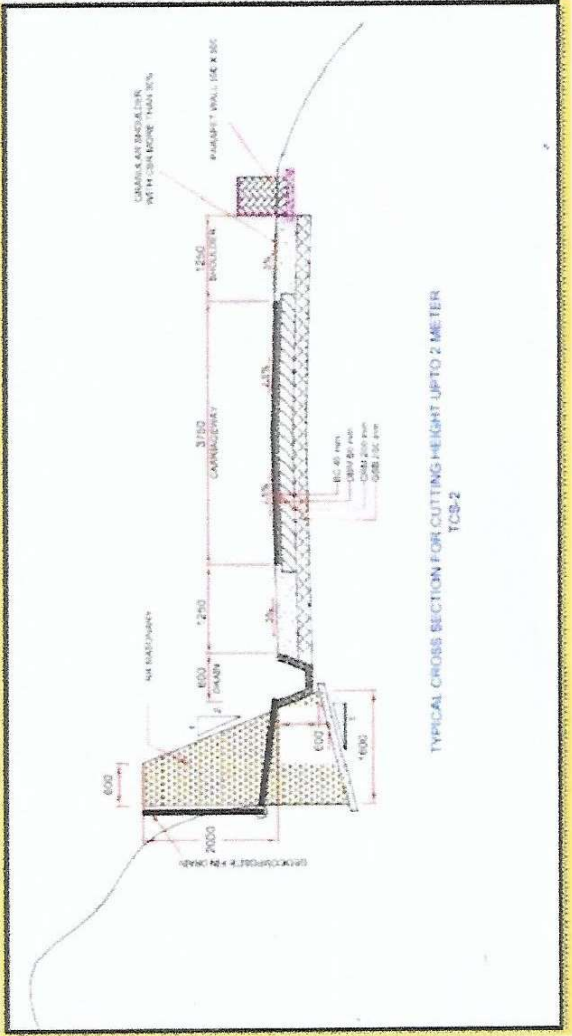
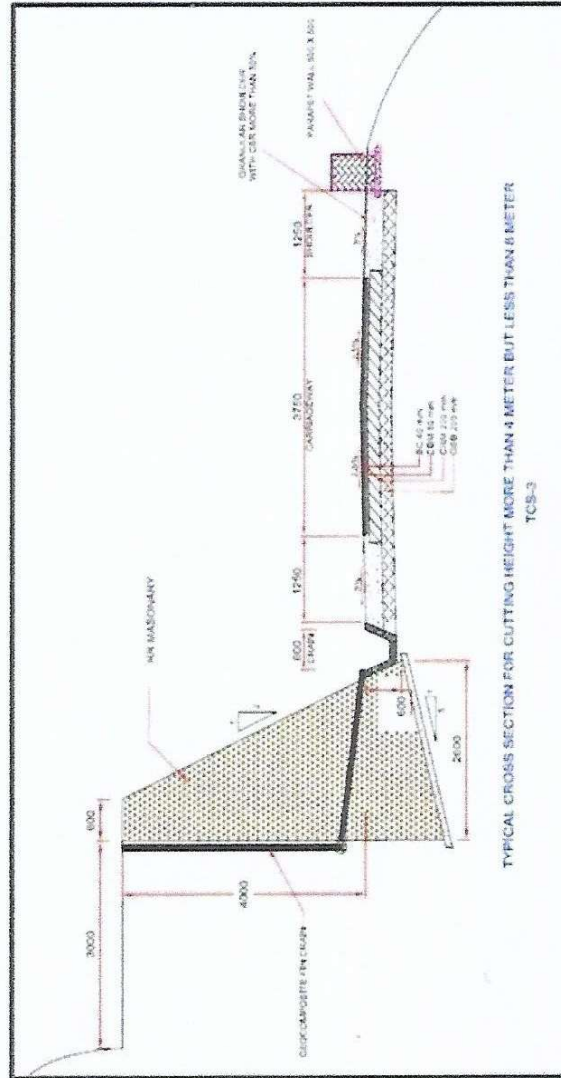


a. Typical Cross Section









NATIONAL HIGHWAY AND INFRASTRUCTURE DEVELOPMENT CORPORATION LTD.

Construction of High-Altitude hill road from
Doginala to Gâu from Km 0+000 to
Km 15+320 in Upper Subansiri District of
Arunachal Pradesh on EPC Mode.

PLAN & PROFILE
(AUGUST-2023)

PLAN & PROFILE

POGINALA

GAU

0+000

0+100

0+200

0+300

0+400

009+0

005+0

HORIZONTAL CURVE DETAILS	
CURVE NUMBER	1
RADIUS (m)	100.000
CURVE LENGTH (m)	1.000
CH	100.000
TYPE	NEW CONSTRUCTION
SPAN	1.000
PROPOSED	NEW CONSTRUCTION

HORIZONTAL CURVE DETAILS	
CURVE NUMBER	2
RADIUS (m)	50.000
CURVE LENGTH (m)	5.000
CH	50.000
TYPE	NEW CONSTRUCTION
SPAN	5.000
PROPOSED	NEW CONSTRUCTION

PROPOSED BRIDGE 0/0	
CH	00+4.30
TYPE	MAJOR BRIDGE
SIZE	1x8.7m
PROPOSED	NEW CONSTRUCTION

PROPOSED CULVERT	
CH	00+1.300
TYPE	BOX
SPAN	1.000
PROPOSED	NEW CONSTRUCTION

HORIZONTAL CURVE DETAILS	
CURVE NUMBER	3
RADIUS (m)	100.000
CURVE LENGTH (m)	1.000
CH	100.000
TYPE	NEW CONSTRUCTION
SPAN	1.000
PROPOSED	NEW CONSTRUCTION



DATE	20/01/2020
PROJECT	POGINALA
DESIGNER	GAU
CHECKER	GAU
APPROVER	GAU
DATE	20/01/2020
PROJECT	POGINALA
DESIGNER	GAU
CHECKER	GAU
APPROVER	GAU
DATE	20/01/2020
PROJECT	POGINALA
DESIGNER	GAU
CHECKER	GAU
APPROVER	GAU



POGINALA

GAU

CHAINAGE	GRADIENT	VERTICAL	HORIZONTAL	LEVEL DIFF.	EXISTING LEVELS	PROPOSED LEVELS
0.000				2.270	704.240	704.509
20.000	5.476			0.474	707.130	707.604
40.000	5.476			0.321	708.379	708.700
60.000	5.476			-0.656	710.450	709.795
80.000	5.476			-2.315	713.205	710.890
100.000	5.476			-1.467	713.452	711.985
120.000	5.476			1.326	711.754	713.081
140.000	5.476			2.030	917.176	714.176
160.000	5.484			2.650	717.923	715.273
180.000	5.544			2.230	718.611	716.381
200.000	5.612			2.009	715.494	717.504
220.000	5.680			-2.616	721.256	718.640
240.000	5.748			-3.090	722.880	719.789
260.000	5.816			0.227	720.725	720.953
280.000	5.876			0.509	721.618	722.128
300.000	5.885			-2.261	725.566	723.305
320.000	5.885			-5.637	730.118	724.482
340.000	5.701			-5.320	720.302	725.622
360.000	4.413			-5.769	732.273	726.505
380.000	2.942			1.080	726.340	727.420
400.000	1.471			5.560	721.860	727.420
420.000	0.184			10.230	717.190	727.420
440.000	0.000			11.390	718.030	727.420
460.000	-0.065			10.440	716.980	727.420
480.000	-0.583			4.740	722.680	727.420
500.000	-1.141			0.700	726.720	727.420
520.000	-1.718			-5.160	731.887	726.727
540.000	-2.231			-5.260	731.541	726.281
560.000	-2.310			-5.570	731.389	725.819
580.000	-2.310			-3.013	728.369	725.356
600.000	-2.310			1.916	722.978	724.894

CH > 00+300
SPAN > 1x2x2m
TYPE > BOX CULVERT

CH > 00+450
SPAN > 1x87m
TYPE > MAJOR BRIDGE

CHAINAGE

0.000

600.000

GRADIENT

5.476

-2.310

VERTICAL

5.476

-2.310

HORIZONTAL

5.476

-2.310

LEVEL DIFF.

2.270

1.916

EXISTING LEVELS

704.240

722.978

PROPOSED LEVELS

704.509

724.894



TCS NO.1 TYPICAL CROSS-SECTION

Horizontal Alignment Report

HIP/ Curve No.	Easting	Northing	Deflection	Element	Chainage	Start Easting	Start Northing	Change	End Easting	End Northing	Length	Chord Length	Bearing	Radius	Hand Of Arc
1	571034.039	3142480.167	49° 05' 05.5088"	Straight	0+00.000	571025.791	3142409.559	0+03.188	571028.391	3142412.691	3.188	19.962	N 10° 51' 09.3611" E		
				Transition	0+03.188	571026.391	3142412.691	0+23.188	571029.53	3142432.434	20				
				Arc	0+23.188	571029.53	3142432.434	1+13.141	571030.921	3142514.836	89.953			105	LEFT
				Transition	1+13.141	571030.921	3142514.836	1+33.141	570986.223	3142528.387	20	19.962			
				Straight	1+33.141	570986.223	3142528.387	3+51.080	570821.38	3142670.949	217.939				
				Transition	3+51.080	570821.38	3142670.949	3+66.080	570810.2	3142680.948	15	14.958	N 49° 08' 44.0801" W		
2	570804.263	3142686.626	06° 16' 09.8804"	Arc	3+66.080	570810.2	3142680.948	3+82.493	570798.981	3142692.917	16.413			150	RIGHT
				Transition	3+82.493	570798.981	3142692.917	3+97.493	570785.777	3142704.72	15	14.958			
				Straight	3+97.493	570785.777	3142704.72	4+51.139	570757.302	3142747.521	53.696				
				Transition	4+51.139	570757.302	3142747.521	4+71.139	570744.807	3142763.131	20	19.994	N 37° 08' 47.7192" W		
3	570727.479	3142782.559	23° 31' 44.2807"	Arc	4+71.139	570744.807	3142763.131	5+22.522	570703.836	3142793.454	51.332			125	LEFT
				Transition	5+22.522	570703.836	3142793.454	5+37.522	570689.975	3142799.181	15	14.998			
				Straight	5+37.522	570689.975	3142799.181	5+52.522	570676.063	3142804.789	15	11.999			
				Transition	5+52.522	570676.063	3142804.789	6+34.903	570608.131	3142850.558	82.382			220	RIGHT
				Straight	6+34.903	570608.131	3142850.558	6+49.903	570597.734	3142861.36	15	11.999			
				Arc	6+49.903	570597.734	3142861.36	6+93.774	570567.661	3142893.234	43.821				
				Transition	6+93.774	570567.661	3142893.234	6+99.130	570563.881	3142897.098	5.406				
				Straight	6+99.130	570563.881	3142897.098	7+28.137	570543.227	3142928.129	15	14.999			
				Transition	7+28.137	570543.227	3142928.129	8+36.802	570486.506	3143008.64	93.665				
				Arc	8+36.802	570486.506	3143008.64	8+51.802	570462.638	3143033.119	15	14.999	N 43° 20' 07.3363" W		
				Transition	8+51.802	570462.638	3143033.119	8+81.527	570450.652	3143148.851	129.725				
				Straight	8+81.527	570450.652	3143148.851	10+12.488	570444.562	3143179.143	30.911			305	RIGHT
				Transition	10+12.488	570444.562	3143179.143	12+01.266	570416.772	3143365.914	188.828				
				Arc	12+01.266	570416.772	3143365.914	12+20.855	570414.512	3143385.379	19.996			305	RIGHT
				Transition	12+20.855	570414.512	3143385.379	12+92.303	570408.558	3143456.569	71.638				
				Arc	12+92.303	570408.558	3143456.569	13+17.255	570407.467	3143481.491	24.951			305	RIGHT
				Transition	13+17.255	570407.467	3143481.491	13+57.405	570407.431	3143521.641	40.15				
				Arc	13+57.405	570407.431	3143521.641	13+76.006	570406.832	3143540.249	18.621			305	LEFT
				Transition	13+76.006	570406.832	3143540.249	16+15.098	570391.853	3143738.852	239.072				
				Arc	16+15.098	570391.853	3143738.852	17+66.279	570419.4	3143925.933	151.182			305	RIGHT
				Transition	17+66.279	570419.4	3143925.933	18+39.833	570450.261	3143952.698	73.553				
				Arc	18+39.833	570450.261	3143952.698	20+07.707	570435.566	3144152.306	167.874			160	LEFT
				Transition	20+07.707	570435.566	3144152.306	21+54.038	570374.141	3144239.078	106.331				
				Arc	21+54.038	570374.141	3144239.078	22+06.677	570360.91	3144253.945	20	19.901			
				Transition	22+06.677	570360.91	3144253.945	22+30.927	570319.745	3144272.732	72.639			30	LEFT
				Arc	22+30.927	570319.745	3144272.732	22+45.948	570325.289	3144185.216	15.022			50	LEFT
				Transition	22+45.948	570325.289	3144185.216	22+53.164	570328.935	3144178.989	7.216				
				Arc	22+53.164	570328.935	3144178.989	22+88.317	570344.911	3144147.699	35.152			305	RIGHT
				Transition	22+88.317	570344.911	3144147.699	23+08.894	570353.197	3144128.864	20.578				
				Arc	23+08.894	570353.197	3144128.864	23+28.894	570360.001	3144110.094	20	16.964		50	RIGHT
				Transition	23+28.894	570360.001	3144110.094	23+50.465	570359.974	3144088.69	21.571				
				Arc	23+50.465	570359.974	3144088.69	23+70.465	570353.122	3144069.938	20	15.964			
				Transition	23+70.465	570353.122	3144069.938	23+95.497	570342.984	3144047.052	25.031				
				Arc	23+95.497	570342.984	3144047.052	24+10.497	570337.406	3144033.136	15	14.992		70	LEFT
				Transition	24+10.497	570337.406	3144033.136	24+25.700	570334.373	3144018.268	15.204				
				Arc	24+25.700	570334.373	3144018.268	24+40.700	570334.055	3144003.729	15	14.992			
				Transition	24+40.700	570334.055	3144003.729	24+87.222	570334.729	3143955.763	46.521				
				Arc	24+87.222	570334.729	3143955.763	25+02.222	570335.482	3143941.79	15	14.992			
				Transition	25+02.222	570335.482	3143941.79	25+17.843	570337.564	3143931.385	10.621			70	LEFT
				Arc	25+17.843	570337.564	3143931.385	25+23.673	570340.488	3143920.957	10.83				
				Transition	25+23.673	570340.488	3143920.957	25+38.673	570344.017	3143905.386	15	14.992			



Resident Engineer
Bloom J. Jindals (Asst.) K. Jindals

OWNER ENGINEERING :		SAFETY CONSULTANT :		EPC CONTRACTOR :		AUTHORITY ENGINEER :	
National Highways & Infrastructure Development Corporation Ltd. (NHIDCL)		K. Jindals & Associates Pvt. Ltd.		ipec		Jindals Consultants	
PROJECT : CONSTRUCTION OF HIGH ALTITUDE HILL ROAD FROM DOGIMALA TO GAU FROM KM- 0.000 TO KM- 15.320 IN THE STATE OF ARUNACHAL PRADESH ON EPC MODE		PROOF CONSULTANT : K. Jindals & Associates Pvt. Ltd.		K. Jindals & Associates Pvt. Ltd.		K. Jindals & Associates Pvt. Ltd.	
TITLE : HORIZONTAL ALIGNMENT REPORT		DRAWN BY : SK		DESIGNED BY : SK		APPROVED BY : DK	
DRG. NO. : APD/HOR/01		REVISION : R-0		JULY-2022			

Horizontal Alignment Report

HIP/curve No.	HIP		Deflection		Element	Start		End		Length	Chord Length	Bearing	Radius	Hand Of Arc
	Easting	Northing				Chainage	Easting	Chainage	Easting	Northing				
19	570345.869	3143895.349	18° 10' 02.6981"		Arc	25+38.673	570344.017	3143506.386	570344.187	3143884.284	22.196		70	RIGHT
					Straight	25+60.868	570344.187	3143884.284	27+40.908	3143745.834	140.04	S 08° 38' 34.7442" W		
					Transition	27+40.908	570323.143	3143745.834	570320.767	3143775.984	20			
20	570320.752	3143725.719	00° 17' 21.8444"		Arc	27+40.908	570320.767	3143725.984	570320.739	3143775.454	0.531		105	LEFT
					Transition	27+41.439	570320.998	3143725.984	570320.998	3143705.464	20			
					Straight	27+41.439	570320.998	3143705.464	570321.071	3143703.832	1.633			
					Transition	27+43.073	570321.071	3143703.832	570320.632	3143683.872	20			
21	570319.686	3143677.826	13° 57' 21.9090"		Arc	27+43.073	570320.632	3143683.872	570317.309	3143672.187	12.179		50	RIGHT
22	570315.176	3143667.127	05° 01' 51.2053"		Arc	27+43.073	570317.309	3143672.187	570313.495	3143661.899	10.976		125	LEFT
					Transition	27+46.227	570313.495	3143661.899	570309.479	3143647.449	15			
					Transition	28+01.227	570309.479	3143647.449	570309.479	3143628.609	20			
23	570298.21	3143619.986	27° 37' 07.5287"		Arc	28+01.227	570309.479	3143628.609	570290.028	3143614.535	19.282		40	RIGHT
					Transition	28+40.509	570290.028	3143614.535	570276.626	3143607.85	15			
					Transition	28+55.509	570276.626	3143607.85	570263.727	3143600.379	15			
24	570249.501	3143586.441	89° 45' 35.8291"		Arc	28+55.509	570263.727	3143600.379	570263.727	3143572.155	31.332		20	LEFT
					Transition	29+01.841	570263.727	3143572.155	570276.609	3143564.369	15			
					Transition	29+16.841	570263.727	3143564.369	570276.609	3143557.864	15			
25	570331.035	3143535.431	48° 20' 00.7890"		Arc	29+16.841	570263.727	3143557.864	570341.821	3143489.567	88.576		105	RIGHT
					Transition	30+20.417	570341.821	3143489.567	570345.153	3143469.855	20			
26	570359.494	3143364.844	07° 09' 52.9759"		Arc	30+20.417	570345.153	3143469.855	570356.911	3143383.763	86.891		305	RIGHT
					Straight	31+27.308	570345.153	3143383.763	570356.911	3143383.763	38.14			
					Transition	31+65.447	570356.911	3143383.763	570359.698	3143345.75	59.285		305	LEFT
27	570361.112	3143213.417	08° 08' 38.8547"		Arc	31+65.447	570359.698	3143345.75	570360.88	3143235.129	110.623		305	LEFT
					Straight	32+48.618	570360.88	3143235.129	570364.118	3143191.957	43.353			
28	570364.234	3143083.611	127° 01' 11.3179"		Arc	32+48.618	570364.118	3143191.957	570364.118	3143125.932	15		18	RIGHT
					Transition	33+78.714	570364.118	3143125.932	570364.118	3143125.932	15			
					Straight	34+48.618	570364.118	3143125.932	570364.118	3143125.932	15			
29	570307.735	3143246.73	15° 44' 20.7143"		Arc	34+48.618	570364.118	3143125.932	570364.118	3143125.932	15			
					Transition	35+37.085	570364.118	3143125.932	570364.118	3143125.932	15			
					Arc	35+52.085	570364.118	3143125.932	570364.118	3143125.932	15			
30	570319.611	3143347.081	24° 11' 00.0171"		Arc	35+52.085	570364.118	3143125.932	570364.118	3143125.932	15			
					Transition	36+08.289	570364.118	3143125.932	570364.118	3143125.932	15			
					Straight	37+37.023	570364.118	3143125.932	570364.118	3143125.932	15			
31	570266.756	3143499.322	60° 04' 52.5246"		Arc	37+37.023	570364.118	3143125.932	570364.118	3143125.932	15			
					Transition	37+78.531	570364.118	3143125.932	570364.118	3143125.932	15			
					Arc	37+98.531	570364.118	3143125.932	570364.118	3143125.932	15			
32	570086.632	3143495.109	75° 44' 31.1936"		Arc	37+98.531	570364.118	3143125.932	570364.118	3143125.932	15			
					Transition	38+61.448	570364.118	3143125.932	570364.118	3143125.932	15			
					Straight	39+75.943	570364.118	3143125.932	570364.118	3143125.932	15			
33	570110.851	3143585.247	11° 09' 51.6484"		Arc	39+75.943	570364.118	3143125.932	570364.118	3143125.932	15			
					Transition	40+35.025	570364.118	3143125.932	570364.118	3143125.932	15			
					Straight	40+35.025	570364.118	3143125.932	570364.118	3143125.932	15			
34	570140.818	3143636.835	11° 58' 52.8828"		Arc	40+35.025	570364.118	3143125.932	570364.118	3143125.932	15			
					Transition	41+59.383	570364.118	3143125.932	570364.118	3143125.932	15			
					Straight	41+59.383	570364.118	3143125.932	570364.118	3143125.932	15			
					Transition	42+37.569	570364.118	3143125.932	570364.118	3143125.932	15			



Resident Engineer
Jindals (Ashu) Kimpol

Jindals Consortium
BLCOM-JINDAL-KMIPPL (JV)

OWNER ENGINEERING :

MPTCL
National Highways & Infrastructure Development Corporation Ltd. (NHIDCL)

SAFETY CONSULTANTS :

Jindals Consortium

EPC CONTRACTOR :

Jindals Consortium

INDO ENGINEERING PROJECT CORPORATION

PROOF CONSULTANTS :

Jindals Consortium

PROJECT :

CONSTRUCTION OF HIGH ALTITUDE HILL ROAD FROM DODGALA TO GAU FROM KM. 0000 TO KM. 15.300 IN UPPER SUBANSAR DISTRICT OF THE ANAPCHAL PROJECT ON EPC MODE

TITLE :

HORIZONTAL ALIGNMENT REPORT

DRAWN BY :

SK

DESIGNED BY :

SK

APPROVED BY :

DK

SCALE :

1:1

REVISION :

R-0

JULY-2022

Horizontal Alignment Report

HIP/curve No.	HIP Easting	HIP Northing	Deflection	Element	Chaining	Start Easting	Start Northing	Chaining	End Easting	End Northing	Length	Chord Length	Bearing	Radius	Hand Of Arc
35	570173.445	3143743.558	46° 21' 01.4006"	Ac	42-57.569	570173.667	3143730.717	42-81.838	570164	3143752.26	24.269			30	LEFT
				Transition	42-81.838	570164	3143752.26	43-01.838	570164	3143752.186	20	19.901			
				Straight	43-01.838	570164	3143752.186	43-29.411	570161.751	3143773.207	27.573		N 66° 76' 30.3722" W		
				Transition	43-29.411	570161.751	3143773.207	43-49.411	570164.225	3143783.133	20	19.901			
36	570096.931	3143789.854	36° 35' 30.2113"	Ac	43-49.411	570094.226	3143783.133	43-68.571	570095.081	3143799.599	19.159			30	RIGHT
				Transition	43-68.571	570095.081	3143799.599	43-83.571	570094.768	3143814.554	15	14.958			
				Transition	43-83.571	570094.768	3143814.554	43-98.571	570094.455	3143829.509	15	14.958			
37	570091.954	3143884.679	48° 09' 14.5189"	Ac	43-98.571	570094.455	3143829.509	44-23.784	570080.475	3143869.603	25.213			30	LEFT
				Transition	44-23.784	570080.475	3143869.603	44-43.784	570081.585	3143855.87	20	19.901			
				Straight	44-43.784	570081.585	3143855.87	44-79.561	570075.59	3143863.306	35.777		N 78° 00' 14.6799" W		
				Transition	44-79.561	570075.59	3143863.306	44-94.561	570072.509	3143868.196	15	14.906			
38	569998.556	3143877.425	79° 49' 16.8531"	Ac	44-94.561	570072.509	3143868.196	45-22.424	570065.174	3143892.789	27.863			20	RIGHT
				Transition	45-22.424	570065.174	3143892.789	45-37.424	570064.276	3143904.593	15	14.906			
				Straight	45-37.424	570064.276	3143904.593	45-56.405	570062.648	3143918.054	18.981		N 44° 47' 20.7782" E		
39	570100.038	3143990.989	37° 48' 49.9925"	Ac	45-56.405	570062.648	3143918.054	47-54.398	570012.516	3144092.982	167.993			300	LEFT
				Straight	47-54.398	570012.516	3144092.982	48-01.402	570011.225	3144159.639	47.004		N 06° 58' 30.7857" E		
				Transition	48-01.402	570011.225	3144159.639	48-16.402	570011.798	3144154.554	15	14.998			
40	570121.695	3144180.957	20° 00' 57.9888"	Ac	48-16.402	570011.798	3144154.554	48-68.804	570014.441	3144206.414	52.402			150	LEFT
				Transition	48-68.804	570014.441	3144206.414	48-83.804	570009.852	3144220.693	15	14.998			
				Straight	48-83.804	570009.852	3144220.693	49-05.921	570010.735	3144241.633	22.116		N 18° 46' 13.6847" W		
				Transition	49-05.921	570010.735	3144241.633	49-20.921	570009.732	3144255.773	15	14.999			
41	570093.417	3144267.062	06° 54' 57.1635"	Ac	49-20.921	570009.732	3144255.773	49-45.062	570087.774	3144277.749	24.141			200	LEFT
				Transition	49-45.062	570087.774	3144277.749	49-60.062	570080.441	3144303.947	15	14.999			
				Transition	49-60.062	570080.441	3144303.947	49-75.062	570073.163	3144308.002	4.521			150	RIGHT
42	570072.133	3144305.96	01° 43' 37.4599"	Ac	49-75.062	570073.163	3144308.002	49-94.583	570065.187	3144321.758	15	14.998			
				Transition	49-94.583	570065.187	3144321.758	50-09.583	570059.268	3144335.54	15	14.999			
43	570046.015	3144364.386	18° 02' 15.5834"	Ac	50-09.583	570059.268	3144335.54	50-72.546	570024.482	3144387.71	62.963			200	LEFT
				Transition	50-72.546	570024.482	3144387.71	50-87.546	570014.035	3144398.473	15	14.999			
				Transition	50-87.546	570014.035	3144398.473	51-02.546	570004.606	3144410.051	15	14.94			
44	569994.954	3144428.467	79° 28' 32.6219"	Ac	51-02.546	570004.606	3144410.051	51-37.224	570011.287	3144441.319	34.678			25	RIGHT
				Transition	51-37.224	570011.287	3144441.319	51-52.224	570024.63	3144448.04	15	14.94			
				Straight	51-52.224	570024.63	3144448.04	51-82.706	570053.085	3144458.968	30.482		N 68° 59' 29.2935" E		
				Transition	51-82.706	570053.085	3144458.968	51-97.706	570066.555	3144465.473	15	14.958			
45	570075.66	3144471.928	40° 48' 50.2559"	Ac	51-97.706	570066.555	3144465.473	52-19.076	570078.333	3144482.754	21.37			30	LEFT
				Transition	52-19.076	570078.333	3144482.754	52-34.076	570079.455	3144497.681	15	14.958			
				Straight	52-34.076	570079.455	3144497.681	52-59.678	570079.245	3144532.282	25.602		N 00° 28' 13.3655" W		
				Transition	52-59.678	570079.245	3144532.282	52-74.678	570078.585	3144538.259	15	14.992			
46	570078.39	3144539.954	02° 47' 32.1550"	Ac	52-74.678	570078.585	3144538.259	52-78.089	570078.111	3144541.637	3.411			70	LEFT
				Transition	52-78.089	570078.111	3144541.637	52-93.089	570074.613	3144556.216	15	14.992			
				Straight	52-93.089	570074.613	3144556.216	52-98.682	570073.115	3144561.694	5.592		N 15° 32' 25.1218" W		
				Transition	52-98.682	570073.115	3144561.694	53-13.682	570068.585	3144575.895	15	14.992			
47	570067.937	3144577.524	02° 52' 04.9064"	Ac	53-13.682	570068.585	3144575.895	53-17.186	570067.209	3144579.118	3.504			70	LEFT
				Transition	53-17.186	570067.209	3144579.118	53-32.186	570060.024	3144616.538	28.213				
				Straight	53-32.186	570060.024	3144616.538	53-60.398	570045.625	3144629.307	15	14.998			
				Transition	53-60.398	570045.625	3144629.307	53-75.398	570037.753	3144651.548	28.673			150	LEFT
48	570029.81	3144641.291	10° 57' 06.0777"	Ac	53-75.398	570037.753	3144651.548	54-04.071	570038.867	3144750.192	130.378				
				Transition	54-04.071	570038.867	3144661.888	55-49.449	569912.945	3144760.533	15	14.998			
				Straight	54-49.449	569912.945	3144760.533	55-64.449	569902.082	3144770.533	15	14.998			



Resident Engineer
Bloom JV Jindals (Asst.) Knapel

Jindals
CONSULTANTS

OWNER ENGINEERING
National Highways & Infrastructure Development Corporation Ltd. (NHIDCL)

EPC CONTRACTOR:
INDO ENGINEERING PROJECT CORPORATION

SAFETY CONSULTANT:
Jindals Consultants Pvt. Ltd.

PROOF CONSULTANT:
KIC GLOBAL CONSULTANTS PVT. LTD.
301 Kalyani Sector 14, Dwarka, New Delhi, Delhi 110042
www.kicglobalconsultants.com

PROJECT:
CONSTRUCTION OF HIGH ALTITUDE HILL ROAD FROM DODGANA TO GAL UPPER SUBANSARI DISTRICT OF THE STATE OF ARUNACHAL PRADESH ON EPC MODE

TITLE:
HORIZONTAL ALIGNMENT REPORT

DRAWN BY:
SK

DESIGNED BY:
SK

APPROVED BY:
DK

SCALE:
1:1

REVISION:
R40

JULY-2022

Horizontal Alignment Report													
H/P/ Curve No.	H/P		Deflection	Element	Start		End		Length	Chord Length	Bearing	Radius	Hand Of Arc
	Easting	Northing			Chaining	Easting	Northing	Easting					
49	569554.96	3144808.479	48° 16' 51.4071"	Arc	55+64.449	569902.092	3144760.533	56+90.848	569859.39	3144875.558	126.399	150	RIGHT
				Transition	56+90.848	569859.39	3144875.558	57+05.848	569860.876	3144850.482	15	14.998	
				Straight	57+05.848	569860.876	3144890.482	58+63.646	569876.13	3145047.221	157.797		
50	569891.443	3145067.087	07° 30' 13.3731"	Arc	58+63.646	569879.13	3145047.221	59+03.590	569886.331	3145086.481	39.944	305	RIGHT
				Straight	59+03.590	569886.331	3145086.481	60+03.867	569910.839	3145183.717	100.277		
51	569913.832	3145195.592	02° 48' 21.6622"	Arc	60+03.867	569910.839	3145183.717	60+28.354	569916.24	3145207.599	24.487	500	LEFT
				Straight	60+28.354	569916.24	3145207.599	62+32.232	569956.33	3145407.497	203.878		
				Transition	62+32.232	569956.33	3145407.497	62+52.732	569958.944	3145427.289	20	19.964	
52	569958.918	3145439.606	27° 40' 34.4054"	Arc	62+52.732	569958.944	3145427.289	62+76.384	569953.175	3145450.501	24.152	50	LEFT
				Transition	62+76.384	569953.175	3145450.501	62+96.384	569941.6	3145466.767	20	19.964	
				Straight	62+96.384	569941.6	3145466.767	63+51.936	569906.445	3145509.783	55.551	500	RIGHT
53	569901.146	3145516.273	01° 55' 14.0011"	Arc	63+51.936	569906.449	3145509.783	63+68.696	569896.063	3145522.937	16.76		
				Straight	63+68.696	569896.063	3145522.937	64+05.535	569873.722	3145553.229	36.84	15	LEFT
				Transition	64+05.535	569873.722	3145553.229	64+20.535	569864.346	3145583.933	15	14.997	
54	569860.581	3145568.199	06° 12' 10.7004"	Arc	64+20.535	569864.346	3145563.933	64+31.903	569856.378	3145572.033	11.368	105	LEFT
				Transition	64+31.903	569856.378	3145572.033	64+46.903	569844.83	3145581.601	15	14.997	
				Straight	64+46.903	569844.83	3145581.601	64+48.280	569843.745	3145582.454	1.377	20	RIGHT
				Arc	64+48.280	569843.749	3145582.454	64+83.465	569843.037	3145613.265	35.184		
55	569824.772	3145597.429	100° 47' 45.0780"	Transition	64+83.465	56983.037	3145513.265	64+98.465	569856.366	3145619.938	15	14.906	
				Transition	64+98.465	569856.366	3145619.938	65+13.465	569870.343	3145625.368	15	14.994	
56	569941.336	3145658.188	88° 42' 19.1526"	Arc	65+13.465	569870.343	3145625.368	66+37.321	569910.128	3145729.905	123.856	80	LEFT
				Transition	66+37.321	569910.128	3145729.905	66+52.321	569903.298	3145743.253	15	14.994	
				Straight	66+52.321	569903.298	3145743.253	67+35.412	569863.156	3145816.005	83.091		
57	569855.422	3145830.021	06° 00' 33.1169"	Arc	67+35.412	569863.156	3145816.005	67+67.400	569846.264	3145843.152	31.988	305	LEFT
				Straight	67+67.400	569846.264	3145843.152	68+14.848	569819.118	3145882.067	47.448		
				Transition	68+14.848	569819.118	3145882.067	68+19.848	5				

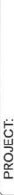
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Resident Engineer
Jy Jindals (Assn.) Kimppl

[illegible]

Horizontal Alignment Report																	
HIP/ Curve No.	HIP	Deflection	Element	Chainage	Easting	Northing	Start Easting	Start Northing	End Easting	End Northing	Length	Chord Length	Bearing	Radius	Hand Off Arc		
64	569914.466	09° 09' 25.7870"	Arc	71+50.954	569915.021	3146297.181	73+67.735	569912.582	3146313.766	16.781	14.997	105	LEFT				
			Transition	73+67.735	569911.582	3146313.766	73+82.735	569908.551	3146328.205	15							
			Straight	73+82.735	569908.551	3146328.205	74+17.380	569908.382	3146361.33	34.645					N 17° 02' 08.2864° W		
65	569884.488	26° 40' 42.4194"	Arc	74+17.380	569898.382	3146361.33	75+10.505	569892.432	3146453.425	93.125	200	RIGHT					
			Straight	75+10.505	569892.432	3146453.425	75+38.162	569897.064	3146480.69	27.656					N 09° 38' 34.1329° E		
			Arc	75+38.162	569897.064	3146480.69	75+58.482	569899.769	3146500.822	20.321					LEFT		
66	569898.767	03° 49' 02.4429"	Straight	75+58.482	569899.769	3146500.822	75+93.873	569903.391	3146536.33	35.391	305	RIGHT					
			Arc	75+93.873	569903.391	3146536.33	76+27.130	569908.561	3146558.866	33.256					N 05° 19' 31.6900° E		
			Straight	76+27.130	569908.561	3146558.866	76+45.250	569922.809	3146635.48	68.121					RIGHT		
67	569905.08	06° 14' 50.5051"	Transition	76+45.250	569922.809	3146635.48	77+10.250	569925.537	3146650.225	15	14.995	90	LEFT				
			Arc	77+10.250	569925.537	3146650.225	77+48.748	569922.237	3146688.286	38.497					LEFT		
			Transition	77+48.748	569922.237	3146688.286	77+63.748	569917.011	3146702.342	15	14.995						
68	569928.02	24° 30' 29.1242"	Straight	77+63.748	569917.011	3146702.342	78+24.067	569894.43	3146758.276	60.32	150	LEFT					
			Transition	78+24.067	569894.43	3146758.276	78+39.627	569883.585	3146772.088	15	14.998						
			Arc	78+39.627	569883.585	3146772.088	79+23.629	569883.84	3146835.066	84.561					LEFT		
69	569870.331	31° 46' 59.7555"	Transition	79+23.629	569883.84	3146835.066	79+38.629	569870.976	3146842.777	15	14.998	200	LEFT				
			Straight	79+38.629	569870.976	3146842.777	79+71.938	569792.125	3146859.425	33.309							
			Transition	79+71.938	569792.125	3146859.425	79+91.938	569775.055	3146871.22	20	19.901						
70	569764.873	59° 28' 01.6168"	Arc	79+91.938	569776.035	3146901.413	80+23.075	569770.325	3146930.413	31.137	30	RIGHT					
			Transition	80+23.075	569770.325	3146901.413	80+38.075	569773.371	3146913.608	15	14.958						
			Arc	80+38.075	569773.371	3146913.608	80+95.083	569801.121	3146965.22	57.008					LEFT		
71	569792.949	16° 19' 53.5014"	Transition	80+95.083	569801.121	3146965.22	81+10.083	569805.031	3146979.701	15	14.999	125	RIGHT				
			Straight	81+10.083	569805.031	3146979.701	81+17.326	569805.832	3146986.717	7.244							
			Transition	81+17.326	569805.832	3146986.717	81+32.326	569810.85	3147001.166	15	14.998						
72	569822.533	33° 56' 34.1045"	Arc	81+32.326	569810.85	3147001.166	82+10.378	569822.502	3147051.085	74.052	15	14.998	30	RIGHT			
			Transition	82+10.378	569822.502	3147051.0											

Resident Engineer
Jv Jindals (Assn.) Knappl

OWNER ENGINEERING :	 National Highways & Infrastructure Development Corporation Ltd. (NHIDCL)	SAFE & SOUND ENGINEERING	 ipec	EPC CONTRACTOR:	 Indials Consortium	 Bloom Consortium	 KJ Somaiya Institute of Infrastructure Development	PROOF CONSULTANT:	KJ Somaiya Institute of Infrastructure Development	PROJECT: CONSTRUCTION OF HIGH ALTITUDE TUNNEL FROM 1000 TO 4550 M. FROM ROAD TO KHALASGAH, UPPER SUBANSIRI DISTRICT OF THE STATE OF ARUNACHAL PRADESH ON EPC MODE[®]	<table border="1"> <tr> <td>REV.</td> <td>DATE</td> <td>DESCRIPTION</td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>	REV.	DATE	DESCRIPTION													DRAWN BY : DESIGNED BY : APPROVED BY :	INDR SK DK	TITLE : HORIZONTAL ALIGNMENT REPORT	DRG. NO. : AP/DR/HOR/35 REVISION : R0 JULY-2022
REV.	DATE	DESCRIPTION																												

Horizontal Alignment Report

HIP/ Curve No.	HPI		Deflection	Element	Start		End		Length	Chord Length	Bearing	Radius	Hand Of Arc
	Easting	Northing			Chainage	Easting	Northing	Chainage	Easting	Northing			
79	569800.342	3147563.211	13° 14' 18.909"	Arc	87+74.702	569800.939	3147557.439	87+86.255	559801.083	3147568.965	11.553	50	RIGHT
				Transition	87+86.255	569801.083	3147568.965	88+01.255	559802.251	3147583.905	15		
80	569802.237	3147584.552	01° 28' 59.7561"	Arc	88+01.255	569802.251	3147583.905	88+02.549	559802.251	3147585.198	1.294	50	LEFT
				Transition	88+02.549	569802.251	3147583.905	88+17.549	559799.998	3147600.02	15		
				Straight	88+17.549	569799.998	3147600.02	88+61.681	559791.323	3147643.29	44.131		
				Transition	88+61.681	569791.323	3147643.29	88+76.681	569788.62	3147658.043	15		
81	569787.355	3147666.532	06° 32' 58.6548"	Arc	88+76.681	569788.62	3147658.043	88+93.828	559787.067	3147675.11	17.147	150	RIGHT
				Transition	88+93.828	569787.067	3147658.043	89+08.828	559787.067	3147650.108	15		
				Straight	89+08.828	569787.067	3147650.108	89+98.498	559788.339	3147779.756	89.67		
				Transition	89+98.498	569788.339	3147779.756	90+13.498	569788.25	3147794.756	15		
82	569787.77	3147800.032	08° 39' 22.6524"	Arc	90+13.498	569788.25	3147794.756	90+24.073	559786.502	3147805.176	10.576	70	LEFT
				Transition	90+24.073	569786.502	3147805.176	90+39.073	569781.882	3147819.439	15		
				Straight	90+39.073	569781.882	3147819.439	90+79.487	569788.065	3147857.417	40.413		
				Transition	90+79.487	569788.065	3147857.417	90+94.487	569762.44	3147871.314	15		
83	569760.992	3147874.266	05° 22' 47.5968"	Arc	90+94.487	569762.44	3147871.314	91+01.059	569759.273	3147877.07	6.573	70	LEFT
				Transition	91+01.059	569759.273	3147877.07	91+16.059	569750.545	3147889.26	15		
				Straight	91+16.059	569750.545	3147889.26	91+47.186	569715.039	3147935.283	58.127		
				Transition	91+47.186	569715.039	3147935.283	91+89.186	569706.385	3147947.522	15		
84	569699.049	3147959.982	27° 05' 55.3031"	Arc	91+89.186	569706.385	3147947.522	92+17.564	569698.195	3147974.416	28.378	60	RIGHT
				Transition	92+17.564	569698.195	3147974.416	92+32.564	569688.557	3147989.402	15		
				Straight	92+32.564	569688.557	3147989.402	92+42.039	569699.181	3147998.856	9.475		
				Transition	92+42.039	569699.181	3147998.856	92+57.039	569699.752	3148013.84	15		
85	569699.297	3148039.85	32° 14' 35.0760"	Arc	92+57.039	569699.752	3148013.84	93+07.686	569685.036	3148061.607	50.647	90	LEFT
				Transition	93+07.686	569685.036	3148061.607	93+22.686	569676.132	3148073.672	15		
				Straight	93+22.686	569676.132	3148073.672	93+32.851	569669.871	3148081.68	10.155		
				Transition	93+32.851	569669.871	3148081.68	93+47.851	569650.438	3148093.34	15		
86	569653.829	3148100.973	07° 42' 05.4646"	Arc	93+47.851	569669.871	3148081.68	93+68.013	569646.257	3148107.652	20.153	150	LEFT
				Transition	93+68.013	569646.257	3148107.652	93+83.013	569634.685	3148117.193	15		
				Straight	93+83.013	569634.685	3148117.193	94+32.944	569595.636	3148148.31	49.931		
				Transition	94+32.944	569595.636	3148148.31	94+47.944	569584.529	3148158.357	15		
87	569580.518	3148163.018	17° 28' 48.8566"	Arc	94+47.944	569584.529	3148158.357	94+60.148	569578.093	3148168.659	12.204	40	RIGHT
				Transition	94+60.148	569578.093	3148168.659	94+75.148	569570.524	3148183.051	15		
				Transition	94+75.148	569570.524	3148183.051	94+90.148	569557.931	3148223.391	36.992		
88	569565.838	3148215.611	10° 35' 50.8292"	Arc	94+90.148	569557.931	3148223.391	95+27.140	569542.275	3148263.029	19.409	200	LEFT
				Transition	95+27.140	569542.275	3148263.029	95+42.140	569531.201	3148285.795	15		
				Straight	95+42.140	569531.201	3148285.795	95+61.549	569526.397	3148299.394	15		
89	569531.162	3148282.552	08° 08' 32.1636"	Arc	95+61.549	569526.397	3148299.394	95+91.470	569516.296	3148310.73	22.216	105	LEFT
				Transition	95+91.470	569516.296	3148310.73	96+21.470	569506.496	3148331.104	22.216		
90	569500	3148319.97	25° 27' 28.1825"	Arc	96+21.470	569506.496	3148331.104	96+43.686	569494.858	3148345.733	15	50	RIGHT
				Transition	96+43.686	569494.858	3148345.733	96+58.920	569488.631	3148359.618	15		
91	569494.822	3148345.844	00° 16' 03.5670"	Arc	96+58.920	569488.631	3148359.618	97+04.524	569474.684	3148400.034	30.604	50	LEFT
				Transition	97+04.524	569474.684	3148400.034	97+19.524	569467.628	3148400.034	15		

Resident Engineer
Bloom Jindals (Asst.) Kmppl

OWNER ENGINEERING

National Highways & Infrastructure
Development Corporation Ltd. (NHIDCL)

SAFE CONSULTANTS

CREDIBLE MANAGEMENT
& CONSULTANTS PVT. LTD.

AUTHORITY ENGINEER



BLOOM JINDALS-KMPPL (JV)

PROOF CONSULTANT

KGC Global Consultants Pvt. Ltd.
30, Kirti Nagar, New Delhi - 110028
www.kgcglobalconsultants.com

PROJECT:

CONSTRUCTION OF HIGH ALTITUDE
HILL ROAD FROM DODGIALA TO GAL
FROM KM. 0000 TO KM. 15.30 IN
UPPER SUBANSAR DISTRICT OF THE
STATE OF HIMACHAL PRADESH ON
EPC MODE.

TITLE:

HORIZONTAL ALIGNMENT
REPORT

DRAWN BY:

DESIGNED BY: SK

INDEX

APPROVED BY: DK

REVISION: R0

JULY-2022

Horizontal Alignment Report

HIP/curve No.	HPI		Deflection		Element	Start		End		Length	Bearing	Radius	Hand Of Arc
	Easting	Northing				Chainage	Easting	Chainage	Easting	Northing			
92	569461.959	3148409.923	08° 39' 06.066"		Arc	97+19.524	569467.628	3148400.094	97+42.174	22.65		150	LEFT
					Transition	97+42.174	569454.876	3148418.788	97+57.174	15	14.998		
					Straight	97+57.174	569445.128	3148430.186	97+82.316	25.142	N 41° 29' 29.2528" W		
					Transition	97+82.316	569428.471	3148449.019	97+97.316	15	14.997		
93	569415.79	3148464.43	05° 24' 54.688"		Arc	97+97.316	569418.806	3148460.485	98+07.240	9.924		105	RIGHT
					Transition	98+07.240	569413.16	3148468.642	98+22.240	15	14.997		
					Straight	98+22.240	569405.831	3148481.726	99+27.205	9.966	N 27° 53' 28.1635" W		
					Transition	99+27.205	569359.162	3148509.903	99+42.205	15	14.997		
94	569345.681	3148586.432	04° 25' 52.3872"		Arc	99+42.205	569351.833	3148582.986	99+57.205	15	14.997		
					Transition	99+57.205	569345.126	3148589.701	100+07.205	8.121		105	LEFT
					Straight	100+07.205	569337.803	3148601.332	100+22.205	15	14.997		
					Transition	100+22.205	569330.901	3148614.018	100+37.205	1.387	N 40° 30' 26.9515" W		
95	569322.612	3148620.555	08° 50' 52.9849"		Arc	99+61.513	569326.902	3148602.387	99+76.513	15	14.997		
					Transition	99+76.513	569321.435	3148614.018	99+92.728	16.215		105	RIGHT
					Straight	99+92.728	569318.853	3148627.756	100+07.728	15	14.997		
					Transition	100+07.728	569312.553	3148641.366	100+22.728	5.853	N 23° 28' 27.5657" W		
96	569308.555	3148650.373	15° 52' 52.6520"		Arc	100+22.728	569310.222	3148646.734	100+37.728	15	14.958	30	LEFT
					Transition	100+37.728	569305.901	3148653.808	100+52.728	8.315			
					Straight	100+52.728	569300.901	3148663.64	100+67.728	11.884	N 53° 40' 46.4192" W		
					Transition	100+67.728	569294.628	3148678.779	100+82.728	15	14.977		
97	569265.705	3148680.095	08° 43' 06.2147"		Arc	100+82.728	569285.053	3148683.502	100+97.728	15	14.977	40	LEFT
					Transition	100+97.728	569277.456	3148692.212	101+12.728	6.087			
					Straight	101+12.728	569272.456	3148707.74	101+27.728	15	14.977		
					Transition	101+27.728	569266.787	3148722.025	101+42.728	15	14.977		
					Straight	101+42.728	569261.787	3148737.302	101+57.728	8.935	N 83° 53' 01.9360" W		
98	569151.684	3148696.035	12° 47' 56.8441"		Arc	101+57.728	569252.025	3148752.025	101+72.728	15	14.977	40	RIGHT
					Transition	101+72.728	569247.785	3148767.779	101+87.728	18.8			
					Straight	101+87.728	569242.785	3148782.331	102+02.728	15	14.997		
					Transition	102+02.728	569237.785	3148797.331	102+17.728	15	14.997		
99	569108.595	3148729.77	01° 40' 25.8466"		Arc	102+17.728	569232.785	3148808.98	102+32.728	15	14.997	105	LEFT
					Transition	102+32.728	569227.785	3148823.502	102+47.728	15	14.997		
					Straight	102+47.728	569222.785	3148838.502	102+62.728	15	14.997		
					Transition	102+62.728	569217.785	3148853.502	102+77.728	24.026	N 59° 27' 28.0369" W		
100	569055.137	3148758.746	06° 10' 47.0387"		Arc	102+77.728	569212.785	3148868.502	102+92.728	15	14.985	50	LEFT
					Transition	102+92.728	569207.785	3148883.502	103+07.728	5.393			
					Straight	103+07.728	569202.785	3148898.502	103+22.728	15	14.985		
					Transition	103+22.728	569197.785	3149003.502	103+37.728	19.604	N 82° 49' 34.5170" W		
101	568997.593	3148770.333	12° 57' 36.6966"		Arc	103+37.728	569192.785	3149018.502	103+52.728	20	19.944	40	RIGHT
					Transition	103+52.728	569187.785	3149033.502	103+67.728	19.944			
					Straight	103+67.728	569182.785	3149048.502	103+82.728	20	19.944		
102	568925.488	3148843.855	04° 30' 42.4727"		Arc	103+82.728	569177.785	3149063.502	103+97.728	15	14.997	200	LEFT
					Transition	103+97.728	569172.785	3149078.502	104+02.728	15	14.997		
					Straight	104+02.728	569167.785	3149093.502	104+17.728	15	14.997		
103	568916.846	3148856.179	06° 22' 25.0995"		Arc	104+17.728	569162.785	3149108.502	104+32.728	15	14.985	50	RIGHT
					Transition	104+32.728	569157.785	3149123.502	104+47.728	15	14.985		
					Straight	104+47.728	569152.785	3149138.502	104+62.728	15	14.985		
104	568904.421	3148896.585	05° 12' 46.7453"		Arc	104+62.728	569147.785	3149153.502	104+77.728	15	14.985	70	LEFT
					Transition	104+77.728	569142.785	3149168.502	104+92.728	15	14.992		
					Straight	104+92.728	569137.785	3149183.502	105+07.728	6.369			
					Transition	105+07.728	569132.785	3149198.502	105+22.728	15	14.992		
					Straight	105+22.728	569127.785	3149213.502	105+37.728	1.539	N 48° 15' 09.4160" W		



Resident Engineer
Bloom JV (Joint Assn.) Knapel

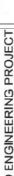
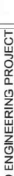
OWNER ENGINEERING 	SAVED CONSULTANTS 	AUTHORITY ENGINEER 	EPC CONTRACTOR 	INDO ENGINEERING PROJECT CORPORATION	CREDIBLE MANAGEMENT & CONSULTANTS PVT. LTD.	PROOF CONSULTANT 	PROJECT: CONSTRUCTION OF HIGH ALTITUDE HILL ROAD FROM DODGIALA TO GALI UPPER SUBANSI DISTRICT OF THE STATE OF ARUNACHAL PRADESH ON EPC MODE	DRAWN BY:	INDEX:	TITLE:
								DESIGNED BY:	SK	HORIZONTAL ALIGNMENT REPORT
								APPROVED BY:	DK	DRG. NO. : AP/DR/HOR/07
								SCALE:		REVISION : R-0 JULY-2022

Horizontal Alignment Report

HIP/curve No.	HIP		Deflection	Element	Start		End		Length	Chord Length	Bearing	Radius	Hand Of Arc
	Eastings	Northings			Chainage	Eastings	Northings	Chainage					
105	568651.62	3148922.336	05° 41' 14.1365"	Arc	105+62.093	568654.82	3148919.979	105+70.034	7.941	14.985		80	LEFT
				Transition	105+70.034	568658.203	3148924.364	105+85.034	15				
106	568843.65	3148934.335	06° 06' 32.8487"	Arc	105+85.034	568845.715	3148932.646	105+90.365	5.331			50	RIGHT
				Transition	105+90.365	568841.776	3148936.235	106+05.365	15				
				Straight	106+05.365	568832.37	3148947.901	106+22.380	17.015		N 36° 00' 48.5876" W		
				Transition	106+22.380	568822.366	3148961.664	106+37.380	15				
107	568809.234	3148978.521	06° 04' 55.5774"	Arc	106+37.380	568813.297	3148973.609	106+50.119	12.738			120	LEFT
				Transition	106+50.119	568804.673	3148982.976	106+65.119	15				
				Straight	106+65.119	568793.517	3148992.998	107+25.695	60.576		N 49° 15' 27.2658" W		
				Transition	107+25.695	568747.621	3149002.093	107+40.695	15				
108	568730.981	3149045.966	05° 51' 12.6497"	Arc	107+40.695	568736.065	3149042.093	107+53.465	12.77			125	LEFT
				Transition	107+53.465	568725.529	3149049.301	107+68.465	15				
				Straight	107+68.465	568712.432	3149056.608	108+07.858	39.393		N 61° 59' 11.6622" W		
				Transition	108+07.858	568677.555	3149075.11	108+22.858	15				
109	568654.863	3149088.224	09° 13' 50.3314"	Arc	108+22.858	568664.542	3149082.39	108+45.413	22.555			140	RIGHT
				Transition	108+45.413	568646.245	3149095.536	108+60.413	15				
				Straight	108+60.413	568635.162	3149105.642	108+71.781	11.368		N 46° 37' 01.5601" W		
				Transition	108+71.781	568626.9	3149113.45	108+96.781	25				
110	568611.818	3149139.35	32° 23' 17.9730"	Arc	108+96.781	568612.307	3149133.644	109+08.086	11.306			20	RIGHT
				Transition	109+08.086	568613.954	3149144.751	109+28.086	20				
				Straight	109+28.086	568600.542	3149159.746	109+48.086	19.901				
111	568648.039	3149186.338	50° 59' 16.9487"	Arc	109+48.086	568640.544	3149174.093	109+74.784	26.697			30	LEFT
				Transition	109+74.784	568643.18	3149189.793	109+89.784	15				
				Straight	109+89.784	568635.335	3149212.824	110+04.784	15				
112	568559.127	3149271.25	33° 24' 06.4587"	Arc	110+04.784	568627.581	3149225.348	110+24.719	14.999		N 03° 59' 41.4278" E		
				Transition	110+24.719	568601.479	3149340.209	111+46.567	15				
				Straight	111+46.567	568604.395	3149381.956	111+81.567	14.997				
113	568625.07	3149404.795	08° 33' 36.5562"	Arc	111+81.567	568605.083	3149396.937	111+97.254	15.687			105	LEFT
				Transition	111+97.254	568603.887	3149412.254	112+12.254	15				
				Straight	112+12.254	568600.926	3149427.255	112+27.254	15				
114	568555.119	3149458.974	15° 42' 36.6807"	Arc	112+27.254	568597.909	3149441.956	112+41.528	14.998			125	RIGHT
				Transition	112+41.528	568597.04	3149476.112	112+56.528	15				
				Straight	112+56.528	568593.306	3149490.938	112+71.528	14.998				
115	568603.405	3149522.113	14° 59' 44.6419"	Arc	112+71.528	568600.572	3149505.753	113+24.244	15			125	LEFT
				Transition	113+24.244	568600.945	3149538.38	113+39.244	15				
				Straight	113+39.244	568598.112	3149553.107	113+49.510	15				
116	568560.719	3149646.424	31° 11' 29.9850"	Arc	113+49.510	568587.547	3149602.66	113+64.541	50.666		N 12° 02' 09.4905" W		
				Transition	113+64.541	568584.769	3149617.397	113+79.510	15				
				Straight	113+79.510	568582.856	3149673.352	113+94.510	15				
117	568659.01	3149803.176	32° 20' 49.1257"	Arc	113+94.510	568592.288	3149686.834	114+04.510	57.162			105	RIGHT
				Transition	114+04.510	568592.856	3149696.834	114+19.510	15				
				Straight	114+19.510	568592.856	3149706.532	114+34.510	15				
118	568642.417	3149992.592	05° 05' 57.1608"	Arc	114+34.510	568592.856	3149716.532	114+49.510	87.469		N 27° 20' 28.8954" E		
				Transition	114+49.510	568592.856	3149726.532	114+64.510	15				
119	568642.446	3150010.34	01° 33' 55.6650"	Arc	114+64.510	568592.856	3149736.532	114+79.510	15			150	LEFT
				Transition	114+79.510	568592.856	3149746.532	114+94.510	15				
				Straight	114+94.510	568592.856	3149756.532	115+04.510	15				
				Transition	115+04.510	568592.856	3149766.532	115+19.510	15				
				Straight	115+19.510	568592.856	3149776.532	115+34.510	15				
				Transition	115+34.510	568592.856	3149786.532	115+49.510	15				
				Straight	115+49.510	568592.856	3149796.532	115+64.510	15				
				Transition	115+64.510	568592.856	3149806.532	115+79.510	15				
				Straight	115+79.510	568592.856	3149816.532	115+94.510	15				
				Transition	115+94.510	568592.856	3149826.532	116+04.510	15				
				Straight	116+04.510	568592.856	3149836.532	116+19.510	15				
				Transition	116+19.510	568592.856	3149846.532	116+34.510	15				
				Straight	116+34.510	568592.856	3149856.532	116+49.510	15				
				Transition	116+49.510	568592.856	3149866.532	116+64.510	15				
				Straight	116+64.510	568592.856	3149876.532	116+79.510	15				
				Transition	116+79.510	568592.856	3149886.532	116+94.510	15				
				Straight	116+94.510	568592.856	3149896.532	117+04.510	15				
				Transition	117+04.510	568592.856	3149906.532	117+19.510	15				
				Straight	117+19.510	568592.856	3149916.532	117+34.510	15				
				Transition	117+34.510	568592.856	3149926.532	117+49.510	15				
				Straight	117+49.510	568592.856	3149936.532	117+64.510	15				
				Transition	117+64.510	568592.856	3149946.532	117+79.510	15				
				Straight	117+79.510	568592.856	3149956.532	117+94.510	15				
				Transition	117+94.510	568592.856	3149966.532	118+04.510	15				
				Straight	118+04.510	568592.856	3149976.532	118+19.510	15				
				Transition	118+19.510	568592.856	3149986.532	118+34.510	15				
				Straight	118+34.510	568592.856	3149996.532	118+49.510	15				
				Transition	118+49.510	568592.856	3150006.532	118+64.510	15				
				Straight	118+64.510	568592.856	3150016.532	118+79.510	15				
				Transition	118+79.510	568592.856	3150026.532	118+94.510	15				
				Straight	118+94.510	568592.856	3150036.532	119+04.510	15				
				Transition	119+04.510	568592.856	3150046.532	119+19.510	15				
				Straight	119+19.510	568592.856	3150056.532	119+34.510	15				
				Transition	119+34.510	568592.856	3150066.532	119+49.510	15				
				Straight	119+49.510	568592.856	3150076.532	119+64.510	15				
				Transition	119+64.510	568592.856	3150086.532	119+79.510	15				
				Straight	119+79.510	568592.856	3150096.532	119+94.510	15				
				Transition	119+94.510	568592.856	3150106.532	120+04.510	15				
				Straight	120+04.510	568592.856	3150116.532	120+19.510	15				
				Transition	120+19.510	568592.856	3150126.532	120+34.510	15				
				Straight	120+34.510	568592.856	3150136.532	120+49.510	15				
				Transition	120+49.510	568592.856	3150146.532	120+64.510	15				
				Straight	120+64.510	568592.856	3150156.532	120+79.510	15				
				Transition	120+79.510	568592.856	3150166.532	120+94.510	15				
				Straight	120+94.510	568592.856	3150176.532	121+04.510	15				
				Transition	121+04.510	568592.856	3150186.532	121+19.510	15				
				Straight	121+19.510	568592.856	3150196.532	121+34.510	15				
				Transition	121+34.510	568592.856	3150206.532	121+49.510	15				
				Straight	121+49.510	568592.856	3150216.532	121+64.510	15				
				Transition	121+64.510	568592.856	3150226.532	121+79.510	15				
				Straight	121+79.510	568592.856	3150236.532	121+94.510	15				
				Transition	121+94.510	568592.856	3150246.532	122+04.510	15				
				Straight	122+04.510	568592.856	3150256.532	122+19.510	15				
				Transition	122+19.510	568592.856	3150266.532	122+34.510	15				
				Straight	122+34.510	568592.856							

Horizontal Alignment Report															
HIP/ Curve No.	HIP		Deflection	Element	Start		End		Length	Chord Length	Bearing	Radius	Hand Of Arc		
	Easting	Northing			Chaining	Easting	Northing	Chaining						Easting	Northing
120	568667.661	3150128.004	151° 42' 17.7951"	Arc	Chaining	Easting	Northing	Chaining	Easting	Northing	58.251	14.923	S 07° 53' 20.0704" W	22	RIGHT
					118+47.759	568642.651	3150044.385	119+06.010	568685.276	3150042.521					
					119+06.010	568685.276	3150042.521	119+21.010	568684.915	3150027.602					
					119+21.010	568684.915	3150027.602	119+38.511	568682.761	3150010.236					
121	568661.463	3149999.574	11° 17' 02.6488"	Arc	Chaining	Easting	Northing	Chaining	Easting	Northing	29.542	14.998	S 09° 07' 25.0589" E	150	LEFT
					119+23.511	568684.572	3150025.125	119+38.511	568682.761	3150010.236					
					119+38.511	568684.572	3150010.236	119+68.053	568683.079	3149980.744					
					119+68.053	568683.079	3149980.744	120+83.312	568701.11	3149866.907					
122	568706.171	3149816.651	27° 27' 10.4155"	Arc	Chaining	Easting	Northing	Chaining	Easting	Northing	100.259	19.994		125	RIGHT
					120+83.312	568701.11	3149866.907	121+03.312	568703.753	3149847.088					
					121+03.312	568703.753	3149847.088	121+63.205	568694.284	3149788.528					
					121+63.205	568694.284	3149788.528	121+83.205	568685.529	3149770.552					
123	568666.558	3149770.552	23° 42' 45.8125"	Arc	Chaining	Easting	Northing	Chaining	Easting	Northing	20	19.994		125	LEFT
					122+03.205	568676.774	3149752.576	122+54.938	568666.925	3149702.165					
					122+54.938	568666.925	3149702.165	122+74.938	568668.27	3149582.216					
					122+74.938	568668.27	3149582.216	122+94.938	568669.513	3149562.262					
124	568669.497	3149649.332	14° 02' 28.7057"	Arc	Chaining	Easting	Northing	Chaining	Easting	Northing	25.732	19.992		105	RIGHT
					123+0.670	568666.344	3149636.791	123+40.670	568660.248	3149517.751					
					123+40.670	568660.248	3149517.751	123+55.670	568655.461	3149503.537					
					123+55.670	568655.461	3149503.537	124+45.688	568656.214	3149514.868					
125	568642.12	3149559.086	34° 23' 03.0623"	Arc	Chaining	Easting	Northing	Chaining	Easting	Northing	90.018	19.996	S 21° 29' 54.5055" E	150	LEFT
					124+45.688	568656.214	3149514.868	124+65.688	568663.127	3149496.105					
					124+65.688	568656.214	3149496.105	125+13.283	568680.569	3149451.82					
					125+13.283	568680.569	3149451.82	125+33.283	568687.302	3149432.996					
126	568688.459	3149428.972	04° 34' 04.3038"	Arc	Chaining	Easting	Northing	Chaining	Easting	Northing	8.371	19.992		105	RIGHT
					125+33.283	568687.302	3149432.996	125+41.654	568689.292	3149424.867					
					125+41.654	568689.292	3149424.867	125+61.654	568692.018	3149405.062					
					125+61.654	568692.018	3149405.062	126+78.352	568704.251	3149289.007					
127	568749.192	3149206.106	147° 23' 11.0206"	Arc	Chaining	Easting	Northing	Chaining	Easting	Northing	116.658	19.817	S 06° 01' 01.6672" E	22	LEFT
					126+78.352	568704.251	3149289.007	126+98.352	568709.274	3149269.837					
					126+98.352	568709.274	3149269.837	127+54.945	568749.917	3149281.303					
					127+54.945	568749.917	3149281.303	127+69.945	568746.654	3149295.873					
128	568734.533	3149336.165	20° 28' 40.0884"	Arc	Chaining	Easting	Northing								

Resident Engineer
Mississippi Indians (Assn.) Knappl

OWNER ENGINEERING :	SAFETY CONSULTANT :	EPC CONTRACTOR :	AUTHORITY ENGINEER :	PROJECT :
 National Highways & Infrastructure Development Corporation Ltd. (NHIDCL)	 INDO ENGINEERING PROJECT CORPORATION	 BLOOM-JINDAL-KMPPIL (JV)	 KOP GLOBAL CONSTRUCTION PVT. LTD. 2nd Floor, Sector-14, Phase-I New Park Road, Gurgaon Haryana - 122001 India www.kopglobalconstruction.com	CONSTRUCTION OF HIGH ALTITUDE TUNNELS IN THE NORTH EAST UPPER SUBANSARI DISTRICT OF THE STATE OF ARUNACHAL PRADESH ON EPC MODE
DRAWN BY :	DESIGNED BY :	APPROVED BY :	SCALE :	TITLE :
				HORIZONTAL ALIGNMENT REPORT
REV	DATE	DESCRIPTION	REVISION : R=0	JULY-2022

Horizontal Alignment Report

HIP/ Curve No.	H/P		Deflection		Element	Start		End		Length	Chord Length	Bearing	Radius	Hand Of Arc
	Easting	Northing				Chaining	Easting	Chaining	Easting	Northing				
133	568803.125	3149791.237	47° 52' 26.3774"		Arc	132+80.001	568788.571	133+30.135	568796.343	3149816.993	50.134		60	LEFT
					Transition	133+30.135	568796.343	133+45.135	568796.343	3149831.121	15	14.99		
					Transition	133+45.135	568796.343	133+60.135	568796.343	3149845.127	15	14.98		
134	568782.177	3149856.107	08° 51' 24.2955"		Arc	133+60.135	568785.968	133+85.127	568780.121	3149867.541	23.187		150	RIGHT
					Transition	133+85.127	568785.968	133+98.322	568777.961	3149882.383	15	14.98		
					Straight	133+98.322	568777.961	134+54.727	568770.767	3149898.327	56.405	N 07° 19' 38.1477" W		
135	568768.169	3149958.532	07° 38' 32.7152"		Arc	134+54.727	568770.767	134+95.409	568768.281	3149978.903	40.683		305	RIGHT
					Straight	134+95.409	568768.281	135+32.789	568768.487	3150016.283	37.38			
					Transition	135+32.789	568768.487	135+47.789	568770.424	3150031.063	15	14.906		
136	568794.09	3150090.228	145° 09' 00.4134"		Arc	135+47.789	568770.424	135+03.063	568808.477	3150078.151	50.667		20	RIGHT
					Transition	135+03.063	568808.477	135+02.151	568808.143	3150013.248	15	14.906		
					Transition	135+02.151	568808.143	135+13.456	568806.128	3149998.385	15	14.999		
137	568803.289	3149972.623	14° 46' 02.4018"		Arc	136+13.456	568806.128	136+28.456	568807.111	3149946.989	51.548		200	LEFT
					Transition	136+28.456	568806.128	136+95.004	568809.593	3149932.214	15	14.999		
					Straight	136+95.004	568809.593	137+49.727	568819.785	3149878.479	54.723			
138	568824.77	3149851.863	10° 07' 43.8063"		Arc	137+49.727	568819.785	138+03.546	568834.349	3149826.588	53.918		305	LEFT
					Straight	138+03.546	568834.349	138+41.089	568847.518	3149791.575	37.443			
					Transition	138+41.089	568847.518	138+56.089	568852.222	3149777.314	15	14.985		
139	568855.194	3149763.522	31° 30' 54.3780"		Arc	138+56.089	568852.222	139+03.591	568852.222	3149750.211	27.502		50	RIGHT
					Transition	139+03.591	568852.222	139+51.729	568850.519	3149732.422	20	19.964		
					Transition	139+51.729	568850.519	139+71.729	568864.143	3149714.414	20	19.928		
140	568829.211	3149700.005	46° 03' 45.2967"		Arc	139+71.729	568864.143	139+67.652	568867.223	3149619.296	40.673		35	LEFT
					Transition	139+67.652	568867.223	140+32.403	568859.34	3149606.561	15	14.977		
141	568876.5	3149639.565	58° 15' 36.8744"		Arc	140+32.403	568859.34	140+41.411	568851.238	3149595.134	14.008		40	RIGHT
					Straight	140+41.411	568859.34	140+61.411	568842.361	3149583.045	15	14.998		
142	568837.166	3149576.444	06° 24' 37.7739"		Arc	140+61.411	568842.361	140+76.411	568831.267	3149570.464	16.783		150	RIGHT
					Transition	140+76.411	568831.267	140+93.194	568816.505	3149555.867	20	19.996		
					Transition	140+93.194	568816.505	141+13.194	568803.27	3149542.094	20	19.901		
143	568648.554	3149266.764	169° 08' 50.9708"		Arc	141+13.194	568803.27	141+33.194	568852.342	3149508.039	88.565		30	LEFT
					Transition	141+33.194	568803.27	142+21.759	568851.515	3149525.701	20	19.901		
					Transition	142+21.759	568851.515	142+41.759	568869.296	3149544.116	20	19.992		
144	568871.787	3149549.101	06° 04' 31.3453"		Arc	142+41.759	568869.296	142+61.759	568874.79	3149553.794	11.134		105	RIGHT
					Transition	142+61.759	568874.79	142+87.893	568883.466	3149565.026	15	14.997		
					Straight	142+87.893	568883.466	143+43.816	568916.896	3149610.857	55.923			
145	568940.17	3149649.381	53° 12' 42.7794"		Transition	143+43.816	568916.896	143+58.816	568925.348	3149623.237	15	14.99		
					Transition	143+58.816	568925.348	144+14.539	568928.108	3149675.908	55.723		60	LEFT
					Transition	144+14.539	568928.108	144+29.539	568930.97	3149690.089	15	14.99		
146	568910.926	3149710.709	18° 07' 47.3805"		Arc	144+29.539	568930.97	144+44.539	568935.356	3149718.666	15.821		50	RIGHT
					Transition	144+44.539	568935.356	144+60.361	568910.356	3149733.645	15	14.985		
					Transition	144+60.361	568910.356	144+75.361	568911.209	3149748.624	15	14.985		
147	568910.736	3149755.215	15° 03' 28.5077"		Arc	144+75.361	568911.209	145+03.501	568908.567	3149761.458	13.141		50	LEFT
					Transition	145+03.501	568908.567	145+18.501	568902.261	3149775.051	15	14.985		
					Transition	145+18.501	568902.261	145+33.501	568895.499	3149788.439	15	14.998		



Resident Engineer
Bloom JV Jindal (Assn.) Kmipl

OWNER ENGINEERING : National Highways & Infrastructure Development Corporation Ltd. (NHIDCL)	SAFETY CONSULTANTS : CHETAN MANAGEMENT & CONSULTANTS PVT. LTD.	EPC CONTRACTOR : INDIA ASSOCIATION OF PROJECT CONTRACTORS	AUTHORITY ENGINEER : Jindal Consortium BLOOM JINDAL KMIPL (JV)	PROOF CONSULTANT : KOC GLOBAL CONSULTANTS PVT. LTD.	PROJECT : CONSTRUCTION OF HIGH ALTITUDE HILL ROAD FROM DOGMA TO GAU FROM KM- 0000 TO KM- 15.32 IN UPPER SUBANIG DISTRICT OF THE UPPER SUBANIG PROJECT ON EPC MODE	TITLE : HORIZONTAL ALIGNMENT REPORT	DRAWN BY : SK	INDEX : SK
						DESIGNED BY : DK	APPROVED BY : DK	DRG. NO. : AP/DH/HOR/10
						REV. DATE DESCRIPTION	SCALE : 1:1000	REVISION : R-0
						JULY-2022		

Horizontal Alignment Report

HIP/curve No.	HIP		Deflection	Element	Start		End		Length	Chord Length	Bearing	Radius	Hand Of Arc
	Easting	Northing			Chainage	Easting	Northing	Chainage					
148	568884.778	3149811.549	19° 16' 43.7659"	Arc	145+33.501	568895.499	3149788.439	145+83.973	50.472			150	RIGHT
				Transition	145+83.973	568882.288	3149836.904	145+98.973	15	14.998			
				Straight	145+98.973	568881.32	3149851.871	147+32.203	568874.942		N 02° 44' 38.4844" W		
149	568874.399	3149956.271	04° 15' 25.3014"	Arc	147+32.203	568874.942	3149984.948	147+54.864	22.661			305	LEFT
				Straight	147+54.864	568873.017	3150007.522	148+15.887	568865.579		N 07° 00' 03.7858" W		
				Transition	148+15.887	568865.579	3150068.09	148+30.887	61.023	14.994			
150	568858.481	3150104.822	31° 19' 50.0171"	Arc	148+30.887	568863.288	3150082.908	148+74.633	43.746			80	LEFT
				Transition	148+74.633	568842.98	3150121.041	148+89.633	15	14.994			
				Transition	148+89.633	568831.963	3150131.212	149+04.633	15	14.998			
151	568813.84	3150148.098	08° 56' 43.4591"	Arc	149+04.633	568820.831	3150141.261	149+24.148	19.516			125	RIGHT
				Transition	149+24.148	568807.998	3150155.939	149+39.148	15	14.998			
				Straight	149+39.148	568799.525	3150168.313	149+50.026	10.878		N 33° 15' 13.2182" W		



Resident Engineer
Bloom Jindals (Asian) Kmipl

Resident Engineer
Bloom Jindals (Asian) Kmipl

OWNER ENGINEERING: 	SAFETY CONSULTANT: 	EPC CONTRACTOR: 	AUTHORITY ENGINEER: 	PROOF CONSULTANT: 	PROJECT: CONSTRUCTION OF HIGH ALTITUDE HILL ROAD FROM DONGALA TO GAU FROM KM. 0000 TO 4M- 15.320 IN UPPER SUBANSARI DISTRICT OF THE STATE OF ARUNACHAL PRADESH ON EPC MODE	REV.	DATE	DESCRIPTION	SCALE	APPROVED BY:	DESIGNED BY:	DRAWN BY:	INDEX	TITLE:
						DK	DK	DK	SK	SK	SK	SK	SK	SK
DRG. NO.: AP/DIR/HOR/11 REVISION: R0 JULY-2022														

Vertical Alignment Report

VIP No.	VIP CHAINAGE (m)	VIP LEVEL (m)	IN-GRADE (%)	OUT-GRADE (%)	GRADE DIFFERENCE (%)	CURVE TYPE	LENGTH OF CURVE (m)	CURVE START		K-VALUE	CURVE END	
								CHAINAGE (m)	LEVEL (m)		CHAINAGE (m)	LEVEL (m)
1	1287.576	811.190	-4.101	-4.101	-4.101	Hog	200.000	1187.576	805.190	19.800	1387.576	807.089
2	1742.901	792.533	-4.101	3.000	10.101	Sag	161.622	1662.090	795.847	16.001	1823.712	797.382
3	2369.237	830.113	6.000	-0.030	-6.030	Hog	150.000	2294.337	825.613	24.876	2444.237	830.091
4	2649.468	830.029	-0.030	3.060	6.089	Sag	150.000	2574.468	833.052	24.632	2724.468	834.574
5	4462.352	930.881	6.060	1.559	-4.502	Hog	335.677	4794.514	922.711	74.565	4600.191	942.496
6	4932.130	947.109	1.558	3.085	4.527	Sag	220.595	4821.832	945.481	48.723	5042.427	953.911
7	5197.877	963.370	6.085	3.084	0.899	Sag	25.594	5185.860	962.592	28.476	5210.674	964.264
8	6237.699	1035.978	6.984	3.000	1.016	Sag	250.000	612.699	1027.248	346.863	6362.499	1045.978
9	6626.204	1067.074	8.000	7.000	-1.000	Hog	350.000	6451.004	1053.074	350.000	6801.204	1075.374
10	8895.172	1225.902	7.000	3.000	1.000	Sag	300.000	8745.172	1215.402	300.000	9045.172	1237.902
11	9384.717	1265.065	8.000	4.339	-3.651	Hog	500.000	9134.717	1245.065	336.566	9634.717	1275.912
12	11814.119	1370.472	4.339	7.000	2.661	Sag	300.000	11664.119	1363.963	112.729	11964.119	1380.972
13	13582.265	1494.242	7.000	5.007	-0.933	Hog	200.000	13482.265	1487.242	201.406	13682.265	1500.249
14	14292.795	1536.924	6.007	4.892	-1.115	Hog	150.483	14217.554	1532.464	35.200	14368.037	1540.605
15	14586.440	1550.996	4.892	1.825	-3.057	Hog	200.000	14480.440	1546.164	55.200	14680.440	1552.811
16	14956.026	1557.740	1.825									



Resident Engineer
Bloom J. Jindals (Asst.) Kmppl

Resident Engineer
Bloom J. Jindals (Asst.) Kmppl

OWNER ENGINEERING : National Highways & Infrastructure Development Corporation Ltd (NHIDCL)	SAP CONSULTANT & CONTRACTOR : Jindal Engineering Project Management & Construction Pvt. Ltd.	EPC CONTRACTOR : JPC CORPORATION	AUTHORITY ENGINEER : BLOOM-JINDAL-KMPPL (JV)	PROOF CONSULTANT : Jindal Consortium Pvt. Ltd.	PROJECT : CONSTRUCTION OF HIGH ALTITUDE HILL ROAD FROM DOGINALA TO GAU FROM KM+ 0.000 TO KM+ 16.320 IN UPPER SUBANSARI DISTRICT OF THE STATE OF ARUNACHAL PRADESH IN EPC MODE	REV. DATE DESCRIPTION	DRAWN BY : INDER DESIGNED BY : SK APPROVED BY : DK SCALE :	TITLE : VERTICAL ALIGNMENT REPORT ORG. NO. : APD/VER/01 REVISION : R-0 JULY-2022
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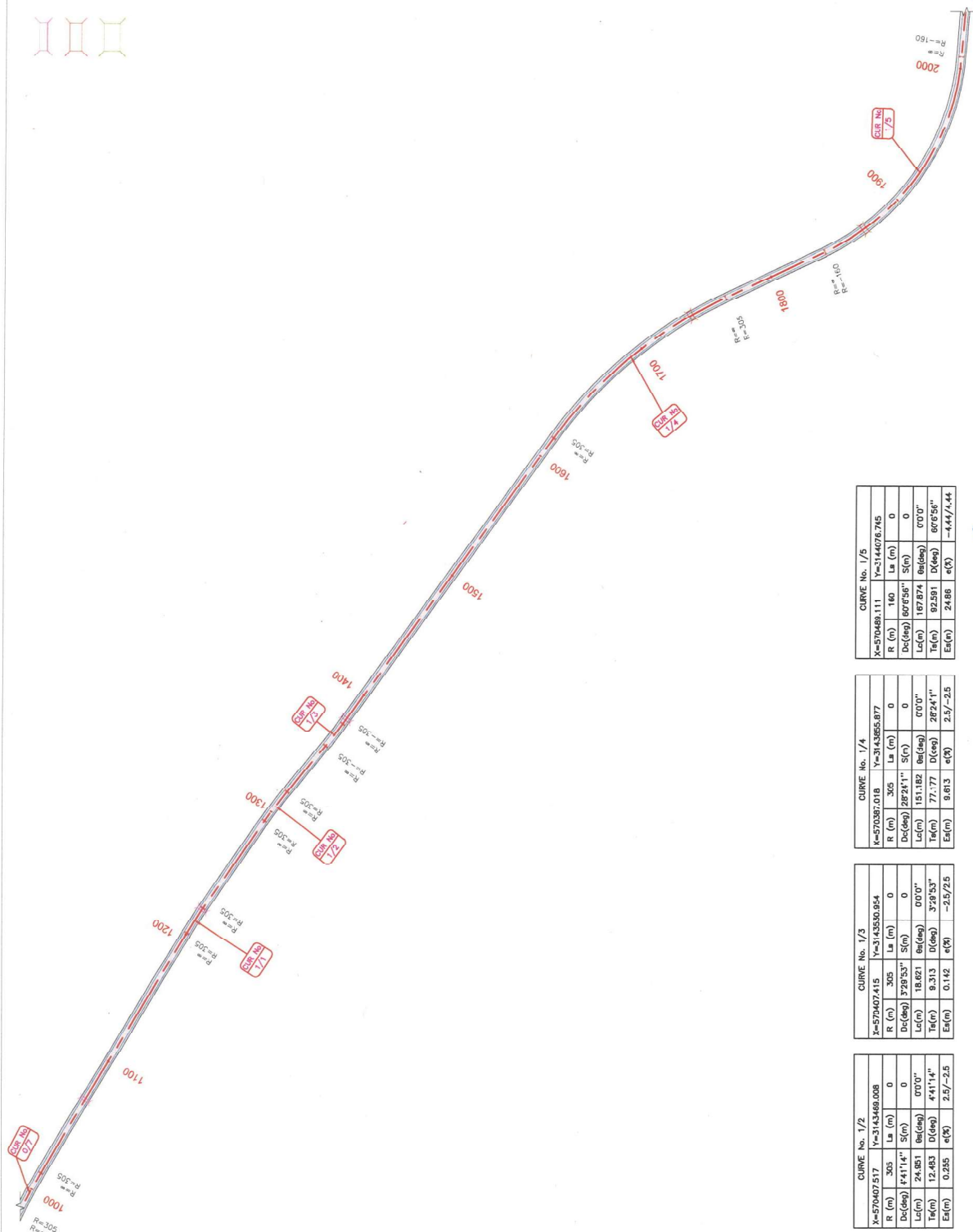
BOX CULVERT 4m x 4m



CURVE No. 0/7	
Y=57046.839	Y=3143163.843
R (m)	305
Ls (m)	0
Dc(deg)	5°48'24"
Lc(m)	30.911
Ta(m)	15.469
θ(deg)	0°0'0"
D(deg)	5°48'24"

			DRAWN BY
			DESIGNED
			APPROVED

TITLE :	
PLAN CH. (000+000 TO CH. 031+000)	
Dwg. NO.: APIPLAN/001	
REVISION : R-0	JULY-2022



CURVE NO. 1/5		
X=570489.111		Y=3144076.745
R (m)	180	Ls (m) 0
Dc(deg)	60°6'56"	S(m) 0
Lc(m)	167.874	Os(deg) 0°0'0"
Ta(m)	92.591	Ds(deg) 60°6'56"
Es(m)	24.86	e(%) -4.44/1.44

CURVE NO. 1/4			
K=570.387, 0.18		Y=314.3855, 8.77	
R (m)	305	Ls (m)	0
Dc(deg)	28°24'1"	S(n)	0
Lc(m)	151.182	Ba(deg)	0°0'0"
Ta(m)	77.177	D(deg)	28°24'1"
Ea(m)	9.613	e(%)	2.5/-2.5

CURVE No. 1/3			
X=570407.415		Y=3143530.954	
R (m)	305	Ls (m)	0
Dc(deg)	3°29'53"	S(m)	0
Lc(m)	18.621	Rs(deg)	0°0'0"
Ts(m)	9.313	D(deg)	3°29'53"
Ea(m)	0.142	e(%)	-2.5/2.5

CURVE No. 1/2			
X=570407.517		Y=3143469.008	
R (m)	305	Ls (m)	0
Dc(deg)	4°41'14"	S(m)	0
Lc(m)	24.951	Bs(deg)	0°0'0"
Ts(m)	12.483	D(deg)	4°41'14"
Es(m)	0.255	e(%)	2.5/-2.5

CURVE No. 1/1		
X=570415.328		Y=3143375.61
R (m)	305	Ls (m)
Dc(deg)	3°40'54"	S(m)
Lc(m)	19.599	Θs(deg)
lθ(m)	9.803	U(deg)
Es(m)	0.157	e(%)
		-2.5/2.5

PROJECT:
CONSTRUCTION OF HIGH ALTITUDE
HILL ROAD FROM DGINALA TO GAU
FROM KM- 0.000 TO KM- 15.320 N
UPPER SUBANSRI DISTRICT OF THE
STATE OF ARUNACHAL PRADESH CN
EPC MODE*

PROOF CONSULTING
KOC SUBSIDIARY CONSULTANTS PVT. LTD.
30 Maulana, Sector 15, Dwarka
New Delhi 110075
www.kocglobalconsultants.com

AUTHORITY ENGINEER:

 **Jindal Consortium**

 **BLOOM CONSULTING LLC**

 **K Singh Vasthu Bhawan**
B-20/21, 1st Flr, DDA Flt. 2, Connaught Place, New Delhi-110028

BLOOM-JINDAL-KMIPPL (JV)

EPC CONTRACTOR:

 iapc

INDO ENGINEERING PROJECT

OWNER ENGINEERING:

National Highways & Infrastructure

Widcel
WIDENING & DEEPENING

Technical Corporation

TITLE :	PLAN CH. 001+000 TO CH. 002+000)
DRG. NO. :	AP/PLAN/002
REVISION : R-0	JULY-2022

					DRAWN BY:	INDER
					DESIGNED BY :	SK
					APPROVED BY :	DK
REV.	DATE	DESCRIPTION	SCALE :			

PROJECT:
CONSTRUCTION OF HIGH ALTITUDE
HILL ROAD FROM DGINALA TO GAU
FROM KM- 0.00 TO KM- 15.320 N
UPPER SUBANSRI DISTRICT OF THE
STATE OF ARUNACHAL PRADESH CN
EPC MODE*

PROOF CONSULTANT

AUTHORITY ENGINEER

 **Jindal Consortium**

 **BLOOM COMPANY LLC**

 **K Singh Associates**
123456789101112

BLOOM-JINDAL-K/IIPL (JV)

EPC CONTRACTOR:

 ipec

INDO ENGINEERING PROJECT
CORPORATION

OWNER & ENGINEERING
National Highways & Infrastructure
Development Corporation Ltd. (NHIDCL)

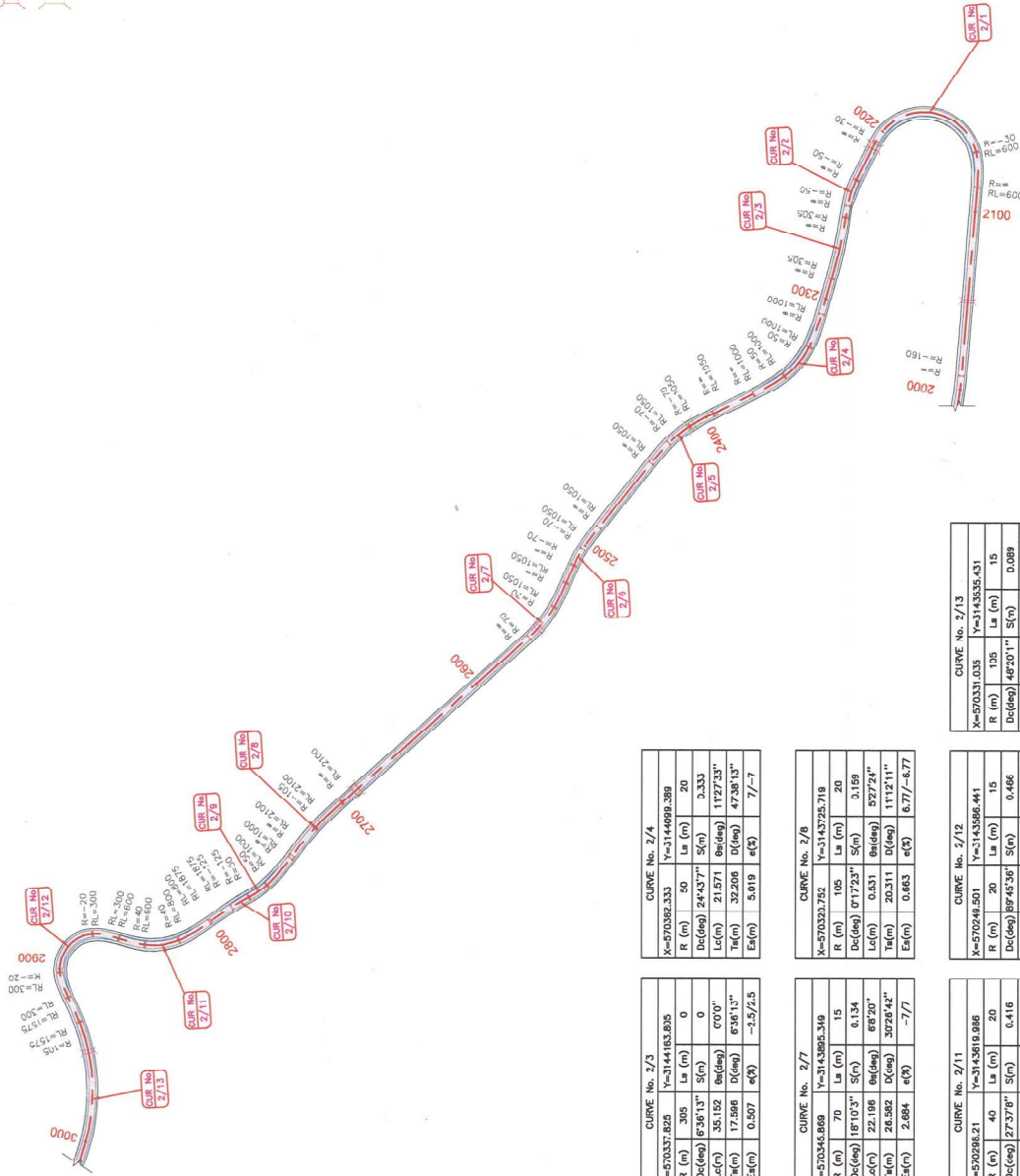


Resident Engineer
Jy Jindals (Assn.) Kripol



OWNER ENGINEERING 	SAFETY CONSULTANT: 	EPC CONTRACTOR: 	AUTHORITY ENGINEER: BLOOM-JINDAL-KMPPL (JV)	PROOF CONSULTANT: KGS GLOBAL CONSULTANTS PVT. LTD. 301, Sector 14, Dwarka, New Delhi-110075 www.kgsconsultants.com	PROJECT: CONSTRUCTION OF HIGH ALTITUDE TUNNEL FROM VIGNANAL TOLL FROM NH-100 TO NH-15, UPPER SUBANSIR DISTRICT OF THE STATE OF ARUNACHAL PRADESH ON EPC MODE	REV.	DATE	DESCRIPTION	SCALE	DRAWN BY :	INDEX	TITLE :	PROFILE CH. (001+000 TO CH. 002+000)
											DESIGNED BY :	SK	APPROVED BY :

BOX CULVERT 4m x 4m



CURVE No. 2/1				
X=570298.129		Y=3144300.313		
R (m)	30	Ls (m)	20	
Dc(deg)	38°43'47"	S(m)	0.553	
Lc(m)	72.639	En(deg)	19°5'55"	
Ta(m)	1149.003	D(deg)	176°55'37"	
Ea(m)	1109.448	Δs(%)	-7.77	

CURVE No. 2/5				
X=570.335,079	Y=314.4025,867			
R (m)	70	L _s (m)	15	
Dc(deg)	12°26'40"	S(m)	0.134	
Lc(m)	15.204	θs(deg)	6°8'20"	
Ts(m)	22.867	D(deg)	24°43'20"	
Ea(m)	1.708	α(deg)	-5°15'57"	

CURVE No. 2/9				
X=570319.686		Y=3143677.826		
R (m)	50	L _a (m)	20	
Dc(deg)	13°57'22"	S(m)	0.333	
Te(m)	12.179	Es(deg)	11°27'33"	
Ls(m)	26.766	D(deg)	36°52'28"	
E ₁ (m)	3.056	e ₁ (%)	7.7-7	

CURVE No. 2/2			
X=570321.465		Y=3144191.747	
R (m)	50	L _s (m)	0
Dc(deg)	7°12'48"	S(m)	0
Lc(m)	15.022	Es(deg)	0°0'0"
Ta(m)	7.588	D(deg)	17°12'48"
Ea(m)	0.580	Y ₁	7/-7

CURVE No. 2/6			
X=570336.127		Y=3143936.508	
R (m)	70	Ls (m)	15
Dc(deg)	8°41'37"	S(m)	0.134
Lc(m)	10.621	θs(deg)	6°8'20"
Ta(m)	20.477	D(deg)	20°58'16"
Ea(m)	1.395	e(%)	5.71

CURVE No. 2/10			
X=570315.176		Y=3143667.127	
R (m)	125	Ls (m)	0
Dc(deg)	51°51"	S(m)	0
Lc(m)	10.876	Bs(deg)	0°00"
Ts(m)	5.431	D(deg)	51°51"
Ea(m)	0.124	Δm	3.2732

CURVE No. 2/3			
K=570337.825		Y=-3144163.825	
R (m)	305	L ₉₀ (m)	0
Dc(deg)	6°36'13"	S(m)	0
Lc(m)	35.152	Ba(deg)	0°0'0"
T ₉₀ (m)	17.596	D(deg)	6°36'13"
S ₉₀ (m)	0.507		-9.57° E

CURVE NO. 2/7				
K=570344.869		Y=-314.38955.349		
R (m)	70	L ₀ (m)	15	
Dc(deg)	18°10'3"	S(m)	0.134	
Lc(m)	22.196	θs(deg)	6°8'20"	
Ts(m)	26.582	D(deg)	30°26'42"	
S ₀ (m)	2.684	α(m)	7.7	

CURVE No. 2/11				
K=570295.21		Y=314.3619.986		
R (m)	40	Ls (m)	20	
Dc(deg)	27°37'8"	S(m)	0.416	
Lc(m)	19.282	θs(deg)	14°19'26"	
Ts(m)	31.569	D(deg)	56°15'60"	
E (m)	5.0	z (%)	7.7	

CURVE No. 2/4				
X=570362.333		Y=3144699.389		
R (m)	50	Ls (m)	20	
Dc(deg)	24°43'7"	S(m)	3.333	
Lc(m)	21.571	Bs(deg)	1°27'13"	
Ts(m)	32.206	D(deg)	47°38'13"	
E(m)	5.010			

CURVE No. 2/8			
X=570320.752		Y=3143725.718	
R (m)	105	Ls (m)	20
Dc(deg)	0°17'23"	S(m)	3.158
Lc(m)	0.631	θs(deg)	57°24"
Ts(m)	20.311	D(deg)	1°12'11"
E=(m)	0.663	Δ	0.771

CURVE No. 2/12				
X=570248.501		Y=3143586.441		
R (m)	20	La (m)	S(n)	15
Dc(deg)	89°45'36"	S(n)	0.466	
La(m)	31.332	Ba(deg)	2°29'9"	
Ta(m)	54.235	D(deg)	132°43'54"	
La(m)	54.260			

CURVE No. 2/13			
X=570331.035	Y=3143535.431		
R (m)	135	Ls (m)	15
Dc(deg)	48°20'11"	S(n)	0.089
Lc(m)	88.576	0s(deg)	4°5'33"
Ts(n)	63.987	D(deg)	55°31'7"



OWNER ENGINEERING CORPORATION
National Highways & Infrastructure
Development Corporation Ltd. (NHIDCO)

SAFETY CONSULTANT
EPC CONTRACT

MANAGEMENT CONSULTANTS PVT. LTD.
CREDIBLE MANAGEMENT
W/ COOPERATION PVT. LTD.

INDO ENCL
C

CONTRACTOR: 	ENGINEERING PROJECT CORPORATION
AUTHORITY ENGINEERING 	BLOCK

PR

aisium

BLOOM
COMPANVILLE

 K

English-Minor Degree
Tutoring, PWS 1042

INDAL-KMIPPL (JV)

F. CONSULTANT
 KQC GLOBAL CONSULTANTS LTD.
 205, Kauliya, Sector 14, Durgam
 New Delhi, Delhi 110013
 www.kqcglobalconsultants.com

PROJECT:
CONSTRUCTION OF HIGH-ALTITUDE
HILL ROAD FROM DOGINALA TO GAU
FROM KM- 0.000 TO KM- 15.320 IN
UPPER SUJANSIRI DISTRICT OF THE
STATE OF ARUNACHAL PRADESH ON
EPC MODE*

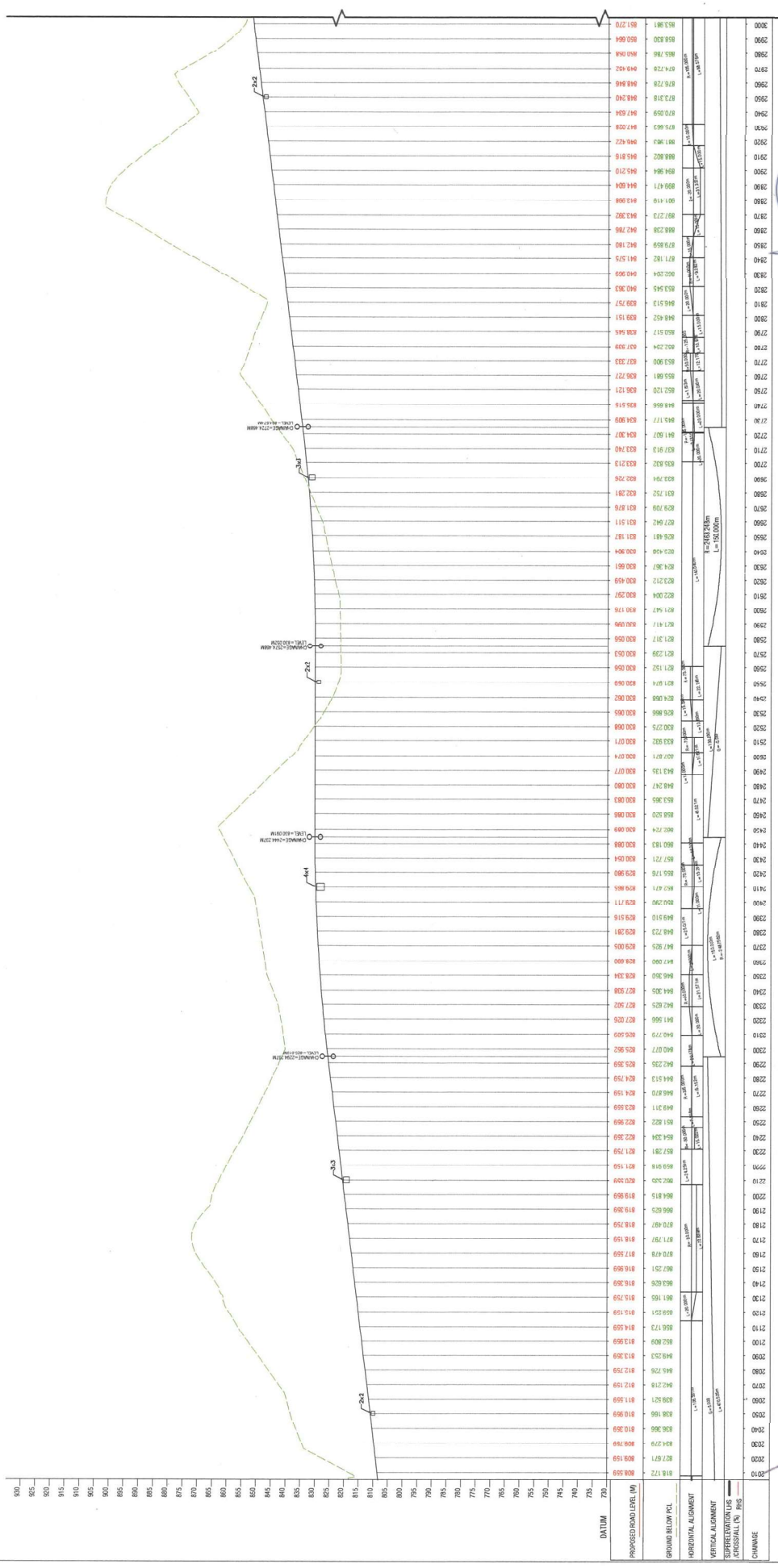
REV.	DATE	DESCRIPTION	SCALE	APPRO	DESIGN	DRAW

BY :	INCDR	TITLE :
ED BY :	SK	CH. (032++)
ED BY :	DK	DRG. NO. :
		REVISION : 1

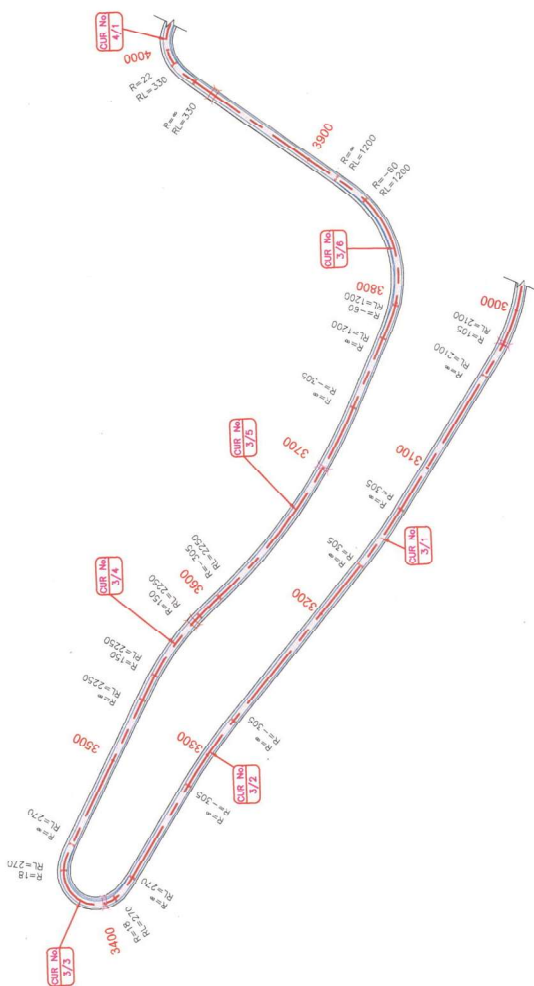
PLAN		
TO CH. 003+000)		
PLAN/003		
		JULY-2022

Resident Engineer
Bloom Jv Jindals (Assn.) Knapoli

TEAM LEADER
BLOOM
(ASSN.) KMIPPL(U)



BOX CULVERT 4m x 4m



CURVE No. 3/1		
K=570359.484		Y=314.3364.844
R (m)	305	L _a (m) 0
Dc(deg)	79°53"	S(m) 0
Lc(m)	38.14	0 _a (deg) 0°0'0"
Ta(m)	19.085	D(deg) 79°53"
Es(m)	0.597	e(%) -2.5/2.5

CURVE No. 3/2	
K=5703861.112	Y=3143213.417
R (m)	305
Dc(deg)	8°8'39"
Le(m)	43.253
Ta(m)	21.713
Ea(m)	0.772
	e(deg)
	2.5/-2.5

CURVE No. 3/3			
K=570364.234		Y=314.3083.811	
R (m)	18	Ls (m)	15
Dc(deg)	127°11"	S(m)	0.518
Le(m)	39.804	0s(deg)	23°52'24"
Ts(m)	412.616	D(deg)	174°45'59"
Ea(m)	387.583	e(%)	-7/7

CURVE NO. 3/4			
K=570307.735		Y=3143246.73	
R (m)	150	L _a (m)	15
Dc(deg)	15°44'21"	S(m)	0.062
Lc(m)	41.205	0a(deg)	2°51'53"
Ta(m)	35.947	D(deg)	21°28'7"
Ea(m)	2.735	e(%)	2.67/-2.67

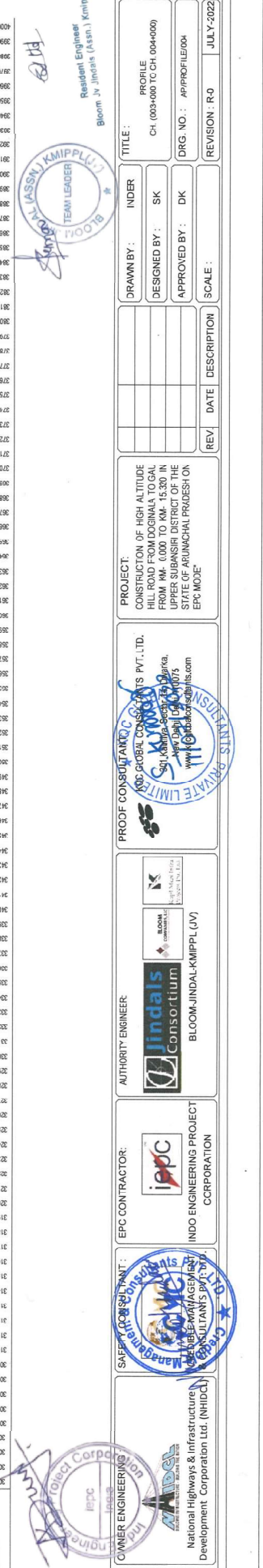
CLIVE No. 3/5	
Y=570319.611	Y=314.3347,081
R (m)	305 Ls (m)
15	
De(deg)	24°11'0"
0.031	S(n)
128.734	89°deg)
124°32"	
80.735	D(deg)
270°4'	
8.699	E(deg)
-2°5'25"	

CURVE NO. 3/6				
X=570266.753		Y=3143499.322		
R (m)	60	Ls (m)	20	
Dc(deg)	60°45'3"	S(m)	0.278	
Lc(m)	62.917	Θc(deg)	93°59'57"	
Tc(m)	59.839	D(deg)	78°10'47"	
Ea(m)	18.219	Δa(m)	6.477	8.672

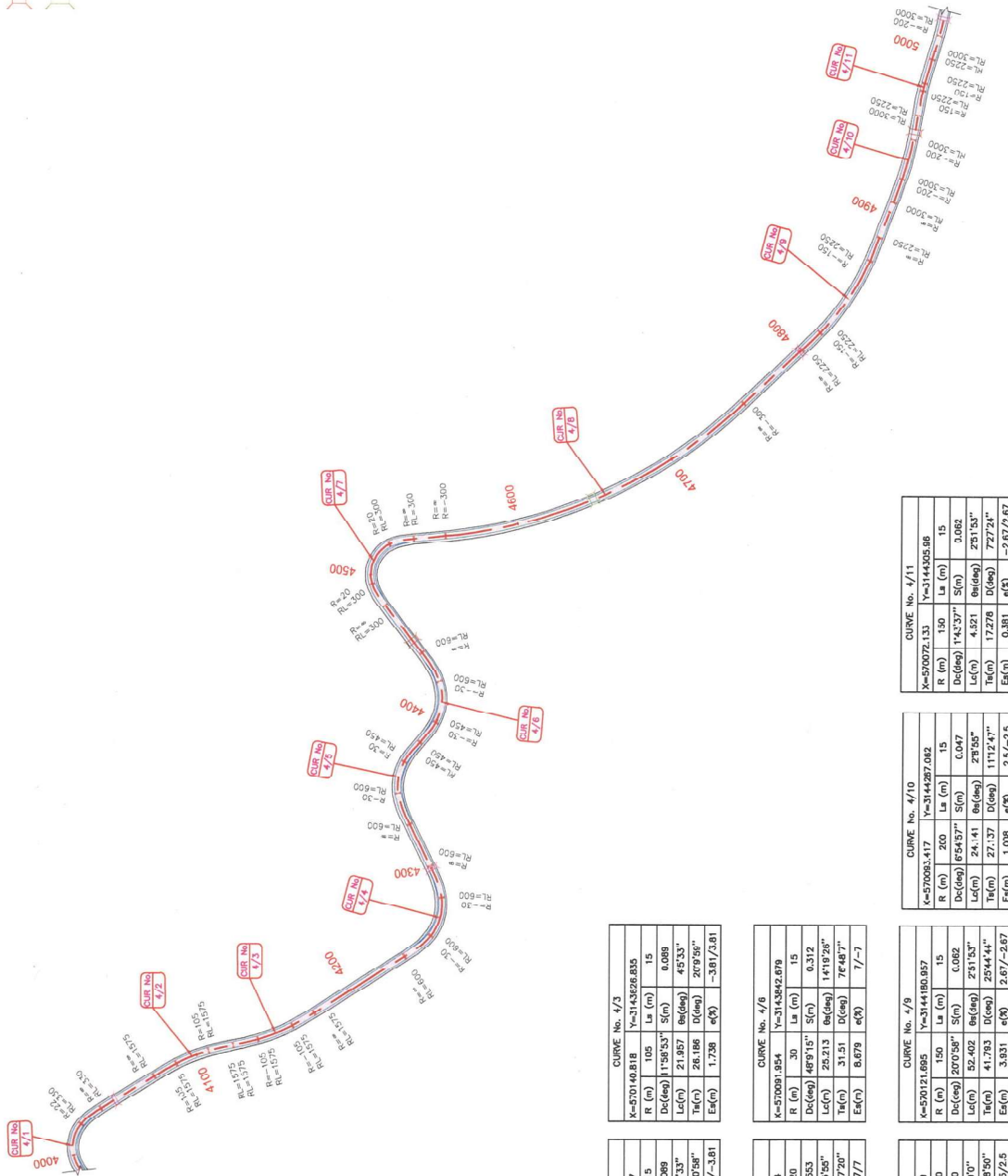
TEAM LEADER
BLOOMING
ASSN. KMIPPL(J)

Resident Engineer
Jy Jindals (Assn.) Knapoli

OWNER: EXCELTA POLICE CORP. National Highways & Infrastructure Development Corporation (NHIDCL)	SAFETY CONSULTANTS: AMC AMC CONSULTANTS PVT. LTD. OVERSEAS ENGINEERING & CONSULTING (INDIA) PVT. LTD.	 IPCC INDIAN PUBLIC CONTRACTORS CORPORATION	Authority Engineer  Jindals Consortium BLOOM-JINDAL-KMIPPL (JV)	PROOF CONSULTANT  Bloom Consortium BLOOM-JINDAL-KMIPPL (JV)	PROJECT: CONSTRUCTION OF HIGH ALTITUDE HILL ROAD FROM DOGIMLA TO GAU ROAD, KATHUN, UPPER SUBANSIR DISTRICT OF THE STATE OF ARUNACHAL PRADESH ON "EPC MODE".	PROOF CONSULTANT  Jindal Steel & Power Pvt. Ltd. Jindal Steel & Power Pvt. Ltd., 100, Park Road, Sector-10, Gurgaon, Haryana-122001, India www.jindalsteel.com	PROJECT: CONSTRUCTION OF HIGH ALTITUDE HILL ROAD FROM DOGIMLA TO GAU ROAD, KATHUN, UPPER SUBANSIR DISTRICT OF THE STATE OF ARUNACHAL PRADESH ON "EPC MODE".	DRAWN BY: DESIGNED BY: APPROVED BY: SCALE:	INDEX: SK: DK:	TITLE: PLAN CH. (003+000 TO CH. 004+000) DRG. NO.: AP/PLAN/001	REVISION R-0 JULY-2022
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BOX CULVERT 2m2m
BOX CULVERT 3m3m
BOX CULVERT 4m4m



CURVE No. 4/3

X=570140.818	Y=314326.835
R (m)	105
La (m)	15
Dc(deg)	1159.53"
S(m)	0.088
Lc(n)	21.857
Bs(deg)	45.33"
Ta(n)	26.186
D(deg)	2079.55"
Ex(m)	1.738
e(%)	-3.81/3.81

CURVE No. 4/8

X=570091.954	Y=3143462.879
R (m)	30
La (m)	15
Dc(deg)	4697.15"
S(m)	0.372
Lc(n)	25.213
Bs(deg)	1419.28"
Ta(n)	31.51
D(deg)	7648.7"
Ex(m)	8.679
e(%)	7/-7

CURVE No. 4/9

X=57021.895	Y=3144180.957
R (m)	150
La (m)	15
Dc(deg)	207.58"
S(m)	0.062
Lc(n)	52.402
Bs(deg)	231.53"
Ta(n)	41.793
D(deg)	2544.4"
Ex(m)	3.931
e(%)	2.67/-2.67

CURVE No. 4/2

X=570110.851	Y=3143585.247
R (m)	105
La (m)	15
Dc(deg)	1159.53"
S(m)	0.088
Lc(n)	20.46
Bs(deg)	45.33"
Ta(n)	25.414
D(deg)	1920.58"
Ex(m)	1.695
e(%)	3.81/-3.81

CURVE No. 4/5

X=570092.831	Y=3143789.854
R (m)	30
La (m)	20
Dc(deg)	1635.50"
S(m)	0.553
Lc(n)	19.109
Bs(deg)	1879.50"
Ta(n)	33.318
D(deg)	7447.20"
Ex(m)	8.457
e(%)	-7/7

CURVE No. 4/8

X=570100.039	Y=3143980.889
R (m)	300
La (m)	0
Dc(deg)	3746.50"
S(m)	0
Lc(n)	197.883
Bs(deg)	070.0"
Ta(n)	102.154
D(deg)	3746.50"
Ex(m)	17.109
e(%)	-2.67/2.6

CURVE No. 4/1

X=570086.632	Y=3143495.109
R (m)	22
La (m)	15
Dc(deg)	7944.31"
S(m)	0.424
Lc(n)	29.083
Bs(deg)	1931.58"
Ta(n)	42.54
D(deg)	11448.28"
Ex(m)	19.628
e(%)	-7/7

CURVE No. 4/4

X=570173.445	Y=3143743.588
R (m)	30
La (m)	20
Dc(deg)	14971.1"
S(m)	0.553
Lc(n)	24.280
Bs(deg)	1879.50"
Ta(n)	37.759
D(deg)	8432.51"
Ex(m)	11.292
e(%)	7/-7

CURVE No. 4/7

X=569988.554	Y=3143874.425
R (m)	20
La (m)	15
Dc(deg)	7949.17"
S(m)	0.468
Lc(n)	27.853
Bs(deg)	2129.9"
Ta(n)	44.988
D(deg)	12247.35"
Ex(m)	22.76
e(%)	-7/7



Resident Engineer
Bloom JV Jindals (Ash) Kimppl

TITLE :		DRAWN BY :		INDEX :	
CH. 004+000 TO CH. 005+000		DESIGNED BY :		SK :	
DRG NO. : APIPLAN005		APPROVED BY :		DK :	
REVISION : R-0		SCALE :		REV. :	
DATE :		DESCRIPTION :		JULY-2022	

PROJECT : CONSTRUCTION OF HIGH ALTITUDE ROAD FROM DIGHAL TO GAU FROM AN AND FROM AN UPPER SUBANSRI DISTRICT OF THE STATE OF ARUNACHAL PRADESH ON EPC MODE

PROF CONSULTANT : BLOOM JV JINDALS (ASH) KIMPL LTD.

AUTHORITY ENGINEER : Jindals Consortium

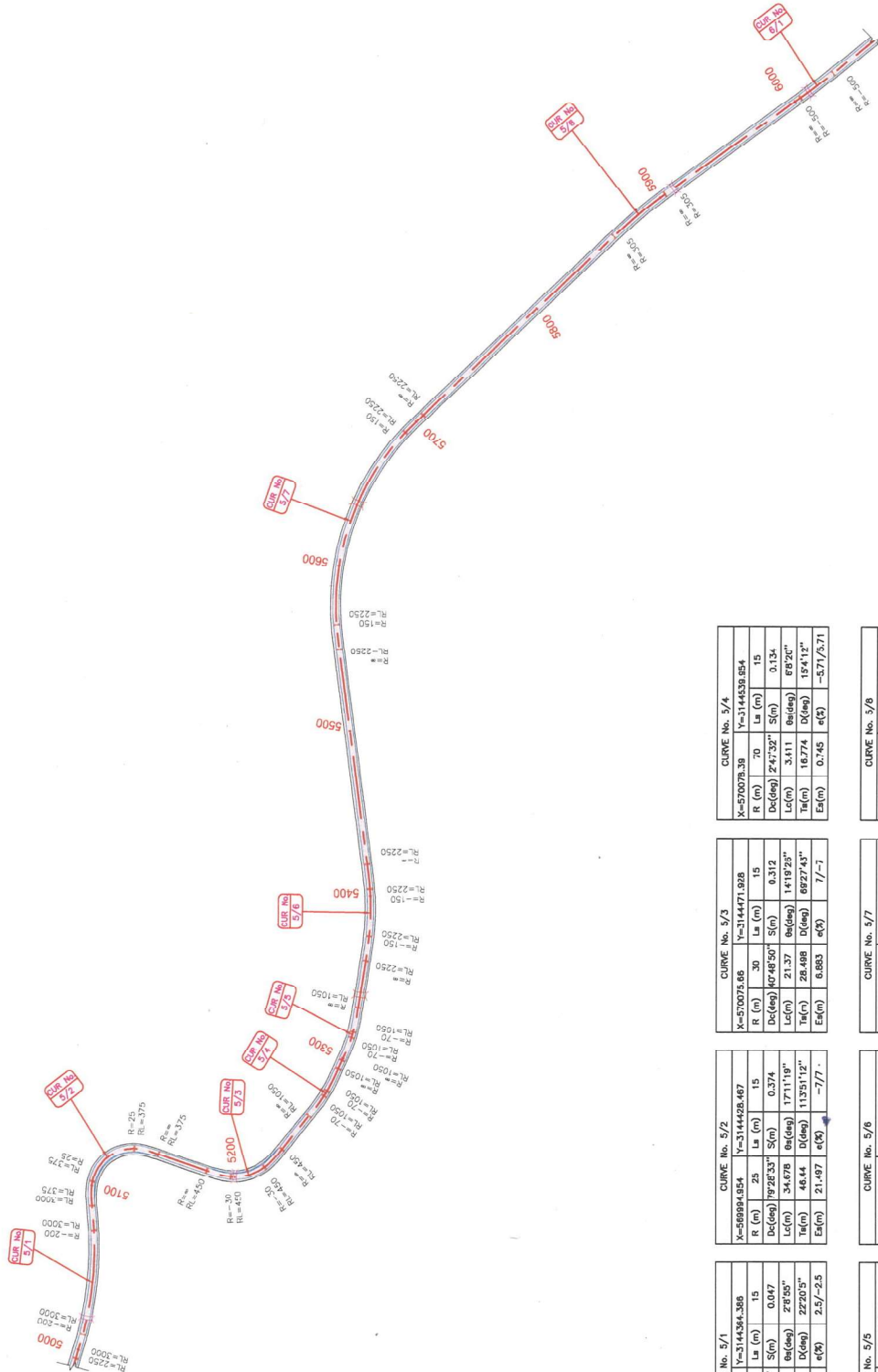
EPC CONTRACTOR : iPPC

SAFETY CONSULTANT : Jindals Consortium

OWNER ENGINEER : National Highways & Infrastructure Development Corporation Ltd. (NHIDCL)



BOX CULVERT 2m x 2m
 BOX CULVERT 3m x 3m
 BOX CULVERT 4m x 4m



CURVE No. 5/4									
X=570078.39	Y=3144471.898	R (m)	70	Ls (m)	15	Dc(deg)	2°47'32"	S(m)	0.134
		Lc(m)	34.11	Be(deg)	88°20"				
		Ta(m)	16.774	D(deg)	154°12"				
		Ex(m)	0.745	e(%)	-5.71/5.71				

CURVE No. 5/3									
X=570078.39	Y=3144471.898	R (m)	30	Ls (m)	15	Dc(deg)	4°48'50"	S(m)	0.312
		Lc(m)	21.37	Be(deg)	141°19'25"				
		Ta(m)	28.488	D(deg)	89°27'43"				
		Ex(m)	6.883	e(%)	7/-7				

CURVE No. 5/2									
X=569894.854	Y=3144428.487	R (m)	25	Ls (m)	15	Dc(deg)	1°28'33"	S(m)	0.047
		Lc(m)	34.678	Be(deg)	171°11'19"				
		Ta(m)	46.44	D(deg)	113°51'12"				
		Ex(m)	21.497	e(%)	-7/7				

CURVE No. 5/1									
X=570046.015	Y=3144364.385	R (m)	200	Ls (m)	15	Dc(deg)	1°57'16"	S(m)	0.047
		Lc(m)	92.963	Be(deg)	27°55"				
		Ta(m)	46.992	D(deg)	222°03"				
		Ex(m)	3.008	e(%)	2.5/-2.5				

CURVE No. 5/6									
X=569881.443	Y=3144538.854	R (m)	305	Ls (m)	0	Dc(deg)	7°30'13"	S(m)	0
		Lc(m)	39.344	Be(deg)	8°00"				
		Ta(m)	20.001	D(deg)	73°013"				
		Ex(m)	0.455	e(%)	2.5/-2.5				

CURVE No. 5/7									
X=568554.96	Y=3144458.479	R (m)	150	Ls (m)	15	Dc(deg)	1°15'51"	S(m)	0.062
		Lc(m)	126.399	Be(deg)	231°15"				
		Ta(m)	83.877	D(deg)	54°038"				
		Ex(m)	18.427	e(%)	-2.87/2.87				

CURVE No. 5/8									
X=570028.81	Y=3144441.281	R (m)	150	Ls (m)	15	Dc(deg)	1°07'58"	S(m)	0.062
		Lc(m)	28.673	Be(deg)	271°53"				
		Ta(m)	29.501	D(deg)	19°40'55"				
		Ex(m)	1.837	e(%)	2.87/-2.87				

CURVE No. 5/5									
X=570087.337	Y=314457.524	R (m)	70	Ls (m)	15	Dc(deg)	2°52'5"	S(m)	0.134
		Lc(m)	3.904	Be(deg)	68°20"				
		Ta(m)	16.821	D(deg)	15°8'45"				
		Ex(m)	0.751	e(%)	5.71/-5.71				

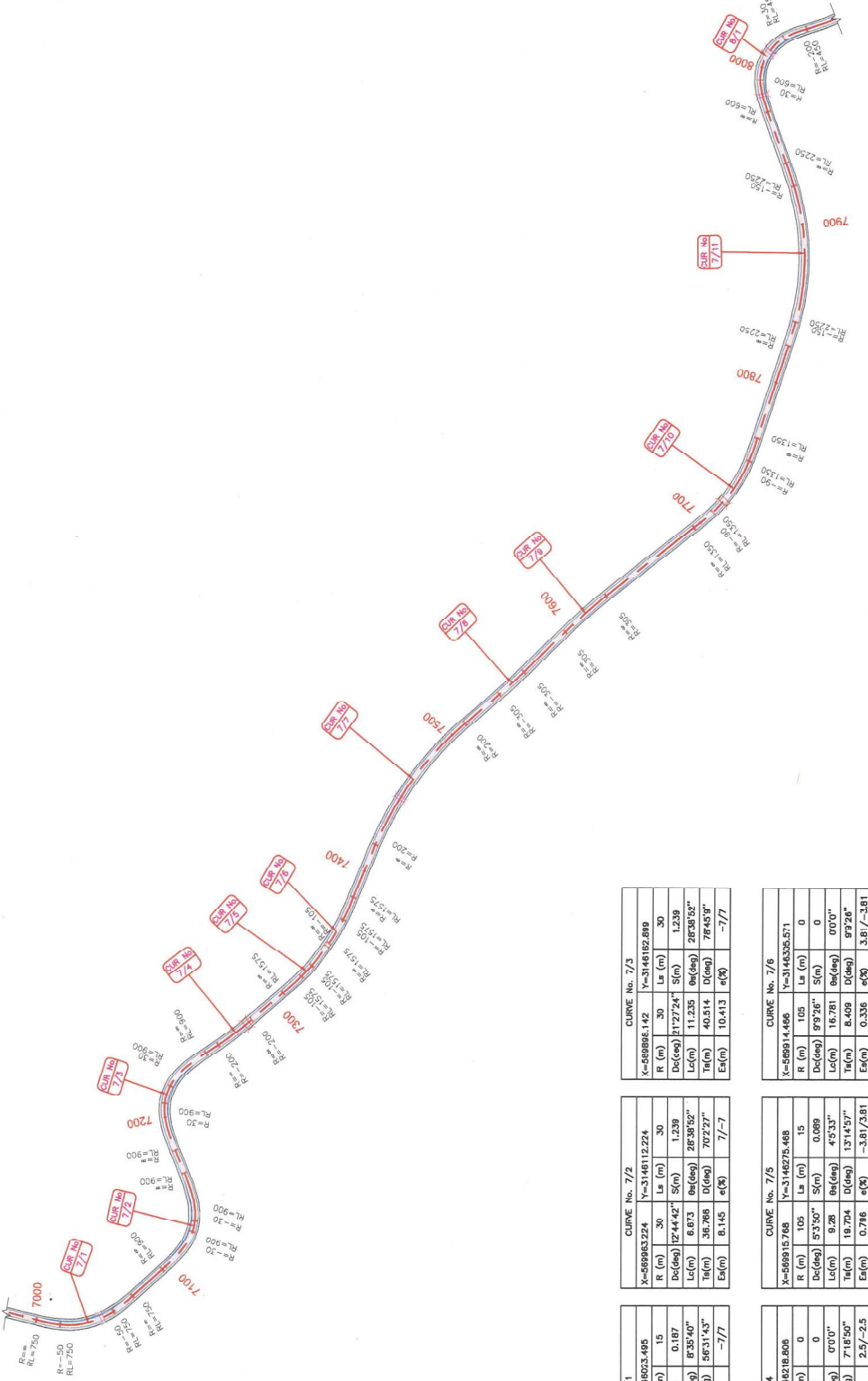


Resident Engineer
 Bloom JV Jindal (Assn.) Knppl

 K Jindal & Associates Pvt. Ltd. 301, Kalinga, Sector 11, Gurgaon, Haryana 122007 www.kjindalassociates.com	PROJECT: CONSTRUCTION OF HIGH ALTITUDE HILL ROAD FROM DIGNALA TO GAU FROM KM. 0.000 TO KM. 15.320 IN THE DISTRICT OF THE STATE OF ARUNACHAL PRADESH ON EPC MODE	TITLE: PLAN CH. (005+000 TO CH. 006+000) DRG. NO.: AP/PLAN005 REVISION: R-0 JULY 2022
	DRAWN BY: INDER DESIGNED BY: SK APPROVED BY: DK SCALE:	REV: DATE DESCRIPTION
	AUTHORITY ENGINEER: Jindal Consortium BLOOM-JINDAL-KNPPL (JV)	EPC CONTRACTOR: ipec INDIA ENGINEERING PROJECT CORPORATION
	SAFETY CONSULTANT: K Jindal & Associates Pvt. Ltd.	OWA ENGINEERING: OWA Engineering



BCX CULVERT 2mx2m
 BCX CULVERT 3mx3m
 BCX CULVERT 4mx4m



CURVE No. 7/1					
X=509953.779	Y=3146023.495				
R (m)	50	La (m)	15		
Dc(deg)	39°20'24"	S(n)	0.187		
Lc(m)	34.331	Be(deg)	8°35'40"		
Ta(m)	34.477	D(deg)	58°31'43"		
Ea(m)	6.881	e(%)	-7/7		

CURVE No. 7/2					
X=509983.224	Y=3146112.224				
R (m)	30	La (m)	30		
Dc(deg)	12°44'42"	S(n)	1.239		
Lc(m)	6.873	Be(deg)	28°38'52"		
Ta(m)	36.766	D(deg)	70°22'27"		
Ea(m)	8.145	e(%)	7/-7		

CURVE No. 7/3					
X=509988.142	Y=3146182.889				
R (m)	30	La (m)	30		
Dc(deg)	11°27'24"	S(n)	1.239		
Lc(m)	11.235	Be(deg)	28°38'52"		
Ta(m)	40.514	D(deg)	78°45'9"		
Ea(m)	10.413	e(%)	-7/7		

CURVE No. 7/4					
X=509997.021	Y=3146218.856				
R (m)	200	La (m)	15		
Dc(deg)	7°18'50"	S(n)	0		
Lc(m)	20.531	Be(deg)	0°0'0"		
Ta(m)	12.783	D(deg)	7°18'50"		
Ea(m)	0.008	e(%)	2.5/-2.5		

CURVE No. 7/5					
X=509915.788	Y=3146275.468				
R (m)	105	La (m)	15		
Dc(deg)	5°32'50"	S(n)	0.089		
Lc(m)	9.28	Be(deg)	4°5'33"		
Ta(m)	19.794	D(deg)	13°14'57"		
Ea(m)	0.786	e(%)	-3.81/3.81		

CURVE No. 7/6					
X=509898.787	Y=3146400.711				
R (m)	305	La (m)	0		
Dc(deg)	3°49'2"	S(n)	0		
Lc(m)	20.321	Be(deg)	0°0'0"		
Ta(m)	10.154	D(deg)	3°49'2"		
Ea(m)	0.169	e(%)	2.5/-2.5		

CURVE No. 7/7					
X=509884.488	Y=3146408.872				
R (m)	200	La (m)	0		
Dc(deg)	26°40'42"	S(n)	0		
Lc(m)	93.126	Be(deg)	0°0'0"		
Ta(m)	47.423	D(deg)	26°40'42"		
Ea(m)	5.545	e(%)	-2.5/2.5		

CURVE No. 7/8					
X=509895.038	Y=3146592.569				
R (m)	305	La (m)	0		
Dc(deg)	5°14'51"	S(n)	0		
Lc(m)	33.258	Be(deg)	0°0'0"		
Ta(m)	16.645	D(deg)	6°14'51"		
Ea(m)	0.454	e(%)	-2.5/2.5		

CURVE No. 7/9					
X=509892.022	Y=3146598.614				
R (m)	90	La (m)	15		
Dc(deg)	34°32'29"	S(n)	0.104		
Lc(m)	38.497	Be(deg)	4°45'28"		
Ta(m)	35.005	D(deg)	34°32'27"		
Ea(m)	4.238	e(%)	4.44/-4.44		

CURVE No. 7/10					
X=509870.331	Y=3146811.553				
R (m)	150	La (m)	15		
Dc(deg)	32°17'60"	S(n)	0.082		
Lc(m)	84.381	Be(deg)	23°1'53"		
Ta(m)	59.213	D(deg)	38°1'46"		
Ea(m)	6.723	e(%)	-2.67/2.67		

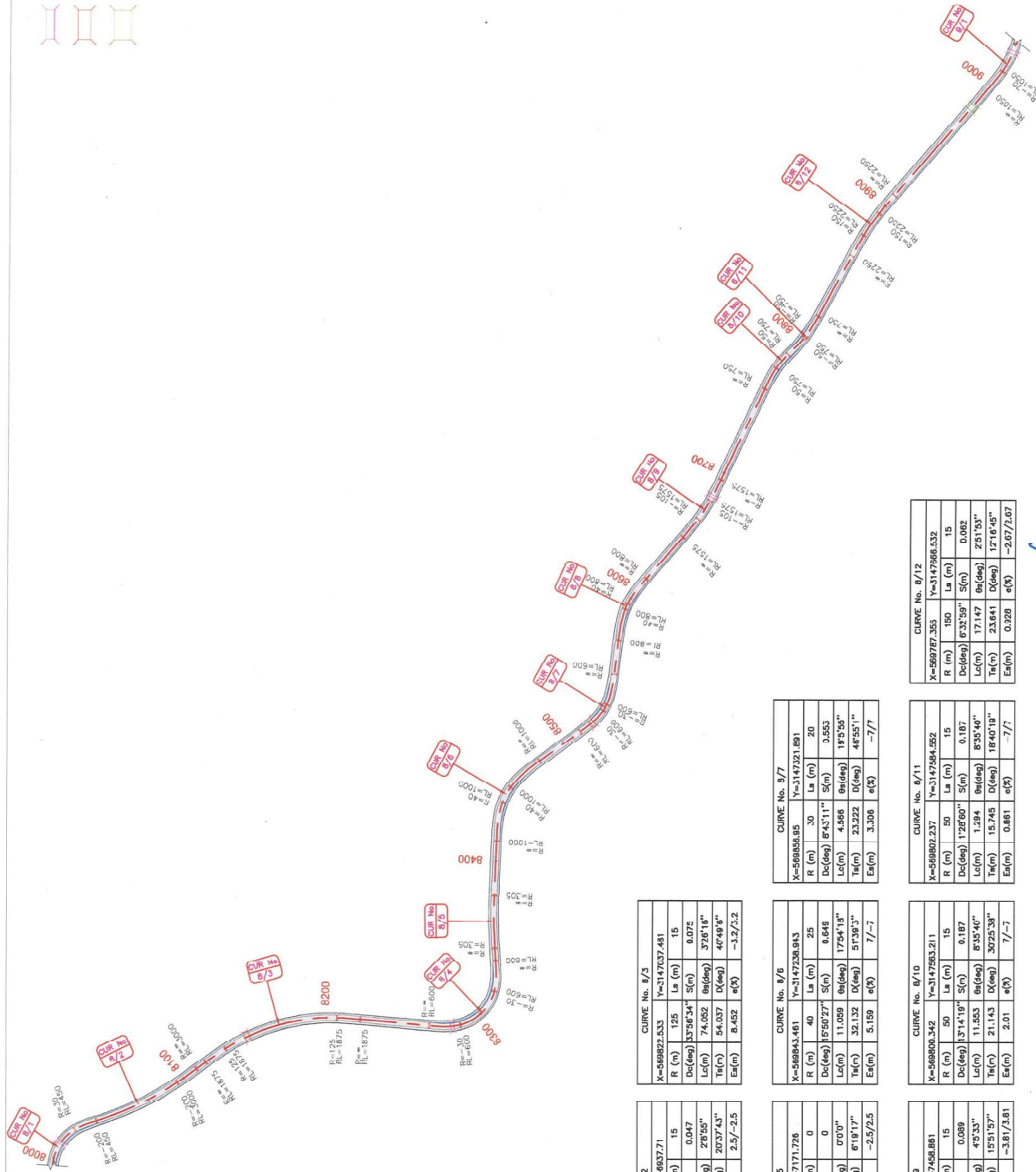
CURVE No. 7/11					
X=509870.331	Y=3146811.553				
R (m)	150	La (m)	15		
Dc(deg)	32°17'60"	S(n)	0.082		
Lc(m)	84.381	Be(deg)	23°1'53"		
Ta(m)	59.213	D(deg)	38°1'46"		
Ea(m)	6.723	e(%)	-2.67/2.67		

OWNER/ENGINEERING:		SAFETY CONSULTANT:		EPC CONTRACTOR:		AUTHORITY ENGINEER:		PROOF CONSULTANT:		PROJECT:		DRAWN BY:		DESIGNED BY:		APPROVED BY:		SCALE:		REVISION:		JULY 2022	
National Highways Infrastructure Development Corporation Ltd. (NHIDCL)		M&C Consultants Pvt. Ltd.		iPPC		Indials Consortium		Indials Consortium		CONSTRUCTION OF HIGH ALTITUDE HILL ROAD FROM DOGBAL TO GAU PHULI, DISTRICT DOGBAL, UPPER SUBANSER, STATE OF ARUNACHAL PRADESH ON EPC MODE.		INDR		SK		DK		R-0		R-0		JULY 2022	
TITLE:		CH. 007+000 TO CH. 018+000		DRG. NO. : AP/PLAN/008		REVISION: R-0		JULY 2022															



Resident Engineer
 Bloom JV Indials (Asst.) Kimpppl

BCX CULVERT 2mx2m
BCX CULVERT 3mx3m
BCX CULVERT 4mx4m



CURVE No. 8/1

X=509764.873	Y=314684.168
R (m)	125
L (m)	18.75
Dc(deg)	187.97
S(n)	0.553
Lc(m)	31.137
Bc(deg)	197.55
Tc(m)	44.903
D(deg)	87.39
Ex(m)	16.415
e(%)	-7/7

CURVE No. 8/2

X=509792.949	Y=314683.721
R (m)	125
L (m)	18.75
Dc(deg)	187.97
S(n)	0.553
Lc(m)	31.137
Bc(deg)	197.55
Tc(m)	44.903
D(deg)	87.39
Ex(m)	16.415
e(%)	-7/7

CURVE No. 8/3

X=509822.533	Y=314737.481
R (m)	125
L (m)	18.75
Dc(deg)	187.97
S(n)	0.553
Lc(m)	31.137
Bc(deg)	197.55
Tc(m)	44.903
D(deg)	87.39
Ex(m)	16.415
e(%)	-7/7

CURVE No. 8/4

X=509852.997	Y=314737.201
R (m)	125
L (m)	18.75
Dc(deg)	187.97
S(n)	0.553
Lc(m)	31.137
Bc(deg)	197.55
Tc(m)	44.903
D(deg)	87.39
Ex(m)	16.415
e(%)	-7/7

CURVE No. 8/5

X=509882.559	Y=314737.726
R (m)	125
L (m)	18.75
Dc(deg)	187.97
S(n)	0.553
Lc(m)	31.137
Bc(deg)	197.55
Tc(m)	44.903
D(deg)	87.39
Ex(m)	16.415
e(%)	-7/7

CURVE No. 8/6

X=509912.521	Y=314738.943
R (m)	125
L (m)	18.75
Dc(deg)	187.97
S(n)	0.553
Lc(m)	31.137
Bc(deg)	197.55
Tc(m)	44.903
D(deg)	87.39
Ex(m)	16.415
e(%)	-7/7

CURVE No. 8/7

X=509942.585	Y=314739.181
R (m)	125
L (m)	18.75
Dc(deg)	187.97
S(n)	0.553
Lc(m)	31.137
Bc(deg)	197.55
Tc(m)	44.903
D(deg)	87.39
Ex(m)	16.415
e(%)	-7/7

CURVE No. 8/8

X=509972.649	Y=314739.421
R (m)	125
L (m)	18.75
Dc(deg)	187.97
S(n)	0.553
Lc(m)	31.137
Bc(deg)	197.55
Tc(m)	44.903
D(deg)	87.39
Ex(m)	16.415
e(%)	-7/7

CURVE No. 8/9

X=510002.713	Y=314739.661
R (m)	125
L (m)	18.75
Dc(deg)	187.97
S(n)	0.553
Lc(m)	31.137
Bc(deg)	197.55
Tc(m)	44.903
D(deg)	87.39
Ex(m)	16.415
e(%)	-7/7

CURVE No. 8/10

X=510032.777	Y=314739.901
R (m)	125
L (m)	18.75
Dc(deg)	187.97
S(n)	0.553
Lc(m)	31.137
Bc(deg)	197.55
Tc(m)	44.903
D(deg)	87.39
Ex(m)	16.415
e(%)	-7/7

CURVE No. 8/11

X=510062.841	Y=314740.141
R (m)	125
L (m)	18.75
Dc(deg)	187.97
S(n)	0.553
Lc(m)	31.137
Bc(deg)	197.55
Tc(m)	44.903
D(deg)	87.39
Ex(m)	16.415
e(%)	-7/7

CURVE No. 8/12

X=510092.905	Y=314740.381
R (m)	125
L (m)	18.75
Dc(deg)	187.97
S(n)	0.553
Lc(m)	31.137
Bc(deg)	197.55
Tc(m)	44.903
D(deg)	87.39
Ex(m)	16.415
e(%)	-7/7

PROJECT:
CONSTRUCTION OF HIGH ALTITUDE
HILL ROAD FROM DODGIALA TO GAU
PITIA, IN THE DISTRICT OF THE
UPPER SUBANSERI DISTRICT OF THE
STATE OF ARUNACHAL PRADESH ON
EPC MODE

PROF. CONSULTANT: KMD CONSULTANTS PVT. LTD.
KMD CONSULTANTS PVT. LTD.
KMD CONSULTANTS PVT. LTD.
KMD CONSULTANTS PVT. LTD.
KMD CONSULTANTS PVT. LTD.

AUTHORITY ENGINEER:
Jindals Consortium
BLOOM-JINDAL-KMPP (JV)

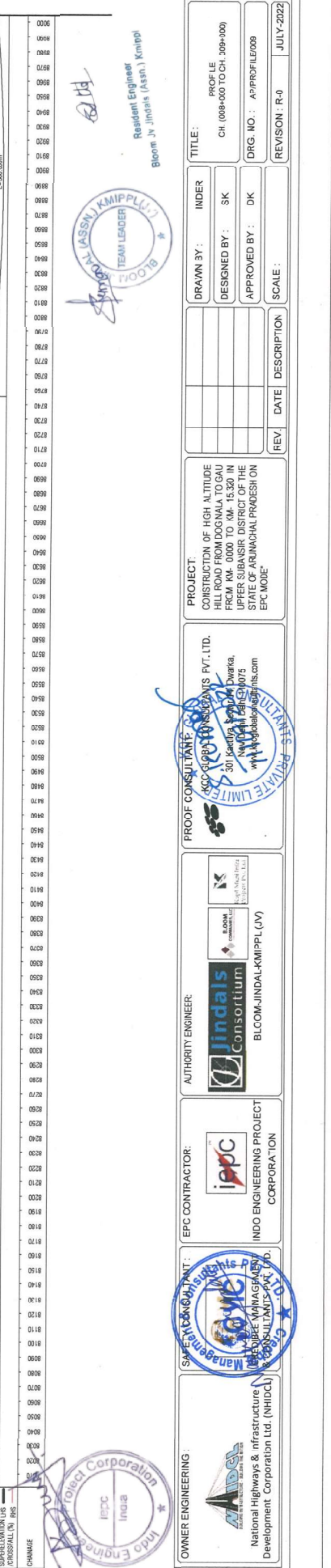
EPC CONTRACTOR:
ipec
INDIAN PETROLEUM CORPORATION

OWNER ENGINEERING CONSULTANTS:
National Highways & Infrastructure
Development Corporation Limited (NHIDCL)

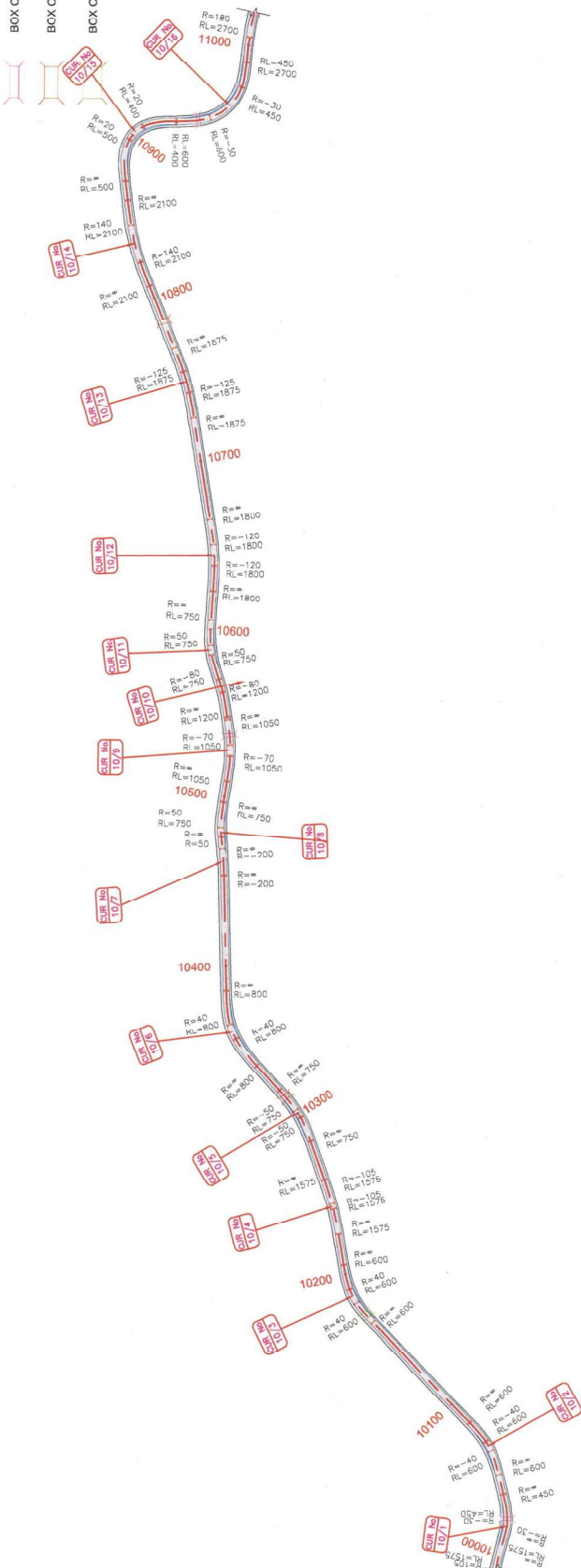
TITLE:	PLAN
CH. (008+000 TO CH. 009+000)	CH. (008+000 TO CH. 009+000)
DRG. NO.:	AP/PLAN009
REVISION:	R-0
DATE:	JULY-2022



Resident Engineer
Bloom JV Jindals (Asst.) KMD



BOX CULVERT 2m x 2m
BOX CULVERT 3m x 3m
BOX CULVERT 4m x 4m



CURVE No. 10/1									
X=569308.355	Y=3146650.573	R (m)	30	La (m)	0	Dc(deg)	0.000	S(m)	0
Lc(m)	8.315	Bc(deg)	0.000	Tc(m)	4.158	D(deg)	0.000	Ea(m)	0.28
Ex(m)	0.28	e(%)	7/-7						

CURVE No. 10/2									
X=569226.705	Y=3146660.095	R (m)	40	La (m)	15	Dc(deg)	0.000	S(m)	0.234
Lc(m)	6.087	Bc(deg)	0.000	Tc(m)	3.044	D(deg)	0.000	Ea(m)	0.234
Ex(m)	0.234	e(%)	7/-7						

CURVE No. 10/3									
X=569151.694	Y=3146666.035	R (m)	40	La (m)	15	Dc(deg)	0.000	S(m)	0.234
Lc(m)	6.087	Bc(deg)	0.000	Tc(m)	3.044	D(deg)	0.000	Ea(m)	0.234
Ex(m)	0.234	e(%)	7/-7						

CURVE No. 10/4									
X=569108.595	Y=3146729.77	R (m)	135	La (m)	15	Dc(deg)	0.000	S(m)	0.089
Lc(m)	3.087	Bc(deg)	0.000	Tc(m)	1.544	D(deg)	0.000	Ea(m)	0.089
Ex(m)	0.089	e(%)	7/-7						

CURVE No. 10/5									
X=569058.137	Y=3146758.745	R (m)	50	La (m)	15	Dc(deg)	0.000	S(m)	0.187
Lc(m)	3.087	Bc(deg)	0.000	Tc(m)	1.544	D(deg)	0.000	Ea(m)	0.187
Ex(m)	0.187	e(%)	7/-7						

CURVE No. 10/6									
X=568997.583	Y=3146770.333	R (m)	40	La (m)	20	Dc(deg)	0.000	S(m)	0.416
Lc(m)	8.048	Bc(deg)	0.000	Tc(m)	4.024	D(deg)	0.000	Ea(m)	0.416
Ex(m)	0.416	e(%)	7/-7						

CURVE No. 10/7									
X=568929.468	Y=3146843.555	R (m)	200	La (m)	0	Dc(deg)	0.000	S(m)	0
Lc(m)	4.204	Bc(deg)	0.000	Tc(m)	2.102	D(deg)	0.000	Ea(m)	0.000
Ex(m)	0.000	e(%)	7/-7						

CURVE No. 10/8									
X=568916.846	Y=3146856.179	R (m)	50	La (m)	0	Dc(deg)	0.000	S(m)	0
Lc(m)	4.204	Bc(deg)	0.000	Tc(m)	2.102	D(deg)	0.000	Ea(m)	0.000
Ex(m)	0.000	e(%)	7/-7						

CURVE No. 10/9									
X=568890.421	Y=3146858.585	R (m)	70	La (m)	15	Dc(deg)	0.000	S(m)	0.134
Lc(m)	3.589	Bc(deg)	0.000	Tc(m)	1.795	D(deg)	0.000	Ea(m)	0.134
Ex(m)	0.134	e(%)	7/-7						

CURVE No. 10/10									
X=568861.62	Y=3146922.336	R (m)	60	La (m)	15	Dc(deg)	0.000	S(m)	0.117
Lc(m)	3.589	Bc(deg)	0.000	Tc(m)	1.795	D(deg)	0.000	Ea(m)	0.117
Ex(m)	0.117	e(%)	7/-7						

CURVE No. 10/11									
X=568833.65	Y=3146934.335	R (m)	50	La (m)	15	Dc(deg)	0.000	S(m)	0.117
Lc(m)	3.589	Bc(deg)	0.000	Tc(m)	1.795	D(deg)	0.000	Ea(m)	0.117
Ex(m)	0.117	e(%)	7/-7						

CURVE No. 10/12									
X=568803.234	Y=3146978.521	R (m)	170	La (m)	15	Dc(deg)	0.000	S(m)	0.078
Lc(m)	12.738	Bc(deg)	0.000	Tc(m)	6.369	D(deg)	0.000	Ea(m)	0.078
Ex(m)	0.078	e(%)	7/-7						

CURVE No. 10/13									
X=568730.981	Y=3146945.986	R (m)	125	La (m)	15	Dc(deg)	0.000	S(m)	0.078
Lc(m)	12.738	Bc(deg)	0.000	Tc(m)	6.369	D(deg)	0.000	Ea(m)	0.078
Ex(m)	0.078	e(%)	7/-7						

CURVE No. 10/14									
X=568654.683	Y=3146988.224	R (m)	140	La (m)	15	Dc(deg)	0.000	S(m)	0.087
Lc(m)	11.308	Bc(deg)	0.000	Tc(m)	5.654	D(deg)	0.000	Ea(m)	0.087
Ex(m)	0.087	e(%)	7/-7						

CURVE No. 10/15									
X=568611.818	Y=3146139.35	R (m)	20	La (m)	25	Dc(deg)	0.000	S(m)	0.553
Lc(m)	11.308	Bc(deg)	0.000	Tc(m)	5.654	D(deg)	0.000	Ea(m)	0.553
Ex(m)	0.553	e(%)	7/-7						

CURVE No. 10/16									
X=568616.039	Y=3146166.336	R (m)	30	La (m)	20	Dc(deg)	0.000	S(m)	0.553
Lc(m)	11.308	Bc(deg)	0.000	Tc(m)	5.654	D(deg)	0.000	Ea(m)	0.553
Ex(m)	0.553	e(%)	7/-7						

OWNER / ENGINEERING
National Highways & Infrastructure Development Corporation (NHIDCL)

SAFETY CONSULTANT
M/s. Jindal's Consortium

EPC CONTRACTOR
M/s. Jindal's Consortium

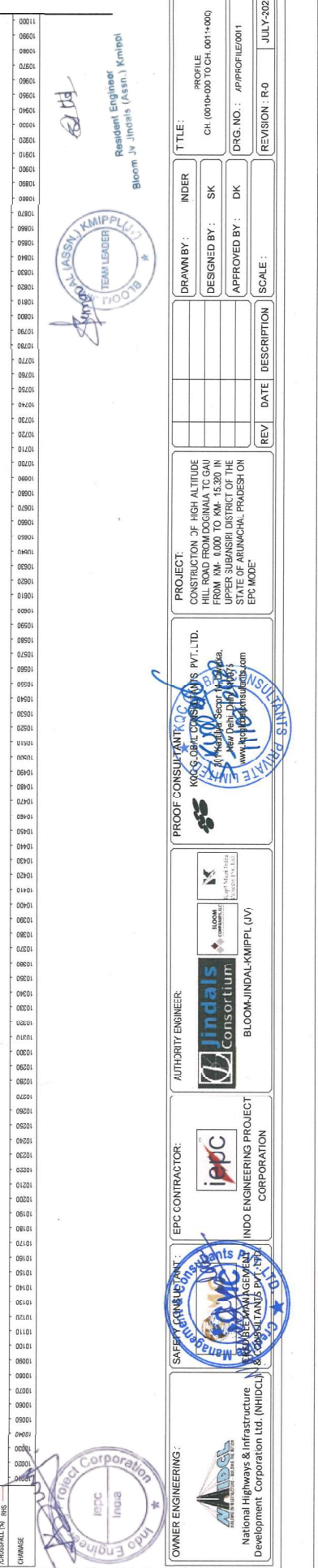
AUTHORITY ENGINEER
M/s. Jindal's Consortium

PROOF CONSULTANT
M/s. Jindal's Consortium

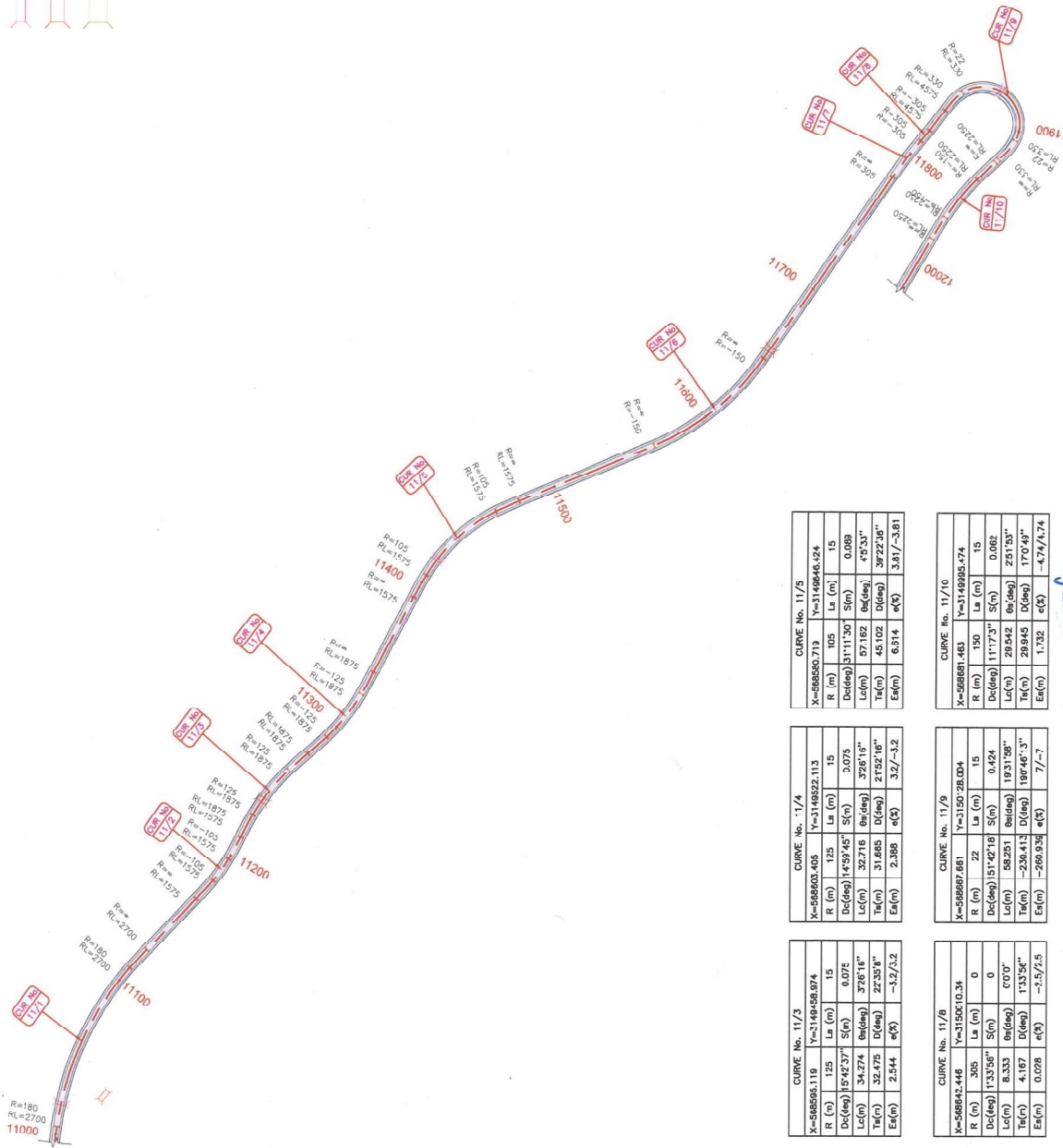
PROJECT
CONSTRUCTION OF HIGH ALTITUDE HILL ROAD FROM DODGINLA TO GAU IN 15.24 KM IN UPPER SUBANSI DISTRICT, WESTERN STATE OF ARUNACHAL PRADESH ON EPC MODE

DRAWN BY
INDEXED

TITLE
Resident Engineer
KMPCL
DRG. NO. : AP/PLAN011
REVISION: R-0
JULY-2022



BOX CULVERT 2mx2m
BOX CULVERT 3mx3m
BOX CULVERT 4mx4m



CURVE No. 11/5					
X=58560.713	Y=31466.424	R (m)	105	La (m)	15
Dc(deg)	3111'30"	S(m)	0.089	Lc(m)	57.162
Tc(m)	45.102	D(deg)	37'22'38"	Ex(m)	6.314
Y=31466.424	X=58560.713	Y=31466.424	X=58560.713	Y=31466.424	X=58560.713

CURVE No. 11/4					
X=58560.405	Y=31465.213	R (m)	125	La (m)	15
Dc(deg)	14'59'45"	S(m)	0.075	Lc(m)	32.716
Tc(m)	31.605	D(deg)	27'52'16"	Ex(m)	2.388
Y=31465.213	X=58560.405	Y=31465.213	X=58560.405	Y=31465.213	X=58560.405

CURVE No. 11/3					
X=58560.119	Y=31465.874	R (m)	125	La (m)	15
Dc(deg)	15'42'37"	S(m)	0.075	Lc(m)	34.274
Tc(m)	32.475	D(deg)	27'52'16"	Ex(m)	2.388
Y=31465.874	X=58560.119	Y=31465.874	X=58560.119	Y=31465.874	X=58560.119

CURVE No. 11/2					
X=58560.07	Y=31464.785	R (m)	125	La (m)	15
Dc(deg)	15'42'37"	S(m)	0.089	Lc(m)	15.687
Tc(m)	22.868	D(deg)	16'44'43"	Ex(m)	1.221
Y=31464.785	X=58560.07	Y=31464.785	X=58560.07	Y=31464.785	X=58560.07

CURVE No. 11/1					
X=58559.127	Y=314621.25	R (m)	180	La (m)	15
Dc(deg)	33'24'16"	S(m)	0.052	Lc(m)	104.835
Tc(m)	69.807	D(deg)	38'10'35"	Ex(m)	10.528
Y=314621.25	X=58559.127	Y=314621.25	X=58559.127	Y=314621.25	X=58559.127

CURVE No. 11/6					
X=58559.01	Y=314683.178	R (m)	150	La (m)	0
Dc(deg)	32'20'49"	S(m)	0	Lc(m)	84.684
Tc(m)	43.504	D(deg)	32'20'49"	Ex(m)	6.181
Y=314683.178	X=58559.01	Y=314683.178	X=58559.01	Y=314683.178	X=58559.01

CURVE No. 11/7					
X=58558.417	Y=314692.592	R (m)	355	La (m)	0
Dc(deg)	5'53'37"	S(m)	0	Lc(m)	27.144
Tc(m)	13.381	D(deg)	5'53'37"	Ex(m)	0.302
Y=314692.592	X=58558.417	Y=314692.592	X=58558.417	Y=314692.592	X=58558.417

CURVE No. 11/8					
X=58558.448	Y=31500.034	R (m)	305	La (m)	0
Dc(deg)	1'33'56"	S(m)	0	Lc(m)	8.333
Tc(m)	4.167	D(deg)	1'33'56"	Ex(m)	0.098
Y=31500.034	X=58558.448	Y=31500.034	X=58558.448	Y=31500.034	X=58558.448

CURVE No. 11/9					
X=58557.881	Y=31502.804	R (m)	22	La (m)	15
Dc(deg)	51'42'18"	S(m)	0.424	Lc(m)	58.251
Tc(m)	-230.413	D(deg)	189'48'3"	Ex(m)	-290.036
Y=31502.804	X=58557.881	Y=31502.804	X=58557.881	Y=31502.804	X=58557.881

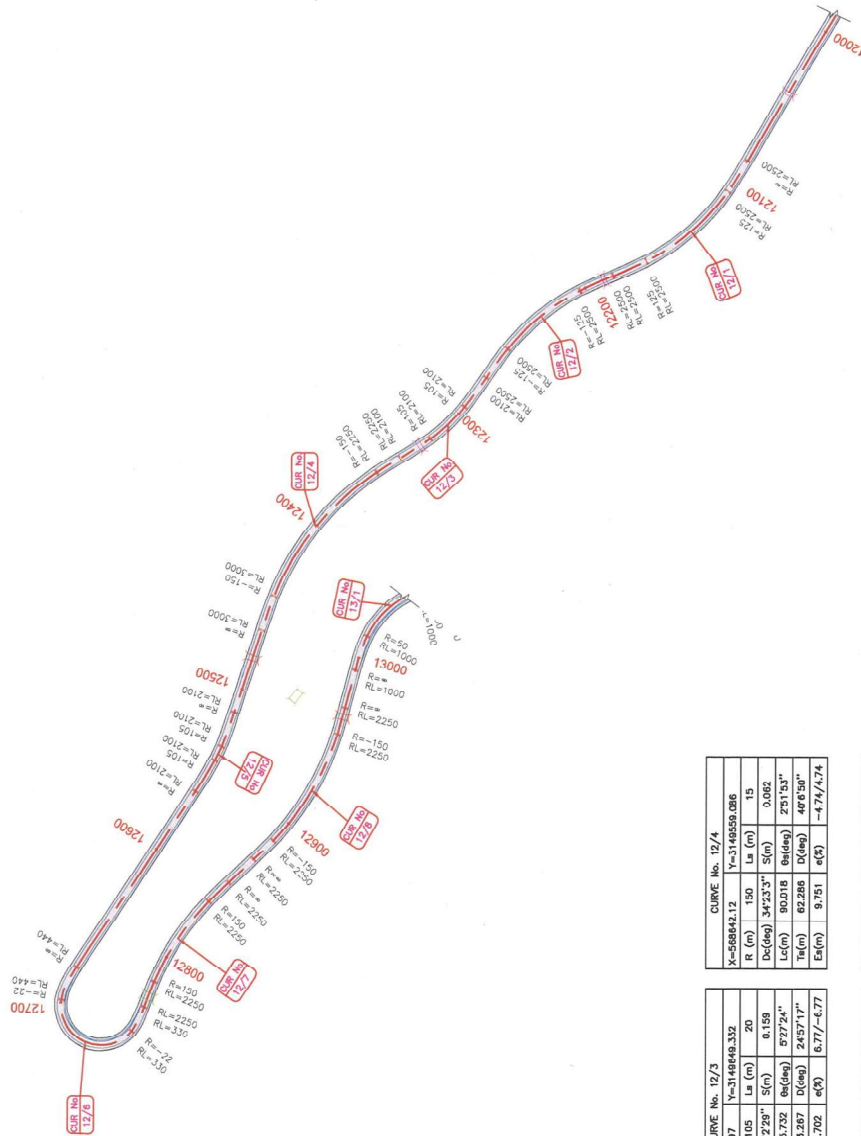
CURVE No. 11/10					
X=58557.463	Y=31495.474	R (m)	130	La (m)	15
Dc(deg)	11'17'3"	S(m)	0.082	Lc(m)	29.542
Tc(m)	28.845	D(deg)	17'0'48"	Ex(m)	1.332
Y=31495.474	X=58557.463	Y=31495.474	X=58557.463	Y=31495.474	X=58557.463



Resident Engineer
Bloom JV Jindals (Assn.) Kimppl

OWNER ENGINEERING CORPORATION		SAFETY CONSULTANT		EPC CONTRACTOR		AUTHORITY ENGINEER		PROOF CONSULTANT		PROJECT		DRAWN BY		DESIGNED BY		APPROVED BY		REVISION		DATE		DESCRIPTION		SCALE		TITLE	
National Highways & Infrastructure Development Corporation Ltd. (NHIDCL)		Jindals Consortium		Jindals Consortium		Jindals Consortium		Jindals Consortium		CONSTRUCTION OF HIGH ALTITUDE ROAD FROM DORAGALA TO GAU PETA, ROAD NO. 14, DISTRICT OF THE UPPER SUBANSERI DISTRICT OF THE STATE OF ARUNACHAL PRADESH ON EPC MODE		INDR		SK		DK		R-0		JULY-2022						PLAN CH. (011+000 TO CH. 012+000) DRG. NO. : AP/PLAN012	

BCX CULVERT 2mx2m
 BCX CULVERT 3mx3m
 BCX CULVERT 4mx4m



CURVE No. 12/4									
X=58844.12	Y=314959.086	R (m)	150	La (m)	15	Dc(deg)	3423.3"	S(m)	0.062
Lc(m)	90.018	Bc(deg)	2731.53"	Ta(m)	82.286	D(deg)	46.636"	Ex(m)	9.151
Ea(m)	9.151	e(%)	-4.74/-4.74						

CURVE No. 12/3									
X=58869.497	Y=3148448.332	R (m)	105	La (m)	20	Dc(deg)	14229.9"	S(m)	0.159
Lc(m)	25.732	Bc(deg)	577.24"	Ta(m)	33.267	D(deg)	2457.11"	Ex(m)	2.702
Ea(m)	2.702	e(%)	6.77/-4.77						

CURVE No. 12/2									
X=58866.558	Y=3149728.404	R (m)	125	La (m)	20	Dc(deg)	3242.46"	S(m)	0.133
Lc(m)	51.733	Bc(deg)	435.11"	Ta(m)	46.522	D(deg)	3252.48"	Ex(m)	5.437
Ea(m)	5.437	e(%)	-5.69/-5.69						

CURVE No. 12/1									
X=588706.171	Y=3148816.651	R (m)	125	La (m)	20	Dc(deg)	2727.10"	S(m)	0.133
Lc(m)	99.893	Bc(deg)	435.11"	Ta(m)	51.406	D(deg)	3637.13"	Ex(m)	6.807
Ea(m)	6.807	e(%)	5.69/-5.69						

CURVE No. 12/8									
X=58874.888	Y=3149446.592	R (m)	150	La (m)	15	Dc(deg)	2618.98"	S(m)	0.062
Lc(m)	68.359	Bc(deg)	2731.53"	Ta(m)	50.374	D(deg)	321.54"	Ex(m)	6.122
Ea(m)	6.122	e(%)	-4.74/-4.74						

CURVE No. 12/7									
X=58873.533	Y=3149336.185	R (m)	150	La (m)	15	Dc(deg)	30229.40"	S(m)	0.062
Lc(m)	53.811	Bc(deg)	291.53"	Ta(m)	42.43	D(deg)	2612.29"	Ex(m)	4.074
Ea(m)	4.074	e(%)	4.74/-4.74						

CURVE No. 12/6									
X=58874.192	Y=3149206.106	R (m)	22	La (m)	20	Dc(deg)	4723.11"	S(m)	0.752
Lc(m)	56.592	Bc(deg)	262.37"	Ta(m)	-122.661	D(deg)	19828.24"	Ex(m)	-196.531
Ea(m)	-196.531	e(%)	-7/7						

CURVE No. 12/5									
X=58868.459	Y=3149425.972	R (m)	105	La (m)	20	Dc(deg)	434.42"	S(m)	0.159
Lc(m)	6.371	Bc(deg)	577.24"	Ta(m)	24.291	D(deg)	4328.53"	Ex(m)	1.126
Ea(m)	1.126	e(%)	6.77/-6.77						



Resident Engineer
 Bloom Jindals (Assn.) Kmppl

OWNERS ENGINEERING: 		SAFETY CONSULTANT: 		EPC CONTRACTOR: 		INDO ENGINEERING PROJECT CORPORATION	
PROOF CONSULTANT: 		AUTHORITY ENGINEER: 		CONTRACTOR: 		INDO ENGINEERING PROJECT CORPORATION	
PROJECT: CONSTRUCTION OF HIGH ALTITUDE HILL ROAD FROM DODGINLA TO GAU FROM KM. 0.000 TO KM. 15.320 IN THE DISTRICT OF THE STATE OF ARUNACHAL PRADESH ON EPC MODE		REVISION: R-0 JULY-2022		SCALE: 		DATE: 	
TITLE: PLAN CH. (012+000 TO CH. 013+000)		DESIGNED BY: SK		APPROVED BY: DK		REVISION: R-0	
DRAWN BY: INDER		DESIGNED BY: SK		APPROVED BY: DK		REVISION: R-0	

BOX CULVERT 2m2m
BOX CULVERT 3m3m
BOX CULVERT 4m4m



CURVE No. 13/1					
X-588704.279	Y=314955.208				
R (m)	50	La (m)	20		
De(deg)	48°11'48"	S(m)	0.333		
Lc(m)	42.832	Bs(deg)	117°2'33"		
Tc(m)	46.833	D(deg)	72°5'54"		
Ec(m)	12.26	e(%)	7/-7		

CURVE No. 13/2					
X-588762.838	Y=3149626.266				
R (m)	65	La (m)	15		
De(deg)	49°49'4"	S(m)	0.144		
Lc(m)	56.516	Bs(deg)	6°36'40"		
Tc(m)	47.448	D(deg)	63°22'3"		
Ec(m)	11.419	e(%)	7/-7		

CURVE No. 13/3					
X-588796.939	Y=3149718.011				
R (m)	80	La (m)	15		
De(deg)	45°16'13"	S(m)	0.117		
Lc(m)	63.209	Bs(deg)	5°22'17"		
Tc(m)	50.108	D(deg)	56°0'48"		
Ec(m)	10.744	e(%)	-7/-7		

CURVE No. 13/4					
X-588803.125	Y=3149781.237				
R (m)	60	La (m)	15		
De(deg)	47°52'26"	S(m)	2.158		
Lc(m)	50.134	Bs(deg)	7°9'43"		
Tc(m)	43.783	D(deg)	62°11'53"		
Ec(m)	10.253	e(%)	7/-7		

CURVE No. 13/5					
X-588782.177	Y=3149356.107				
R (m)	150	La (m)	15		
De(deg)	45°7'24"	S(m)	0.082		
Lc(m)	23.187	Bs(deg)	2°51'53"		
Tc(m)	28.705	D(deg)	14°35'11"		
Ec(m)	1.386	e(%)	-2.67/2.67		

CURVE No. 13/6					
X-588788.169	Y=3149898.532				
R (m)	305	La (m)	0		
De(deg)	7°36'33"	S(m)	0		
Lc(m)	40.683	Bs(deg)	0°0'0"		
Tc(m)	20.371	D(deg)	7°36'33"		
Ec(m)	0.68	e(%)	2.5/-2.5		

CURVE No. 13/7					
X-588794.09	Y=3150090.228				
R (m)	26	La (m)	15		
De(deg)	145°9'0"	S(m)	0.468		
Lc(m)	50.667	Bs(deg)	21°29'9"		
Tc(m)	-280.609	D(deg)	188°7'19"		
Ec(m)	-308	e(%)	-7/-7		

CURVE No. 13/8					
X-588803.288	Y=3149872.653				
R (m)	200	La (m)	15		
De(deg)	144°6'2"	S(m)	0.047		
Lc(m)	51.548	Bs(deg)	2°5'55"		
Tc(m)	41.092	D(deg)	183°52'		
Ec(m)	2.848	e(%)	2.5/-2.5		

CURVE No. 13/9					
X-588824.77	Y=3148851.853				
R (m)	305	La (m)	0		
De(deg)	107°44'4"	S(m)	0		
Lc(m)	53.318	Bs(deg)	0°0'0"		
Tc(m)	27.03	D(deg)	107°44"		
Ec(m)	1.195	e(%)	-2.5/2.5		

CURVE No. 13/10					
X-588855.194	Y=3149763.222				
R (m)	50	La (m)	15		
De(deg)	31°30'54"	S(m)	0.187		
Lc(m)	27.502	Bs(deg)	83°5'46"		
Tc(m)	30.21	D(deg)	484°2'14"		
Ec(m)	5.889	e(%)	7/-7		

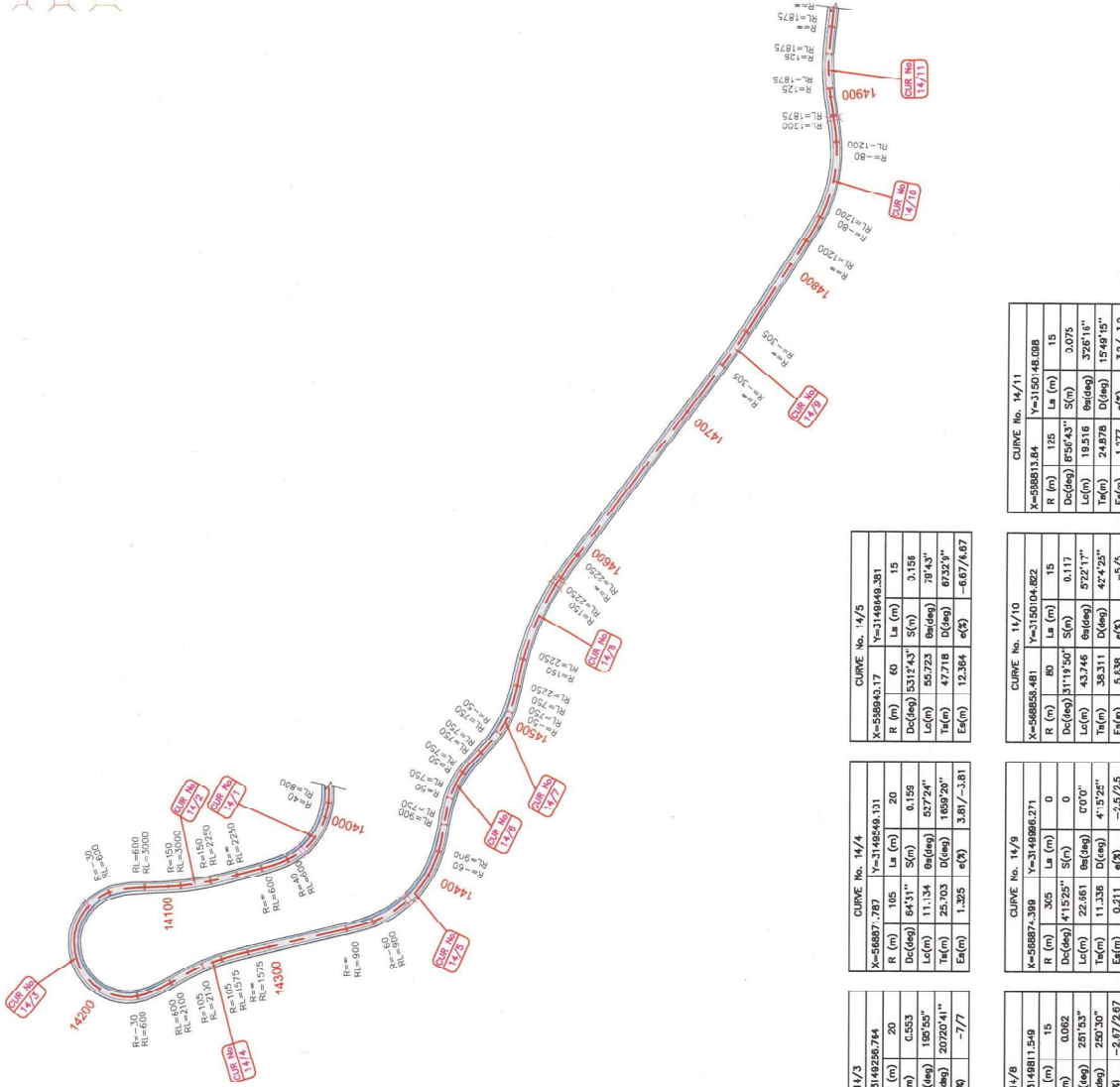
CURVE No. 13/11					
X-588923.211	Y=3149700.005				
R (m)	35	La (m)	20		
De(deg)	48°45'4"	S(m)	0.475		
Lc(m)	28.138	Bs(deg)	162°13'		
Tc(m)	39.114	D(deg)	784°8'11"		
Ec(m)	10.909	e(%)	-7/-7		



Resident Engineer
Bloom JV Jindals (Asst.) Kripal

OWNER: Andhra Pradesh Infrastructure Development Corporation Ltd. (AIDCL)	SAFETY CONSULTANT: Andhra Pradesh Infrastructure Development Corporation Ltd. (AIDCL)	EPC CONTRACTOR: IPPC	AUTHORITY ENGINEER: Jindals Consortium	PROOF CONSULTANT: KCC Global Engineering Pvt. Ltd.	PROJECT: CONSTRUCTION OF HIGH ALTITUDE HILL ROAD FROM DIGITALA TO GAU PALLA ROAD IN 15.202 IN UPPER SUBANSERI DISTRICT, WEST BENGAL, INDIA	TITLE: PLAN CH. (0+13+000 TO CH. 0+14+000)
DESIGNED BY: SK	APPROVED BY: DK	SCALE: R-0	REVISION: R-0	DATE: JULY-2022		

BOX CULVERT 2mx2m
BOX CULVERT 3mx3m
BOX CULVERT 4mx4m



CURVE No. 14/5

X=588943.17	Y=3148948.381
R (m)	60
Lc (m)	5312.43
S (m)	3.158
Dc(deg)	85.52
Lc(deg)	85.52
Tc(m)	47.718
Ec(m)	12.864
e(%)	-6.67/6.67

CURVE No. 14/11

X=588813.84	Y=3150148.088
R (m)	125
Lc (m)	15
S (m)	0.075
Dc(deg)	85.52
Lc(deg)	85.52
Tc(m)	18.516
Ec(m)	24.878
e(%)	3.2/-3.2

CURVE No. 14/10

X=588853.481	Y=3150104.822
R (m)	80
Lc (m)	15
S (m)	0.117
Dc(deg)	31.19
Lc(deg)	31.19
Tc(m)	43.746
Ec(m)	38.311
e(%)	-5/5

CURVE No. 14/9

X=58887.399	Y=3148986.271
R (m)	305
Lc (m)	0
S (m)	0
Dc(deg)	41.525
Lc(deg)	41.525
Tc(m)	22.861
Ec(m)	11.336
e(%)	-2.5/2.5

CURVE No. 14/8

X=58884.778	Y=3148811.540
R (m)	150
Lc (m)	15
S (m)	0.062
Dc(deg)	91.644
Lc(deg)	91.644
Tc(m)	50.472
Ec(m)	40.779
e(%)	-2.67/2.67

CURVE No. 14/7

X=58881.738	Y=3148755.215
R (m)	50
Lc (m)	15
S (m)	0.187
Dc(deg)	153.59
Lc(deg)	153.59
Tc(m)	13.141
Ec(m)	22.002
e(%)	3.54/-3.56

CURVE No. 14/6

X=58881.028	Y=3148745.709
R (m)	50
Lc (m)	15
S (m)	0.187
Dc(deg)	187.47
Lc(deg)	187.47
Tc(m)	13.141
Ec(m)	23.472
e(%)	-7/7

CURVE No. 14/3

X=58884.354	Y=3148926.784
R (m)	30
Lc (m)	20
S (m)	0.553
Dc(deg)	168.51
Lc(deg)	168.51
Tc(m)	88.860
Ec(m)	-115.635
e(%)	-7/7

CURVE No. 14/2

X=58837.186	Y=3148576.444
R (m)	150
Lc (m)	15
S (m)	0.082
Dc(deg)	124.38
Lc(deg)	124.38
Tc(m)	16.783
Ec(m)	23.457
e(%)	2.67/-2.67

CURVE No. 14/1

X=58878.5	Y=314833.565
R (m)	40
Lc (m)	20
S (m)	0.416
Dc(deg)	5815.37
Lc(deg)	5815.37
Tc(m)	48.271
Ec(m)	15.075
e(%)	7/-7

OWNER: National Highways & Infrastructure Development Corporation Ltd. (NHIDCL)

SAFETY CONSULTANT:

EPC CONTRACTOR:

AUTHORITY ENGINEER:

PROOF CONSULTANT:

PROJECT: CONSTRUCTION OF HIGH ALTITUDE ROLL ROAD FROM DIGHALIA TO GAU PUNJAL, UPPER SUBANSER DISTRICT OF THE STATE OF ARUNACHAL PRADESH ON EPC MODE.

RESIDENT ENGINEER: Bloom J. Jindas (Asst.) Kmppl

TITLE: PLAN

CH: (044+000 TO CH. 0+5+000)

DRG NO.: AP/PLAN/015

REVISION: R-0

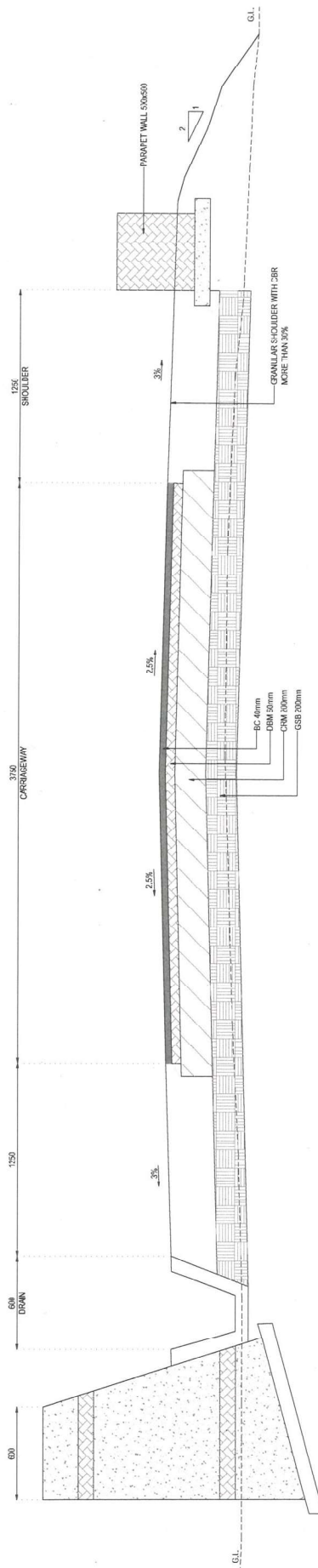
JULY-2022

DRAWN BY: INDER

DESIGNED BY: SK

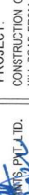
APPROVED BY: DK

SCALE:



Resident Engineer
Bloom Jv Jindals (Assn.) Knappl

TYPICAL CROSS SECTION FOR CUTTING HEIGHT LESS THAN 0.5 METER
TCS-1

OWNER ENGINEERING :	SAFETY CONSULTANT :	EPC CONTRACTOR :	AUTHORITY ENGINEER :	PROOF CONSULTANT :	PROJECT :	DRAWN BY :	TITLE :
 National Highways & Infrastructure Development Corporation Ltd. (NHIDCL)	 THE BRIDGE CONSULTANTS PVT. LTD.	 INDO ENGINEERING PROJECT CORPORATION	 ELOOM-JINDAL-KMPPH (JV)	 KGC GLOBAL CONSULTANTS PVT. LTD. 303, Connaught Place, New Delhi - 110075 www.kgcglobalconsultants.com	CONSTRUCTION OF HIGH ALTITUDE HILL ROAD FROM DGGINALA TO GAU FROM KM. 0.00 TO KM. 13.20 IN UPPER SUBANSIRI DISTRICT OF THE STATE OF ARUNACHAL PRADESH ON EPC MODE	DEEPAK SK DK	TYPICAL CROSS SECTION FOR COTTING HEIGHT LESS THAN 10 METER DRG. NO. : APTG36001
REV.		DATE	DESCRIPTION	SCALE :	REVISION : R-0		
					JULY-2022		

