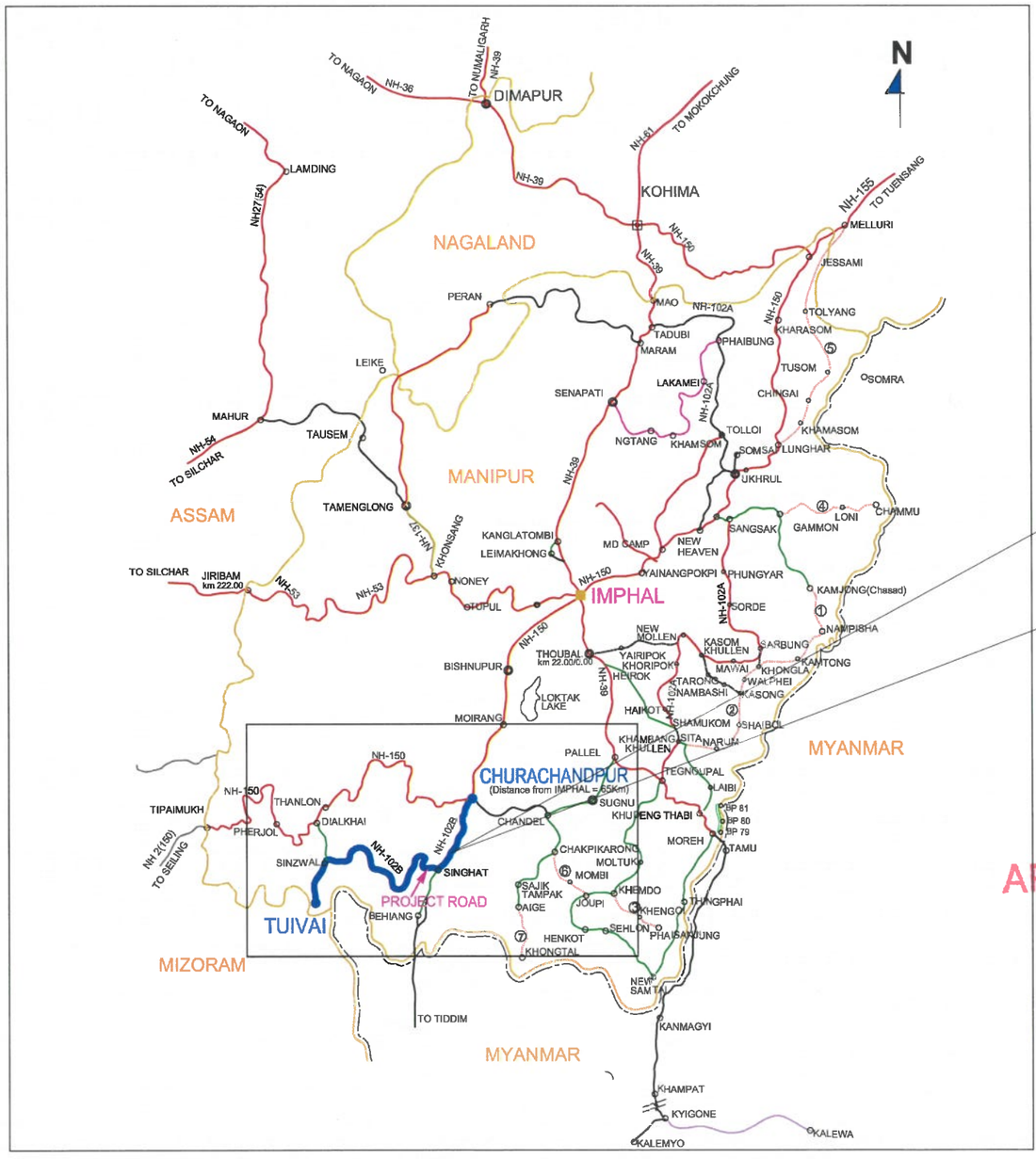
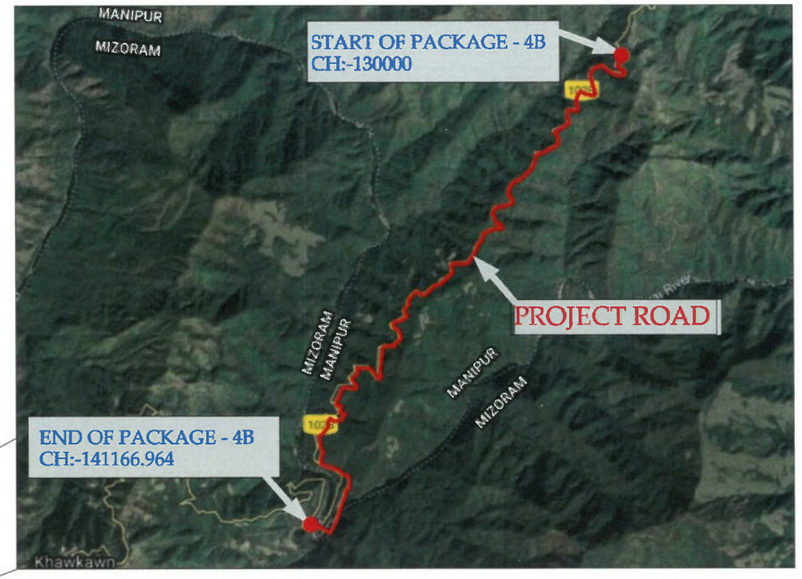
NHIDCL
BUILDING INFRASTRUCTURE - BUILDING THE NATION

National Highways & Infrastructure Development
राष्ट्रीय राजमार्ग एवं अवसंरचना विकास निगम लिमिटेड

Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction mode.





PLAN & LONGITUDINAL PROFILE

PACKAGE - 4B

(Km. 130+000 to Km. 141+166.964)

NOVEMBER - 2020

APPROVED

CHAITANYA PROJECTS CONSULTANCY PVT. LTD. * MSPARK FUTURISTICS & ASSOCIATES * NH-102-B Pur In association with

EPC CONTRACTOR:

GPT group

JC - 25, Sector - III, Salt Lake,
Kolkata - 700098.

DESIGN CONSULTANT:

SPS Technocrats Pvt. Ltd.

510 & 511, JMD Megapolis, Sector 48,
Gurugram, Haryana - 122018.

CONTENT SHEET

SR. NO.	DRAWING NAME	DRAWING NO	NO OF SHEETS
01	LIST OF DRAWINGS	GPT/CCT/4B/HW/GEN/LOD/01	01
02	LEGENDS & ABBREVIATIONS	GPT/CCT/4B/HW/GEN/LEGEND/01	01
03	HORIZONTAL ALIGNMENT REPORT	GPT/CCT/4B/HW/GEN/HOR/01 TO 05	05
04	VERTICAL ALIGNMENT REPORT	GPT/CCT/4B/HW/GEN/VER/01	01
05	TYPICAL CROSS SECTION	GPT/CCT/4B/HW/GEN/TCS/01 TO 09	09
06	PLAN & LONGITUDINAL PROFILE	GPT/CCT/4B/HW/PNP/01 TO 22	44

APPROVED

CHAITANYA PROJECTS CONSULTANCY PVT. LTD. NH-102-B PECPur In association with MSPARK FUTURISTICS & ASSOCIATES

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS Regd. No- 11/2004-05 BHUBANESWAR

Rev.	Date	Description

CLIENT: NHIDCL BUILDING INFRASTRUCTURE · BUILDING THE NATION

EPC CONTRACTOR: GPT Group
JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES
C-8,2ND FLOOR, R.K.TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS
PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD.
E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd.
510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE:	DEC - 2020

TITLE: LIST OF DRAWINGS
SCALE: AS SHOWN
REV: R0
DRG.NO: GPT/CCT/4B/HW/GEN/LOD/01

LEGENDS

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
LEGEND FOR PLAN			
	BUILDING (P, SP, K, UC)		COVERED DRAIN
	CULVERT, BRIDGE	11KV	11KV ELECTRIC LINE
	GATE	33KV	33KV ELECTRIC LINE
TP	TELEPHONE POLE		TOILET
EP	ELECTRIC POLE		EXISTING CARRIAGEWAY
	TEMPORARY BENCH MARK	P	REFFRENCE PILLAR
	SIDE ROAD	GPS	GPS PILLAR
	NALA & RIVER		SLAB CULVERT
	TRANSFORMER		PROPOSED CARRIAGEWAY EDGE
KM	KILOMETER POST		PROPOSED HS EDGE
T43	TREE		PROPOSED CENTER LINE
VILLAGE	VILLAGE NAME		PROPOSED SHOULDER EDGE
	BOUNDARY WALL	P ROW	PROPOSED RIGHT - OF - WAY
S41	SURVEY STATION	213	CONTOUR LINE
	FENCING		PROPOSED TOE LINE
	AGRICULTRAL FIELD		CUTTING TOE LINE
LP	LAMP POST		FILLING TOE LINE
	RETAINING WALL		EARTHEN SHOULDER
	GARDEN		HOR. TANGENT POINT
	WALL		VER. TANGENT POINT
	TEMPLE		PROP. BOX CULVERT

ABBREVIATIONS

SYMBOL	DESCRIPTION
△	TOTAL DEVIATION ANGLE OF CURVE
R	RADIUS OF CIRCULAR CURVE
Ts	TANGENT LENGTH
Es	APEX DISTANCE
Lc	LENGTH OF CIRCULAR CURVE
e	SUPER ELEVATION
Ls	LENGTH OF TRANSITION CURVE
$\triangle_s$	DEVIATION ANGLE OF TRANSITION CURVE
$\triangle_c$	DEVIATION OR CENTRAL ANGLE OF CIRCULAR CURVE
L	TOTAL LENGTH OF CURVE
S	SHIFT
PC	POINT OF CURVATURE
PT	POINT OF TANGENCY
TS	POINT OF CHANGE FROM TANGENT TO SPIRAL
SC	POINT OF CHANGE FROM SPIRAL TO CIRCULAR CURVE
CS	POINT OF CHANGE FROM CIRCULAR CURVE TO SPIRAL
ST	POINT OF CHANGE FROM SPIRAL TO TANGENT
IL	INVERT LEVEL OF CULVERT
PVI	POINT OF VERTICAL INTERSECTION
Lvs	LENGTH OF VALLEY CURVE
Lsc	LENGTH OF SUMMIT CURVE
HIP	HORIZONTAL INTERSECTION POINT

APPROVED

CHAITANYA PROJECTS CONSULTANCY PVT. LTD. NH-102 B Ganjam

SUVADRA CONSULTANTS Regd. No- 11/2004-05 BHUBANESWAR

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

Rev.	Date	Description

CLIENT: NAIDCL BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR: GPT Group
JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES
C-5,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS
PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD.
E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd.
510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE:	DEC - 2020

TITLE: LEGENDS & ABBREVIATIONS

SCALE: AS SHOWN

REV: R0

DRG.NO: GPT/CCT/4B/HW/GEN/LEGEND/01

REFERENCE PILLAR DETAILS

REFERENCE PILLAR DETAILS

TBM No.	Easting (m)	Northing (m)	R.L. (m)
GPS-4	529855.861	2662876.336	806.482
GPS-4A	529787.251	2662888.344	805.457
TBM-C26	529538.780	2662607.268	763.610
TBM-C28	527962.501	2660613.890	819.517
TBM-C30	527756.043	2660343.712	813.728
TBM-C31	527599.926	2660238.127	804.675
TBM-C32	527594.668	2660235.282	804.733
TBM-B20	527425.012	2660054.876	794.574
TBM-B19	527429.022	2660049.124	794.692
TBM-B16	527012.997	2659764.165	805.642
TBM-B15	527007.371	2659766.831	766.527
GPS-5	526974.616	2659627.979	756.879
GPS-5A	526936.732	2659594.215	756.889
GPS-6	526199.953	2657484.206	529.023
GPS-6A	526207.521	2657447.180	526.974

APPROVED

CHAITANYA PROJECTS CONSULTANCY PVT. LTD. NH-102-B Ccur. In association with MSPARK FUTURISTICS & ASSOCIATES

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS Regd. No- 11/2004-05 BHUBANESWAR

Rev.	Date	Description

CLIENT: NHIDCL BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR: GPT group
JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES
C-5,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010

SAFETY CONSULTANT: SUVADRA CONSULTANTS
PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD.
E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd.
510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE: DEC - 2020	

TITLE: REFERENCE PILLAR DETAILS

SCALE: AS SHOWN

REV: R0

DRG.NO: GPT/CCT/4B/HW/GEN/REF.PILLAR/01

ALIGNMENT REPORT

HORIZONTAL ALIGNMENT REPORT

HIP / Curve No.	HIP		Deflection Angle			Element	Start			End			Length (m)	Bearing (dd mm ss)	Hand of Arc	Design Speed (KM/H)	Radius (m)	Superelevation (%)
	Easting (m)	Northing (m)	Deg	Min	Sec		Chainage (m)	Easting (m)	Northing (m)	Chainage (m)	Easting (m)	Northing (m)						
						Start	130000	529887.09	2663056.401	130012.431	529883.725	2663044.434	12.431					
						Transition	130012.431	529883.725	2663044.434	130027.431	529878.952	2663030.230	15.000					
1	529877.805	2663023.385	31	57	31.3	Arc	130027.431	529878.952	2663030.23	130040.320	529872.200	2663019.292	12.889		Right	20.00	50	3.56%
						Transition	130040.32	529872.2	2663019.292	130055.320	529861.641	2663008.659	15.000					
						Straight	130055.32	529861.641	2663008.659	130055.741	529861.330	2663008.376	0.421	227 39 58				
						Transition	130055.741	529861.33	2663008.376	130075.741	529849.116	2662992.820	20.000					
2	529837.519	2662986.684	266	6	3.6	Arc	130075.741	529849.116	2662992.82	130088.517	529848.959	2662980.260	12.776		Left	20.00	-20	7.00%
						Transition	130088.517	529848.959	2662980.26	130108.517	529860.780	2662964.403	20.000					
						Straight	130108.517	529860.78	2662964.403	130113.210	529864.169	2662961.157	4.693	133 46 1.6				
						Transition	130113.21	529864.169	2662961.157	130133.210	529879.474	2662948.338	20.000					
3	529882.398	2662943.696	326	16	32.3	Arc	130133.21	529879.474	2662948.338	130142.640	529887.871	2662944.077	9.430		Left	30.00	-50	7.00%
						Transition	130142.64	529887.871	2662944.077	130162.640	529907.254	2662939.294	20.000					
						Straight	130162.64	529907.254	2662939.294	130164.405	529908.992	2662938.986	1.765	100 2 34				
						Transition	130164.405	529908.992	2662938.986	130184.405	529927.628	2662932.361	20.000					
4	529931.535	2662934.994	63	51	15	Arc	130184.405	529927.628	2662932.361	130186.694	529929.329	2662930.831	2.289		Right	20.00	20	7.00%
						Transition	130186.694	529929.329	2662930.831	130206.694	529937.885	2662912.998	20.000					
						Straight	130206.694	529937.885	2662912.998	130220.968	529941.844	2662899.285	14.274	163 53 48.9				
						Transition	130220.968	529941.844	2662899.285	130240.968	529944.109	2662879.636	20.000					
5	529952.245	2662863.257	105	53	22.1	Arc	130240.968	529944.109	2662879.636	130257.930	529934.240	2662866.464	16.962		Right	20.00	20	7.00%
						Transition	130257.93	529934.24	2662866.464	130277.930	529914.746	2662863.117	20.000					
						Straight	130277.93	529914.746	2662863.117	130294.877	529897.800	2662863.054	16.947	269 47 11				
						Transition	130294.877	529897.8	2662863.054	130309.877	529882.803	2662863.248	15.000					
6	529874.458	2662862.967	12	3	12.7	Arc	130309.877	529882.803	2662863.248	130326.433	529866.341	2662864.924	16.556		Right	40.00	150	4.74%
						Transition	130326.433	529866.341	2662864.924	130341.433	529851.612	2662867.756	15.000					
						Straight	130341.433	529851.612	2662867.756	130386.916	529807.096	2662877.089	45.483	281 50 23.7				
						Transition	130386.916	529807.096	2662877.089	130401.916	529792.470	2662880.410	15.000					
7	529769.749	2662884.918	23	5	40.3	Arc	130401.916	529792.47	2662880.41	130447.378	529750.903	2662898.387	45.462		Right	40.00	150	4.74%
						Transition	130447.378	529750.903	2662898.387	130462.378	529738.466	2662906.769	15.000					
						Straight	130462.378	529738.466	2662906.769	130495.324	529711.456	2662925.636	32.946	304 56 4				
						Transition	130495.324	529711.456	2662925.636	130515.324	529695.729	2662937.952	20.000					
8	529689.36	2662941.07	30	56	47.7	Arc	130515.324	529695.729	2662937.952	130528.272	529687.492	2662947.911	12.948		Right	30.00	61	6.56%
						Transition	130528.272	529687.492	2662947.911	130548.272	529678.346	2662965.670	20.000					
						Straight	130548.272	529678.346	2662965.67	130549.042	529678.032	2662966.373	0.770	335 52 51.7				
						Transition	130549.042	529678.032	2662966.373	130564.042	529670.870	2662979.511	15.000					
9	529662.928	2663000.107	275	13	25.3	Arc	130564.042	529670.87	2662979.511	130596.390	529642.451	2662991.864	32.348		Left	20.00	-32	5.56%
						Transition	130596.39	529642.451	2662991.864	130611.390	529627.959	2662988.138	15.000					
						Straight	130611.39	529627.959	2662988.138	130690.252	529553.346	2662962.599	78.862	251 6 17				
						Transition	130690.252	529553.346	2662962.599	130705.252	529539.319	2662957.302	15.000					
10	529500.306	2662944.444	297	33	19.6	Arc	130705.252	529539.319	2662957.302	130777.441	529494.584	2662903.768	72.189		Left	30	-80	5.00%
						Transition	130777.441	529494.584	2662903.768	130792.441	529491.865	2662889.022	15.000					
						Straight	130792.441	529491.865	2662889.022	130810.469	529489.150	2662871.200	18.028	188 39 36.6				
						Transition	130810.469	529489.15	2662871.2	130825.469	529487.139	2662856.338	15.000					
11	529482.278	2662826.08	331	28	41.5	Arc	130825.469	529487.139	2662856.338	130885.138	529492.925	2662797.343	59.669		Left	40.00	-150	4.74%
						Transition	130885.138	529492.925	2662797.343	130900.138	529497.784	2662783.154	15.000					
						Straight	130900.138	529497.784	2662783.154	131051.808	529549.314	2662640.507	151.670	160 8 18				
						Transition	131051.808	529549.314	2662640.507	131066.808	529553.208	2662626.064	15.000					
12	529569.478	2662584.688	119	23	32.9	Arc	131066.808	529553.208	2662626.064	131114.322	529525.855	2662593.274	47.514		Right	20.00	30	5.93%
						Transition	131114.322	529525.855	2662593.274	131129.322	529510.948	2662594.515	15.000					
						Straight	131129.322	529510.948	2662594.515	131194.702	529446.471	2662605.340	65.380	279 31 50.9				
						Transition	131194.702	529446.471	2662605.34	131214.702	529426.980	2662609.719	20.000					
13	529417.312	2662610.236	35	26	8	Arc	131214.702	529426.98	2662609.719	131232.428	529411.276	2662617.806	17.726		Right	30.00	61	6.56%
						Transition	131232.428	529411.276	2662617.806	131252.428	529396.393	2662631.131	20.000					
						Straight	131252.428	529396.393	2662631.131	131266.317	529386.566	2662640.946	13.889	314 57 58.9				
						Transition	131266.317	529386.566	2662640.946	131286.317	529370.777	2662652.990	20.000					
14	529354.242	2662673.232	251	21	38.9	Arc	131286.317	529370.777	2662652.99	131313.720	529345.072	2662648.756	27.403		Left	20.00	-25	7.00%
						Transition	131313.72	529345.072	2662648.756	131333.720	529333.980	2662632.284	20.000					
						Straight	131333.72	529333.98	2662632.284	131383.285	529311.999	2662587.861	49.565	206 19 37.8				
						Transition	131383.285	529311.999	2662587.861	131398.285	529305.572	2662574.309	15.000					
15	529280.389	2662523.98	313	57	2.2	Arc	131398.285	529305.572	2662574.309	131503.842	529299.616	2662471.088	105.557		Left	40.00	-150	4.74%
						Transition	131503.842	529299.616	2662471.088	131518.842	529304.441	2662456.887	15.000					
						Straight	131518.842	529304.441	2662456.887	131545.866	529313.561	2662431.448	27.024	160 16 40				
						Transition	131545.866	529313.561	2662431.448	131565.866	529318.160	2662412.086	20.000					
16	529339.771	2662358.335	131	25	27.6	Arc	131565.866	529318.16	2662412.086	131614.680	529286.799	2662381.790	48.814		Right	20.00	30	5.93%
						Transition	131614.68	529286.799	2662381.79	131634.680	529267.607	2662387.056	20.000					
						Straight	131634.68	529267.607	2662387.056	131672.611	529232.364	2662401.082	37.931	291 42 7.6				
						Transition	131672.611	529232.364	2662401.082	131687.611	529218.137	2662405.762	15.000					
17	529158.312	2662430.554	239	26	54.8	Arc	131687.611	529218.137	2662405.762	131758.876	529169.175	2662366.713	71.265		Left	20.00	-41	4.34%
						Transition	131758.876	529169.175	2662366.713	131773.876	529170.573	2662351.801	15.000					
						Straight	131773.876	529170.573	2662351.801	131879.261	529186.785	2662247.670	105.385	171 9 2.3				
						Transition	131879.261	529186.785	2662247.67	131899.261	529188.536	2662227.783	20.000					
18	529194.330	2662199.210	75	37	17	Arc	131899.261	529188.536	2662227.783	131945.253	529167.043	2662188.946	45.992		Right	30	50	7.00%
						Transition	131945.253	529167.043	2662188.946	131965.253	529149.261	2662179.868	20.000					
						Straight	131965.253	529149.261	2662179.868	132109.596	529016.619	2662122.940	144.343	246 46 19.4				
						Transition	132109.596	529016.619	2662122.94	132129.596	528999.985	2662112.238	20.000					
19	528975.097	2662105.12	241	7	32.2	Arc	132129.596	528999.985	2662112.238	132151.091	528997.371	2662091.931	21.495		Left	20.00	-20	7.00%
						Transition	132151.091	528997.371	2662091.931	132171.091	529010.752	2662077.365	20.000					
						Straight	132171.091	529010.752	2662077.365	132172.216	529011.640	2662076.674	1.125	127 53 51.6				
						Transition	132172.216	529011.64	2662076.674	132192.216	529026.543	2662063.389	20.000					
20	529036.644	2662057.211	46	38	36.4	Arc	132192.216	529026.543	2662063.389	132212.920	529036.440	2662045.372	20.704		Right	30.00	50	7.00%

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS BHUBANESWAR Regd. No. 111/2004-05

APPROVED

CHAITANYA PROJECTS CONSULTANCY PVT. LTD. NH-102-B PCCPur In association with MSPARK FUTURISTICS & ASSOCIATES

Rev.	Date	Description

CLIENT: NAIDCL BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR: GPT Group
JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES
C-5,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS
PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD.
E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd.
510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE: DEC - 2020	

TITLE: HORIZONTAL ALIGNMENT REPORT
SCALE: AS SHOWN
REV: R0
DRG.NO: GPT/CCT/4B/HW/GEN/HOR/01

HORIZONTAL ALIGNMENT REPORT

HIP / Curve No.	HIP		Deflection Angle			Element	Start			End			Length (m)	Bearing (dd mm ss)	Hand of Arc	Design Speed (KM/H)	Radius (m)	Superelevation (%)
	Easting (m)	Northing (m)	Deg	Min	Sec		Chainage (m)	Easting (m)	Northing (m)	Chainage (m)	Easting (m)	Northing (m)						
						Transition	132212.92	529036.44	2662045.372	132232.920	529039.658	2662025.669	20.000					
						Straight	132232.92	529039.658	2662025.669	132278.735	529044.017	2661980.062	45.815	174 32 28				
						Transition	132278.735	529044.017	2661980.062	132303.735	529043.861	2661955.165	25.000					
21	529047.179	2661946.972	53	2	50.6	Arc	132303.735	529043.861	2661955.165	132316.695	529039.222	2661943.122	12.960		Right	30	41	7.00%
						Transition	132316.695	529039.222	2661943.122	132341.695	529022.637	2661924.553	25.000					
						Straight	132341.695	529022.637	2661924.553	132391.487	528985.874	2661890.971	49.792	227 35 18.6				
						Transition	132391.487	528985.874	2661890.971	132411.487	528970.678	2661877.982	20.000					
22	528958.873	2661866.305	29	26	12.3	Arc	132411.487	528970.678	2661877.982	132443.378	528942.557	2661863.223	31.891		Right	40	101	7.00%
						Transition	132443.378	528942.557	2661863.223	132463.378	528923.235	2661858.094	20.000					
						Straight	132463.378	528923.235	2661858.094	132466.007	528920.673	2661857.504	2.629	257 1 30.8				
						Transition	132466.007	528920.673	2661857.504	132486.007	528901.351	2661852.375	20.000					
23	528884.430	2661849.153	329	54	22.3	Arc	132486.007	528901.351	2661852.375	132519.056	528872.306	2661836.917	33.049		Left	40	-101	7.00%
						Transition	132519.056	528872.306	2661836.917	132539.056	528857.259	2661823.755	20.000					
						Straight	132539.056	528857.259	2661823.755	132540.332	528856.327	2661822.884	1.276	226 55 53.1				
						Transition	132540.332	528856.327	2661822.884	132565.332	528836.509	2661807.814	25.000					
24	528831.506	2661799.682	54	39	28.7	Arc	132565.332	528836.509	2661807.814	132579.445	528822.993	2661804.004	14.113		Right	30	41	7.00%
						Transition	132579.445	528822.993	2661804.004	132604.445	528798.222	2661806.508	25.000					
						Straight	132604.445	528798.222	2661806.508	132605.512	528797.176	2661806.722	1.067	281 35 21.8				
						Transition	132605.512	528797.176	2661806.722	132635.512	528767.490	2661808.238	30.000					
25	528739.687	2661818.512	255	51	52.4	Arc	132635.512	528767.49	2661808.238	132665.490	528745.463	2661789.440	29.978		Left	30	-33	7.00%
						Transition	132665.49	528745.463	2661789.44	132695.490	528742.294	2661759.884	30.000					
						Straight	132695.49	528742.294	2661759.884	132696.357	528742.332	2661759.018	0.867	177 27 14.2				
						Transition	132696.357	528742.332	2661759.018	132711.357	528742.384	2661744.028	15.000					
26	528743.176	2661740.048	21	17	10.2	Arc	132711.357	528742.384	2661744.028	132719.020	528741.306	2661736.447	7.663		Right	30	61	6.56%
						Transition	132719.02	528741.306	2661736.447	132734.020	528737.075	2661722.066	15.000					
						Straight	132734.02	528737.075	2661722.066	132767.603	528726.286	2661690.264	33.583	198 44 24.4				
						Transition	132767.603	528726.286	2661690.264	132782.603	528721.231	2661676.143	15.000					
27	528720.018	2661671.788	9	9	7.9	Arc	132782.603	528721.231	2661676.143	132791.563	528717.685	2661667.915	8.960		Right	40	150	4.74%
						Transition	132791.563	528717.685	2661667.915	132806.563	528710.891	2661654.544	15.000					
						Straight	132806.563	528710.891	2661654.544	132847.037	528691.957	2661618.772	40.474	207 53 32.3				
						Transition	132847.037	528691.957	2661618.772	132867.037	528682.027	2661601.421	20.000					
28	528678.506	2661593.360	21	0	22.6	Arc	132867.037	528682.027	2661601.421	132884.067	528671.462	2661588.090	17.030		Right	40	101	7.00%
						Transition	132884.067	528671.462	2661588.09	132904.067	528656.840	2661574.458	20.000					
						Straight	132904.067	528656.84	2661574.458	133052.677	528544.855	2661476.763	148.610	228 53 54.9				
						Transition	133052.677	528544.855	2661476.763	133072.677	528529.365	2661464.125	20.000					
29	528521.172	2661456.102	23	55	22.3	Arc	133072.677	528529.365	2661464.125	133094.848	528510.039	2661453.351	22.171		Right	40	101	7.00%
						Transition	133094.848	528510.039	2661453.351	133114.848	528491.145	2661446.819	20.000					
						Straight	133114.848	528491.145	2661446.819	133137.772	528469.244	2661440.049	22.924	252 49 17.2				
						Transition	133137.772	528469.244	2661440.049	133157.772	528450.350	2661433.517	20.000					
30	528406.464	2661420.641	302	18	51.1	Arc	133157.772	528450.35	2661433.517	133239.459	528395.160	2661376.324	81.687		Left	40.00	-101	7.00%
						Transition	133239.459	528395.16	2661376.324	133259.459	528389.306	2661357.209	20.000					
						Straight	133259.459	528389.306	2661357.209	133329.088	528371.126	2661289.996	69.629	195 8 8.3				
						Transition	133329.088	528371.126	2661289.996	133359.088	528367.777	2661260.460	30.000					
31	528361.062	2661252.789	290	33	55.7	Arc	133359.088	528367.777	2661260.46	133369.079	528371.112	2661251.082	9.991		Left	30.00	-33	7.00%
						Transition	133369.079	528371.112	2661251.082	133399.079	528392.362	2661230.296	30.000					
						Straight	133399.079	528392.362	2661230.296	133402.309	528394.985	2661228.412	3.230	125 42 4				
						Transition	133402.309	528394.985	2661228.412	133427.309	528413.788	2661212.065	25.000					
32	528466.532	2661176.998	117	51	17.7	Arc	133427.309	528413.788	2661212.065	133494.872	528408.833	2661150.872	67.563		Right	30	45	7.00%
						Transition	133494.872	528408.833	2661150.872	133519.872	528387.646	2661137.763	25.000					
						Straight	133519.872	528387.646	2661137.763	133564.867	528347.359	2661117.726	44.995	243 33 21.8				
						Transition	133564.867	528347.359	2661117.726	133579.867	528333.838	2661111.234	15.000					
33	528304.167	2661096.244	25	29	55.6	Arc	133579.867	528333.838	2661111.234	133644.974	528270.926	2661095.904	65.107		Right	40	180	3.95%
						Transition	133644.974	528270.926	2661095.904	133659.974	528255.934	2661095.448	15.000					
						Straight	133659.974	528255.934	2661095.448	133682.861	528233.050	2661095.071	22.887	269 3 17.3				
						Transition	133682.861	528233.05	2661095.071	133707.861	528208.327	2661092.139	25.000					
34	528202.337	2661094.564	312	38	42.2	Arc	133707.861	528208.327	2661092.139	133716.748	528200.264	2661088.443	8.887		Left	30	-41	7.00%
						Transition	133716.748	528200.264	2661088.443	133741.748	528181.903	2661071.629	25.000					
						Straight	133741.748	528181.903	2661071.629	133755.399	528172.822	2661061.436	13.651	221 41 59.5				
						Transition	133755.399	528172.822	2661061.436	133775.399	528160.367	2661045.818	20.000					
35	528138.814	2661023.267	292	15	19.9	Arc	133775.399	528160.367	2661045.818	133827.523	528153.482	2660995.736	52.124		Left	30	-61	6.56%
						Transition	133827.523	528153.482	2660995.736	133847.523	528161.260	2660977.337	20.000					
						Straight	133847.523	528161.26	2660977.337	133920.945	528193.497	2660911.371	73.422	153 57 19.4				
						Transition	133920.945	528193.497	2660911.371	133940.945	528203.235	2660893.929	20.000					
36	528206.477	2660884.811	324	34	20.9	Arc	133940.945	528203.235	2660893.929	133958.663	528215.446	2660881.177	17.718		Left	30	-61	6.56%
						Transition	133958.663	528215.446	2660881.177	133978.663	528232.450	2660870.693	20.000					
						Straight	133978.663	528232.45	2660870.693	134012.958	528262.581	2660854.314	34.295	118 31 40.3				
						Transition	134012.958	528262.581	2660854.314	134032.958	528278.155	2660842.121	20.000					
37	528336.313	2660814.234	148	33	54	Arc	134032.958	528278.155	2660842.121	134064.817	528271.814	2660814.237	31.859		Right	20	20	7.00%
						Transition	134064.817	528271.814	2660814.237	134084.817	528252.500	2660809.978	20.000					
						Straight	134084.817	528252.5	2660809.978	134151.977	528185.426	2660806.572	67.160	267 5 34.4				
						Transition	134151.977	528185.426	2660806.572	134171.977	528165.505	2660804.899	20.000					
38	528151.367	2660804.842	333	11	39.7	Arc	134171.977	528165.505	2660804.899	134199.230	528139.428	2660797.269	27.253		Left	40.00	-101	7.00%
						Transition	134199.23	528139.428	2660797.269	134219.230	528121.748	2660787.939	20.000					
						Straight	134219.23	528121.748	2660787.939	134300.566	528051.106	2660747.625	81.336	240 17 14				
						Transition	134300.566	528051.106	2660747.625	134320.566	528034.464	2660736.596	20.000					
39	528022.967	2660731.566	311	59	43.2	Arc	134320.566	528034.464	2660736.596	134342.458	528021.611	2660719.090	21.892		Left	30.00	-50	7.00%
						Transition	134342.458	528021.611	2660719.09	134362.458	528016.075	2660699.909	20.000					
						Straight	134362.458	528016.075	2660699.909	134407.577	528006.476	2660655.823	45.119	192 16 57.2				
						Transition	134407.577	528006.476	2660655.823	134422.577	528002.766	2660641.297	15.000					

APPROVED
CHAITANYA PROJECTS CONSULTANCY PVT. LTD.
KL-102/B
CCPJ
In association with
MSPARK FUTURISTICS & ASSOCIATES

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS
Regd. No- 117204-05
BHUBANESWAR

Rev.	Date	Description

Client: NIDCL — BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC Contractor: GPT Group
JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

Authority Engineer: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES
C-5,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

Safety Consultant: SUVADRA CONSULTANTS
PP-97, Tankapani Road, BBSR-18, Odisha

Proof Consultant: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD.
E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

Design Consultant: SPS Technocrats Pvt. Ltd.
510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

Project: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

Drawn	AMIT	Title: HORIZONTAL ALIGNMENT REPORT	
Designed	DHEERESH	Scale: AS SHOWN	Rev: R0
Checked	VIPUL		
Date: DEC - 2020		Drg. No: GPT/CCT/4B/HW/GEN/HOR/02	

HORIZONTAL ALIGNMENT REPORT

HIP / Curve No.	HIP		Deflection Angle			Element	Start			End			Length (m)	Bearing (dd mm ss)	Hand of Arc	Design Speed (KM/H)	Radius (m)	Superelevation (%)
	Easting (m)	Northing (m)	Deg	Min	Sec		Chainage (m)	Easting (m)	Northing (m)	Chainage (m)	Easting (m)	Northing (m)						
40	528000.82	2660629.842	30	27	24.1	Arc	134422.577	528002.766	2660641.297	134444.787	527992.550	2660621.681	22.210		Right	30	70	5.71%
						Transition	134444.787	527992.55	2660621.681	134459.787	527982.775	2660610.313	15.000					
						Straight	134459.787	527982.775	2660610.313	134488.633	527963.198	2660589.127	28.846	222 44 21.3				
						Transition	134488.633	527963.198	2660589.127	134503.633	527953.204	2660577.944	15.000					
41	527936.052	2660559.750	335	33	34.8	Arc	134503.633	527953.204	2660577.944	134552.617	527928.439	2660535.933	48.984		Left	40	-150	4.74%
						Transition	134552.617	527928.439	2660535.933	134567.617	527923.493	2660521.773	15.000					
						Straight	134567.617	527923.493	2660521.773	134612.202	527909.495	2660479.443	44.585	198 17 56.2				
						Transition	134612.202	527909.495	2660479.443	134632.202	527901.978	2660460.948	20.000					
42	527902.007	2660456.801	30	47	42.6	Arc	134632.202	527901.978	2660460.948	134639.076	527898.167	2660455.234	6.874		Right	30.00	50	7.00%
						Transition	134639.076	527898.167	2660455.234	134659.076	527883.983	2660441.185	20.000					
						Straight	134659.076	527883.983	2660441.185	134671.746	527874.407	2660432.888	12.670	229 5 38.8				
						Transition	134671.746	527874.407	2660432.888	134686.746	527863.434	2660422.673	15.000					
43	527855.747	2660416.721	332	27	9.9	Arc	134686.746	527863.434	2660422.673	134705.401	527852.680	2660407.496	18.655		Left	30.00	-70	5.71%
						Transition	134705.401	527852.68	2660407.496	134720.401	527846.680	2660393.757	15.000					
						Straight	134720.401	527846.68	2660393.757	134734.824	527841.382	2660380.342	14.423	201 32 48.7				
						Transition	134734.824	527841.382	2660380.342	134754.824	527832.830	2660362.302	20.000					
44	527825.706	2660340.64	66	1	4.9	Arc	134754.824	527832.83	2660362.302	134792.436	527802.906	2660341.001	37.612		Right	30.00	50	7.00%
						Transition	134792.436	527802.906	2660341.001	134812.436	527783.060	2660338.826	20.000					
						Straight	134812.436	527783.06	2660338.826	134983.454	527612.196	2660331.560	171.018	267 33 53.6				
						Transition	134983.454	527612.196	2660331.56	135003.454	527592.847	2660327.460	20.000					
45	527575.65	2660330.006	255	59	15.8	Arc	135003.454	527592.847	2660327.46	135019.761	527583.624	2660314.558	16.307		Left	20.00	-20	7.00%
						Transition	135019.761	527583.624	2660314.558	135039.761	527586.007	2660294.924	20.000					
						Straight	135039.761	527586.007	2660294.924	135092.211	527600.857	2660244.620	52.450	163 33 9.4				
						Transition	135092.211	527600.857	2660244.62	135117.211	527605.449	2660220.151	25.000					
46	527611.526	2660208.481	62	24	42.9	Arc	135117.211	527605.449	2660220.151	135136.872	527600.489	2660201.320	19.661		Right	30.00	41	7.00%
						Transition	135136.872	527600.489	2660201.32	135161.872	527584.437	2660182.289	25.000					
						Straight	135161.872	527584.437	2660182.289	135181.264	527570.496	2660168.809	19.392	225 57 52.3				
47	527528.903	2660128.594	4	25	3.5	Arc	135181.264	527570.496	2660168.809	135296.917	527484.336	2660091.702	115.653		Right	40	1500	2.50%
						Straight	135296.917	527484.336	2660091.702	135341.907	527449.680	2660063.013	44.990	230 22 55.8				
						Transition	135341.907	527449.68	2660063.013	135361.907	527433.619	2660051.135	20.000					
48	527428.609	2660045.571	31	38	30	Arc	135361.907	527433.619	2660051.135	135375.594	527421.122	2660045.623	13.687		Right	30.00	61	6.56%
						Transition	135375.594	527421.122	2660045.623	135395.594	527401.520	2660041.775	20.000					
						Straight	135395.594	527401.52	2660041.775	135412.549	527384.730	2660039.423	16.955	262 1 25.8				
						Transition	135412.549	527384.73	2660039.423	135432.549	527365.187	2660035.342	20.000					
49	527356.255	2660035.433	319	6	18.7	Arc	135432.549	527365.187	2660035.342	135448.236	527351.447	2660027.906	15.687		Left	30.00	-50	7.00%
						Transition	135448.236	527351.447	2660027.906	135468.236	527337.343	2660013.776	20.000					
						Straight	135468.236	527337.343	2660013.776	135565.205	527273.561	2659940.736	96.969	221 7 44.5				
						Transition	135565.205	527273.561	2659940.736	135585.205	527259.620	2659926.429	20.000					
50	527232.686	2659893.928	80	48	17.7	Arc	135585.205	527259.62	2659926.429	135651.234	527197.452	2659917.173	66.029		Right	30	61	6.56%
						Transition	135651.234	527197.452	2659917.173	135671.234	527179.948	2659926.798	20.000					
						Straight	135671.234	527179.948	2659926.798	135696.126	527158.823	2659939.964	24.892	301 56 2.2				
						Transition	135696.126	527158.823	2659939.964	135716.126	527141.215	2659949.373	20.000					
51	527109.296	2659970.833	272	16	31.2	Arc	135716.126	527141.215	2659949.373	135772.680	527088.784	2659938.297	56.554		Left	30.00	-50	7.00%
						Transition	135772.68	527088.784	2659938.297	135792.680	527076.485	2659922.570	20.000					
						Straight	135792.68	527076.485	2659922.57	135881.170	527026.734	2659849.390	88.490	214 12 33.4				
						Transition	135881.17	527026.734	2659849.39	135896.170	527019.084	2659836.513	15.000					
52	527013.709	2659830.23	318	21	48.7	Arc	135896.17	527019.084	2659836.513	135910.965	527015.676	2659822.199	14.795		Left	20.00	-41	4.34%
						Transition	135910.965	527015.676	2659822.199	135925.965	527016.704	2659807.257	15.000					
						Straight	135925.965	527016.704	2659807.257	135943.396	527018.957	2659789.971	17.431	172 34 22.1				
						Transition	135943.396	527018.957	2659789.971	135958.396	527019.650	2659775.029	15.000					
53	527022.188	2659765.187	60	1	32	Arc	135958.396	527019.65	2659775.029	135974.826	527013.419	2659760.048	16.430		Right	20.00	30	5.93%
						Transition	135974.826	527013.419	2659760.048	135989.826	527002.333	2659750.006	15.000					
						Straight	135989.826	527002.333	2659750.006	136016.191	526981.389	2659733.992	26.365	232 35 54.1				
						Transition	136016.191	526981.389	2659733.992	136031.191	526970.135	2659724.115	15.000					
54	526936.898	2659699.974	255	2	17.2	Arc	136031.191	526970.135	2659724.115	136083.972	526970.036	2659675.697	52.781		Left	20.00	-37	4.80%
						Transition	136083.972	526970.036	2659675.697	136098.972	526981.249	2659665.774	15.000					
						Straight	136098.972	526981.249	2659665.774	136099.571	526981.723	2659665.408	0.599	127 38 11.3				
						Transition	136099.571	526981.723	2659665.408	136114.571	526992.768	2659655.320	15.000					
55	527031.96	2659626.67	123	6	30.8	Arc	136114.571	526992.768	2659655.32	136164.031	526985.733	2659611.840	49.460		Right	20.00	30	5.93%
						Transition	136164.031	526985.733	2659611.84	136179.031	526972.071	2659605.750	15.000					
						Straight	136179.031	526972.071	2659605.75	136328.475	526830.987	2659556.467	149.444	250 44 42				
						Transition	136328.475	526830.987	2659556.467	136358.475	526804.448	2659542.953	30.000					
56	526726.246	2659519.88	223	11	12.3	Arc	136358.475	526804.448	2659542.953	136416.825	526802.306	2659490.508	58.350		Left	30.00	-37	7.00%
						Transition	136416.825	526802.306	2659490.508	136446.825	526827.655	2659474.875	30.000					
						Straight	136446.825	526827.655	2659474.875	136477.040	526855.272	2659462.618	30.215	113 55 54.3				
						Transition	136477.04	526855.272	2659462.618	136492.040	526868.749	2659456.051	15.000					
57	526895.292	2659444.857	54	42	50.6	Arc	136492.04	526868.749	2659456.051	136543.886	526900.437	2659416.514	51.846		Right	30.00	70	5.71%
						Transition	136543.886	526900.437	2659416.514	136558.886	526903.912	2659401.930	15.000					
						Straight	136558.886	526903.912	2659401.93	136594.705	526910.964	2659366.811	35.819	168 38 44.9				
						Transition	136594.705	526910.964	2659366.811	136614.705	526913.582	2659347.019	20.000					
58	526917.787	2659332.832	52	13	23.7	Arc	136614.705	526913.582	2659347.019	136640.279	526907.139	2659322.558	25.574		Right	30	50	7.00%
						Transition	136640.279	526907.139	2659322.558	136660.279	526895.110	2659306.624	20.000					
						Straight	136660.279	526895.11	2659306.624	136744.016	526840.318	2659243.301	83.737	220 52 8.6				
						Transition	136744.016	526840.318	2659243.301	136764.016	526826.278	2659229.107	20.000					
59	526815.945	2659215.134	56	52	54.4	Arc	136764.016	526826.278	2659229.107	136793.655	526798.955	2659218.788	29.639		Right	30.00	50	7.00%
						Transition	136793.655	526798.955	2659218.788	136813.655	526779.037	2659220.157	20.000					
						Straight	136813.655	526779.037	2659220.157	136845.863	526747.123	2659224.501	32.208	277 45 3				
						Transition	136845.863	526747.123	2659224.501	136880.863	526712.272	2659226.091	35.000					
60	526662.972	2659235.955	268	33	1.4	Arc	136880.863	526712.272	2659226.091	136949.610	526660.570	2659185.736	68.747		Left	40.00	-65	7.00%

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS BHUBANESWAR Regd. No- 11/2004-05

APPROVED

CHAITANYA PROJECTS CONSULTANCY PVT. LTD. BHUBANESWAR In Association with MSPARK FUTURISTICS & ASSOCIATES NH-102B CCPM

Rev.	Date	Description

Client: NIDCL — BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC Contractor: GPT Group — JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

Authority Engineer: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES — C-5,2ND FLOOR, RK TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010

Safety Consultant: SUVADRA CONSULTANTS — PP-97, Tankapani Road, BBSR-18, Odisha

Proof Consultant: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD. — E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

Design Consultant: SPS Technocrats Pvt. Ltd. — # 510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

Project: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

Drawn	AMIT
Designed	DHEERESH
Checked	VIPUL
Date:	DEC - 2020

Title: **HORIZONTAL ALIGNMENT REPORT**

Scale: **AS SHOWN**

Rev: **R0**

Drg. No: **GPT/CCT/4B/HW/GEN/HOR/03**

HORIZONTAL ALIGNMENT REPORT

HIP / Curve No.	HIP		Deflection Angle			Element	Start			End			Length (m)	Bearing (dd mm ss)	Hand of Arc	Design Speed (KM/H)	Radius (m)	Superelevation (%)
	Easting (m)	Northing (m)	Deg	Min	Sec		Chainage (m)	Easting (m)	Northing (m)	Chainage (m)	Easting (m)	Northing (m)						
						Transition	136949.61	526660.57	2659185.736	136984.610	526653.651	2659151.541	35.000					
						Straight	136984.61	526653.651	2659151.541	137068.932	526644.396	2659067.729	84.322	186 18 4.4				
61	526641.764	2659043.893	4	34	39.1	Arc	137068.932	526644.396	2659067.729	137116.867	526637.238	2659020.343	47.935		Right	40.00	600	2.50%
						Straight	137116.867	526637.238	2659020.343	137129.600	526634.835	2659007.839	12.733	190 52 43.5				
62	526619.464	2658927.859	336	58	57.6	Arc	137129.6	526634.835	2659007.839	137290.292	526636.590	2658848.236	160.692		Left	40	-400	2.50%
						Straight	137290.292	526636.59	2658848.236	137308.817	526640.485	2658830.125	18.525	167 51 41.1				
						Transition	137308.817	526640.485	2658830.125	137333.817	526642.053	2658805.395	25.000					
63	526678.866	2658651.681	160	42	1.7	Arc	137333.817	526642.053	2658805.395	137387.350	526599.576	2658788.416	53.533		Right	20	28	6.35%
						Transition	137387.35	526599.576	2658788.416	137412.350	526583.665	2658807.412	25.000					
						Straight	137412.35	526583.665	2658807.412	137512.385	526531.489	2658892.762	100.035	328 33 42.8				
						Transition	137512.385	526531.489	2658892.762	137532.385	526519.965	2658909.065	20.000					
64	526512.475	2658923.866	304	31	20.7	Arc	137532.385	526519.965	2658909.065	137560.798	526495.892	2658923.428	28.413		Left	30	-50	7.00%
						Transition	137560.798	526495.892	2658923.428	137580.798	526476.072	2658925.828	20.000					
						Straight	137580.798	526476.072	2658925.828	137710.423	526346.635	2658932.802	129.625	273 5 3.5				
						Transition	137710.423	526346.635	2658932.802	137730.423	526326.982	2658930.582	20.000					
65	526287.527	2658935.987	225	49	14.9	Arc	137730.423	526326.982	2658930.582	137757.260	526316.082	2658908.229	26.837		Left	20	-20	7.00%
						Transition	137757.26	526316.082	2658908.229	137777.260	526326.436	2658891.377	20.000					
						Straight	137777.26	526326.436	2658891.377	137778.355	526327.156	2658890.552	1.095	138 54 18.4				
						Transition	137778.355	526327.156	2658890.552	137793.355	526336.016	2658878.500	15.000					
66	526355.043	2658858.578	98	7	4.5	Arc	137793.355	526336.016	2658878.5	137829.730	526331.279	2658844.643	36.375		Right	20	30	5.93%
						Transition	137829.73	526331.279	2658844.643	137844.730	526319.452	2658835.485	15.000					
						Straight	137844.73	526319.452	2658835.485	137901.753	526271.616	2658804.447	57.023	237 1 23				
						Transition	137901.753	526271.616	2658804.447	137916.753	526259.788	2658795.290	15.000					
67	526234.390	2658780.294	258	49	4	Arc	137916.753	526259.788	2658795.29	137954.732	526255.812	2658760.020	37.979		Left	20	-30	5.93%
						Transition	137954.732	526255.812	2658760.02	137969.732	526265.304	2658748.459	15.000					
						Straight	137969.732	526265.304	2658748.459	138024.863	526303.711	2658708.908	55.131	135 50 27				
						Transition	138024.863	526303.711	2658708.908	138039.863	526313.203	2658697.347	15.000					
68	526364.703	2658646.099	138	31	39.8	Arc	138039.863	526313.203	2658697.347	138097.396	526292.366	2658652.873	57.533		Right	20	30	5.93%
						Transition	138097.396	526292.366	2658652.873	138112.396	526277.408	2658652.768	15.000					
						Straight	138112.396	526277.408	2658652.768	138227.900	526162.239	2658661.566	115.504	274 22 6.8				
						Transition	138227.9	526162.239	2658661.566	138252.900	526137.350	2658660.936	25.000					
69	526108.569	2658665.666	270	22	11.1	Arc	138252.9	526137.35	2658660.936	138292.038	526108.684	2658636.499	39.138		Left	30	-41	7.00%
						Transition	138292.038	526108.684	2658636.499	138317.038	526104.123	2658612.023	25.000					
						Straight	138317.038	526104.123	2658612.023	138323.298	526103.606	2658605.785	6.260	184 44 17.8				
						Transition	138323.298	526103.606	2658605.785	138348.298	526100.250	2658581.039	25.000					
70	526100.927	2658573.469	27	52	42.8	Arc	138348.298	526100.25	2658581.039	138362.224	526095.796	2658567.863	13.926		Right	40	80	7.00%
						Transition	138362.224	526095.796	2658567.863	138387.224	526083.448	2658546.156	25.000					
						Straight	138387.224	526083.448	2658546.156	138470.670	526038.469	2658475.870	83.446	212 37 0.6				
						Transition	138470.67	526038.469	2658475.87	138485.670	526031.482	2658462.643	15.000					
71	525999.538	2658415.034	230	10	39.5	Arc	138485.67	526031.482	2658462.643	138538.645	526056.249	2658423.458	52.975		Left	20.00	-30	5.93%
						Transition	138538.645	526056.249	2658423.458	138553.645	526071.194	2658424.093	15.000					
						Straight	138553.645	526071.194	2658424.093	138559.983	526077.482	2658424.888	6.338	82 47 40.1				
						Transition	138559.983	526077.482	2658424.888	138579.983	526097.244	2658424.086	20.000					
72	526127.398	2658431.199	125	27	14.5	Arc	138579.983	526097.244	2658424.086	138603.775	526109.932	2658405.610	23.792		Right	20.00	20	7.00%
						Transition	138603.775	526109.932	2658405.61	138623.775	526103.585	2658386.878	20.000					
						Straight	138623.775	526103.585	2658386.878	138639.555	526096.116	2658372.977	15.780	208 14 54.6				
						Transition	138639.555	526096.116	2658372.977	138659.555	526089.123	2658354.391	20.000					
73	526074.535	2658332.810	251	29	44.2	Arc	138659.555	526089.123	2658354.391	138686.899	526100.523	2658331.022	27.344		Left	20	-25	7.00%
						Transition	138686.899	526100.523	2658331.022	138706.899	526119.475	2658325.093	20.000					
						Straight	138706.899	526119.475	2658325.093	138726.356	526138.651	2658321.800	19.457	99 44 38.8				
						Transition	138726.356	526138.651	2658321.8	138746.356	526157.321	2658315.271	20.000					
74	526189.352	2658313.093	126	43	51.1	Arc	138746.356	526157.321	2658315.271	138770.593	526163.940	2658293.473	24.237		Right	20	20	7.00%
						Transition	138770.593	526163.94	2658293.473	138790.593	526152.052	2658277.666	20.000					
						Straight	138790.593	526152.052	2658277.666	138840.695	526115.724	2658243.162	50.102	226 28 29.8				
						Transition	138840.695	526115.724	2658243.162	138860.695	526100.365	2658230.407	20.000					
75	526095.615	2658224.062	38	50	44.4	Arc	138860.695	526100.365	2658230.407	138874.594	526087.718	2658224.750	13.899		Right	30	50	7.00%
						Transition	138874.594	526087.718	2658224.75	138894.594	526067.973	2658221.799	20.000					
						Straight	138894.594	526067.973	2658221.799	138928.725	526033.956	2658219.015	34.131	265 19 14.3				
						Transition	138928.725	526033.956	2658219.015	138948.725	526013.994	2658218.715	20.000					
76	526002.313	2658216.425	46	45	52.9	Arc	138948.725	526013.994	2658218.715	138969.535	525994.425	2658225.340	20.810		Right	30	50	7.00%
						Transition	138969.535	525994.425	2658225.34	138989.535	525978.750	2658237.705	20.000					
						Straight	138989.535	525978.75	2658237.705	138989.637	525978.675	2658237.773	0.102	312 5 7.2				
						Transition	138989.637	525978.675	2658237.773	139009.637	525962.004	2658248.416	20.000					
77	525942.465	2658270.474	236	21	33.1	Arc	139009.637	525962.004	2658248.416	139032.795	525941.403	2658241.026	23.158		Left	20	-20	7.00%
						Transition	139032.795	525941.403	2658241.026	139052.795	525935.300	2658222.212	20.000					
						Straight	139052.795	525935.3	2658222.212	139123.616	525924.900	2658152.160	70.821	188 26 40.3				
						Transition	139123.616	525924.9	2658152.16	139143.616	525920.660	2658132.651	20.000					
78	525920.935	2658125.453	37	21	5.2	Arc	139143.616	525920.66	2658132.651	139156.211	525914.933	2658121.470	12.595		Right	30	50	7.00%
						Transition	139156.211	525914.933	2658121.47	139176.211	525901.580	2658106.628	20.000					
						Straight	139176.211	525901.58	2658106.628	139263.468	525839.028	2658045.791	87.257	225 47 45.4				
						Transition	139263.468	525839.028	2658045.791	139283.468	525825.675	2658030.949	20.000					
79	525814.057	2658021.504	307	27	6.8	Arc	139283.468	525825.675	2658030.949	139309.325	525817.131	2658006.850	25.857		Left	30.00	-50	7.00%
						Transition	139309.325	525817.131	2658006.85	139329.325	525818.153	2657986.911	20.000					
						Straight	139329.325	525818.153	2657986.911	139408.087	525827.413	2657908.696	78.762	173 14 52.3				
						Transition	139408.087	525827.413	2657908.696	139428.087	525830.417	2657888.932	20.000					
80	525830.873	2657879.472	338	15	15.6	Arc	139428.087	525830.417	2657888.932	139446.419	525835.961	2657871.484	18.332		Left	40.00	-101	7.00%
						Transition	139446.419	525835.961	2657871.484	139466.419	525844.914	2657853.609	20.000					
						Straight	139466.419	525844.914	2657853.609	139506.271	525863.928	2657818.587	39.852	151 30 7.9				
						Transition	139506.271	525863.928	2657818.587	139521.271	525869.947	2657804.893	15.000					

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS BHUBANESWAR Regd. No 1/12004-05

APPROVED
CHAITANYA PROJECTS CONSULTANCY PVT. LTD.

Rev.	Date	Description

Client: NHIDCL BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC Contractor: GPT group
JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

Authority Engineer: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES
C-5,2ND FLOOR, R.K.TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

Safety Consultant: SUVADRA CONSULTANTS
PP-97, Tankapani Road, BBSR-18, Odisha

Proof Consultant: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD.
E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

Design Consultant: SPS Technocrats Pvt. Ltd.
510 & 511, JMD Megapolis, Sector-48, Gurugram, Haryana - 122018.

Project: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

Drawn	AMIT	Title:	HORIZONTAL ALIGNMENT REPORT
Designed	DHEERESH	Scale:	AS SHOWN
Checked	VIPUL	Rev:	R0
Date:	DEC - 2020	Drg.No:	GPT/CCT/4B/HW/GEN/HOR/04

HORIZONTAL ALIGNMENT REPORT

HIP / Curve No.	HIP		Deflection Angle			Element	Start			End			Length (m)	Bearing (dd mm ss)	Hand of Arc	Design Speed (KM/H)	Radius (m)	Superelevation (%)
	Easting (m)	Northing (m)	Deg	Min	Sec		Chainage (m)	Easting (m)	Northing (m)	Chainage (m)	Easting (m)	Northing (m)						
81	525874.198	2657799.67	49	42	27.1	Arc	139521.271	525869.947	2657804.893	139532.297	525870.643	2657793.950	11.026		Right	20	30	5.93%
						Transition	139532.297	525870.643	2657793.95	139547.297	525866.411	2657779.603	15.000					
						Straight	139547.297	525866.411	2657779.603	139625.908	525837.971	2657706.317	78.611	201 12 35				
						Transition	139625.908	525837.971	2657706.317	139665.908	525828.645	2657667.712	40.000					
82	525810.555	2657635.671	265	7	44.4	Arc	139665.908	525828.645	2657667.712	139708.698	525846.983	2657630.487	42.790		Left	40	-50	7.00%
						Transition	139708.698	525846.983	2657630.487	139748.698	525883.274	2657614.353	40.000					
						Straight	139748.698	525883.274	2657614.353	139918.831	526046.537	2657566.492	170.133	106 20 19.4				
						Transition	139918.831	526046.537	2657566.492	139938.831	526065.371	2657559.834	20.000					
83	526073.335	2657558.636	32	37	49.5	Arc	139938.831	526065.371	2657559.834	139953.571	526077.751	2657551.900	14.740		Right	30.00	61	6.56%
						Transition	139953.571	526077.751	2657551.9	139973.571	526091.668	2657537.570	20.000					
						Straight	139973.571	526091.668	2657537.57	139997.913	526107.647	2657519.208	24.342	138 58 8.8				
						Transition	139997.913	526107.647	2657519.208	140017.913	526121.727	2657505.054	20.000					
84	526126.736	2657497.272	318	27	17.9	Arc	140017.913	526121.727	2657505.054	140034.168	526135.990	2657497.407	16.255		Left	30.00	-50	7.00%
						Transition	140034.168	526135.99	2657497.407	140054.168	526155.571	2657493.515	20.000					
						Straight	140054.168	526155.571	2657493.515	140067.788	526169.077	2657491.755	13.620	97 25 26.7				
						Transition	140067.788	526169.077	2657491.755	140097.788	526197.638	2657483.516	30.000					
85	526214.415	2657485.847	84	10	30.6	Arc	140097.788	526197.638	2657483.516	140116.270	526209.482	2657469.644	18.482		Right	30.00	33	7.00%
						Transition	140116.27	526209.482	2657469.644	140146.270	526213.139	2657440.144	30.000					
						Straight	140146.27	526213.139	2657440.144	140246.472	526210.342	2657339.981	100.202	181 35 57.4				
						Transition	140246.472	526210.342	2657339.981	140261.472	526209.013	2657325.063	15.000					
86	526209.628	2657314.391	47	25	27.7	Arc	140261.472	526209.013	2657325.063	140280.408	526200.989	2657308.096	18.936		Right	20.00	41	4.34%
						Transition	140280.408	526200.989	2657308.096	140295.408	526190.300	2657297.604	15.000					
						Straight	140295.408	526190.3	2657297.604	140314.363	526175.990	2657285.174	18.955	229 1 25.1				
						Transition	140314.363	526175.99	2657285.174	140329.363	526165.552	2657274.460	15.000					
87	526158.752	2657270.202	306	17	26.5	Arc	140329.363	526165.552	2657274.46	140342.485	526160.640	2657262.404	13.122		Left	20.00	-30	5.93%
						Transition	140342.485	526160.64	2657262.404	140357.485	526160.617	2657247.446	15.000					
						Straight	140357.485	526160.617	2657247.446	140370.406	526161.673	2657234.568	12.921	175 18 51.6				
						Transition	140370.406	526161.673	2657234.568	140390.406	526161.975	2657214.606	20.000					
88	526163.876	2657207.686	37	17	43.9	Arc	140390.406	526161.975	2657214.606	140402.952	526158.956	2657202.462	12.546		Right	30.00	50	7.00%
						Transition	140402.952	526158.956	2657202.462	140422.952	526149.340	2657184.966	20.000					
						Straight	140422.952	526149.34	2657184.966	140428.607	526146.293	2657180.202	5.655	212 36 35.5				
						Transition	140428.607	526146.293	2657180.202	140443.607	526138.421	2657167.435	15.000					
89	526132.812	2657159.131	346	41	7.3	Arc	140443.607	526138.421	2657167.435	140463.465	526129.738	2657149.593	19.858		Left	40.00	-150	4.74%
						Transition	140463.465	526129.738	2657149.593	140478.465	526124.546	2657135.522	15.000					
						Straight	140478.465	526124.546	2657135.522	140573.507	526093.141	2657045.818	95.042	199 17 42.9				
						Transition	140573.507	526093.141	2657045.818	140588.507	526088.326	2657031.612	15.000					
90	526083.072	2657017.058	349	30	5.2	Arc	140588.507	526088.326	2657031.612	140619.316	526080.854	2657001.744	30.809		Left	40.00	-250	2.84%
						Transition	140619.316	526080.854	2657001.744	140634.316	526078.412	2656986.945	15.000					
						Straight	140634.316	526078.412	2656986.945	140641.279	526077.347	2656980.063	6.963	188 47 48.1				
						Transition	140641.279	526077.347	2656980.063	140656.279	526074.868	2656965.270	15.000					
91	526071.455	2656941.988	17	38	0.3	Arc	140656.279	526074.868	2656965.27	140702.831	526060.814	2656921.000	46.552		Right	40.00	200	3.56%
						Transition	140702.831	526060.814	2656921	140717.831	526054.306	2656907.487	15.000					
						Straight	140717.831	526054.306	2656907.487	140894.424	525975.703	2656749.352	176.593	206 25 48.4				
						Transition	140894.424	525975.703	2656749.352	140909.424	525967.954	2656736.557	15.000					
92	525956.846	2656711.414	98	1	9.9	Arc	140909.424	525967.954	2656736.557	140945.747	525934.906	2656727.974	36.323		Right	20.00	30	5.93%
						Transition	140945.747	525934.906	2656727.974	140960.747	525921.910	2656735.380	15.000					
						Straight	140960.747	525921.91	2656735.38	141070.704	525831.236	2656797.580	109.957	304 26 58.3				
						Transition	141070.704	525831.236	2656797.58	141090.704	525813.679	2656806.951	20.000					
93	525800.946	2656818.359	277	33	14.1	Arc	141090.704	525813.679	2656806.951	141113.873	525791.240	2656804.286	23.169		Left	20.00	-30	5.93%
						Transition	141113.873	525791.24	2656804.286	141133.873	525776.366	2656791.063	20.000					
						Straight	141133.873	525776.366	2656791.063	141166.964	525754.222	2656766.473	33.091	222 0 12.4				

APPROVED

CHAITANYA PROJECTS CONSULTANCY PVT. LTD. In association with MSPARK FUTURISTICS & ASSOCIATES

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd

Managing Director

SUVADRA CONSULTANTS Regd. No- 11/2004-05 BHUBANESWAR

Rev.	Date	Description

CLIENT: NHIDCL BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR: GPT GROUP
JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES
C-5,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS
PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD.
E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd.
510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE:	DEC - 2020

TITLE: HORIZONTAL ALIGNMENT REPORT

SCALE: AS SHOWN

REV: R0

DRG.NO: GPT/CCT/4B/HW/GEN/HOR/05

VERTICAL ALIGNMENT REPORT

S.No.	Vertical Intersection Points			Element	Vertical Tangent Points					Radius (m)	M Value	K Value	Length of Element (m)
	Chainage (m)	Level (m)	%Grade Diff.		Start Chainage (m)	Level (m)	End Chainage (m)	Level (m)	Grade (%)				
1				Grade	130000.000	826.172	130189.904	815.589	-5.573				189.904
2	130219.904	813.917	-0.417	Hog Curve	130189.904	815.589	130249.904	812.120		-14377	-0.696	143.767	60.000
3				Grade	130249.904	812.120	131017.567	766.138	-5.990				767.663
4	131117.567	760.148	12.319	Sag Curve	131017.567	766.138	131217.567	766.476		1624	6.159	16.236	200.000
5				Grade	131217.567	766.476	131257.324	768.992	6.329				39.757
6	131307.324	772.156	-4.320	Hog Curve	131257.324	768.992	131357.324	773.160		-2315	-4.320	23.146	100.000
7				Grade	131357.324	773.160	131517.438	776.376	2.008				160.114
8	131547.438	776.978	-0.820	Hog Curve	131517.438	776.376	131577.438	777.335		-7313	-1.367	73.133	60.000
9				Grade	131577.438	777.335	131869.516	780.804	1.188				292.078
10	131969.516	781.992	-7.986	Hog Curve	131869.516	780.804	132069.516	775.194		-2504	-3.993	25.044	200.000
11				Grade	132069.516	775.194	132163.311	768.817	-6.798				93.795
12	132263.312	762.019	7.522	Sag Curve	132163.311	768.817	132363.311	762.743		2659	3.761	26.589	200.000
13				Grade	132363.311	762.743	132520.006	763.877	0.724				156.695
14	132595.006	764.420	1.105	Sag Curve	132520.006	763.877	132670.006	765.792		13571	0.737	135.709	150.000
15				Grade	132670.006	765.792	132719.886	766.704	1.829				49.880
16	132749.886	767.253	2.899	Sag Curve	132719.886	766.704	132779.886	768.671		2070	4.832	20.697	60.000
17				Grade	132779.886	768.671	133186.917	787.916	4.728				407.031
18	133216.917	789.334	-1.232	Hog Curve	133186.917	787.916	133246.917	790.383		-4871	-2.053	48.710	60.000
19				Grade	133246.917	790.383	133429.735	796.775	3.496				182.818
20	133459.735	797.824	-5.494	Hog Curve	133429.735	796.775	133489.735	797.224		-1092	-9.157	10.920	60.000
21				Grade	133489.735	797.224	133760.136	791.822	-1.998				270.401
22	133860.136	789.823	7.060	Sag Curve	133760.136	791.822	133960.136	794.885		2833	3.530	28.330	200.000
23				Grade	133960.136	794.885	134431.512	818.745	5.062				471.376
24	134461.512	820.263	-6.548	Hog Curve	134431.512	818.745	134491.512	819.817		-916	-10.913	9.164	60.000
25				Grade	134491.512	819.817	134781.036	815.515	-1.486				289.524
26	134811.036	815.069	-3.058	Hog Curve	134781.036	815.515	134841.036	813.706		-1962	-5.097	19.620	60.000
27				Grade	134841.036	813.706	134997.895	806.578	-4.544				156.859
28	135027.895	805.215	1.736	Sag Curve	134997.895	806.578	135057.895	804.373		3457	2.893	34.567	60.000
29				Grade	135057.895	804.373	135434.192	793.805	-2.808				376.297
30	135464.192	792.963	-2.136	Hog Curve	135434.192	793.805	135494.192	791.479		-2808	-3.561	28.084	60.000
31				Grade	135494.192	791.479	136429.898	745.211	-4.945				935.706
32	136459.898	743.728	-0.918	Hog Curve	136429.898	745.211	136489.898	741.969		-6539	-1.529	65.386	60.000
33				Grade	136489.898	741.969	137301.526	694.388	-5.862				811.628
34	137331.526	692.630	3.402	Sag Curve	137301.526	694.388	137361.526	691.892		1763	5.671	17.634	60.000
35				Grade	137361.526	691.892	137475.605	689.085	-2.460				114.079
36	137575.605	686.625	-4.540	Hog Curve	137475.605	689.085	137675.605	679.625		-4405	-2.270	44.052	200.000
37				Grade	137675.605	679.625	137712.396	677.050	-7.000				36.791
38	138112.396	649.050	0.597	Sag Curve	137712.396	677.050	138512.396	623.438		134024	0.075	1340.303	800.000
39				Grade	138512.396	623.438	138587.634	618.620	-6.403				75.238
40	138617.634	616.699	0.433	Sag Curve	138587.634	618.620	138647.634	614.908		13854	0.722	138.541	60.000
41				Grade	138647.634	614.908	138773.672	607.384	-5.970				126.038
42	139123.672	586.489	-1.030	Hog Curve	138773.672	607.384	139473.672	561.989		-67961	-0.147	679.625	700.000
43				Grade	139473.672	561.989	139504.155	559.855	-7.000				30.483
44	139829.155	537.105	2.712	Sag Curve	139504.155	559.855	140154.155	523.168		23971	0.417	239.705	650.000
45				Grade	140154.155	523.168	140292.609	517.230	-4.288				138.454
46	140392.609	512.942	-1.987	Hog Curve	140292.609	517.230	140492.609	506.667		-10065	-0.994	100.650	200.000
47				Grade	140492.609	506.667	140585.000	500.869	-6.275				92.391
48	140660.000	496.162	1.729	Sag Curve	140585.000	500.869	140735.000	492.752		8677	1.152	86.772	150.000
49				Grade	140735.000	492.752	140913.003	484.659	-4.547				178.003
50	140943.003	483.295	4.547	Sag Curve	140913.003	484.659	140973.003	483.295		1320	7.578	13.196	60.000
51				Grade	140973.003	483.295	141166.964	483.295	0.000				193.961

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS Regd. No- 11/2004-05 BHUBANESWAR

APPROVED

CHAITANYA PROJECTS CONSULTANCY PVT. LTD. MSPARK FUTURISTICS & ASSOCIATES

Rev.	Date	Description

CLIENT: NHIDCL BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR: GPT Group
JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES
C-5,2ND FLOOR, R.K.TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS
PP-97, Tankapani Road, BBSR-18. Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD.
E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

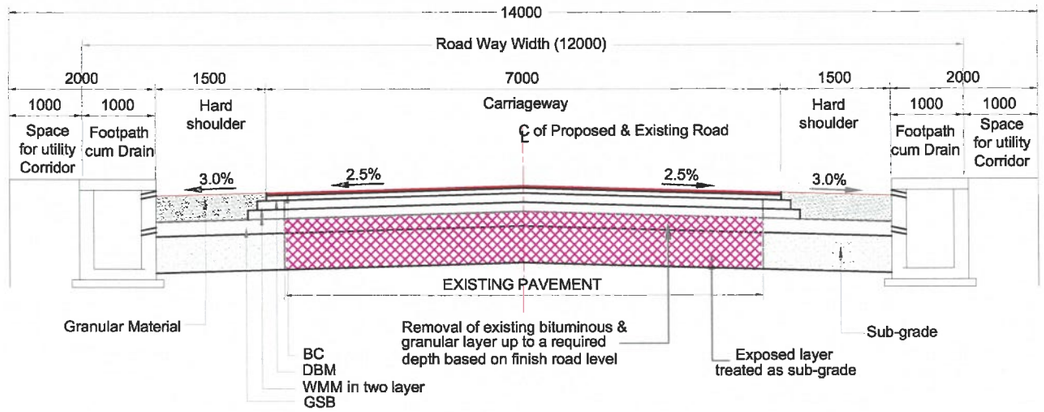
DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd.
510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE:	DEC - 2020

TITLE: VERTICAL ALIGNMENT REPORT
SCALE: AS SHOWN
DRG.NO: GPT/CCT/4B/HW/GEN/VER/01
REV: R0

TYPICAL CROSS SECTION



TCS-1 :- TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY WITH HARD SHOULDER IN BUILT UP AREA WITH BOTH SIDE FOOTPATH CUM RCC RECTENGULAR DRAIN

(RECONSTRUCTION OF EXISTING PAVEMENT)

APPROVED

CHAITANYA PROJECTS CONSULTANCY PVT. LTD. * MSPARK FUTURISTICS & ASSOCIATES * In association with

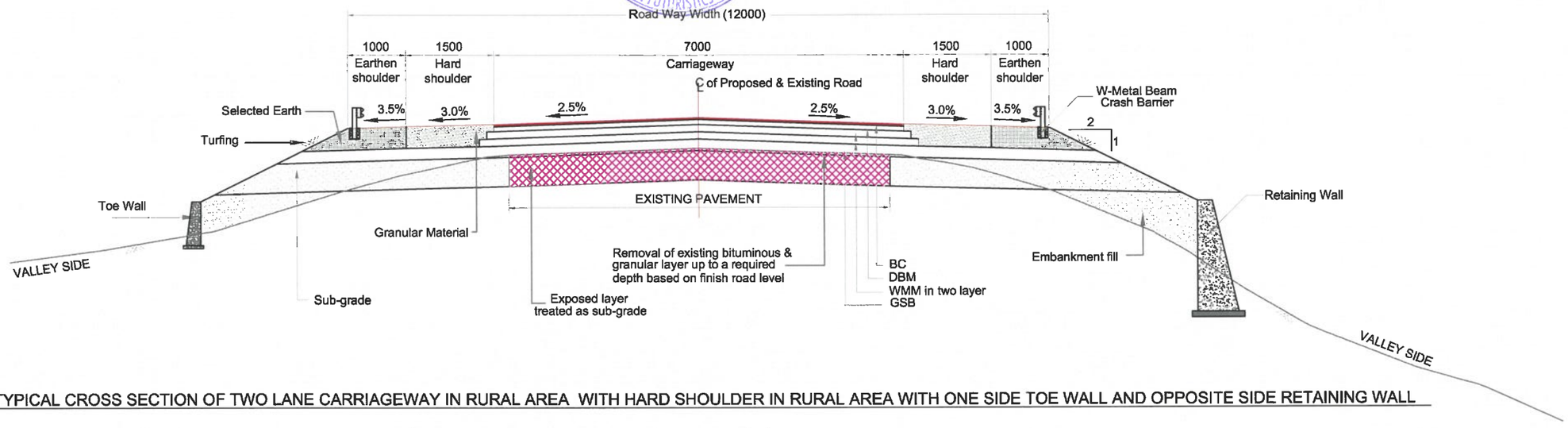
NH-10/B CCPUL

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd

Managing Director

SUVADRA CONSULTANTS * BHUBANESWAR * Regd. No- 11/2004-05



TCS-2 :-TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY IN RURAL AREA WITH HARD SHOULDER IN RURAL AREA WITH ONE SIDE TOE WALL AND OPPOSITE SIDE RETAINING WALL

(RECONSTRUCTION OF EXISTING PAVEMENT)

NOTES:

1. PAVEMENT THICKNESS AS PER PAVEMENT DESIGN REPORT.

Rev.	Date	Description
R1	NOV	As Per AE Letter No. (0008)

CLIENT: NHIDCL BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR: BVE Bharat Vanijya Eastern Pvt Ltd, 114, Chittaranjan Avenue, Kolkata-700073, West Bengal

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES, G-5,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS, PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD. E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd. # 510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 32.835 to Km 48.587 (Package-2A) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

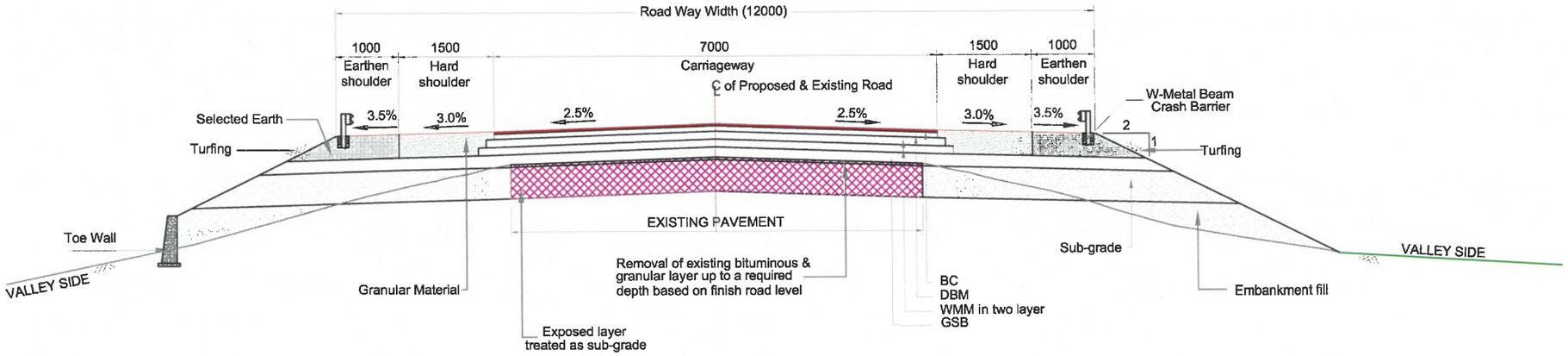
DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE: NOV - 2020	

TITLE: TYPICAL CROSS SECTION

SCALE: AS SHOWN

REV: R1

DRG.NO: BVE/CCT/2A/HW/GEN/TCS/01



TCS-3 :-TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY WITH HARD SHOULDER IN RURAL AREA WITH ONE SIDE TOE WALL

(RECONSTRUCTION OF EXISTING PAVEMENT)

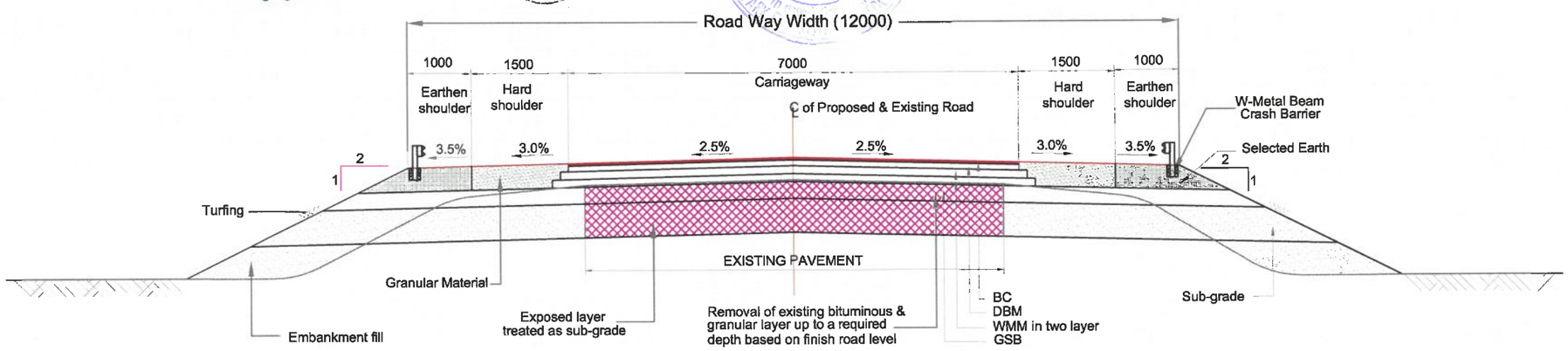
DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS Regd. No- 11/2004-05 BHUBANESWAR

CHAITANYA PROJECTS CONSULTANCY PVT. LTD. MSPAC INDIA

APPROVED



TCS- 4 :-TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY WITH HARD SHOULDER IN RURAL AREA

(RECONSTRUCTION OF EXISTING PAVEMENT)

NOTES:

1. PAVEMENT THICKNESS AS PER PAVEMENT DESIGN REPORT.

Rev.	Date	Description
R1	NOV	As Per AE Letter No. (0008)

CLIENT: NHIDCL – BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR: BVE – Bharat Venture Eastern Pvt Ltd, 114, Chittaranjan Avenue, Kolkata-700073, West Bengal

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES, D-6,2ND FLOOR, K.K. TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS, PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD., E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd., # 510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 32.835 to Km 48.567 (Package-2A) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

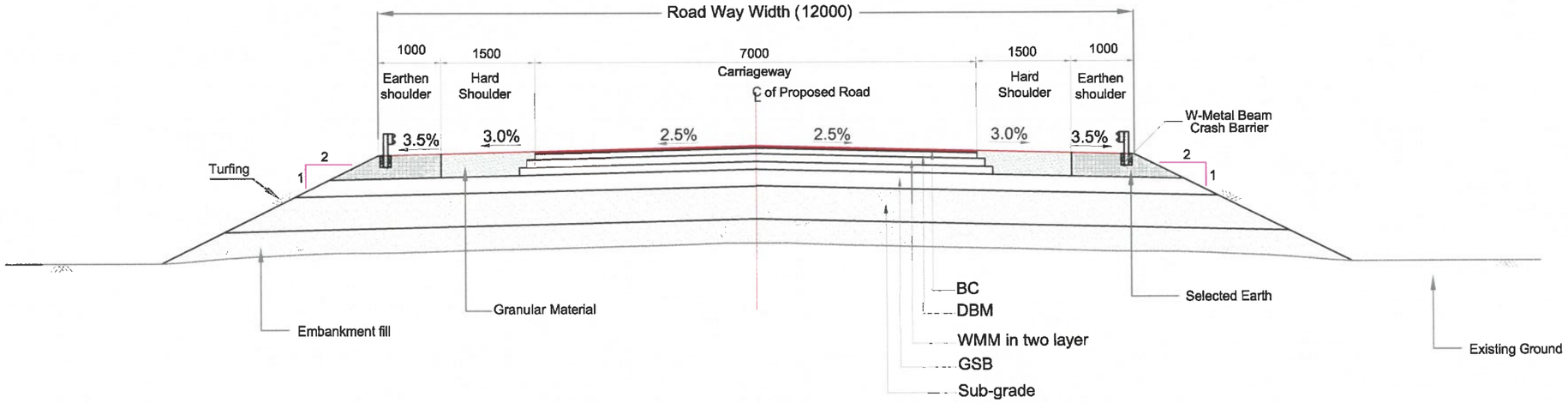
DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE:	NOV - 2020

TITLE: **TYPICAL CROSS SECTION**

SCALE: **AS SHOWN**

DRG.NO: **BVE/CCT/2A/HW/GEN/TCS/02**

REV: **R1**



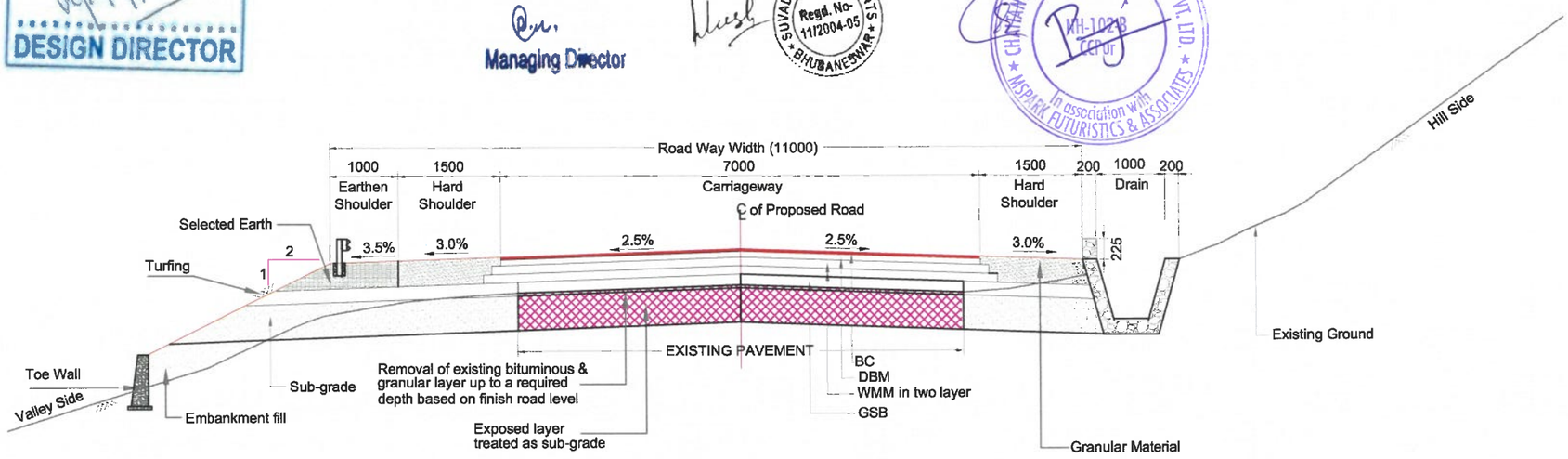
TCS- 4A :-TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY WITH HARD SHOULDER AT REALIGNMENT STRETCH IN RURAL AREA (NEW CONSTRUCTION)

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS Regd. No- 11/2004-05 BHUBANESWAR

APPROVED
CHAITANYA PROJECTS CONSULTANCY PVT. LTD. In association with MSPARK FUTURISTICS & ASSOCIATES



TCS-5 :-TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY WITH HARD SHOULDER IN RURAL AREA WITH TOE WALL ON VALLEY SIDE & OPEN TRAPEZOIDAL DRAIN ON HILL SIDE (RECONSTRUCTION OF EXISTING PAVEMENT)

NOTES:

1. PAVEMENT THICKNESS AS PER PAVEMENT DESIGN REPORT.

Rev.	Date	Description
R1	NOV	As Per AE Letter No. (0008)

CLIENT: NHIDCL BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR: BVE Bharat Vanijya Eastern Pvt Ltd, 114, Chittaranjan Avenue, Kolkata-700073, West Bengal

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES, C-5,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS, PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD. E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd. # 510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 32.835 to Km 48.587 (Package-2A) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE: NOV - 2020	

TITLE: TYPICAL CROSS SECTION

SCALE: AS SHOWN

REV: R1

DRG.NO: BVE/CCT/2A/HW/GEN/TCS/03

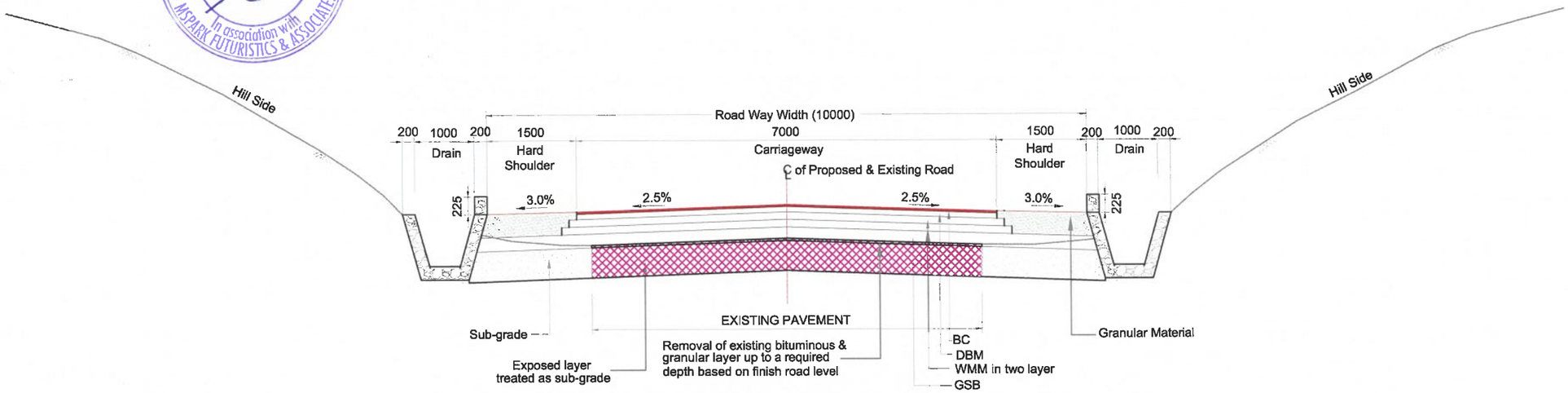
APPROVED

CHAITANYA PROJECTS CONSULTANCY PVT. LTD. NH-102-B CCPL In association with MSPARK FUTURISTICS & ASSOCIATES

DESIGN DIRECTOR

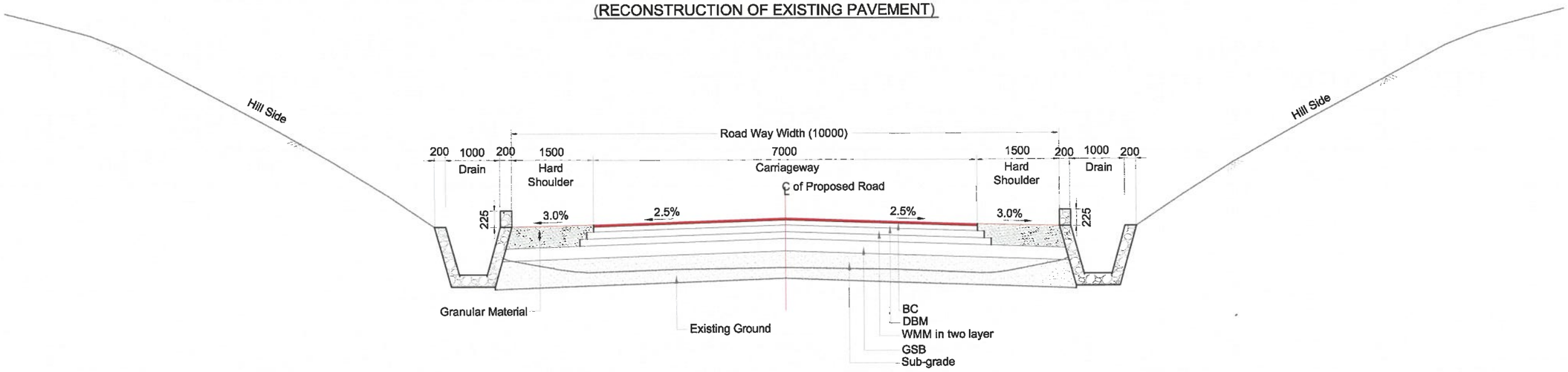
Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS Regd. No- 11/2004-05 BHUBANESWAR



TCS-6 :-TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY WITH HARD SHOULDER IN RURAL AREA WITH BOTH SIDE OPEN TRAPEZOIDAL DRAIN ON HILL SECTION

(RECONSTRUCTION OF EXISTING PAVEMENT)



TCS-6A :-TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY WITH HARD SHOULDER AT REALIGNMENT STRETCH IN RURAL AREA WITH BOTH SIDE OPEN TRAPEZOIDAL DRAIN ON HILL SECTION

(NEW CONSTRUCTION)

NOTES:

1. PAVEMENT THICKNESS AS PER PAVEMENT DESIGN REPORT.

Rev.	Date	Description
R1	NOV	As Per AE Letter No. (0008)

CLIENT: NHIDCL BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR: BVE Bharat Vanijya Eastern Pvt Ltd, 114, Chittaranjan Avenue, Kolkata-700073, West Bengal

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES, C-5,2ND FLOOR, K.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS, PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD., E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd., # 510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 32.835 to Km 48.587 (Package-2A) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

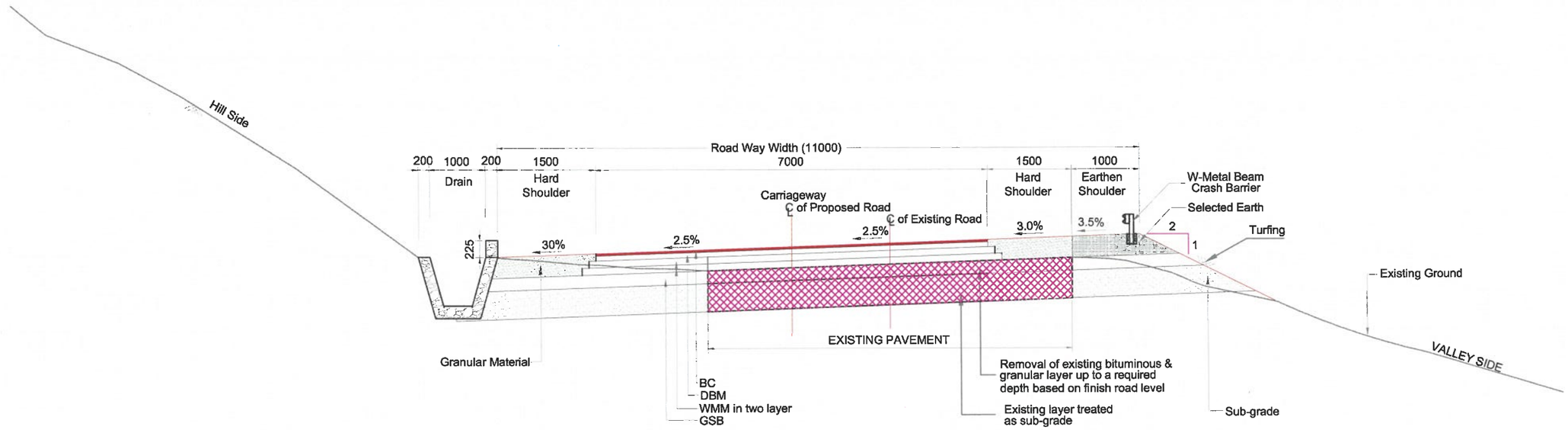
DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE: NOV - 2020	

TITLE: TYPICAL CROSS SECTION

SCALE: AS SHOWN

REV: R1

DRG.NO: BVE/CCT/2A/HW/GEN/TCS/04



TCS-7 : TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY WITH HARD SHOULDER IN RURAL AREA WITH OPEN TRAPEZOIDAL DRAIN ON HILL SIDE AND EARTHEN SHOULDER ON VALLEY SIDE

(RECONSTRUCTION OF EXISTING PAVEMENT)

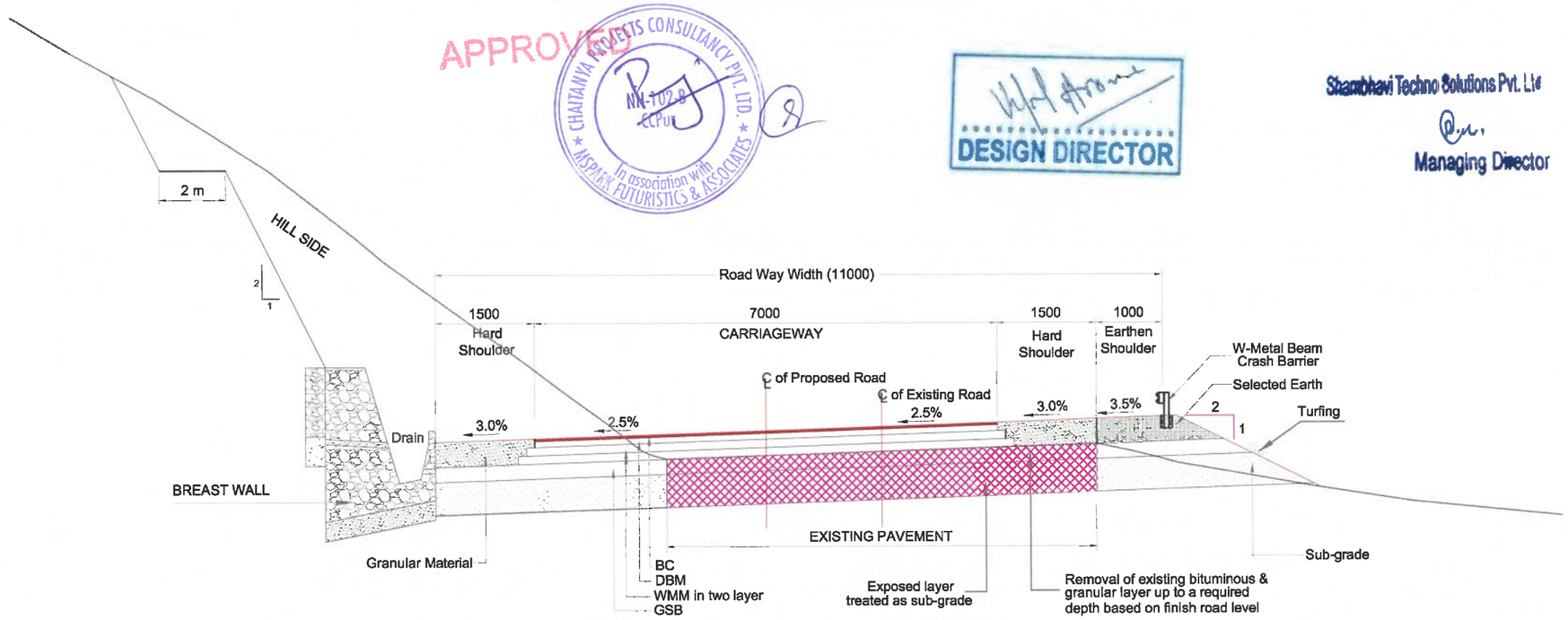
APPROVED

CHAITANYA PROJECTS CONSULTANCY PVT. LTD. In association with MSPARK FUTURISTICS & ASSOCIATES

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS Regd. No- 11/2004-05 BHUBANESWAR



TCS-8 :- TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY WITH HARD SHOILDER IN RURAL AREA WITH BREAST WALL ON HILL SIDE

(RECONSTRUCTION OF EXISTING PAVEMENT)

NOTES:

1. PAVEMENT THICKNESS AS PER PAVEMENT DESIGN REPORT.

Rev.	Date	Description
R1	NOV	As Per AE Letter No. (0008)

CLIENT: NHIDCL BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR: BVE Bharat Vasdya Eastern Pvt Ltd, 114, Chittaranjan Avenue, Kolkata-700073, West Bengal

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES, C-5,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS, PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD., E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd., # 510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 32.835 to Km 48.587 (Package-2A) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE: NOV - 2020	

TITLE: TYPICAL CROSS SECTION

SCALE: AS SHOWN

REV: R1

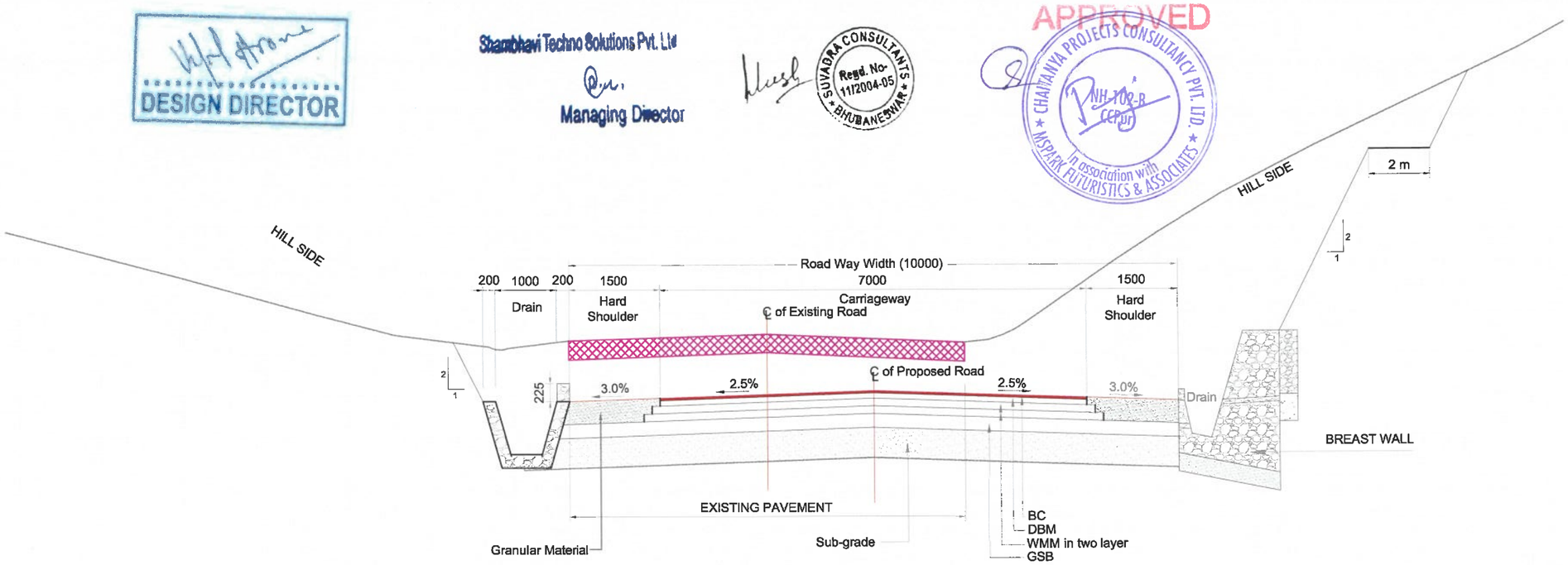
DRG.NO: BVE/CCT/2A/HW/GEN/TCS/05

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

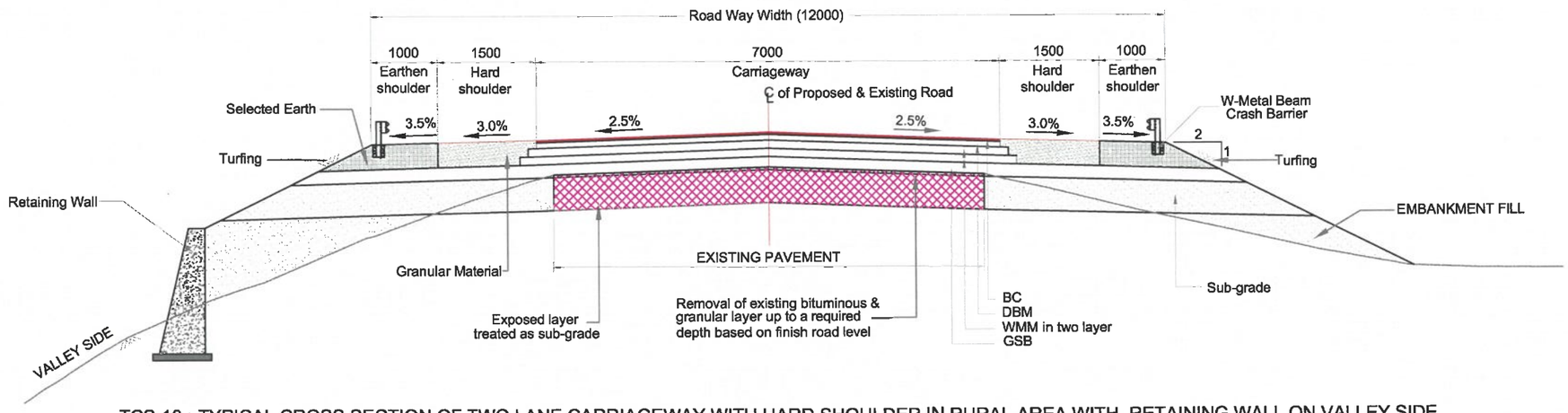
SUVADRA CONSULTANTS Regd. No- 11/2004-05 BHUBANESWAR

APPROVED
CHAITANYA PROJECTS CONSULTANCY PVT. LTD.
In association with MSPARK FUTURISTICS & ASSOCIATES
NH-102-B
CEPU



TCS-9 :- TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY WITH HARD SHOULDER AT CUTTING SECTION IN RURAL AREA WITH BREAST WALL ON HILL SIDE

(RECONSTRUCTION OF EXISTING PAVEMENT)



TCS-10 :-TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY WITH HARD SHOULDER IN RURAL AREA WITH RETAINING WALL ON VALLEY SIDE

(RECONSTRUCTION OF EXISTING PAVEMENT)

NOTES:

1. PAVEMENT THICKNESS AS PER PAVEMENT DESIGN REPORT.

Rev.	Date	Description
R1	NOV	As Per AE Letter No. (0008)

CLIENT: NAIDCL BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR: BVE Bharat Vanijya Eastern Pvt Ltd, 114, Chittaranjan Avenue, Kolkata-700073, West Bengal

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES, C-3,2ND FLOOR, RK TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS, PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD. E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd. # 510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 32.835 to Km 48.587 (Package-2A) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

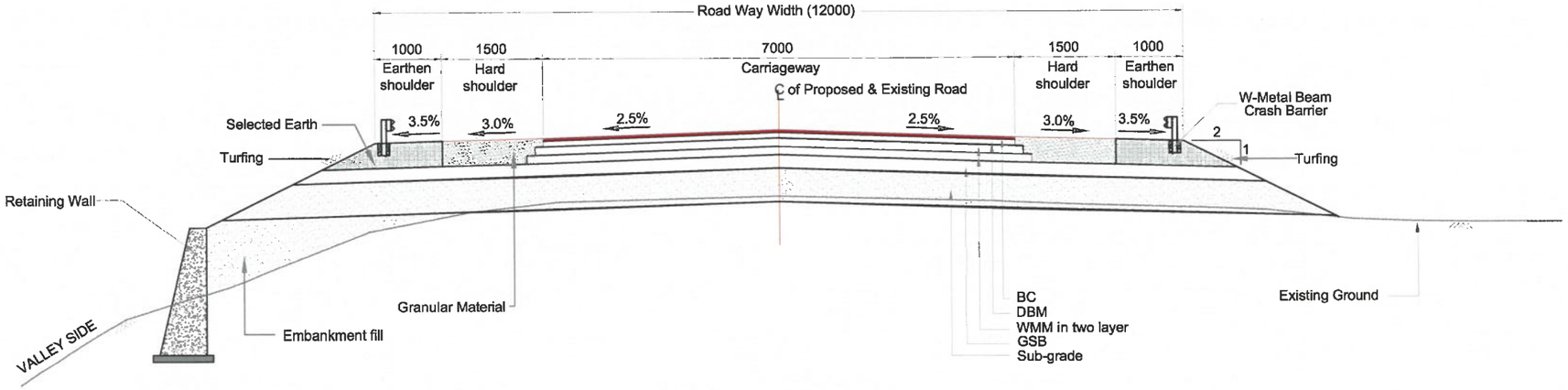
DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE: NOV - 2020	

TITLE: TYPICAL CROSS SECTION

SCALE: AS SHOWN

REV: R1

DRG. NO: BVE/CCT/2A/HW/GEN/TCS/06



TCS-10A :-TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY WITH HARD SHOULDER AT REALIGNMENT STRETCH IN RURAL AREA WITH RETAINING WALL ON VALLEY SIDE

(NEW CONSTRUCTION)

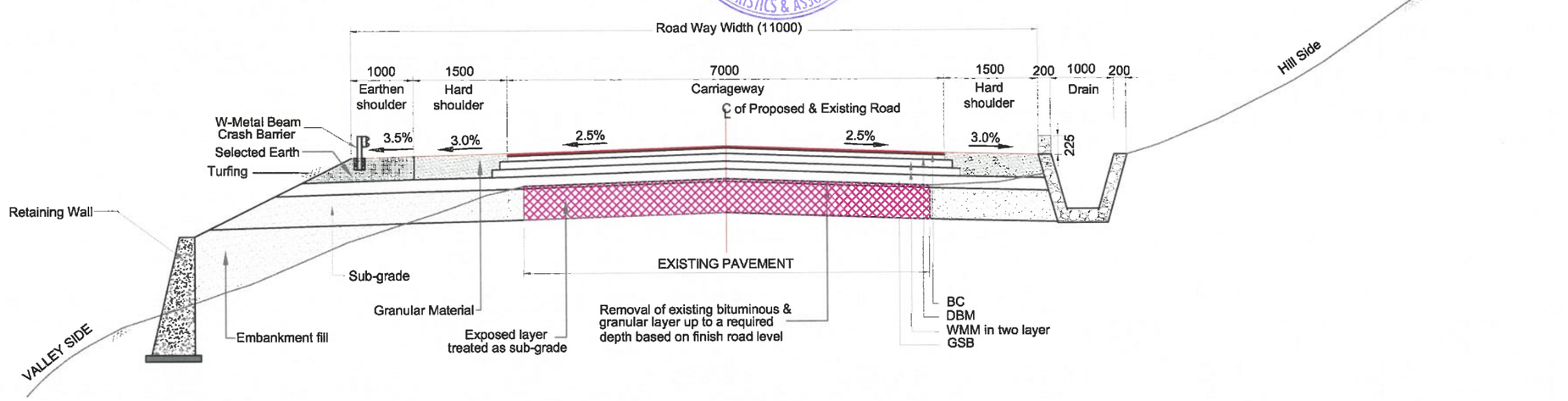
APPROVED

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS Regd. No- 11/2004-05 BHUBANESWAR

CHAITANYA PROJECTS CONSULTANCY PVT. LTD. In association with MSPARK FUTURISTICS & ASSOCIATES



TCS-11 :-TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY WITH HARD SHOULDER IN RURAL AREA WITH RETAINING WALL ON VALLEY SIDE AND OPEN TRAPEZOIDAL DRAIN ON HILL SIDE

(RECONSTRUCTION OF EXISTING PAVEMENT)

NOTES:

1. PAVEMENT THICKNESS AS PER PAVEMENT DESIGN REPORT.

Rev.	Date	Description
R1	NOV	As Per AE Letter No. (0008)

CLIENT: NHIDCL BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR: BVE Bharat Vanijya Eastern Pvt Ltd, 114, Chittaranjan Avenue, Kolkata-700073, West Bengal

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES, C-5,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS, PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD., E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd., # 510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 32.835 to Km 48.587 (Package-2A) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE: NOV - 2020	

TITLE: TYPICAL CROSS SECTION

SCALE: AS SHOWN

DRG.NO: BVE/CCT/2A/HW/GEN/TCS/07

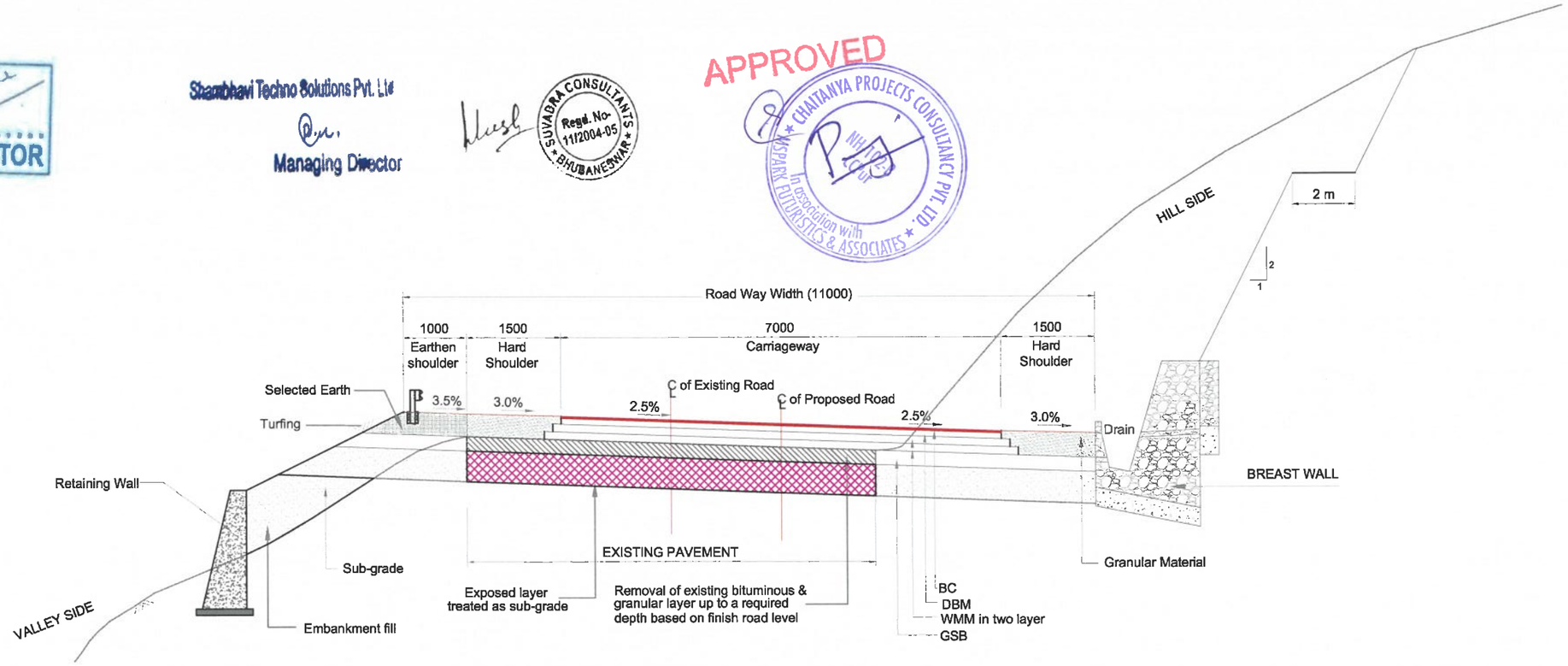
REV: R1

DESIGN DIRECTOR

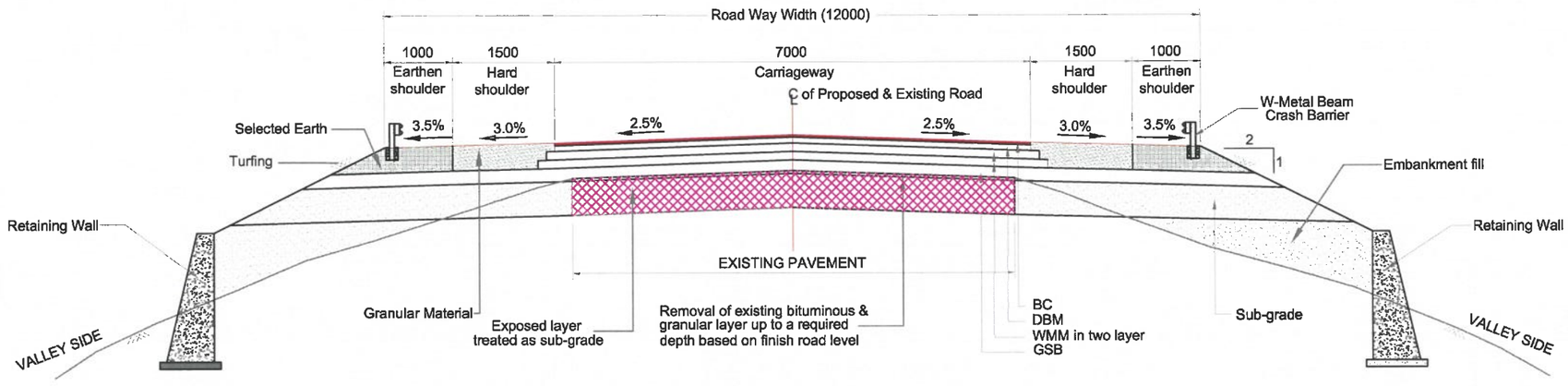
Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS Regd. No- 11/2004-05 BHUBANESWAR

APPROVED
CHAITANYA PROJECTS CONSULTANCY PVT. LTD. In association with MSPARK FUTURISTICS & ASSOCIATES



TCS-12 :-TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY WITH HARD SHOULDER AT RECONSTRUCTION STRETCH IN RURAL AREA WITH RETAINING WALL ON VALLEY SIDE AND BREAST WALL ON HILL SIDE (RECONSTRUCTION OF EXISTING PAVEMENT)



TCS-13 :-TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY WITH HARD SHOULDER IN RURAL AREA WITH BOTH SIDE RETAINING WALL ON VALLEY SIDE (RECONSTRUCTION OF EXISTING PAVEMENT)

NOTES:

1. PAVEMENT THICKNESS AS PER PAVEMENT DESIGN REPORT.

Rev.	Date	Description
R1	NOV	As Per AE Letter No. (0008)

CLIENT: NHIDCL BUILDING INFRASTRUCTURE : BUILDING THE NATION

EPC CONTRACTOR: BVE Bharat Vanijya Eastern Pvt Ltd, 114, Chittaranjan Avenue, Kolkata-700073, West Bengal

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES, C-5,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS, PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD. E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd. # 510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tulvai section of NH 102B from Km 32.835 to Km 48.587 (Package-2A) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE: NOV - 2020	

TITLE: TYPICAL CROSS SECTION

SCALE: AS SHOWN

REV: R1

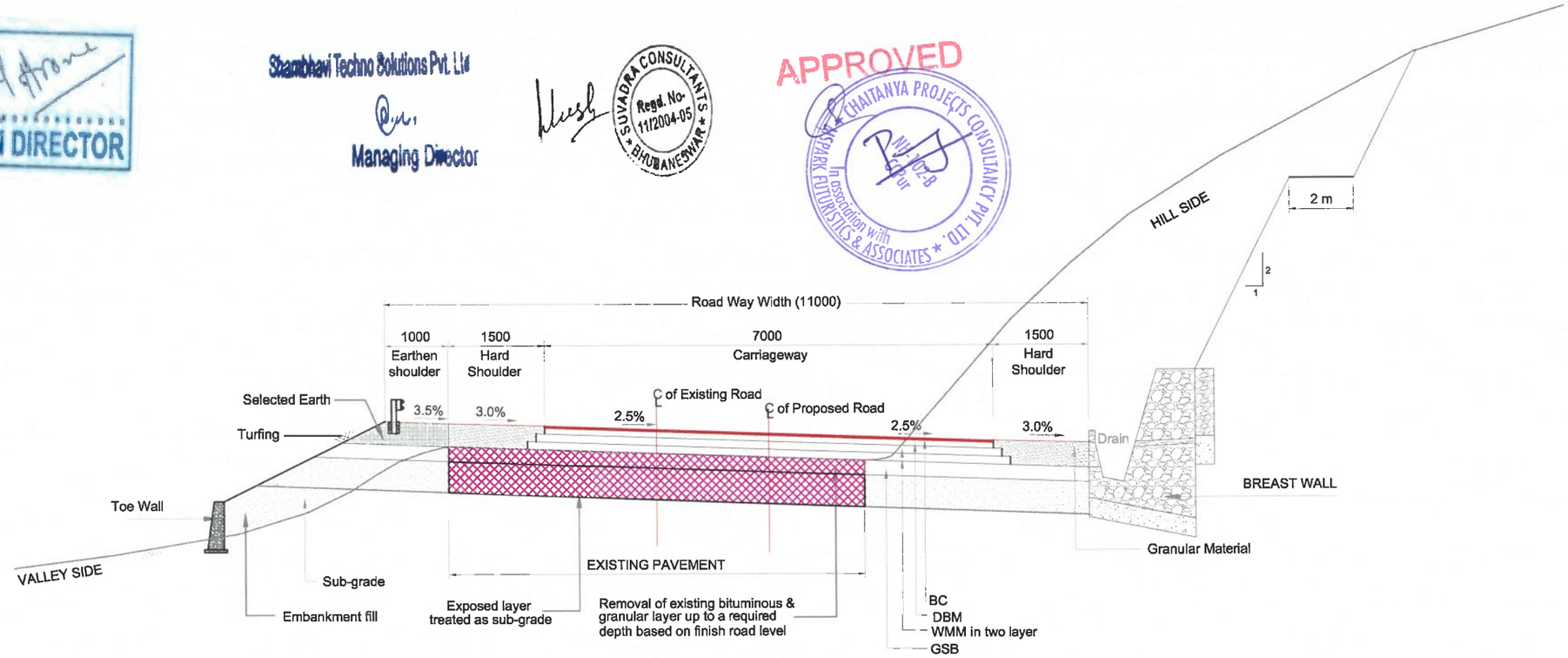
DRG.NO: BVE/CCT/2A/HW/GEN/TCS/08

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

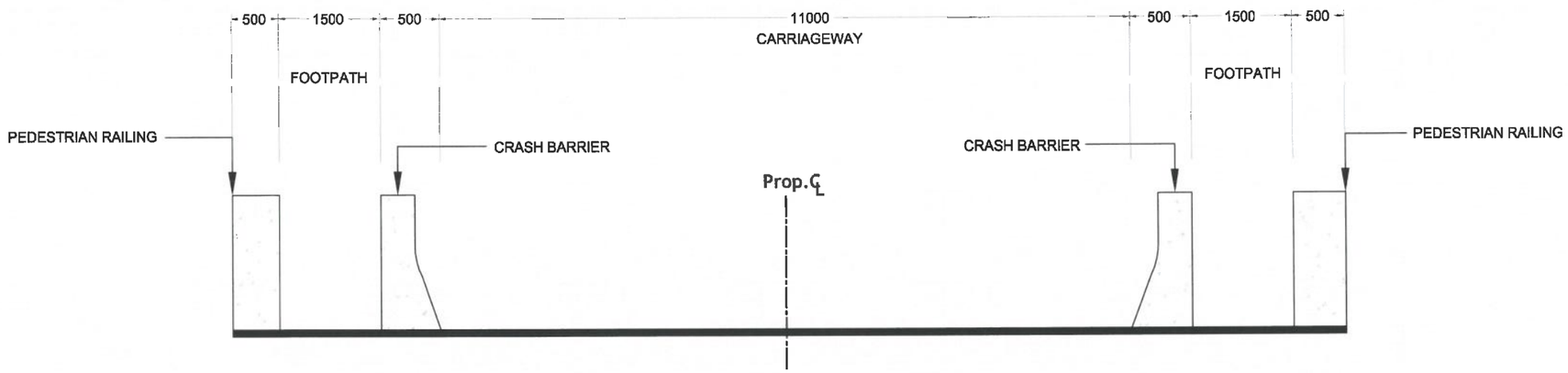
SUVADRA CONSULTANTS Regd. No- 11/2004-05 BHUBANESWAR

APPROVED
CHAITANYA PROJECTS CONSULTANCY PVT. LTD. In association with MSPARK FUTURISTICS & ASSOCIATES



TCS-14 :-TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY WITH HARD SHOULDER AT RECONSTRUCTION STRETCH IN RURAL AREA WITH TOE WALL ON VALLEY SIDE AND BREAST WALL ON HILL SIDE

(RECONSTRUCTION OF EXISTING PAVEMENT)



TCS-15 :- TYPICAL CROSS SECTION OF BRIDGE WITH FOOTPATH TWO LANE CARRIAGEWAY

NOTES:

1. PAVEMENT THICKNESS AS PER PAVEMENT DESIGN REPORT.

Rev.	Date	Description
R1	NOV	As Per AE Letter No. (0008)

CLIENT: NAIDCL BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR: BVE Bharat Vanijya Eastern Pvt Ltd, 114, Chittaranjan Avenue, Kolkata-700073, West Bengal

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES, C-5,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS, PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD. E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd. # 510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuival section of NH 102B from Km 32.835 to Km 48.587 (Package-2A) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE: NOV - 2020	

TITLE: TYPICAL CROSS SECTION
SCALE: AS SHOWN
REV: R1
DRG.NO: BVE/CCT/2A/HW/GEN/TCS/09

PLAN AND LONGITUDINAL PROFILE

LEGEND :

EXISTING PLAN :

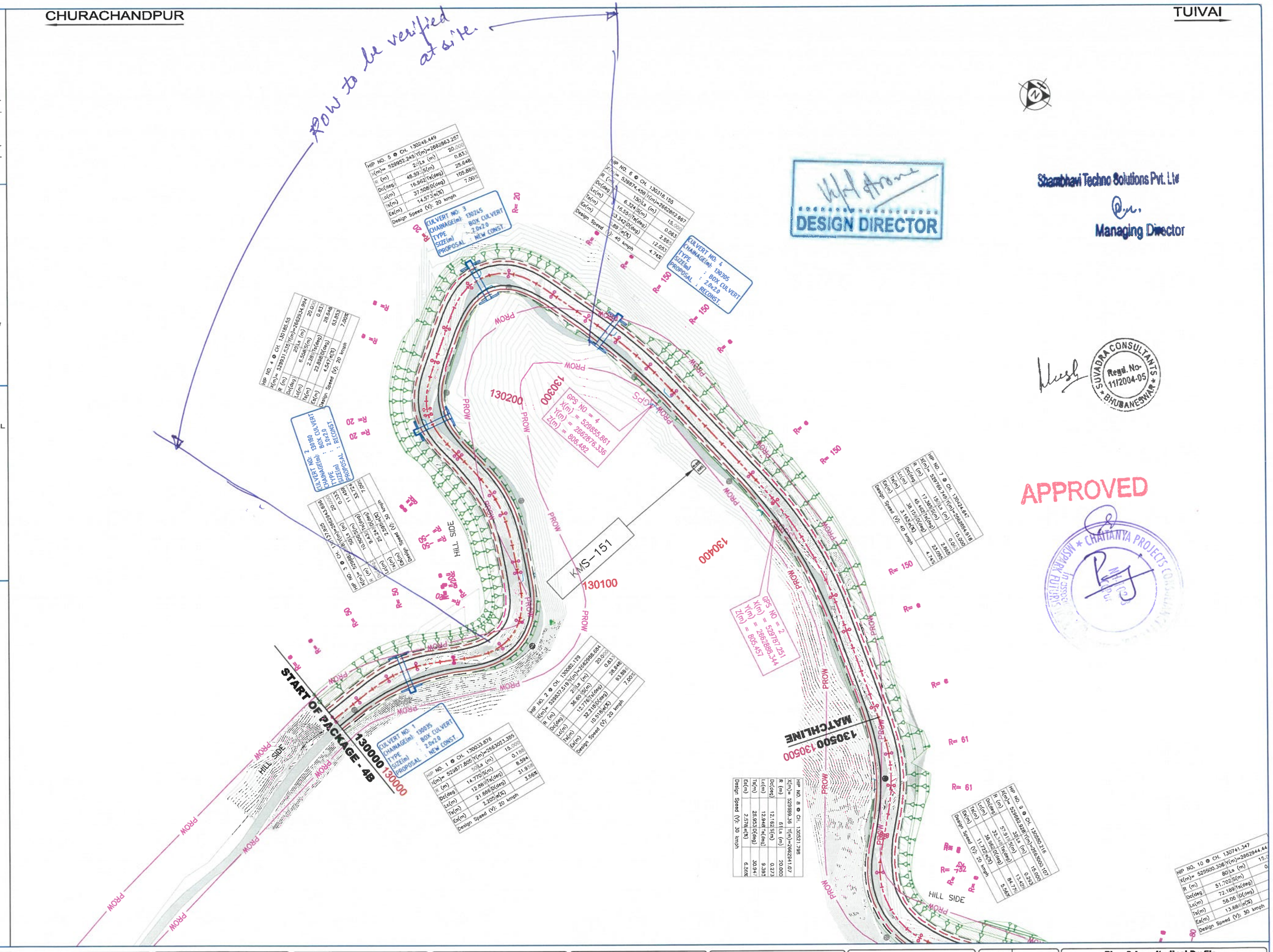
- EXIST. ROAD
- K-I/R : KACHA RESIDENTIAL
- K-I/C : KACHA COMMERCIAL
- SP-I/R : SEMI PUCCA RESI.
- SP-I/C : SEMI PUCCA COMM.
- P-I/R : PUCCA RESIDENTIAL
- P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
- ES EDGE
- HS EDGE
- C/W EDGE
- CEN.LINE
- C/W EDGE
- HS EDGE
- ES EDGE
- TOE LINE
- HOR. TANGENT POINT
- PROW — PROPOSED ROW
- CULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
- EXIS. ROAD LEVEL
- LEFT 6M LEVEL
- EXIST. LEVEL AT PRO. CL
- RIGHT 6M LEVEL
- VER. TANGENT POINT
- GRID LINE (5.0 / 10.0)
- BOX CULVERT



Rev.	Date	Description

CLIENT: NHIDCL — BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR: GPT Group
JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES
C-5,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS
PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD.
E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd.
510 & 511, JMD Megapolis, Sector 46, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE:	DEC - 2020

TITLE: Plan & Longitudinal Profile
(From Km 130+000 to Km 130+500)

SCALE: (HOR - 1 : 1000; VER - 1 : 100 at A2 Size Sheet) HOR 10 0 10 20; VER 5 0 5 10

REV: R0

DRG.NO: GPT/CCT/4B/HW/PNP/01

LEGEND :

EXISTING PLAN :

- EXIST. ROAD
- K-I/R : KACHA RESIDENTIAL
- K-I/C : KACHA COMMERCIAL
- SP-I/R : SEMI PUCCA RESI.
- SP-I/C : SEMI PUCCA COMM.
- P-I/R : PUCCA RESIDENTIAL
- P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
- ES EDGE
- HS EDGE
- C/W EDGE
- CEN.LINE
- C/W EDGE
- HS EDGE
- ES EDGE
- TOE LINE
- HOR. TANGENT POINT
- PROW — PROPOSED ROW
- CULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
- EXIS. ROAD LEVEL
- LEFT 6M LEVEL
- EXIST. LEVEL AT PRO. CL
- RIGHT 6M LEVEL
- VER. TANGENT POINT
- GRID LINE (5.0 / 10.0)
- BOX CULVERT

CHURACHANDPUR

TUIVAI

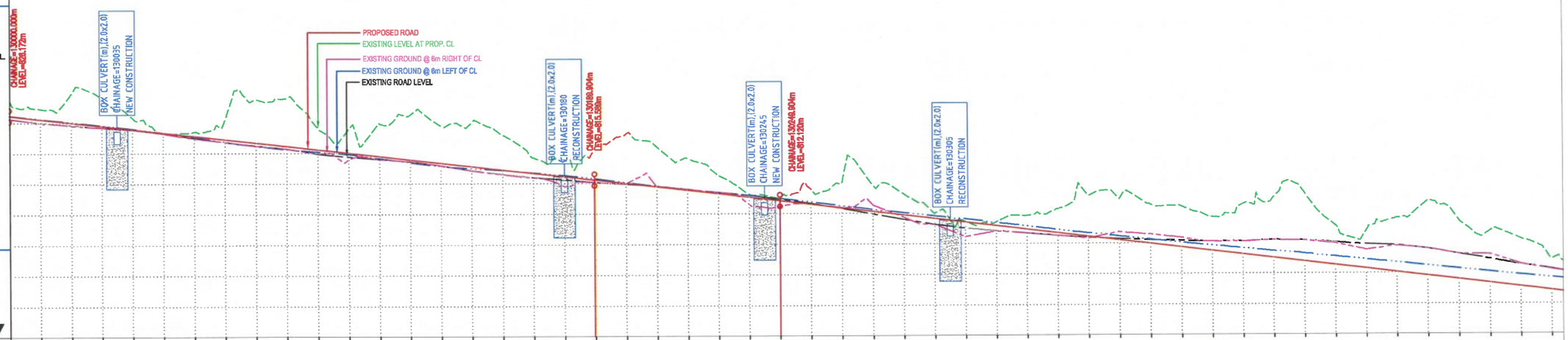
APPROVED

MSPARK FUTURISTICS & ASSOCIATES * CHAITANYA PROJECTS CONSULTANCY PVT. LTD. * In association with

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS * BHUBANESWAR * Regd. No- 11/2004-05



Level Datum= 790(m)

CHAINAGE (m)	PROP. ROAD LEVELS (m)	EXIST LEVELS AT PROP. CL (m)	EXISTING ROAD LEVEL (m)
130000	826.172	828.687	825.672
130010	825.615	827.353	825.058
130020	825.057	829.832	824.619
130030	824.500	829.035	824.248
130040	823.943	825.879	823.874
130050	823.386	823.371	823.302
130060	822.828	823.577	822.508
130070	822.271	825.531	821.821
130080	821.714	828.742	821.259
130090	821.157	829.000	820.752
130100	820.599	824.151	819.894
130110	820.042	824.046	819.407
130120	819.485	824.884	819.016
130130	818.928	826.297	818.625
130140	818.370	824.506	817.888
130150	817.813	825.009	817.149
130160	817.256	823.051	816.521
130170	816.698	819.343	816.012
130180	816.141	818.770	815.624
130190	815.584	820.982	815.183
130200	815.023	823.213	814.878
130210	814.455	821.048	814.536
130220	813.881	819.157	814.014
130230	813.299	816.429	813.495
130240	812.710	813.233	813.023
130250	812.115	812.504	812.363
130260	811.516	814.087	811.654
130270	810.917	814.867	810.801
130280	810.318	814.695	809.869
130290	809.719	813.221	808.994
130300	809.120	810.001	808.133
130310	808.521	808.623	807.535
130320	807.922	808.532	807.078
130330	807.323	809.545	806.679
130340	806.724	810.722	806.276
130350	806.125	812.803	805.920
130360	805.526	812.279	805.704
130370	804.927	811.421	805.564
130380	804.328	811.065	805.400
130390	803.729	809.330	805.273
130400	803.130	811.411	805.313
130410	802.531	812.460	805.503
130420	801.932	813.254	805.400
130430	801.333	807.956	805.036
130440	800.734	806.953	804.698
130450	800.135	809.056	804.526
130460	799.536	811.820	803.941
130470	798.937	808.680	803.039
130480	798.338	806.922	802.265
130490	797.739	805.669	801.361
130500	797.140	802.212	800.560

HORIZONTAL SCHEMATIC (L,R=m): L=12.431m; L=15.000m; R=50.000m; L=12.889m; L=15.000m; L=20.000m; R=-20.000m; L=12.777m; L=20.000m; L; L=20.000m; R; R=9.430m; L=20.000m; L; L=20.000m; R; L; L=20.000m; L=14.274m; L=20.000m; R=20.000m; L=16.962m; L=20.000m; L=16.948m; L=15.000m; R=150.000m; L=16.556m; L=15.000m; L=45.484m; L=15.000m; R=150.000m; L=45.461m; L=15.000m; L=32.947m; L=20

VERTICAL SCHEMATIC (G=%) (L,R=m): G=-5.573; L=189.904m; L=60.000m

WIDENING SCHEMATIC (m) LEFT / RIGHT: 3.500; 4.700; 4.700; 3.500; 3.500; 3.500; 3.500; 5.000; 5.000; 4.700; 4.700; 3.500; 5.000; 5.000; 3.500; 3.500; 5.000; 5.000; 3.500; 3.500; 4.100; 4.100; 3.500; 3.500; 4.100; 4.100; 3.500; 3.500

SUPERELEVATION SCHEMATIC (e in %) LEFT / RIGHT: e=2.500; e=3.800; e=7.000; e=7.000; e=7.000; e=2.500; e=7.000; e=2.500; e=4.700; e=2.500; e=4.700; e=2.500

Rev.	Date	Description

CLIENT: NHIDCL — BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR: GPT group — JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES — C-5,2ND FLOOR, RK TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS — PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD. — E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd. — # 510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE:	DEC - 2020

TITLE: **Plan & Longitudinal Profile** (From Km 130+000 to Km 130+500)

SCALE: (HOR - 1 : 1000; VER - 1 : 100 at A2 Size Sheet) HOR. 10 5 0 10 20; VER. 0 5 10

DRG.NO: **GPT/CCT/4B/HW/PNP/ 01a**

REV: **R0**

LEGEND :

EXISTING PLAN :

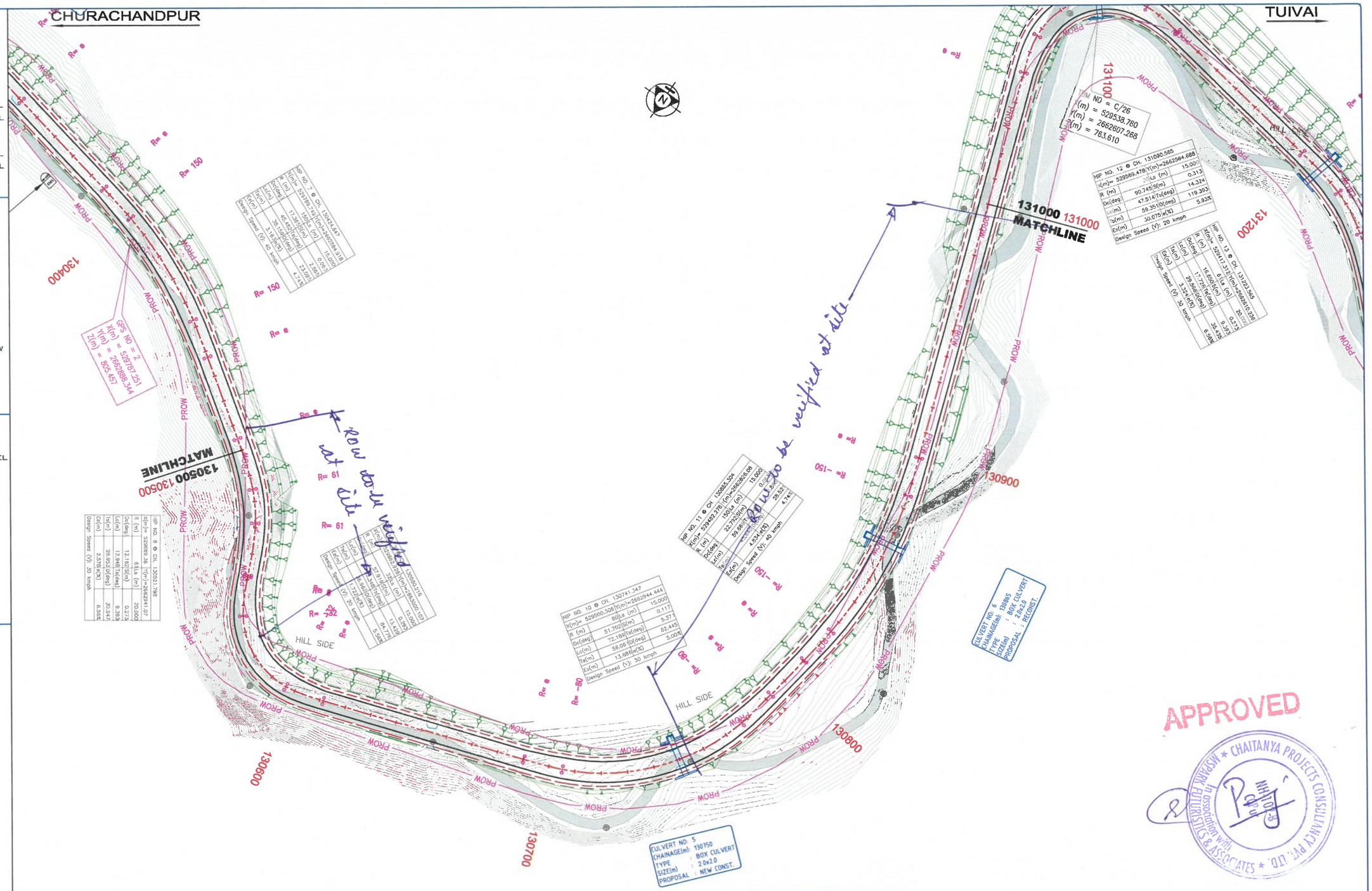
- EXIST. ROAD
- K-I/R : KACHA RESIDENTIAL
- K-I/C : KACHA COMMERCIAL
- SP-I/R : SEMI PUCCA RESI.
- SP-I/C : SEMI PUCCA COMM.
- P-I/R : PUCCA RESIDENTIAL
- P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
- ES EDGE
- HS EDGE
- C/W EDGE
- CEN.LINE
- C/W EDGE
- HS EDGE
- ES EDGE
- TOE LINE
- HOR. TANGENT POINT
- PROW — PROPOSED ROW
- CULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
- EXIS. ROAD LEVEL
- LEFT 6M LEVEL
- EXIST. LEVEL AT PRO. CL
- RIGHT 6M LEVEL
- VER. TANGENT POINT
- 5.0 / 10.0 GRID LINE
- BOX CULVERT



APPROVED

CHAITANYA PROJECTS CONSULTANCY PVT. LTD. ★ MSPARK FUTURISTICS & ASSOCIATES ★ In association with

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS ★ BHUBANESWAR ★ Regd. No- 11/2004-05

Rev.	Date	Description

CLIENT: NHIDCL — BUILDING INFRASTRUCTURE · BUILDING THE NATION

EPC CONTRACTOR: GPT group
JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: RITES
M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD.
IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES
C-5,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS
PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD.
E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd.
510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH :102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE: DEC - 2020	

TITLE: Plan & Longitudinal Profile
(From Km 130+500 to Km 131+000)

SCALE: (HOR - 1 : 1000, VER - 1 : 100 at A2 Size Sheet) HOR: 10 0 10 20 / VER: 5 0 5 10

DRG.NO: GPT/CCT/4B/HW/PNP/ 02

REV: R0

LEGEND :

EXISTING PLAN :

- EXIST. ROAD
- K-I/R : KACHA RESIDENTIAL
- K-I/C : KACHA COMMERCIAL
- SP-I/R : SEMI PUCCA RESI.
- SP-I/C : SEMI PUCCA COMM.
- P-I/R : PUCCA RESIDENTIAL
- P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
- ES EDGE
- HS EDGE
- C/W EDGE
- CEN.LINE
- C/W EDGE
- HS EDGE
- ES EDGE
- TOE LINE
- HOR. TANGENT POINT
- PROW — PROPOSED ROW
- CULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
- EXIS. ROAD LEVEL
- LEFT 6M LEVEL
- EXIST. LEVEL AT PRO. CL
- RIGHT 6M LEVEL
- VER. TANGENT POINT
- GRID LINE (10.0 × 5.0)
- BOX CULVERT

CHURACHANDPUR — TUIVAI

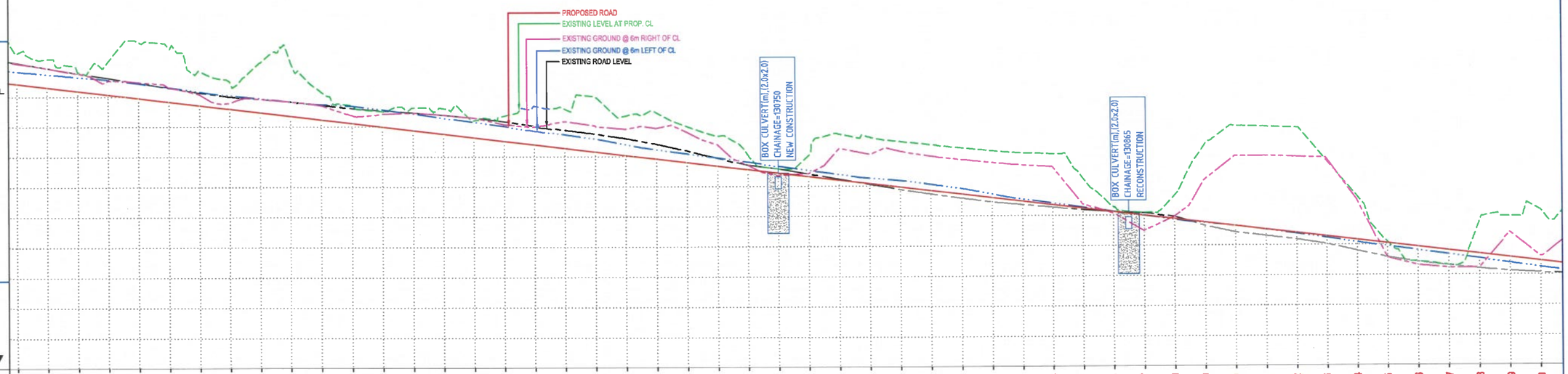
APPROVED

CHAITANYA PROJECTS CONSULTANCY PVT. LTD. * MSPARK FUTURISTICS & ASSOCIATES (In association with)

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS * BHUBANESWAR * Regd. No- 11/2004-05



Level Datum= 750(m)

CHAINAGE (m)	PROP. ROAD LEVELS (m)	EXIST LEVELS AT PROP. CL (m)	EXISTING ROAD LEVEL (m)
130500	797.140	802.212	800.580
130510	796.541	801.298	799.746
130520	795.942	799.086	798.855
130530	795.343	800.923	798.088
130540	794.744	804.015	797.283
130550	794.145	802.919	796.427
130560	793.546	799.180	795.615
130570	792.947	797.322	794.885
130580	792.348	800.680	794.572
130590	791.748	800.532	794.130
130600	791.150	795.729	793.568
130610	790.551	793.406	793.028
130620	789.952	792.527	792.536
130630	789.353	793.123	792.276
130640	788.754	792.989	791.883
130650	788.155	790.984	791.446
130660	787.556	791.751	790.801
130670	786.957	793.463	790.047
130680	786.358	792.876	789.381
130690	785.759	794.843	788.738
130700	785.160	791.728	788.007
130710	784.561	792.236	787.062
130720	783.962	789.916	785.954
130730	783.363	788.321	784.668
130740	782.764	785.228	783.498
130750	782.165	782.685	782.866
130760	781.566	785.065	782.009
130770	780.967	786.620	781.136
130780	780.368	786.095	780.256
130790	779.769	787.332	779.404
130800	779.170	786.811	778.658
130810	778.571	786.291	777.942
130820	777.972	785.791	777.293
130830	777.373	785.428	776.807
130840	776.774	785.252	776.392
130850	776.175	781.329	775.897
130860	775.576	776.390	775.572
130870	774.977	775.417	775.375
130880	774.378	778.204	774.729
130890	773.779	786.499	773.254
130900	773.180	789.770	772.136
130910	772.581	789.584	771.539
130920	771.982	789.399	770.930
130930	771.383	-999.000	770.146
130940	770.784	-999.000	769.017
130950	770.185	770.455	767.925
130960	769.586	767.191	767.128
130970	768.987	766.573	766.535
130980	768.388	773.282	765.992
130990	767.789	774.593	765.594
131000	767.190	775.683	765.291

HORIZONTAL SCHEMATIC (L,R=m)

L=20.000m | R=61.000m, L=12.947m | L=20.000m | L=15.000m | R=-32.000m, L=32.348m | L=15.000m | L=78.862m | L=15.000m | R=-80.000m, L=72.189m | L=15.000m | L=18.027m | L=15.000m | R=-150.000m, L=59.670m | L=15.000m | L=151.669m

VERTICAL SCHEMATIC (G=%) (L,R=m)

G=-5.990
L=767.663m

WIDENING SCHEMATIC (m) — LEFT / RIGHT

3.500, 3.500, 3.500, 3.500, 5.000, 5.000, 3.500, 3.500, 4.400, 4.400, 3.500, 3.500, 4.100, 4.100, 3.500
4.400, 4.400, 3.500

SUPERELEVATION SCHEMATIC (e in %) — LEFT / RIGHT

e=5.600, e=5.600, e=2.500, e=5.000, e=2.500, e=4.700, e=2.500
e=5.600, e=5.600, e=2.500, e=5.000, e=2.500, e=4.700, e=2.500

Rev.	Date	Description

CLIENT: NHIDCL — BUILDING INFRASTRUCTURE · BUILDING THE NATION

EPC CONTRACTOR: GPT group
JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES
C-5,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS
PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD.
E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd.
510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE:	DEC - 2020

TITLE: Plan & Longitudinal Profile (From Km 130+500 to Km 131+000)

SCALE: (HOR - 1 : 1000; VER - 1 : 100 at A2 Size Sheet) HOR. 10 0 10 20 / VER. 5 0 5 10

DRG.NO: GPT/CCT/4B/HW/PNP/ 02a

REV: R0

LEGEND :

EXISTING PLAN :

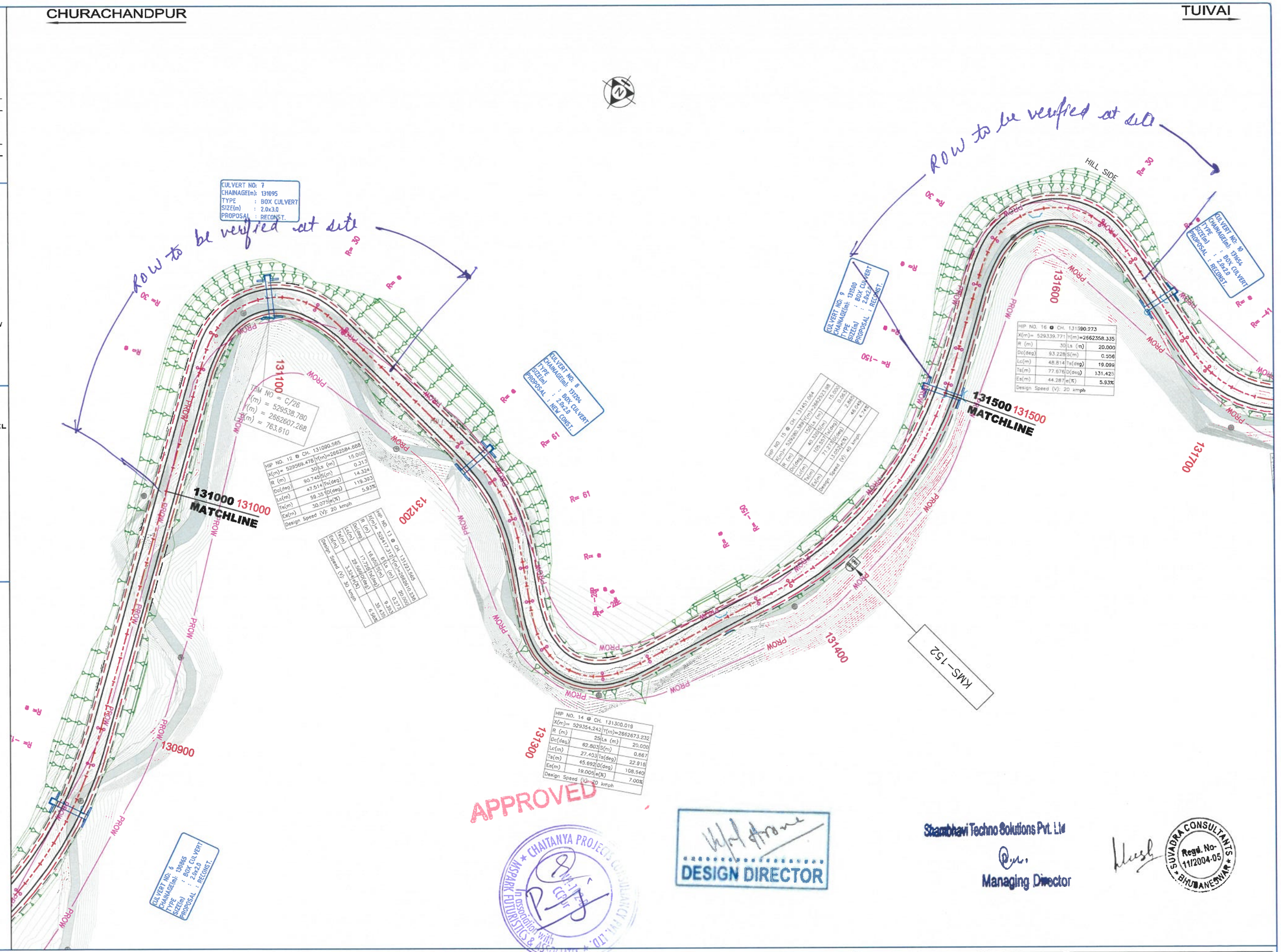
- EXIST. ROAD
- K-I/R : KACHA RESIDENTIAL
- K-I/C : KACHA COMMERCIAL
- SP-I/R : SEMI PUCCA RESI.
- SP-I/C : SEMI PUCCA COMM.
- P-I/R : PUCCA RESIDENTIAL
- P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
- ES EDGE
- HS EDGE
- C/W EDGE
- CEN.LINE
- C/W EDGE
- HS EDGE
- ES EDGE
- TOE LINE
- HOR. TANGENT POINT
- PROW — PROPOSED ROW
- CULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
- EXIS. ROAD LEVEL
- LEFT 6M LEVEL
- EXIST. LEVEL AT PRO. CL
- RIGHT 6M LEVEL
- VER. TANGENT POINT
- GRID LINE (5.0 / 10.0)
- BOX CULVERT



Rev.	Date	Description

CLIENT: NHIDCL — BUILDING INFRASTRUCTURE · BUILDING THE NATION

EPC CONTRACTOR: GPT Group
JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES
C-5,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS
PP-97, Tankaparni Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD.
E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd.
510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE:	DEC - 2020

TITLE: Plan & Longitudinal Profile
(From Km 131+000 to Km 131+500)

SCALE: (HOR - 1 : 1000; VER - 1 : 100 at A2 Size Sheet) HOR 10 0 10 20 / VER 5 0 5 10

REV: R0

DRG. NO: GPT/CCT/4B/HW/PNP/ 03

LEGEND :

EXISTING PLAN :

- EXIST. ROAD
- K-I/R : KACHA RESIDENTIAL
- K-I/C : KACHA COMMERCIAL
- SP-I/R : SEMI PUCCA RESI.
- SP-I/C : SEMI PUCCA COMM.
- P-I/R : PUCCA RESIDENTIAL
- P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
- ES EDGE
- HS EDGE
- C/W EDGE
- CEN.LINE
- C/W EDGE
- HS EDGE
- ES EDGE
- TOE LINE
- HOR. TANGENT POINT
- PROW — PROPOSED ROW
- CULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
- EXIS. ROAD LEVEL
- LEFT 6M LEVEL
- EXIST. LEVEL AT PRO. CL
- RIGHT 6M LEVEL
- VER. TANGENT POINT
- GRID LINE (5.0 / 10.0)
- BOX CULVERT

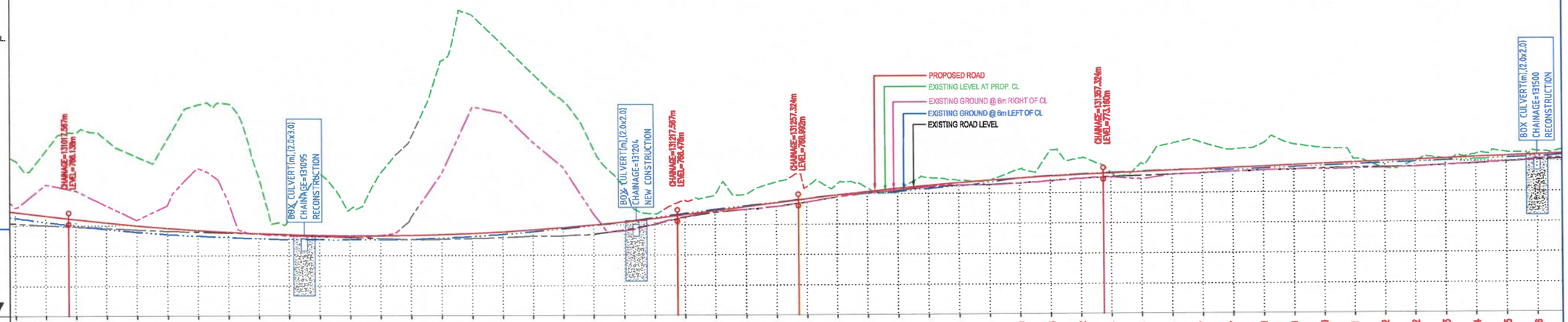
CHURACHANDPUR — TUIVAI

APPROVED — CHANAKYA PROJECTS CONSULTANCY PVT. LTD. ★ MSPARK FUTURISTICS & ASSOCIATES ★ In association with — NH-102B

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd. — Managing Director

SUVADRA CONSULTANTS ★ BHUBANESWAR ★ Regd. No- 11/2004-05



Level Datum= 750(m)

CHAINAGE (m)	PROP. ROAD LEVELS (m)	EXIST LEVELS AT PROP. CL (m)	EXISTING ROAD LEVEL (m)
131000	767.190	775.683	765.281
131010	766.591	777.341	765.035
131020	765.994	780.313	764.787
131030	765.440	779.170	764.540
131040	764.949	776.348	764.292
131050	764.519	779.366	764.064
131060	764.150	784.960	763.876
131070	763.843	785.087	763.730
131080	763.598	772.921	763.579
131090	763.415	766.289	763.354
131100	763.292	773.570	763.114
131110	763.232	767.652	762.976
131120	763.233	773.579	762.800
131130	763.286	779.337	762.676
131140	763.420	792.167	762.722
131150	763.608	799.810	762.768
131160	763.853	794.969	762.946
131170	764.163	790.093	763.151
131180	764.533	785.566	763.207
131190	764.965	777.552	763.426
131200	765.459	771.246	764.091
131210	766.015	766.864	765.030
131220	766.630	768.118	766.288
131230	767.263	769.902	767.014
131240	767.886	769.939	767.467
131250	768.529	772.033	767.911
131260	769.160	771.247	768.632
131270	769.760	771.572	769.451
131280	770.316	771.001	770.078
131290	770.829	770.178	770.527
131300	771.299	772.590	771.010
131310	771.726	772.132	771.317
131320	772.110	772.084	771.392
131330	772.450	773.946	771.650
131340	772.748	776.974	772.002
131350	773.002	775.740	772.361
131360	773.214	773.298	772.664
131370	773.415	774.813	772.779
131380	773.616	778.093	772.956
131390	773.817	778.232	773.177
131400	774.017	777.100	773.411
131410	774.218	778.048	773.596
131420	774.419	777.899	773.734
131430	774.620	777.209	773.870
131440	774.821	775.453	774.006
131450	775.022	773.839	774.018
131460	775.222	775.034	774.098
131470	775.423	775.401	774.314
131480	775.624	776.158	774.577
131490	775.825	776.482	774.863
131500	776.026	776.593	775.147

HORIZONTAL SCHEMATIC (L,R=m): R=30.000m; L=15.000m; L=47.514m; L=15.000m; L=65.380m; L=20.000m; R=61.000m; L=17.726m; L=20.000m; L=13.889m; L=20.000m; R=-25.000m; L=27.403m; L=20.000m; L=49.565m; L=15.000m; R=-150.000m; L=105.557m; L=

VERTICAL SCHEMATIC (G=%) (L,R=m): L=200.000m; G=6.329; L=39.757m; L=100.000m; G=2.008; L=160.114m

WIDENING SCHEMATIC (m) LEFT / RIGHT: 3.500; 5.000; 5.000; 3.500; 3.500; 4.400; 4.400; 3.500; 3.500; 5.000; 5.000; 3.500; 3.500; 4.100; 4.100

SUPERELEVATION SCHEMATIC (e in %) LEFT / RIGHT: e=5.900; e=2.500; e=6.800; e=2.500; e=7.000; e=2.500; e=4.700

CHAINAGE (m)
131000 131010 131020 131030 131040 131050 131060 131070 131080 131090 131100 131110 131120 131130 131140 131150 131160 131170 131180 131190 131200 131210 131220 131230 131240 131250 131260 131270 131280 131290 131300 131310 131320 131330 131340 131350 131360 131370 131380 131390 131400 131410 131420 131430 131440 131450 131460 131470 131480 131490 131500

Rev.	Date	Description

CLIENT: NHIDCL — BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR: GPT group — JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES — C-5,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS (An ISO 9001 : 2008 Certified) — PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD. — E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd. — # 510 & 511, JMD Megapolis, Sector-48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE:	DEC - 2020

TITLE: Plan & Longitudinal Profile (From Km 131+000 to Km 131+500)

SCALE: (HOR - 1 : 1000; VER - 1 : 100 at A2 Size Sheet) HOR 10 0 10 20; VER 5 0 5 10

DRG.NO: GPT/CCT/4B/HW/PNP/ 03a

REV: R0

LEGEND :

EXISTING PLAN :

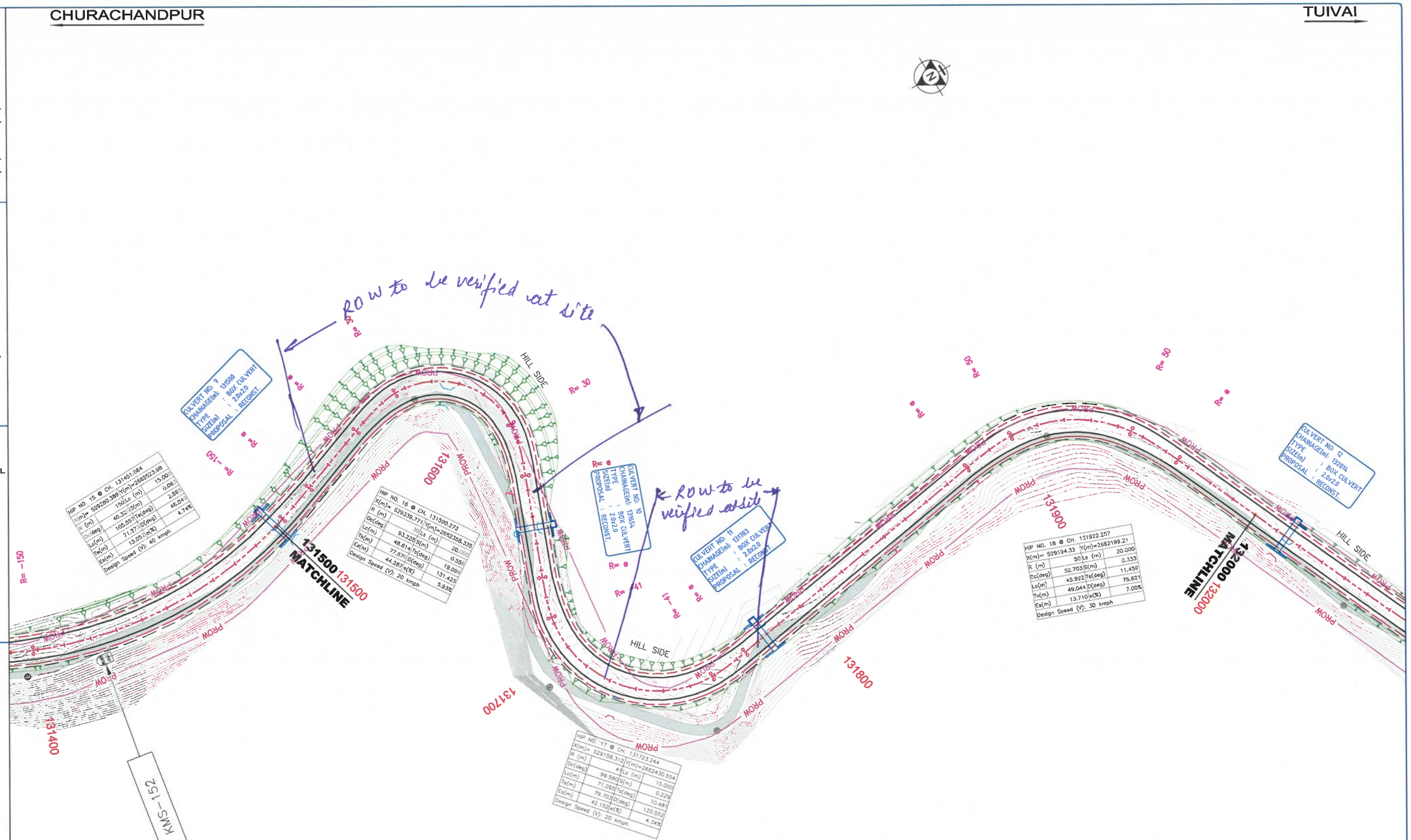
- EXIST. ROAD
- K-I/R : KACHA RESIDENTIAL
- K-I/C : KACHA COMMERCIAL
- SP-I/R : SEMI PUCCA RESI.
- SP-I/C : SEMI PUCCA COMM.
- P-I/R : PUCCA RESIDENTIAL
- P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
- ES EDGE
- HS EDGE
- C/W EDGE
- CEN.LINE
- C/W EDGE
- HS EDGE
- ES EDGE
- TOE LINE
- HOR. TANGENT POINT
- PROW — PROPOSED ROW
- CULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
- EXIS. ROAD LEVEL
- LEFT 6M LEVEL
- EXIST. LEVEL AT PRO. CL
- RIGHT 6M LEVEL
- VER. TANGENT POINT
- GRID LINE (5.0 / 10.0)
- BOX CULVERT



APPROVED

CHAITANYA PROJECTS CONSULTANCY PVT. LTD. MH-102-B CCPur In association with MSPARK FUTURISTICS & ASSOCIATES

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS Regd. No- 11/2004-05 BHUBANESWAR

Rev.	Date	Description

CLIENT: NAIDCL — BUILDING INFRASTRUCTURE · BUILDING THE NATION

EPC CONTRACTOR: GPT Group
JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES
C-5,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS
PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD.
E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd.
510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE: DEC - 2020	

TITLE: Plan & Longitudinal Profile
(From Km 131+500 to Km 132+000)

SCALE: (HOR - 1 : 1000; VER - 1 : 100 in A2 Size Sheet) HOR 10 0 10 20 / VER 5 0 5 10

DRG.NO: GPT/CCT/4B/HW/PNP/ 04

REV: R0

LEGEND :

EXISTING PLAN :

- EXIST. ROAD
- K-I/R : KACHA RESIDENTIAL
- K-I/C : KACHA COMMERCIAL
- SP-I/R : SEMI PUCCA RESI.
- SP-I/C : SEMI PUCCA COMM.
- P-I/R : PUCCA RESIDENTIAL
- P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
- ES EDGE
- HS EDGE
- C/W EDGE
- CEN.LINE
- C/W EDGE
- HS EDGE
- ES EDGE
- TOE LINE
- HOR. TANGENT POINT
- PROW — PROPOSED ROW
- CULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
- EXIS. ROAD LEVEL
- LEFT 6M LEVEL
- EXIST. LEVEL AT PRO. CL
- RIGHT 6M LEVEL
- VER. TANGENT POINT
- GRID LINE (5.0 / 10.0)
- BOX CULVERT

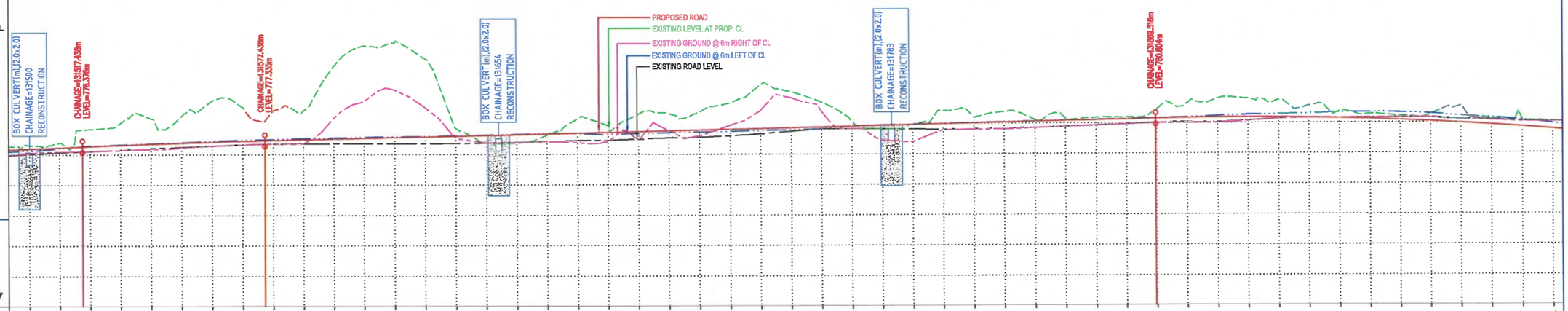
CHURACHANDPUR — TUIVAI

APPROVED — CHAITANYA PROJECTS CONSULTANCY PVT. LTD. In association with MSPARK FUTURISTICS & ASSOCIATES — NH-102B LCPT

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd — Managing Director

SUVADRA CONSULTANTS Regd. No- 11/2004-05 BHUBANESWAR



CHAINAGE (m)	PROP. ROAD LEVELS (m)	EXIST LEVELS AT PROP. CL (m)	EXISTING ROAD LEVEL (m)
131500	776.028	776.593	775.147
131510	776.226	777.085	775.378
131520	776.427	779.317	775.595
131530	776.617	780.347	775.800
131540	776.794	781.091	776.035
131550	776.957	781.506	776.260
131560	777.107	784.033	776.483
131570	777.242	782.870	776.668
131580	777.365	782.420	776.784
131590	777.484	782.353	776.810
131600	777.603	769.581	776.811
131610	777.721	793.030	776.821
131620	777.840	793.451	776.824
131630	777.959	790.899	776.829
131640	778.078	779.513	776.859
131650	778.196	777.070	776.947
131660	778.315	776.930	777.032
131670	778.434	778.258	777.174
131680	778.553	780.929	777.262
131690	778.672	779.558	777.349
131700	778.790	781.715	777.524
131710	778.909	781.812	777.732
131720	779.028	782.063	777.811
131730	779.147	783.555	778.045
131740	779.265	786.472	778.331
131750	779.384	785.374	778.631
131760	779.503	783.678	779.219
131770	779.622	780.563	779.228
131780	779.741	779.196	779.187
131790	779.859	779.932	779.091
131800	779.978	782.212	779.039
131810	780.097	781.213	779.090
131820	780.216	782.025	779.196
131830	780.334	780.633	779.322
131840	780.453	780.868	779.494
131850	780.572	781.033	779.677
131860	780.691	781.027	779.907
131870	780.810	782.319	780.104
131880	780.906	783.277	780.166
131890	780.963	784.062	780.145
131900	780.980	784.069	780.411
131910	780.957	783.792	780.734
131920	780.895	782.918	780.834
131930	780.792	781.937	780.813
131940	780.649	781.496	780.875
131950	780.467	781.197	780.891
131960	780.244	781.413	780.885
131970	779.981	782.804	780.683
131980	779.679	780.770	780.485
131990	779.337	780.539	780.293
132000	778.954	780.241	780.205

HORIZONTAL SCHEMATIC (L,R=m): L=15.000m; L=27.024m; L=20.000m; R=30.000m; L=48.814m; L=20.000m; L=37.931m; L=15.000m; R=-41.000m; L=71.285m; L=15.000m; L=105.386m; L=20.000m; R=50.000m; L=45.992m; L=20.000m

VERTICAL SCHEMATIC (G=%) (L,R=m): L=60.000m; G=1.188; L=292.077m; L=200.000m

WIDENING SCHEMATIC (m): LEFT 4.100, 3.500, 3.500, 4.700, 4.700, 3.500; RIGHT 3.500, 5.000, 5.000, 3.500, 3.500, 4.700, 4.700, 3.500

SUPERELEVATION SCHEMATIC (e in %): LEFT e=2.500, e=5.900, e=2.500, e=4.300, e=2.500, e=7.000; RIGHT e=2.500, e=5.900, e=2.500, e=4.300, e=2.500, e=7.000

Rev.	Date	Description

CLIENT: NHIDCL — BUILDING INFRASTRUCTURE · BUILDING THE NATION

EPC CONTRACTOR: GPT Group — JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES — C-5,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS — PP-97, Tankapani Road, BBSR-18. Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD. — E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd. — # 510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE:	DEC - 2020

TITLE: Plan & Longitudinal Profile (From Km 131+500 to Km 132+000)

SCALE: (HOR - 1 : 1000; VER - 1 : 100 at A2 Size Sheet) HOR. 10 0 10 20 VER. 5 0 5 10

DRG.NO: GPT/CCT/4B/HW/PNP/ 04a

REV: R0

LEGEND :

EXISTING PLAN :

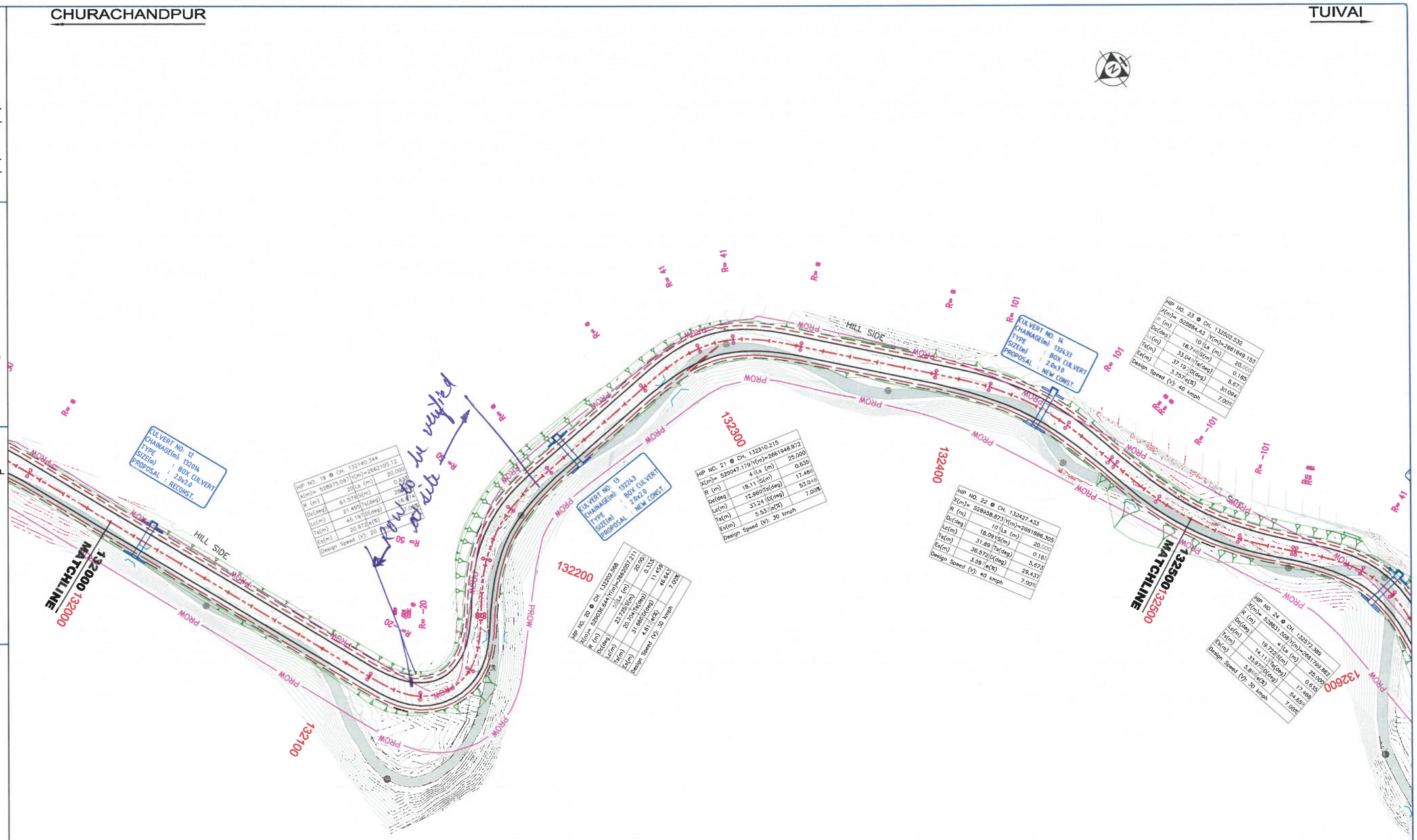
- EXIST. ROAD
- K-I/R : KACHA RESIDENTIAL
- K-I/C : KACHA COMMERCIAL
- SP-I/R : SEMI PUCCA RESI.
- SP-I/C : SEMI PUCCA COMM.
- P-I/R : PUCCA RESIDENTIAL
- P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
- ES EDGE
- HS EDGE
- C/W EDGE
- CEN.LINE
- C/W EDGE
- HS EDGE
- ES EDGE
- TOE LINE
- HOR. TANGENT POINT
- PROW — PROPOSED ROW
- CULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
- EXIS. ROAD LEVEL
- LEFT 6M LEVEL
- EXIST. LEVEL AT PRO. CL
- RIGHT 6M LEVEL
- VER. TANGENT POINT
- GRID LINE (10.0 × 5.0)
- BOX CULVERT



APPROVED

CHAITANYA PROJECTS CONSULTANCY PVT. LTD. IN-102-B CPur In association with M/S PARK FUTURISTICS & ASSOCIATES

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS Regd. No- 11/2004-05 BHUBANESWAR

Rev.	Date	Description

CLIENT: NHIDCL — BUILDING INFRASTRUCTURE · BUILDING THE NATION

EPC CONTRACTOR: GPT group
JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES
C-5,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS
PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD.
E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd.
510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE: DEC - 2020	

TITLE: Plan & Longitudinal Profile (From Km 132+000 to Km 132+500)

SCALE: (HOR - 1 : 1000; VER - 1 : 100 at A2 Size Sheet) HOR 10 0 10 20; VER 5 0 5 10

DRG. NO: GPT/CCT/4B/HW/PNP/ 05

REV: R0

LEGEND :

EXISTING PLAN :

- EXIST. ROAD
- K-I/R : KACHA RESIDENTIAL
- K-I/C : KACHA COMMERCIAL
- SP-I/R : SEMI PUCCA RESI.
- SP-I/C : SEMI PUCCA COMM.
- P-I/R : PUCCA RESIDENTIAL
- P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
- ES EDGE
- HS EDGE
- C/W EDGE
- CEN.LINE
- C/W EDGE
- HS EDGE
- ES EDGE
- TOE LINE
- HOR. TANGENT POINT
- PROW — PROPOSED ROW
- CULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
- EXIS. ROAD LEVEL
- LEFT 6M LEVEL
- EXIST. LEVEL AT PRO. CL
- RIGHT 6M LEVEL
- VER. TANGENT POINT
- GRID LINE (10.0 × 5.0)
- BOX CULVERT

CHURACHANDPUR — TUIVAI

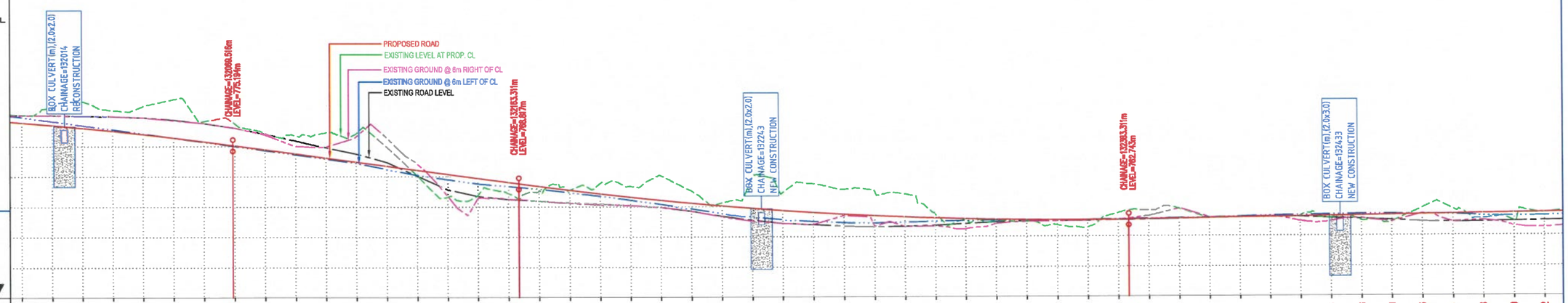
APPROVED

CHAITANYA PROJECTS CONSULTANCY PVT. LTD. — NH-102B — In association with MSPARK FUTURISTICS & ASSOCIATES

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS — Regd. No- 11/2004-05 — BHUBANESWAR



Level Datum= 750(m)

CHAINAGE (m)	PROP. ROAD LEVELS (m)	EXIST LEVELS AT PROP. CL (m)	EXISTING ROAD LEVEL (m)
132000	778.654	780.241	780.205
132010	778.532	781.375	780.160
132020	778.070	782.461	780.087
132030	777.568	781.058	779.988
132040	777.026	781.707	779.810
132050	776.444	782.838	779.411
132060	775.822	779.175	778.830
132070	775.161	778.833	778.065
132080	774.481	777.193	777.060
132090	773.801	776.805	775.962
132100	773.121	777.333	774.803
132110	772.441	777.147	773.765
132120	771.762	774.944	772.348
132130	771.082	770.165	770.092
132140	770.402	766.596	767.837
132150	769.722	766.905	766.730
132160	769.042	767.223	766.223
132170	768.371	767.562	765.973
132180	767.735	767.761	765.690
132190	767.137	768.819	765.445
132200	766.576	768.438	765.213
132210	766.053	770.158	764.858
132220	765.568	767.693	764.225
132230	765.120	765.607	763.394
132240	764.710	769.818	762.704
132250	764.337	767.308	762.217
132260	764.002	769.769	761.956
132270	763.705	767.890	761.748
132280	763.445	767.578	761.604
132290	763.223	767.056	761.658
132300	763.038	763.729	761.804
132310	762.892	762.817	762.087
132320	762.782	762.467	762.354
132330	762.711	762.415	762.482
132340	762.676	761.876	762.508
132350	762.680	761.485	762.542
132360	762.721	763.792	762.647
132370	762.791	764.266	762.710
132380	762.864	764.479	762.809
132390	762.936	763.012	762.952
132400	763.009	763.030	763.114
132410	763.081	763.272	763.189
132420	763.153	763.285	763.079
132430	763.226	762.934	762.879
132440	763.298	762.491	762.730
132450	763.370	762.250	762.517
132460	763.443	764.537	762.271
132470	763.515	764.474	762.176
132480	763.588	762.828	762.210
132490	763.660	762.414	762.300
132500	763.732	763.898	762.386

HORIZONTAL SCHEMATIC (L,R=m): L=144.343m; L=20.000m; R=-20.000m L=21.495m; L=20.000m; L=20.000m; R=50.000m L=20.704m; L=20.000m; L=45.815m; L=25.000m; R=41.000m L=12.960m; L=25.000m; L=49.792m; L=20.000m; R=101.000m L=31.891m; L=20.000m; L; L=20.000m; R=-101 L=33.04

VERTICAL SCHEMATIC (G=%) (L,R=m): G=-6.798 L=93.796m; L=200.000m; G=0.724 L=156.695m

WIDENING SCHEMATIC (m) LEFT / RIGHT: 3.500; 5.000; 5.000; 3.500; 3.500; 4.700; 4.700; 3.500; 3.500; 3.500; 4.700; 4.700; 3.500; 3.500; 4.100; 4.100; 3.500; 4.100

SUPERELEVATION SCHEMATIC (e in %) LEFT / RIGHT: e=2.500; e=7.000; e=7.000; e=2.500; e=7.000; e=2.500; e=7.000; e=7.000; e=2.500; e=7.000; e=2.500; e=7.000; e=7.000

Rev.	Date	Description

CLIENT: NHIDCL — BUILDING INFRASTRUCTURE · BUILDING THE NATION

EPC CONTRACTOR: GPT Group — JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES — C-5,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS — PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD. — E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd. — # 510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE:	DEC - 2020

TITLE: **Plan & Longitudinal Profile** (From Km 132+000 to Km 132+500)

SCALE: (HOR - 1 : 1000; VER - 1 : 100 at A3 Size Sheet) HOR 10 0 10 20 30; VER 5 0 5 10

DRG.NO: **GPT/CCT/4B/HW/PNP/ 05a**

REV: **R0**

LEGEND :

EXISTING PLAN :

▬ EXIST. ROAD

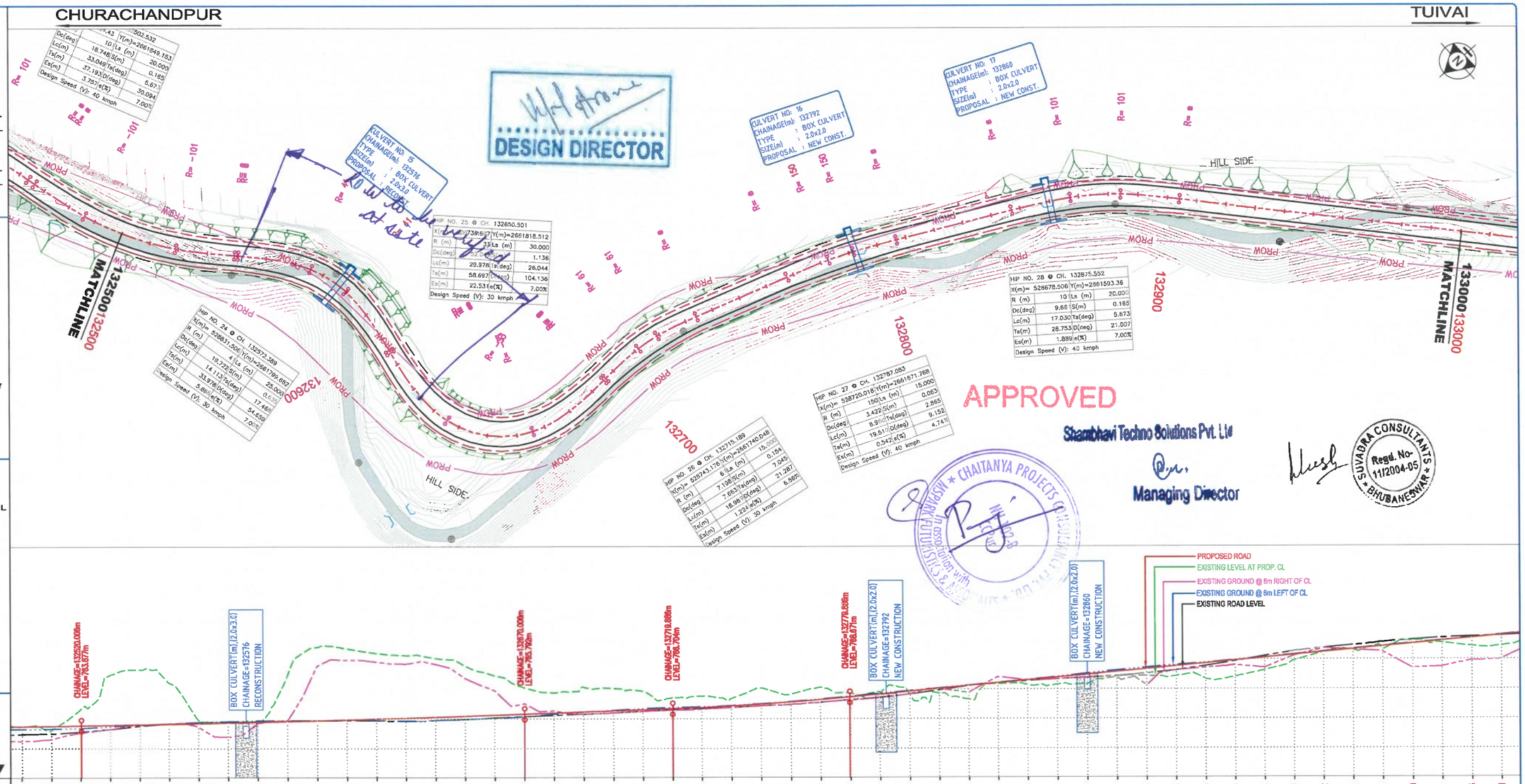
- K-I/R : KACHA RESIDENTIAL
- K-I/C : KACHA COMMERCIAL
- SP-I/R : SEMI PUCCA RESI.
- SP-I/C : SEMI PUCCA COMM.
- P-I/R : PUCCA RESIDENTIAL
- P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
- ES EDGE
- HS EDGE
- C/W EDGE
- CEN.LINE
- C/W EDGE
- HS EDGE
- ES EDGE
- TOE LINE
- HOR. TANGENT POINT
- PROW PROPOSED ROW
- CULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
- EXIS. ROAD LEVEL
- LEFT 6M LEVEL
- EXIST. LEVEL AT PRO. CL
- RIGHT 6M LEVEL
- VER. TANGENT POINT
- GRID LINE (10.0, 5.0)
- BOX CULVERT



To be verified at site

DESIGN DIRECTOR

APPROVED

Shambhavi Techno Solutions Pvt. Ltd

Managing Director

SUVADRA CONSULTANTS Regd. No- 11/2004-05 BHUBANESWAR

CHAITANYA PROJECTS CONSULTANCY PVT. LTD. in association with MSPARK FUTURISTICS & ASSOCIATES

Level Datum= 755(m)

CHAINAGE (m)	PROP. ROAD LEVELS (m)	EXIST LEVELS AT PROP. CL (m)	EXISTING ROAD LEVEL (m)
132500	763.732	763.698	762.386
132510	763.805	763.164	762.481
132520	763.877	766.661	762.839
132530	763.953	772.406	763.265
132540	764.037	773.308	763.799
132550	764.127	771.128	764.193
132560	764.228	764.834	764.451
132570	764.331	764.408	764.455
132580	764.444	764.556	764.562
132590	764.564	772.523	764.663
132600	764.692	777.201	764.690
132610	764.827	776.925	764.710
132620	764.969	776.145	764.691
132630	765.119	775.769	764.599
132640	765.276	775.275	764.742
132650	765.441	773.994	764.883
132660	765.613	772.311	765.167
132670	765.792	770.288	765.368
132680	765.975	769.421	765.580
132690	766.158	770.350	765.791
132700	766.340	770.169	766.012
132710	766.523	769.680	766.266
132720	766.706	768.596	766.502
132730	766.914	768.883	766.709
132740	767.170	768.485	766.939
132750	767.474	770.222	767.187
132760	767.827	769.194	767.455
132770	768.228	770.345	767.792
132780	768.677	769.312	768.190
132790	769.150	769.496	768.594
132800	769.622	769.144	769.138
132810	770.095	769.262	769.832
132820	770.568	768.351	770.577
132830	771.041	770.889	771.073
132840	771.514	770.754	771.388
132850	771.986	770.775	771.683
132860	772.459	770.857	771.947
132870	772.932	771.951	772.218
132880	773.405	772.202	772.612
132890	773.878	772.234	773.163
132900	774.350	771.814	773.900
132910	774.823	772.103	774.697
132920	775.296	773.205	775.570
132930	775.769	774.829	776.368
132940	776.242	776.220	776.910
132950	776.714	776.551	777.409
132960	777.187	776.643	777.928
132970	777.660	778.183	778.306
132980	778.133	777.818	778.659
132990	778.606	777.288	778.852
133000	779.078	777.355	778.999

HORIZONTAL SCHEMATIC (L,R=m): R=-101.000m, L=33.049m; L=20.000m; L=25.000m; R=41.000m, L=14.112m; L=25.000m; L=30.000m; R=-33.000m, L=29.978m; L=30.000m; L=15.000m; R, L; L=15.000m; L=33.583m; L=15.000m; R, L; L=15.000m; L=40.474m; L=20.000m; R=101.000m, L=17.030m; L=20.000m; L=148.610m

VERTICAL SCHEMATIC (G=%) (L,R=m): L=150.000m; G=1.829, L=49.880m; L=60.000m; G=4.728, L=407.031m

WIDENING SCHEMATIC (m): LEFT 4.100, 4.072, 3.500, 3.500, 3.502, 3.500, 3.500, 5.000, 5.000, 4.774, 3.500; RIGHT 3.500, 4.700, 4.700, 3.500, 3.500, 3.502, 3.500, 3.500, 4.400, 4.400, 3.500, 3.500, 4.100, 4.100, 3.500, 3.500, 4.100, 4.100, 3.500

SUPERELEVATION SCHEMATIC (e In %): LEFT e=7.000, e=7.000, e=7.000, e=6.600, e=2.500, e=2.500, e=4.700, e=2.500, e=7.000, e=2.500; RIGHT e=7.000, e=7.000, e=7.000, e=6.600, e=2.500, e=2.500, e=4.700, e=2.500, e=7.000, e=2.500

Rev.	Date	Description

CLIENT: NHIDCL BUILDING INFRASTRUCTURE · BUILDING THE NATION

EPC CONTRACTOR: GPT group
JC - 25, Sector - III, Salt Lake,
Kolkata - 700098.

AUTHORITY ENGINEER:
M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD.
IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES
C-5,2ND FLOOR, R.K TOWER,
SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS
PP-97, Tankapani Road,
BBSR-18, Odisha

PROOF CONSULTANT:
SHAMBHAVI TECHNO SOLUTIONS PVT.LTD.
E-82, Rajesh Kumar Path,
S.k.Puri, Boring Road,
Patna-800001

DESIGN CONSULTANT:
SPS Technocrats Pvt. Ltd.
510 & 511, JMD Megapolis, Sector 48,
Gurugram, Haryana - 122018.

PROJECT:
Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE:	DEC - 2020

TITLE: **Plan & Longitudinal Profile**
(From Km 132+500 to Km 133+000)

SCALE: (HOR - 1 : 1000; VER - 1 : 100 at A2 Size Sheet) HOR 10 0 10 20 VER 5 0 5 10

REV: R0

DRG.NO: GPT/CCT/4B/HW/PNP/ 06

LEGEND :

EXISTING PLAN :

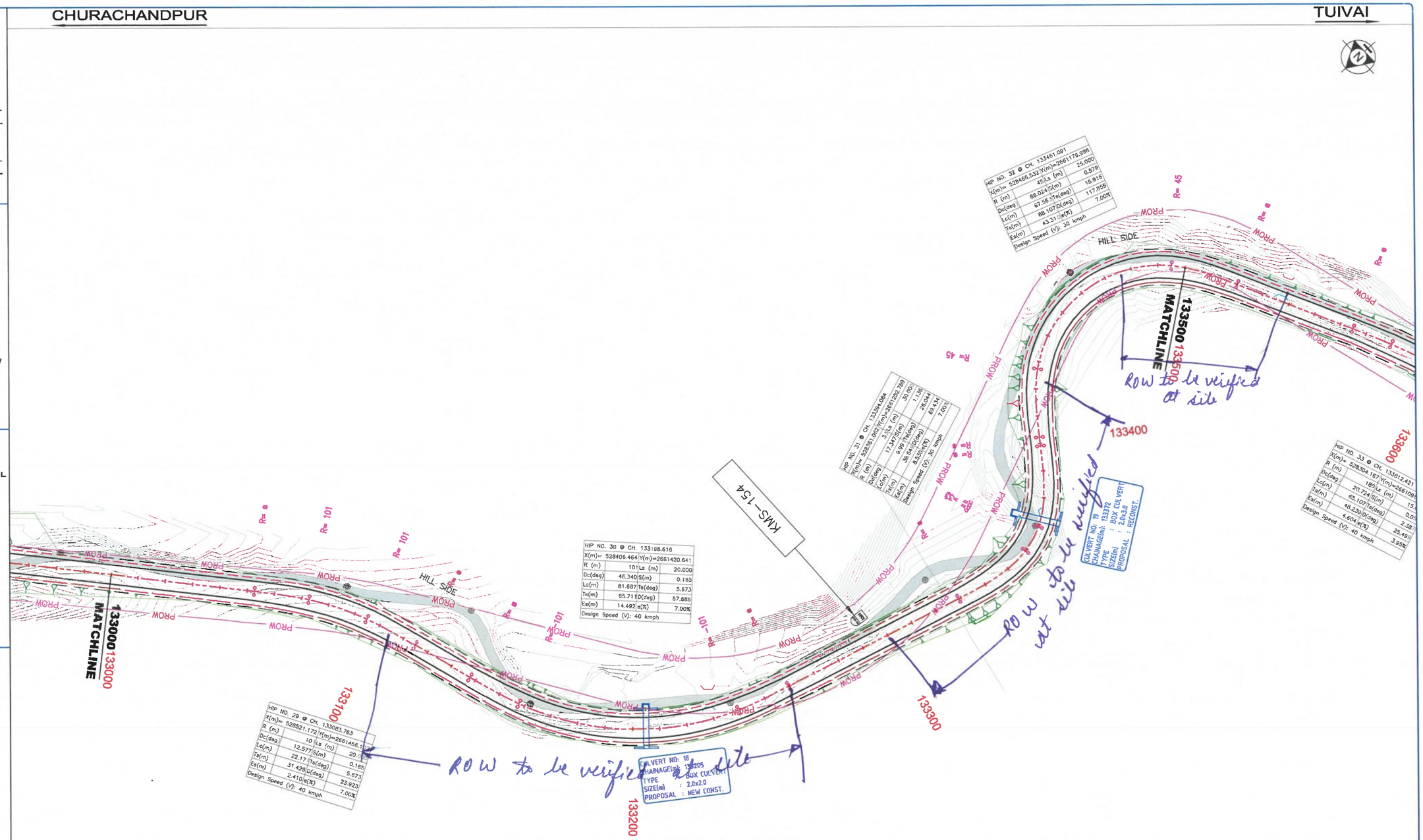
- EXIST. ROAD
- K-I/R : KACHA RESIDENTIAL
- K-I/C : KACHA COMMERCIAL
- SP-I/R : SEMI PUCCA RESI.
- SP-I/C : SEMI PUCCA COMM.
- P-I/R : PUCCA RESIDENTIAL
- P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
- ES EDGE
- HS EDGE
- C/W EDGE
- CEN.LINE
- C/W EDGE
- HS EDGE
- ES EDGE
- TOE LINE
- HOR. TANGENT POINT
- PROW — PROPOSED ROW
- CULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
- EXIS. ROAD LEVEL
- LEFT 6M LEVEL
- EXIST. LEVEL AT PRO. CL
- RIGHT 6M LEVEL
- VER. TANGENT POINT
- GRID LINE (5.0 / 10.0)
- BOX CULVERT



APPROVED

CHAITANYA PROJECTS CONSULTANCY PVT. LTD. MH-102-B CCPur In association with MSPARK FUTURISTICS & ASSOCIATES

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS Regd. No- 11/2004-05 BHUBANESWAR

Rev.	Date	Description

CLIENT: NAIDCL — BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR: GPT Group — JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES — C-5,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS — PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD. — E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd. — # 510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE:	DEC - 2020

TITLE: Plan & Longitudinal Profile (From Km 133+000 to Km 133+500)

SCALE: (HOR - 1 : 1000; VER - 1 : 100 at A2 Size Sheet) HOR 10 0 10 20; VER 5 0 5 10

DRG.NO: GPT/CCT/4B/HW/PNP/ 07

REV: R0

CHURACHANDPUR

TUIVAI

LEGEND :

EXISTING PLAN :

▬ EXIST. ROAD

K-I/R : KACHA RESIDENTIAL
K-I/C : KACHA COMMERCIAL
SP-I/R : SEMI PUCCA RESI.
SP-I/C : SEMI PUCCA COMM.
P-I/R : PUCCA RESIDENTIAL
P-I/C : PUCCA COMMERCIAL
1000 CONTOUR

PROPOSED PLAN :

TOE LINE
ES EDGE
HS EDGE
C/W EDGE
CEN.LINE
C/W EDGE
HS EDGE
ES EDGE
TOE LINE
HOR. TANGENT POINT
PROW PROPOSED ROW
CULVERT
BRIDGE

PROPOSED PROFILE :

PROP. LEVEL
EXIS. ROAD LEVEL
LEFT 6M LEVEL
EXIST. LEVEL AT PRO. CL
RIGHT 6M LEVEL
VER. TANGENT POINT
GRID LINE
BOX CULVERT

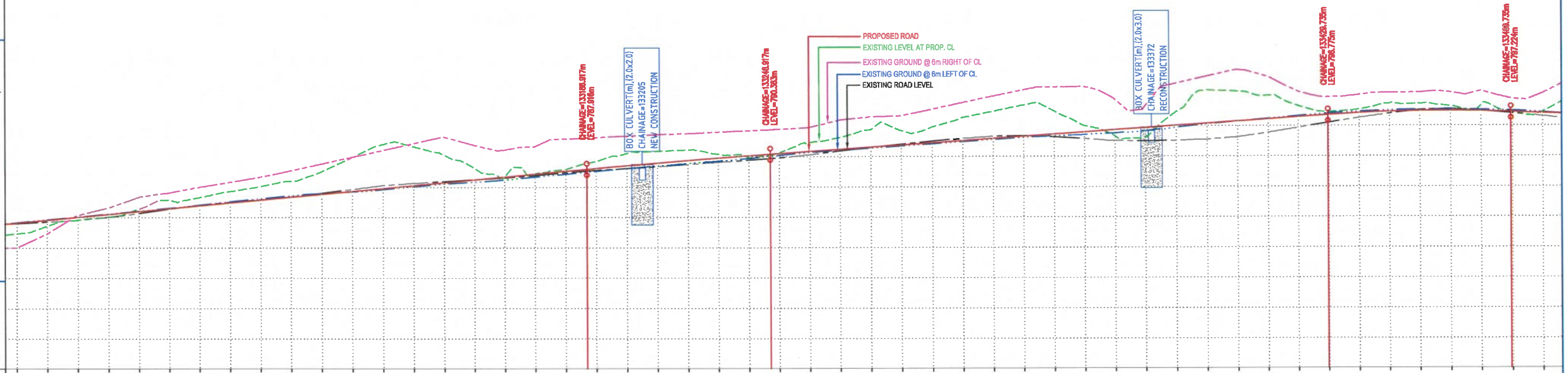
APPROVED

In association with MSPARK FUTURISTICS & ASSOCIATES

DESIGN DIRECTOR

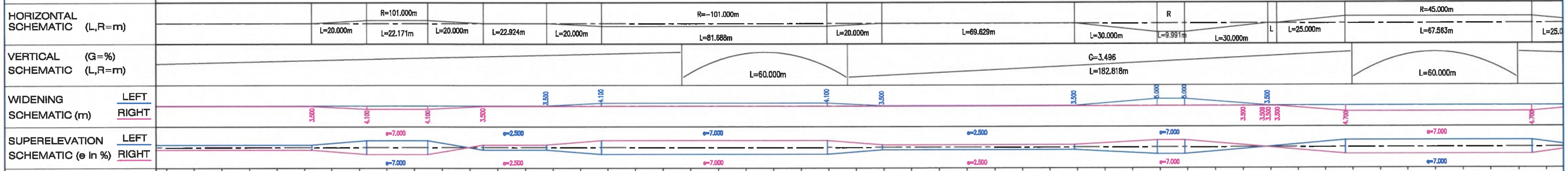
Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS
Regd. No.- 11/2004-05
BHUBANESWAR



Level Datum= 755(m)

CHAINAGE (m)	PROP. ROAD LEVELS (m)	EXIST LEVELS AT PROP. CL (m)	EXISTING ROAD LEVEL (m)
133000	779.078	777.355	778.999
133010	779.551	778.614	779.268
133020	780.024	779.615	779.596
133030	780.497	780.084	780.038
133040	780.970	781.422	780.684
133050	781.442	782.903	781.392
133060	781.915	783.310	781.995
133070	782.388	784.308	782.500
133080	782.861	785.129	782.907
133090	783.334	785.991	783.380
133100	783.806	787.573	783.991
133110	784.279	789.939	784.659
133120	784.752	792.072	785.276
133130	785.225	791.716	785.661
133140	785.698	790.309	785.911
133150	786.170	788.187	786.195
133160	786.643	786.656	786.498
133170	787.116	787.183	786.902
133180	787.589	787.895	787.351
133190	788.061	789.258	787.757
133200	788.517	790.591	788.060
133210	788.953	790.913	788.355
133220	789.368	791.141	788.721
133230	789.762	790.435	789.084
133240	790.136	789.804	789.417
133250	790.491	790.537	789.793
133260	790.841	792.307	790.294
133270	791.190	793.161	790.914
133280	791.540	794.467	791.493
133290	791.889	794.332	792.019
133300	792.239	794.891	792.512
133310	792.589	796.466	792.987
133320	792.938	797.465	793.325
133330	793.288	798.487	793.363
133340	793.638	797.553	793.208
133350	793.987	795.098	792.915
133360	794.337	793.341	792.537
133370	794.686	793.128	792.489
133380	795.036	797.305	792.583
133390	795.386	800.884	792.742
133400	795.735	800.681	793.128
133410	796.085	799.961	793.863
133420	796.435	798.264	794.685
133430	796.784	797.275	795.487
133440	797.086	797.680	796.299
133450	797.295	798.680	796.976
133460	797.414	798.606	797.577
133470	797.440	798.260	797.733
133480	797.375	798.281	797.427
133490	797.219	797.332	796.993
133500	797.019	797.280	796.547



Rev.	Date	Description

CLIENT:
NHIDCL
BUILDING INFRASTRUCTURE · BUILDING THE NATION

EPC CONTRACTOR:
GPT group
JC - 25, Sector - III, Salt Lake,
Kolkata - 700098.

AUTHORITY ENGINEER:
M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD.
IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES
C-5,2ND FLOOR, R.K TOWER,
SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT:
SUVADRA CONSULTANTS
PP-97, Tankapani Road,
BBSR-18, Odisha

PROOF CONSULTANT:
SHAMBHAVI TECHNO SOLUTIONS PVT.LTD.
E-82, Rajesh Kumar Path,
S.k.Puri, Boring Road,
Patna-800001

DESIGN CONSULTANT:
SPS Technocrats Pvt. Ltd.
510 & 511, JMD Megapolis, Sector 48,
Gurugram, Haryana - 122018.

PROJECT:
Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN: AMIT
DESIGNED: DHEERESH
CHECKED: VIPUL
DATE: DEC - 2020

TITLE: **Plan & Longitudinal Profile**
(From Km 133+000 to Km 133+500)

SCALE: (HOR - 1 : 1000; VER - 1 : 100 at A2 Size Sheet)
HOR 10 0 10 20
VER 5 0 5 10

DRG.NO: **GPT/CCT/4B/HW/PNP/ 07a**

REV: R0

LEGEND :

EXISTING PLAN :

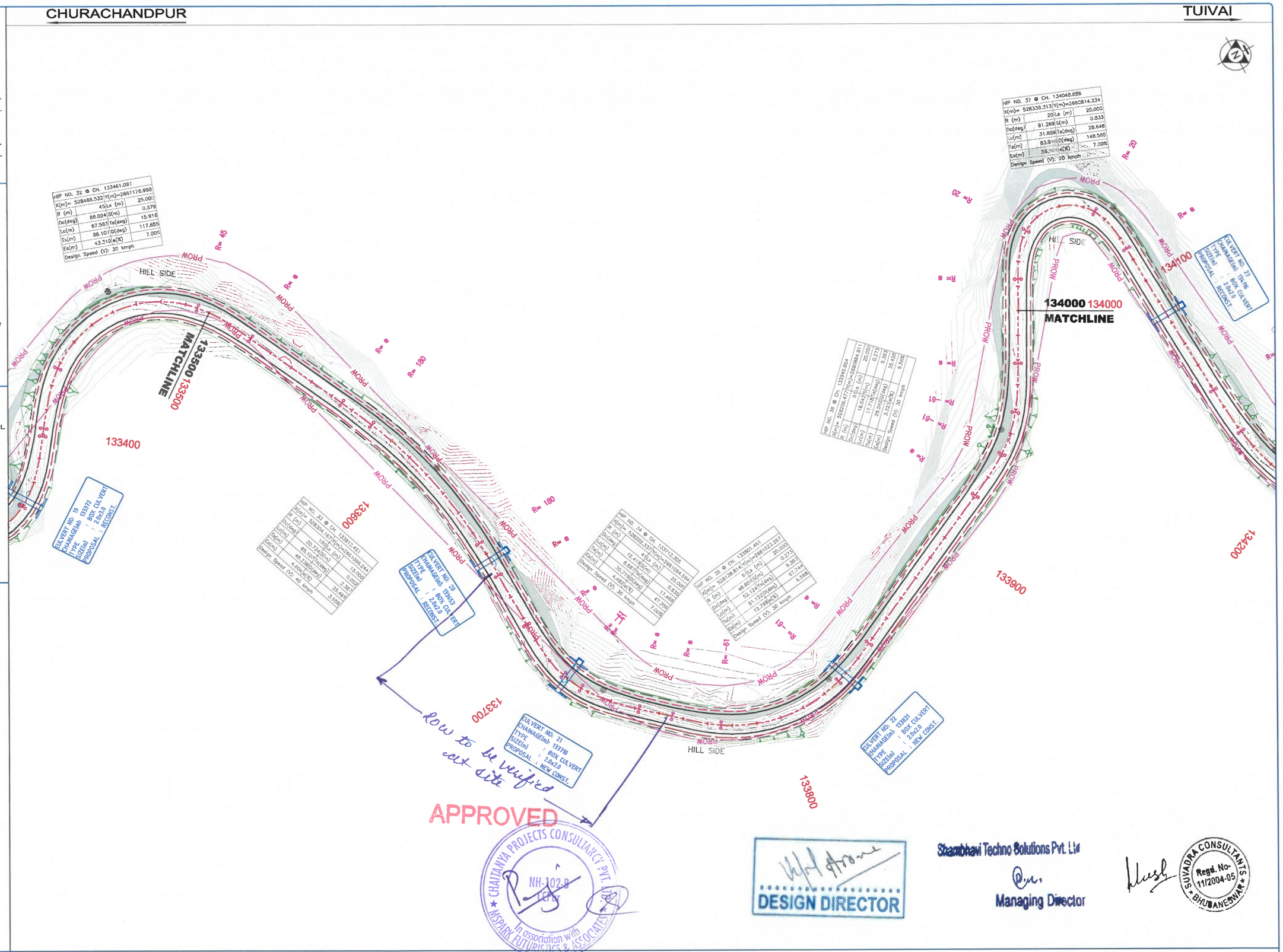
- EXIST. ROAD
- K-I/R : KACHA RESIDENTIAL
- K-I/C : KACHA COMMERCIAL
- SP-I/R : SEMI PUCCA RESI.
- SP-I/C : SEMI PUCCA COMM.
- P-I/R : PUCCA RESIDENTIAL
- P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
- ES EDGE
- HS EDGE
- C/W EDGE
- CEN.LINE
- C/W EDGE
- HS EDGE
- ES EDGE
- TOE LINE
- HOR. TANGENT POINT
- PROW — PROPOSED ROW
- CULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
- EXIS. ROAD LEVEL
- LEFT 6M LEVEL
- EXIST. LEVEL AT PRO. CL
- RIGHT 6M LEVEL
- VER. TANGENT POINT
- GRID LINE (5.0 / 10.0)
- BOX CULVERT



Rev.	Date	Description

CLIENT: NHIDCL — BUILDING INFRASTRUCTURE · BUILDING THE NATION

EPC CONTRACTOR: GPT Group
JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES
C-5,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS
PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD.
E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd.
510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE:	DEC - 2020

TITLE: Plan & Longitudinal Profile
(From Km 133+500 to Km 134+000)

SCALE: (HOR - 1 : 1000; VER - 1 : 100 at A2 Size Sheet)
HOR 10 0 10 20
VER 5 0 5 10

REV: R0

DRG. NO: GPT/CCT/4B/HW/PNP/ 08

LEGEND :

EXISTING PLAN :

- EXIST. ROAD
- K-I/R : KACHA RESIDENTIAL
- K-I/C : KACHA COMMERCIAL
- SP-I/R : SEMI PUCCA RESI.
- SP-I/C : SEMI PUCCA COMM.
- P-I/R : PUCCA RESIDENTIAL
- P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
- ES EDGE
- HS EDGE
- C/W EDGE
- CEN.LINE
- C/W EDGE
- HS EDGE
- ES EDGE
- TOE LINE
- HOR. TANGENT POINT
- PROW — PROPOSED ROW
- CULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
- EXIS. ROAD LEVEL
- LEFT 6M LEVEL
- EXIST. LEVEL AT PRO. CL
- RIGHT 6M LEVEL
- VER. TANGENT POINT
- GRID LINE (10.0 × 5.0)
- BOX CULVERT

CHURACHANDPUR ← → TUIVAI

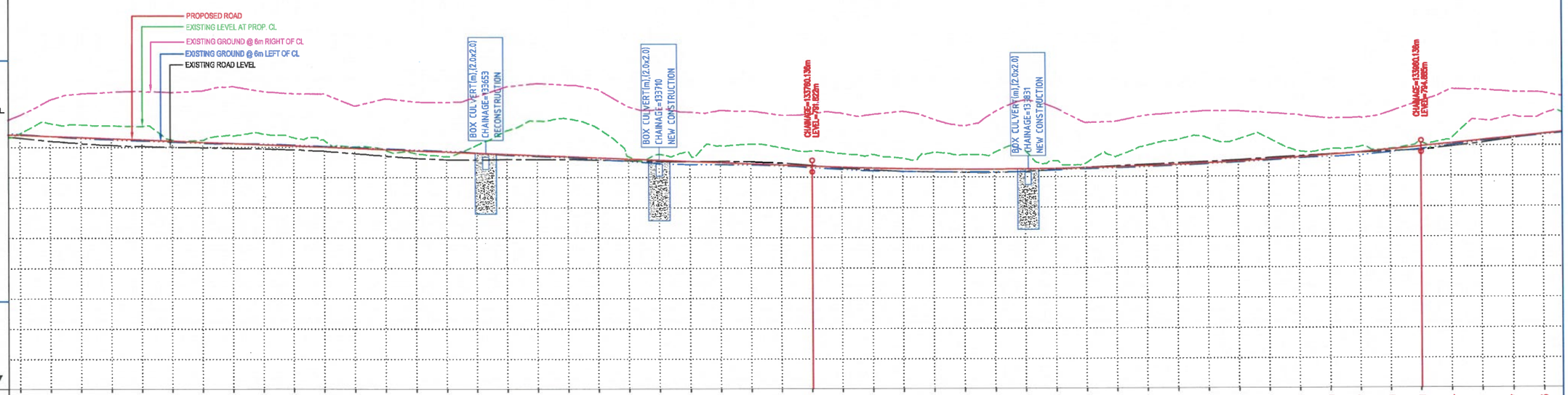
APPROVED

CHAITANYA PROJECTS CONSULTANCY PVT. LTD. * MSPARK FUTURISTICS *

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS * BHUBANESWAR * Regd. No- 11/2004-05



CHAINAGE (m)	PROP. ROAD LEVELS (m)	EXIST LEVELS AT PROP. CL (m)	EXISTING ROAD LEVEL (m)
133500	797.019	797.280	796.547
133510	796.819	798.935	796.028
133520	796.620	798.723	795.828
133530	796.420	798.539	795.312
133540	796.220	798.462	795.128
133550	796.020	796.215	795.027
133560	795.820	796.178	794.934
133570	795.621	796.900	794.838
133580	795.421	797.205	794.738
133590	795.221	798.602	794.594
133600	795.021	796.181	794.338
133610	794.821	795.074	793.951
133620	794.622	794.495	793.532
133630	794.422	793.940	793.166
133640	794.222	793.492	792.856
133650	794.022	795.341	792.887
133660	793.822	797.751	792.967
133670	793.623	799.354	792.892
133680	793.423	799.734	792.974
133690	793.223	798.178	792.875
133700	793.023	793.432	792.724
133710	792.823	793.830	792.603
133720	792.624	794.046	792.583
133730	792.424	795.237	792.544
133740	792.224	795.490	792.614
133750	792.024	794.923	792.378
133760	791.824	794.337	791.956
133770	791.642	793.622	791.477
133780	791.494	793.800	791.169
133790	791.382	793.201	790.941
133800	791.308	794.084	790.836
133810	791.264	793.700	790.768
133820	791.259	794.046	790.733
133830	791.287	794.337	790.839
133840	791.352	792.662	791.182
133850	791.451	792.218	791.502
133860	791.586	793.302	791.743
133870	791.757	795.115	791.984
133880	791.962	796.052	792.210
133890	792.203	796.354	792.430
133900	792.480	796.095	792.673
133910	792.791	796.280	793.030
133920	793.138	794.154	793.321
133930	793.520	794.445	793.603
133940	793.937	794.840	793.862
133950	794.390	794.528	794.088
133960	794.878	795.634	794.302
133970	795.394	796.030	794.869
133980	795.891	799.260	795.447
133990	796.397	799.976	796.187
134000	796.903	800.172	796.861

HORIZONTAL SCHEMATIC (L,R=m): L=25.000m; L=44.995m; L=15.000m; R=180.000m L=65.107m; L=15.000m; L=22.887m; L=25.000m; R L; L=25.000m; L=13.651m; L=20.000m; R=-61.000m L=52.124m; L=20.000m; L=73.421m; L=20.000m; R=-61.000m L=17.718m; L=20.000m; L=34.295m

VERTICAL SCHEMATIC (G=%) (L,R=m): G=-1.998 L=270.401m; L=200.000m

WIDENING SCHEMATIC (m) LEFT / RIGHT: 3.500; 4.700; 4.700; 3.500; 3.500; 4.400; 4.400; 3.500; 3.500; 4.400; 4.400; 3.500 / 3.500; 3.500; 4.100; 4.100; 3.500

SUPERELEVATION SCHEMATIC (e in %) LEFT / RIGHT: e=2.500; e=4.000; e=2.500; e=7.000; e=2.500; e=6.800; e=2.500; e=6.800; e=2.500 / e=2.500; e=4.000; e=2.500; e=7.000; e=2.500; e=6.800; e=2.500; e=6.800; e=2.500

Rev.	Date	Description

CLIENT: NHIDCL — BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR: GPT group — JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES — C-5,2ND FLOOR, R.K.TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS — PP-97, Tankapani Road, BBSR-18. Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD. — E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd. — # 510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE:	DEC - 2020

TITLE: **Plan & Longitudinal Profile** *(From Km 133+500 to Km 134+000)*

SCALE: (HOR - 1 : 1000; VER - 1 : 100 at A2 Size Sheet) HOR 10 0 10 20 / VER 5 0 5 10

DRG.NO: **GPT/CCT/4B/HW/PNP/ 08a**

REV: **R0**

LEGEND :

EXISTING PLAN :

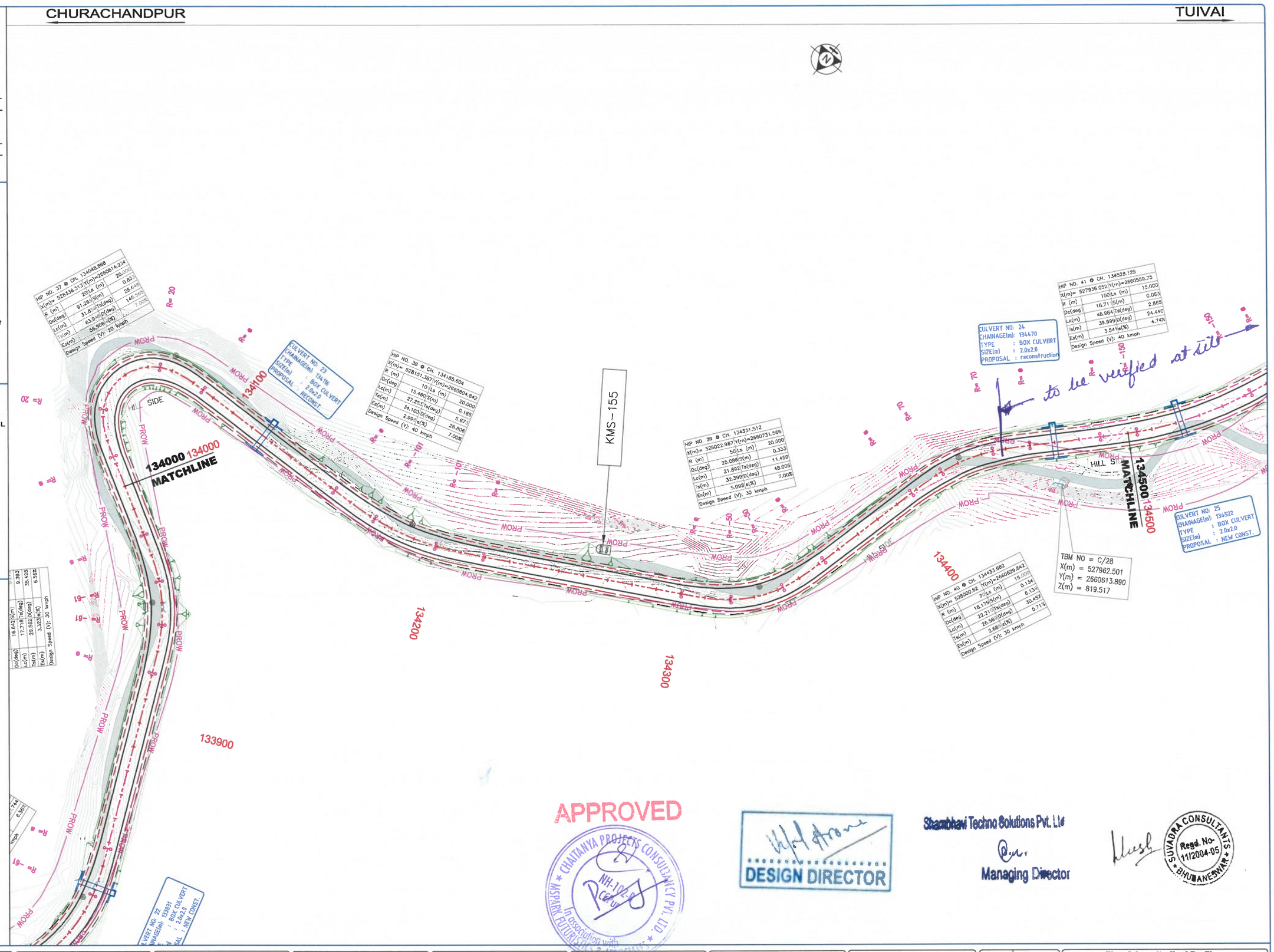
- EXIST. ROAD
- K-I/R : KACHA RESIDENTIAL
- K-I/C : KACHA COMMERCIAL
- SP-I/R : SEMI PUCCA RESI.
- SP-I/C : SEMI PUCCA COMM.
- P-I/R : PUCCA RESIDENTIAL
- P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
- ES EDGE
- HS EDGE
- C/W EDGE
- CEN.LINE
- C/W EDGE
- HS EDGE
- ES EDGE
- TOE LINE
- HOR. TANGENT POINT
- PROW — PROPOSED ROW
- CULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
- EXIS. ROAD LEVEL
- LEFT 6M LEVEL
- EXIST. LEVEL AT PRO. CL
- RIGHT 6M LEVEL
- VER. TANGENT POINT
- GRID LINE (10.0 × 5.0)
- BOX CULVERT



APPROVED

CHAITANYA PROJECTS CONSULTANCY PVT. LTD. * MSPARK FUTURISTICS & ASSOCIATES * NH-102-B In association with

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS * BHUBANESWAR * Regd. No- 11/2004-05

Rev.	Date	Description

CLIENT: NHIDCL — BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR: GPT group
JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES
C-5,2ND FLOOR, R.K.TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS
PP-97, Tankapani Road, BBSR-18, Odisha

PROJECT CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD.
E-82, Rajesh Kumar Palh, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd.
510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) In the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE: DEC - 2020	

TITLE: Plan & Longitudinal Profile (From Km 134+000 to Km 134+500)

SCALE: (HOR - 1 : 1000, VER - 1 : 100 at A2 Size Sheet) HOR 10 0 10 20 / VER 5 0 5 10

REV: R0

DRG.NO: GPT/CCT/4B/HW/PNP/ 09

LEGEND :

EXISTING PLAN :

- EXIST. ROAD
- K-I/R : KACHA RESIDENTIAL
- K-I/C : KACHA COMMERCIAL
- SP-I/R : SEMI PUCCA RESI.
- SP-I/C : SEMI PUCCA COMM.
- P-I/R : PUCCA RESIDENTIAL
- P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
- ES EDGE
- HS EDGE
- C/W EDGE
- CEN.LINE
- C/W EDGE
- HS EDGE
- ES EDGE
- TOE LINE
- HOR. TANGENT POINT
- PROW PROPOSED ROW
- CULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
- EXIS. ROAD LEVEL
- LEFT 6M LEVEL
- EXIST. LEVEL AT PRO. CL
- RIGHT 6M LEVEL
- VER. TANGENT POINT
- GRID LINE (10.0 × 5.0)
- BOX CULVERT

CHURACHANDPUR → TUIVAI

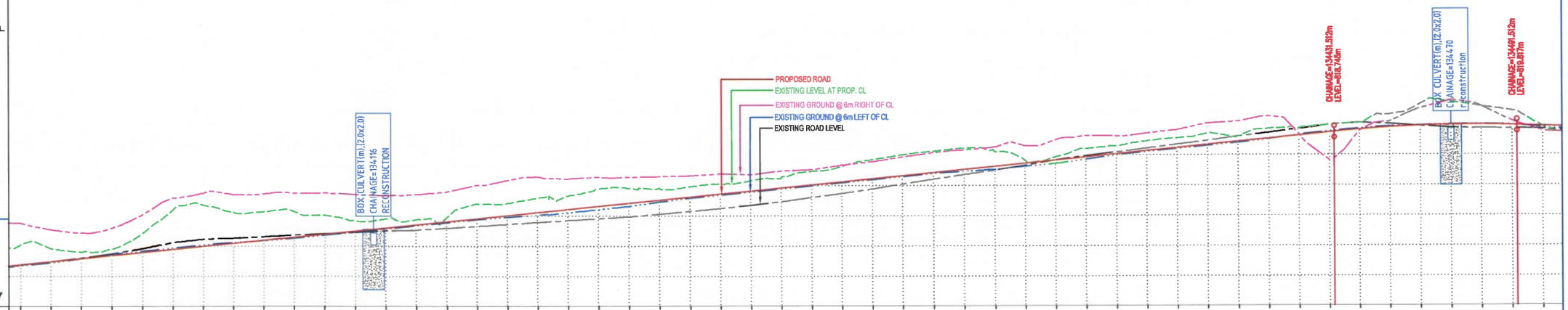
APPROVED

CHAITANYA PROJECTS CONSULTANCY PVT. LTD. In association with MSPARK FUTURISTICS & ASSOCIATES

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS Regd. No- 11/2004-05 BHUBANESWAR



Level Datum= 790(m)

CHAINAGE (m)	PROP. ROAD LEVELS (m)	EXIST LEVELS AT PROP. CL (m)	EXISTING ROAD LEVEL (m)
134000	796.903	800.172	796.861
134010	797.409	799.664	797.388
134020	797.915	799.101	798.010
134030	798.421	799.491	798.699
134040	798.928	802.045	799.600
134050	799.434	805.918	800.600
134060	799.940	806.821	801.131
134070	800.446	805.583	801.327
134080	800.952	805.713	801.540
134090	801.458	805.773	801.822
134100	801.965	805.150	802.042
134110	802.471	804.207	802.247
134120	802.977	804.563	802.503
134130	803.483	804.422	802.672
134140	803.989	804.698	802.950
134150	804.495	807.003	803.282
134160	805.002	807.073	803.604
134170	805.508	807.833	803.925
134180	806.014	808.315	804.229
134190	806.520	809.455	804.537
134200	807.026	809.527	804.858
134210	807.532	809.527	805.271
134220	808.039	809.791	805.734
134230	808.545	810.205	806.212
134240	809.051	810.775	806.696
134250	809.557	811.183	807.333
134260	810.063	812.356	808.026
134270	810.569	813.168	808.692
134280	811.076	814.274	809.420
134290	811.582	815.055	810.241
134300	812.088	815.643	811.030
134310	812.594	816.114	811.770
134320	813.100	815.616	812.488
134330	813.606	814.076	813.278
134340	814.113	814.675	814.160
134350	814.619	815.993	814.854
134360	815.125	816.426	815.471
134370	815.631	817.265	816.104
134380	816.137	817.760	816.727
134390	816.643	818.498	817.350
134400	817.150	818.016	818.065
134410	817.656	819.279	818.655
134420	818.162	819.341	819.298
134430	818.668	819.911	819.917
134440	819.135	820.260	820.264
134450	819.494	821.644	820.040
134460	819.744	823.354	819.697
134470	819.885	823.703	819.395
134480	819.916	822.867	819.334
134490	819.838	822.271	819.309
134500	819.691	819.630	819.212

HORIZONTAL SCHEMATIC (L,R=m): L=20.000m; R=20.000m; L=20.000m; 295m; L=31.859m; L=67.160m; L=20.000m; R=-101.000m; L=27.253m; L=20.000m; L=81.336m; L=20.000m; R=-50.000m; L=21.892m; L=20.000m; L=45.119m; L=15.000m; R=70.000m; L=22.210m; L=15.000m; L=28.846m; L=15.000m

VERTICAL SCHEMATIC (G=%) (L,R=m): G=5.062; L=471.376m; L=60.000m

WIDENING SCHEMATIC (m) LEFT / RIGHT: 3.500; 5.000; 5.000; 3.500; 3.500; 4.100; 4.100; 3.500; 3.500; 4.700; 4.700; 3.500; 3.500; 4.100; 3.500; 4.400; 4.400; 3.500

SUPERELEVATION SCHEMATIC (e in %) LEFT / RIGHT: e=7.000; e=2.500; e=7.000; e=2.500; e=7.000; e=2.500; e=5.700; e=2.500

CHAINAGE (m): 134000, 134010, 134020, 134030, 134040, 134050, 134060, 134070, 134080, 134090, 134100, 134110, 134120, 134130, 134140, 134150, 134160, 134170, 134180, 134190, 134200, 134210, 134220, 134230, 134240, 134250, 134260, 134270, 134280, 134290, 134300, 134310, 134320, 134330, 134340, 134350, 134360, 134370, 134380, 134390, 134400, 134410, 134420, 134430, 134440, 134450, 134460, 134470, 134480, 134490, 134500

Rev.	Date	Description

CLIENT: NHIDCL — BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR: GPT Infraprojects Group — JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES, C-5,2ND FLOOR, RK TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS — PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD. E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd. # 510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE:	DEC - 2020

TITLE: Plan & Longitudinal Profile (From Km 134+000 to Km 134+500)

SCALE: (HOR - 1 : 1000; VER - 1 : 100 at A2 Size Sheet) HOR 10 0 10 20; VER 5 0 5 10

DRG.NO: GPT/CCT/4B/HW/PNP/ 09a

REV: R0

LEGEND :

EXISTING PLAN :

EXIST. ROAD

K-I/R : KACHA RESIDENTIAL
K-I/C : KACHA COMMERCIAL
SP-I/R : SEMI PUCCA RESI.
SP-I/C : SEMI PUCCA COMM.
P-I/R : PUCCA RESIDENTIAL
P-I/C : PUCCA COMMERCIAL

1000 CONTOUR

PROPOSED PLAN :

TOE LINE
ES EDGE
HS EDGE
C/W EDGE
CEN.LINE
C/W EDGE
HS EDGE
ES EDGE
TOE LINE

HOR. TANGENT POINT

PROW PROPOSED ROW

CULVERT

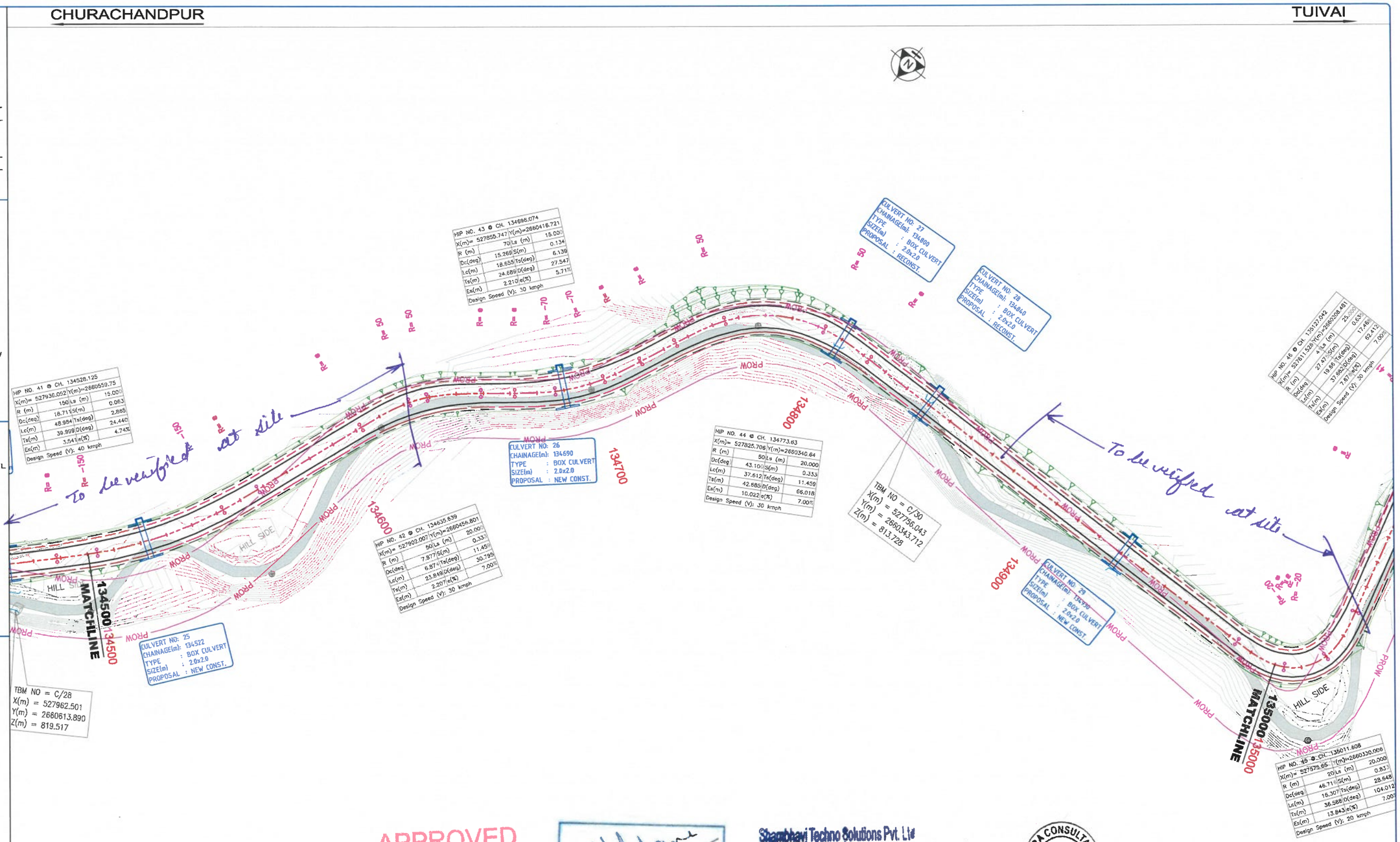
BRIDGE

PROPOSED PROFILE :

PROP. LEVEL
EXIS. ROAD LEVEL
LEFT 6M LEVEL
EXIST. LEVEL AT PRO. CL
RIGHT 6M LEVEL
VER. TANGENT POINT

GRID LINE (10.0 × 5.0)

BOX CULVERT



APPROVED

CHAITANYA PROJECTS CONSULTANCY PVT. LTD. NH-102-B (EPC) In association with MSPARK FUTURISTICS & ASSOCIATES

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS Regd. No- 11/2004-05 BHUBANESWAR

Rev.	Date	Description

CLIENT: NAIDCL — BUILDING INFRASTRUCTURE · BUILDING THE NATION

EPC CONTRACTOR: GPT Group — JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES — C-5,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS — PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD. — E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd. — # 510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.028 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE:	DEC - 2020

TITLE: Plan & Longitudinal Profile (From Km 134+500 to Km 135+000)

SCALE: (HOR - 1 : 1000; VER - 1 : 100 at A2 Size Sheet) HOR 10 0 10 20 VER 5 0 5 10

REV: R0

DRG.NO: GPT/CCT/4B/HW/PNP/10

LEGEND :

EXISTING PLAN :

- EXIST. ROAD
- K-I/R : KACHA RESIDENTIAL
- K-I/C : KACHA COMMERCIAL
- SP-I/R : SEMI PUCCA RESI.
- SP-I/C : SEMI PUCCA COMM.
- P-I/R : PUCCA RESIDENTIAL
- P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
- ES EDGE
- HS EDGE
- C/W EDGE
- CEN.LINE
- C/W EDGE
- HS EDGE
- ES EDGE
- TOE LINE
- HOR. TANGENT POINT
- PROW PROPOSED ROW
- CULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
- EXIS. ROAD LEVEL
- LEFT 6M LEVEL
- EXIST. LEVEL AT PRO. CL
- RIGHT 6M LEVEL
- VER. TANGENT POINT
- GRID LINE (10.0 × 5.0)
- BOX CULVERT

CHURACHANDPUR ← → TUIVAI

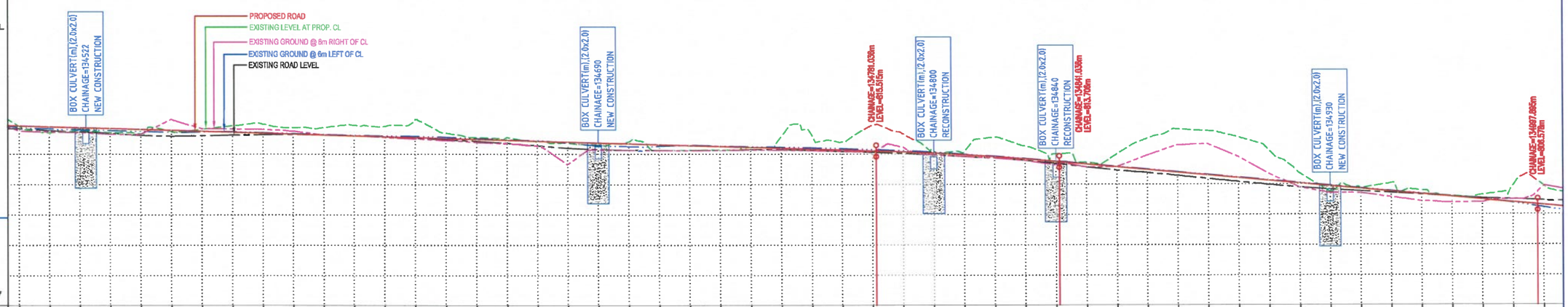
APPROVED

CHAITANYA PROJECTS CONSULTANCY PVT. LTD. * MSPARK FUTURISTICS & ASSOCIATES * In association with

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd.
Managing Director

SUVADRA CONSULTANTS * BHUBANESWAR * Regd. No- 11/2004-05



Level Datum= 790(m)

CHAINAGE (m)	PROP. ROAD LEVELS (m)	EXIST LEVELS AT PROP. CL (m)	EXISTING ROAD LEVEL (m)
134500	819.691	819.530	819.212
134510	819.543	818.588	818.890
134520	819.394	818.970	818.712
134530	819.245	818.804	818.473
134540	819.097	818.407	818.120
134550	818.948	818.773	817.993
134560	818.800	-999.000	818.060
134570	818.651	-999.000	818.180
134580	818.502	820.059	818.259
134590	818.354	819.490	818.294
134600	818.205	819.468	818.196
134610	818.057	818.853	818.056
134620	817.908	817.887	817.890
134630	817.759	820.837	817.642
134640	817.611	818.553	817.400
134650	817.462	817.804	817.151
134660	817.314	817.791	816.825
134670	817.165	817.165	816.397
134680	817.017	816.843	816.015
134690	816.868	816.512	815.780
134700	816.719	817.059	815.672
134710	816.571	815.873	815.643
134720	816.422	815.670	815.631
134730	816.274	815.715	815.663
134740	816.125	816.116	815.754
134750	815.976	817.834	815.743
134760	815.828	818.264	815.617
134770	815.678	817.092	815.431
134780	815.531	819.872	815.294
134790	815.361	818.509	815.119
134800	815.142	815.503	814.861
134810	814.871	815.317	814.568
134820	814.549	817.763	814.296
134830	814.177	816.312	813.930
134840	813.753	815.022	813.423
134850	813.299	813.604	812.805
134860	812.844	814.948	812.280
134870	812.390	817.555	811.891
134880	811.936	819.138	811.423
134890	811.481	818.829	810.874
134900	811.027	817.781	810.373
134910	810.572	815.633	809.887
134920	810.118	811.840	809.447
134930	809.664	808.675	809.098
134940	809.209	809.256	808.796
134950	808.755	810.129	808.514
134960	808.300	808.946	808.233
134970	807.846	808.005	807.897
134980	807.392	808.263	807.618
134990	806.937	809.611	807.464
135000	806.483	-999.000	807.238

HORIZONTAL SCHEMATIC (L,R=m): R=-150.000m; L=48.985m; L=15.000m; L=44.585m; L=20.000m; R; L; L=20.000m; L=12.670m; L=15.000m; R=-70.000m; L=18.655m; L=15.000m; L=14.423m; L=20.000m; R=50.000m; L=37.612m; L=20.000m; L=171.018m; L=20.000m

VERTICAL SCHEMATIC (G=%) (L,R=m): G=-1.486; L=289.524m; L=60.000m; G=-4.544; L=156.859m

WIDENING SCHEMATIC (m) LEFT / RIGHT: 4.100, 4.100, 3.500, 3.500, 3.500, 4.400, 4.400, 3.500, 3.500, 4.700, 4.700, 3.500, 3.500, 4.700, 4.700, 3.500, 3.500, 5.000

SUPERELEVATION SCHEMATIC (e in %) LEFT / RIGHT: e=4.700, e=2.500, e=7.000, e=2.500, e=5.700, e=2.500, e=7.000, e=2.500, e=4.700, e=2.500, e=7.000, e=2.500, e=5.700, e=2.500, e=7.000, e=2.500

Rev.	Date	Description

CLIENT: NHIDCL — NATIONAL HIGHWAYS INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR: GPT Group — JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES, C-3,2ND FLOOR, R K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS — PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD. E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd. # 510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE: DEC - 2020	

TITLE: Plan & Longitudinal Profile (From Km 134+500 to Km 135+000)

SCALE: (HOR - 1 : 1000, VER - 1 : 100 at A2 Size Sheet) HOR 10 0 10 20 VER 5 0 5 10

DRG. NO: GPT/CCT/4B/HW/PNP/10a

REV: R0

LEGEND :

EXISTING PLAN :

EXIST. ROAD

K-I/R : KACHA RESIDENTIAL
K-I/C : KACHA COMMERCIAL
SP-I/R : SEMI PUCCA RESI.
SP-I/C : SEMI PUCCA COMM.
P-I/R : PUCCA RESIDENTIAL
P-I/C : PUCCA COMMERCIAL

1000 CONTOUR

PROPOSED PLAN :

TOE LINE
ES EDGE
HS EDGE
C/W EDGE
CEN.LINE
C/W EDGE
HS EDGE
ES EDGE
TOE LINE

HOR. TANGENT POINT

PROW PROPOSED ROW

CULVERT

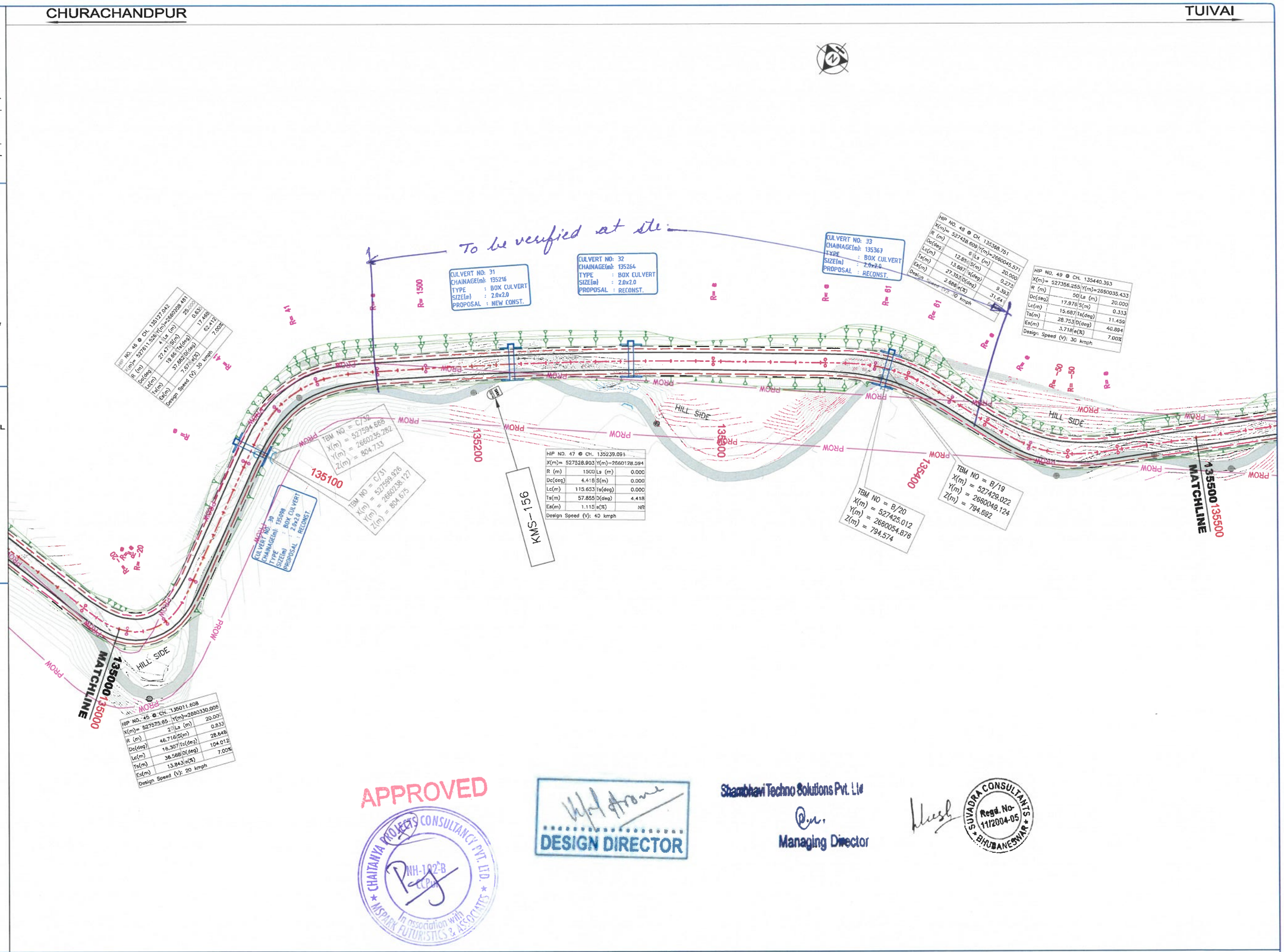
BRIDGE

PROPOSED PROFILE :

PROP. LEVEL
EXIS. ROAD LEVEL
LEFT 6M LEVEL
EXIST. LEVEL AT PRO. CL
RIGHT 6M LEVEL
VER. TANGENT POINT

GRID LINE (10.0 × 5.0)

BOX CULVERT



APPROVED

CHAITANYA PROJECTS CONSULTANCY PVT. LTD. NH-102-B CCPL In association with MSPARK FUTURISTICS & ASSOCIATES

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS Regd. No- 11/2004-05 BHUBANESHAR

Rev.	Date	Description

CLIENT: NHIDCL – BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR: GPT Group
JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES
C-5,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS
PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD.
E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd.
510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE: DEC - 2020	

TITLE: Plan & Longitudinal Profile
(From Km 135+000 to Km 135+500)

SCALE: (HOR - 1 : 1000; VER - 1 : 100 at A2 Size Sheet) HOR 50 0 10 20 VER 5 0 5 10

DRG.NO: GPT/CCT/4B/HW/PNP/11

REV: R0

LEGEND :

EXISTING PLAN :

- EXIST. ROAD
- K-I/R : KACHA RESIDENTIAL
- K-I/C : KACHA COMMERCIAL
- SP-I/R : SEMI PUCCA RESI.
- SP-I/C : SEMI PUCCA COMM.
- P-I/R : PUCCA RESIDENTIAL
- P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
- ES EDGE
- HS EDGE
- C/W EDGE
- CEN.LINE
- C/W EDGE
- HS EDGE
- ES EDGE
- TOE LINE
- HOR. TANGENT POINT
- PROW — PROPOSED ROW
- CULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
- EXIS. ROAD LEVEL
- LEFT 6M LEVEL
- EXIST. LEVEL AT PRO. CL
- RIGHT 6M LEVEL
- VER. TANGENT POINT
- GRID LINE (5.0 / 10.0)
- BOX CULVERT

CHURACHANDPUR ← → TUIVAI

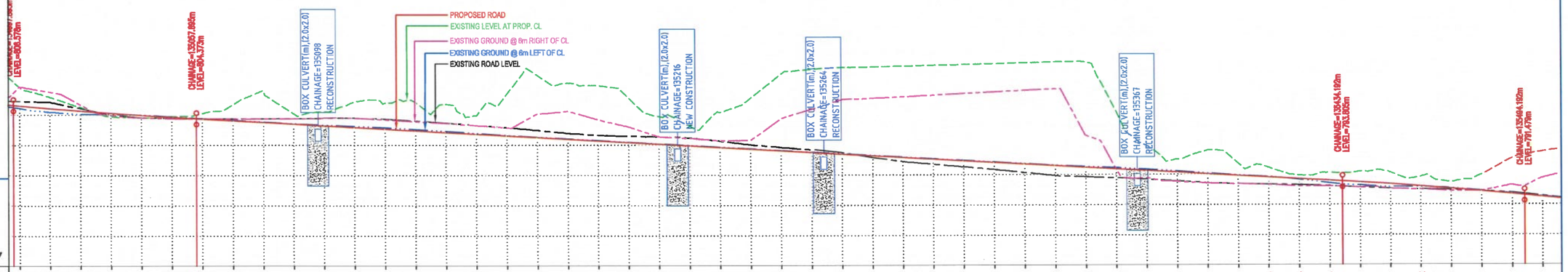
APPROVED

CHAITANYA PROJECTS CONSULTANCY PVT. LTD. In association with MSPARK FUTURISTICS & ASSOCIATES

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd. Managing Director

SUVADRA CONSULTANTS Regd. No- 11/2004-05 BHUBANESWAR



CHAINAGE (m)	PROP. ROAD LEVELS (m)	EXIST LEVELS AT PROP. CL (m)	EXISTING ROAD LEVEL (m)
135000	806.483	-999.000	807.238
135010	806.050	808.025	807.089
135020	805.645	806.273	806.079
135030	805.269	804.746	804.853
135040	804.922	804.560	804.558
135050	804.603	804.761	804.401
135060	804.314	805.260	804.342
135070	804.033	806.702	804.320
135080	803.752	808.802	804.346
135090	803.471	805.212	804.372
135100	803.190	805.499	804.442
135110	802.909	807.161	804.446
135120	802.629	806.983	804.265
135130	802.348	807.031	803.973
135140	802.067	805.764	803.637
135150	801.788	804.915	803.279
135160	801.505	808.369	802.880
135170	801.224	811.556	802.411
135180	800.944	810.229	801.918
135190	800.663	809.878	801.633
135200	800.382	807.841	801.461
135210	800.101	804.710	801.390
135220	799.820	803.157	801.188
135230	799.539	805.408	800.659
135240	799.259	807.721	800.049
135250	798.978	811.682	799.633
135260	798.697	812.477	799.235
135270	798.416	-999.000	798.676
135280	798.135	-999.000	797.843
135290	797.854	-999.000	797.197
135300	797.574	-999.000	796.752
135310	797.293	-999.000	796.314
135320	797.012	-999.000	795.865
135330	796.731	-999.000	795.340
135340	796.450	-999.000	794.829
135350	796.169	813.627	794.625
135360	795.889	805.443	794.423
135370	795.608	799.882	794.183
135380	795.327	797.498	793.905
135390	795.046	798.921	793.609
135400	794.765	796.942	793.407
135410	794.484	796.160	793.297
135420	794.204	794.882	793.215
135430	793.923	795.243	793.022
135440	793.636	795.439	792.784
135450	793.317	795.342	792.573
135460	792.962	794.804	792.480
135470	792.571	793.758	792.356
135480	792.145	794.909	792.175
135490	791.683	797.580	791.884
135500	791.192	798.720	791.359

HORIZONTAL SCHEMATIC (L,R=m): R=-20.000m; L=16.307m; L=20.000m; L=52.450m; L=25.000m; R=41.000m; L=19.661m; L=25.000m; L=19.392m; R=1500.000m; L=115.653m; L=44.990m; L=20.000m; R=61.000m; L=13.687m; L=20.000m; L=16.954m; L=20.000m; R=-50.000m; L=15.687m; L=20.000m

VERTICAL SCHEMATIC (G=%) (L,R=m): L=60.000m; G=-2.808; L=376.297m; L=60.000m

WIDENING SCHEMATIC (m): LEFT / RIGHT

SUPERELEVATION SCHEMATIC (e in %): LEFT / RIGHT

Rev.	Date	Description

CLIENT: NHIDCL — BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR: GPT group — JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES — C-5,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS — PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD. — E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd. — # 510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE: DEC - 2020	

TITLE: **Plan & Longitudinal Profile** *(From Km 135+000 to Km 135+500)*

SCALE: (HOR - 1 : 1000; VER - 1 : 100 at A2 Size Sheet) HOR: 10 0 10 20; VER: 5 0 5 10

DRG.NO: **GPT/CCT/4B/HW/PNP/11a**

REV: **R0**

LEGEND :

EXISTING PLAN :

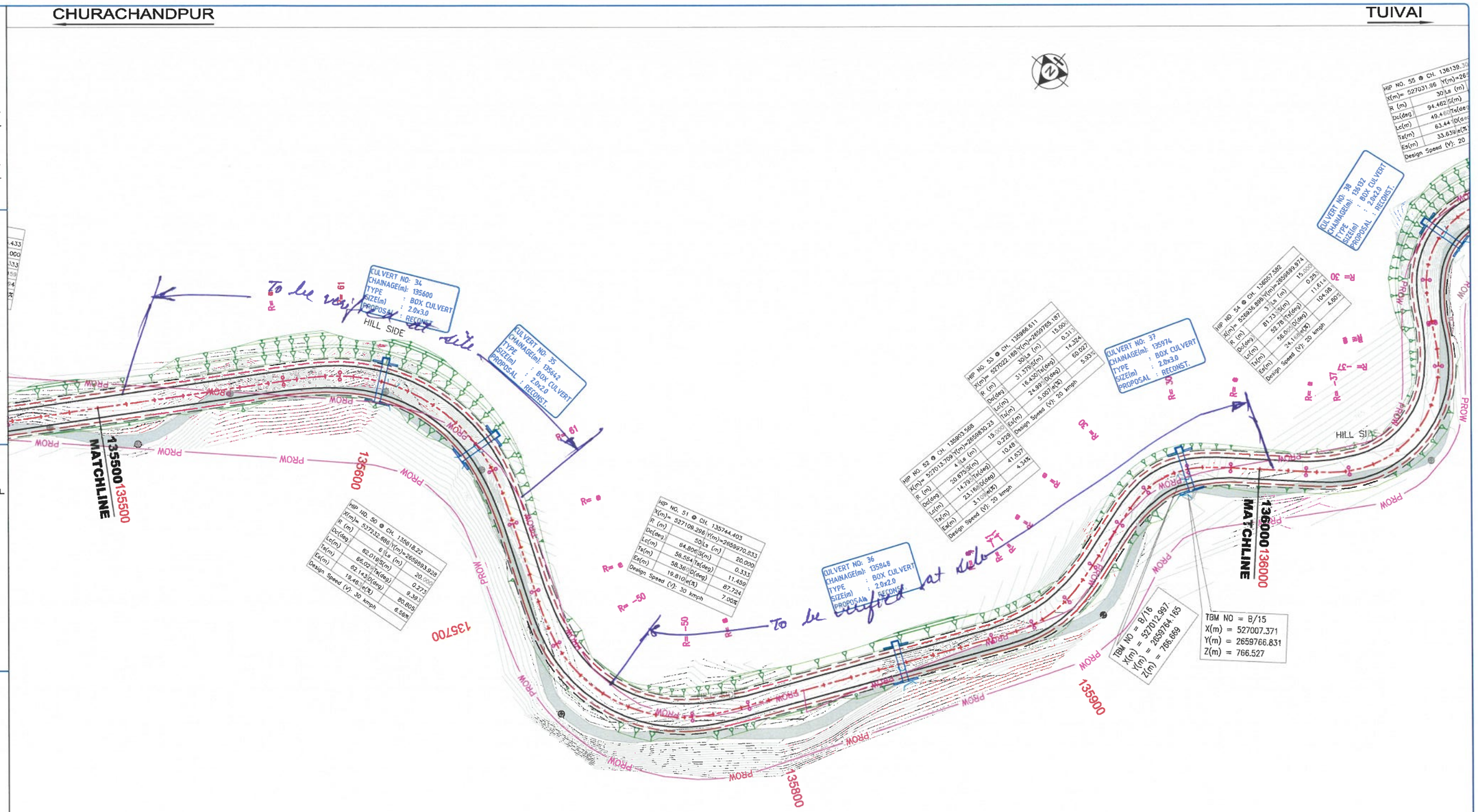
- EXIST. ROAD
- K-I/R : KACHA RESIDENTIAL
- K-I/C : KACHA COMMERCIAL
- SP-I/R : SEMI PUCCA RESI.
- SP-I/C : SEMI PUCCA COMM.
- P-I/R : PUCCA RESIDENTIAL
- P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
- ES EDGE
- HS EDGE
- C/W EDGE
- CEN.LINE
- C/W EDGE
- HS EDGE
- ES EDGE
- TOE LINE
- HOR. TANGENT POINT
- PROW PROPOSED ROW
- CULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
- EXIS. ROAD LEVEL
- LEFT 6M LEVEL
- EXIST. LEVEL AT PRO. CL
- RIGHT 6M LEVEL
- VER. TANGENT POINT
- GRID LINE (10.0 × 5.0)
- BOX CULVERT



APPROVED

CHAITANYA PROJECTS CONSULTANCY PVT. LTD. — NH-102-B EPC — In association with MSPARK FUTURISTICS & ASSOCIATES

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS Regd. No- 11/2004-05 BHUBANESWAR

Rev.	Date	Description

CLIENT: NHIDCL — BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR: GPT Group — JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES — C-5,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS — PP-97, Tankapani Road, BBSR-18. Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD. — E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd. — # 910 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE:	DEC - 2020

TITLE: Plan & Longitudinal Profile (From Km 135+500 to Km 136+000)

SCALE: (HOR - 1 : 1000; VER - 1 : 100 at A2 Size Sheet) HOR: 10 0 10 20 VER: 5 0 5 10

DRG.NO: GPT/CCT/4B/HW/PNP/12

REV: R0

LEGEND :

EXISTING PLAN :

- EXIST. ROAD
- K-I/R : KACHA RESIDENTIAL
- K-I/C : KACHA COMMERCIAL
- SP-I/R : SEMI PUCCA RESI.
- SP-I/C : SEMI PUCCA COMM.
- P-I/R : PUCCA RESIDENTIAL
- P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
- ES EDGE
- HS EDGE
- C/W EDGE
- CEN.LINE
- C/W EDGE
- HS EDGE
- ES EDGE
- TOE LINE
- HOR. TANGENT POINT
- PROW — PROPOSED ROW
- CULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
- EXIS. ROAD LEVEL
- LEFT 6M LEVEL
- EXIST. LEVEL AT PRO. CL
- RIGHT 6M LEVEL
- VER. TANGENT POINT
- GRID LINE (5.0 / 10.0)
- BOX CULVERT

CHURACHANDPUR ← → TUIVAI

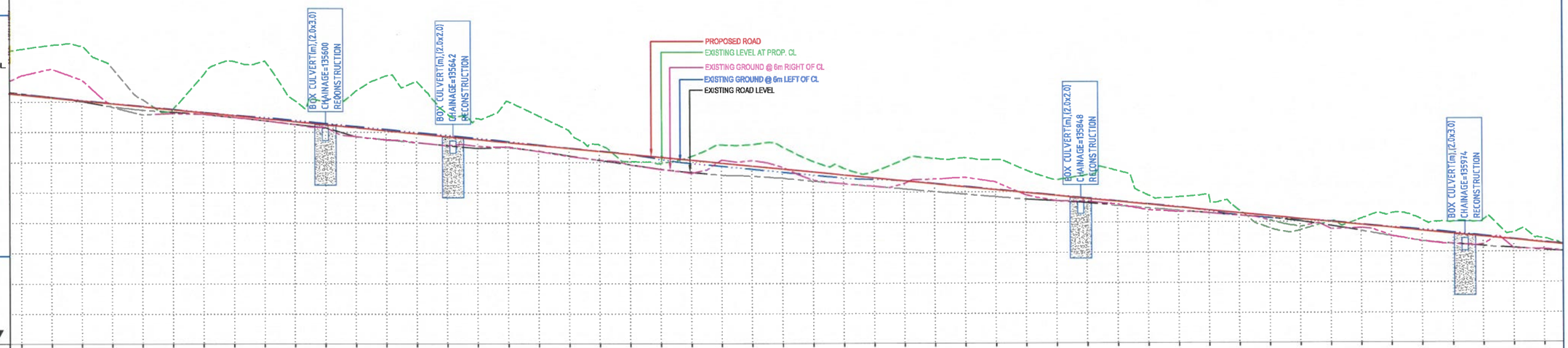
APPROVED

CHAITANYA PROJECTS CONSULTANCY PVT. LTD. MSPARK FUTURISTICS & ASSOCIATES In association with

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS Regd. No- 11/2004-05 BHUBANESWAR



Level Datum= 750(m)

CHAINAGE (m)	PROP. ROAD LEVELS (m)	EXIST LEVELS AT PROP. CL (m)	EXISTING ROAD LEVEL (m)
135500	791.192	798.720	791.359
135510	790.698	799.370	790.793
135520	790.203	799.272	790.091
135530	789.709	795.731	789.197
135540	789.214	790.460	788.651
135550	788.720	788.810	788.314
135560	788.225	794.518	787.962
135570	787.731	796.736	787.442
135580	787.236	796.774	786.885
135590	786.742	790.334	786.285
135600	786.247	790.338	785.734
135610	785.753	791.893	784.255
135620	785.258	794.405	783.757
135630	784.764	793.456	783.279
135640	784.269	788.222	782.774
135650	783.775	787.296	782.324
135660	783.280	790.059	782.472
135670	782.786	787.691	781.856
135680	782.291	785.182	781.062
135690	781.797	782.920	780.319
135700	781.303	780.094	779.603
135710	780.808	779.779	778.818
135720	780.314	780.918	778.274
135730	779.819	782.833	777.873
135740	779.325	782.895	777.712
135750	778.830	782.500	777.359
135760	778.336	780.093	776.850
135770	777.841	778.954	776.396
135780	777.347	778.414	775.968
135790	776.852	780.390	775.555
135800	776.358	780.548	775.088
135810	775.863	780.632	774.659
135820	775.369	780.299	774.236
135830	774.874	778.605	773.784
135840	774.380	776.974	773.506
135850	773.885	777.796	773.180
135860	773.391	778.465	772.737
135870	772.896	774.489	772.297
135880	772.402	774.134	771.871
135890	771.908	774.609	771.435
135900	771.413	771.962	771.007
135910	770.919	769.041	770.537
135920	770.424	768.663	770.058
135930	769.930	769.999	769.285
135940	769.435	770.460	768.473
135950	768.941	771.348	767.588
135960	768.446	770.387	766.773
135970	767.952	769.958	766.267
135980	767.457	770.224	765.914
135990	766.963	768.185	765.567
136000	766.468	767.243	765.228

HORIZONTAL SCHEMATIC (L,R=m): L=96.963m; L=20.000m; R=61.000m; L=66.029m; L=20.000m; L=24.892m; L=20.000m; R=-50.000m; L=56.554m; L=20.000m; L=88.491m; L=15.000m; R=-41.000m; L=14.794m; L=15.000m; L=17.432m; L=15.000m; R=30.000m; L=16.429m; L=15.000m; L=26.365

VERTICAL SCHEMATIC (G=%) (L,R=m): G=-4.945; L=935.706m

WIDENING SCHEMATIC (m) LEFT / RIGHT: 3.500, 4.400, 4.400, 3.500, 3.500, 4.700, 4.700, 3.500, 3.500, 4.700, 4.700, 3.500, 3.500, 5.000, 5.000, 3.500

SUPERELEVATION SCHEMATIC (e in %) LEFT / RIGHT: e=2.500, e=6.800, e=2.500, e=7.000, e=2.500, e=4.300, e=2.500, e=5.900, e=2.500

Rev.	Date	Description

CLIENT: NHIDCL — BUILDING INFRASTRUCTURE · BUILDING THE NATION

EPC CONTRACTOR: GPT Group — JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES — C-5,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS — PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD. — E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd. — # 510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE:	DEC - 2020

TITLE: **Plan & Longitudinal Profile** *(From Km 135+500 to Km 136+000)*

SCALE: (HOR - 1 : 1000; VER - 1 : 100 at A2 Size Sheet) HOR 10 0 10 20; VER 5 0 5 10

DRG.NO: **GPT/CCT/4B/HW/PNP/12a**

REV: **R0**

LEGEND :

EXISTING PLAN :

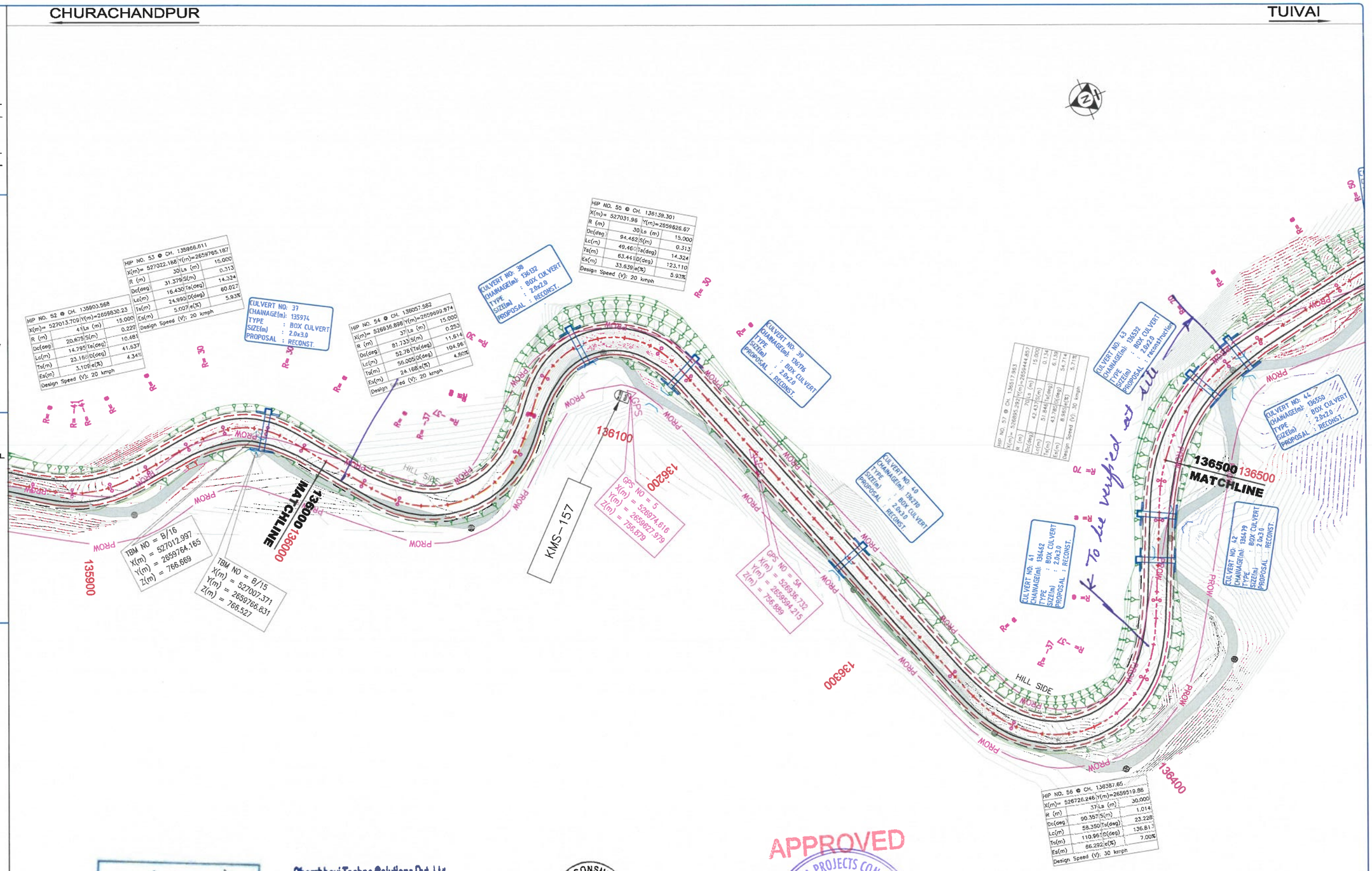
- EXIST. ROAD
- K-I/R : KACHA RESIDENTIAL
- K-I/C : KACHA COMMERCIAL
- SP-I/R : SEMI PUCCA RESI.
- SP-I/C : SEMI PUCCA COMM.
- P-I/R : PUCCA RESIDENTIAL
- P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
- ES EDGE
- HS EDGE
- C/W EDGE
- CEN.LINE
- C/W EDGE
- HS EDGE
- ES EDGE
- TOE LINE
- HOR. TANGENT POINT
- PROW — PROPOSED ROW
- CULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
- EXIS. ROAD LEVEL
- LEFT 6M LEVEL
- EXIST. LEVEL AT PRO. CL
- RIGHT 6M LEVEL
- VER. TANGENT POINT
- GRID LINE (5.0 / 10.0)
- BOX CULVERT



DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS Regd. No- 11/2004-05 BHUBANESWAR

APPROVED
CHAITANYA PROJECTS CONSULTANCY PVT. LTD. MSPARK FUTURISTICS & ASSOCIATES In association with

Rev.	Date	Description

CLIENT: NHIDCL — BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR: GPT Group
JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES
C-5,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS
PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD.
E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd.
510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE:	DEC - 2020

TITLE: Plan & Longitudinal Profile
(From Km 136+000 to Km 136+500)

SCALE: (HOR - 1 : 1000, VER - 1 : 100 at A2 Size Sheet) HOR 10 0 10 20 / VER 5 0 5 10

REV: R0

DRG.NO: GPT/CCT/4B/HW/PNP/13

CHURACHANDPUR

TUIVAI

LEGEND :

EXISTING PLAN :

▨ EXIST. ROAD

K-I/R : KACHA RESIDENTIAL
K-I/C : KACHA COMMERCIAL
SP-I/R : SEMI PUCCA RESI.
SP-I/C : SEMI PUCCA COMM.
P-I/R : PUCCA RESIDENTIAL
P-I/C : PUCCA COMMERCIAL
1000 CONTOUR

PROPOSED PLAN :

TOE LINE
ES EDGE
HS EDGE
C/W EDGE
CEN.LINE
C/W EDGE
HS EDGE
ES EDGE
TOE LINE
HOR. TANGENT POINT
—PROW— PROPOSED ROW
CULVERT
BRIDGE

PROPOSED PROFILE :

PROP. LEVEL
EXIS. ROAD LEVEL
LEFT 6M LEVEL
EXIST. LEVEL AT PRO. CL
RIGHT 6M LEVEL
VER. TANGENT POINT
GRID LINE (10.0 × 5.0)
BOX CULVERT

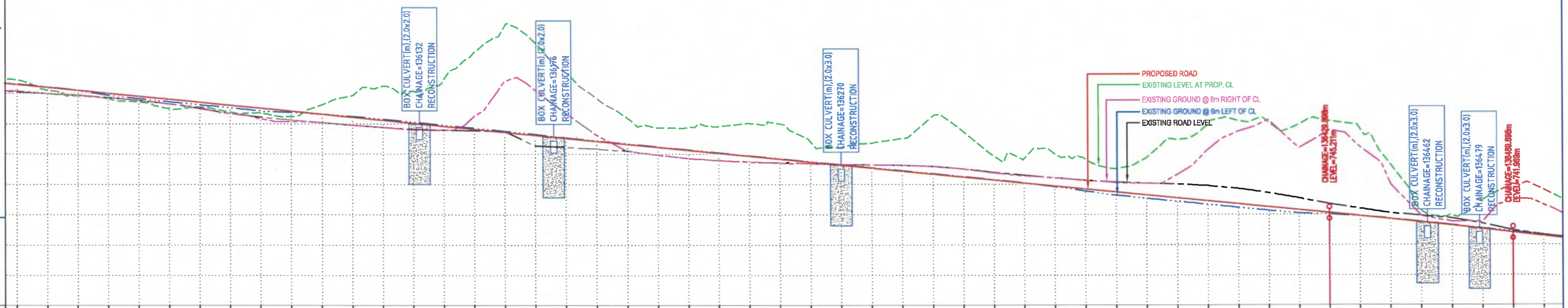
Level Datum= 730(m)

APPROVED

DESIGN DIRECTOR

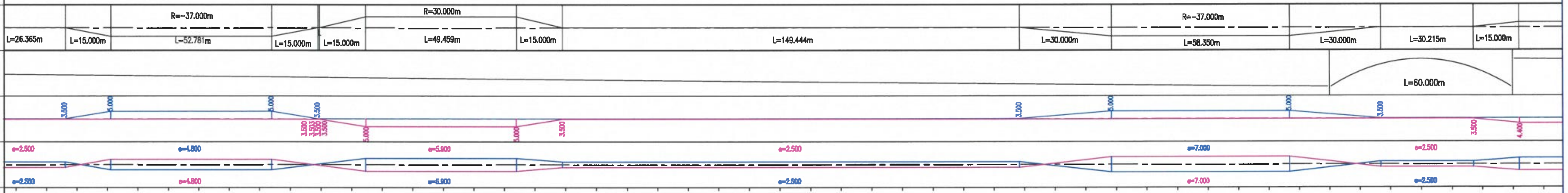
Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS Regd. No- 11/2004-05 BHUBANESWAR



CHAINAGE (m)	PROP. ROAD LEVELS (m)	EXIST LEVELS AT PROP. CL (m)	EXISTING ROAD LEVEL (m)
136000	766.468	767.243	765.228
136010	765.974	765.554	764.962
136020	765.479	764.567	764.658
136030	764.985	764.148	764.288
136040	764.490	763.579	763.816
136050	763.996	762.504	763.246
136060	763.501	762.764	762.493
136070	763.007	761.895	761.618
136080	762.513	761.831	761.044
136090	762.018	761.209	760.580
136100	761.524	763.143	760.125
136110	761.029	764.640	759.715
136120	760.535	766.194	759.363
136130	760.040	765.369	759.034
136140	759.546	767.294	758.910
136150	759.051	771.832	758.821
136160	758.557	776.228	758.695
136170	758.062	773.346	756.324
136180	757.568	768.443	756.098
136190	757.073	764.194	755.843
136200	756.579	760.973	755.473
136210	756.084	759.383	754.877
136220	755.590	759.415	754.295
136230	755.095	759.563	753.962
136240	754.601	760.085	753.745
136250	754.106	759.988	753.585
136260	753.612	757.101	753.374
136270	753.118	756.085	753.222
136280	752.623	756.816	753.164
136290	752.129	757.554	753.092
136300	751.634	761.226	752.910
136310	751.140	758.713	752.489
136320	750.645	754.722	751.897
136330	750.151	754.204	751.449
136340	749.656	755.070	751.013
136350	749.162	754.193	750.587
136360	748.667	752.524	750.290
136370	748.173	754.310	750.098
136380	747.678	757.289	749.946
136390	747.184	759.817	749.690
136400	746.689	760.452	749.213
136410	746.195	760.183	748.500
136420	745.700	759.807	747.669
136430	745.206	760.409	746.664
136440	744.704	759.167	745.954
136450	744.188	753.218	745.201
136460	743.653	745.577	744.723
136470	743.105	744.819	744.283
136480	742.542	747.269	743.432
136490	741.963	749.971	742.300
136500	741.377	749.069	741.580

HORIZONTAL SCHEMATIC (L,R=m)
VERTICAL SCHEMATIC (G=%) (L,R=m)
WIDENING SCHEMATIC (m) LEFT RIGHT
SUPERELEVATION SCHEMATIC (e in %) LEFT RIGHT



Rev.	Date	Description

CLIENT:
NHIDCL
BUILDING INFRASTRUCTURE · BUILDING THE NATION

EPC CONTRACTOR:
GPT group
JC - 25, Sector - III, Salt Lake,
Kolkata - 700098.

AUTHORITY ENGINEER:
M/S CHAITANYA PROJECTS
CONSULTANCY PVT.LTD.
IN ASSOCIATION WITH MSPARK
FUTURISTICS AND ASSOCIATES
C-5,2ND FLOOR, R.K TOWER,
SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT:
SUVADRA CONSULTANTS
PP-97, Tankapani Road,
BBSR-18, Odisha

PROOF CONSULTANT:
SHAMBHAVI TECHNO
SOLUTIONS PVT.LTD.
E-82, Rajesh Kumar Path,
S.k.Puri, Boring Road,
Patna-800001

DESIGN CONSULTANT:
SPS Technocrats Pvt. Ltd.
510 & 511, JMD Megapolis, Sector 48,
Gurugram, Haryana - 122018.

PROJECT:
Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN AMIT
DESIGNED DHEERESH
CHECKED VIPUL
DATE: DEC - 2020

TITLE: **Plan & Longitudinal Profile**
(From Km 136+000 to Km 136+500)

SCALE: (HOR - 1 : 1000; VER - 1 : 100 at A2 Size Sheet)
HOR 10 0 10 20
VER 5 0 5 10

DRG.NO: GPT/CCT/4B/HW/PNP/ 13a

REV: R0

LEGEND :

EXISTING PLAN :

EXIST. ROAD

K-I/R : KACHA RESIDENTIAL
K-I/C : KACHA COMMERCIAL
SP-I/R : SEMI PUCCA RESI.
SP-I/C : SEMI PUCCA COMM.
P-I/R : PUCCA RESIDENTIAL
P-I/C : PUCCA COMMERCIAL

1000 CONTOUR

PROPOSED PLAN :

TOE LINE
ES EDGE
HS EDGE
C/W EDGE
CEN.LINE
C/W EDGE
HS EDGE
ES EDGE
TOE LINE

HOR. TANGENT POINT

PROW PROPOSED ROW

CULVERT

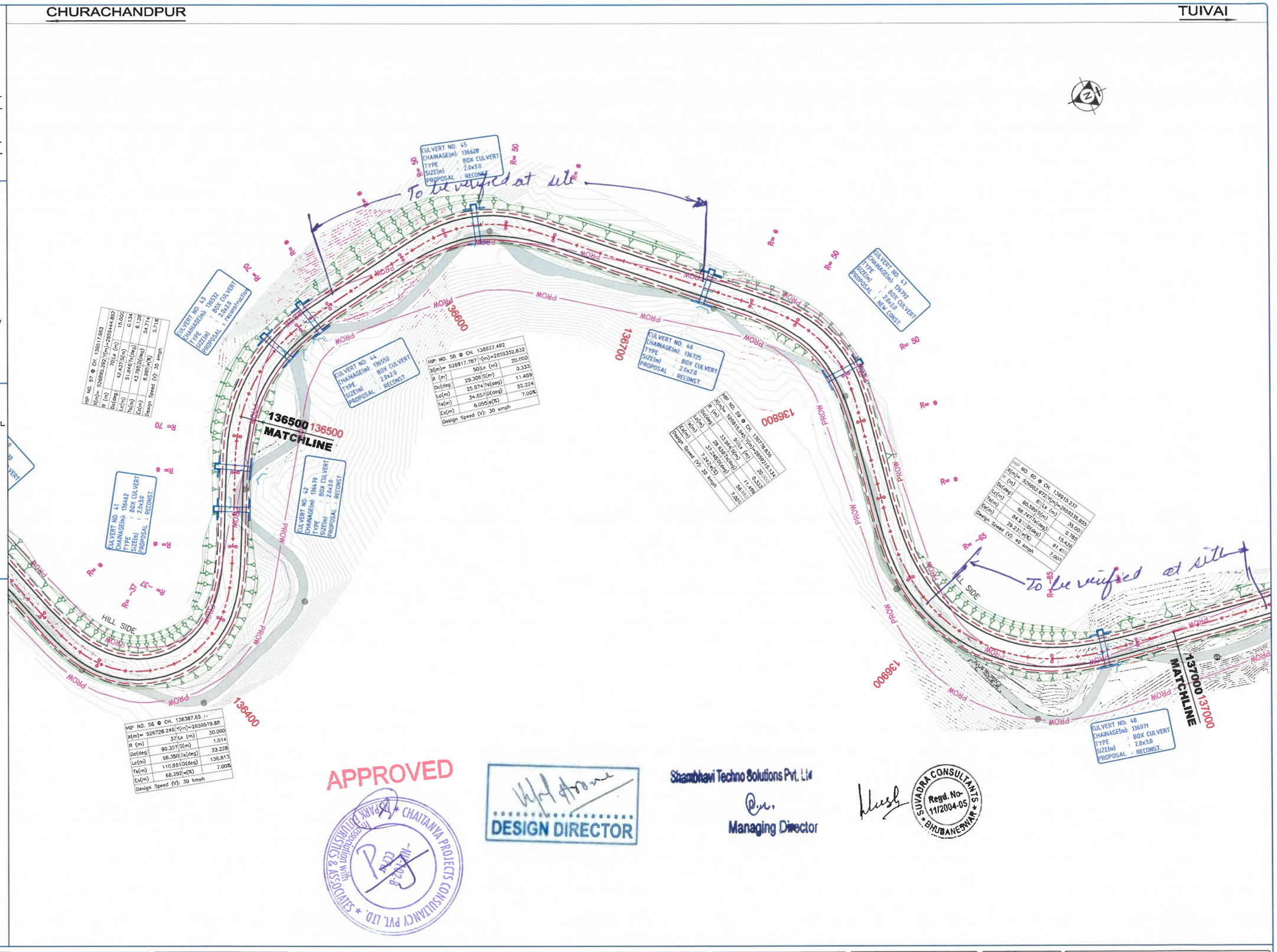
BRIDGE

PROPOSED PROFILE :

PROP. LEVEL
EXIS. ROAD LEVEL
LEFT 6M LEVEL
EXIST. LEVEL AT PRO. CL
RIGHT 6M LEVEL
VER. TANGENT POINT

GRID LINE (5.0 / 10.0)

BOX CULVERT



HIP NO: 57 @ CH. 136517.963			
X(m)= 526680.392	Y(m)=2659444.857		
R (m)	70	Ls (m)	15.000
Dc(deg)	47.437	S(m)	0.134
Lc(m)	51.846	Ts(deg)	6.138
Ts(m)	43.785	D(deg)	34.714
Ec(m)	8.985	e(%)	5.71%
Design Speed (V): 30 kmph			

HIP NO: 58 @ CH. 136627.492			
X(m)= 526917.787	Y(m)=2659332.832		
R (m)	50	Ls (m)	20.000
Dc(deg)	29.308	S(m)	0.333
Lc(m)	25.574	Ts(deg)	11.459
Ts(m)	34.850	D(deg)	52.224
Ec(m)	6.055	e(%)	7.00%
Design Speed (V): 30 kmph			

HIP NO: 59 @ CH. 136776.836			
X(m)= 526815.945	Y(m)=2659215.134		
R (m)	50	Ls (m)	20.000
Dc(deg)	33.969	S(m)	0.333
Lc(m)	29.835	Ts(deg)	11.459
Ts(m)	37.243	D(deg)	59.718
Ec(m)	7.243	e(%)	7.00%
Design Speed (V): 30 kmph			

HIP NO: 60 @ CH. 136915.537			
X(m)= 526662.872	Y(m)=2659235.855		
R (m)	60	Ls (m)	35.000
Dc(deg)	60.599	S(m)	0.785
Lc(m)	64.742	Ts(deg)	35.426
Ts(m)	84.9	D(deg)	91.4
Ec(m)	29.23	e(%)	7.00%
Design Speed (V): 40 kmph			

HIP NO: 56 @ CH. 136387.65			
X(m)= 526726.246	Y(m)=2659519.88		
R (m)	37	Ls (m)	30.000
Dc(deg)	90.357	S(m)	1.014
Lc(m)	58.350	Ts(deg)	23.228
Ts(m)	110.981	D(deg)	136.813
Ec(m)	66.292	e(%)	7.00%
Design Speed (V): 30 kmph			

APPROVED

CHAITANYA PROJECTS CONSULTANCY PVT. LTD. * ASSOCIATES * In Association with SUVADRA CONSULTANTS & FUTURISTICS

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS * BHUBANESWAR * Regd. No. 11/2004-05

Rev.	Date	Description

CLIENT: NHIDCL — BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR: GPT Group
JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES
C-5,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS
PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD.
E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd.
510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE: DEC - 2020	

TITLE: Plan & Longitudinal Profile (From Km 136+500 to Km 137+000)

SCALE: (HOR - 1 : 1000; VER - 1 : 100 at A2 Size Sheet) HOR: 10 0 10 20 / VER: 5 0 5 10

DRG.NO: GPT/CCT/4B/HW/PNP/14

REV: R0

CHURACHANDPUR

TUIVAI

LEGEND :

EXISTING PLAN :

- ▬ EXIST. ROAD
- K-I/R : KACHA RESIDENTIAL
- K-I/C : KACHA COMMERCIAL
- SP-I/R : SEMI PUCCA RESI.
- SP-I/C : SEMI PUCCA COMM.
- P-I/R : PUCCA RESIDENTIAL
- P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
- ES EDGE
- HS EDGE
- C/W EDGE
- CEN.LINE
- C/W EDGE
- HS EDGE
- ES EDGE
- TOE LINE
- HOR. TANGENT POINT
- PROW PROPOSED ROW
- CULVERT
- ▨ BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
- EXIS. ROAD LEVEL
- LEFT 6M LEVEL
- EXIST. LEVEL AT PRO. CL
- RIGHT 6M LEVEL
- VER. TANGENT POINT
- GRID LINE (5.0, 10.0)
- ▨ BOX CULVERT

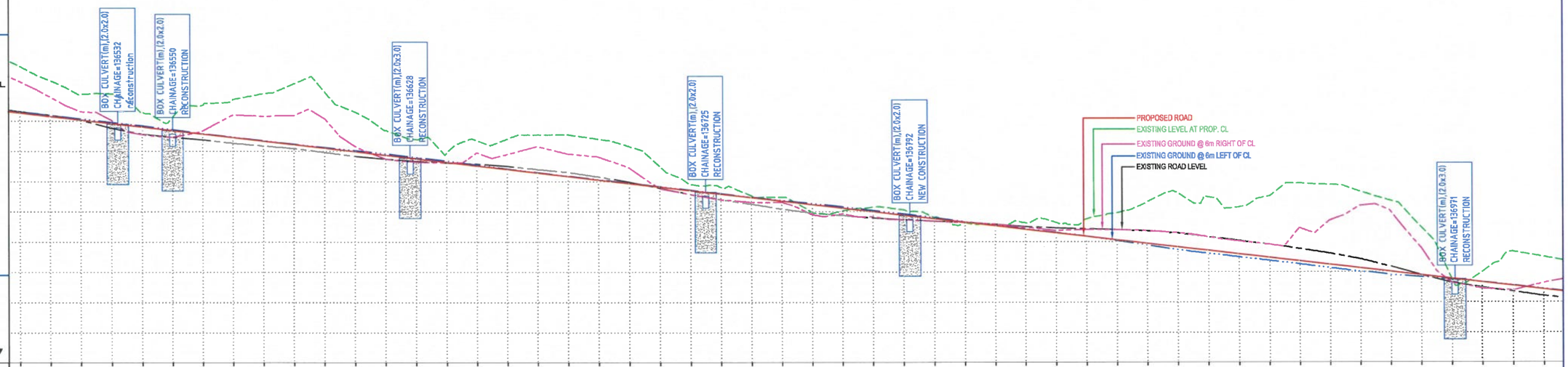
APPROVED

CHAITANYA PROJECTS CONSULTANCY PVT. LTD. In association with MSPARK FUTURISTICS & ASSOCIATES

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS Regd. No-11/2004-05 BHUBANESWAR



Level Datum= 700(m)

CHAINAGE (m)	PROP. ROAD LEVELS (m)	EXIST LEVELS AT PROP. CL (m)	EXISTING ROAD LEVEL (m)
136500	741.377	749.069	741.580
136510	740.790	746.749	740.987
136520	740.204	744.476	740.137
136530	739.618	744.529	738.793
136540	739.032	741.573	737.823
136550	738.445	740.680	737.308
136560	737.859	742.696	736.896
136570	737.273	743.612	736.346
136580	736.687	744.556	735.879
136590	736.101	746.154	735.447
136600	735.514	744.839	734.814
136610	734.928	741.497	734.153
136620	734.342	738.543	733.684
136630	733.756	736.965	733.334
136640	733.169	734.719	733.082
136650	732.583	736.820	732.887
136660	731.997	737.014	732.505
136670	731.411	737.716	731.996
136680	730.824	737.739	731.519
136690	730.238	737.042	730.762
136700	729.652	735.831	729.878
136710	729.066	732.555	728.876
136720	728.479	729.513	727.840
136730	727.893	729.059	726.976
136740	727.307	727.602	726.239
136750	726.721	727.410	725.407
136760	726.134	724.963	724.770
136770	725.548	725.129	724.351
136780	724.962	725.747	723.937
136790	724.376	725.276	723.624
136800	723.790	724.039	723.386
136810	723.203	723.074	723.173
136820	722.617	722.874	722.868
136830	722.031	723.171	722.475
136840	721.445	723.225	722.236
136850	720.858	723.729	722.106
136860	720.272	724.754	721.960
136870	719.686	726.514	721.783
136880	719.100	728.174	721.435
136890	718.513	727.408	720.785
136900	717.927	725.745	720.125
136910	717.341	727.548	719.540
136920	716.755	729.644	718.815
136930	716.168	729.435	718.030
136940	715.582	728.283	717.142
136950	714.996	726.756	715.839
136960	714.410	722.354	714.441
136970	713.824	713.802	713.135
136980	713.237	714.907	712.402
136990	712.651	718.280	711.707
137000	712.065	717.421	711.000

HORIZONTAL SCHEMATIC (L,R=m)

R=70.000m L=51.846m; L=15.000m; L=35.820m; L=20.000m; R=50.000m L=25.573m; L=20.000m; L=83.737m; L=20.000m; R=50.000m L=29.639m; L=20.000m; L=32.209m; L=35.000m; R=-65.000m L=68.746m; L=35.000m

VERTICAL SCHEMATIC (G=%) (L,R=m)

G=-5.862
L=811.628m

WIDENING SCHEMATIC (m)

LEFT: 3.500, 4.400, 4.400, 3.500
RIGHT: 4.400, 3.500, 3.500, 4.700, 4.700, 3.500, 3.500, 3.500, 4.700, 4.700, 3.500

SUPERELEVATION SCHEMATIC (e in %)

LEFT: e=5.700, e=2.500, e=7.000, e=2.500, e=7.000, e=2.500, e=7.000
RIGHT: e=5.700, e=2.500, e=7.000, e=2.500, e=7.000, e=2.500, e=7.000

Rev.	Date	Description

CLIENT:
NHIDCL
BUILDING INFRASTRUCTURE · BUILDING THE NATION

EPC CONTRACTOR:
GPT group
JC - 25, Sector - III, Salt Lake,
Kolkata - 700098.

AUTHORITY ENGINEER:
M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD.
IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES
C-5,2ND FLOOR, R.K TOWER,
SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT:
SUVADRA CONSULTANTS
PP-97, Tankapani Road,
BBSR-18, Odisha

PROOF CONSULTANT:
SHAMBHAVI TECHNO SOLUTIONS PVT.LTD.
E-82, Rajesh Kumar Path,
S.k.Puri, Boring Road,
Patna-800001

DESIGN CONSULTANT:
SPS Technocrats Pvt. Ltd.
510 & 511, JMD Megapolis, Sector 48,
Gurugram, Haryana - 122018.

PROJECT:
Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL

DATE: **DEC - 2020**

TITLE: **Plan & Longitudinal Profile**
(From Km 136+500 to Km 137+000)

SCALE: (HOR - 1 : 1000; VER - 1 : 100 at A2 Size Sheet) HOR 10 0 10 20 VER 5 0 5 10

DRG.NO: **GPT/CCT/4B/HW/PNP/ 14a**

REV: **R0**

LEGEND :

EXISTING PLAN :

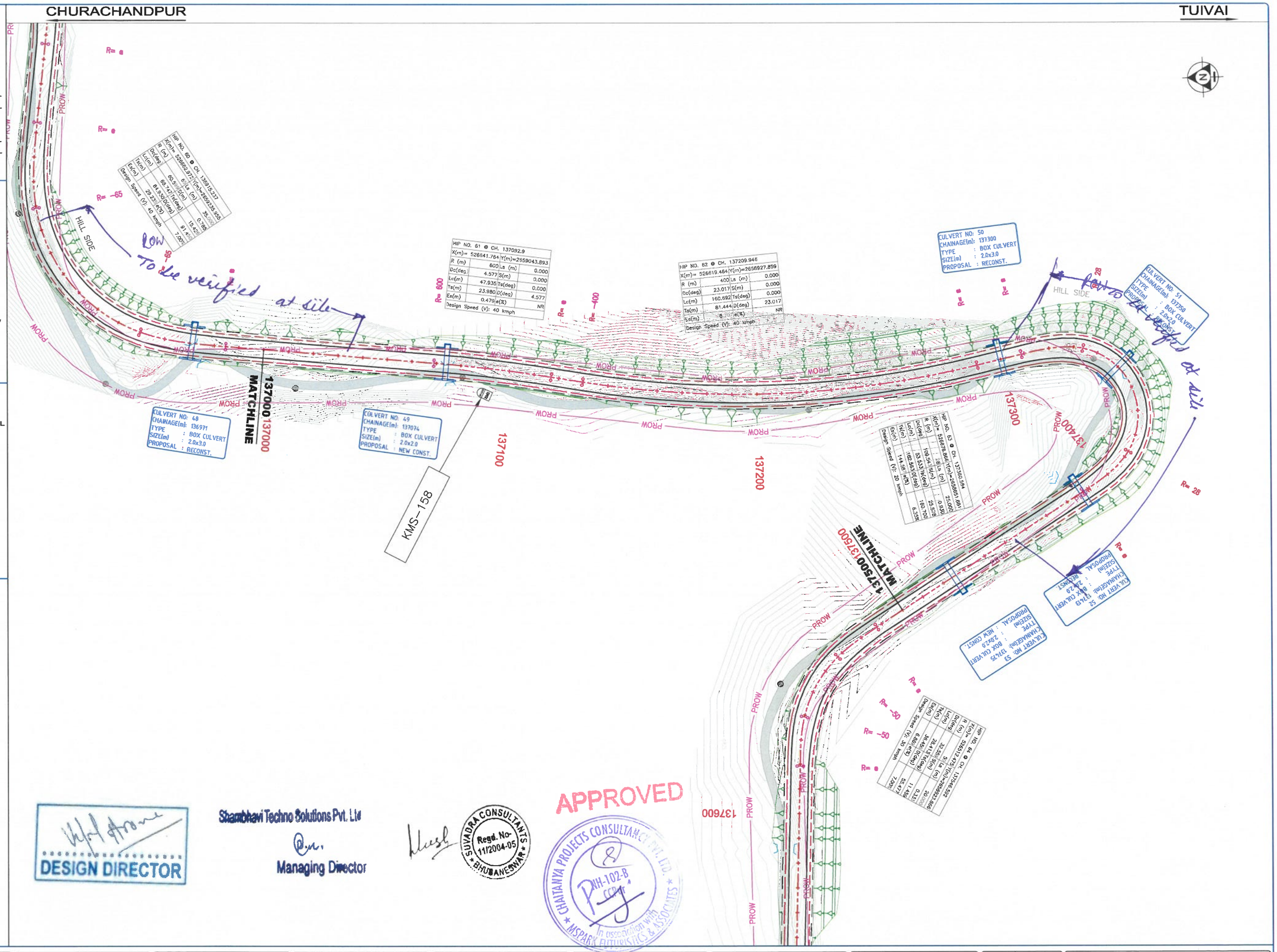
- EXIST. ROAD
- K-I/R : KACHA RESIDENTIAL
- K-I/C : KACHA COMMERCIAL
- SP-I/R : SEMI PUCCA RESI.
- SP-I/C : SEMI PUCCA COMM.
- P-I/R : PUCCA RESIDENTIAL
- P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
- ES EDGE
- HS EDGE
- C/W EDGE
- CEN.LINE
- C/W EDGE
- HS EDGE
- ES EDGE
- TOE LINE
- HOR. TANGENT POINT
- PROW — PROPOSED ROW
- CULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
- EXIS. ROAD LEVEL
- LEFT 6M LEVEL
- EXIST. LEVEL AT PRO. CL
- RIGHT 6M LEVEL
- VER. TANGENT POINT
- GRID LINE (10.0 × 5.0)
- BOX CULVERT



APPROVED

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

DESIGN DIRECTOR

SUVADRA CONSULTANTS Regd. No- 11/2004-05 BHUBANESWAR

CHAITANYA PROJECTS CONSULTANCY PVT. LTD. MSPARK FUTURISTICS & ASSOCIATES

Rev.	Date	Description

CLIENT: NHIDCL — BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR: GPT Infraprojects
JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES
C-5,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS
PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD.
E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd.
510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE: DEC - 2020	

TITLE: Plan & Longitudinal Profile
(From Km 137+000 to Km 137+500)

SCALE: (HOR - 1 : 1000; VER - 1 : 100 at A2 Size Sheet) HOR 10 0 10 20 / VER 5 0 5 10

DRG. NO: GPT/CCT/4B/HW/PNP/15

REV: R0

LEGEND :

EXISTING PLAN :

- EXIST. ROAD
- K-I/R : KACHA RESIDENTIAL
- K-I/C : KACHA COMMERCIAL
- SP-I/R : SEMI PUCCA RESI.
- SP-I/C : SEMI PUCCA COMM.
- P-I/R : PUCCA RESIDENTIAL
- P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
- ES EDGE
- HS EDGE
- C/W EDGE
- CEN.LINE
- C/W EDGE
- HS EDGE
- ES EDGE
- TOE LINE
- HOR. TANGENT POINT
- PROW — PROPOSED ROW
- CULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
- EXIS. ROAD LEVEL
- LEFT 6m LEVEL
- EXIST. LEVEL AT PRO. CL
- RIGHT 6m LEVEL
- VER. TANGENT POINT
- GRID LINE (5.0 / 10.0)
- BOX CULVERT

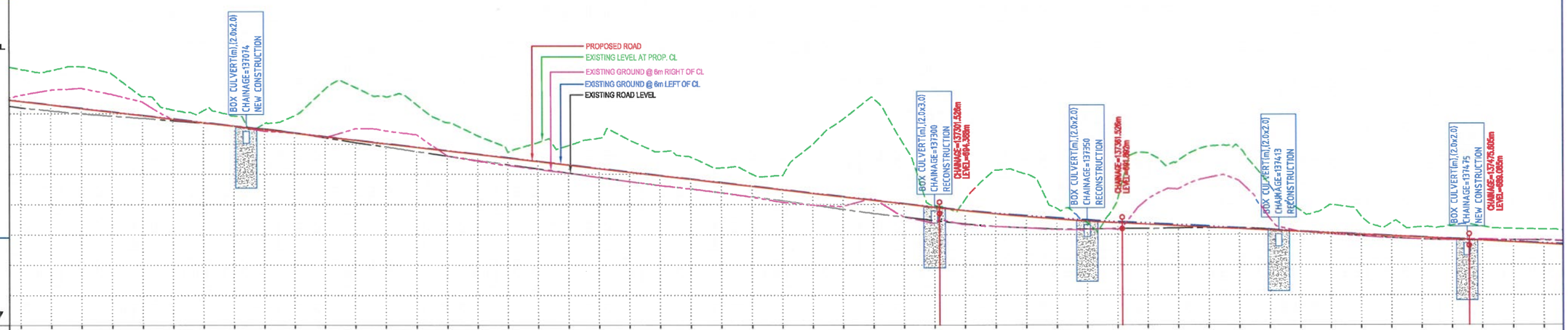
CHURACHANDPUR ← → TUIVAI

APPROVED — CHAITANYA PROJECTS CONSULTANCY PVT. LTD. — NM-102-B — In association with MSPARK FUTURISTICS & ASSOCIATES

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd — Managing Director

SUVADRA CONSULTANTS — Regd. No- 11/2004-05 — BHUBANESWAR



Level Datum= 675(m)

CHAINAGE (m)	PROP. ROAD LEVELS (m)	EXIST LEVELS AT PROP. CL (m)	EXISTING ROAD LEVEL (m)
137000	712.065	717.421	711.000
137010	711.479	717.226	710.452
137020	710.892	717.858	709.974
137030	710.306	716.633	709.610
137040	709.720	712.963	709.234
137050	709.134	710.755	708.854
137060	708.547	710.665	708.466
137070	707.961	709.657	708.004
137080	707.375	708.395	707.500
137090	706.789	709.727	706.870
137100	706.202	714.135	706.034
137110	705.616	714.418	705.245
137120	705.030	712.873	704.522
137130	704.444	711.560	703.751
137140	703.857	708.571	703.017
137150	703.271	706.396	702.282
137160	702.685	703.624	701.572
137170	702.099	705.267	700.889
137180	701.513	704.754	700.194
137190	700.926	706.030	699.474
137200	700.340	705.745	698.780
137210	699.754	703.800	698.125
137220	699.168	702.906	697.575
137230	698.581	701.117	696.950
137240	697.995	700.078	696.272
137250	697.409	699.879	695.604
137260	696.823	704.974	694.922
137270	696.236	709.079	694.171
137280	695.650	712.578	693.493
137290	695.064	704.920	692.879
137300	694.478	694.783	692.278
137310	693.912	695.844	691.731
137320	693.402	700.735	691.319
137330	692.940	700.185	691.078
137340	692.552	694.428	690.857
137350	692.213	691.971	690.874
137360	691.930	695.652	690.937
137370	691.683	703.529	690.975
137380	691.437	702.205	691.033
137390	691.191	704.617	691.085
137400	690.945	704.424	691.107
137410	690.699	698.246	690.863
137420	690.453	693.989	690.438
137430	690.207	694.894	690.093
137440	689.961	693.096	689.767
137450	689.715	691.857	689.417
137460	689.469	691.237	689.168
137470	689.223	691.492	689.030
137480	688.976	691.319	689.006
137490	688.706	690.961	689.019
137500	688.418	690.855	689.008

HORIZONTAL SCHEMATIC (L,R=m): L=84.322m; R=600.000m, L=47.936m; L=12.733m; R=-400.000m, L=160.891m; L=18.525m; L=25.000m; R=28.000m, L=53.533m; L=25.000m; L=100.035m

VERTICAL SCHEMATIC (G=%) (L,R=m): L=60.000m; G=-2.460, L=114.079m

WIDENING SCHEMATIC (m) LEFT / RIGHT: 3.500, 5.000, 5.000, 3.500

SUPERELEVATION SCHEMATIC (e in %) LEFT / RIGHT: e=2.500; e=6.300; e=2.500

Rev.	Date	Description

CLIENT: NHIDCL — BUILDING INFRASTRUCTURE · BUILDING THE NATION

EPC CONTRACTOR: GPT INFRA — JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES — C-5,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS — PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD. — E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd. — # 510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE: DEC - 2020	

TITLE: Plan & Longitudinal Profile (From Km 137+000 to Km 137+500)

SCALE: (HOR - 1 : 1000; VER - 1 : 100 at A2 Size Sheet)

DRG. NO: GPT/CCT/4B/HW/PNP/15a

REV: R0

LEGEND :

EXISTING PLAN :

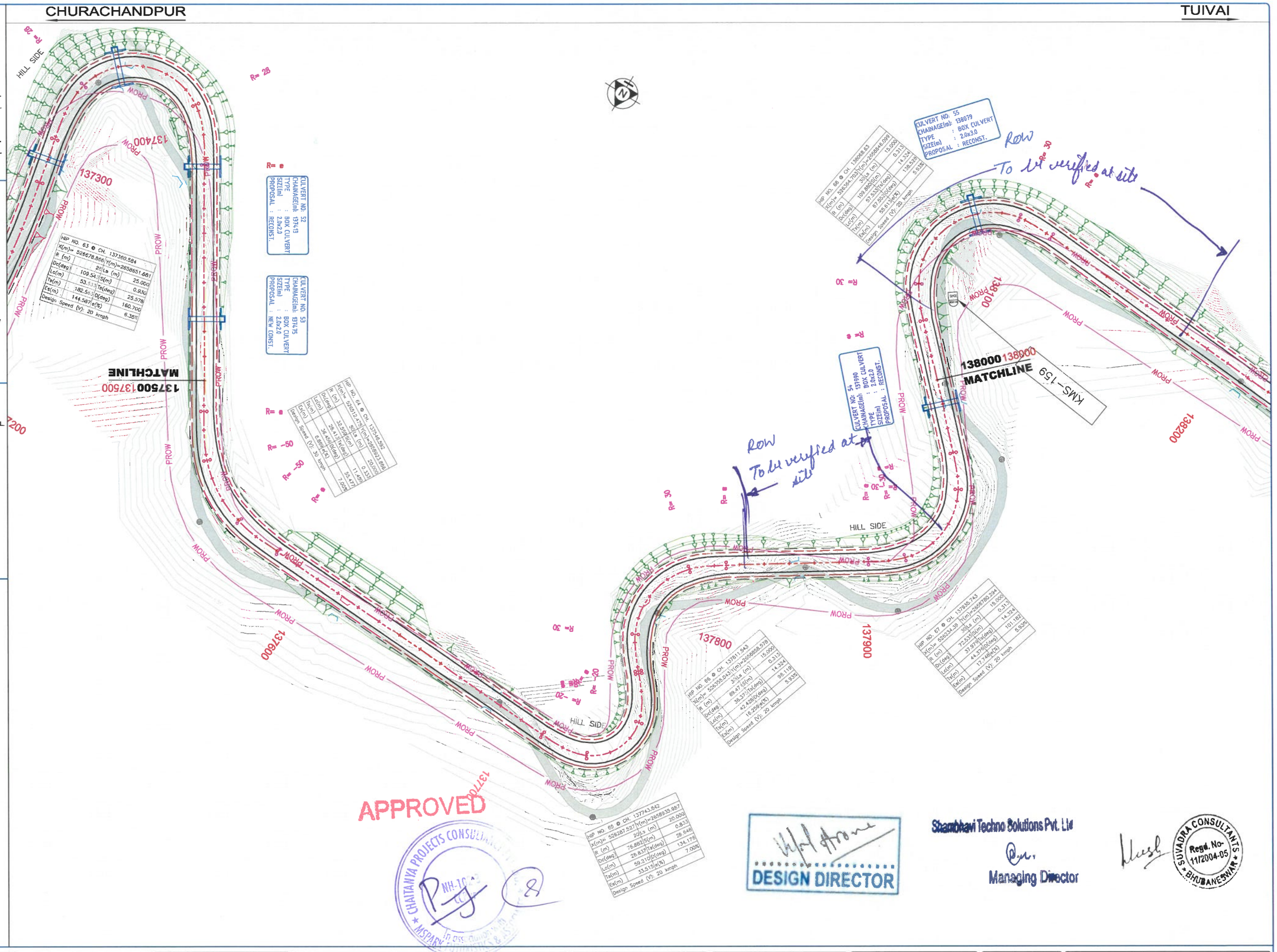
- EXIST. ROAD
- K-I/R : KACHA RESIDENTIAL
- K-I/C : KACHA COMMERCIAL
- SP-I/R : SEMI PUCCA RESI.
- SP-I/C : SEMI PUCCA COMM.
- P-I/R : PUCCA RESIDENTIAL
- P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
- ES EDGE
- HS EDGE
- C/W EDGE
- CEN.LINE
- C/W EDGE
- HS EDGE
- ES EDGE
- TOE LINE
- HOR. TANGENT POINT
- PROW — PROPOSED ROW
- CULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
- EXIS. ROAD LEVEL
- LEFT 6M LEVEL
- EXIST. LEVEL AT PRO. CL
- RIGHT 6M LEVEL
- VER. TANGENT POINT
- GRID LINE (5.0 / 10.0)
- BOX CULVERT



HIP NO. 63 @ CH. 137360.584			
X(m)= 528678.866	Y(m)=2658651.661		
R (m)	20	Ls (m)	25.000
Dc(deg)	109.54	S(m)	0.930
Lc(m)	53.[illegible]	Ts(deg)	25.578
Ts(m)	182.5[illegible]	D(deg)	160.700
Es(m)	144.587	e(%)	6.35%
Design Speed (V): 20 kmph			

HIP NO. 64 @ CH. 137546.597			
X(m)= 529512.475	Y(m)=2658623.856		
R. (m)	20	Ls (m)	20.000
Dc(deg)	32.4298	S(m)	0.333
Lc(m)	28.413	Ts(deg)	11.458
Ts(m)	38.440	D(deg)	55.727
Es(m)	6.898	e(%)	7.00%
Design Speed (V): 30 kmph			

HIP NO. 65 @ CH. 137743.842			
X(m)= 529287.527	Y(m)=2658835.987		
R. (m)	20	Ls (m)	20.000
Dc(deg)	76.882	S(m)	0.833
Lc(m)	59.837	Ts(deg)	28.648
Ts(m)	59.210	D(deg)	134.178
Es(m)	33.515	e(%)	7.00%
Design Speed (V): 20 kmph			

HIP NO. 66 @ CH. 137811.543			
X(m)= 529355.043	Y(m)=2658858.578		
R. (m)	30	Ls (m)	15.000
Dc(deg)	69.477	S(m)	0.313
Lc(m)	36.327	Ts(deg)	14.324
Ts(m)	42.428	D(deg)	98.149
Es(m)	16.258	e(%)	5.93%
Design Speed (V): 20 kmph			

HIP NO. 67 @ CH. 137835.743			
X(m)= 529334.38	Y(m)=2658780.294		
R. (m)	30	Ls (m)	15.000
Dc(deg)	72.533	S(m)	0.313
Lc(m)	37.979	Ts(deg)	14.324
Ts(m)	44.376	D(deg)	101.182
Es(m)	17.748	e(%)	5.93%
Design Speed (V): 20 kmph			

HIP NO. 68 @ CH. 138968.83			
X(m)= 529304.707	Y(m)=2658648.099		
R. (m)	30	Ls (m)	15.000
Dc(deg)	109.880	S(m)	0.313
Lc(m)	57.533	Ts(deg)	14.324
Ts(m)	67.520	D(deg)	138.539
Es(m)	55.613	e(%)	8.93%
Design Speed (V): 20 kmph			

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS BHUBANESWAR Regd. No- 11/2004-05

CHAITANYA PROJECTS CONSULTANCY MSPARK

Rev.	Date	Description

CLIENT: NAIDCL — BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR: GPT GROUP
JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES
C-5,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS
PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD.
E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd.
510 & 511, JMD Megapolis, Sector 46, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE: DEC - 2020	

TITLE: Plan & Longitudinal Profile (From Km 137+500 to Km 138+000)

SCALE: (HOR - 1 : 1000; VER - 1 : 100 at A2 Size Sheet) HOR 10 0 10 20 / VER 5 0 5 10

DRG.NO: GPT/CCT/4B/HW/PNP/ 16

REV: R0

LEGEND :

EXISTING PLAN :

- EXIST. ROAD
- K-I/R : KACHA RESIDENTIAL
- K-I/C : KACHA COMMERCIAL
- SP-I/R : SEMI PUCCA RESI.
- SP-I/C : SEMI PUCCA COMM.
- P-I/R : PUCCA RESIDENTIAL
- P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
- ES EDGE
- HS EDGE
- C/W EDGE
- CEN.LINE
- C/W EDGE
- HS EDGE
- ES EDGE
- TOE LINE
- HOR. TANGENT POINT
- PROW — PROPOSED ROW
- CULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
- EXIS. ROAD LEVEL
- LEFT 6M LEVEL
- EXIST. LEVEL AT PRO. CL
- RIGHT 6M LEVEL
- VER. TANGENT POINT
- GRID LINE (5.0 / 10.0)
- BOX CULVERT

CHURACHANDPUR — TUIVAI

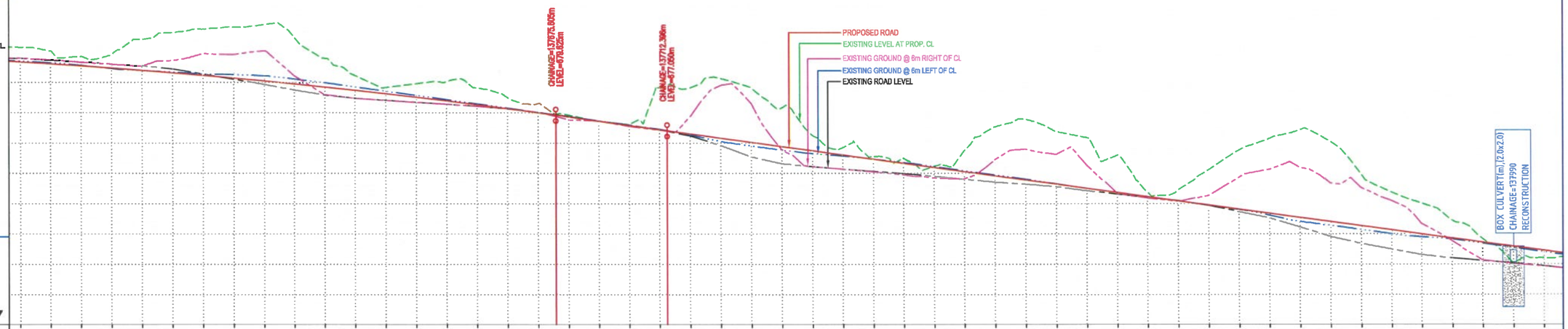
APPROVED

CHAITANYA PROJECTS CONSULTANCY

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd.
Managing Director

SUVADRA CONSULTANTS Regd. No- 11/2004-05 BHUBANESWAR



Level Datum= 645(m)

CHAINAGE (m)	PROP. ROAD LEVELS (m)	EXIST LEVELS AT PROP. CL (m)	EXISTING ROAD LEVEL (m)
137500	688.418	690.855	689.008
137510	688.105	690.257	688.730
137520	687.770	689.378	688.441
137530	687.411	689.709	688.104
137540	687.031	692.144	687.742
137550	686.627	693.292	687.231
137560	686.201	693.856	686.399
137570	685.752	694.165	685.533
137580	685.280	694.601	684.660
137590	684.786	692.407	683.737
137600	684.269	689.042	682.930
137610	683.729	686.176	682.407
137620	683.167	684.200	682.070
137630	682.582	684.834	681.740
137640	681.974	685.181	681.429
137650	681.343	684.103	681.082
137660	680.690	682.578	680.646
137670	680.014	681.617	680.090
137680	679.318	679.628	679.388
137690	678.618	678.652	678.645
137700	677.918	678.129	677.978
137710	677.218	684.229	677.181
137720	676.518	684.165	676.172
137730	675.819	685.688	674.809
137740	675.121	684.059	672.722
137750	674.423	680.859	671.591
137760	673.726	676.232	671.066
137770	673.030	674.260	670.679
137780	672.335	672.790	670.316
137790	671.640	672.518	669.940
137800	670.946	671.190	669.488
137810	670.253	673.743	669.033
137820	669.561	677.697	668.539
137830	668.869	678.965	668.208
137840	668.179	676.926	667.783
137850	667.488	675.818	667.124
137860	666.799	672.994	666.550
137870	666.110	666.839	666.002
137880	665.423	667.258	665.468
137890	664.735	670.624	664.666
137900	664.049	673.842	663.650
137910	663.363	675.767	662.622
137920	662.679	677.195	661.123
137930	661.994	675.232	659.560
137940	661.311	669.788	658.403
137950	660.628	666.828	657.466
137960	659.946	665.015	656.553
137970	659.265	662.215	655.951
137980	658.585	659.139	655.542
137990	657.905	655.199	655.151
138000	657.226	656.093	654.688

HORIZONTAL SCHEMATIC (L,R=m): R=-50.000m; L=20.000m; L=28.413m; L=20.000m; L=129.625m; L=20.000m; R=-20.000m; L=26.837m; L=20.000m; L=15.000m; R=30.000m; L=36.374m; L=15.000m; L=57.023m; L=15.000m; R=-30.000m; L=37.979m; L=15.000m; L=55.131m

VERTICAL SCHEMATIC (G=%) (L,R=m): L=200.000m; G=-7.000; L=36.791m

WIDENING SCHEMATIC (m): LEFT / RIGHT — 3.500, 4.700, 4.700, 3.500, 3.500, 5.000, 5.000, 3.500, 5.000, 5.000, 3.500, 3.500, 5.000, 5.000, 3.500

SUPERELEVATION SCHEMATIC (e in %): LEFT / RIGHT — e=7.000, e=2.500, e=7.000, e=5.900, e=2.500, e=5.900, e=2.500; e=7.000, e=2.500, e=7.000, e=5.900, e=2.500, e=5.900, e=2.500

Rev.	Date	Description

CLIENT: NHIDCL — BUILDING INFRASTRUCTURE · BUILDING THE NATION

EPC CONTRACTOR: GPT Group
JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES
C-5,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS
PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD.
E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd.
510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE:	DEC - 2020

TITLE: Plan & Longitudinal Profile
(From Km 137+500 to Km 138+000)

SCALE: (HOR - 1 : 1000; VER - 1 : 100 at A2 Size Sheet)

DRG. NO: GPT/CCT/4B/HW/PNP/16a

REV: R0

LEGEND :

EXISTING PLAN :

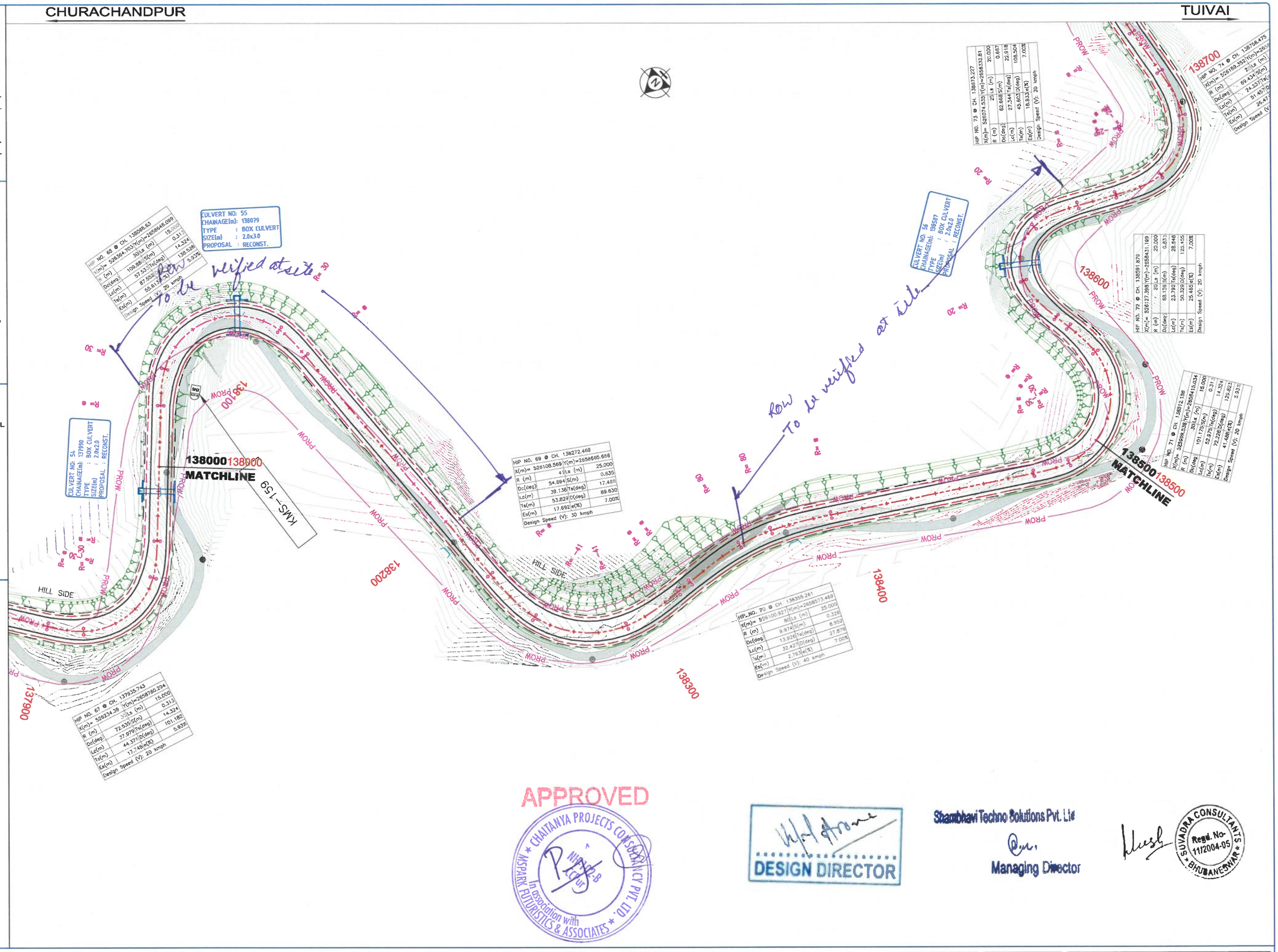
- EXIST. ROAD
- K-I/R : KACHA RESIDENTIAL
- K-I/C : KACHA COMMERCIAL
- SP-I/R : SEMI PUCCA RESI.
- SP-I/C : SEMI PUCCA COMM.
- P-I/R : PUCCA RESIDENTIAL
- P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
- ES EDGE
- HS EDGE
- C/W EDGE
- CEN.LINE
- C/W EDGE
- HS EDGE
- ES EDGE
- TOE LINE
- HOR. TANGENT POINT
- PROW — PROPOSED ROW
- CULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
- EXIS. ROAD LEVEL
- LEFT 6M LEVEL
- EXIST. LEVEL AT PRO. CL
- RIGHT 6M LEVEL
- VER. TANGENT POINT
- GRID LINE (10.0 × 5.0)
- BOX CULVERT



APPROVED
CHAITANYA PROJECTS CONSULTANCY PVT. LTD. * MSPARK FUTURISTICS & ASSOCIATES * In association with

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS * BHUBANESWAR * Regd. No- 11/2004-05

Rev.	Date	Description

CLIENT: NHIDCL — BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR: GPT GROUP
JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES
C-5,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS
PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD.
E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd.
510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE: DEC - 2020	

TITLE: Plan & Longitudinal Profile
(From Km 138+000 to Km 138+500)

SCALE: (HOR - 1 : 1000; VER - 1 : 100 at A2 Size Sheet) HOR 10 0 10 20 / VER 5 0 5 10

DRG.NO: GPT/CCT/4B/HW/PNP/17

REV: R0

LEGEND :

EXISTING PLAN :

- EXIST. ROAD
- K-I/R : KACHA RESIDENTIAL
- K-I/C : KACHA COMMERCIAL
- SP-I/R : SEMI PUCCA RESI.
- SP-I/C : SEMI PUCCA COMM.
- P-I/R : PUCCA RESIDENTIAL
- P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
- ES EDGE
- HS EDGE
- C/W EDGE
- CEN.LINE
- C/W EDGE
- HS EDGE
- ES EDGE
- TOE LINE
- HOR. TANGENT POINT
- PROW — PROPOSED ROW
- CULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
- EXIS. ROAD LEVEL
- LEFT 6M LEVEL
- EXIST. LEVEL AT PRO. CL
- RIGHT 6M LEVEL
- VER. TANGENT POINT
- GRID LINE (10.0 × 5.0)
- BOX CULVERT

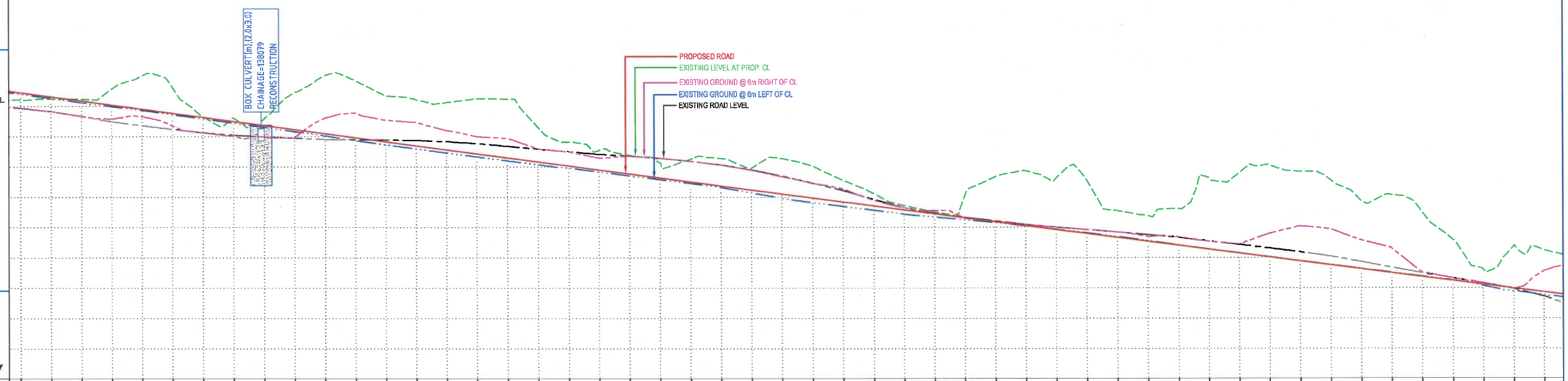
CHURACHANDPUR ← → TUIVAI

APPROVED — CHAITANYA PROJECTS CONSULTANCY PVT. LTD. — In association with MSPARK FUTURISTICS & ASSOCIATES — NH-102-B LCPur

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd — Managing Director

SUVADRA CONSULTANTS — Regd. No- 11/2004-05 — BHUBANESWAR



Level Datum= 610(m)

Chainage (m)	Prop. Road Levels (m)	Exist Levels at Prop. CL (m)	Existing Road Level (m)
138000	657.226	656.093	654.688
138010	656.548	656.203	654.122
138020	655.871	656.165	653.330
138030	655.194	657.832	652.487
138040	654.516	660.019	651.805
138050	653.843	658.258	651.207
138060	653.169	653.316	650.616
138070	652.495	653.048	650.194
138080	651.822	652.988	649.933
138090	651.150	657.323	649.719
138100	650.478	660.124	649.566
138110	649.808	659.259	649.489
138120	649.138	656.768	649.441
138130	648.468	656.145	649.313
138140	647.800	655.657	649.132
138150	647.132	656.297	648.831
138160	646.465	656.225	648.366
138170	645.798	651.509	647.953
138180	645.133	649.108	647.519
138190	644.469	647.756	647.115
138200	643.805	646.922	646.766
138210	643.142	645.730	646.394
138220	642.478	646.255	645.905
138230	641.817	646.379	645.294
138240	641.156	644.765	644.496
138250	640.496	646.369	643.460
138260	639.836	645.164	642.311
138270	639.178	642.815	641.051
138280	638.520	640.622	639.622
138290	637.862	638.556	638.231
138300	637.206	637.537	637.281
138310	636.550	639.960	636.614
138320	635.895	643.290	636.041
138330	635.241	644.332	635.434
138340	634.587	643.045	634.974
138350	633.934	642.928	634.582
138360	633.282	637.771	634.159
138370	632.631	636.932	633.729
138380	631.981	638.082	633.294
138390	631.331	643.204	632.732
138400	630.682	643.672	632.141
138410	630.033	645.285	631.546
138420	629.386	644.190	630.933
138430	628.739	642.817	630.214
138440	628.093	639.407	629.313
138450	627.447	640.390	628.349
138460	626.803	637.586	627.477
138470	626.159	632.946	626.609
138480	625.516	628.086	625.752
138490	624.874	631.616	624.772
138500	624.232	631.252	623.502

HORIZONTAL SCHEMATIC (L,R=m): .131m; L=15.000m; R=30.000m L=57.533m; L=15.000m; L=115.504m; L=25.000m; R=-41.000m L=39.138m; L=25.000m; L; L=25.000m; R=80.000m L=13.926m; L=25.000m; L=83.447m; L=15.000m

VERTICAL SCHEMATIC (G=%) (L,R=m): L=800.000m

WIDENING SCHEMATIC (m) LEFT / RIGHT: 3.500; 4.700; 4.700; 3.500; 3.500; 5.000 / 3.500; 5.000; 5.000; 3.500; 3.500; 4.400; 4.400; 3.500; 3.500; 5.000

SUPERELEVATION SCHEMATIC (e in %) LEFT / RIGHT: .500; e=5.900; e=2.500; e=7.000; e=7.000; e=2.500 / .500; e=5.900; e=2.500; e=7.000; e=7.000; e=2.500

Rev.	Date	Description

CLIENT: NHIDCL — BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR: GPT Group — JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES, C-5,2ND FLOOR, RK TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS — PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD. E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd. # 510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE:	DEC - 2020

TITLE: Plan & Longitudinal Profile (From Km 138+000 to Km 138+500)

SCALE: (HOR - 1 : 1000; VER - 1 : 100 at A2 Size Sheet) HOR 10 0 10 20; VER 5 0 5 10

DRG.NO: GPT/CCT/4B/HW/PNP/17a

REV: R0

LEGEND :

EXISTING PLAN :

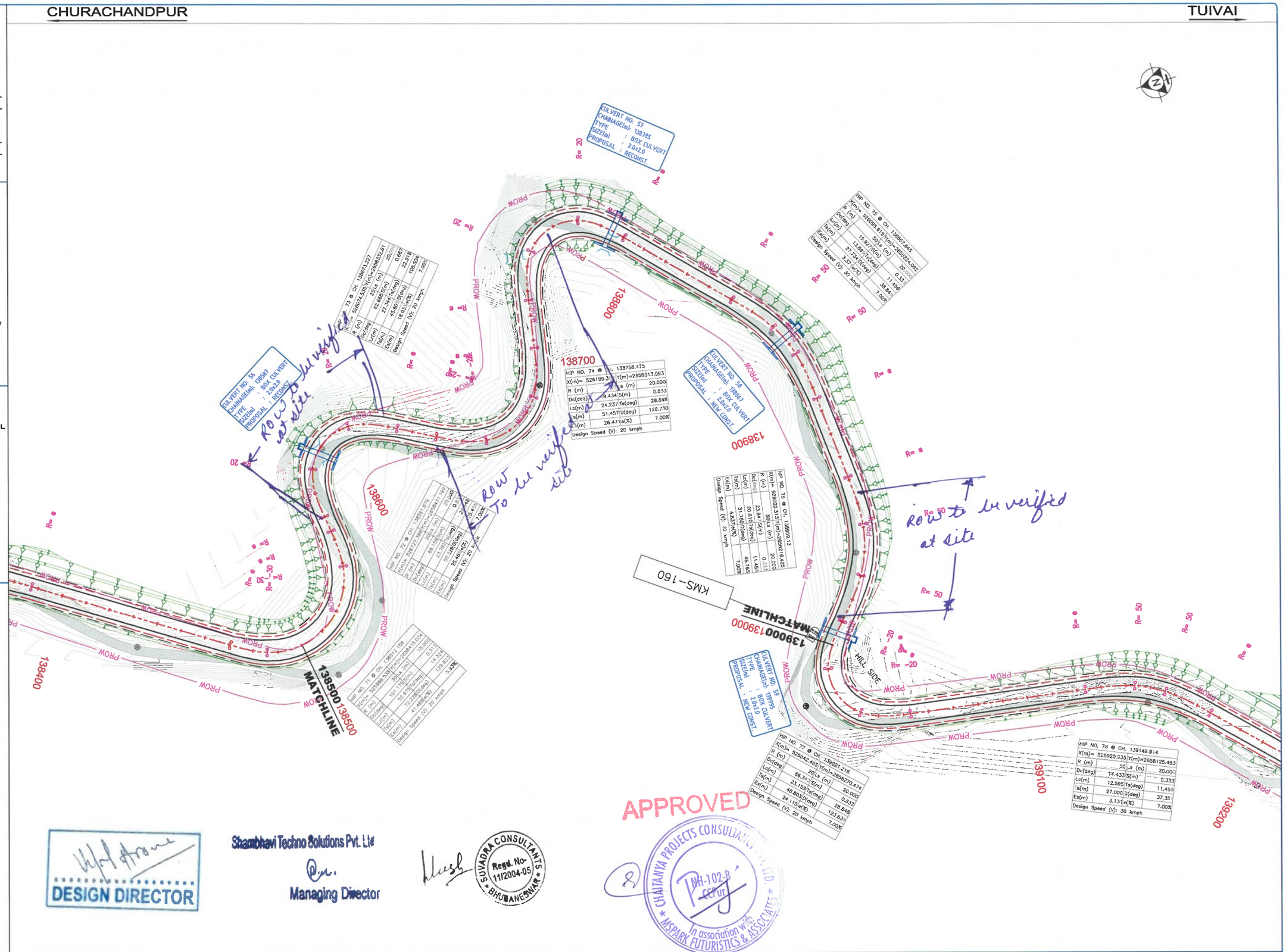
- EXIST. ROAD
- K-I/R : KACHA RESIDENTIAL
- K-I/C : KACHA COMMERCIAL
- SP-I/R : SEMI PUCCA RESI.
- SP-I/C : SEMI PUCCA COMM.
- P-I/R : PUCCA RESIDENTIAL
- P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
- ES EDGE
- HS EDGE
- C/W EDGE
- CEN.LINE
- C/W EDGE
- HS EDGE
- ES EDGE
- TOE LINE
- HOR. TANGENT POINT
- PROW — PROPOSED ROW
- CULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
- EXIS. ROAD LEVEL
- LEFT 6M LEVEL
- EXIST. LEVEL AT PRO. CL
- RIGHT 6M LEVEL
- VER. TANGENT POINT
- GRID LINE
- BOX CULVERT



Rev.	Date	Description

CLIENT: NHIDCL — BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR: GPT group
JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES
C-5,2ND FLOOR, R.K.TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS
PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD.
E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd.
510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE: DEC - 2020	

TITLE: Plan & Longitudinal Profile
(From Km 138+300 to Km 139+000)

SCALE: (HOR - 1 : 1000; VER - 1 : 100 at A2 Size Sheet) HOR 10 0 10 20 / VER 5 0 5 10

DRG.NO: GPT/CCT/4B/HW/PNP/18

REV: R0

LEGEND :

EXISTING PLAN :

- EXIST. ROAD
- K-I/R : KACHA RESIDENTIAL
- K-I/C : KACHA COMMERCIAL
- SP-I/R : SEMI PUCCA RESI.
- SP-I/C : SEMI PUCCA COMM.
- P-I/R : PUCCA RESIDENTIAL
- P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
- ES EDGE
- HS EDGE
- C/W EDGE
- CEN.LINE
- C/W EDGE
- HS EDGE
- ES EDGE
- TOE LINE
- HOR. TANGENT POINT
- PROW — PROPOSED ROW
- CULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
- EXIS. ROAD LEVEL
- LEFT 6M LEVEL
- EXIST. LEVEL AT PRO. CL
- RIGHT 6M LEVEL
- VER. TANGENT POINT
- GRID LINE (5.0 / 10.0)
- BOX CULVERT

CHURACHANDPUR → TUIVAI

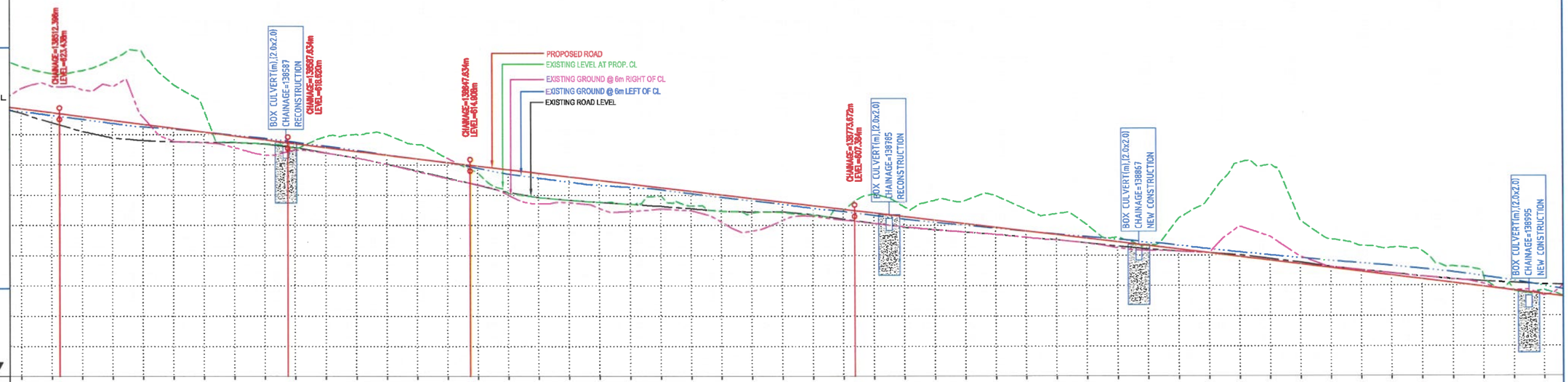
APPROVED

CHAITANYA PROJECTS CONSULTANCY PVT. LTD. In association with MSPARK FUTURISTICS & ASSOCIATES

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS Regd. No- 11/2004-05 BHUBANESWAR



Level Datum= 580(m)

CHAINAGE (m)	PROP. ROAD LEVELS (m)	EXIST LEVELS AT PROP. CL (m)	EXISTING ROAD LEVEL (m)
138500	624.232	631.252	623.502
138510	623.591	630.092	621.925
138520	622.951	630.563	620.520
138530	622.310	632.429	619.454
138540	621.670	633.260	618.015
138550	621.030	628.269	618.785
138560	620.390	623.920	618.667
138570	619.749	618.755	618.640
138580	619.109	618.454	618.400
138590	618.469	617.851	617.802
138600	617.834	619.624	616.961
138610	617.206	619.985	616.130
138620	616.586	619.983	615.135
138630	615.972	618.362	614.011
138640	615.366	616.092	612.831
138650	614.767	613.652	611.617
138660	614.170	610.294	610.401
138670	613.573	609.562	609.570
138680	612.976	609.122	609.131
138690	612.379	608.772	608.772
138700	611.782	608.470	608.461
138710	611.185	608.835	608.161
138720	610.588	608.168	607.758
138730	609.991	607.323	607.309
138740	609.394	606.980	607.189
138750	608.797	607.086	607.176
138760	608.200	606.658	606.719
138770	607.603	607.417	605.969
138780	607.006	610.138	605.262
138790	606.407	608.188	604.681
138800	605.807	609.187	604.259
138810	605.205	609.017	603.878
138820	604.602	609.872	603.480
138830	603.998	607.620	603.022
138840	603.392	606.847	602.533
138850	602.784	605.131	602.003
138860	602.175	602.968	601.462
138870	601.585	601.772	600.984
138880	600.953	606.004	600.638
138890	600.339	609.447	600.342
138900	599.725	615.230	599.995
138910	599.108	614.917	599.377
138920	598.490	615.736	598.759
138930	597.871	602.625	598.040
138940	597.250	601.541	597.502
138950	596.628	601.245	596.980
138960	596.005	600.674	596.450
138970	595.379	598.119	595.990
138980	594.753	596.527	595.617
138990	594.125	594.120	595.357
139000	593.495	594.209	595.081

HORIZONTAL SCHEMATIC (L,R=m): R=-30.000m, L=52.975m; L=15.000m; L; L=20.000m; R=20.000m, L=23.792m; L=20.000m; L=15.780m; L=20.000m; R=-25.000m, L=27.344m; L=20.000m; L=19.457m; L=20.000m; R=20.000m, L=24.237m; L=20.000m; R=4073.807m; L=50.102m; L=20.000m; R=50.000m, L=13.899m; L=20.000m; L=34.131m; L=20.000m; R=50.000m, L=20.810m; L=20.000m; L=20.000m

VERTICAL SCHEMATIC (G=%) (L,R=m): G=-6.403, L=75.238m; L=60.000m; G=-5.970, L=126.038m

WIDENING SCHEMATIC (m) LEFT / RIGHT: 5.000, 3.500, 3.500, 5.000, 3.500, 3.500, 5.000, 3.500, 5.000, 3.500, 3.500, 5.000, 3.500, 5.000, 3.500, 3.500, 4.700, 4.700, 3.500, 3.500, 4.700, 4.700, 3.500

SUPERELEVATION SCHEMATIC (e in %) LEFT / RIGHT: e=5.900, e=7.000, e=2.500, e=7.000, e=2.500, e=7.000, e=2.500, e=7.000, e=2.500, e=7.000, e=2.500, e=7.000

Rev.	Date	Description

CLIENT: NHIDCL — BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR: GPT INFRA PROJ — JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES, C-5,2ND FLOOR, R.K.TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS — PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD. E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd. # 510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE:	DEC - 2020

TITLE: **Plan & Longitudinal Profile** (From Km 138+500 to Km 139+000)

SCALE: (HOR - 1 : 1000; VER - 1 : 100 at A2 Size Sheet) HOR 10 0 10 20; VER 5 0 5 10

DRG.NO: **GPT/CCT/4B/HW/PNP/18a**

REV: **R0**

LEGEND :

EXISTING PLAN :

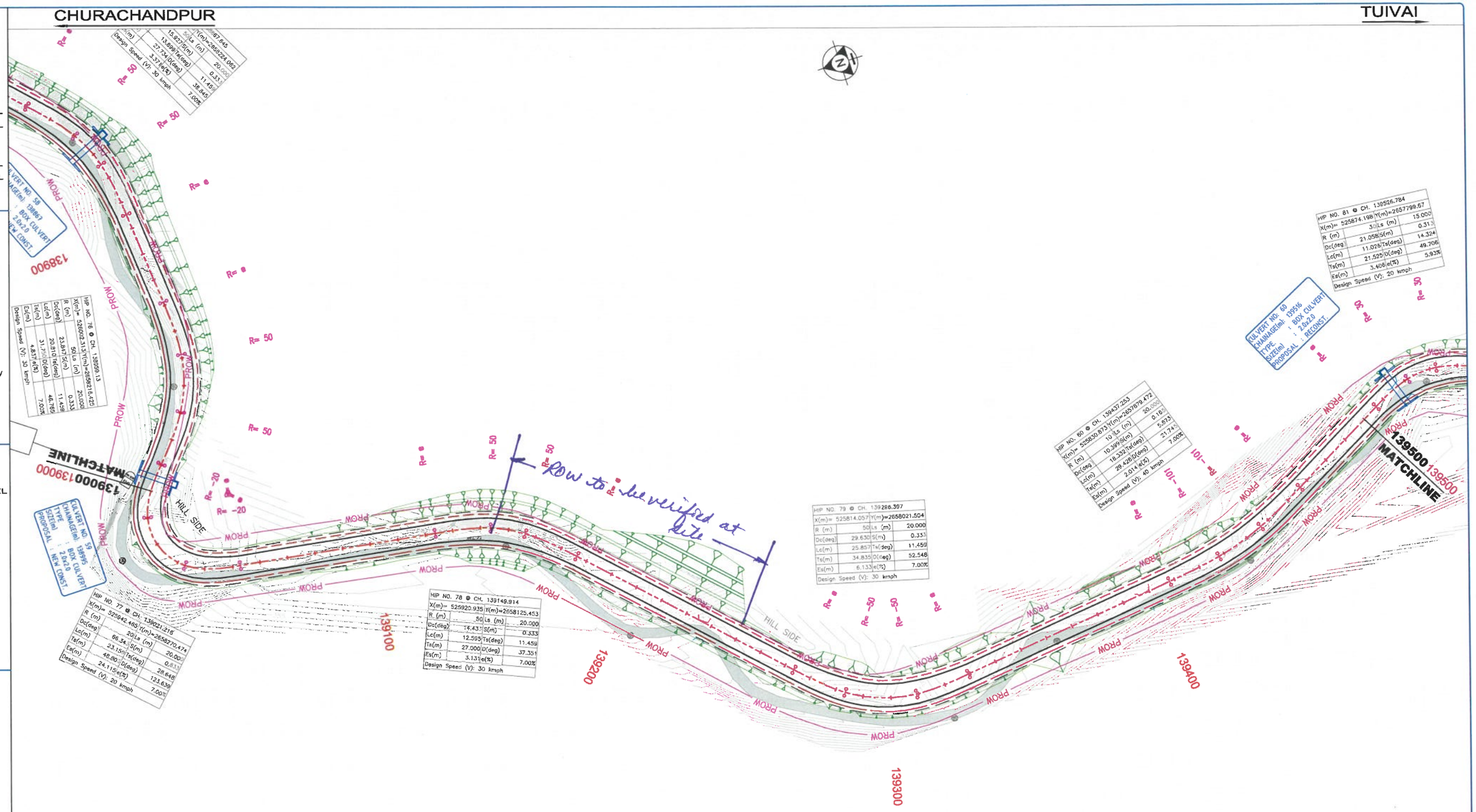
- EXIST. ROAD
- K-I/R : KACHA RESIDENTIAL
- K-I/C : KACHA COMMERCIAL
- SP-I/R : SEMI PUCCA RESI.
- SP-I/C : SEMI PUCCA COMM.
- P-I/R : PUCCA RESIDENTIAL
- P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
- ES EDGE
- HS EDGE
- C/W EDGE
- CEN.LINE
- C/W EDGE
- HS EDGE
- ES EDGE
- TOE LINE
- HOR. TANGENT POINT
- PROW PROPOSED ROW
- CULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
- EXIS. ROAD LEVEL
- LEFT 6M LEVEL
- EXIST. LEVEL AT PRO. CL
- RIGHT 6M LEVEL
- VER. TANGENT POINT
- GRID LINE (5.0 / 10.0)
- BOX CULVERT



APPROVED

CHAITANYA PROJECTS CONSULTANCY PVT. LTD. NH-102B In association with MSPARK FUTURISTICS & ASSOCIATES

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS Regd. No- 11/2004-05 BHUBANESWAR

Rev.	Date	Description

CLIENT: NHIDCL — BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR: GPT group — JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES — C-5,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS — PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD. — E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd. — # 510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE: DEC - 2020	

TITLE: Plan & Longitudinal Profile (From Km 139+000 to Km 139+500)

SCALE: (HOR - 1 : 1000; VER - 1 : 100 at A2 Size Sheet) HOR 10 0 10 20 / VER 5 0 5 10

DRG.NO: GPT/CCT/4B/HW/PNP/ 19

REV: R0

CHURACHANDPUR

TUIVAI

LEGEND :

EXISTING PLAN :

▬	EXIST. ROAD
K-I/R	KACHA RESIDENTIAL
K-I/C	KACHA COMMERCIAL
SP-I/R	SEMI PUCCA RESI.
SP-I/C	SEMI PUCCA COMM.
P-I/R	PUCCA RESIDENTIAL
P-I/C	PUCCA COMMERCIAL
1000	CONTOUR

PROPOSED PLAN :

TOE LINE
ES EDGE
HS EDGE
C/W EDGE
CEN.LINE
C/W EDGE
HS EDGE
ES EDGE
TOE LINE
HOR. TANGENT POINT
PROW — PROPOSED ROW
CULVERT
BRIDGE

PROPOSED PROFILE :

PROP. LEVEL
EXIS. ROAD LEVEL
LEFT 6M LEVEL
EXIST. LEVEL AT PRO. CL
RIGHT 6M LEVEL
VER. TANGENT POINT
GRID LINE
BOX CULVERT

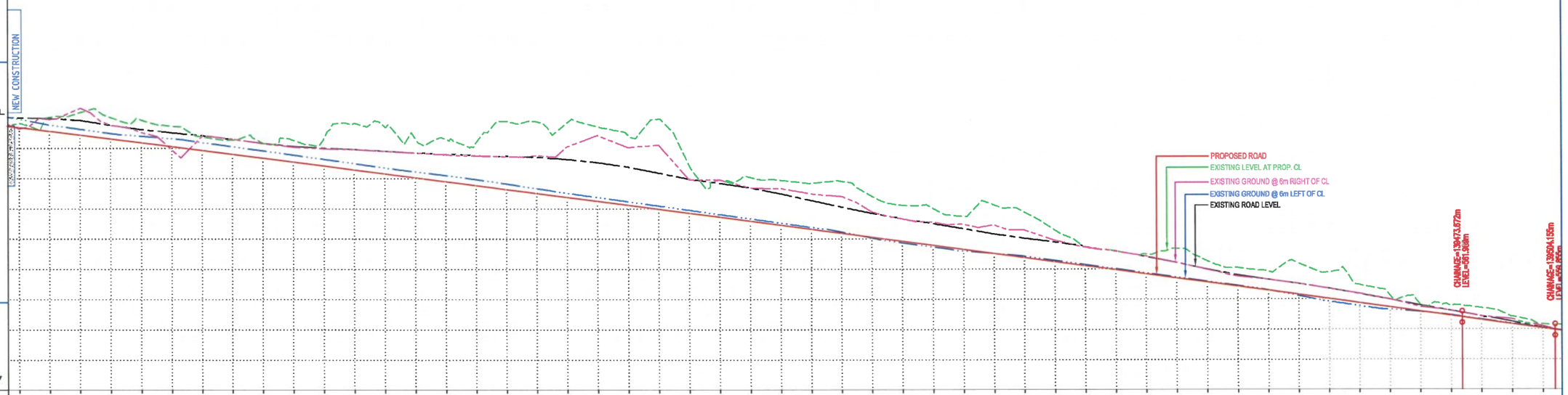
APPROVED

CHAITANYA PROJECTS CONSULTANCY In association with MSPARK FUTURISTICS & ASSOCIATES

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS Regd. No- 11/2004-05 BHUBANESWAR



CHAINAGE (m)	PROP. ROAD LEVELS (m)	EXIST LEVELS AT PROP. CL (m)	EXISTING ROAD LEVEL (m)
139000	593.495	594.209	595.081
139010	592.864	595.198	594.988
139020	592.232	596.006	594.672
139030	591.598	595.152	593.882
139040	590.962	594.723	593.185
139050	590.325	593.724	592.673
139060	589.687	591.964	592.167
139070	589.047	591.443	591.545
139080	588.406	590.871	590.859
139090	587.763	591.460	590.353
139100	587.118	591.744	590.071
139110	586.473	594.234	589.856
139120	585.826	593.620	589.573
139130	585.177	591.677	589.281
139140	584.527	591.660	589.041
139150	583.875	591.150	588.843
139160	583.222	594.529	588.733
139170	582.567	594.443	588.525
139180	581.911	594.200	588.162
139190	581.254	593.605	587.633
139200	580.595	592.217	586.904
139210	579.934	594.854	585.908
139220	579.272	587.282	584.902
139230	578.609	584.789	584.217
139240	577.944	585.273	583.464
139250	577.278	584.776	582.470
139260	576.610	584.279	581.376
139270	575.941	584.617	580.303
139280	575.270	582.168	579.284
139290	574.598	580.651	578.393
139300	573.924	580.148	577.554
139310	573.249	578.813	576.707
139320	572.572	580.730	575.830
139330	571.894	579.528	575.122
139340	571.214	576.593	574.489
139350	570.533	573.780	573.808
139360	569.851	572.946	572.952
139370	569.167	572.463	572.011
139380	568.481	573.376	571.015
139390	567.794	571.412	569.914
139400	567.106	570.252	568.971
139410	566.416	569.655	568.208
139420	565.725	570.979	567.517
139430	565.032	569.463	566.720
139440	564.337	567.429	565.842
139450	563.642	565.771	564.912
139460	562.944	564.039	563.929
139470	562.246	563.924	563.053
139480	561.546	563.613	562.157
139490	560.846	562.209	561.225
139500	560.146	560.794	560.219

HORIZONTAL SCHEMATIC (L,R=m)

.000m
R=-20.000m L=23.159m
L=20.000m
L=70.820m
L=20.000m
R=50.000m L=12.595m
L=20.000m
L=87.258m
L=20.000m
R=-50.000m L=25.857m
L=20.000m
L=78.761m
L=20.000m
R=-101.000m L=18.333m
L=20.000m
L=39.851m

VERTICAL SCHEMATIC (G=%) (L,R=m)

L=700.000m
G=-7.000 L=30.484m

WIDENING SCHEMATIC (m) LEFT RIGHT

5.000 5.000 3.500 3.500 4.700 4.700 3.500 3.500 4.100 4.100 3.500
3.500 4.700 4.700 3.500

SUPERELEVATION SCHEMATIC (e in %) LEFT RIGHT

e=7.000 e=2.500 e=7.000 e=2.500 e=7.000 e=2.500 e=7.000 e=2.500
e=7.000 e=2.500 e=7.000 e=2.500 e=7.000 e=2.500 e=7.000 e=2.500

Rev.	Date	Description

CLIENT:
NHIDCL
BUILDING INFRASTRUCTURE · BUILDING THE NATION

EPC CONTRACTOR:
GPT group
JC - 25, Sector - III, Salt Lake,
Kolkata - 700098.

AUTHORITY ENGINEER:
M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD.
IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES
C-5,2ND FLOOR, R.K TOWER,
SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT:
SUVADRA CONSULTANTS
PP-97, Tankapani Road,
BBSR-18, Odisha

PROOF CONSULTANT:
SHAMBHAVI TECHNO SOLUTIONS PVT.LTD.
E-82, Rajesh Kumar Path,
S.k.Puri, Boring Road,
Patna-800001

DESIGN CONSULTANT:
SPS Technocrats Pvt. Ltd.
510 & 511, JMD Megapolis, Sector 48,
Gurugram, Haryana - 122018.

PROJECT:
Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE:	DEC - 2020

TITLE: **Plan & Longitudinal Profile**
(From Km 139+000 to Km 139+500)

SCALE: (HOR - 1 : 1000; VER - 1 : 100 at A2 Size Sheet)
HOR 10 0 10 20
VER 5 0 5 10

REV: R0

DRG.NO: GPT/CCT/4B/HW/PNP/ 19a

LEGEND :

EXISTING PLAN :

EXIST. ROAD

K-I/R : KACHA RESIDENTIAL
K-I/C : KACHA COMMERCIAL
SP-I/R : SEMI PUCCA RESI.
SP-I/C : SEMI PUCCA COMM.
P-I/R : PUCCA RESIDENTIAL
P-I/C : PUCCA COMMERCIAL

1000 CONTOUR

PROPOSED PLAN :

TOE LINE
ES EDGE
HS EDGE
C/W EDGE
CEN.LINE
C/W EDGE
HS EDGE
ES EDGE
TOE LINE

HOR. TANGENT POINT

PROW PROPOSED ROW

CULVERT

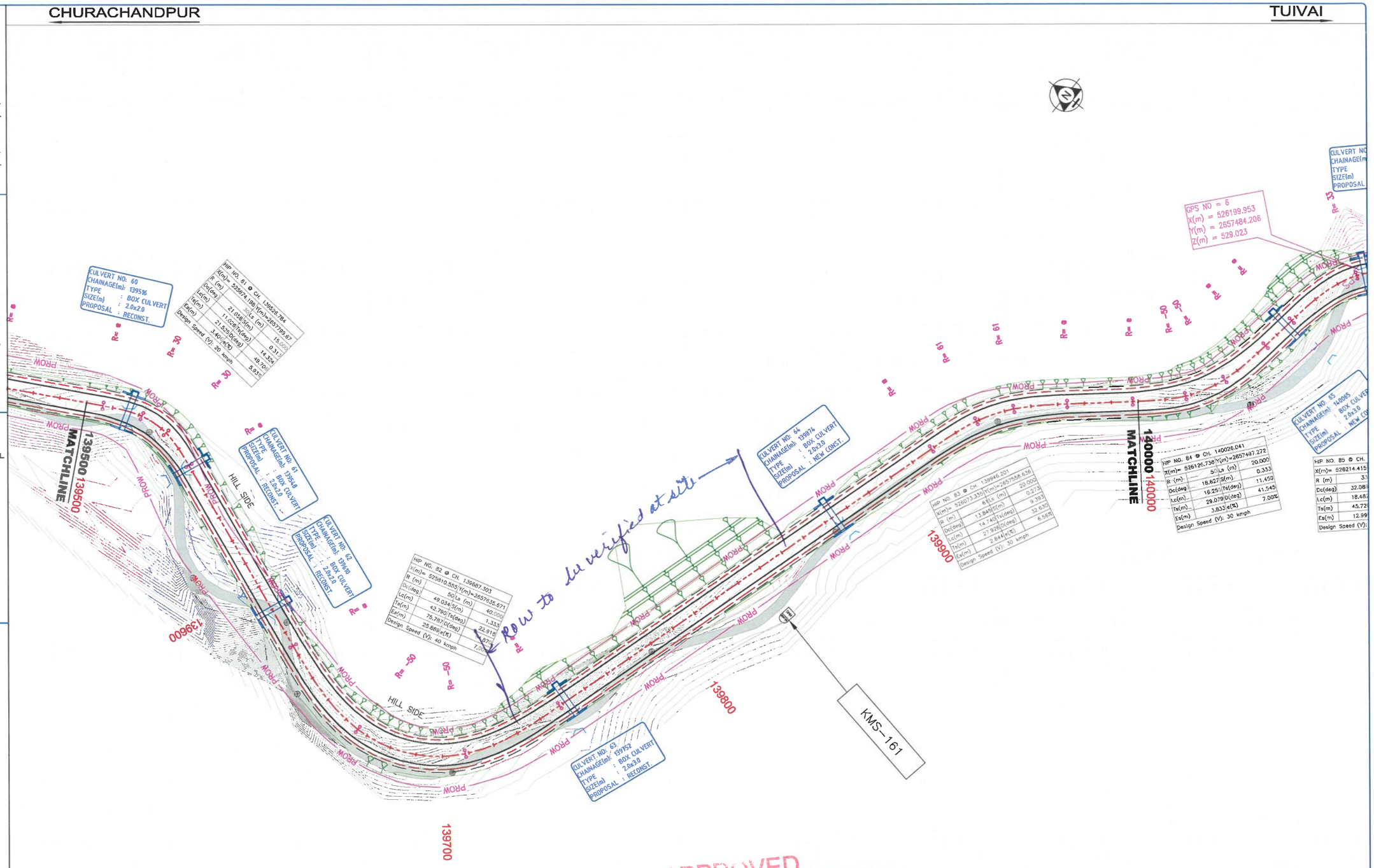
BRIDGE

PROPOSED PROFILE :

PROP. LEVEL
EXIS. ROAD LEVEL
LEFT 6M LEVEL
EXIST. LEVEL AT PRO. CL
RIGHT 6M LEVEL
VER. TANGENT POINT

GRID LINE (10.0 × 5.0)

BOX CULVERT



APPROVED

MSPARK FUTURISTICS & ASSOCIATES * CHAITANYA PROJECTS CONSULTANCY PVT. LTD. * MH-10/R (Corporation with)

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS * BHUBANESWAR * Regd. No- 11/2004-05

Rev.	Date	Description

CLIENT: NHIDCL — BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR: GPT Group
JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES
C-5,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS
PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD.
E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd.
510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE: DEC - 2020	

TITLE: Plan & Longitudinal Profile
(From Km 139+500 to Km 140+000)

SCALE: (HOR - 1 : 1000; VER - 1 : 100 at A2 Size Sheet) HOR 10 0 10 20 VER 5 0 5 10

DRG. NO: GPT/CCT/4B/HW/PNP/ 20

REV: R0

LEGEND :

EXISTING PLAN :

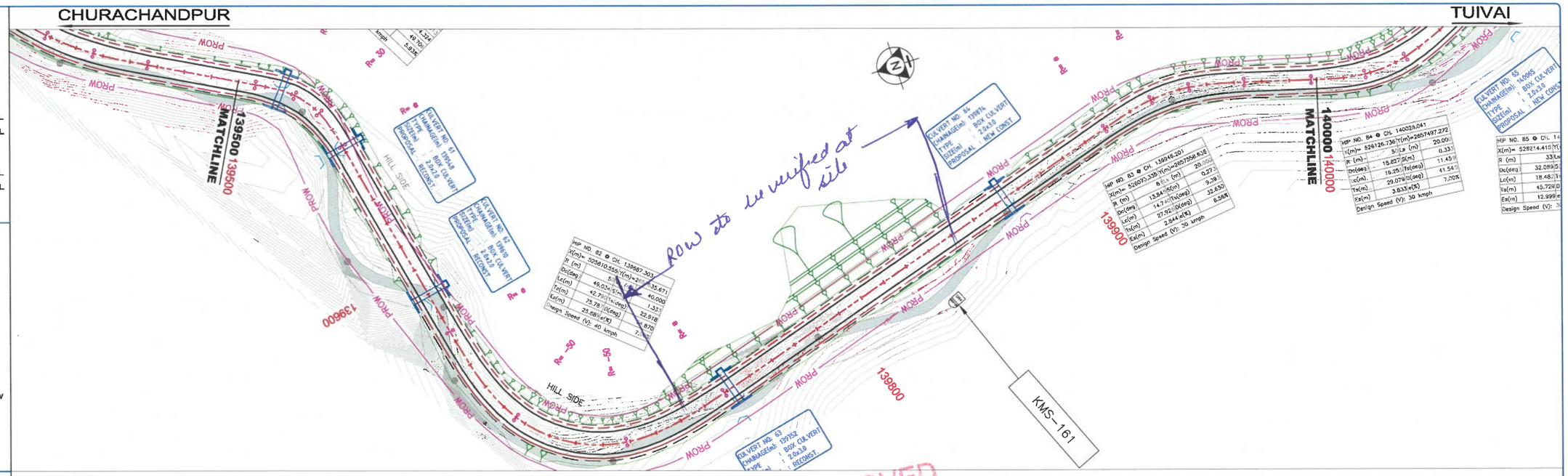
- EXIST. ROAD
- K-I/R : KACHA RESIDENTIAL
- K-I/C : KACHA COMMERCIAL
- SP-I/R : SEMI PUCCA RESI.
- SP-I/C : SEMI PUCCA COMM.
- P-I/R : PUCCA RESIDENTIAL
- P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

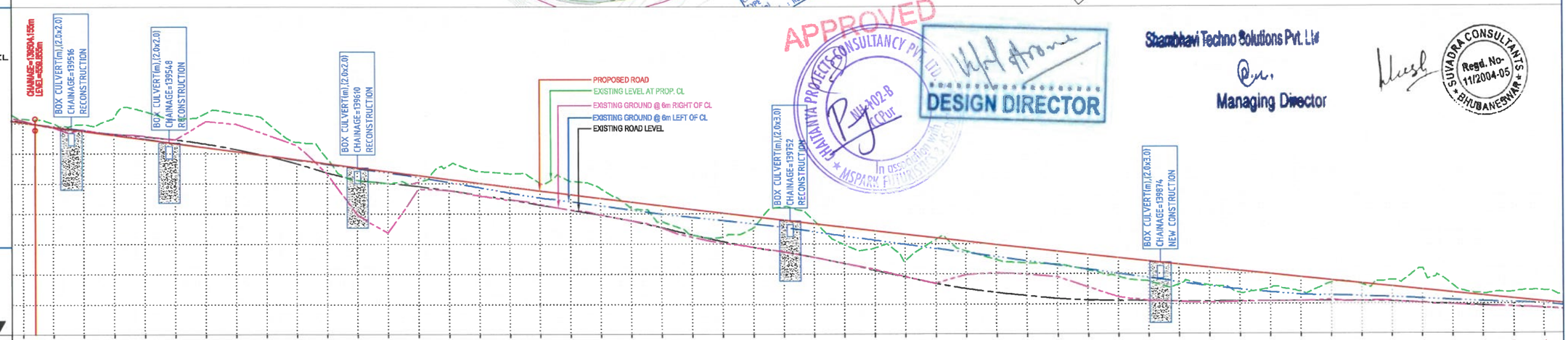
PROPOSED PLAN :

- TOE LINE
- ES EDGE
- HS EDGE
- C/W EDGE
- CEN.LINE
- C/W EDGE
- HS EDGE
- ES EDGE
- TOE LINE
- HOR. TANGENT POINT
- PROW — PROPOSED ROW
- CULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
- EXIS. ROAD LEVEL
- LEFT 6m LEVEL
- EXIST. LEVEL AT PRO. CL
- RIGHT 6m LEVEL
- VER. TANGENT POINT
- GRID LINE (5.0 / 10.0)
- BOX CULVERT





CHAINAGE (m)	PROP. ROAD LEVELS (m)	EXIST LEVELS AT PROP. CL (m)	EXISTING ROAD LEVEL (m)
139500	560.146	560.794	560.219
139510	559.446	560.101	559.369
139520	558.751	559.855	558.766
139530	558.060	561.127	558.277
139540	557.373	562.051	557.838
139550	556.690	560.781	557.317
139560	558.011	561.713	556.598
139570	555.338	561.754	555.715
139580	554.666	560.300	554.644
139590	553.999	558.996	553.347
139600	553.337	554.232	551.792
139610	552.679	550.566	550.566
139620	552.025	550.085	550.089
139630	551.376	550.324	549.554
139640	550.731	553.053	548.888
139650	550.089	552.028	548.105
139660	549.452	551.666	547.359
139670	548.819	550.088	546.479
139680	548.191	550.401	545.623
139690	547.568	549.239	544.790
139700	546.946	545.919	543.656
139710	546.330	543.743	542.717
139720	545.718	541.498	541.501
139730	545.110	541.118	540.390
139740	544.506	542.625	539.410
139750	543.906	546.164	538.620
139760	543.311	543.864	537.755
139770	542.720	539.818	536.707
139780	542.133	539.309	535.617
139790	541.550	537.162	534.519
139800	540.971	540.678	533.441
139810	540.397	538.789	532.566
139820	539.827	537.315	531.915
139830	539.260	536.785	531.383
139840	538.698	536.542	530.912
139850	538.141	535.601	530.645
139860	537.587	534.520	530.566
139870	537.038	533.766	530.481
139880	536.492	533.229	530.379
139890	535.951	533.145	530.430
139900	535.414	531.926	530.423
139910	534.881	532.598	530.385
139920	534.353	532.022	530.421
139930	533.828	533.453	530.416
139940	533.308	533.160	530.427
139950	532.792	533.942	530.344
139960	532.280	535.789	530.108
139970	531.772	533.178	529.863
139980	531.269	531.692	529.670
139990	530.769	532.008	529.464
140000	530.274	532.229	529.198

HORIZONTAL SCHEMATIC (L,R=m): R=30.000m; L=15.000m; L=11.027m; L=15.000m; L=78.611m; L=40.000m; R=-50.000m; L=42.791m; L=40.000m; L=170.133m; L=20.000m; R=61.000m; L=14.740m; L=20.000m; L=24.341m

VERTICAL SCHEMATIC (G=%) (L,R=m): L=650.000m

WIDENING SCHEMATIC (m) LEFT / RIGHT: 3.500; 3.500; 3.000; 3.000; 3.500; 3.700; 3.700; 3.500; 3.500; 3.500; 4.400; 4.400; 3.500

SUPERELEVATION SCHEMATIC (e in %) LEFT / RIGHT: e=5.900; e=2.500; e=7.000; e=2.500; e=6.600; e=2.500

APPROVED — CHAITANYA PROJECTS CONSULTANCY PVT. LTD. In association with MSPARK FUTURISTICS & ASSOCIATES — DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd — Managing Director

SUVADRA CONSULTANTS Regd. No- 11/2004-05 BHUBANESWAR

Rev.	Date	Description

CLIENT: NHIDCL — BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR: GPT group — JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES — C-5,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS — PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD. — E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd. — # 510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE: DEC - 2020	

TITLE: Plan & Longitudinal Profile (From Km 139+500 to Km 140+000)

SCALE: (HOR - 1 : 1000; VER - 1 : 100 at A2 Size Sheet) HOR: 10 0 10 20; VER: 5 0 5 10

DRG.NO: GPT/CCT/4B/HW/PNP/ 20a

REV: R0

LEGEND :

EXISTING PLAN :

EXIST. ROAD

K-I/R : KACHA RESIDENTIAL
K-I/C : KACHA COMMERCIAL
SP-I/R : SEMI PUCCA RESI.
SP-I/C : SEMI PUCCA COMM.
P-I/R : PUCCA RESIDENTIAL
P-I/C : PUCCA COMMERCIAL

1000 CONTOUR

PROPOSED PLAN :

TOE LINE
ES EDGE
HS EDGE
C/W EDGE
CEN.LINE
C/W EDGE
HS EDGE
ES EDGE
TOE LINE

HOR. TANGENT POINT

PROW — PROPOSED ROW

CULVERT

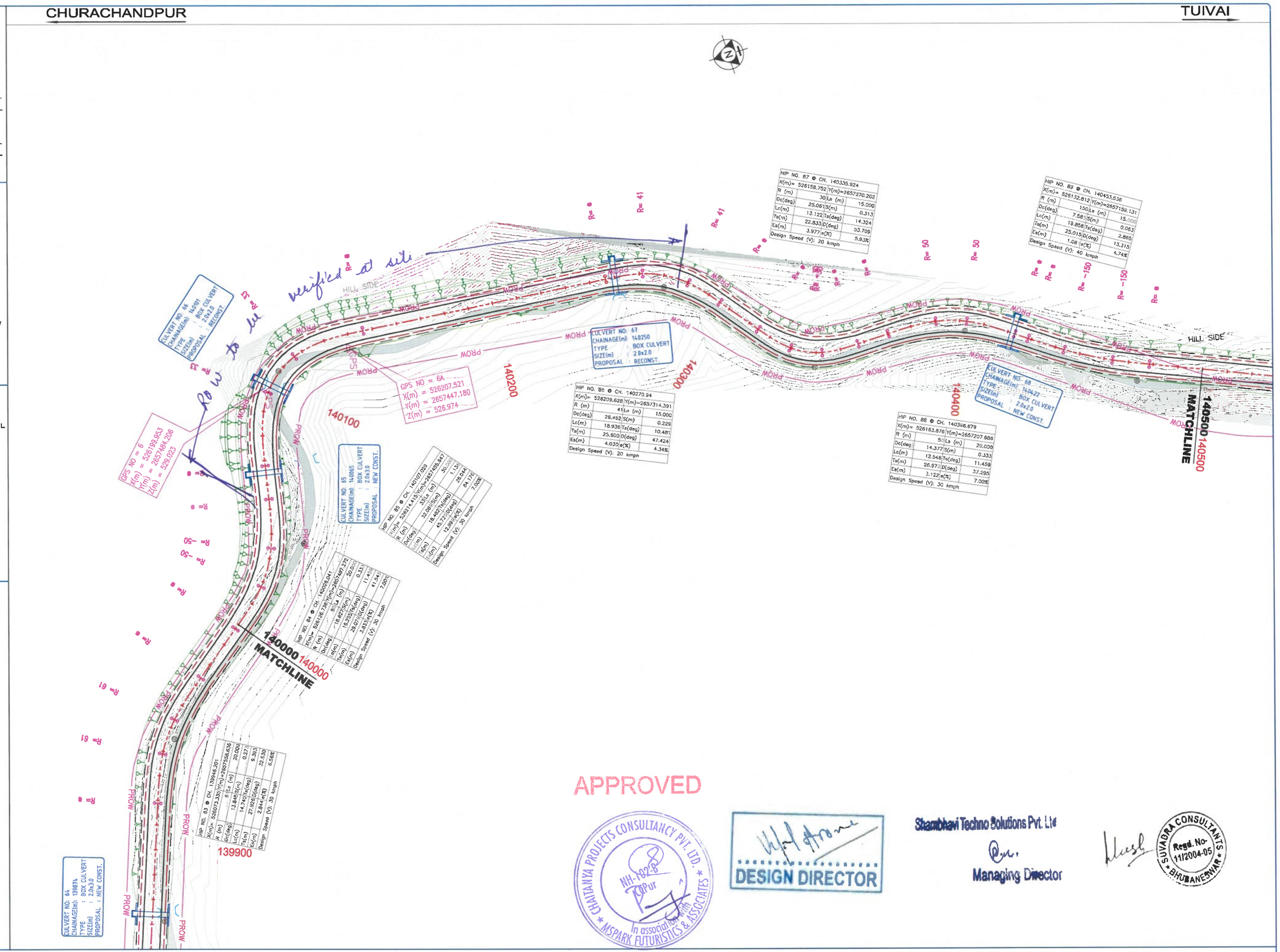
BRIDGE

PROPOSED PROFILE :

PROP. LEVEL
EXIS. ROAD LEVEL
LEFT 6M LEVEL
EXIST. LEVEL AT PRO. CL
RIGHT 6M LEVEL
VER. TANGENT POINT

GRID LINE (10.0 × 5.0)

BOX CULVERT



APPROVED

CHAITANYA PROJECTS CONSULTANCY PVT. LTD. NH-102B PPur In association with MSPARK FUTURISTICS & ASSOCIATES

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS Regd. No- 11/2004-05 BHUBANESWAR

Rev.	Date	Description

CLIENT: NAIDCL — BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR: GPT Group
JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES
C-5,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS
An ISO 9001 : 2008 Certified Co. Building Consultancy & Engineering Consultancy
PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD.
E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd.
510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE: DEC - 2020	

TITLE: Plan & Longitudinal Profile
(From Km 140+000 to Km 140+500)

SCALE: (HOR - 1 : 1000; VER - 1 : 100 at A2 Size Sheet) HOR 10 0 10 20 VER 5 0 5 10

REV: R0

DRG.NO: GPT/CCT/4B/HW/PNP/ 21

LEGEND :

EXISTING PLAN :

- EXIST. ROAD
- K-I/R : KACHA RESIDENTIAL
- K-I/C : KACHA COMMERCIAL
- SP-I/R : SEMI PUCCA RESI.
- SP-I/C : SEMI PUCCA COMM.
- P-I/R : PUCCA RESIDENTIAL
- P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
- ES EDGE
- HS EDGE
- C/W EDGE
- CEN.LINE
- C/W EDGE
- HS EDGE
- ES EDGE
- TOE LINE
- HOR. TANGENT POINT
- PROW PROPOSED ROW
- CULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
- EXIS. ROAD LEVEL
- LEFT 6M LEVEL
- EXIST. LEVEL AT PRO. CL
- RIGHT 6M LEVEL
- VER. TANGENT POINT
- GRID LINE (5.0 / 10.0)
- BOX CULVERT

CHURACHANDPUR → TUIVAI

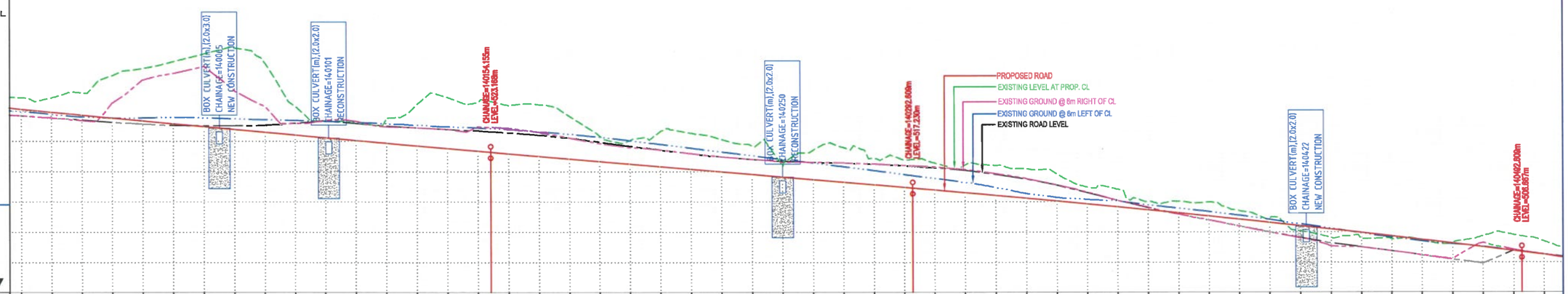
APPROVED

CHAITANYA PROJECTS CONSULTANCY PVT. LTD. In association with MSPARK FUTURISTICS & ASSOCIATES

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS Regd. No- 11/2004-05 BHUBANESWAR



CHAINAGE (m)	PROP. ROAD LEVELS (m)	EXIST LEVELS AT PROP. CL (m)	EXISTING ROAD LEVEL (m)
140000	530.274	532.229	529.198
140010	529.783	532.209	528.875
140020	529.296	532.975	528.502
140030	528.813	535.867	528.128
140040	528.335	537.031	527.845
140050	527.861	-999.000	527.604
140060	527.390	-999.000	527.557
140070	528.924	540.410	527.557
140080	528.462	537.885	527.706
140090	528.005	530.779	527.979
140100	525.551	528.385	528.332
140110	525.102	528.048	527.958
140120	524.657	528.763	527.496
140130	524.216	531.050	527.204
140140	523.779	532.292	526.938
140150	523.346	531.422	526.672
140160	522.917	530.928	526.375
140170	522.488	531.090	526.016
140180	522.059	529.143	525.521
140190	521.631	525.860	524.877
140200	521.202	525.097	524.224
140210	520.773	526.617	523.562
140220	520.344	526.333	522.943
140230	519.915	525.303	522.395
140240	519.486	524.236	521.947
140250	519.058	520.937	521.677
140260	518.629	523.527	521.488
140270	518.200	523.966	521.374
140280	517.771	522.148	521.205
140290	517.342	521.848	520.969
140300	516.911	521.385	520.621
140310	516.470	521.009	520.181
140320	516.018	520.959	519.489
140330	515.557	520.454	518.714
140340	515.086	519.616	517.698
140350	514.606	517.427	516.452
140360	514.115	517.078	515.182
140370	513.614	515.019	513.975
140380	513.103	515.037	512.903
140390	512.583	514.909	511.940
140400	512.052	513.476	510.970
140410	511.512	512.162	509.964
140420	510.961	510.107	509.011
140430	510.401	509.107	508.142
140440	509.831	508.920	507.453
140450	509.250	508.840	506.794
140460	508.660	508.599	506.141
140470	508.060	508.020	505.474
140480	507.450	509.327	504.825
140490	506.830	509.540	506.874
140500	506.203	508.477	506.219

HORIZONTAL SCHEMATIC (L,R=m): L=20.000m; R=-50.000m; L=16.255m; L=20.000m; L=13.621m; L=30.000m; R=33.000m; L=18.481m; L=30.000m; L=100.202m; L=15.000m; R=41.000m; L=18.936m; L=15.000m; L=18.955m; L=15.000m; R=-30.000m; L=13.122m; L=15.000m; L=12.921m; L=20.000m; R=50.000m; L=12.546m; L=20.000m; L; L=15.000m; R=-150.000m; L=19.858m; L=15.000m

VERTICAL SCHEMATIC (G=%) (L,R=m): L=138.454m; L=200.000m

WIDENING SCHEMATIC (m) LEFT / RIGHT: 3.500; 4.700; 4.700; 3.500; 3.500; 5.000; 5.000; 3.500; 3.500; 4.700; 4.700; 3.500; 3.500; 5.000; 5.000; 3.500; 3.500; 4.700; 4.700; 3.500

SUPERELEVATION SCHEMATIC (e in %) LEFT / RIGHT: e=7.000; e=2.500; e=7.000; e=2.500; e=4.300; e=2.500; e=5.900; e=2.500; e=7.000; e=4.700; e=7.000; e=2.500; e=7.000; e=2.500; e=4.300; e=2.500; e=5.900; e=2.500; e=7.000; e=4.700

Rev.	Date	Description

CLIENT: NAIDCL — BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR: GPT Group — JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES — C-5,2ND FLOOR, R.K.TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS — PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD. — E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd. — # 510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE: DEC - 2020	

TITLE: **Plan & Longitudinal Profile** (From Km 140+000 to Km 140+500)

SCALE: (HOR - 1 : 1000; VER - 1 : 100 at A2 Size Sheet) HOR 10 6 10 20 / VER 5 0 5 10

DRG.NO: **GPT/CCT/4B/HW/PNP/ 21a**

REV: **R0**

LEGEND :

EXISTING PLAN :

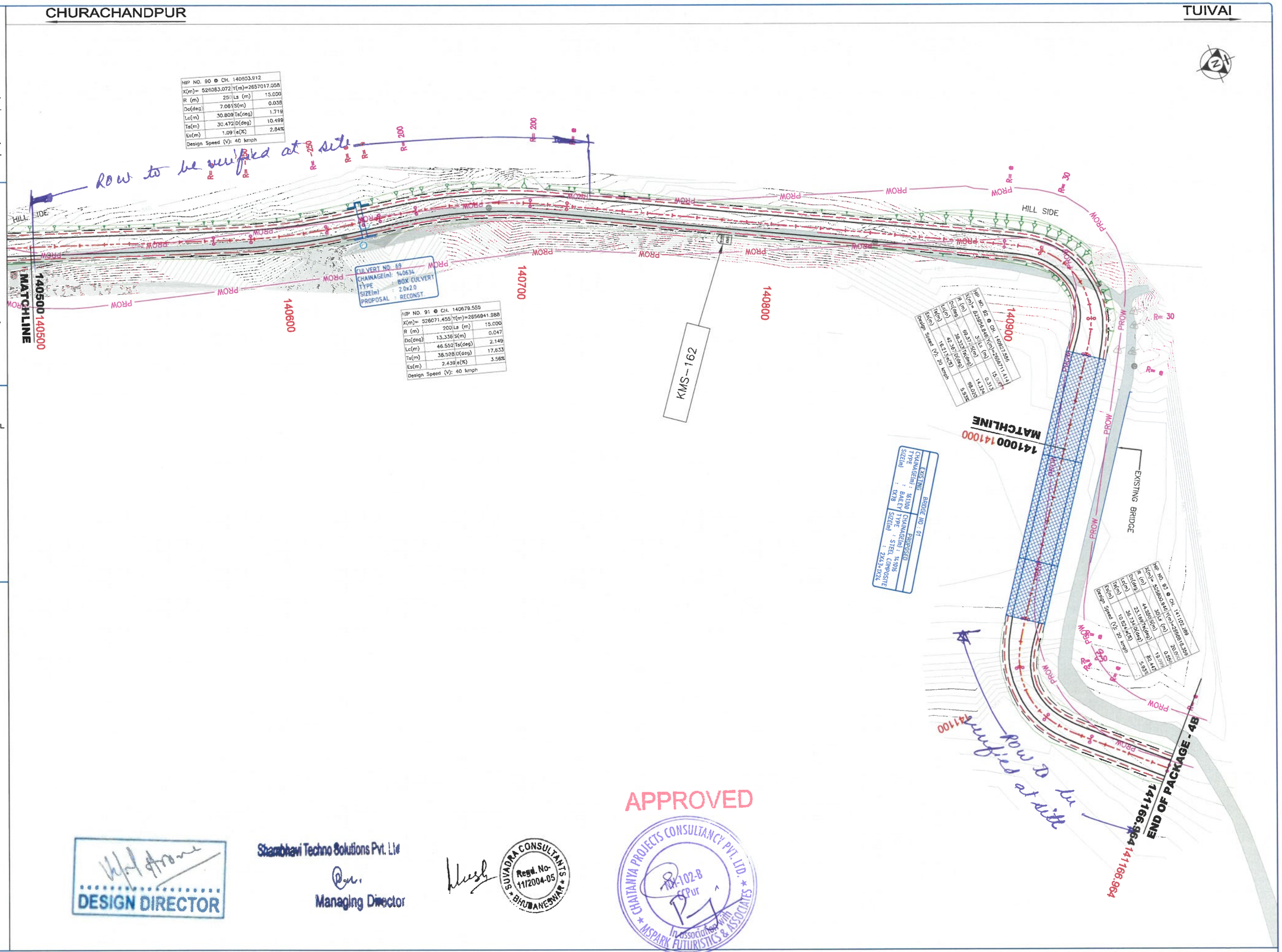
- EXIST. ROAD
- K-I/R : KACHA RESIDENTIAL
- K-I/C : KACHA COMMERCIAL
- SP-I/R : SEMI PUCCA RESI.
- SP-I/C : SEMI PUCCA COMM.
- P-I/R : PUCCA RESIDENTIAL
- P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
- ES EDGE
- HS EDGE
- C/W EDGE
- CEN.LINE
- C/W EDGE
- HS EDGE
- ES EDGE
- TOE LINE
- HOR. TANGENT POINT
- PROW — PROPOSED ROW
- CULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
- EXIS. ROAD LEVEL
- LEFT 6M LEVEL
- EXIST. LEVEL AT PRO. CL
- RIGHT 6M LEVEL
- VER. TANGENT POINT
- GRID LINE (5 / 10.0)
- BOX CULVERT



APPROVED

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS Regd. No- 11/2004-05 BHUBANESWAR

CHAITANYA PROJECTS CONSULTANCY PVT. LTD. TIN-102-B SGPur In association with MSPARK FUTURISTICS & ASSOCIATES

Rev.	Date	Description

Client: NHIDCL — BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC Contractor: GPT Group — JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

Authority Engineer: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES, C-8,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

Safety Consultant: SUVADRA CONSULTANTS (An ISO 9001 : 2008 Certified Engineering Consultancy Organisation under Govt. of Odisha) — PP-97, Tankapani Road, BBSR-18, Odisha

Proof Consultant: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD. E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

Design Consultant: SPS Technocrats Pvt. Ltd. # 510 & 511, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018.

Project: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

Drawn	AMIT
Designed	DHEERESH
Checked	VIPUL
Date:	DEC - 2020

Title: Plan & Longitudinal Profile (From Km 140+500 to Km 141+166.964)

Scale: (HOR - 1 : 1000; VER - 1 : 100 at A2 Size Sheet) HOR 10 0 10 20; VER 5 0 5 10

Drg. No: GPT/CCT/4B/HW/PNP/ 22

Rev: R0

CHURACHANDPUR

TUIVAI

LEGEND :

EXISTING PLAN :

▬ EXIST. ROAD

K-I/R : KACHA RESIDENTIAL
K-I/C : KACHA COMMERCIAL
SP-I/R : SEMI PUCCA RESI.
SP-I/C : SEMI PUCCA COMM.
P-I/R : PUCCA RESIDENTIAL
P-I/C : PUCCA COMMERCIAL
1000 CONTOUR

PROPOSED PLAN :

TOE LINE
ES EDGE
HS EDGE
C/W EDGE
CEN.LINE
C/W EDGE
HS EDGE
ES EDGE
TOE LINE
HOR. TANGENT POINT
PROW PROPOSED ROW
CULVERT
BRIDGE

PROPOSED PROFILE :

PROP. LEVEL
EXIS. ROAD LEVEL
LEFT 6M LEVEL
EXIST. LEVEL AT PRO. CL
RIGHT 6M LEVEL
VER. TANGENT POINT
5.0 10.0 GRID LINE
BOX CULVERT

Level Datum= 470(m)

APPROVED

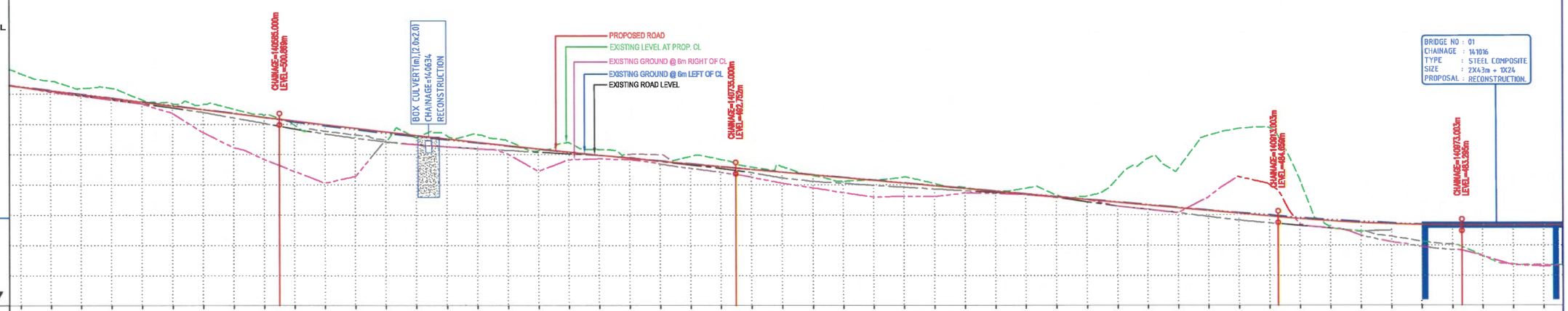
NH-102-B
CCPur

CHAITANYA PROJECTS CONSULTANCY PVT. LTD. In association with MSPARK FUTURISTICS & ASSOCIATES

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS Regd. No- 11/2004-05 BHUBANESWAR



CHAINAGE (m)	PROP. ROAD LEVELS (m)	EXIST LEVELS AT PROP. CL (m)	EXISTING ROAD LEVEL (m)
140500	506.203	508.477	506.219
140510	505.575	507.215	505.470
140520	504.948	506.039	504.752
140530	504.320	506.056	504.078
140540	503.693	504.089	503.405
140550	503.065	503.437	502.717
140560	502.437	503.316	501.962
140570	501.810	502.574	501.064
140580	501.182	501.508	500.157
140590	500.556	499.855	499.225
140600	499.940	498.867	498.419
140610	499.336	498.260	497.709
140620	498.743	497.405	497.107
140630	498.161	497.824	496.654
140640	497.591	498.121	496.307
140650	497.033	498.390	495.967
140660	496.486	497.351	495.695
140670	495.951	495.665	495.398
140680	495.427	496.996	495.129
140690	494.915	495.809	494.876
140700	494.414	495.072	494.519
140710	493.925	495.045	493.872
140720	493.447	494.711	493.267
140730	492.981	494.198	492.703
140740	492.525	492.934	492.027
140750	492.070	493.063	491.131
140760	491.615	491.504	490.565
140770	491.161	490.620	490.230
140780	490.708	490.790	489.896
140790	490.251	491.283	489.587
140800	489.797	490.252	489.291
140810	489.342	489.528	489.000
140820	488.887	488.949	488.714
140830	488.433	489.481	488.359
140840	487.978	488.328	487.873
140850	487.523	488.188	487.142
140860	487.069	491.076	486.432
140870	486.614	494.339	485.893
140880	486.159	492.715	485.346
140890	485.704	498.130	484.726
140900	485.250	499.291	484.129
140910	484.795	499.439	483.659
140920	484.359	490.915	483.208
140930	483.995	483.068	482.790
140940	483.707	482.236	482.290
140950	483.495	481.465	482.493
140960	483.359	480.611	
140970	483.298	480.169	
140980	483.295	478.302	
140990	483.295	476.955	
141000	483.295	476.752	

HORIZONTAL SCHEMATIC (L,R=m)
L=95.042m
L=15.000m
R=-250.000m
L=30.809m
L=15.000m
L
L=15.000m
R=200.000m
L=46.552m
L=15.000m
L=176.593m
L=15.000m
R=30.000m
L=36.323m
L=15.000m

VERTICAL SCHEMATIC (G=%) (L,R=m)
G=-6.275
L=92.391m
L=150.000m
G=-4.547
L=178.003m
L=60.000m

WIDENING SCHEMATIC (m) LEFT RIGHT

SUPERELEVATION SCHEMATIC (e in %) LEFT RIGHT
e=2.500
e=2.500
e=2.800
e=2.800
e=3.600
e=3.600
e=2.500
e=2.500
e=5.900
e=5.900

Rev.	Date	Description

CLIENT:
NHIDCL
BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR:
GPT group
JC - 25, Sector - III, Salt Lake,
Kolkata - 700098.

AUTHORITY ENGINEER:
M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD.
IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES
C-5,2ND FLOOR, R.K TOWER,
SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT:
SUVADRA CONSULTANTS
PP-97, Tankapani Road,
BBSR-18, Odisha

PROOF CONSULTANT:
SHAMBHAVI TECHNO SOLUTIONS PVT.LTD.
E-82, Rajesh Kumar Path,
S.k.Puri, Boring Road,
Patna-800001

DESIGN CONSULTANT:
SPS Technocrats Pvt. Ltd.
510 & 511, JMD Megapolis, Sector 48,
Gurugram, Haryana - 122018.

PROJECT:
Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN AMIT
DESIGNED DHEERESH
CHECKED VIPUL
DATE: DEC - 2020

TITLE: **Plan & Longitudinal Profile**
(From Km 140+500 to Km 141+000)

SCALE: (HOR - 1 : 1000; VER - 1 : 100 at A2 Size Sheet)
HOR 10 0 10 20
VER 5 0 5 10

DRG. NO: GPT/CCT/4B/HW/PNP/ 22a

REV: R0

LEGEND :

EXISTING PLAN :

EXIST. ROAD

K-I/R : KACHA RESIDENTIAL
K-I/C : KACHA COMMERCIAL
SP-I/R : SEMI PUCCA RESI.
SP-I/C : SEMI PUCCA COMM.
P-I/R : PUCCA RESIDENTIAL
P-I/C : PUCCA COMMERCIAL

1000 CONTOUR

PROPOSED PLAN :

TOE LINE
ES EDGE
HS EDGE
C/W EDGE
CEN.LINE
C/W EDGE
HS EDGE
ES EDGE
TOE LINE

HOR. TANGENT POINT

PROW PROPOSED ROW

CULVERT

BRIDGE

PROPOSED PROFILE :

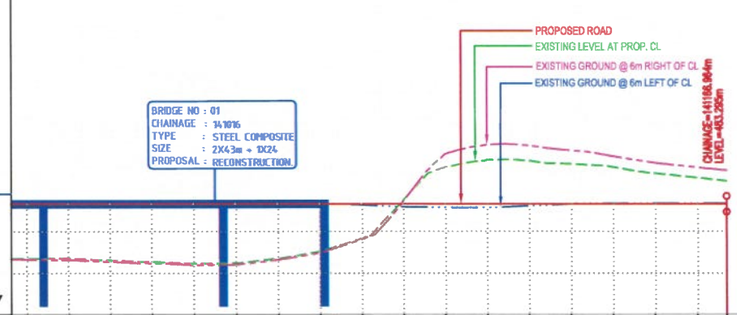
PROP. LEVEL
EXIS. ROAD LEVEL
LEFT 6M LEVEL
EXIST. LEVEL AT PRO. CL
RIGHT 6M LEVEL
VER. TANGENT POINT

5.0 10.0 GRID LINE

BOX CULVERT

CHURACHANDPUR

TUIVAI



Level Datum= 470(m)

PROP. ROAD LEVELS (m)	483.295	483.295	483.295	483.295	483.295	483.295	483.295	483.295	483.295	483.295	483.295	483.295	483.295	483.295	483.295	483.295	483.295	483.295
EXIST LEVELS AT PROP. CL (m)	476.752	476.722	476.559	476.361	476.192	476.215	476.772	477.597	479.170	483.778	487.667	488.574	488.460	488.118	487.745	486.977	486.443	486.071
EXISTING ROAD LEVEL (m)																		

HORIZONTAL SCHEMATIC (L,R=m): L=109.957m; L=20.000m; R=-30.000m; L=23.169m; L=20.000m; L=33.091m

VERTICAL SCHEMATIC (G=%) (L,R=m): G=0.000; L=193.961m

WIDENING SCHEMATIC (m): LEFT / RIGHT

SUPERELEVATION SCHEMATIC (e in %): LEFT / RIGHT: e=2.500; e=5.900; e=2.500

CHAINAGE (m)	141000	141010	141020	141030	141040	141050	141060	141070	141080	141090	141100	141110	141120	141130	141140	141150	141160	141166.964

APPROVED

SUVADRA CONSULTANTS & ASSOCIATES PVT. LTD. * CHAITANYA PROJECTS CONSULTANCY PVT. LTD. * NH-102B

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
Managing Director

SUVADRA CONSULTANTS * BHUBANESWAR * Regd. No- 11/2004-05

Rev.	Date	Description

CLIENT: NHIDCL BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR: GPT group
JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES
C-5,2ND FLOOR, R.K TOWER, SECTOR-4,VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT: SUVADRA CONSULTANTS
PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT.LTD.
E-82, Rajesh Kumar Path, S.k.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd.
510 & 511, JMD Megapolis, Sector 46, Gurugram, Haryana - 122016.

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE: DEC - 2020	

TITLE: **Plan & Longitudinal Profile** *(From Km 141+000 to Km 141+166.964)*

SCALE: (HOR - 1 : 1000, VER - 1 : 100 at A2 Size Sheet) HOR 10 0 10 20 / VER 5 0 5 10

DRG.NO: **GPT/CCT/4B/HW/PNP/ 22b**

REV: **R0**