

Letter no: 21/GPT-Ihra/B.O-Imphal/Design/Pkg-4(A)/2020-21/119

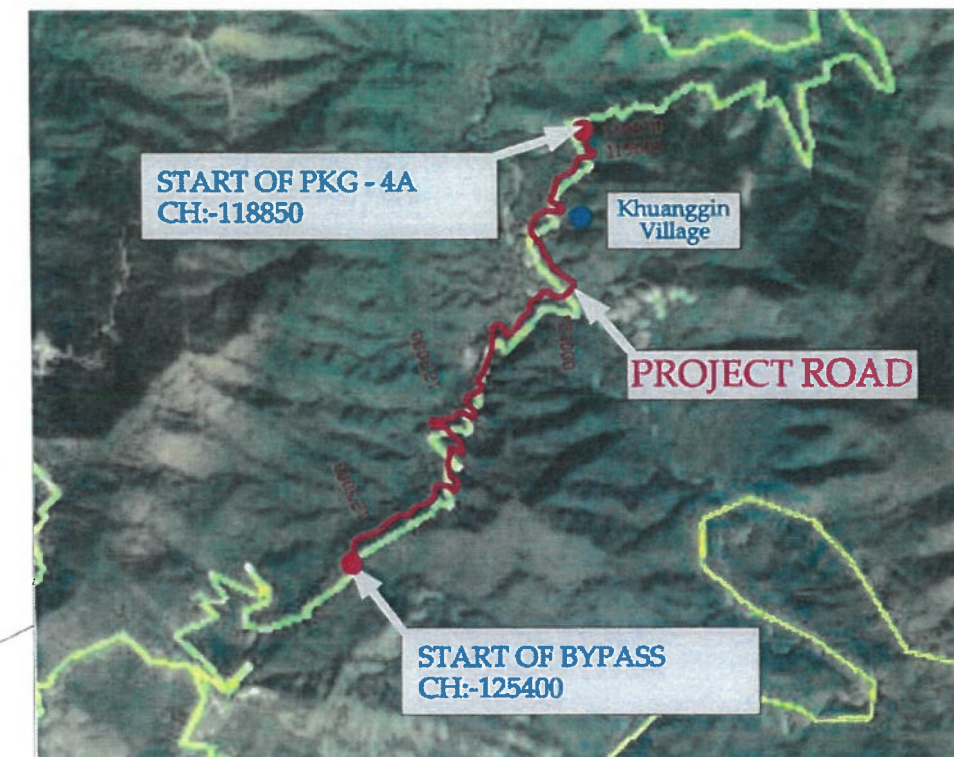
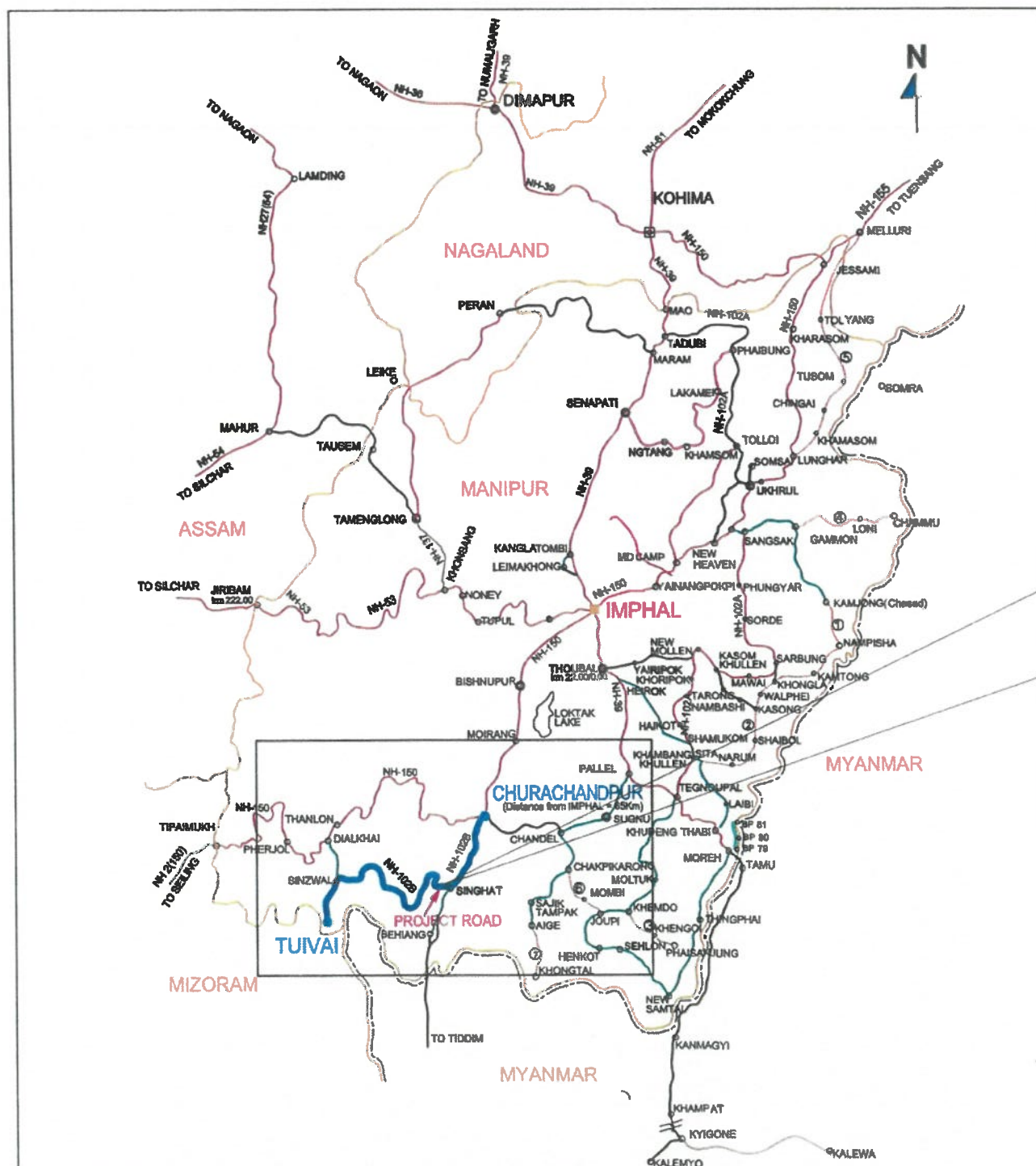
Dated, Imphal, the 19th Oct, 2021

Received Date: 20.10.21



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

Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 118.850 to Km 130.000 (Package-4A) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.



BYPASS PLAN & LONGITUDINAL PROFILE

PACKAGE - 4A

(Km. 125+358 to Km. 132+465)

APPROVED

**REVISION - 0
OCTOBER - 2021**



EPC CONTRACTOR:

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

DESIGN CONSULTANT:



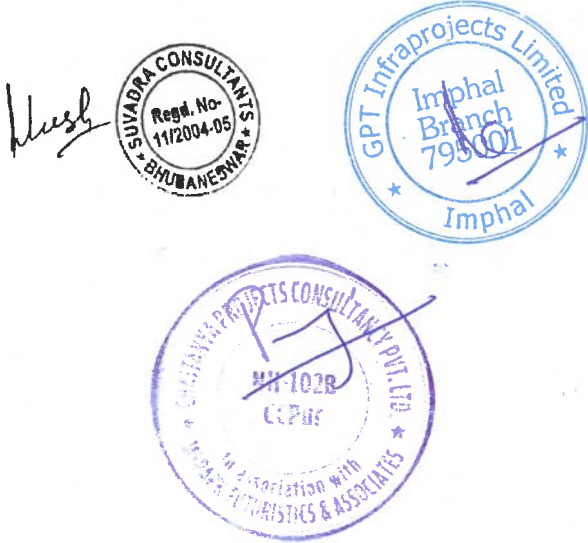
SPS Technocrats Pvt. Ltd.
#638 & 641, JMD Megapolis, Sector 48,
Gurgaon, Haryana - 122018.
E-mail:- info@spstpl.com
Website:- www.spstpl.com

CONTENT SHEET

SR. NO.	DRAWING NAME	DRAWING NO	NO OF SHEETS
01	LIST OF DRAWINGS	GPT/CCT/4A/HW/GEN/LOD/01	01
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[Signature]
DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd
[Signature]
Managing Director



APPROVED

Rev.	Date	Description	CLIENT:  BUILDING INFRASTRUCTURE - BUILDING THE NATION	EPC CONTRACTOR:  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, RJK TOWER, SECTOR-4, VAISHALI, GHANABAD-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. 603 & 641, 2ND Muggalla, Sector 45, Gurgaon, Haryana - 122015. E-mail: info@spspl.com Website: www.spspl.com	PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 118.850 to Km 130.000 (Package-4A) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	DRAWN DESIGNED CHECKED DATE: OCT - 2021	AMT NISHANT VIPUL R0	TITLE: LIST OF DRAWINGS SCALE: AS SHOWN DRS.No: GPT/CCT/4A/HW/GEN/LOD/01
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LEGENDS				ABBREVIATIONS	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
LEGEND FOR PLAN					
	BUILDING (P, SP, K, UC)		COVERED DRAIN		TOTAL DEVIATION ANGLE OF CURVE
	CULVERT, BRIDGE		11KV ELECTRIC LINE	R	RADIUS OF CIRCULAR CURVE
	GATE		33KV ELECTRIC LINE	Ts	TANGENT LENGTH
	TELEPHONE POLE		TOILET	Es	APEX DISTANCE
	ELECTRIC POLE		EXISTING CARRIAGEWAY	Lc	LENGTH OF CIRCULAR CURVE
	TEMPORARY BENCH MARK		REFERENCE PILLAR	e	SUPER ELEVATION
	SIDE ROAD		GPS PILLAR	Ls	LENGTH OF TRANSITION CURVE
	NALA & RIVER		SLAB CULVERT	Δ_s	DEVIATION ANGLE OF TRANSITION CURVE
	TRANSFORMER		PROPOSED CARRIAGEWAY EDGE	Δ_c	DEVIATION OR CENTRAL ANGLE OF CIRCULAR CURVE
	KILOMETER POST		PROPOSED HS EDGE	L	TOTAL LENGTH OF CURVE
	TREE		PROPOSED CENTER LINE	S	SHIFT
	VILLAGE NAME		PROPOSED SHOULDER EDGE	PC	POINT OF CURVATURE
	BOUNDARY WALL		PROPOSED RIGHT - OF - WAY	PT	POINT OF TANGENCY
	SURVEY STATION		CONTOUR LINE	TS	POINT OF CHANGE FROM TANGENT TO SPIRAL
	FENCING		PROPOSED TOE LINE	SC	POINT OF CHANGE FROM SPIRAL TO CIRCULAR CURVE
	AGRICULTURAL FIELD		CUTTING TOE LINE	CS	POINT OF CHANGE FROM CIRCULAR CURVE TO SPIRAL
	LAMP POST		FILLING TOE LINE	ST	POINT OF CHANGE FROM SPIRAL TO TANGENT
	RETAINING WALL		EARTHEN SHOULDER	IL	INVERT LEVEL OF CULVERT
	GARDEN		HOR. TANGENT POINT	PVI	POINT OF VERTICAL INTERSECTION
	WALL		VER. TANGENT POINT	Lvs	LENGTH OF VALLEY CURVE
	TEMPLE		PROP. BOX CULVERT	Lsc	LENGTH OF SUMMIT CURVE
				HIP	HORIZONTAL INTERSECTION POINT

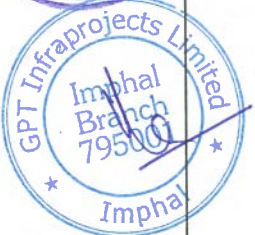
DESIGN DIRECTOR

APPROVED

Shambhavi Techno Solutions Pvt. Ltd.

Managing Director

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



Rev.	Date	Description	CLIENT: 	EPC CONTRACTOR: JC - 25, Sector - III, Salt Lake, Kolkata - 700098.	AUTHORITY ENGINEER: IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES C-4, 2ND FLOOR, RUK TOWER, SECTOR-4, VAISHALI, GHANASHYAM-201010.	SAFETY CONSULTANT: PP-67, Tankapuri Road, BBSR-18, Odisha	PROJECT CONSULTANT: E-82, Rajesh Kumar Path, S.K. Puri, Boring Road, Patna-800001	DESIGN CONSULTANT: #C8 & 41, DMD Megapole, Sector 48, Gurgaon, Haryana - 122015. E-mail: info@spstpl.com Website: www.spstpl.com	PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Chumchandpur to Tuvali section of NH 102B from Km 118.850 to Km 130.000 (Package-4A) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	DRAWN: AMIT DESIGNED: NIBHANT CHECKED: VIPUL DATE: OCT - 2021	TITLE: LEGENDS & ABBREVIATIONS SCALE: AS SHOWN DRS. NO: GPT/CCT/4A/HW/GEN/LEG/01	REV: R0
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ALIGNMENT REPORT

APPROVED

HORIZONTAL ALIGNMENT REPORT

H/P / Curve No.	H/P		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)							
1	531561.439	2665312.519	53	35	17	Start	125358.397	531590.729	2665353.663	125375.415	531580.859	2665339.799	17.018		Right	30	41	7.00%	
						Transition	125375.415	531580.859	2665339.799	125400.415	531564.439	2665321.085	25.000						
						Arc	125400.415	531564.439	2665321.085	125413.762	531552.680	2665314.896	13.347						
2	531473.421	2665311.036	275	30	31.5	Transition	125413.762	531552.680	2665314.896	125438.762	531527.957	2665311.955	25.000		Left	30	-30	7.00%	
						Straight	125438.762	531527.957	2665311.955	125450.060	531516.662	2665311.765	11.298						
						Transition	125450.060	531516.662	2665311.765	125480.060	531487.490	2665306.361	30.000						
3	531466.061	2665218.417	84	32	58.9	Arc	125480.060	531487.490	2665306.361	125494.299	531477.209	2665296.703	14.239		Left	30	-30	7.00%	
						Transition	125494.299	531477.209	2665296.703	125524.299	531469.995	2665267.925	30.000						
						Straight	125524.299	531469.995	2665267.925	125530.687	531469.489	2665261.557	6.388						
4	531347.729	2665216.544	299	39	49.6	Transition	125530.687	531469.489	2665261.557	125560.687	531462.275	2665232.779	30.000		Right	30	30	7.00%	
						Arc	125560.687	531462.275	2665232.779	125574.957	531451.968	2665223.106	14.270						
						Transition	125574.957	531451.968	2665223.106	125604.957	531422.790	2665217.732	30.000						
5	531310.995	2665149.606	47	28	31.2	Straight	125604.957	531422.790	2665217.732	125640.784	531386.968	2665217.165	35.827		Left	30	-50	7.00%	
						Transition	125640.784	531386.968	2665217.165	125660.784	531367.071	2665215.520	20.000						
						Arc	125660.784	531367.071	2665215.520	125693.438	531339.598	2665198.964	32.654						
6	531232.183	2665130.295	263	34	45.1	Transition	125693.438	531339.598	2665198.964	125713.438	531328.849	2665182.140	20.000		Left	30	-50	7.00%	
						Straight	125713.438	531328.849	2665182.140	125718.428	531326.448	2665177.765	4.990						
						Transition	125718.428	531326.448	2665177.765	125738.428	531315.699	2665160.942	20.000						
7	531265.054	2665040.899	111	37	43.6	Arc	125738.428	531315.699	2665160.942	125759.858	531298.829	2665147.994	21.430		Right	30	50	7.00%	
						Transition	125759.858	531298.829	2665147.994	125779.858	531279.797	2665141.962	20.000						
						Straight	125779.858	531279.797	2665141.962	125787.358	531272.513	2665140.177	7.500						
8	531157.507	2665043.603	13	10	48.1	Transition	125787.358	531272.513	2665140.177	125812.358	531249.805	2665130.399	25.000		Left	25	25	7.00%	
						Arc	125812.358	531249.805	2665130.399	125829.430	531241.940	2665115.620	17.072						
						Transition	125829.430	531241.940	2665115.620	125854.430	531246.513	2665091.323	25.000						
9	531085.100	2665062.491	270	59	5.9	Straight	125854.430	531246.513	2665091.323	125									

H/P / 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)							
20	530925.527	2665210.273	284	13	32.2	Arc	126947.430	530914.510	2665211.387	126957.105	530919.551	2665219.596	9.675			Left	30	-30	7.00%
						Transition	126957.105	530919.551	2665219.596	126987.105	530921.205	2665249.217	30.000						
						Straight	126987.105	530921.205	2665249.217	127034.510	530915.977	2665296.332	47.405	353	40 4.7				
						Transition	127034.510	530915.977	2665296.332	127054.510	530912.459	2665315.984	20.000						
21	530911.941	2665392.706	304	16	14.7	Arc	127054.510	530912.459	2665315.984	127083.142	530896.585	2665339.345	28.632			Left	30	-50	7.00%
						Transition	127083.142	530896.585	2665339.345	127103.142	530879.610	2665349.853	20.000						
						Straight	127103.142	530879.610	2665349.853	127170.579	530820.033	2665381.448	67.437	297	56 19.4				
						Transition	127170.579	530820.033	2665381.448	127195.579	530799.334	2665395.283	25.000						
22	530790.345	2665397.193	53	50	49.4	Arc	127195.579	530799.334	2665395.283	127209.111	530791.581	2665406.299	13.532			Right	30	41	7.00%
						Transition	127209.111	530791.581	2665406.299	127234.111	530785.544	2665430.453	25.000						
						Straight	127234.111	530785.544	2665430.453	127238.532	530784.912	2665434.828	4.421	351	47 8.8				
						Transition	127238.532	530784.912	2665434.828	127258.532	530780.750	2665454.354	20.000						
23	530781.496	2665458.493	329	4	27.5	Arc	127258.532	530780.750	2665454.354	127265.520	530777.946	2665460.748	6.988			Left	30	-50	7.00%
						Transition	127265.520	530777.946	2665460.748	127285.520	530766.404	2665477.038	20.000						
						Straight	127285.520	530766.404	2665477.038	127301.619	530756.241	2665489.525	16.099	320	51 36.3				
						Transition	127301.619	530756.241	2665489.525	127321.619	530741.559	2665502.835	20.000						
24	530854.145	2665369.226	164	18	4.1	Arc	127321.619	530741.559	2665502.835	127376.762	530713.046	2665472.269	55.143			Left	20	-22	7.00%
						Transition	127376.762	530713.046	2665472.269	127396.762	530727.343	2665458.547	20.000						
						Straight	127396.762	530727.343	2665458.547	127407.673	530736.262	2665452.263	10.911	125	9 40.4				
						Transition	127407.673	530736.262	2665452.263	127432.673	530735.058	2665435.936	25.000						
25	530759.434	2665435.941	41	45	39	Arc	127432.673	530735.058	2665435.936	127437.557	530757.784	2665431.888	4.884			Right	30	41	7.00%
						Transition	127437.557	530757.784	2665431.888	127462.557	530765.847	2665408.333	25						

APPROVED

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DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd.

P. M.
Managing Director



Rev.	Date	Description	CLIENT:  MIDCL 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-2ND FLOOR, R/K TOWER, SECTOR-4 VASHALI, GHAZIABAD-201010.	SAFETY CONSULTANT:  SUVADRA CONSULTANTS An ISO 9001:2008 Certified Safety & Health & Environment Consultancy Services for India & Overseas since 1997 PP-97, Tenkapuri Road, BBSR-751004, 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. 6018 A 641, 3RD Megapole, Sector 48, Gurgaon, Haryana - 122018. E-mail:- info@spspl.com Website:- www.spspl.com	PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churechandpur to Tulval section of NH 102B from Km 118.850 to Km 130.000 (Package-4A) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	<table><tr><td>DRAWN</td><td>AMIT</td></tr><tr><td>DESIGNED</td><td>NISHANT</td></tr><tr><td>CHECKED</td><td>VIPUL</td></tr><tr><td colspan="2">DATE: OCT - 2021</td></tr></table>	DRAWN	AMIT	DESIGNED	NISHANT	CHECKED	VIPUL	DATE: OCT - 2021		<table><tr><td colspan="2">TITLE: HORIZONTAL ALIGNMENT REPORT</td></tr><tr><td>SCALE: AS SHOWN</td><td>REV: R0</td></tr><tr><td colspan="2">DRG.NO: GPT/CCT/AA/HW/GEN/HOR/01</td></tr></table>	TITLE: HORIZONTAL ALIGNMENT REPORT		SCALE: AS SHOWN	REV: R0	DRG.NO: GPT/CCT/AA/HW/GEN/HOR/01	
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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	530402.745	265138.963	29	11	34.5	Straight	128706.282	530375.994	2665153.436	128713.603	530382.433	2665149.952	7.321	118 24 51.8	Right	30	50	7.00%
						Transition	128713.603	530382.433	2665149.952	128733.603	530399.321	2665139.304	20.000					
						Arc	128733.603	530399.321	2665139.304	128739.079	530403.323	2665135.571	5.476					
						Transition	128739.079	530403.323	2665135.571	128759.079	530415.117	2665119.462	20.000					
41	530429.493	265096.803	329	21	31.2	Straight	128759.079	530415.117	2665119.462	128762.138	530416.756	2665116.879	3.059	147 36 26.3	Left	30	-50	7.00%
						Transition	128762.138	530416.756	2665116.879	128782.138	530428.550	2665100.771	20.000					
						Arc	128782.138	530428.550	2665100.771	128788.878	530433.532	2665096.240	6.740					
						Transition	128788.878	530433.532	2665096.240	128808.878	530450.684	2665086.022	20.000					
42	530606.018	2665006.991	164	4	22.6	Straight	128808.878	530450.684	2665086.022	128810.589	530452.209	2665085.246	1.711	116 57 57.5	Right	20	22	7.00%
						Transition	128810.589	530452.209	2665085.246	128830.589	530468.316	2665073.701	20.000					
						Arc	128830.589	530468.316	2665073.701	128873.589	530456.439	2665039.214	43.000					
						Transition	128873.589	530456.439	2665039.214	128893.589	530436.639	2665040.034	20.000					
43	530402.615	2665046.672	308	26	57.5	Straight	128893.589	530436.639	2665040.034	128896.166	530434.110	2665040.528	2.577	281 2 20.2	Left	30	-40	7.00%
						Transition	128896.166	530434.110	2665040.528	128921.166	530409.315	2665042.730	25.000					
						Arc	128921.166	530409.315	2665042.730	128932.156	530398.721	2665039.943	10.990					
						Transition	128932.156	530398.721	2665039.943	128957.156	530378.219	2665025.827	25.000					
44	530328.215	2664983.102	12	35	16.2	Straight	128957.156	530378.219	2665025.827	129004.278	530342.393	2664985.760	47.122	229 29 17.7	Right	30	101	3.96%
						Transition	129004.278	530342.393	2664985.760	129019.278	530330.754	2664985.760	15.000					
						Arc	129019.278	530330.754	2664985.760	129026.468	530324.810	2664981.717	7.190					
						Transition	129026.468	530324.810	2664981.717	129041.468	530311.738	2664974.369	15.000					
45	530256.982	2664945.348	41	41	0.3	Straight	129041.468	530311.738	2664974.369	129074.291	530282.737	2664958.998	32.823	242 4 33.9	Right	30	50	7.00%
						Transition	129074.291	530282.737	2664958.998	129094.291	530264.513	2664950.844	20.000					
						Arc	129094.291	530264.513	2664950.844	129110.666	530248.335	2664948.834	16.375					
						Transition	129110.666	530248.335	2664948.834	129130.666	530228.670	2664952.281	20.000					
46	530197.768	2664959.848	318	50	1.8	Straight	129130.666	530228.670	2664952.281	129133.593	530225.828	2664952.977	2.927	283 45 34.2	Left	30	-50	7.00%
						Transition	129133.593	530225.828	2664952.977	129153.593	530206.163	2664956.424	20.000					
						Arc	129153.593	530206.163	2664956.424	129169.517	530190.418	2664954.539	15.924					
						Transition	129169.517	530190.418	2664954.539	129189.517	530172.122	2664946.550	20.000					
47	530109.812	2664914.243	260	40	15.7	Straight	129189.517	530172.122	2664946.550	129208.039	530155.678	2664936.025	18.522	242 35 36.1	Left	30	-30	7.00%
						Transition	129208.039	530155.678	2664936.025	129238.039	530131.964	2664920.197	30.000					
						Arc	129238.039	530131.964	2664920.197	129260.048	530127.150	2664899.224	22.000					
						Transition	129260.048	530127.150	2664899.224	129290.048	530140.714	2664872.838	30.000					
48	530177.598	2664823.419	336	26	22.6	Straight	129290.048	530104.714	2664872.838	129329.590	530164.365	2664841.149	39.542	143 15 51.8	Left	30	-70	5.71%
						Transition	129329.590	530164.365	2664841.149	129344.590	530173.756	2664829.462	15.000					
						Arc	129344.590	530173.756	2664829.462	129358.375	530184.066	2664820.346	13.785					
						Transition	129358.375	530184.066	2664820.346	129373.375	530196.814	2664812.456	15.000					
49	530226.206	2664795.689	28	3	32.8	Straight	129373.375	530196.814	2664812.456	129382.191	530204.472	2664808.088	8.816	119 42 14.4	Right	30	70	5.71%
						Transition	129382.191	530204.472	2664808.088	129397.191	530217.221	2664800.199	15.000					
						Arc	129397.191	530217.221	2664800.199	129416.471	530231.108	2664786.912	19.280					
						Transition	129416.471	530231.108	2664786.912	129431.471	530239.553	2664774.524	15.000					
50	530269.545	2664726.966	298	10	21.5	Straight	129431.471	530239.553	2664774.524	129454.115	530251.632	2664755.371	22.644	147 45 47.2	Left	30	-30	7.00%
						Transition	129454.115	530251.632	2664755.371	129484.115	530271.393	2664733.243	30.000					
						Arc	129484.115	530271.393	2664733.243	129486.487	530273.509	2664732.171	2.372					
						Transition	129486.487	530273.509	2664732.171	129516.487	530303.043	2664729.346	30.000					
51	530373.593	2664734.359	104	6	5.5	Straight	129516.487	530303.043	2664729.346	129541.438	530327.931	2664731.115	24.951	85 56 8.7	Right	25	25	7.00%
						Transition	129541.438	530327.931	2664731.115	129566.438	530352.542	2664728.760	25.000					
						Arc	129566.438	530352.542	2664728.760	129586.861	530365.834	2664714.005	20.423					
						Transition	129586.861	530365.834	2664714.005	129613.840	530365.270	2664689.282	25.000					
52	530357.754	2664644.872	275	45	43.7	Straight	129613.840	530365.270	2664689.282	129613.840	530365.270	2664689.282	1.979	190 2 14.2	Left	30	-30	7.00%
						Transition	129613.840	530365.270	2664689.282	129648.840	530365.006	2664657.666	30.000					
						Arc	129648.840	530365.006	2664657.666	129657.947	530372.430	2664645.824	14.107					
						Transition	129657.947	530372.430	2664645.824	129687.947	530399.246	2664633.131	30.000					
53	530449.880	2664618.804	50	19	24.3	Straight	129687.947	530399.246	2664633.131	129706.939	530417.520	2664627.961	18.992	105 47 57.9	Right	30	50	7.00%
						Transition	129706.939	530417.520	2664627.961	129726.939	530436.326	2664621.258	20.000					
						Arc	129726.939	530436.326	2664621.258	129750.854	530454.214	2664605.729	23.915					
						Transition	129750.854	530454.214	2664605.729	129770.854	530463.493	2664588.052	20.000					
54	530484.409	2664540.801	347	19	30.8	Straight	129770.854	530463.493	2664588.052	129780.595	530467.436	2664579.145	9.741	156 7 22.2	Left	30	-310	3.58%
						Transition	129780.595	530467.436	2664579.145	129795.595	530473.618	2664565.478	15.000					
						Arc	129795.595	530473.618	2664565.478	129849.172	530500.546	2664519.237	53.577					
						Transition	129849.172	530500.546	2664519.237	129864.172	530509.382	2664507.116	15.000					
55	530547.044	2664456.315	277	30	5.3	Straight	129864.172	530509.382	2664507.116	129885.141	530521.869	2664490.272	20.969	143 26 52.9	Left	30	-30	7.00%
						Transition	129885.141	530521.869	2664490.272	129915.141	530543.240	2664469.693	30.000					
						Arc	129915.141	530543.240	2664469.693	129928.337	530556.034	2664466.927	13.196					
						Transition	129928.337	530556.034	2664466.927	129958.337	530583.997	2664476.841	30.000					
56	530641.704	2664508.895	335	16	56.9	Straight	129958.337	530583.997	2664476.841	130001.484	530621.716	2664497.793	43.147	60 56 58.2	Left	30	-70	5.71%
						Transition	130001.484	530621.716	2664497.793	130016.484	530634.554	2664505.536	15.000					
						Arc	130016.484	530634.554	2664505.536	130031.683	530645.931	2664515.569	15.199					
						Transition	130031.683	530645.931	2664515.569	130046.683	530655.218	2664527.338	15.000					
57	530705.823	2664596.400	343	52	39	Straight	130046.683	530655.218	2664527.338	130110.484	530692.928	2664578.802	63.801	36 13 55.1	Left	30	-101	3.96%
						Transition	130110.484	530692.928	2664578.802	130125.484	530701.490	2664591.114	15.000					
						Arc	130125.484	530701.490	2664591.114	130138.905	530707.821	2664602.936	13.421					
						Transition	130138.905	530707.821	2664602.936	130153.905	530713.324	2664616.887	15.000					
58	530657.216	2664463.642	194	35	14.9	Straight	130153.905	530713.324	2664616.887	130174.232	530720.313	2664635.974	20.237	20 6 34.1	Right	20	24	7.00%
						Transition	130174.232	530720.313	2664635.974	130199.232	530732.675	2664657.358	25.000					
						Arc	130199.232	530732.675	2664657.358	130225.740	530772.032	2664636.955	56.508					
						Transition	130225.740	530772.032	2664636.955	130280.740	530761.682	2664614.528	25.000					

VERTICAL ALIGNMENT REPORT

Sl. No.	Vertical Intersection Points			Element	Vertical Tangent Points					Radius	M Value	K Value	Length of Element
	Chainage (m)	Level (m)	%Grade Diff.		Start Chainage (m)	Level (m)	End Chainage (m)	Level (m)	Grade (%)				
1				Grade	125358.397	760.371	125360.397	760.433	3.093				2.000
2	125390.397	761.361	-4.866	Hog Curve	125360.397	760.433	125420.397	760.829		-1233	-8.109	12.331	60.000
3				Grade	125420.397	760.829	125512.397	759.198	-1.773				92.000
4	125542.397	758.666	-0.404	Hog Curve	125512.397	759.198	125572.397	758.013		-14836	-0.674	148.359	60.000
5				Grade	125572.397	758.013	125694.155	755.362	-2.177				121.758
6	125744.155	754.274	8.177	Sag Curve	125694.155	755.362	125794.155	757.274		1223	8.177	12.229	100.000
7				Grade	125794.155	757.274	125847.878	760.497	6.000				53.723
8	125907.878	764.097	-2.705	Hog Curve	125847.878	760.497	125967.878	766.075		-4437	-2.254	44.370	120.000
9				Grade	125967.878	766.075	126259.433	775.683	3.295				291.555
10	126309.433	777.330	-6.945	Hog Curve	126259.433	775.683	126359.433	775.505		-1440	-6.945	14.398	100.000
11				Grade	126359.433	775.505	126465.112	771.648	-3.650				105.679
12	126525.112	769.458	5.422	Sag Curve	126465.112	771.648	126585.112	770.522		2213	4.518	22.133	120.000
13				Grade	126585.112	770.522	126683.493	772.265	1.772				98.381
14	126733.493	773.151	2.422	Sag Curve	126683.493	772.265	126783.493	775.247		4130	2.422	41.296	100.000
15				Grade	126783.493	775.247	126853.201	778.170	4.193				69.708
16	126903.201	780.267	0.695	Sag Curve	126853.201	778.170	126953.201	782.711		14392	0.695	143.918	100.000
17				Grade	126953.201	782.711	126976.332	783.842	4.888				23.131
18	127026.332	786.286	2.080	Sag Curve	126976.332	783.842	127076.332	789.770		4808	2.080	48.077	100.000
19				Grade	127076.332	789.770	127345.448	808.522	6.968				269.116
20	127375.448	810.613	-8.674	Hog Curve	127345.448	808.522	127405.448	810.101		-692	-14.457	6.917	60.000
21				Grade	127405.448	810.101	127455.787	809.242	-1.706				50.339
22	127530.788	807.963	6.770	Sag Curve	127455.787	809.242	127605.787	811.761		2216	4.513	22.156	150.000
23				Grade	127605.787	811.761	128269.852	845.390	5.064				664.065
24	128319.852	847.922	-1.859	Hog Curve	128269.852	845.390	128369.852	849.525		-5378	-1.859	53.779	100.000
25				Grade	128369.852	849.525	128421.273	851.172	3.205				51.421
26	128471.273	852.775	1.537	Sag Curve	128421.273	851.172	128521.273	855.145		6507	1.537	65.075	100.000
27				Grade	128521.273	855.145	128862.511	871.325	4.741				341.238
28	128912.511	873.696	0.600	Sag Curve	128862.511	871.325	128962.511	876.366		16674	0.600	166.736	100.000
29				Grade	128962.511	876.366	129097.620	883.583	5.341				135.109
30	129147.620	886.253	2.221	Sag Curve	129097.620	883.583	129197.620	890.034		4503	2.221	45.031	100.000
31				Grade	129197.620	890.034	129341.320	900.900	7.562				143.700
32	129371.320	903.169	-3.326	Hog Curve	129341.320	900.900	129401.320	904.440		-1804	-5.544	18.039	60.000
33				Grade	129401.320	904.440	129623.599	913.855	4.236				222.279
34	129673.599	915.973	-3.755	Hog Curve	129623.599	913.855	129723.599	916.213		-2663	-3.755	26.628	100.000
35				Grade	129723.599	916.213	129910.588	917.111	0.480				186.989
36	129985.588	917.471	6.491	Sag Curve	129910.588	917.111	130060.588	922.700		2311	4.327	23.109	150.000
37				Grade	130060.588	922.700	130168.114	930.196	6.971				107.526
38	130218.114	933.681	-3.602	Hog Curve	130168.114	930.196	130268.114	935.366		-2776	-3.602	27.761	100.000
39				Grade	130268.114	935.366	130433.137	940.926	3.369				165.023
40	130483.137	942.610	0.782	Sag Curve	130433.137	940.926	130533.137	944.686		12791	0.782	127.908	100.000
41				Grade	130533.137	944.686	130588.880	947.000	4.151				55.743
42	130638.880	949.075	0.902	Sag Curve	130588.880	947.000	130688.880	951.602		11082	0.902	110.817	100.000
43				Grade	130688.880	951.602	130750.828	954.732	5.053				61.948
44	130790.828	956.753	-9.782	Hog Curve	130750.828	954.732	130830.828	954.862		-818	-12.228	8.178	80.000
45				Grade	130830.828	954.862	130910.895	951.076	-4.729				80.067
46	130940.895	949.657	7.321	Sag Curve	130910.895	951.076	130970.895	950.435		820	12.202	8.195	60.000
47				Grade	130970.895	950.435	131061.751	952.790	2.593				90.856
48	131091.751	953.568	-1.675	Hog Curve	131061.751	952.790	131121.751	953.843		-3581	-2.792	35.812	60.000
49				Grade	131121.751	953.843	131323.072	955.690	0.917				201.321
50	131383.072	956.240	-8.917	Hog Curve	131323.072	955.690	131443.072	951.440		-1346	-7.431	13.457	120.000
51				Grade	131443.072	951.440	131750.403	926.853	-8.000				307.331
52	131800.403	922.853	4.616	Sag Curve	131750.403	926.853	131850.403	921.161		2166	4.616	21.664	100.000
53				Grade	131850.403	921.161	131876.403	920.282	-3.384				26.000
54	131951.403	917.744	-4.538	Hog Curve	131876.403	920.282	132026.403	911.802		-3306	-3.025	33.056	150.000
55				Grade	132026.403	911.802	132178.650	899.741	-7.922				152.247
56	132228.650	895.781	2.561	Sag Curve	132178.650	899.741	132278.650	893.100		3905	2.561	39.050	100.000
57				Grade	132278.650	893.100	132465.015	883.109	-5.361				186.365

APPROVED



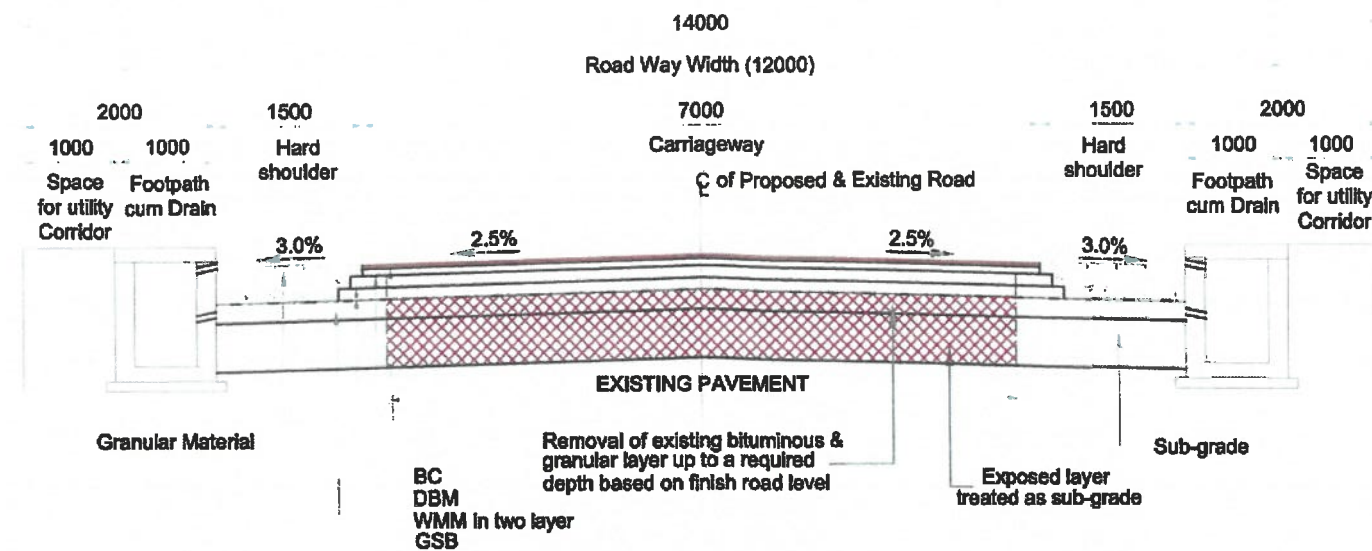
Shambhavi Techno Solutions Pvt. Ltd.
Managing Director



Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROJECT CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	AMT:	TITLE: VERTICAL ALIGNMENT REPORT	REV: R0
				 JC - 25, Sector - III, Salt Lake, Kolkata - 700098.	 M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES C-6, 2ND FLOOR, RJK TOWER, SECTOR-4, VASNAHALL, GHANASHYAM-201010.	 PP-87, Tankapani Road, BBSR-18, Odisha	 SHAMBHAVI TECHNO SOLUTIONS PVT.LTD. E-82, Rajesh Kumar Path, S.K.Puri, Boring Road, Patna-800001	 SPS Technocrats Pvt. Ltd. 8038 & 641, 2ND Megapalis, Sector 48, Gurgaon, Haryana - 122015. E-mail:- info@spspl.com Website:- www.spspl.com	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuval section of NH 102B from Km 118.850 to Km 130.000 (Package-4A) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	DRAWN: NISHANT DESIGNED: NISHANT CHECKED: VIPUL	DATE: OCT - 2021	SCALE: AS SHOWN DRG. NO: GPT/CCT/4A/NW/GEN/VER/01	

TYPICAL CROSS SECTION

APPROVED



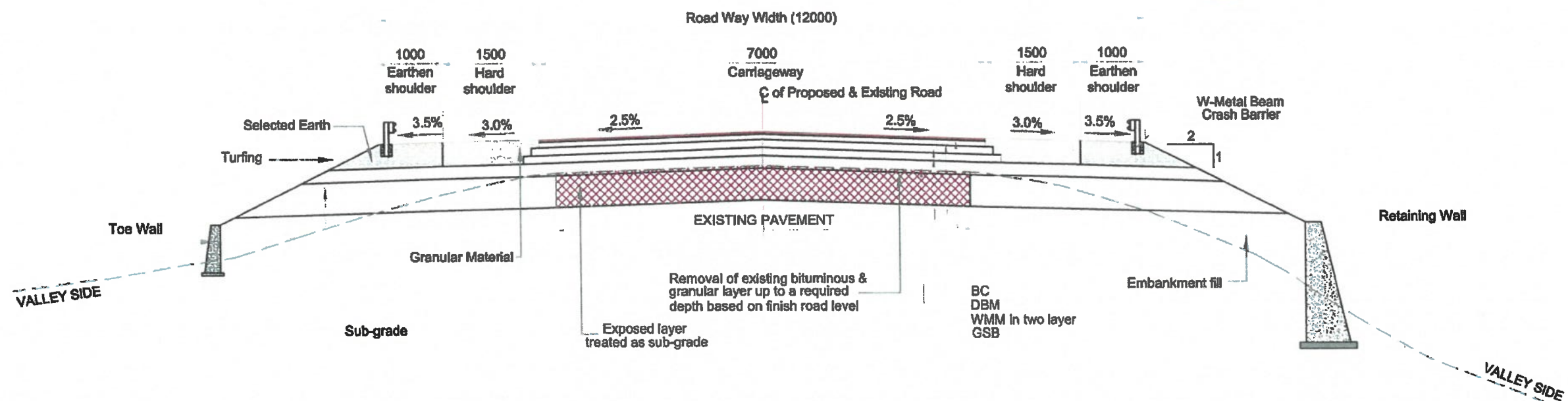
**TCS-1 :- TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY WITH HARD SHOULDER IN BUILT UP AREA WITH BOTH SIDE FOOTPATH CUM RCC RECTANGULAR DRAIN
(RECONSTRUCTION OF EXISTING PAVEMENT)**



Shambhavi Techno Solutions Pvt. Ltd.
Managing Director



APPROVED

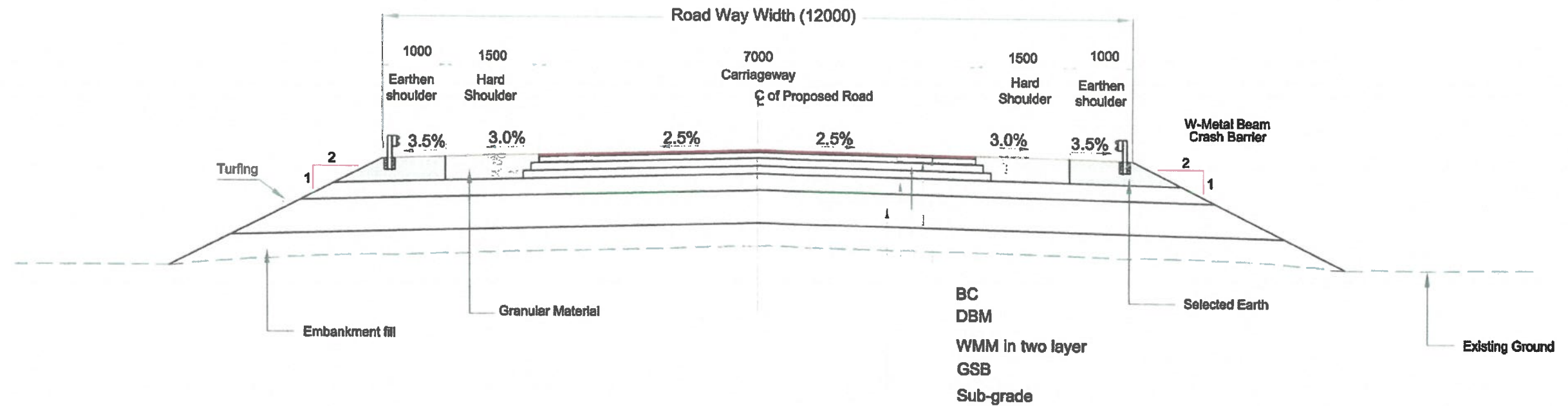


**TCS-2 :- TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY IN RURAL AREA WITH HARD SHOULDER IN RURAL AREA WITH ONE SIDE TOE WALL AND OPPOSITE SIDE RETAINING WALL
(RECONSTRUCTION OF EXISTING PAVEMENT)**

NOTES:

1. PAVEMENT THICKNESS AS PER PAVEMENT DESIGN REPORT.

Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROJECT CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	AMT:	TITLE:	REV:
				 JC-25, Sector - III, Salt Lake, Kolkata - 700098.	 IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES C-4 2ND FLOOR, R.K.TOWER, SECTOR-4, VAIDHARAJ, GHANASHYAM, Bhubaneswar-751010.	 PP-97, Tankapuri Road, BBSR-18 Odisha	 E-82, Rajesh Kumar Path, S.K.Puri, Boring Road, Patna-800001	 W-3B & 4A, 3RD Floor, Sector-4B, Gurgaon, Haryana - 122018. E-mail: info@spstechnocrats.com Website: www.spstechnocrats.com	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuvel section of NH 102B from Km 110.850 to Km 120.000 (Package-4A) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	DESIGNED: NISHANT CHECKED: VIPUL	DATE: OCT - 2021	SCALE: AS SHOWN DRS. NO: GPT/CCT/4A/HW/GEN/ TCS/01	REV: R0



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

DESIGN DIRECTOR

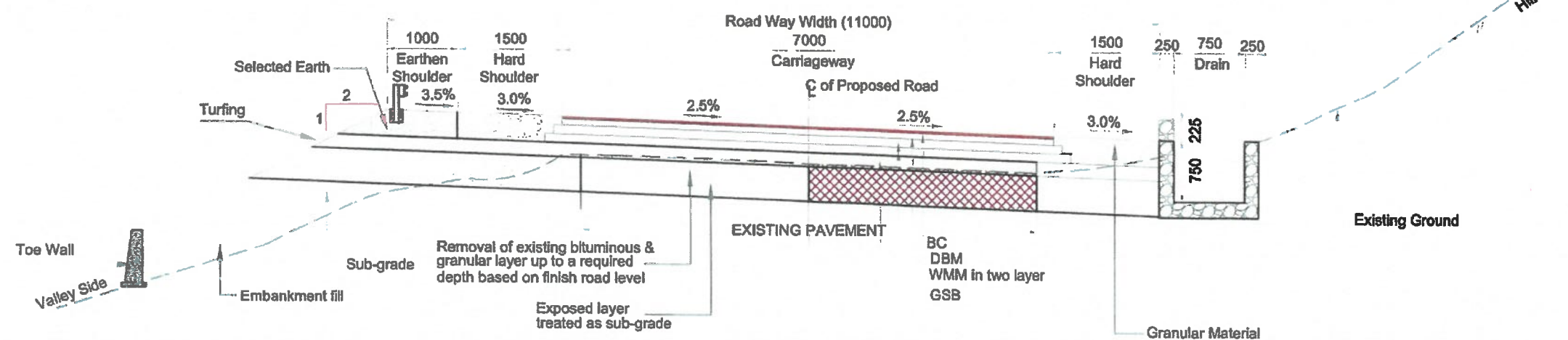
Shambhavi Techno Solutions Pvt. Ltd.
Managing Director

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

GPT Infraprojects Limited
Imphal Branch
795008

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

APPROVED

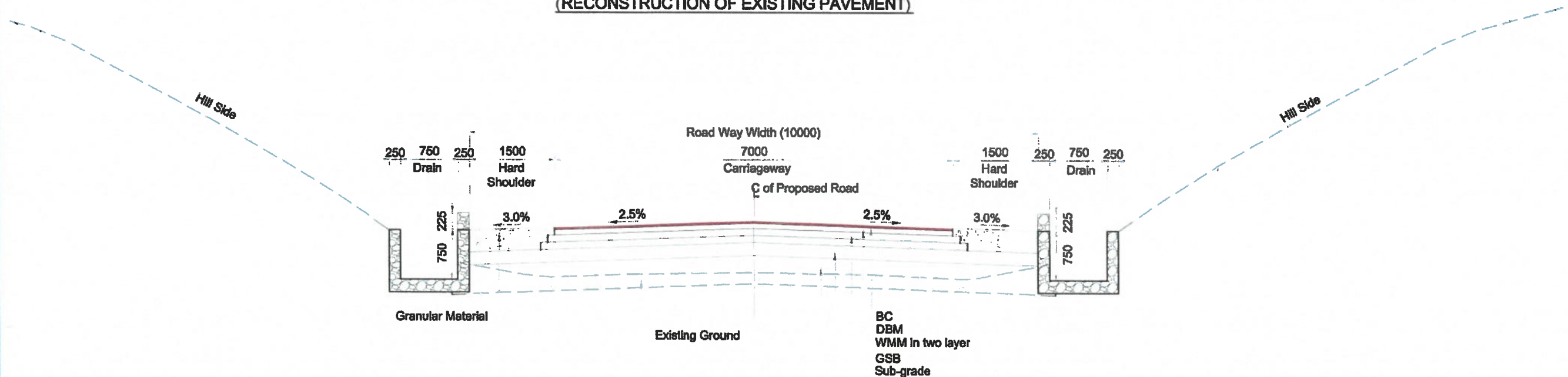
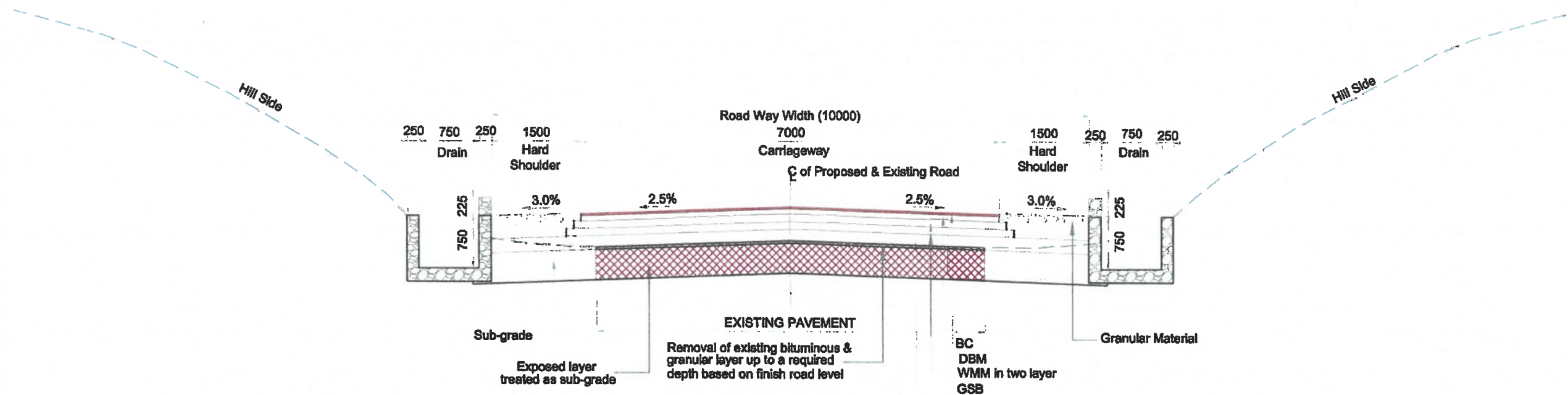


**TCS-5 :-TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY WITH HARD SHOULDER IN RURAL AREA WITH TOE WALL ON VALLEY SIDE & OPEN RECTANGULAR DRAIN ON HILL SIDE
(RECONSTRUCTION OF EXISTING PAVEMENT)**

NOTES:

- PAVEMENT THICKNESS AS PER PAVEMENT DESIGN REPORT.

Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROJECT CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN	AMT	TITLE:	SCALE:	REV:
			 BUILDING INFRASTRUCTURE - BUILDING THE NATION	 JC - 25, Sector - III, Salt Lake, Kolkata - 700098.	 M/S CHAITANYA PROJECTS CONSULTANCY PVT. LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES C-5, 2ND FLOOR, RK TOWER, SECTOR-4, VASAHALLI, GHANASAND-751010.	 SUVADRA CONSULTANTS PP-97, Tankapani Road, BBSR-18 Odisha	 SHAMBHAVI TECHNO SOLUTIONS PVT. LTD. E-82, Rajesh Kumar Path, S.K. Puri, Boring Road, Patna-800001	 SPS Technocrats Pvt. Ltd. 603 & 641, 2ND Floor, Sector 6, Gurgaon, Haryana - 122018. E-mail: info@spstec.com Website: www.spstec.com	PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churnchandpur to Tulai section of NH 162B from Km 116.850 to Km 130.000 (Package-4A) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	DESIGNED CHECKED	NISHANT VIPUL	TITLE: TYPICAL CROSS SECTION SCALE: AS SHOWN DATE: OCT - 2021 DRG. NO.: GPT/CCT/4A/HW/GEN/ TCS/03	R0	



NOTES:

1. PAVEMENT THICKNESS AS PER PAVEMENT DESIGN REPORT.

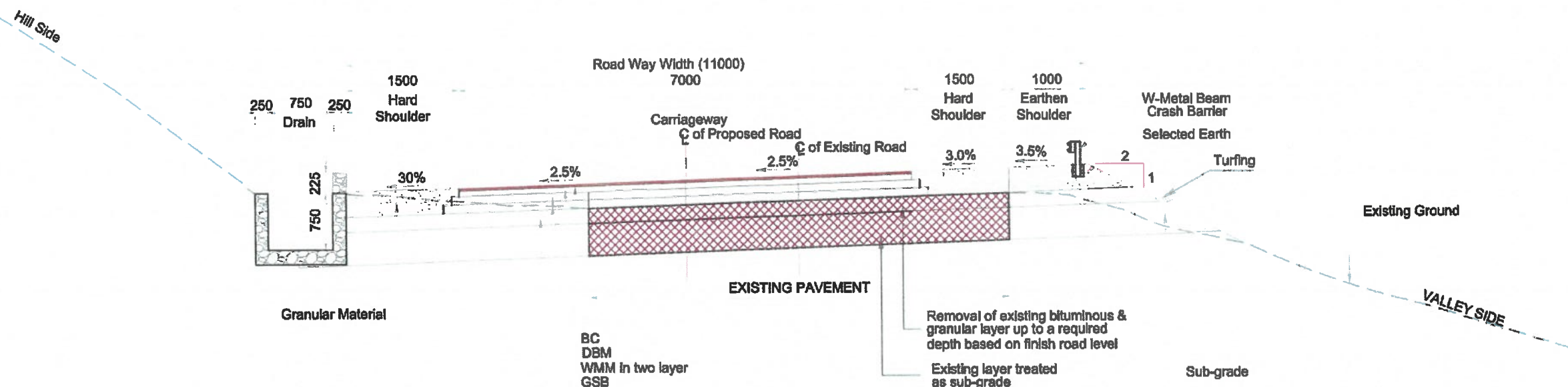
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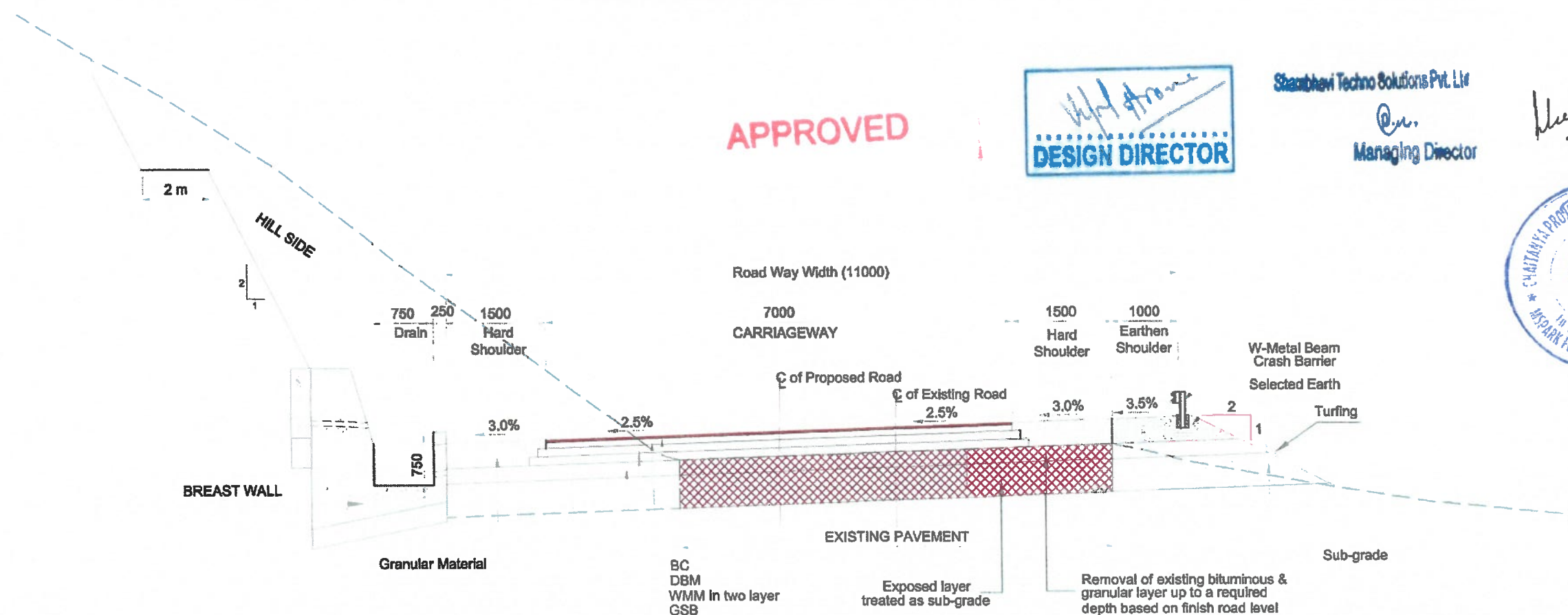
Shambhavi Techno Solutions Pvt. Ltd.
Managing Director



Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROOF CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	AMT:	TITLE:	SCALE:	REV:
			M/S CHAITANYA PROJECTS CONSULTANCY PVT. LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES	GPT	M/S CHAITANYA PROJECTS CONSULTANCY PVT. LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES	SUVADRA CONSULTANTS	SHAMBHAVI TECHNO SOLUTIONS PVT. LTD.	SPS Technocrats Pvt. Ltd.	Widening to 2 (Two) Lane with Hard shoulder of Churechandpur to Tuvel section of NH 102B from Km 118.850 to Km 130.000 (Package-4A) in the State of Manipal on Engineering, Procurement & Construction (EPC) mode.	DESIGNED: NISHANT	CHECKED: VIPUL	TITLE: TYPICAL CROSS SECTION	SCALE: AS SHOWN	REV: R0
			JC - 25, Sector - III, Salt Lake, Kolkata - 700098.		PP-97, Tankapani Road, BBSR-18 Odisha		E-82, Rajesh Kumar Path, S.K. Puri, Boring Road, Patna-800001			DATE: OCT - 2021		DRG. NO: GPT/CCT/4A/HW/GEN/ TCS/04		



TCS-7 : TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY WITH HARD SHOULDER IN RURAL AREA WITH OPEN RECTANGULAR DRAIN ON HILL SIDE AND EARTHEN SHOULDER ON VALLEY SIDE
(RECONSTRUCTION OF EXISTING PAVEMENT)

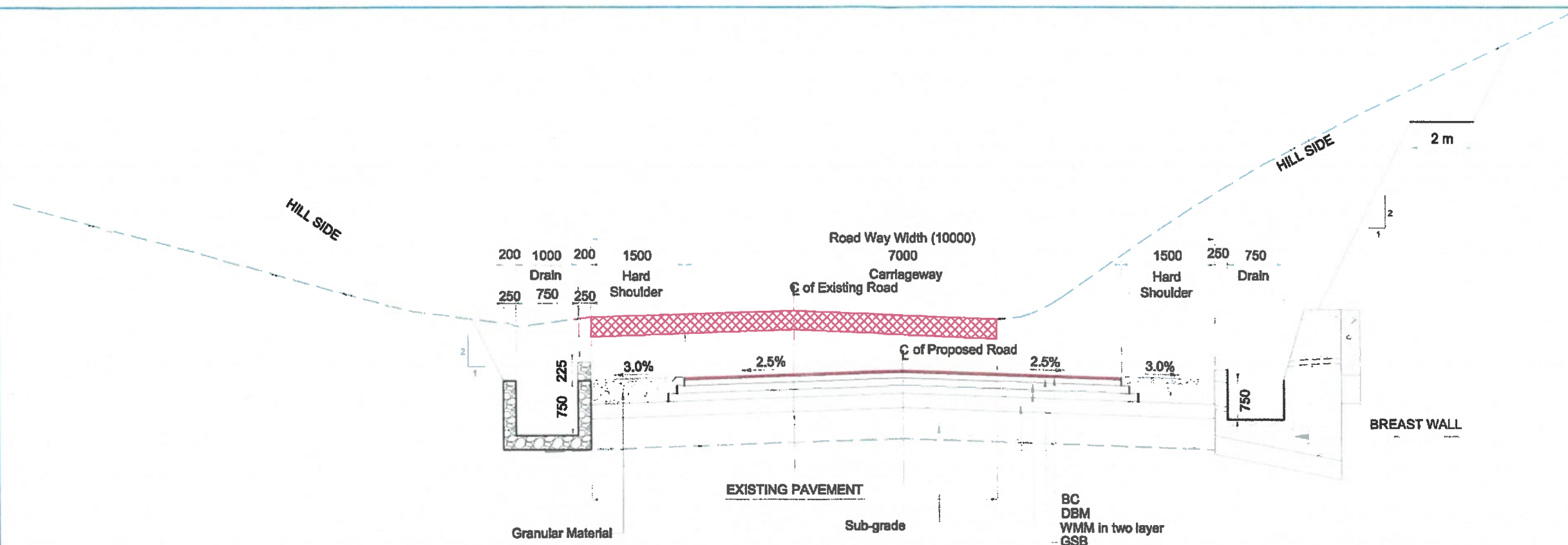


TCS-8 :- TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY WITH HARD SHOILDER IN RURAL AREA WITH BREAST WALL ON HILL SIDE
(RECONSTRUCTION OF EXISTING PAVEMENT)

NOTES:

- 1. PAVEMENT THICKNESS AS PER PAVEMENT DESIGN REPORT.**

Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROOF CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	<table><tr><td>DRAWN</td><td>ANIT</td></tr><tr><td>DESIGNED</td><td>NIBMANT</td></tr><tr><td>CHECKED</td><td>VIPUL</td></tr><tr><td colspan="2">DATE: OCT - 2021</td></tr></table>	DRAWN	ANIT	DESIGNED	NIBMANT	CHECKED	VIPUL	DATE: OCT - 2021		<table><tr><td>TITLE:</td><td>TYPICAL CROSS SECTION</td></tr><tr><td>SCALE:</td><td>AS SHOWN</td></tr><tr><td>DWG. NO:</td><td>GPT/ECT/4A/HW/GEN/ TCS/05</td></tr></table>	TITLE:	TYPICAL CROSS SECTION	SCALE:	AS SHOWN	DWG. NO:	GPT/ECT/4A/HW/GEN/ TCS/05	REV
DRAWN	ANIT																									
DESIGNED	NIBMANT																									
CHECKED	VIPUL																									
DATE: OCT - 2021																										
TITLE:	TYPICAL CROSS SECTION																									
SCALE:	AS SHOWN																									
DWG. NO:	GPT/ECT/4A/HW/GEN/ TCS/05																									
									Widening to 2 (Two) Lane with Hard shoulder of Churahandpur to Tuvisi section of NH 1023 from Km 118.650 to Km 130.000 (Package-4A) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.		R															
			MIDCL BUILDING INFRASTRUCTURE - BUILDING THE NATION	GPT JC - 25, Sector - III, Salt Lake, Kolkata - 700098.	M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES C-2ND FLOOR, AKTOWER, SECTOR-4, MIDC-17, CHURAHANDPUR-201010.	SUVA DRA CONSULTANTS P-87, Tankapuri Road, P.S.-18, Odisha	SHAMBHAVI TECHNO SOLUTIONS PVT.LTD. E-82, Rajesh Kumar Path, S.K.Puri, Boring Road, Patna-400001	SPS Technocrats Pvt. Ltd. A/10 & 44, NH-2 Nagpada, Sector 4, Gurgaon, Haryana - 122003. E-mail: info@spsl.com Website: www.spsl.com																		

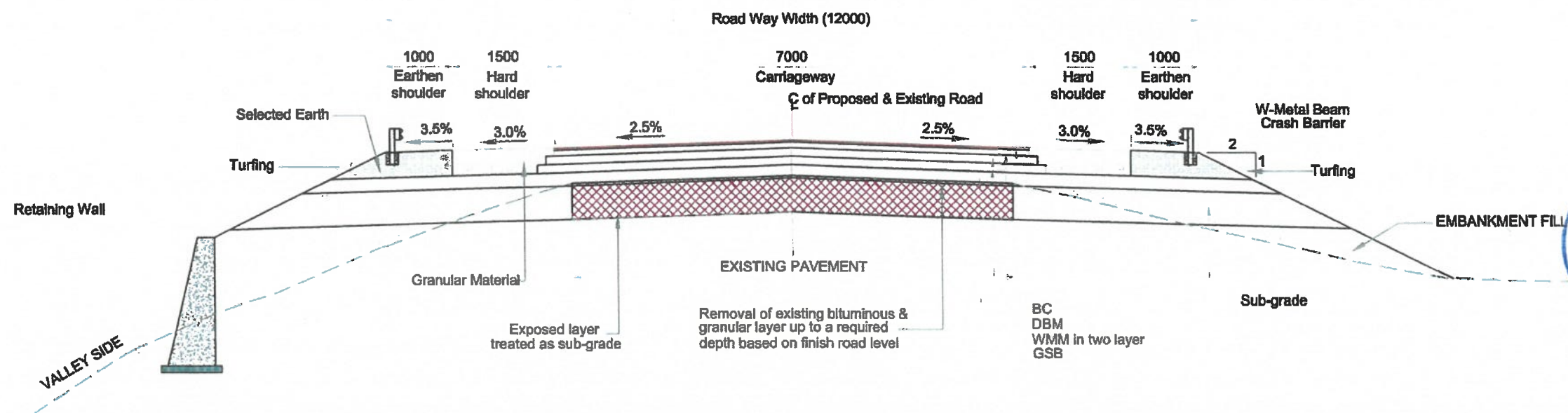


TCS-9 :- TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY WITH HARD SHOULDER AT CUTTING SECTION IN RURAL AREA WITH BREAST WALL ON HILL SIDE
(RECONSTRUCTION OF EXISTING PAVEMENT)

APPROVED



Shambhavi Techno Solutions Pvt. Ltd.
Managing Director



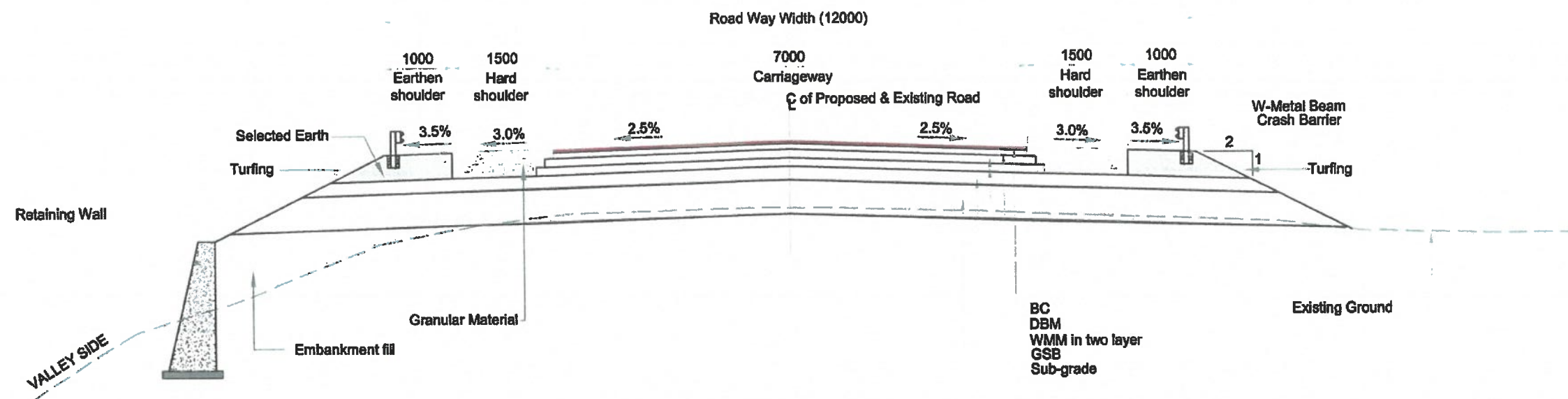
NOTES:

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)

1. PAVEMENT THICKNESS AS PER PAVEMENT DESIGN REPORT.

Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROJECT CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	AMT:	TITLE:
				 JC - 25, Sector - III, Salt Lake, Kolkata - 700093.	 IN ASSOCIATION WITH MSPARK FUTURESTICS AND ASSOCIATES C-52ND FLOOR, RJK TOWER, SECTOR-4, VASISHTH GHATA ROAD-201010.	 PP-87, Tenkapent Road, BBSR-18 Odisha	 E-52, Rajesh Kumar Path, S.J.Puri, Boring Road, Patna-800001	 B-38 & 441, 3RD Megapole, Sector 45, Gurgaon, Haryana - 122018. E-mail: info@spstpl.com Website: www.spstpl.com	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuval section of NH 102B from Km 116.850 to Km 130.000 (Package-4A) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	DRAWN: ANIT DESIGNED: NIRHANT CHECKED: VIPUL DATE: OCT - 2021	AMT: NIRHANT VIPUL	TITLE: TYPICAL CROSS SECTION SCALE: AS SHOWN ORG. NO: GPT/CCT/4A/HW/GEN/ TCS/06

REV:
R0

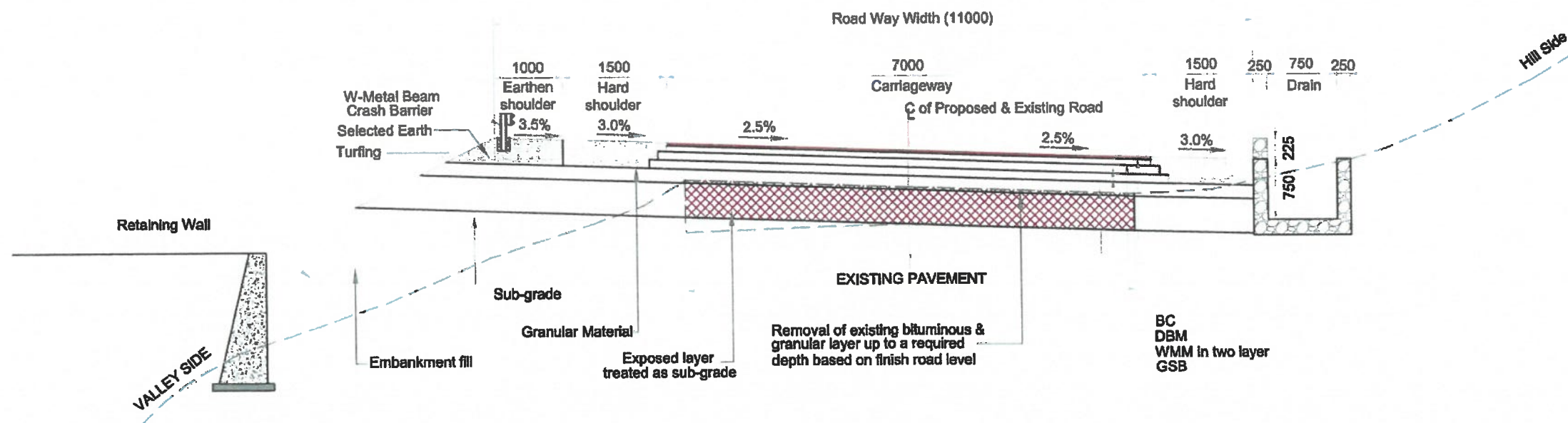
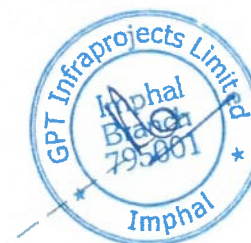


TCS-10A :-TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY WITH HARD SHOULDER AT REALIGNMENT STRETCH IN RURAL AREA WITH RETAINING WALL ON VALLEY SIDE
(NEW CONSTRUCTION)

APPROVED



Shambhavi Techno Solutions Pvt. Ltd.
Managing Director



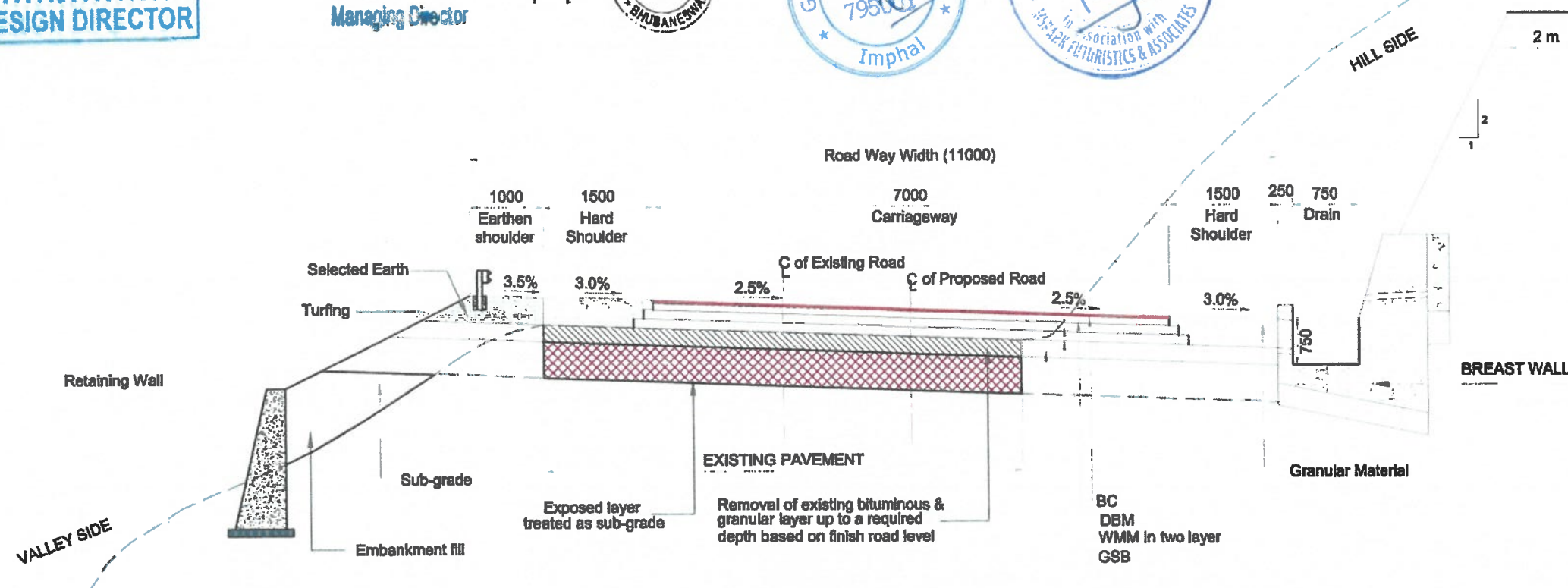
TCS-11 :-TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY WITH HARD SHOULDER IN RURAL AREA WITH RETAINING WALL ON VALLEY SIDE AND OPEN RECTANGULAR DRAIN ON HILL SIDE
(RECONSTRUCTION OF EXISTING PAVEMENT)

NOTES:

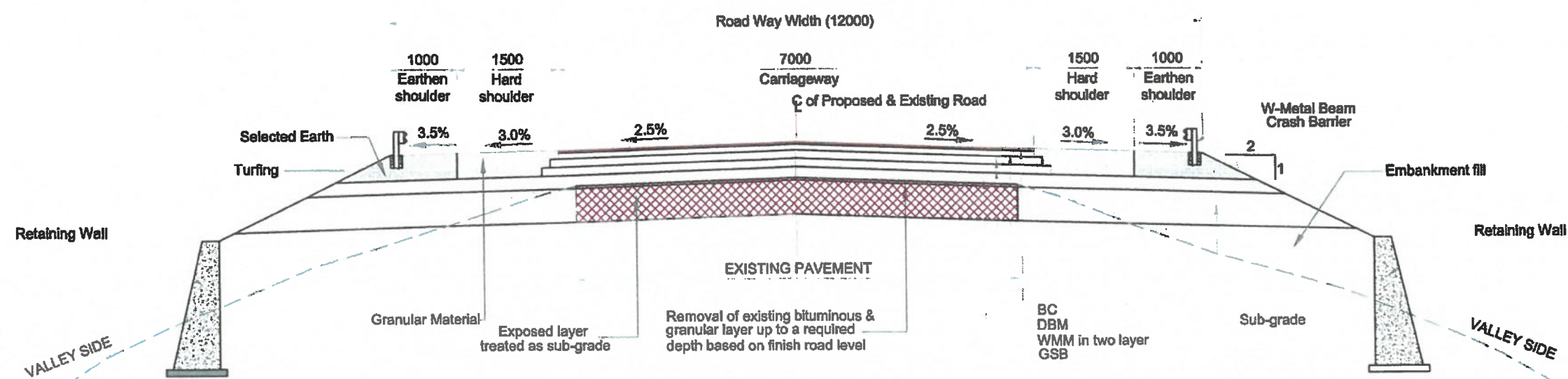
1. PAVEMENT THICKNESS AS PER PAVEMENT DESIGN REPORT.

Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROJECT CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN	AMT	TITLE: TYPICAL CROSS SECTION
			 BUILDING INFRASTRUCTURE - BUILDING THE NATION	 JC - 25, Sector - III, Salt Lake, Kolkata - 700098.	 M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES C-3, 2ND FLOOR, BIK TOWER, SECTOR-4, VAISHALI, GHAZIABAD-201010.	 PP-07, Tankapuri Road, BBSR-18, Odisha	 SHAMBHAVI TECHNO SOLUTIONS PVT.LTD. E-82, Rajesh Kumar Path, S.K.Puri, Boring Road, Patna-800001	 SPS Technocrats Pvt. Ltd. A-11 & 411, JMD Housings, Sector 46, Gurgaon, Haryana - 122016 E-mail: info@spstec.com Website: www.spstec.com	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tulval section of NH 102B from Km 118.650 to Km 130.000 (Package-4A) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	DESIGNED CHECKED	NISHANT VIPUL	SCALE: AS SHOWN
										DATE: OCT - 2021		DRG.NO: GPT/CCT/4A/HW/GEN/ TCS/07
												REV: R0

APPROVED



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)



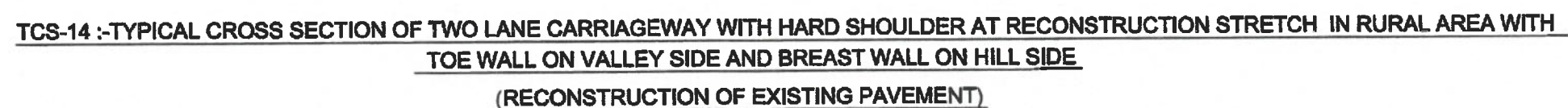
TCS-13 :-TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY WITH HARD SHOULDER IN RURAL AREA WITH BOTH SIDE RETAINING WALL ON VALLEY SIDE
(RECONSTRUCTION OF EXISTING PAVEMENT)

NOTES:

1. PAVEMENT THICKNESS AS PER PAVEMENT DESIGN REPORT.

Rev.	Date	Description	 MIDCL MAHARASHTRA INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED BUILDING INFRASTRUCTURE - BUILDING THE NATION	EPC CONTRACTOR:  GPT 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, IKA TOWER, SECTOR-A VASAHAT-I, GULSHANBAAGANAND	SAFETY CONSULTANT:  SUVA DRA CONSULTANTS FOR ALL TYPE OF CONSTRUCTION PROJECTS PP-87, Tankapani Road, PBR-18, Digha	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. B-16 & 6d, JMD Magnapole, Sector 04, Gurgaon, Haryana - 122018 E-mail: ts@spstechno.com Website: www.spspl.com	PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachendpur to Tulvi section of NH 102B from Km 118.850 to Km 130.000 (Package-4A) in the State of Manipal (Engineering, Procurement & Construction (EPC) mode.	<table><tr><td>DRAWN</td><td>AMIT</td></tr><tr><td>DESIGNED</td><td>NISHANT</td></tr><tr><td>CHECKED</td><td>VIPUL</td></tr><tr><td colspan="2">DATE: OCT - 2021</td></tr></table>	DRAWN	AMIT	DESIGNED	NISHANT	CHECKED	VIPUL	DATE: OCT - 2021		<table><tr><td>TITLE: TYPICAL CROSS SECTION</td><td>REV</td></tr><tr><td>SCALE: AS SHOWN</td><td>R</td></tr><tr><td colspan="2">ORG.No: GPT/CCT/4A/HW/GEN/ TCS/08</td></tr></table>	TITLE: TYPICAL CROSS SECTION	REV	SCALE: AS SHOWN	R	ORG.No: GPT/CCT/4A/HW/GEN/ TCS/08	
DRAWN	AMIT																								
DESIGNED	NISHANT																								
CHECKED	VIPUL																								
DATE: OCT - 2021																									
TITLE: TYPICAL CROSS SECTION	REV																								
SCALE: AS SHOWN	R																								
ORG.No: GPT/CCT/4A/HW/GEN/ TCS/08																									

APPROVED



Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROOF CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN	AMT	TITLE:	TYPICAL CROSS SECTION
			 MIDCL BUILDING INFRASTRUCTURE - BUILDING THE NATION	GPT JC - 25, Sector - III, Salt Lake, Kolkata - 700088.	 M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES P-6/2ND FLOOR, R/K TOWER, SECTOR-4 VASAHATI, GHATAKOPDA-700010.	 SUVADRA CONSULTANTS For All Work - 2000 Crores 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758,							

PLAN AND LONGITUDINAL PROFILE

APPROVED

LEGEND :

EXISTING PLAN :

EXIST. ROAD
 K-I/R : KADHA RESIDENTIAL
 K-I/C : KADHA 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
 S EDGE
 Q/W EDGE
 GEN. LINE
 C/W EDGE
 S EDGE
 ES EDGE
 TOE LINE
 HDR. TANGENT POINT
 PROW
 CULVERT
 BRIDGE

PROPOSED PROFILE :

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

CHURACHANDPUR

START OF PACKAGE-4A PART 2
 CHAINAGE = 125358.397

CULVERT NO: 01
 CHAINAGE(m): 125360
 TYPE : BOX CULVERT
 SIZE(m) : 10x20
 PROPOSAL : NEW

HP NO. 2 @ CH. 125407.18
 X(m) = 531481.181 Y(m) = 2665302.775
 R (m) : 30.000
 Lc (m) : 1.250
 Dc (deg) : 1.945
 Ts (m) : 26.648
 Td (deg) : 43.257
 Es (m) : 84.450
 Ee (m) : 7.000
 Design Speed (V) : 30 kmph

HP NO. 1 @ CH. 125407.089
 X(m) = 531559.068 Y(m) = 2665317.025
 R (m) : 25.000
 Lc (m) : 0.635
 Dc (deg) : 18.852
 Ts (m) : 17.469
 Td (deg) : 33.487
 Es (m) : 53.586
 Ee (m) : 7.000
 Design Speed (V) : 30 kmph

CHAINAGE = 125358.397m
 BOX CULVERT (m) : 10x20
 CHAINAGE = 125360
 NEW

PROPOSED ROAD
 EXISTING LEVEL AT PROP. CL

Level Datum = 743(M)

PROP. ROAD LEVELS (M)

EXIST LEVELS AT PROP. CL (M)

LEVEL DIFFERENCE (M)

HORIZONTAL SCHEMATIC (M)

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

WIDENING SCHEMATIC (M)

SUPERELEVATION SCHEMATIC (e in %)

CHAINAGE (M)

Rev.	Date	Description

CLIENT:

 BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR:

 JC - 25, Sector - III, Salt Lake,
 Kolkata - 700086.

AUTHORITY ENGINEER:

 M/S CHAITANYA PROJECTS
 CONSULTANCY PVT.LTD.
 IN ASSOCIATION WITH MSPARK
 FUTURISTICS AND ASSOCIATES
 C-62ND FLOOR, R.K TOWER,
 SECTOR-4, VASINDH, GHANABAD-201010.

SAFETY CONSULTANT:

 SUVADRA
 CONSULTANTS
 C-62ND FLOOR, R.K TOWER,
 SECTOR-4, VASINDH, GHANABAD-201010.

PROJECT CONSULTANT:

 SHAMBHAVI TECHNO
 SOLUTIONS PVT.LTD.
 E-82, Rajesh Kumar Path,
 S.K.Puri, Boring Road,
 Patna-800001

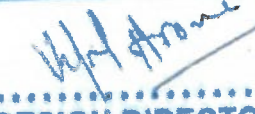
DESIGN CONSULTANT:

 SPS Technocrats Pvt. Ltd.
 803 & 804, 2ND Megapole, Sector 45,
 Churachandpur, Bypass - 781015.
 E-mail: info@spstpl.com
 Website: www.spstpl.com

PROJECT:
 Widening to 2 (Two) Lane with Hard
 shoulder of Churachandpur to Tuivai section
 of NH 102B from Km 118.850 to Km 130.000
 (Package-4A) in the State of Manipur on
 Engineering, Procurement & Construction
 (EPC) mode.

DRAWN AMIT
 DESIGNED NISHANT
 CHECKED VIPUL
 DATE: OCT - 2021

TITLE: Plan & Longitudinal Profile (Realignment)
 (From Km 125+358.397 to Km 125+500)
 SCALE: HORIZONTAL: 1:1000, VERTICAL: 1:100 (at A2 Size Sheet)
 DRG.No: GPT/CCT/4A/HW/PNP/01
 REV: R0

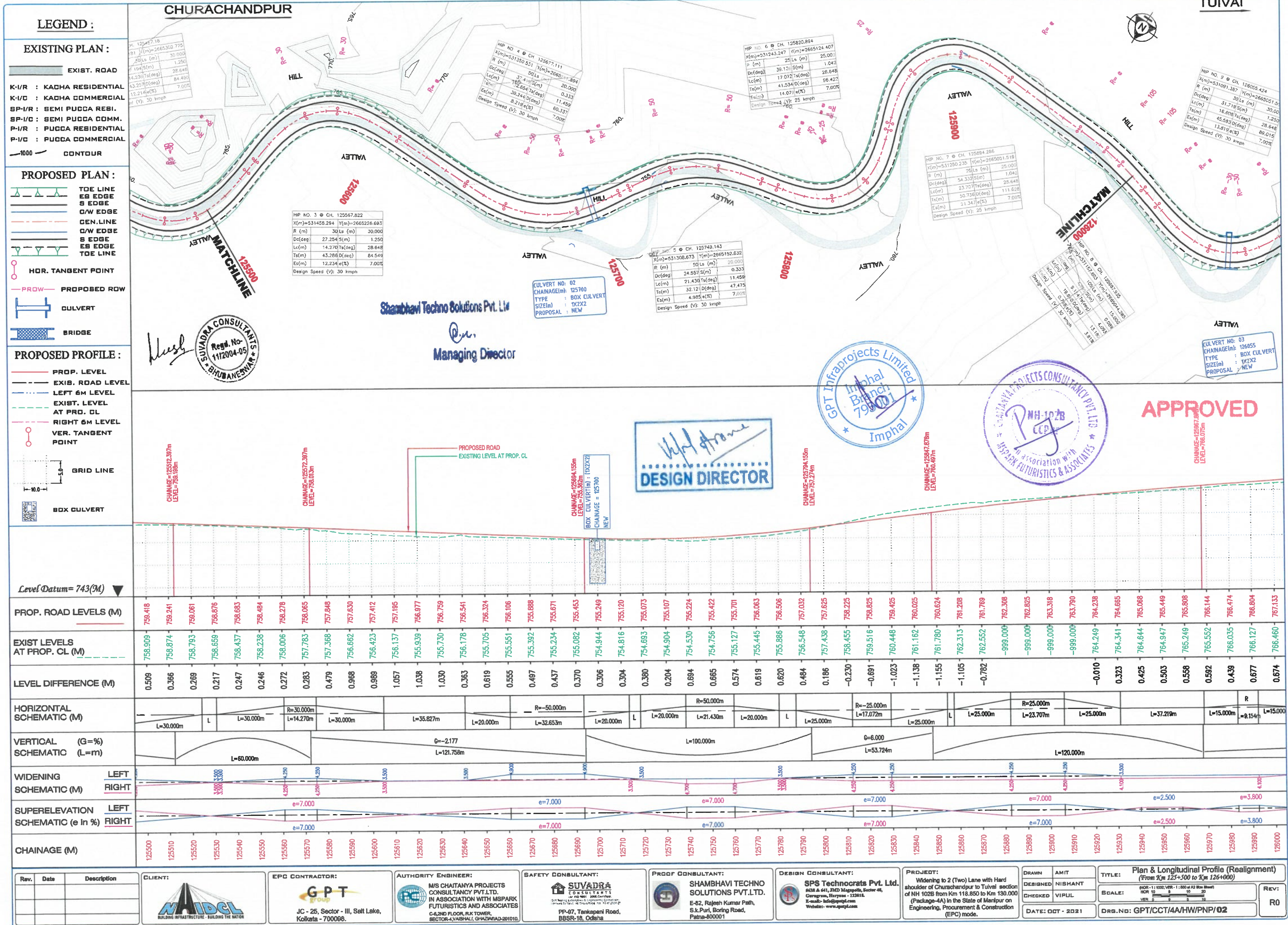

 DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd

 Managing Director



APPROVED



LEGEND :

EXISTING PLAN :

- EXIST. ROAD
- K-I/R : KADHA RESIDENTIAL
K-I/C : KADHA 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
S EDGE
C/W EDGE
DEN. LINE
C/W EDGE
S 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

CHURACHANDPUR

DESIGN DIRECTOR

HIP NO. 9 @ CH. 126055.424

X(m)	531091.387	Y(m)	2665051.552
R (m)	30.000	Ls (m)	1.250
Dc(deg)	31.719	S(m)	28.648
Lc(m)	16.608	Ta(deg)	89.015
Ts(m)	45.593	D(deg)	7.000
Es(m)	13.818	e(%)	7.000

Design Speed (V): 30 kmph

HIP NO. 11 @ CH. 126208.663

X(m)	530991.855	Y(m)	2664975.45
R (m)	41.000	Ls (m)	25.000
Dc(deg)	21.415	S(m)	0.635
Lc(m)	15.324	Ta(deg)	17.468
Ts(m)	34.763	D(deg)	56.351
Es(m)	6.232	e(%)	7.000

Design Speed (V): 30 kmph

HIP NO. 10 @ CH. 126146.681

X(m)	531083.084	Y(m)	2664970.242
R (m)	20.000	Ls (m)	0.833
Dc(deg)	32.174	S(m)	28.648
Lc(m)	11.233	Ta(deg)	89.470
Ts(m)	30.558	D(deg)	7.000
Es(m)	9.328	e(%)	7.000

Design Speed (V): 20 kmph

HIP NO. 12 @ CH. 126388.191

X(m)	530923.748	Y(m)	2664835.715
R (m)	30.000	Ls (m)	1.250
Dc(deg)	40.493	S(m)	28.648
Lc(m)	21.202	Ta(deg)	89.778
Ts(m)	69.010	D(deg)	7.000
Es(m)	17.533	e(%)	7.000

Design Speed (V): 30 kmph

HIP NO. 13 @ CH. 126350.000

X(m)	530813.858	Y(m)	2664888.221
R (m)	41.000	Ls (m)	17.468
Dc(deg)	14.044	S(m)	0.610
Lc(m)	10.678	Ta(deg)	7.000
Ts(m)	31.568	D(deg)	7.000
Es(m)	4.810	e(%)	7.000

Design Speed (V): 30 kmph

HIP NO. 14 @ CH. 126446.555

X(m)	530787.865	Y(m)	2664997.481
R (m)	50.000	Ls (m)	20.000
Dc(deg)	15.769	S(m)	0.333
Lc(m)	13.761	Ta(deg)	11.458
Ts(m)	27.656	D(deg)	28.687
Es(m)	3.345	e(%)	7.000

Design Speed (V): 30 kmph

HIP NO. 8 @ CH. 125987.935

X(m)	531157.603	Y(m)	2665044.285
R (m)	105.000	Ls (m)	15.000
Dc(deg)	8.174	S(m)	0.089
Lc(m)	19.000	Ta(deg)	4.093
Ts(m)	0.216	D(deg)	13.180
Es(m)	3.817	e(%)	3.817

Design Speed (V): 30 kmph

CULVERT NO. 03
CHAMANE: 126055
TYPE: BOX CULVERT
SIZE: 1X2X2
PROPOSAL: NEW

CULVERT NO. 04
CHAMANE: 126440
TYPE: BOX CULVERT
SIZE: 1X2X2
PROPOSAL: NEW

MATCHLINE
126400

APPROVED

Level Datum = 760(M)

PROP. ROAD LEVELS (M)

EXIST LEVELS AT PROP. CL (M)

LEVEL DIFFERENCE (M)

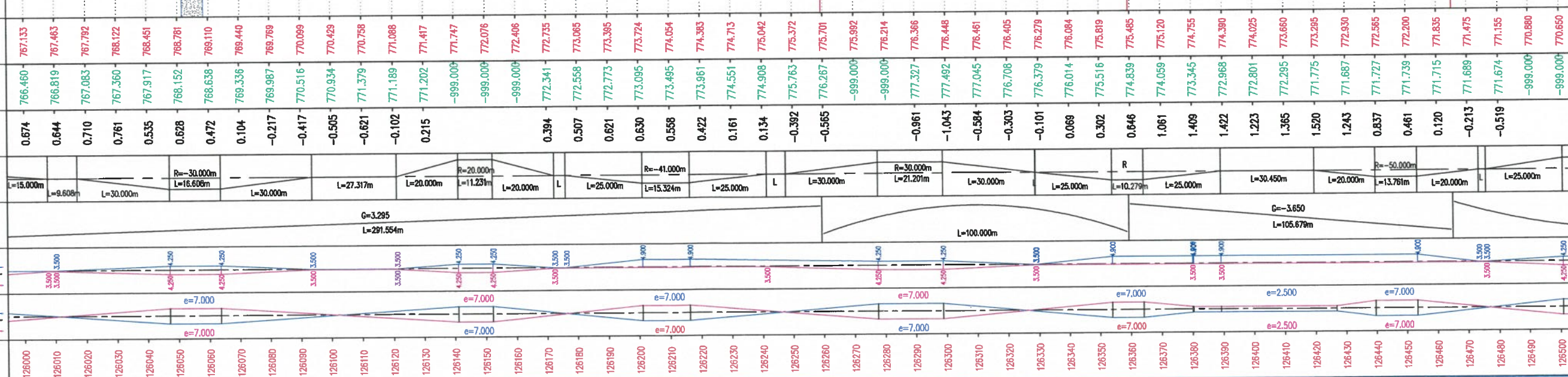
HORIZONTAL SCHEMATIC (M)

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

WIDENING SCHEMATIC (M)
LEFT
RIGHT

SUPERELEVATION SCHEMATIC (e in %)
LEFT
RIGHT

CHAINAGE (M)



Rev.	Date	Description

CLIENT:
MIDCL
BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR:
GPT
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, RKTOWER, SECTOR-4, VAISHALI, GHATSHABAD-201010.

SAFETY CONSULTANT:
SUVEDRA CONSULTANTS
PP-67, Tankapuri 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.
9038 & 61, 2ND Maggo, Sector 48, Gurgaon, Haryana - 122015.
E-mail: info@spstechnocrats.com
Website: www.spstechnocrats.com

PROJECT:
Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 118.850 to Km 130.000 (Package-4A) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN: AMIT
DESIGNED: NIBHANT
CHECKED: VIPUL
DATE: OCT - 2021

TITLE: Plan & Longitudinal Profile (Realignment) (From Km 126+000 to Km 126+500)
SCALE: 1:1000 (PLAN) 1:1000 (LONGITUDINAL)
DRG.No: GPT/CCT/4A/HW/PNP/03
REV: R0

TUIVAI

Shambhavi Techno Solutions Pvt. Ltd

Managing Director



LEGEND :

EXISTING PLAN :

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

PROPOSED PLAN :

TDE LINE
ES EDGE
S EDGE
Q/W EDGE
QEN.LINE
Q/W EDGE
S EDGE
ES EDGE
TDE 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

CHURACHANDPUR

DESIGN DIRECTOR



HP NO. 18 @ CH. 126800.00	HP NO. 19 @ CH. 126800.53
X(m)=530953.15	X(m)=530954.854
Y(m)=2665143.006	Y(m)=2665192.077
R (m) 23.00	R (m) 15.00
Dc(deg) 87.630	Dc(deg) 15.940
Lc(m) 87.630	Lc(m) 15.940
Ta(m) 35.177	Ta(m) 19.475
Es(m) 70.871	Es(m) 25.120
Design Speed (V): 20 kmph	Design Speed (V): 30 kmph

CULVERT NO. 05
CHAINAGE: 126540
TYPE : BOX CULVERT
SIZE: 1X2X2
PROPOSAL : NEW

HP NO. 16 @ CH. 126800.00	HP NO. 17 @ CH. 126800.123
X(m)=530953.15	X(m)=530953.15
Y(m)=2665143.006	Y(m)=2665143.006
R (m) 23.00	R (m) 23.00
Dc(deg) 87.630	Dc(deg) 87.630
Lc(m) 87.630	Lc(m) 87.630
Ta(m) 35.177	Ta(m) 35.177
Es(m) 70.871	Es(m) 70.871
Design Speed (V): 20 kmph	Design Speed (V): 20 kmph

HP NO. 17 @ CH. 126800.123	HP NO. 18 @ CH. 126800.00
X(m)=530953.15	X(m)=530953.15
Y(m)=2665143.006	Y(m)=2665143.006
R (m) 23.00	R (m) 23.00
Dc(deg) 87.630	Dc(deg) 87.630
Lc(m) 87.630	Lc(m) 87.630
Ta(m) 35.177	Ta(m) 35.177
Es(m) 70.871	Es(m) 70.871
Design Speed (V): 20 kmph	Design Speed (V): 20 kmph

HP NO. 18 @ CH. 126800.00	HP NO. 19 @ CH. 126800.53
X(m)=530953.15	X(m)=530954.854
Y(m)=2665143.006	Y(m)=2665192.077
R (m) 23.00	R (m) 15.00
Dc(deg) 87.630	Dc(deg) 15.940
Lc(m) 87.630	Lc(m) 15.940
Ta(m) 35.177	Ta(m) 19.475
Es(m) 70.871	Es(m) 25.120
Design Speed (V): 20 kmph	Design Speed (V): 30 kmph

HP NO. 19 @ CH. 126800.53	HP NO. 20 @ CH. 126800.268
X(m)=530954.854	X(m)=530917.588
Y(m)=2665192.077	Y(m)=2665215.081
R (m) 15.00	R (m) 30.00
Dc(deg) 15.940	Dc(deg) 18.478
Lc(m) 15.940	Lc(m) 18.478
Ta(m) 19.475	Ta(m) 39.192
Es(m) 25.120	Es(m) 75.774
Design Speed (V): 30 kmph	Design Speed (V): 30 kmph

HP NO. 20 @ CH. 126800.268	HP NO. 21 @ CH. 126800.500
X(m)=530917.588	X(m)=530917.588
Y(m)=2665215.081	Y(m)=2665215.081
R (m) 30.00	R (m) 30.00
Dc(deg) 18.478	Dc(deg) 18.478
Lc(m) 18.478	Lc(m) 18.478
Ta(m) 39.192	Ta(m) 39.192
Es(m) 75.774	Es(m) 75.774
Design Speed (V): 30 kmph	Design Speed (V): 30 kmph

HP NO. 27 @ CH. 127553.34	HP NO. 28 @ CH. 127553.34
X(m)=530834.381	X(m)=530834.381
Y(m)=266540.071	Y(m)=266540.071
R (m) 10.00	R (m) 10.00
Dc(deg) 2.668	Dc(deg) 2.668
Lc(m) 10.00	Lc(m) 10.00
Ta(m) 4.703	Ta(m) 4.703
Es(m) 17.391	Es(m) 17.391
Design Speed (V): 30 kmph	Design Speed (V): 30 kmph

CULVERT NO. 08
CHAINAGE: 127795
TYPE : BOX CULVERT
SIZE: 1X2X2
PROPOSAL : NEW

Shambhavi Techno Solutions Pvt. Ltd.

Managing Director

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

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

APPROVED

Rev.	Date	Description

CLIENT:
MSPARK FUTURISTICS & ASSOCIATES

EPC CONTRACTOR:
GPT
JC - 25, Sector - III, Salt Lake, Kolkata - 700088.

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

SAFETY CONSULTANT:
SUVADRA CONSULTANTS
PP-67, Tankapuri 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.
908 & 41, MIDC Margapalli, Sector 4B, Chavagum, Bhubaneswar - 751018.
E-mail: info@spstcl.com
Website: www.spstcl.com

PROJECT:
Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuiva section of NH 102B from Km 118.850 to Km 130.000 (Package-4A) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN: AMIT
DESIGNED: NIBHANT
CHECKED: VIPUL
DATE: OCT - 2021

TITLE: Plan & Longitudinal Profile (Realignment) (From Km 126+500 to Km 127+000)
SCALE: HORIZ. 1:1000, VERT. 1:500 @ A3 Size Sheet
DRS. NO: GPT/CCT/4A/HW/PPN/04
REV: R0

LEGEND :

EXISTING PLAN :

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

PROPOSED PLAN :

TOE LINE
ES EDGE
S EDGE
D/W EDGE
CEN. LINE
D/W EDGE
S 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

CHURACHANDPUR

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd.

Managing Director

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

GPT Infraprojects Limited
Imphal Branch
795003

APPROVED
MH-102B
In association with
MSPARK FUTURISTICS & ASSOCIATES

Level Datum = 760(M)

PROP. ROAD LEVELS (M)

EXIST LEVELS AT PROP. CL (M)

LEVEL DIFFERENCE (M)

HORIZONTAL SCHEMATIC (M)

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

WIDENING SCHEMATIC (M) LEFT RIGHT

SUPERELEVATION SCHEMATIC (e in %) LEFT RIGHT

CHAINAGE (M)

Rev.	Date	Description

CLIENT:
MIDCL
BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR:
GPT
JC - 25, Sector - III, Salt Lake, Kolkata - 700086.

AUTHORITY ENGINEER:
M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD.
IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES
C-62ND FLOOR, RJK TOWER, SECTOR-4, VIKAS NAGAR, GHAZIABAD-201010.

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

PROOF CONSULTANT:
SHAMBHAVI TECHNO SOLUTIONS PVT.LTD.
E-82, Rajesh Kumar Path, S.K.Puri, Boring Road, Patna-500001

DESIGN CONSULTANT:
SPS Technocrats Pvt. Ltd.
A-38 & 41, 3RD Magdalla, Sector 45, Chandigarh, Haryana - 152018.
E-mail: info@spspl.com
Website: www.spspl.com

PROJECT:
Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 118.850 to Km 130.000 (Package-4A) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN: AMIT
DESIGNED: NISHANT
CHECKED: VIPUL
DATE: OCT - 2021

TITLE: Plan & Longitudinal Profile (Realignment) (From Km 126+500 to Km 127+000)
SCALE: 1:1000 (VER. 1:100)
DRG.No: GPT/CCT/4A/HW/04A
REV: R0

EXISTING PLAN :

PROPOSED PLAN :



10.0

5.0

GRID LINE

BOX CULVERT

Level Datum= 760(M) ▼

Rev.	Date	Description

CLIENT:



EPC CONTRACTOR:



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-6,2ND FLOOR, RJK TOWER,
SECTOR-4, VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT:

 **SUVADRA**
CONSULTANTS
JAN 1982 NO.1 2008 CERTIFIED
For Building Engineering & Construction Consultancy
(Company Reg. No. 12 of 2004 @)

**PP-87, Tankapuri Road,
BBSR-18, Odisha**

PROOF CONSULTANT:

**SHAMBHAVI TECHNO
SOLUTIONS PVT.LTD.**
E-52, Rajesh Kumer Path,
S.k.Puri, Boring Road,
Patna-800001

DESIGN CONSULTANT:



 **SPS Technocrats Pvt. Ltd.**
#338 & 641, JMD Magapalle, Sector 48,
Gurgaon, Haryana - 122012.
E-mail: info@spsnpl.com
Website: www.spsnpl.com

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 118.850 to Km 130.000 (Package-4A) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN	AMIT
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DESIGNED	NISHANT
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0	CHECKED	VIPUL
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DATE: OCT - 2021

TITLE: Plan & Longitudinal Profile (Realignment)
(From Km 127+000 to Km 127+500)

010R-1: 1000; VER-1: 300 at A3 Size (Sheet)

SCALE: REV:

R0

DRB.NO: GPT/CCT/4A/HW/PPN/05A

15

REV:

R0

7

LEGEND :

EXISTING PLAN :

EXIST. ROAD
 K-I/R : KADHA RESIDENTIAL
 K-I/C : KADHA 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
 S EDGE
 Q/W EDGE
 GEN. LINE
 Q/W EDGE
 S EDGE
 ES EDGE
 TOE LINE
 HOR. TANGENT POINT
 PROW
 PROPOSED ROW
 DULVERT
 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

Level Datum = 785(M) ▼

PROP. ROAD LEVELS (M)

EXIST LEVELS AT PROP. CL (M)

LEVEL DIFFERENCE (M)

HORIZONTAL SCHEMATIC (M)

VERTICAL SCHEMATIC (G=%)
(L=m)WIDENING SCHEMATIC (M)
LEFT
RIGHTSUPERELEVATION SCHEMATIC (e in %)
LEFT
RIGHT

CHAINAGE (M)

Rev.	Date	Description

CLIENT:



EPC CONTRACTOR:



JC - 25, Sector - III, Salt Lake,
 Kolkata - 700088.

AUTHORITY ENGINEER:



M/S CHAITANYA PROJECTS
 CONSULTANCY PVT.LTD.
 IN ASSOCIATION WITH MSPARK
 FUTURISTICS AND ASSOCIATES
 C-5, 2ND FLOOR, RKTOWER,
 SECTOR-4, VAISHALI, GHAZIABAD-201018.

SAFETY CONSULTANT:



SUVADRA
 CONSULTANTS
 PP-67, Tankapuri 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.
 603 & 641, MID Megapole, Sector 46,
 Gurgaon, Haryana - 122015.
 E-mail: info@spstpl.com
 Website: www.spstpl.com

PROJECT:

Widening to 2 (Two) Lane with Hard
 shoulder of Churachandpur to Tuivai section
 of NH 102B from Km 118.850 to Km 130.000
 (Package-4A) in the State of Manipur on
 Engineering, Procurement & Construction
 (EPC) mode.

DRAWN AMIT

DESIGNED NISHANT

CHECKED VIPUL

DATE: OCT - 2021

TITLE: Plan & Longitudinal Profile (Realignment)
(From Km 127+500 to Km 128+000)

SCALE: HORIZ - 1:1000; VERT - 1:500 at A2 Size Sheet

DRS.NO: GPT/CCT/4A/HW/PNP/05B

REV: R0

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd

Managing Director



APPROVED

PROPOSED ROAD
 EXISTING LEVEL AT PROP. CL

CHAINAGE=127605.767m
 LEVEL=811.761m

CHURACHANDPUR

LEGEND :

EXISTING PLAN :

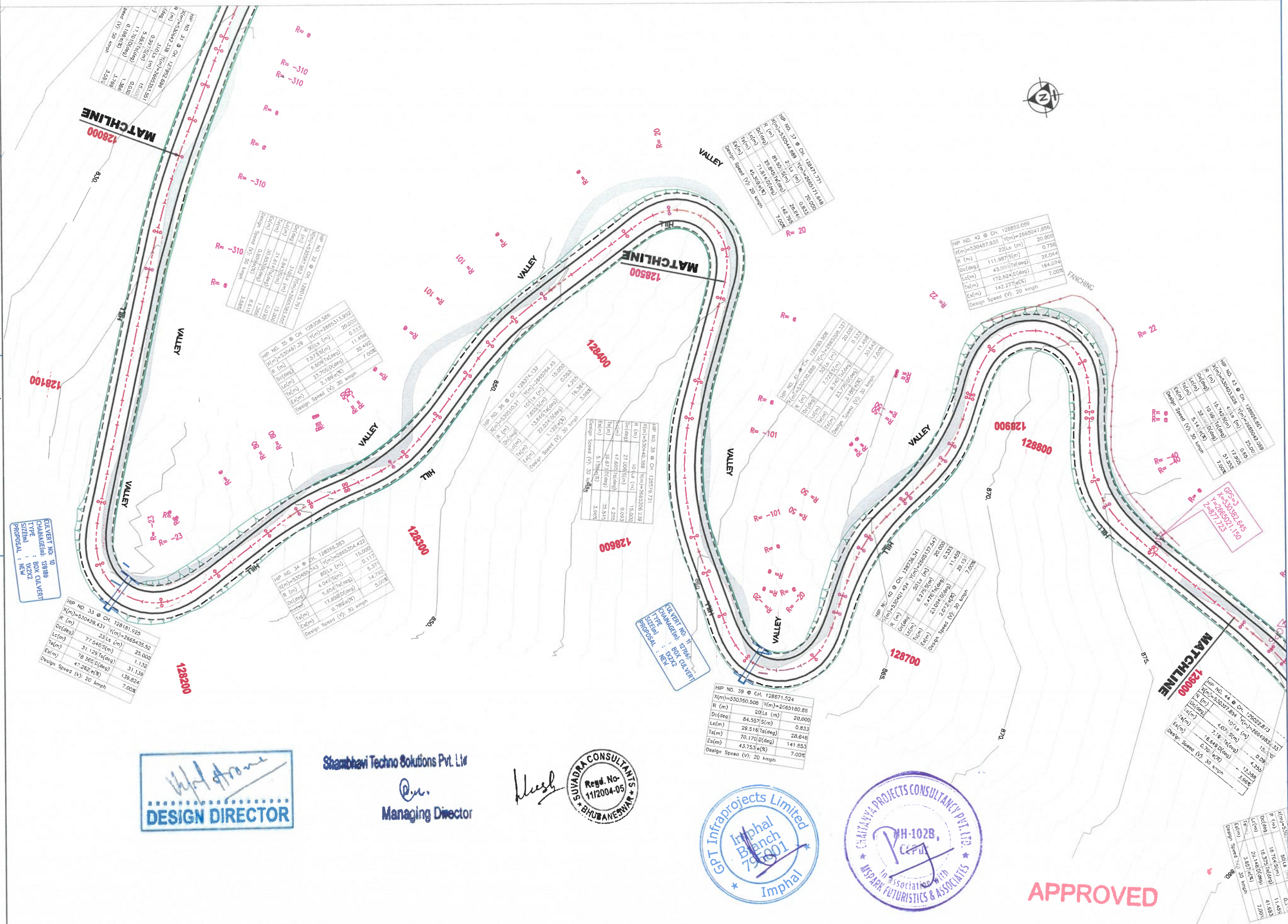
- EXIST. ROAD
- K-I/R : KADHA RESIDENTIAL
K-I/C : KADHA COMMERCIAL
SP-I/R : SEMI PUCCA RESI.
SP-I/C : SEMI PUCCA COMM.
P-I/R : PUCCA RESIDENTIAL
P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
ES EDGE
S EDGE
D/W EDGE
GEN. LINE
C/W EDGE
S 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



DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd.
Managing Director

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

Infraprojects Limited
Imphal Branch
795001

CHAITANYA PROJECTS CONSULTANCY PVT. LTD.
In Association With
MSPARK FUTURISTICS & ASSOCIATES

APPROVED

Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROOF CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	DESIGNED:	CHECKED:	DATE:	TITLE:	SCALE:	DRS. NO:	REV:
			MIDCL	GPT	M/S CHAITANYA PROJECTS CONSULTANCY PVT. LTD.	SUVADRA CONSULTANTS	SHAMBHAVI TECHNO SOLUTIONS PVT. LTD.	SPS Technocrats Pvt. Ltd.	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuwai section of NH 102B from Km 118.850 to Km 130.000 (Package-4A) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	AMIT	NISHANT	VIPUL	OCT - 2021	Plan & Longitudinal Profile (Realignment) (From Km 128+000 to Km 129+000)	1:1000 (HORIZ) 1:1000 (VERT)	GPT/CCT/4A/HW/PNP/06	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
 S EDGE
 G/W EDGE
 GEN.LINE
 G/W EDGE
 S EDGE
 ES EDGE
 TOE LINE

HOR. TANGENT POINT

PROW PROPOSED ROW

GULVERT

BRIDGE

PROPOSED PROFILE :

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

GRID LINE

BOX CULVERT

Level Datum = 795(M) ▼

PROP. ROAD LEVELS (M)

EXIST LEVELS AT PROP. CL (M)

LEVEL DIFFERENCE (M)

HORIZONTAL SCHEMATIC (M)

VERTICAL SCHEMATIC (G=%)
(L=m)WIDENING SCHEMATIC (M)
LEFT
RIGHTSUPERELEVATION SCHEMATIC (e in %)
LEFT
RIGHT

CHAINAGE (M)

Rev.	Date	Description

CLIENT:



EPC CONTRACTOR:



AUTHORITY ENGINEER:



SAFETY CONSULTANT:



PROOF CONSULTANT:



DESIGN CONSULTANT:



PROJECT:

Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 118.850 to Km 130.000 (Package-4A) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN

AMIT
 DESIGNED NISHANT
 CHECKED VIPLU
 DATE: OCT - 2021

TITLE: Plan & Longitudinal Profile (Realignment)

(From Km 128+000 to Km 128+500)

SCALE:

HOR: 1:1000, VER: 1:1000 at 1/2 Scale
 HOR 10 0 10 20
 VER 5 0 5 10

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

REV:

R0

CHURACHANDPUR

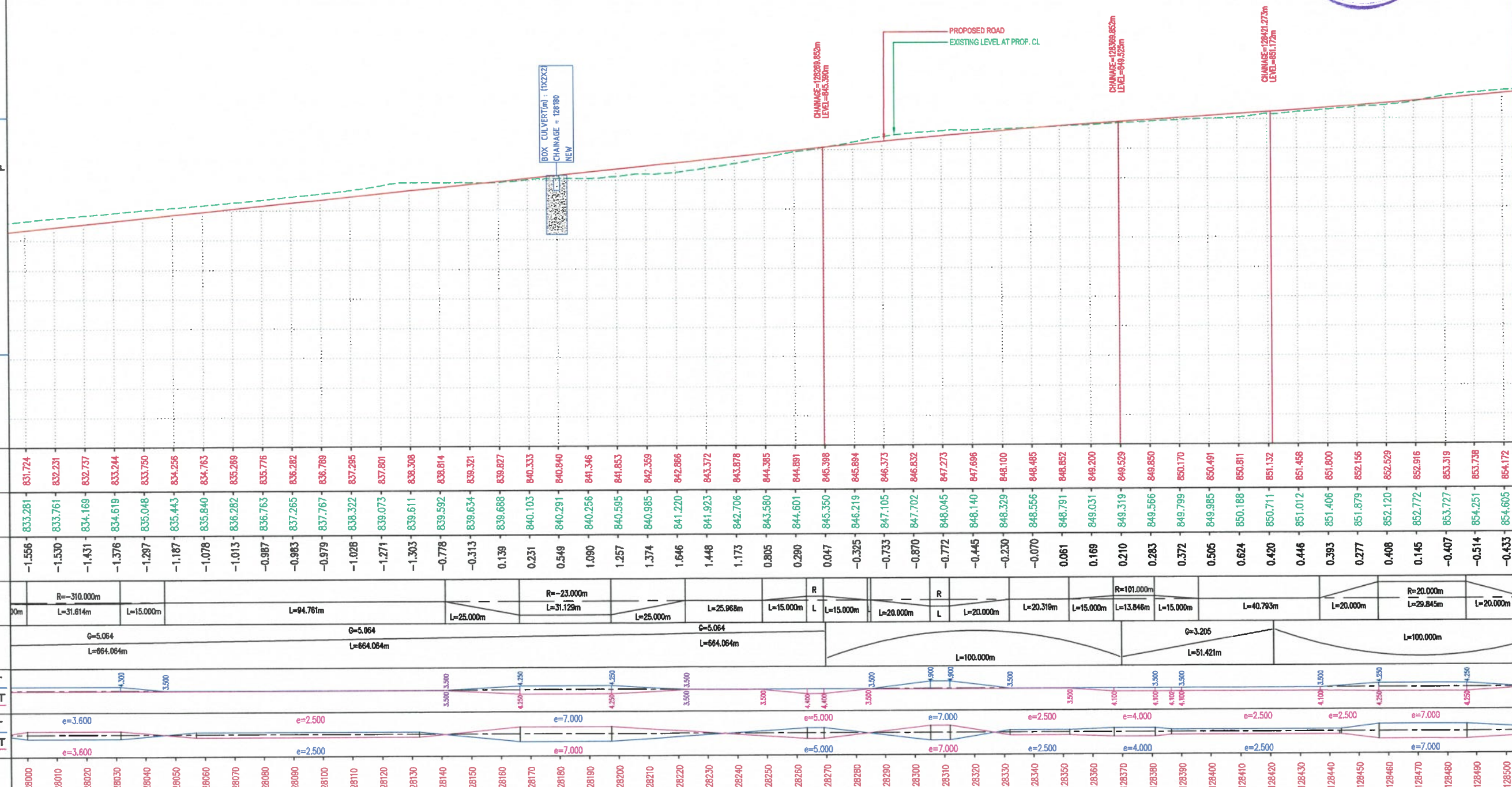
DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd.

Managing Director



APPROVED



LEGEND :

EXISTING PLAN :

EXIST. ROAD

K-I/R : KADHA RESIDENTIAL
K-I/C : KADHA 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
S EDGE
D/W EDGE
GEN. LINE
D/W EDGE
S EDGE
ES EDGE
TOE LINE

HOR. TANGENT POINT

PROW PROPOSED ROW

CULVERT

BRIDGE

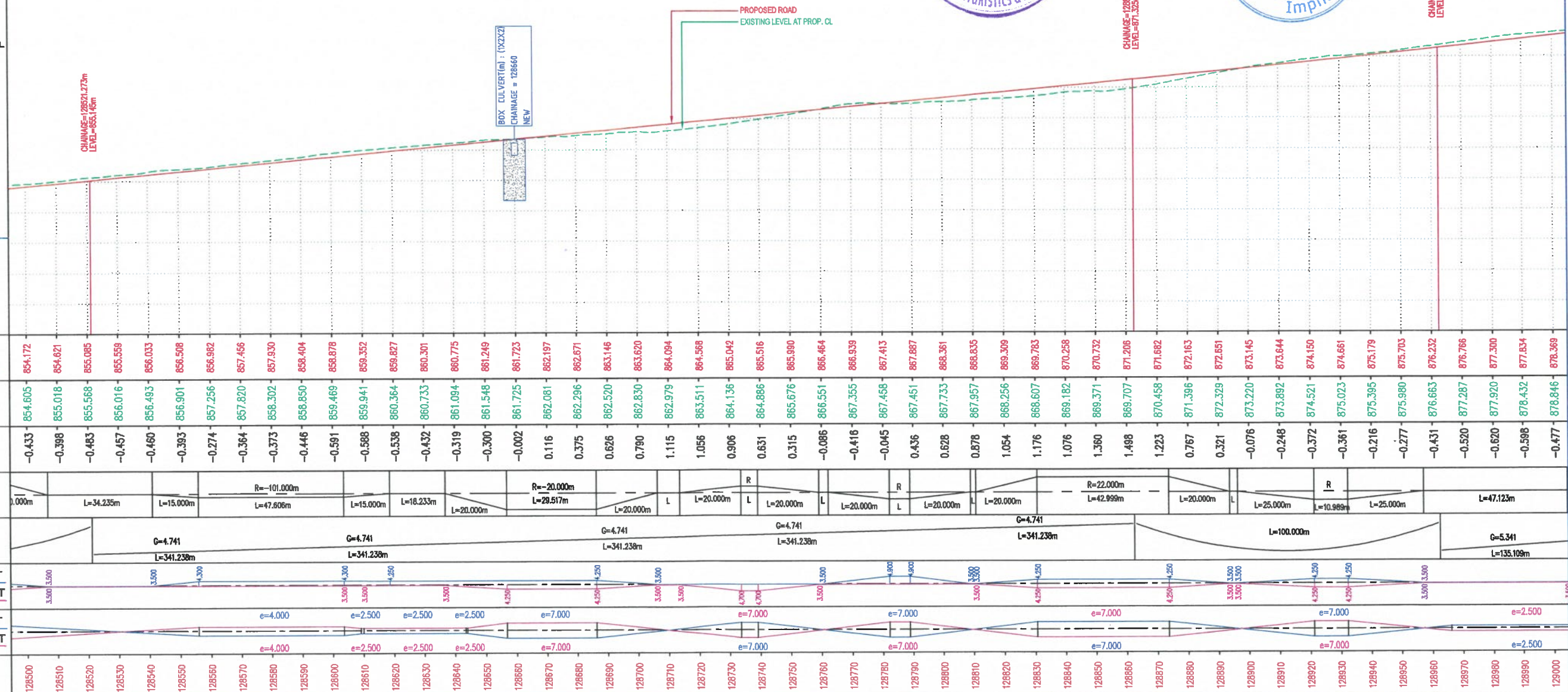
PROPOSED PROFILE :

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

GRID LINE

BOX CULVERT

CHURACHANDPUR



DESIGN DIRECTOR



Shambhavi Techno Solutions Pvt. Ltd.
Managing Director



APPROVED

CHAINAGE = 128882.51m
LEVEL = 871.326m

Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROJECT CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	AMIT	TITLE:	SCALE:	DATE:	REV:
			NAIDCL	GPT	M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES	SUVADRA	SHAMBHAVI TECHNO SOLUTIONS PVT.LTD.	SPS Technocrats Pvt. Ltd.	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 118.850 to Km 130.000 (Package-4A) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	DESIGNED	NISHANT	Plan & Longitudinal Profile (Realignment)	1:1000	OCT - 2021	R0
				JC - 25, Sector - III, Salt Lake, Kolkata - 700098.	PP-07, Tankapani Road, BBSR-18, Odisha		E-42, Rajesh Kumar Path, S.K.Puri, Boring Road, Patna-800001			CHECKED	VIPUL	Scale: 1:1000 (Plan), 1:1000 (Profile)	DRS. NO: GPT/CCT/4A/HW/PNP/06B		

REV.	R0
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CHURACHANDPUR

LEGEND :

EXISTING PLAN :

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

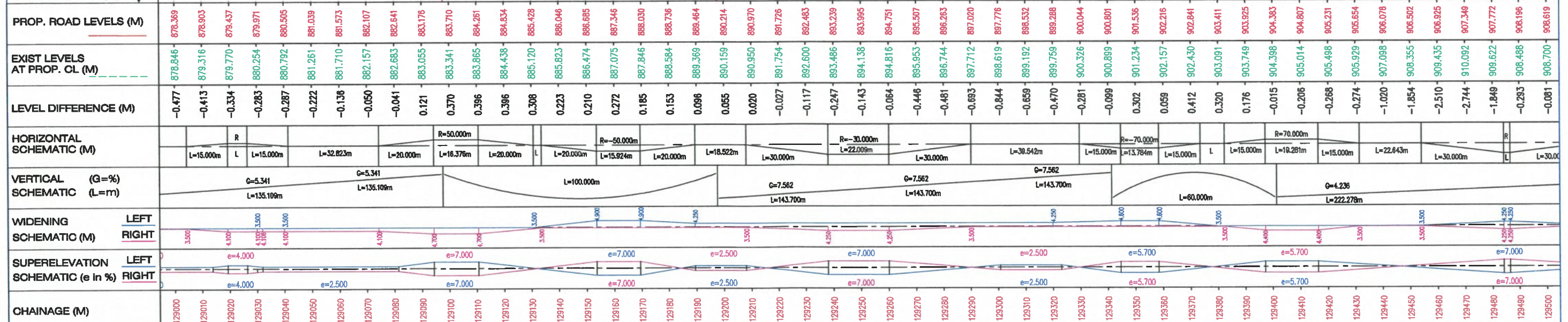
PROPOSED PLAN :

TOE LINE
ES EDGE
S EDGE
C/W EDGE
GEN. LINE
C/W EDGE
S 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

Level Datum = 870(M)



APPROVED

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd.
Managing Director

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



Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROOF CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	AMIT	TITLE:	SCALE:	DATE:	REV:
			NAIDCL BUILDING INFRASTRUCTURE - BUILDING THE NATION	GPT JC - 25, Sector - III, Salt Lake, Kolkata - 700098.	M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES C-6, 2ND FLOOR, RK TOWER, SECTOR-4, VASHPALLI, GHANASHYAM-201010.	SUVADRA CONSULTANTS Sanjay Kumar & Associates PP-97, Tankapuri Road, BBSR-18, Odisha	SHAMBHAVI TECHNO SOLUTIONS PVT.LTD. E-82, Rajesh Kumar Path, S.J.Puri, Boring Road, Patna-800001	SPS Technocrats Pvt. Ltd. B-38 & 41, 2ND Magapalli, Sector 46, Gurgaon, Haryana - 122015. E-mail:- info@spstcl.com Website:- www.spstcl.com	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuwai section of NH 102B from Km 118.850 to Km 130.000 (Package-4A) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	DESIGNED NISHANT	CHECKED VIPUL	Plan & Longitudinal Profile (Realignment) (From Km 129+000 to Km 129+500)	SCALE: HORIZ 1:10000 VERT. 1:1000 VER. 1:1000	DATE: DEC - 2021	R0

LEGEND :

EXISTING PLAN :

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

PROPOSED PLAN :

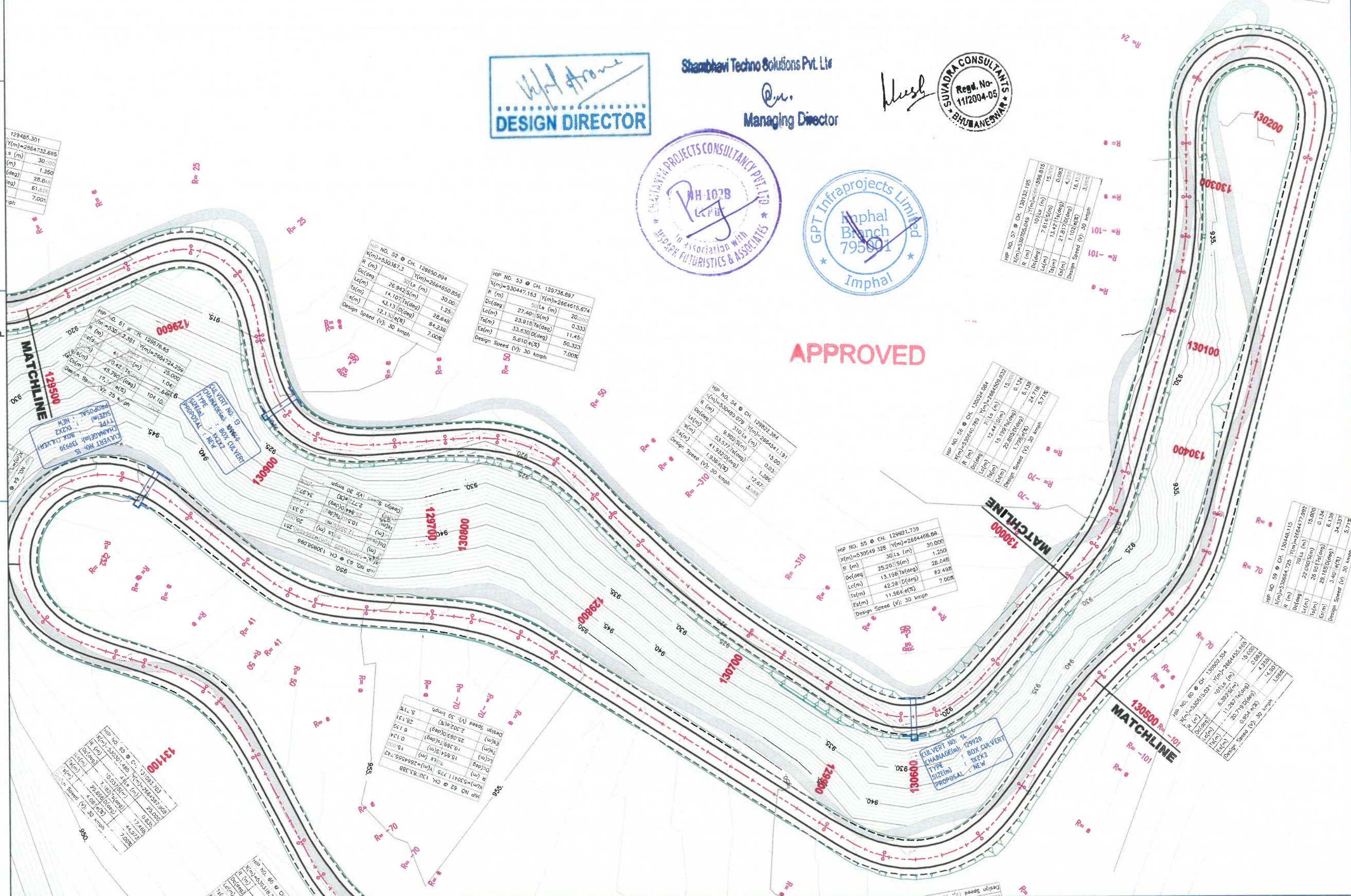
TOE LINE
ES EDGE
S EDGE
D/W EDGE
CEN.LINE
D/W EDGE
S EDGE
ES EDGE
TOE LINE
HOR. TANGENT POINT
PROW PROPOSED ROW
CULVERT
BRIDGE

PROPOSED PROFILE :

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

CHURACHANDPUR

TUVAI



DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd.

Managing Director



APPROVED



Station	Curve No.	Radius (m)	Length (m)	Design Speed (kmph)
130+00	23	8000	540	30
130+100	24	8300	560	30
130+200	25	8600	580	30
130+300	26	8900	600	30
130+400	27	9200	620	30
130+500	28	9500	640	30

Station	Curve No.	Radius (m)	Length (m)	Design Speed (kmph)
130+00	29	9800	660	30
130+100	30	10100	680	30
130+200	31	10400	700	30
130+300	32	10700	720	30
130+400	33	11000	740	30
130+500	34	11300	760	30

Station	Curve No.	Radius (m)	Length (m)	Design Speed (kmph)
130+00	35	11600	780	30
130+100	36	11900	800	30
130+200	37	12200	820	30
130+300	38	12500	840	30
130+400	39	12800	860	30
130+500	40	13100	880	30

Station	Curve No.	Radius (m)	Length (m)	Design Speed (kmph)
130+00	41	13400	900	30
130+100	42	13700	920	30
130+200	43	14000	940	30
130+300	44	14300	960	30
130+400	45	14600	980	30
130+500	46	14900	1000	30

Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROOF CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	AMT:	TITLE:	SCALE:	DATE:	REV:
			NAIDCL	GPT	M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES	SUVADRA CONSULTANTS	SHAMBHAVI TECHNO SOLUTIONS PVT.LTD.	SPS Technocrats Pvt. Ltd.	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuwai section of NH 102B from Km 118.850 to Km 130.000 (Package-4A) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	NISHANT	VIJUL	Plan & Longitudinal Profile (Realignment) (From Km 129+500 to Km 130+500)	1:1000	OCT - 2021	R0

CHURACHANDPUR

LEGEND :

EXISTING PLAN :

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

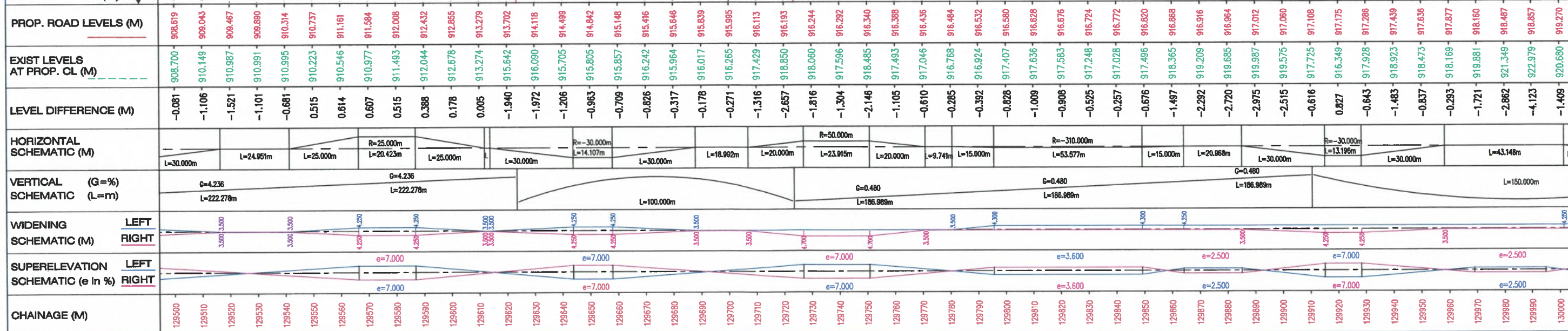
PROPOSED PLAN :

TOE LINE
ES EDGE
S EDGE
C/W EDGE
GEN. LINE
D/W EDGE
S 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 PROP. CL
RIGHT 6M LEVEL
VER. TANGENT POINT
GRID LINE
BOX CULVERT

Level Datum = 870(M)



DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd.

Managing Director

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

GPT InfraProjects Limited
Imphal
795001

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

APPROVED

Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROJECT CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	DESIGNED:	CHECKED:	DATE:	TITLE:	SCALE:	DRG. NO:	REV:
			MAIDCL BUILDING INFRASTRUCTURE - BUILDING THE NATION	GPT JC - 25, Sector - III, Salt Lake, Kolkata - 700098.	M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES C-4, 2ND FLOOR, RK TOWER, SECTOR-4, VASHPALLI, GHANABAD-201010.	SUVADRA CONSULTANTS C-10, 4th, 3rd Magapalli, Sector 48, Chennai, India - 600015. E-mail: info@suvadra.com Website: www.suvadra.com	SHAMBHAVI TECHNO SOLUTIONS PVT.LTD. E-82, Rajesh Kumar Path, S.K.Puri, Boring Road, Patna-800001	SPS Technocrats Pvt. Ltd. #308 & 441, 3RD Magapalli, Sector 48, Chennai, India - 600015. E-mail: info@spspl.com Website: www.spspl.com	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuwai section of NH 102B from Km 118.850 to Km 130.000 (Package-4A) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	AMIT	NISHANT	VIPUL	DCT - 2021	Plan & Longitudinal Profile (Realignment) (From Km 129+500 to Km 130+500)	NCR - 1 : 1000, VCR - 1 : 500 (at 100m Road) NCR 10 : 10 20 30 VCR 5 : 5 10 15	GPT/ICT/4A/HW/PNP/08A	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
 S EDGE
 C/W EDGE
 GEN. LINE
 C/W EDGE
 S EDGE
 ES EDGE
 TOE LINE
 HOR. TANGENT POINT
 PROW
 PROPOSED ROW
 CULVERT
 BRIDGE

PROPOSED PROFILE :

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

Level Datum = 910(M) ▼

PROP. ROAD LEVELS (M)

EXIST LEVELS AT PROP. CL (M)

LEVEL DIFFERENCE (M)

HORIZONTAL SCHEMATIC (M)

VERTICAL SCHEMATIC (G=%)
(L=m)WIDENING SCHEMATIC (M)
LEFT
RIGHTSUPERELEVATION SCHEMATIC (e in %)
LEFT
RIGHT

CHAINAGE (M)

Rev.	Date	Description

CLIENT:



EPC CONTRACTOR:



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-2ND FLOOR, RK TOWER,
SECTOR-4, VASRAHALLI, GHAZIABAD-201010.

SAFETY CONSULTANT:



SUVADRA
CONSULTANTS
PVT. LTD.
S-10, Sector-10, Connaught Place,
New Delhi-110028.

PROJECT CONSULTANT:



SHAMBHAVI TECHNO
SOLUTIONS PVT. LTD.
E-82, Rajesh Kumar Path,
S.K. Puri, Boring Road,
Patna-800001

DESIGN CONSULTANT:



SPS Technocrats Pvt. Ltd.
838 & 841, 3RD Magnolia, Sector 45,
Gurgaon, Haryana - 122018.
E-mail: info@spstec.com
Website: www.spstec.com

PROJECT:

Widening to 2 (Two) Lane with Hard
shoulder of Churachandpur to Tuwai section
of NH 102B from Km 118.850 to Km 130.000
(Package-4A) in the State of Manipur on
Engineering, Procurement & Construction
(EPC) mode.

DRAWN:

AMIT

DESIGNED:

NISHANT

CHECKED:

VIPUL

DATE: OCT - 2021

TITLE: Plan & Longitudinal Profile (Realignment)

(From Km 130+000 to Km 130+500)

SCALE:

(HOR - 1 : 1000; VER - 1 : 500 at A2 Size Sheet)
 HOR 10 0 10 20
 VER 0 5 10

DRS. NO: GPT/CCT/4A/HW/PNP/08B

REV: R0



DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd.

Managing Director

APPROVED



LEGEND :

EXISTING PLAN :

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

PROPOSED PLAN :

- TOE LINE
- ES EDGE
- S EDGE
- D/W EDGE
- CEN. LINE
- D/W EDGE
- S 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

CHURACHANDPUR

TUVAI

APPROVED

SHAMBHAVI TECHNO SOLUTIONS PVT. LTD.
Managing Director

GPT Infraprojects Limited
Imphal

CHAITANYA PROJECTS CONSULTANCY PVT. LTD.
IMPHAL

DESIGN DIRECTOR

SPS Technocrats Pvt. Ltd.

SHAMBHAVI TECHNO SOLUTIONS PVT. LTD.

CHURACHANDPUR

TUVAI

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

SCALE:
HORIZ. 1:1000, VER. 1:200 at A2 Size Sheet

DATE: OCT - 2021

DRS. NO: GPT/CCT/IA/HW/PNP/09

REV: R0

APPROVED



Stamp: GPT Infraprojects Limited
Imphal Branch
795001
Imphal

ENATANYA PROJECTS CONSULTANCY PVT. LTD.
 MH-102B
 CCP
 In Association with
 IMPAK FETURISTIC & ASSOCIATES

Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROOF CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN	AMIT	TITLE:	Plan & Longitudinal Profile (Realignment) (From Km 130+500 to Km 131+000)	REV:
									Widening to 2 (Two) Lane with Hard shoulder of Churuchandpur to Tulvali section of NH 102B from Km 118.850 to Km 130.000 (Package-4A) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	DESIGNED	NISHANT	SCALE: 	R0	
			BUILDING INFRASTRUCTURE - BUILDING THE NATION	JC - 25, Sector - III, Salt Lake, Kolkata - 700098.	M/S CHATANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MPMARK FUTURISTICS AND ASSOCIATES C-62ND FLOOR, RJK TOWER, SECTOR-4 VASHPALLI, GHUZINIAD-201010.	SUVADRA CONSULTANTS Unit No.201, 30th Century, Salt Lake, Eastern Suburbs, Kolkata-700061 (Contacted to Salt Lake Group Road No. 10 at 2014)	SHAMBHAVI TECHNO SOLUTIONS PVT.LTD. E-82, Rajesh Kumar Path, S.K.Puri, Boring Road, Patna-800001	SPS Technocrats Pvt. Ltd. 86/3 & 41, 3RD Magapalli, Sector 48, Gurgaon, Haryana - 122018. E-mail:- info@spscl.com Website:- www.spscl.com		DATE: OCT - 2021		DRB.NO: GPT/CCT/4A/HW/PNP/09		

R0

LEGEND :

EXISTING PLAN :

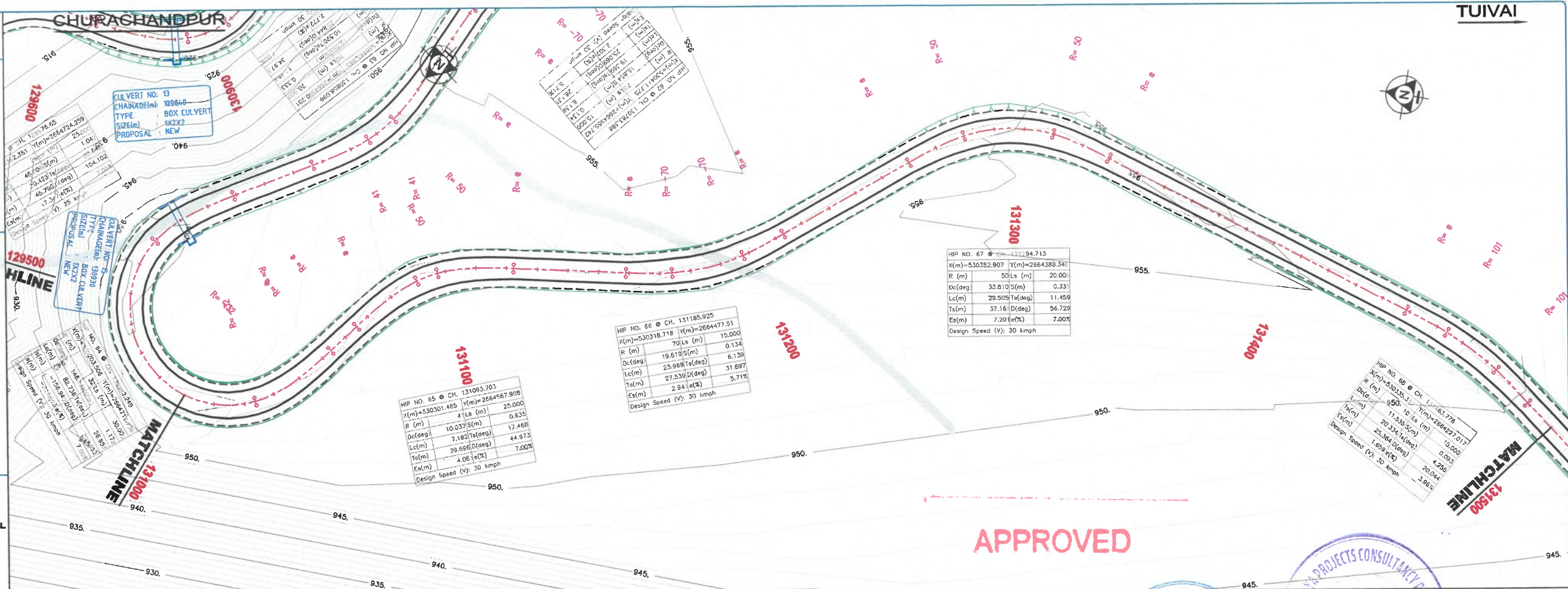
- EXIST. ROAD
- K-I/R : KACHA RESIDENTIAL
K-I/C : KACHA COMMERCIAL
SP-I/R : SEMI PUCCA RESI.
SP-I/C : SEMI PUCCA COMM.
P-I/R : PUCCA RESIDENTIAL
P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
EB EDGE
S EDGE
D/W EDGE
CEN. LINE
D/W EDGE
S EDGE
EB EDGE
TOE LINE
- HOR. TANGENT POINT
- PROW PROPOSED ROW
- CULVERT
- BRIDGE

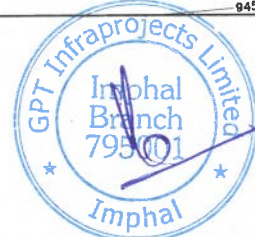
PROPOSED PROFILE :

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



APPROVED

Shambhavi Techno Solutions Pvt. Ltd.
Managing Director



DESIGN DIRECTOR

Level Datum = 94.5(M)

PROP. ROAD LEVELS (M)	951.189	951.449	951.708	951.967	952.226	952.486	952.745	952.995	953.217	953.411	953.578	953.716	953.827	953.919	954.011	954.102	954.194	954.286	954.377	954.469	954.561	954.653	954.744	954.836	954.928	955.019	955.111	955.203	955.295	955.386	955.478	955.570	955.661	955.753	955.845	955.937	956.029	956.121	956.213	956.305	956.397	956.489	956.581	956.673	956.765	956.857	956.949	957.041	957.133	957.225	957.317	957.409	957.501	957.593	957.685	957.777	957.869	957.961	958.053	958.145	958.237	958.329	958.421	958.513	958.605	958.697	958.789	958.881	958.973	959.065	959.157	959.249	959.341	959.433	959.525	959.617	959.709	959.801	959.893	959.985	960.077	960.169	960.261	960.353	960.445	960.537	960.629	960.721	960.813	960.905	960.997	961.089	961.181	961.273	961.365	961.457	961.549	961.641	961.733	961.825	961.917	962.009	962.101	962.193	962.285	962.377	962.469	962.561	962.653	962.745	962.837	962.929	963.021	963.113	963.205	963.297	963.389	963.481	963.573	963.665	963.757	963.849	963.941	964.033	964.125	964.217	964.309	964.401	964.493	964.585	964.677	964.769	964.861	964.953	965.045	965.137	965.229	965.321	965.413	965.505	965.597	965.689	965.781	965.873	965.965	966.057	966.149	966.241	966.333	966.425	966.517	966.609	966.701	966.793	966.885	966.977	967.069	967.161	967.253	967.345	967.437	967.529	967.621	967.713	967.805	967.897	967.989	968.081	968.173	968.265	968.357	968.449	968.541	968.633	968.725	968.817	968.909	969.001	969.093	969.185	969.277	969.369	969.461	969.553	969.645	969.737	969.829	969.921	970.013	970.105	970.197	970.289	970.381	970.473	970.565	970.657	970.749	970.841	970.933	971.025	971.117	971.209	971.301	971.393	971.485	971.577	971.669	971.761	971.853	971.945	972.037	972.129	972.221	972.313	972.405	972.497	972.589	972.681	972.773	972.865	972.957	973.049	973.141	973.233	973.325	973.417	973.509	973.601	973.693	973.785	973.877	973.969	974.061	974.153	974.245	974.337	974.429	974.521	974.613	974.705	974.797	974.889	974.981	975.073	975.165	975.257	975.349	975.441	975.533	975.625	975.717	975.809	975.901	975.993	976.085	976.177	976.269	976.361	976.453	976.545	976.637	976.729	976.821	976.913	977.005	977.097	977.189	977.281	977.373	977.465	977.557	977.649	977.741	977.833	977.925	978.017	978.109	978.201	978.293	978.385	978.477	978.569	978.661	978.753	978.845	978.937	979.029	979.121	979.213	979.305	979.397	979.489	979.581	979.673	979.765	979.857	979.949	980.041	980.133	980.225	980.317	980.409	980.501	980.593	980.685	980.777	980.869	980.961	981.053	981.145	981.237	981.329	981.421	981.513	981.605	981.697	981.789	981.881	981.973	982.065	982.157	982.249	982.341	982.433	982.525	982.617	982.709	982.801	982.893	982.985	983.077	983.169	983.261	983.353	983.445	983.537	983.629	983.721	983.813	983.905	984.000	984.090	984.180	984.270	984.360	984.450	984.540	984.630	984.720	984.810	984.900	985.000	985.090	985.180	985.270	985.360	985.450	985.540	985.630	985.720	985.810	985.900	986.000	986.090	986.180	986.270	986.360	986.450	986.540	986.630	986.720	986.810	986.900	987.000	987.090	987.180	987.270	987.360	987.450	987.540	987.630	987.720	987.810	987.900	988.000	988.090	988.180	988.270	988.360	988.450	988.540	988.630	988.720	988.810	988.900	989.000	989.090	989.180	989.270	989.360	989.450	989.540	989.630	989.720	989.810	989.900	990.000	990.090	990.180	990.270	990.360	990.450	990.540	990.630	990.720	990.810	990.900	991.000	991.090	991.180	991.270	991.360	991.450	991.540	991.630	991.720	991.810	991.900	992.000	992.090	992.180	992.270	992.360	992.450	992.540	992.630	992.720	992.810	992.900	993.000	993.090	993.180	993.270	993.360	993.450	993.540	993.630	993.720	993.810	993.900	994.000	994.090	994.180	994.270	994.360	994.450	994.540	994.630	994.720	994.810	994.900	995.000	995.090	995.180	995.270	995.360	995.450	995.540	995.630	995.720	995.810	995.900	996.000	996.090	996.180	996.270	996.360	996.450	996.540	996.630	996.720	996.810	996.900	997.000	997.090	997.180	997.270	997.360	997.450	997.540	997.630	997.720	997.810	997.900	998.000	998.090	998.180	998.270	998.360	998.450	998.540	998.630	998.720	998.810	998.900	999.000	999.090	999.180	999.270	999.360	999.450	999.540	999.630	999.720	999.810	999.900	1000.000
EXIST LEVELS AT PROP. CL (M)	951.817	951.790	952.143	952.433	952.509	952.885	953.114	953.304	953.386	953.409	953.458	953.710	953.681	953.707	953.862	953.783	953.672	953.999	953.842	953.948	954.083	954.260	954.410	954.599	954.731	954.737	954.816	954.861	954.905	954.912	954.918	954.963	955.063	955.077	955.084	955.130	955.230	955.244	955.251	955.297	955.397	955.411	955.418	955.464	955.564	955.578	955.585	955.631	955.731	955.745	955.752	955.798	955.898	955.912	955.919	955.965	960.065	960.165	960.179	960.225	960.325	960.339	960.346	960.392	960.492	960.506	960.513	960.559	960.659	960.673	960.680	960.726	960.826	960.840	960.847	960.893	960.993	961.007	961.014	961.060	961.160	961.174	961.181	961.227	961.327	961.341	961.348	961.394	961.494	961.508	961.515	961.561	961.661	961.675	961.682	961.728	961.828	961.842	961.849	961.895	961.995	962.009	962.016	962.062	962.162	962.176	962.183	962.229	962.329	962.343	962.350	962.396	962.496	962.510	962.517	962.563	962.663	962.677	962.684	962.730	962.830	962.844	962.851	962.897	962.997	963.011	963.018	963.064	963.164	963.178	963.185	963.231	963.331	963.345	963.352	963.398	963.498	963.512	963.519	963.565	963.665	963.679	963.686	963.732	963.832	963.846	963.853	963.900	964.000	964.014	964.021	964.067	964.167	964.181	964.188	964.234	964.334	964.348	964.355	964.401	964.501	964.515	964.522	964.568	964.668	964.682	964.689	964.735	964.835	964.849	964.856	964.902	965.002	965.016	965.023	965.069	965.169	965.183	965.190	965.236	965.336	965.350	965.357	965.403	965.503	965.517	965.524	965.570	965.670	965.684	965.691	965.737	965.837	965.851	965.858	965.904	966.004	966.018	966.025	966.071	966.171	966.185	966.192	966.238	966.338	966.352	966.359	966.405	966.505	966.519	966.526	966.572	966.672	966.686	966.693	966.739	966.839	966.853	966.860	966.906	967.006	967.020	967.027	967.073	967.173	967.187	967.194	967.240	967.340	967.354	967.361	967.407	967.507	967.521	967.528	967.574	967.674	967.688	967.695	967.741	967.841	967.855	967.862	967.908	968.008	968.022	968.029	968.075	968.175	968.189	968.196	968.242	968.342	968.356	968.363	968.409	968.509	968.523	968.530	968.576	968.676	968.690	968.697	968.743	968.843	968.857	968.864	968.910	969.010	969.024	969.031	969.077	969.177	969.191	969.198	969.244	969.344	969.358	969.365	969.411	969.511	969.525	969.532	969.578	969.678	969.692	969.699	969.745	969.845																																																																																																																																																																																																																																				

LEGEND :

EXISTING PLAN :

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

PROPOSED PLAN :

- TOE LINE
ES EDGE
S EDGE
O/W EDGE
GEN. LINE
O/W EDGE
S 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

Level Datum = 945(M) ▼

PROP. ROAD LEVELS (M)

EXIST LEVELS
AT PROP. CL (M)

LEVEL DIFFERENCE (M)

HORIZONTAL
SCHEMATIC (M)VERTICAL (G=%)
SCHEMATIC (L=M)WIDENING
SCHEMATIC (M) LEFT
RIGHTSUPERELEVATION LEFT
SCHEMATIC (e in %) RIGHT

CHAINAGE (M)

CHURACHANDPUR

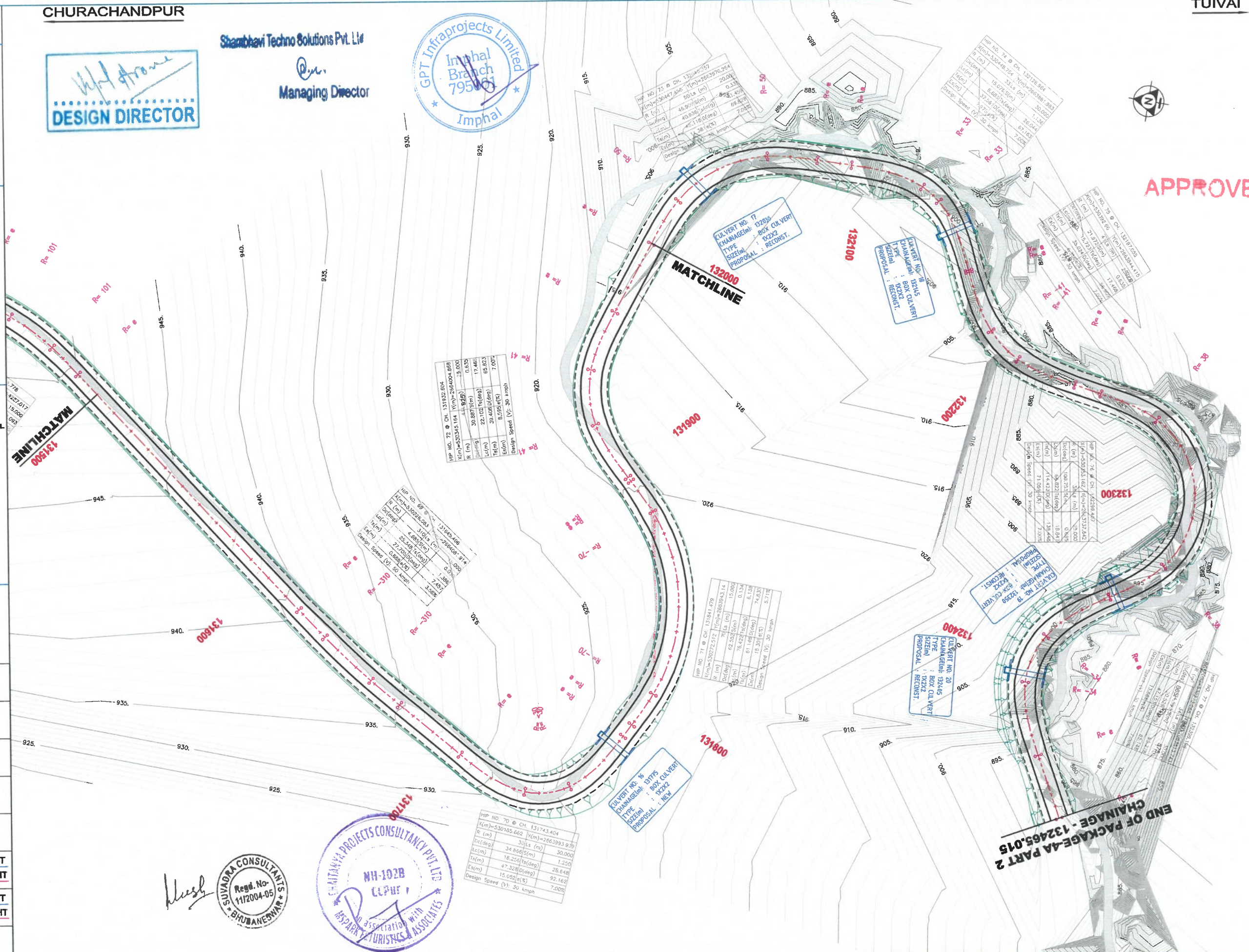
DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd.

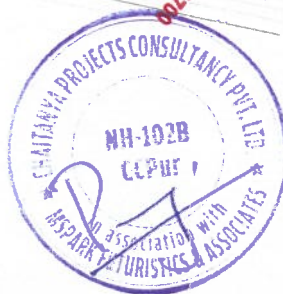
Managing Director



APPROVED



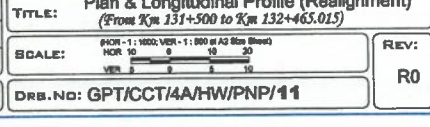
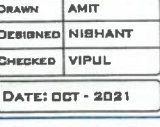
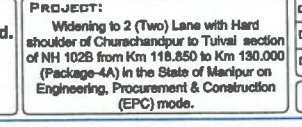
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HP NO. 70 @ CH. 131841.478	HP NO. 71 @ CH. 131841.478
CH (m) = 530185.669	CH (m) = 530185.669
LC (m) = 34.866	LC (m) = 34.866
LC (deg) = 16.226	LC (deg) = 16.226
LC (m) = 47.328	LC (m) = 47.328
LC (deg) = 15.052	LC (deg) = 15.052
Design Speed (V): 30 kmph	Design Speed (V): 30 kmph

HP NO. 71 @ CH. 131841.478	HP NO. 72 @ CH. 131841.478
CH (m) = 530185.669	CH (m) = 530185.669
LC (m) = 34.866	LC (m) = 34.866
LC (deg) = 16.226	LC (deg) = 16.226
LC (m) = 47.328	LC (m) = 47.328
LC (deg) = 15.052	LC (deg) = 15.052
Design Speed (V): 30 kmph	Design Speed (V): 30 kmph

Rev.	Date	Description



LEGEND :

EXISTING PLAN :

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

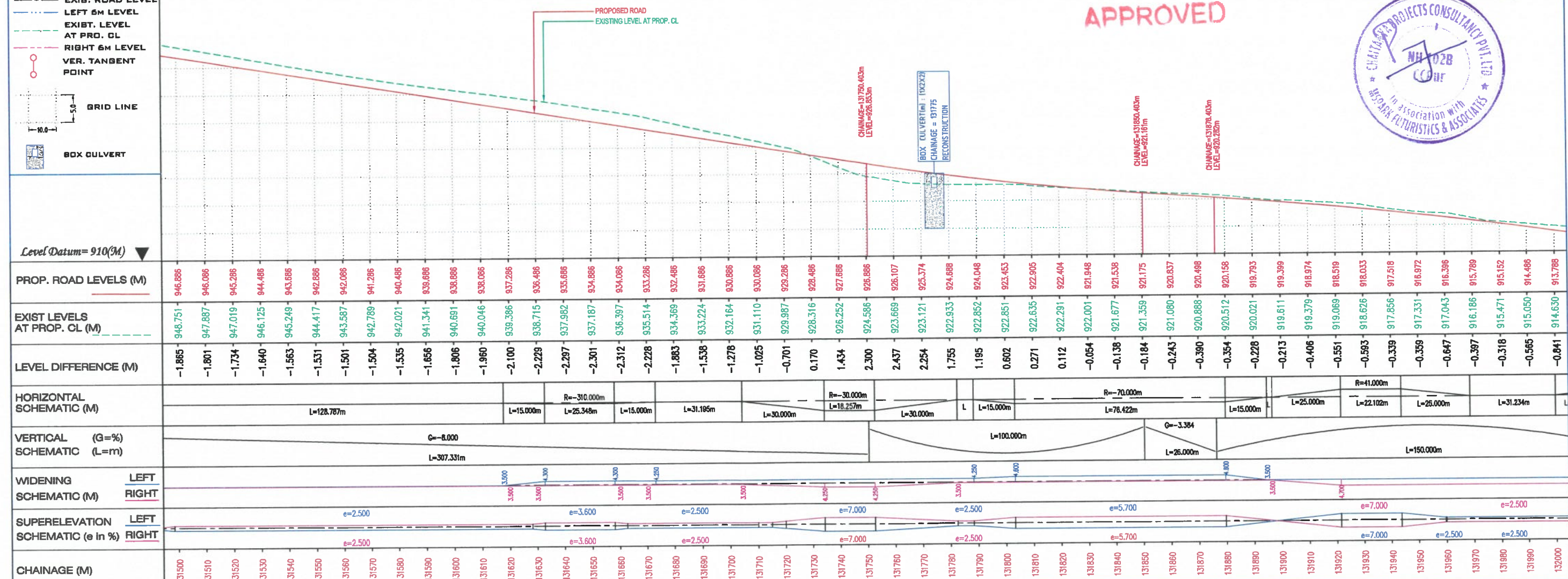
PROPOSED PLAN :

TOE LINE
 ES EDGE
 S EDGE
 D/W EDGE
 GEN. LINE
 Q/W EDGE
 S EDGE
 ES EDGE
 TOE LINE
 HOR. TANGENT POINT
 PROW
 CULVERT
 BRIDGE

PROPOSED PROFILE :

PROP. LEVEL
 EXIS. ROAD LEVEL
 LEFT 5M LEVEL
 EXIST. LEVEL
 AT PRO. CL
 RIGHT 5M LEVEL
 VER. TANGENT POINT
 GRID LINE
 BOX CULVERT

CHURACHANDPUR



DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd.
 Managing Director

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

GPT Infraprojects Limited
 Imphal Branch
 795001

CHAITANYA PROJECTS CONSULTANCY PVT. LTD.
 In association with
 BISSAN FUTURESTICS & ASSOCIATES

APPROVED

Rev.	Date	Description

CLIENT:

 BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR:

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

AUTHORITY ENGINEER:

 IN ASSOCIATION WITH MSPARK FUTURESTICS AND ASSOCIATES
 C-5, 2ND FLOOR, RK TOWER, SECTOR-4, VAISHALI, GHANABAD-201010.

SAFETY CONSULTANT:

 PP-67, Tankapuri Road, BBSR-16, Odisha

PROJECT CONSULTANT:

 E-82, Rajesh Kumar Path, S.K.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT:

 6036 & 641, JMD Margalla, Sector-46, Gurgaon, Haryana - 122018.
 E-mail: info@spstec.com Website: www.spstec.com

PROJECT:
 Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuwai section of NH 102B from Km 118.850 to Km 130.000 (Package-4A) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN: AMIT
 DESIGNED: NISHANT
 CHECKED: VIPUL
 DATE: OCT - 2021

TITLE: Plan & Longitudinal Profile (Realignment)
 (From Km 131+500 to Km 132+000)
 SCALE: 1:1000 (PLAN) 1:100 (PROFILE)
 DRG. No: GPT/CCT/4A/HW/PPN/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
 S EDGE
 C/W EDGE
 CEN. LINE
 C/W EDGE
 S 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 PROP. CL
 RIGHT 6M LEVEL
 VER. TANGENT POINT
 GRID LINE
 BOX CULVERT

Level Datum = 910(M) ▼

PROP. ROAD LEVELS (M)

EXIST LEVELS AT PROP. CL (M)

LEVEL DIFFERENCE (M)

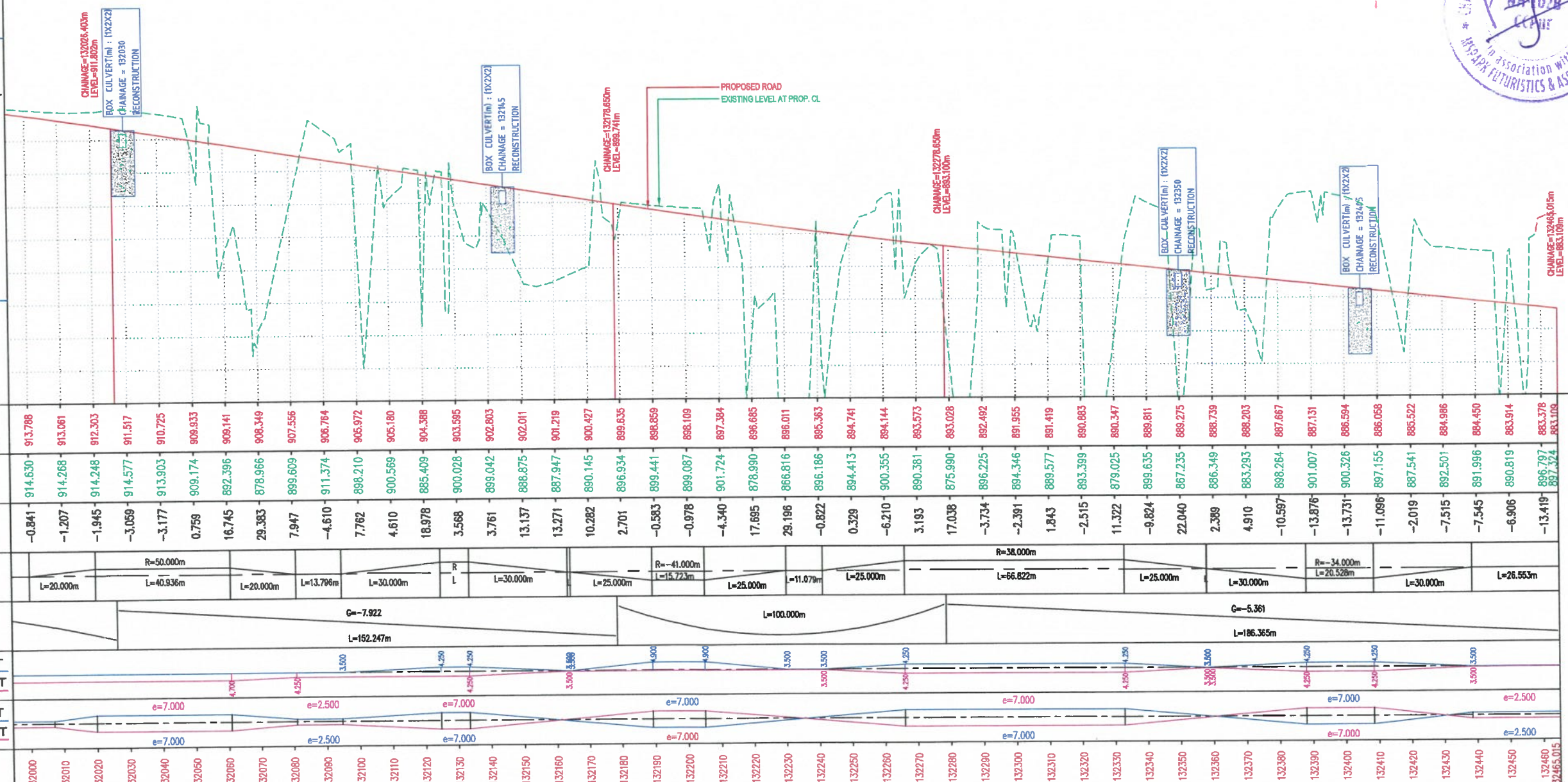
HORIZONTAL SCHEMATIC (M)

VERTICAL (G=%) SCHEMATIC (L=M)

WIDENING SCHEMATIC (M) LEFT RIGHT

SUPERELEVATION SCHEMATIC (e in %) LEFT RIGHT

CHAINAGE (M)



DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd.

Managing Director

APPROVED

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

GPT Infraprojects Limited
 Imphal Branch
 795001

SHAMBHAVI PROJECTS CONSULTANCY PVT. LTD.
 In association with
 INFRASTRUCTURE FUTURESTICS & ASSOCIATES

Rev.	Date	Description

CLIENT:

 BUILDING INFRASTRUCTURE - BUILDING THE NATION

EPC CONTRACTOR:

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

AUTHORITY ENGINEER:

 IN ASSOCIATION WITH MSPARK FUTURESTICS AND ASSOCIATES
 C-6/90 FLOOR, AK TOWER, SECTOR-4 VAISHALI, GHANABAD-201010.

SAFETY CONSULTANT:

 PP-07, Tankapuri Road, BBSR-18, Odisha

PROOF CONSULTANT:

 E-82, Rajesh Kumar Path, S.K.Puri, Boring Road, Patna-800001

DESIGN CONSULTANT:

 9/28 & 4/1, 2ND Magnolia, Sector 46, Cuttack, Bhubaneswar - 753018.
 E-mail: info@spstpl.com Website: www.spstpl.com

PROJECT:
 Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 118.850 to Km 130.000 (Package-4A) in the State of Manipal on Engineering, Procurement & Construction (EPC) mode.

DRAWN AMIT
 DESIGNED NISHANT
 CHECKED VIPUL
 DATE: OCT - 2021

TITLE: Plan & Longitudinal Profile (Realignment)
 (From Km 132+000 to Km 132+465.015)
 SCALE: HORIZONTAL: 1:1000, VERTICAL: 1:100 (at 42.5m Road)
 REV: R0
 DRG. NO: GPT/CCT/4A/HW/PPN/11B