

# **Government of Jammu & Kashmir**



## **JHELUM & TAWI FLOOD RECOVERY PROJECT**

**Jammu Province**

**Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir**

**(Tutain Di Khoi Road)**

**(Length : 11.000 km)**

**(DRAWINGS)**

**(Detailed Project Report)**

**September 2019**

**eptisa**

# *ROAD DRAWINGS*

≡ LIST OF DRAWINGS ≡

## LIST OF DRAWINGS FOR ROAD

Sl. No.	Descriptions	Drawing No.	No.of Sheet
(A)	<b>ROAD WORKS</b>		
1.	List of Drawings	EPTISA/JTFRP/DPR/J&K/LOD-01	01
2.	Legend, Abbreviations & General Notes	EPTISA/JTFRP/DPR/J&K/LEGEND-01	01
3.	Index Map	EPTISA/JTFRP/DPR/J&K/IM-01	01
4.	Typical Cross Section	EPTISA/JTFRP/DPR/J&K/TCS-01	01
5.	Strip Plan	EPTISA/JTFRP/DPR/J&K/SP-01 to 02	02
6.	Plan and Profile	EPTISA/JTFRP/DPR/J&K/PP-01 to 10	17
7.	Horizontal Alignment Report	EPTISA/JTFRP/DPR/J&K/HAR-01 to 05	05
8.	Vertical Alignment Report	EPTISA/JTFRP/DPR/J&K/VAR-01 to 04	04
9.	Signage Plan	EPTISA/JTFRP/DPR/J&K/SP-01 to 12	12
10.	Utility Relocation Plan-(For Electricity Department)	EPTISA/JTFRP/DPR/J&K/URP-01 to 12	12
11.	Utility Relocation Plan-(For Telephone Department)	EPTISA/JTFRP/DPR/J&K/URP-01 to 12	12
12.	Utility Relocation Plan-(For Water Department)	EPTISA/JTFRP/DPR/J&K/URP-01 to 12	12
13.	Tree Cutting	EPTISA/JTFRP/DPR/J&K/TC-01 to 12	12
14.	<i>Miscellaneous Drawings</i>		
i.)	Road Signs & Road Delineators - (3 Sheets)	EPTISA/JTFRP/DPR/J&K/MISC-01 to 03	03
ii.)	Typical Details of Distance Stone, Boundary Stone & Guard Post	EPTISA/JTFRP/DPR/J&K/MISC-02	01
iii.)	Typical Details of Metal Beam Crash Barrier	EPTISA/JTFRP/DPR/J&K/MISC-03	01
15.	<i>GIS Mapping</i>		04
16.	Details of PCC Retaining Wall	EPTISA/JTFRP/DPR/J&K/RW-01	01
17.	Dimension Detail of Breast Wall	EPTISA/JTFRP/DPR/J&K/BW/01	01
18.	<i>Culvert Drawings</i>		
i.)	Typical General Arrangement Drawing for Single Cell Box Culvert	EPTISA/JTFRP/DPR/J&K/BOX/GAD/01	01
ii.)	Typical General Arrangement Drawing for Single Cell Pipe Culvert	EPTISA/JTFRP/DPR/J&K/PIPE/GAD/01	01
iii.)	Typical General Arrangement Drawing for Double Cell Pipe Culvert	EPTISA/JTFRP/DPR/J&K/PIPE/GAD/01	01
19.	<i>Tentative General Arrangement Drawing Bridges</i>		
i.)	Tentative General Arrangement Drawing Bridge At CH. 0+760	EPTISA/JTFRP/DPR/J&K/GAD/0+760/01	01
ii.)	Tentative General Arrangement Drawing Bridge At CH. 1+800	EPTISA/JTFRP/DPR/J&K/GAD/1+800/01	01
iii.)	Tentative General Arrangement Drawing Bridge At CH. 3+600	EPTISA/JTFRP/DPR/J&K/GAD/3+600/01	01
iv.)	Tentative General Arrangement Drawing Bridge At CH. 7+300	EPTISA/JTFRP/DPR/J&K/GAD/7+300/01	01
v.)	Tentative General Arrangement Drawing Bridge At CH. 9+700	EPTISA/JTFRP/DPR/J&K/GAD/9+700/01	01
vi.)	Tentative General Arrangement Drawing Bridge At CH. 9+740	EPTISA/JTFRP/DPR/J&K/GAD/9+740/01	01

CLIENT :   
**JHELUM & TAWI  
FLOOD RECOVERY PROJECT**  
 Jhelum Tawi Flood Recovery Project  
 2nd Floor ERA Commercial Complex Rambagh  
 Srinagar-190 009.

PROJECT :  
 Consultancy Services for Preparing Detailed Project  
 Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:  
 **Eptisa Servicios de Ingenieria S.L.**  
 Unit 1203, 12th Floor, Tower 1, PS Srijan  
 Corporate Park, Plot No. 2, Block EP & GP,  
 Sector v, Salt Lake Kolkata - 700091,  
 West Bengal  
 Ph: 033-40347200  
 www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY : SD  
 DESIGNED BY : SCK/MM  
 APPROVED BY : KG

TITLE :  
**LIST OF DRAWING**  
 DRG. NO. : EPTISA/JTFRP/DPR/J&K/LOD/01  
 REVISION : R-1  
 September 2019

≡ LEGEND, ABBREVIATIONS & GENERAL NOTES ≡

**LEGEND**

**A. PLAN**

*a) Existing*

1 Security Room		31 Divider	
2 Pump house		32 Dusbin	
3 Solar		33 Earthen Road	
4 Rail trac		34 Bitumen Road	
5 Railing		35 Existing Center Line	
6 Telephone Pst tp.		36 Shed	
7 Under Construction Building		37 Sign Board	
8 Hoarding Post		38 Bedi	
9 Water Tank		39 Canal / River	
10 Wire Crossing Details		40 Drain	
11 P.c.c Road		41 Alart Post ap.	
12 Pucca House One Storied Commercial & Residential ph-i/c+r.		42 Compound wall	
13 Pucca House Two Storied Residential ph-ii-r.		43 Fencing	
14 Abandoned Building		44 Gate	
15 Damage Culvert		45 GPS Pillar gps.	
16 Damage Pipe Culvert		46 Reference Pillar	
17 Ep Box		47 Electric Post ep.	
18 Hotel		48 Guard Wall	
19 Retaining Wall		49 Temple / Mandir	
20 Ohe		50 Pond / Ditch / Water Logged	
21 Parking		51 Nala / Natural Stream	
22 Shoulder		52 Petrol Pump	
23 Pave Shoulder		53 Heigh Must Light hmt.	
24 Pavement		54 Water Tap tap.	
25 Pipe Culvert		55 Wildlife Sanctuary Sign Board	
26 Seating bench		56 H.F.L hfl.	
27 Showroom		57 Toilet	
28 Stair		58 Handpump/Tube well tw.	
29 Chamber		59 OFC	
30 Cover Drain		60 Kancha House Commercial kh-c.	

61 Kancha House Residential kh-r.	
62 Km Stone kmp.	
63 Lamp Post lp.	
64 Semi Pucca House Commercial sp-c.	
65 Semi Pucca House Residential sp-r.	
66 Survey Station stn.	
67 Pucca House One Storied Commercial ph-i-c.	
68 Pucca House One Storied Residential ph-i-r.	
69 Pucca House Two Storied Commercial ph-ii-c.	
70 Transformer tns.	
71 TREE 1 (Ã?300 TO Ã?600) t1	
72 TREE 2 (Ã?600 TO Ã?900) t2	
73 TREE 3 (Ã?900 TO Ã?1200) t3	
74 TREE 4 (Ã?1200 TO ABOVE) t4	

**GENERAL NOTES**

**A) General**

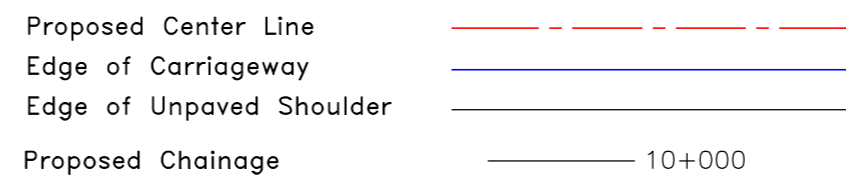
1. All angles are in degree (°) – minute (') – second (") format.
2. All chainages are in kilometres and all levels are in meters unless otherwise specified.
3. All the co-ordinates (X, Y) are with respect to GPS values (established for project road at 2 km interval).
4. Details shown in the plans are based on topographical survey carried out under the assignment.
5. The scale mentioned for all drawings is applicable for A2 sheet.

**B) Geometric Design**

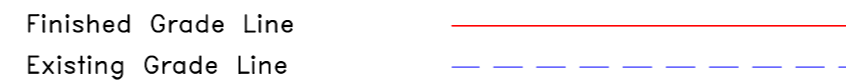
1. The pavements have been considered to be rotated about the Carriageway Center line to attain requisite amount of superelevation.

*b) Proposed*

**A. PLAN**



**B. PROFILE**



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**(Tutain Di Khoi Road)**

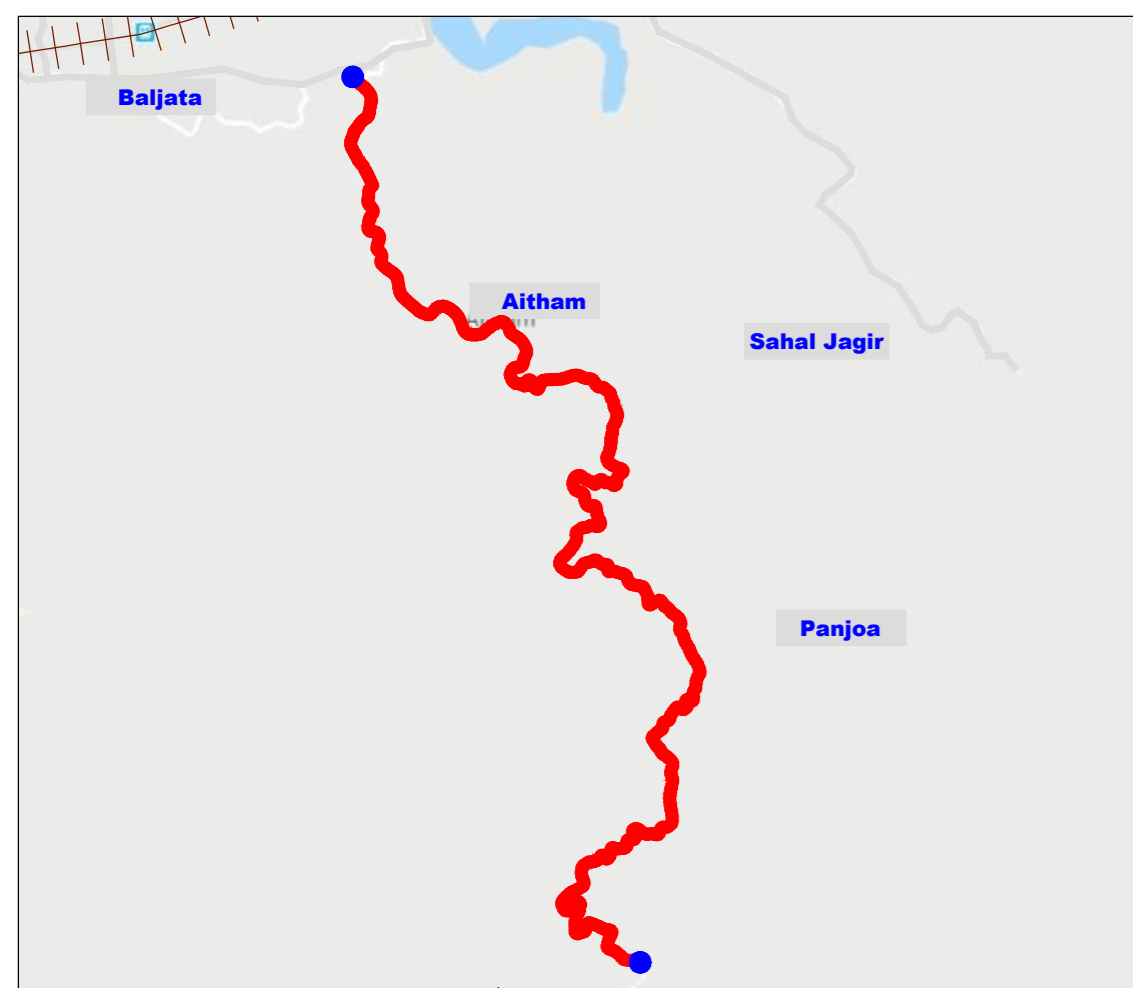
DESIGN CONSULTANT:  
 **Eptisa Servicios de Ingenieria S.L.**  
 Unit 1203, 12th Floor, Tower 1, PS Srijan  
 Corporate Park, Plot No. 2, Block EP & GP,  
 Sector v, Salt Lake Kolkata - 700091,  
 West Bengal  
 Ph: 033-40347200  
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REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	N.T.S

TITLE :	LEGEND, ABBREVIATIONS & GENERAL NOTES
DRG. NO. :	EPTISA/JTFRP/DPR/J&K/LEGEND/01
REVISION : R-1	September 2019

☰ INDEX MAP ☰



█ Project Road Stretch  
— Other Roads  
+++++ Railway Track

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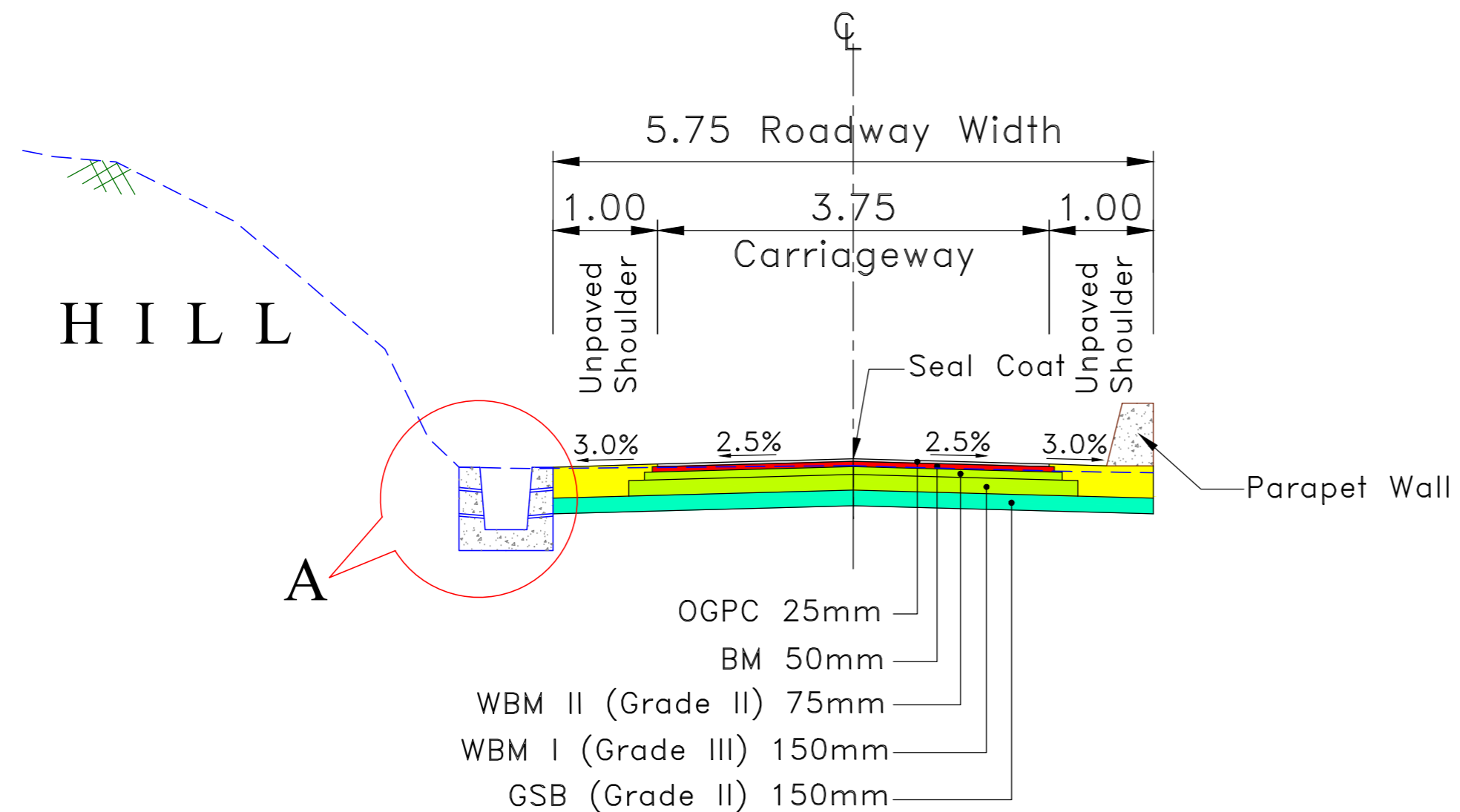
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 DESIGNED BY : SCK/MM  
 APPROVED BY : KG  
 SCALE : N.T.S

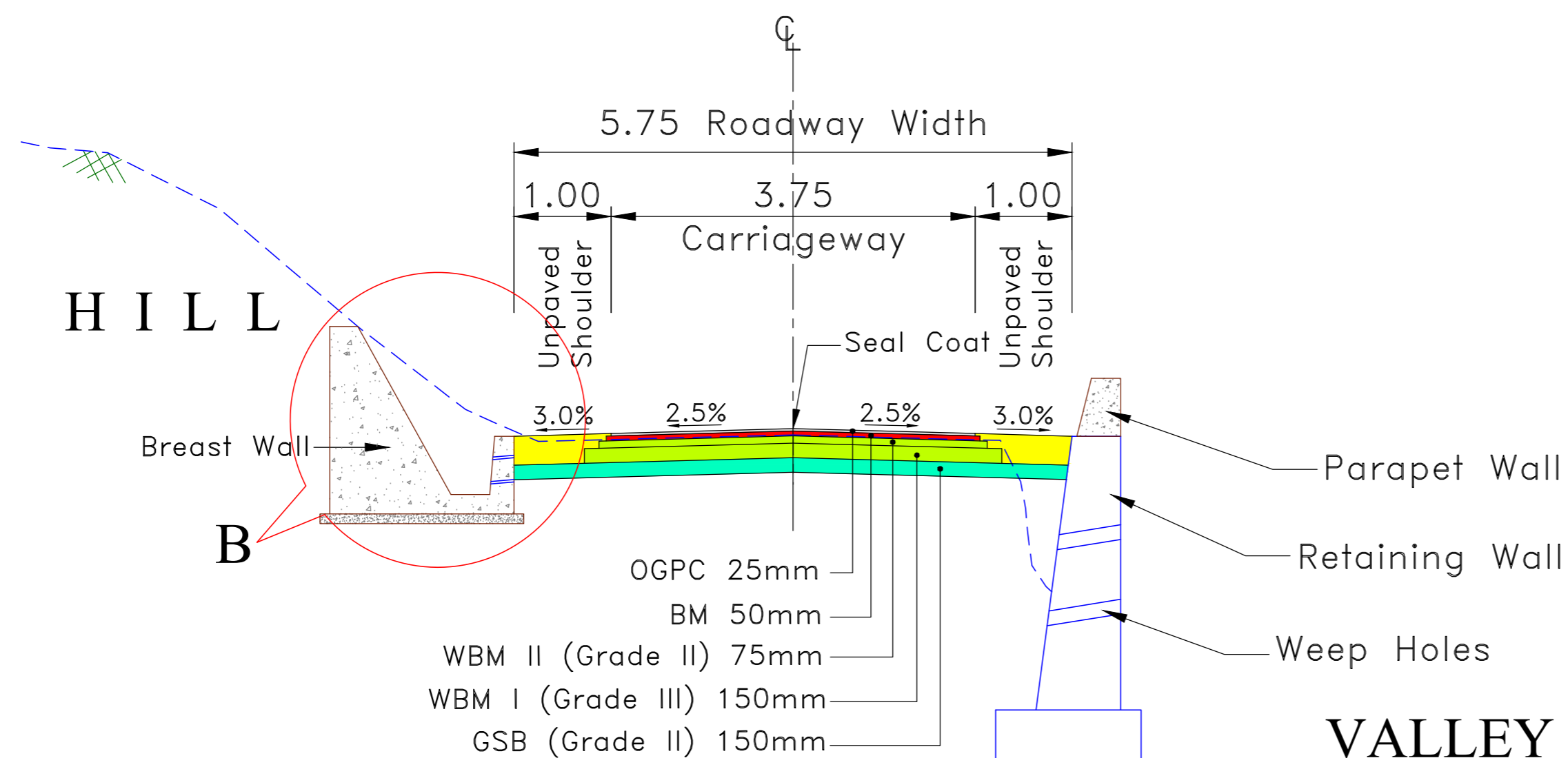
TITLE :  
**Index Map**  
 DRG. NO. : EPTISA/JTRFP/DPR/J&K/IM/01  
 REVISION : R-1  
 September 2019



≡ TYPICAL CROSS SECTIONS ≡



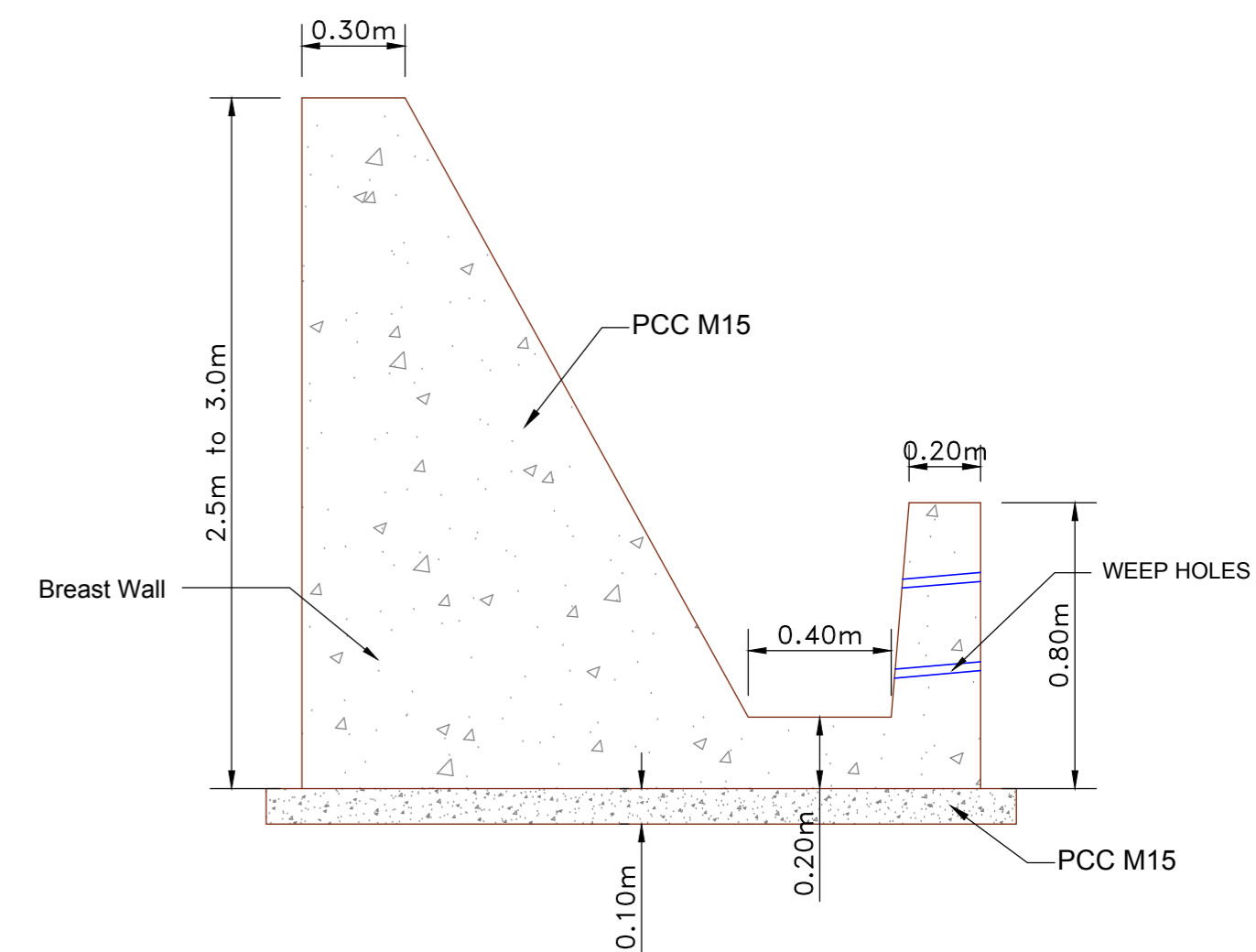
**TYPE - 1 : TYPICAL CROSS SECTION OF SINGLE LANE CARRIAGEWAY AT NEW CONSTRUCTION WITH LEFT SIDE DRAIN**



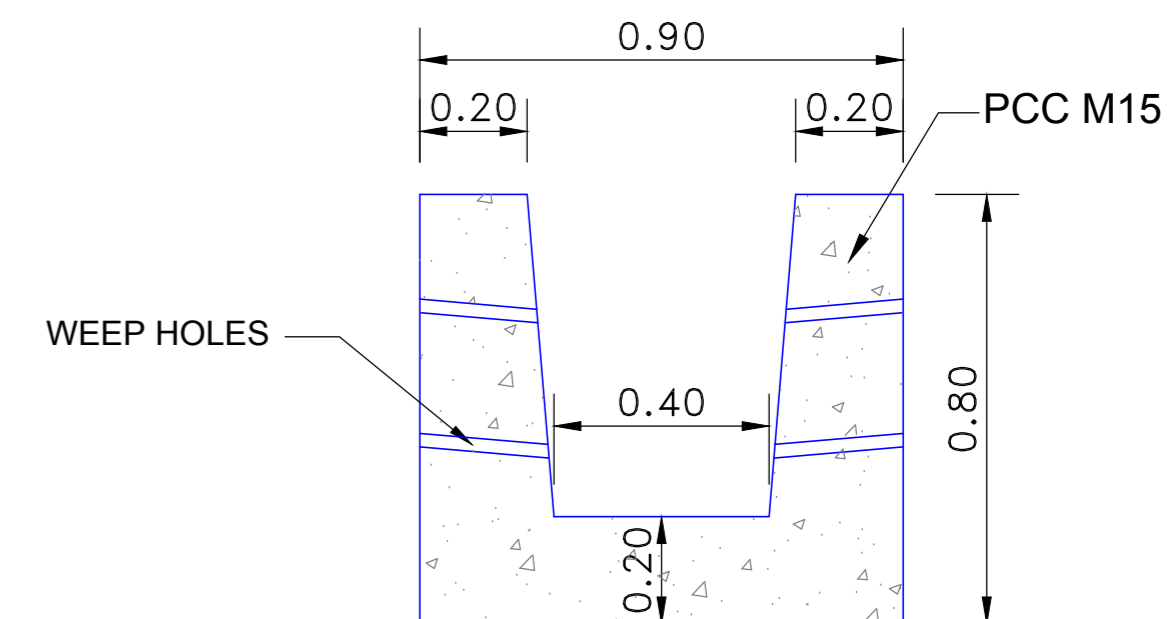
**TYPE - 2 : TYPICAL CROSS SECTION OF SINGLE LANE CARRIAGEWAY AT NEW CONSTRUCTION WITH DRAIN & BREAST WALL AT LEFT SIDE & RETAINING WALL AT RIGHT SIDE**

**Note:**

1. PCC upto 75mm thick shall be done by BM.
2. PCC from 75mm to 225mm thick shall be done by WBM after dismantling Existing Bituminous Surface.
3. PCC of thickness more than 225mm shall be done GSB after dismantling Existing Bituminous Surface.
4. PCC shall be decided based on difference in level of FRL and existing level and/or level after dismantling and recompaction of Existing Bituminous Surface.



**Detail -B  
Typical Drain with Breast Wall**



**Detail -A  
Typical Lined Drain**

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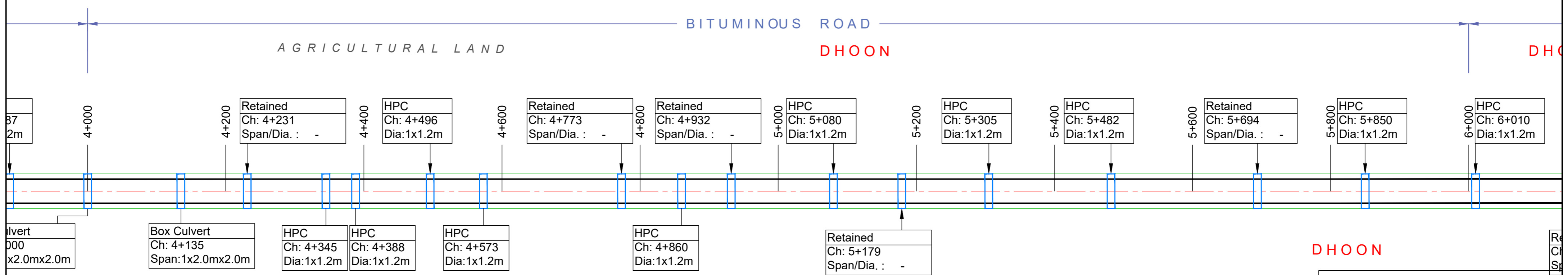
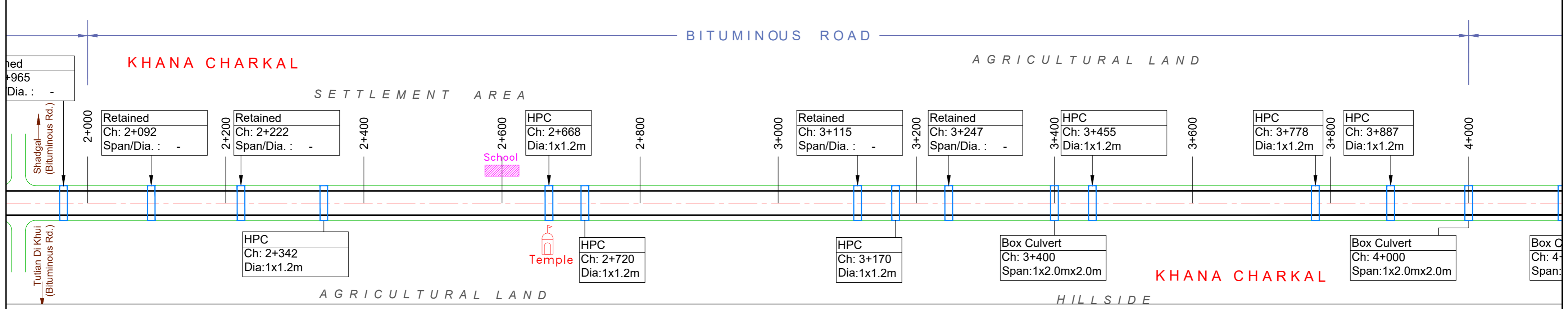
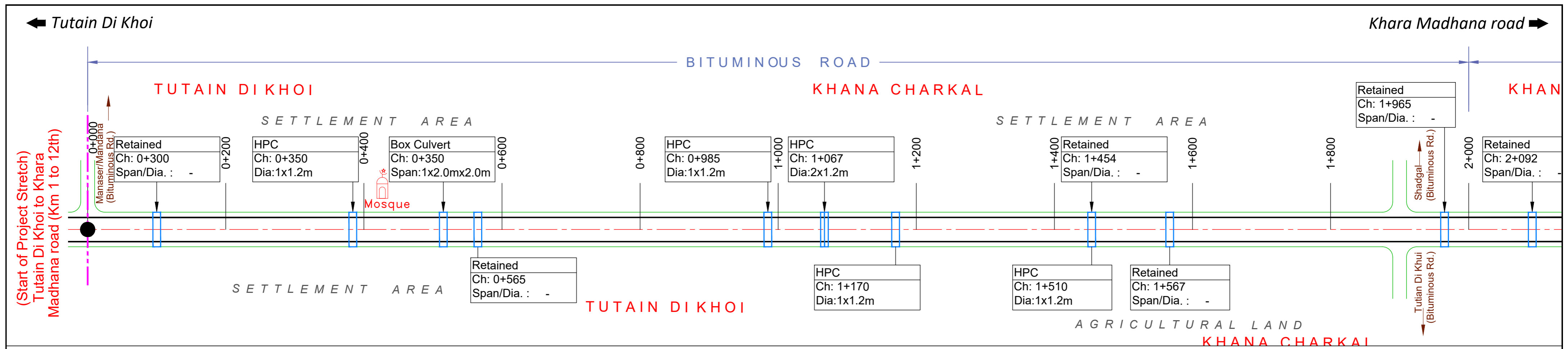
DESIGN CONSULTANT:  
  
**Eptisa Servicios de Ingenieria S.L.**  
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REV.	DATE	DESCRIPTION

DRAWN BY : SD  
 DESIGNED BY : SCK/MM  
 APPROVED BY : KG  
 SCALE : 1:80

TITLE :  
**TYPICAL CROSS SECTION**  
 DRG. NO. : EPTISA/JTFRP/DPR/J&K/TCS/01  
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≡ STRIP PLAN ≡



**LEGEND:**

- Existing Center Line
- Existing Carriageway Edge
- Existing Shoulder Edge

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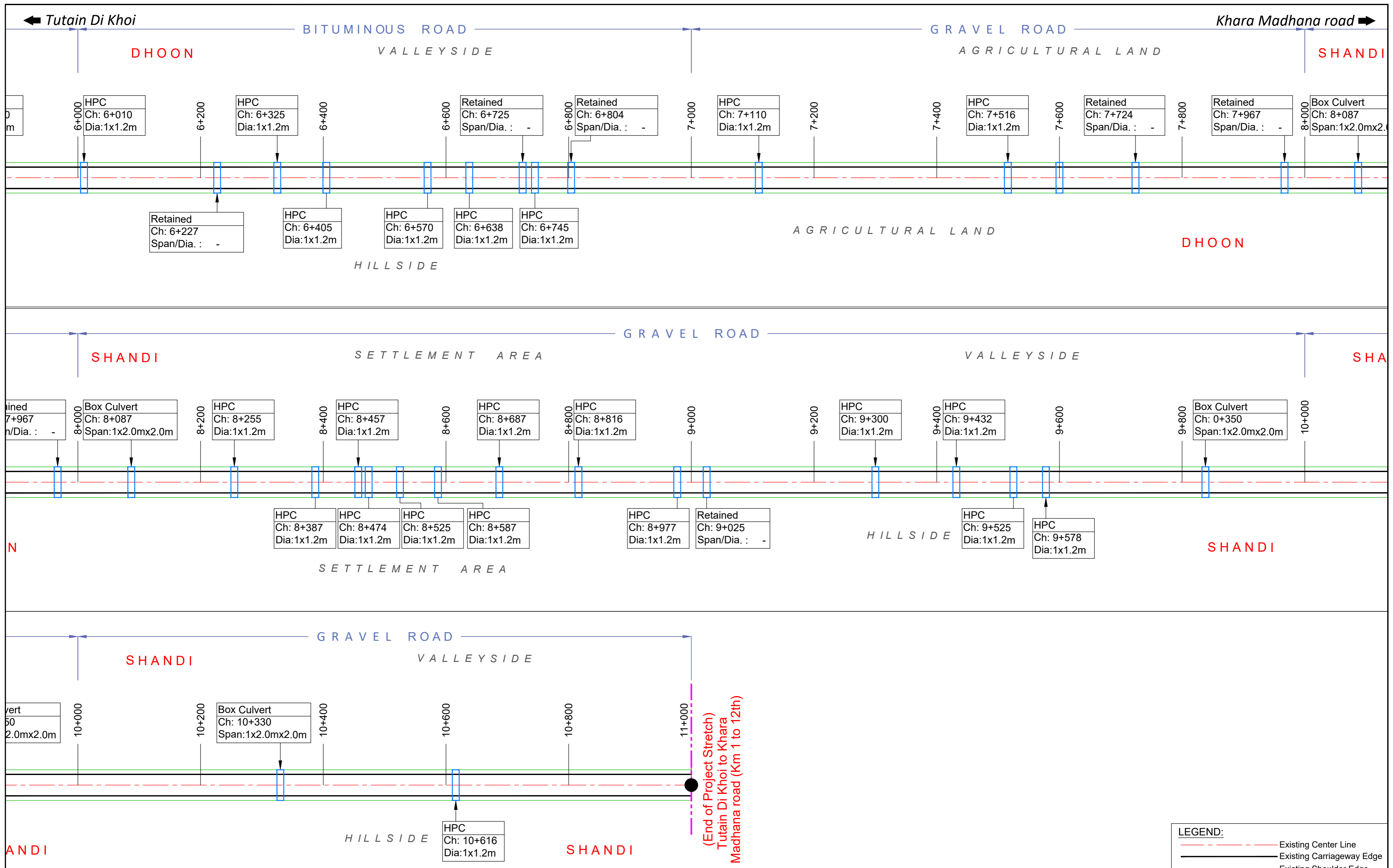
REV.	DATE	DESCRIPTION

DRAWN BY : SD  
DESIGNED BY : SCK/MM  
APPROVED BY : KG

LONG SCALE: 1:2500  
TRANS SCALE: 1:1000

TITLE : **Strip Plan**  
(Tutain Di Khoi Road)

DRG. NO. : EPTISA/JTFRP/DPR/J&K/SP/01  
REVISION : R-1  
September 2019



CLIENT :   
 Jhelum Tawi Flood Recovery Project  
 2nd Floor ERA Commercial Complex Rambagh  
 Srinagar-190 009.

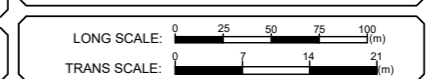
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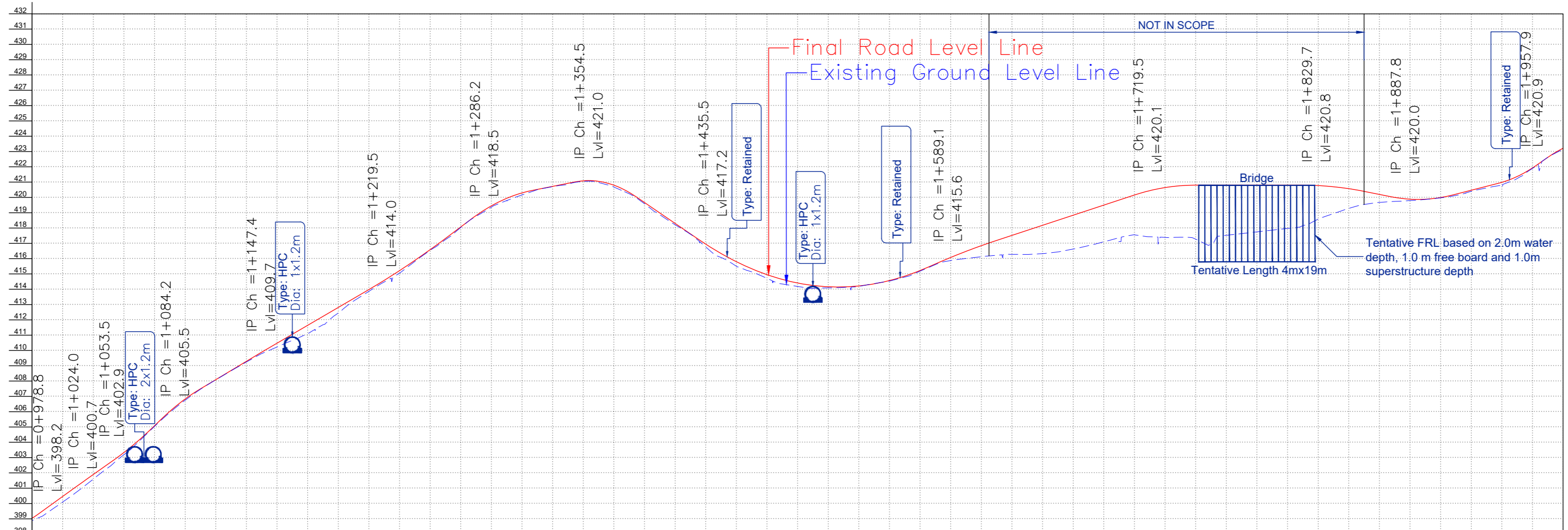
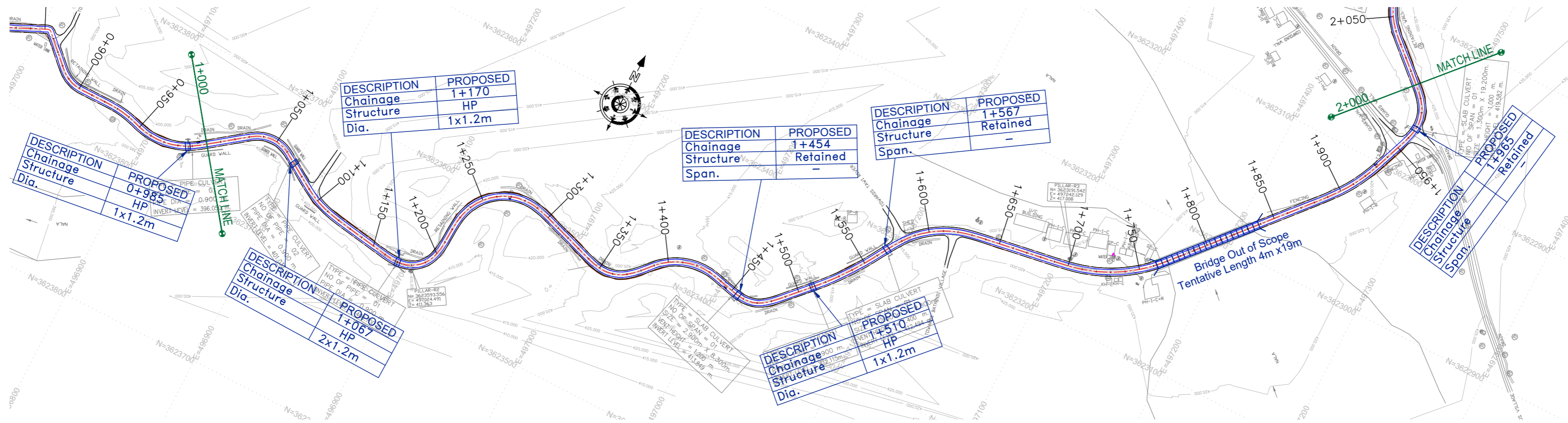
DRAWN BY : SD  
 DESIGNED BY : SCK/MM  
 APPROVED BY : KG

TITLE : **Strip Plan**  
 (Tutain Di Khoi Road)  
 DRG. NO. : EPTISA/JTFRP/DPR/J&K/SP/02  
 REVISION : R-1  
 September 2019



≡ PLAN PROFILE ≡





FINISHED ROAD LEVEL (M)	399.038	399.038	400.463	401.897	403.334	405.085	406.832	408.095	409.296	410.479	411.648	412.816	413.985	415.222	416.591	418.078	419.453	420.301	420.726	421.090	420.806	419.673	418.308	416.951	415.804	414.718	414.163	414.217	414.570	415.224	416.083	416.851	417.523	418.183	418.843	419.503	420.163	420.649	420.806	420.806	420.806	420.780	420.578	420.204	419.891	419.999	420.477	420.992	421.933	423.221	
EXISTING ROAD/GROUND LEVEL (M)	398.887	400.096	401.591	403.192	405.044	406.754	408.083	409.248	410.234	411.087	412.465	413.868	415.050	416.545	418.040	419.368	420.169	420.708	421.061	420.683	419.594	418.214	416.769	415.504	414.718	414.188	414.092	414.188	414.535	415.186	415.882	416.128	416.285	416.332	416.633	417.104	417.560	417.394	417.277	417.529	417.753	417.978	418.589	419.288	419.679	419.800	419.979	420.408	420.833	421.905	423.155
VERTICAL ALIGNMENT	G=0.000% L=168.574		G=0.000% L=25.000		G=0.000% L=25.000		G=0.000% L=25.000		G=0.000% L=3.243		G=3.818% L=68.307		G=7.516% L=40.000		G=10.888% L=40.000		G=27.682% L=40.000		G=27.682% L=40.000		G=13.324% L=150.000		G=4.434% L=40.000		G=3.300% L=90.406		G=0.000% L=70.200		G=1.987% L=40.000		G=1.987% L=40.000		G=1.987% L=40.000		G=1.987% L=40.000		G=1.987% L=40.000		G=1.987% L=40.000		G=1.987% L=40.000		G=1.987% L=40.000		G=1.987% L=40.000		G=1.987% L=40.000				
HORIZONTAL ALIGNMENT	R=35.558		R=29.000		R=30.573		R=28.991		R=22.000		R=17.040		R=15.000		R=15.000		R=15.000		R=15.000		R=15.000		R=15.000		R=15.000		R=15.000		R=15.000		R=15.000		R=15.000		R=15.000		R=15.000		R=15.000		R=15.000		R=15.000		R=15.000		R=15.000				
CHAINAGE (M)	1+000	1+020	1+040	1+060	1+080	1+100	1+120	1+140	1+160	1+180	1+200	1+220	1+240	1+260	1+280	1+300	1+320	1+340	1+360	1+380	1+400	1+420	1+440	1+460	1+480	1+500	1+520	1+540	1+560	1+580	1+600	1+620	1+640	1+660	1+680	1+700	1+720	1+740	1+760	1+780	1+800	1+820	1+840	1+860	1+880	1+900	1+920	1+940	1+960	1+980	2+000

Note:  
1. Horizontal Curve Details as referred in dwg no.EPTISA/JTFRP/DPR/J&K/HAR/01 to 05

CLIENT :   
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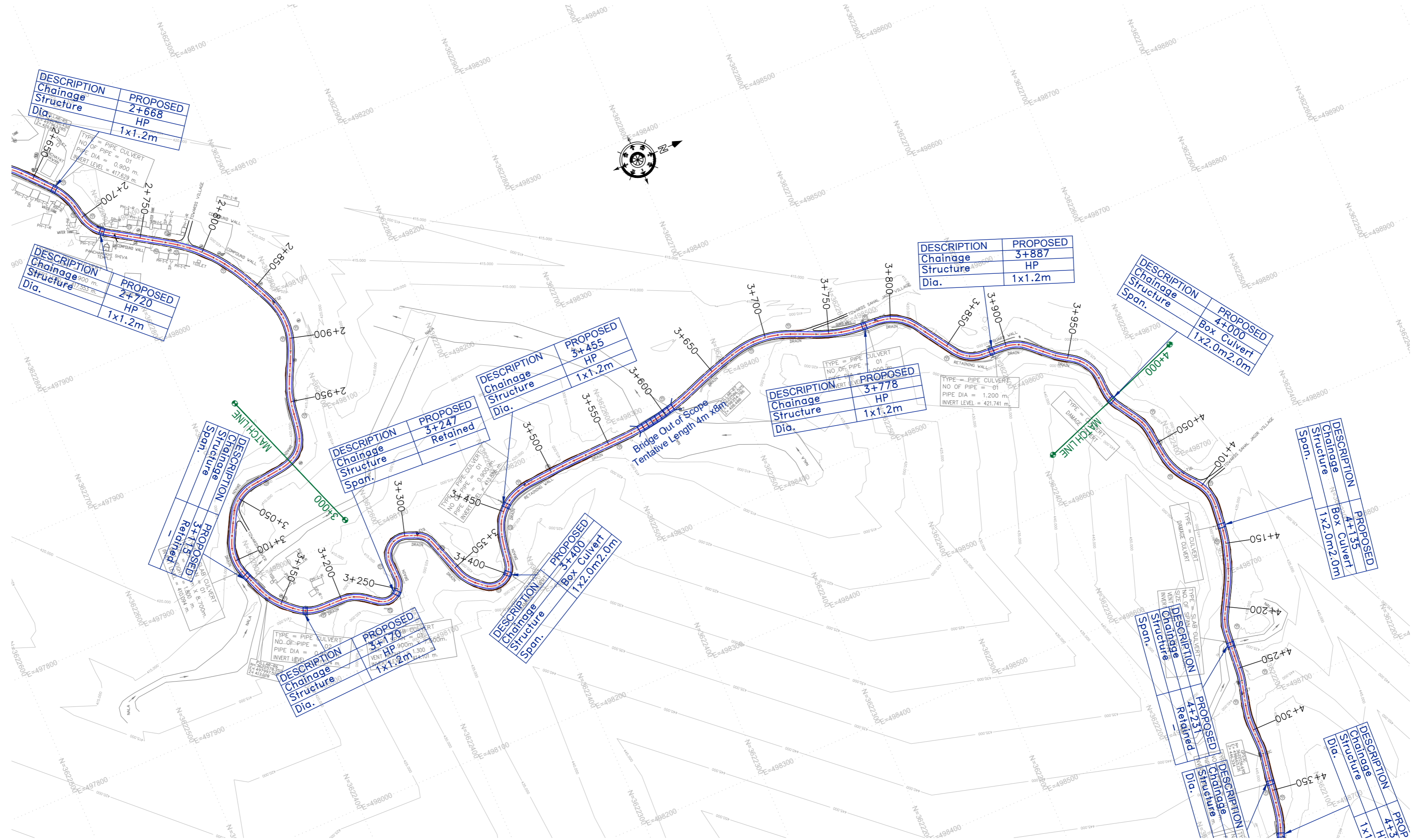
REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCKMM
APPROVED BY :	KG
SCALE :	HOR 1:2500 VER 1:250

TITLE :	<b>Plan &amp; Profile</b> (km 1+000 to km 2+000)
DRG. NO. :	EPTISA/JTFRP/DPR/J&K/PP/02
REVISION :	R-1
September 2019	



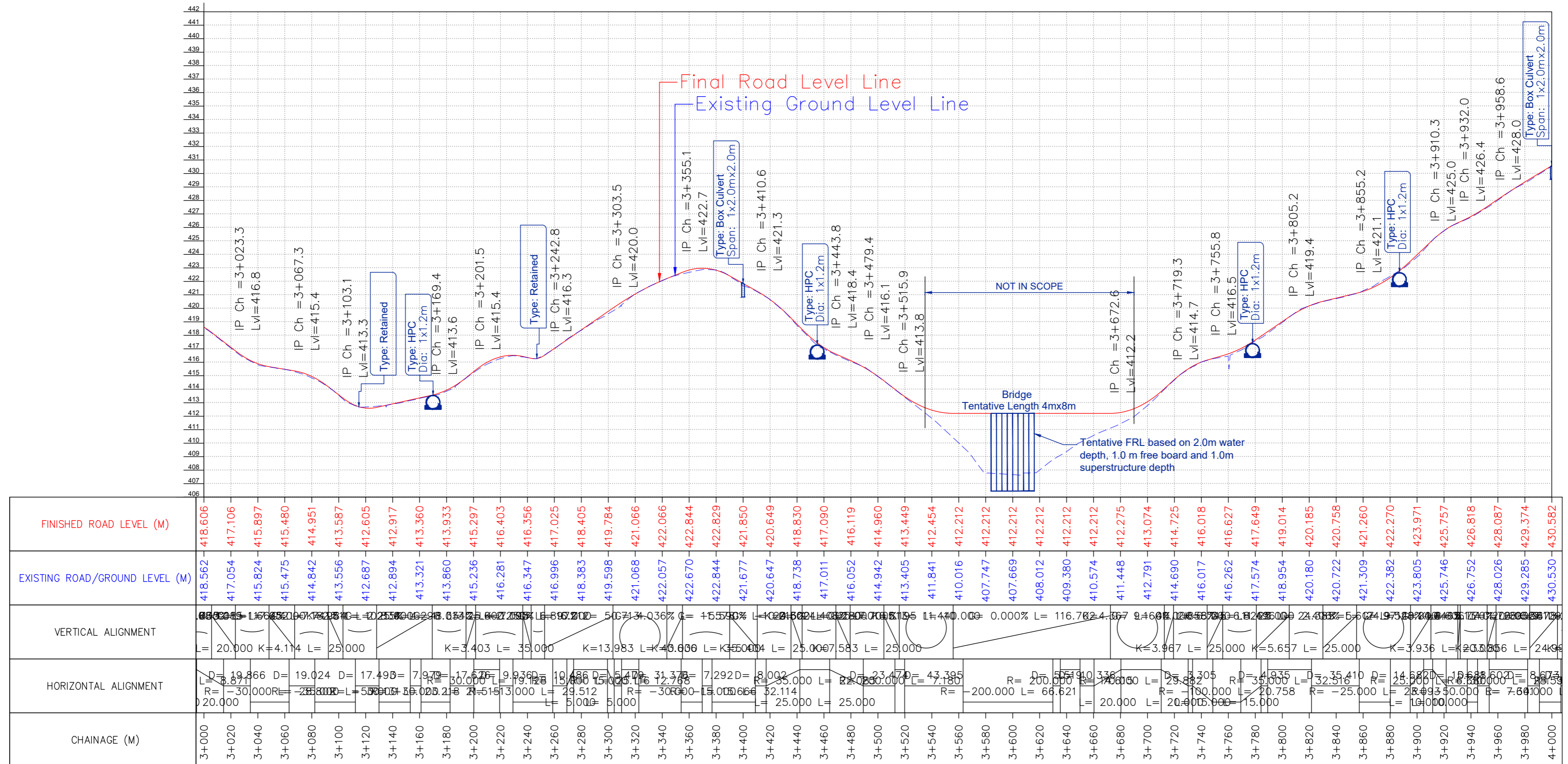


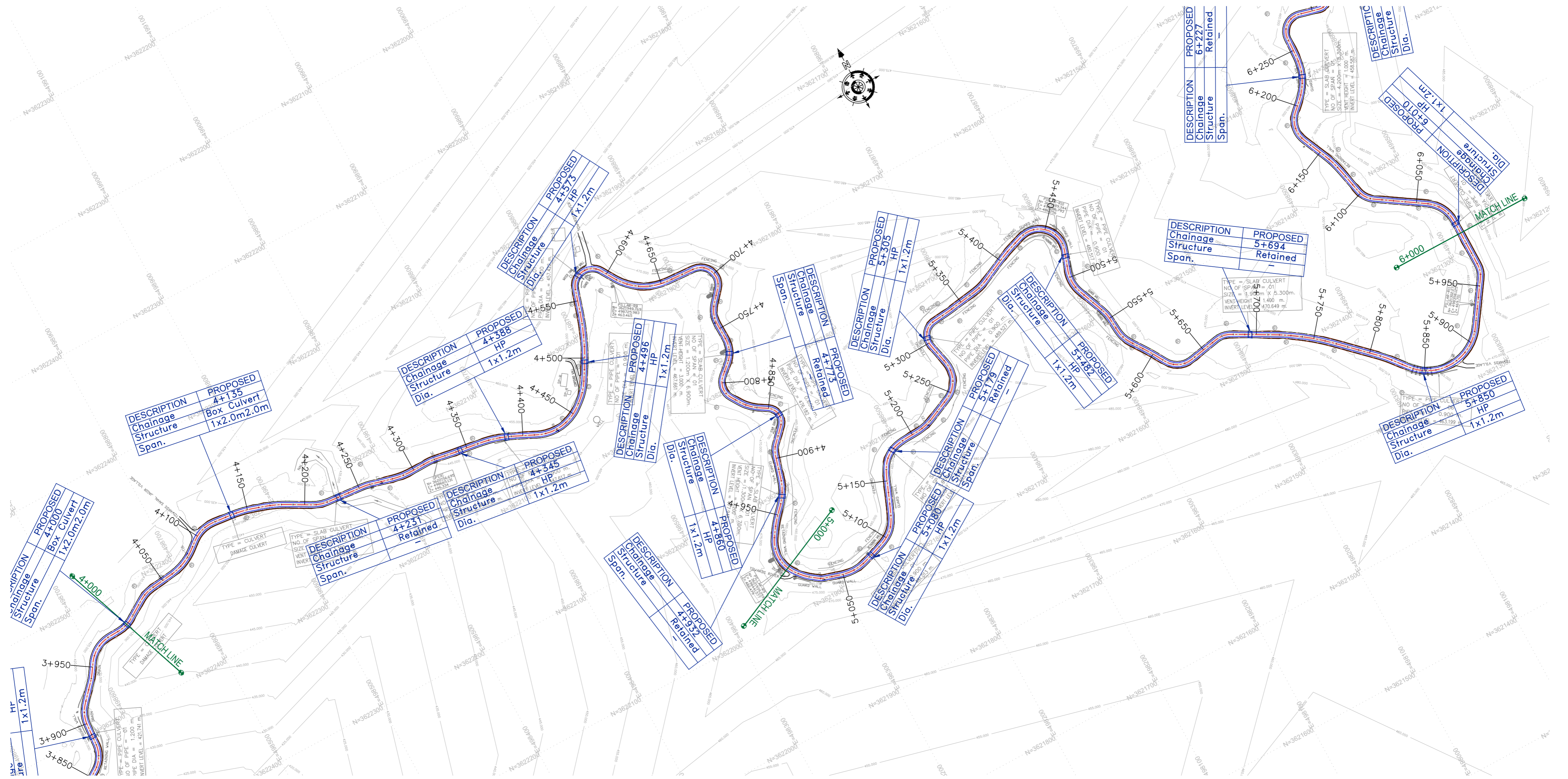


Note:  
1. Horizontal Curve Details as referred in dwg no.EPTISA/JTRFP/DPR/J&K/HAR/01 to 05

**(PROFILE ON NEXT SHEET)**

CLIENT :  Jhelum & Tawi Flood Recovery Project 2nd Floor ERA Commercial Complex Rambagh Srinagar-190 009.	PROJECT : Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir <b>(Tutain Di Khoi Road)</b>	DESIGN CONSULTANT:  <b>Eptisa Servicios de Ingenieria S.L.</b> Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal Ph: 033-40347200 www.eptisa.com	DRAWN BY : SD	TITLE : <b>Plan</b> (km 3+000 to km 4+000)												
			DESIGNED BY : SCK/MM		DRG. NO. : EPTISA/JTRFP/DPR/J&K/PP/04											
			APPROVED BY : KG	REVISION : R-1												
			SCALE : HOR 1:2500 VER 1:250		September 2019											
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REV.	DATE	DESCRIPTION														





Note:  
1. Horizontal Curve Details as referred in dwg no.EPTISA/JTFRP/DPR/J&K/HAR/01 to 05

(PROFILE ON NEXT SHEET)

CLIENT :



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DESIGN CONSULTANT:



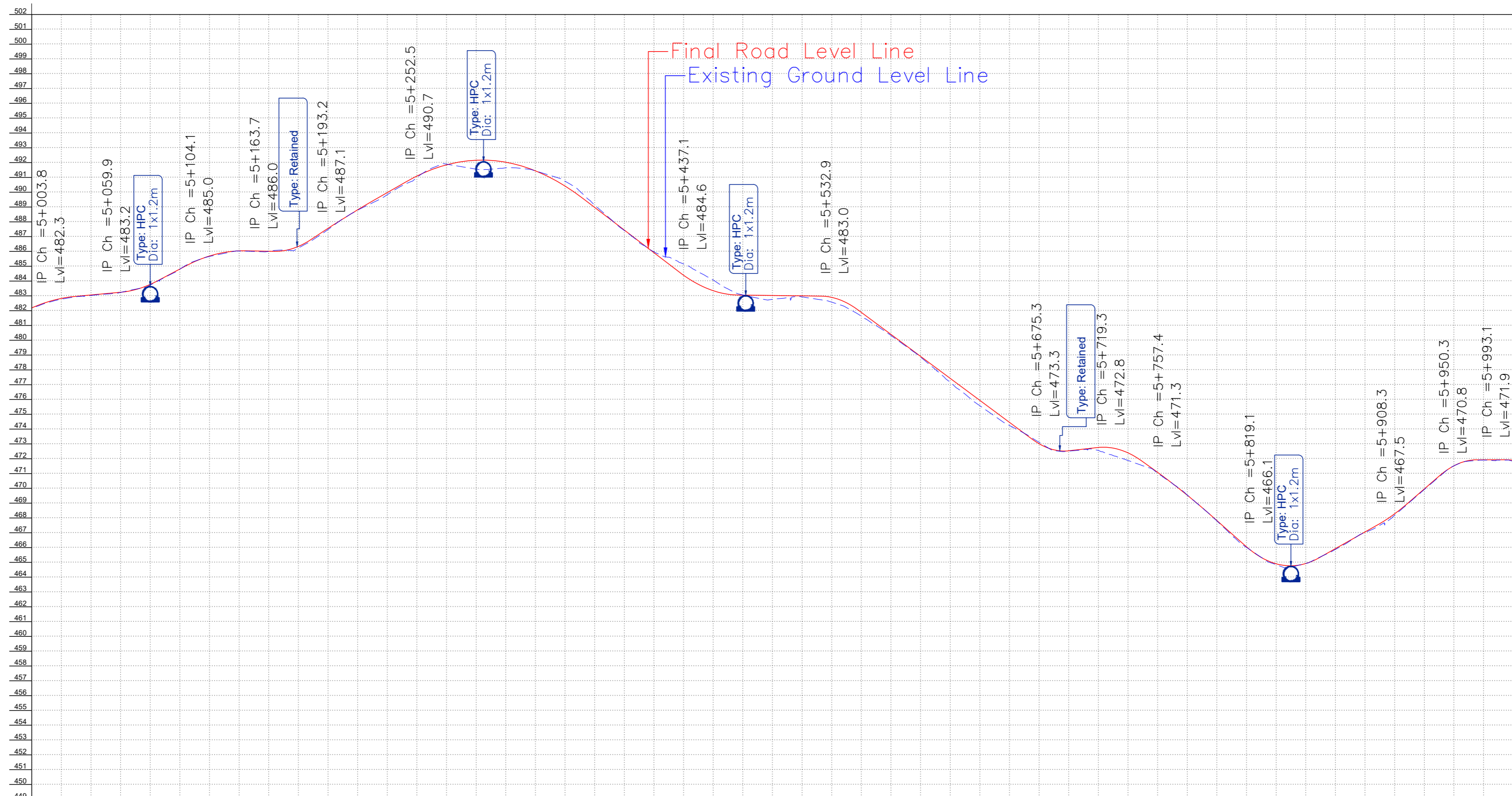
**Eptisa Servicios de Ingenieria S.L.**  
Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
Ph: 033-40347200  
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REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	HOR 1:2500 VER 1:250

TITLE :	<b>Plan</b> (km 4+000 to km 6+000)
DRG. NO. :	EPTISA/JTFRP/DPR/J&K/PP/05
REVISION :	R-1
	September 2019





CHAINAGE (M)	FINISHED ROAD LEVEL (M)	EXISTING ROAD/GROUND LEVEL (M)	VERTICAL ALIGNMENT	HORIZONTAL ALIGNMENT
5+000	482.190	482.143	G = 0.000% L = 135	R = 100.000
5+020	482.826	482.776	G = 0.150% L = 25.000	R = 100.000
5+040	483.056	483.023	G = 0.300% L = 25.000	R = 100.000
5+060	483.239	483.230	G = 0.380% L = 25.000	R = 100.000
5+080	483.773	483.725	G = 1.120% L = 25.000	R = 100.000
5+100	484.807	484.805	G = 2.220% L = 40.000	R = 100.000
5+120	485.689	485.661	G = 3.550% L = 40.000	R = 100.000
5+140	486.036	486.026	G = 4.000% L = 40.000	R = 100.000
5+160	486.011	486.007	G = 3.920% L = 40.000	R = 100.000
5+180	486.337	486.230	G = 8.000% L = 40.000	R = 100.000
5+200	487.556	487.477	G = 12.500% L = 40.000	R = 100.000
5+220	488.808	488.764	G = 17.500% L = 40.000	R = 100.000
5+240	489.975	489.830	G = 23.000% L = 40.000	R = 100.000
5+260	491.091	490.997	G = 29.000% L = 40.000	R = 100.000
5+280	491.848	491.894	G = 35.000% L = 40.000	R = 100.000
5+300	492.159	491.567	G = 39.000% L = 40.000	R = 100.000
5+320	492.024	491.650	G = 37.000% L = 40.000	R = 100.000
5+340	491.443	491.440	G = 32.000% L = 40.000	R = 100.000
5+360	490.415	490.741	G = 24.000% L = 40.000	R = 100.000
5+380	488.973	489.126	G = 16.000% L = 40.000	R = 100.000
5+400	487.443	487.410	G = 9.000% L = 40.000	R = 100.000
5+420	485.913	485.974	G = 2.000% L = 40.000	R = 100.000
5+440	484.391	485.153	G = -7.649% L = 40.000	R = 100.000
5+460	483.347	484.070	G = -14.000% L = 40.000	R = 100.000
5+480	483.047	483.062	G = -14.000% L = 40.000	R = 100.000
5+500	483.022	482.767	G = -14.000% L = 40.000	R = 100.000
5+520	482.996	482.928	G = -14.000% L = 40.000	R = 100.000
5+540	482.897	482.572	G = -14.000% L = 40.000	R = 100.000
5+560	481.880	481.629	G = -14.000% L = 40.000	R = 100.000
5+580	480.396	480.321	G = -14.000% L = 40.000	R = 100.000
5+600	478.911	478.863	G = -14.000% L = 40.000	R = 100.000
5+620	477.426	477.161	G = -14.000% L = 40.000	R = 100.000
5+640	475.941	475.576	G = -14.000% L = 40.000	R = 100.000
5+660	474.457	474.244	G = -14.000% L = 40.000	R = 100.000
5+680	473.010	473.108	G = -14.000% L = 40.000	R = 100.000
5+700	472.533	472.509	G = -14.000% L = 40.000	R = 100.000
5+720	472.761	472.563	G = -14.000% L = 40.000	R = 100.000
5+740	472.393	471.876	G = -14.000% L = 40.000	R = 100.000
5+760	471.077	471.034	G = -14.000% L = 40.000	R = 100.000
5+780	469.535	469.540	G = -14.000% L = 40.000	R = 100.000
5+800	467.822	467.800	G = -14.000% L = 40.000	R = 100.000
5+820	466.046	466.009	G = -14.000% L = 40.000	R = 100.000
5+840	464.903	464.845	G = -14.000% L = 40.000	R = 100.000
5+860	464.920	464.925	G = -14.000% L = 40.000	R = 100.000
5+880	465.926	465.875	G = -14.000% L = 40.000	R = 100.000
5+900	467.052	467.017	G = -14.000% L = 40.000	R = 100.000
5+920	468.281	468.180	G = -14.000% L = 40.000	R = 100.000
5+940	469.957	469.918	G = -14.000% L = 40.000	R = 100.000
5+960	471.520	471.522	G = -14.000% L = 40.000	R = 100.000
5+980	471.926	471.901	G = -14.000% L = 40.000	R = 100.000
6+000	471.904	471.826	G = -14.000% L = 40.000	R = 100.000

CLIENT :  Jhelum & Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

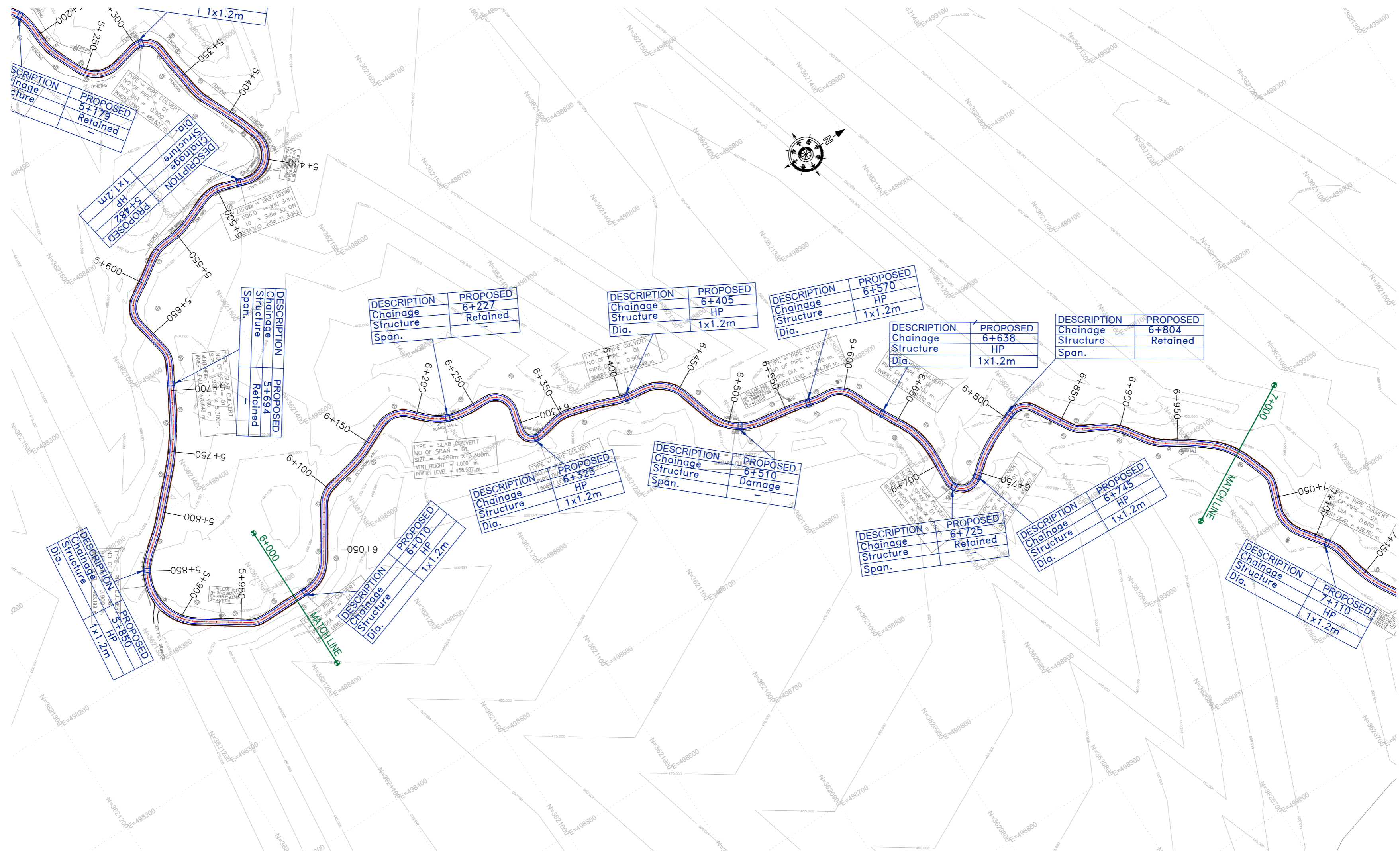
PROJECT :  
Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:  
 **Eptisa Servicios de Ingenieria S.L.**  
Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
Ph: 033-40347200  
www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY : SD  
DESIGNED BY : SCK/MM  
APPROVED BY : KG  
SCALE : HOR 1:2500  
VER 1:250

TITLE : **Profile**  
(km 5+000 to km 6+000)  
DRG. NO. : EPTISA/JFRP/DPR/J&K/PP/05b  
REVISION : R-1  
September 2019



Note:  
1. Horizontal Curve Details as referred in dwg no.EPTISA/JTRFP/DPR/J&K/HAR/01 to 05

**(PROFILE ON NEXT SHEET)**

CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

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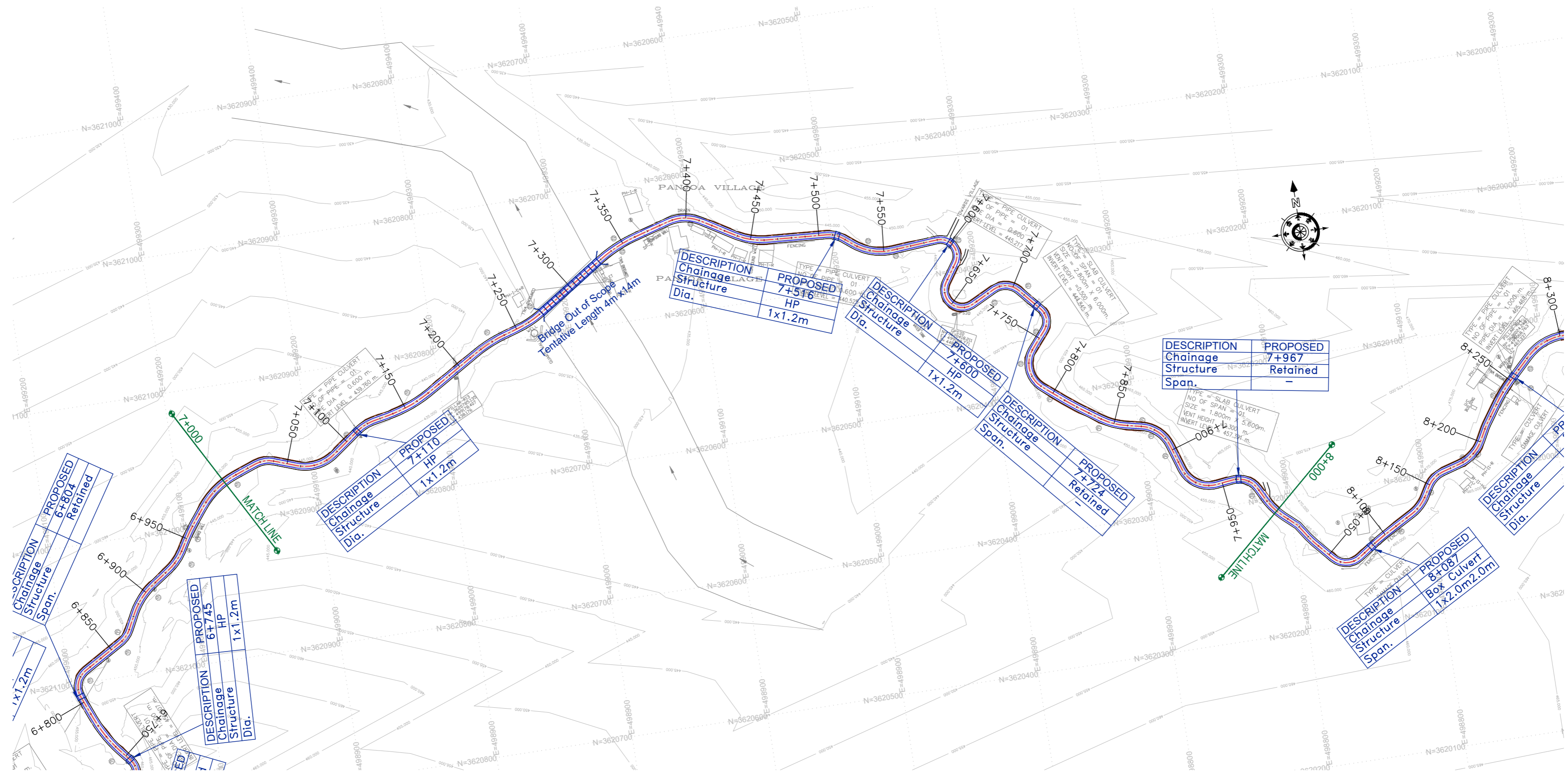
REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	HOR 1:2500 VER 1:250

TITLE :	<b>Plan</b> (km 6+000 to km 7+000)
DRG. NO. :	EPTISA/JTRFP/DPR/J&K/PP/06
REVISION :	R-1
September 2019	







**Note:**  
1. Horizontal Curve Details as referred in dwg no.EPTISA/JTFRP/DPR/J&K/HAR/01 to 05

**(PROFILE ON NEXT SHEET)**

CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:



**Eptisa Servicios de Ingenieria S.L.**  
Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
Ph: 033-40347200  
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REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	HOR 1:2500 VER 1:250

TITLE :	<b>Plan</b> (km 7+000 to km 8+000)
DRG. NO. :	EPTISA/JTFRP/DPR/J&K/PP/07
REVISION : R-1	September 2019





**Note:**  
1. Horizontal Curve Details as referred in dwg no.EPTISA/JTFRP/DPR/J&K/HAR/01 to 05

**(PROFILE ON NEXT SHEET)**

CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:



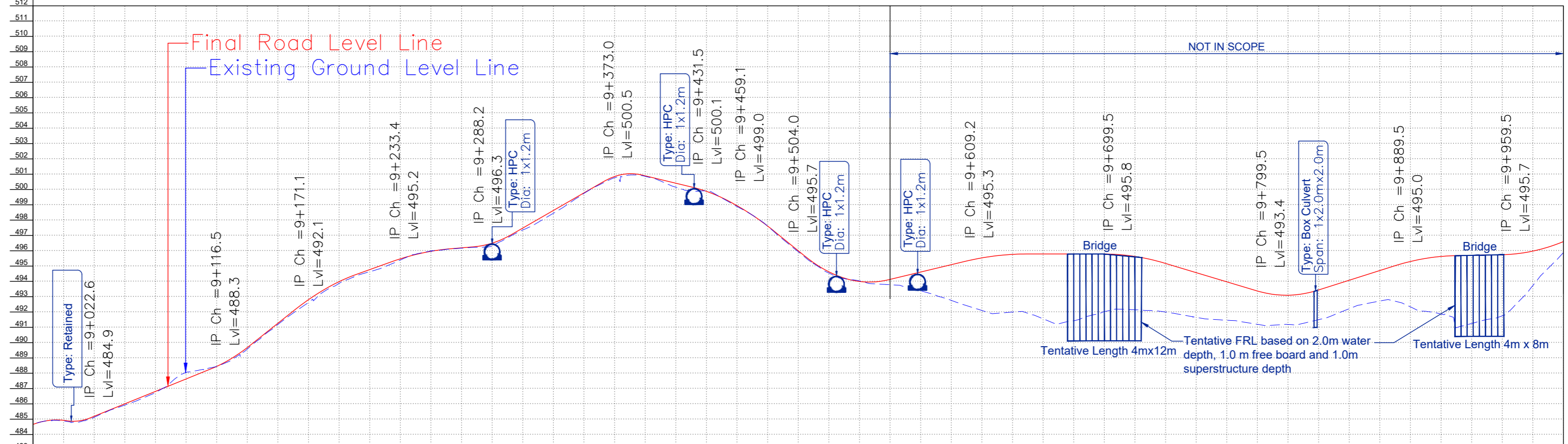
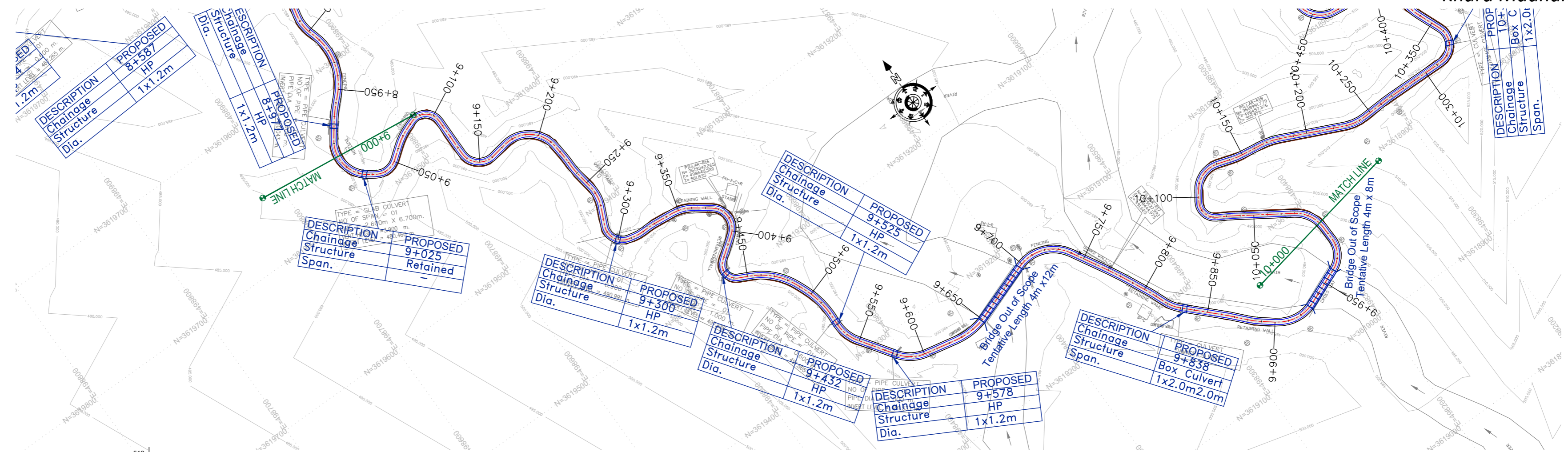
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Ph: 033-40347200  
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REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	HOR 1:2500 VER 1:250

TITLE :	<b>Plan</b> (km 8+000 to km 9+000)
DRG. NO. :	EPTISA/JTFRP/DPR/J&K/PP/08
REVISION :	R-1
	September 2019





FINISHED ROAD LEVEL (M)	EXISTING ROAD/GROUND LEVEL (M)	VERTICAL ALIGNMENT	HORIZONTAL ALIGNMENT	CHAINAGE (M)
484.667	484.667			9+000
484.886	484.886			9+020
485.128	485.128			9+040
485.923	485.923			9+060
486.738	486.738			9+080
488.055	488.055			9+100
488.450	488.450			9+120
489.577	489.577			9+140
491.187	491.187			9+160
492.629	492.629			9+180
493.876	493.876			9+200
494.628	494.628			9+220
495.392	495.392			9+240
495.988	495.988			9+260
496.170	496.170			9+280
496.316	496.316			9+300
497.356	497.356			9+320
498.450	498.450			9+340
499.749	499.749			9+360
500.776	500.776			9+380
500.864	500.864			9+400
500.151	500.151			9+420
499.920	499.920			9+440
498.890	498.890			9+460
497.612	497.612			9+480
495.940	495.940			9+500
494.543	494.543			9+520
494.034	494.034			9+540
493.781	493.781			9+560
493.379	493.379			9+580
492.762	492.762			9+600
492.100	492.100			9+620
491.999	491.999			9+640
491.555	491.555			9+660
491.430	491.430			9+680
492.026	492.026			9+700
492.147	492.147			9+720
492.000	492.000			9+740
491.652	491.652			9+760
491.459	491.459			9+780
491.195	491.195			9+800
491.187	491.187			9+820
491.500	491.500			9+840
492.214	492.214			9+860
492.717	492.717			9+880
492.337	492.337			9+900
491.863	491.863			9+920
491.252	491.252			9+940
491.749	491.749			9+960
493.726	493.726			9+980
495.882	495.882			10+000

Note:

1. Horizontal Curve Details as referred in dwg no.EPTISA/JTFRP/DPR/J&K/HAR/01 to 05

CLIENT:  Jhelum & Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

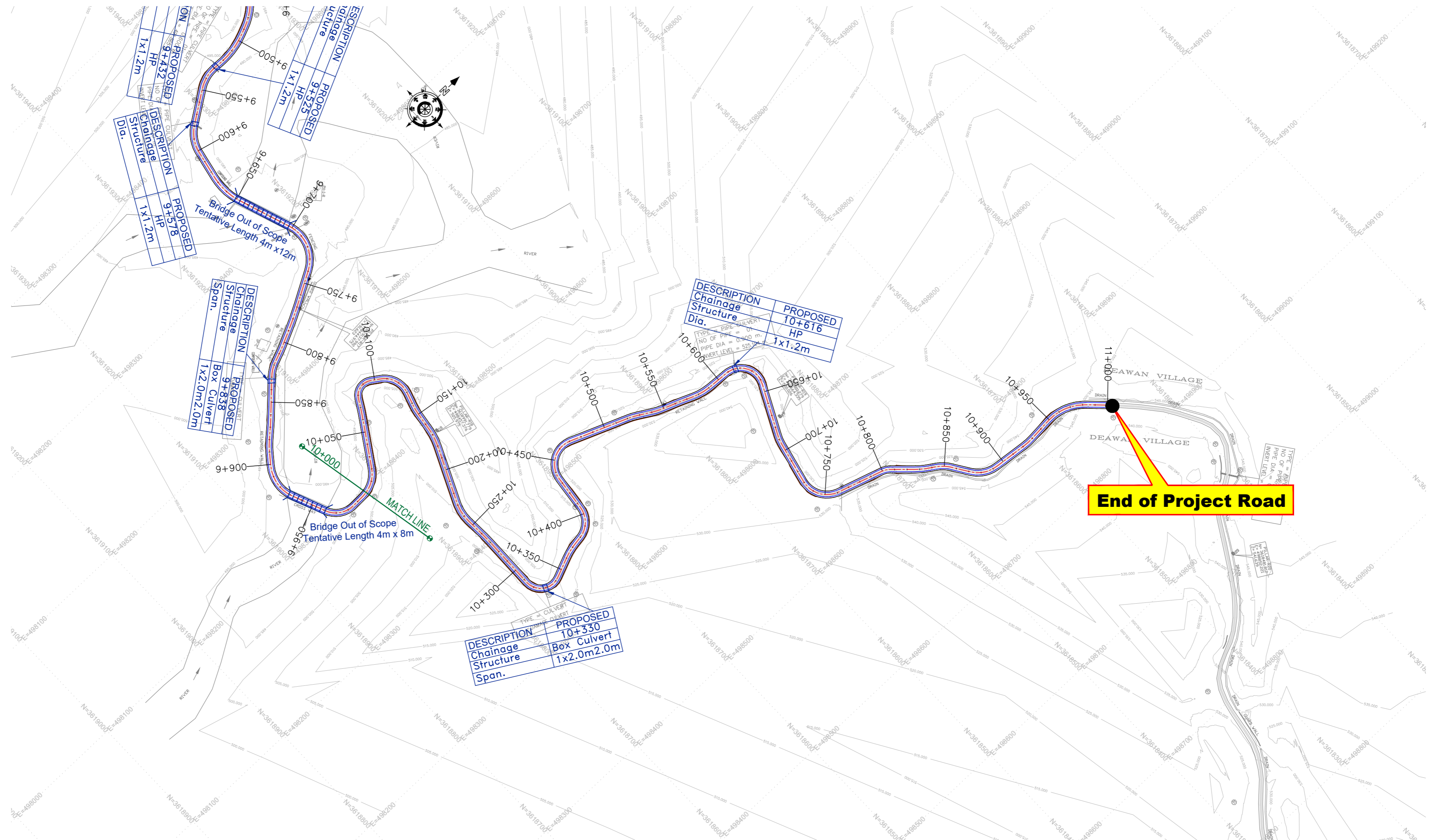
PROJECT: Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:  **Eptisa Servicios de Ingenieria S.L.**  
Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
Ph: 033-40347200  
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REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	HOR 1:2500 VER 1:250

TITLE :	<b>Plan &amp; Profile</b> (km 9+000 to km 10+000)
DRG. NO. :	EPTISA/JTFRP/DPR/J&K/PP/09
REVISION :	R-1
September 2019	



**Note:**  
1. Horizontal Curve Details as referred in dwg no.EPTISA/JTFRP/DPR/J&K/HAR/01 to 05

**(PROFILE ON NEXT SHEET)**

CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

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Ph: 033-40347200  
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REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	HOR 1:2500 VER 1:250

TITLE :	<b>Plan</b> (km 10+000 to km 11+000)
DRG. NO. :	EPTISA/JTFRP/DPR/J&K/PP/10
REVISION :	R-1
	September 2019



HORIZONTAL ALIGNMENT REPORT



**Horizontal Alignment Report**

HPP No.	Start of Transition (TS)	Start of Curve PC / SC	HPP	End of Curve		End of Transition (ST)	HPP Coordinates		Radius	Design Speed (V Kmph)	Transition Start Length	Transition End Length	Circular Curve Length	Shift (s)		Tangent Length (Ts)		gs (°)		De (°)	D (°)	Apex Distance (Fs)	Hand of Curve	e%	Extra Widening
				CS / PT	Transition (ST)		Easting	Northing						Leading	Trailing	Leading	Trailing	Leading	Trailing						
1	0+000.106	0+009.106	0+020.307	0+031.145	0+031.145	496946.996	3624602.674	50	30	0.00	0.00	22.04	0.000	0.000	11.20	11.20	0.00	0.00	25.25	25.25	1.239	Left	7.00	1.2	
2	0+068.950	0+068.950	0+076.863	0+084.772	0+084.772	496991.335	3624566.983	300	40	0.00	0.00	15.82	0.000	0.000	7.91	7.91	0.00	0.00	3.02	3.02	0.104	Right	2.50	0.6	
3	0+098.140	0+098.140	0+107.143	0+116.097	0+116.097	497013.892	3624546.776	100	25	0.00	0.00	17.96	0.000	0.000	9.00	9.00	0.00	0.00	10.29	10.29	0.404	Right	2.78	0.9	
4	0+131.783	0+151.783	0+162.773	0+171.994	0+191.994	497045.245	3624501.873	60	30	20.00	20.00	20.21	0.278	0.278	30.99	30.99	9.55	9.55	19.30	38.40	3.828	Right	6.67	1.2	
5	0+193.986	0+193.986	0+202.806	0+211.581	0+211.581	497047.660	3624461.031	100	40	0.00	0.00	17.60	0.000	0.000	8.82	8.82	0.00	0.00	10.08	10.08	0.388	Right	7.00	0.9	
6	0+233.211	0+233.211	0+238.333	0+241.455	0+241.455	497041.103	3624426.069	400	40	0.00	0.00	6.24	0.000	0.000	3.12	3.12	0.00	0.00	0.89	0.89	0.012	Right	2.50	0	
7	0+256.262	0+256.262	0+266.440	0+276.613	0+276.613	497035.491	3624398.528	400	30	0.00	0.00	20.35	0.000	0.000	10.18	10.18	0.00	0.00	2.92	2.92	0.129	Left	2.50	0	
8	0+284.404	0+299.404	0+306.788	0+311.790	0+326.790	497026.896	3624360.422	30	20	15.00	15.00	12.39	0.313	0.313	22.38	22.38	14.32	14.32	23.66	52.30	3.769	Left	5.93	1.5	
9	0+327.955	0+342.955	0+344.561	0+345.903	0+360.903	496995.014	3624338.369	50	30	15.00	15.00	2.95	0.188	0.188	16.61	16.61	8.59	8.59	3.38	20.57	1.007	Left	7.00	1.2	
10	0+383.506	0+383.506	0+390.871	0+398.162	0+398.162	496964.246	3624303.634	60	30	0.00	0.00	14.66	0.000	0.000	7.36	7.36	0.00	0.00	14.00	14.00	0.450	Left	6.67	1.2	
11	0+405.704	0+405.704	0+416.938	0+427.915	0+427.915	496952.646	3624280.208	60	30	0.00	0.00	22.21	0.000	0.000	11.23	11.23	0.00	0.00	21.21	21.21	1.043	Right	6.67	1.2	
12	0+430.277	0+440.277	0+445.575	0+450.032	0+460.032	496932.599	3624260.015	30	20	10.00	10.00	9.76	0.139	0.139	15.30	15.30	9.55	9.55	18.63	37.73	1.850	Left	5.93	1.5	
13	0+465.678	0+465.678	0+474.948	0+484.009	0+484.009	496926.175	3624230.944	50	30	0.00	0.00	18.33	0.000	0.000	9.27	9.27	0.00	0.00	21.01	21.01	0.852	Right	7.00	1.2	
14	0+488.870	0+488.870	0+503.898	0+518.320	0+518.320	496911.232	3624205.906	60	30	0.00	0.00	29.45	0.000	0.000	15.03	15.03	0.00	0.00	28.12	28.12	1.853	Left	6.67	1.2	
15	0+519.323	0+539.323	0+548.231	0+555.986	0+575.986	496911.447	3624161.584	65	30	20.00	20.00	16.66	0.256	0.256	28.91	28.91	8.81	8.81	14.69	32.32	2.940	Left	6.15	0.9	
16	0+607.904	0+607.904	0+618.204	0+628.499	0+628.499	496944.250	3624099.196	400	40	0.00	0.00	20.60	0.000	0.000	10.30	10.30	0.00	0.00	2.95	2.95	0.133	Right	2.50	0	
17	0+638.445	0+653.445	0+658.532	0+663.464	0+678.464	496962.976	3624063.574	100	40	15.00	15.00	10.02	0.094	0.094	20.09	20.09	4.30	4.30	5.74	14.33	0.882	Left	7.00	0.9	
18	0+683.009	0+698.009	0+700.572	0+703.048	0+718.048	496989.563	3624030.981	100	40	15.00	15.00	5.04	0.094	0.094	17.56	17.56	4.30	4.30	2.89	11.48	0.598	Right	7.00	0.9	
19	0+743.825	0+743.825	0+756.529	0+777.213	0+777.213	497019.604	3623997.058	400	40	0.00	0.00	33.39	0.000	0.000	16.70	16.70	0.00	0.00	4.78	4.78	0.349	Right	2.50	0	
20	0+852.279	0+852.279	0+853.642	0+854.672	0+854.672	497058.568	3623894.467	2	5	0.00	0.00	2.39	0.000	0.000	1.36	1.36	0.00	0.00	68.55	68.55	0.420	Right	5.56	1.5	
21	0+882.582	0+882.582	0+892.680	0+901.776	0+901.776	497031.305	3623866.062	25	20	0.00	0.00	19.19	0.000	0.000	10.10	10.10	0.00	0.00	43.99	43.99	1.962	Left	7.00	1.5	
22	0+923.928	0+923.928	0+934.843	0+945.583	0+945.583	497031.429	3623822.898	70	35	0.00	0.00	21.66	0.000	0.000	10.91	10.91	0.00	0.00	17.72	17.72	0.846	Right	7.00	0.9	
23	0+948.121	0+948.121	0+973.955	0+995.812	0+995.812	497019.576	3623783.442	50	30	0.00	0.00	47.69	0.000	0.000	25.83	25.83	0.00	0.00	54.65	54.65	6.280	Left	7.00	1.2	
24	1+031.371	1+031.371	1+048.705	1+061.684	1+061.684	497067.055	3623722.642	25	20	0.00	0.00	30.31	0.000	0.000	17.33	17.33	0.00	0.00	69.47	69.47	5.422	Right	7.00	1.5	
25	1+078.843	1+078.843	1+103.456	1+107.560	1+127.560	497036.906	3623672.167	70	35	20.00	20.00	8.72	0.238	0.238	24.61	24.61	8.19	8.19	7.13	23.51	1.742	Left	7.00	0.9	
26	1+156.551	1+176.551	1+192.033	1+193.591	1+193.591	497029.707	3623591.388	22	20	20.00	20.00	17.04	0.758	0.758	35.48	35.48	26.04	26.04	44.38	96.47	12.165	Left	7.00	1.5	
27	1+217.172	1+232.172	1+275.097	1+287.235	1+302.235	497108.182	3623573.564	38	25	15.00	15.00	55.06	0.247	0.247	57.92	57.92	11.31	11.31	83.02	105.64	25.289	Right	7.00	1.5	
28	1+335.852	1+335.852	1+362.638	1+364.839	1+364.839	497086.916	3623469.633	25	20	20.00	20.00	8.99	0.667	0.667	26.81	26.81	22.92	22.92	20.60	66.43	5.680	Left	7.00	1.5	
29	1+389.070	1+389.070	1+414.773	1+435.403	1+435.403	497124.211	3623430.609	43	25	0.00	0.00	46.33	0.000	0.000	25.70	25.70	0.00	0.00	61.74	61.74	7.096	Right	6.46	1.2	
30	1+446.924	1+446.924	1+469.043	1+467.998	1+487.998	497114.436	3623374.139	20	20	20.00	20.00	1.07	0.833	0.833	22.12	22.12	28.65	28.65	3.08	60.37	4.102	Left	7.00	1.5	
31	1+513.189	1+513.189	1+534.662	1+555.972	1+555.972	497160.782	3623326.122	200	40	0.00	0.00	42.78	0.000	0.000	21.47	21.47	0.00	0.00	12.26	12.26	1.149	Left	3.56	0.6	
32	1+564.209	1+584.209	1+604.590	1+620.832	1+640.832	497217.467	3623287.887	65	25	20.00	20.00	36.64	0.256	0.256	40.38	40.38	8.81	8.81	32.30	49.93	6.982	Right	4.27	0.9	
33	1+686.267	1+711.267	1+735.096	1+755.793	1+780.793	497246.474	3623159.502	100	40	25.00	25.00	44.53	0.260	0.260	48.83	48.83	7.16	7.16	25.51	39.84	6.639	Left	7.00	0.9	
34	1+880.559	1+905.559	1+911.040	1+916.050	1+941.050	497379.281	3623041.930	100	40	25.00	25.00	10.49	0.260	0.260	30.48	30.48	7.16	7.16	6.01	20.33	1.860	Left	7.00	0.9	
35	1+951.869	1+971.869	1+979.432	1+981.873	2+001.873	497441.511	3623021.796	25	20	20.00	20.00	10.00	0.667	0.667	27.56	27.56	22.92	22.92	68.76	61.00	6.100	Left	7.00	1.5	
36	2+030.848	2+040.848	2+056.195	2+069.437	2+079.437	497498.165	3623075.706	50	30	10.00	10.00	28.59	0.083	0.083	25.35	25.35	5.73	5.73	32.76	44.22	4.039	Right	7.00	1.2	
37	2+082.843	2+092.843	2+101.720	2+109.873	2+119.873	497544.569	3623079.611	50	30	10.00	10.00	17.03	0.083	0.083	18.88	18.88	5.73	5.73	19.51	30.97	1.970	Right	7.00	1.2	
38	2+122.706	2+142.706	2+144.642	2+146.427	2+166.427	497583.253	3623060.355	100	40	20.00	20.00	3.72	0.167	0.167	21.94	21.94	5.73	5.73	2.13	13.59	0.875	Right	7.00	0.9	
39	2+172.805	2+192.805	2+204.461	2+215.389	2+235.389	497627.858	3623021.007	100	40	20.00	20.00	22.58	0.167	0.167	31.66	31.66	5.73	5.73	12.94	24.40	2.481	Right	7.00	0.9	
40	2+246.721	2+246.721	2+262.541	2+278.344	2+278.344	497654.264	3622968.869	400	40	0.00	0.00	31.62	0.000	0.000	15.82	15.82	0.00	0.00	4.53	4.53	0.313	Right	2.50	0	
41	2+303.870	2+323.870	2+339.915	2+351.307	2+371.307	497684.659	3622900.106	48	25	20.00	20.00	27.44	0.347	0.347	36.05	36.05	11.94	11.94	16.60	56.62	6.916	Left	5.79	1.2	
42	2+373.535	2+373.535	2+388.120	2+402.500	2+402.500	497732.974	3622884.709	100	40	0.00	0.00	28.97	0.000	0.000	14.58	14.58	0.00	0.00	16.60	16.60	1.058	Left	7.00	0.9	
43	2+415.757	2+435.757	2+448.183	2+478.499	2+478.499	497791.782	3622891.626	60	30	20.00	20.00	22.74	0.278	0.278	32.43	32.43	9.55	9.55	21.72	40.82	4.315	Left	6.67	1.2	
44	2+485.826	2+485.826	2+496.510	2+507.173	2+507.173	497829.006	3622924.098	200	40	0.00	0.00	21.35	0.000	0.000	10.68	10.68	0.00	0.00	6.12	6.12	0.285	Right	3.56	0.6	
45	2+517.180	2+532.180	2+534.327	2+536.792	2+551.792	497839.078	3622947.306	100	30	15.00	15.00	4.61	0.094	0.094	17.35	17.35	4.30	4.30	2.64</						

**Horizontal Alignment Report**

HHP No.	Start of Transition (TS)	End of Curve PC / SC	HHP	End of Curve CS / PT	End of Transition (ST)	HHP Coordinates		Radius	Design Speed (V kmph)	Transition Start Length	Transition End Length	Circular Curve Length	Shift (s)		Tangent Length (Ts)		gs (°)		Dc (°)	D (°)	Apex Distance (Bs)	Hand of Curve	e%	Extra Widening
						Easting	Northing						Leading	Trailing	Leading	Trailing	Leading	Trailing						
51	2+853.900	2+873.900	2+888.813	2+899.861	2+919.861	498099.371	3622773.886	50	30	20.00	20.00	25.96	0.333	0.333	34.91	34.91	11.46	11.46	29.75	52.67	6.161	Right	7.00	1.2
52	2+926.760	2+941.760	2+943.949	2+945.923	2+960.923	498078.350	3622720.814	60	30	15.00	15.00	4.16	0.156	0.156	17.19	17.19	7.16	7.16	3.98	18.30	0.932	Left	6.67	1.2
53	2+965.702	2+985.702	2+993.224	2+994.572	3+014.572	498066.095	3622676.657	22	20	20.00	20.00	8.87	0.758	0.758	27.52	27.52	26.04	26.04	23.10	75.19	6.721	Right	7.00	1.5
54	3+034.438	3+034.438	3+050.058	3+063.240	3+063.240	498007.946	3622664.909	30	20	0.00	0.00	28.80	0.000	0.000	15.62	15.62	0.00	0.00	55.01	55.01	3.823	Left	5.93	1.5
55	3+082.264	3+082.264	3+098.334	3+112.295	3+112.295	497983.852	3622620.284	35	25	0.00	0.00	30.13	0.000	0.000	16.07	16.07	0.00	0.00	49.33	49.33	3.513	Left	7.00	1.5
56	3+129.887	3+129.887	3+141.709	3+153.105	3+153.105	498000.087	3622577.901	50	30	0.00	0.00	23.22	0.000	0.000	11.82	11.82	0.00	0.00	26.61	26.61	1.379	Left	7.00	1.2
57	3+161.084	3+161.084	3+172.328	3+182.600	3+182.600	498023.000	3622556.954	30	20	0.00	0.00	21.52	0.000	0.000	11.24	11.24	0.00	0.00	41.09	41.09	2.038	Left	5.93	1.5
58	3+200.225	3+200.225	3+210.127	3+219.353	3+219.353	498061.760	3622556.045	30	20	0.00	0.00	19.13	0.000	0.000	9.90	9.90	0.00	0.00	36.53	36.53	1.592	Right	5.93	1.5
59	3+229.289	3+229.289	3+257.215	3+258.802	3+258.802	498099.461	3622526.722	13	15	0.00	0.00	29.51	0.000	0.000	27.93	27.93	0.00	0.00	130.07	130.07	17.804	Left	7.00	1.5
60	3+269.288	3+274.288	3+295.458	3+299.404	3+304.404	498100.205	3622586.600	15	15	5.00	5.00	25.12	0.069	0.069	26.17	26.17	9.55	9.55	95.94	115.03	13.060	Right	6.67	1.5
61	3+309.883	3+309.883	3+316.683	3+322.651	3+322.651	498132.419	3622576.330	15	15	0.00	0.00	12.77	0.000	0.000	6.80	6.80	0.00	0.00	48.77	48.77	1.469	Right	6.67	1.5
62	3+354.027	3+354.027	3+362.044	3+369.694	3+369.694	498146.992	3622532.497	30	20	0.00	0.00	15.67	0.000	0.000	8.02	8.02	0.00	0.00	29.92	29.92	1.053	Left	5.93	1.5
63	3+376.985	3+376.985	3+404.421	3+409.099	3+409.099	498178.911	3622504.069	15	15	0.00	0.00	32.11	0.000	0.000	27.44	27.44	0.00	0.00	122.67	122.67	16.269	Left	6.67	1.5
64	3+417.101	3+442.101	3+458.074	3+464.187	3+489.187	498196.876	3622572.927	35	25	25.00	25.00	22.09	0.744	0.744	40.97	40.97	20.46	20.46	36.16	77.08	10.699	Right	7.00	1.5
65	3+512.661	3+512.661	3+516.251	3+519.840	3+519.840	498258.711	3622584.098	200	35	0.00	0.00	7.18	0.000	0.000	3.59	3.59	0.00	0.00	2.06	2.06	0.032	Right	2.72	0.6
66	3+563.236	3+563.236	3+596.858	3+629.857	3+629.857	498339.277	3622586.686	200	35	0.00	0.00	66.62	0.000	0.000	33.62	33.62	0.00	0.00	19.09	19.09	2.806	Left	2.72	0.6
67	3+635.376	3+635.376	3+642.687	3+649.991	3+649.991	498332.955	3622615.452	200	35	0.00	0.00	14.61	0.000	0.000	7.31	7.31	0.00	0.00	4.19	4.19	0.134	Right	2.72	0.6
68	3+660.327	3+680.327	3+696.469	3+710.209	3+730.209	498433.965	3622615.452	70	35	20.00	20.00	29.88	0.238	0.238	36.14	36.14	8.19	8.19	24.46	40.83	4.945	Right	7.00	0.9
69	3+733.514	3+748.514	3+759.103	3+769.272	3+784.272	498493.812	3622593.362	100	40	15.00	15.00	20.76	0.094	0.094	25.59	25.59	4.30	4.30	11.89	20.49	1.715	Left	7.00	0.9
70	3+789.207	3+789.207	3+806.745	3+821.723	3+821.723	498541.497	3622589.202	35	25	0.00	0.00	32.52	0.000	0.000	17.54	17.54	0.00	0.00	53.23	53.23	4.148	Right	7.00	1.5
71	3+857.133	3+857.133	3+869.577	3+880.226	3+880.226	498577.273	3622534.466	25	20	0.00	0.00	23.09	0.000	0.000	12.44	12.44	0.00	0.00	52.93	52.93	2.926	Left	7.00	1.5
72	3+894.908	3+904.908	3+908.630	3+911.588	3+921.588	498617.468	3622530.384	25	20	10.00	10.00	6.68	0.167	0.167	13.72	13.72	11.46	11.46	15.31	38.23	1.635	Right	7.00	1.5
73	3+937.269	3+937.269	3+941.097	3+944.910	3+944.910	498642.658	3622509.396	50	30	0.00	0.00	7.64	0.000	0.000	3.83	3.83	0.00	0.00	8.76	8.76	0.146	Left	7.00	1.2
74	3+953.512	3+953.512	3+968.998	3+982.104	3+982.104	498665.969	3622494.035	30	20	0.00	0.00	28.59	0.000	0.000	15.49	15.49	0.00	0.00	54.61	54.61	3.761	Right	5.93	1.5
75	3+990.778	3+990.778	3+998.958	4+006.750	4+006.750	498667.106	3622461.715	30	20	0.00	0.00	15.97	0.000	0.000	8.18	8.18	0.00	0.00	30.50	30.50	1.095	Left	5.93	1.5
76	4+025.118	4+025.118	4+032.013	4+038.673	4+038.673	498685.084	3622433.515	30	20	0.00	0.00	13.55	0.000	0.000	6.90	6.90	0.00	0.00	25.89	25.89	0.782	Right	5.93	1.5
77	4+059.071	4+059.071	4+073.559	4+087.274	4+087.274	498689.908	3622392.014	50	30	0.00	0.00	28.20	0.000	0.000	14.49	14.49	0.00	0.00	32.32	32.32	2.057	Left	7.00	1.2
78	4+095.424	4+095.424	4+107.821	4+118.936	4+118.936	498711.932	3622364.767	100	20	0.00	0.00	23.51	0.000	0.000	12.40	12.40	0.00	0.00	44.90	44.90	2.461	Right	5.93	1.5
79	4+134.735	4+134.735	4+145.090	4+155.371	4+155.371	498707.931	3622326.424	300	40	0.00	0.00	20.64	0.000	0.000	10.35	10.35	0.00	0.00	11.82	11.82	0.535	Right	7.00	0.9
80	4+164.814	4+164.814	4+174.852	4+184.822	4+184.822	498698.821	3622298.014	100	40	0.00	0.00	20.01	0.000	0.000	10.04	10.04	0.00	0.00	11.46	11.46	0.502	Right	7.00	0.9
81	4+206.209	4+206.209	4+213.713	4+220.994	4+220.994	498679.803	3622264.047	35	25	0.00	0.00	14.78	0.000	0.000	7.50	7.50	0.00	0.00	24.20	24.20	0.795	Left	7.00	1.5
82	4+252.619	4+252.619	4+256.959	4+261.278	4+261.278	498675.983	3622220.745	50	30	0.00	0.00	8.66	0.000	0.000	4.34	4.34	0.00	0.00	9.92	9.92	0.188	Right	7.00	1.2
83	4+272.960	4+287.960	4+288.981	4+289.845	4+304.845	498668.454	3622189.702	60	30	15.00	15.00	9.72	0.156	0.156	16.02	16.02	7.16	7.16	1.80	16.12	0.757	Left	6.67	1.2
84	4+312.127	4+312.127	4+317.003	4+321.849	4+321.849	498668.281	3622161.622	50	30	0.00	0.00	9.72	0.000	0.000	4.88	4.88	0.00	0.00	11.14	11.14	0.237	Right	7.00	1.2
85	4+334.856	4+334.856	4+336.761	4+338.665	4+338.665	498664.852	3622142.134	100	40	0.00	0.00	3.81	0.000	0.000	1.90	1.90	0.00	0.00	2.18	2.18	0.018	Left	7.00	0.9
86	4+352.646	4+372.646	4+376.445	4+379.976	4+399.976	498658.356	3622103.149	90	40	20.00	20.00	7.33	0.185	0.185	23.80	23.80	6.37	6.37	4.67	17.40	1.235	Right	7.00	0.9
87	4+412.322	4+412.322	4+437.317	4+457.003	4+457.003	498633.441	3622047.500	40	25	0.00	0.00	44.68	0.000	0.000	25.00	25.00	0.00	0.00	64.00	64.00	7.167	Left	6.94	1.5
88	4+462.310	4+462.310	4+471.091	4+479.694	4+479.694	498657.932	3622017.044	50	30	0.00	0.00	17.38	0.000	0.000	8.78	8.78	0.00	0.00	19.92	19.92	0.765	Left	7.00	1.2
89	4+489.644	4+489.644	4+514.927	4+519.943	4+519.943	498695.550	3621994.194	200	40	0.00	0.00	50.30	0.000	0.000	25.28	25.28	0.00	0.00	14.41	14.41	1.592	Left	3.56	0.6
90	4+560.199	4+560.199	4+593.633	4+594.671	4+594.671	498771.125	3621971.283	15	15	0.00	0.00	34.47	0.000	0.000	33.43	33.43	0.00	0.00	131.67	131.67	21.644	Right	6.67	1.5
91	4+608.012	4+608.012	4+634.035	4+656.000	4+656.000	498709.032	3621933.287	50	30	0.00	0.00	47.99	0.000	0.000	26.02	26.02	0.00	0.00	54.99	54.99	6.367	Left	7.00	1.2
92	4+680.693	4+680.693	4+711.183	4+714.101	4+714.101	498704.007	3621852.236	15	15	0.00	0.00	33.41	0.000	0.000	30.49	30.49	0.00	0.00	127.61	127.61	18.980	Right	6.67	1.5
93	4+727.408	4+727.408	4+737.086	4+745.876	4+745.876	498663.744	3621887.429	25	20	0.00	0.00	18.47	0.000	0.000	9.68	9.68	0.00	0.00	42.33	42.33	1.808	Left	7.00	1.5
94	4+760.459	4+760.459	4+771.927	4+781.963	4+781.963	498628.023	3621886.699	25	20	0.00	0.00	21.50	0.000	0.000	11.47	11.47	0.00	0.00	49.28	49.28	2.505	Right	7.00	1.5
95	4+794.246	4+794.246	4+806.988	4+815.571	4+815.571	498603.659	3621913.868	15	15	0.00	0.00	21.13	0.000	0.000	12.74	12.74	0.00	0.00	80.69	80.69	4.681	Left		

**Horizontal Alignment Report**

H/P No.	Start of Transition (TS)	Start of Curve PC / SC	H/P	End of Curve CS / PT	End of Transition (ST)	H/P Coordinates		Radius	Design Speed (V kmp/h)	Transition Start Length	Transition End Length	Circular Curve Length	Shift (s)		Tangent Length (Ts)		qs (°)		Dc (°)	D (°)	Apex Distance (Es)	Hand of Curve	e%	Extra Widening
						Easting	Northing						Leading	Trailing	Leading	Trailing	Leading	Trailing						
101	4+969.644	4+969.644	4+992.199	5+008.325	5+008.325	498449.436	3621943.973	30	20	0.00	0.00	38.68	0.000	0.000	22.56	22.56	0.00	0.00	73.88	73.88	7.533	Left	5.93	1.5
102	5+011.437	5+011.437	5+017.933	5+024.357	5+024.357	498424.862	3621923.221	50	30	0.00	0.00	12.92	0.000	0.000	6.50	6.50	0.00	0.00	14.81	14.81	0.420	Left	7.00	1.2
103	5+029.709	5+029.709	5+031.292	5+032.848	5+032.848	498417.155	3621912.221	10	15	0.00	0.00	3.14	0.000	0.000	1.58	1.58	0.00	0.00	17.99	17.99	0.124	Left	7.00	1.5
104	5+048.238	5+048.238	5+060.929	5+072.817	5+072.817	498408.469	3621883.858	40	25	0.00	0.00	24.58	0.000	0.000	12.69	12.69	0.00	0.00	35.21	35.21	1.965	Left	6.94	1.5
105	5+085.403	5+105.403	5+107.384	5+117.829	5+117.829	498425.604	3621841.272	25	20	20.00	20.00	1.84	0.667	0.667	21.98	21.98	22.92	22.92	4.21	50.04	3.325	Left	7.00	1.5
106	5+148.982	5+168.982	5+175.686	5+177.829	5+177.829	498484.226	3621809.917	25	20	20.00	20.00	8.85	0.667	0.667	26.70	26.70	22.92	22.92	20.28	66.11	5.624	Right	7.00	1.5
107	5+203.428	5+203.428	5+213.225	5+222.776	5+222.776	498490.044	3621770.909	50	30	0.00	0.00	19.35	0.000	0.000	9.80	9.80	0.00	0.00	22.17	22.17	0.951	Left	7.00	1.2
108	5+243.626	5+243.626	5+264.171	5+278.021	5+278.021	498511.098	3621724.247	25	20	0.00	0.00	34.39	0.000	0.000	20.55	20.55	0.00	0.00	78.83	78.83	7.359	Left	7.00	1.5
109	5+297.415	5+297.415	5+313.384	5+321.243	5+321.243	498565.548	3621736.930	14	15	0.00	0.00	23.83	0.000	0.000	15.97	15.97	0.00	0.00	97.52	97.52	7.237	Right	7.00	1.5
110	5+333.276	5+333.276	5+335.799	5+338.320	5+338.320	498568.524	3621706.551	100	40	0.00	0.00	5.04	0.000	0.000	2.52	2.52	0.00	0.00	2.89	2.89	0.032	Left	7.00	0.9
111	5+364.298	5+364.298	5+371.618	5+378.835	5+378.835	498573.810	3621671.122	50	30	0.00	0.00	14.54	0.000	0.000	7.32	7.32	0.00	0.00	16.66	16.66	0.533	Left	7.00	1.2
112	5+403.046	5+403.046	5+408.679	5+414.300	5+414.300	498589.600	3621637.479	100	25	0.00	0.00	11.25	0.000	0.000	5.63	5.63	0.00	0.00	6.45	6.45	0.159	Right	2.78	0.9
113	5+427.069	5+427.069	5+471.661	5+476.018	5+476.018	498609.793	3621577.808	22	20	0.00	0.00	48.95	0.000	0.000	44.59	44.59	0.00	0.00	127.48	127.48	27.724	Right	7.00	1.5
114	5+494.065	5+494.065	5+505.102	5+515.217	5+515.217	498540.040	3621601.535	30	20	0.00	0.00	21.15	0.000	0.000	11.04	11.04	0.00	0.00	40.40	40.40	1.966	Left	5.93	1.5
115	5+541.400	5+541.400	5+545.903	5+550.340	5+550.340	498501.250	3621586.168	30	20	0.00	0.00	8.94	0.000	0.000	4.50	4.50	0.00	0.00	17.07	17.07	0.336	Right	5.93	1.5
116	5+562.500	5+562.500	5+570.542	5+578.214	5+578.214	498476.622	3621584.213	30	20	0.00	0.00	15.71	0.000	0.000	8.04	8.04	0.00	0.00	30.01	30.01	1.059	Left	5.93	1.5
117	5+593.736	5+593.736	5+597.373	5+601.007	5+601.007	498454.219	3621568.788	100	25	0.00	0.00	7.27	0.000	0.000	3.64	3.64	0.00	0.00	4.17	4.17	0.066	Right	2.78	0.9
118	5+612.264	5+612.264	5+626.336	5+636.789	5+636.789	498429.231	3621554.137	20	20	0.00	0.00	24.52	0.000	0.000	14.07	14.07	0.00	0.00	70.26	70.26	4.454	Left	7.00	1.5
119	5+664.365	5+664.365	5+671.570	5+678.196	5+678.196	498438.254	3621506.125	20	20	0.00	0.00	13.83	0.000	0.000	7.20	7.20	0.00	0.00	39.62	39.62	1.258	Right	7.00	1.5
120	5+715.868	5+715.868	5+741.916	5+767.672	5+767.672	498403.892	3621444.080	200	35	0.00	0.00	51.80	0.000	0.000	26.05	26.05	0.00	0.00	14.84	14.84	1.689	Right	2.72	0.6
121	5+807.531	5+807.531	5+813.827	5+820.106	5+820.106	498353.900	3621391.984	100	25	0.00	0.00	12.57	0.000	0.000	6.30	6.30	0.00	0.00	7.20	7.20	0.198	Right	2.78	0.9
122	5+835.755	5+835.755	5+892.260	5+914.009	5+914.009	498292.913	3621342.640	42	25	0.00	0.00	78.25	0.000	0.000	56.50	56.50	0.00	0.00	106.75	106.75	28.404	Left	6.61	1.2
123	5+936.866	5+936.866	5+963.031	5+968.827	5+968.827	498380.118	3621283.219	20	20	0.00	0.00	11.96	0.000	0.000	6.17	6.17	0.00	0.00	34.27	34.27	0.929	Left	7.00	1.5
124	6+011.144	6+011.144	6+027.350	6+040.862	6+040.862	498444.807	3621283.209	30	20	0.00	0.00	29.72	0.000	0.000	16.21	16.21	0.00	0.00	56.76	56.76	4.098	Left	5.93	1.5
125	6+087.060	6+087.060	6+095.215	6+102.547	6+102.547	498483.493	3621342.218	20	20	0.00	0.00	15.49	0.000	0.000	8.16	8.16	0.00	0.00	44.37	44.37	1.599	Right	7.00	1.5
126	6+124.846	6+124.846	6+135.322	6+145.721	6+145.721	498523.470	3621350.997	100	25	0.00	0.00	20.88	0.000	0.000	10.48	10.48	0.00	0.00	11.96	11.96	0.547	Left	2.78	0.9
127	6+167.294	6+167.294	6+183.152	6+194.775	6+194.775	498567.117	3621370.747	22	20	0.00	0.00	27.48	0.000	0.000	15.86	15.86	0.00	0.00	71.57	71.57	5.120	Right	7.00	1.5
128	6+196.814	6+216.814	6+225.633	6+232.201	6+232.201	498600.274	3621339.604	45	25	20.00	20.00	15.39	0.370	0.370	28.82	28.82	12.73	12.73	19.59	45.06	4.119	Left	6.17	1.2
129	6+261.319	6+261.319	6+279.903	6+288.083	6+288.083	498655.295	3621334.330	15	15	0.00	0.00	26.70	0.000	0.000	18.52	18.52	0.00	0.00	102.00	102.00	8.836	Right	6.67	1.5
130	6+306.061	6+306.061	6+322.165	6+326.363	6+326.363	498642.419	3621283.325	10	15	0.00	0.00	20.30	0.000	0.000	16.10	16.10	0.00	0.00	116.32	116.32	8.956	Left	7.00	1.5
131	6+341.942	6+341.942	6+349.373	6+356.510	6+356.510	498680.655	3621291.559	30	20	0.00	0.00	14.57	0.000	0.000	7.43	7.43	0.00	0.00	27.82	27.82	0.907	Right	5.93	1.5
132	6+372.515	6+372.515	6+377.661	6+382.798	6+382.798	498708.175	3621283.839	100	25	0.00	0.00	10.28	0.000	0.000	5.15	5.15	0.00	0.00	5.89	5.89	0.132	Right	2.78	0.9
133	6+396.475	6+396.475	6+403.409	6+410.256	6+410.256	498732.130	3621274.374	50	25	0.00	0.00	13.78	0.000	0.000	6.93	6.93	0.00	0.00	15.79	15.79	0.479	Left	5.56	1.2
134	6+419.076	6+419.076	6+440.223	6+456.449	6+456.449	498768.844	3621270.664	32	20	0.00	0.00	37.37	0.000	0.000	21.15	21.15	0.00	0.00	66.92	66.92	6.356	Right	5.56	1.5
135	6+481.825	6+481.825	6+506.522	6+526.076	6+526.076	498790.038	3621202.671	40	25	0.00	0.00	44.25	0.000	0.000	24.70	24.70	0.00	0.00	63.38	63.38	7.010	Left	6.94	1.5
136	6+552.713	6+552.713	6+557.754	6+562.787	6+562.787	498845.673	3621193.557	100	25	0.00	0.00	10.07	0.000	0.000	5.04	5.04	0.00	0.00	5.77	5.77	0.127	Right	2.78	0.9
137	6+572.837	6+572.837	6+577.195	6+581.531	6+581.531	498864.452	3621188.499	50	25	0.00	0.00	8.69	0.000	0.000	4.36	4.36	0.00	0.00	9.96	9.96	0.190	Left	5.56	1.2
138	6+586.888	6+586.888	6+598.705	6+608.234	6+608.234	498883.898	3621186.580	20	20	0.00	0.00	21.35	0.000	0.000	11.82	11.82	0.00	0.00	61.15	61.15	3.230	Right	7.00	1.5
139	6+624.775	6+624.775	6+628.945	6+633.111	6+633.111	498898.992	3621156.303	100	25	0.00	0.00	8.34	0.000	0.000	4.17	4.17	0.00	0.00	4.78	4.78	0.087	Left	2.78	0.9
140	6+664.519	6+664.519	6+675.386	6+684.948	6+684.948	498918.694	3621153.475	70	25	20.00	20.00	20.43	0.238	0.238	30.87	30.87	8.19	8.19	16.72	16.72	3.272	Right	3.07	0.9
141	6+714.774	6+714.774	6+745.539	6+745.220	6+745.220	498915.455	3621044.773	13	15	0.00	0.00	30.45	0.000	0.000	30.77	30.77	0.00	0.00	134.19	134.19	20.399	Left	7.00	1.5
142	6+755.227	6+755.227	6+771.109	6+786.728	6+786.728	498959.102	3621080.895	100	25	0.00	0.00	31.50	0.000	0.000	15.88	15.88	0.00	0.00	18.05	18.05	1.253	Right	2.78	0.9
143	6+804.473	6+804.473	6+817.349	6+825.754	6+825.754	499002.352	3621097.985	15	15	0.00	0.00	21.28	0.000	0.000	12.88	12.88	0.00	0.00	81.29	81.29	4.769	Right	6.67	1.5
144	6+858.498	6+858.498	6+869.973	6+889.973	6+889.973	499028.328	3621053.493	20	20	0.00	0.00	11.48	0.000	0.000	5.90	5.90	0.00	0.00	32.87	32.87	0.852	Left	7.00	1.5
145	6+882.123	6+882.123	6+894.807	6+906.966	6+906.966	499055.749	3621039.613	50	25	0.00	0.00	24.84	0.000	0.000	12.68	12.68	0.00	0.00	28.47	28.47</				

**Horizontal Alignment Report**

HIP No.	Start of Transition (TS)	Start of Curve PC / SC	HIP	End of Curve		End of Transition (ST)	HIP Coordinates		Radius	Design Speed (V kmph)	Transition Start Length	Transition End Length	Circular Curve Length	Shift (s)		Tangent Length (Ts)		qs (°)		Dc (°)	D (°)	Apex Distance (Es)	Hand of Curve	e%	Extra Widening
				CS / PT	CS / ST		Easting	Northing						Leading	Trailing	Leading	Trailing	Leading	Trailing						
151	7+111.286	7+111.286	7+117.873	7+124.254	7+124.254	499155.416	3620858.412	30	20	0.00	0.00	12.97	0.000	0.000	6.59	6.59	0.00	0.00	24.77	24.77	0.715	Right	5.93	1.5	
152	7+137.457	7+137.457	7+154.759	7+171.721	7+171.721	499162.768	3620822.056	100	25	0.00	0.00	34.26	0.000	0.000	17.30	17.30	0.00	0.00	19.63	19.63	1.486	Left	2.78	0.9	
153	7+215.078	7+215.078	7+227.349	7+239.497	7+239.497	499200.399	3620759.586	100	25	0.00	0.00	24.42	0.000	0.000	12.27	12.27	0.00	0.00	13.99	13.99	0.750	Right	2.78	0.9	
154	7+251.607	7+251.607	7+261.483	7+271.229	7+271.229	499210.456	3620726.839	70	25	0.00	0.00	19.62	0.000	0.000	9.88	9.88	0.00	0.00	16.06	16.06	0.693	Left	3.97	0.9	
155	7+329.910	7+329.910	7+345.114	7+360.086	7+360.086	499256.240	3620656.699	100	25	0.00	0.00	30.18	0.000	0.000	15.20	15.20	0.00	0.00	17.29	17.29	1.149	Right	2.78	0.9	
156	7+386.627	7+386.627	7+399.617	7+411.145	7+411.145	499271.185	3620604.044	30	20	0.00	0.00	24.52	0.000	0.000	12.99	12.99	0.00	0.00	46.83	46.83	2.692	Right	5.93	1.5	
157	7+438.505	7+438.505	7+450.558	7+462.159	7+462.159	499244.211	3620559.116	50	25	0.00	0.00	23.65	0.000	0.000	12.05	12.05	0.00	0.00	27.11	27.11	1.432	Left	5.56	1.2	
158	7+505.907	7+505.907	7+512.151	7+518.012	7+518.012	499240.018	3620497.213	20	20	0.00	0.00	12.10	0.000	0.000	6.24	6.24	0.00	0.00	34.68	34.68	0.952	Right	7.00	1.5	
159	7+526.837	7+526.837	7+542.514	7+556.719	7+556.719	499220.857	3620473.169	40	25	0.00	0.00	29.88	0.000	0.000	15.68	15.68	0.00	0.00	42.80	42.80	2.962	Left	6.94	1.5	
160	7+589.686	7+589.686	7+614.623	7+616.621	7+616.621	499226.309	3620399.790	12	15	0.00	0.00	26.94	0.000	0.000	24.94	24.94	0.00	0.00	128.61	128.61	15.674	Right	7.00	1.5	
161	7+632.122	7+632.122	7+682.129	7+666.350	7+666.350	499151.639	3620450.831	13	15	0.00	0.00	34.23	0.000	0.000	50.01	50.01	0.00	0.00	150.86	150.86	38.669	Left	7.00	1.5	
162	7+685.258	7+685.258	7+696.877	7+705.030	7+705.030	499187.579	3620378.757	15	15	0.00	0.00	19.77	0.000	0.000	11.62	11.62	0.00	0.00	75.52	75.52	3.974	Right	6.67	1.5	
163	7+726.076	7+726.076	7+736.305	7+743.018	7+743.018	499155.196	3620350.626	12	15	0.00	0.00	16.94	0.000	0.000	10.23	10.23	0.00	0.00	80.89	80.89	3.768	Right	7.00	1.5	
164	7+759.410	7+759.410	7+779.579	7+790.994	7+790.994	499119.307	3620380.648	20	20	0.00	0.00	31.58	0.000	0.000	20.17	20.17	0.00	0.00	90.48	90.48	8.404	Left	7.00	1.5	
165	7+808.616	7+808.616	7+816.315	7+824.007	7+824.007	499090.413	3620345.512	200	35	0.00	0.00	15.39	0.000	0.000	7.70	7.70	0.00	0.00	4.41	4.41	0.148	Left	2.72	0.6	
166	7+839.206	7+839.206	7+849.204	7+858.941	7+858.941	499071.534	3620318.573	50	25	0.00	0.00	19.73	0.000	0.000	10.00	10.00	0.00	0.00	22.61	22.61	2.261	Left	5.56	1.2	
167	7+870.133	7+870.133	7+884.487	7+896.193	7+896.193	499063.897	3620283.860	25	20	0.00	0.00	26.06	0.000	0.000	14.35	14.35	0.00	0.00	59.73	59.73	3.828	Right	7.00	1.5	
168	7+915.610	7+915.610	7+933.800	7+946.009	7+946.009	499014.442	3620267.918	22	20	0.00	0.00	30.40	0.000	0.000	18.19	18.19	0.00	0.00	79.17	79.17	6.546	Left	7.00	1.5	
169	7+957.876	7+957.876	7+969.697	7+978.535	7+978.535	499019.572	3620226.355	17	15	0.00	0.00	20.66	0.000	0.000	11.82	11.82	0.00	0.00	69.63	69.63	3.706	Right	5.88	1.5	
170	7+987.974	7+987.974	7+997.203	8+006.226	8+006.226	498992.504	3620212.320	50	25	0.00	0.00	18.25	0.000	0.000	9.23	9.23	0.00	0.00	20.92	20.92	0.845	Left	5.56	1.2	
171	8+029.538	8+029.538	8+032.852	8+036.157	8+036.157	498966.293	3620188.263	50	25	0.00	0.00	6.62	0.000	0.000	3.31	3.31	0.00	0.00	7.58	7.58	0.110	Left	5.56	1.2	
172	8+053.642	8+053.642	8+066.945	8+075.407	8+075.407	498940.682	3620165.746	15	15	0.00	0.00	21.77	0.000	0.000	13.30	13.30	0.00	0.00	83.14	83.14	5.049	Left	6.67	1.5	
173	8+089.183	8+089.183	8+093.961	8+098.732	8+098.732	498928.708	3620139.479	100	25	0.00	0.00	9.55	0.000	0.000	4.78	4.78	0.00	0.00	5.47	5.47	0.114	Right	2.78	0.9	
174	8+124.877	8+124.877	8+133.089	8+140.909	8+140.909	498977.675	3620105.247	30	20	0.00	0.00	16.03	0.000	0.000	8.21	8.21	0.00	0.00	30.62	30.62	1.104	Left	5.93	1.5	
175	8+148.683	8+148.683	8+156.697	8+163.927	8+163.927	498998.376	3620093.104	20	20	0.00	0.00	15.24	0.000	0.000	8.01	8.01	0.00	0.00	43.67	43.67	1.546	Right	7.00	1.5	
176	8+177.056	8+177.056	8+189.793	8+201.147	8+201.147	499007.679	3620060.526	30	20	0.00	0.00	24.09	0.000	0.000	12.74	12.74	0.00	0.00	46.01	46.01	2.592	Left	5.93	1.5	
177	8+210.284	8+210.284	8+212.013	8+213.738	8+213.738	499028.508	3620049.425	30	20	0.00	0.00	3.45	0.000	0.000	1.73	1.73	0.00	0.00	6.60	6.60	0.050	Right	5.93	1.5	
178	8+231.433	8+231.433	8+240.744	8+250.002	8+250.002	499052.148	3620033.087	100	25	0.00	0.00	18.57	0.000	0.000	9.31	9.31	0.00	0.00	10.64	10.64	0.433	Right	2.78	0.9	
179	8+271.730	8+271.730	8+299.101	8+319.738	8+319.738	499093.241	3619991.577	40	25	0.00	0.00	48.01	0.000	0.000	27.37	27.37	0.00	0.00	68.77	68.77	8.468	Right	6.94	1.5	
180	8+336.632	8+336.632	8+352.221	8+366.646	8+366.646	499068.842	3619936.921	45	25	0.00	0.00	30.01	0.000	0.000	15.59	15.59	0.00	0.00	38.22	38.22	2.624	Left	6.17	1.2	
181	8+382.191	8+382.191	8+385.936	8+389.677	8+389.677	499077.374	3619903.101	100	25	0.00	0.00	7.49	0.000	0.000	3.74	3.74	0.00	0.00	4.29	4.29	0.070	Left	2.78	0.9	
182	8+400.794	8+400.794	8+411.533	8+421.777	8+421.777	499085.475	3619878.816	40	25	0.00	0.00	20.98	0.000	0.000	10.74	10.74	0.00	0.00	30.06	30.06	3.006	Right	6.94	1.5	
183	8+468.610	8+468.610	8+471.880	8+475.147	8+475.147	499073.234	3619819.219	100	25	0.00	0.00	6.54	0.000	0.000	3.27	3.27	0.00	0.00	3.75	3.75	0.053	Right	2.78	0.9	
184	8+482.610	8+482.610	8+491.978	8+501.195	8+501.195	499067.912	3619799.836	60	25	0.00	0.00	18.38	0.000	0.000	9.37	9.37	0.00	0.00	17.75	17.75	0.727	Left	4.63	1.2	
185	8+507.077	8+507.077	8+512.854	8+518.492	8+518.492	499068.791	3619778.828	30	20	0.00	0.00	11.42	0.000	0.000	5.78	5.78	0.00	0.00	21.80	21.80	0.551	Right	5.93	1.5	
186	8+529.170	8+529.170	8+535.823	8+542.016	8+542.016	499061.113	3619757.032	20	20	0.00	0.00	12.85	0.000	0.000	6.65	6.65	0.00	0.00	36.80	36.80	1.078	Left	7.00	1.5	
187	8+550.030	8+550.030	8+555.765	8+555.466	8+555.466	499066.315	3619740.425	20	20	0.00	0.00	5.44	0.000	0.000	2.73	2.73	0.00	0.00	15.57	15.57	0.186	Right	7.00	1.5	
188	8+573.890	8+573.890	8+583.538	8+593.126	8+593.126	499067.295	3619709.634	100	25	0.00	0.00	19.24	0.000	0.000	9.65	9.65	0.00	0.00	11.02	11.02	0.464	Left	2.78	0.9	
189	8+607.517	8+607.517	8+611.777	8+616.032	8+616.032	499073.585	3619682.044	100	25	0.00	0.00	8.51	0.000	0.000	4.26	4.26	0.00	0.00	4.88	4.88	0.091	Right	2.78	0.9	
190	8+629.728	8+629.728	8+633.252	8+636.773	8+636.773	499076.562	3619660.771	100	25	0.00	0.00	7.05	0.000	0.000	3.52	3.52	0.00	0.00	4.04	4.04	0.062	Left	2.78	0.9	
191	8+642.060	8+642.060	8+651.932	8+661.740	8+661.740	499080.446	3619642.496	100	25	0.00	0.00	19.68	0.000	0.000	9.87	9.87	0.00	0.00	11.28	11.28	0.486	Right	2.78	0.9	
192	8+694.297	8+694.297	8+707.466	8+718.338	8+718.338	499081.151	3619586.903	25	20	0.00	0.00	24.24	0.000	0.000	13.17	13.17	0.00	0.00	55.56	55.56	3.256	Right	7.00	1.5	
193	8+725.161	8+725.161	8+734.869	8+734.869	8+734.869	499060.991	3619572.698	50	25	0.00	0.00	9.71	0.000	0.000	4.87	4.87	0.00	0.00	11.12	11.12	0.237	Left	5.56	1.2	
194	8+740.507	8+740.507	8+751.610	8+760.779	8+760.779	499046.059	3619572.076	20	20	0.00	0.00	20.27	0.000	0.000	11.10	11.10	0.00	0.00	58.08	58.08	2.875	Right	7.00	1.5	
195	8+770.111	8+770.111	8+783.457	8+796.290	8+796.290	499011.032	3619564.383	20	20	0.00	0.00	26.18	0.000	0.000	15.35	15.35	0.00	0.00	75.00	75.00	5.209				

**Horizontal Alignment Report**

HHP No.	Start of Transition (TS)	Start of Curve		HHP	End of Curve		End of Transition (ST)	HHP Coordinates			Radius	Design Speed (V kmph)	Transition		Circular Curve Length	Shift (s)		Tangent Length (Ts)		qs (°)		De (°)	D (°)	Apex Distance (Es)	Hand of Curve	e%	Extra Widening
		PC / SC	PT		Easting	Northing		Start Length	End Length	Leading			Trailing	Leading		Trailing	Leading	Trailing									
201	8+958.825	8+958.825	8+966.994	8+975.127	8+975.127	498868.877	3619535.448	100	25	0.00	0.00	16.30	0.000	0.000	8.17	8.17	0.00	8.17	8.17	0.00	0.00	9.34	9.34	0.333	Left	2.78	0.9
202	8+987.226	8+987.226	8+987.226	9+027.766	9+027.766	498831.528	3619563.269	25	20	0.00	0.00	40.54	0.000	0.000	26.30	26.30	0.00	26.30	26.30	0.00	0.00	92.91	92.91	1.289	Left	7.00	1.5
203	9+032.700	9+032.700	9+043.584	9+051.267	9+051.267	498808.225	3619528.420	15	15	0.00	0.00	18.57	0.000	0.000	10.68	10.68	0.00	10.68	10.68	0.00	0.00	70.92	70.92	3.416	Left	6.67	1.5
204	9+062.019	9+062.019	9+069.858	9+077.570	9+077.570	498825.906	3619505.088	50	25	0.00	0.00	15.55	0.000	0.000	7.84	7.84	0.00	7.84	7.84	0.00	0.00	17.82	17.82	0.611	Right	5.56	1.2
205	9+082.816	9+082.816	9+099.923	9+105.834	9+105.834	498835.900	3619476.599	12	15	0.00	0.00	23.02	0.000	0.000	17.11	17.11	0.00	17.11	17.11	0.00	0.00	109.90	109.90	8.896	Right	7.00	1.5
206	9+134.968	9+134.968	9+152.910	9+161.202	9+161.202	498771.721	3619477.236	15	15	0.00	0.00	26.23	0.000	0.000	17.94	17.94	0.00	17.94	17.94	0.00	0.00	100.21	100.21	8.386	Left	6.67	1.5
207	9+173.305	9+173.305	9+200.389	9+214.574	9+214.574	498781.287	3619420.915	25	20	0.00	0.00	41.27	0.000	0.000	27.08	27.08	0.00	27.08	27.08	0.00	0.00	94.58	94.58	11.858	Right	7.00	1.5
208	9+223.828	9+223.828	9+226.340	9+228.850	9+228.850	498732.588	3619417.489	60	25	0.00	0.00	5.02	0.000	0.000	2.51	2.51	0.00	2.51	2.51	0.00	0.00	4.80	4.80	0.053	Right	4.63	1.2
209	9+232.445	9+232.445	9+236.823	9+241.185	9+241.185	498732.103	3619417.441	60	25	0.00	0.00	8.74	0.000	0.000	4.38	4.38	0.00	4.38	4.38	0.00	0.00	8.35	8.35	0.159	Left	4.63	1.2
210	9+253.866	9+253.866	9+262.841	9+271.308	9+271.308	498706.362	3619413.545	30	20	0.00	0.00	17.44	0.000	0.000	8.98	8.98	0.00	8.98	8.98	0.00	0.00	33.31	33.31	1.314	Right	5.93	1.5
211	9+285.066	9+285.066	9+301.043	9+308.148	9+308.148	498671.194	3619429.724	13	15	0.00	0.00	23.08	0.000	0.000	15.98	15.98	0.00	15.98	15.98	0.00	0.00	101.73	101.73	7.598	Left	7.00	1.5
212	9+312.557	9+312.557	9+316.400	9+320.202	9+320.202	498665.755	3619406.113	30	20	0.00	0.00	7.64	0.000	0.000	3.84	3.84	0.00	3.84	3.84	0.00	0.00	14.60	14.60	0.245	Left	5.93	1.5
213	9+325.122	9+325.122	9+327.082	9+329.037	9+329.037	498666.060	3619395.393	30	20	0.00	0.00	3.92	0.000	0.000	1.96	1.96	0.00	1.96	1.96	0.00	0.00	7.48	7.48	0.064	Right	5.93	1.5
214	9+345.114	9+345.114	9+353.228	9+360.962	9+360.962	498663.395	3619369.379	30	20	0.00	0.00	15.85	0.000	0.000	8.11	8.11	0.00	8.11	8.11	0.00	0.00	30.27	30.27	1.078	Right	5.93	1.5
215	9+374.745	9+374.745	9+395.198	9+402.885	9+402.885	498638.434	3619335.168	15	15	0.00	0.00	28.14	0.000	0.000	20.45	20.45	0.00	20.45	20.45	0.00	0.00	107.49	107.49	10.363	Right	6.67	1.5
216	9+422.556	9+422.556	9+438.984	9+443.036	9+443.036	498604.877	3619380.687	10	15	0.00	0.00	20.48	0.000	0.000	16.43	16.43	0.00	16.43	16.43	0.00	0.00	117.34	117.34	9.232	Left	7.00	1.5
217	9+452.206	9+452.206	9+470.969	9+488.105	9+488.105	498585.249	3619340.905	50	25	0.00	0.00	35.90	0.000	0.000	18.76	18.76	0.00	18.76	18.76	0.00	0.00	41.14	41.14	3.404	Right	5.56	1.2
218	9+494.336	9+494.336	9+508.843	9+522.882	9+522.882	498548.782	3619325.724	65	25	0.00	0.00	28.55	0.000	0.000	14.51	14.51	0.00	14.51	14.51	0.00	0.00	25.16	25.16	1.599	Right	4.27	0.9
219	9+529.318	9+529.318	9+548.596	9+554.896	9+554.896	498517.886	3619327.106	30	20	0.00	0.00	19.28	0.000	0.000	9.98	9.98	0.00	9.98	9.98	0.00	0.00	36.82	36.82	1.618	Left	5.93	1.5
220	9+578.616	9+578.616	9+590.738	9+601.656	9+601.656	498474.802	3619297.762	30	20	0.00	0.00	23.04	0.000	0.000	12.12	12.12	0.00	12.12	12.12	0.00	0.00	44.00	44.00	2.356	Left	5.93	1.5
221	9+625.414	9+625.414	9+639.233	9+652.378	9+652.378	498464.690	3619249.104	50	25	0.00	0.00	26.96	0.000	0.000	13.82	13.82	0.00	13.82	13.82	0.00	0.00	30.90	30.90	1.874	Left	5.56	1.2
222	9+697.817	9+697.817	9+722.883	9+739.579	9+739.579	498492.363	3619169.451	30	20	0.00	0.00	41.76	0.000	0.000	25.07	25.07	0.00	25.07	25.07	0.00	0.00	79.76	79.76	9.093	Right	5.93	1.5
223	9+767.450	9+767.450	9+778.439	9+789.419	9+789.419	498436.669	3619138.070	300	40	0.00	0.00	21.97	0.000	0.000	10.99	10.99	0.00	10.99	10.99	0.00	0.00	4.20	4.20	0.201	Right	2.50	0.6
224	9+803.909	9+803.909	9+805.480	9+807.808	9+807.808	498412.194	3619126.551	50	25	0.00	0.00	3.14	0.000	0.000	1.57	1.57	0.00	1.57	1.57	0.00	0.00	3.60	3.60	0.025	Right	5.56	1.2
225	9+817.487	9+817.487	9+823.736	9+829.808	9+829.808	498395.220	3619119.829	30	20	0.00	0.00	12.32	0.000	0.000	6.25	6.25	0.00	6.25	6.25	0.00	0.00	23.53	23.53	0.644	Left	5.93	1.5
226	9+864.332	9+864.332	9+865.545	9+866.758	9+866.758	498365.602	3619090.070	50	25	0.00	0.00	2.43	0.000	0.000	1.21	1.21	0.00	1.21	1.21	0.00	0.00	2.78	2.78	0.015	Right	5.56	1.2
227	9+879.857	9+879.857	9+884.711	9+889.544	9+889.544	498351.438	3619077.157	60	25	0.00	0.00	9.69	0.000	0.000	4.85	4.85	0.00	4.85	4.85	0.00	0.00	9.25	9.25	0.196	Left	4.63	1.2
228	9+900.565	9+900.565	9+918.169	9+932.405	9+932.405	498330.646	3619050.917	30	20	0.00	0.00	31.84	0.000	0.000	17.60	17.60	0.00	17.60	17.60	0.00	0.00	60.81	60.81	4.784	Left	5.93	1.5
229	9+961.221	9+961.221	9+974.986	9+985.333	9+985.333	498353.597	3618995.280	20	20	0.00	0.00	24.11	0.000	0.000	13.77	13.77	0.00	13.77	13.77	0.00	0.00	69.08	69.08	4.279	Left	7.00	1.5
230	9+996.205	9+996.205	10+009.271	10+020.284	10+020.284	498391.287	3618996.262	25	20	0.00	0.00	24.08	0.000	0.000	13.07	13.07	0.00	13.07	13.07	0.00	0.00	55.19	55.19	3.019	Left	7.00	1.5
231	10+064.079	10+064.079	10+066.708	10+069.336	10+069.336	498423.968	3619045.970	100	25	0.00	0.00	5.26	0.000	0.000	2.63	2.63	0.00	2.63	2.63	0.00	0.00	3.01	3.01	0.035	Left	2.78	0.9
232	10+077.228	10+077.228	10+090.091	10+096.910	10+096.910	498435.770	3619066.158	12	15	0.00	0.00	19.68	0.000	0.000	12.86	12.86	0.00	12.86	12.86	0.00	0.00	93.97	93.97	5.591	Right	7.00	1.5
233	10+104.921	10+104.921	10+119.838	10+130.580	10+130.580	498465.358	3619045.983	20	20	0.00	0.00	25.66	0.000	0.000	14.94	14.94	0.00	14.94	14.94	0.00	0.00	73.51	73.51	4.962	Right	7.00	1.5
234	10+141.363	10+141.363	10+145.571	10+149.759	10+149.759	498456.210	3619017.487	50	25	0.00	0.00	8.40	0.000	0.000	4.21	4.21	0.00	4.21	4.21	0.00	0.00	9.62	9.62	0.177	Left	5.56	1.2
235	10+165.244	10+165.244	10+172.503	10+179.661	10+179.661	498452.377	3618990.810	50	25	0.00	0.00	14.42	0.000	0.000	7.26	7.26	0.00	7.26	7.26	0.00	0.00	16.52	16.52	0.524	Right	5.56	1.2
236	10+228.235	10+228.235	10+236.657	10+244.765	10+244.765	498425.529	3618932.432	35	25	0.00	0.00	16.53	0.000	0.000	8.42	8.42	0.00	8.42	8.42	0.00	0.00	27.06	27.06	0.999	Left	7.00	1.5
237	10+263.135	10+263.135	10+269.189	10+269.189	10+269.189	498426.759	3618902.637	100	25	0.00	0.00	6.05	0.000	0.000	3.03	3.03	0.00	3.03	3.03	0.00	0.00	3.47	3.47	0.046	Right	2.78	0.9
238	10+313.263	10+313.263	10+336.102	10+342.953	10+342.953	498425.408	3618832.709	15	15	0.00	0.00	29.69	0.000	0.000	22.84	22.84	0.00	22.84	22.84	0.00	0.00	113.41	113.41	12.524	Left	6.67	1.5
239	10+360.640	10+360.640	10+366.784	10+372.867	10+372.867	498468.586	3618850.420	50	25	0.00	0.00	12.23	0.000	0.000	6.14	6.14	0.00	6.14	6.14	0.00	0.00	14.01	14.01	0.376	Right	5.56	1.2
240	10+379.676	10+379.676	10+394.988	10+405.813	10+405.813	498496.557	3618854.496	20	20	0.00	0.00	26.14	0.000	0.000	15.31	15.31	0.00	15.31	15.31	0.00	0.00	74.88	74.88	5.189	Left	7.00	1.5
241	10+434.026	10+434.026	10+460.191	10+470.752	10+470.752	498504.848	3618923.691	20	20	0.0																	

≡ VERTICAL ALIGNMENT REPORT ≡

### Vertical Alignment Report

PVI No.	Start		PVI Details		End		Gradient (%)		Type of Curve	Curve Length (m)	K-Value
	Chainage (Km)	Level (m)	Chainage (Km)	Level (m)	Chainage (Km)	Level (m)	IN	OUT			
1	0+070.906	377.632	0+090.906	376.832	0+110.906	377.982	-4.002	5.752	Sag	40	4.10
2	0+156.205	380.588	0+176.205	381.738	0+196.205	382.408	5.752	3.352	Hog	40	16.67
3	0+215.654	383.061	0+235.654	383.731	0+255.654	384.679	3.352	4.739	Sag	40	28.84
4	0+272.968	385.499	0+292.968	386.447	0+312.968	387.007	4.739	2.800	Hog	40	20.63
5	0+335.149	387.628	0+355.149	388.188	0+375.149	388.499	2.800	1.553	Hog	40	32.08
6	0+382.215	388.608	0+402.214	388.919	0+422.212	389.908	1.553	4.943	Sag	40	11.80
7	0+473.462	392.441	0+485.962	393.059	0+498.462	393.283	4.943	1.789	Hog	25	7.93
8	0+512.873	393.540	0+520.453	393.676	0+528.032	393.879	1.789	2.680	Sag	15	17.01
9	0+576.360	395.174	0+590.684	395.558	0+605.007	395.236	2.680	-2.249	Hog	29	5.81
10	0+652.143	394.176	0+672.143	393.726	0+692.143	394.117	-2.249	1.953	Sag	40	9.52
11	0+704.478	394.357	0+724.478	394.748	0+744.478	394.748	1.953	0.000	Hog	40	20.48
12	0+791.478	394.748	0+811.478	394.748	0+831.478	394.217	0.000	-2.655	Hog	40	15.07
13	0+837.546	394.056	0+857.546	393.525	0+877.546	394.457	-2.655	4.660	Sag	40	5.47
14	0+939.741	397.355	0+952.241	397.938	0+964.741	398.083	4.660	1.161	Hog	25	7.14
15	0+978.765	398.246	0+991.265	398.391	1+003.765	399.292	1.161	7.210	Sag	25	4.13
16	1+023.981	400.750	1+036.481	401.651	1+048.981	402.534	7.210	7.062	Hog	25	168.92
17	1+053.493	402.852	1+065.993	403.735	1+078.493	404.940	7.062	9.637	Sag	25	9.71
18	1+084.250	405.494	1+096.750	406.699	1+109.250	407.450	9.637	6.004	Hog	25	6.88
19	1+147.423	409.742	1+149.045	409.839	1+150.666	409.934	6.004	5.843	Hog	3	20.14
20	1+219.473	413.954	1+245.304	415.463	1+271.134	417.409	5.843	7.536	Sag	52	30.51
21	1+286.242	418.548	1+306.242	420.055	1+326.242	420.453	7.536	1.988	Hog	40	7.21
22	1+354.516	421.014	1+374.516	421.412	1+394.516	420.047	1.988	-6.824	Hog	40	4.54
23	1+435.512	417.250	1+510.512	412.132	1+585.512	415.457	-6.824	4.434	Sag	150	13.32
24	1+589.072	415.615	1+609.072	416.502	1+629.072	417.162	4.434	3.300	Hog	40	35.27
25	1+719.478	420.146	1+739.478	420.806	1+759.478	420.806	3.300	0.000	Hog	40	12.12
26	1+829.688	420.806	1+849.688	420.806	1+869.688	420.409	0.000	-1.987	Hog	40	20.13
27	1+887.752	420.049	1+907.752	419.652	1+927.752	420.163	-1.987	2.557	Sag	40	8.80
28	1+957.854	420.933	1+970.354	421.253	1+982.854	422.125	2.557	6.975	Sag	25	5.66
29	1+989.983	422.622	2+002.483	423.494	2+014.983	423.743	6.975	1.994	Hog	25	5.02
30	2+034.713	424.137	2+047.213	424.386	2+059.713	424.060	1.994	-2.611	Hog	25	5.43
31	2+080.750	423.510	2+093.250	423.184	2+105.750	423.973	-2.611	6.310	Sag	25	2.80
32	2+115.391	424.581	2+127.891	425.370	2+140.391	425.874	6.310	4.035	Hog	25	10.99
33	2+154.461	426.442	2+179.461	427.451	2+204.461	426.597	4.035	-3.417	Hog	50	6.71
34	2+211.030	426.372	2+223.530	425.945	2+236.030	426.353	-3.417	3.262	Sag	25	3.74
35	2+244.150	426.618	2+269.150	427.433	2+294.149	426.668	3.262	-3.058	Hog	50	7.91
36	2+316.159	425.995	2+328.659	425.613	2+341.159	425.562	-3.058	-0.404	Sag	25	9.42
37	2+353.279	425.514	2+365.779	425.463	2+378.279	424.732	-0.404	-5.849	Hog	25	4.59
38	2+417.884	422.416	2+447.884	420.661	2+477.884	420.288	-5.849	-1.243	Sag	60	13.03
39	2+566.011	419.193	2+626.011	418.447	2+686.011	419.460	-1.243	1.689	Sag	120	40.93
40	2+751.756	420.571	2+764.256	420.782	2+776.756	420.940	1.689	1.267	Hog	25	59.24
41	2+794.452	421.165	2+814.452	421.418	2+834.452	421.394	1.267	-0.121	Hog	40	28.82
42	2+865.524	421.356	2+878.024	421.341	2+890.524	421.695	-0.121	2.829	Sag	25	8.47
43	2+898.295	421.914	2+910.795	422.268	2+923.295	421.848	2.829	-3.362	Hog	25	4.04
44	2+939.467	421.304	2+949.467	420.968	2+959.467	420.267	-3.362	-7.007	Hog	20	5.49
45	2+960.575	420.190	2+970.575	419.489	2+980.575	419.289	-7.007	-1.997	Sag	20	3.99
46	2+985.660	419.188	2+995.660	418.988	3+005.660	418.215	-1.997	-7.733	Hog	20	3.49
47	3+023.312	416.850	3+035.812	415.883	3+048.312	415.675	-7.733	-1.664	Sag	25	4.12
48	3+067.296	415.359	3+079.796	415.151	3+092.296	414.183	-1.664	-7.741	Hog	25	4.11
49	3+103.130	413.345	3+115.630	412.377	3+128.130	412.654	-7.741	2.215	Sag	25	2.51
50	3+169.443	413.569	3+181.943	413.846	3+194.443	414.850	2.215	8.034	Sag	25	4.30

CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project  
Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:



**Eptisa Servicios de Ingenieria S.L.**  
Unit 1203, 12th Floor, Tower 1, PS Srijan  
Corporate Park, Plot No. 2, Block EP & GP,  
Sector V, Salt Lake Kolkata - 700091,  
West Bengal  
Ph: 033-40347200  
www.eptisa.com

DRAWN BY :

SD

DESIGNED BY :

SKKMM

APPROVED BY :

KG

SCALE :

N.T.S

REV.

DATE

DESCRIPTION

SCALE :

N.T.S

REVISION : R-1

September 2019

TITLE :

Vertical Alignment Report

DRG. NO. : EPTISAJTRP/DPR/J&KVAR/01

### Vertical Alignment Report

PVI No.	Start		PVI Details		End		Gradient (%)		Type of Curve	Curve Length (m)	K-Value
	Chainage (Km)	Level (m)	Chainage (Km)	Level (m)	Chainage (Km)	Level (m)	IN	OUT			
51	3+201.548	415.421	3+219.048	416.827	3+236.548	416.433	8.034	-2.250	Hog	35	3.40
52	3+242.760	416.293	3+247.760	416.181	3+252.760	416.526	-2.250	6.897	Sag	10	1.09
53	3+303.473	420.024	3+323.473	421.403	3+343.473	422.210	6.897	4.036	Hog	40	13.98
54	3+355.051	422.678	3+372.551	423.384	3+390.051	422.406	4.036	-5.590	Hog	35	3.64
55	3+410.553	421.260	3+423.053	420.561	3+435.553	419.284	-5.590	-10.216	Hog	25	5.40
56	3+443.833	418.438	3+456.333	417.161	3+468.833	416.611	-10.216	-4.403	Sag	25	4.30
57	3+479.446	416.143	3+491.946	415.593	3+504.446	414.631	-4.403	-7.700	Hog	25	7.58
58	3+515.856	413.752	3+535.856	412.212	3+555.856	412.212	-7.700	0.000	Sag	40	5.19
59	3+672.558	412.212	3+692.558	412.212	3+712.558	414.044	0.000	9.160	Sag	40	4.37
60	3+719.303	414.662	3+731.803	415.807	3+744.303	416.164	9.160	2.858	Hog	25	3.97
61	3+755.799	416.493	3+768.299	416.850	3+780.799	417.703	2.858	6.826	Sag	25	6.30
62	3+805.184	419.368	3+817.684	420.221	3+830.184	420.522	6.826	2.406	Hog	25	5.66
63	3+855.155	421.123	3+875.155	421.604	3+895.155	423.510	2.406	9.528	Sag	40	5.62
64	3+910.286	424.951	3+920.286	425.904	3+930.286	426.349	9.528	4.446	Hog	20	3.94
65	3+932.014	426.425	3+942.014	426.870	3+952.014	427.547	4.446	6.770	Sag	20	8.61
66	3+958.601	427.993	3+971.099	428.839	3+983.597	429.593	6.770	6.032	Hog	25	33.87
67	4+004.206	430.836	4+014.206	431.439	4+024.206	432.262	6.032	8.227	Sag	20	9.11
68	4+026.474	432.448	4+036.474	433.271	4+046.474	433.454	8.227	1.825	Hog	20	3.12
69	4+058.910	433.680	4+068.910	433.863	4+078.910	434.411	1.825	5.478	Sag	20	5.47
70	4+083.396	434.656	4+103.396	435.752	4+123.396	436.134	5.478	1.910	Hog	40	11.21
71	4+125.969	436.183	4+138.469	436.422	4+150.969	437.245	1.910	6.584	Sag	25	5.35
72	4+165.182	438.181	4+187.682	439.662	4+210.182	439.298	6.584	-1.616	Hog	45	5.49
73	4+223.317	439.086	4+235.817	438.884	4+248.317	440.063	-1.616	9.428	Sag	25	2.26
74	4+259.631	441.129	4+279.631	443.015	4+299.631	444.504	9.428	7.444	Hog	40	20.16
75	4+315.446	445.681	4+335.446	447.170	4+355.446	448.197	7.444	5.136	Hog	40	17.33
76	4+430.139	452.033	4+440.139	452.547	4+450.139	453.335	5.136	7.883	Sag	20	7.28
77	4+452.617	453.531	4+462.617	454.319	4+472.617	454.724	7.883	4.050	Hog	20	5.22
78	4+487.040	455.308	4+507.040	456.118	4+527.040	457.320	4.050	6.009	Sag	40	20.42
79	4+557.849	459.171	4+577.849	460.373	4+597.849	462.098	6.009	8.626	Sag	40	15.28
80	4+631.670	465.016	4+651.670	466.741	4+671.670	467.503	8.626	3.810	Hog	40	8.31
81	4+704.866	468.768	4+714.866	469.149	4+724.866	469.703	3.810	5.544	Sag	20	11.53
82	4+733.782	470.198	4+743.782	470.752	4+753.782	470.867	5.544	1.151	Hog	20	4.55
83	4+770.872	471.064	4+780.872	471.179	4+790.872	472.166	1.151	9.870	Sag	20	2.29
84	4+798.948	472.963	4+811.448	474.197	4+823.948	474.763	9.870	4.526	Hog	25	4.68
85	4+826.486	474.878	4+835.145	475.270	4+843.804	475.949	4.526	7.844	Sag	17	5.22
86	4+846.704	476.176	4+855.161	476.840	4+863.617	477.265	7.844	5.029	Hog	17	6.01
87	4+892.385	478.712	4+902.385	479.214	4+912.385	479.317	5.029	1.023	Hog	20	4.99
88	4+923.318	479.429	4+933.318	479.531	4+943.318	479.930	1.023	3.988	Sag	20	6.75
89	5+003.764	482.340	5+016.264	482.839	5+028.764	482.953	3.988	0.915	Hog	25	8.14
90	5+059.945	483.239	5+072.445	483.353	5+084.945	484.013	0.915	5.278	Sag	25	5.73
91	5+104.059	485.021	5+124.059	486.077	5+144.059	486.040	5.278	-0.184	Hog	40	7.32
92	5+163.671	486.004	5+176.171	485.981	5+188.671	486.810	-0.184	6.632	Sag	25	3.67
93	5+193.216	487.112	5+213.216	488.438	5+233.216	489.585	6.632	5.737	Hog	40	44.69
94	5+252.517	490.693	5+312.517	494.135	5+372.517	489.545	5.737	-7.649	Hog	120	8.96
95	5+437.084	484.607	5+457.084	483.077	5+477.084	483.051	-7.649	-0.128	Sag	40	5.32
96	5+532.905	482.980	5+545.405	482.964	5+557.905	482.036	-0.128	-7.424	Hog	25	3.43
97	5+675.282	473.322	5+687.782	472.394	5+700.282	472.537	-7.424	1.141	Sag	25	2.92
98	5+719.251	472.753	5+734.251	472.924	5+749.251	471.849	1.141	-7.167	Hog	30	3.61
99	5+757.357	471.268	5+777.351	469.835	5+797.344	468.058	-7.167	-8.886	Hog	40	23.26
100	5+819.086	466.126	5+844.086	463.905	5+869.086	465.312	-8.886	5.628	Sag	50	3.44

CLIENT :



Jhelum Tawi Flood Recovery Project  
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Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project  
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**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:

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West Bengal  
Ph: 033-40347200  
www.epitisa.com

REV.	DATE	DESCRIPTION

DRAWN BY : SD	TITLE : Vertical Alignment Report
DESIGNED BY : SKKMM	DRG. NO. : EPTISAJTRP/DPR/J&K/VAR/02
APPROVED BY : KG	REVISION : R-1
SCALE : N.T.S	September 2019



### Vertical Alignment Report

PVI No.	Start		PVI Details		End		Gradient (%)		Type of Curve	Curve Length (m)	K-Value
	Chainage (Km)	Level (m)	Chainage (Km)	Level (m)	Chainage (Km)	Level (m)	IN	OUT			
101	5+908.281	467.518	5+918.281	468.081	5+928.281	468.944	5.628	8.636	Sag	20	6.65
102	5+950.259	470.842	5+962.759	471.922	5+975.259	471.925	8.636	0.023	Hog	25	2.90
103	5+993.119	471.929	6+010.619	471.933	6+028.119	471.251	0.023	-3.897	Hog	35	8.93
104	6+082.025	469.150	6+094.525	468.663	6+107.025	467.828	-3.897	-6.684	Hog	25	8.97
105	6+110.661	467.584	6+123.161	466.749	6+135.661	466.000	-6.684	-5.989	Sag	25	35.97
106	6+147.726	465.278	6+167.726	464.080	6+187.726	462.599	-5.989	-7.406	Hog	40	28.23
107	6+204.451	461.360	6+224.451	459.879	6+244.451	461.002	-7.406	5.615	Sag	40	3.07
108	6+252.693	461.465	6+272.693	462.588	6+292.693	462.906	5.615	1.590	Hog	40	9.94
109	6+311.328	463.202	6+323.828	463.401	6+336.328	464.434	1.590	8.267	Sag	25	3.74
110	6+356.737	466.122	6+376.737	467.775	6+396.737	468.999	8.267	6.121	Hog	40	18.64
111	6+422.611	470.583	6+435.111	471.348	6+447.611	470.976	6.121	-2.976	Hog	25	2.75
112	6+467.506	470.384	6+480.006	470.012	6+492.506	469.449	-2.976	-4.501	Hog	25	16.39
113	6+493.346	469.412	6+505.846	468.849	6+518.346	469.005	-4.501	1.251	Sag	25	4.35
114	6+533.958	469.201	6+546.458	469.357	6+558.958	468.744	1.251	-4.907	Hog	25	4.06
115	6+563.467	468.522	6+575.967	467.909	6+588.467	467.148	-4.907	-6.089	Hog	25	21.15
116	6+615.381	465.509	6+627.881	464.748	6+640.381	463.394	-6.089	-10.835	Hog	25	5.27
117	6+640.511	463.380	6+650.511	462.296	6+660.511	462.015	-10.835	-2.811	Sag	20	2.49
118	6+667.859	461.808	6+680.359	461.457	6+692.859	460.562	-2.811	-7.162	Hog	25	5.75
119	6+700.824	459.991	6+713.324	459.096	6+725.824	458.912	-7.162	-1.474	Sag	25	4.40
120	6+731.416	458.829	6+743.916	458.645	6+756.416	457.838	-1.474	-6.458	Hog	25	5.02
121	6+760.591	457.568	6+770.591	456.922	6+780.591	456.813	-6.458	-1.095	Sag	20	3.73
122	6+819.141	456.391	6+831.641	456.254	6+844.141	455.522	-1.095	-5.853	Hog	25	5.25
123	6+947.575	449.468	6+957.575	448.883	6+967.575	448.524	-5.853	-3.591	Sag	20	8.84
124	6+971.136	448.396	6+981.136	448.037	6+991.136	447.356	-3.591	-6.813	Hog	20	6.21
125	6+996.009	447.024	7+008.509	446.172	7+021.009	445.772	-6.813	-3.203	Sag	25	6.93
126	7+055.139	444.678	7+067.639	444.278	7+080.139	443.462	-3.203	-6.526	Hog	25	7.52
127	7+085.707	443.099	7+098.207	442.283	7+110.707	441.764	-6.526	-4.152	Sag	25	10.53
128	7+115.593	441.561	7+128.093	441.042	7+140.593	440.397	-4.152	-5.161	Hog	25	24.78
129	7+168.328	438.965	7+198.328	437.417	7+228.328	437.417	-5.161	0.000	Sag	60	11.63
130	7+373.509	437.417	7+403.509	437.417	7+433.509	439.470	0.000	6.845	Sag	60	8.77
131	7+437.021	439.711	7+446.653	440.370	7+456.284	440.816	6.845	4.628	Hog	19	8.69
132	7+598.500	447.398	7+616.000	448.208	7+633.500	447.943	4.628	-1.512	Hog	35	5.70
133	7+666.083	447.451	7+678.583	447.262	7+691.083	446.811	-1.512	-3.609	Hog	25	11.92
134	7+710.942	446.094	7+723.442	445.643	7+735.942	446.575	-3.609	7.456	Sag	25	2.26
135	7+750.251	447.642	7+770.251	449.133	7+790.251	450.435	7.456	6.508	Hog	40	42.19
136	7+820.101	452.377	7+832.601	453.191	7+845.101	453.862	6.508	5.367	Hog	25	21.91
137	7+848.076	454.021	7+860.576	454.692	7+873.076	455.451	5.367	6.070	Sag	25	35.56
138	7+929.013	458.846	7+941.513	459.605	7+954.013	459.991	6.070	3.090	Hog	25	8.39
139	7+955.422	460.035	7+967.922	460.421	7+980.422	461.171	3.090	5.998	Sag	25	8.60
140	7+986.649	461.544	7+999.149	462.294	8+011.649	462.864	5.998	4.559	Hog	25	17.37
141	8+089.011	466.390	8+114.011	467.530	8+139.011	467.777	4.559	0.987	Hog	50	14.00
142	8+184.655	468.227	8+209.655	468.474	8+234.655	467.454	0.987	-4.078	Hog	50	9.87
143	8+282.465	465.505	8+302.465	464.689	8+322.465	463.495	-4.078	-5.968	Hog	40	21.16
144	8+352.661	461.694	8+372.661	460.500	8+392.661	461.345	-5.968	4.226	Sag	40	3.92
145	8+412.717	462.193	8+437.717	463.249	8+462.717	463.722	4.226	1.893	Hog	50	21.43
146	8+465.253	463.770	8+477.753	464.007	8+490.253	464.825	1.893	6.543	Sag	25	5.38
147	8+516.956	466.572	8+541.956	468.208	8+566.956	469.018	6.543	3.240	Hog	50	15.14
148	8+621.887	470.798	8+634.387	471.203	8+646.887	471.947	3.240	5.950	Sag	25	9.23
149	8+654.374	472.392	8+666.874	473.136	8+679.374	473.756	5.950	4.957	Hog	25	25.18
150	8+737.693	476.646	8+750.193	477.266	8+762.693	477.457	4.957	1.529	Hog	25	7.29

CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:

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Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector V, Salt Lake Kolkata - 700091, West Bengal  
Ph: 033-40347200  
www.epitisa.com

REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SKKMM
APPROVED BY :	KG
SCALE :	N.T.S

TITLE :	Vertical Alignment Report
DRG. NO. :	EPTISAJTRP/DPR/J&K/VAR/03
REVISION :	R-1
	September 2019

### Vertical Alignment Report

PVI No.	Start		PVI Details		End		Gradient (%)		Type of Curve	Curve Length (m)	K-Value
	Chainage (Km)	Level (m)	Chainage (Km)	Level (m)	Chainage (Km)	Level (m)	IN	OUT			
151	8+768.893	477.552	8+781.393	477.743	8+793.893	478.336	1.529	4.746	Sag	25	7.77
152	8+805.661	478.895	8+818.161	479.488	8+830.661	480.339	4.746	6.810	Sag	25	12.11
153	8+883.341	483.927	8+903.341	485.289	8+923.341	484.866	6.810	-2.114	Hog	40	4.48
154	8+966.327	483.957	8+978.827	483.693	8+991.327	484.273	-2.114	4.639	Sag	25	3.70
155	8+996.357	484.506	9+008.857	485.086	9+021.357	484.909	4.639	-1.415	Hog	25	4.13
156	9+022.554	484.892	9+030.054	484.786	9+037.554	485.091	-1.415	4.060	Sag	15	2.74
157	9+116.532	488.297	9+129.032	488.805	9+141.532	489.797	4.060	7.935	Sag	25	6.45
158	9+171.114	492.144	9+191.114	493.731	9+211.114	494.450	7.935	3.594	Hog	40	9.21
159	9+233.354	495.249	9+253.354	495.968	9+273.354	496.137	3.594	0.843	Hog	40	14.54
160	9+288.170	496.262	9+300.670	496.367	9+313.170	497.086	0.843	5.749	Sag	25	5.10
161	9+373.026	500.527	9+385.526	501.246	9+398.026	500.943	5.749	-2.424	Hog	25	3.06
162	9+431.550	500.130	9+444.050	499.827	9+456.550	499.136	-2.424	-5.532	Hog	25	8.04
163	9+459.117	498.993	9+471.617	498.302	9+484.117	497.288	-5.532	-8.110	Hog	25	9.70
164	9+503.981	495.677	9+531.481	493.447	9+558.981	494.106	-8.110	2.397	Sag	55	5.23
165	9+609.162	495.309	9+629.162	495.788	9+649.162	495.788	2.397	0.000	Hog	40	16.69
166	9+699.478	495.788	9+719.478	495.788	9+739.478	495.188	0.000	-3.000	Hog	40	13.33
167	9+799.478	493.388	9+819.478	492.788	9+839.478	493.422	-3.000	3.171	Sag	40	6.48
168	9+889.455	495.007	9+909.455	495.641	9+929.455	495.680	3.171	0.194	Hog	40	13.44
169	9+959.478	495.738	9+979.478	495.777	9+999.478	496.578	0.194	4.004	Sag	40	10.50
170	10+042.561	498.303	10+055.061	498.803	10+067.561	499.935	4.004	9.057	Sag	25	4.95
171	10+092.480	502.192	10+104.980	503.324	10+117.480	503.798	9.057	3.792	Hog	25	4.75
172	10+165.810	505.631	10+185.810	506.389	10+205.810	507.339	3.792	4.752	Sag	40	41.67
173	10+421.789	517.603	10+441.789	518.553	10+461.789	520.149	4.752	7.978	Sag	40	12.40
174	10+538.538	526.271	10+558.538	527.867	10+578.538	527.997	7.978	0.648	Hog	40	5.46
175	10+620.369	528.267	10+640.369	528.397	10+660.369	529.209	0.648	4.060	Sag	40	11.72
176	10+685.230	530.218	10+697.730	530.726	10+710.230	531.381	4.060	5.239	Sag	25	21.20
177	10+712.523	531.501	10+725.023	532.156	10+737.523	532.117	5.239	-0.310	Hog	25	4.51
178	10+745.139	532.094	10+757.639	532.055	10+770.139	533.193	-0.310	9.103	Sag	25	2.66
179	10+791.513	535.139	10+801.513	536.049	10+811.513	536.564	9.103	5.147	Hog	20	5.06
180	10+818.867	536.942	10+828.867	537.457	10+838.867	538.249	5.147	7.919	Sag	20	7.22
181	10+839.691	538.314	10+847.191	538.908	10+854.691	539.423	7.919	6.868	Hog	15	14.27
182	10+865.203	540.145	10+875.203	540.832	10+885.203	541.288	6.868	4.564	Hog	20	8.68
183	10+965.009	544.931	10+977.509	545.501	10+990.009	545.296	4.564	-1.643	Hog	25	4.03

CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor, ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:



**Eptisa Servicios de Ingeniería S.L.**  
Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector V, Salt Lake Kolkata - 700091, West Bengal  
Ph: 033-40347200  
www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY : SD

DESIGNED BY : SKKMM

APPROVED BY : KG

SCALE : N.T.S

TITLE :

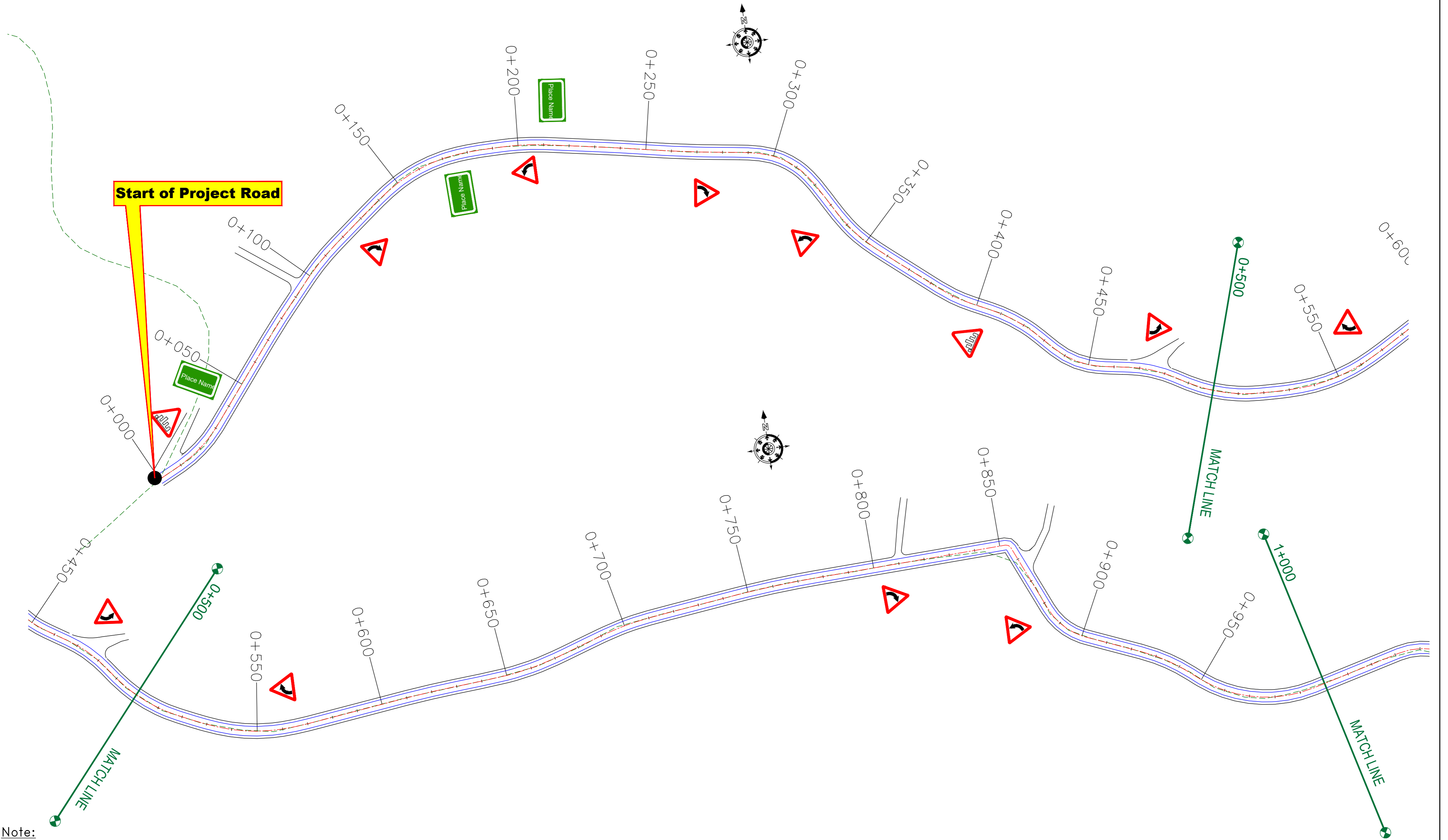
Vertical Alignment Report

DRG. NO. : EPTISAJTRP/DPR/J&K/VAR/04

REVISION : R-1

September 2019

≡ SCHEDULE OF SIGNAGE ≡



- Note:**
1. Speed Limit Sign(Fig-14.37 of IRC-67, 2012) of 30km/h should be provided at bends.
  2. Series of Bends Sign(Fig-15.07 of IRC-67, 2012) should be provided at every 200m in zigzag curves.

CLIENT :



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2nd Floor ERA Commercial Complex Rambagh  
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PROJECT :

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DESIGN CONSULTANT:



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Ph: 033-40347200  
www.eptisa.com

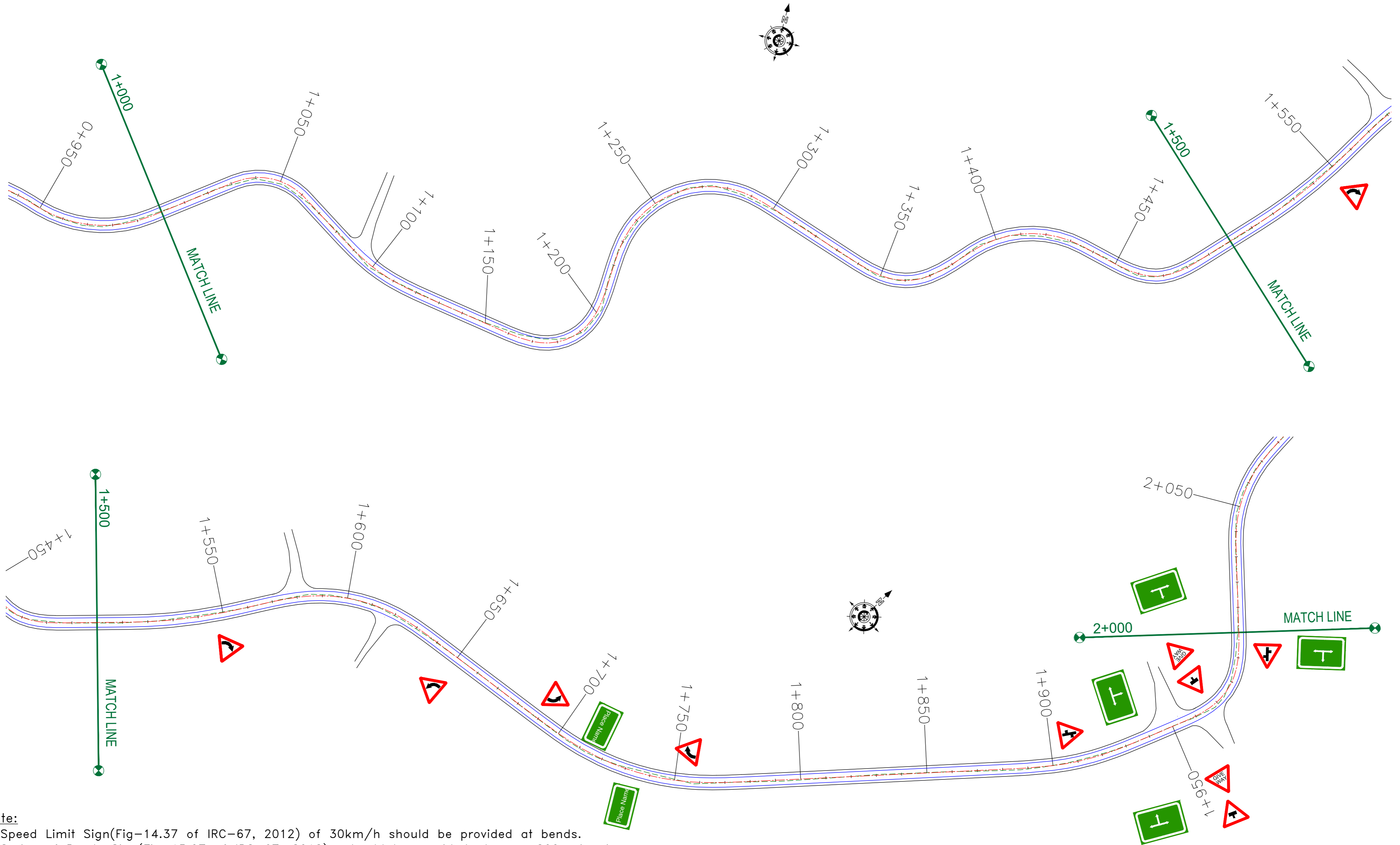
REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	<b>Signage Plan</b> (Ch. 0+000 to Ch. 1+000)
DRG. NO. :	EPTISA/JTRFP/DPR/J&K/SP/01
REVISION :	R-1
September 2019	

← Tutain Di Khoi

Khara Madhana Road →



- Note:**
- 1.Speed Limit Sign(Fig-14.37 of IRC-67, 2012) of 30km/h should be provided at bends.
  - 2.Series of Bends Sign(Fig-15.07 of IRC-67, 2012) should be provided at every 200m in zigzag curves.

CLIENT :



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2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:



**servicios de Ingenieria S.L.**  
Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
Ph: 033-40347200  
www.eptisa.com

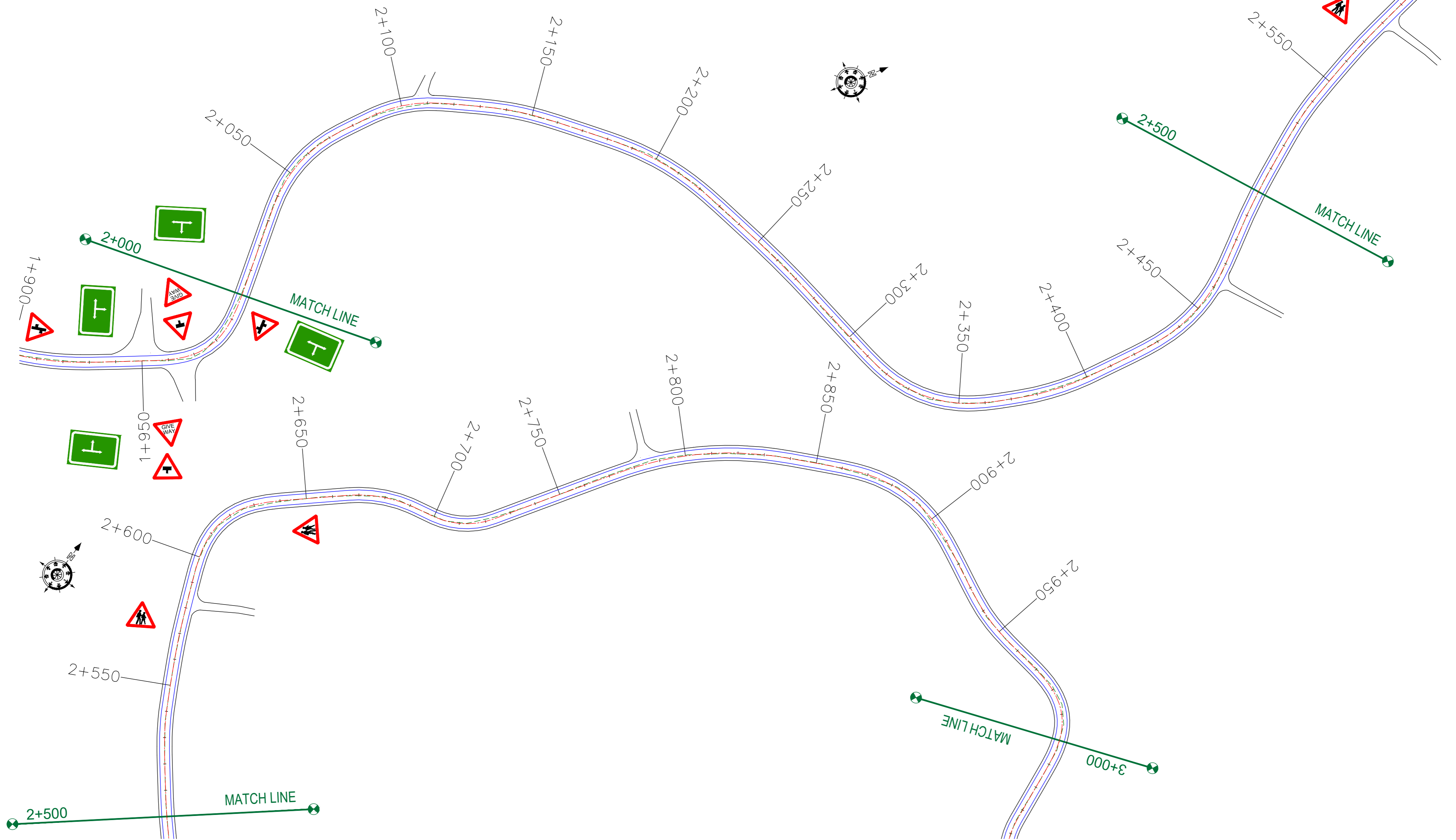
REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	<b>Signage Plan</b> (Ch. 1+000 to Ch. 2+000)
DRG. NO. :	EPTISA/JTRFP/DPR/J&K/SP/02
REVISION :	R-1
September 2019	

← Tutain Di Khoi

Khara Madhana Road →



**Note:**

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CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:

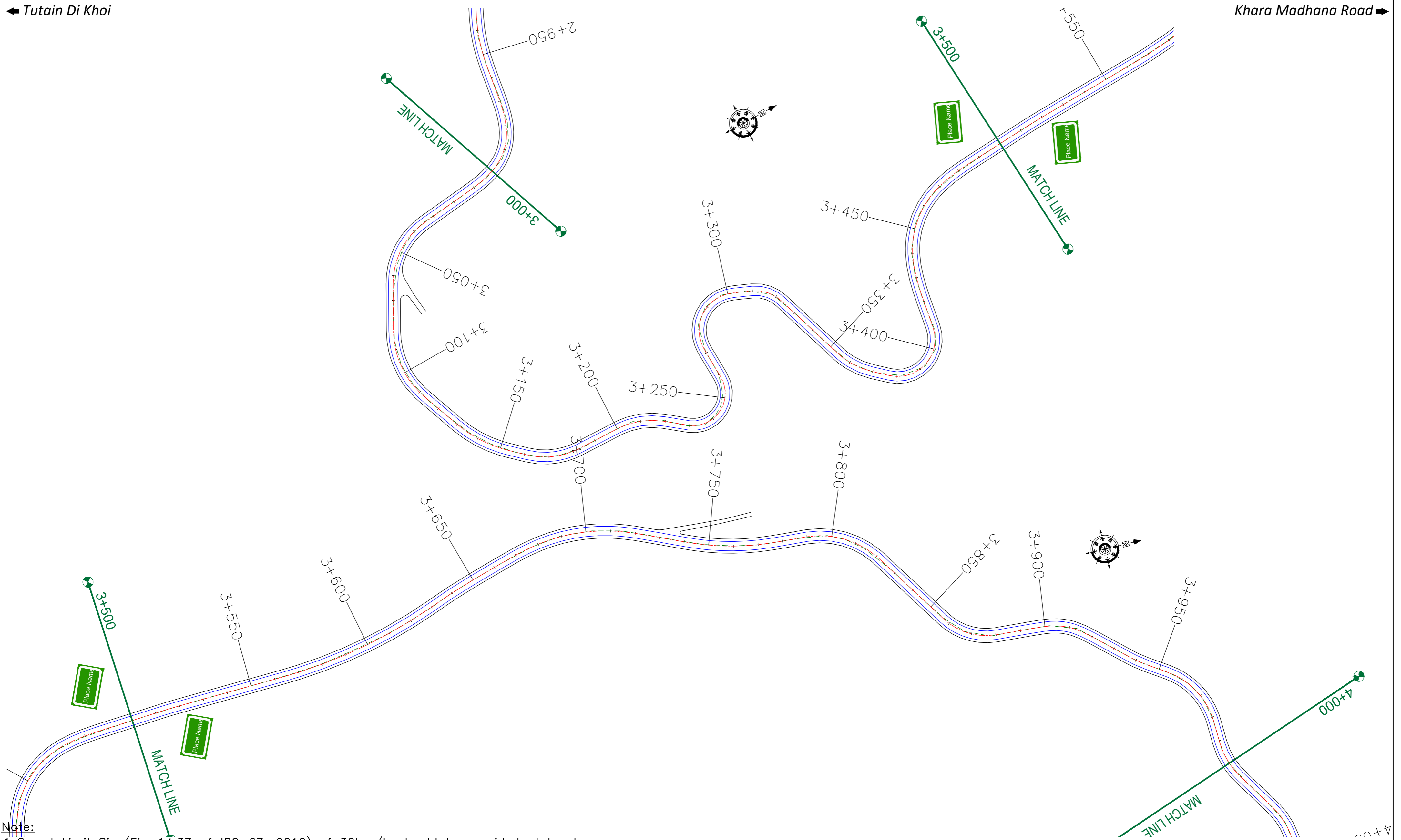


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Ph: 033-40347200  
www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	<b>Signage Plan</b>	
	(Ch. 2+000 to Ch. 3+000)	
DRG. NO. :	EPTISA/JTRP/DPR/J&K/SP/03	
REVISION :	R-1	September 2019



- Note:**
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CLIENT :



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2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:

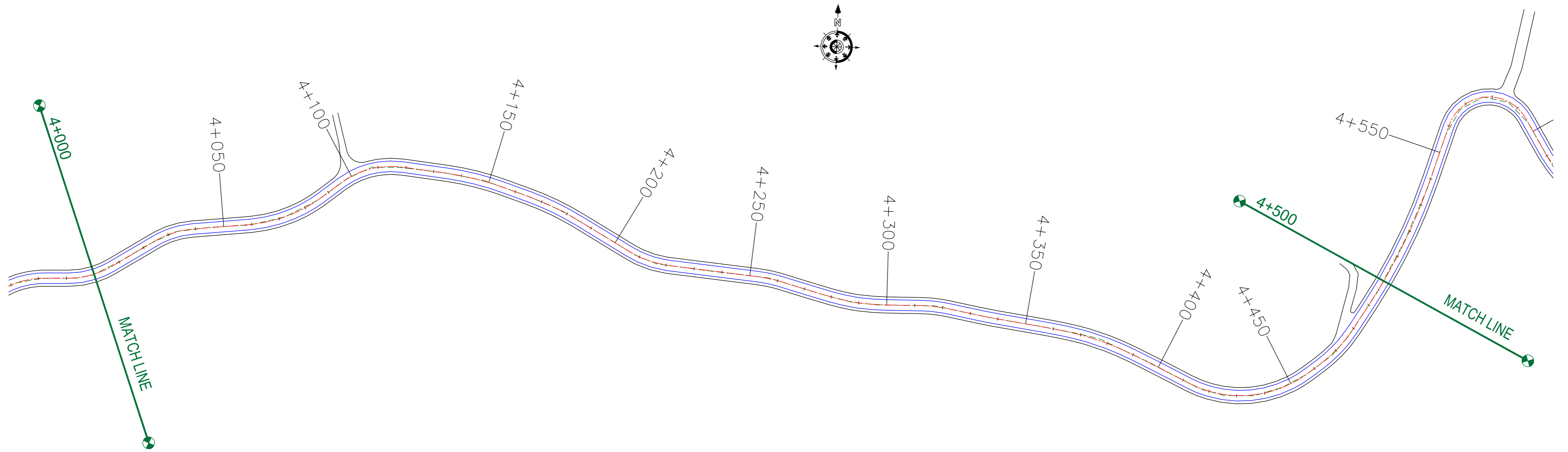


**servicios de Ingenieria S.L.**  
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Ph: 033-40347200  
www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	<b>Signage Plan</b>	
	(Ch. 4+000 to Ch. 5+000)	
DRG. NO. :	EPTISA/JTFRP/DPR/J&K/SP/04	
REVISION : R-1	September 2019	



**Note:**

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CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:



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Ph: 033-40347200  
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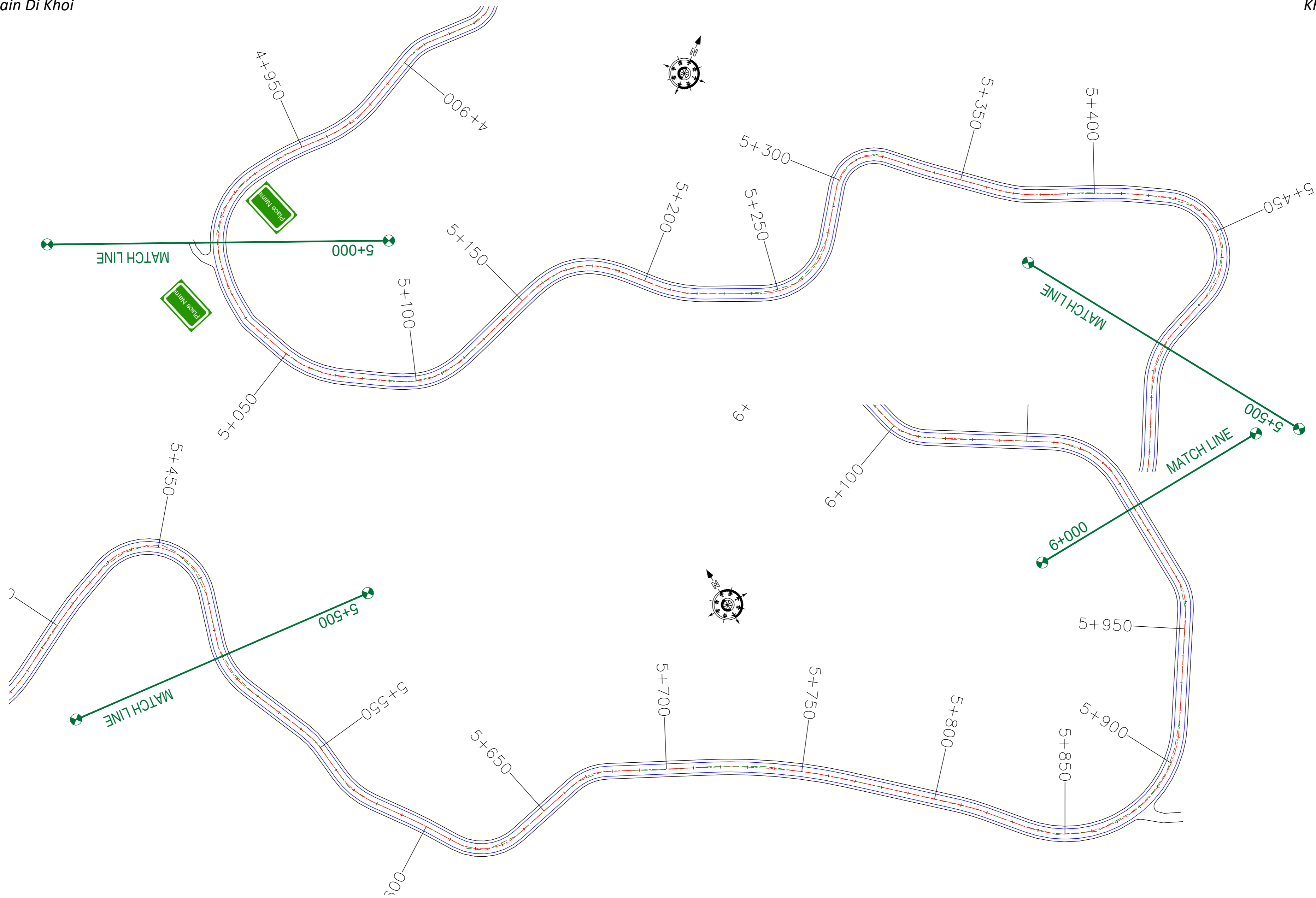
REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	<b>Signage Plan</b> (Ch. 4+000 to Ch. 4+500)
DRG. NO. :	EPTISA/JTRFP/DPR/J&K/SP/04
REVISION :	R-1
	September 2019







**Note:**

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CLIENT :



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2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:

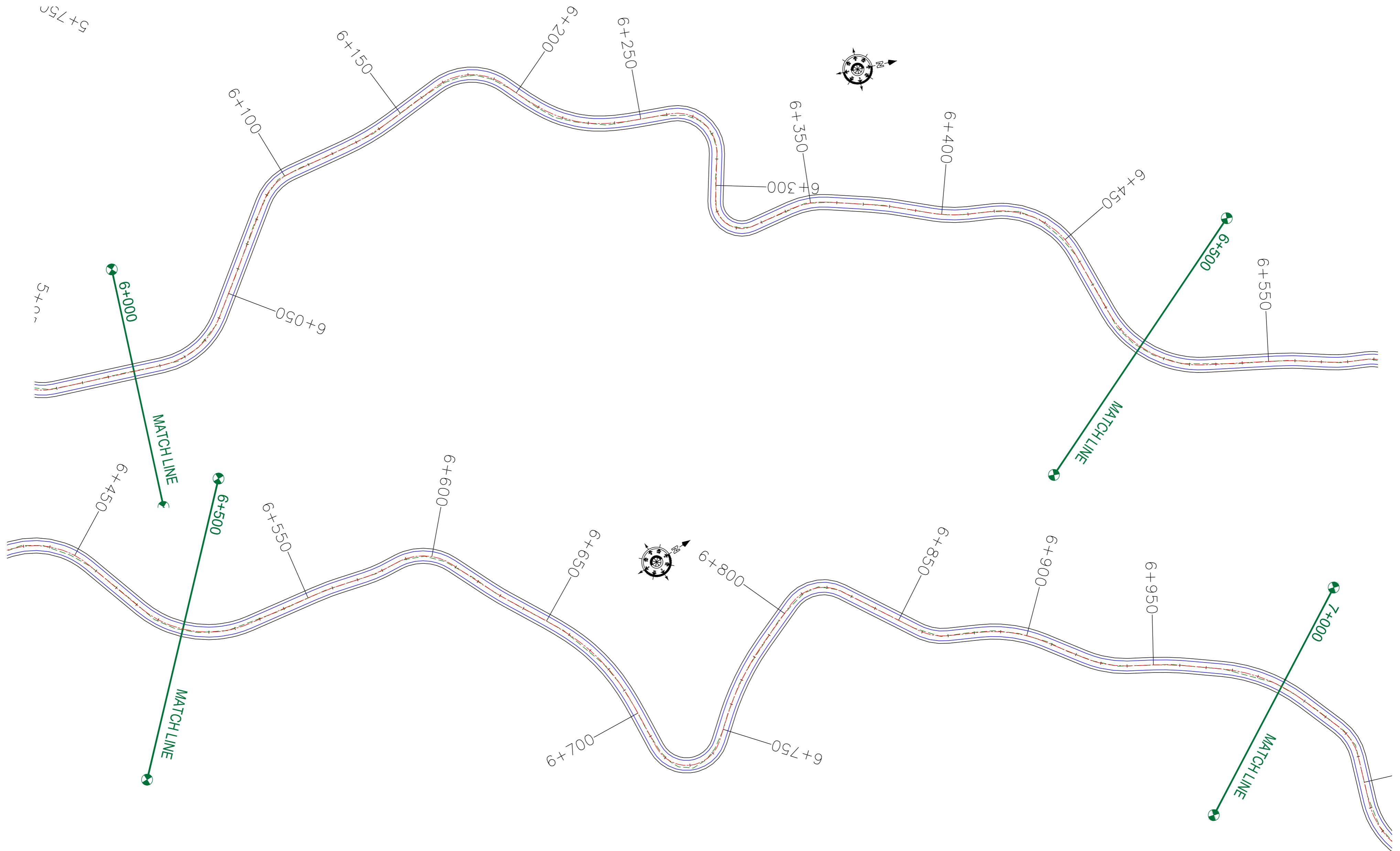


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Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
Ph: 033-40347200  
www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	<b>Signage Plan</b> (Ch. 5+000 to Ch. 6+000)
DRG. NO. :	EPTISA/JTRP/DPR/J&K/SP/07
REVISION : R-1	September 2019



**Note:**

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CLIENT :



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2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

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**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:

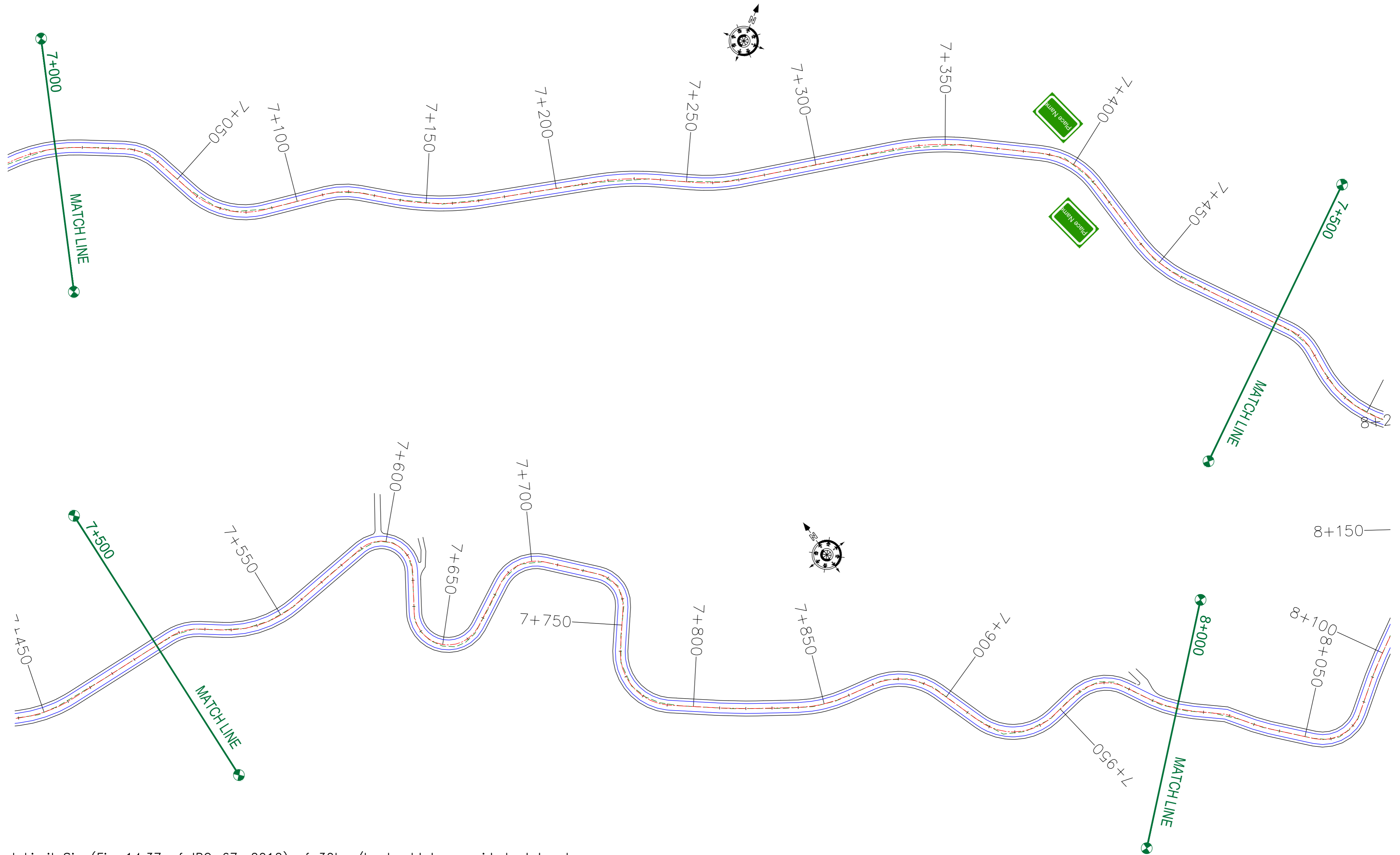


**servicios de Ingenieria S.L.**  
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Ph: 033-40347200  
www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	<b>Signage Plan</b> (Ch. 6+000 to Ch. 7+000)
DRG. NO. :	EPTISA/JTRP/DPR/J&K/SP/08
REVISION :	R-1
September 2019	



- Note:**
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CLIENT :



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2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:

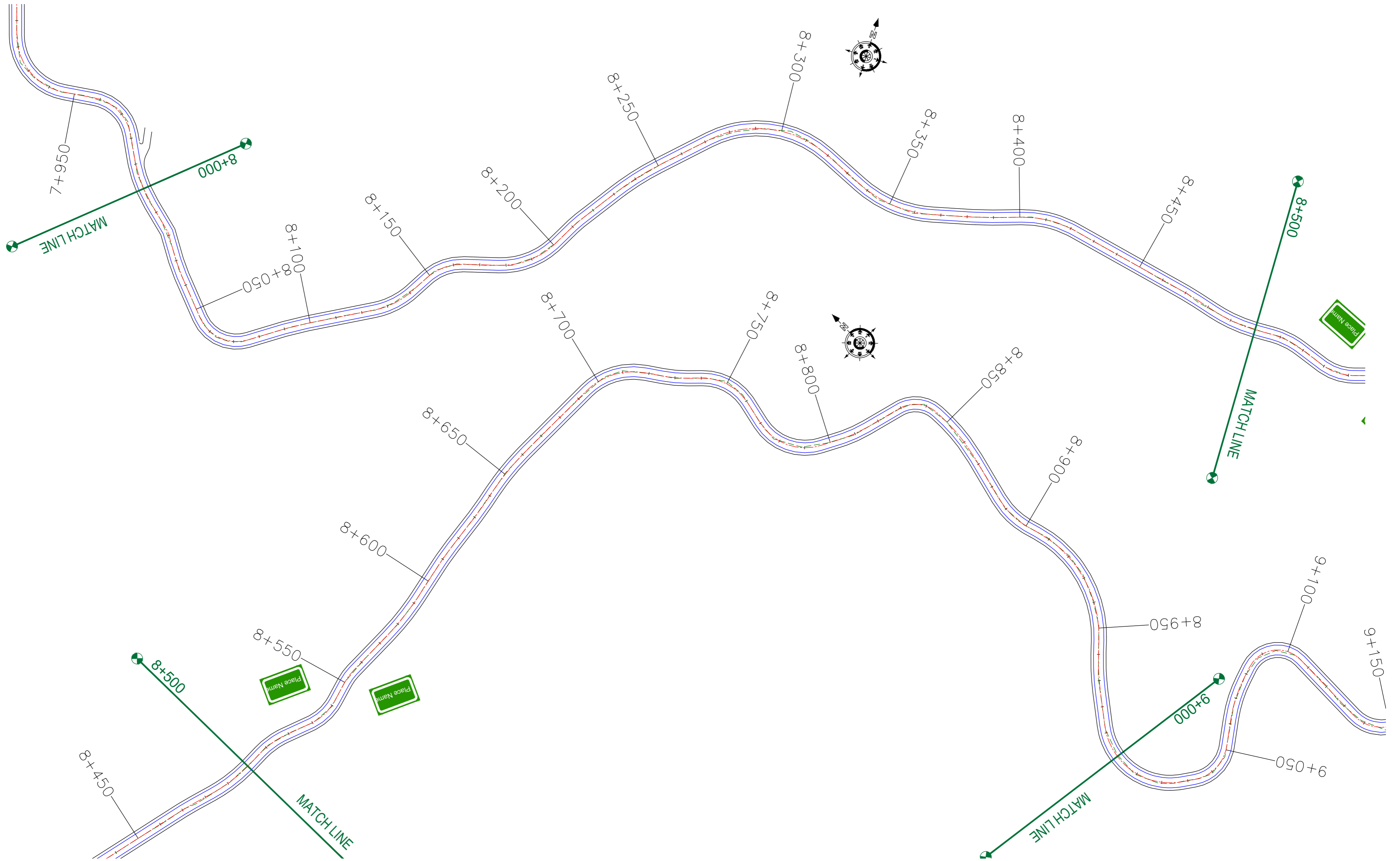


**servicios de Ingenieria S.L.**  
Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
Ph: 033-40347200  
www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	<b>Signage Plan</b> (Ch. 7+000 to Ch. 8+000)
DRG. NO. :	EPTISA/JTRFP/DPR/J&K/SP/09
REVISION : R-1	September 2019



**Note:**

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CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:



**servicios de Ingenieria S.L.**  
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Ph: 033-40347200  
www.eptisa.com

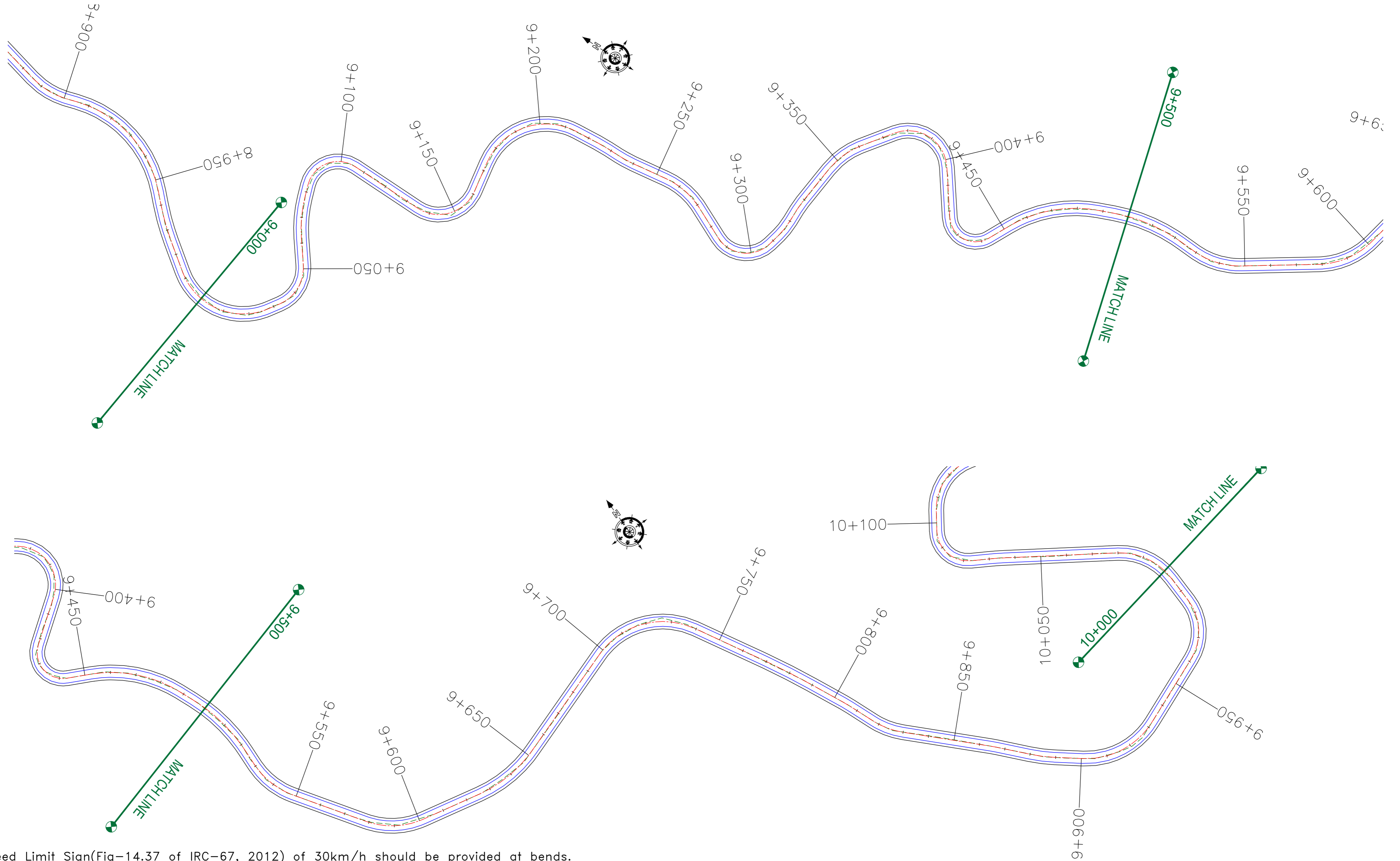
REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	<b>Signage Plan</b>	
	(Ch. 8+000 to Ch. 9+000)	
DRG. NO. :	EPTISA/JTRFP/DPR/J&K/SP/10	
REVISION : R-1	September 2019	

← Tutain Di Khoi

Khara Madhana Road →



**Note:**

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CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:

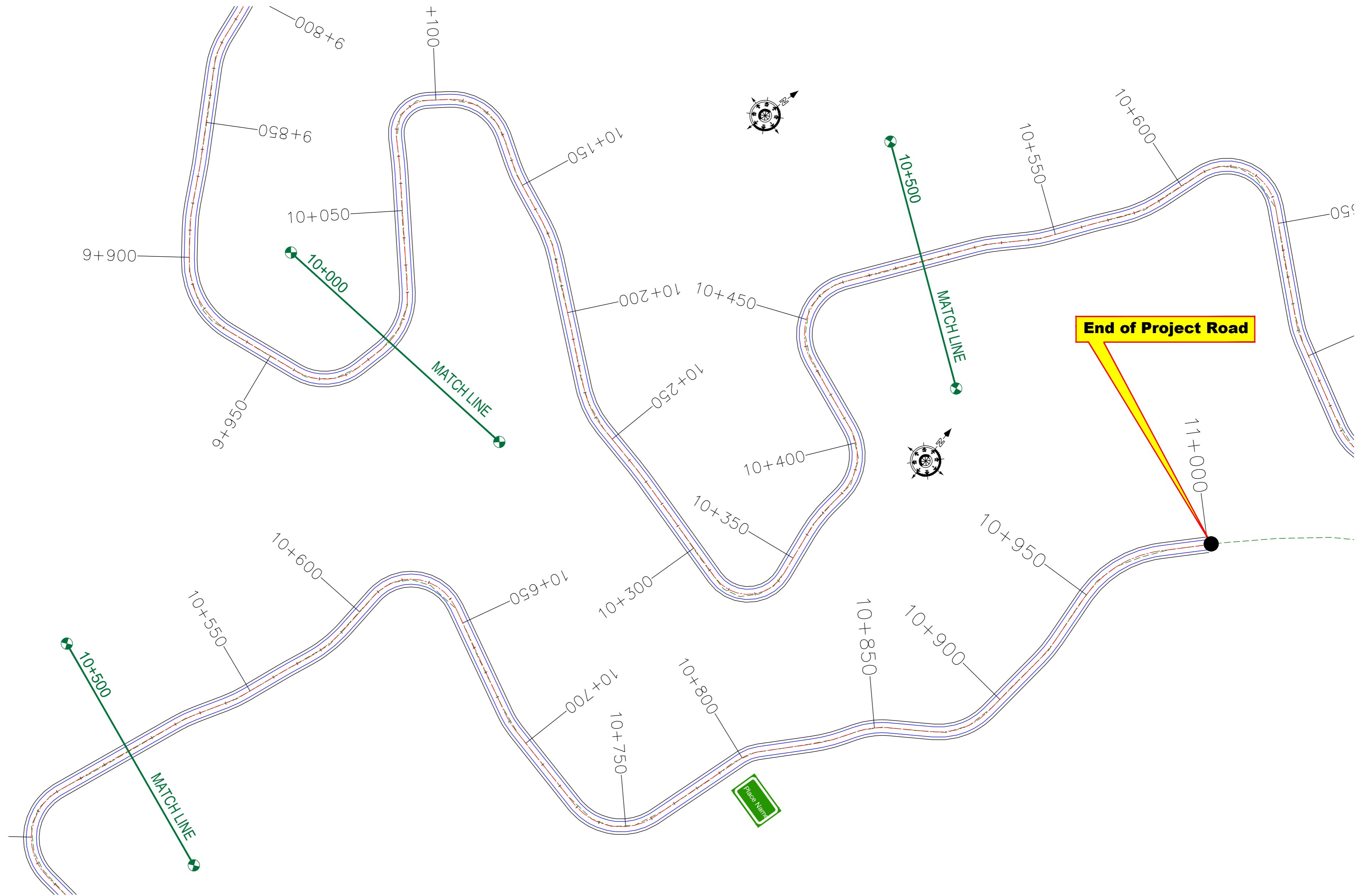


**servicios de Ingenieria S.L.**  
Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
Ph: 033-40347200  
www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	<b>Signage Plan</b>	
	(Ch. 9+000 to Ch. 10+000)	
DRG. NO. :	EPTISA/JTRFP/DPR/J&K/SP/11	
REVISION : R-1		September 2019



**Note:**

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CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

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**(Tutain Di Khoi Road)**

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Ph: 033-40347200  
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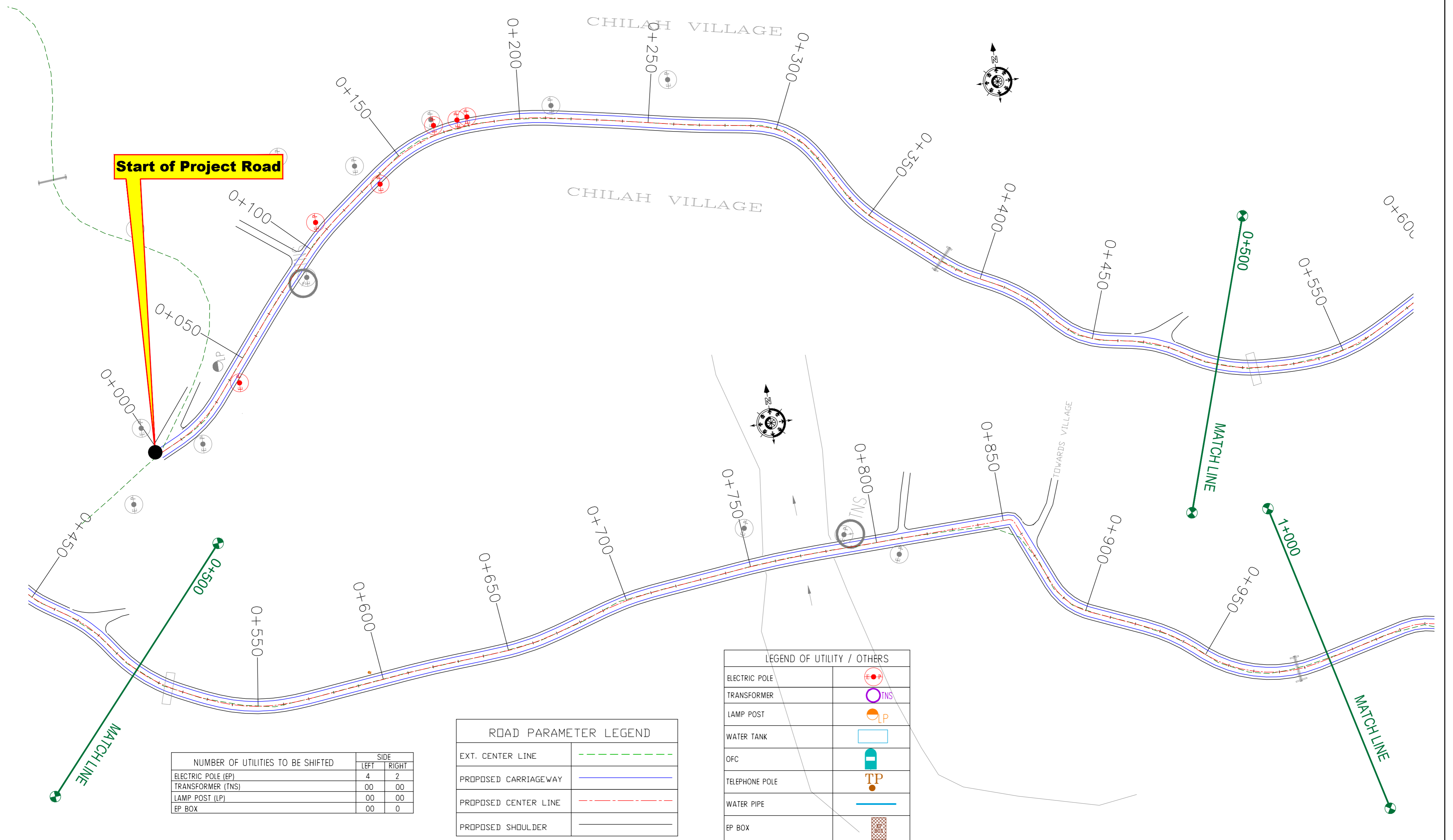
REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	<b>Signage Plan</b> (Ch. 10+000 to Ch. 11+000)
DRG. NO. :	EPTISA/JTFRP/DPR/J&K/SP/12
REVISION :	R-1
	September 2019

≡ UTILITY RELOCATION PLAN FOR MAIN ROAD (ELECTRICITY DEPARTMENT) ≡





**Start of Project Road**

NUMBER OF UTILITIES TO BE SHIFTED	SIDE	
	LEFT	RIGHT
ELECTRIC POLE (EP)	4	2
TRANSFORMER (TNS)	00	00
LAMP POST (LP)	00	00
EP BOX	00	0

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	--- --
PROPOSED CARRIAGEWAY	====
PROPOSED CENTER LINE	- - - -
PROPOSED SHOULDER	====

LEGEND OF UTILITY / OTHERS	
ELECTRIC POLE	
TRANSFORMER	
LAMP POST	
WATER TANK	
OFC	
TELEPHONE POLE	
WATER PIPE	
EP BOX	

CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:



**servicios de Ingenieria S.L.**  
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Ph: 033-40347200  
www.eptisa.com

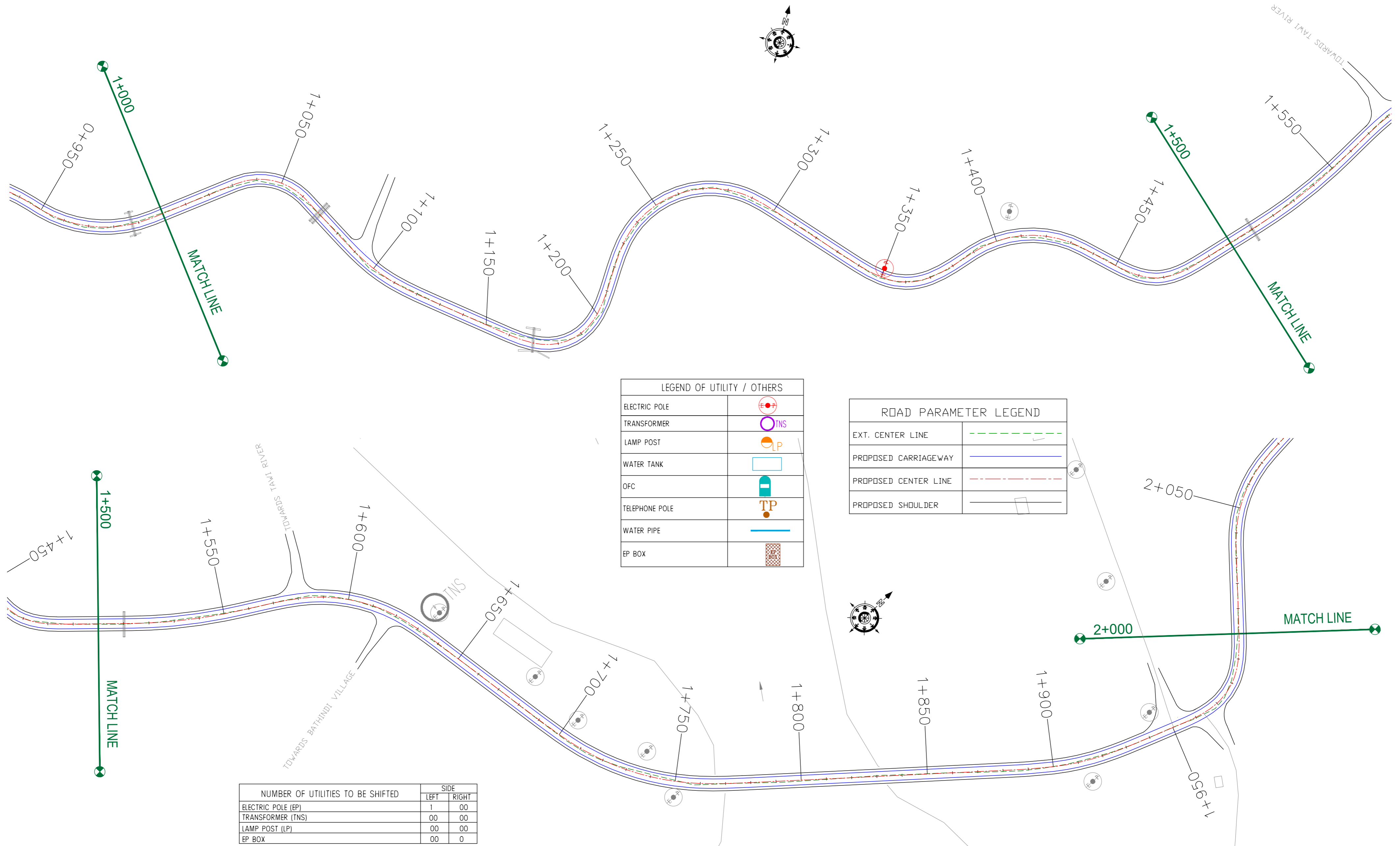
REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	<b>Utility Relocation Plan</b> (For Electricity Department) (Ch. 0+000 to Ch. 1+000)
DRG. NO. :	EPTISA/JTRFP/DPR/J&K/URP/01
REVISION :	R-1
	September 2019

← Tutain Di Khoi

Khara Madhana Road →



LEGEND OF UTILITY / OTHERS	
ELECTRIC POLE	
TRANSFORMER	
LAMP POST	
WATER TANK	
OFC	
TELEPHONE POLE	
WATER PIPE	
EP BOX	

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

NUMBER OF UTILITIES TO BE SHIFTED	SIDE	
	LEFT	RIGHT
ELECTRIC POLE (EP)	1	00
TRANSFORMER (TNS)	00	00
LAMP POST (LP)	00	00
EP BOX	00	0

CLIENT :   
 Jhelum Tawi Flood Recovery Project  
 2nd Floor ERA Commercial Complex Rambagh  
 Srinagar-190 009.

PROJECT :  
 Consultancy Services for Preparing Detailed Project  
 Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:  
 **servicios de Ingenieria S.L.**  
 Unit 1203, 12th Floor, Tower 1, PS Srijan  
 Corporate Park, Plot No. 2, Block EP & GP,  
 Sector v, Salt Lake Kolkata - 700091,  
 West Bengal  
 Ph: 033-40347200  
 www.eptisa.com

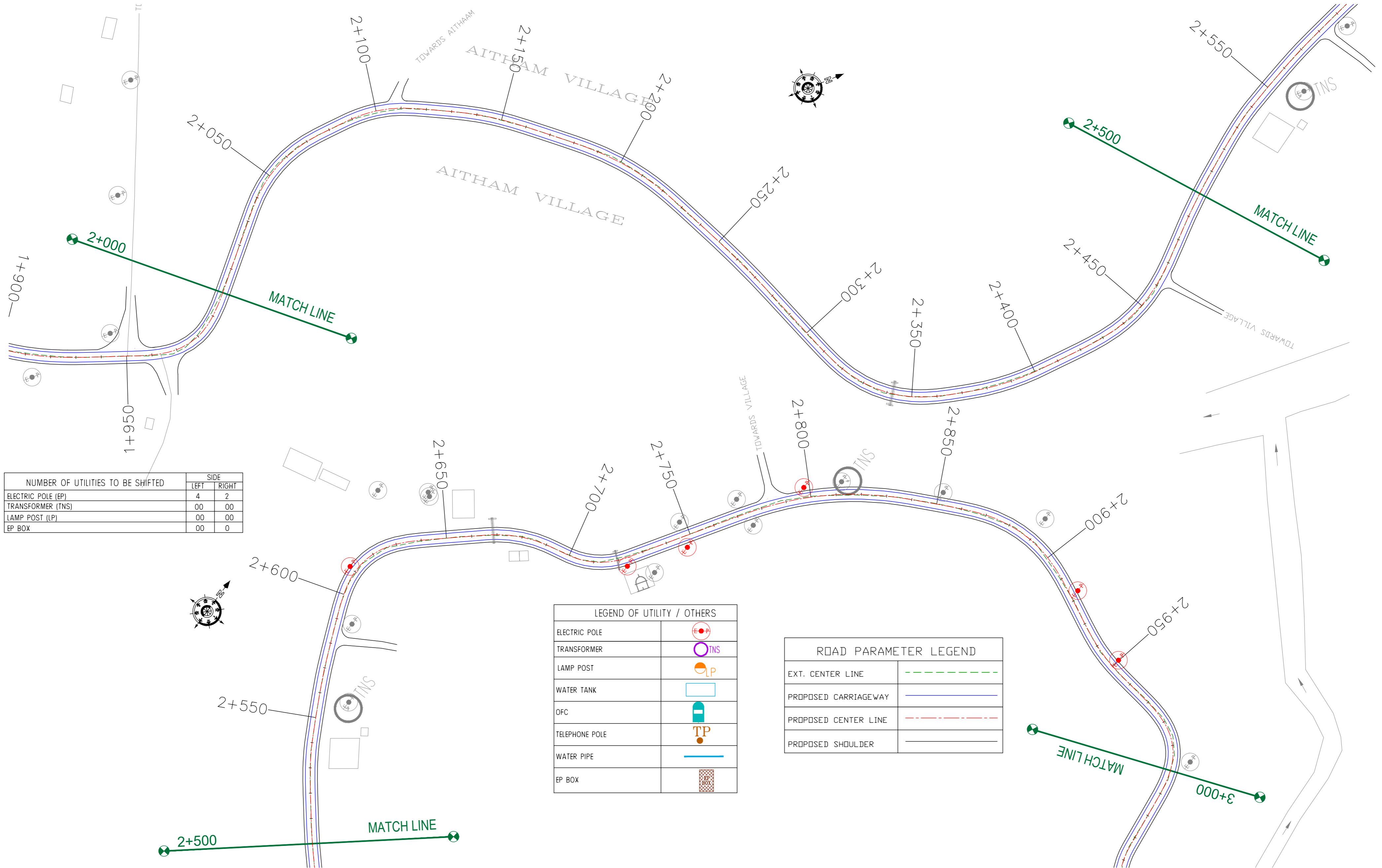
REV.	DATE	DESCRIPTION

DRAWN BY : SD  
 DESIGNED BY : SCK/MM  
 APPROVED BY : KG  
 SCALE : 1:1000

TITLE : **Utility Relocation Plan**  
 (For Electricity Department)  
 (Ch. 1+000 to Ch. 2+000)  
 DRG. NO. : EPTISA/JTFRP/DPR/J&K/URP/02  
 REVISION : R-1  
 September 2019

← Tutain Di Khoi

Khara Madhana Road →



NUMBER OF UTILITIES TO BE SHIFTED	SIDE	
	LEFT	RIGHT
ELECTRIC POLE (EP)	4	2
TRANSFORMER (TNS)	00	00
LAMP POST (LP)	00	00
EP BOX	00	0

LEGEND OF UTILITY / OTHERS	
ELECTRIC POLE	
TRANSFORMER	
LAMP POST	
WATER TANK	
OFC	
TELEPHONE POLE	
WATER PIPE	
EP BOX	

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:

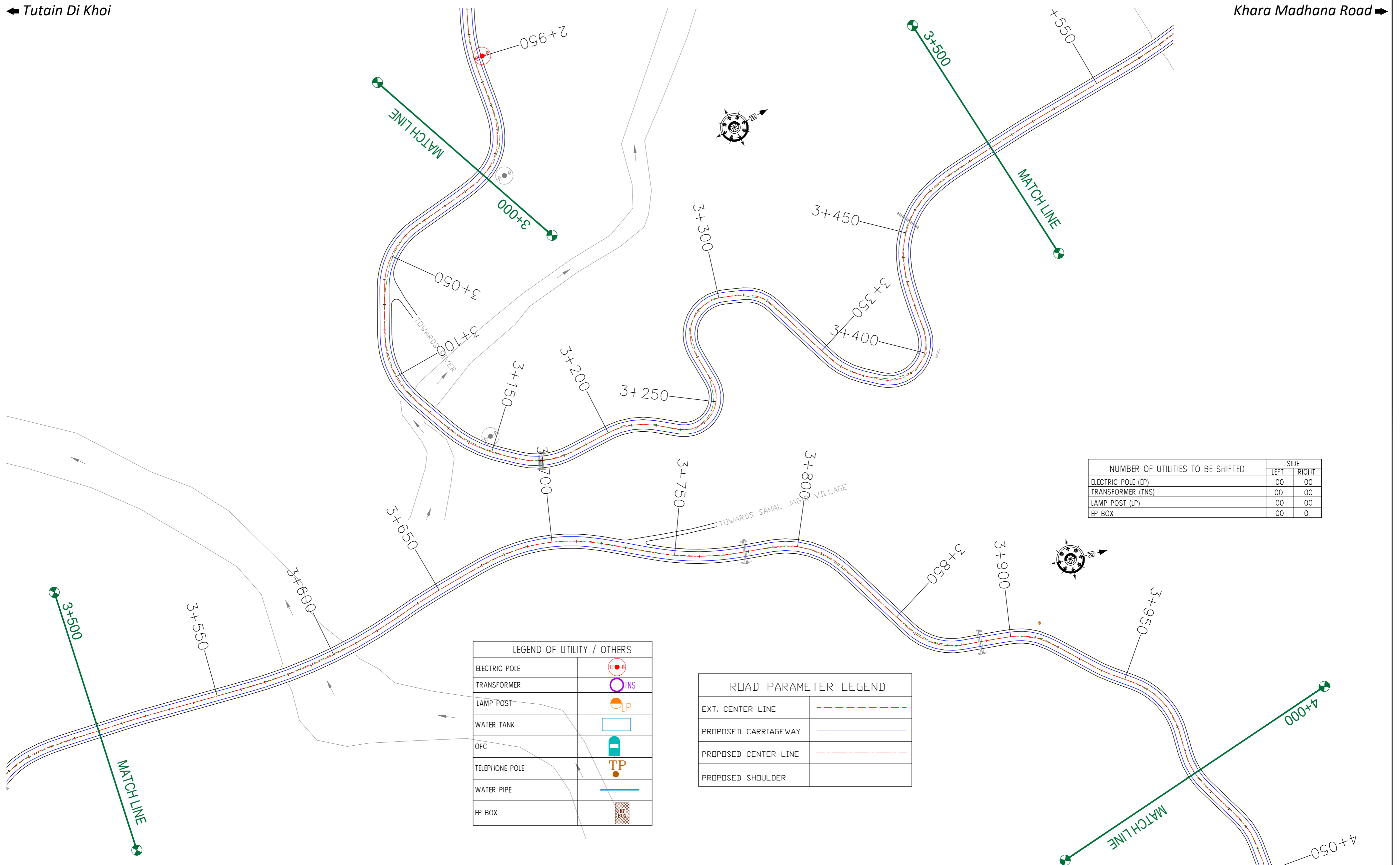


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Ph: 033-40347200  
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REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	<b>Utility Relocation Plan</b> (For Electricity Department) (Ch. 2+000 to Ch. 3+000)
DRG. NO. :	EPTISA/JFRP/DPR/J&K/URP/03
REVISION :	R-1
September 2019	



NUMBER OF UTILITIES TO BE SHIFTED	SIDE	
	LEFT	RIGHT
ELECTRIC POLE (EP)	00	00
TRANSFORMER (TNS)	00	00
LAMP POST (LP)	00	00
EP BOX	00	0

LEGEND OF UTILITY / OTHERS	
ELECTRIC POLE	
TRANSFORMER	
LAMP POST	
WATER TANK	
OFC	
TELEPHONE POLE	
WATER PIPE	
EP BOX	

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:

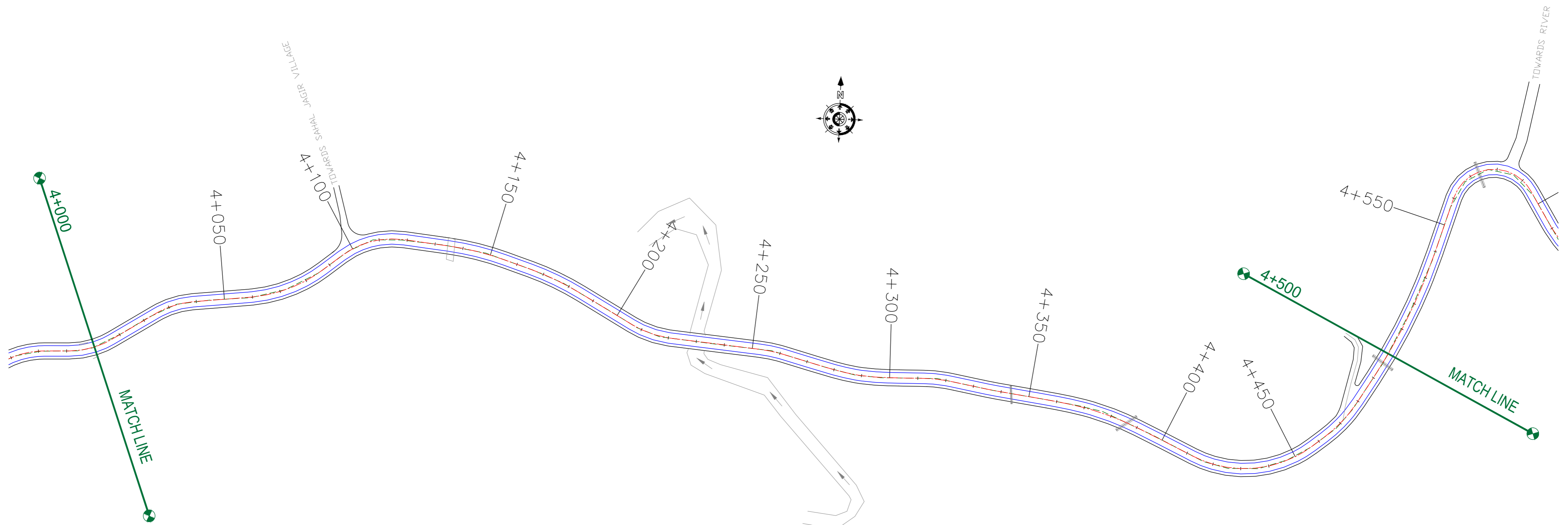


**servicios de Ingenieria S.L.**  
Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
Ph: 033-40347200  
www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	<b>Utility Relocation Plan</b> (For Electricity Department) (Ch. 4+000 to Ch. 5+000)
DRG. NO. :	EPTISA/JTFRP/DPR/J&K/URP/04
REVISION :	R-1
September 2019	



LEGEND OF UTILITY / OTHERS	
ELECTRIC POLE	
TRANSFORMER	
LAMP POST	
WATER TANK	
OFC	
TELEPHONE POLE	
WATER PIPE	
EP BOX	

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

NUMBER OF UTILITIES TO BE SHIFTED	SIDE	
	LEFT	RIGHT
ELECTRIC POLE (EP)	00	00
TRANSFORMER (TNS)	00	00
LAMP POST (LP)	00	00
EP BOX	00	0

CLIENT : Jhelum & Tawi FLOOD RECOVERY PROJECT  
 Jhelum Tawi Flood Recovery Project  
 2nd Floor ERA Commercial Complex Rambagh  
 Srinagar-190 009.

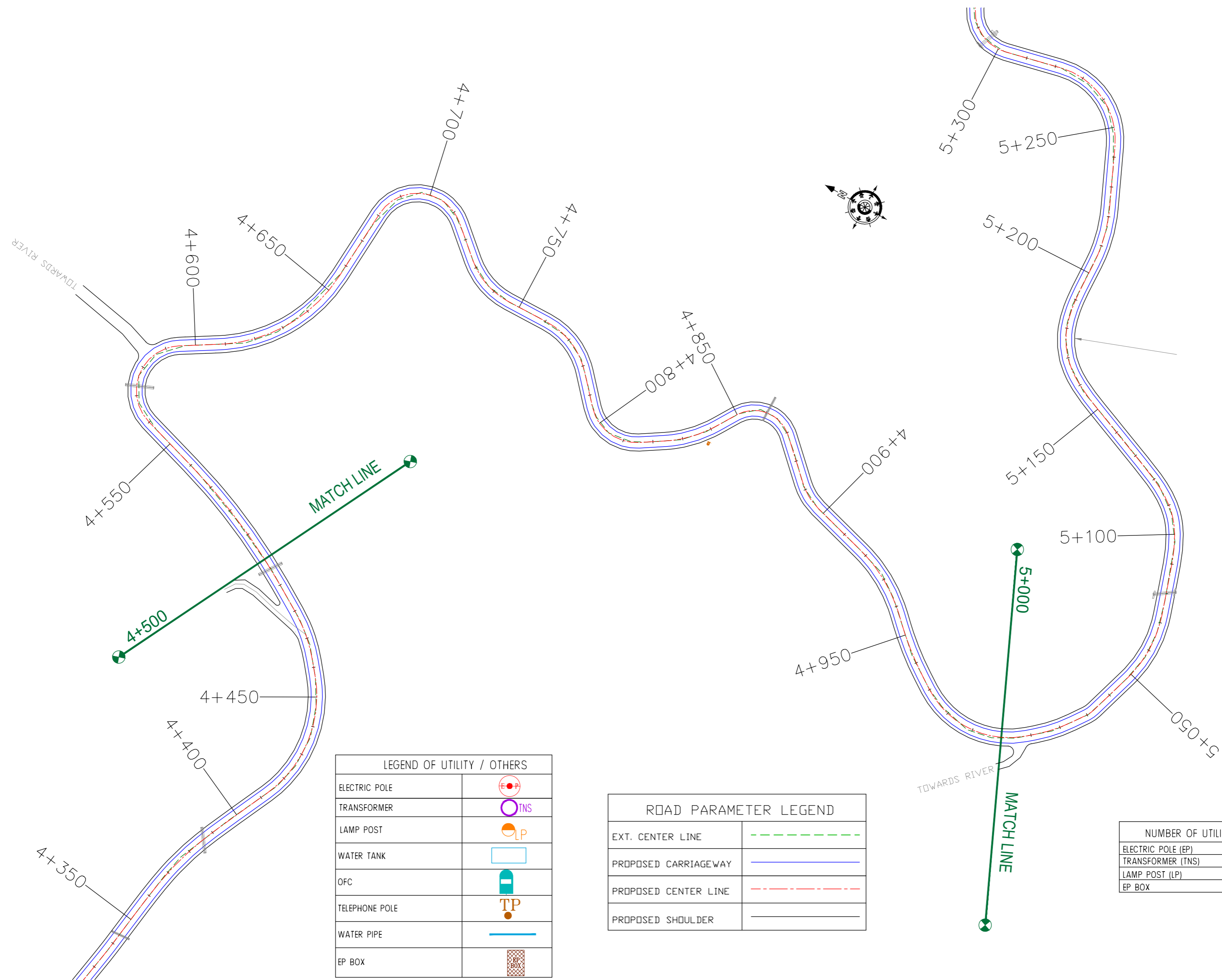
PROJECT :  
 Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:  
**servicios de Ingenieria S.L.**  
 Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
 Ph: 033-40347200  
 www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY : SD  
 DESIGNED BY : SCK/MM  
 APPROVED BY : KG  
 SCALE : 1:1000

TITLE : **Utility Relocation Plan (For Electricity Department)**  
 (Ch. 4+000 to Ch. 4+500)  
 DRG. NO. : EPTISA/JTFRP/DPR/J&K/URP/04  
 REVISION : R-1  
 September 2019



LEGEND OF UTILITY / OTHERS	
ELECTRIC POLE	
TRANSFORMER	
LAMP POST	
WATER TANK	
OFC	
TELEPHONE POLE	
WATER PIPE	
EP BOX	

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

NUMBER OF UTILITIES TO BE SHIFTED	SIDE	
	LEFT	RIGHT
ELECTRIC POLE (EP)	00	00
TRANSFORMER (TNS)	00	00
LAMP POST (LP)	00	00
EP BOX	00	0

CLIENT : Jhelum & Tawi FLOOD RECOVERY PROJECT  
Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

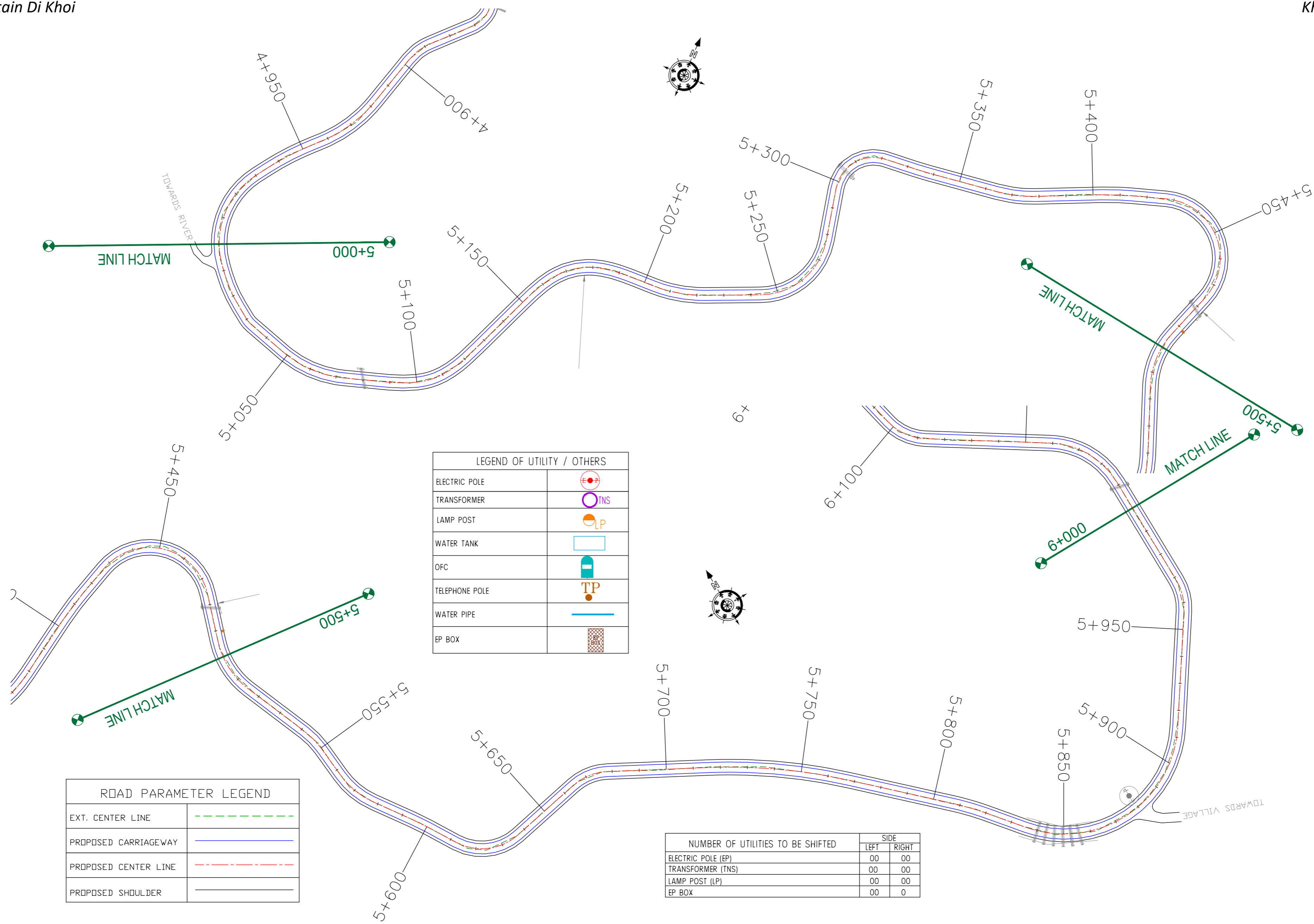
PROJECT :  
Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:  
**eptisa** *servicios de Ingenieria S.L.*  
Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
Ph: 033-40347200  
www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY : SD  
DESIGNED BY : SCK/MM  
APPROVED BY : KG  
SCALE : 1:1000

TITLE : **Utility Relocation Plan (For Electricity Department)**  
(Ch. 4+500 to Ch. 5+000)  
DRG. NO. : EPTISA/JTFRP/DPR/J&K/URP/05  
REVISION : R-1  
September 2019



LEGEND OF UTILITY / OTHERS	
ELECTRIC POLE	
TRANSFORMER	
LAMP POST	
WATER TANK	
OFC	
TELEPHONE POLE	
WATER PIPE	
EP BOX	

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

NUMBER OF UTILITIES TO BE SHIFTED	SIDE	
	LEFT	RIGHT
ELECTRIC POLE (EP)	00	00
TRANSFORMER (TNS)	00	00
LAMP POST (LP)	00	00
EP BOX	00	0

CLIENT : Jhelum & Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

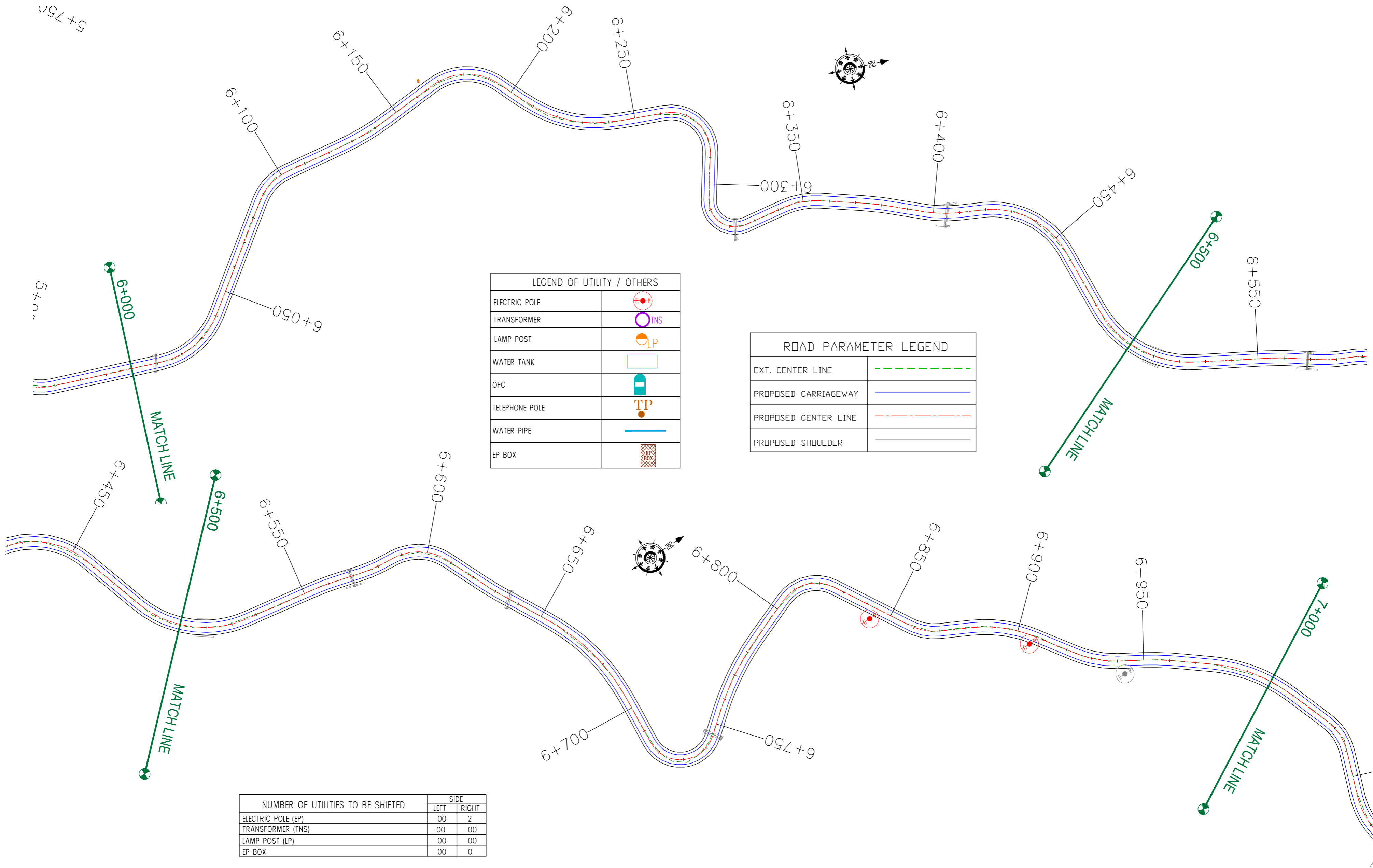
PROJECT : Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT: **eptisa** *servicios de Ingenieria S.L.*  
Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
Ph: 033-40347200  
www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY : SD  
DESIGNED BY : SCK/MM  
APPROVED BY : KG  
SCALE : 1:1000

TITLE : **Utility Relocation Plan (For Electricity Department)**  
(Ch. 5+000 to Ch. 6+000)  
DRG. NO. : EPTISA/JTFRP/DPR/J&K/URP/07  
REVISION : R-1  
September 2019



LEGEND OF UTILITY / OTHERS	
ELECTRIC POLE	
TRANSFORMER	
LAMP POST	
WATER TANK	
OFC	
TELEPHONE POLE	
WATER PIPE	
EP BOX	

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

NUMBER OF UTILITIES TO BE SHIFTED	SIDE	
	LEFT	RIGHT
ELECTRIC POLE (EP)	00	2
TRANSFORMER (TNS)	00	00
LAMP POST (LP)	00	00
EP BOX	00	0

CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:



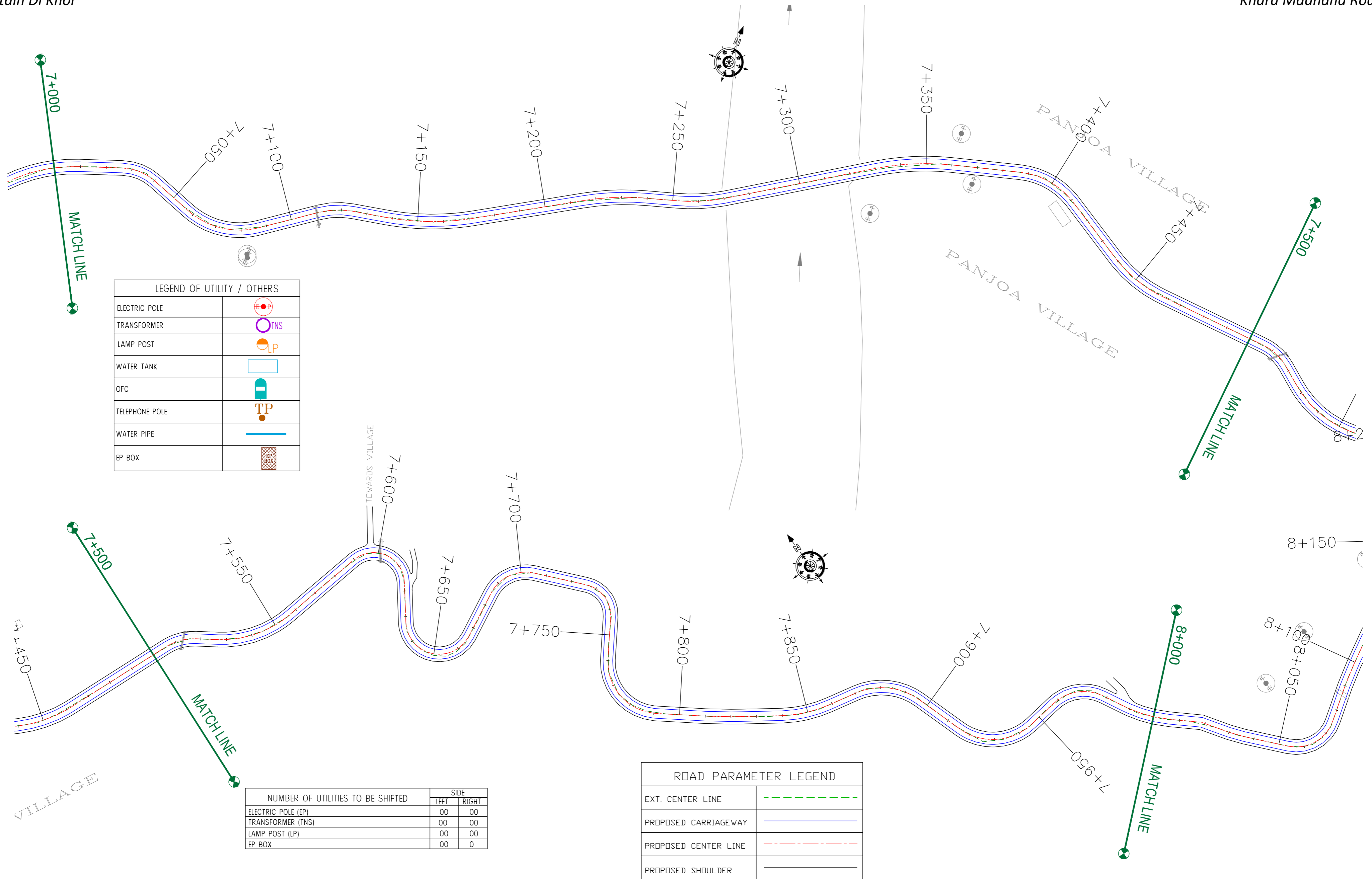
**servicios de Ingenieria S.L.**  
Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
Ph: 033-40347200  
www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	<b>Utility Relocation Plan</b> (For Electricity Department) (Ch. 6+000 to Ch. 7+000)
DRG. NO. :	EPTISA/JTFRP/DPR/J&K/URP/08
REVISION :	R-1
September 2019	





LEGEND OF UTILITY / OTHERS	
ELECTRIC POLE	
TRANSFORMER	
LAMP POST	
WATER TANK	
OFC	
TELEPHONE POLE	
WATER PIPE	
EP BOX	

NUMBER OF UTILITIES TO BE SHIFTED	SIDE	
	LEFT	RIGHT
ELECTRIC POLE (EP)	00	00
TRANSFORMER (TNS)	00	00
LAMP POST (LP)	00	00
EP BOX	00	0

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

CLIENT :   
 Jhelum Tawi Flood Recovery Project  
 2nd Floor ERA Commercial Complex Rambagh  
 Srinagar-190 009.

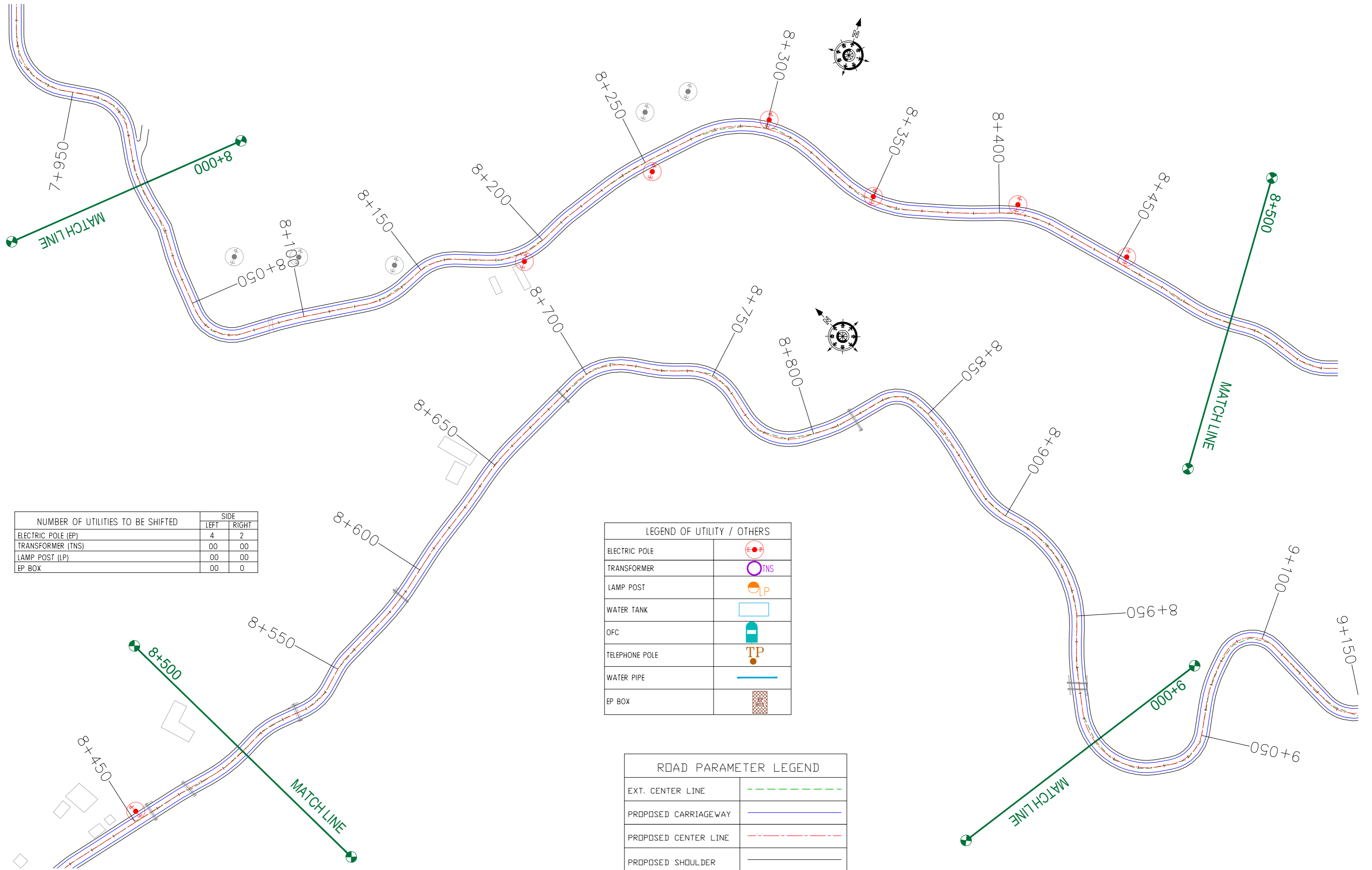
PROJECT :  
 Consultancy Services for Preparing Detailed Project  
 Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:  
 **servicios de Ingenieria S.L.**  
 Unit 1203, 12th Floor, Tower 1, PS Srijan  
 Corporate Park, Plot No. 2, Block EP & GP,  
 Sector v, Salt Lake Kolkata - 700091,  
 West Bengal  
 Ph: 033-40347200  
 www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY : SD  
 DESIGNED BY : SCK/MM  
 APPROVED BY : KG  
 SCALE : 1:1000

TITLE : **Utility Relocation Plan**  
 (For Electricity Department)  
 (Ch. 7+000 to Ch. 8+000)  
 DRG. NO. : EPTISA/JFRP/DPR/J&K/URP/09  
 REVISION : R-1  
 September 2019



NUMBER OF UTILITIES TO BE SHIFTED	SIDE	
	LEFT	RIGHT
ELECTRIC POLE (EP)	4	2
TRANSFORMER (TNS)	00	00
LAMP POST (LP)	00	00
EP BOX	00	0

LEGEND OF UTILITY / OTHERS	
ELECTRIC POLE	
TRANSFORMER	
LAMP POST	
WATER TANK	
OFC	
TELEPHONE POLE	
WATER PIPE	
EP BOX	

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:



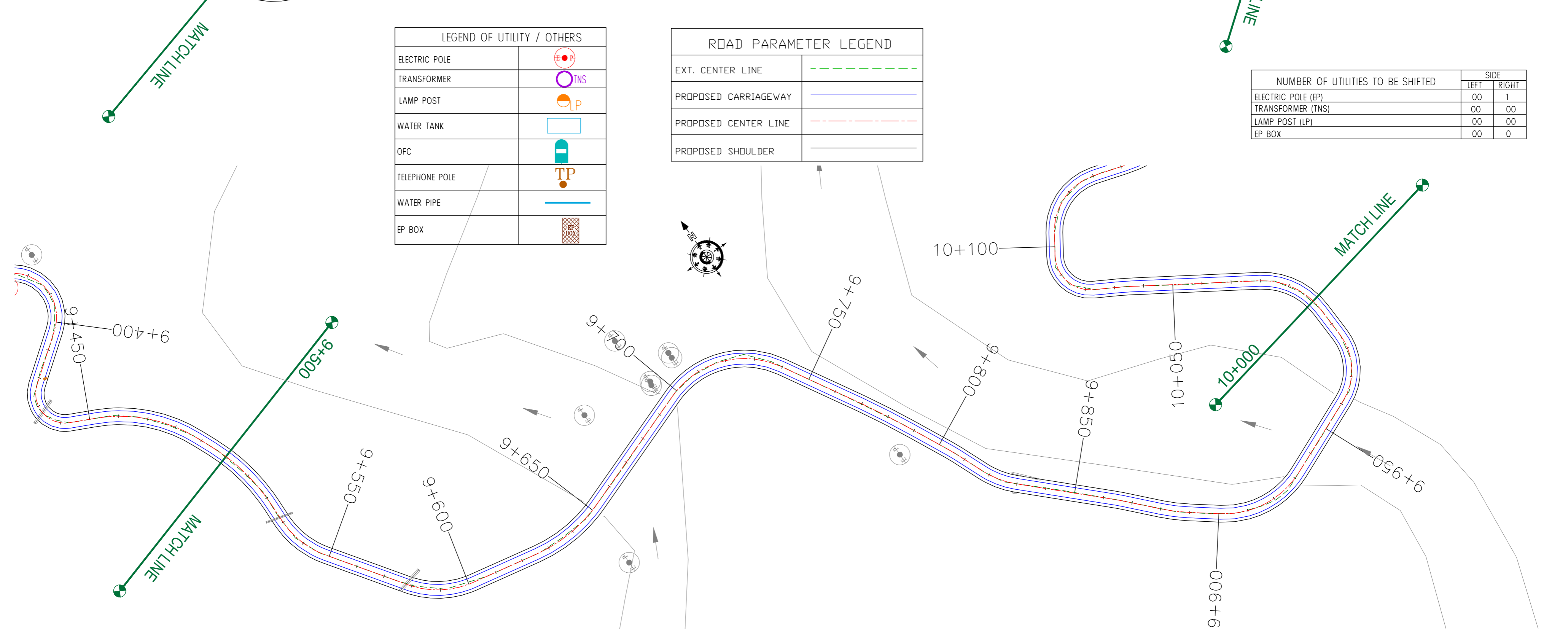
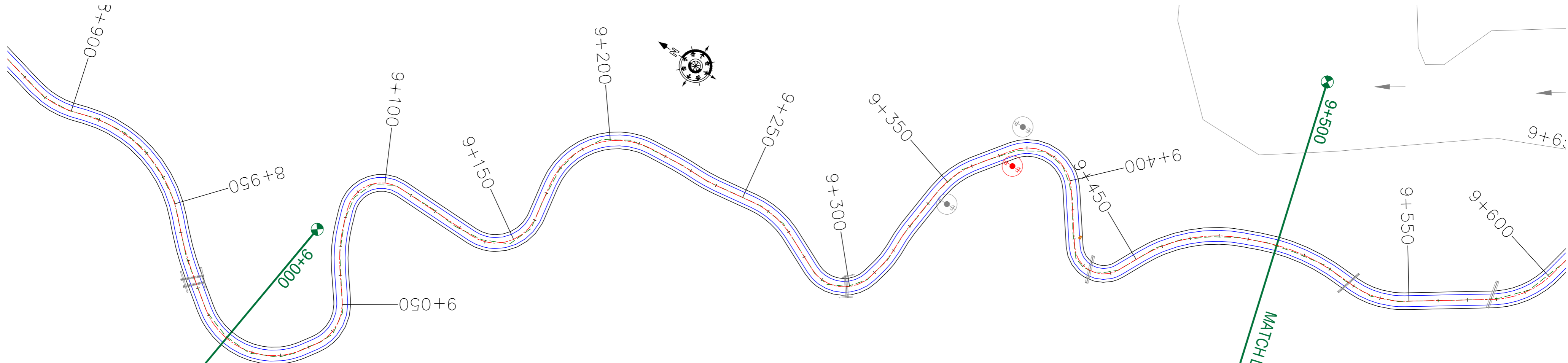
**servicios de Ingenieria S.L.**  
Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
Ph: 033-40347200  
www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	<b>Utility Relocation Plan</b> (For Electricity Department) (Ch. 8+000 to Ch. 9+000)
DRG. NO. :	EPTISA/JTFRP/DPR/J&K/URP/10
REVISION :	R-1
September 2019	

← Tutain Di Khoi Khara Madhana Road →



LEGEND OF UTILITY / OTHERS	
ELECTRIC POLE	
TRANSFORMER	
LAMP POST	
WATER TANK	
OFC	
TELEPHONE POLE	
WATER PIPE	
EP BOX	

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

NUMBER OF UTILITIES TO BE SHIFTED	SIDE	
	LEFT	RIGHT
ELECTRIC POLE (EP)	00	1
TRANSFORMER (TNS)	00	00
LAMP POST (LP)	00	00
EP BOX	00	0

CLIENT :   
 Jhelum Tawi Flood Recovery Project  
 2nd Floor ERA Commercial Complex Rambagh  
 Srinagar-190 009.

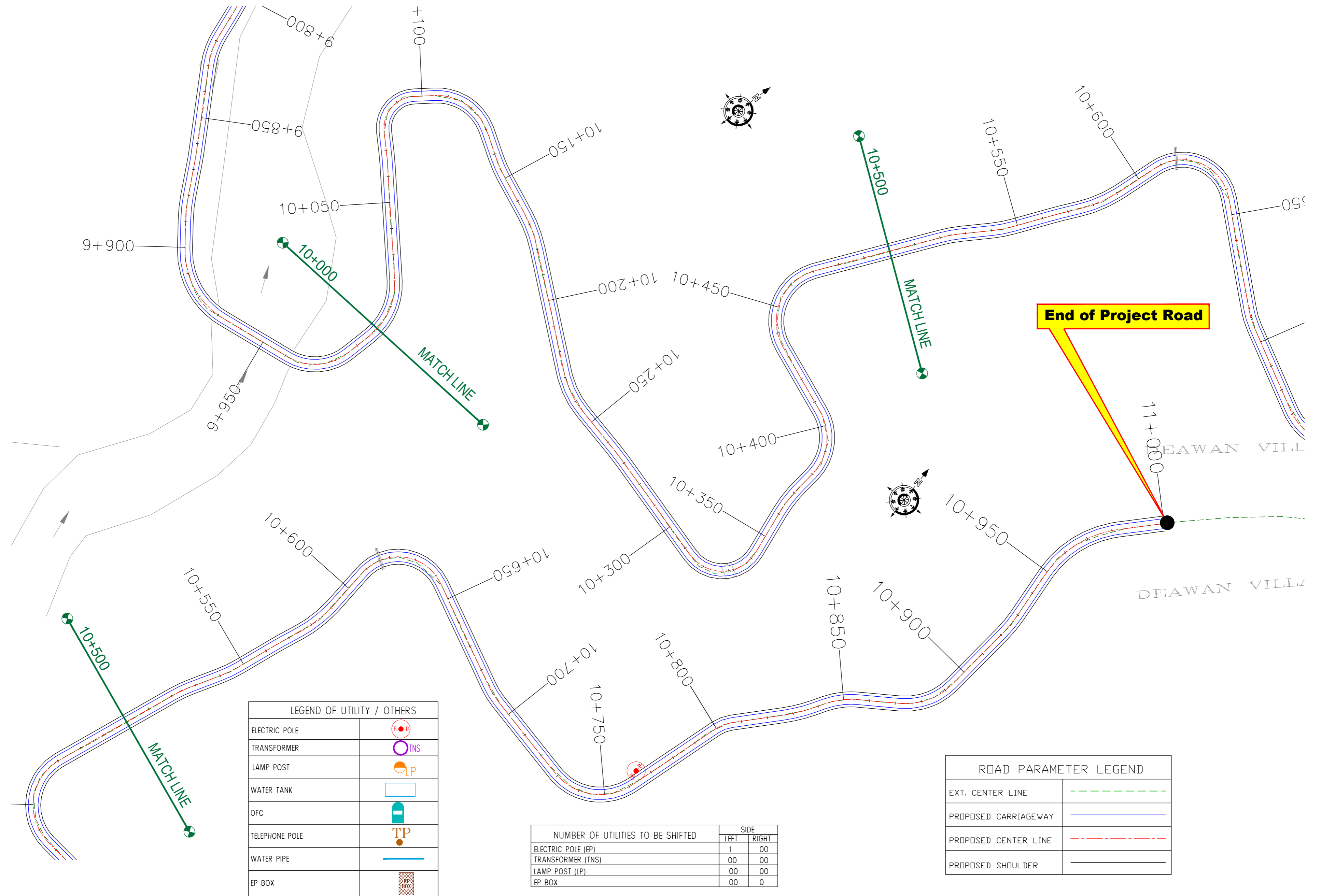
PROJECT :  
 Consultancy Services for Preparing Detailed Project  
 Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:  
 **servicios de Ingenieria S.L.**  
 Unit 1203, 12th Floor, Tower 1, PS Srijan  
 Corporate Park, Plot No. 2, Block EP & GP,  
 Sector v, Salt Lake Kolkata - 700091,  
 West Bengal  
 Ph: 033-40347200  
 www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY : SD  
 DESIGNED BY : SCK/MM  
 APPROVED BY : KG  
 SCALE : 1:1000

TITLE : **Utility Relocation Plan**  
 (For Electricity Department)  
 (Ch. 9+000 to Ch. 10+000)  
 DRG. NO. : EPTISA/JTFRP/DPR/J&K/URP/11  
 REVISION : R-1  
 September 2019



LEGEND OF UTILITY / OTHERS	
ELECTRIC POLE	
TRANSFORMER	
LAMP POST	
WATER TANK	
OFC	
TELEPHONE POLE	
WATER PIPE	
EP BOX	

NUMBER OF UTILITIES TO BE SHIFTED	SIDE	
	LEFT	RIGHT
ELECTRIC POLE (EP)	1	00
TRANSFORMER (TNS)	00	00
LAMP POST (LP)	00	00
EP BOX	00	0

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

CLIENT : Jhelum & Tawi FLOOD RECOVERY PROJECT  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT : Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

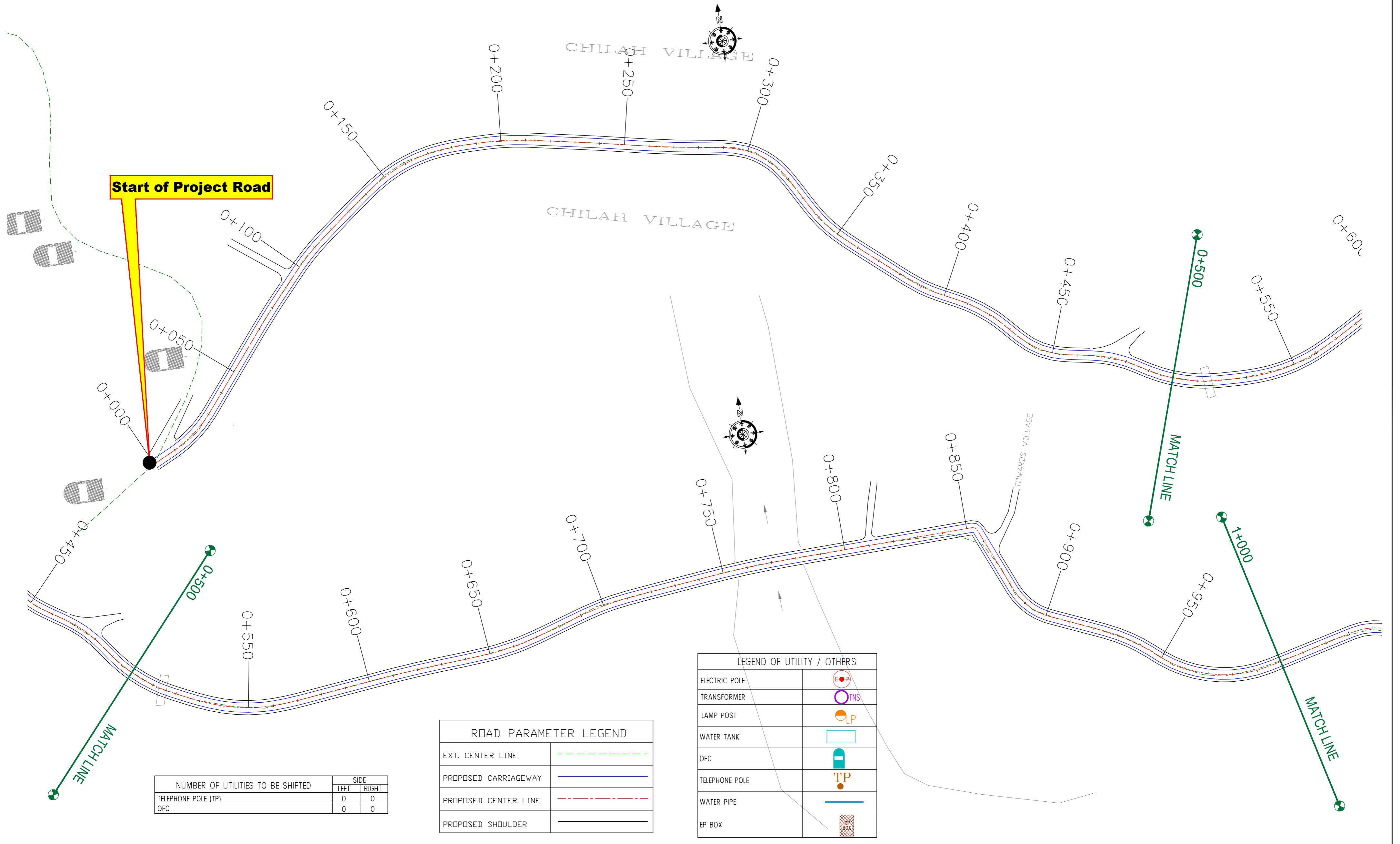
DESIGN CONSULTANT: **eptisa** *servicios de Ingenieria S.L.*  
Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
Ph: 033-40347200  
www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY : SD  
DESIGNED BY : SCK/MM  
APPROVED BY : KG  
SCALE : 1:1000

TITLE : **Utility Relocation Plan (For Electricity Department)**  
(Ch. 10+000 to Ch. 11+000)  
DRG. NO. : EPTISA/JTRFP/DPR/J&K/URP/12  
REVISION : R-1  
September 2019

≡ UTILITY RELOCATION PLAN FOR MAIN ROAD (TELEPHONE DEPARTMENT) ≡



NUMBER OF UTILITIES TO BE SHIFTED	SIDE	
	LEFT	RIGHT
TELEPHONE POLE (TP)	0	0
OFC	0	0

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	---
PROPOSED CARRIAGEWAY	—
PROPOSED CENTER LINE	- - -
PROPOSED SHOULDER	—

LEGEND OF UTILITY / OTHERS	
ELECTRIC POLE	⊙
TRANSFORMER	⊕
LAMP POST	⊙
WATER TANK	□
OFC	—
TELEPHONE POLE	⊕
WATER PIPE	—
EP BOX	⊕

CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:



**servicios de Ingenieria S.L.**  
Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
Ph: 033-40347200  
www.eptisa.com

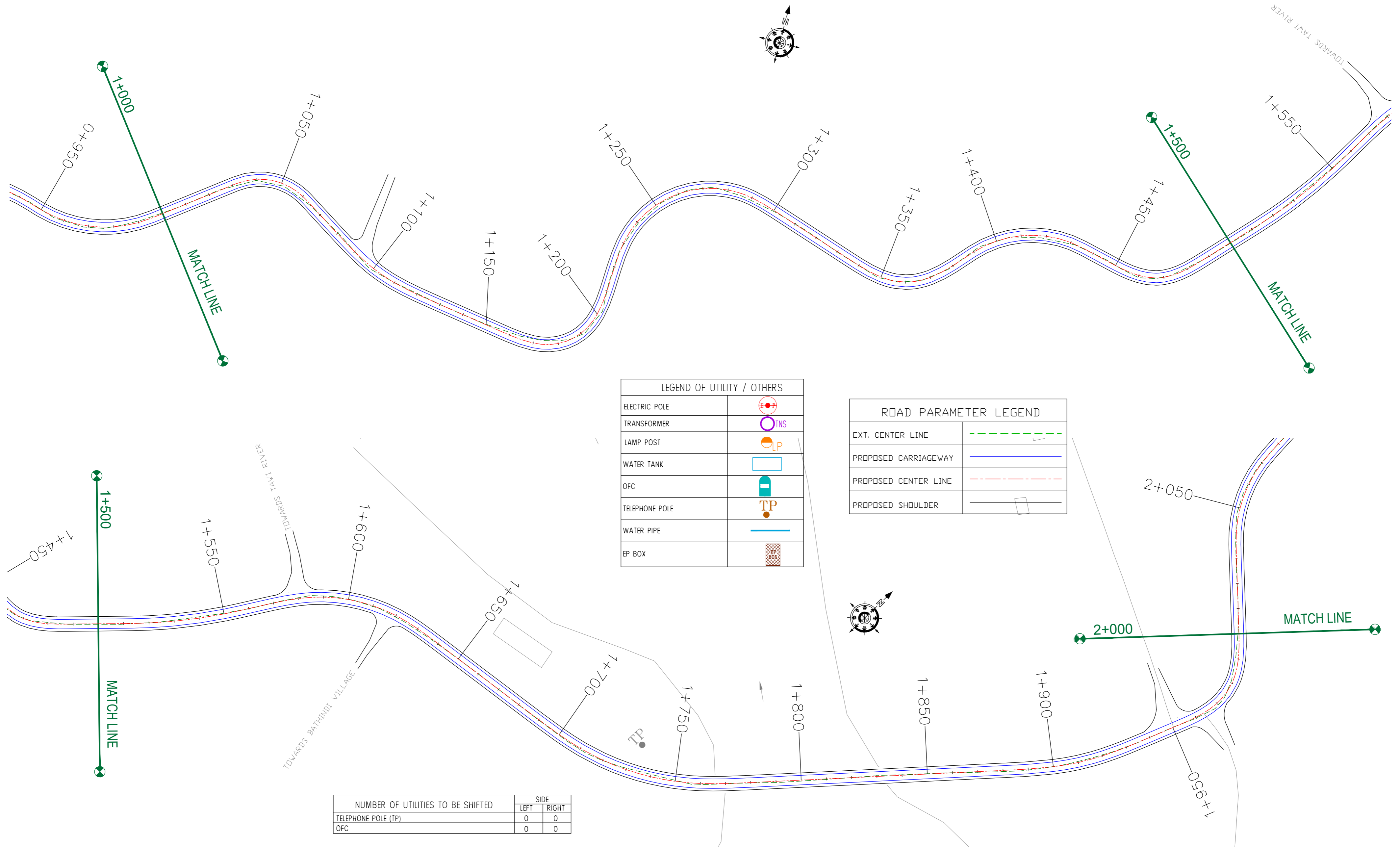
REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	<b>Utility Relocation Plan</b> (For Telephone Department) (Ch. 0+000 to Ch. 1+000)
DRG. NO. :	EPTISA/JTFRP/DPR/J&K/URP/01
REVISION :	R-1
	September 2019

← Tutain Di Khoi

Khara Madhana Road →



LEGEND OF UTILITY / OTHERS	
ELECTRIC POLE	
TRANSFORMER	
LAMP POST	
WATER TANK	
OFC	
TELEPHONE POLE	
WATER PIPE	
EP BOX	

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

NUMBER OF UTILITIES TO BE SHIFTED	SIDE	
	LEFT	RIGHT
TELEPHONE POLE (TP)	0	0
OFC	0	0

CLIENT :



Jhelum & Tawi  
FLOOD RECOVERY PROJECT

Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:

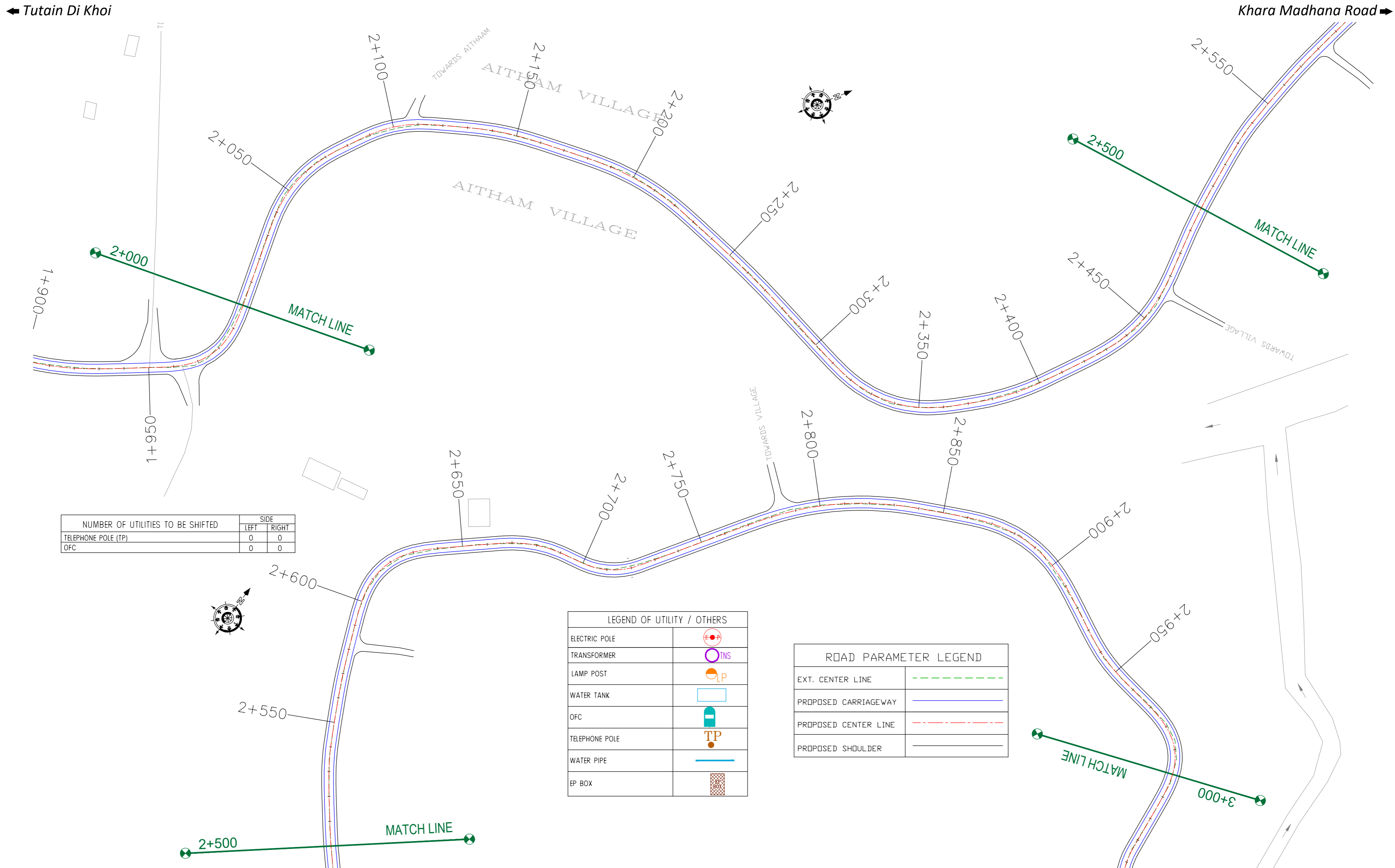


**servicios de Ingenieria S.L.**  
Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
Ph: 033-40347200  
www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	<b>Utility Relocation Plan (For Telephone Department) (Ch. 1+000 to Ch. 2+000)</b>
DRG. NO. :	EPTISA/JTFRP/DPR/J&K/URP/02
REVISION :	R-1
September 2019	



NUMBER OF UTILITIES TO BE SHIFTED	SIDE	
	LEFT	RIGHT
TELEPHONE POLE (TP)	0	0
OFC	0	0

LEGEND OF UTILITY / OTHERS	
ELECTRIC POLE	
TRANSFORMER	
LAMP POST	
WATER TANK	
OFC	
TELEPHONE POLE	
WATER PIPE	
EP BOX	

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:



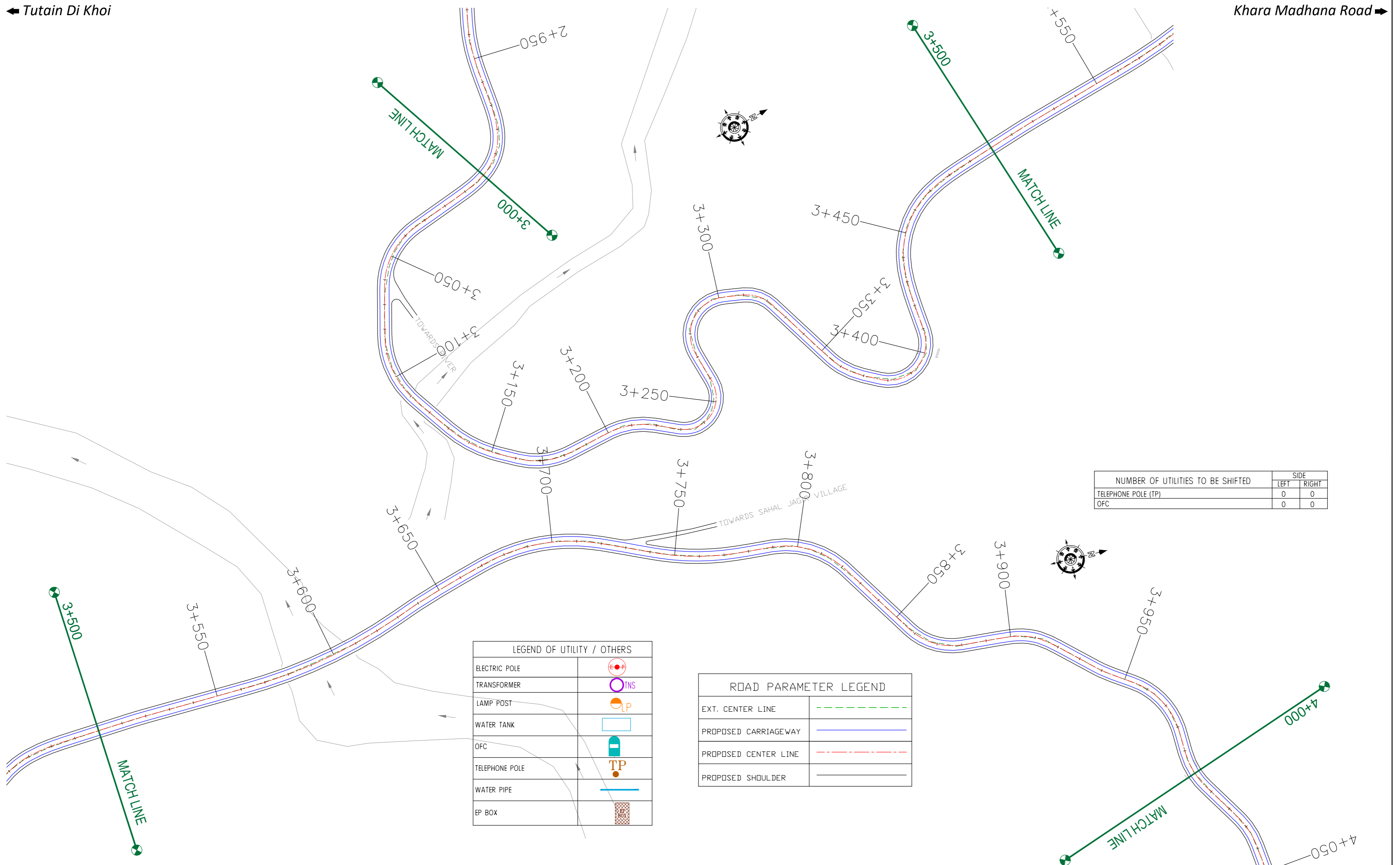
**servicios de Ingenieria S.L.**  
Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
Ph: 033-40347200  
www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	<b>Utility Relocation Plan</b> (For Telephone Department) (Ch. 2+000 to Ch. 3+000)
DRG. NO. :	EPTISA/JTRFP/DPR/J&K/URP/03
REVISION :	R-1
September 2019	





NUMBER OF UTILITIES TO BE SHIFTED	SIDE	
	LEFT	RIGHT
TELEPHONE POLE (TP)	0	0
OFC	0	0

LEGEND OF UTILITY / OTHERS	
ELECTRIC POLE	
TRANSFORMER	
LAMP POST	
WATER TANK	
OFC	
TELEPHONE POLE	
WATER PIPE	
EP BOX	

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

CLIENT : Jhelum & Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

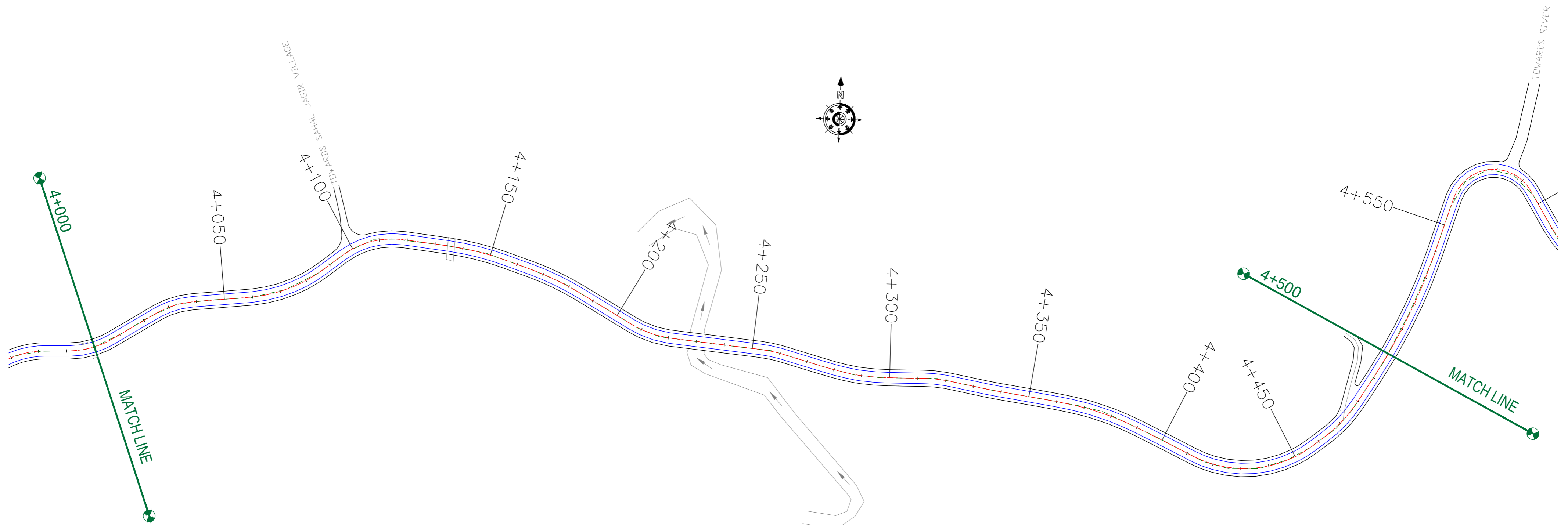
PROJECT : Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT: **eptisa** *servicios de Ingenieria S.L.*  
Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
Ph: 033-40347200  
www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY : SD  
DESIGNED BY : SCK/MM  
APPROVED BY : KG  
SCALE : 1:1000

TITLE : **Utility Relocation Plan**  
**(For Telephone Department)**  
(Ch. 4+000 to Ch. 5+000)  
DRG. NO. : EPTISA/JTFRP/DPR/J&K/URP/04  
REVISION : R-1  
September 2019



LEGEND OF UTILITY / OTHERS	
ELECTRIC POLE	
TRANSFORMER	
LAMP POST	
WATER TANK	
OFC	
TELEPHONE POLE	
WATER PIPE	
EP BOX	

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

NUMBER OF UTILITIES TO BE SHIFTED	SIDE	
	LEFT	RIGHT
TELEPHONE POLE (TP)	0	0
OFC	0	0

CLIENT : Jhelum & Tawi FLOOD RECOVERY PROJECT  
Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

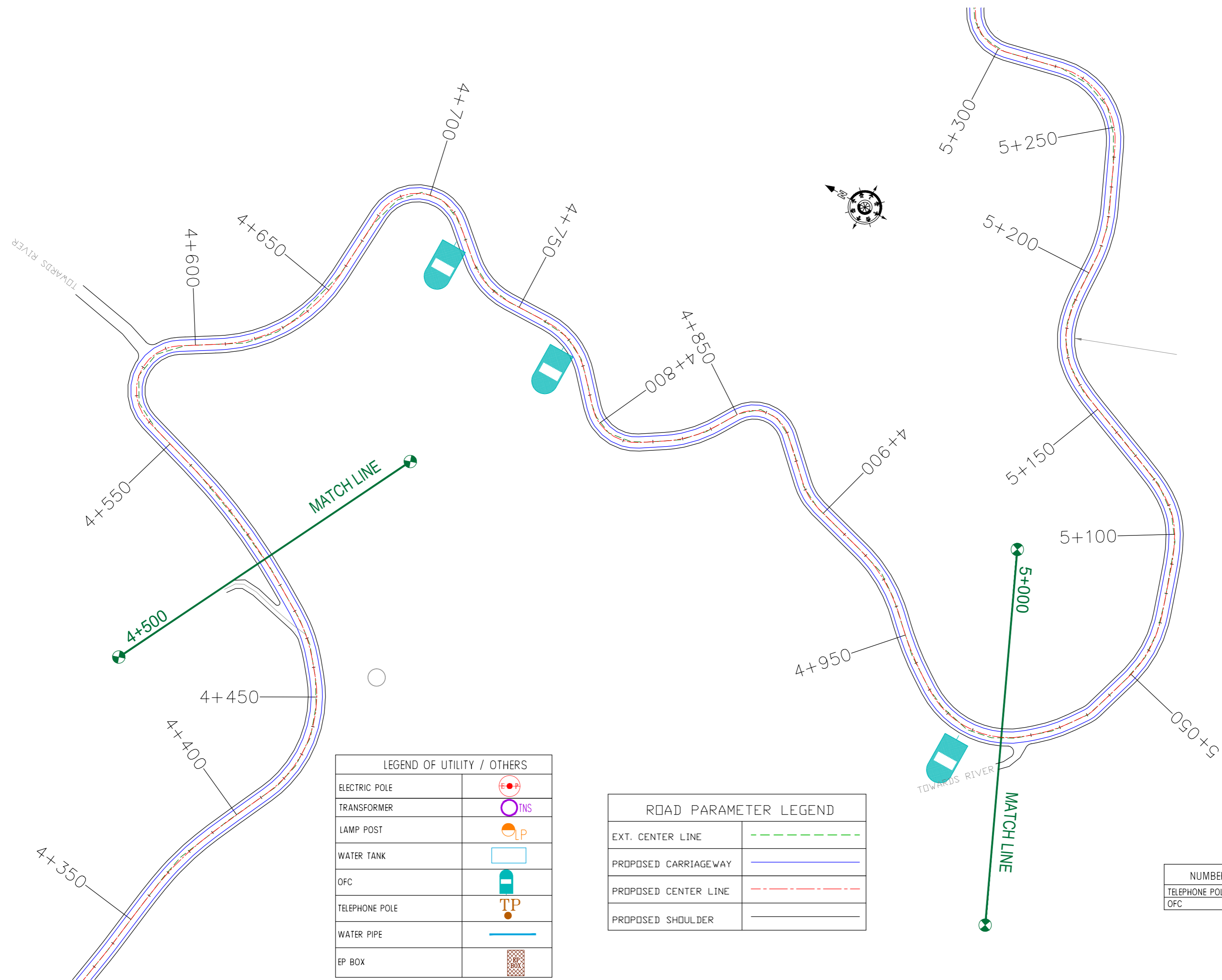
PROJECT :  
Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:  
 **servicios de Ingenieria S.L.**  
Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
Ph: 033-40347200  
www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY : SD  
DESIGNED BY : SCK/MM  
APPROVED BY : KG  
SCALE : 1:1000

TITLE : **Utility Relocation Plan**  
**(For Telephone Department)**  
(Ch. 4+000 to Ch. 4+500)  
DRG. NO. : EPTISA/JTRFP/DPR/J&K/URP/04  
REVISION : R-1  
September 2019



LEGEND OF UTILITY / OTHERS	
ELECTRIC POLE	
TRANSFORMER	
LAMP POST	
WATER TANK	
OFC	
TELEPHONE POLE	
WATER PIPE	
EP BOX	

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

NUMBER OF UTILITIES TO BE SHIFTED	SIDE	
	LEFT	RIGHT
TELEPHONE POLE (TP)	0	0
OFC	0	3

CLIENT : Jhelum & Tawi FLOOD RECOVERY PROJECT  
Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

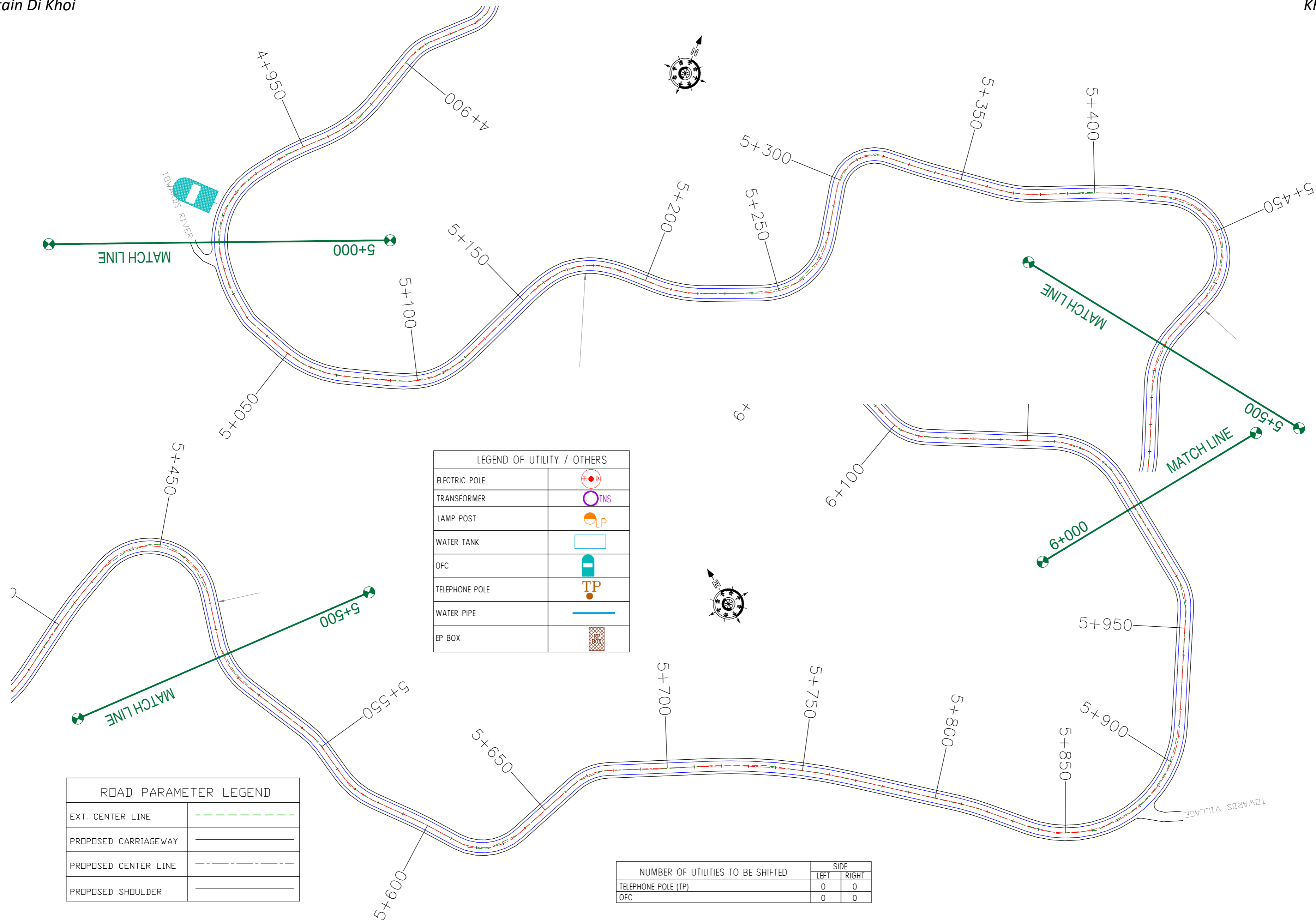
PROJECT :  
Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:  
**eptisa** *Servicios de Ingenieria S.L.*  
Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
Ph: 033-40347200  
www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY : SD  
DESIGNED BY : SCK/MM  
APPROVED BY : KG  
SCALE : 1:1000

TITLE : **Utility Relocation Plan (For Telephone Department)**  
(Ch. 4+500 to Ch. 5+000)  
DRG. NO. : EPTISA/JTFRP/DPR/J&K/URP/05  
REVISION : R-1  
September 2019



LEGEND OF UTILITY / OTHERS	
ELECTRIC POLE	
TRANSFORMER	
LAMP POST	
WATER TANK	
OFC	
TELEPHONE POLE	
WATER PIPE	
EP BOX	

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

NUMBER OF UTILITIES TO BE SHIFTED	SIDE	
	LEFT	RIGHT
TELEPHONE POLE (TP)	0	0
OFC	0	0

CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:

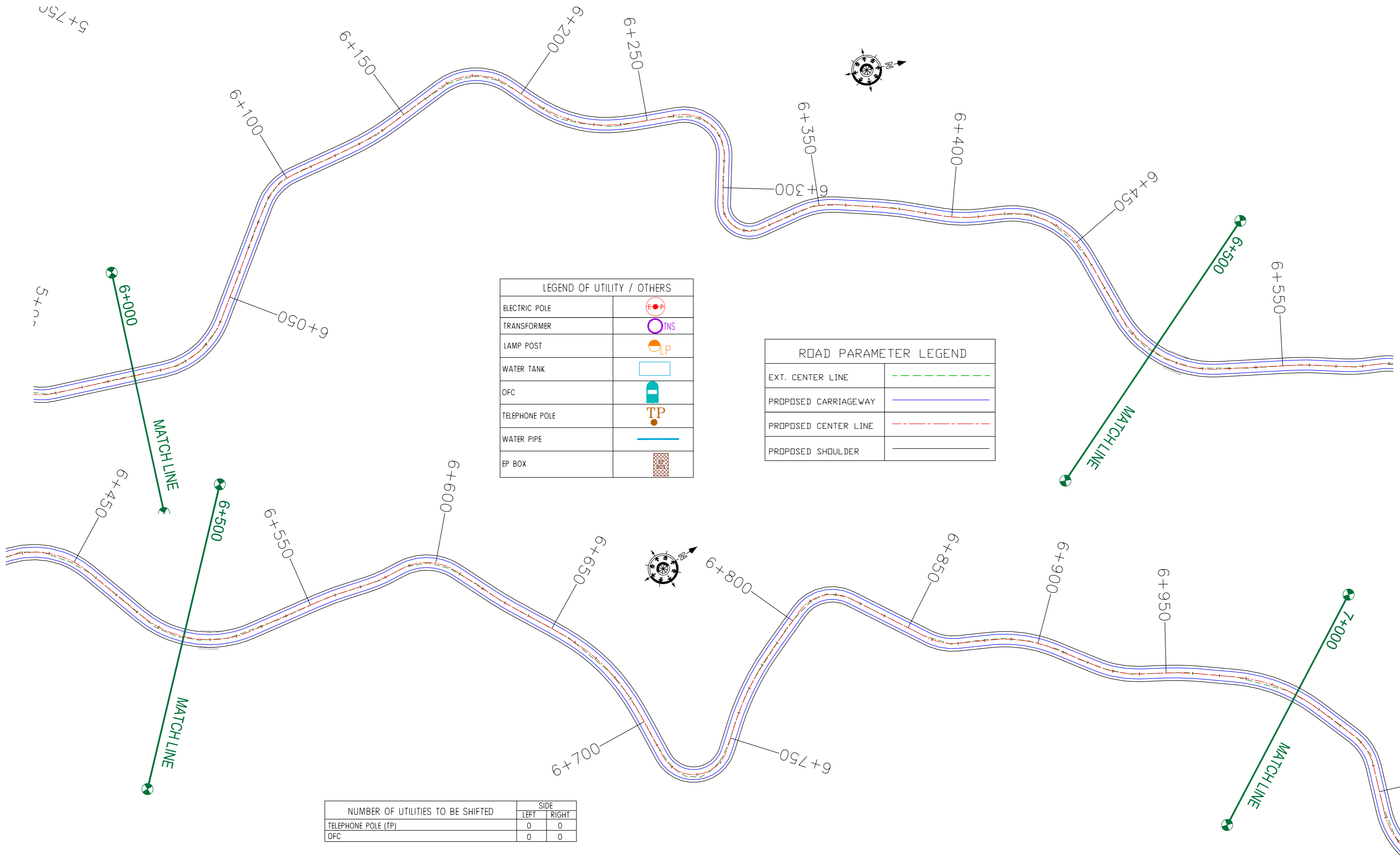


**servicios de Ingenieria S.L.**  
Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
Ph: 033-40347200  
www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	<b>Utility Relocation Plan (For Telephone Department)</b> (Ch. 5+000 to Ch. 6+000)
DRG. NO. :	EPTISA/JTRP/DPR/J&K/URP/07
REVISION :	R-1
	September 2019



LEGEND OF UTILITY / OTHERS	
ELECTRIC POLE	
TRANSFORMER	
LAMP POST	
WATER TANK	
OFC	
TELEPHONE POLE	
WATER PIPE	
EP BOX	

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

NUMBER OF UTILITIES TO BE SHIFTED	SIDE	
	LEFT	RIGHT
TELEPHONE POLE (TP)	0	0
OFC	0	0

CLIENT :   
 Jhelum Tawi Flood Recovery Project  
 2nd Floor ERA Commercial Complex Rambagh  
 Srinagar-190 009.

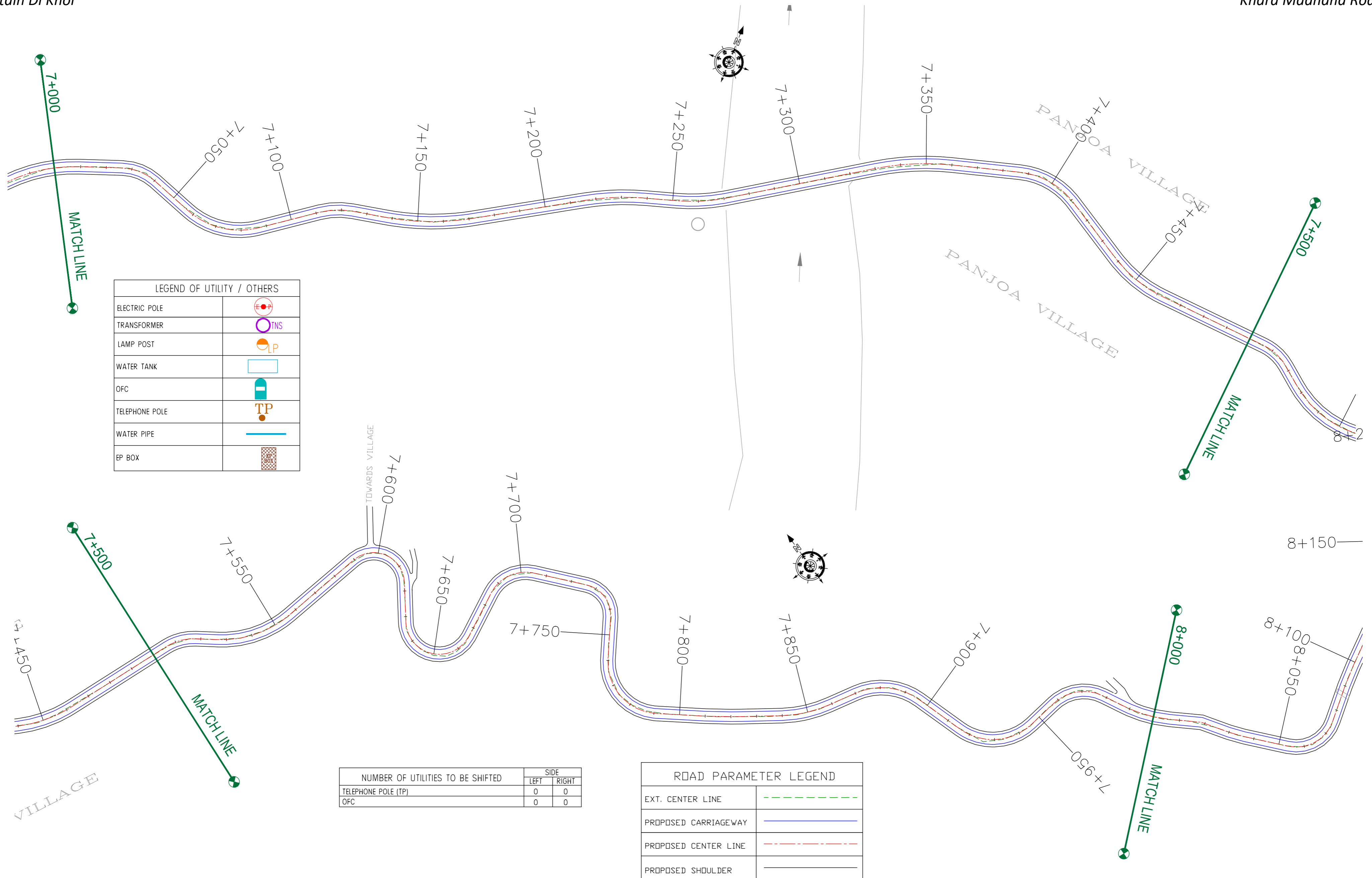
PROJECT :  
 Consultancy Services for Preparing Detailed Project  
 Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:  
 **servicios de Ingenieria S.L.**  
 Unit 1203, 12th Floor, Tower 1, PS Srijan  
 Corporate Park, Plot No. 2, Block EP & GP,  
 Sector v, Salt Lake Kolkata - 700091,  
 West Bengal  
 Ph: 033-40347200  
 www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY : SD  
 DESIGNED BY : SCK/MM  
 APPROVED BY : KG  
 SCALE : 1:1000

TITLE : **Utility Relocation Plan**  
 (For Telephone Department)  
 (Ch. 6+000 to Ch. 7+000)  
 DRG. NO. : EPTISA/JTRP/DPR/J&K/URP/08  
 REVISION : R-1  
 September 2019



LEGEND OF UTILITY / OTHERS	
ELECTRIC POLE	
TRANSFORMER	
LAMP POST	
WATER TANK	
OFC	
TELEPHONE POLE	
WATER PIPE	
EP BOX	

NUMBER OF UTILITIES TO BE SHIFTED	SIDE	
	LEFT	RIGHT
TELEPHONE POLE (TP)	0	0
OFC	0	0

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

CLIENT : Jhelum & Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

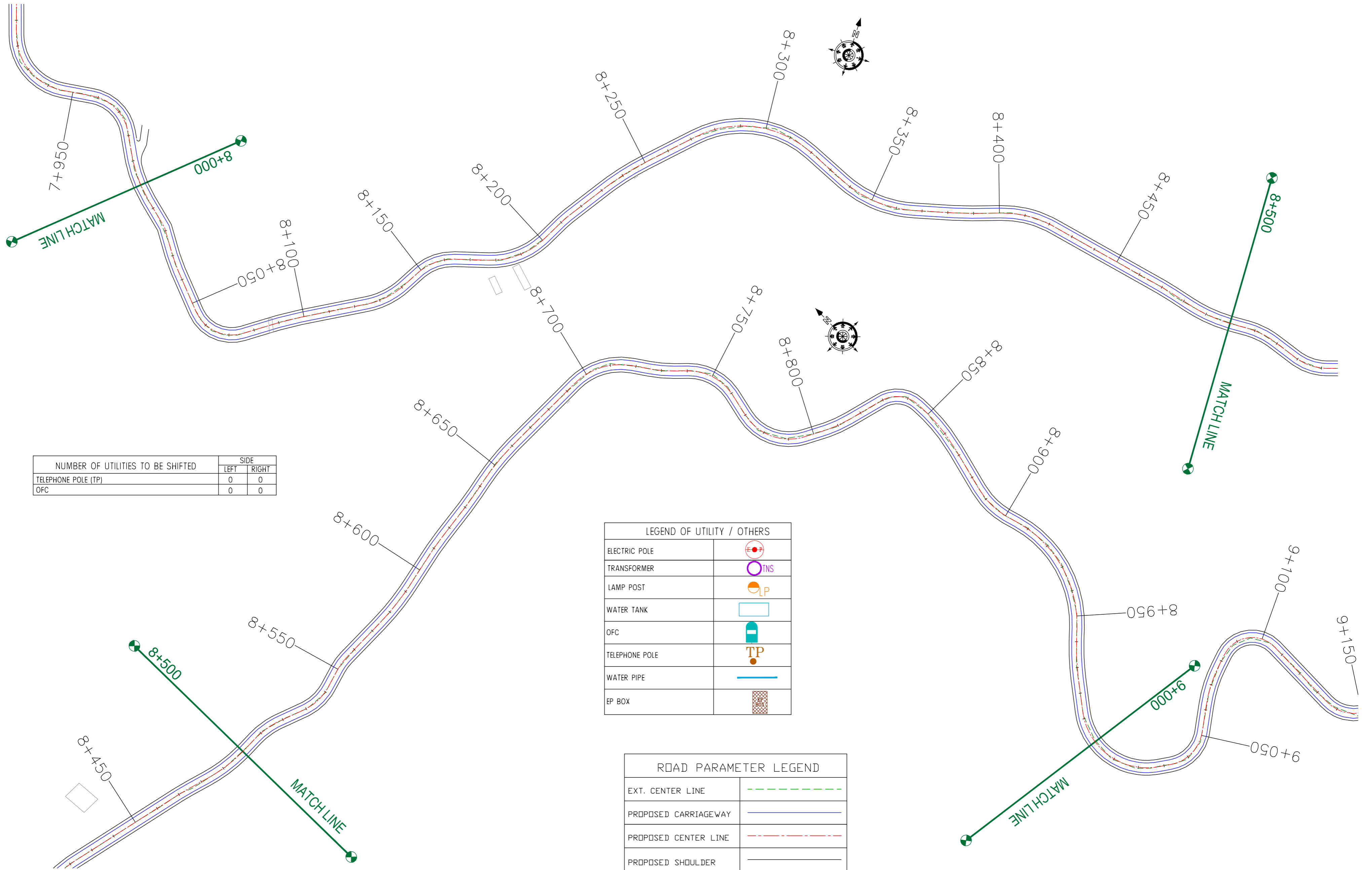
PROJECT :  
Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:  
**eptisa** *Servicios de Ingenieria S.L.*  
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Ph: 033-40347200  
www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY : SD  
DESIGNED BY : SCK/MM  
APPROVED BY : KG  
SCALE : 1:1000

TITLE : **Utility Relocation Plan**  
(For Telephone Department)  
(Ch. 7+000 to Ch. 8+000)  
DRG. NO. : EPTISA/JTRP/DPR/J&K/URP/09  
REVISION : R-1  
September 2019



NUMBER OF UTILITIES TO BE SHIFTED	SIDE	
	LEFT	RIGHT
TELEPHONE POLE (TP)	0	0
OFC	0	0

LEGEND OF UTILITY / OTHERS	
ELECTRIC POLE	
TRANSFORMER	
LAMP POST	
WATER TANK	
OFC	
TELEPHONE POLE	
WATER PIPE	
EP BOX	

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:



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Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
Ph: 033-40347200  
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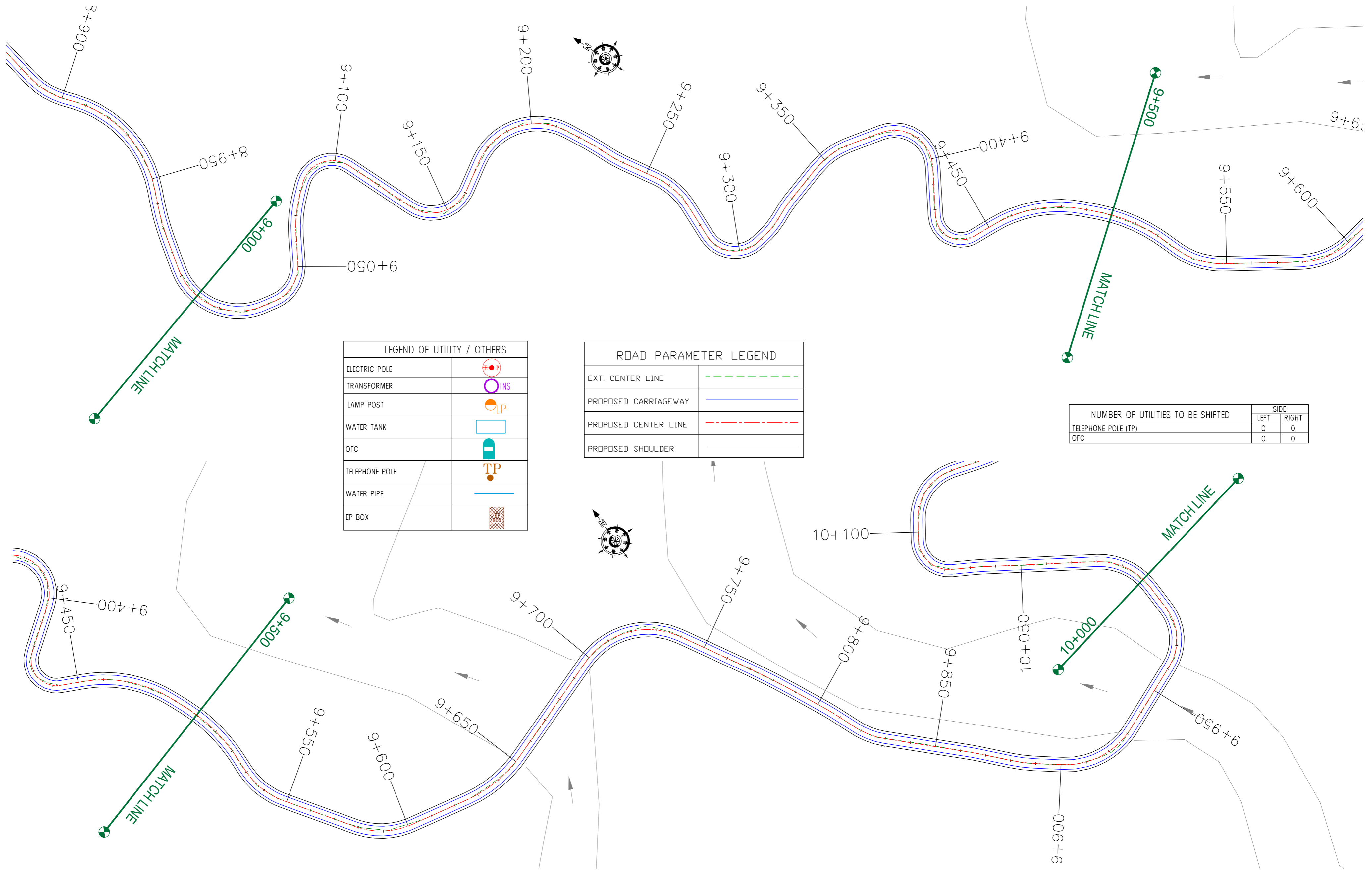
REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	<b>Utility Relocation Plan</b> (For Telephone Department) (Ch. 8+000 to Ch. 9+000)
DRG. NO. :	EPTISA/JTRFP/DPR/J&K/URP/10
REVISION :	R-1
September 2019	

← Tutain Di Khoi

Khara Madhana Road →



LEGEND OF UTILITY / OTHERS	
ELECTRIC POLE	
TRANSFORMER	
LAMP POST	
WATER TANK	
OFC	
TELEPHONE POLE	
WATER PIPE	
EP BOX	

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

NUMBER OF UTILITIES TO BE SHIFTED	SIDE	
	LEFT	RIGHT
TELEPHONE POLE (TP)	0	0
OFC	0	0

CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:



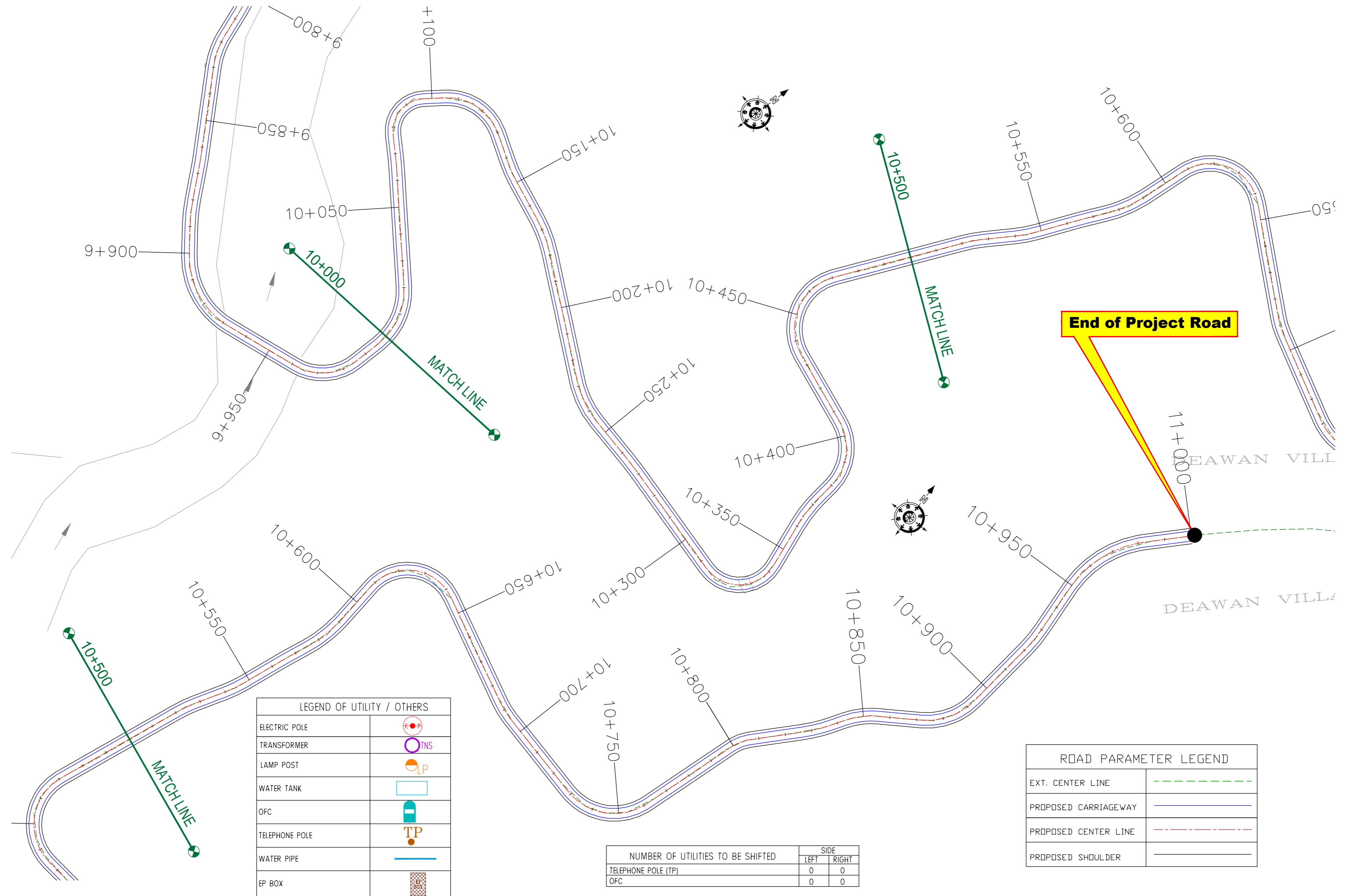
**servicios de Ingenieria S.L.**  
Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
Ph: 033-40347200  
www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	<b>Utility Relocation Plan (For Telephone Department) (Ch. 9+000 to Ch. 10+000)</b>
DRG. NO. :	EPTISA/JTRFP/DPR/J&K/URP/11
REVISION :	R-1
	September 2019





LEGEND OF UTILITY / OTHERS	
ELECTRIC POLE	
TRANSFORMER	
LAMP POST	
WATER TANK	
OFC	
TELEPHONE POLE	
WATER PIPE	
EP BOX	

NUMBER OF UTILITIES TO BE SHIFTED	SIDE	
	LEFT	RIGHT
TELEPHONE POLE (TP)	0	0
OFC	0	0

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:



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Ph: 033-40347200  
www.eptisa.com

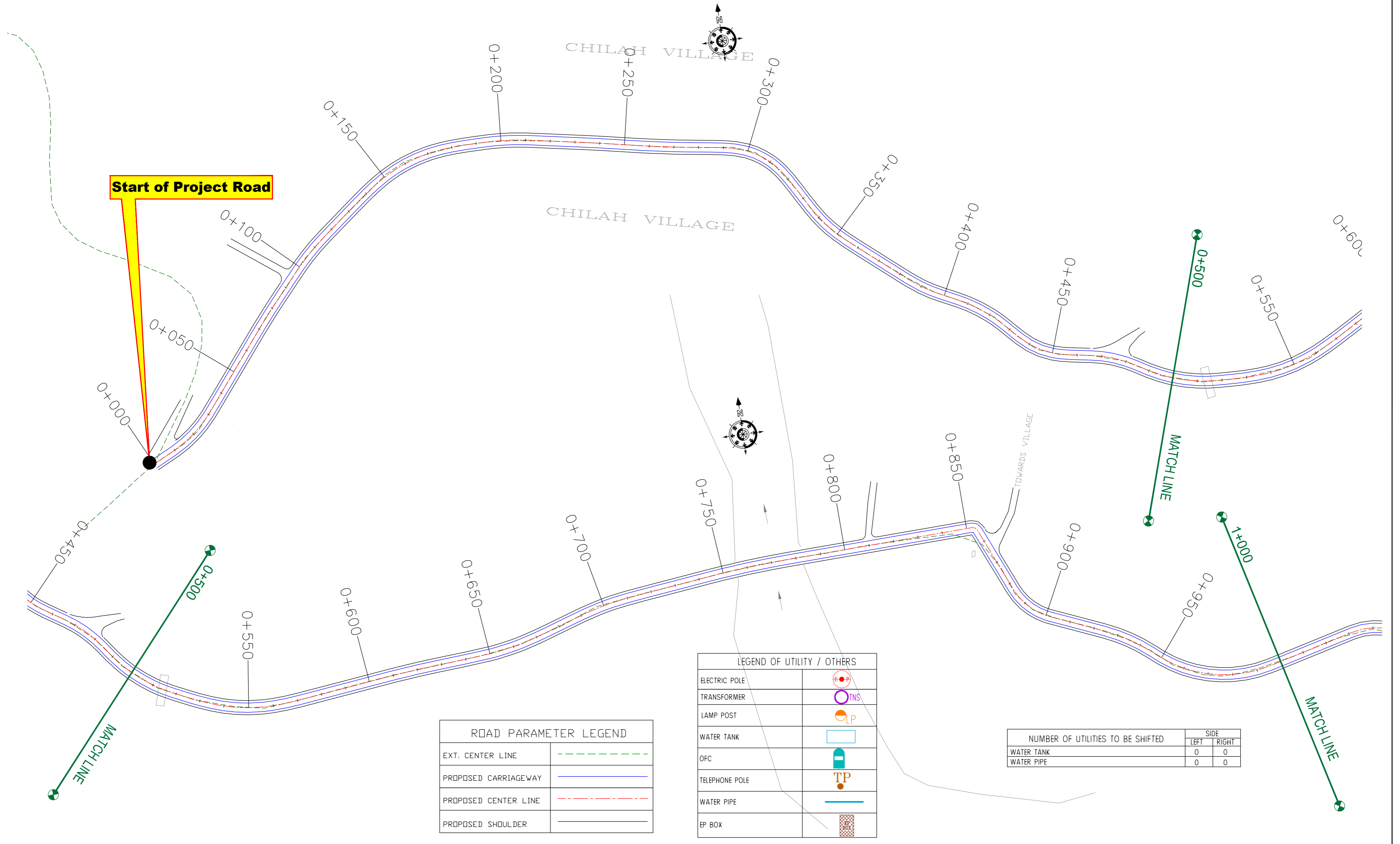
REV.	DATE	DESCRIPTION

DRAWN BY : SD  
DESIGNED BY : SCK/MM  
APPROVED BY : KG  
SCALE : 1:1000

TITLE : **Utility Relocation Plan**  
(For Telephone Department)  
(Ch. 10+000 to Ch. 11+000)

DRG. NO. : EPTISA/JTRP/DPR/J&K/URP/12  
REVISION : R-1  
September 2019

≡ UTILITY RELOCATION PLAN FOR MAIN ROAD (WATER DEPARTMENT) ≡



ROAD PARAMETER LEGEND	
EXT. CENTER LINE	---
PROPOSED CARRIAGEWAY	—
PROPOSED CENTER LINE	- - -
PROPOSED SHOULDER	—

LEGEND OF UTILITY / OTHERS	
ELECTRIC POLE	⊙
TRANSFORMER	⊕
LAMP POST	⊙
WATER TANK	□
OFC	⊕
TELEPHONE POLE	⊙
WATER PIPE	—
EP BOX	⊙

NUMBER OF UTILITIES TO BE SHIFTED	SIDE	
	LEFT	RIGHT
WATER TANK	0	0
WATER PIPE	0	0

CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:



**servicios de Ingenieria S.L.**  
Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
Ph: 033-40347200  
www.eptisa.com

REV.	DATE	DESCRIPTION

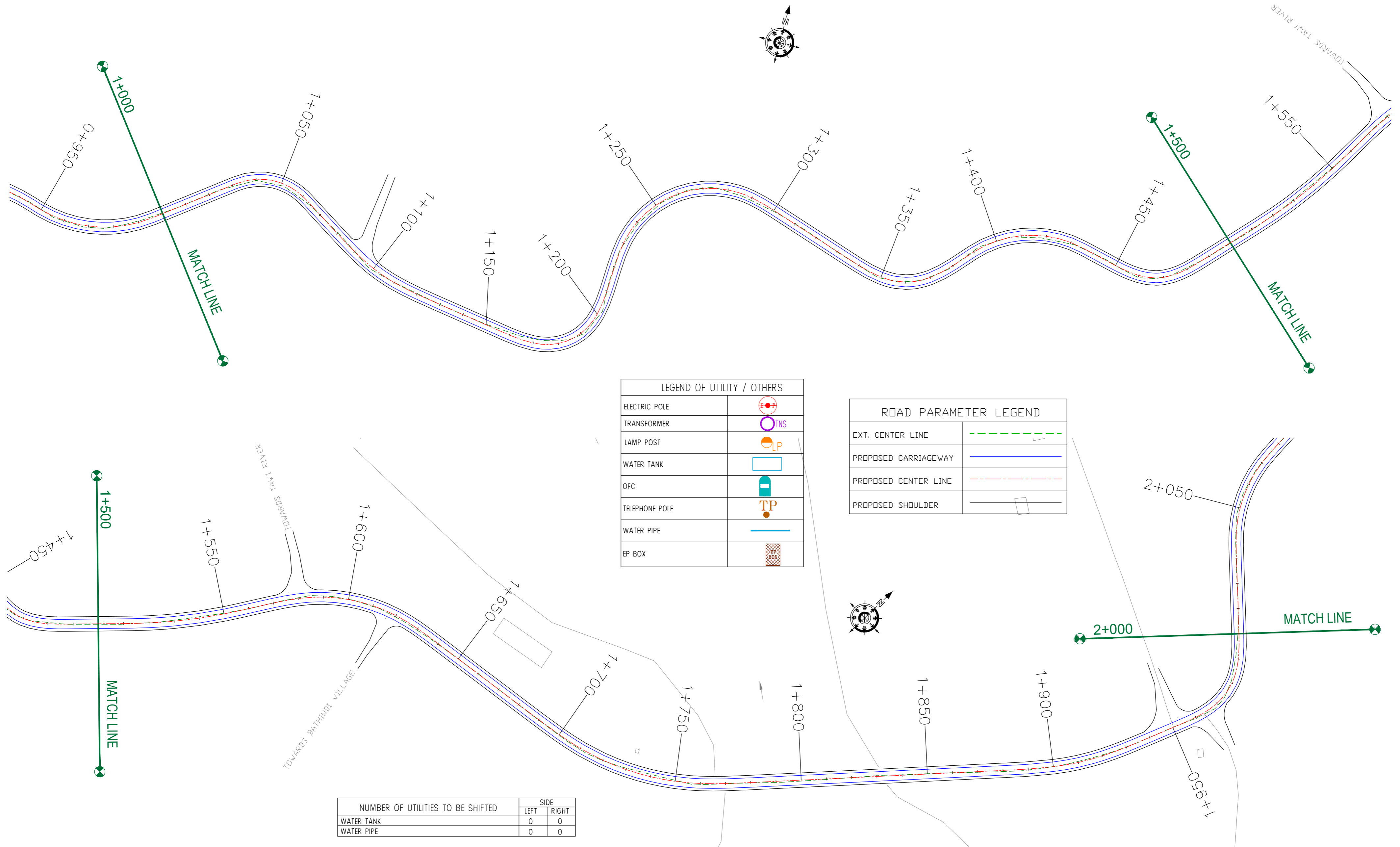
DRAWN BY : SD  
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APPROVED BY : KG  
SCALE : 1:1000

TITLE : **Utility Relocation Plan (For Water Department)**  
(Ch. 0+000 to Ch. 1+000)

DRG. NO. : EPTISA/JTFRP/DPR/J&K/URP/01  
REVISION : R-1  
September 2019

← Tutain Di Khoi

Khara Madhana Road →



LEGEND OF UTILITY / OTHERS	
ELECTRIC POLE	
TRANSFORMER	
LAMP POST	
WATER TANK	
OFC	
TELEPHONE POLE	
WATER PIPE	
EP BOX	

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

NUMBER OF UTILITIES TO BE SHIFTED	SIDE	
	LEFT	RIGHT
WATER TANK	0	0
WATER PIPE	0	0

CLIENT :



Jhelum & Tawi  
FLOOD RECOVERY PROJECT

Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:

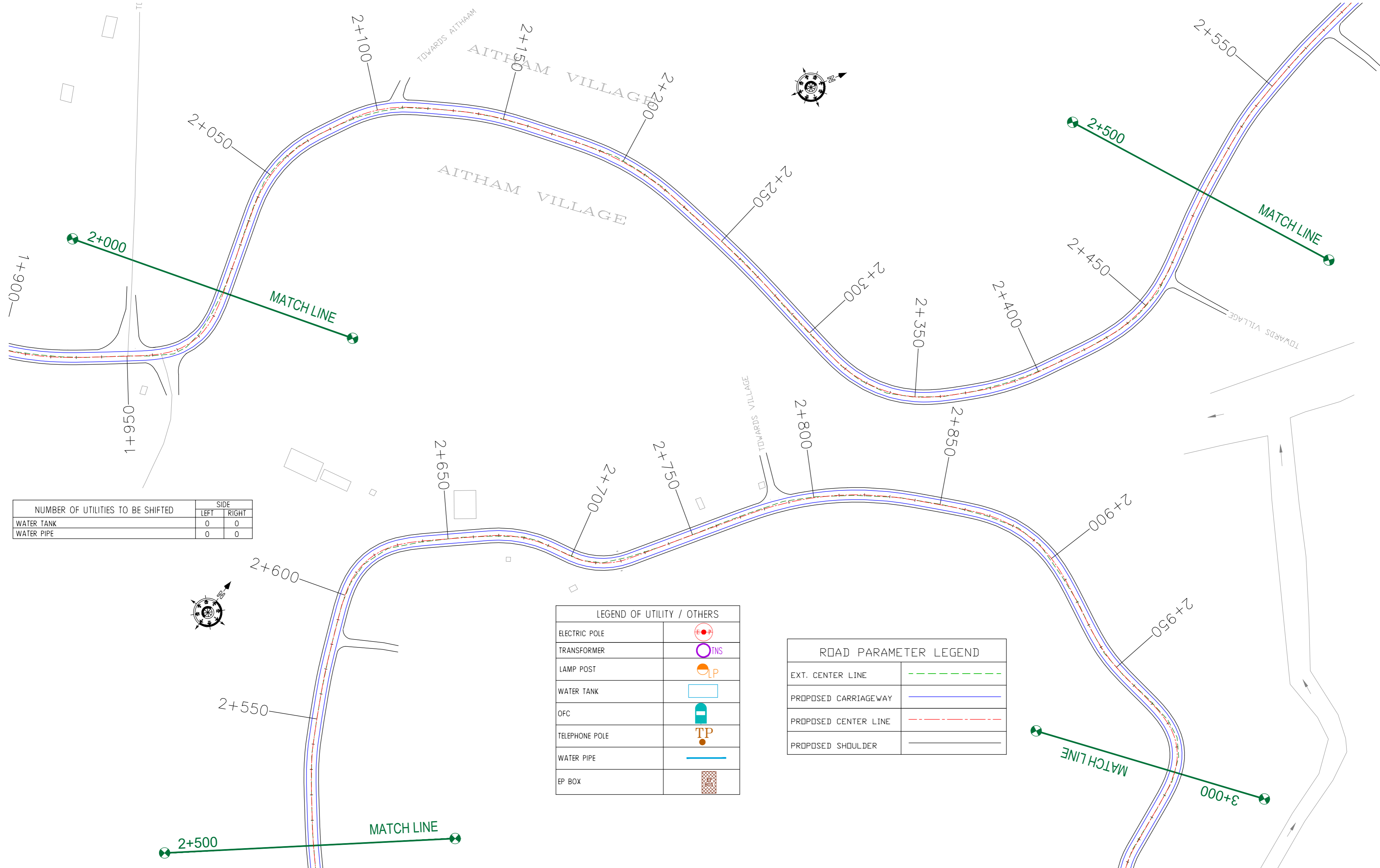


**servicios de Ingenieria S.L.**  
Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
Ph: 033-40347200  
www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	<b>Utility Relocation Plan (For Water Department) (Ch. 1+000 to Ch. 2+000)</b>
DRG. NO. :	EPTISA/JTRP/DPR/J&K/URP/02
REVISION :	R-1
September 2019	



NUMBER OF UTILITIES TO BE SHIFTED	SIDE	
	LEFT	RIGHT
WATER TANK	0	0
WATER PIPE	0	0

LEGEND OF UTILITY / OTHERS	
ELECTRIC POLE	
TRANSFORMER	
LAMP POST	
WATER TANK	
OFC	
TELEPHONE POLE	
WATER PIPE	
EP BOX	

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	



CLIENT :   
 Jhelum Tawi Flood Recovery Project  
 2nd Floor ERA Commercial Complex Rambagh  
 Srinagar-190 009.

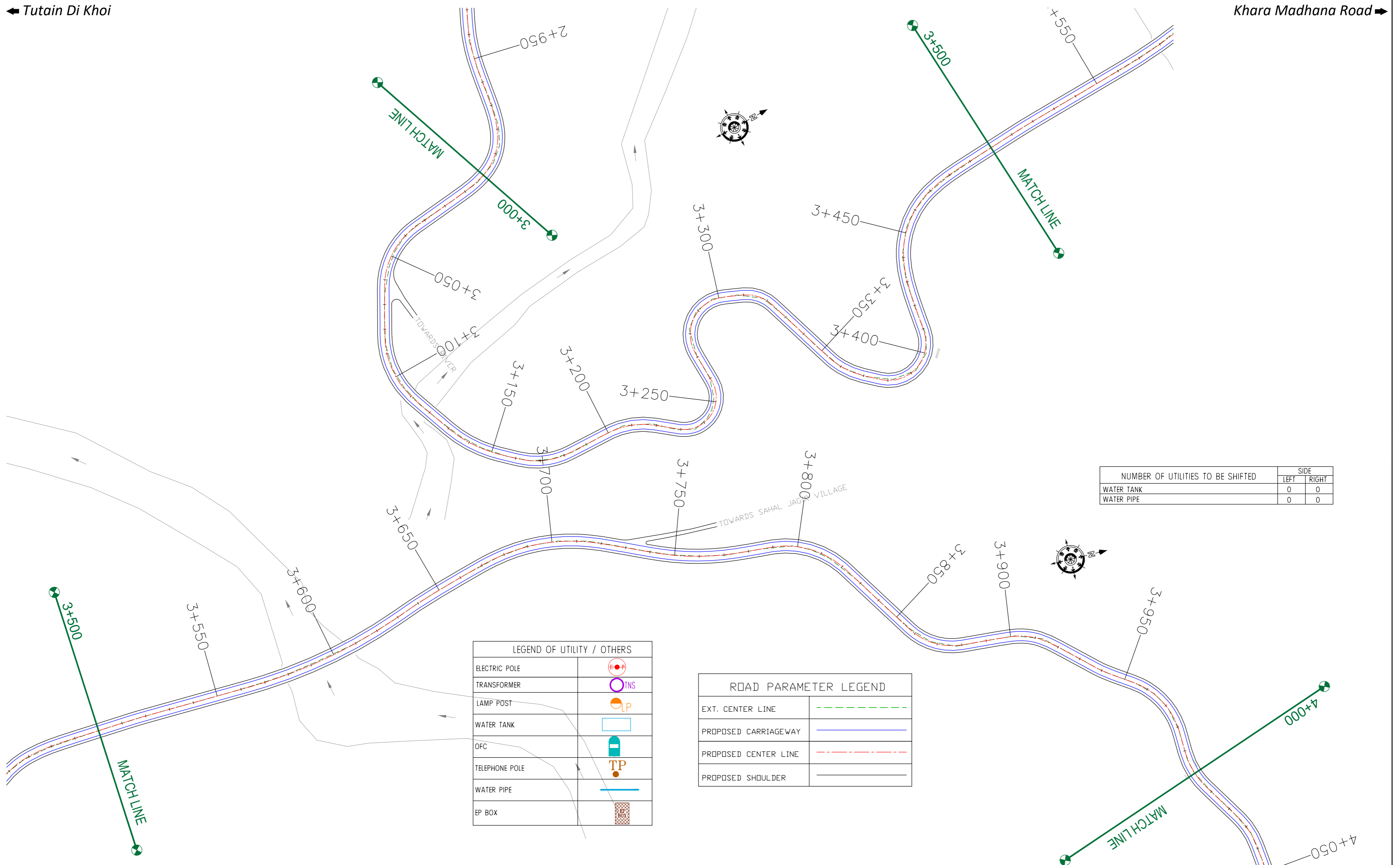
PROJECT :  
 Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:  
 **servicios de Ingenieria S.L.**  
 Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
 Ph: 033-40347200  
 www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	<b>Utility Relocation Plan (For Water Department)</b> (Ch. 2+000 to Ch. 3+000)
DRG. NO. :	EPTISA/JTRP/DPR/J&K/URP/03
REVISION :	R-1
	September 2019



NUMBER OF UTILITIES TO BE SHIFTED	SIDE	
	LEFT	RIGHT
WATER TANK	0	0
WATER PIPE	0	0

LEGEND OF UTILITY / OTHERS	
ELECTRIC POLE	
TRANSFORMER	
LAMP POST	
WATER TANK	
OFC	
TELEPHONE POLE	
WATER PIPE	
EP BOX	

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

CLIENT : Jhelum & Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

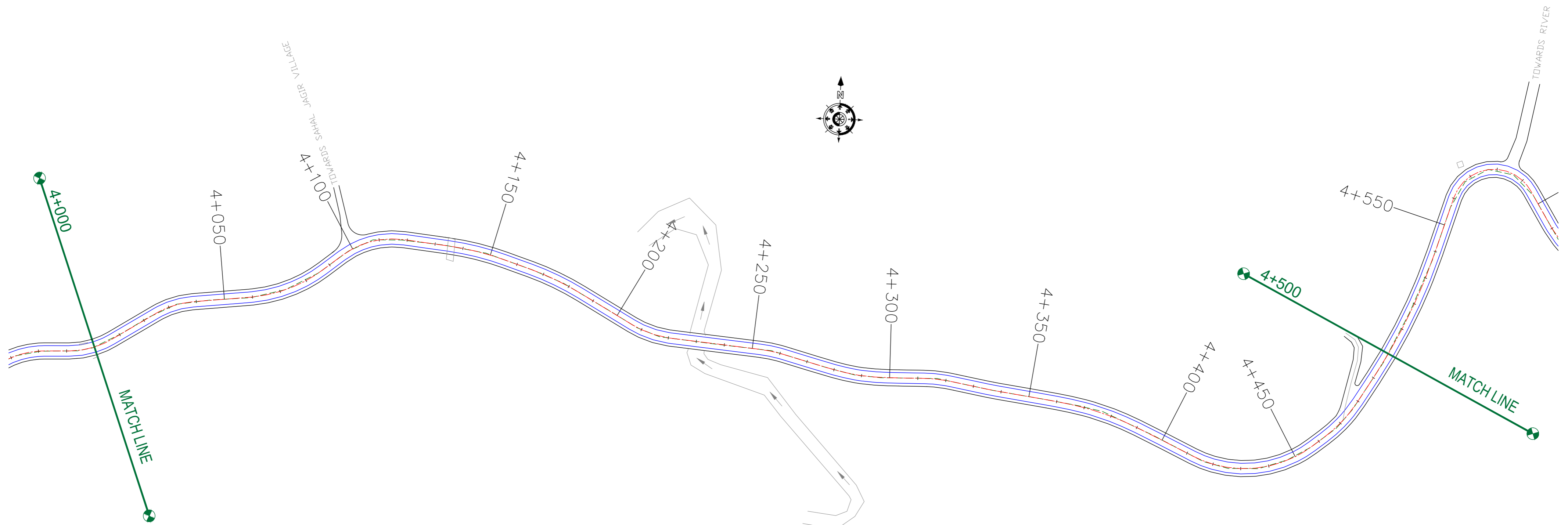
PROJECT : Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT: **eptisa** *servicios de Ingenieria S.L.*  
Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
Ph: 033-40347200  
www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY : SD  
DESIGNED BY : SCK/MM  
APPROVED BY : KG  
SCALE : 1:1000

TITLE : **Utility Relocation Plan (For Water Department)**  
(Ch. 4+000 to Ch. 5+000)  
DRG. NO. : EPTISA/JTFRP/DPR/J&K/URP/04  
REVISION : R-1  
September 2019



LEGEND OF UTILITY / OTHERS	
ELECTRIC POLE	
TRANSFORMER	
LAMP POST	
WATER TANK	
OFC	
TELEPHONE POLE	
WATER PIPE	
EP BOX	

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

NUMBER OF UTILITIES TO BE SHIFTED	SIDE	
	LEFT	RIGHT
WATER TANK	0	0
WATER PIPE	0	0

CLIENT : Jhelum & Tawi FLOOD RECOVERY PROJECT  
Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

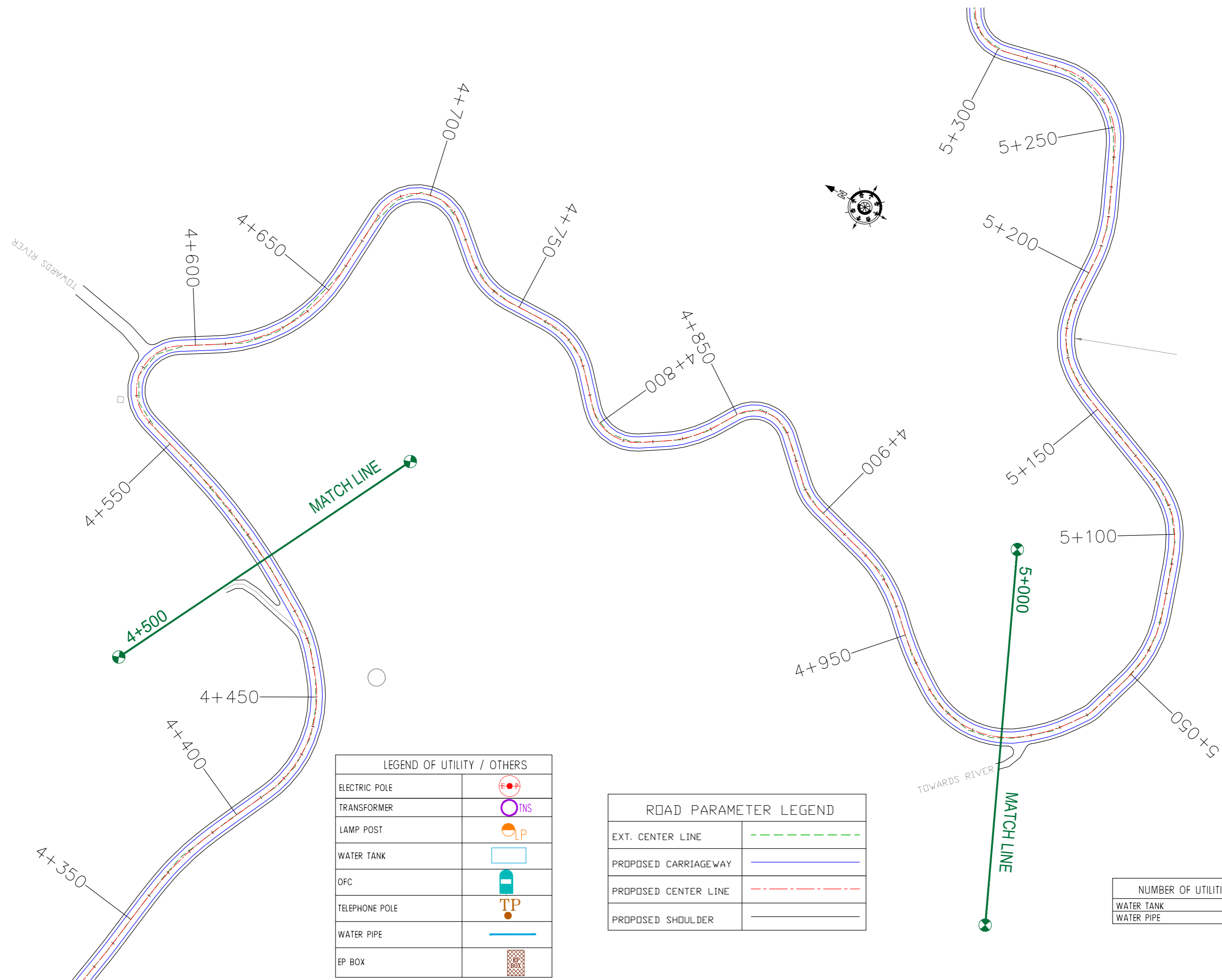
PROJECT :  
Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:  
**eptisa** *servicios de Ingenieria S.L.*  
Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
Ph: 033-40347200  
www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY : SD  
DESIGNED BY : SCK/MM  
APPROVED BY : KG  
SCALE : 1:1000

TITLE : **Utility Relocation Plan (For Water Department)**  
(Ch. 4+000 to Ch. 4+500)  
DRG. NO. : EPTISA/JTRFP/DPR/J&K/URP/04  
REVISION : R-1  
September 2019



LEGEND OF UTILITY / OTHERS	
ELECTRIC POLE	
TRANSFORMER	
LAMP POST	
WATER TANK	
OFC	
TELEPHONE POLE	
WATER PIPE	
EP BOX	

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

NUMBER OF UTILITIES TO BE SHIFTED	SIDE	
	LEFT	RIGHT
WATER TANK	0	0
WATER PIPE	0	0

CLIENT : Jhelum & Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT : Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

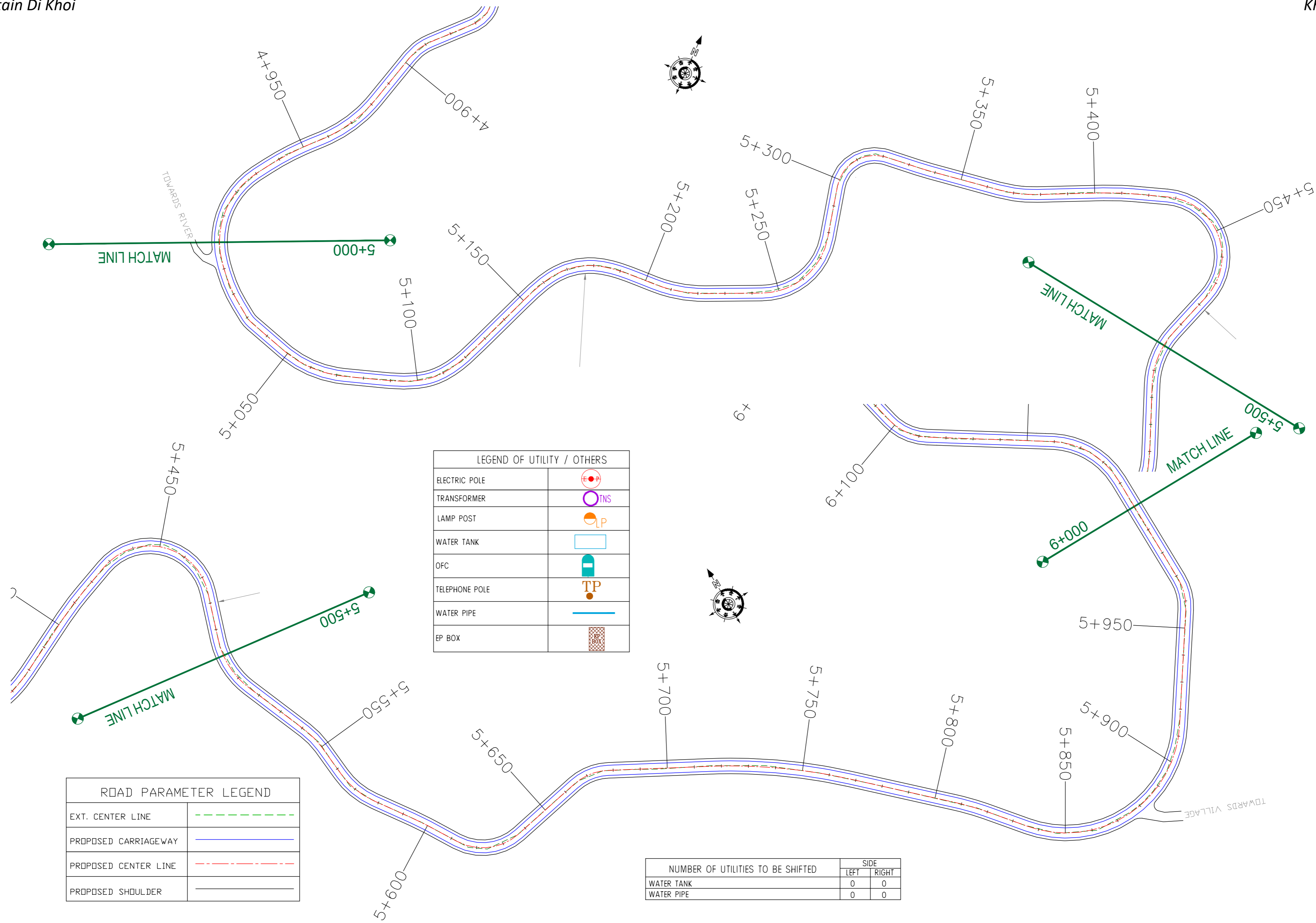
DESIGN CONSULTANT: **eptisa** *Servicios de Ingenieria S.L.*  
Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
Ph: 033-40347200  
www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY : SD  
DESIGNED BY : SCK/MM  
APPROVED BY : KG  
SCALE : 1:1000

TITLE : **Utility Relocation Plan (For Water Department)**  
(Ch. 4+500 to Ch. 5+000)  
DRG. NO. : EPTISA/JTRP/DPR/J&K/URP/05  
REVISION : R-1  
September 2019





LEGEND OF UTILITY / OTHERS	
ELECTRIC POLE	
TRANSFORMER	
LAMP POST	
WATER TANK	
OFC	
TELEPHONE POLE	
WATER PIPE	
EP BOX	

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

NUMBER OF UTILITIES TO BE SHIFTED	SIDE	
	LEFT	RIGHT
WATER TANK	0	0
WATER PIPE	0	0

CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:

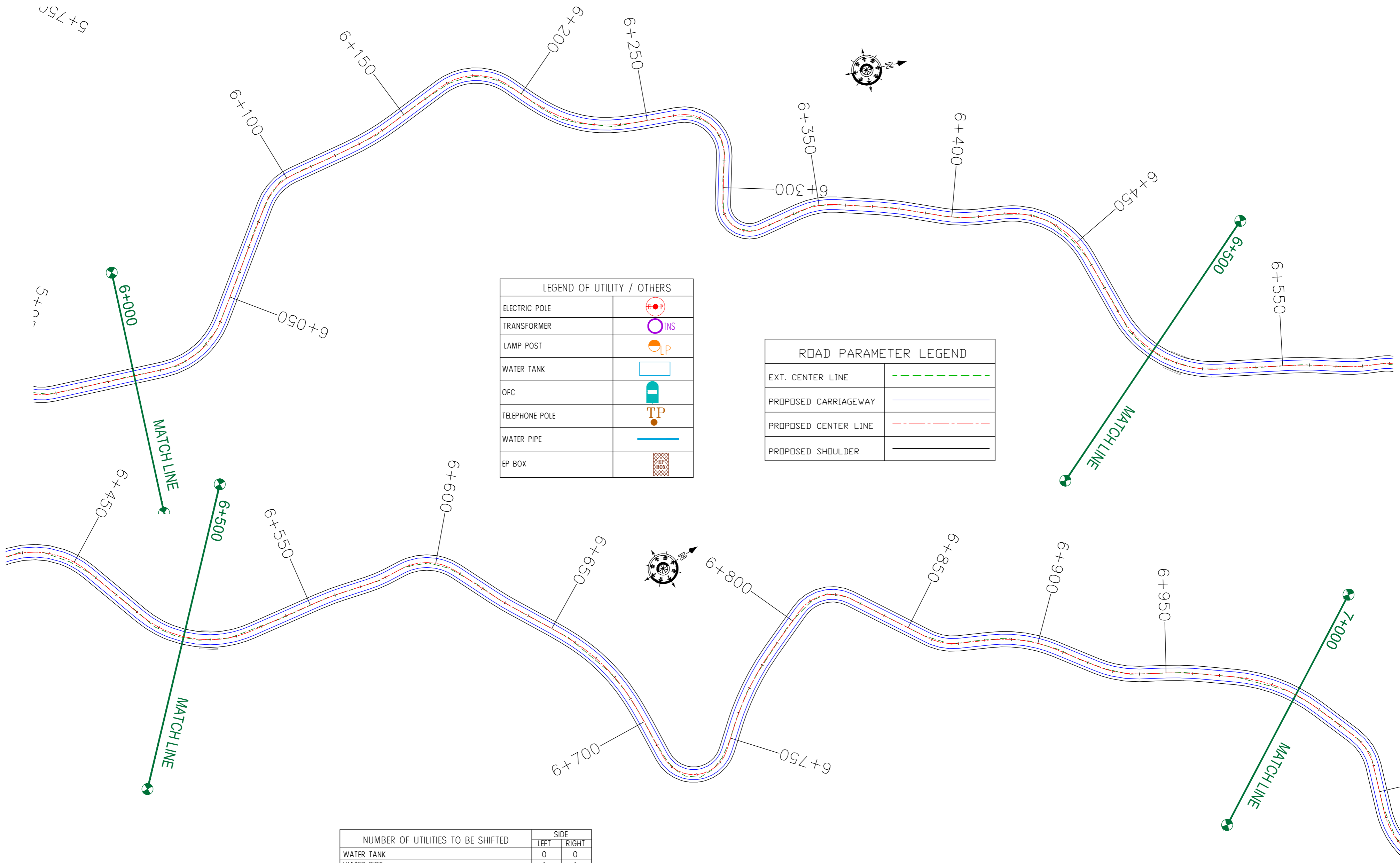


**servicios de Ingenieria S.L.**  
Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
Ph: 033-40347200  
www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	<b>Utility Relocation Plan (For Water Department)</b> (Ch. 5+000 to Ch. 6+000)
DRG. NO. :	EPTISA/JTRP/DPR/J&K/URP/07
REVISION :	R-1
	September 2019



LEGEND OF UTILITY / OTHERS	
ELECTRIC POLE	
TRANSFORMER	
LAMP POST	
WATER TANK	
OFC	
TELEPHONE POLE	
WATER PIPE	
EP BOX	

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

NUMBER OF UTILITIES TO BE SHIFTED	SIDE	
	LEFT	RIGHT
WATER TANK	0	0
WATER PIPE	0	0

CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:

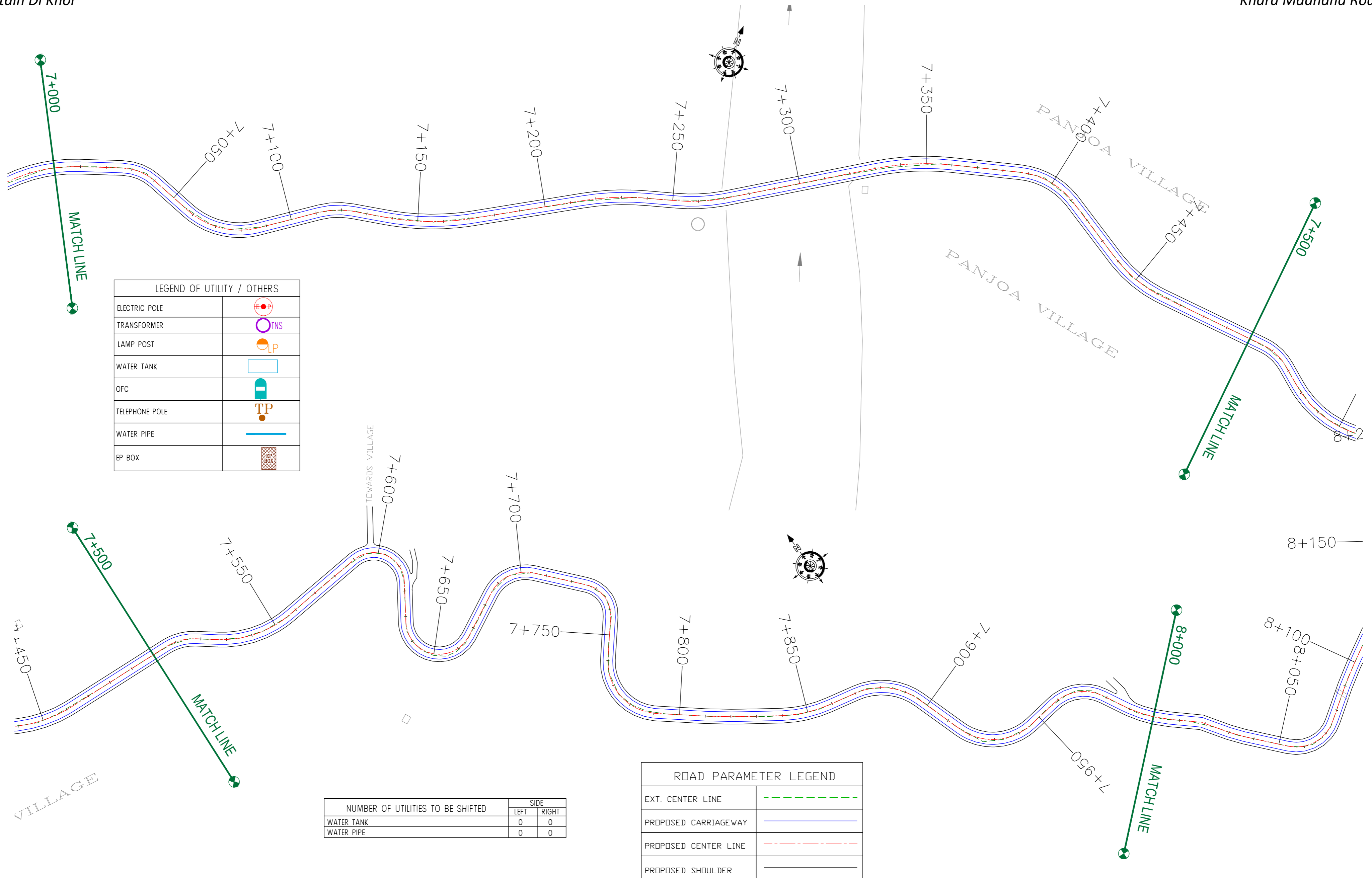


**servicios de Ingenieria S.L.**  
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Ph: 033-40347200  
www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	<b>Utility Relocation Plan (For Water Department) (Ch. 6+000 to Ch. 7+000)</b>
DRG. NO. :	EPTISA/JTRFP/DPR/J&K/URP/08
REVISION :	R-1
	September 2019



LEGEND OF UTILITY / OTHERS	
ELECTRIC POLE	
TRANSFORMER	
LAMP POST	
WATER TANK	
OFC	
TELEPHONE POLE	
WATER PIPE	
EP BOX	

NUMBER OF UTILITIES TO BE SHIFTED	SIDE	
	LEFT	RIGHT
WATER TANK	0	0
WATER PIPE	0	0

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:

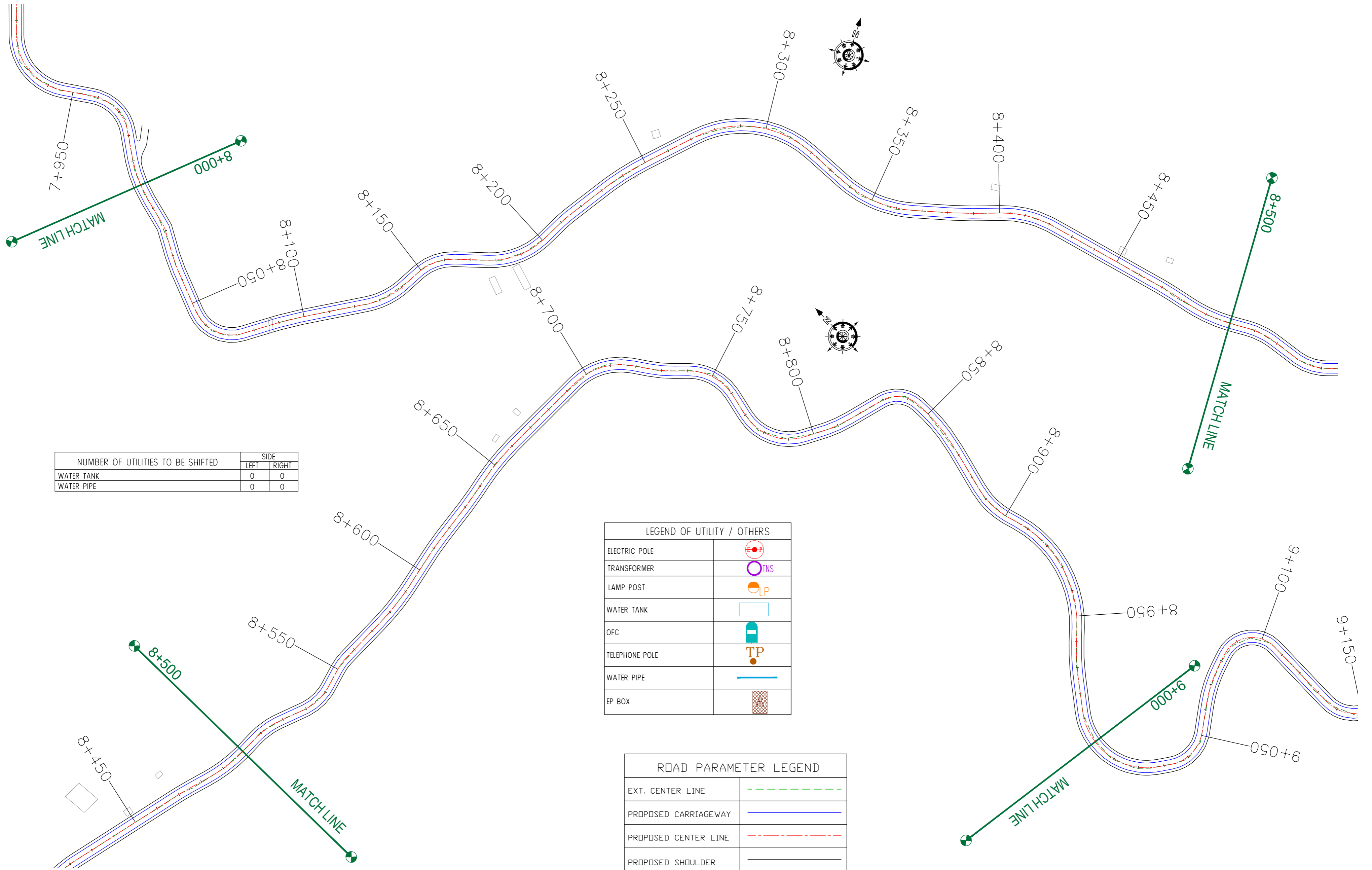


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Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
Ph: 033-40347200  
www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	<b>Utility Relocation Plan (For Water Department)</b> (Ch. 7+000 to Ch. 8+000)
DRG. NO. :	EPTISA/JTFRP/DPR/J&K/URP/09
REVISION :	R-1
September 2019	



NUMBER OF UTILITIES TO BE SHIFTED	SIDE	
	LEFT	RIGHT
WATER TANK	0	0
WATER PIPE	0	0

LEGEND OF UTILITY / OTHERS	
ELECTRIC POLE	
TRANSFORMER	
LAMP POST	
WATER TANK	
OFC	
TELEPHONE POLE	
WATER PIPE	
EP BOX	

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:

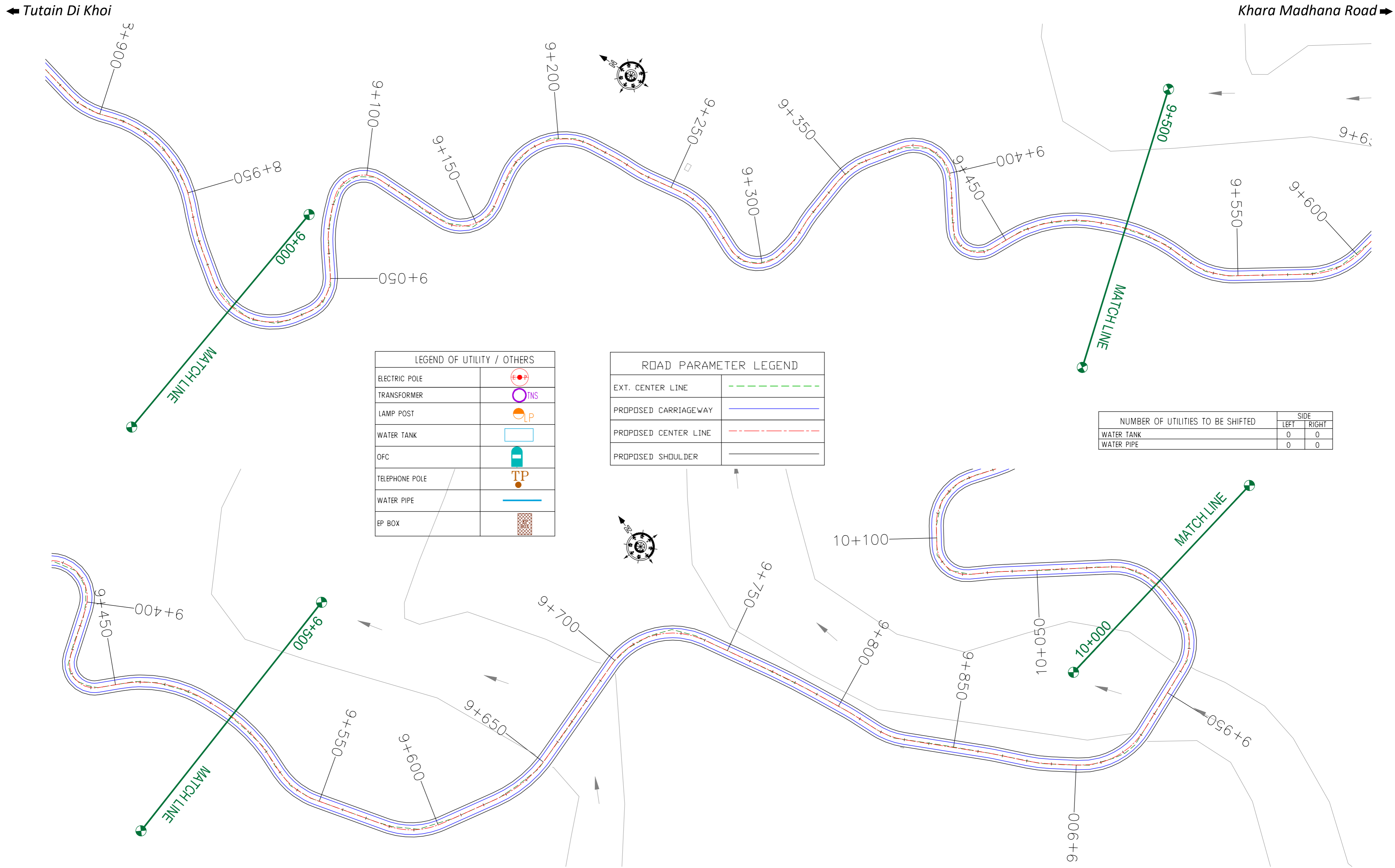


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Ph: 033-40347200  
www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	<b>Utility Relocation Plan (For Water Department)</b> (Ch. 8+000 to Ch. 9+000)
DRG. NO. :	EPTISA/JTRFP/DPR/J&K/URP/10
REVISION :	R-1
	September 2019



LEGEND OF UTILITY / OTHERS	
ELECTRIC POLE	
TRANSFORMER	
LAMP POST	
WATER TANK	
OFC	
TELEPHONE POLE	
WATER PIPE	
EP BOX	

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

NUMBER OF UTILITIES TO BE SHIFTED	SIDE	
	LEFT	RIGHT
WATER TANK	0	0
WATER PIPE	0	0

CLIENT : Jhelum & Tawi FLOOD RECOVERY PROJECT  
 Jhelum Tawi Flood Recovery Project  
 2nd Floor ERA Commercial Complex Rambagh  
 Srinagar-190 009.

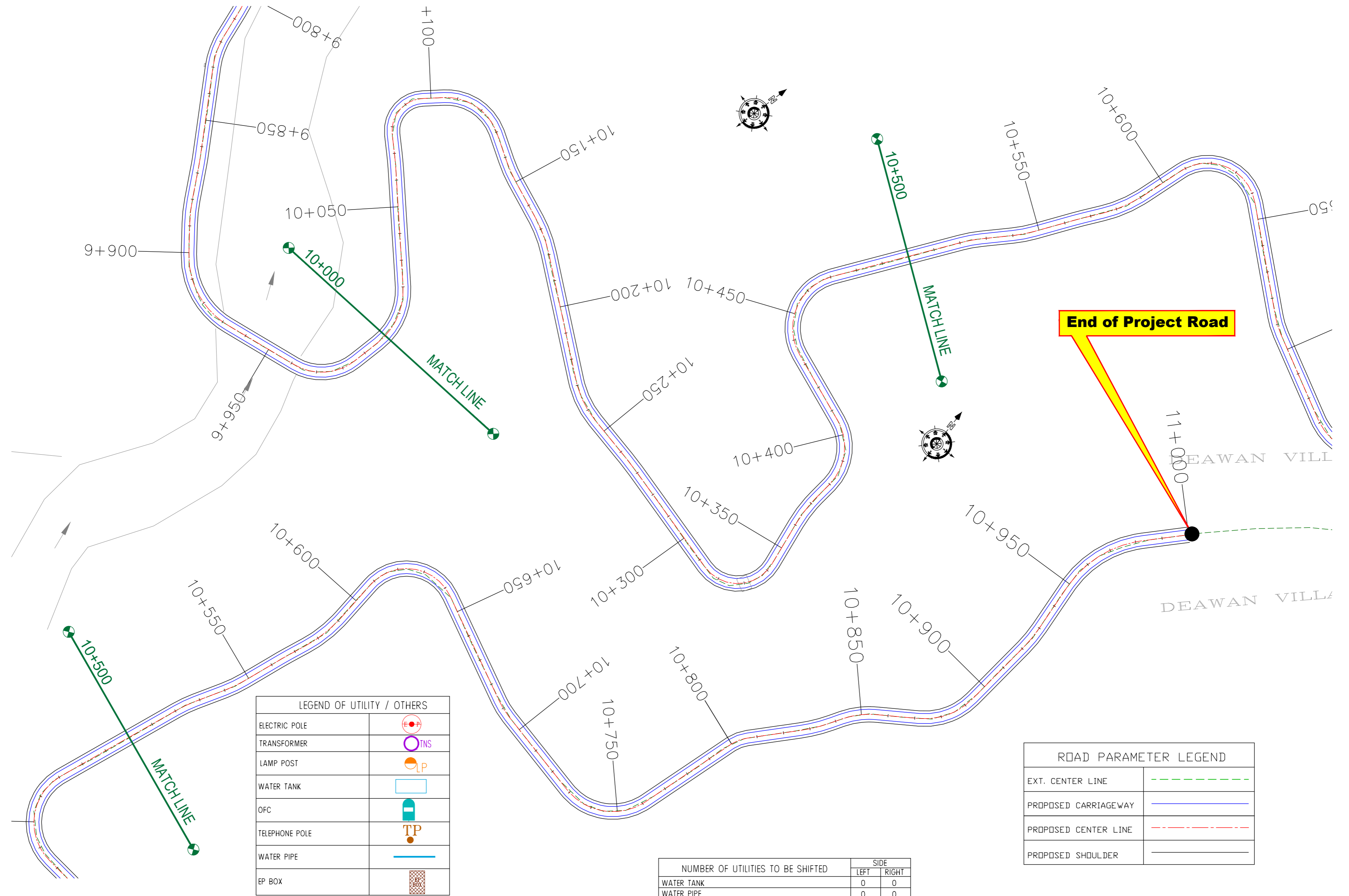
PROJECT :  
 Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:  
**servicios de Ingenieria S.L.**  
 Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
 Ph: 033-40347200  
 www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY : SD  
 DESIGNED BY : SCK/MM  
 APPROVED BY : KG  
 SCALE : 1:1000

TITLE : **Utility Relocation Plan (For Water Department)**  
 (Ch. 9+000 to Ch. 10+000)  
 DRG. NO. : EPTISA/JTRFP/DPR/J&K/URP/11  
 REVISION : R-1  
 September 2019



LEGEND OF UTILITY / OTHERS	
ELECTRIC POLE	
TRANSFORMER	
LAMP POST	
WATER TANK	
OFC	
TELEPHONE POLE	
WATER PIPE	
EP BOX	

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

NUMBER OF UTILITIES TO BE SHIFTED	SIDE	
	LEFT	RIGHT
WATER TANK	0	0
WATER PIPE	0	0

CLIENT : Jhelum & Tawi FLOOD RECOVERY PROJECT  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :  
Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

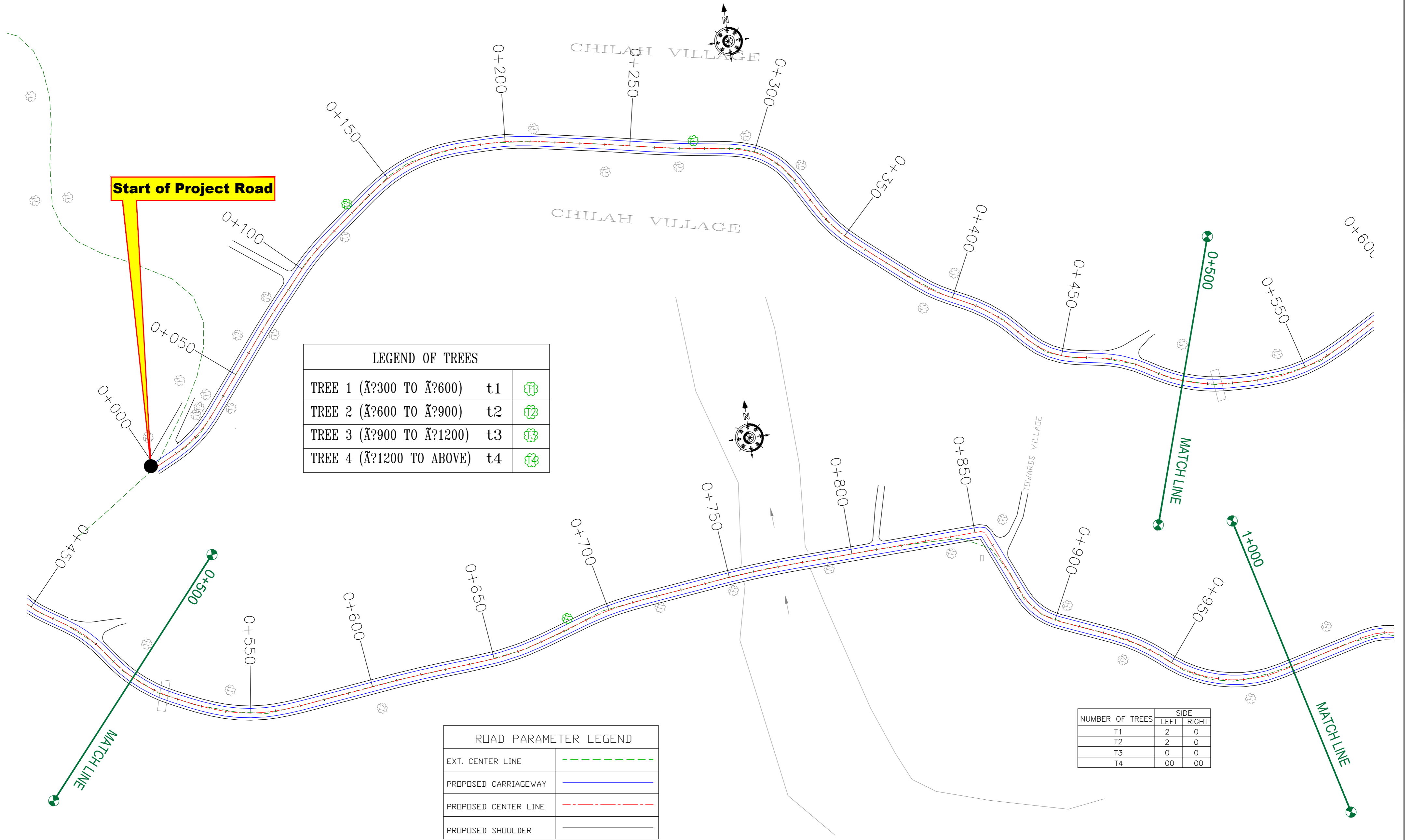
DESIGN CONSULTANT:  
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Ph: 033-40347200  
www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY : SD  
DESIGNED BY : SCK/MM  
APPROVED BY : KG  
SCALE : 1:1000

TITLE : **Utility Relocation Plan (For Water Department)**  
(Ch. 10+000 to Ch. 11+000)  
DRG. NO. : EPTISA/JTRP/DPR/J&K/URP/12  
REVISION : R-1  
September 2019

≡ TREE CUTTING (MAIN ROAD) ≡



**LEGEND OF TREES**

TREE 1 (Á?300 TO Á?600)	t1	
TREE 2 (Á?600 TO Á?900)	t2	
TREE 3 (Á?900 TO Á?1200)	t3	
TREE 4 (Á?1200 TO ABOVE)	t4	

**ROAD PARAMETER LEGEND**

EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

NUMBER OF TREES	SIDE	
	LEFT	RIGHT
T1	2	0
T2	2	0
T3	0	0
T4	00	00

CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:



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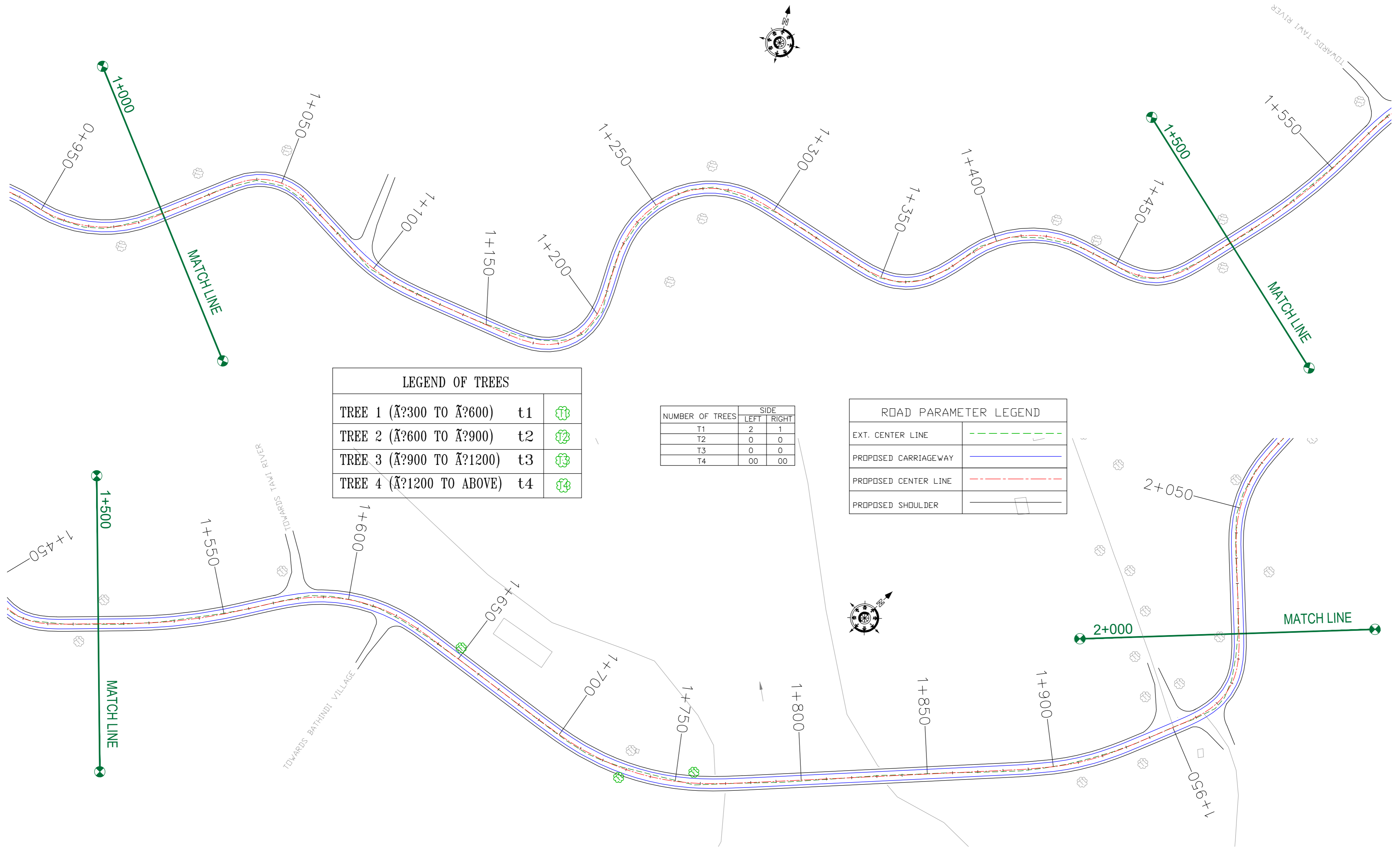
REV.	DATE	DESCRIPTION

DRAWN BY : SD  
DESIGNED BY : SCK/MM  
APPROVED BY : KG  
SCALE : 1:1000

TITLE : **TREE CUTTING**  
(Ch. 0+000 to Ch. 1+000)

DRG. NO. : EPTISA/JTFRP/DPR/J&K/TC/01  
REVISION : R-1  
September 2019





LEGEND OF TREES		
TREE 1 (∅300 TO ∅600)	t1	
TREE 2 (∅600 TO ∅900)	t2	
TREE 3 (∅900 TO ∅1200)	t3	
TREE 4 (∅1200 TO ABOVE)	t4	

NUMBER OF TREES	SIDE	
	LEFT	RIGHT
T1	2	1
T2	0	0
T3	0	0
T4	00	00

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:

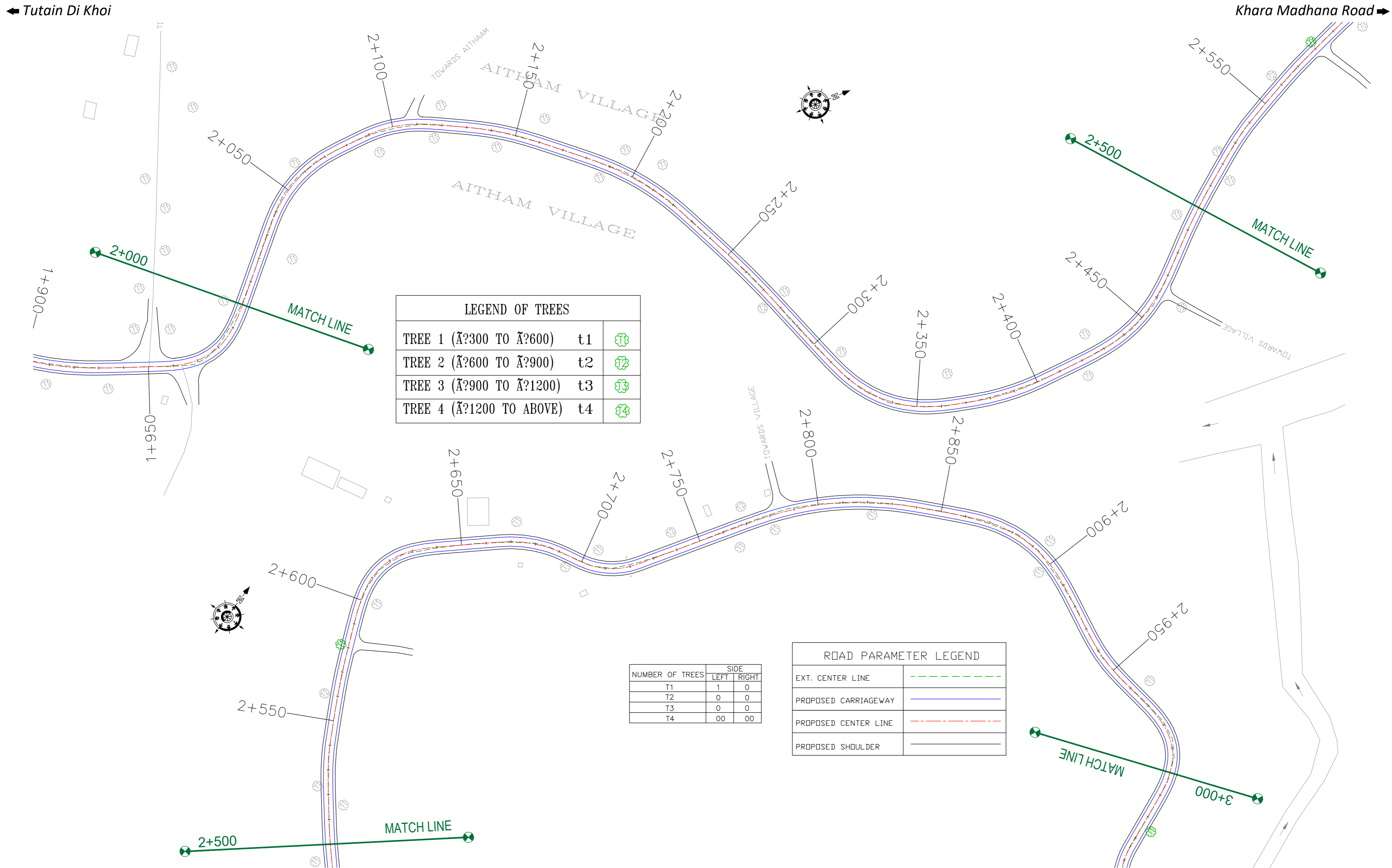


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REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	<b>TREE CUTTING</b> (Ch. 1+000 to Ch. 2+000)
DRG. NO. :	EPTISA/JTFRP/DPR/J&K/TC/02
REVISION :	R-1
September 2019	



**LEGEND OF TREES**

TREE 1 (Ã?300 TO Ã?600)	t1	
TREE 2 (Ã?600 TO Ã?900)	t2	
TREE 3 (Ã?900 TO Ã?1200)	t3	
TREE 4 (Ã?1200 TO ABOVE)	t4	

NUMBER OF TREES	SIDE	
	LEFT	RIGHT
T1	1	0
T2	0	0
T3	0	0
T4	00	00

**ROAD PARAMETER LEGEND**

EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

CLIENT :   
 Jehlum Tawi Flood Recovery Project  
 2nd Floor ERA Commercial Complex Rambagh  
 Srinagar-190 009.

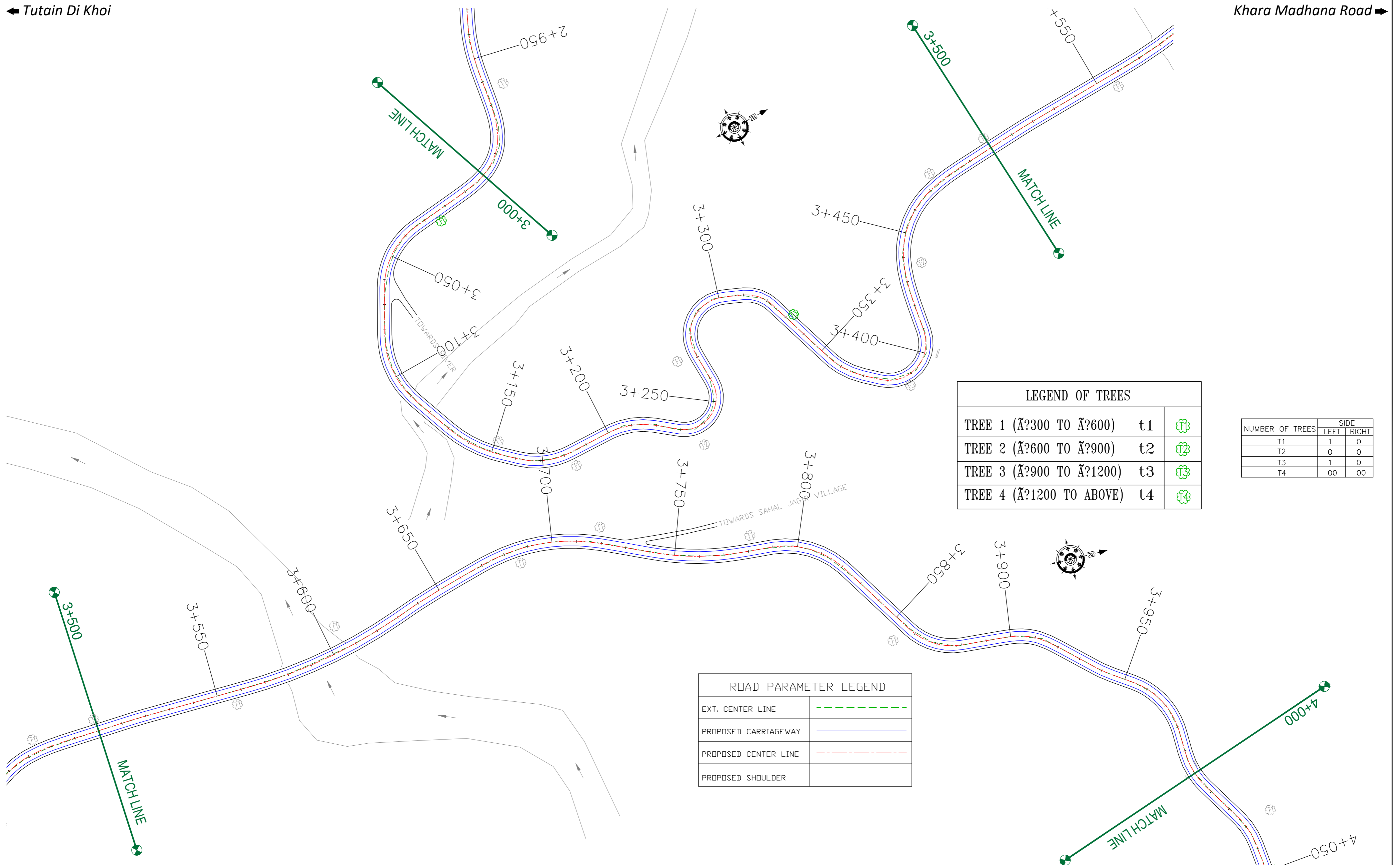
PROJECT :  
 Consultancy Services for Preparing Detailed Project  
 Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:  
 **servicios de Ingenieria S.L.**  
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 Corporate Park, Plot No. 2, Block EP & GP,  
 Sector v, Salt Lake Kolkata - 700091,  
 West Bengal  
 Ph: 033-40347200  
 www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY : SD  
 DESIGNED BY : SCK/MM  
 APPROVED BY : KG  
 SCALE : 1:1000

TITLE : **TREE CUTTING**  
 (Ch. 2+000 to Ch. 3+000)  
 DRG. NO. : EPTISA/JTRFP/DPR/J&K/TC/03  
 REVISION : R-1  
 September 2019



LEGEND OF TREES		
TREE 1 (Ã?300 TO Ã?600)	t1	
TREE 2 (Ã?600 TO Ã?900)	t2	
TREE 3 (Ã?900 TO Ã?1200)	t3	
TREE 4 (Ã?1200 TO ABOVE)	t4	

NUMBER OF TREES	SIDE	
	LEFT	RIGHT
T1	1	0
T2	0	0
T3	1	0
T4	00	00

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:

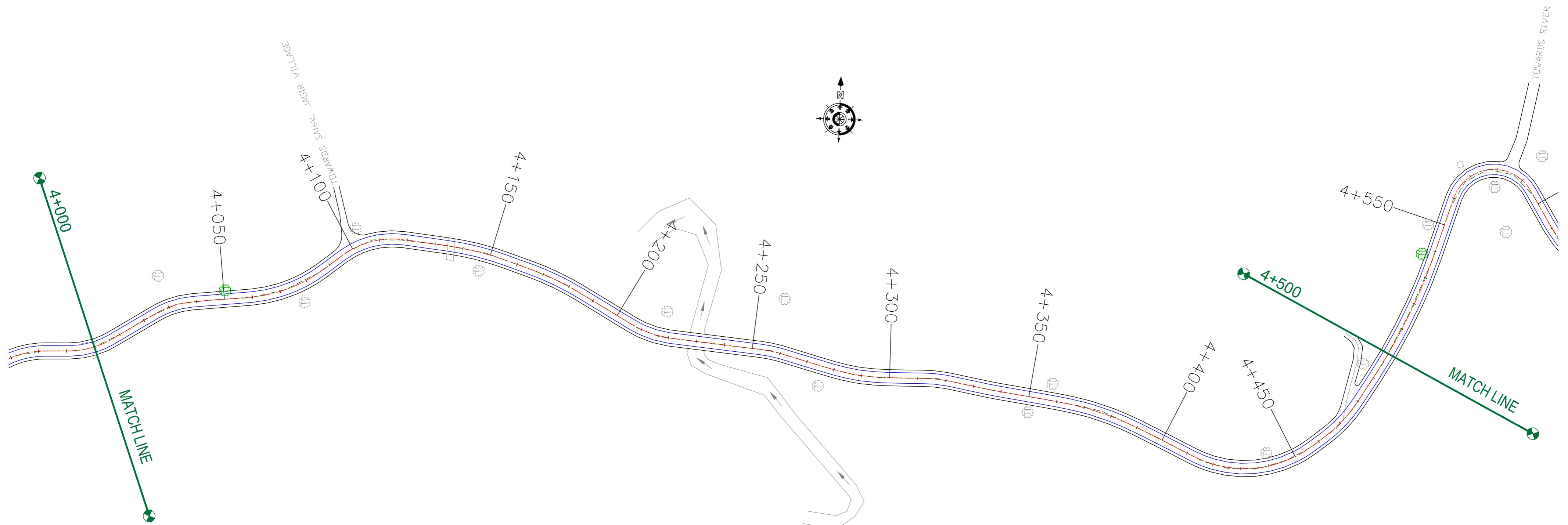


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Ph: 033-40347200  
www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	<b>TREE CUTTING</b> (Ch. 4+000 to Ch. 5+000)
DRG. NO. :	EPTISA/JTFRP/DPR/J&K/TC/04
REVISION :	R-1
September 2019	



LEGEND OF TREES		
TREE 1 (ŀ?300 TO ŀ?600)	t1	
TREE 2 (ŀ?600 TO ŀ?900)	t2	
TREE 3 (ŀ?900 TO ŀ?1200)	t3	
TREE 4 (ŀ?1200 TO ABOVE)	t4	

NUMBER OF TREES	SIDE	
	LEFT	RIGHT
T1	1	0
T2	0	0
T3	0	0
T4	00	00

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:

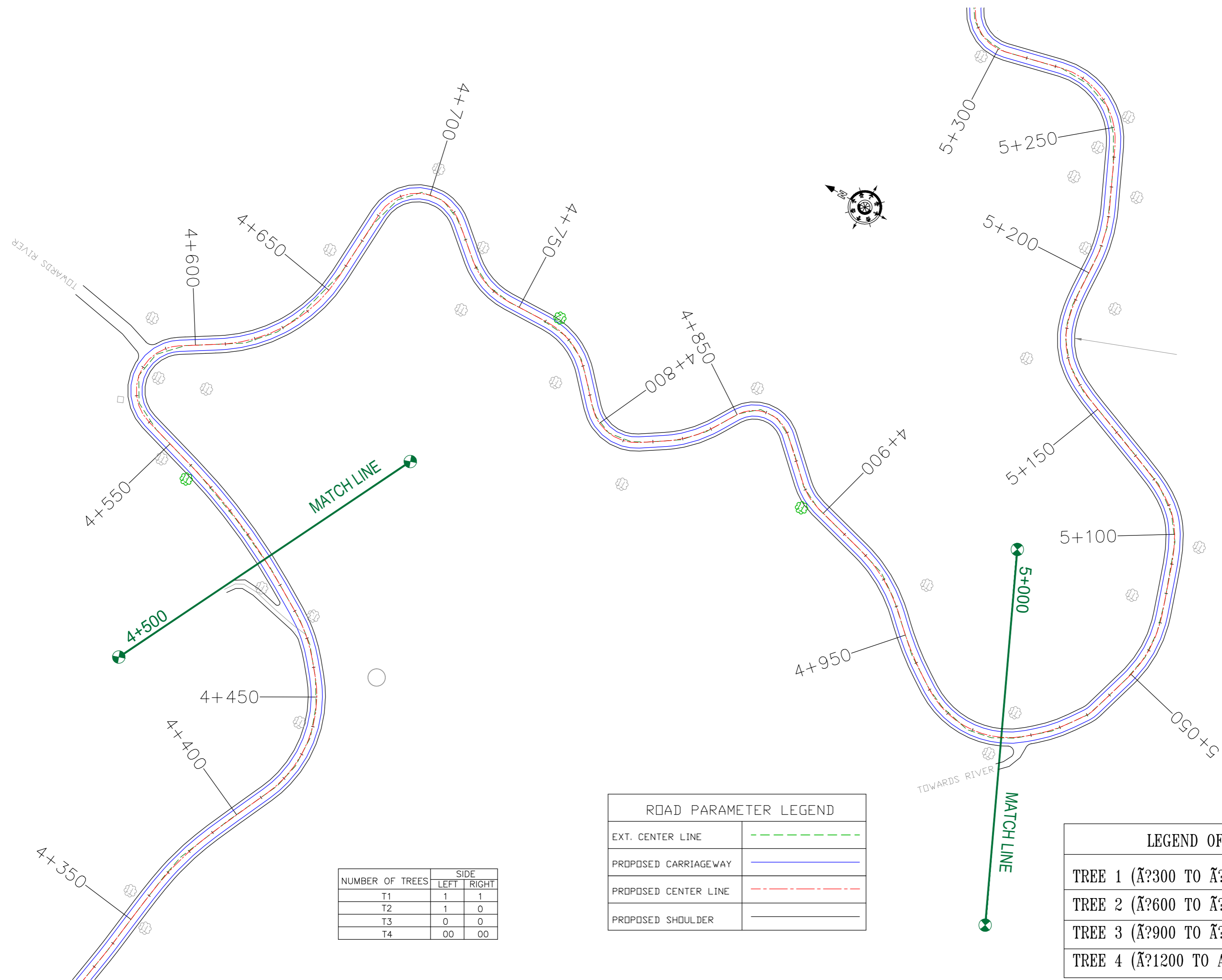


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Ph: 033-40347200  
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REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	<b>TREE CUTTING</b> (Ch. 4+000 to Ch. 4+500)
DRG. NO. :	EPTISA/JFRP/DPR/J&K/TC/04
REVISION :	R-1
	September 2019



NUMBER OF TREES	SIDE	
	LEFT	RIGHT
T1	1	1
T2	1	0
T3	0	0
T4	00	00

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	---
PROPOSED CARRIAGEWAY	—
PROPOSED CENTER LINE	- - -
PROPOSED SHOULDER	—

LEGEND OF TREES		
TREE 1 (ŀ?300 TO ŀ?600)	t1	ŀ1
TREE 2 (ŀ?600 TO ŀ?900)	t2	ŀ2
TREE 3 (ŀ?900 TO ŀ?1200)	t3	ŀ3
TREE 4 (ŀ?1200 TO ABOVE)	t4	ŀ4

CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:

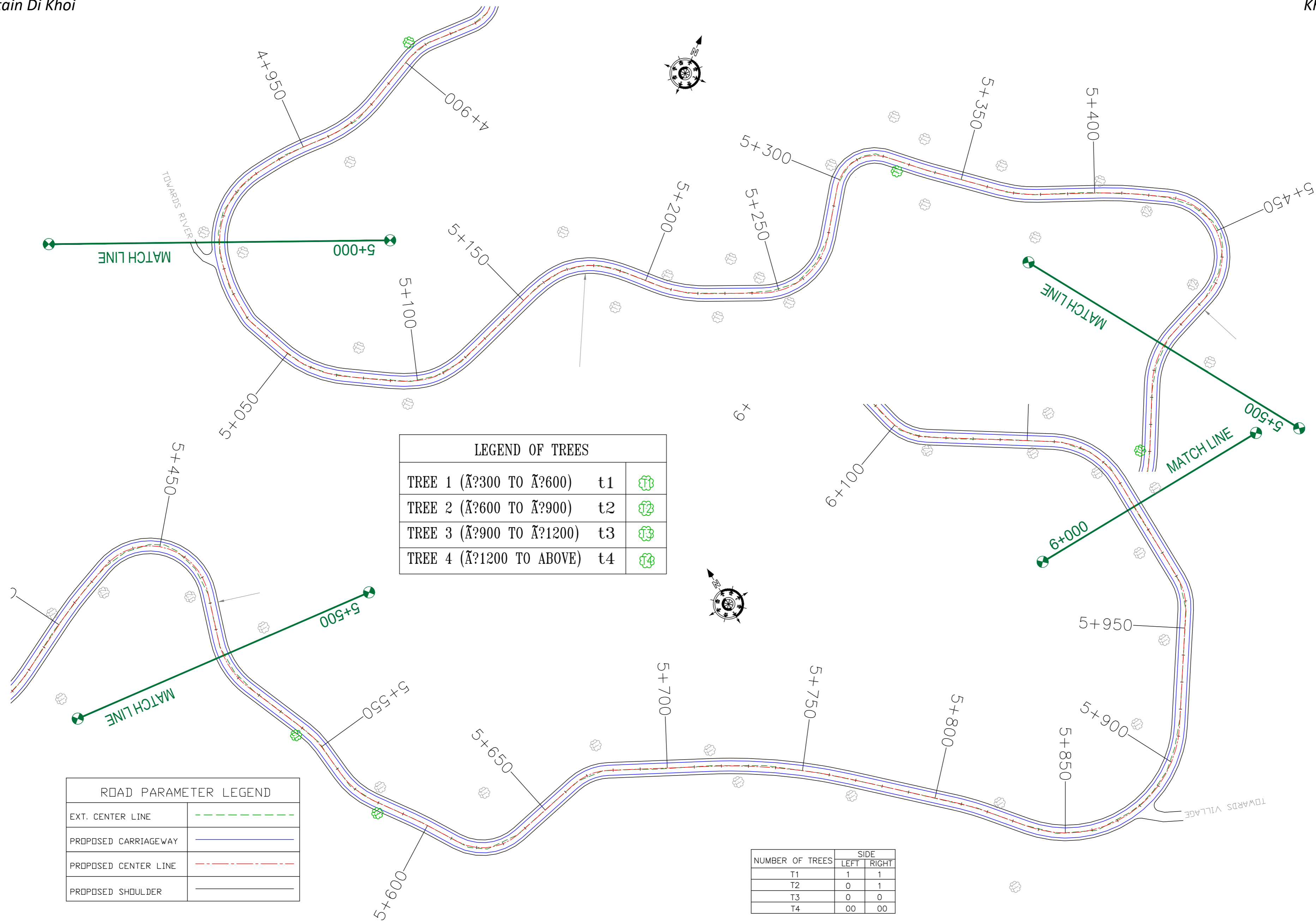


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Ph: 033-40347200  
www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	<b>TREE CUTTING</b> (Ch. 4+500 to Ch. 5+000)
DRG. NO. :	EPTISA/JTRP/DPR/J&K/TC/05
REVISION :	R-1
September 2019	



LEGEND OF TREES		
TREE 1 (A?300 TO A?600)	t1	
TREE 2 (A?600 TO A?900)	t2	
TREE 3 (A?900 TO A?1200)	t3	
TREE 4 (A?1200 TO ABOVE)	t4	

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

NUMBER OF TREES	SIDE	
	LEFT	RIGHT
T1	1	1
T2	0	1
T3	0	0
T4	00	00

CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:



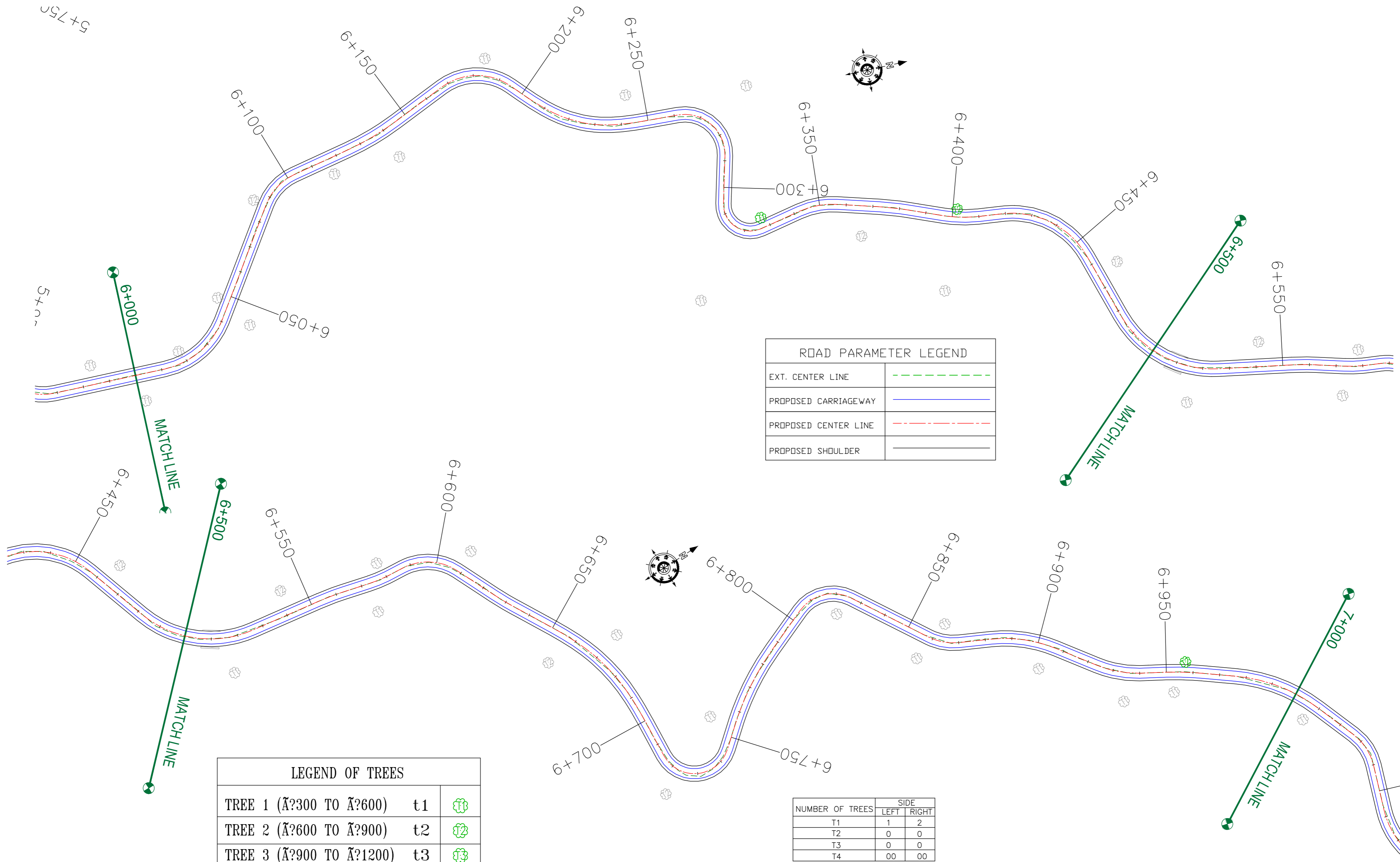
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Ph: 033-40347200  
www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY : SD  
DESIGNED BY : SCK/MM  
APPROVED BY : KG  
SCALE : 1:1000

TITLE : **TREE CUTTING**  
(Ch. 5+000 to Ch. 6+000)

DRG. NO. : EPTISA/JTRFP/DPR/J&K/TC/07  
REVISION : R-1  
September 2019



ROAD PARAMETER LEGEND	
EXT. CENTER LINE	---
PROPOSED CARRIAGEWAY	—
PROPOSED CENTER LINE	- - -
PROPOSED SHOULDER	—

LEGEND OF TREES		
TREE 1 (Ã?300 TO Ã?600)	t1	
TREE 2 (Ã?600 TO Ã?900)	t2	
TREE 3 (Ã?900 TO Ã?1200)	t3	
TREE 4 (Ã?1200 TO ABOVE)	t4	

NUMBER OF TREES	SIDE	
	LEFT	RIGHT
T1	1	2
T2	0	0
T3	0	0
T4	00	00

CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:



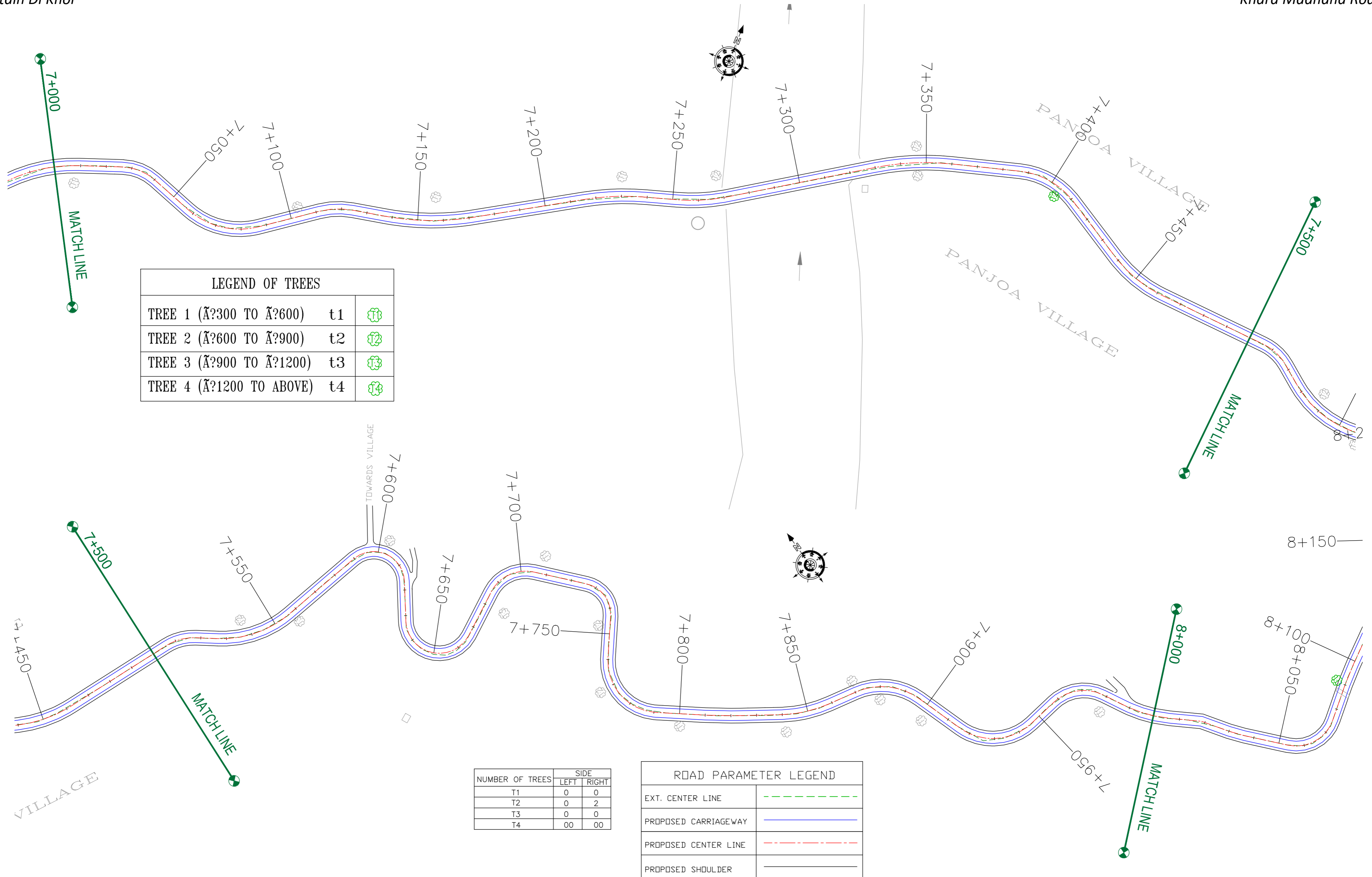
**servicios de Ingenieria S.L.**  
Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
Ph: 033-40347200  
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REV.	DATE	DESCRIPTION

DRAWN BY : SD  
DESIGNED BY : SCK/MM  
APPROVED BY : KG  
SCALE : 1:1000

TITLE : **TREE CUTTING**  
(Ch. 6+000 to Ch. 7+000)

DRG. NO. : EPTISA/JTRP/DPR/J&K/TC/08  
REVISION : R-1  
September 2019



LEGEND OF TREES		
TREE 1 (À?300 TO À?600)	t1	
TREE 2 (À?600 TO À?900)	t2	
TREE 3 (À?900 TO À?1200)	t3	
TREE 4 (À?1200 TO ABOVE)	t4	

NUMBER OF TREES	SIDE	
	LEFT	RIGHT
T1	0	0
T2	0	2
T3	0	0
T4	00	00

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:



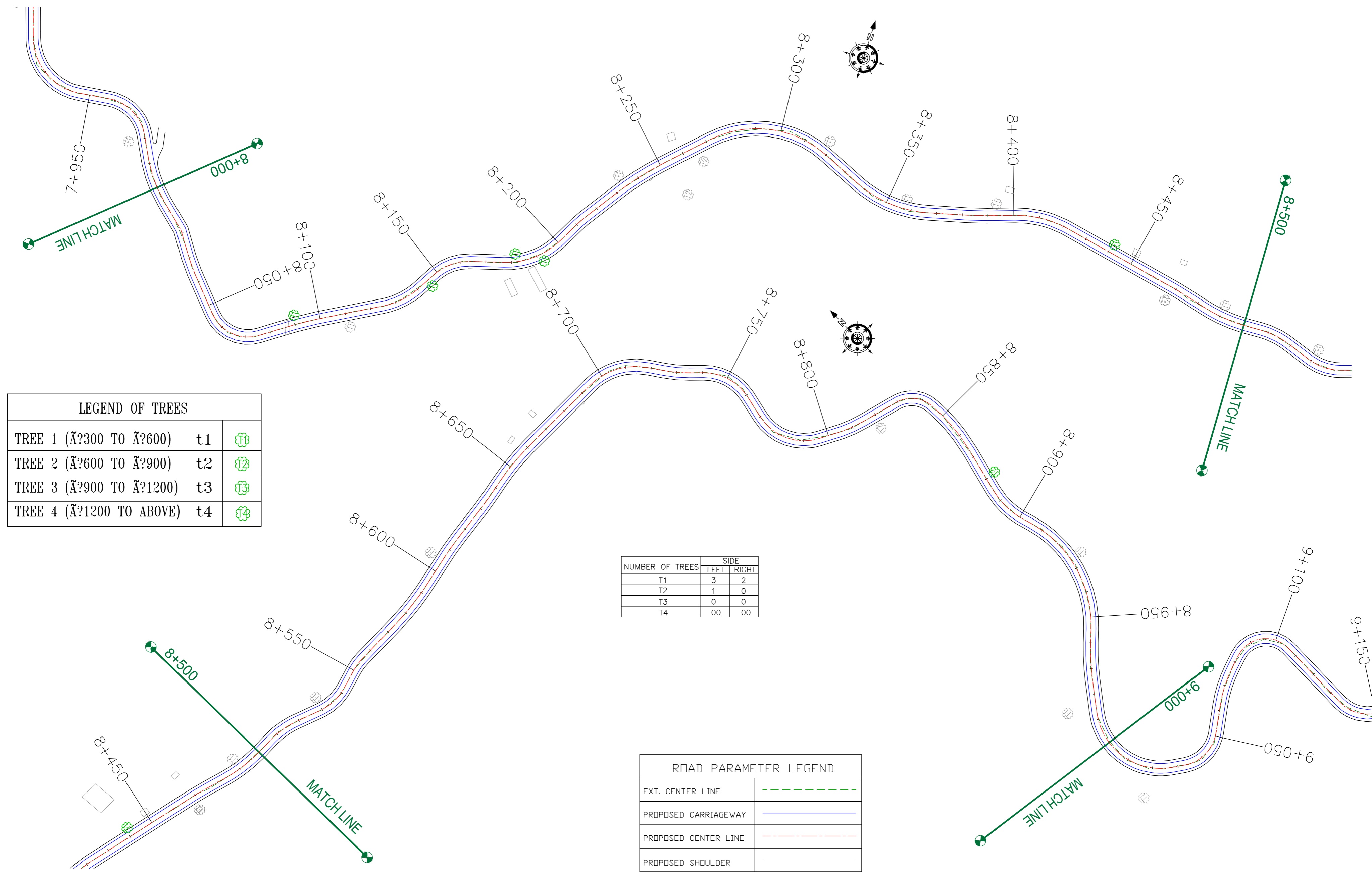
**Servicios de Ingenieria S.L.**  
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Ph: 033-40347200  
www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	<b>TREE CUTTING</b> (Ch. 7+000 to Ch. 8+000)
DRG. NO. :	EPTISA/JTRP/DPR/J&K/TC/09
REVISION :	R-1
September 2019	





LEGEND OF TREES		
TREE 1 (Ã?300 TO Ã?600)	t1	
TREE 2 (Ã?600 TO Ã?900)	t2	
TREE 3 (Ã?900 TO Ã?1200)	t3	
TREE 4 (Ã?1200 TO ABOVE)	t4	

NUMBER OF TREES	SIDE	
	LEFT	RIGHT
T1	3	2
T2	1	0
T3	0	0
T4	00	00

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:



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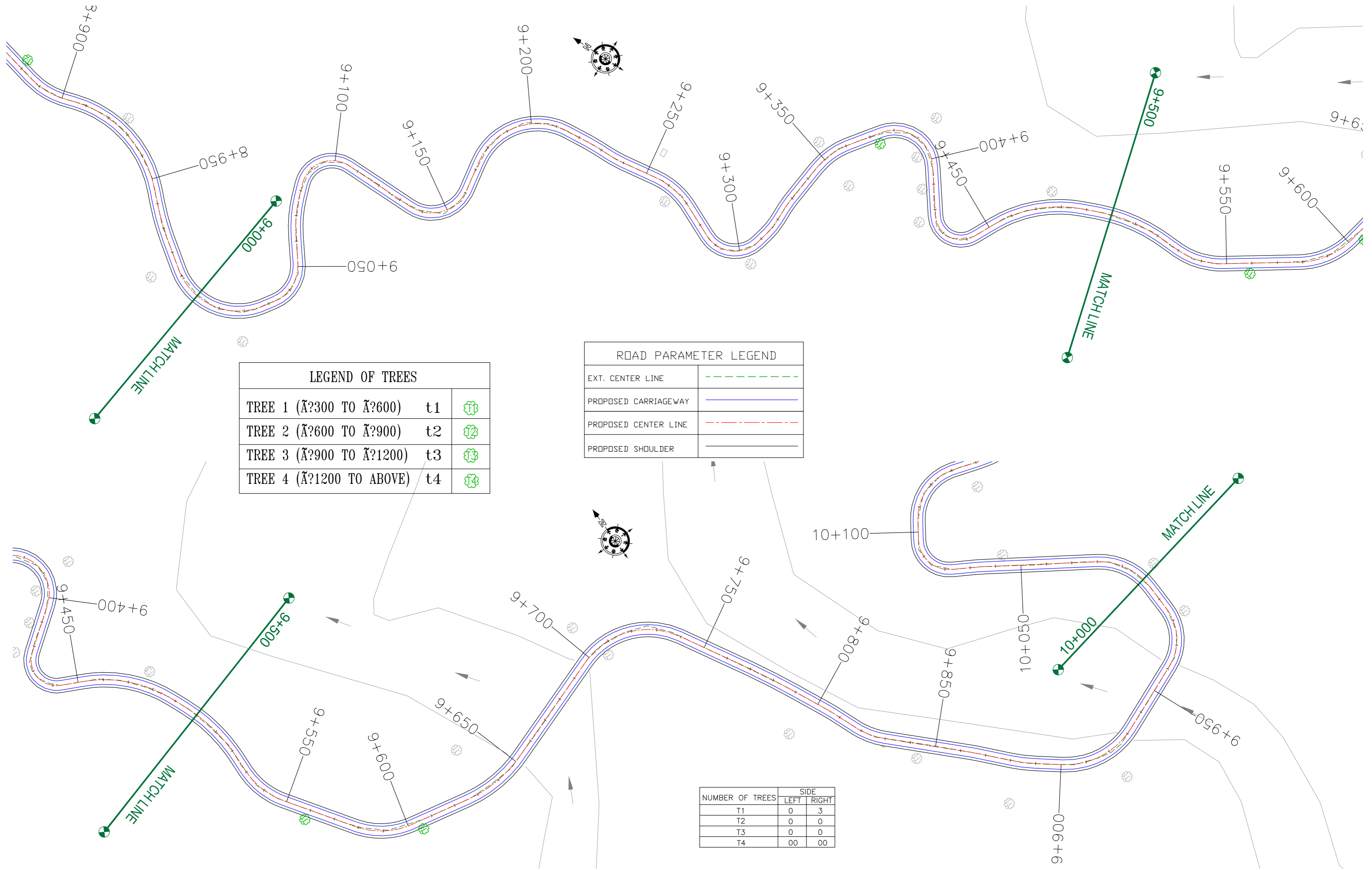
REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	<b>TREE CUTTING</b> (Ch. 8+000 to Ch. 9+000)
DRG. NO. :	EPTISA/JFRP/DPR/J&K/TC/10
REVISION :	R-1
	September 2019

← Tutain Di Khoi

Khara Madhana Road →



LEGEND OF TREES		
TREE 1 (Á?300 TO Á?600)	t1	
TREE 2 (Á?600 TO Á?900)	t2	
TREE 3 (Á?900 TO Á?1200)	t3	
TREE 4 (Á?1200 TO ABOVE)	t4	

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

NUMBER OF TREES	SIDE	
	LEFT	RIGHT
T1	0	3
T2	0	0
T3	0	0
T4	00	00

CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:

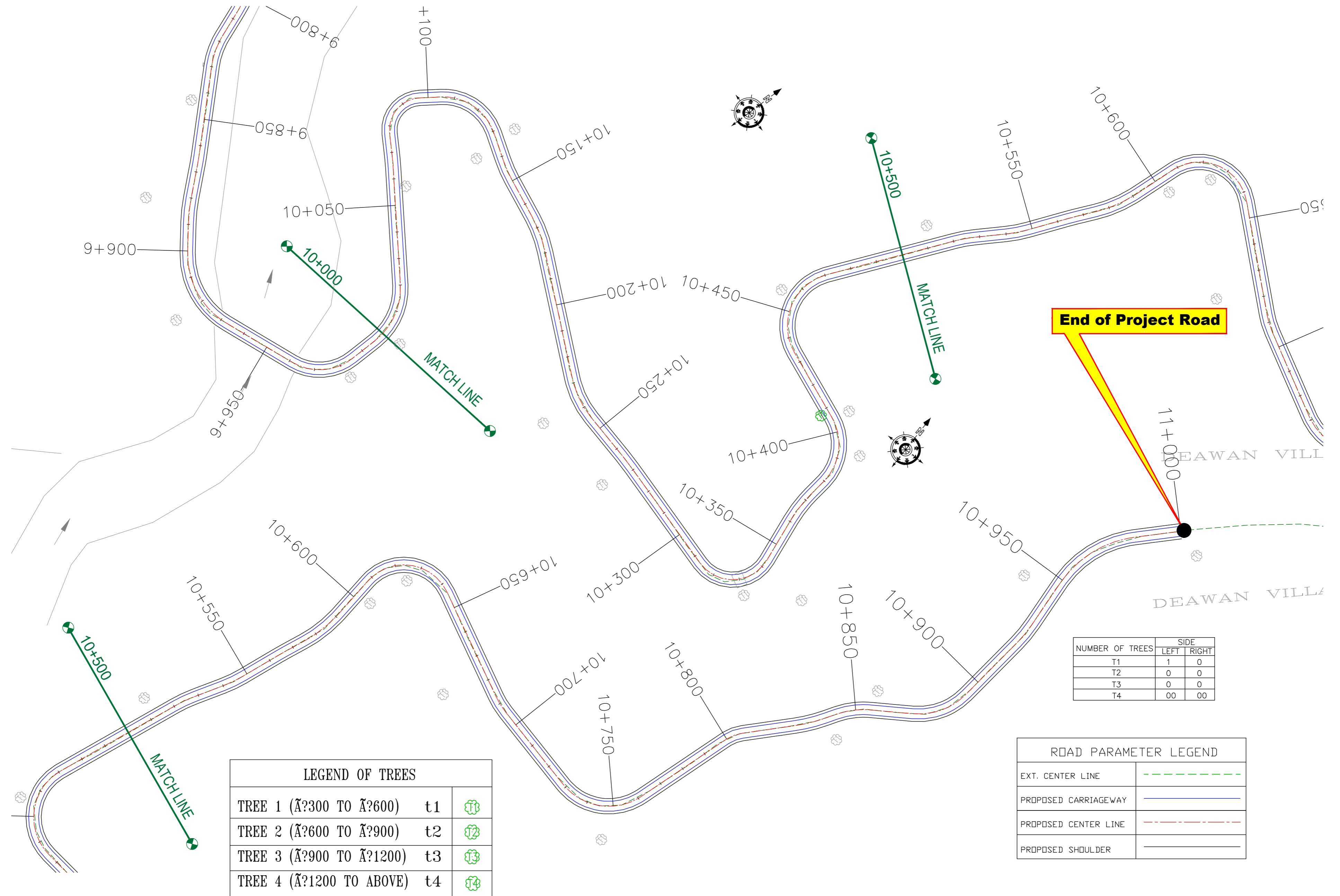


**servicios de Ingenieria S.L.**  
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Ph: 033-40347200  
www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	<b>TREE CUTTING</b> (Ch. 9+000 to Ch. 10+000)
DRG. NO. :	EPTISA/JFRP/DPR/J&K/TC/11
REVISION :	R-1
September 2019	



LEGEND OF TREES			
TREE 1 (∅?300 TO ∅?600)	t1		
TREE 2 (∅?600 TO ∅?900)	t2		
TREE 3 (∅?900 TO ∅?1200)	t3		
TREE 4 (∅?1200 TO ABOVE)	t4		

NUMBER OF TREES	SIDE	
	LEFT	RIGHT
T1	1	0
T2	0	0
T3	0	0
T4	00	00

ROAD PARAMETER LEGEND	
EXT. CENTER LINE	
PROPOSED CARRIAGEWAY	
PROPOSED CENTER LINE	
PROPOSED SHOULDER	

**End of Project Road**

CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:



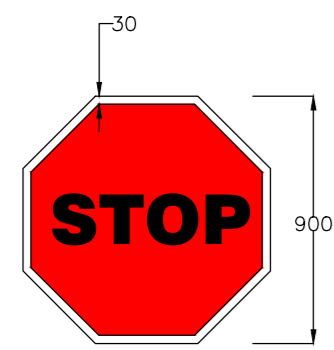
**servicios de Ingenieria S.L.**  
Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
Ph: 033-40347200  
www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

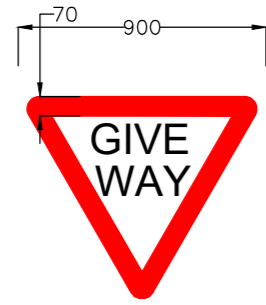
TITLE :	<b>TREE CUTTING</b> (Ch. 10+000 to Ch. 11+000)
DRG. NO. :	EPTISA/JTRP/DPR/J&K/TC/12
REVISION :	R-1
	September 2019

≡ MISCELLANEOUS DRAWINGS ≡



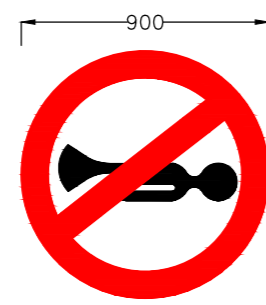
STOP SIGNS  
Fig. 14.01

MS-1



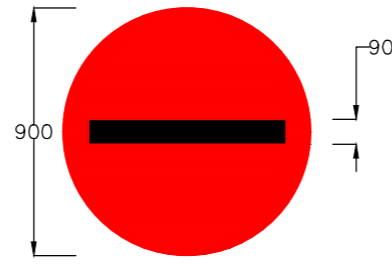
GIVE WAY  
Fig. 14.02

MS-2



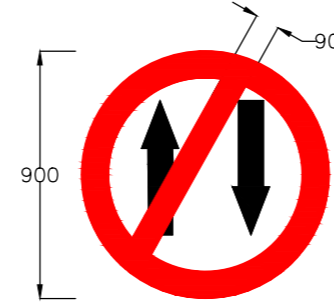
HORN PROHIBITED  
Fig. 14.18

MS-3



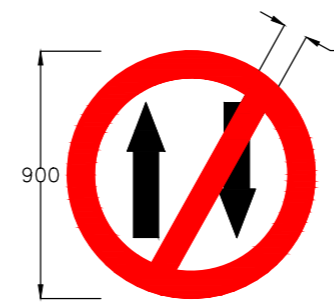
NO ENTRY  
Fig. 14.19

MS-4



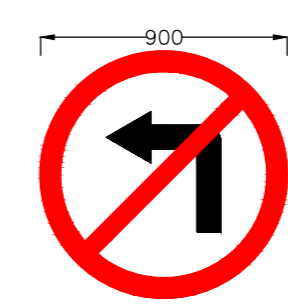
ONE WAY  
Fig. 14.20

MS-5



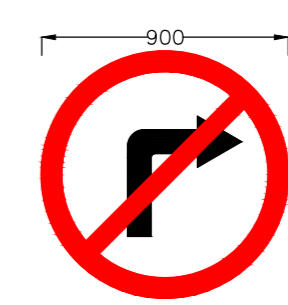
ONE WAY  
Fig. 14.20

MS-6



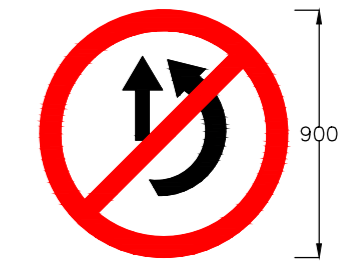
LEFT TURN PROHIBITED  
Fig. 14.21

MS-7



RIGHT TURN PROHIBITED  
Fig. 14.22

MS-8



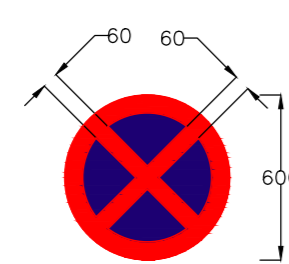
OVERTAKING PROHIBITED  
Fig. 14.23

MS-9



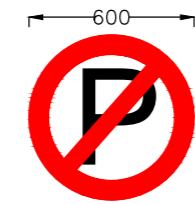
U-TURN PROHIBITED  
Fig. 14.24

MS-10



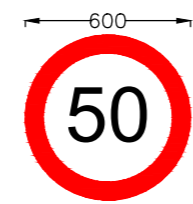
NO STOPPING AND NO STANDING  
Fig. 14.28

MS-11



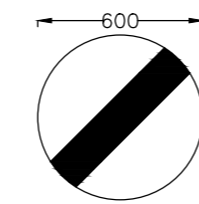
NO PARKING  
Fig. 14.29

MS-12



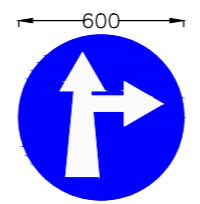
MAXIMUM SPEED LIMIT  
Fig. 14.37

MS-13



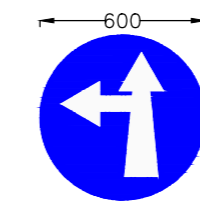
RESTRICTION ENDS  
Fig. 14.40

MS-14



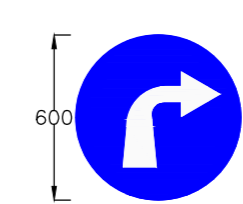
COMPULSORY AHEAD  
OR RIGHT TURN  
Fig. 14.42

MS-15



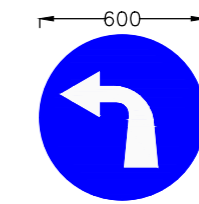
COMPULSORY AHEAD  
OR LEFT TURN  
Fig. 14.43

MS-16



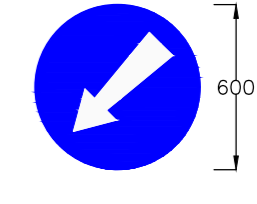
COMPULSORY  
TURN RIGHT  
Fig. 14.46

MS-17



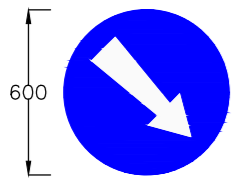
COMPULSORY  
TURN LEFT  
Fig. 14.47

MS-18



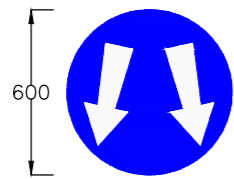
COMPULSORY KEEP LEFT  
Fig. 14.48

MS-19



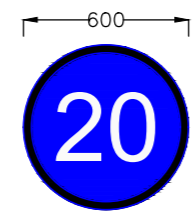
COMPULSORY KEEP RIGHT  
Fig. 14.49

MS-20



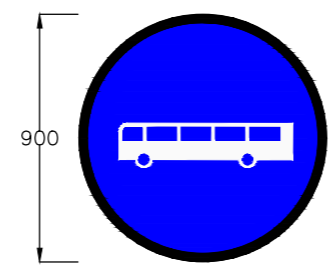
PASS EITHER SIDE  
Fig. 14.50

MS-21



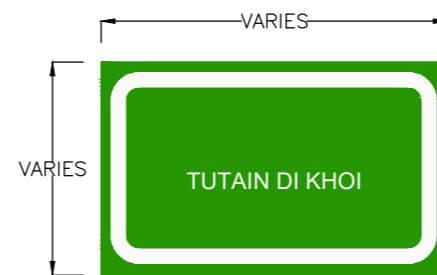
MINIMUM SPEED LIMIT  
Fig. 14.51

MS-22



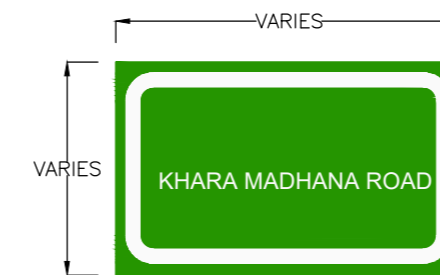
BUS WAY/BUSES ONLY  
Fig. 14.56

MS-23



PLACE IDENTIFICATION SIGN  
Fig. 16.06

DS-01



PLACE IDENTIFICATION SIGN  
Fig. 16.06

DS-02

**Notes:**

- Road signs shall be erected as per IRC:67-2012.
- Sizes of arrows, letters and numerals for road signs shall be as per IRC:67-2012
- Route marker signs, letters and numerals shall be erected as per IRC:2-1968.
- Spacing of TA2 on kerb face shall be 250mm C/C and that on metal beam crash barrier shall be 3000mm C/C. The number of reflector at island/median tips shall be as instructed by the Engineer, but in no case shall be less than five number at a tip.
- All items indicated in this drawing may not be relevant for the subject project, these shall be used depending upon the requirement.
- Besides the above, standards and specifications mentioned in IRC : SP : 73-2015 shall be followed strictly whenever applicable.
- All dimensions are in millimetres unless otherwise mentioned.

CLIENT :   
 Jehlum Tawi Flood Recovery Project  
 2nd Floor ERA Commercial Complex Rambagh  
 Srinagar-190 009.

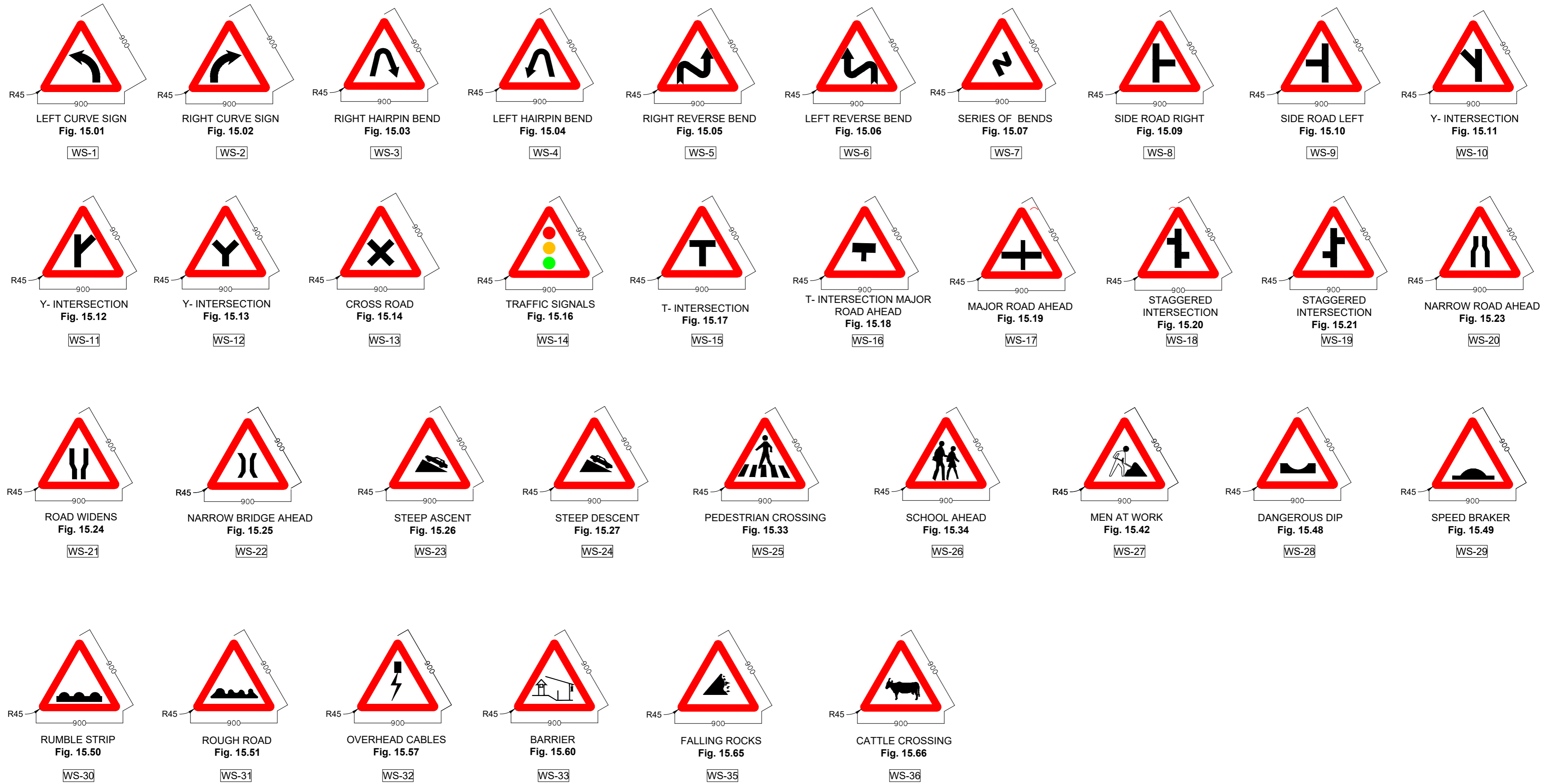
PROJECT :  
 Consultancy Services for Preparing Detailed Project  
 Report for the Road works in Jammu and Kashmir  
 (Tutain Di Khoi Road)

DESIGN CONSULTANT:  
 **Eptisa Servicios de Ingenieria S.L.**  
 Unit 1203, 12th Floor, Tower 1, PS Srijan  
 Corporate Park, Plot No. 2, Block EP & GP,  
 Sector v, Salt Lake Kolkata - 700091,  
 West Bengal  
 Ph: 033-40347200  
 www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	N.T.S

TITLE :	Road Signs & Road Delineators
DRG. NO. :	EPTISA/JTFRP/DPR/J&K/MISC/01 (Sheet 01 of 03)
REVISION :	R-1
	September 2019



**Notes:**

- 1.Road signs shall be erected as per IRC:67-2012.
- 2.Sizes of arrows, letters and numerals for road signs shall be as per IRC:67-2012
- 3.All items indicated in this drawing may not be relevant for the subject project, these shall be used depending upon the requirement.
- 4.Besides the above, standards and specifications mentioned in IRC:SP:73-2015 shall be followed strictly whenever applicable.
- 5.All dimensions are in millimetres unless otherwise mentioned.

CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:

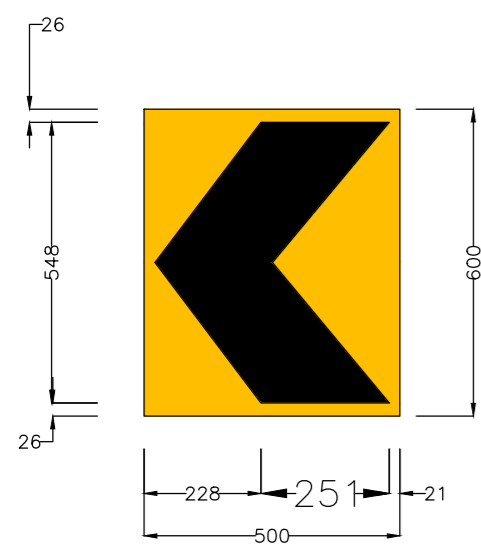


**Eptisa Servicios de Ingenieria S.L.**  
Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
Ph: 033-40347200  
www.eptisa.com

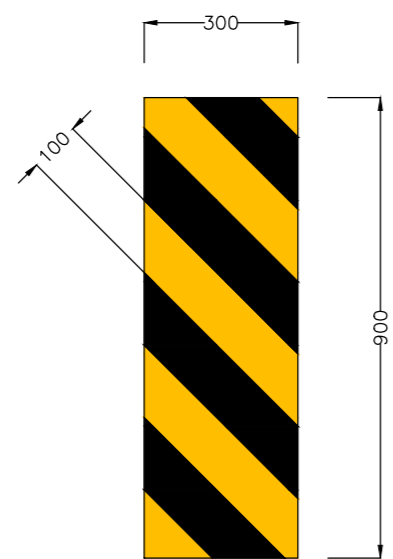
REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	N.T.S

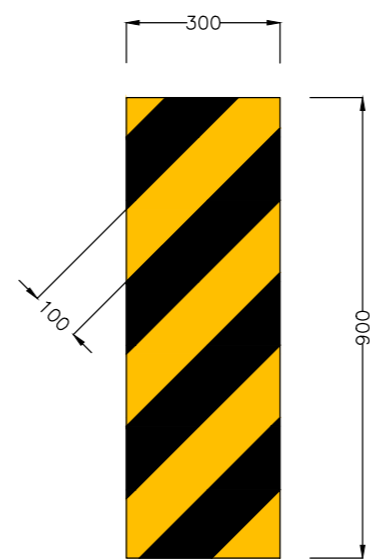
TITLE :	Road Signs & Road Delineators	
DRG. NO. :	EPTISA/JTRP/DPR/J&K/MISC/01 (Sheet 02 of 03)	
REVISION :	R-1	September 2019



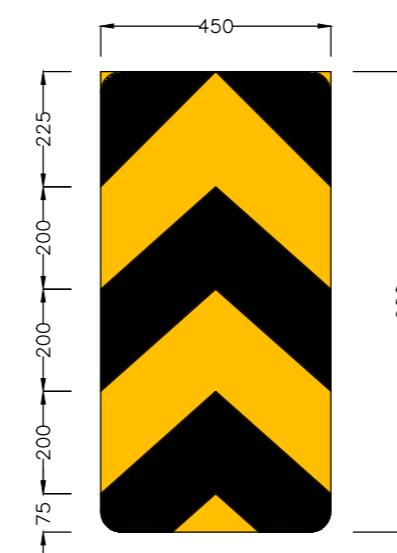
SINGLE CHEVRON  
Fig. 15.72  
TA-1  
SCALE 1:15000



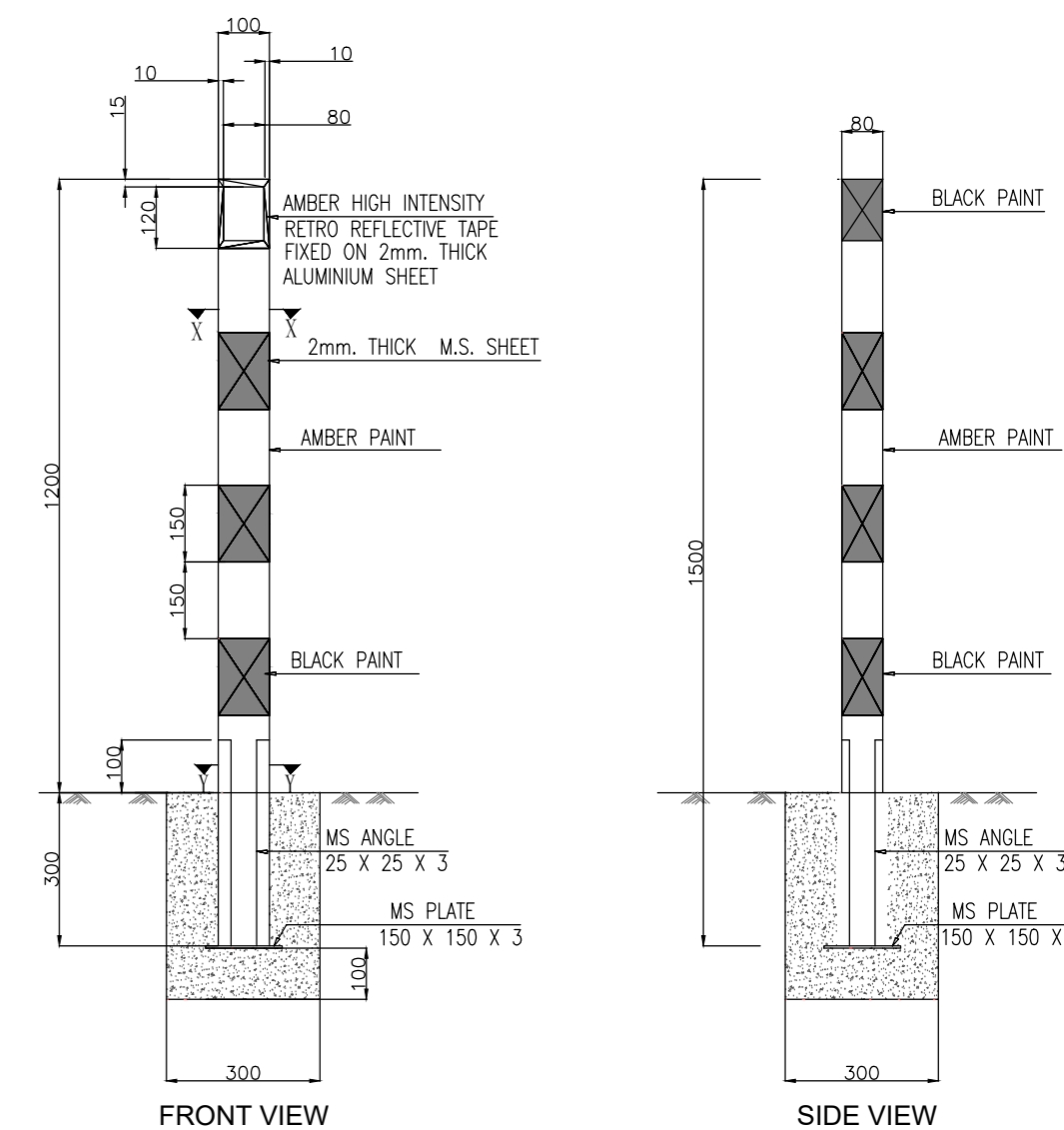
OBJECT HAZARD (LEFT)  
Fig. 15.76  
TA-2  
SCALE 1:15000



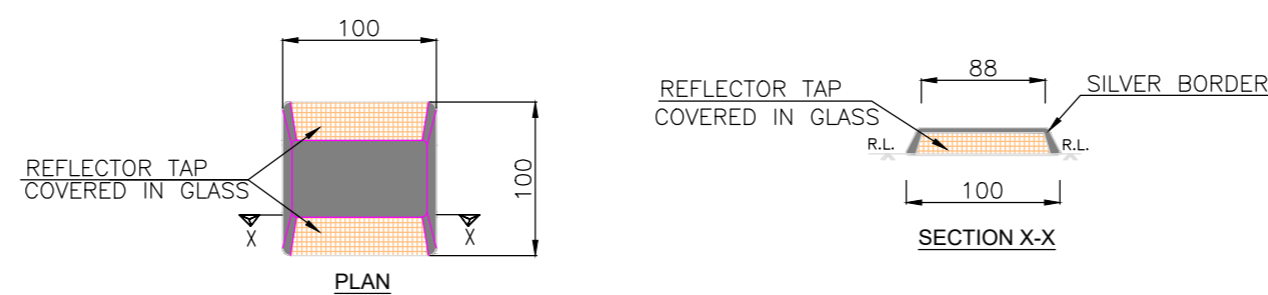
OBJECT HAZARD (RIGHT)  
Fig. 15.77  
TA-3  
SCALE 1:15000



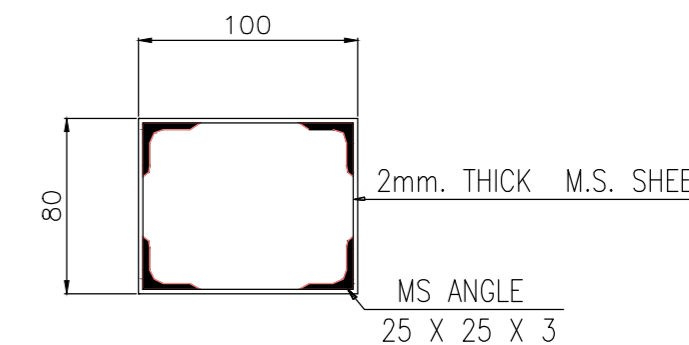
TWO WAY HAZARD MARKER  
Fig. 15.78  
TA-4  
SCALE 1:15000



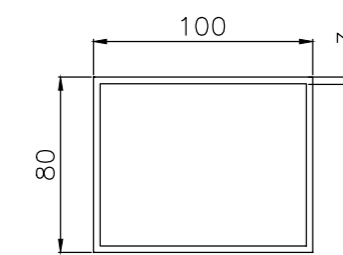
ROAD DELINEATORS  
TA-6  
SCALE 1:15000



ROAD STUDS (CATS'S EYE)  
TA-7  
SCALE 1:5000



SECTION Y-Y  
SCALE 1:3500



SECTION X-X  
SCALE 1:3500

**Notes:**

- 1.Road signs shall be erected as per IRC:67-2012.
- 2.Sizes of arrows, letters and numerals for road signs shall be as per IRC:67-2012
- 3.All items indicated in this drawing may not be relevant for the subject project, these shall be used depending upon the requirement.
- 4.Besides the above, standards and specifications mentioned in IRC:SP:73-2015 shall be followed strictly whenever applicable.
- 5.All dimensions are in millimetres unless otherwise mentioned.
- 6.The scale mentioned is applicable for A2 size sheet.

CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:

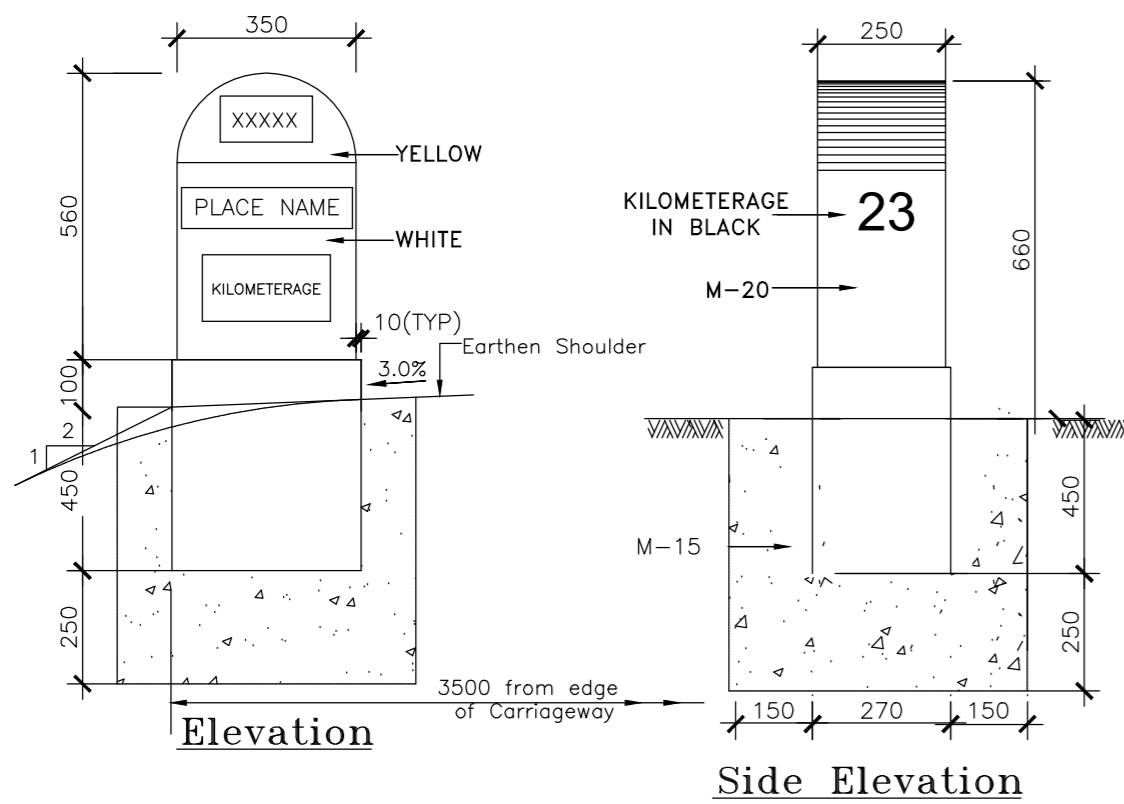


**Eptisa Servicios de Ingenieria S.L.**  
Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
Ph: 033-40347200  
www.eptisa.com

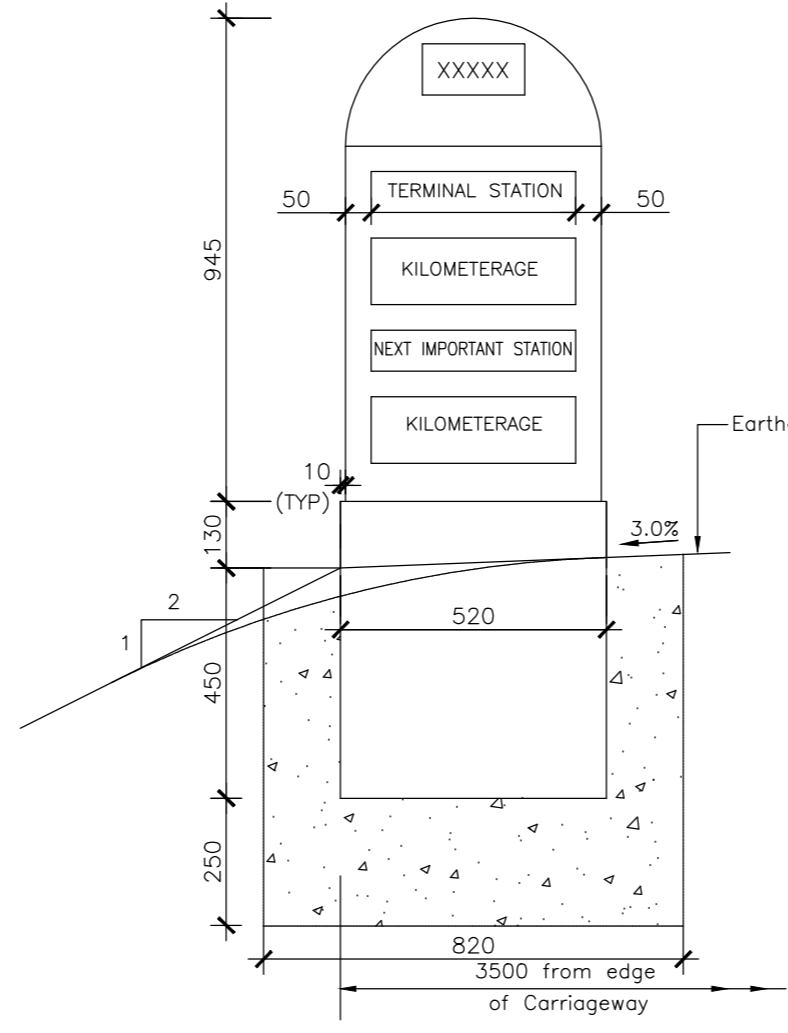
REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	AS SHOWN

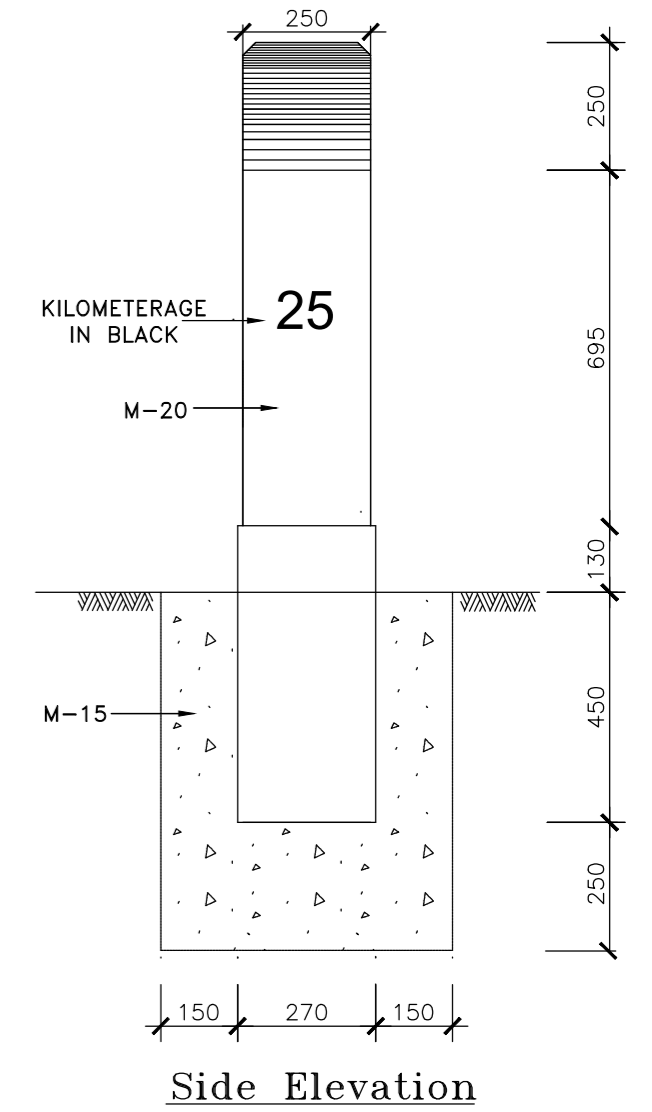
TITLE :	Road Signs & Road Delineators	
DRG. NO. :	EPTISA/JTRP/DPR/J&K/MISC/01 (Sheet 03 of 03)	
REVISION :	R-1	September 2019



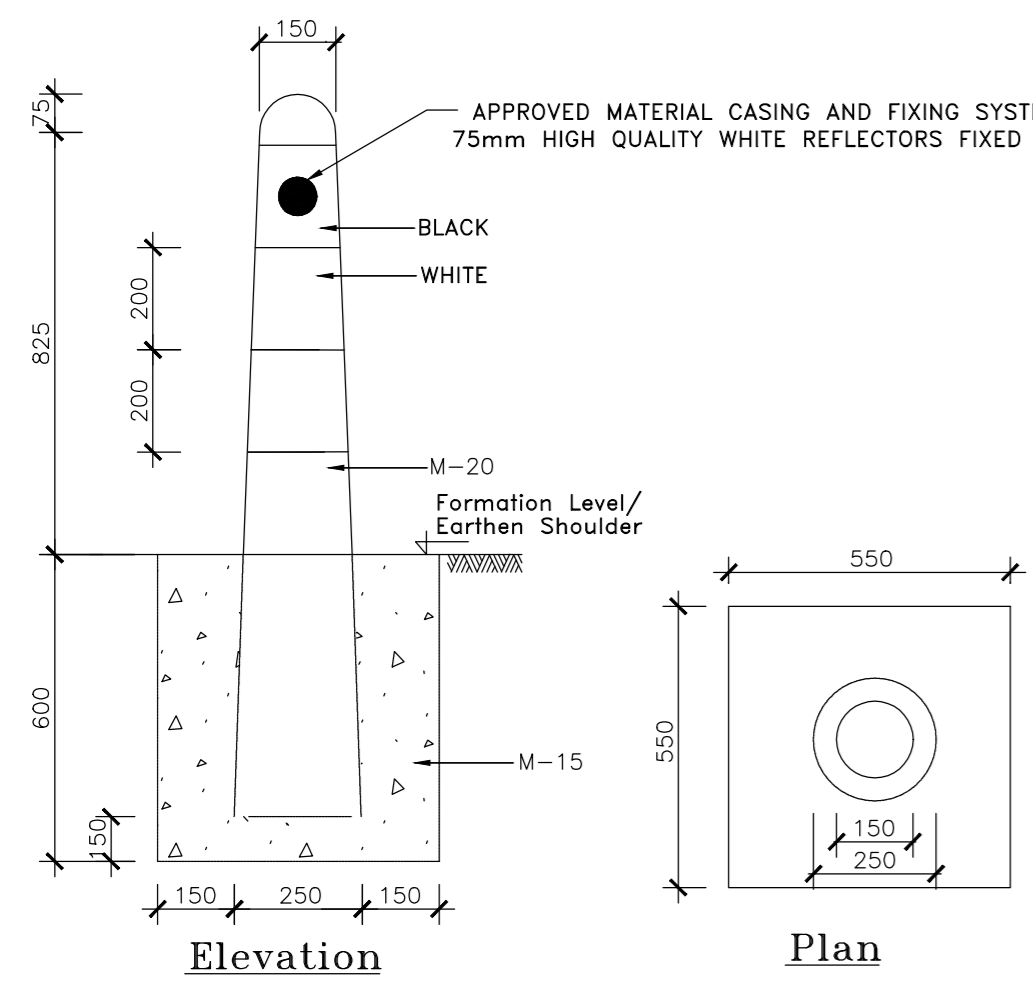
**Kilometre Stone**



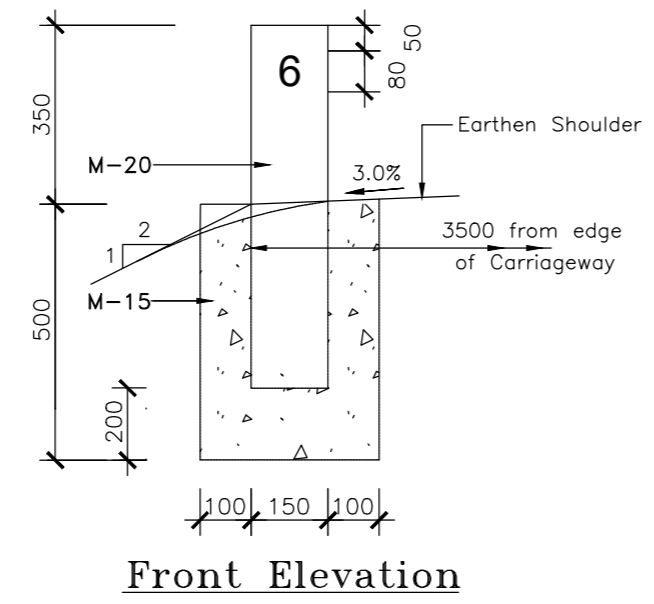
**Face - II Elevation**



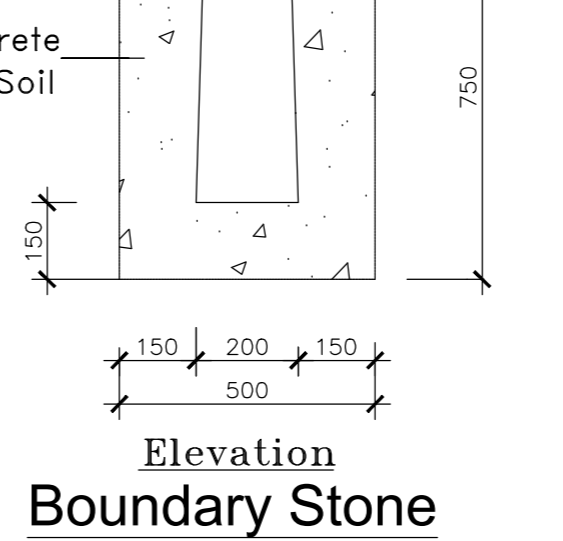
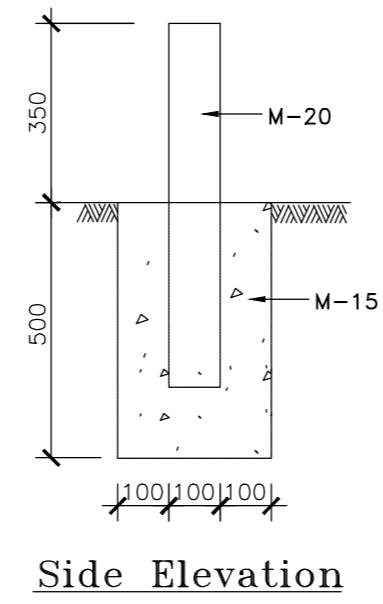
**Side Elevation**



**Guard Post**

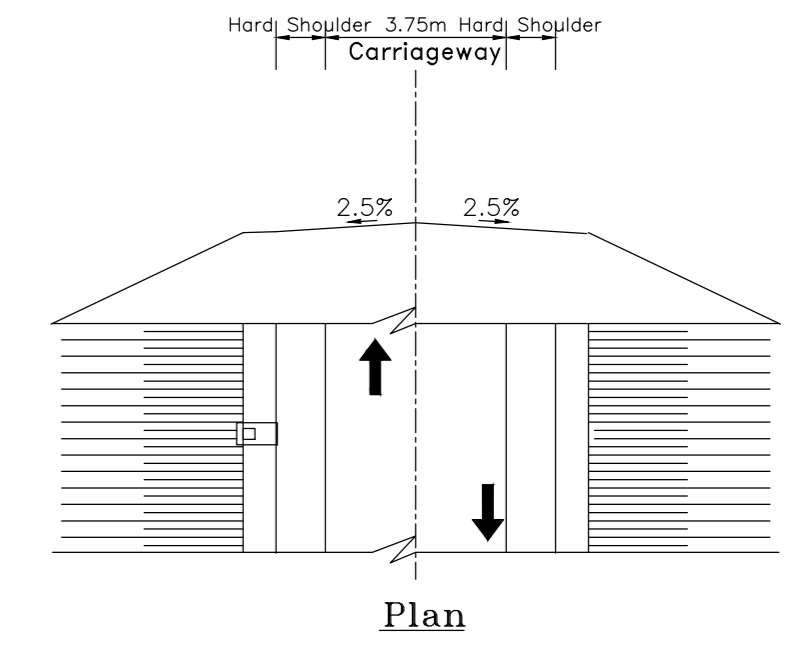


**200 metre Stone**



**Boundary Stone**

**Fifth Kilometre Stone**



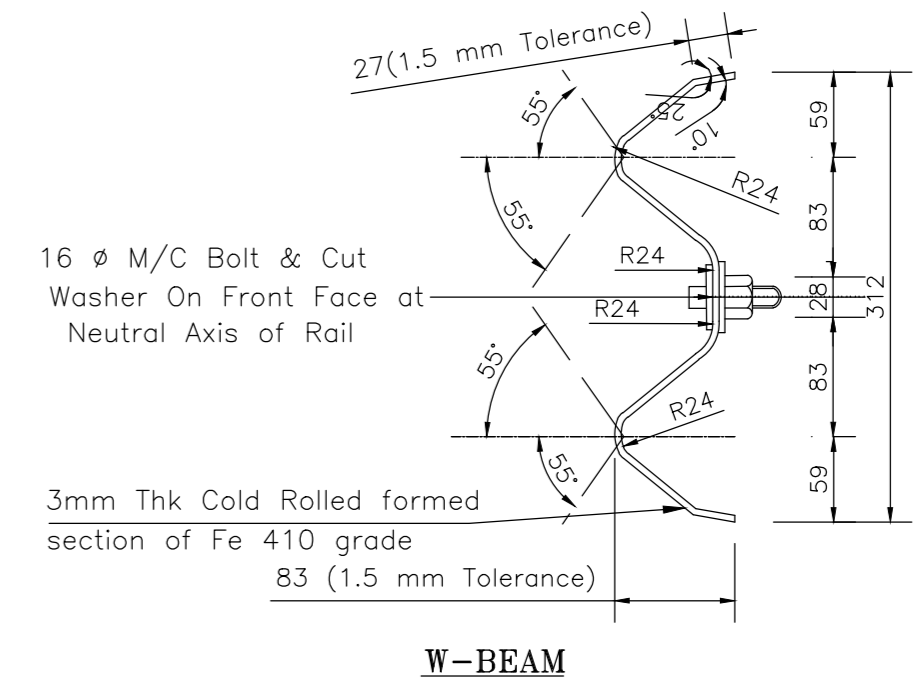
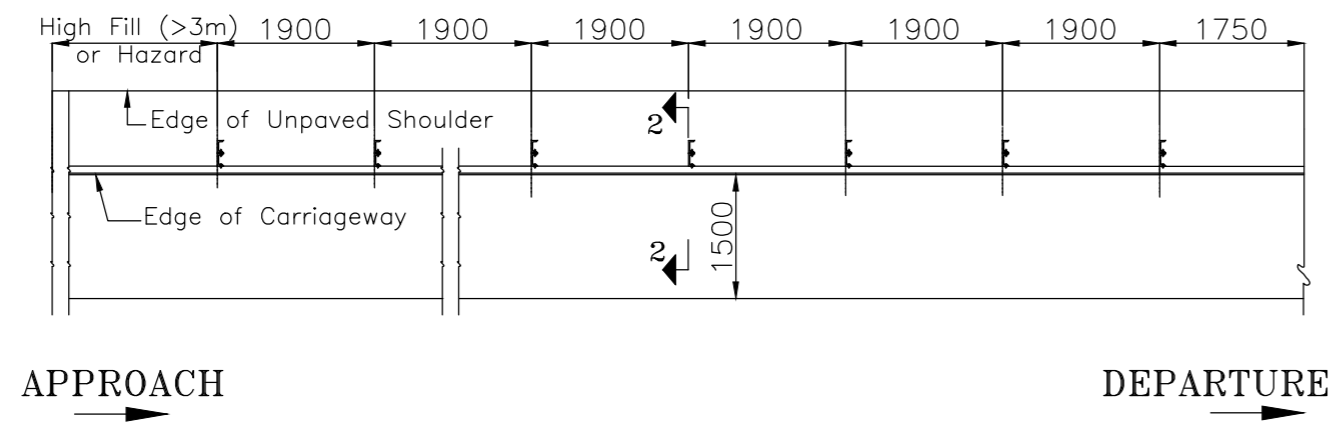
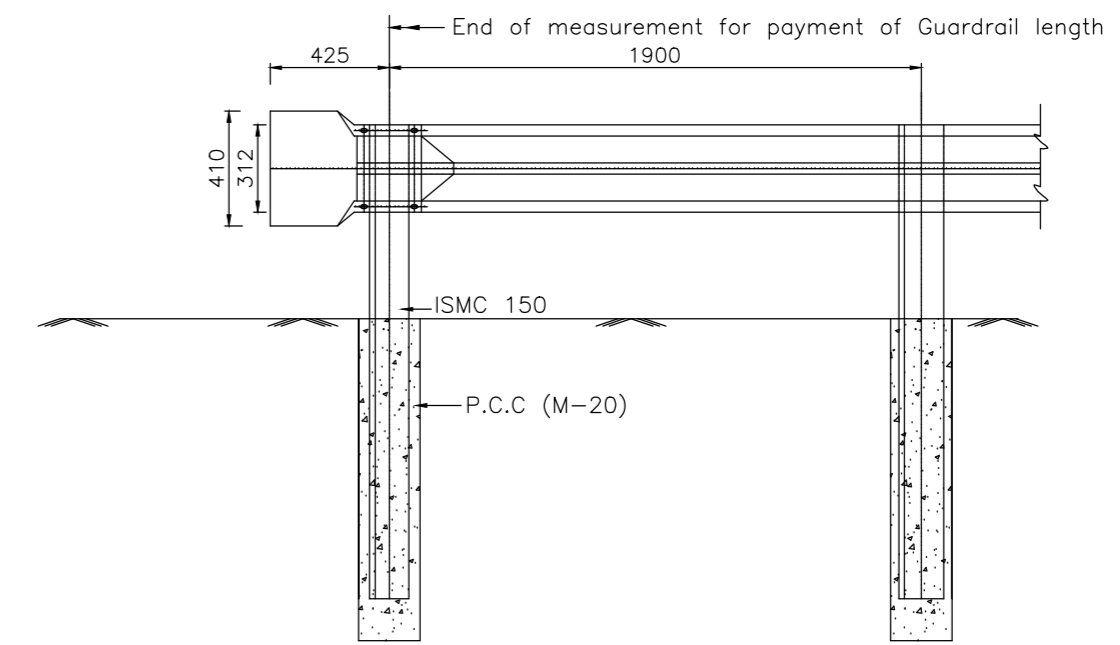
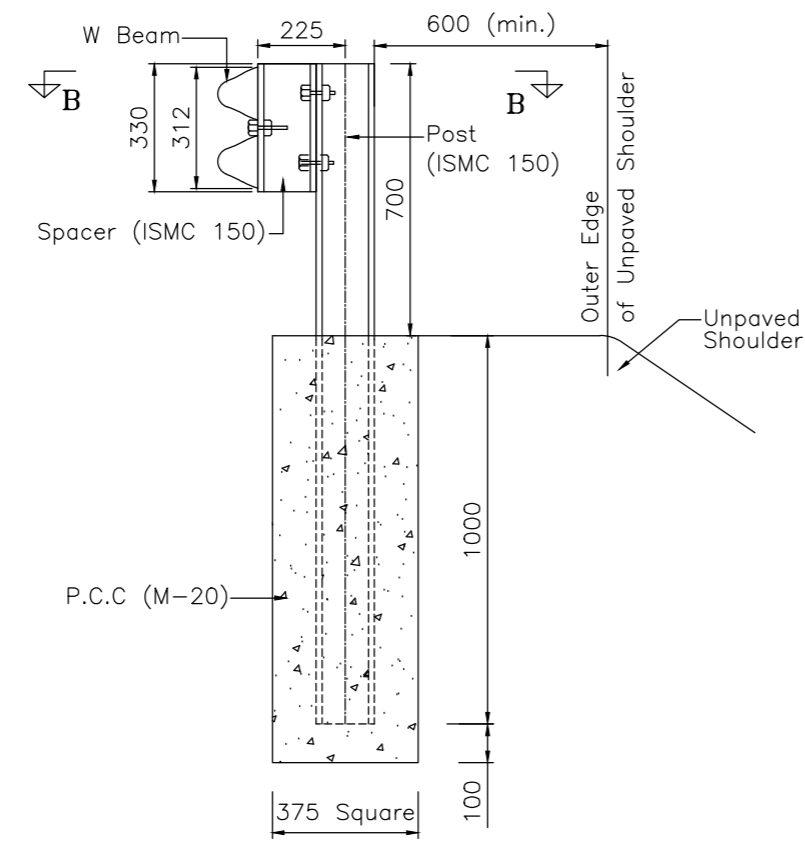
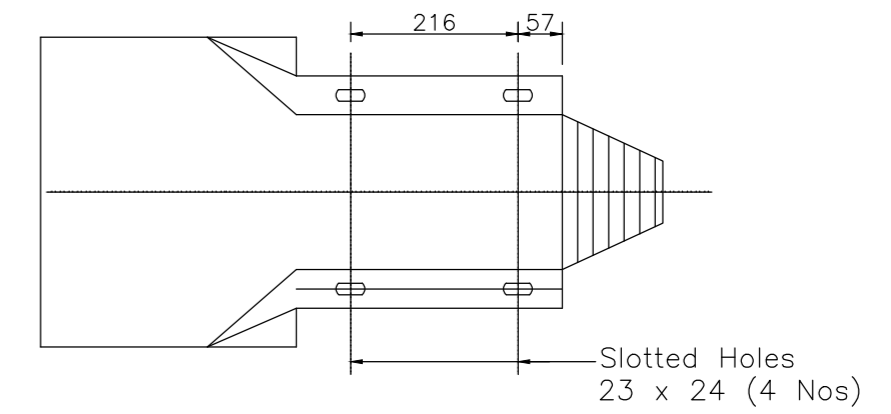
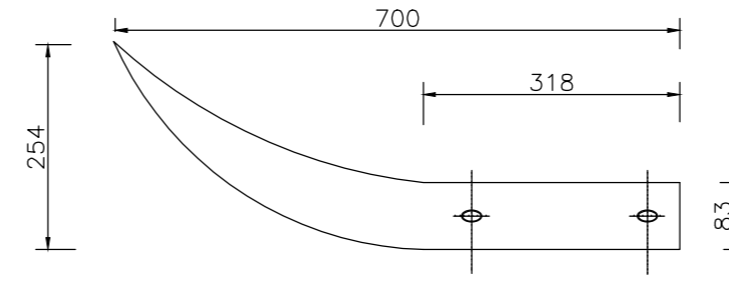
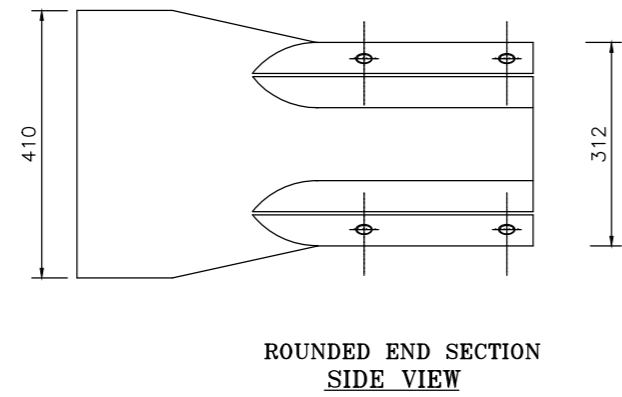
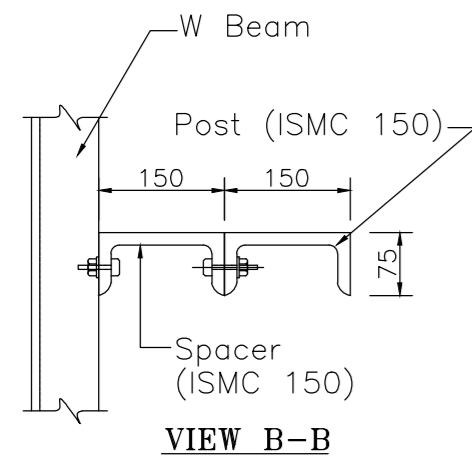
**Location of Distance Stones**

**Notes:**

1. Details of kilometre stone and 5th kilometre stone are generally based on IRC:8-1980
2. Details of 200m stones are generally based on IRC:26-1967.
3. The distance stones shall be provided on left side of the road as shown independently for each direction of traffic flow.
4. The letters and numerals on distance stones shall be as per IRC:8-1980.
5. Details of boundary stones are generally based on IRC:25-1967.
6. Besides the above, standards and specifications mentioned in IRC : SP : 73-2015 shall be followed strictly whenever applicable.
7. All dimensions are in millimetres unless otherwise mentioned.
8. Location of Distance Stones shall be as per applicable TCSs for the stretches where Depressed Median has been provided.

CLIENT :  Jhelum & Tawi Flood Recovery Project 2nd Floor ERA Commercial Complex Rambagh Srinagar-190 009.	PROJECT : Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir <b>(Tutain Di Khoi Road)</b>	DESIGN CONSULTANT:  <b>Eptisa Servicios de Ingenieria S.L.</b> Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal Ph: 033-40347200 www.eptisa.com	DRAWN BY : SD	TITLE : Typical Details of Distance Stone, Boundary Stone & Guard Post
			DESIGNED BY : SCK/MM	
			APPROVED BY : KG	REVISION : R-1
			SCALE : N.T.S	
			REV. DATE DESCRIPTION	





- Notes:**
- All dimensions are in millimetres unless otherwise mentioned
  - Suitable reflectors are to be provided on W-Beam at a spacing of 3 m c/c
  - All holes in posts and blocks shall be 21.50mm max
  - W-beam shall be as per IS : 5986 - 1992 and post, spacers etc. shall be as per IS : 2062 - 1992
  - W-beam, posts & spacers shall be hot dip galvanised as per specifications
  - Besides the above, standards and specifications mentioned in IRC : SP : 73-2015 shall be followed whenever applicable.
  - Metal Beam Crash Barrier (Providing and erecting a "W" metal beam crash barrier comprising of 3 mm thick corrugated sheet (Fe-510) metal beam rail, 70 cm above road/ground level, fixed on ISMC (Fe-410 C) series channel vertical post, 150 x 75 x 5 mm spaced 2 m centre to centre, 1.8 m high, 1.1 m below ground/road level, all steel parts and fittings to be galvanised by hot dip process, all fittings to conform to IS:1367 and IS:1364, W-beam should conform as per latest revision of IS-5986 and for post and spacer IS-2062, metal beam rail to be fixed on the vertical post with a spacer of channel section 150 x 75 x 5 mm, 330 mm long complete as per clause 810)

CLIENT :



Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:



**Eptisa Servicios de Ingenieria S.L.**  
Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
Ph: 033-40347200  
www.eptisa.com

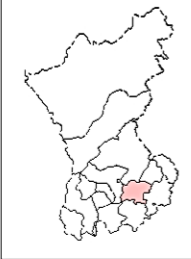
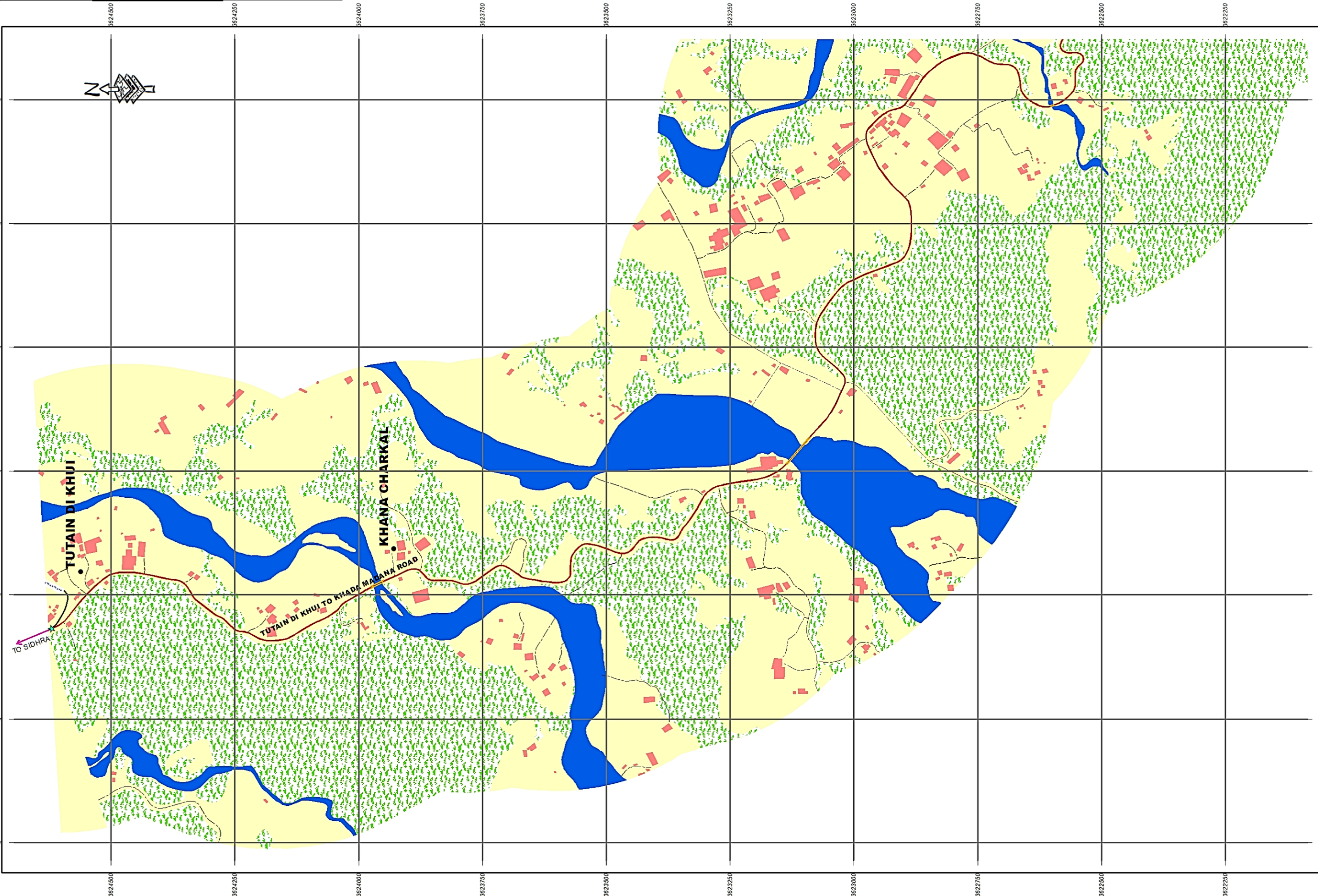
REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	N.T.S

TITLE :	Details of Metal Beam Crash Barrier	
DRG. NO. :	EPTISA/JTRP/DPR/J&K/MISC/03	
REVISION :	R-1	September 2019

☰ GIS MAPPING ☰

# TUTAIN DI KHUI TO KHADA MADANA ROAD



INDEX MAP

SHEET-1
SHEET-2
SHEET-3
SHEET-4



Legend

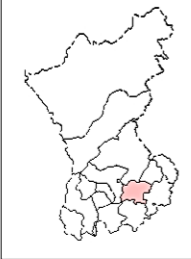
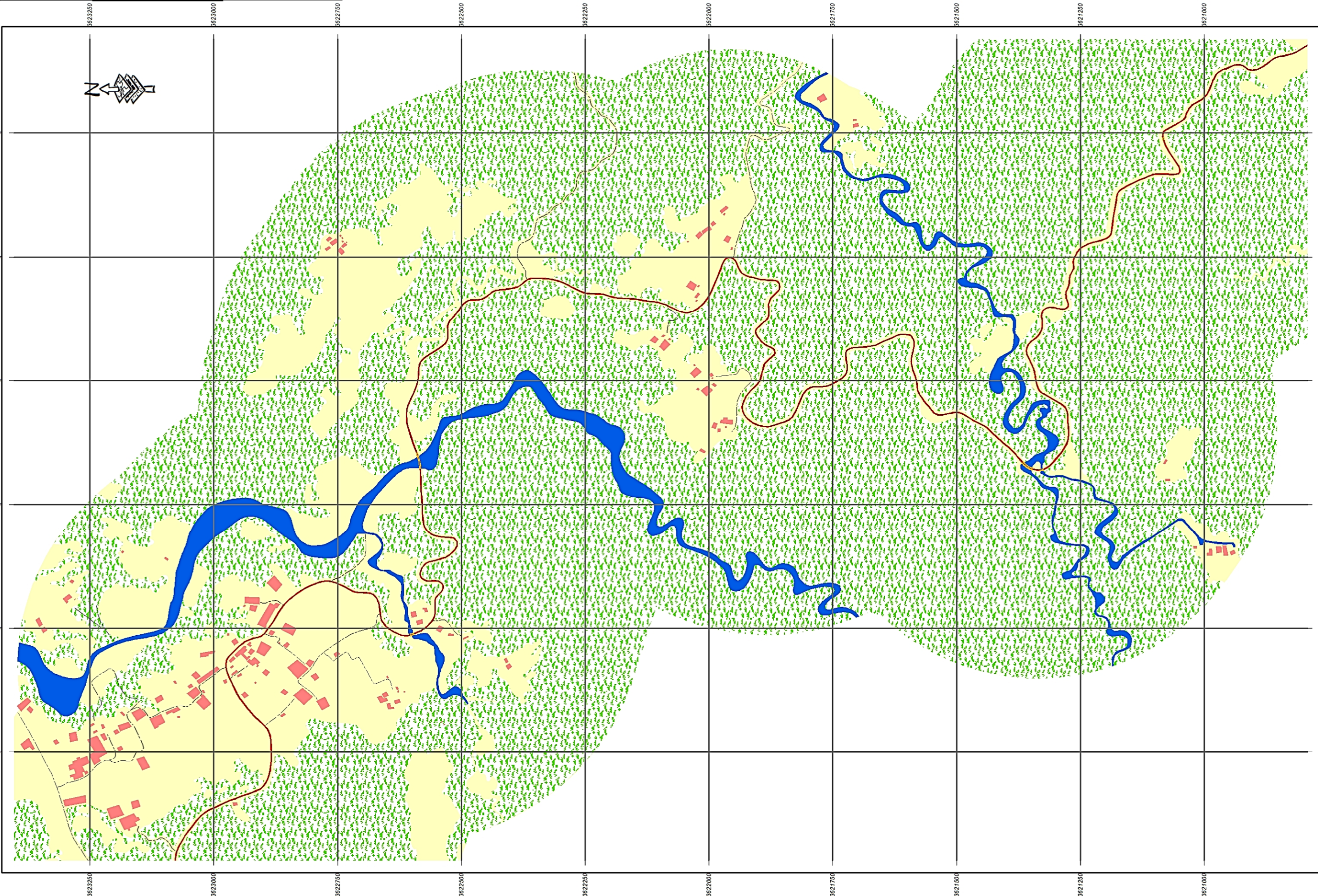
●	Importance_LandMark
★	Start_End_Point
●	Village_Name
—	Major_Road
—	Other_Road
—	Road_Centerline
■	Bridge
■	Building
■	Forest
■	Proposed_Road
■	River
■	Vegetation
■	Open_Barren_Land

1 cm = 70 meters

**Project:** JHELUM TAWI FLOOD RECOVERY PROJECT  
**Agency:** PROJECT MANAGEMENT UNIT JTFRP

**Sub-Project:** FOR RECONSTRUCTION OF  
TUTAIN DI KHUI TO KHADA MADANA ROAD  
UNDER JAMMU DIVISION

**TUTAIN DI KHUI TO KHADA MADANA ROAD**



INDEX MAP

SHEET-1
SHEET-2
SHEET-3
SHEET-4



Legend

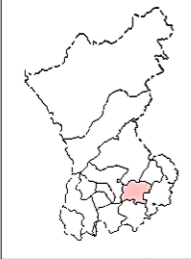
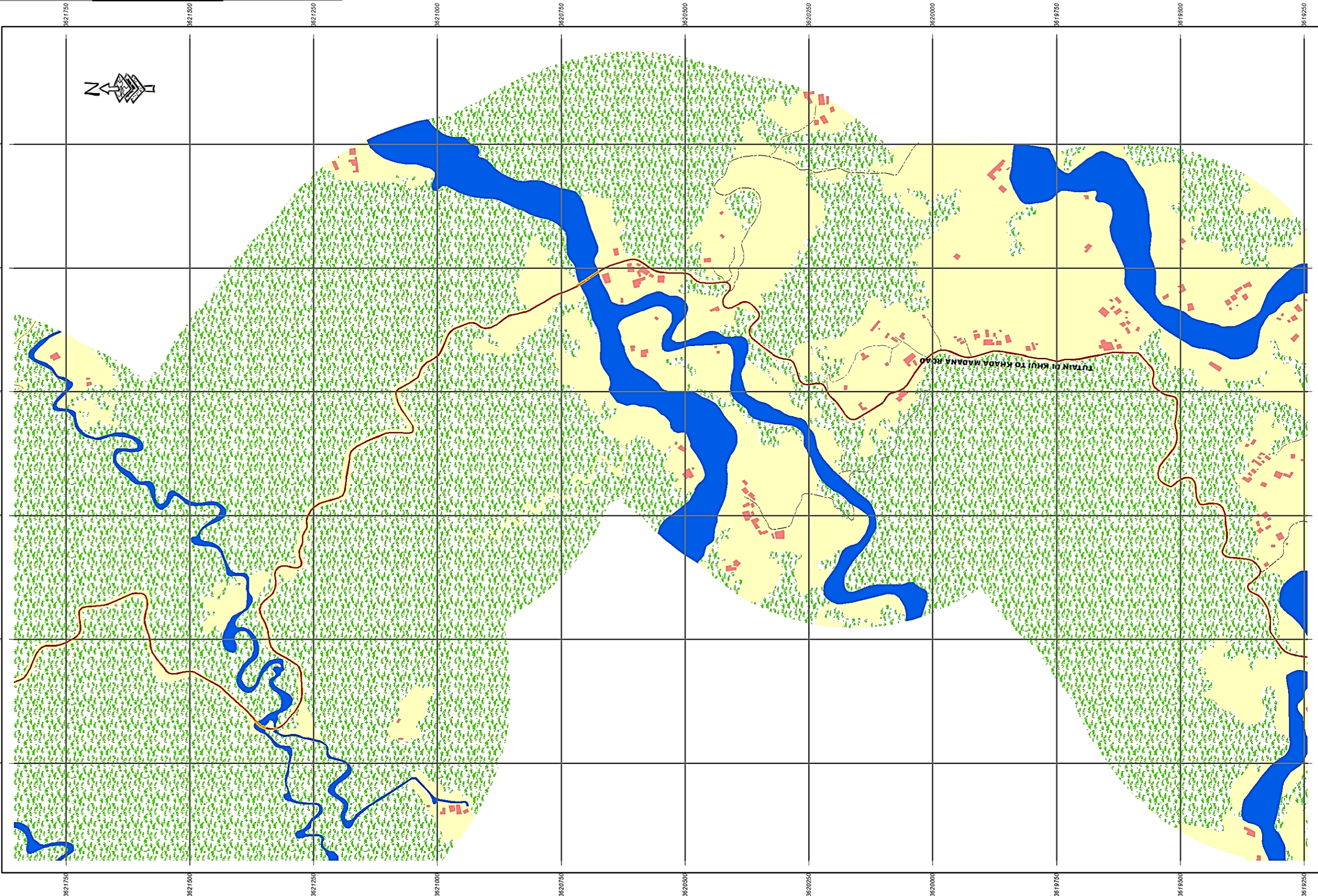
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★	Start_End_Point
●	Village_Name
—	Major_Road
- - -	Other_Road
- - -	Road_Centerline
■	Bridge
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1 cm = 70 meters

**Project:** JHELUM TAWI FLOOD RECOVERY PROJECT  
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TUTAIN DI KHUI TO KHADA MADANA ROAD  
UNDER JAMMU DIVISION

# TUTAIN DI KHUI TO KHADA MADANA ROAD



INDEX MAP

SHEET-1
SHEET-2
SHEET-3
SHEET-4



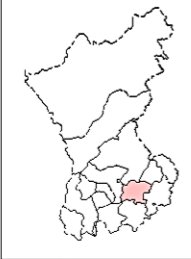
Legend

●	Importance_LandMark
★	Start_End_Point
●	Village_Name
—	Major_Road
- - -	Other_Road
- - -	Road_Centerline
■	Bridge
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1 cm = 70 meters

**Project:** JHELUM TAWI FLOOD RECOVERY PROJECT  
**Agency:** PROJECT MANAGEMENT UNIT JTFRP  
**Sub-Project:** FOR RECONSTRUCTION OF TUTAIN DI KHUI TO KHADA MADANA ROAD UNDER JAMMU DIVISION

# TUTAIN DI KHUI TO KHADA MADANA ROAD



INDEX MAP

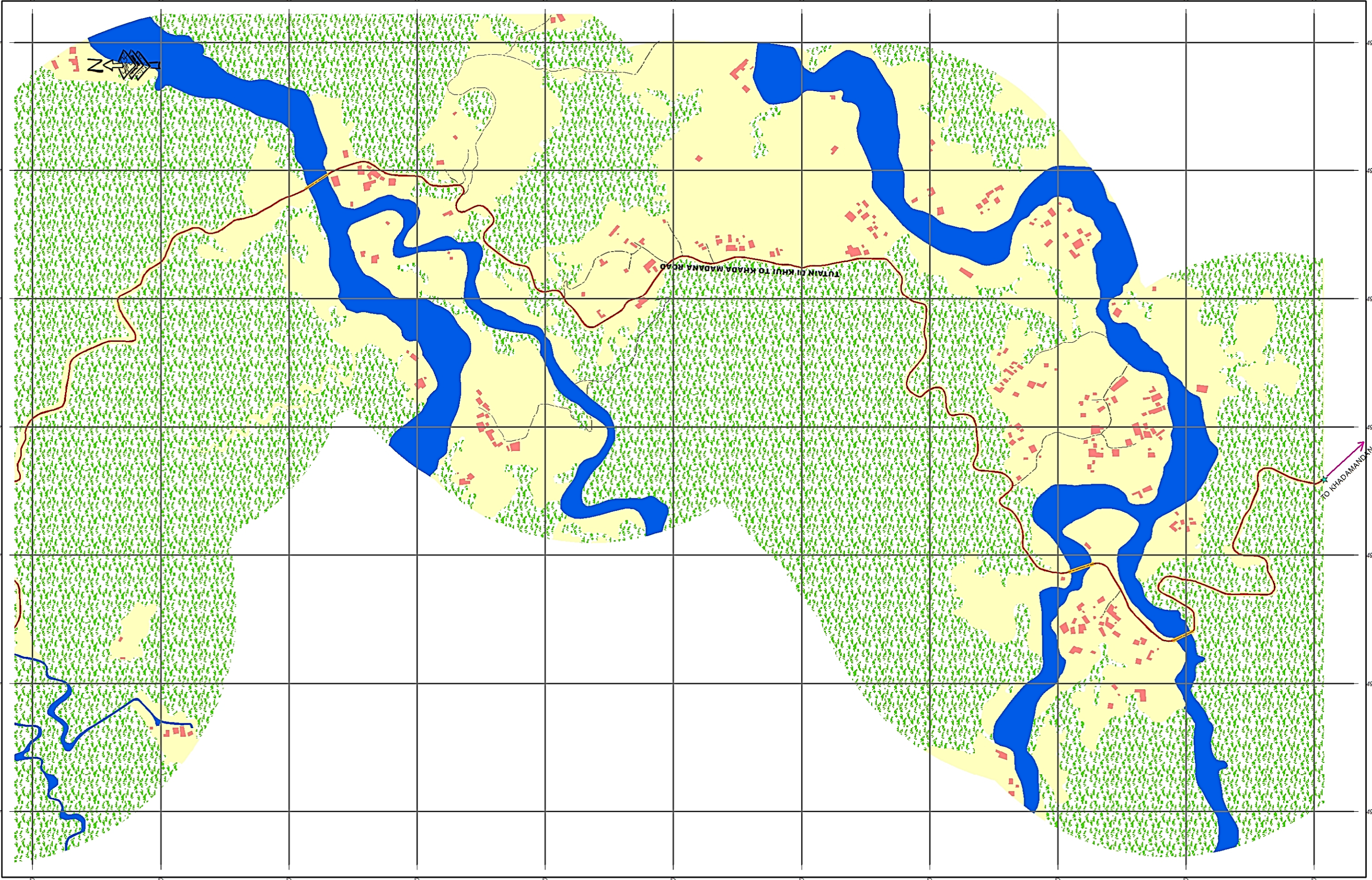
SHEET-1
SHEET-2
SHEET-3
SHEET-4



Legend

●	Importance_LandMark
★	Start_End_Point
●	Village_Name
—	Major_Road
- - -	Other_Road
- - -	Road_Centerline
■	Bridge
■	Building
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■	Open_Barren_Land

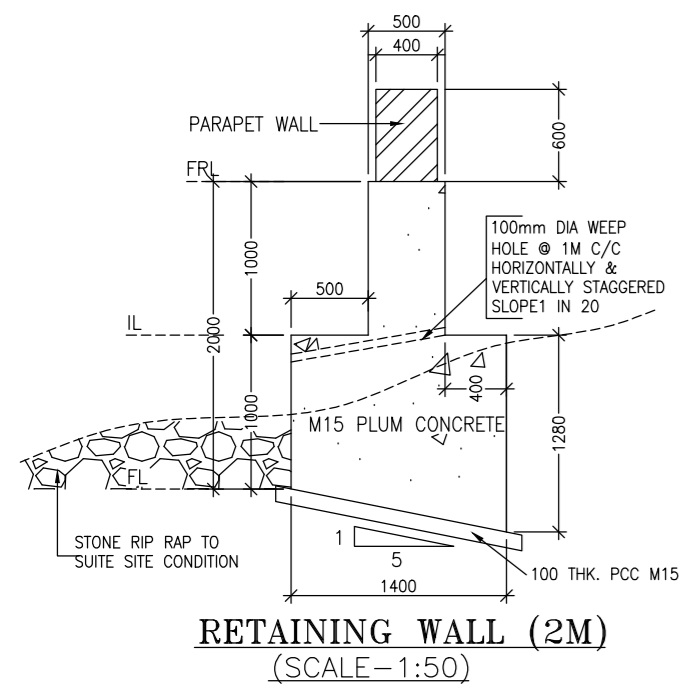
1 cm = 70 meters



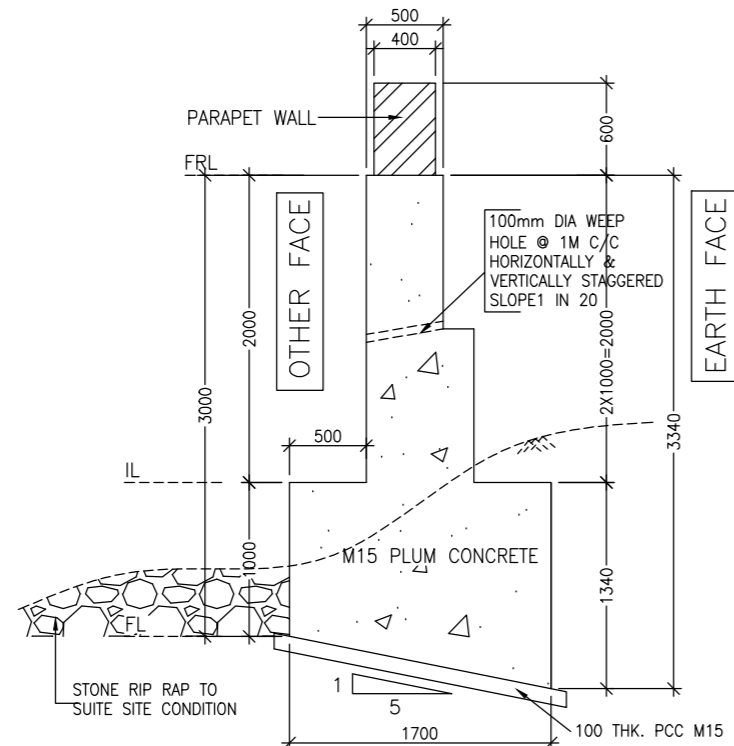
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**Agency:** PROJECT MANAGEMENT UNIT JTRP

**Sub-Project:** FOR RECONSTRUCTION OF  
TUTAIN DI KHUI TO KHADA MADANA ROAD  
UNDER JAMMU DIVISION

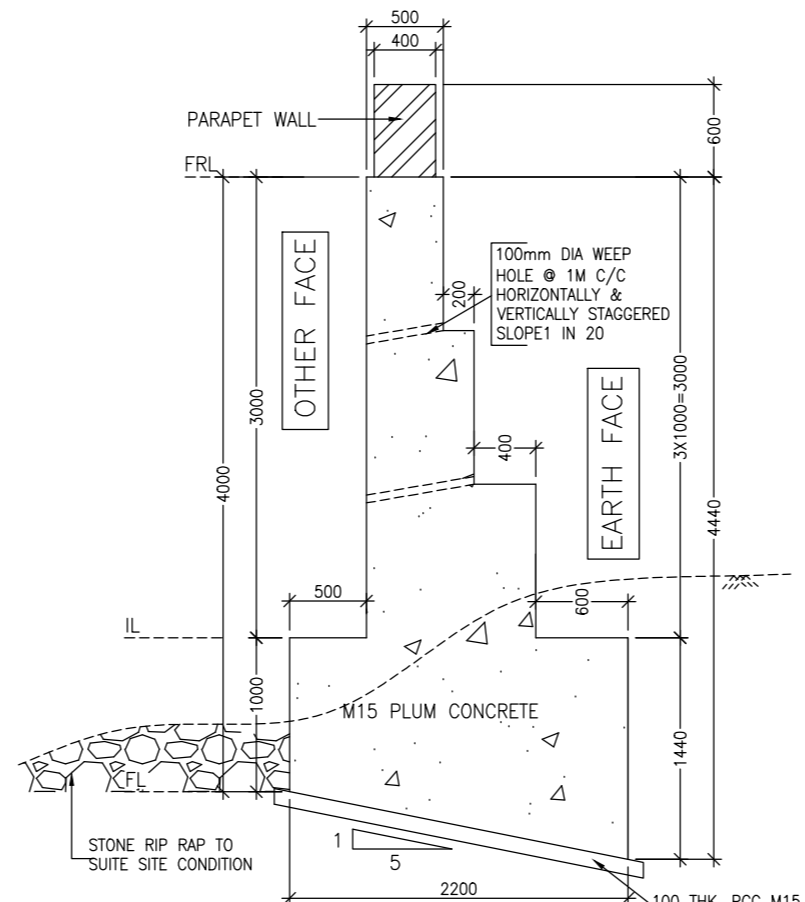
≡ DETAILS OF PCC RETAINING WALL ≡



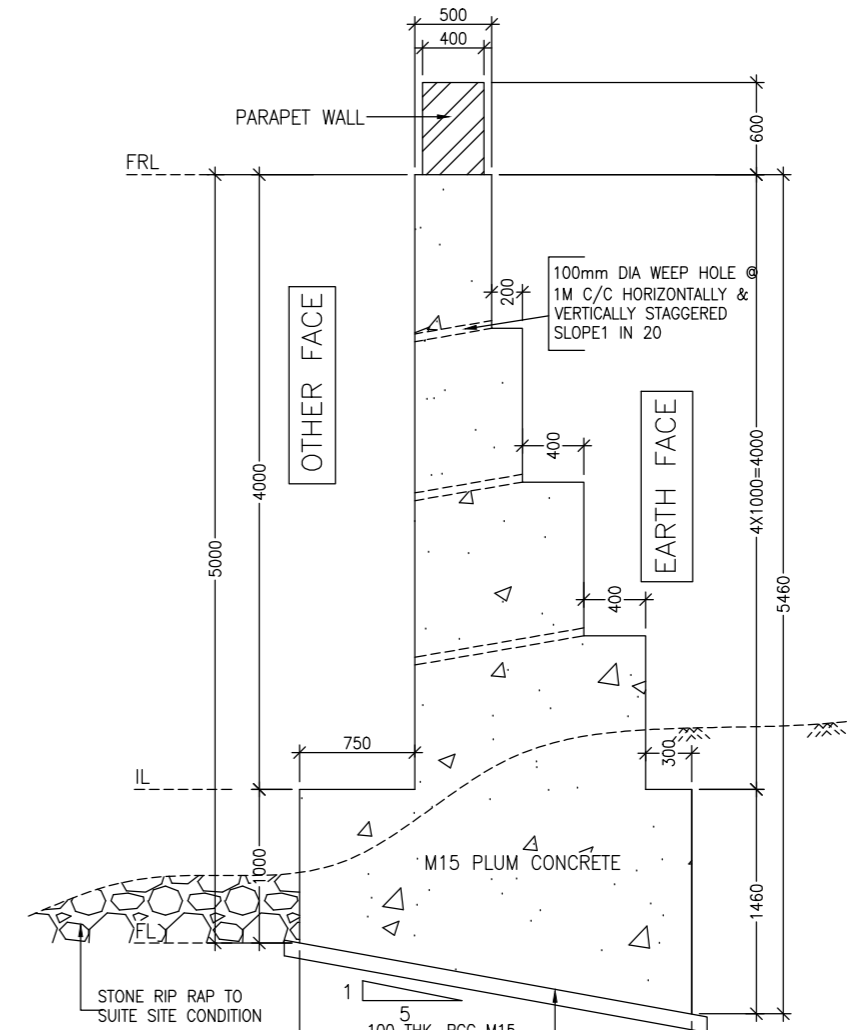
**RETAINING WALL (2M)**  
(SCALE-1:50)



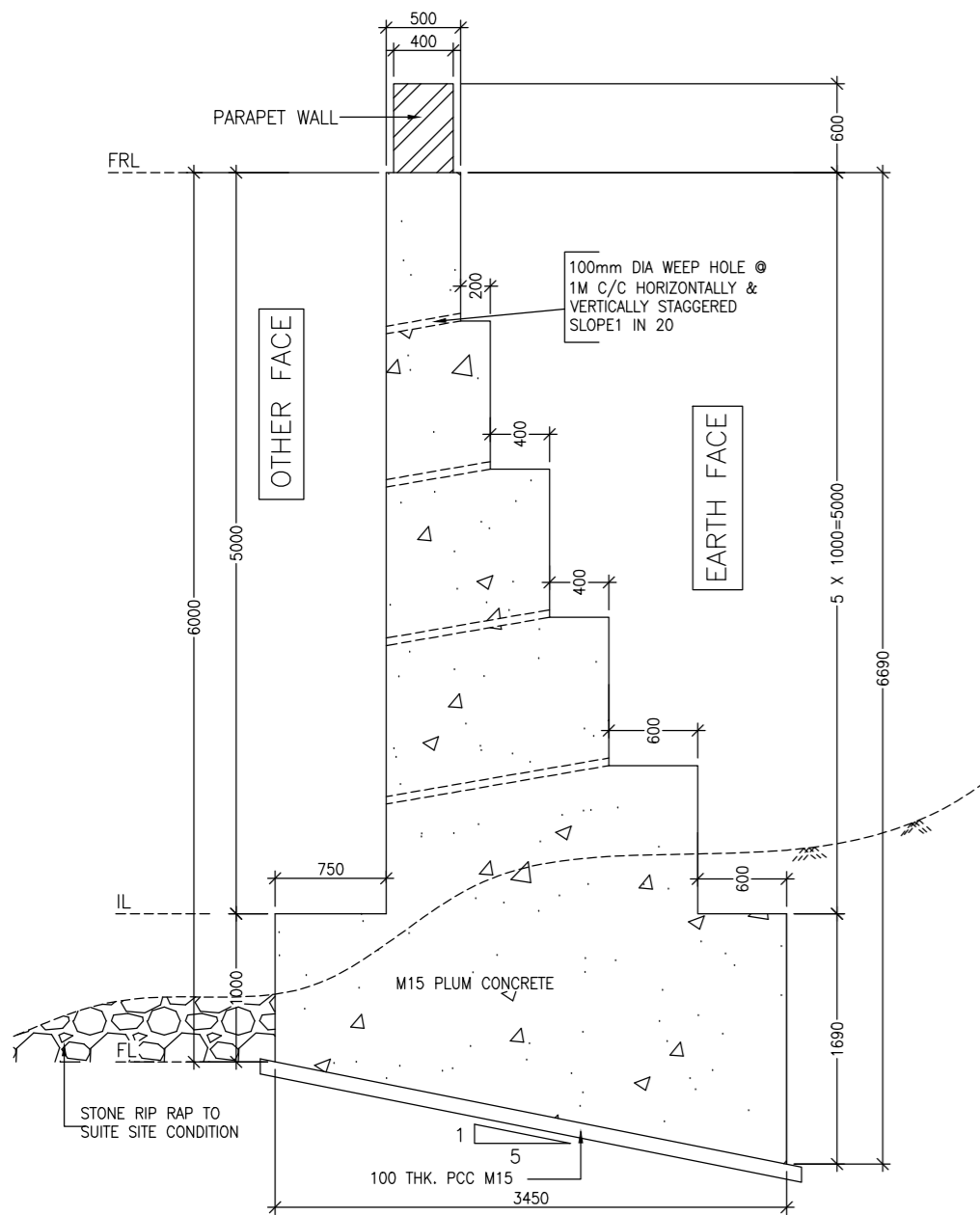
**RETAINING WALL (3M)**  
(SCALE-1:50)



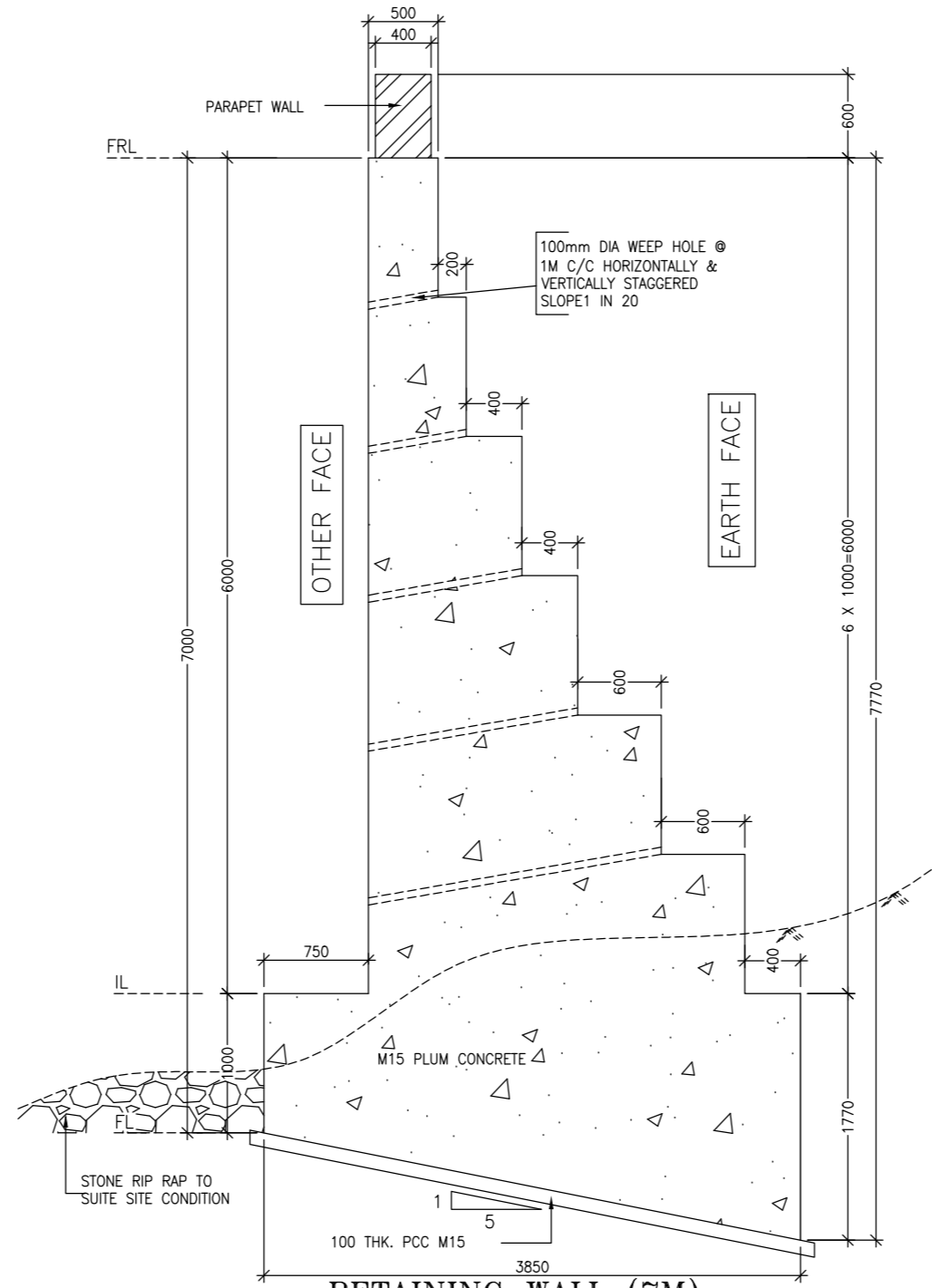
**RETAINING WALL (4M)**  
(SCALE-1:50)



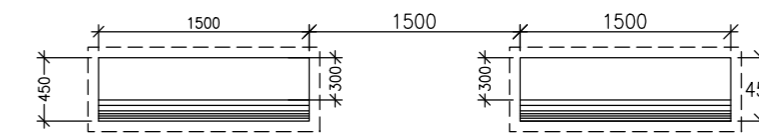
**RETAINING WALL (5M)**  
(SCALE-1:50)



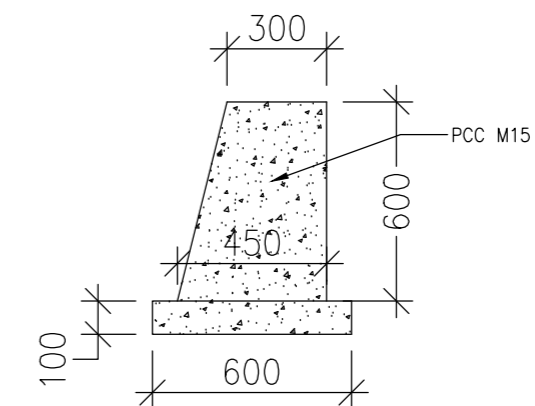
**RETAINING WALL (6M)**  
(SCALE-1:50)



**RETAINING WALL (7M)**  
(SCALE-1:50)



**PLAN OF PARAPET WALL**



**SECTION OF PARAPET WALL**

- NOTES :**
1. ALL DIMENSIONS ARE IN MM. UNLESS OTHERWISE MENTIONED.
  2. DIMENSIONS ARE NOT TO BE SCALED. ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
  3. 100 DIA WEEP HOLES WITH SLOPE 1 IN 20 SHALL BE PROVIDED AT SPACING OF 1000 C/C BOTH HORIZONTALLY & VERTICALLY (STAGGERED) IN FULL HEIGHT OF THE RETAINING WALL WITH BOTTOM MOST ROW 150mm ABOVE G.L.
  4. BACK FILLING AND FILTER MEDIA BEHIND THE RETAINING WALL SHALL BE PROVIDED WITH SELECTED EARTH CONFORMING TO APPENDIX 6 OF IRC:78-2000 HAVING PROPERTIES  $\phi=35^\circ$ ,  $C=0$ ,  $\gamma=21/m^3$
  5. ALL FACE OF WALL SHALL BE PROVIDED WITH A MINIMUM STEEL OF 250mm<sup>2</sup> IN EACH DIRECTION. SPACING OF THESE BARS SHALL NOT EXCEED 300mm.
  6. THESE DRAWING ARE APPLICABLE FOR M15 PCC OR M15 GRADE CONCRETE WITH PLUM. REFER SPECIFICATIONS FOR PLUM CONCRETE GIVEN IN THIS DRAWING.
- PLUM CONCRETE SPECIFICATIONS:**  
THE SIZE OF STONE PLUMS MAY BE FROM 150-300MM. THE MAXIMUM DIMENSION OF THESE STONES OR PLUMS SHALL NOT EXCEED  $\frac{1}{3}$  RD THE LEAST DIMENSION OF THE MEMBERS.
- MATERIAL:**  
ALL PLUMS SHALL BE HARD, DURABLE, CLEAN AND FREE FROM SOFT MATERIALS OR LOOSEPIECES OR DELETERIOUS SUBSTANCE IN THEM & SHALL NOT HAVE SHARP.
- CONSTRUCTION OPERATIONS:**  
DURING CONCRETING THE FIRST LAYER OF CONCRETE OF THE SPECIFIED MIX SHALL BE LAID TO A THICKNESS OF THE MAXIMUM SIZE OF THE PLUMS TO BE USED. THE PLUMS SHALL THEN BE LAID WHILE THE TOP PORTION OF THIS CONCRETE IS STILL GREEN BUT SUFFICIENTLY STIFF TO PREVENT COMPLETE SUBMERGENCE OF THE PLUM UNDER THEIR OWN WEIGHT. THESE PLUMS SHALL BE ABOUT HALF EMBEDDED IN THE CONCRETE & THE REMAINING PART EXPOSED 150 AS TO FORM A KEY WITH THE NEXT LAYER OF THE CONCRETE. NO PLUM SHALL BE USED FOR CONCRETE LAID UNDER WATER.
- WHILE PLACING THE PLUMS, CARE SHALL BE TAKEN TO SEE THAT THE CLEAR DISTANCE BETWEEN ANY TWO PLUMS IS NOT LESS THAN EITHER THE WIDTH OR THICKNESS OF EITHER OF THE PLUMS. THE DISTANCE FROM THE PLUMS TO THE OUTER SURFACE FROM ANY STEEL REINFORCEMENT SHALL BE EQUAL TO GREATEST WIDTH OF PLUMS. IF PLUMS OF STRATIFIED STONE ARE USED THEY SHALL BE LAID ON THEIR NATURAL BED. STONES WITH CONCAVE FACES SHALL BE LAID WITH THE CONCAVE UPWARD THE THICKNESS OF THE NEXT AND SUCCESSIVE LAYERS OF CONCRETE SHALL BE AT LEAST TWICE THAT OF THE LARGEST PLUM.
- QUALITY OF PLUM:**  
THE TOTAL VOLUME OF PLUMS SHALL NOT EXCEED 15% OF THE VOLUME OF THE FINISHED CONCRETE.
- MIX OF CONCRETE:**  
PLUM CONCRETE 1:2:(1 CEMENT, 2 SAND, 4 GRADED STONE AGGREGATE 40 MM NORMAL SIZE) WITH 15% PLUMS.

CLIENT :   
Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :  
Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:  
 **Eptisa Servicios de Ingenieria S.L.**  
Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
Ph: 033-40347200  
www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY : SD  
DESIGNED BY : SCK/MM  
APPROVED BY : KG  
SCALE : N.T.S

TITLE :  
DETAILS OF PCC RETAINING WALL  
DRG. NO. :  
EPTISA/JTFRP/DPR/J&K/RW-01  
REVISION : R-1  
September 2019

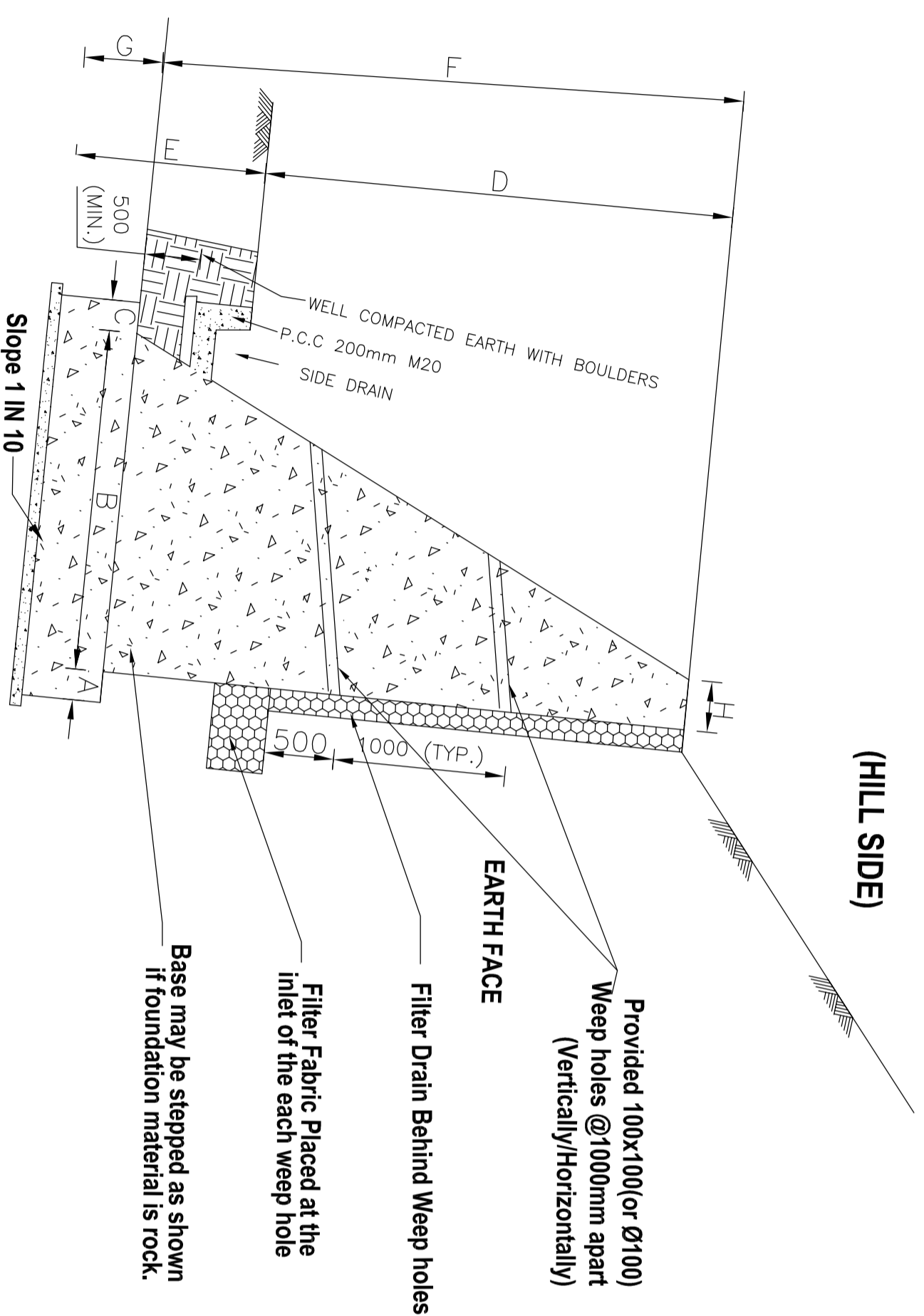


≡ DETAILS OF BREAST WALL ≡

**NOTES:—**

- 1) ALL DIMENSIONS IN MILLIMETERS AND LEVELS IN METERS UNLESS WRITTEN OTHERWISE.
- 2) NO DIMENSION SHALL BE SCALED FROM THIS DRAWING, ONLY WRITTEN DIMENSION SHALL BE FOLLOWED.
- 3) 1) GRADE OF PCC M20 (1:1.5:3)  
ii) STEEL-HYSD AS PER IS 1786.
- 4) SKIN/SURFACE REINFORCEMENT SHALL BE PROVIDED AS PER 8ø @ 200mm c/c FOR WALL HEIGHT ≥ 3M WITH MINIMUM CLEAR COVER OF 40mm.
- 5) THE SECTIONS ARE FOR GUIDANCE AND FOR ESTIMATION. EXACT STABILITY CALCULATIONS TO BE DONE WITH SITE PARAMETER.
- 6) BACK FILLING SHALL BE DONE AS PER APPENDIX-6 OF IRC:78
- 7) WEEP HOLES SHALL BE PROVIDED AT 1.0m c/c HORIZONTALLY AND VERTICALLY IN A STAGGERED MANNER.
- 8) LEVELLING COURSE BELOW SHOULD BE PROVIDED WITH SUITABLE OFFSET (0.15m Min.) TO RESTRICT BASE PRESSURE ON SOIL WITHIN PERMISSIBLE LIMITS.
- 9) WIDTH OF BASE SHALL BE INCREASED/DECREASED AS PER SBC REQUIREMENT.
- 10) THE PROPERTIES OF THE RETAINED EARTH/BACK FILL HAVE BEEN ASSUMED AS FOLLOWS:  

DRY DENSITY	----	18 KN/m <sup>3</sup>
ANGLE OF INTERNAL FRICTION	----	30°
ANGLE OF WALL FRICTION	----	20°
COHESION (c)	----	= 0
- 11) FACTOR OF SAFETY FOR OVERTURNING IS 2.0 FOR NON SEISMIC CONDITION AND 1.5 FOR SEISMIC CONDITION.
- 12) WEEP HOLES SHALL BE PROVIDED IN MASONRY WALLS AT A SPACING OF 900MM IN EITHER DIRECTION.
- 13) SIZE OF PVC SHALL BE 100MM TO 150MM PVC.
- 14) IMPERVIOUS SILTY SOIL LAYER OR BACK FILL OF ABOUT 300MM ON THE TOP TO PREVENT SEEPAGE OF RAIN WATER IN THE BACKFILL OR IN FOUNDATION.
- 15) NATURAL GULLIES SHALL BE DIVERTED AWAY FROM THE SLIT. SO THAT FLOW OF RAIN WATER DOES NOT CAUSE EROSSION OF BREAST WALL ON TOPMOST TERRACE.
- 16) GRASS TURFING SHALL BE LAID ON THE GROUND SLOPE TO PREVENT EROSION.
- 17) SIDE WATER DRAINS SHALL BE AVOIDED NEAR THE TOP OF THE BREAST WALLS AS THEY ALLOW SEEPAGE OF WATER IN UNMAINTAINED CONDITIONS INTO THE OUT & DESTABILISE
- 18) SIDE WATER DRAINS TO BE PROVIDED AT THE TOE OF THE RETAINING WALLS
- 19) FOUNDATION TO BE 500MM BELOW THE SIDE DRAIN WITHIN SOIL OR HIGHLY JOINTED ROCK SIDE DRAIN
- 20) INCASE SIDE DRAINS AT TOE OF THE RETAINING WALL ARE NOT PROVIDED THEN DRY STONE PITCHING OF SIZE 150MM, MAY BE LAID ON SLOPE FOR A DISTANCE OF 1MTRS BELOW THE TOE OF THE RETAINING WALLS.
- 21) FOR ERODABLE SOILS AND WEAK FOUNDATIONS (CLAY, WEAK SAND ETC.) GABION WALLS SHALL BE PREFERRED AS THEY WITH STAND HIGH DIFFERENTIAL SETTLEMENTS.



**TYPICAL CROSS SECTION OF BREAST WALL  
(Embankment Section)**

Sl no.	Total Height		A (in mm)	B (in mm)	C (in mm)	D (in mm)	E (in mm)	F (in mm)	G (in mm)	H (in mm)	Base Pressure (in KN/m <sup>2</sup> )
	Dimensions										
1	275	275	275	275	275	275	275	275	275	275	275
2	990	1500	1500	1740	1890	2250	2490	3018	3030	3030	275
3	275	275	275	275	275	275	275	275	275	275	275
4	1000	1500	2000	2500	3000	3500	4000	4500	4500	4500	750
5	750	750	750	750	750	750	750	750	750	750	750
6	1250	1750	2150	2650	3150	3600	4100	4550	4550	4550	700
7	500	500	600	600	600	650	650	700	700	700	450
8	450	450	450	450	450	450	450	450	450	450	450
9	100	120	150	180	180	200	200	200	200	250	250

CLIENT :




Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:



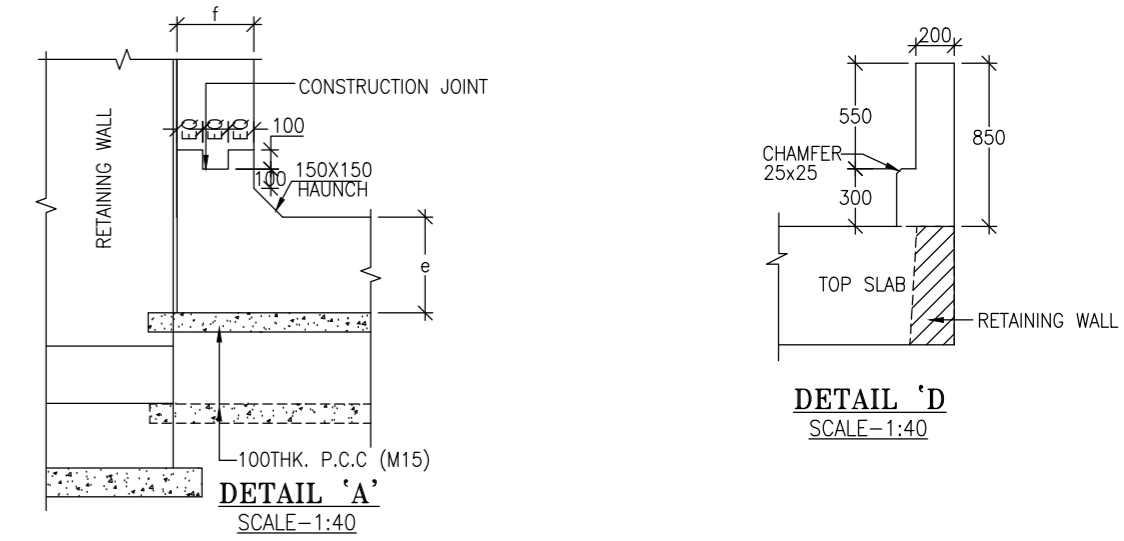
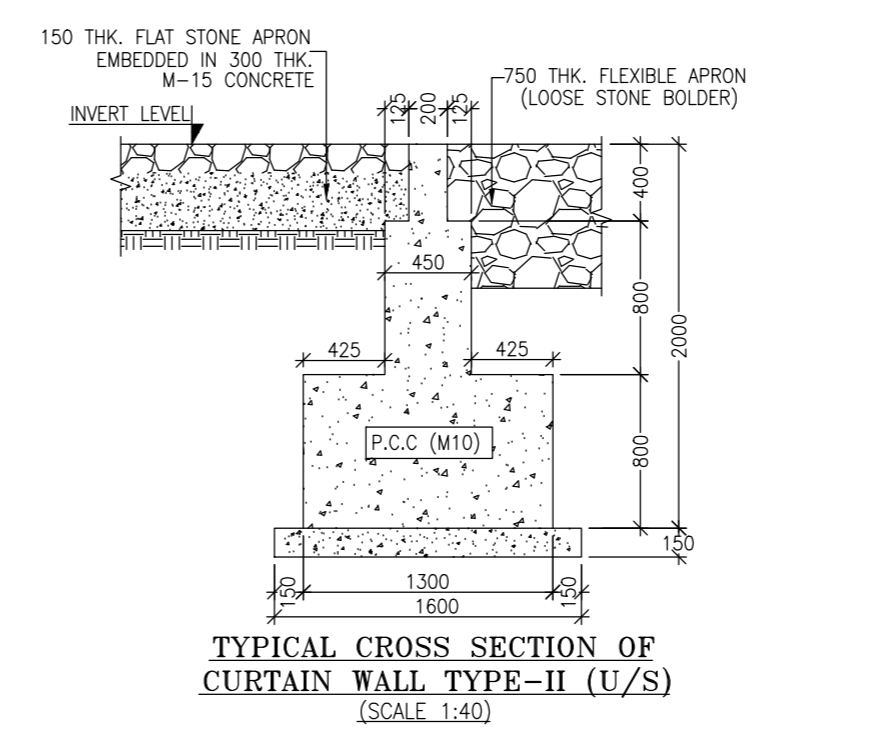
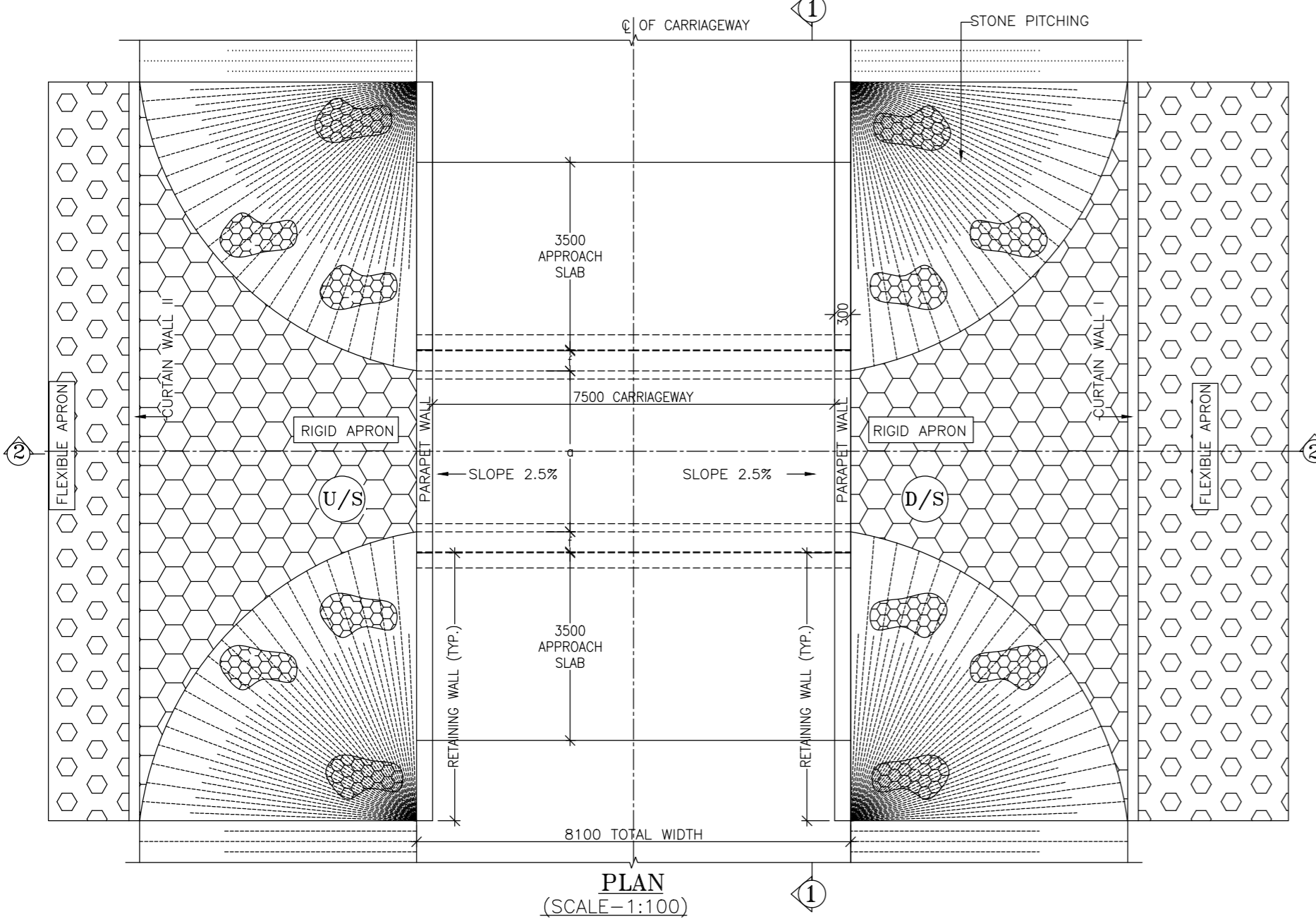
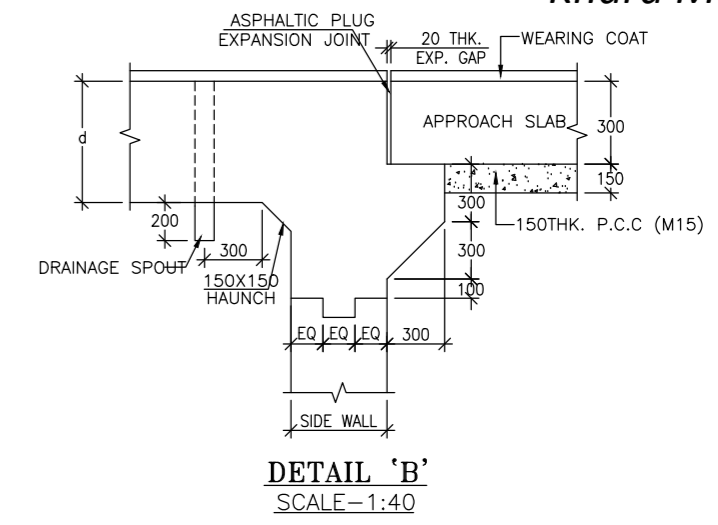
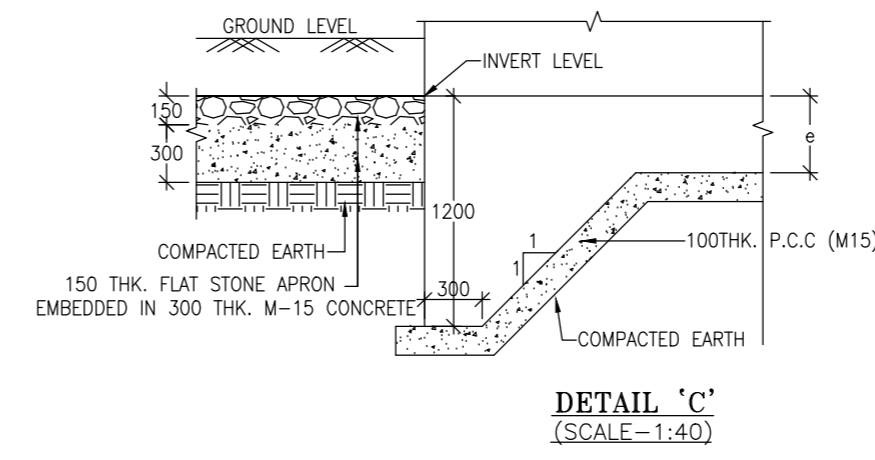
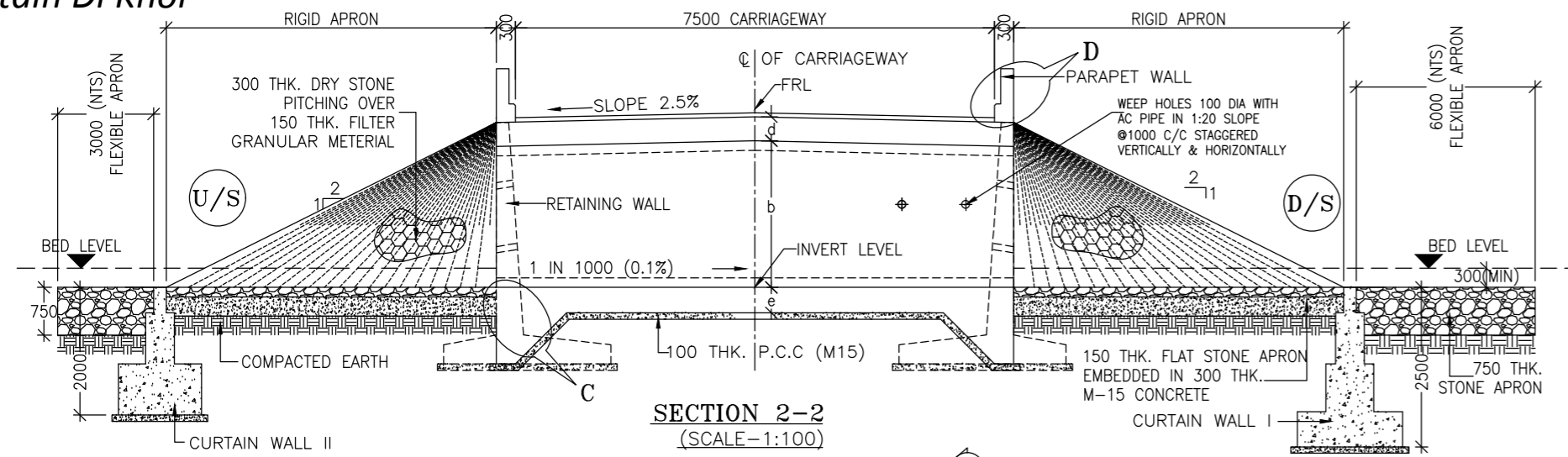
**Eptisa Servicios de Ingeniería S.L.**  
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DESIGNED BY : SCKMM  
APPROVED BY : KG  
SCALE : N.T.S

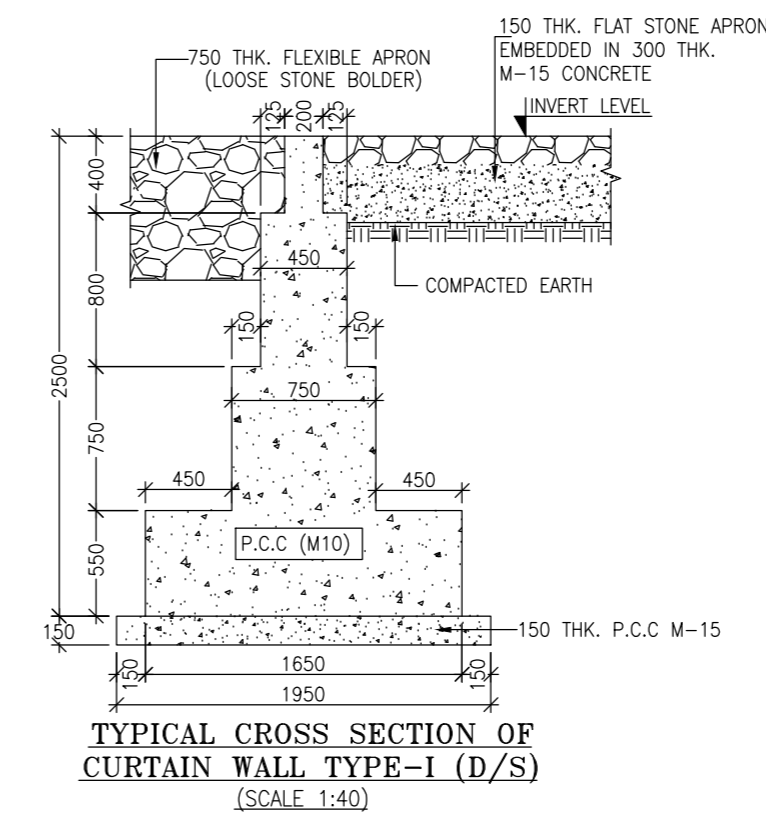
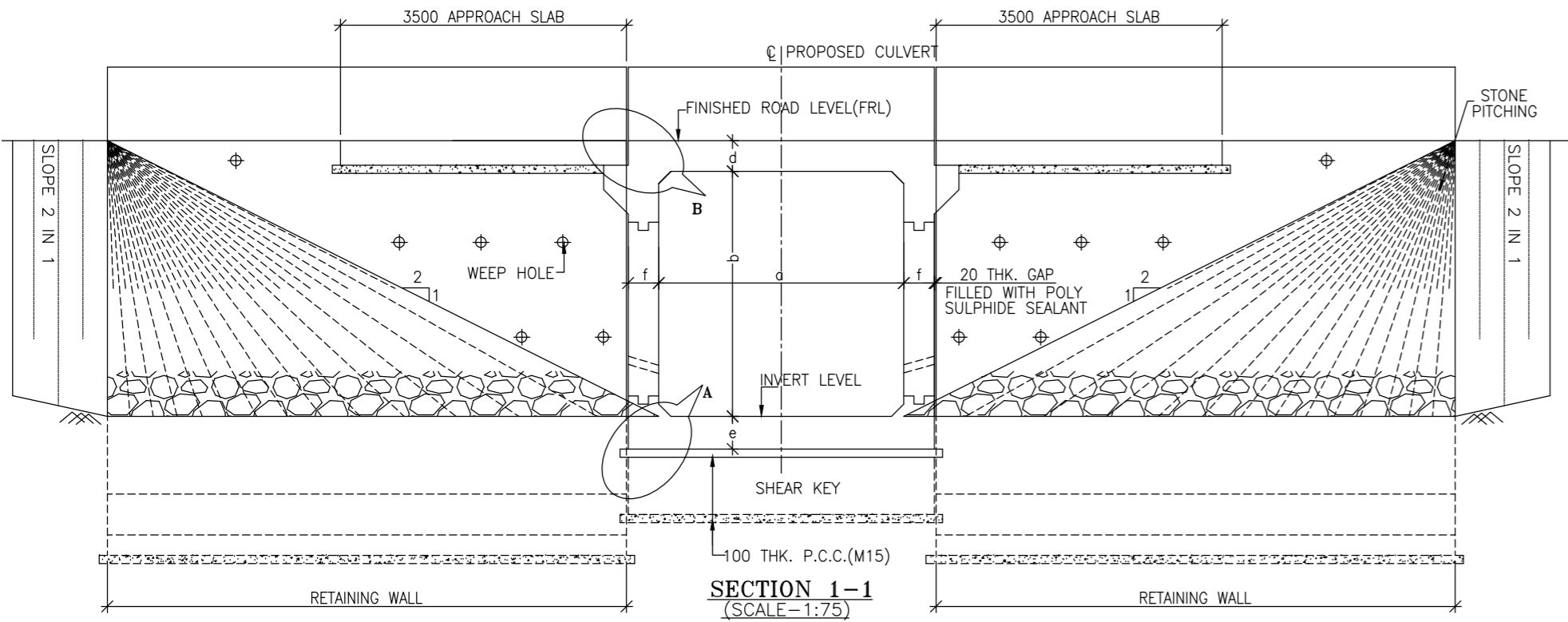
TITLE : **DIMENSION DETAIL OF BREAST WALL**  
DRG. NO. : EPTISAJTFRP/DPRJ&K/BW/01  
REVISION : R-1  
September 2019

≡ CULVERT DRAWINGS ≡



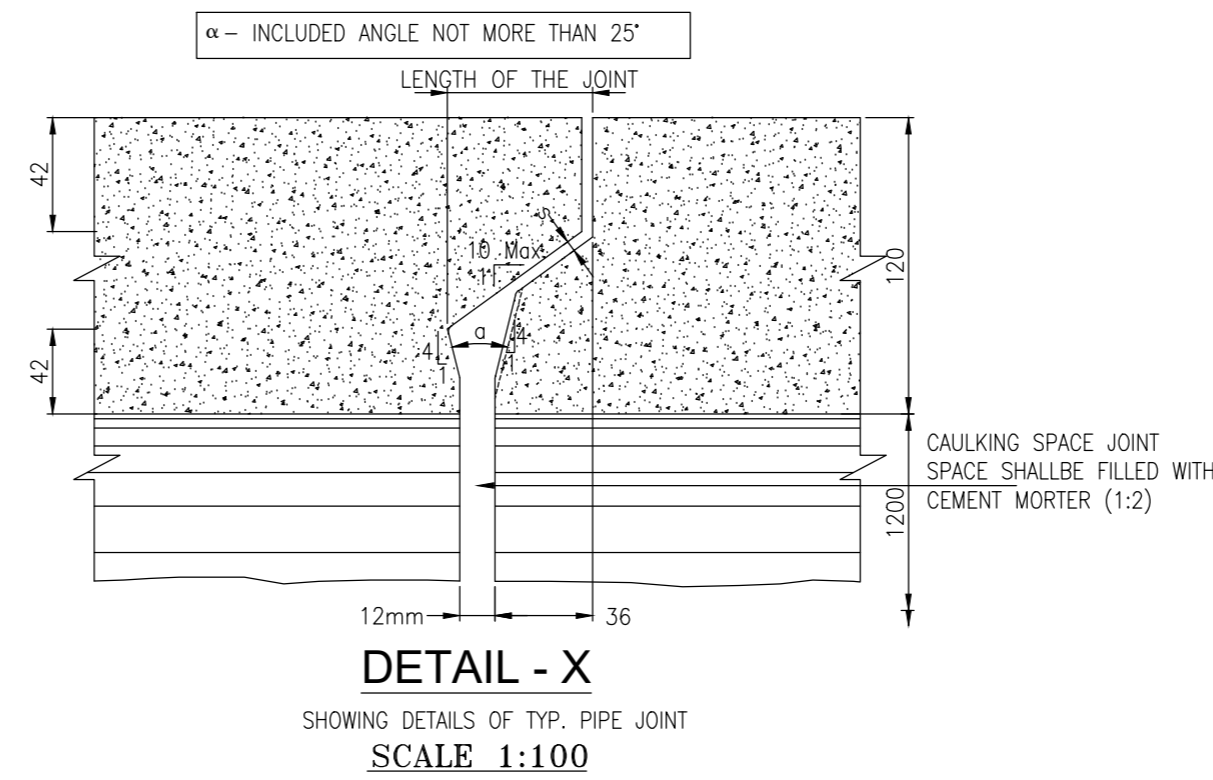
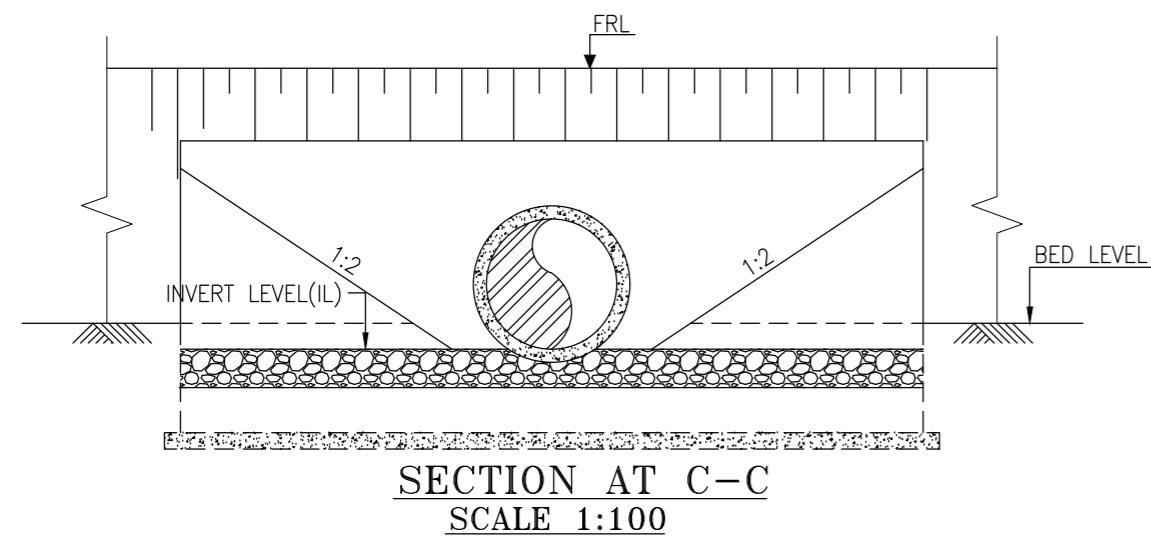
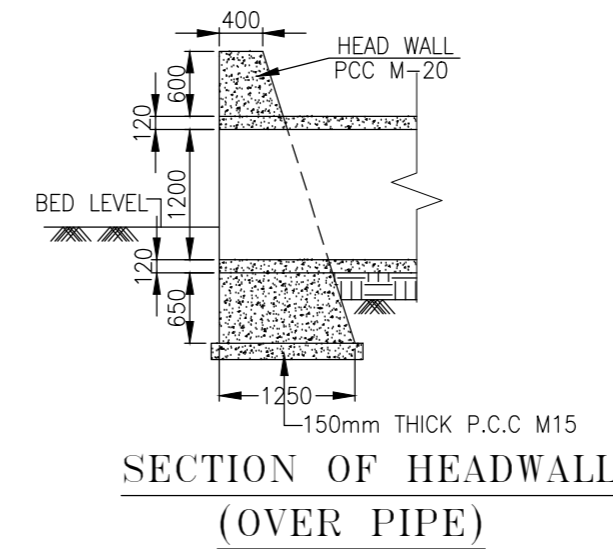
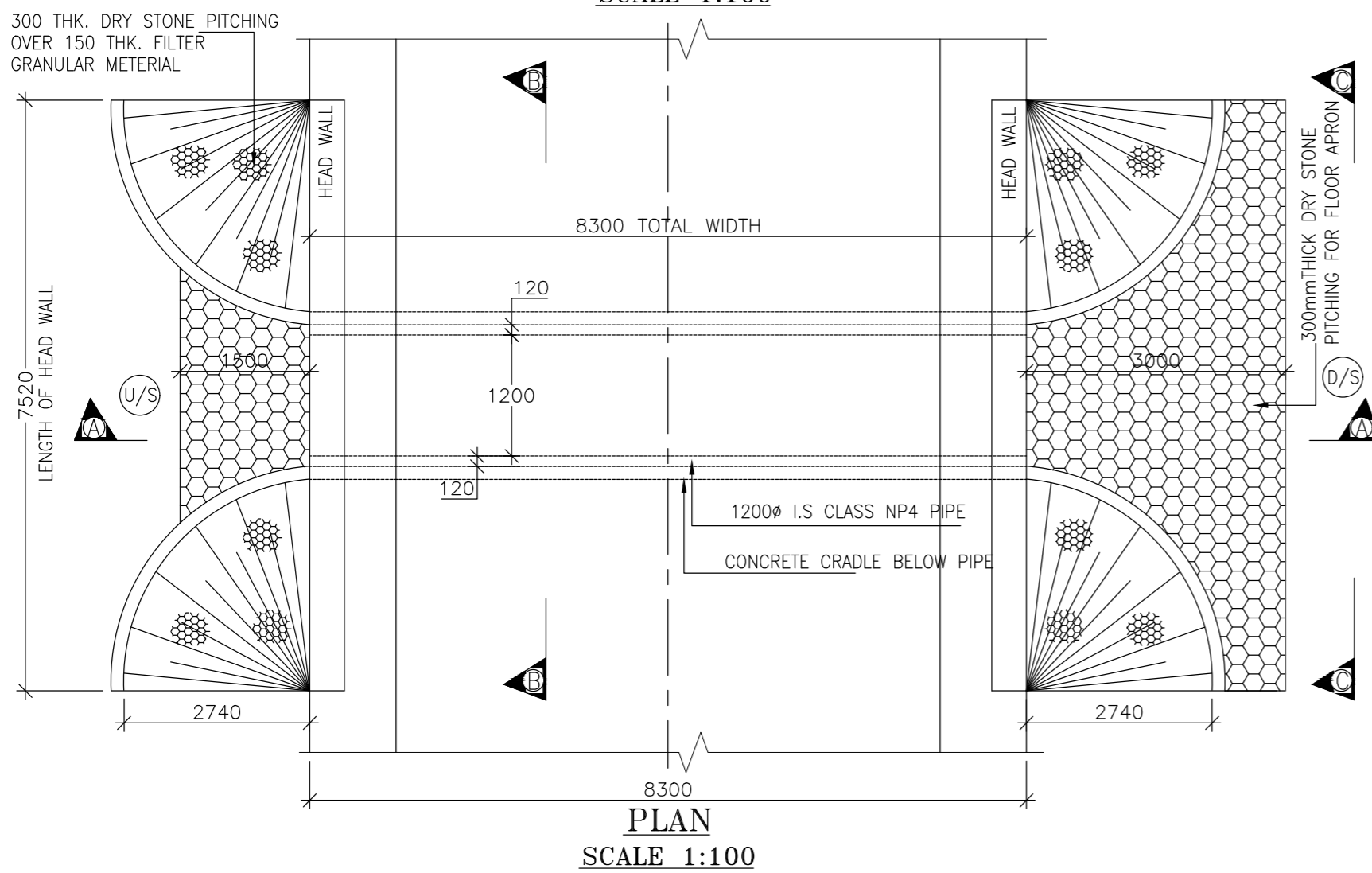
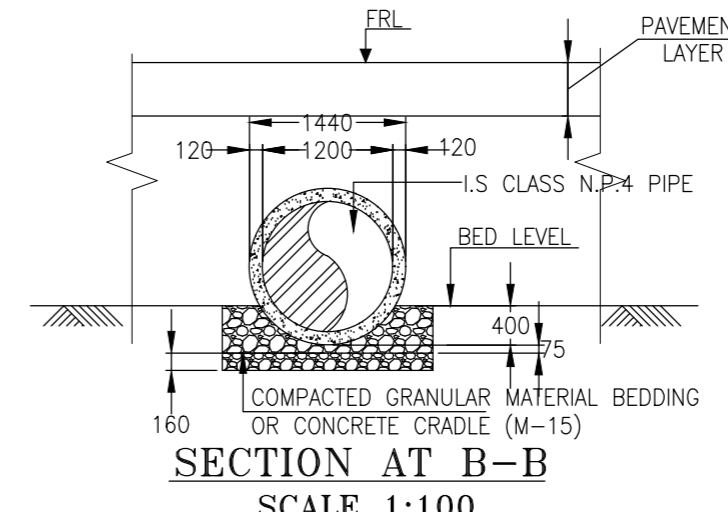
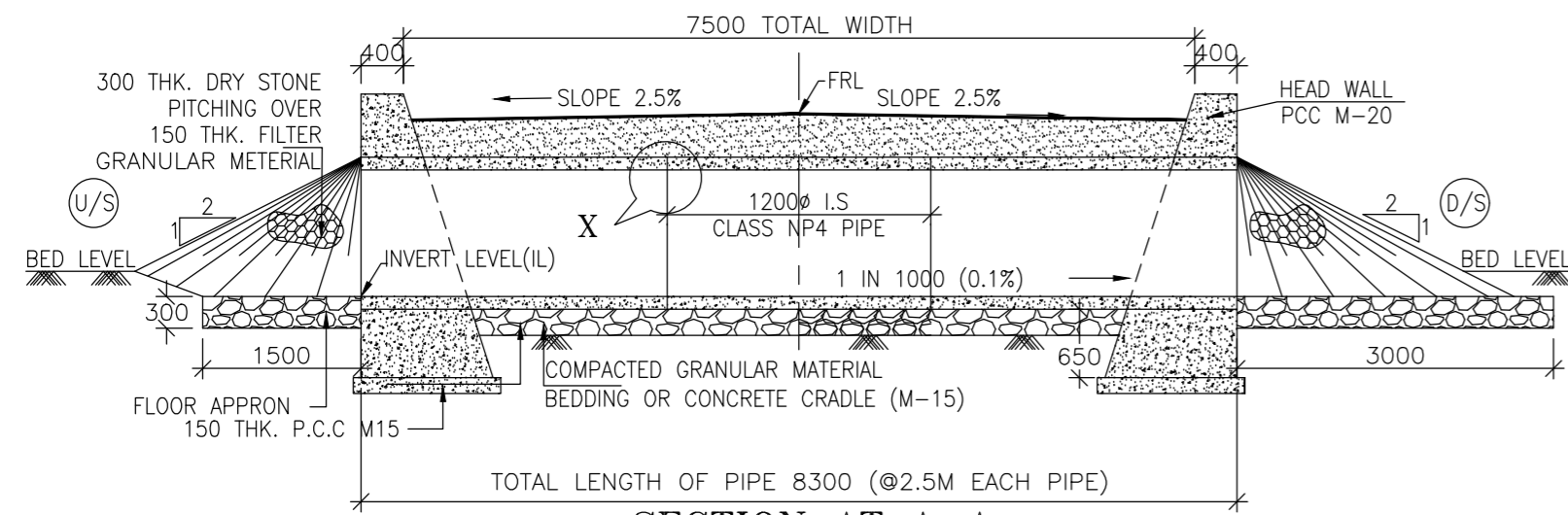
**TABLE SHOWING SILENT DIMENSIONS**

BOX CELL DESIGNATION	a (mm)	b (mm)	d (mm)	e (mm)	f (mm)
1/22/0	2000	2000	350	380	350



- NOTES:-**
- ALL DIMENSIONS ARE IN MILLIMETRES, LEVELS ARE IN METRES AND CHAINAGES ARE IN KILOMETRES, UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
  - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE RELEVANT ROAD PLAN AND PROFILE DRAWING.
  - THE STRUCTURE IS DESIGNED FOR LIVE LOAD COMBINATION OF 3 LANE CLASS A OR 1-LANE OF 70 R+1-LANE OF CLASS A, WHICHEVER PRODUCES SEVERE.
  - GRADE OF CONCRETE FOR VARIOUS ELEMENTS SHALL BE AS FOLLOWS:
    - a) RCC BOX.....M35
    - b) RCC RETAINING WALL.....M35
    - c) PCC LEVELLING COURSE.....M15
    - d) PCC CURTAIN WALL.....M20
    - e) PARAPET WALL.....M35
  - GRADE OF STEEL SHALL BE Fe-500 (H.Y.S.D. REBAR CONFORMING TO IS-1786)
  - BACK FILLING BEHIND THE STRUCTURE SHALL CONSIST OF SELECTED EARTH CONFORMING TO APPENDIX 6 OF IRC:78-2014 HAVING PROPERTIES  $\phi < 30^\circ$ ,  $C=0$ ,  $\gamma = 2.0T/M^3$
  - COMPRESSIBLE FILLER BOARD SHALL BE PROVIDED IN ALL EXPANSION GAPS AND SEALED WITH POLY-SULPHIDE SEALANT.
  - FOUNDATION OF BOX SHALL BE PLACED OVER A FIRM STRATA HAVING BEARING CAPACITY EQUAL TO  $12T/M^2$  IN GENERAL. IF THE MATERIAL ENCOUNTERED IS SOFT, SPONZY OR OTHER UNSUITABLE SOIL, SUCH UNSUITABLE MATERIAL SHALL BE TOTALLY REMOVED TO SUCH DEPTH, WIDTH & LENGTH, AS DIRECTED BY THE ENGINEER. THE EXCAVATED AREA SHALL BE BACKFILLED WITH APPROVED GRANULAR MATERIAL & THOROUGHLY COMPACTED UP TO THE SPECIFIED LEVEL.
  - 600MM THICK FILTER MEDIA SHALL BE PROVIDED BEHIND SIDE WALLS AND WING WALLS AS PER IR:78-2014.
  - ALL THE LEVELS AND CAMBERS TO BE VERIFIED WITH RESPECT TO PLAN & PROFILE DRAWINGS BEFORE EXCAVATION. ANY DISCREPANCY NOTED SHOULD BE REPORTED TO THE DESIGN ENGINEER IMMEDIATELY.
  - BACK FILLING BEHIND WALLS SHALL BE DONE SIMULTANEOUSLY ON EITHER SIDE OF THE STRUCTURE WITH HEIGHT DIFFERENCE NOT MORE THAN 1.0M. BACK FILLING SHALL BE DONE ONLY AFTER THE TOP SLAB IS CONCRETED AND CURED FOR 14 DAYS.
  - SPRADING & COMPACTED OF SAND WILL BE DONE IN ACCORDANCE WITH CLAUSE 401.3.2 OF SPECIFICATION FOR ROAD & BRIDGE WORKS BY MINISTRY OF ROAD TRANSPORT & HIGHWAY

<p>CLIENT :</p> <p>Jhelum Tawi Flood Recovery Project 2nd Floor ERA Commercial Complex Rambagh Srinagar-190 009.</p>	<p>PROJECT :</p> <p>Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir <b>(Tutain Di Khoi Road)</b></p>	<p>DESIGN CONSULTANT:</p> <p><b>Eptisa Servicios de Ingenieria S.L.</b> Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP &amp; GP, Sector v, Salt Lake Kolkata - 700091, West Bengal Ph: 033-40347200 www.eptisa.com</p>	<p>DRAWN BY : PD</p> <p>DESIGNED BY : SD</p> <p>APPROVED BY : KG</p> <p>SCALE : AS SHOWN</p>	<p>TITLE : TYPICAL GENERAL ARRANGEMENT DRAWING FOR SINGLE BOX CULVERT</p> <p>DRG. NO. : EPTISA/JTRP/DPR/J&amp;K/BOX/GAD/01</p> <p>REVISION : R-1</p> <p>September 2019</p>							
			<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>REV.</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	REV.	DATE	DESCRIPTION					
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- NOTES:-
1. ALL DIMENSIONS ARE IN mm, EXCEPT OTHERWISE MENTIONED.
  2. NO DIMENSION SHALL BE SCALED ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
  3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH RELEVANT ROAD DRAWINGS. FRL & CAMBER / SUPER ELEVATION AT PARTICULAR LOCATION SHALL BE VERIFIED WITH THE HIGHWAY DWG. DISCREPANCY, IF ANY, IS TO BE IMMEDIATELY BROUGHT TO THE NOTICE OF ENGINEER FOR NECESSARY MODIFICATION IN THE DRAWING.
  4. HUME PIPE (NP4 TYPE), SHALL CONFORM TO IS : 458-2003.
  5. COMPACTED GRANULAR BED SHALL CONFORM TO MORT&H SPECIFICATION CLAUSE NO.2904.
  6. LONGITUDINAL SLOPE OF WIDENED PIPE SHALL BE 1 : 1000 (MIN.)
  7. LENGTH, LOCATION, ORIENTATION & INVERT LEVEL OF PIPE CULVERT SHALL BE ADJUSTED TO SUIT SITE CONDITION AND AS APPROVED BY THE ENGINEER.
  8. TRENCHES SHALL BE BACKFILLED IMMEDIATELY AFTER THE PIPES HAVE BEEN LAID AND THE JOINTING MATERIAL HAS HARDENED.
  9. PIPE SHALL BE JOINTED BY FLUSH JOINT METHOD AS PER THE DETAILS GIVEN IN SECTION 2906 OF MORT&H SPECIFICATIONS OF ROAD & BRIDGE WORKS.
  10. FLOOR APRON SHALL BE PROVIDED AT NON-IRRIGATION CROSS DRAINAGE WORKS ONLY.

CLIENT :



JHELUM & TAWI  
FLOOD RECOVERY PROJECT

Jhelum Tawi Flood Recovery Project  
2nd Floor ERA Commercial Complex Rambagh  
Srinagar-190 009.

PROJECT :

Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:

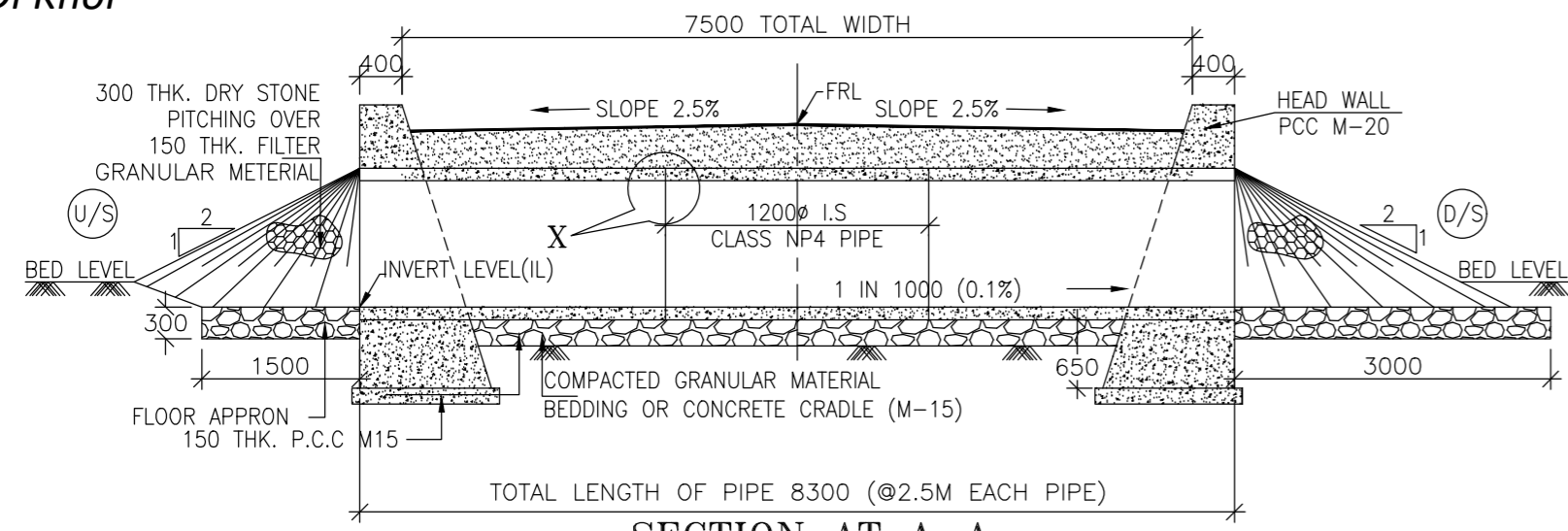


**Eptisa Servicios de Ingenieria S.L.**  
Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal  
Ph: 033-40347200  
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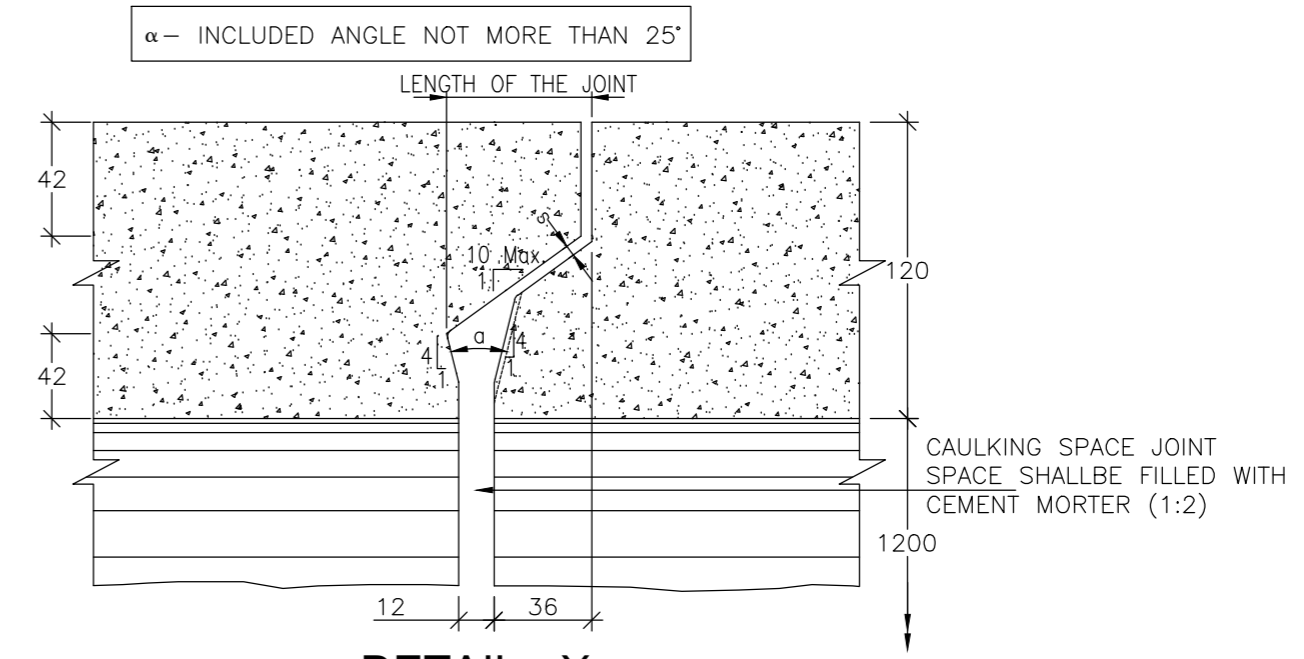
REV.	DATE	DESCRIPTION

DRAWN BY :	PD
DESIGNED BY :	SD
APPROVED BY :	KG
SCALE :	AS SHOWN

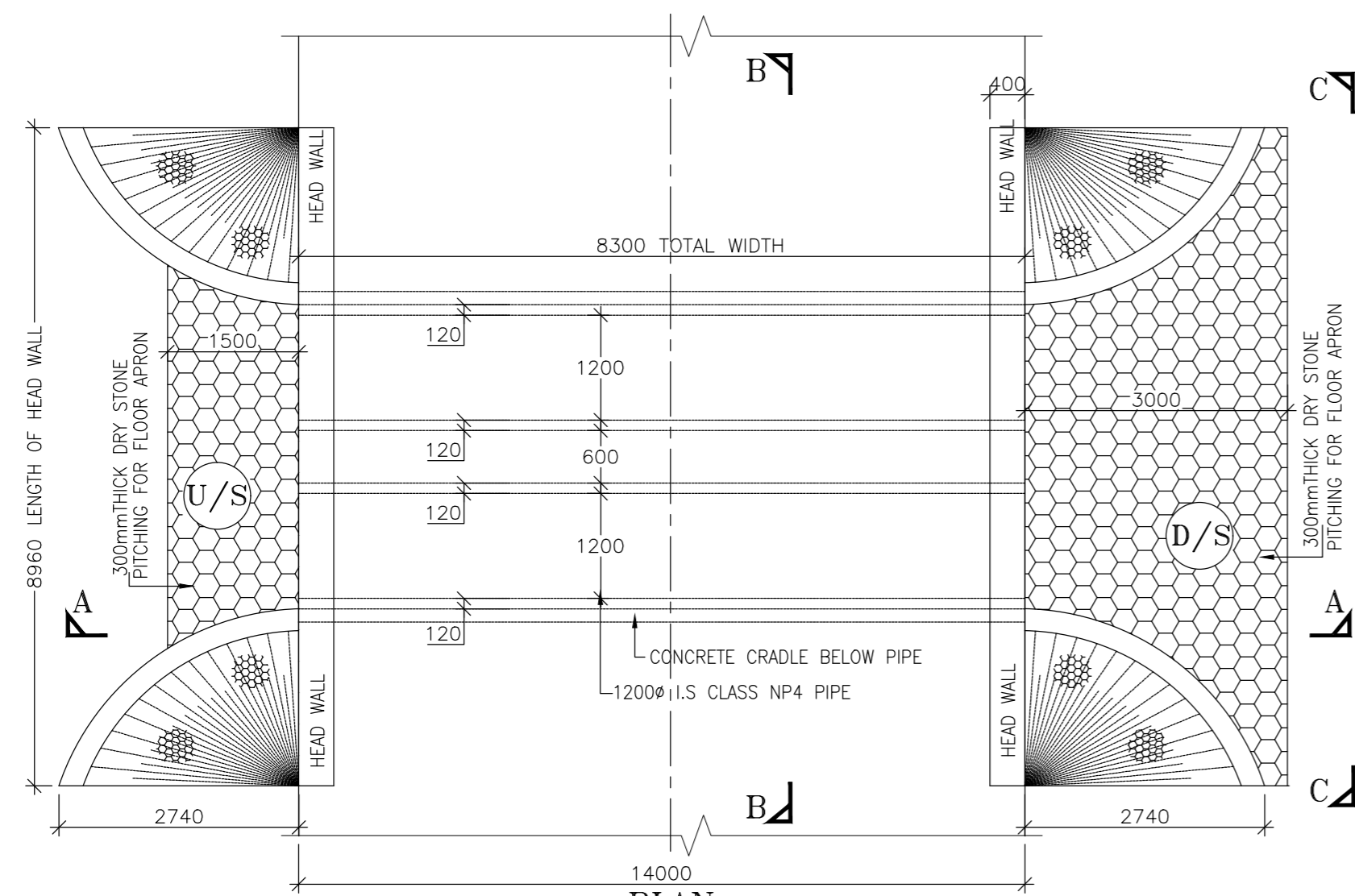
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DRG. NO. :	EPTISA/JTRP/DPR/J&K/PIPE/GAD/01
REVISION :	R-1
	September 2019



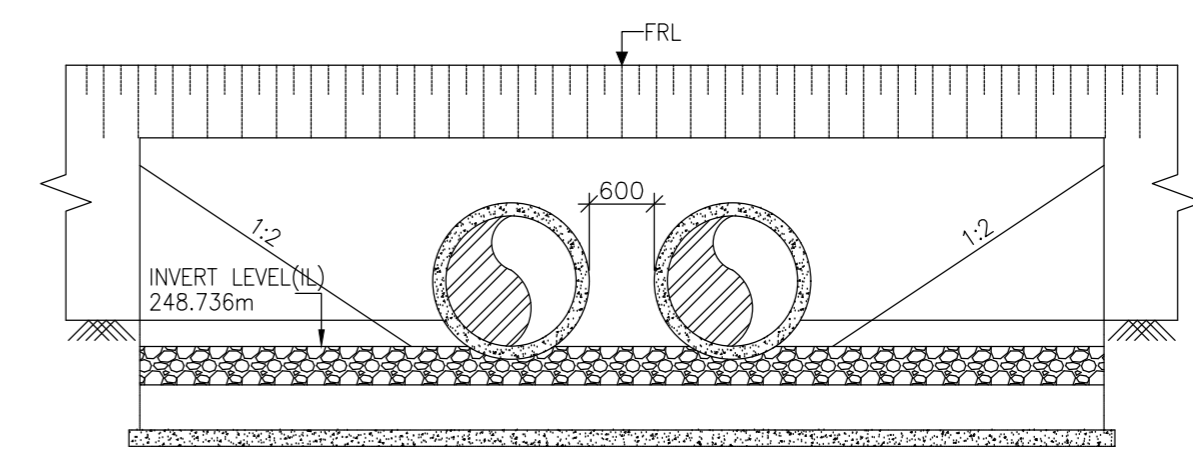
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SCALE 1:100



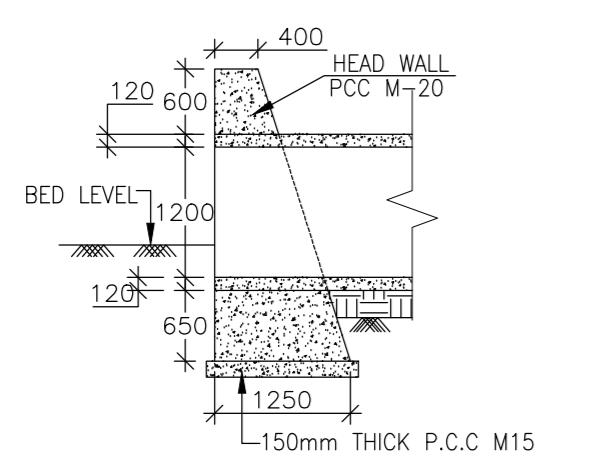
**DETAIL - X**  
SCALE 1:100  
SHOWING DETAILS OF TYP. PIPE JOINT



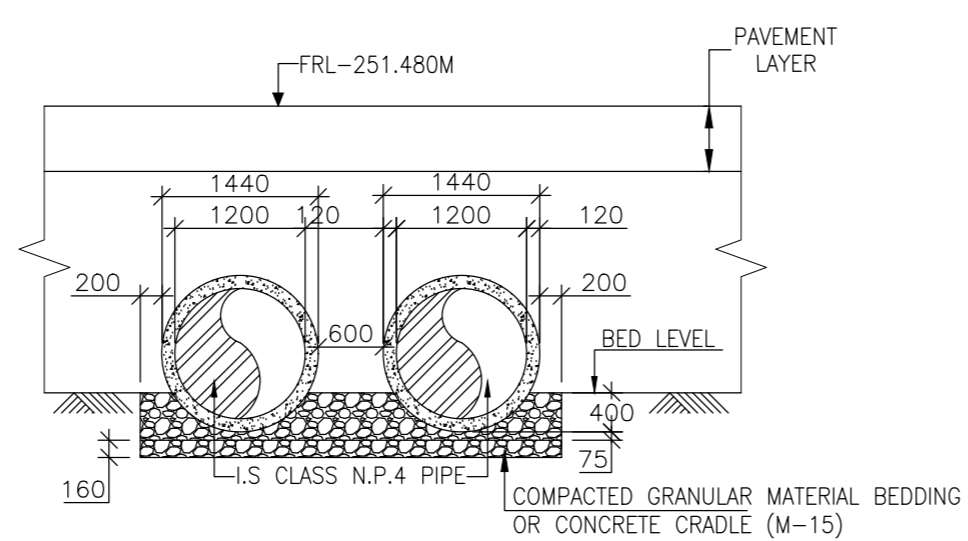
**PLAN**  
SCALE 1:100



**SECTION AT C-C**  
SCALE 1:100



**SECTION OF HEADWALL (OVER PIPE)**  
SCALE 1:100



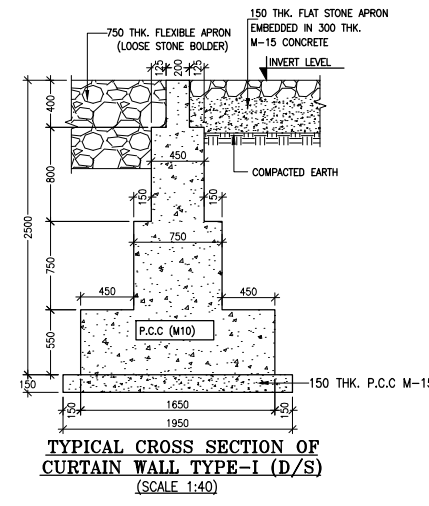
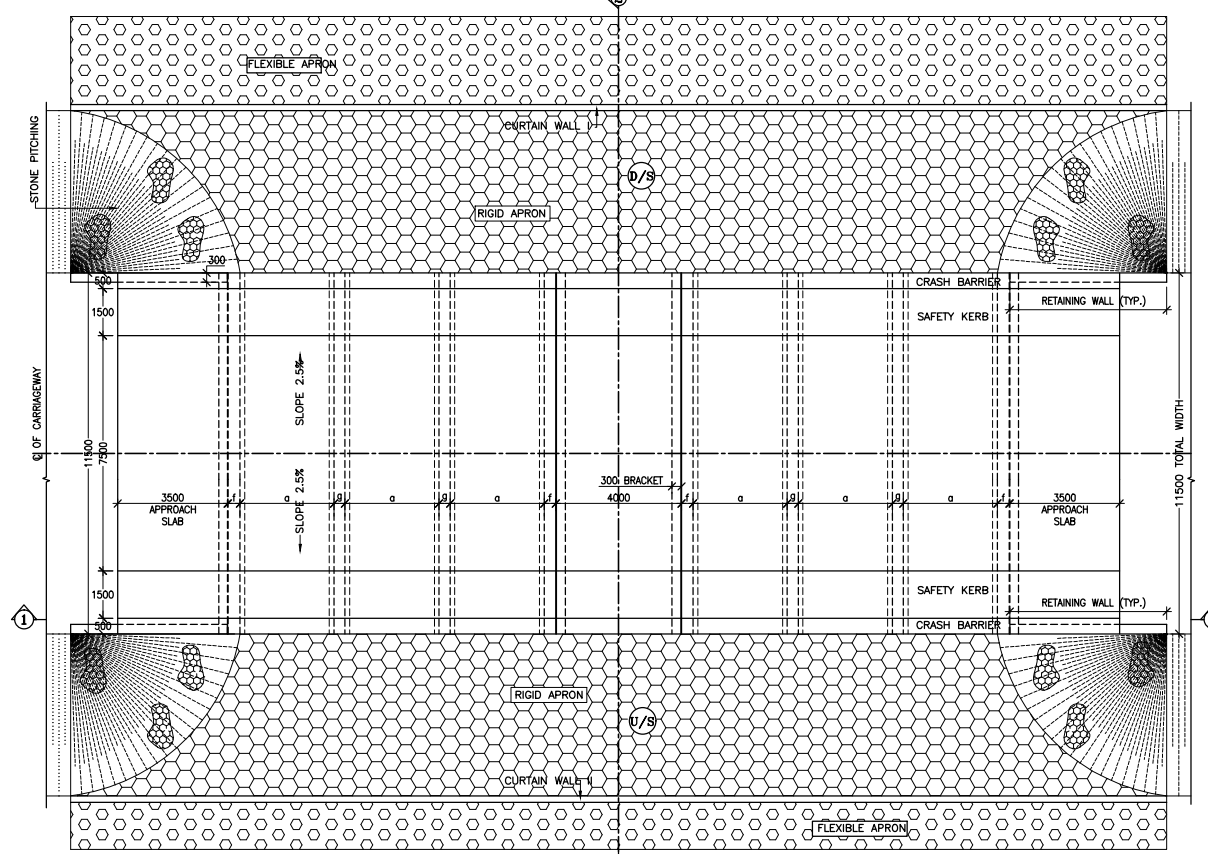
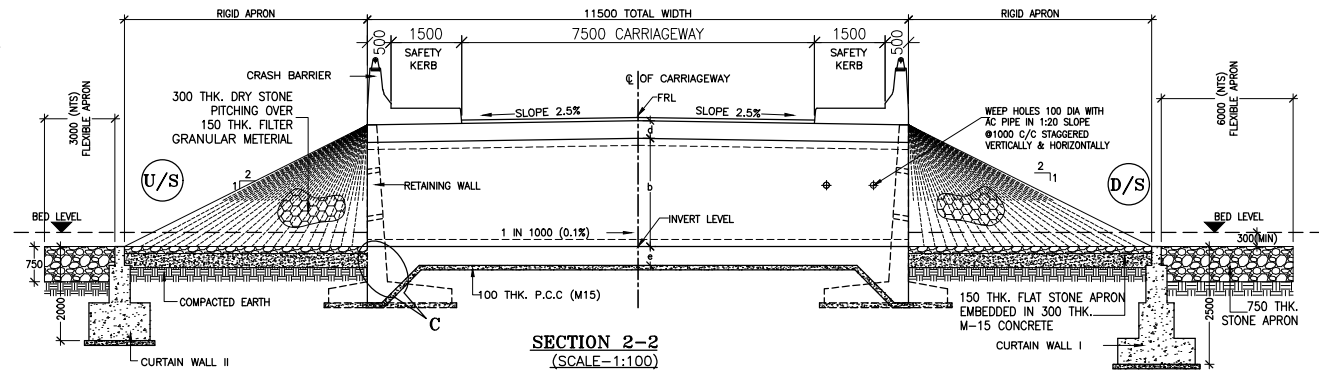
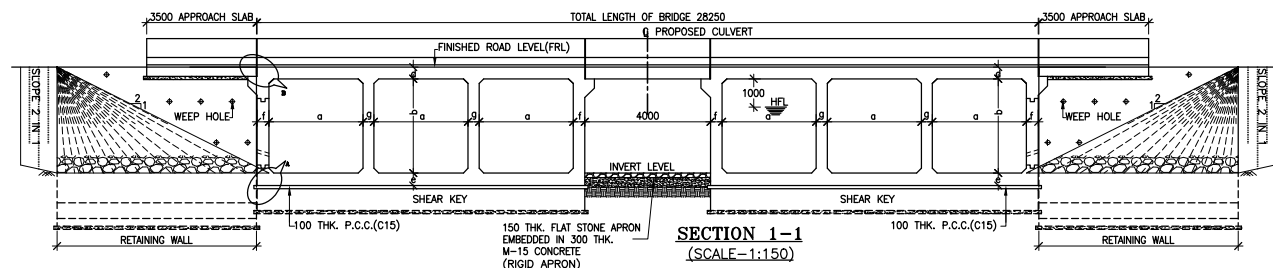
**SECTION AT B-B**  
SCALE 1:100

**NOTES:-**

1. ALL DIMENSIONS ARE IN mm, EXCEPT WHERE OTHERWISE MENTIONED.
2. NO DIMENSION SHALL BE SCALED, ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH RELEVANT ROAD DRAWINGS. FRL & CAMBER/SUPER ELEVATION AT PARTICULAR LOCATION SHALL BE VERIFIED WITH THE HIGHWAY DWG. DISCREPANCY, IF ANY, IS TO BE IMMEDIATELY BROUGHT TO THE NOTICE OF ENGINEER FOR NECESSARY MODIFICATION IN THE DRAWING.
4. HUME PIPE (NP4 TYPE), SHALL CONFORM TO IS : 458-2003.
5. COMPACTED GRANULAR BED SHALL CONFORM TO Mort&H SPECIFICATION CLAUSE NO.2904.
6. LONGITUDINAL SLOPE OF WIDENED PIPE SHALL BE 1:1000 (MIN.)
7. LENGTH, LOCATION, ORIENTATION & INVERT LEVEL OF PIPE CULVERT SHALL BE ADJUSTED TO SUIT SITE CONDITION AND AS APPROVED BY THE ENGINEER.
8. TRENCHES SHALL BE BACKFILLED IMMEDIATELY AFTER THE PIPES HAVE BEEN LAID AND THE JOINTING MATERIAL HAS HARDENED.
9. PIPE SHALL BE JOINTED BY FLUSH JOINT METHOD AS PER THE DETAILS GIVEN IN SECTION 2906 OF Mort&H SPECIFICATIONS OF ROAD & BRIDGE WORKS.
10. FLOOR APRON SHALL BE PROVIDED AT NON-IRRIGATION CROSS DRAINAGE WORKS ONLY.

CLIENT :  Jehlum Tawi Flood Recovery Project 2nd Floor ERA Commercial Complex Rambagh Srinagar-190 009.	PROJECT : Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir <b>(Tutain Di Khoi Road)</b>	DESIGN CONSULTANT:  <b>Eptisa Servicios de Ingenieria S.L.</b> Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal Ph: 033-40347200 www.eptisa.com	DRAWN BY : PD	TITLE : TYPICAL GENERAL ARRANGEMENT DRAWING FOR DOUBLE CELL PIPE CULVERT
			DESIGNED BY : SD	
REV.    DATE    DESCRIPTION			APPROVED BY : KG	REVISION : R-1
SCALE : AS SHOWN			September 2019	

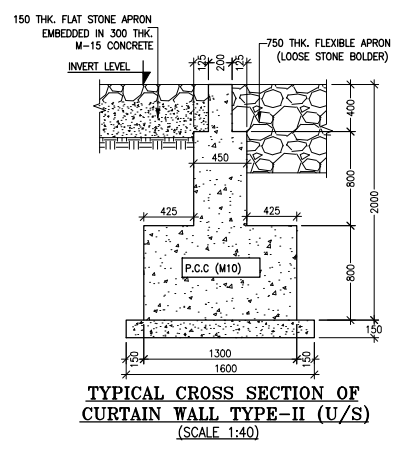
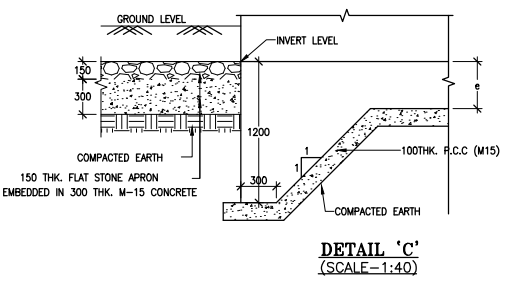
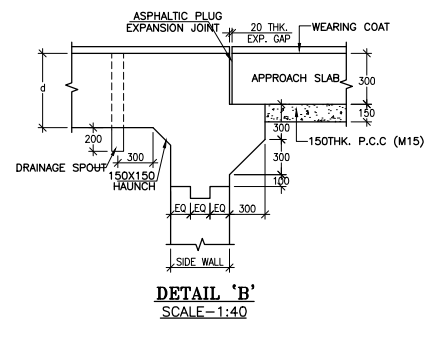
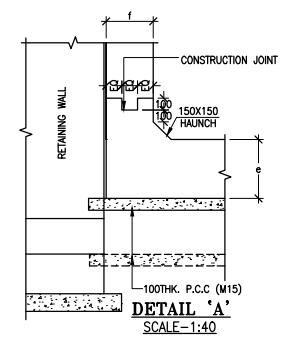
≡ TENTATIVE GENERAL ARRANGEMENT DRAWING OF BRIDGES ≡



**TABLE SHOWING SILENT DIMENSIONS**

BOX CELL DESIGNATION	a (mm)	b (mm)	d (mm)	e (mm)	f (mm)	g (mm)
3/54/0	5000	4000	600	600	650	550

- NOTES:-**
- ALL DIMENSIONS ARE IN MILLIMETRES, LEVELS ARE IN METRES AND CHAINAGES ARE IN KILOMETRES, UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
  - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE RELEVANT ROAD PLAN AND PROFILE DRAWING.
  - THE STRUCTURE IS DESIGNED FOR LIVE LOAD COMBINATION OF 3 LANE CLASS A OR 1-LANE OF 70 R+1-LANE OF CLASS A, WHICHEVER PRODUCES SEVERE.
  - GRADE OF CONCRETE FOR VARIES ELEMENTS SHALL BE AS FOLLOWS:  
 a) RCC BOX.....M35  
 b) RCC RETAINING WALL.....M35  
 c) PCC LEVELLING COURSE.....M15  
 d) PCC CURTAIN WALL.....M20  
 e) PARAPET WALL.....M35
  - GRADE OF STEEL SHALL BE Fe-500 (H.Y.S.D. REBAR CONFORMING TO IS-1786)
  - MINIMUM CLEAR COVER TO REINFORCEMENT SHALL BE 50MM.
  - BACK FILLING BEHIND THE STRUCTURE SHALL CONSIST OF SELECTED EARTH CONFORMING TO APPENDIX 6 OF IRC:78-2014 HAVING PROPERTIES  $\phi < 30^\circ$ ,  $C=0$ ,  $\gamma = 2.0T/M^3$
  - COMPRESSIBLE FILLER BOARD SHALL BE PROVIDED IN ALL EXPANSION GAPS AND SEALED WITH POLY-SULPHIDE SEALANT.
  - FOUNDATION OF BOX SHALL BE PLACED OVER A FIRM STRATA HAVING BEARING CAPACITY EQUAL TO  $12T/M^2$  IN GENERAL. IF THE MATERIAL ENCOUNTERED IS SOFT, SPONZY OR OTHER UNSUITABLE SOIL, SUCH UNSUITABLE MATERIAL SHALL BE TOTALLY REMOVED TO SUCH DEPTH, WIDTH & LENGTH, AS DIRECTED BY THE ENGINEER. THE EXCAVATED AREA SHALL BE BACKFILLED WITH APPROVED GRANULAR MATERIAL & THOROUGHLY COMPACTED UP TO THE SPECIFIED LEVEL.
  - 600MM THICK FILTER MEDIA SHALL BE PROVIDED BEHIND SIDE WALLS AND WING WALLS AS PER IR:78-2014.
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  - BACK FILLING BEHIND WALLS SHALL BE DONE SIMULTANEOUSLY ON EITHER SIDE OF THE STRUCTURE WITH HEIGHT DIFFERENCE NOT MORE THAN 1.0M. BACK FILLING SHALL BE DONE ONLY AFTER THE TOP SLAB IS CONCRETED AND CURED FOR 14 DAYS.
  - SPRADING & COMPACTED OF SAND WILL BE DONE IN ACCORDANCE WITH CLAUSE 401.3.2 OF SPECIFICATION FOR ROAD & BRIDGE WORKS BY MINISTRY OF ROAD TRANSPORT & HIGHWAY



IT IS A TENTATIVE GAD - FOR TENDERING PURPOSE ONLY. BIDDER SHOULD VISIT THE SITE BEFORE BIDDING TO ASSESS THE INDIVIDUAL LENGTH OF THE BRIDGES, TYPE OF FOUNDATION & SUPERSTRUCTURE, SPAN ARRANGEMENT & VERTICAL CLEARANCE.

CLIENT :  Jhelum Tawi Flood Recovery Project 2nd Floor ERA Commercial Complex Rambagh Srinagar-190 009.	PROJECT : Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir <b>(Tutain Di Khoi Road)</b>	DESIGN CONSULTANT:  <b>Eptisa Servicios de Ingenieria S.L.</b> Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP & GP, Sector v, Salt Lake Kolkata - 700091, West Bengal Ph: 033-40347200 www.eptisa.com	DRAWN BY : PD	TITLE : TENTATIVE GENERAL ARRANGEMENT DRAWING OF BRIDGE AT CH. 0+760
			DESIGNED BY : SD	
			APPROVED BY : KG	DRG. NO. : EPTISA/JTFRP/DPR/J&K/GAD/0+760/01
			SCALE : AS SHOWN	
		REV. DATE DESCRIPTION		
			September 2019	



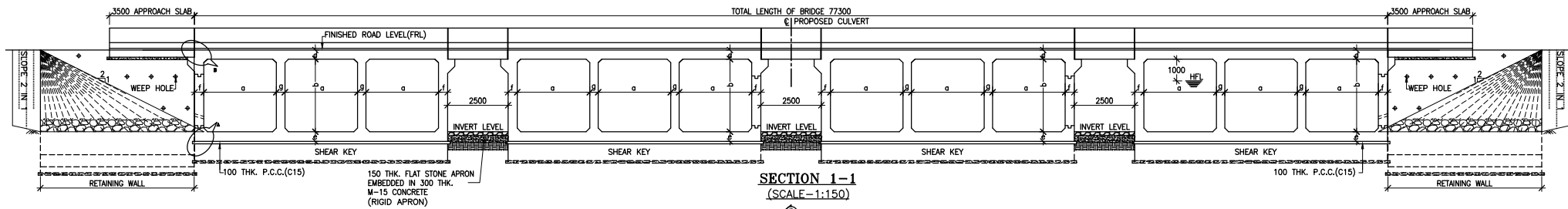
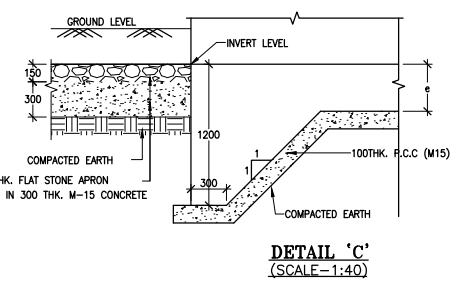
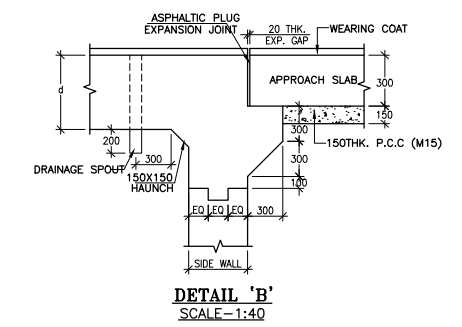
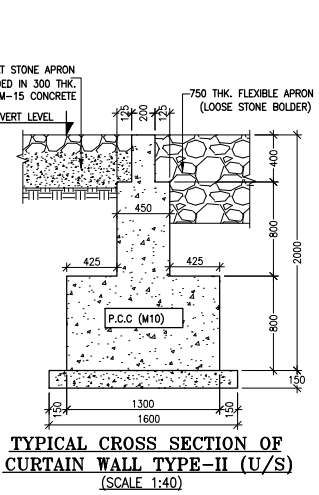
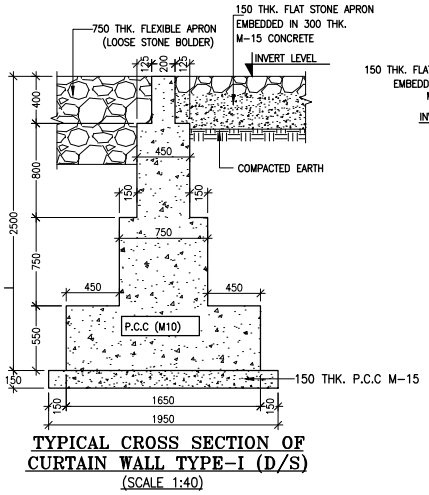
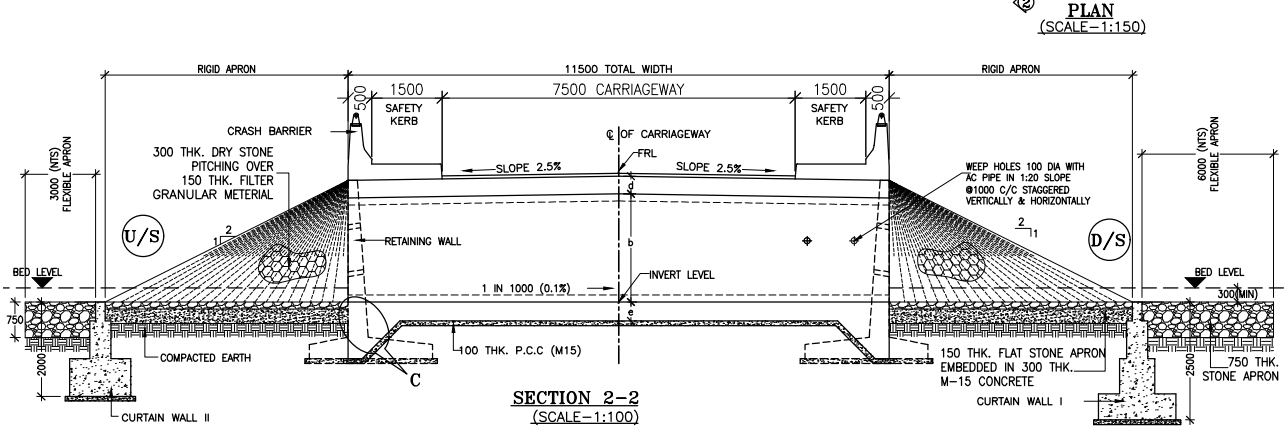
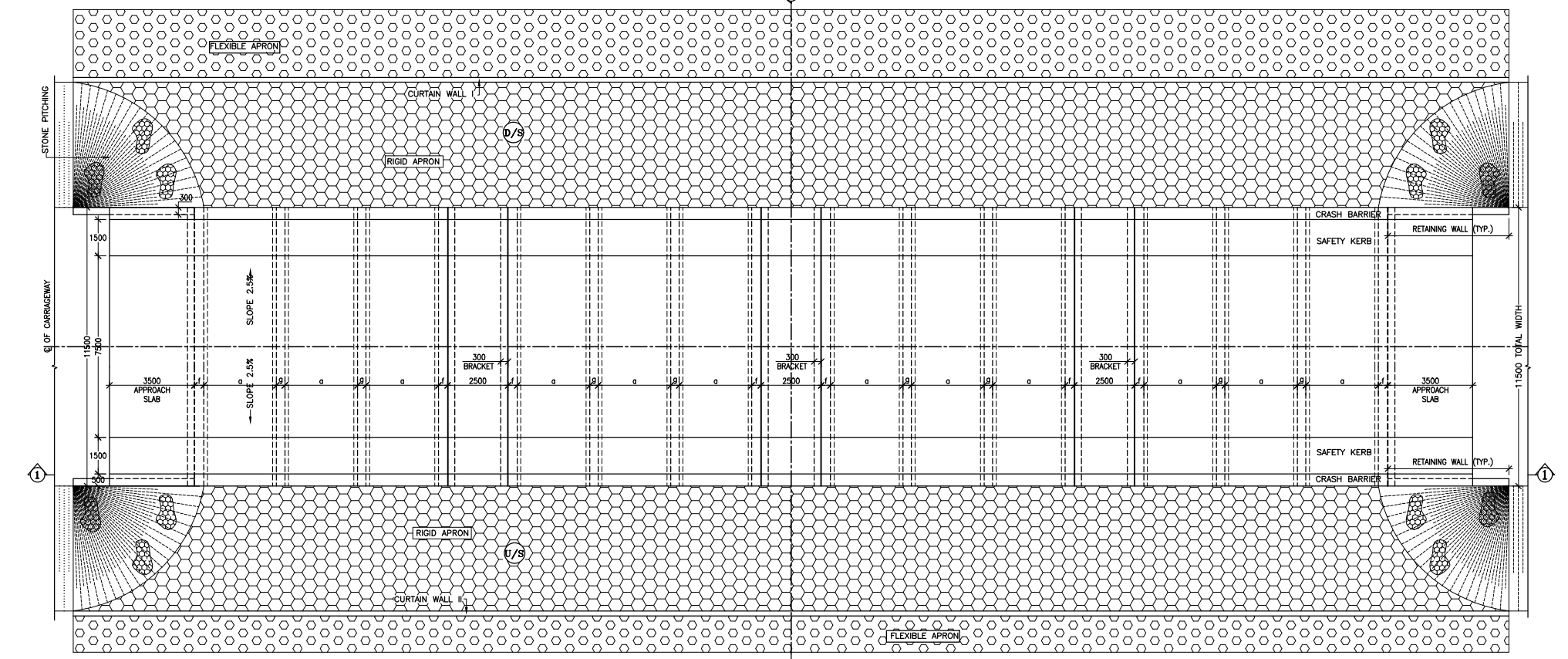


TABLE SHOWING SILENT DIMENSIONS

BOX CELL DESIGNATION	a (mm)	b (mm)	d (mm)	e (mm)	f (mm)	g (mm)
3/54/0	5000	4000	650	650	700	600

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CLIENT :  
  
 Jhelum & Tawi Flood Recovery Project  
 2nd Floor ERA Commercial Complex Rambagh  
 Srinagar-190 009.

PROJECT :  
 Consultancy Services for Preparing Detailed Project Report  
 for the Road works in Jammu and Kashmir  
**(Tutain Di Khoi Road)**

DESIGN CONSULTANT:  
  
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 Unit 1203, 12th Floor, Tower 1, PS Srijan  
 Corporate Park, Plot No. 2, Block EP & GP,  
 Sector v, Salt Lake Kolkata - 700091,  
 West Bengal  
 Ph: 033-40347200  
 www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY : PD  
 DESIGNED BY : SD  
 APPROVED BY : KG  
 SCALE : AS SHOWN

TITLE :  
**TENTATIVE GENERAL ARRANGEMENT  
 DRAWING OF BRIDGE AT CH. 1+800**  
 DRG. NO. : EPTISA/JFRP/DPR/J&K/GAD/1+800/01  
 REVISION : R-0  
 September 2019

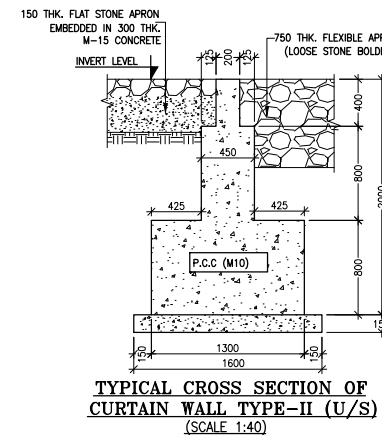
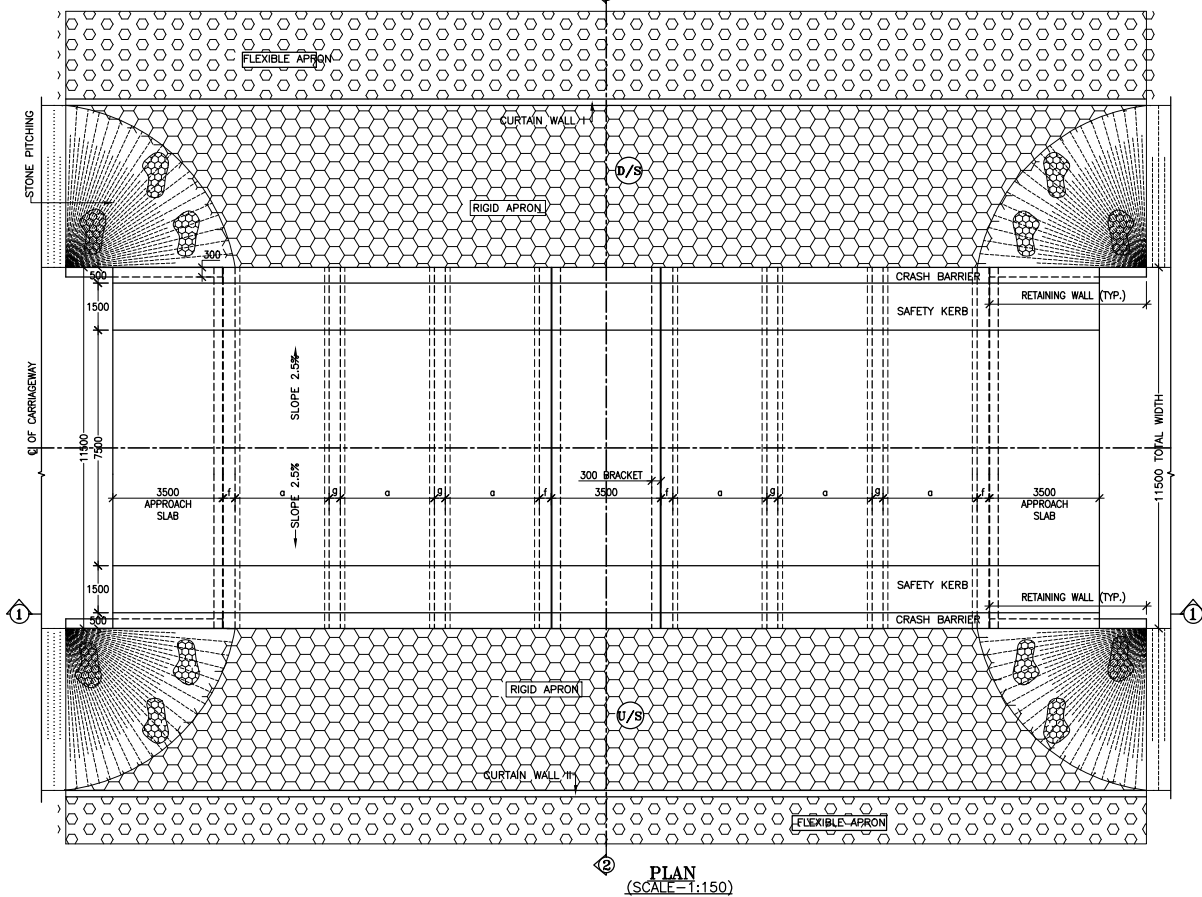
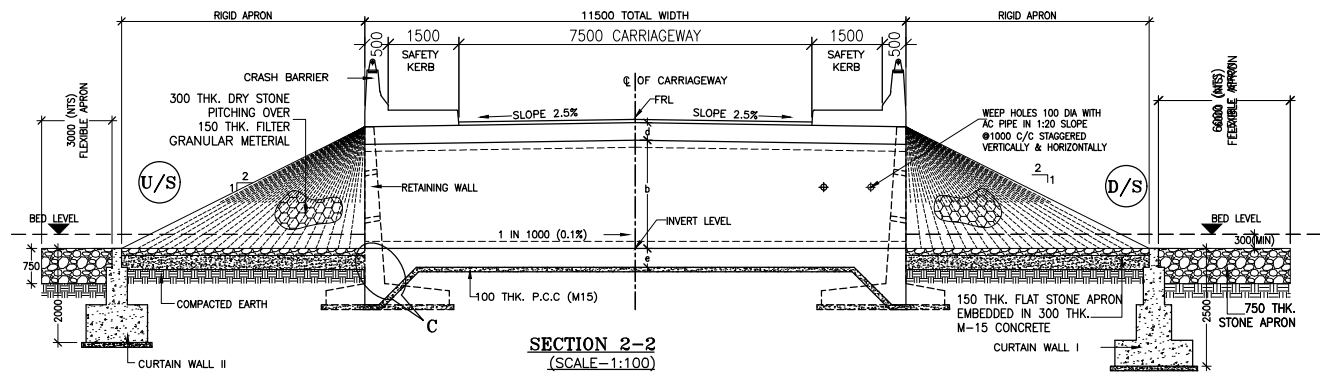
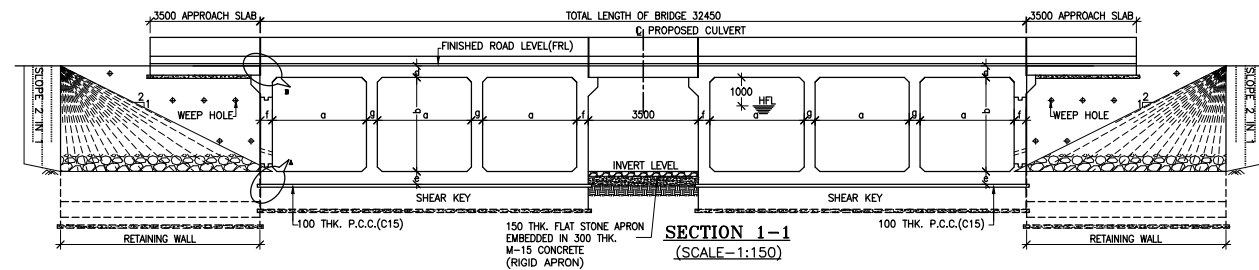
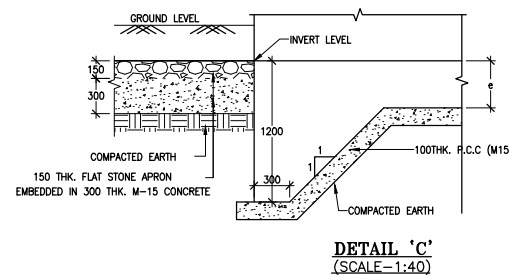
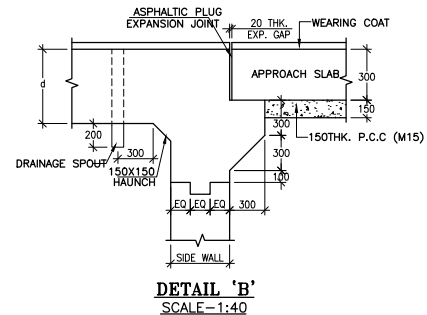
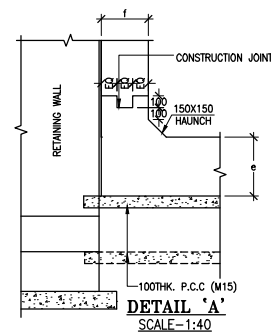
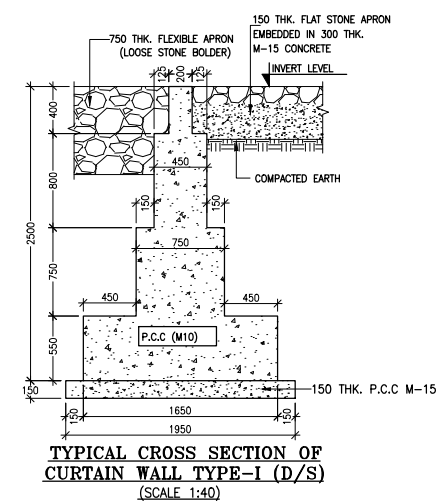


TABLE SHOWING SILENT DIMENSIONS

BOX CELL DESIGNATION	a (mm)	b (mm)	d (mm)	e (mm)	f (mm)	g (mm)
3/65/0	6000	5000	700	700	750	650

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REV.	DATE	DESCRIPTION

DRAWN BY : PD  
 DESIGNED BY : SD  
 APPROVED BY : KG  
 SCALE : AS SHOWN

TITLE :  
**TENTATIVE GENERAL ARRANGEMENT  
 DRAWING OF BRIDGE AT CH. 3+600**  
 DRG. NO. : EPTISA/JTRP/DPR/J&K/GAD/3+600/01  
 REVISION : R-0  
 September 2019

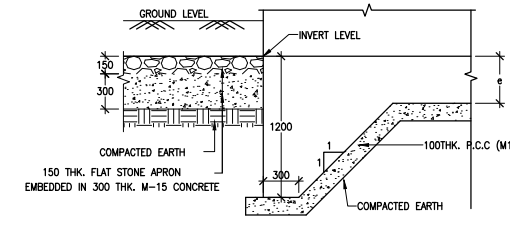
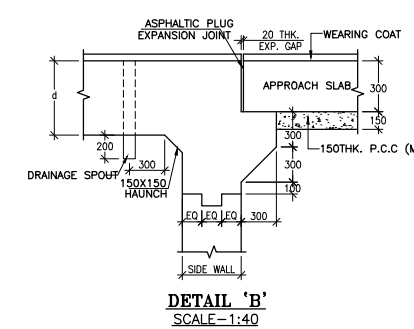
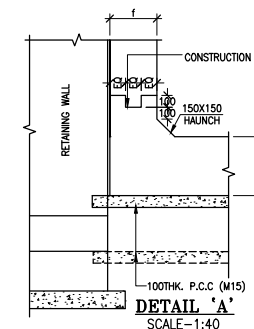
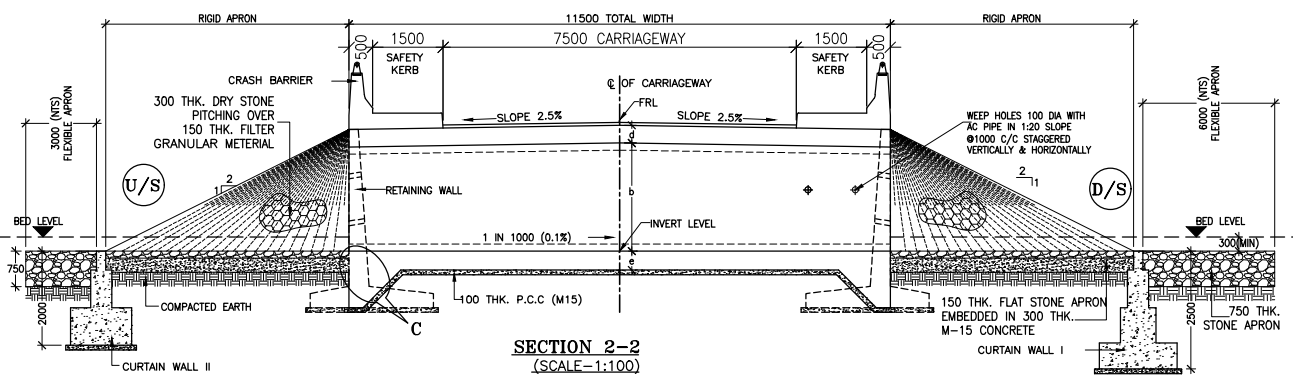
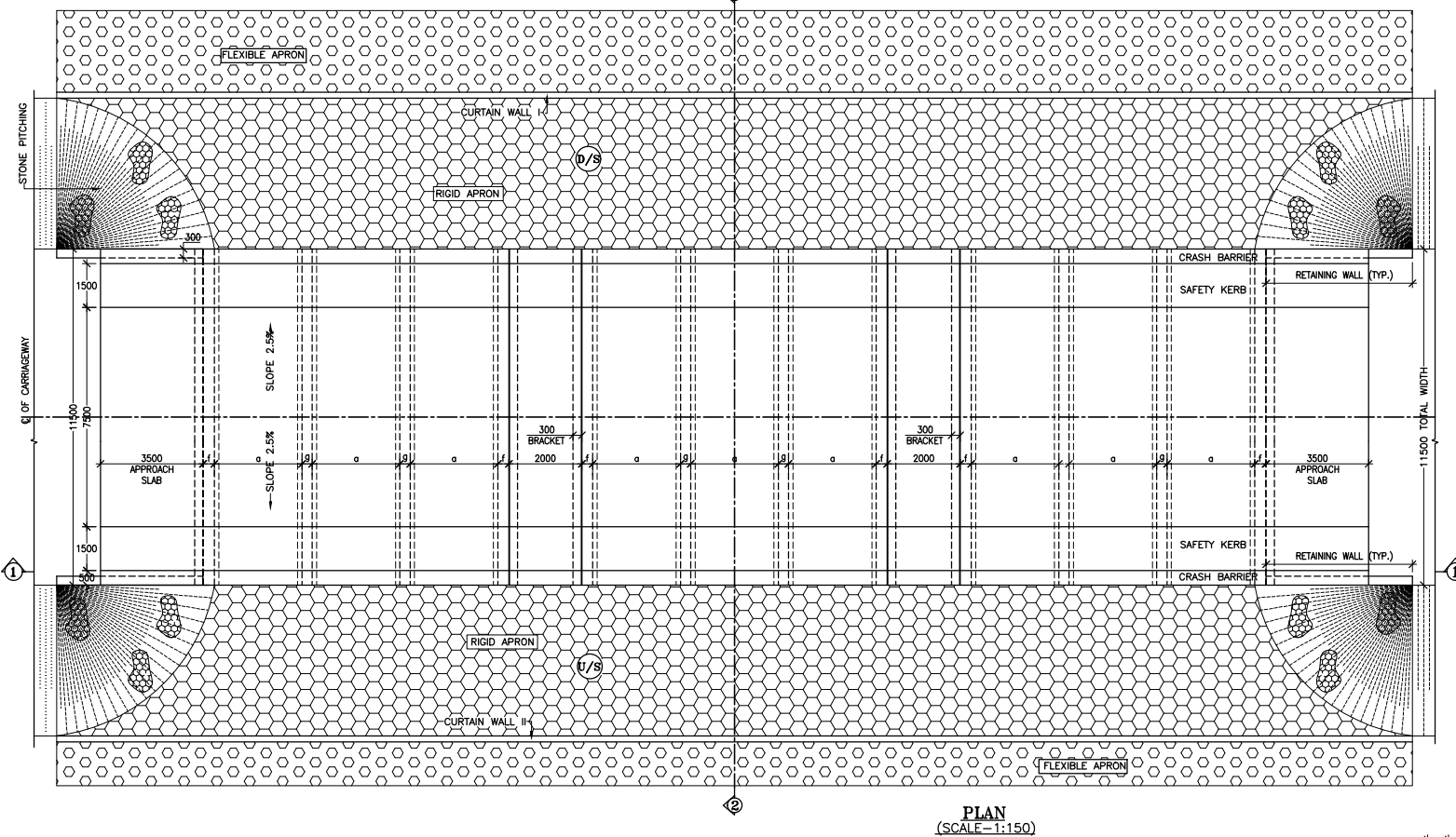
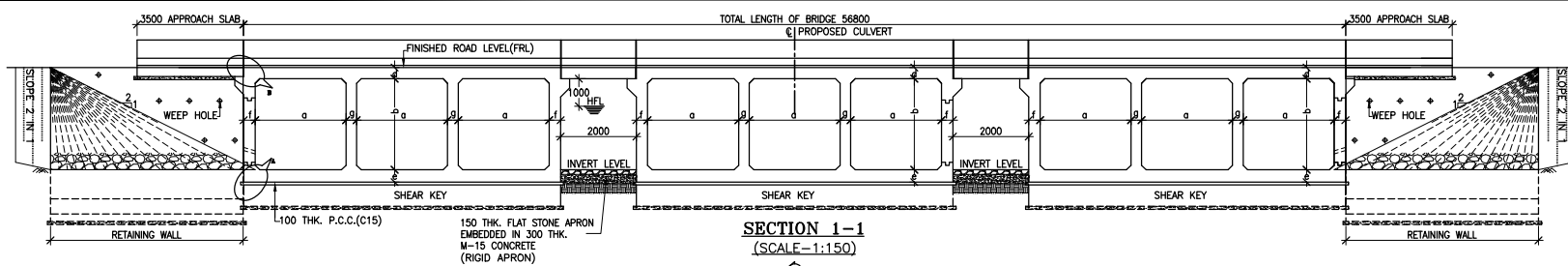
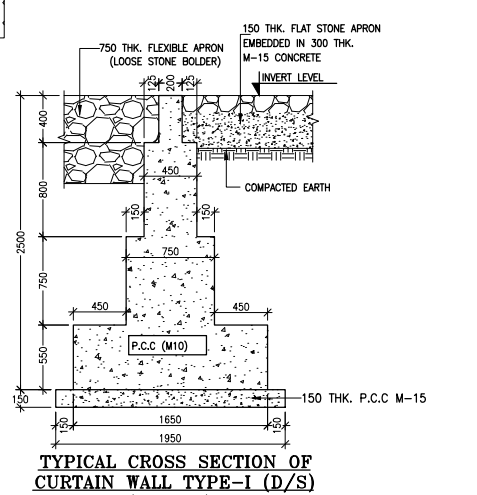
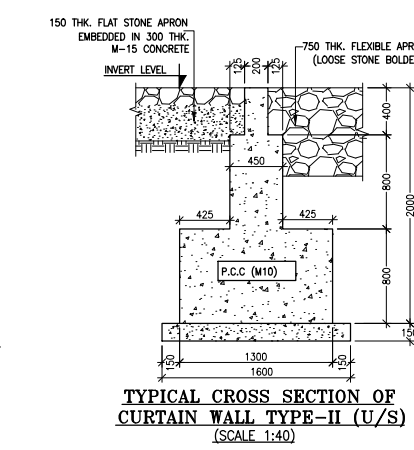


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3/55/0	5000	5000	650	700	700	600



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<p>CLIENT :</p> <p>Jhelum &amp; Tawi Flood Recovery Project 2nd Floor ERA Commercial Complex Rambagh Srinagar-190 009.</p>	<p>PROJECT :</p> <p>Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir <b>(Tutain Di Khoi Road)</b></p>	<p>DESIGN CONSULTANT:</p> <p><b>Eptisa Servicios de Ingenieria S.L.</b> Unit 1203, 12th Floor, Tower 1, PS Srijan Corporate Park, Plot No. 2, Block EP &amp; GP, Sector v, Salt Lake Kolkata - 700091, West Bengal Ph: 033-40347200 www.eptisa.com</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">DRAWN BY :</td> <td>PD</td> </tr> <tr> <td>DESIGNED BY :</td> <td>SD</td> </tr> <tr> <td>APPROVED BY :</td> <td>KG</td> </tr> <tr> <td>SCALE :</td> <td>AS SHOWN</td> </tr> </table>	DRAWN BY :	PD	DESIGNED BY :	SD	APPROVED BY :	KG	SCALE :	AS SHOWN
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SCALE :	AS SHOWN										
			<p>TITLE :</p> <p>TENTATIVE GENERAL ARRANGEMENT DRAWING OF BRIDGE AT CH. 7+300</p> <p>DRG. NO. : EPTISA/JTFRP/DPR/J&amp;K/GAD/7+300/01</p> <p>REVISION : R-0</p> <p>September 2019</p>								
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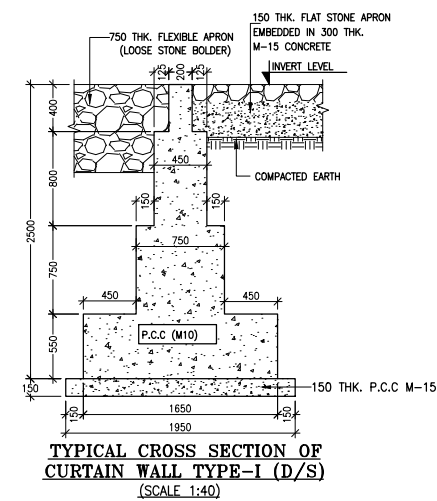
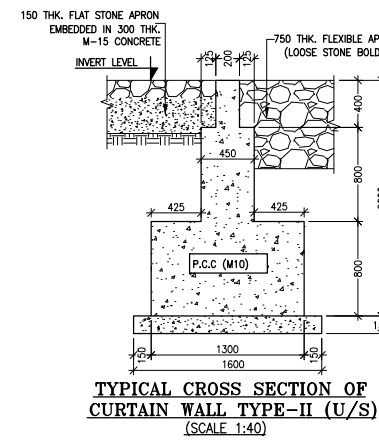
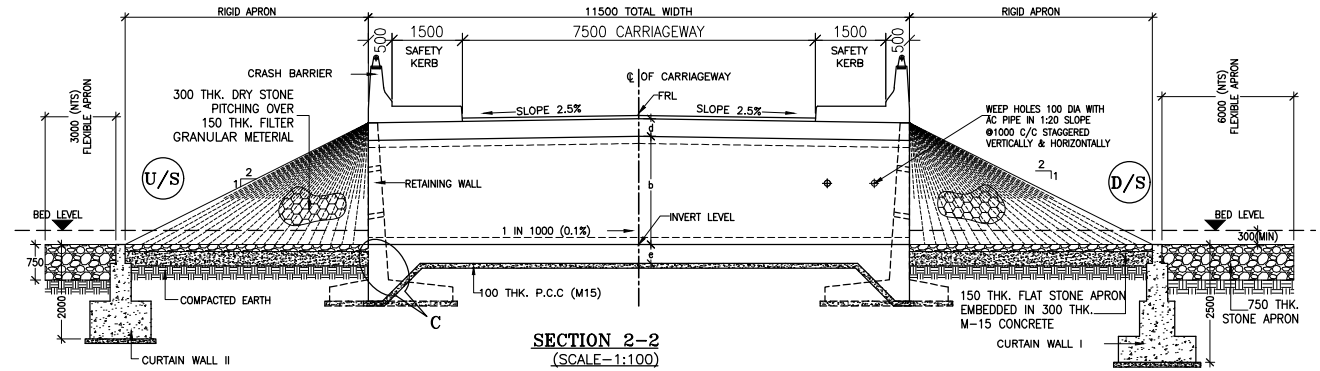
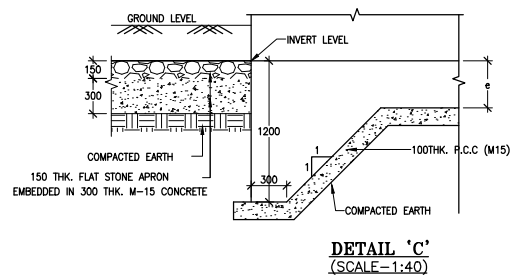
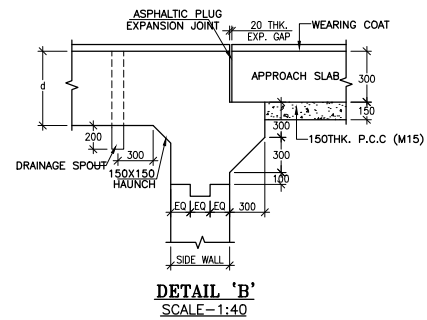
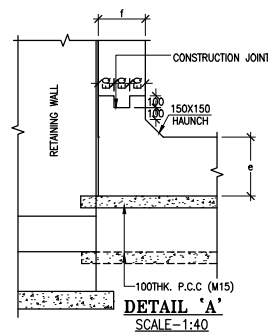
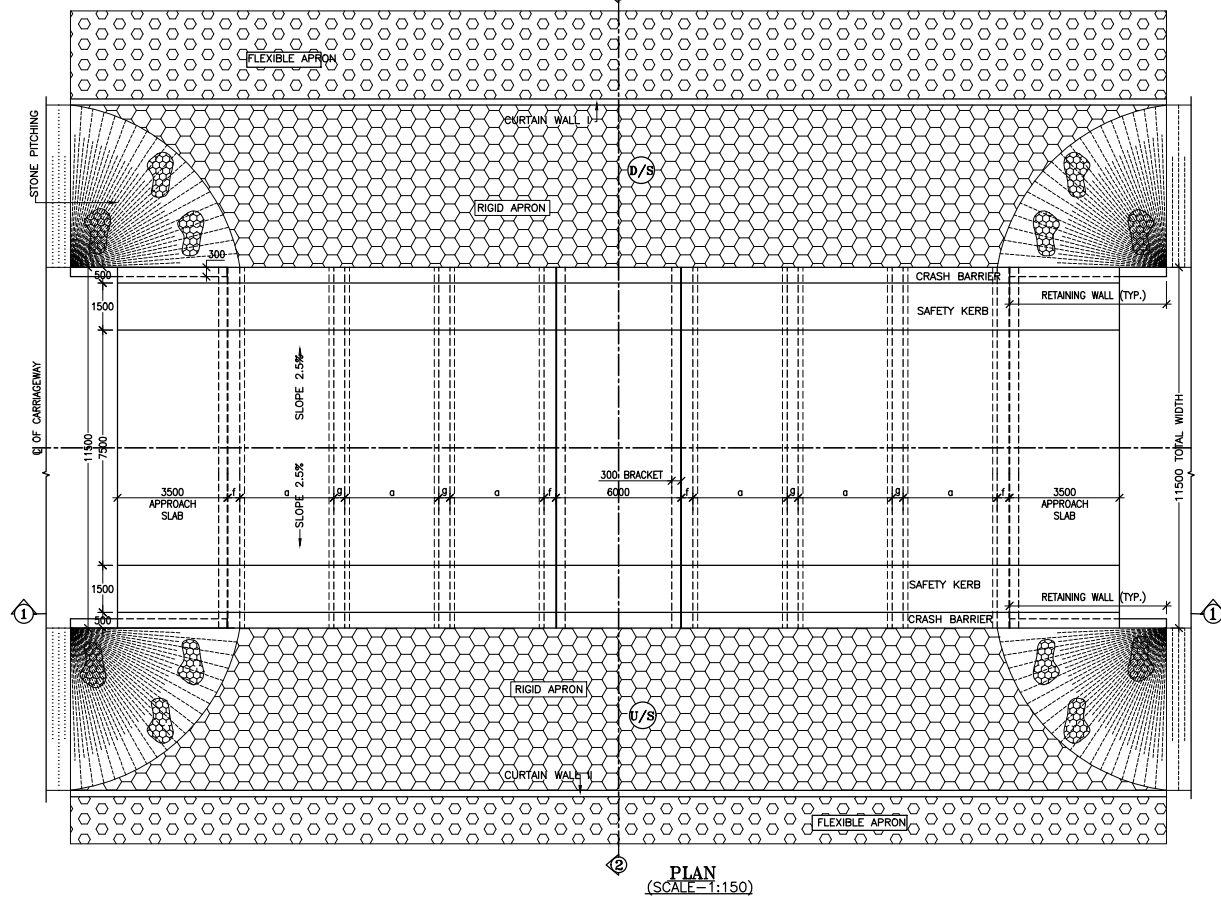
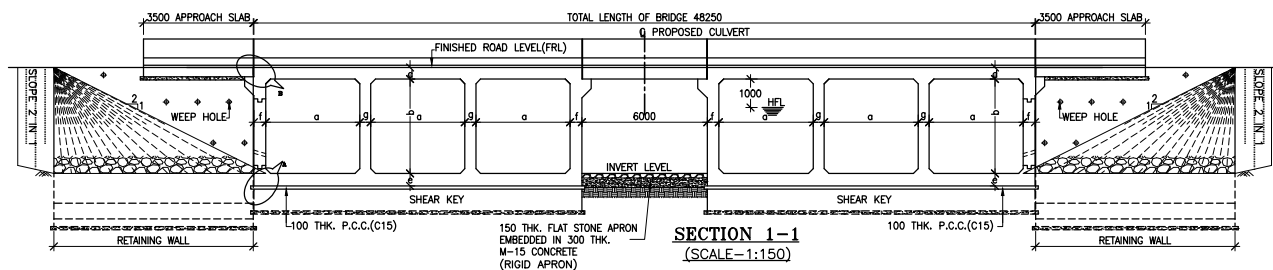


TABLE SHOWING SILENT DIMENSIONS

BOX CELL DESIGNATION	a (mm)	b (mm)	d (mm)	e (mm)	f (mm)	g (mm)
3/64/0	6000	4000	700	700	750	650


NOTES:-

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 Sector v, Salt Lake Kolkata - 700091,  
 West Bengal  
 Ph: 033-40347200  
 www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY : PD  
 DESIGNED BY : SD  
 APPROVED BY : KG  
 SCALE : AS SHOWN

TITLE :  
**TENTATIVE GENERAL ARRANGEMENT  
 DRAWING OF BRIDGE AT CH. 9+700**  
 DRG. NO. : EPTISA/JTRP/DPR/J&K/GAD/9+700/01  
 REVISION : R-0  
 September 2019

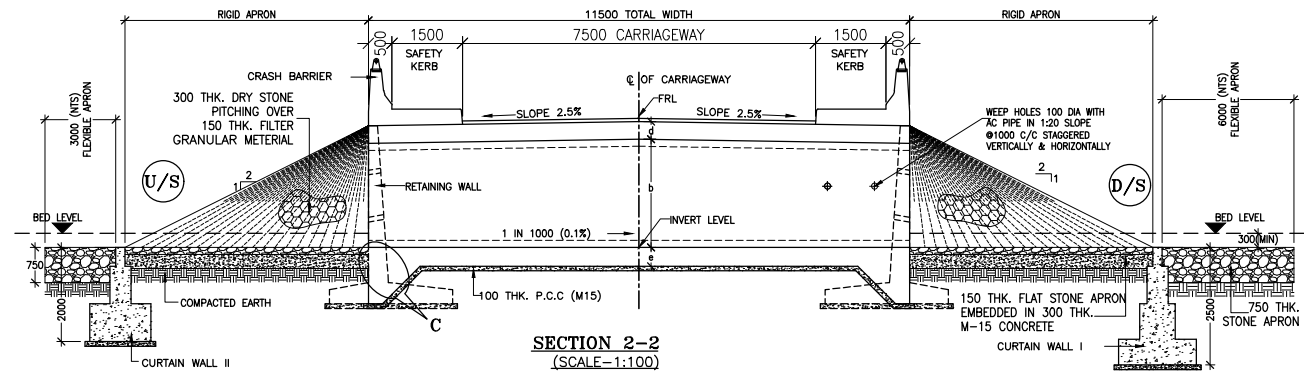
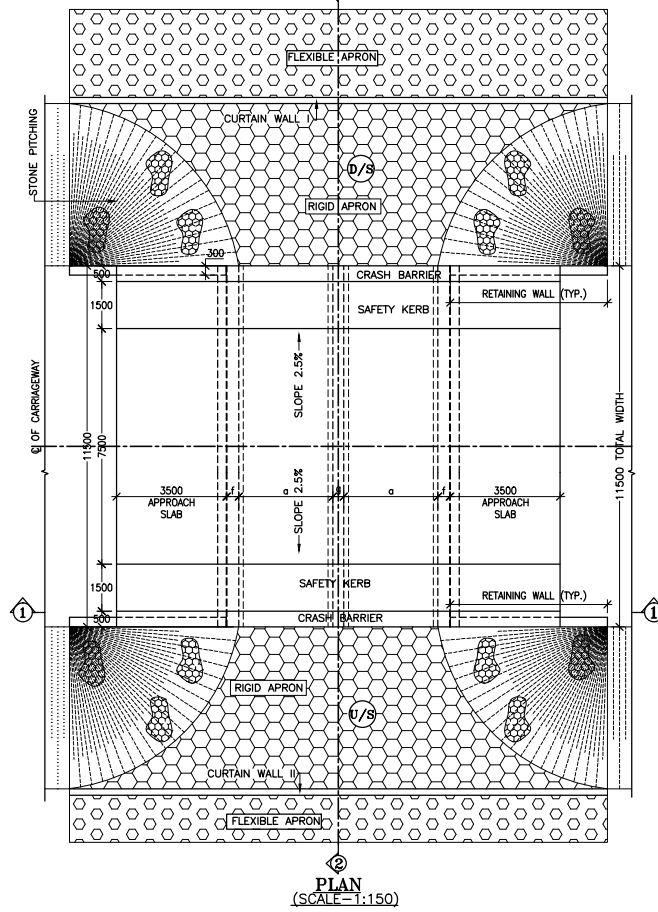
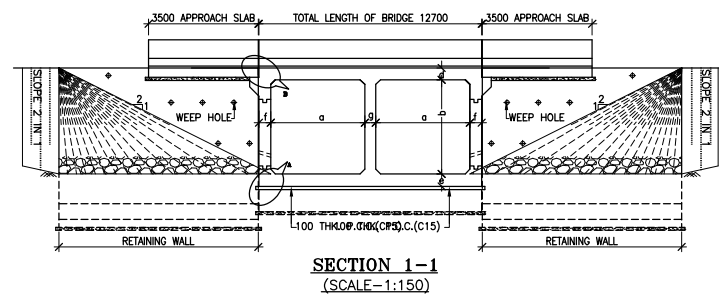
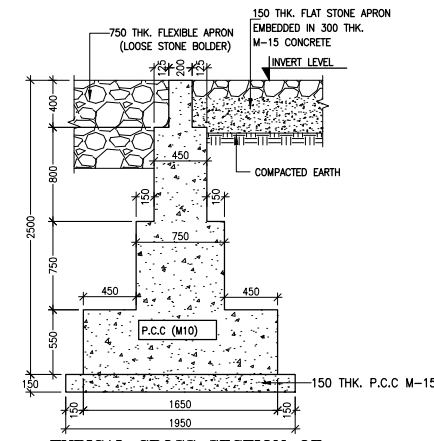
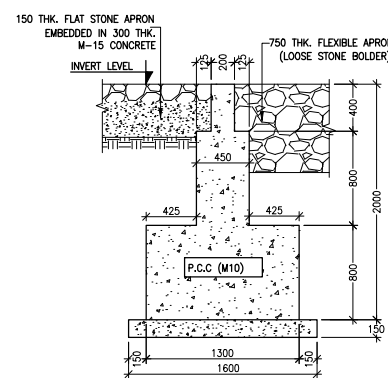
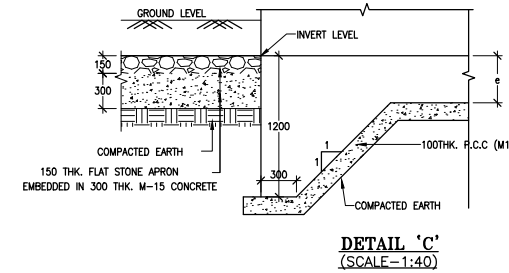
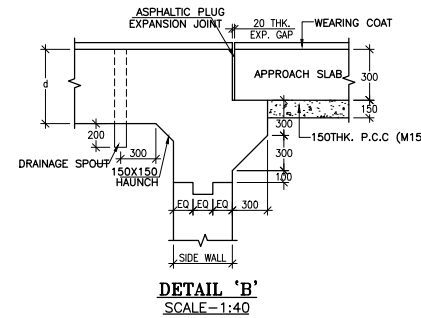
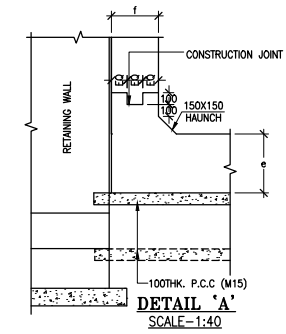


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TITLE :

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REVISION : R-0

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