

Government of Jammu & Kashmir



JHELUM & TAWI FLOOD RECOVERY PROJECT

Kashmir Province

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

Upgradation of Hamary-Sultanpora-Zalpora-Nowgam upto Sumbal Bridge)

(Detailed Project Report)

September 2019



ROAD DRAWINGS

≡ LIST OF DRAWINGS ≡

LIST OF DRAWINGS FOR ROAD

Sl. No.	Descriptions	Drawing No.	No.of Sheet
(A)	ROAD WORKS		
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 to 04	04
5.	Strip Plan	EPTISA/JTFRP/DPR/J&K/SP-01 to 03	03
6.	Plan and Profile	EPTISA/JTFRP/DPR/J&K/PP-01 to 13	13
7.	Horizontal Alignment Report	EPTISA/JTFRP/DPR/J&K/HAR-01 to 04	04
8.	Vertical Alignment Report	EPTISA/JTFRP/DPR/J&K/VAR-01 to 02	02
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10.	Detailed Cross Section	EPTISA/JTFRP/DPR/J&K/DCS-01 to 21	21
11.	Utility Relocation Plan-(For Electricity Department)	EPTISA/JTFRP/DPR/J&K/URP-01 to 13	13
12.	Utility Relocation Plan-(For Telephone Department)	EPTISA/JTFRP/DPR/J&K/URP-01 to 13	13
13.	Utility Relocation Plan-(For Water Department)	EPTISA/JTFRP/DPR/J&K/URP-01 to 13	13
14.	Tree Cutting	EPTISA/JTFRP/DPR/J&K/TC-01 to 13	13
15.	<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
16.	<i>GIS Mapping</i>		04
17.	Details of PCC Retaining Wall	EPTISA/JTFRP/DPR/J&K/RW-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

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
**(Upgradation of Hamary-Sultanpora-Zalpura-Nowgam
upto Sumbal Bridge)**

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


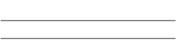


























































September 2019








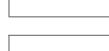






≡ LEGEND, ABBREVIATIONS & GENERAL NOTES ≡

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




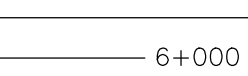
1. All angles are in degree (°) – minute (') – second (") format.
2. All chainages are in kilometres and all levels are in meters unless otherwise specified.
3. All the co-ordinates (X, Y) are with respect to GPS values (established for project road at 2 km interval).
4. Details shown in the plans are 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

Proposed Center Line	
Edge of Carriageway	
Edge of Unpaved Shoulder	
Proposed Chainage	

B. PROFILE

Finished Grade Line	
Existing Grade Line	

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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/JTRP/DPR/J&K/LEGEND/01

REVISION : R-1

September 2019



- Project Road Stretch
- National Highway
- Other Roads



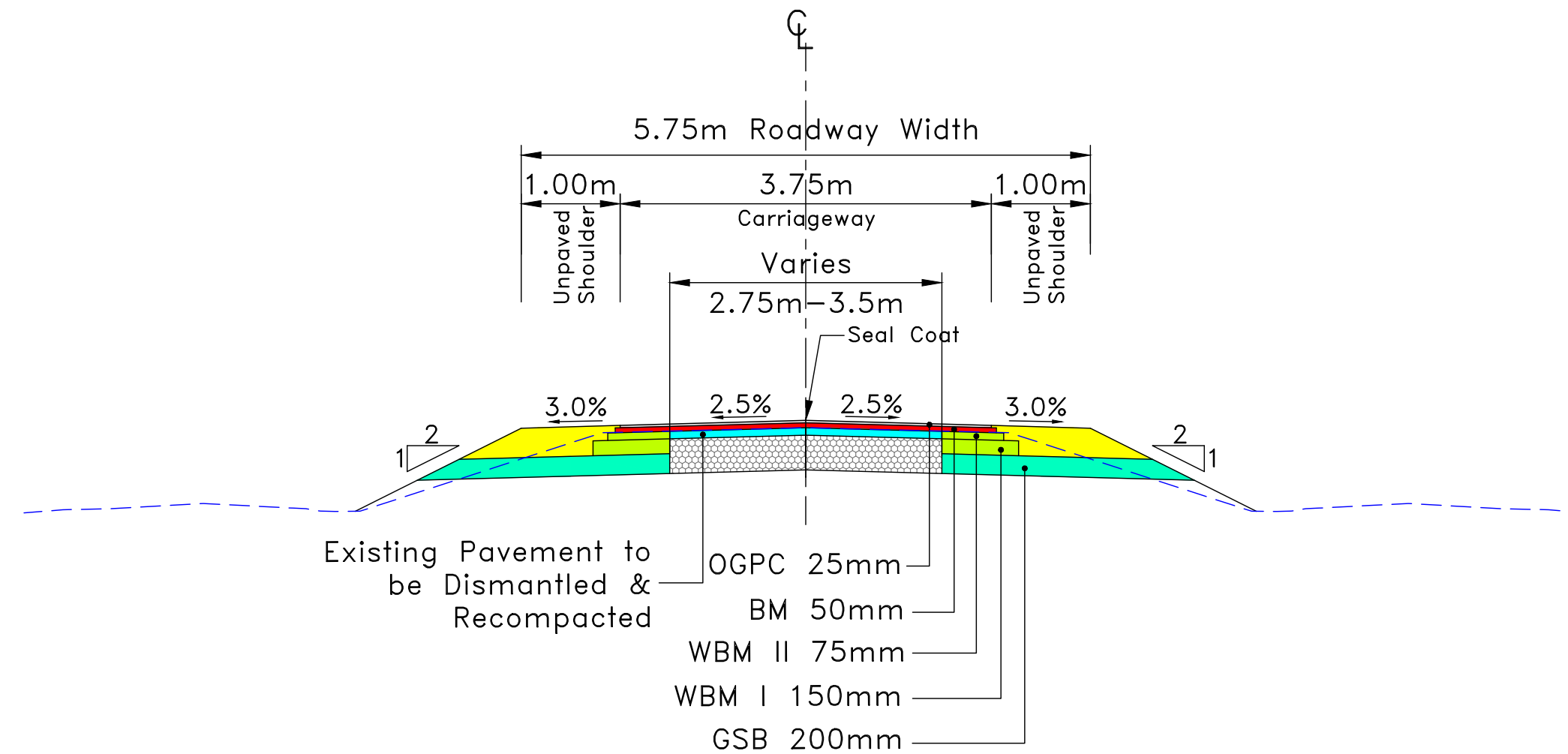
**JEHLUM & TAWI
FLOOD RECOVERY PROJECT**

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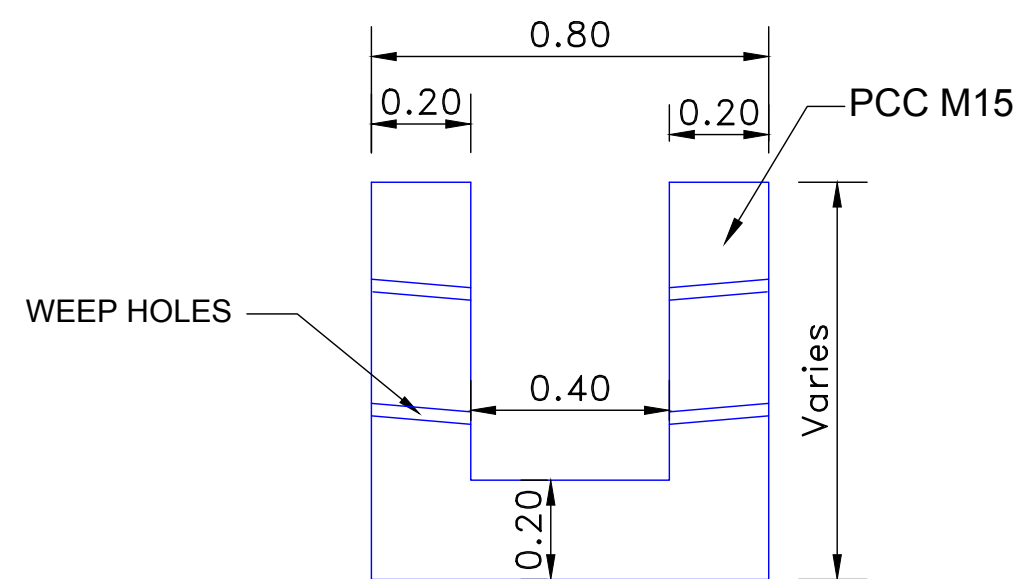
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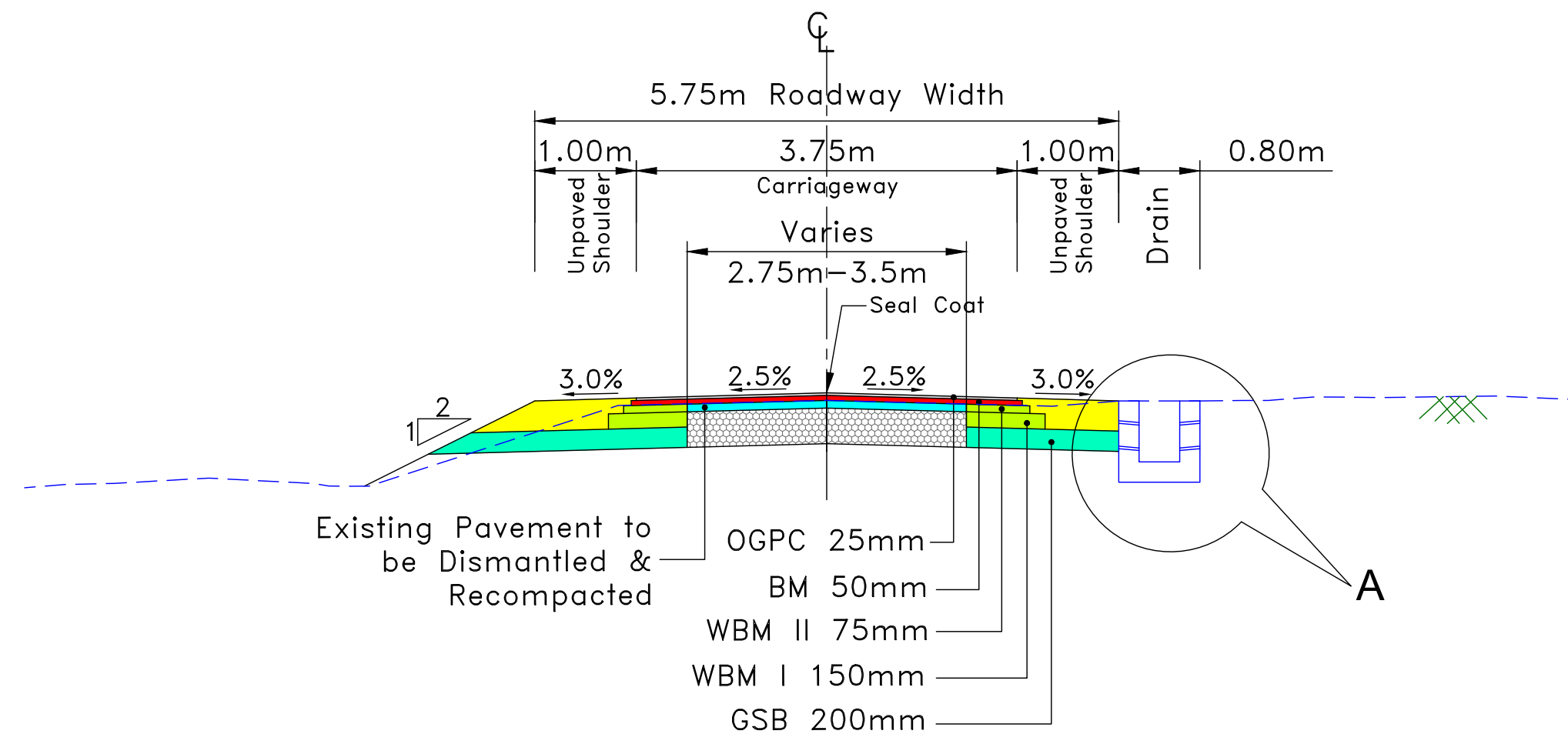
≡ TYPICAL CROSS SECTIONS ≡



TYPE - 1 : TYPICAL CROSS SECTION OF SINGLE LANE CARRIAGEWAY AT CONCENTRIC WIDENING STRETCH



Detail -A
Typical Lined Drain

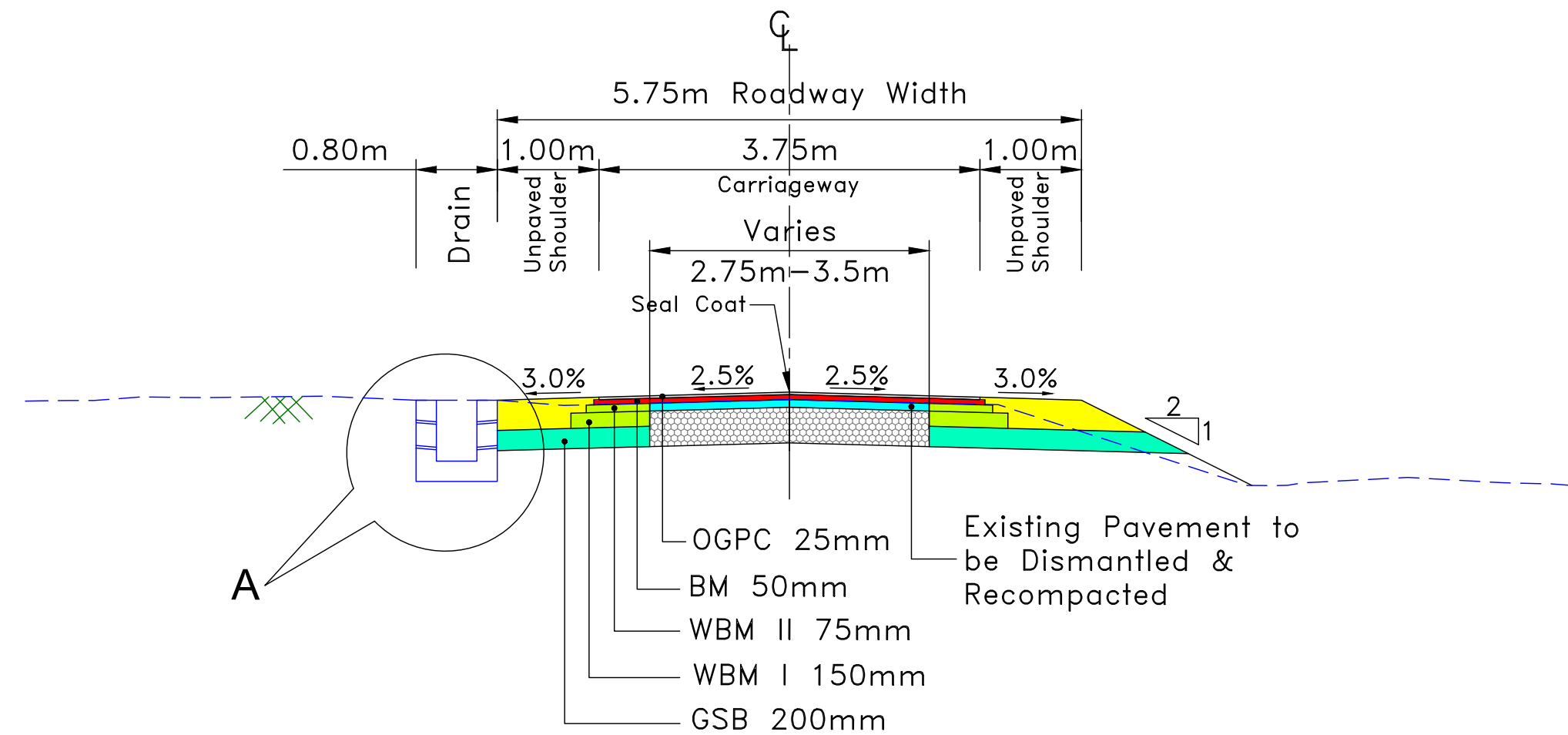


TYPE - 2 : TYPICAL CROSS SECTION OF SINGLE LANE CARRIAGEWAY AT CONCENTRIC WIDENING STRETCH WITH RIGHT SIDE OPEN DRAIN

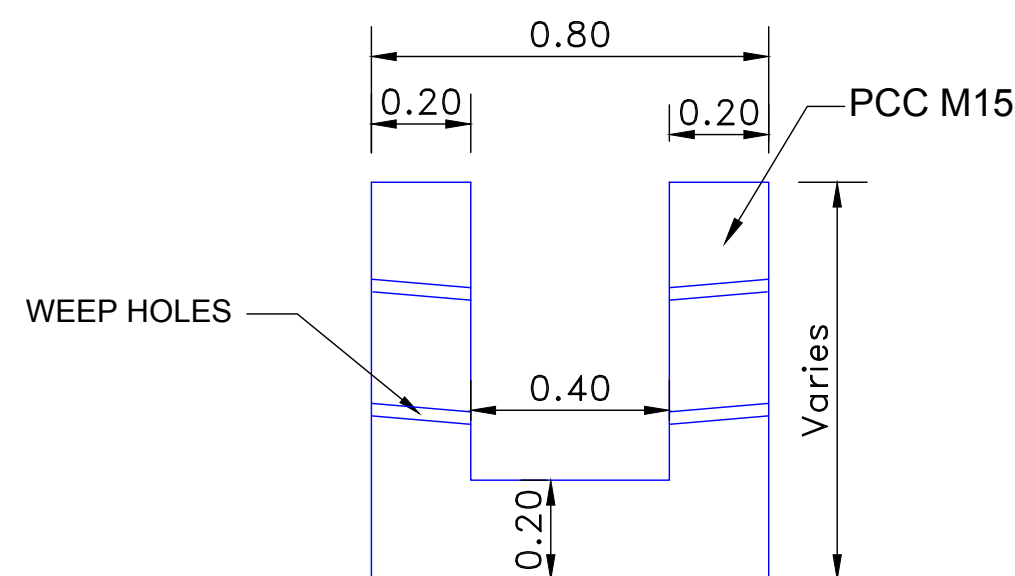
Note:

- Existing Bituminous layer to dismantled and re-compacted.
- Below Bituminous Macadam, layer thickness (WBM-maximum 225mm/GSB) shall be decided based on re-compacted level and FRL of the proposed road.

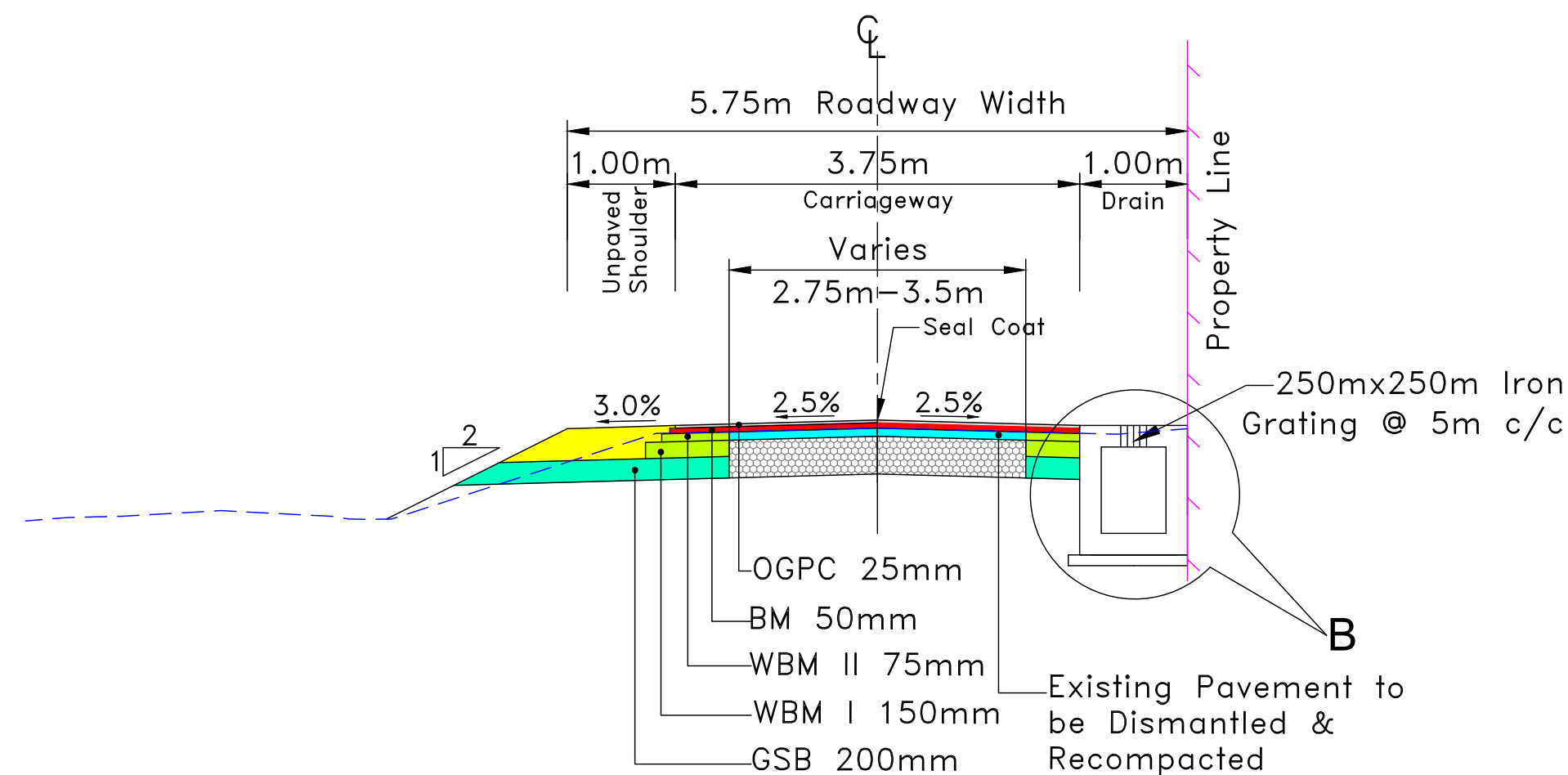
<div>CLIENT :</div> <div></div> <div>Jhelum Tawi Flood Recovery Project 2nd Floor ERA Commercial Complex Rambagh Srinagar-190 009.</div>	<div>PROJECT :</div> <div>Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir <u>(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam upto Sumbal Bridge)</u></div>	<div>DESIGN CONSULTANT:</div> <div>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</div>				DRAWN BY : SD	TITLE : TYPICAL CROSS SECTION	
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			REV.	DATE	DESCRIPTION			



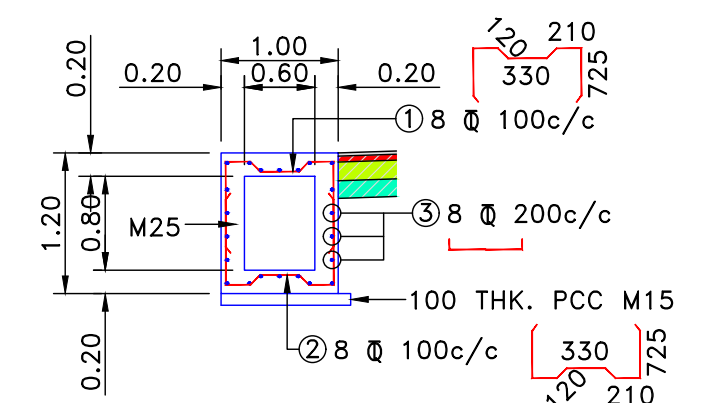
TYPE - 3 : TYPICAL CROSS SECTION OF SINGLE LANE CARRIAGEWAY AT CONCENTRIC WIDENING STRETCH WITH LEFT SIDE OPEN DRAIN



**Detail -A
Typical Lined Drain**



TYPE - 4 : TYPICAL CROSS SECTION OF SINGLE LANE CARRIAGEWAY AT CONCENTRIC WIDENING STRETCH WITH RIGHT SIDE COVER DRAIN



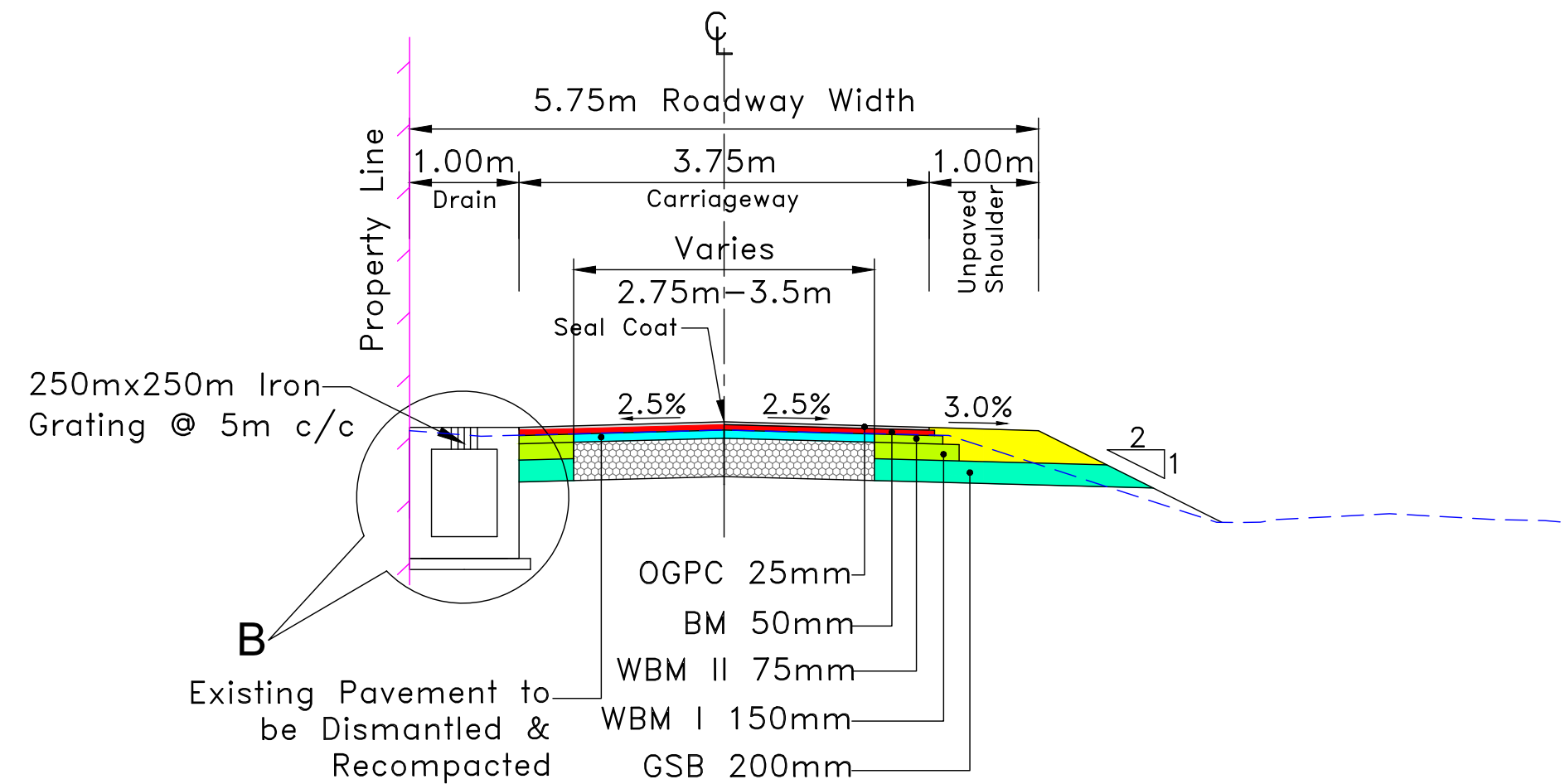
**DETAIL-B
CROSS SECTION & R/F DETAILS
OF ROAD DRAIN**

- NOTES :**
1. ALL DIMENSIONS ARE IN MM. UNLESS OTHERWISE MENTIONED.
 2. GRADE OF CONCRETE :-
STRUCTURE - M25
LEVELING COURSE(P.C.C) - M15
 3. GRADE OF STEEL Fe-500 AS PER I.S.-1786.
 4. CLEAR COVER SHALL BE 40MM.

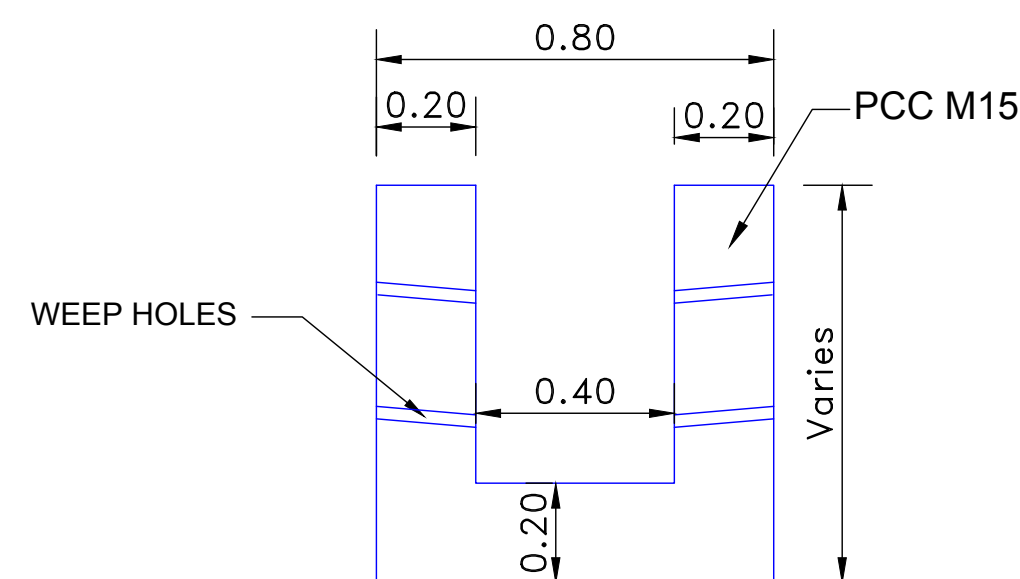
Note:

1. Existing Bituminous layer to dismantled and re-compacted.
2. Below Bituminous Macadam, layer thickness (WBM-maximum 225mm/GSB) shall be decided based on re-compacted level and FRL of the proposed road.

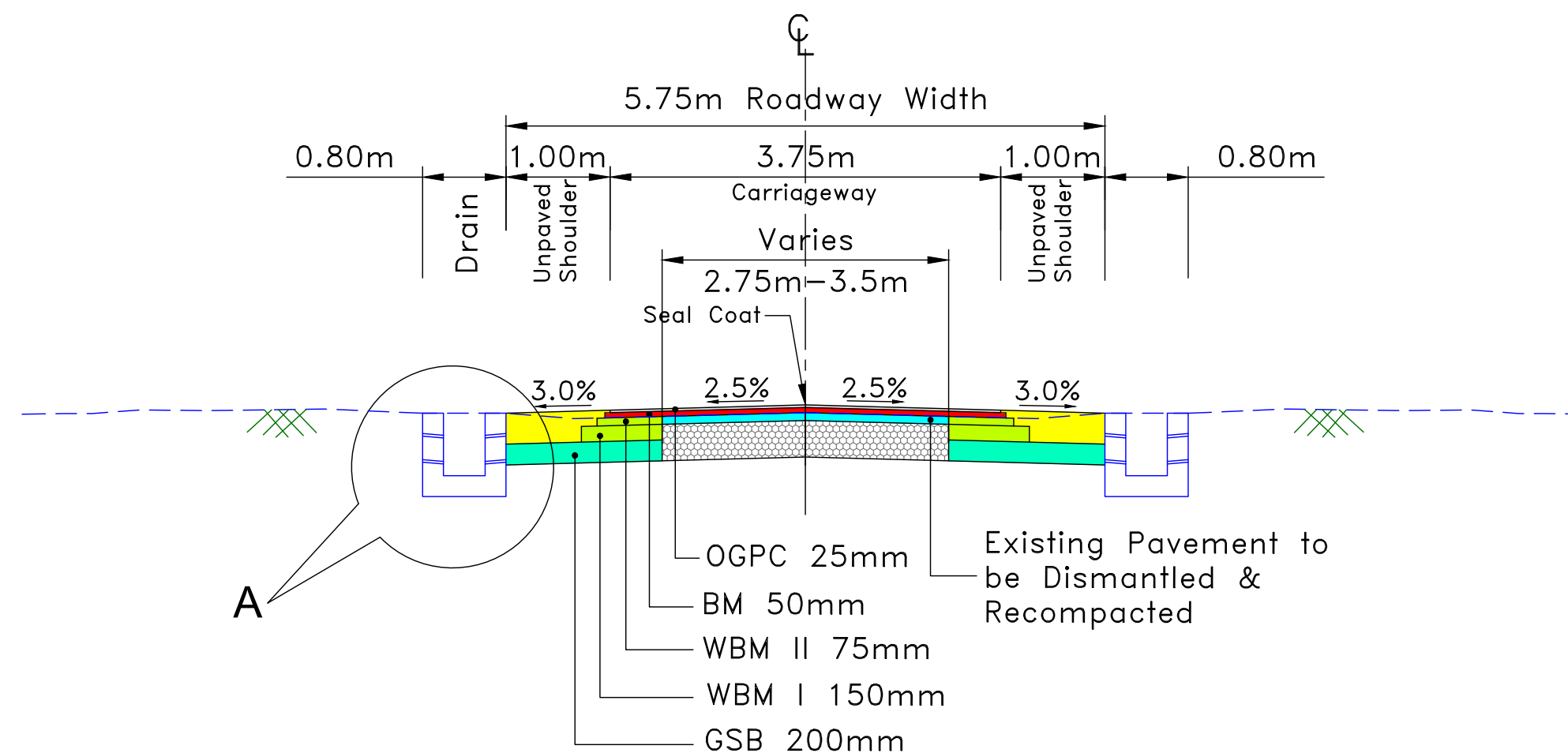
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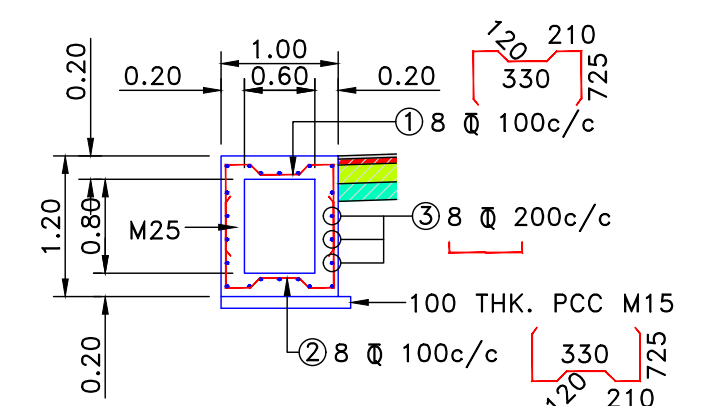
TYPE - 5 : TYPICAL CROSS SECTION OF SINGLE LANE CARRIAGEWAY AT CONCENTRIC WIDENING STRETCH WITH LEFT SIDE COVER DRAIN



Detail -A
Typical Lined Drain



TYPE - 6 : TYPICAL CROSS SECTION OF SINGLE LANE CARRIAGEWAY AT CONCENTRIC WIDENING STRETCH WITH BOTH SIDE OPEN DRAIN



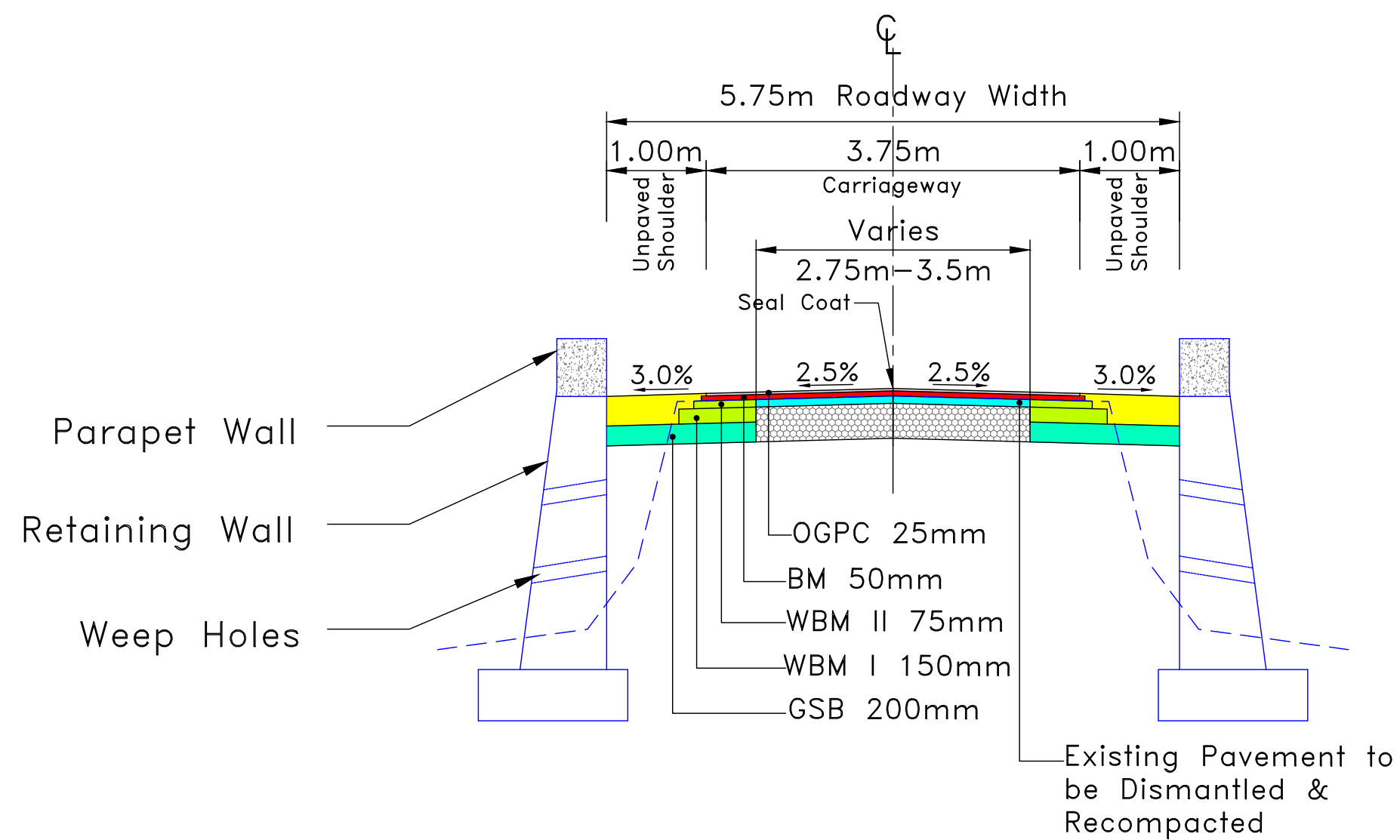
DETAIL-B
CROSS SECTION & R/F DETAILS
OF ROAD DRAIN

- NOTES :
1. ALL DIMENSIONS ARE IN MM. UNLESS OTHERWISE MENTIONED.
 2. GRADE OF CONCRETE :-
STRUCTURE - M25
LEVELING COURSE(P.C.C) - M15
 3. GRADE OF STEEL Fe-500 AS PER I.S.-1786.
 4. CLEAR COVER SHALL BE 40MM.

Note:

1. Existing Bituminous layer to dismantled and re-compacted.
2. Below Bituminous Macadam, layer thickness (WBM-maximum 225mm/GSB) shall be decided based on re-compacted level and FRL of the proposed road.

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						APPROVED BY : KG	REVISION : R-1	
			REV.	DATE	DESCRIPTION	SCALE : 1:80	September 2019	



TYPE - 7 : TYPICAL CROSS SECTION OF SINGLE LANE CARRIAGEWAY AT CONCENTRIC WIDENING STRETCH WITH BOTH SIDE RETAINING WALL

- Note:
- 1. Existing Bituminous layer to dismantled and re-compacted.
 - 2. Below Bituminous Macadam, layer thickness (WBM-maximum 225mm/GSB) shall be decided based on re-compacted level and FRL of the proposed road.

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

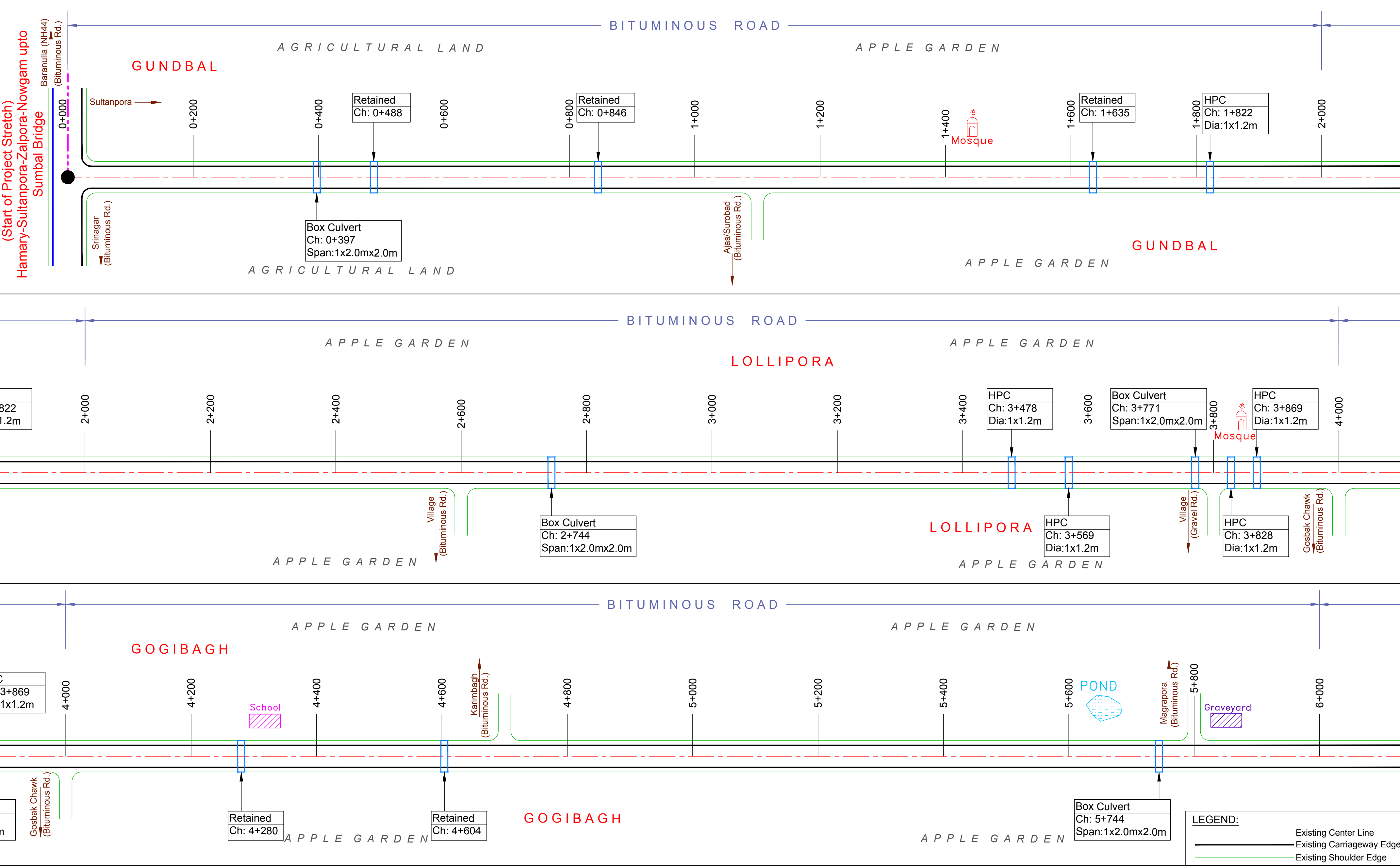
PROJECT :

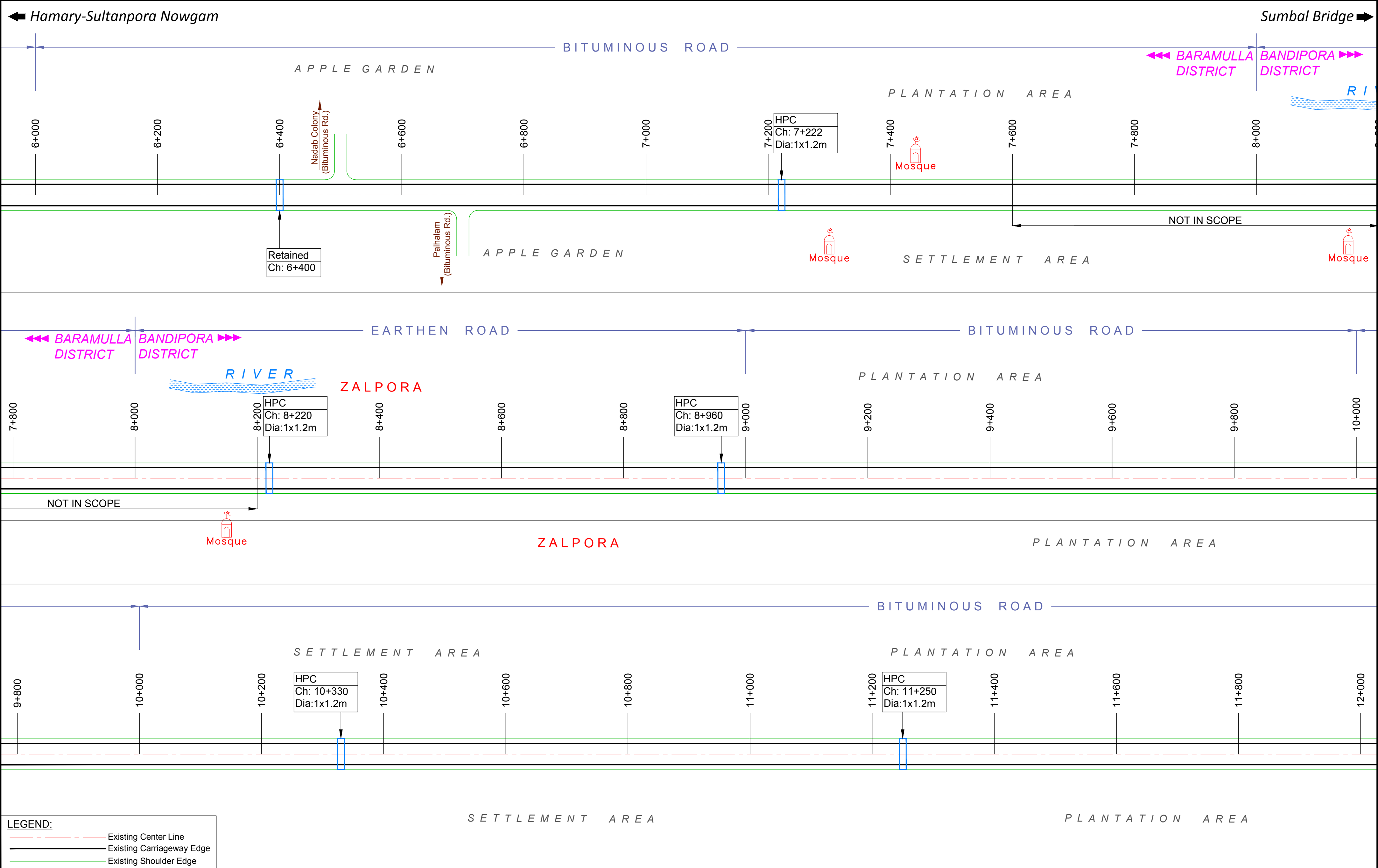
Consultancy Services for Preparing Detailed Project Report
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			DRAWN BY : SD	TITLE : TYPICAL CROSS SECTION	
			DESIGNED BY : SCK/MM		
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REV.	DATE	DESCRIPTION	SCALE : 1:80	REVISION : R-1	September 2019





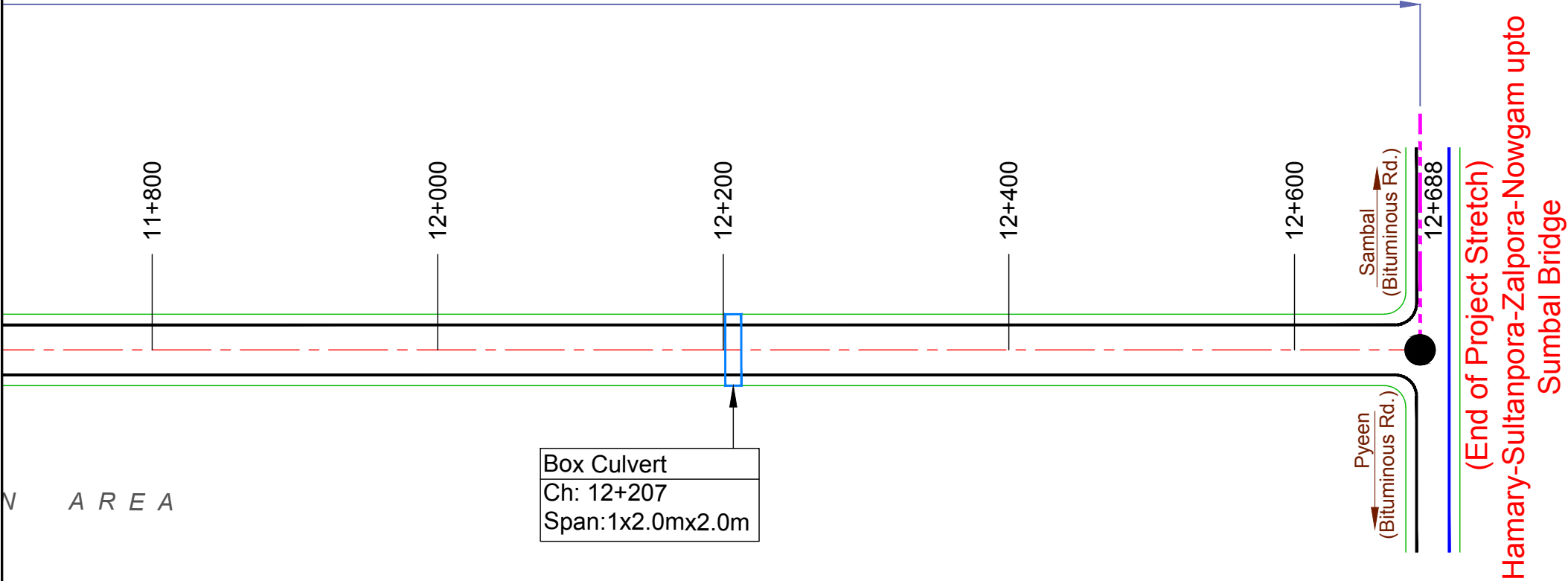
LEGEND:

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

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LONG SCALE:	0 25 50 75 100 (m)																									
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← Hamary-Sultanpora Nowgam

Sumbal Bridge →



LEGEND:

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- Existing Carriageway Edge
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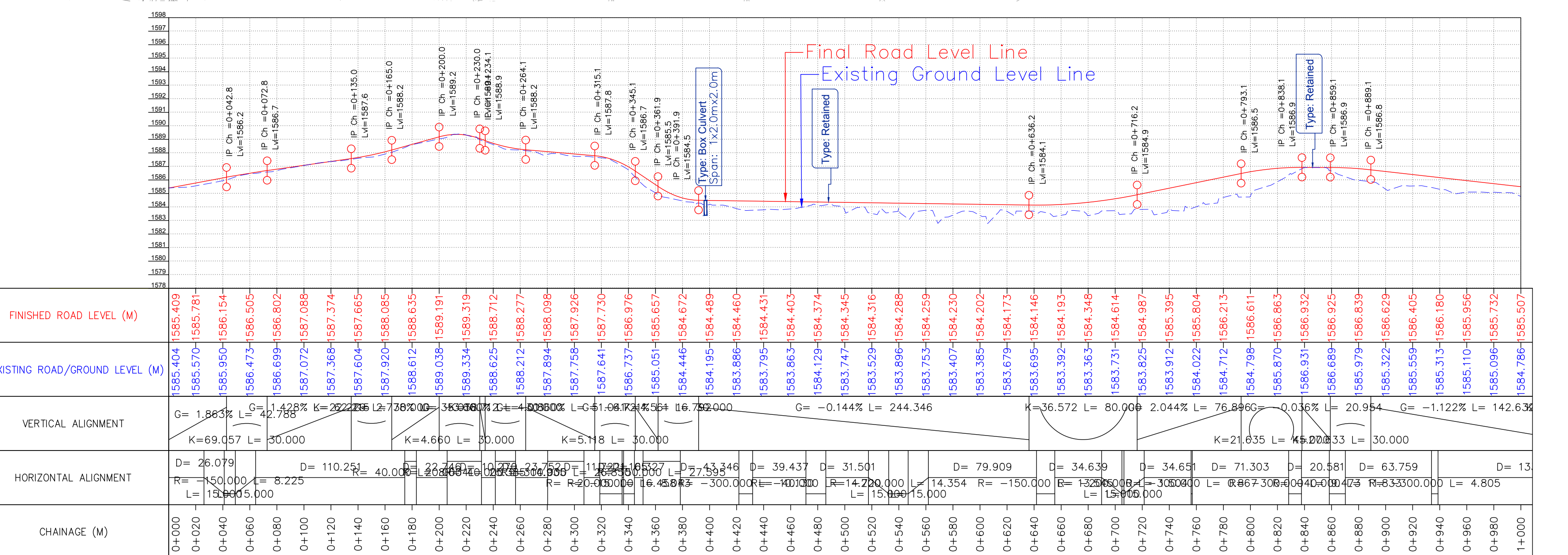


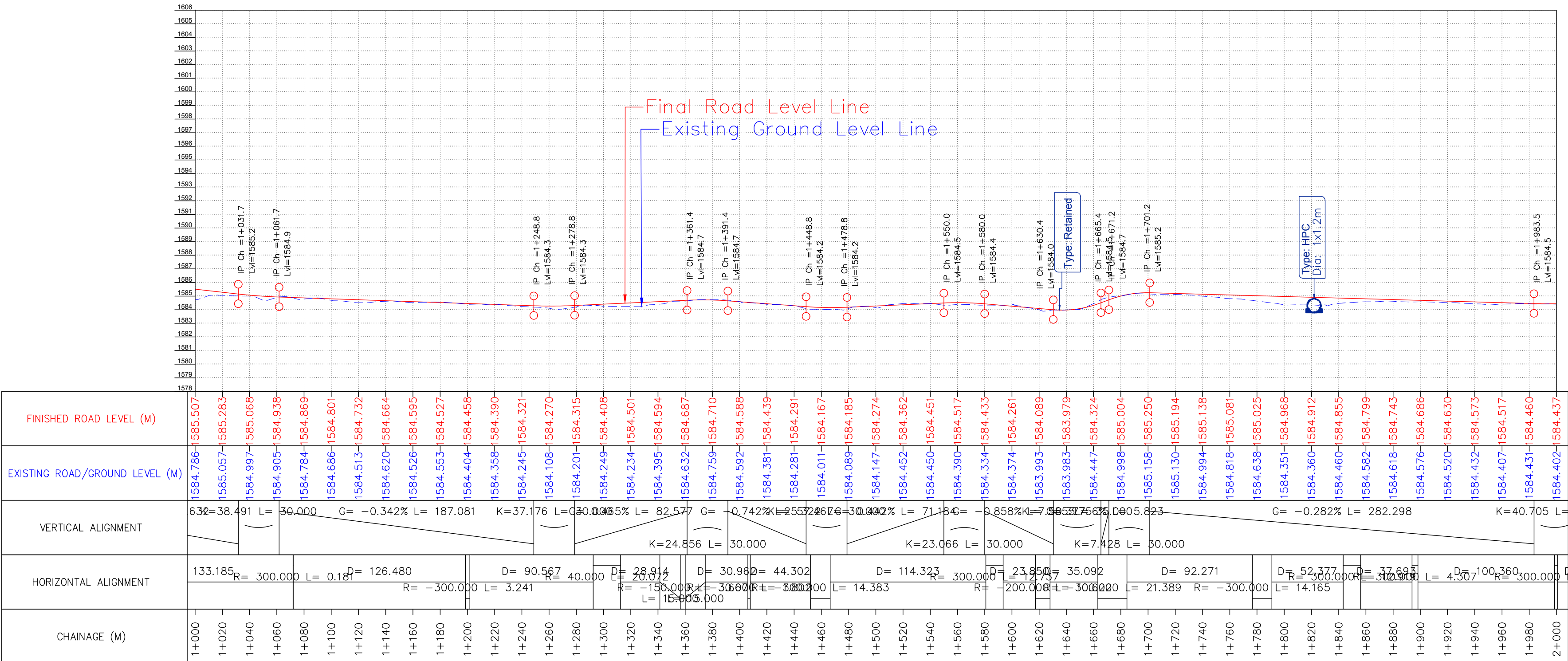
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REV.	DATE	DESCRIPTION

DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
LONG SCALE:	0 25 50 75 100 (m)
TRANS SCALE:	0 7 14 21 (m)

TITLE :	Strip Plan (Hamary-Sultanpora Nowgam to Sumbal Bridge)	
DRG. NO. :	EPTISA/JTFRP/DPR/J&K/SP/02	
REVISION : R-1	September 2019	





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REV.	DATE	DESCRIPTION

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

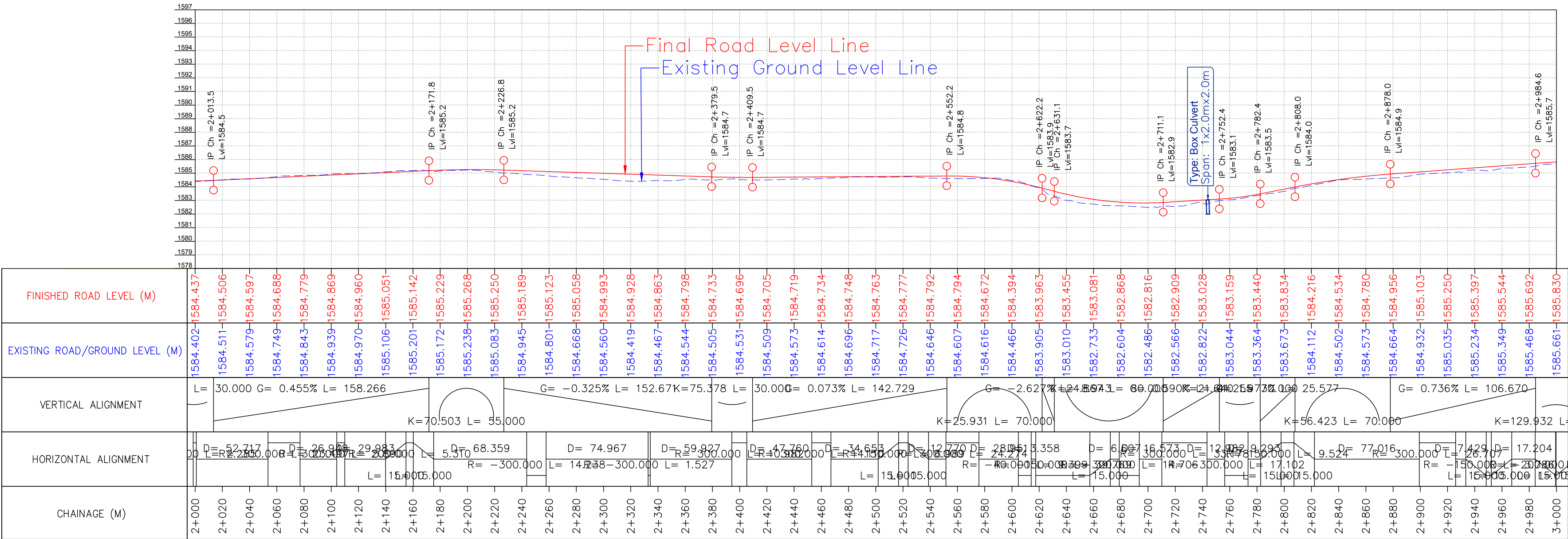
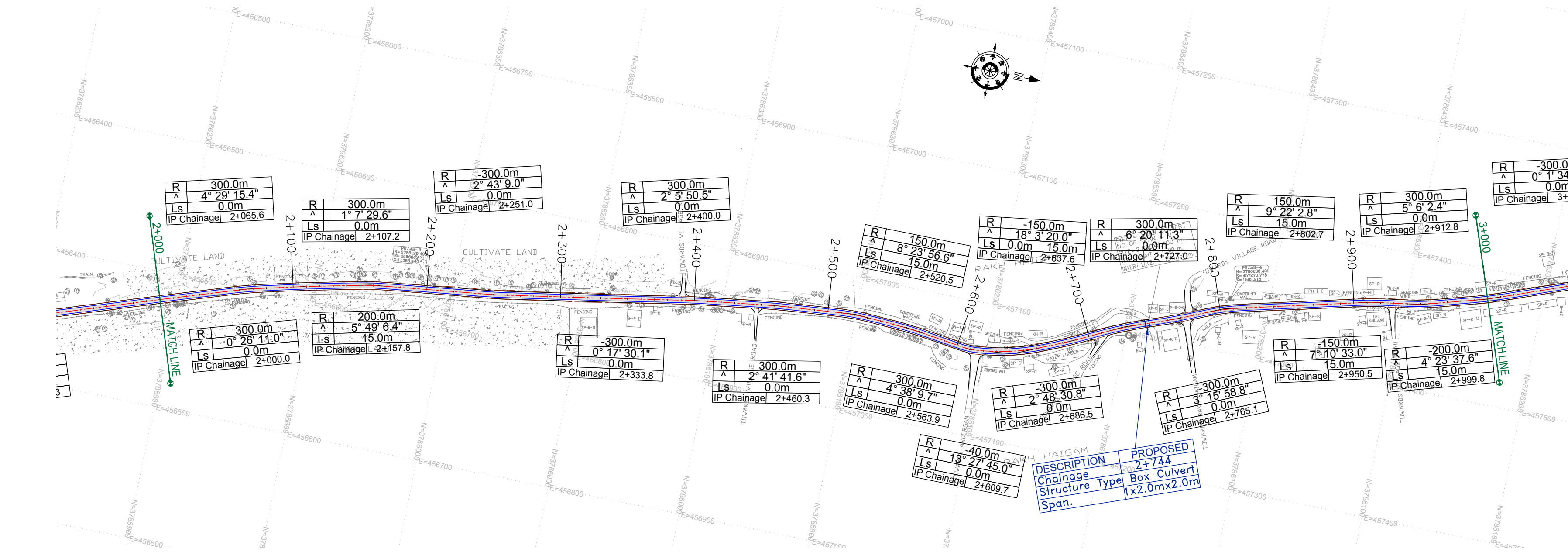
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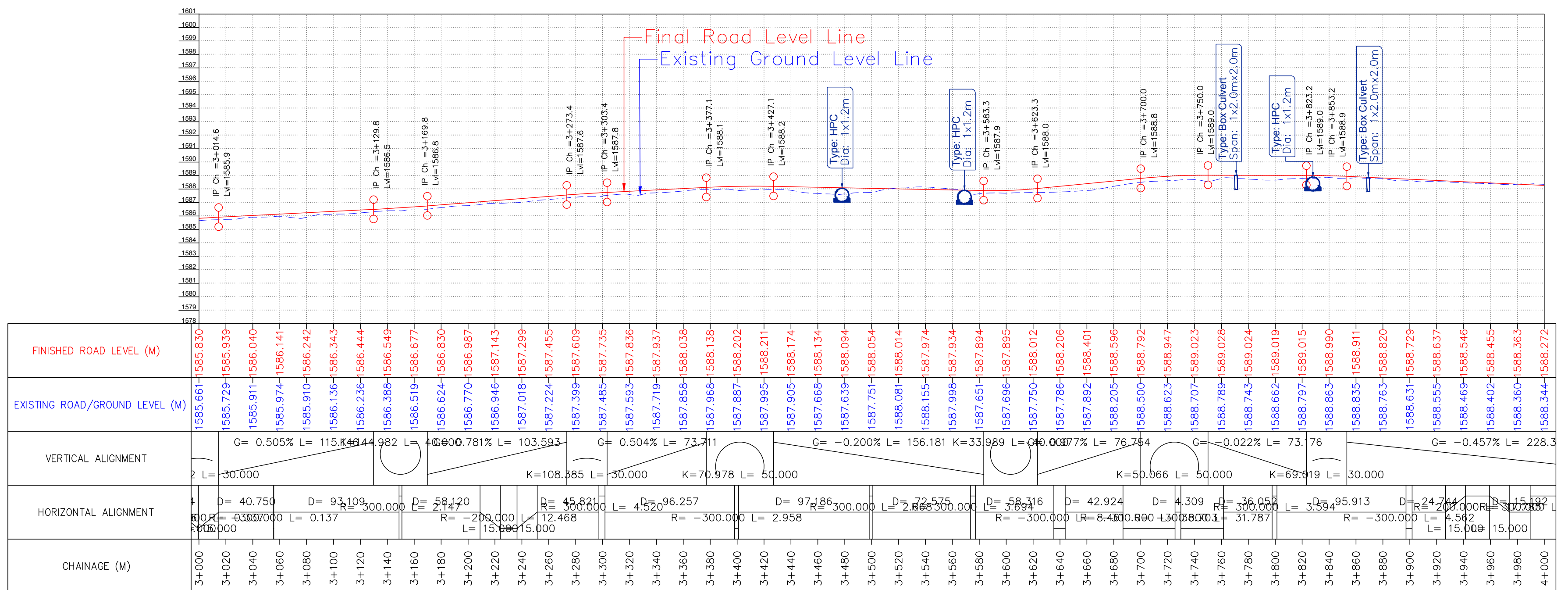
Plan & Profile
(km 1+000 to km 2+000)

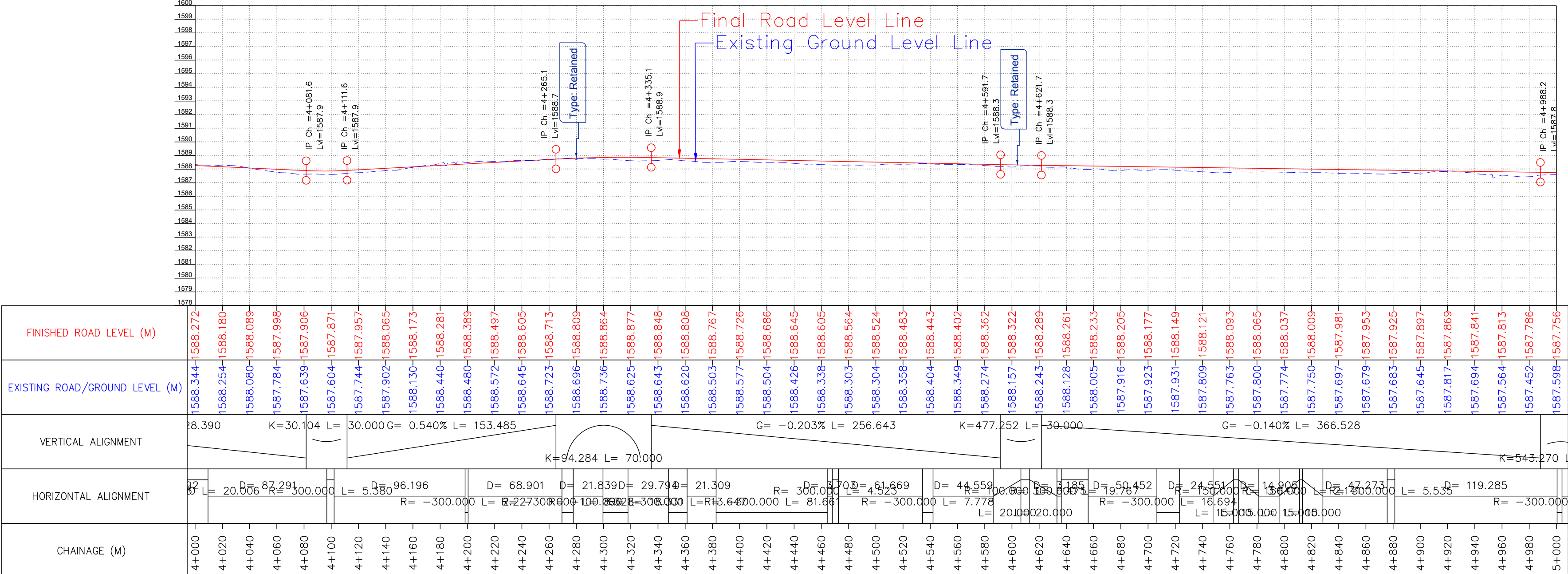
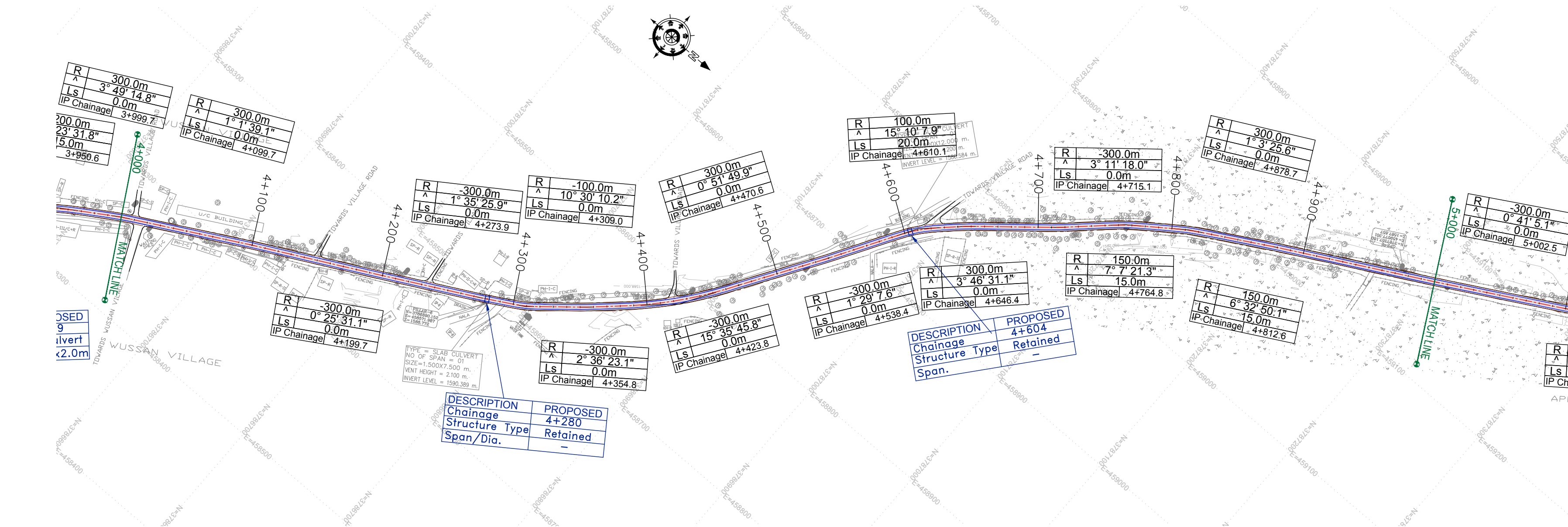
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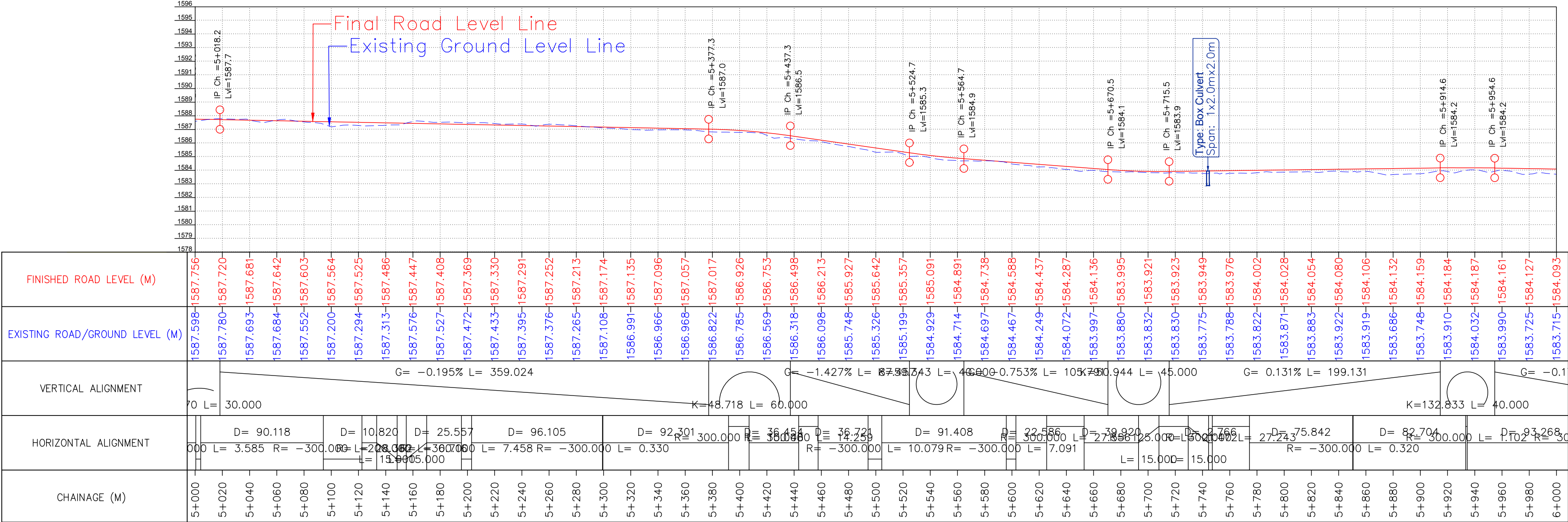
REVISION : R-1

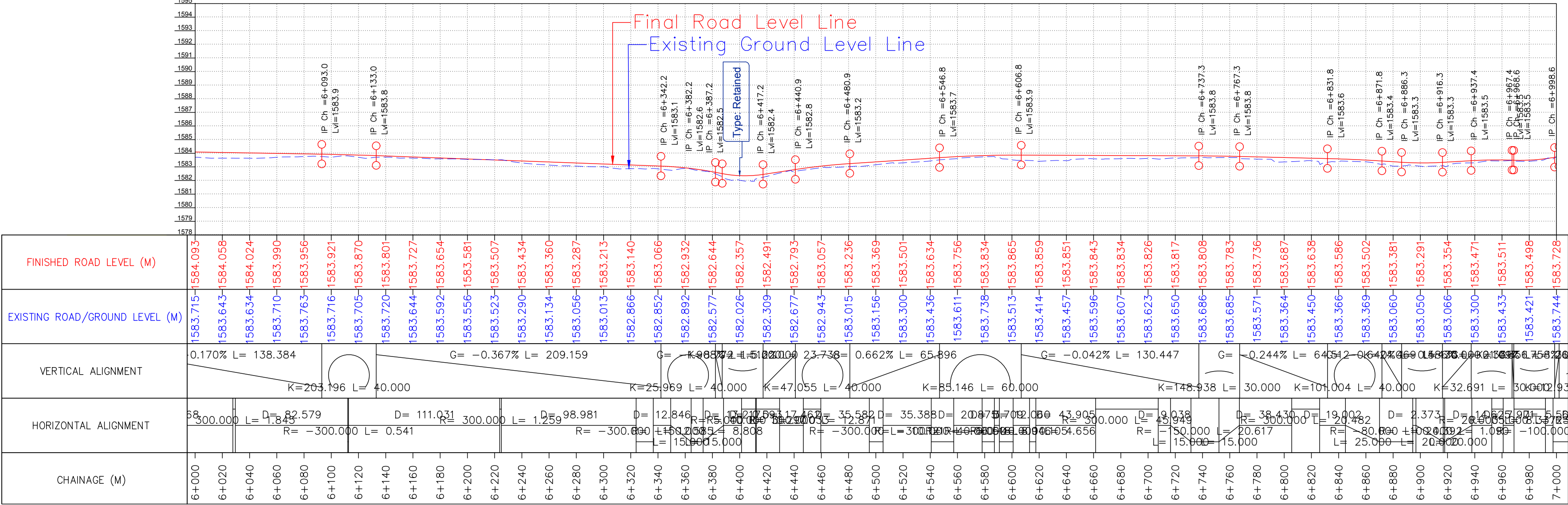
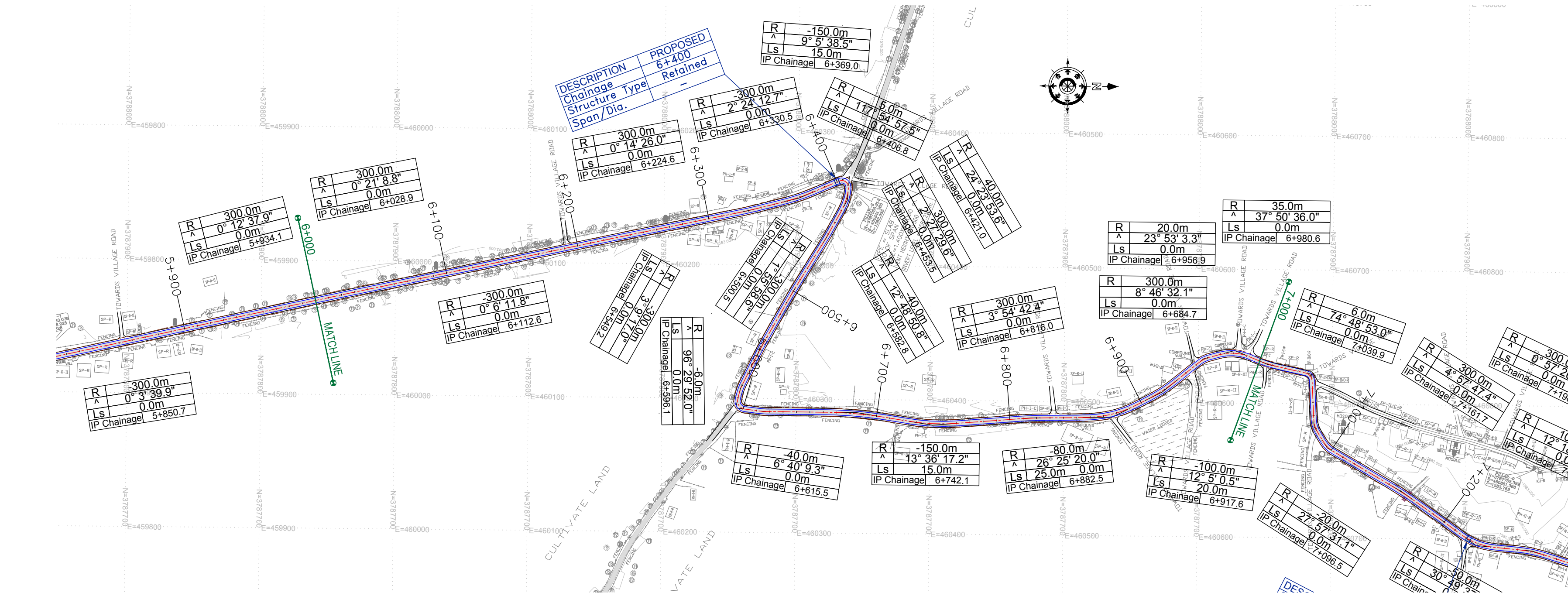
September 2019











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
**(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam
upto Sumbal Bridge)**

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

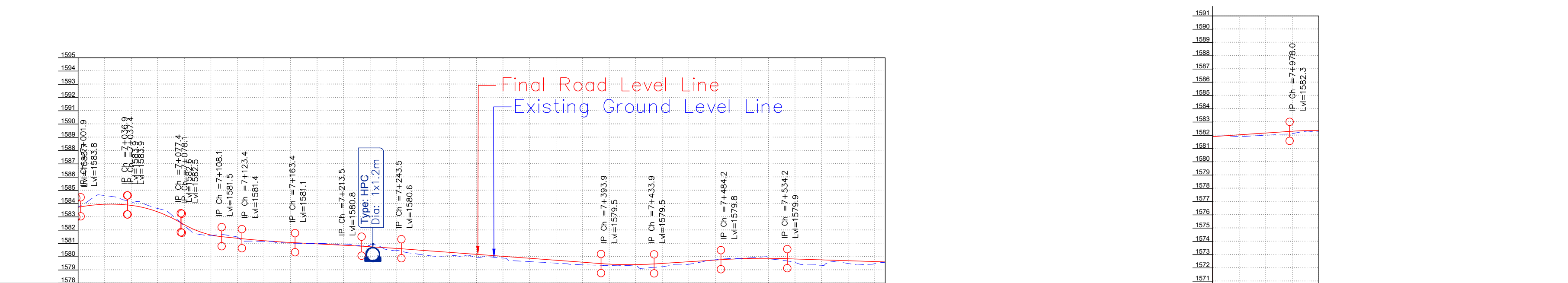
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Plan & Profile
(km 6+000 to km 7+000)

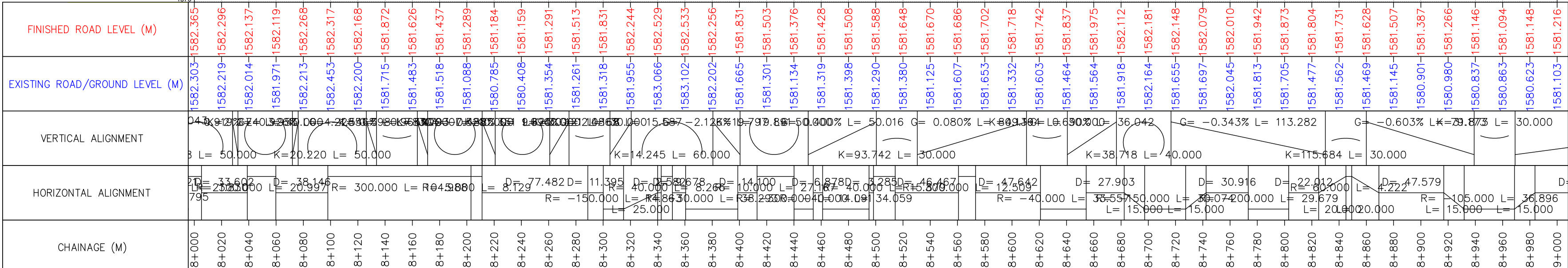
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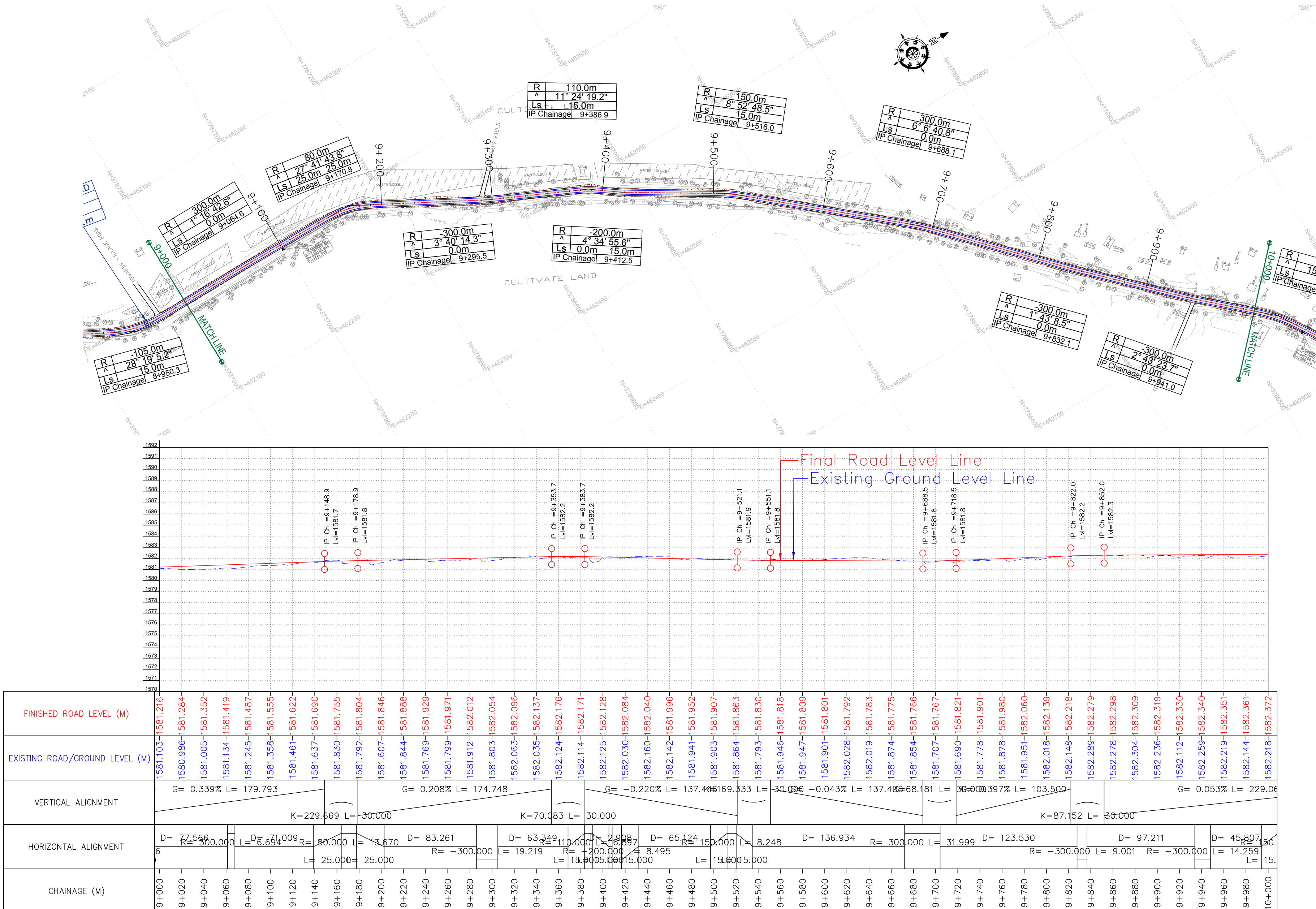
REVISION : R-1

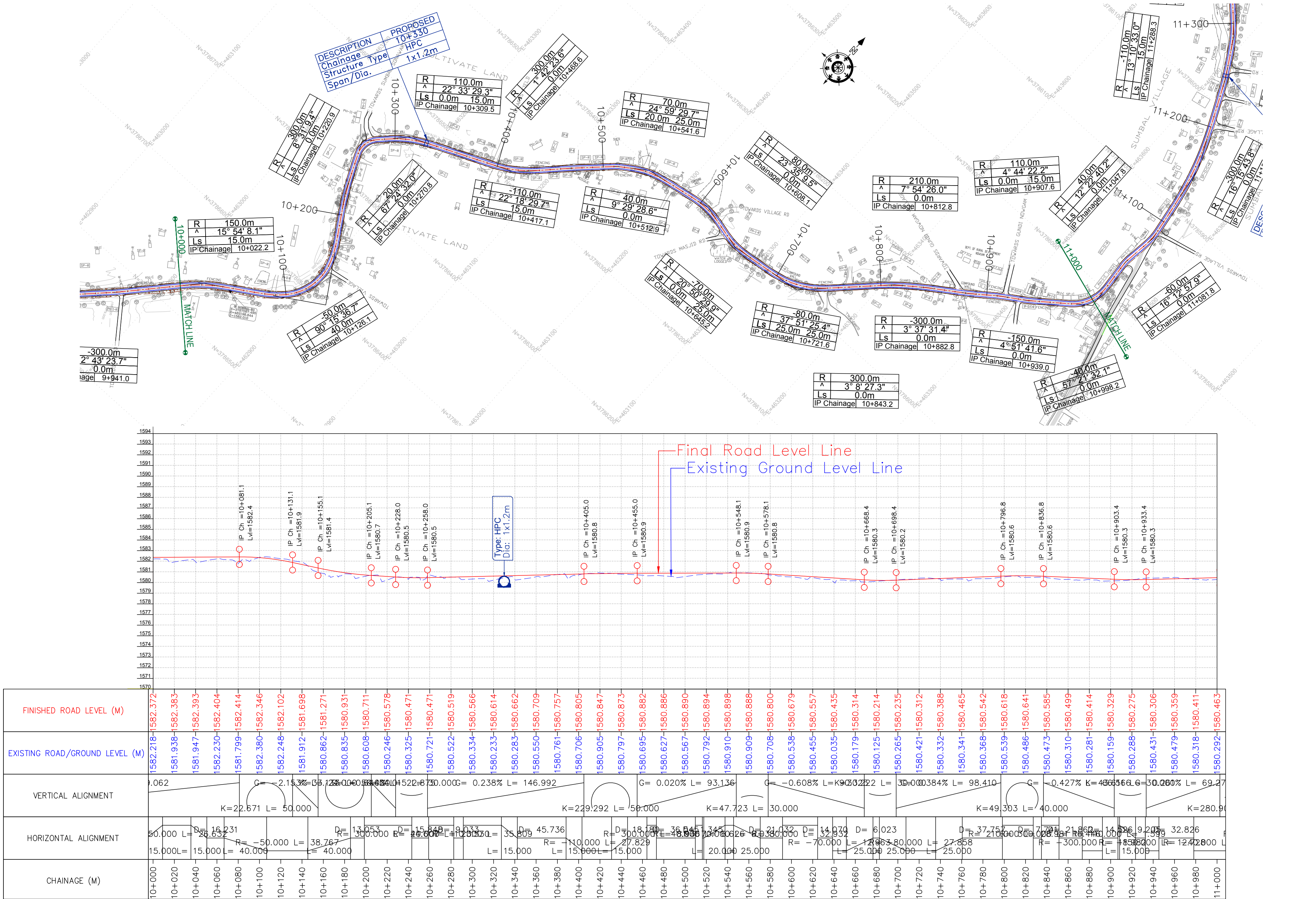
September 2019

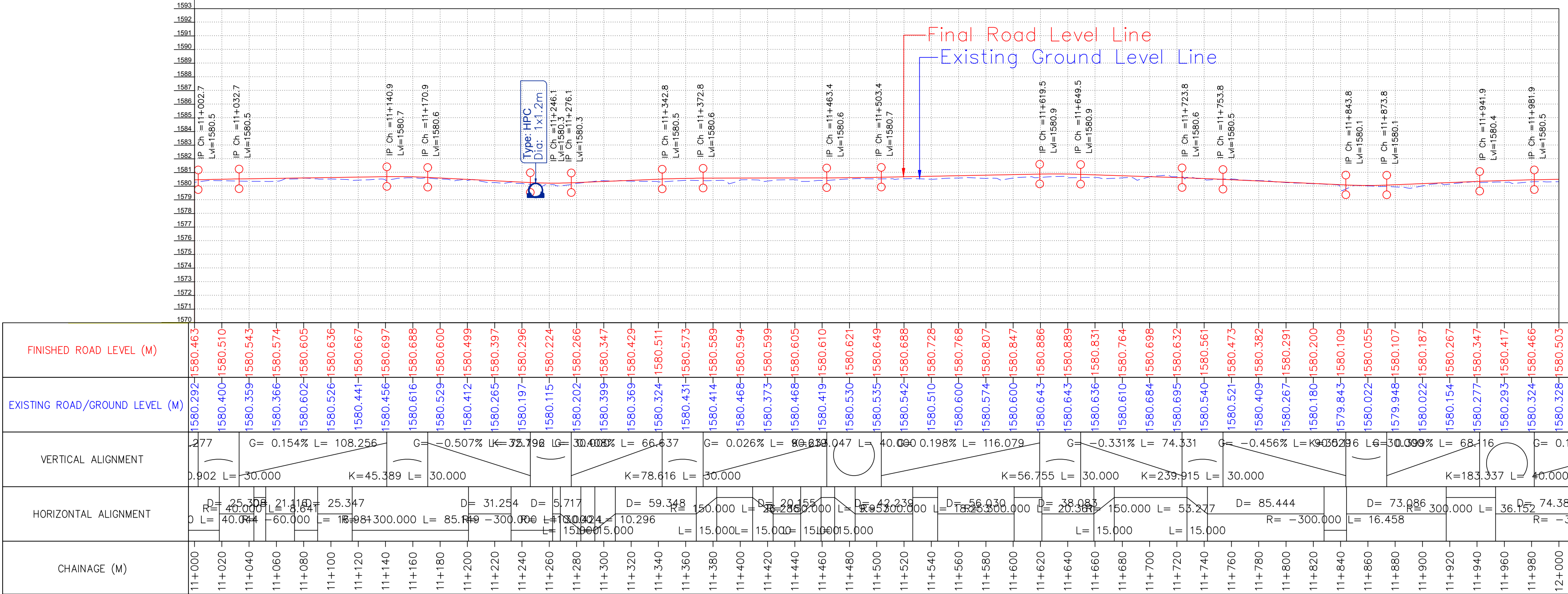
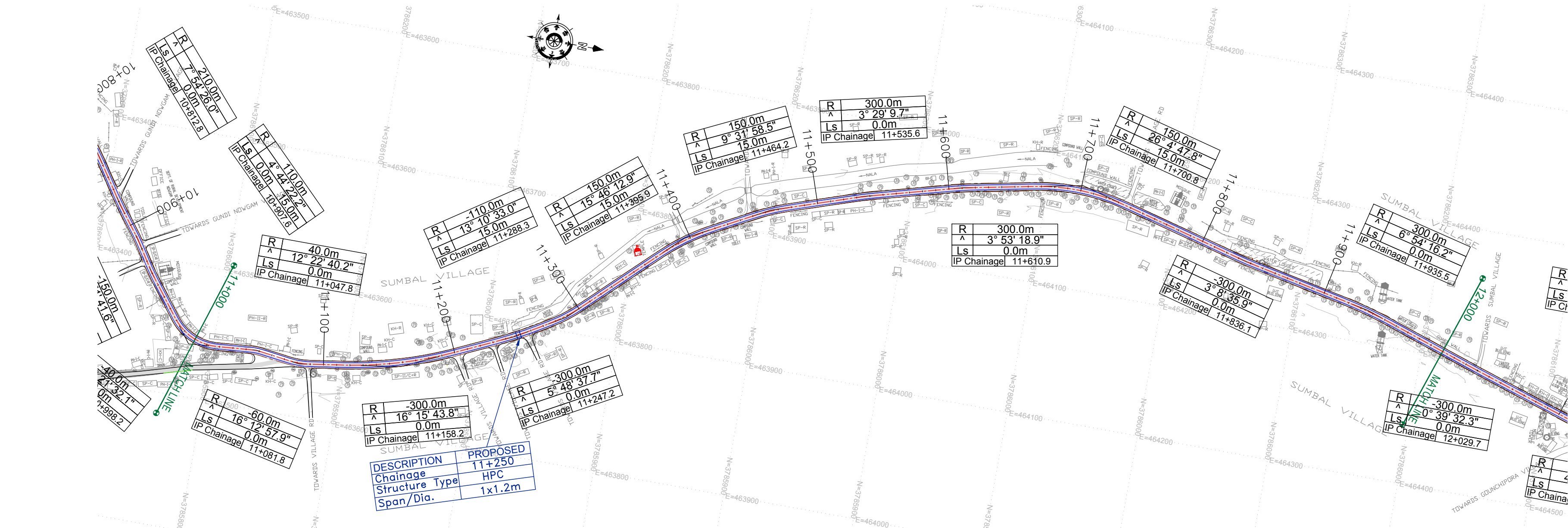


FINISHED ROAD LEVEL (M)	1570	1581.873	1581.873	1581.900	1582.036	1582.171	1582.306	1582.365
EXISTING ROAD/GROUND LEVEL (M)		1581.874	1581.918	1581.918	1581.911	1582.004	1582.120	1582.303
VERTICAL ALIGNMENT		$G = 0.676\% \quad L = 62.04$ $K = 31.338 \quad L$						
HORIZONTAL ALIGNMENT		$D = 5.027$ $R = 150.000$ $L = 15.000$ $D = 5.027$ $R = 150.000$ $L = 15.000$						
CHAINAGE (M)	7+916 7+920 7+940 7+960 7+980 8+000							









CLIENT :



Jhelum Tawi Flood Recovery Project
2nd Floor ERA Commercial Complex Rambagh
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PROJECT :

Consultancy Services for Preparing Detailed Project Report
for the Road works in Jammu and Kashmir
(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam upto Sumbal Bridge)

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

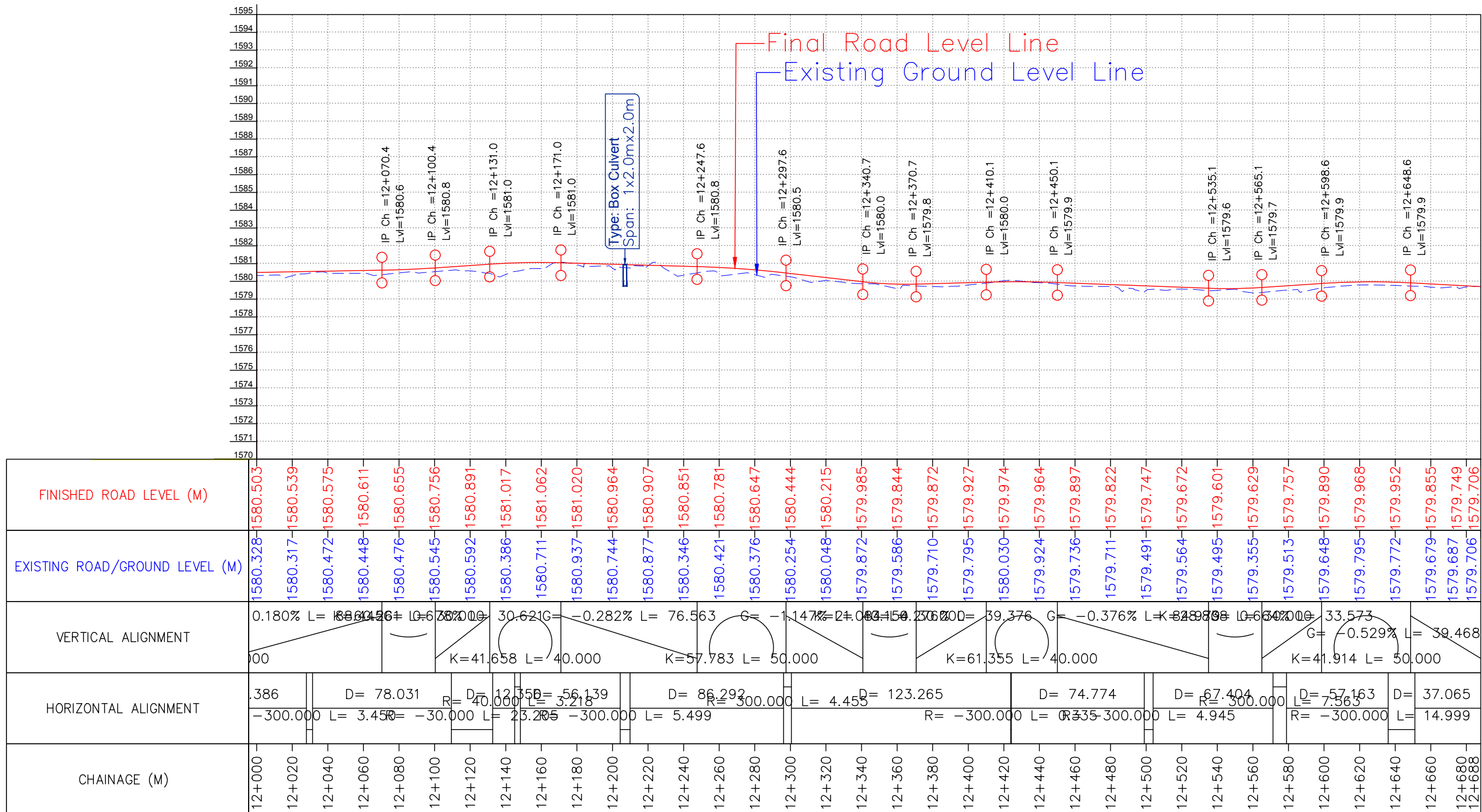
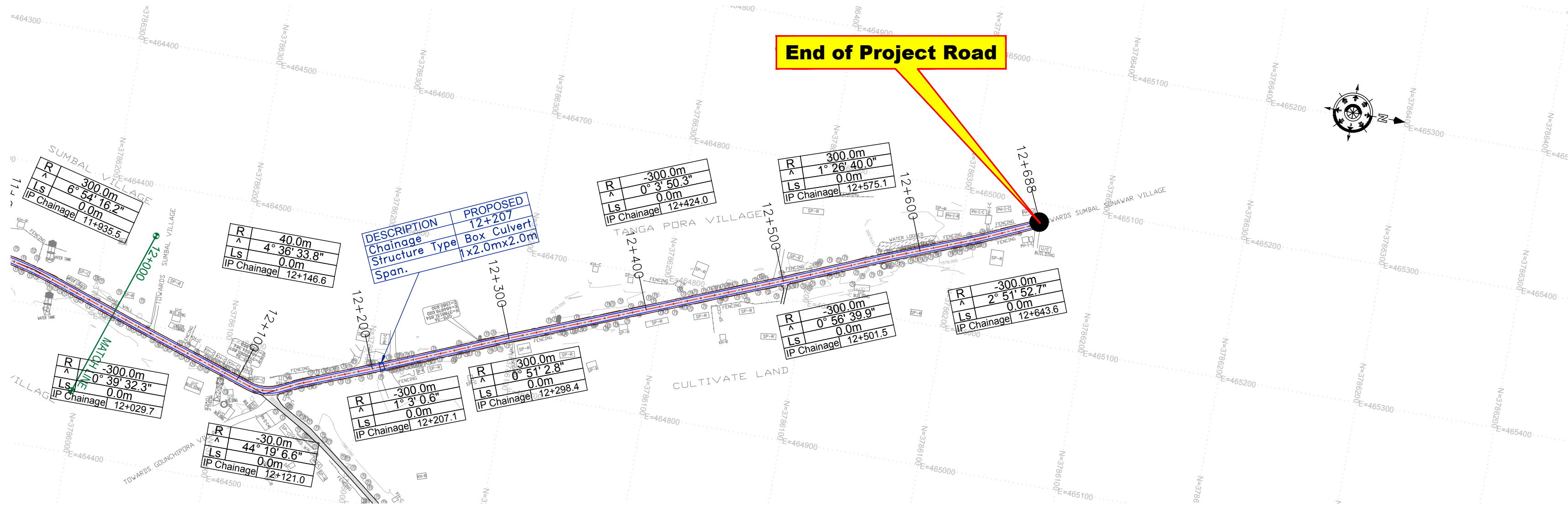
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VER 1:250

TITLE : Plan & Profile
(km 11+000 to km 12+000)

DRG. NO. : EPTISA/JTRP/DPR/J&K/PP/12

REVISION : R-1

September 2019



HORIZONTAL ALIGNMENT REPORT

Horizontal Alignment Report																								
HIP No.	Start of Transition (TS)	Start of Curve	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
		PC / SC		CS / PT		Easting	Northing						Leading	Trailing	Leading	Trailing	Leading	Trailing						
1	0+026.079	0+041.079	0+045.220	0+049.304	0+064.304	454751.672	3785811.399	150	40	15.00	15.00	8.23	0.063	0.063	19.14	19.14	2.86	2.86	3.14	8.87	0.513	Left	4.74	0.6
2	0+174.555	0+174.555	0+178.889	0+183.189	0+183.189	454882.160	3785840.487	40	25	0.00	0.00	8.63	0.000	0.000	4.33	4.33	0.00	0.00	12.37	12.37	0.234	Right	6.94	1.5
3	0+205.935	0+205.935	0+220.659	0+231.320	0+231.320	454923.963	3785840.775	20	15	0.00	0.00	25.39	0.000	0.000	14.72	14.72	0.00	0.00	72.72	72.72	4.836	Right	5.00	1.5
4	0+241.590	0+241.590	0+249.145	0+256.524	0+256.524	454933.844	3785809.762	40	25	0.00	0.00	14.93	0.000	0.000	7.55	7.55	0.00	0.00	21.39	21.39	0.707	Right	6.94	1.5
5	0+280.276	0+280.276	0+293.710	0+307.126	0+307.126	454930.941	3785765.115	300	30	0.00	0.00	26.85	0.000	0.000	13.43	13.43	0.00	0.00	5.13	5.13	0.301	Right	2.50	0.6
6	0+321.030	0+321.030	0+327.575	0+333.373	0+333.373	454925.730	3785731.636	15	15	0.00	0.00	12.34	0.000	0.000	6.55	6.55	0.00	0.00	47.15	47.15	1.366	Left	6.67	1.5
7	0+336.660	0+336.660	0+340.781	0+344.703	0+344.703	454934.378	3785720.686	15	15	0.00	0.00	8.04	0.000	0.000	4.12	4.12	0.00	0.00	30.72	30.72	0.556	Left	6.67	1.5
8	0+351.030	0+351.030	0+364.867	0+378.625	0+378.625	454957.053	3785711.993	150	30	0.00	0.00	27.60	0.000	0.000	13.84	13.84	0.00	0.00	10.54	10.54	0.637	Right	2.67	0.6
9	0+421.971	0+421.971	0+427.037	0+432.102	0+432.102	455010.120	3785679.453	300	40	0.00	0.00	10.13	0.000	0.000	5.07	5.07	0.00	0.00	1.93	1.93	0.043	Left	2.50	0.6
10	0+471.539	0+471.539	0+478.983	0+486.258	0+486.258	455055.295	3785653.810	40	25	0.00	0.00	14.72	0.000	0.000	7.44	7.44	0.00	0.00	21.08	21.08	0.687	Left	6.94	1.5
11	0+517.759	0+532.759	0+539.966	0+547.113	0+562.113	455115.810	3785645.231	200	40	15.00	15.00	14.35	0.047	0.047	22.21	22.21	2.15	2.15	4.11	8.41	0.587	Left	3.56	0.6
12	0+642.022	0+642.022	0+648.800	0+655.568	0+655.568	455224.669	3785644.609	150	40	0.00	0.00	13.55	0.000	0.000	6.78	6.78	0.00	0.00	5.17	5.17	0.153	Left	4.74	0.6
13	0+690.207	0+705.207	0+705.966	0+706.711	0+721.711	455281.590	3785649.892	200	40	15.00	15.00	1.50	0.047	0.047	15.76	15.76	2.15	2.15	0.43	4.73	0.217	Left	3.56	0.6
14	0+756.362	0+756.362	0+756.796	0+757.229	0+757.229	455331.716	3785658.344	300	40	0.00	0.00	0.87	0.000	0.000	0.43	0.43	0.00	0.00	0.17	0.17	0.000	Left	2.50	0.6
15	0+828.531	0+828.531	0+833.268	0+838.004	0+838.004	455407.032	3785671.598	300	40	0.00	0.00	9.47	0.000	0.000	4.74	4.74	0.00	0.00	1.81	1.81	0.037	Left	2.50	0.6
16	0+858.585	0+858.585	0+864.545	0+870.418	0+870.418	455437.650	3785677.988	40	25	0.00	0.00	11.83	0.000	0.000	5.96	5.96	0.00	0.00	16.95	16.95	0.442	Left	6.94	1.5
17	0+934.177	0+934.177	0+936.580	0+938.982	0+938.982	455500.888	3785712.666	300	40	0.00	0.00	4.80	0.000	0.000	2.40	2.40	0.00	0.00	0.92	0.92	0.010	Left	2.50	0.6
18	1+072.167	1+072.167	1+072.258	1+072.348	1+072.348	455618.793	3785779.799	300	40	0.00	0.00	0.18	0.000	0.000	0.09	0.09	0.00	0.00	0.03	0.03	0.000	Right	2.50	0.6
19	1+198.827	1+198.827	1+200.448	1+202.069	1+202.069	455730.230	3785843.161	300	40	0.00	0.00	3.24	0.000	0.000	1.62	1.62	0.00	0.00	0.62	0.62	0.004	Left	2.50	0.6
20	1+292.636	1+292.636	1+302.888	1+312.708	1+312.708	455818.729	3785894.754	40	25	0.00	0.00	20.07	0.000	0.000	10.25	10.25	0.00	0.00	28.75	28.75	1.293	Right	6.94	1.5
21	1+341.622	1+356.622	1+358.472	1+360.290	1+375.290	455874.695	3785896.551	150	35	15.00	15.00	3.67	0.063	0.063	16.85	16.85	2.86	2.86	1.40	7.13	0.354	Left	3.63	0.6
22	1+406.251	1+406.251	1+407.152	1+408.053	1+408.053	455922.887	3785903.511	30	20	0.00	0.00	1.80	0.000	0.000	0.90	0.90	0.00	0.00	3.44	3.44	0.014	Left	5.93	1.5
23	1+452.355	1+452.355	1+459.548	1+466.739	1+466.739	455974.127	3785914.459	300	40	0.00	0.00	14.38	0.000	0.000	7.19	7.19	0.00	0.00	2.75	2.75	0.086	Left	2.50	0.6
24	1+581.062	1+581.062	1+587.431	1+593.799	1+593.799	456097.765	3785947.145	300	40	0.00	0.00	12.74	0.000	0.000	6.37	6.37	0.00	0.00	2.43	2.43	0.068	Right	2.50	0.6
25	1+617.649	1+617.649	1+622.961	1+628.271	1+628.271	456132.472	3785954.760	200	40	0.00	0.00	10.62	0.000	0.000	5.31	5.31	0.00	0.00	3.04	3.04	0.071	Left	3.56	0.6
26	1+663.363	1+663.363	1+674.062	1+684.752	1+684.752	456181.735	3785968.346	300	40	0.00	0.00	21.39	0.000	0.000	10.70	10.70	0.00	0.00	4.08	4.08	0.191	Left	2.50	0.6
27	1+777.023	1+777.023	1+784.107	1+791.188	1+791.188	456285.474	3786005.088	300	40	0.00	0.00	14.17	0.000	0.000	7.08	7.08	0.00	0.00	2.71	2.71	0.084	Left	2.50	0.6
28	1+843.565	1+843.565	1+850.025	1+856.484	1+856.484	456346.506	3786030.005	300	40	0.00	0.00	12.92	0.000	0.000	6.46	6.46	0.00	0.00	2.47	2.47	0.070	Right	2.50	0.6
29	1+894.177	1+894.177	1+896.331	1+898.484	1+898.484	456390.091	3786045.647	300	40	0.00	0.00	4.31	0.000	0.000	2.15	2.15	0.00	0.00	0.82	0.82	0.008	Right	2.50	0.6
30	1+998.844	1+998.844	1+999.987	2+001.129	2+001.129	456488.147	3786079.255	300	40	0.00	0.00	2.28	0.000	0.000	1.14	1.14	0.00	0.00	0.44	0.44	0.002	Right	2.50	0.6
31	2+053.846	2+053.846	2+065.601	2+077.343	2+077.343	456550.377	3786100.055	300	40	0.00	0.00	23.50	0.000	0.000	11.75	11.75	0.00	0.00	4.49	4.49	0.230	Right	2.50	0.6
32	2+104.291	2+104.291	2+107.236	2+110.181	2+110.181	456590.789	3786110.127	300	40	0.00	0.00	5.89	0.000	0.000	2.95	2.95	0.00	0.00	1.12	1.12	0.014	Right	2.50	0.6
33	2+140.164	2+155.164	2+157.830	2+160.474	2+175.474	456640.161	3786121.113	200	40	15.00	15.00	5.31	0.047	0.047	17.67	17.67	2.15	2.15	1.52</					

Horizontal Alignment Report																								
HIP No.	Start of Transition (TS)	Start of Curve	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
		PC / SC		CS / PT		Easting	Northing						Leading	Trailing	Leading	Trailing	Leading	Trailing						
51	3+209.214	3+224.214	3+230.473	3+236.682	3+251.682	457674.988	3786359.057	200	40	15.00	15.00	12.47	0.047	0.047	21.26	21.26	2.15	2.15	3.57	7.87	0.519	Left	3.56	0.6
52	3+297.504	3+297.504	3+299.764	3+302.024	3+302.024	457736.339	3786391.308	300	40	0.00	0.00	4.52	0.000	0.000	2.26	2.26	0.00	0.00	0.86	0.86	0.009	Right	2.50	0.6
53	3+398.281	3+398.281	3+399.760	3+401.239	3+401.239	457825.266	3786437.039	300	40	0.00	0.00	2.96	0.000	0.000	1.48	1.48	0.00	0.00	0.56	0.56	0.004	Left	2.50	0.6
54	3+498.425	3+498.425	3+499.759	3+501.093	3+501.093	457913.740	3786483.646	300	40	0.00	0.00	2.67	0.000	0.000	1.33	1.33	0.00	0.00	0.51	0.51	0.003	Right	2.50	0.6
55	3+573.668	3+573.668	3+575.515	3+577.362	3+577.362	457981.076	3786518.356	300	40	0.00	0.00	3.69	0.000	0.000	1.85	1.85	0.00	0.00	0.71	0.71	0.006	Right	2.50	0.6
56	3+635.678	3+635.678	3+639.909	3+644.139	3+644.139	458038.672	3786547.153	300	40	0.00	0.00	8.46	0.000	0.000	4.23	4.23	0.00	0.00	1.62	1.62	0.030	Left	2.50	0.6
57	3+687.064	3+687.064	3+706.442	3+725.767	3+725.767	458097.319	3786578.574	300	40	0.00	0.00	38.70	0.000	0.000	19.38	19.38	0.00	0.00	7.39	7.39	0.625	Left	2.50	0.6
58	3+730.076	3+730.076	3+745.984	3+761.863	3+761.863	458129.526	3786601.608	300	40	0.00	0.00	31.79	0.000	0.000	15.91	15.91	0.00	0.00	6.07	6.07	0.421	Left	2.50	0.6
59	3+797.915	3+797.915	3+799.713	3+801.510	3+801.510	458169.699	3786637.330	300	40	0.00	0.00	3.60	0.000	0.000	1.80	1.80	0.00	0.00	0.69	0.69	0.005	Right	2.50	0.6
60	3+897.423	3+897.423	3+899.704	3+901.984	3+901.984	458245.213	3786702.873	300	40	0.00	0.00	4.56	0.000	0.000	2.28	2.28	0.00	0.00	0.87	0.87	0.009	Left	2.50	0.6
61	3+926.728	3+941.728	3+950.661	3+959.513	3+974.513	458283.499	3786736.440	200	40	15.00	15.00	17.78	0.047	0.047	23.93	23.93	2.15	2.15	5.10	9.39	0.721	Right	3.56	0.6
62	3+989.705	3+989.705	3+999.712	4+009.711	4+009.711	458324.650	3786763.208	300	40	0.00	0.00	20.01	0.000	0.000	10.01	10.01	0.00	0.00	3.82	3.82	0.167	Right	2.50	0.6
63	4+097.001	4+097.001	4+099.691	4+102.381	4+102.381	458412.424	3786811.094	300	40	0.00	0.00	5.38	0.000	0.000	2.69	2.69	0.00	0.00	1.03	1.03	0.012	Right	2.50	0.6
64	4+198.577	4+198.577	4+199.691	4+200.804	4+200.804	458501.054	3786857.405	300	40	0.00	0.00	2.23	0.000	0.000	1.11	1.11	0.00	0.00	0.43	0.43	0.002	Left	2.50	0.6
65	4+269.705	4+269.705	4+273.869	4+278.033	4+278.033	458566.543	3786892.244	300	40	0.00	0.00	8.33	0.000	0.000	4.16	4.16	0.00	0.00	1.59	1.59	0.029	Left	2.50	0.6
66	4+299.872	4+299.872	4+309.063	4+318.203	4+318.203	458597.143	3786909.630	100	40	0.00	0.00	18.33	0.000	0.000	9.19	9.19	0.00	0.00	10.50	10.50	0.422	Left	7.00	0.9
67	4+347.997	4+347.997	4+354.822	4+361.644	4+361.644	458632.181	3786939.141	300	40	0.00	0.00	13.65	0.000	0.000	6.82	6.82	0.00	0.00	2.61	2.61	0.078	Left	2.50	0.6
68	4+382.953	4+382.953	4+424.037	4+464.614	4+464.614	458683.040	3786986.093	300	40	0.00	0.00	81.66	0.000	0.000	41.08	41.08	0.00	0.00	15.60	15.60	2.800	Left	2.50	0.6
69	4+468.318	4+468.318	4+470.580	4+472.841	4+472.841	458707.757	3787026.127	300	40	0.00	0.00	4.52	0.000	0.000	2.26	2.26	0.00	0.00	0.86	0.86	0.009	Right	2.50	0.6
70	4+534.510	4+534.510	4+538.399	4+542.288	4+542.288	458744.252	3787083.291	300	40	0.00	0.00	7.78	0.000	0.000	3.89	3.89	0.00	0.00	1.49	1.49	0.025	Left	2.50	0.6
71	4+586.846	4+606.846	4+610.184	4+613.321	4+633.321	458782.076	3787144.151	100	40	20.00	20.00	6.48	0.167	0.167	23.34	23.34	5.73	5.73	3.71	15.17	1.051	Right	7.00	0.9
72	4+636.506	4+636.506	4+646.393	4+656.273	4+656.273	458807.590	3787169.956	300	40	0.00	0.00	19.77	0.000	0.000	9.89	9.89	0.00	0.00	3.78	3.78	0.163	Right	2.50	0.6
73	4+706.725	4+706.725	4+715.074	4+723.419	4+723.419	458860.219	3787214.095	300	40	0.00	0.00	16.69	0.000	0.000	8.35	8.35	0.00	0.00	3.19	3.19	0.116	Left	2.50	0.6
74	4+747.970	4+762.970	4+764.809	4+766.617	4+781.617	458896.710	3787247.864	150	40	15.00	15.00	3.65	0.063	0.063	16.84	16.84	2.86	2.86	1.39	7.12	0.353	Right	4.74	0.6
75	4+796.521	4+811.521	4+812.604	4+813.662	4+828.662	458935.323	3787276.018	150	40	15.00	15.00	2.14	0.063	0.063	16.08	16.08	2.86	2.86	0.82	6.55	0.308	Right	4.74	0.6
76	4+875.935	4+875.935	4+878.703	4+881.470	4+881.470	458992.707	3787308.839	300	40	0.00	0.00	5.53	0.000	0.000	2.77	2.77	0.00	0.00	1.06	1.06	0.013	Right	2.50	0.6
77	5+000.754	5+000.754	5+002.547	5+004.340	5+004.340	459101.598	3787367.833	300	40	0.00	0.00	3.59	0.000	0.000	1.79	1.79	0.00	0.00	0.68	0.68	0.005	Left	2.50	0.6
78	5+094.457	5+094.457	5+108.649	5+122.820	5+122.820	459194.278	3787419.486	300	40	0.00	0.00	28.36	0.000	0.000	14.19	14.19	0.00	0.00	5.42	5.42	0.336	Left	2.50	0.6
79	5+133.639	5+148.639	5+152.011	5+155.356	5+170.356	459229.818	3787444.337	200	40	15.00	15.00	6.72	0.047	0.047	18.37	18.37	2.15	2.15	1.92	6.22	0.342	Left	3.56	0.6
80	5+195.913	5+195.913	5+199.642	5+203.370	5+203.370	459266.101	3787475.210	300	40	0.00	0.00	7.46	0.000	0.000	3.73	3.73	0.00	0.00	1.42	1.42	0.023	Left	2.50	0.6
81	5+299.475	5+299.475	5+299.640	5+299.805	5+299.805	459340.187	3787542.374	300	40	0.00	0.00	0.33	0.000	0.000	0.17	0.17	0.00	0.00	0.06	0.06	0.000	Left	2.50	0.6
82	5+392.106	5+392.106	5+399.632	5+407.154	5+407.154	459414.193	3787609.615	300	40	0.00	0.00	15.05	0.000	0.000	7.53	7.53	0.00	0.00	2.87	2.87	0.094	Right	2.50	0.6
83	5+443.608	5+443.608	5+450.739	5+457.867	5+457.867	459453.697	3787642.045	300																


Horizontal Alignment Report																								
HIP No.	Start of Transition (TS)	Start of Curve	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
		PC / SC		CS / PT		Easting	Northing						Leading	Trailing	Leading	Trailing	Leading	Trailing						
101	6+578.373	6+578.373	6+582.865	6+587.319	6+587.319	460258.316	3787807.510	40	25	0.00	0.00	8.95	0.000	0.000	4.49	4.49	0.00	0.00	12.81	12.81	0.251	Left	6.94	1.5
102	6+591.028	6+591.028	6+597.751	6+601.134	6+601.134	460254.894	3787792.984	6	10	0.00	0.00	10.11	0.000	0.000	6.72	6.72	0.00	0.00	96.51	96.51	3.011	Left	7.00	1.5
103	6+613.193	6+613.193	6+615.524	6+617.849	6+617.849	460275.859	3787790.499	40	25	0.00	0.00	4.66	0.000	0.000	2.33	2.33	0.00	0.00	6.67	6.67	0.068	Left	6.94	1.5
104	6+661.755	6+661.755	6+684.774	6+707.703	6+707.703	460345.115	3787790.392	300	40	0.00	0.00	45.95	0.000	0.000	23.02	23.02	0.00	0.00	8.78	8.78	0.882	Right	2.50	0.6
105	6+716.742	6+731.742	6+742.142	6+752.359	6+767.359	460401.914	3787782.309	150	40	15.00	15.00	20.62	0.063	0.063	25.40	25.40	2.86	2.86	7.88	13.60	1.126	Left	4.74	0.6
106	6+805.789	6+805.789	6+816.034	6+826.271	6+826.271	460475.707	3787787.659	300	40	0.00	0.00	20.48	0.000	0.000	10.24	10.24	0.00	0.00	3.91	3.91	0.175	Right	2.50	0.6
107	6+845.272	6+870.272	6+876.629	6+894.665	6+894.665	460541.981	3787791.830	80	35	25.00	0.00	24.39	0.326	0.000	31.36	18.78	8.95	0.00	17.47	26.42	2.509	Left	6.81	0.9
108	6+897.038	6+917.038	6+917.639	6+918.127	6+938.127	460572.932	3787808.583	100	35	20.00	20.00	1.09	0.167	0.167	20.60	20.60	5.73	5.73	0.62	12.08	0.726	Left	5.44	0.9
109	6+952.752	6+952.752	6+956.982	6+961.090	6+961.090	460603.846	3787832.984	20	15	0.00	0.00	8.34	0.000	0.000	4.23	4.23	0.00	0.00	23.89	23.89	0.443	Right	5.00	1.5
110	6+969.060	6+969.060	6+981.058	6+992.177	6+992.177	460627.170	3787839.430	35	20	0.00	0.00	23.12	0.000	0.000	12.00	12.00	0.00	0.00	37.84	37.84	1.999	Right	5.08	1.5
111	6+997.741	6+997.741	7+006.628	7+015.468	7+015.468	460651.624	3787829.355	100	30	0.00	0.00	17.73	0.000	0.000	8.89	8.89	0.00	0.00	10.16	10.16	0.394	Left	4.00	0.9
112	7+035.981	7+035.981	7+040.570	7+043.816	7+043.816	460684.840	3787822.151	6	10	0.00	0.00	7.84	0.000	0.000	4.59	4.59	0.00	0.00	74.82	74.82	1.554	Right	7.00	1.5
113	7+072.882	7+072.882	7+078.074	7+083.041	7+083.041	460686.839	3787783.356	20	15	0.00	0.00	10.16	0.000	0.000	5.19	5.19	0.00	0.00	29.10	29.10	0.663	Left	5.00	1.5
114	7+091.596	7+091.596	7+096.575	7+101.356	7+101.356	460696.776	3787767.484	20	15	0.00	0.00	9.76	0.000	0.000	4.98	4.98	0.00	0.00	27.96	27.96	0.610	Left	5.00	1.5
115	7+148.663	7+148.663	7+161.665	7+174.650	7+174.650	460753.323	3787734.850	300	30	0.00	0.00	25.99	0.000	0.000	13.00	13.00	0.00	0.00	4.96	4.96	0.282	Right	2.50	0.6
116	7+195.926	7+195.926	7+198.433	7+200.939	7+200.939	460783.472	3787713.777	300	40	0.00	0.00	5.01	0.000	0.000	2.51	2.51	0.00	0.00	0.96	0.96	0.010	Right	2.50	0.6
117	7+215.729	7+215.729	7+229.514	7+242.630	7+242.630	460808.646	3787695.547	50	25	0.00	0.00	26.90	0.000	0.000	13.78	13.78	0.00	0.00	30.83	30.83	1.865	Left	5.56	1.2
118	7+260.105	7+260.105	7+270.888	7+281.588	7+281.588	460850.523	3787691.822	100	40	0.00	0.00	21.48	0.000	0.000	10.78	10.78	0.00	0.00	12.31	12.31	0.580	Right	7.00	0.9
119	7+310.305	7+310.305	7+311.631	7+312.956	7+312.956	460889.482	3787679.619	300	40	0.00	0.00	2.65	0.000	0.000	1.33	1.33	0.00	0.00	0.51	0.51	0.003	Right	2.50	0.6
120	7+327.704	7+337.704	7+341.135	7+344.520	7+354.520	460917.635	3787670.880	100	40	10.00	10.00	6.82	0.042	0.042	13.43	13.43	2.86	2.86	3.91	9.63	0.396	Left	7.00	0.9
121	7+366.348	7+366.348	7+373.282	7+380.079	7+380.079	460949.417	3787665.924	40	25	0.00	0.00	13.73	0.000	0.000	6.93	6.93	0.00	0.00	19.67	19.67	0.597	Right	6.94	1.5
122	7+401.268	7+401.268	7+408.118	7+414.836	7+414.836	460980.315	3787649.542	40	25	0.00	0.00	13.57	0.000	0.000	6.85	6.85	0.00	0.00	19.43	19.43	0.582	Left	6.94	1.5
123	7+431.297	7+431.297	7+447.479	7+463.630	7+463.630	461019.375	3787643.706	300	35	0.00	0.00	32.33	0.000	0.000	16.18	16.18	0.00	0.00	6.18	6.18	0.436	Left	2.50	0.6
124	7+474.810	7+474.810	7+484.201	7+492.776	7+492.776	461056.097	3787642.216	25	20	0.00	0.00	17.97	0.000	0.000	9.39	9.39	0.00	0.00	41.18	41.18	1.706	Left	7.00	1.5
125	7+530.682	7+530.682	7+538.543	7+546.207	7+546.207	461099.053	3787676.817	40	25	0.00	0.00	15.53	0.000	0.000	7.86	7.86	0.00	0.00	22.24	22.24	0.765	Left	6.94	1.5
126	7+555.464	7+555.464	7+564.297	7+569.934	7+569.934	461111.598	3787699.535	10	10	0.00	0.00	14.47	0.000	0.000	8.83	8.83	0.00	0.00	82.91	82.91	3.342	Right	4.44	1.5
127	Under Construction Bridge & Approach Road																							
128																								
129																								
130	8+098.019	8+098.019	8+099.623	8+101.226	8+101.226	461610.839	3787614.689	300	20	0.00	0.00	3.21	0.000	0.000	1.60	1.60	0.00	0.00	0.61	0.61	0.004	Right	2.50	0.6
131	8+203.007	8+203.007	8+208.290	8+211.136	8+211.136	461719.417	3787610.278	5	10	0.00	0.00	8.13	0.000	0.000	5.28	5.28	0.00	0.00	93.15	93.15	2.274	Right	7.00	1.5
132	8+240.815	8+240.815	8+264.823	8+288.728	8+288.728	461713.784	3787551.578	300	30	0.00	0.00	47.91	0.000	0.000	24.01	24.01	0.00	0.00	9.15	9.15	0.959	Right	2.50	0.6
133	8+300.123	8+300.123	8+313.843	8+314.986	8+339.986	461702.963	3787510.127	150	40	0.00	25.00	14.86	0.000	0.174	13.72	26.24	0.00	4.77	5.68	10.45	0.626	Left	4.74	0.6
134	8+342.567	8+342.567	8+346.715	8+350.834	8+350.834	461698.802	3787471.203	40	25	0.00	0.00	8.27	0.000	0.000	4.15	4.15	0.00	0.00	11.84	11.84	0.215	Right	6.94	1.5
135	8+360.512	8+360.512	8+382.765	8+398.805	8+398.805	461688.845	3787436.525	30	20	0.00	0.00	38.29	0.000	0.000	22.25	22.25	0.00	0.00	73.13	73.13	7.352	Left	5.93	1.5
136	8+412.904	8+412.904	8+420.162	8+425.461	8+425.461	461725.467	3787412.845	10	10	0.00	0.00	12.56	0.000	0.000	7.26	7.26	0.00	0.00	71.95	71.95	2.356	Right	4.44	1.5
137	8+440.071	8+440.071	8+447.118	8+454.162	8+454.162	461718.065	3787384.894	300	30	0.00	0.00	14.09	0.000	0.000	7.05	7.05	0.00	0.00	2.69	2.69	0.083	Left	2.50	0.6
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Horizontal Alignment Report																								
HIP No.	Start of Transition (TS)	Start of Curve	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
		PC / SC		CS / PT		Easting	Northing						Leading	Trailing	Leading	Trailing	Leading	Trailing						
151	9+496.910	9+511.910	9+516.063	9+520.159	9+535.159	462571.147	3786922.694	150	40	15.00	15.00	8.25	0.063	0.063	19.15	19.15	2.86	2.86	3.15	8.88	0.514	Right	4.74	0.6
152	9+672.093	9+672.093	9+688.107	9+704.091	9+704.091	462702.239	3786811.242	300	40	0.00	0.00	32.00	0.000	0.000	16.01	16.01	0.00	0.00	6.11	6.11	0.427	Right	2.50	0.6
153	9+827.621	9+827.621	9+832.122	9+836.622	9+836.622	462801.148	3786706.524	300	40	0.00	0.00	9.00	0.000	0.000	4.50	4.50	0.00	0.00	1.72	1.72	0.034	Left	2.50	0.6
154	9+933.833	9+933.833	9+940.964	9+948.092	9+948.092	462878.226	3786629.675	300	40	0.00	0.00	14.26	0.000	0.000	7.13	7.13	0.00	0.00	2.72	2.72	0.085	Left	2.50	0.6
155	9+993.899	10+008.899	10+022.358	10+035.531	10+050.531	462937.821	3786574.414	150	40	15.00	15.00	26.63	0.063	0.063	28.46	28.46	2.86	2.86	10.17	15.90	1.519	Right	4.74	0.6
156	10+066.762	10+106.762	10+138.328	10+145.528	10+185.528	463004.122	3786494.678	50	30	40.00	40.00	38.77	1.333	1.333	71.57	71.57	22.92	22.92	44.42	90.26	22.761	Left	7.00	1.2
157	10+198.581	10+198.581	10+220.926	10+243.188	10+243.188	463090.367	3786533.297	300	35	0.00	0.00	44.61	0.000	0.000	22.34	22.34	0.00	0.00	8.52	8.52	0.831	Right	2.50	0.6
158	10+259.036	10+259.036	10+272.377	10+282.567	10+282.567	463137.573	3786553.967	20	15	0.00	0.00	23.53	0.000	0.000	13.34	13.34	0.00	0.00	67.41	67.41	4.041	Right	5.00	1.5
159	10+291.599	10+291.599	10+313.538	10+327.408	10+342.408	463166.778	3786525.998	110	30	0.00	15.00	35.81	0.000	0.085	21.94	29.46	0.00	3.91	18.65	22.56	2.166	Right	3.64	0.6
160	10+388.144	10+403.144	10+417.349	10+430.972	10+445.972	463212.658	3786428.517	110	40	15.00	15.00	27.83	0.085	0.085	29.21	29.21	3.91	3.91	14.49	22.31	2.205	Left	6.46	0.6
161	10+464.152	10+464.152	10+468.620	10+473.088	10+473.088	463248.867	3786391.736	300	40	0.00	0.00	8.94	0.000	0.000	4.47	4.47	0.00	0.00	1.71	1.71	0.033	Right	2.50	0.6
162	10+509.633	10+509.633	10+512.954	10+516.259	10+516.259	463279.821	3786359.997	40	25	0.00	0.00	6.63	0.000	0.000	3.32	3.32	0.00	0.00	9.49	9.49	0.138	Right	6.94	1.5
163	10+517.604	10+537.604	10+543.170	10+545.637	10+570.637	463294.891	3786335.636	70	30	20.00	25.00	8.03	0.238	0.372	25.57	28.10	8.19	10.23	6.58	24.99	1.942	Right	5.71	0.9
164	10+591.669	10+591.669	10+608.372	10+624.601	10+624.601	463308.394	3786270.370	80	35	0.00	0.00	32.93	0.000	0.000	16.70	16.70	0.00	0.00	23.59	23.59	1.725	Right	6.81	0.9
165	10+638.671	10+638.671	10+651.545	10+651.634	10+676.634	463299.512	3786234.171	70	30	0.00	25.00	12.96	0.000	0.372	12.87	25.44	0.00	10.23	10.61	20.84	1.174	Left	5.71	0.9
166	10+682.657	10+707.657	10+722.704	10+735.516	10+760.516	463309.711	3786158.672	80	35	25.00	25.00	27.86	0.326	0.326	40.05	40.05	8.95	8.95	19.95	37.86	4.918	Left	6.81	0.9
167	10+798.273	10+798.273	10+812.787	10+827.254	10+827.254	463371.565	3786091.685	210	40	0.00	0.00	28.98	0.000	0.000	14.51	14.51	0.00	0.00	7.91	7.91	0.501	Right	3.39	0.6
168	10+834.995	10+834.995	10+843.220	10+851.441	10+851.441	463389.910	3786067.344	300	40	0.00	0.00	16.45	0.000	0.000	8.23	8.23	0.00	0.00	3.14	3.14	0.113	Right	2.50	0.6
169	10+873.303	10+873.303	10+882.797	10+892.285	10+892.285	463411.965	3786034.477	300	40	0.00	0.00	18.98	0.000	0.000	9.49	9.49	0.00	0.00	3.63	3.63	0.150	Left	2.50	0.6
170	10+906.811	10+906.811	10+911.363	10+908.410	10+923.410	463427.070	3786014.783	110	40	0.00	15.00	1.60	0.000	0.085	4.55	12.06	0.00	3.91	0.83	4.74	0.094	Right	6.46	0.6
171	10+932.616	10+932.616	10+938.983	10+945.343	10+945.343	463444.370	3785988.619	150	40	0.00	0.00	12.73	0.000	0.000	6.37	6.37	0.00	0.00	4.86	4.86	0.135	Left	4.74	0.6
172	10+978.169	10+978.169	11+000.050	11+018.213	11+018.213	463481.643	3785940.237	40	25	0.00	0.00	40.04	0.000	0.000	21.88	21.88	0.00	0.00	57.36	57.36	5.593	Left	6.94	1.5
173	11+043.521	11+043.521	11+047.859	11+052.163	11+052.163	463532.976	3785944.701	40	25	0.00	0.00	8.64	0.000	0.000	4.34	4.34	0.00	0.00	12.38	12.38	0.235	Right	6.94	1.5
174	11+073.279	11+073.279	11+081.827	11+090.260	11+090.260	463566.693	3785940.317	60	30	0.00	0.00	16.98	0.000	0.000	8.55	8.55	0.00	0.00	16.22	16.22	0.606	Left	6.67	1.2
175	11+115.607	11+115.607	11+158.470	11+200.756	11+200.756	463642.545	3785952.070	300	40	0.00	0.00	85.15	0.000	0.000	42.86	42.86	0.00	0.00	16.26	16.26	3.047	Left	2.50	0.6
176	11+232.009	11+232.009	11+247.234	11+262.433	11+262.433	463723.469	3785989.926	300	40	0.00	0.00	30.42	0.000	0.000	15.23	15.23	0.00	0.00	5.81	5.81	0.386	Left	2.50	0.6
177	11+268.150	11+283.150	11+288.363	11+293.445	11+308.445	463758.366	3786011.601	110	40	15.00	15.00	10.30	0.085	0.085	20.21	20.21	3.91	3.91	5.36	13.18	0.817	Left	6.46	0.6
178	11+367.793	11+382.793	11+396.076	11+409.080	11+424.080	463836.833	3786085.299	150	40	15.00	15.00	26.29	0.063	0.063	28.28	28.28	2.86	2.86	10.04	15.77	1.495	Right	4.74	0.6
179	11+444.234	11+459.234	11+464.247	11+469.191	11+484.191	463896.767	3786118.016	150	40	15.00	15.00	9.96	0.063	0.063	20.01	20.01	2.86	2.86	3.80	9.53	0.583	Right	4.74	0.6
180	11+526.431	11+526.431	11+535.560	11+544.683	11+544.683	463964.158	3786141.424	300	40	0.00	0.00	18.25	0.000	0.000	9.13	9.13	0.00	0.00	3.49	3.49	0.139	Right	2.50	0.6
181	11+600.713	11+600.713	11+610.897	11+621.074	11+621.074	464036.842	3786161.263	300	40	0.00	0.00	20.36	0.000	0.000	10.18	10.18	0.00	0.00	3.89	3.89	0.173	Right	2.50	0.6
182	11+659.157	11+674.157	11+701.412	11+727.434	11+742.434	464125.537	3786177.485	150	40	15.00	15.00	53.28	0.063	0.063	42.25	42.25	2.86	2.86	20.35	26.08	4.035	Right	4.74	0.6
183	11+827.878	11+827.878	11+836.109	11+844.336	11+844.336	464257.064	3786144.626	300	40	0.00	0.00	16.46	0.000	0.000	8.23	8.23	0.00	0.00	3.14	3.14	0.113	Left	2.50	0.6
184	11+917.422	11+917.422	11+935.520	11																				

≡ VERTICAL ALIGNMENT REPORT ≡

Vertical Alignment Report											
PVI No.	Start		PVI Details		End		Gradient (%)		Type of Curve	Curve Lenght (m)	K-Value
	Chainage (Km)	Level(m)	Chainage (Km)	Level(m)	Chainage (Km)	Level(m)	IN	OUT			
1	0+042.788	1586.206	0+057.788	1586.485	0+072.788	1586.699	1.863	1.428	Hog	30	69.06
2	0+135.003	1587.588	0+150.003	1587.802	0+165.003	1588.219	1.428	2.778	Sag	30	22.23
3	0+200.041	1589.192	0+215.041	1589.609	0+230.041	1589.060	2.778	-3.660	Hog	30	4.66
4	0+234.052	1588.913	0+249.052	1588.364	0+264.052	1588.235	-3.660	-0.860	Sag	30	10.71
5	0+315.093	1587.796	0+330.093	1587.667	0+345.093	1586.659	-0.860	-6.721	Hog	30	5.12
6	0+361.885	1585.530	0+376.885	1584.522	0+391.885	1584.500	-6.721	-0.144	Sag	30	4.56
7	0+636.231	1584.149	0+676.231	1584.092	0+716.231	1584.910	-0.144	2.044	Sag	80	36.57
8	0+793.127	1586.481	0+815.627	1586.941	0+838.127	1586.933	2.044	-0.036	Hog	45	21.64
9	0+859.082	1586.925	0+874.082	1586.920	0+889.082	1586.752	-0.036	-1.122	Hog	30	27.63
10	1+031.713	1585.152	1+046.713	1584.983	1+061.713	1584.932	-1.122	-0.342	Sag	30	38.49
11	1+248.794	1584.291	1+263.794	1584.240	1+278.794	1584.310	-0.342	0.465	Sag	30	37.18
12	1+361.371	1584.693	1+376.371	1584.763	1+391.371	1584.652	0.465	-0.742	Hog	30	24.86
13	1+448.838	1584.225	1+463.838	1584.114	1+478.838	1584.180	-0.742	0.442	Sag	30	25.32
14	1+550.022	1584.495	1+565.022	1584.561	1+580.022	1584.433	0.442	-0.858	Hog	30	23.07
15	1+630.399	1584.000	1+647.899	1583.850	1+665.399	1584.507	-0.858	3.756	Sag	35	7.59
16	1+671.222	1584.726	1+686.222	1585.289	1+701.222	1585.247	3.756	-0.282	Hog	30	7.43
17	1+983.520	1584.450	1+998.520	1584.408	2+013.520	1584.476	-0.282	0.455	Sag	30	40.71
18	2+171.786	1585.196	2+199.286	1585.321	2+226.786	1585.232	0.455	-0.325	Hog	55	70.50
19	2+379.457	1584.735	2+394.457	1584.686	2+409.457	1584.697	-0.325	0.073	Sag	30	75.38
20	2+552.186	1584.801	2+587.186	1584.826	2+622.186	1583.907	0.073	-2.627	Hog	70	25.93
21	2+631.129	1583.672	2+671.129	1582.621	2+711.129	1582.857	-2.627	0.590	Sag	80	24.87
22	2+752.384	1583.101	2+767.384	1583.189	2+782.384	1583.486	0.590	1.977	Sag	30	21.64
23	2+807.961	1583.991	2+842.961	1584.683	2+877.961	1584.941	1.977	0.736	Hog	70	56.42
24	2+984.631	1585.726	2+999.631	1585.836	3+014.631	1585.912	0.736	0.505	Hog	30	129.93
25	3+129.777	1586.493	3+149.777	1586.594	3+169.777	1586.751	0.505	0.781	Sag	40	144.98
26	3+273.370	1587.560	3+288.370	1587.677	3+303.370	1587.752	0.781	0.504	Hog	30	108.39
27	3+377.081	1588.124	3+402.081	1588.250	3+427.081	1588.200	0.504	-0.200	Hog	50	70.98
28	3+583.262	1587.887	3+603.262	1587.847	3+623.262	1588.042	-0.200	0.977	Sag	40	33.99
29	3+700.016	1588.792	3+725.016	1589.036	3+750.016	1589.030	0.977	-0.022	Hog	50	50.07
30	3+823.192	1589.014	3+838.192	1589.011	3+853.192	1588.942	-0.022	-0.457	Hog	30	69.02
31	4+081.581	1587.899	4+096.581	1587.831	4+111.581	1587.912	-0.457	0.540	Sag	30	30.10
32	4+265.066	1588.740	4+300.066	1588.929	4+335.066	1588.858	0.540	-0.203	Hog	70	94.28
33	4+591.709	1588.338	4+606.709	1588.307	4+621.709	1588.287	-0.203	-0.140	Sag	30	477.25
34	4+988.238	1587.774	5+003.238	1587.753	5+018.238	1587.724	-0.140	-0.195	Hog	30	543.27
35	5+377.262	1587.024	5+407.262	1586.965	5+437.262	1586.537	-0.195	-1.427	Hog	60	48.72
36	5+524.719	1585.289	5+544.719	1585.004	5+564.719	1584.853	-1.427	-0.753	Sag	40	59.34
37	5+670.510	1584.057	5+693.010	1583.888	5+715.510	1583.917	-0.753	0.131	Sag	45	50.94
38	5+914.641	1584.178	5+934.641	1584.204	5+954.641	1584.170	0.131	-0.170	Hog	40	132.83
39	6+093.025	1583.934	6+113.025	1583.900	6+133.025	1583.827	-0.170	-0.367	Hog	40	203.20
40	6+342.184	1583.058	6+362.184	1582.985	6+382.184	1582.603	-0.367	-1.908	Hog	40	25.97
41	6+387.204	1582.508	6+402.204	1582.222	6+417.204	1582.448	-1.908	1.512	Sag	30	8.77
42	6+440.942	1582.808	6+460.942	1583.110	6+480.942	1583.242	1.512	0.662	Hog	40	47.06
43	6+546.838	1583.679	6+576.838	1583.878	6+606.838	1583.865	0.662	-0.042	Hog	60	85.15
44	6+737.285	1583.810	6+752.285	1583.804	6+767.285	1583.767	-0.042	-0.244	Hog	30	148.94
45	6+831.797	1583.610	6+851.797	1583.561	6+871.797	1583.433	-0.244	-0.640	Hog	40	101.00
46	6+886.270	1583.340	6+901.270	1583.245	6+916.270	1583.332	-0.640	0.586	Sag	30	24.47
47	6+937.368	1583.456	6+952.368	1583.544	6+967.368	1583.494	0.586	-0.331	Hog	30	32.69
48	6+968.634	1583.490	6+983.634	1583.441	6+998.634	1583.704	-0.331	1.758	Sag	30	14.36
49	7+001.933	1583.762	7+019.433	1584.070	7+036.933	1583.904	1.758	-0.948	Hog	35	12.93
50	7+037.378	1583.900	7+057.378	1583.710	7+077.378	1582.561	-0.948	-5.745	Hog	40	8.34

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
(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam upto Sumbal Bridge)

DESIGN CONSULTANT:



Eptisa Servicios de Ingenieria S.L.
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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 :
Vertical Alignment Report

DRG. NO. : EPTISA/JTFRP/DPR/J&K/VAR/01

REVISION : R-1September 2019

Vertical Alignment Report											
PVI No.	Start		PVI Details		End		Gradient (%)		Type of Curve	Curve Lenght (m)	K-Value
	Chainage (Km)	Level(m)	Chainage (Km)	Level(m)	Chainage (Km)	Level(m)	IN	OUT			
51	7+078.145	1582.517	7+093.145	1581.655	7+108.145	1581.508	-5.745	-0.986	Sag	30	6.30
52	7+123.393	1581.357	7+143.393	1581.160	7+163.393	1581.054	-0.986	-0.528	Sag	40	87.41
53	7+213.545	1580.789	7+228.545	1580.710	7+243.545	1580.598	-0.528	-0.743	Hog	30	139.55
54	7+393.898	1579.481	7+413.898	1579.332	7+433.898	1579.458	-0.743	0.630	Sag	40	29.13
55	7+484.193	1579.775	7+509.193	1579.932	7+534.193	1579.850	0.630	-0.328	Hog	50	52.22
56	Under Construction Bridge & Approach Road										
57											
58											
59	8+133.666	1581.966	8+148.666	1581.734	8+163.666	1581.590	-1.546	-0.965	Sag	30	51.60
60	8+171.190	1581.517	8+191.190	1581.324	8+211.190	1581.226	-0.965	-0.488	Sag	40	83.79
61	8+220.815	1581.180	8+240.815	1581.082	8+260.815	1581.300	-0.488	1.090	Sag	40	25.35
62	8+274.983	1581.455	8+289.983	1581.618	8+304.983	1581.931	1.090	2.086	Sag	30	30.12
63	8+320.570	1582.256	8+350.570	1582.882	8+380.570	1582.244	2.086	-2.126	Hog	60	14.25
64	8+400.461	1581.821	8+425.461	1581.290	8+450.461	1581.390	-2.126	0.400	Sag	50	19.80
65	8+500.477	1581.590	8+515.477	1581.650	8+530.477	1581.662	0.400	0.080	Hog	30	93.74
66	8+610.613	1581.726	8+625.613	1581.738	8+640.613	1581.841	0.080	0.690	Sag	30	49.19
67	8+676.655	1582.090	8+696.655	1582.228	8+716.655	1582.159	0.690	-0.343	Hog	40	38.72
68	8+829.937	1581.770	8+844.937	1581.719	8+859.937	1581.628	-0.343	-0.603	Hog	30	115.68
69	8+939.110	1581.151	8+954.110	1581.061	8+969.110	1581.112	-0.603	0.339	Sag	30	31.87
70	9+148.903	1581.720	9+163.903	1581.771	9+178.903	1581.802	0.339	0.208	Hog	30	229.67
71	9+353.651	1582.165	9+368.651	1582.197	9+383.651	1582.164	0.208	-0.220	Hog	30	70.08
72	9+521.097	1581.861	9+536.097	1581.828	9+551.097	1581.822	-0.220	-0.043	Sag	30	169.33
73	9+688.535	1581.762	9+703.535	1581.756	9+718.535	1581.816	-0.043	0.397	Sag	30	68.18
74	9+822.035	1582.226	9+837.035	1582.286	9+852.035	1582.294	0.397	0.053	Hog	30	87.15
75	10+081.097	1582.415	10+106.097	1582.428	10+131.097	1581.890	0.053	-2.153	Hog	50	22.67
76	10+155.097	1581.373	10+180.097	1580.835	10+205.097	1580.674	-2.153	-0.644	Sag	50	33.13
77	10+227.972	1580.527	10+242.972	1580.430	10+257.972	1580.466	-0.644	0.238	Sag	30	34.02
78	10+404.965	1580.816	10+429.965	1580.876	10+454.965	1580.881	0.238	0.020	Hog	50	229.29
79	10+548.101	1580.900	10+563.101	1580.903	10+578.101	1580.812	0.020	-0.608	Hog	30	47.72
80	10+668.426	1580.262	10+683.426	1580.171	10+698.426	1580.229	-0.608	0.384	Sag	30	30.22
81	10+796.836	1580.607	10+816.836	1580.684	10+836.836	1580.598	0.384	-0.427	Hog	40	49.30
82	10+903.402	1580.314	10+918.402	1580.250	10+933.402	1580.289	-0.427	0.261	Sag	30	43.61
83	11+002.679	1580.470	11+017.679	1580.509	11+032.679	1580.532	0.261	0.154	Hog	30	280.90
84	11+140.935	1580.699	11+155.935	1580.722	11+170.935	1580.646	0.154	-0.507	Hog	30	45.39
85	11+246.127	1580.265	11+261.127	1580.189	11+276.127	1580.250	-0.507	0.408	Sag	30	32.80
86	11+342.764	1580.522	11+357.764	1580.583	11+372.764	1580.587	0.408	0.026	Hog	30	78.62
87	11+463.383	1580.611	11+483.383	1580.616	11+503.383	1580.656	0.026	0.198	Sag	40	233.05
88	11+619.462	1580.885	11+634.462	1580.915	11+649.462	1580.865	0.198	-0.331	Hog	30	56.76
89	11+723.793	1580.620	11+738.793	1580.570	11+753.793	1580.502	-0.331	-0.456	Hog	30	239.92
90	11+843.822	1580.091	11+858.822	1580.023	11+873.822	1580.083	-0.456	0.399	Sag	30	35.12
91	11+941.938	1580.354	11+961.938	1580.434	11+981.938	1580.470	0.399	0.180	Hog	40	183.34
92	12+070.383	1580.630	12+085.383	1580.657	12+100.383	1580.758	0.180	0.678	Sag	30	60.26
93	12+131.004	1580.966	12+151.004	1581.102	12+171.004	1581.045	0.678	-0.282	Hog	40	41.66
94	12+247.567	1580.829	12+272.567	1580.759	12+297.567	1580.472	-0.282	-1.147	Hog	50	57.78
95	12+340.721	1579.977	12+355.721	1579.805	12+370.721	1579.846	-1.147	0.276	Sag	30	21.08
96	12+410.097	1579.955	12+430.097	1580.010	12+450.097	1579.935	0.276	-0.376	Hog	40	61.36
97	12+535.076	1579.615	12+550.076	1579.559	12+565.076	1579.658	-0.376	0.664	Sag	30	28.84
98	12+598.649	1579.881	12+623.649	1580.047	12+648.649	1579.915	0.664	-0.529	Hog	50	41.91

CLIENT :



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**(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam
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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 :	N.T.S

TITLE :

Vertical Alignment Report

DRG. NO. : EPTISA/JTRFP/DPR/J&K/VAR/02

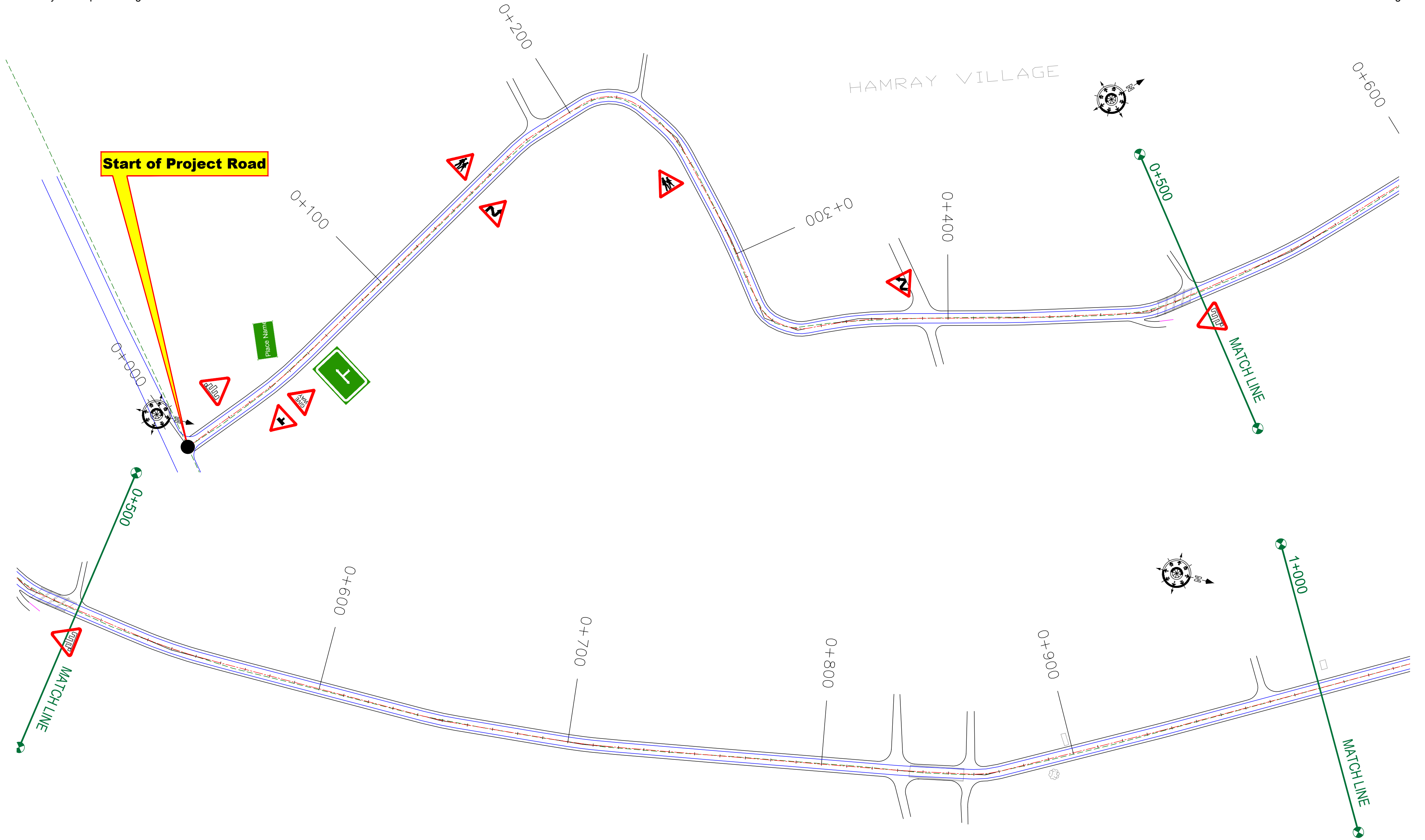
REVISION : R-1

September 2019

≡ SIGNAGE PLAN (MAIN ROAD) ≡

← Hamary-Sultanpora Nowgam

Sumbal Bridge →



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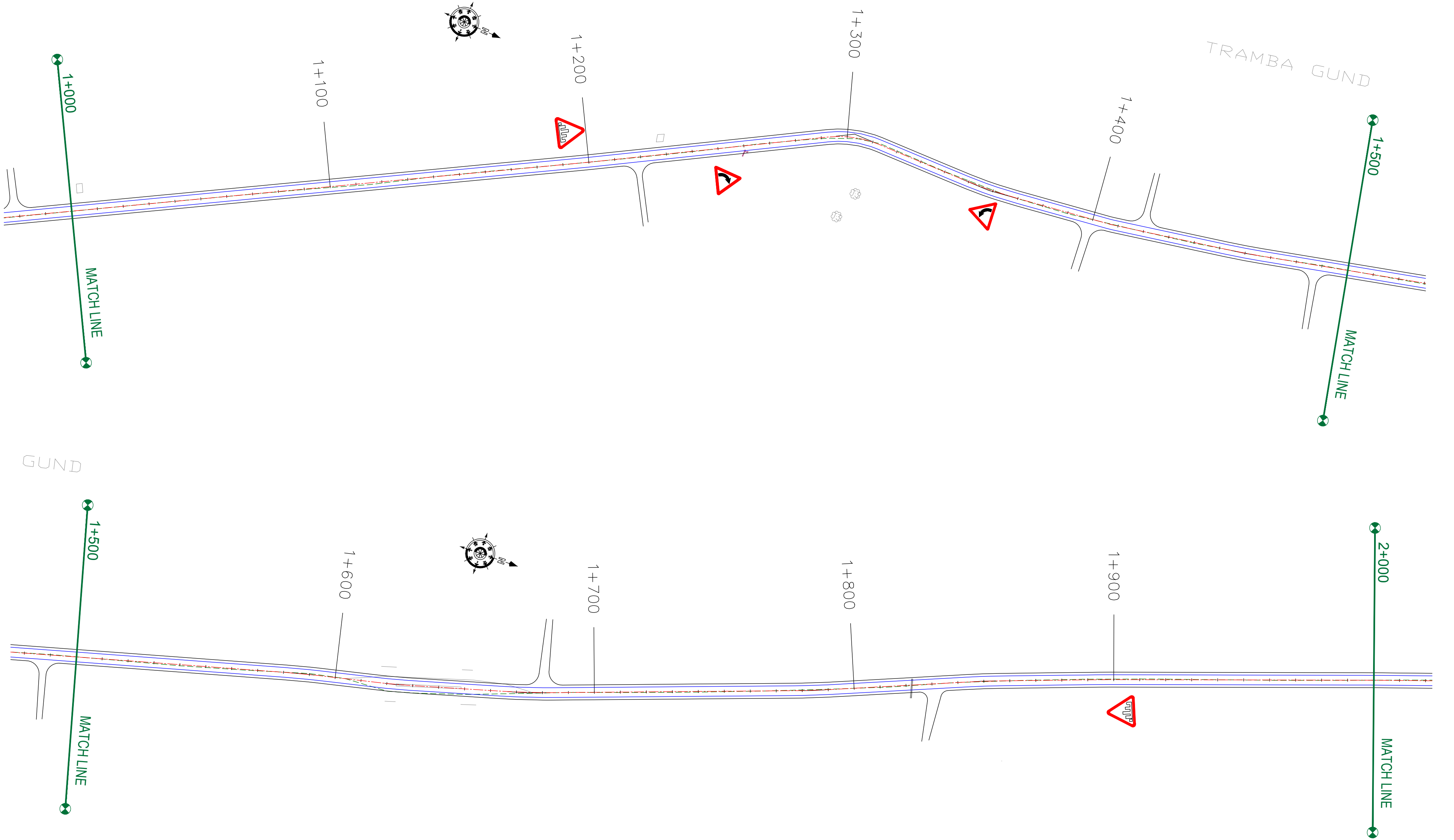
REV.	DATE	DESCRIPTION

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

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

← Hamary-Sultanpora Nowgam

Sumbal Bridge →



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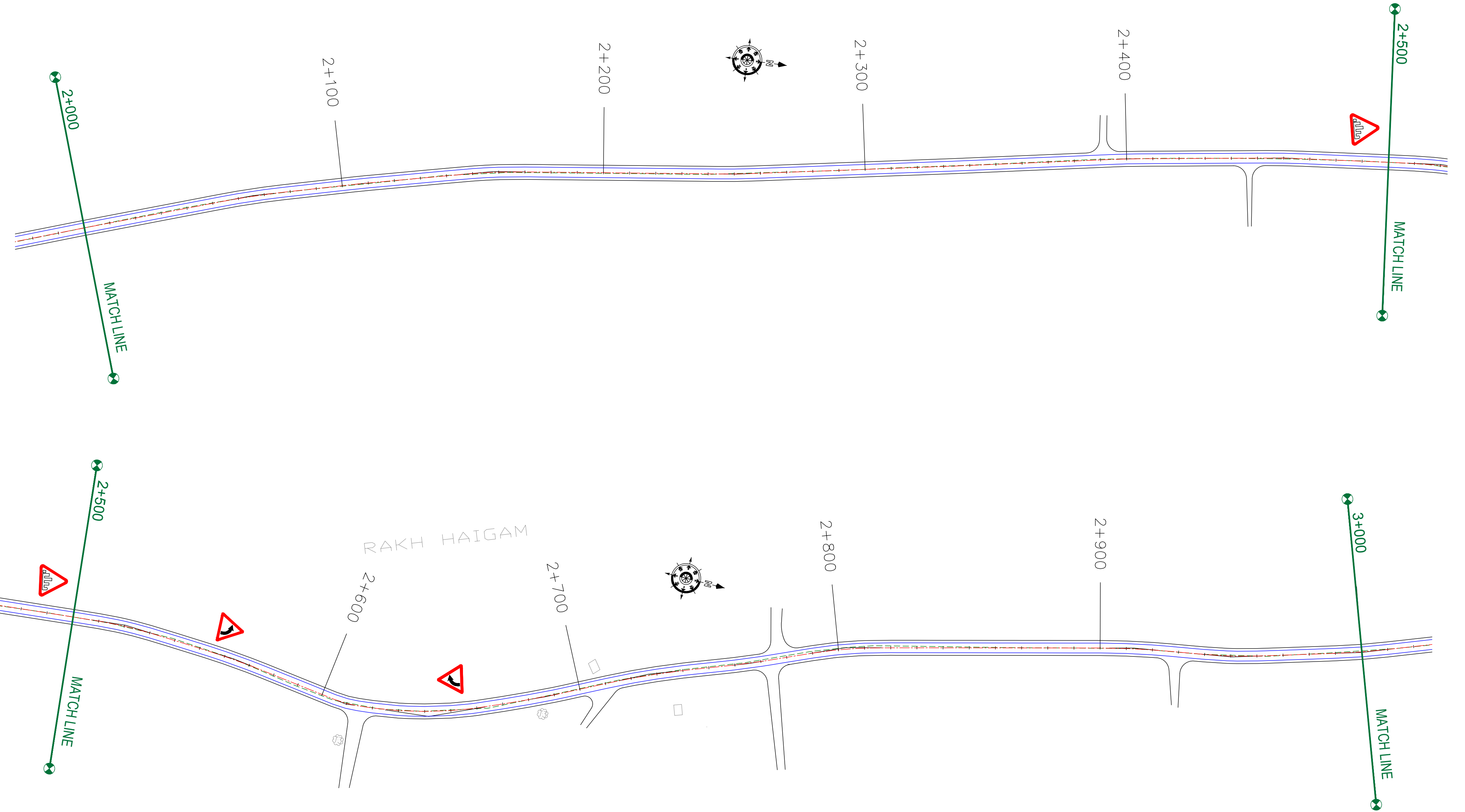
REV.	DATE	DESCRIPTION

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

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

← Hamary-Sultanpora Nowgam

Sumbal Bridge →



CLIENT :



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**(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam
upto Sumbal Bridge)**

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 :

Signage Plan
(Ch. 2+000 to Ch. 3+000)

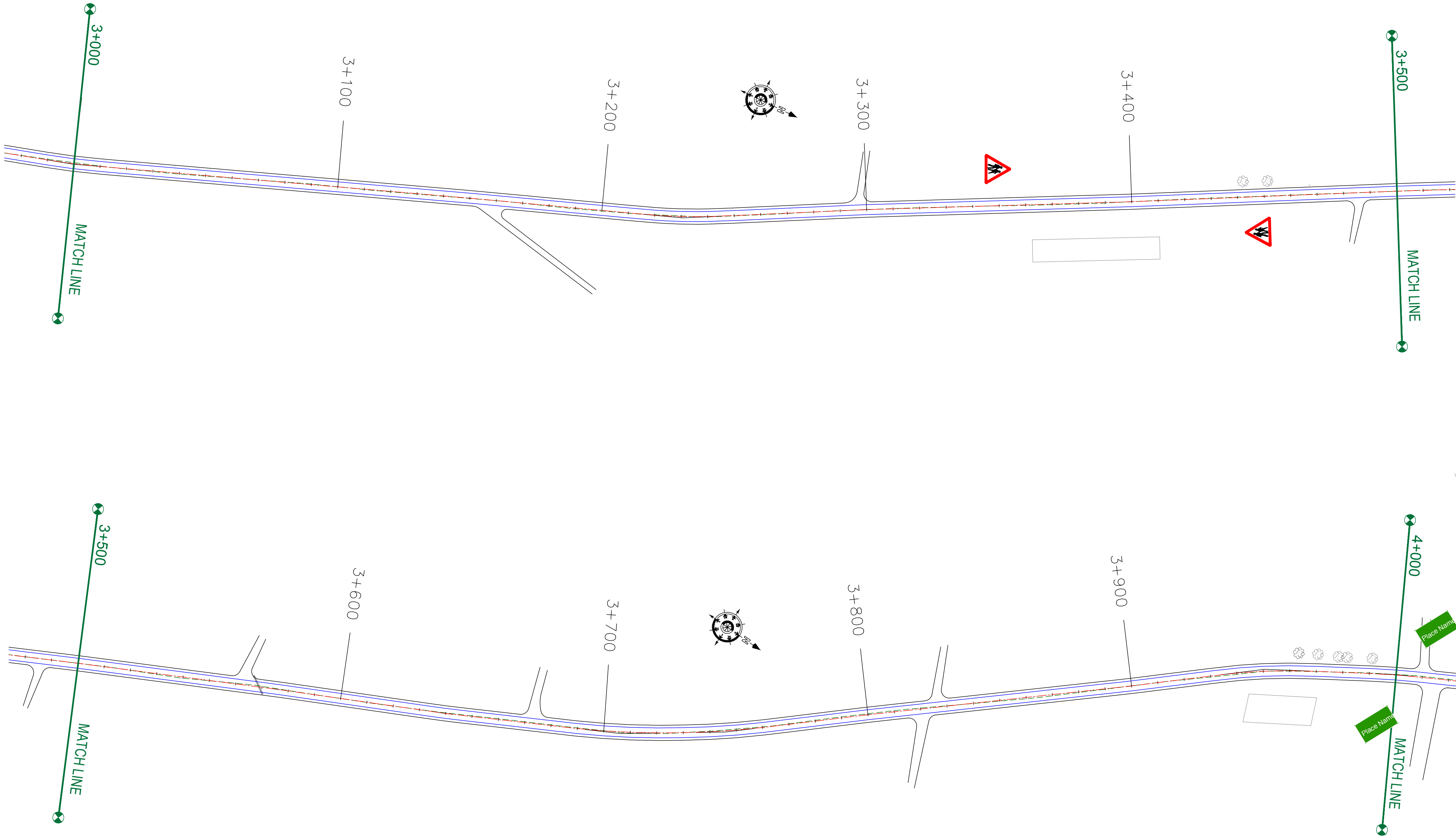
DRG. NO. : EPTISA/JTFRP/DPR/J&K/SP/03

REVISION : R-1

September 2019

← Hamary-Sultanpora Nowgam

Sumbal Bridge →



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
**(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam
upto Sumbal Bridge)**

DESIGN CONSULTANT:



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Sector v, Salt Lake Kolkata - 700091,
West Bengal
Ph: 033-40347200
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REV.	DATE	DESCRIPTION

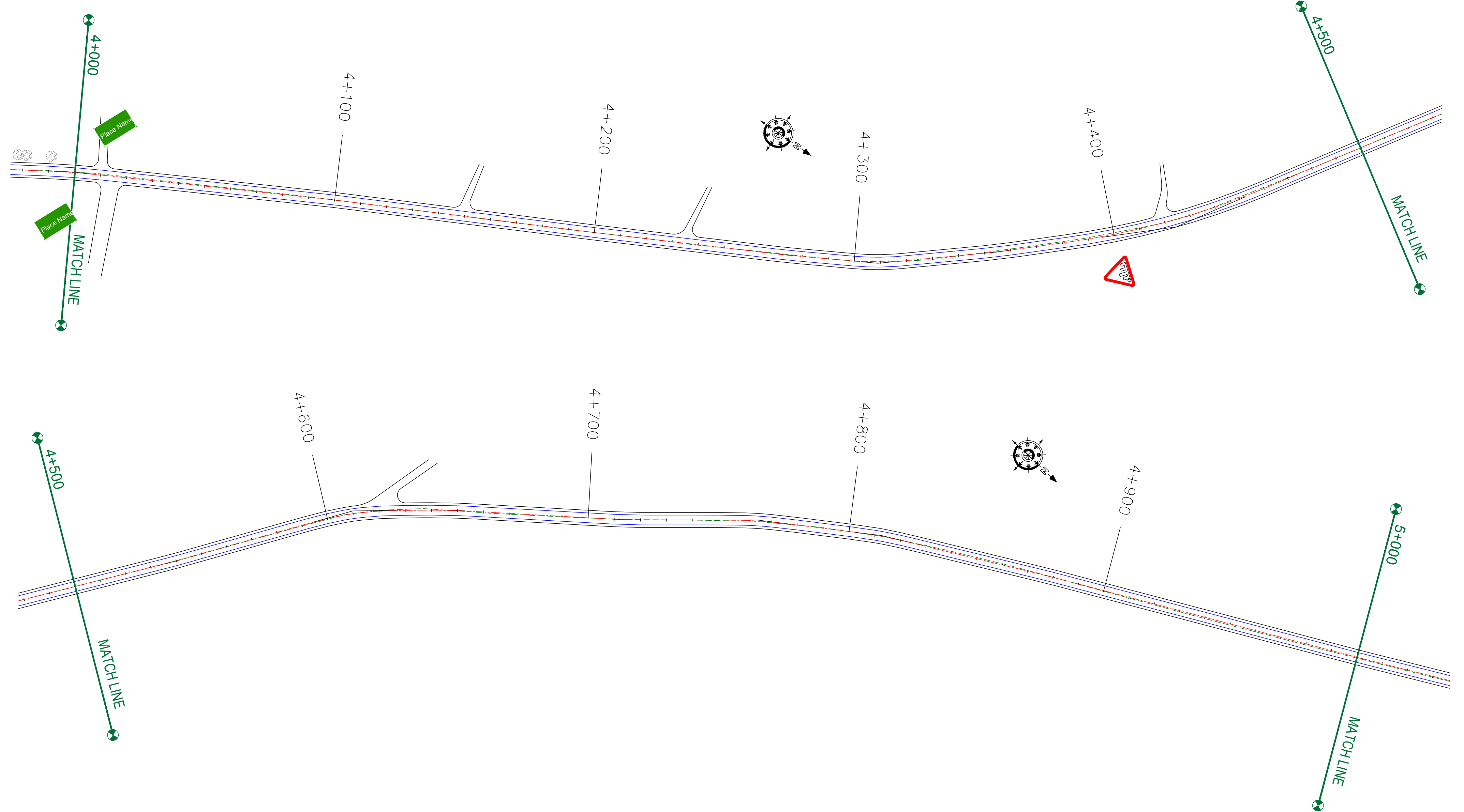
DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	Signage Plan (Ch. 3+000 to Ch. 4+000)
DRG. NO. :	EPTISA/JTFRP/DPR/J&K/SP/04
REVISION : R-1	September 2019

← Hamary-Sultanpora Nowgam

Sumbal Bridge →

WUSSAN VILLAGE



CLIENT :




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

PROJECT :

Consultancy Services for Preparing Detailed Project Report
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DESIGN CONSULTANT:



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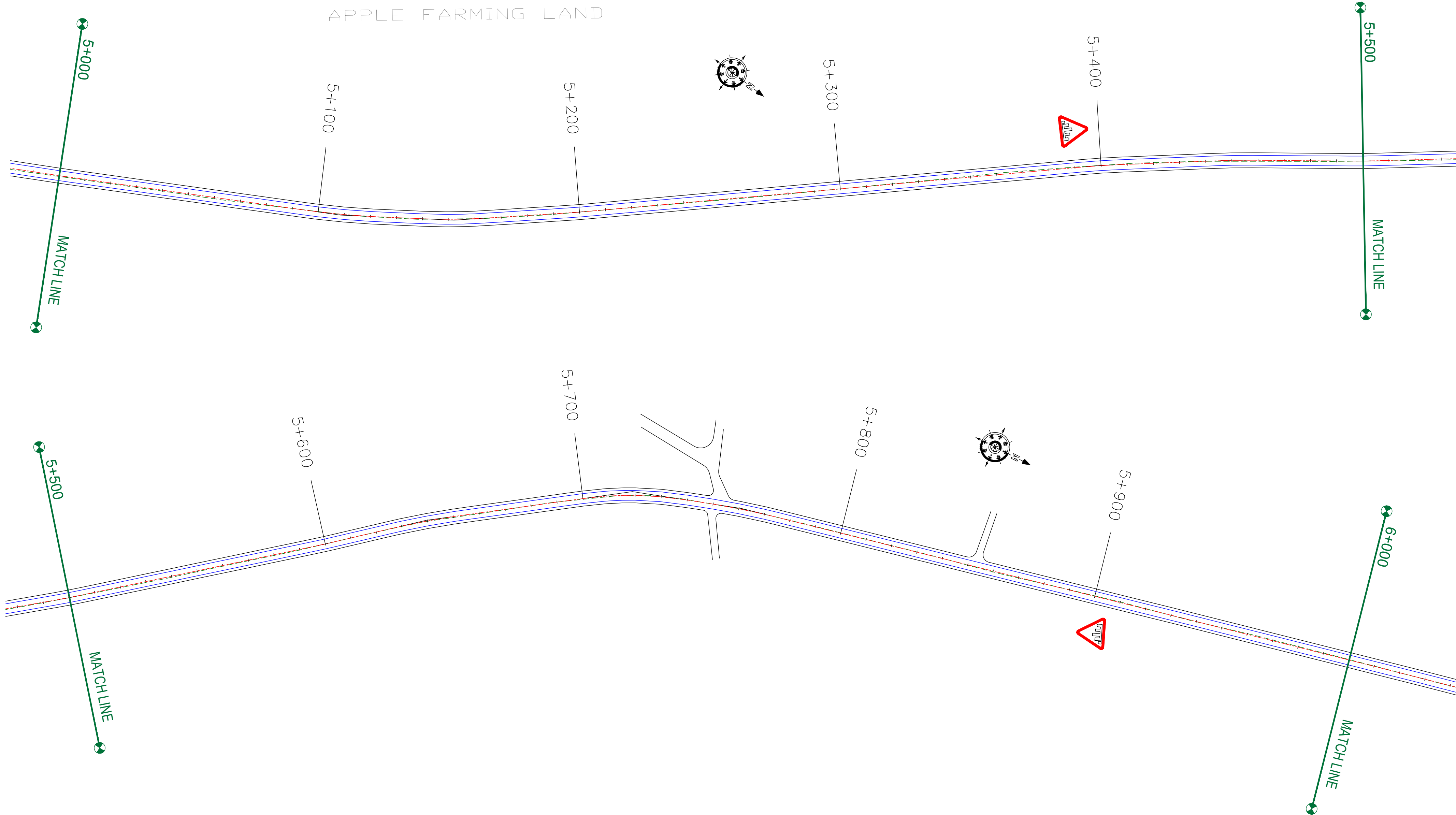
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DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	
Signage Plan	
(Ch. 4+000 to Ch. 5+000)	
DRG. NO. : EPTISA/JTRFP/DPR/J&K/SP/05	
REVISION : R-1	September 2019

← Hamary-Sultanpora Nowgam

Sumbal Bridge →



CLIENT :



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

PROJECT :

Consultancy Services for Preparing Detailed Project Report
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**(Upgradation of Hamary-Sultanpora-Zalpura-Nowgam
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DESIGN CONSULTANT:



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Sector v, Salt Lake Kolkata - 700091,
West Bengal
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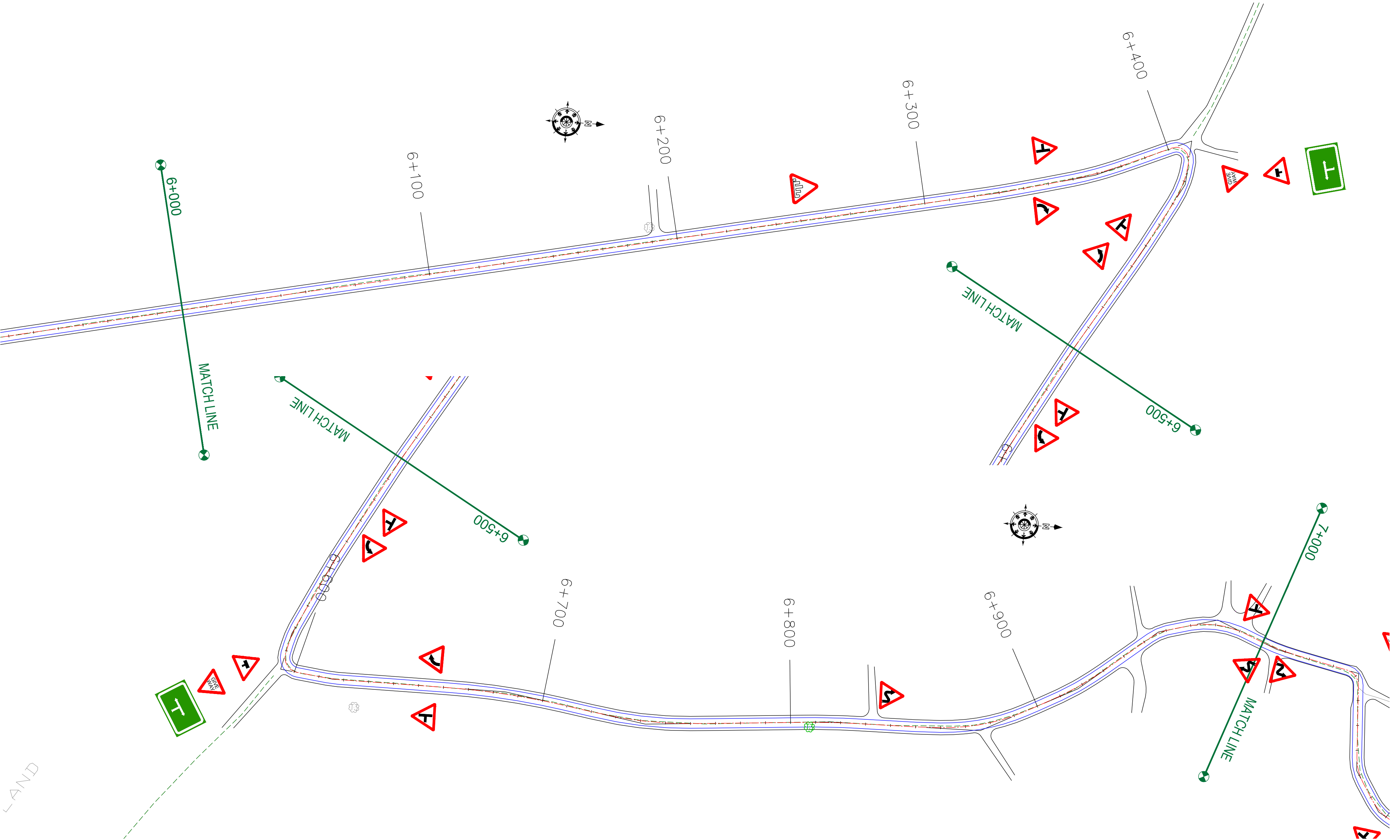
REV.	DATE	DESCRIPTION

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

TITLE :	Signage Plan (Ch. 5+000 to Ch. 6+000)
DRG. NO. :	EPTISA/JTRP/DPR/J&K/SP/06
REVISION : R-1	September 2019

← Hamary-Sultanpora Nowgam

Sumbal Bridge →



CLIENT :

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

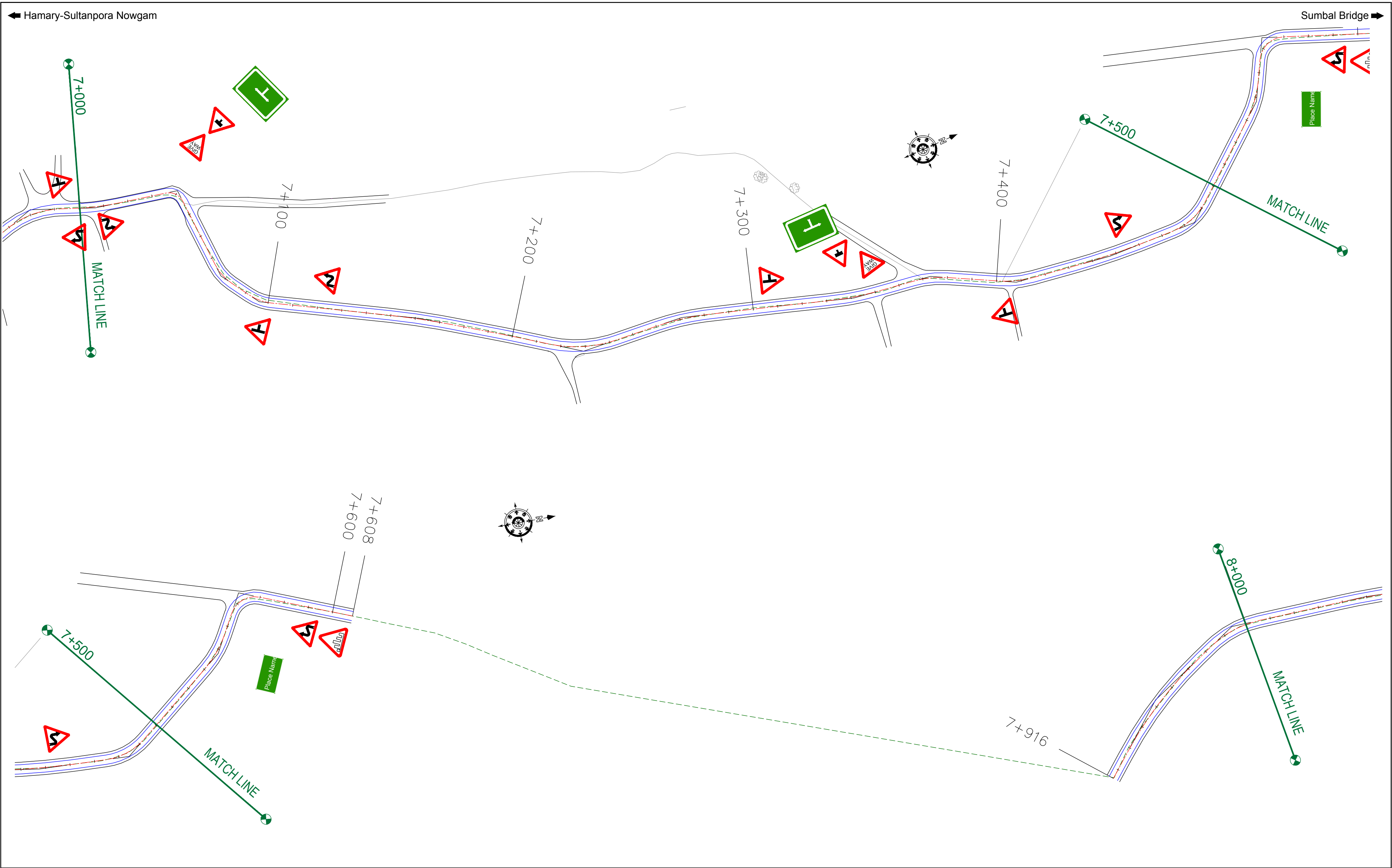
PROJECT :
Consultancy Services for Preparing Detailed Project Report
for the Road works in Jammu and Kashmir
**(Upgradation of Hamary-Sultanpora-Zalpura-Nowgam
upto Sumbal Bridge)**

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 :
Signage Plan
(Ch. 6+000 to Ch. 7+000)
DRG. NO. : EPTISA/JTFRP/DPR/J&K/SP/07
REVISION : R-1
September 2019



CLIENT :



JHELMUM & 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
**(Upgradation of Hamary-Sultanpora-Zalpura-Nowgam
upto Sumbal Bridge)**

DESIGN CONSULTANT:

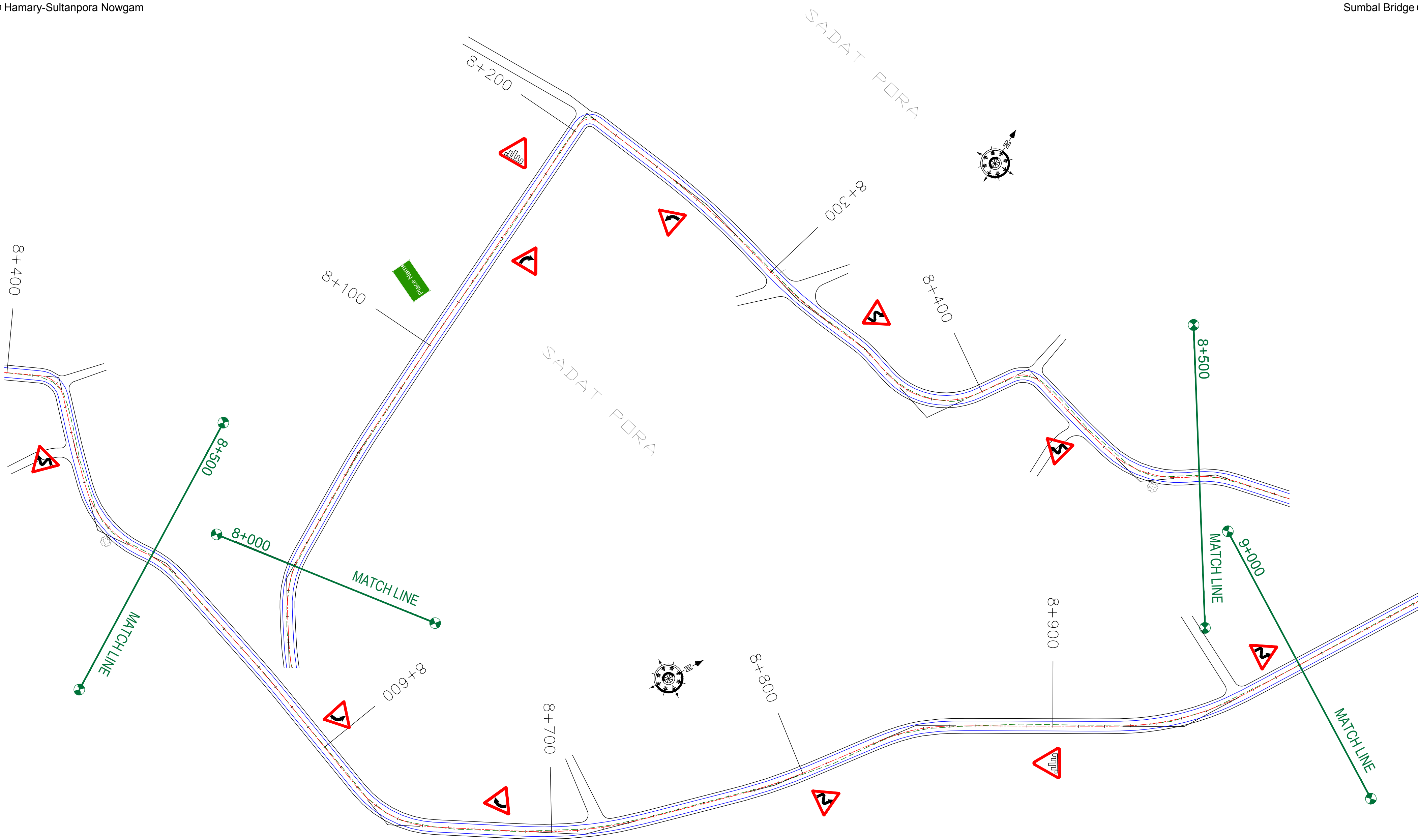


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Sector v, Salt Lake Kolkata - 700091,
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REV.	DATE	DESCRIPTION

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

TITLE :	
Signage Plan	
(Ch. 7+000 to Ch. 8+000)	
DRG. NO. : EPTISA/JTRFP/DPR/J&K/SP/08	
REVISION : R-1	September 2019



CLIENT :




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

PROJECT :

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for the Road works in Jammu and Kashmir
**(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam
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DESIGN CONSULTANT:



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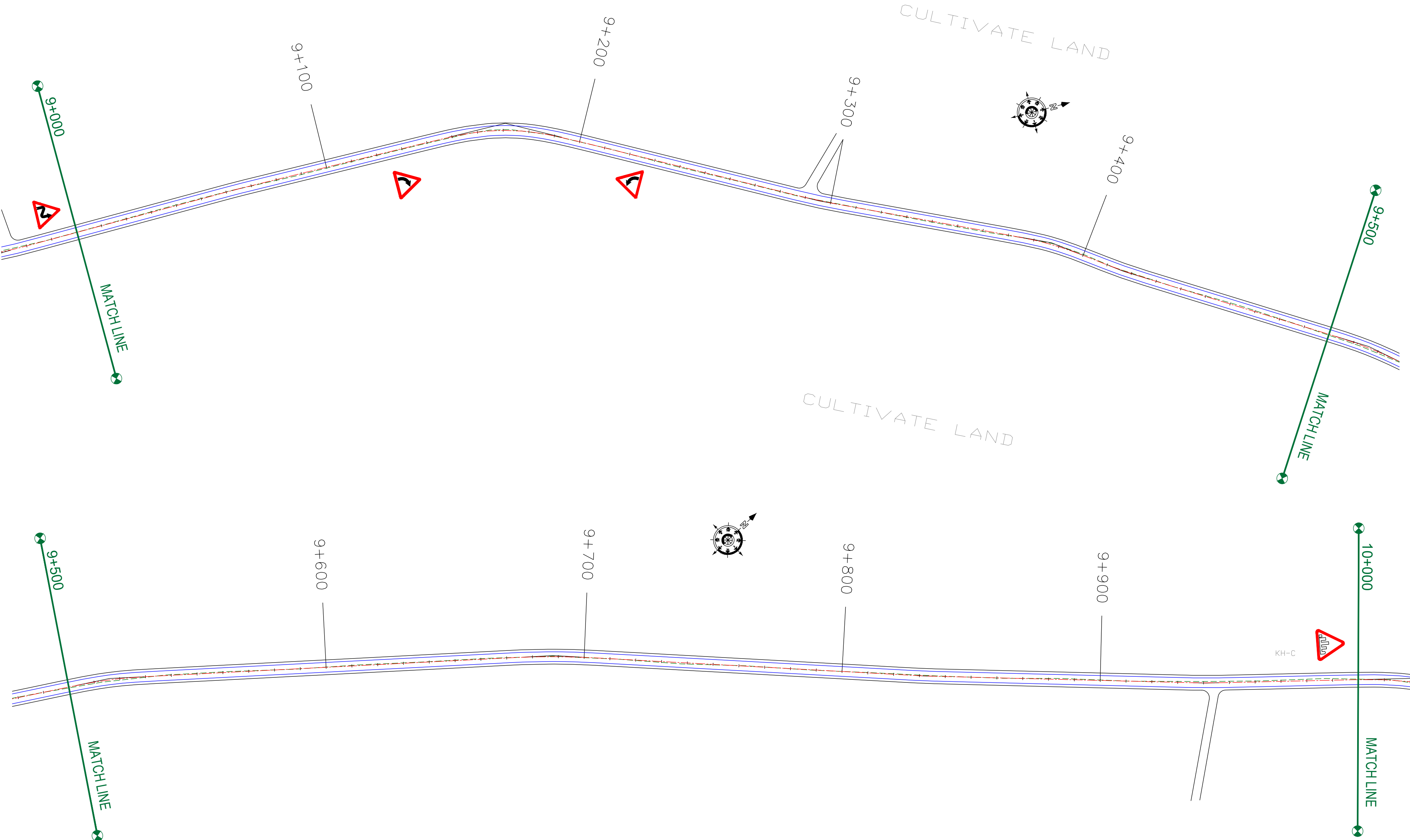
REV.	DATE	DESCRIPTION

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

TITLE :	Signage Plan (Ch. 8+000 to Ch. 9+000)
DRG. NO. :	EPTISA/JTFRP/DPR/J&K/SP/09
REVISION : R-1	September 2019

← Hamary-Sultanpora Nowgam

Sumbal Bridge →



CLIENT :



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

PROJECT :

Consultancy Services for Preparing Detailed Project Report
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**(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam
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DESIGN CONSULTANT:



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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 :

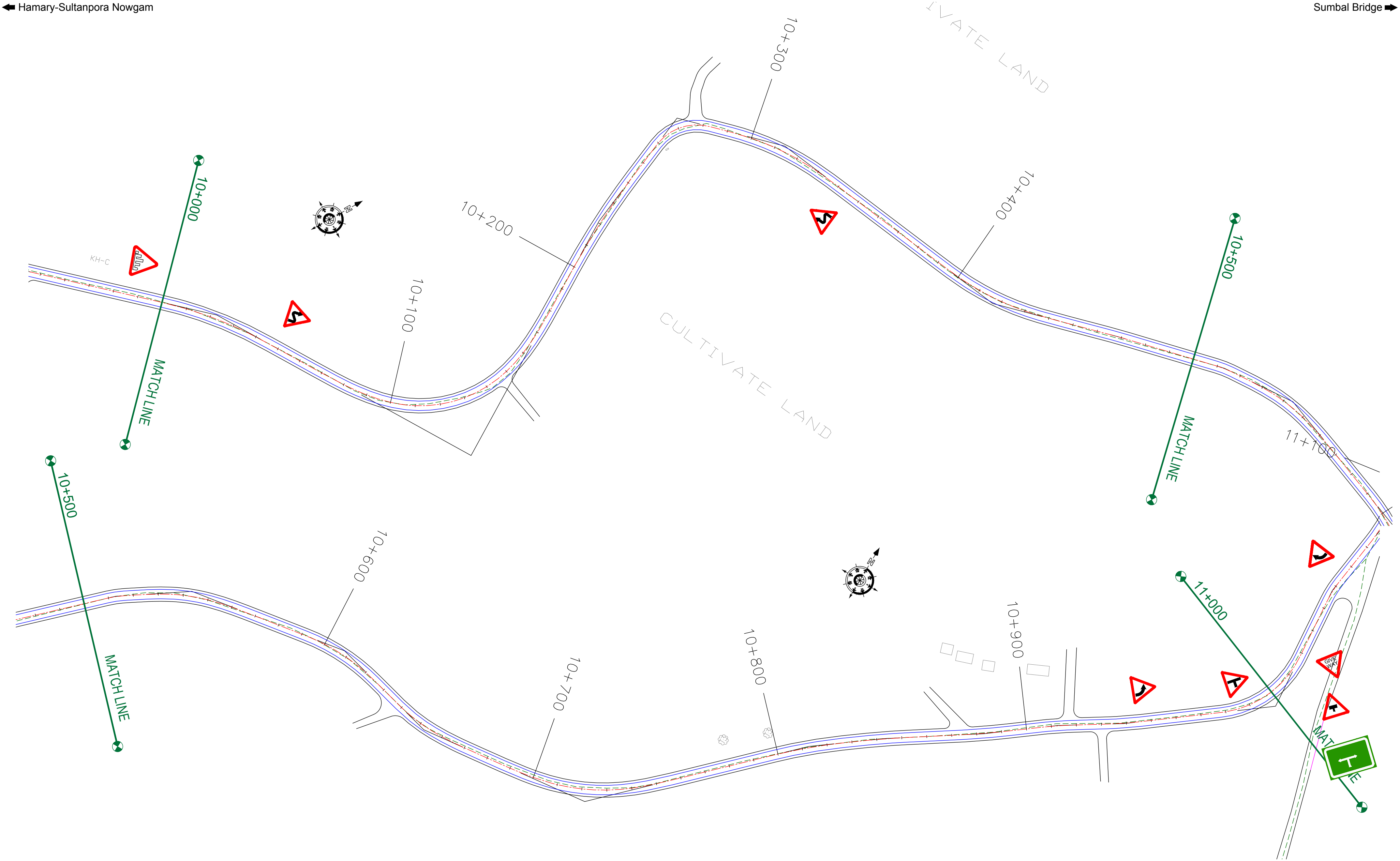
Signage Plan

(Ch. 9+000 to Ch. 10+000)

DRG. NO. : EPTISA/JTRFP/DPR/J&K/SP/10

REVISION : R-1

September 2019



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
**(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam
upto Sumbal Bridge)**

DESIGN CONSULTANT:

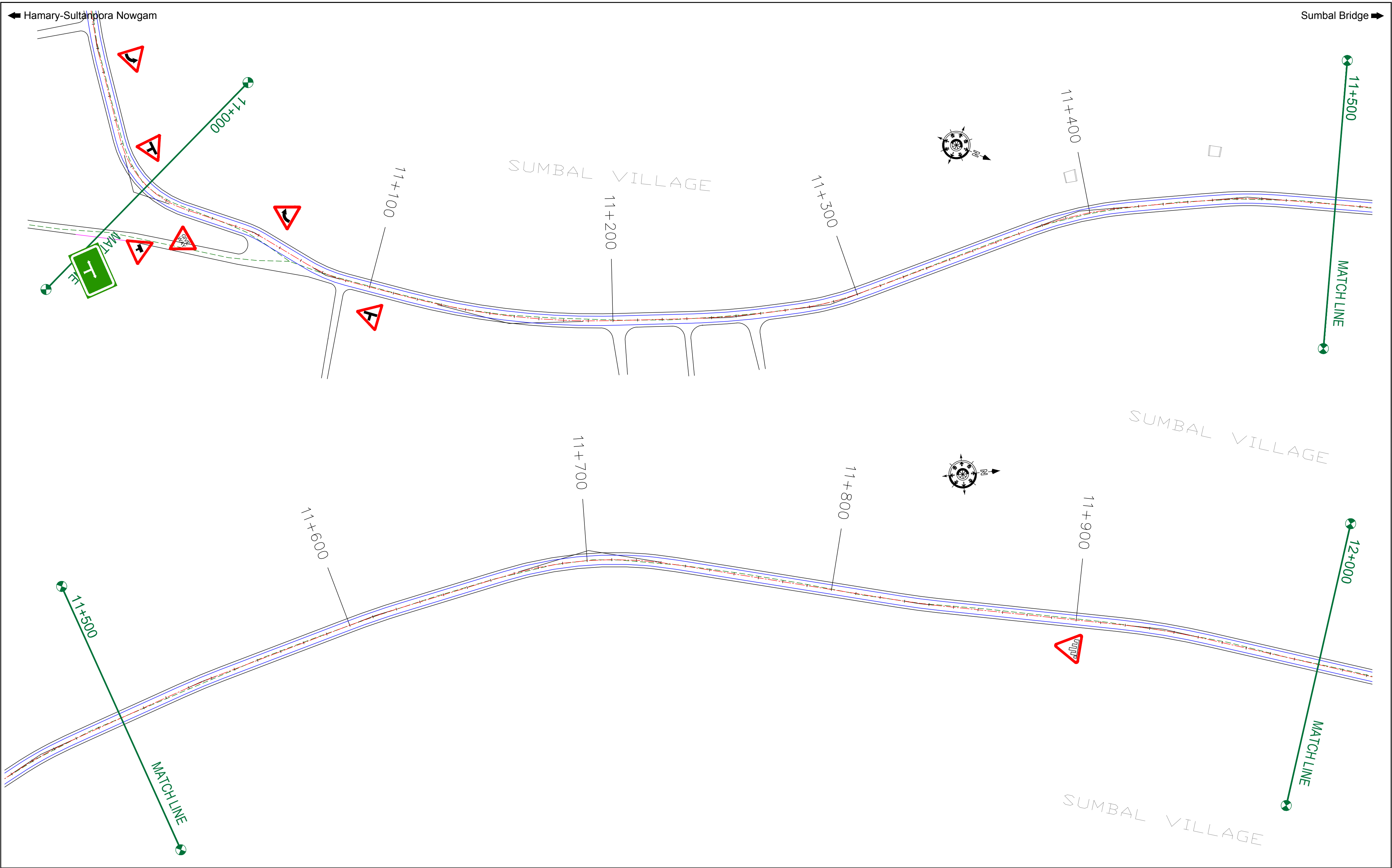


Servicios de Ingenieria S.L.
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Ph: 033-40347200
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REV.	DATE	DESCRIPTION

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

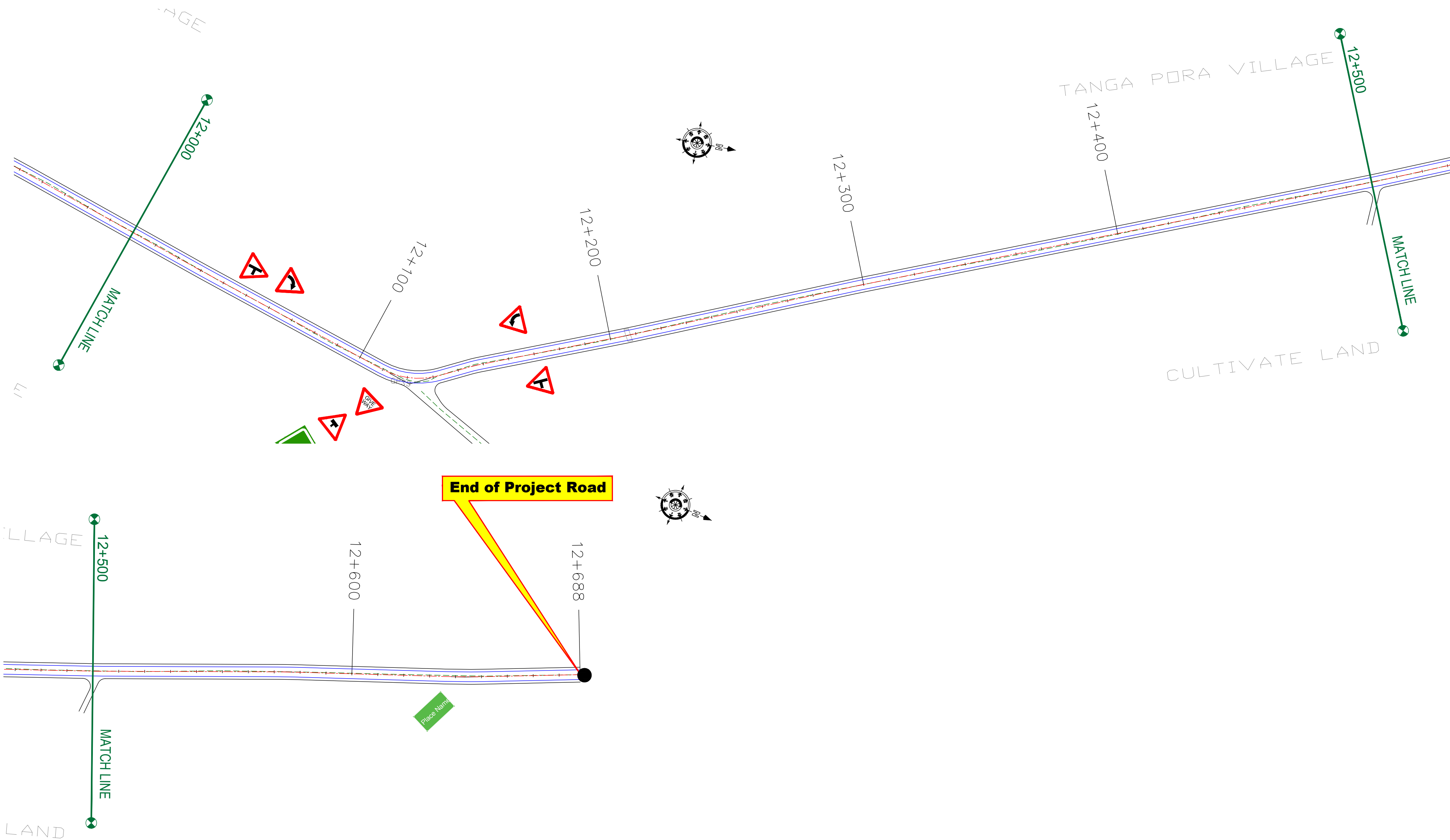
TITLE :	
Signage Plan	
(Ch. 10+000 to Ch. 11+000)	
DRG. NO. : EPTISA/JTRP/DPR/J&K/SP/11	
REVISION : R-1	September 2019



<div>CLIENT :</div> <div><div>JHELUM & TAWI FLOOD RECOVERY PROJECT</div><div>Jhelum Tawi Flood Recovery Project 2nd Floor ERA Commercial Complex Rambagh Srinagar-190 009.</div></div>	<div>PROJECT :</div> <div>Consultancy Services for Preparing Detailed Project Report for the Road works in Jammu and Kashmir <u>(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam upto Sumbal Bridge)</u></div>	<div>DESIGN CONSULTANT:</div> <div><div>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</div></div>				DRAWN BY : SD	TITLE : Signage Plan (Ch. 11+000 to Ch. 12+000)	
						DESIGNED BY : SCK/MM		
						APPROVED BY : KG	DRG. NO. : EPTISA/JTRP/DPR/J&K/SP/12	
						SCALE : 1:1000	REVISION : R-1	September 2019
			REV.	DATE	DESCRIPTION			

← Hamary-Sultanpora Nowgam

Sumbal Bridge →



CLIENT :



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

PROJECT :

Consultancy Services for Preparing Detailed Project Report
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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 :
Signage Plan
(Ch. 12+000 to Ch. 12+688)

DRG. NO. : EPTISA/JTRFP/DPR/J&K/SP/13

REVISION : R-1

September 2019

≡ DETAILED CROSS SECTION ≡

Level Datum =1586.000

Design LEVELS				1586.990	1587.041	1587.088	1587.041	1587.114	
Design OFFSET				-2.896	-1.875	0.000	1.875	2.978	
Existing Ground LEVELS	1586.663		1586.829	1586.899	1587.043		1587.117	1587.129	1587.122
Existing Ground OFFSET	-15.000		-8.235	-4.228	-2.134		3.224	4.132	15.000

Chainage = 100.000

Level Datum =1586.000

Design LEVELS				1587.676	1587.879	1587.926	1587.879	1588.210	
Design OFFSET				-3.048	-1.875	-0.000	1.875	3.236	
Existing Ground LEVELS	1586.673		1587.684	1587.615		1587.953	1588.506	1588.605	1590.166
Existing Ground OFFSET	-15.000		-2.950	-2.008		2.732	3.771	4.589	15.000

Chainage = 300.000

Level Datum =1583.000

Design LEVELS				1583.823	1584.268	1584.298	1584.345	1584.298	1583.062
Design OFFSET				-3.321	-2.875	-1.875	0.000	1.875	4.082
Existing Ground LEVELS	1583.051	1583.087	1583.304	1583.258	1583.238	1583.312	1583.356	1583.498	1583.351
Existing Ground OFFSET	-15.000	-13.458	-11.768	-10.726	-10.125	-7.744	-6.760	-5.443	15.000

Chainage = 500.000

Level Datum =1585.000

Design LEVELS				1585.357	1585.362	1585.409	1585.362	1585.442	
Design OFFSET				-2.901	-1.875	0.000	1.875	2.985	
Existing Ground LEVELS	1586.020	1585.835	1585.806	1585.351	1585.365		1585.432	1585.476	1585.457
Existing Ground OFFSET	-15.000	-12.626	-10.541	-3.476	-2.236		1.655	7.581	15.000

Chainage = 0.000

Level Datum =1588.000

Design LEVELS				1589.007	1589.144	1589.191	1589.144	1589.081	
Design OFFSET				-2.982	-1.875	0.000	1.875	2.908	
Existing Ground LEVELS	1588.501	1588.860	1588.931	1588.957	1588.990	1589.014	1589.016	1589.062	1589.287
Existing Ground OFFSET	-15.000	-11.990	-7.270	-5.534	-4.915	-2.214	-2.097	2.145	15.000

Chainage = 200.000

Level Datum =1583.000

Design LEVELS				1584.239	1584.442	1584.489	1584.442	1584.013	
Design OFFSET				-3.048	-1.875	0.000	1.875	3.274	
Existing Ground LEVELS	1583.886	1584.332	1584.322	1584.352	1584.392	1584.336	1584.238	1584.258	1583.681
Existing Ground OFFSET	-15.000	-10.090	-9.600	-7.923	-6.800	-4.331	-3.124	-2.442	15.000

Chainage = 400.000

CLIENT :



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

PROJECT :

Consultancy Services for Preparing Detailed Project Report
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DESIGN CONSULTANT:



Eptisa Servicios de Ingenieria S.L.
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West Bengal
Ph: 033-40347200
www.eptisa.com

REV.	DATE	DESCRIPTION

DRAWN BY : SD

DESIGNED BY : SCK/MM

APPROVED BY : KG

SCALE 1 : 250

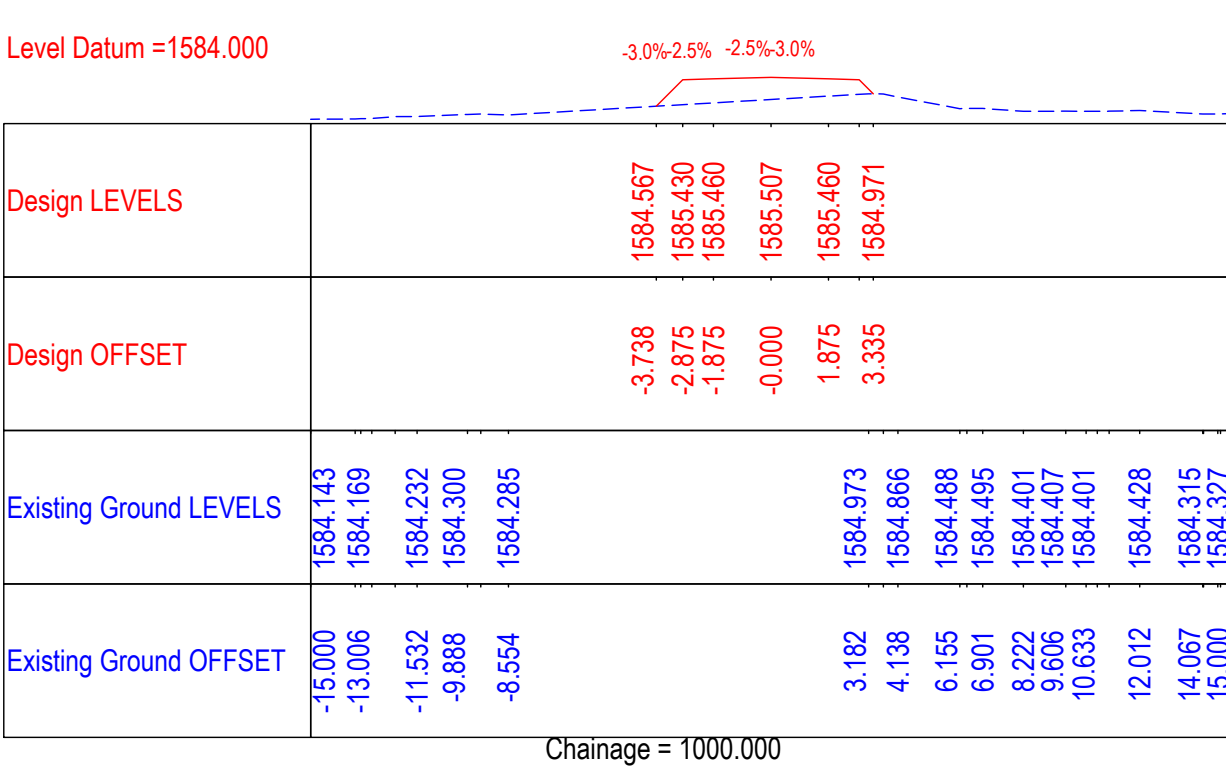
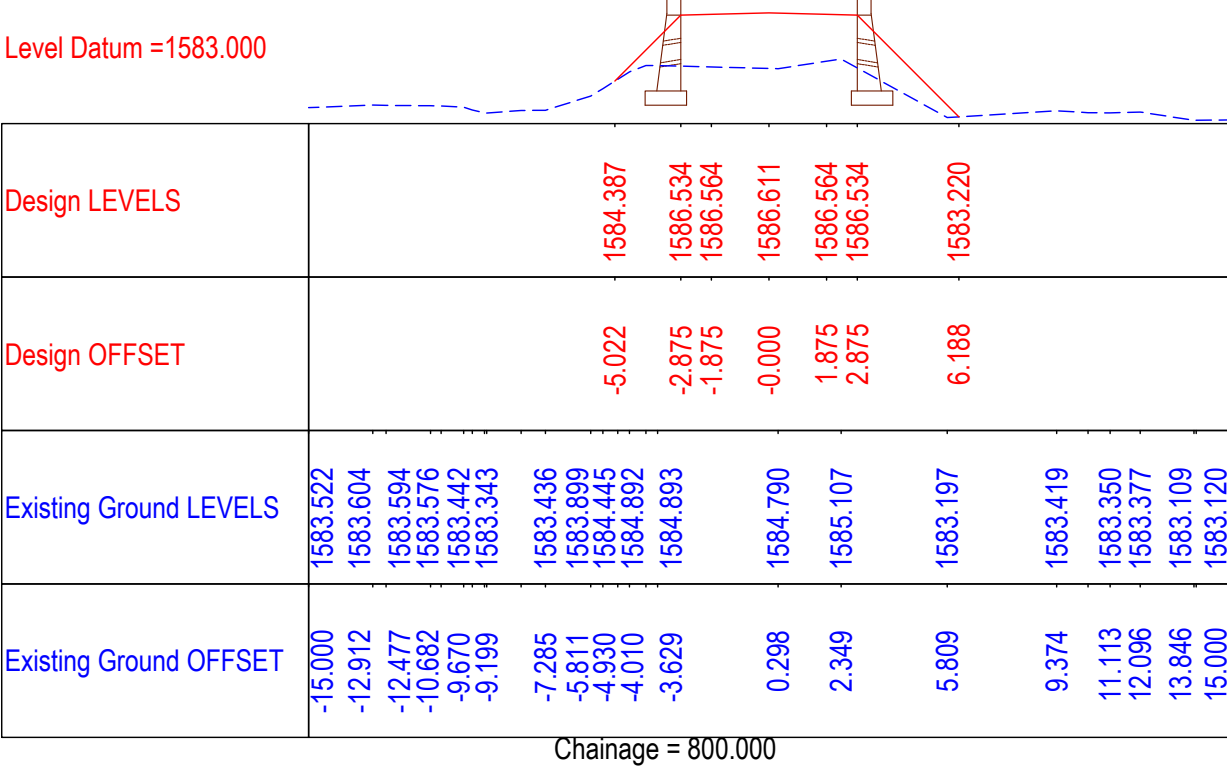
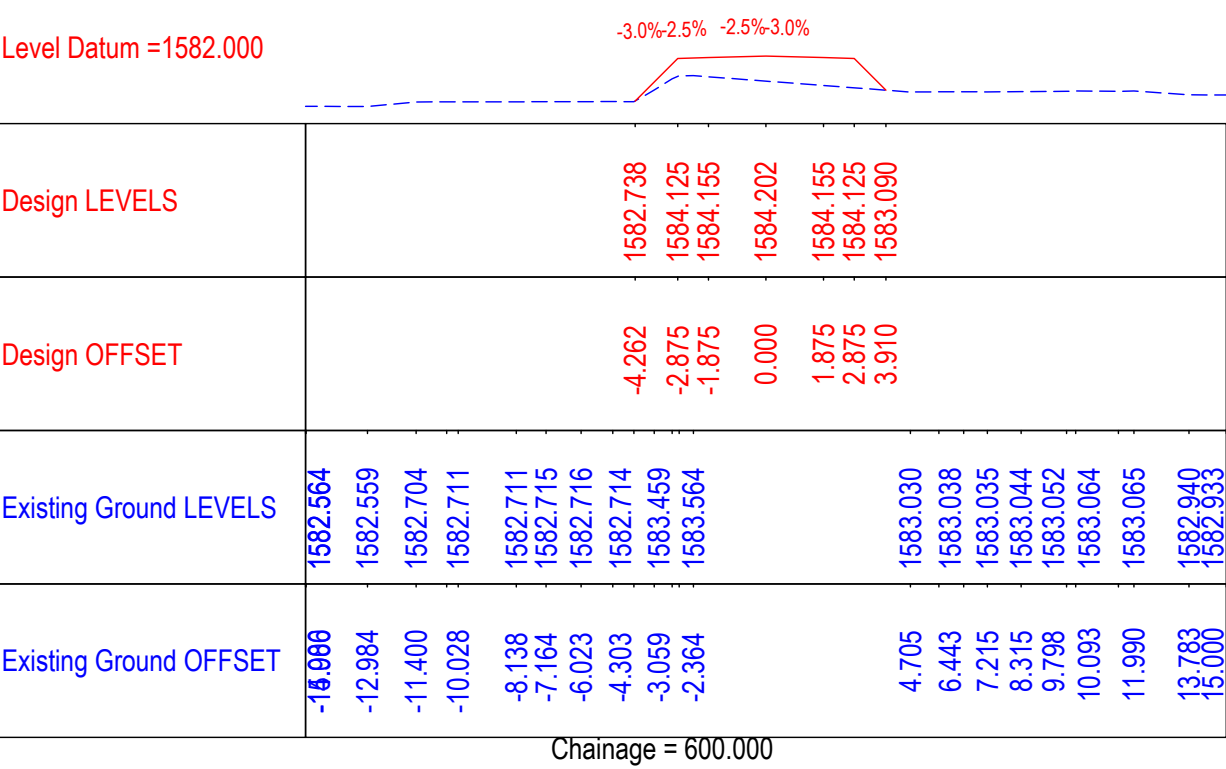
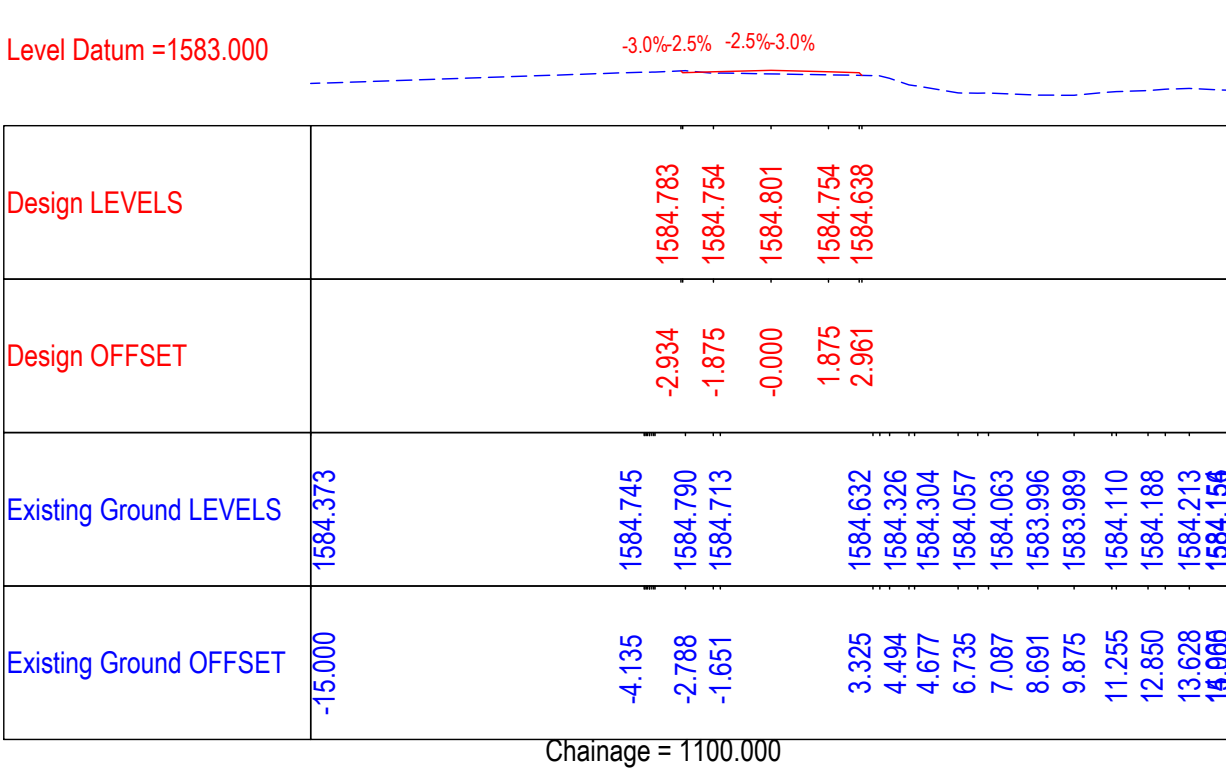
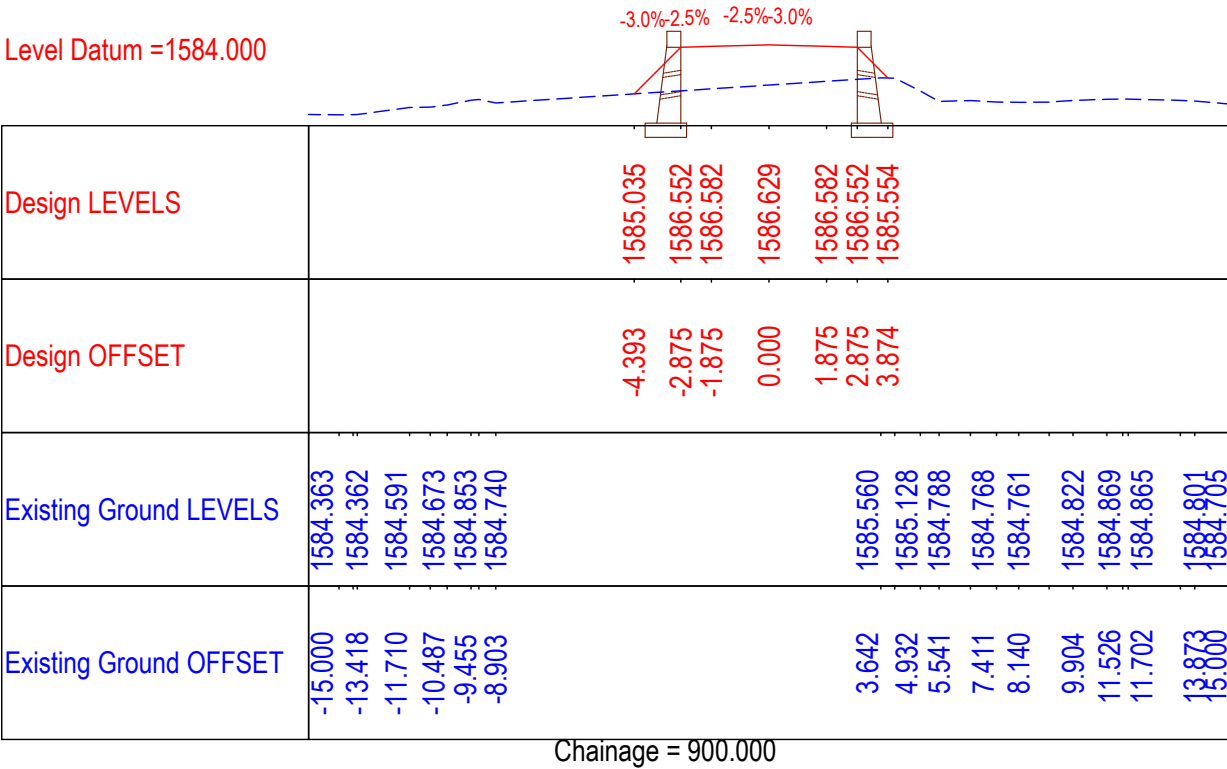
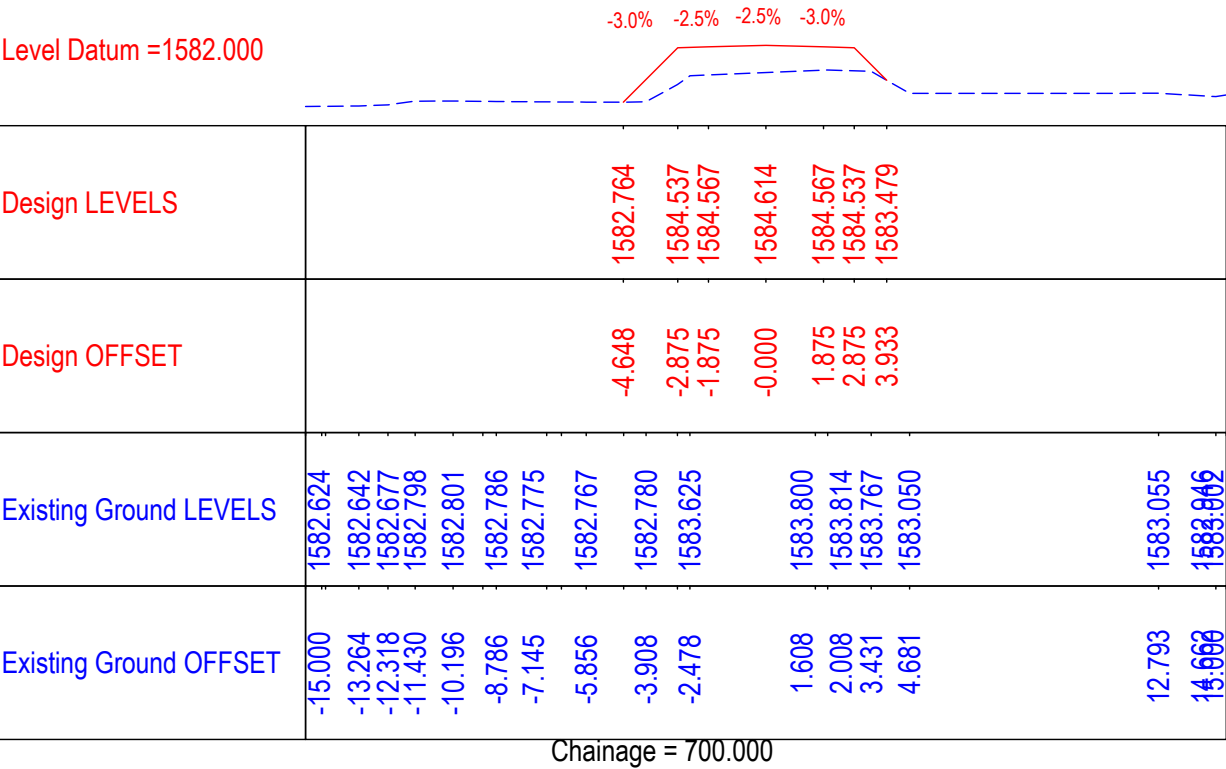
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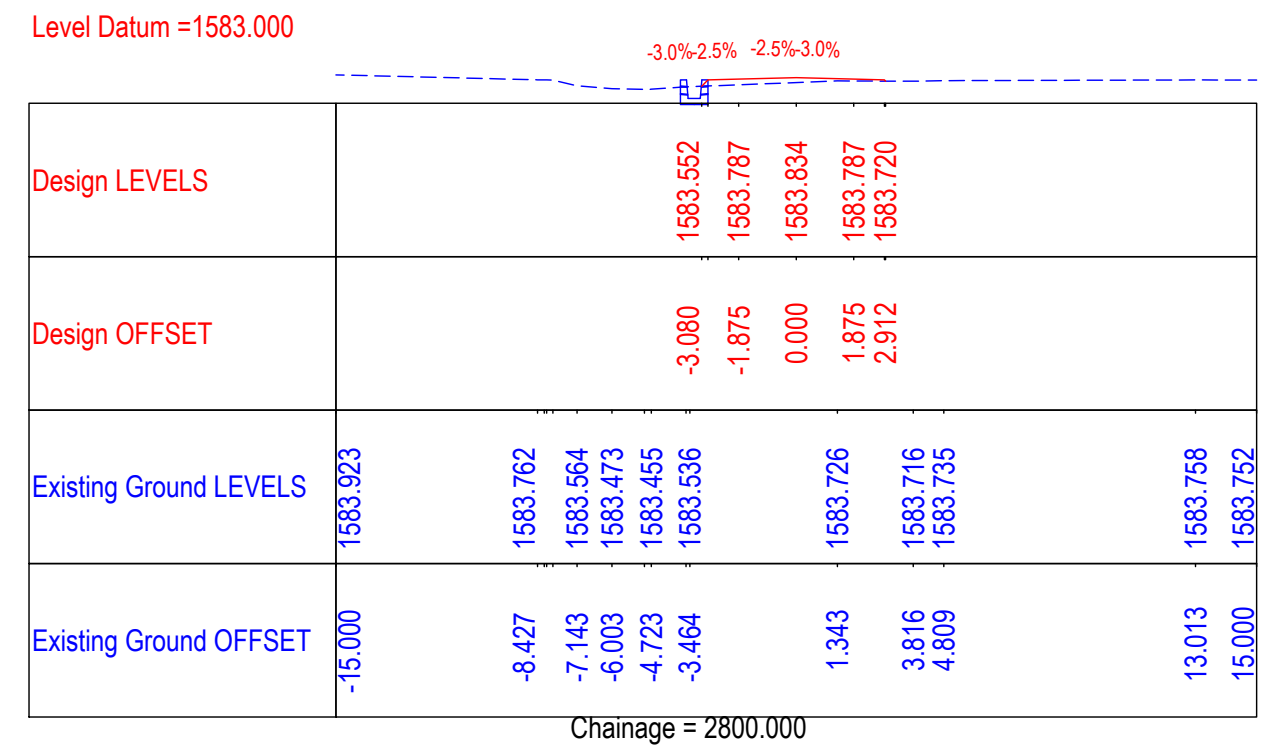
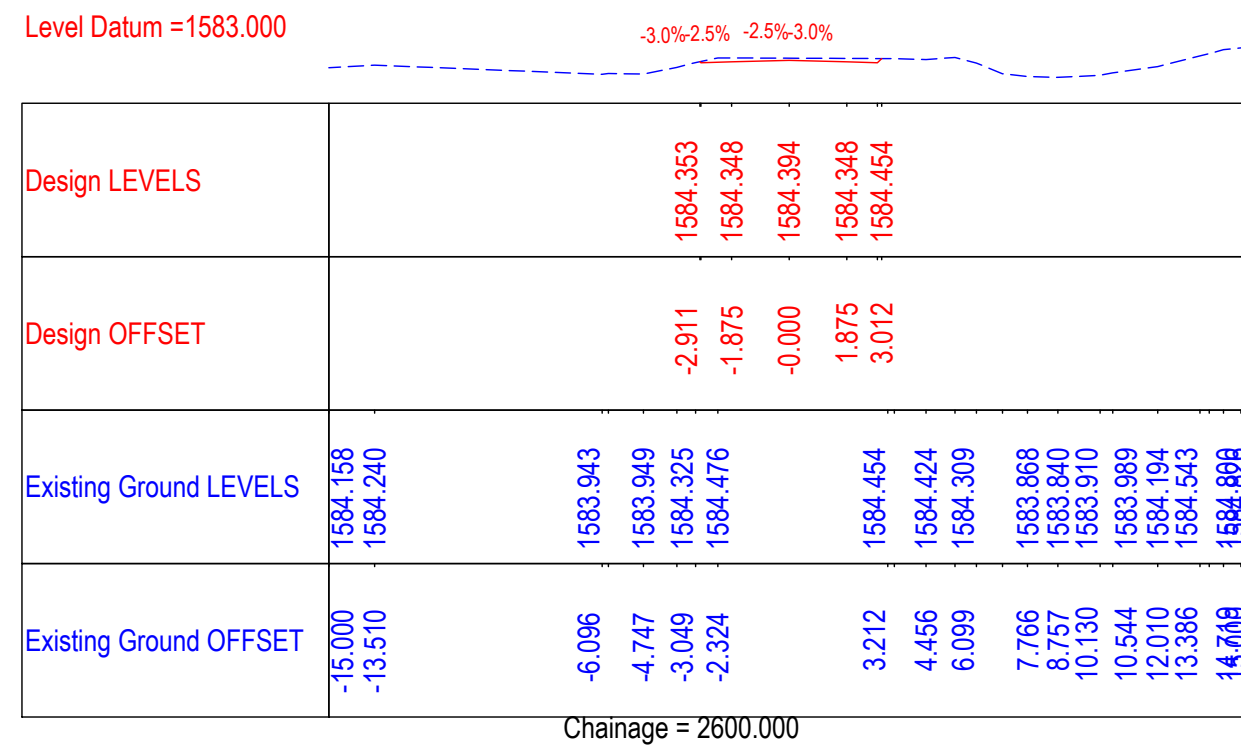
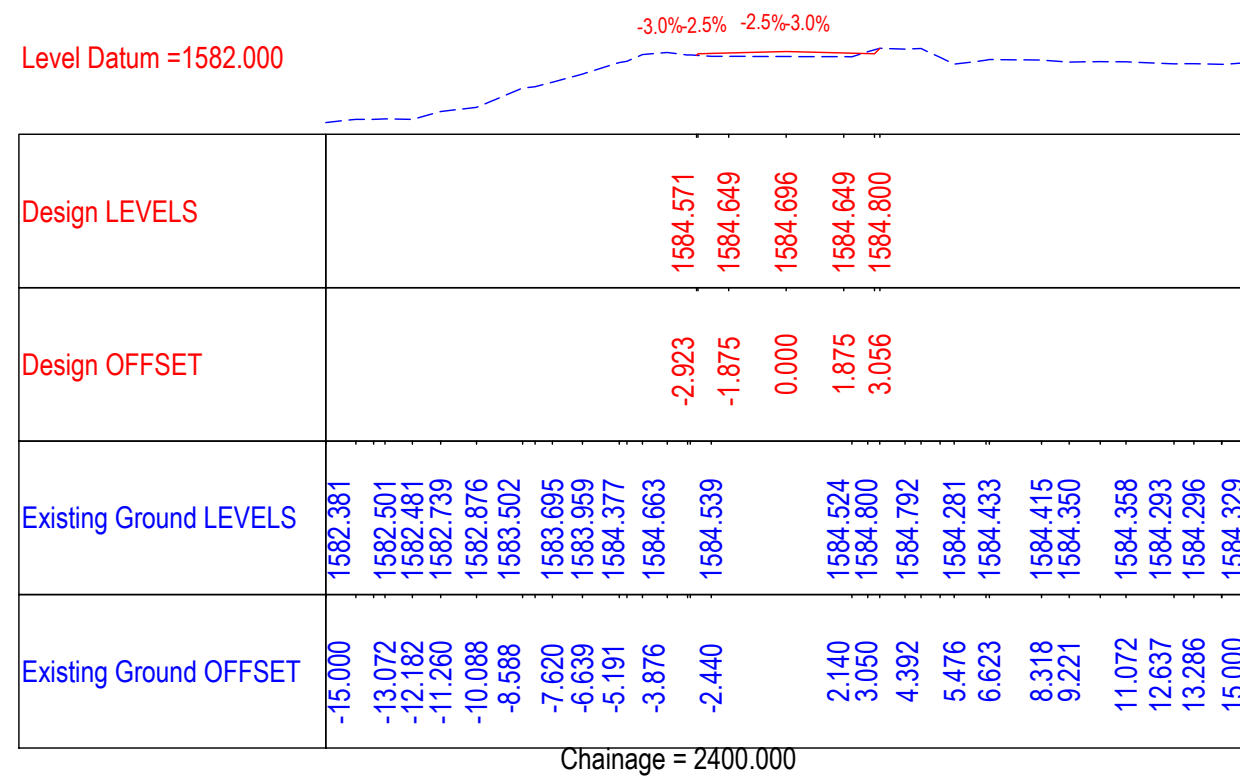
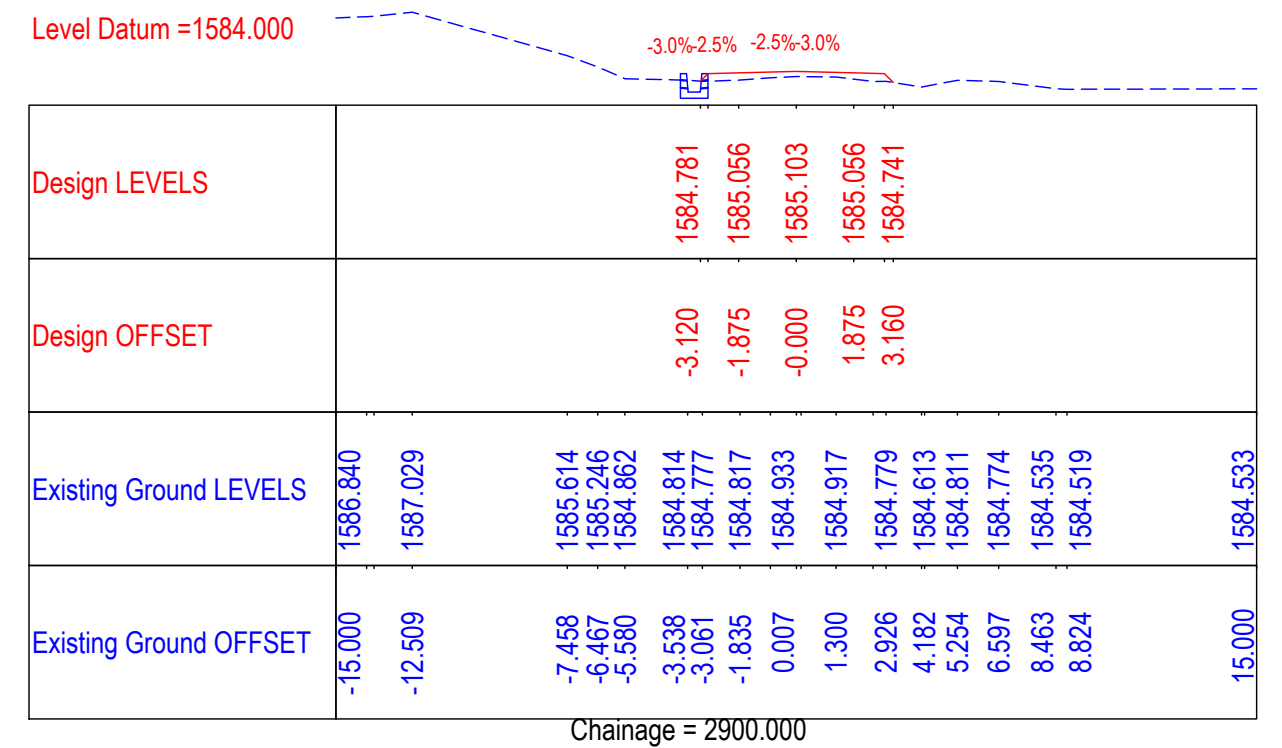
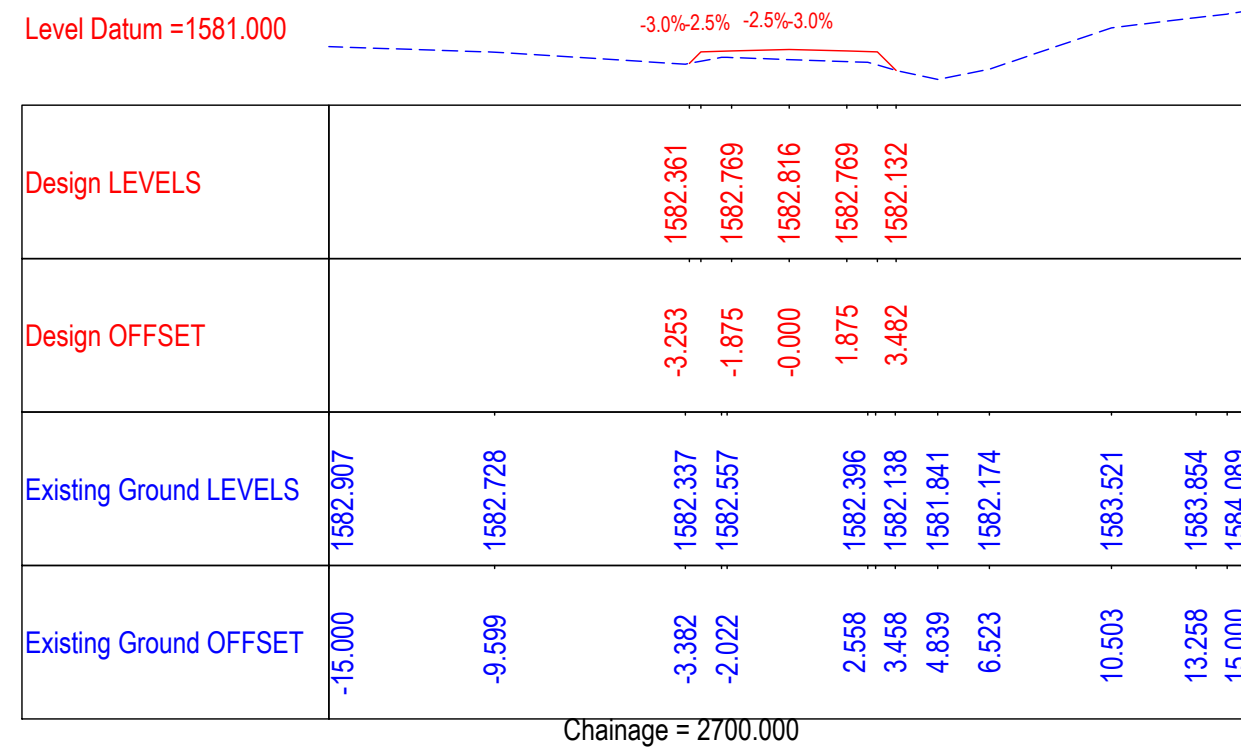
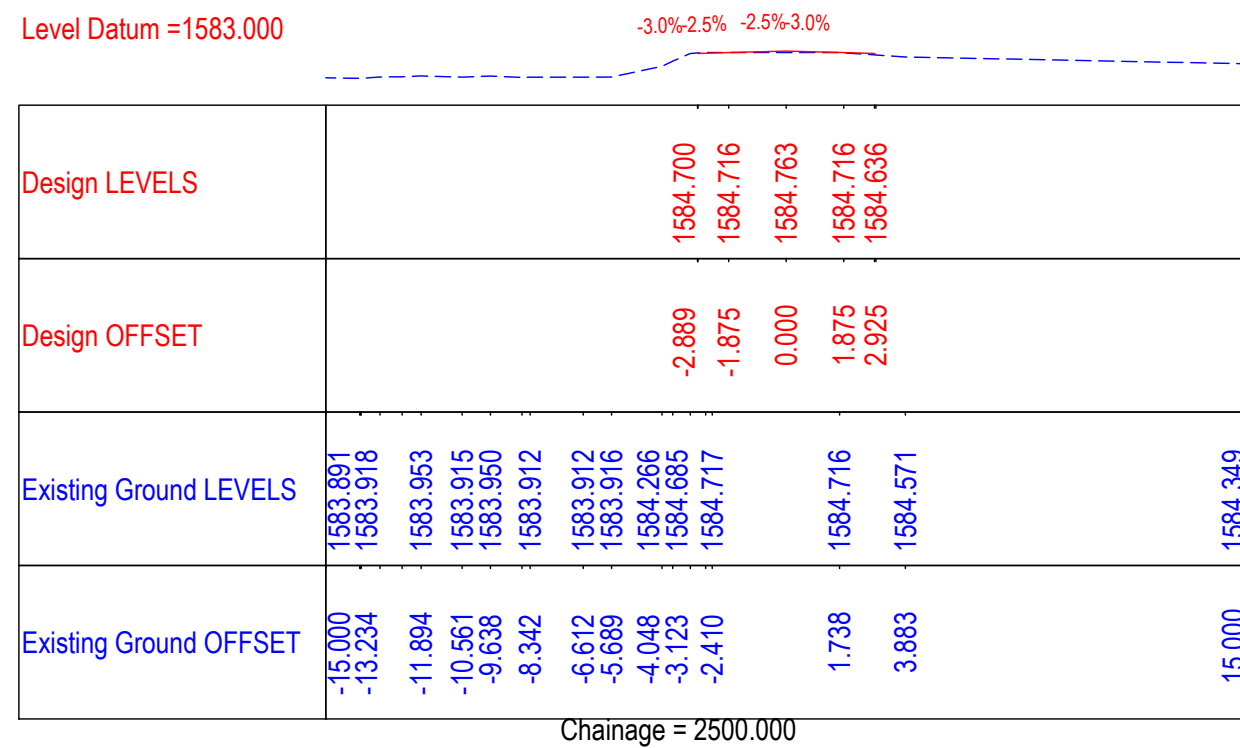
Detailed Cross Section
(Ch.0+000 to Ch.0+500)

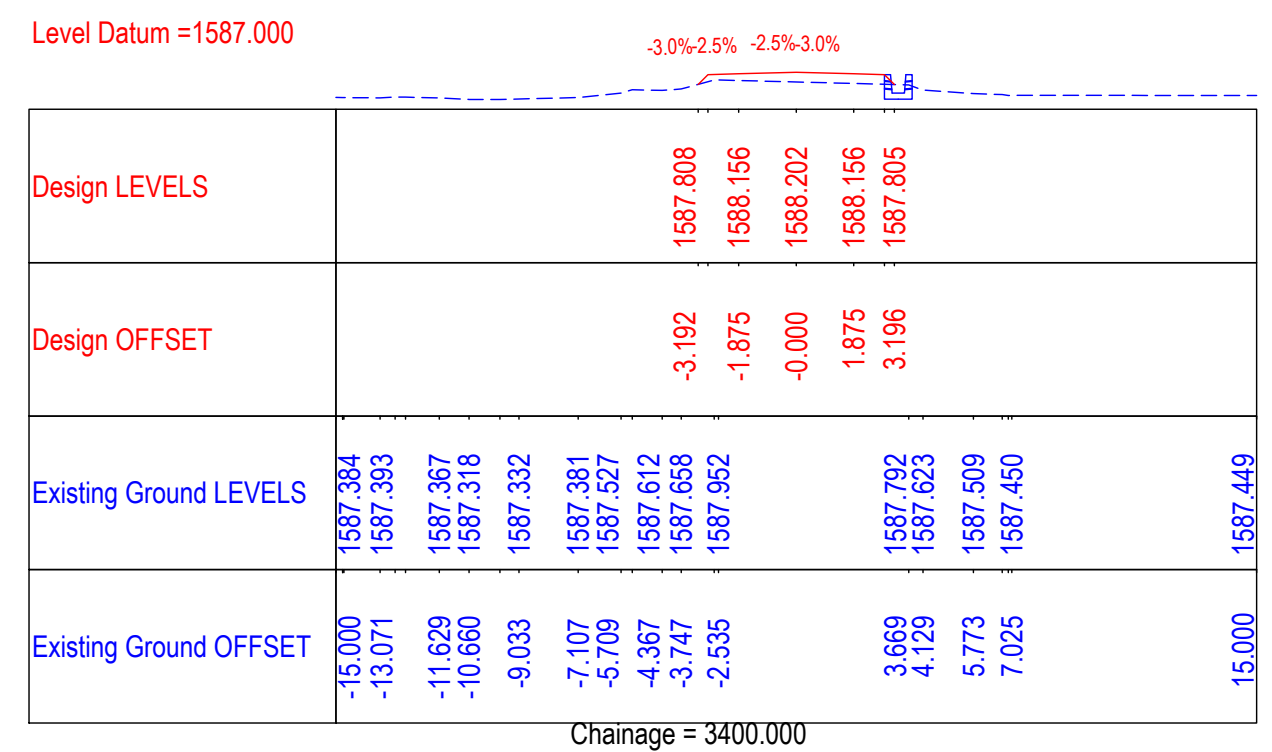
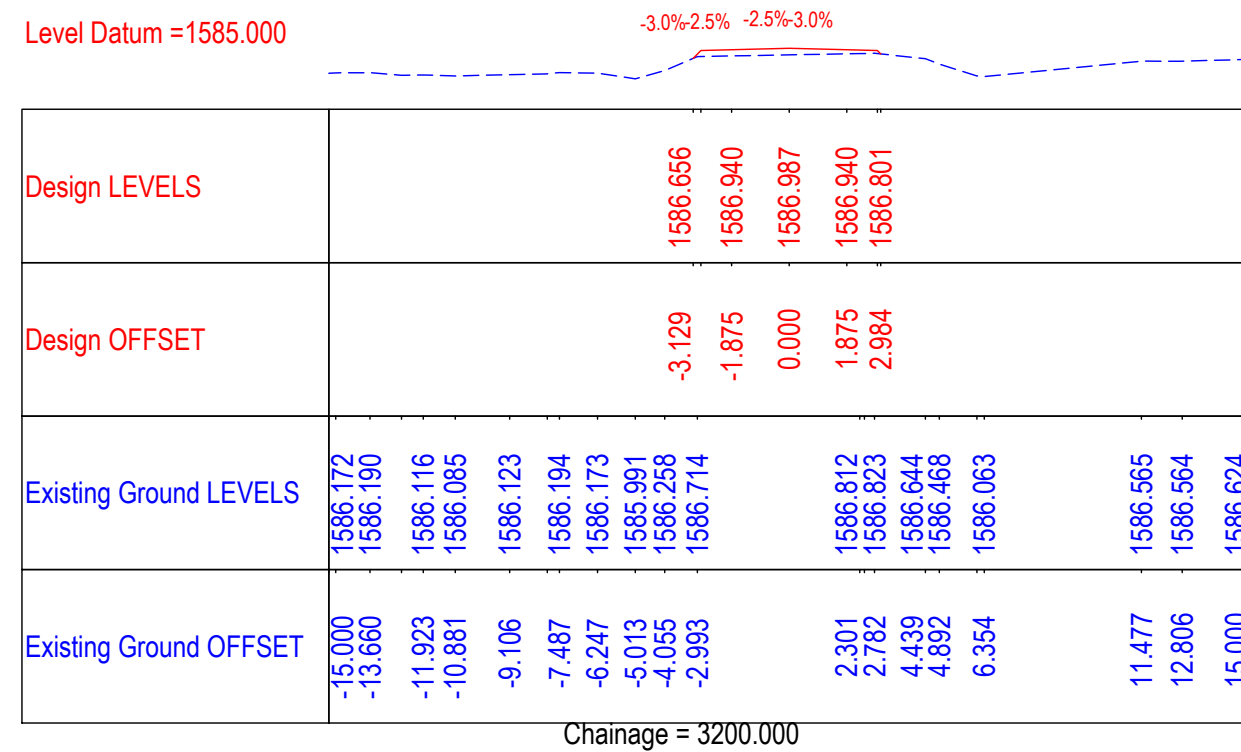
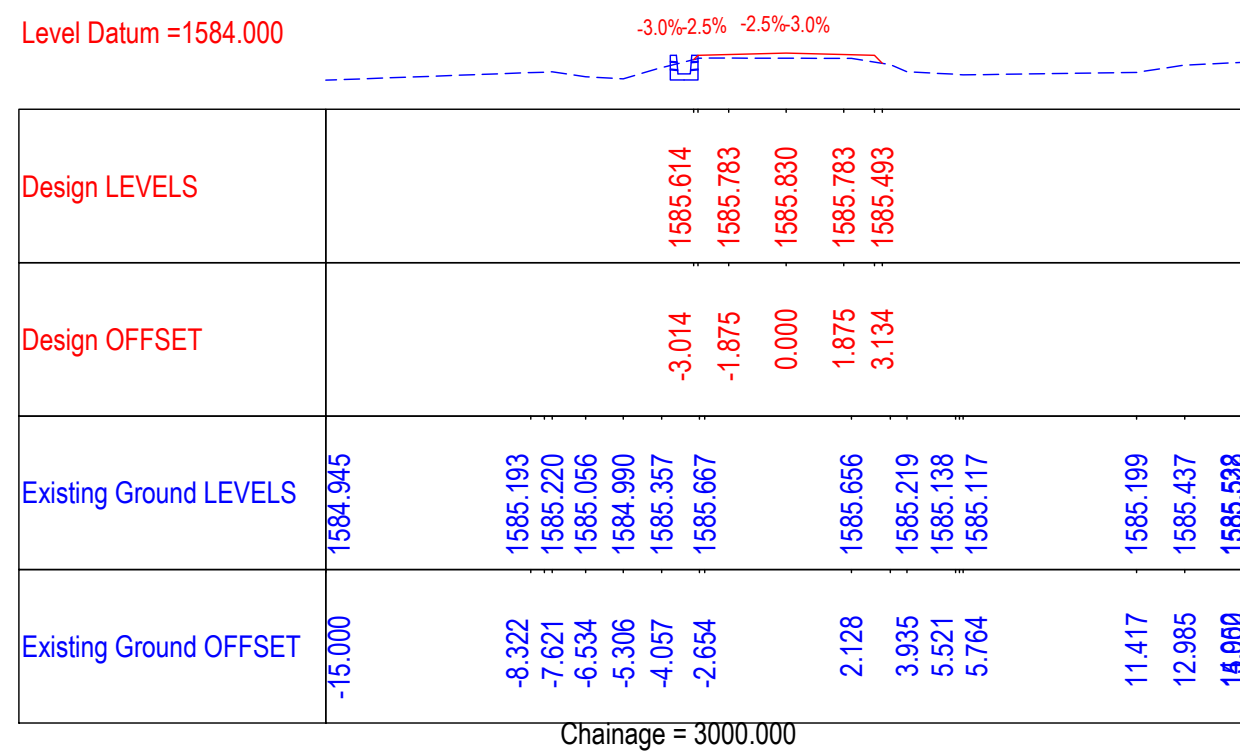
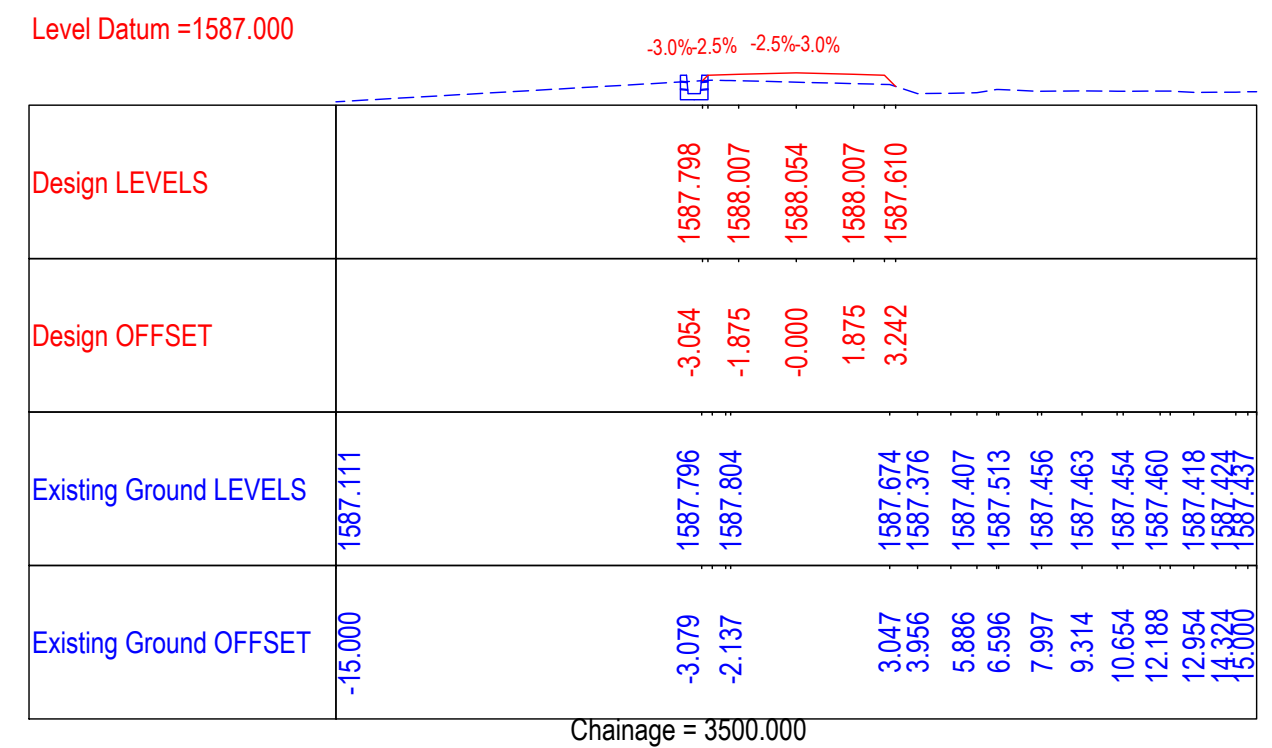
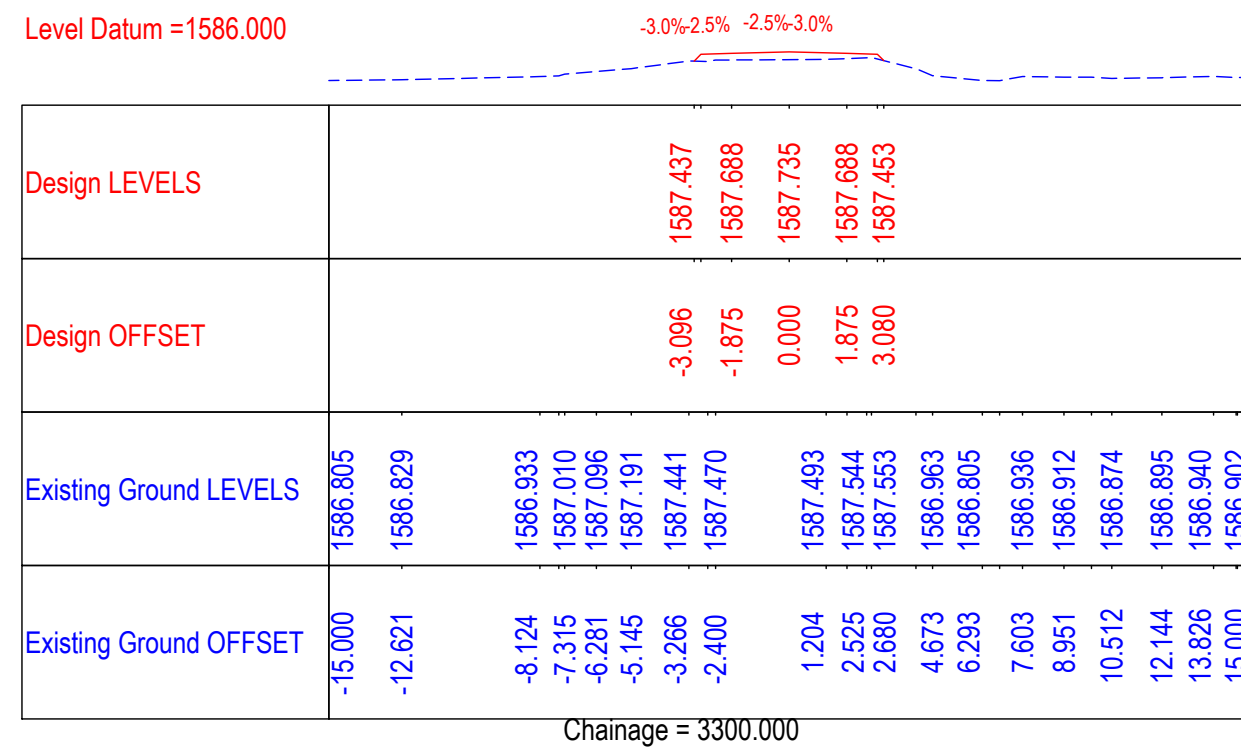
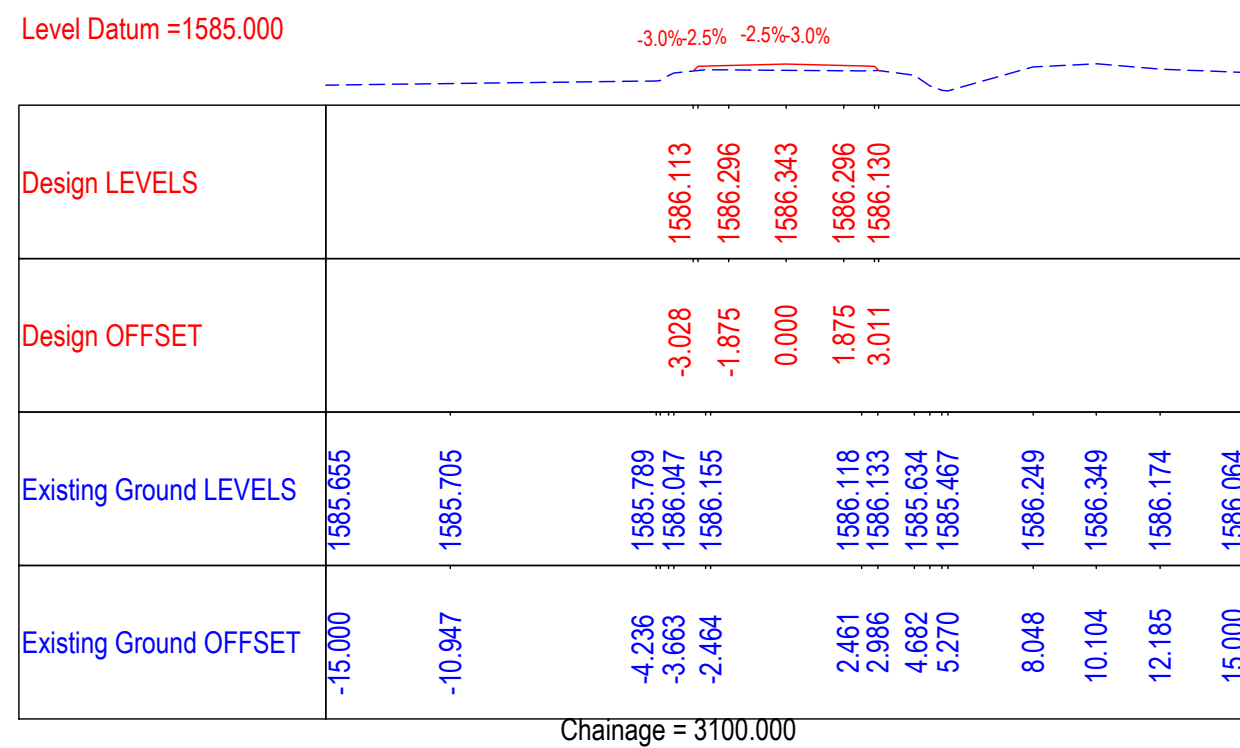
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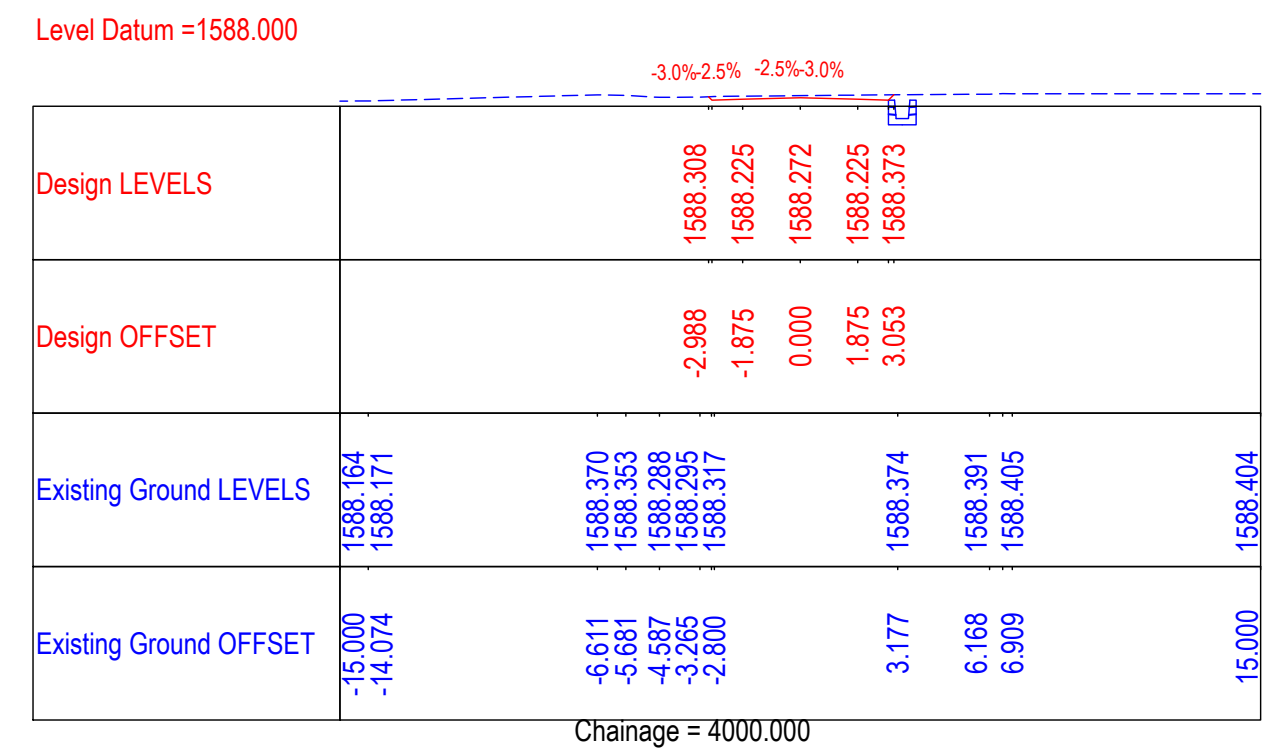
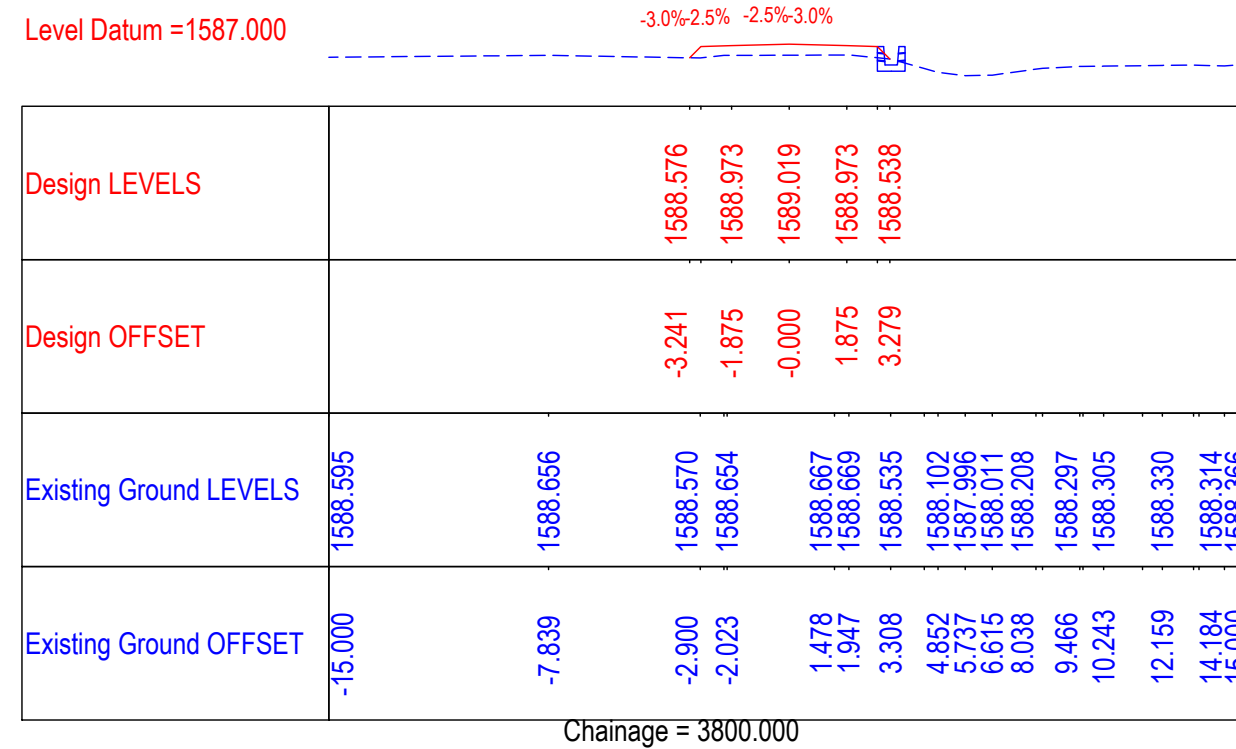
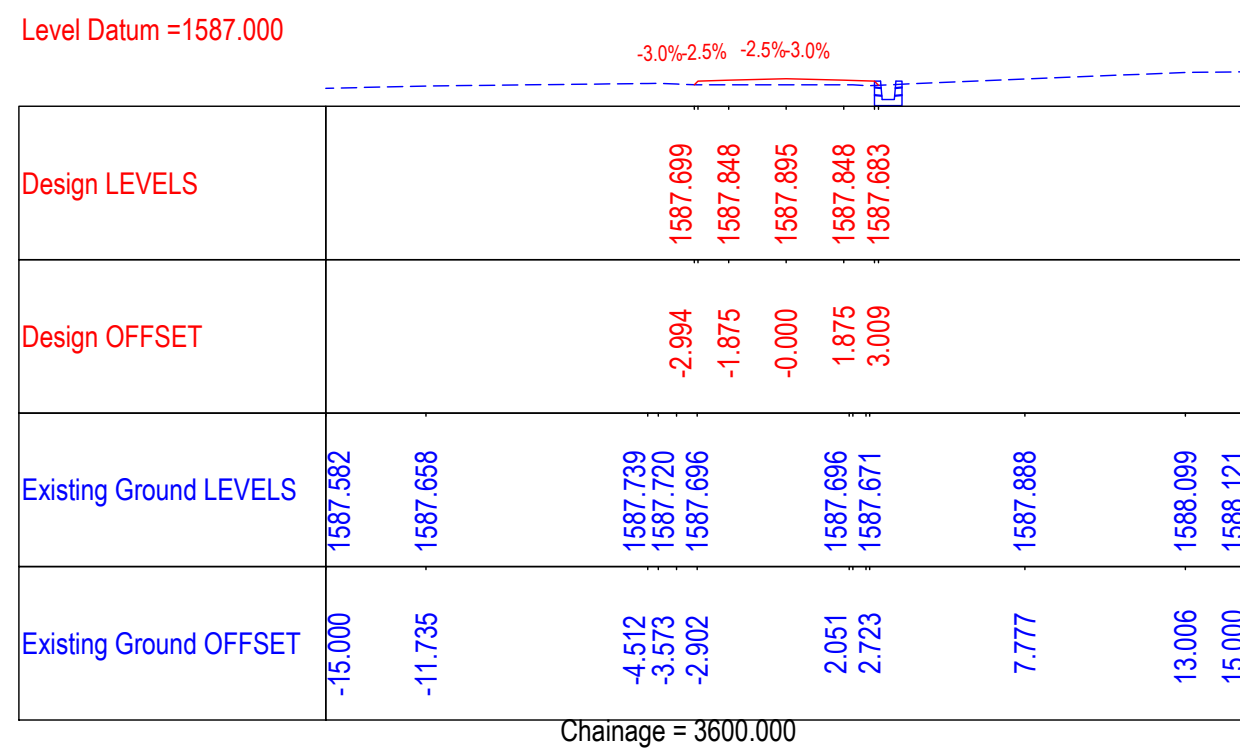
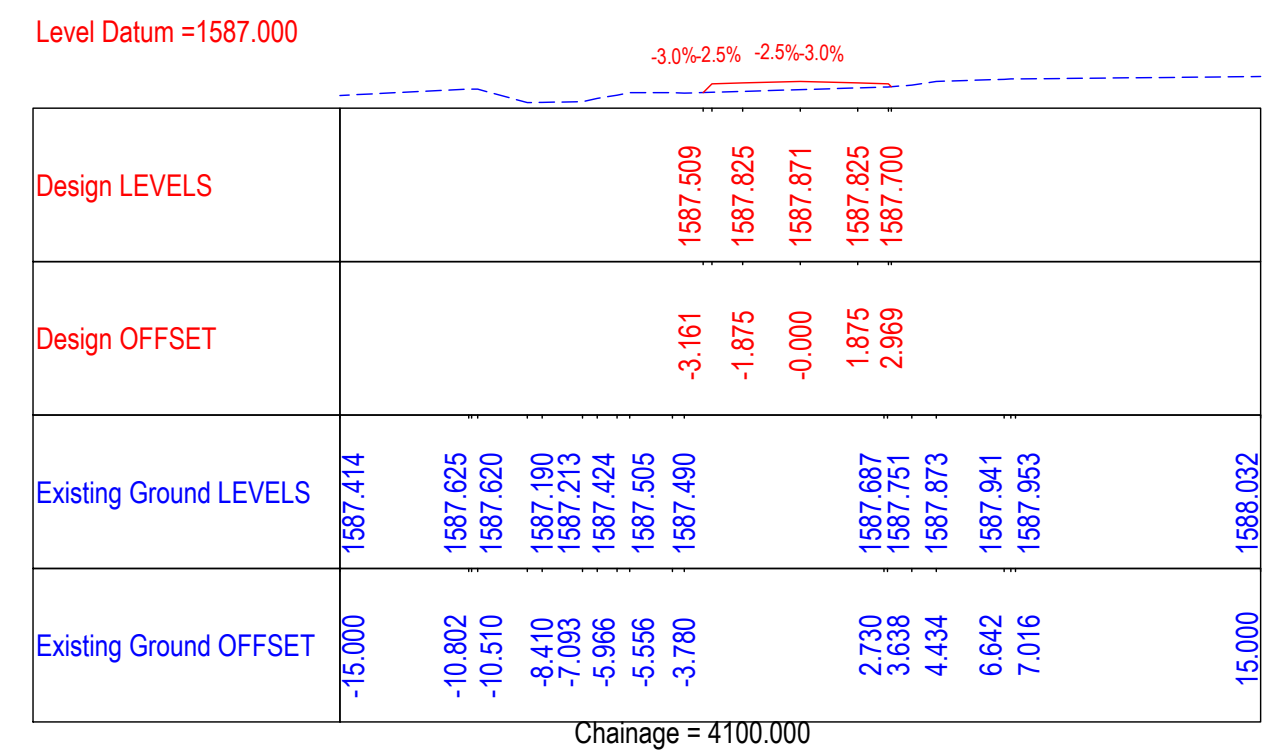
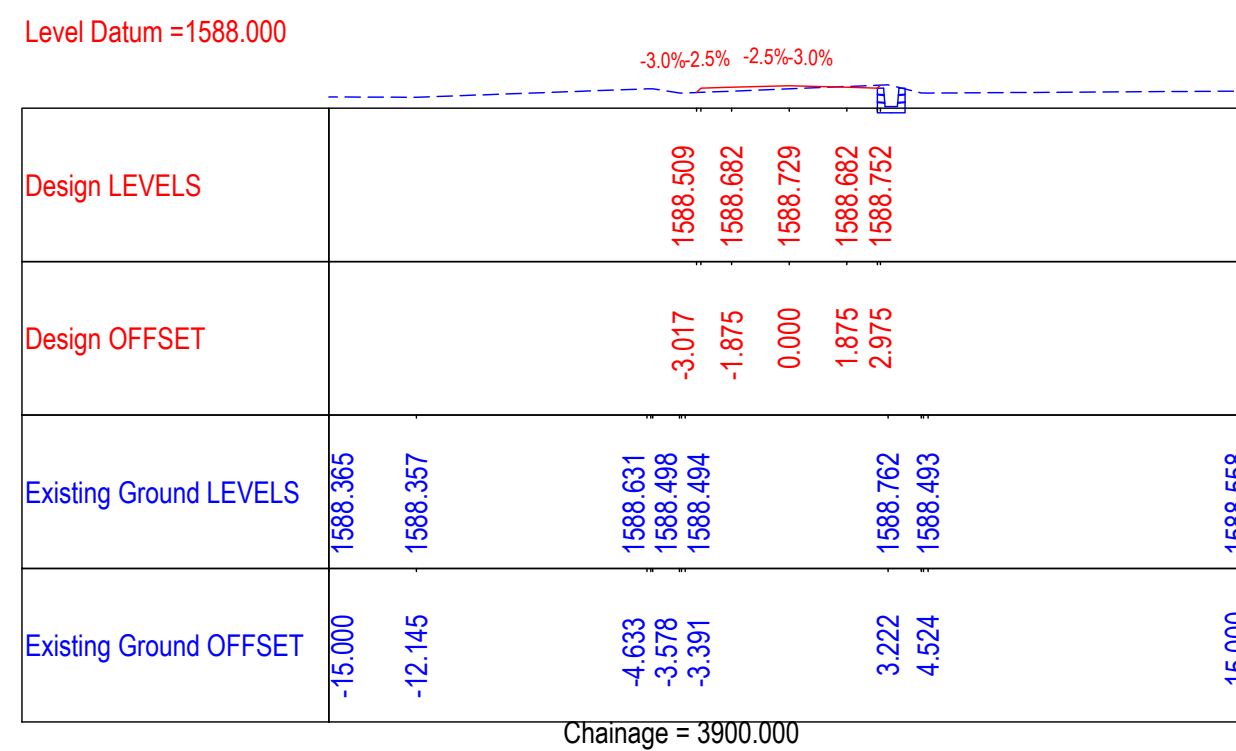
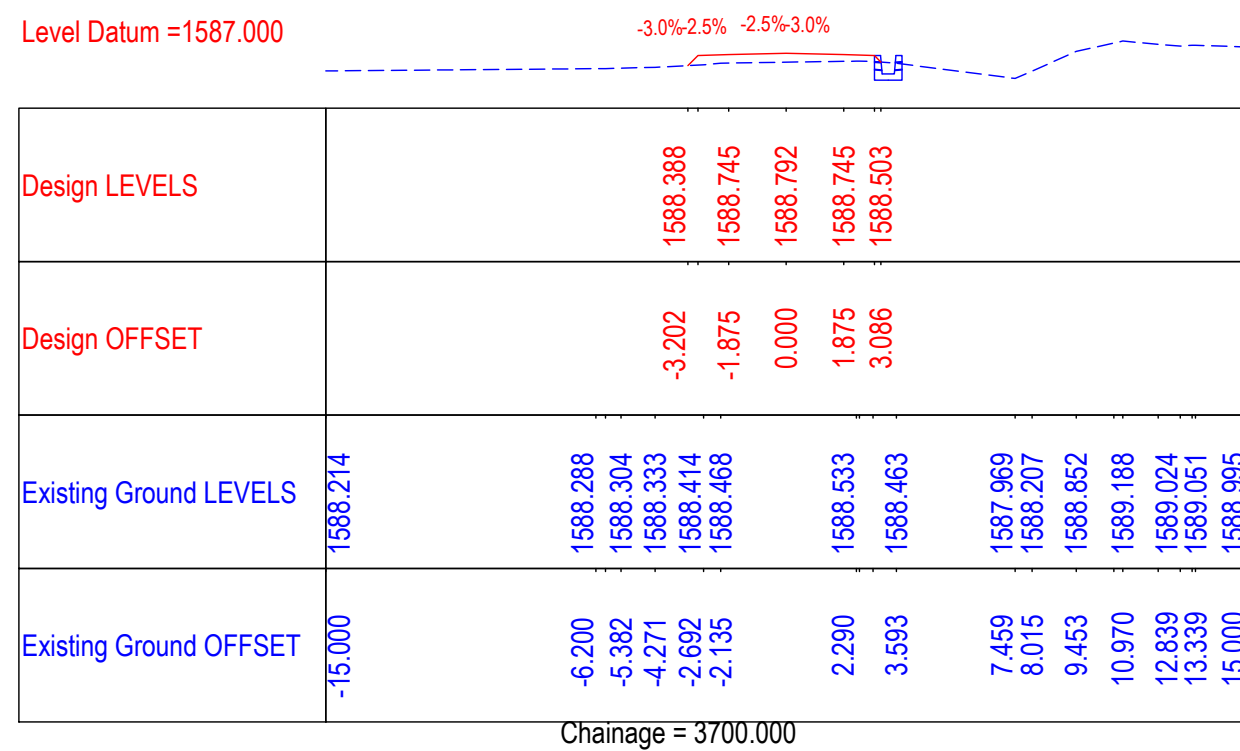
REVISION : R-1

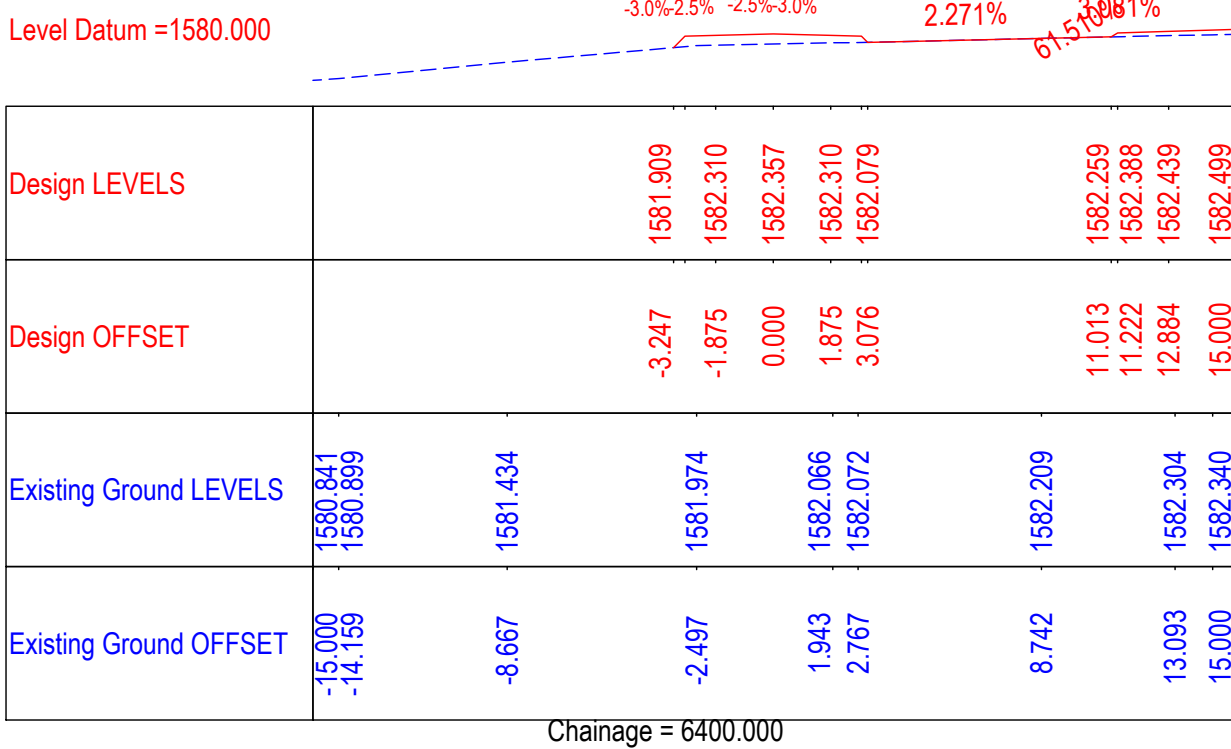
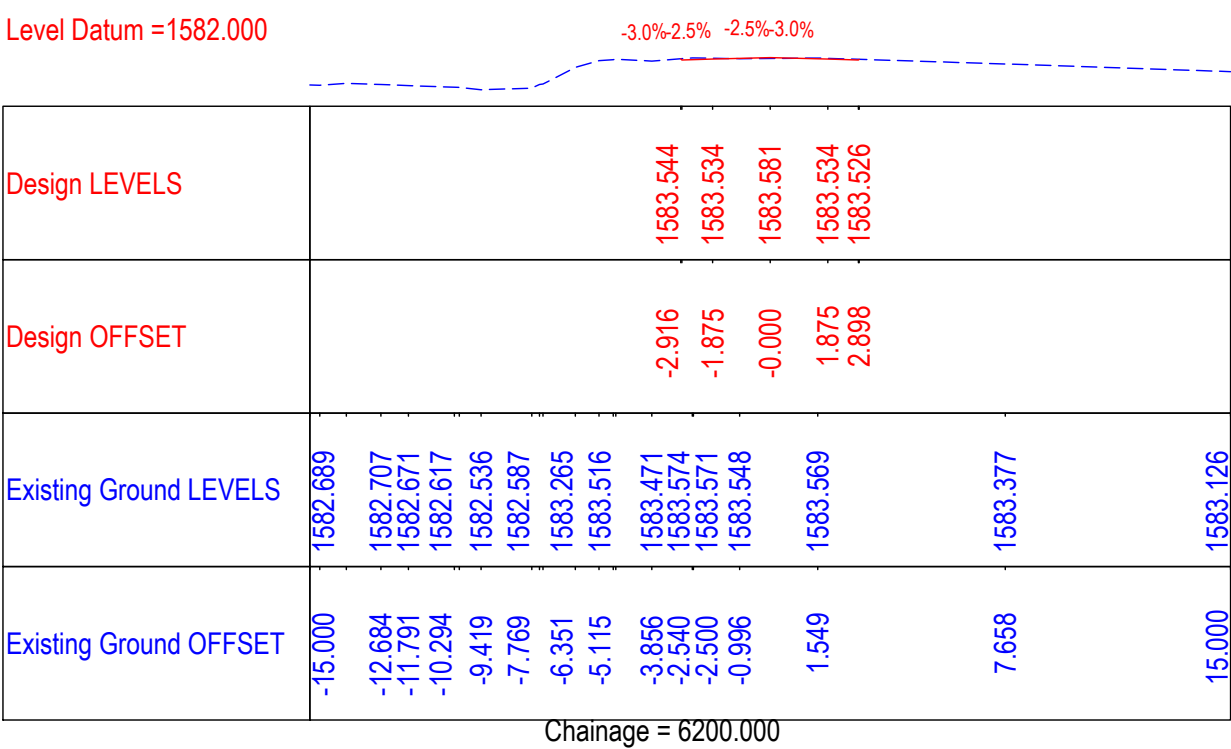
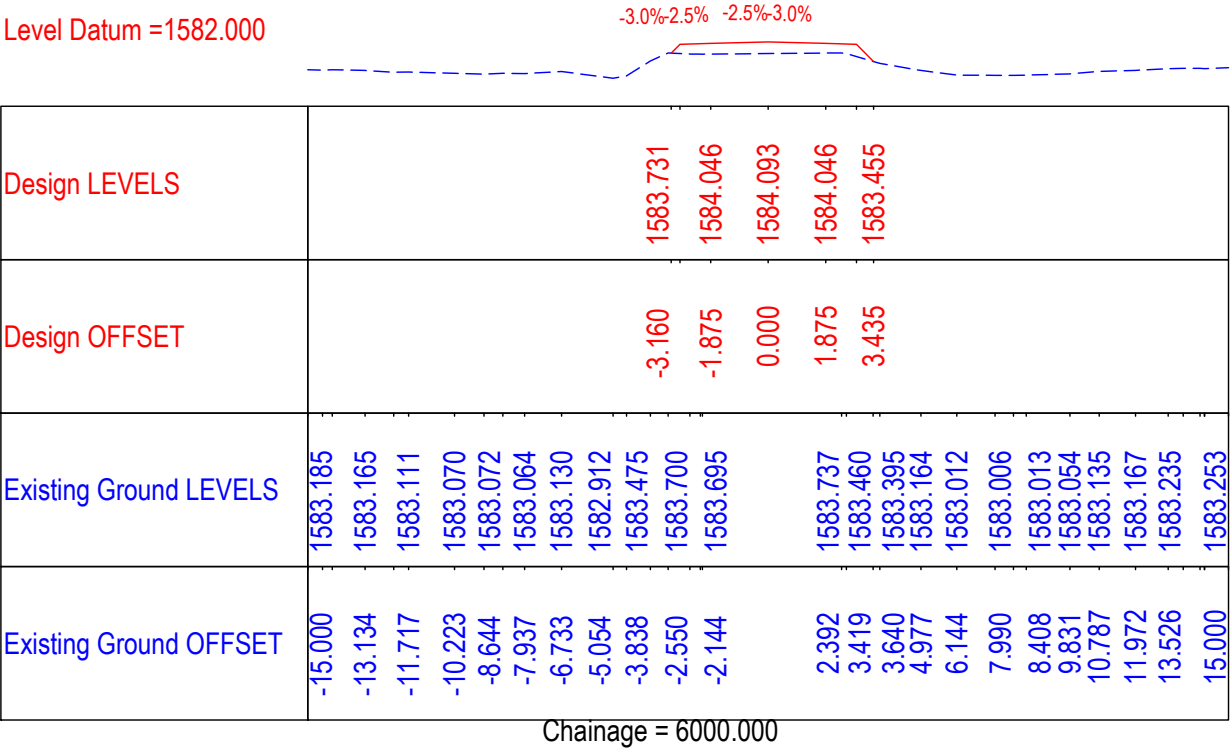
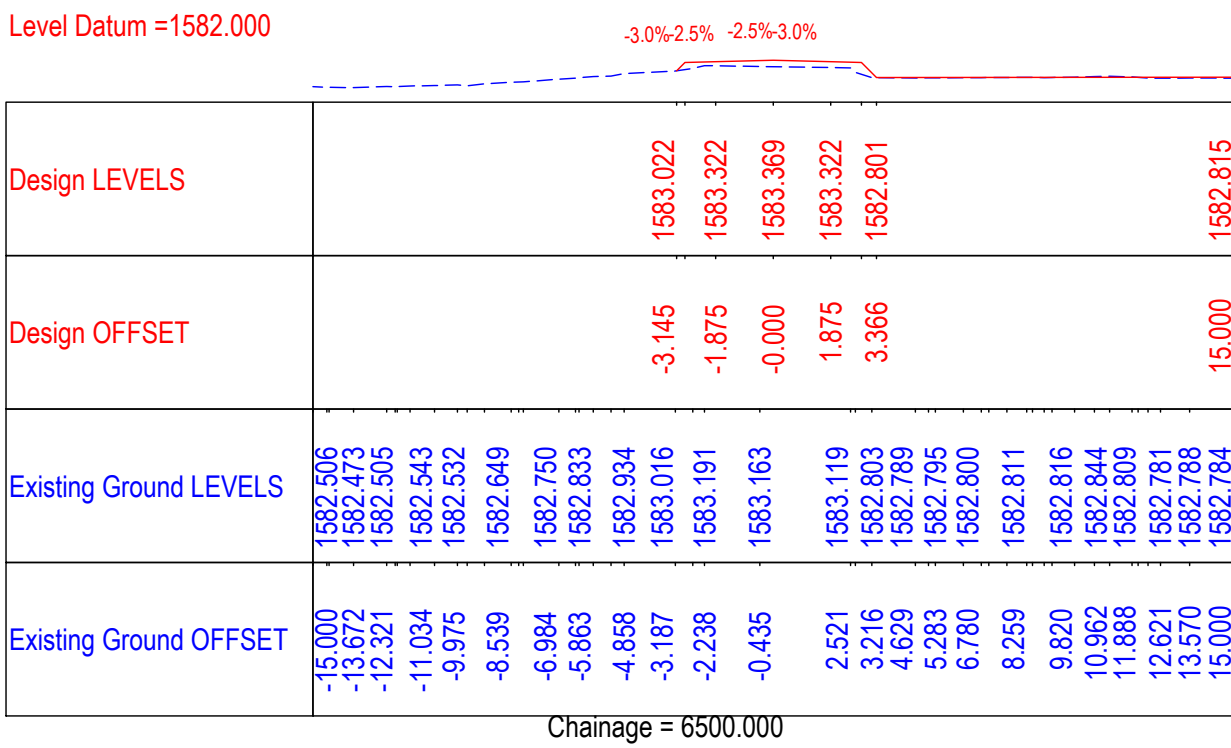
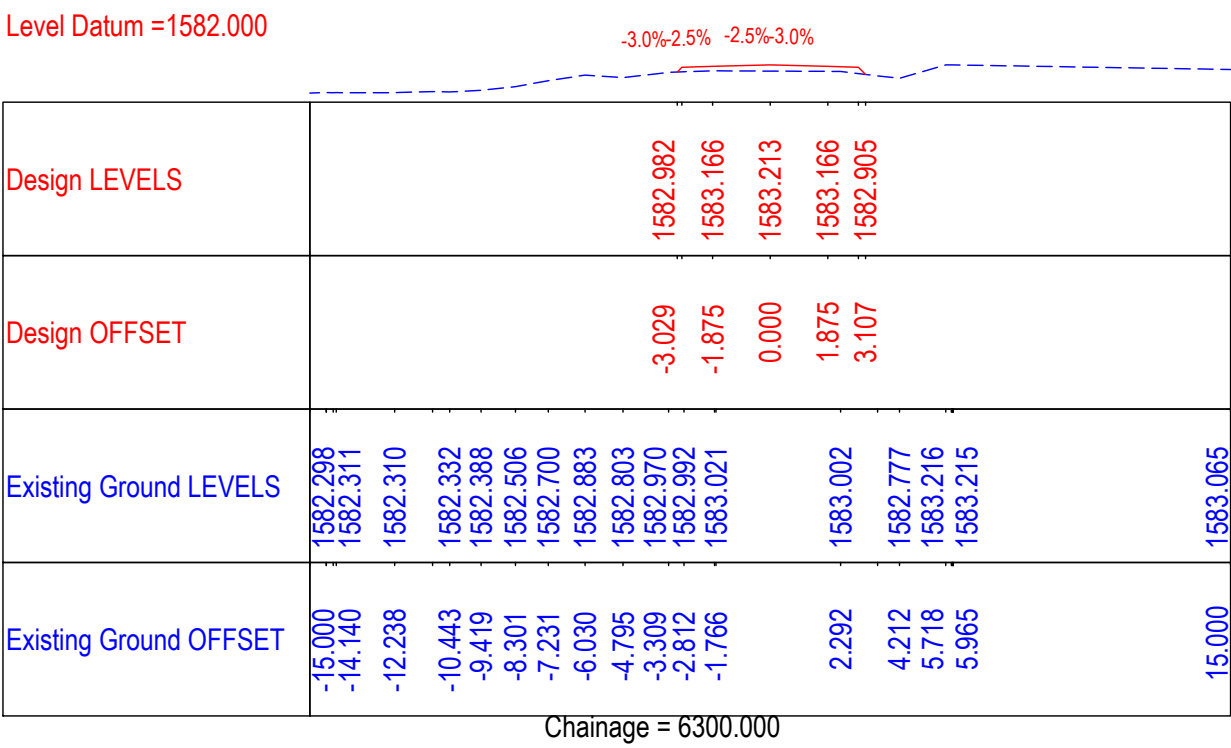
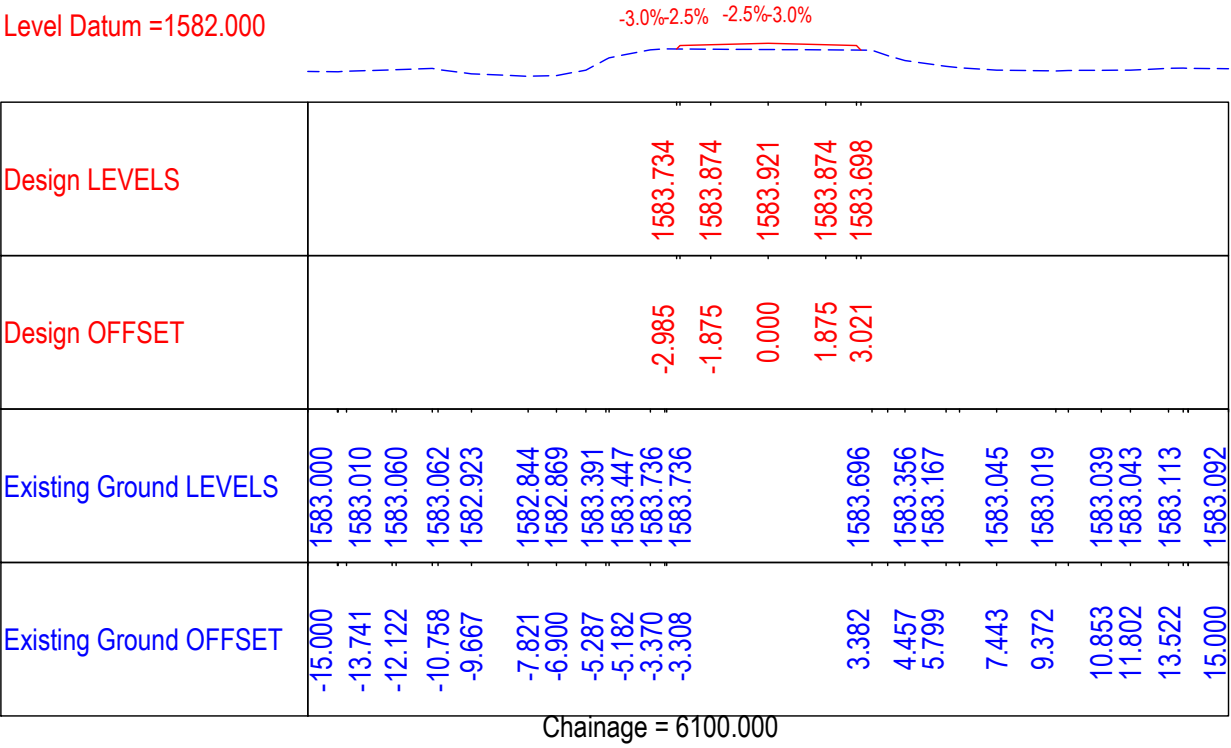
September 2019

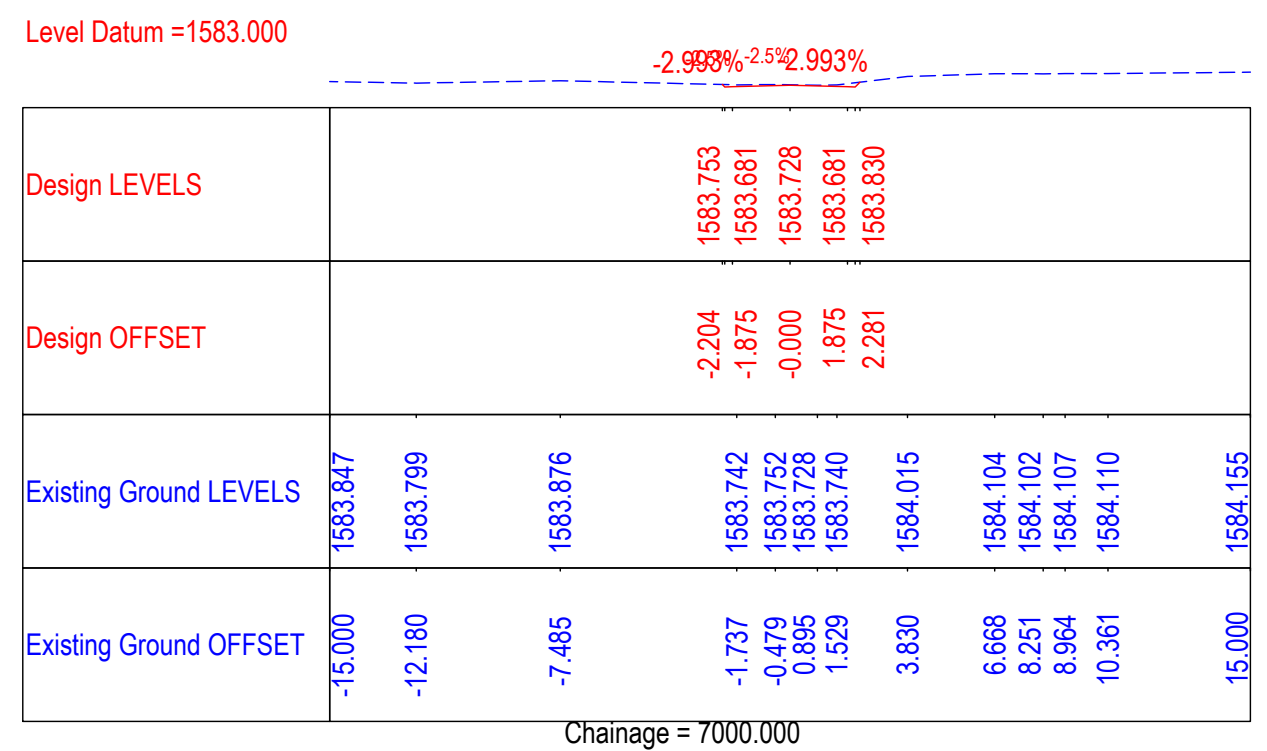
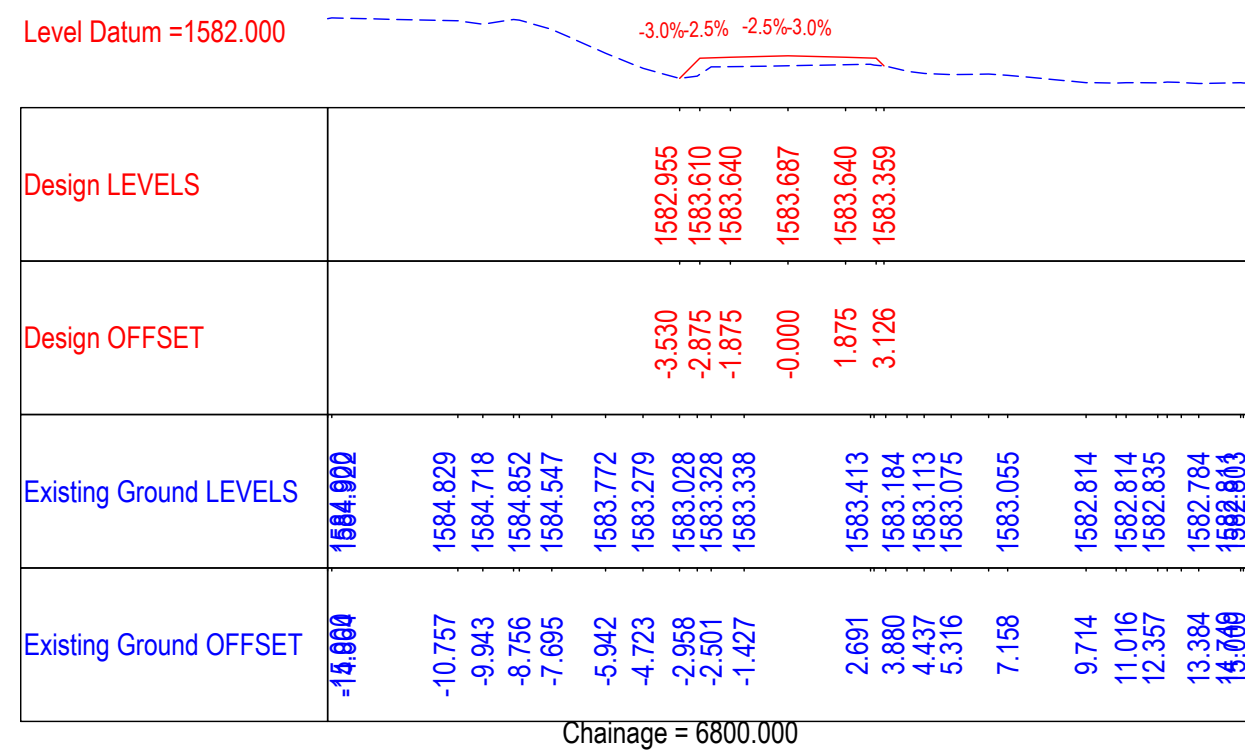
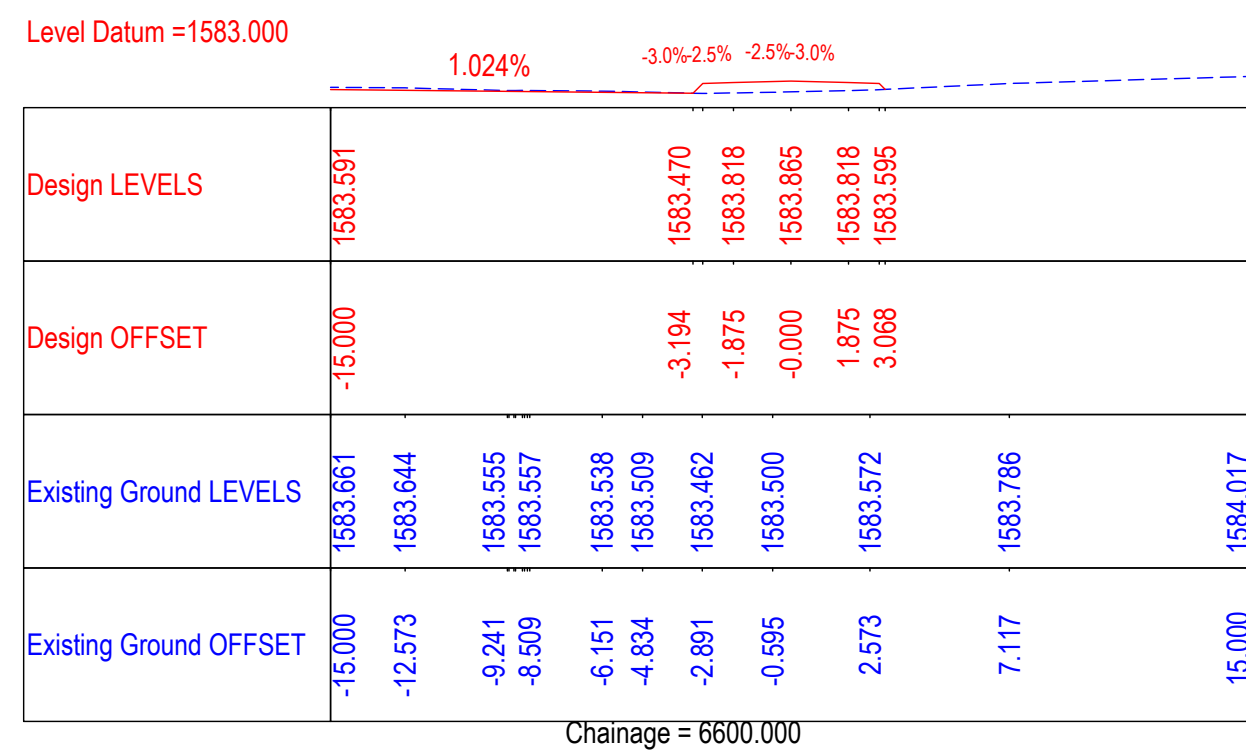


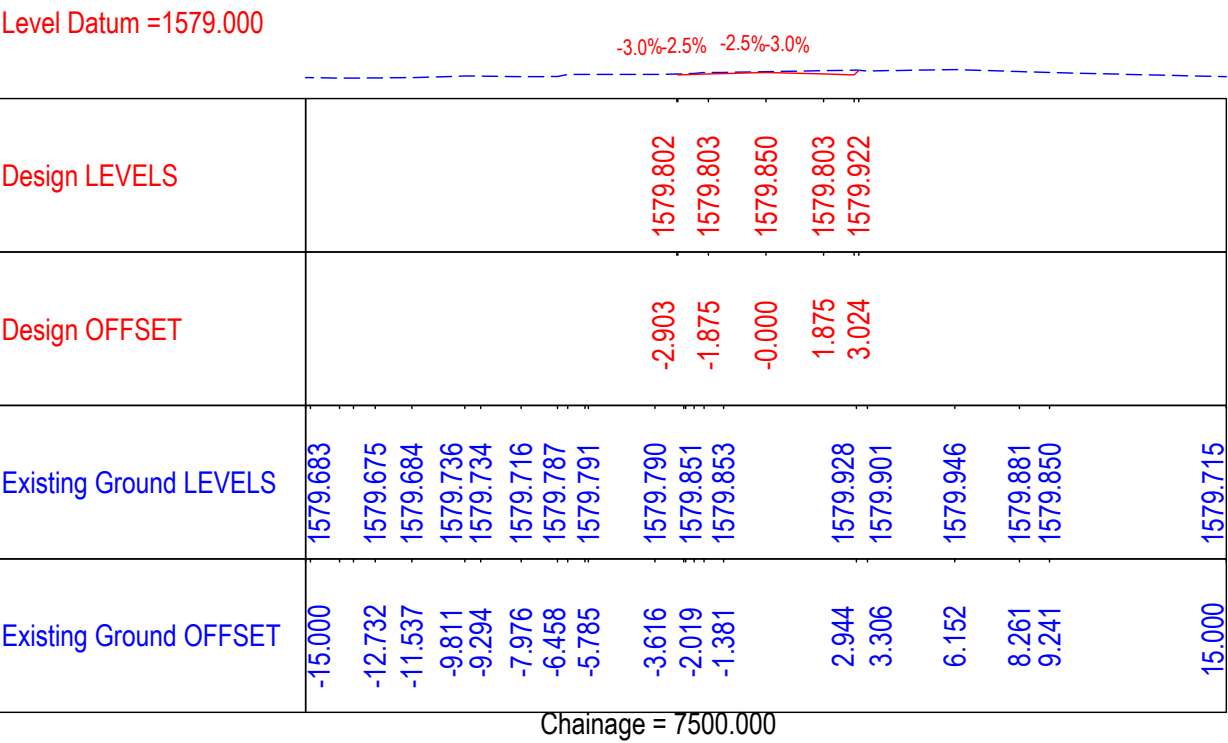
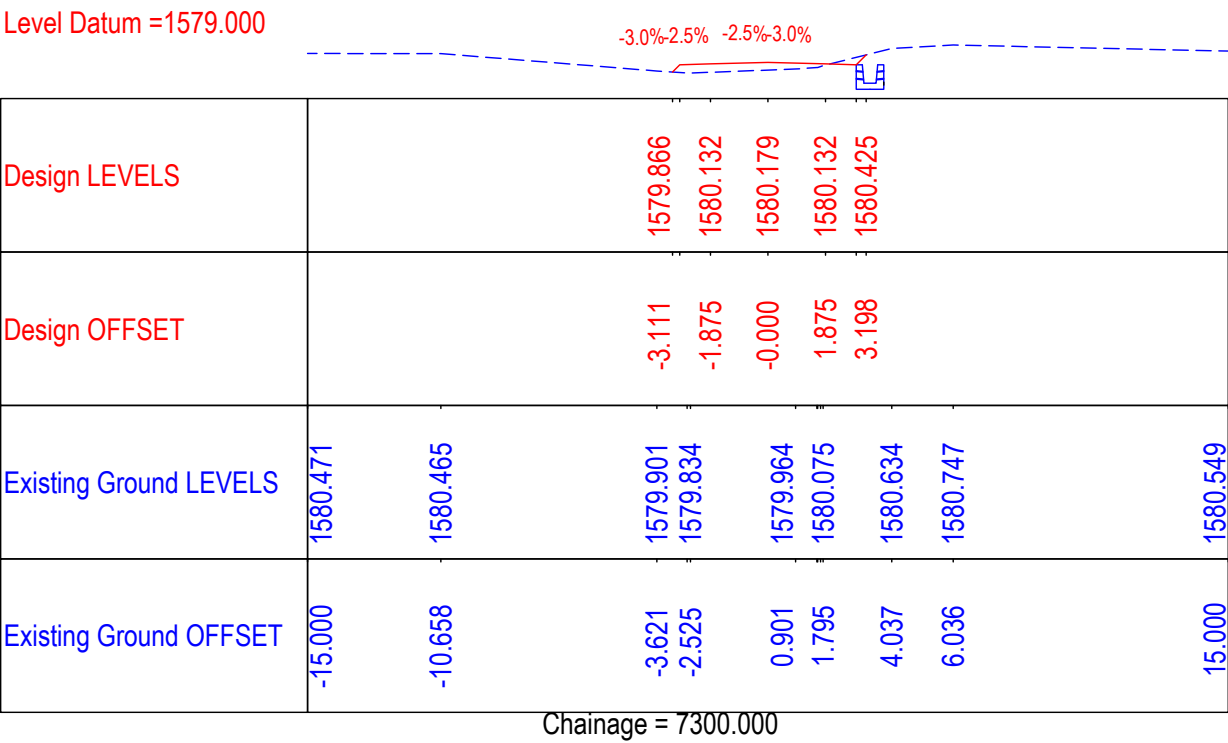




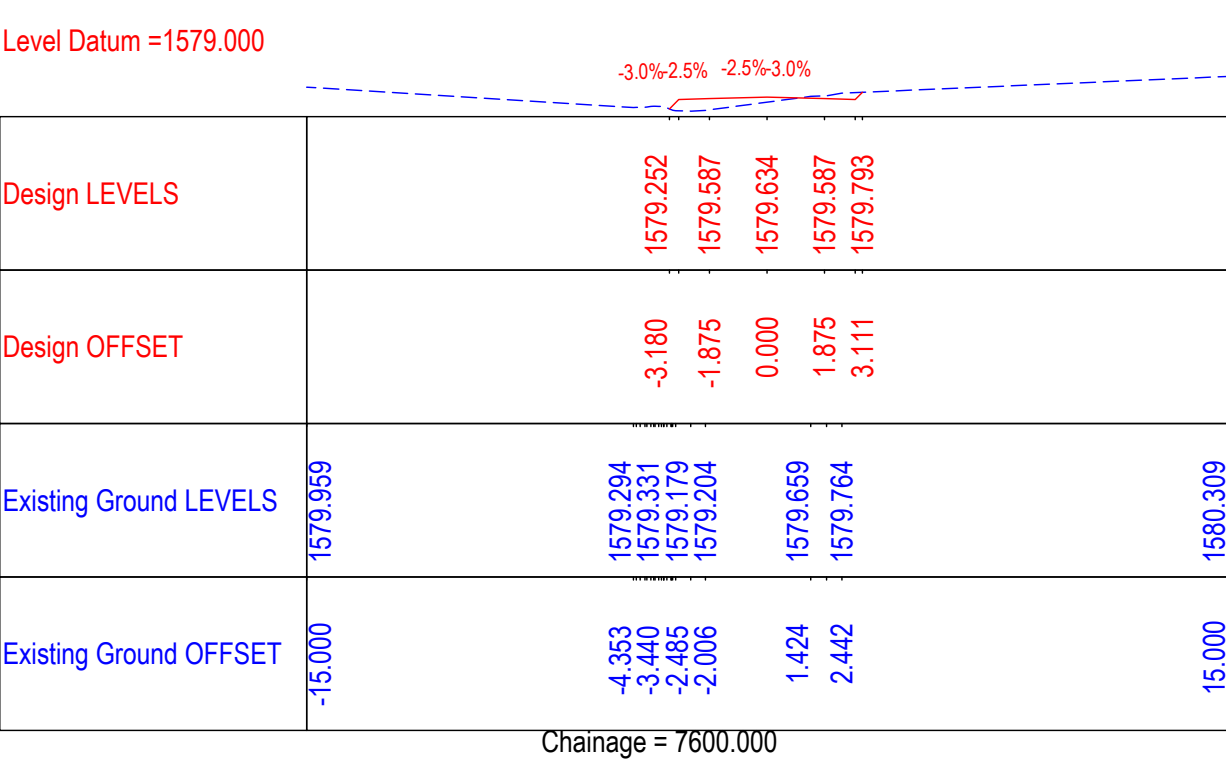
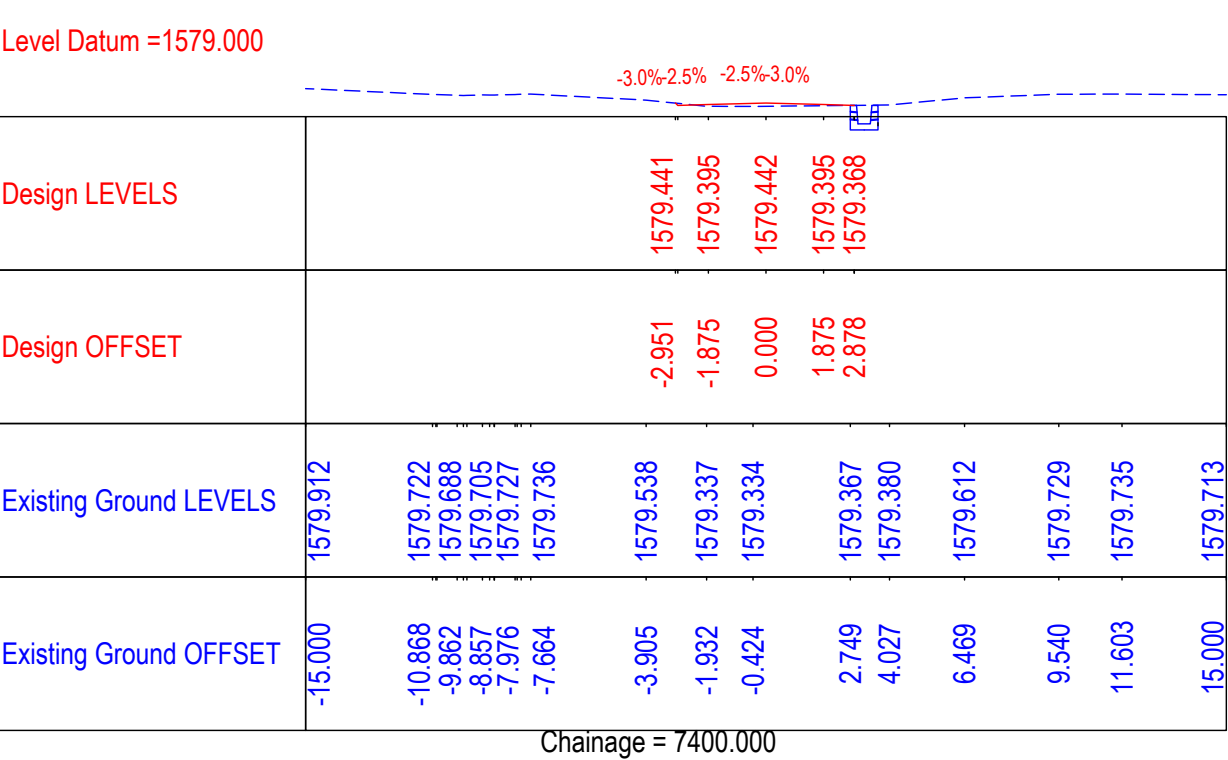
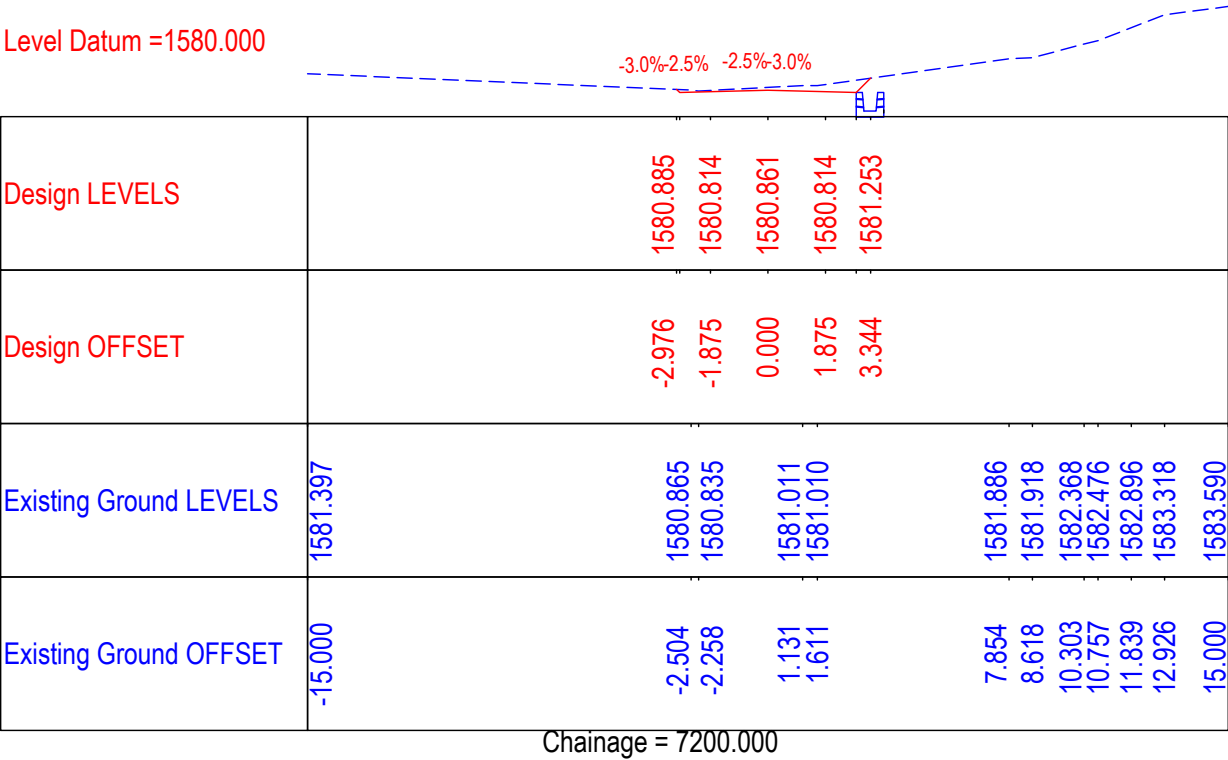


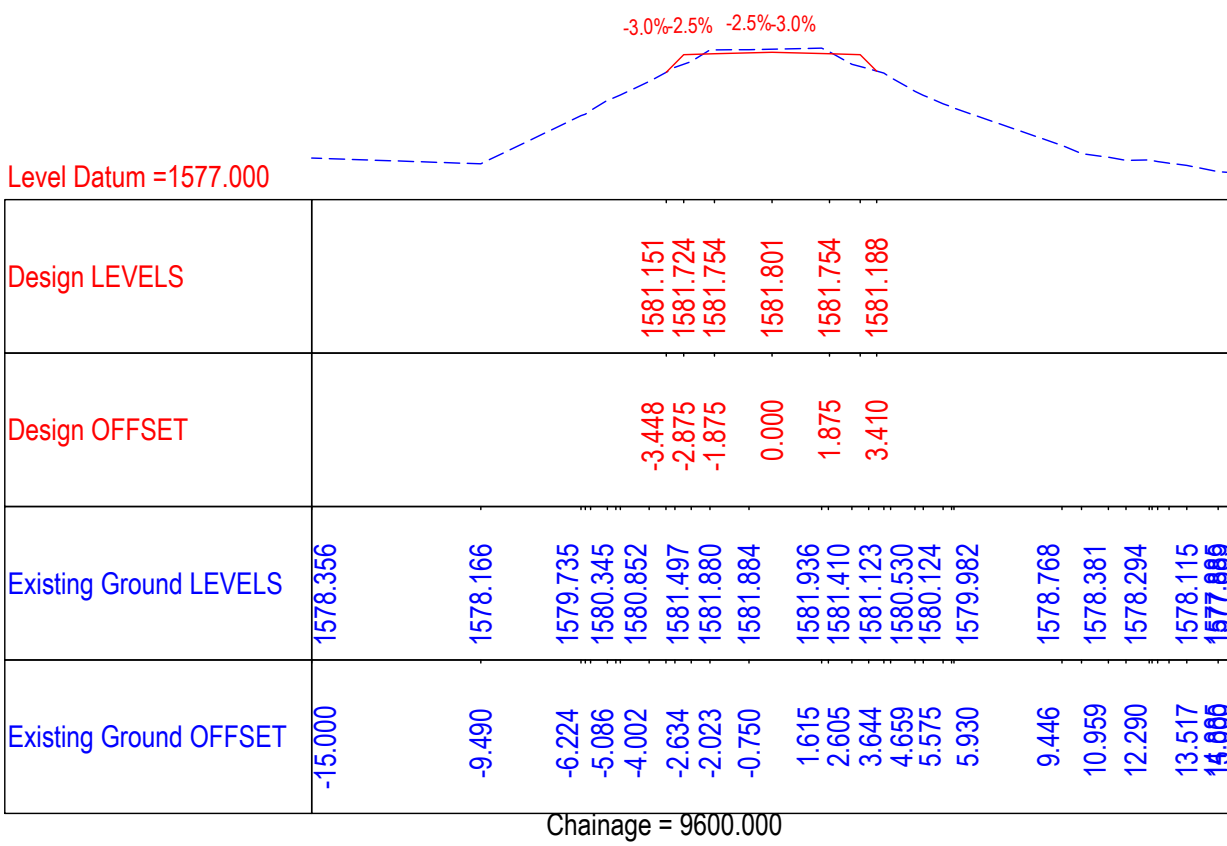
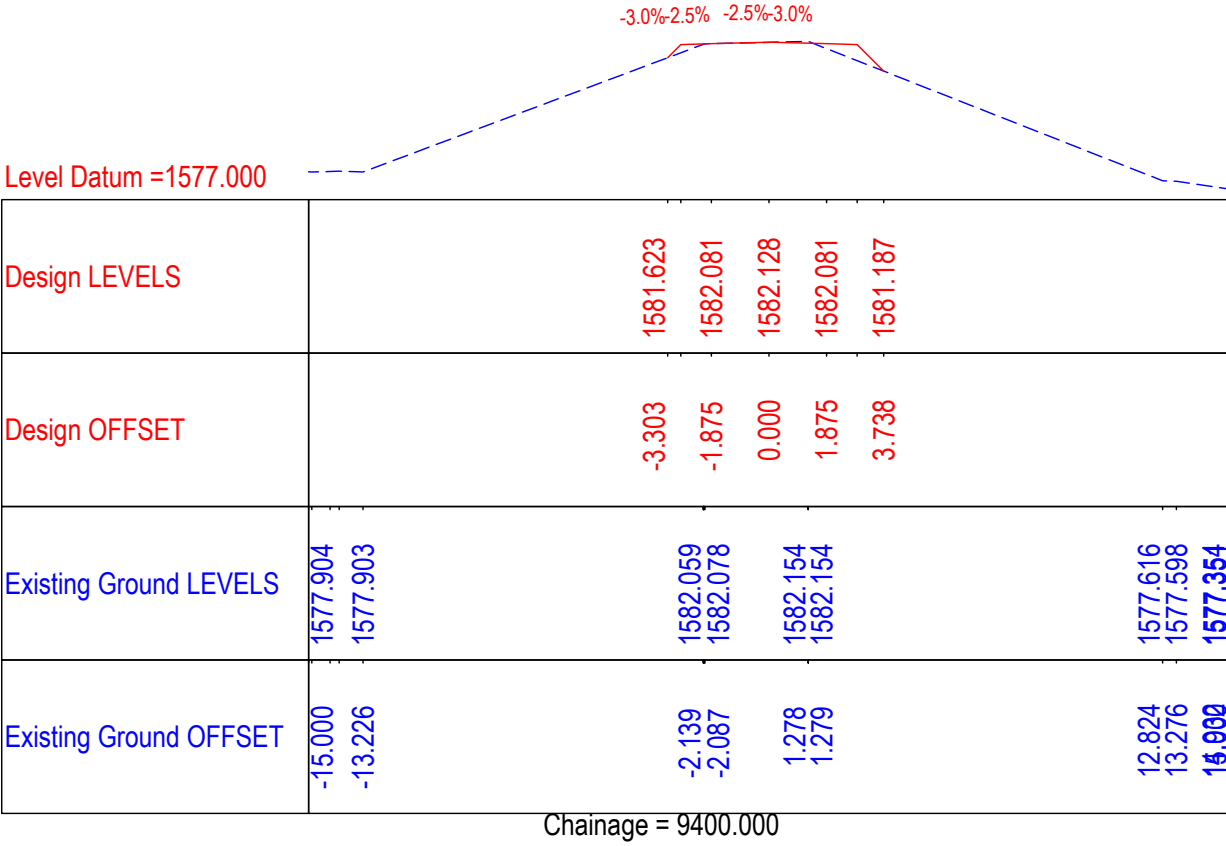
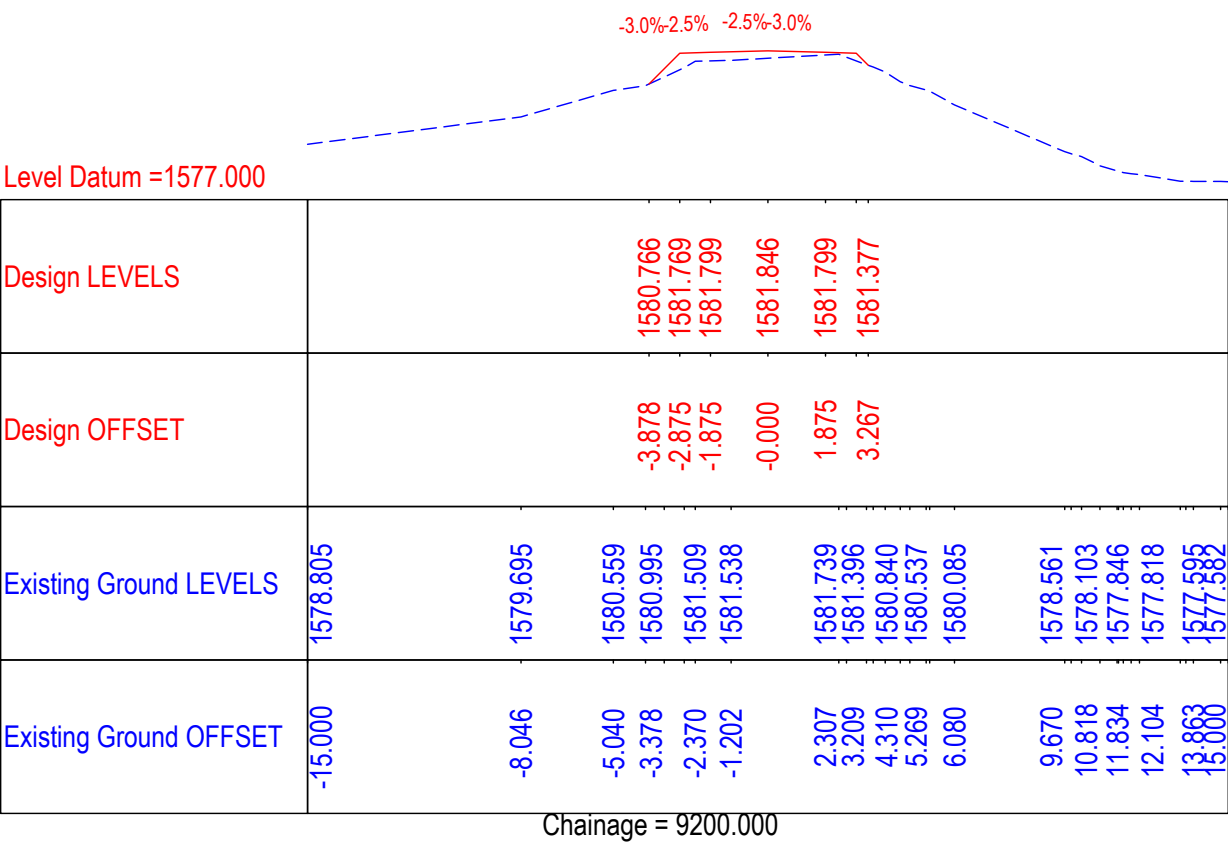
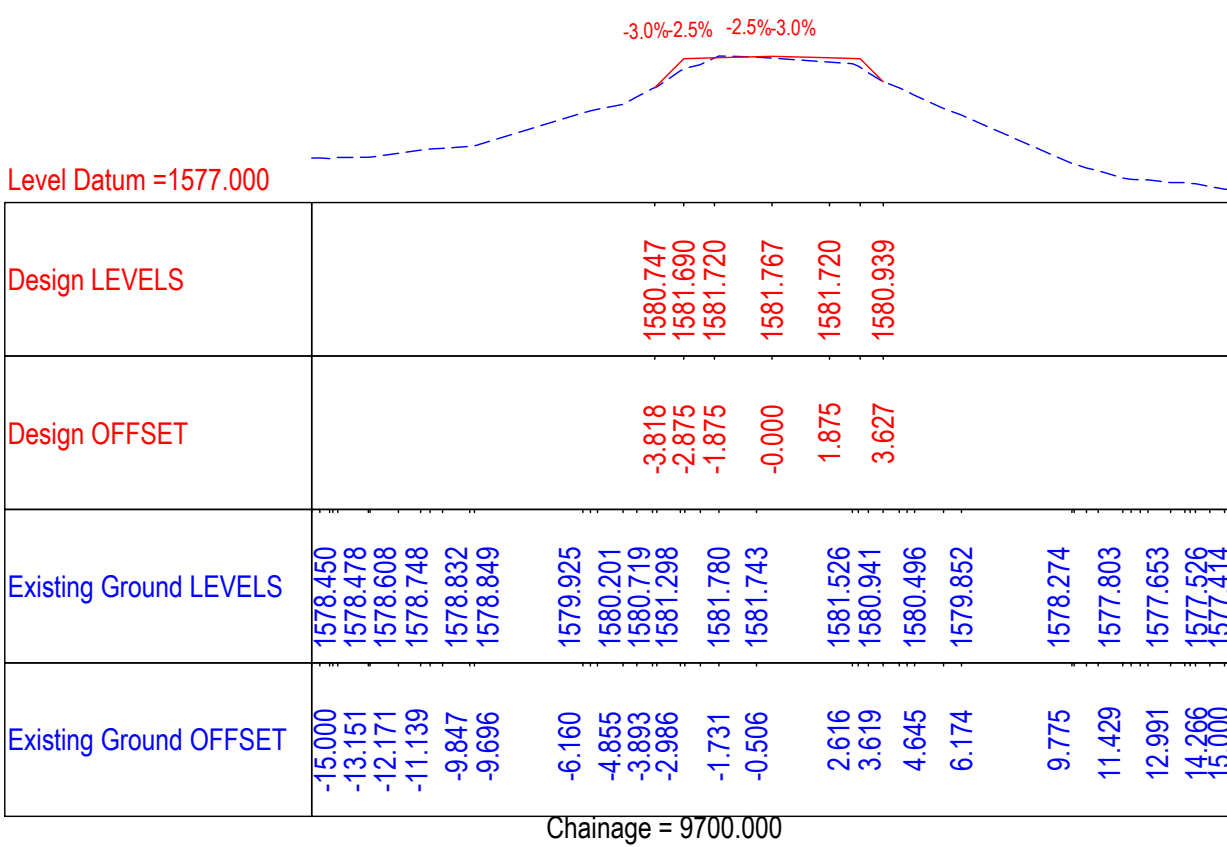
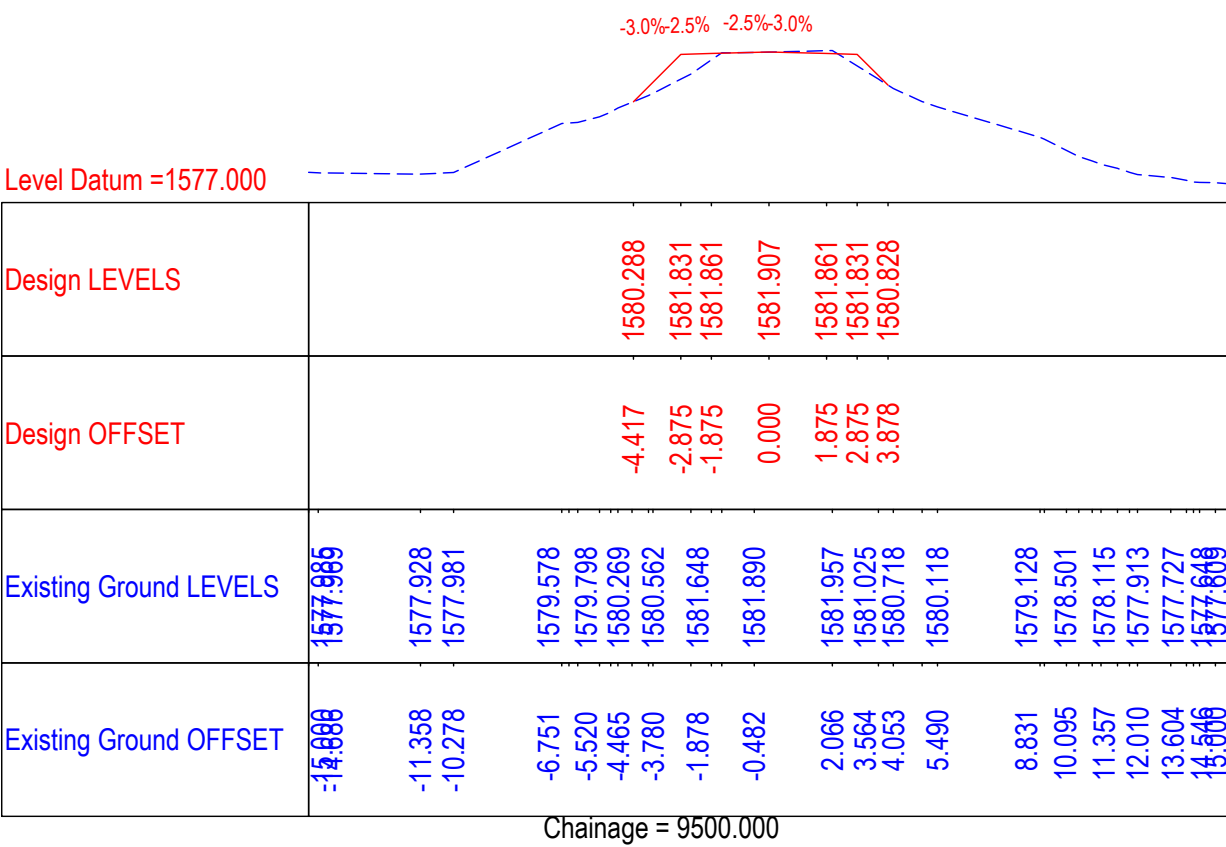
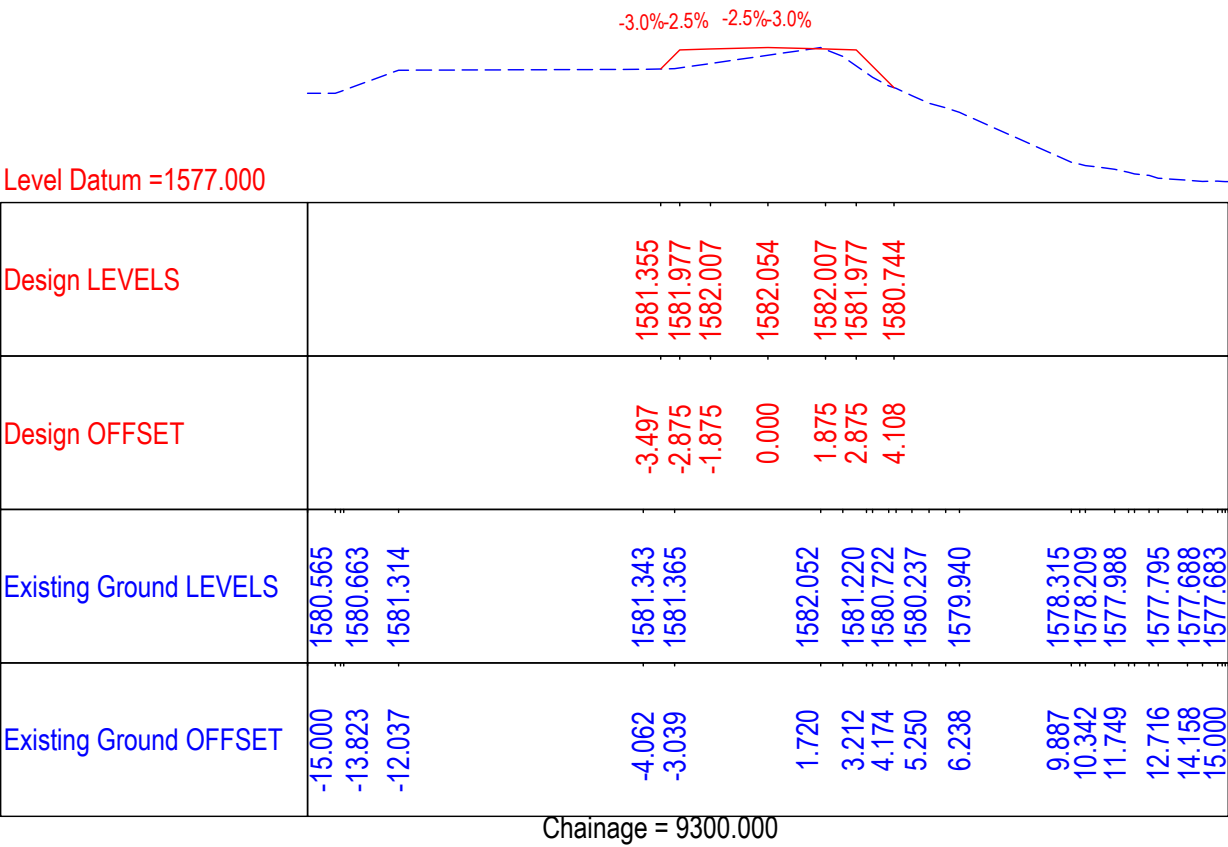






OUT OF SCOPE





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
**(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam
upto Sumbal Bridge)**

DESIGN CONSULTANT:

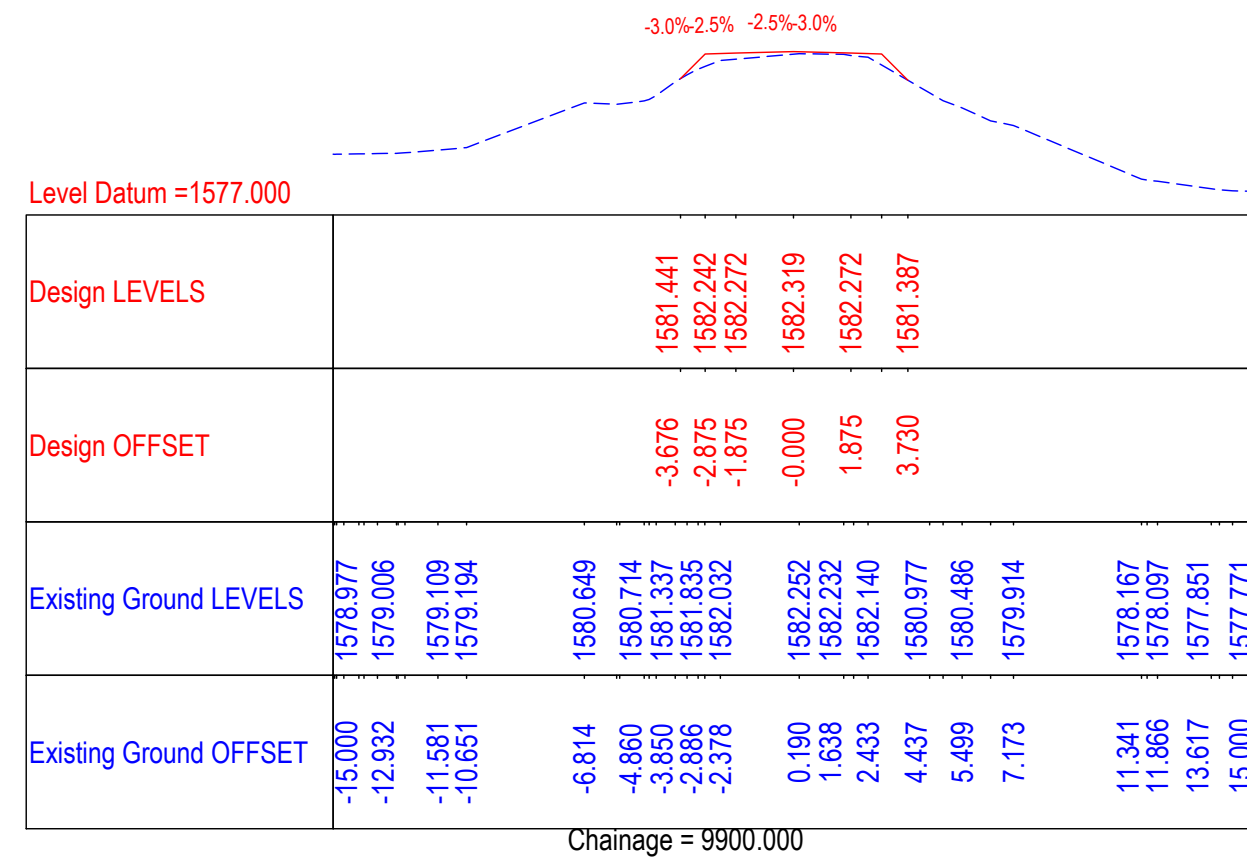


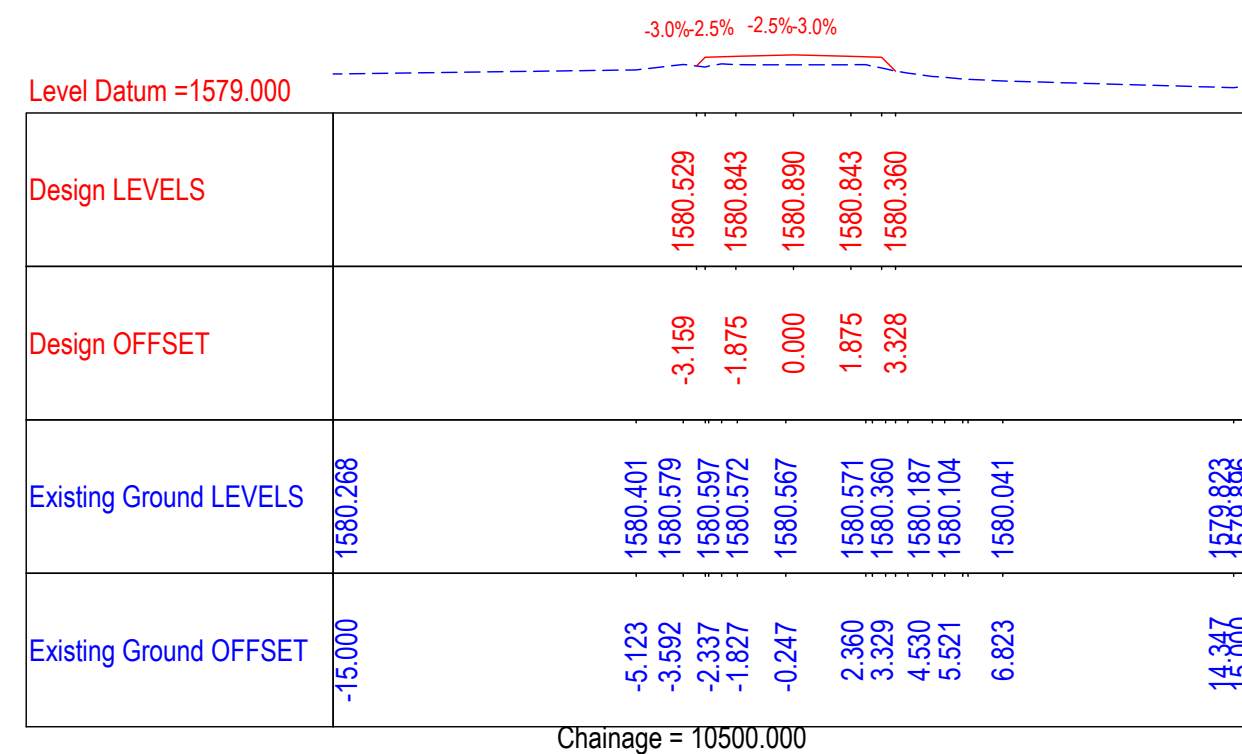
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REV.	DATE	DESCRIPTION

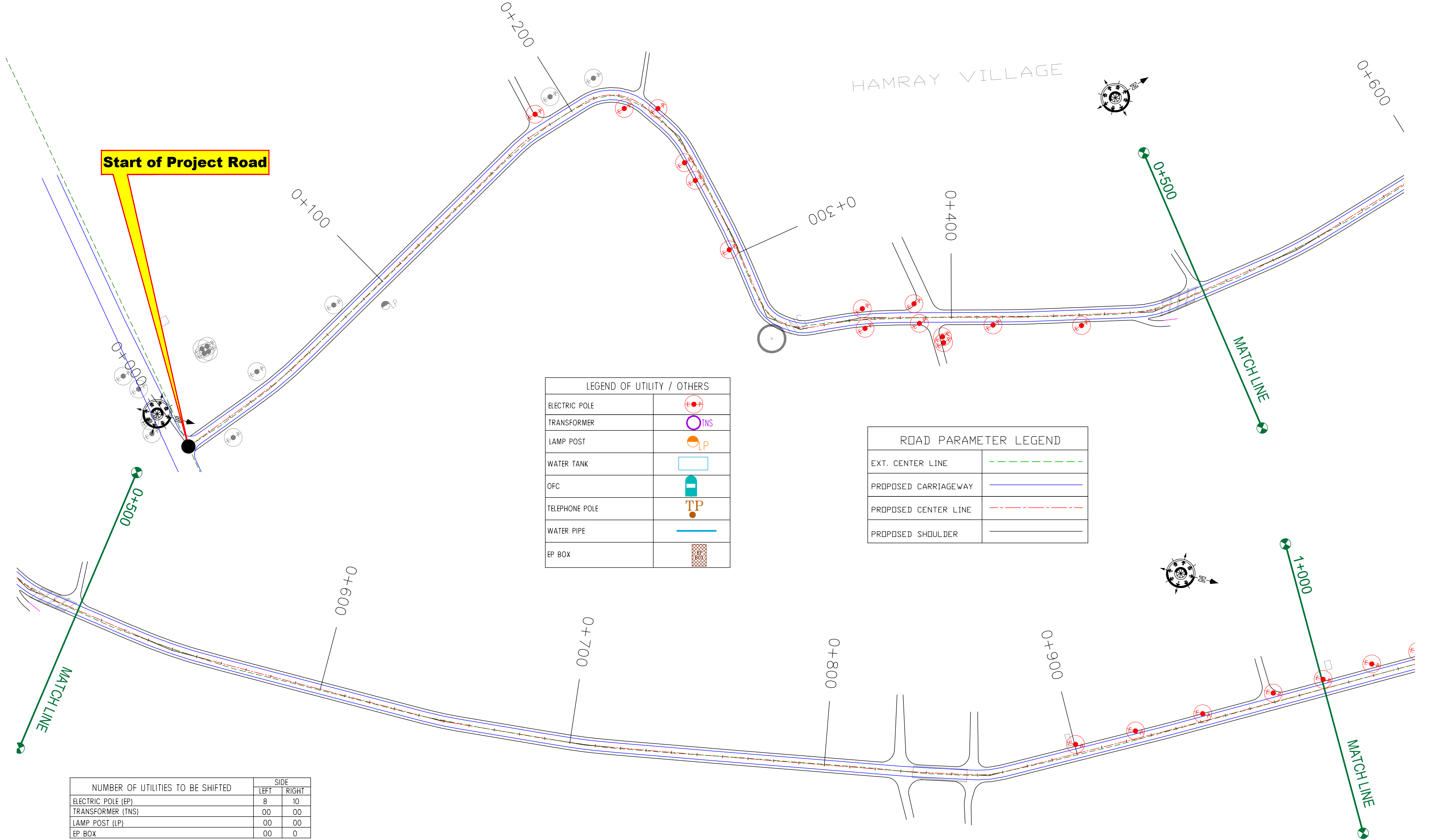
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DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE	1 : 250

TITLE :	Detailed Cross Section (Ch.9+200 to Ch.9+700)
DRG. NO. :	EPTISA/JTFRP/DPR/J&K/DCS/16
REVISION : R-1	September 2019





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



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)	8	10
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
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**(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam
upto Sumbal Bridge)**

DESIGN CONSULTANT:



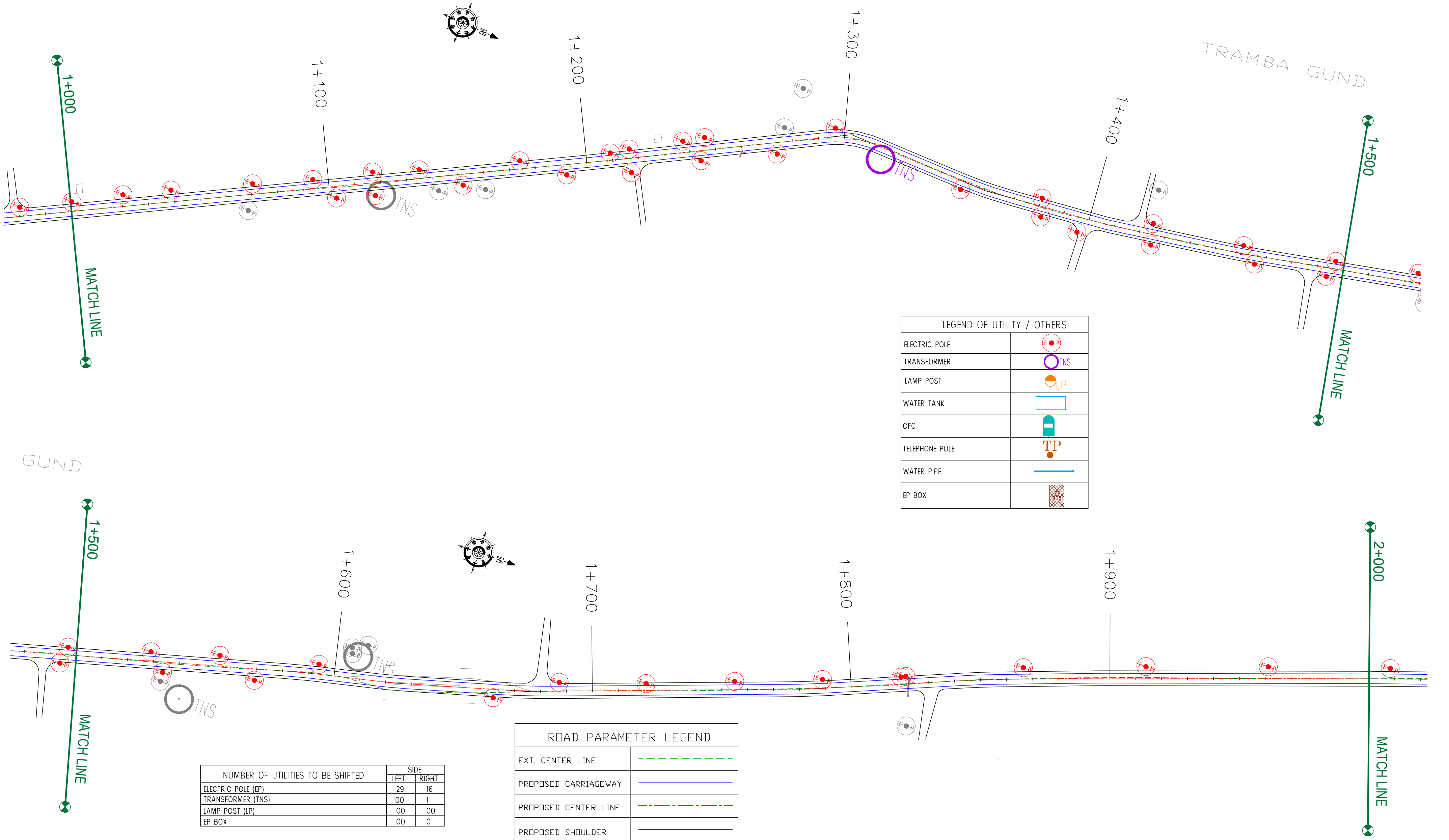
servicios de Ingenieria S.L.

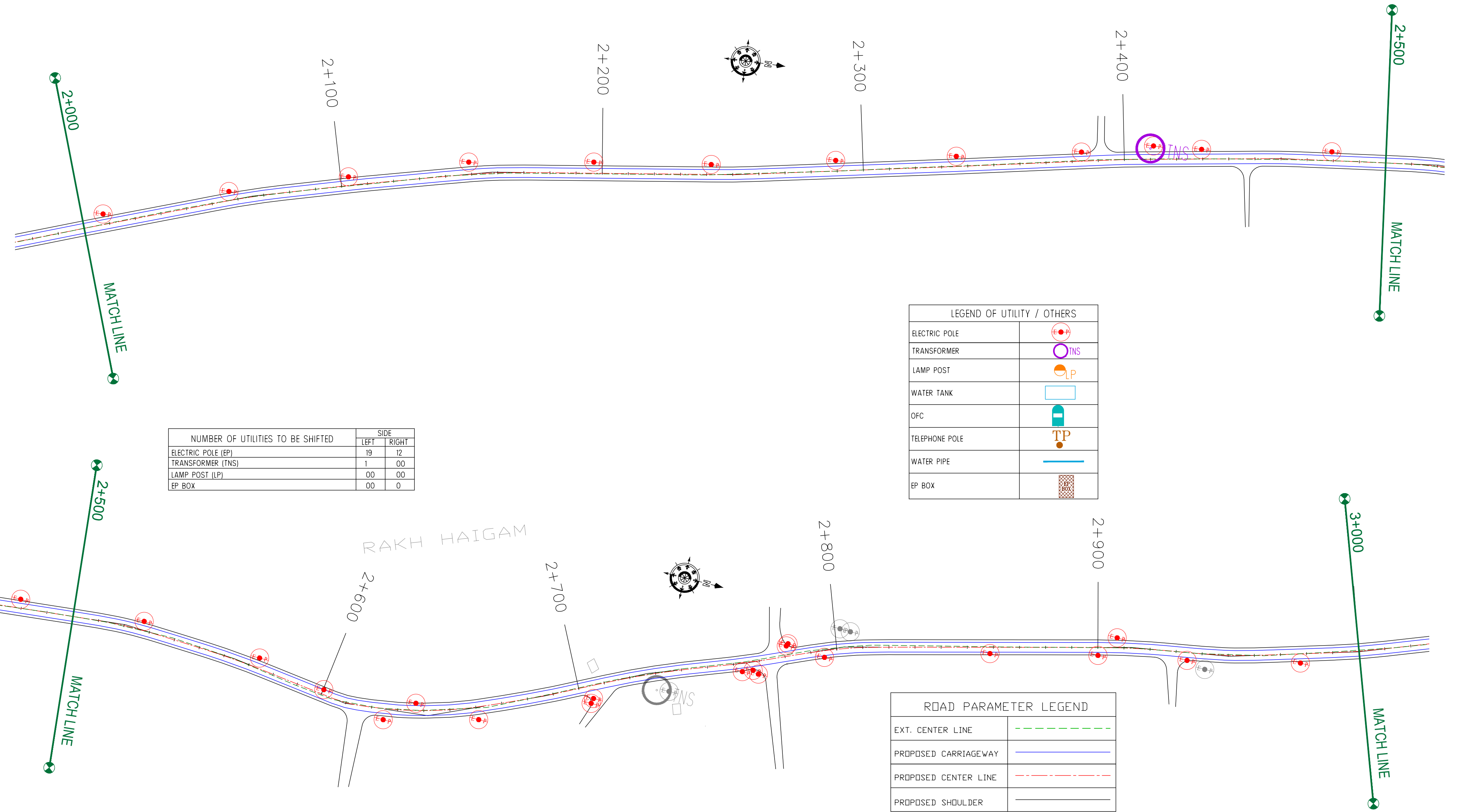
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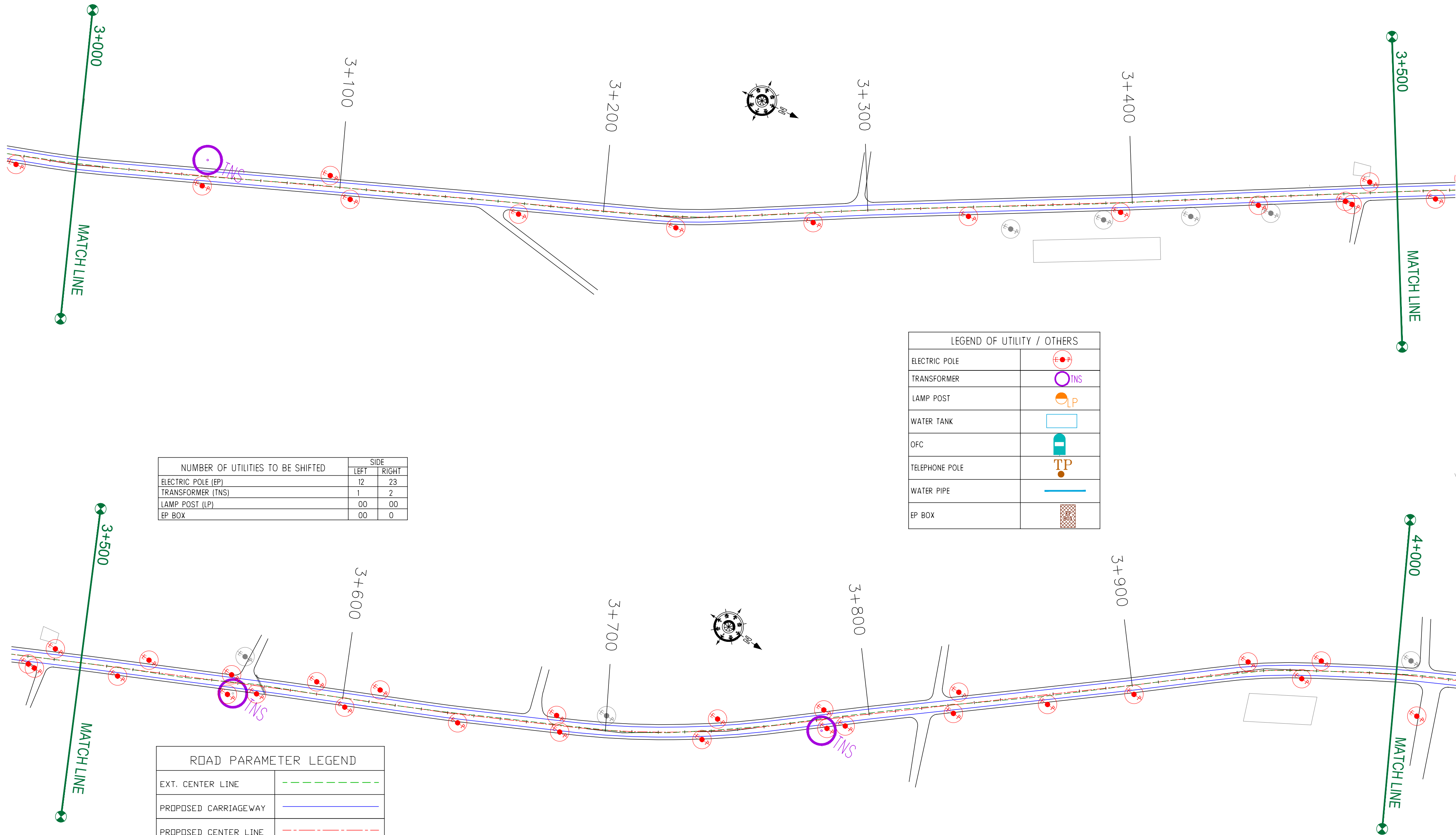
REV.	DATE	DESCRIPTION

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

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







NUMBER OF UTILITIES TO BE SHIFTED	SIDE	
	LEFT	RIGHT
ELECTRIC POLE (EP)	12	23
TRANSFORMER (TNS)	1	2
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 :

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**(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam
upto Sumbal Bridge)**

DESIGN CONSULTANT:



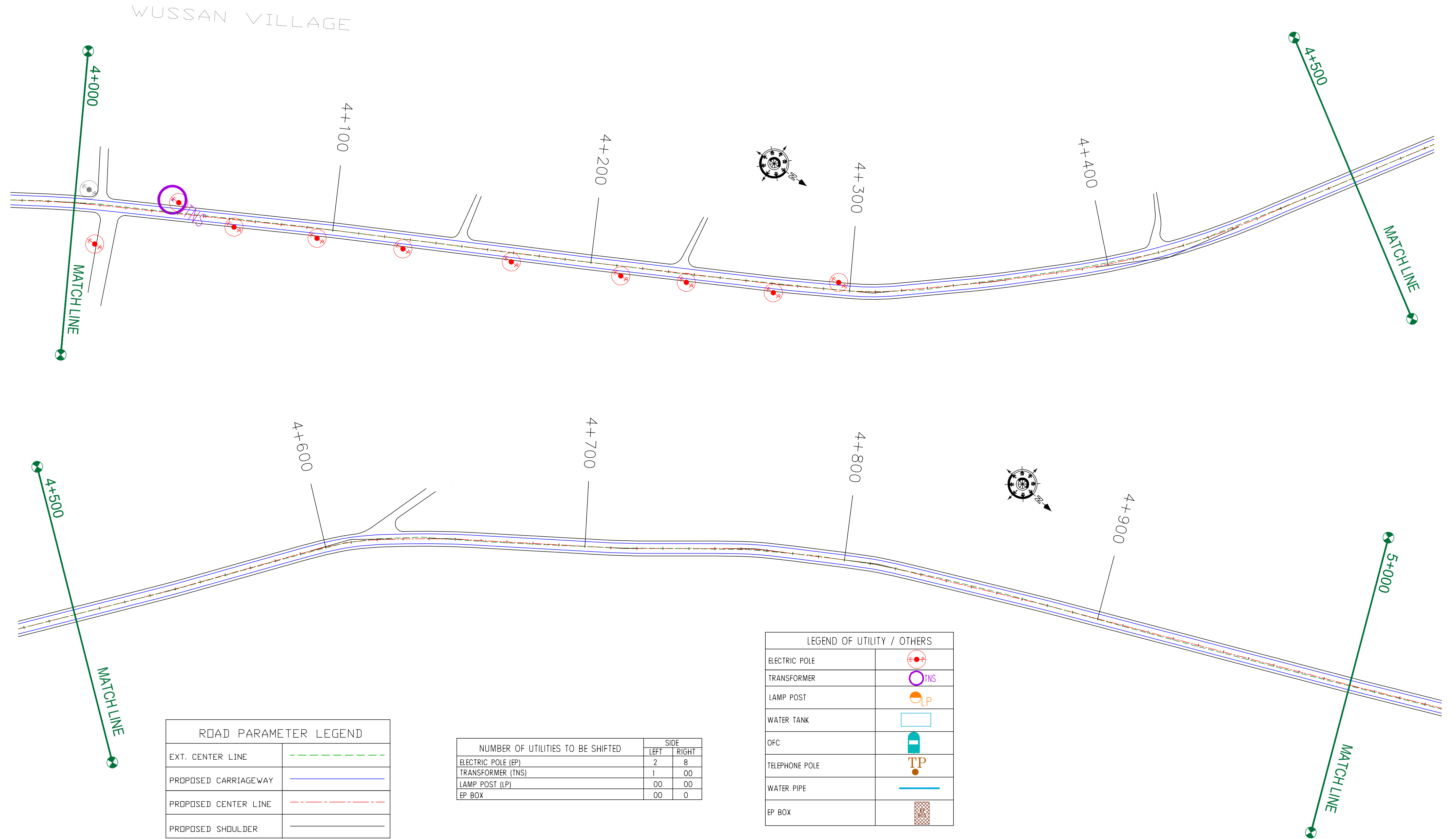
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REV.	DATE	DESCRIPTION

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

TITLE : Utility Relocation Plan (For Electricity Department) (Ch. 3+000 to Ch. 4+000)	
DRG. NO. : EPTISA/JTRFP/DPR/J&K/URP/04	
REVISION : R-1	September 2019



CLIENT :



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2nd Floor ERA Commercial Complex Rambagh
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REV.	DATE	DESCRIPTION

DRAWN BY : SD

DESIGNED BY : SCK/MM

APPROVED BY : KG

SCALE : 1:1000

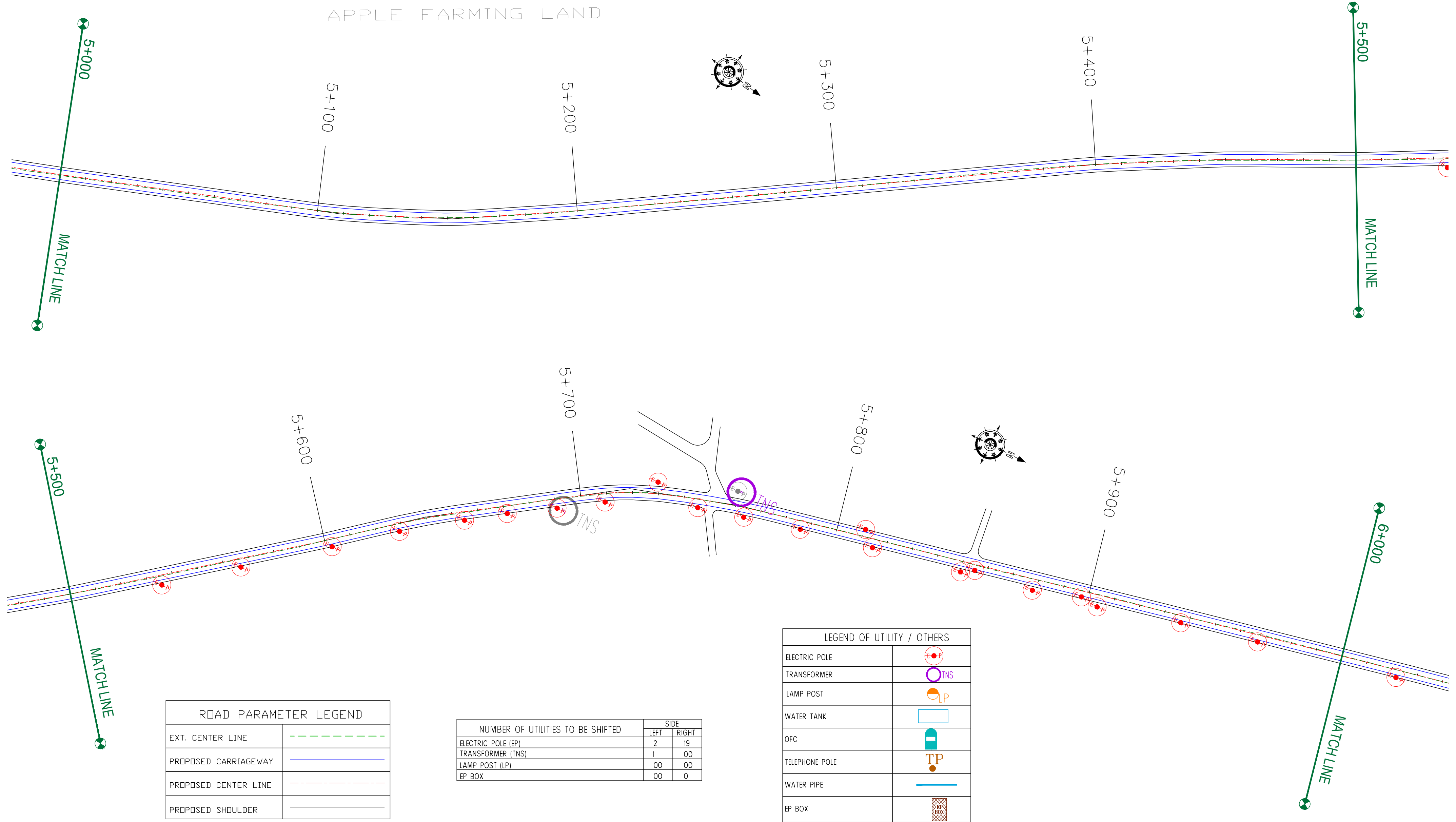
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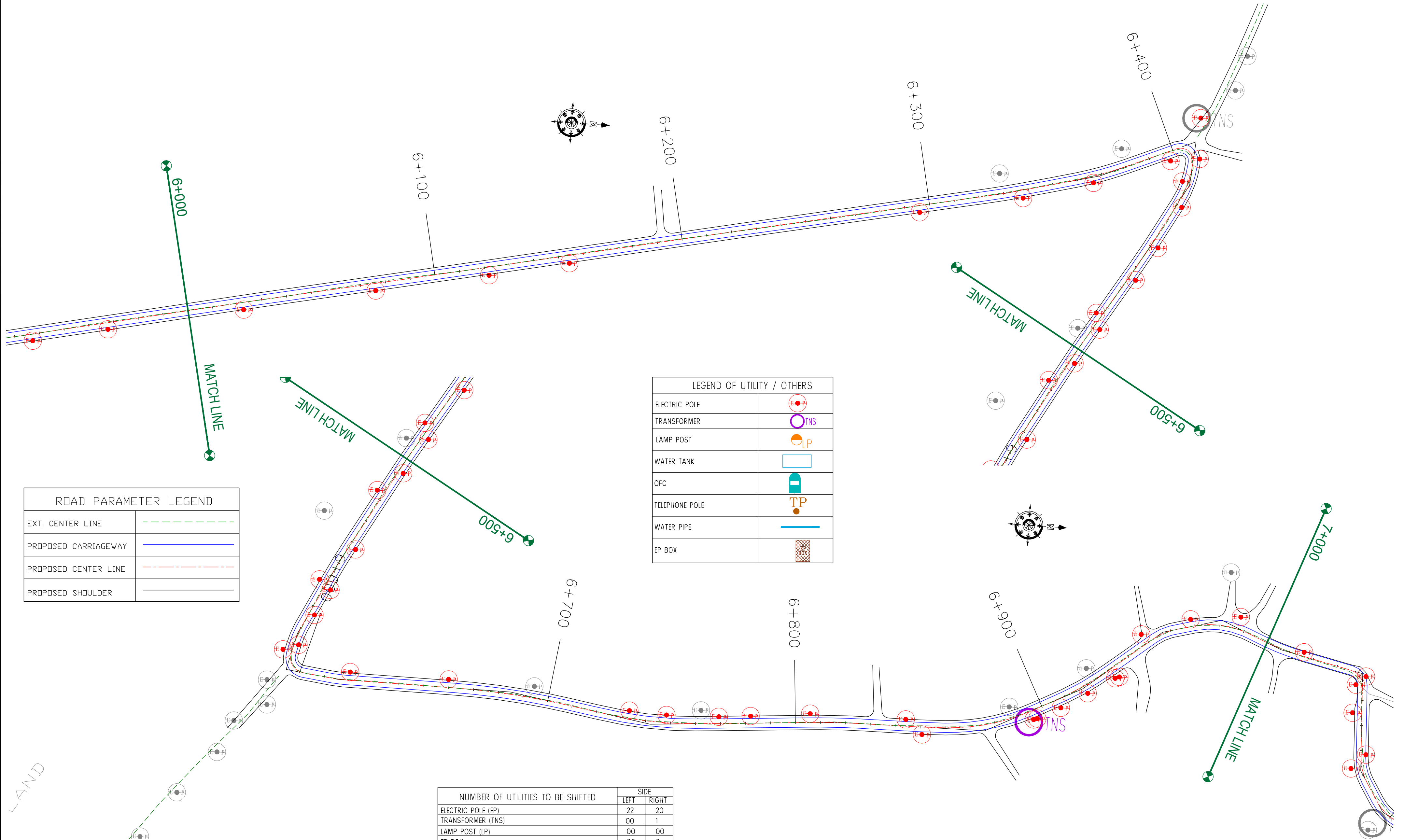
Utility Relocation Plan
(For Electricity Department)
(Ch. 4+000 to Ch. 5+000)

DRG. NO. : EPTISA/JTRFP/DPR/J&K/URP/05

REVISION : R-1

September 2019





CLIENT :



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

PROJECT :

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**(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam
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DESIGN CONSULTANT:



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REV.	DATE	DESCRIPTION

DRAWN BY : SD

DESIGNED BY : SCK/MM

APPROVED BY : KG

SCALE : 1:1000

TITLE :

Utility Relocation Plan
(For Electricity Department)
(Ch. 6+000 to Ch. 7+000)

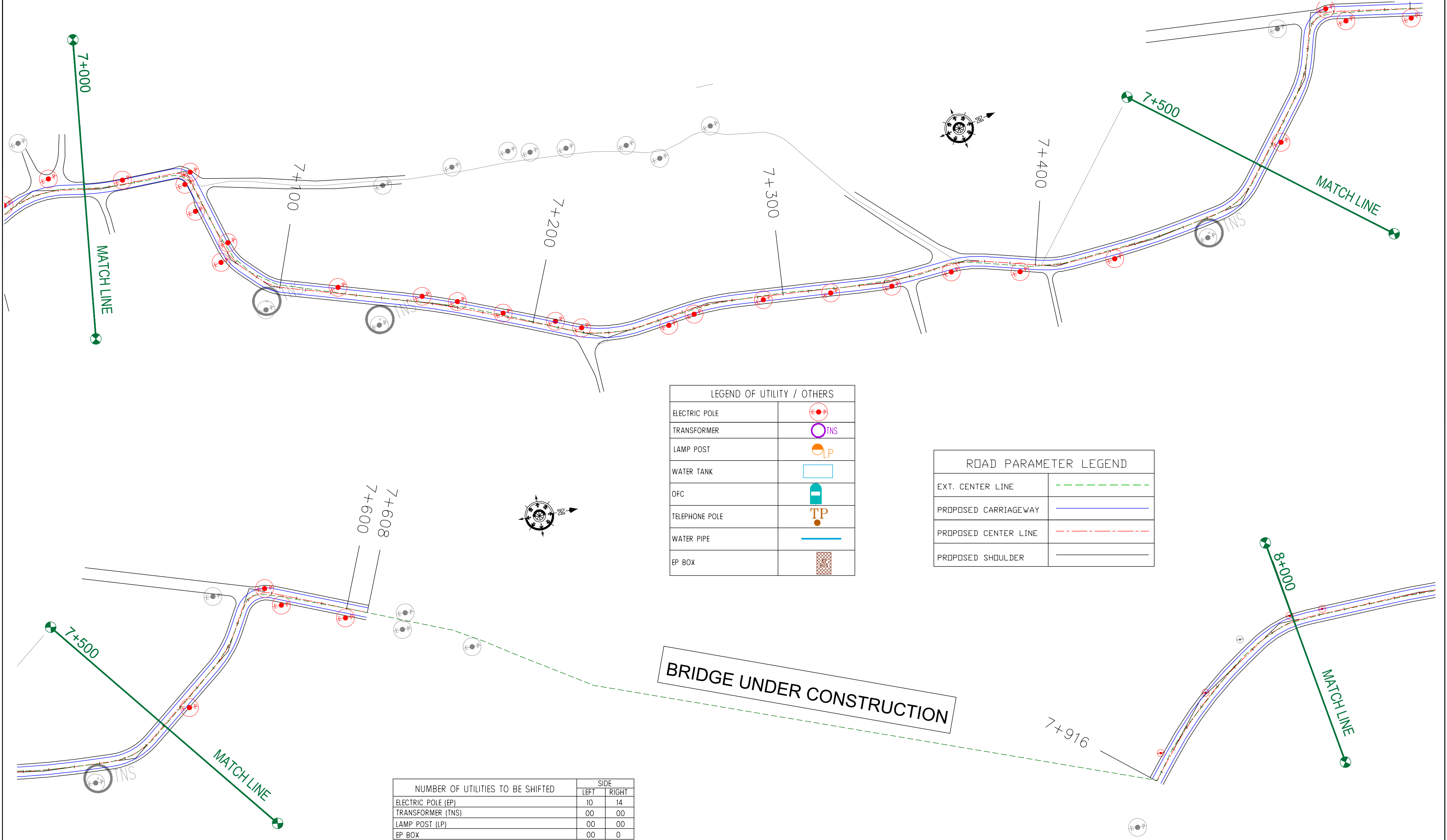
DRG. NO. : EPTISA/JTFRP/DPR/J&K/URP/07

REVISION : R-1

September 2019

← Hamary-Sultanpora Nowgam

Sumbal Bridge →



CLIENT :



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

PROJECT :

Consultancy Services for Preparing Detailed Project Report
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**(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam
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DESIGN CONSULTANT:



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REV.	DATE	DESCRIPTION

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

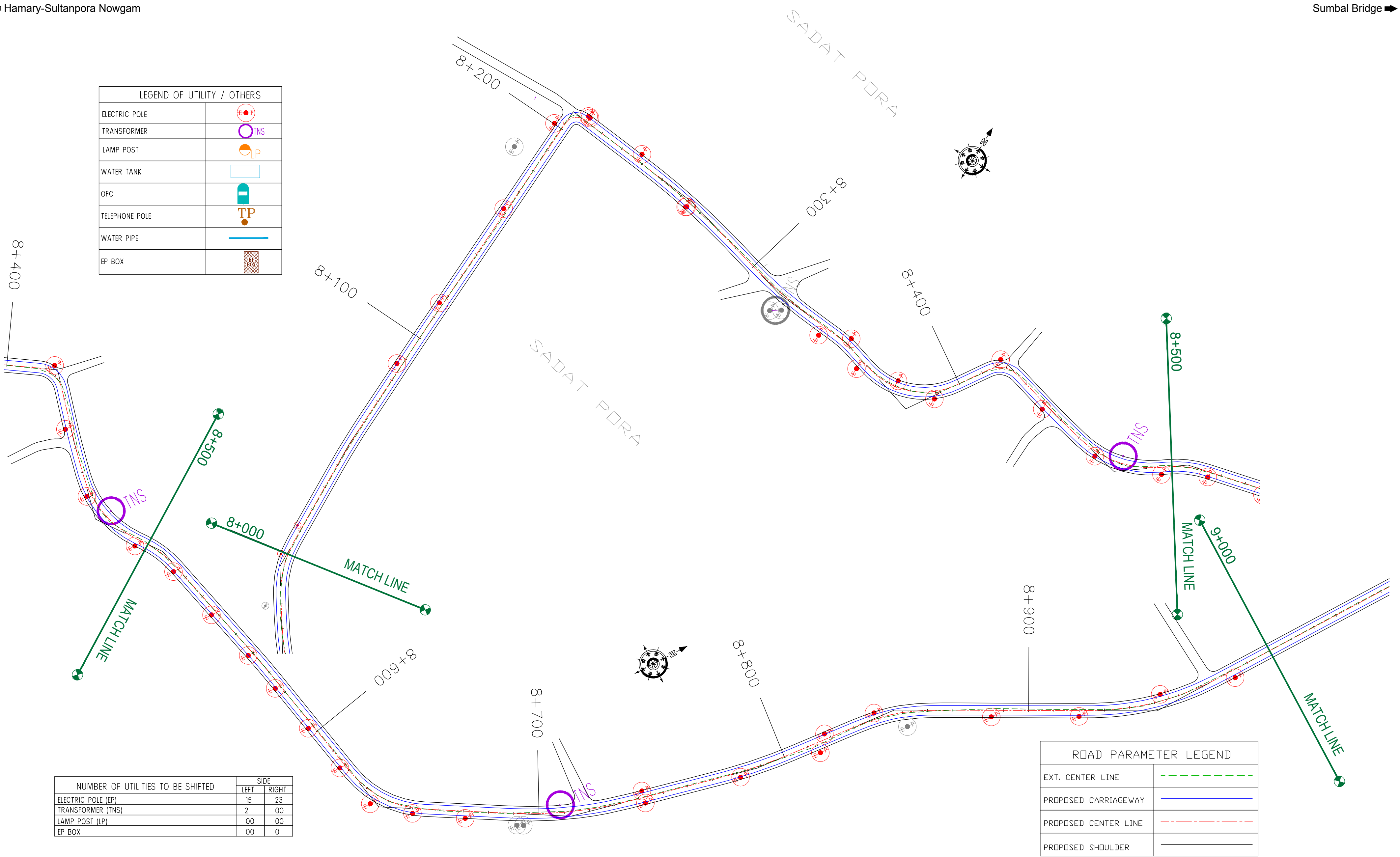
TITLE :

Utility Relocation Plan
(For Electricity Department)
(Ch. 7+000 to Ch. 8+000)

DRG. NO. : EPTISA/JTRFP/DPR/J&K/URP/08

REVISION : R-1

September 2019



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
**(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam
upto Sumbal Bridge)**

DESIGN CONSULTANT:



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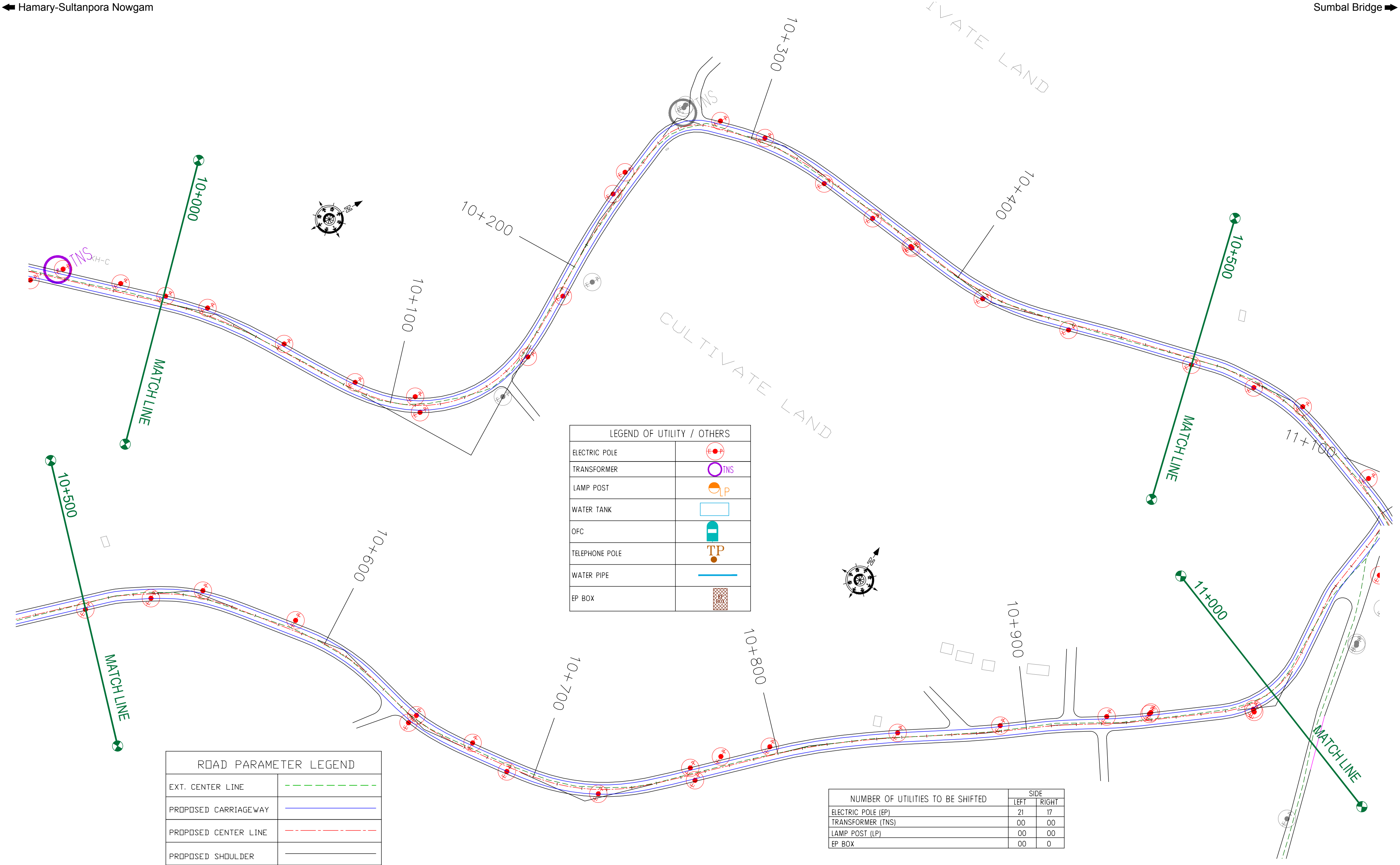
Unit 1203, 12th Floor, Tower 1, PS Srijan
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Ph: 033-40347200
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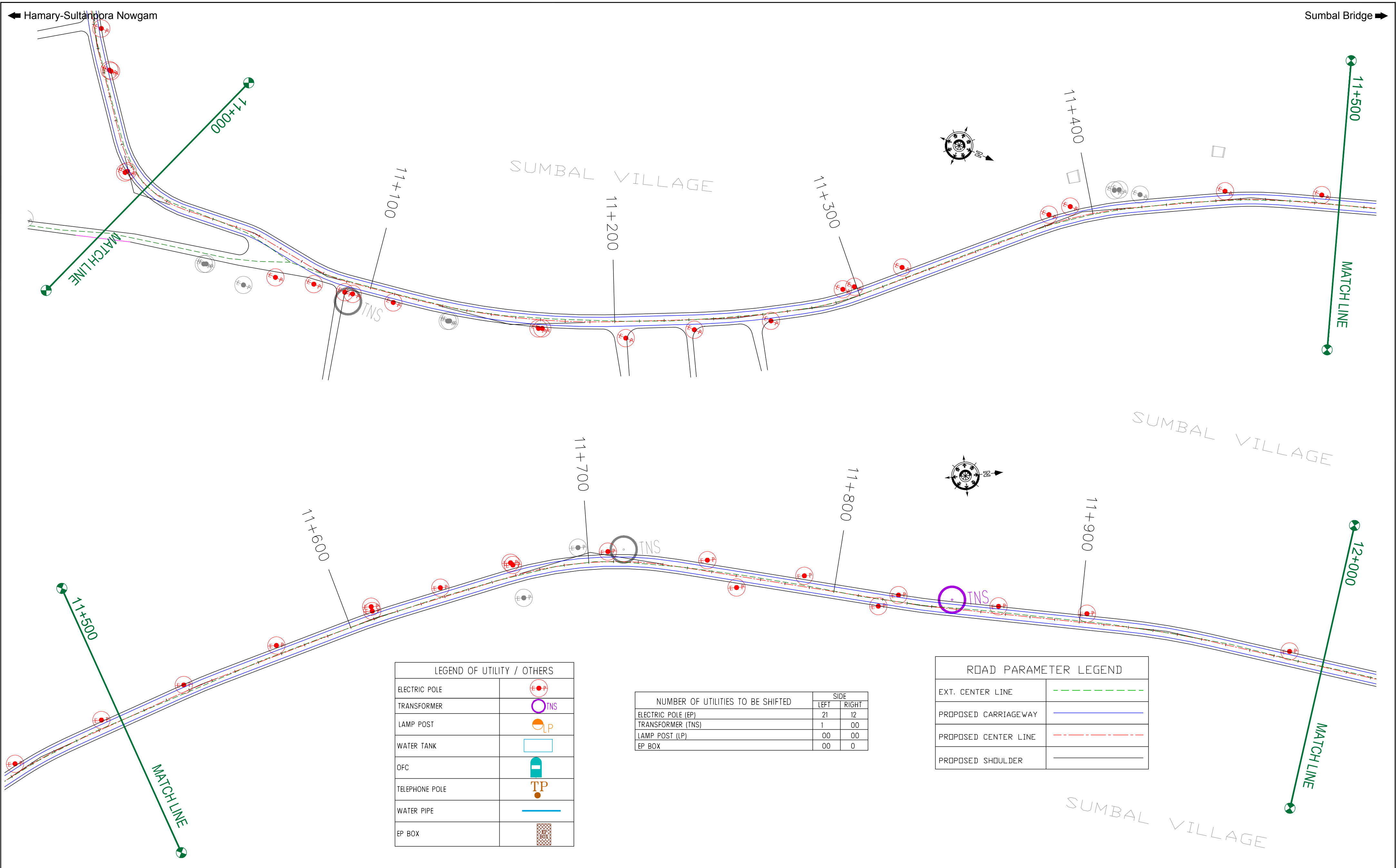
REV.	DATE	DESCRIPTION

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

TITLE :	Utility Relocation Plan (For Electricity Department) (Ch. 8+000 to Ch. 9+000)
DRG. NO. :	EPTISA/JTRP/DPR/J&K/URP/09
REVISION : R-1	September 2019

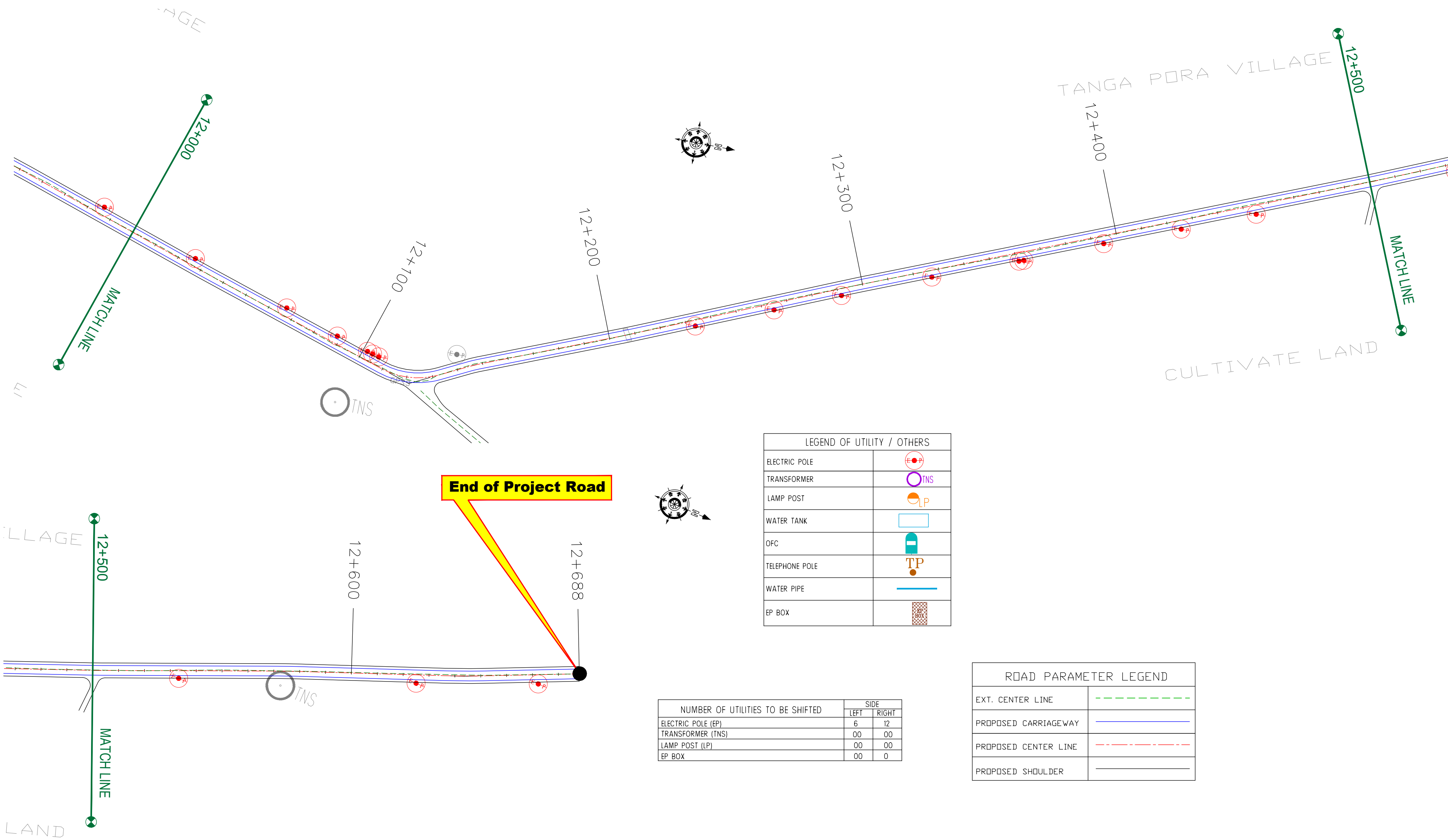






← Hamary-Sultanpora Nowgam

Sumbal Bridge →



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)	6	12
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
(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam upto Sumbal Bridge)

DESIGN CONSULTANT:



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REV.	DATE	DESCRIPTION

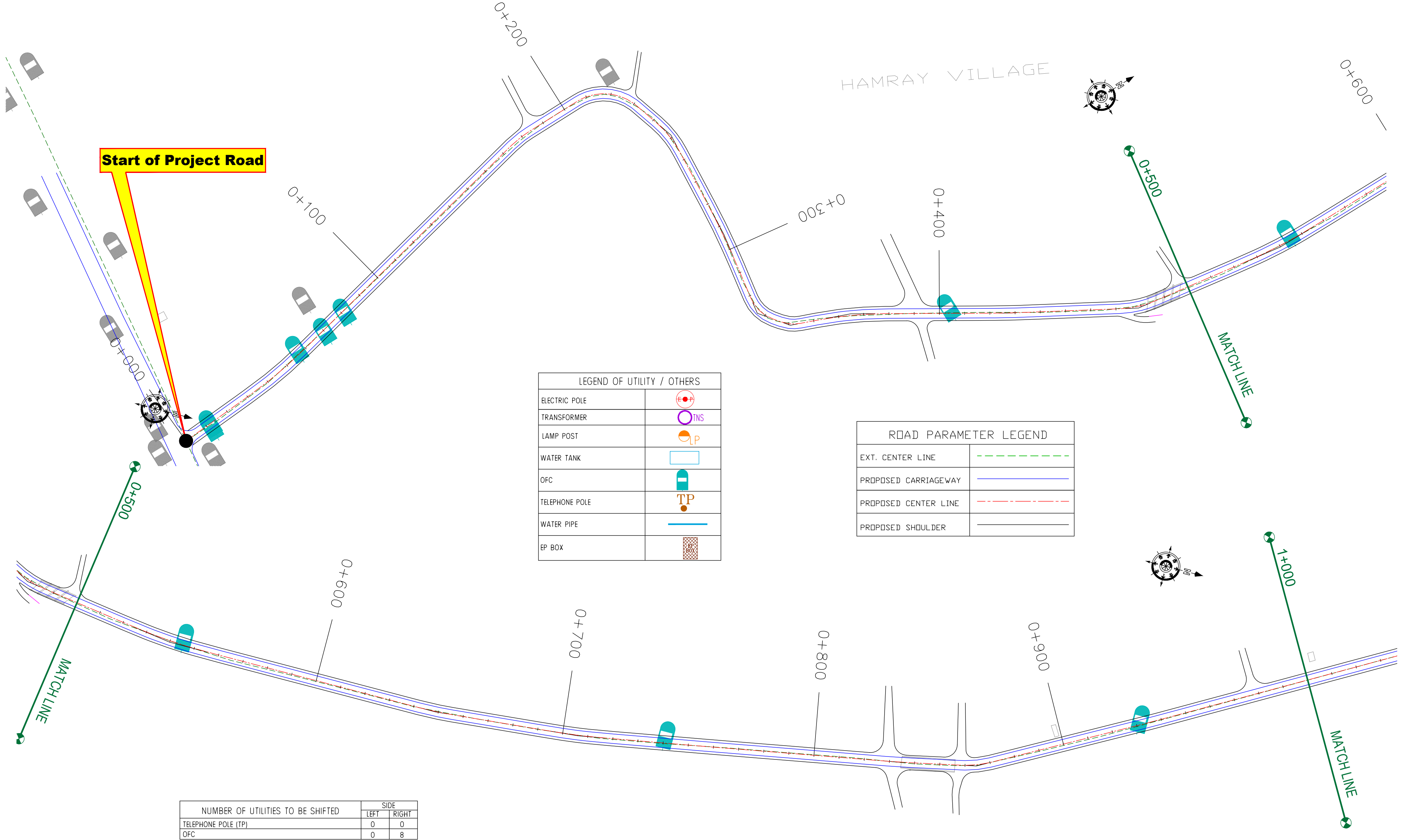
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DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	Utility Relocation Plan (For Electricity Department) (Ch. 12+000 to Ch. 12+688)	
DRG. NO. :	EPTISA/JTRFP/DPR/J&K/URP/13	
REVISION : R-1	September 2019	

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

← Hamary-Sultanpora Nowgam

Sumbal Bridge →



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	8

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
**(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam
upto Sumbal Bridge)**

DESIGN CONSULTANT:

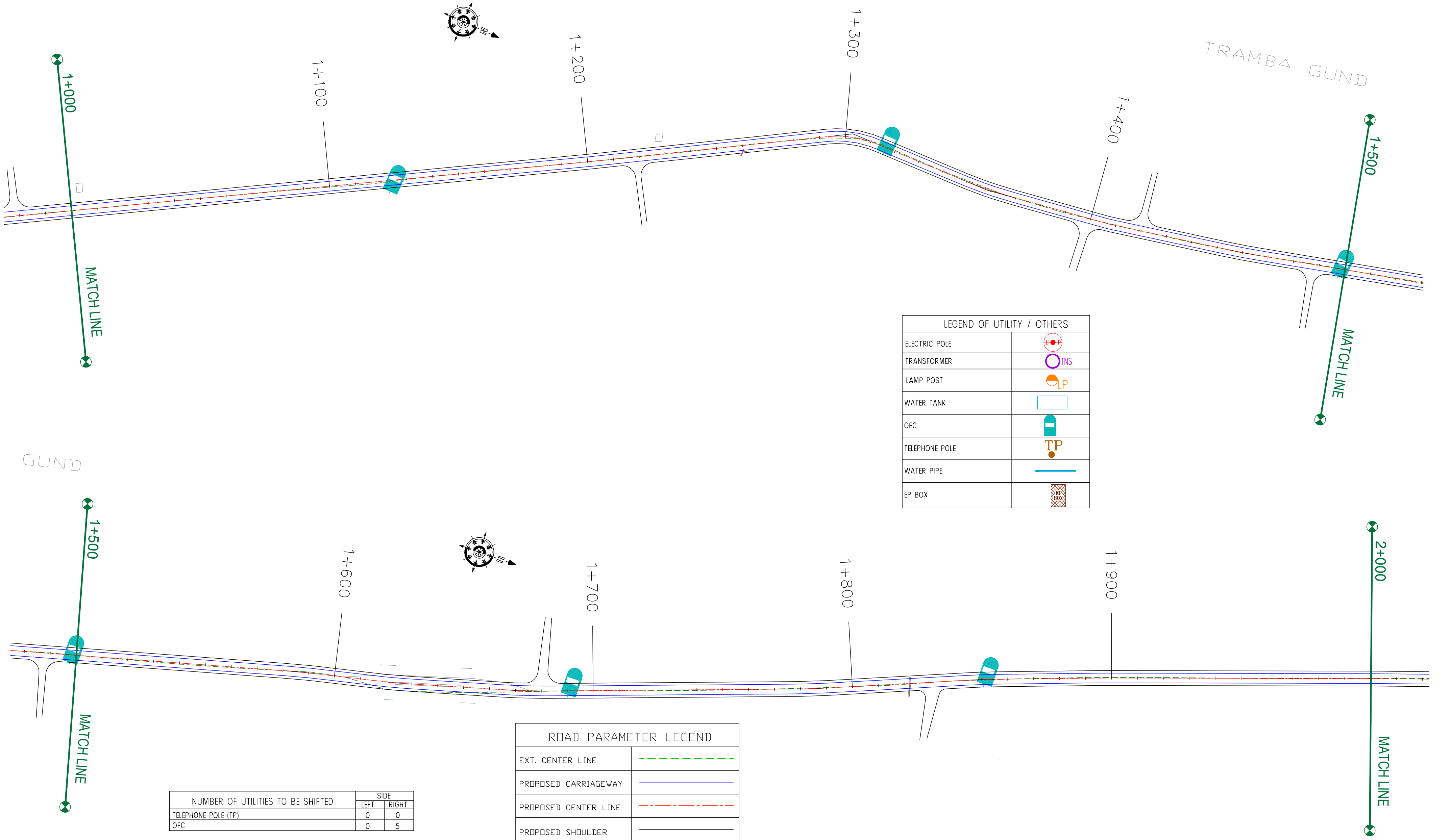


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REV.	DATE	DESCRIPTION

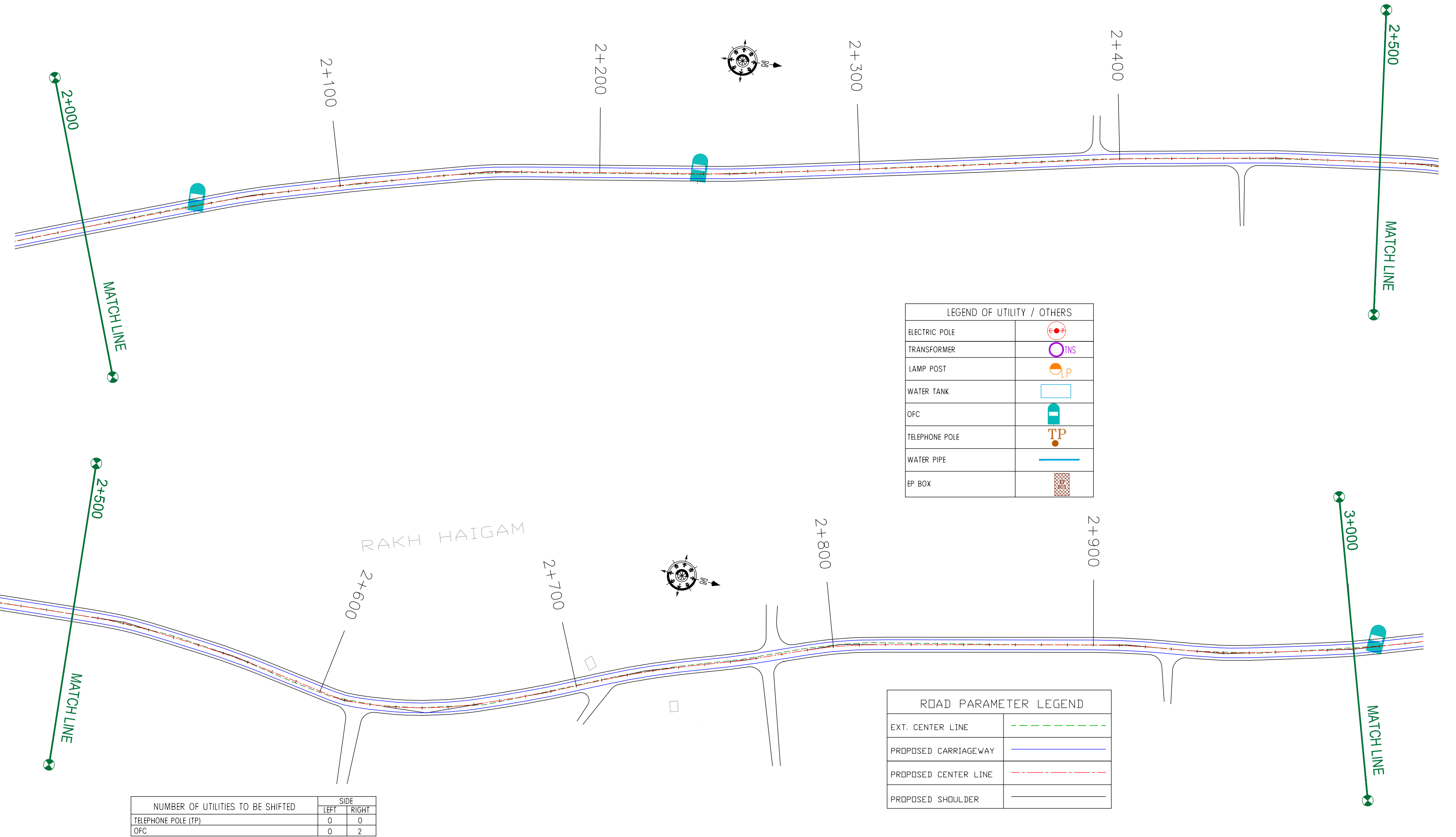
DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

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



← Hamary-Sultanpora Nowgam

Sumbal Bridge →



CLIENT :

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

PROJECT :
Consultancy Services for Preparing Detailed Project Report
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(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam upto Sumbal Bridge)

DESIGN CONSULTANT:

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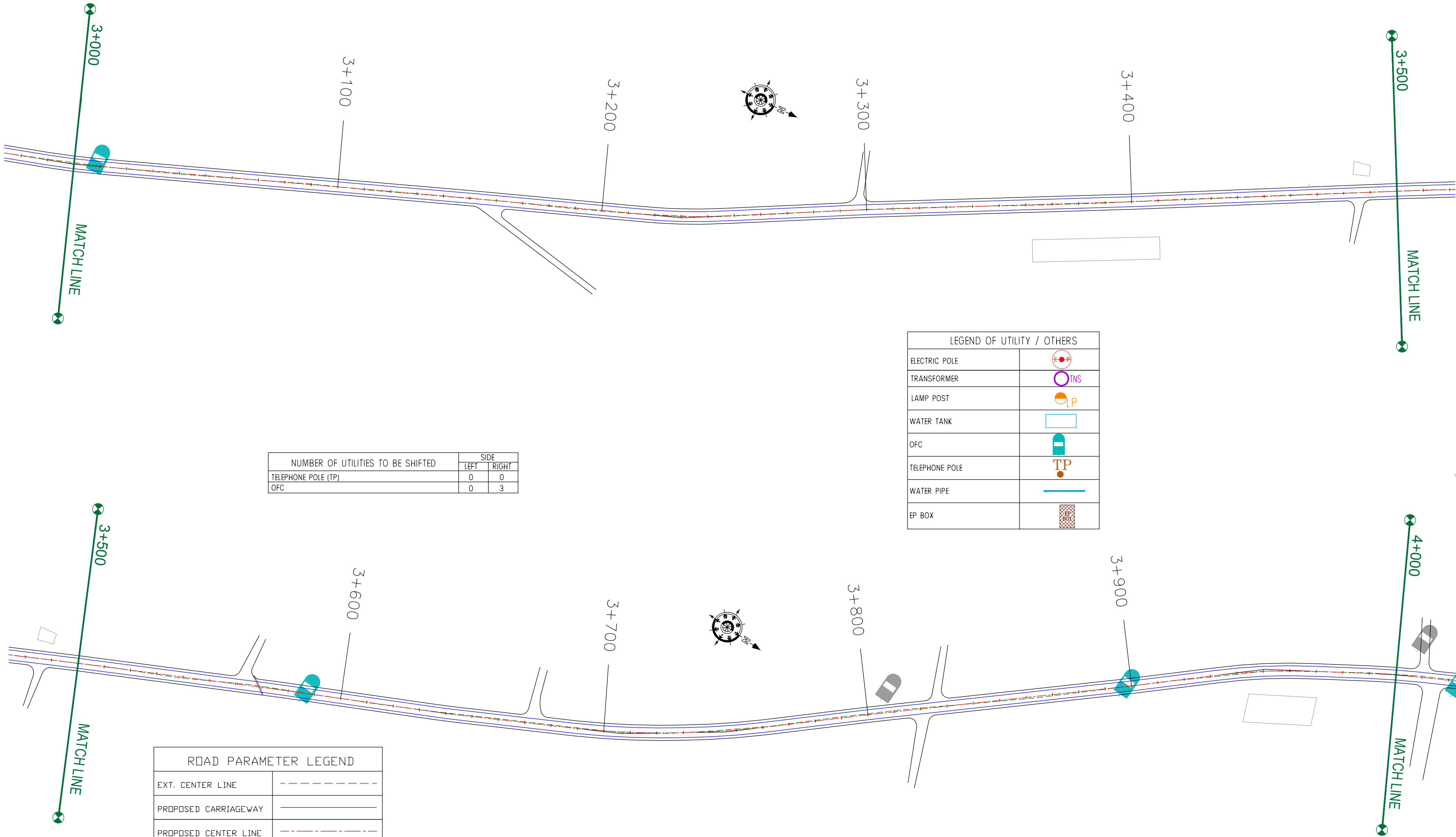
REV.	DATE	DESCRIPTION

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

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

← Hamary-Sultanpora Nowgam

Sumbal Bridge →



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

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 :

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DESIGN CONSULTANT:



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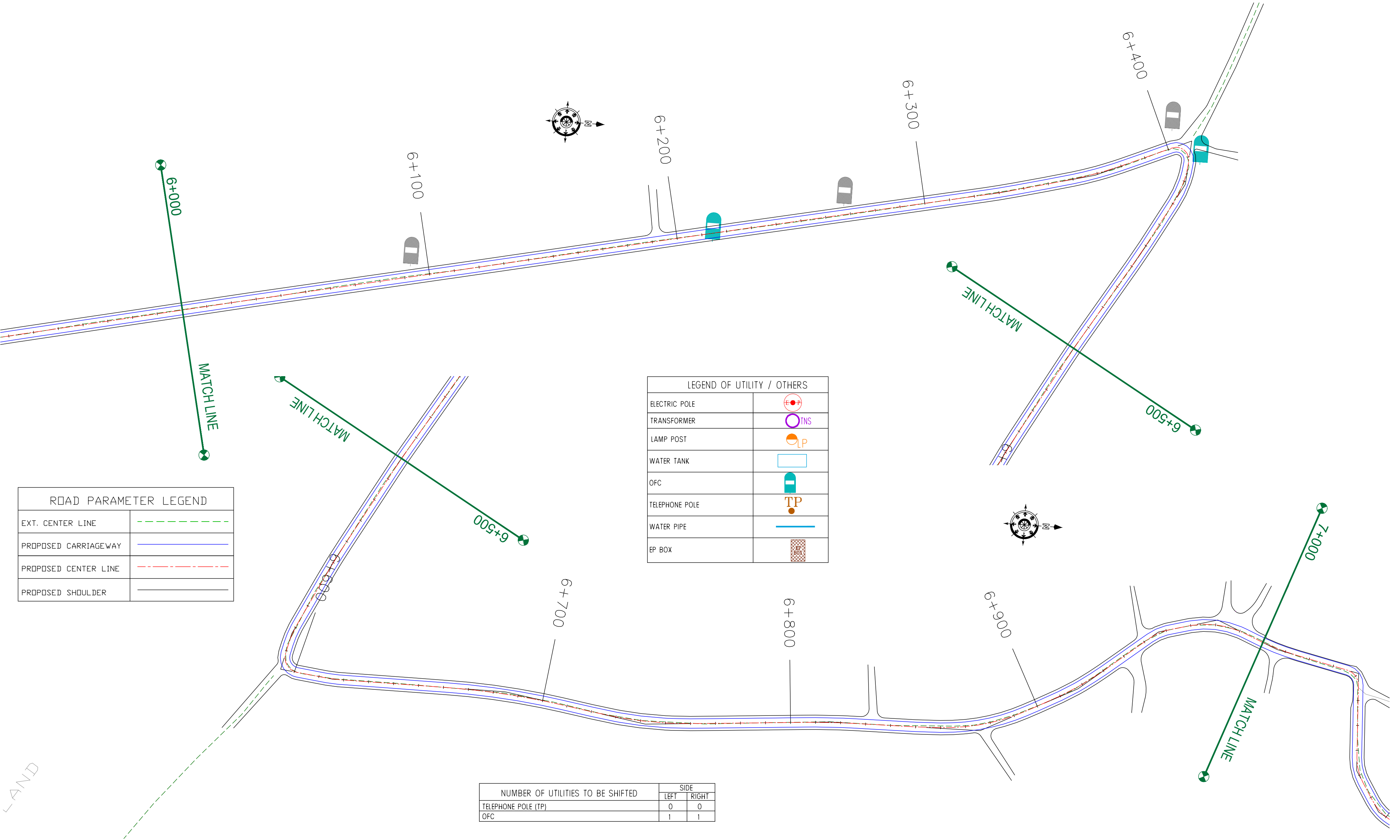
REV.	DATE	DESCRIPTION

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

TITLE : Utility Relocation Plan (For Telephone Department) (Ch. 3+000 to Ch. 4+000)	
DRG. NO. : EPTISA/JTRFP/DPR/J&K/URP/04	
REVISION : R-1	September 2019







ROAD PARAMETER LEGEND	
EXT. CENTER LINE	<div></div>
PROPOSED CARRIAGEWAY	<div></div>
PROPOSED CENTER LINE	<div></div>
PROPOSED SHOULDER	<div></div>

LEGEND OF UTILITY / OTHERS	
ELECTRIC POLE	<div></div>
TRANSFORMER	<div>TNS</div>
LAMP POST	<div>LP</div>
WATER TANK	<div></div>
OFC	<div></div>
TELEPHONE POLE	<div>TP</div>
WATER PIPE	<div></div>
EP BOX	<div>EP BOX</div>

NUMBER OF UTILITIES TO BE SHIFTED	SIDE	
	LEFT	RIGHT
TELEPHONE POLE (TP)	0	0
OFC	1	1

CLIENT :



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

PROJECT :

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DESIGN CONSULTANT:



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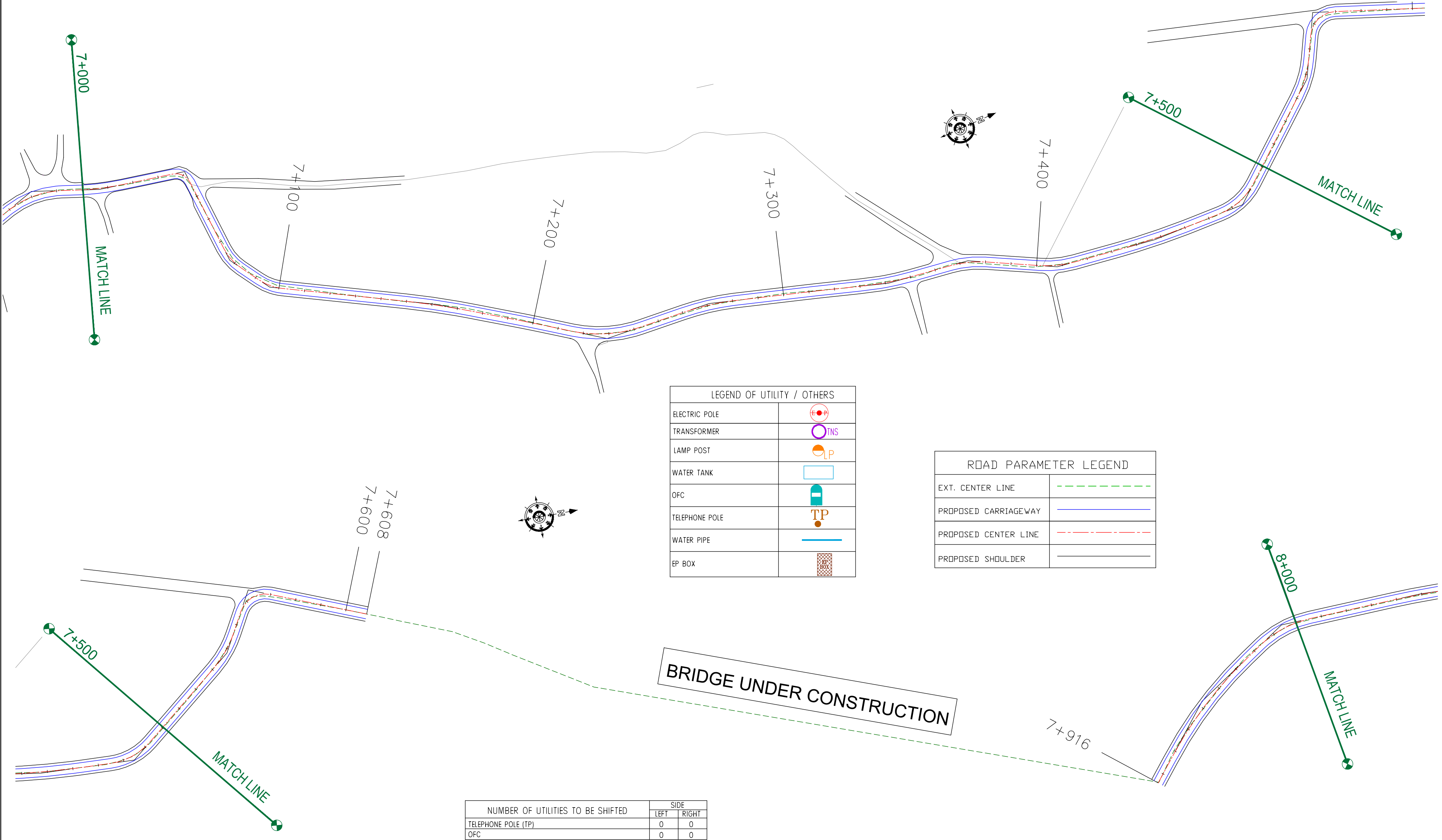
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DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	Utility Relocation Plan (For Telephone Department) (Ch. 6+000 to Ch. 7+000)	
DRG. NO. :	EPTISA/JTRFP/DPR/J&K/URP/07	
REVISION : R-1	September 2019	

← Hamary-Sultanpora Nowgam

Sumbal Bridge →



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 :



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REV.	DATE	DESCRIPTION

DRAWN BY : SD

DESIGNED BY : SCK/MM

APPROVED BY : KG

SCALE : 1:1000

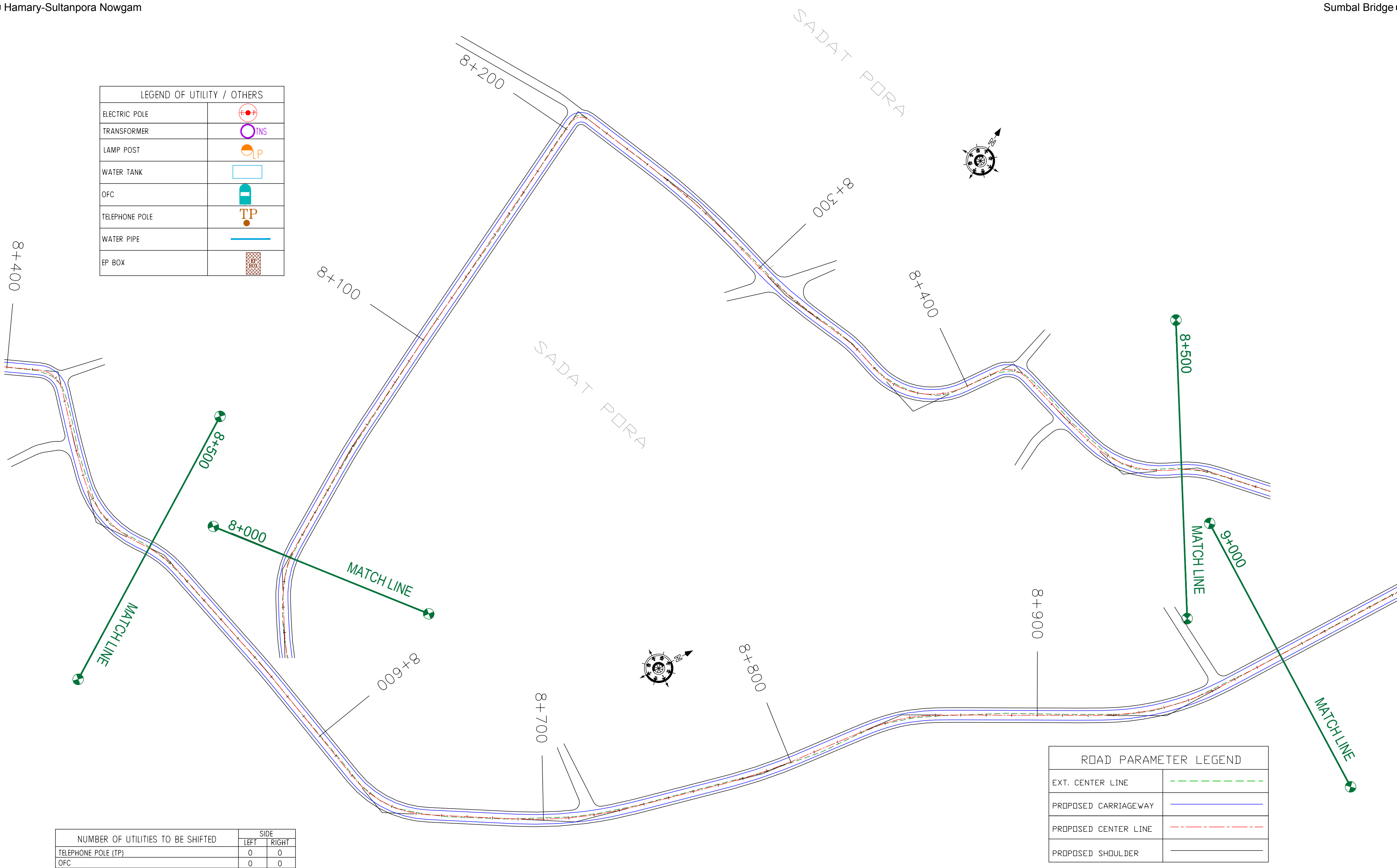
TITLE :

Utility Relocation Plan
(For Telephone Department)
(Ch. 7+000 to Ch. 8+000)

DRG. NO. : EPTISA/JTRFP/DPR/J&K/URP/08

REVISION : R-1

September 2019





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
**(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam
upto Sumbal Bridge)**

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. 9+000 to Ch. 10+000)

DRG. NO. : EPTISA/JTRP/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
TELEPHONE POLE (TP)	0	0
OFC	2	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
**(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam
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DESIGN CONSULTANT:



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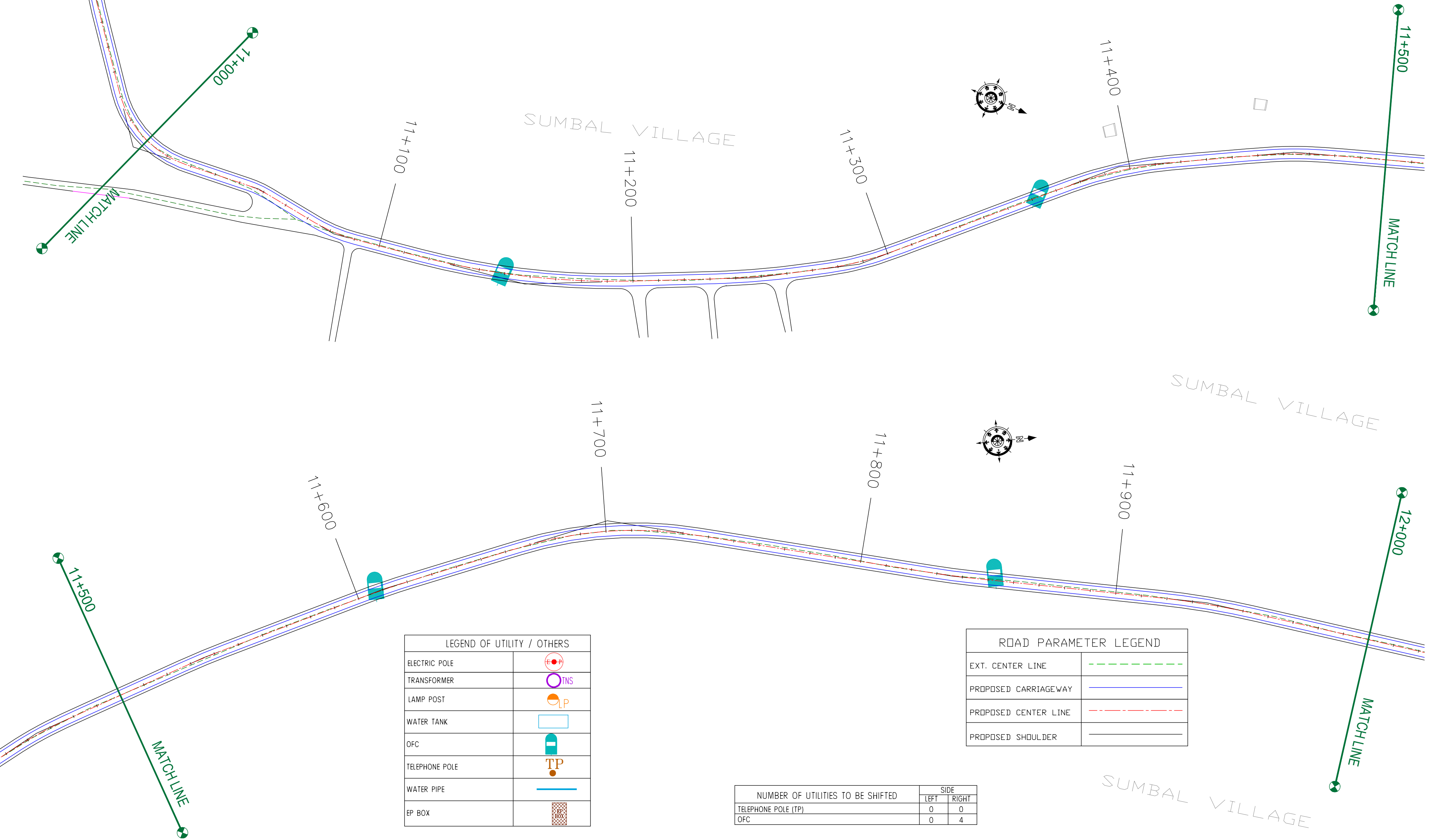
REV.	DATE	DESCRIPTION

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/JTRFP/DPR/J&K/URP/11	
REVISION : R-1	September 2019

← Hamary-Sultanpora Nowgam

Sumbal Bridge →



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	4

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
**(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam
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DESIGN CONSULTANT:



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West Bengal
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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. 11+000 to Ch. 12+000)

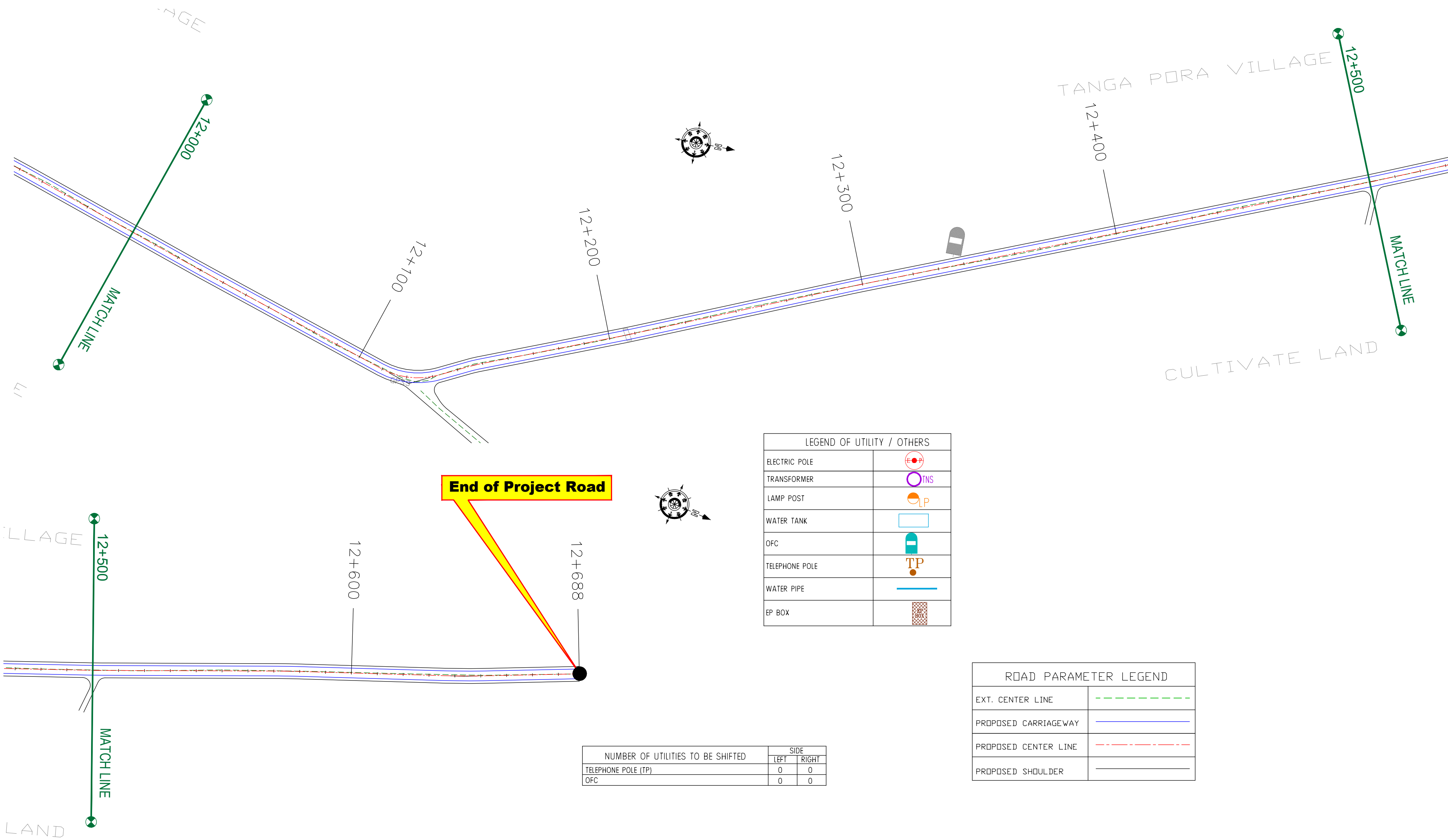
DRG. NO. : EPTISA/JTFRP/DPR/J&K/URP/12

REVISION : R-1

September 2019

← Hamary-Sultanpora Nowgam

Sumbal Bridge →



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
**(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam
upto Sumbal Bridge)**

DESIGN CONSULTANT:



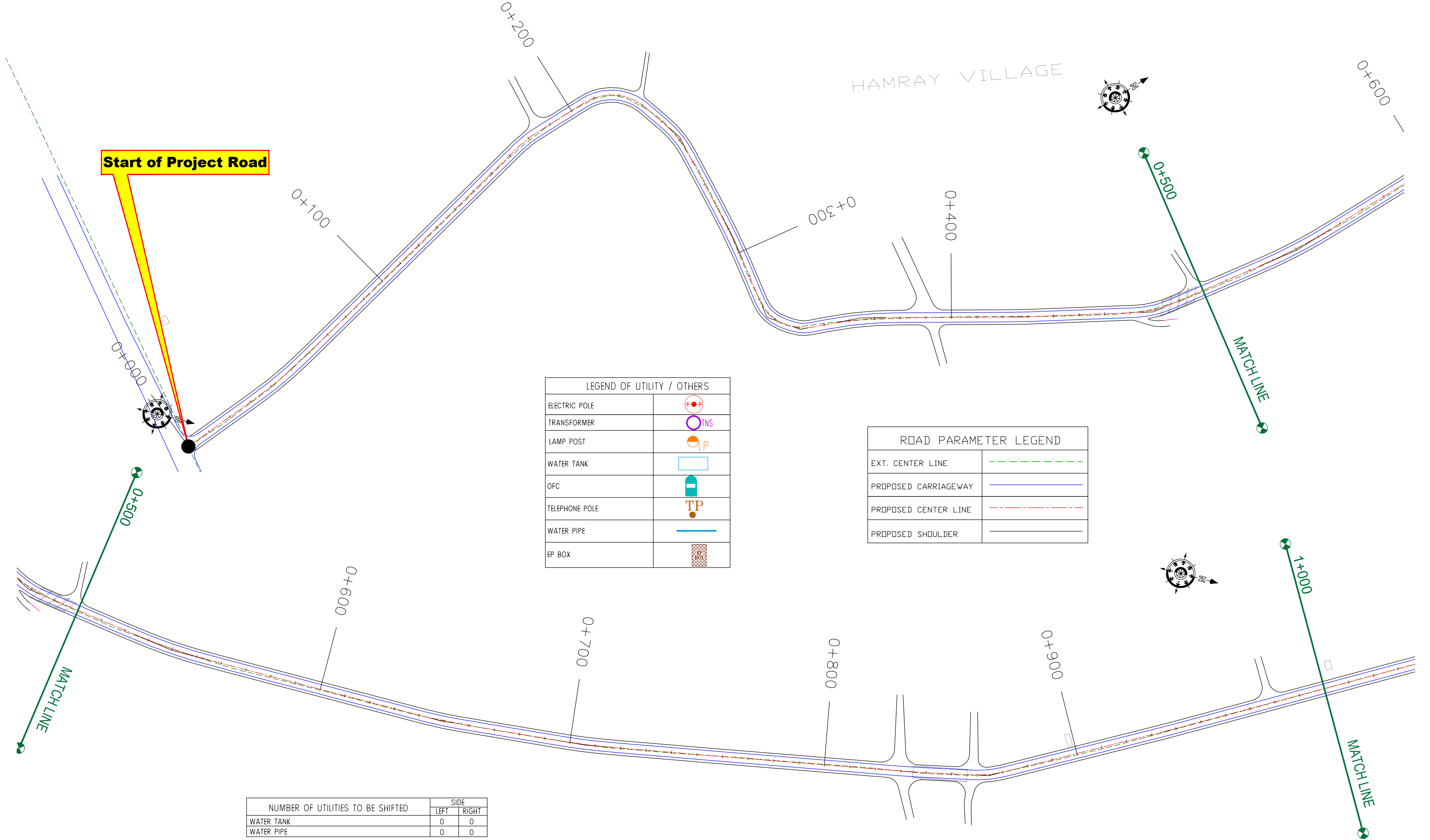
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Ph: 033-40347200
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REV.	DATE	DESCRIPTION

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

TITLE : Utility Relocation Plan (For Telephone Department) (Ch. 12+000 to Ch. 12+688)	
DRG. NO. : EPTISA/JTRFP/DPR/J&K/URP/13	
REVISION : R-1	September 2019

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



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
**(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam
upto Sumbal Bridge)**

DESIGN CONSULTANT:



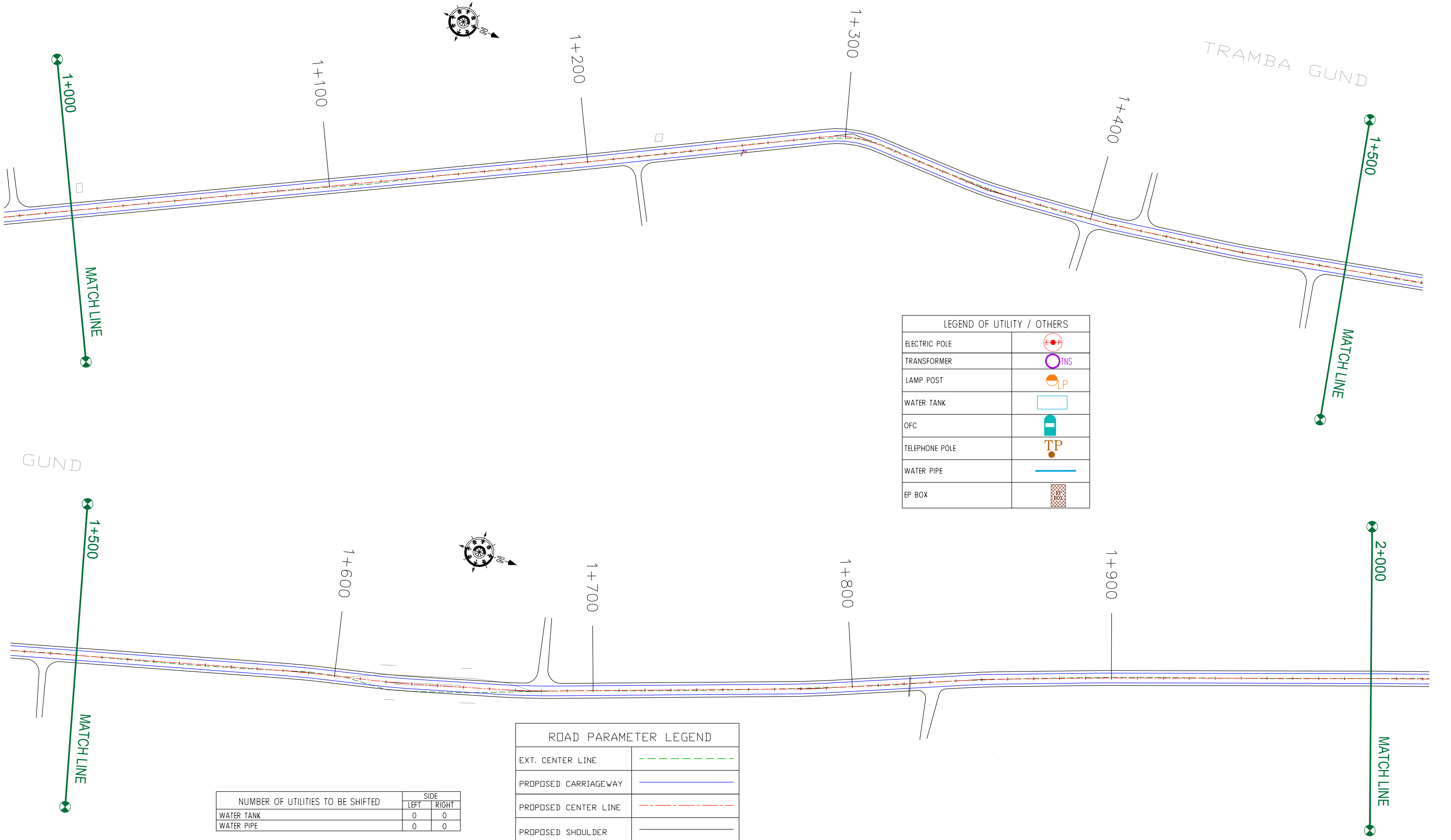
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REV.	DATE	DESCRIPTION

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

TITLE :	Utility Relocation Plan (For Water Department) (Ch. 0+000 to Ch. 1+000)	
DRG. NO. :	EPTISA/JTRP/DPR/J&K/URP/01	
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
**(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam
upto Sumbal Bridge)**

DESIGN CONSULTANT:



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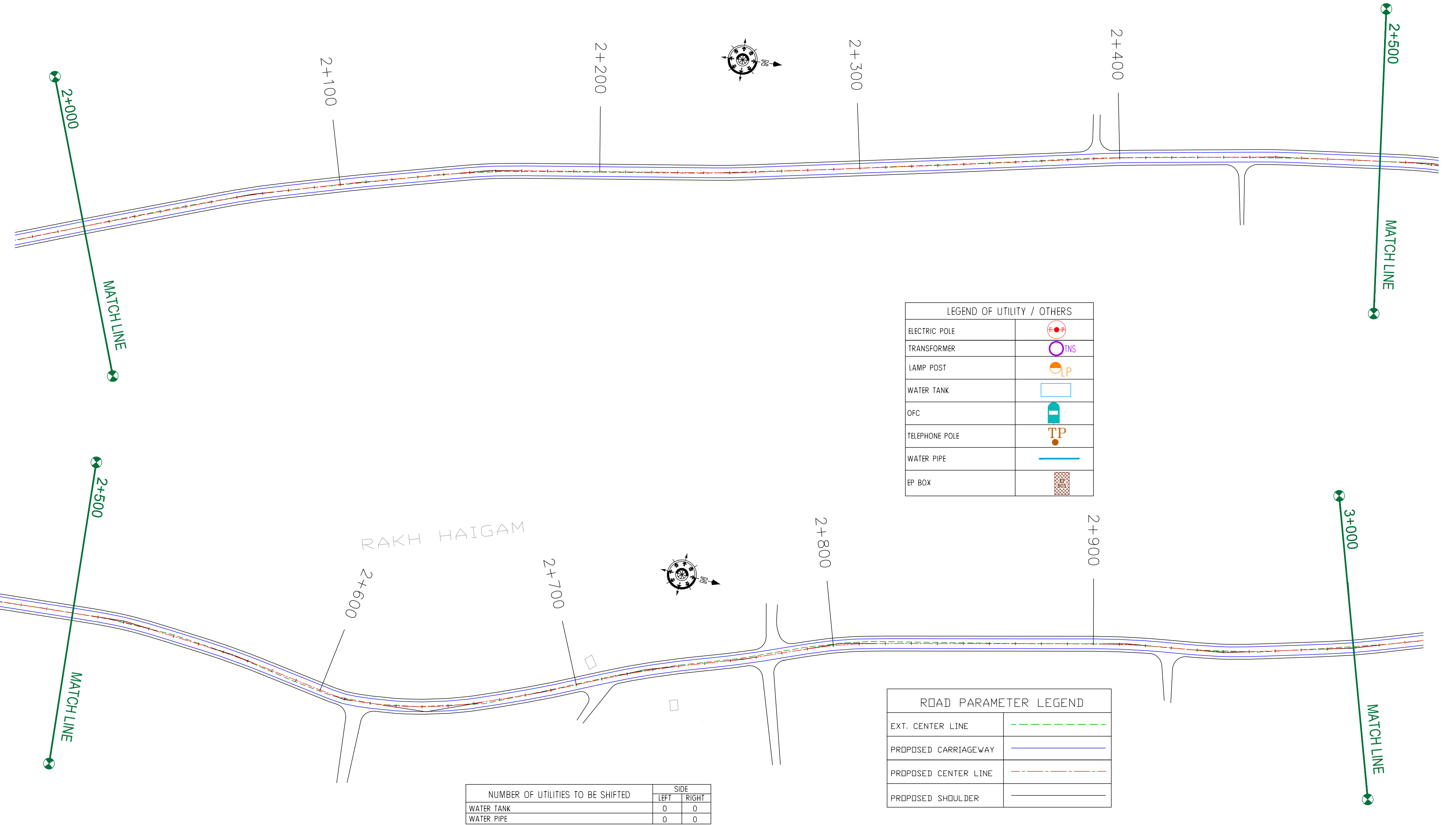
REV.	DATE	DESCRIPTION

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

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

← Hamary-Sultanpora Nowgam

Sumbal Bridge →



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
(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam upto Sumbal Bridge)

DESIGN CONSULTANT:

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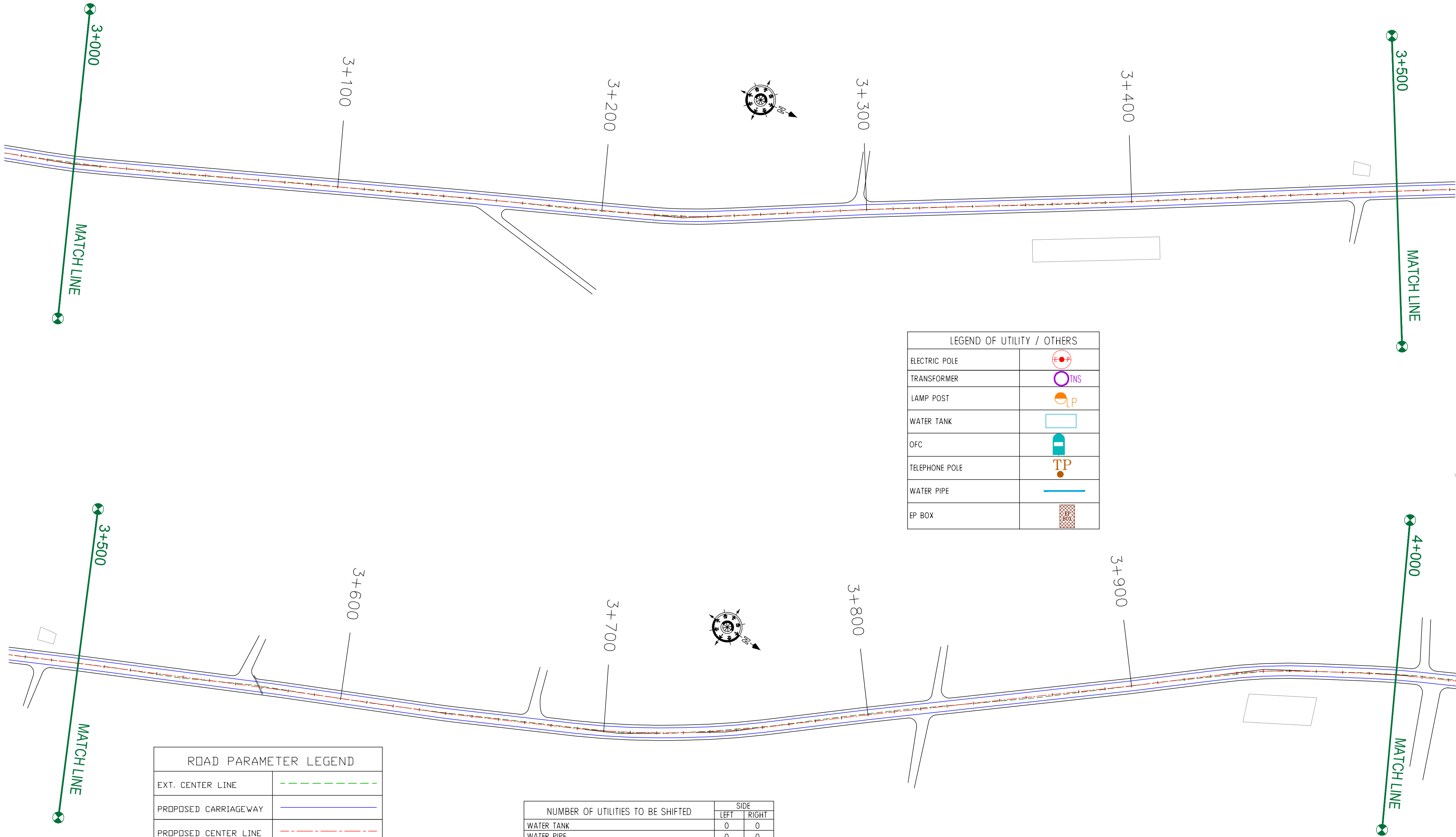
REV.	DATE	DESCRIPTION

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

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

← Hamary-Sultanpora Nowgam

Sumbal Bridge →



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
**(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam
upto Sumbal Bridge)**

DESIGN CONSULTANT:



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REV.	DATE	DESCRIPTION

DRAWN BY : SD

DESIGNED BY : SCK/MM

APPROVED BY : KG

SCALE : 1:1000

TITLE :

**Utility Relocation Plan
(For Water Department)**
(Ch. 3+000 to Ch. 4+000)

DRG. NO. : EPTISA/JTRFP/DPR/J&K/URP/04

REVISION : R-1

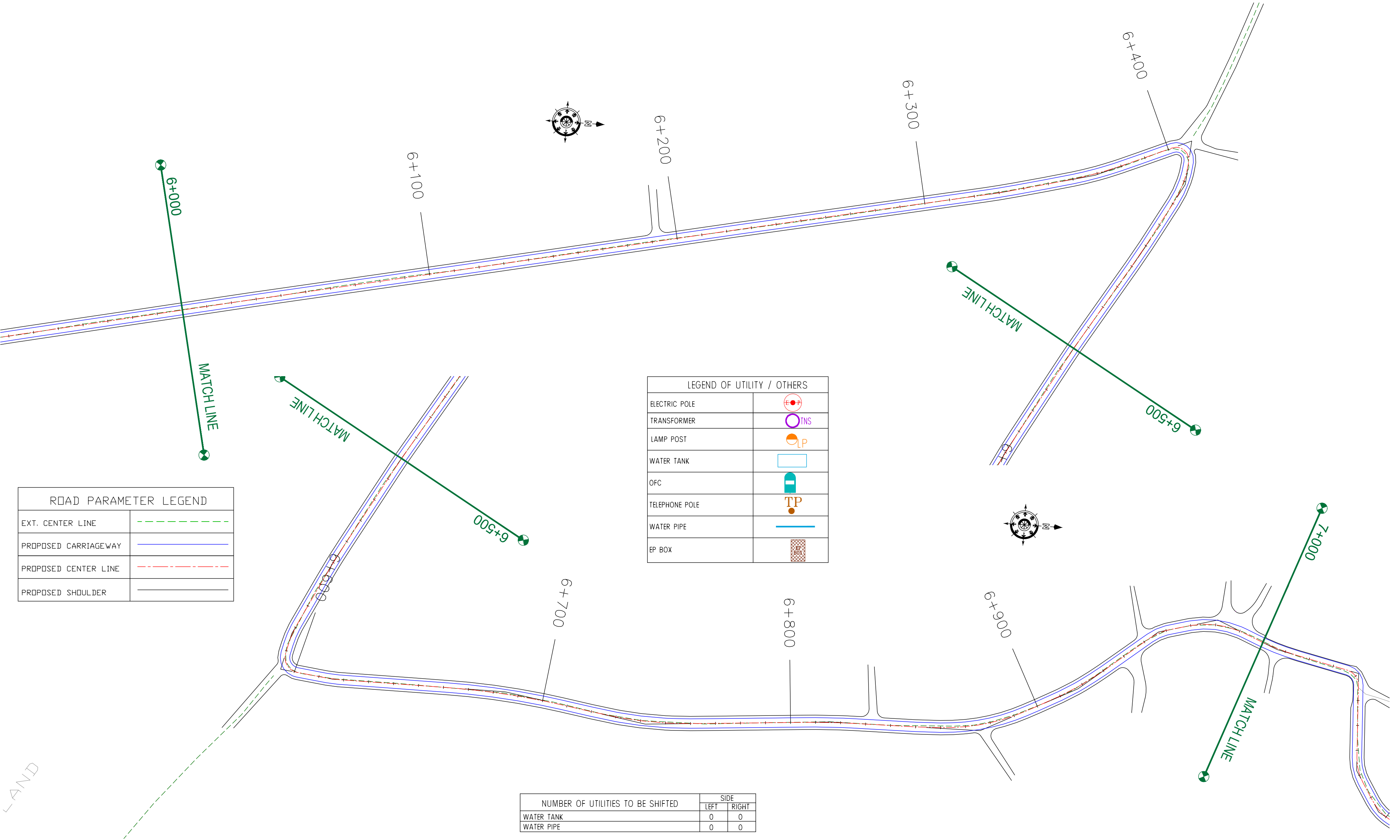
September 2019





← Hamary-Sultanpora Nowgam

Sumbal Bridge →



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
**(Upgradation of Hamary-Sultanpora-Zalpura-Nowgam
upto Sumbal Bridge)**

DESIGN CONSULTANT:

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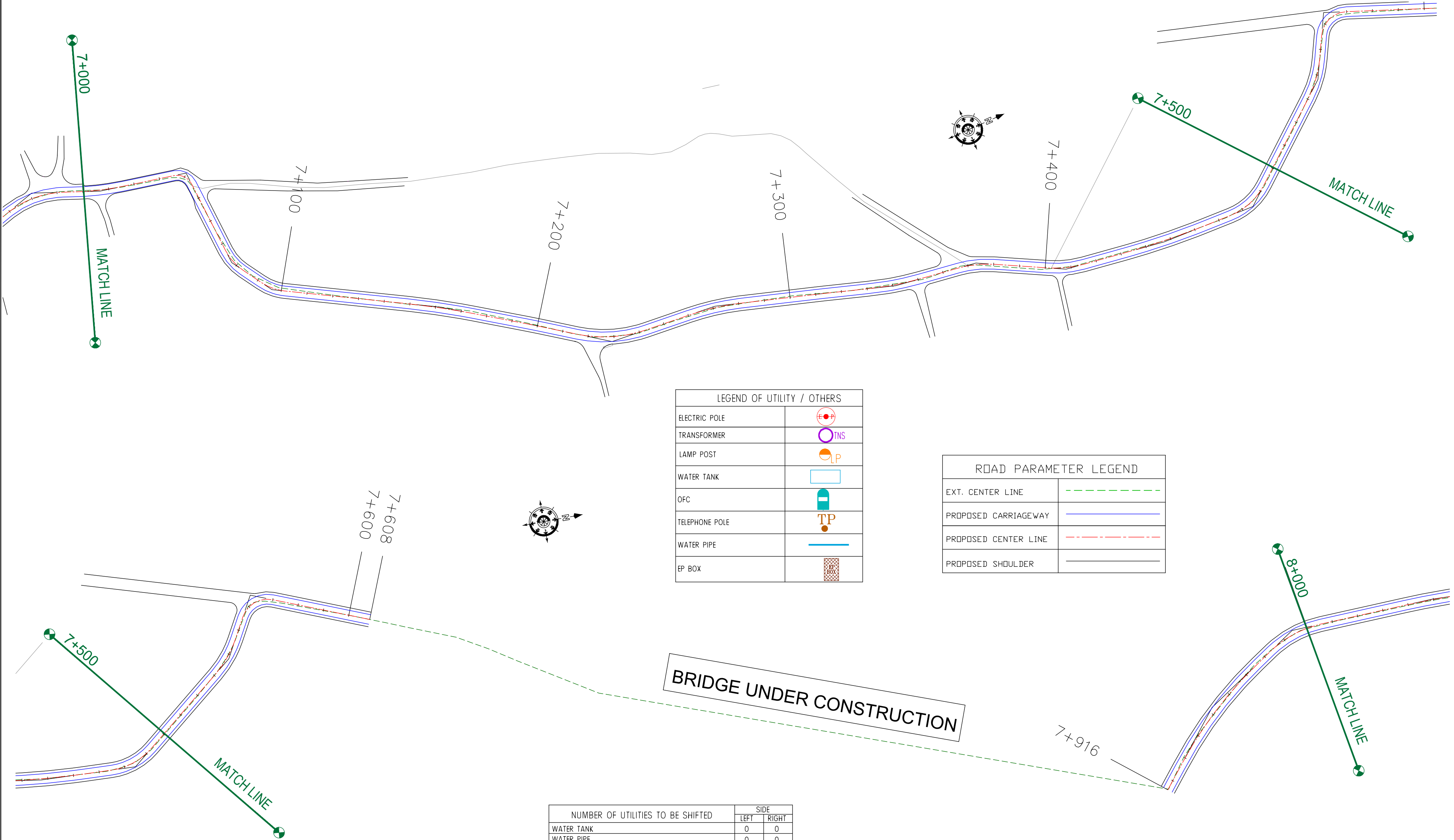
REV.	DATE	DESCRIPTION

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

TITLE :	Utility Relocation Plan (For Water Department) (Ch. 6+000 to Ch. 7+000)	
DRG. NO. :	EPTISA/JTFRP/DPR/J&K/URP/07	
REVISION : R-1	September 2019	

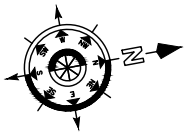
← Hamary-Sultanpora Nowgam

Sumbal Bridge →



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	



BRIDGE UNDER CONSTRUCTION

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
**(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam
upto Sumbal Bridge)**

DESIGN CONSULTANT:

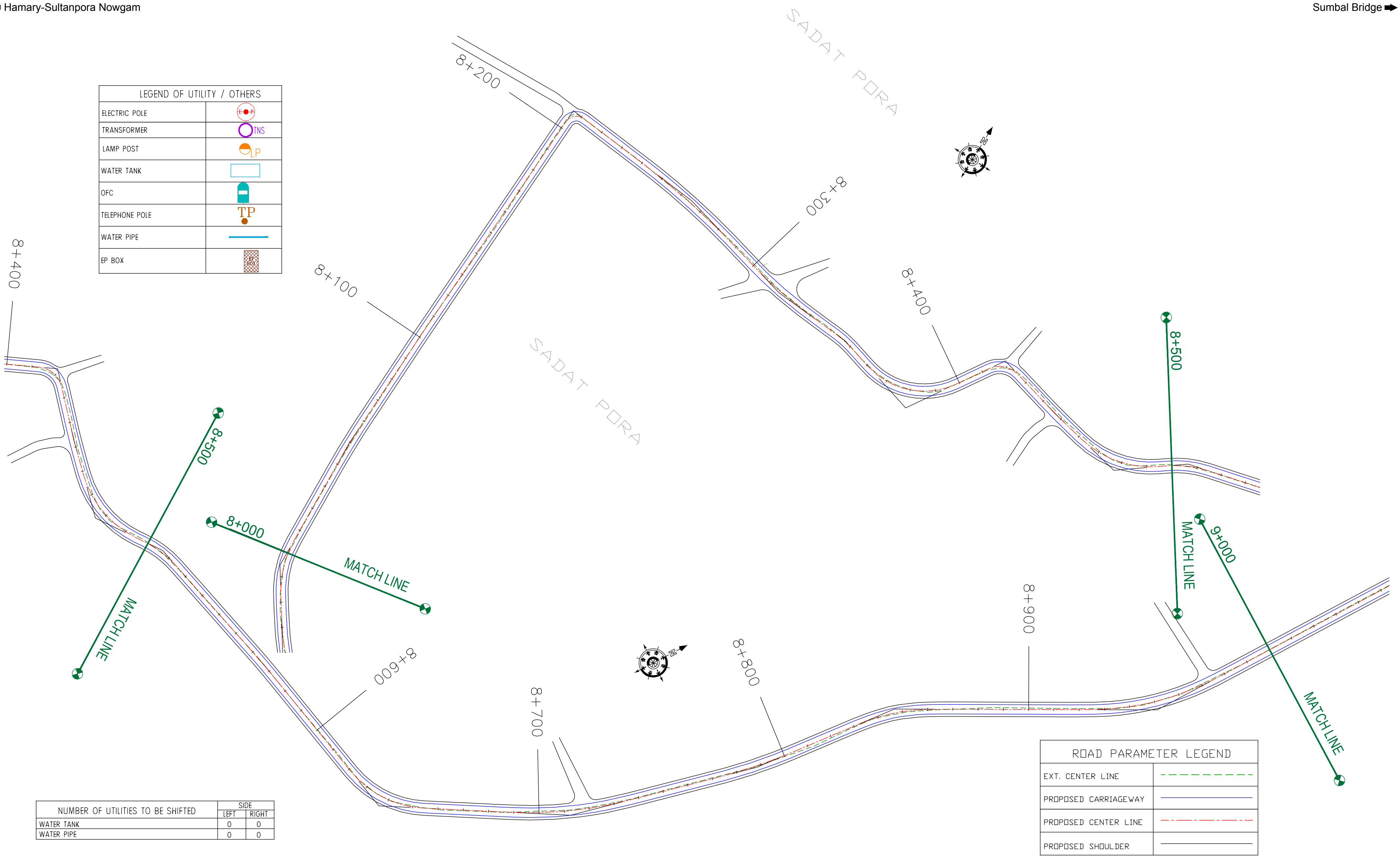


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REV.	DATE	DESCRIPTION

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

TITLE :	Utility Relocation Plan (For Water Department) (Ch. 7+000 to Ch. 8+000)
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
**(Upgradation of Hamary-Sultanpora-Zalpura-Nowgam
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DESIGN CONSULTANT:

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Sector v, Salt Lake Kolkata - 700091,
West Bengal
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REV.	DATE	DESCRIPTION

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

TITLE :	Utility Relocation Plan (For Water Department) (Ch. 8+000 to Ch. 9+000)	
DRG. NO. :	EPTISA/JTRP/DPR/J&K/URP/09	
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
**(Upgradation of Hamary-Sultanpora-Zalpura-Nowgam
upto Sumbal Bridge)**

DESIGN CONSULTANT:

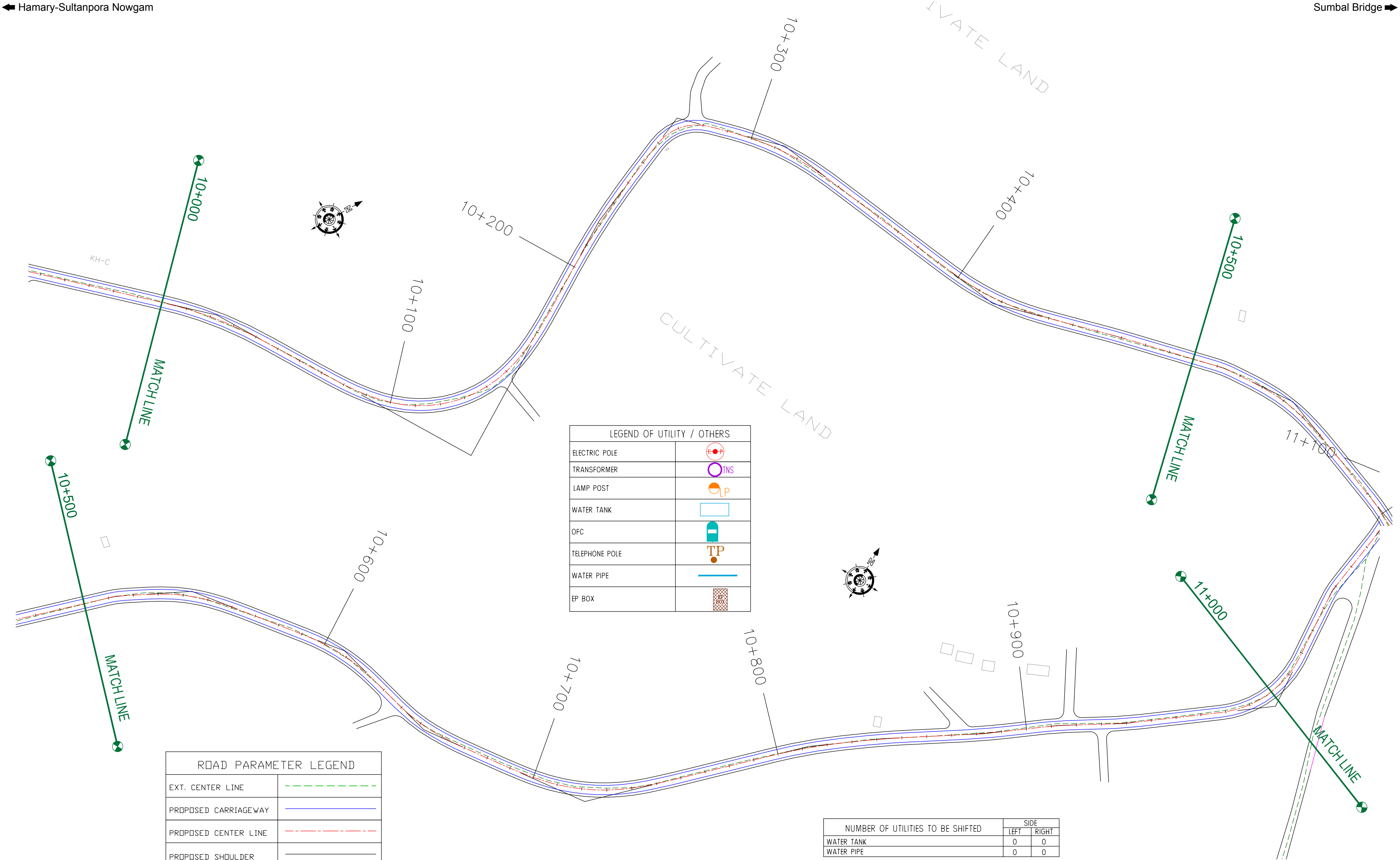


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REV.	DATE	DESCRIPTION

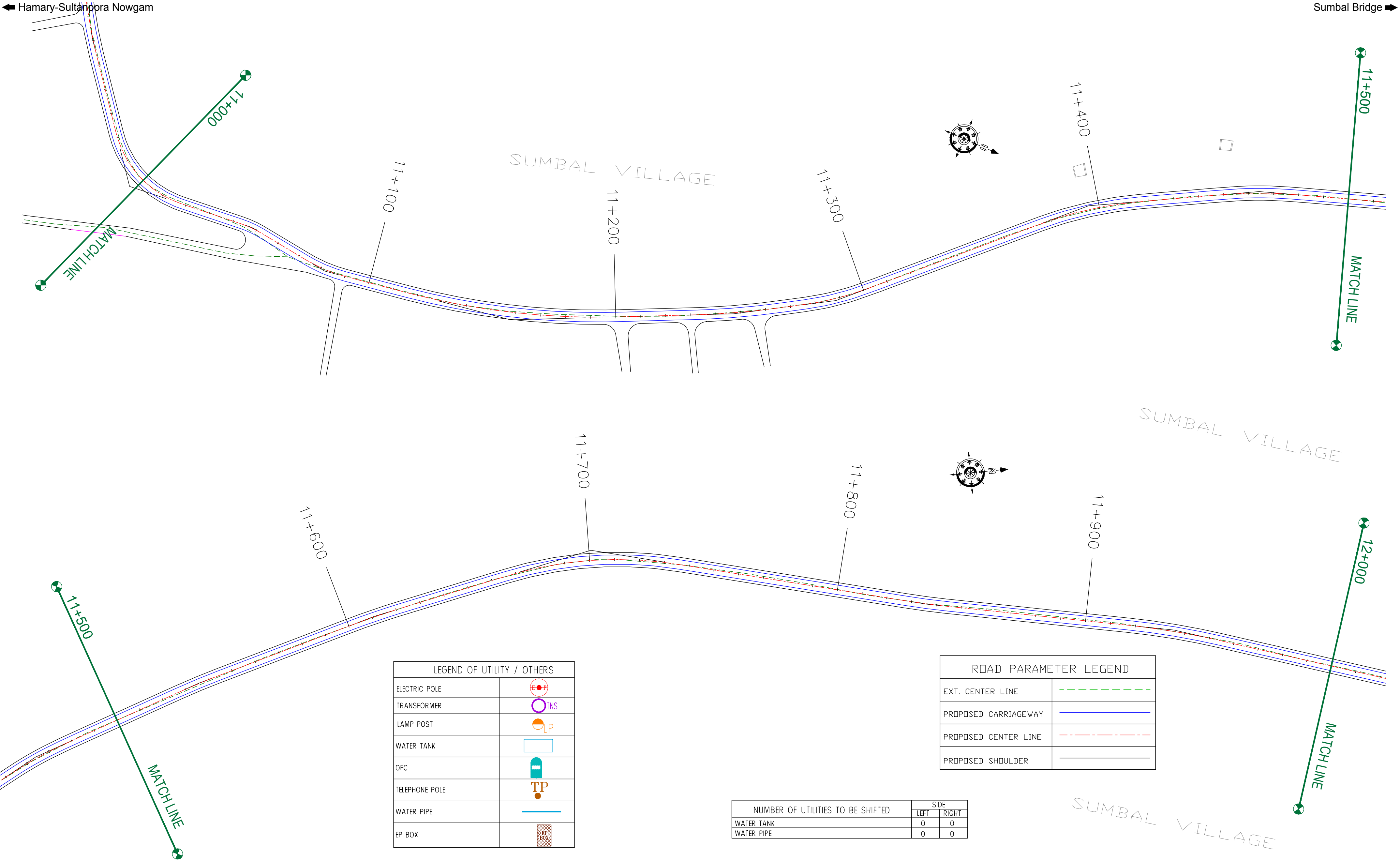
DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
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TITLE :	Utility Relocation Plan (For Water Department) (Ch. 9+000 to Ch. 10+000)
DRG. NO. :	EPTISA/JTRP/DPR/J&K/URP/10
REVISION : R-1	September 2019



← Hamary-Sultanpora Nowgam

Sumbal Bridge →



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
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**(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam
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DESIGN CONSULTANT:



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REV.	DATE	DESCRIPTION

DRAWN BY : SD

DESIGNED BY : SCK/MM

APPROVED BY : KG

SCALE : 1:1000

TITLE :

**Utility Relocation Plan
(For Water Department)
(Ch. 11+000 to Ch. 12+000)**

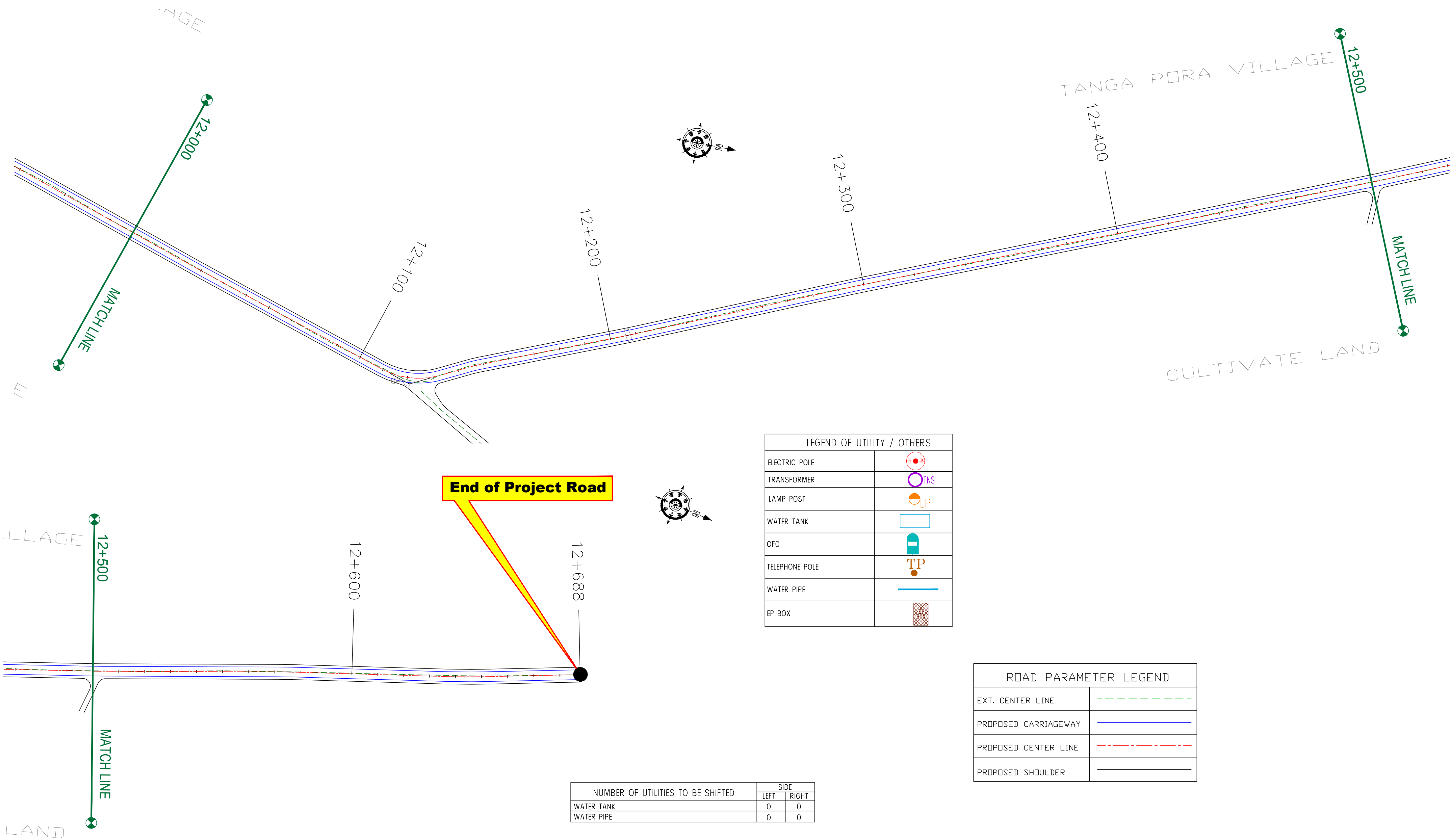
DRG. NO. : EPTISA/JTRFP/DPR/J&K/URP/12

REVISION : R-1

September 2019

← Hamary-Sultanpora Nowgam

Sumbal Bridge →



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 :

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DESIGN CONSULTANT:



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REV.	DATE	DESCRIPTION

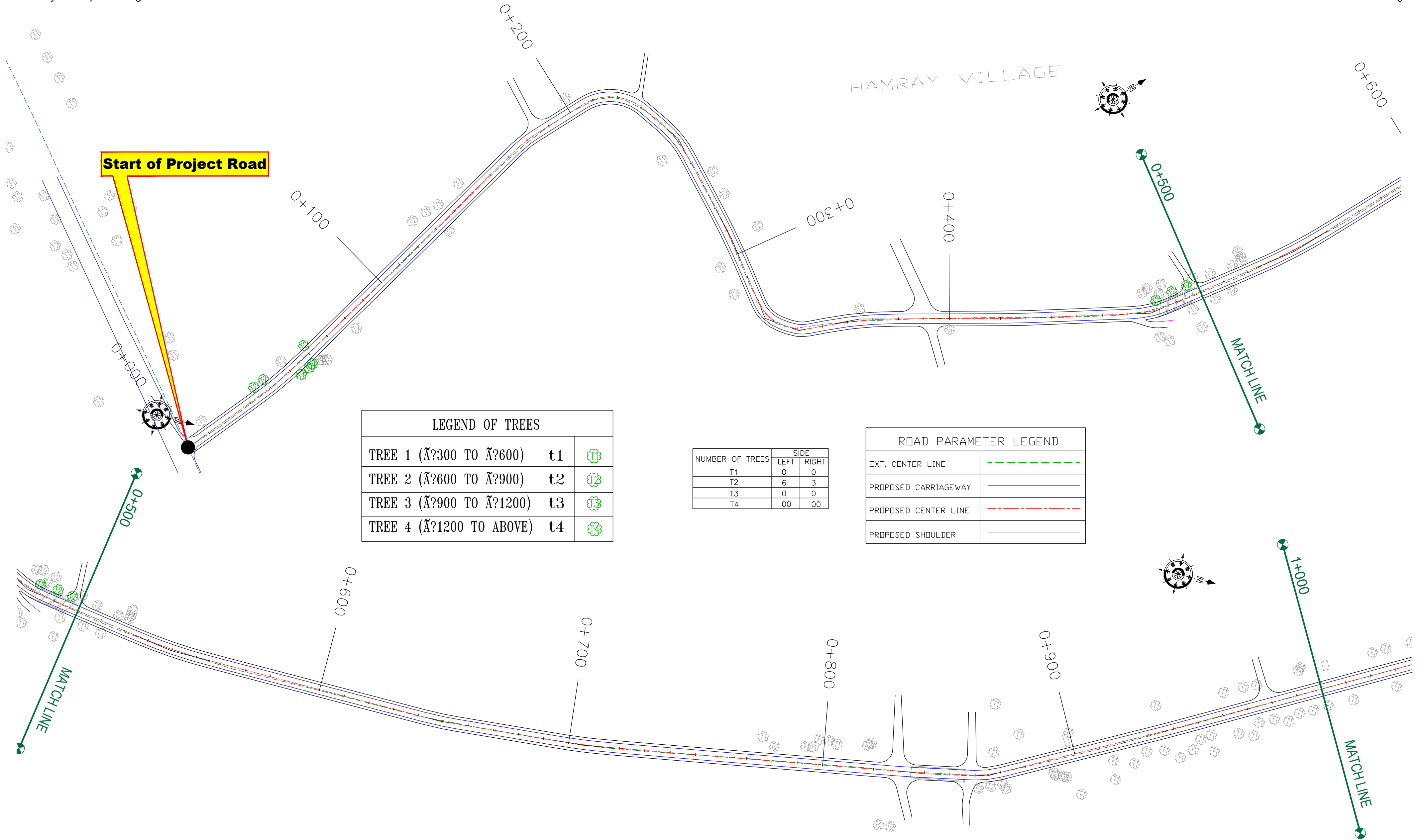
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DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE :	Utility Relocation Plan (For Water Department) (Ch. 12+000 to Ch. 12+688)	
DRG. NO. :	EPTISA/JTRFP/DPR/J&K/URP/13	
REVISION : R-1	September 2019	

≡ TREE CUTTING (MAIN ROAD) ≡

← Hamary-Sultanpora Nowgam

Sumbal Bridge →



CLIENT :



Jhelum Tawi Flood Recovery Project
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Srinagar-190 009.

PROJECT :

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**(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam
upto Sumbal Bridge)**

DESIGN CONSULTANT:



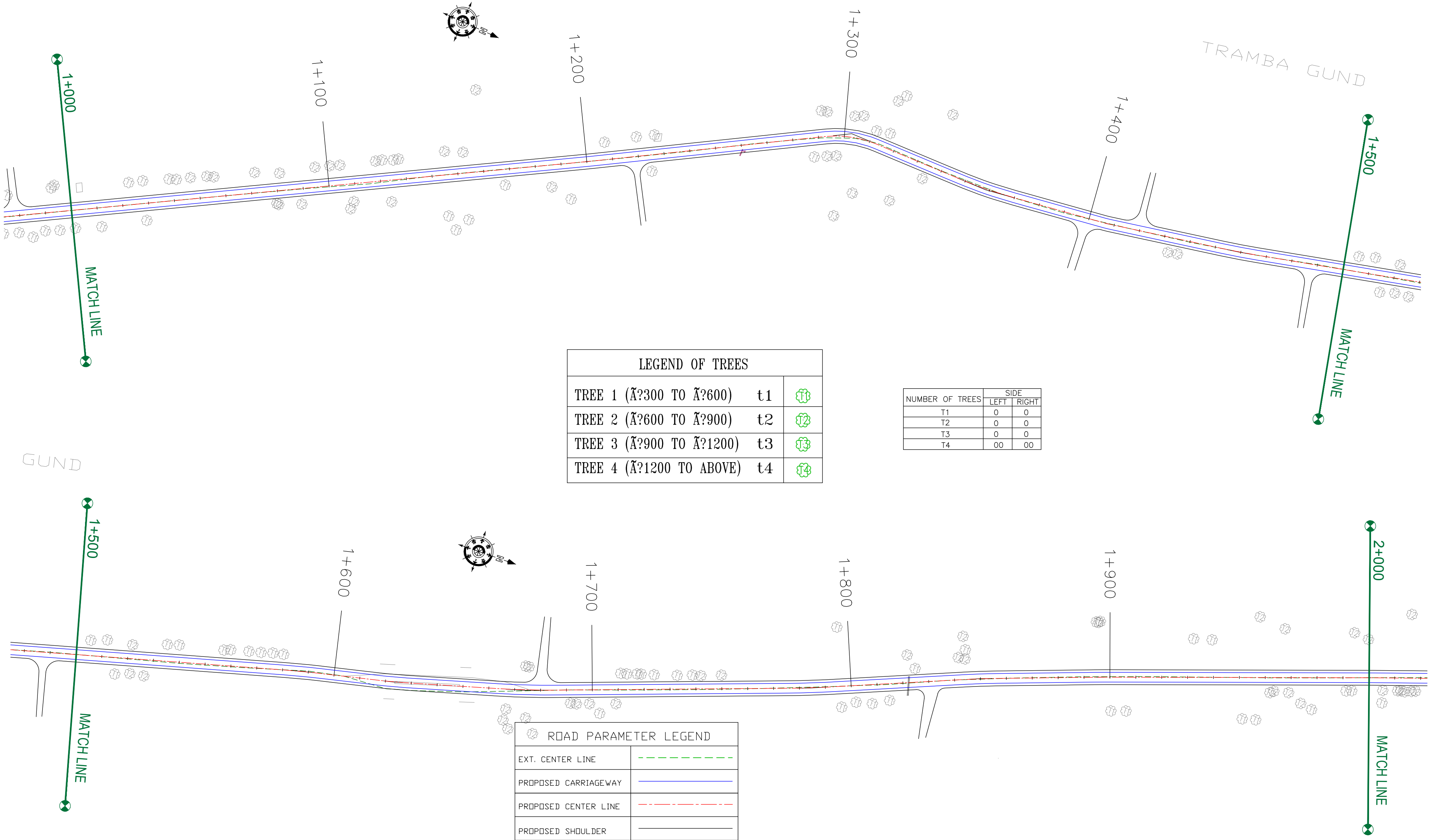
servicios de Ingenieria S.L.

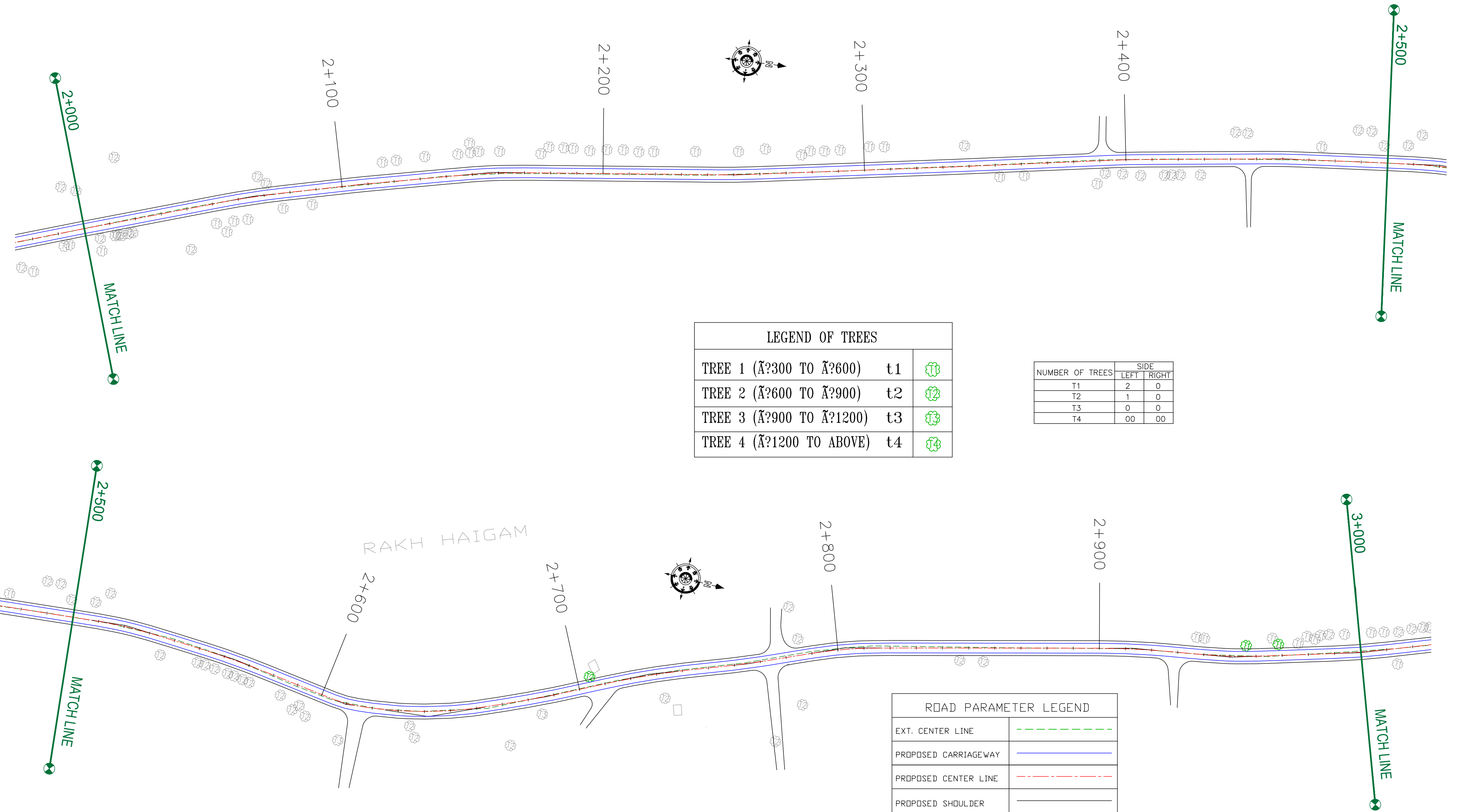
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Ph: 033-40347200
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REV.	DATE	DESCRIPTION

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

TITLE :	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	0
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
**(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam
upto Sumbal Bridge)**

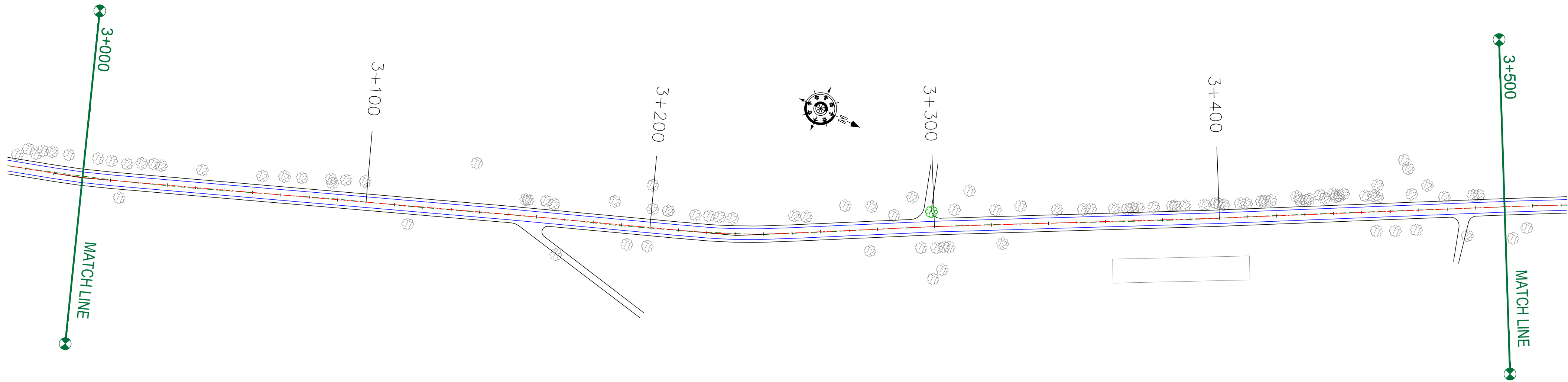
DESIGN CONSULTANT:

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REV.	DATE	DESCRIPTION

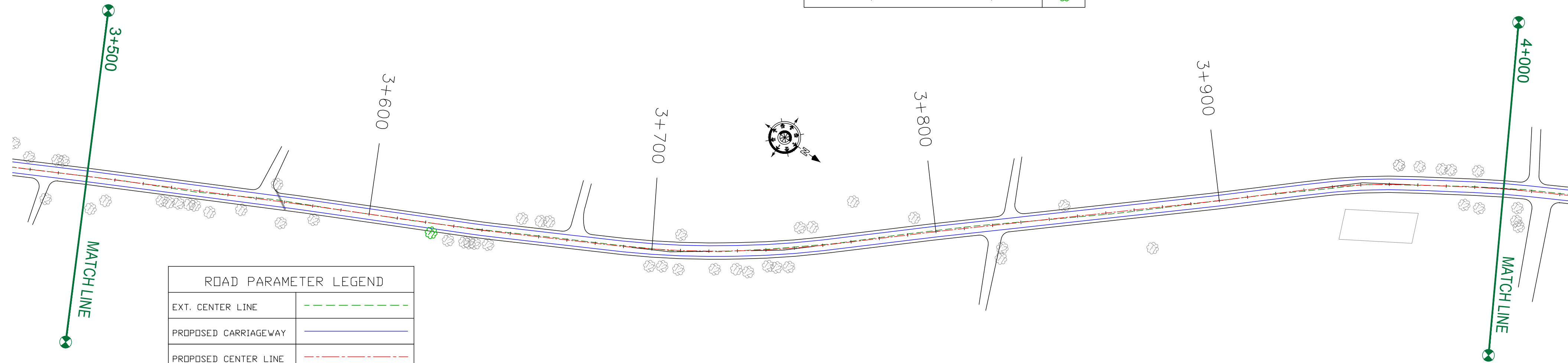
DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	1:1000

TITLE : TREE CUTTING (Ch. 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 (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	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
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PROJECT :

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**(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam
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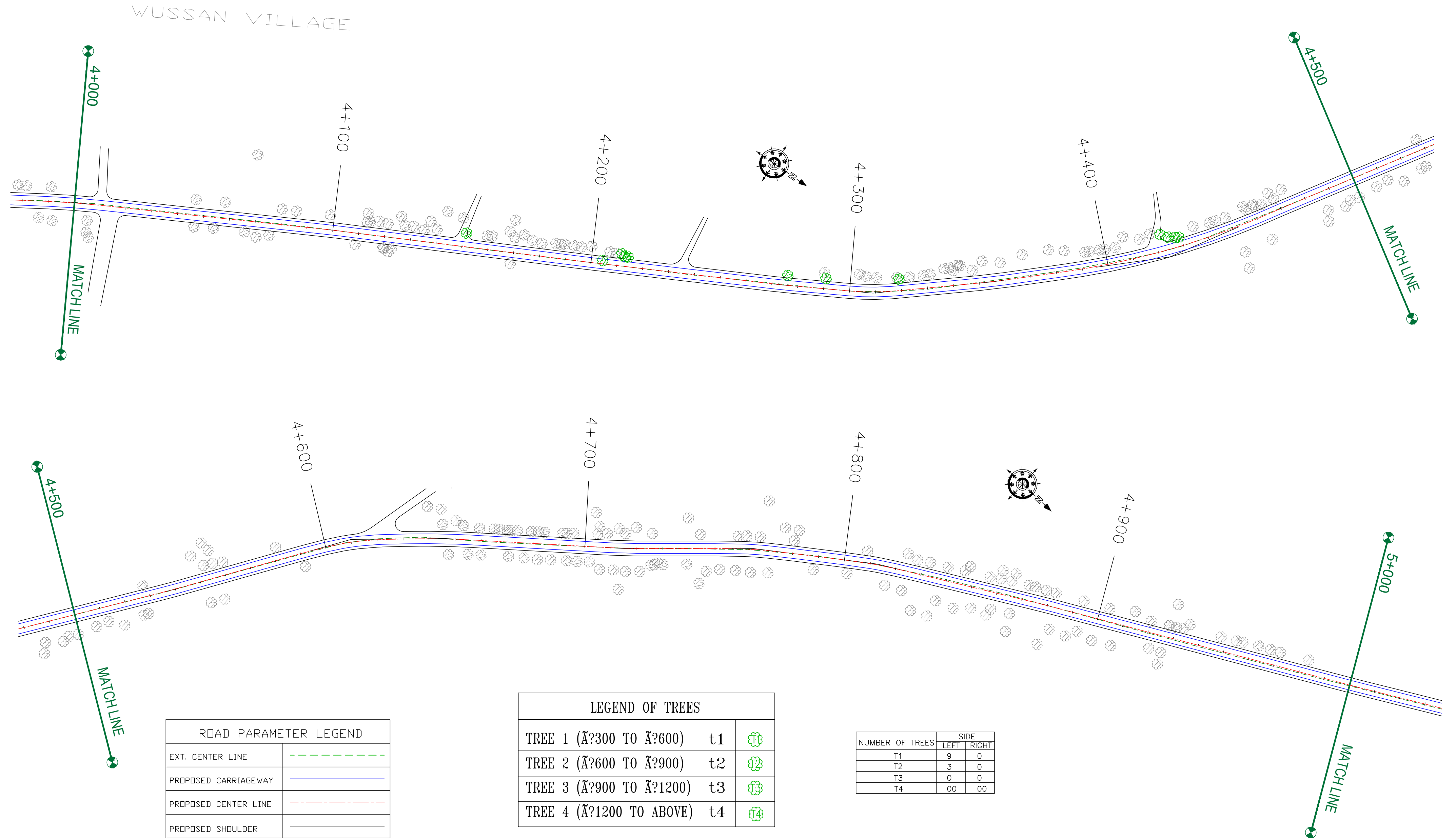
DESIGN CONSULTANT:

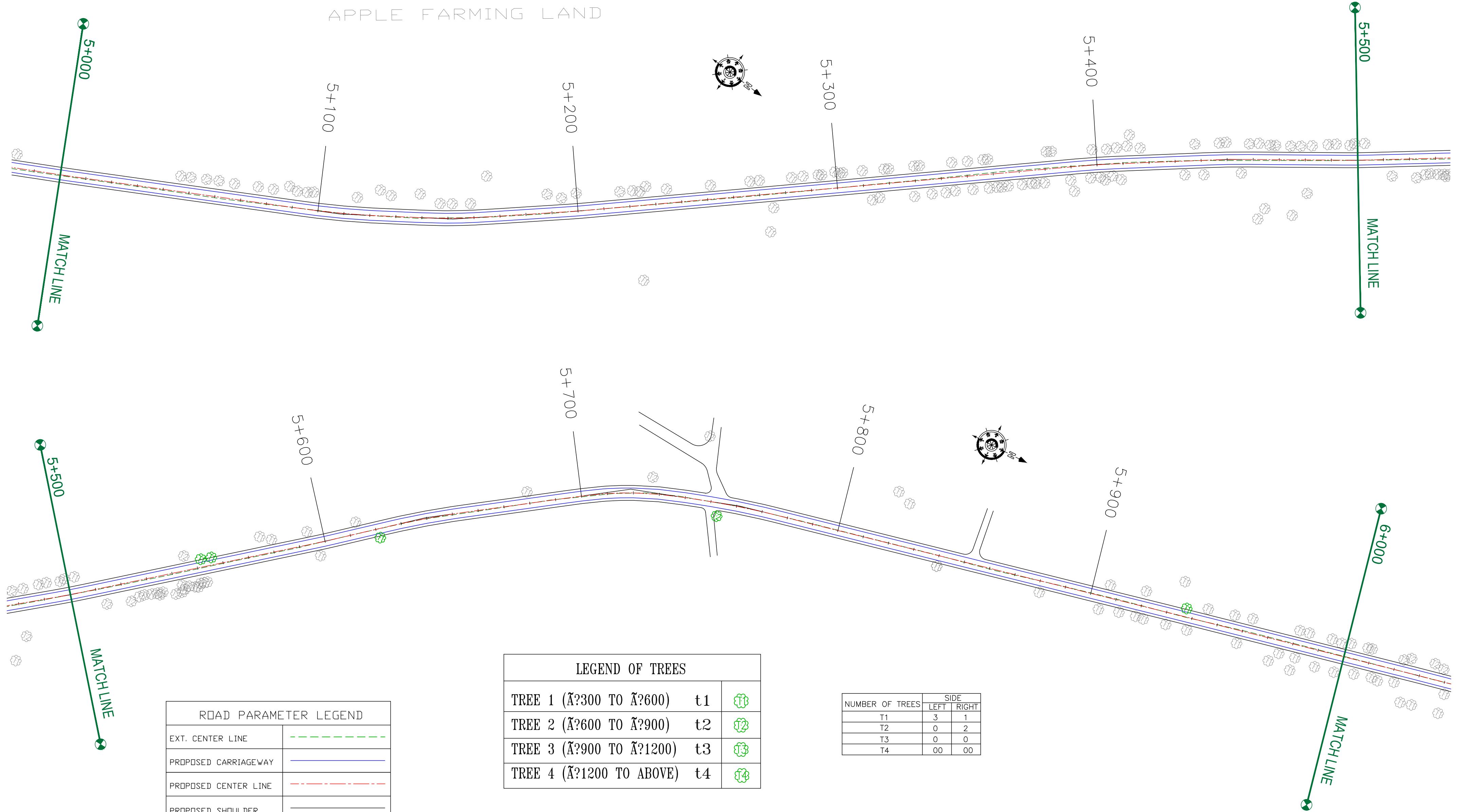
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REV.	DATE	DESCRIPTION

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

TITLE :	
TREE CUTTING (Ch. 3+000 to Ch. 4+000)	
DRG. NO. : EPTISA/JTRFP/DPR/J&K/TC/04	
REVISION : R-1	September 2019





ROAD PARAMETER LEGEND	
EXT. CENTER LINE	<div></div>
PROPOSED CARRIAGEWAY	<div></div>
PROPOSED CENTER LINE	<div></div>
PROPOSED SHOULDER	<div></div>

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

NUMBER OF TREES	SIDE	
	LEFT	RIGHT
T1	3	1
T2	0	2
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
**(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam
upto Sumbal Bridge)**

DESIGN CONSULTANT:

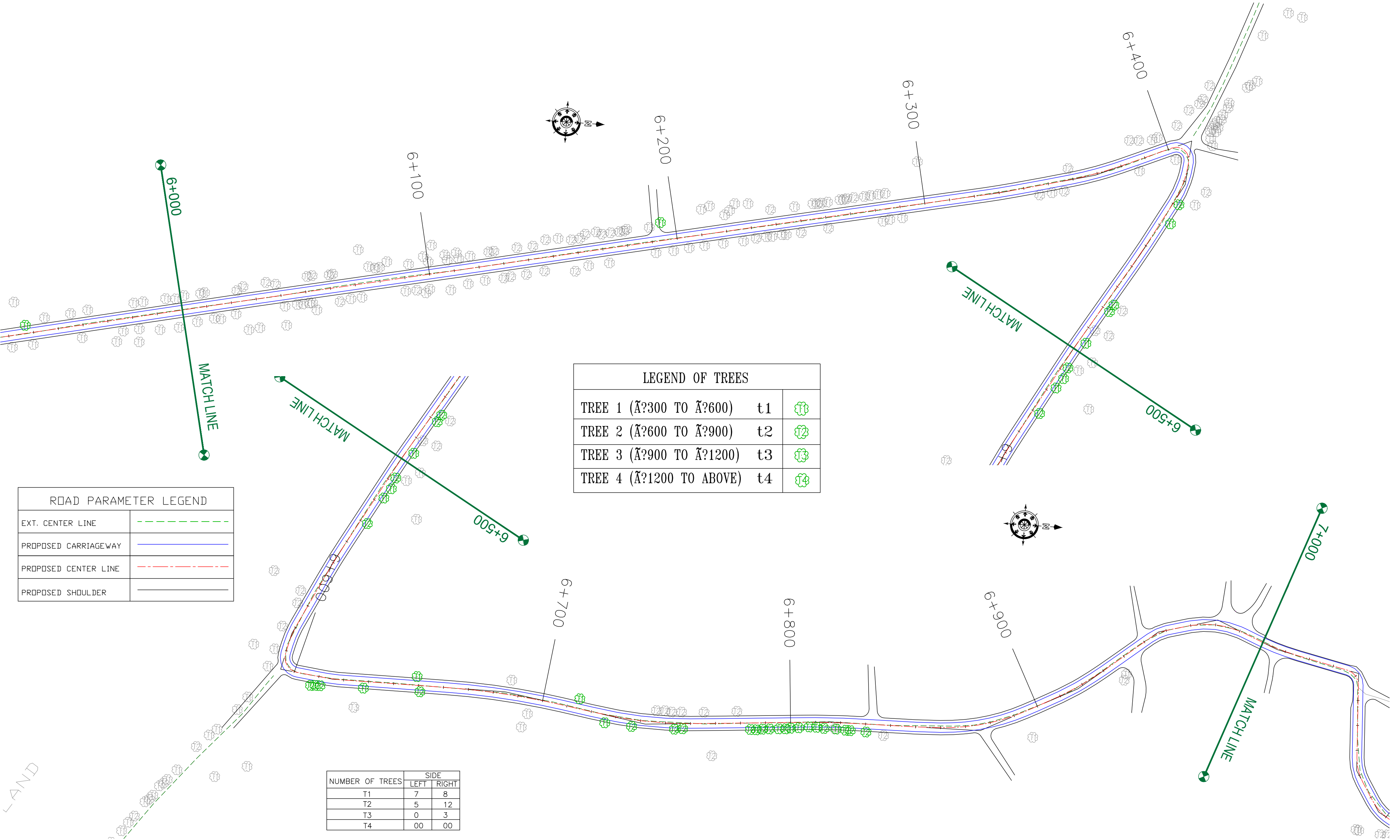


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REV.	DATE	DESCRIPTION

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

TITLE :	
TREE CUTTING (Ch. 5+000 to Ch. 6+000)	
DRG. NO. : EPTISA/JTRP/DPR/J&K/TC/06	
REVISION : R-1	September 2019



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

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	7	8
T2	5	12
T3	0	3
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
**(Upgradation of Hamary-Sultanpora-Zalpura-Nowgam
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DESIGN CONSULTANT:

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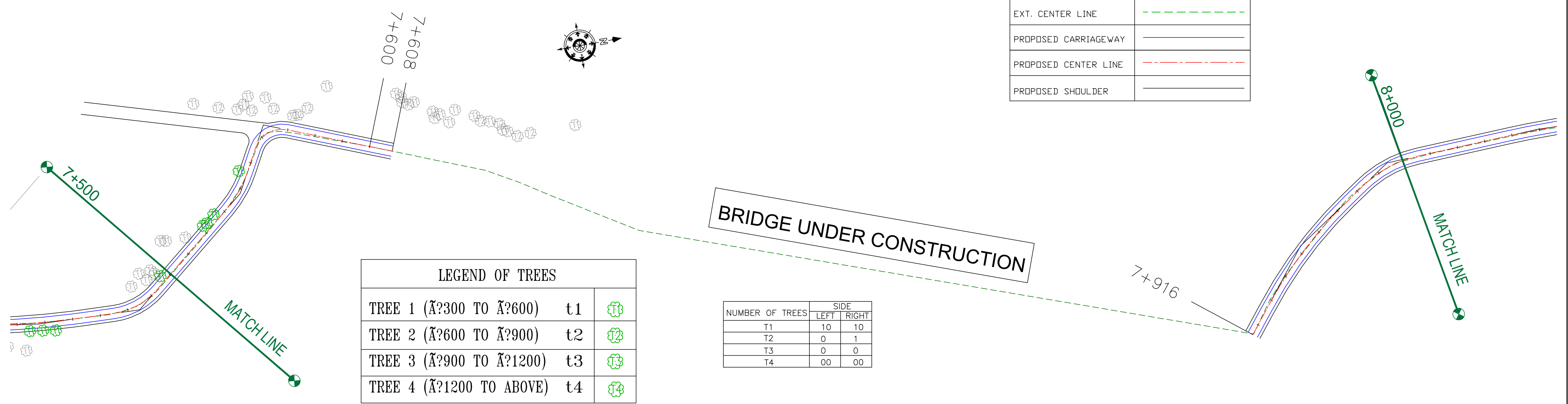
REV.	DATE	DESCRIPTION

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

TITLE :	TREE CUTTING	
	(Ch. 6+000 to Ch. 7+000)	
DRG. NO. :	EPTISA/JTFRP/DPR/J&K/TC/07	
REVISION : R-1	September 2019	

← Hamary-Sultanpora Nowgam

Sumbal Bridge →



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

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	10	10
T2	0	1
T3	0	0
T4	00	00

BRIDGE UNDER CONSTRUCTION

CLIENT :



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

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**(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam
upto Sumbal Bridge)**

DESIGN CONSULTANT:



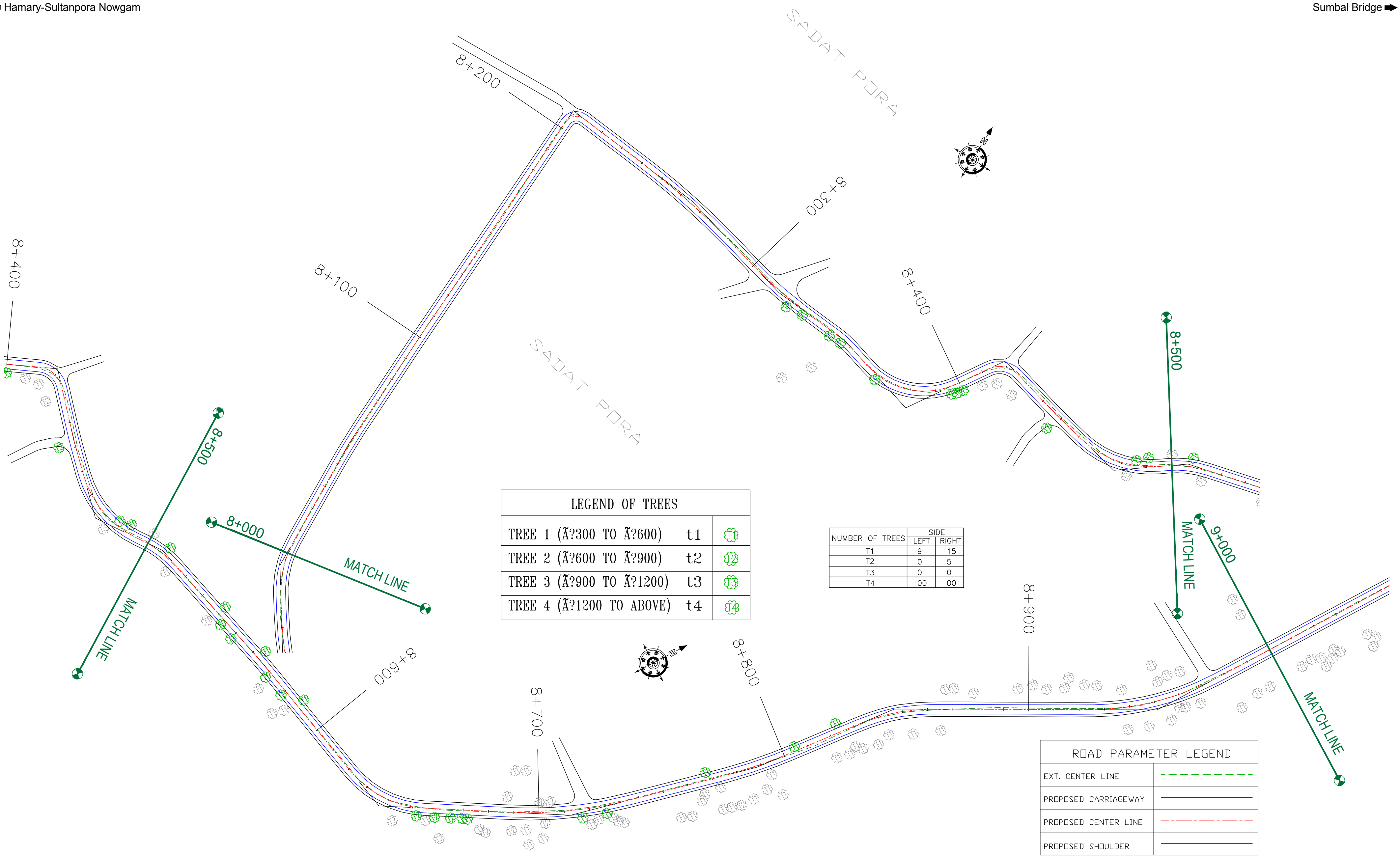
Servicios de Ingenieria S.L.

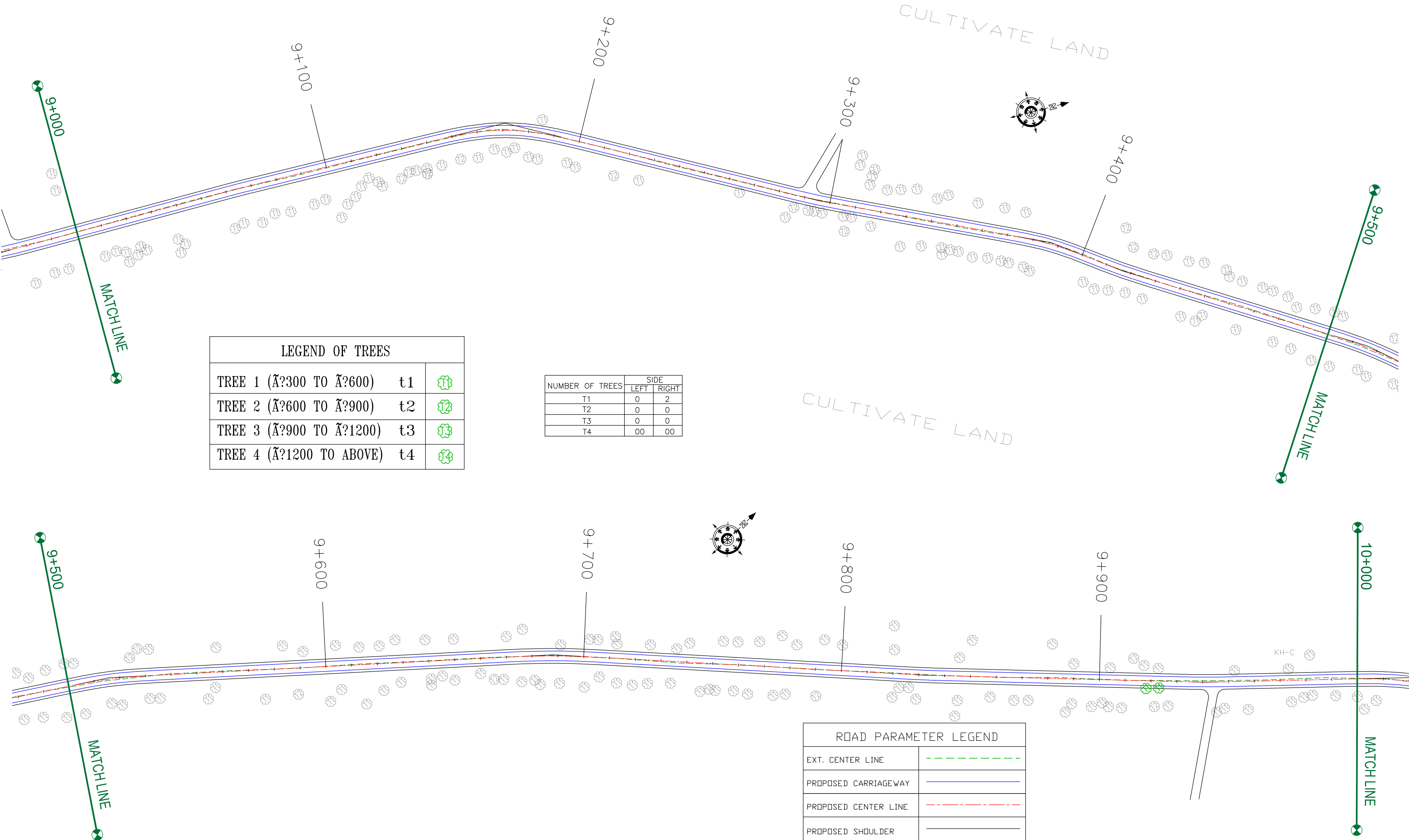
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REV.	DATE	DESCRIPTION

DRAWN BY :	SD
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SCALE :	1:1000

TITLE :	TREE CUTTING (Ch. 7+000 to Ch. 8+000)	
DRG. NO. :	EPTISA/JTFRP/DPR/J&K/TC/08	
REVISION : R-1	September 2019	





CLIENT :



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

PROJECT :

Consultancy Services for Preparing Detailed Project Report
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REV.	DATE	DESCRIPTION

DRAWN BY : SD

DESIGNED BY : SCK/MM

APPROVED BY : KG

SCALE : 1:1000

TITLE :

TREE CUTTING

(Ch. 9+000 to Ch. 10+000)

DRG. NO. : EPTISA/JTRFP/DPR/J&K/TC/10

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	13	55
T2	3	9
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
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**(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam
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DESIGN CONSULTANT:



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REV.	DATE	DESCRIPTION

DRAWN BY : SD

DESIGNED BY : SCK/MM

APPROVED BY : KG

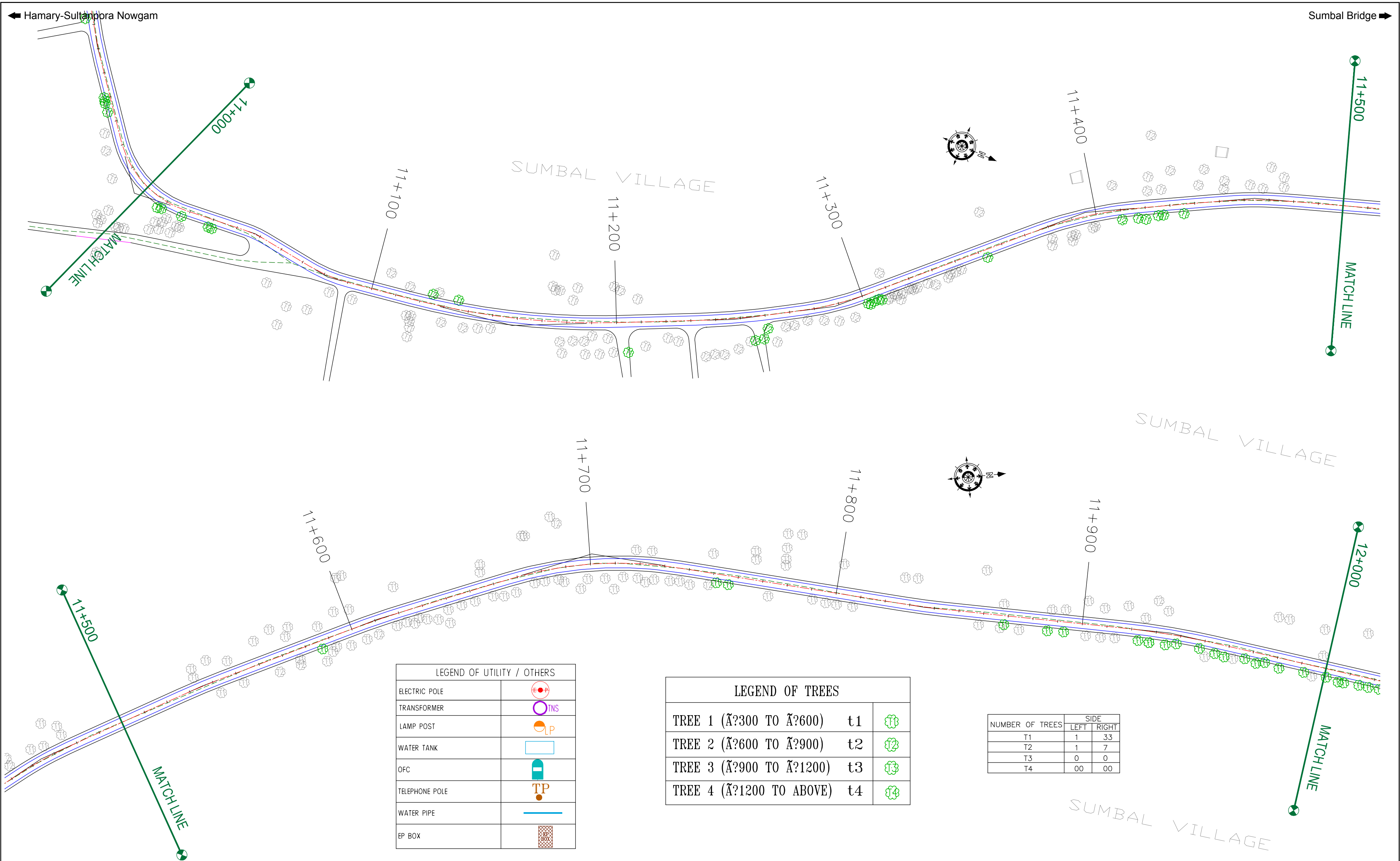
SCALE : 1:1000

TITLE :
TREE CUTTING
(Ch. 10+000 to Ch. 11+000)

DRG. NO. : EPTISA/JTRFP/DPR/J&K/TC/11

REVISION : R-1

September 2019

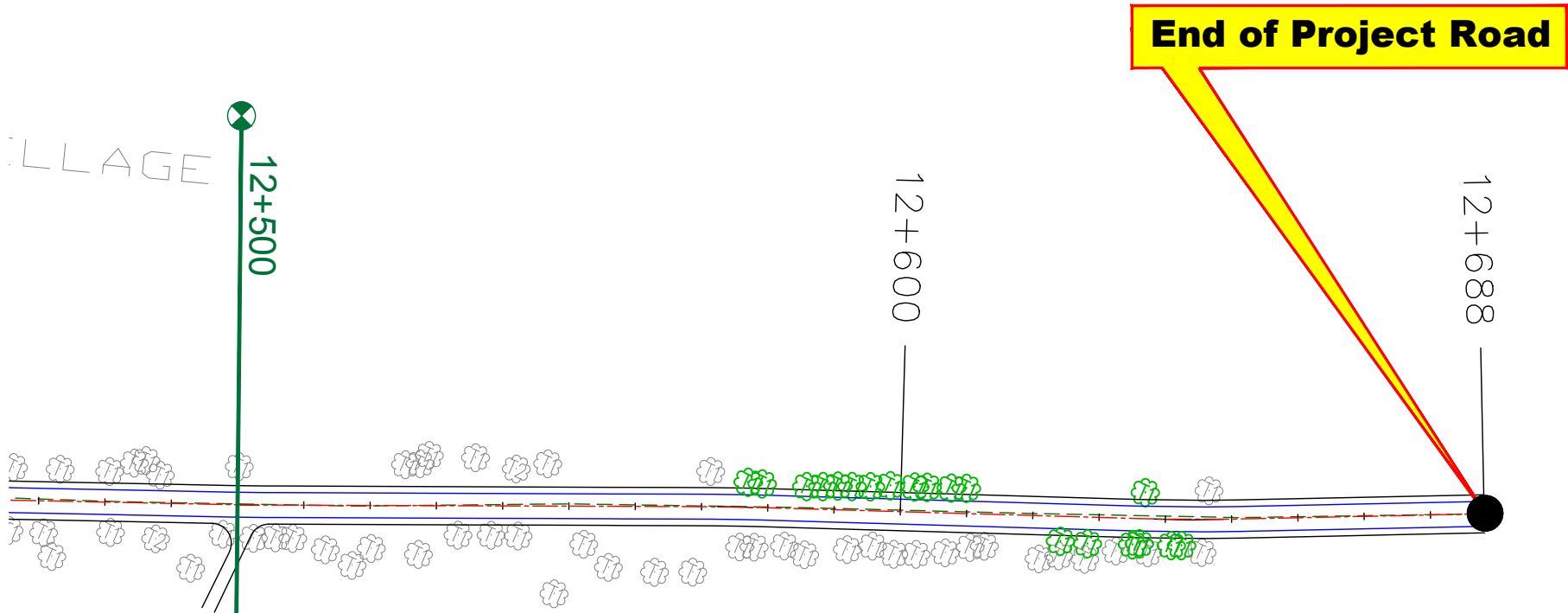
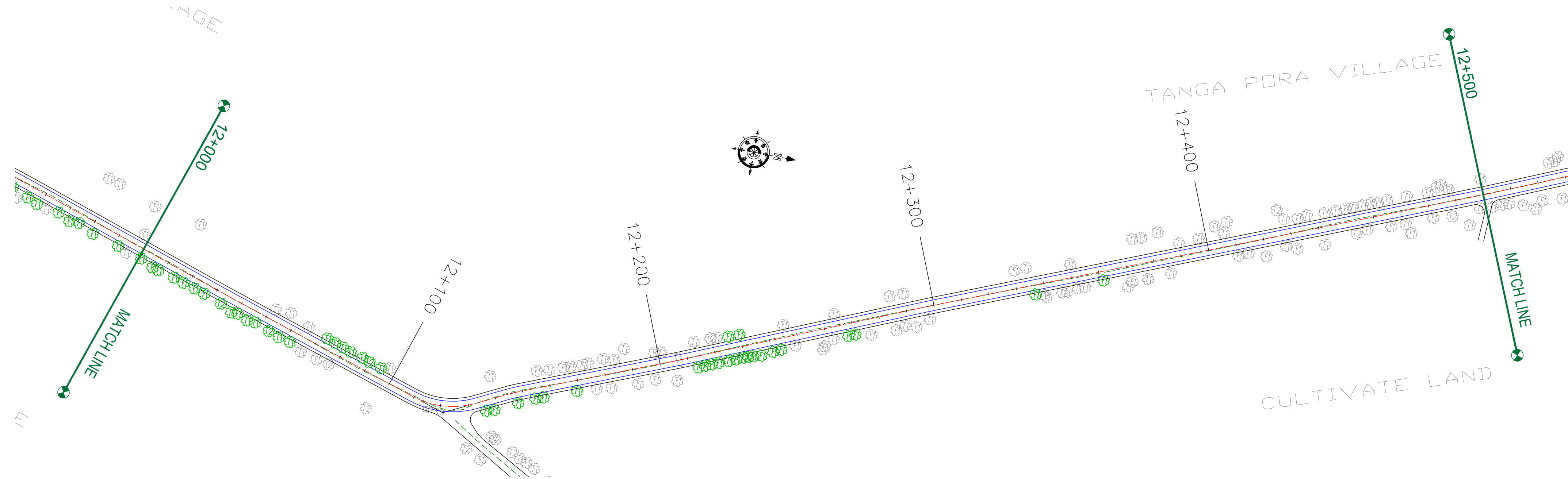


LEGEND OF UTILITY / OTHERS	
ELECTRIC POLE	
TRANSFORMER	
LAMP POST	
WATER TANK	
OFC	
TELEPHONE POLE	
WATER PIPE	
EP BOX	

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	33
T2	1	7
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 (Upgradation of Hamary-Sultanpora-Zalpora-Nowgam upto Sumbal Bridge)	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	DRAWN BY : SD DESIGNED BY : SCK/MM APPROVED BY : KG SCALE : 1:1000	TITLE : TREE CUTTING (Ch. 11+000 to Ch. 12+000) DRG. NO. : EPTISA/JTRP/DPR/J&K/TC/12 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	21	41
T2	1	3
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
**(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam
upto Sumbal Bridge)**

DESIGN CONSULTANT:



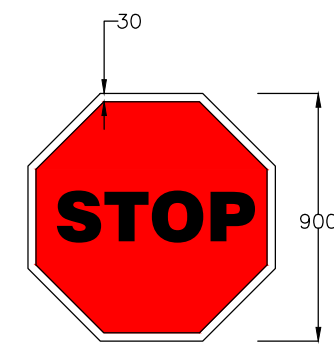
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DRAWN BY :	SD
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APPROVED BY :	KG
SCALE :	1:1000

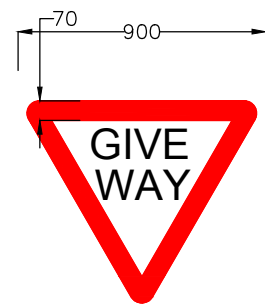
TITLE :	
TREE CUTTING	
(Ch. 12+000 to Ch. 12+688)	
DRG. NO. : EPTISA/JTRFP/DPR/J&K/TC/13	
REVISION : R-1	September 2019

≡ MISCELLANEOUS DRAWINGS ≡



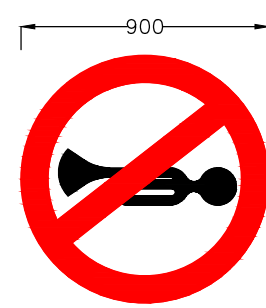
STOP SIGNS
Fig. 14.01

MS-1



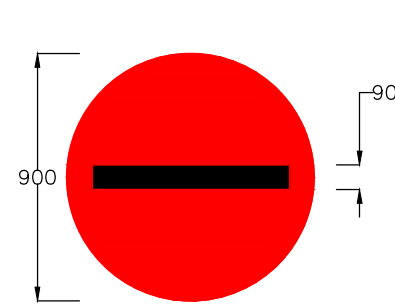
GIVE WAY
Fig. 14.02

MS-2



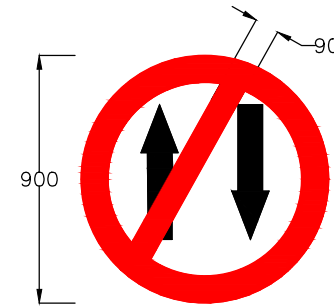
HORN PROHIBITED
Fig. 14.18

MS-3



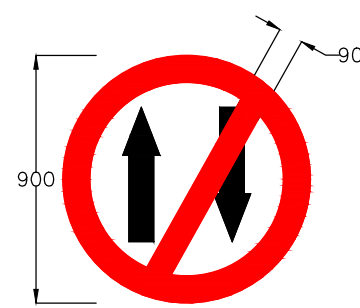
NO ENTRY
Fig. 14.19

MS-4



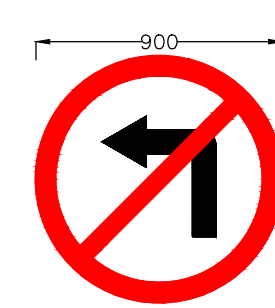
ONE WAY
Fig. 14.20

MS-5



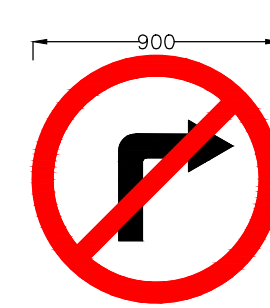
ONE WAY
Fig. 14.20

MS-6



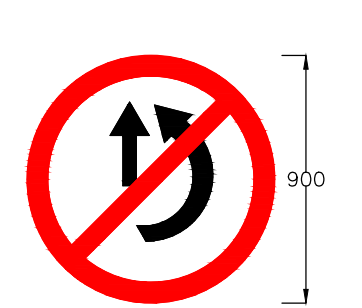
LEFT TURN PROHIBITED
Fig. 14.21

MS-7



RIGHT TURN PROHIBITED
Fig. 14.22

MS-8



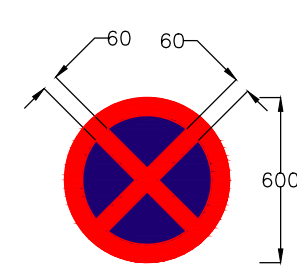
OVERTAKING PROHIBITED
Fig. 14.23

MS-9



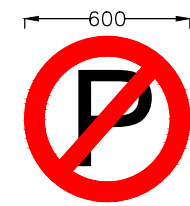
U- TURN PROHIBITED
Fig. 14.24

MS-10



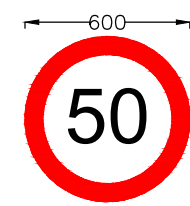
NO STOPPING AND NO STANDING
Fig. 14.28

MS-11



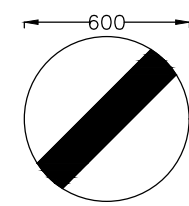
NO PARKING
Fig. 14.29

MS-12



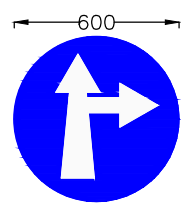
MAXIMUM SPEED LIMIT
Fig. 14.37

MS-13



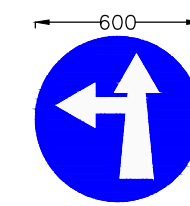
RESTRICTION ENDS
Fig. 14.40

MS-14



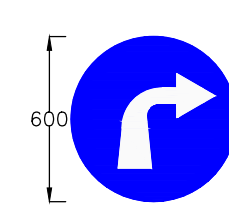
COMPULSORY AHEAD
OR RIGHT TURN
Fig. 14.42

MS-15



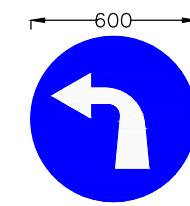
COMPULSORY AHEAD
OR LEFT TURN
Fig. 14.43

MS-16



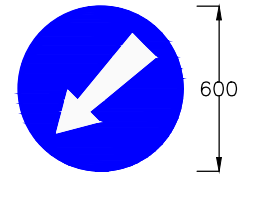
COMPULSORY
TURN RIGHT
Fig. 14.46

MS-17



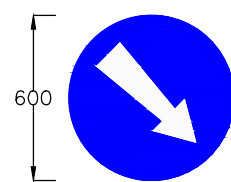
COMPULSORY
TURN LEFT
Fig. 14.47

MS-18



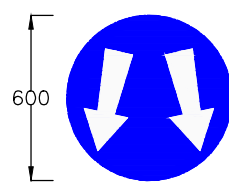
COMPULSORY KEEP LEFT
Fig. 14.48

MS-19



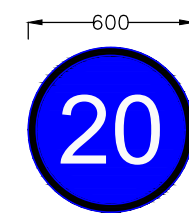
COMPULSORY KEEP RIGHT
Fig. 14.49

MS-20



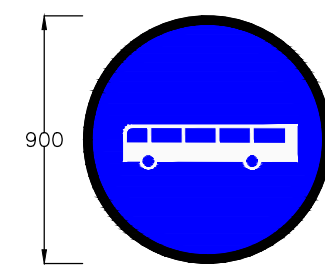
PASS EITHER SIDE
Fig. 14.50

MS-21



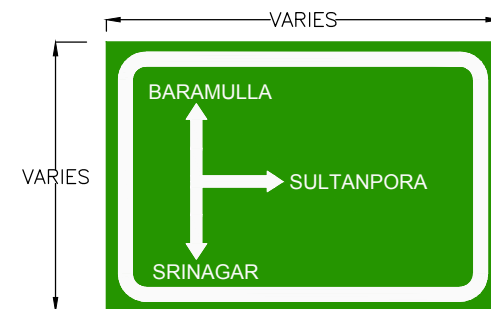
MINIMUM SPEED LIMIT
Fig. 14.51

MS-22



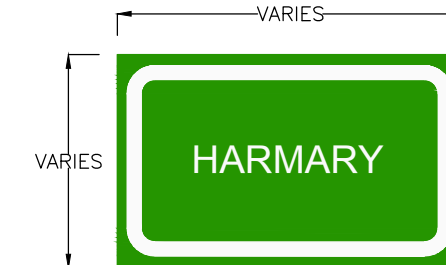
BUS WAY/BUSES ONLY
Fig. 14.56

MS-23



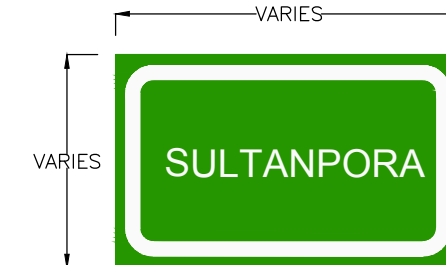
ADVANCE DIRECTION SIGN
Fig. 16.03

DS-01



PLACE IDENTIFICATION SIGN
Fig. 16.06

DS-02



PLACE IDENTIFICATION SIGN
Fig. 16.06

DS-03

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. Route marker signs, letters and numerals shall be erected as per IRC:2-1968.
4. Spacing of TAZ 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.
5. All items indicated in this drawing may not be relevant for the subject project, these shall be used depending upon the requirement.
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.

CLIENT :

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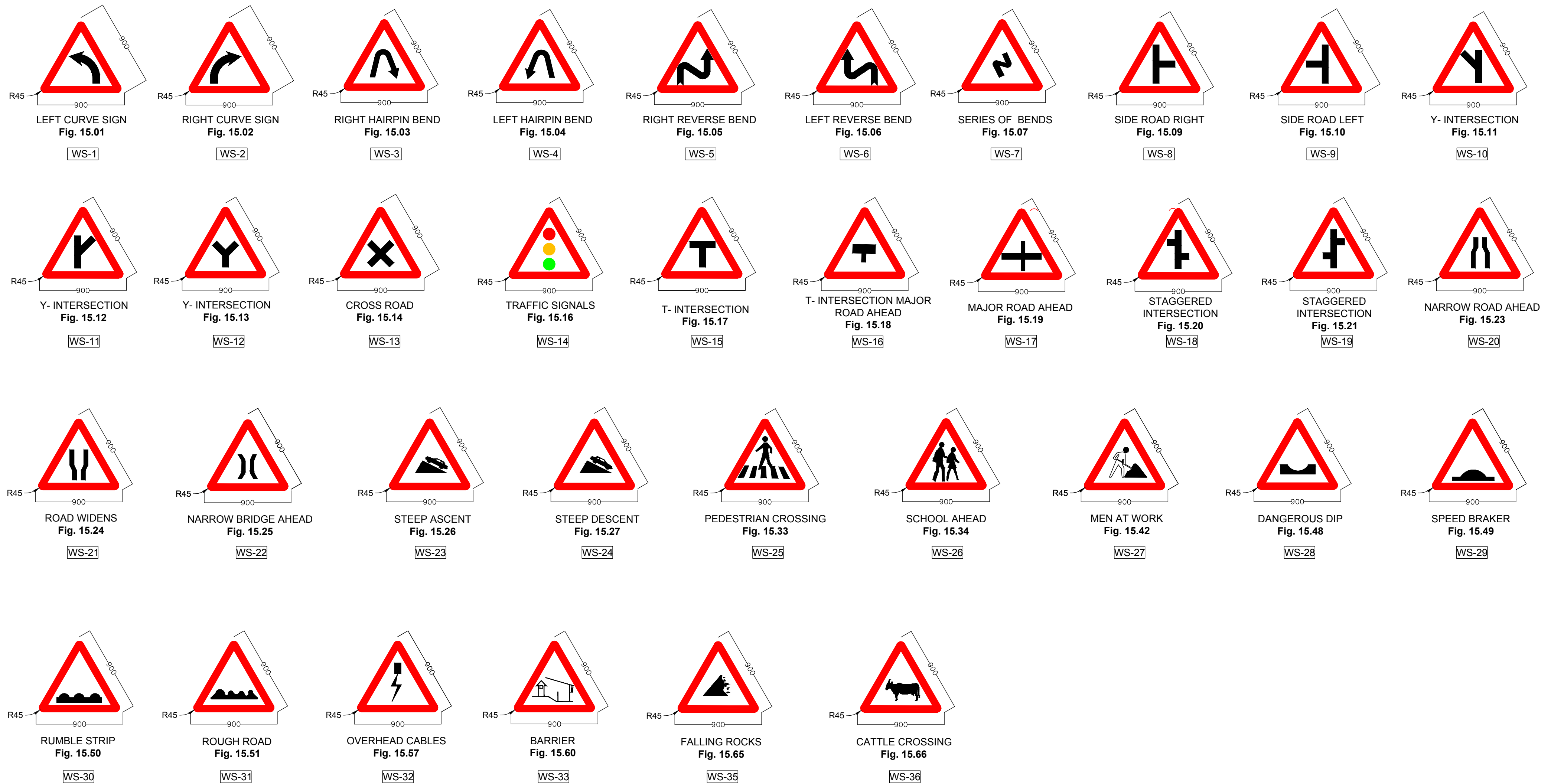
DESIGN CONSULTANT:

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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 :	N.T.S

TITLE :	Road Signs & Road Delineators
DRG. NO. :	EPTISA/JFRP/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
**(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam
upto Sumbal Bridge)**

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

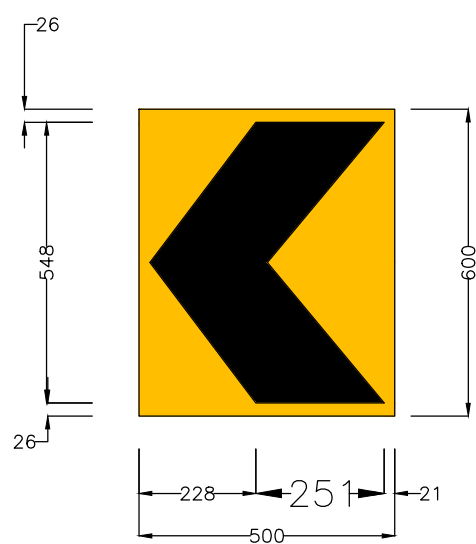
REV.	DATE	DESCRIPTION

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

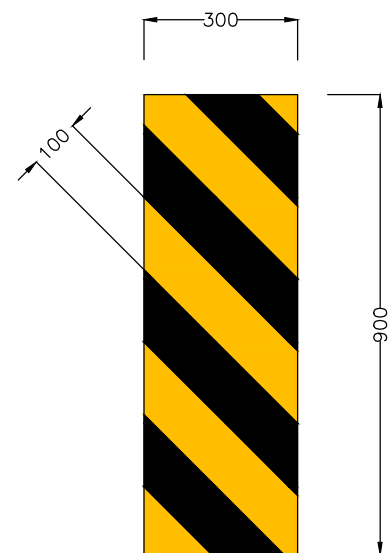
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Road Signs & Road Delineators

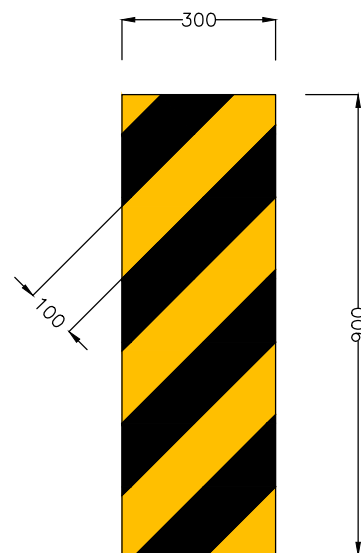
DRG. NO. : EPTISA/JTRP/DPR/J&K/MISC/01
(Sheet 02 of 03)
REVISION : R-1
September 2019



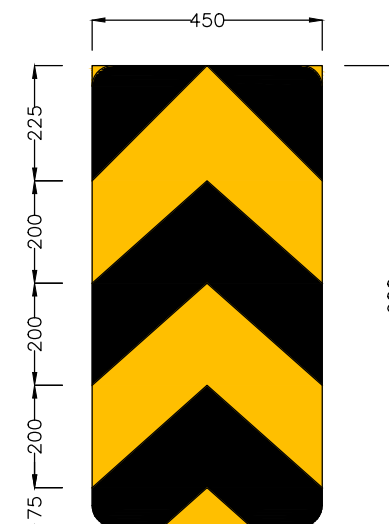
SINGLE CHEVRON
Fig. 15.72
TA-1
SCALE 1:15000



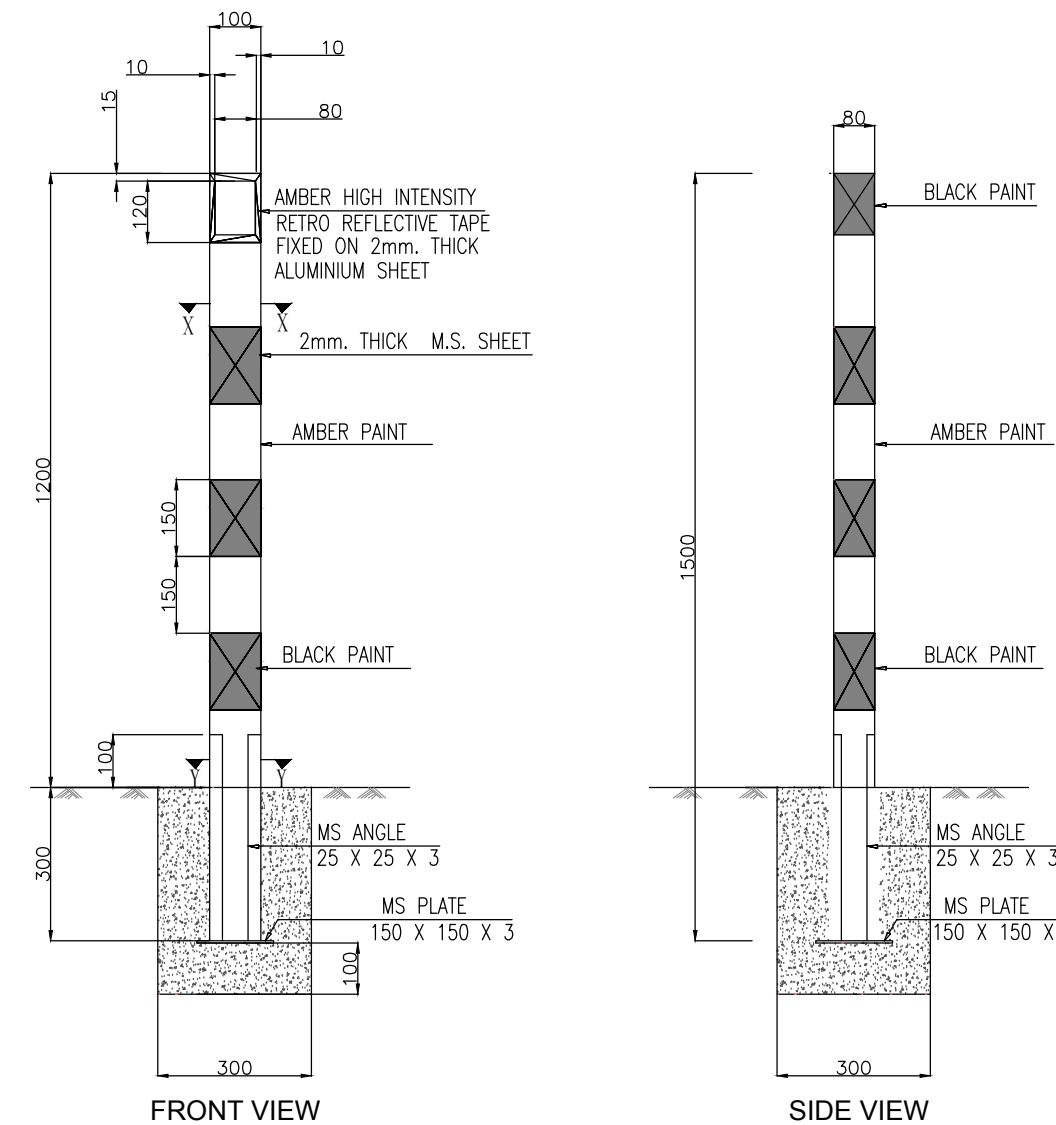
OBJECT HAZARD (LEFT)
Fig. 15.76
TA-2
SCALE 1:15000



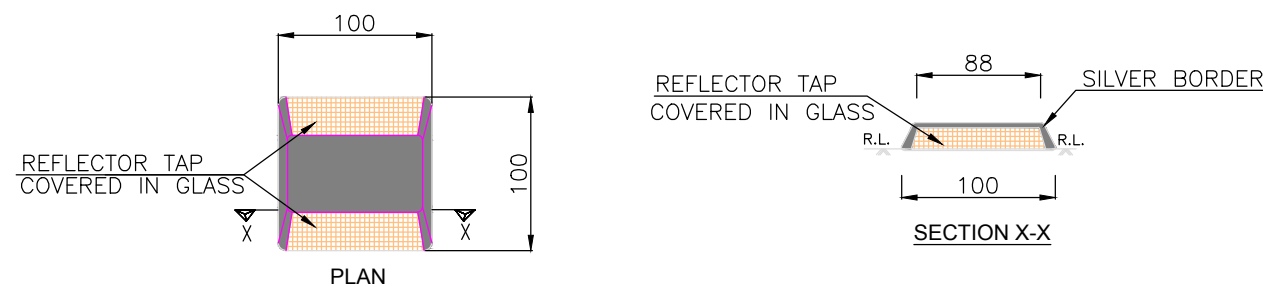
OBJECT HAZARD (RIGHT)
Fig. 15.77
TA-3
SCALE 1:15000



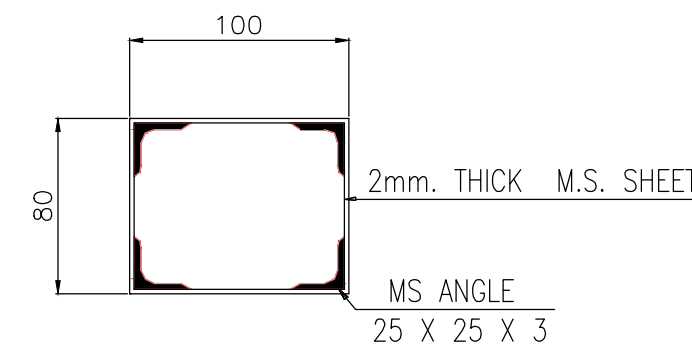
TWO WAY HAZARD MARKER
Fig. 15.78
TA-4
SCALE 1:15000



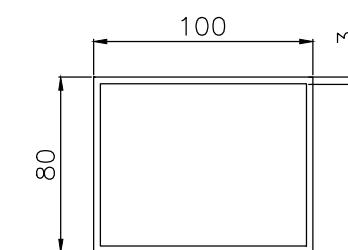
ROAD DELINEATORS
TA-6
SCALE 1:15000



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 :



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REV.	DATE	DESCRIPTION

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

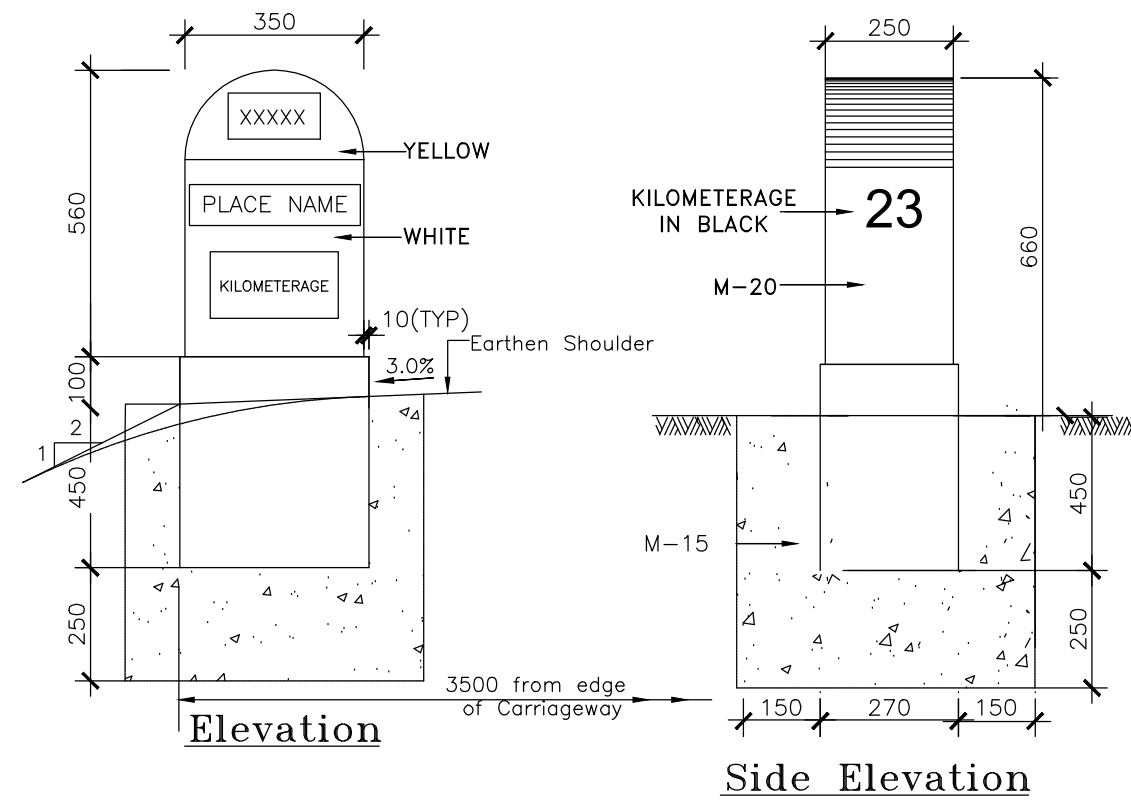
TITLE :

Road Signs & Road Delineators

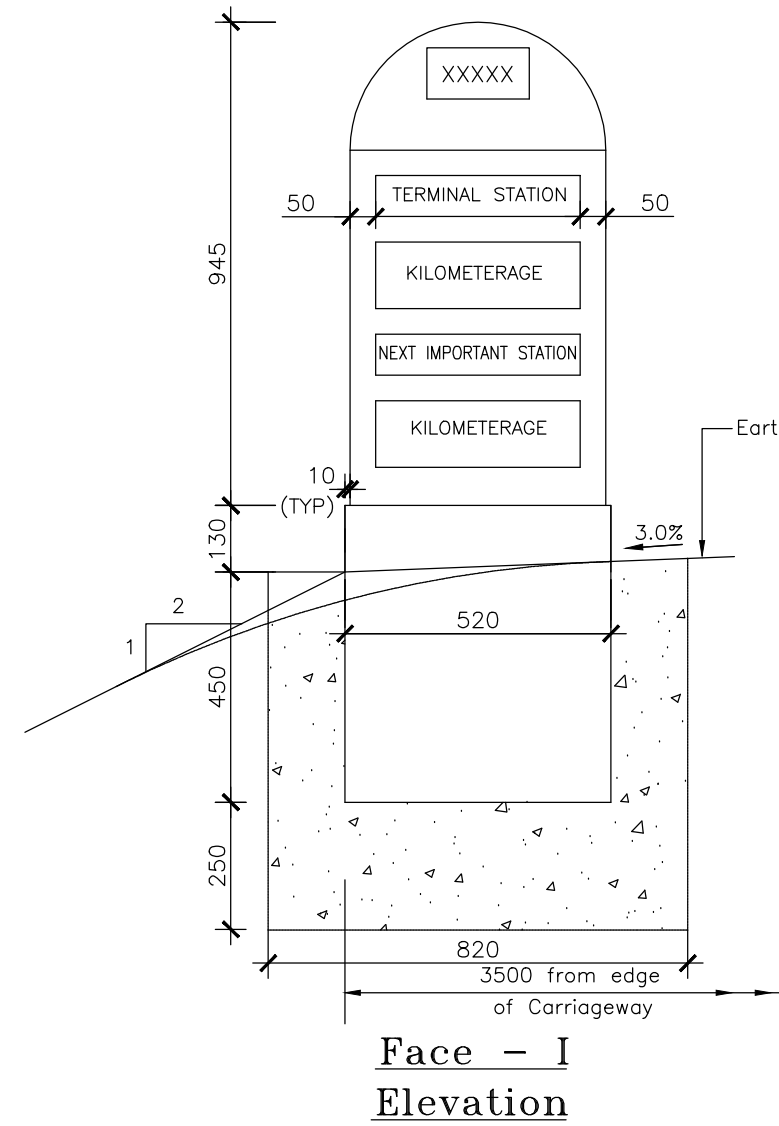
DRG. NO. : EPTISA/JTRP/DPR/J&K/MISC/01
(Sheet 03 of 03)

REVISION : R-1

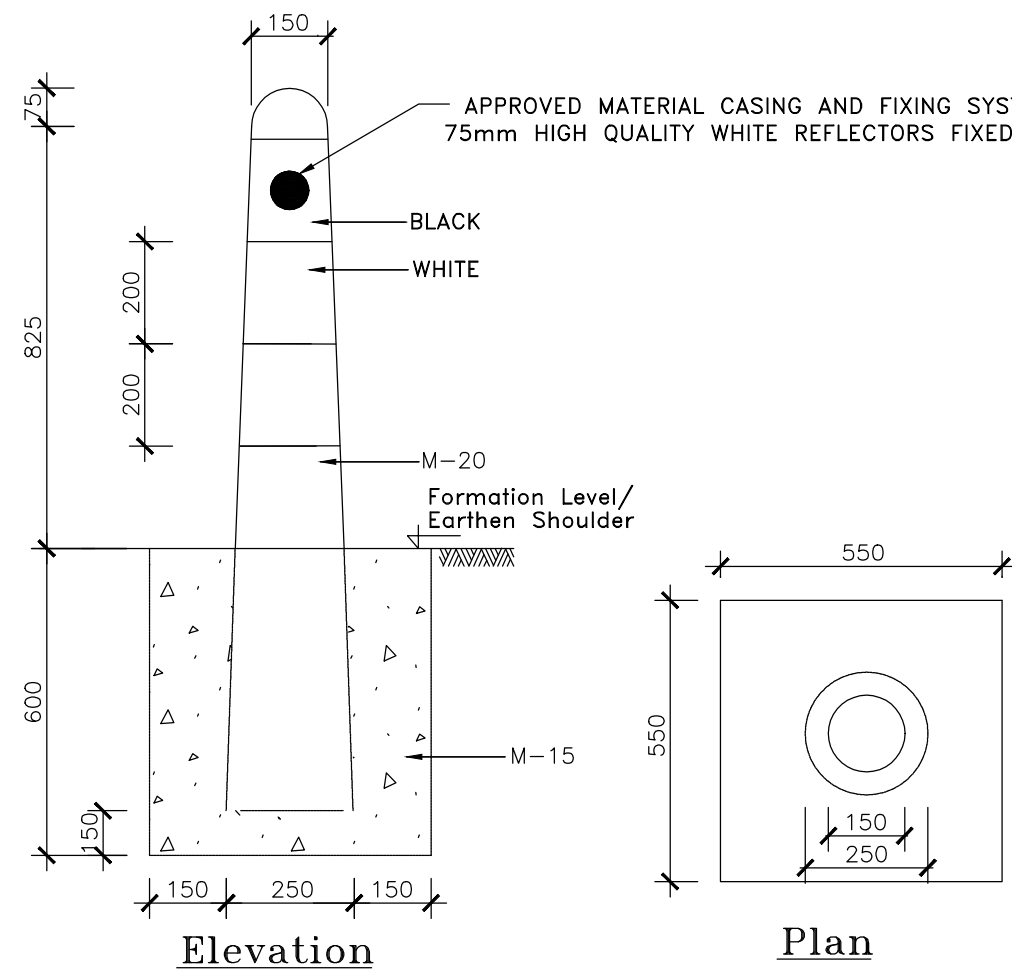
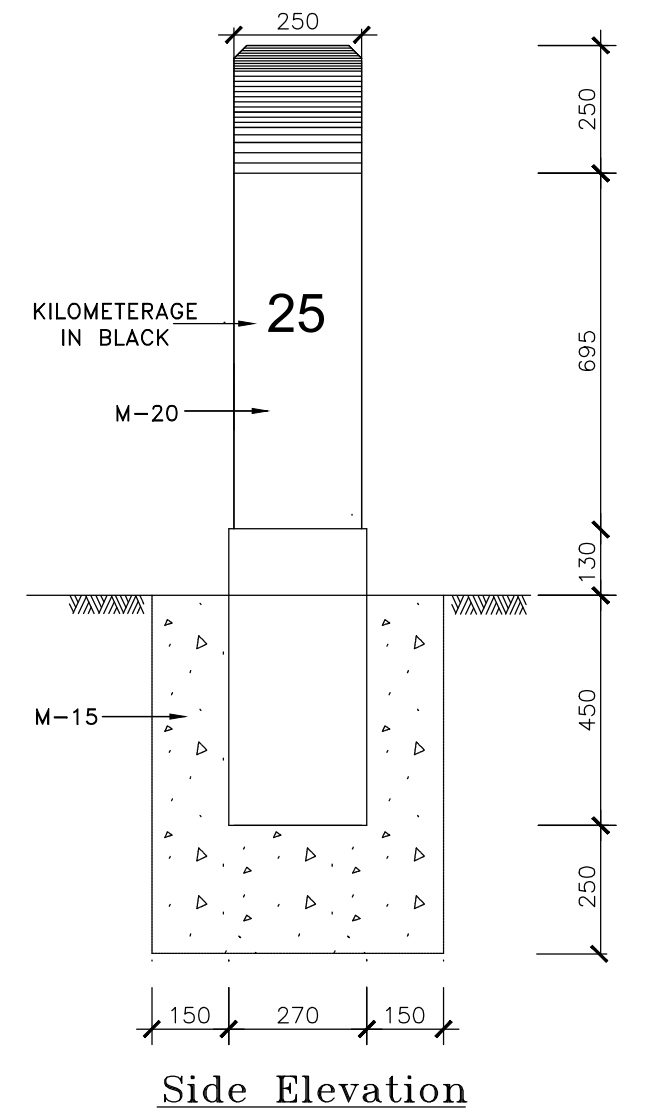
September 2019



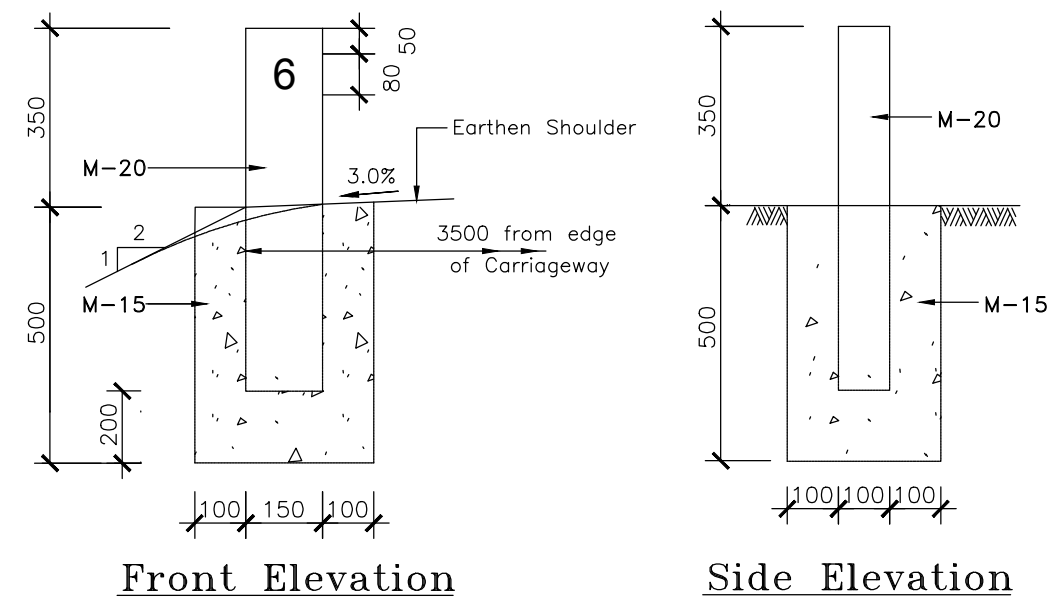
Kilometre Stone



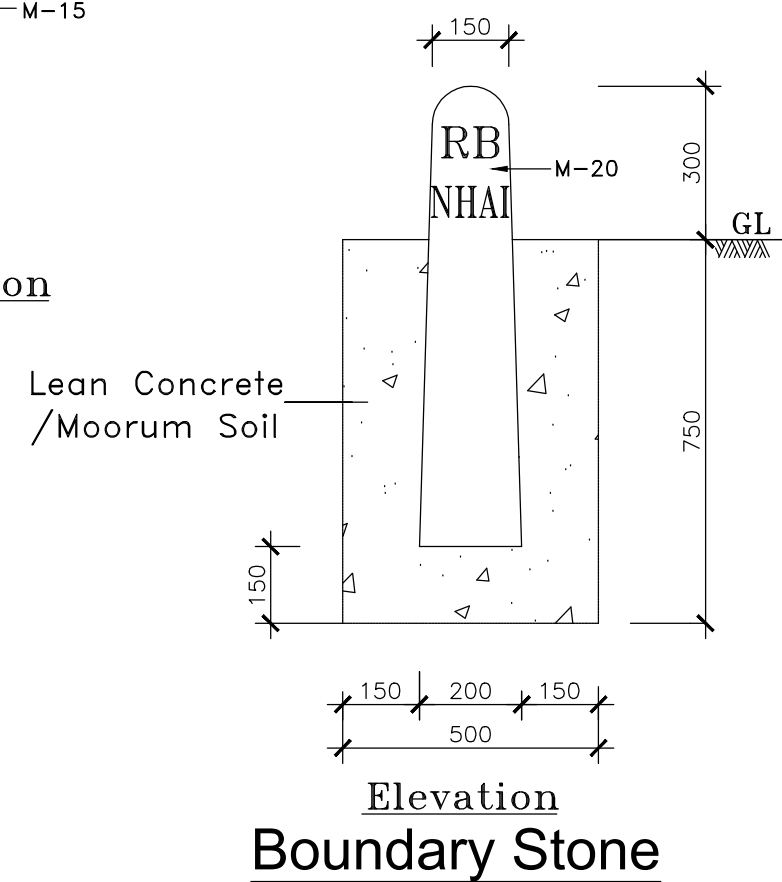
Fifth Kilometre Stone



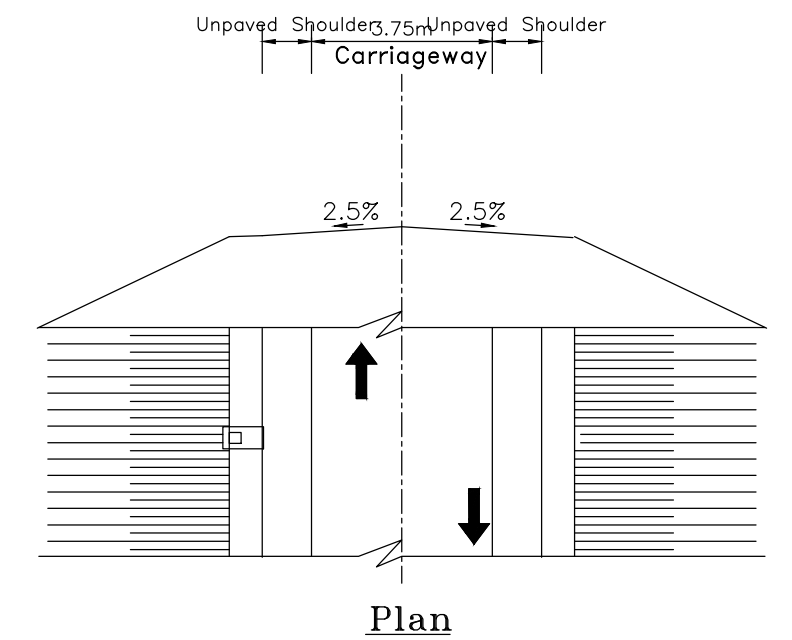
Guard Post



200 metre Stone



Boundary 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 :



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(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam upto Sumbal Bridge)

DESIGN CONSULTANT:

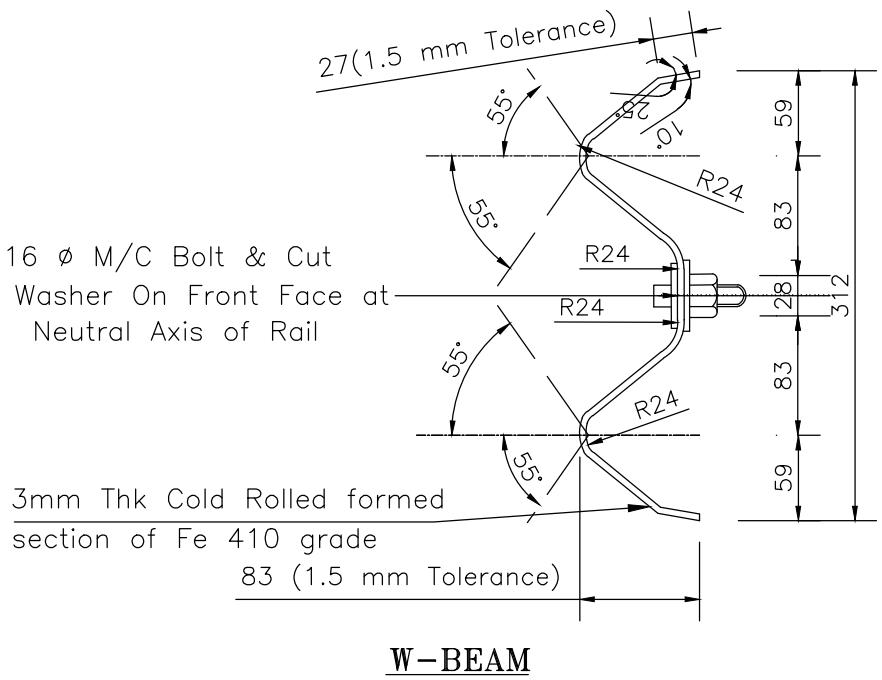


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REV.	DATE	DESCRIPTION

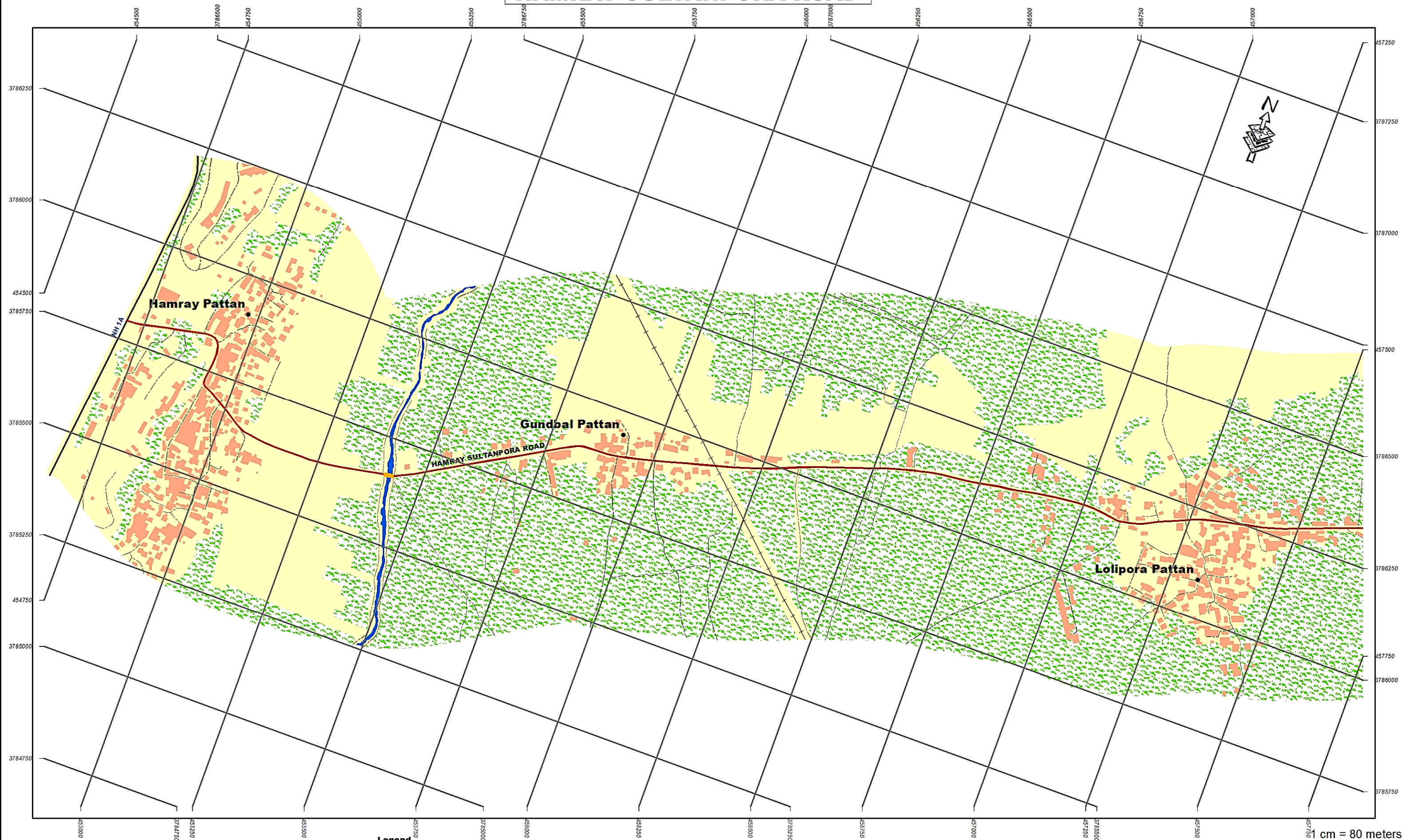
DRAWN BY :	SD
DESIGNED BY :	SCK/MM
APPROVED BY :	KG
SCALE :	N.T.S

TITLE :	Typical Details of Distance Stone, Boundary Stone & Guard Post
DRG. NO. :	EPTISA/JTRP/DPR/J&K/MISC/02
REVISION : R-1	September 2019

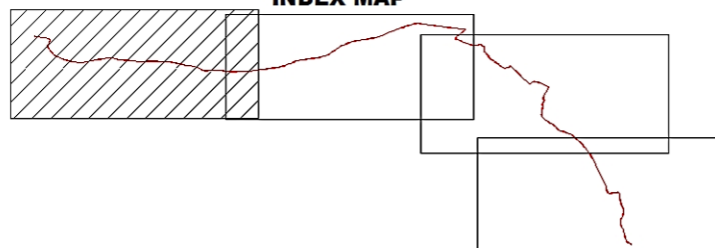


TITLE : Details of Metal Beam Crash Barrier	
DRG. NO. : EPTISA/JTFRP/DPR/J&K/MISC/03	
REVISION : R-1	September 2019

HAMRAY SULTANPORA ROAD

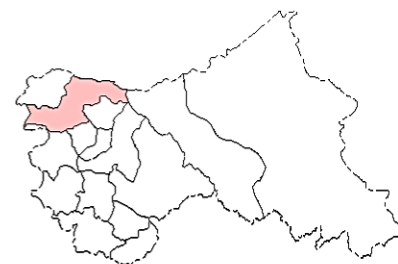


INDEX MAP



Legend

▲ Importance LandMark	--- Road Centerline	Water
★ Start End Point	Red Proposed Road	Swamp
● Village Name	Major Road	Vegetation
— Railways	Other Road	Open/Agriculture Land
Park	Building	
Bridge	Forest	
Restricted Area		



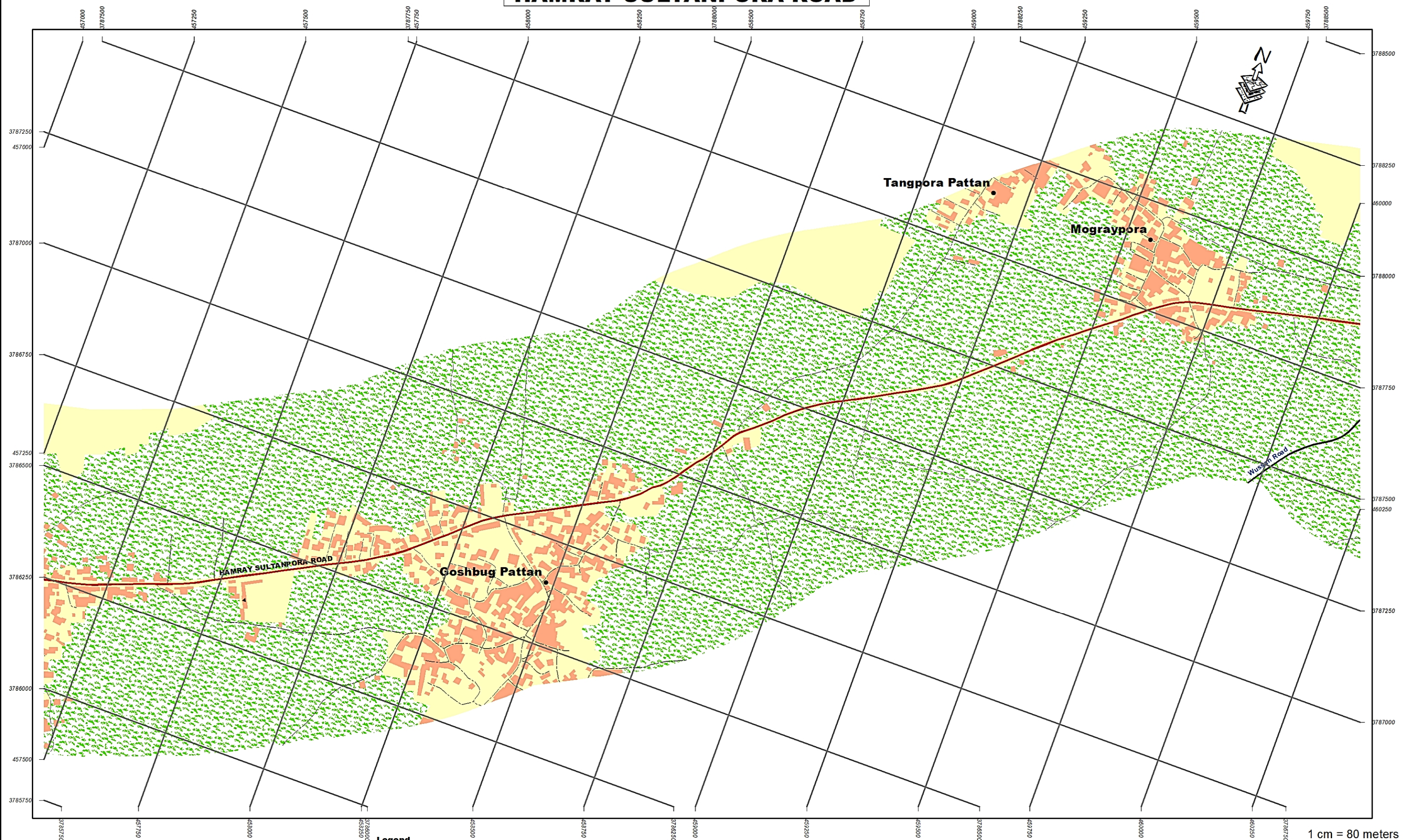
Project: JHELM TAWI FLOOD RECOVERY PROJECT

Sub-Project: FOR RECONSTRUCTION OF HAMRAY SULTANPORA ROAD UNDER KASHMIR DIVISION

Agency: PROJECT MANAGEMENT UNIT JTRP

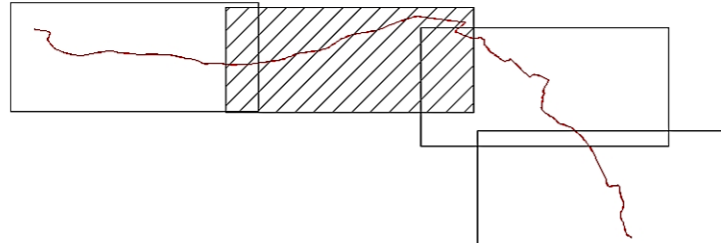
eptisa

HAMRAY SULTANPORA ROAD



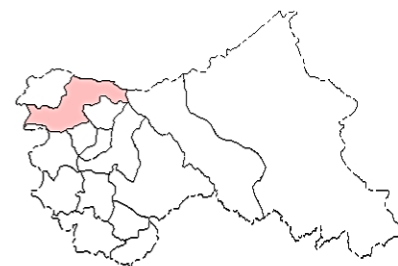
1 cm = 80 meters

INDEX MAP



Legend

- | | | |
|---------------------------|-----------------------------|-----------------------|
| ▲ Importance LandMark | --- Road Centerline | Water |
| ★ Start End Point | Red Box Proposed Road | Swamp |
| ● Village Name | Thick Black Line Major Road | Vegetation |
| — Railways | Thin Black Line Other Road | Open/Agriculture Land |
| Green Dots Park | Orange Box Building | |
| Yellow Box Bridge | Dashed Black Line Forest | |
| Black Box Restricted Area | | |



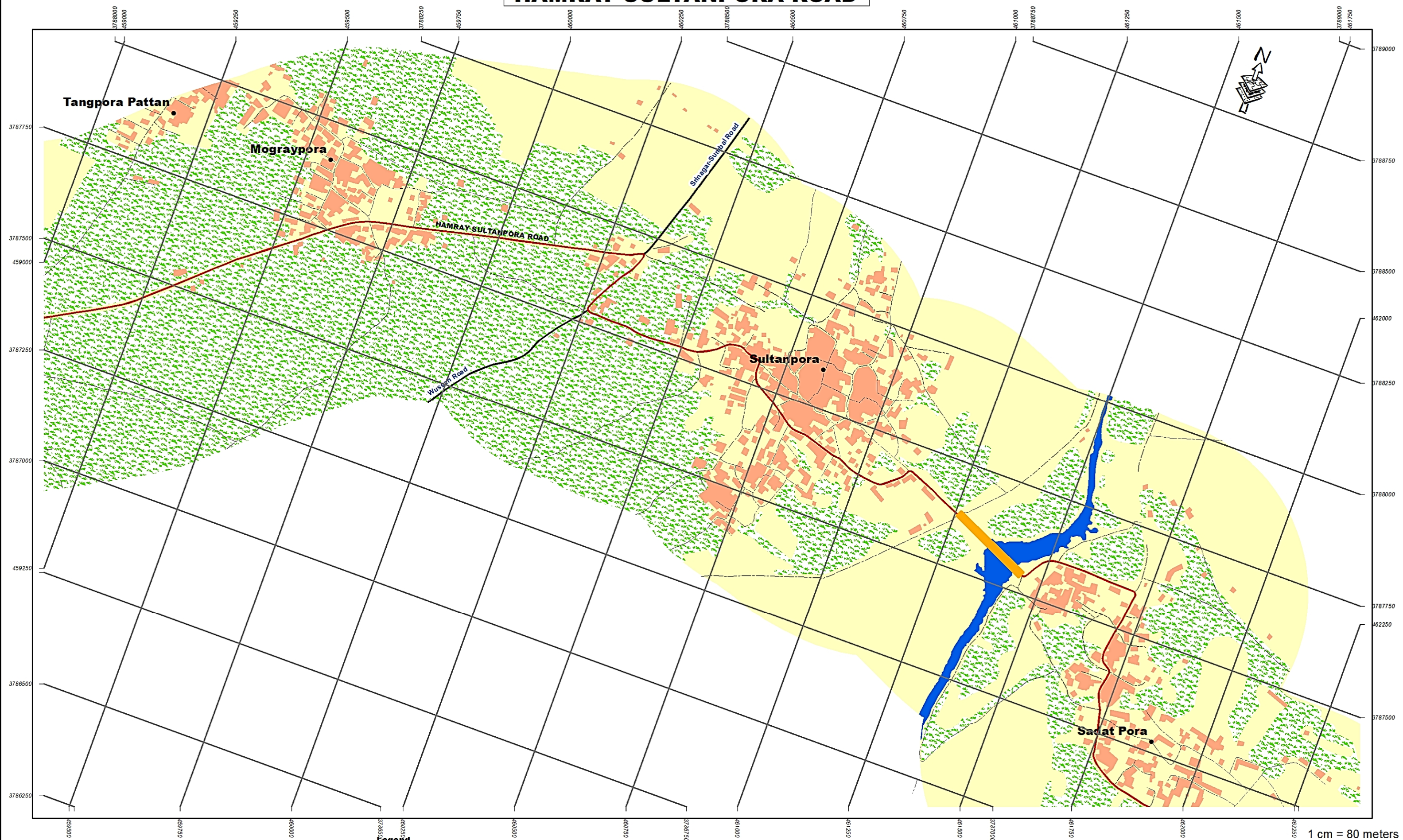
Project: JHELM TAWI FLOOD RECOVERY PROJECT

Sub-Project: FOR RECONSTRUCTION OF
HAMRAY SULTANPORA ROAD
UNDER KASHMIR DIVISION

Agency: PROJECT MANAGEMENT UNIT JTFRP

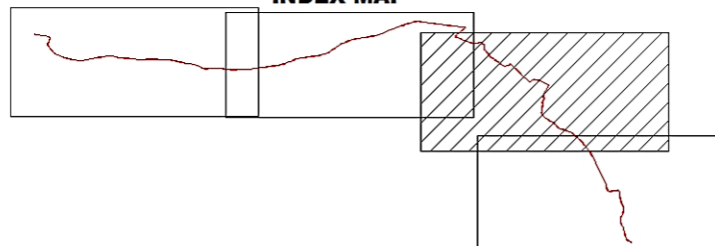
eptisa

HAMRAY SULTANPORA ROAD



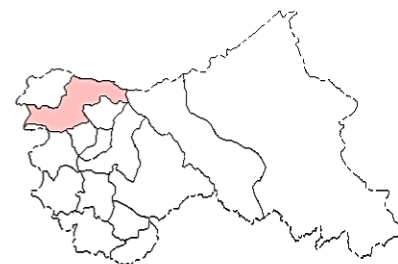
1 cm = 80 meters

INDEX MAP



Legend

- | | | |
|-----------------------|-----------------------------|-----------------------|
| ▲ Importance LandMark | --- Road Centerline | Water |
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| Green Dots Park | Orange Box Building | |
| Orange Box Bridge | Dashed Black Line Forest | |
| Restricted Area | | |



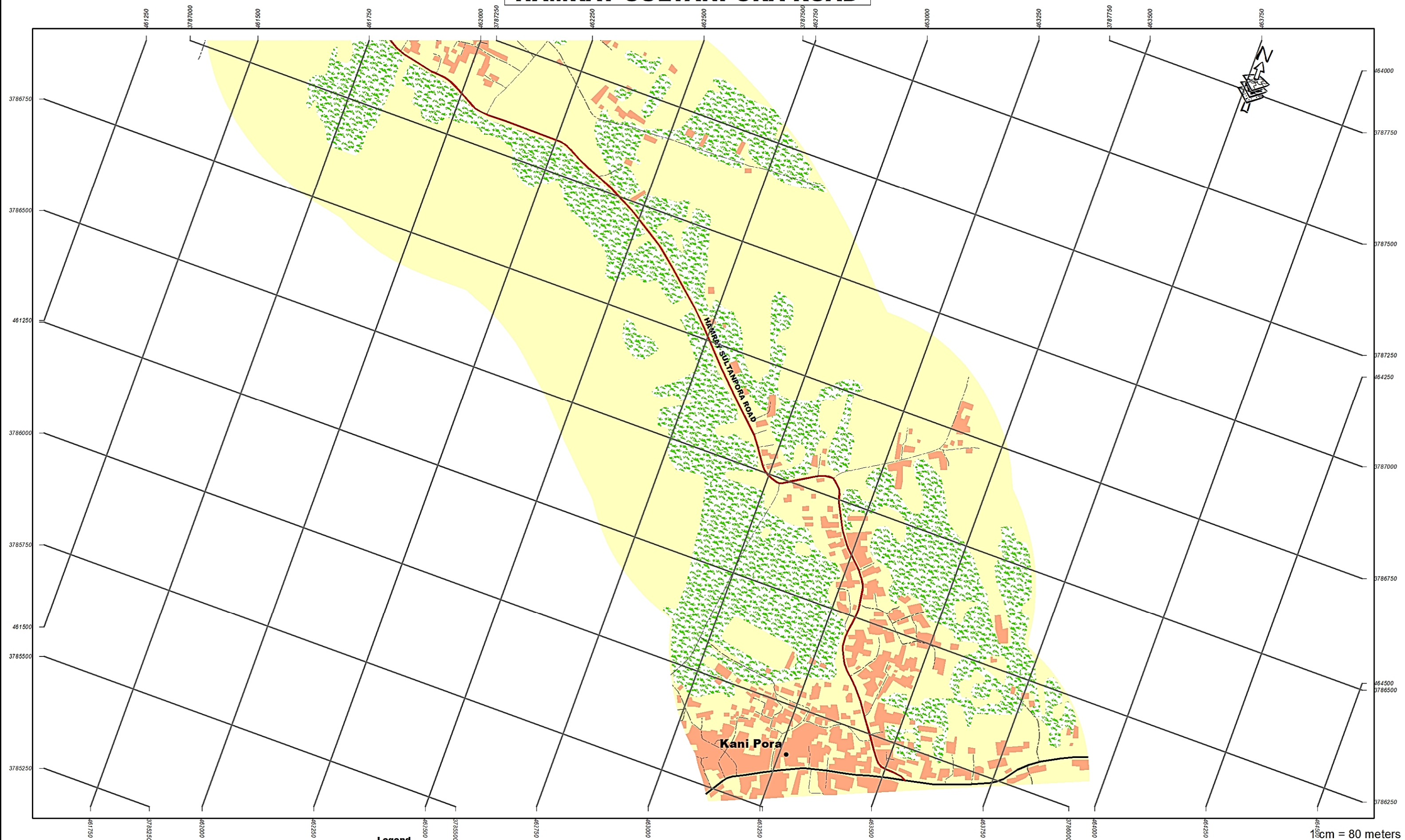
Project: JHELM TAWI FLOOD RECOVERY PROJECT

Sub-Project: FOR RECONSTRUCTION OF
HAMRAY SULTANPORA ROAD
UNDER KASHMIR DIVISION

Agency: PROJECT MANAGEMENT UNIT JTFRP

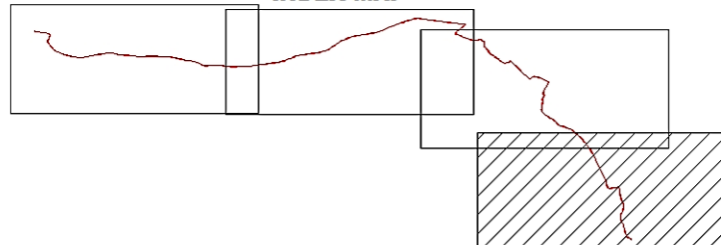
eptisa

HAMRAY SULTANPORA ROAD



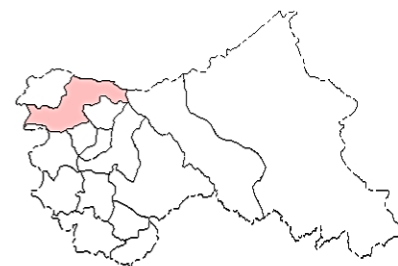
1cm = 80 meters

INDEX MAP



Legend

- | | | |
|-----------------------|---------------------|-----------------------|
| ▲ Importance LandMark | --- Road Centerline | Water |
| ★ Start End Point | Proposed Road | Swamp |
| ● Village Name | Major Road | Vegetation |
| — Railways | Other Road | Open/Agriculture Land |
| Park | Building | |
| Bridge | Forest | |
| Restricted Area | | |



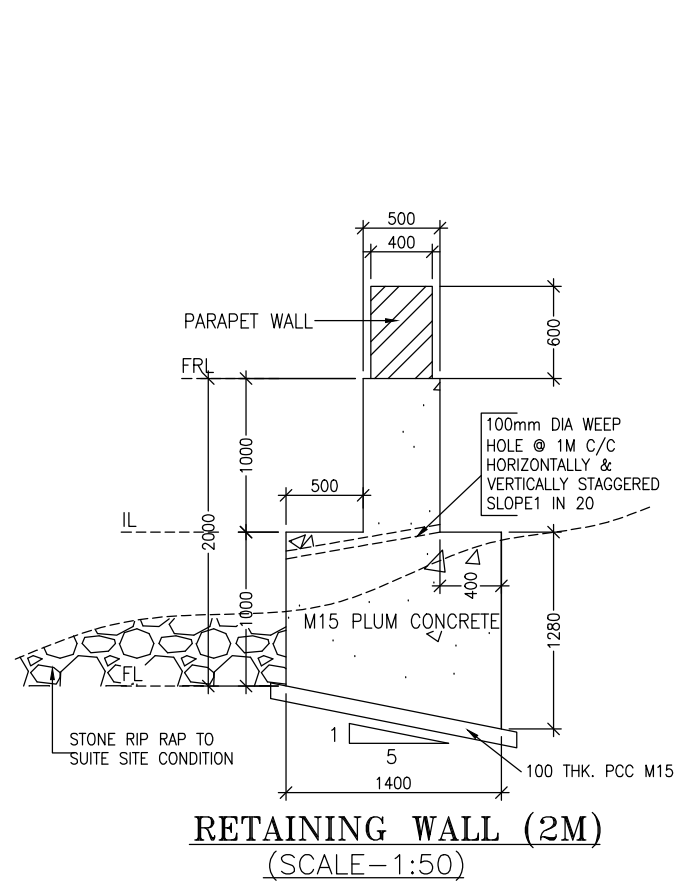
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Sub-Project: FOR RECONSTRUCTION OF
HAMRAY SULTANPORA ROAD
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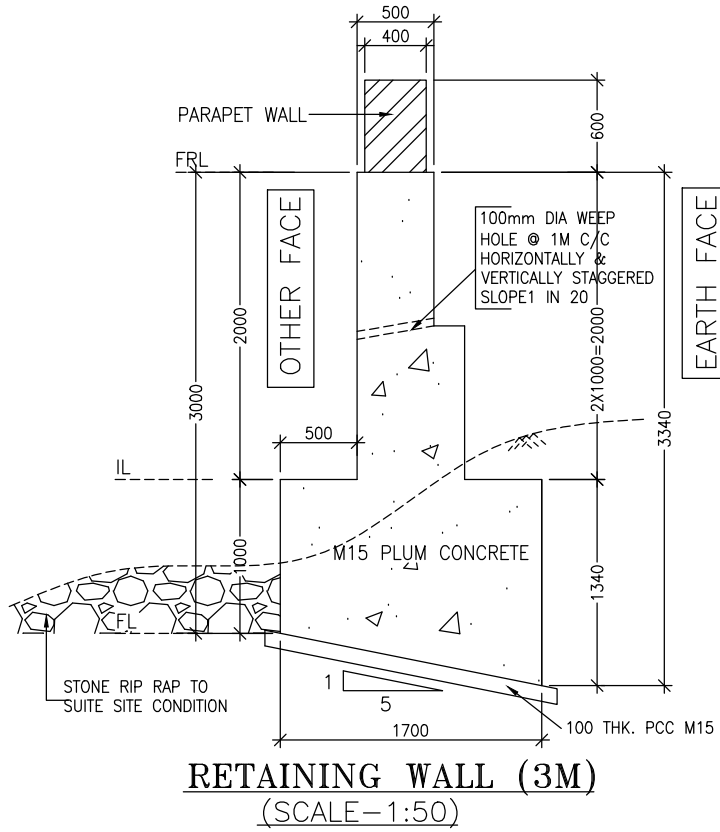
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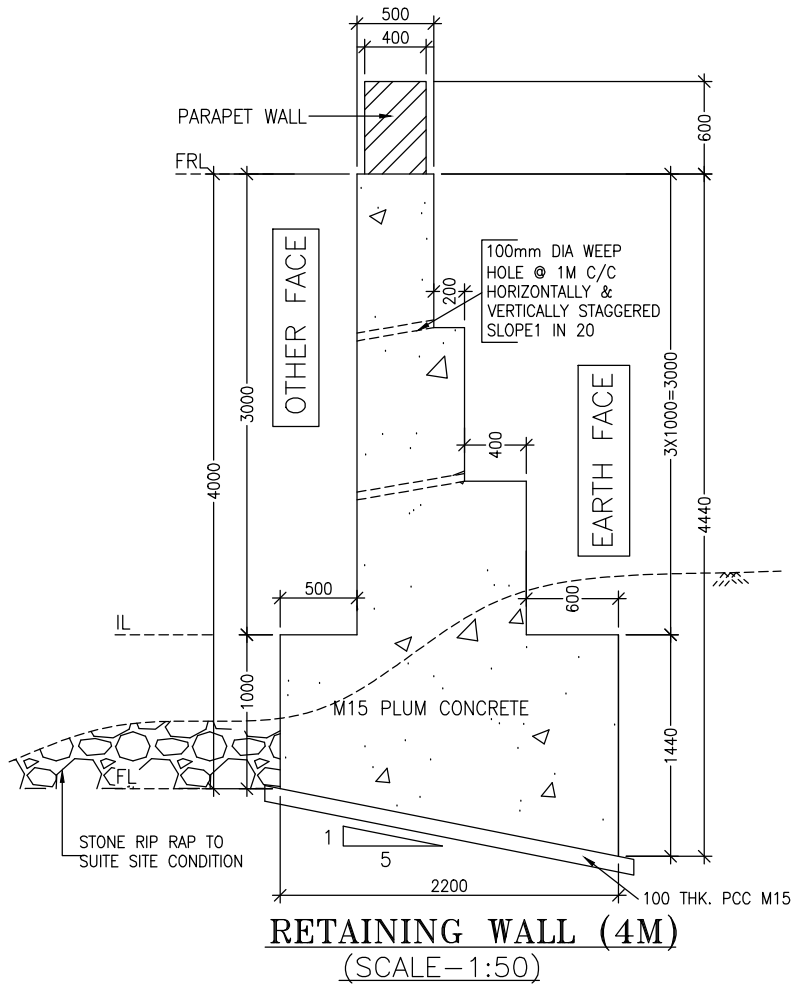
DETAILS OF PCC RETAINING WALL



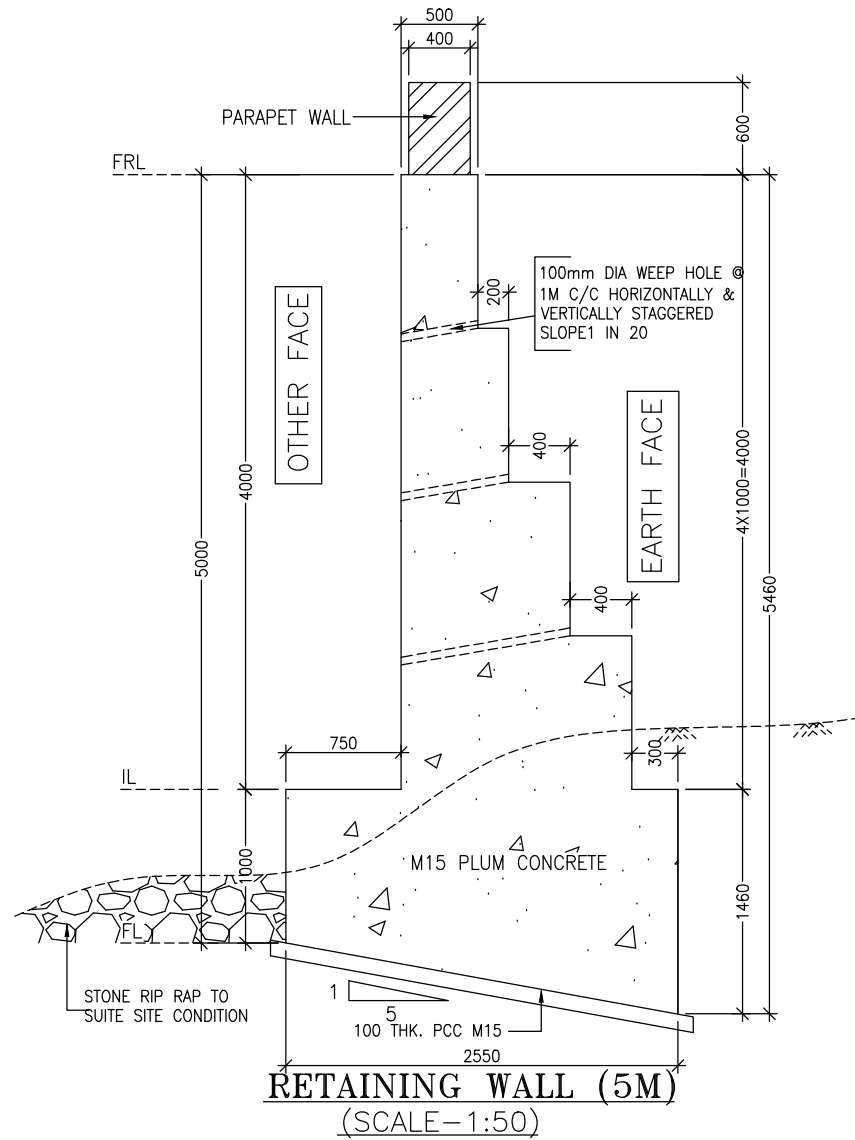
RETAINING WALL (2M)
(SCALE-1:50)



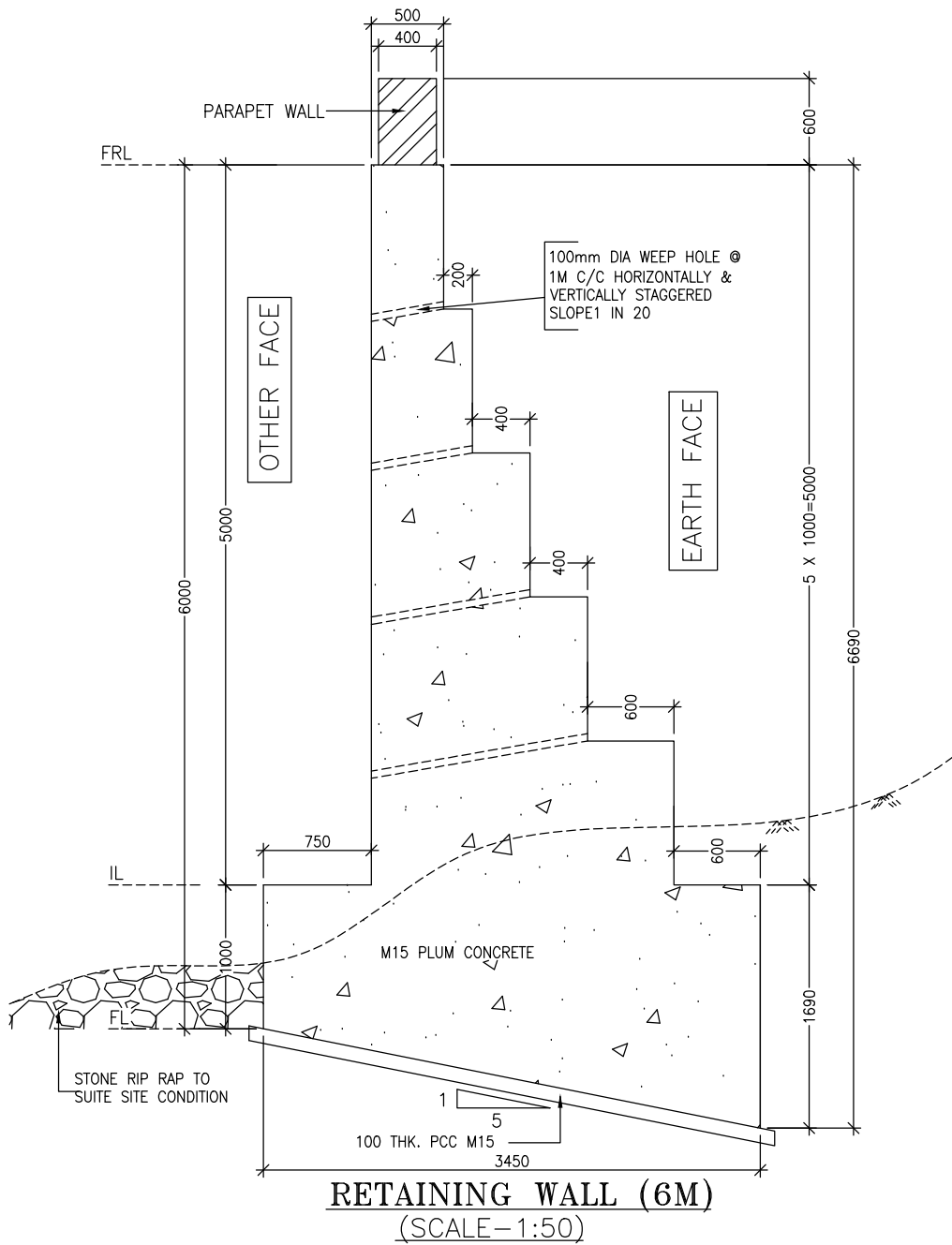
RETAINING WALL (3M)
(SCALE-1:50)



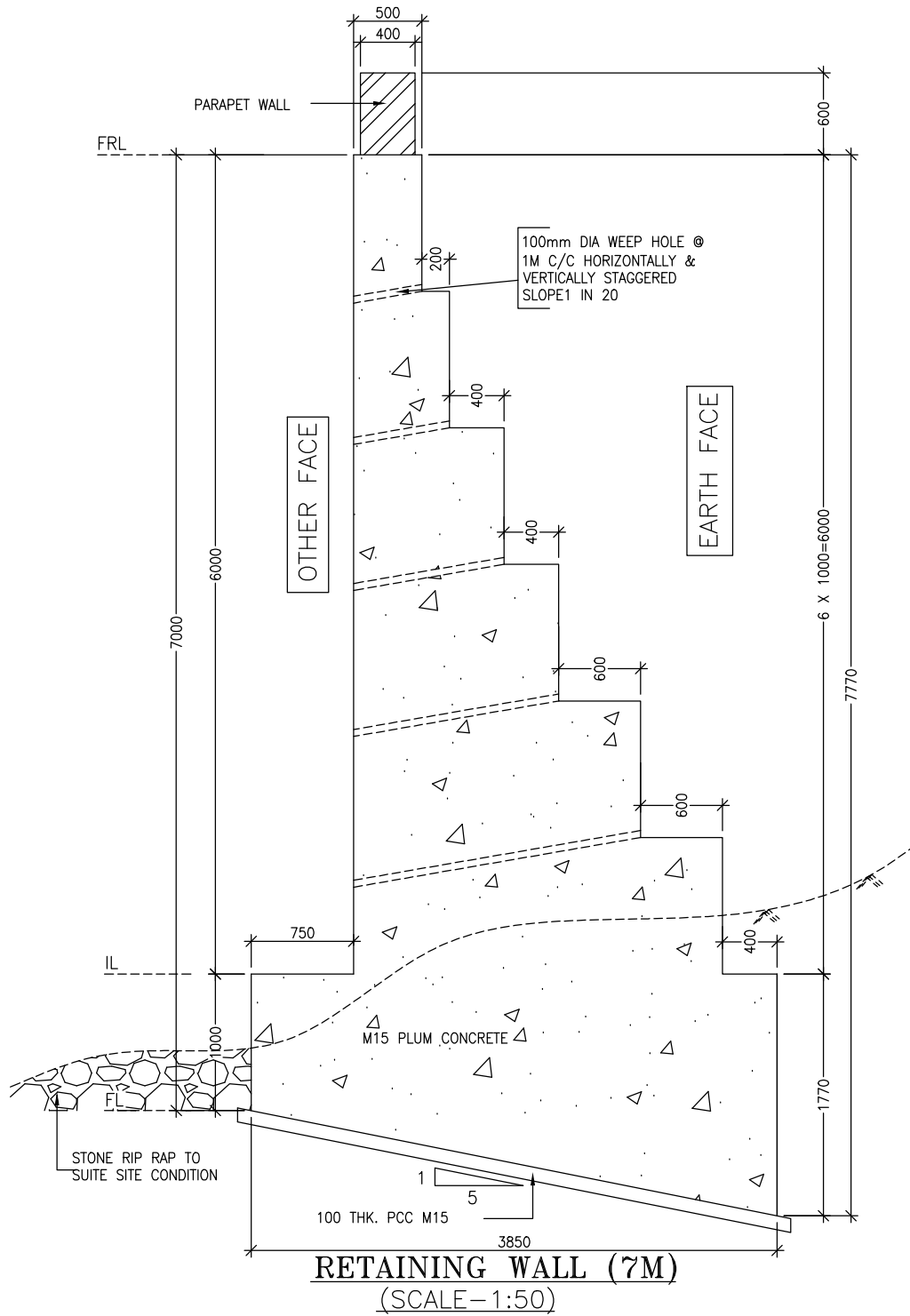
RETAINING WALL (4M)
(SCALE-1:50)



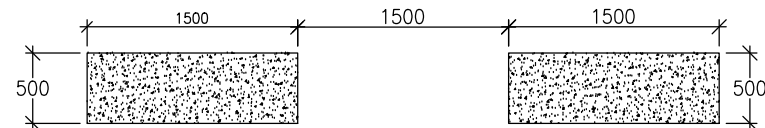
RETAINING WALL (5M)
(SCALE-1:50)



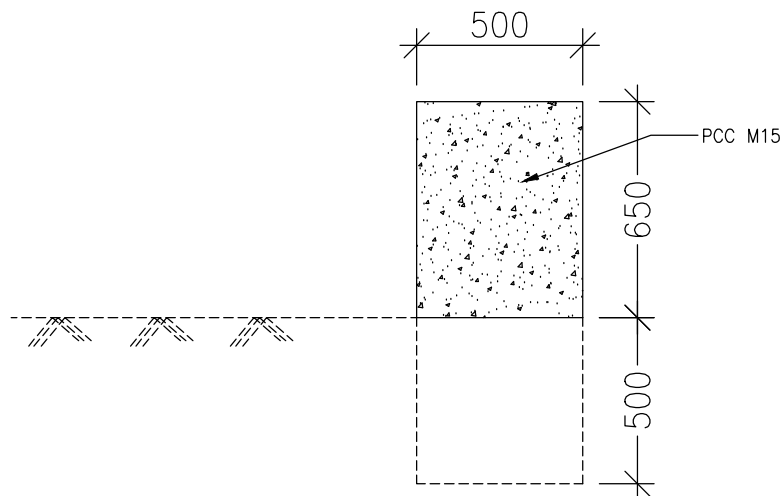
RETAINING WALL (6M)
(SCALE-1:50)



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



PLAN OF PARAPET WALL



SECTION OF PARAPET WALL

- NOTES :**
- ALL DIMENSIONS ARE IN MM. UNLESS OTHERWISE MENTIONED.
 - DIMENSIONS ARE NOT TO BE SCALED. ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
 - 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.
 - 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 $\phi=35^\circ$, $C=0$, $\gamma=21/m^3$
 - ALL FACE OF WALL SHALL BE PROVIDED WITH A MINIMUM STEEL OF 250mm² IN EACH DIRECTION. SPACING OF THESE BARS SHALL NOT EXCEED 300mm.
 - 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 FORM 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 WITH 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 1:2:4 (1 CEMENT, 2 SAND, 4 GRADED STONE AGGREGATE 40 MM NORMAL SIZE) WITH 15% PLUMS.

CLIENT :



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REV.	DATE	DESCRIPTION

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

TITLE :

DETAILS OF PCC RETAINING WALL

DRG. NO. :

EPTISA/JTRFP/DPR/J&K/RW-01

REVISION : R-1

September 2019

||| CULVERT DRAWINGS |||

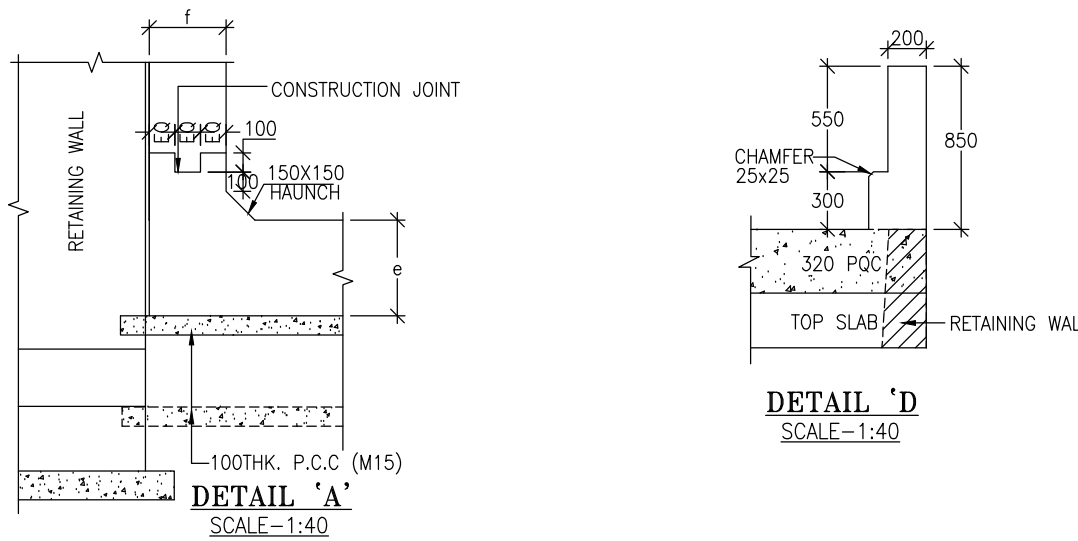
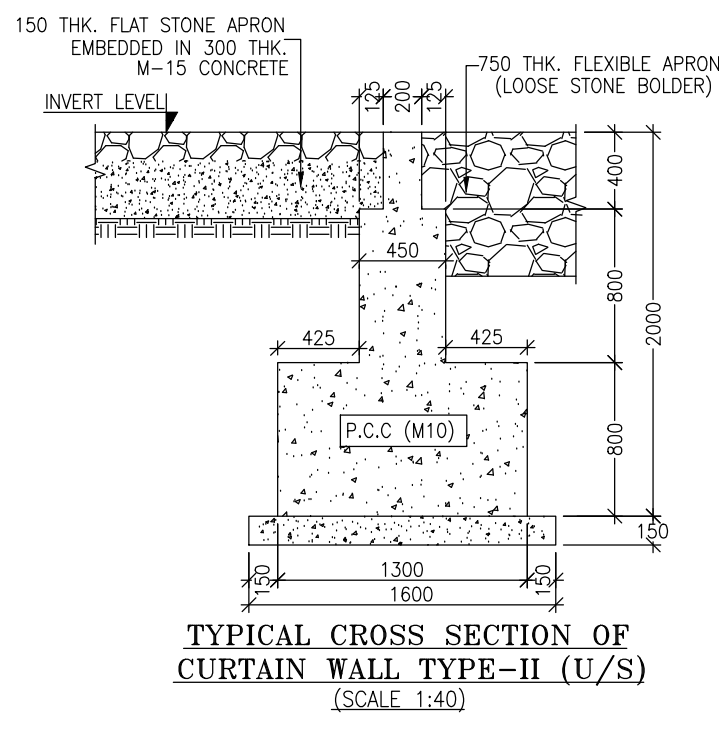
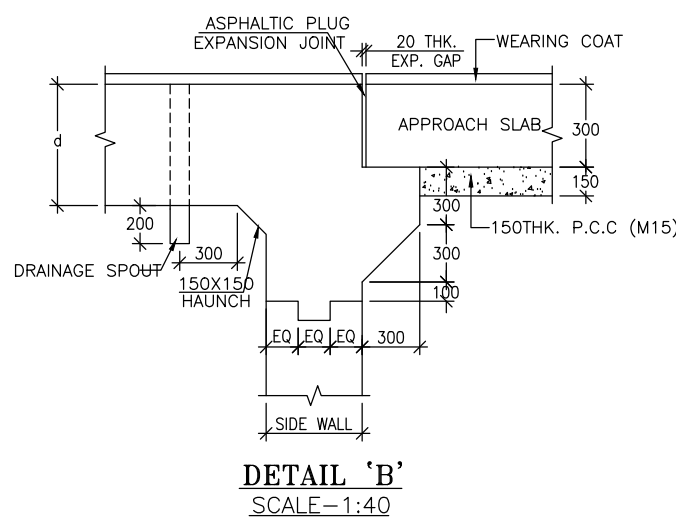
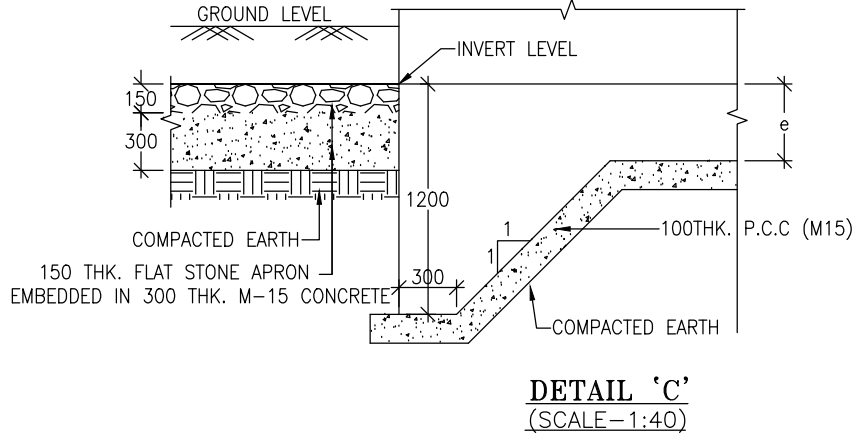
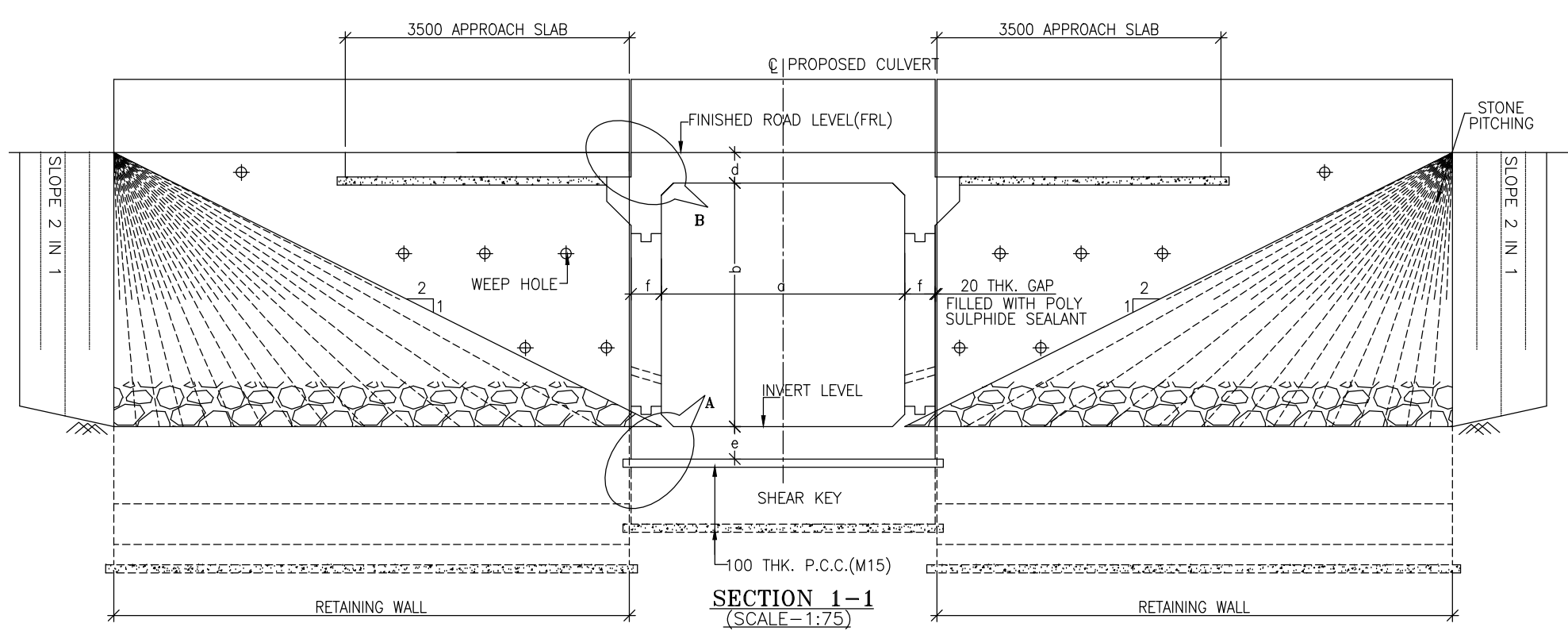
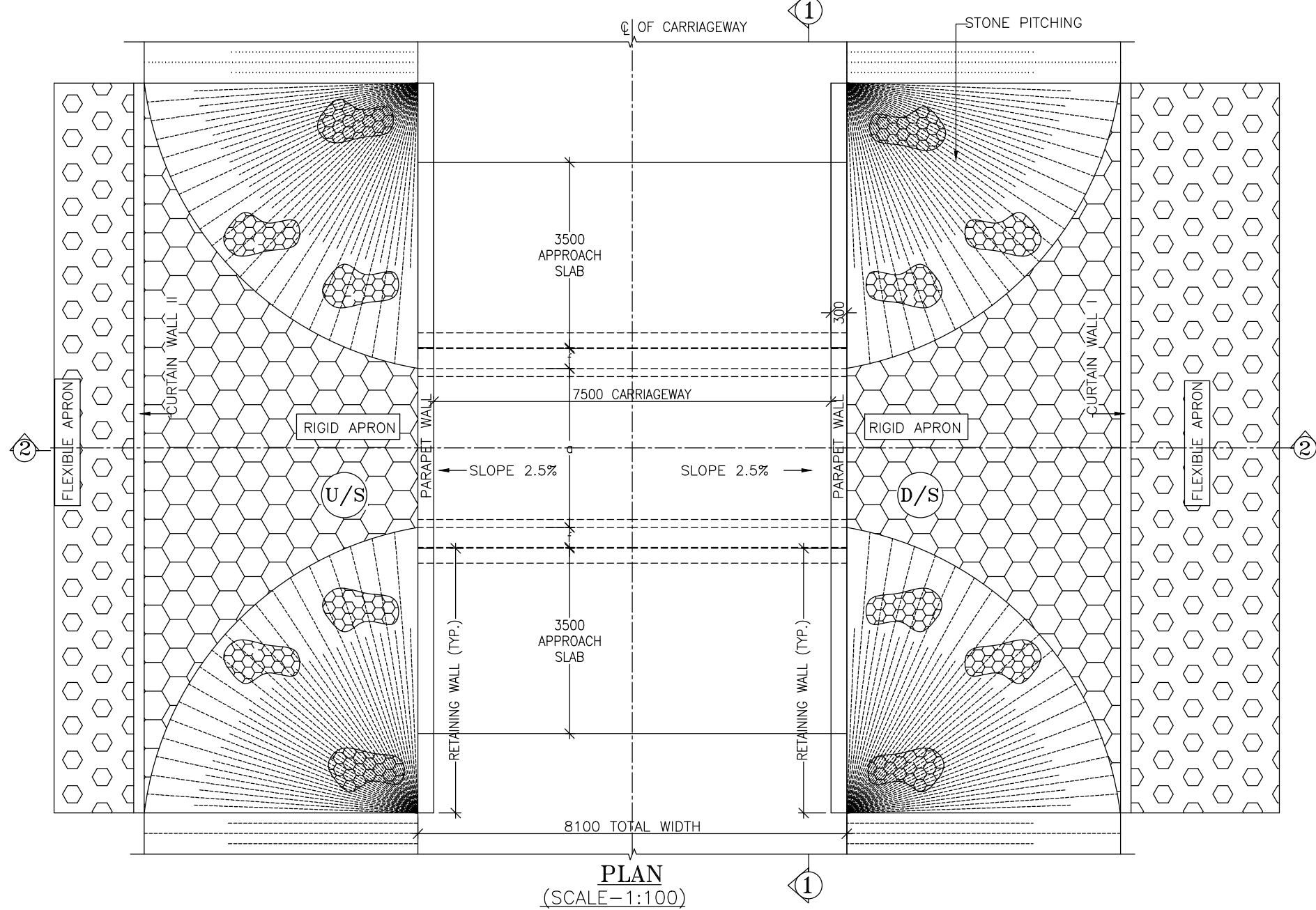
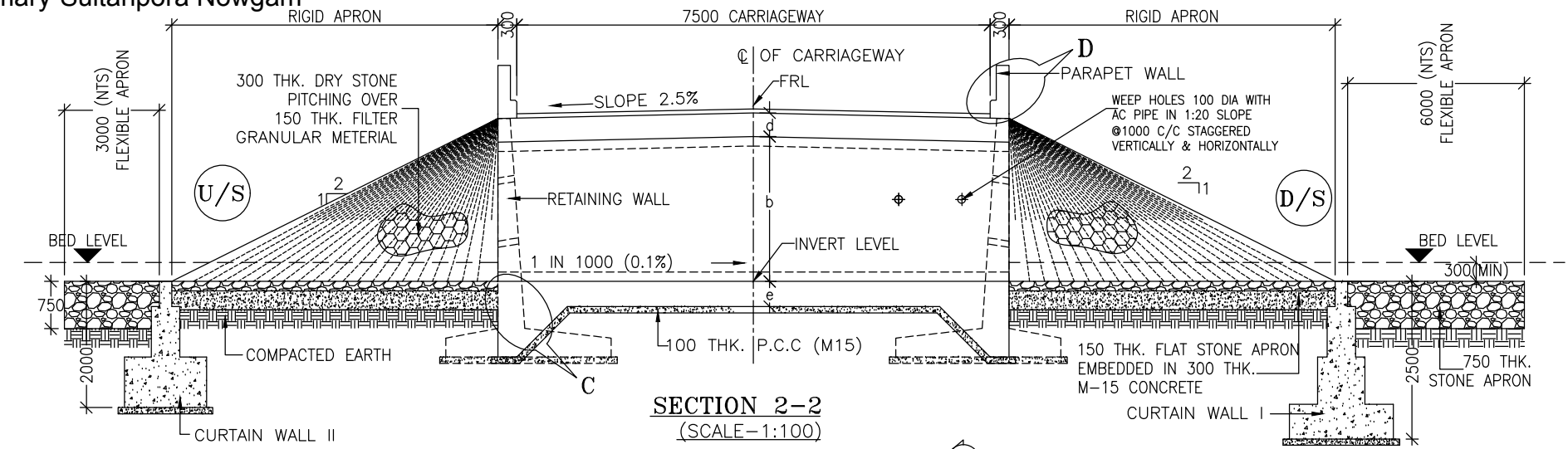
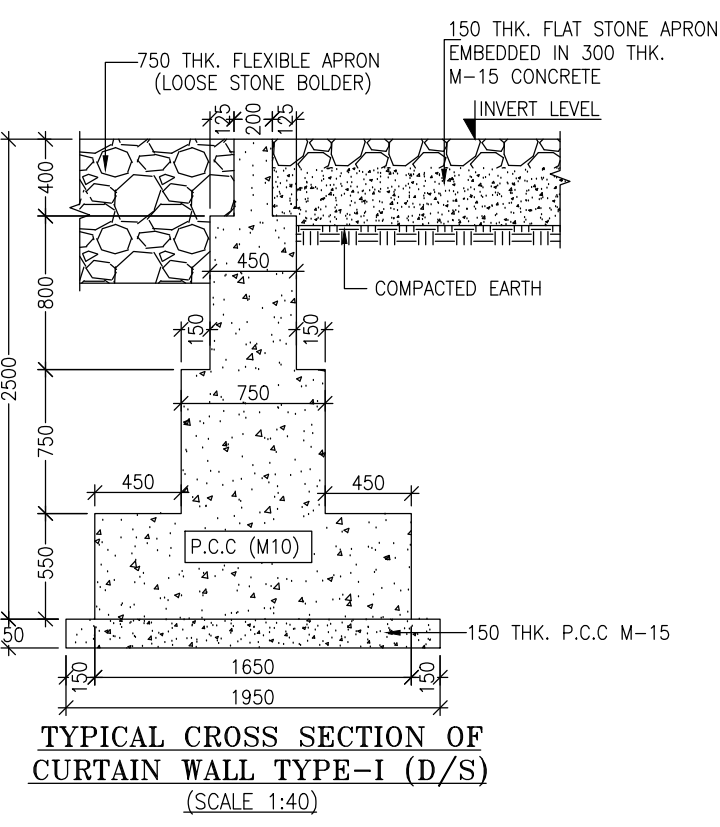
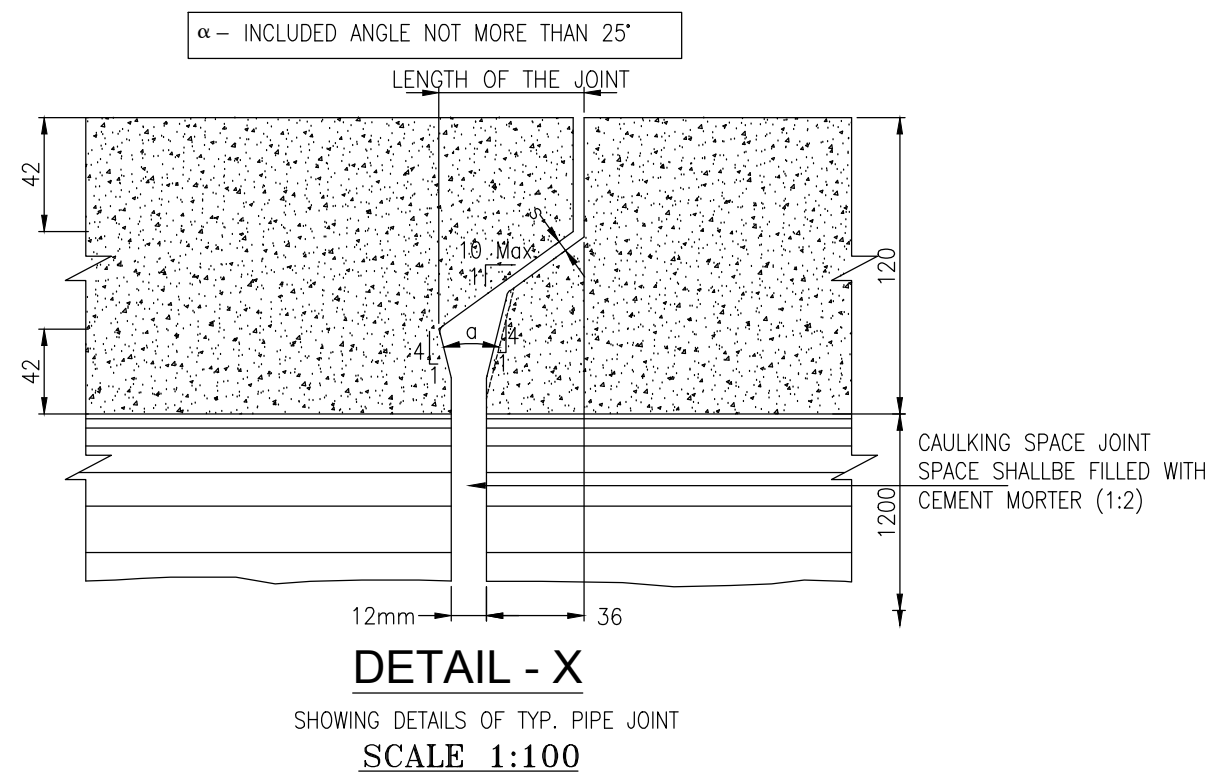
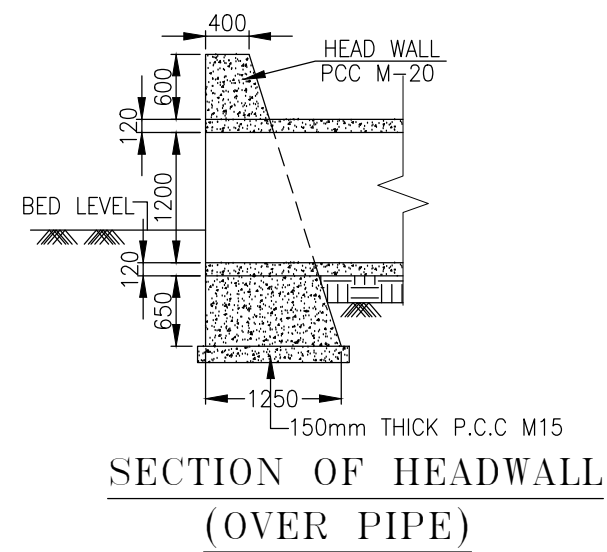
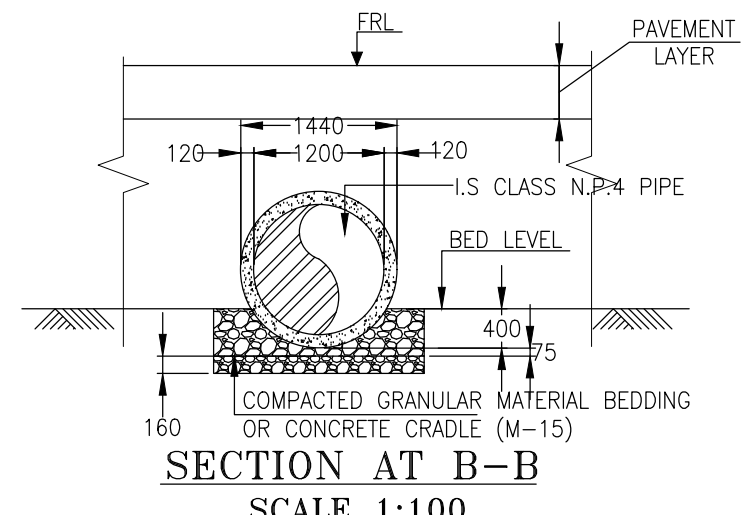
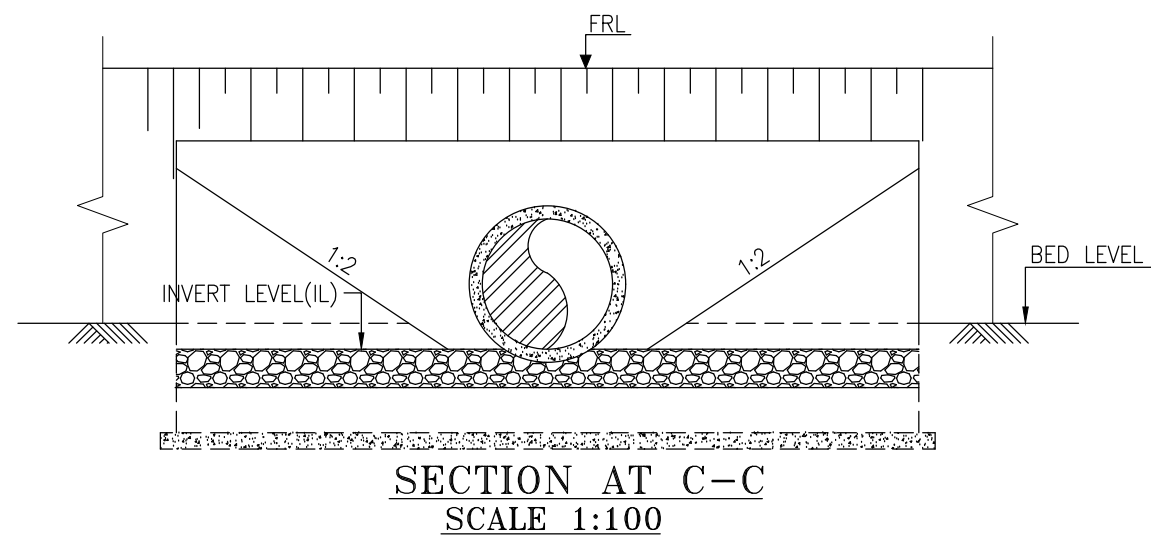
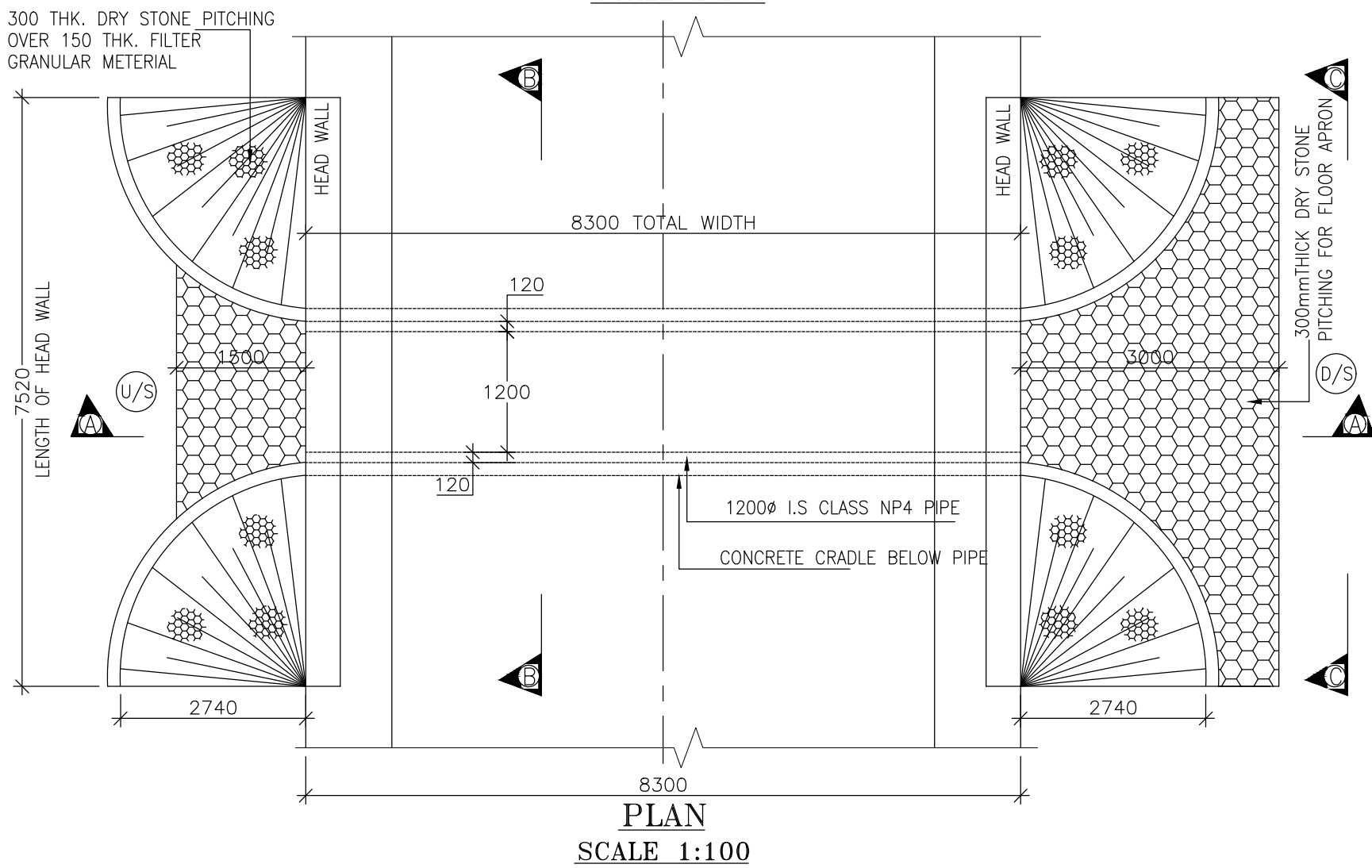
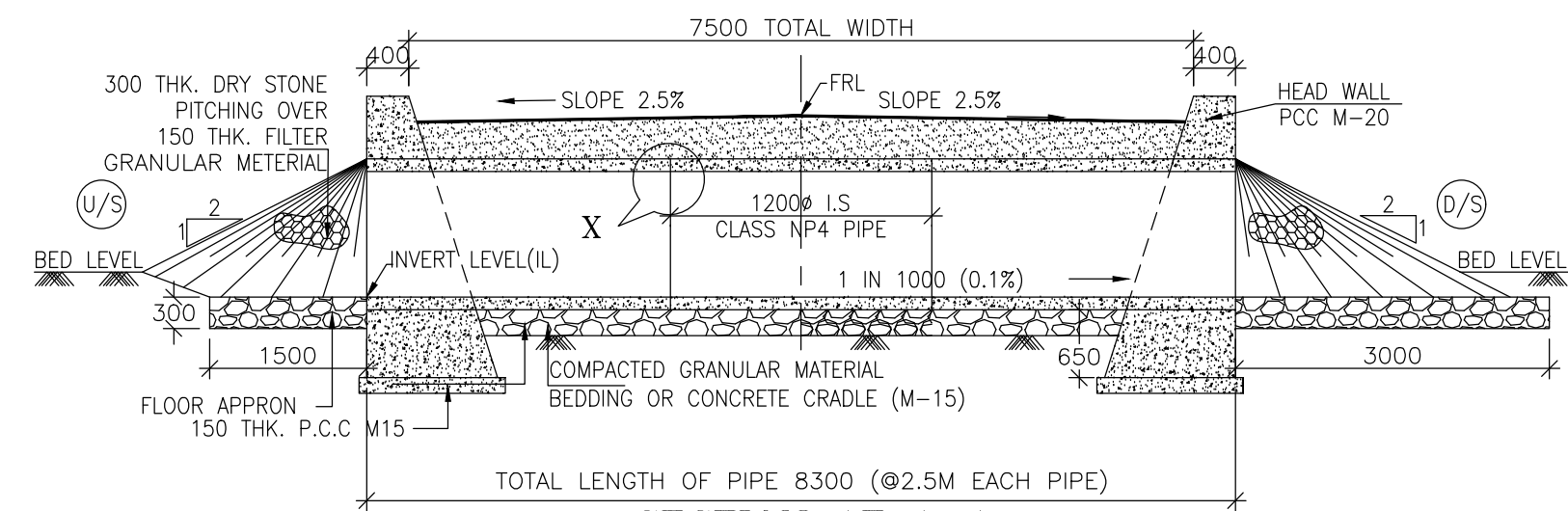


TABLE SHOWING SILENT DIMENSIONS

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 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)
 - 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/M² 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





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
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
(Upgradation of Hamary-Sultanpora-Zalpora-Nowgam upto Sumbal Bridge)

DESIGN CONSULTANT:



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REV.	DATE	DESCRIPTION

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

TITLE :	TYPICAL GENERAL ARRANGEMENT DRAWING FOR SINGLE CELL PIPE CULVERT
DRG. NO. :	EPTISA/JTFRP/DPR/J&K/PIPE/GAD/01
REVISION : R-1	September 2019