

Nepal Urban Governance and Infrastructure Project (NUGIP)
Office of Municipal Executive
Pokhara Metropolitan City
Kaski District , Gandaki Province



DETAIL PROJECT REPORT

OF

UPGRADATION OF SISUWA- SISHAGHAT (SISUWA - KHUDHI KHOLA SECTION) ROAD

VOLUME – I	Main Report
VOLUME – II	Cost Estimate
VOLUME – III	Drawing
VOLUME – IV	Annex

October 2023
(Revised November 2023)

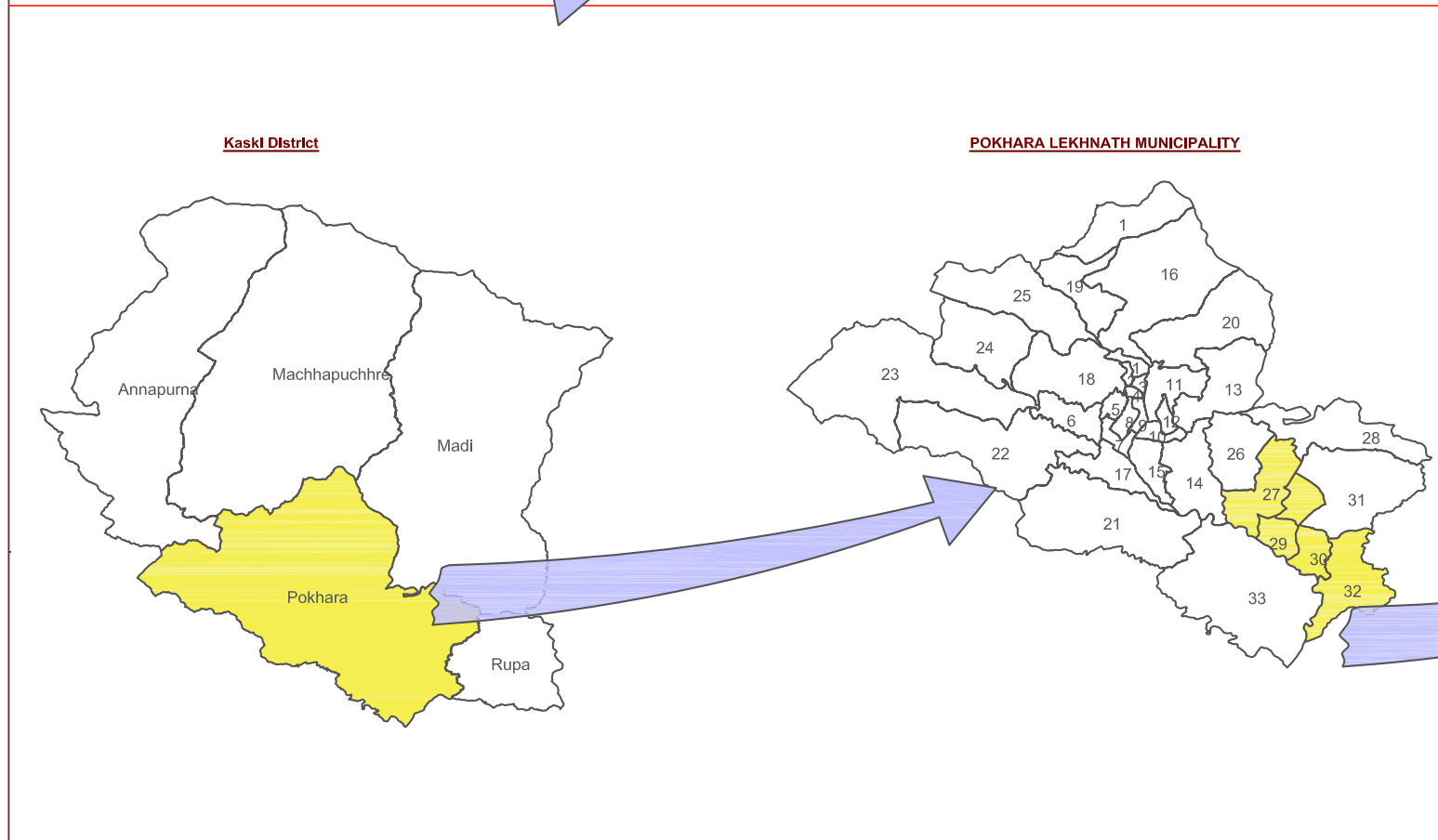
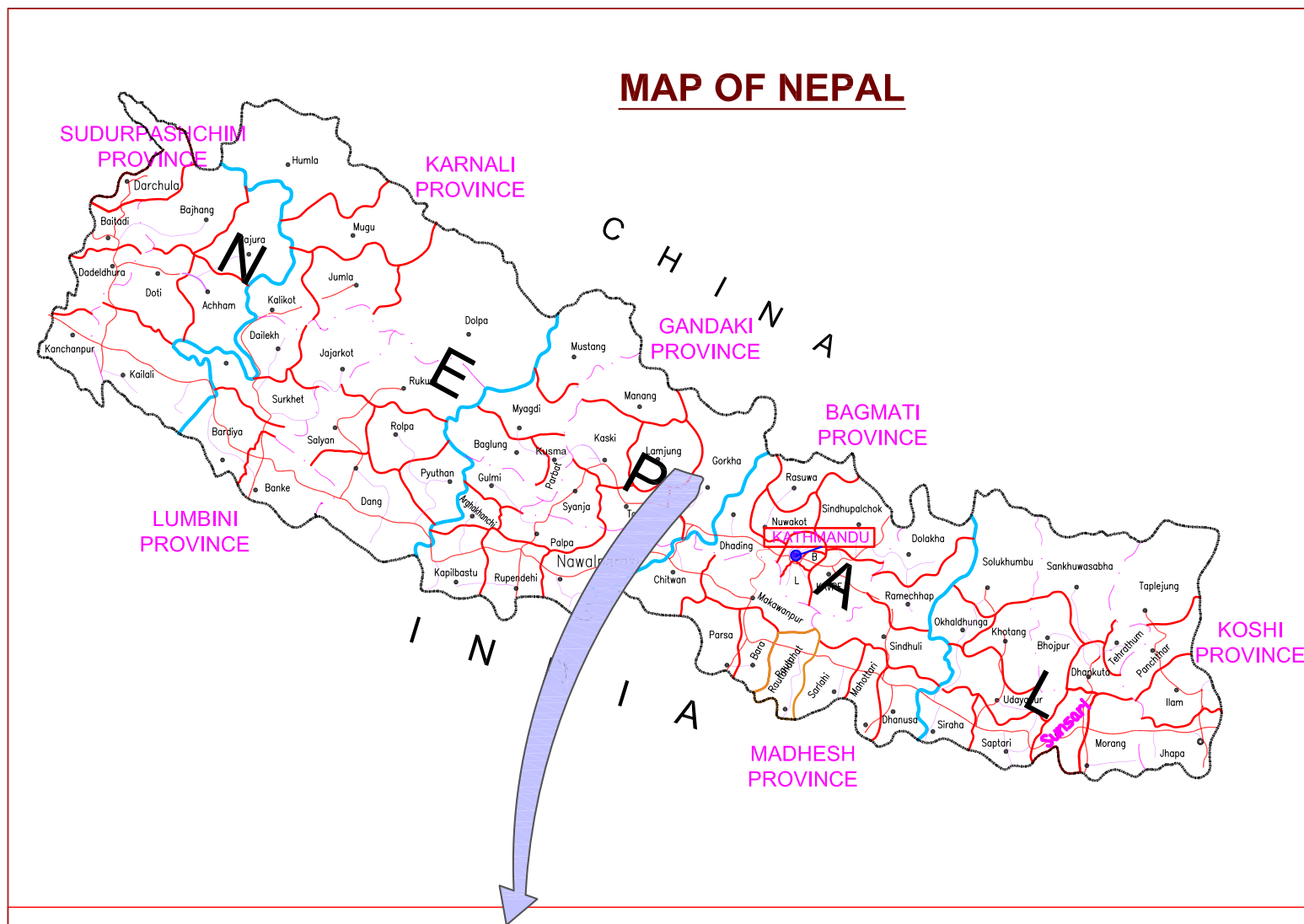
Submitted By :-

Plush Engineers and Architects (P.) Ltd. (PEA)
B.N. Consultancy Pvt. Ltd. (BN)
SOIL TEST (P.) Ltd.
(PEA-BN-Soil Test) JV Kathmandu, Nepal

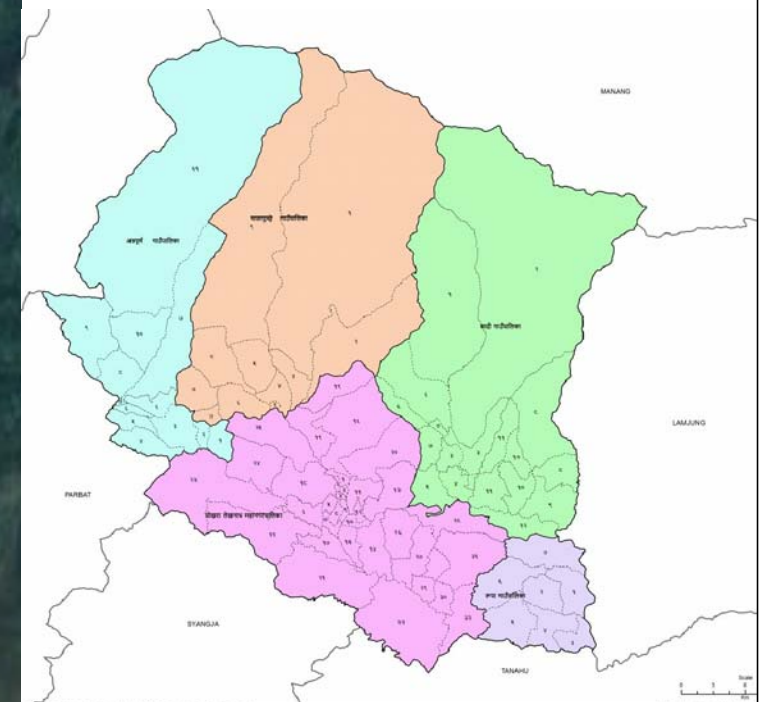
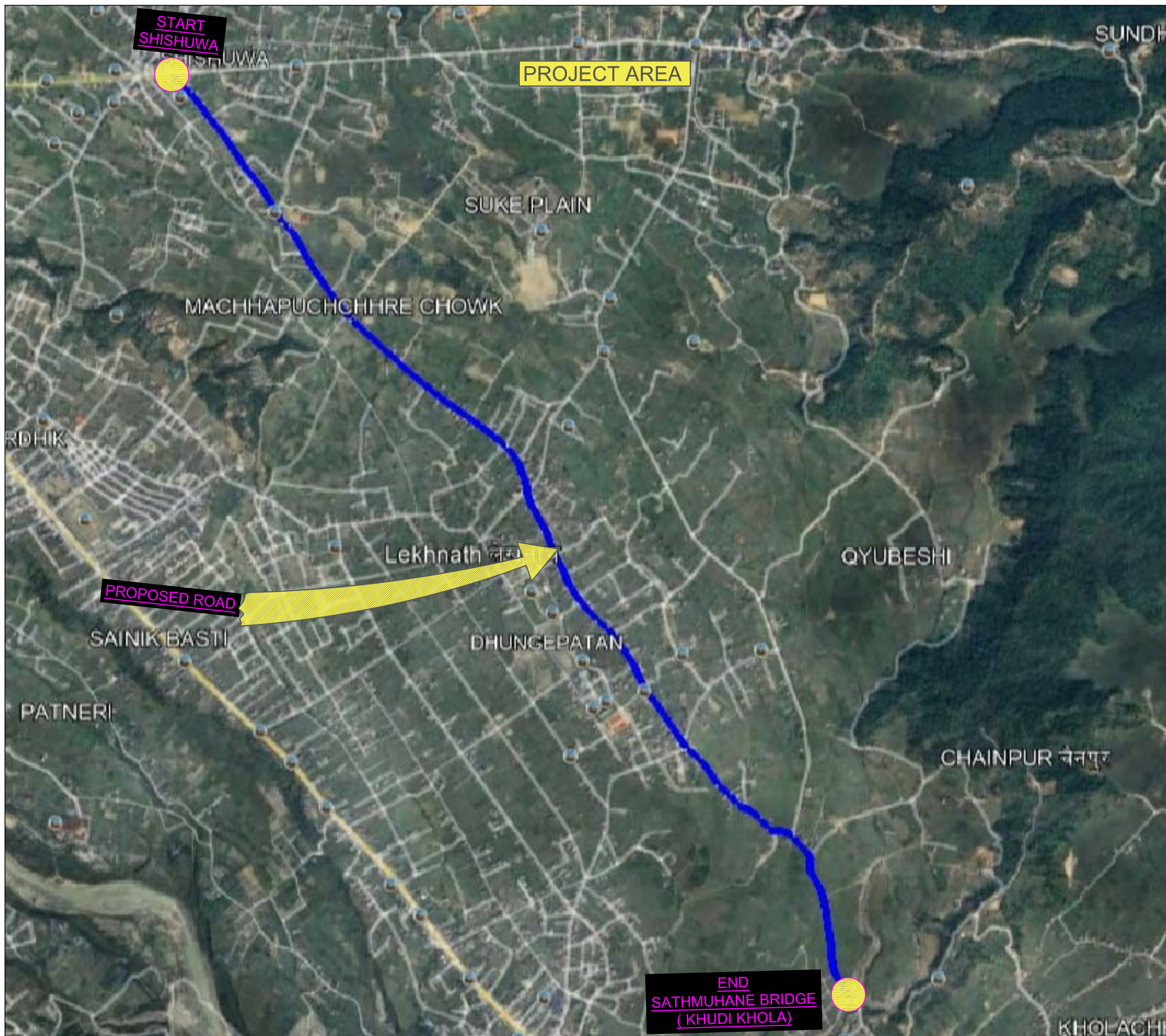
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INDEX MAP/LOCATION MAP



	<p>Nepal Urban Governance and Infrastructure Project (NUGIP) Office of the Municipal Executive Pokhara Metropolitan City Kaski District, Gandaki Province</p>	<p>CONSULTANT: Plush Engineers and Architects (P.) Ltd. (PEA) B.N. Consultancy Pvt. Ltd. (BN) Soil Test Consultancy (P.) Ltd. (Soil Test) Kathmandu, Nepal</p>	<p>Project Name:- Nepal Urban Governance and Infrastructure Project (NUGIP)</p>	<p>SHEET TITLE: INDEX MAP</p>	<p>DESIGNED BY: DRAWN BY: CHECKED BY: APPROVED BY:</p>	<p>Date: 2023 Scale: Chainage: Sheet No: 1</p>
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Nepal Urban Governance and Infrastructure Project (NUGIP)
Office of the Municipal Executive
Pokhara Metropolitan City
Kaski District, Gandaki Province

CONSULTANT:
Plush Engineers and Architects (P.) Ltd. (PEA)
B.N. Consultancy Pvt. Ltd. (BN)
Soil Test Consultancy (P.) Ltd. (Soil Test)
Kathmandu, Nepal

Project Name:- Nepal Urban Governance and Infrastructure Project (NUGIP)

SHEET TITLE:

LOCATION MAP

DESIGNED BY:

DRAWN BY:

CHECKED BY:

APPROVED BY:

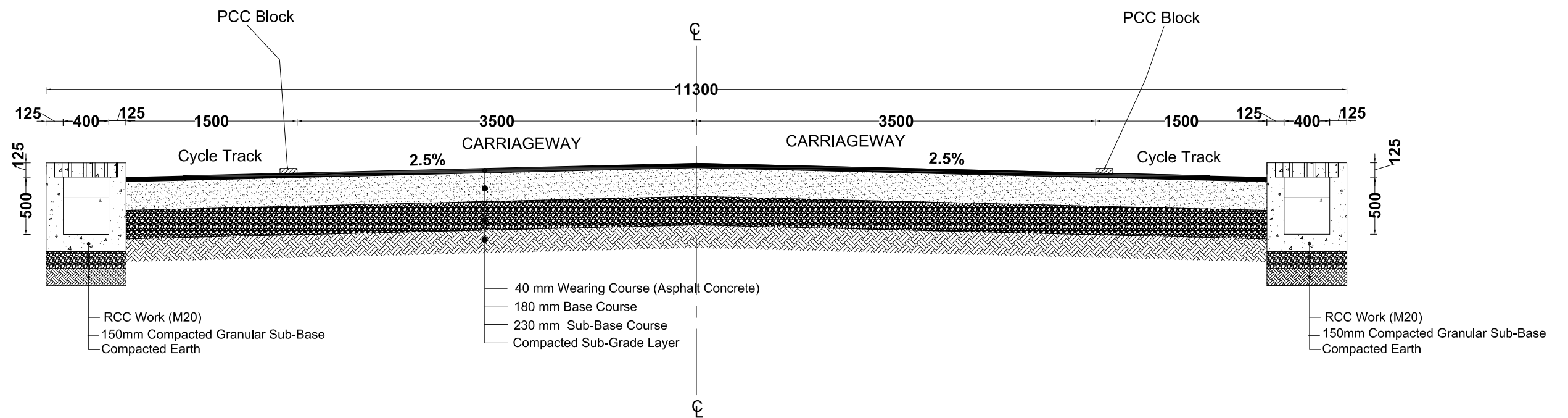
Date: 2023

Scale: Not in Scale



Chainage:

Sheet No: 1

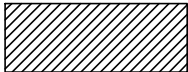
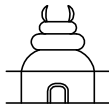



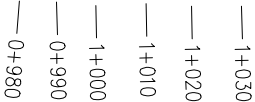
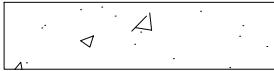
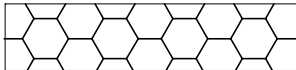


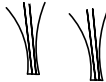
PROPOSED TYPICAL CROSS SECTION OF ROAD

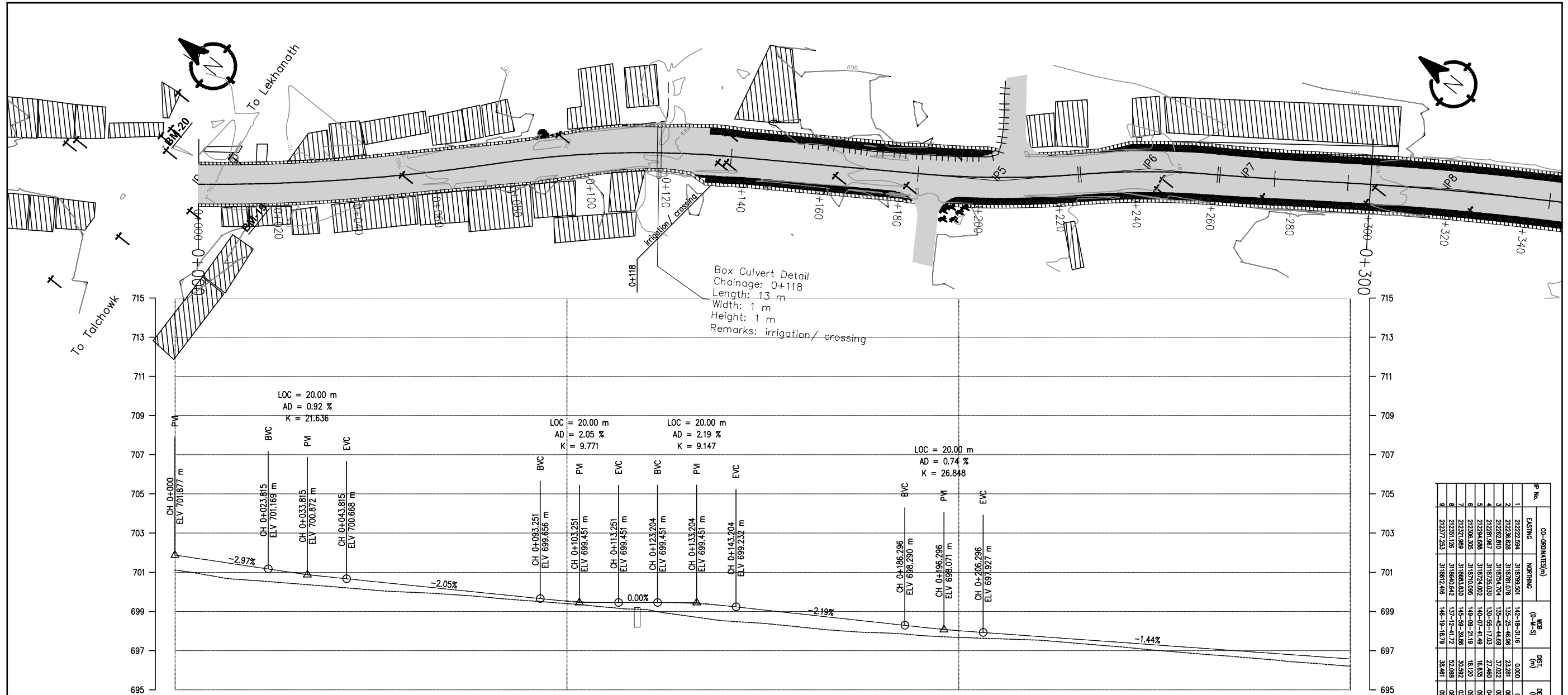


Scale 1:40
Typical Cross Section of Road For Settlement Area
From Chainage 0+000 to 0+120
Type A

	Nepal Urban Governance and Infrastructure Project (NUGIP) Office of the Municipal Executive Pokhara Metropolitan City Kaski District, Gandaki Province	CONSULTANT: Plush Engineers and Architects (P.) Ltd. (PEA) B.N. Consultancy Pvt. Ltd. (BN) Soil Test Consultancy (P.) Ltd. (Soll Test) Kathmandu, Nepal		Project Name:- Nepal Urban Governance and Infrastructure Project (NUGIP)	Sheet Title:- Proposed Typical Cross Section Of Road	DESIGNED BY :	Date : 2023
						DRAWN BY :	Scale : 1:40
						CHECKED BY :	Chainage :
						APPROVED BY :	Sheet No. : 1

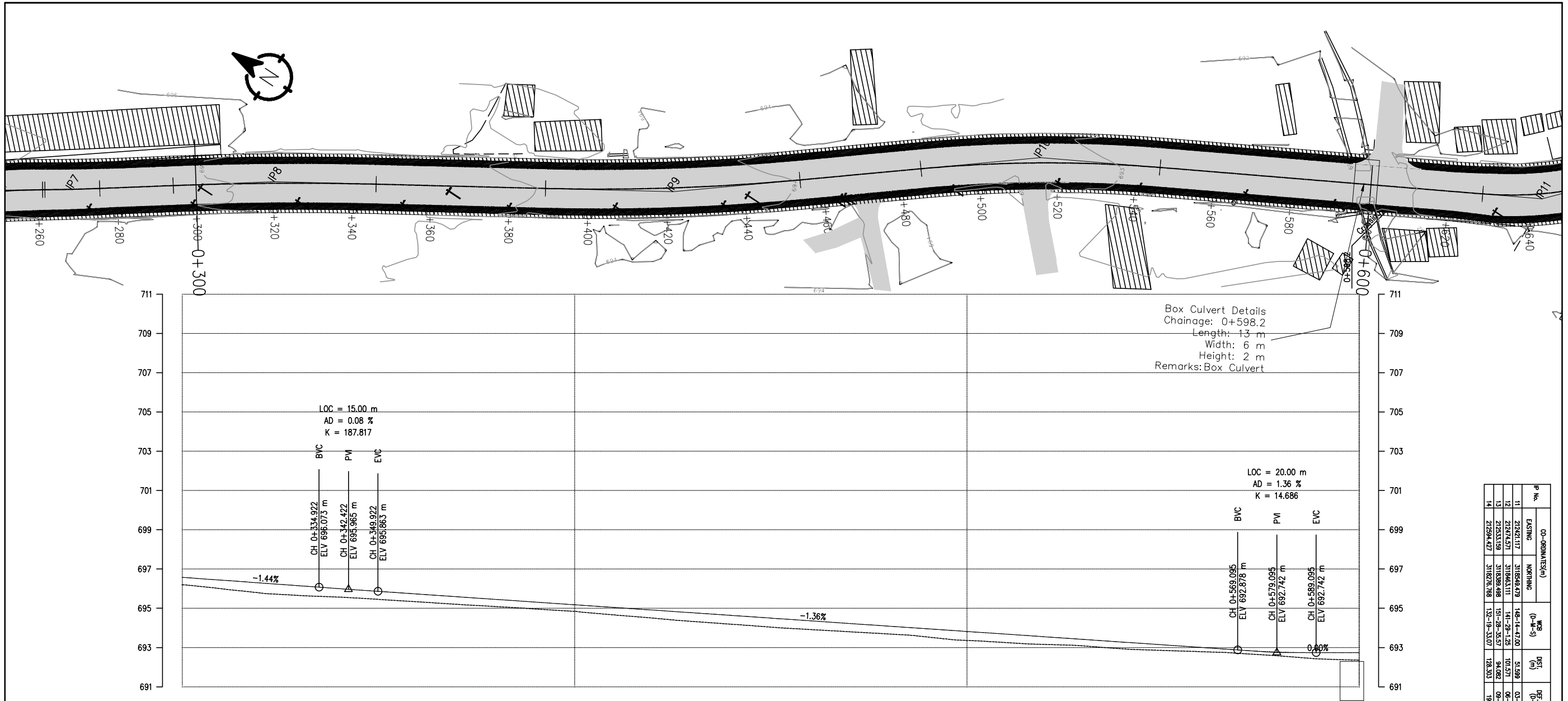
PROPOSED PLAN AND PROFILE

LEGEND	SYMBOL
Bench Mark	BM-1
Houses	
Temple	
RCC Electric pole	
Pipe Culvert	
Centreline	
Chainage	
Tick Drain	
Foot Path	
kerb stone	
Side Drain	
Bamboo	



DESIGN LEVEL(m)		701.877		701.283		700.749		700.336		699.927		699.541		699.451		699.297		698.865		698.428		698.025		697.730		697.441		697.153		696.865		696.576	
EXISTING LEVEL(m)		701.117		700.583		700.269		699.981		699.715		699.400		699.105		698.521		698.196		697.910		697.675		697.538		697.214		696.858		696.534		696.203	
CHAINAGE(Km)		0+000		0+020		0+040		0+060		0+080		0+100		0+120		0+140		0+160		0+180		0+200		0+220		0+240		0+260		0+280		0+300	
CUT/FILL (m)		0.760		0.699		0.480		0.355		0.212		0.141		0.346		0.776		0.669		0.518		0.351		0.192		0.228		0.295		0.330		0.373	
HORIZONTAL ALIGNMENT		RIGHT																															
		LEFT																															
SUPER ELEVATION		<div><div>IP-1 R=0.00</div><div>IP-2 R=385.00</div><div>IP-3 R=450.00</div><div>IP-4 R=160.00</div><div>IP-5 R=100.00</div><div>IP-6 R=125.00</div><div>IP-7 R=200.00</div><div>IP-8 R=200.00</div><div>IP-9 R=210.00</div><div>IP-10 R=450.00</div><div>IP-11 R=800.00</div></div>																															
		<div><div>NC</div><div>T</div><div>2.5</div><div>T</div><div>-4.5</div><div>T</div><div>-4</div><div>T</div><div>2.5</div><div>T</div><div>NC</div><div>T</div><div>2.5</div><div>T</div><div>-2.5</div><div>T</div><div>NC</div></div>																															
		<div><div>0+000</div><div>0+075.345</div><div>0+082.695</div><div>0+092.713</div><div>0+099.634</div><div>0+109.403</div><div>0+115.553</div><div>0+129.648</div><div>0+149.403</div><div>0+156.939</div><div>0+167.439</div><div>0+181.158</div><div>0+191.658</div><div>0+218.816</div><div>0+228.688</div><div>0+258.579</div><div>0+265.929</div><div>0+300</div></div>																															

P No.	CO-ORDINATES(m)		WGS (U-M-S)	DIST. (m)	DEF. ANG. (U-M-S)	TAL. LEN. (m)	SPLINE CURVE DATA			CHANGING			
	EXISTING	NORTHING					R (m)	E (m)	LC (m)	BC	MC	EC	IP
1	21222.594	3118799.501	142-18-31.16	0.000	00-00-00.00	0.000	0.000	0.000	0.000	0+000.000	0+000.000	0+000.000	0+000.000
2	21222.828	3118791.073	135-55-46.86	23.281	06-55-44.20	23.139	385.000	0.665	46.223	0+000.142	0+020.353	0+040.355	0+060.281
3	21226.810	3118754.704	135-55-44.89	37.022	00-19-57.74	1.307	450.000	0.002	2.813	0+058.941	0+080.248	0+094.554	0+094.554
4	21226.867	3118755.000	135-55-44.89	27.460	04-50-27.67	6.763	160.000	0.143	1.519	0+090.949	0+100.794	0+094.493	0+094.493
5	21234.688	3118724.002	140-07-41.49	18.335	09-12-24.46	8.052	100.000	0.324	18.089	0+096.484	0+100.518	0+104.535	0+104.535
6	21236.305	3118710.095	140-09-21.19	18.120	09-01-38.70	9.889	125.000	0.380	12.500	0+112.752	0+122.601	0+132.448	0+132.448
7	21237.989	3118683.830	145-59-39.86	30.992	03-09-41.33	5.519	200.000	0.070	11.036	0+147.653	0+153.171	0+158.989	0+158.989
8	21251.128	3118640.642	137-15-41.72	52.088	08-46-58.14	15.359	200.000	0.580	30.658	0+188.908	0+205.327	0+220.566	0+220.566
9	21257.253	3118612.416	146-19-18.79	38.461	09-06-37.07	18.731	210.000	0.665	33.391	0+228.339	0+243.833	0+260.329	0+260.329



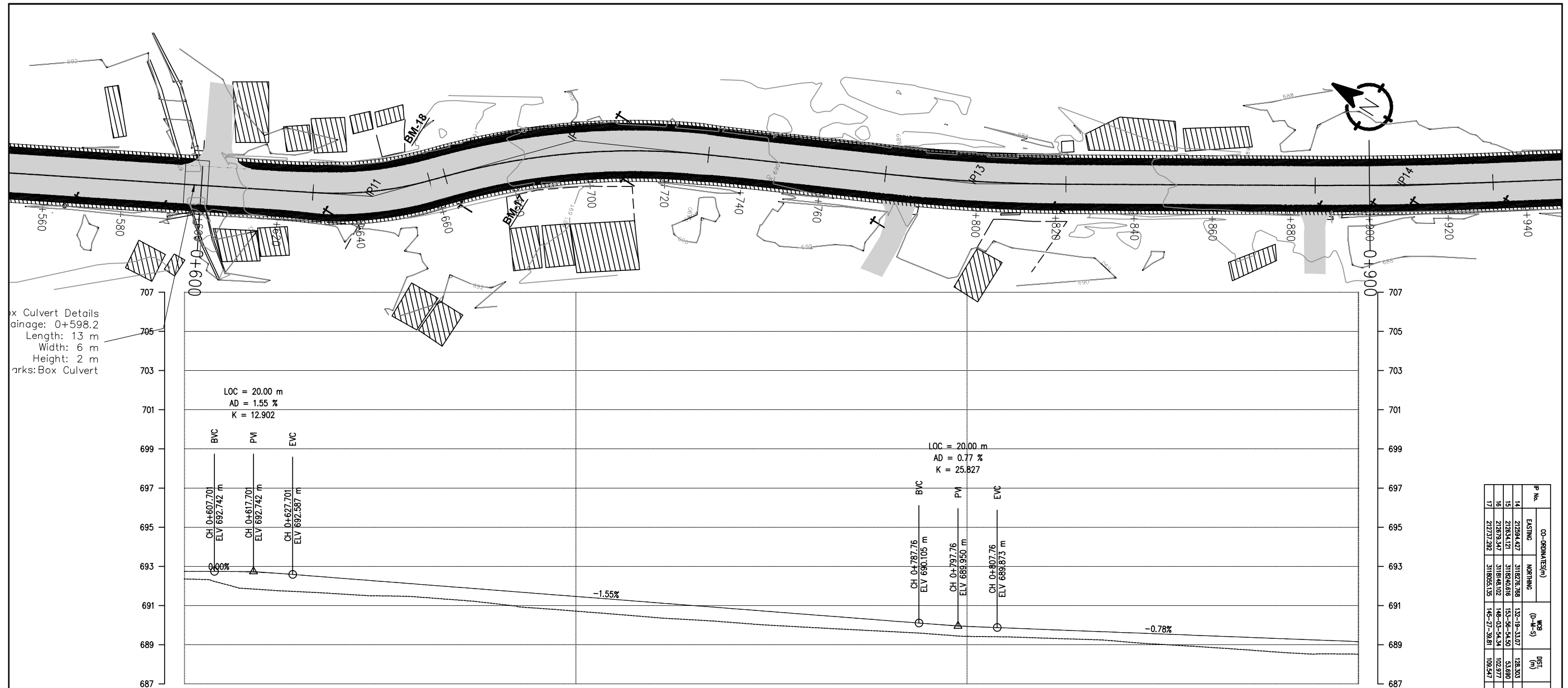
Box Culvert Details
Chainage: 0+598.2
Length: 13 m
Width: 6 m
Height: 2 m
Remarks: Box Culvert

LOC = 15.00 m
AD = 0.08 %
K = 187.817

LOC = 20.00 m
AD = 1.36 %
K = 14.686

DESIGN LEVEL(m)		696.576	696.288	696.000	695.725	695.453	695.181	694.908	694.636	694.364	694.091	693.819	693.546	693.274	693.002	692.742
EXISTING LEVEL(m)		696.203	695.777	695.569	695.329	695.087	694.840	694.500	694.187	693.919	693.692	693.363	693.158	692.931	692.788	692.358
CHAINAGE(Km)		0+300	0+320	0+340	0+360	0+380	0+400	0+420	0+440	0+460	0+480	0+500	0+520	0+540	0+560	0+600
CUT/FILL (m)		0.373	0.511	0.431	0.397	0.366	0.341	0.408	0.449	0.444	0.399	0.455	0.388	0.343	0.214	0.383
HORIZONTAL ALIGNMENT	RIGHT	IP-11 R=800.00														
	LEFT	IP-12 R=550.00														
SUPER ELEVATION		NC														

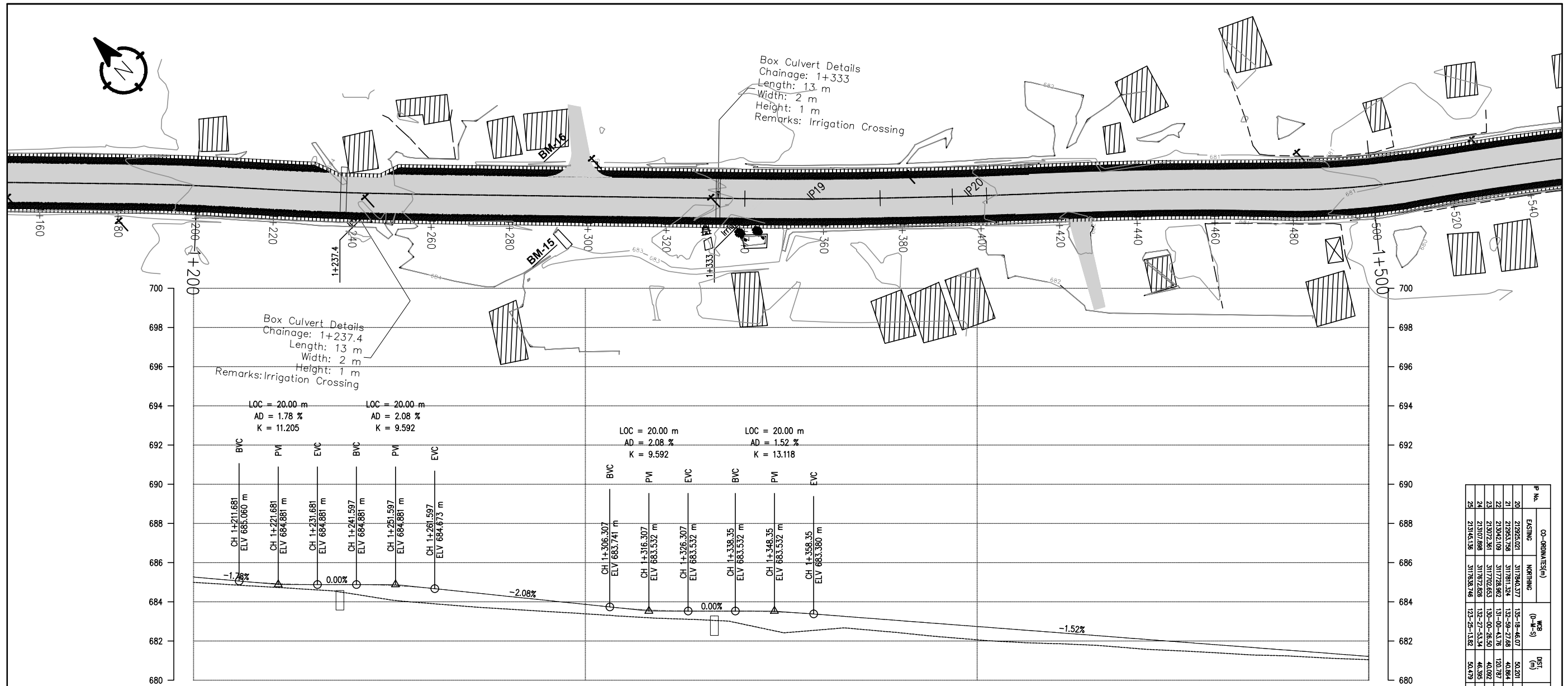
P No.	CO-ORDINATES(m)		WCS (0+M-3)	DIST. (m)	DEF. ANG. (0+M-3)	TAN. LEN. (m)	SPLINE CURVE DATA						CHANGING			
	EXISTING	NORTHING					R (m)	E (m)	LC (m)	BC	MC	EC	IP			
11	217421.117	3118546.479	1+8-14-47.00	51.999	03-42-12.98	25.865	800.000	0.000	0.018	64.917	0+294.456	0+320.312	0+346.188	0+370.321		
12	217474.571	3118463.111	1+1-29-12.35	101.571	06-45-45.74	32.489	500.000	0.000	0.959	64.917	0+389.717	0+424.836	0+454.994	0+487.874		
13	217533.159	3118398.498	151-29-35.57	94.082	09-59-34.32	30.699	300.000	0.000	1.335	61.043	0+485.281	0+515.662	0+546.324	0+578.860		
14	217594.427	3118276.788	132-0-13.07	28.303	19-09-2.50	15.183	900.000	0.000	1.722	30.082	0+628.945	0+654.966	0+686.927	0+714.028		



x Culvert Details
ainage: 0+598.2
Length: 13 m
Width: 6 m
Height: 2 m
arks: Box Culvert

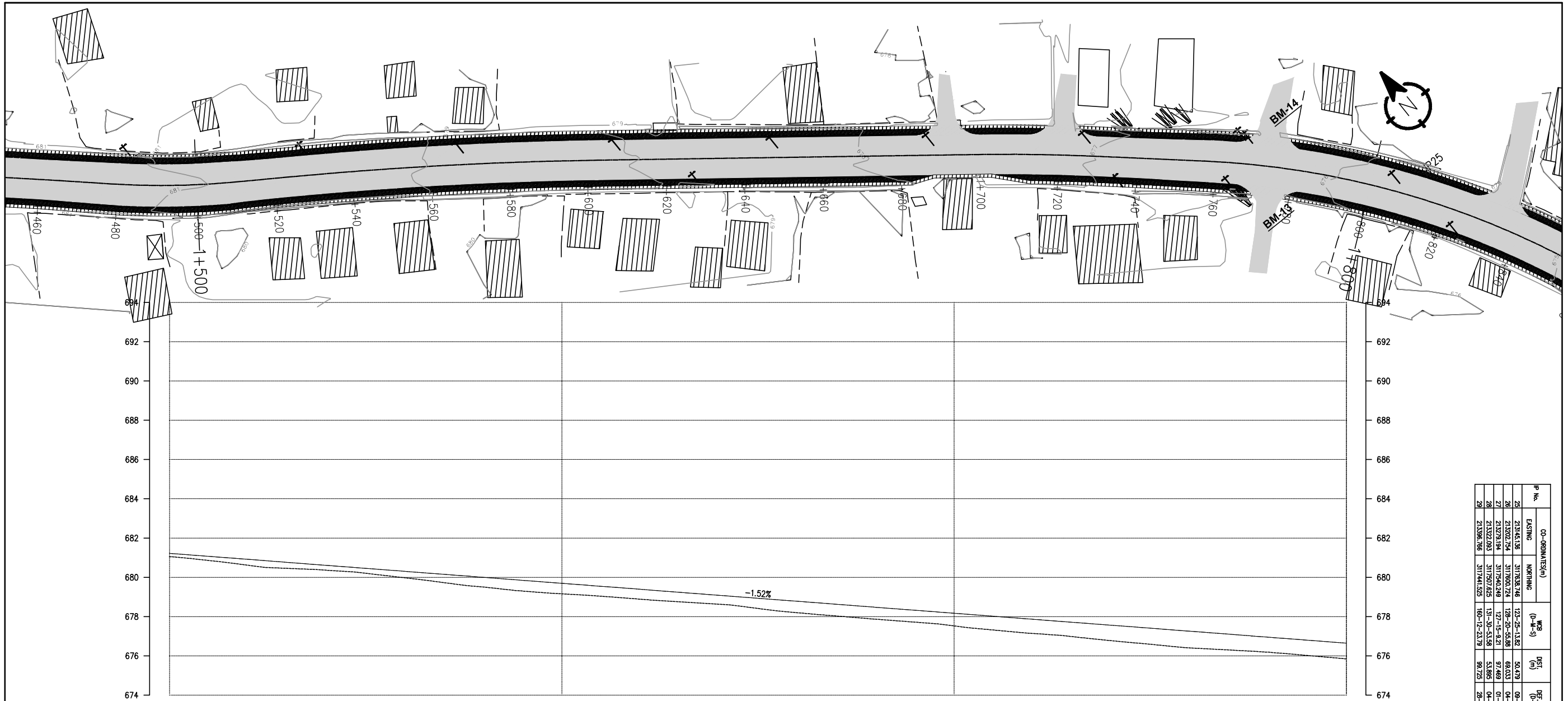
DESIGN LEVEL(m)	692.742	692.683	692.396	692.086	691.776	691.466	691.156	690.846	690.536	690.226	689.945	689.778	689.623	689.468	689.312	689.157
EXISTING LEVEL(m)	692.358	691.811	691.592	691.432	691.082	690.715	690.394	690.134	689.881	689.674	689.425	689.335	689.152	688.891	688.612	688.513
CHAINAGE(Km)	0+600	0+620	0+640	0+660	0+680	0+700	0+720	0+740	0+760	0+780	0+800	0+820	0+840	0+860	0+880	0+900
CUT/FILL (m)	0.383	0.872	0.804	0.654	0.693	0.751	0.761	0.712	0.654	0.552	0.520	0.442	0.471	0.576	0.701	0.644
HORIZONTAL ALIGNMENT	<div>RIGHT</div> <div>LEFT</div> <div>IP-14 R=90.00</div> <div>IP-15 R=180.00</div> <div>IP-16 R=450.00</div> <div>IP-17 R=1000.00</div>															
SUPER ELEVATION	<div>NC</div> <div>T</div> <div>2.5</div> <div>T</div> <div>-2.5</div> <div>T</div> <div>NC</div>															

P No	CO-ORDINATES(m)		NORTHING	EASTING	DIST. (m)	DEF. ANG. (°-M-S)	TAN. LEN. (m)	SAMPLE CURVE DATA				CHANGING			
	NO	COORDINATES(m)						R (m)	E (m)	LC (m)	BC	MC	EC	P	
14	27354.427	3118276.788	132-18-13.07	128.303	19-09-2.50	15.183	90.000	1.772	30.082	0+628.945	0+644.386	0+658.927	0+674.028	0+689.425	
15	27354.127	3118240.616	153-06-54.50	53.890	21-37-21.43	34.374	180.000	3.253	67.929	0+663.061	0+689.028	0+720.991	0+769.435	0+818.102	
16	27353.347	3118148.102	146-03-54.34	102.877	05-53-0.16	23.124	450.000	0.594	46.208	0+776.470	0+796.574	0+822.878	0+859.544	0+900.100	
17	27373.292	3118055.135	146-27-39.81	109.547	02-36-14.53	22.728	1000.000	0.289	45.449	0+898.372	0+900.086	0+931.821	0+968.100	0+1000.000	



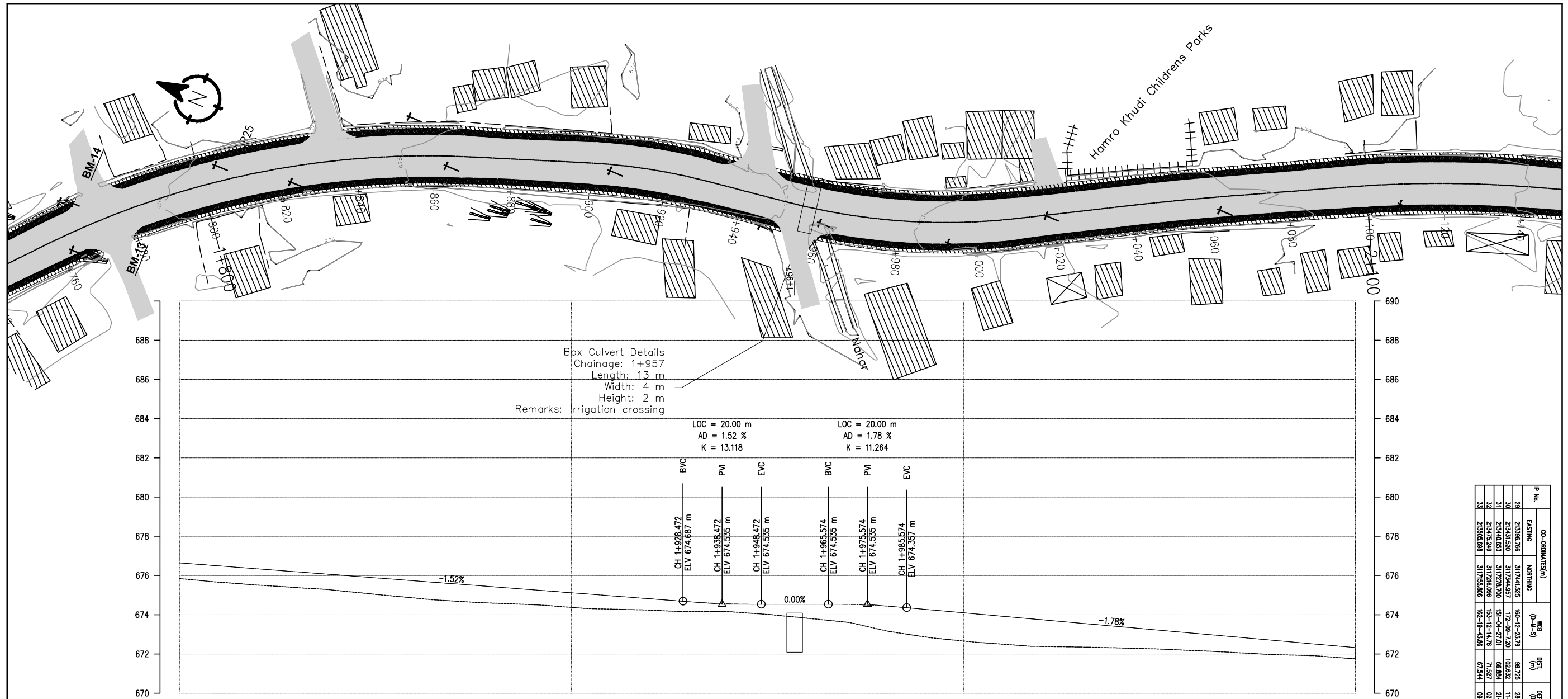
P No.	CO-ORDINATES (m)		WBS (0+00-50)	DIST. (m)	DEF. ANG. (°-M-S)	TAN. LEN. (m)	SPLINE CURVE DATA				CHAINAGE			
	EXISTING	NORTHING					R (m)	E (m)	LC (m)	BC	MC	EC	IP	
20	21295.021	311784.377	135-18-46.07	50.00	02-25-21.34	10.572	500.000	0.112	21.41	1+185.144	1+185.714	1+206.285	1+185.716	
21	21295.798	311781.324	132-09-27.68	40.84	02-19-18.38	17.224	850.000	0.175	34.444	1+218.555	1+238.575	1+258.577	1+238.577	
22	21304.109	311778.962	131-00-43.78	120.787	01-58-43.92	17.277	100.000	0.149	34.538	1+340.088	1+359.597	1+374.928	1+357.599	
23	21307.361	311770.653	130-00-26.50	40.292	01-00-17.26	4.384	500.000	0.019	6.789	1+393.065	1+397.447	1+401.832	1+397.447	
24	21310.888	311767.868	132-27-53.34	46.395	02-27-28.84	12.449	100.000	0.230	42.891	1+422.393	1+443.839	1+458.284	1+443.842	
25	21314.138	311763.748	132-25-13.82	50.479	09-02-39.52	15.818	200.000	0.625	31.571	1+478.497	1+494.282	1+510.087	1+494.315	

DESIGN LEVEL(m)		685.268	684.942	684.881	684.705	684.289	683.872	683.553	683.531	683.354	683.049	682.745	682.440	682.135	681.830	681.525	681.220
EXISTING LEVEL(m)		684.994	684.751	684.427	683.926	683.633	683.391	683.156	682.876	682.572	682.430	682.066	681.867	681.632	681.413	681.235	681.050
CHAINAGE(Km)		1+200	1+220	1+240	1+260	1+280	1+300	1+320	1+340	1+360	1+380	1+400	1+420	1+440	1+460	1+480	1+500
CUT/FILL (m)		0.274	0.192	0.454	0.779	0.656	0.481	0.397	0.655	0.782	0.619	0.679	0.573	0.503	0.417	0.290	0.170
HORIZONTAL ALIGNMENT	RIGHT	IP-20 R=500.00															
	LEFT	IP-21 R=850.00															
SUPER ELEVATION		NC															



P No.	CO-ORDINATES(m)		WBS (0+M-3)	DIST (m)	DEF. ANG. (0+M-3)	TAN. LEN. (m)	SPLINE CURVE DATA				CHANGING			
	EXISTING	NORTHING					R (m)	E (m)	LC (m)	BC	MC	EC	IP	
25	213145.136	3117638.746	123-25-13.82	50.479	09-02-39.52	15.818	200.000	0.625	31.571	1+478.497	1+494.282	1+510.087	1+494.315	
26	213202.754	3117600.724	128-20-55.88	69.033	04-55-42.06	43.035	1000.000	0.939	68.016	1+520.248	1+565.256	1+606.263	1+565.282	
27	213273.194	3117540.249	127-15-9.21	97.469	01-05-46.66	4.794	500.000	0.023	9.567	1+655.914	1+660.688	1+665.481	1+660.688	
28	213322.003	3117507.625	131-30-53.58	53.895	04-15-44.36	18.003	500.000	0.346	37.196	1+714.584	1+717.584	1+723.182	1+714.583	
29	213386.768	3117441.529	160-12-23.79	99.725	28-41-30.22	56.285	220.000	7.081	110.168	1+759.036	1+813.120	1+868.205	1+814.301	

DESIGN LEVEL(m)	681.220	680.915	680.610	680.305	680.000	679.695	679.390	679.086	678.781	678.476	678.171	677.866	677.561	677.256	676.951	676.646
EXISTING LEVEL(m)	681.050	680.617	680.361	679.977	679.506	679.160	678.887	678.631	678.199	677.868	677.526	677.143	676.775	676.405	676.186	675.845
CHAINAGE(Km)	1+500	1+520	1+540	1+560	1+580	1+600	1+620	1+640	1+660	1+680	1+700	1+720	1+740	1+760	1+780	1+800
CUT/FILL (m)	0.170	0.298	0.249	0.328	0.494	0.536	0.504	0.455	0.582	0.608	0.645	0.723	0.786	0.851	0.765	0.801
HORIZONTAL ALIGNMENT	RIGHT	IP-26 R=1000.00														
	LEFT	IP-25 R=200.00														
SUPER ELEVATION	RIGHT	NC														
	LEFT	NC														



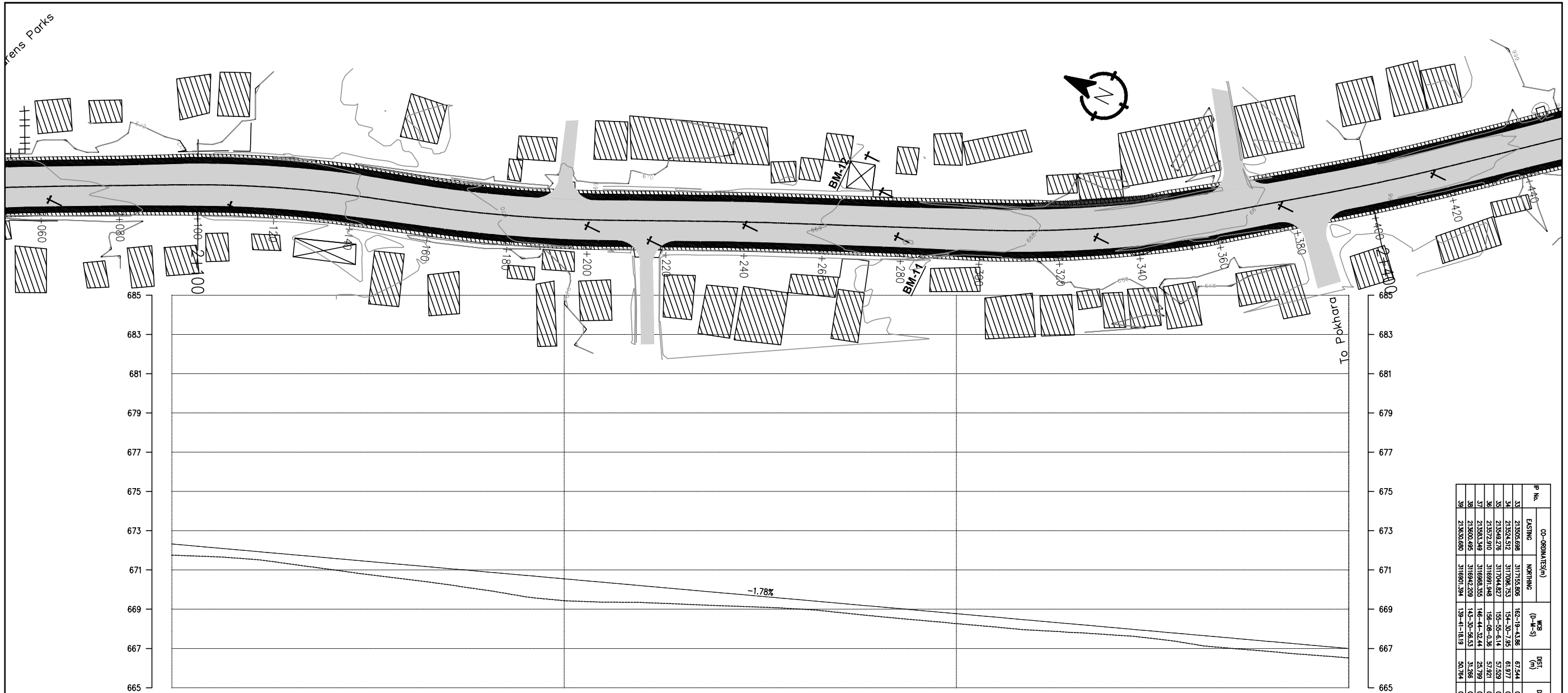
Box Culvert Details
Chainage: 1+957
Length: 13 m
Width: 4 m
Height: 2 m
Remarks: Irrigation crossing

LOC = 20.00 m
AD = 1.52 %
K = 13.118

LOC = 20.00 m
AD = 1.78 %
K = 11.264

DESIGN LEVEL(m)	676.646	676.341	676.036	675.731	675.426	675.122	674.817	674.562	674.355	674.443	674.101	673.746	673.391	673.036	672.681	672.326
	675.845	675.508	675.239	674.854	674.593	674.375	674.234	674.162	673.827	673.194	672.663	672.384	672.306	672.166	671.963	671.756
CHAINAGE(Km)	1+800	1+820	1+840	1+860	1+880	1+900	1+920	1+940	1+960	1+980	2+000	2+020	2+040	2+060	2+080	2+100
CUT/FILL (m)	0.801	0.834	0.797	0.878	0.834	0.747	0.583	0.400	0.708	1.249	1.439	1.362	1.085	0.869	0.718	0.570
HORIZONTAL ALIGNMENT	IP-29 R=220.00															
	IP-30 R=150.00															
SUPER ELEVATION	IP-31 R=160.00															
	IP-32 R=608.00															
HORIZONTAL ALIGNMENT	IP-33 R=340.00															
	IP-34 R=340.00															
SUPER ELEVATION	IP-35 R=340.00															
	IP-36 R=340.00															

P No.	CO-ORDINATES		NORTHING	EASTING	DIST. (m)	DEF. ANG. (°-M-S)	TAN. LEN. (m)	SPLINE CURVE DATA				CHANGING			
								R (m)	E (m)	LC (m)	BC	MC	EC	P	
28	21306.766	317144.525	160-12-23.79	99.275	28-41-30.22	56.285	220.000	7.081	110.168	1+738.026	1+812.120	1+886.205	1+960.301	1+934.301	
29	21343.500	317144.527	172-09-17.20	102.632	11-56-43.41	15.693	150.000	0.819	31.273	1+888.878	1+914.514	1+930.151	1+944.571	1+914.571	
30	21344.653	317278.700	151-04-27.01	66.884	21-04-40.20	29.707	280.000	2.745	58.880	1+886.005	2+010.335	2+084.495	2+158.185	2+052.185	
31	21343.249	317278.698	153-12-14.78	71.527	02-07-47.77	11.302	600.000	0.105	22.602	2+040.893	2+052.194	2+063.495	2+074.495	2+052.195	
32	21306.698	317155.806	162-18-43.86	67.244	09-07-28.08	23.939	300.000	0.541	47.777	2+056.797	2+118.886	2+143.574	2+118.786	2+118.786	



P No.	CO-ORDINATES(m)		WCB (0+0-5)	DIST. (m)	DEF. ANG. (°-M-S)	TAL. LEN. (m)	SPLINE CURVE DATA				CHANGING			
	EXISTING	NORTHING					R (m)	E (m)	LC (m)	BC	WC	EC	IP	
33	21356.688	3117155.065	182-19-43.86	67.244	09-07-29.08	23.939	300.000	0.954	47.777	24095.797	24111.686	24143.574	24181.736	
34	21354.512	3117096.753	154-30-7.85	61.618	07-49-35.81	23.942	300.000	0.818	47.810	24157.070	24181.575	24205.480	24181.612	
35	21354.278	3117044.827	155-55-6.14	57.529	01-24-58.18	6.179	500.000	0.039	12.358	24232.887	24233.066	24445.245	24233.067	
36	21357.290	3116991.948	156-08-0.36	57.821	00-12-54.23	0.939	500.000	0.000	1.877	24296.048	24296.987	24397.925	24296.987	
37	21363.349	3116968.305	146-44-32.44	25.799	09-23-27.92	74.641	300.000	1.079	48.172	24298.145	24322.731	24341.315	24322.786	
38	21360.485	3116942.209	143-30-56.53	31.266	03-13-35.92	5.633	200.000	0.079	11.263	24348.309	24353.940	24359.572	24353.942	
39	213630.680	3116901.394	139-41-18.19	50.294	03-49-38.34	16.708	500.000	0.279	33.400	24387.986	24401.696	24421.396	24401.703	

DESIGN LEVEL(m)		672.326	671.971	671.615	671.260	670.905	670.550	670.195	669.840	669.485	669.130	668.775	668.419	668.064	667.709	667.354	666.999
EXISTING LEVEL(m)		671.756	671.553	671.039	670.523	669.974	669.438	669.342	669.178	669.007	668.634	668.267	667.927	667.688	667.232	666.847	666.517
CHAINAGE(Km)		2+100	2+120	2+140	2+160	2+180	2+200	2+220	2+240	2+260	2+280	2+300	2+320	2+340	2+360	2+380	2+400
CUT/FILL (m)		0.570	0.417	0.576	0.737	0.931	1.112	0.853	0.662	0.478	0.496	0.508	0.492	0.376	0.477	0.507	0.482
HORIZONTAL ALIGNMENT	RIGHT	IP-33 R=300.00															
	LEFT	IP-34 R=350.00															
SUPER ELEVATION		NC															

Nepal Urban Governance and Infrastructure Project (NUGIP)

Office of the Municipal Executive
Pokhara Metropolitan City
Kaski District, Gandaki Province



CONSULTANT:

Plush Engineers and Architects (P.) Ltd. (PEA)
B.N. Consultancy Pvt. Ltd. (BN)
Soil Test Consultancy (P.) Ltd. (Soil Test)
Kathmandu, Nepal



Project Name:- Nepal Urban Governance
and Infrastructure Project (NUGIP)



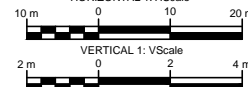
DESIGNED BY :

DRAWN BY :

CHECKED BY :

APPROVED BY :

SCALE



Plan & Profile

2+100-2+400

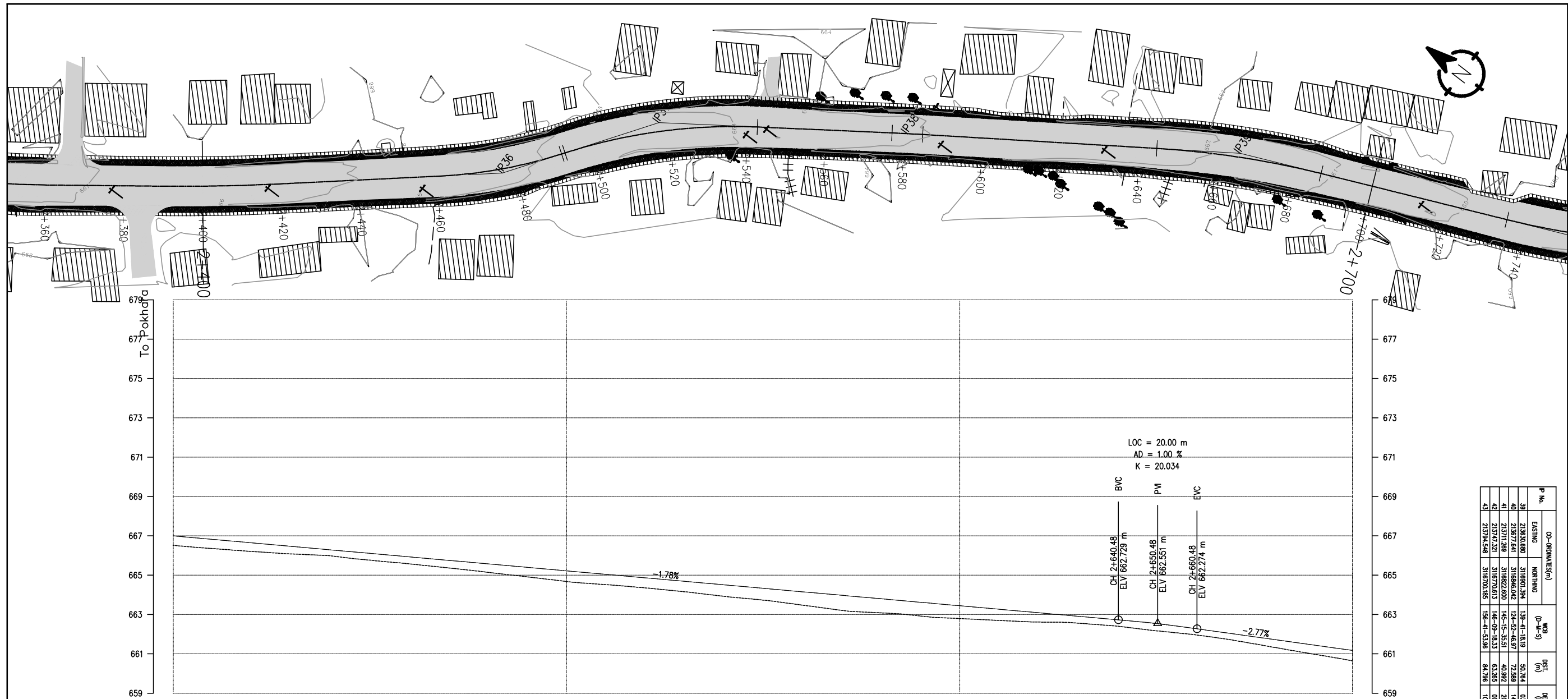
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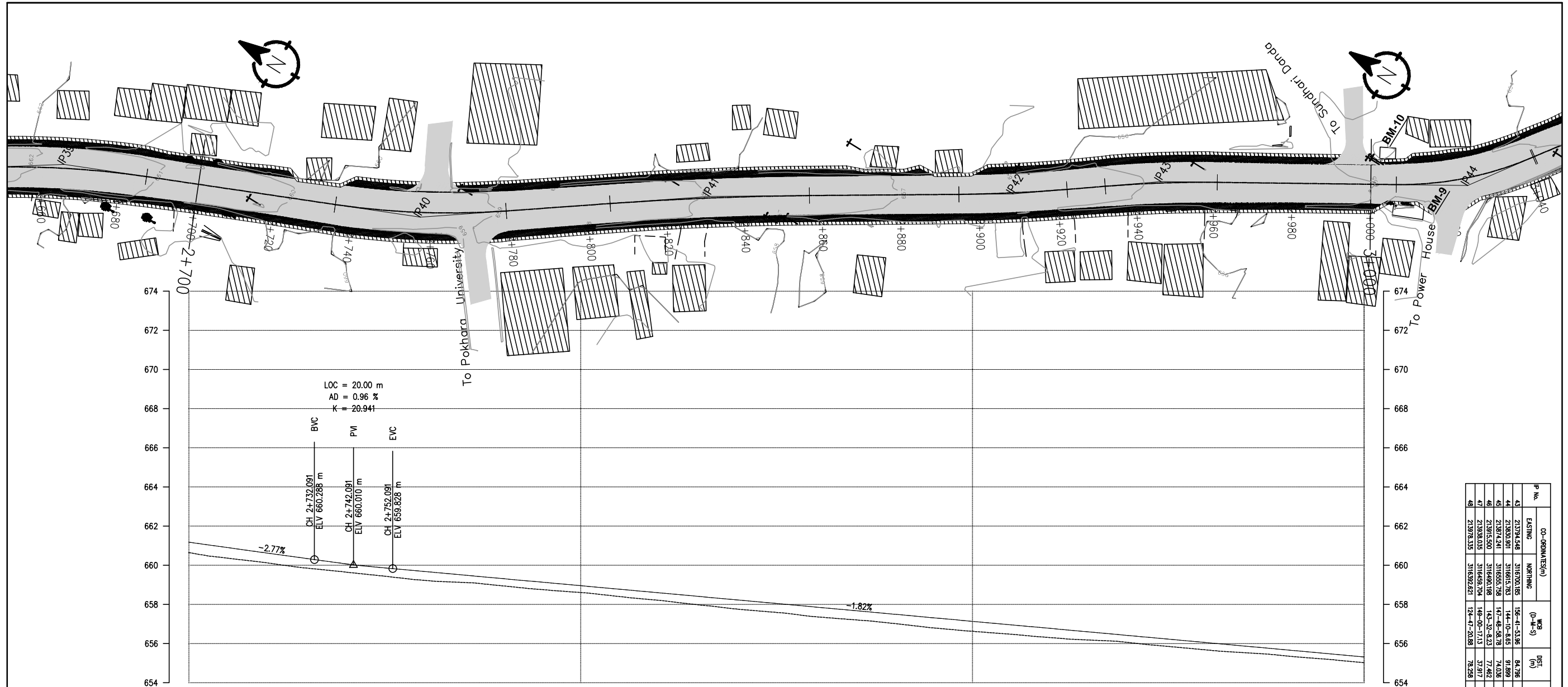
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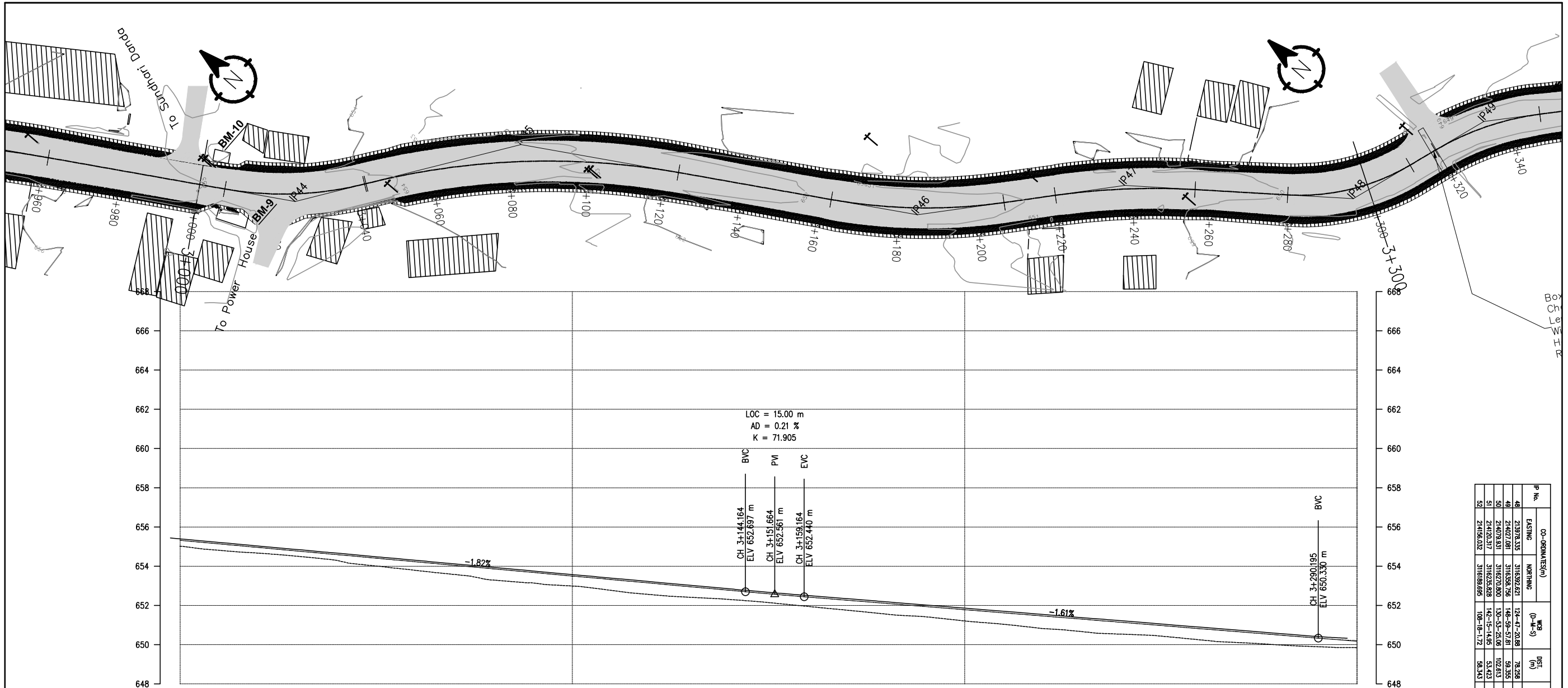
P No.	CO-ORDINATES(N)		WCB (0+M-S)	DIST (m)	DEF. ANG. (0+M-S)	TAN LEN. (m)	SAMPLE CURVE DATA				CHANGING			
	EASTING	NORTHING					R (m)	E (m)	LC (m)	BC	MC	EC	P	
39	21363.680	3116901.394	139-41-16.19	50.764	03-49-38.34	16.706	500.000	0.279	33.000	2+397.996	2+404.696	2+421.396	2+438.096	
40	21367.641	3116946.042	124-52-46.87	72.889	14-48-31.21	15.965	100.000	1.000	31.015	2+461.665	2+471.163	2+482.700	2+492.729	
41	21371.289	3116922.000	146-09-18.33	40.892	20-22-48.54	25.165	140.000	2.244	46.798	2+502.933	2+517.632	2+534.731	2+550.088	
42	21374.121	3116700.613	156-44-53.96	63.265	00-53-42.82	3.909	500.000	0.015	7.812	2+576.935	2+590.831	2+604.728	2+618.627	
43	21374.548	3116700.185	156-44-53.96	84.796	10-32-35.63	21.222	200.000	0.977	42.323	2+644.408	2+668.587	2+692.766	2+716.945	

DESIGN LEVEL(m)	666.999	666.644	666.289	665.934	665.578	665.223	664.868	664.513	664.158	663.803	663.448	663.093	662.737	662.382	661.778
EXISTING LEVEL(m)	666.517	666.209	665.984	665.578	665.147	664.681	664.357	663.928	663.481	663.085	662.797	662.616	662.414	661.969	660.649
CHAINAGE(Km)	2+400	2+420	2+440	2+460	2+480	2+500	2+520	2+540	2+560	2+580	2+600	2+620	2+640	2+660	2+700
CUT/FILL (m)	0.482	0.435	0.305	0.356	0.431	0.542	0.511	0.585	0.677	0.718	0.651	0.476	0.324	0.318	0.528
HORIZONTAL ALIGNMENT	RIGHT	IP-39 R=500.00													
	LEFT	IP-40 R=120.00													
SUPER ELEVATION	RIGHT	NC													
	LEFT	NC													
		2+400	2+450.835	2+464.485	2+489.9	2+495.383	2+540.281	2+552.881	2+629.822	2+647.322	2+683.812	2+700			



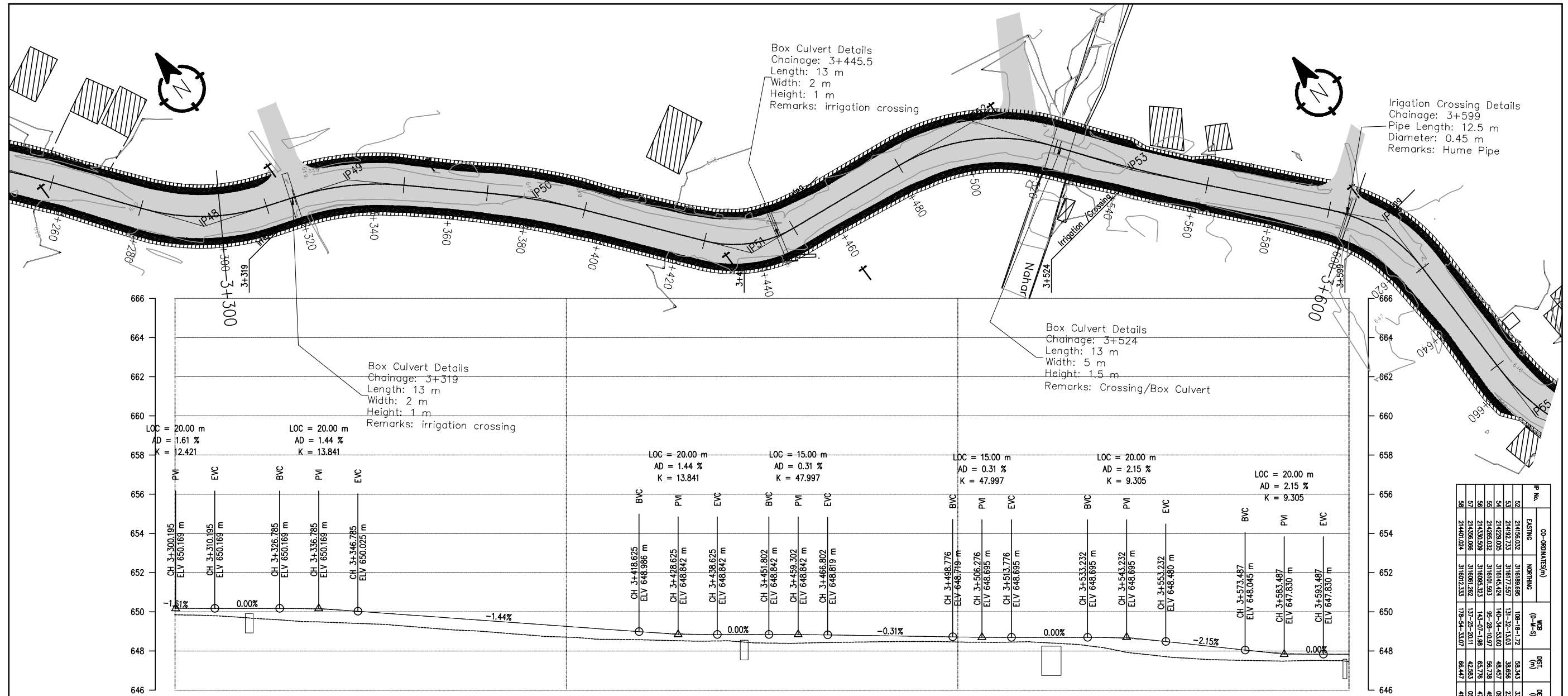
P No.	CO-ORDINATES(N)		WCB (0+0-5)	DIST (m)	DEF. ANG. (0+0-5)	TAL. LEN. (m)	SPLINE CURVE DATA				CHANGING			
	EXISTING	NORTHING					R (m)	E (m)	LC (m)	BC	WC	EC	P	
43	21794.548	316700.185	156-41-53.96	84.796	10-32-35.63	21.222	230.000	0.977	42.323	2+444.406	2+466.587	2+488.729	2+466.627	
44	21793.901	316695.783	144-10-8.85	91.899	12-31-45.31	12.955	200.000	1.201	43.725	2+475.451	2+475.288	2+475.186	2+475.406	
45	21797.241	316655.758	147-48-58.78	74.038	03-38-50.13	25.471	800.000	0.465	50.925	2+495.796	2+495.258	2+495.121	2+495.267	
46	217915.500	316460.194	143-32-8.23	77.462	04-16-50.55	13.828	300.000	0.289	27.644	2+498.889	2+498.706	2+498.527	2+498.712	
47	21793.035	316459.704	148-00-17.13	37.817	05-28-8.90	14.339	300.000	0.342	28.636	2+502.287	2+499.605	2+498.023	2+498.616	
48	21797.335	316392.621	124-47-20.88	78.258	24-12-56.25	18.235	85.000	1.934	35.925	3+006.617	3+006.580	3+006.542	3+006.582	

DESIGN LEVEL(m)	661.178	660.623	660.083	659.684	659.321	658.957	658.593	658.229	657.866	657.502	657.138	656.774	656.411	656.047	655.683	655.319
EXISTING LEVEL(m)	660.649	660.121	659.653	659.230	658.949	658.608	658.211	657.760	657.372	657.028	656.628	656.305	656.052	655.673	655.374	655.024
CHAINAGE(Km)	2+700	2+720	2+740	2+760	2+780	2+800	2+820	2+840	2+860	2+880	2+900	2+920	2+940	2+960	2+980	3+000
CUT/FILL (m)	0.528	0.502	0.430	0.455	0.372	0.348	0.382	0.470	0.494	0.474	0.510	0.469	0.358	0.374	0.309	0.295
HORIZONTAL ALIGNMENT	<div><div>RIGHT</div><div>LEFT</div></div> <div><div>IP-44 R=200.00</div><div>IP-45 R=800.00</div><div>IP-46 R=370.00</div><div>IP-47 R=300.00</div></div>															
SUPER ELEVATION	<div><div>T</div><div>NC</div><div>T</div><div>2.5</div><div>T</div><div>NC</div></div> <div><div>2+700</div><div>2+720</div><div>2+740</div><div>2+760</div><div>2+780</div><div>2+800</div><div>2+820</div><div>2+840</div><div>2+860</div><div>2+880</div><div>2+900</div><div>2+920</div><div>2+940</div><div>2+960</div><div>2+980</div><div>3+000</div></div>															



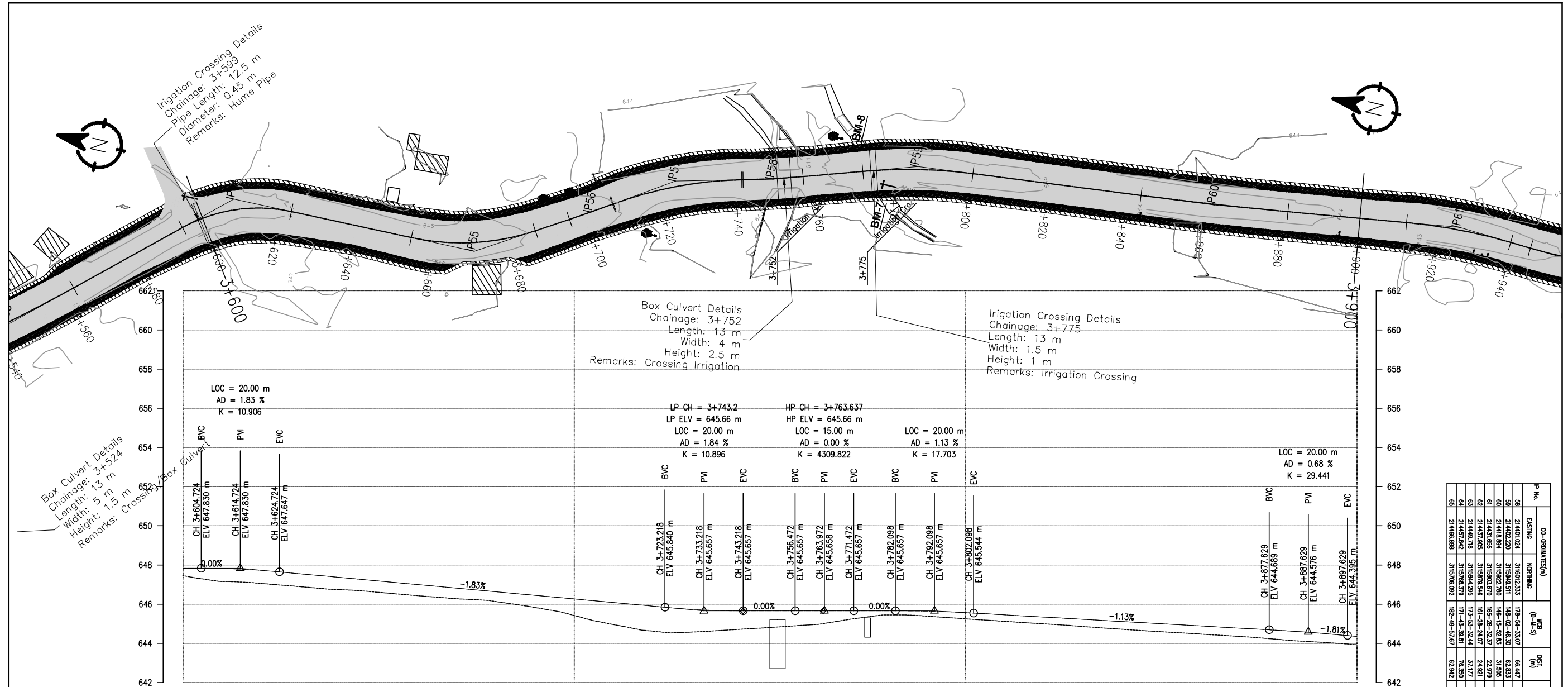
P No.	CO-ORDINATES		WBS (0+M-S)	DIST (m)	DEF. ANG. (0+M-S)	TAN LEN. (m)	SPLINE CURVE DATA				CHANGING			
	EXISTING	NORTHING					R (m)	E (m)	LC (m)	BC	MC	EC	P	
40	213978.335	3116392.621	124-07-20.88	78.258	24-12-56.25	18.235	85.000	1.934	35.925	3+006.617	3+022.580	3+024.652	3+024.652	
49	214027.081	3116358.756	148-09-57.81	59.555	24-12-36.94	40.750	180.000	4.321	80.294	3+042.912	3+080.034	3+123.196	3+123.196	
50	214073.831	3116270.000	130-53-25.06	102.813	18-08-32.75	22.310	140.000	1.787	44.249	3+182.748	3+181.673	3+180.698	3+180.698	
51	214120.317	3116255.828	142-51-4.85	53.423	11-21-48.88	17.900	180.000	0.889	35.701	3+220.201	3+238.051	3+255.901	3+255.901	
52	214156.032	3116189.666	108-18-17.22	58.343	33-57-13.23	18.791	55.000	2.585	32.593	3+273.545	3+286.841	3+121.138	3+286.336	

DESIGN LEVEL(m)	655.319	654.955	654.592	654.228	653.864	653.500	653.137	652.773	652.426	652.104	651.782	651.460	651.138	650.816	650.494	650.211
EXISTING LEVEL(m)	655.024	654.668	654.300	653.790	653.292	652.989	652.553	652.306	651.952	651.560	651.211	650.821	650.537	650.246	649.989	649.849
CHAINAGE(Km)	3+000	3+020	3+040	3+060	3+080	3+100	3+120	3+140	3+160	3+180	3+200	3+220	3+240	3+260	3+280	3+300
CUT/FILL (m)	0.295	0.288	0.291	0.438	0.572	0.511	0.583	0.467	0.474	0.544	0.571	0.640	0.601	0.570	0.505	0.362
HORIZONTAL ALIGNMENT	RIGHT		LEFT		RIGHT		LEFT		RIGHT		LEFT		RIGHT		LEFT	
	IP-48 R=85.00		IP-49 R=190.00		IP-50 R=140.00		IP-51 R=180.00		IP-52 R=55.00							
SUPER ELEVATION	NC		T		NC		T		NC		T		NC		T	
	3+000.007	3+008.367	3+040.792	3+044.662	3+121.446	3+128.796	3+156.099	3+164.499	3+205.248	3+221.951	3+254.151	3+261.501	3+273.945	3+281.295	3+300	



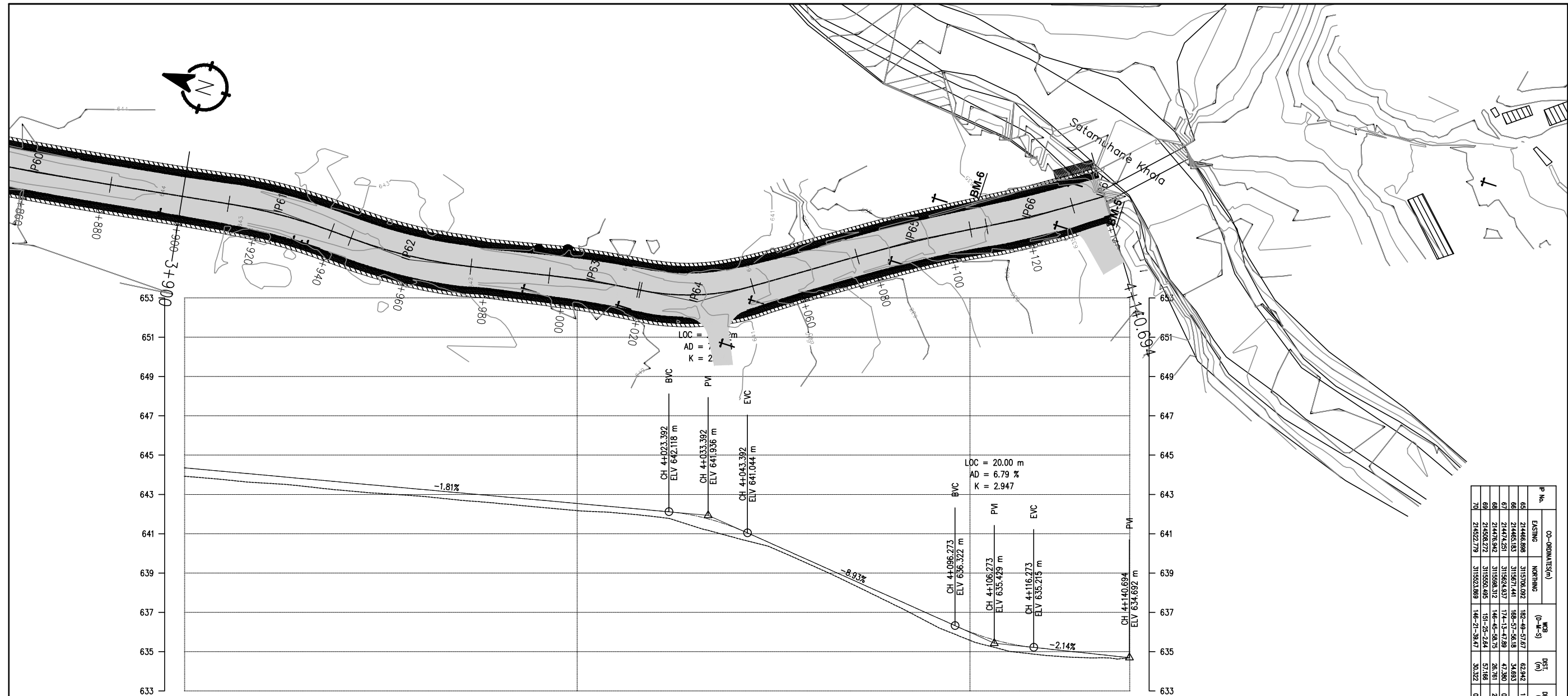
DESIGN LEVEL(m)		650.211		650.169		650.106		649.834		649.545		649.256		648.967		648.842		648.835		648.777		648.715		648.695		648.671		648.335		647.928		647.830	
EXISTING LEVEL(m)		649.849		649.668		649.459		649.253		648.979		648.707		648.567		648.515		648.400		648.470		648.457		648.448		648.063		647.614		647.493		647.455	
CHAINAGE(Km)		3+300		3+320		3+340		3+360		3+380		3+400		3+420		3+440		3+460		3+480		3+500		3+520		3+540		3+560		3+580		3+600	
CUT/FILL (m)		0.362		0.501		0.647		0.580		0.565		0.549		0.400		0.327		0.435		0.308		0.258		0.247		0.607		0.721		0.434		0.375	
HORIZONTAL ALIGNMENT		RIGHT																															
		LEFT																															
SUPER ELEVATION																																	
		2.5 T -5 T -3 T 6.5 T -2.5 T NC T -6.5																															

P No.	CO-ORDINATES(m)		WGS (0-M-S)	DIST (m)	DEF. ANG. (0-M-S)	TAN LEN (m)	SPLINE CURVE DATA			CHANGING			
	EXISTING	NORTHING					R (m)	E (m)	LC (m)	BC	WC	EC	IP
52	21456.032	316180.695	108-18-1.72	58.343	33-57-13.23	16.791	55.000	0.000	32.593	3+722.545	3+728.541	3+732.138	3+736.336
53	21492.733	316161.557	131-32-13.03	38.659	23-14-11.31	14.302	0.000	0.000	33.989	3+738.611	3+743.805	3+747.999	3+752.003
54	21492.002	316161.557	146-34-33.60	48.657	09-02-40.57	12.655	0.000	0.000	35.657	3+758.410	3+763.605	3+767.799	3+772.003
55	21492.002	316161.557	96-28-10.30	56.136	05-41-41.87	18.888	0.000	0.000	37.298	3+788.208	3+793.403	3+797.597	3+802.003
56	21492.002	316161.557	131-32-13.03	48.657	09-02-40.57	12.655	0.000	0.000	35.657	3+758.410	3+763.605	3+767.799	3+772.003
57	21492.002	316161.557	131-32-13.03	48.657	09-02-40.57	12.655	0.000	0.000	35.657	3+758.410	3+763.605	3+767.799	3+772.003
58	21492.002	316161.557	131-32-13.03	48.657	09-02-40.57	12.655	0.000	0.000	35.657	3+758.410	3+763.605	3+767.799	3+772.003

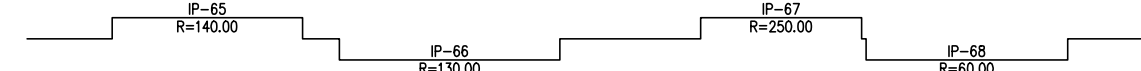



DESIGN LEVEL(m)	647.830	647.723	647.366	647.000	646.633	646.266	645.899	645.657	645.657	645.566	645.341	645.115	644.889	644.661	644.352
EXISTING LEVEL(m)	647.455	647.057	646.742	646.432	646.133	645.424	644.623	644.689	644.941	645.453	645.252	644.996	644.476	644.200	643.976
CHAINAGE(Km)	3+600	3+620	3+640	3+660	3+680	3+700	3+720	3+740	3+760	3+780	3+800	3+820	3+840	3+860	3+900
CUT/FILL (m)	0.375	0.666	0.625	0.568	0.500	0.843	1.277	0.973	0.716	0.204	0.314	0.345	0.396	0.412	0.426
HORIZONTAL ALIGNMENT	RIGHT IP-58 R=40.00		LEFT IP-59 R=60.00		RIGHT IP-60 R=375.00		LEFT IP-61 R=100.00		RIGHT IP-62 R=220.00		LEFT IP-63 R=130.00		RIGHT IP-64 R=1000.00		
SUPER ELEVATION	-6.5		T		5.5		T		NC		T		-2.5		3+600
	3+618.154		3+658.434		3+683.053		3+699.853		3+702.301		3+709.651		3+739.68		3+900

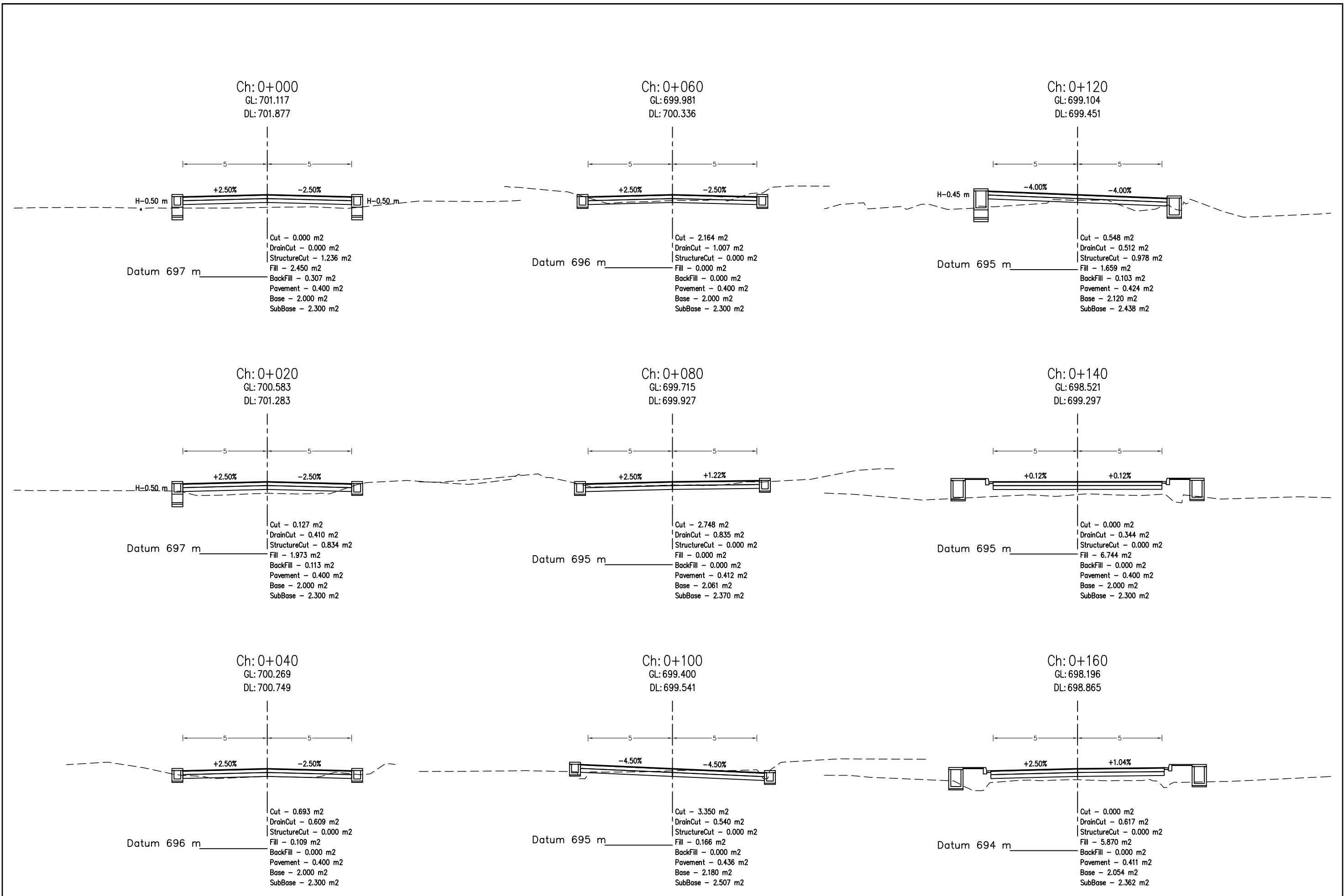
P No.	CO-ORDINATES	MB	DEP.	DEP. ANG.	TAH. LEN.	SPLINE CURVE DATA				CHANGING			
	EASTING	NORTHING	(0-M-S)	(0-M-S)	(m)	R (m)	E (m)	LC (m)	BC	MC	EC	IP	
58	21440.024	311607.333	175-54-33.07	41-28-12.96	66.47	0.000	0.000	2.773	28.853	3+594.489	3+603.881	3+606.648	
59	21440.024	311607.333	175-54-33.07	41-28-12.96	66.47	0.000	0.000	2.773	28.853	3+606.648	3+615.940	3+618.154	
60	21440.024	311607.333	175-54-33.07	41-28-12.96	66.47	0.000	0.000	2.773	28.853	3+615.940	3+625.292	3+627.506	
61	21440.024	311607.333	175-54-33.07	41-28-12.96	66.47	0.000	0.000	2.773	28.853	3+625.292	3+634.644	3+636.858	
62	21440.024	311607.333	175-54-33.07	41-28-12.96	66.47	0.000	0.000	2.773	28.853	3+634.644	3+643.996	3+646.210	
63	21440.024	311607.333	175-54-33.07	41-28-12.96	66.47	0.000	0.000	2.773	28.853	3+643.996	3+653.348	3+655.562	
64	21440.024	311607.333	175-54-33.07	41-28-12.96	66.47	0.000	0.000	2.773	28.853	3+653.348	3+662.700	3+664.914	
65	21440.024	311607.333	175-54-33.07	41-28-12.96	66.47	0.000	0.000	2.773	28.853	3+662.700	3+672.052	3+674.266	
66	21440.024	311607.333	175-54-33.07	41-28-12.96	66.47	0.000	0.000	2.773	28.853	3+672.052	3+681.404	3+683.618	
67	21440.024	311607.333	175-54-33.07	41-28-12.96	66.47	0.000	0.000	2.773	28.853	3+681.404	3+690.756	3+692.970	
68	21440.024	311607.333	175-54-33.07	41-28-12.96	66.47	0.000	0.000	2.773	28.853	3+690.756	3+700.108	3+702.322	
69	21440.024	311607.333	175-54-33.07	41-28-12.96	66.47	0.000	0.000	2.773	28.853	3+700.108	3+709.460	3+711.674	
70	21440.024	311607.333	175-54-33.07	41-28-12.96	66.47	0.000	0.000	2.773	28.853	3+709.460	3+718.812	3+721.026	
71	21440.024	311607.333	175-54-33.07	41-28-12.96	66.47	0.000	0.000	2.773	28.853	3+718.812	3+728.164	3+730.378	
72	21440.024	311607.333	175-54-33.07	41-28-12.96	66.47	0.000	0.000	2.773	28.853	3+728.164	3+737.516	3+739.730	
73	21440.024	311607.333	175-54-33.07	41-28-12.96	66.47	0.000	0.000	2.773	28.853	3+737.516	3+746.868	3+749.082	
74	21440.024	311607.333	175-54-33.07	41-28-12.96	66.47	0.000	0.000	2.773	28.853	3+746.868	3+756.220	3+758.434	
75	21440.024	311607.333	175-54-33.07	41-28-12.96	66.47	0.000	0.000	2.773	28.853	3+756.220	3+765.572	3+767.786	
76	21440.024	311607.333	175-54-33.07	41-28-12.96	66.47	0.000	0.000	2.773	28.853	3+765.572	3+774.924	3+777.138	
77	21440.024	311607.333	175-54-33.07	41-28-12.96	66.47	0.000	0.000	2.773	28.853	3+774.924	3+784.276	3+786.490	
78	21440.024	311607.333	175-54-33.07	41-28-12.96	66.47	0.000	0.000	2.773	28.853	3+784.276	3+793.628	3+795.842	
79	21440.024	311607.333	175-54-33.07	41-28-12.96	66.47	0.000	0.000	2.773	28.853	3+793.628	3+802.980	3+805.194	
80	21440.024	311607.333	175-54-33.07	41-28-12.96	66.47	0.000	0.000	2.773	28.853	3+802.980	3+812.332	3+814.546	
81	21440.024	311607.333	175-54-33.07	41-28-12.96	66.47	0.000	0.000	2.773	28.853	3+812.332	3+821.684	3+823.898	
82	21440.024	311607.333	175-54-33.07	41-28-12.96	66.47	0.000	0.000	2.773	28.853	3+821.684	3+831.036	3+833.250	
83	21440.024	311607.333	175-54-33.07	41-28-12.96	66.47	0.000	0.000	2.773	28.853	3+831.036	3+840.388	3+842.602	
84	21440.024	311607.333	175-54-33.07	41-28-12.96	66.47	0.000	0.000	2.773	28.853	3+840.388	3+849.740	3+851.954	
85	21440.024	311607.333	175-54-33.07	41-28-12.96	66.47	0.000	0.000	2.773	28.853	3+849.740	3+859.092	3+861.306	
86	21440.024	311607.333	175-54-33.07	41-28-12.96	66.47	0.000	0.000	2.773	28.853	3+859.092	3+868.444	3+870.658	
87	21440.024	311607.333	175-54-33.07	41-28-12.96	66.47	0.000	0.000	2.773	28.853	3+868.444	3+877.796	3+880.010	
88	21440.024	311607.333	175-54-33.07	41-28-12.96	66.47	0.000	0.000	2.773	28.853	3+877.796	3+887.148	3+889.362	
89	21440.024	311607.333	175-54-33.07	41-28-12.96	66.47	0.000	0.000	2.773	28.853	3+887.148	3+896.500	3+898.714	
90	21440.024	311607.333	175-54-33.07	41-28-12.96	66.47	0.000	0.000	2.773	28.853	3+896.500	3+905.852	3+908.066	

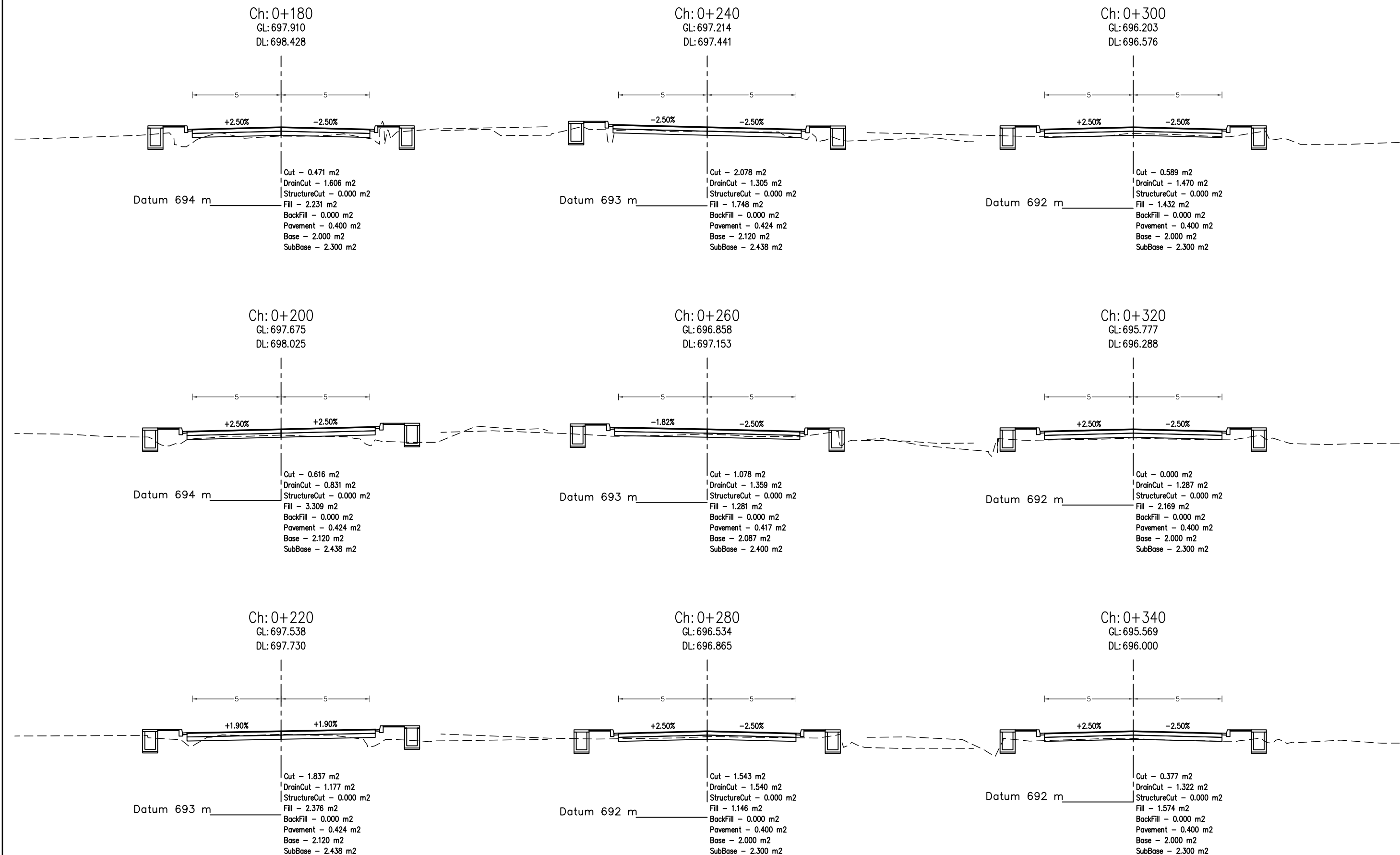


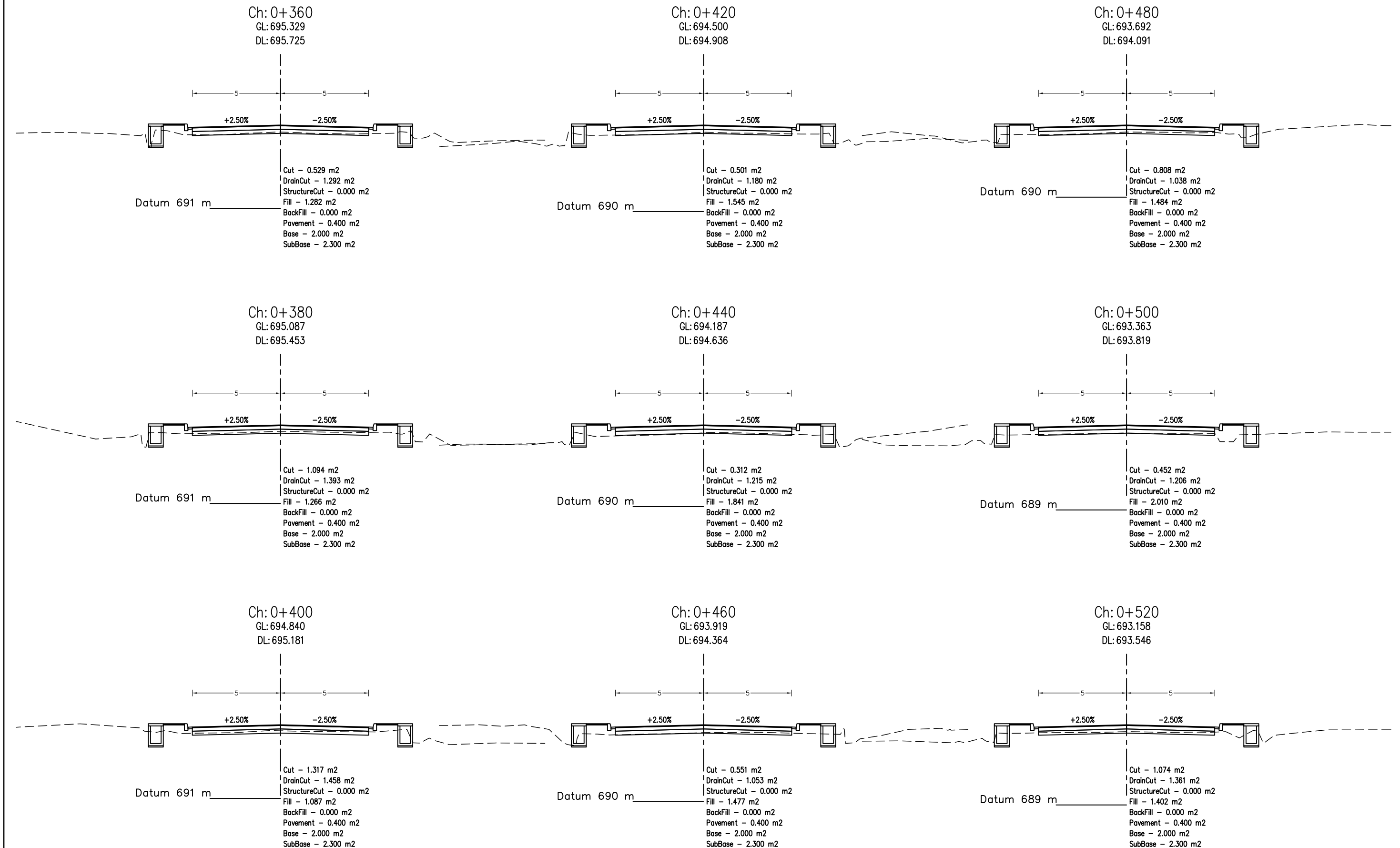
P No.	CO-ORDINATES(m)		WCB (0+M-S)	DIST. (m)	DEF. ANG. (0+M-S)	TAN. LEN. (m)	SURVEY CURVE DATA				CHANGING			
	EXISTING	NORTHING					R (m)	E (m)	LC (m)	BC	MC	EC	IP	
65	214468.888	3151706.092	182-49-57.67	62.842	11-06-17.86	13.610	140.000	0.660	27.135	3+912.165	3+925.322	3+939.289	3+952.775	
66	214463.183	3151971.441	182-57-56.18	34.693	13-52-1.49	15.800	130.000	0.959	31.463	3+944.574	3+960.306	3+976.037	3+990.363	
67	214474.251	3151924.937	174-15-47.89	47.290	05-15-51.71	11.483	250.000	0.284	22.870	3+986.115	4+000.600	4+018.085	4+032.553	
68	214476.942	3151998.312	146-46-58.75	26.781	27-27-49.14	14.662	60.000	1.765	26.780	4+018.691	4+032.071	4+048.451	4+063.553	
69	214508.272	3151950.485	151-25-28.84	57.166	04-39-3.89	14.214	350.000	0.289	28.412	4+076.742	4+090.948	4+105.154	4+120.556	
70	214522.779	3151923.869	146-21-39.47	30.322	05-03-23.17	11.039	250.000	0.244	22.083	4+110.024	4+121.255	4+132.287	4+147.282	

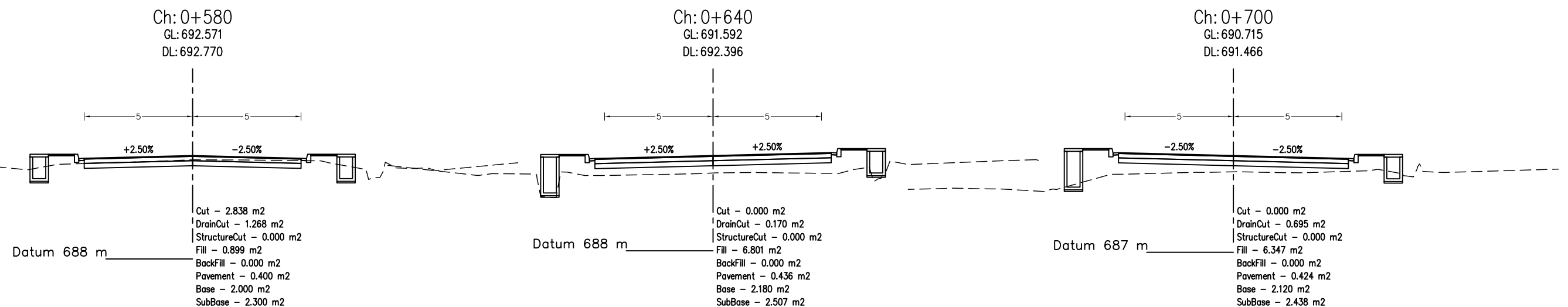
DESIGN LEVEL(m)		644.352		643.990		643.628		643.265		642.903		642.541		642.179		641.326		639.561		637.775		636.013		635.135		634.292	
EXISTING LEVEL(m)		643.926		643.583		643.213		642.912		642.542		642.177		641.866		640.812		639.370		637.463		635.581		634.796		634.692	
CHAINAGE(Km)		3+900		3+920		3+940		3+960		3+980		4+000		4+020		4+040		4+060		4+080		4+100		4+120		4+140.964	
CUT/FILL (m)		0.426		0.407		0.415		0.353		0.361		0.364		0.313		0.514		0.191		0.312		0.432		0.339		0.690	
HORIZONTAL ALIGNMENT	RIGHT																										
	LEFT																										
SUPER ELEVATION																											

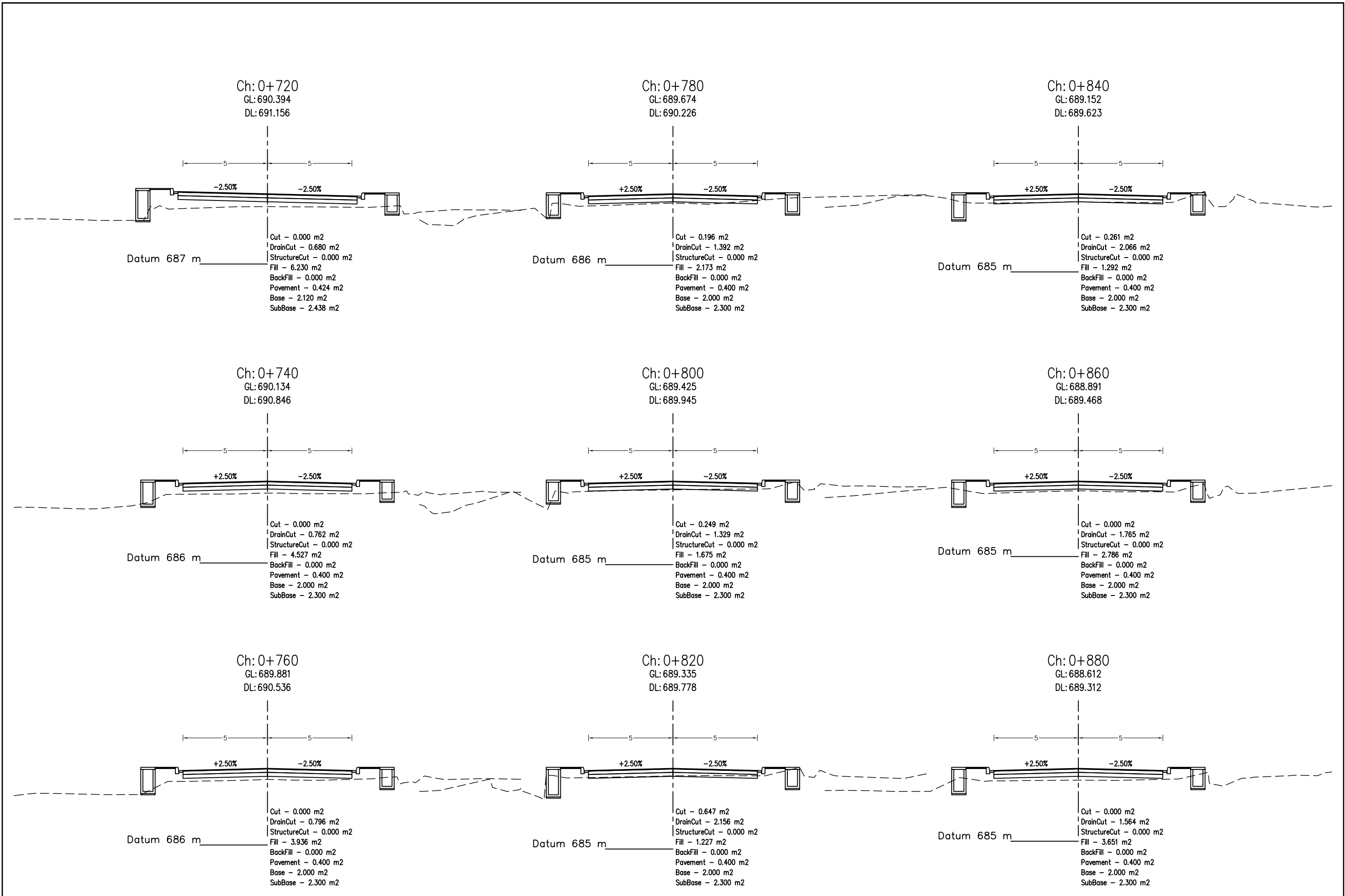
DETAILED CROSS SECTION AT 20m INTERVAL

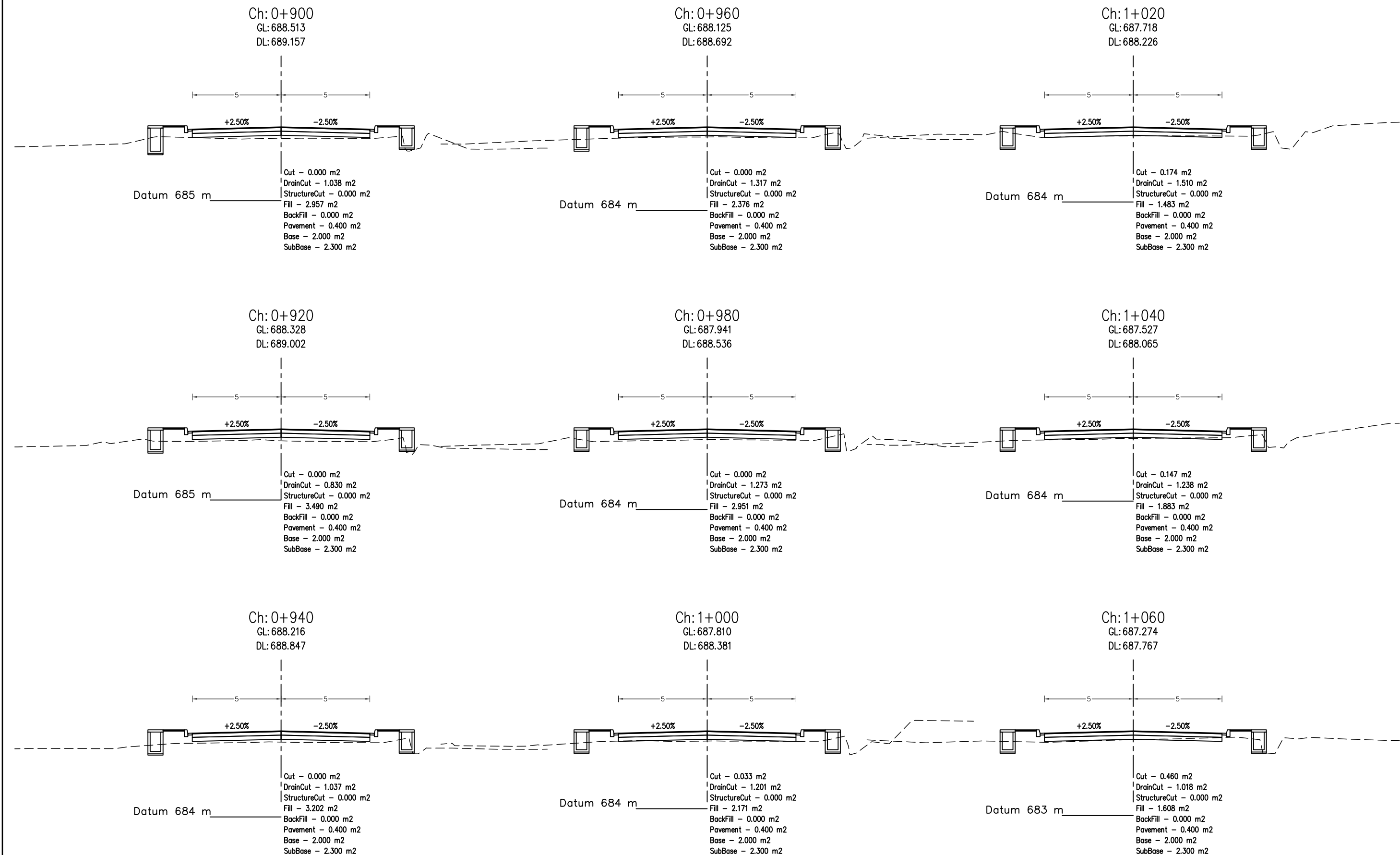


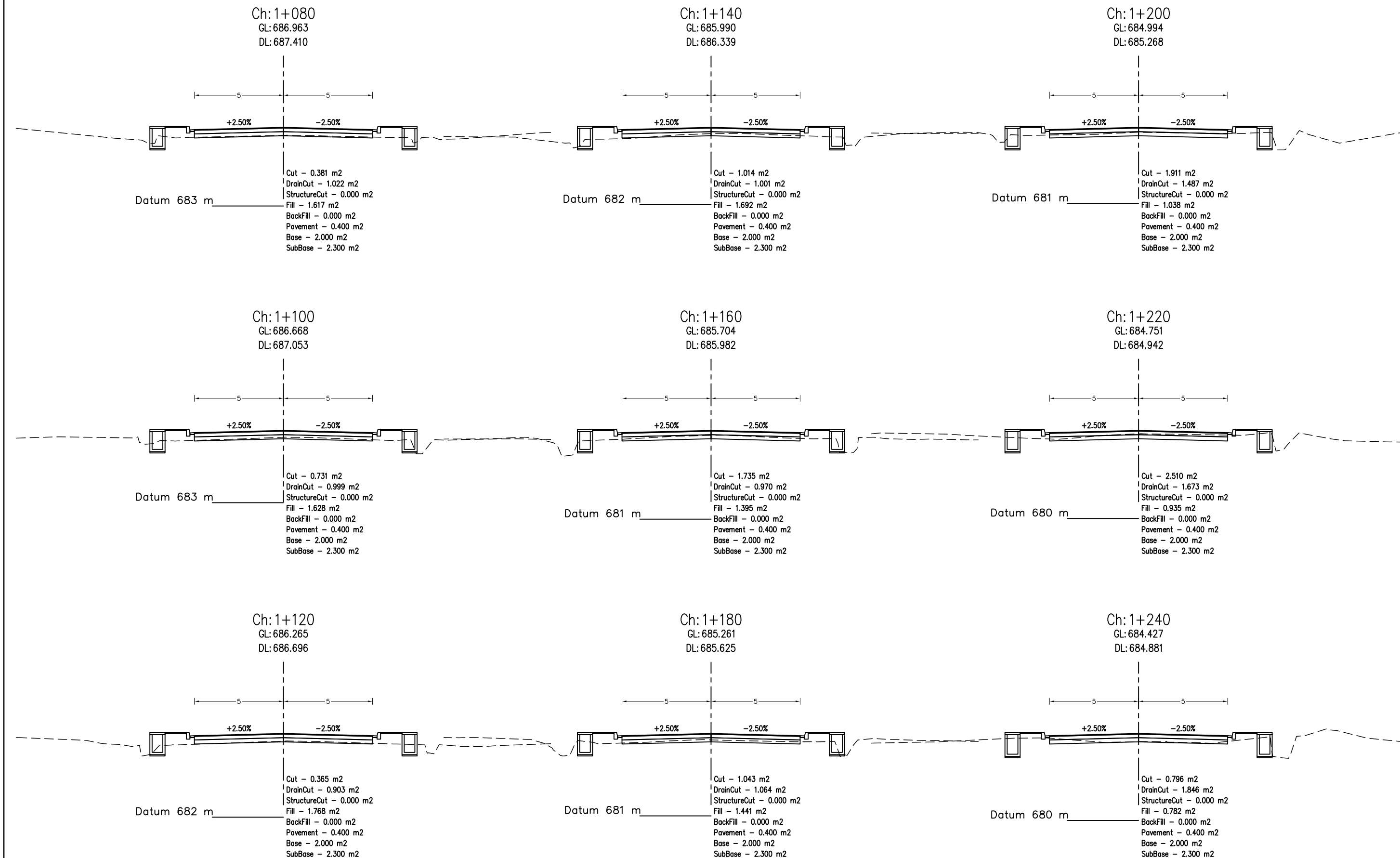


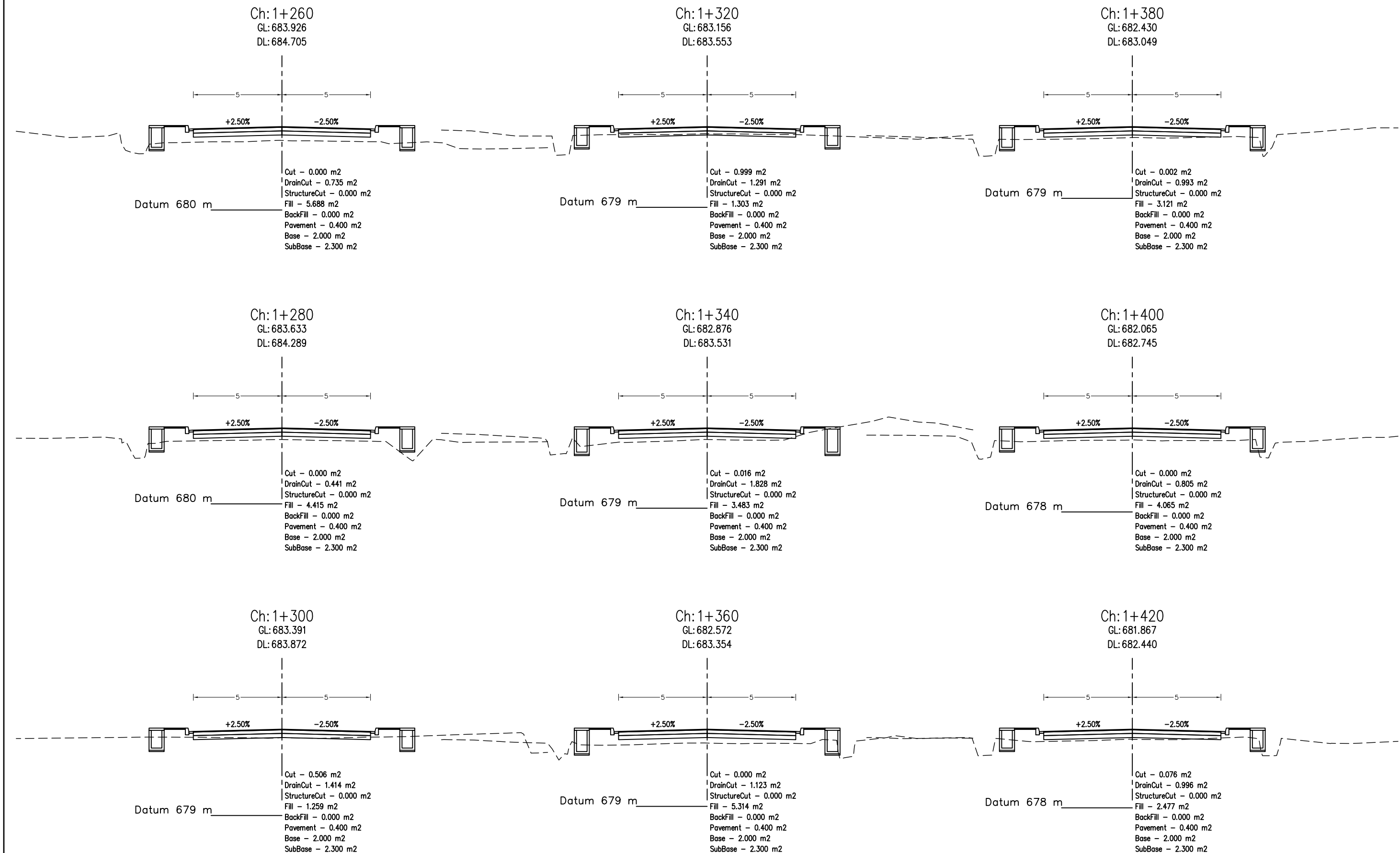


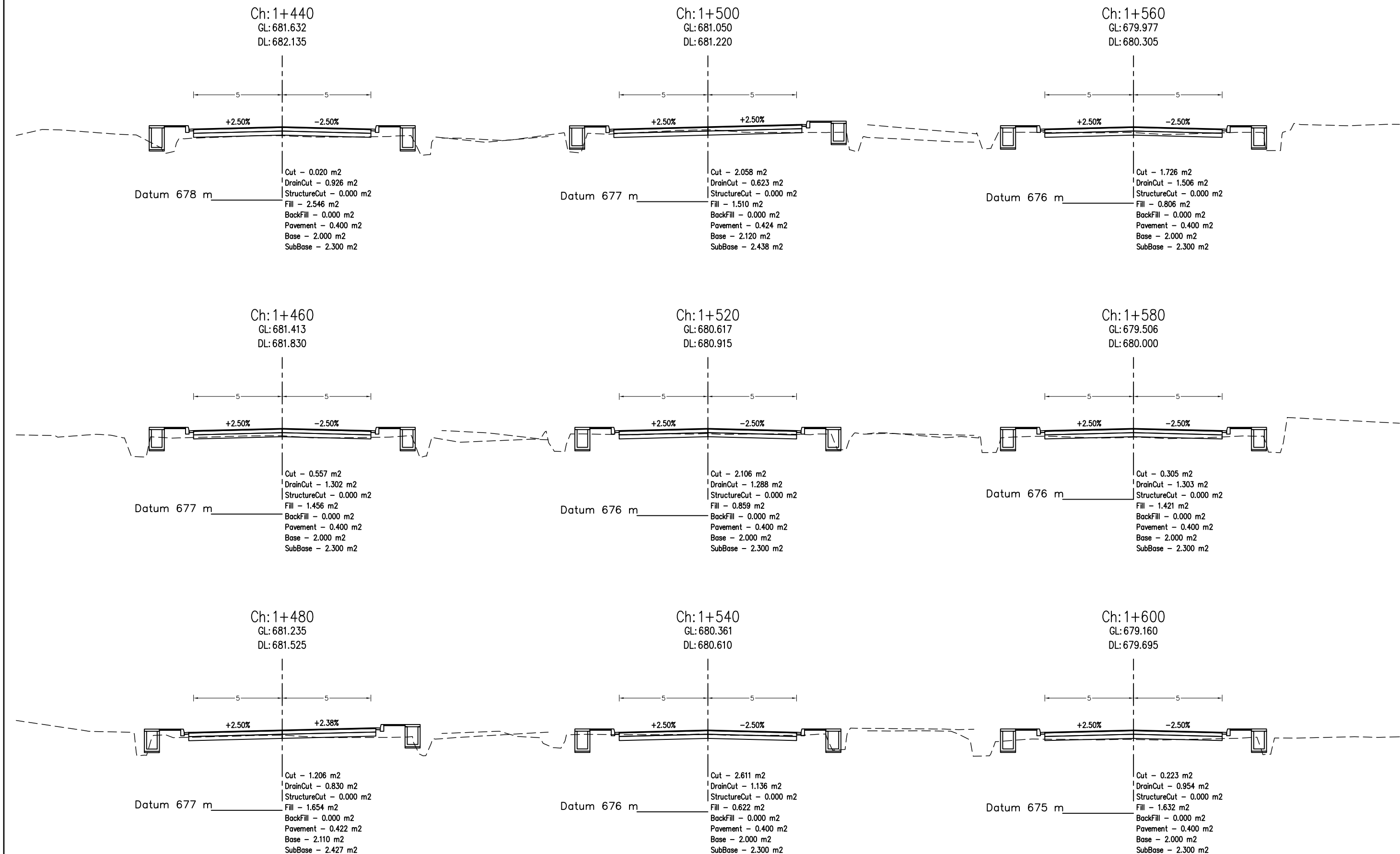


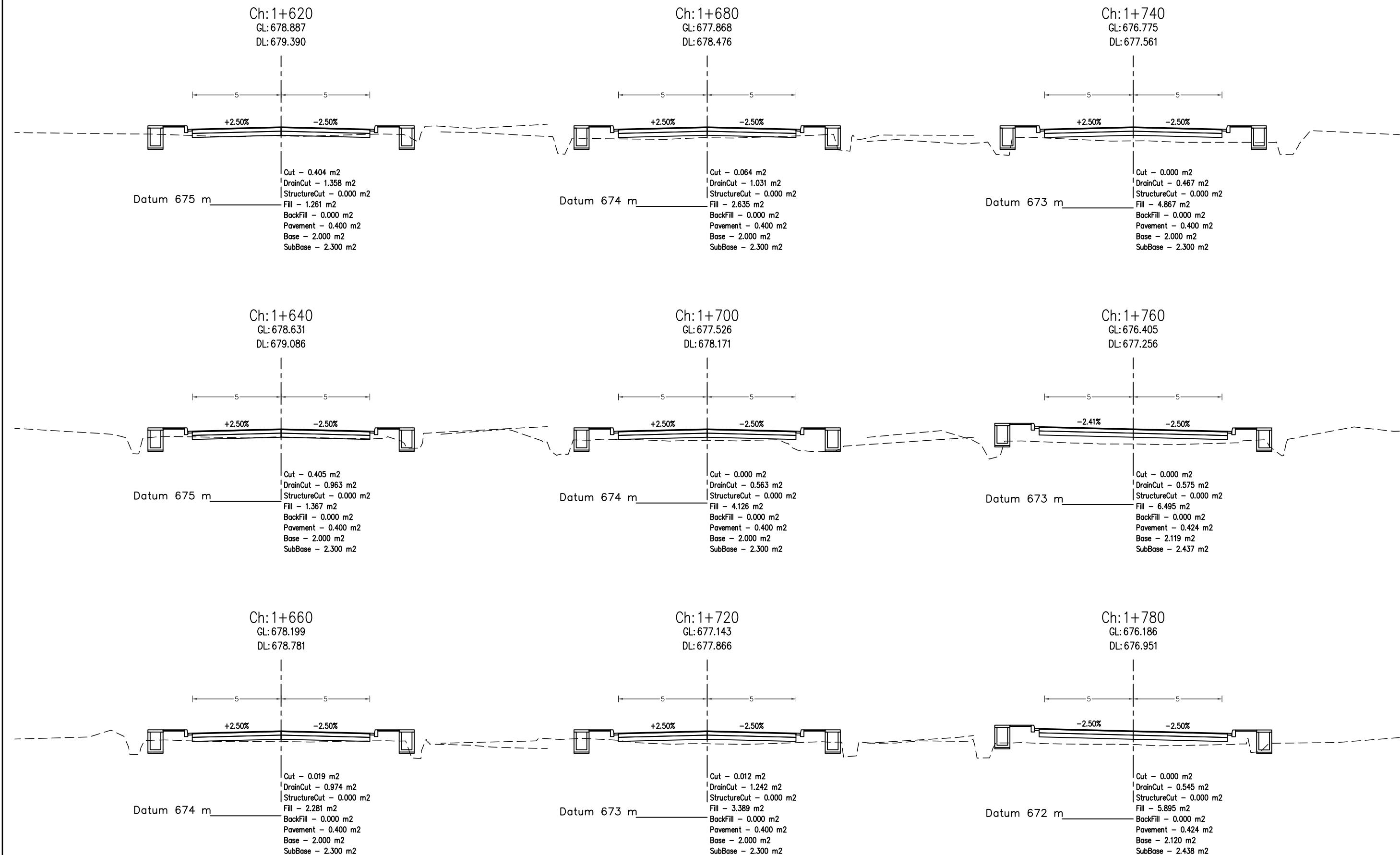


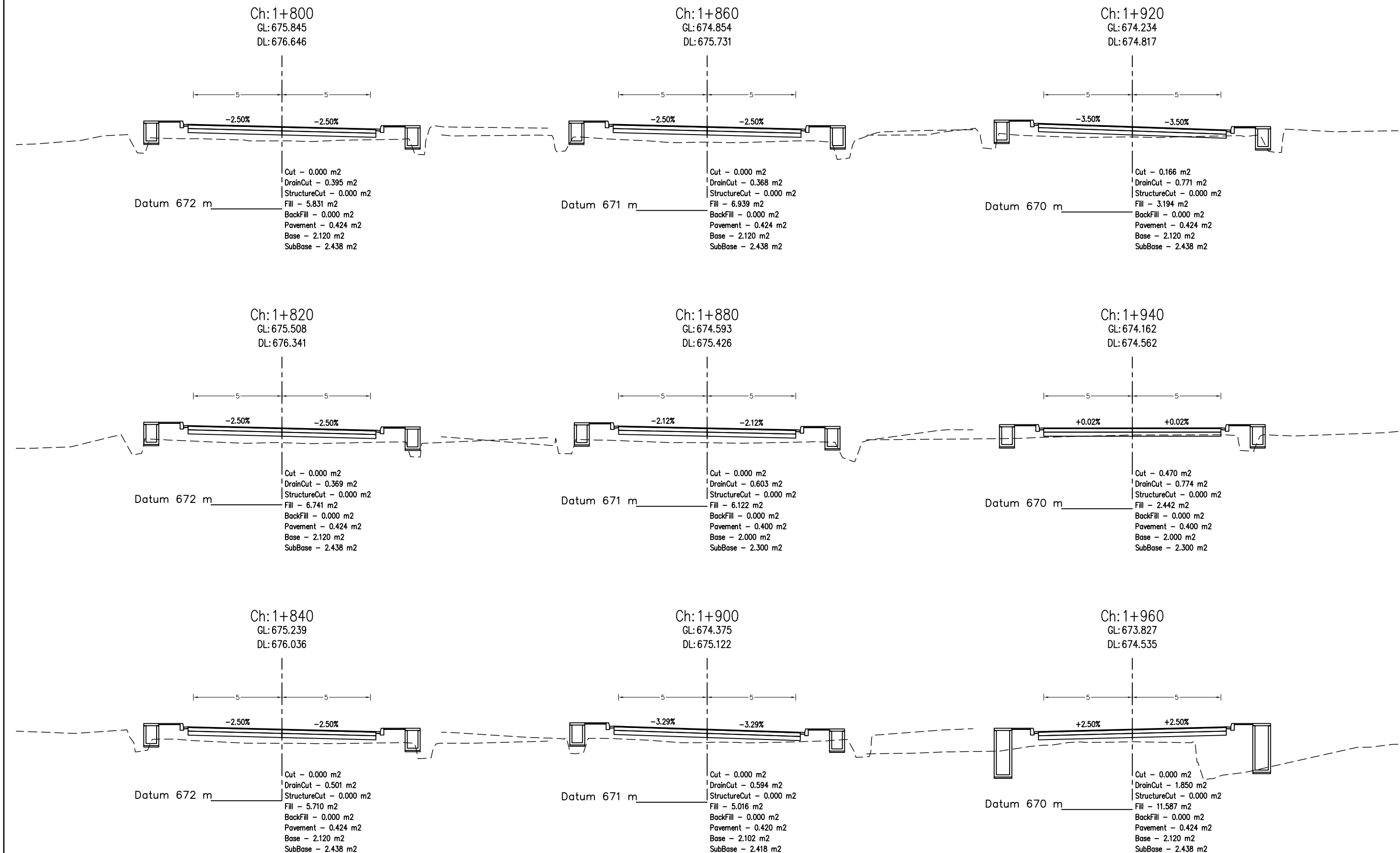


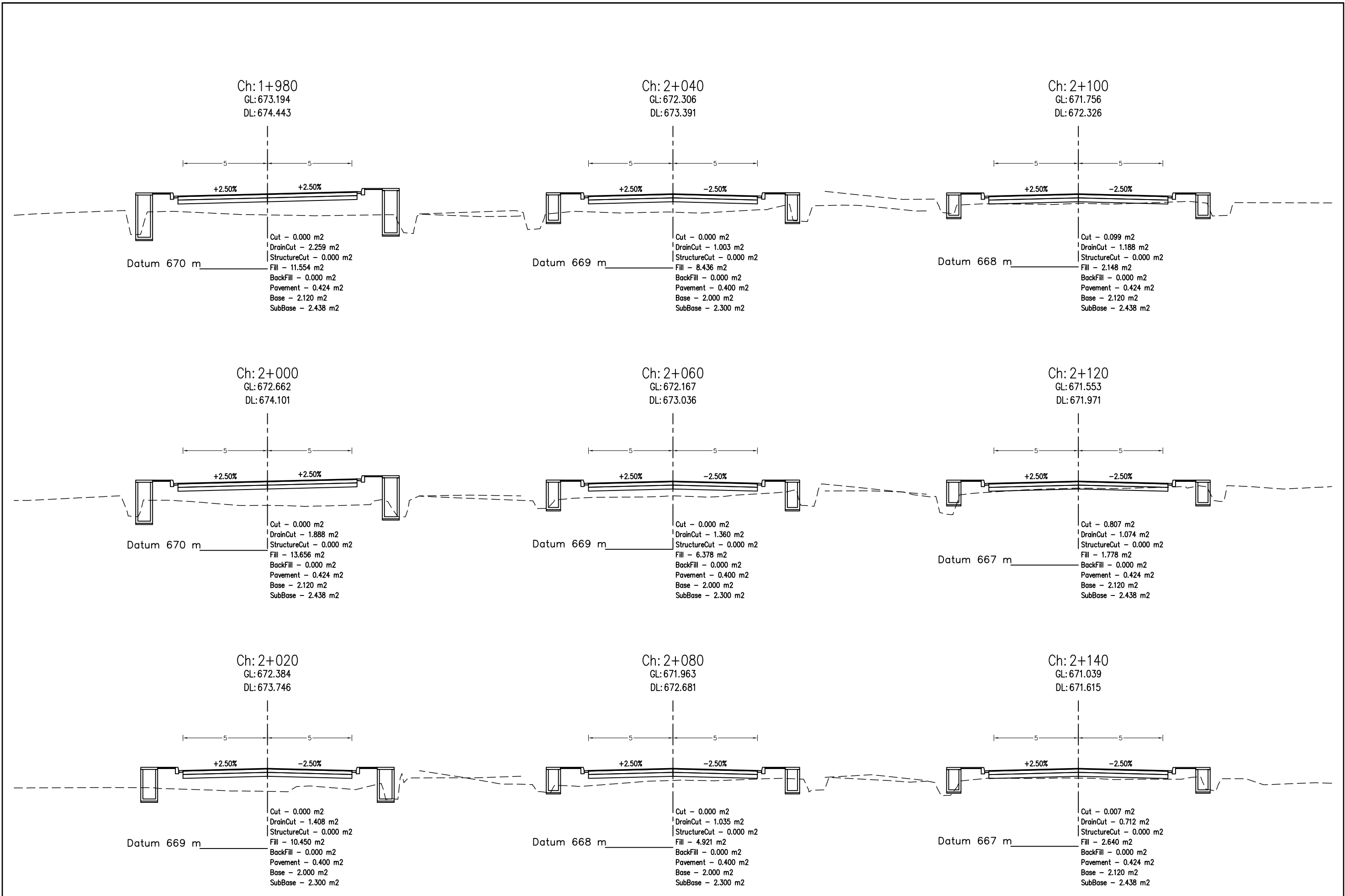


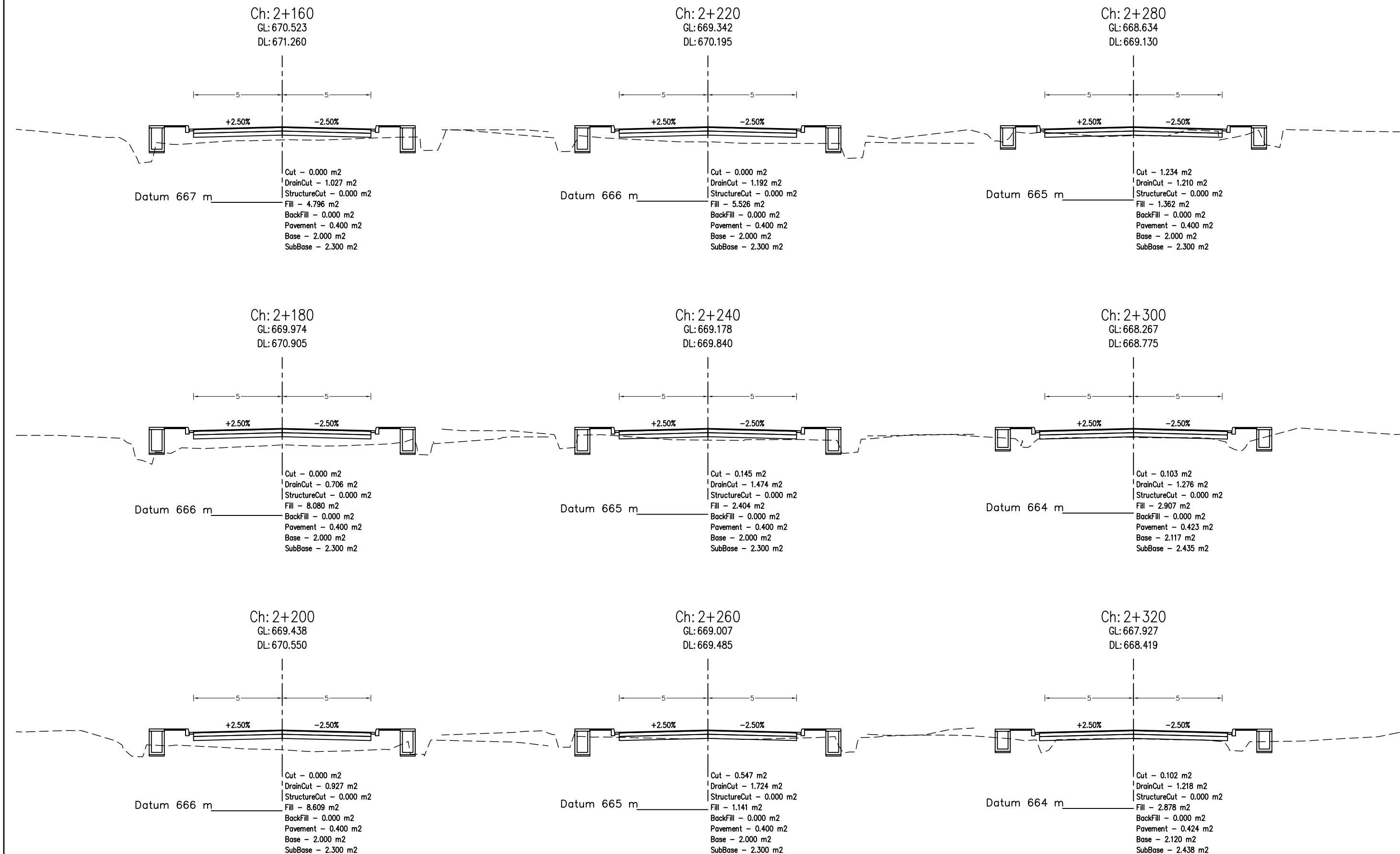


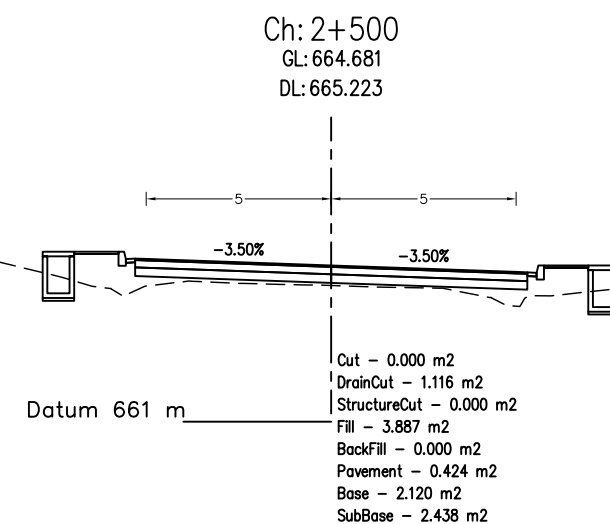
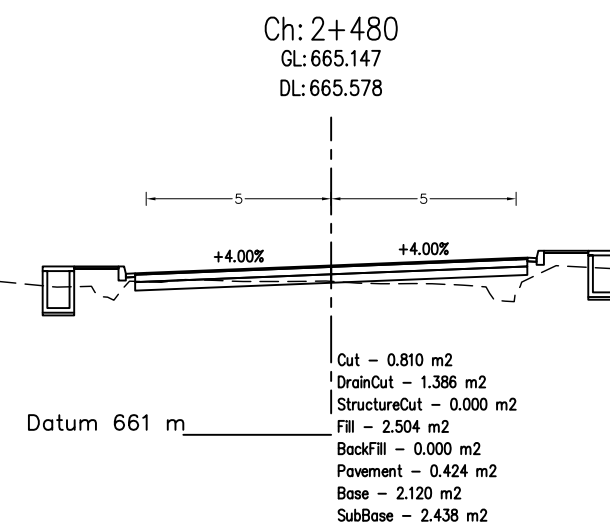
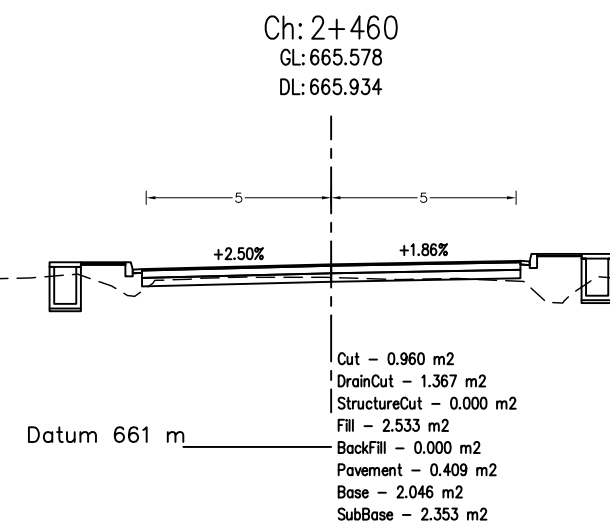


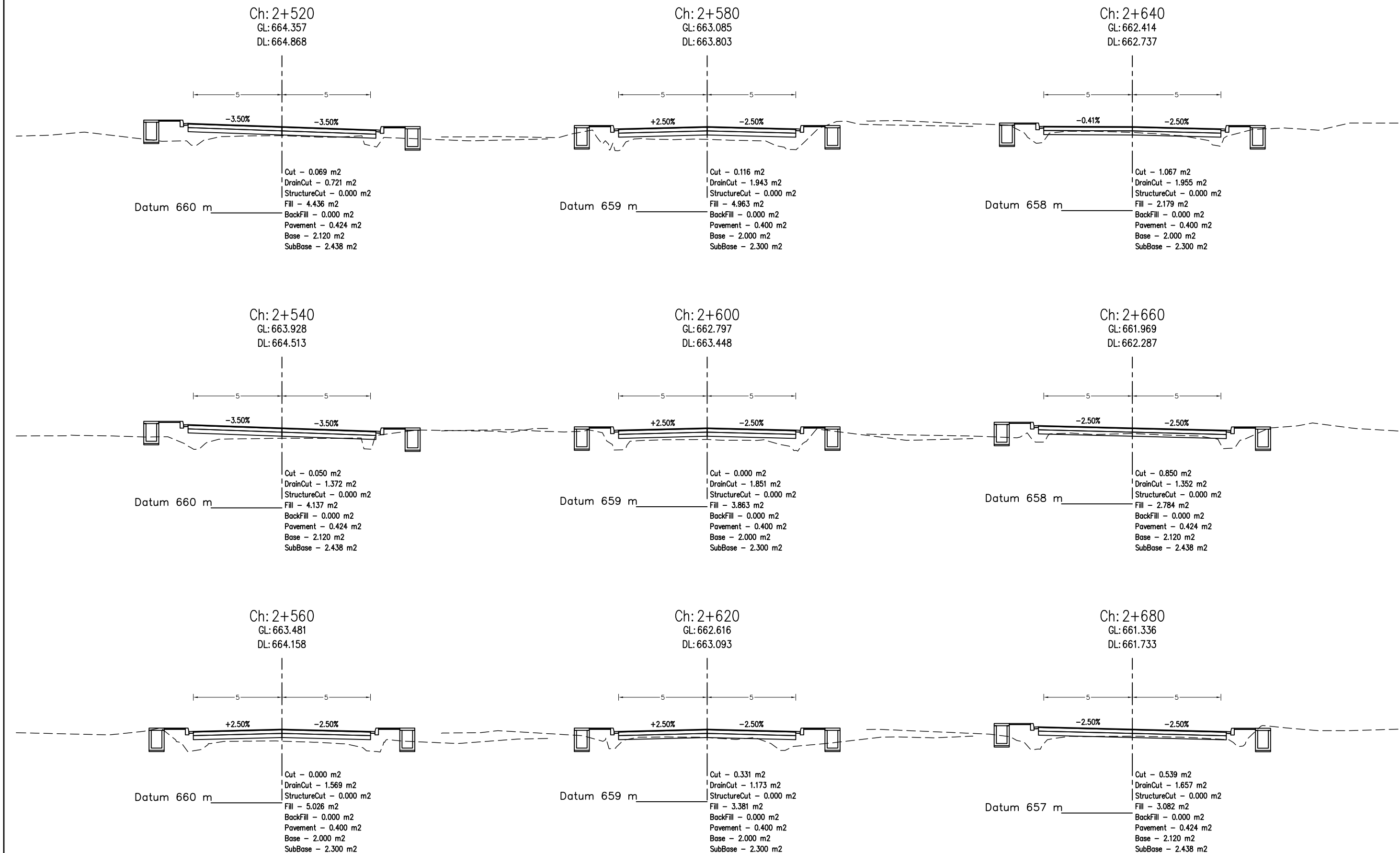


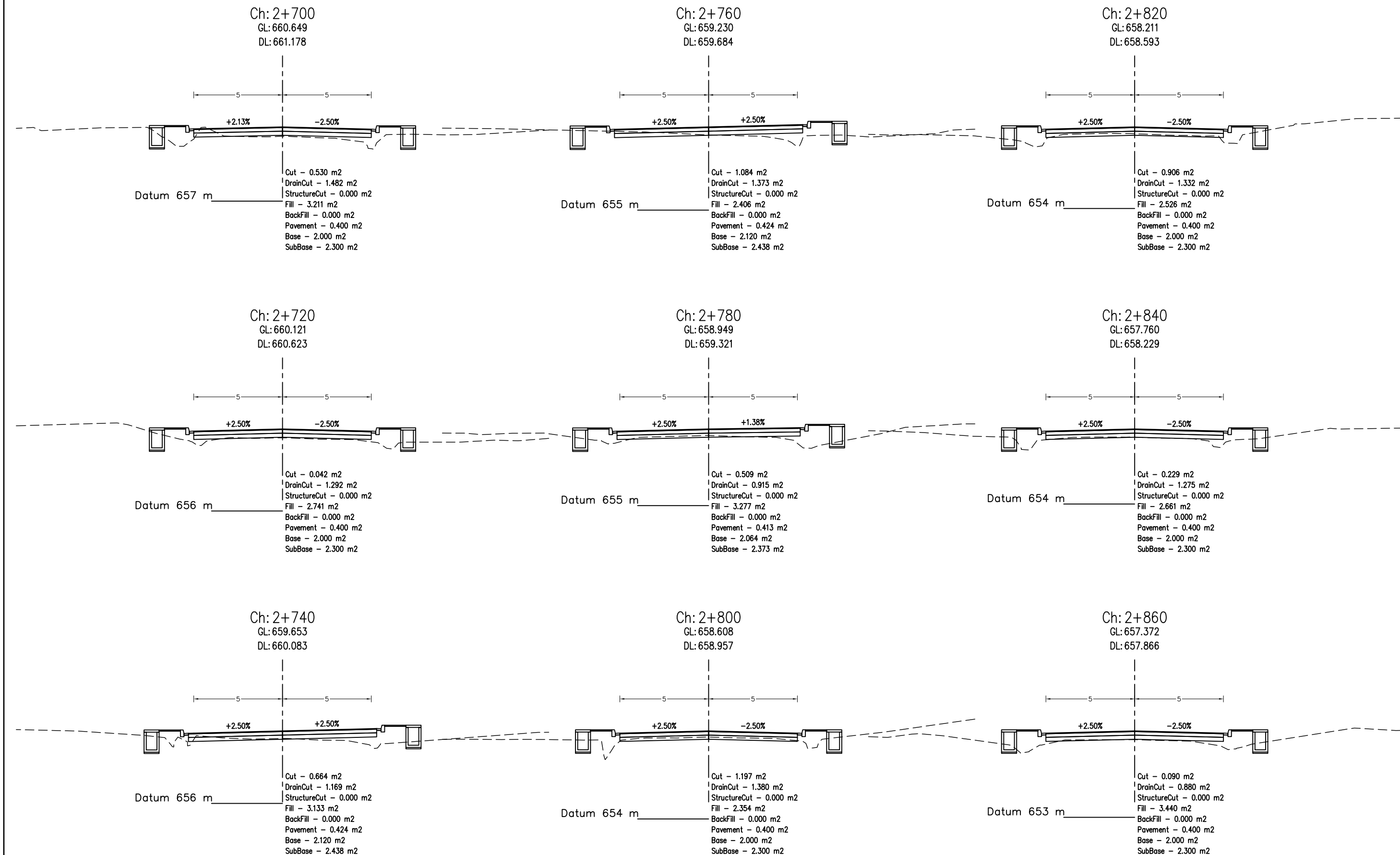


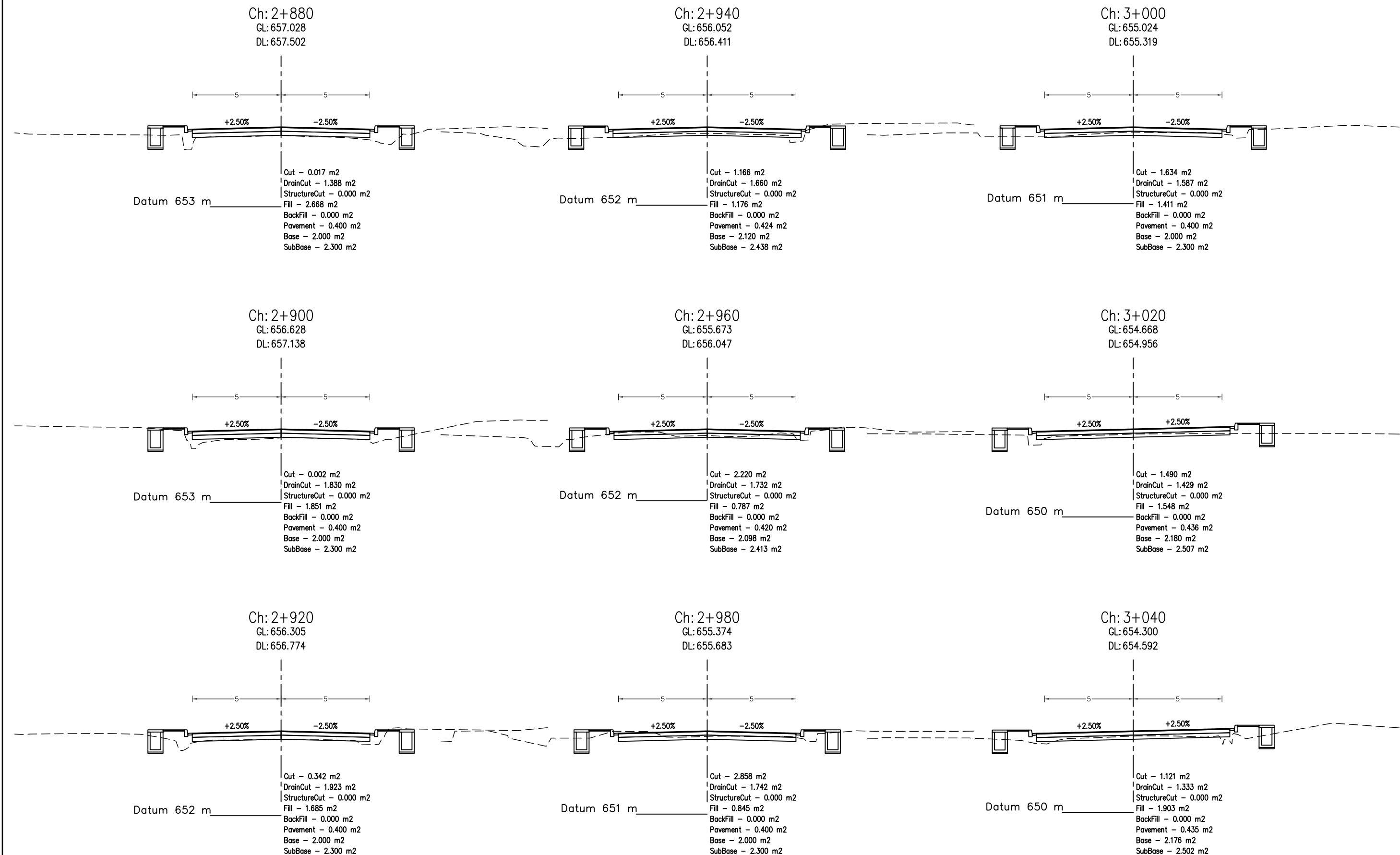


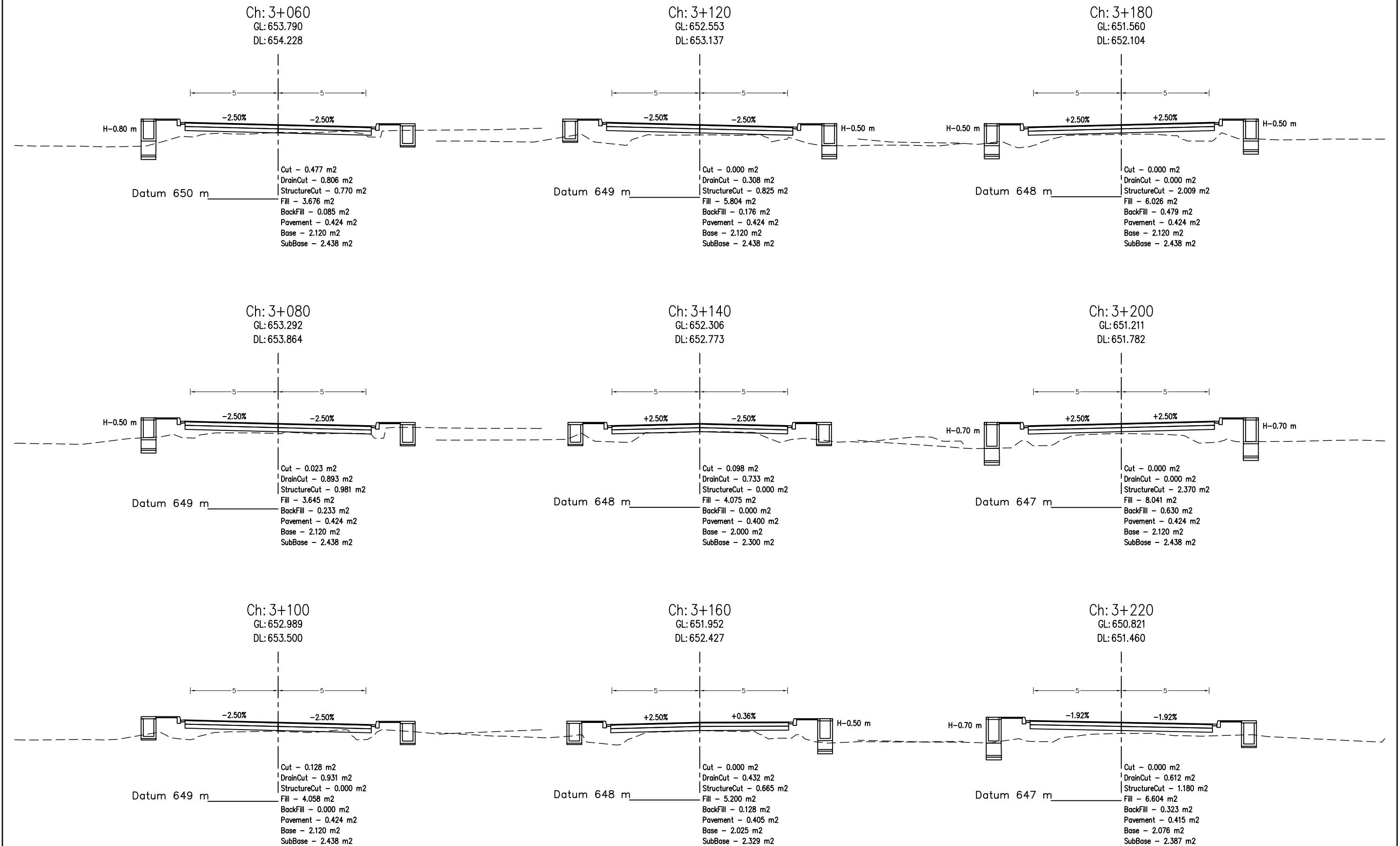


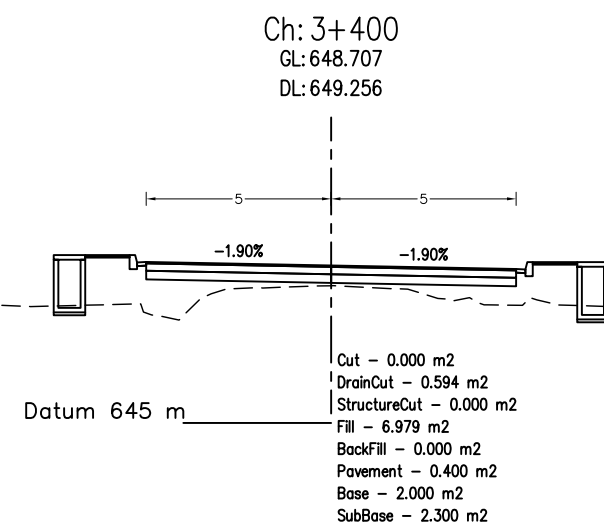
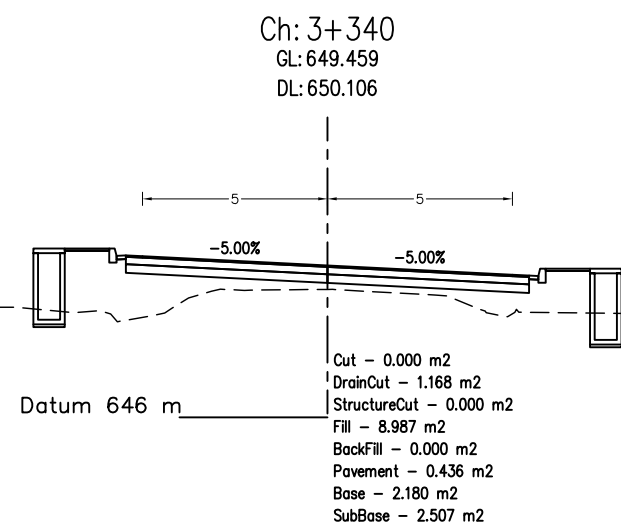
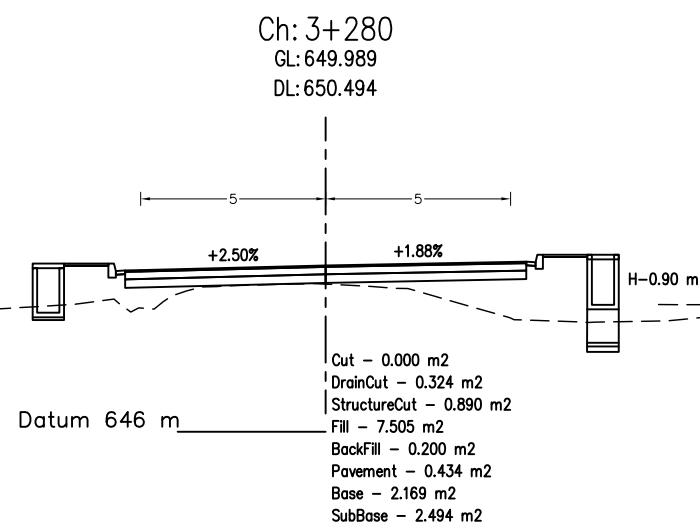
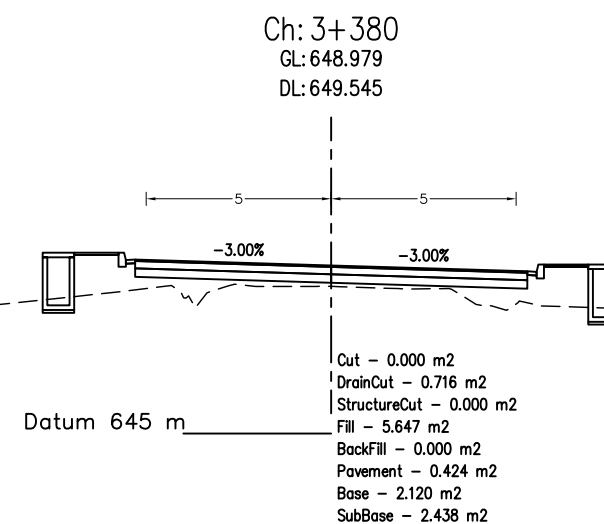
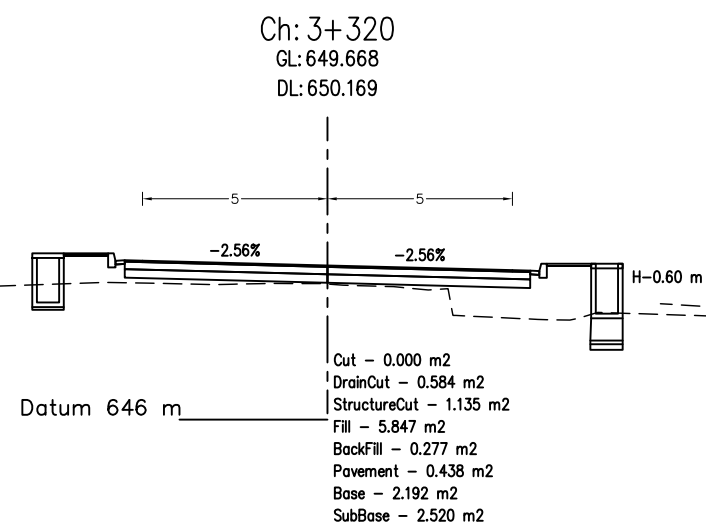
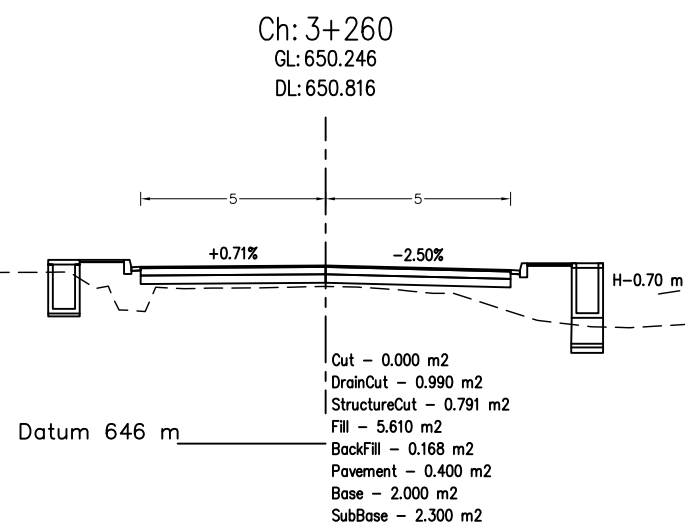
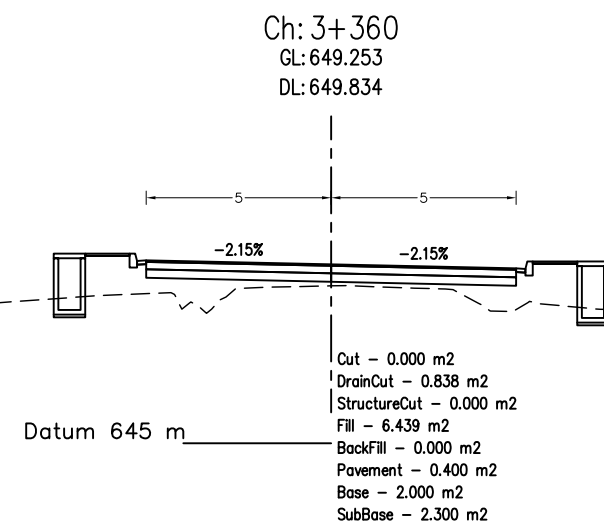
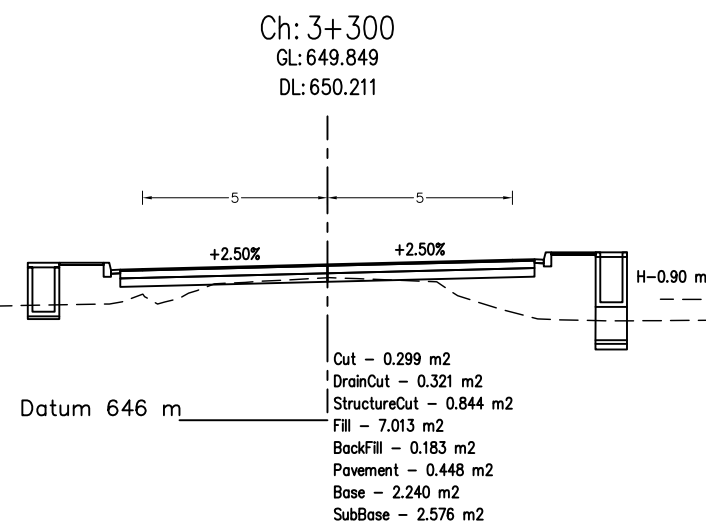
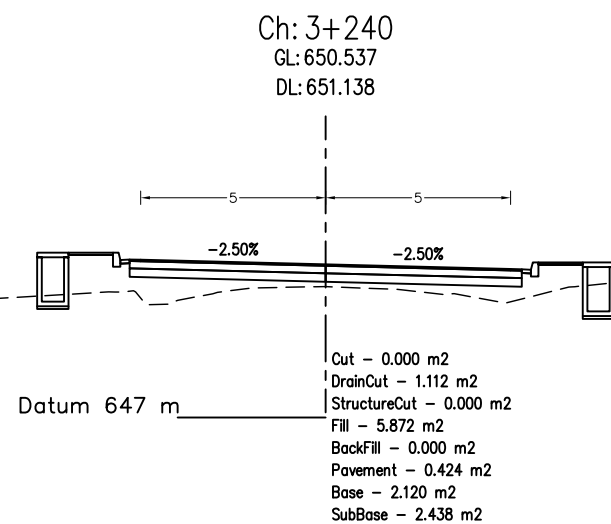


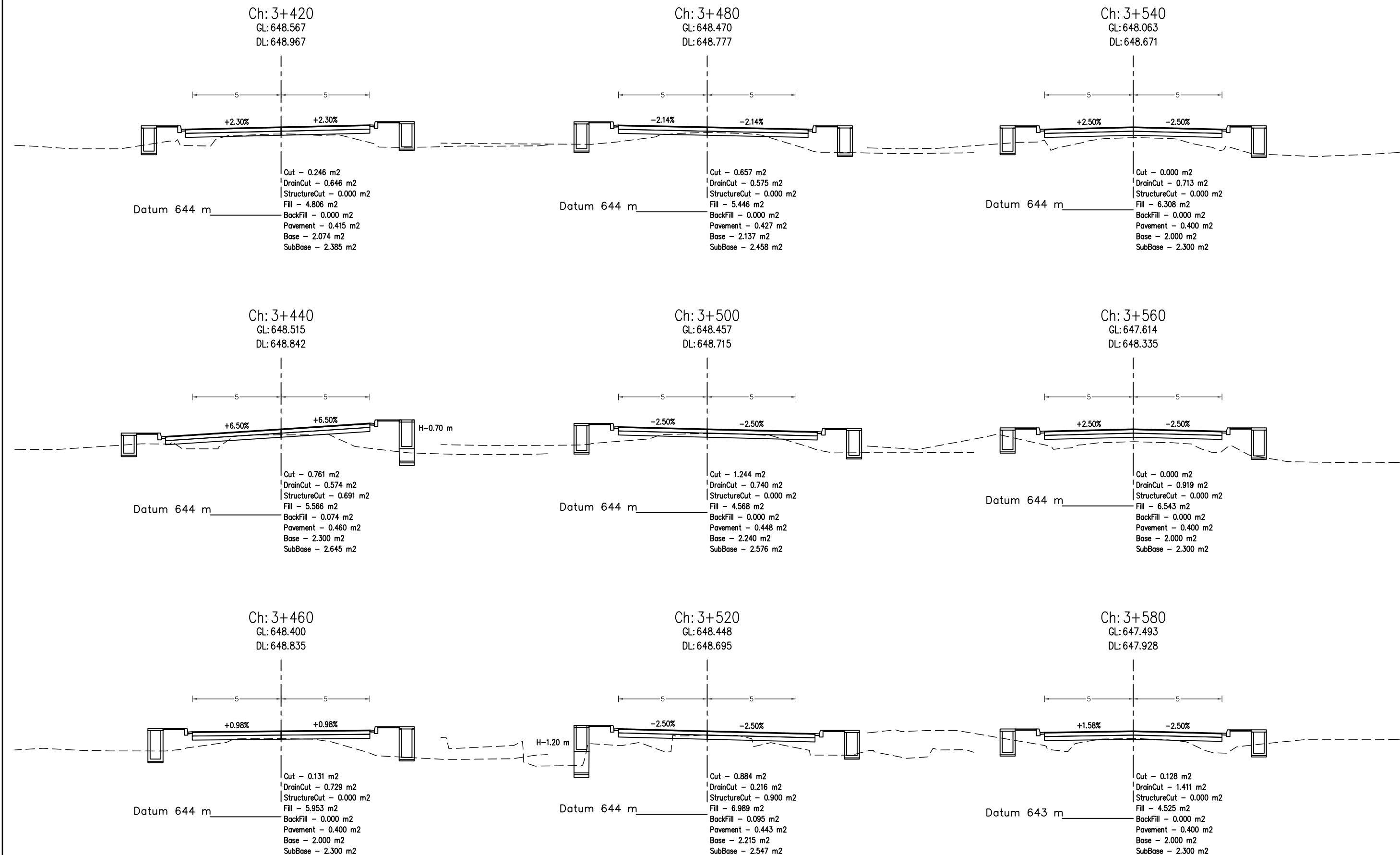


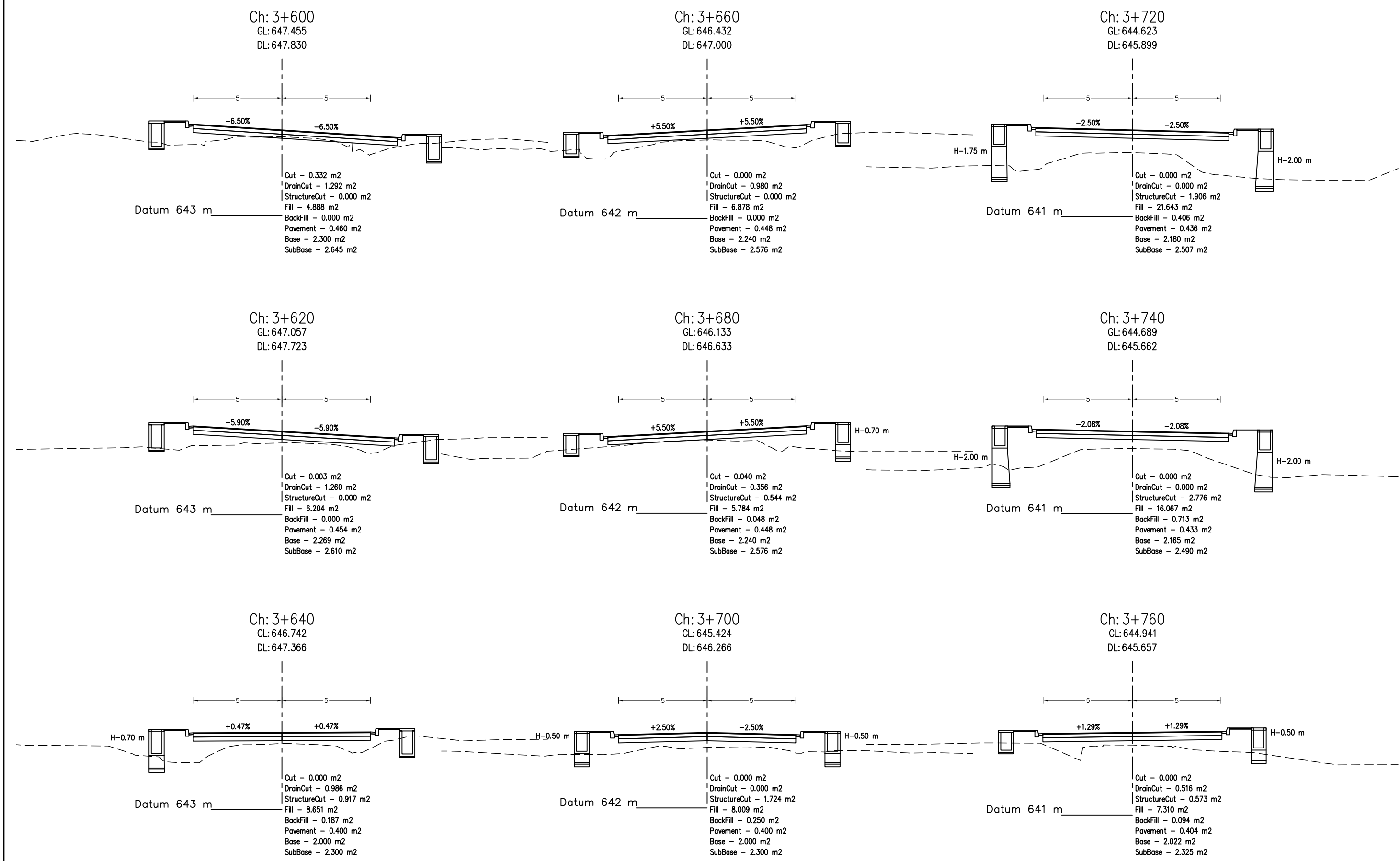


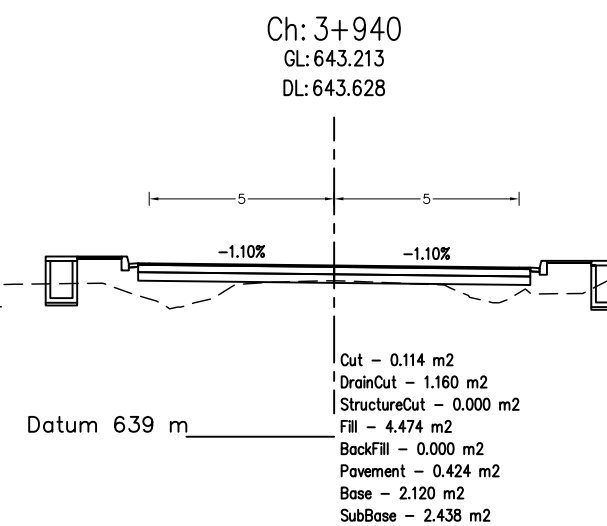
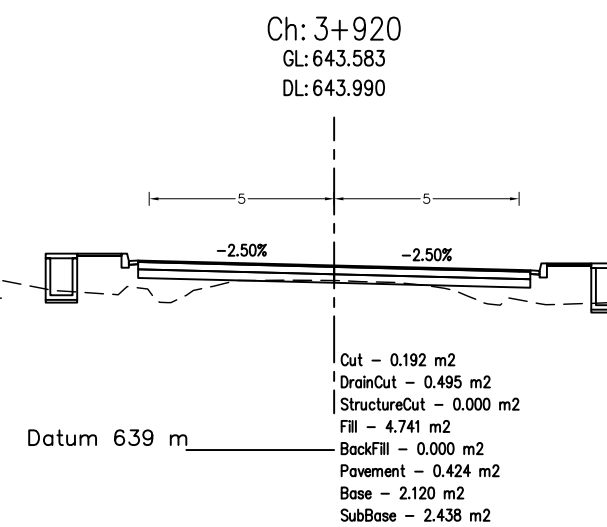
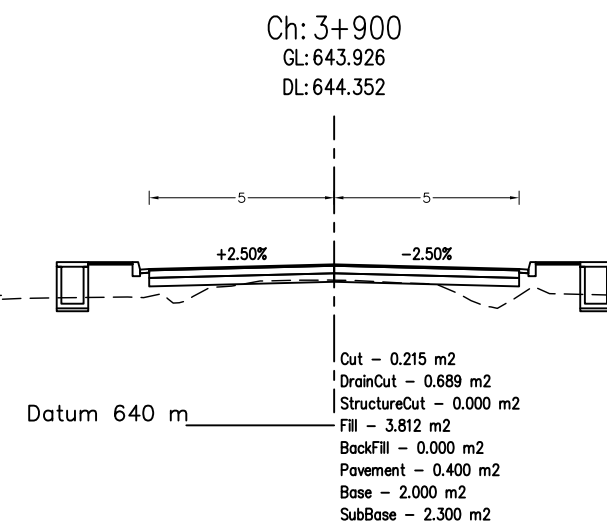


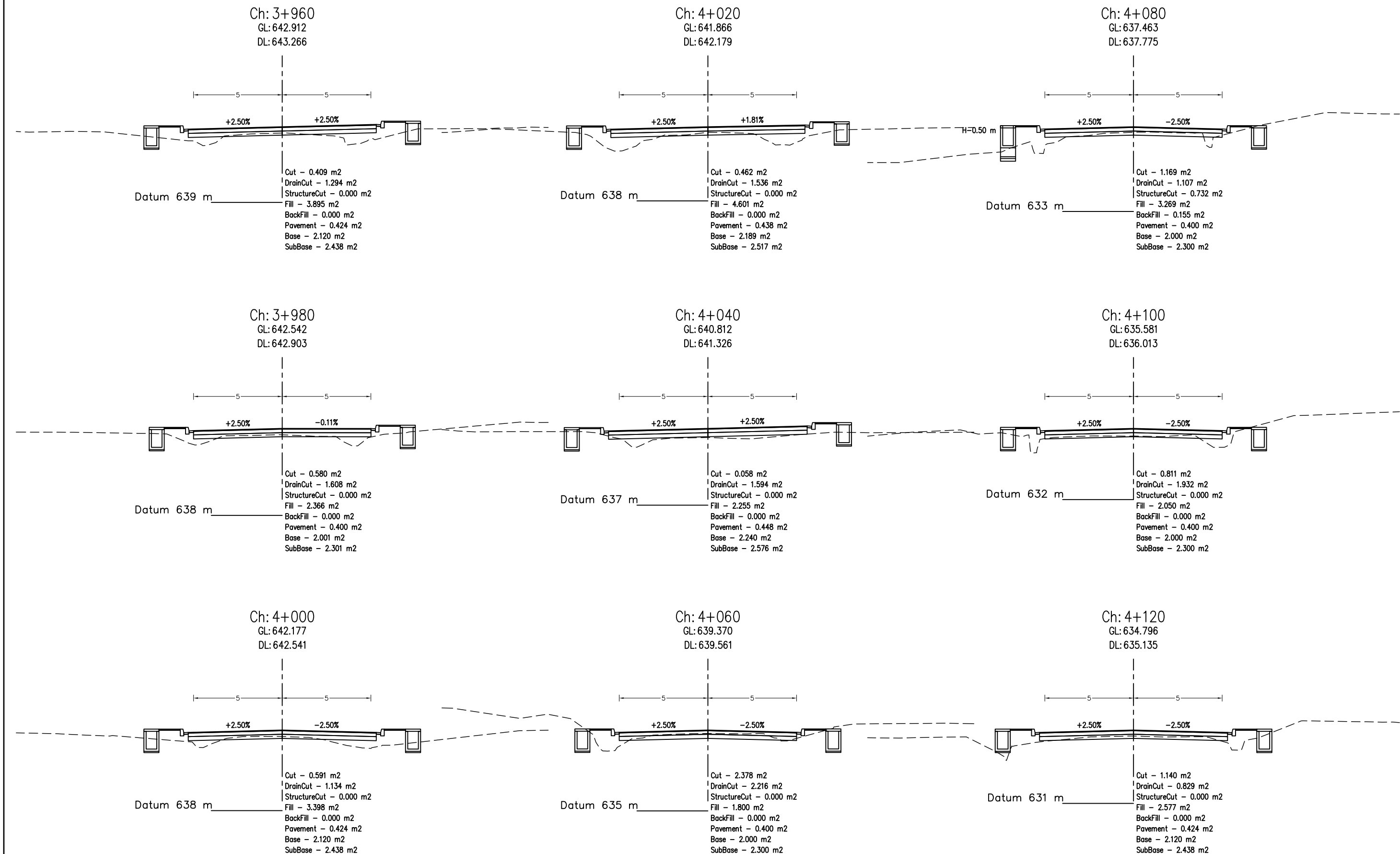


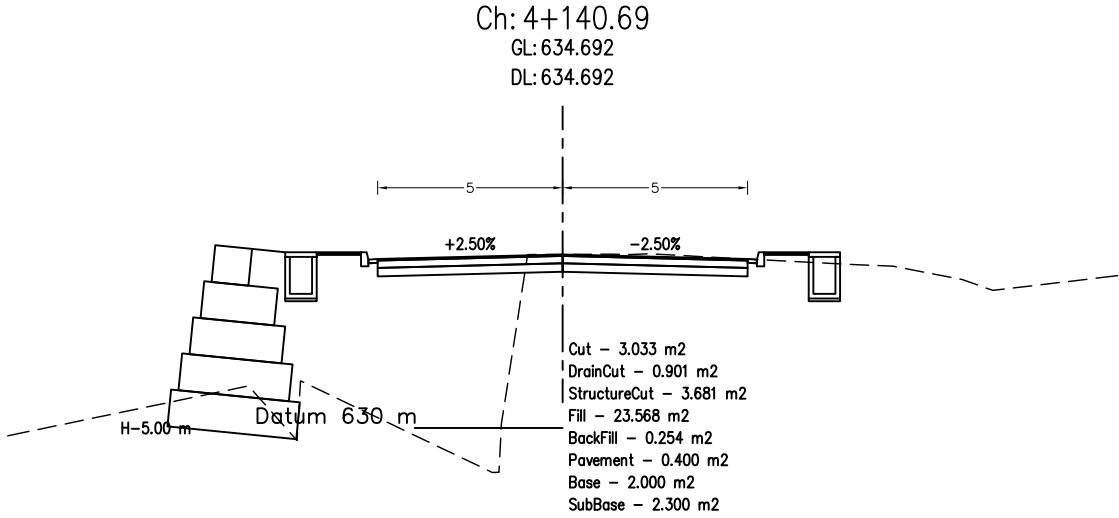
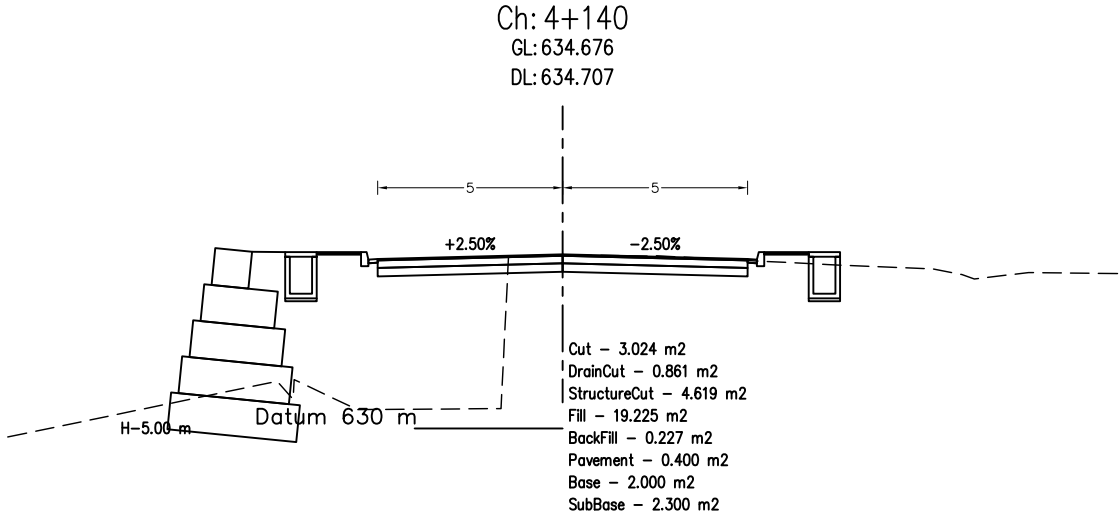








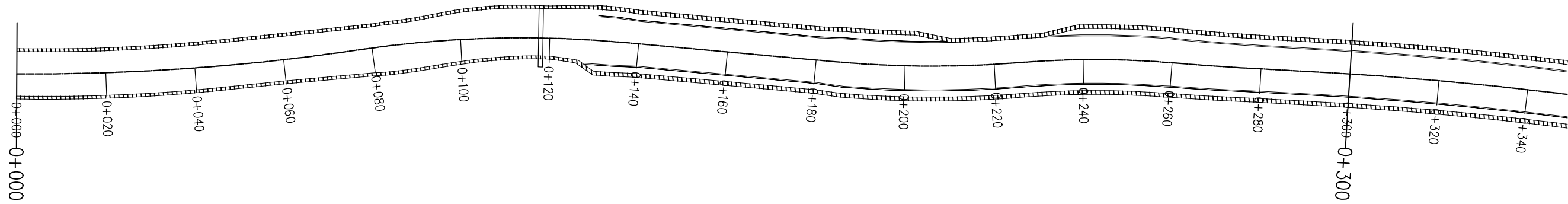




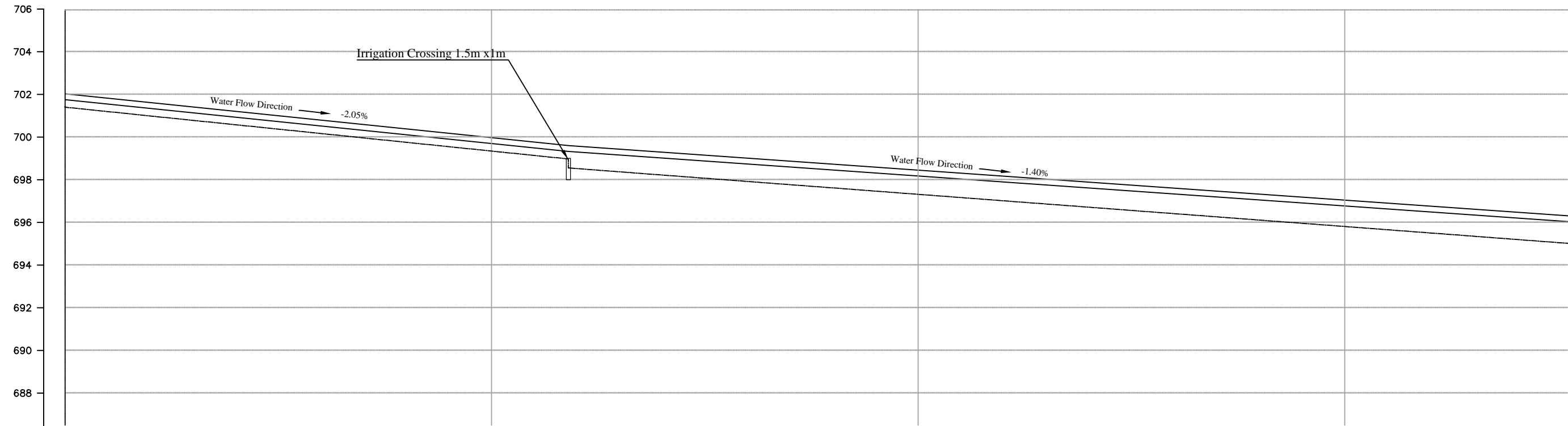
SIDE DRAIN PLAN AND PROFILE



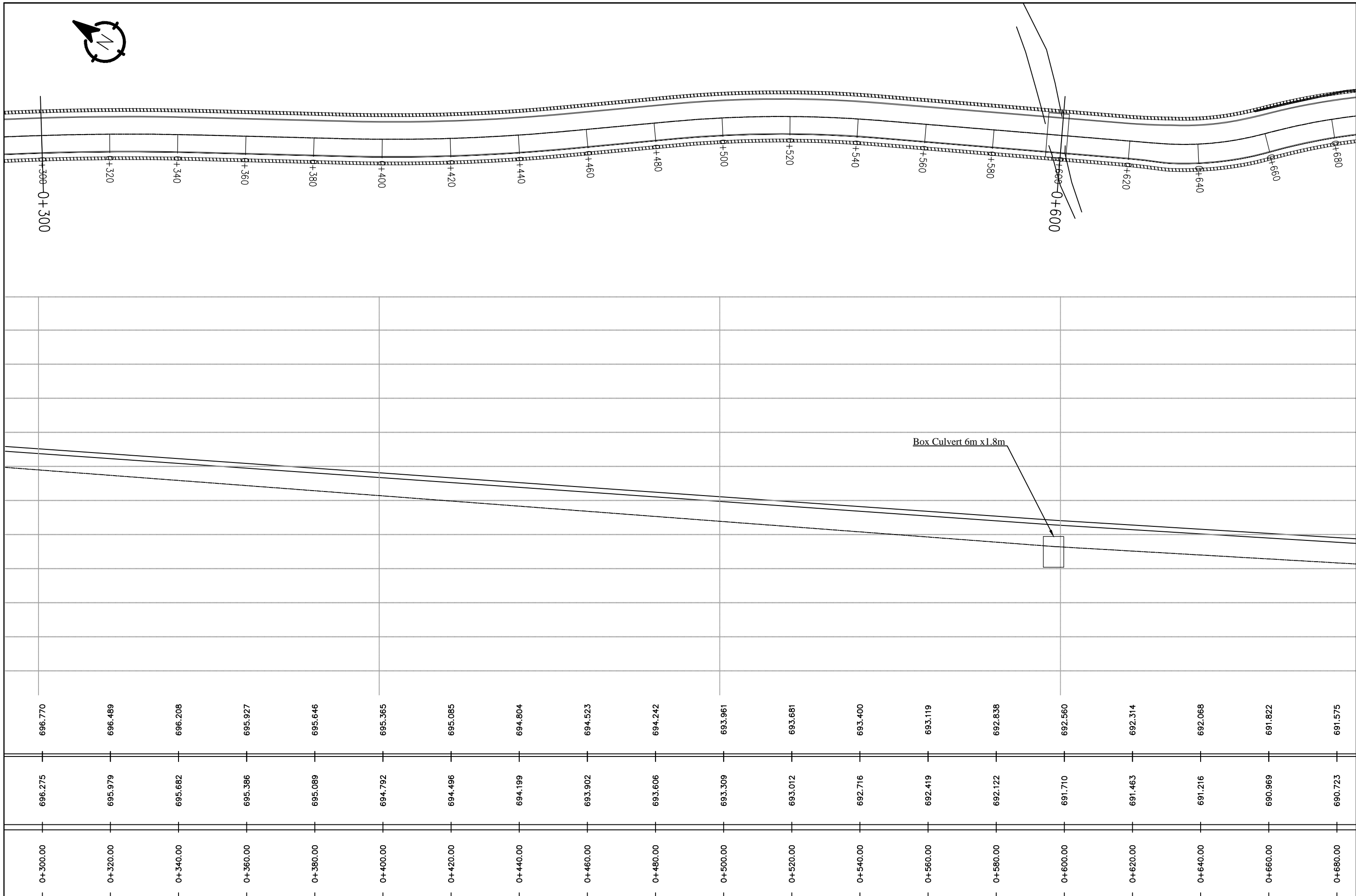
To Lekhanath

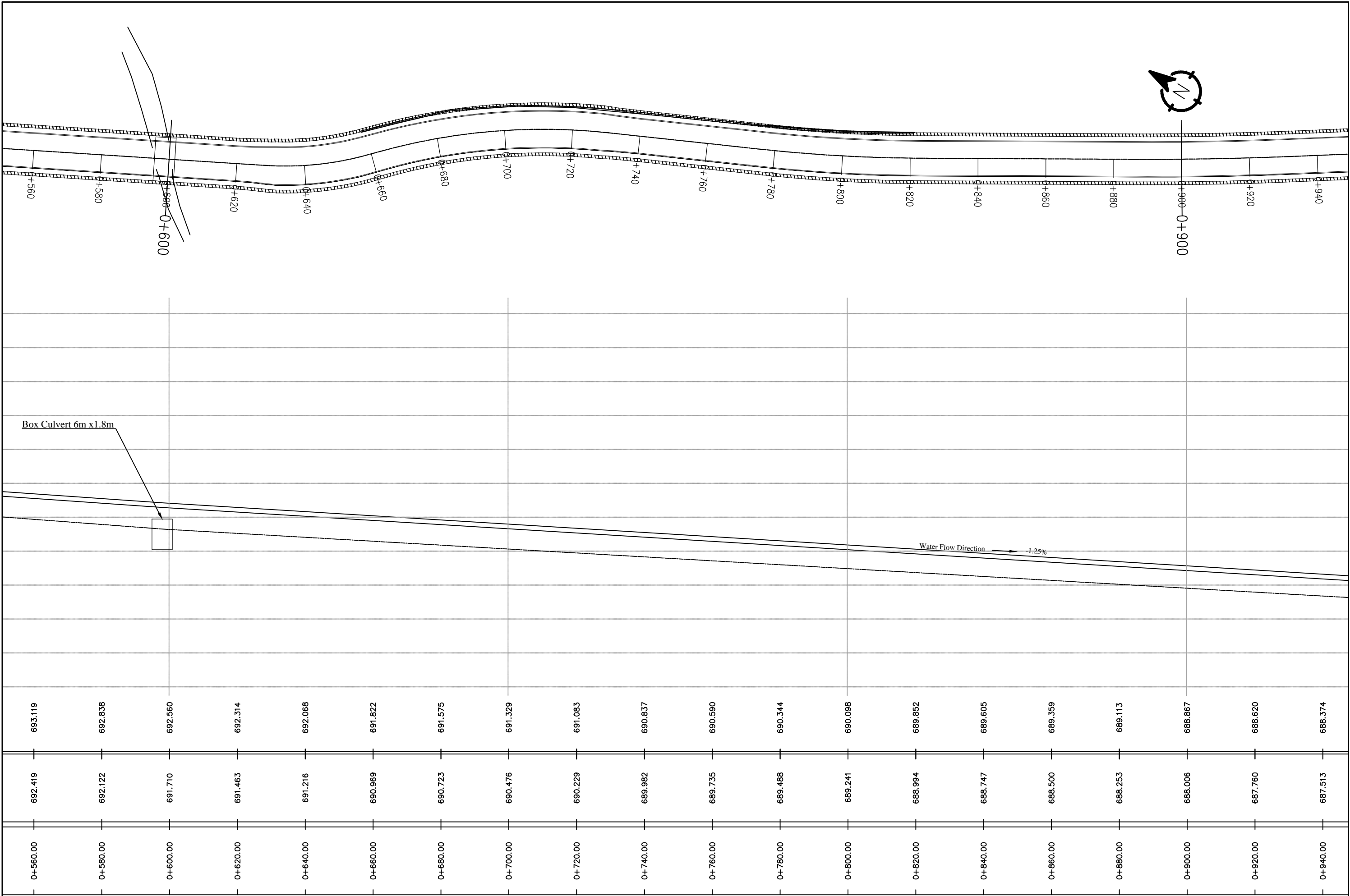


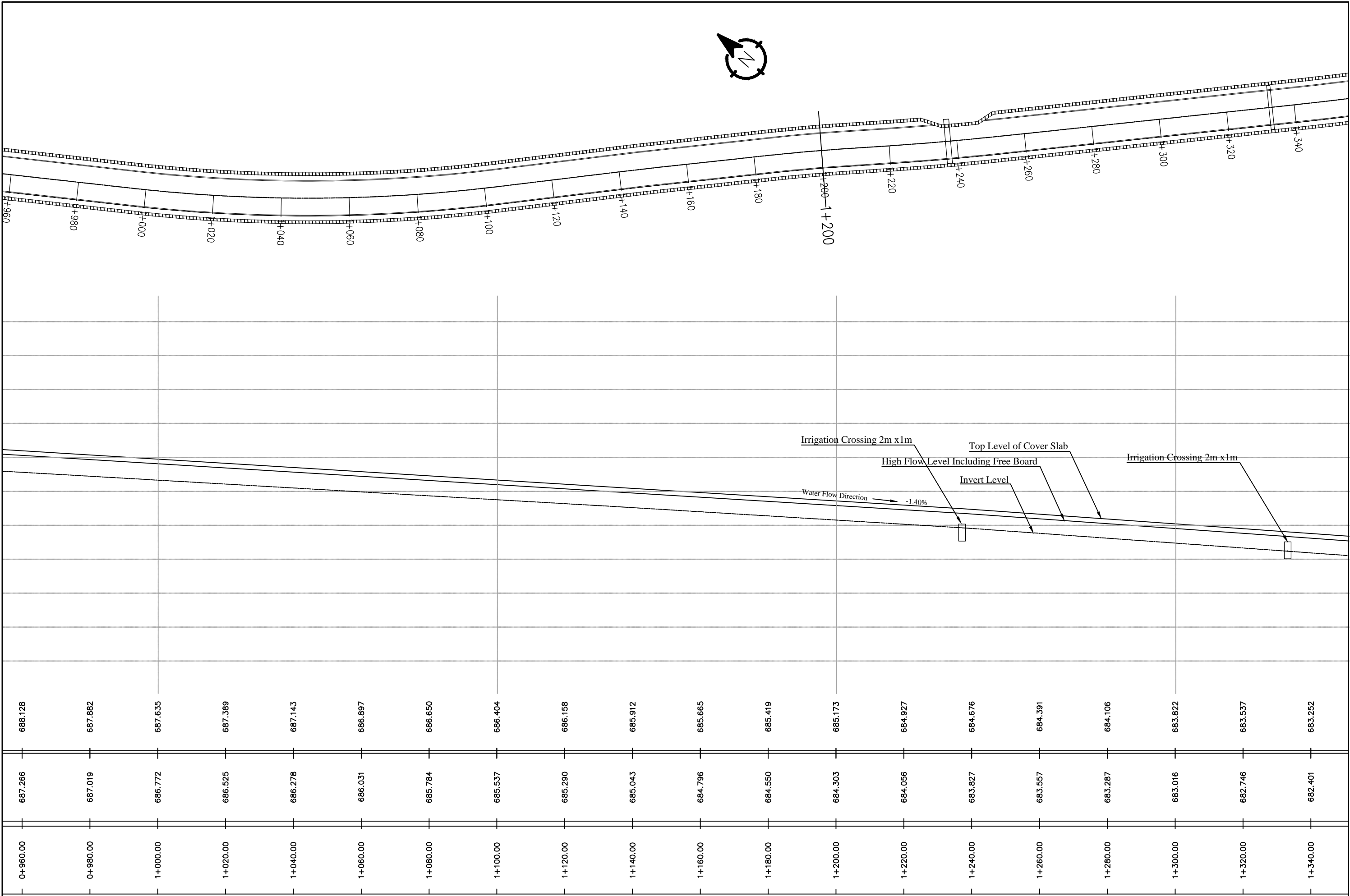
Talchowk

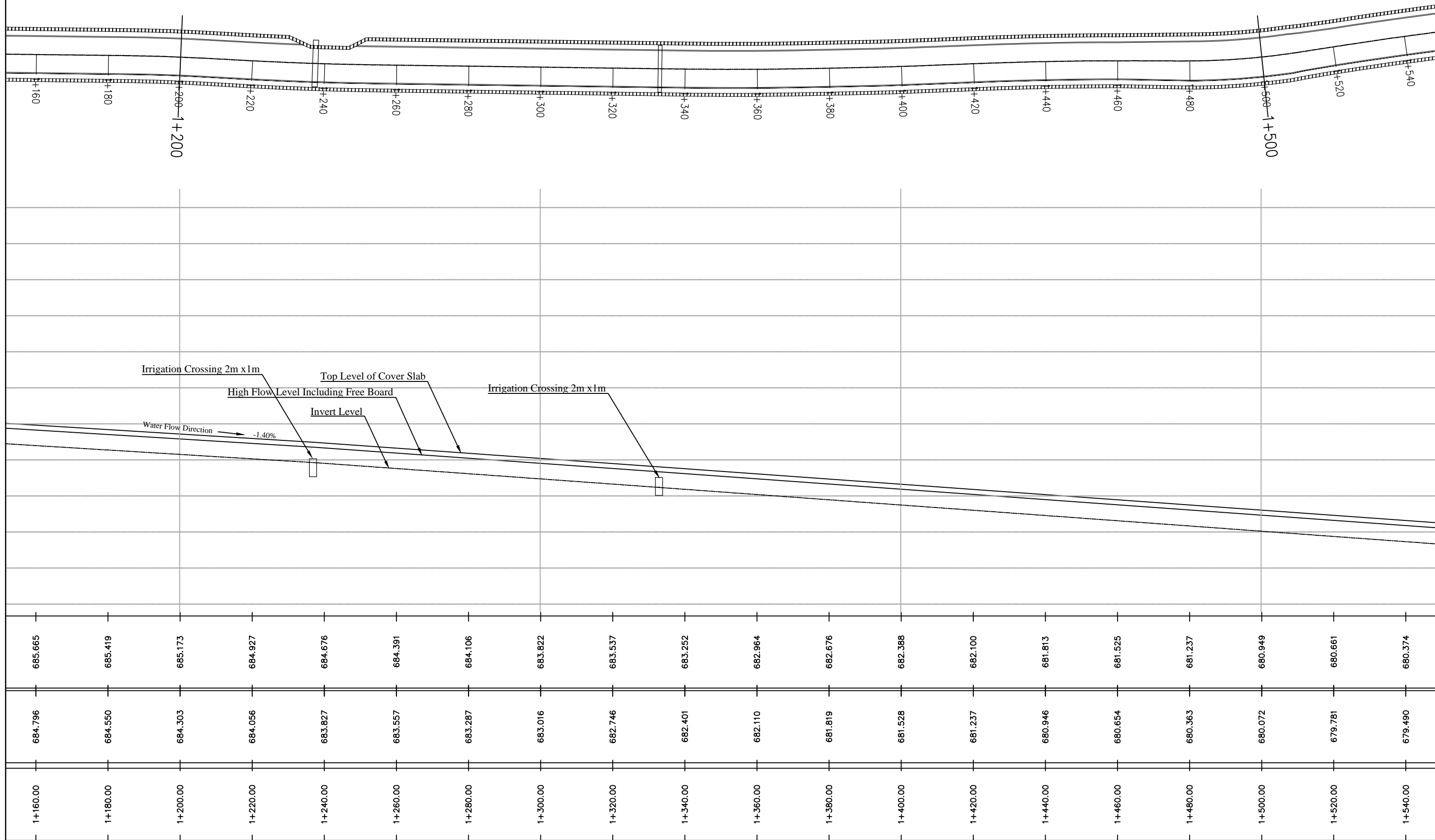


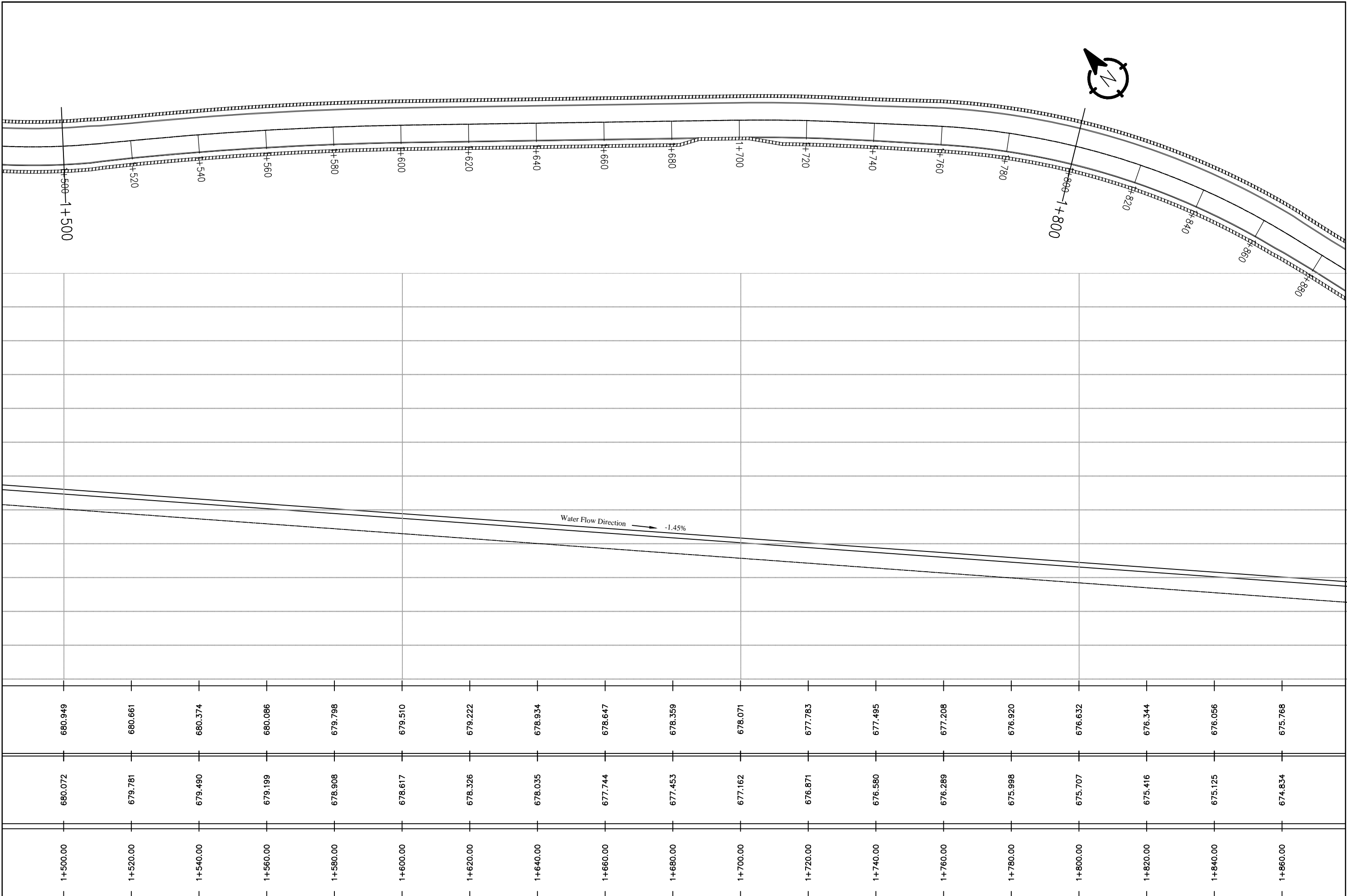
HFL LEVEL (m)	701.752	701.333	700.915	700.496	700.078	699.659	699.297	699.016	698.735	698.454	698.174	697.893	697.612	697.331	697.050	696.770	696.489	696.208
INVERT LEVEL (m)	701.394	700.896	700.398	699.900	699.402	698.904	698.945	698.649	698.352	698.055	697.759	697.462	697.165	696.869	696.572	696.275	695.979	695.682
CHAINAGE (km)	0+000.00	0+020.00	0+040.00	0+060.00	0+080.00	0+100.00	0+120.00	0+140.00	0+160.00	0+180.00	0+200.00	0+220.00	0+240.00	0+260.00	0+280.00	0+300.00	0+320.00	0+340.00

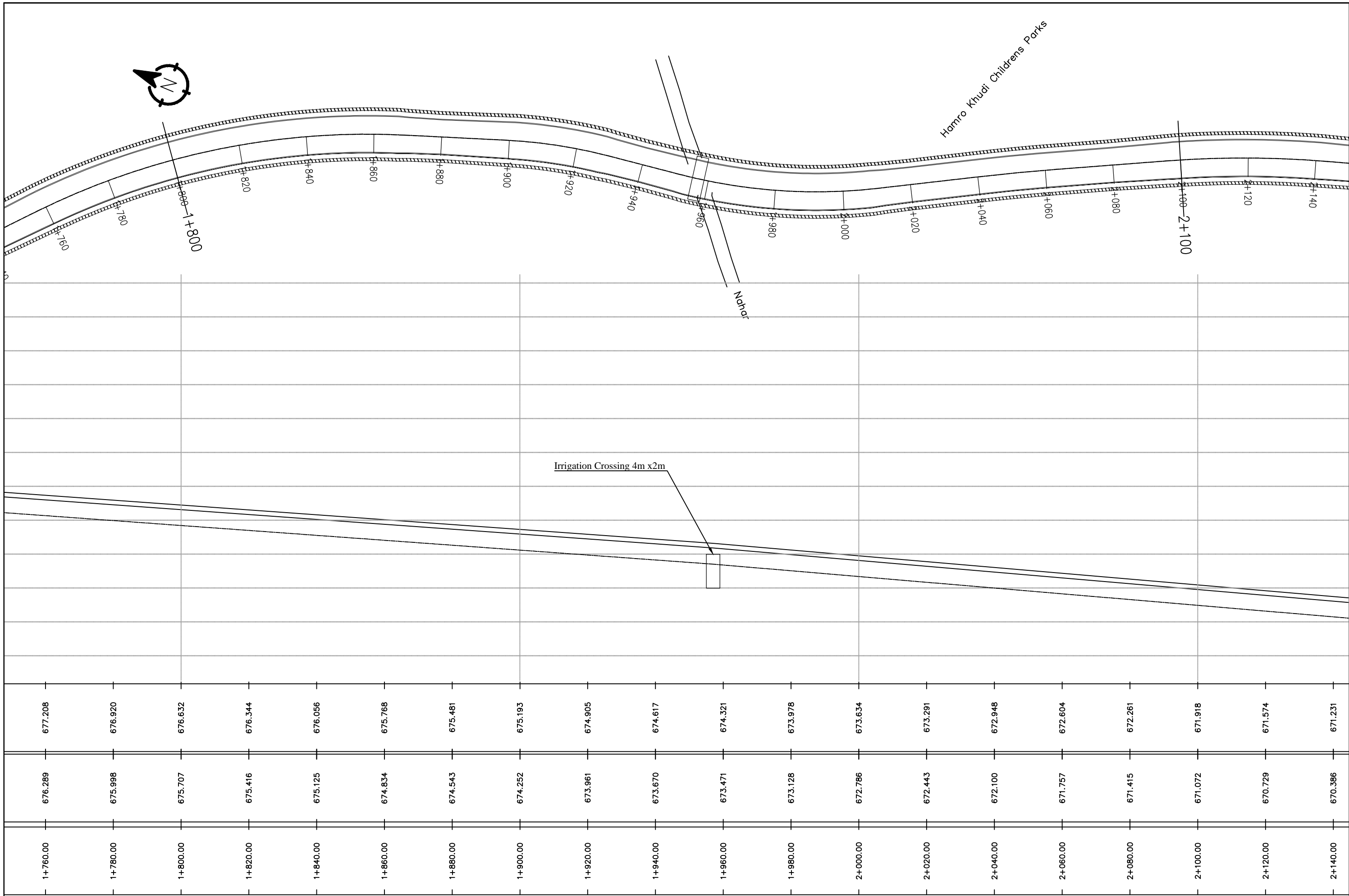


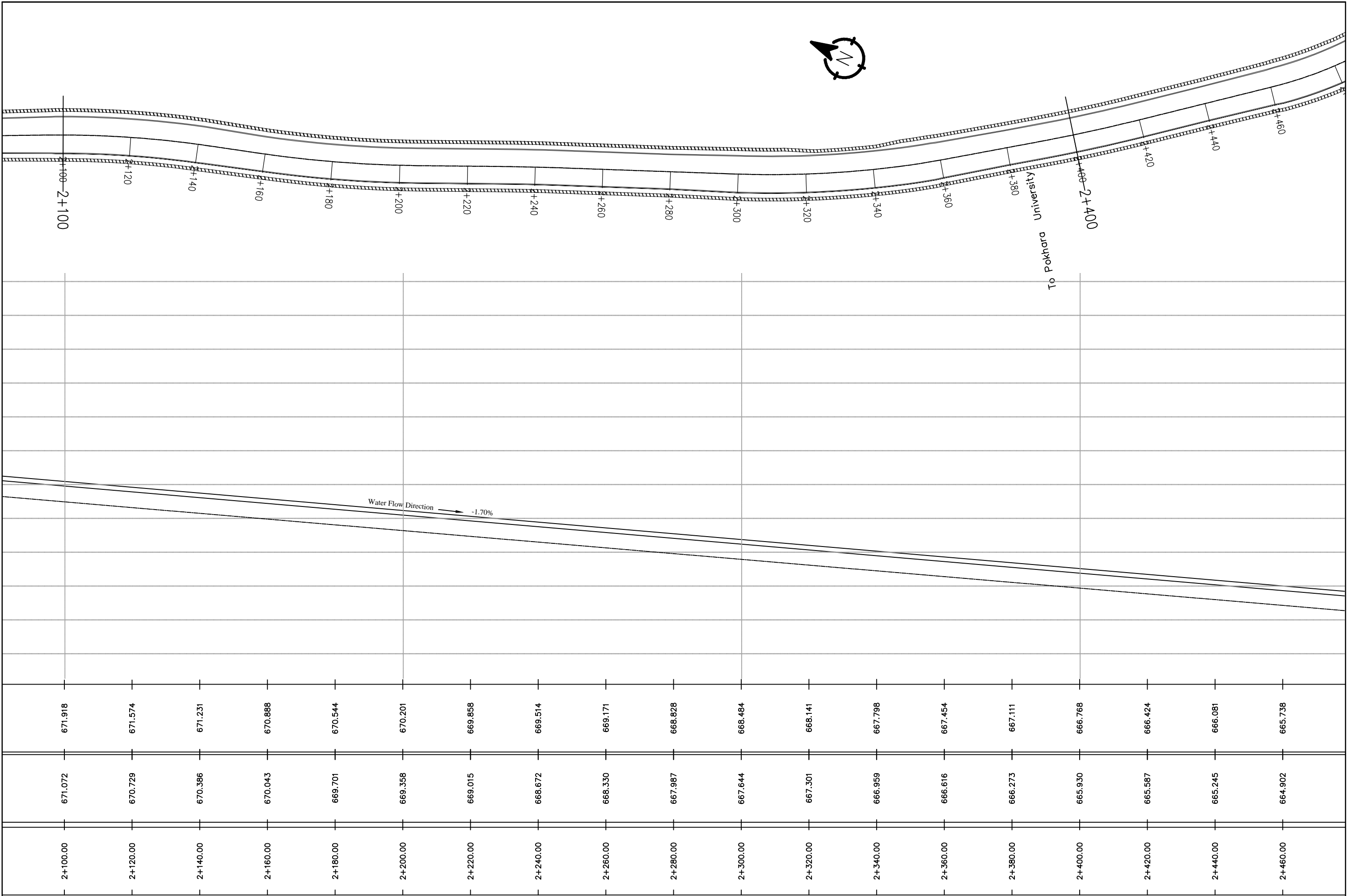


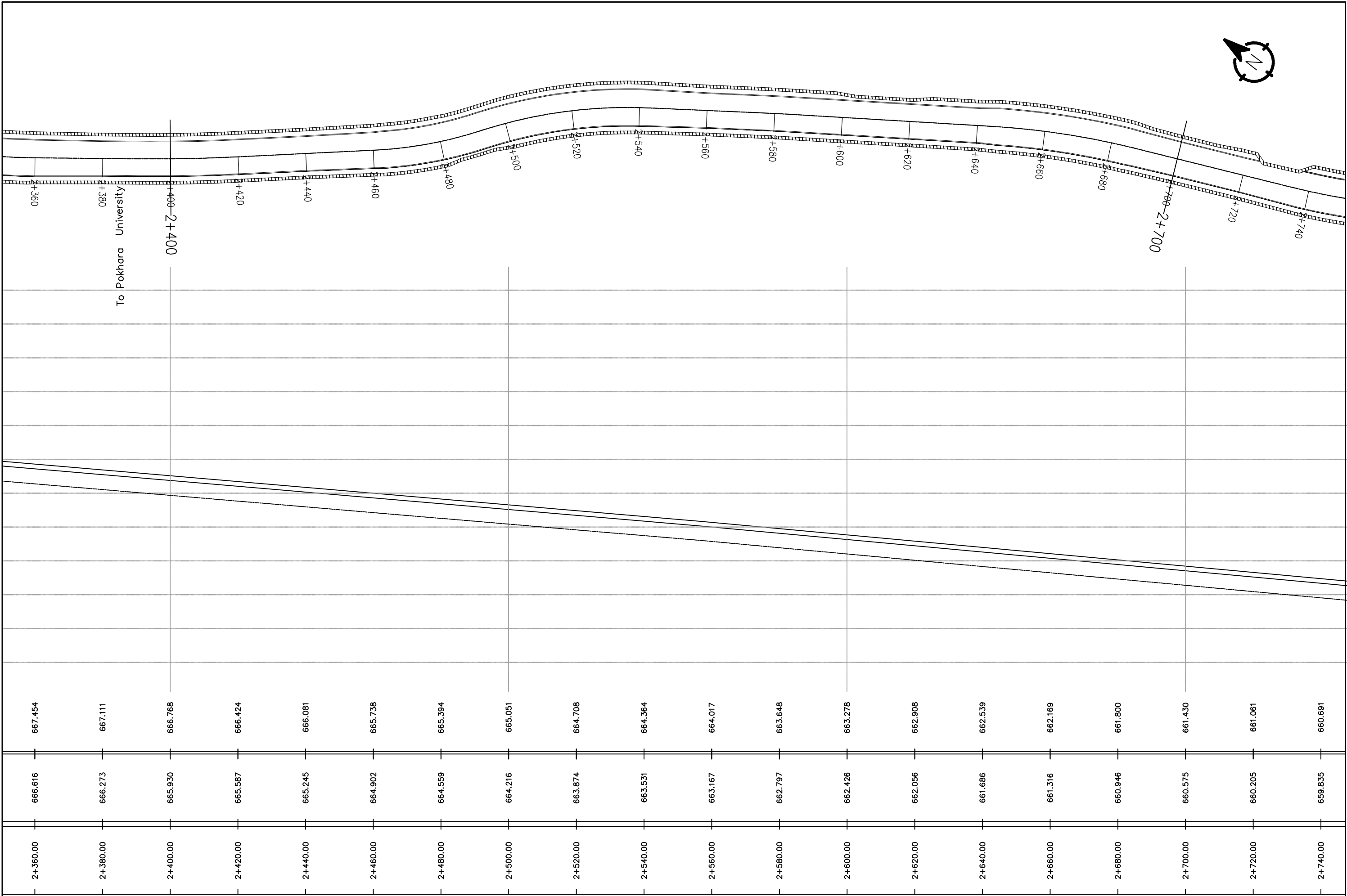


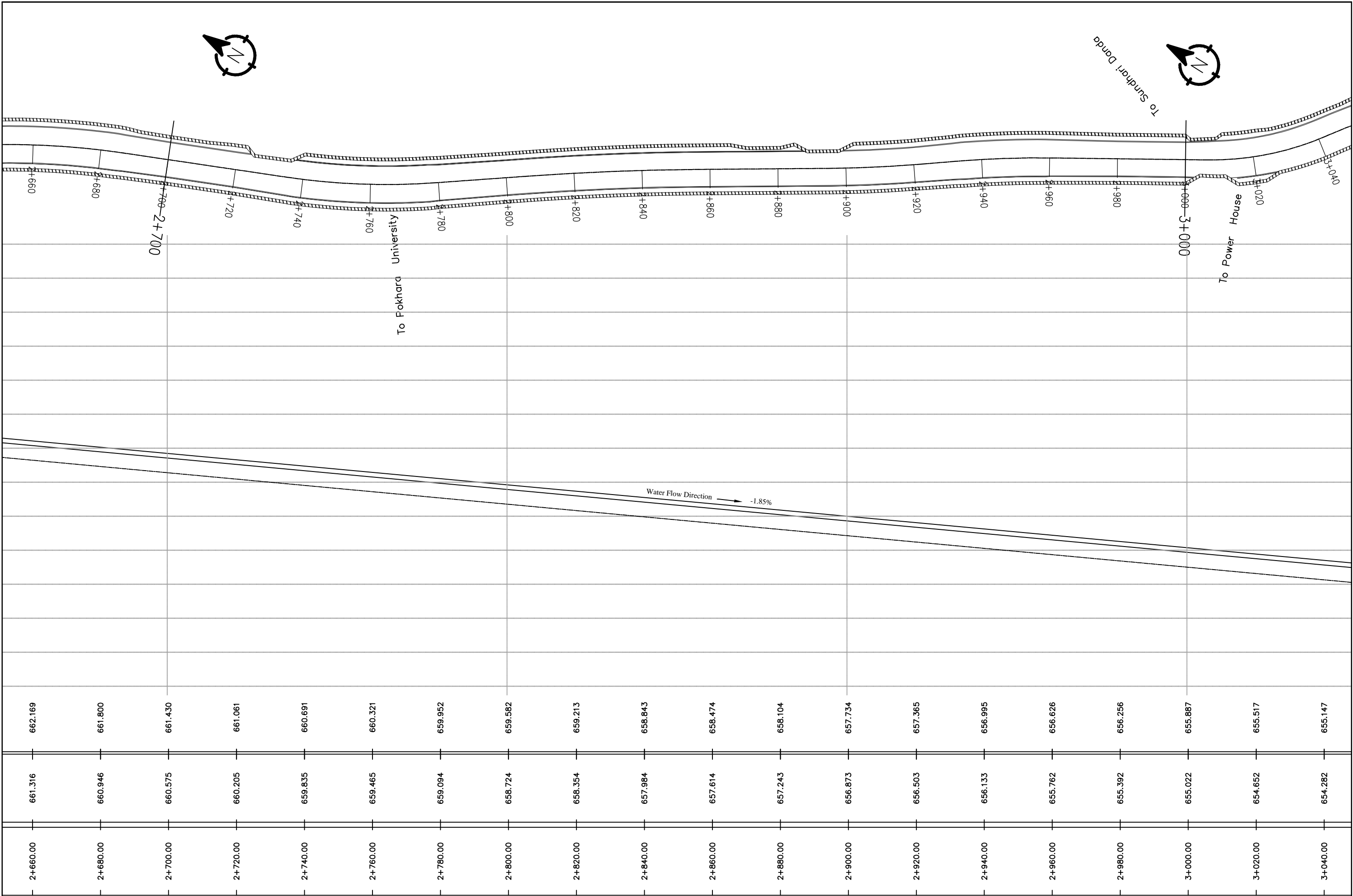


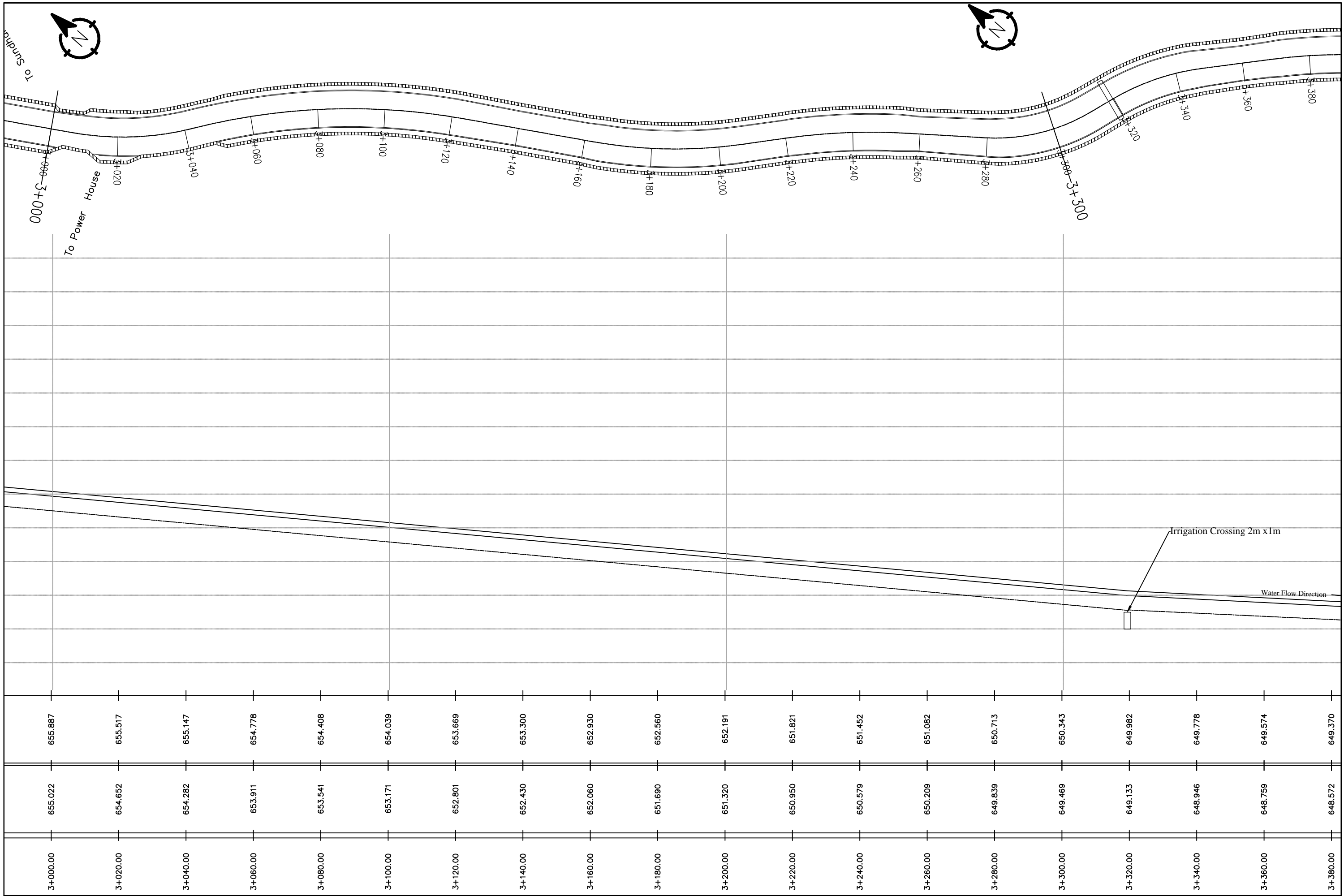


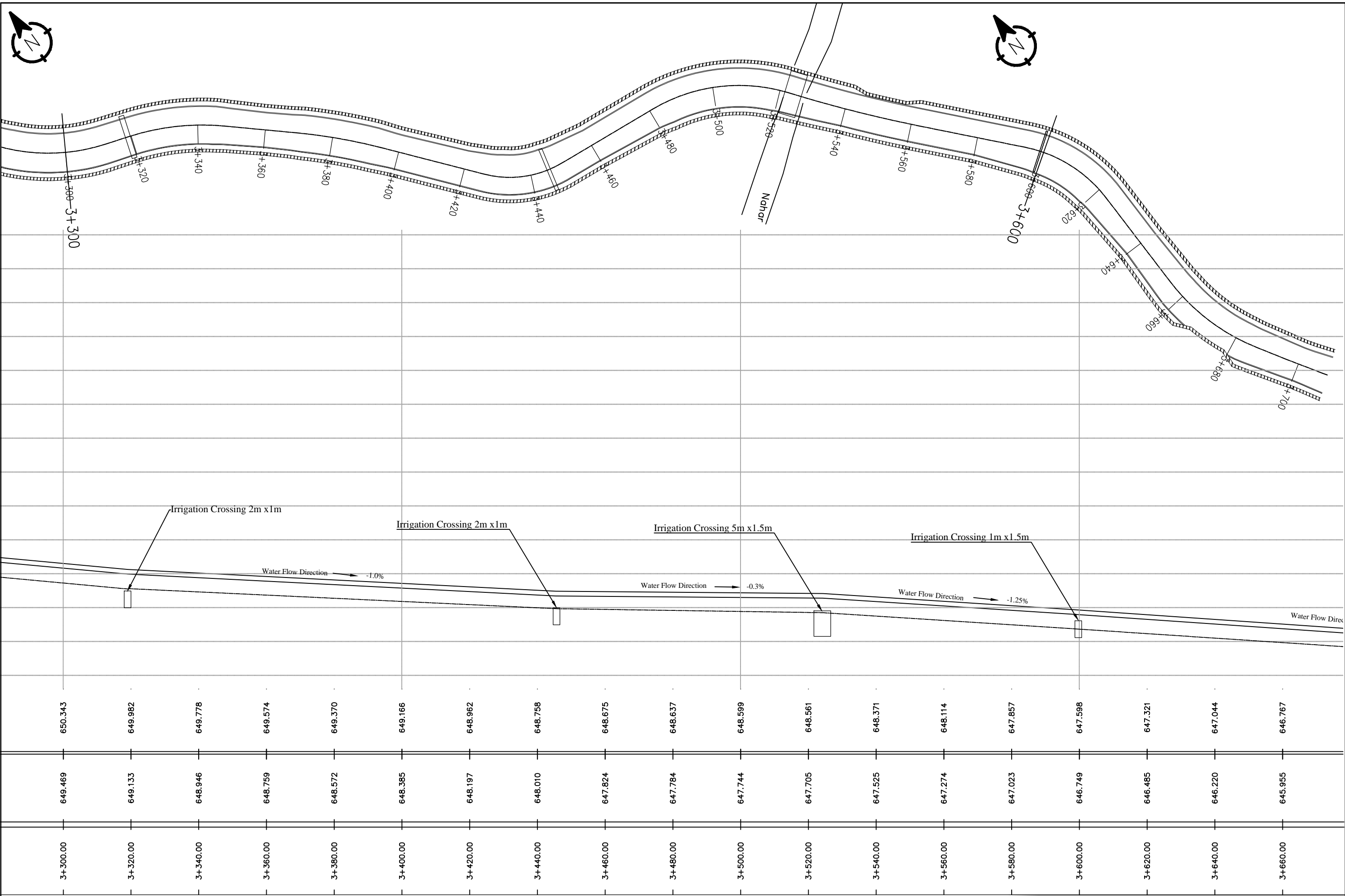


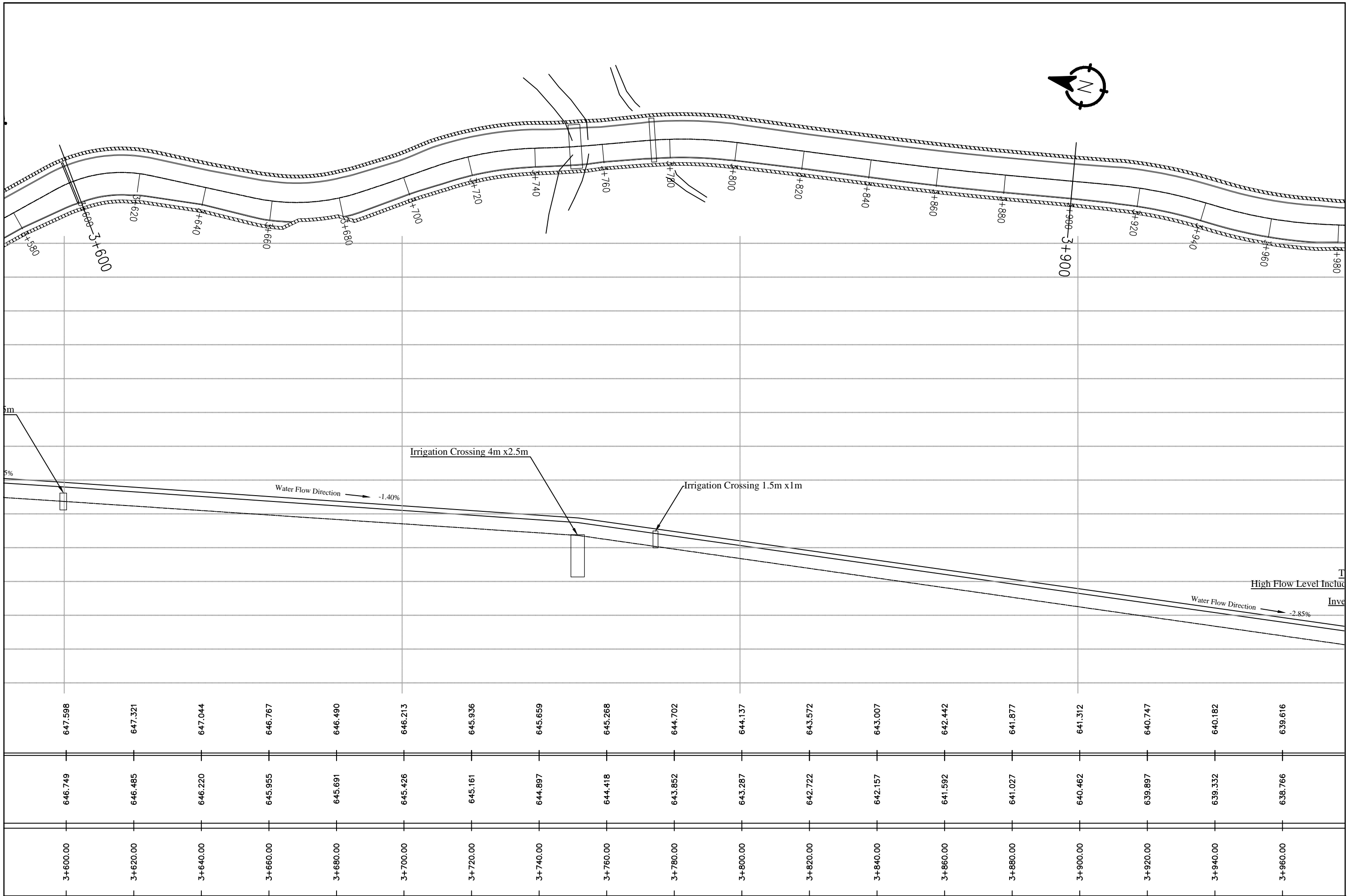


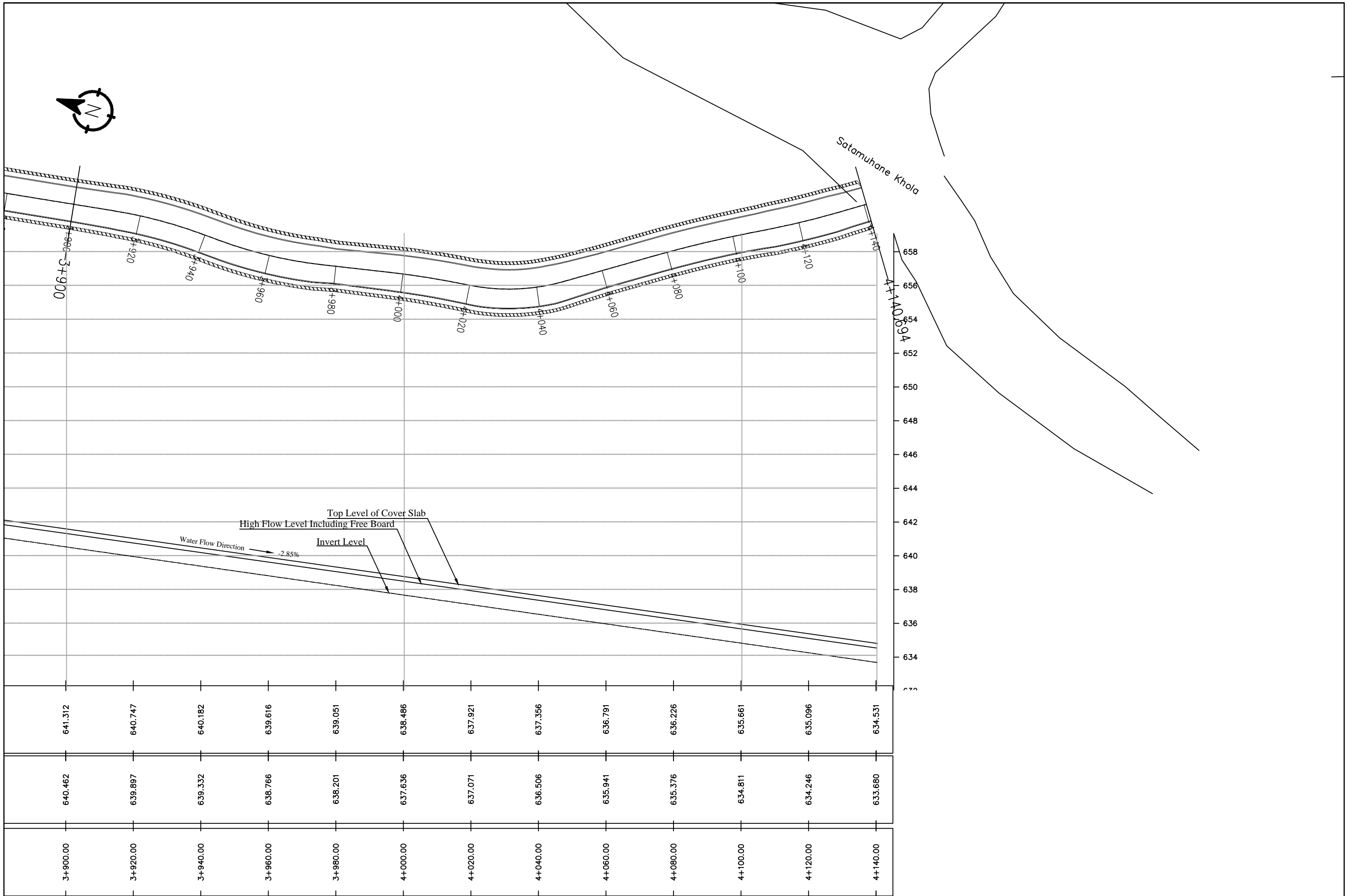




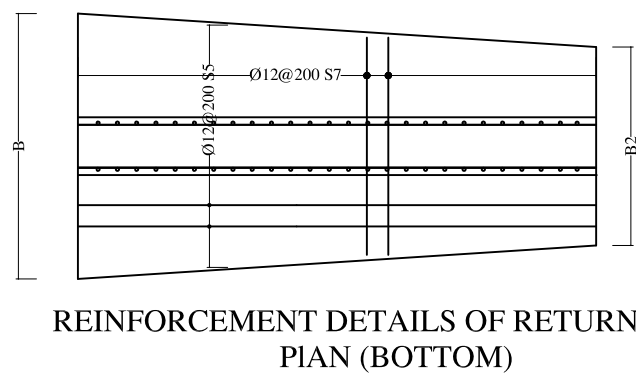
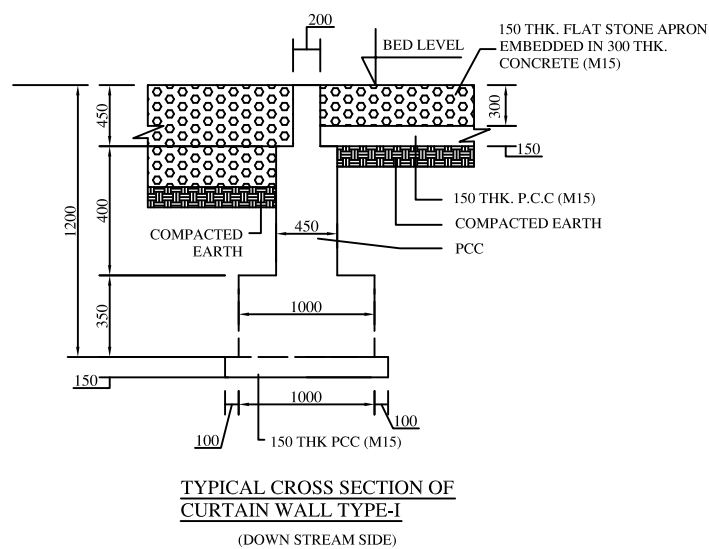
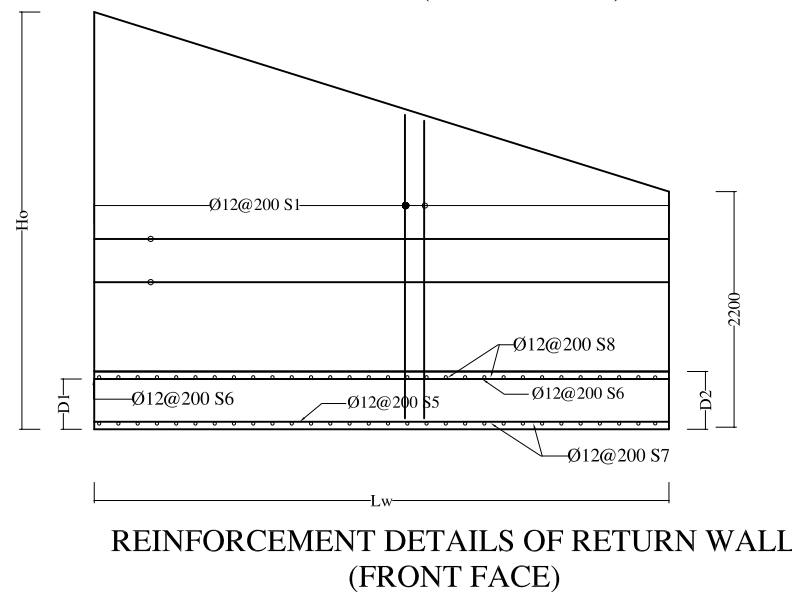
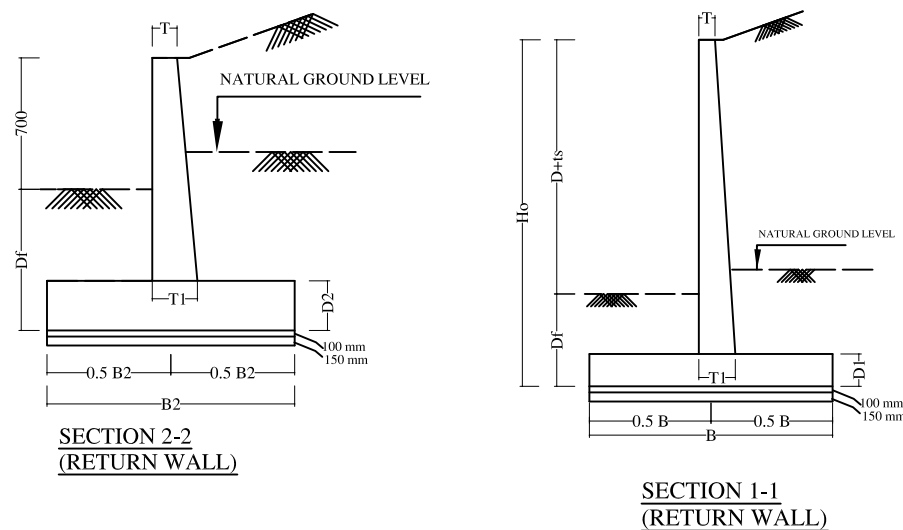
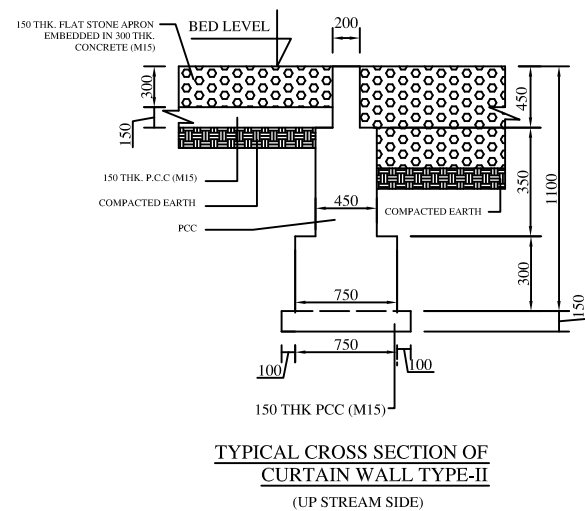
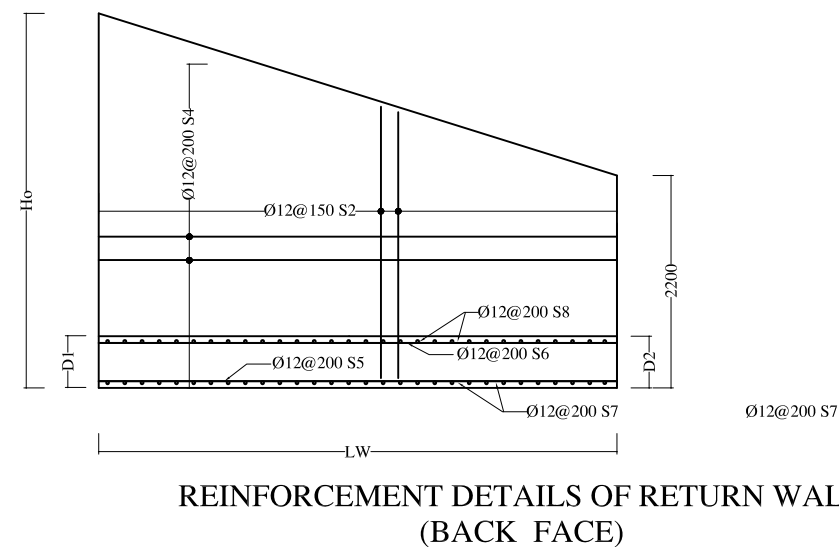
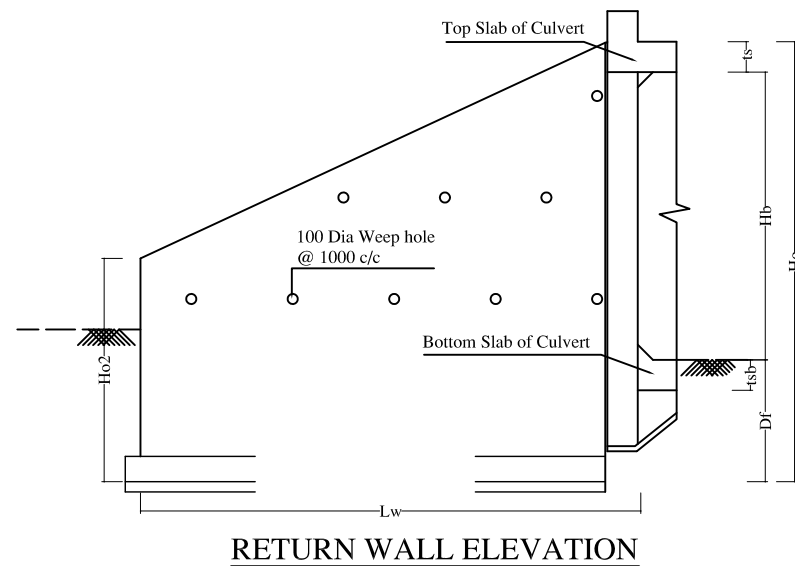
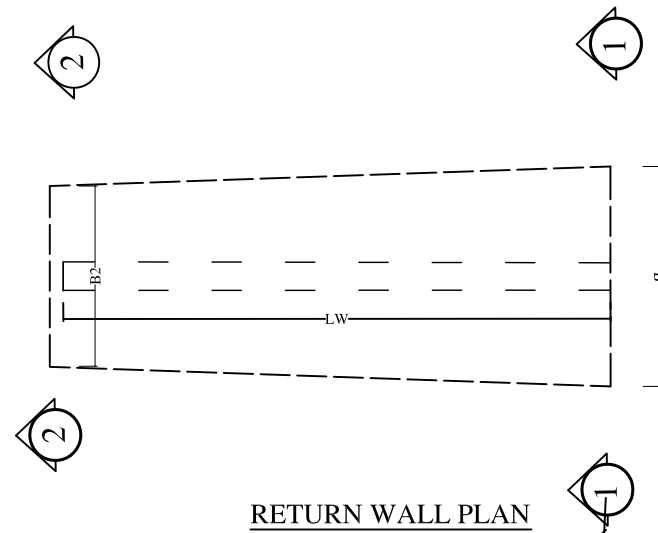






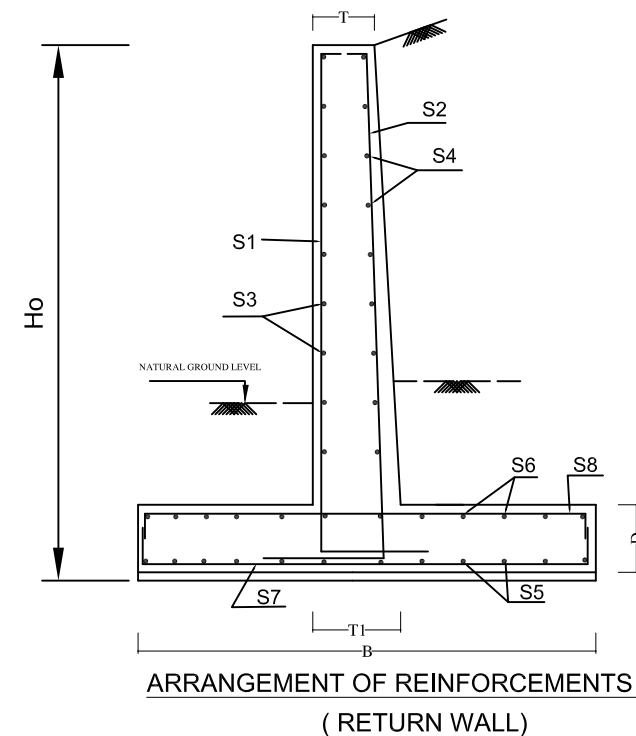


TYPICAL DRAWINGS



S.No.	Height of Opening, Hb (mm)	Depth of Foundation, Df (mm)	Max. ht. Ho (mm)	Length of Return Wall, Lw (mm)	Section 1 -1				Section 2 -2			
					T (mm)	T1 (mm)	B (mm)	D1 (mm)	T (mm)	T1 (mm)	B2 (mm)	D2 (mm)
1	1800	1500	3750	2000	200	430	1500	400	200	400	1500	400

NOTES: 1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.



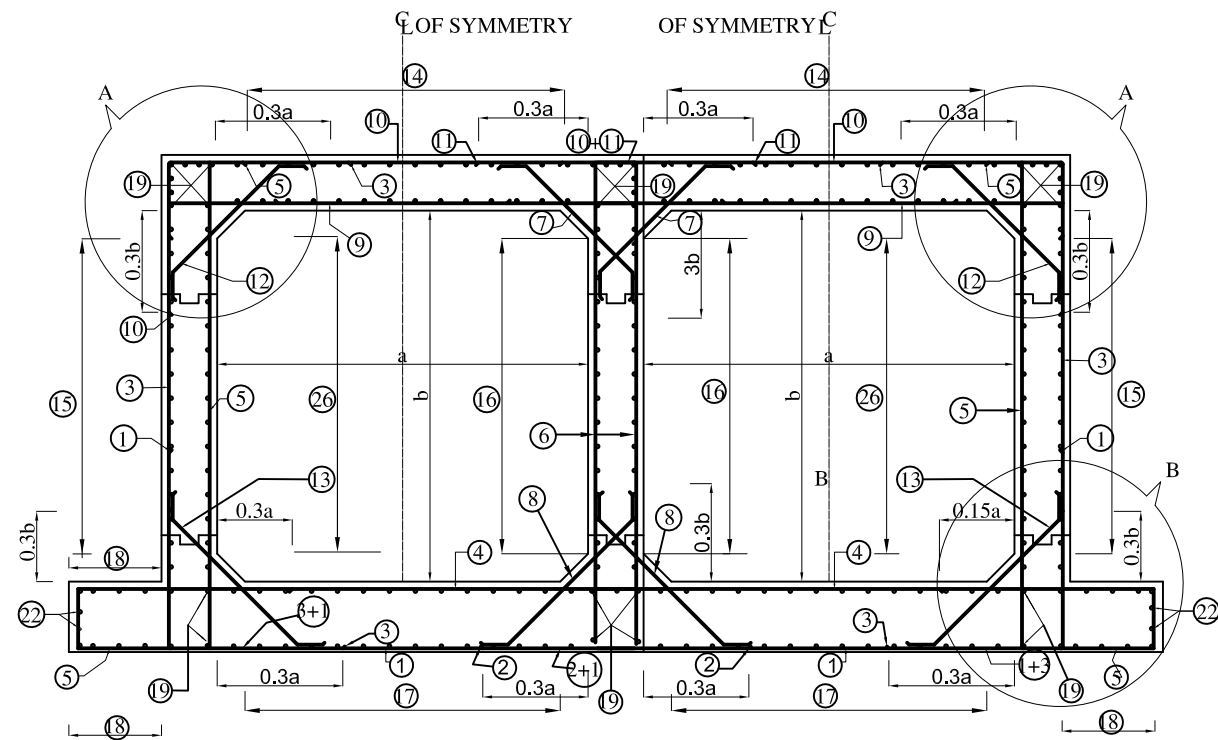
Nepal Urban Governance and Infrastructure Project (NUGIP)
Office of the Municipal Executive
Pokhara Metropolitan City
Kaski District, Gandaki Province

CONSULTANT:
Plush Engineers and Architects (P.) Ltd. (PEA)
B.N. Consultancy Pvt. Ltd. (BN)
Soil Test Consultancy (P.) Ltd. (Soil Test)
Kathmandu, Nepal

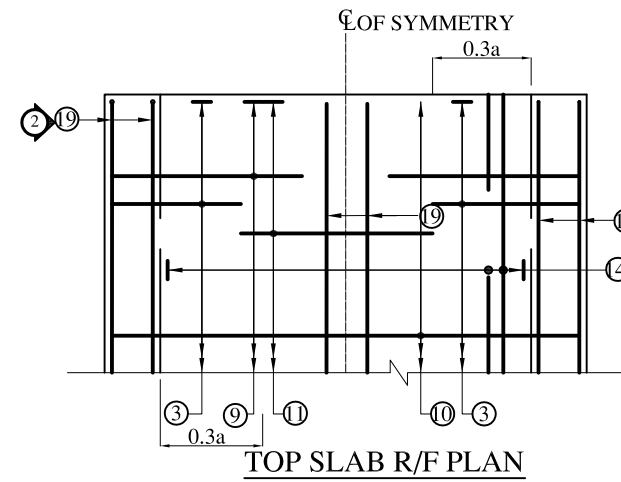
Project Name:- Nepal Urban Governance and Infrastructure Project (NUGIP)

SHEET TITLE:
Box Culvert (Return Wall Details)

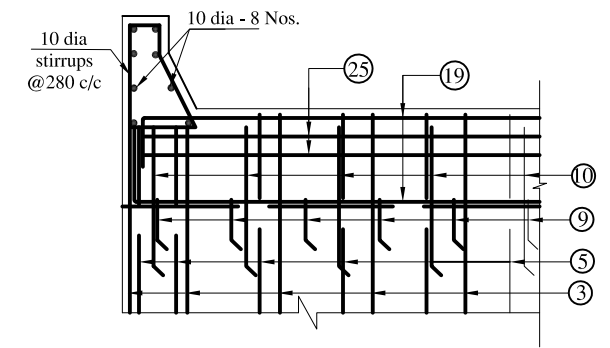
DESIGNED BY:	Date: 2023
DRAWN BY:	Scale: Not in Scale
CHECKED BY:	Chainage:
APPROVED BY:	Sheet No: 2



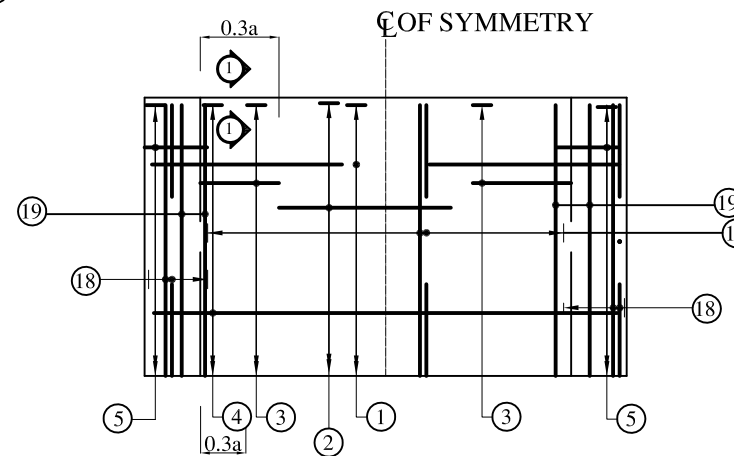
REINFORCEMENT DETAILS OF DOUBLE CELL BOX CULVERT



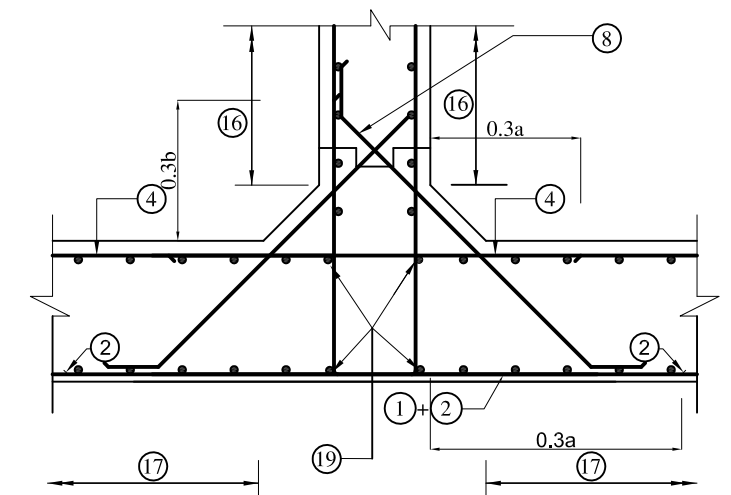
TOP SLAB R/F PLAN



VIEW 2 - 2



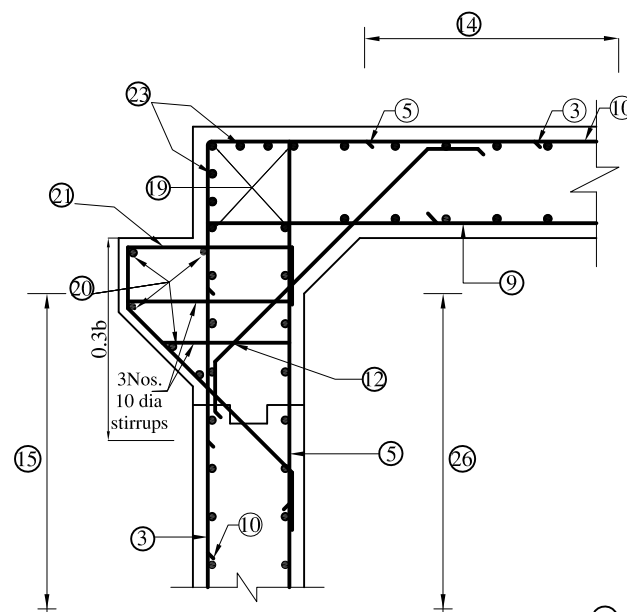
BOTTOM SLAB R/F PLAN



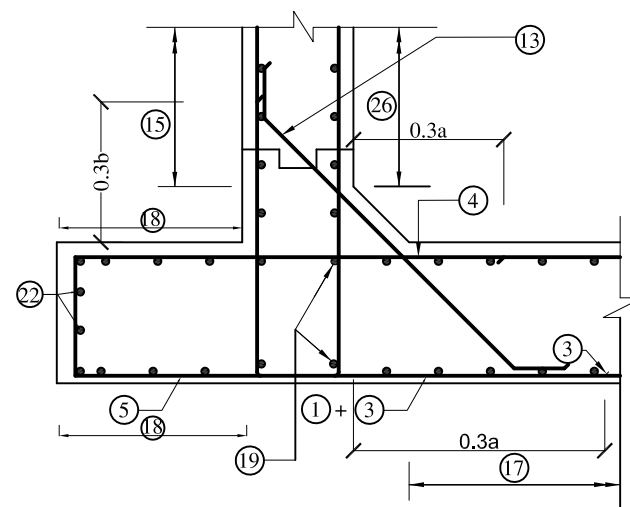
DETAIL - C

LEGEND:

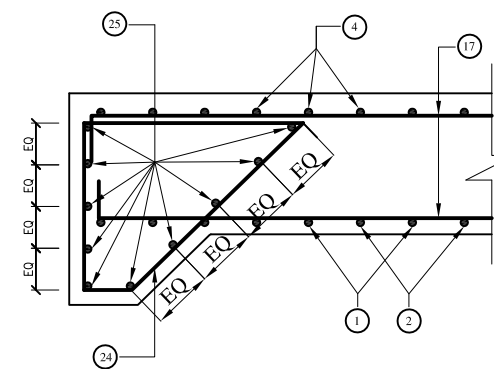
- : TOP FACE BARS / OUTER FACE BARS
- - - : BOTTOM FACE BARS / INNER FACE BARS



DETAIL - A



DETAIL - B



SECTION 1-1



Nepal Urban Governance and Infrastructure Project (NUGIP)
Office of the Municipal Executive
Pokhara Metropolitan City
Kaski District, Gandaki Province



CONSULTANT:
Plush Engineers and Architects (P.) Ltd. (PEA)
B.N. Consultancy Pvt. Ltd. (BN)
Soil Test Consultancy (P.) Ltd. (Soil Test)
Kathmandu, Nepal



Project Name:- Nepal Urban Governance and
Infrastructure Project (NUGIP)

SHEET TITLE:

Box Culvert Double Cell
(Reinforcement Details)

DESIGNED BY:

DRAWN BY:

CHECKED BY:

APPROVED BY:

Date: 2023

Scale:

Chainage:

Sheet No: 3

BAR MARK	BOX-CELL DESIGNATION Nc/ab/Ec SHAPE OF BARS (NOT TO SCALE)	Double Cell Box Culvert 3m x2m without earth cushion								
		BAR DIA. in mm.	SPACING in mm.	M1 in mm.	M2 in mm.	LENGTH in mm.	NO. OF BARS	TOTAL LENGTH in mm.	Wt/m. kg	Weight, kg
1		10	200	1300	7000	9600	51	489600	0.62	303.6
2		10	200	2100	0	2100	50	105000	0.62	65.1
3		16	200	1250	2600	5100	102	540600	1.58	854.1
4		16	200	350	7600	8350	51	425850	1.58	672.8
5		12	125	2600	600	6000	160	992000	0.89	882.9
6		12	125	200	2600	3000	160	512000	0.89	455.7
7		12	200	200	1030	1430	102	145860	0.89	129.8
8		12	200	200	1030	1430	102	145860	0.89	129.8
9		16	200	260	7000	7520	51	383520	1.58	606.0
10		12	200	1000	7000	9000	51	459000	0.89	408.5
11		16	200	2100	0	2100	50	105000	1.58	165.9
12		12	200	200	1170	1570	102	160140	0.89	142.5
13		12	200	200	1170	1570	102	160140	0.89	142.5
14		10	150	250	9900	10400	72	748800	0.62	464.3
15		10	150	200	9900	10300	23	236900	0.62	146.9
16		10	150	160	9900	10220	23	235060	0.62	145.7
17		10	150	225	9900	10350	72	745200	0.62	462.0
18		10	150	225	9900	10350	12	124200	0.62	77.0
19		10	-	160	9900	10220	16	163520	0.62	101.4
20		12	-	9900	0	9900	10	99000	0.89	88.1
21		12	200	1000	1260	2260	102	230520	0.89	205.2
22		10	-	160	9900	10220	2	20440	0.62	12.7
23		10	-	160	9900	10220	4	40880	0.62	25.3
24		10	150	1100	1550	4150	102	423300	0.62	262.4
25		10	-	160	7600	7920	20	158400	0.62	98.2
26		10	250	200	9900	10300	16	164800	0.62	102.2
										7150.7



Nepal Urban Governance and Infrastructure Project (NUGIP)
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Pokhara Metropolitan City
Kaski District, Gandaki Province



CONSULTANT:
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B.N. Consultancy Pvt. Ltd. (BN)
Soil Test Consultancy (P.) Ltd. (Soil Test)
Kathmandu, Nepal



Project Name:- Nepal Urban Governance and
Infrastructure Project (NUGIP)

SHEET TITLE:

Box Culvert Double Cell
(Reinforcement Details)

DESIGNED BY:

DRAWN BY:

CHECKED BY:

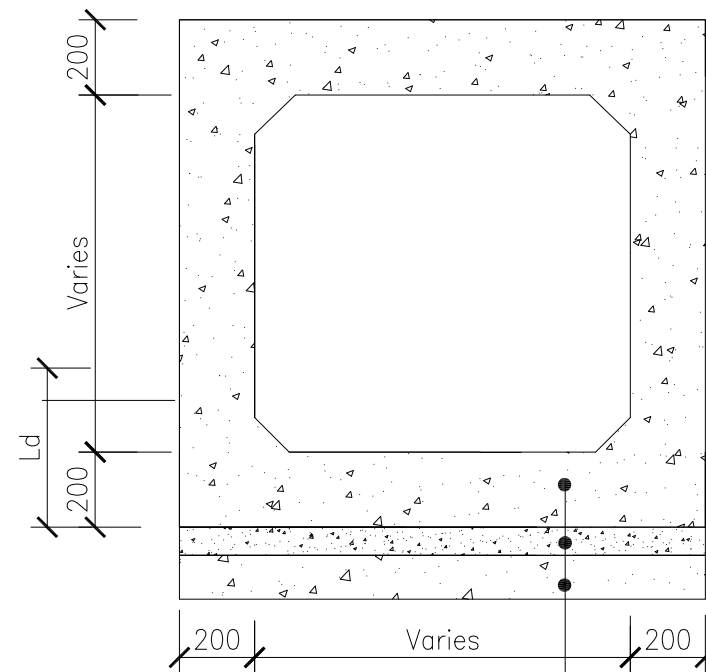
APPROVED BY:

Date: 2023

Scale:

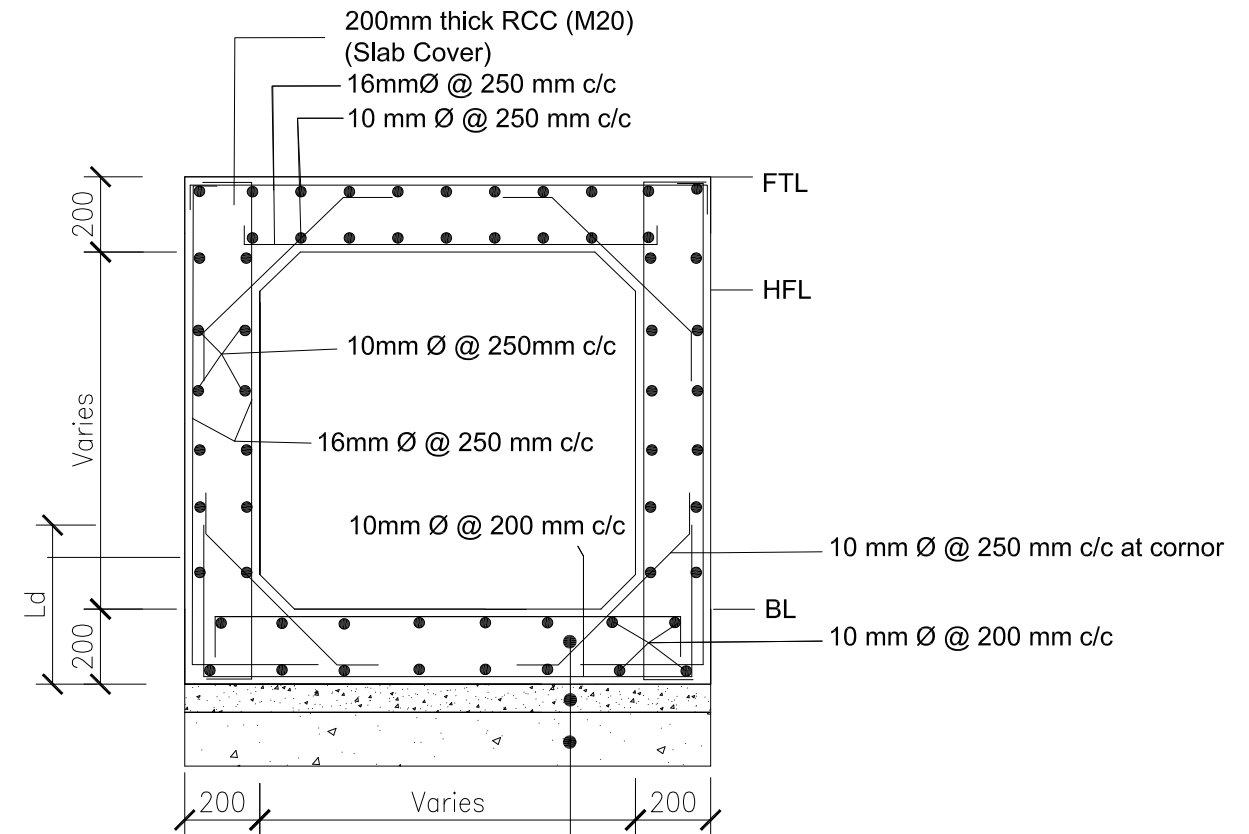
Chainage:

Sheet No: 4



200mm thk Reinforced Concrete (M20)
100mm thk P.C.C (M15)
150 mm Thk Granular Sub Base

Irrigation Crossing



200mm thk Reinforced Concrete (M20)
100mm thk P.C.C (M15)
150 mm Thk Granular Sub Base

Reinforcement Details at Irrigation Crossing

S.N	Chainage	Proposed Structure	Proposed Size (H*w)
1	3+445.5	Irrigation Crossing	1.5*1



Nepal Urban Governance and Infrastructure Project (NUGIP)
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Kaski District, Gandaki Province

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B.N. Consultancy Pvt. Ltd. (BN)
Soil Test Consultancy (P.) Ltd. (Soil Test)
Kathmandu, Nepal



Project Name:- Nepal Urban Governance and Infrastructure Project (NUGIP)

SHEET TITLE:

Irrigation Crossing

DESIGNED BY:

Date: 2023

DRAWN BY:

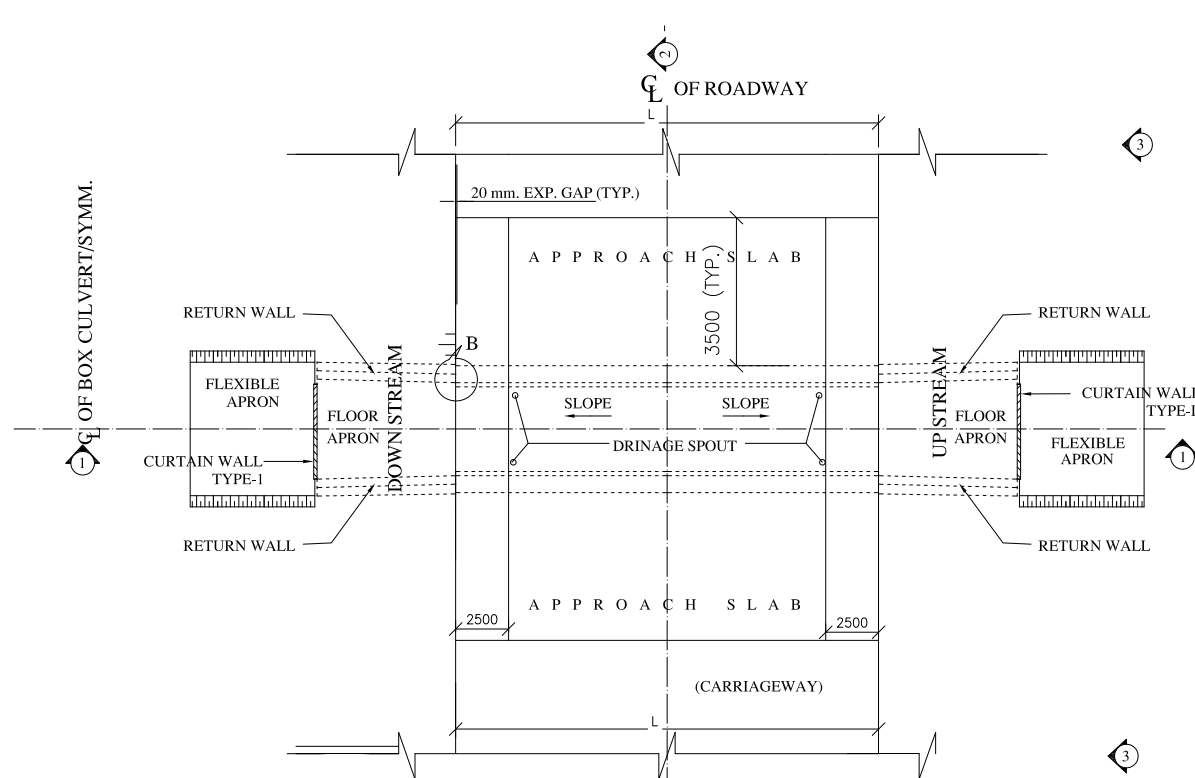
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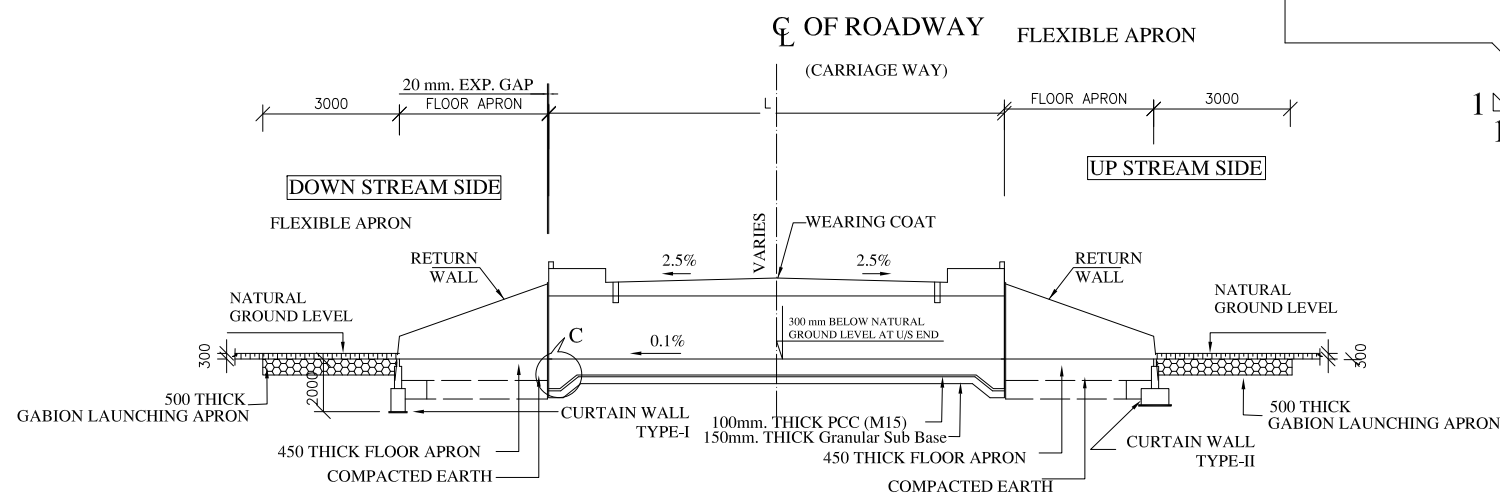
Chainage:

APPROVED BY:

Sheet No: 1



PLAN AT ROAD LEVEL

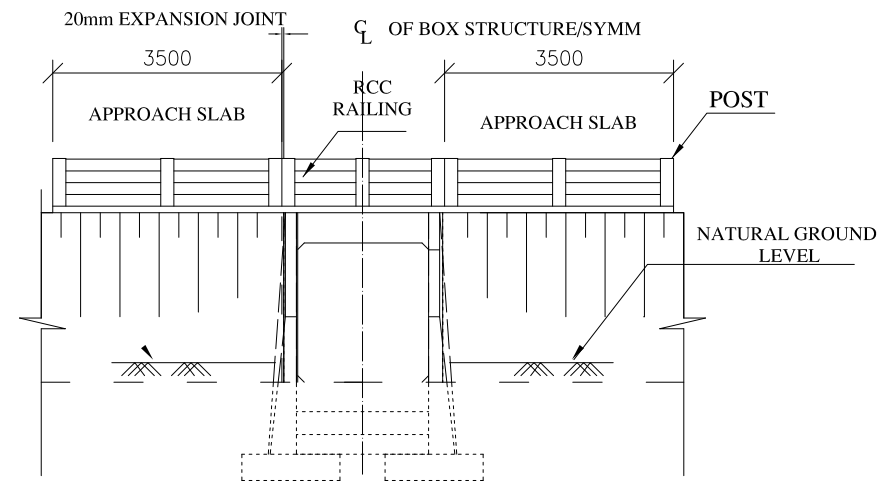


SECTION 1-1

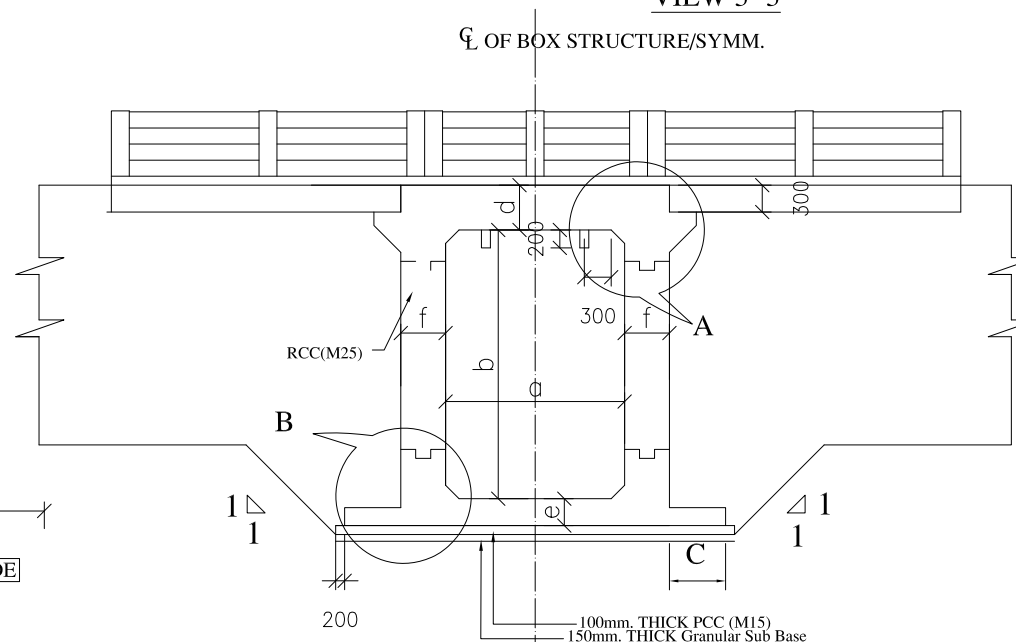
TABLE SHOWING SALIENT DIMENSIONS OF SINGLE CELL BOX CULVERT

Box Cell Designation	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)	f (mm)	g (mm)
1.5 m x 1 m	1500	1000	500	350	380	300	NA
2 m x 1 m	2000	1000	500	350	380	300	NA

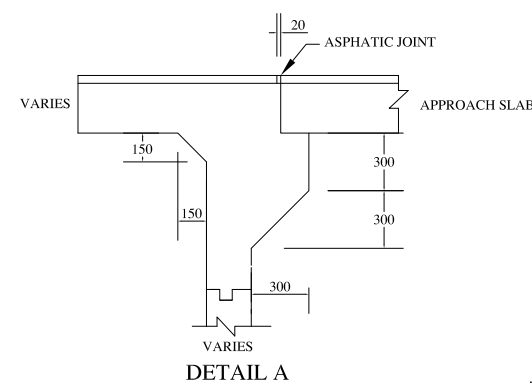
Summary of Cross Drainage Structures/Irrigation Crossing									
S.N.	Chainage	Proposed Bed level (m)	Existing Structure Box/Hume Pipe	Proposed structure (Box/Hume Pipe)	Clear Width (m)	Clear Height (m)	Cover Slab	Adopted FRL	Remark (Box Structure)
1	0+118	698.20	Existing Irrigation Crossing		1.50	1.00	0.25	699.45	Single Cell
2	1+237.4	683.58	Existing Irrigation Crossing		2.00	1.00	0.30	684.88	Single Cell
3	1+333	682.28	Existing Irrigation Crossing		2.00	1.00	0.25	683.53	Single Cell
4	3+319	648.91	Existing Irrigation Crossing		2.00	1.00	0.30	650.21	Single Cell
5	3+445.5	647.57	Existing Irrigation Crossing		2.00	1.00	0.30	648.87	Single Cell
6	3+775	644.309	Existing Irrigation Crossing		1.5	1	0.25	645.56	Single Cel



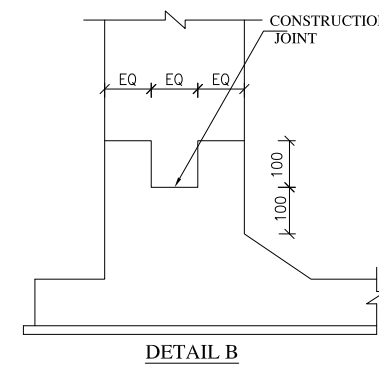
VIEW 3-3



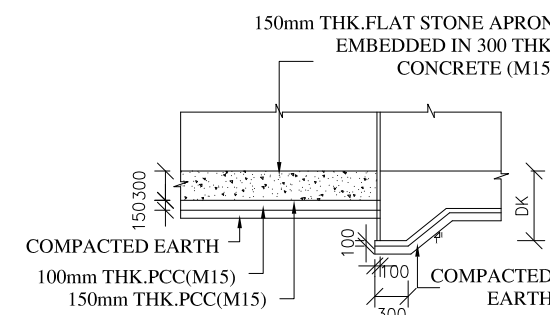
SECTION 2-2



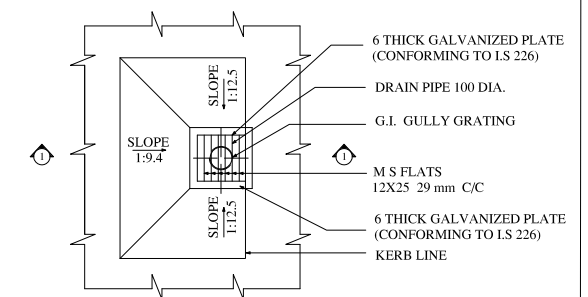
DETAIL A



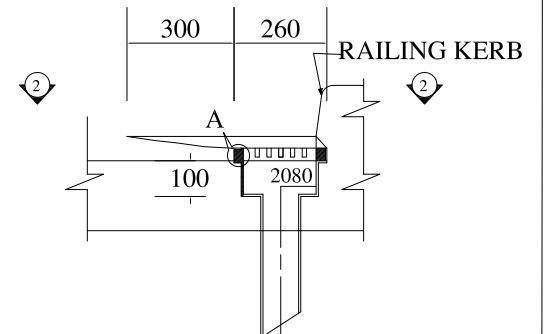
DETAIL B



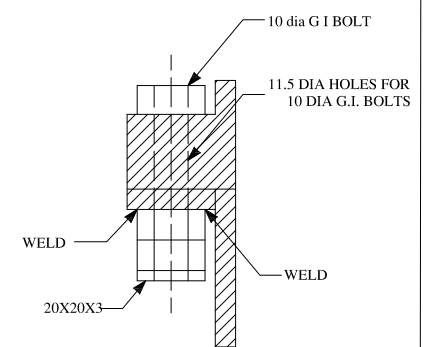
DETAIL -C



PLAN DETAILS OF DRAINAGE SPOUT AND COLLECTION PIT



SECTION 1-1



DETAIL -A



Nepal Urban Governance and Infrastructure Project (NUGIP)
Office of the Municipal Executive
Pokhara Metropolitan City
Kaski District, Gandaki Province



CONSULTANT:
Plush Engineers and Architects (P.) Ltd. (PEA)
B.N. Consultancy Pvt. Ltd. (BN)
Soil Test Consultancy (P.) Ltd. (Soil Test)
Kathmandu, Nepal



Project Name:- Nepal Urban Governance and Infrastructure Project (NUGIP)

SHEET TITLE:

Irrigation Crossing Single Cell

DESIGNED BY:

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CHECKED BY:

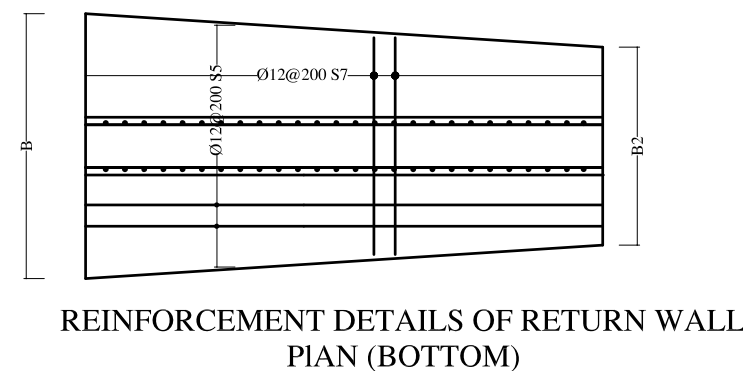
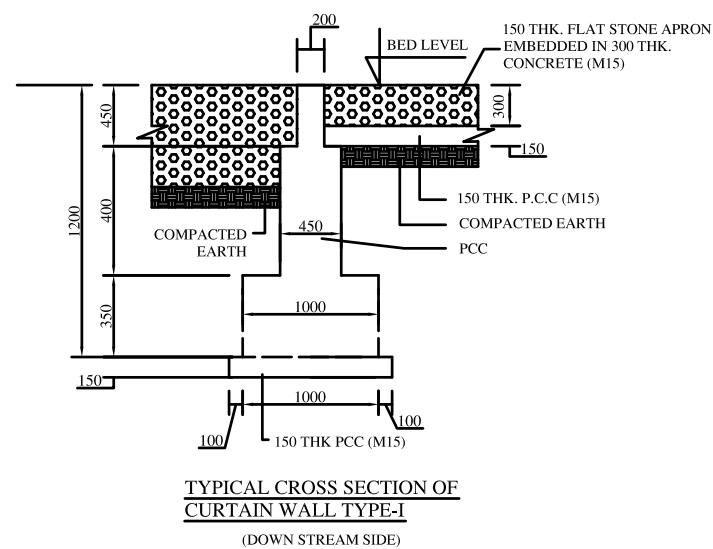
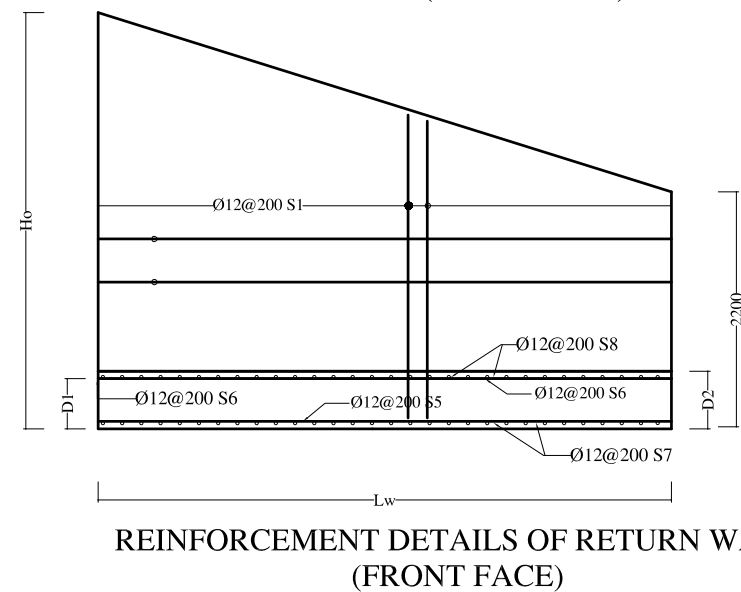
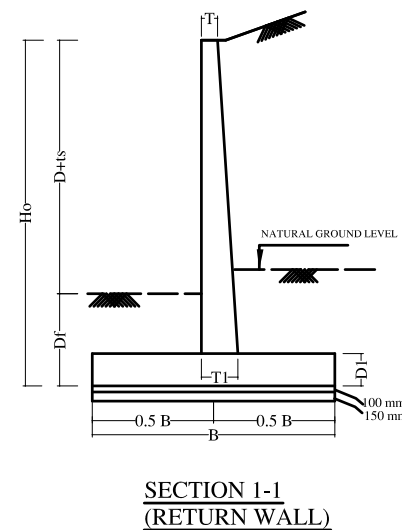
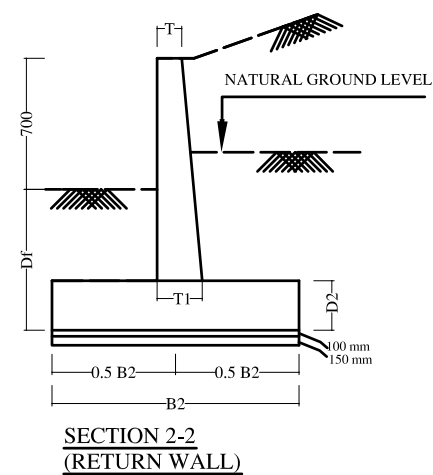
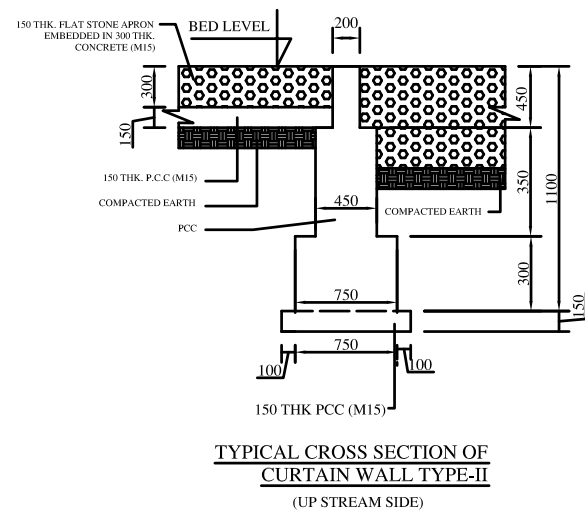
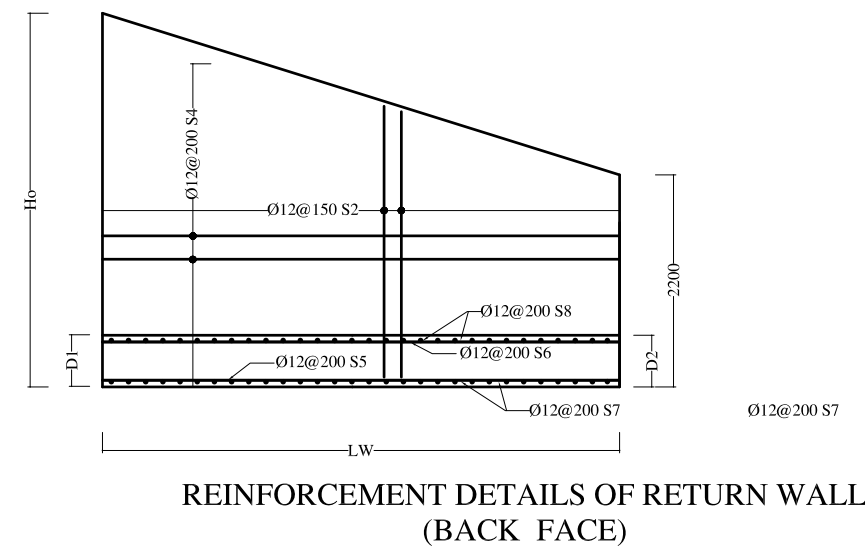
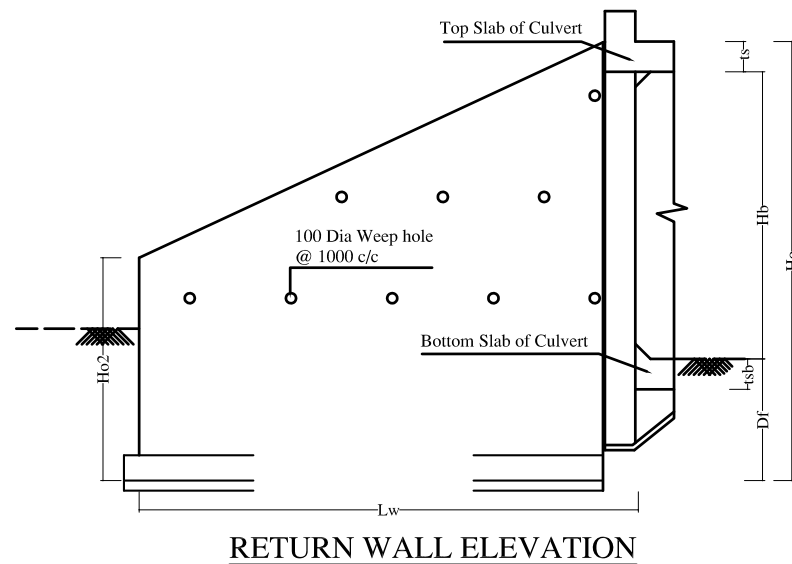
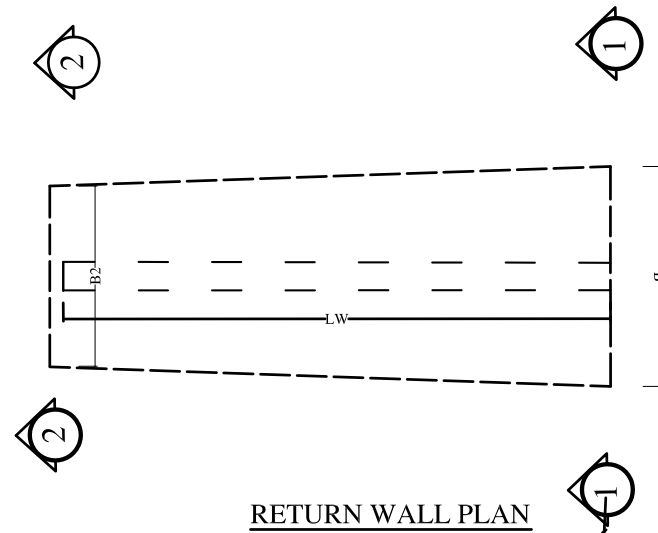
APPROVED BY:

Date: 2023

Scale: Not in Scale

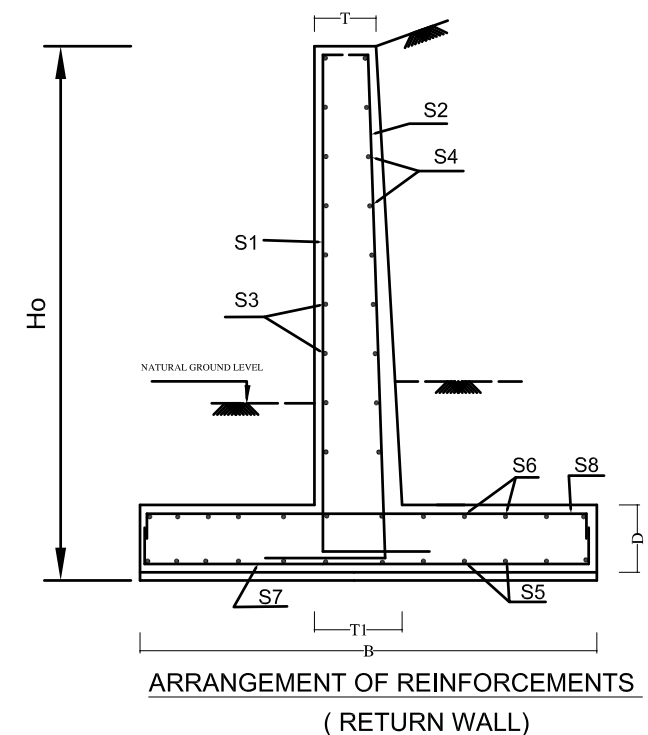
Chainage:

Sheet No: 1



S.No.	Height of Opening, Hb (mm)	Depth of Foundation, Df (mm)	Max. ht. Ho (mm)	Length of Return Wall, Lw (mm)	Section 1 -1				Section 2 -2			
					T (mm)	T1 (mm)	B (mm)	D1 (mm)	T (mm)	T1 (mm)	B2 (mm)	D2 (mm)
1	1000	1500	2850	2000	200	430	1500	400	200	400	1500	400

NOTES: 1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.



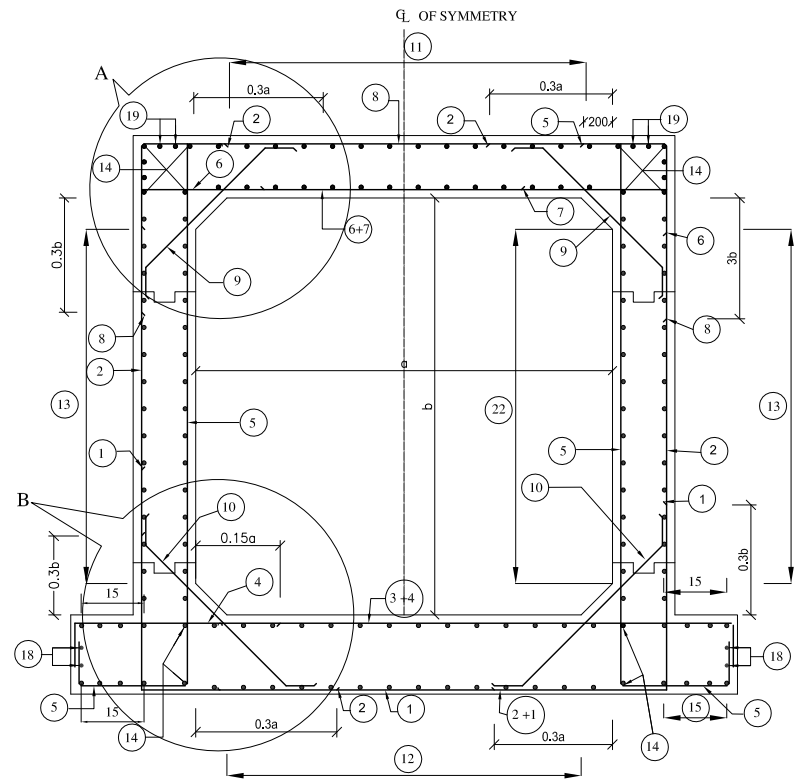
Nepal Urban Governance and Infrastructure Project (NUGIP)
Office of the Municipal Executive
Pokhara Metropolitan City
Kaski District, Gandaki Province

CONSULTANT:
Plush Engineers and Architects (P.) Ltd. (PEA)
B.N. Consultancy Pvt. Ltd. (BN)
Soil Test Consultancy (P.) Ltd. (Soil Test)
Kathmandu, Nepal

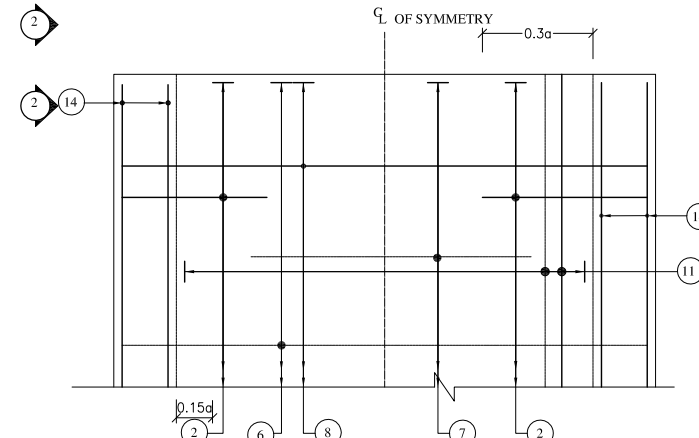
Project Name:- Nepal Urban Governance and Infrastructure Project (NUGIP)

SHEET TITLE:
Irrigation Crossing (Return Wall Details)

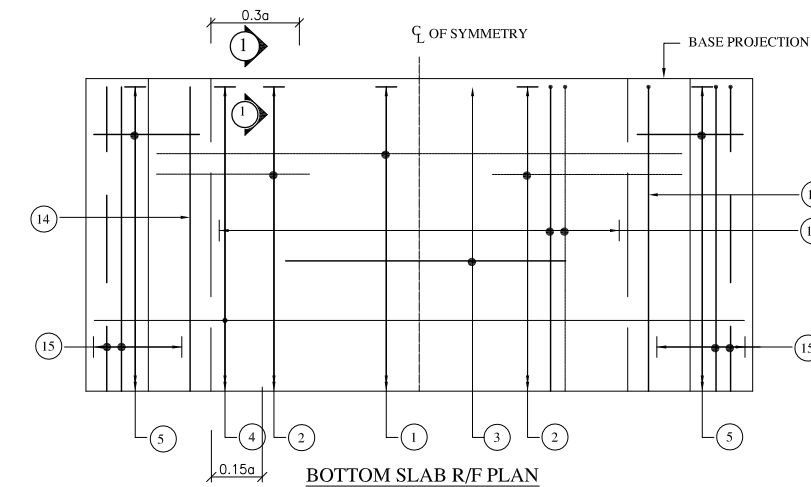
DESIGNED BY:	Date: 2023
DRAWN BY:	Scale: Not in Scale
CHECKED BY:	Chainage:
APPROVED BY:	Sheet No: 2



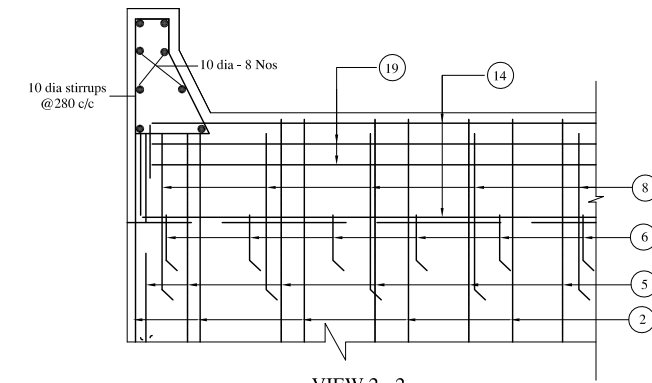
REINFORCEMENT DETAILS OF SINGLE CELL Irrigation Crossing
(Scale 1:100)



TOP SLAB R/F PLAN
(Scale 1:100)



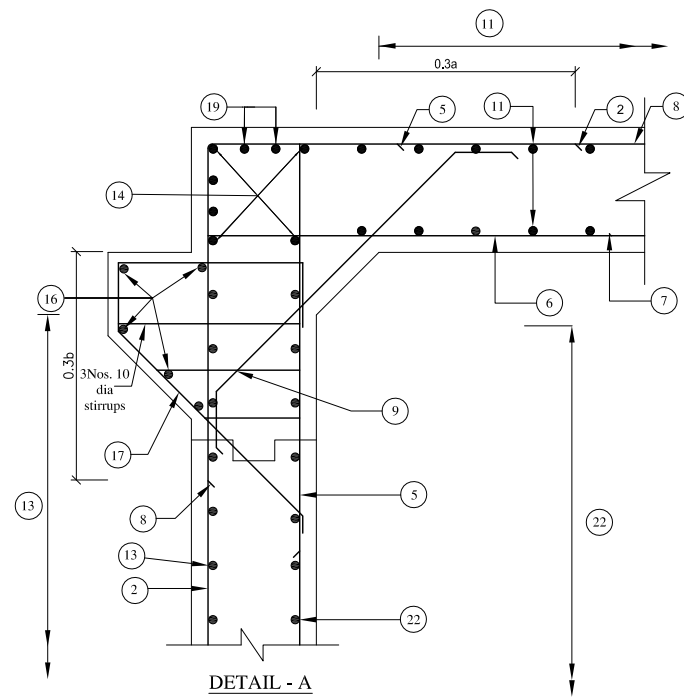
BOTTOM SLAB R/F PLAN
(Scale 1:100)



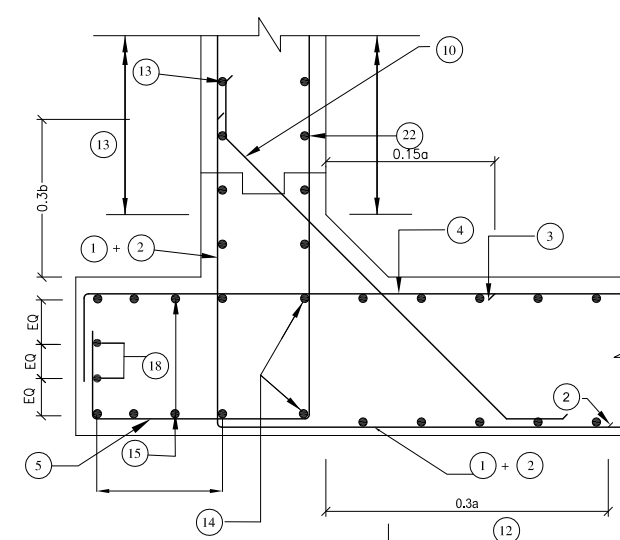
VIEW 2 - 2
(Scale 1:100)

LEGEND:

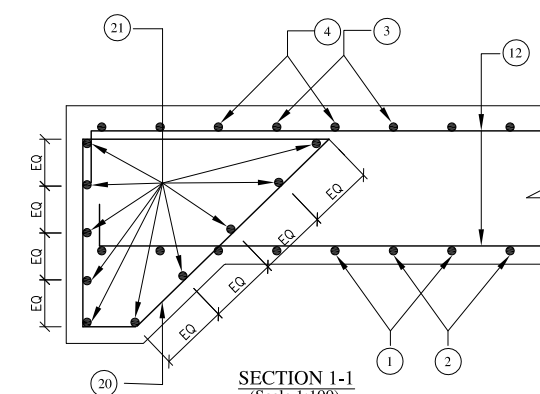
- : TOP FACE BARS / OUTER FACE BARS
 - - - - : BOTTOM FACE BARS / INNER FACE BARS



DETAIL - A
(Scale 1:100)



DETAIL - B
(Scale 1:100)



SECTION 1-1
(Scale 1:100)



Nepal Urban Governance and Infrastructure Project (NUGIP)
Office of the Municipal Executive
Pokhara Metropolitan City
Kaski District, Gandaki Province



CONSULTANT:
 Plush Engineers and Architects (P.) Ltd. (PEA)
 B.N. Consultancy Pvt. Ltd. (BN)
 Soil Test Consultancy (P.) Ltd. (Soll Test)
 Kathmandu, Nepal



Project Name:- Nepal Urban Governance and Infrastructure Project (NUGIP)

SHEET TITLE:

Irrigation Crossing Single Cell
(Reinforcement Details)

DESIGNED BY:

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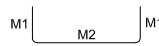
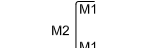
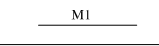
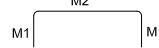
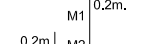
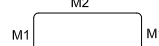
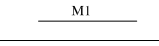

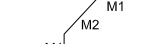
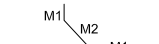
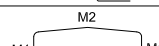
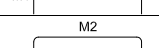

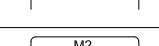

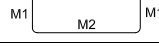
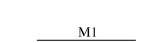
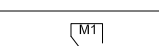
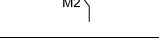
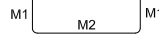


APPROVED BY:

Date: 2023

Scale:

Chainage:

Sheet No: 3

BAR MARK	BOX-CELL DESIGNATION Nc/ab/Ec SHAPE OF BARS (NOT TO SCALE)	Single Cell Irrigation Crossing 1.5m x1m without earth cushion										Single Cell Irrigation Crossing 2m x1m without earth cushion									
		BAR DIA. in mm.	SPACING in mm.	M1 in mm.	M2 in mm.	LENGTH in mm.	NO. OF BARS	TOTAL LENGTH in mm.	Wt/m. kg	Weight, kg	BAR DIA. in mm.	SPACING in mm.	M1 in mm.	M2 in mm.	LENGTH in mm.	NO. OF BARS	TOTAL LENGTH in mm.	Wt/m. kg	Weight, kg		
1		10	250	930	2000	3860	40	174400	0.62	108.1	10	250	930	2500	4360	40	174400	0.62	108.1		
2		16	250	850	1630	3330	82	355060	1.58	561.0	16	250	850	1630	3330	82	355060	1.58	561.0		
3		Bar not needed										Bar not needed									
4		16	250	280	3000	3560	40	162400	1.58	256.6	16	250	280	3500	4060	40	162400	1.58	256.6		
5		16	250	1630	700	2730	80	298400	1.58	471.5	16	250	1630	700	2730	80	298400	1.58	471.5		
6		16	250	250	2000	2500	40	120000	1.58	189.6	16	250	250	2500	3000	40	120000	1.58	189.6		
7		Bar not needed										Bar not needed									
8		10	250	900	2000	3800	40	172000	0.62	106.6	10	250	900	2500	4300	40	172000	0.62	106.6		
9		10	250	200	900	1300	80	104000	0.62	64.5	10	250	200	900	1300	80	104000	0.62	64.5		
10		12	250	200	940	1340	80	107200	0.89	95.4	12	250	200	940	1340	80	107200	0.89	95.4		
11		10	250	200	9900	10300	16	164800	0.62	102.2	10	250	200	9900	10300	16	164800	0.62	102.2		
12		10	250	200	9900	10300	16	164800	0.62	102.2	10	250	200	9900	10300	16	164800	0.62	102.2		
13		10	250	200	9900	10300	16	164800	0.62	102.2	10	250	200	9900	10300	16	164800	0.62	102.2		
14		10	-	160	9900	10220	12	122640	0.62	76.0	10	-	160	9900	10220	12	122640	0.62	76.0		
15		10	250	200	9900	10300	12	123600	0.62	76.6	10	250	200	9900	10300	12	123600	0.62	76.6		
16		12	-	0	9900	9900	10	99000	0.89	88.1	12	-	0	9900	9900	10	99000	0.89	88.1		
17		12	250	1000	1250	2250	80	180000	0.89	160.2	12	250	1000	1250	2250	80	180000	0.89	160.2		
18		10	-	160	9900	10220	4	40880	0.62	25.3	10	-	160	9900	10220	4	40880	0.62	25.3		
19		10	-	1600	9900	13100	8	104800	0.62	65.0	10	-	1600	9900	13100	8	104800	0.62	65.0		
20		10	150	1100	1550	4150	36	149400	0.62	92.6	10	150	1100	1550	4150	36	149400	0.62	92.6		
21		10	-	160	3500	3820	20	76400	0.62	47.4	10	-	160	3500	3820	20	76400	0.62	47.4		
22		10	250	160	9900	10220	14	143080	0.62	88.7	10	250	160	9900	10220	14	143080	0.62	88.7		
Total										2879.8	Total										2879.8



Nepal Urban Governance and Infrastructure Project (NUGIP)
Office of the Municipal Executive
Pokhara Metropolitan City
Kaski District, Gandaki Province



CONSULTANT:
Plush Engineers and Architects (P.) Ltd. (PEA)
B.N. Consultancy Pvt. Ltd. (BN)
Soil Test Consultancy (P.) Ltd. (Soll Test)
Kathmandu, Nepal



Project Name:- Nepal Urban Governance and
Infrastructure Project (NUGIP)

SHEET TITLE:

Irrigation Crossing Single Cell
(Reinforcement Details)

DESIGNED BY:

DRAWN BY:

CHECKED BY:

APPROVED BY:

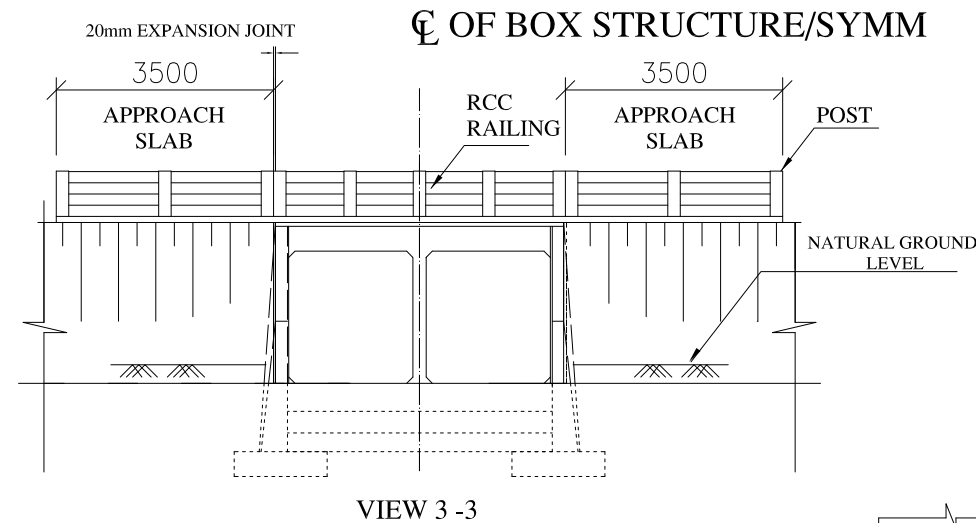
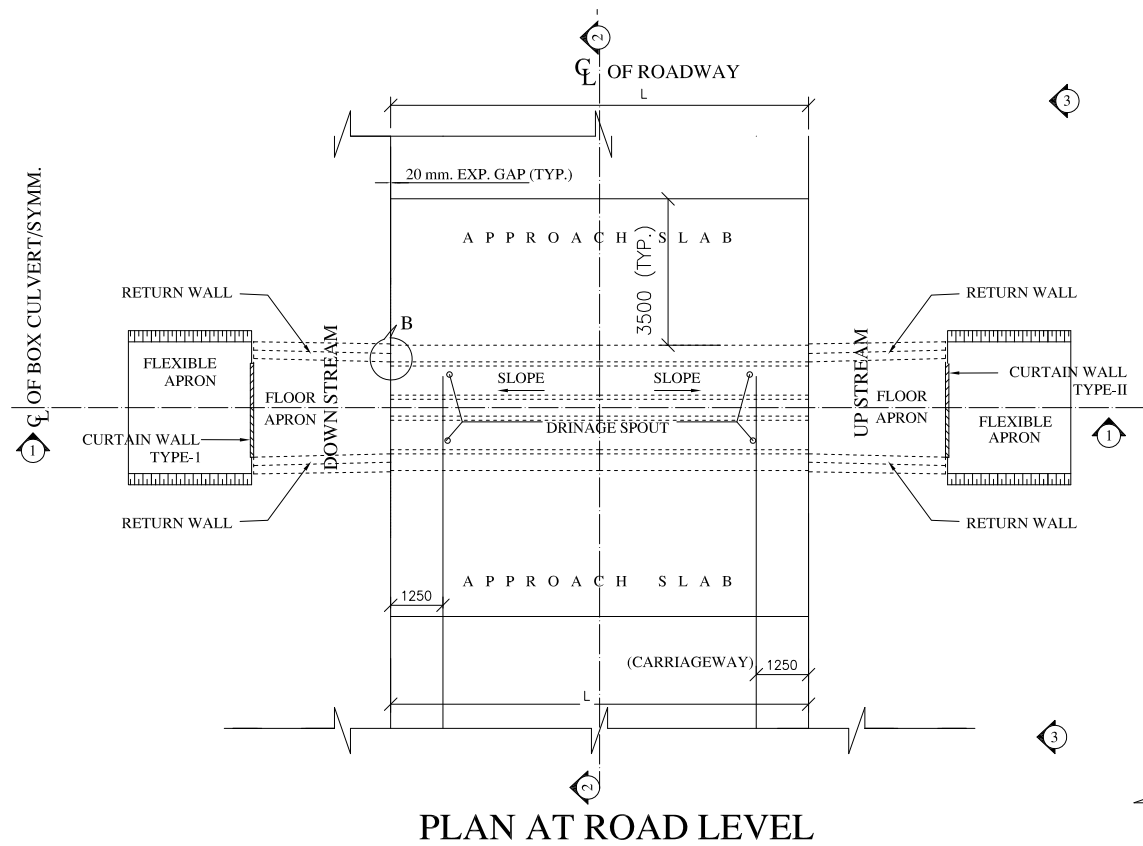
Date: 2023

Scale:

Chainage:

Sheet No: 4

CL OF BOX CULVERT/SYMM.



PLAN AT 2-2

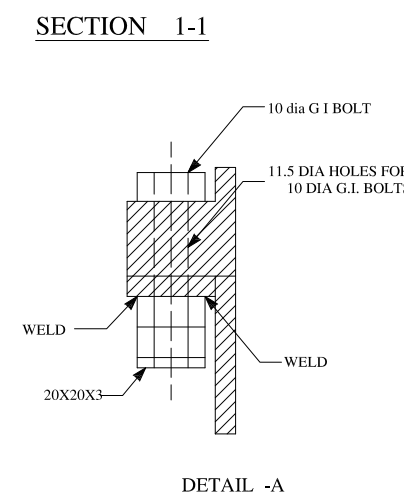
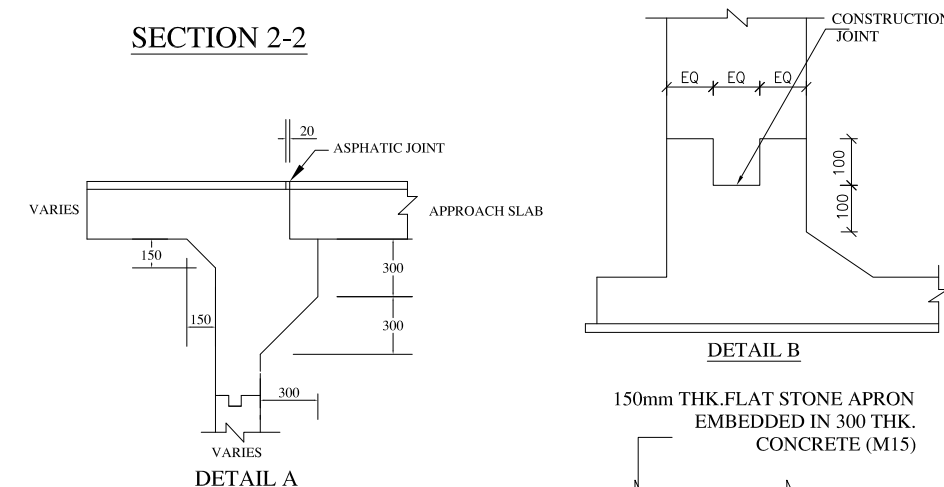
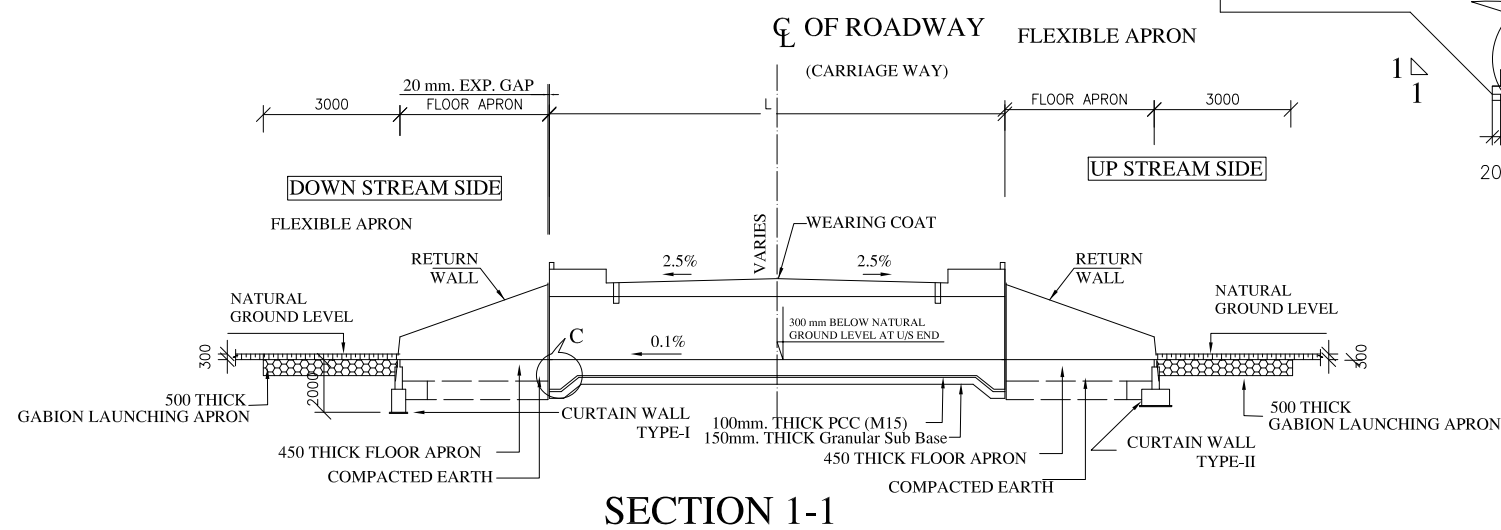
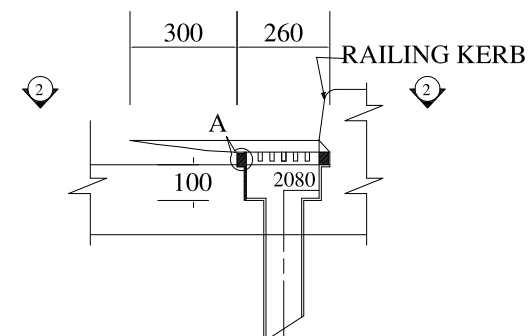
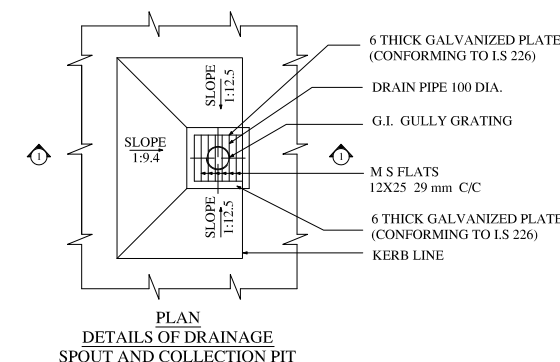
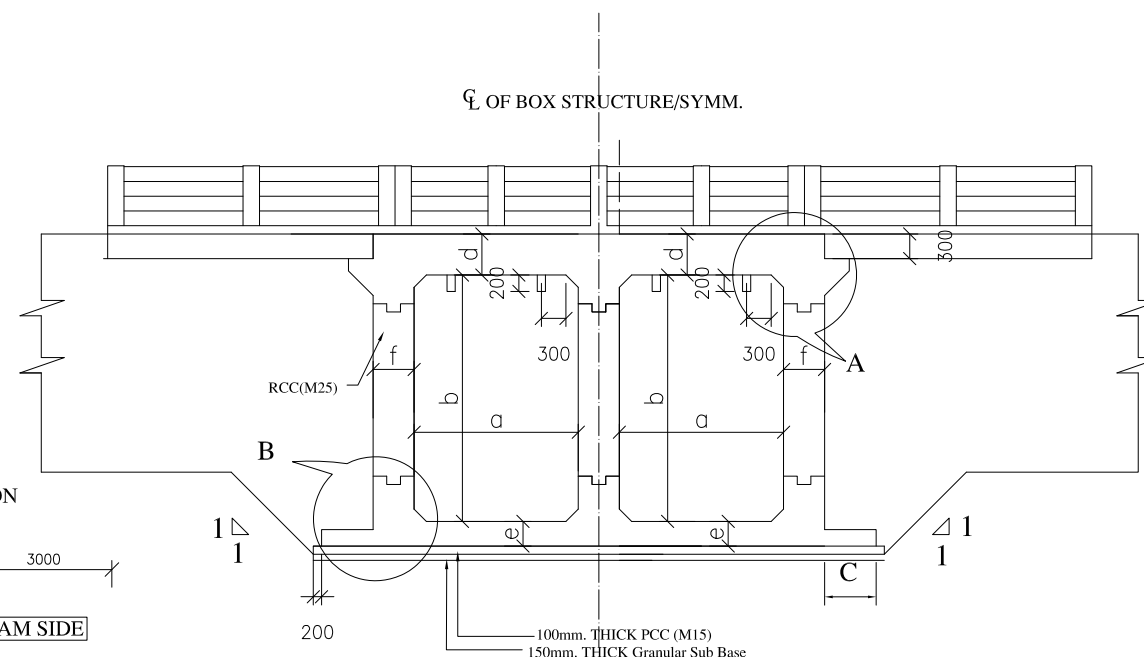
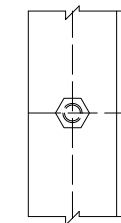


TABLE SHOWING SALIENT DIMENSIONS OF DOUBLE CELL BOX CULVERT

Box Cell Designation	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)	f (mm)	g (mm)	h (mm)
2m x 2m	2000	2000	300	400	400	370	300	NA
2.5m x 1.5m	2500	1500	300	450	450	400	300	NA
2m x 2.5m	2000	2500	300	400	420	400	300	NA

Summary of Cross Drainage Structures/Irrigation Crossing							
S.N.	Chainage	Proposed Bed level (m)	Existing Structure Box/Time	Proposed structure Clear Width(m)	Clear Height(m)	Cover Slab	Adopted FRL
1	1+957	672.09	Existing Irrigation Crossing	4.00	2.00	0.45	674.54
2	3+524	646.80	Existing Irrigation Crossing	5.00	1.50	0.45	648.75
3	3+752	642.71	Existing Irrigation Crossing	4.00	2.50	0.45	645.66



Nepal Urban Governance and Infrastructure Project (NUGIP)
Office of the Municipal Executive
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Kaski District, Gandaki Province



CONSULTANT:
Plush Engineers and Architects (P.) Ltd. (PEA)
B.N. Consultancy Pvt. Ltd. (BN)
Soil Test Consultancy (P.) Ltd. (Soil Test)
Kathmandu, Nepal



Project Name:- Nepal Urban Governance and Infrastructure Project (NUGIP)

SHEET TITLE:

Irrigation Crossing Double Cell

DESIGNED BY:

DRAWN BY:

CHECKED BY:

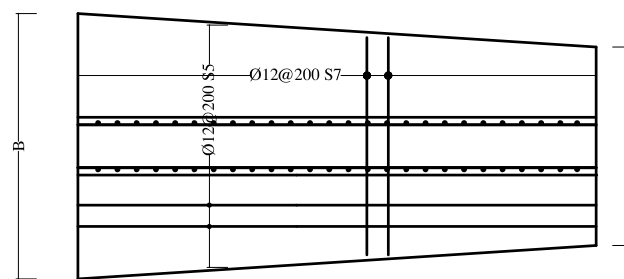
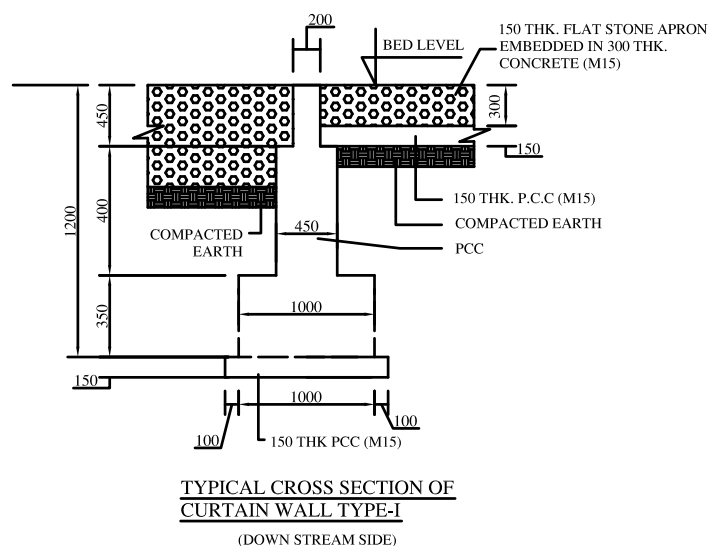
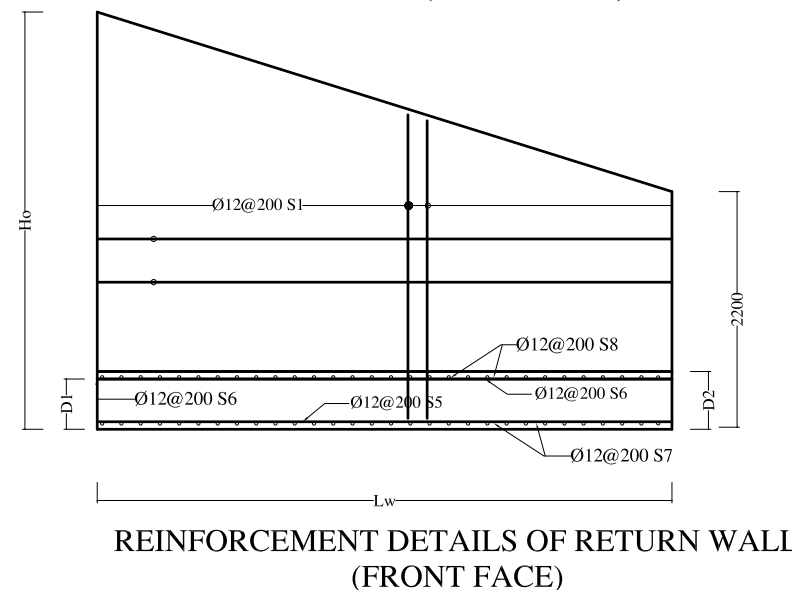
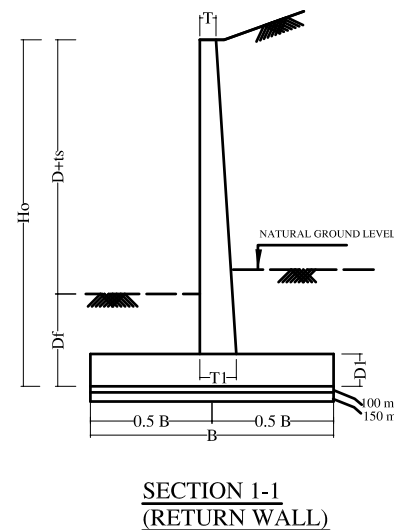
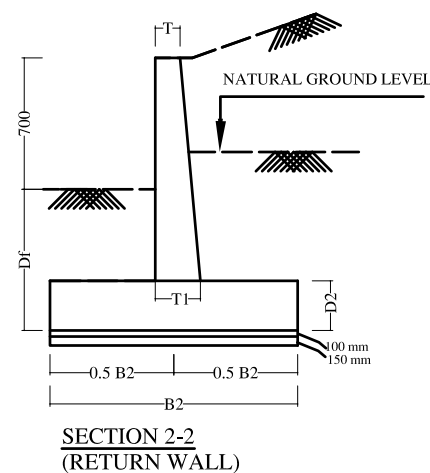
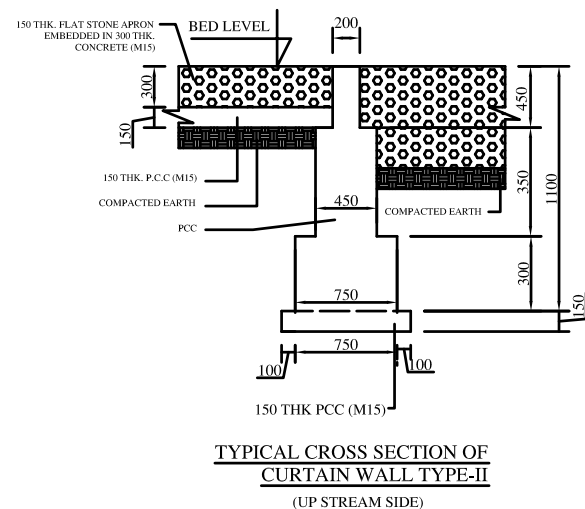
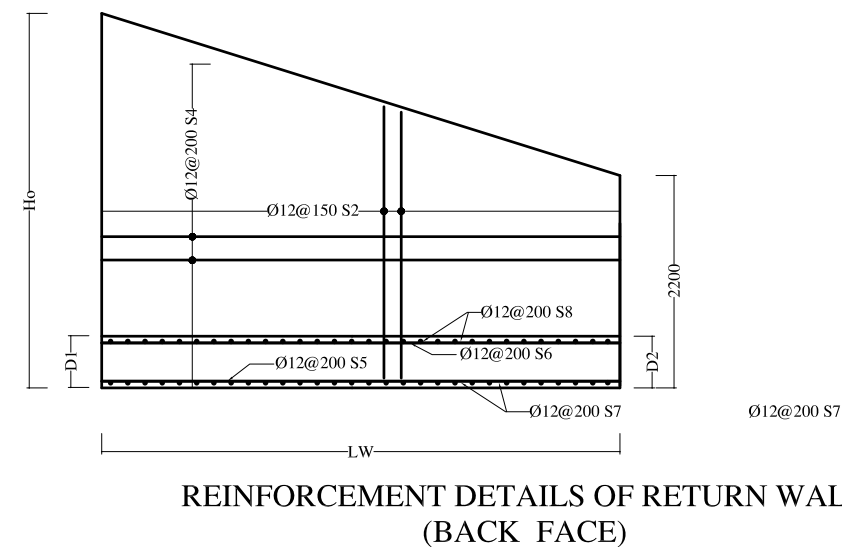
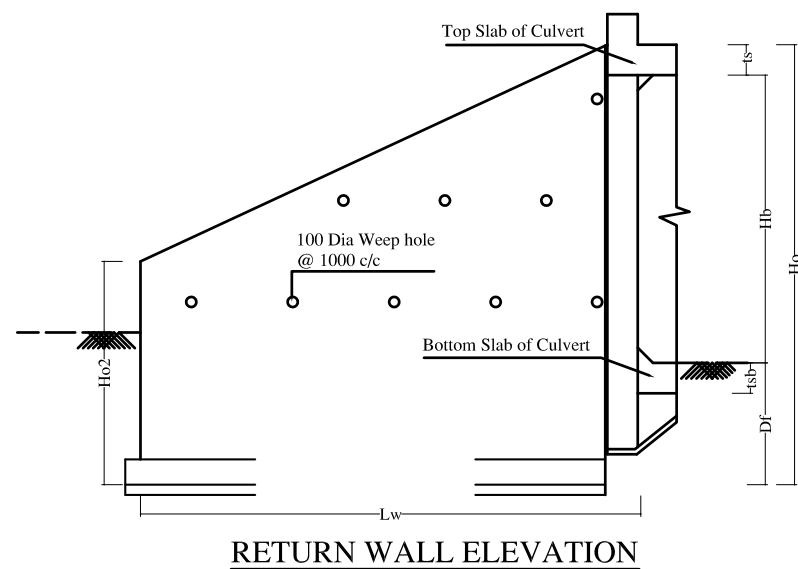
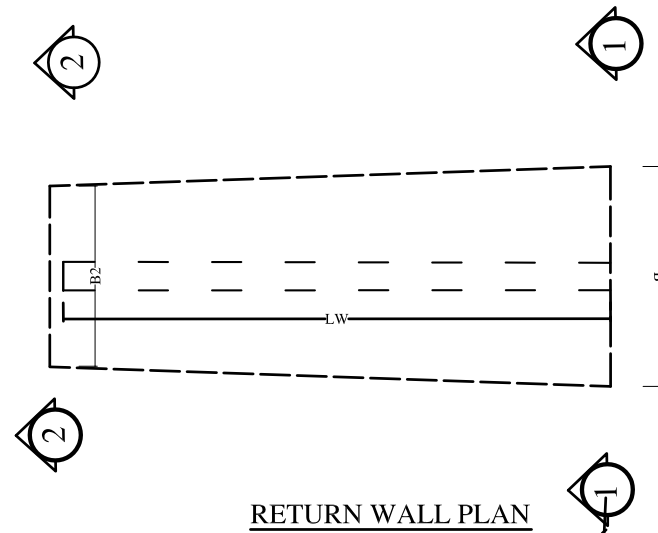
APPROVED BY:

Date: 2023

Scale: Not in Scale

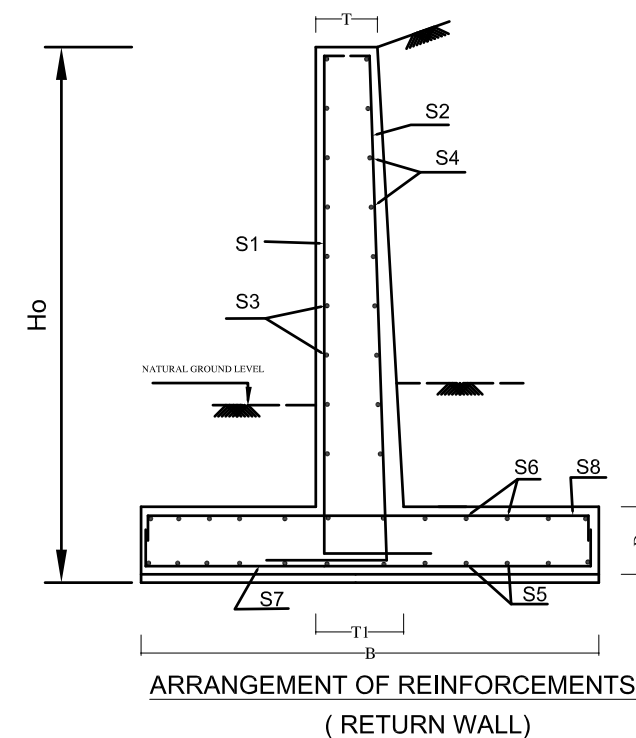
Chainage:

Sheet No: 5



S.No.	Height of Opening, Hb (mm)	Depth of Foundation, Df (mm)	Max. ht. Ho (mm)	Length of Return Wall, Lw (mm)	Section 1 -1				Section 2 -2			
					T (mm)	T1 (mm)	B (mm)	D1 (mm)	T (mm)	T1 (mm)	B2 (mm)	D2 (mm)
1	2500	1500	4400	2000	200	430	1500	400	200	400	1500	400
2	2000	1500	3900	2000	200		1500	400	200	400	1500	400
3	1500	1500	3450	2000	200		1500	400	200	400	1500	400

NOTES: 1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.



Nepal Urban Governance and Infrastructure Project (NUGIP)
Office of the Municipal Executive
Pokhara Metropolitan City
Kaski District, Gandaki Province

CONSULTANT:
Plush Engineers and Architects (P.) Ltd. (PEA)
B.N. Consultancy Pvt. Ltd. (BN)
Soil Test Consultancy (P.) Ltd. (Soil Test)
Kathmandu, Nepal



Project Name:- Nepal Urban Governance and Infrastructure Project (NUGIP)

SHEET TITLE:
Irrigation Crossing (Return Wall Details)

DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:

Date: 2023
Scale: Not in Scale
Chainage:
Sheet No: 6



 : TOP FACE BARS /
OUTER FACE BARS
 : BOTTOM FACE BARS /
INNER FACE BARS

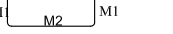


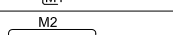
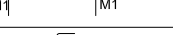
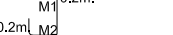

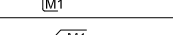


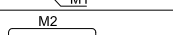
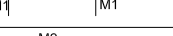


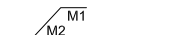
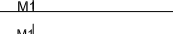
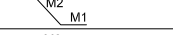

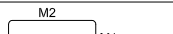
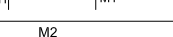
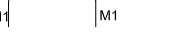

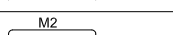
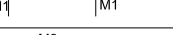

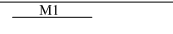


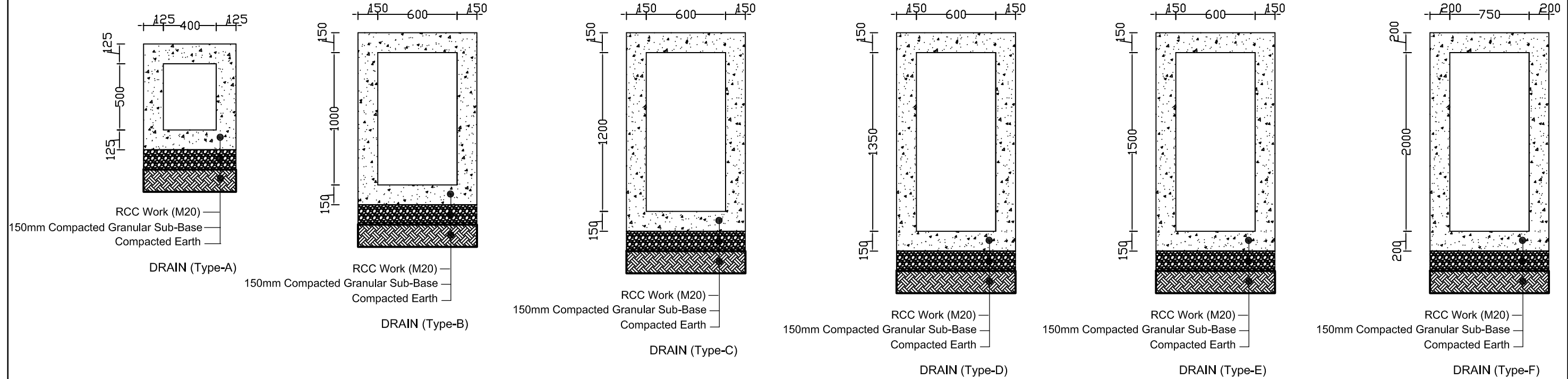
Plush Engineers and Architects (P.) Ltd. (PEA)
B.N. Consultancy Pvt. Ltd. (BN)
Soil Test Consultancy (P.) Ltd. (Soil Test)
Kathmandu, Nepal



Irrigation Crossing Double Cell (Reinforcement Details)

Sheet No: 7

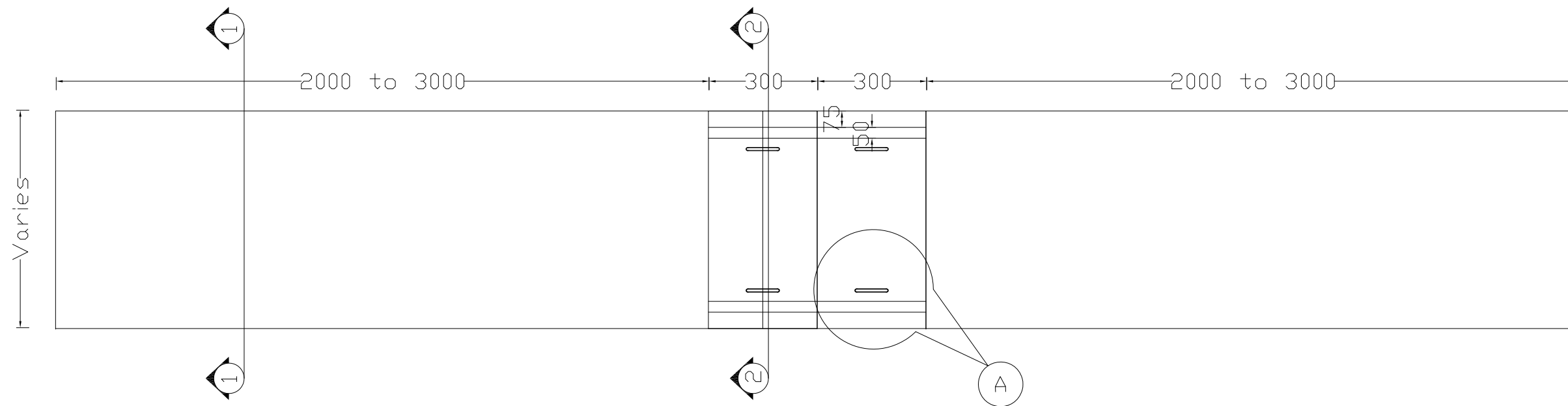
BAR MARK	BOX-CELL DESIGNATION Nc/ab/Ec SHAPE OF BARS (NOT TO SCALE)	Double Cell Irrigation Crossing 2m x2m without earth cushion									Double Cell Irrigation Crossing 2m x2.5m without earth cushion									Double Cell Irrigation Crossing 2.5m x1.5m without earth cushion										
		BAR DIA. in mm.	SPACING in mm.	M1 in mm.	M2 in mm.	LENGTH in mm.	NO. OF BARS	TOTAL LENGTH in mm.	Wt/m. kg	Weight, kg	BAR DIA. in mm.	SPACING in mm.	M1 in mm.	M2 in mm.	LENGTH in mm.	NO. OF BARS	TOTAL LENGTH in mm.	Wt/m. kg	Weight, kg	BAR DIA. in mm.	SPACING in mm.	M1 in mm.	M2 in mm.	LENGTH in mm.	NO. OF BARS	TOTAL LENGTH in mm.	Wt/m. kg	Weight, kg		
1		10	200	950	4940	6840	51	348840	0.62	216.3	10	200	1270	5000	7540	51	384540	0.62	238.4	10	200	1300	6500	9100	51	489600	0.62	303.6		
2		10	200	1500	0	1500	50	75000	0.62	46.5	10	200	1500	0	1500	50	75000	0.62	46.5	10	200	1600	0	1600	50	105000	0.62	65.1		
3		12	200	920	2700	4540	102	463080	0.89	412.1	16	200	920	3220	5060	102	567120	1.58	896.0	16	200	1250	2300	4800	102	540600	1.58	854.1		
4		12	150	300	5540	6240	67	418080	0.89	372.1	12	125	320	5600	6320	80	505600	0.89	450.0	16	200	350	7100	7850	51	425850	1.58	672.8		
5		12	125	2700	570	5970	162	967140	0.89	860.8	12	175	3220	600	7540	116	932640	0.89	830.0	12	125	2300	600	5700	160	992000	0.89	882.9		
6		16	200	260	2700	3220	102	328440	1.58	518.9	16	200	260	3220	3740	102	432480	1.58	683.3	12	125	200	2300	2700	160	512000	0.89	455.7		
7		12	200	200	960	1360	102	138720	0.89	123.5	12	200	200	950	1350	102	137700	0.89	122.6	12	200	200	1030	1430	102	145860	0.89	129.8		
8		12	200	200	960	1360	102	138720	0.89	123.5	12	200	200	990	1390	102	141780	0.89	126.2	12	200	200	1030	1430	102	145860	0.89	129.8		
9		12	125	200	4940	5340	81	432540	0.89	385.0	12	125	200	5000	5400	81	437400	0.89	389.3	16	200	260	7000	7520	51	383520	1.58	606.0		
10		10	200	950	4940	6840	51	348840	0.62	216.3	12	200	1250	5000	7500	51	382500	0.62	237.2	12	200	1000	7000	9000	51	459000	0.89	408.5		
11		16	200	1500	0	1500	50	75000	1.58	118.5	16	200	1500	0	1500	50	75000	1.58	118.5	16	200	2100	0	2100	50	105000	1.58	165.9		
12		12	200	200	1060	1460	102	148920	0.89	132.5	12	200	200	1100	1500	102	153000	0.89	136.2	12	200	200	1170	1570	102	160140	0.89	142.5		
13		12	200	200	1060	1460	102	148920	0.89	132.5	12	200	200	1130	1530	102	156060	0.89	138.9	12	200	200	1170	1570	102	160140	0.89	142.5		
14		8	150	200	9900	10300	46	473800	0.4	189.5	10	150	250	9900	10400	46	478400	0.62	296.6	10	150	250	9900	10400	72	748800	0.62	464.3		
15		8	150	200	9900	10300	23	236900	0.4	94.8	10	150	200	9900	10300	35	360500	0.62	223.5	10	150	200	9900	10300	23	236900	0.62	146.9		
16		8	150	200	9900	10300	24	247200	0.4	98.9	10	150	160	9900	10220	35	357700	0.62	221.8	10	150	160	9900	10220	23	235060	0.62	145.7		
17		8	150	200	9900	10300	48	494400	0.4	197.8	10	150	210	9900	10320	48	495360	0.62	307.1	10	150	225	9900	10350	72	745200	0.62	462.0		
18		8	150	200	9900	10300	10	103000	0.4	41.2	10	150	210	9900	10320	12	123840	0.62	76.8	10	150	225	9900	10350	12	124200	0.62	77.0		
19		10	-	160	9900	10220	16	163520	0.62	101.4	10	-	160	9900	10220	16	163520	0.62	101.4	10	-	160	9900	10220	16	163520	0.62	101.4		
20		12	-	9900	0	9900	10	99000	0.89	88.1	12	-	9900	0	9900	10	99000	0.89	88.1	12	-	9900	0	9900	10	99000	0.89	88.1		
21		12	200	1000	1260	2260	99	223740	0.89	199.1	12	200	1000	1260	2260	99	223740	0.89	199.1	12	200	1000	1260	2260	102	230520	0.89	205.2		
22		10	-	160	9900	10220	2	20440	0.62	12.7	10	-	160	9900	10220	2	20440	0.62	12.7	10	-	160	9900	10220	2	20440	0.62	12.7		
23		10	-	180	9900	10260	4	41040	0.62	25.4	10	-	180	9900	10260	4	41040	0.62	25.4	10	-	160	9900	10220	4	40880	0.62	25.3		
24		10	150	1100	1550	4150	76	315400	0.62	195.5	10	150	1100	1550	4150	76	315400	0.62	195.5	10	150	1100	1550	4150	102	423300	0.62	262.4		
25		10	-	160	5540	5860	20	117200	0.62	72.7	10	-	160	5600	5920	20	118400	0.62	73.4	10	-	160	7600	7920	20	158400	0.62	98.2		
26		10	250	180	9900	10260	16	164160	0.62	101.8	10	250	200	9900	10300	16	164800	0.62	102.2	10	250	200	9900	10300	16	164800	0.62	102.2		
										5077.3										6336.7										7150.7



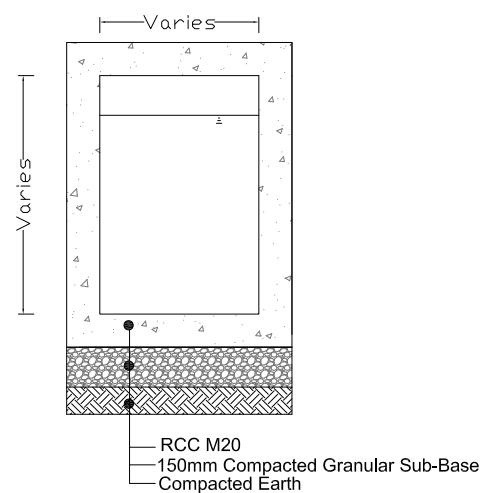
Summary of Road Side Drain-Both sides

CH		Length	Width	Final Gross Depth	Catageroy	Remarks
From	To	L	b	D		
Km+m		m	m	m		
0+000.0	0+118.0	118.00	0.40	0.5	A	Proposed Drain
Summary of Irrigation canal cum Roade Side Drain (Both sides)						
CH		Length	Average Width	Average Gross Depth	Catageroy	Remarks
From	To	L	b	D		
Km+m		m	m	m		
0+118.0	0+598.2	480.20	0.60	1.00	B	RCC Rectangular
0+598.2	1+237.4	3273.51	0.60	1.20	C	
1+237.4	1+333.0					
1+333.0	1+957.0					
2+260.0	3+200.0					
3+599.0	3+752.0					
3+752.0	4+140.0					
2+020.0	2+260.0					
3+200.0	3+319.0					
3+524.3	3+599.0					
3+445.5	3+524.3	78.82	0.60	1.35	D	
3+319.0	3+445.5	126.50	0.60	1.50	E	
1+957.0	2+020.0	63.00	0.75	2.00	F	

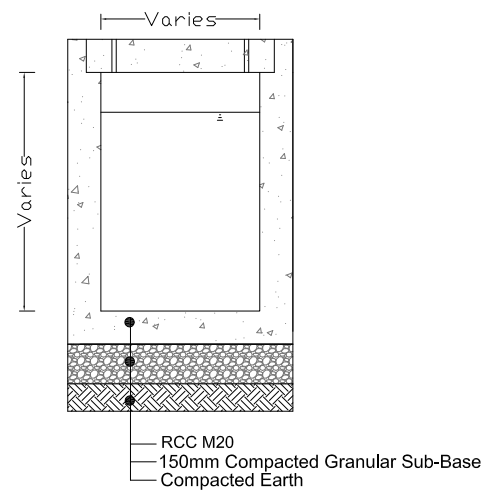
Note:- Size of irrigation canal cum side drain is based on existing site and existing invert level of inlet of existing irrigation canal



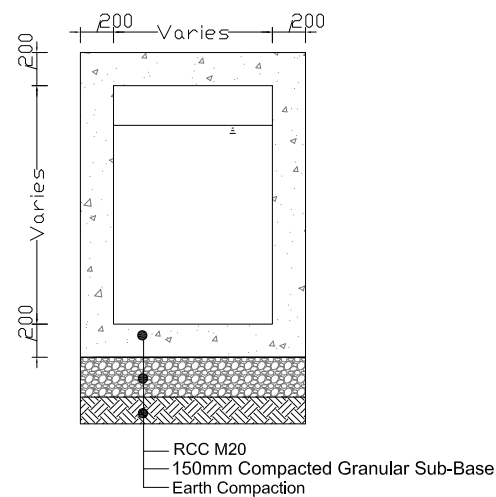
PLAN OF DRAIN



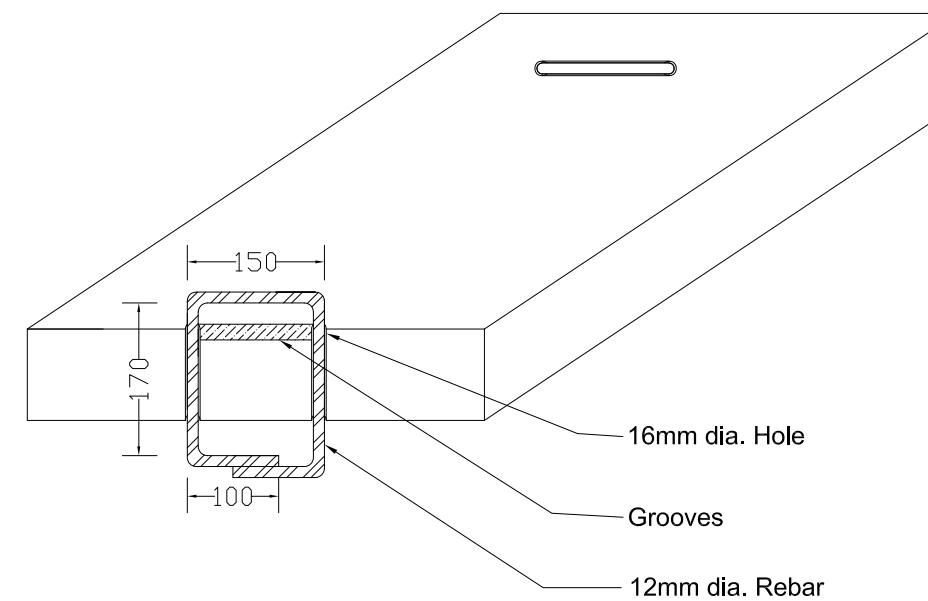
SECTION 1-1



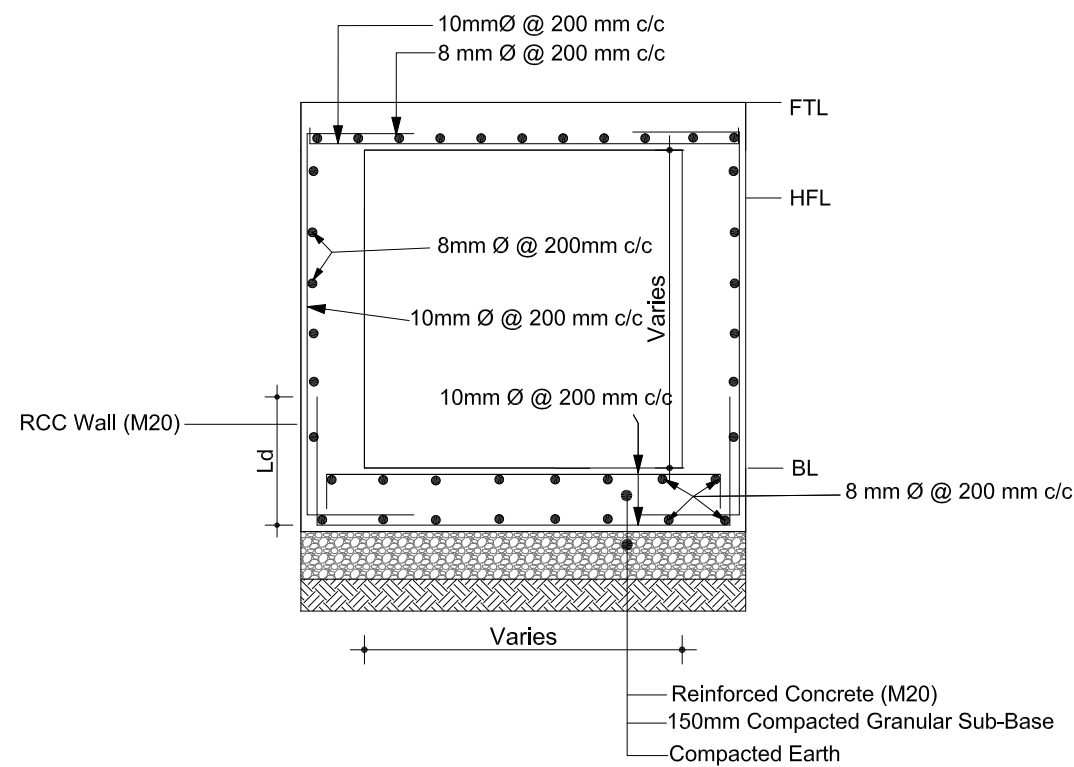
SECTION 2-2



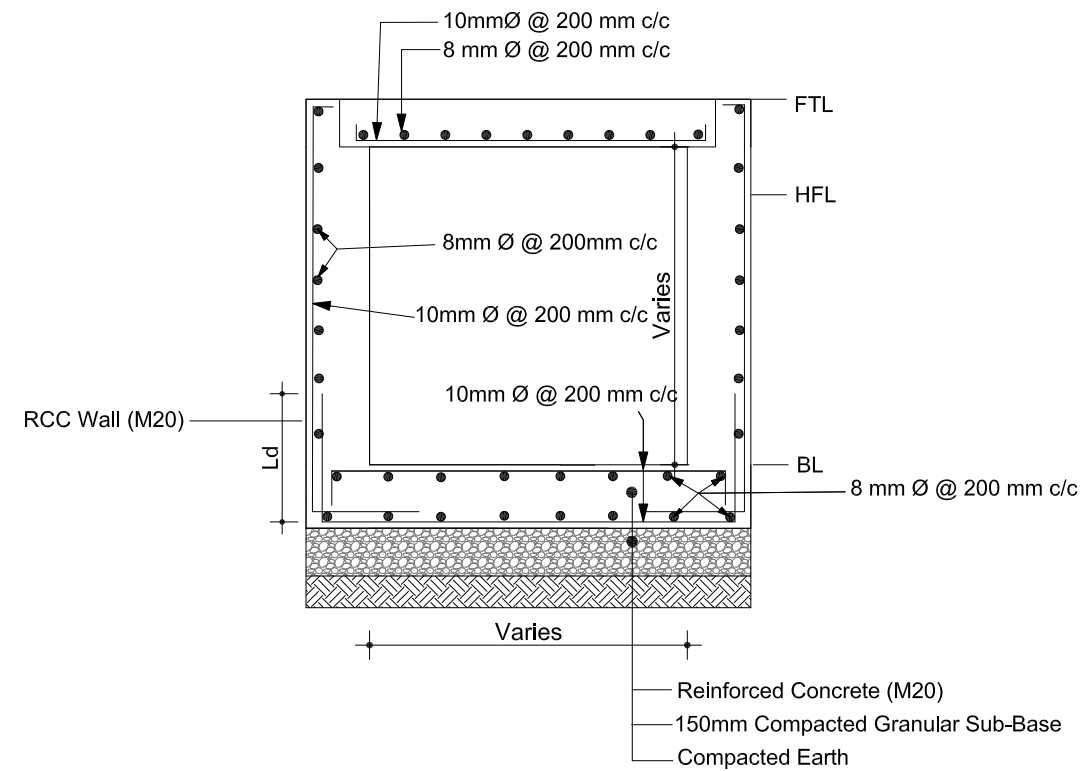
AT ROAD CROSSING



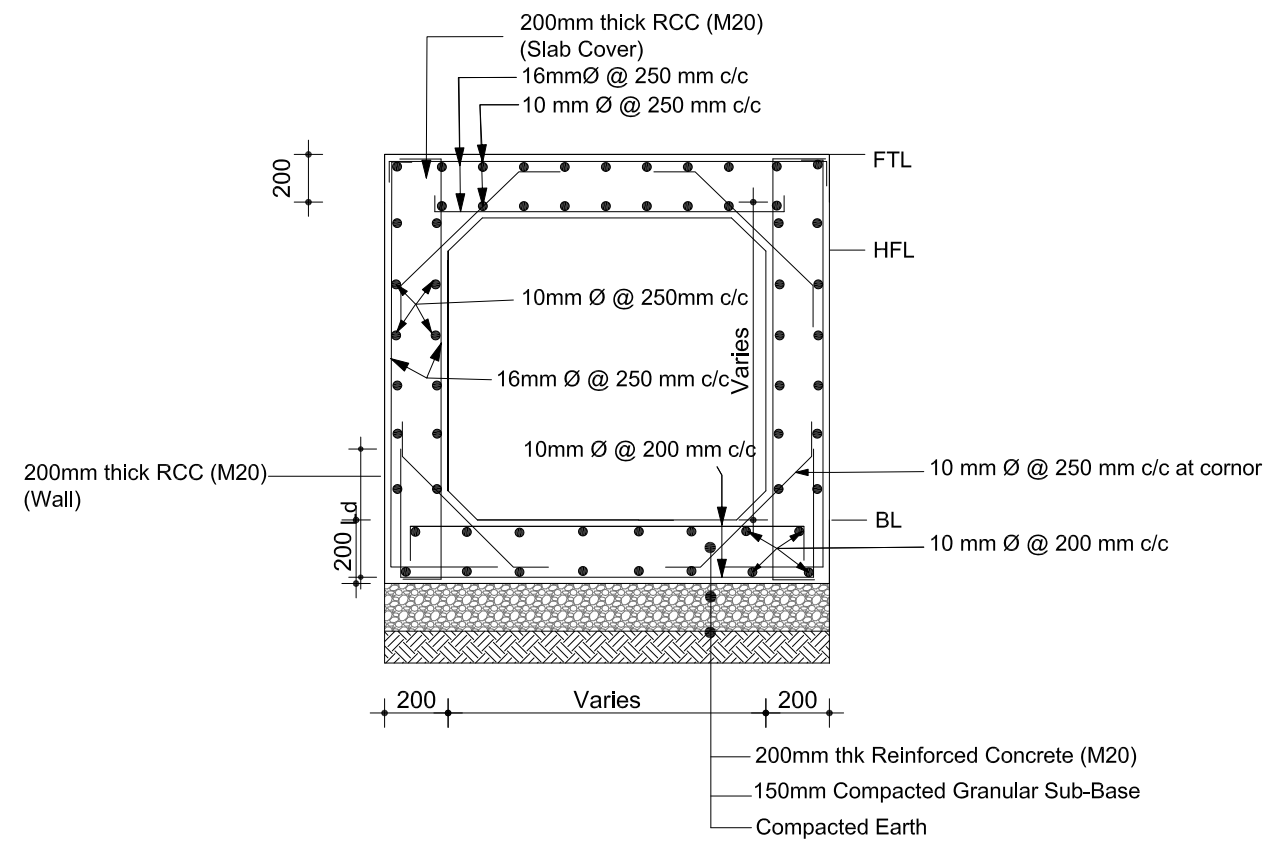
DETAIL AT-A



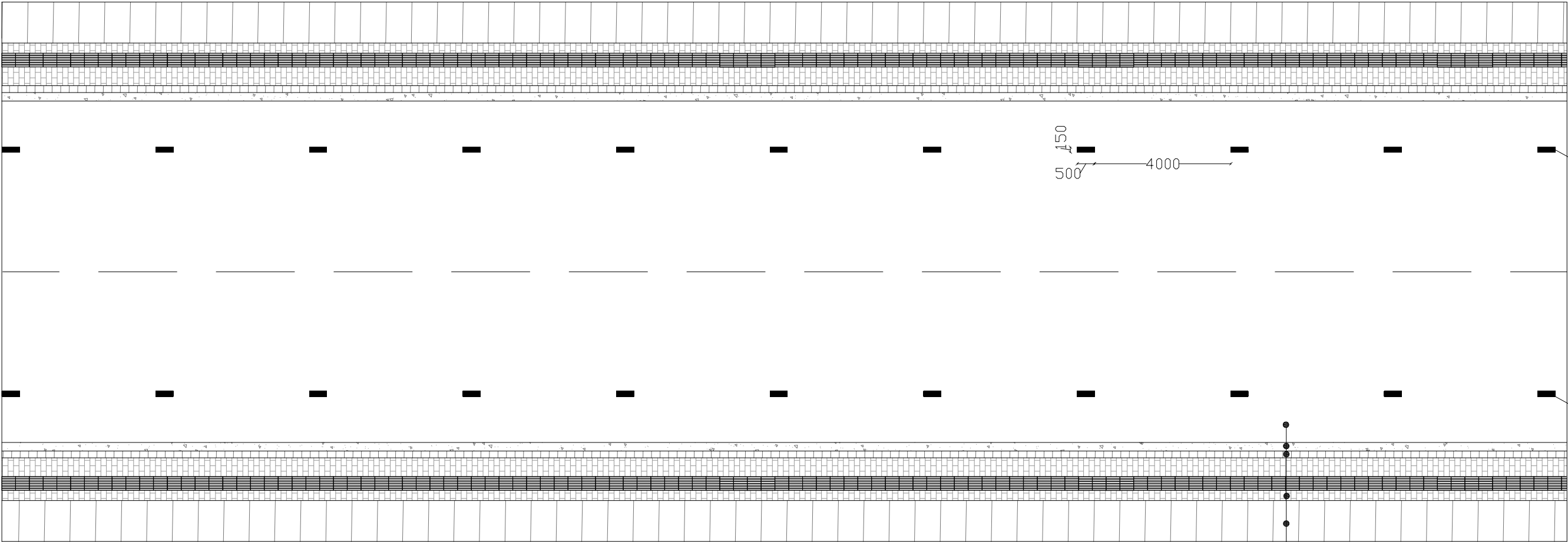
Reinforcement Details at Section 1-1



Reinforcement Details at Section 2-2



Reinforcement Details at Road Crossing

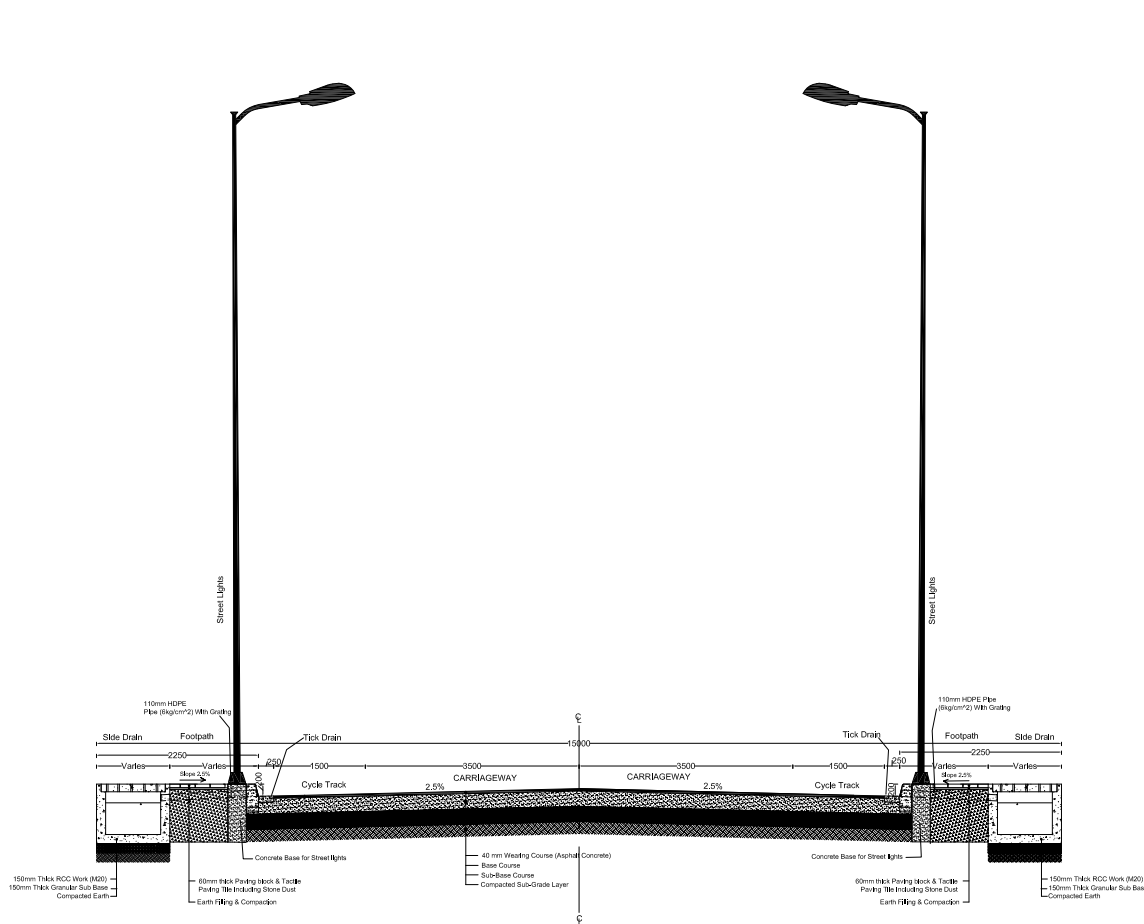


PCC Block

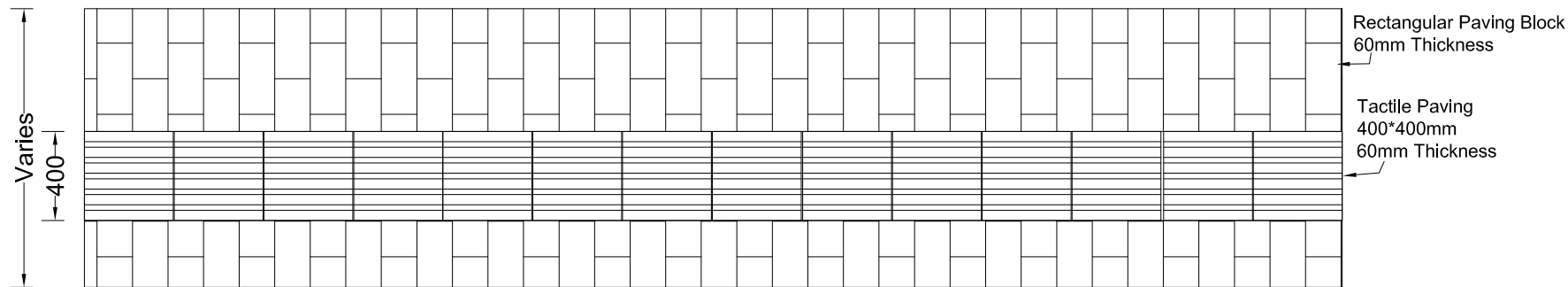
PCC Block

- Cycle Track
- Tick Drain
- Kerb Stone
- Footpath
- Side Drain

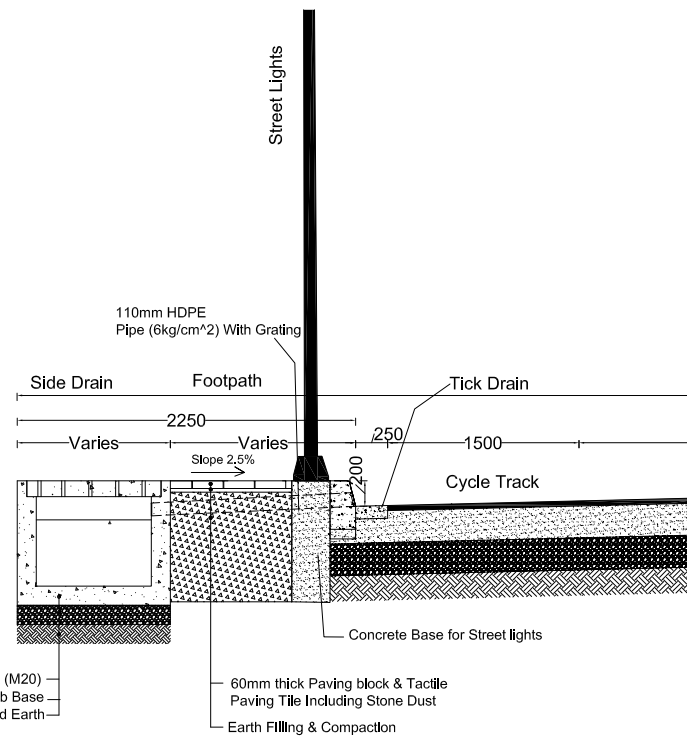
Typical Plan of Road



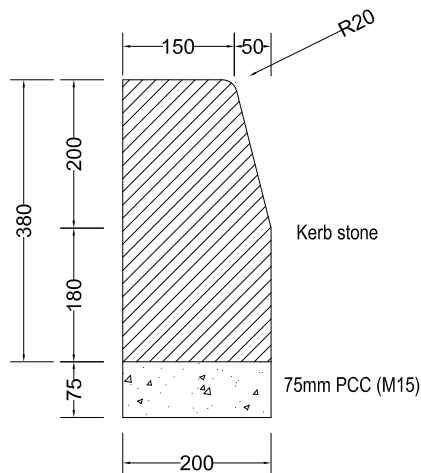
Typical Cross Section of Road



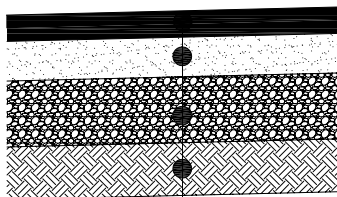
Footpath Plan



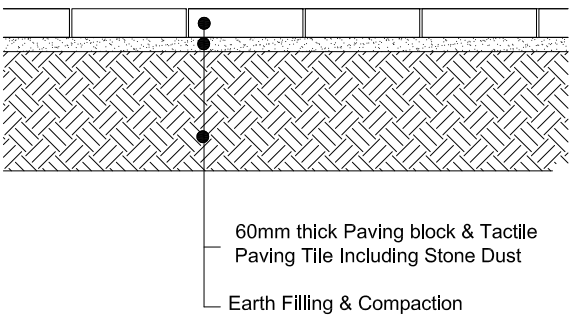
Typical Cross Section of Footpath



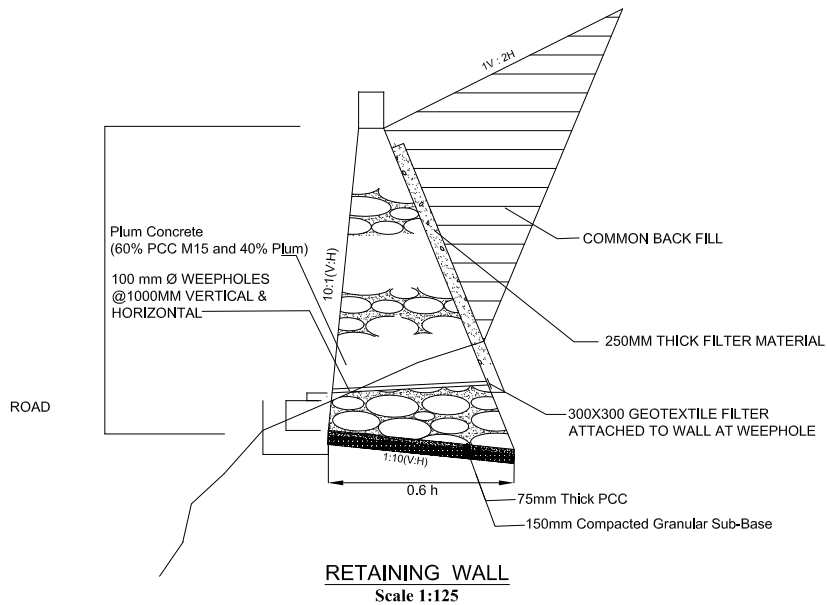
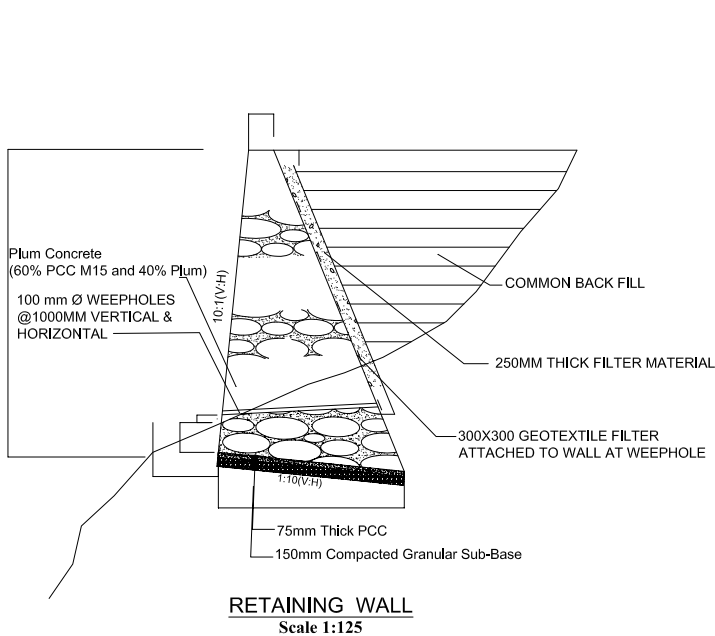
KERB STONE DETAILS



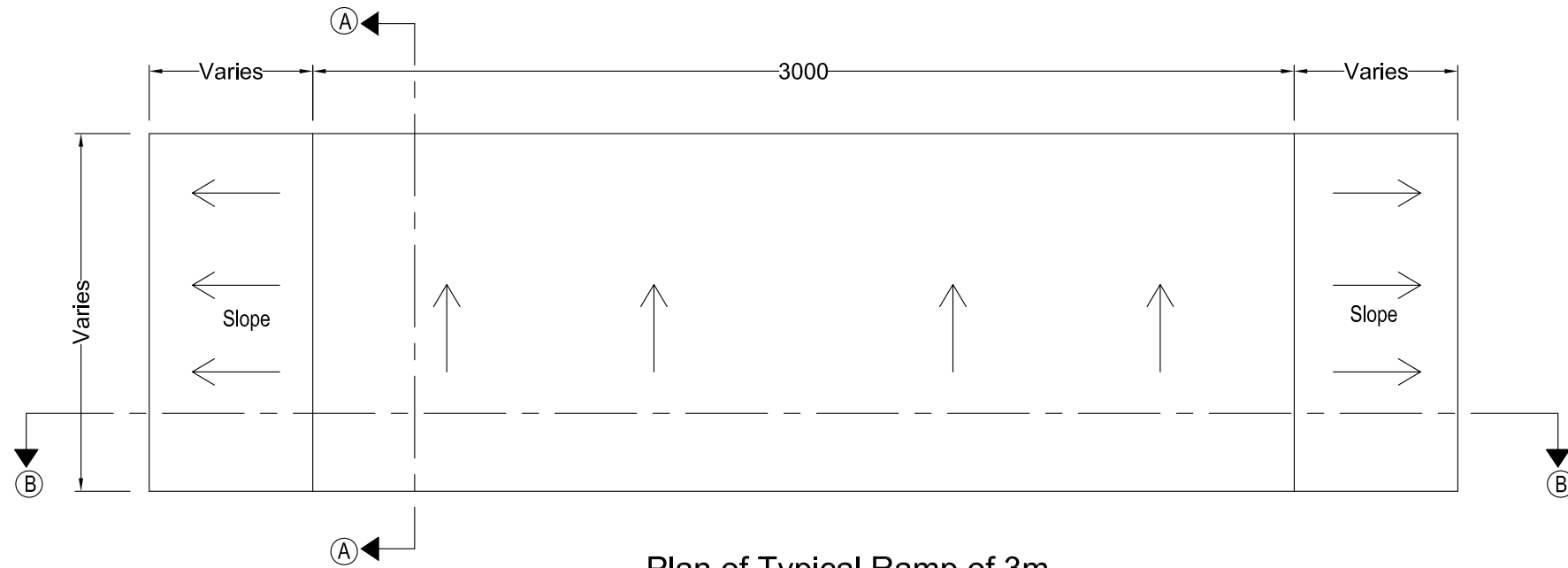
Typical Cross Section of Pavement



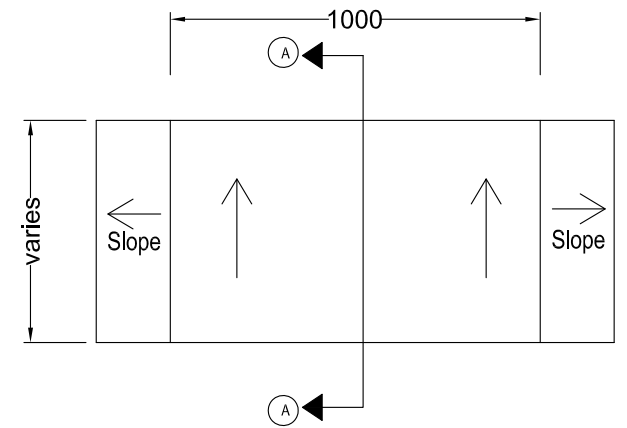
FOOTPATH DETAILS



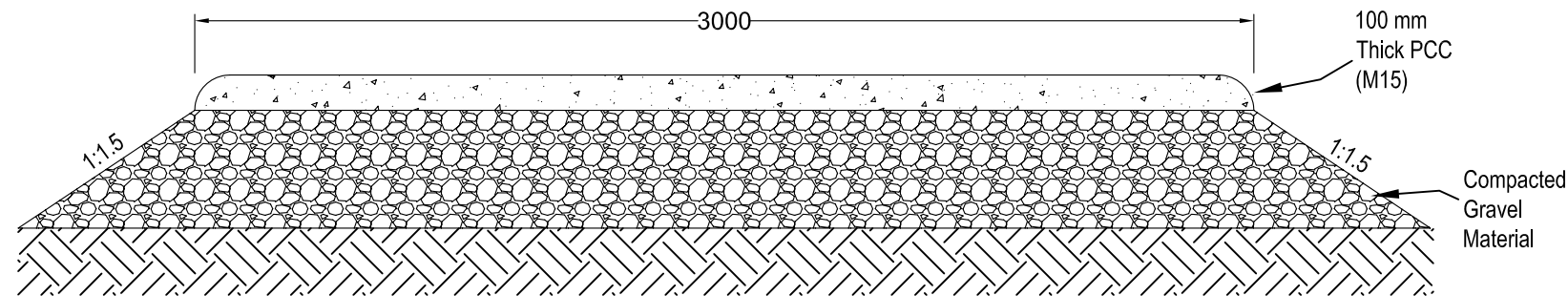
- NOTES :
1. Wall height is to be modified as per actual site condition or as directed by the Engineer.
 2. Wall height for more than 6.0 m, soil investigation is to be done or as directed by the Engineer.
 3. Expansion Joint is to be provided maximum at a distance of 10.0 m C/C .It should be located, wherever possible, at every major changes in the wall height or as directed by the Engineer.
 4. Mortar joint width to be 25mm to 35mm. Exposed face of masonry is to be free from mortar stains.
 5. Minimum depth of foundation shall be 600mm or as directed by the Engineer.
 6. Lowest weep hole should not be more than 200mm above final ground level at the toe of wall or as directed by the Engineer.
 7. Place the foundation inclined at 10% slope
 8. Retaining wall shall be curved in plan & profile to the center line of road where directed by the Engineer.
 9. Wall interior is not to be filled with dry stone rubble.
 10. Others not mentioned shall be in accordance with the specifications and special provisions



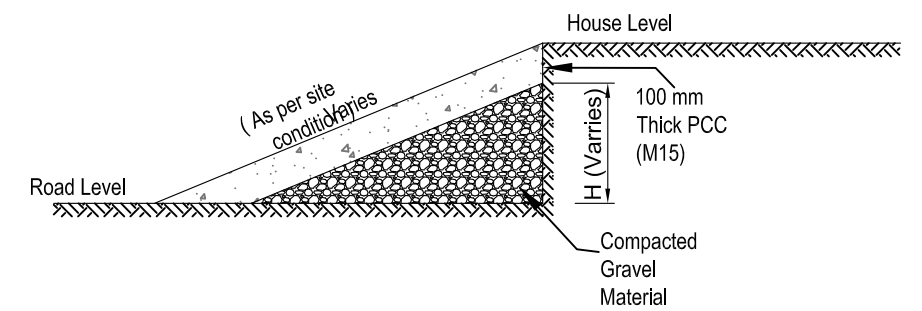
Plan of Typical Ramp of 3m
Scale (1:20)



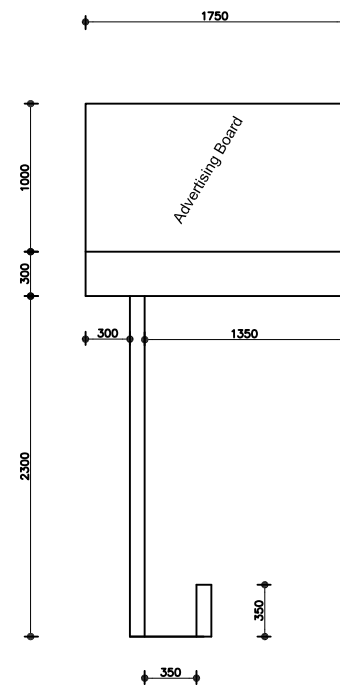
Plan of Typical Ramp of 1m
Scale (1:20)



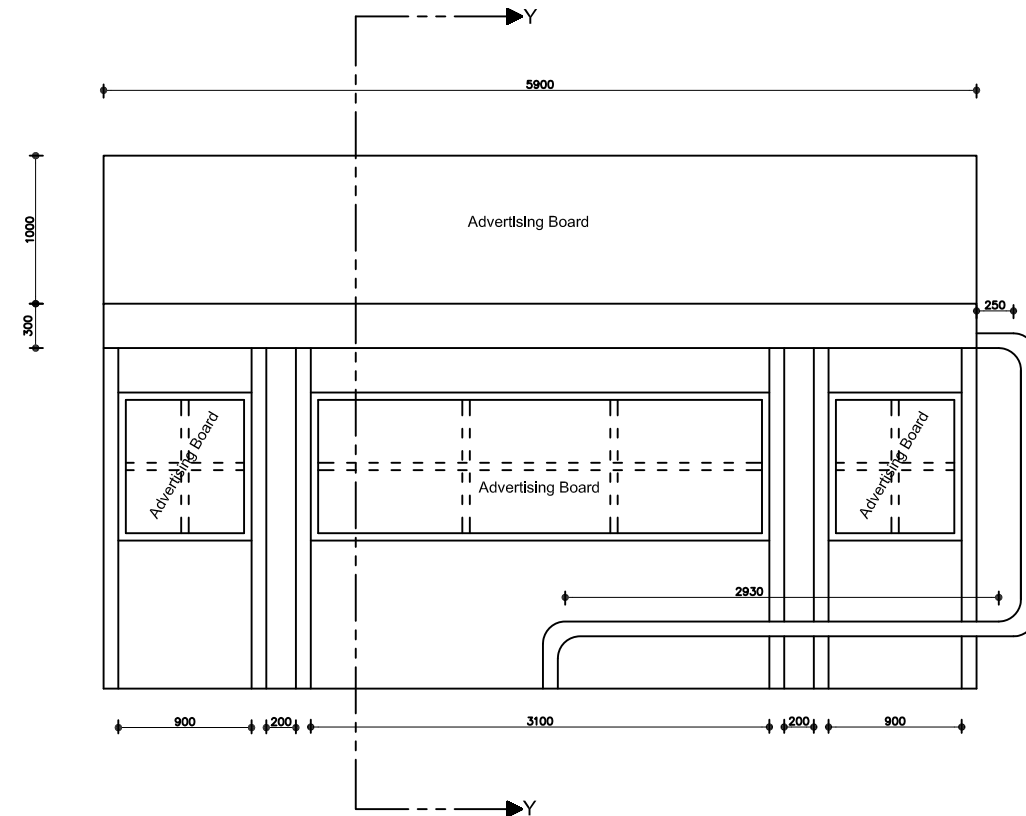
Section at B-B
Scale (1:20)



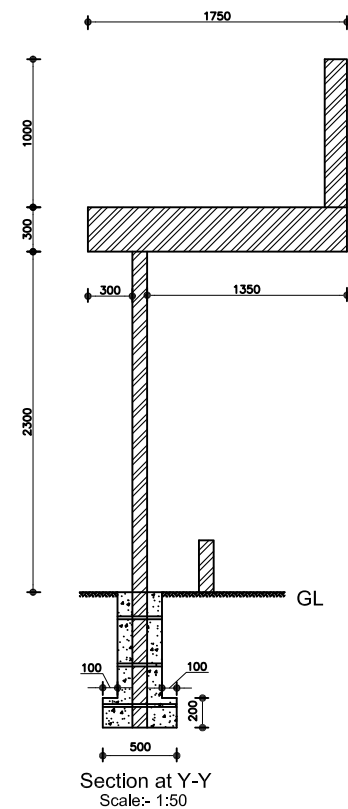
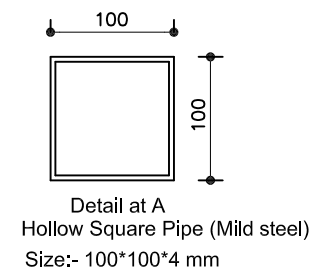
Section at A-A
Scale (1:20)



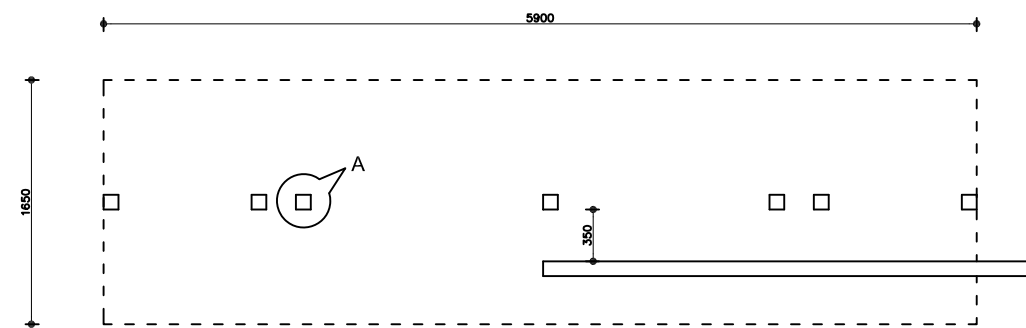
Bus Shelter Side View
Scale:- 1:50



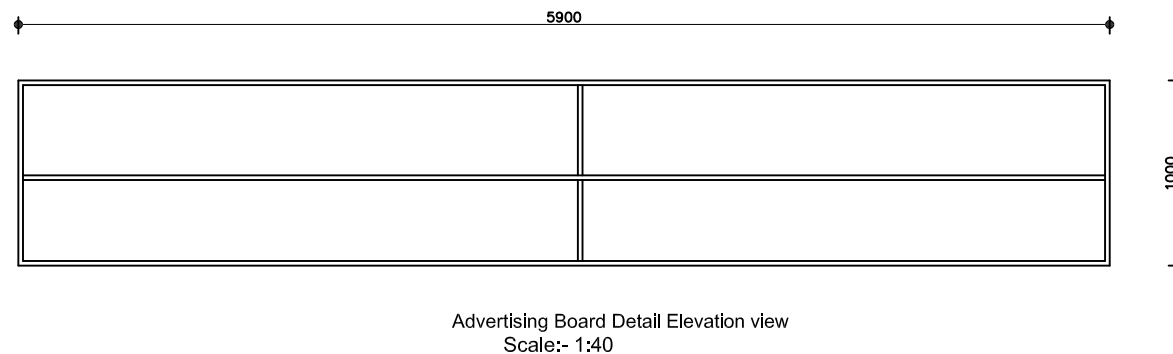
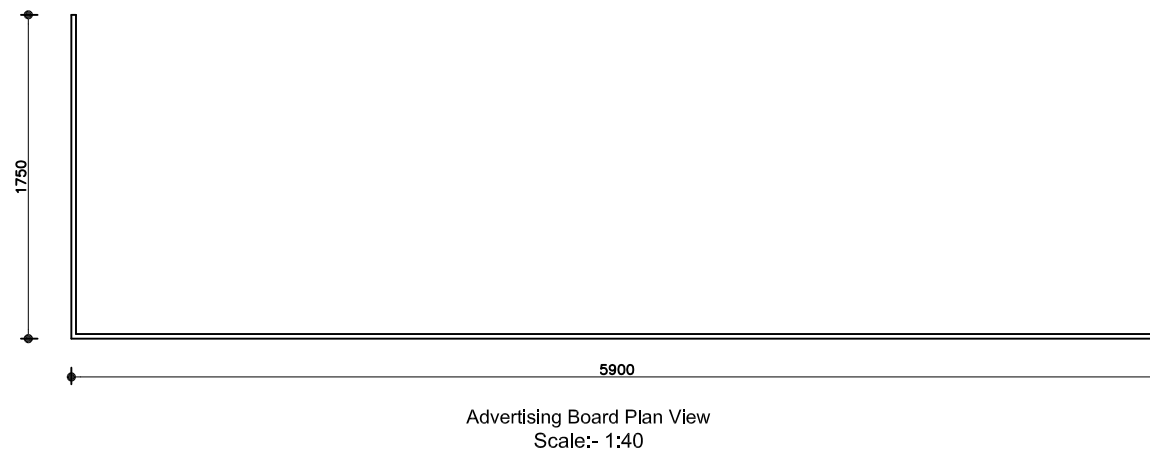
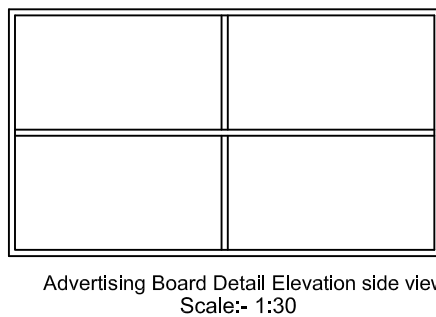
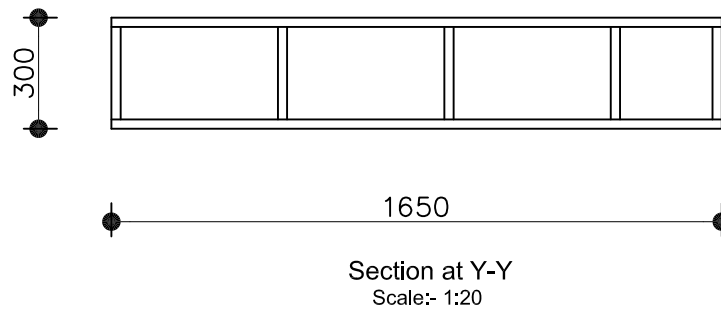
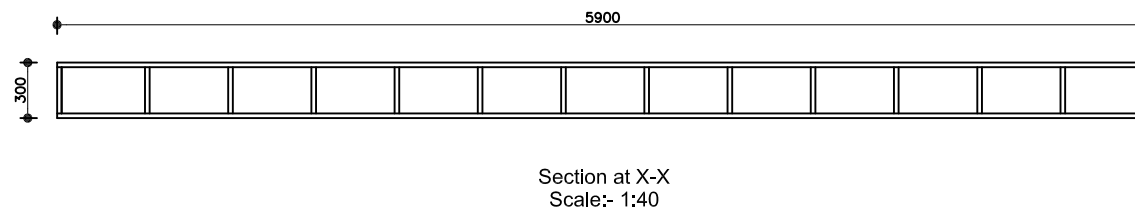
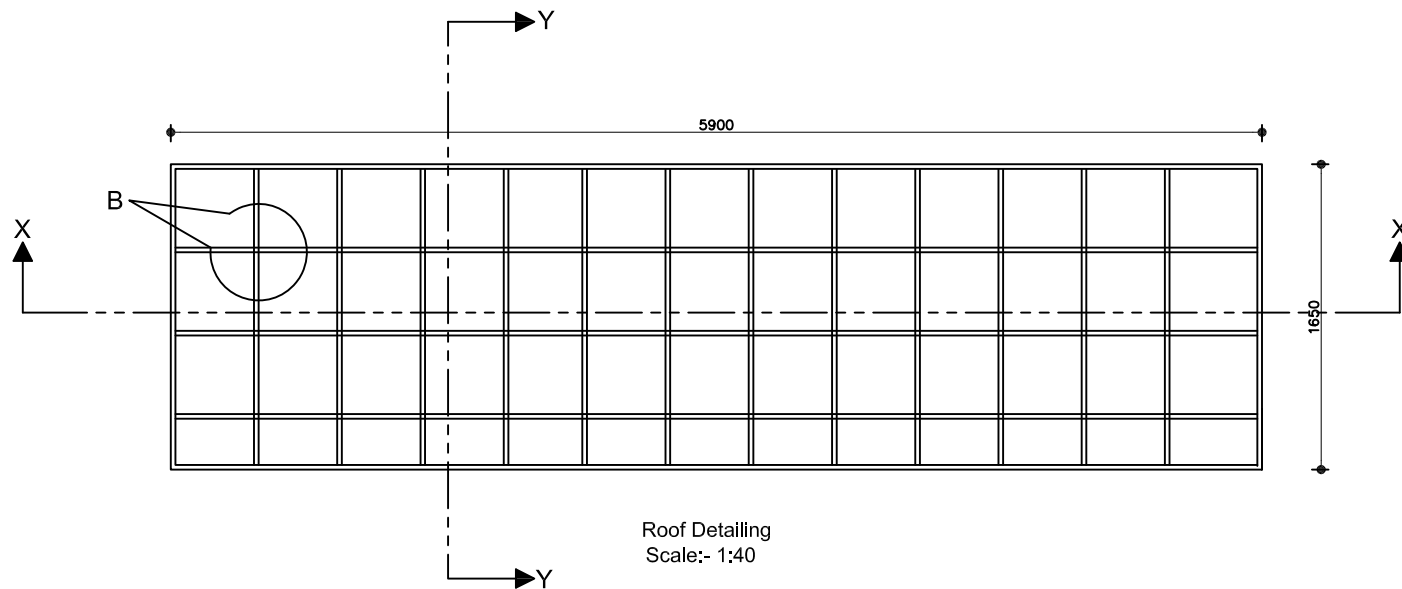
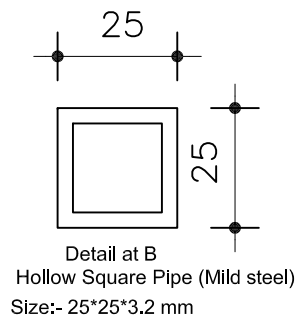
Bus Shelter Front View
Scale:- 1:50

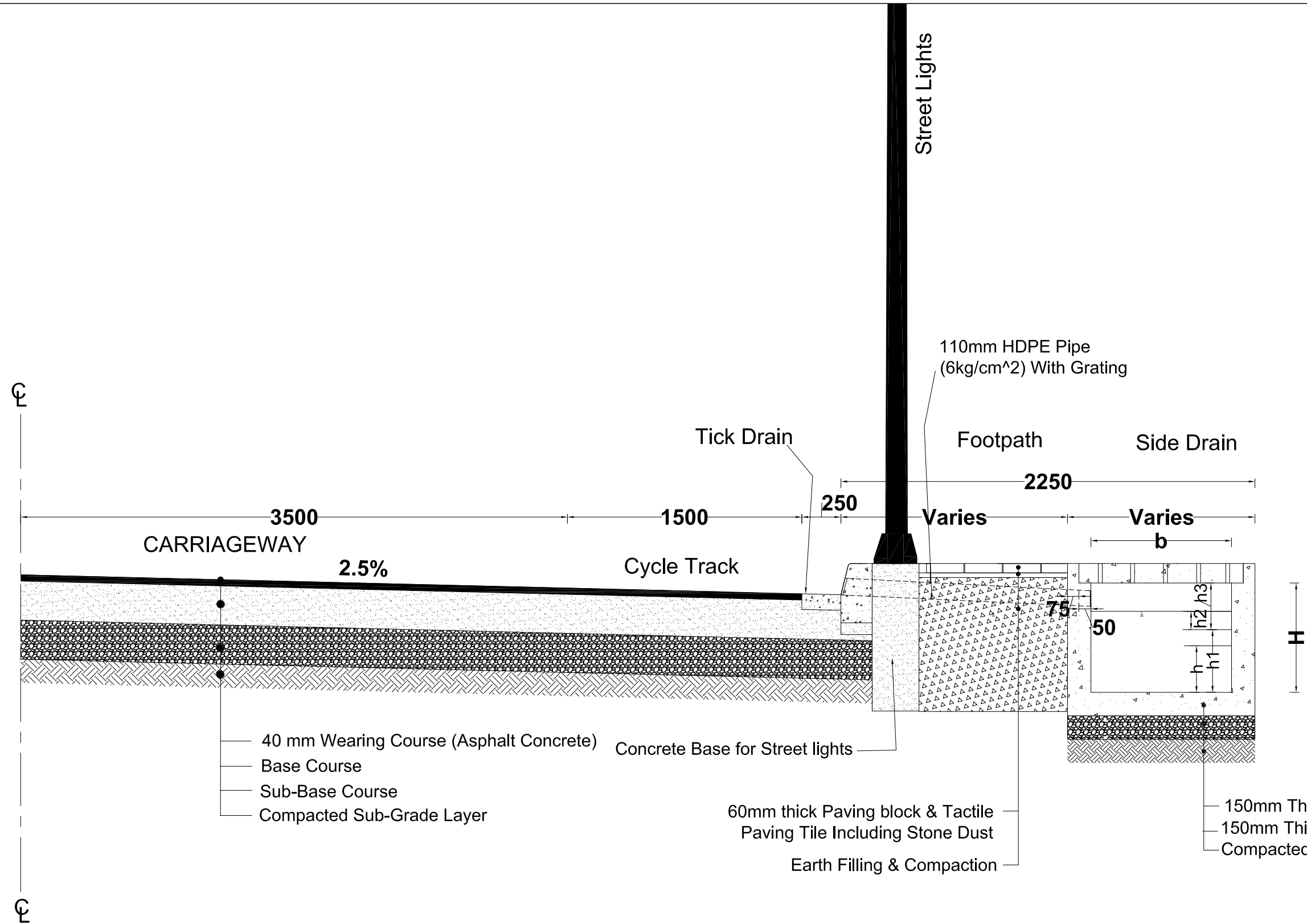


Section at Y-Y
Scale:- 1:50

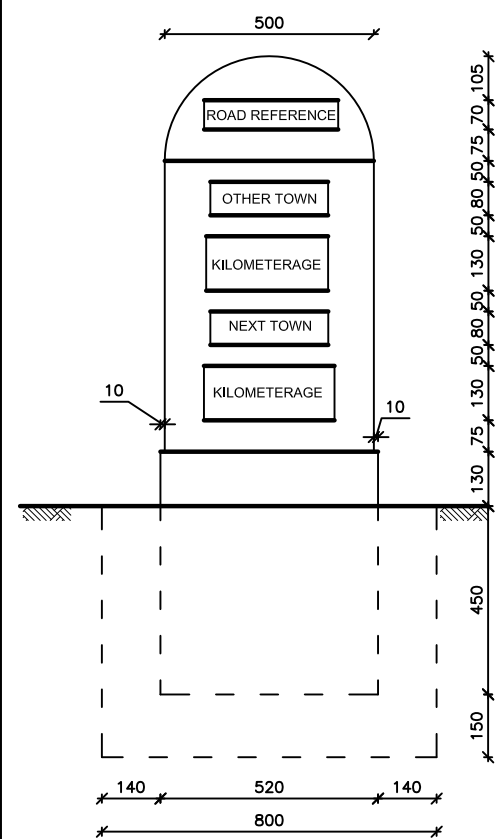


Bus Shelter (Plan View)
Scale:- 1:50

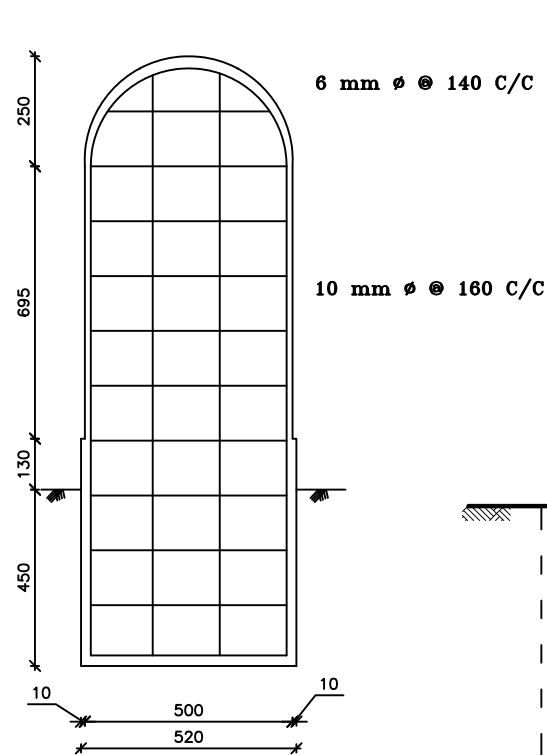




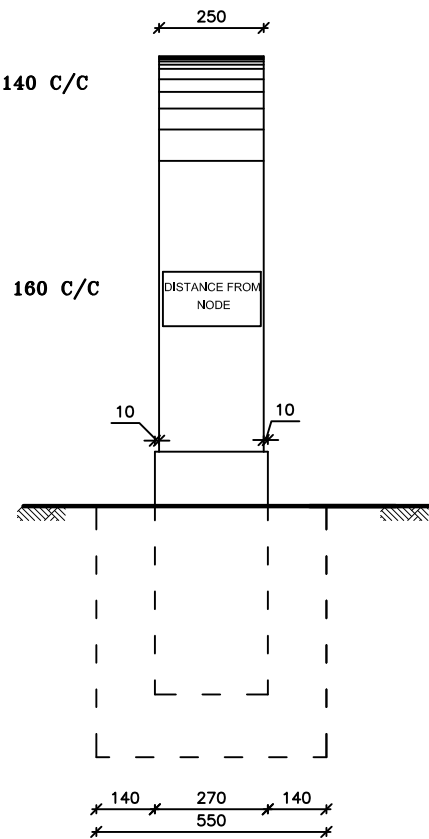
Arrangement Details of Road Side Drain



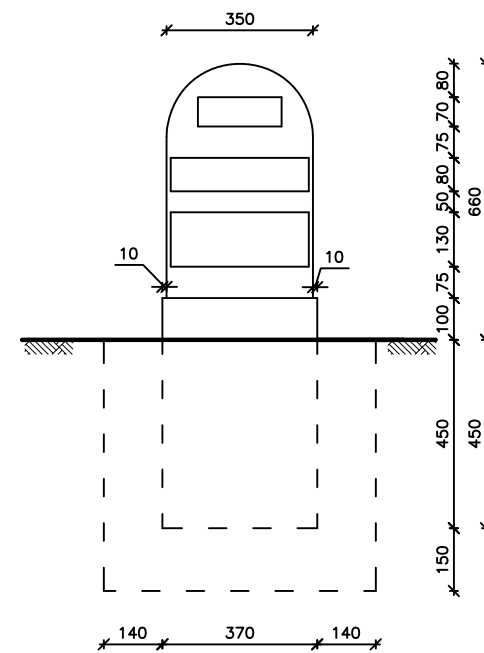
ELEVATION FACE 1 & 2



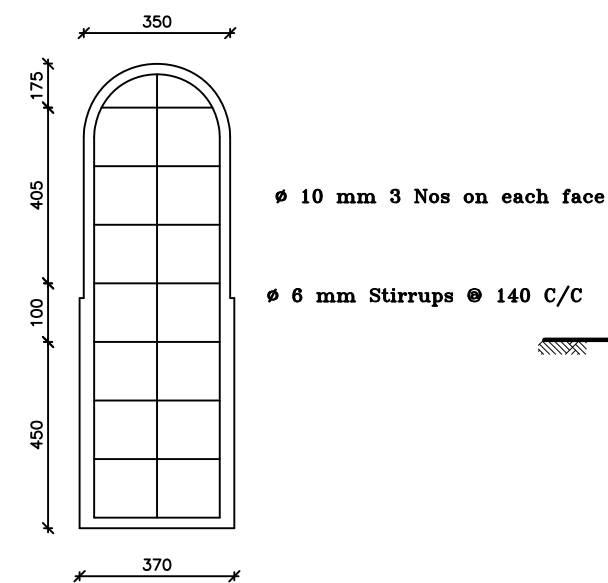
SECTION AT AA



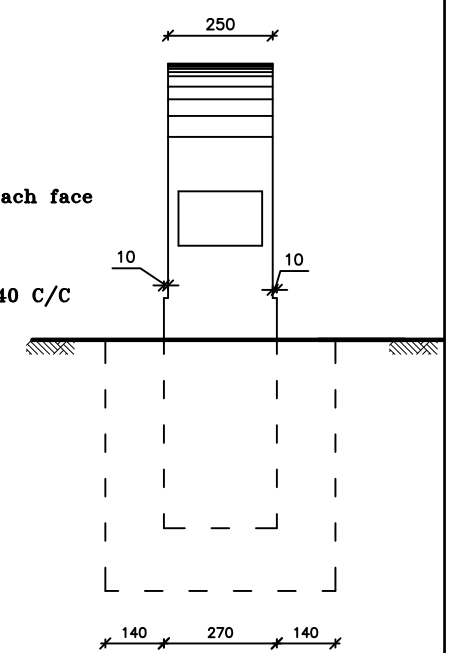
SIDE ELEVATION



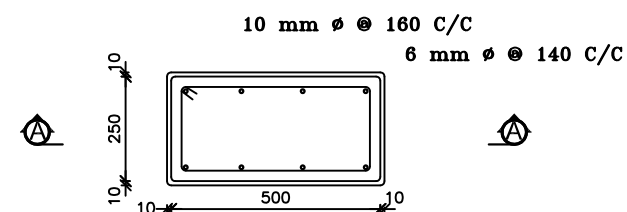
ELEVATION FACE 1 and 2



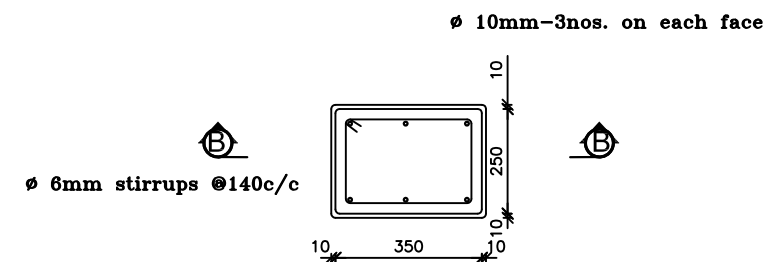
SECTION AT B-B



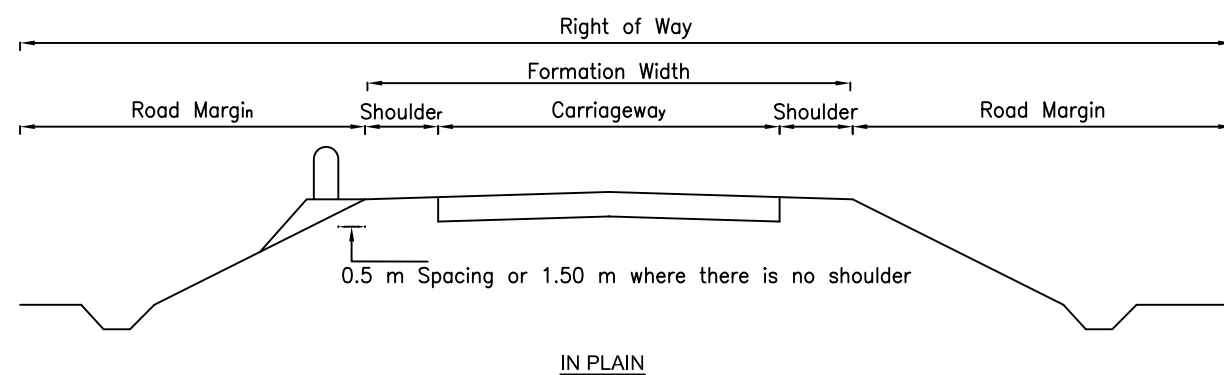
SIDE ELEVATION



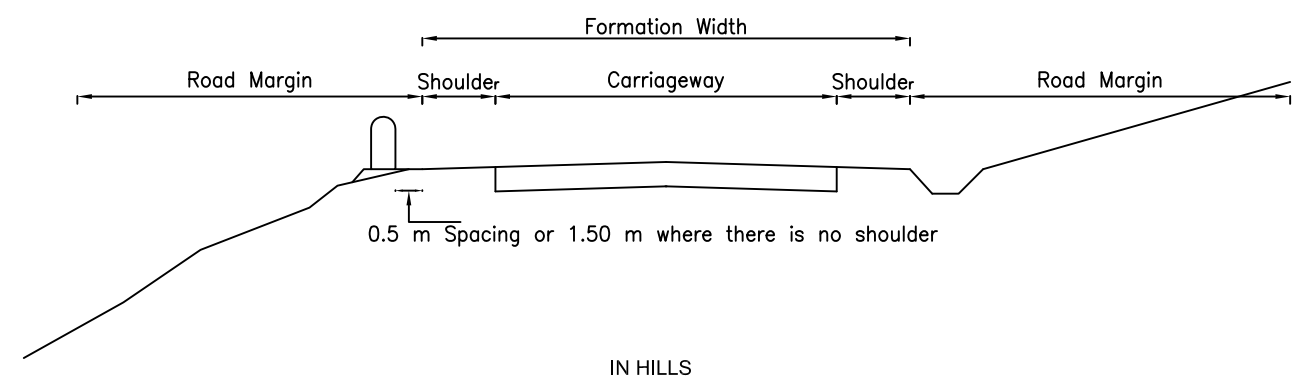
SECTIONAL PLAN



SECTIONAL PLAN



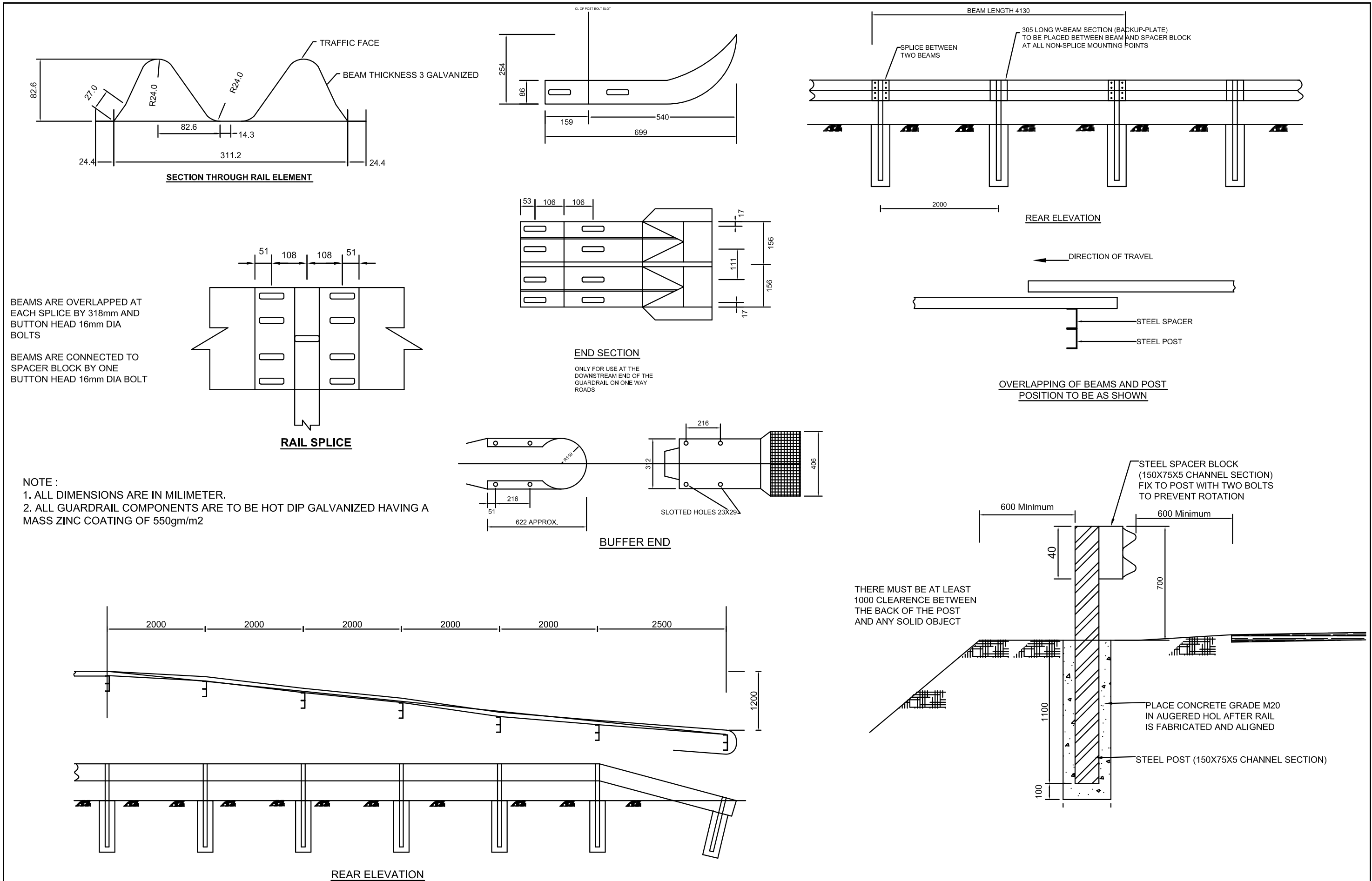
IN PLAIN

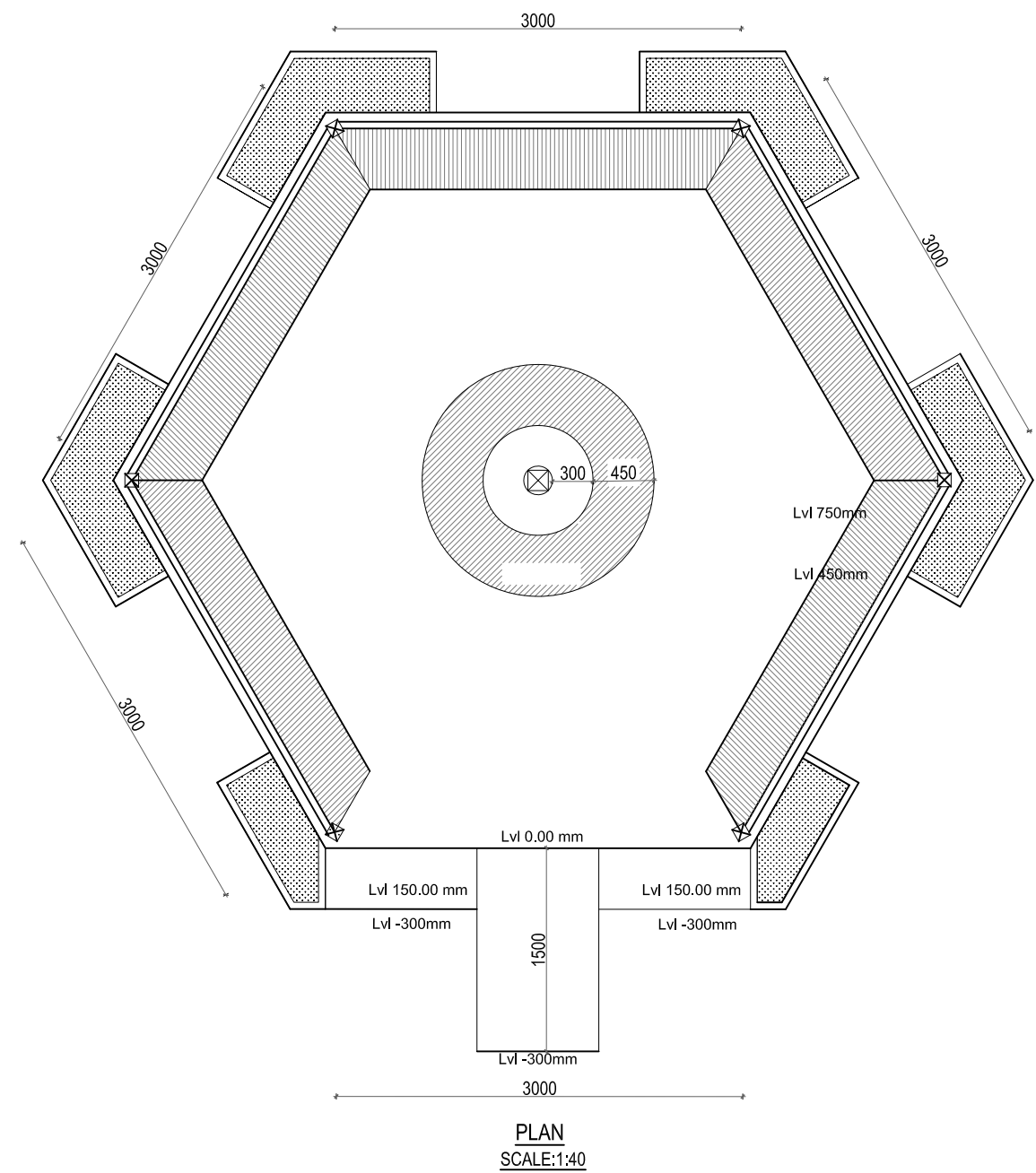
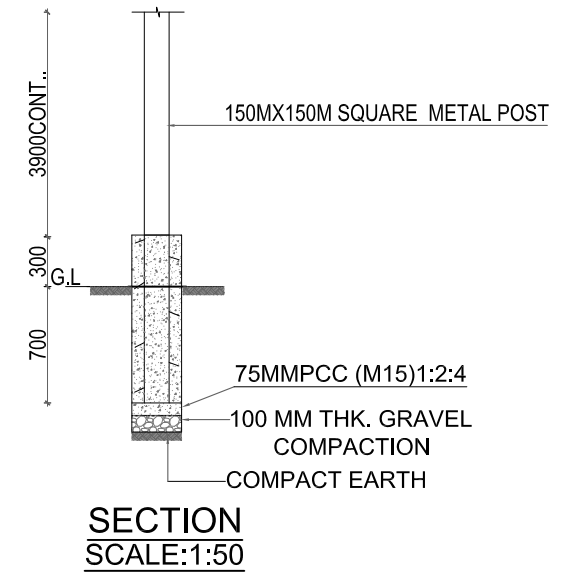
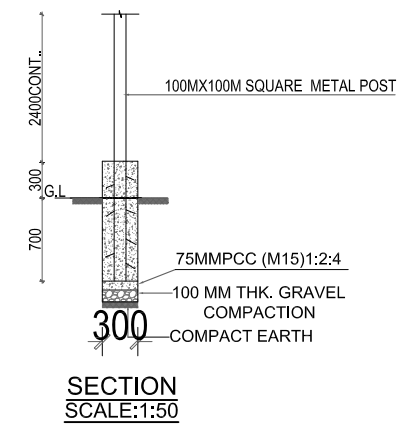
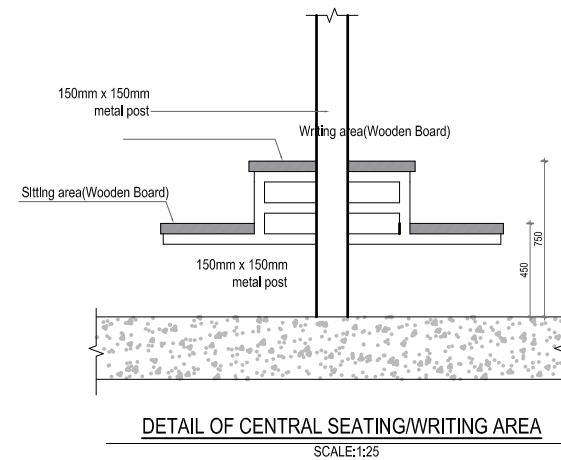
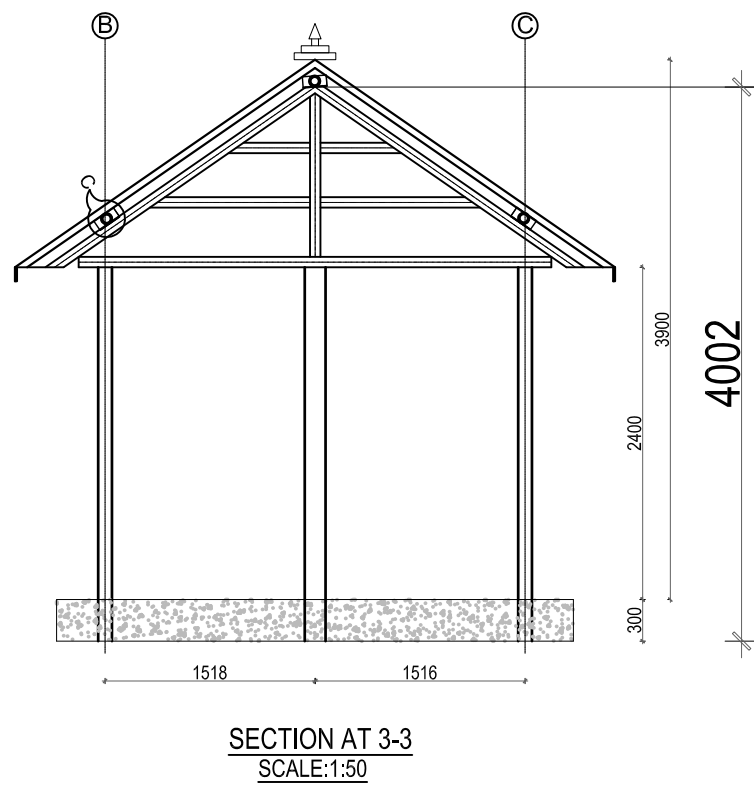
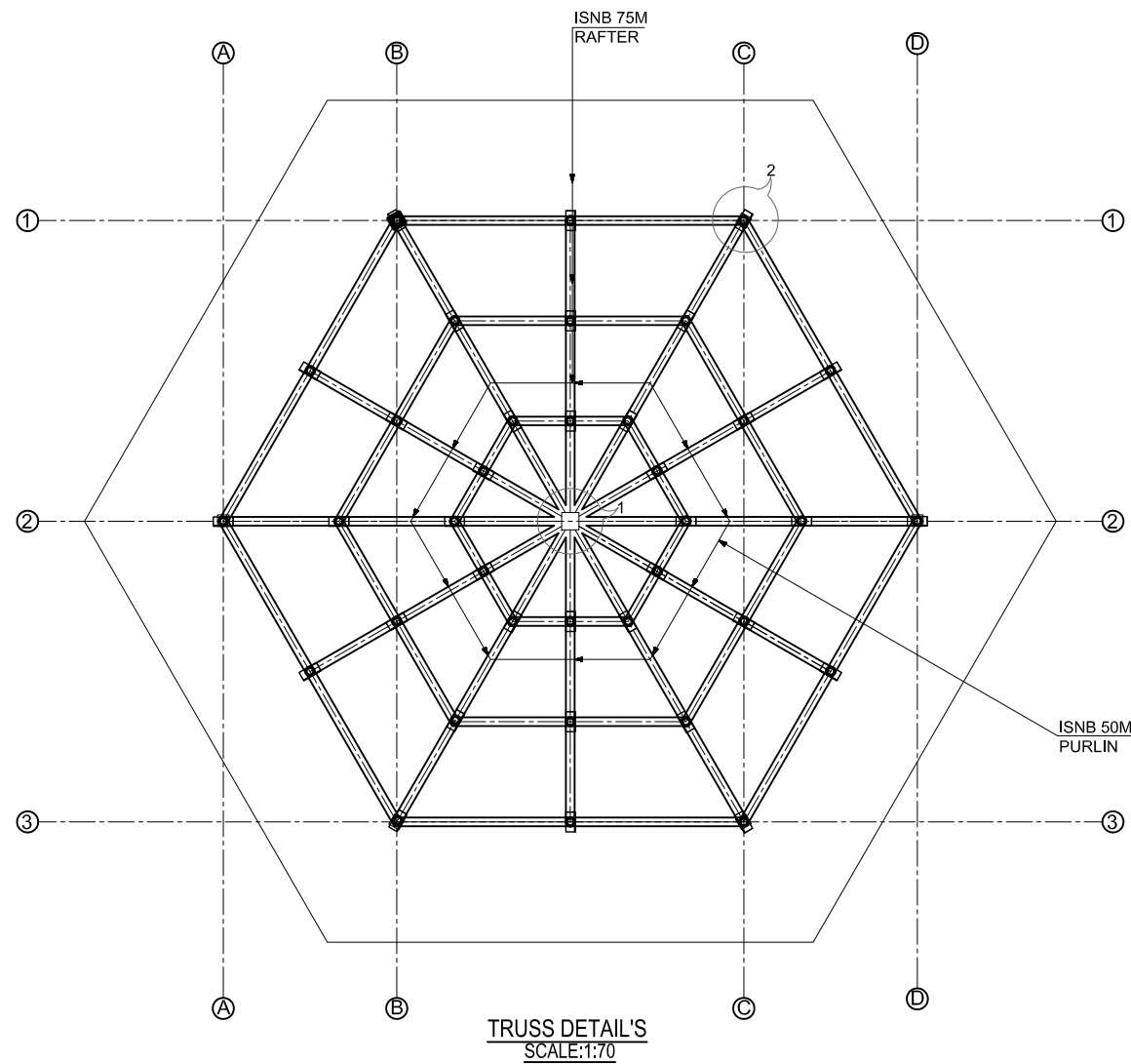


IN HILLS

NOTE:

1. All dimensions are in mm unless otherwise stated.
2. Alternate km and 5km post will be in Nepali and English language.
3. Lettering size will be as given in the box.
4. The back ground of the post will be painted in white and deep black paints will be used for letters & numerals.
5. Top half circle shall be painted in yellow colour.
6. In hilly terrain the post will be located in the valley side of the road and in plain area will be located on the left side as one proceeds the starting station towards the terminal station.





Nepal Urban Governance and Infrastructure Project (NUGIP)
Office of the Municipal Executive
Pokhara Metropolitan City
Kaski District, Gandaki Province



CONSULTANT:
Plush Engineers and Architects (P.) Ltd. (PEA)
B.N. Consultancy Pvt. Ltd. (BN)
Soil Test Consultancy (P.) Ltd. (Soil Test)
Kathmandu, Nepal



Project Name:- Nepal Urban Governance and
Infrastructure Project (NUGIP)

SHEET TITLE:

SHED DETAIL

DESIGNED BY:

DRAWN BY:

CHECKED BY:

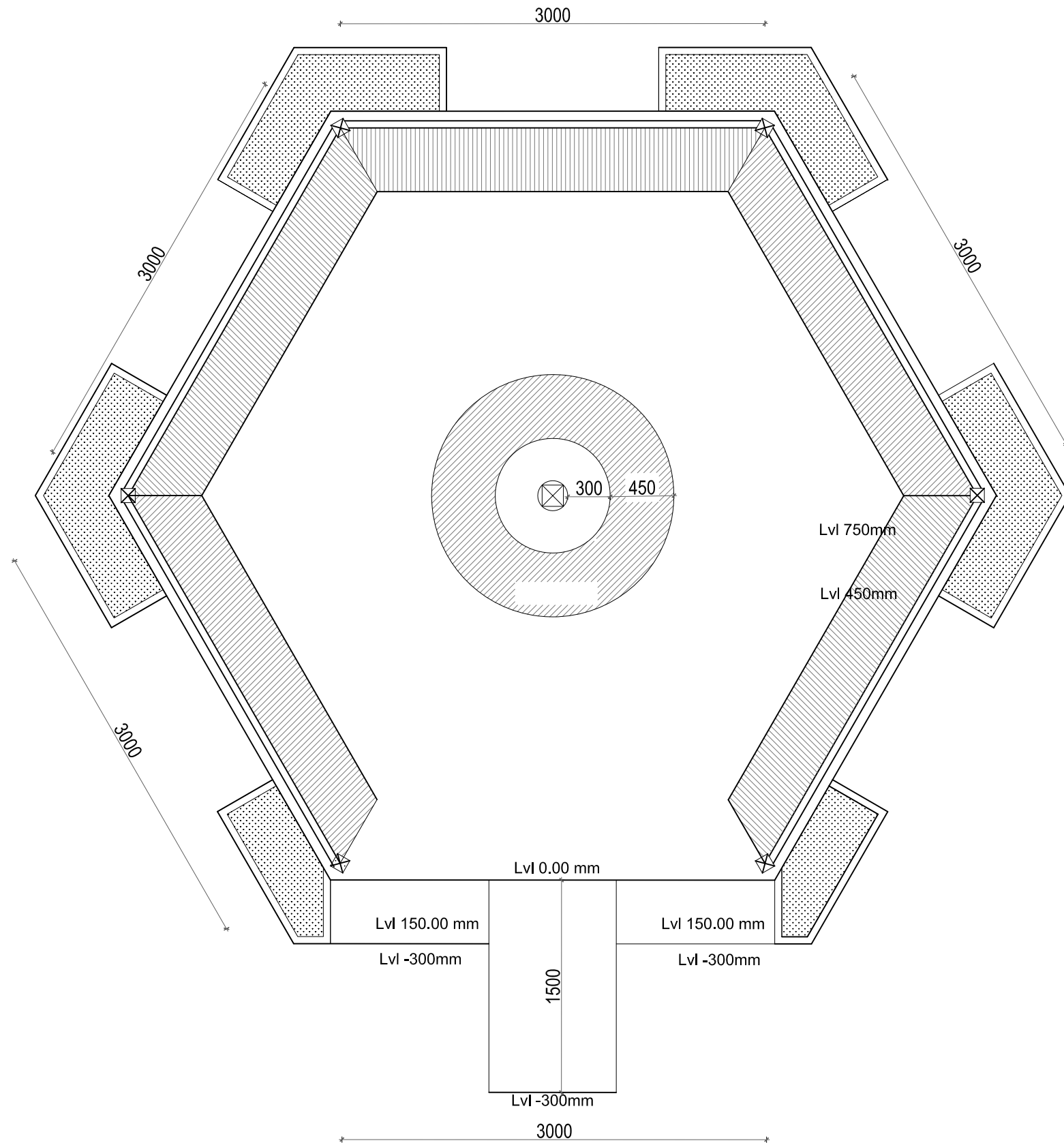
APPROVED BY:

Date: 2023

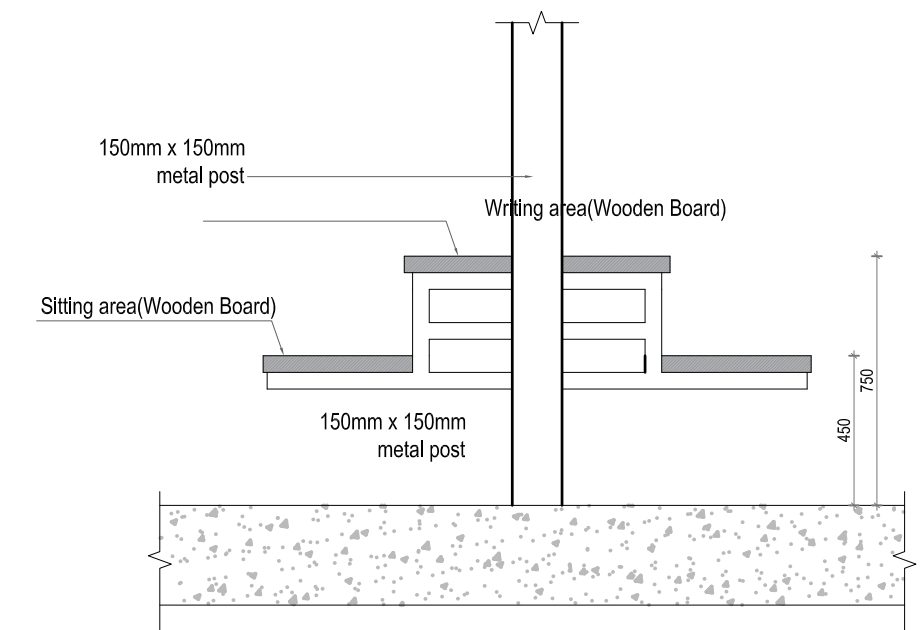
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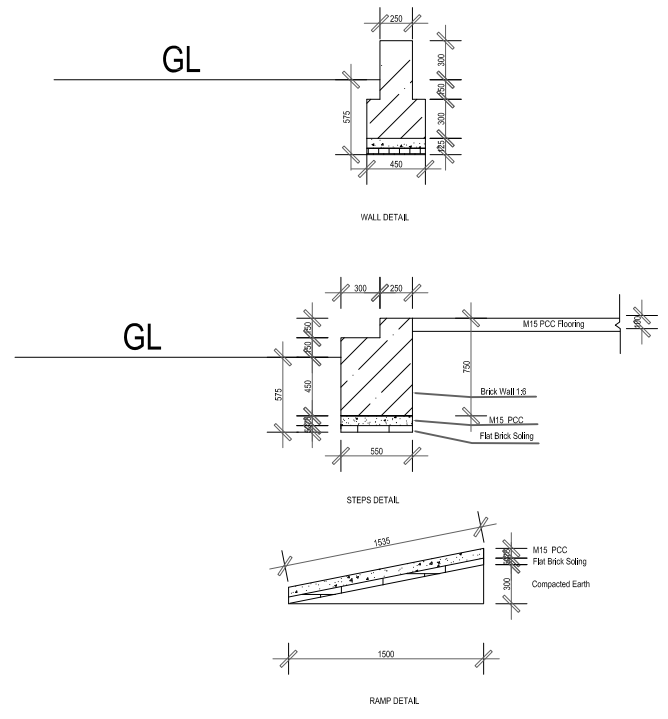
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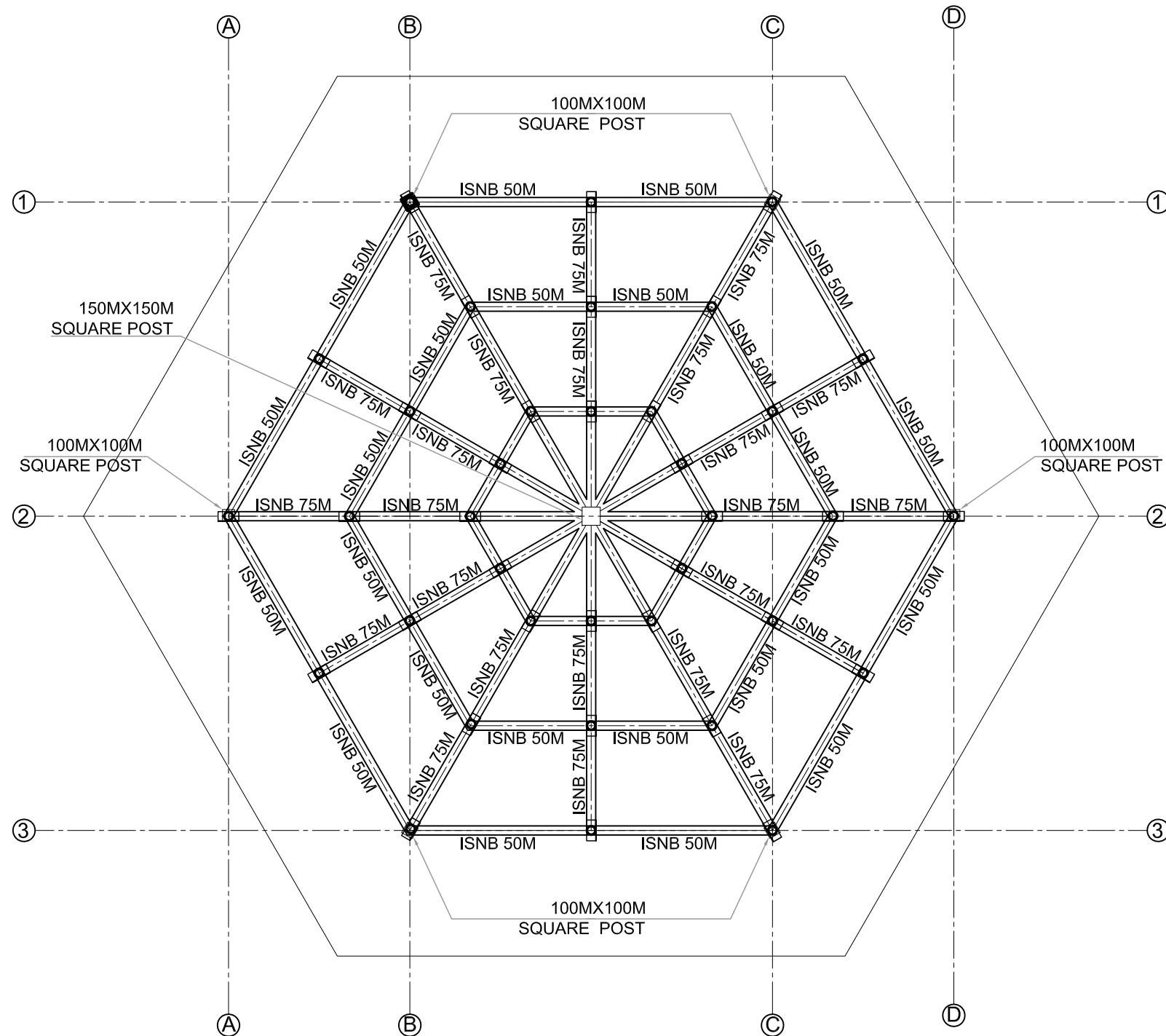


PLAN
SCALE:1:40

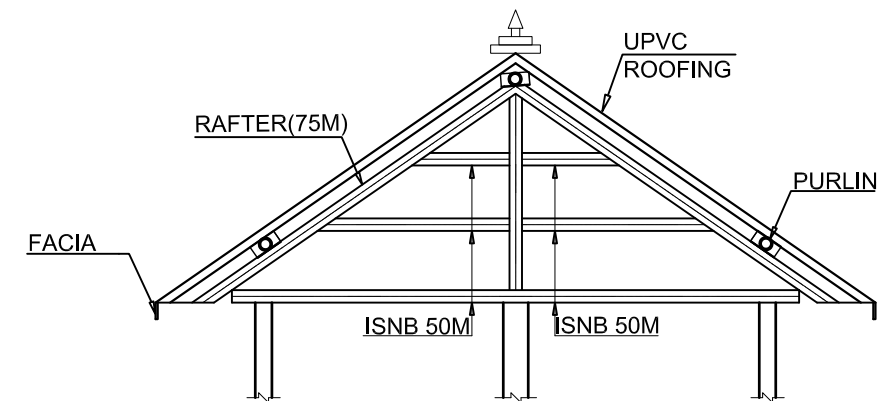


DETAIL OF CENTRAL SEATING/WRITING AREA
SCALE:1:25





TYPICAL TRUSS DETAIL'S
SCALE:1:70



TYPICAL TRUSS DETAIL'S
SCALE:1:50



Nepal Urban Governance and Infrastructure Project (NUGIP)
Office of the Municipal Executive
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Kaski District, Gandaki Province



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Soil Test Consultancy (P.) Ltd. (Soil Test)
Kathmandu, Nepal



Project Name:- Nepal Urban Governance and
Infrastructure Project (NUGIP)

SHEET TITLE:

SHED DETAIL

DESIGNED BY:

DRAWN BY:

CHECKED BY:

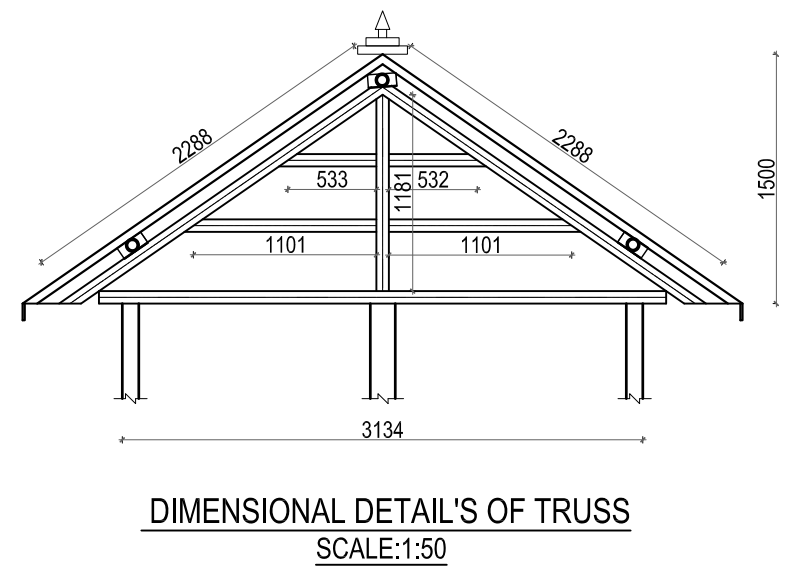
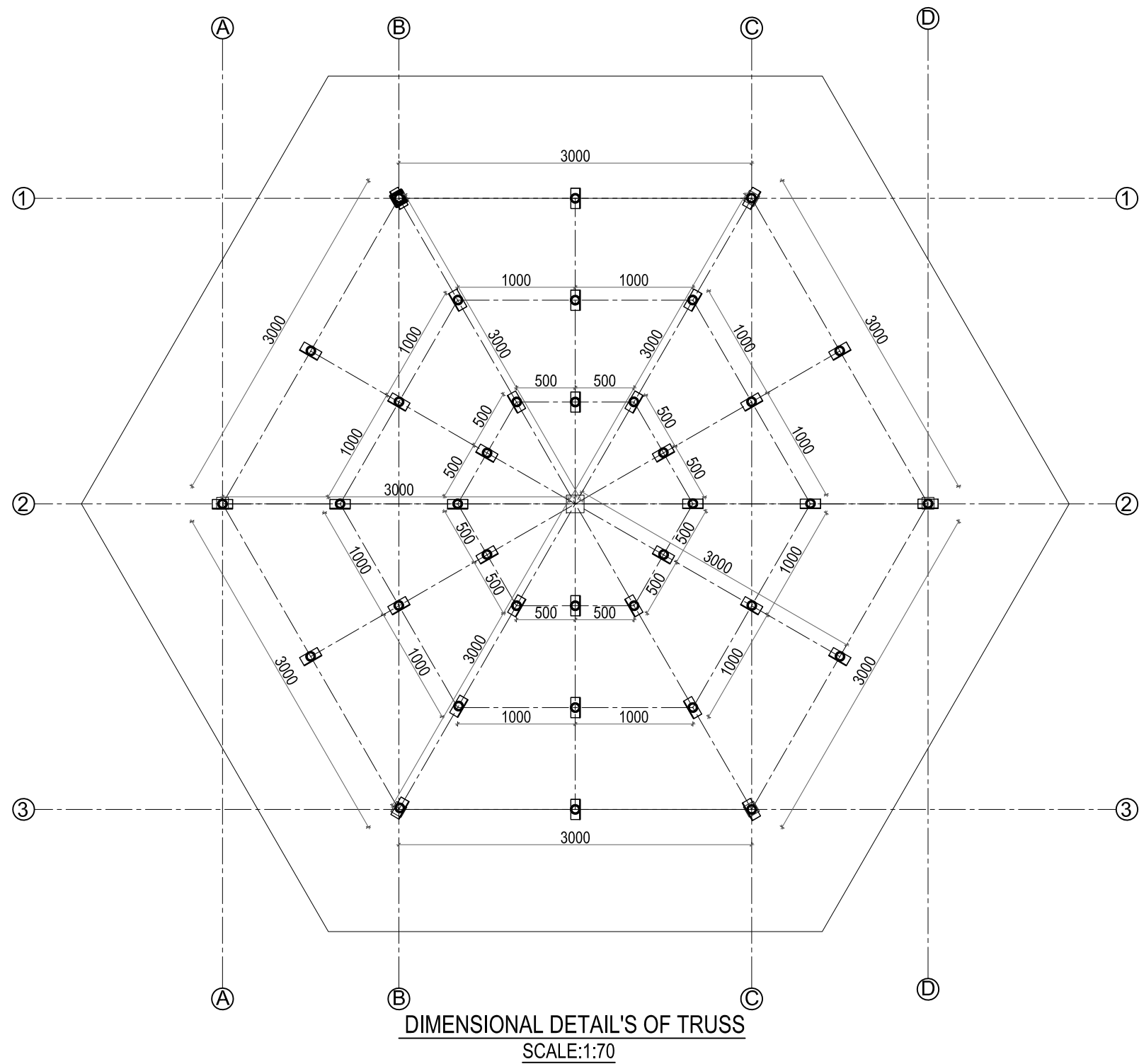
APPROVED BY:

Date: 2023

Scale:

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Sheet No: 3



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Office of the Municipal Executive
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Kaski District, Gandaki Province



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B.N. Consultancy Pvt. Ltd. (BN)
Soil Test Consultancy (P.) Ltd. (Soil Test)
Kathmandu, Nepal



Project Name:- Nepal Urban Governance and
Infrastructure Project (NUGIP)

SHEET TITLE:

SHED DETAIL

DESIGNED BY:

Date: 2023

DRAWN BY:

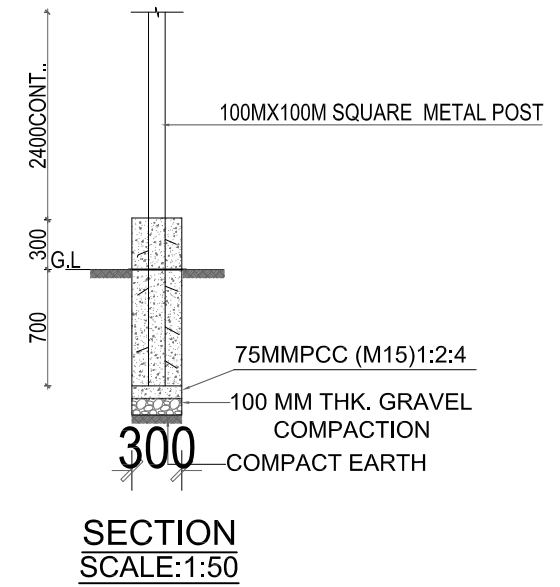
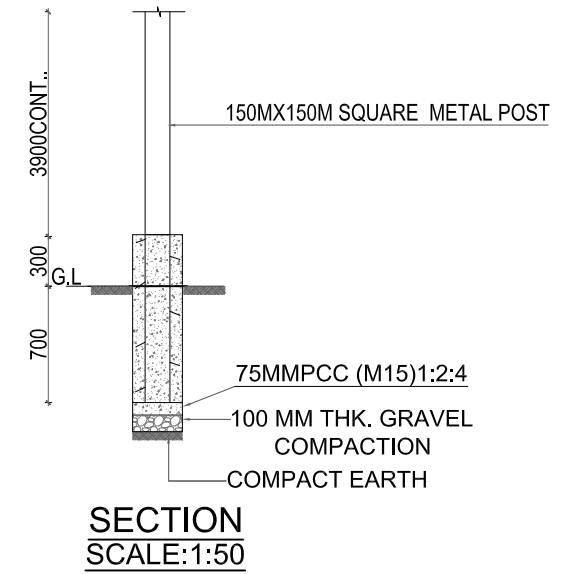
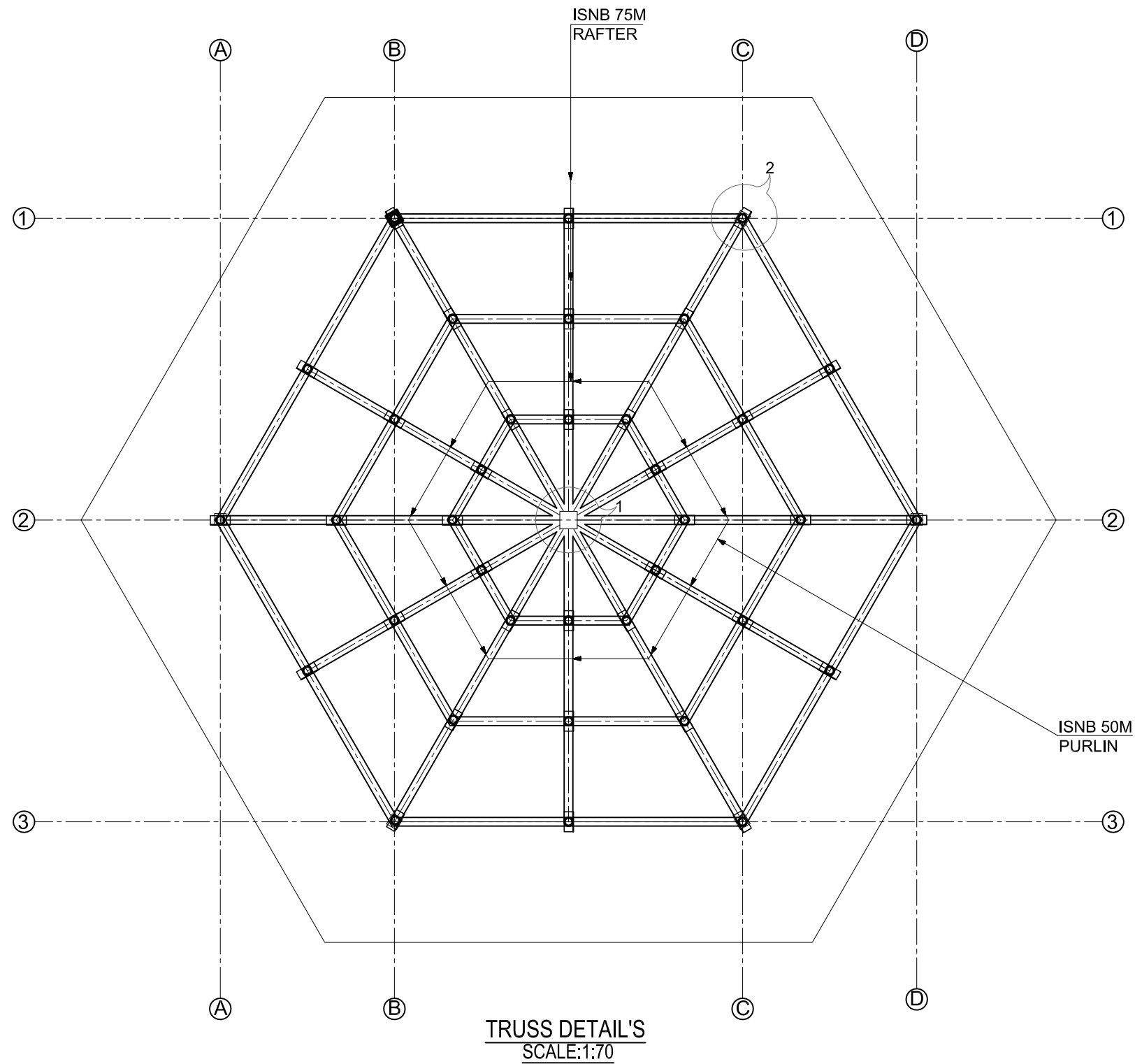
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Chainage:

APPROVED BY:

Sheet No: 4



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Office of the Municipal Executive
Pokhara Metropolitan City
Kaski District, Gandaki Province



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B.N. Consultancy Pvt. Ltd. (BN)
Soil Test Consultancy (P.) Ltd. (Soil Test)
Kathmandu, Nepal



Project Name:- Nepal Urban Governance and
Infrastructure Project (NUGIP)

SHEET TITLE:

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DESIGNED BY:

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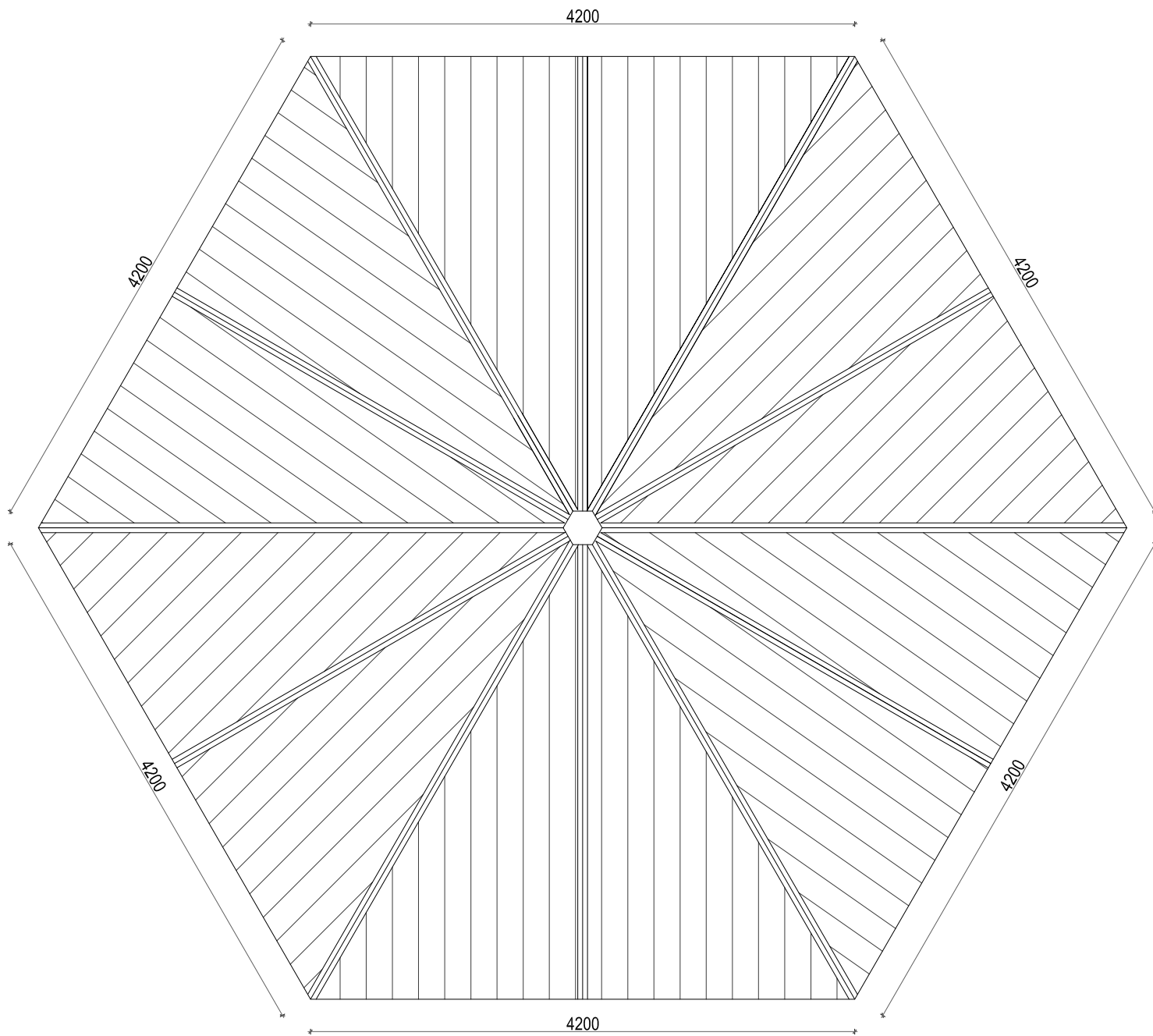
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Date: 2023

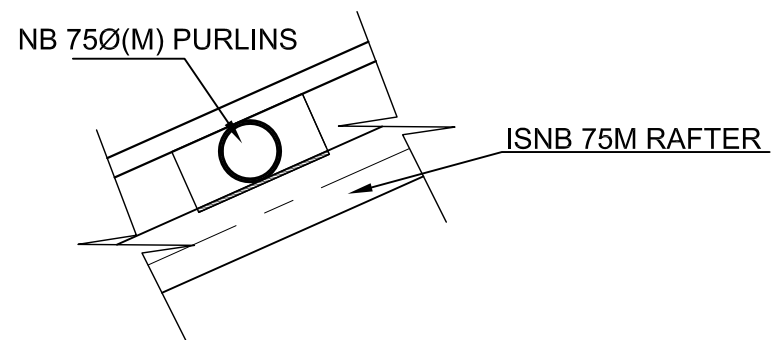
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Sheet No: 5

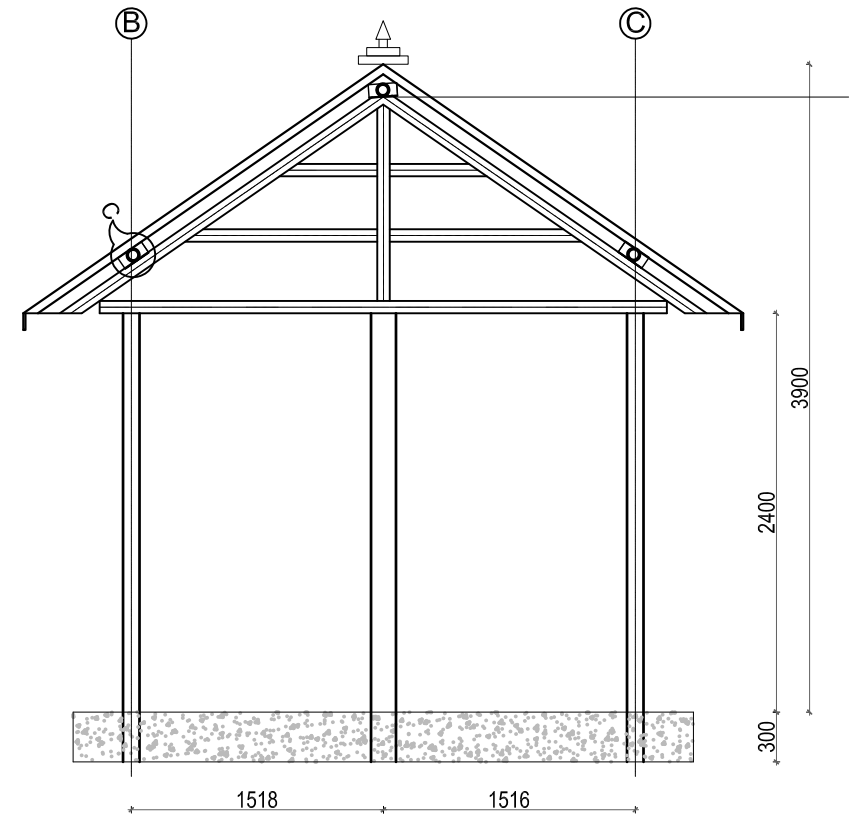


ROOF LAYOUT PLAN
SCALE:1:70

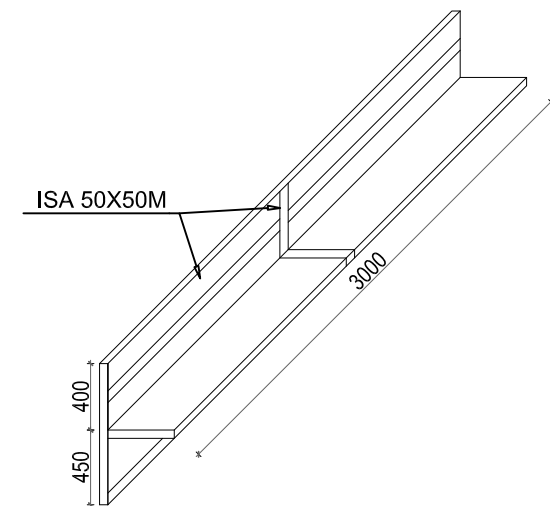


DETAIL AT - C

(SCALE :1:10)



SECTION AT 3-3
SCALE:1:50



SITTING BENCH DETAILS
SCALE:1:50



Nepal Urban Governance and Infrastructure Project (NUGIP)
Office of the Municipal Executive
Pokhara Metropolitan City
Kaski District, Gandaki Province



CONSULTANT:
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B.N. Consultancy Pvt. Ltd. (BN)
Soil Test Consultancy (P.) Ltd. (Soil Test)
Kathmandu, Nepal



Project Name:- Nepal Urban Governance and
Infrastructure Project (NUGIP)

SHEET TITLE:

SHED DETAIL

DESIGNED BY:

DRAWN BY:

CHECKED BY:

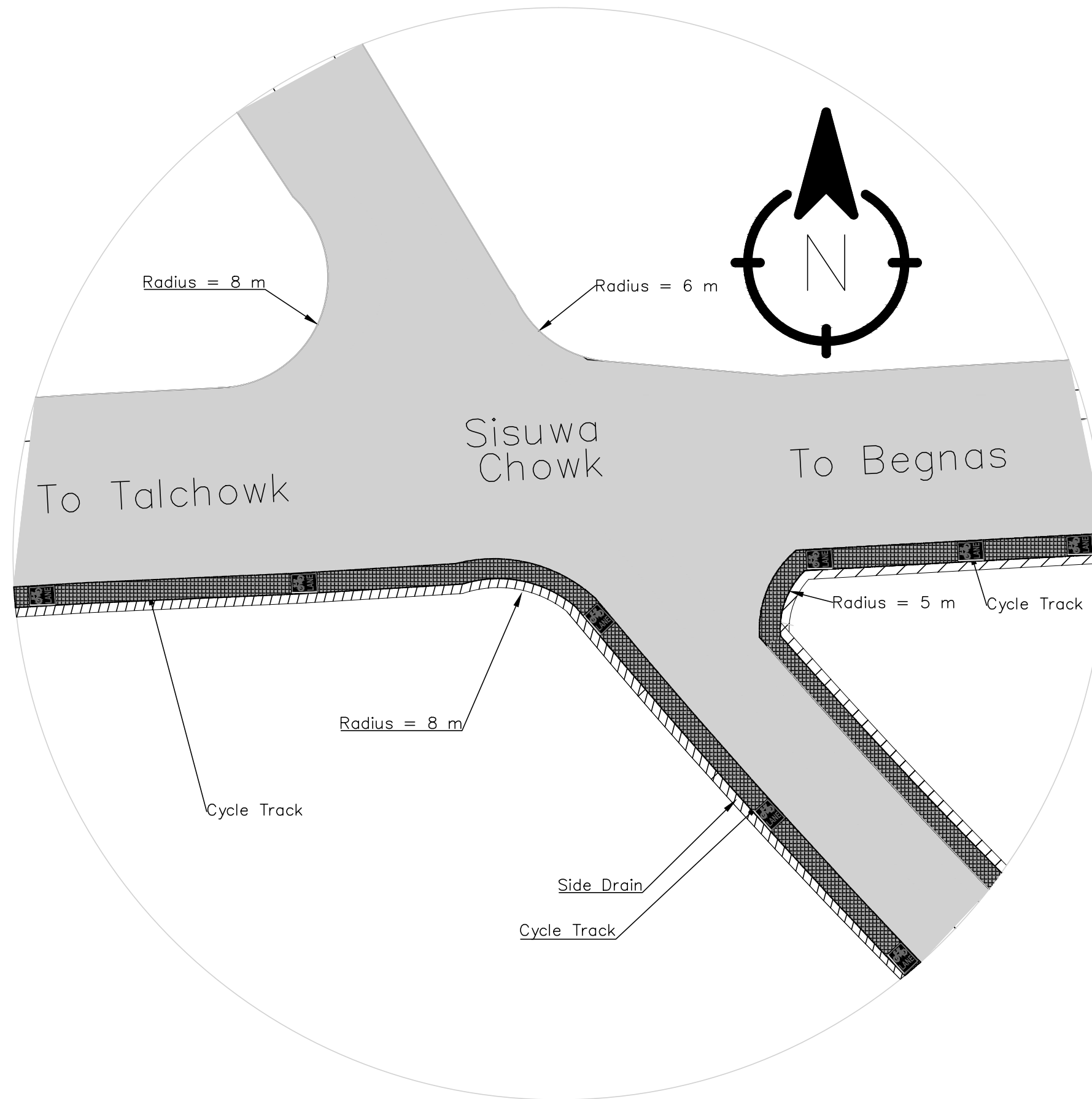
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Date: 2023

Scale:

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Sheet No: 6



Nepal Urban Governance and Infrastructure Project (NUGIP)
Office of the Municipal Executive
Pokhara Municipality
Kaski District, Gandaki Province



CONSULTANT:
Plush Engineers and Architects (P.) Ltd. (PEA)
B.N. Consultancy Pvt. Ltd. (BN)
Soil Test Consultancy (P.) Ltd. (Soil Test)
Kathmandu, Nepal

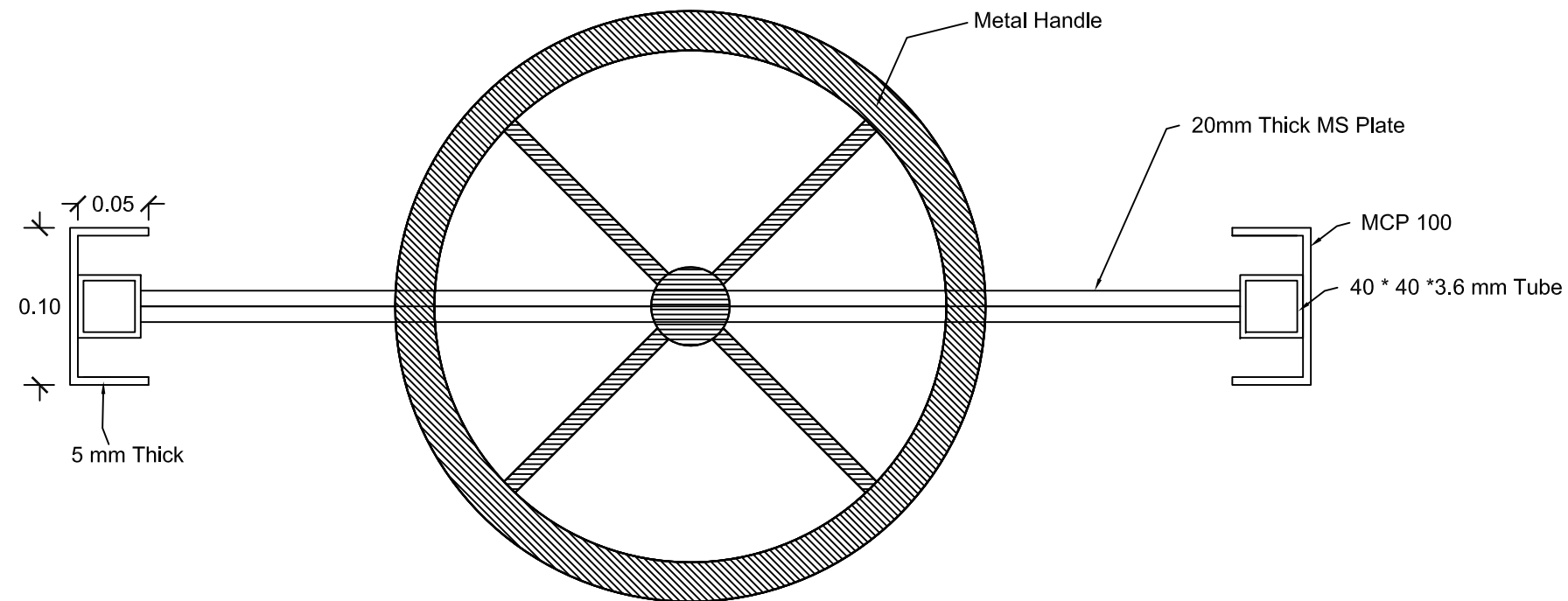


Project Name:- Nepal Urban Governance and Infrastructure Project (NUGIP)

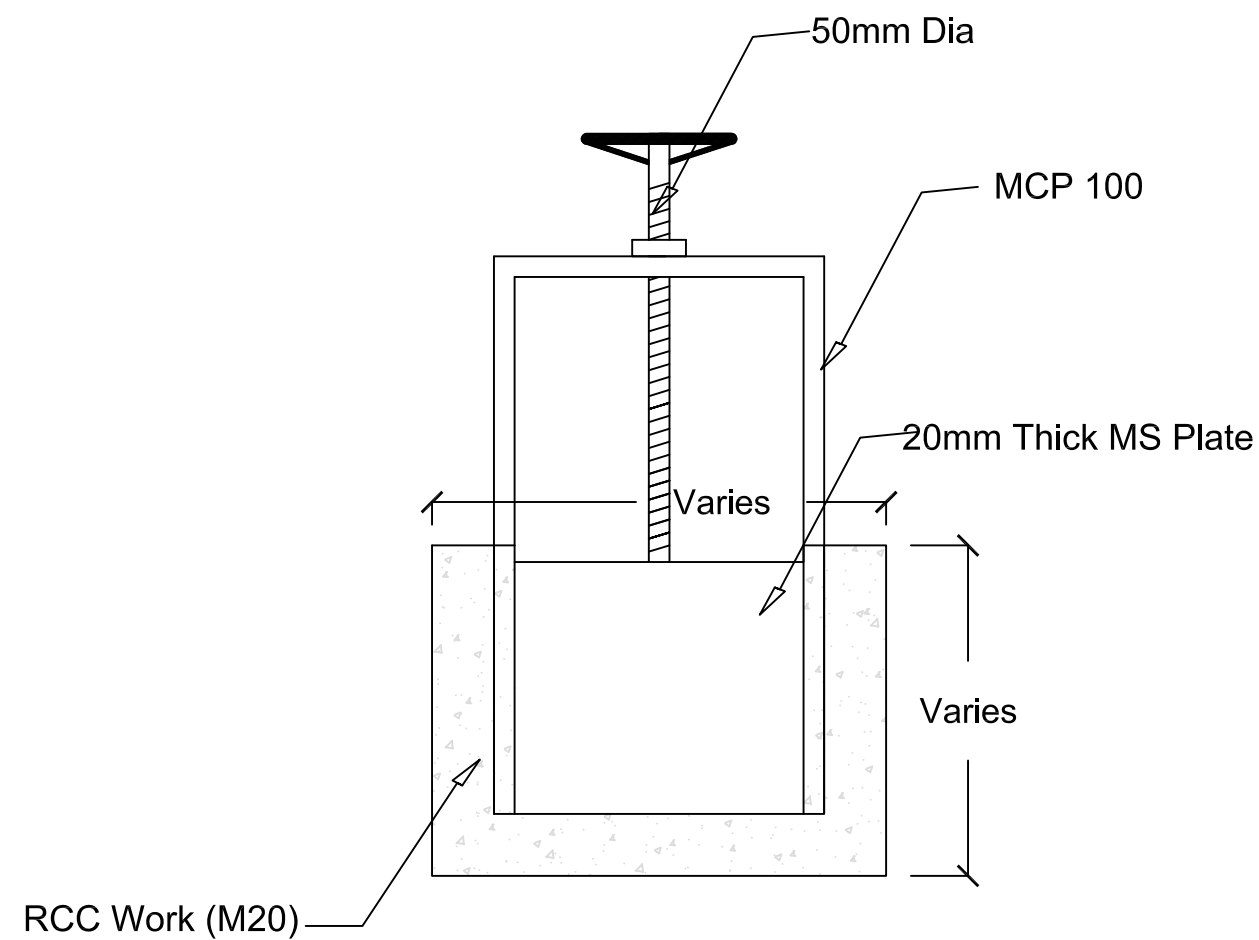
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Intersection

DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:

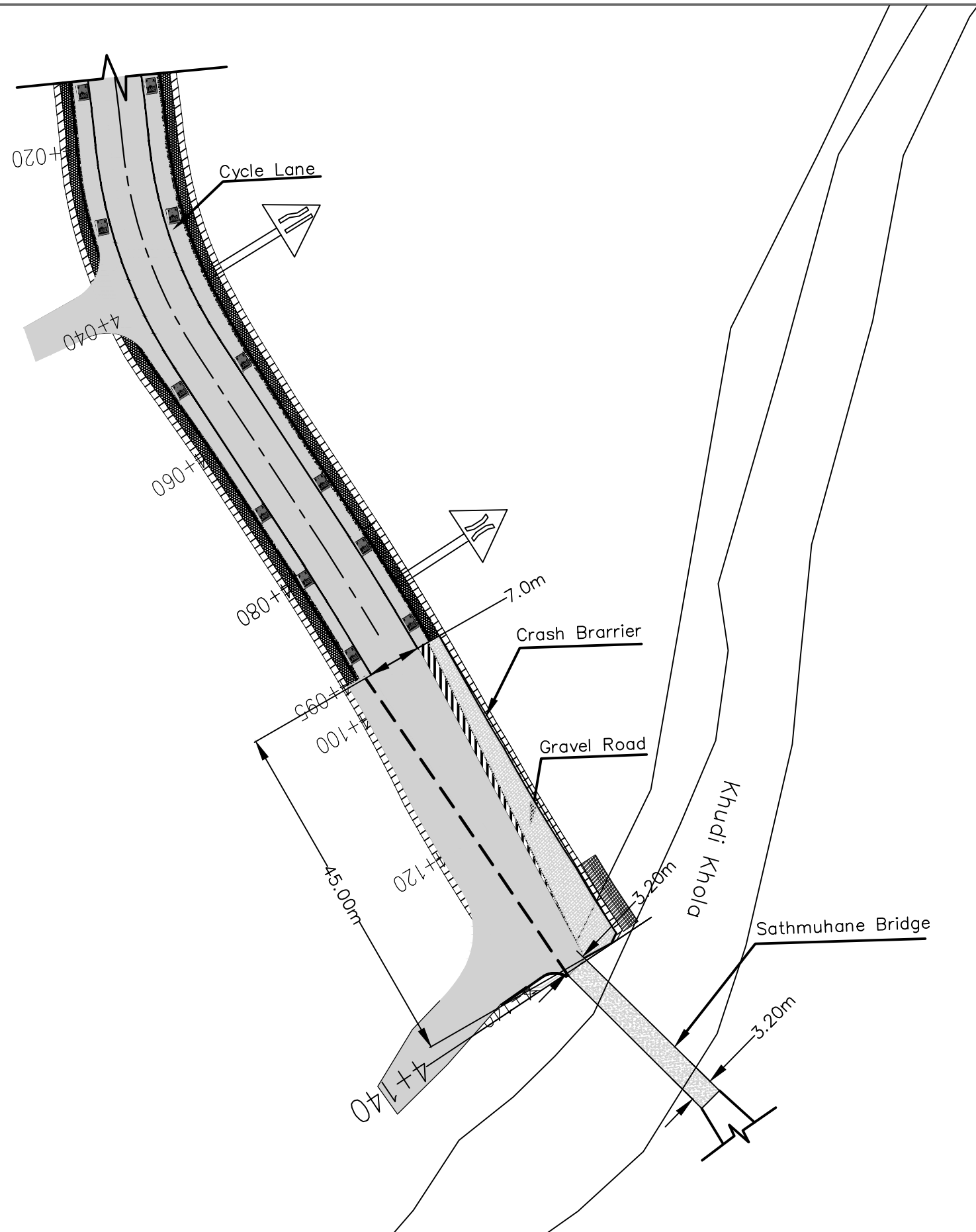
Date: 2023
Scale: not in scale
Chainage:
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Plan



Section



ROAD MARKING & TRAFFIC SIGN / SIGNAL



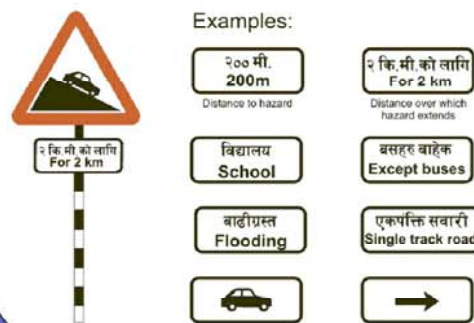
- Cycle Track
- Tick Drain
- Kerb Stone
- Footpath
- Side Drain

TRAFFIC SIGNS

REGULATORY SIGNS



SUPPLEMENTARY PLATES



WARNING SIGNS



DIRECTION SIGNS

Signs on national highways - green backgrounds



On approaches to junctions



On approaches to junctions - alternative style



At the junction

Route confirmation sign - after junctions

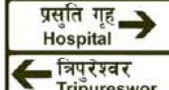


At the junction

Temporary diversion signs - yellow background



On approaches to junctions



On approaches to junctions

INFORMATION SIGNS

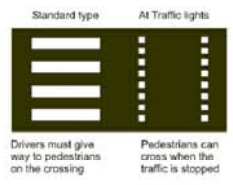


ROAD MARKINGS

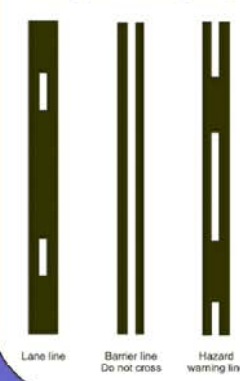
Across the carriageway



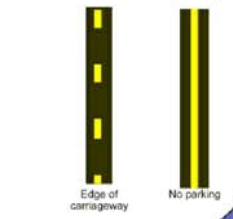
Pedestrian crossings



Along the carriageway

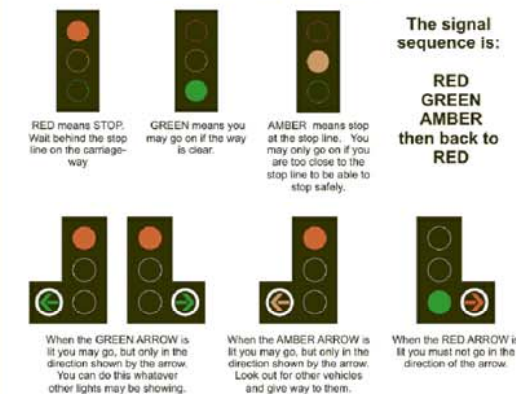


Along the edge of the carriageway

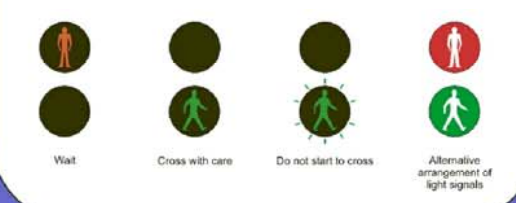


TRAFFIC LIGHT SIGNALS

For control of vehicles



For controlling pedestrian crossing movements



Traffic Engineering and Safety Unit, Department of Roads, 1997



Nepal Urban Governance and Infrastructure Project (NUGIP)
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Pokhara Metropolitan City
Kaski District, Gandaki Province

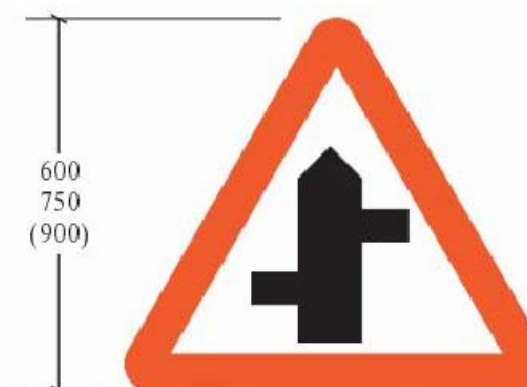
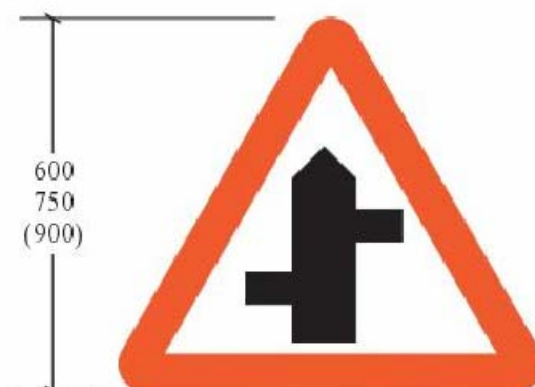
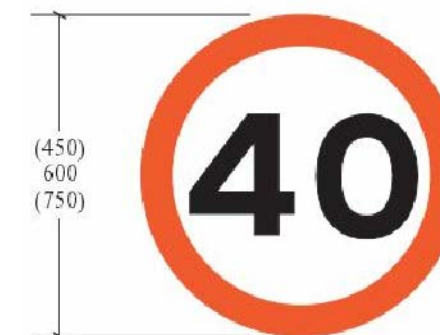
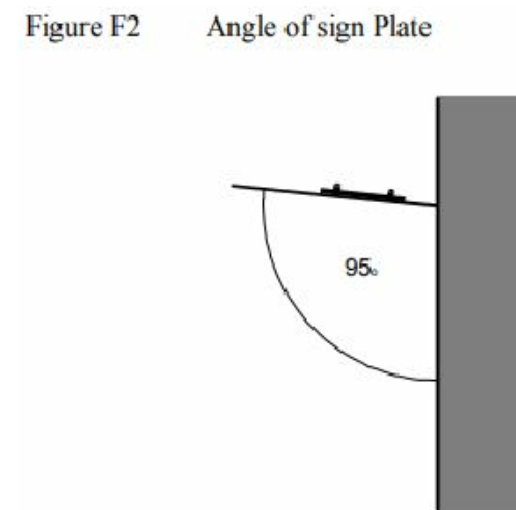
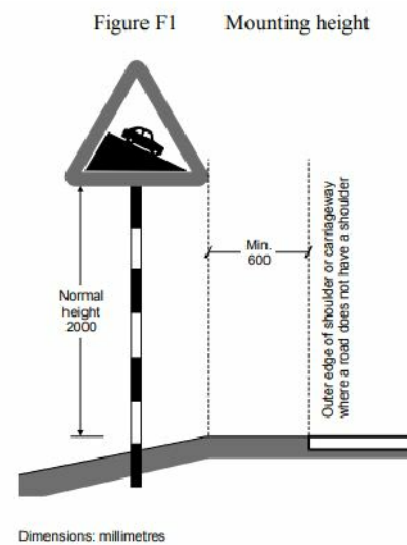
CONSULTANT:
Plush Engineers and Architects (P.) Ltd. (PEA)
B.N. Consultancy Pvt. Ltd. (BN)
Soil Test Consultancy (P.) Ltd. (Soil Test)
Kathmandu, Nepal

Project Name:-
Nepal Urban Governance and Infrastructure Project
(NUGIP)

SHEET TITLE:
Standard Drawing of Traffic Sign

DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:

Date: 2023
Scale:
Chainage:
Sheet No: 1



Nepal Urban Governance and Infrastructure Project (NUGIP)
Office of the Municipal Executive
Pokhara Metropolitan City
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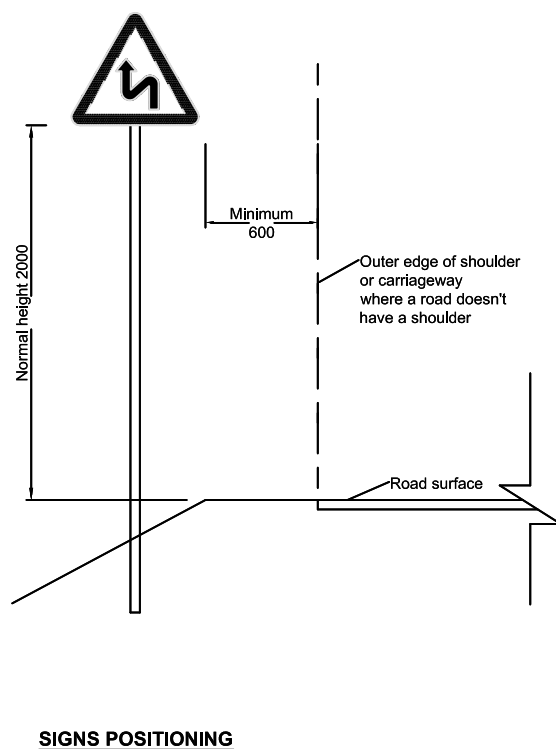
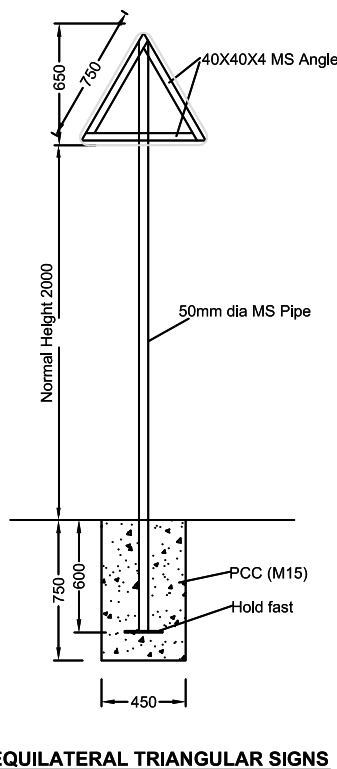
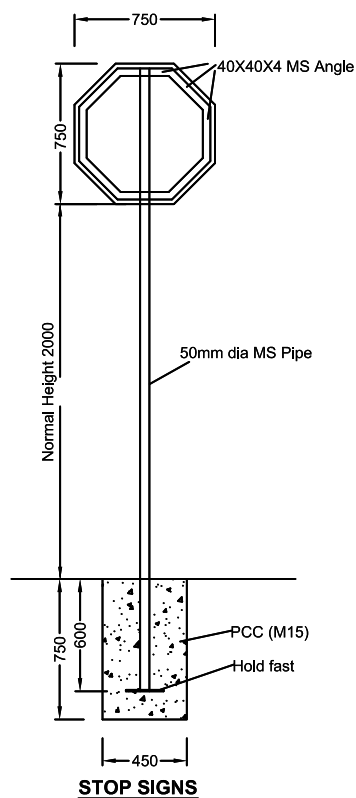
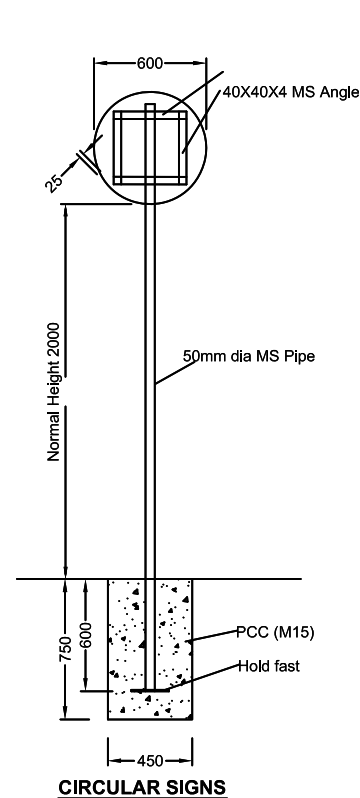
CONSULTANT:
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B.N. Consultancy Pvt. Ltd. (BN)
Soil Test Consultancy (P.) Ltd. (Soil Test)
Kathmandu, Nepal

Project Name:-
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(NUGIP)

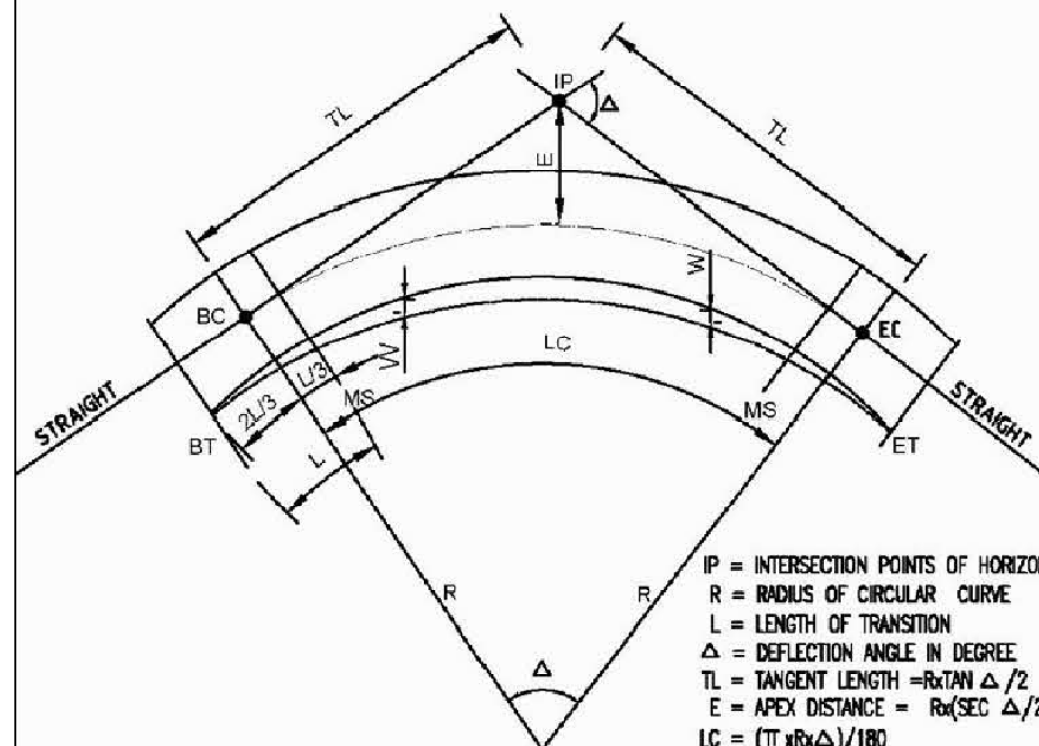
SHEET TITLE:
Standard Drawing of Traffic Sign

DESIGNED BY:
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APPROVED BY:

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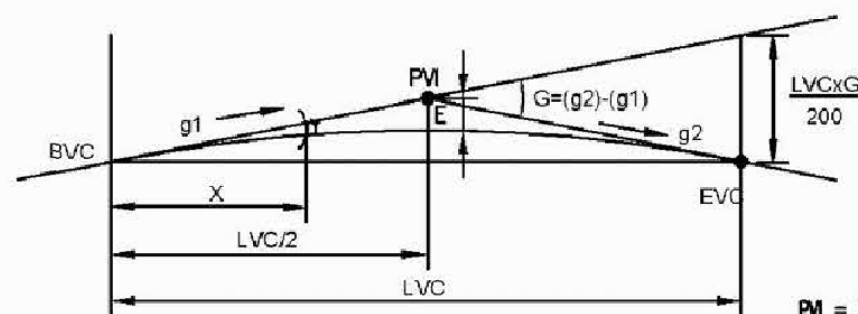


Note: For the dimensions of board signs and letter, please refer Traffic Signs Manual Vol 1 & 2



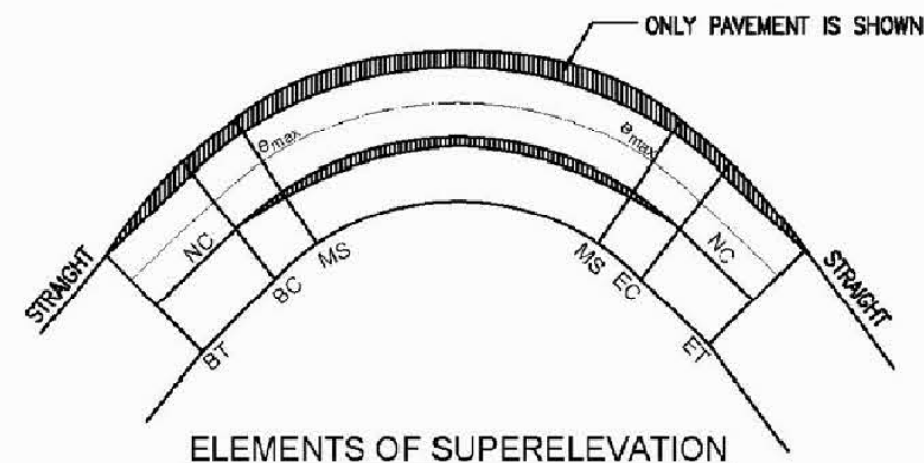
IP = INTERSECTION POINTS OF HORIZONTAL CURVES
 R = RADIUS OF CIRCULAR CURVE
 L = LENGTH OF TRANSITION
 Δ = DEFLECTION ANGLE IN DEGREE
 $TL = \text{TANGENT LENGTH} = R \tan \Delta / 2$
 $E = \text{APEX DISTANCE} = R (\sec \Delta / 2 - 1)$
 $LC = (\pi \times R \times \Delta) / 180$
 BT = BEGINNING OF TRANSITION (JUNCTION OF TRANSITION START)
 ET = END OF TRANSITION CURVE (JUNCTION OF TRANSITION END)
 e_{max} = LIMIT OF MAXIMUM SUPER ELEVATION
 BC&EC = BEGINNING AND END OF THE CURVE
 W = EXTRA WIDENING
 NC = NO CURVE SECTION
 MS = MAXIMUM SUPER ELEVATION

ELEMENTS OF HORIZONTAL CURVE

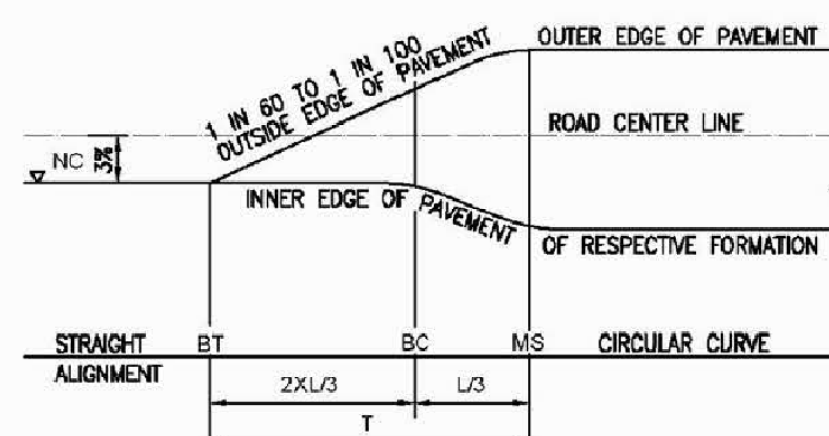


PVI = POINT OF VERTICAL INTERSECTIONS
 LVC = LENGTH OF VERTICAL CURVE
 BVC = BEGINNING OF VERTICAL CURVE
 EVC = END OF VERTICAL CURVE
 $g1 \& g2$ = GRADES IN %
 $G = (g2) - (g1)$
 $Y = Gx^2 / (200 \times LVC)$
 $E = G \times LVC / 800$

ELEMENTS OF VERTICAL CURVE



ELEMENTS OF SUPERELEVATION



ELEVATION OF SUPERELEVATION

CLACULATION OF SUPER ELEVATION
$T = (e2 - e1) / 100 \times \text{RATE OF CHANGE OF SUPER ELEVATION} \times RW / 2$
Where,
T = TRANSITION LENGTH IN METRE
e1 = PRECEDING SUPER ELEVATION IN %
e2 = FOLLOWING SUPERELEVATION IN %
RW = ROAD WIDTH IN METRE

SUPER ELEVATION (SE)
MIN. e = 3.0% = TO THE CAMBER SLOPE
MAX. e = 6.0%
RATE OF CHANGE OF SE = 1 IN 60 TO 1 IN 100



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 B.N. Consultancy Pvt. Ltd. (BN)
 Soil Test Consultancy (P.) Ltd. (Soil Test)
 Kathmandu, Nepal

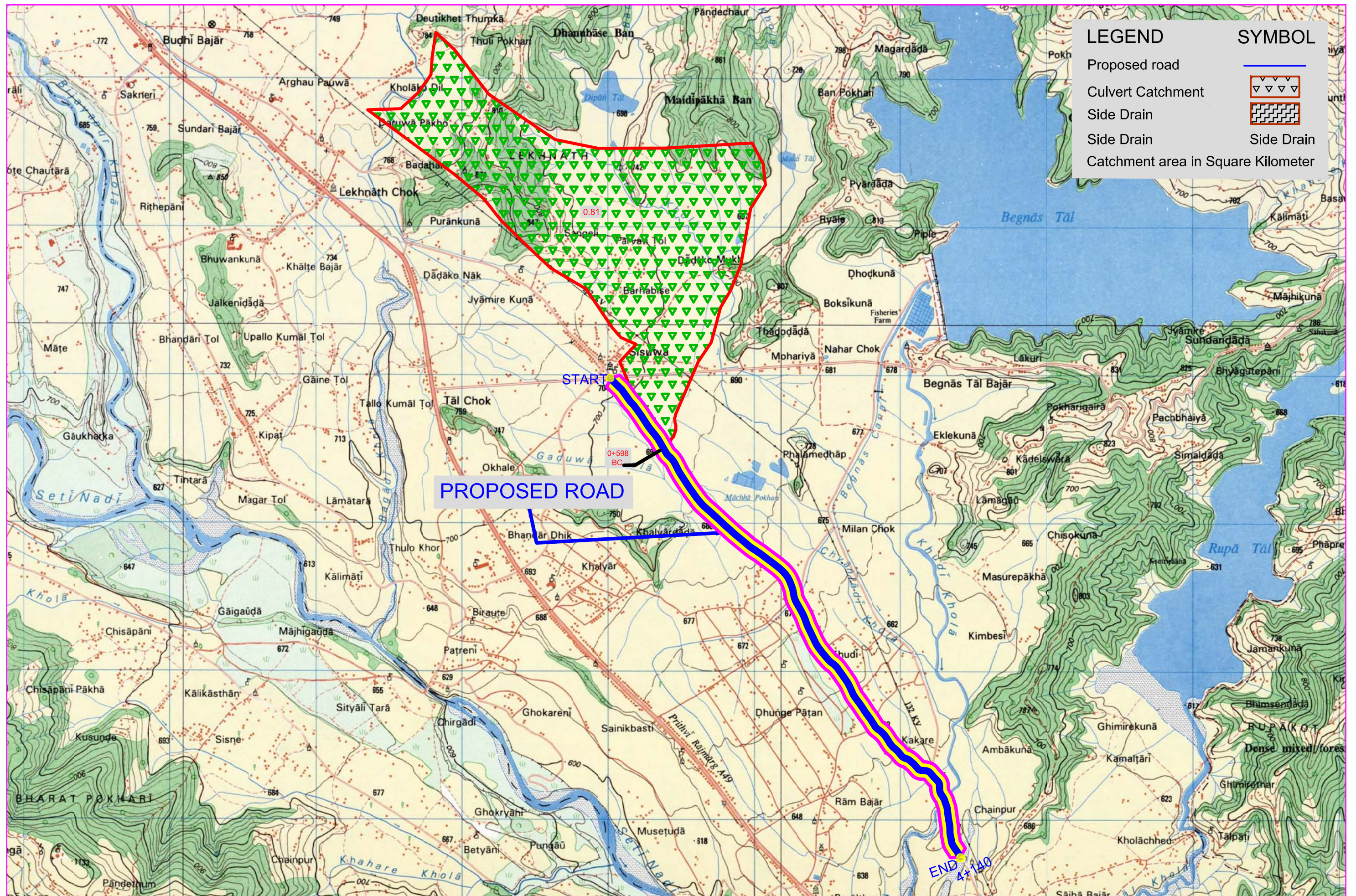
Project Name:-
 Nepal Urban Governance and Infrastructure Project
 (NUGIP)

SHEET TITLE:
 Standard Drawing of Traffic Sign

DESIGNED BY:
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 CHECKED BY:
 APPROVED BY:

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 Chainage:
 Sheet No: 5

CATCHMENT AREA MAP



LEGEND

Proposed road

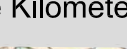
Culvert Catchment

Side Drain

Side Drain

Catchment area in Square Kilometer

SYMBOL



DESCRIPTION CARD

ROAD PROJECT

DESCRIPTION CARD

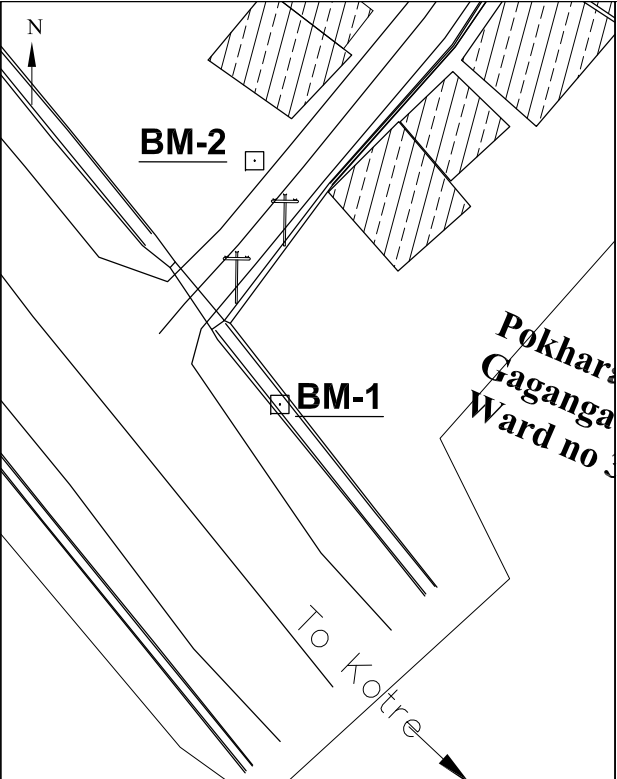
Bench Mark No. : BM-1
Place Name: Gagangauda Chowk
Municipality/Rural Municipality Name: Pokhara Metropolitan City- 30
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-1		213890.419	3114852.343	636.193	Slab

Reference Point

R1 =	2.80m Slab	R2 =	3.80m Tap	R3 =	3.80m Slab
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Schematic Diagram



Photo



ROAD PROJECT

DESCRIPTION CARD

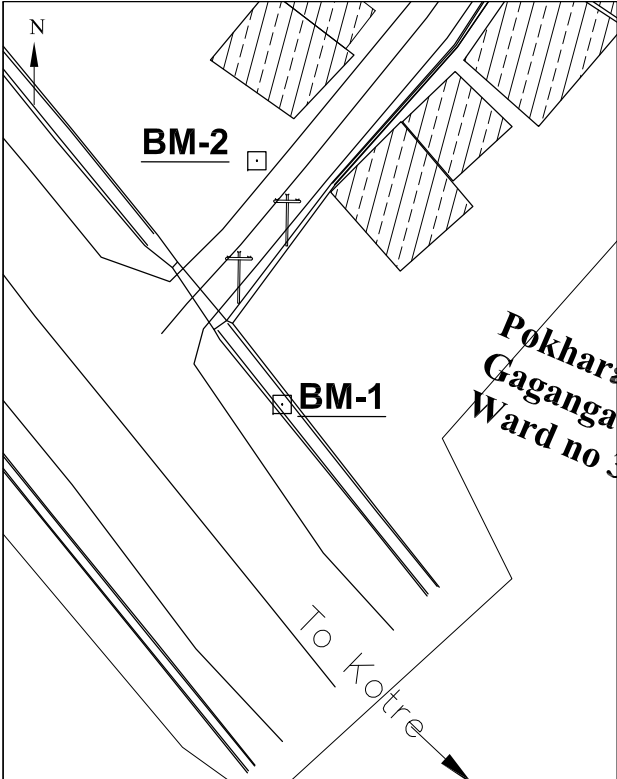
Bench Mark No. : BM-2
Place Name:Gagangauda Chowk
Metropolitan Name: Pokhara Metropolitan City- 30
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-2		213888.450	3114871.303	636.448	Slab

Reference Point

R1 =	2.80m Slab	R2 =	6.90m Slab	R3 =	6.0m EP
------	------------	------	------------	------	---------

Schematic Diagram



Photo



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Kaski District, Gandaki Province

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Soil Test Consultancy (P.) Ltd. (Soll Test)
Kathmandu, Nepal



Project Name:- Nepal Urban Governance and Infrastructure Project (NUGIP)

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ROAD PROJECT

DESCRIPTION CARD

Bench Mark No. : BM-3

Place Name:Khudi Khola

Metropolitan Name: Pokhara Metropolitan City- 30

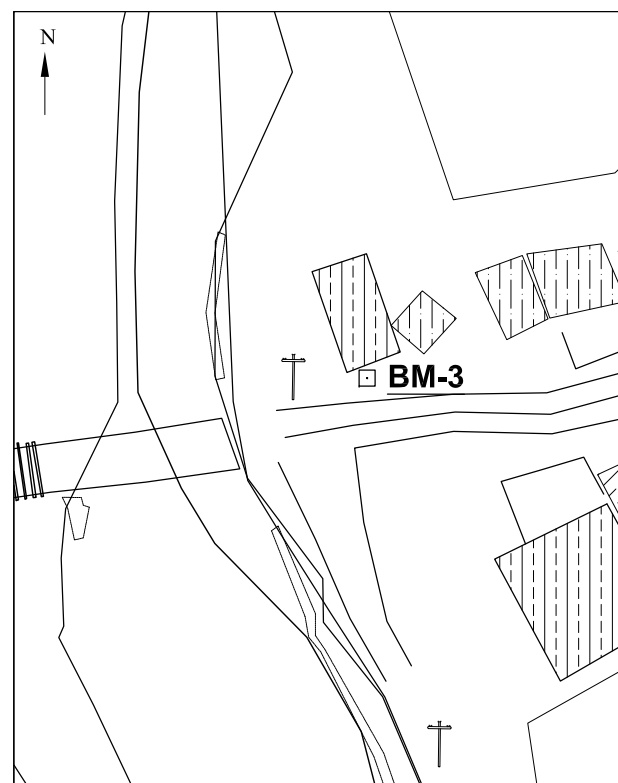
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-3		214236.248	3115069.057	616.234	Slab

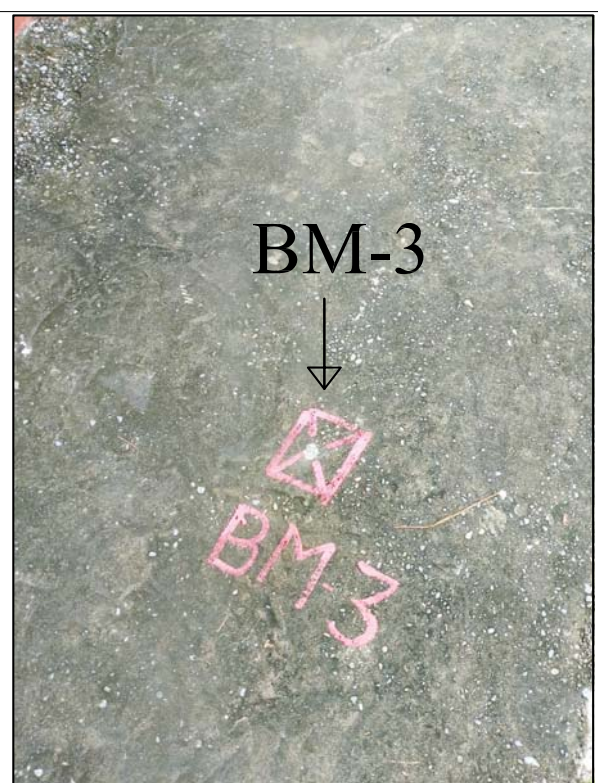
Reference Point

R1 =	1.20m Slab	R2 =	1.70m Slab	R3 =	2.70m Boulder
------	------------	------	------------	------	---------------

Schematic Diagram



Photo



General Information

This point is established at Khudi Khola. The point is marked on the left side of the road on the slab near the electric pole.

ROAD PROJECT

DESCRIPTION CARD

Bench Mark No. : BM-4

Place Name:Khudi Khola

Metropolitan Name: Pokhara Metropolitan City- 30

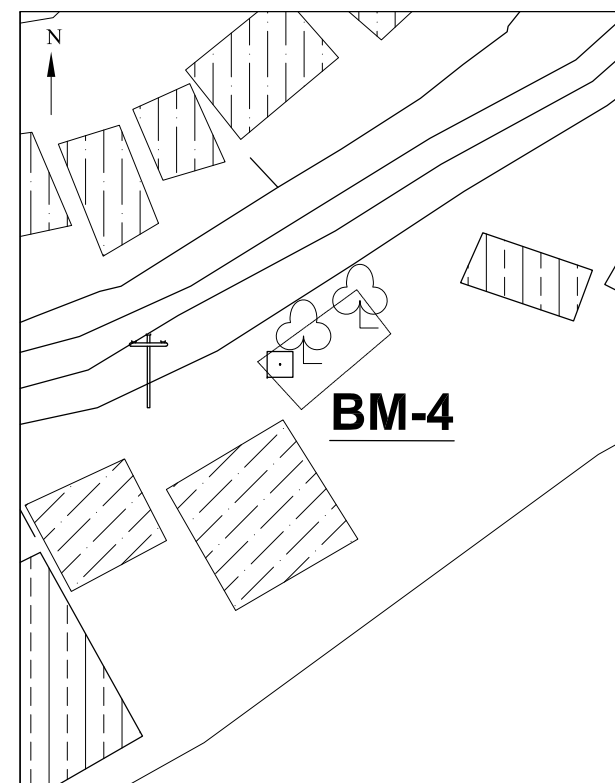
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-4		214270.679	3115068.224	619.414	Slab

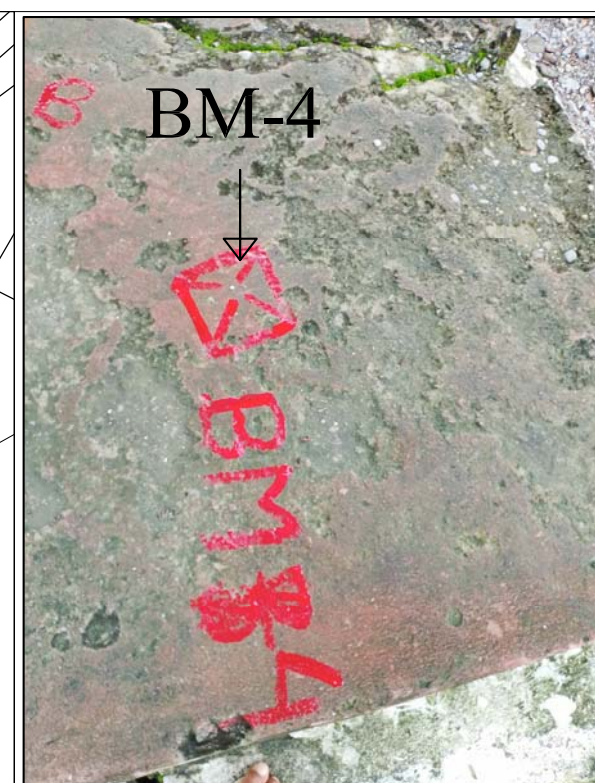
Reference Point

R1 =	1.30m Tree	R2 =	2.10m Slab	R3 =	10.40m Boulder
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Schematic Diagram



Photo



General Information

This point is established at Khudi Khola. The point is marked on the right side of the road near Chutaro.



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B.N. Consultancy Pvt. Ltd. (BN)
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Kathmandu, Nepal

Project Name:- Nepal Urban Governance and Infrastructure Project (NUGIP)

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ROAD PROJECT

DESCRIPTION CARD

Bench Mark No. : BM-5

Place Name: Saatmane Khola

Metropolitan Name: Pokhara Metropolitan City- 30

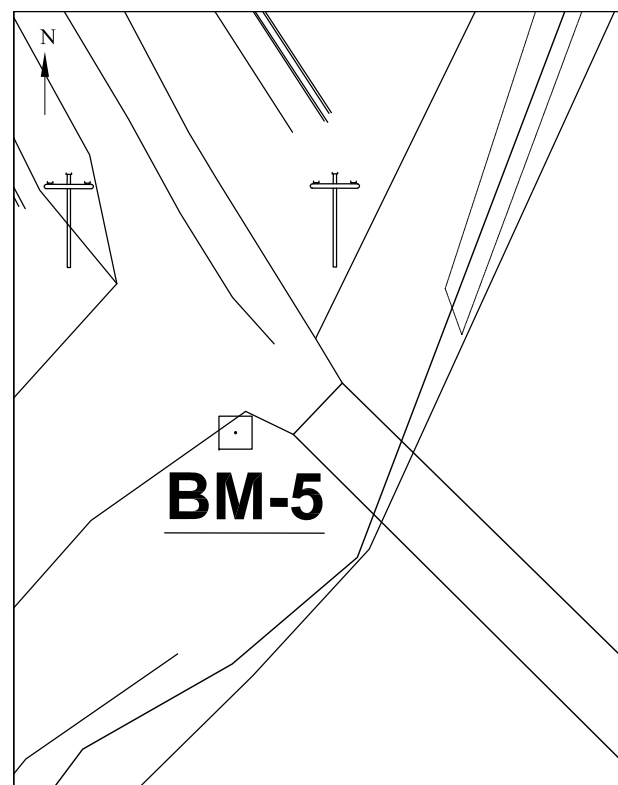
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-5		214530.114	3115506.440	634.612	Slab

Reference Point

R1 =	1.50m Bridge	R2 =	8.40m Slab	R3 =	3.50m Slab
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Schematic Diagram



Photo



General Information

This point is established at Saatmane Khola near the bridge. The point is marked on the left side of the road on the top of slab

ROAD PROJECT

DESCRIPTION CARD

Bench Mark No. : BM-6

Place Name: Saatmane Khola

Metropolitan Name: Pokhara Metropolitan City- 30

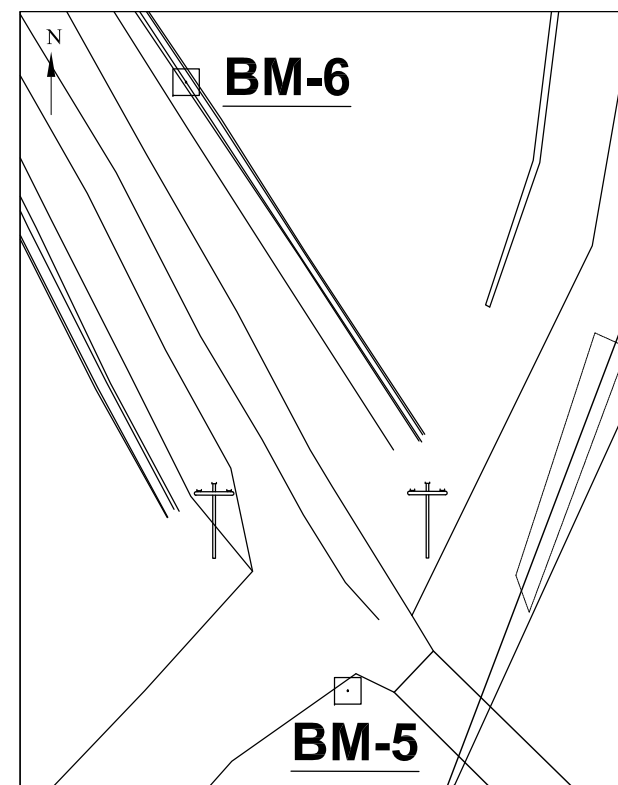
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-6		214521.481	3115538.932	635.290	Slab

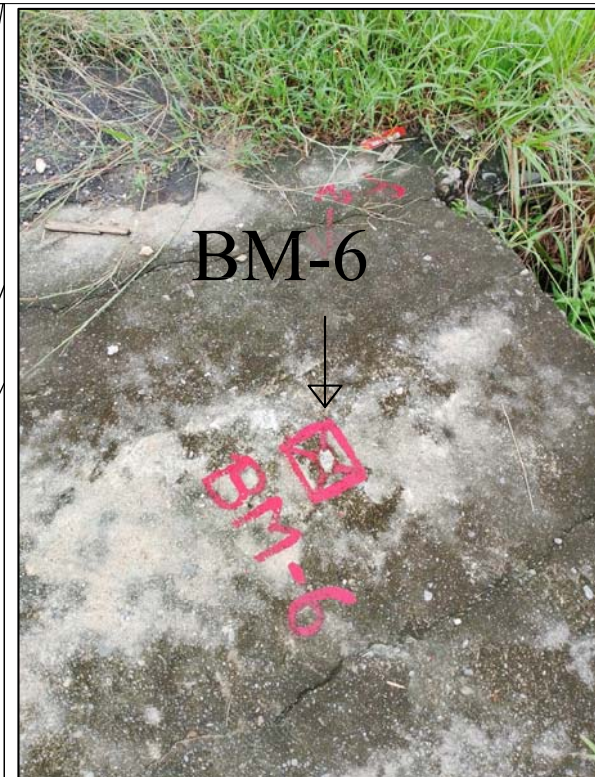
Reference Point

R1 =	2.70m Slab	R2 =	7.30m Slab	R3 =	5.0m EP
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Schematic Diagram



Photo



General Information

This point is established at Saatmane Khola. The point is marked on the right side of the road on the top of slab



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B.N. Consultancy Pvt. Ltd. (BN)
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Kathmandu, Nepal

Project Name:- Nepal Urban Governance and Infrastructure Project (NUGIP)

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ROAD PROJECT

DESCRIPTION CARD

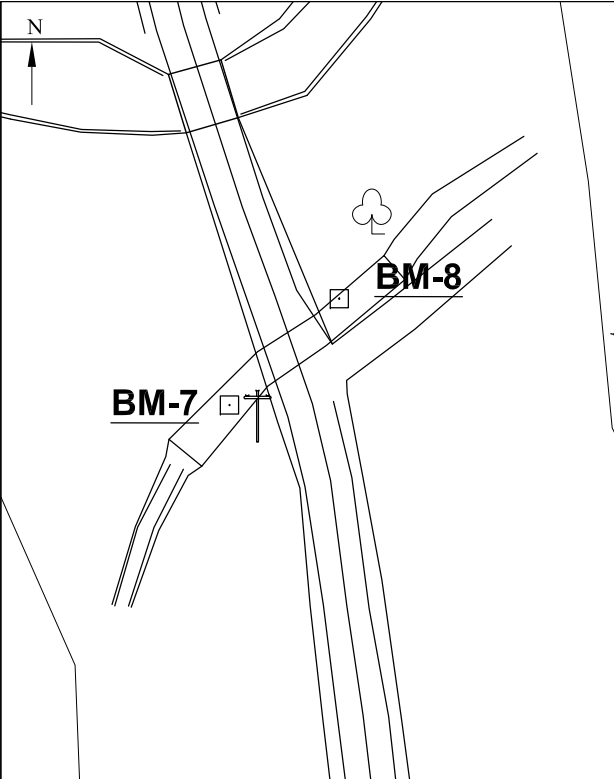
Bench Mark No. : BM-7
Place Name: Pandey Chowk
Metropolitan Name: Pokhara Metropolitan City- 30
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-7		214441.025	3115851.357	645.546	Slab

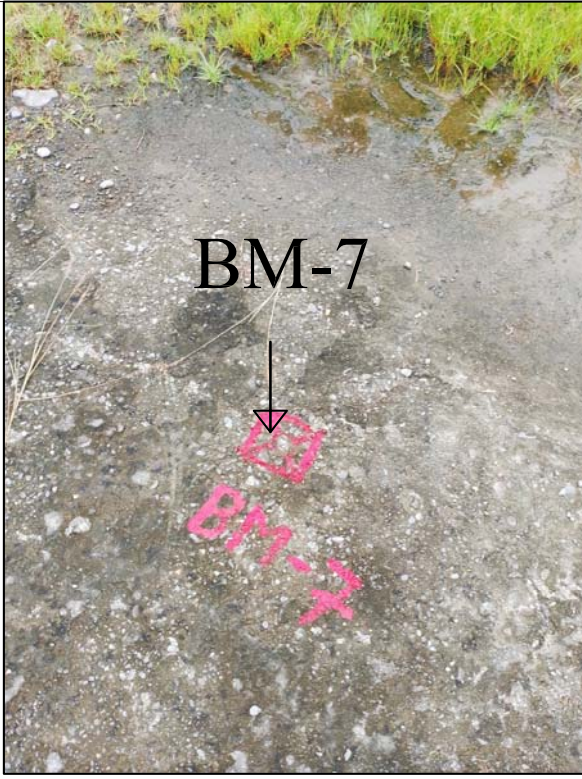
Reference Point

R1 =	5.0m Slab	R2 =	3.50m EP	R3 =	3.60m Slab
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Schematic Diagram



Photo



General Information

This point is established at Pandey Chowk. The point is marked on the left side of the road way to Saatmane on the top of slab

ROAD PROJECT

DESCRIPTION CARD

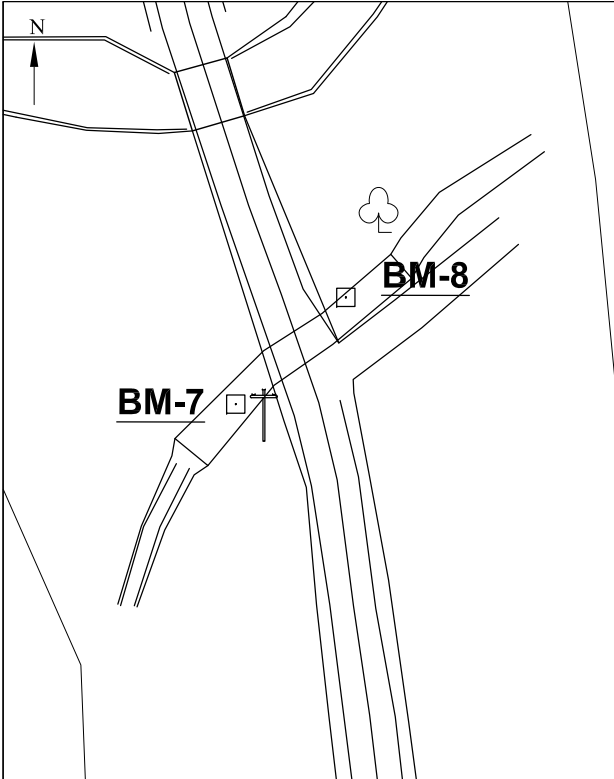
Bench Mark No. : BM-8
Place Name: Pandey Chowk
Metropolitan Name: Pokhara Metropolitan City- 30
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-8		214449.577	3115859.638	645.667	Slab

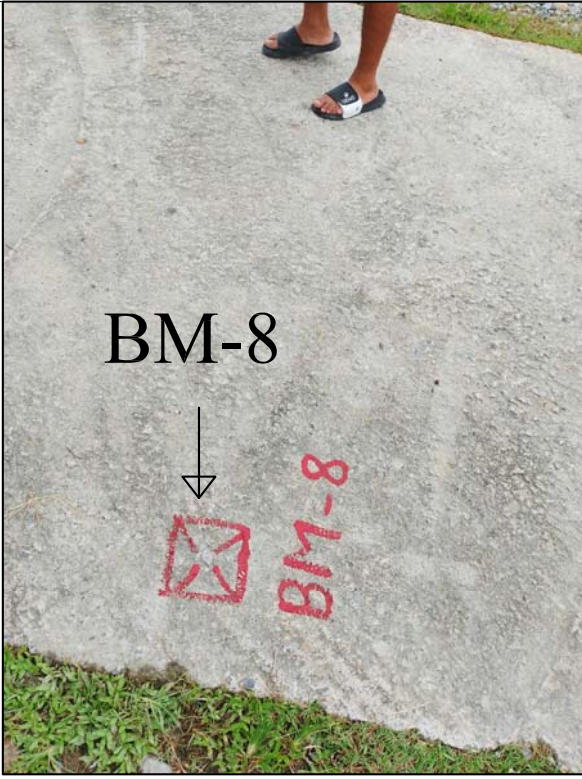
Reference Point

R1 =	4.50m Boulder	R2 =	5.0m Slab	R3 =	8.40m Slab
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Schematic Diagram



Photo



General Information

This point is established at Pandey Chowk. The point is marked on the right side of the road way to Lekhnath on the top of slab



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B.N. Consultancy Pvt. Ltd. (BN)
Soil Test Consultancy (P.) Ltd. (Soll Test)
Kathmandu, Nepal



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Scale: Not In Scale

Chainage:

Sheet No: 4

ROAD PROJECT

DESCRIPTION CARD

Bench Mark No. : BM-9

Place Name:Taka Chowk

Metropolitan Name: Pokhara Metropolitan City- 30

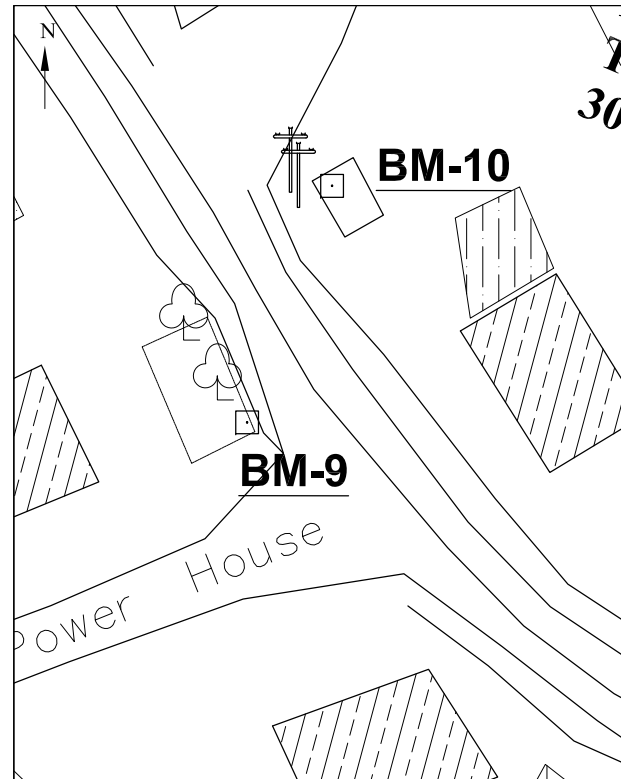
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-9		213968.341	3116400.325	655.586	Slab

Reference Point

R1 =	1.0m Pole	R2 =	1.40m Pole	R3 =	4.30m Pole
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Schematic Diagram



Photo

General Information

This point is established at Taka Chowk. The point is marked on the South East corner of Chautaro way to Chadal Chowk.

ROAD PROJECT

DESCRIPTION CARD

Bench Mark No. : BM-10

Place Name:Taka Chowk

Metropolitan Name: Pokhara Metropolitan City- 30

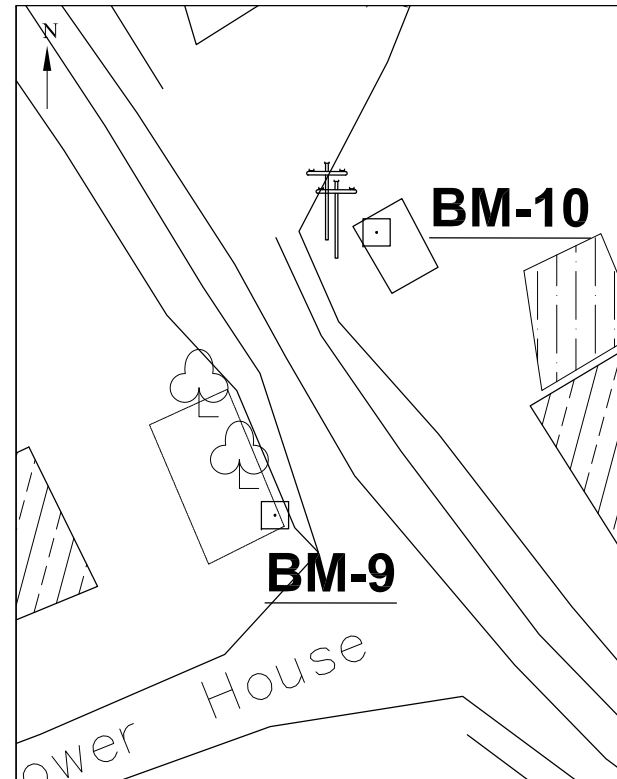
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-10		213973.627	3116415.031	655.039	Slab

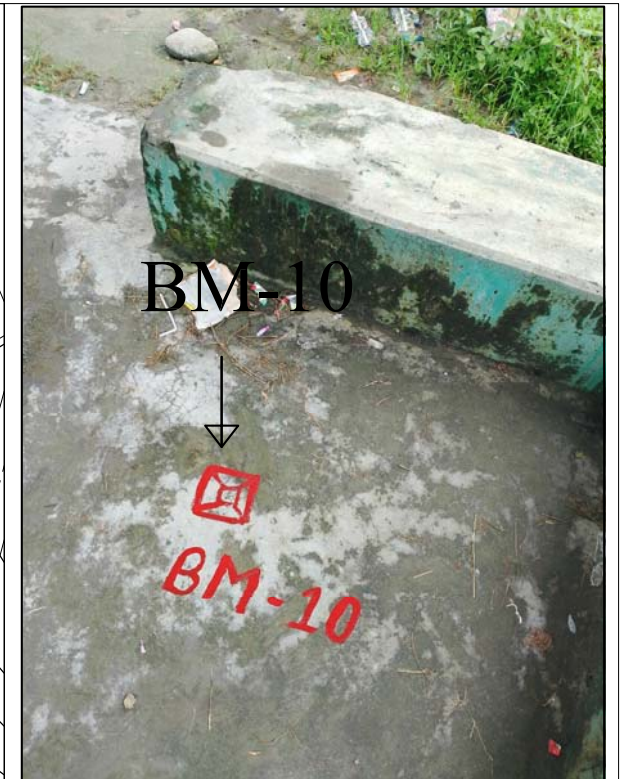
Reference Point

R1 =	1.40m Pati	R2 =	3.10m Pole	R3 =	1.80m Pole
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Schematic Diagram



Photo

General Information

This point is established at Taka Chowk. The point is marked on the North East corner Pratikshyalaya way to Administrative Office



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B.N. Consultancy Pvt. Ltd. (BN)
Soil Test Consultancy (P.) Ltd. (Soll Test)
Kathmandu, Nepal



Project Name:- Nepal Urban Governance and Infrastructure Project (NUGIP)

SHEET TITLE:

DESCRIPTION CARD OF
LEKHNATH

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ROAD PROJECT

DESCRIPTION CARD

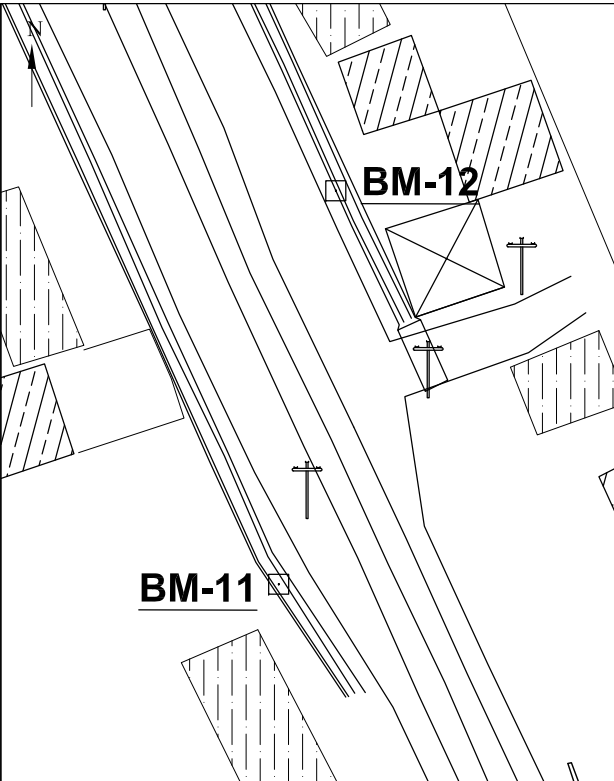
Bench Mark No. : BM-11
Place Name:Khudi Bazar
Metropolitan Name: Pokhara Metropolitan City- 30
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-11		213561.308	3116999.368	668.970	Slab

Reference Point

R1 =	2.10m Wall	R2 =	5.0m EP	R3 =	1.10m Slab
------	------------	------	---------	------	------------

Schematic Diagram



Photo



General Information

This point is established at Khudi Bazar. The point is marked on left side of the road on top of slab

ROAD PROJECT

DESCRIPTION CARD

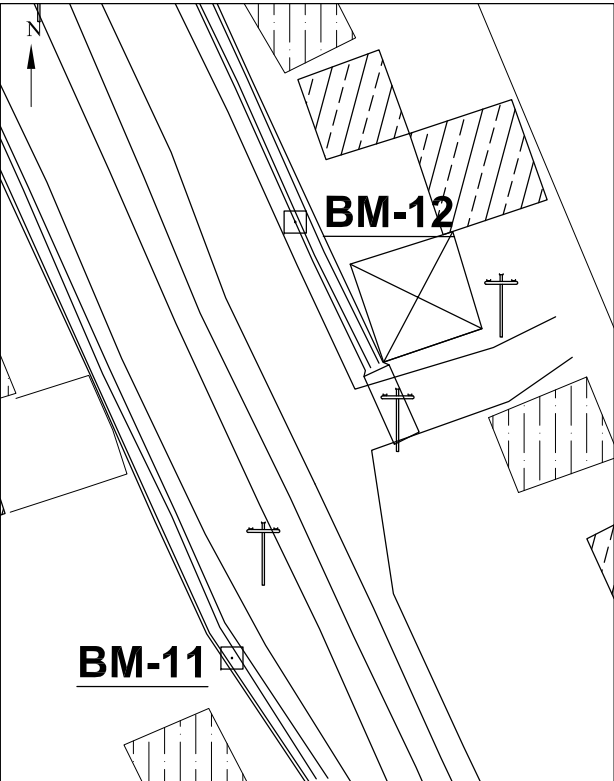
Bench Mark No. : BM-12
Place Name:Khudi Bazar
Metropolitan Name: Pokhara Metropolitan City- 30
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-12		213565.357	3117027.246	669.305	Slab

Reference Point

R1 =	2.60m Pole	R2 =	1.70m Wall	R3 =	3.70m Boulder
------	------------	------	------------	------	---------------

Schematic Diagram



Photo



General Information

This point is established at Khudi Bazar. The point is marked on right side of the road on top of slab.



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Office of the Municipal Executive
Pokhara Metropolitan City
Kaski District, Gandaki Province

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B.N. Consultancy Pvt. Ltd. (BN)
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Kathmandu, Nepal



Project Name:- Nepal Urban Governance and Infrastructure Project (NUGIP)

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DESCRIPTION CARD OF LEKHNATH

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ROAD PROJECT

DESCRIPTION CARD

Bench Mark No. : BM-13

Place Name:Shantinagar Tole

Metropolitan Name: Pokhara Metropolitan City- 30

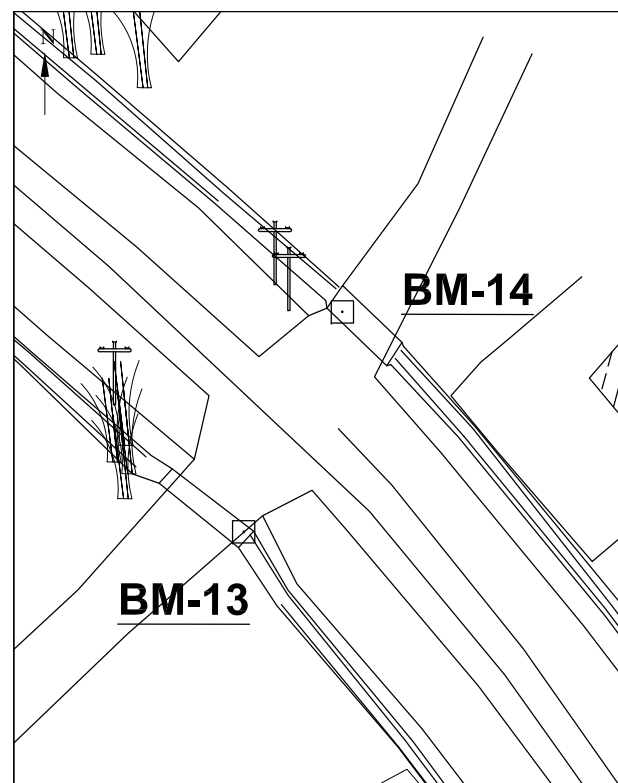
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-13		213363.837	3117461.100	676.300	Slab

Reference Point

R1 =	6.0m Pole	R2 =	3.3m Pole	R3 =	11.40m EP
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Schematic Diagram



Photo



General Information

This point is established at Shantinagar Tole. The point is marked on left side of road way to Dipsika Urja on the top of slab.

ROAD PROJECT

DESCRIPTION CARD

Bench Mark No. : BM-14

Place Name:Shantinagar Tole

Metropolitan Name: Pokhara Metropolitan City- 30

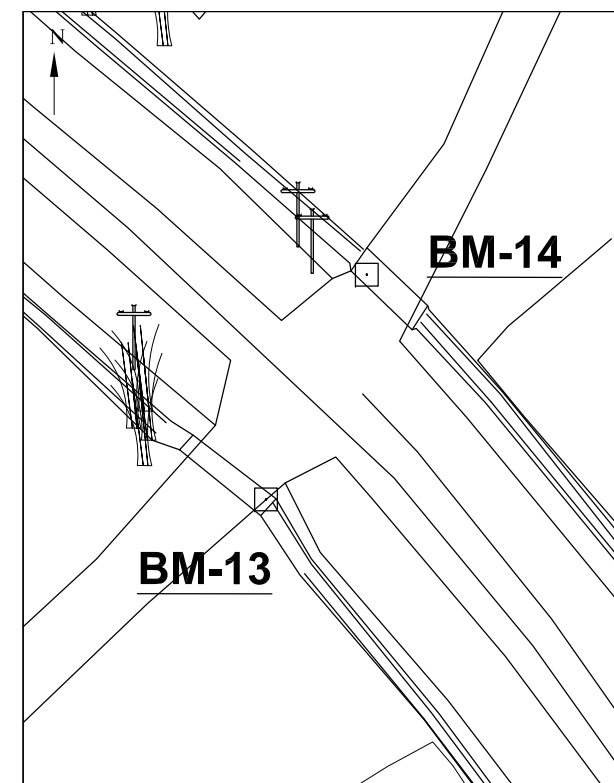
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-14		213370.111	3117475.089	676.591	Slab

Reference Point

R1 =	5.20m Pole	R2 =	4.0m Pole	R3 =	3.5m EP
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Schematic Diagram



Photo



General Information

This point is established at Shantinagar Tole. The point is marked on right side of road way to Suyog Salon on top of slab



Nepal Urban Governance and Infrastructure Project (NUGIP)
Office of the Municipal Executive
Pokhara Metropolitan City
Kaski District, Gandaki Province

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B.N. Consultancy Pvt. Ltd. (BN)
Soil Test Consultancy (P.) Ltd. (Soll Test)
Kathmandu, Nepal

Project Name:- Nepal Urban Governance and Infrastructure Project (NUGIP)

SHEET TITLE:
DESCRIPTION CARD OF
LEKHNATH

DESIGNED BY:	Date: 2023
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APPROVED BY:	Sheet No: 7

ROAD PROJECT

DESCRIPTION CARD

Bench Mark No. : BM-15

Place Name:Shantinagar Tole

Metropolitan Name: Pokhara Metropolitan City- 30

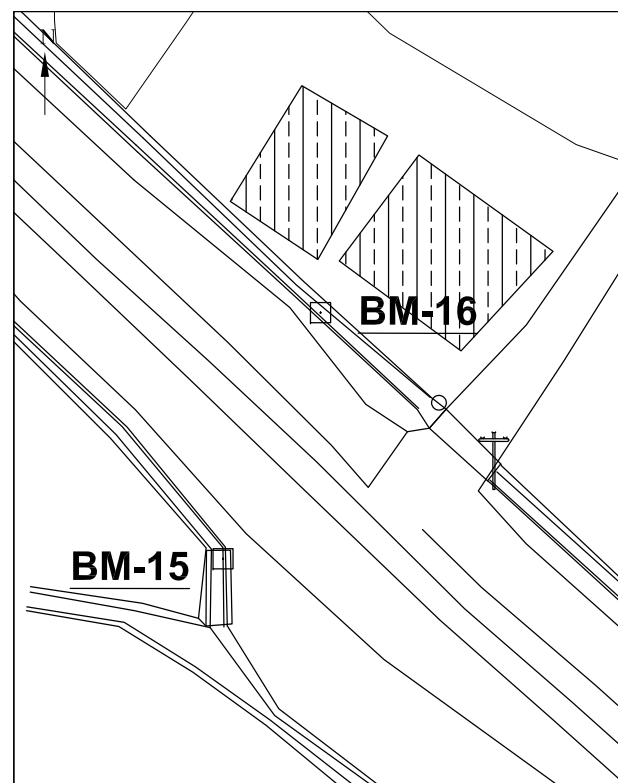
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-15		212988.374	3117766.289	683.674	Slab

Reference Point

R1 =	4.60m Slab	R2 =	3.0m Tree	R3 =	7.50m EP
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Schematic Diagram



Photo



General Information

This point is established at near the Water Tank. The point is marked on left side of road way to Lekhnath on the top of slab.

ROAD PROJECT

DESCRIPTION CARD

Bench Mark No. : BM-16

Place Name:Shantinagar Tole

Metropolitan Name: Pokhara Metropolitan City- 30

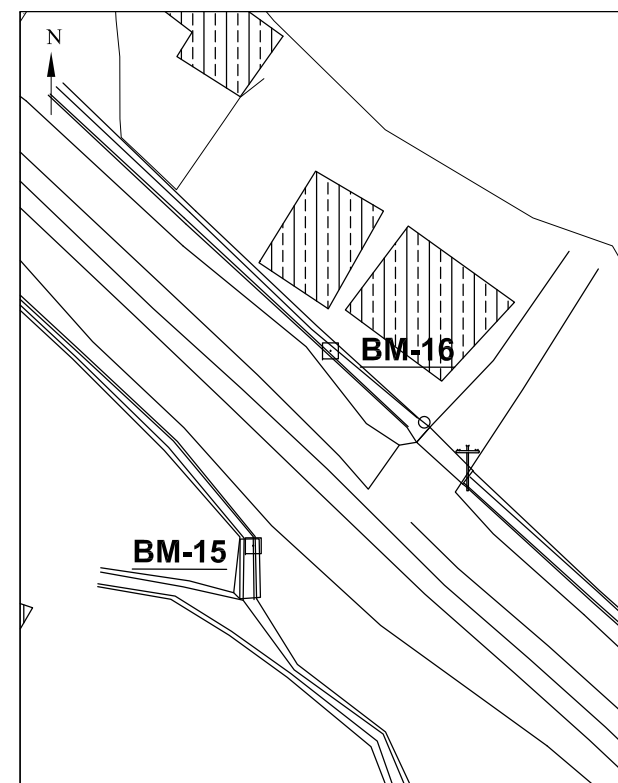
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-16		212995.224	3117783.581	683.452	Slab

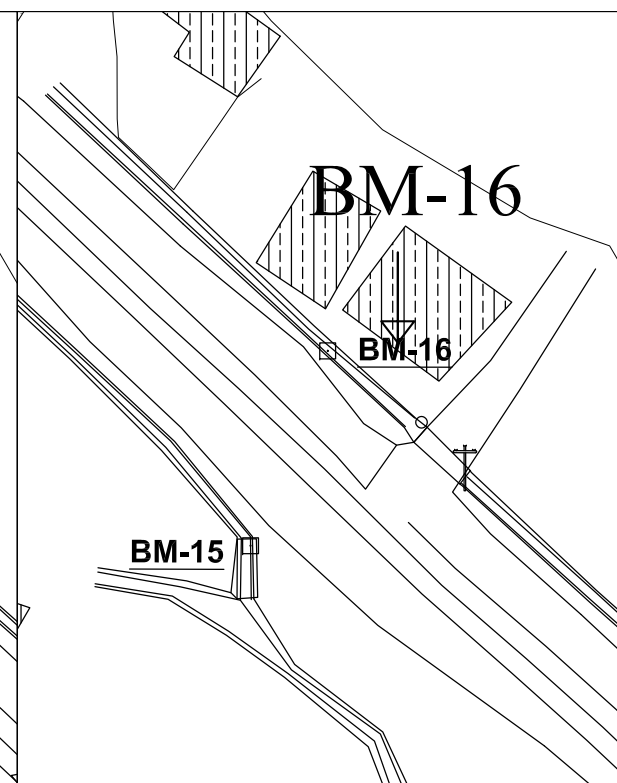
Reference Point

R1 =	2.0m Pole	R2 =	3.10m Pole	R3 =	11.30m EP
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Schematic Diagram



Photo



General Information

This point is established at near the Water Tank. The point is marked on right side of road way to Lekhnath on the top of slab.



Nepal Urban Governance and Infrastructure Project (NUGIP)
Office of the Municipal Executive
Pokhara Metropolitan City
Kaski District, Gandaki Province

CONSULTANT:
Plush Engineers and Architects (P.) Ltd. (PEA)
B.N. Consultancy Pvt. Ltd. (BN)
Soil Test Consultancy (P.) Ltd. (Soll Test)
Kathmandu, Nepal



Project Name:- Nepal Urban Governance and Infrastructure Project (NUGIP)

SHEET TITLE:
DESCRIPTION CARD OF
LEKHNATH

DESIGNED BY:	Date: 2023
DRAWN BY:	Scale: Not In Scale
CHECKED BY:	Chainage:
APPROVED BY:	Sheet No: 8

ROAD PROJECT

DESCRIPTION CARD

Bench Mark No. : BM-17

Place Name:Sisuwa Guwaz

Metropolitan Name: Pokhara Metropolitan City- 30

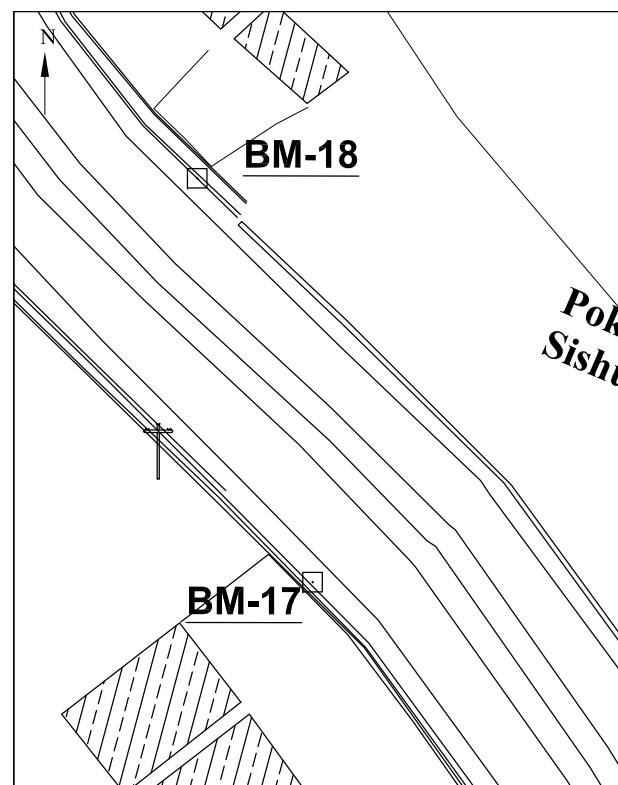
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-17		212615.811	3118245.667	691.309	Slab

Reference Point

R1 =	2.40m Wall	R2 =	3.80m Wall	R3 =	15.60m Slab
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Schematic Diagram



Photo

General Information

This point is established at Sisuwa Guwaz. The point is marked on left side of road way to Lekhnath on the top of slab

ROAD PROJECT

DESCRIPTION CARD

Bench Mark No. : BM-18

Place Name:Sisuwa Guwaz

Metropolitan Name: Pokhara Metropolitan City- 30

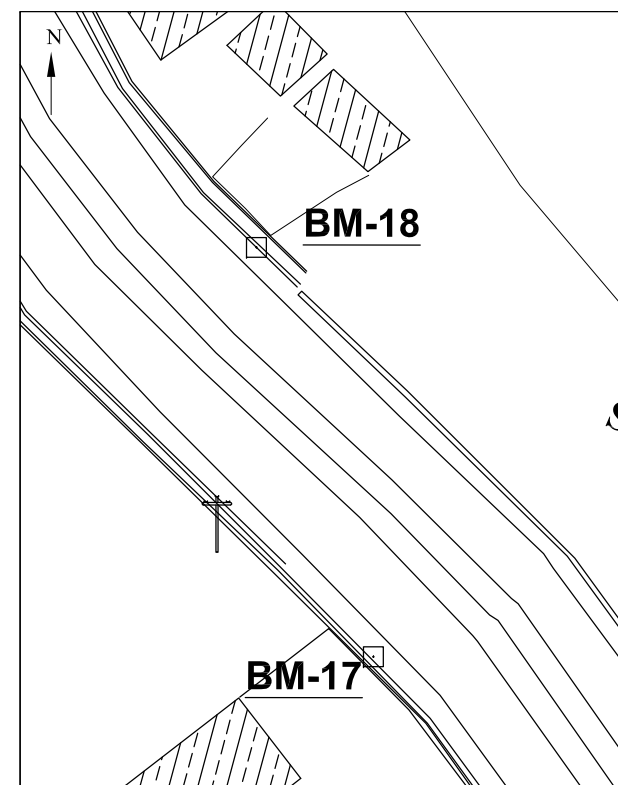
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-18		212607.437	3118274.957	691.601	Slab

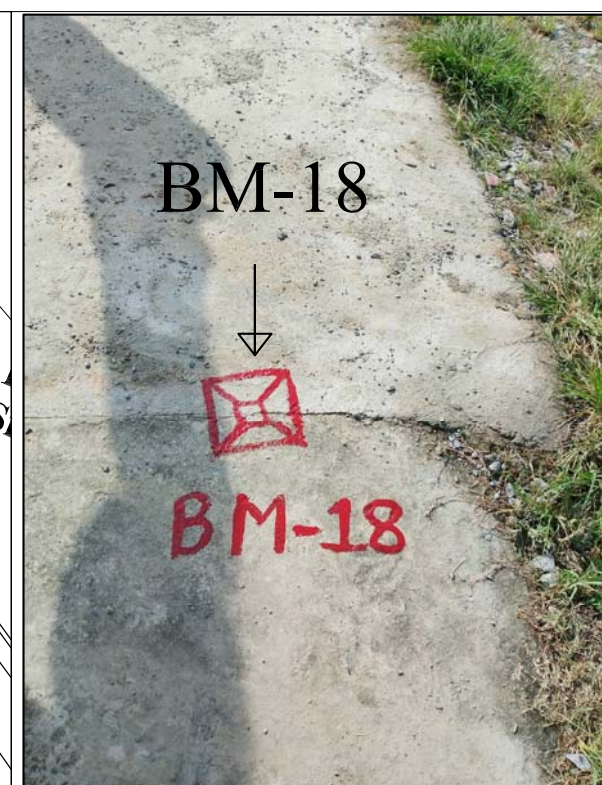
Reference Point

R1 =	2.90m Wall	R2 =	1.30m Wall	R3 =	15.0m Slab
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Schematic Diagram



Photo

General Information

This point is established at Sisuwa Guwaz. The point is marked on right side of road way to Lekhnath on the top of slab.



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B.N. Consultancy Pvt. Ltd. (BN)
Soil Test Consultancy (P.) Ltd. (Soll Test)
Kathmandu, Nepal



Project Name:- Nepal Urban Governance and Infrastructure Project (NUGIP)

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DESCRIPTION CARD OF LEKHNATH

DESIGNED BY:	Date: 2023
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CHECKED BY:	Chainage:
APPROVED BY:	Sheet No: 9

ROAD PROJECT

DESCRIPTION CARD

Bench Mark No. : BM-19

Place Name:Sisuwa Chowk

Metropolitan Name: Pokhara Metropolitan City- 30

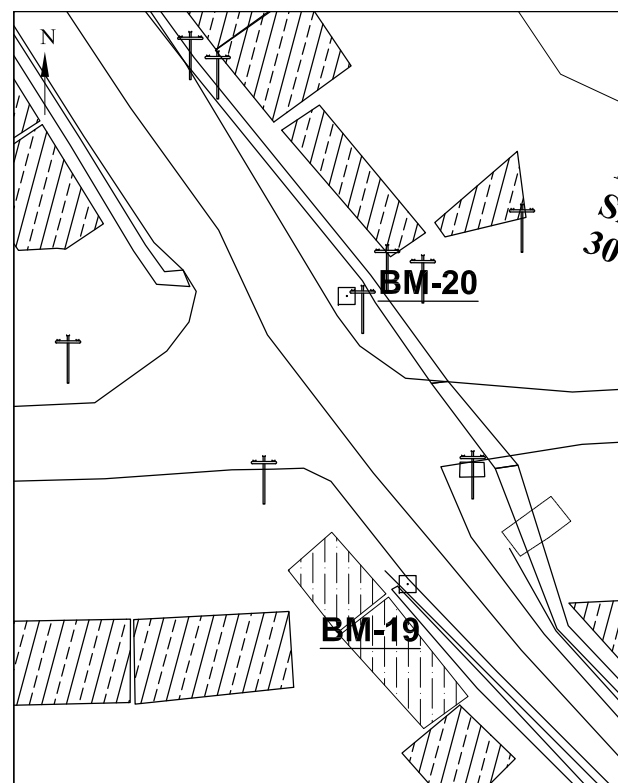
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-19		212227.935	3118786.901	700.768	Slab

Reference Point

R1 =	9.0m Pole	R2 =	10.0m Pole	R3 =	9.40m Slab
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Schematic Diagram



Photo



General Information

This point is established at Sisuwa Chowk. The point is marked on left side of road way to Talchok on the top of slab

ROAD PROJECT

DESCRIPTION CARD

Bench Mark No. : BM-20

Place Name:Sisuwa Chowk

Metropolitan Name: Pokhara Metropolitan City- 30

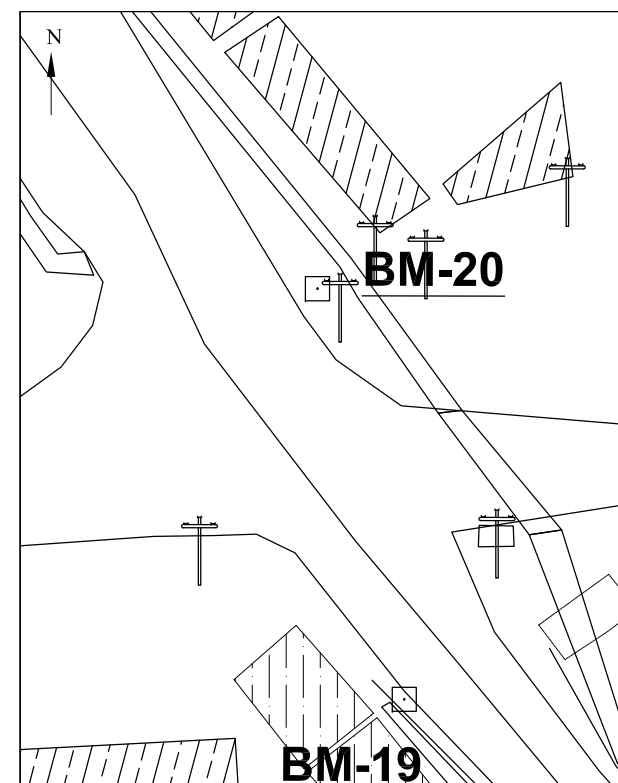
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-20		212222.834	3118811.017	701.338	Slab

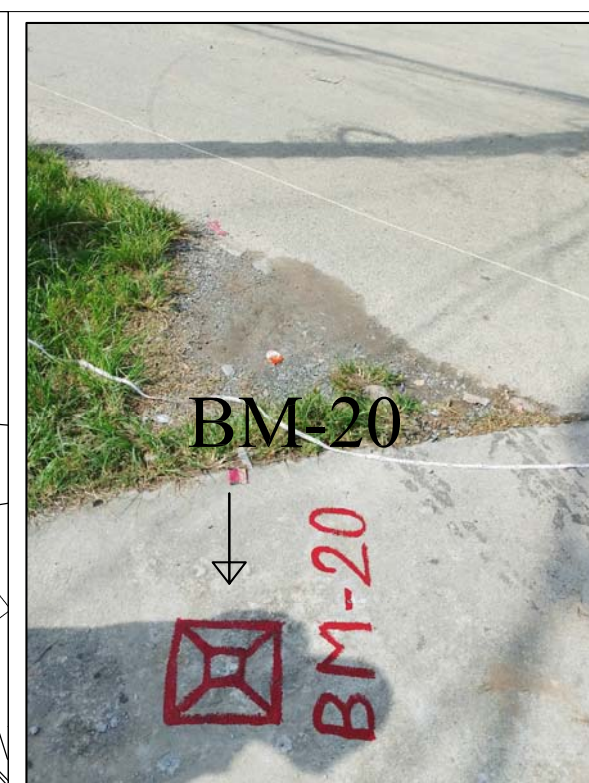
Reference Point

R1 =	4.10m Slab	R2 =	2.60m EP	R3 =	13.0m EP
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Schematic Diagram



Photo



General Information

This point is established at Sisuwa Chowk. The point is marked on left side of road way to Begnas lake on the top of slab.



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B.N. Consultancy Pvt. Ltd. (BN)
Soil Test Consultancy (P.) Ltd. (Soll Test)
Kathmandu, Nepal

Project Name:- Nepal Urban Governance and Infrastructure Project (NUGIP)

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DESCRIPTION CARD OF LEKHNATH

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ROAD PROJECT

DESCRIPTION CARD

Bench Mark No. : BM-21

Place Name:Mansumarga Chowk

Metropolitan Name: Pokhara Metropolitan City- 30

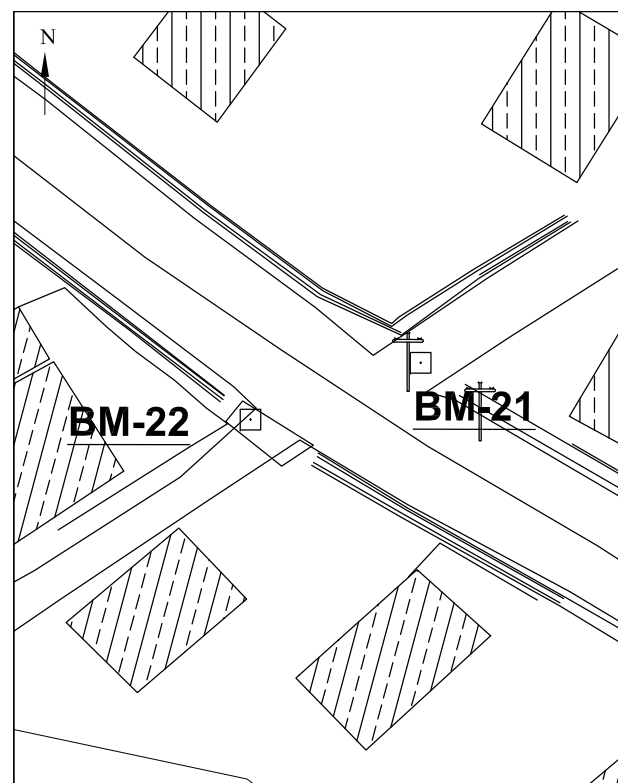
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-21		211731.066	3119387.902	714.389	Slab

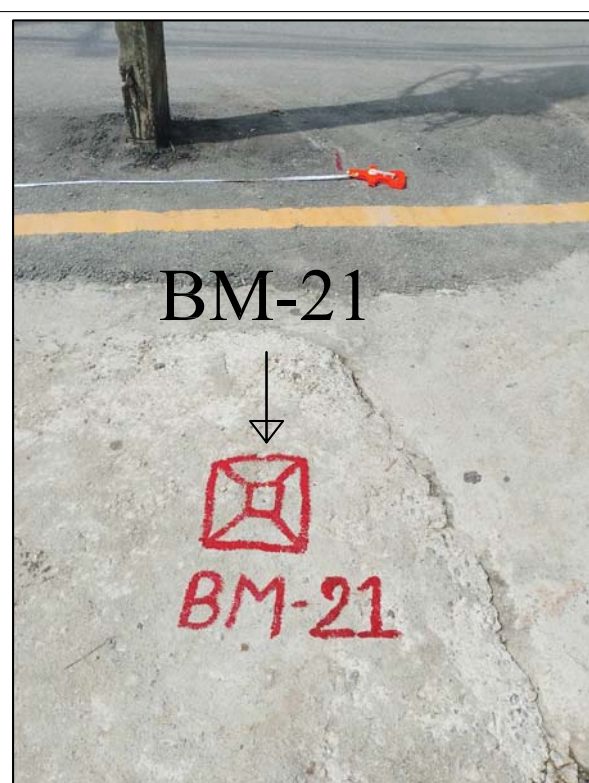
Reference Point

R1 =	1.8m Tap	R2 =	1.90m EP	R3 =	3.80m Slab
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Schematic Diagram



Photo



General Information

This point is established at Mansumarga Chowk. The point is marked on right side of road way to Khabarkot on the top of slab.

ROAD PROJECT

DESCRIPTION CARD

Bench Mark No. : BM-22

Place Name:Mansumarga Chowk

Metropolitan Name: Pokhara Metropolitan City- 30

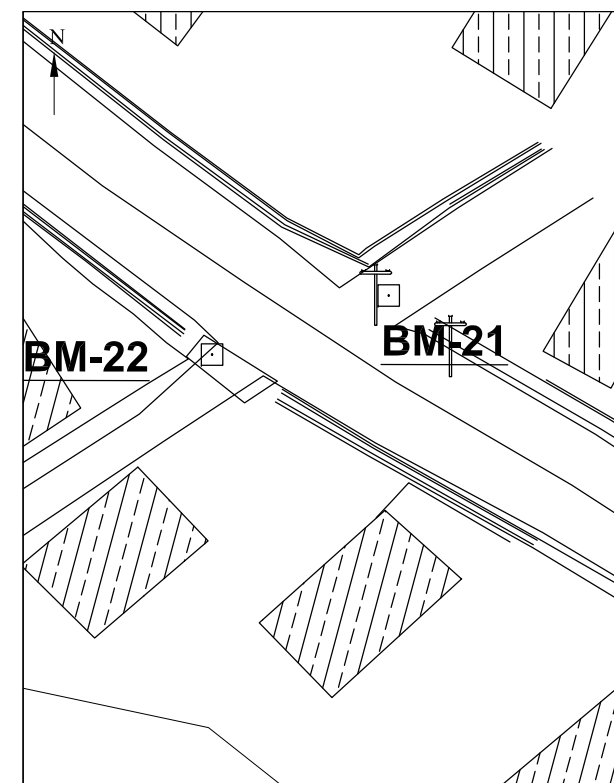
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-22		211719.391	3119384.003	714.822	Slab

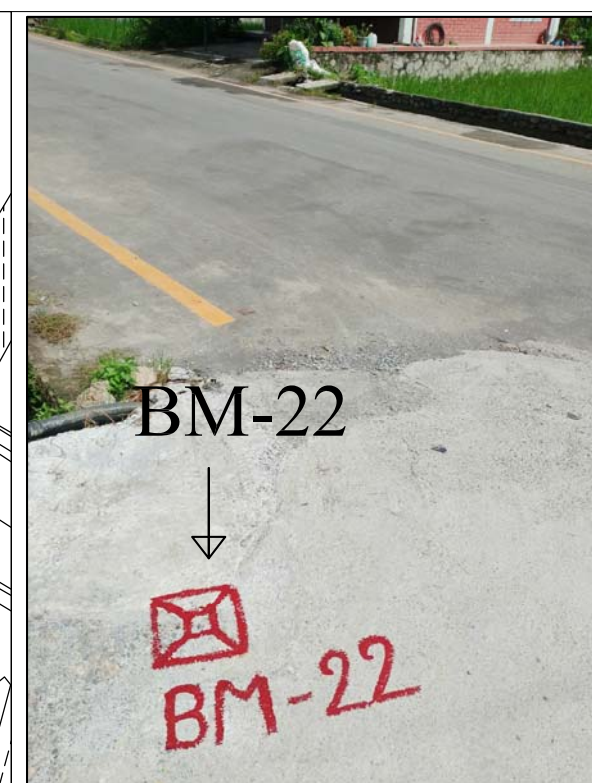
Reference Point

R1 =	1.60m Wall	R2 =	3.80m Slab	R3 =	11.50 Slab
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Schematic Diagram



Photo



General Information

This point is established at Mansumarga Chowk. The point is marked on left side of road way to Nahar on the top of slab.



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B.N. Consultancy Pvt. Ltd. (BN)
Soil Test Consultancy (P.) Ltd. (Soil Test)
Kathmandu, Nepal

Project Name:- Nepal Urban Governance and Infrastructure Project (NUGIP)

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ROAD PROJECT

DESCRIPTION CARD

Bench Mark No. : BM-23

Place Name:Chandakali Chowk

Metropolitan Name: Pokhara Metropolitan City- 27

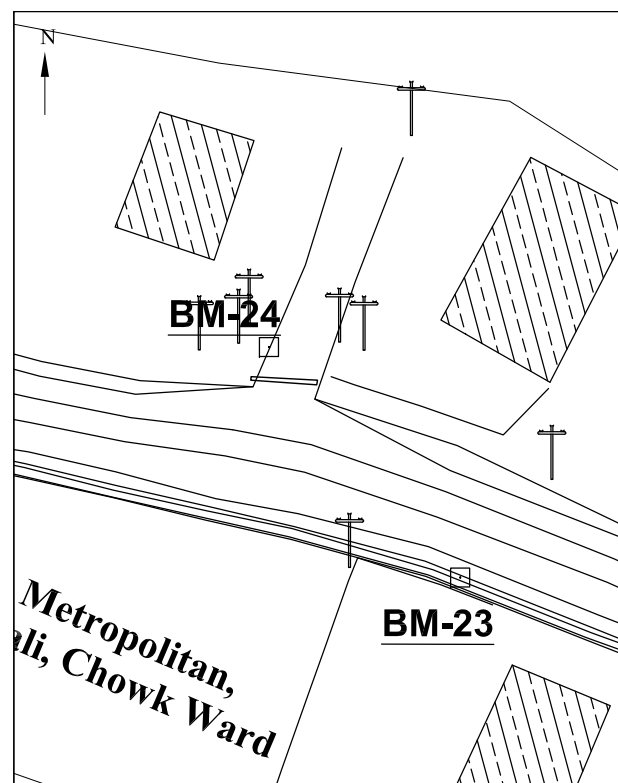
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-23		211049.509	3119699.842	726.973	Slab

Reference Point

R1 =	1.10m Wall	R2 =	3.0m Wall	R3 =	9.70m Wall
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Schematic Diagram



Photo

General Information

This point is established at Chandakali Chowk. The point is marked on left side of road way on the top of slab.

ROAD PROJECT

DESCRIPTION CARD

Bench Mark No. : BM-24

Place Name:Chandakali Chowk

Metropolitan Name: Pokhara Metropolitan City- 27

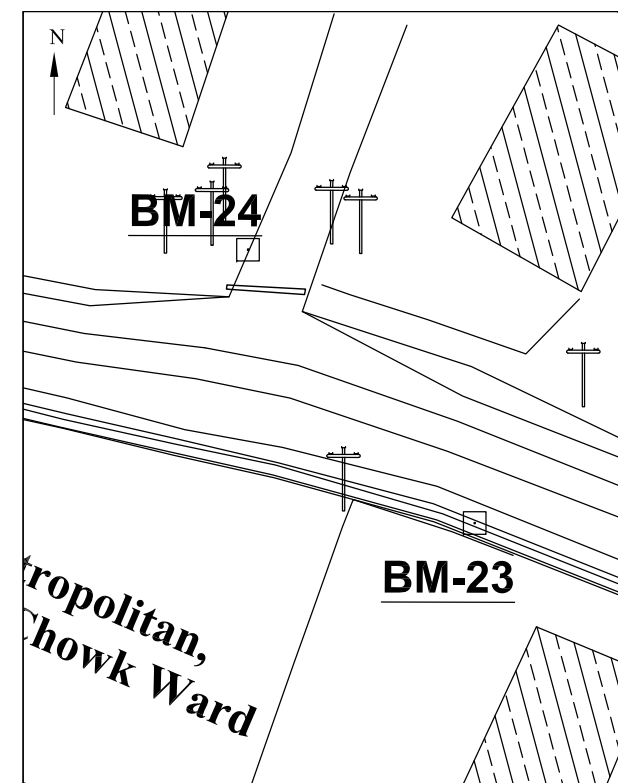
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-24		211035.246	3119717.030	727.345	Slab

Reference Point

R1 =	13.70m Slab	R2 =	5.0m EP	R3 =	2.0m EP
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Schematic Diagram



Photo

General Information

This point is established at Chandakali Chowk. The point is marked on left side of road near the transformer on the top of slab.



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B.N. Consultancy Pvt. Ltd. (BN)
Soil Test Consultancy (P.) Ltd. (Soll Test)
Kathmandu, Nepal



Project Name:- Nepal Urban Governance and Infrastructure Project (NUGIP)

SHEET TITLE:

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ROAD PROJECT

DESCRIPTION CARD

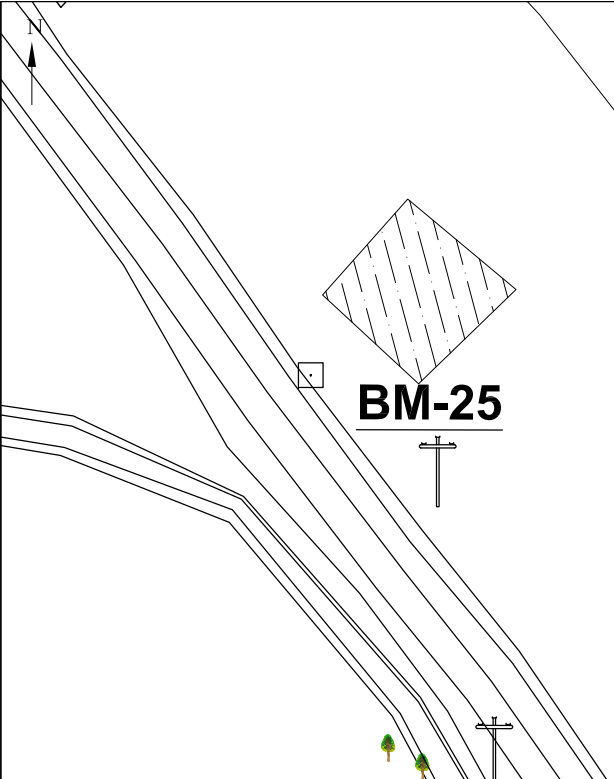
Bench Mark No. : BM-25
Place Name:Dadhanak
Metropolitan Name: Pokhara Metropolitan City- 27
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-25		210666.856	3120030.692	733.588	Slab

Reference Point

R1 =	1.50m Slab	R2 =	2.5m Kulo	R3 =	7.90m Slab
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Schematic Diagram



Photo



General Information

This point is established at Dadhanak. The point is marked on right side of road on the top of slab.

ROAD PROJECT

DESCRIPTION CARD

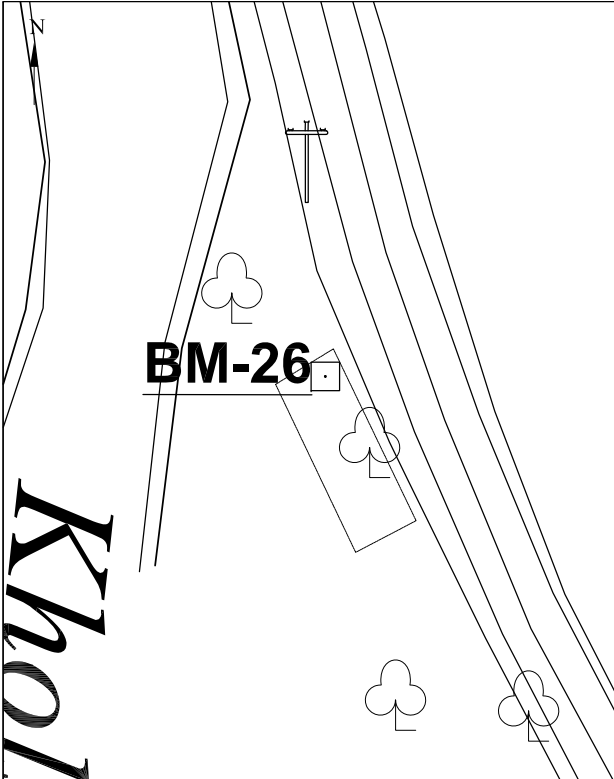
Bench Mark No. : BM-26
Place Name:Dadhanak
Metropolitan Name: Pokhara Metropolitan City- 27
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-26		210622.349	3120088.519	734.752	Slab

Reference Point

R1 =	5.60m Tree	R2 =	5.30m Tree	R3 =	7.10m Boulder
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Schematic Diagram



Photo



General Information

This point is established at Dadhanak. The point is marked on left side of road on the corner of the Chautaro



Nepal Urban Governance and Infrastructure Project (NUGIP)
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B.N. Consultancy Pvt. Ltd. (BN)
Soil Test Consultancy (P.) Ltd. (Soll Test)
Kathmandu, Nepal



Project Name:- Nepal Urban Governance and Infrastructure Project (NUGIP)

SHEET TITLE:
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ROAD PROJECT

DESCRIPTION CARD

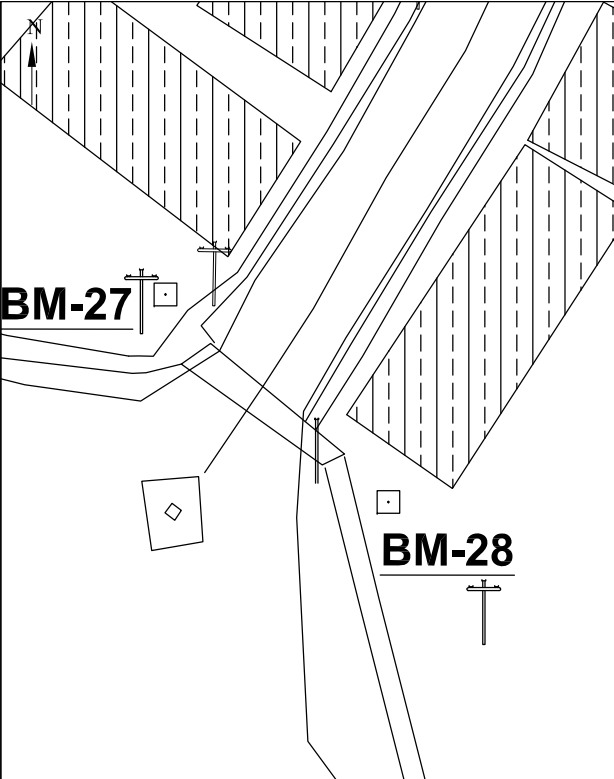
Bench Mark No. : BM-27
Place Name:Arjun Chowk
Metropolitan Name: Pokhara Metropolitan City- 27
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-27		210307.053	3120144.031	739.630	Slab

Reference Point

R1 =	2.90m EP	R2 =	2.50m Pole	R3 =	2.90m Pole
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Schematic Diagram



Photo



General Information

This point is established at Arjun Chowk. The point is marked on right side of road way to Prithvi Highway on the top of slab.

ROAD PROJECT

DESCRIPTION CARD

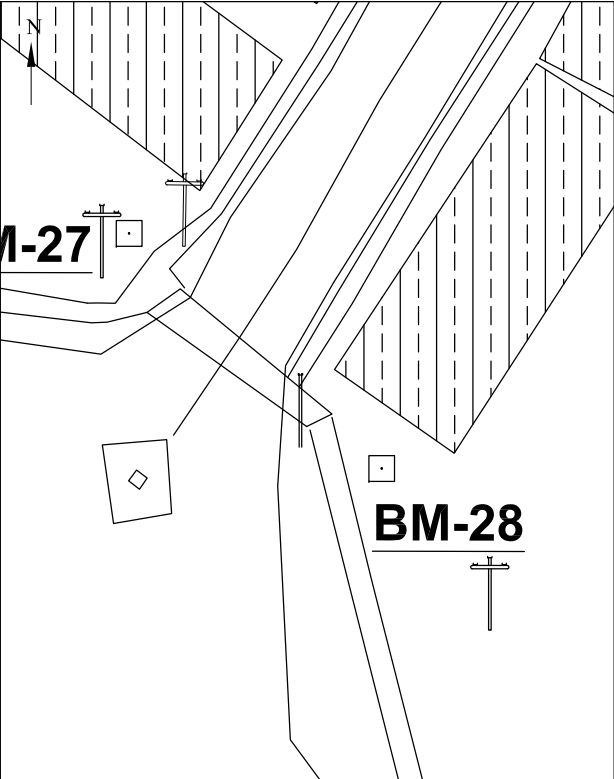
Bench Mark No. : BM-28
Place Name:Arjun Chowk
Metropolitan Name: Pokhara Metropolitan City- 27
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-28		210320.975	3120131.075	738.842	Slab

Reference Point

R1 =	2.80m Slab	R2 =	10.0m EP	R3 =	4.70m EP
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Schematic Diagram



Photo



General Information

This point is established at Arjun Chowk. The point is marked on left side of road way to Prithvi Highway on the top of slab.



Nepal Urban Governance and Infrastructure Project (NUGIP)
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Pokhara Metropolitan City
Kaski District, Gandaki Province

CONSULTANT:
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B.N. Consultancy Pvt. Ltd. (BN)
Soil Test Consultancy (P.) Ltd. (Soll Test)
Kathmandu, Nepal

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SHEET TITLE:
DESCRIPTION CARD OF LEKHNATH

DESIGNED BY:
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APPROVED BY:

Date: 2023
Scale: Not In Scale
Chainage:
Sheet No: 14