

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



DETAIL PROJECT REPORT

OF

**UPGRADATION OF DOBILLA – BAGMARA – TIKLANG – BADARKOT -
LAMGADHI-CHAPLANG – UPALLO PUDITAR – TALLO PUDITAR – JHIGATE
(JANAJAGRITI MAVI) TAGAREGAUDA ROAD**

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

October 2023
(Revised November 2023)

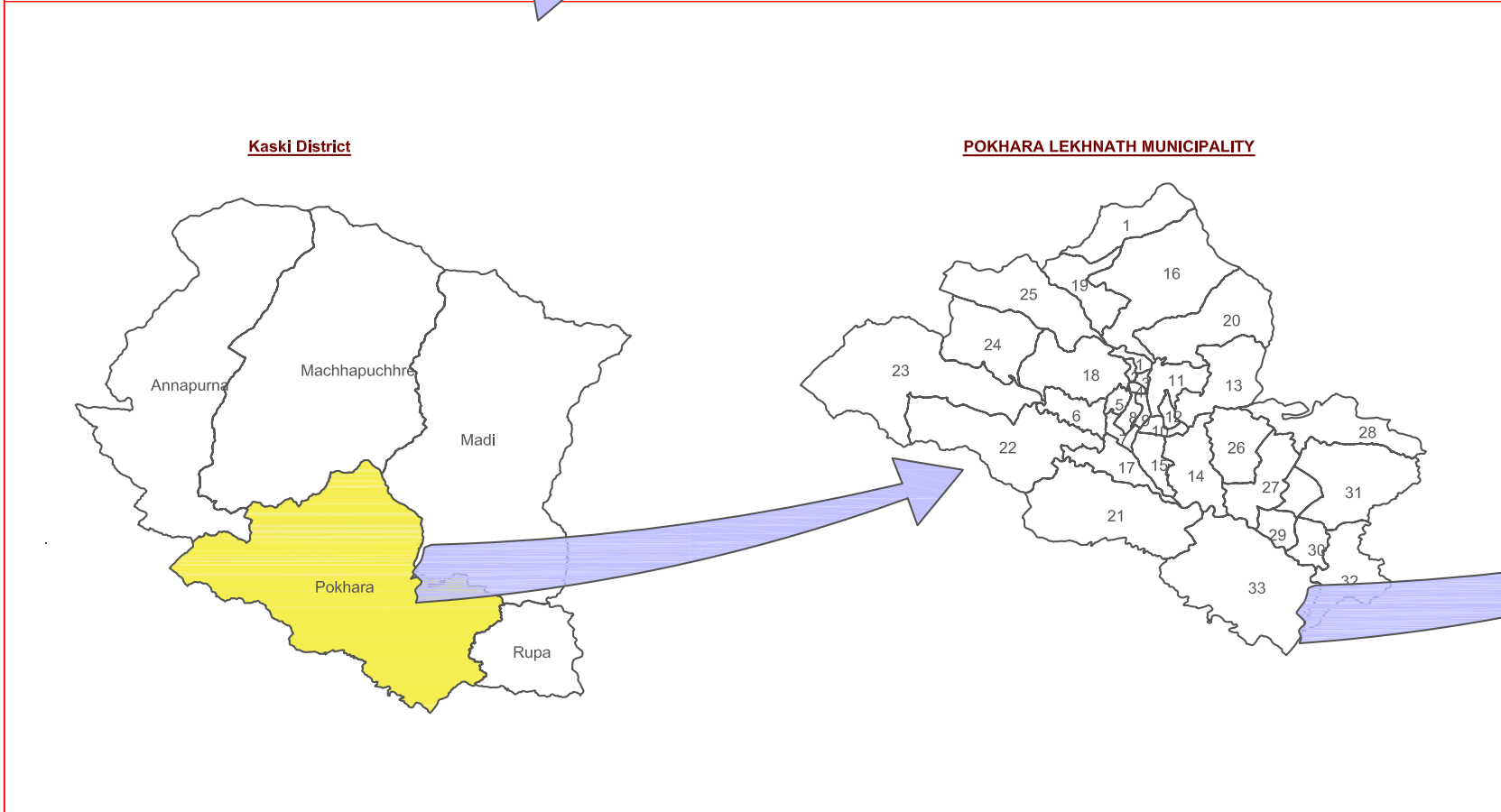
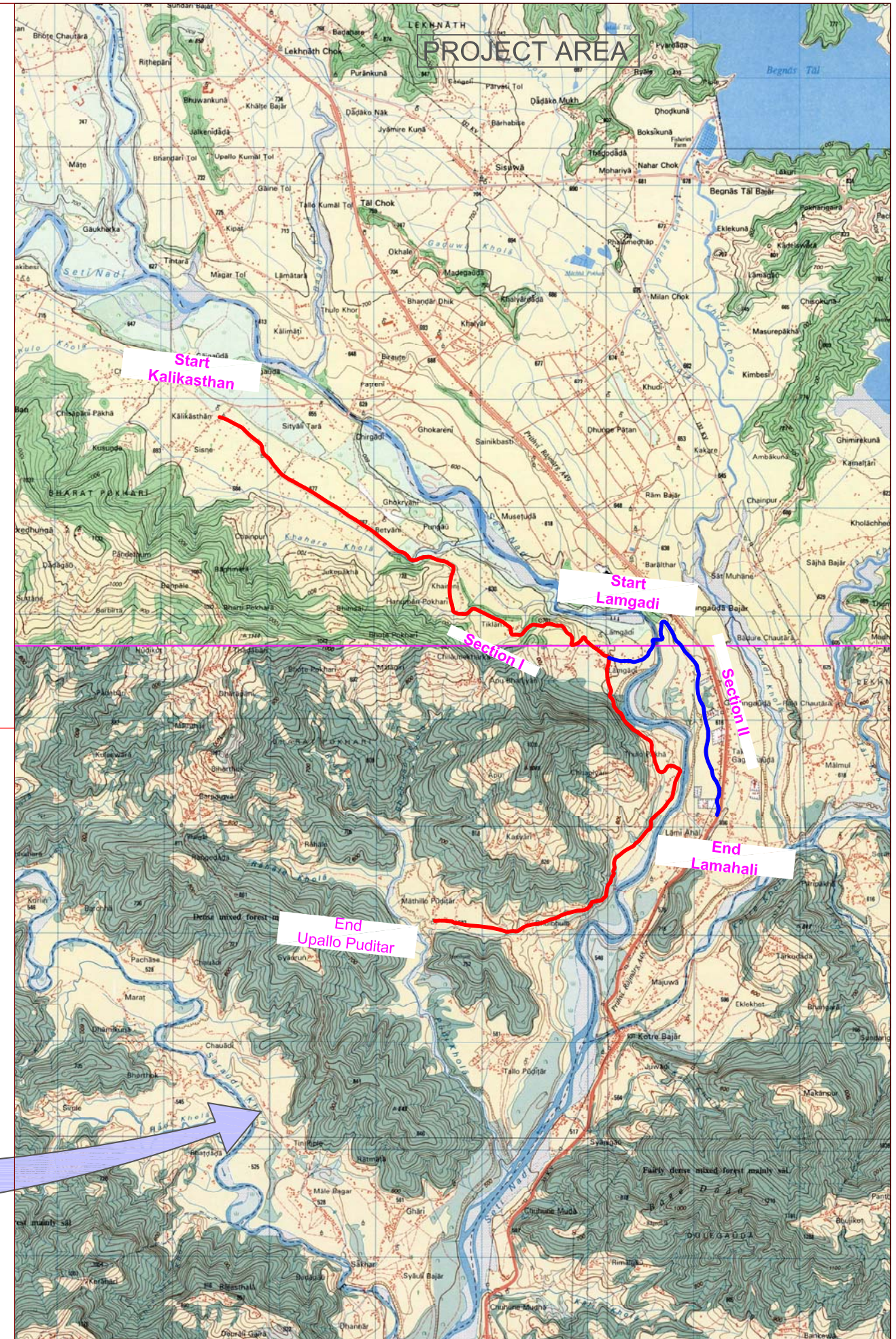
Submitted By :-

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

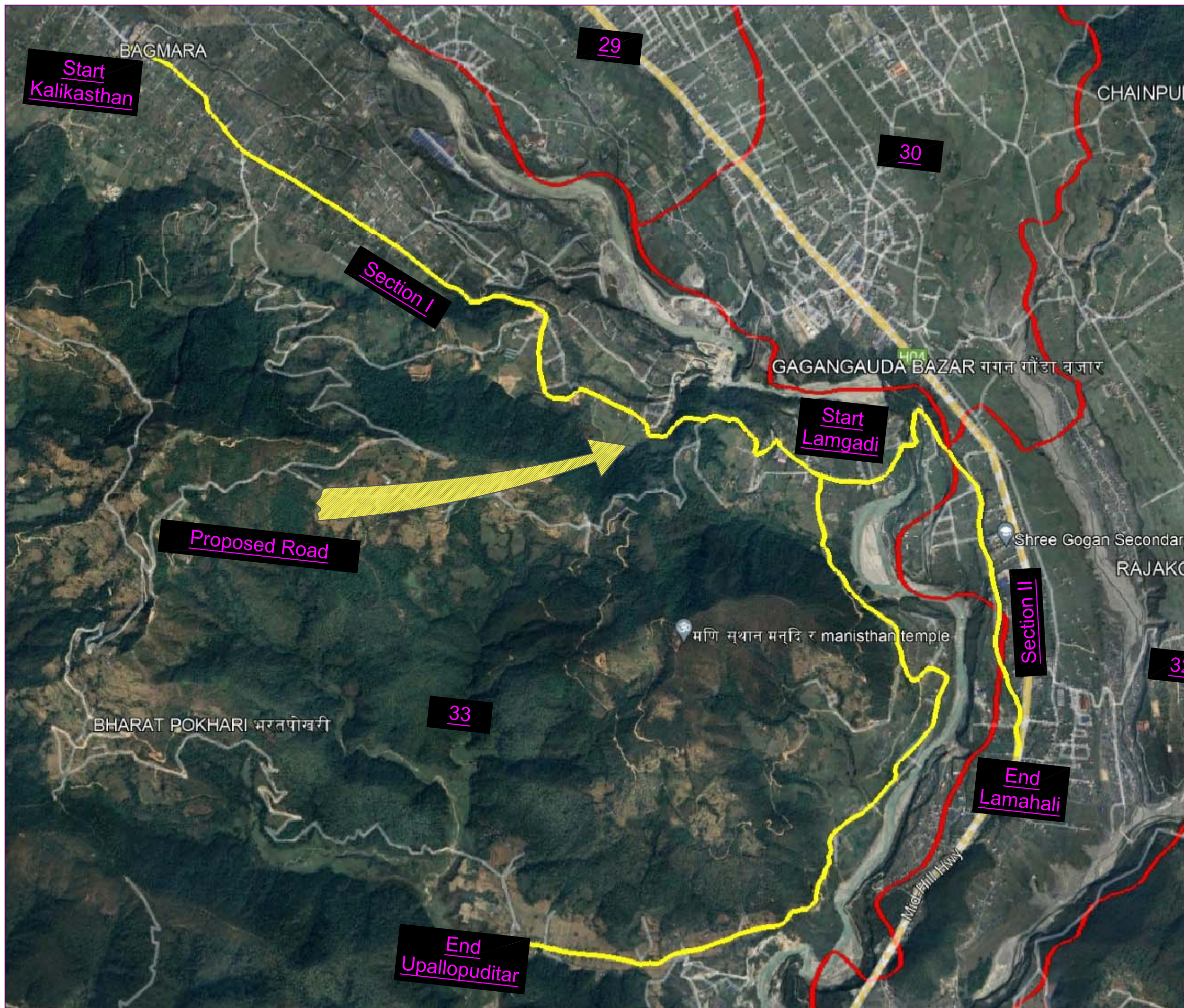
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INDEX MAP/LOCATION MAP

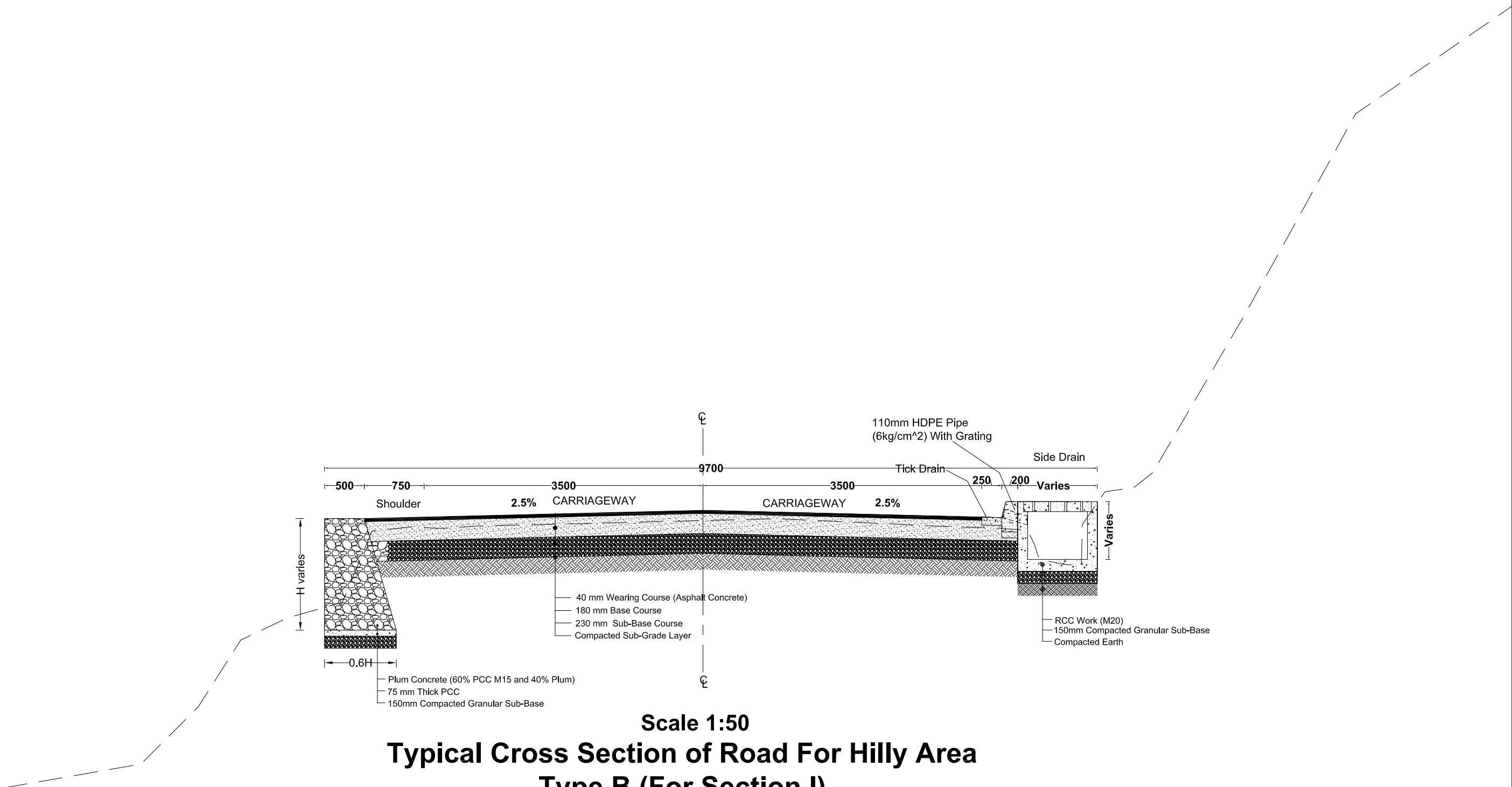


	Nepal Urban Governance and Infrastructure Project (NUGIP) Office of the Municipal Executive Pokhara Metropolitan City Kaski District, Gandaki Province		CONSULTANT: Plush Engineers and Architects (P.) Ltd. (PEA) B.N. Consultancy Pvt. Ltd. (BN) Soil Test Consultancy (P.) Ltd. (Soil Test) Kathmandu, Nepal		Project Name:- Nepal Urban Governance and Infrastructure Project (NUGIP)		SHEET TITLE: INDEX MAP		DESIGNED BY:		Date: 2023
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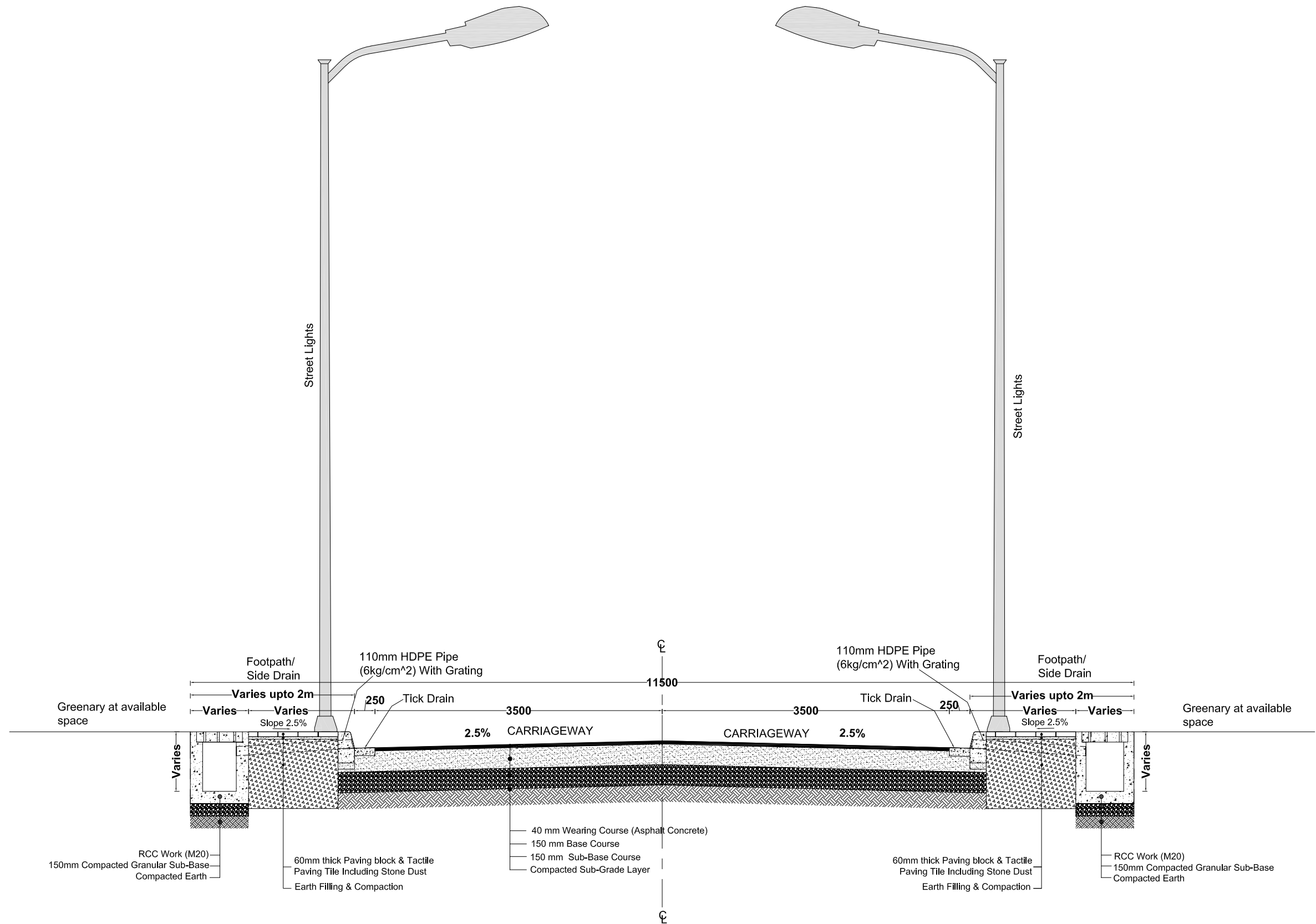
	Nepal Urban Governance and Infrastructure Project (NUGIP) Office of the Municipal Executive Pokhara Metropolitan City Kaski District, Gandaki Province	CONSULTANT: Plush Engineers and Architects (P.) Ltd. (PEA) B.N. Consultancy Pvt. Ltd. (BN) Soil Test Consultancy (P.) Ltd. (Soil Test) Kathmandu, Nepal	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 Chalnage: Sheet No: 1
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PROPOSED TYPICAL CROSS SECTION OF ROAD



Typical Cross Section of Road For Hilly Area Type B (For Section I)


Note:
1. Retaining Wall and Breast Wall Will be Provided According to Site Condition

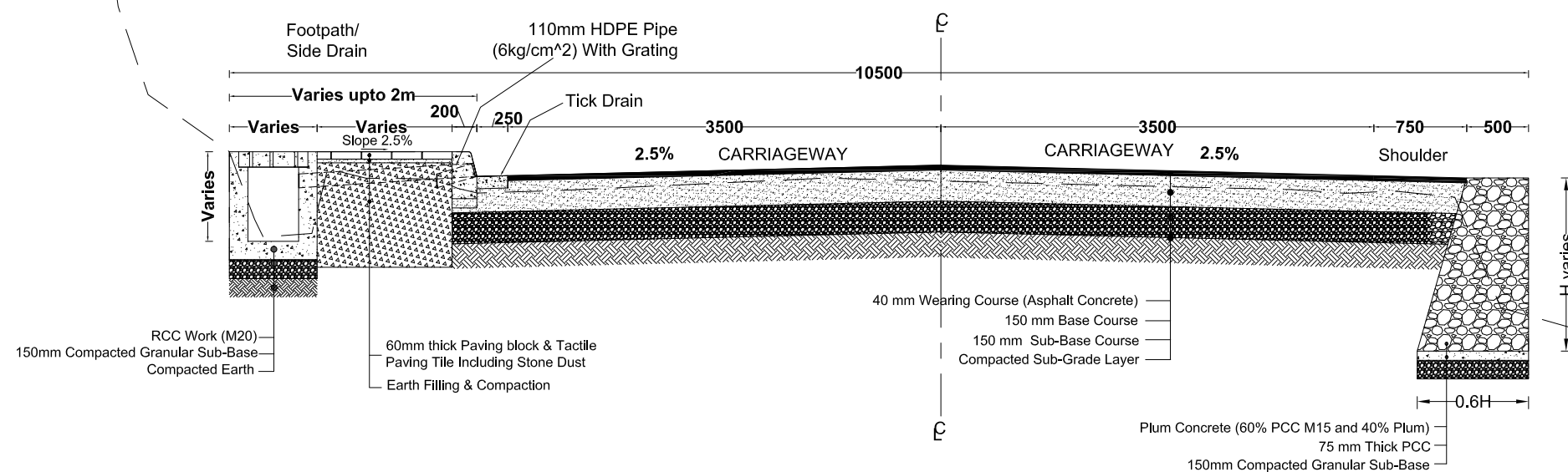


Scale 1:50
Typical Cross Section of Road
Type A (For Section II)

Note:

1. Retaining Wall and Breast Wall Will be Provided
According to Site Condition



	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:- Proposed Typical Cross Section Of Road	DESIGNED BY :	Date : 2023
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Scale 1:50
Typical Cross Section of Road For Hilly Area
Type C (For Section II)

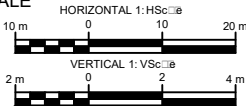
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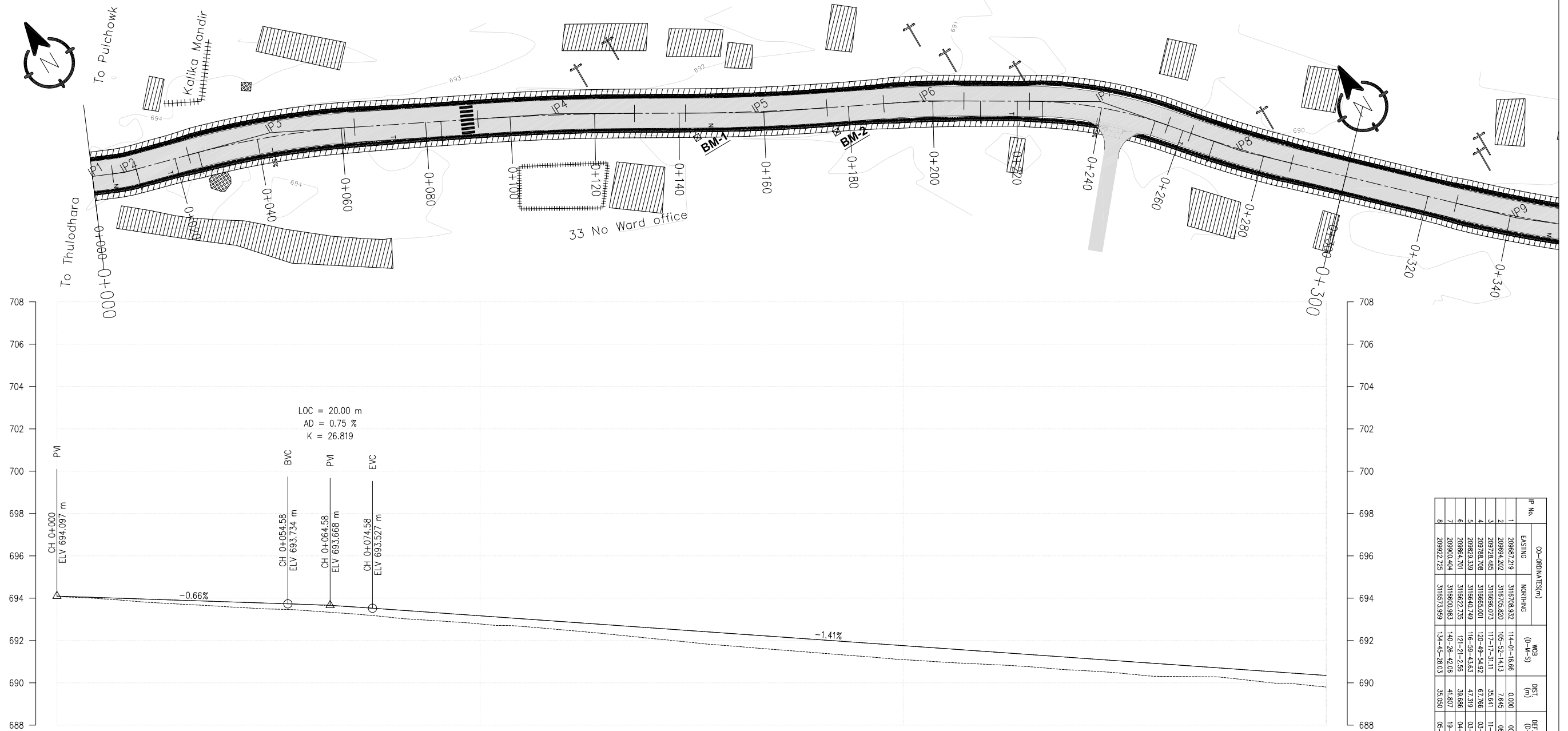
**1. Retaining Wall and Breast Wall Will be Provided
According to Site Condition**

	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:- Proposed Typical Cross Section Of Road	DESIGNED BY :	Date : 2023
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PROPOSED PLAN AND PROFILE (SECTION-I)

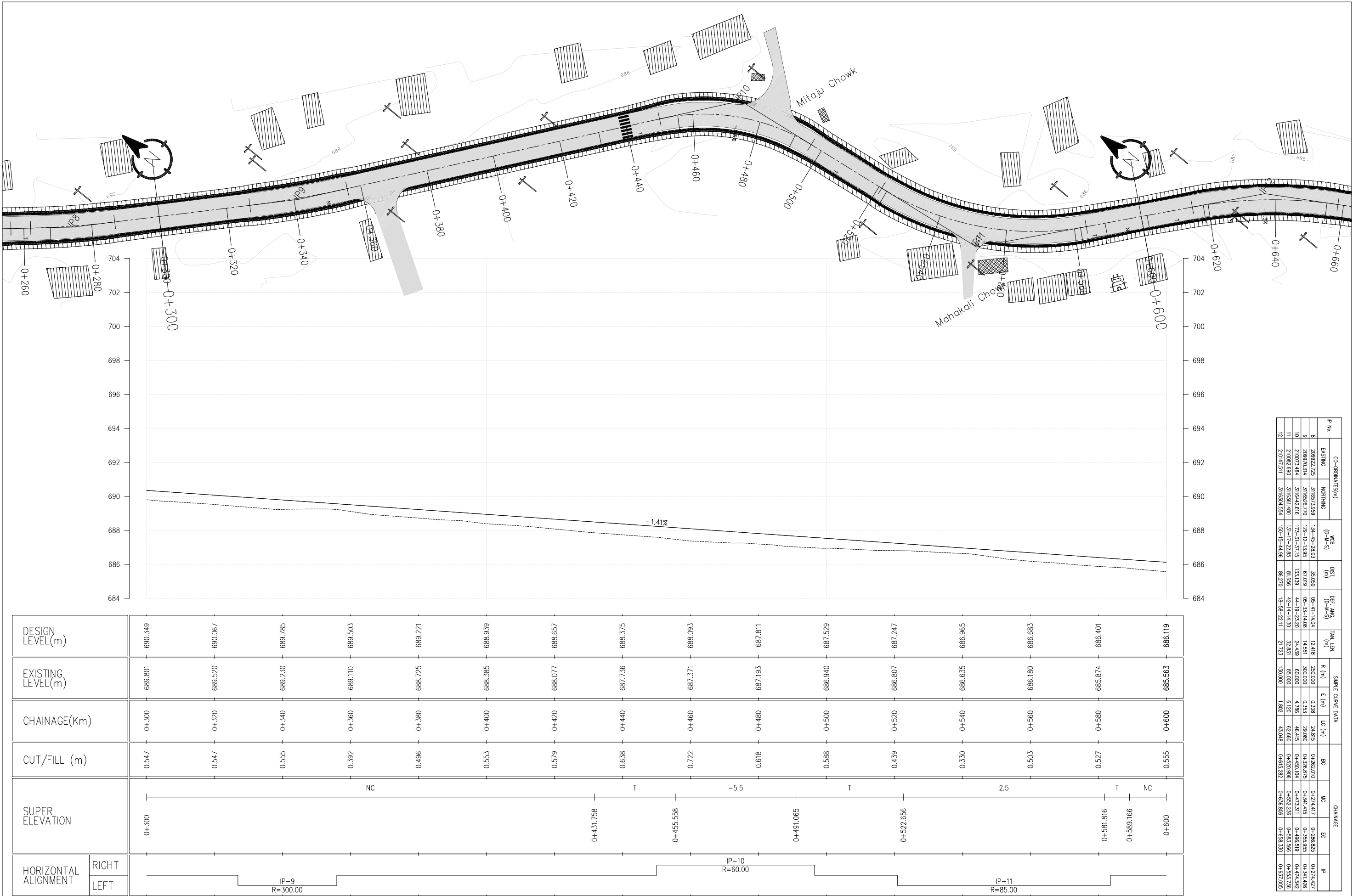
LEGEND	SYMBOL	LEGEND	SYMBOL
Bench Mark		Water tank	
Houses		Retaining wall	
Hut		RCC wall	
Road center			
Chainage			
School			
Chautari			
Partikshyalaya			
Box Culvert			
Pipe Culvert			
Compound wall			
Gate			
Wooden Pole			
Electric Pole			
RCC Pole			
Masonry wall			
Temple			
Index Contour			
Tick Drain			
Kerbstone			
Footpath			
Drain			
Fence bar			

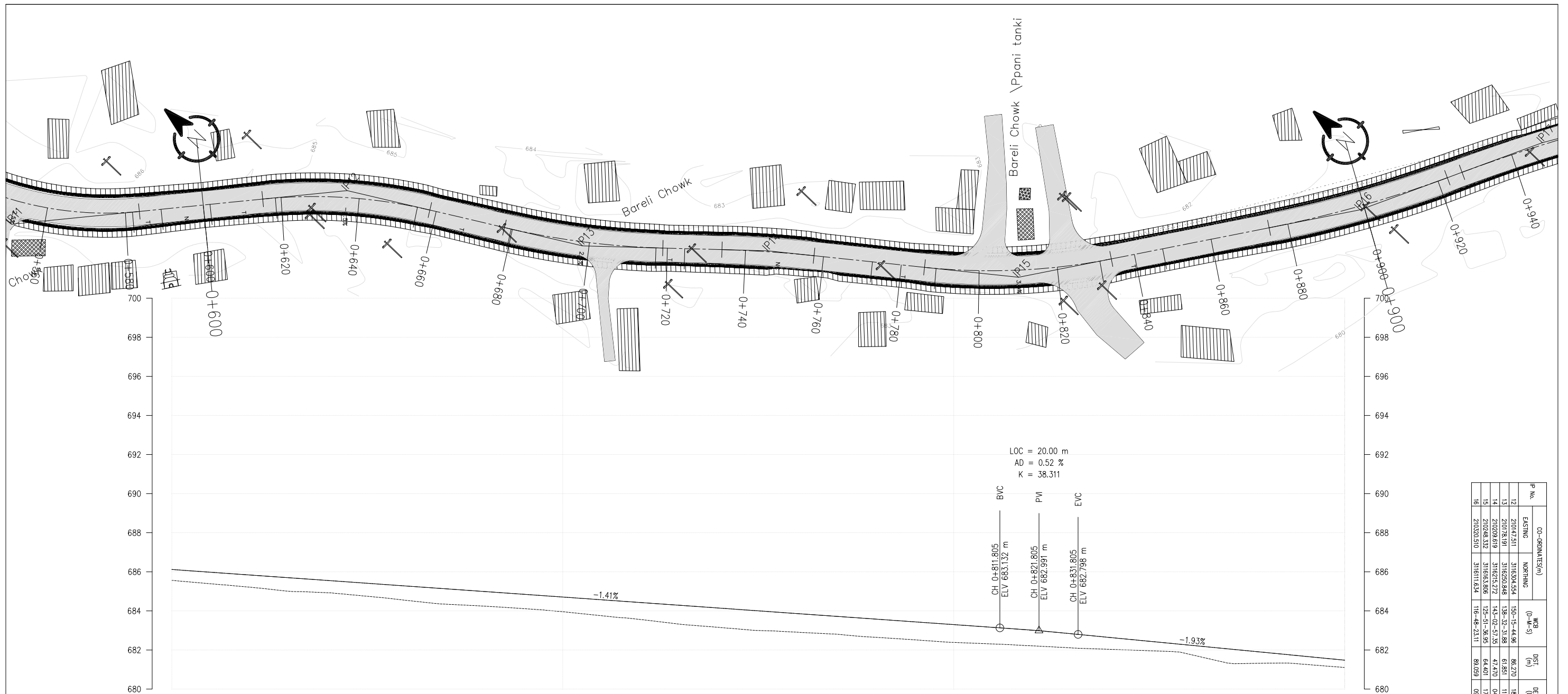




DESIGN LEVEL(m)		694.097		693.964		693.831		693.693		693.451		693.169		692.887		692.605		692.323		692.041		691.759		691.477		691.195		690.913		690.631		690.349
EXISTING LEVEL(m)		694.097		693.828		693.599		693.398		693.072		692.782		692.496		692.110		691.734		691.414		691.099		690.873		690.609		690.310		690.161		689.801
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)		0.000		0.136		0.232		0.295		0.379		0.387		0.390		0.495		0.589		0.627		0.660		0.604		0.586		0.603		0.470		0.547
SUPER ELEVATION		<div><div></div><div>0+000</div><div>0+010.486</div><div>0+025.756</div><div>0+060.666</div><div>0+083.62</div><div>0+211.321</div><div>0+226.021</div><div>0+253.046</div><div>0+267.746</div><div>0+300</div></div> <div>NC</div> <div>T</div> <div>-2.5</div> <div>T</div> <div>NC</div> <div>T</div> <div>-4.5</div> <div>T</div> <div>NC</div>																														
HORIZONTAL ALIGNMENT	RIGHT	<div><div></div><div>IP-1</div><div>IP-2</div><div>IP-3</div><div>IP-4</div><div>IP-5</div><div>IP-6</div><div>IP-7</div><div>IP-8</div></div> <div>R=0.00</div> <div>R=40.00</div> <div>R=200.00</div> <div>R=600.00</div> <div>R=500.00</div> <div>R=250.00</div> <div>R=100.00</div> <div>R=250.00</div>																														
	LEFT																															

IP No.	CO-ORDINATES(m)		DIST. (0-M-S)	DEF. ANG. (0-M-S)	TM. LEN. (m)	SIMPLE CURVE DATA				CHANGES					
	EASTING	NORTHING				R (m)	E (m)	LC (m)	EC	MC	EC	IP			
1	209867.219	316708.320	114.00-16.66	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	209864.202	316705.820	115.00-14.13	7.645	08.09-2.53	2.850	40.00	0.01	5.690	0.004-795	0.007-641	0.010-346	0.007-465	0.003-145	0.003-145
3	209788.265	316696.073	117.17-31.11	35.641	11-25-16.98	20.000	200.000	0.986	39.868	0.023-277	0.043-211	0.063-315	0.043-277	0.043-277	0.043-277
4	209788.708	316696.001	120.49-54.92	67.766	03-32-23.81	18.541	600.000	0.298	37.070	0.092-370	0.110-925	0.129-440	0.110-931	0.110-931	0.110-931
5	209864.209	316662.745	118.49-43.43	47.319	05-21-18.93	16.746	250.000	0.280	33.479	0.141-472	0.156-211	0.173-385	0.156-211	0.156-211	0.156-211
6	209864.731	316660.739	121.21-2.56	39.666	04-21-18.38	9.506	250.000	0.181	19.003	0.188-365	0.197-897	0.207-788	0.197-897	0.197-897	0.197-897
7	209904.474	316600.943	134.05-28.03	41.807	09-05-31.99	16.819	100.000	0.306	33.336	0.242-871	0.273-437	0.286-925	0.273-437	0.273-437	0.273-437
8	209922.725	316573.959	140.45-28.03	35.503	01-41-14.04	12.419	250.000	0.108	24.875	0.262-071	0.279-615	0.296-925	0.279-615	0.279-615	0.279-615





P. No.	CO-ORDINATES(m)			DST	DEF. ANG. (D-M-S)	HAN. LEN.	SAMPLE CURVE DATA						
	Easting	Northing	WGS (D-M-S)				R (m)	E (m)	LC (m)	BC	MC	EC	IP
12	2010/4/31	3150/50/54	150-15-44.96	86.270	18-58-22.11	21.723							
13	2010/4/31	3150/50/54	150-15-44.96	86.270	18-58-22.11	21.723							
12	2010/4/31	3150/50/54	150-15-44.96	86.270	18-58-22.11	21.723							
13	2010/4/31	3150/50/54	150-15-44.96	86.270	18-58-22.11	21.723							
14	2010/4/31	3150/50/54	150-15-44.96	86.270	18-58-22.11	21.723							
15	2010/4/31	3150/50/54	150-15-44.96	86.270	18-58-22.11	21.723							
16	2010/4/31	3150/50/54	150-15-44.96	86.270	18-58-22.11	21.723							
17	2010/4/31	3150/50/54	150-15-44.96	86.270	18-58-22.11	21.723							
18	2010/4/31	3150/50/54	150-15-44.96	86.270	18-58-22.11	21.723							
19	2010/4/31	3150/50/54	150-15-44.96	86.270	18-58-22.11	21.723							
20	2010/4/31	3150/50/54	150-15-44.96	86.270	18-58-22.11	21.723							
21	2010/4/31	3150/50/54	150-15-44.96	86.270	18-58-22.11	21.723							
22	2010/4/31	3150/50/54	150-15-44.96	86.270	18-58-22.11	21.723							
23	2010/4/31	3150/50/54	150-15-44.96	86.270	18-58-22.11	21.723							
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25	2010/4/31	3150/50/54	150-15-44.96	86.270	18-58-22.11	21.723							
26	2010/4/31	3150/50/54	150-15-44.96	86.270	18-58-22.11	21.723							
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31	2010/4/31	3150/50/54	150-15-44.96	86.270	18-58-22.11	21.723							
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62	2010/4/31	3150/50/54	150-15-44.96	86.270	18-58-22.11	21.723							
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76	2010/4/31	3150/50/54	150-15-44.96	86.270	18-58-22.11	21.723							
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87	2010/4/31	3150/50/54	150-15-44.96	86.270	18-58-22.11	21.723							
88	2010/4/31	3150/50/54	150-15-44.96	86.270	18-58-22.11	21.723							
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90	2010/4/31	3150/50/54	150-15-44.96	86.270	18-58-22.11	21.723							
91	2010/4/31	3150/50/54	150-15-44.96	86.270	18-58-22.11	21.723							
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99	2010/4/31	3150/50/54	150-15-44.96	86.270	18-58-22.11	21.723							
100	2010/4/31	3150/50/54	150-15-44.96	86.270	18-58-22.11	21.723							

DESIGN LEVEL(m)		686.119	685.837	685.555	685.273	684.991	684.709	684.427	684.145	683.863	683.581	683.299	683.008	682.640	682.253	681.867	681.480
EXISTING LEVEL(m)		685.563	685.212	684.928	684.539	684.243	683.958	683.557	683.157	682.908	682.649	682.387	682.214	682.033	681.793	681.326	681.104
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)		0.555	0.625	0.626	0.734	0.748	0.750	0.870	0.988	0.954	0.931	0.911	0.794	0.606	0.460	0.541	0.377
SUPER ELEVATION		NC 0+600 0+601.749	T 0+618.549	-3.5	T	2.5	T	NC	T	3	T	NC	0+831.018	0+847.38	0+900		
HORIZONTAL ALIGNMENT	RIGHT																
	LEFT																



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



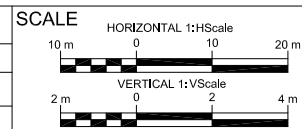
Project Name:- Nepal Urban Governance and Infrastructure Project (NUGIP)

DESIGNED BY :

DRAWN BY :

CHECKED BY :

APPROVED BY :



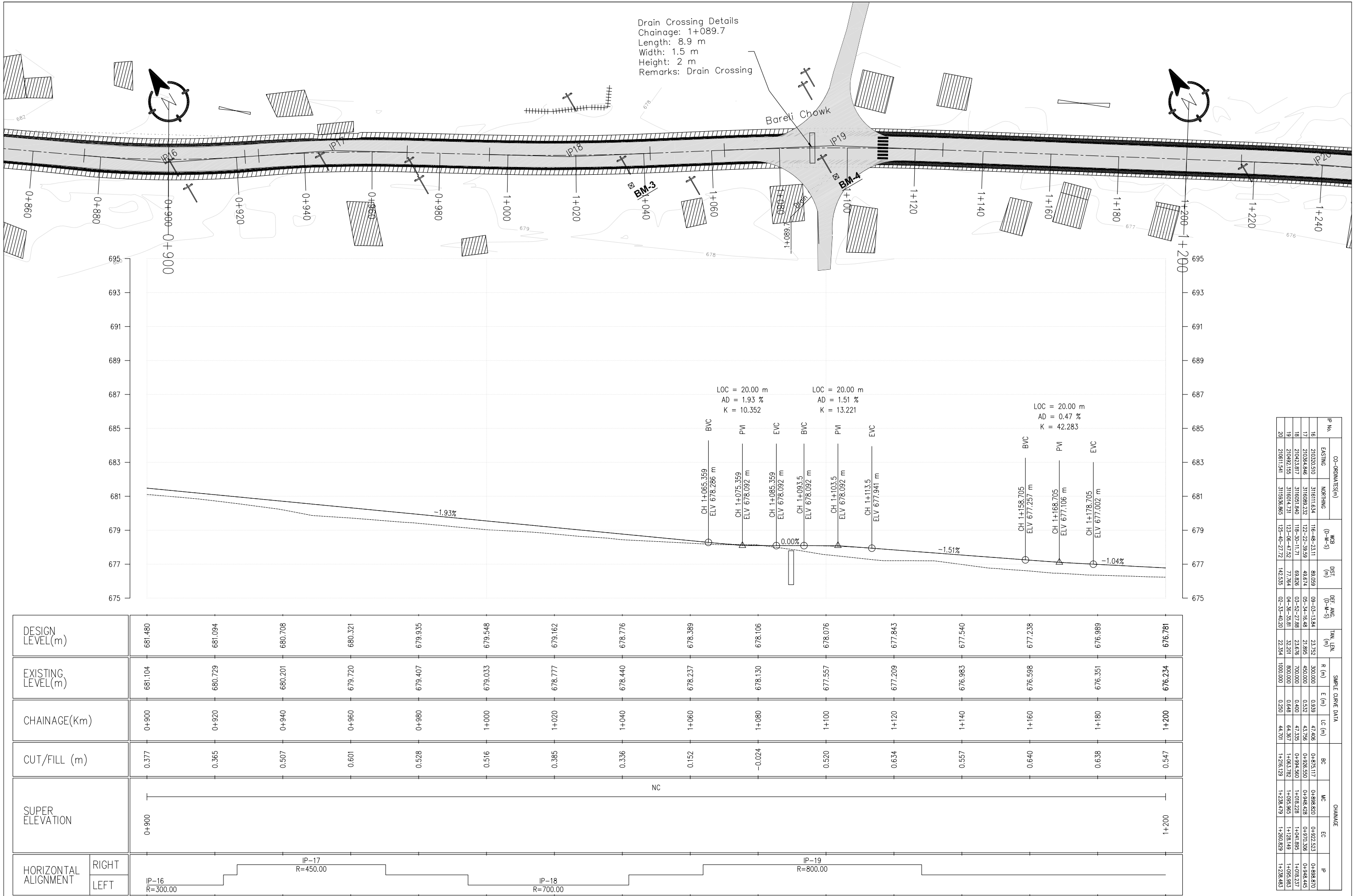
Plan & Profile

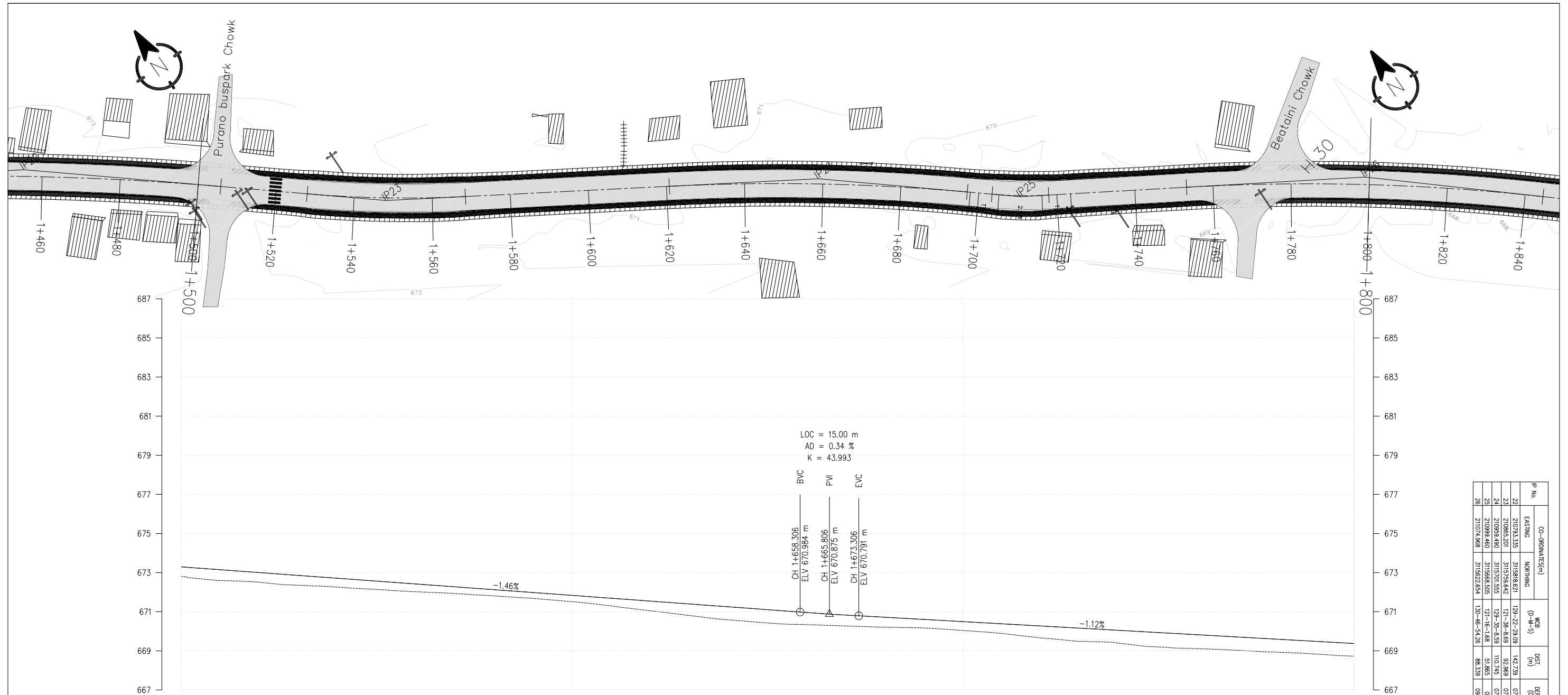
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DATE: Oct-2023

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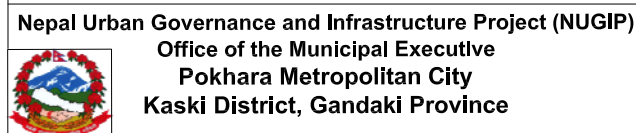
SHEET NO : 3





IP No.	CO-ORDINATES (m)	EATING	NIGHTING	WBR	DST (m)	DEF. AM (D-M-S)	TAN. LEN.	SIMPLE CHIEF DATA				CHANNEL			
								R (m)	E (m)	LC (m)	BC	WC	PC	IS	IS
21	27923.335	315584.821	129-22-20.09	142.70	02-42-10.65	50.40	750.000	1.698	100.832	1.604383	1.445.360	1.445.445	1.445.445		
22	27923.335	315584.821	129-22-20.09	92.69	07-44-20.20	20.20	750.000	1.698	100.832	1.152.272	1.445.360	1.445.360	1.445.360		
23	27923.335	315584.821	129-22-20.09	110.45	07-44-20.20	20.20	750.000	1.698	100.832	1.445.360	1.445.360	1.445.360	1.445.360		
24	210998.400	3157151.555	129-35-58.69	110.45	06-45-59.90	38.216	550.000	1.396	76.314	1+4207.272	1+558.884	1+697.044	1+698.946		
25	210998.400	3155652.405	121-01-1.68	51.865	08-16-6.91	7.272	550.000	0.664	14.519	17.533.515	1+707.615	1+717.934	1+710.686		
26	21071.968	3155622.654	120-46-54.26	88.39	09-30-52.58	45.722	550.000	1.901	91.343	17.533.229	1+798.866	1+444.502	1+799.001		
27	21071.968	3155622.654	120-46-54.26	88.39	09-30-52.58	45.722	550.000	1.901	91.343	17.533.229	1+798.866	1+444.502	1+799.001		
28	21071.968	3155622.654	120-46-54.26	88.39	09-30-52.58	45.722	550.000	1.901	91.343	17.533.229	1+798.866	1+444.502	1+799.001		

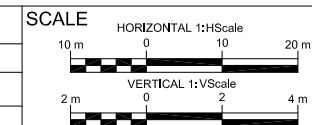
DESIGN LEVEL(m)		673.293	673.001	672.710	672.418	672.126	671.835	671.543	671.251	670.960	670.716	670.493	670.270	670.046	669.823	669.599	669.376
EXISTING LEVEL(m)		672.804	672.505	672.256	672.021	671.808	671.514	671.050	670.584	670.339	670.206	670.042	669.657	669.389	669.112	668.933	668.729
CHAINAGE(Km)		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)		0.489	0.496	0.454	0.397	0.318	0.321	0.493	0.668	0.621	0.511	0.451	0.613	0.657	0.710	0.667	0.647
SUPER ELEVATION																	
HORIZONTAL ALIGNMENT	RIGHT																
	LEFT																



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 :



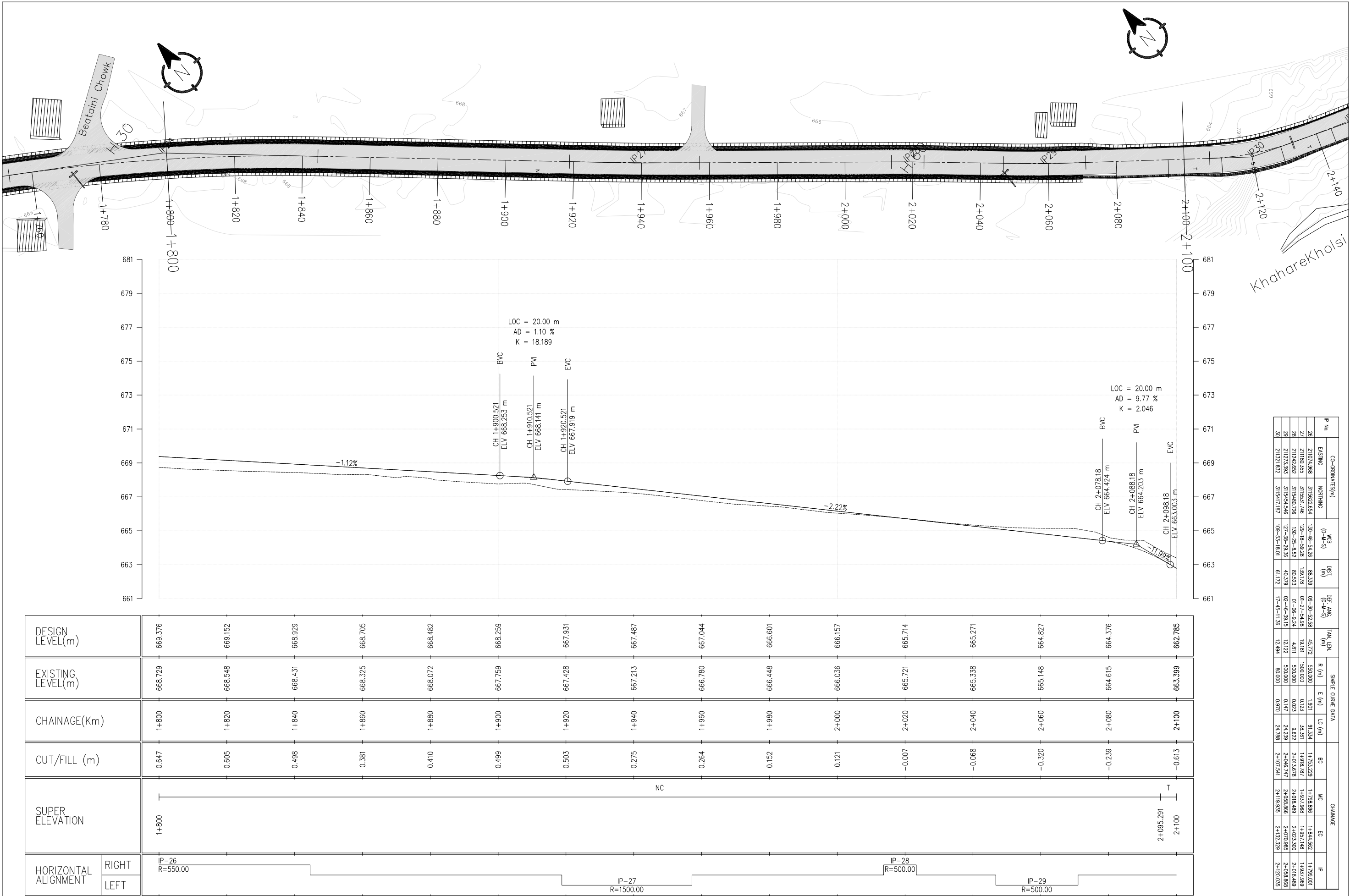
Plan & Profile

1+500-1+800

DATE: Oct-2023

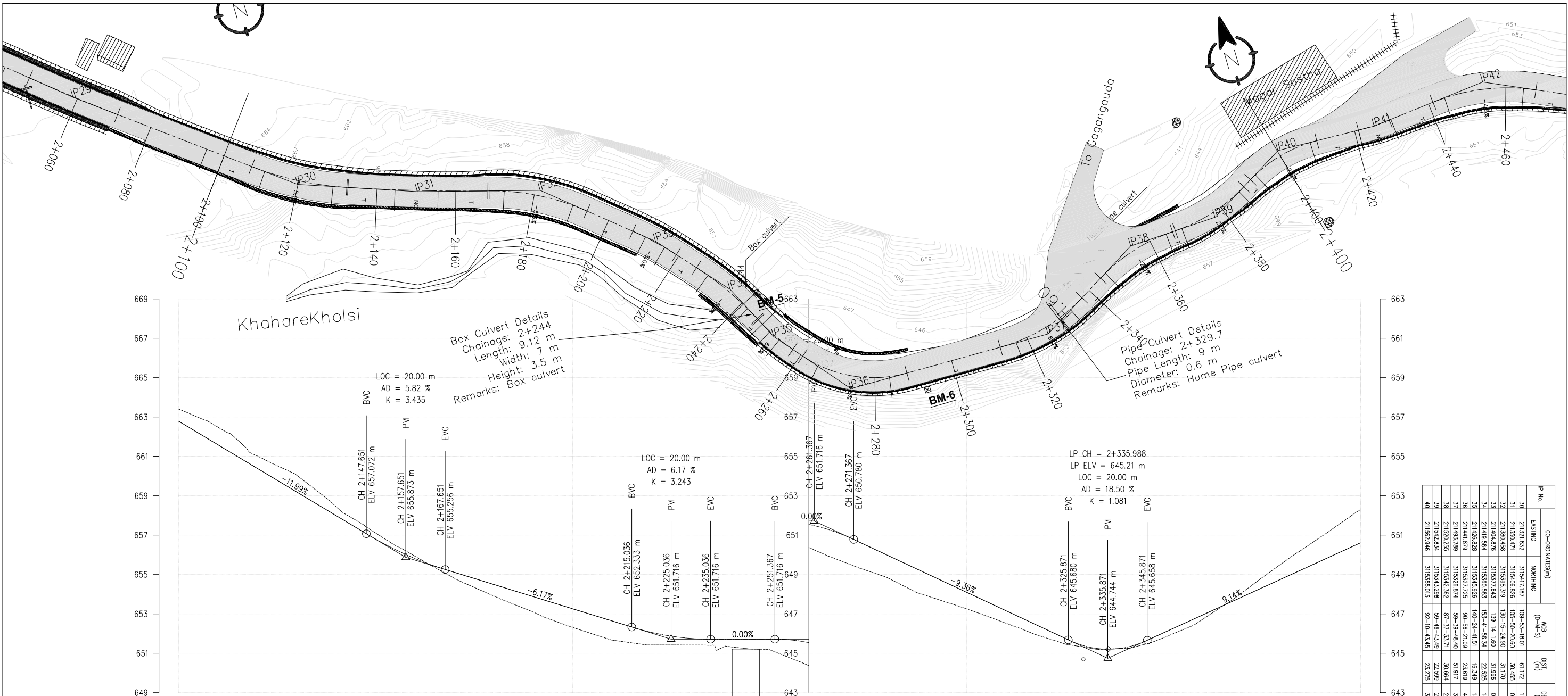
DRG NO : 1

SHEET NO : 6



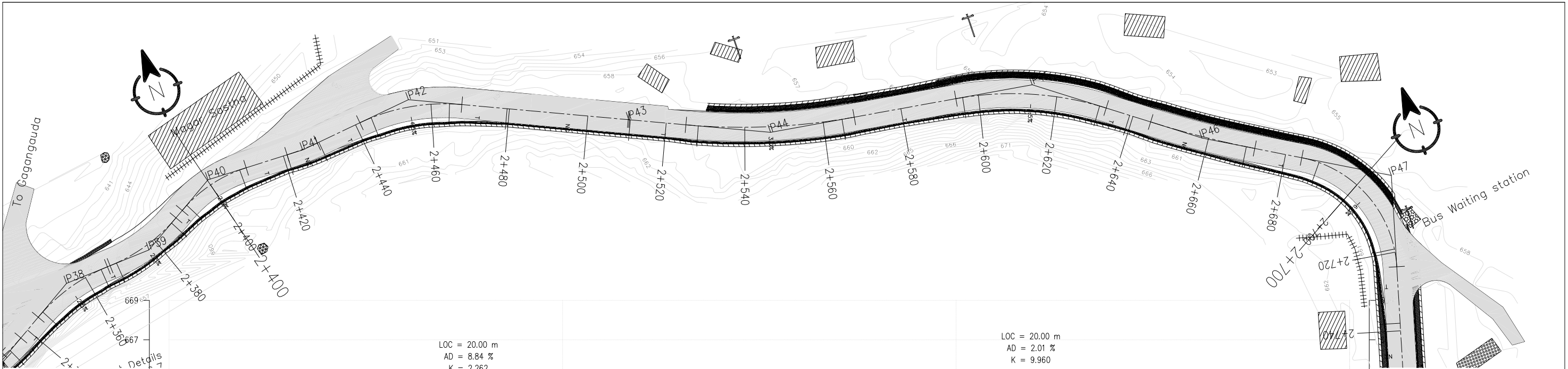
DESIGN LEVEL(m)	669.376	669.152	668.929	668.705	668.482	668.259	667.931	667.687	667.044	666.601	666.157	665.599	665.338	665.149	664.376	662.785
EXISTING LEVEL(m)	668.729	668.548	668.431	668.325	668.072	667.759	667.428	667.121	666.780	666.448	666.036	665.721	665.338	665.149	664.615	663.399
CHAINAGE(Km)	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)	0.647	0.605	0.498	0.381	0.410	0.499	0.503	0.275	0.264	0.152	0.121	0.007	-0.068	-0.320	-0.239	-0.613
SUPER ELEVATION	NC															
HORIZONTAL ALIGNMENT	<div><div>RIGHT</div><div>LEFT</div></div> <div><div>IP-26 R=550.00</div><div>IP-27 R=1500.00</div><div>IP-28 R=500.00</div><div>IP-29 R=500.00</div></div>															

IP No.	CO-ORDINATES(m)		WCB (0-M-S)	DIST. (m)	DEF. ANG. (0-M-S)	TAN. LEN. (m)	SAMPLE CHARGE DATA				CHAINAGE			
	EASTING	NORTHING					R (m)	E (m)	LC (m)	BC	MC	EC	IP	
26	21074.968	315622.654	130-46-54.28	86.339	09-30-52.96	45.772	550.000	1.901	91.334	1+753.229	1+788.886	1+844.562	1+799.001	
27	21180.355	315531.746	129-18-59.28	139.178	01-27-54.98	19.181	1500.000	0.123	38.361	1+918.187	1+937.968	1+957.148	1+937.989	
28	21142.652	315480.726	130-25-8.52	80.523	01-06-9.74	4.811	500.000	0.023	9.622	2+030.578	2+010.489	2+023.300	2+018.489	
29	21173.393	315454.546	127-36-29.36	40.379	02-46-39.15	12.122	500.000	0.147	24.239	2+046.747	2+058.866	2+070.985	2+058.865	
30	21121.632	315417.187	109-53-18.01	61.172	17-45-11.36	12.494	80.000	0.970	24.788	2+072.541	2+110.935	2+132.329	2+120.035	

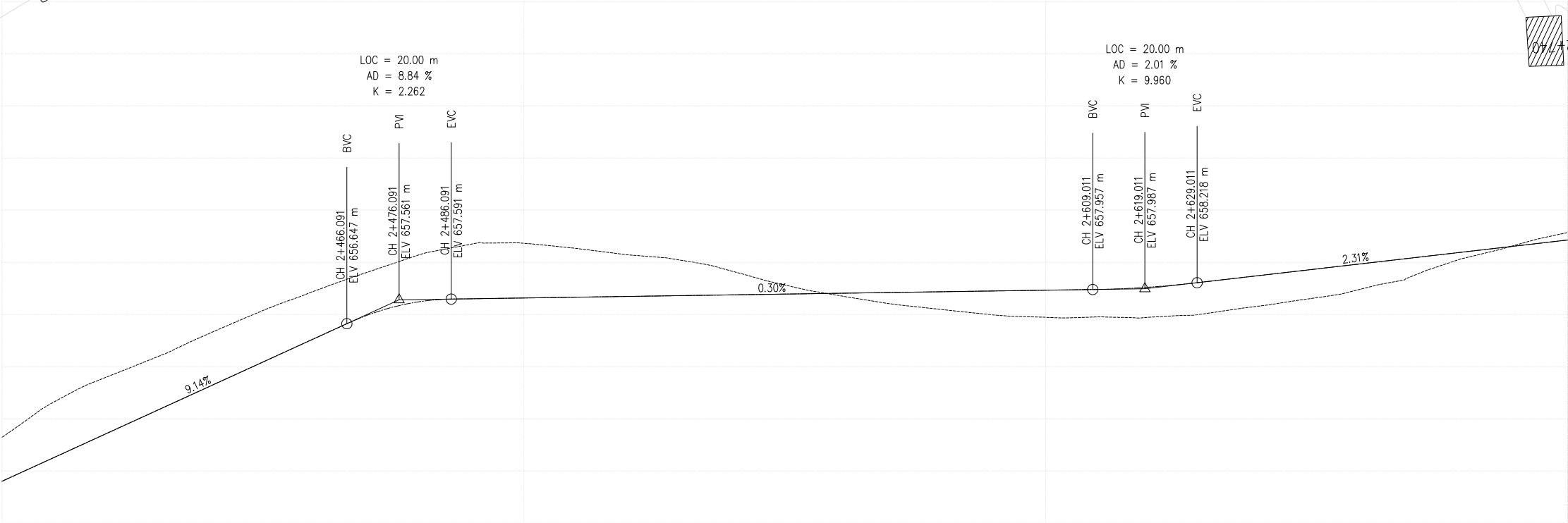


P No.	CO-ORDINATE(m)		WCB (0-M-S)	DIST (0-M-S)	DEF. ANG. (0-M-S)	TAN. LEN.	SAMPLE CHARGE DATA				CHAINAGE			
	EASTING	NORTHING					R (m)	E (m)	LC (m)	BC	WC	EC	IP	
30	211321.832	315471.871	109-53-18.01	611.72	17-45-11.36	12.444	80.000	0.970	24.788	2+107.244	2+119.935	2+132.329	2+120.035	
31	211350.471	315406.826	105-50-20.60	50.485	04-02-57.41	17.676	50.000	0.312	35.337	2+132.615	2+150.283	2+167.952	2+150.297	
32	211380.458	315398.319	130-15-24.90	51.170	24-25-4.30	12.982	60.000	1.388	25.570	2+168.444	2+181.249	2+194.034	2+181.446	
33	211404.876	315377.643	139-14-1.60	51.996	08-58-36.70	6.280	80.000	0.246	12.534	2+206.708	2+213.035	2+219.302	2+213.048	
34	211419.584	315360.583	153-41-56.34	22.525	14-27-54.74	10.153	80.000	0.642	20.197	2+225.394	2+235.483	2+245.592	2+235.447	
35	211426.828	315345.926	140-24-41.51	16.349	13-17-14.83	5.824	50.000	0.338	11.595	2+245.984	2+255.934	2+265.992	2+251.788	
36	211441.879	315327.725	90-56-21.09	23.619	49-28-20.42	14.743	32.000	3.233	27.631	2+260.611	2+274.427	2+288.242	2+275.554	
37	211493.789	315326.874	59-39-48.40	51.917	31-06-32.69	12.966	45.000	1.574	24.964	2+312.820	2+325.102	2+337.384	2+325.154	
38	211520.255	315342.362	87-37-33.71	50.664	27-57-45.31	11.204	43.000	1.302	20.889	2+344.248	2+352.229	2+366.209	2+355.452	
39	211542.834	315343.288	59-46-43.49	22.589	27-50-50.22	10.660	35.000	1.447	19.792	2+366.844	2+373.293	2+387.843	2+377.604	
40	211562.946	315355.013	92-10-43.45	23.275	32-23-59.96	10.168	35.000	1.447	19.792	2+390.289	2+400.185	2+410.081	2+400.458	

DESIGN LEVEL(m)		EXISTING LEVEL(m)	CHAINAGE(Km)	CUT/FILL (m)	SUPER ELEVATION	HORIZONTAL ALIGNMENT	
662.785		663.399	2+100	-0.613	2+100	RIGHT	IP-30 R=80.00
660.387		661.016	2+120	-0.628	2+111.041	LEFT	IP-31 R=500.00
657.989		658.439	2+140	-0.450	2+144.579		
655.813		655.929	2+160	-0.116	2+155.514		
654.494		653.910	2+180	0.584	2+172.314		IP-32 R=60.00
653.260		652.313	2+200	0.947	2+190.184		IP-33 R=80.00
652.065		651.422	2+220	0.642	2+210.268		IP-34 R=80.00
651.716		651.331	2+240	0.385	2+228.894		IP-35 R=50.00
651.541		650.372	2+260	1.170	2+242.092		IP-36 R=32.00
649.972		648.830	2+280	1.142	2+250.164		IP-37 R=45.00
648.101		647.256	2+300	0.845	2+253.359		IP-38 R=45.00
646.229		645.798	2+320	0.432	2+265.161		IP-39 R=43.00
645.281		645.252	2+340	0.029	2+283.692		
646.950		646.730	2+360	0.220	2+317.02		
648.778		649.554	2+380	-0.776	2+333.184		
650.806		652.294	2+400	-1.688	2+345.998		

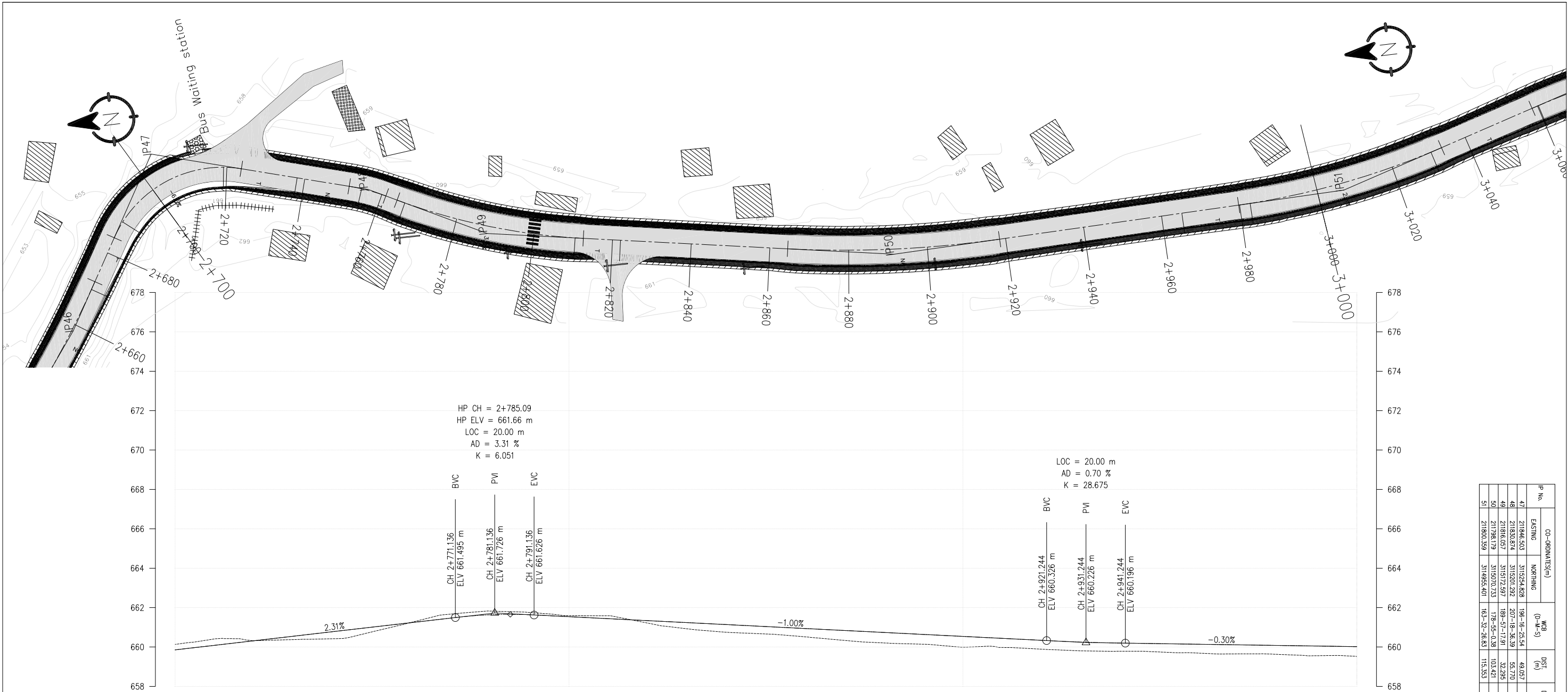


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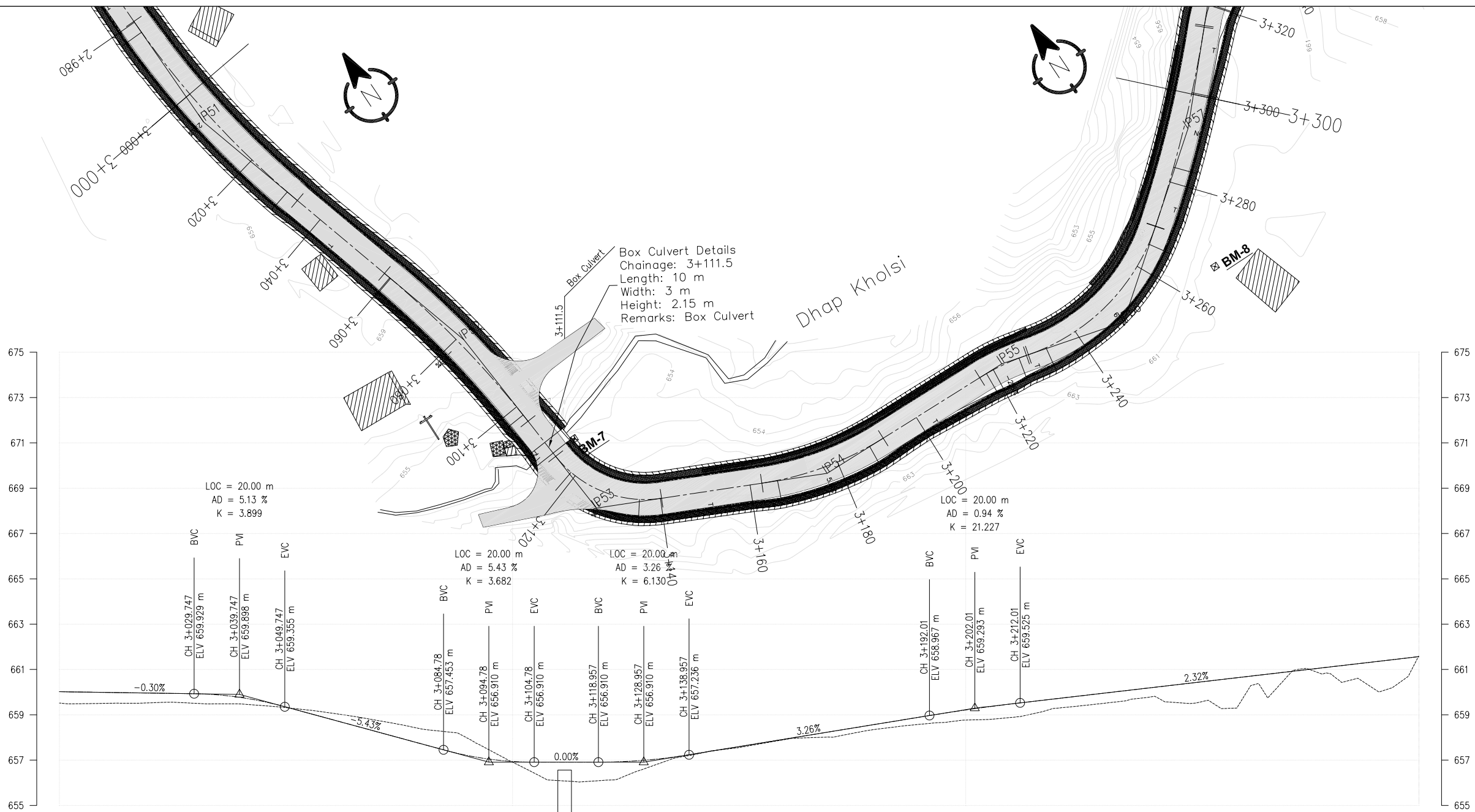
DESIGN LEVEL(m)		650.606		652.434		654.262		656.091		657.491		657.633		657.692		657.752		657.811		657.871		657.930		658.051		658.471		658.932		659.393		659.855			
EXISTING LEVEL(m)		652.294		654.599		656.299		657.909		659.292		659.729		659.286		658.655		657.739		657.191		656.892		656.896		657.299		657.953		659.151		660.132			
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+680		2+700			
CUT/FILL (m)		-1.688		-2.165		-2.037		-1.818		-1.801		-2.096		-1.593		-0.903		0.073		0.679		1.038		1.154		1.172		0.979		0.242		-0.278			
SUPER ELEVATION		<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><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IP No.	CO-ORDINATES(m)		WCB (0-M-S)	DIST. (m)	DEF. ANG. (0-M-S)	TAN LEN. (m)	SAMPLE CHARGE DATA				CHAINAGE			
	EASTING	NORTHING					R (m)	E (m)	LC (m)	BC (m)	MC	EC	IP	
40	211862.946	311555.013	92-10-43.45	23.275	32-23-59.96	10.68	35.000	1.447	19.792	2+390.289	2+400.185	2+410.081	2+420.495	
41	211861.133	311554.055	84-18-48.02	25.205	07-51-54.43	4.125	60.000	0.142	8.238	2+420.993	2+423.111	2+429.230	2+435.118	
42	211817.740	311557.003	114-50-45.64	29.794	30-31-56.62	13.647	50.000	1.829	26.645	2+441.712	2+444.435	2+446.857	2+454.659	
43	211868.780	311533.370	114-45-22.72	56.245	00-05-22.92	0.157	200.000	0.000	0.313	2+510.299	2+510.435	2+510.612	2+510.455	
44	211701.628	311518.222	99-22-31.15	36.172	15-22-51.58	21.606	160.000	1.492	42.952	2+525.022	2+546.498	2+567.974	2+586.828	
45	211788.288	311530.216	127-04-16.18	67.563	27-41-45.03	19.721	80.000	2.395	38.671	2+594.710	2+615.545	2+632.881	2+646.828	
46	211804.370	311527.956	120-48-43.94	45.222	06-15-32.74	13.669	250.000	0.373	27.310	2+658.368	2+672.023	2+685.381	2+698.381	
47	211846.503	311524.828	196-16-25.54	49.057	75-27-41.60	23.212	30.000	7.932	39.512	2+703.955	2+703.955	2+723.711	2+707.412	



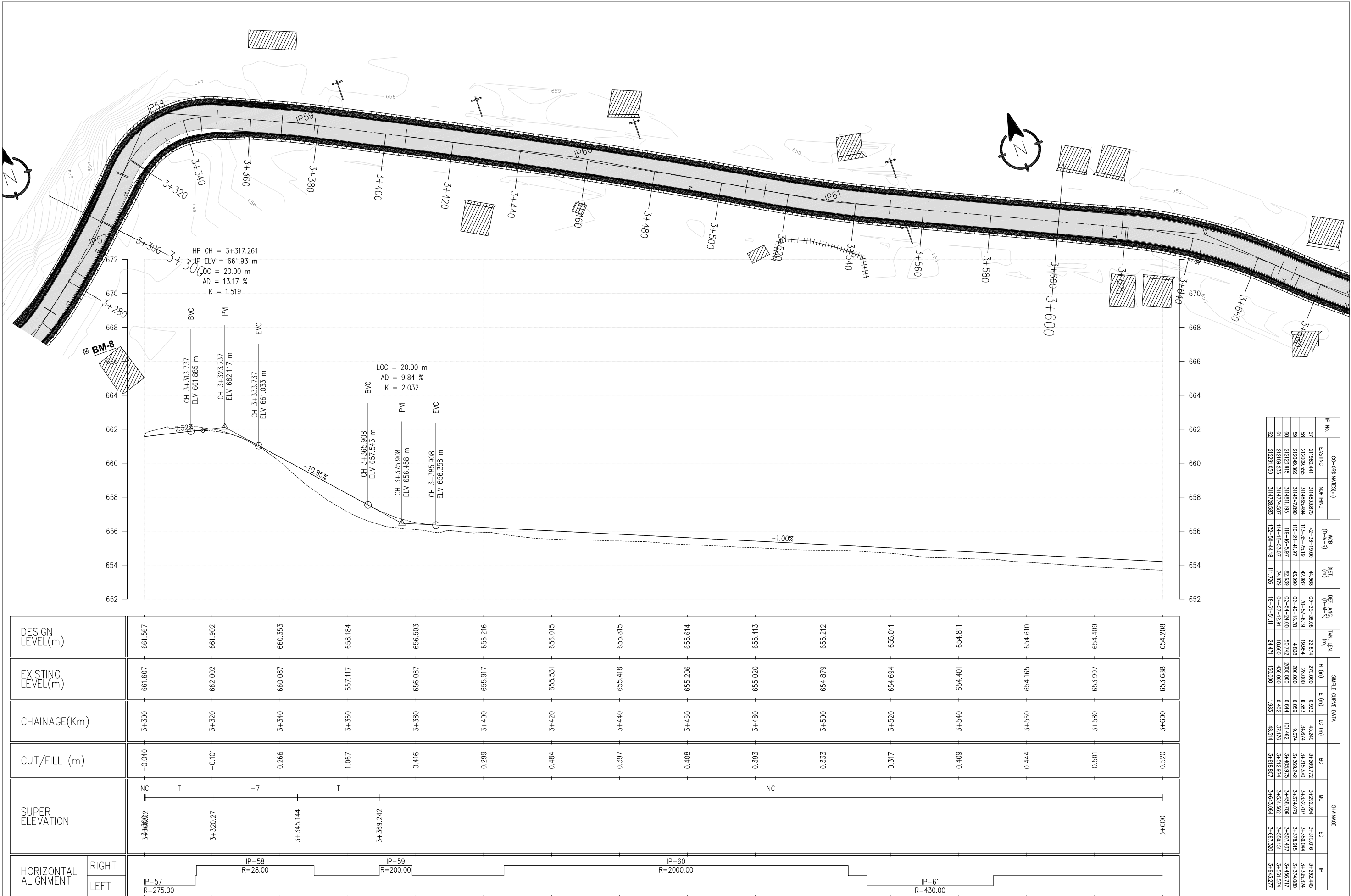
DESIGN LEVEL(m)	659.855	660.316	660.777	661.238	661.634	661.537	661.337	661.137	660.938	660.738	660.538	660.338	660.200	661.099	660.075	660.099
EXISTING LEVEL(m)	660.132	660.320	660.419	661.251	661.824	661.590	661.213	660.747	660.514	660.205	659.990	659.888	659.784	659.689	659.625	659.519
CHAINAGE(Km)	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)	-0.278	-0.004	0.358	-0.013	-0.189	-0.052	0.124	0.390	0.424	0.533	0.548	0.450	0.415	0.451	0.454	0.499
SUPER ELEVATION	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>															
HORIZONTAL ALIGNMENT	RIGHT	IP-47 R=30.00														
	LEFT	IP-48 R=50.00														

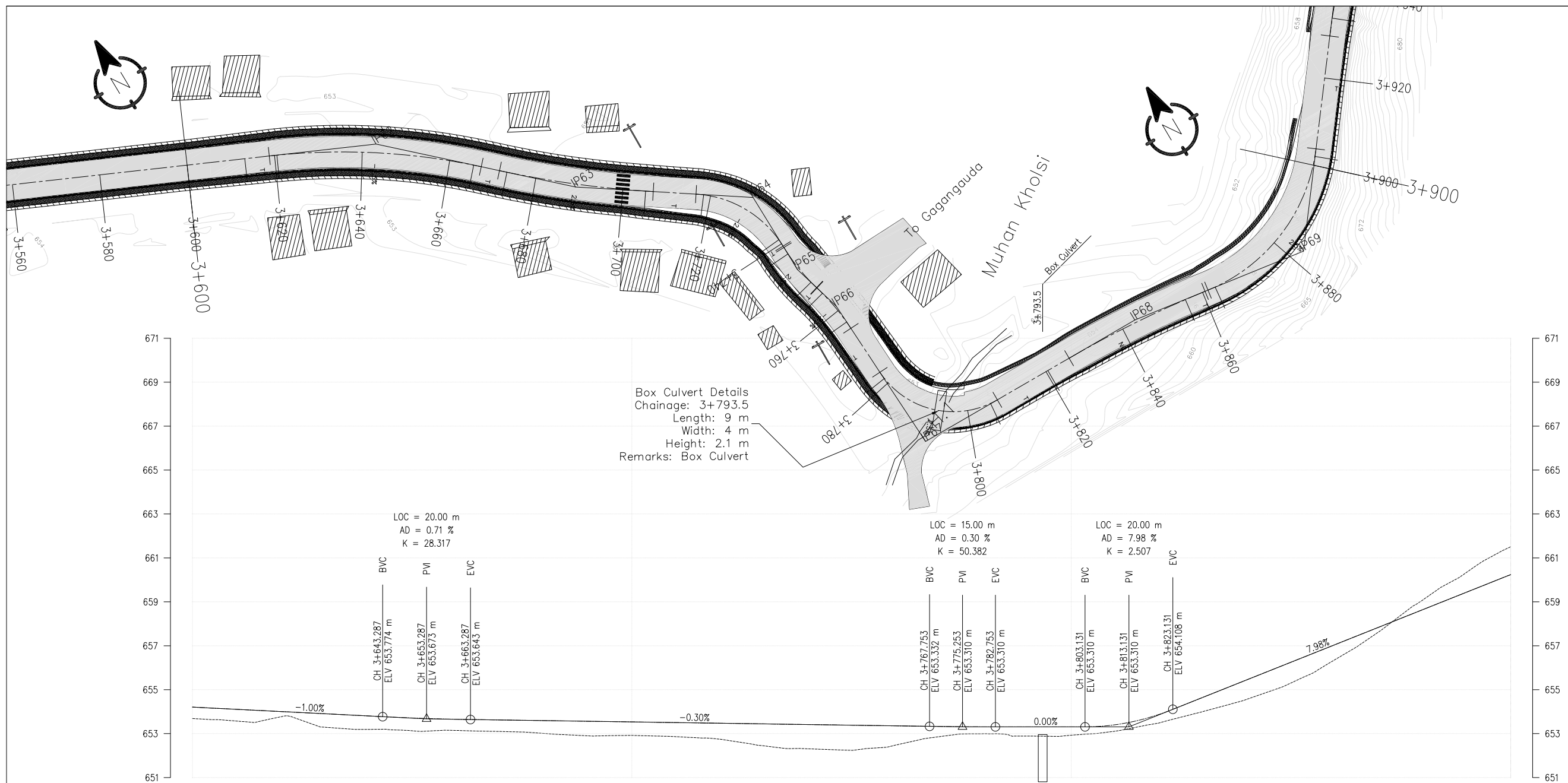
IP No.	CO-ORDINATES(m)		WCB (0-M-S)	DIST. (m)	DEF. ANG. (0-M-S)	TAN LEN. (m)	SAMPLE CHARGE DATA				CHAINAGE			
	EASTING	NORTHING					R (m)	E (m)	LC (m)	BC	MC	EC	IP	
47	21846.503	315524.828	196-16-25.54	48.037	75-27-41.00	23.212	30.000	7.932	39.512	2+684.199	2+703.965	2+723.711	2+707.412	
48	21850.874	315201.292	207-18-36.39	55.770	11-02-10.84	4.830	50.000	0.233	9.631	2+751.438	2+761.294	2+761.089	2+756.269	
49	21816.057	315172.397	189-57-17.91	32.295	17-27-18.47	24.419	160.000	1.853	48.465	2+764.114	2+783.347	2+812.579	2+788.554	
50	21196.179	315070.733	178-55-0.38	103.421	11-02-17.53	27.035	200.000	1.304	53.943	2+864.525	2+891.487	2+918.468	2+891.380	
51	21800.339	314955.401	163-32-26.83	115.353	15-22-33.55	26.998	200.000	1.814	53.672	2+979.068	3+000.604	3+033.440	3+006.766	



DESIGN LEVEL(m)	660.018	659.958	659.763	658.798	657.712	656.941	656.910	657.270	657.922	658.575	659.212	659.710	660.174	660.639	661.103	661.567
EXISTING LEVEL(m)	659.519	659.527	659.478	659.075	658.370	656.906	656.104	657.238	657.904	658.354	658.765	659.290	659.762	659.355	660.832	661.607
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)	0.499	0.431	0.285	-0.277	-0.657	0.034	0.806	0.032	0.019	0.221	0.447	0.421	0.413	1.283	0.271	-0.040
SUPER ELEVATION	3+000 2.5 T 3+030.523 T 3+060.247 -2.5 3+102.295 T 3+118.818 7 3+135.345 T 3+166.121 5 3+187.875 T 3+218.27 -2.5 3+226.222 T 3+232.609 6 3+265.512 T 3+283.362 NC 3+300															
HORIZONTAL ALIGNMENT	RIGHT	IP-52 R=220.00														
	LEFT	IP-51 R=200.00 IP-53 R=25.00 IP-54 R=70.00 IP-55 R=50.00 IP-56 R=45.00 IP-57 R=275.00														

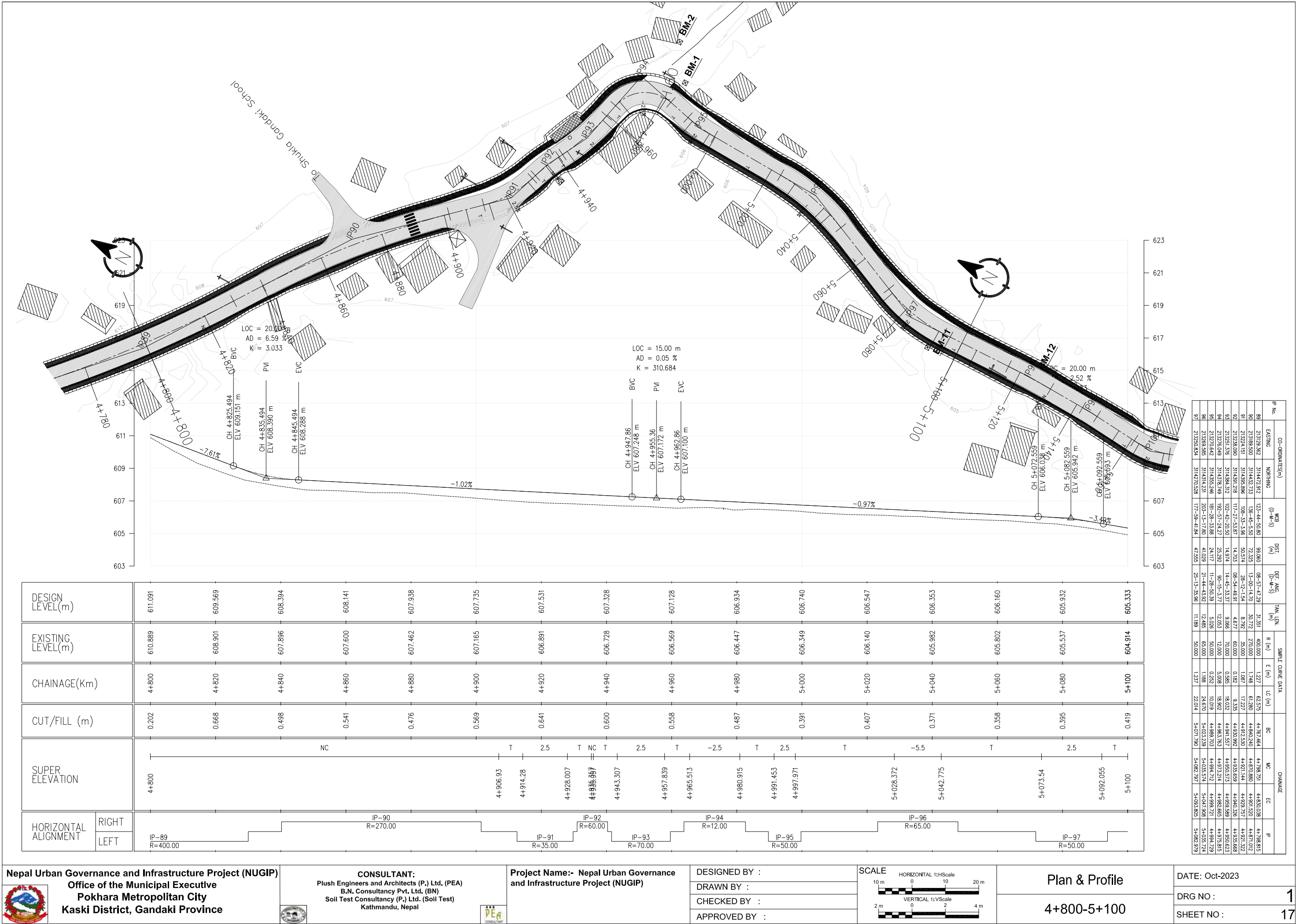
IP No.	CO-ORDINATES(m)		WCB (0-M-S)	DIST. (m)	DEF. ANG. (0-M-S)	TAN LEN. (m)	SAMPLE CHARGE DATA				CHAINAGE			
	EASTING	NORTHING					R (m)	E (m)	LC (m)	RC	WC	EC	IP	
51	211800.599	3114855.401	163-32-28.63	115.533	15-22-33.55	26.998	200.000	1.814	53.672	2+197.788	3+008.604	3+033.440	3+006.786	
52	211821.594	3114863.559	175-24-11.69	74.911	11-18-44.86	22.895	220.000	1.184	45.349	3+058.497	3+081.271	3+104.045	3+081.353	
53	211825.372	3114836.450	115-03-57.18	47.261	60-20-14.51	14.532	25.000	3.917	26.327	3+133.818	3+127.082	3+140.245	3+128.450	
54	211872.013	3114814.636	91-31-49.37	51.490	22-32-7.81	14.583	70.000	1.503	28.794	3+162.821	3+176.988	3+191.315	3+177.204	
55	211917.475	3114813.421	104-39-13.81	45.479	13-07-24.44	5.791	50.000	0.330	11.452	3+165.520	3+222.246	3+227.912	3+222.271	
56	211944.974	3114806.231	52-03-55.06	28.423	52-25-18.75	22.235	45.000	5.193	41.303	3+228.009	3+229.051	3+236.712	3+250.644	
57	211980.441	3114833.875	42-36-19.00	44.968	09-25-36.06	22.674	275.000	0.933	45.245	3+289.772	3+292.394	3+315.016	3+292.445	

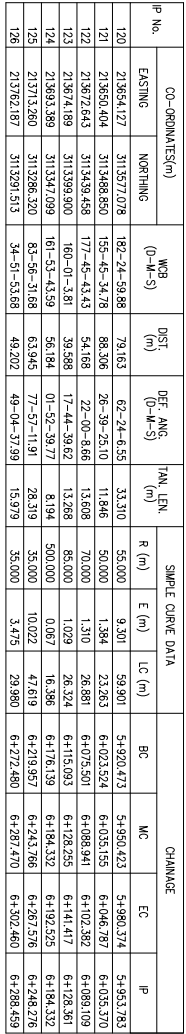







DESIGN LEVEL(m)		EXISTING LEVEL(m)	CHAINAGE(Km)	CUT/FILL (m)	SUPER ELEVATION	HORIZONTAL ALIGNMENT
	654.208	653.688	3+600	0.520	NC	
	654.007	653.763	3+620	0.244	T	
	653.807	653.193	3+640	0.614	-2.5	
	653.655	653.147	3+660	0.508	T	
	653.594	653.010	3+680	0.584	2.5	
	653.534	652.919	3+700	0.615	T	
	653.474	652.750	3+720	0.724	-2.5	
	653.415	652.311	3+740	1.104	T	
	653.355	652.477	3+760	0.878	2.5	
	653.311	652.996	3+780	0.315	T	
	653.310	652.928	3+800	0.382	2.5	
	653.878	653.487	3+820	0.390	T	
	655.453	654.567	3+840	0.887	NC	
	657.049	656.366	3+860	0.683	T	
	658.644	659.085	3+880	-0.440	2.5	
	660.240	661.504	3+900	-1.264		

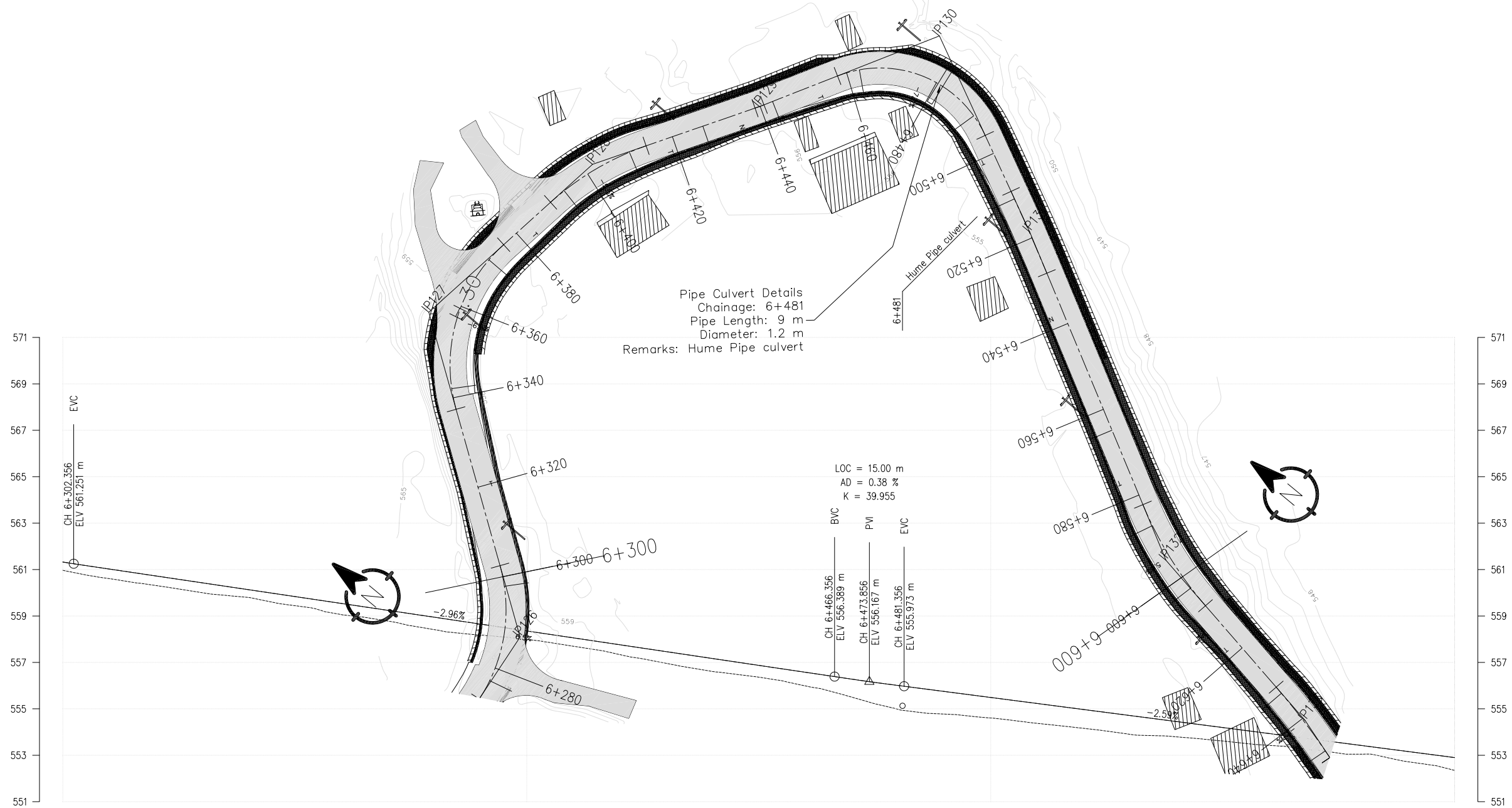
IP No.	CO-ORDINATES(m)		WPS (0-M-S)	DIST (m)	DEF AN (0-M-S)	TAN LEN (m)	SIMPLE CURVE DATA				CHANGING		
	EASTING	NORTHING					R (m)	E (m)	LC (m)	EC	MC	EC	IP
62	212291.050	314728.583	132-50-44.81	111.726	18-31-51.11	24.471	150.000	1.863	46.514	314678.807	314643.064	314667.320	314633.277
63	212325.087	314697.014	124-02-17.18	46.123	08-48-26.26	17.712	20.000	0.681	35.355	314671.561	314689.238	314665.915	316892.973
64	212358.622	314654.362	170-01-44.32	40.469	15-09-26.41	13.012	25.000	3.183	23.994	31476.660	314728.650	314740.655	314729.672
65	212368.950	314654.065	163-09-26.75	19.309	15-02-17.57	5.940	45.000	0.390	11.811	31474.013	31476.916	314762.823	314766.952
66	212382.287	314643.423	171-5-20.04	12.102	13-52-38.08	18.864	52.000	0.350	12.039	314752.940	314752.940	314786.978	314795.966
67	212384.054	314646.054	98-27-42.03	36.904	86-42-56.21	6.000	20.000	7.966	30.268	314792.087	314807.220	314807.220	314807.220
68	212401.931	314569.038	98-27-42.03	55.042	60-47-54.25	12.778	250.000	0.396	34.502	314820.100	314843.515	314860.621	314843.794
69	212420.913	314599.046	98-27-42.03	41.470	60-47-54.25	23.661	40.000	6.372	42.436	314827.551	314827.551	314827.551	314827.551





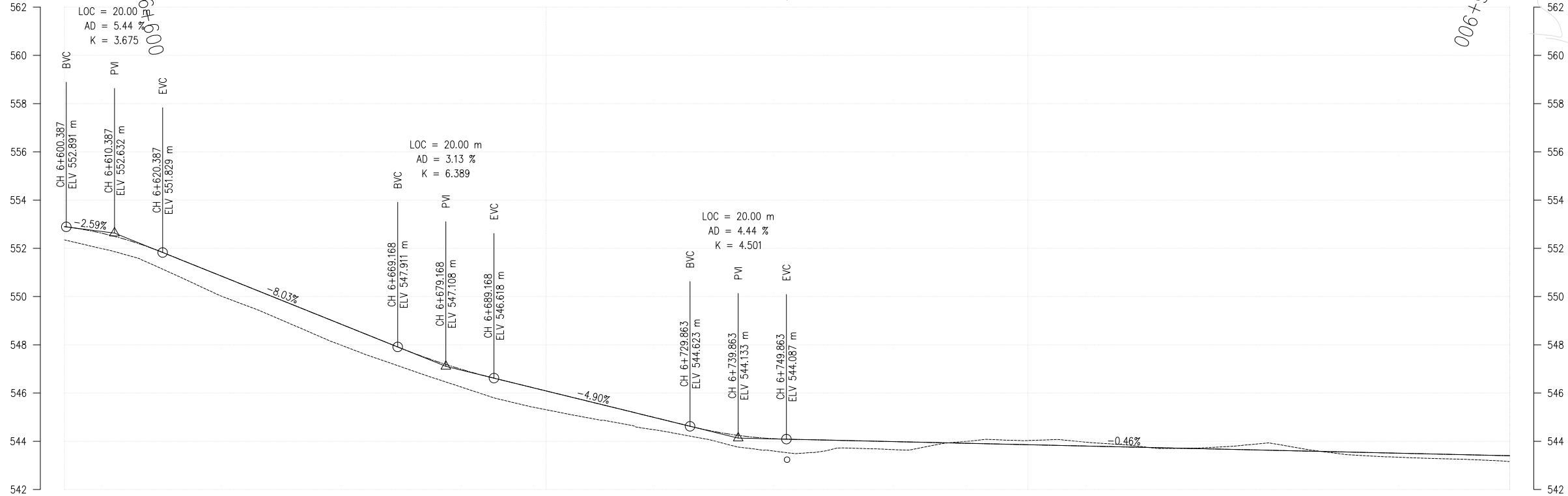
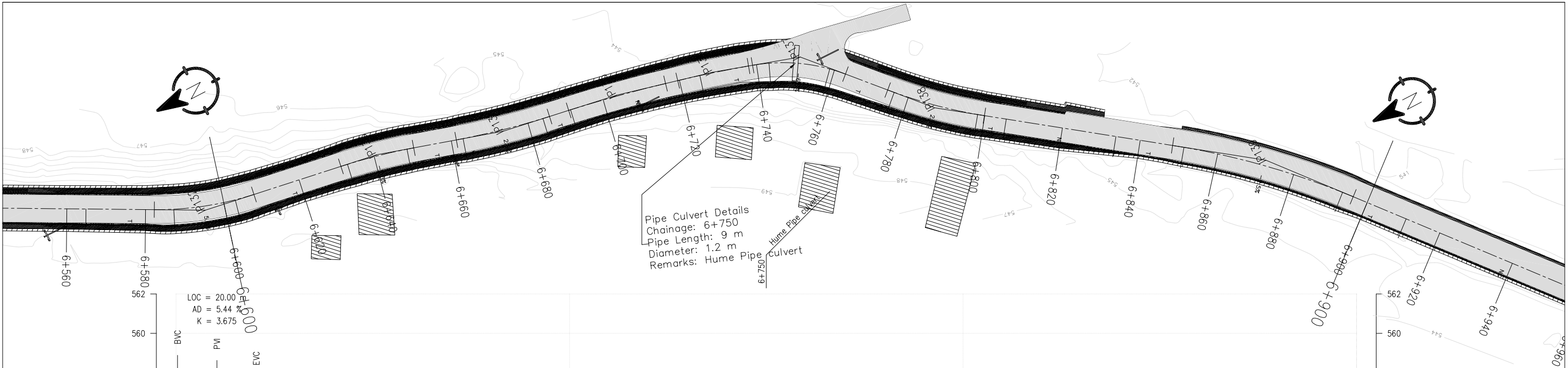
DESIGN LEVEL(m)		EXISTING LEVEL(m)	CHAINAGE(Km)	CUT/FILL (m)	SUPER ELEVATION	HORIZONTAL ALIGNMENT
	591.991	591.668	6+000	0.324		RIGHT
	589.635	589.582	6+020	0.053		LEFT
	587.279	587.091	6+040	0.188		
	584.922	584.581	6+060	0.341		
	582.566	582.662	6+080	-0.096		
	580.262	580.699	6+100	-0.436		
	578.643	578.436	6+120	0.207		
	577.233	576.253	6+140	0.980		
	575.436	574.107	6+160	1.329		
	573.337	572.369	6+180	0.968		
	571.238	570.696	6+200	0.542		
	569.140	568.770	6+220	0.369		
	567.041	566.547	6+240	0.495		
	564.942	564.267	6+260	0.675		
	562.844	562.172	6+280	0.672		
	561.331	560.969	6+300	0.362		

 <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>	DESIGNED BY :	<p>SCALE</p> <p>HORIZONTAL 1:HScale 10 m 0 10 20 m</p> <p>VERTICAL 1:VScale 2 m 0 2 4 m</p>	<p>Plan & Profile</p> <p>6+000-6+300</p>	DATE: Oct-2023
			DRAWN BY :			DRG NO : 1
			CHECKED BY :			SHEET NO : 21
			APPROVED BY :			



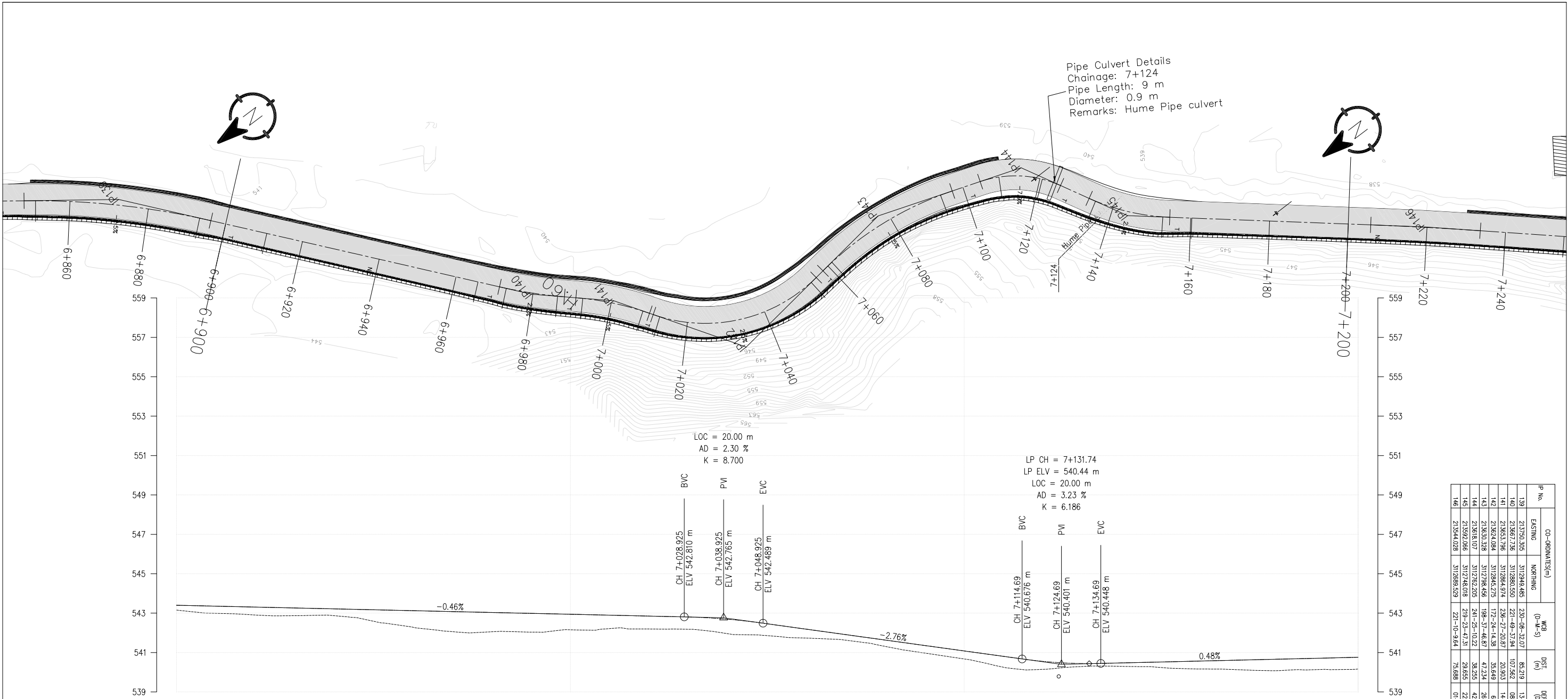
DESIGN LEVEL(m)		561.331																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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IP No.	CO-ORDINATES	WGS 84	DIST (m)	DEF. ANG. (0-360°)	TAN. LEN.	SAMPLE CHAIN DATA							
						R (m)	E (m)	LC (m)	BC	WC	PC	IP	
126	217032.187	313293.513	54.51-53.66	48.202	49-04.37-39.9	15.979	35.000	3.475	29.980	6-2122.480	6-2128.470	6-2032.460	6-2088.659
127	219500.724	313531.505	98-29-15.86	77.662	62-59-12.58	21.716	68.000	38.872	61-337.427	6-1956.863	6-1736.295	6-1509.433	6-1402.223
128	219500.741	313534.105	121-29-11.51	77.640	22-59-12.68	12.200	60.000	1.228	24.072	6-1939.923	6-1400.959	6-1430.983	6-1440.984
129	219500.724	313532.322	119-08-52.55	38.969	02-20-18.00	2.021	50.000	0.010	2.041	6-1438.843	6-1434.863	6-1430.884	6-1431.908
130	219593.576	313530.938	205-48-30.48	61.645	86-39-38.42	23.554	25.000	9.939	37.813	6-1437.925	6-1476.831	6-1495.737	6-1481.508
131	219884.374	313762.003	189-55-20.73	46.463	02-12-30.65	9.626	50.000	0.003	19.249	6-1509.021	6-1507.021	6-1482.920	6-1478.920
132	219898.373	313944.400	68-00-51.62	76.584	18-25-30.19	12.975	80.000	1.045	25.727	6-1582.333	6-1595.006	6-1602.939	6-1595.008



DESIGN LEVEL(m)	552.901	551.860	550.254	548.648	547.133	546.087	545.107	544.241	544.041	543.950	543.858	543.767	543.675	543.583	543.492	543.400
EXISTING LEVEL(m)	552.351	551.172	549.459	547.790	546.405	545.308	544.550	543.757	543.701	543.820	544.031	543.856	543.766	543.603	543.315	543.155
CHAINAGE(Km)	6+600	6+620	6+640	6+660	6+680	6+700	6+720	6+740	6+760	6+780	6+800	6+820	6+840	6+860	6+880	6+900
CUT/FILL (m)	0.551	0.688	0.795	0.857	0.728	0.779	0.557	0.484	0.340	0.130	-0.173	-0.089	-0.091	-0.020	0.177	0.245
SUPER ELEVATION	5	T	-2.5	T	2.5	T	NC	T	-6	T	2.5	T	NC	T	-2.5	T
HORIZONTAL ALIGNMENT	RIGHT IP-132 R=80.00	RIGHT IP-133 R=150.00	RIGHT IP-134 R=200.00	RIGHT IP-135 R=350.00	RIGHT IP-136 R=300.00	RIGHT IP-137 R=45.00	RIGHT IP-138 R=125.00	RIGHT IP-139 R=200.00	RIGHT	RIGHT	RIGHT	RIGHT	RIGHT	RIGHT	RIGHT	RIGHT

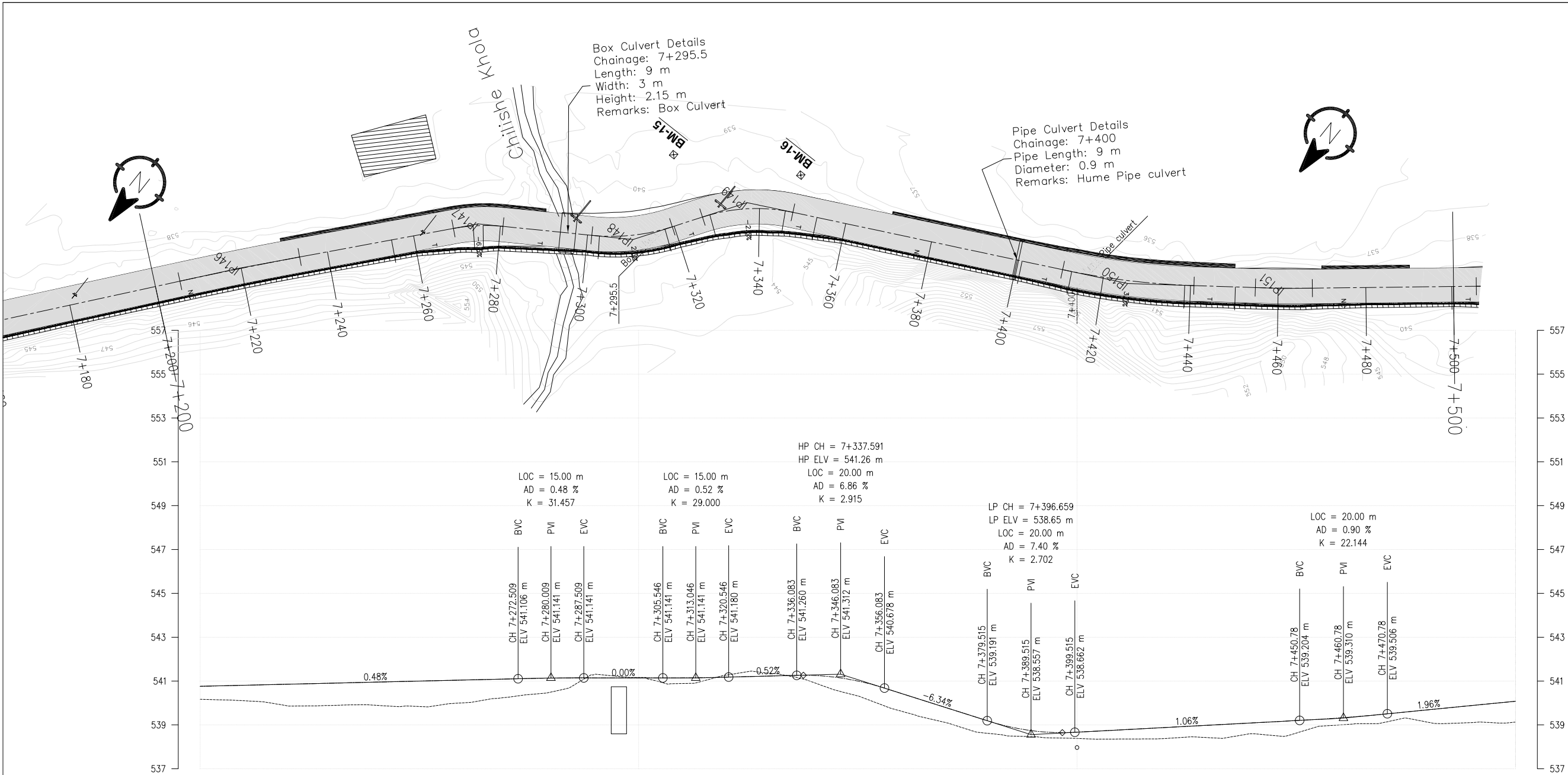
IP No.	CO-ORDINATES(m)		WCB (0-M-S)	DIST.	DEF. ANG. (0-M-S)	TAI LEN. (m)	SAMPLE CURVE DATA						
	EASTING	NORTHING					R (m)	E (m)	LC (m)	BC	MC	EC	IP
132	213863.373	311394.490	189-35-20.72	76.564	18-25-30.91	12.975	80.000	10.045	25.727	6+582.333	6+585.096	6+600.959	6+595.208
133	213865.751	311394.373	189-35-1.07	45.796	07-17-40.35	9.361	150.000	0.304	19.097	6+631.78	6+640.277	6+650.276	6+640.740
134	213846.271	311317.973	189-32-54.49	32.814	07-00-6.99	12.285	200.000	0.374	24.441	6+680.293	6+686.734	6+693.293	6+673.293
135	213841.050	311308.294	194-03-56.68	30.126	04-11-2.19	12.785	300.000	0.233	25.558	6+736.940	6+743.391	6+750.894	6+736.940
136	213834.939	311306.901	197-34-30.67	25.146	03-30-33.99	9.191	300.000	0.141	18.375	6+793.989	6+798.366	6+803.944	6+782.759
137	213828.137	311304.427	228-07-33.75	22.526	30-33-3.08	12.290	45.000	1.648	23.995	6+853.989	6+857.989	6+862.989	6+857.293
138	213800.930	3113018.038	216-26-42.90	36.539	11-40-50.55	12.786	120.000	0.652	25.484	6+913.989	6+917.989	6+922.989	6+917.293
139	213750.305	3112949.485	230-08-32.07	85.219	13-41-48.17	24.020	200.000	1.437	47.812	6+973.989	6+977.989	6+982.989	6+977.293



Pipe Culvert Details
Chainage: 7+124
Pipe Length: 9 m
Diameter: 0.9 m
Remarks: Hume Pipe culvert

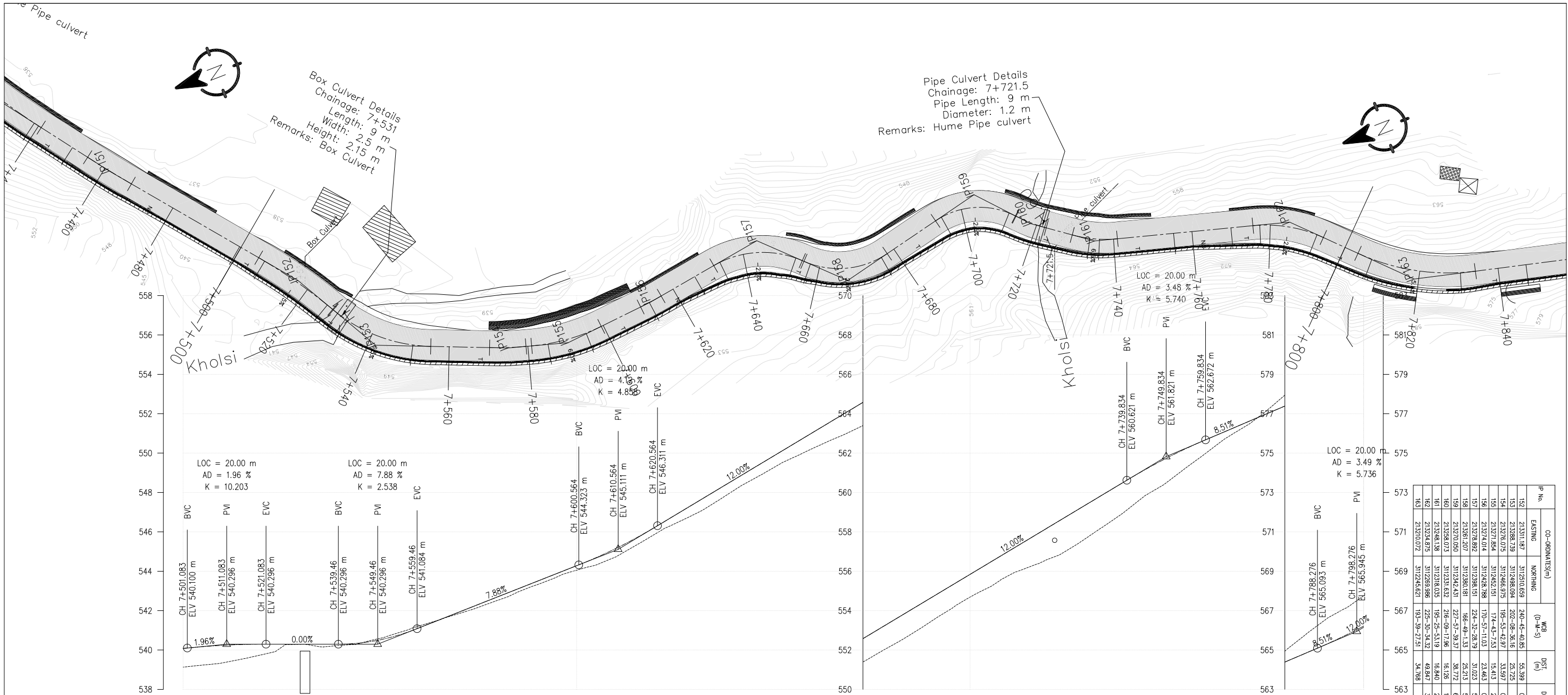
IP No.	CO-ORDINATE(m)		WCB (0-M-S)	DIST (m)	DEF. ANG. (0-M-S)	TAN. LEN (m)	SAMPLE CURVE DATA						CHAINAGE			
	EASTING	NORTHING					R (m)	E (m)	LC (m)	BC	MC	EC	IP			
139	21350.305	312949.485	230-08-32.07	86.219	13-41-49.17	24.020	200.000	1.437	47.812	6+848.343	6+872.249	6+896.155	6+920.353			
140	21360.736	312860.550	221-49-37.94	107.562	08-18-54.12	8.359	113.000	0.303	16.689	6+917.337	6+939.862	6+968.027	6+979.697			
141	21363.796	312864.974	236-27-20.87	20.903	14-37-42.31	9.627	75.000	0.615	19.149	6+980.343	7+003.018	7+010.092	7+020.710			
142	21362.084	312845.275	172-24-14.38	35.649	64-03-6.49	25.020	40.000	7.180	44.717	7+010.095	7+033.453	7+055.811	7+056.115			
143	213630.329	311298.456	198-37-46.87	47.234	26-13-32.49	19.800	85.000	2.276	38.907	7+068.225	7+077.678	7+097.131	7+078.025			
144	213618.107	311262.205	241-25-10.22	38.255	42-47-23.55	10.970	28.000	2.072	20.911	7+104.617	7+115.072	7+125.528	7+155.887			
145	213592.066	3112746.018	219-23-47.31	29.655	22-01-22.92	10.702	55.000	1.032	21.141	7+144.080	7+154.650	7+154.650	7+144.212			
146	213544.028	311289.529	221-10-9.64	75.688	01-46-22.33	13.925	900.000	0.108	27.848	7+219.635	7+233.559	7+233.559	7+219.635			

DESIGN LEVEL(m)		543.400	543.309	543.217	543.126	543.034	542.943	542.851	542.689	542.184	541.632	541.081	540.553	540.474	540.369	540.664	540.760
EXISTING LEVEL(m)		543.155	542.906	542.872	542.288	542.055	542.156	542.195	541.954	541.735	541.309	540.675	540.147	540.297	540.165	540.082	540.165
CHAINAGE(km)		6+900	6+920	6+940	6+960	6+980	7+000	7+020	7+040	7+060	7+080	7+100	7+120	7+140	7+160	7+180	7+200
CUT/FILL (m)		0.245	0.403	0.345	0.838	0.979	0.787	0.656	0.735	0.449	0.323	0.406	0.406	0.177	0.404	0.582	0.590
SUPER ELEVATION		T	NC			T	2.5	-2.5	T	2.5	-4.5	T	-7	T	2.5	NC	
HORIZONTAL ALIGNMENT		RIGHT															
		LEFT															



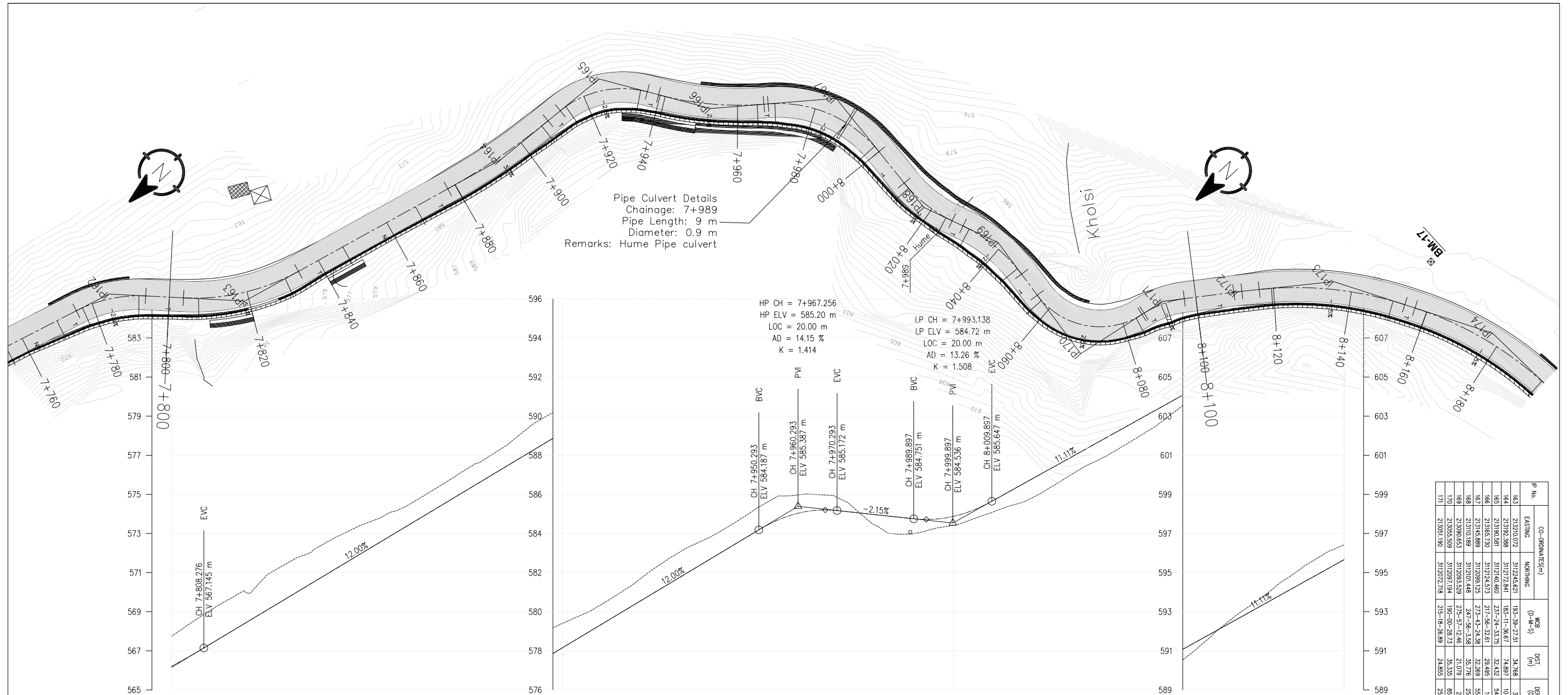
DESIGN LEVEL(m)	540.760	540.855	540.950	541.046	541.132	541.141	541.177	541.254	540.429	539.161	538.879	539.090	539.321	539.687	540.079
EXISTING LEVEL(m)	540.165	539.864	539.895	540.007	540.497	541.166	541.270	540.930	539.622	538.609	538.376	538.595	538.998	539.123	539.129
CHAINAGE(Km)	7+200	7+220	7+240	7+260	7+280	7+300	7+320	7+340	7+360	7+380	7+400	7+420	7+440	7+460	7+500
CUT/FILL (m)	0.595	0.991	1.055	1.039	0.636	-0.025	-0.093	0.324	0.808	0.552	0.286	0.503	0.495	0.564	0.950
SUPER ELEVATION	NC														
HORIZONTAL ALIGNMENT	RIGHT LEFT														

P No.	CO-ORDINATES	WCB	DIST (m)	DEF. ANG.	TAJ. LEN.	SAMPLE CHAIN. DATA				CHAINAGE			
						R (m)	E (m)	C (m)	BC	MC	EC	TP	
146	213544.028	312689.529	221-10-9.64	75.688	01-46-22.33	13.925	900.000	0.108	27.848	7+205.710	7+219.635	7+233.559	7+249.536
147	213550.608	312647.881	237-27-18.98	55.326	16-17-9.34	5.723	40.000	0.407	11.370	7+269.286	7+280.606	7+294.960	7+309.393
148	213477.672	312628.777	213-46-18.49	35.512	22-41-0.49	9.435	40.000	0.979	18.601	7+300.099	7+310.260	7+319.560	7+330.395
149	213462.468	312606.041	243-41-24.21	27.351	29-55-5.72	10.687	40.000	1.403	20.880	7+330.789	7+339.233	7+347.676	7+357.477
150	213382.919	312566.709	233-30-3.33	88.741	10-00-52.87	15.144	110.000	0.673	30.209	7+424.690	7+434.794	7+444.794	7+454.794
151	213354.255	312545.505	231-01-28.16	35.655	02-29-3.18	6.505	30.000	0.073	13.007	7+464.801	7+474.801	7+484.801	7+494.801
152	213311.187	312510.659	240-45-40.65	55.399	09-44-12.70	11.499	135.000	0.489	22.942	7+505.204	7+515.675	7+526.146	7+536.617



DESIGN LEVEL(m)	540.079	540.295	540.297	541.127	542.703	544.279	546.244	548.643	551.043	553.442	555.842	558.241	560.641	562.686	564.389	566.211
EXISTING LEVEL(m)	539.129	539.759	540.239	541.222	542.526	544.051	545.894	548.108	550.236	552.216	554.686	556.625	559.134	562.007	564.944	567.747
CHAINAGE(Km)	7+500	7+520	7+540	7+560	7+580	7+600	7+620	7+640	7+660	7+680	7+700	7+720	7+740	7+760	7+780	7+800
CUT/FILL (m)	0.950	0.536	0.057	-0.095	0.177	0.228	0.350	0.536	0.807	1.226	1.156	1.616	1.507	0.679	-0.555	-1.536
SUPER ELEVATION	T -2.5 T 6.5 T 6 T 0.177 NC 0.350 T -2.5 T 2.5 T 1.226 T -2.5 T 6.5 T NC T -2.5 T															
HORIZONTAL ALIGNMENT	RIGHT LEFT IP-152 R=135.00 IP-153 R=40.00 IP-154 R=85.00 IP-155 R=50.00 IP-156 R=90.00 IP-157 R=25.00 IP-158 R=22.00 IP-159 R=20.00 IP-160 R=40.00 IP-161 R=32.00 IP-162 R=35.00															

IP No.	CO-ORDINATES(m)		WBS (0+M-S)	DIST (m)	DEF. ANG. (0+M-S)	TAH. LEN.	SIMPLE CURVE DATA				CHAINAGE			
	EASTING	NORTHING					R (m)	E (m)	LC (m)	BC	MC	EC	IP	
152	213111.187	312250.659	240-45-40.65	55.399	09-44-12.70	11.499	135.000	0.489	22.942	7+505.504	7+516.675	7+526.146	7+536.702	
153	213188.739	312498.094	202-08-38.16	25.725	38-57-4.70	14.015	85.000	2.384	26.960	7+528.597	7+541.838	7+555.318	7+562.272	
154	213276.075	312466.975	195-53-42.97	33.997	06-14-53.19	4.639	80.000	0.127	9.268	7+540.351	7+550.550	7+560.300	7+569.400	
155	213271.854	312452.151	174-43-7.53	15.413	10-03-35.43	9.347	50.000	0.866	18.489	7+550.957	7+560.957	7+570.957	7+580.957	
156	213274.014	312428.788	170-57-11.03	23.463	03-45-56.50	2.959	40.000	0.049	5.915	7+561.957	7+571.957	7+581.957	7+591.957	
157	213278.892	312398.151	224-32-28.79	31.023	53-35-17.76	12.629	25.000	3.007	23.382	7+593.499	7+603.499	7+613.499	7+623.499	
158	213261.207	312390.181	166-49-1.33	25.213	57-43-27.47	12.782	20.000	3.120	21.345	7+615.000	7+625.000	7+635.000	7+645.000	
159	213270.050	312331.632	227-57-39.37	38.772	67-08-38.04	11.815	20.000	3.229	21.345	7+645.000	7+655.000	7+665.000	7+675.000	
160	213258.073	312331.632	216-09-17.96	16.126	11-46-21.41	13.36	40.000	0.231	8.342	7+655.000	7+665.000	7+675.000	7+685.000	
161	213248.138	312318.035	195-25-53.19	16.840	20-43-24.76	5.851	32.000	0.035	11.574	7+685.000	7+695.000	7+705.000	7+715.000	
162	213234.875	312269.986	225-30-34.32	49.847	30-04-14.13	9.404	35.000	1.241	18.374	7+715.000	7+725.000	7+735.000	7+745.000	
163	213210.072	312245.621	193-39-27.51	34.768	31-51-6.81	15.694	55.000	2.195	18.576	7+745.000	7+755.000	7+765.000	7+775.000	



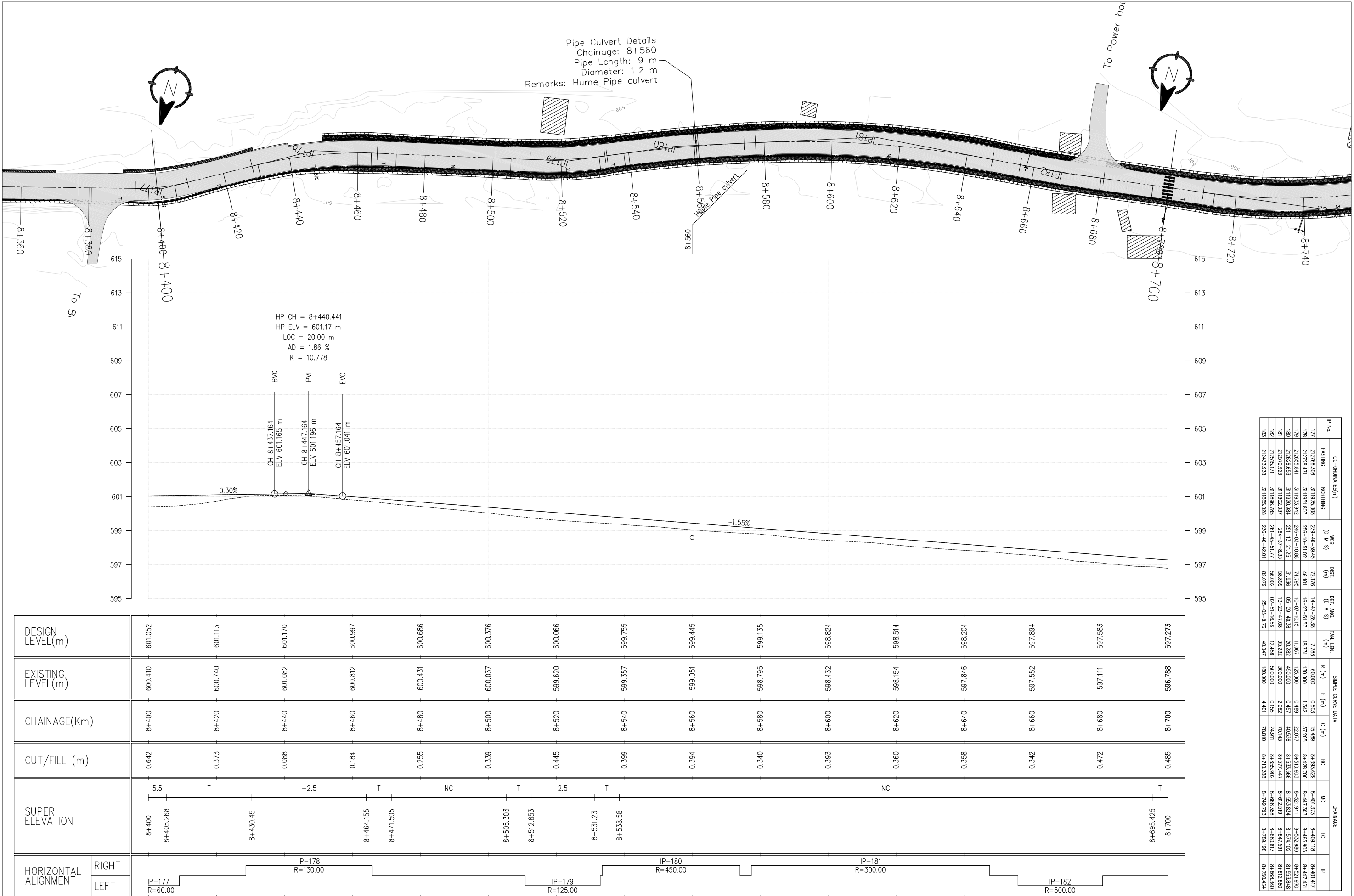
IP No.	CO-GRINA (E5%)	NORTHING	WIDE	DSTI	DEF. ANG. (0-M-55)	PAN. LEN.	SIMPLE CURVE DATA				CHANGING			
							R (m)	E (m)	LC (m)	BO	MC	EC	IP	
163	21230.072	3192455.821	193.39 - 27.51	34.768	31.51 - 6.81	15.694	55.000	21.95	30.576	7.803.612	7.818.900	7.834.188	7.819.207	
164	21230.388	3191747.864	183.21 - 36.67	34.892	30.47 - 52.05	15.567	55.000	0.711	31.648	7.817.824	7.833.348	7.808.872	7.803.391	
165	211930.581	3191464.460	237.56 - 32.61	32.487	54.12 - 57.08	12.798	25.000	35.065	23.656	7.819.924	7.866.395	7.825.136	7.825.136	
166	21165.869	3192454.725	217.56 - 32.61	28.495	19.26 - 51.3	13.723	25.000	1.168	27.181	7.819.924	7.853.292	7.866.757	7.853.292	
167	21165.869	3190941.255	217.56 - 32.61	32.609	55.46 - 51.77	17.466	33.000	4.337	32.728	7.849.837	7.849.865	7.899.959	7.849.837	
168	21103.189	319100.448	275.56 - 36.58	31.076	24.57 - 20.80	8.013	45.000	0.905	15.754	8.010.265	8.016.813	8.026.071	8.016.813	
169	213906.635	319083.529	247.56 - 12.46	26.779	28.01 - 8.87	9.880	40.000	1.266	30.564	8.029.097	8.017.380	8.046.658	8.017.380	
170	21395.509	319079.214	190.40 - 26.73	32.535	25.47 - 34.73	18.633	25.000	7.534	30.564	8.046.658	8.017.380	8.046.658	8.017.380	
171	21395.190	319072.718	190.40 - 26.73	24.855	25.47 - 34.73	5.611	25.000	0.922	11.039	8.046.658	8.017.380	8.046.658	8.017.380	

DESIGN LEVEL(m)		EXISTING LEVEL(m)	CHAINAGE(Km)	CUT/FILL (m)	SUPER ELEVATION	HORIZONTAL ALIGNMENT
	566.211	567.747	7+800	-1.536	T 7+800 7+807.462 5.5 T 7+830.338 NC T 7+847.138 3 T 7+906.772 -2.5 T 7+934.845 2.5 T 7+965.001 -2.5 T 7+998.209 2.5 T 8+012.006 -2.5 T 8+046.908 2.5 T 8+057.13 -7 T 8+100	RIGHT LEFT
	568.552	569.924	7+820	-1.372		
	570.952	572.581	7+840	-1.630		
	573.352	574.385	7+860	-1.033		
	575.752	576.776	7+880	-1.024		
	578.152	579.398	7+900	-1.246		
	580.552	581.689	7+920	-1.137		
	582.952	584.062	7+940	-1.110		
	585.018	585.962	7+960	-0.944		
	584.963	584.432	7+980	0.531		
	584.872	584.414	8+000	0.458		
	586.769	585.808	8+020	0.961		
	588.992	588.058	8+040	0.934		
	591.214	590.731	8+060	0.483		
	593.436	593.871	8+080	-0.435		
	595.659	596.419	8+100	-0.761		

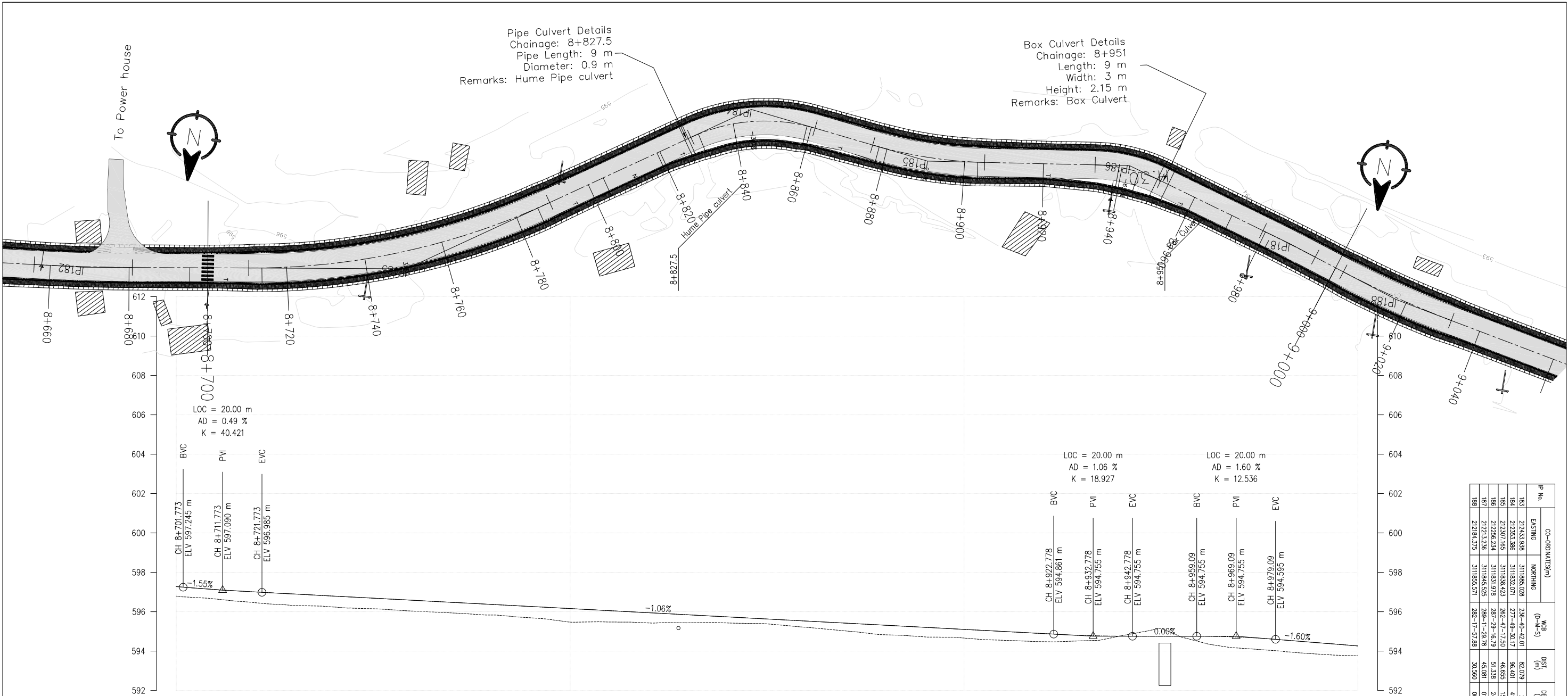


DESIGN LEVEL(m)	595.659	597.881	599.906	600.323	600.383	600.444	600.505	600.566	600.627	600.687	600.748	600.809	600.870	600.931	600.992	601.052
EXISTING LEVEL(m)	596.419	598.464	600.611	601.285	601.060	600.613	600.071	599.964	600.049	600.069	599.976	599.970	599.991	599.999	600.377	600.410
CHAINAGE(Km)	8+100	8+120	8+140	8+160	8+180	8+200	8+220	8+240	8+260	8+280	8+300	8+320	8+340	8+360	8+380	8+400
CUT/FILL (m)	-0.761	-0.583	-0.705	-0.962	-0.676	-0.169	0.434	0.601	0.577	0.618	0.773	0.839	0.879	0.931	0.614	0.642
SUPER ELEVATION	T 8+100 8+119.494 -4.5 8+150.929 8+159.958 -4.5 8+194.528 8+209.228 NC 8+226.159 4.5 8+250.659 8+257.073 T 8+281.573 NC 8+380.679 T 8+400+8															
HORIZONTAL ALIGNMENT	RIGHT	IP-172 R=100.00 IP-173 R=90.00 IP-174 R=90.00 IP-175 R=100.00 IP-176 R=1000.00 IP-177 R=60.00														
	LEFT															

IP No.	CO-ORDINATES(m)	WDI (m)	DIST. (m)	DEF. ANG. (0-M-S)	TAN LEN. (m)	SAMPLE CHIRP DATA				CHAINAGE			
	EASTING	NORTHING				R (m)	E (m)	LC (m)	BC	MC	EC	IP	
171	213051.190	3112022.718	215-18-26.69	24.655	25-17-58.16	5.611	25.000	0.622	11.039	8+085.991	8+091.511	8+097.030	8+101.802
172	213039.967	3112056.871	216-29-32.64	19.419	01-10-42.16	1.029	100.000	0.005	2.057	8+109.810	8+110.838	8+111.866	8+112.894
173	213025.306	3112037.046	240-50-32.35	24.655	24-01-22.71	19.449	90.000	2.015	37.735	8+116.344	8+115.211	8+154.079	8+155.493
174	212988.164	3112016.042	266-51-38.63	42.672	26-07-62.77	20.793	90.000	2.371	40.970	8+126.808	8+117.243	8+197.678	8+172.070
175	212911.303	3112011.378	256-50-10.47	77.002	09-41-28.15	8.477	100.000	0.359	16.614	8+205.099	8+205.886	8+262.323	8+253.886
176	212837.885	3111994.206	254-54-27.83	75.400	02-15-42.64	19.141	100.000	0.195	39.477	8+309.055	8+329.243	8+348.981	8+329.246
177	212768.308	3111975.008	239-46-59.45	72.176	14-47-28.38	7.788	60.000	0.503	15.489	8+393.629	8+401.373	8+409.118	8+401.417

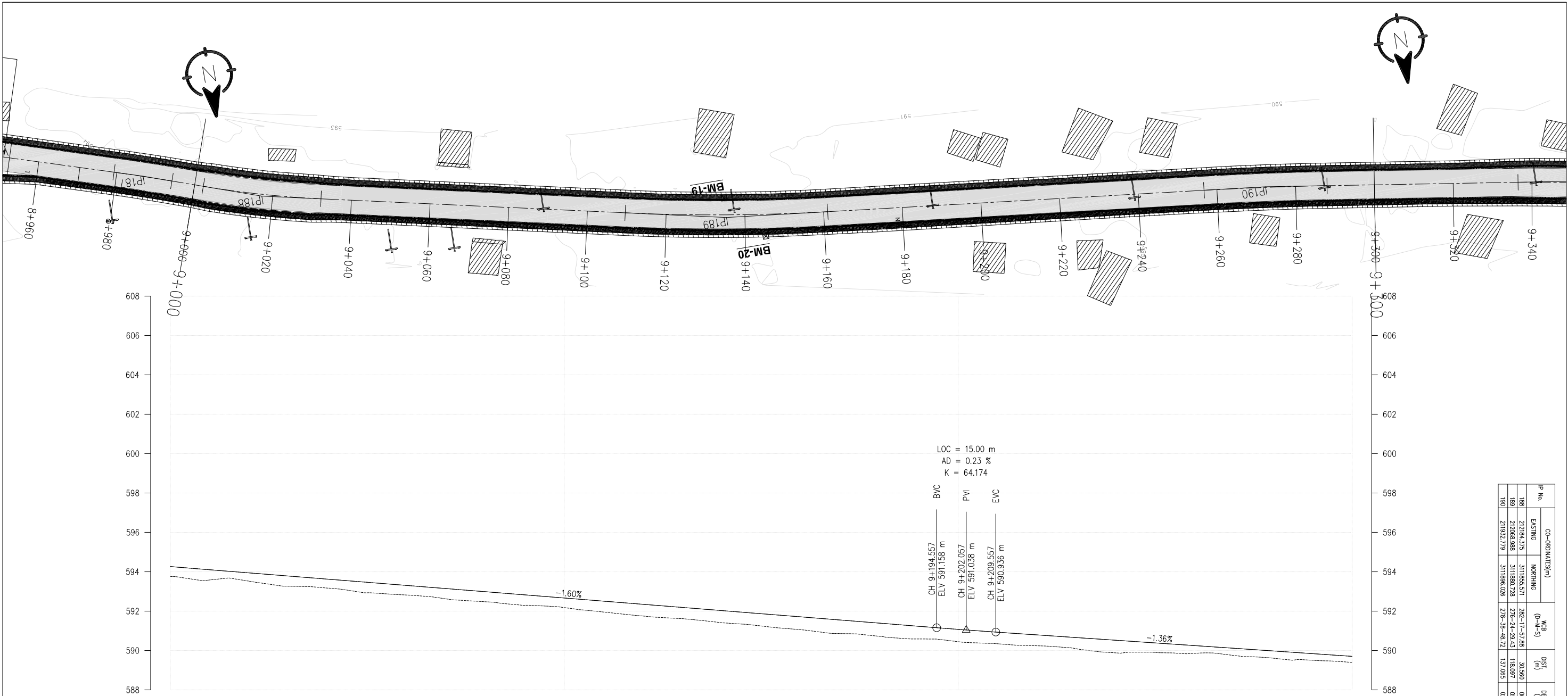


IP No.	CO-ORDINATES(m)		WCB (0-M-S)	DIST. (m)	DEF. ANG. (0-M-S)	TAN LEN. (m)	SAMPLE CURVE DATA				CHAINAGE			
	EASTING	NORTHING					R (m)	E (m)	LC (m)	BC	MC	EC	IP	
177	212788.308	3111975.008	239-46-59.45	72.176	14-47-28.38	7.788	60.000	0.503	15.489	8+393.629	8+401.373	8+409.118	8+417.417	
178	212728.417	3111951.807	236-10-51.02	46.101	16-23-51.57	18.23	130.000	1.342	37.205	8+428.700	8+444.303	8+465.805	8+474.51	
179	212855.841	3111933.942	246-03-40.88	74.795	10-07-10.15	11.067	125.000	0.489	22.077	8+510.303	8+521.941	8+532.880	8+541.702	
180	212828.653	3111920.994	251-13-21.25	31.936	09-09-40.38	20.282	400.000	0.457	40.536	8+533.566	8+553.834	8+574.102	8+583.448	
181	212970.926	3111902.037	264-37-8.33	58.859	13-23-47.08	35.232	300.000	2.062	70.143	8+577.447	8+612.519	8+647.591	8+672.880	
182	212915.171	3111896.785	261-45-51.77	56.002	02-51-16.56	12.458	500.000	0.155	24.911	8+655.902	8+668.358	8+680.813	8+688.360	
183	212433.938	3111886.028	236-40-42.01	82.079	25-05-9.76	40.047	180.000	4.401	78.810	8+710.388	8+729.723	8+750.134		



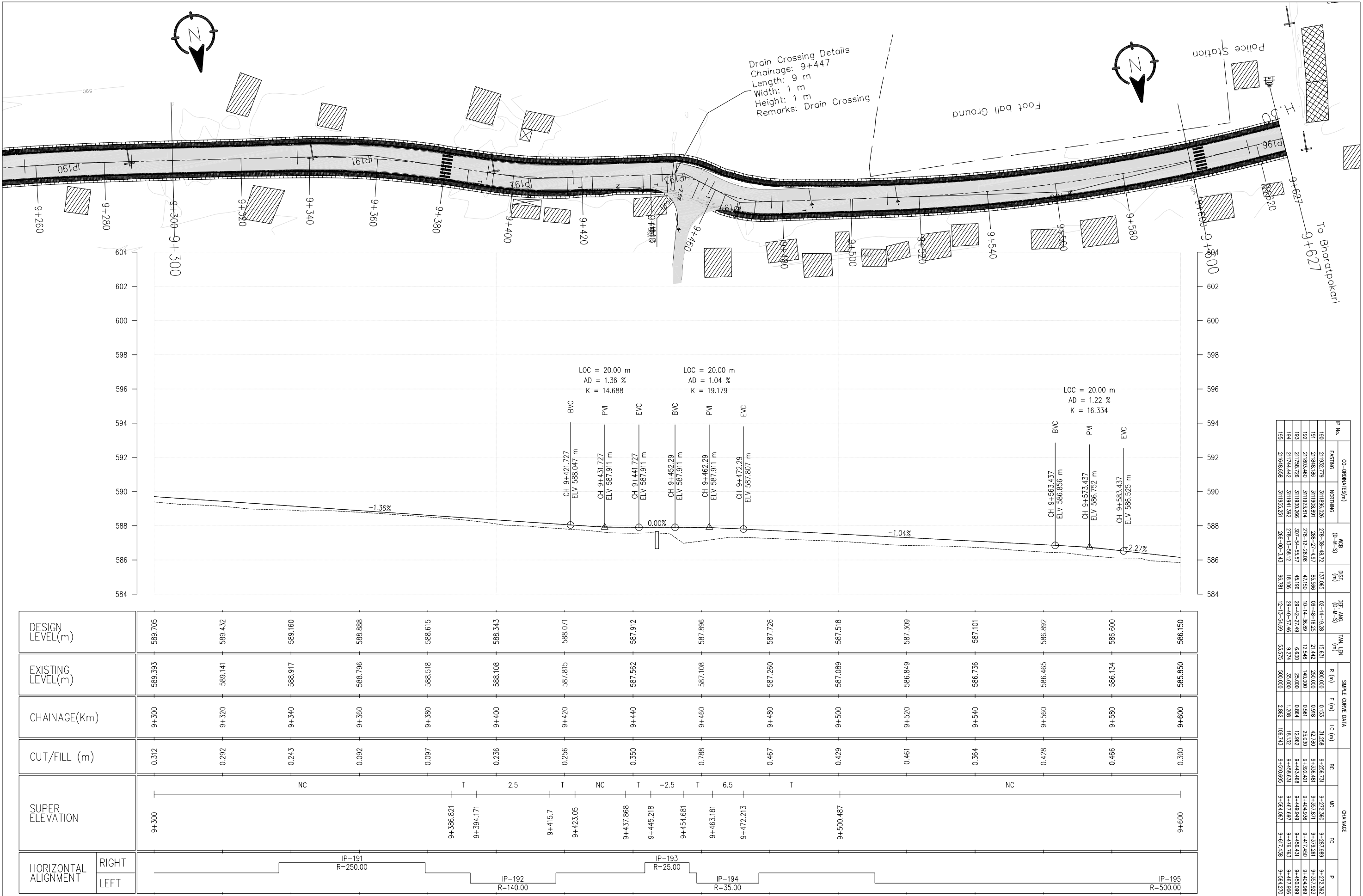
DESIGN LEVEL(m)	597.273	597.004	596.792	596.581	596.369	596.158	595.947	595.735	595.524	595.313	595.101	594.890	594.757	594.755	594.581	594.262
EXISTING LEVEL(m)	596.788	596.458	596.238	596.033	595.831	595.471	595.428	595.426	595.208	594.828	594.661	594.477	594.781	594.462	594.005	593.760
CHAINAGE(km)	8+700	8+720	8+740	8+760	8+780	8+800	8+820	8+840	8+860	8+880	8+900	8+920	8+940	8+960	8+980	9+000
CUT/FILL (m)	0.485	0.546	0.554	0.548	0.539	0.687	0.518	0.309	0.316	0.484	0.440	0.413	-0.024	0.283	0.576	0.501
SUPER ELEVATION	T 3 T NC T -3 T 2.5 T -6.5 T NC															
HORIZONTAL ALIGNMENT	RIGHT LEFT IP-183 R=180.00 IP-184 R=45.00 IP-185 R=110.00 IP-186 R=40.00 IP-187 R=500.00															

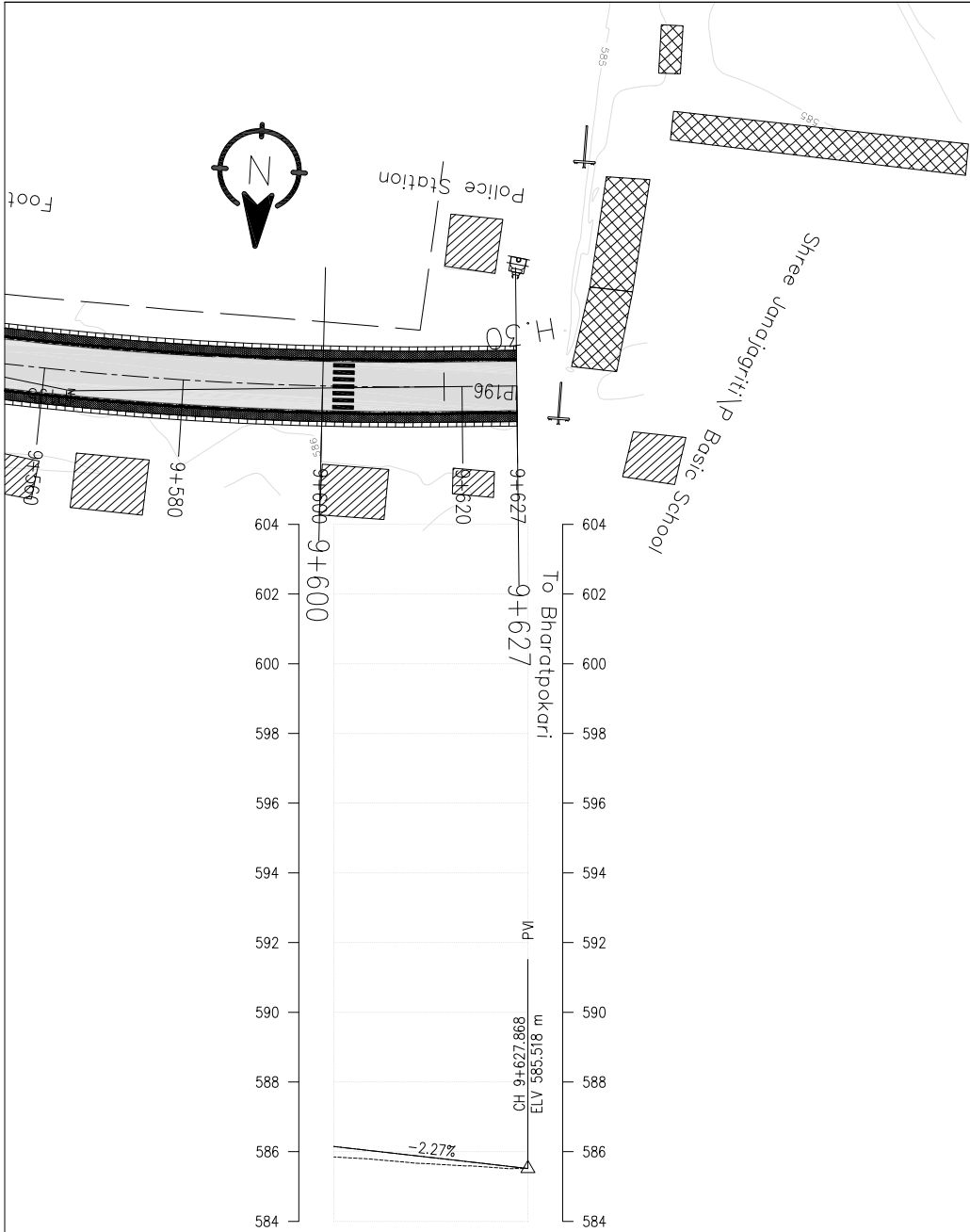
IP No.	CO-ORDINATES(m)	WCB (0-M-S)	DIST. (m)	DEF. ANG. (0-M-S)	TAI LEN. (m)	SAMPLE CHARGE DATA						
						R (m)	E (m)	LC (m)	BC	WC	EC	IP
183	212433.938	311866.028	236-40-42.01	29-05-9.78	40.047	180.000	4.401	78.810	8+710.388	8+749.793	8+789.198	8+750.434
184	212353.386	311832.071	277-48-30.17	41-08-48.15	16.891	45.000	3.005	32.317	8+828.601	8+844.620	8+860.535	8+845.552
185	212307.165	311838.423	262-47-17.50	15-02-12.66	14.518	110.000	0.984	28.889	8+876.224	8+890.093	8+906.008	8+860.742
186	212296.244	311831.978	287-29-16.79	72-41-59.29	51.338	40.000	0.948	17.244	8+933.155	8+944.777	8+950.399	8+941.313
187	21213.236	311845.525	289-11-29.78	01-42-12.99	7.434	0.000	0.055	14.867	8+986.121	8+996.748	8+999.155	8+986.722
188	212184.375	311855.571	282-17-57.88	06-55-31.89	15.055	250.000	0.453	30.073	9+022.006	9+031.282	9+032.299	9+017.281



DESIGN LEVEL(m)				594.262
EXISTING LEVEL(m)				593.943
CHAINAGE(Km)				593.624
CUT/FILL (m)				593.305
SUPER ELEVATION				592.986
				592.667
HORIZONTAL ALIGNMENT				592.347
				592.028
RIGHT				591.709
				591.390
LEFT				591.073
				590.794
RIGHT				590.522
				590.249
LEFT				589.977
				589.705

IP No.	CO-ORDINATES(m)		WCB (0-M-S)	DIST. (m)	DEF. ANG. (0-M-S)	TAN. LEN. (m)	SAMPLE CHAINAGE DATA							CHAINAGE			
	EASTING	NORTHING					R (m)	E (m)	LC (m)	BC	WC	EC	IP				
188	212194.373	311855.571	282-17-57.88	30.560	06-53-31.99	15.055	250.000	0.453	30.073	9+002.282	9+017.282	9+032.289	9+017.281				
189	212088.998	311880.728	276-24-29.43	118.097	05-53-28.45	25.728	500.000	0.681	51.411	9+109.613	9+135.319	9+161.024	9+155.341				
190	211932.779	311896.028	278-38-48.72	137.083	02-14-19.28	15.631	800.000	0.153	31.298	9+256.731	9+272.300	9+287.889	9+272.302				

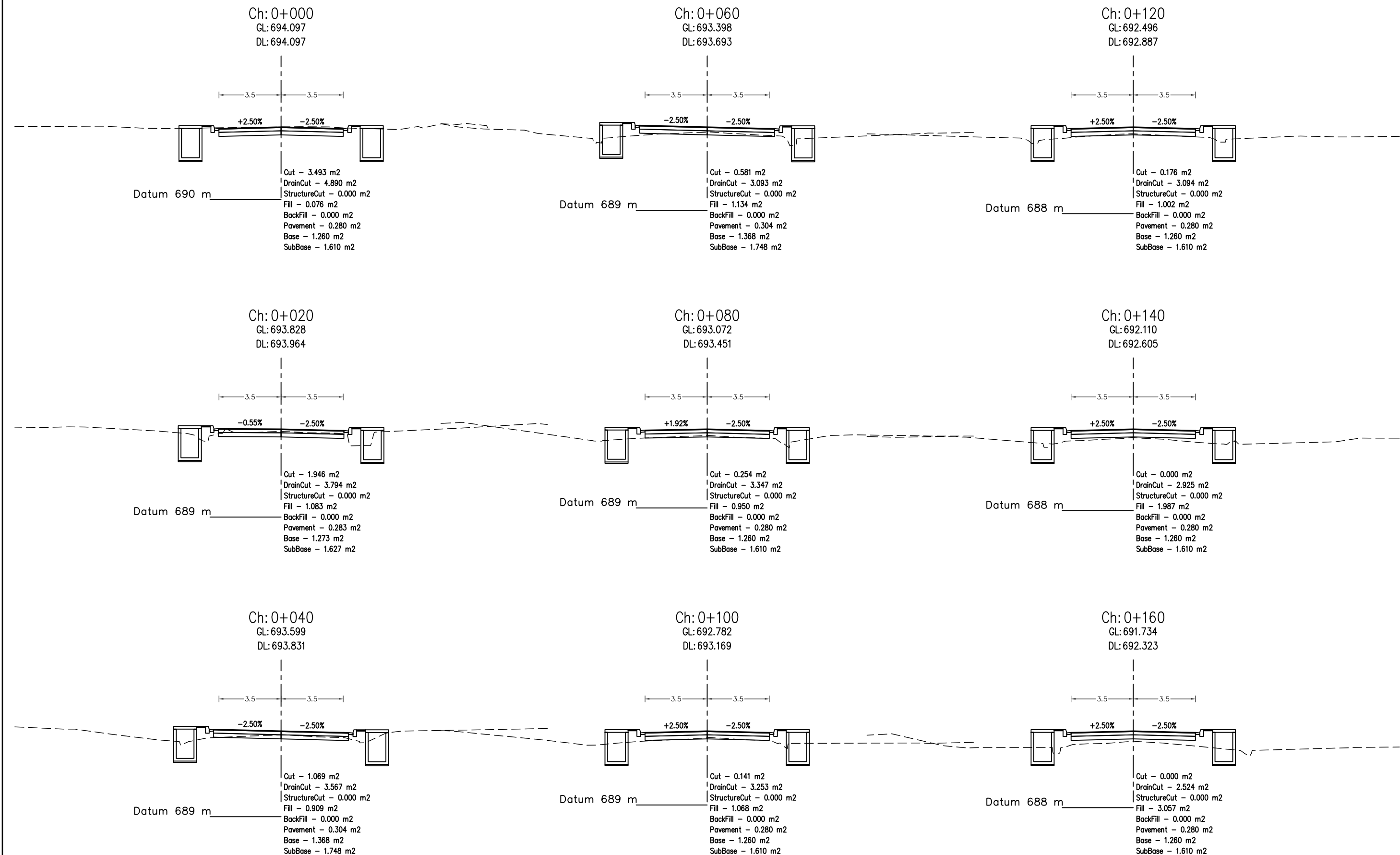


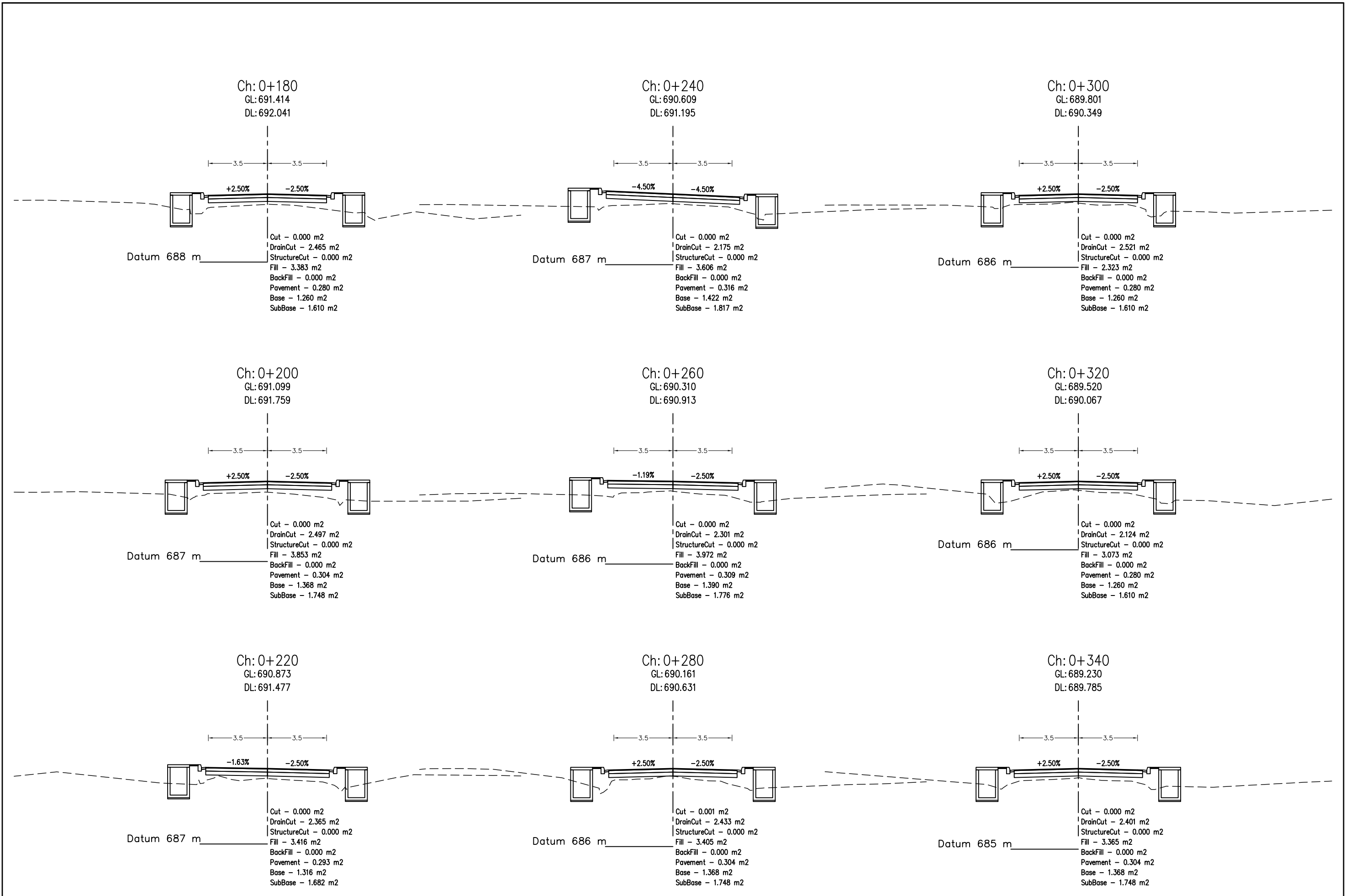


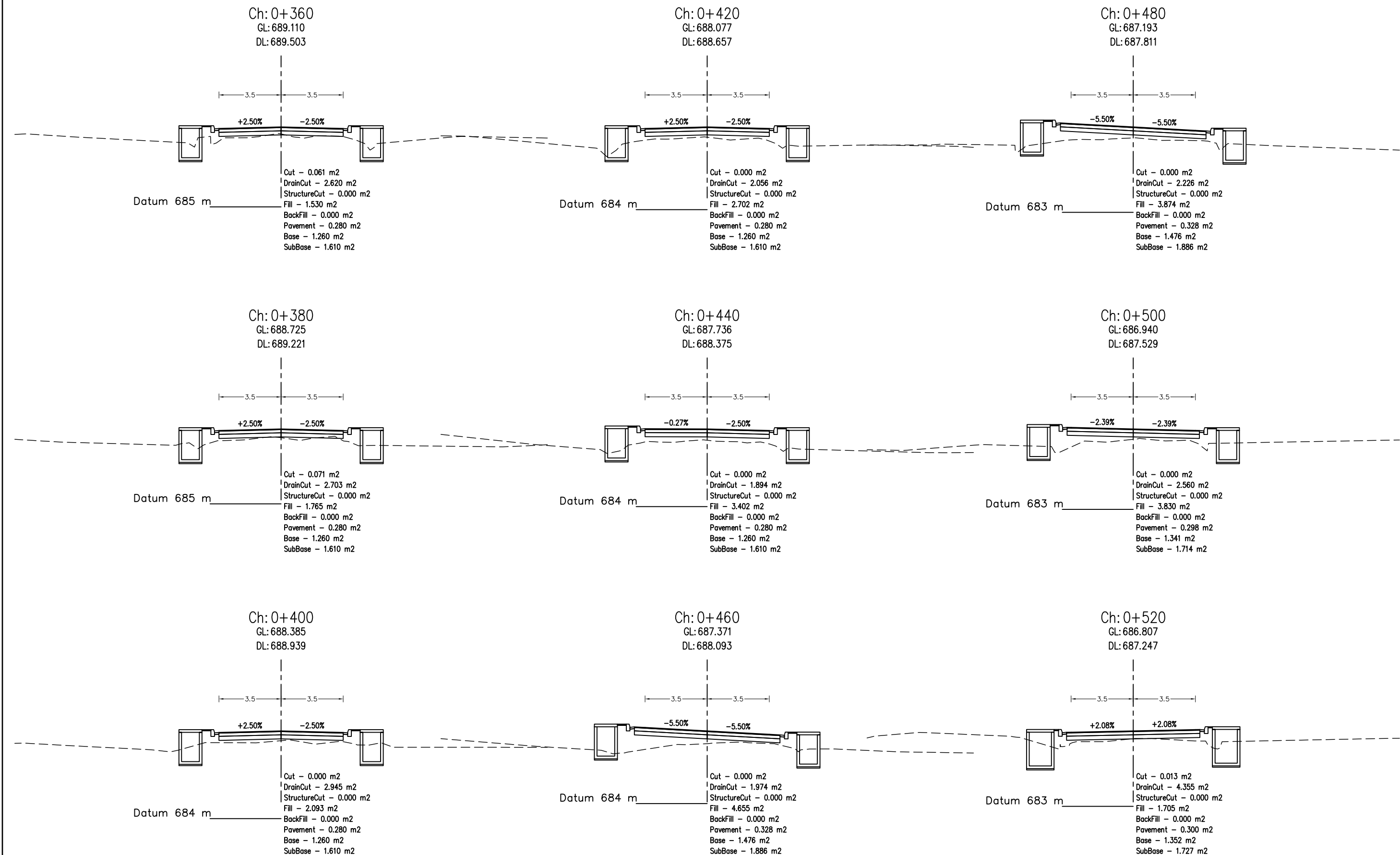
IP No.	CO-ORDINATES(m)		WCB (D-M-S)	DIST. (m)	DEF. ANG. (D-M-S)	TAN. LEN. (m)	SIMPLE CURVE DATA			CHAINAGE			
	EASTING	NORTHING					R (m)	E (m)	LC (m)	BC	MC	EC	IP
195	211648.658	3111955.251	266-00-3.43	96.781	12-13-54.69	53.575	500.000	2.862	106.743	9+510.695	9+564.067	9+617.438	9+564.270
196	211584.810	3111950.787	00-00-0.00	64.005	00-00-0.00	0.000	0.000	0.000	0.000	9+627.868	9+627.868	9+627.868	9+627.868

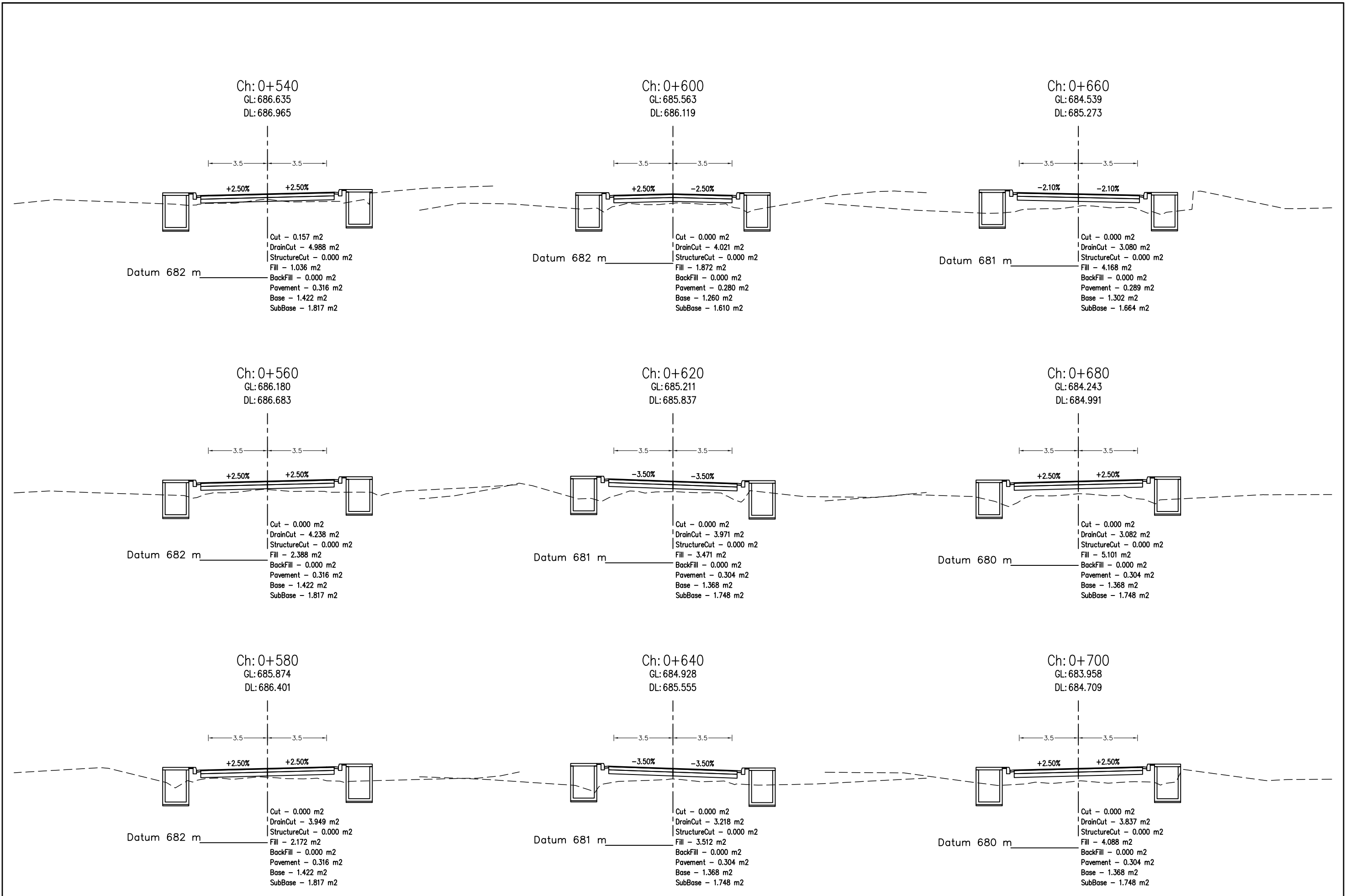
DESIGN LEVEL(m)		586.150	585.696	585.518
EXISTING LEVEL(m)		585.850	585.589	585.518
CHAINAGE(Km)		9+600	9+620	9+627.87
CUT/FILL (m)		0.300	0.107	0.000
SUPER ELEVATION		NC		
HORIZONTAL ALIGNMENT		IP-195 R=500.00		
		IP-196 R=0.00		

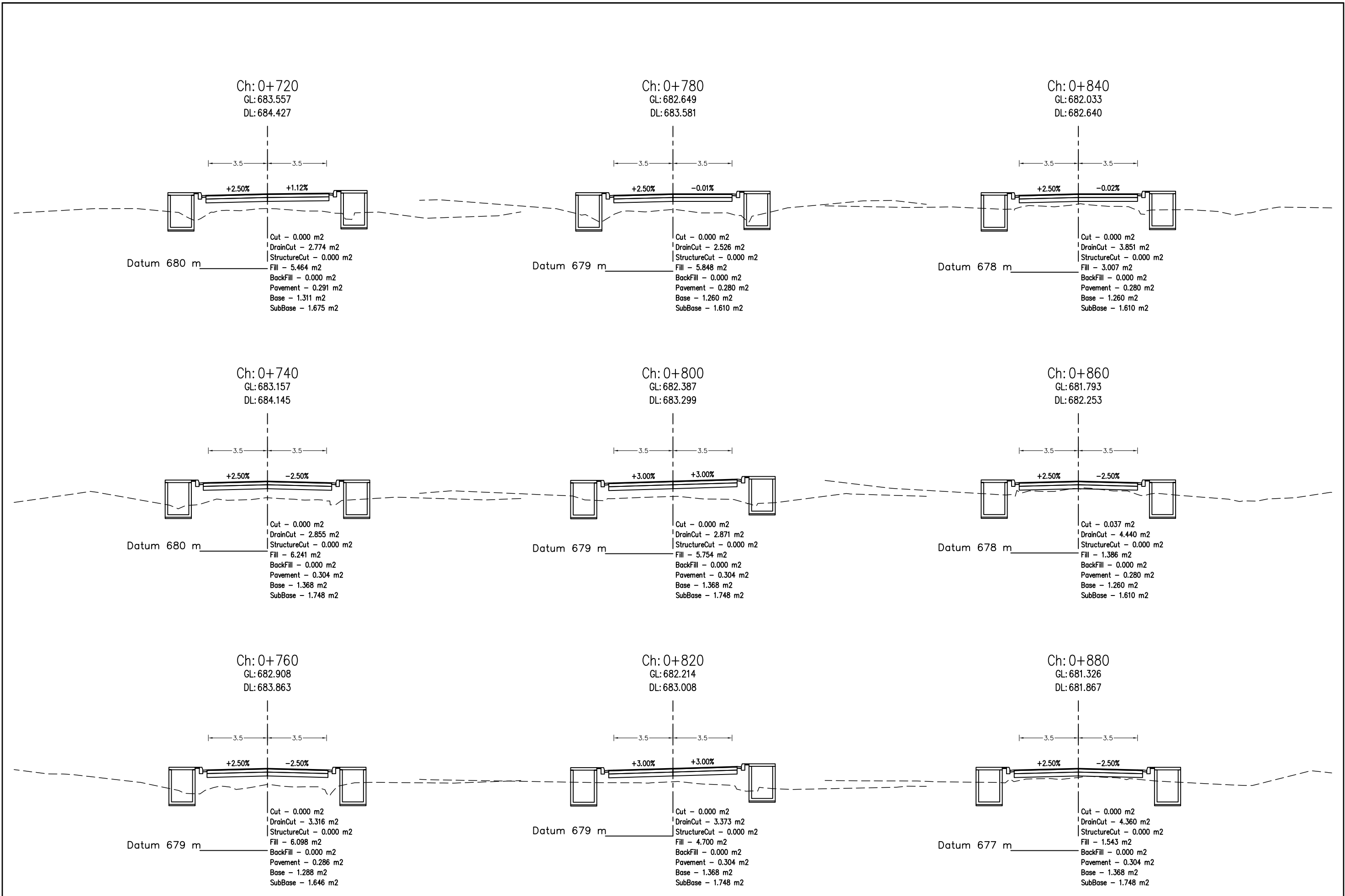
**DETAILED CROSS SECTION AT 20m INTERVAL
(SECTION-I)**

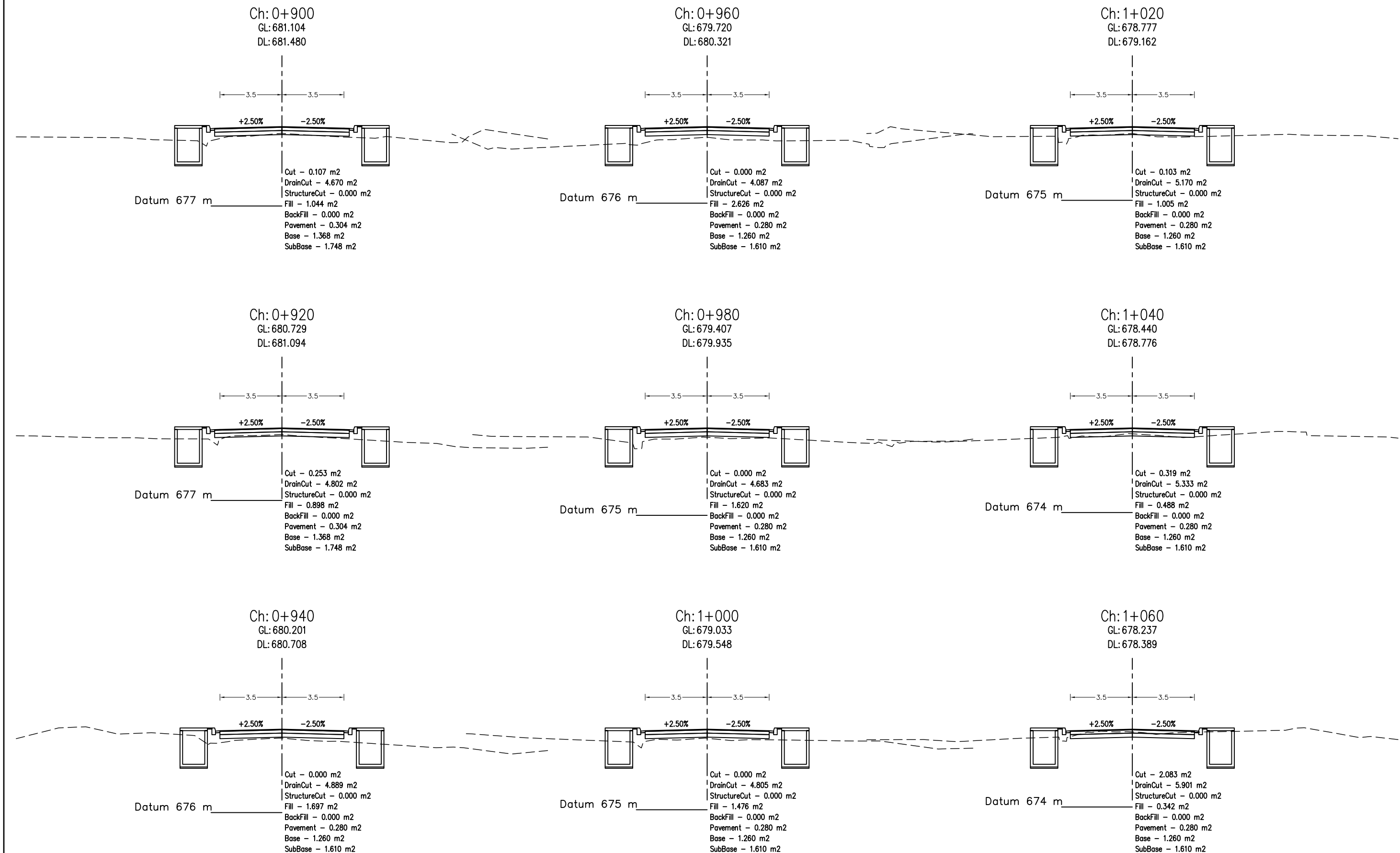


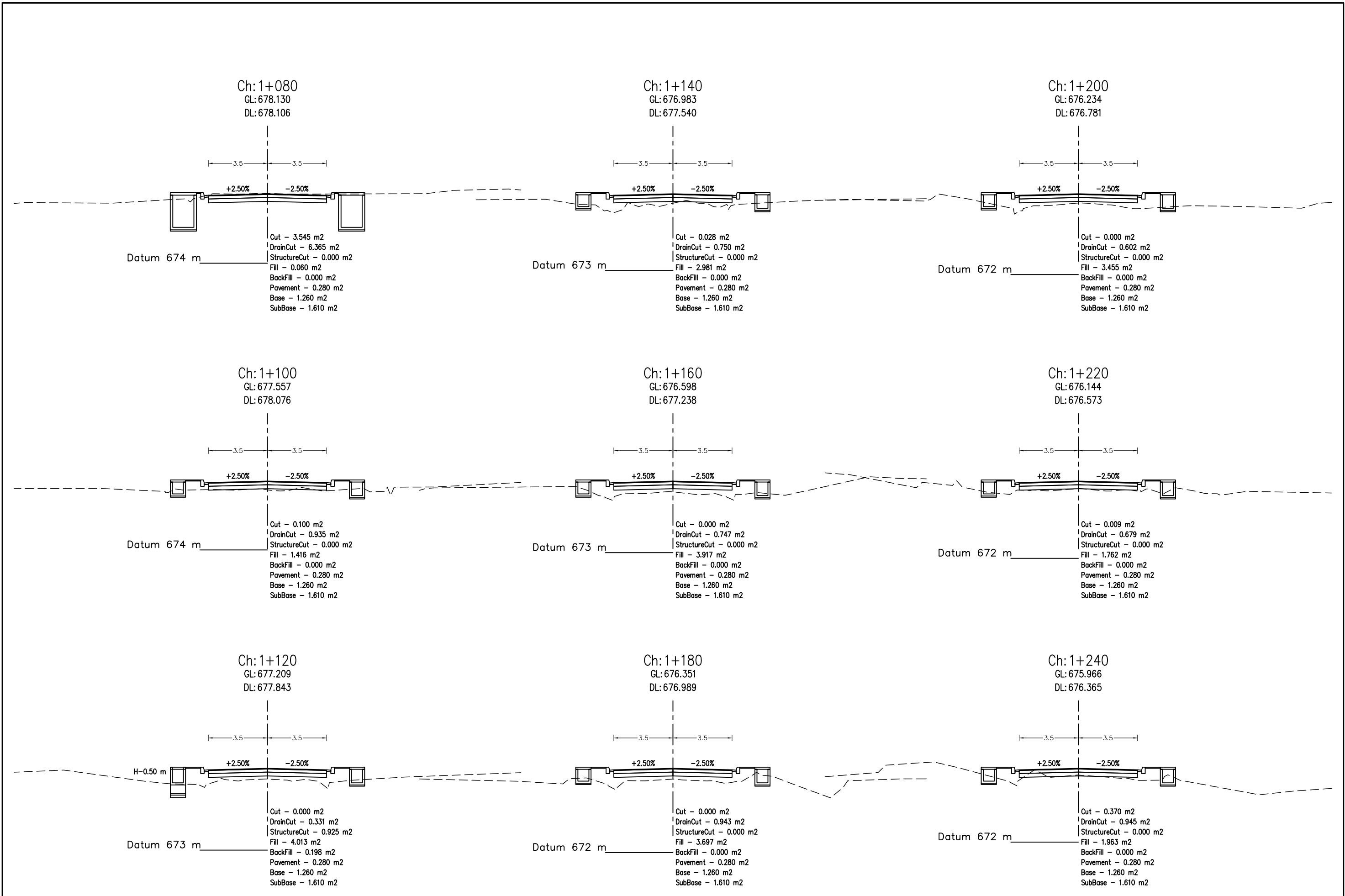


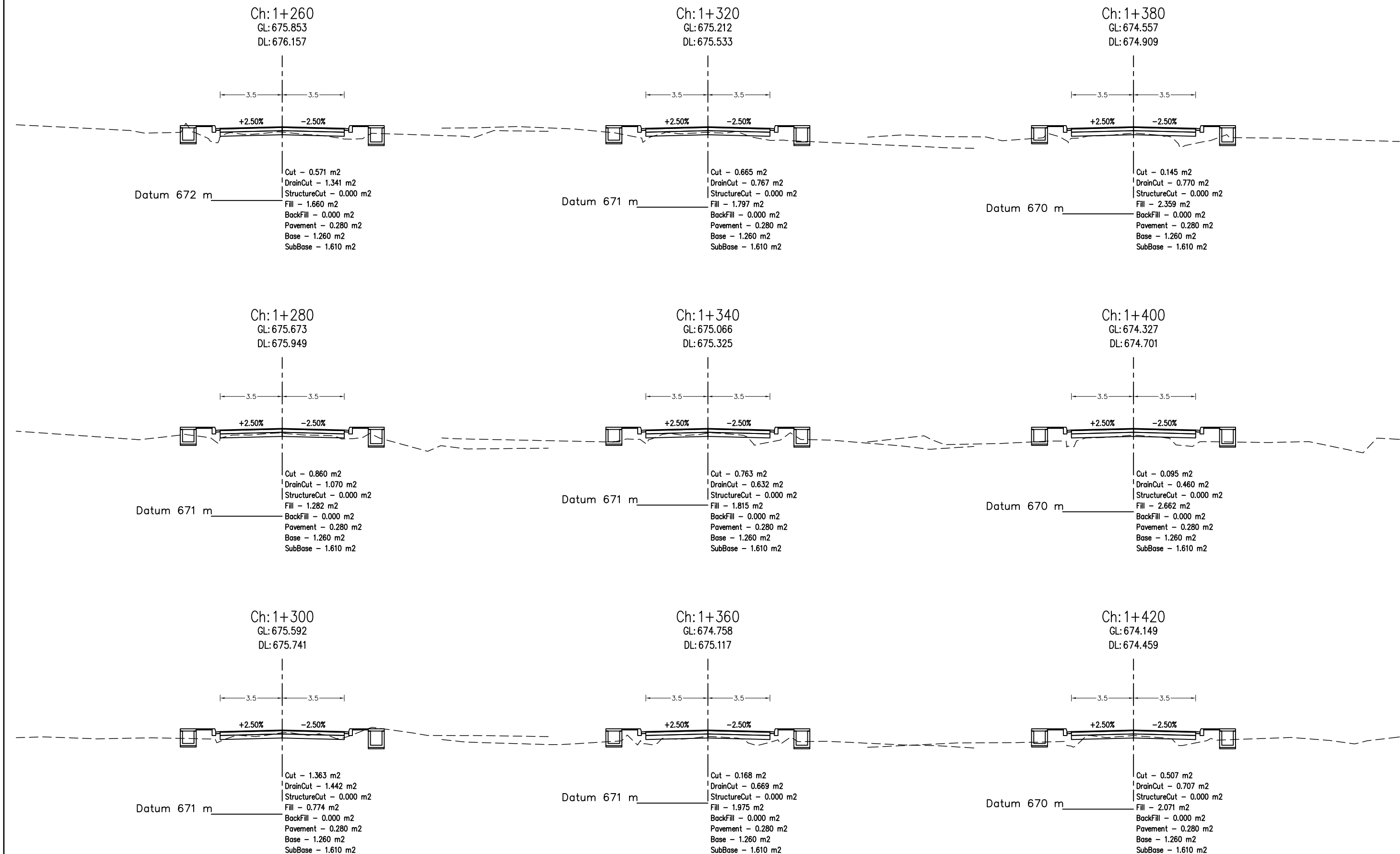


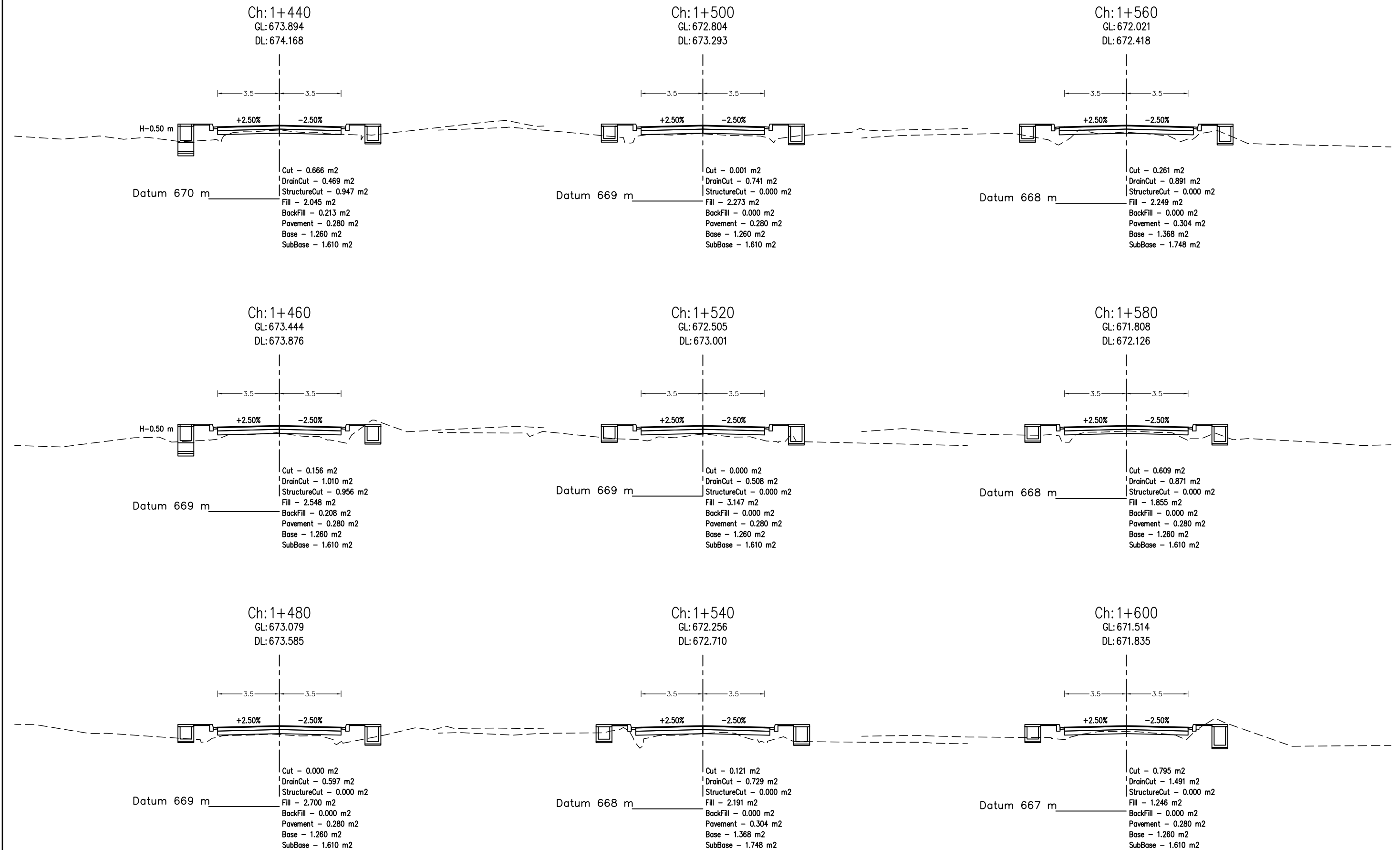


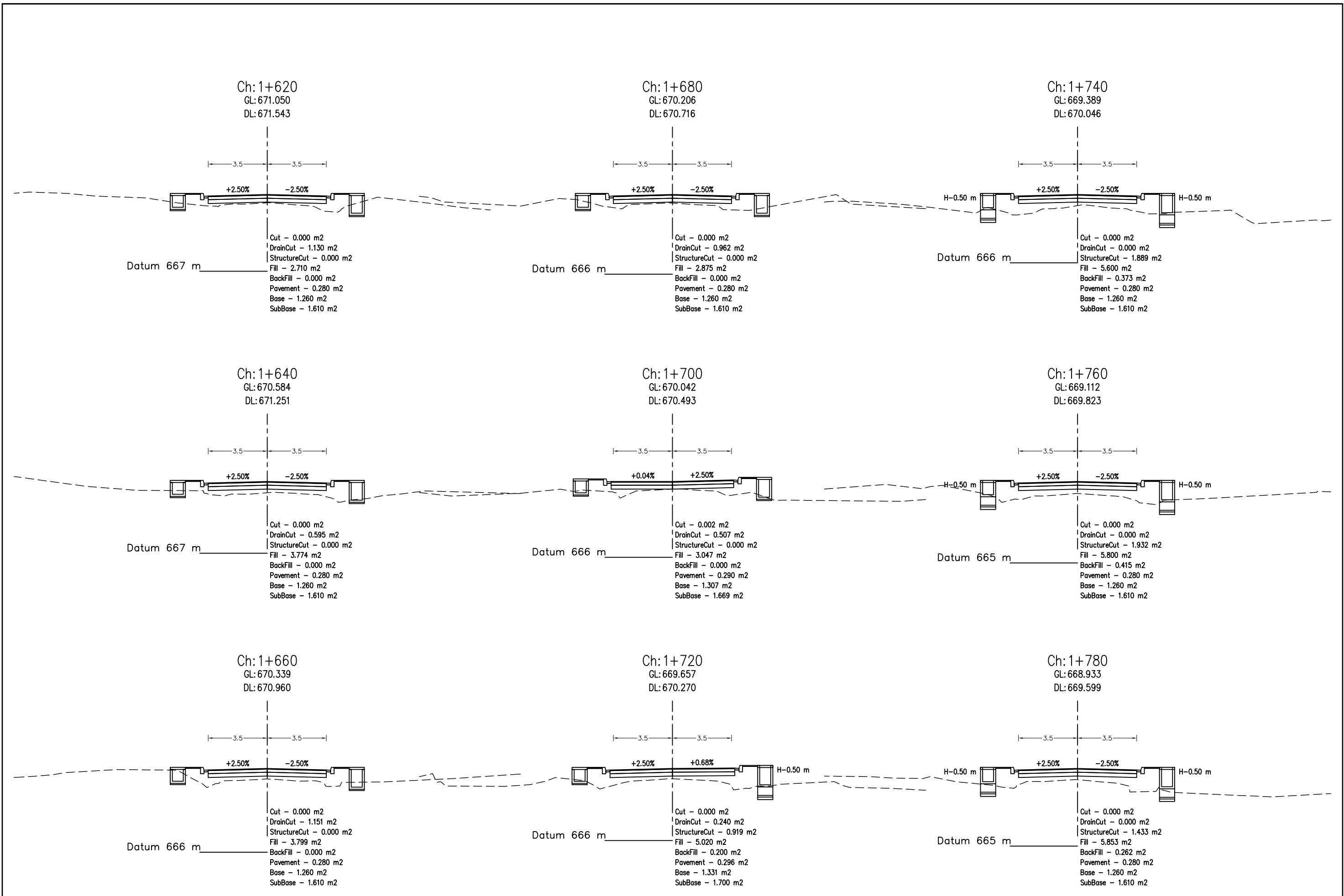


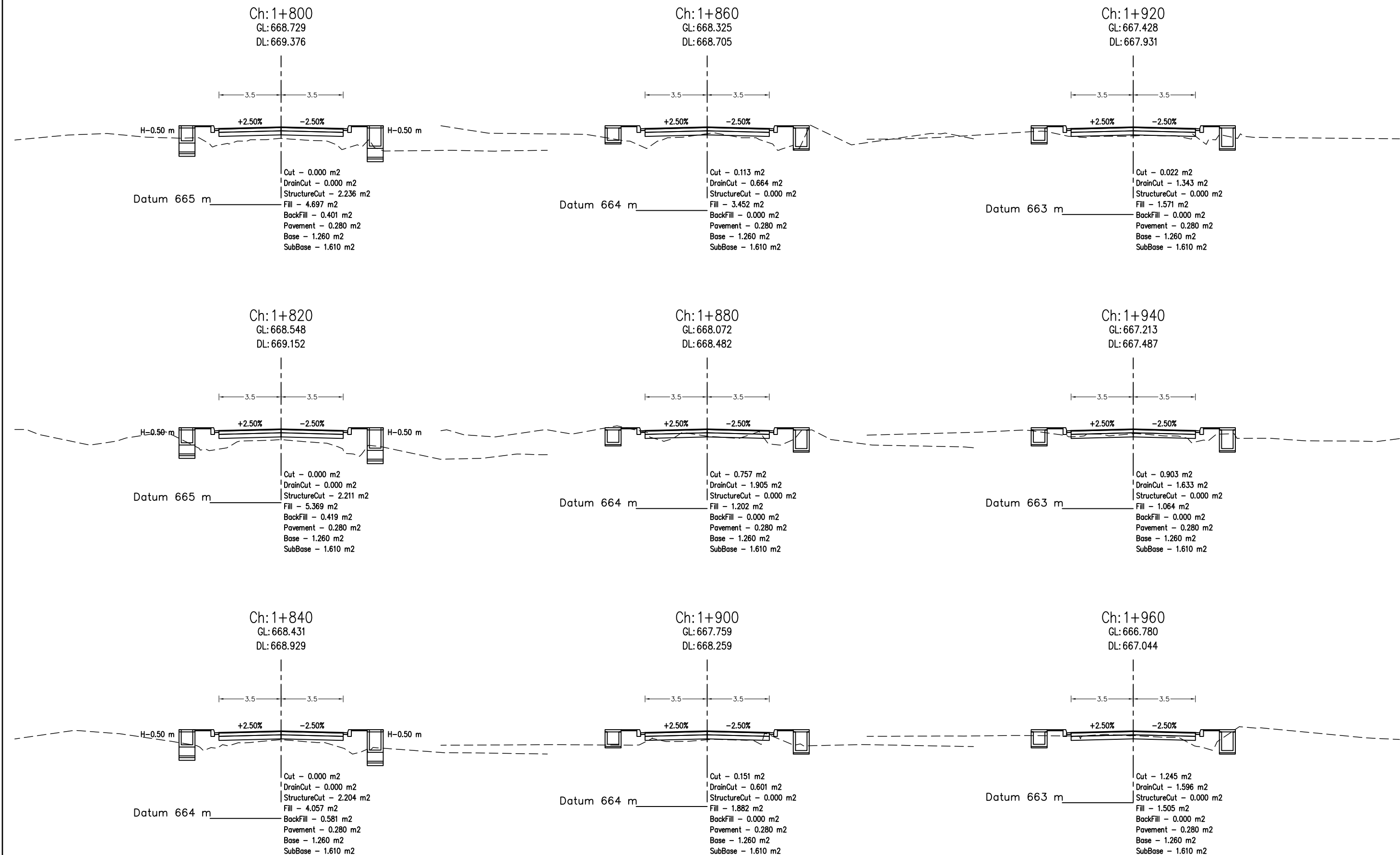


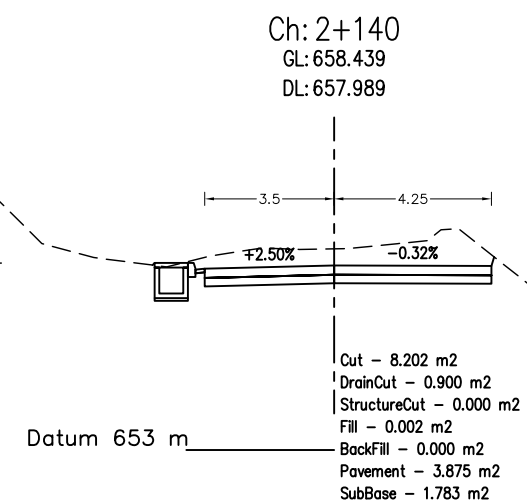


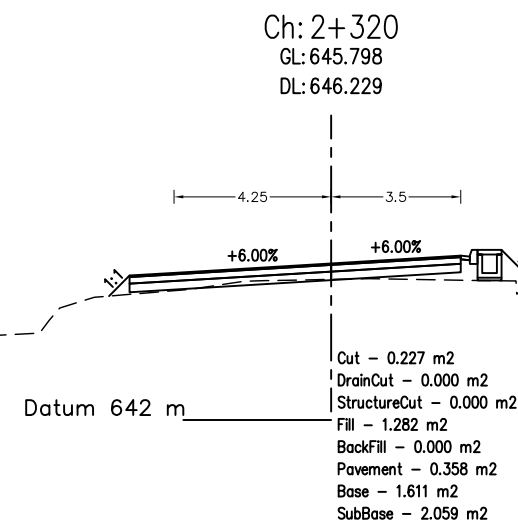
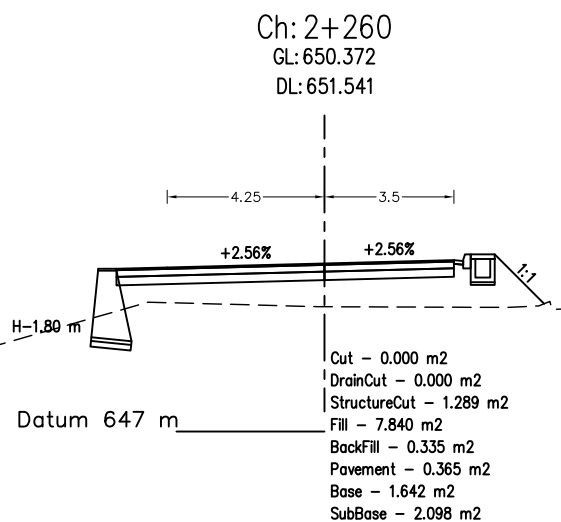
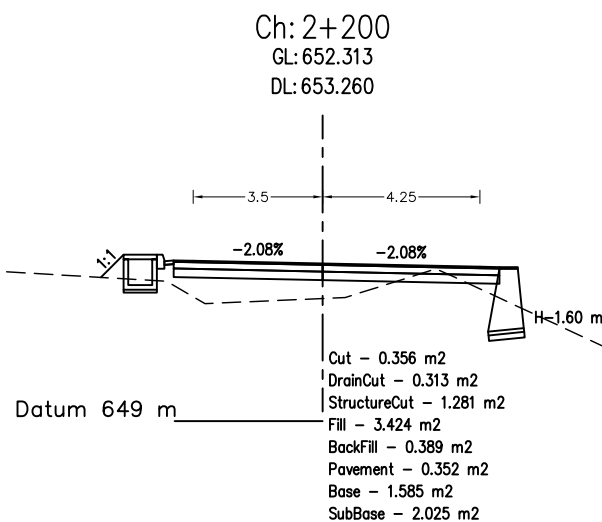
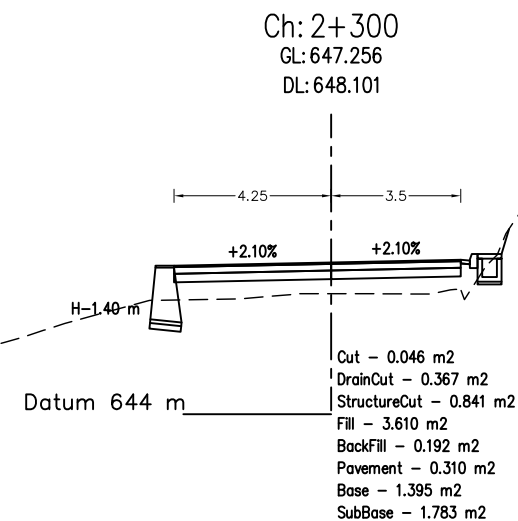
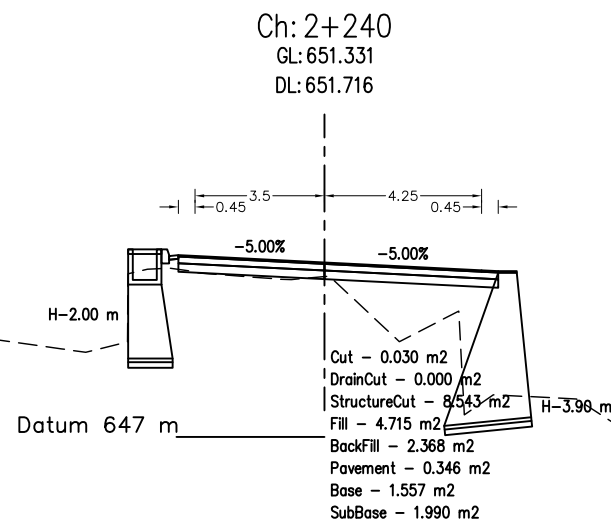
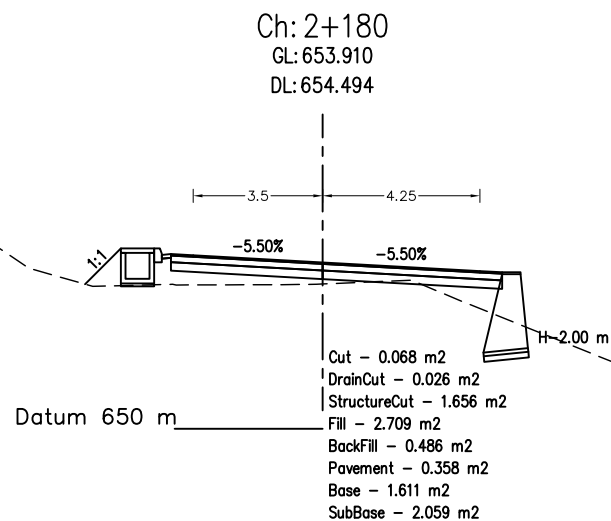
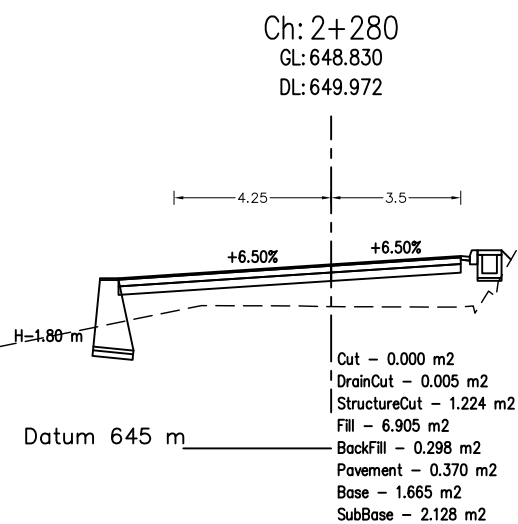
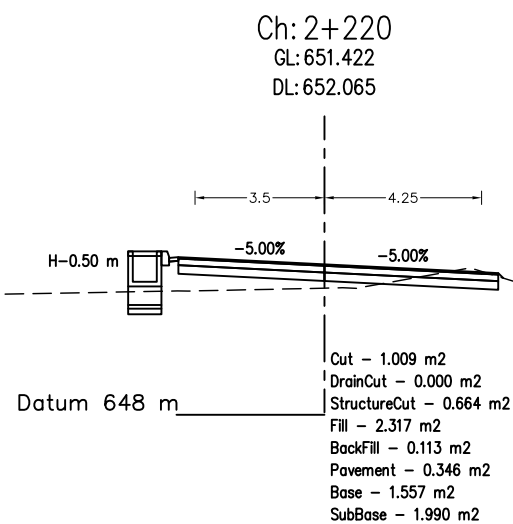
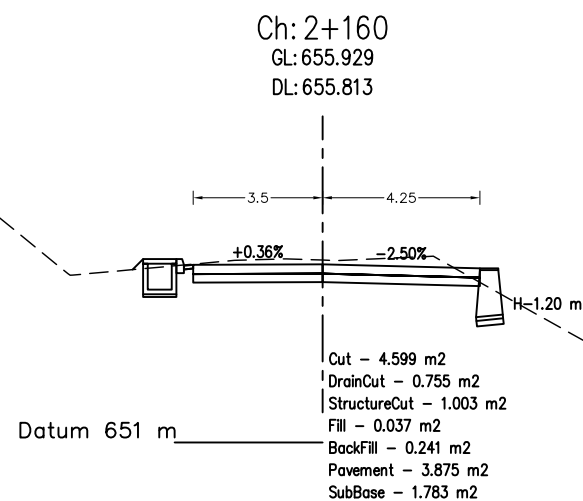


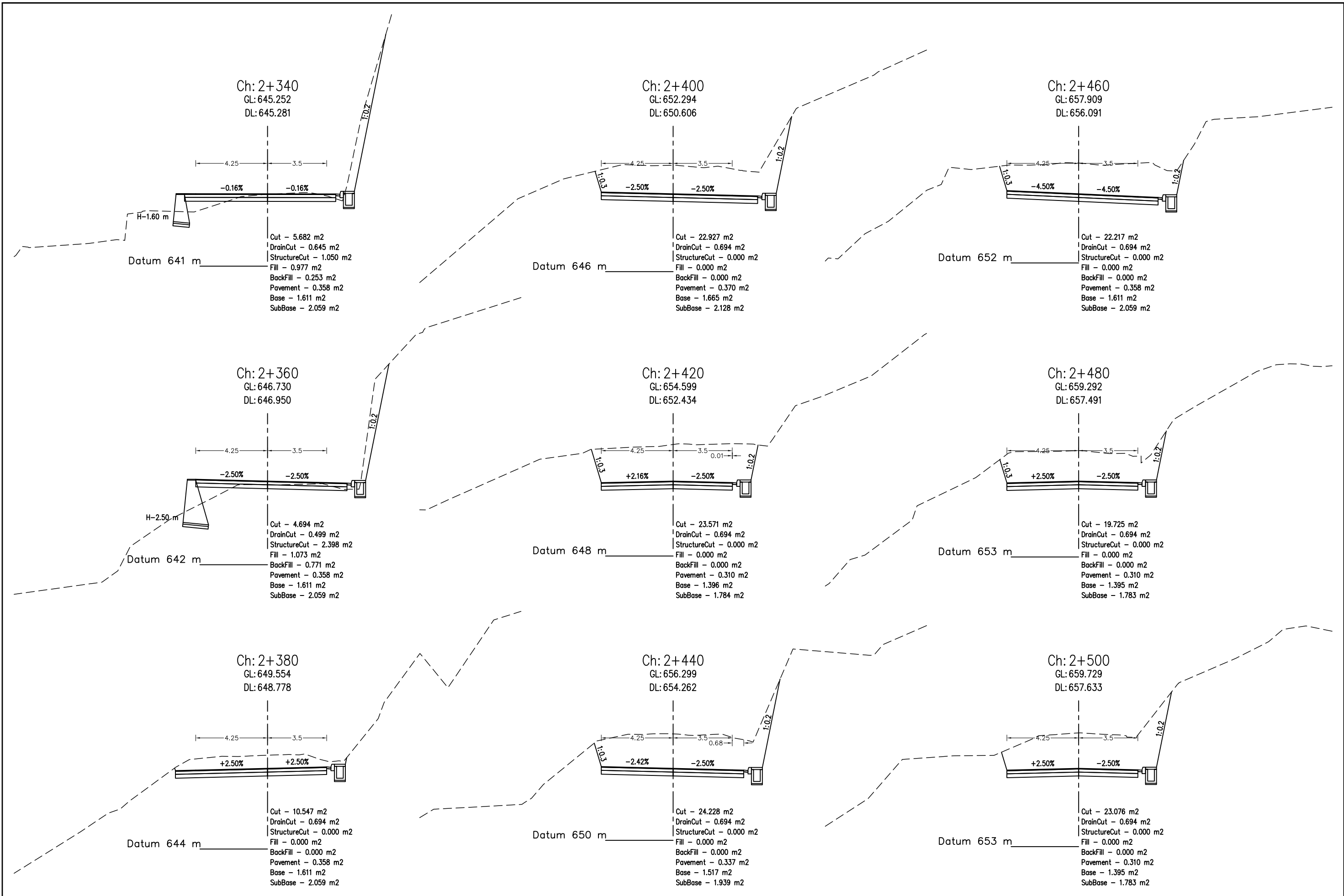


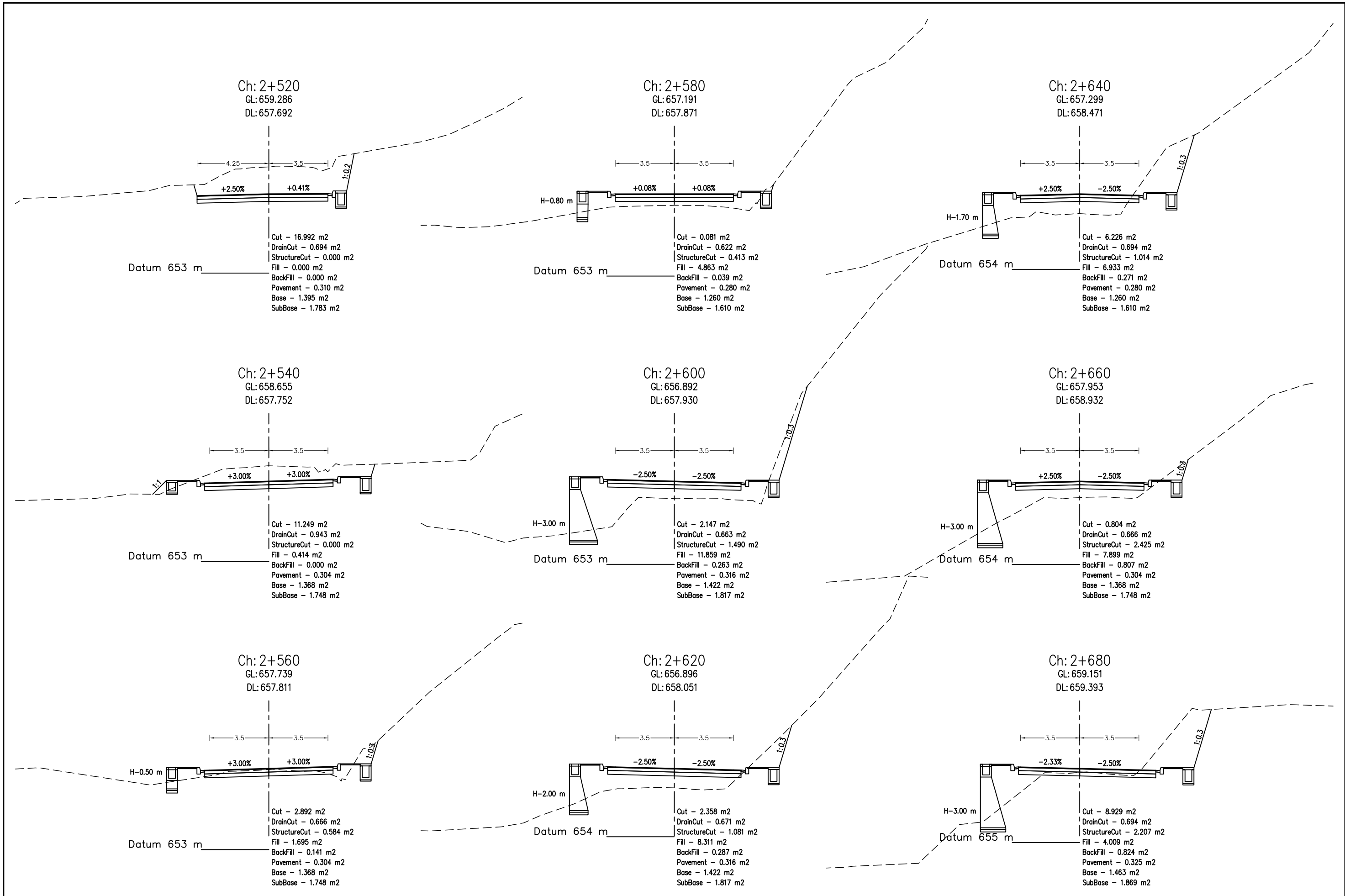


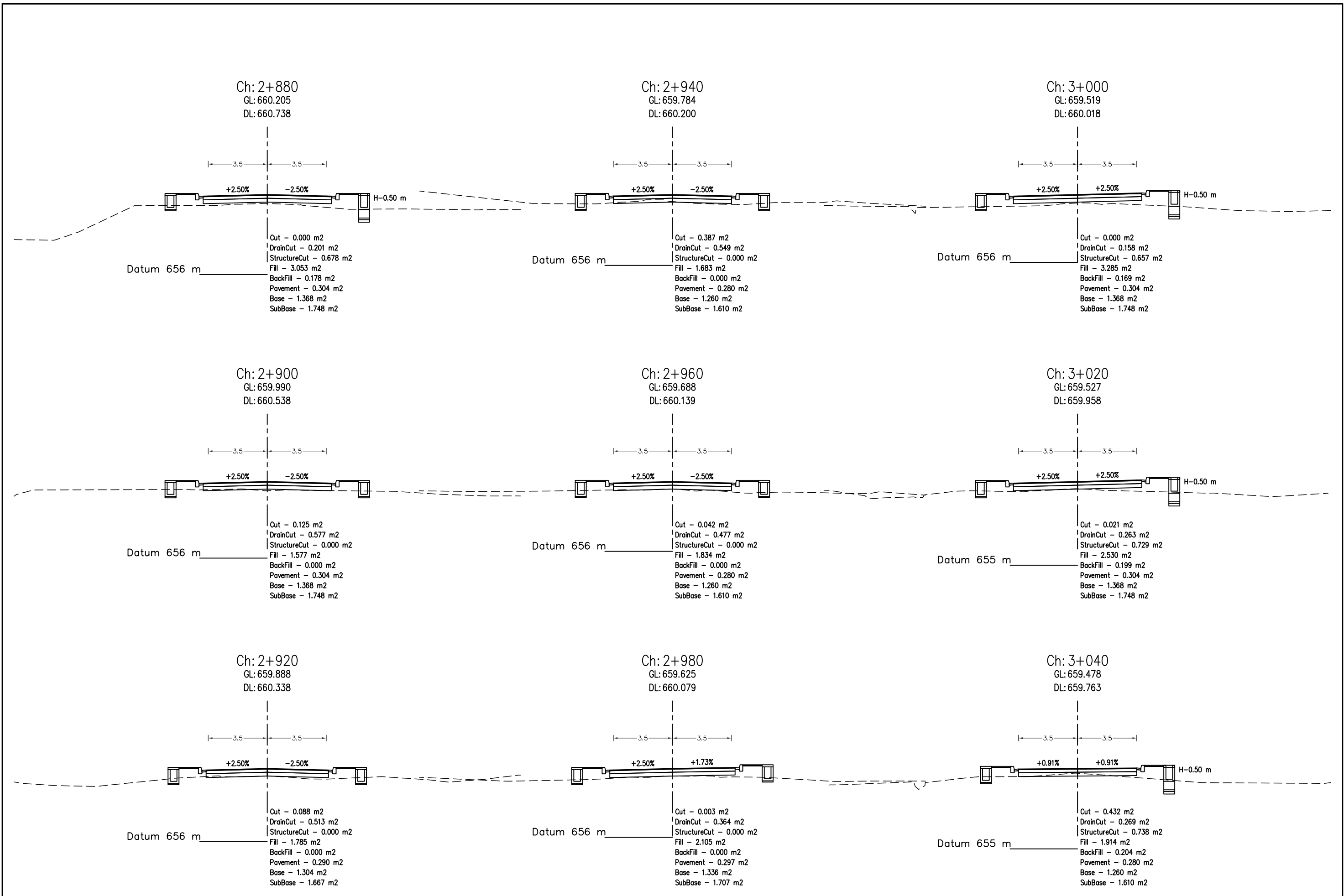


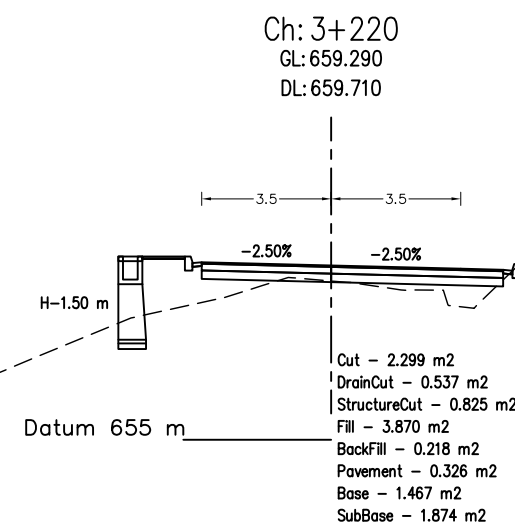
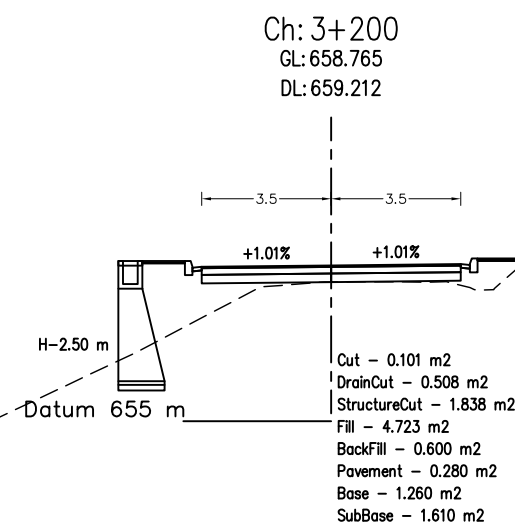
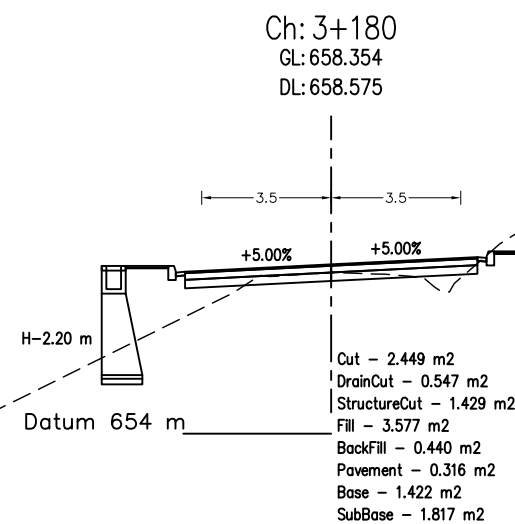


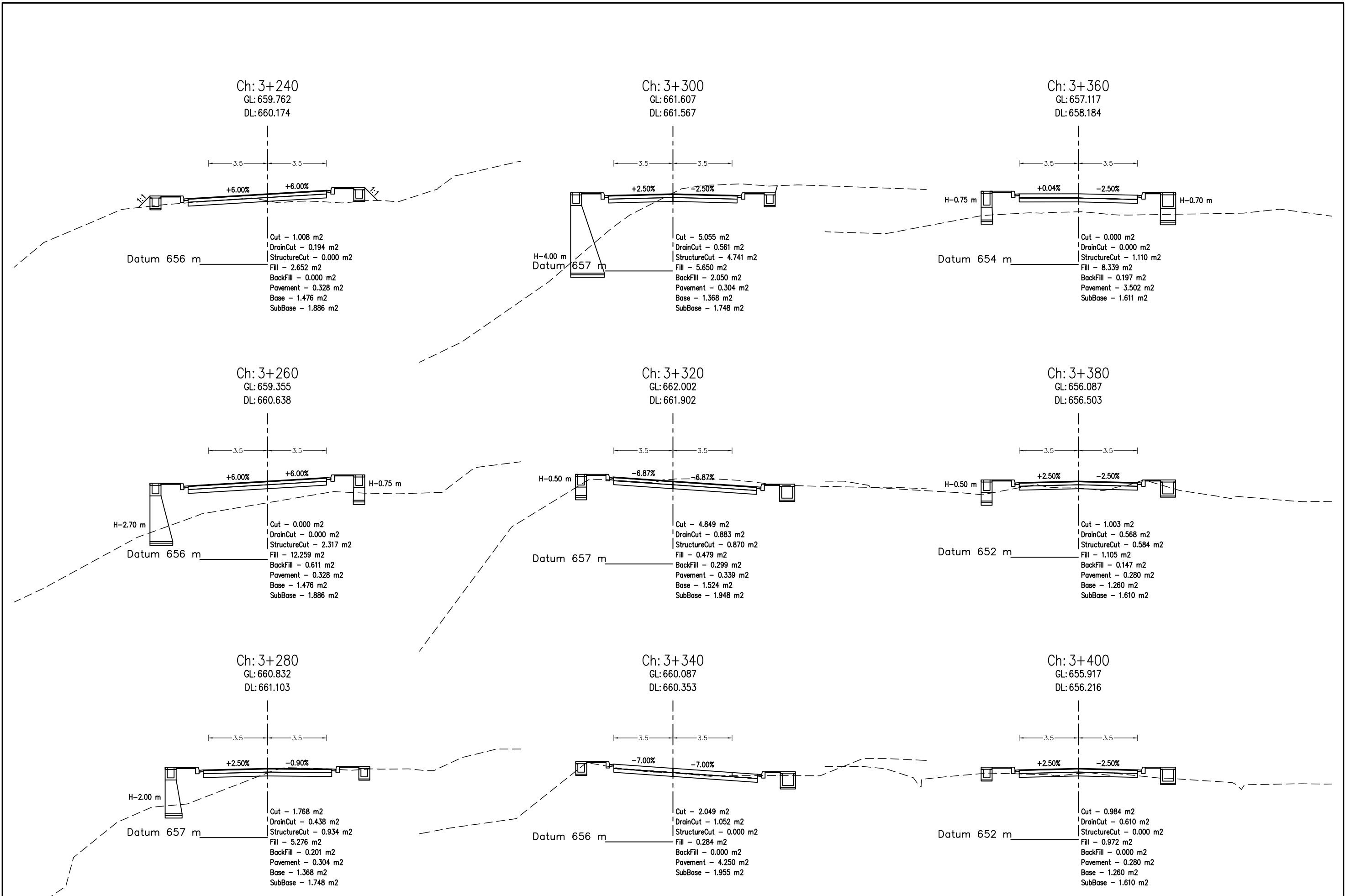


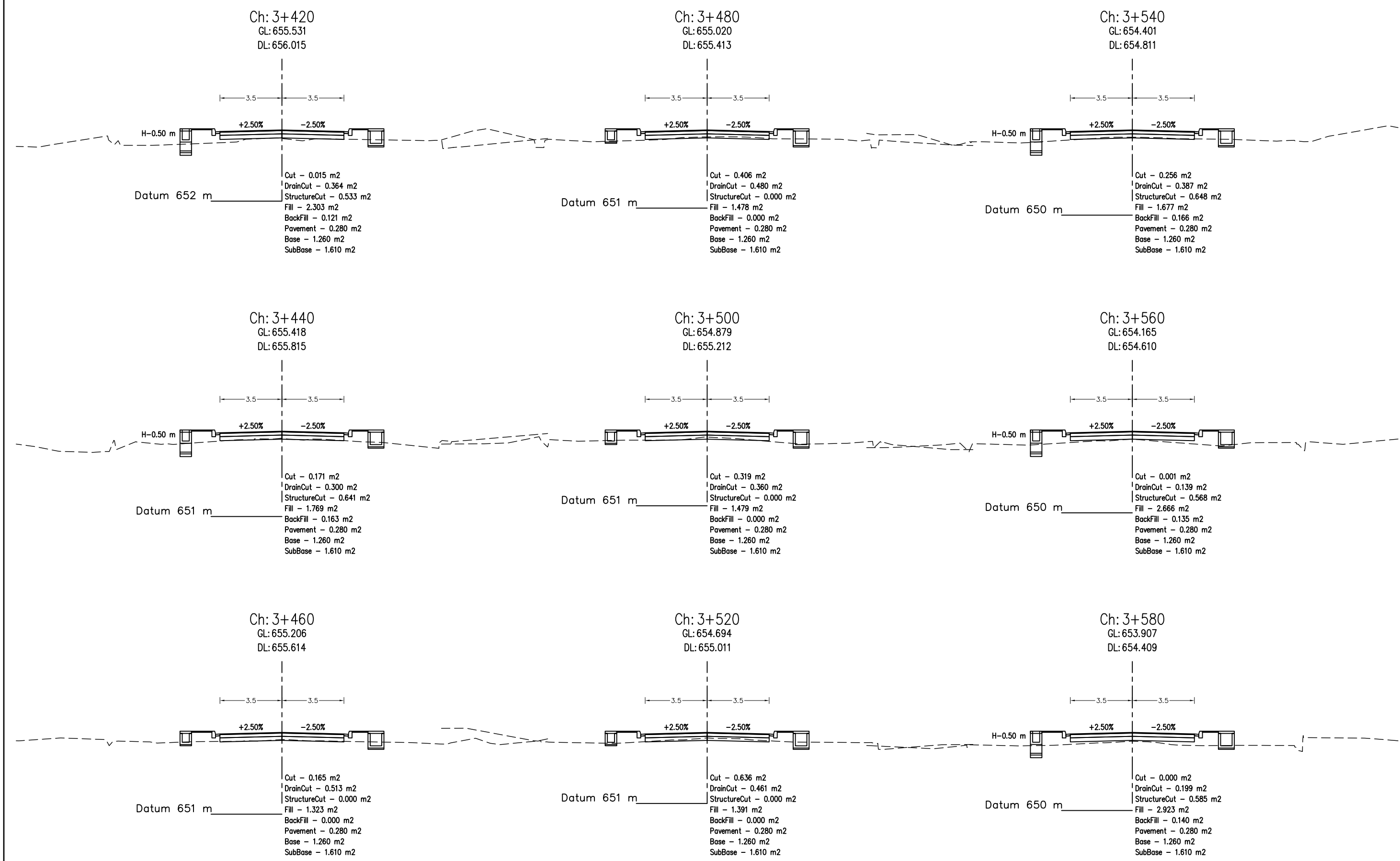


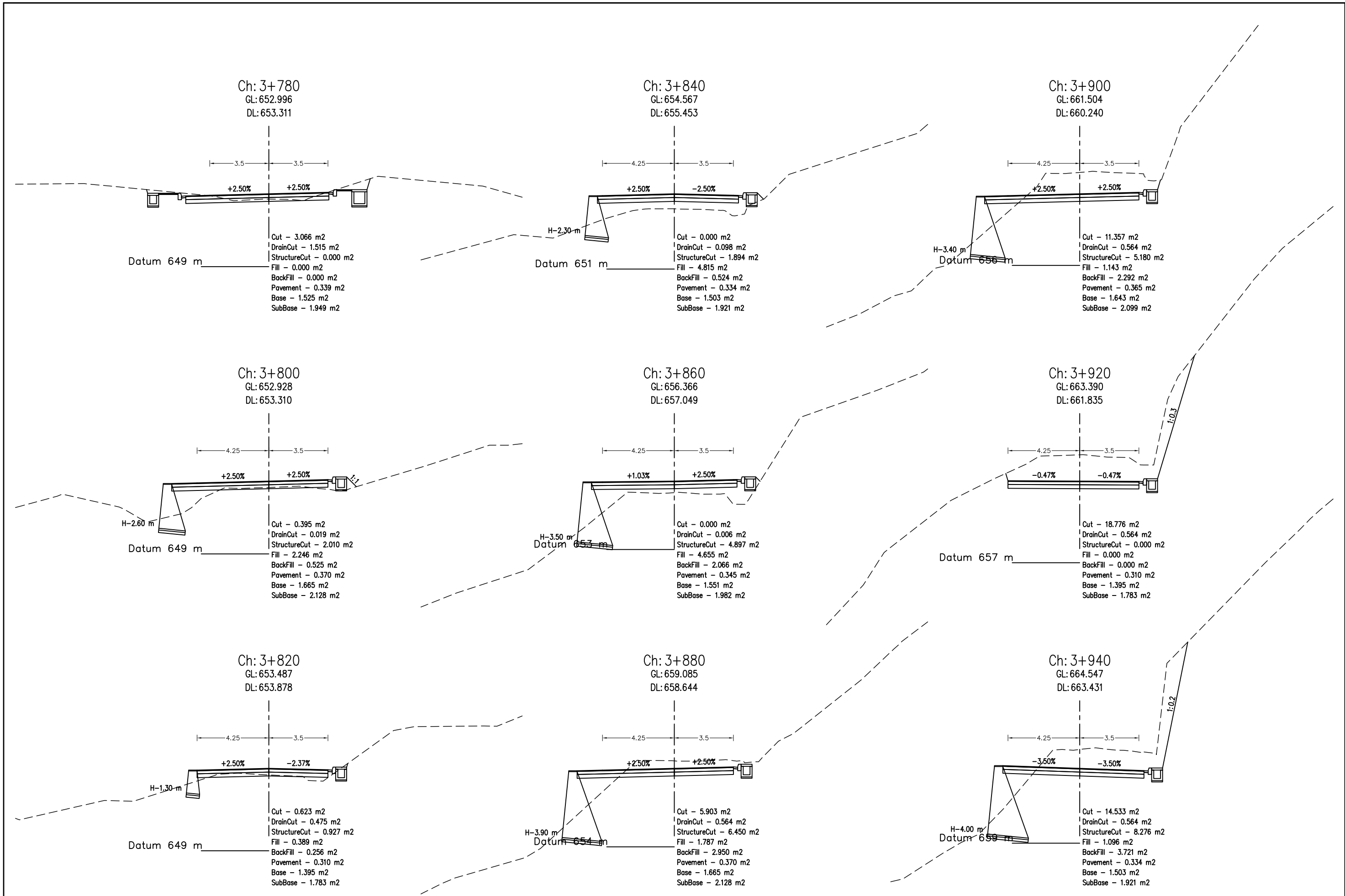


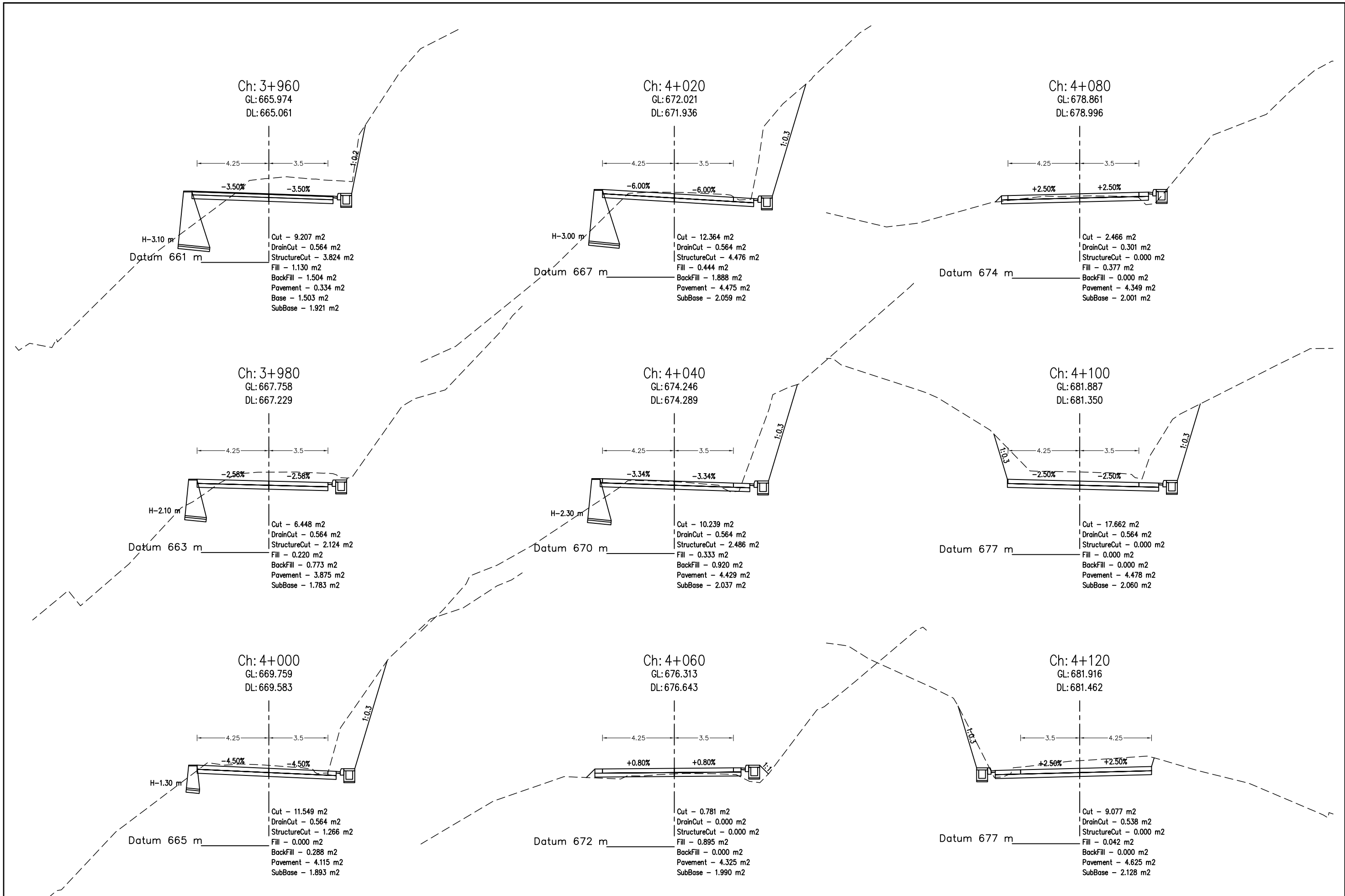


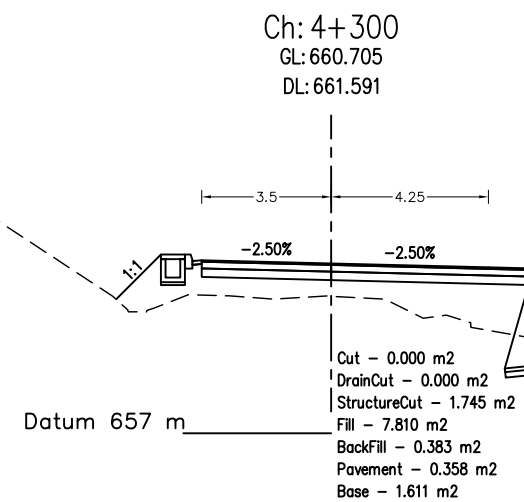
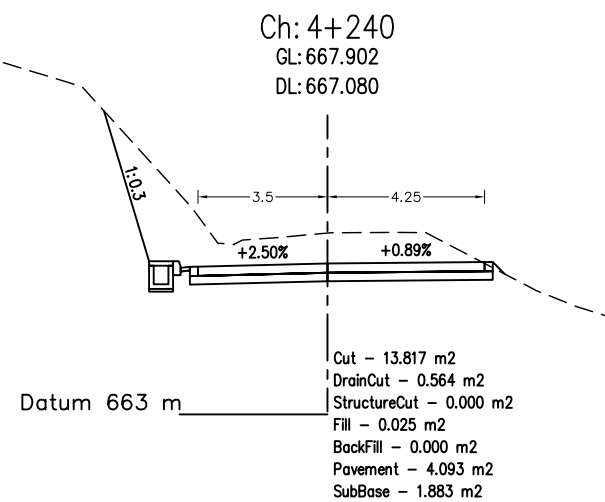
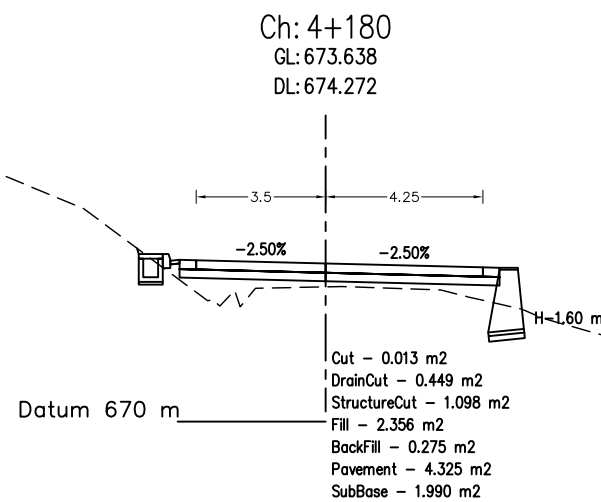
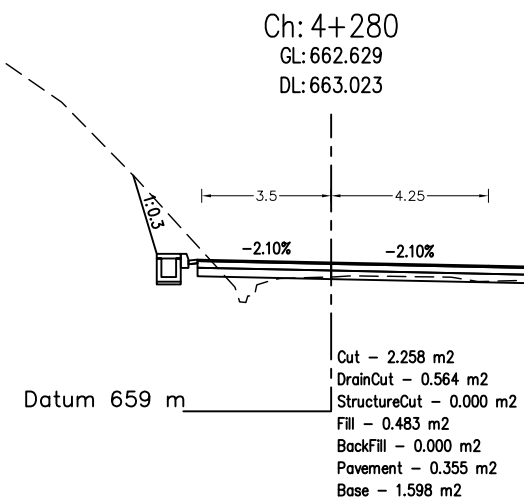
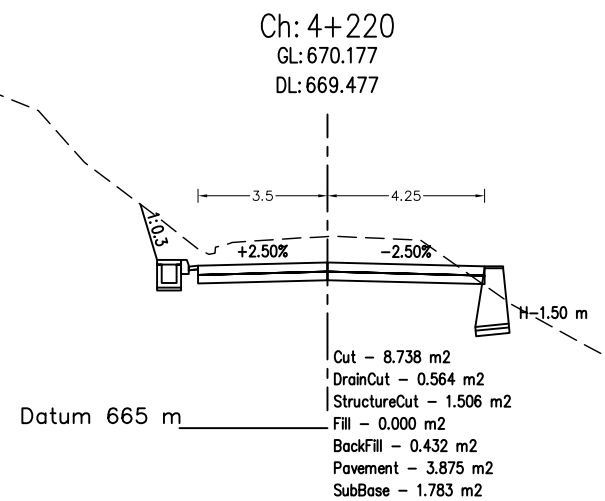
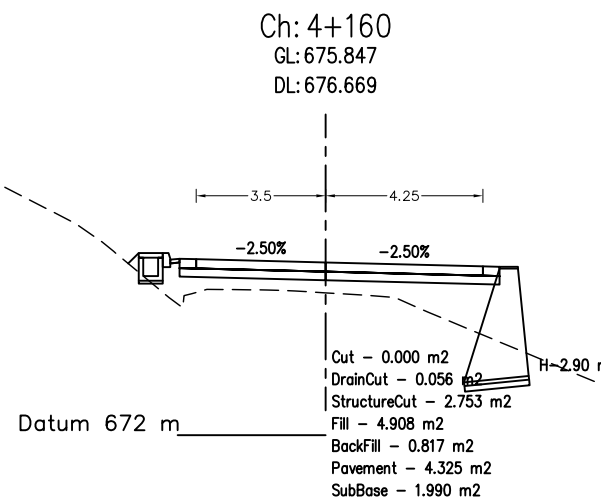
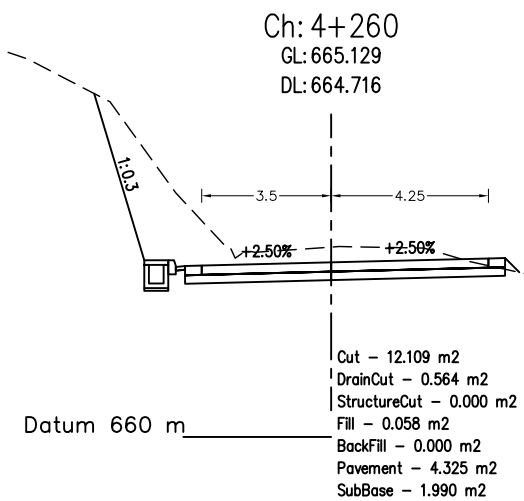
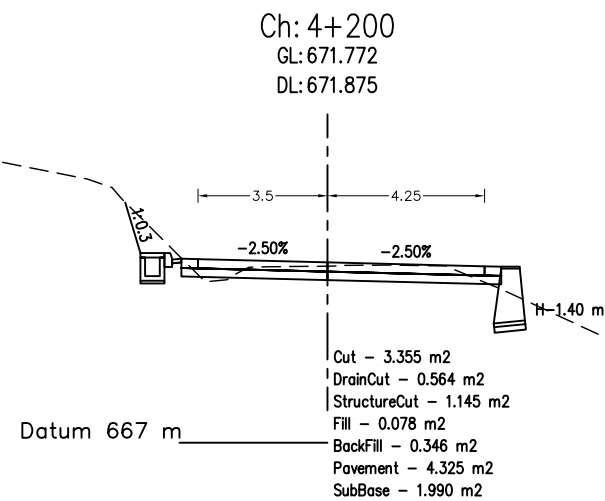
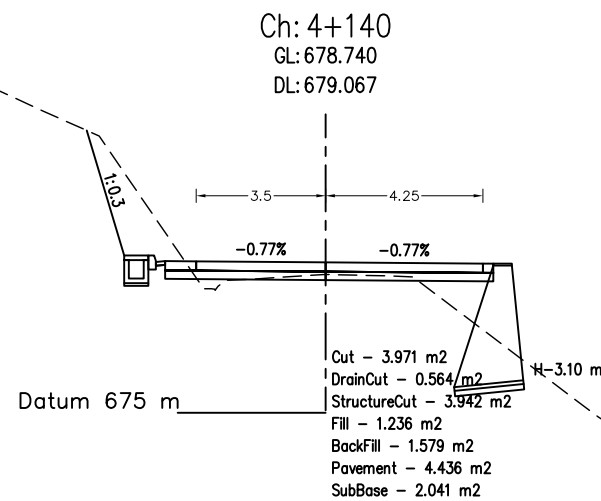


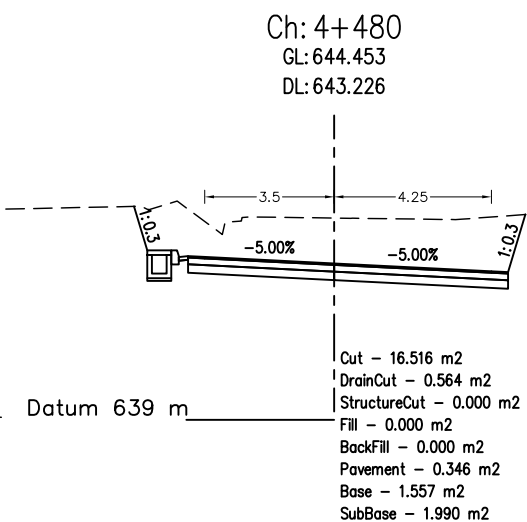
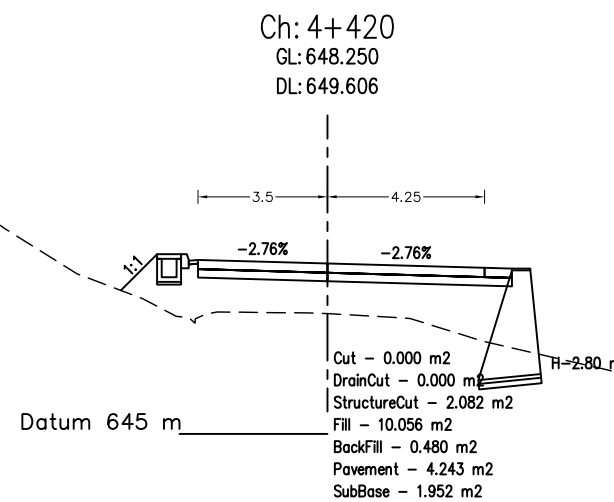
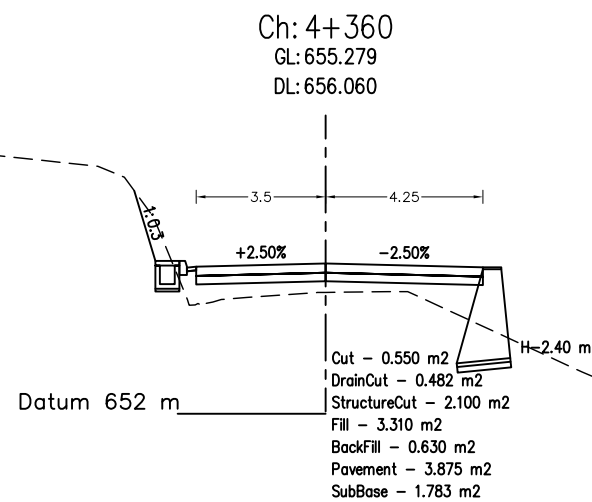
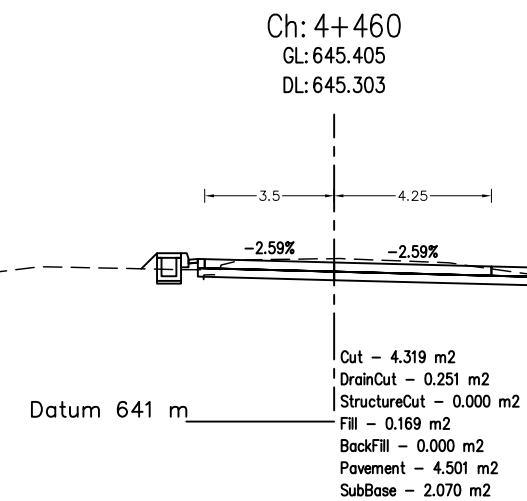
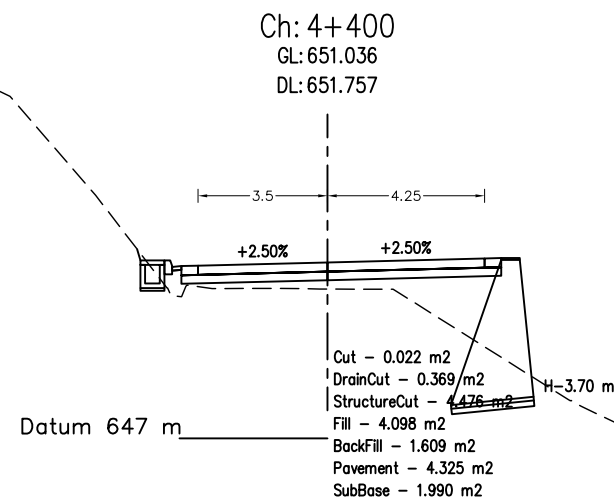
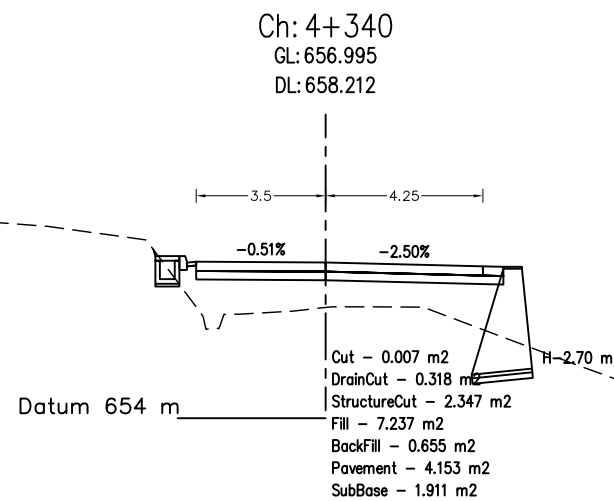
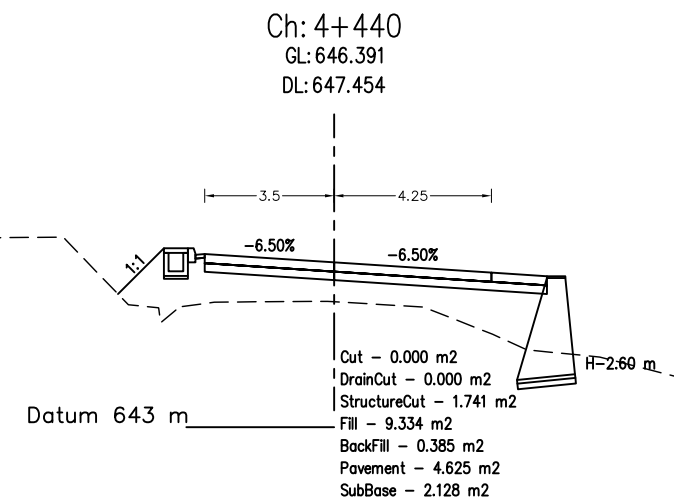
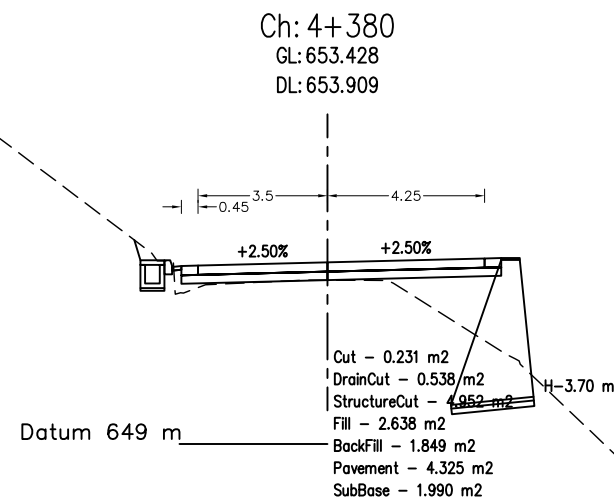
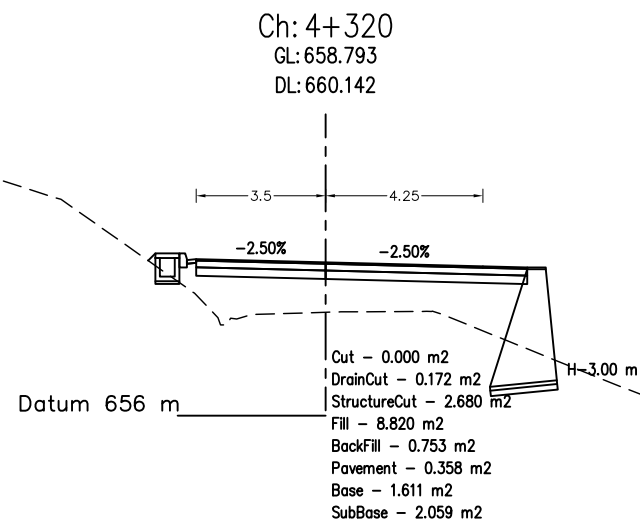


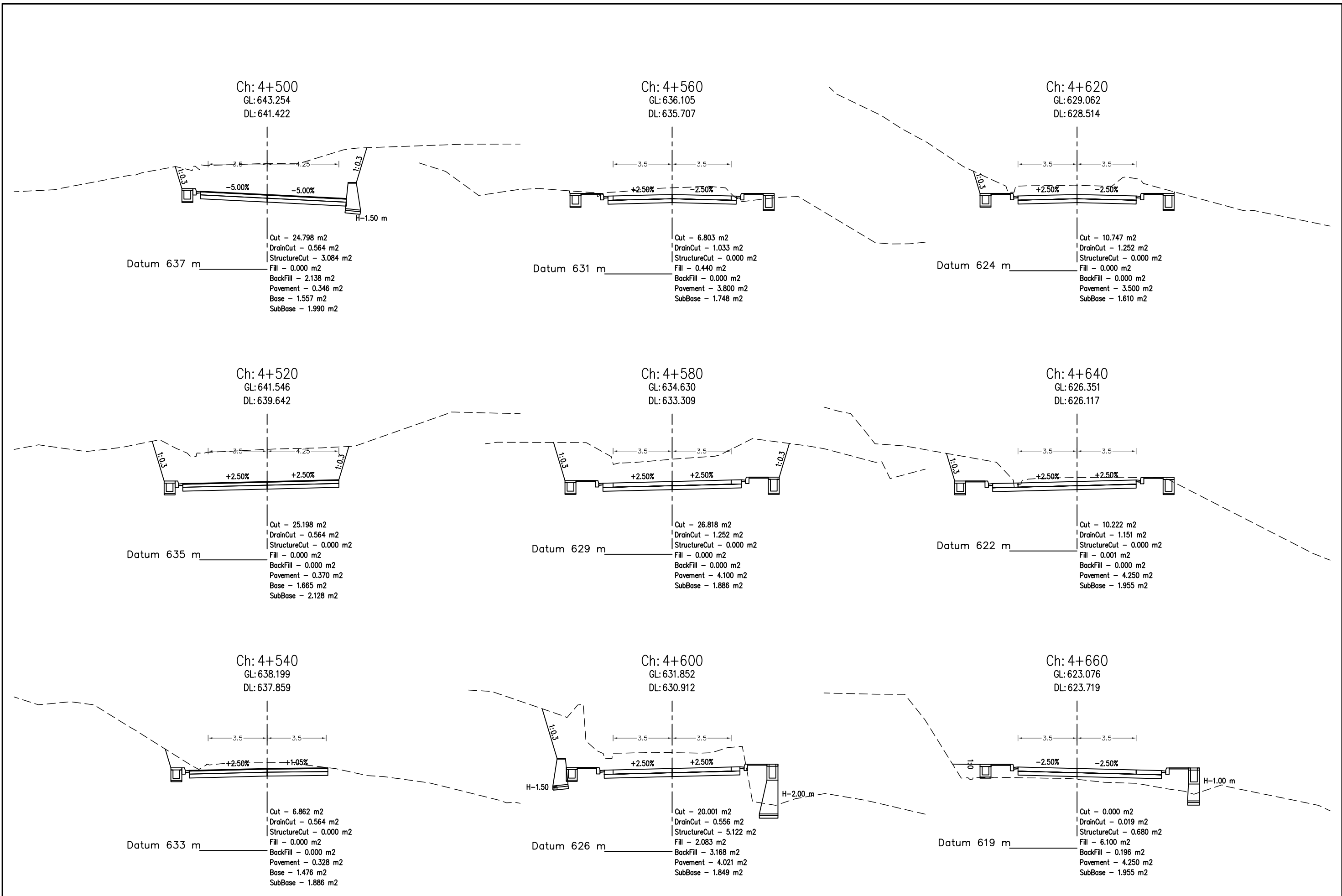


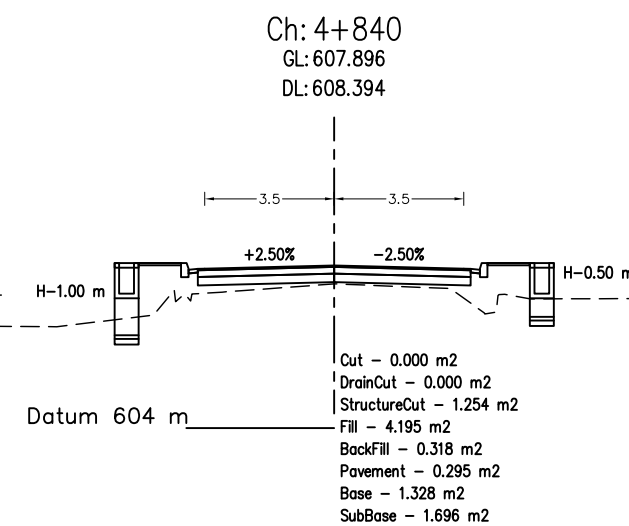
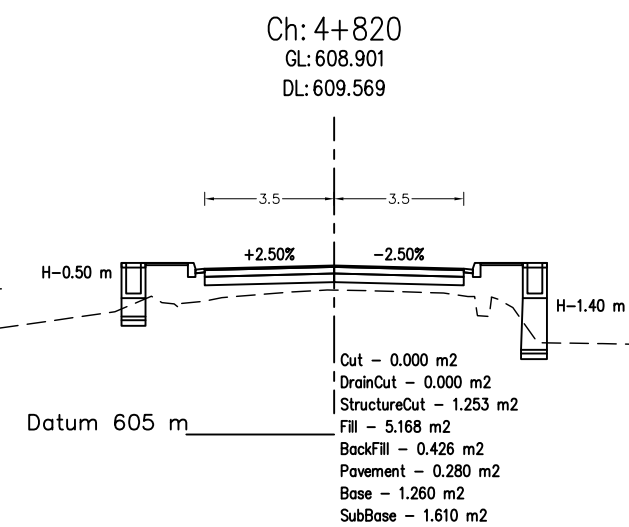
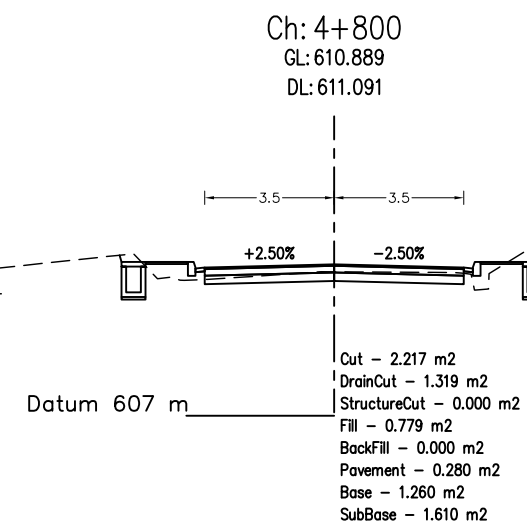


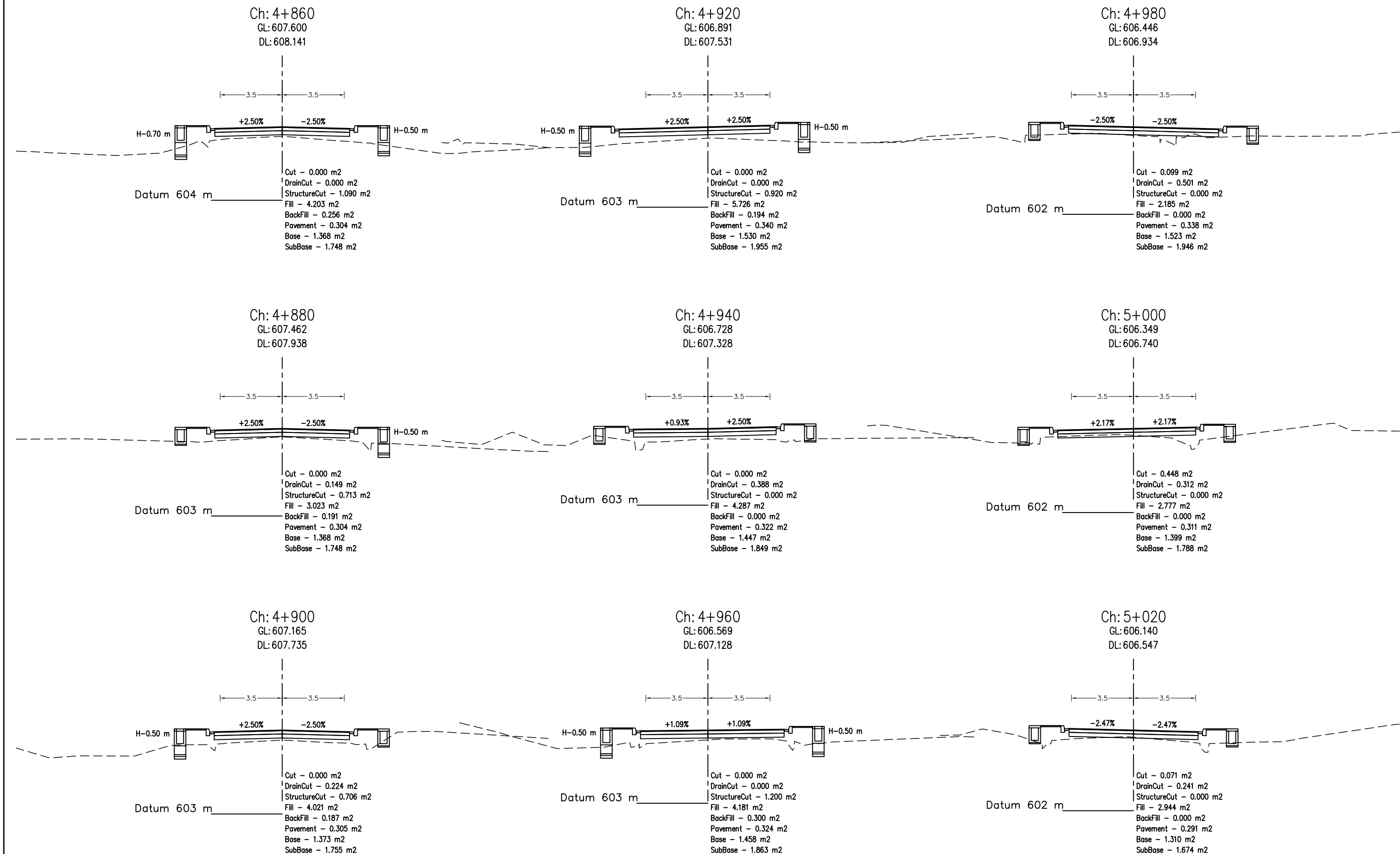


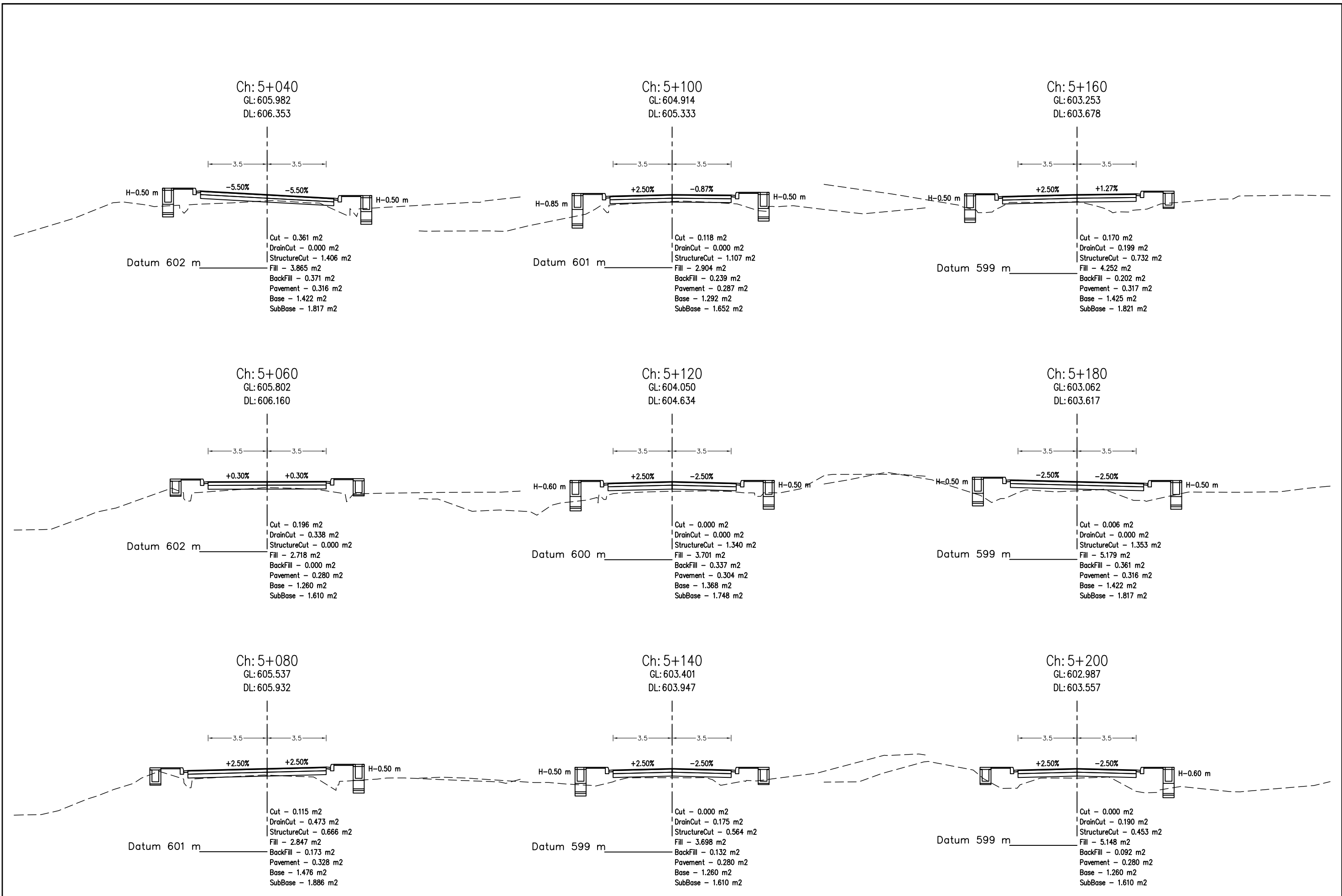


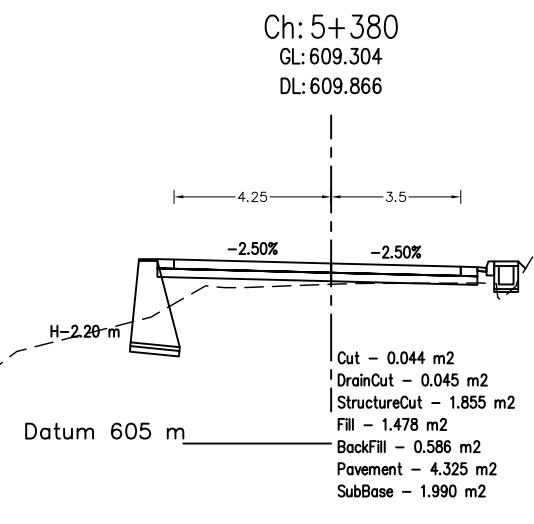
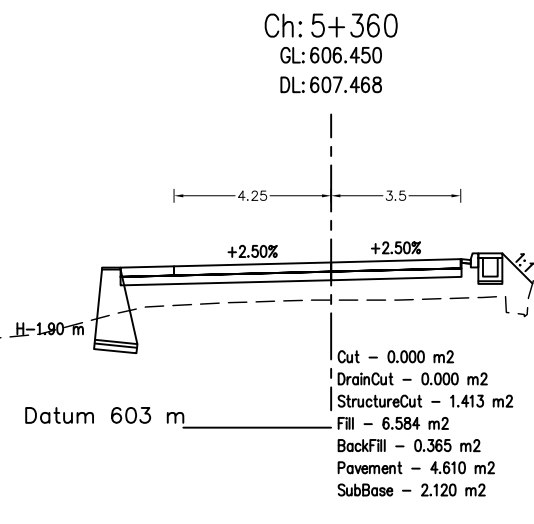
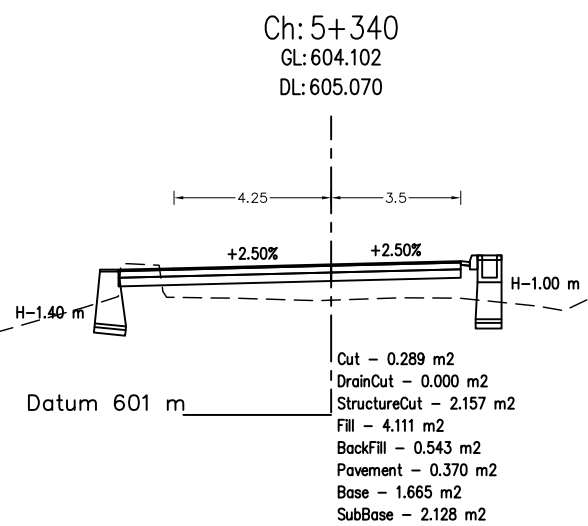


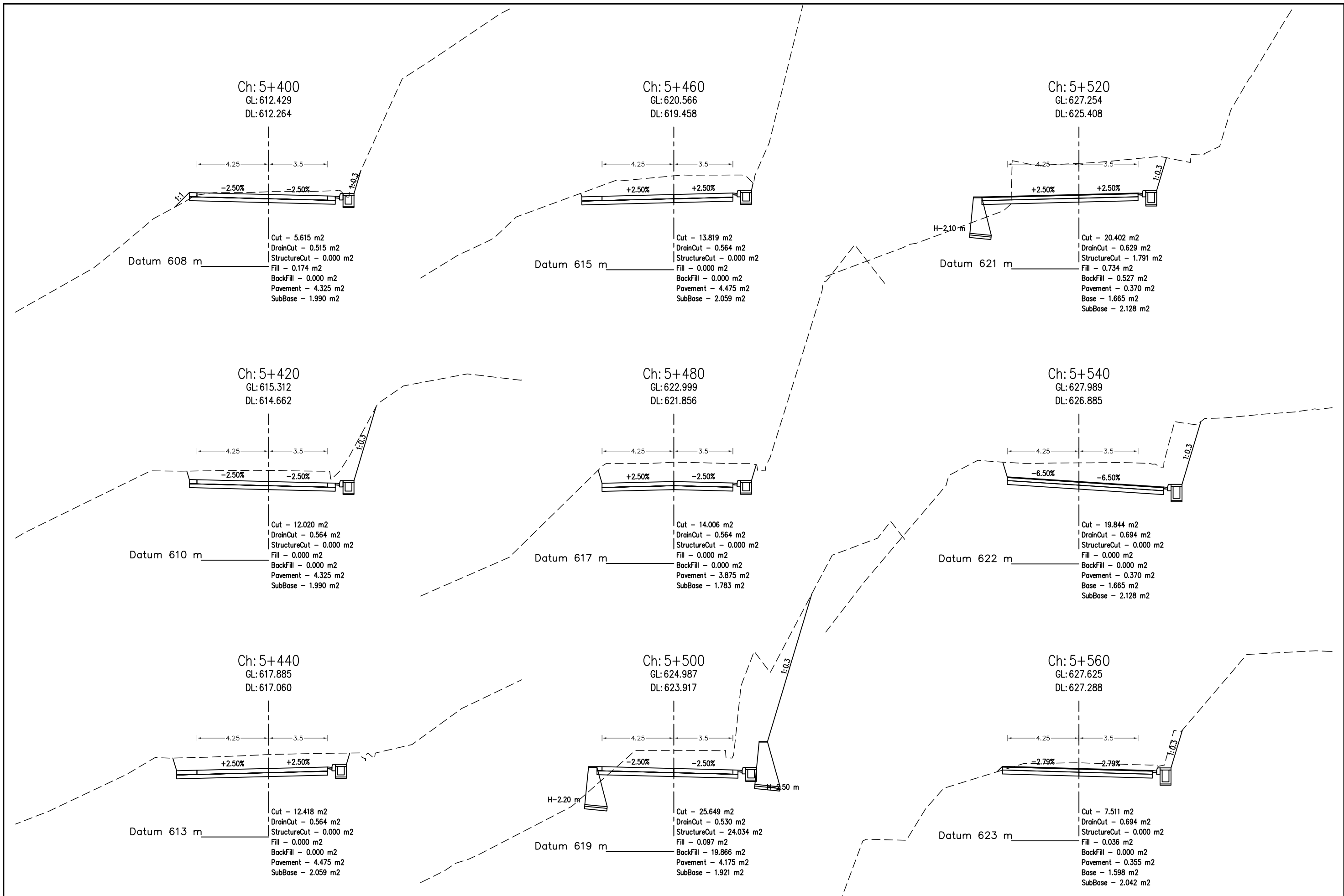


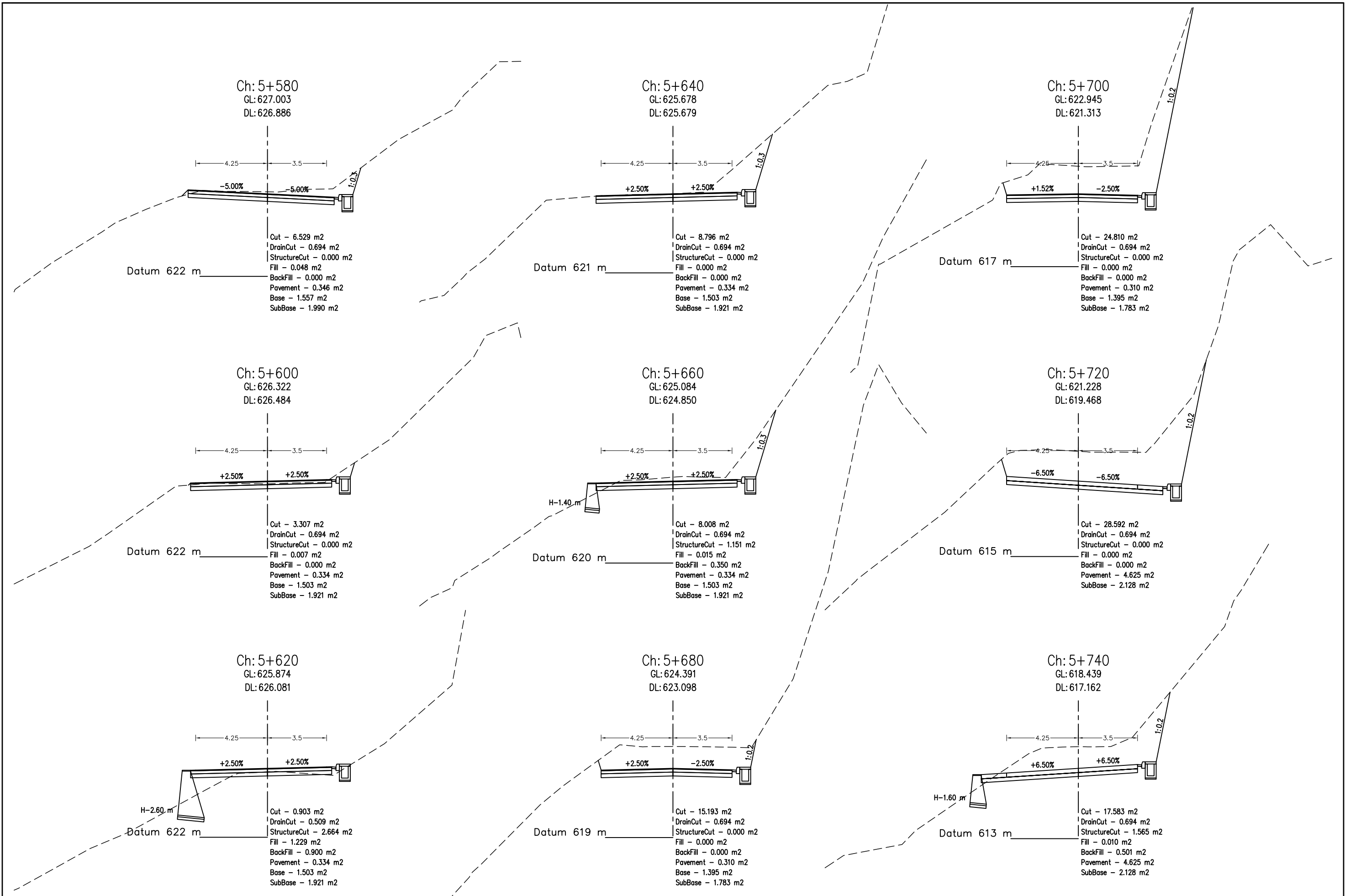


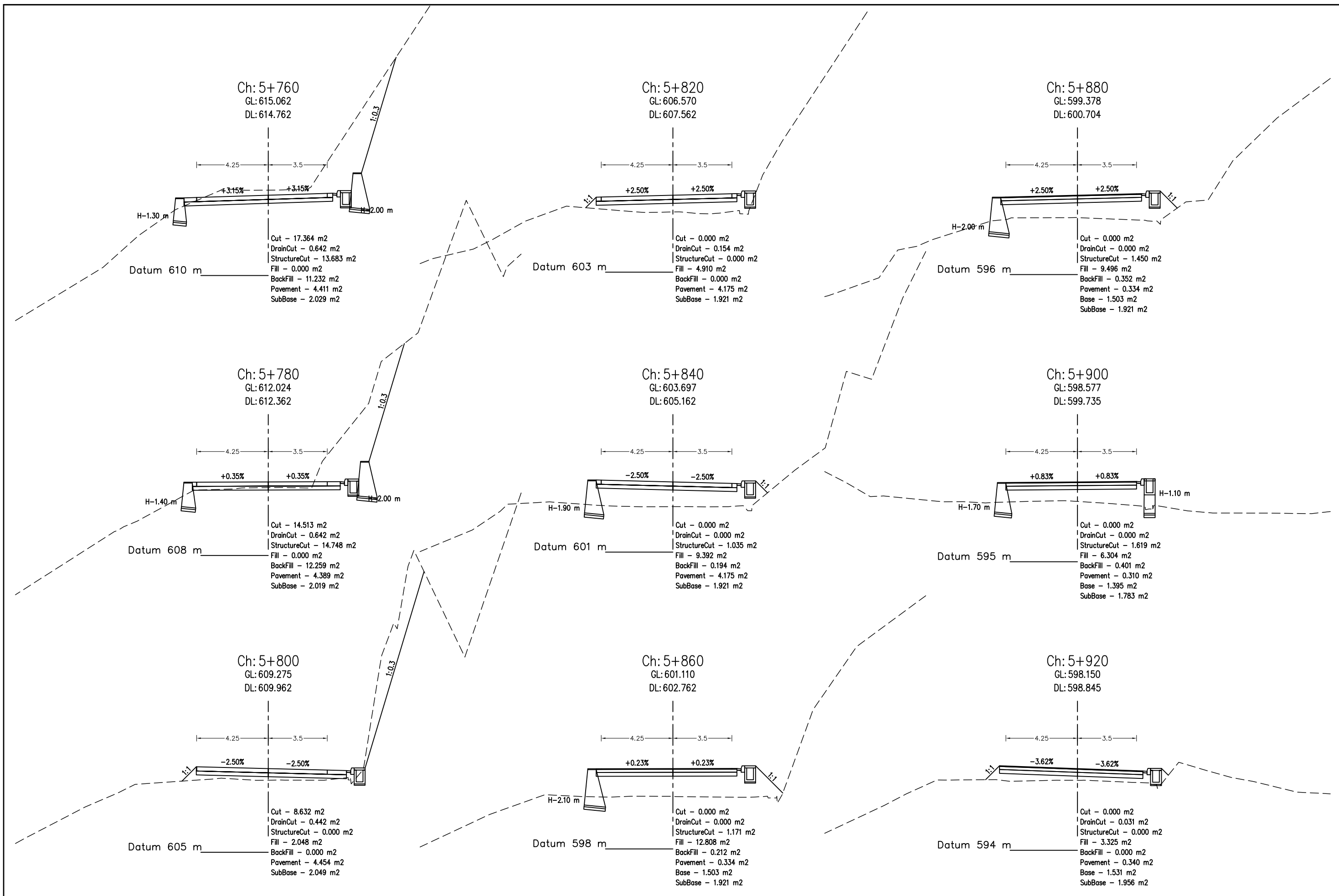


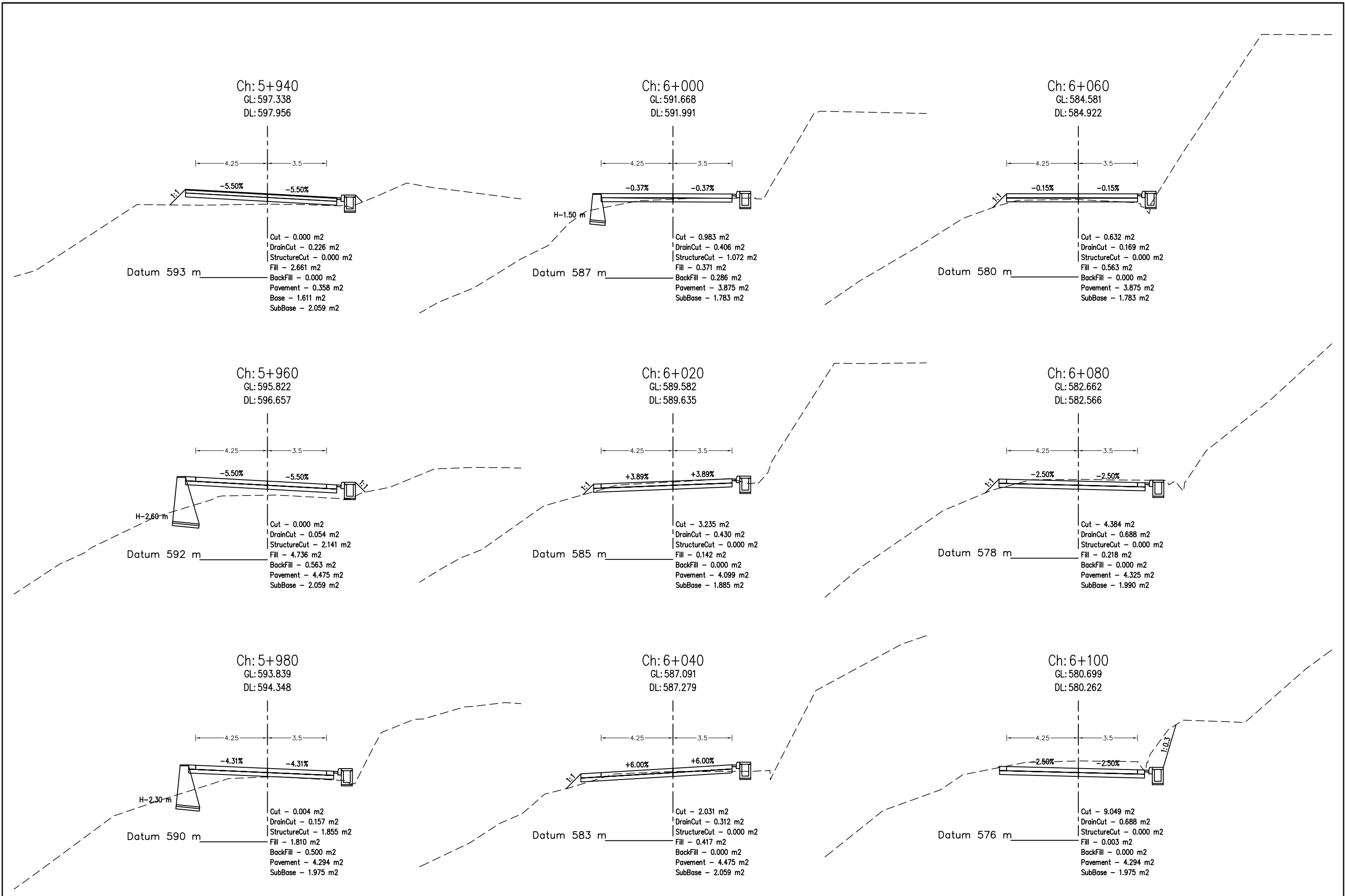


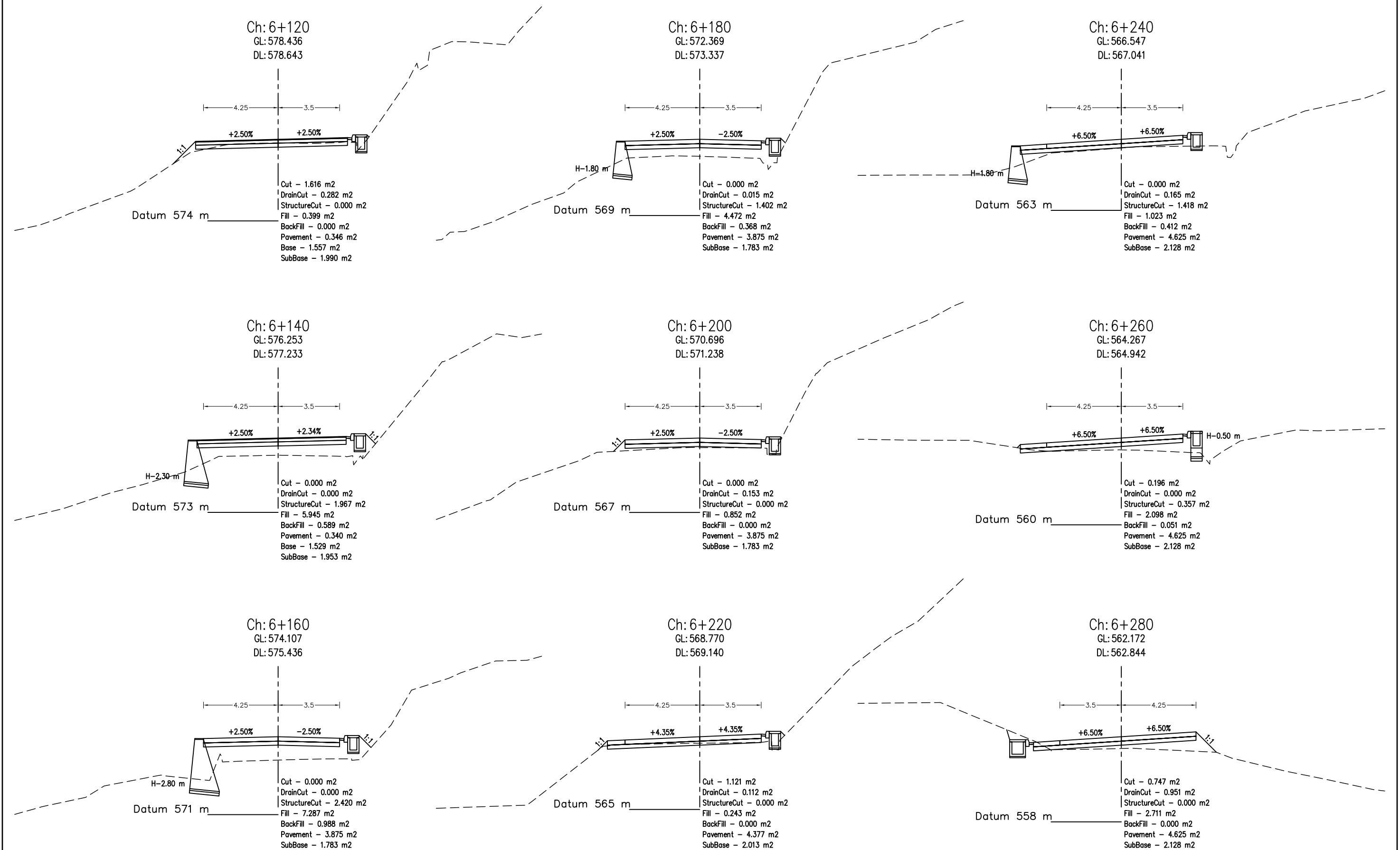












Nepal Urban Governance and Infrastructure Project (NUGIP)



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 :

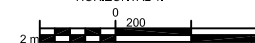
DRAWN BY :

CHECKED BY :

APPROVED BY :

SCALE

HORIZONTAL 1:



VERTICAL 1:



Cross-Section

6+120-6+280

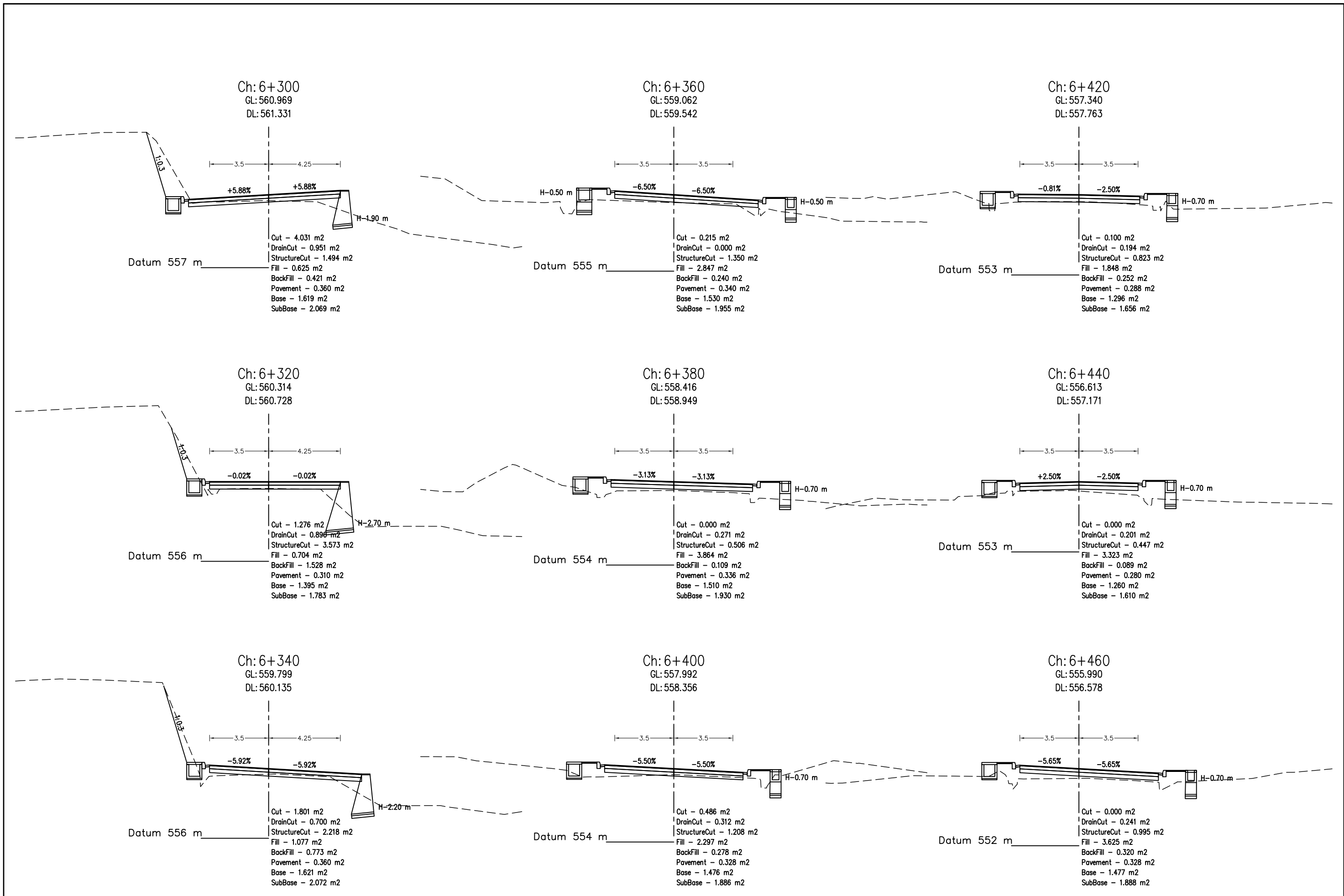
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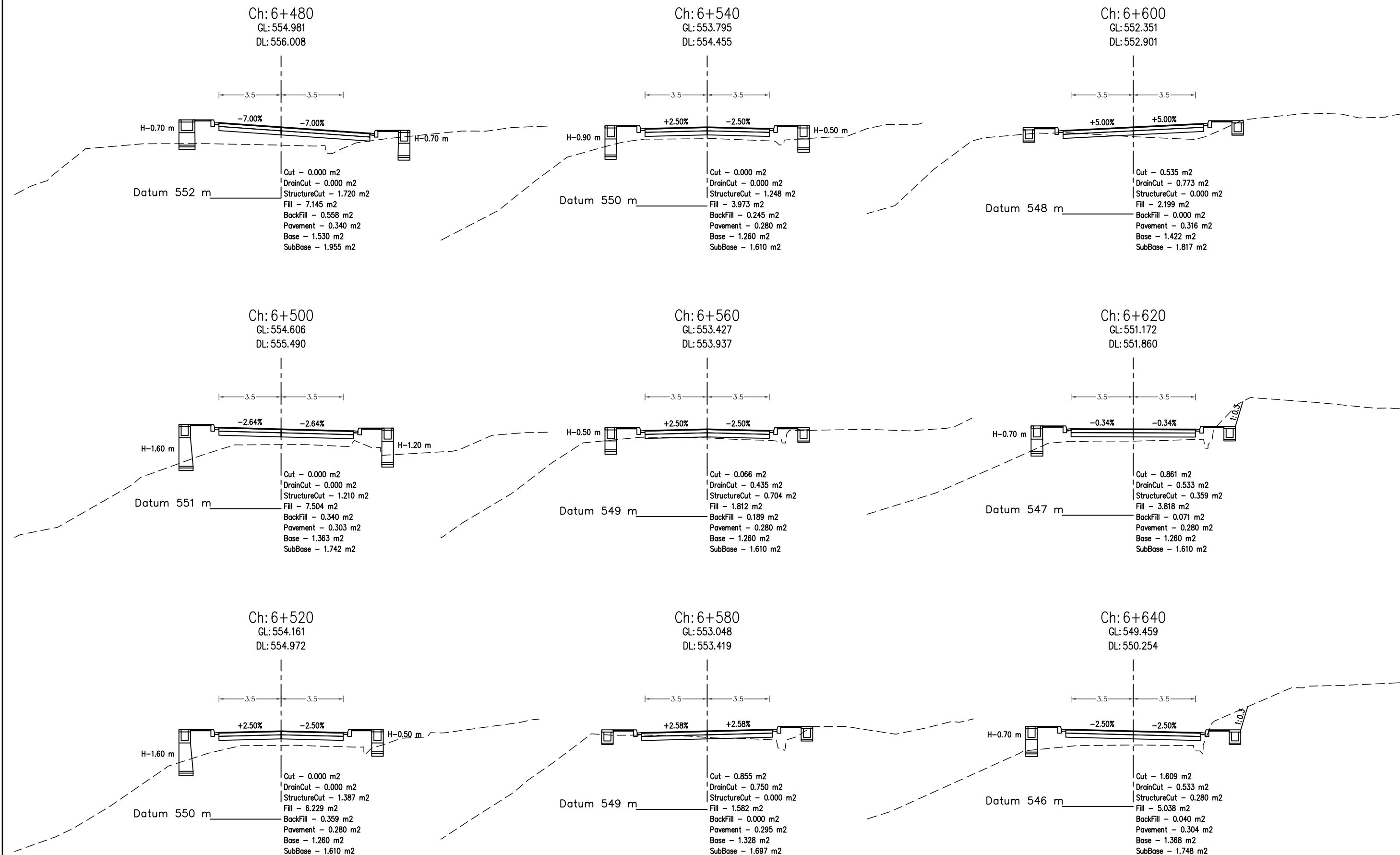
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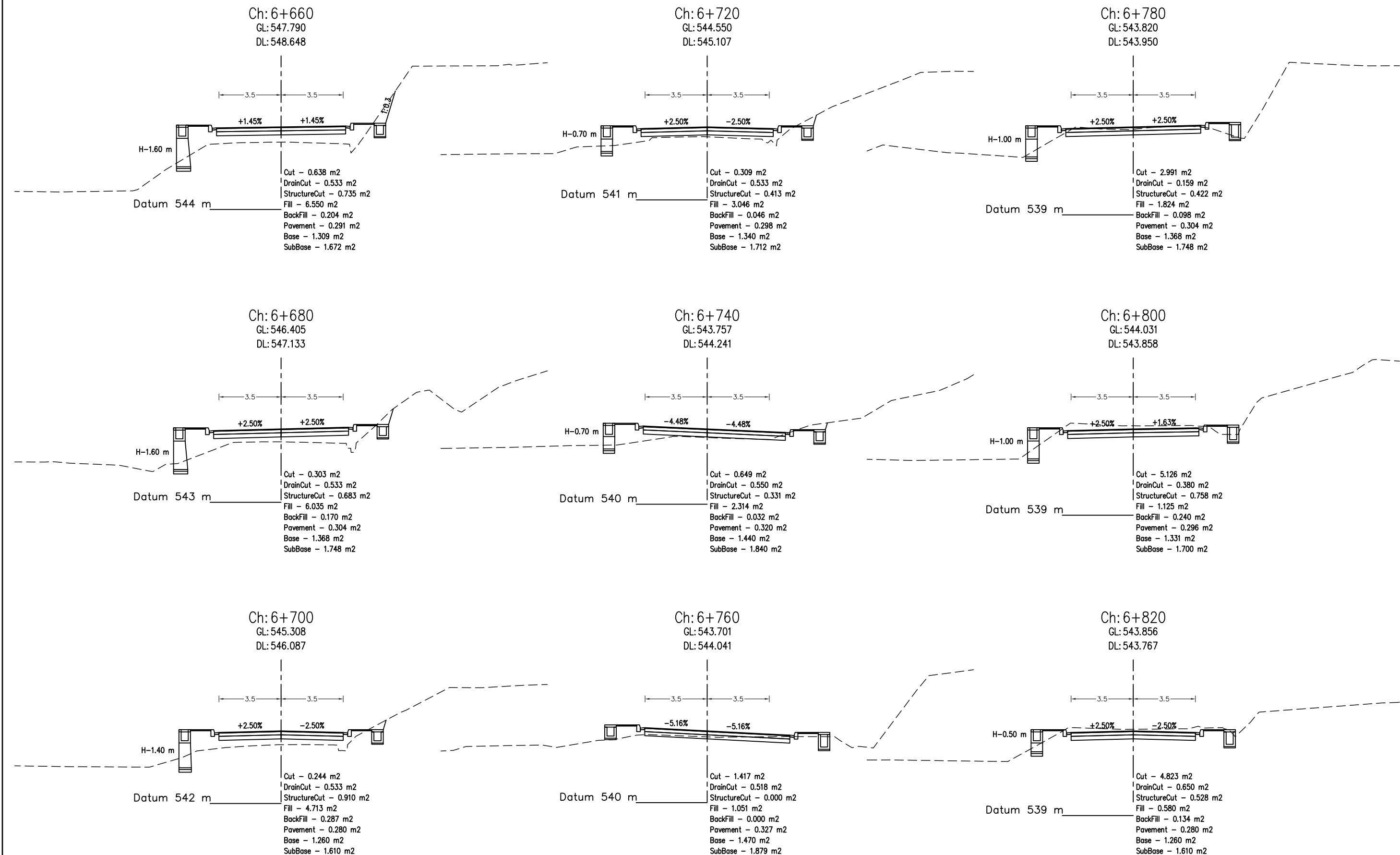
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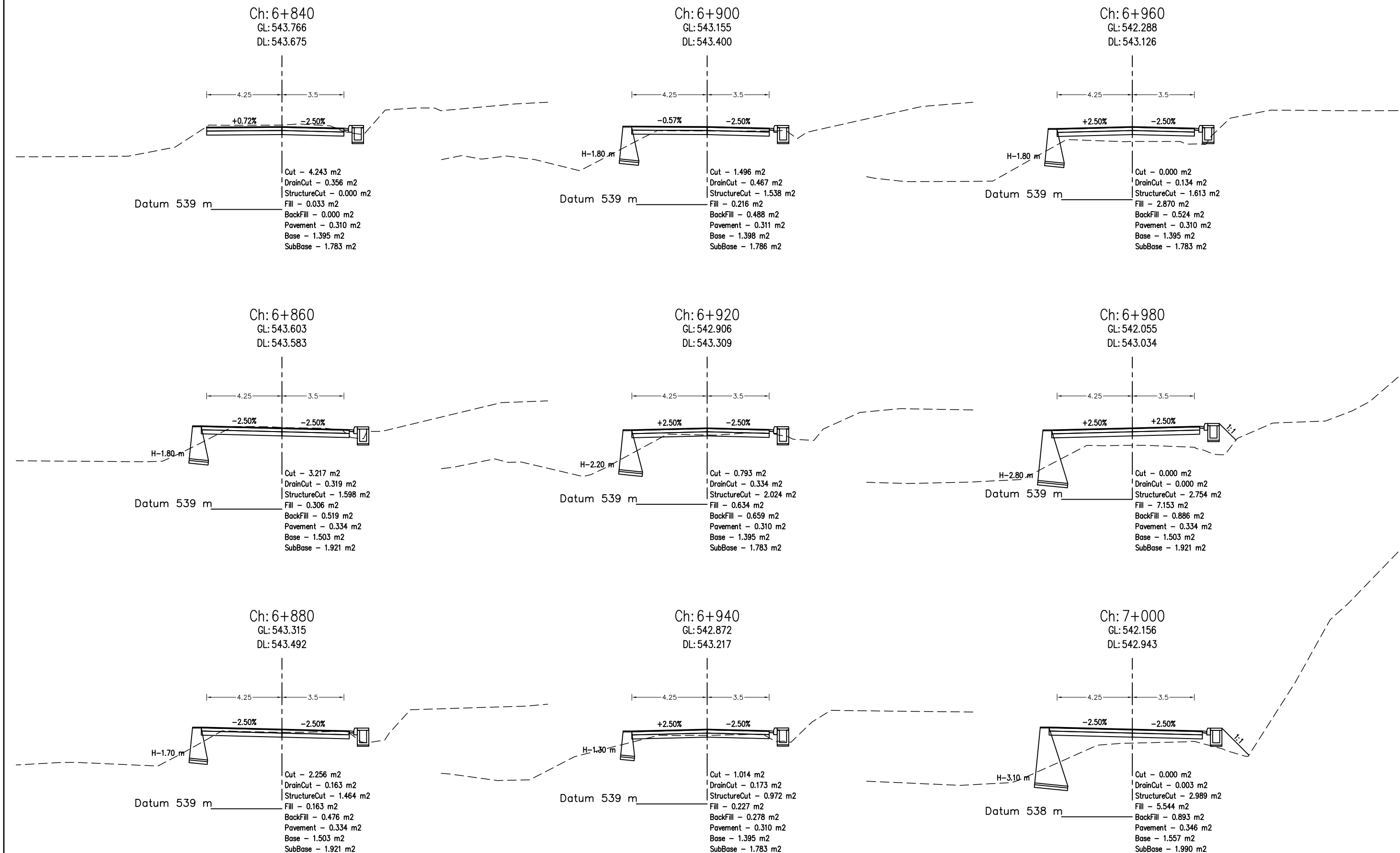
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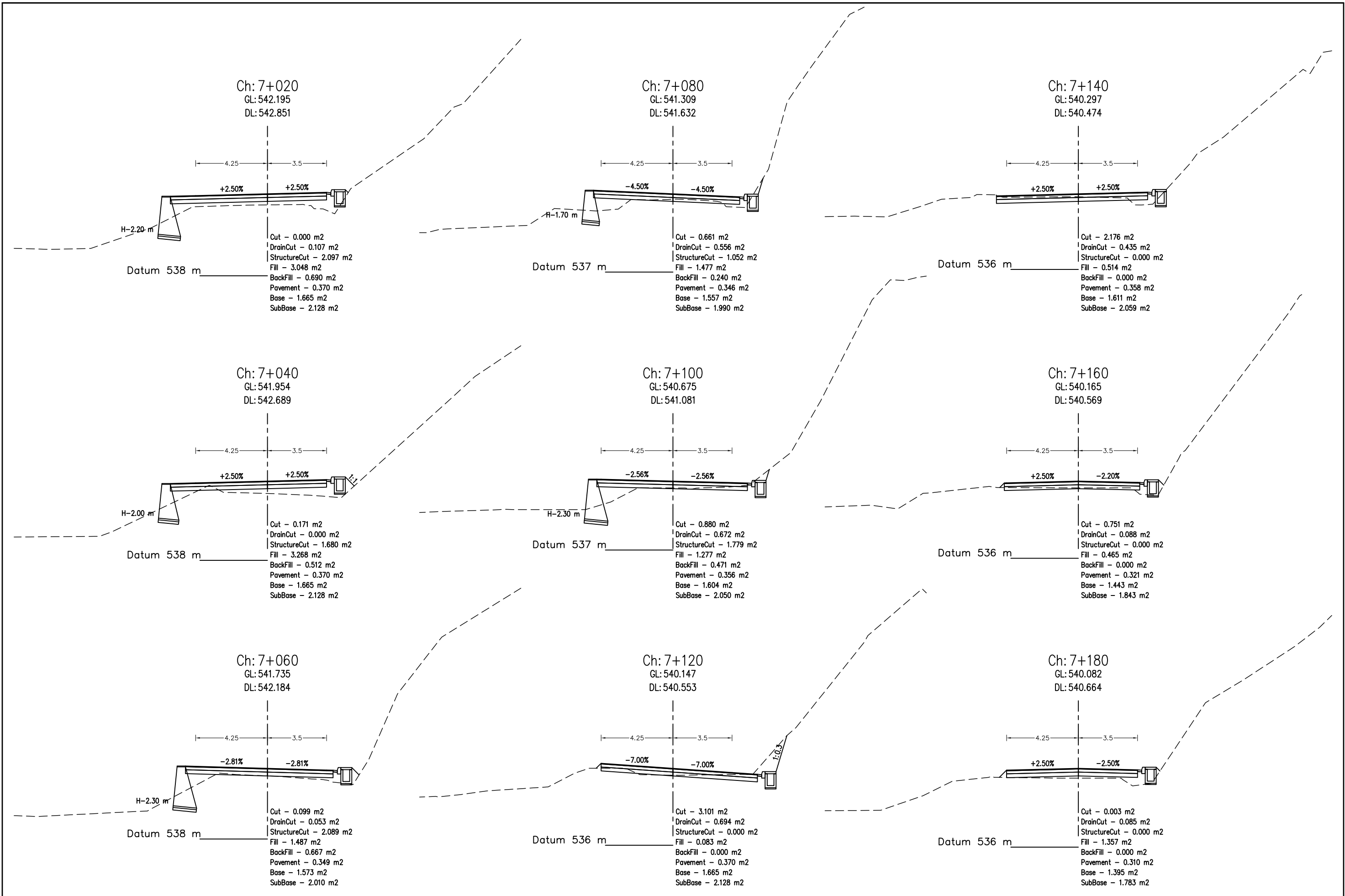
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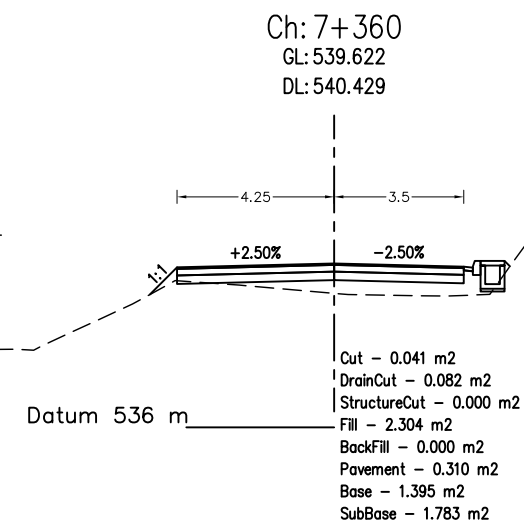
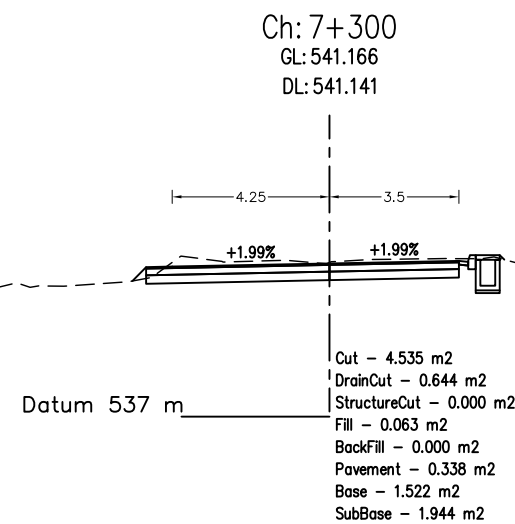
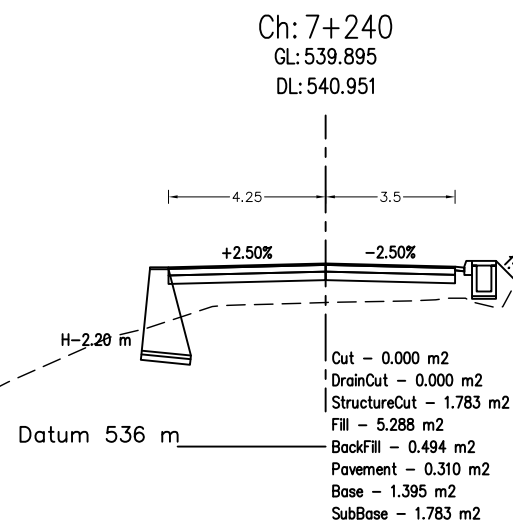


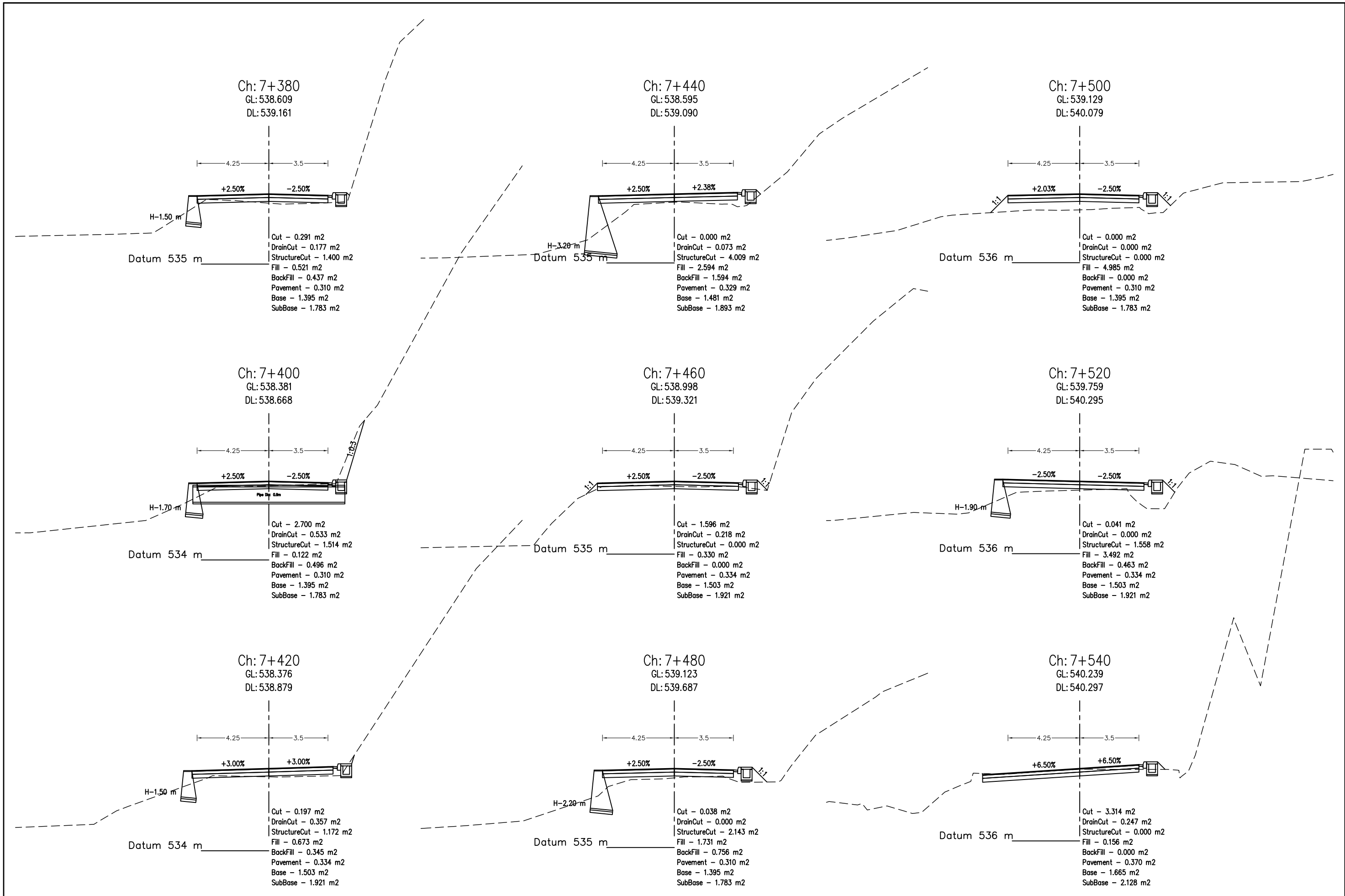


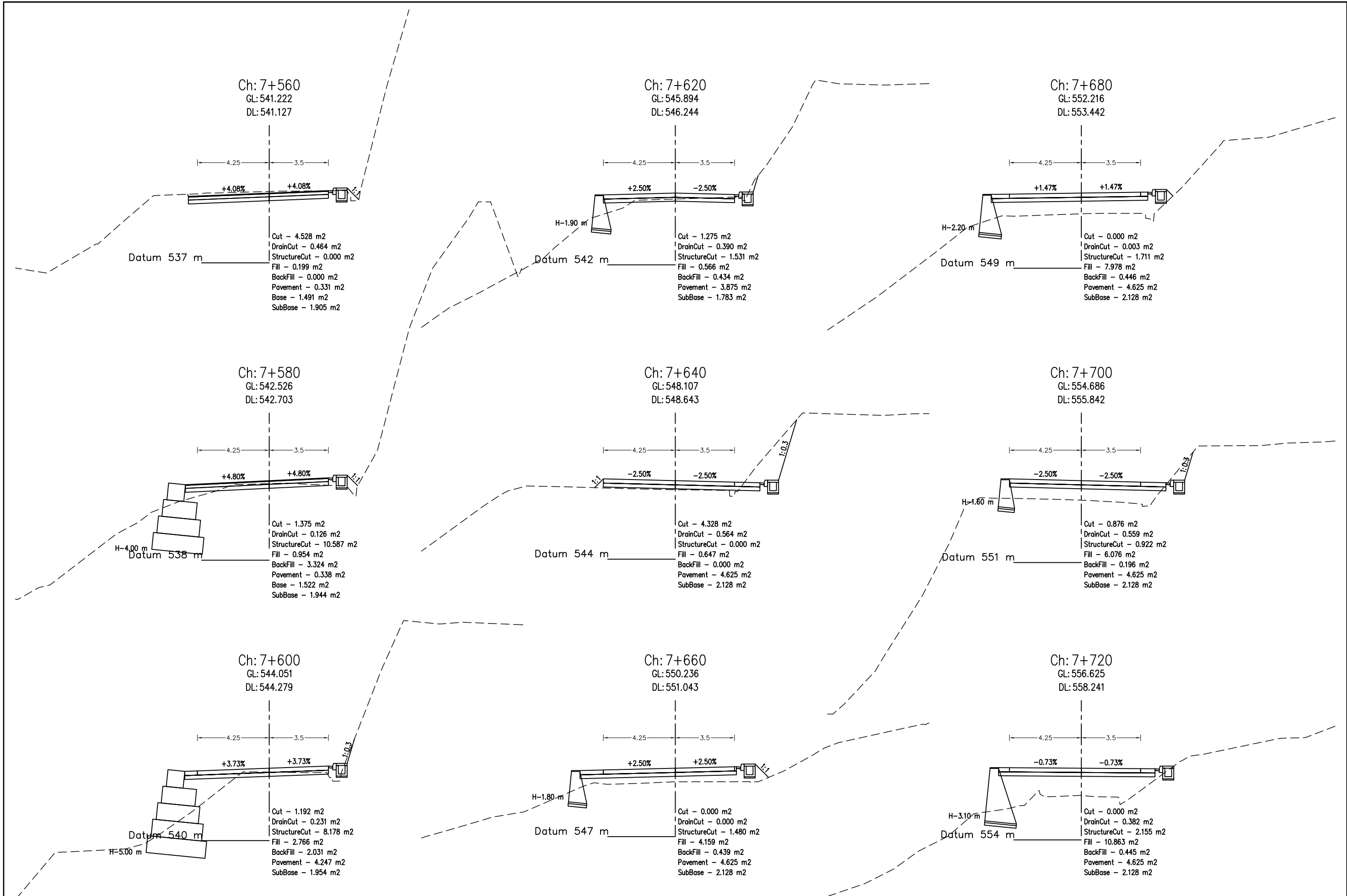


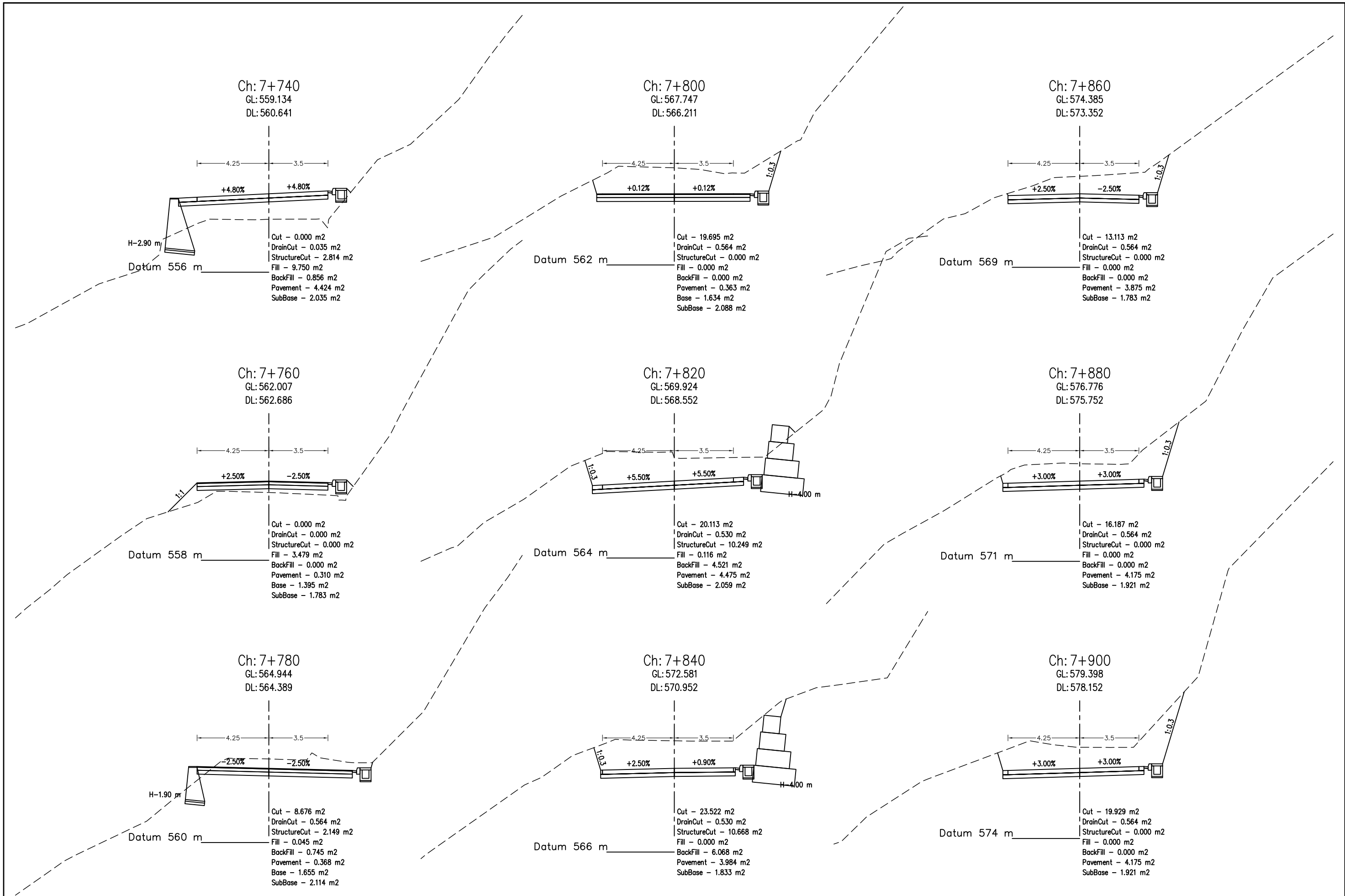


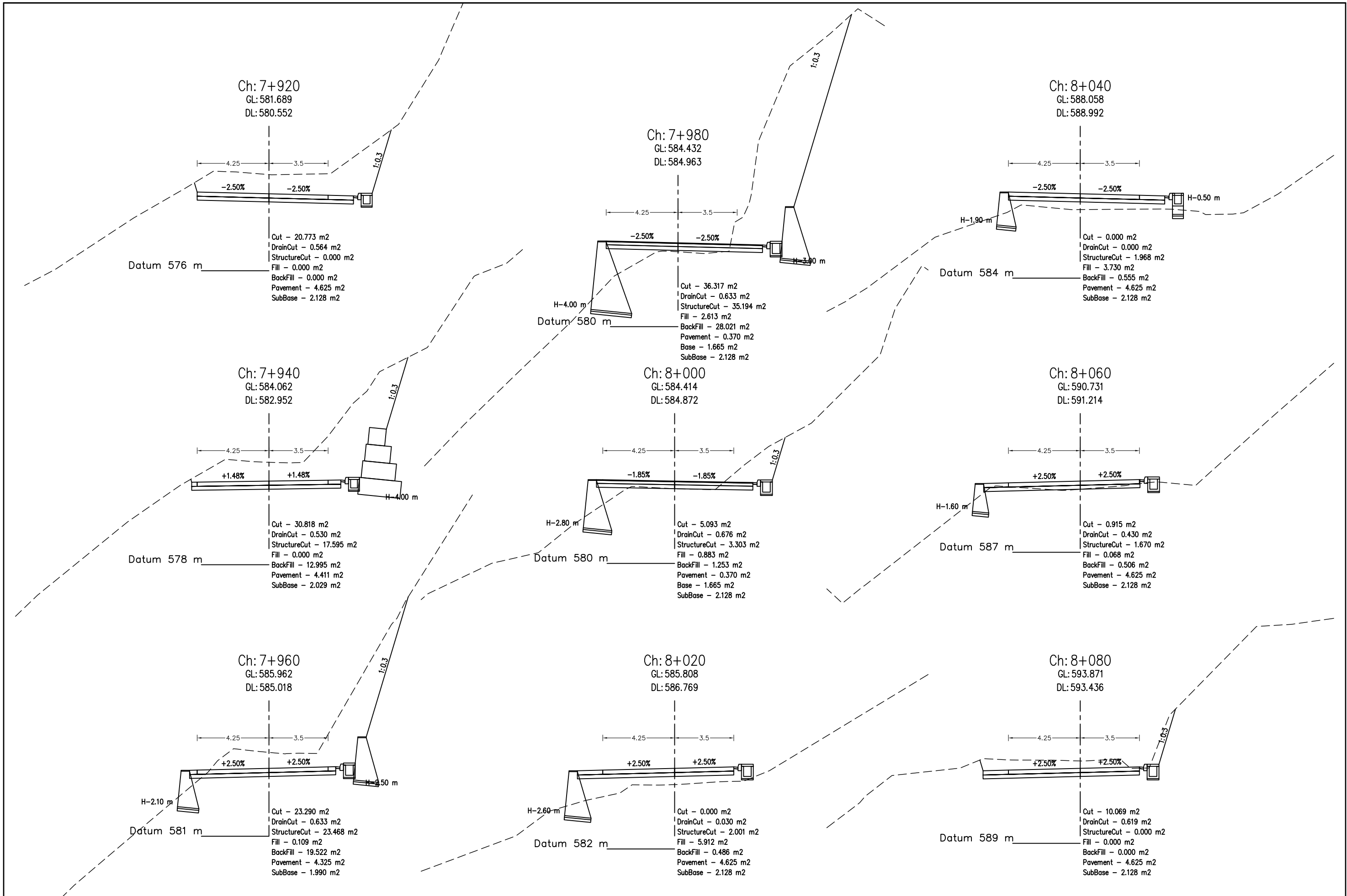


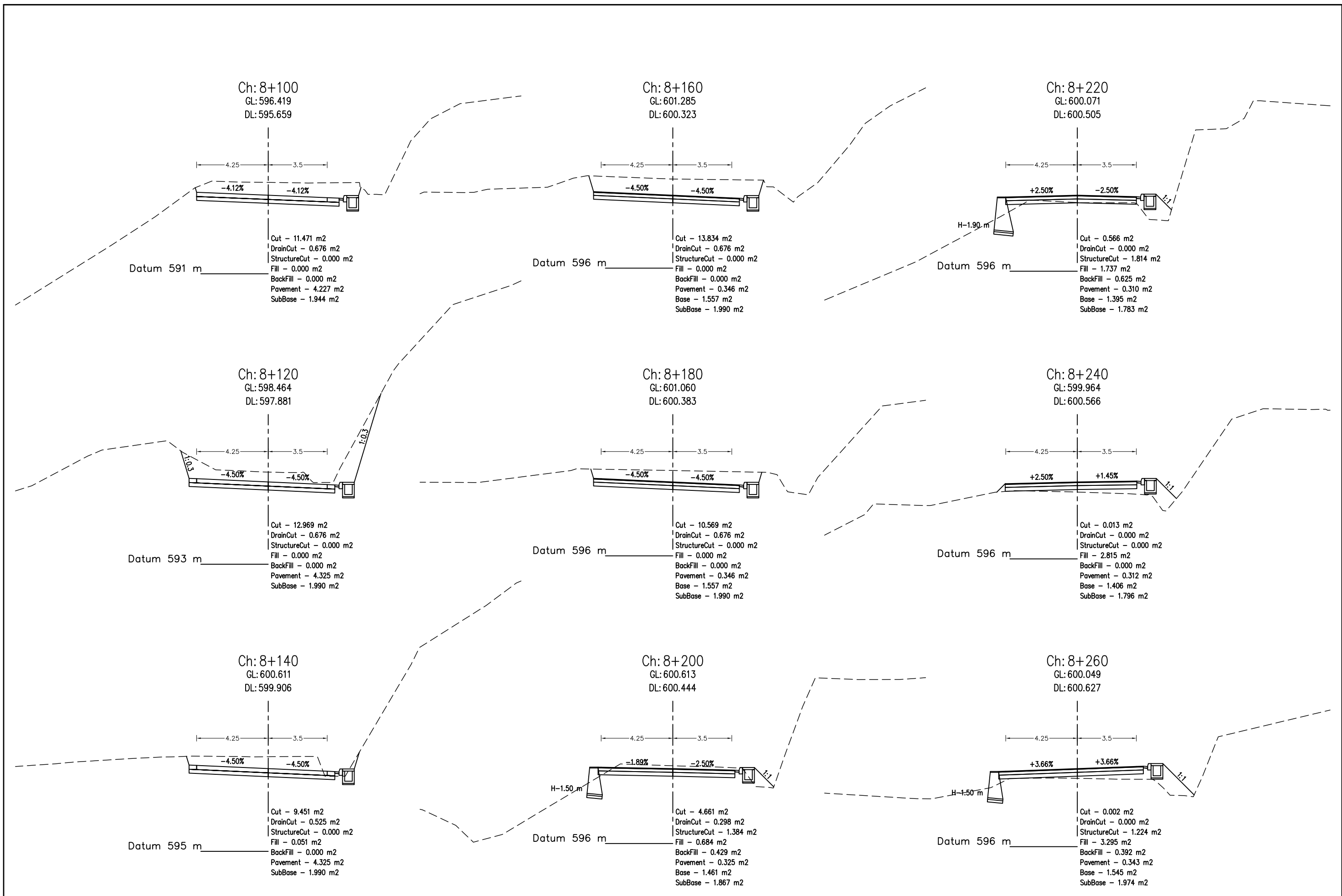


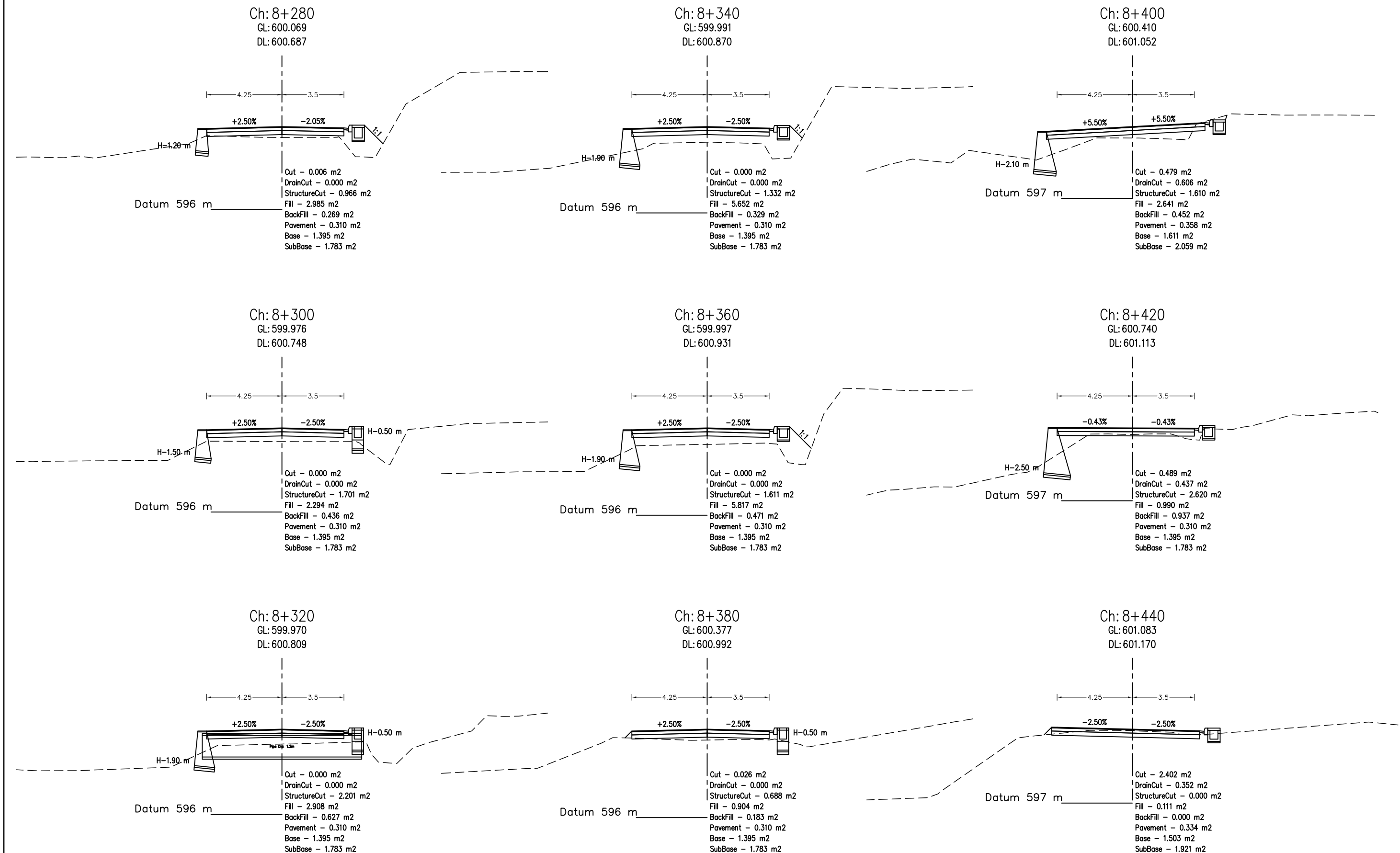


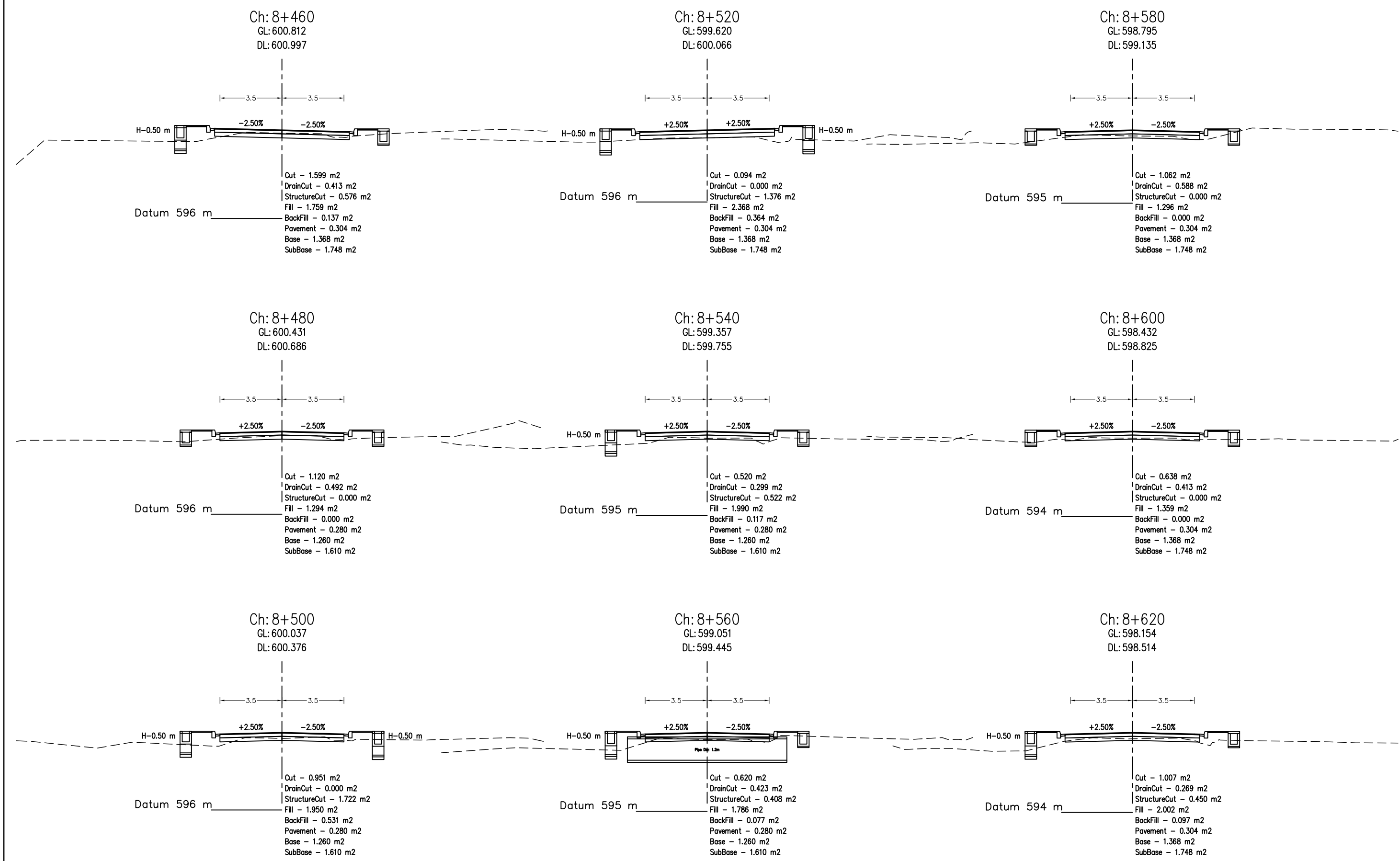


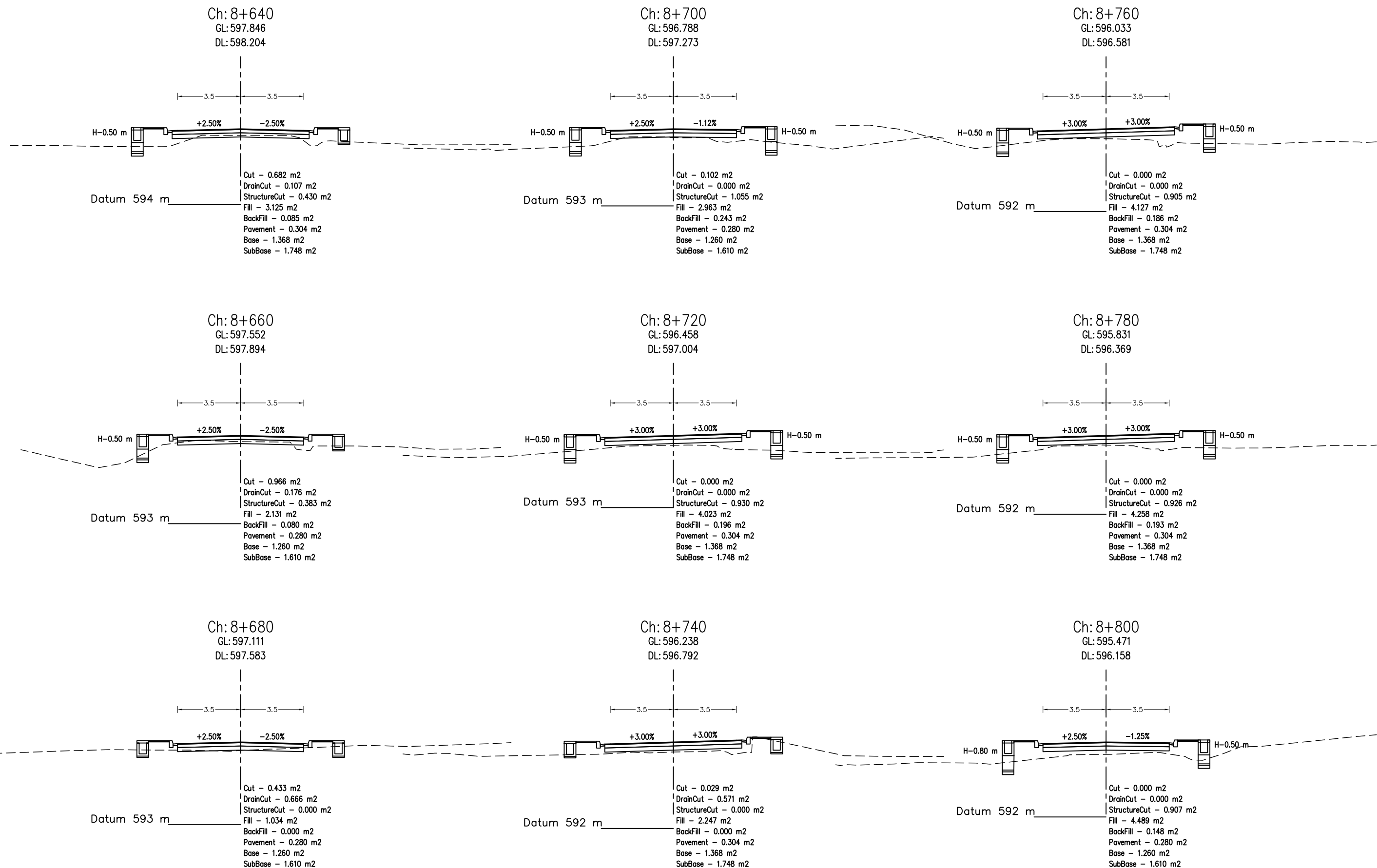


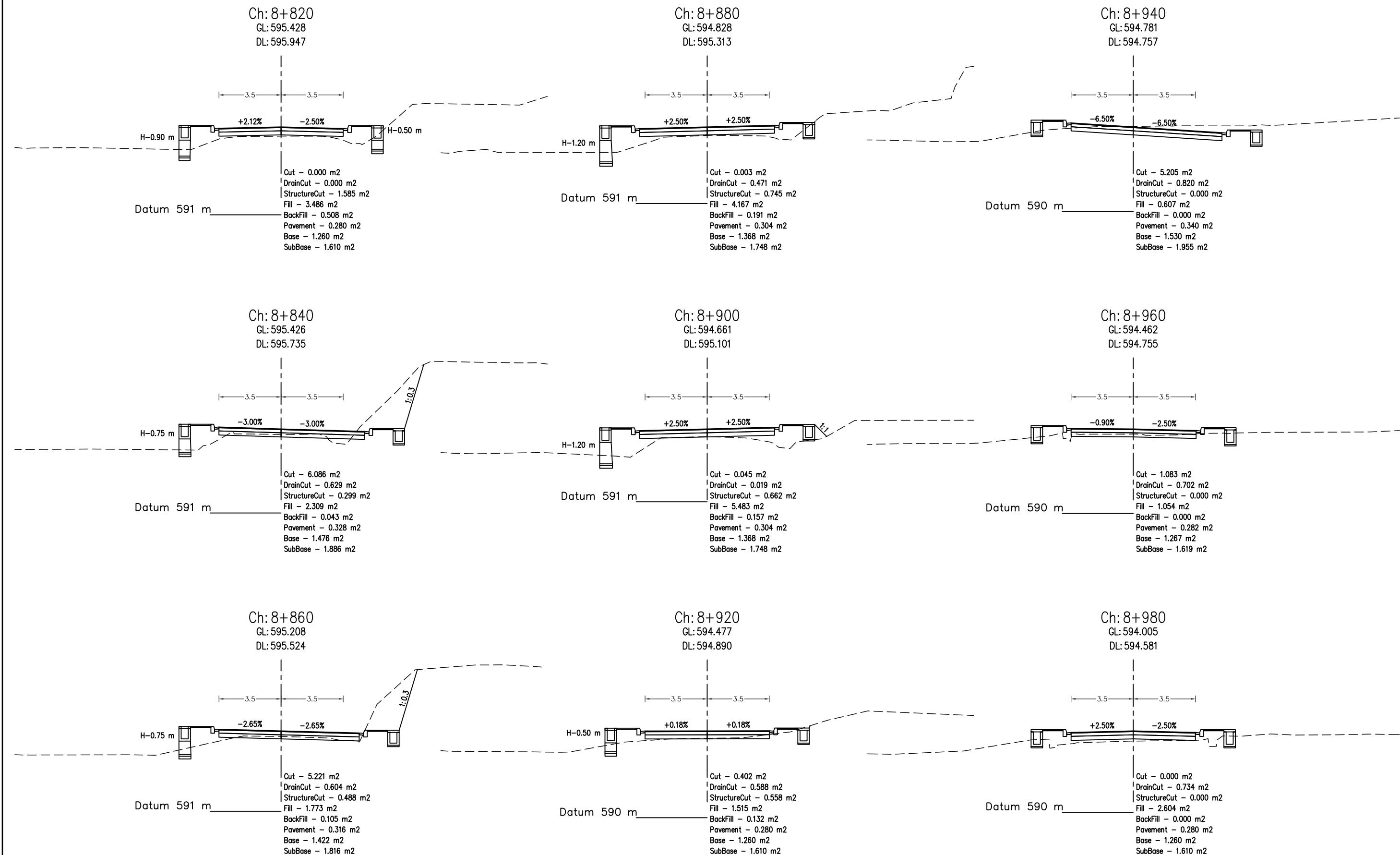


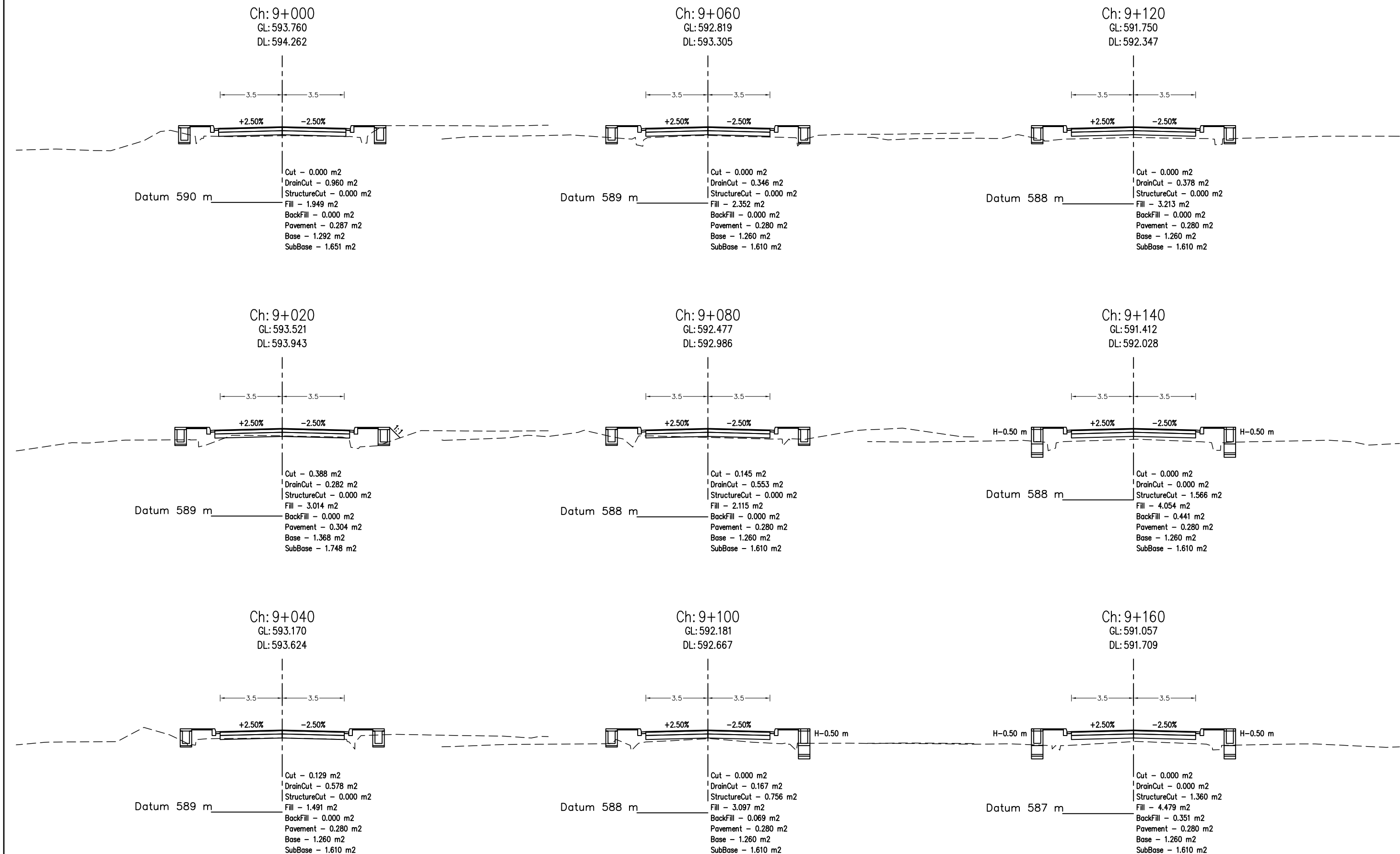


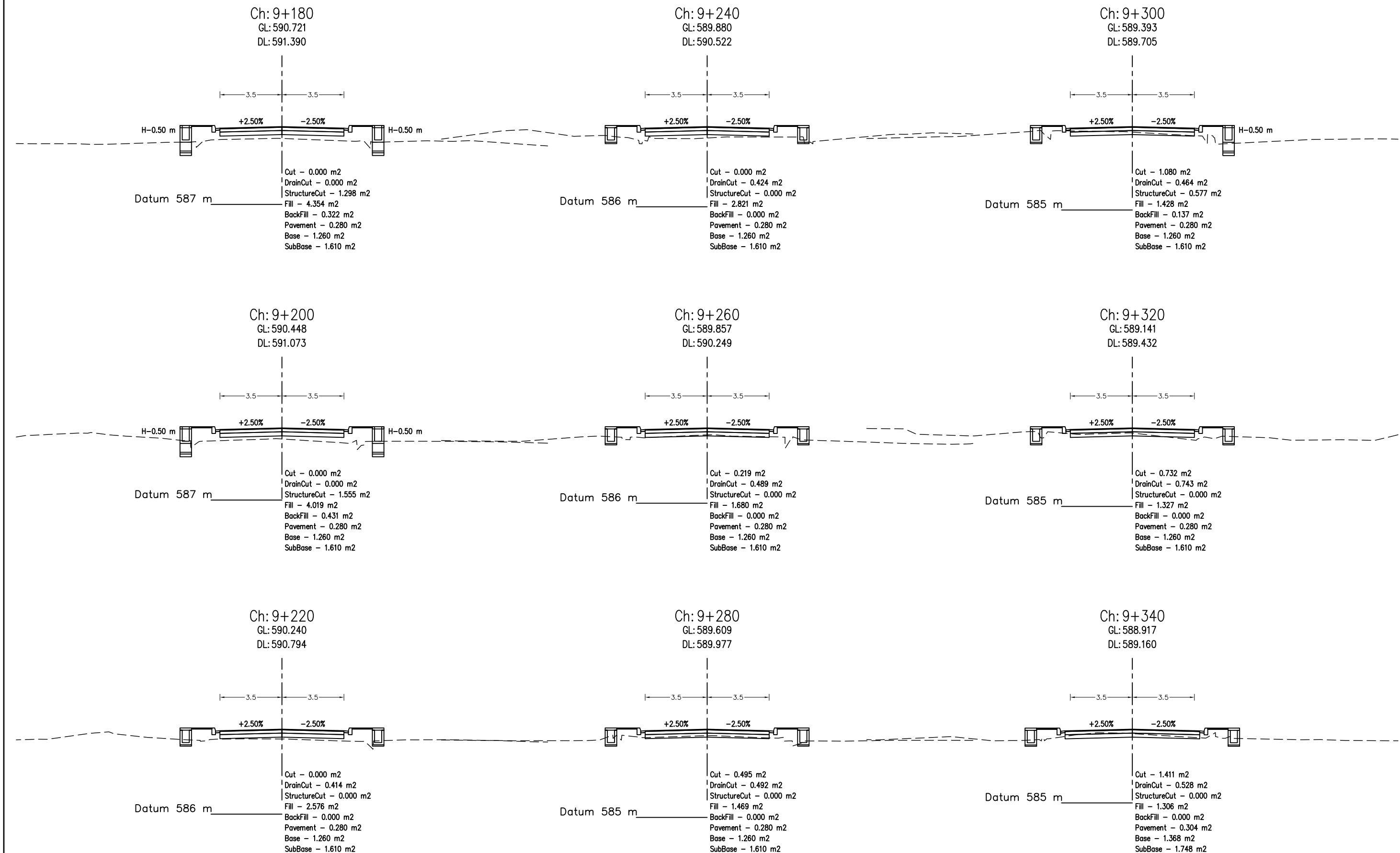


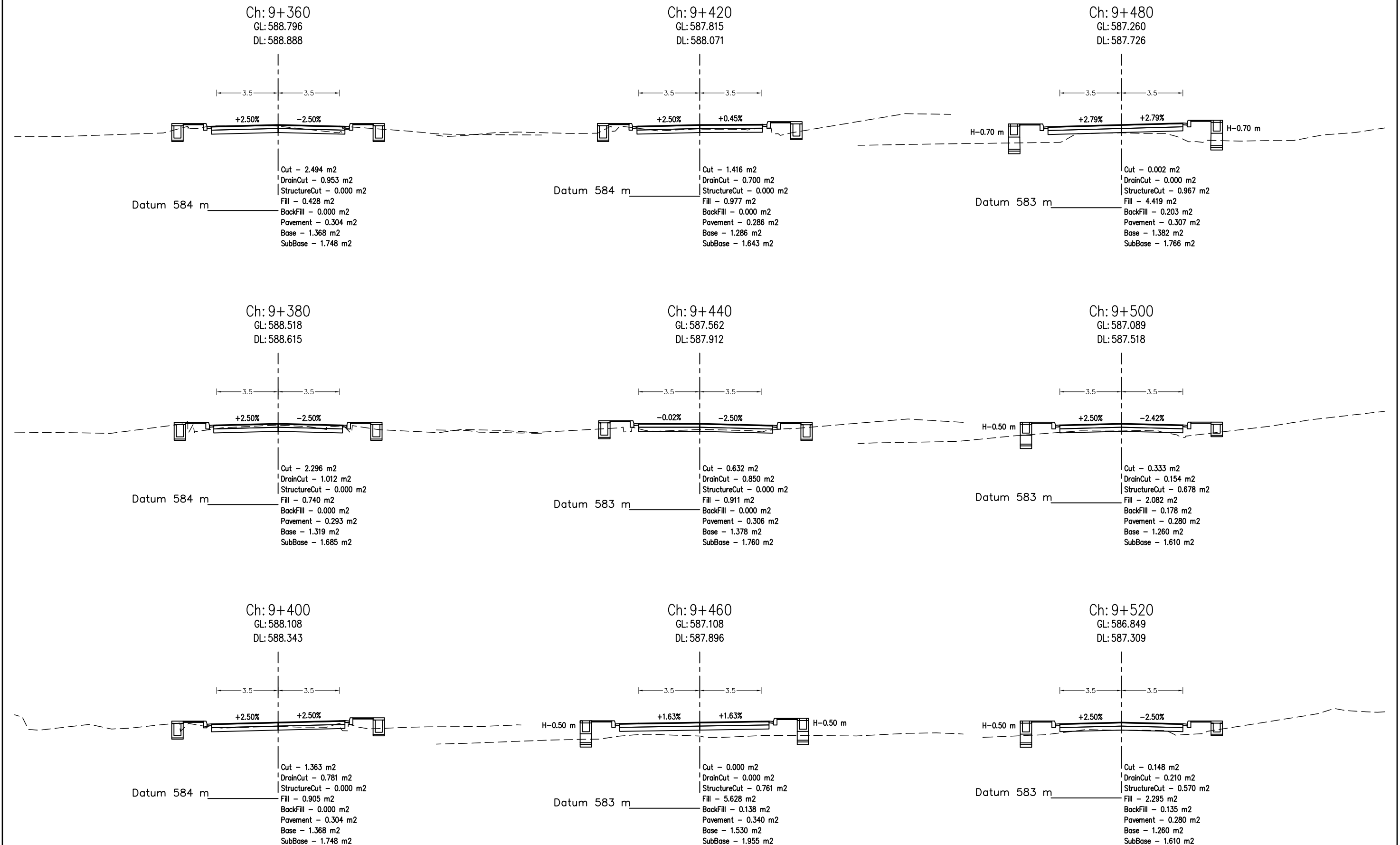


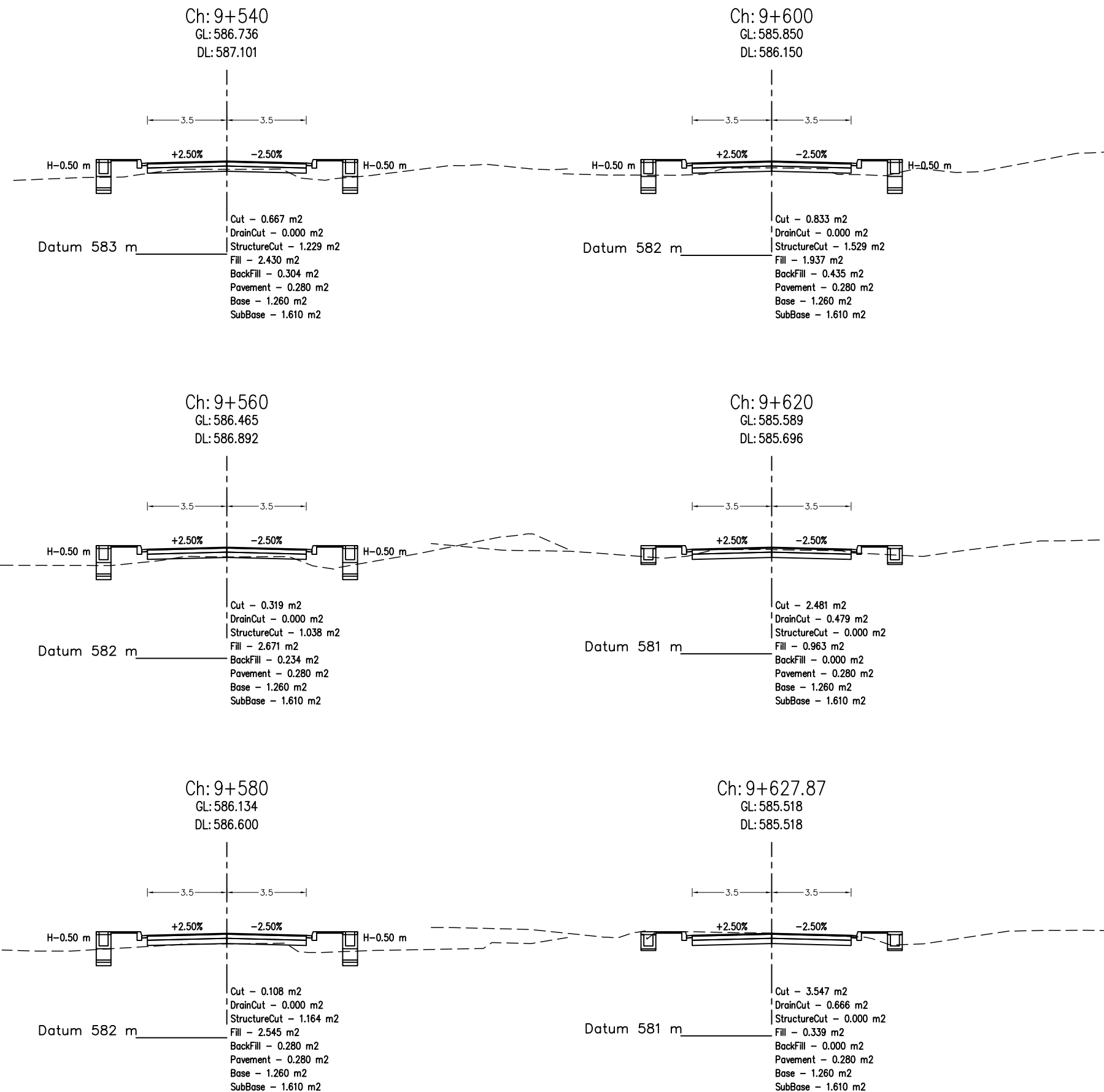




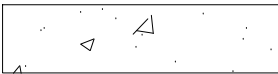


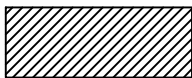

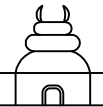


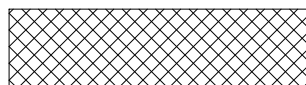
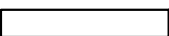
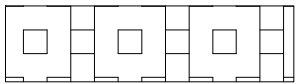



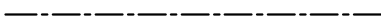
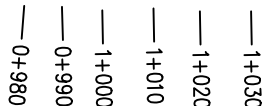

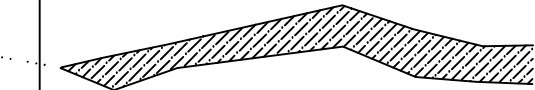
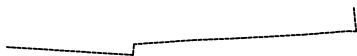








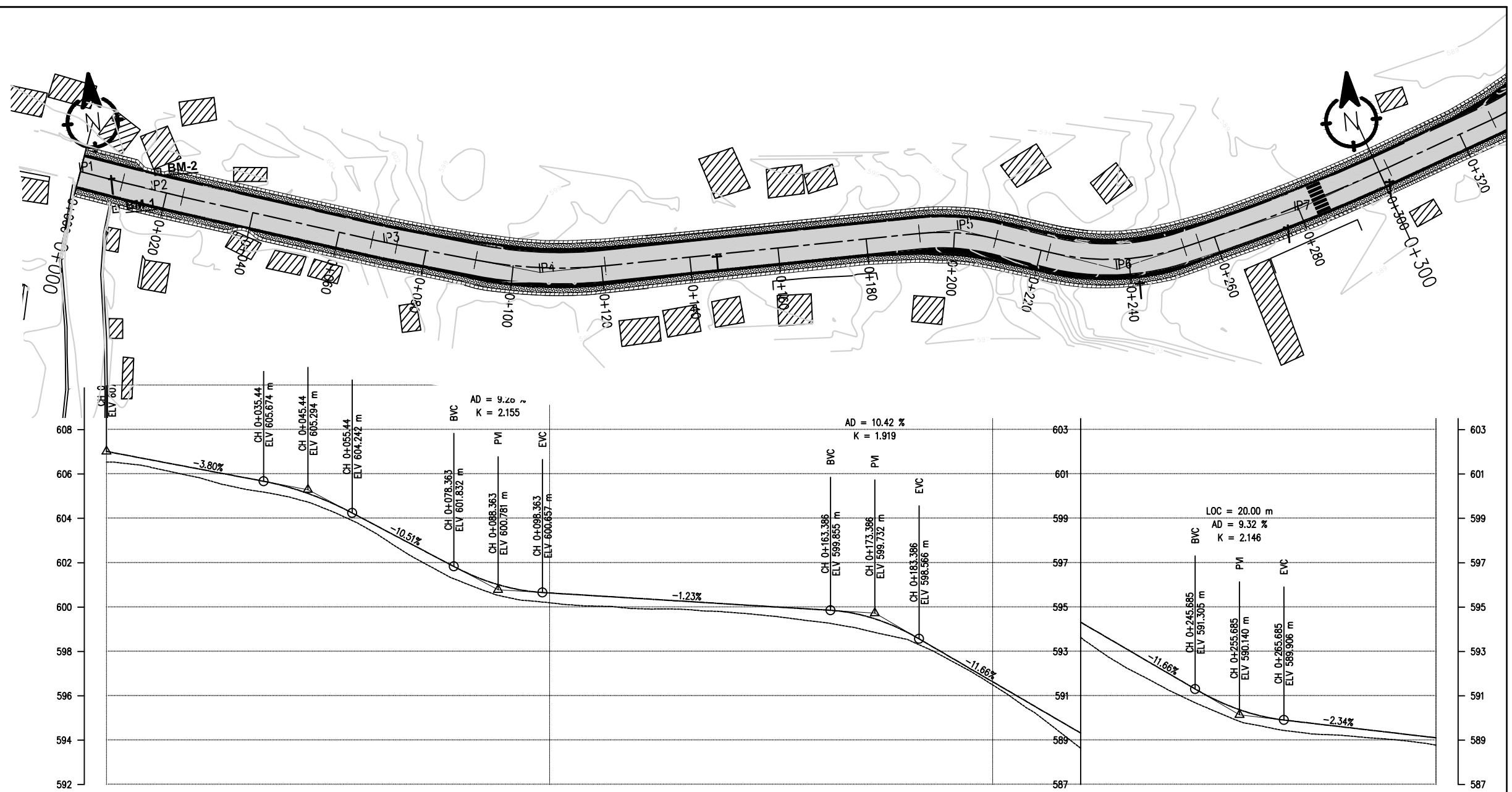
PROPOSED PLAN AND PROFILE (SECTION-II)

LEGEND	SYMBOL	Tick Drain	
Bench Mark	 BM-1	Foot Path	
Houses		kerb stone	
Temple		Side Drain	
RCC Electric pole		Army Camp	
Pipe Culvert		School	
Eletric Pole		Bamboo	
Wodden Pole			
Centreline			
Chainage			
Chautara			
Khola			
Compound Wall			

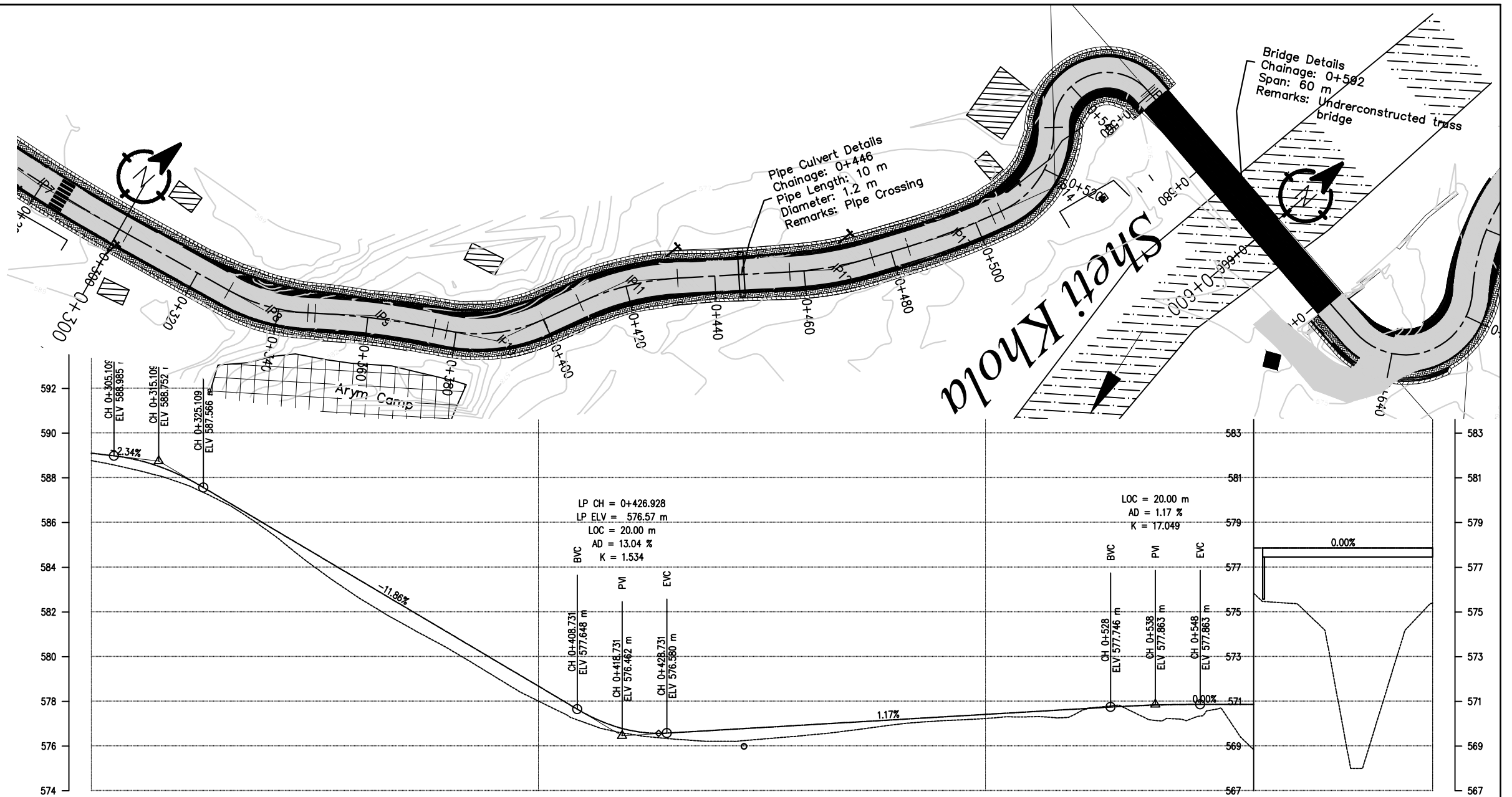


IP No.	CO-ORDINATES(m)		WGS (D-M-S)	DIST. (m)	DEF. ANG. (D-M-S)	TAN. LEN. (m)	SIMPLE CURVE DATA			CHAINAGE		
	EASTING	NORTHING					R (m)	E (m)	LC (m)	BC	MC	EC
1	213715.523	314375.270	109-55-5.88	0.000	00-10-00.00	0.000	0.000	0.000	0.000	0+000.000	0+000.000	0+000.000
2	213983.310	314389.549	109-19-8.10	18.792	01-35-57.78	6.979	50.000	13.957	0.048	0+008.813	0+010.791	0+016.792
3	213340.277	314352.875	109-33-13.24	53.687	01-45-54.87	2.850	185.000	0.022	5.700	0+016.628	0+018.478	0+023.390
4	213374.570	314342.482	109-43-58.98	35.778	16-49-14.35	14.785	100.000	1.897	26.358	0+021.469	0+023.368	0+028.254
5	213468.384	314342.824	109-39-13.77	94.815	18-55-14.79	8.781	50.000	0.765	17.384	0+030.787	0+032.787	0+038.459
6	213504.200	314330.489	77-23-0.53	36.971	32-16-13.33	15.912	55.000	2.255	30.977	0+041.237	0+043.228	0+049.715
7	213545.582	314339.747	70-48-47.07	42.385	06-34-13.47	22.890	400.000	0.658	45.870	0+056.228	0+058.183	0+073.189

DESIGN LEVEL(m)		607.020		606.260		605.466		603.763		601.666		600.637		600.390		600.144		599.897		598.931		596.630		594.299		591.968		590.114		589.572		589.105			
EXISTING LEVEL(m)		606.535		605.873		605.014		603.413		601.149		600.195		599.929		599.774		599.348		598.571		596.487		593.608		591.224		589.659		589.194		588.776			
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)		0.485		0.387		0.452		0.350		0.517		0.442		0.462		0.370		0.549		0.360		0.143		0.691		0.744		0.456		0.378		0.329			
SUPER ELEVATION		<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><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IP No.	CO-ORDINATES(m)		WCS (0+M-S)	DST. (m)	DEF. ANG. (0-M-S)	TAN. LEN. (m)	SIMPLE CURVE DATA			CHAINAGE			
	EASTING	NORTHING					R (m)	E (m)	LC (m)	BC	MC	EC	IP
7	23545.562	314338.747	70-48-47.07	42.395	08-34-13.47	22.980	400.000	0.058	43.970	0+286.228	0+279.183	0+302.098	0+279.189
8	23500.067	314338.922	44-14-30.76	58.546	28-34-18.31	9.445	40.000	1.100	18.550	0+308.039	0+337.314	0+346.589	0+337.484
9	23507.748	314376.462	55-17-14.89	24.822	09-02-43.93	13.447	170.000	0.331	26.839	0+361.179	0+361.989	0+375.015	0+361.827
10	23540.062	314383.102	16-47-20.37	27.658	36-29-54.32	11.541	35.000	1.854	22.296	0+377.866	0+388.014	0+400.161	0+388.406
11	23544.259	314423.595	38-28-20.03	31.840	21-40-58.86	11.491	60.000	1.080	22.707	0+408.970	0+420.323	0+431.676	0+420.460
12	23577.908	314493.637	25-02-22.03	46.040	13-25-58.00	9.421	80.000	0.553	18.758	0+458.813	0+468.191	0+475.589	0+468.234
13	23588.684	314484.846	17-22-38.29	27.824	07-39-42.74	10.044	150.000	0.336	20.059	0+483.928	0+485.197	0+503.986	0+483.972
14	23597.327	314509.287	310-14-30.77	25.989	67-07-48.52	13.270	20.000	4.002	23.433	0+506.261	0+517.977	0+529.884	0+519.531
15	23596.894	314539.260	90-24-24.92	46.423	140-08-54.15	33.113	12.000	23.220	28.355	0+526.733	0+544.410	0+559.088	0+562.846
16	23596.097	314539.017	81-06-35.95	34.294	00-41-11.03	0.589	100.000	0.002	1.198	0+559.580	0+560.178	0+560.178	0+560.179
17	23590.654	314537.785	90-13-38.47	64.988	00-51-37.48	0.751	100.000	0.003	1.502	0+623.986	0+624.747	0+625.488	0+625.747



DESIGN LEVEL(m)		589.105																			
EXISTING LEVEL(m)		588.776																			
CHAINAGE(Km)		0+300																			
CUT/FILL (m)		0.329																			
SUPER ELEVATION		NC																			
		T																			
HORIZONTAL ALIGNMENT		RIGHT																			
		LEFT																			

0+300	0+313.689	0+332.589	0+342.039	0+349.929	0+373.268	0+379.616	0+398.411	0+410.72	0+429.926	0+460.313	0+472.069	0+486.378	0+501.536	0+511.161	0+524.794	0+534.633	0+554.188	0+574.138	0+600																
IP-7 R=400.00																				IP-8 R=40.00	IP-9 R=170.00		IP-10 R=35.00		IP-11 R=60.00		IP-12 R=80.00		IP-13 R=150.00		IP-14 R=20.00		IP-15 R=12.00		IP-16 R=100.00

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)

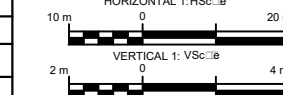
DESIGNED BY :

DRAWN BY :

CHECKED BY :

APPROVED BY :

SCALE



Plan & Profile

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DATE: Sep-2023

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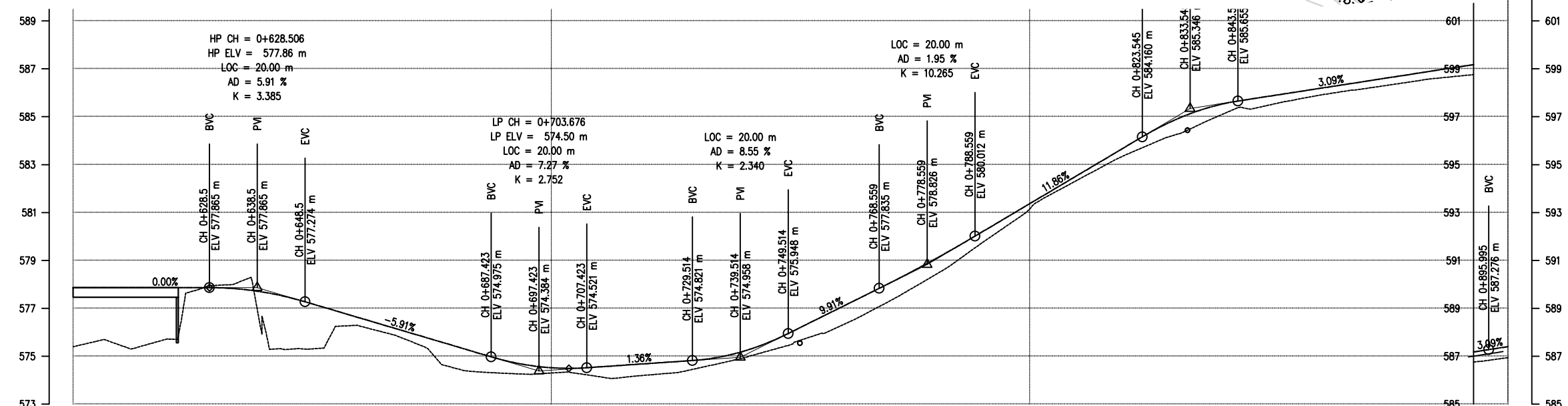
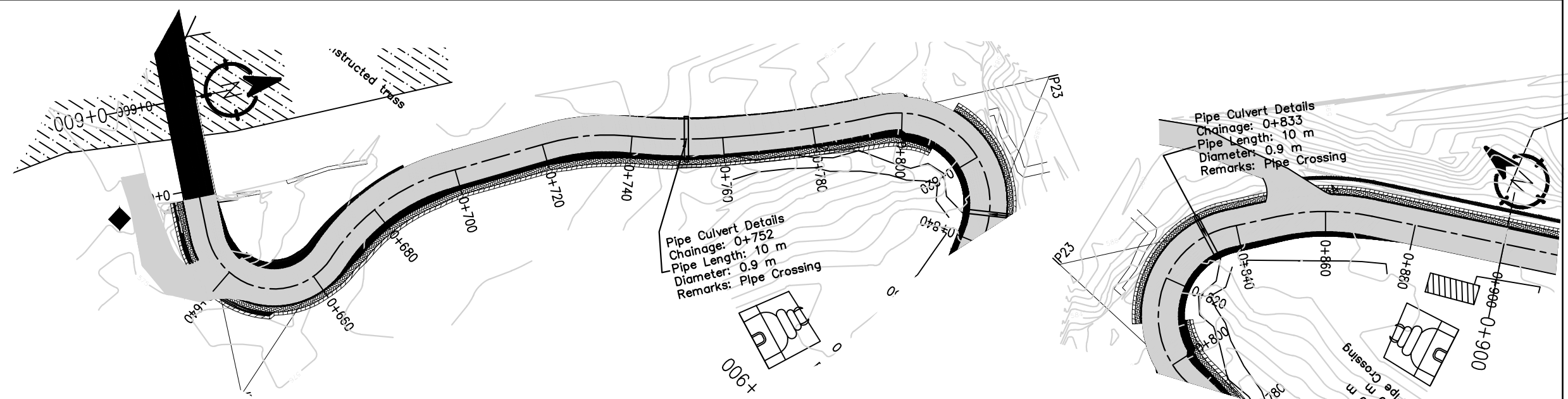
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IP No.	CO-ORDINATES(m)		WCS (0+00-S)	DST. (m)	DEF. ANG. (0+00-S)	SIMPLE CURVE DATA			CHAINAGE			
	EASTING	NORTHING				R (m)	E (m)	LC (m)	BC	MC	EC	IP
17	21370.654	314537.785	90-13-58.47	64.568	00-51-37.48	100.000	0.003	1.502	0+623.988	0+624.747	0+625.488	0+624.747
18	21302.068	314537.817	315-38-17.48	41.443	134-35-20.98	15.000	23.861	35.849	0+630.341	0+647.958	0+665.576	0+666.190
19	21305.034	314537.521	398-17-4.45	53.013	40-38-28.97	45.000	2.987	31.920	0+668.075	0+682.035	0+697.995	0+697.995
20	21378.980	314624.088	17-30-38.65	48.689	21-13-30.19	50.000	0.670	18.522	0+720.631	0+729.862	0+738.154	0+730.000
21	21378.406	314644.772	07-28-51.48	21.689	10-03-45.17	100.000	0.397	17.892	0+742.670	0+751.451	0+760.232	0+751.474
22	21372.165	314631.577	358-34-38.38	20.000	07-52-23.12	20.000	0.473	17.482	0+768.688	0+780.407	0+794.148	0+780.428
23	21371.772	314728.407	124-30-18.88	52.881	124-55-48.52	30.000	23.953	43.698	0+794.984	0+816.706	0+838.427	0+833.268
24	21302.986	314682.578	148-44-10.71	58.718	24-10-53.83	50.000	1.134	21.102	0+848.138	0+859.705	0+870.260	0+869.886


DESIGN LEVEL(m)		577.884				577.865																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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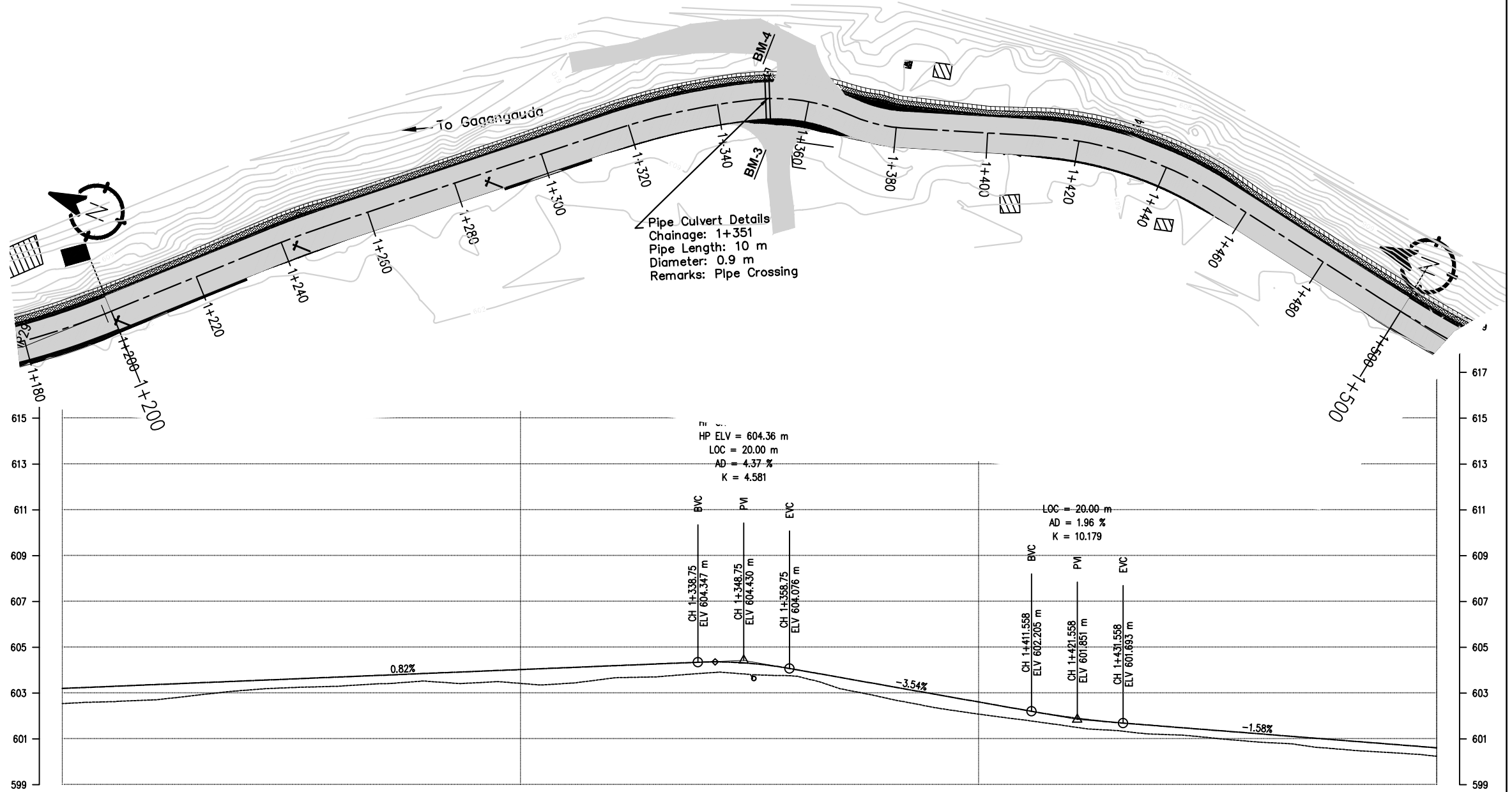
Pipe Culvert Details
Chainage: 0+954
Pipe Length: 10 m
Diameter: 0.9 m
Remarks: Pipe Crossing

Vertical Curve Data

Station	Point	Chainage (CH)	Elevation (ELV)	Grade (%)
0+905.995	CH	0+905.995	587.585	3.09%
0+915.995	CH	0+915.995	587.976	3.91%
0+970.33	CH	0+970.33	590.101	10.56%
0+980.33	CH	0+980.33	590.492	10.56%
0+990.33	CH	0+990.33	591.548	10.56%
1+075.83	CH	1+075.83	600.579	10.56%
1+085.83	CH	1+085.83	600.834	2.75%
1+149.171	CH	1+149.171	602.594	0.82%
1+159.171	CH	1+159.171	602.869	0.82%
1+169.171	CH	1+169.171	602.951	0.82%

<div><p>Nepal Urban Governance and Infrastructure Project (NUGIP) Office of the Municipal Executive Pokhara Metropolitan City Kaski District, Gandaki Province</p></div>		<div><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><div></div></div>		<div><p>Project Name:- Nepal Urban Governance and Infrastructure Project (NUGIP)</p></div>		<div><p>DESIGNED BY :</p><p>DRAWN BY :</p><p>CHECKED BY :</p><p>APPROVED BY :</p></div>		<div><p>SCALE</p><p>HORIZONTAL 1: HScale</p><p>VERTICAL 1: VScale</p></div>		<div><p>Plan & Profile</p><p>0+00-1+200</p></div>		<div><p>DATE: Sep-2023</p><p>DRG NO : 1</p><p>SHEET NO : 4</p></div>	
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P No.	CO-ORDINATES(m)		WCB (0+0-S)	DST. (m)	DEF. ANG. (0+0-S)	TAN. LEN. (m)	SIMPLE CURVE DATA				CHAINAGE		
	EASTING	NORTHING					R (m)	E (m)	LC (m)	BC	MC	EC	P
29	21308.850	3114422.928	136-23-23.21	85.748	14-39-4.00	18.261	150.000	1.232	38.313	14601.157	14178.313	14198.470	14179.418
30	214031.607	3114376.060	136-56-36.29	84.730	03-35-13.08	5.949	150.000	0.093	11.895	14237.889	14143.936	14249.884	14243.936
31	214087.866	3114308.949	136-59-41.12	87.637	12-00-27.83	15.778	150.000	0.827	31.438	14315.398	14131.514	14327.232	14331.572
32	214100.797	3114284.645	136-59-5.94	27.531	30-52-13.13	11.043	40.000	1.468	21.646	14347.044	14368.718	14369.483	14368.987
33	214098.048	3114287.584	136-52-31.88	17.102	20-58-33.27	5.924	32.000	0.544	11.715	14368.628	14375.488	14381.343	14375.452
34	21417.868	3114231.338	136-07-43.10	57.869	28-35-10.13	22.183	85.000	2.847	43.397	14410.398	14431.865	14453.883	14432.476
35	21408.805	3114071.130	173-28-17.79	108.240	17-39-24.31	45.041	280.000	3.477	88.368	14484.710	14539.394	14584.079	14539.751



DESIGN LEVEL(m)		603.205		603.370		603.534		603.699		603.864		604.028		604.193		604.356		604.521		604.685		604.850		605.014		605.179		605.343		605.508		605.672		605.837		605.999		606.161			
EXISTING LEVEL(m)		602.543		602.706		603.125		603.298		603.512		603.424		603.654		603.869		603.739		602.775		602.085		601.546		601.197		600.882		600.534		600.244		600.929		600.244		600.613			
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)		0.662		0.664		0.409		0.401		0.351		0.604		0.540		0.487		0.292		0.548		0.529		0.395		0.363		0.362		0.395		0.369									
SUPER ELEVATION		1+200		1+241.489 1+246.384		1+285.634		1+305.646		1+318.246		1+344.782 1+352.494		1+364.943 1+371.378		1+379.593		1+415.546		1+448.443		1+480.126		1+500																	
HORIZONTAL ALIGNMENT		RIGHT		LEFT		RIGHT		LEFT		RIGHT		LEFT		RIGHT		LEFT		RIGHT		LEFT		RIGHT		LEFT		RIGHT		LEFT		RIGHT		LEFT		RIGHT		LEFT		RIGHT		LEFT	
				IP-30 R=190.00						IP-31 R=150.00				IP-32 R=40.00		IP-33 R=32.00				IP-34 R=85.00				IP-35 R=290.00																	

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)

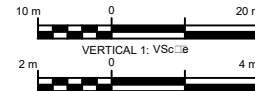
DESIGNED BY :

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SCALE



Plan & Profile

1+200-1+500

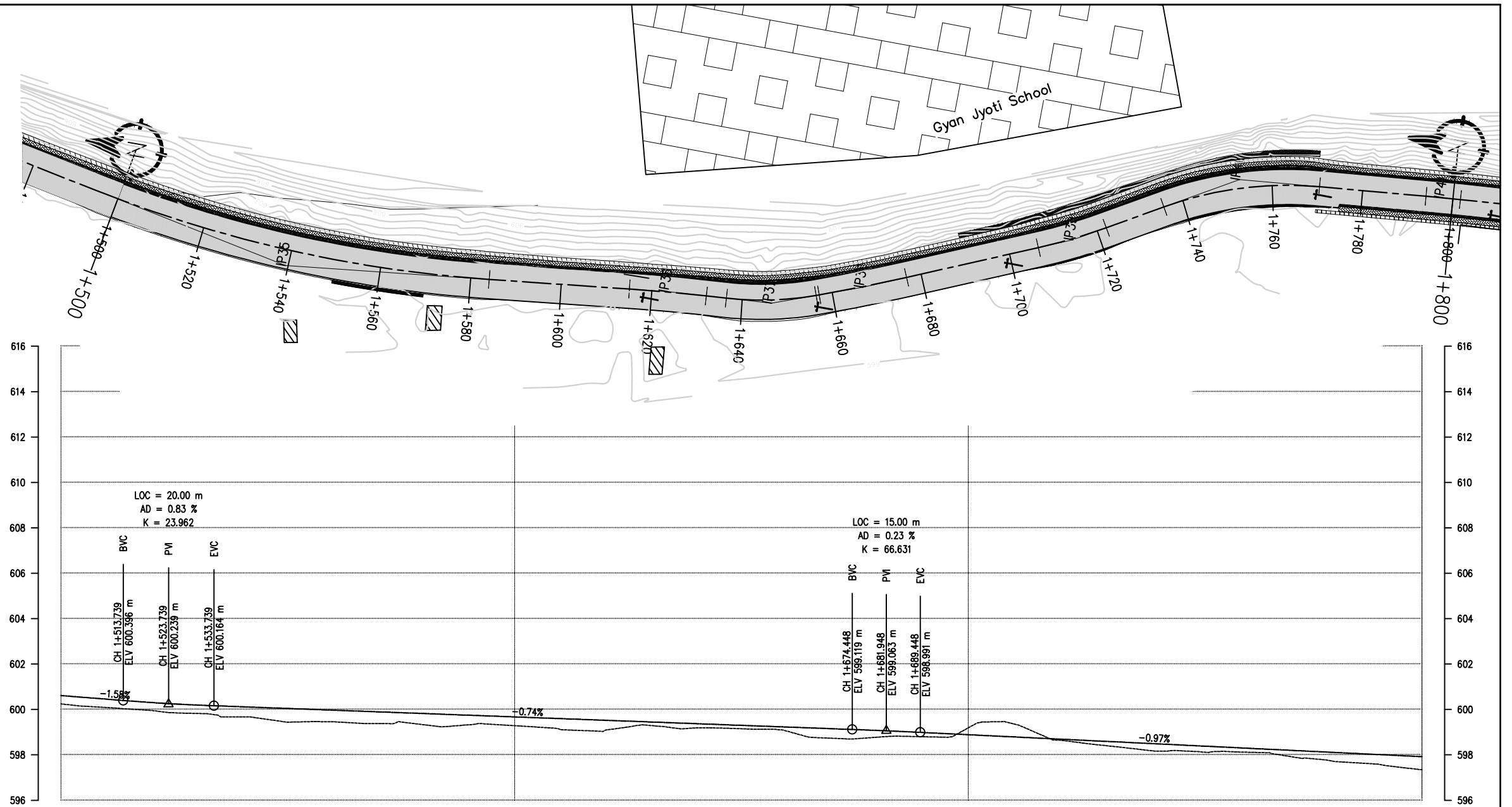
DATE: Sep-2023

DRG NO :

SHEET NO :

1

IP No.	CO-ORDINATES(m)		WCB (0-M-S)	DST. (0-M-S)	DEF. ANG. (0-M-S)	TAN. LEN. (m)	SIMPLE CURVE DATA				CHAINAGE		
	EASTING	NORTHING					R (m)	E (m)	LC (m)	MC	BC	EC	IP
35	24408.825	314407.130	173-28-17.79	108.240	17-39-24.31	46.041	290.000	3.577	89.399	1+494.370	1+539.394	1+584.079	1+539.351
36	24408.416	314403.148	173-34-46.16	84.629	02-26-30.38	6.325	400.000	0.091	17.647	1+615.092	1+621.565	1+632.088	1+621.566
37	24408.052	314400.253	159-39-28.17	22.953	05-18-18.79	9.897	70.000	0.070	19.860	1+636.519	1+644.449	1+656.379	1+646.516
38	24415.063	313981.074	159-39-36.49	20.521	02-46-51.67	9.828	400.000	0.021	19.448	1+657.077	1+665.801	1+676.725	1+666.803
39	24433.624	313807.435	146-41-2.97	47.986	07-09-33.62	7.820	125.000	0.244	15.019	1+706.477	1+716.297	1+722.086	1+716.297
40	24433.538	313803.724	174-40-12.18	38.051	24-39-24.31	17.725	80.000	1.540	34.867	1+735.002	1+753.046	1+770.689	1+753.026
41	24437.724	313806.628	175-32-36.48	45.090	00-52-24.31	3.811	300.000	0.015	7.822	1+794.043	1+797.264	1+801.685	1+797.264



DESIGN LEVEL(m)		600.613	600.306	600.118	599.969	599.821	599.672	599.524	599.375	599.226	599.075	598.889	598.695	598.501	598.308	598.114	597.921
EXISTING LEVEL(m)		600.244	599.956	599.673	599.458	599.326	599.285	599.084	599.189	599.050	598.780	599.190	598.648	598.190	598.123	597.734	597.341
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)		0.369	0.350	0.445	0.511	0.495	0.387	0.439	0.186	0.176	0.295	-0.302	0.047	0.311	0.185	0.380	0.560
SUPER ELEVATION		<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><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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)

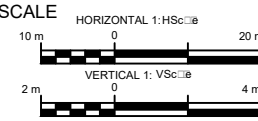
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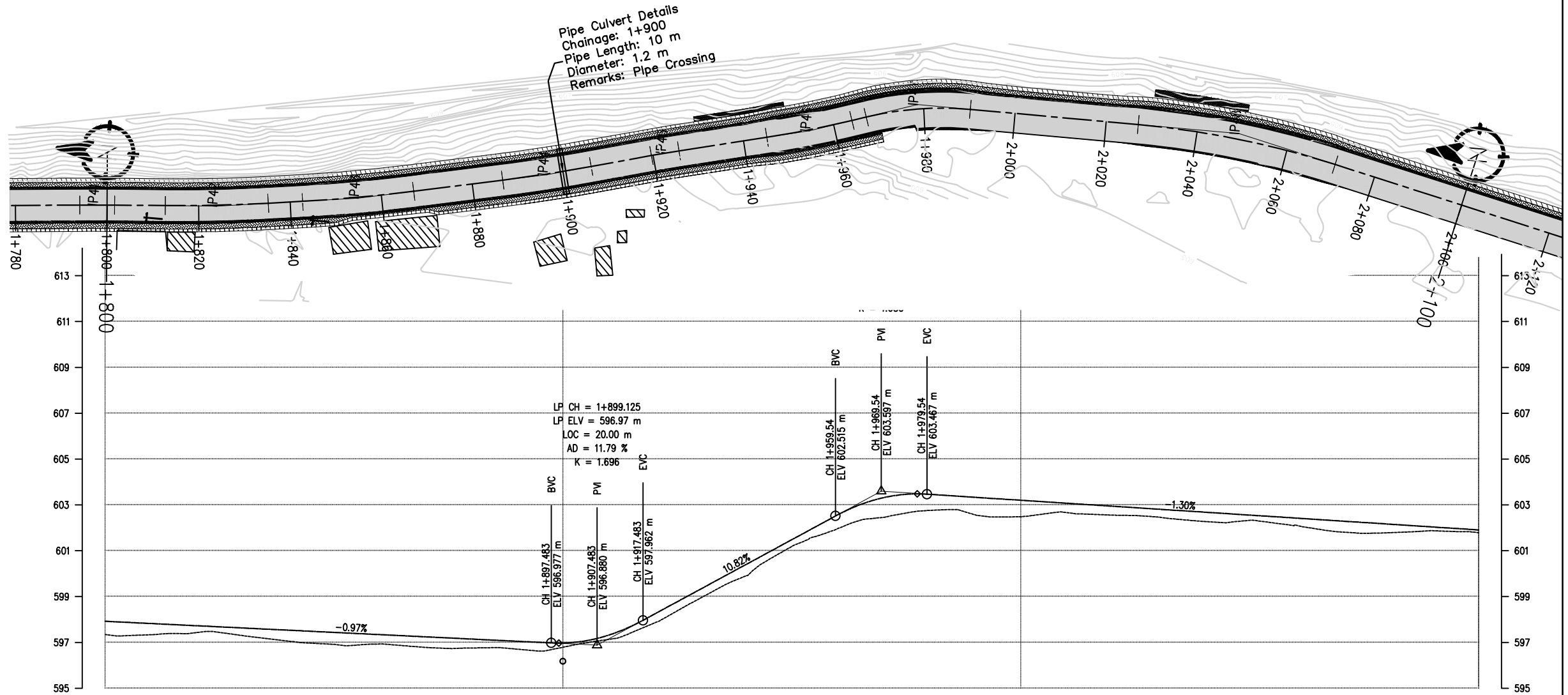
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SHEET NO :

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IP No.	CO-ORDINATES(m)		WCS (0-M-S)	DIST. (m)	DEF. ANG. (0-M-S)	TAN. LEN. (m)	SIMPLE CURVE DATA			CHAINAGE			
	EASTING	NORTHING					R (m)	E (m)	LC (m)	BC	MC	EC	IP
41	214157.724	3113088.828	175-32-38.48	45.090	00-52-24.31	3.811	500.000	0.015	7.822	1+794.043	1+797.854	1+800.665	1+797.854
42	214159.753	3113032.788	177-51-25.35	26.110	03-41-11.10	11.263	350.000	0.181	22.519	1+812.700	1+823.960	1+835.219	1+823.964
43	214164.138	3113002.153	167-51-45.72	30.857	03-58-38.66	12.205	350.000	0.213	24.400	1+842.708	1+854.908	1+867.108	1+854.913
44	214172.875	3113781.528	164-39-48.17	41.554	03-11-57.56	9.774	350.000	0.138	19.544	1+866.683	1+876.454	1+886.226	1+866.457
45	214179.812	3113736.234	166-14-54.69	26.229	01-35-43.32	3.043	220.000	0.021	9.007	1+918.637	1+922.680	1+925.723	1+922.680
46	214187.404	3113705.213	161-25-5.75	31.536	04-48-48.94	8.480	225.000	0.200	18.866	1+945.126	1+954.611	1+964.095	1+954.616
47	214195.128	3113682.241	180-09-51.39	24.235	18-44-45.64	11.555	70.000	0.947	22.803	1+967.285	1+975.795	1+980.188	1+975.840
48	214194.924	3113611.789	182-45-28.08	70.472	12-35-34.69	22.068	200.000	1.214	43.958	2+027.038	2+048.017	2+070.995	2+048.105



DESIGN LEVEL(m)		597.921	597.777	597.533	597.340	597.146	596.971	598.235	600.400	602.584	603.461	603.202	602.943	602.684	602.425	602.166	601.907
EXISTING LEVEL(m)		597.341	597.431	597.058	596.929	596.756	596.788	597.849	599.905	601.962	602.759	602.485	602.554	602.277	602.120	601.783	601.789
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)		0.580	0.296	0.475	0.411	0.390	0.183	0.366	0.495	0.602	0.703	0.718	0.389	0.407	0.305	0.383	0.119
SUPER ELEVATION		1+800 NC T 2.5 T -5 T NC T -2.5 T NC 2+100															
HORIZONTAL ALIGNMENT	RIGHT	IP-41 R=500.00															
	LEFT	IP-42 R=350.00 IP-43 R=350.00 IP-44 R=350.00 IP-45 R=220.00 IP-46 R=225.00 IP-47 R=70.00 IP-48 R=200.00															

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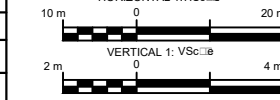
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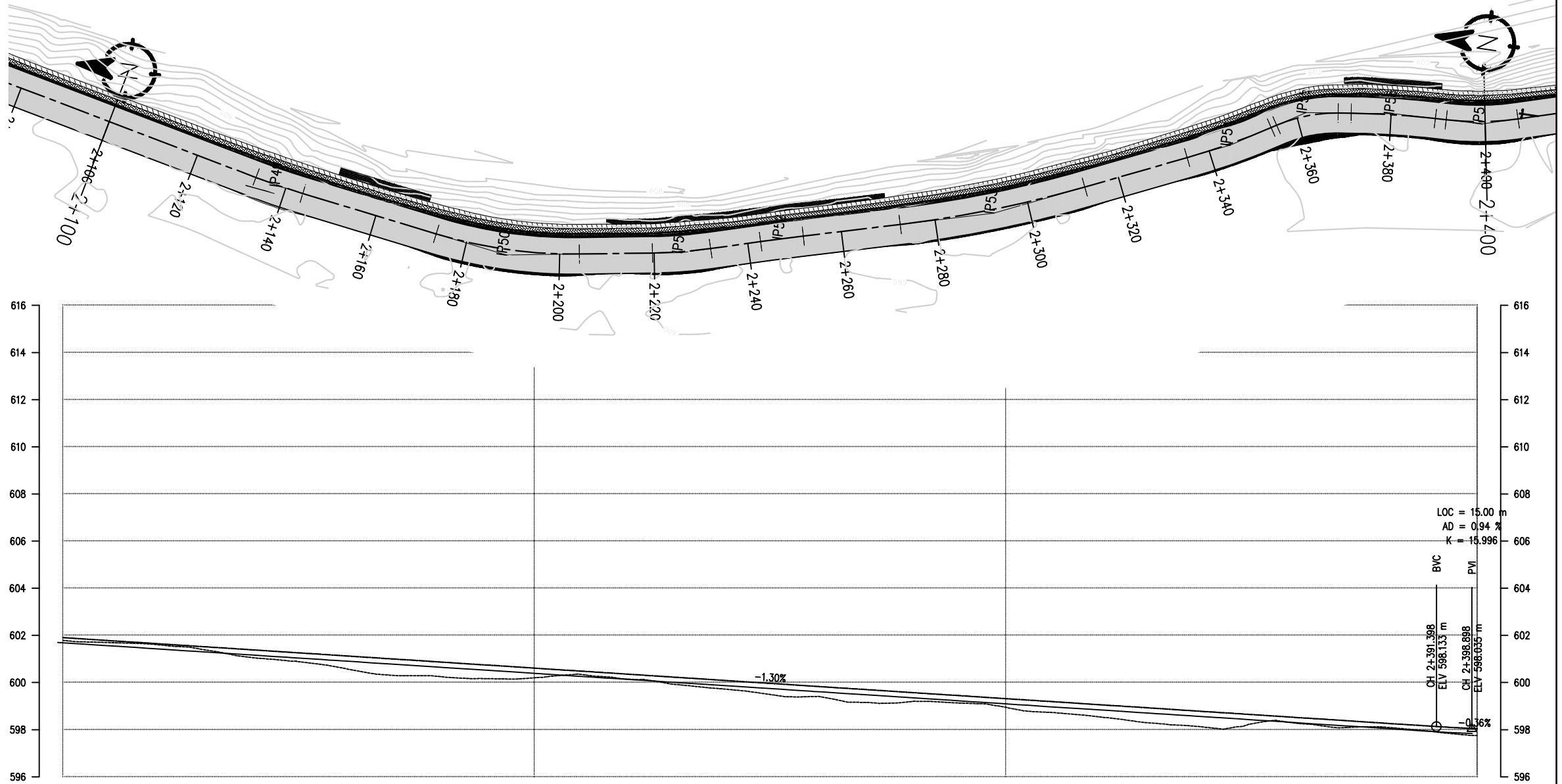
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DRG NO :

SHEET NO :

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P No.	CO-ORDINATES(m)		WGS (D=30°S)	DST (m)	DEF. ANG. (D=30°S)	TAN. LEN. (m)	SIMPLE CURVE DATA			CHAINAGE		
	EASTING	NORTHING					R (m)	E (m)	LC (m)	BC	MC	P
48	214194.924	3113811.789	192-45-26.08	70.472	12-35-34.69	22.088	200.000	1.214	43.958	2+027.038	2+046.077	2+070.895
49	214175.133	3113524.355	188-45-6.05	89.627	04-00-19.51	5.245	150.000	0.092	10.486	2+133.309	2+138.552	2+143.795
50	214167.476	3113474.617	171-06-2.45	90.324	17-39-41.12	15.527	100.000	1.198	30.807	2+173.347	2+188.791	2+204.155
51	214173.235	3113437.837	184-00-1.22	37.228	07-08-1.23	6.204	100.000	0.192	12.392	2+218.852	2+225.848	2+232.045
52	214179.152	3113417.201	165-02-48.88	21.467	01-02-47.66	4.567	500.000	0.021	9.133	2+242.741	2+247.308	2+251.674
53	214190.639	3113373.439	155-52-50.05	45.296	09-09-58.23	20.040	250.000	0.802	39.995	2+272.583	2+292.561	2+312.558
54	214212.136	3113325.873	148-39-5.28	52.116	07-13-45.36	9.476	150.000	0.299	18.926	2+335.159	2+344.622	2+354.085
55	214221.266	3113300.886	172-38-59.85	17.549	23-59-54.56	6.601	32.000	0.715	13.403	2+355.356	2+362.059	2+368.760
56	214223.636	3113292.513	178-30-7.81	18.525	05-51-7.96	8.945	175.000	0.228	17.875	2+371.539	2+380.476	2+388.413
57	214224.131	3113273.580	163-53-17.51	18.839	14-36-50.30	7.684	60.000	0.491	15.304	2+391.713	2+396.365	2+407.017



DESIGN LEVEL(m)		601.907		601.648		601.389		601.130		600.871		600.612		600.353		600.094		599.835		599.576		599.316		599.057		598.798		598.539		598.280		598.044			
EXISTING LEVEL(m)		601.789		601.607		601.061		600.588		600.252		600.200		600.142		599.729		599.410		599.192		598.947		598.538		598.148		598.315		598.111		597.745			
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)		0.119		0.041		0.328		0.542		0.619		0.412		0.210		0.365		0.425		0.383		0.370		0.520		0.650		0.224		0.169		0.299			
SUPER ELEVATION		2+100		2+116.392		2+137.392 2+139.712		2+176.497		2+201.005		2+222.802 2+228.895		2+243.595		2+325.009		2+337.609		2+351.635		2+359.906 2+364.21		2+373.638		2+387.313		2+395.563 2+400							
HORIZONTAL ALIGNMENT	RIGHT																																		
	LEFT	<div><div><div>IP-49 R=150.00</div><div>IP-50 R=100.00</div><div>IP-51 R=100.00</div><div>IP-52 R=500.00</div><div>IP-53 R=250.00</div><div>IP-54 R=150.00</div><div>IP-55 R=32.00</div><div>IP-56 R=175.00</div><div>IP-57 R=60.00</div></div></div>																																	

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)

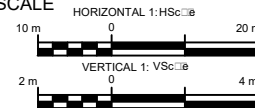
DESIGNED BY :

DRAWN BY :

CHECKED BY :

APPROVED BY :

SCALE



Plan & Profile

2+100-2+400

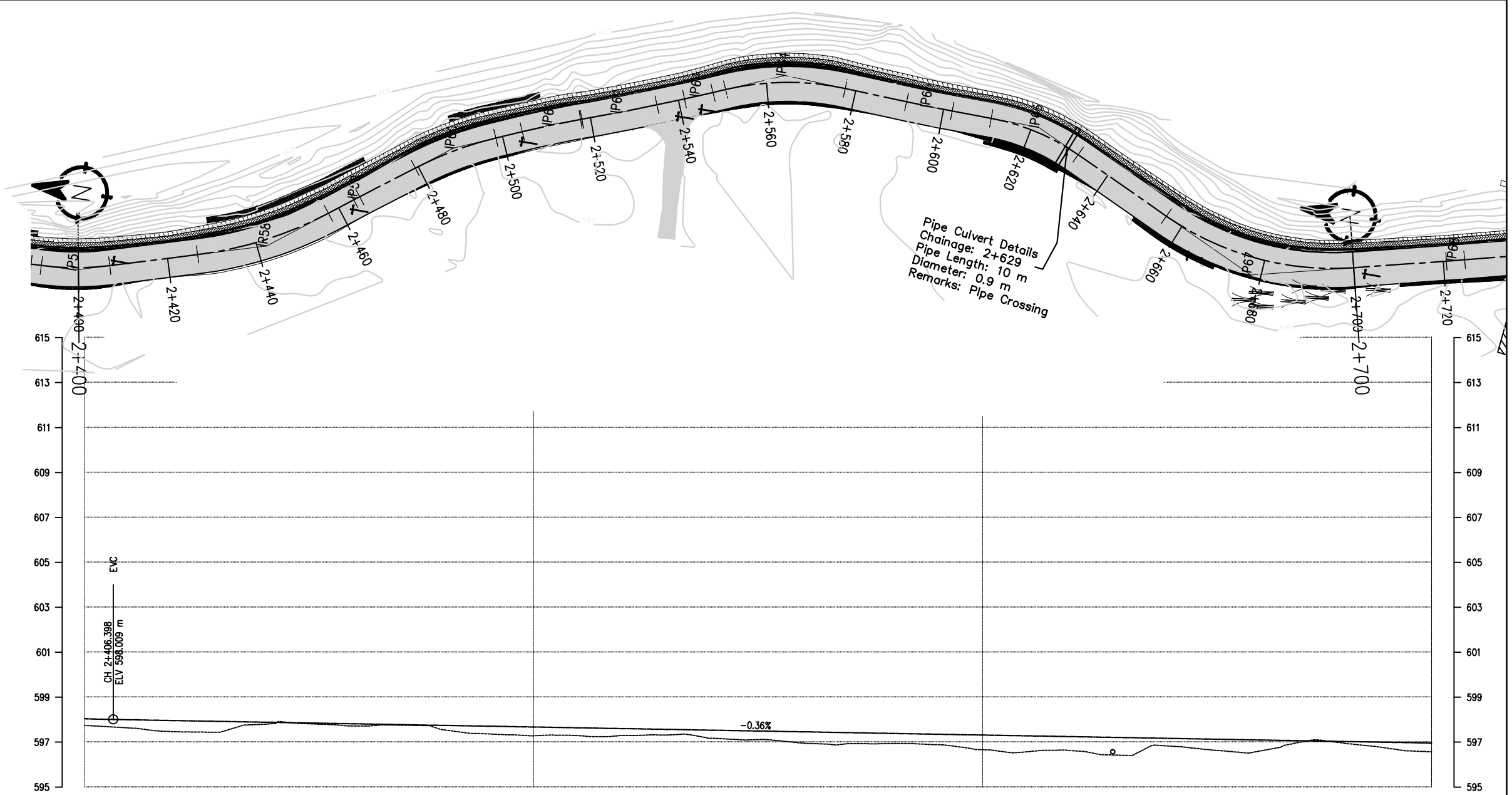
DATE: Sep-2023

DRG NO :

SHEET NO :

1

IP No.	CO-ORDINATES(m)		WGS (0-M-S)	DST (m)	DEF ANG (0-M-S)	TAN LEN (m)	SIMPLE CURVE DATA				CHAINAGE		
	EASTING	NORTHING					R (m)	E (m)	LC (m)	BC	MC	EC	P
57	214224.131	3113271.590	163-53-17.51	18.939	14-36-50.30	7.694	60.000	0.491	15.304	2+391.713	2+399.305	2+407.017	2+399.407
58	214236.044	3113232.336	143-10-47.93	42.937	20-02-29.58	15.530	60.000	1.007	30.731	2+426.724	2+442.085	2+457.445	2+442.254
59	214248.625	3113214.195	143-44-53.96	22.661	00-34-53.93	0.744	150.000	0.002	1.488	2+463.633	2+464.577	2+465.321	2+464.577
60	214264.001	3113194.590	157-29-41.44	24.311	13-44-47.58	9.643	80.000	0.079	18.194	2+479.344	2+488.841	2+498.438	2+488.897
61	214272.556	3113173.943	161-06-55.25	22.349	03-37-13.82	6.637	210.000	0.105	13.270	2+504.507	2+511.142	2+517.777	2+511.144
62	214277.548	3113159.348	159-09-50.98	15.425	01-57-46.97	8.915	500.000	0.072	17.028	2+518.050	2+526.564	2+535.078	2+526.595
63	214283.962	3113142.498	157-40-16.84	18.031	01-29-33.74	3.257	250.000	0.021	6.513	2+541.338	2+544.594	2+547.851	2+544.595
64	214291.488	3113124.171	163-18-46.17	19.810	25-38-29.33	13.655	60.000	1.534	28.852	2+550.750	2+564.175	2+577.601	2+564.404
65	214298.590	3113091.303	161-36-57.74	32.843	01-41-46.43	5.183	350.000	0.038	10.365	2+591.607	2+596.789	2+601.972	2+596.790
66	214298.883	3113066.649	205-51-16.88	24.744	24-14-18.14	10.737	50.000	1.140	21.152	2+610.796	2+621.372	2+631.948	2+621.533
67	214283.777	3113014.622	167-00-28.54	57.592	38-50-51.33	22.920	65.000	3.923	44.071	2+655.883	2+677.919	2+699.954	2+678.803



DESIGN LEVEL(m)		598.044		597.960		597.888		597.817		597.745		597.674		597.602		597.531		597.459		597.388		597.316		597.245		597.173		597.102		597.030		596.959	
EXISTING LEVEL(m)		597.745		597.466		597.796		597.719		597.547		597.283		597.296		597.173		596.956		596.940		596.663		596.619		596.847		596.537		596.971		596.572	
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+680		2+700	
CUT/FILL (m)		0.299		0.494		0.092		0.098		0.198		0.391		0.306		0.357		0.503		0.448		0.654		0.626		0.326		0.565		0.059		0.387	
SUPER ELEVATION		5.5 2+400 2+403.167		T		4.5		T		-5		T		-2.5		T		NC		T		-2.5		T		NC		T		-2.5		T	
HORIZONTAL ALIGNMENT		IP-57 R=60.00		IP-58 R=85.00		IP-59 R=150.00		IP-60 R=80.00		IP-61 R=210.00		IP-62 R=500.00		IP-63 R=250.00		IP-64 R=60.00		IP-65 R=350.00		IP-66 R=50.00		IP-67 R=65.00											
RIGHT																																	
LEFT																																	

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



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

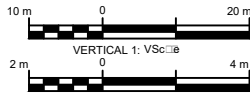
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DRAWN BY :

CHECKED BY :

APPROVED BY :

SCALE



Plan & Profile

2+400-2+700

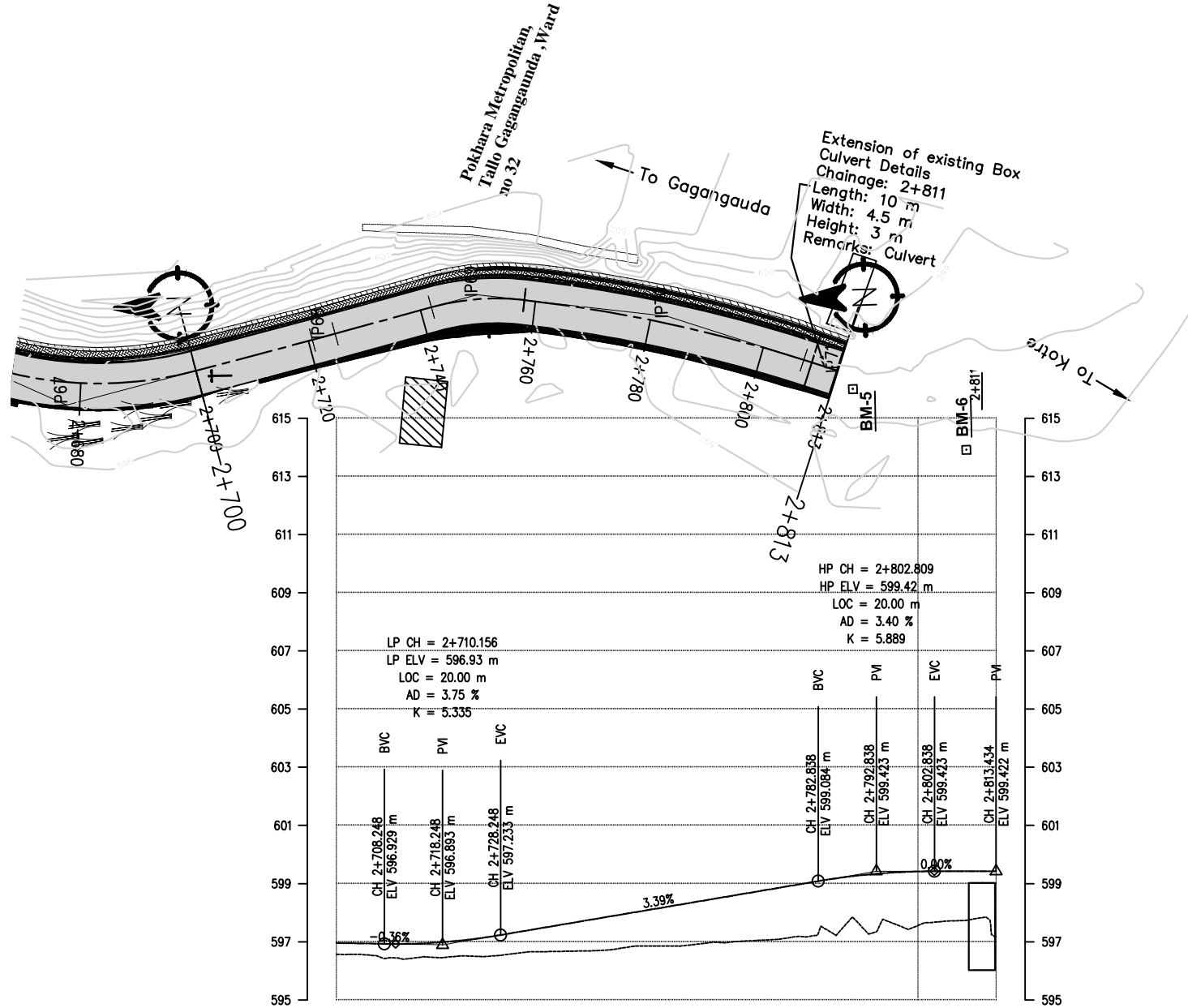
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SHEET NO :

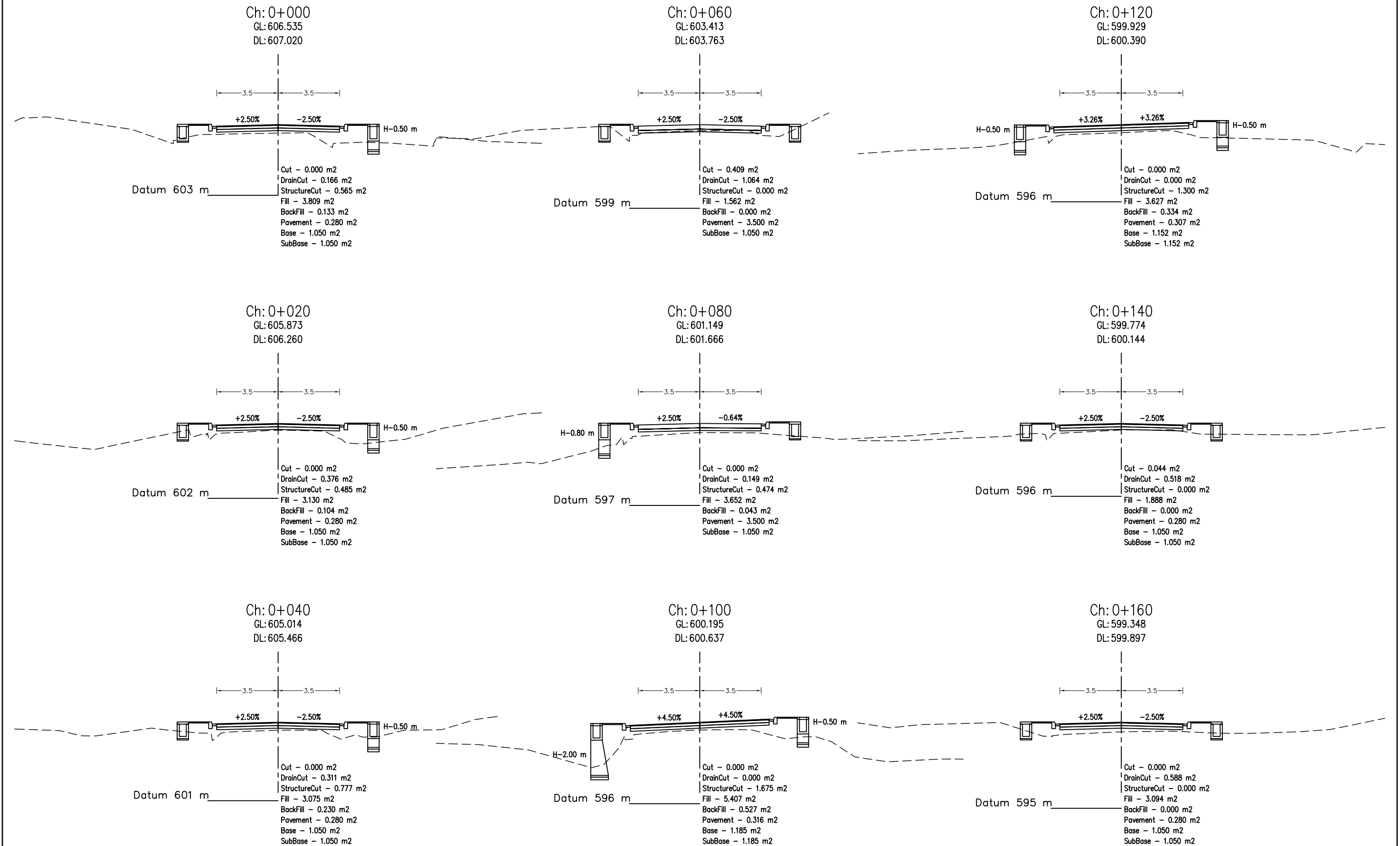
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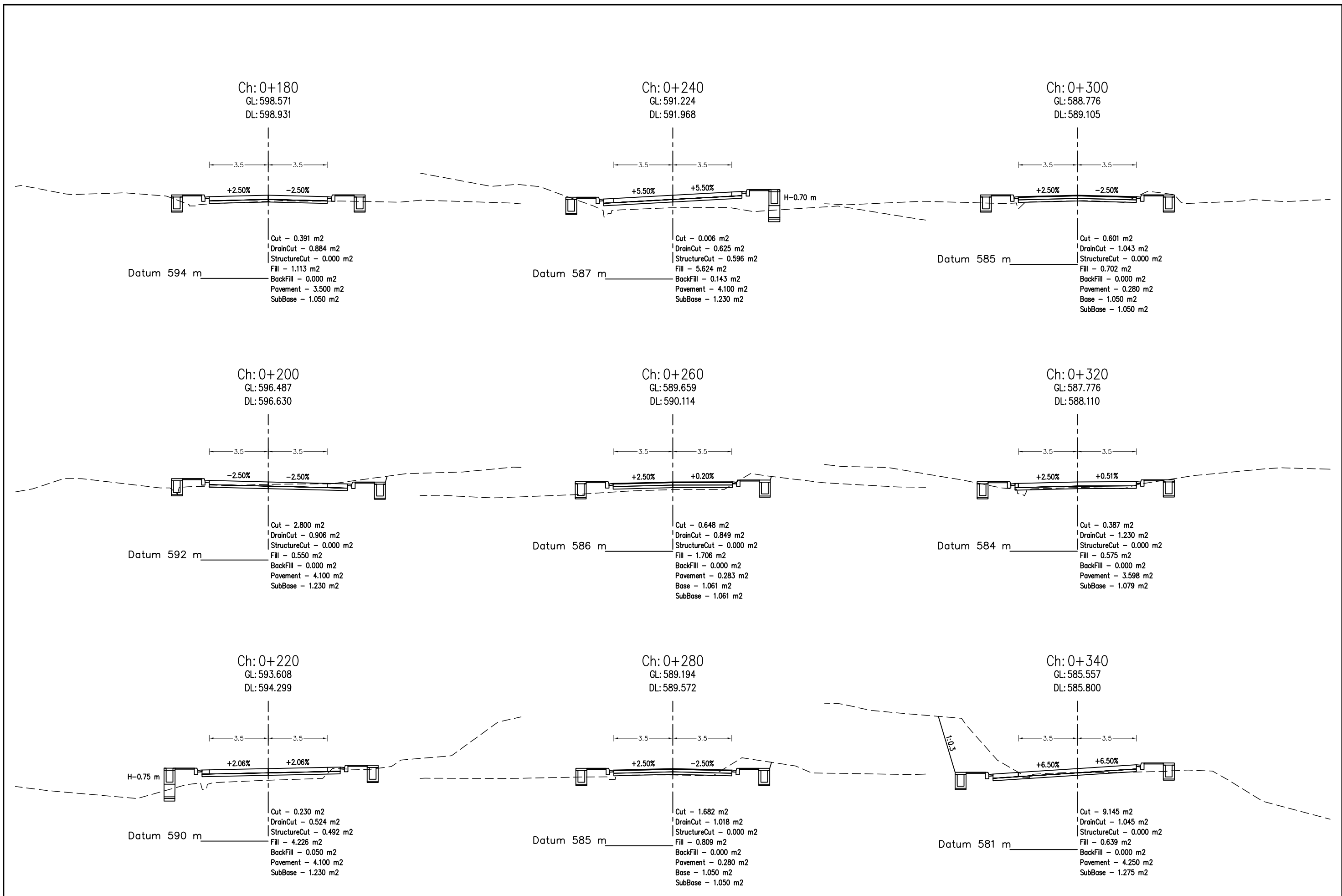
P. No.	CO-ORDINATES(m)		WBS (0+M-S)	DST. (m)	DEF. ANG. (0+M-S)	TAL. LEN. (m)	SIMPLE CURVE DATA				CHAINAGE		
	EASTING	NORTHING					R (m)	E (m)	LC (m)	MC	BC	EC	P
67	214263.777	3113014.622	187-00-25.54	57.592	38-50-51.33	22.920	65.000	3.923	44.071	2+655.883	2+677.819	2+696.954	2+678.803
68	214274.653	3112970.289	186-25-30.30	45.704	00-34-55.24	2.032	400.000	0.005	4.063	2+720.706	2+722.737	2+724.769	2+722.737
69	214280.466	3112943.727	186-20-21.79	27.325	21-54-51.49	6.131	42.000	0.780	16.064	2+741.831	2+748.863	2+757.985	2+750.882
70	214275.689	3112911.135	189-35-47.56	32.940	11-15-25.77	24.639	250.000	1.211	48.119	2+758.165	2+782.724	2+807.283	2+782.803

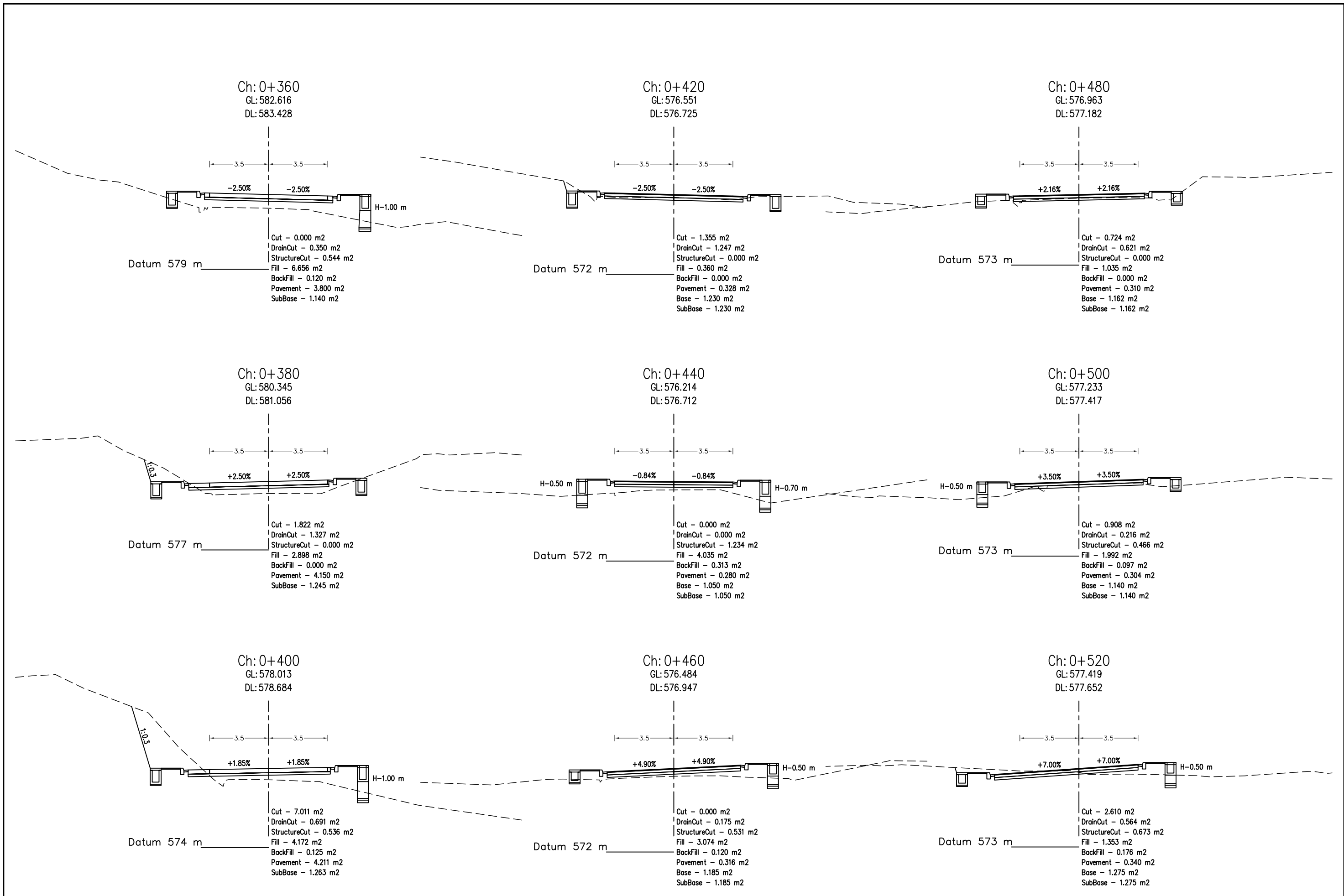


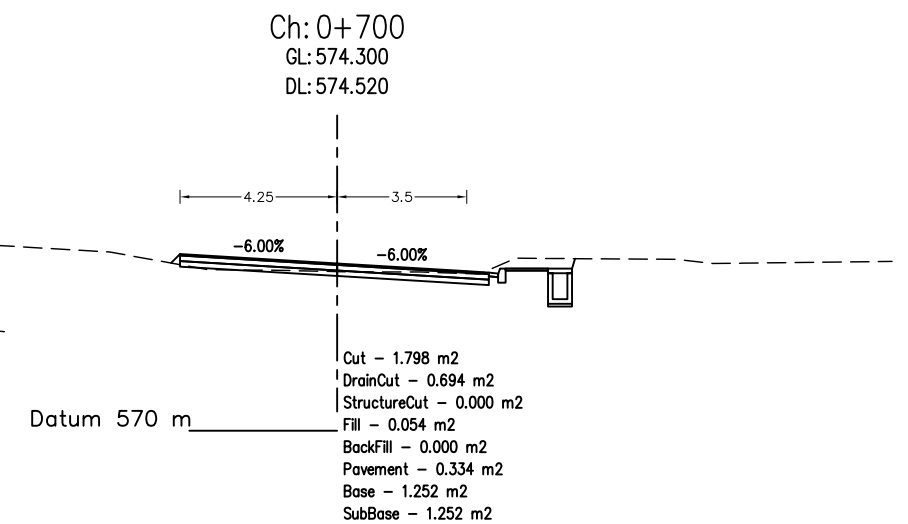
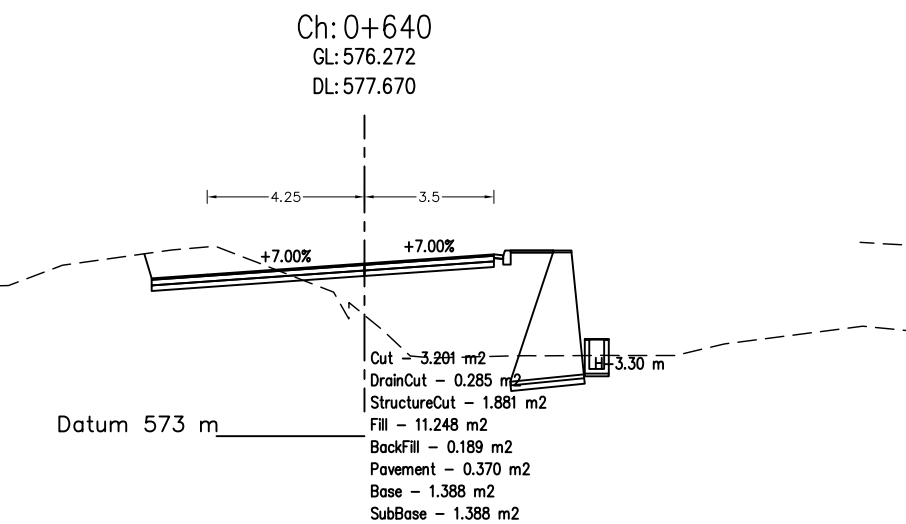
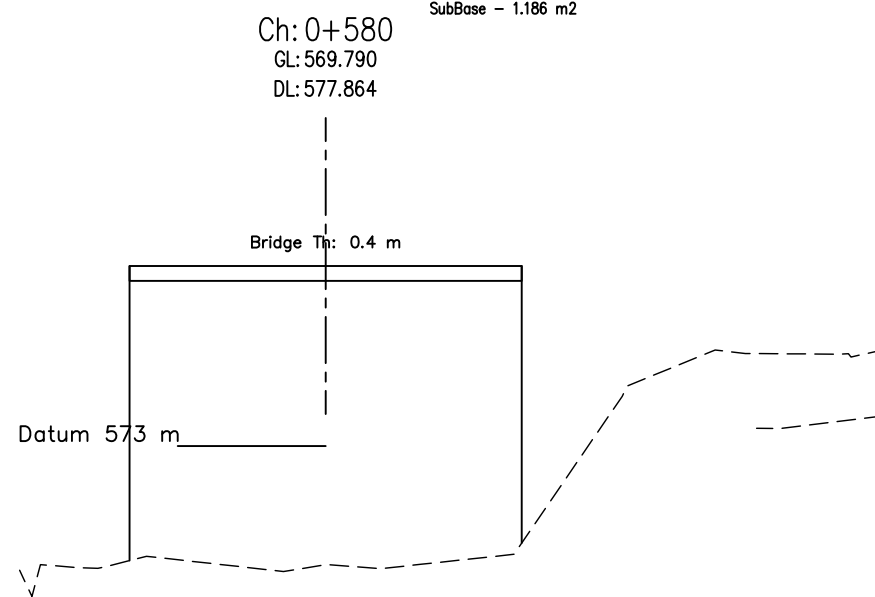
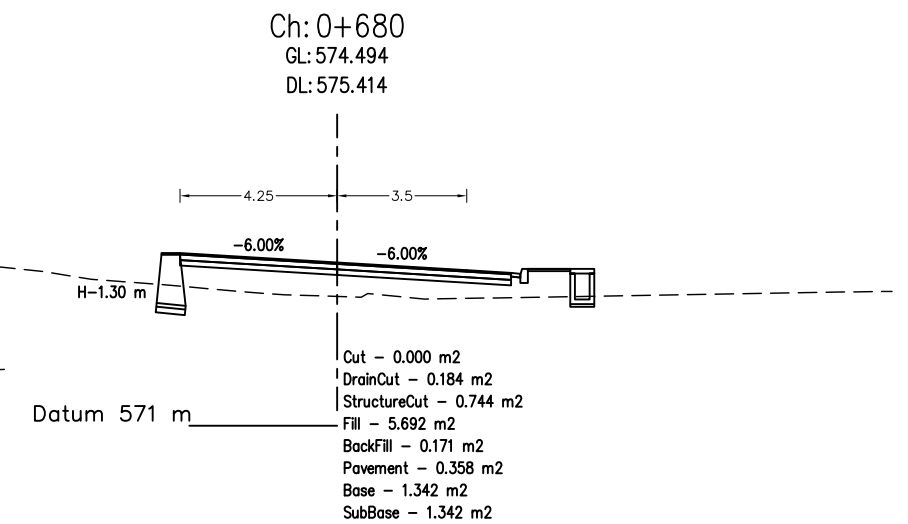
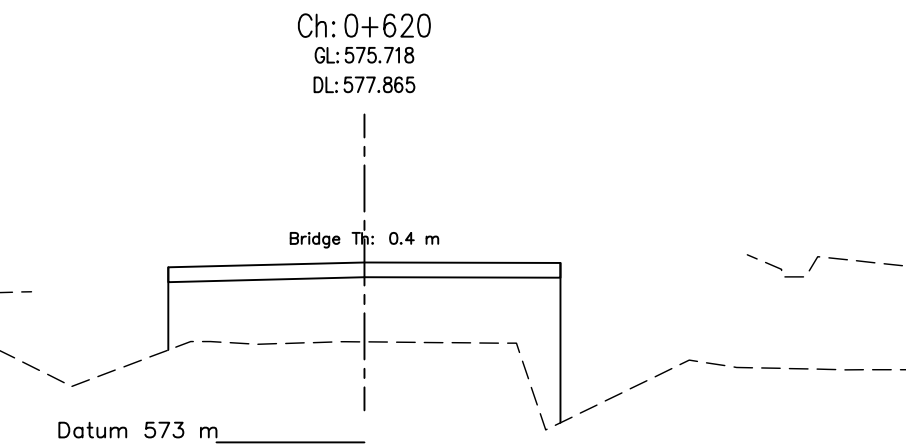
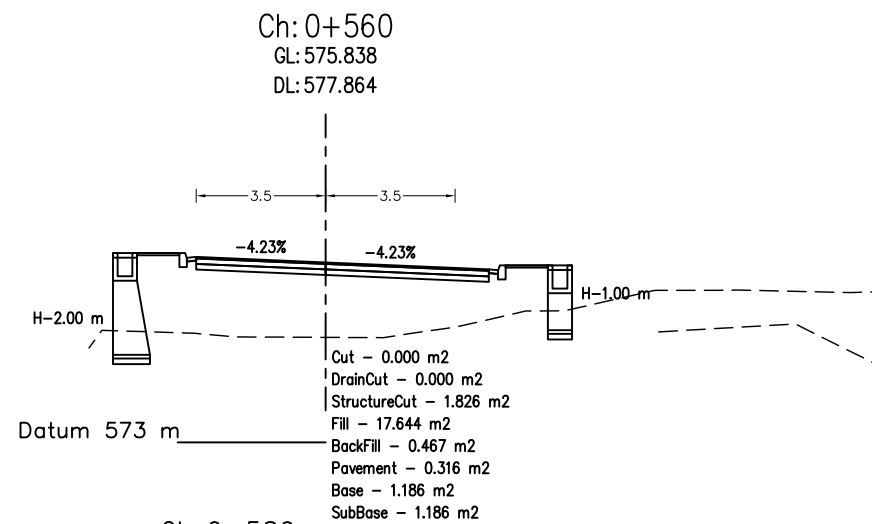
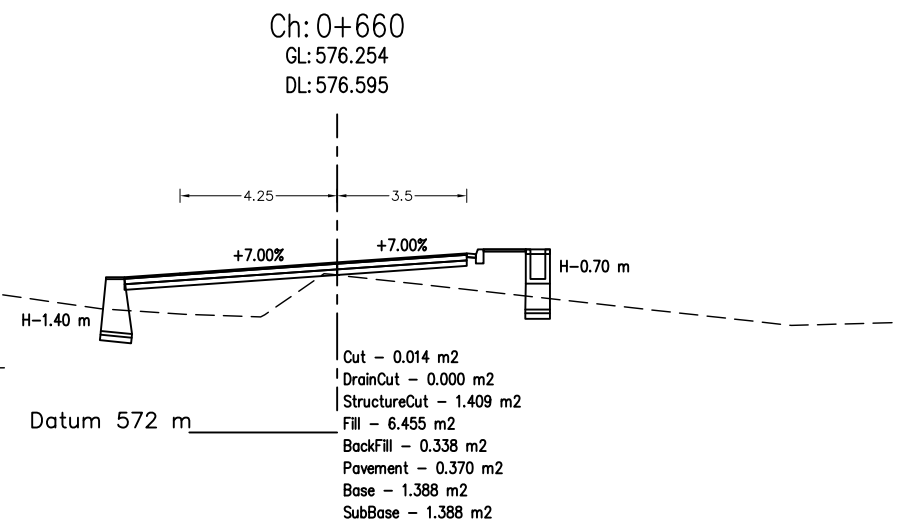
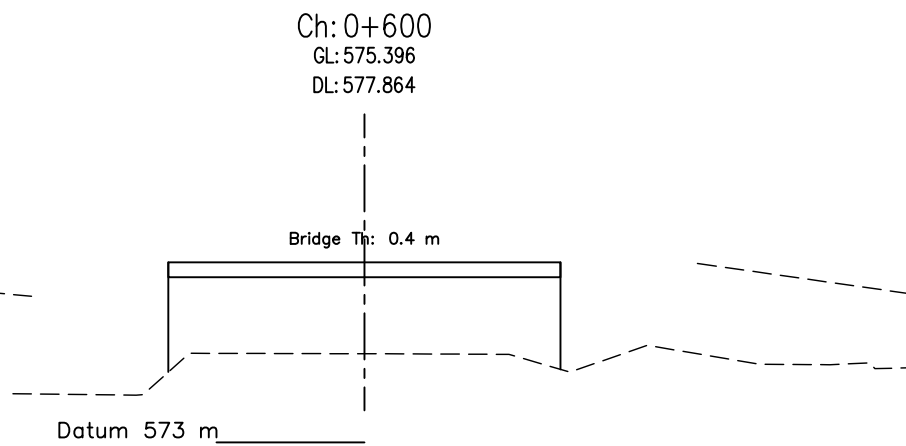
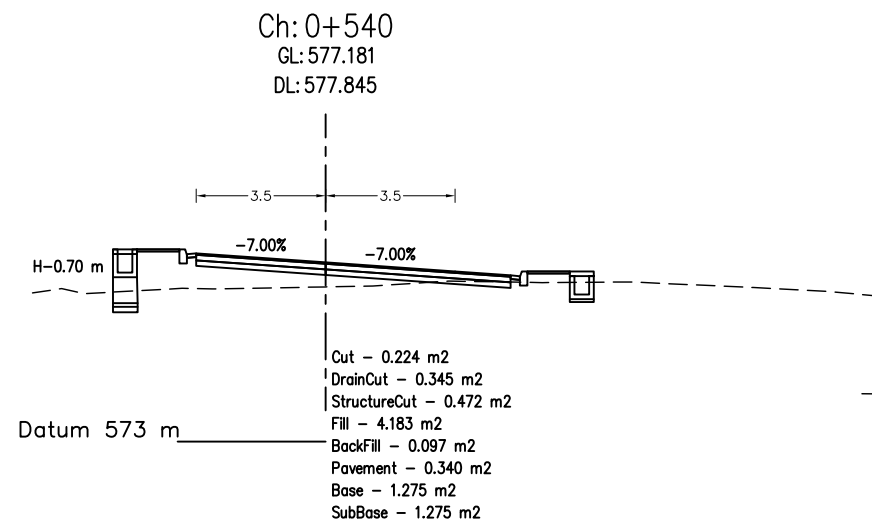
DESIGN LEVEL(m)	596.959	597.017	597.631	598.309	598.988	599.416	599.422
EXISTING LEVEL(m)	596.572	596.490	596.675	596.872	597.178	597.561	597.186
CHAINAGE(Km)	2+700	2+720	2+740	2+760	2+780	2+800	2+813.43
CUT/FILL (m)	0.387	0.526	0.956	1.437	1.809	1.855	2.236
SUPER ELEVATION	T NC T -6.5 T NC						
HORIZONTAL ALIGNMENT	RIGHT LEFT						

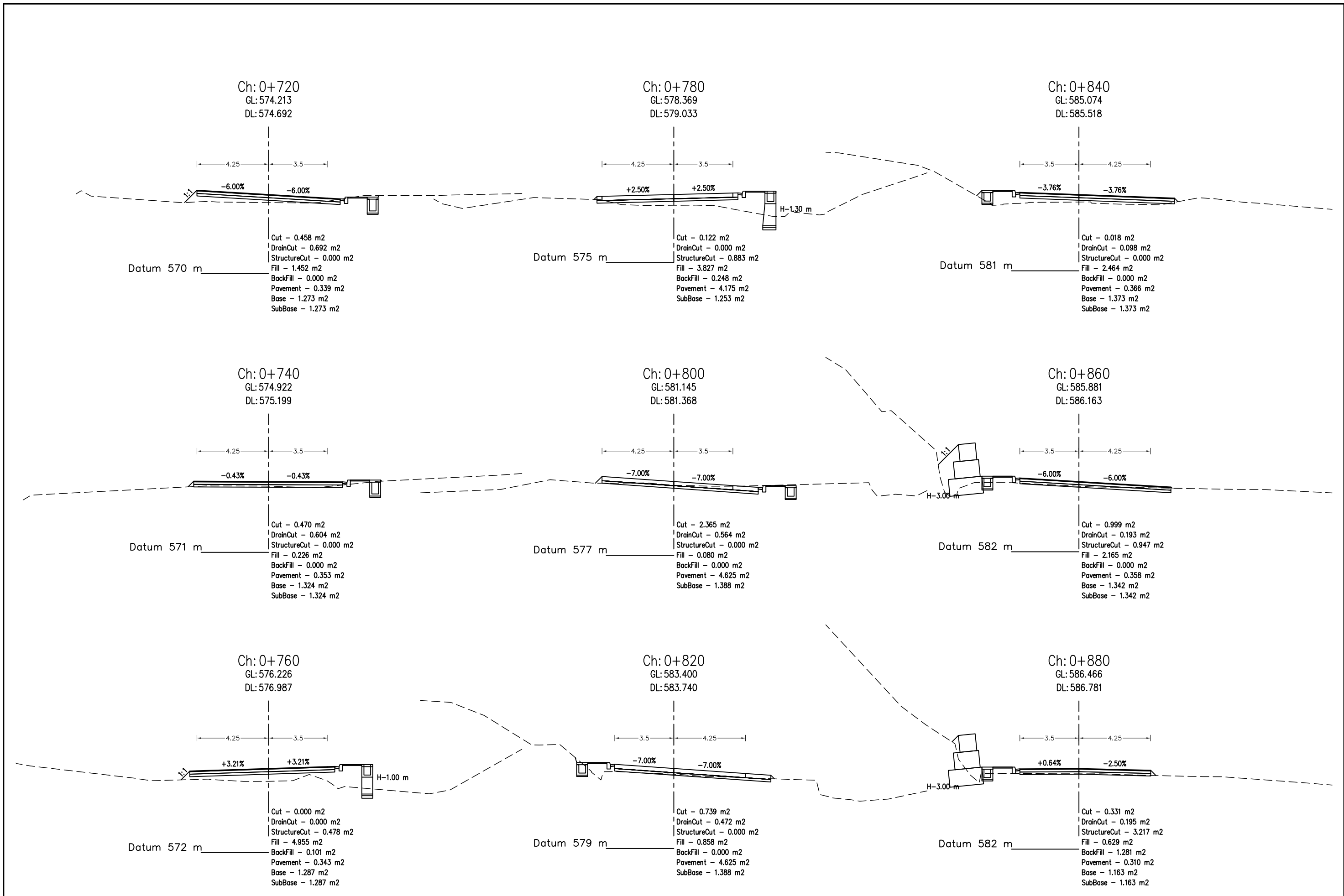
**DETAILED CROSS SECTION AT 20m INTERVAL
(SECTION-II)**

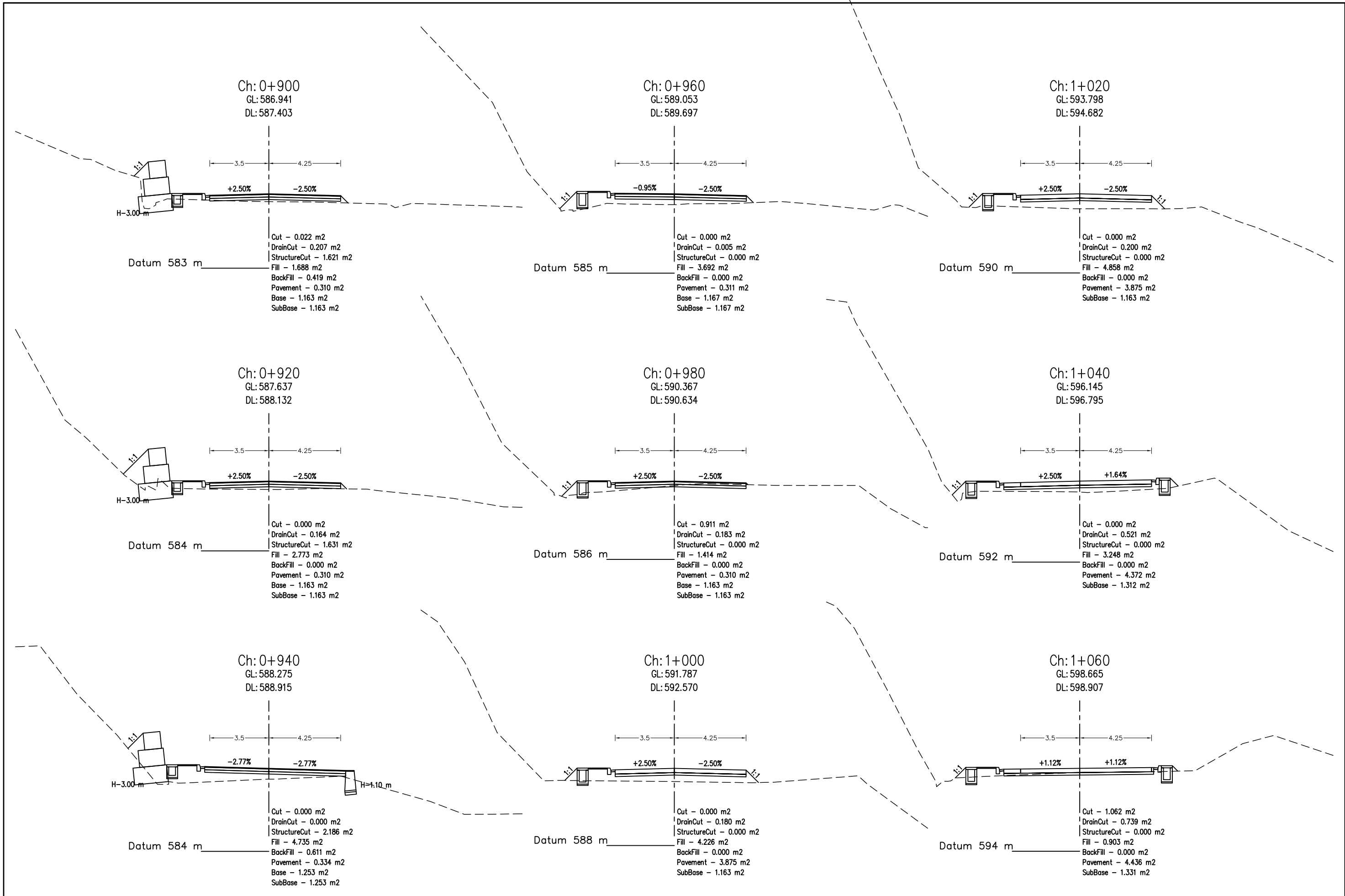


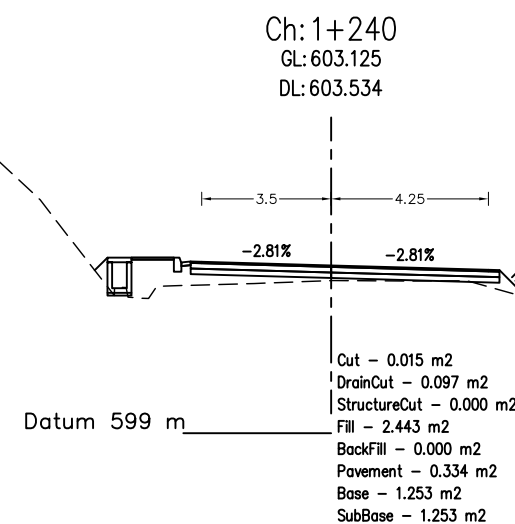
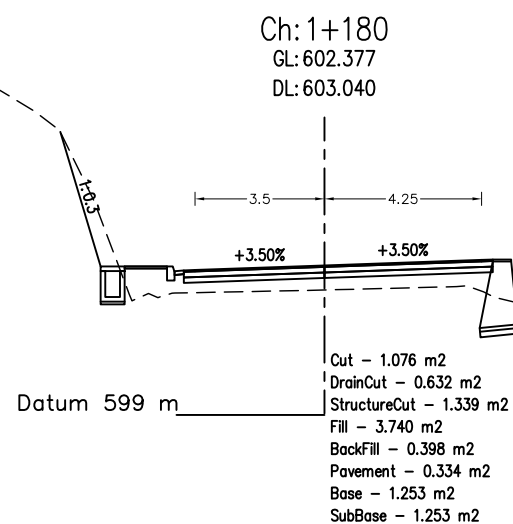
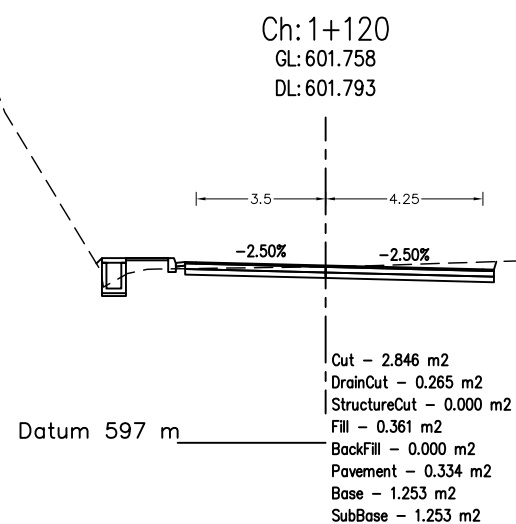
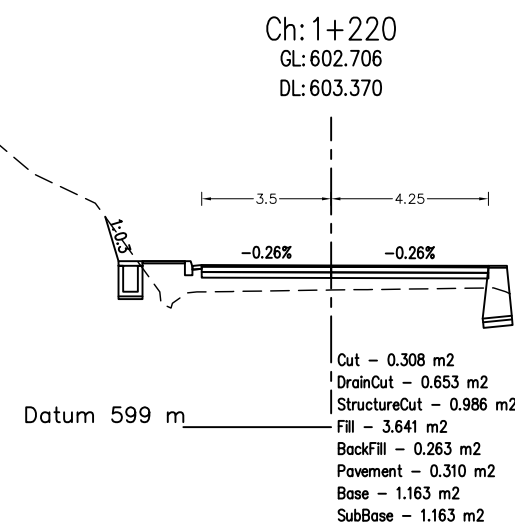
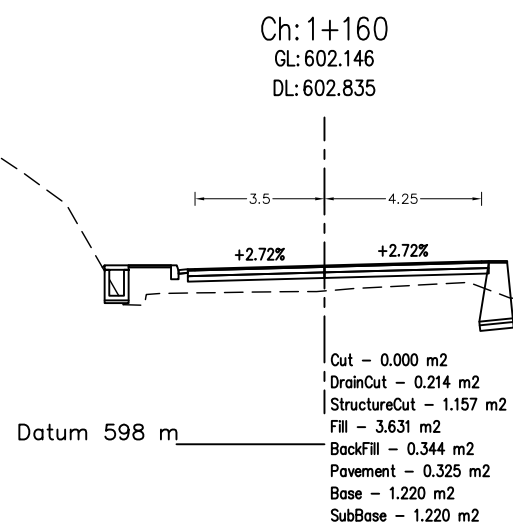
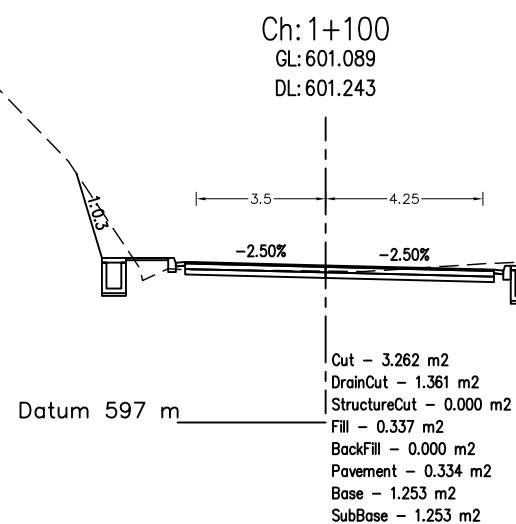
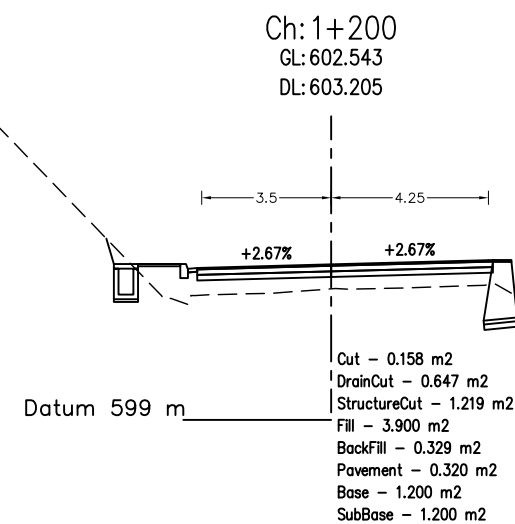
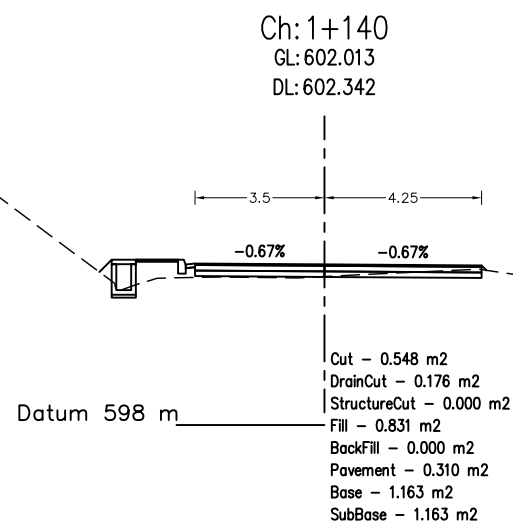
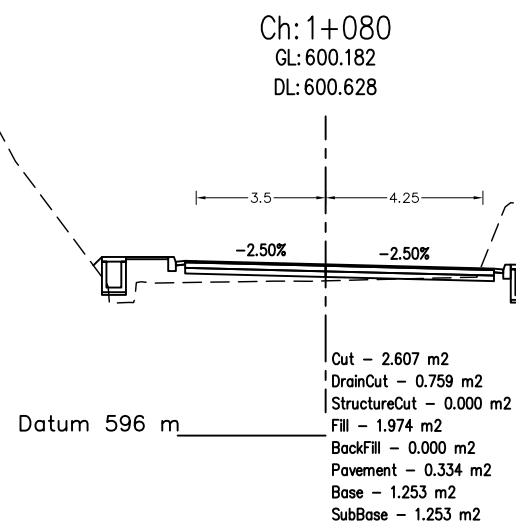


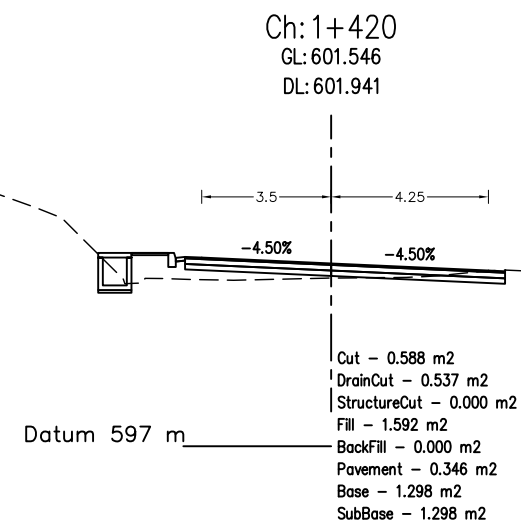
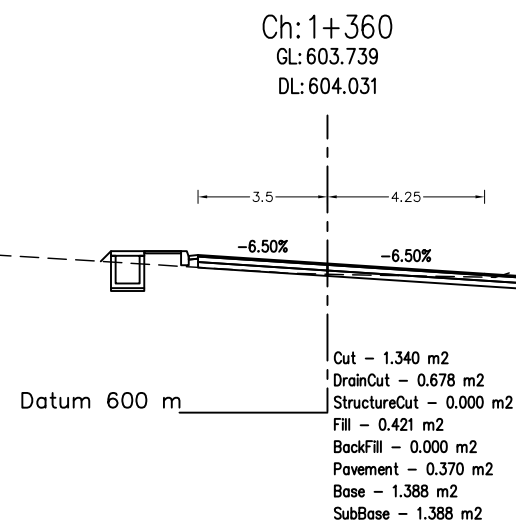
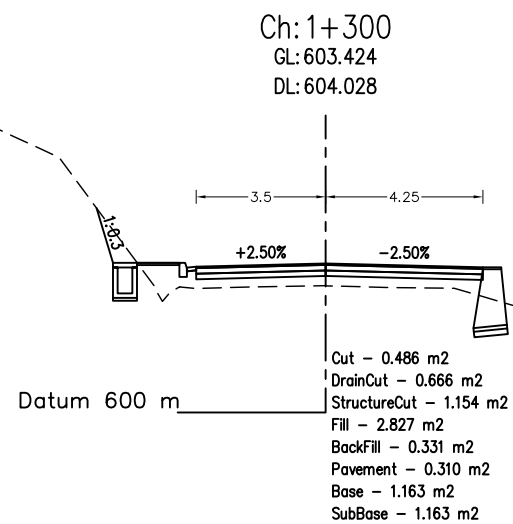
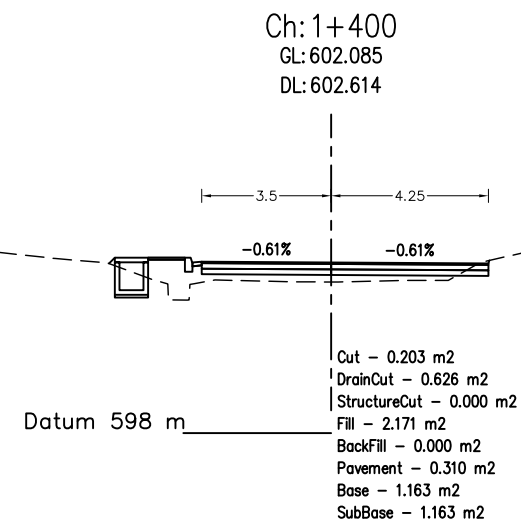
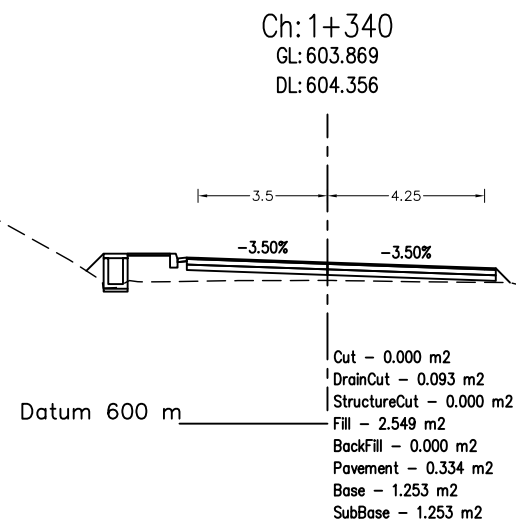
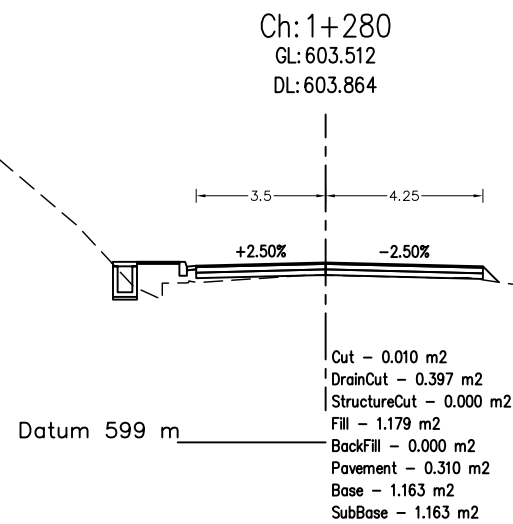
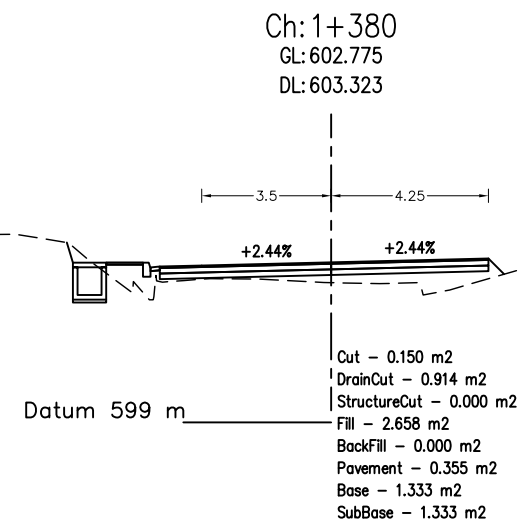
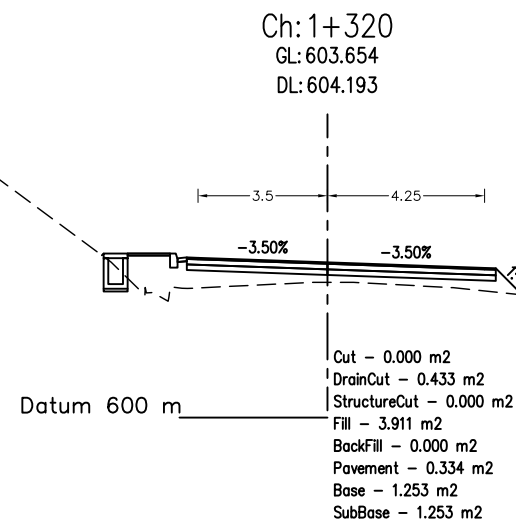
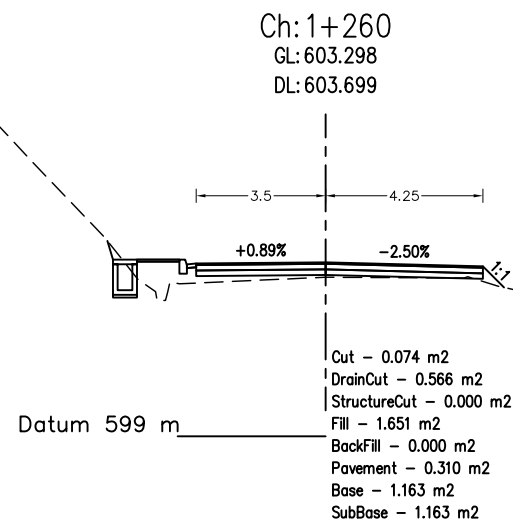


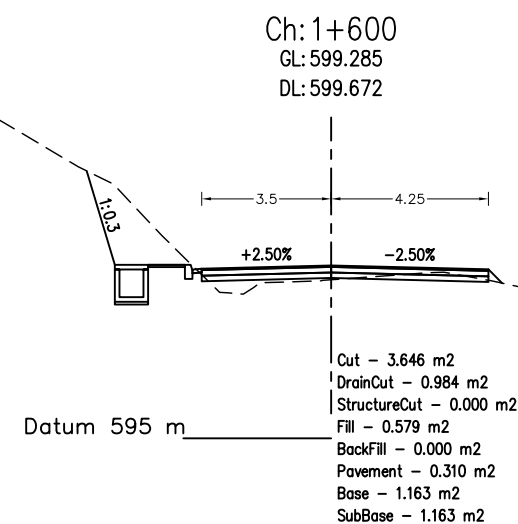
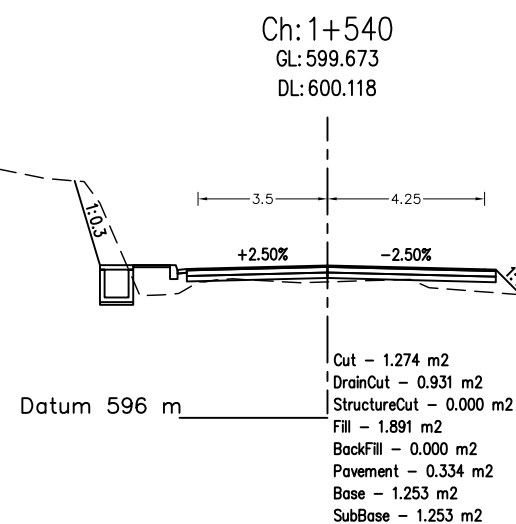
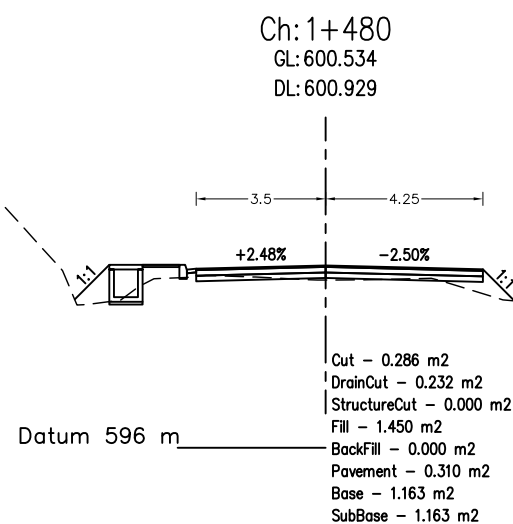
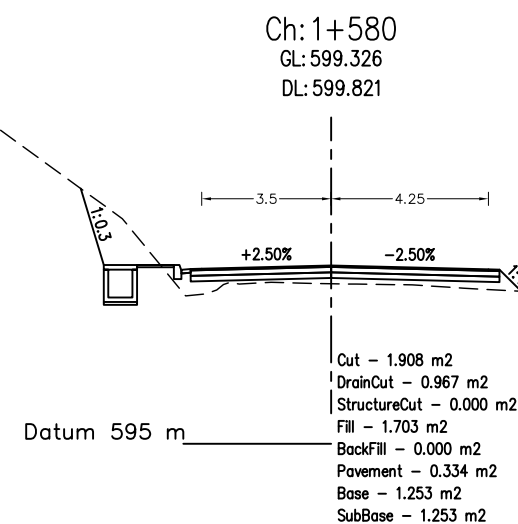
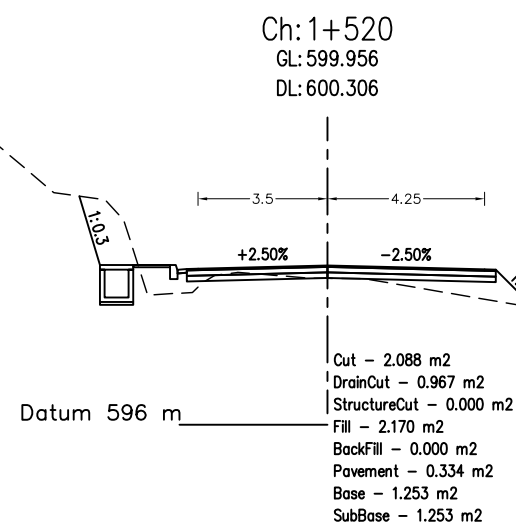
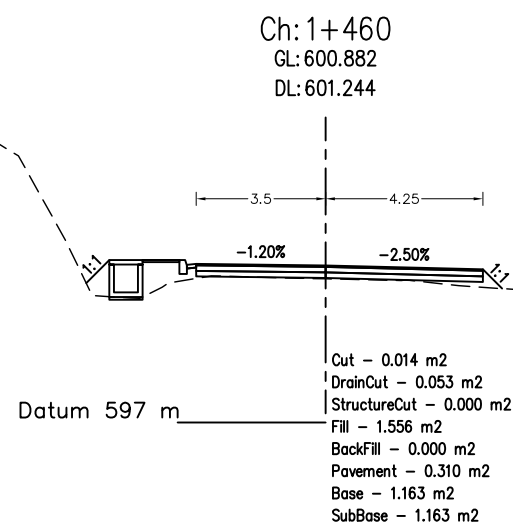
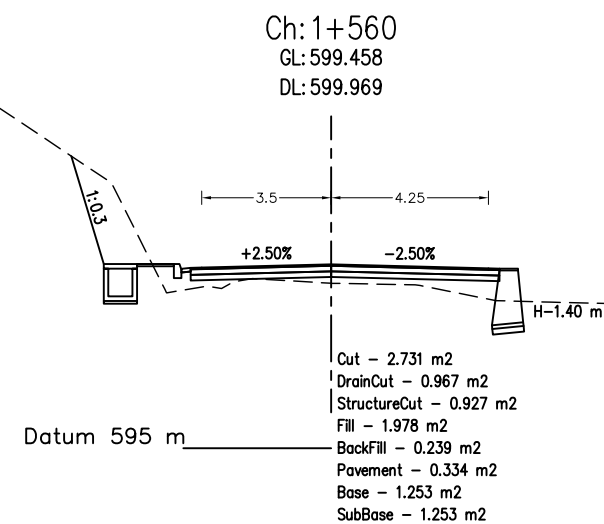
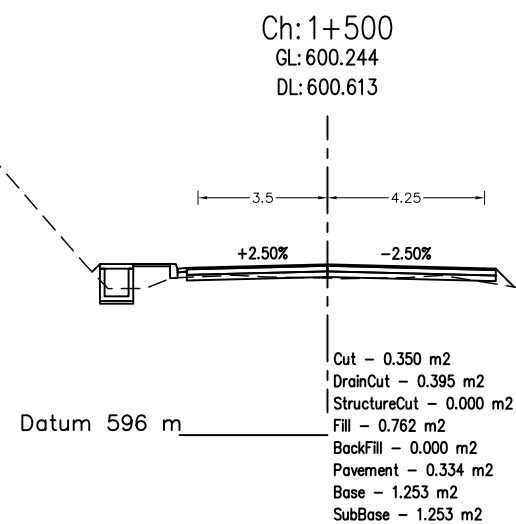
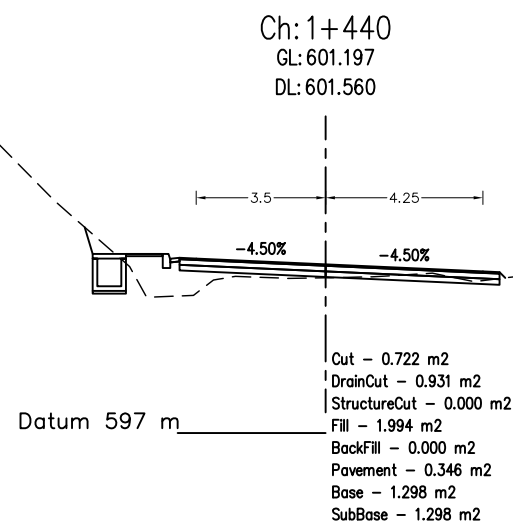


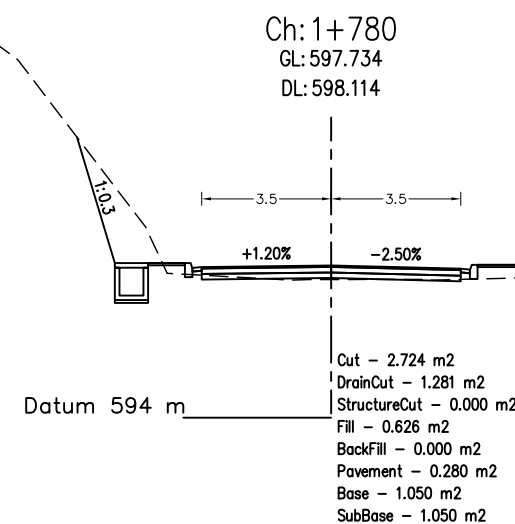
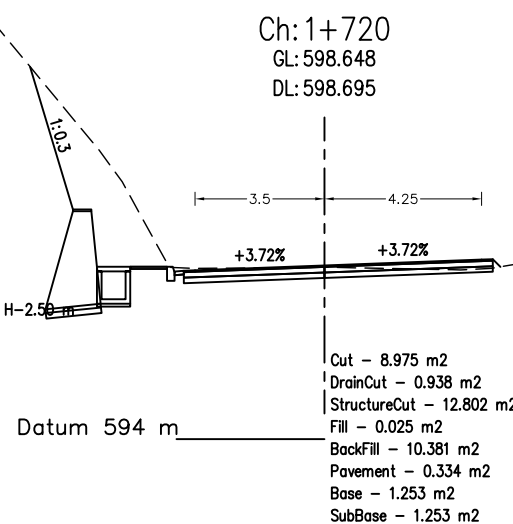
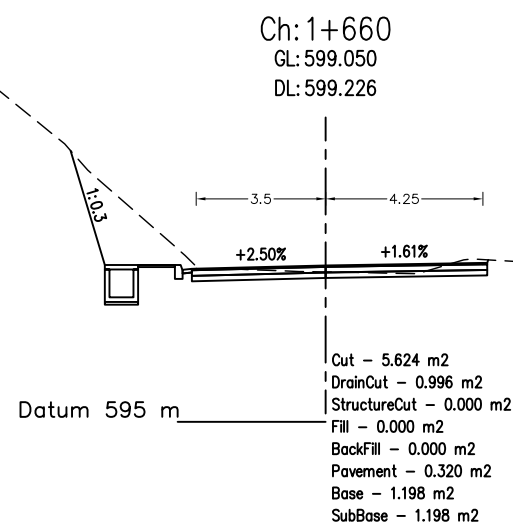
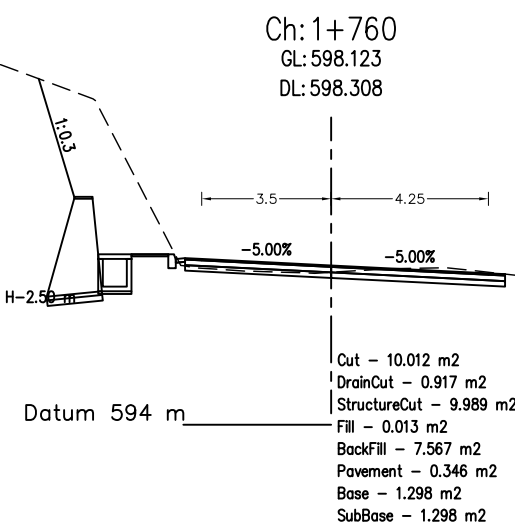
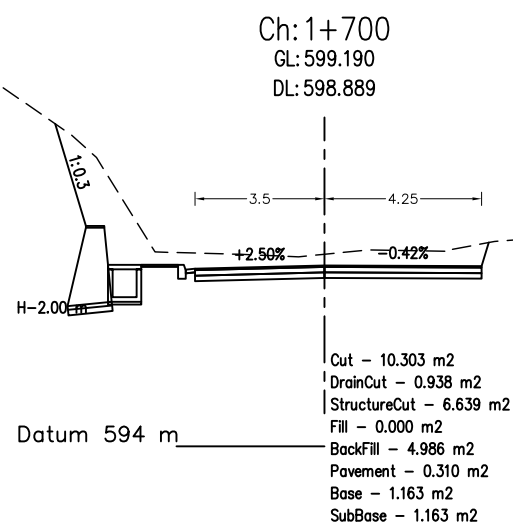
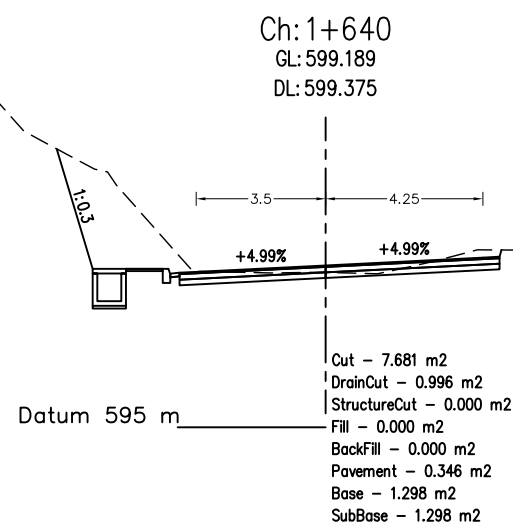
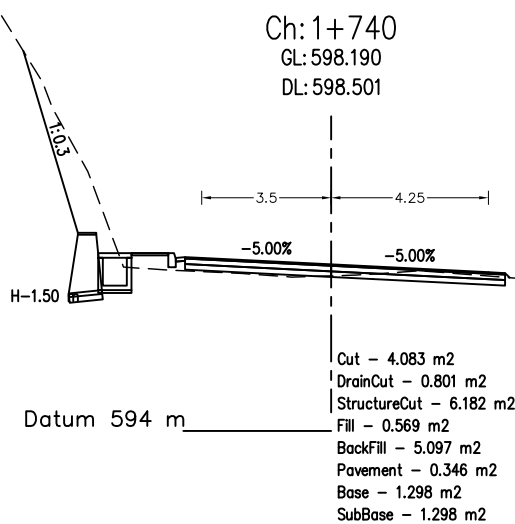
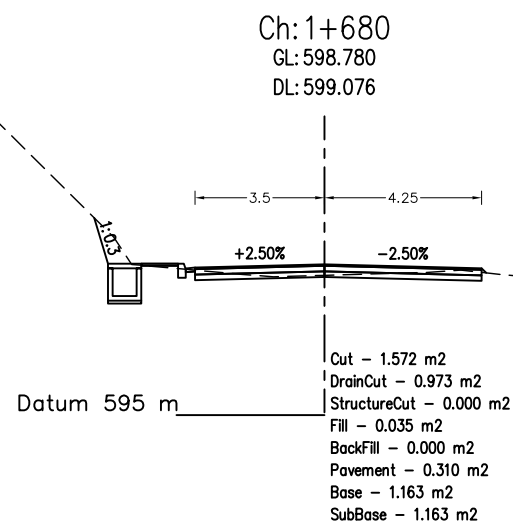
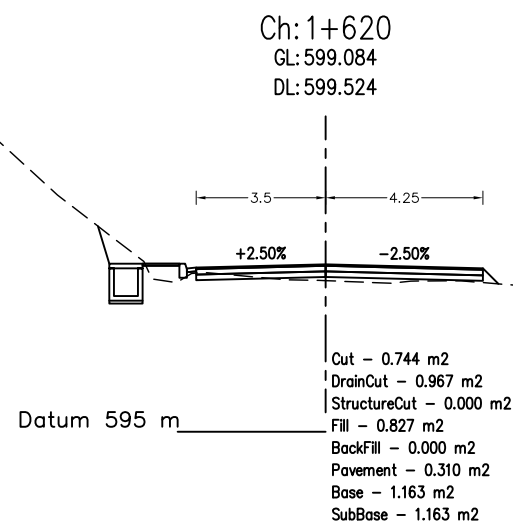


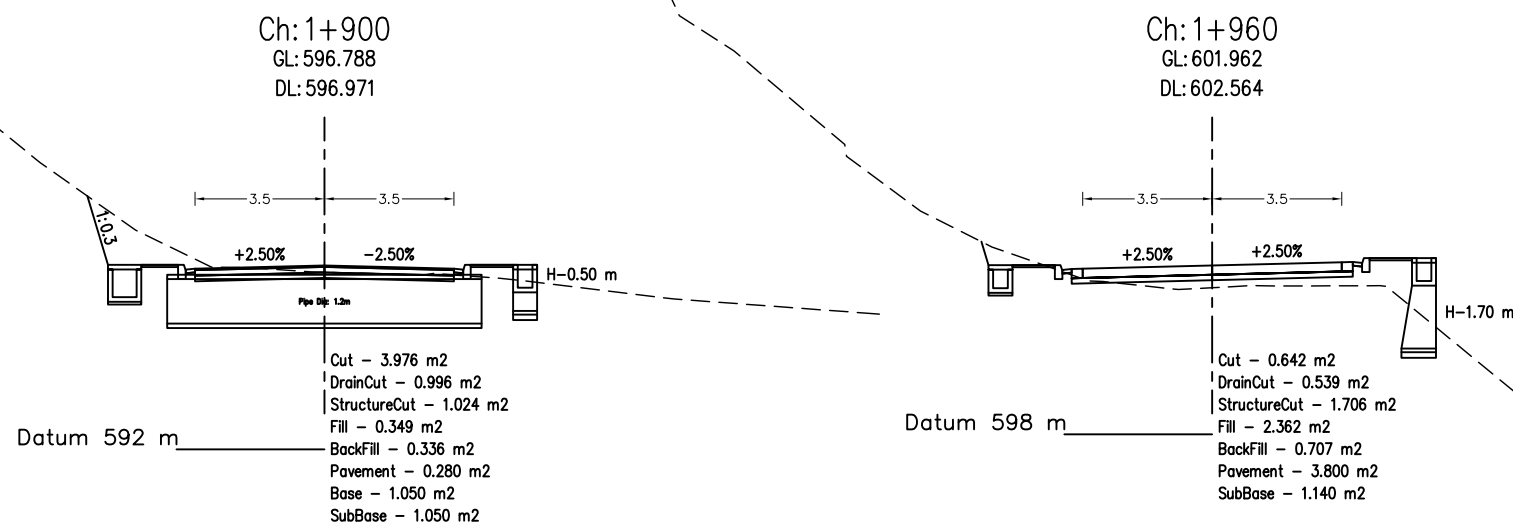
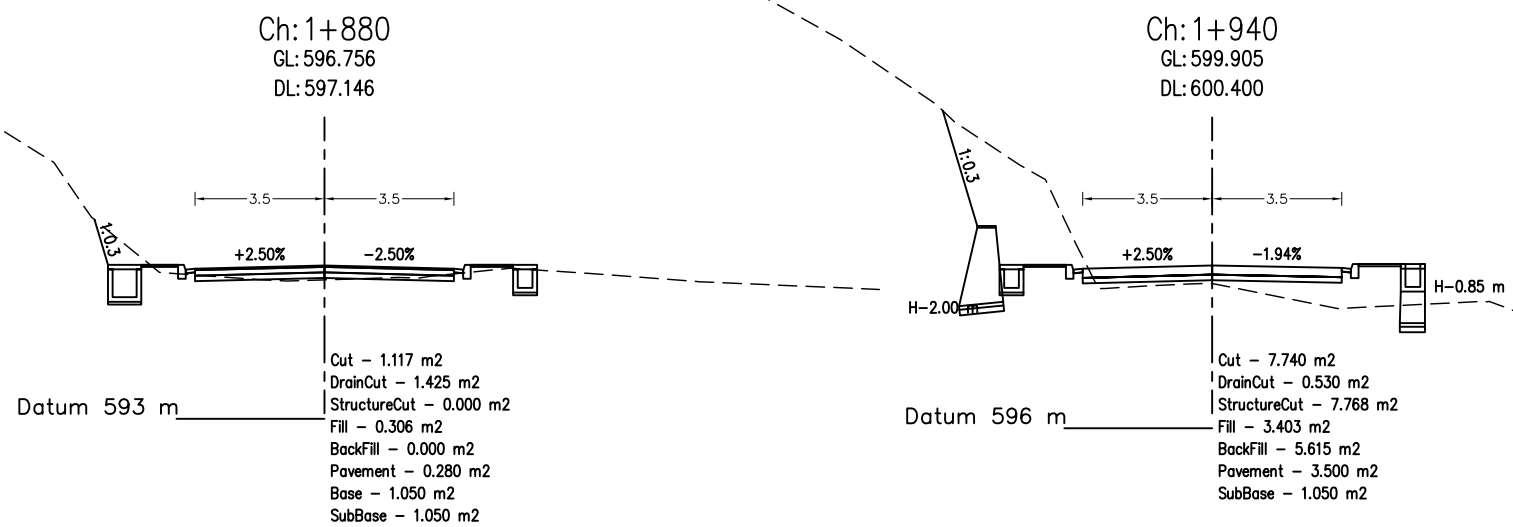
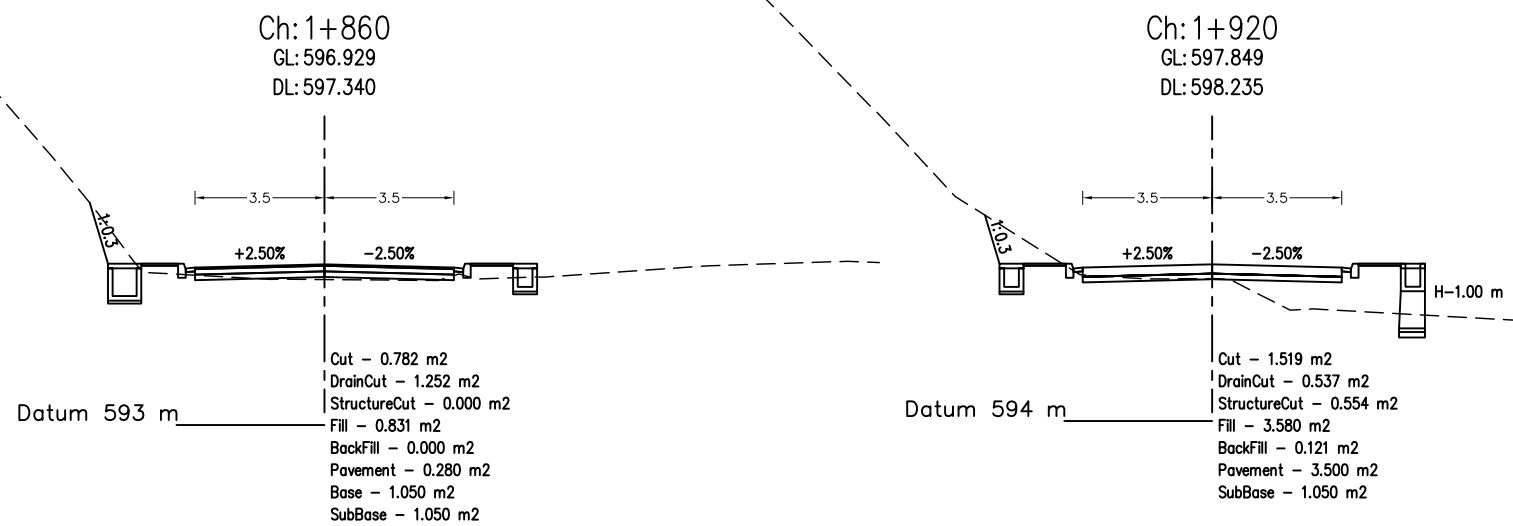


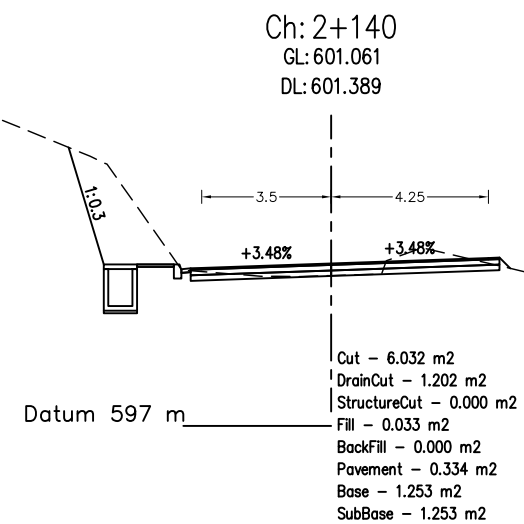
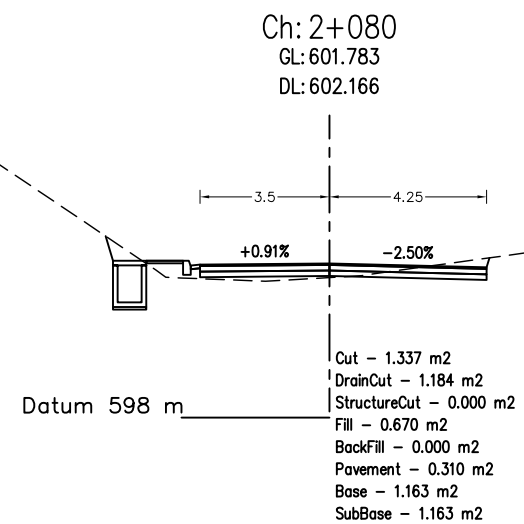
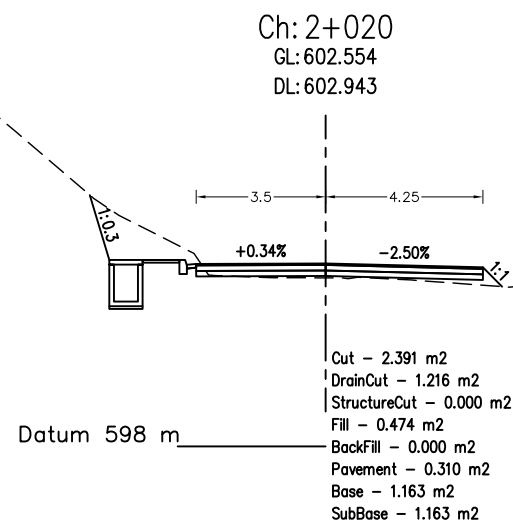
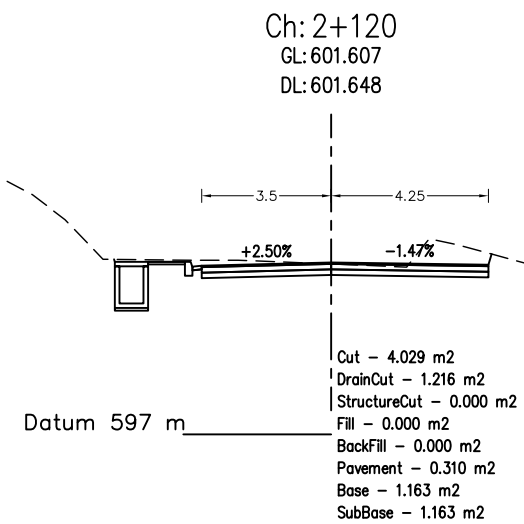
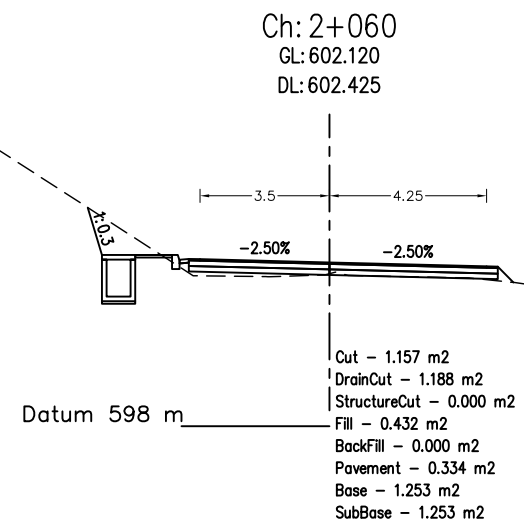
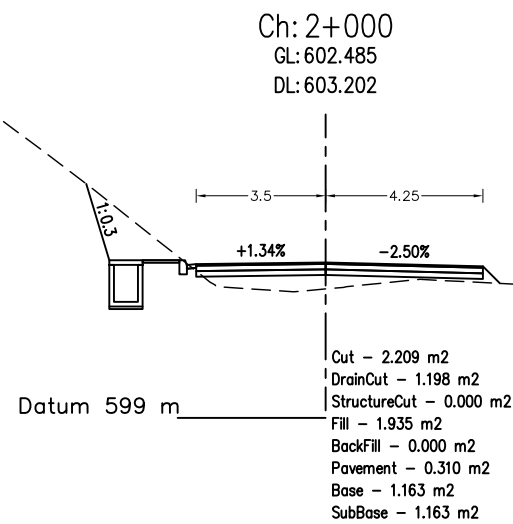
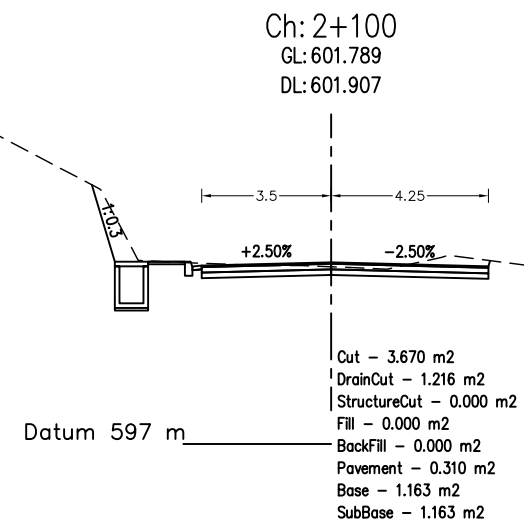
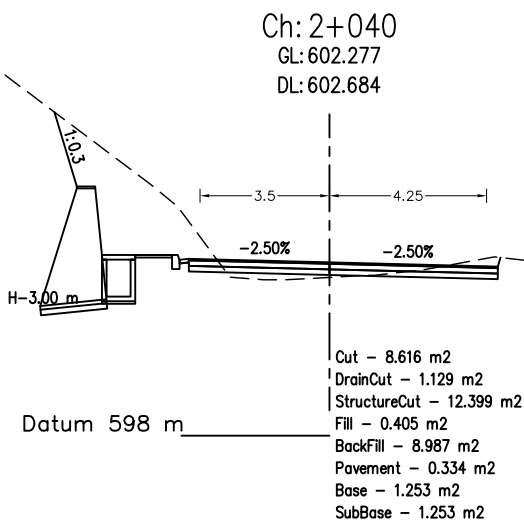
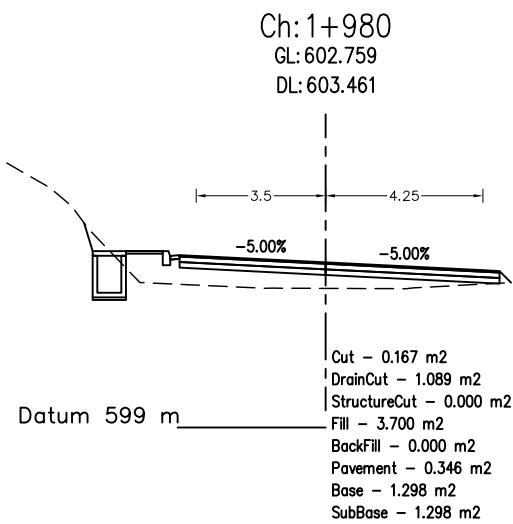


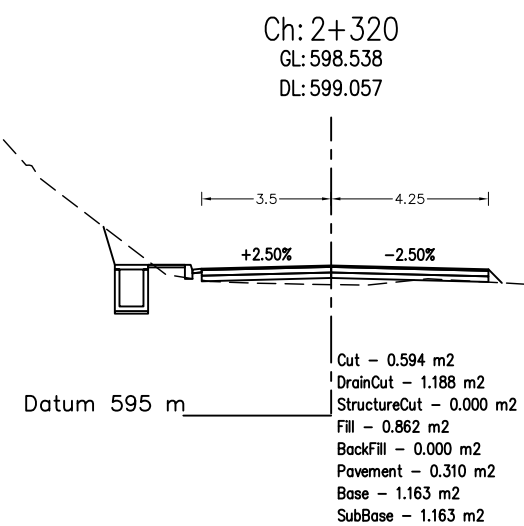
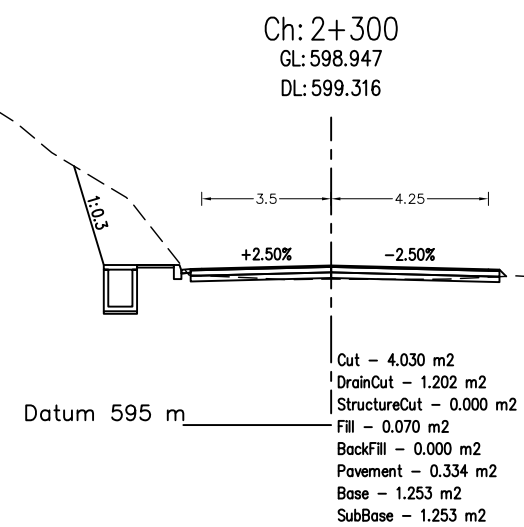
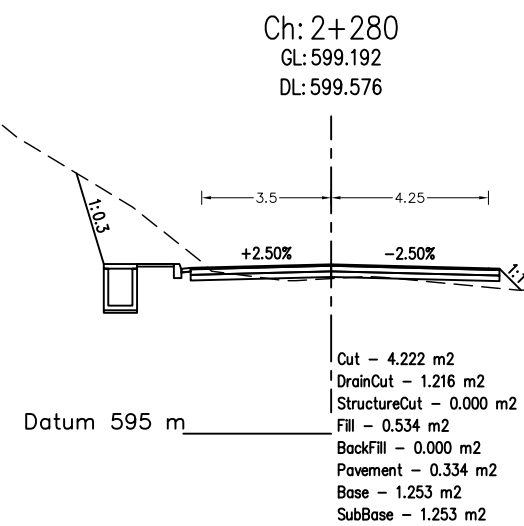


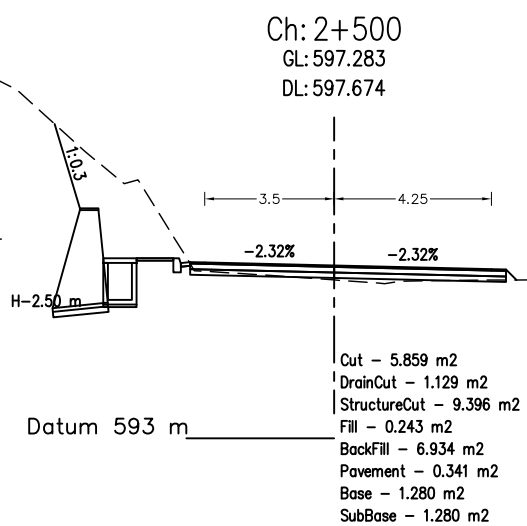
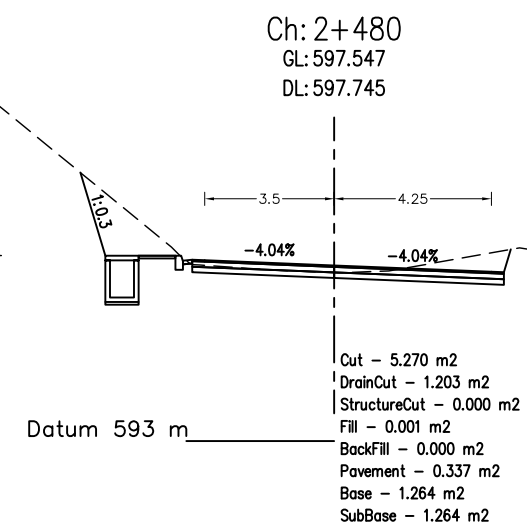
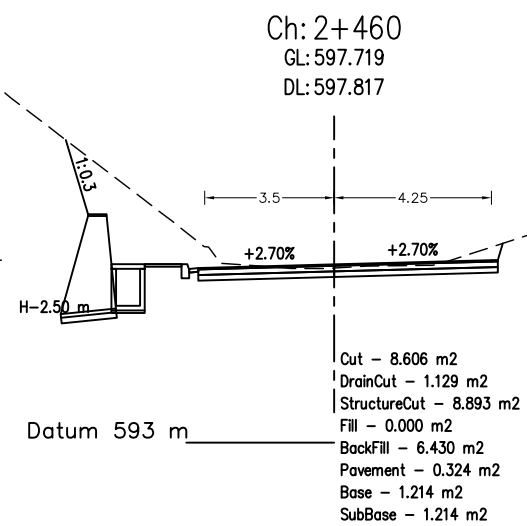


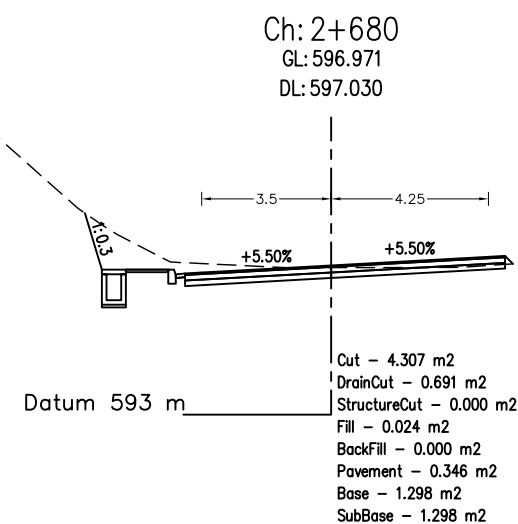
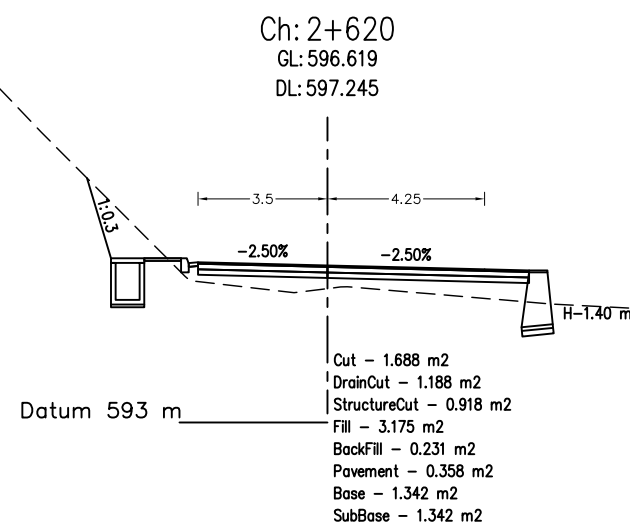
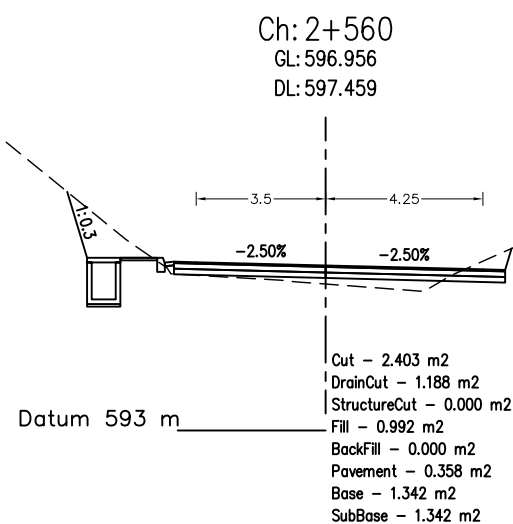
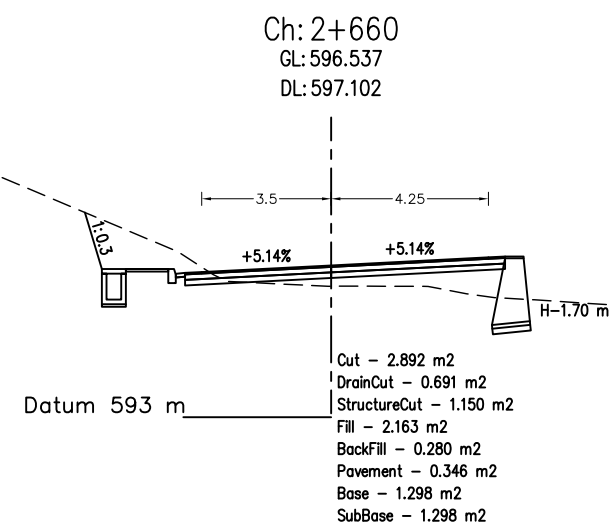
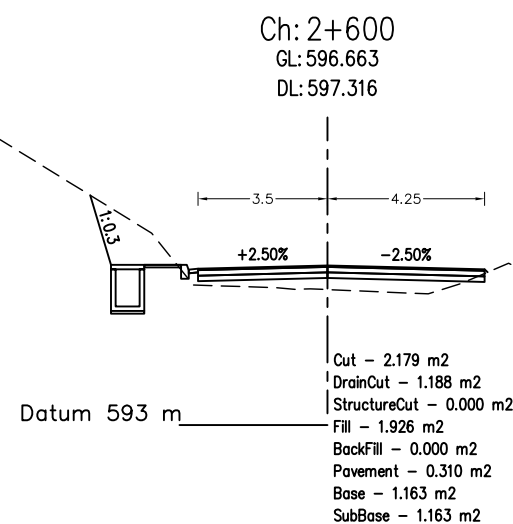
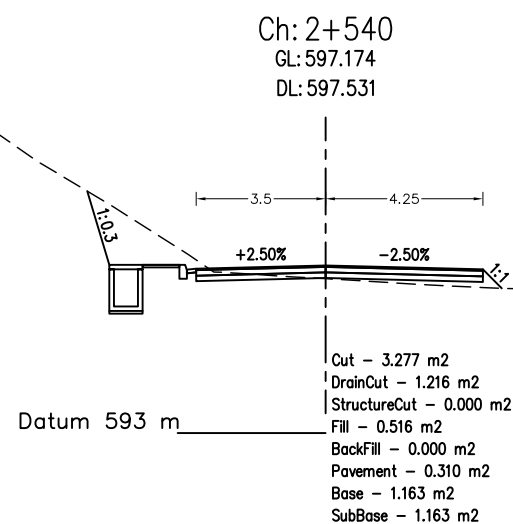
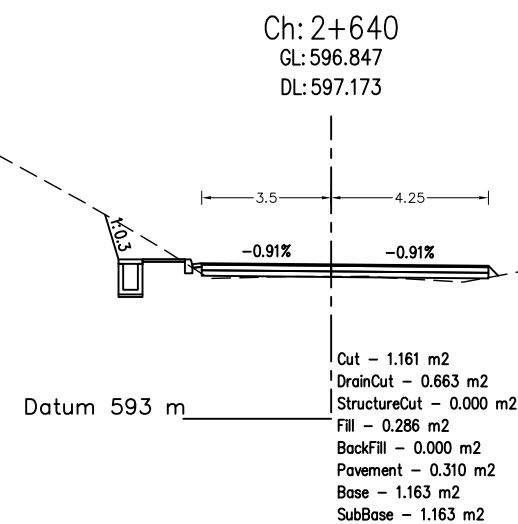
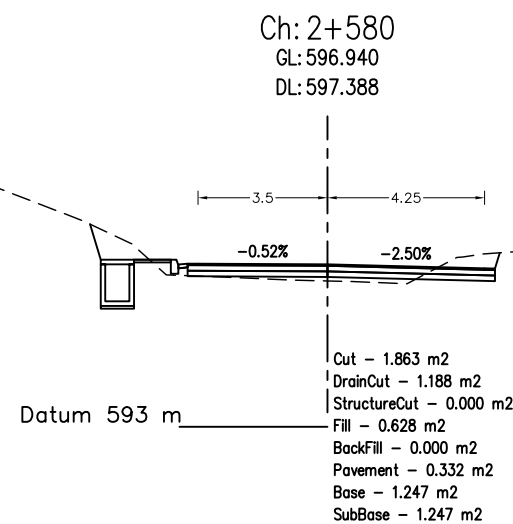
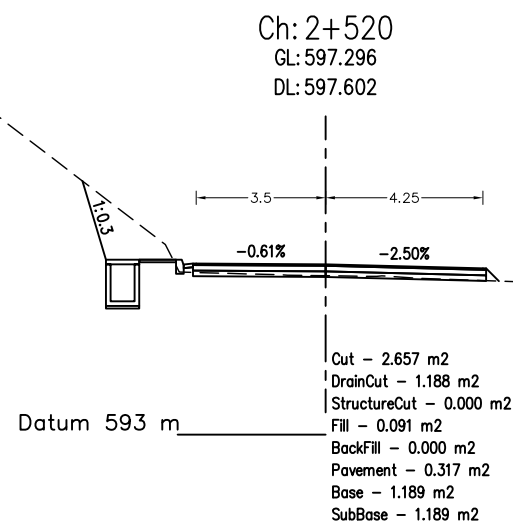


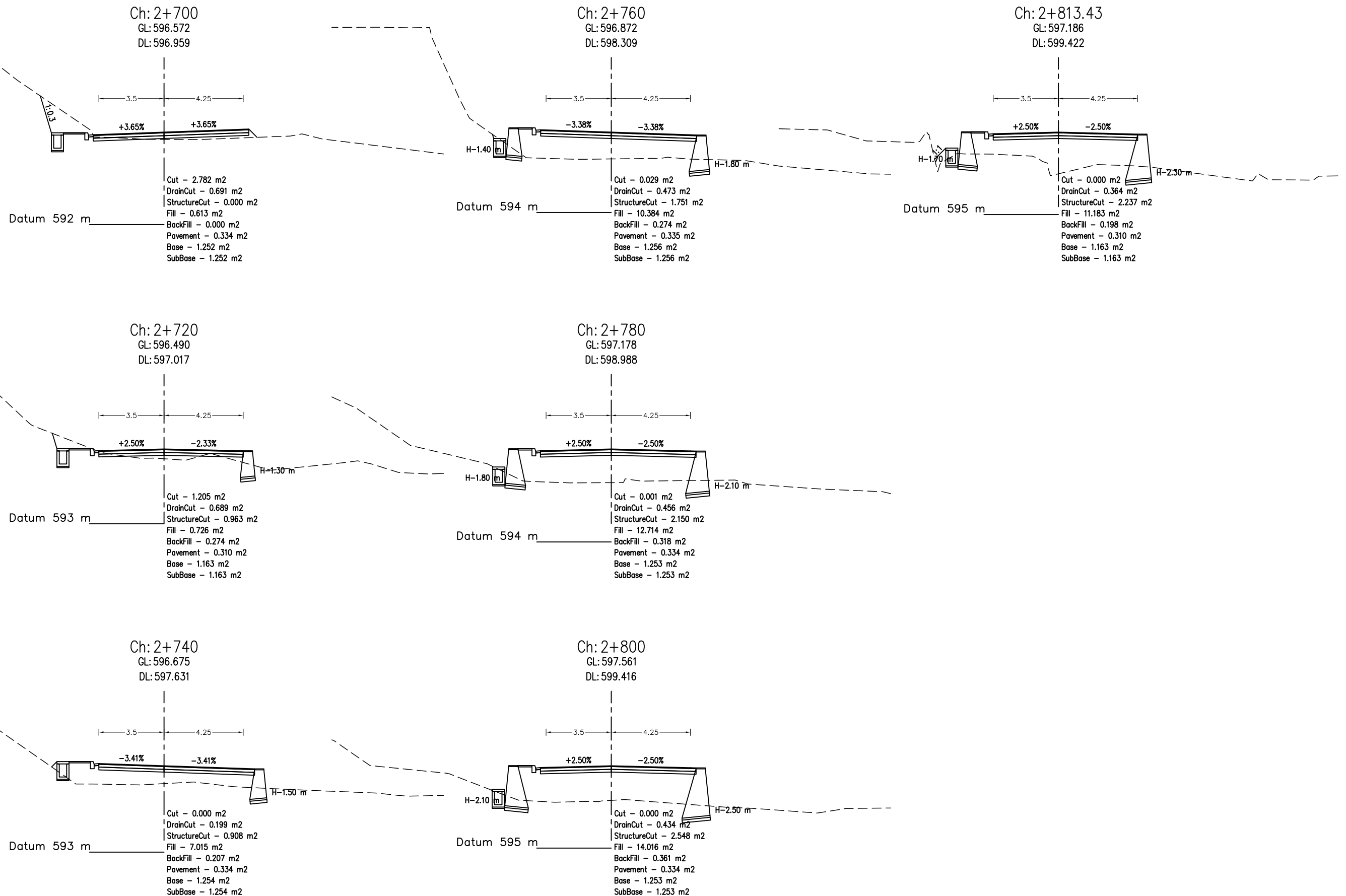




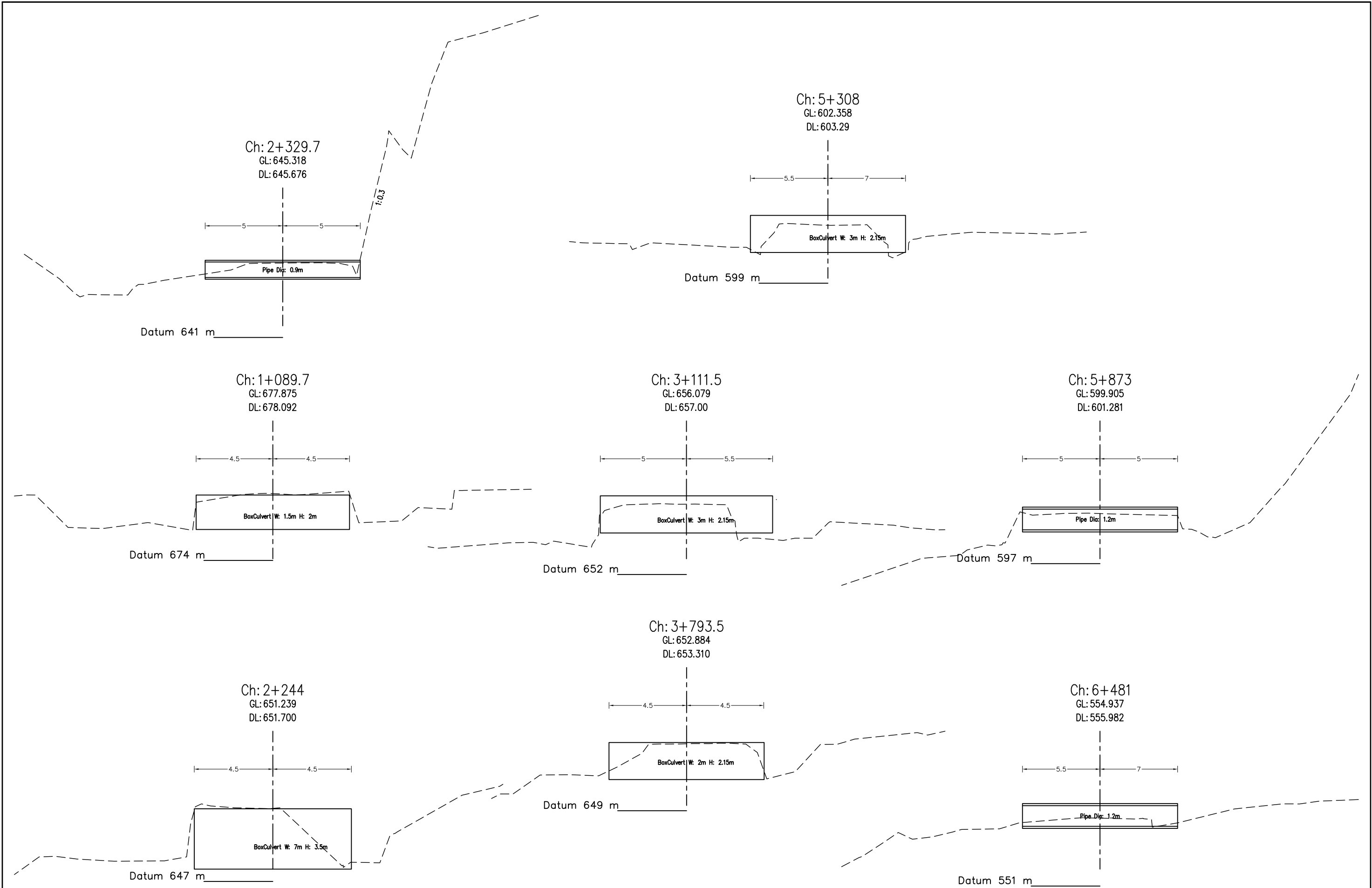


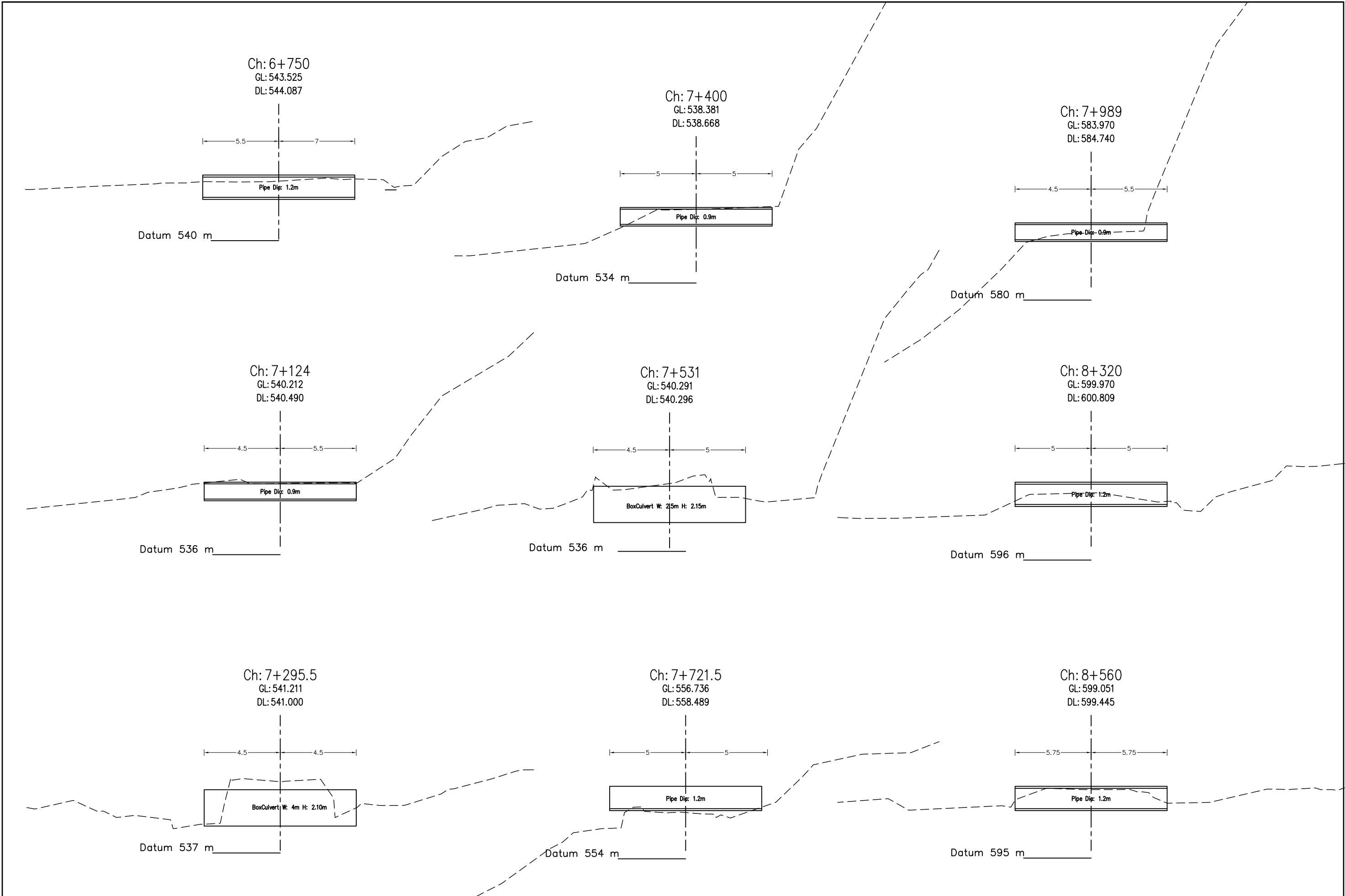


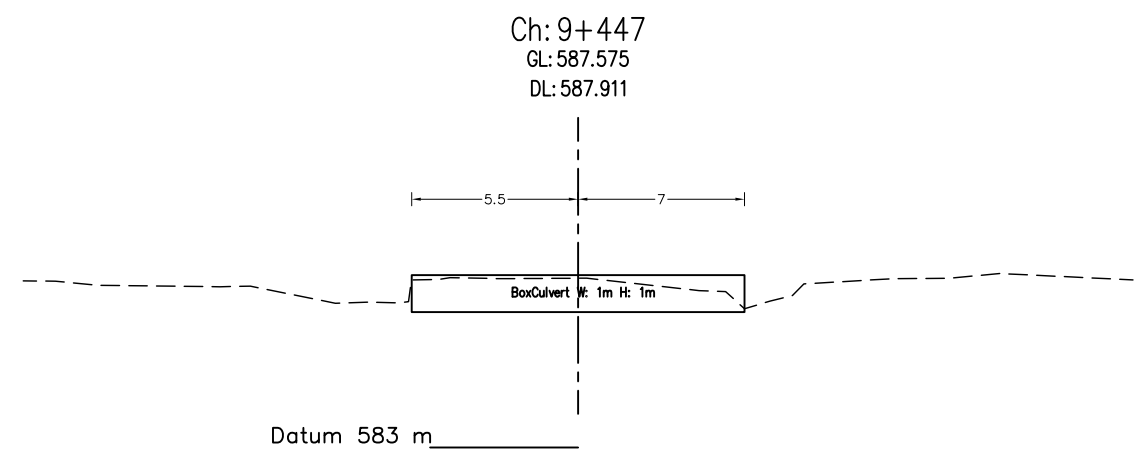
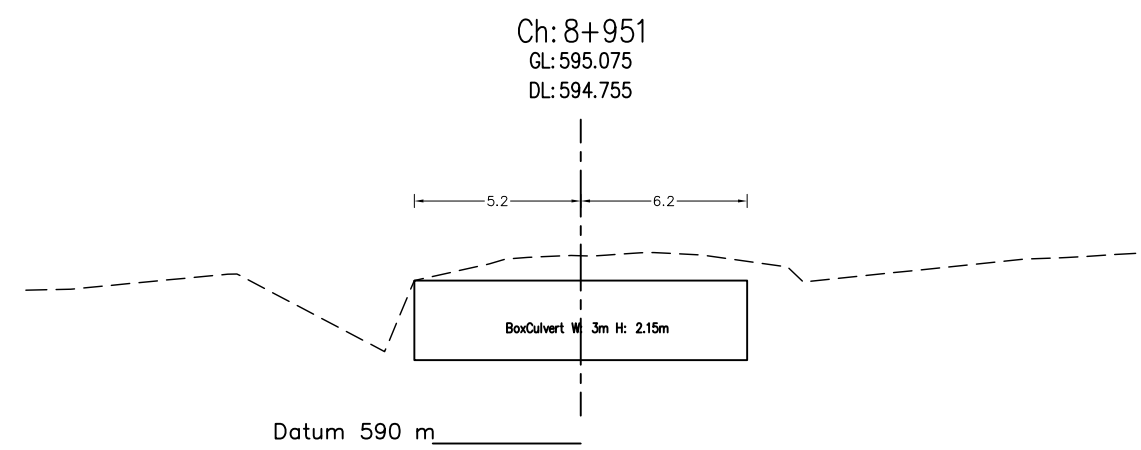
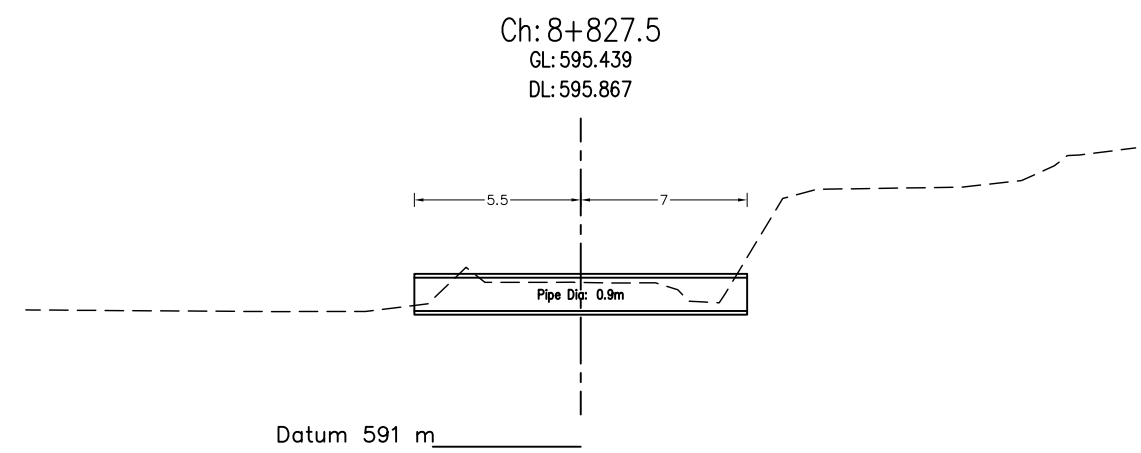







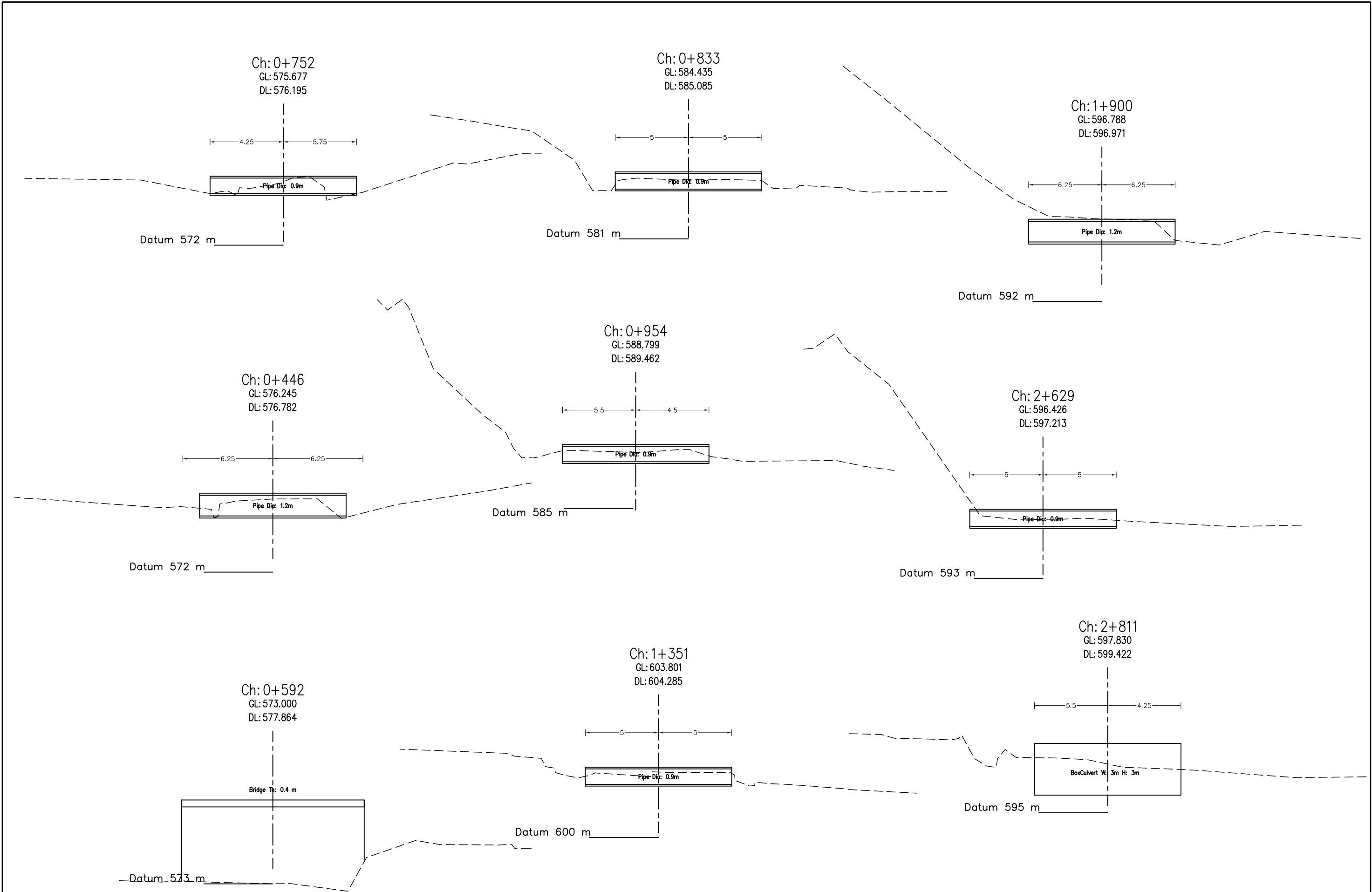
CROSS SECTION OF CROSS DRAINAGE







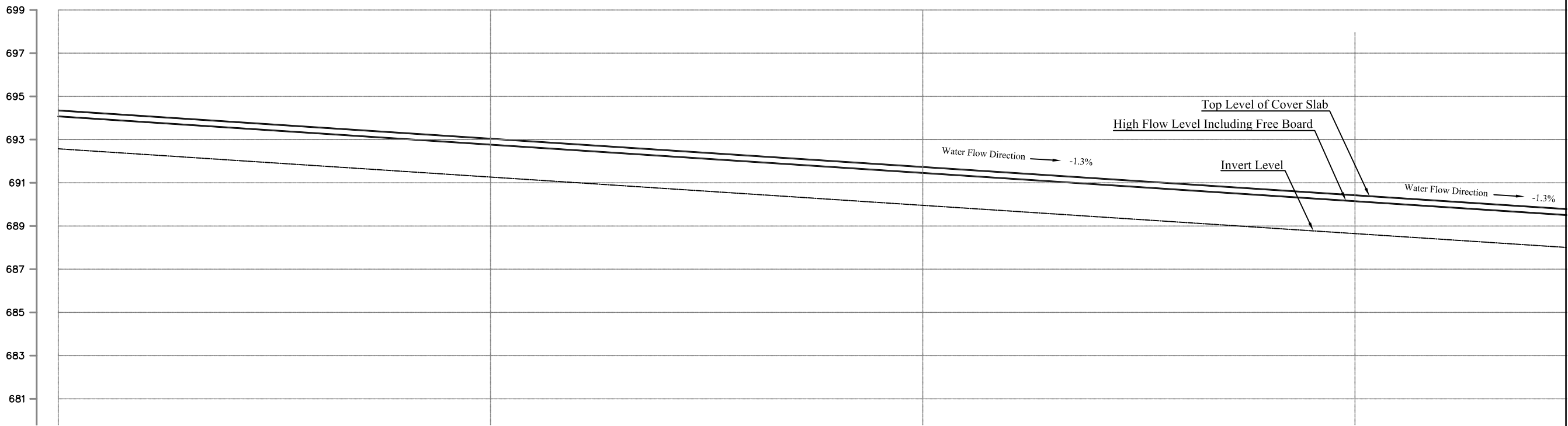
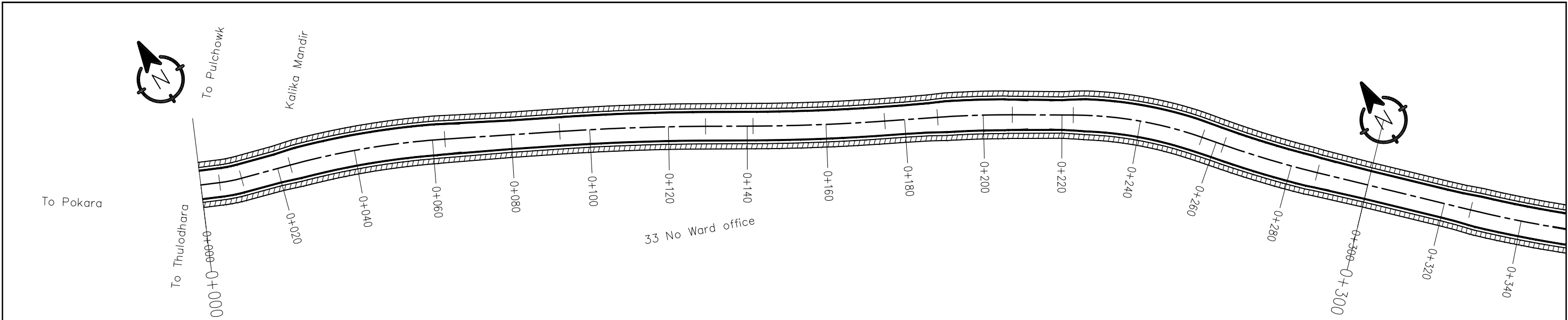
	Nepal Urban Governance and Infrastructure Project (NUGIP) Office of the Municipal Executive Pokhara Metropolitan City Kaski District, Gandaki Province	 CONSULTANT: Plush Engineers and Architects (P.) Ltd. (PEA) B.N. Consultancy Pvt. Ltd. (BN) Soil Test Consultancy (P.) Ltd. (Soil Test) Kathmandu, Nepal	 Project Name:- Nepal Urban Governance and Infrastructure Project (NUGIP)	Sheet Title:- Cross Section of Cross Drainage	DESIGNED BY :	Date : 2023
					DRAWN BY :	Scale :
					CHECKED BY :	Chainage :
					APPROVED BY :	Sheet No. : 3



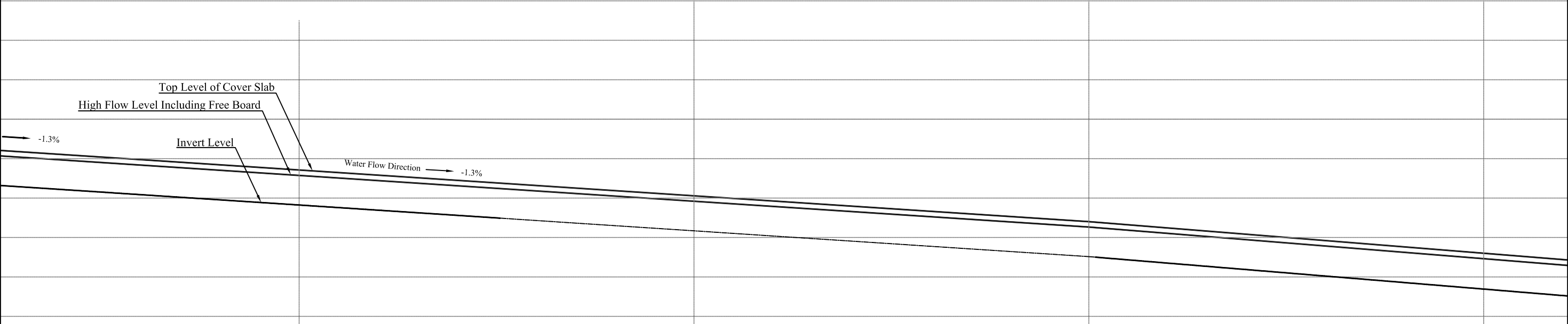
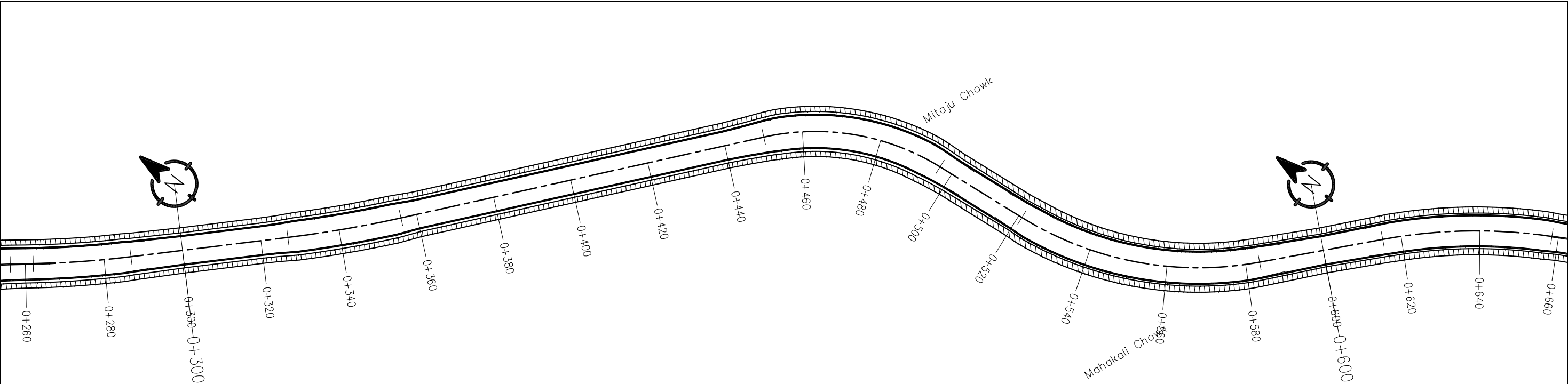
SIDE DRAIN PLAN AND PROFILE
SECTION - I

RIGHT SIDE

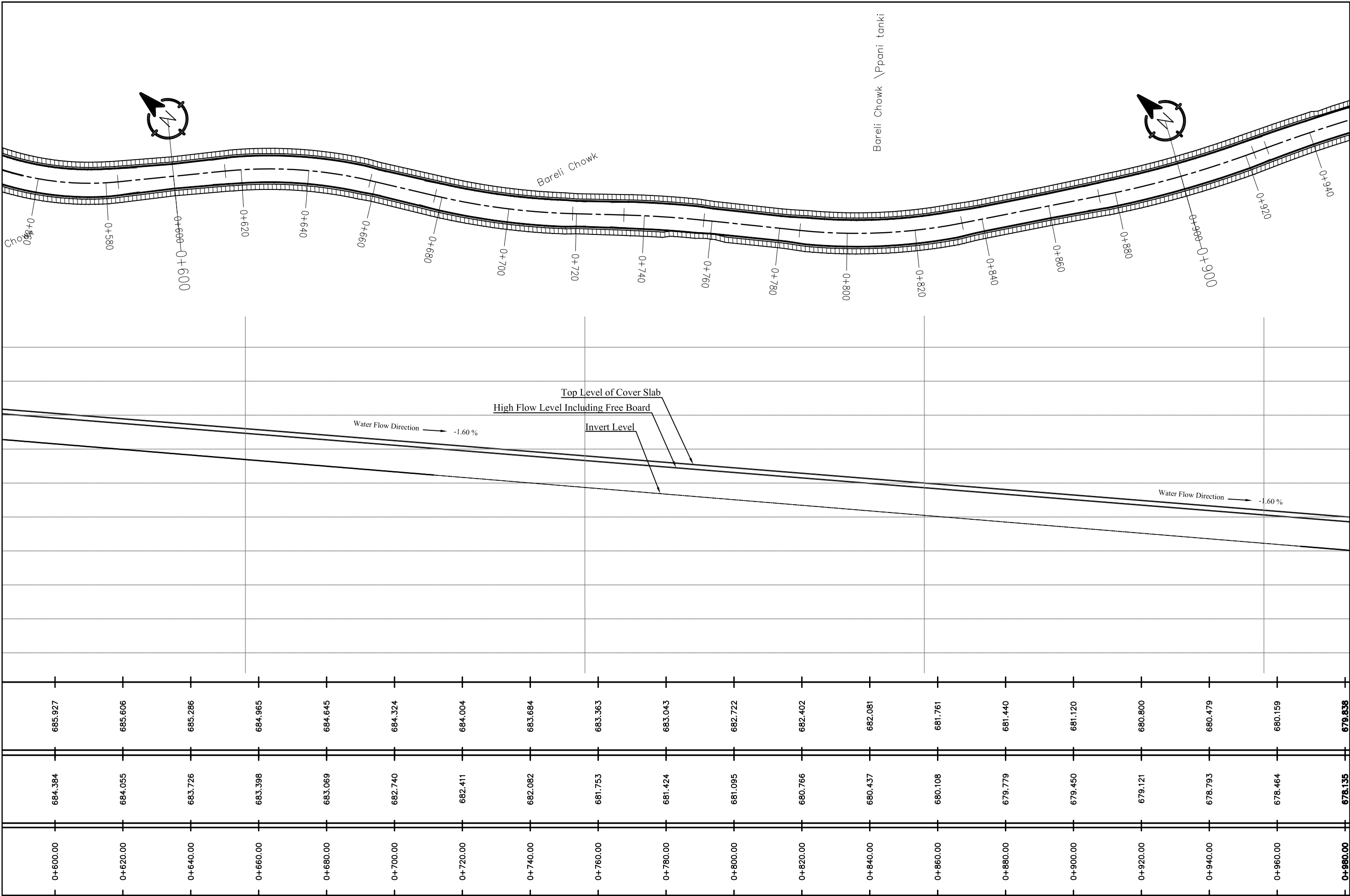
LEGEND	SYMBOL	LEGEND	SYMBOL
Bench Mark		Land slide	
Houses		Rock area	
Temporary house		Water tank	
Road center		Masonry wall	
Chainage		Retaining wall	
School		Gabion wall	
Chautari		RCC wall	
Partikshyalaya			
Box Culvert			
Pipe Culvert			
Compound wall			
Gate			
Wooden Pole			
Electric Pole			
RCC Pole			
Bamboo			
Masonry wall			
Temple			
Index Contour			
Tick Drain			
Kerbstone			
Footpath			
Drain			
Fence bar			

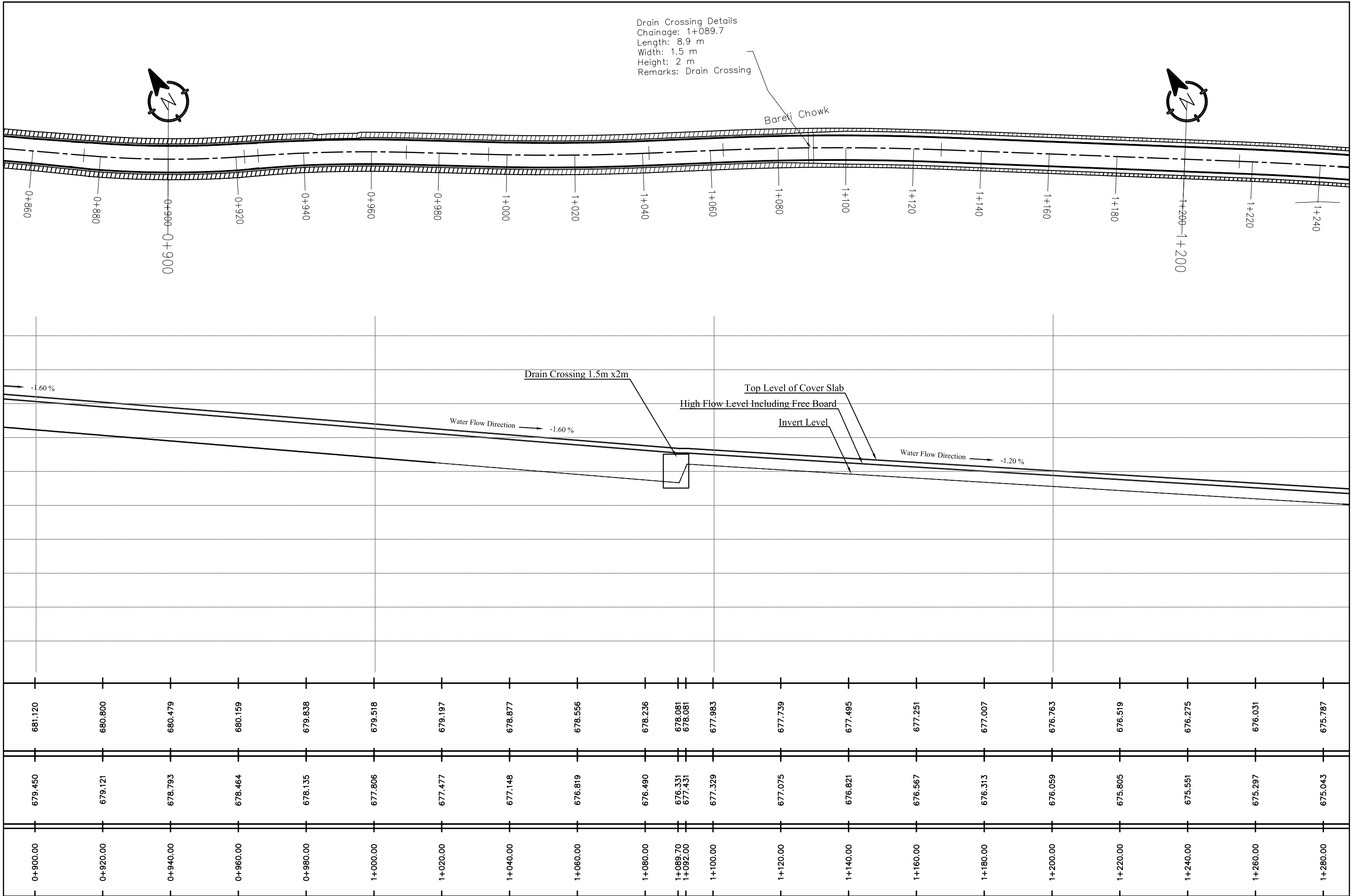


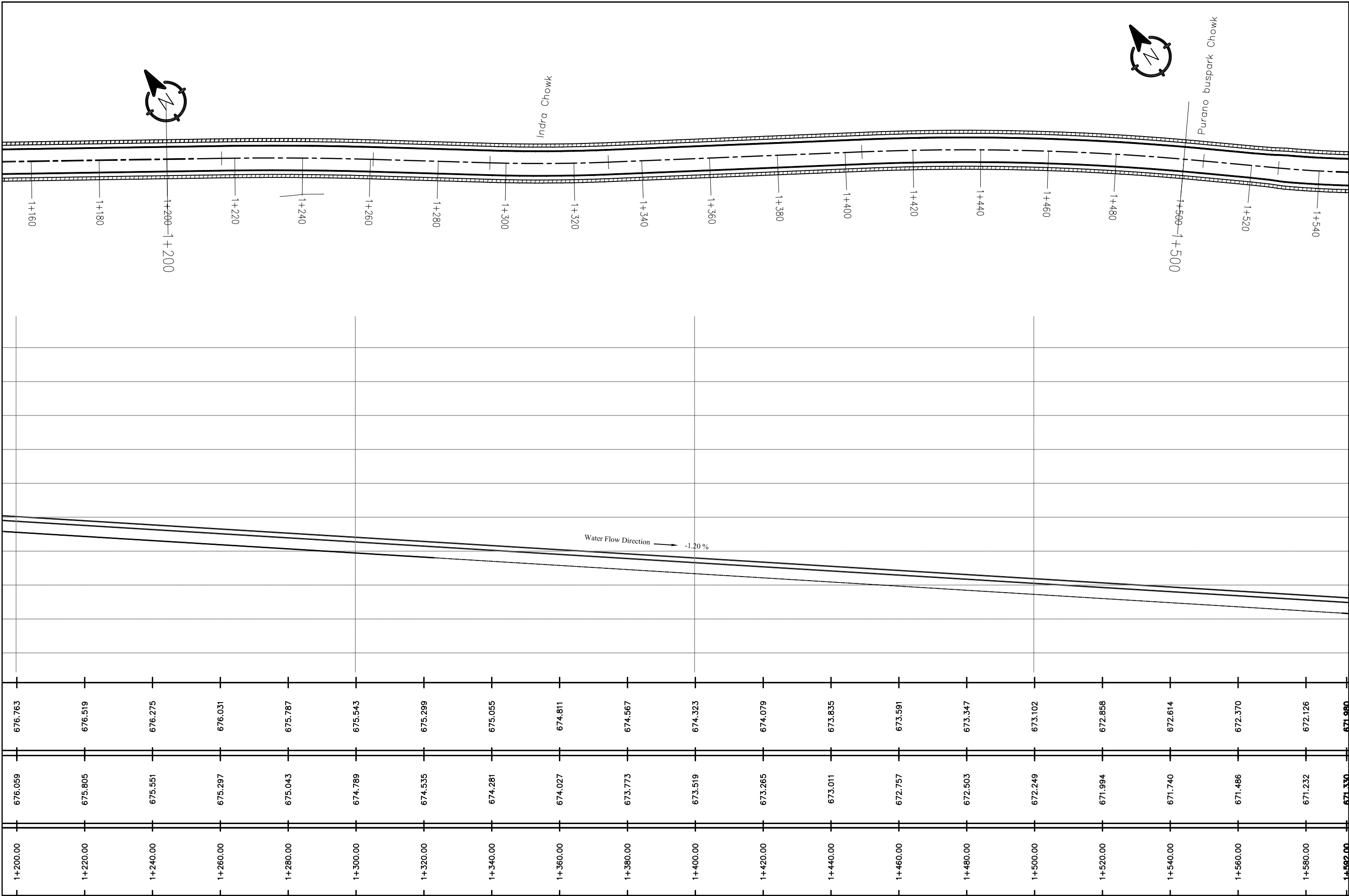
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INVERT LEVEL (m)	692.573	692.297	692.020	691.744	691.468	691.191	690.915	690.638	690.362	690.086	689.809	689.533	689.257	688.980	688.704	688.428	688.151	687.875
CHAINAGE (km)	0+000.00	0+020.00	0+040.00	0+060.00	0+080.00	0+100.00	0+120.00	0+140.00	0+160.00	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

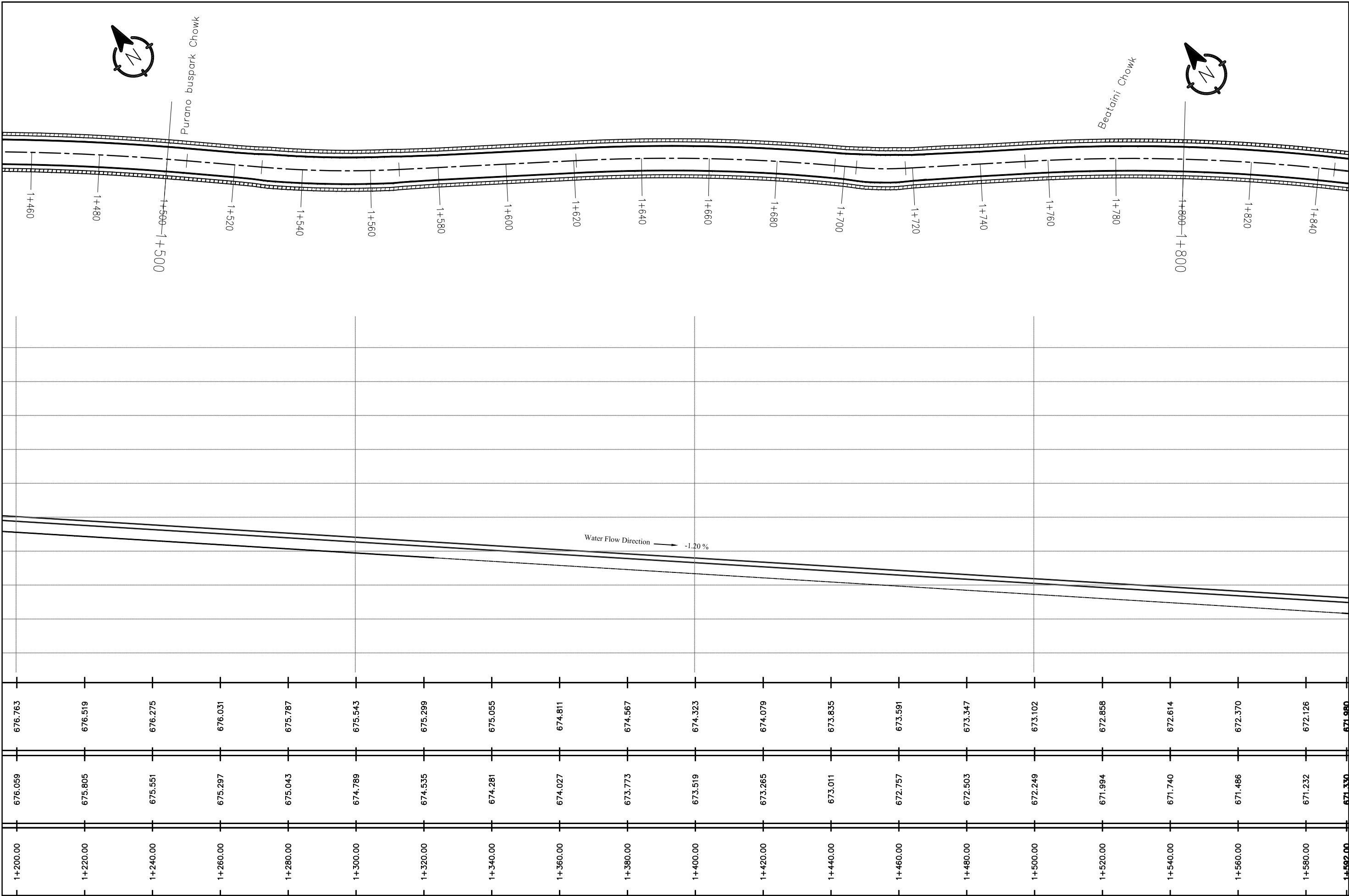


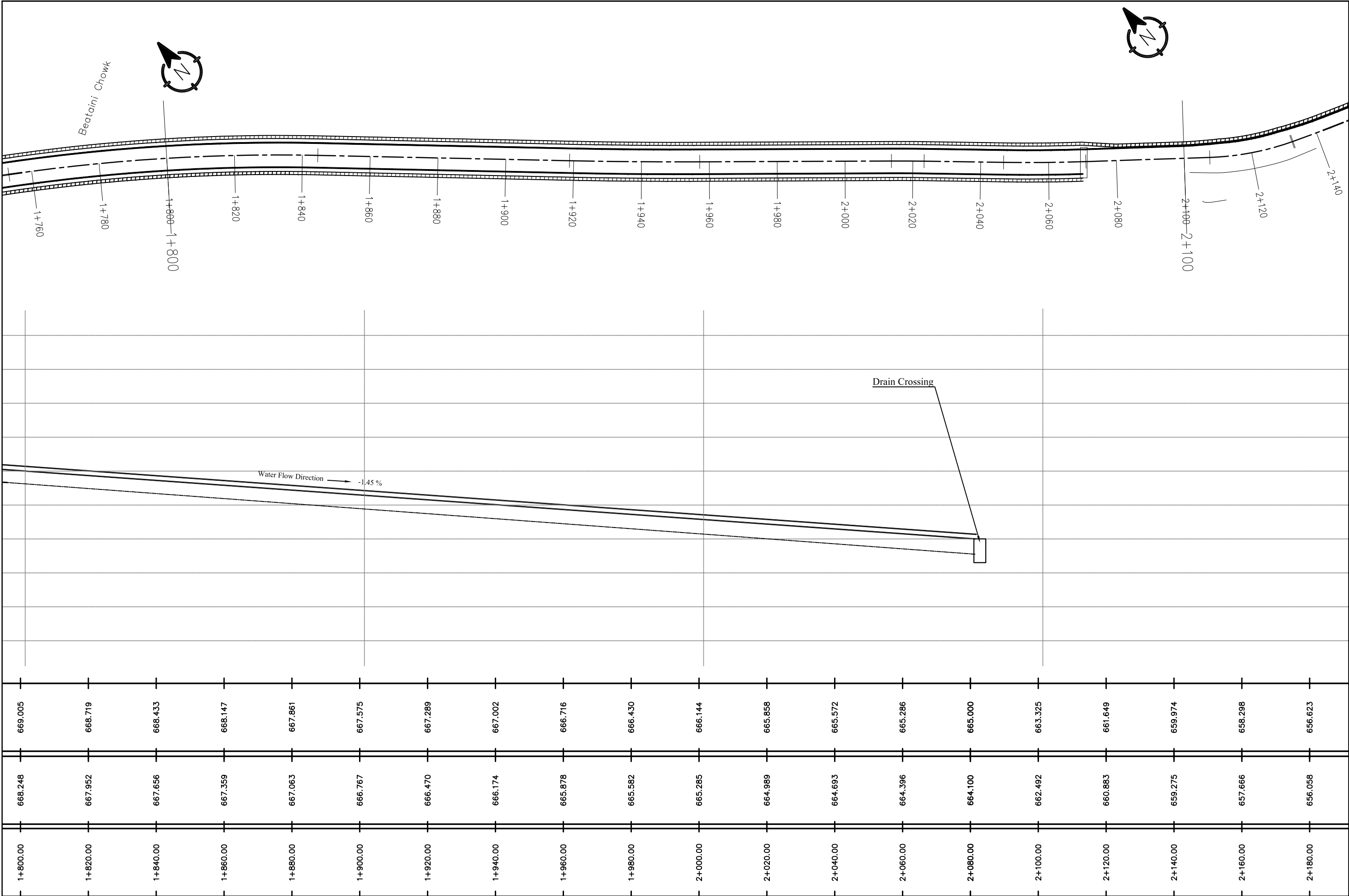
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688.428	688.151	687.875	687.599	687.322	687.046	686.769	686.493	686.217	685.940	686.029	685.700	685.371	685.042	684.713	684.384	684.055	683.726	683.398	683.069
0+300.00	0+320.00	0+340.00	0+360.00	0+380.00	0+400.00	0+420.00	0+440.00	0+460.00	0+480.00	0+500.00	0+520.00	0+540.00	0+560.00	0+580.00	0+600.00	0+620.00	0+640.00	0+660.00	0+680.00

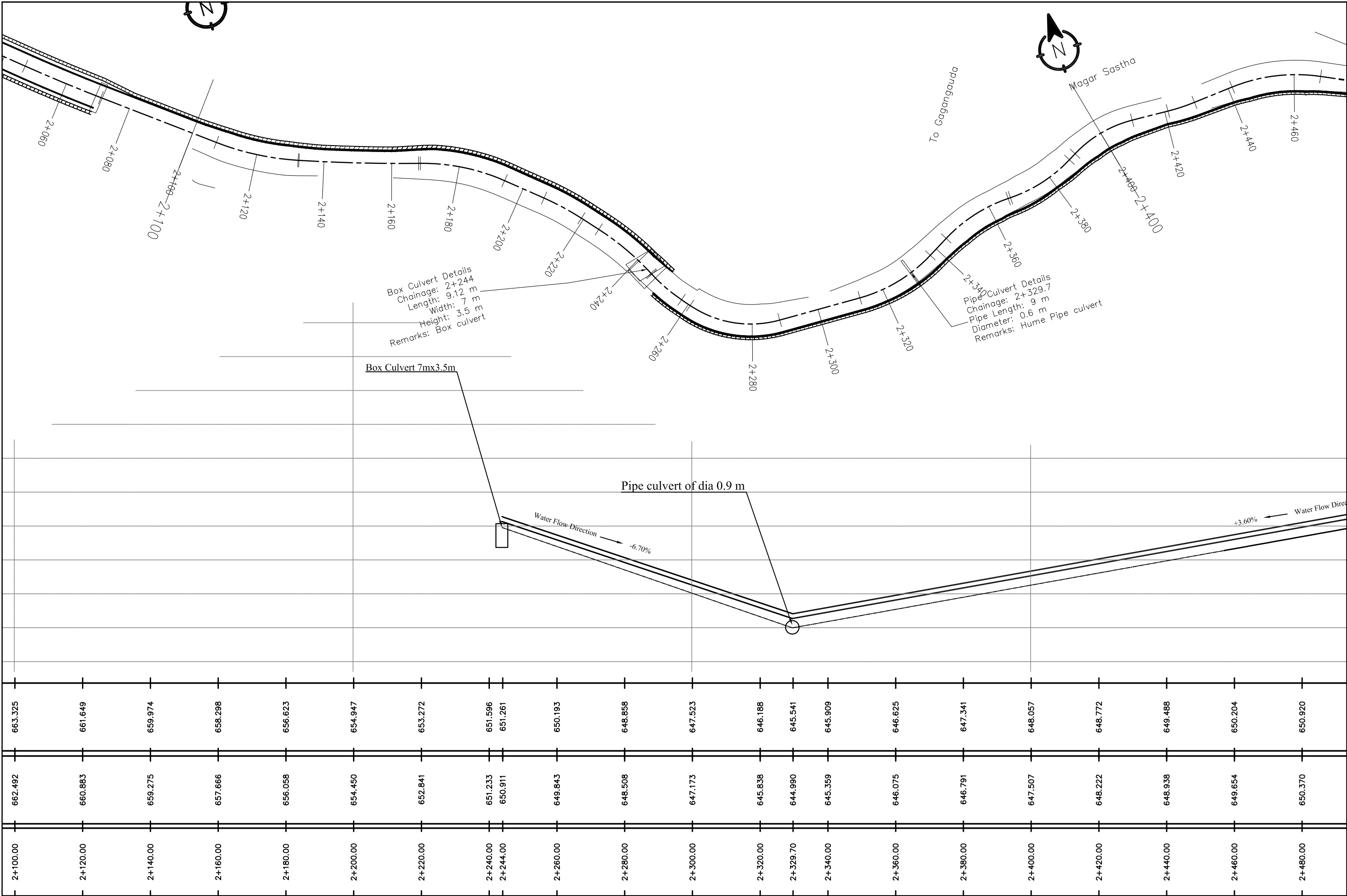


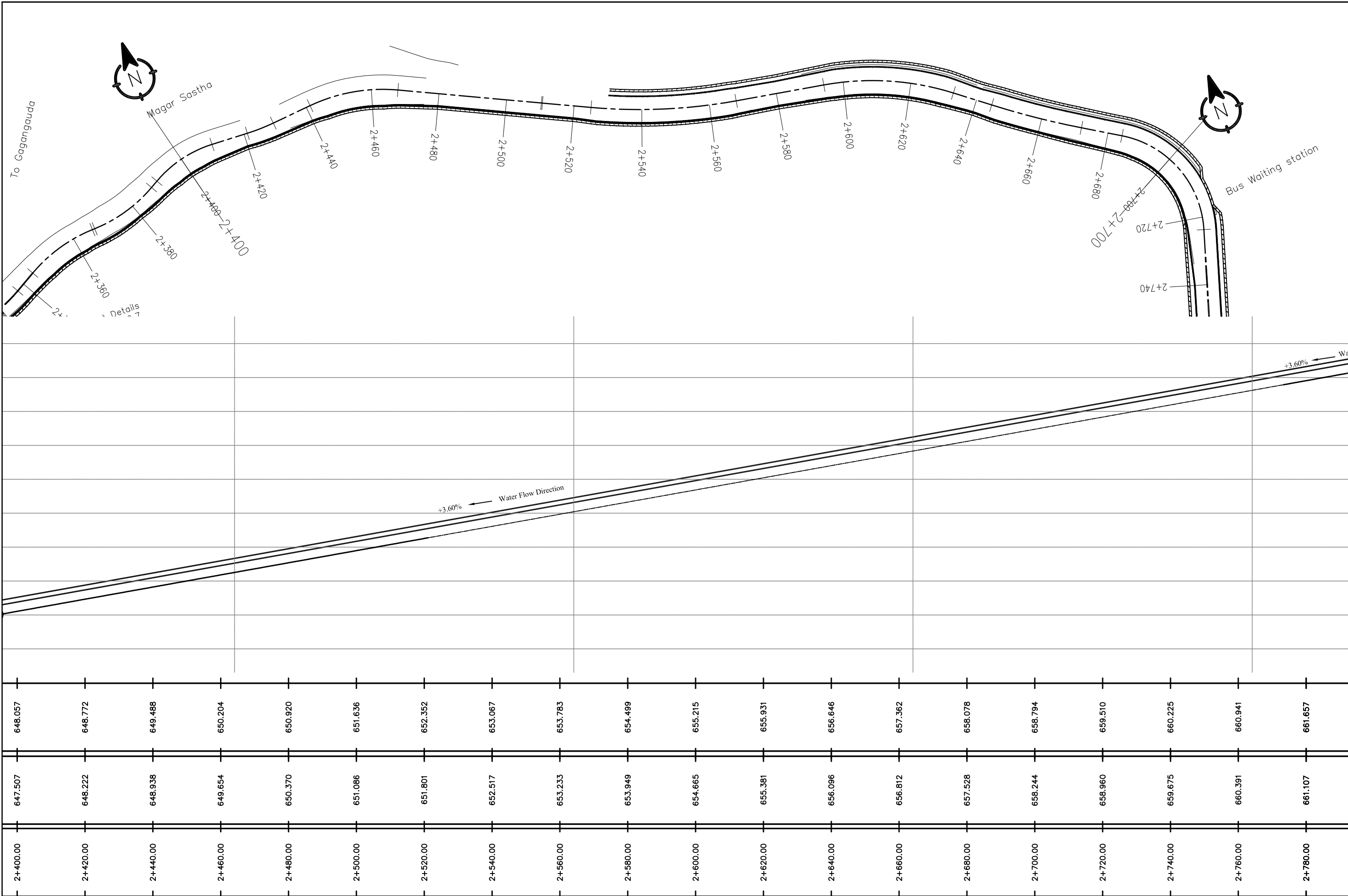


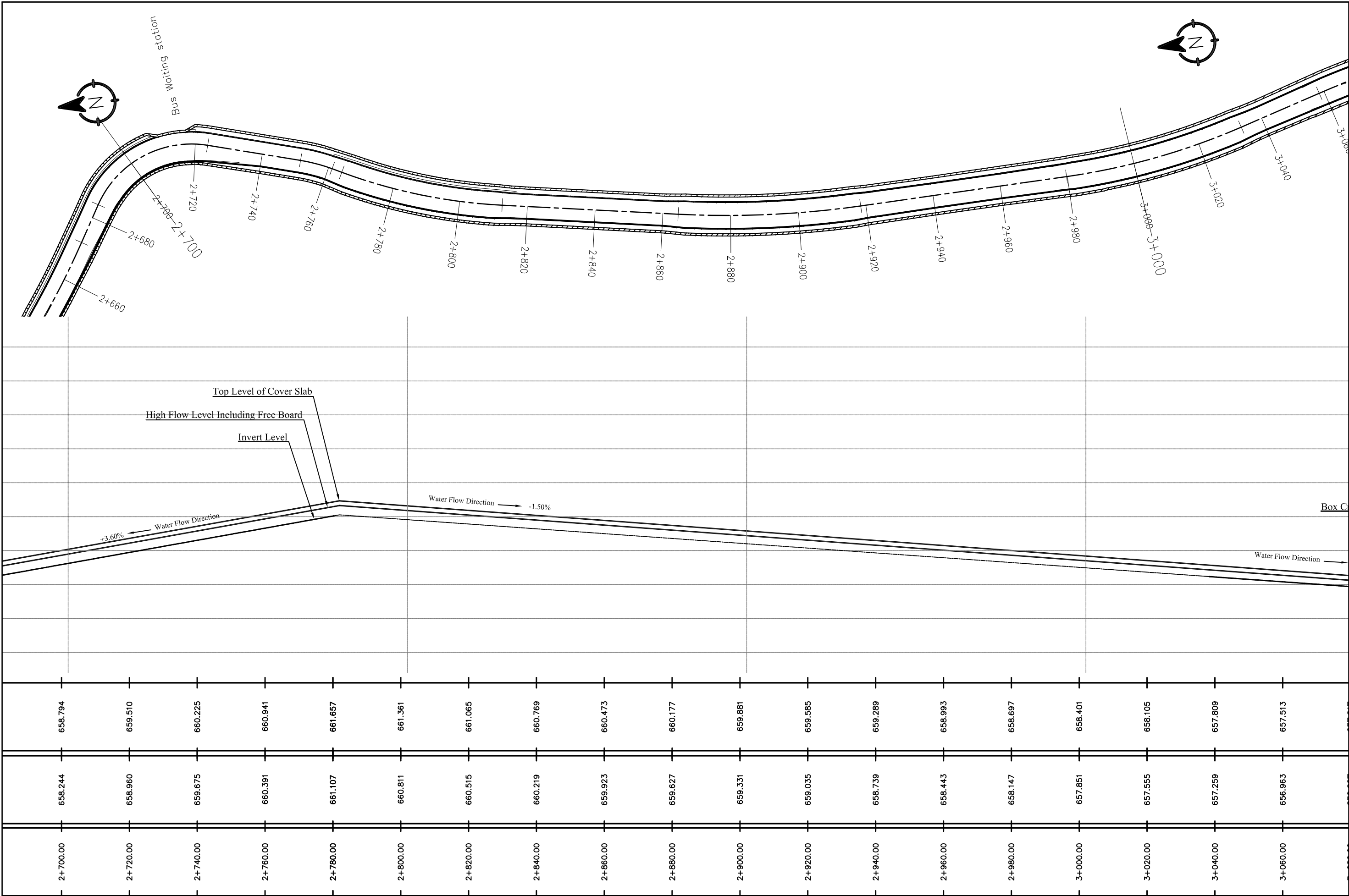


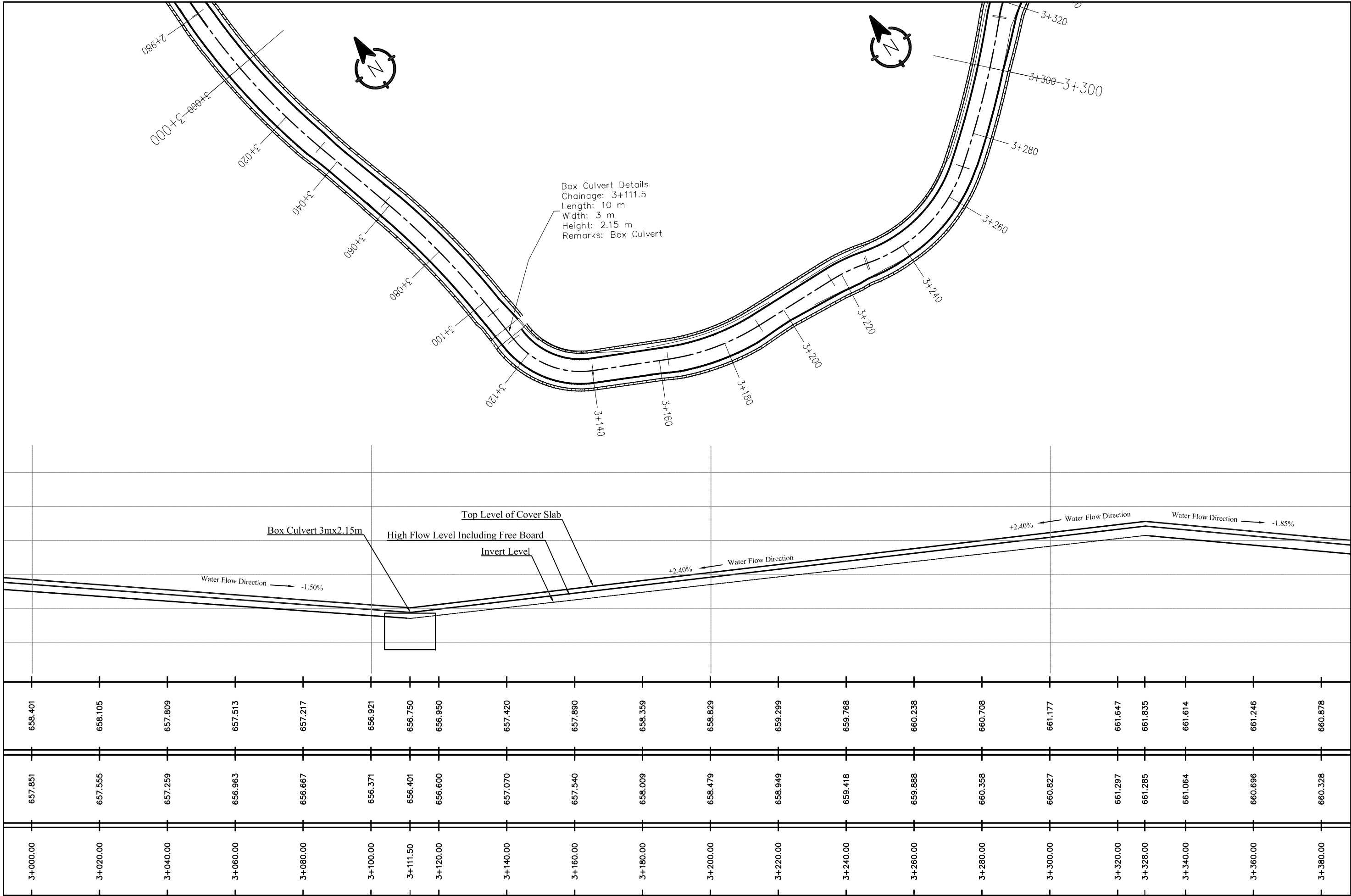


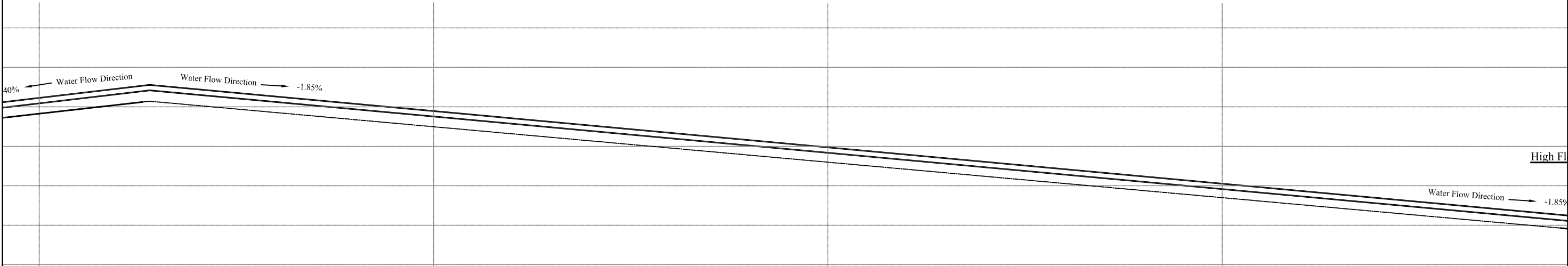
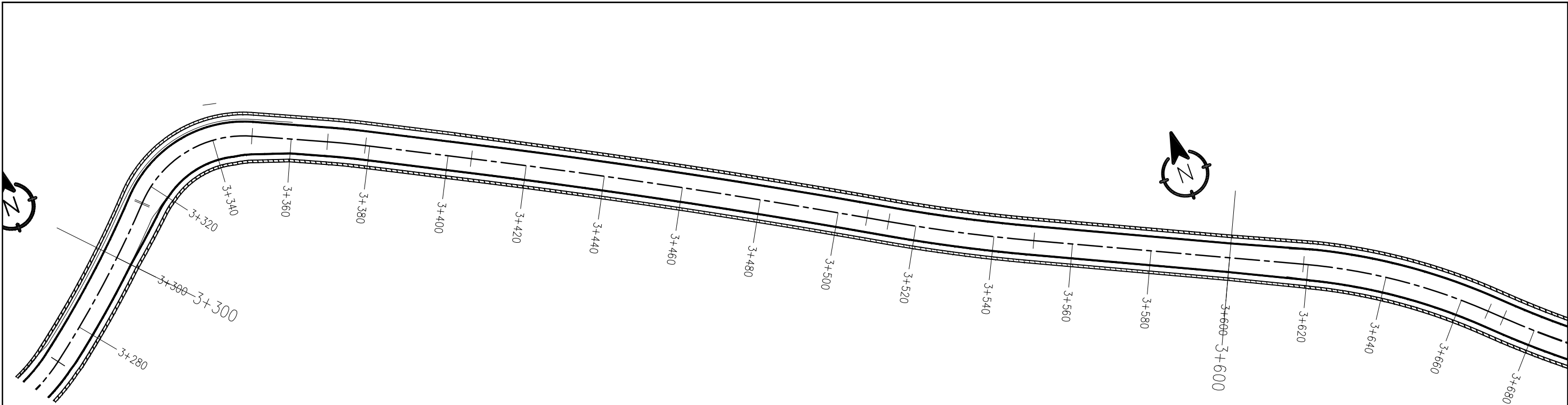




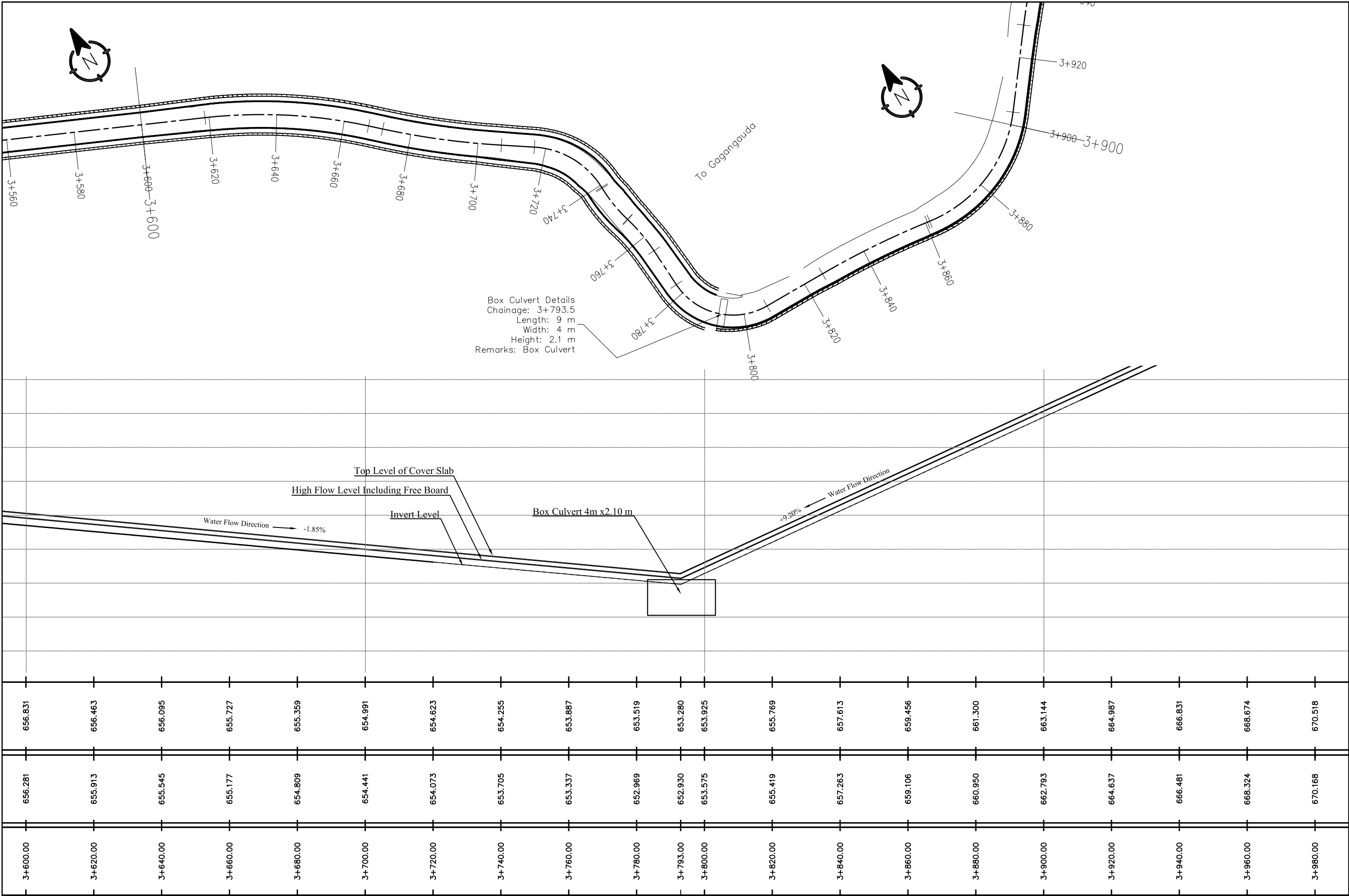


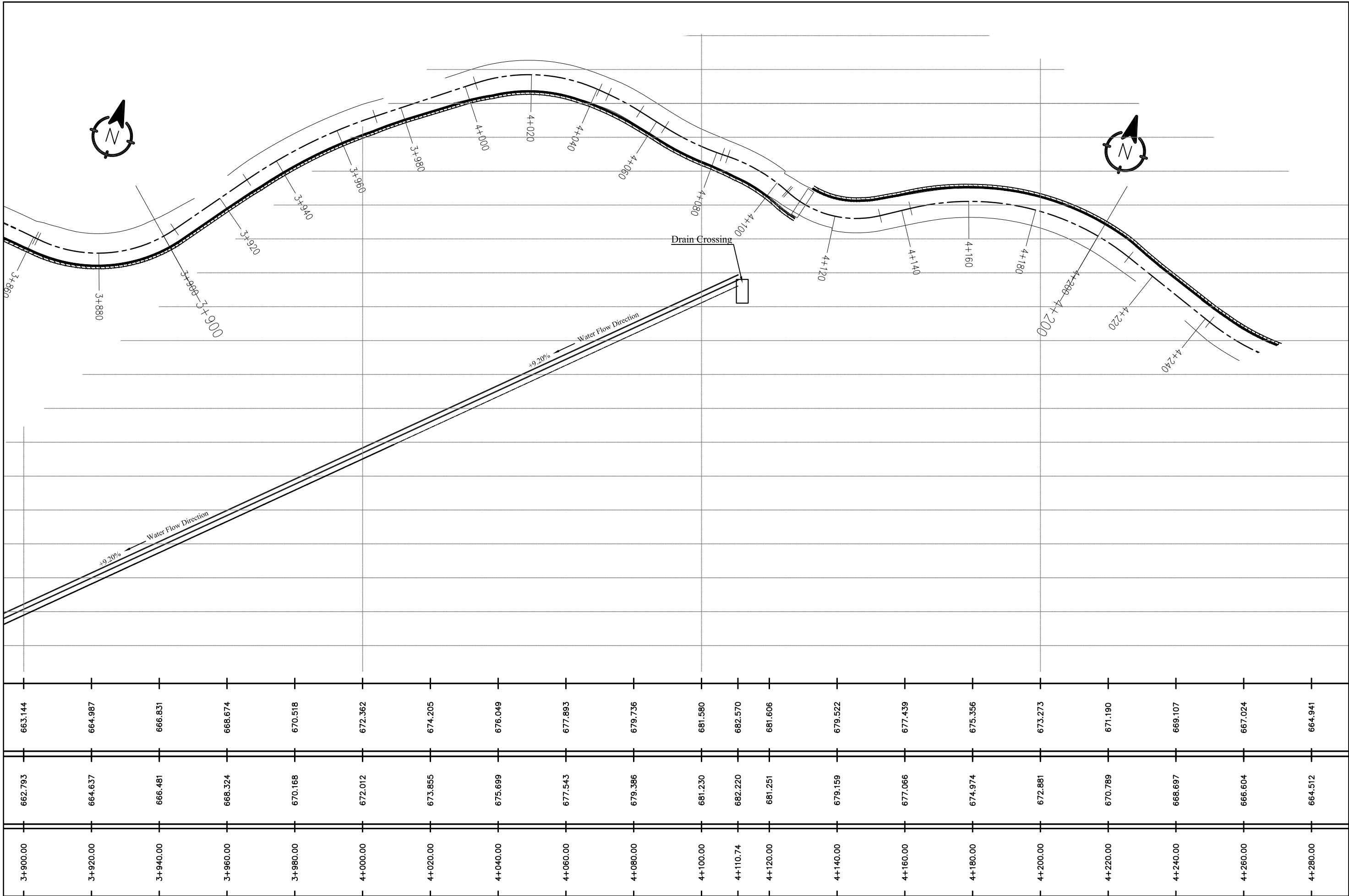


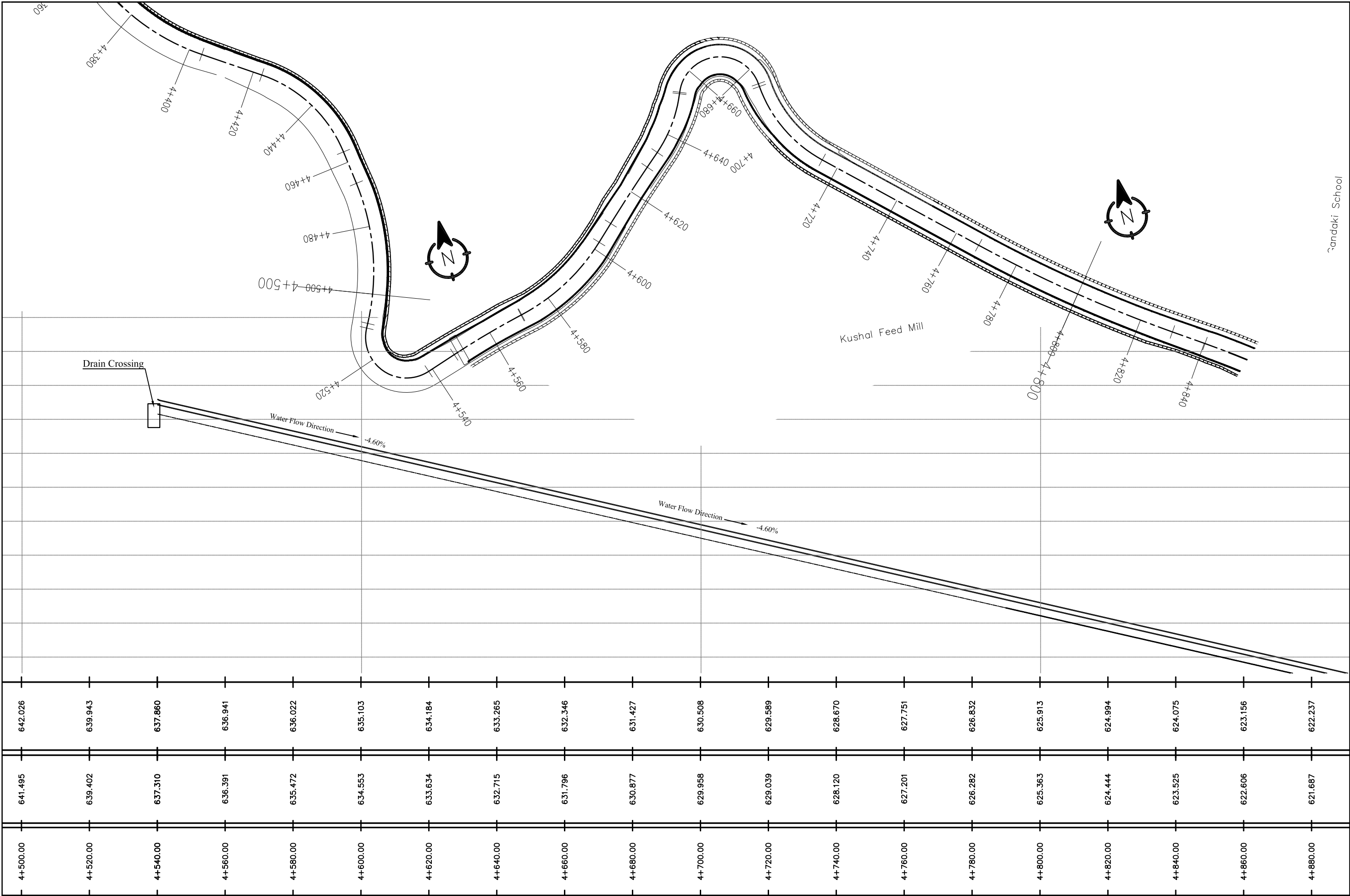


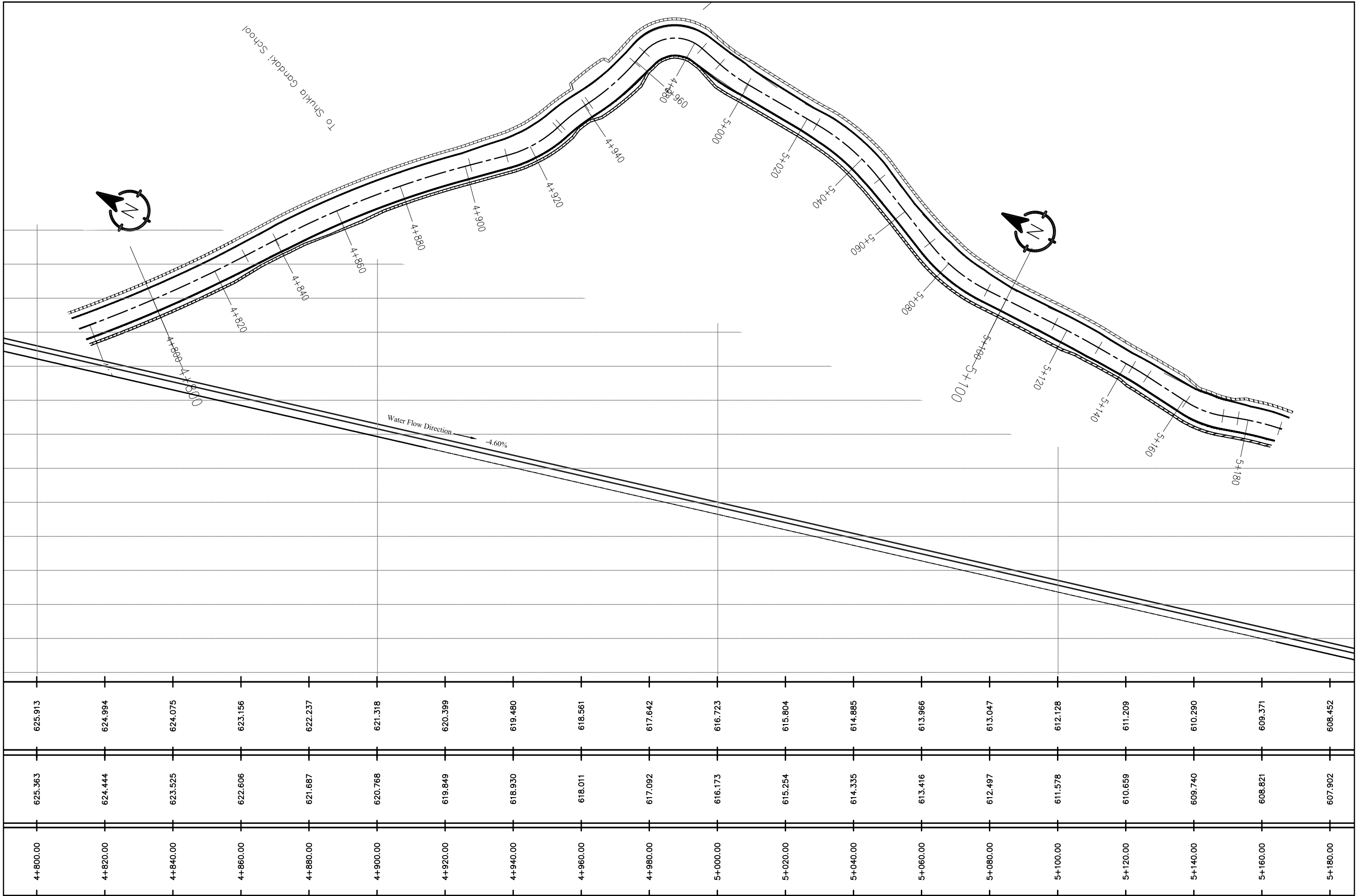


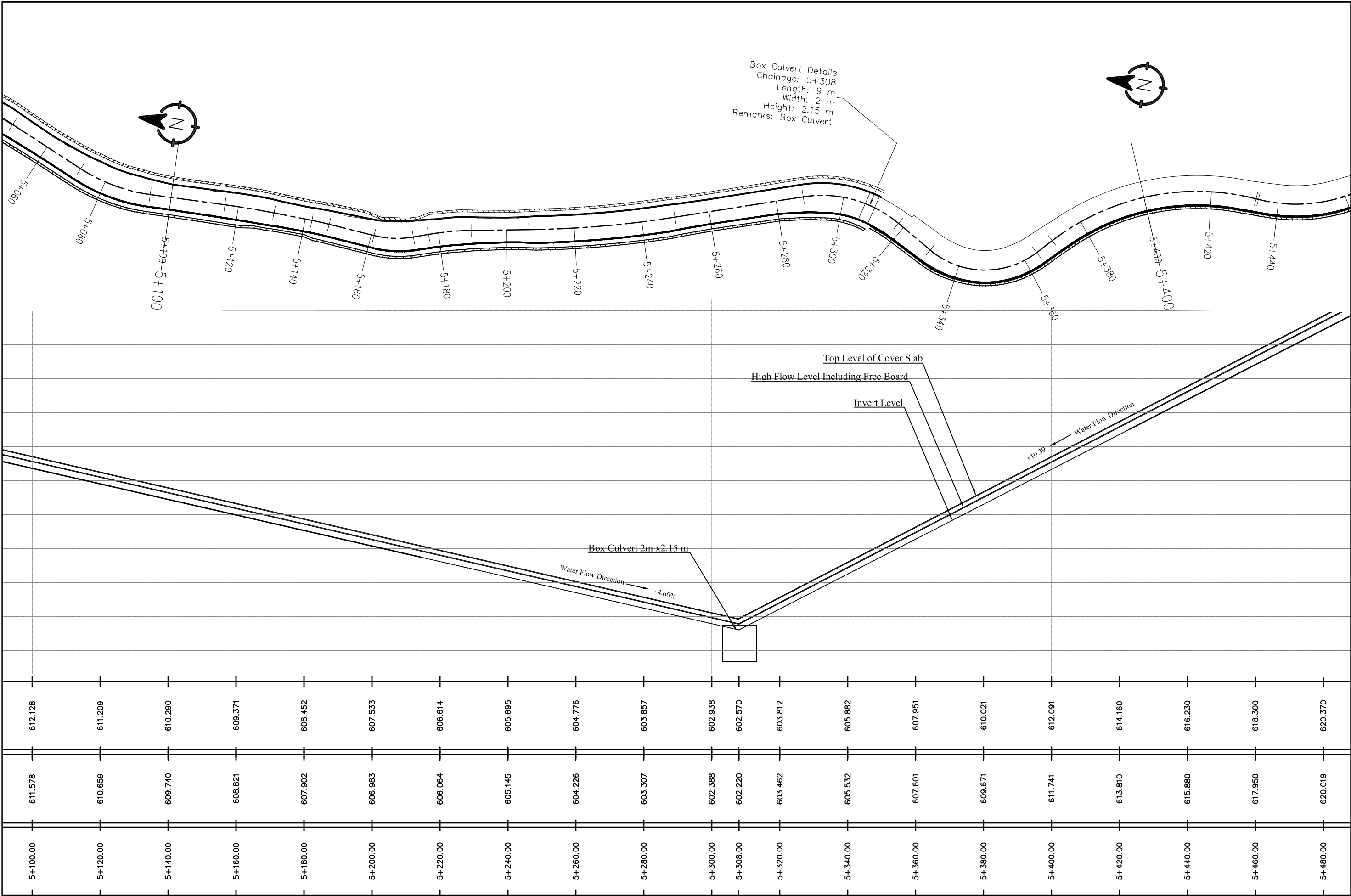
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660.827	661.297	661.285	661.064	660.696	660.328	659.960	659.592	659.224	658.856	658.489	658.121	657.753	657.385	657.017	656.649	656.281	655.913	655.545	655.177	654.809
3+300.00	3+320.00	3+328.00	3+340.00	3+360.00	3+380.00	3+400.00	3+420.00	3+440.00	3+460.00	3+480.00	3+500.00	3+520.00	3+540.00	3+560.00	3+580.00	3+600.00	3+620.00	3+640.00	3+660.00	3+680.00

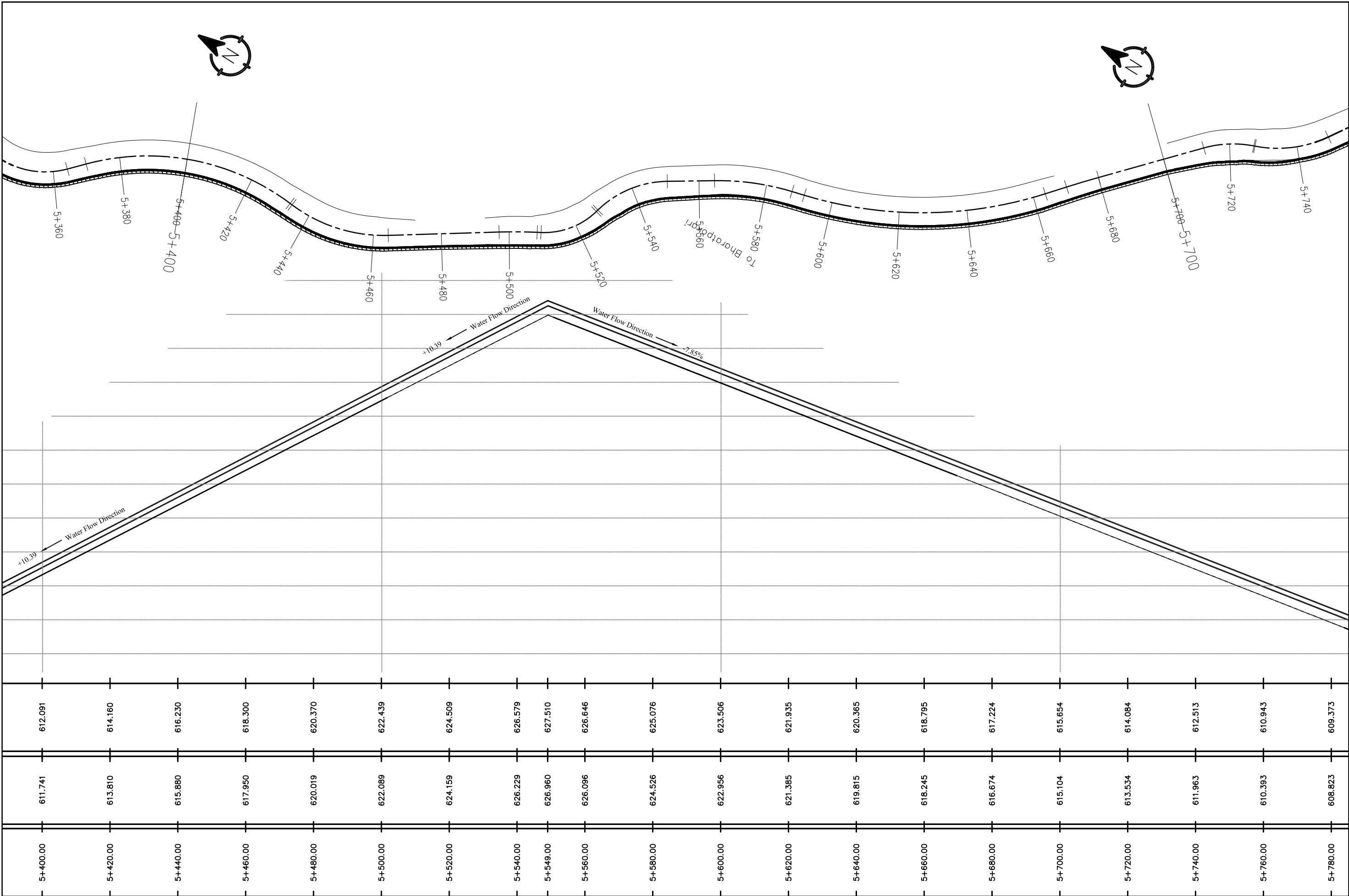


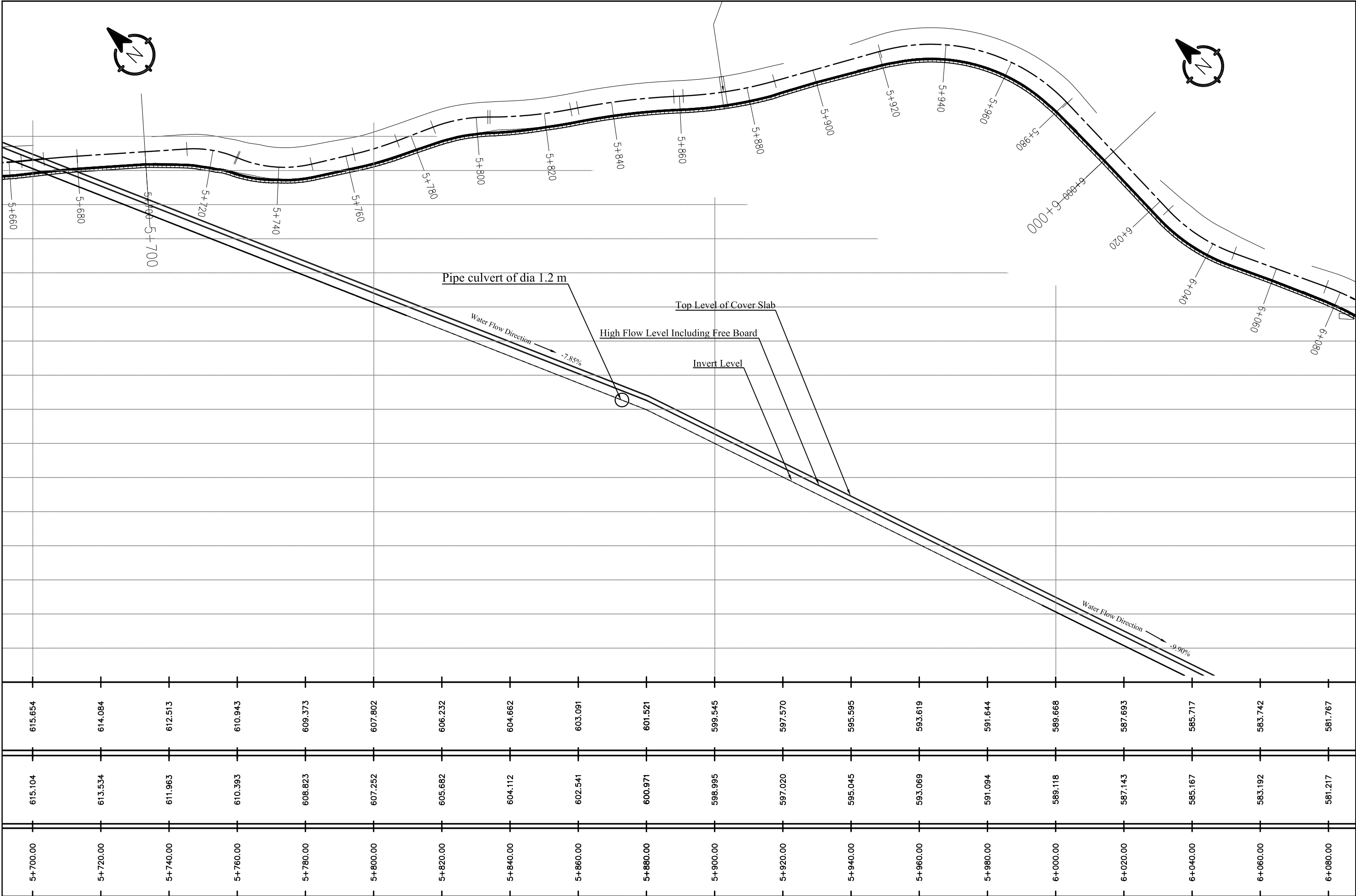


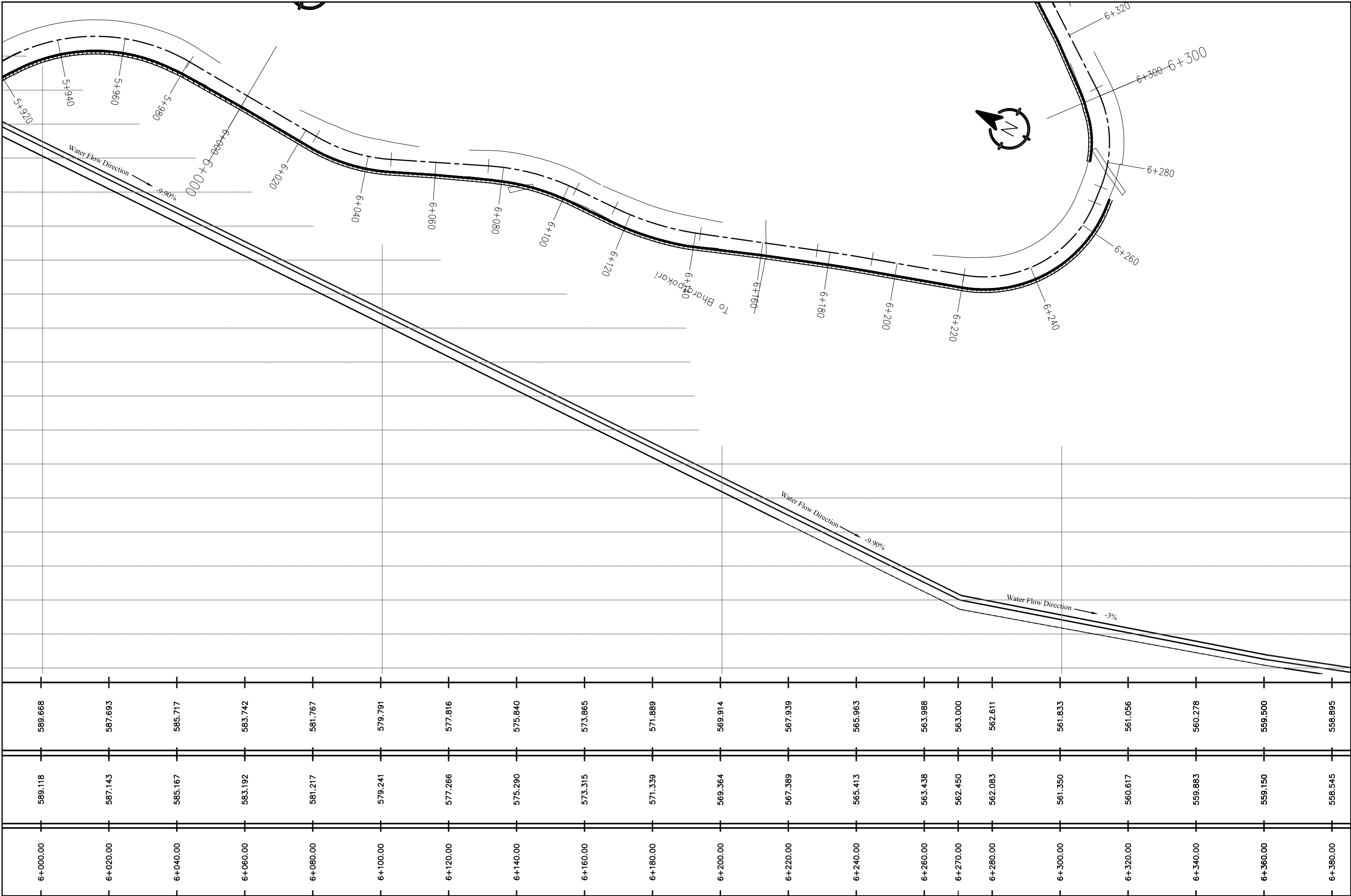


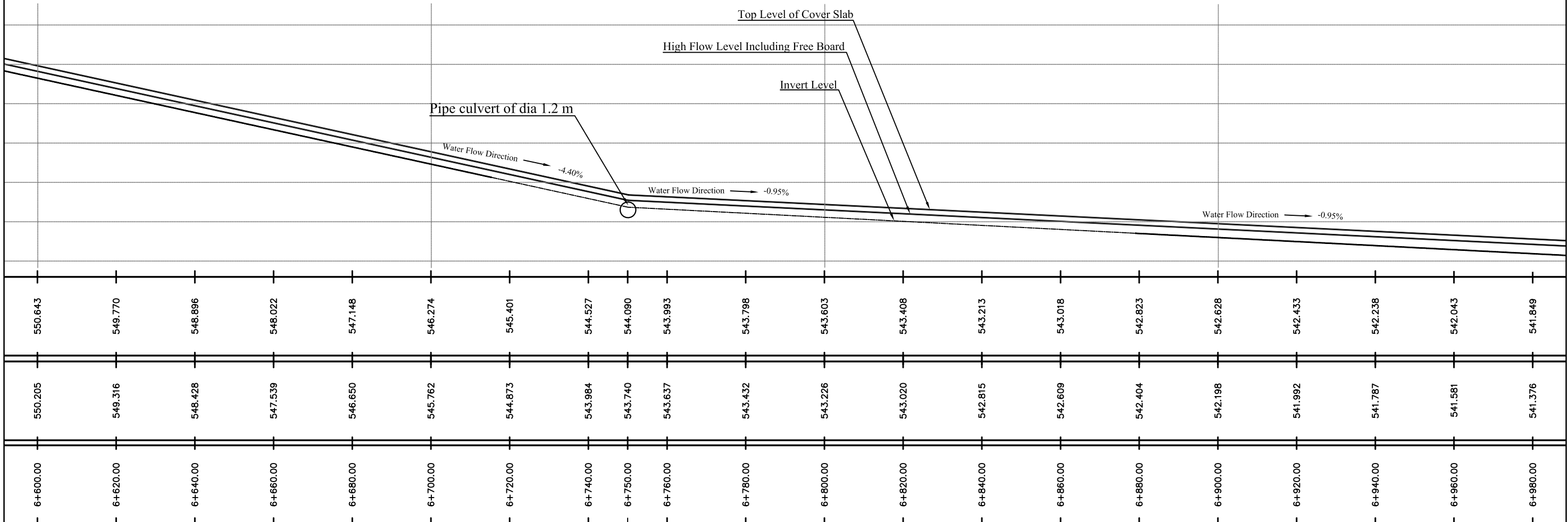
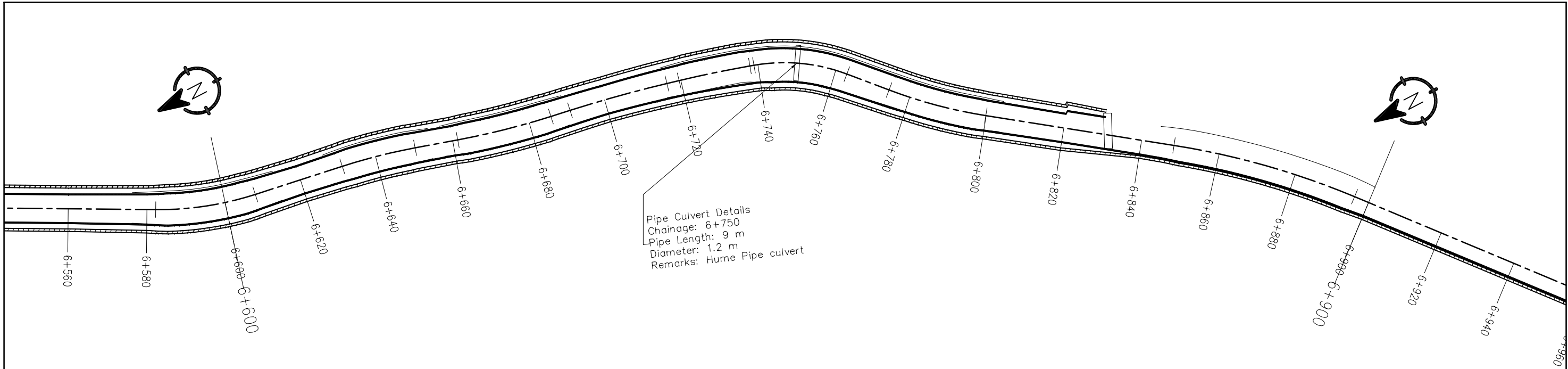


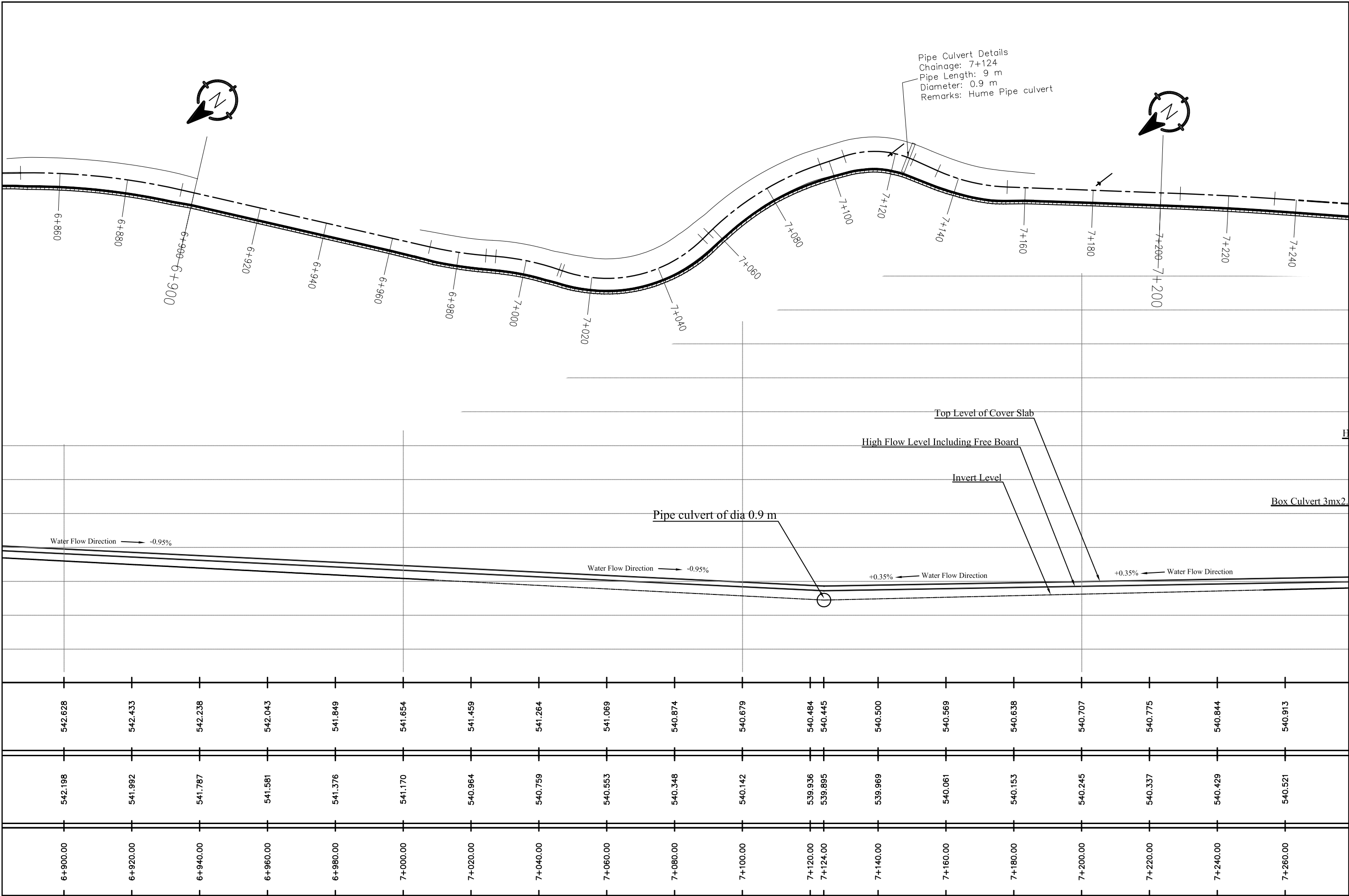


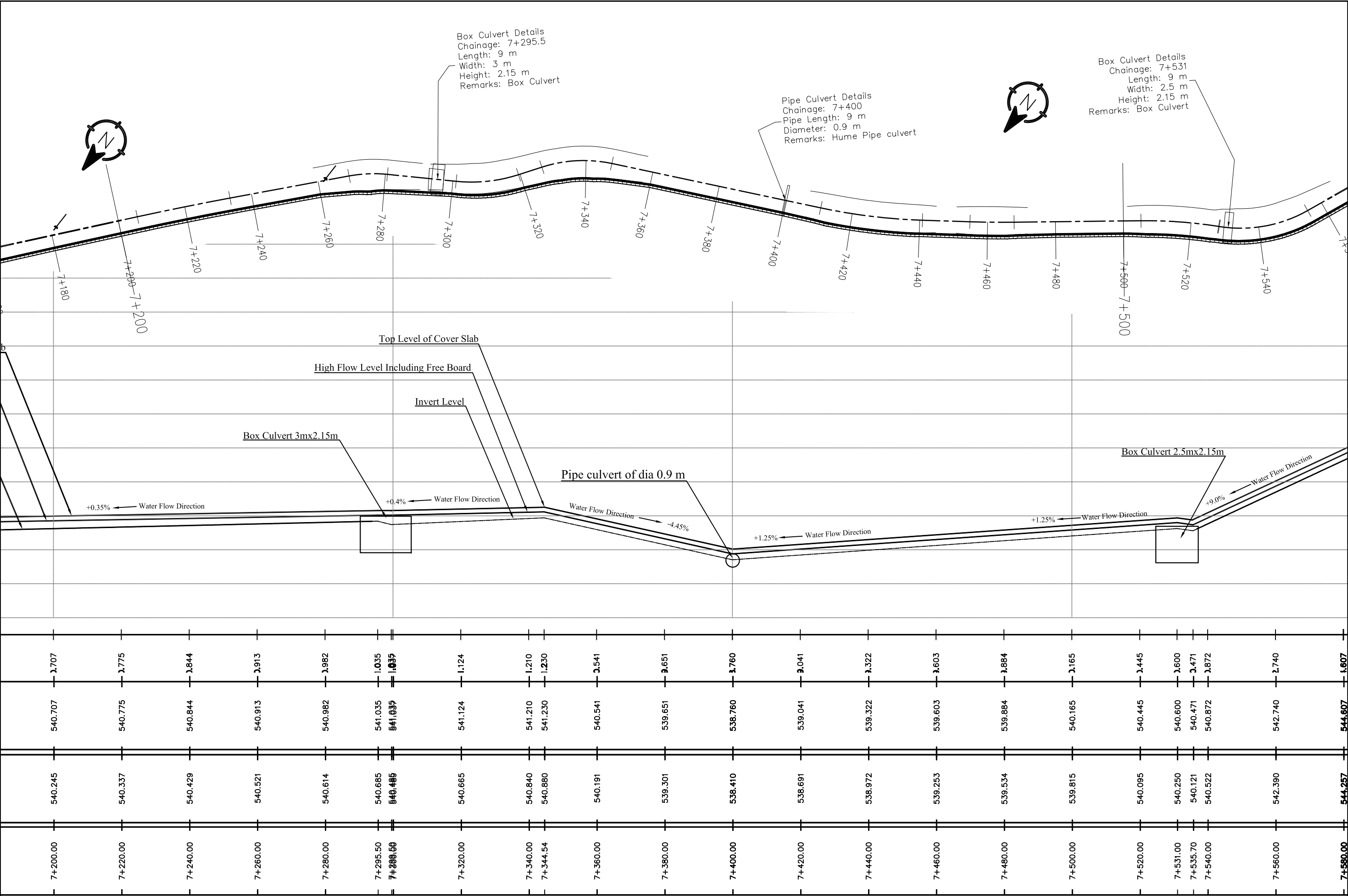


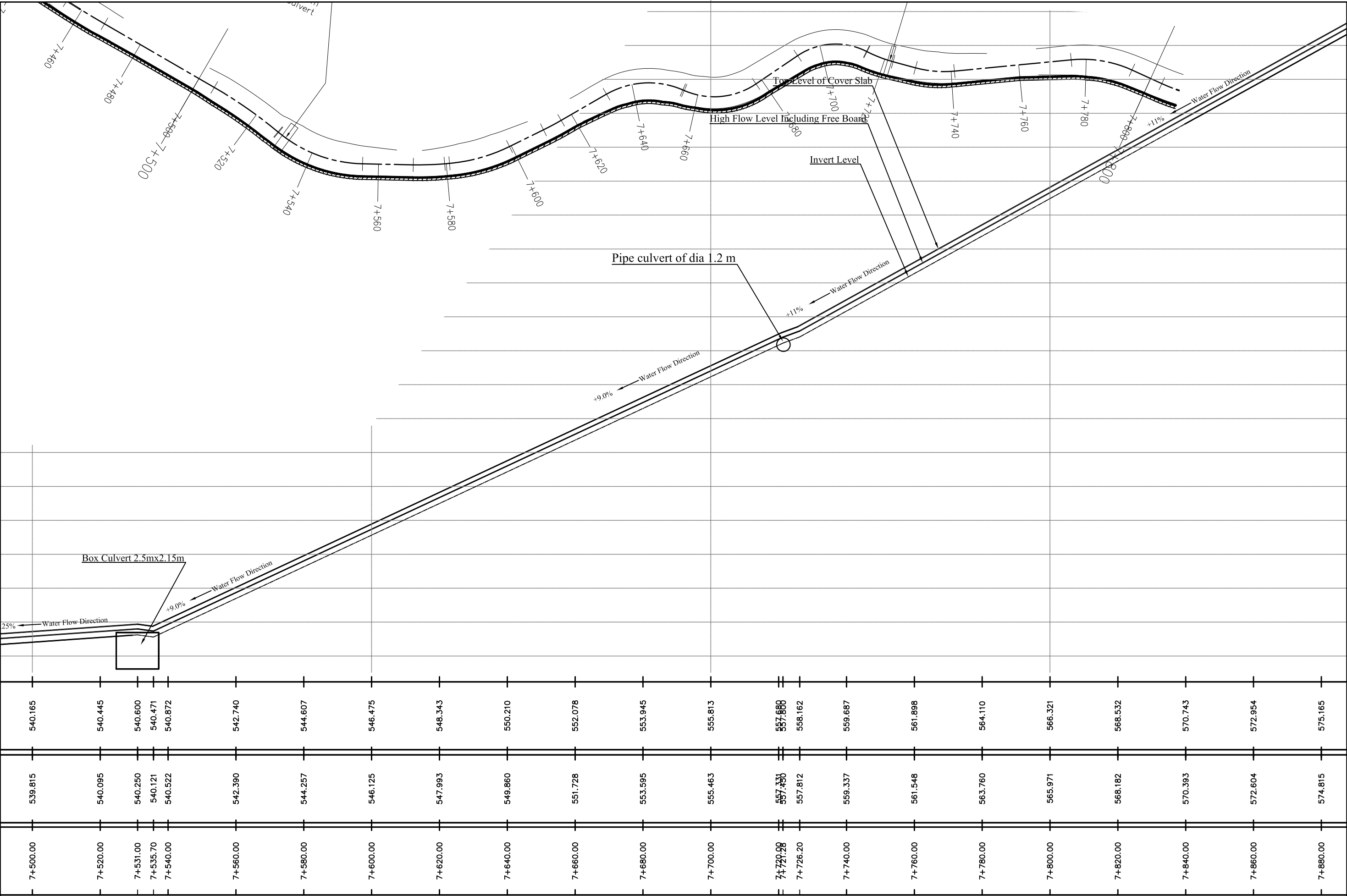


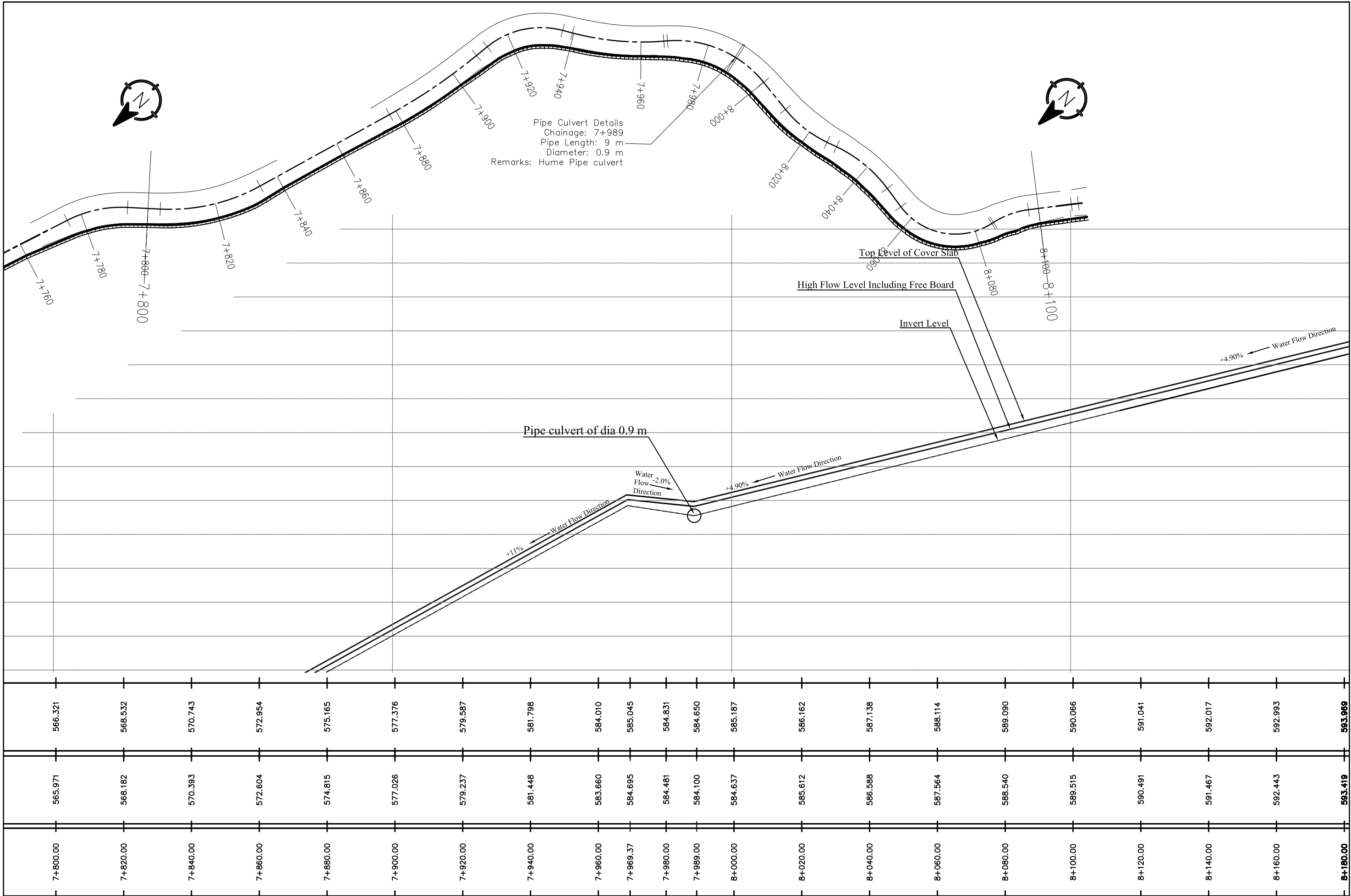


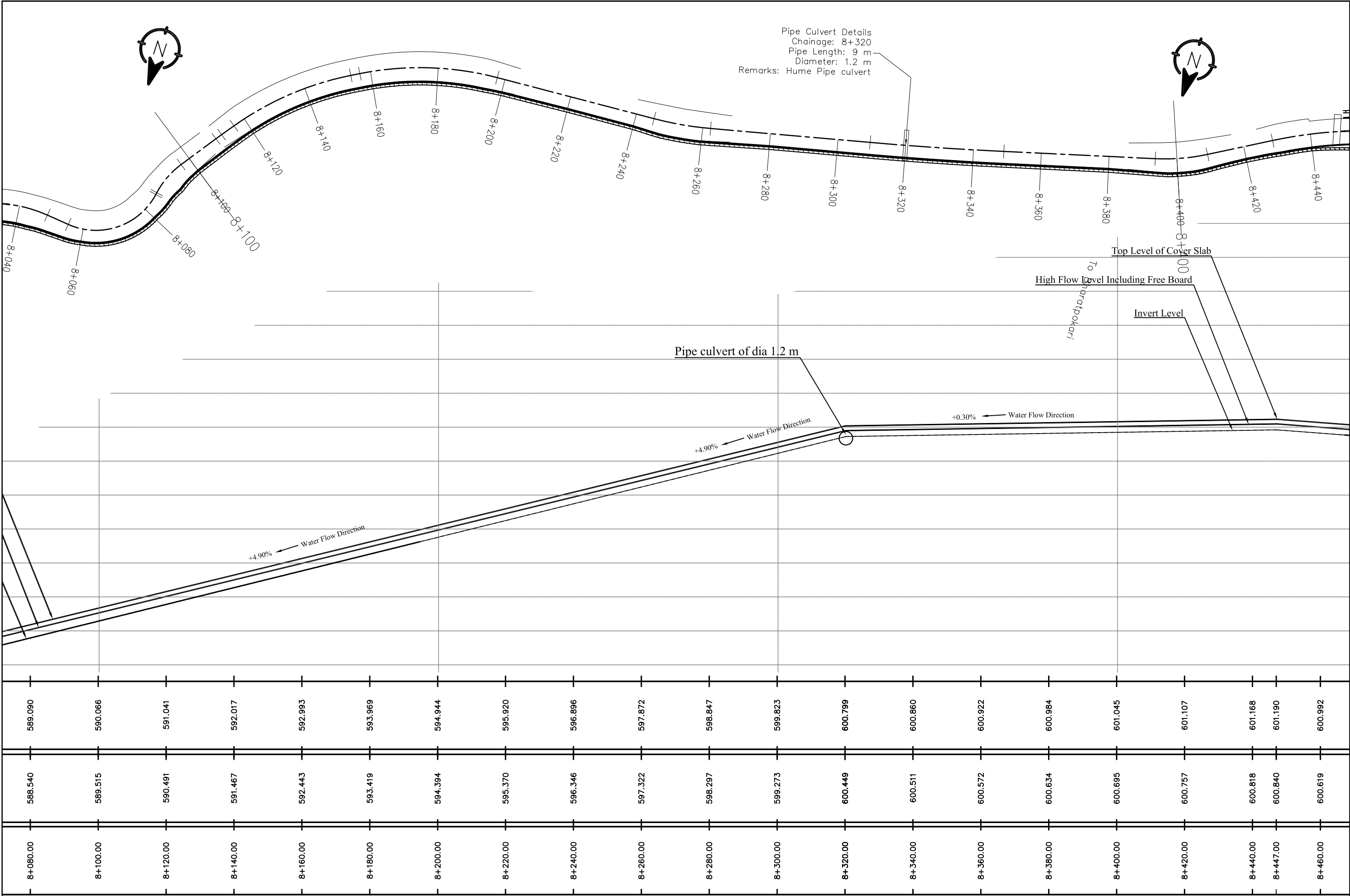


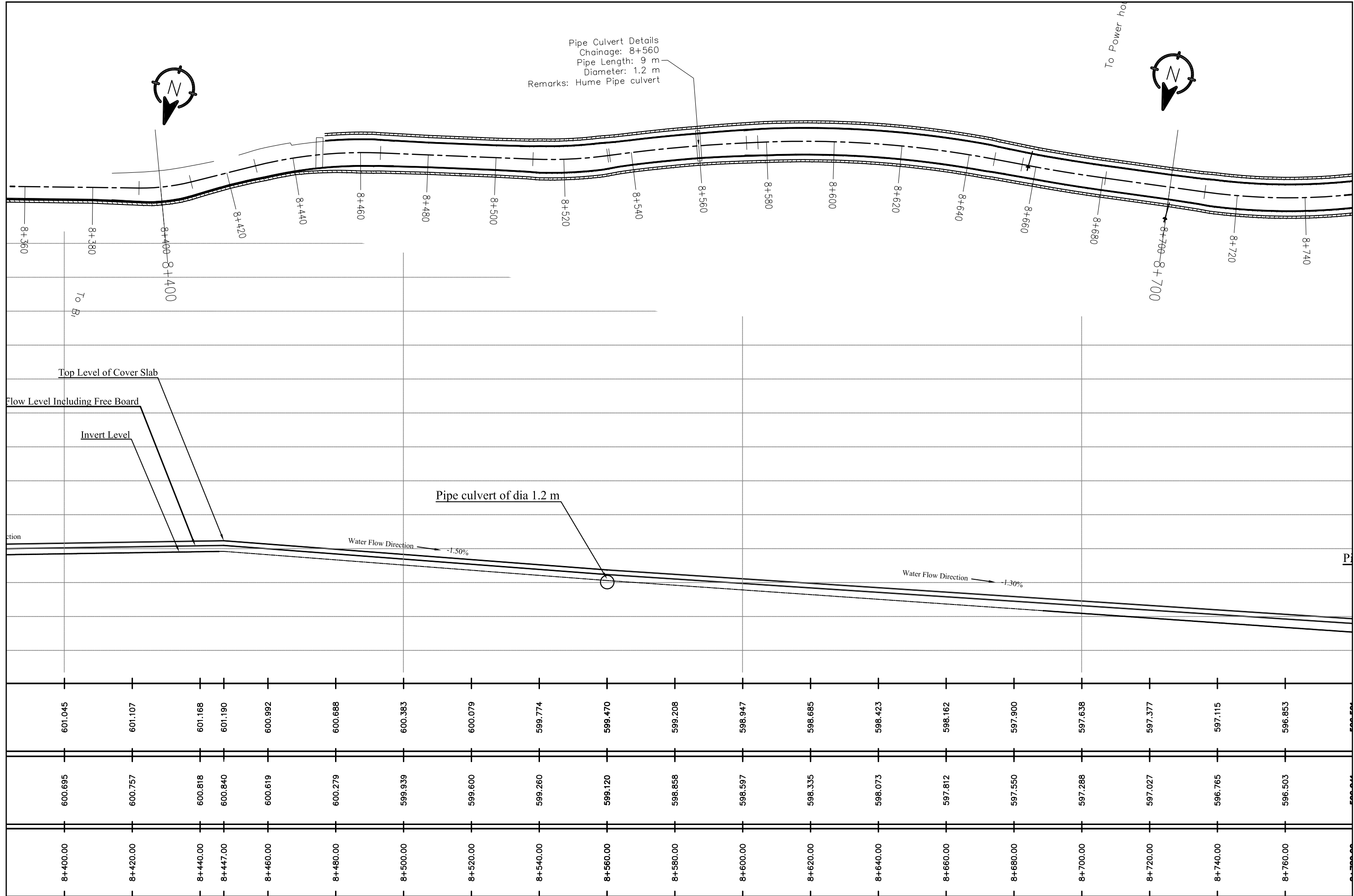


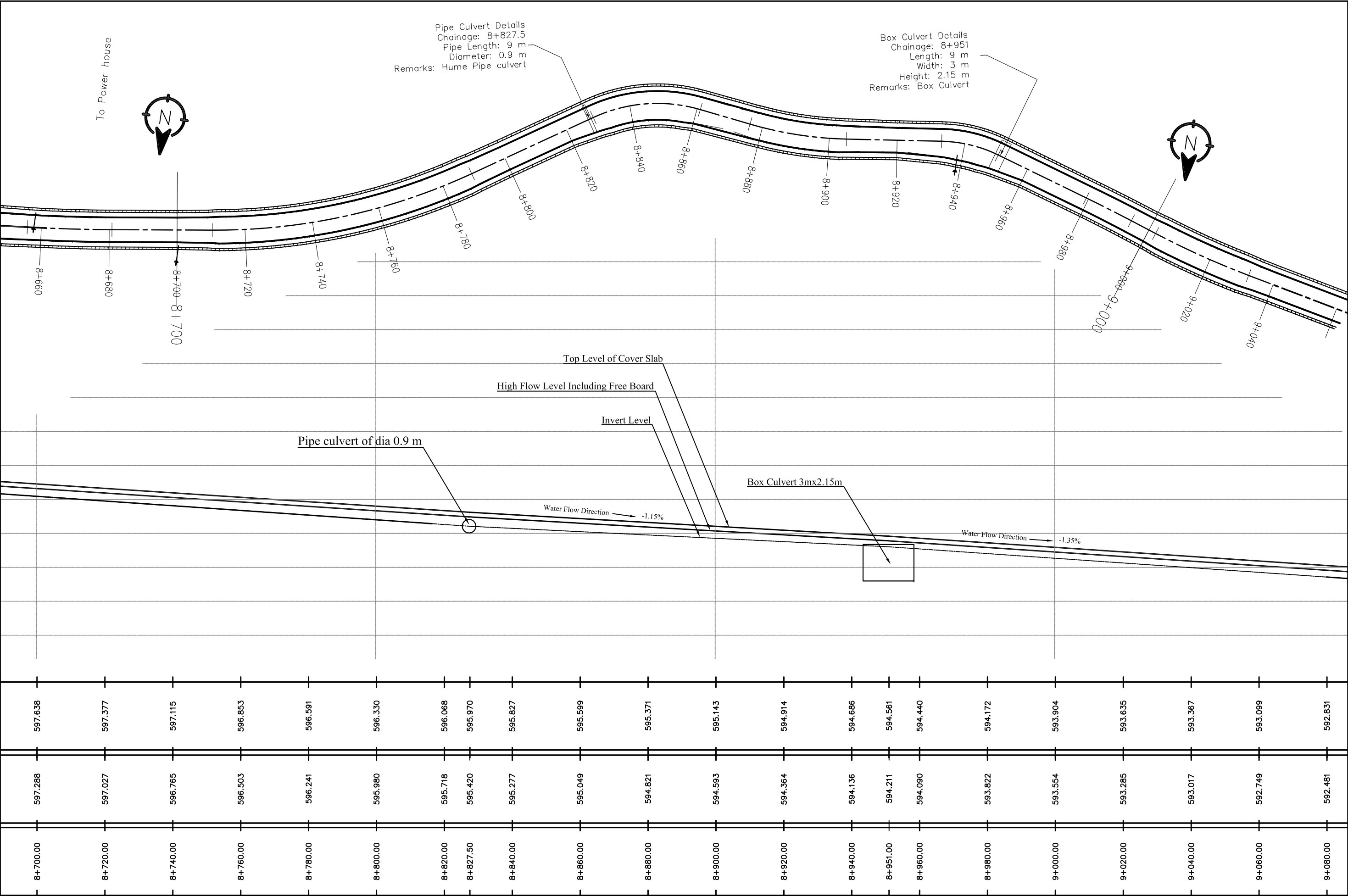


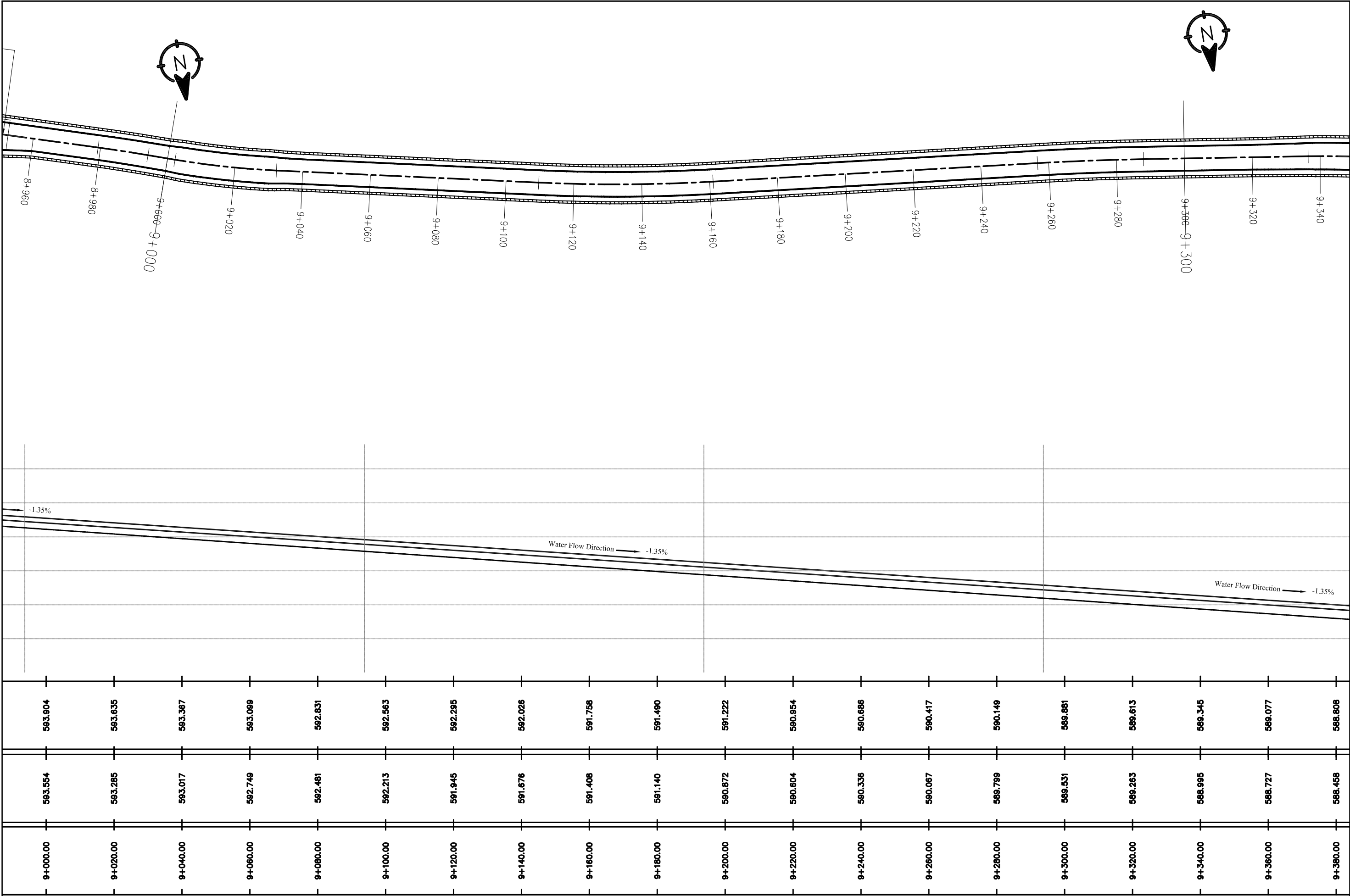


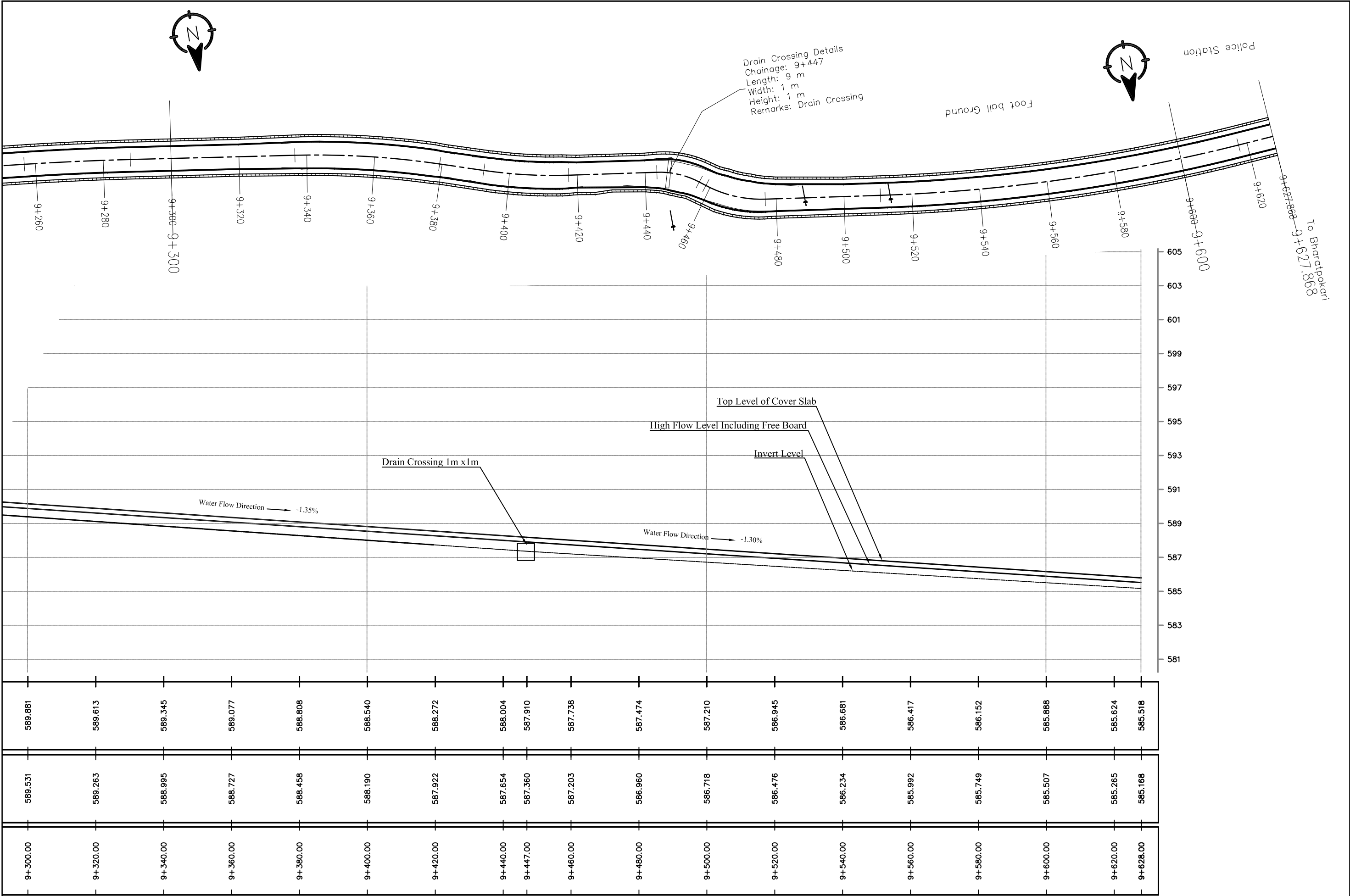


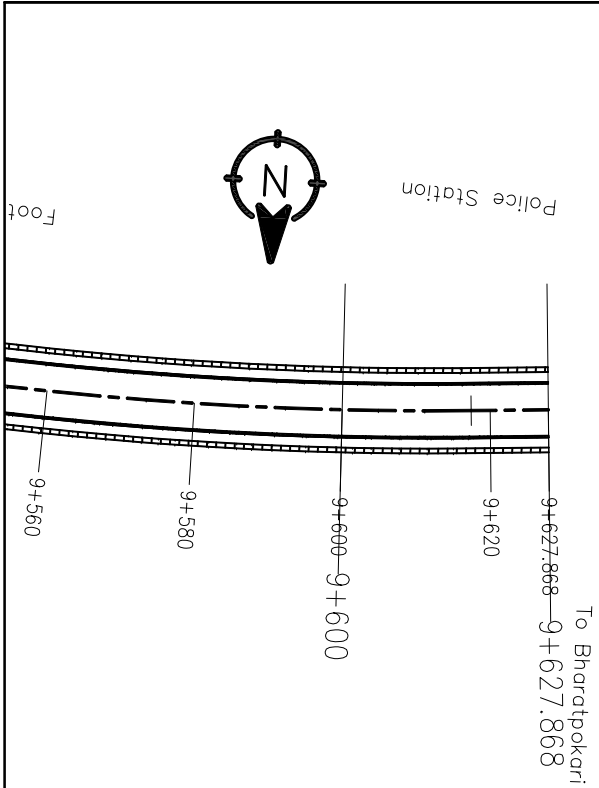




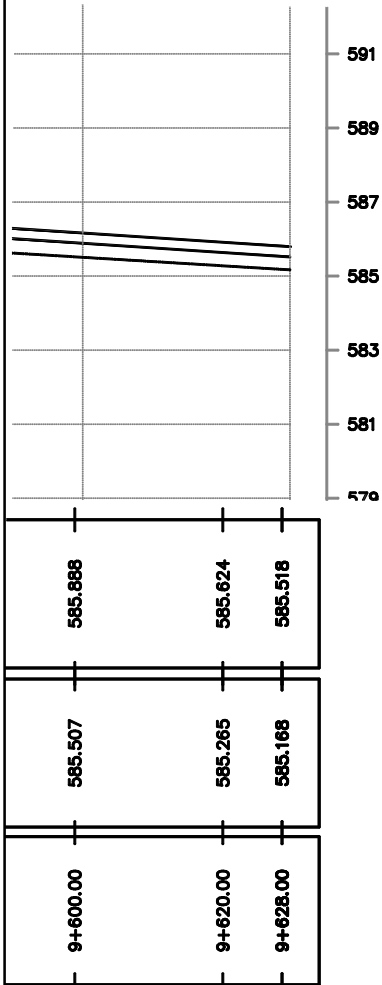




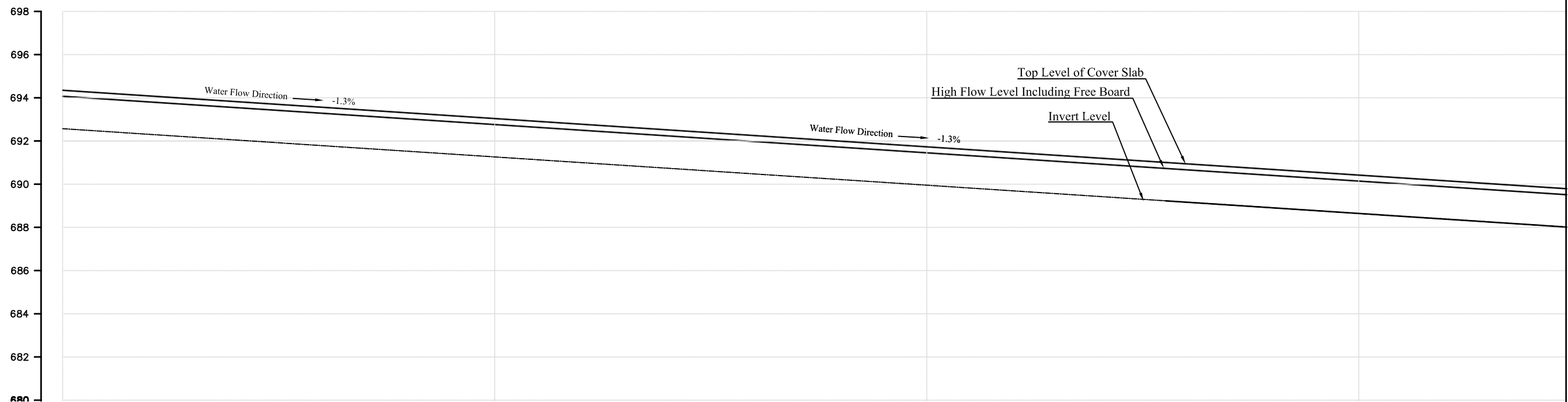
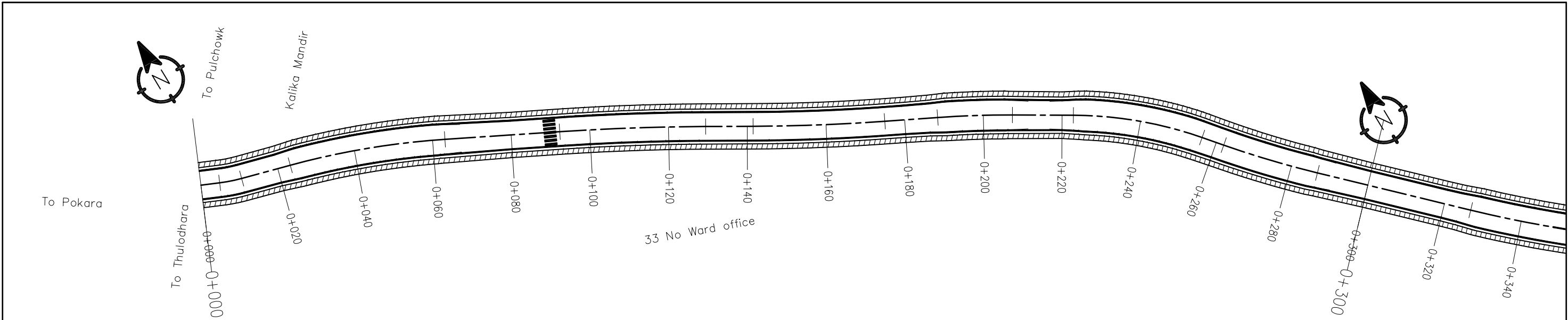




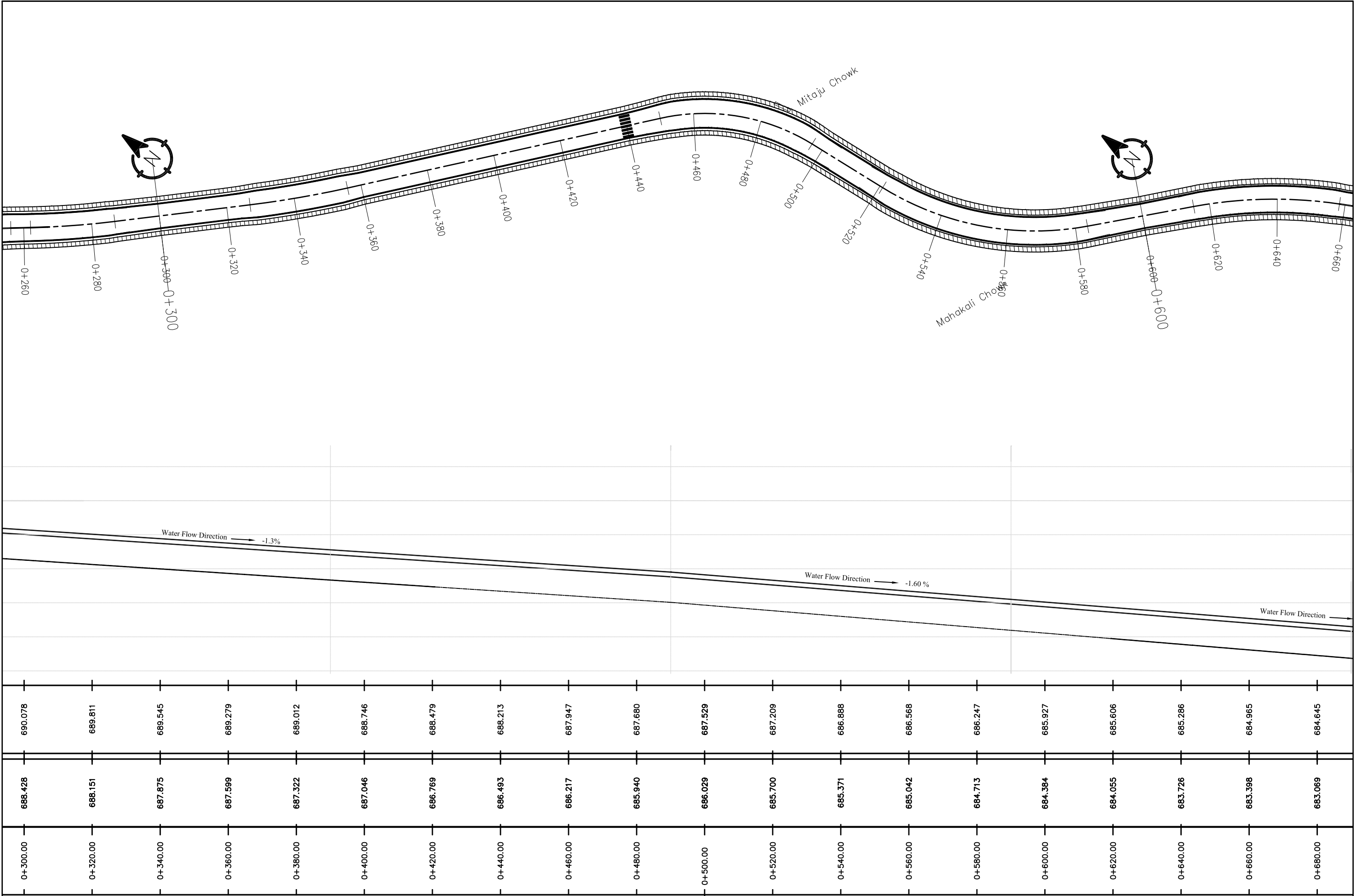
Shree Janajagriti P Basic School

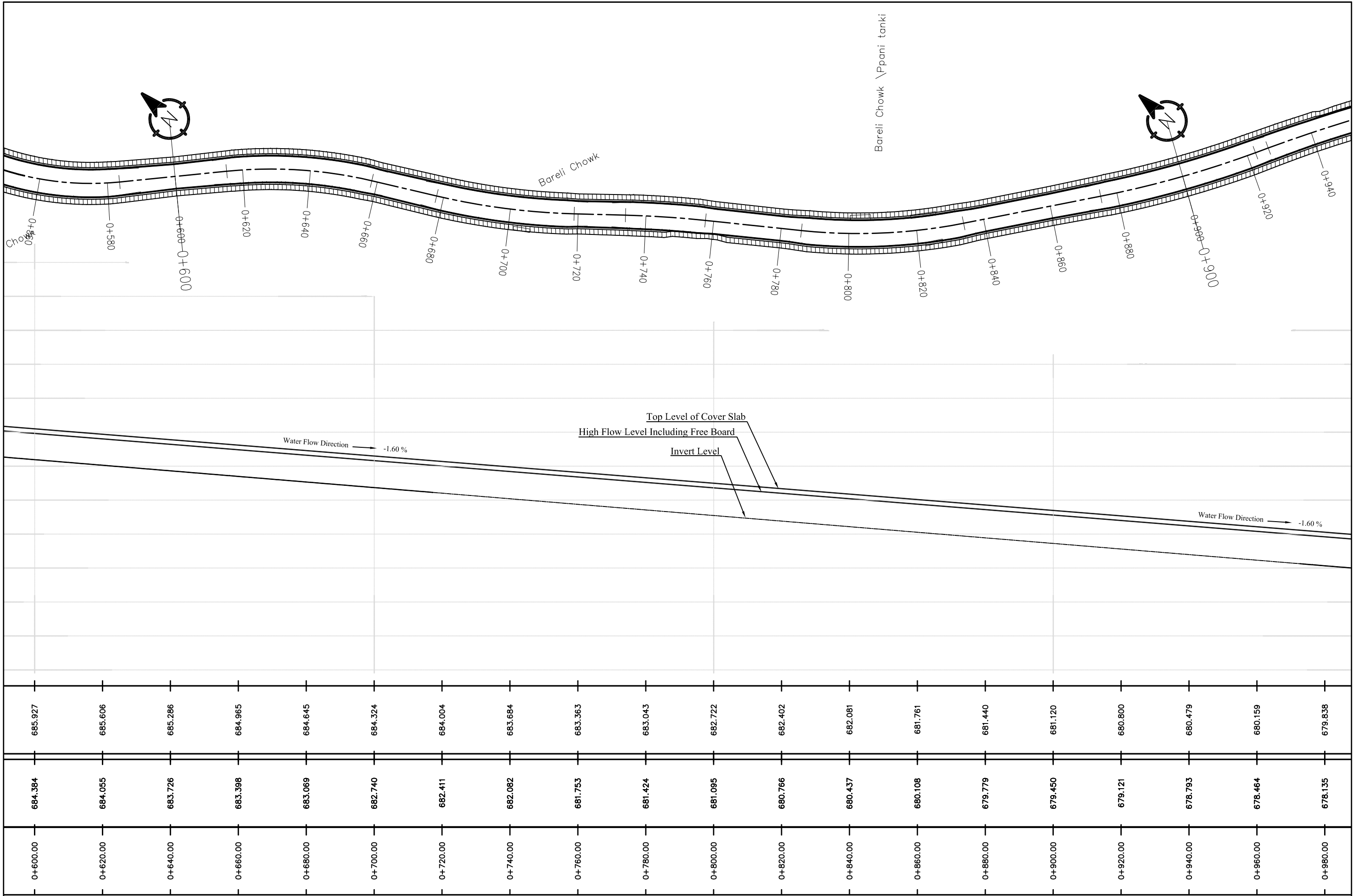


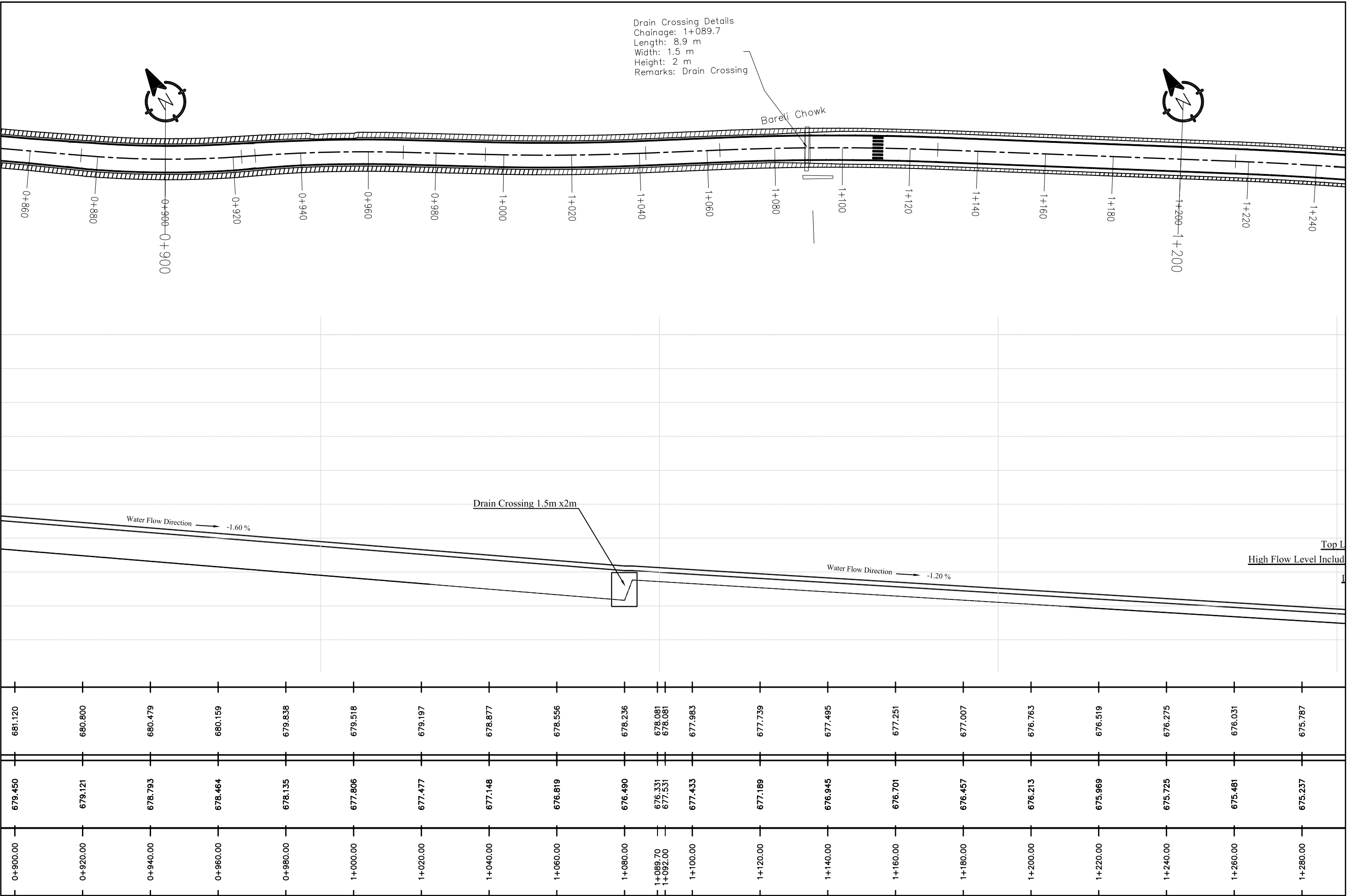
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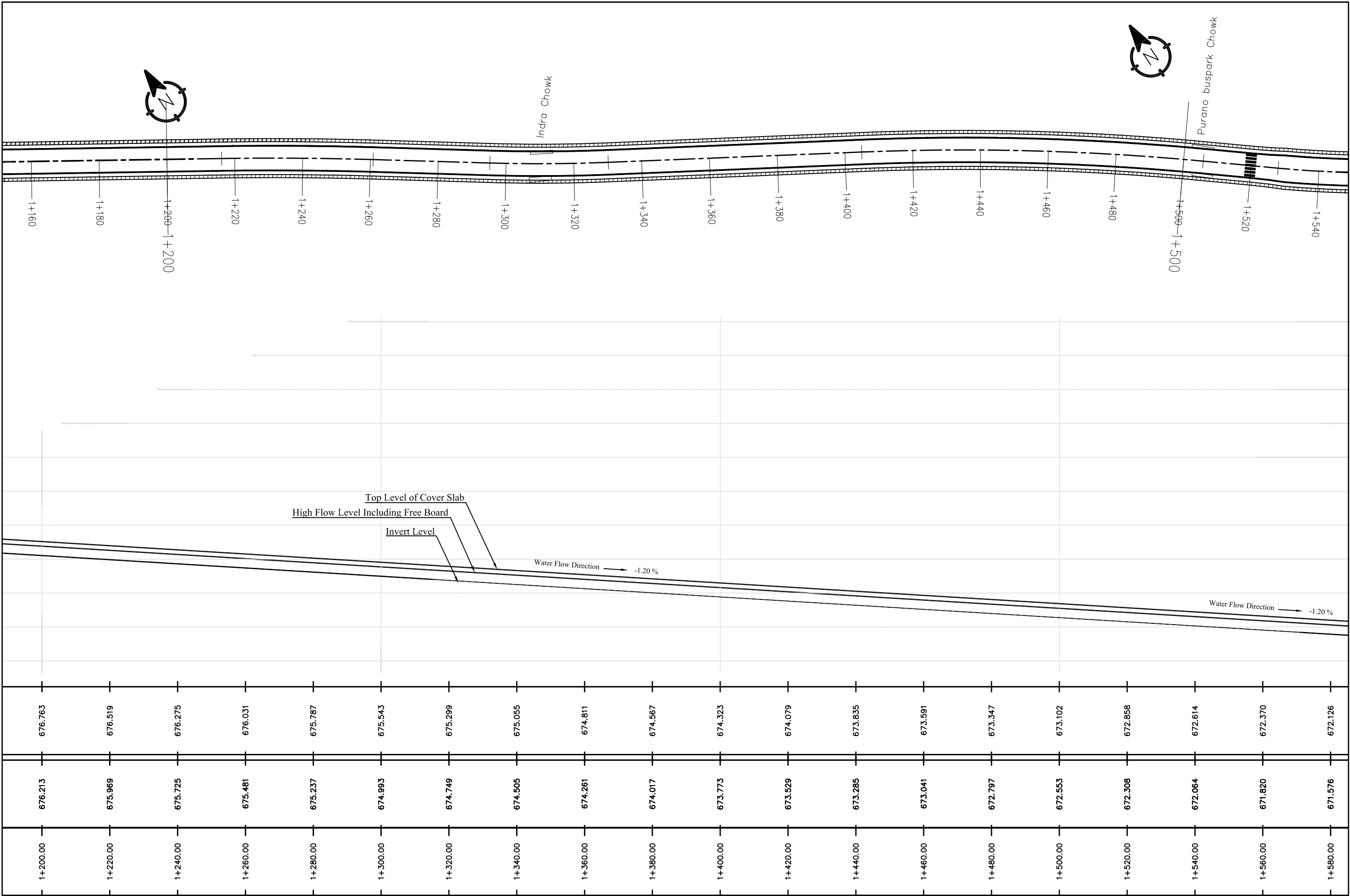


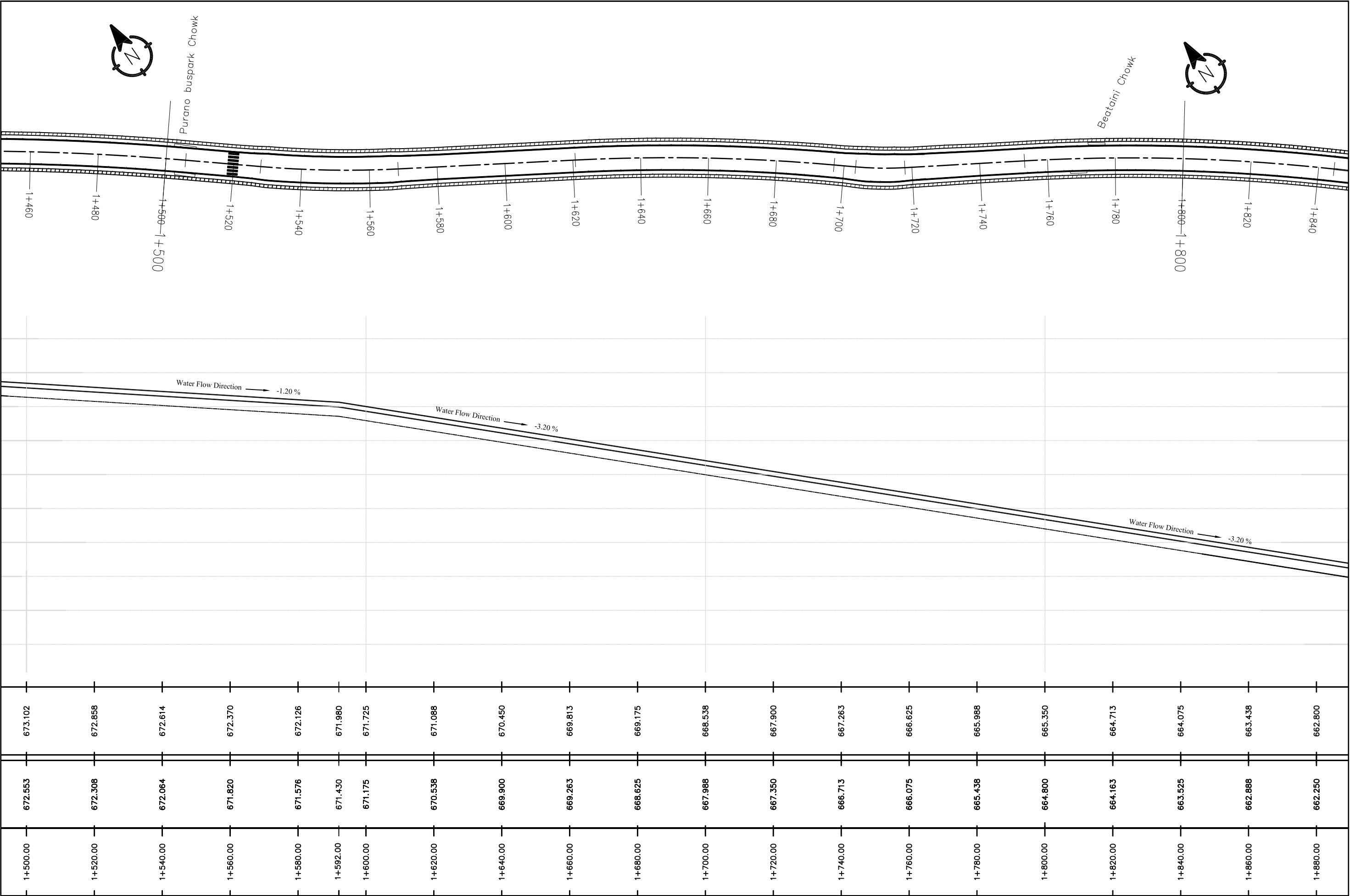
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CHAINAGE (km)	0+000.00	0+020.00	0+040.00	0+060.00	0+080.00	0+100.00	0+120.00	0+140.00	0+160.00	0+180.00	0+200.00	0+220.00	0+240.00	0+260.00	0+280.00	0+300.00	0+320.00	0+340.00

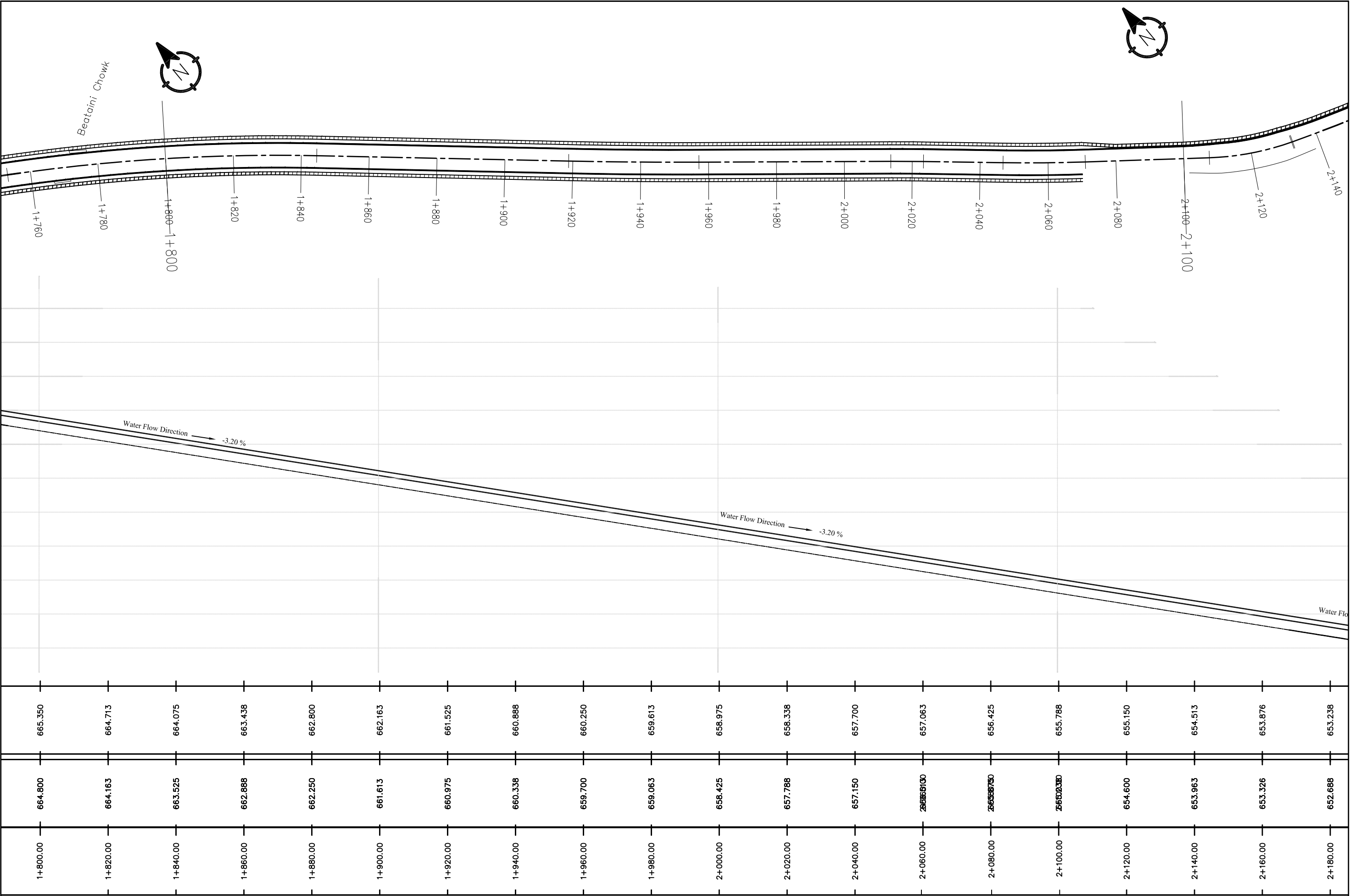


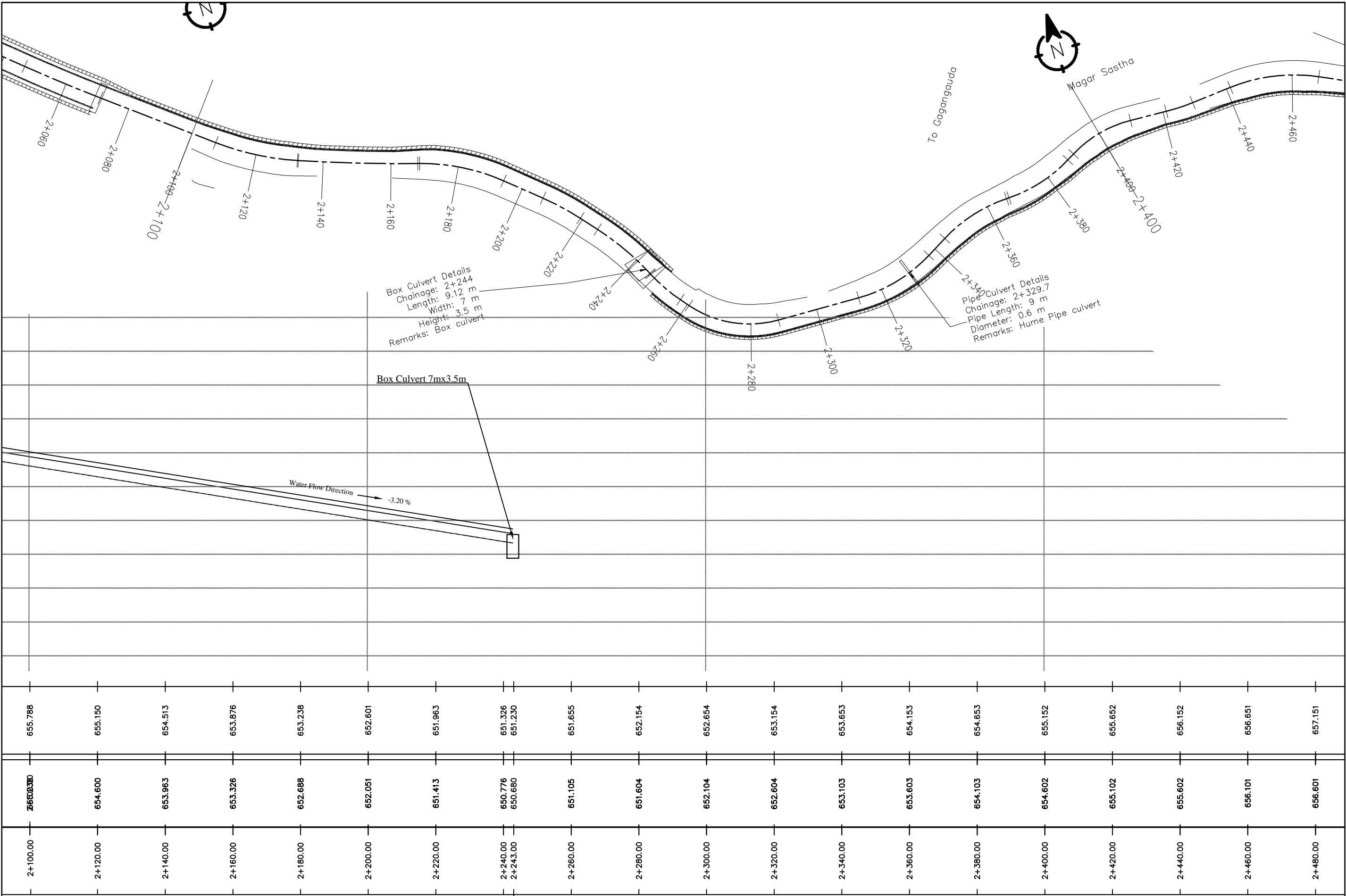












Nepal Urban Governance and Infrastructure Project (NUGIP)



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)



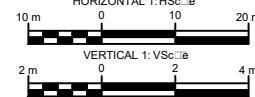
DESIGNED BY :

DRAWN BY :

CHECKED BY :

APPROVED BY :

SCALE



Plan & Profile

2+100-2+400

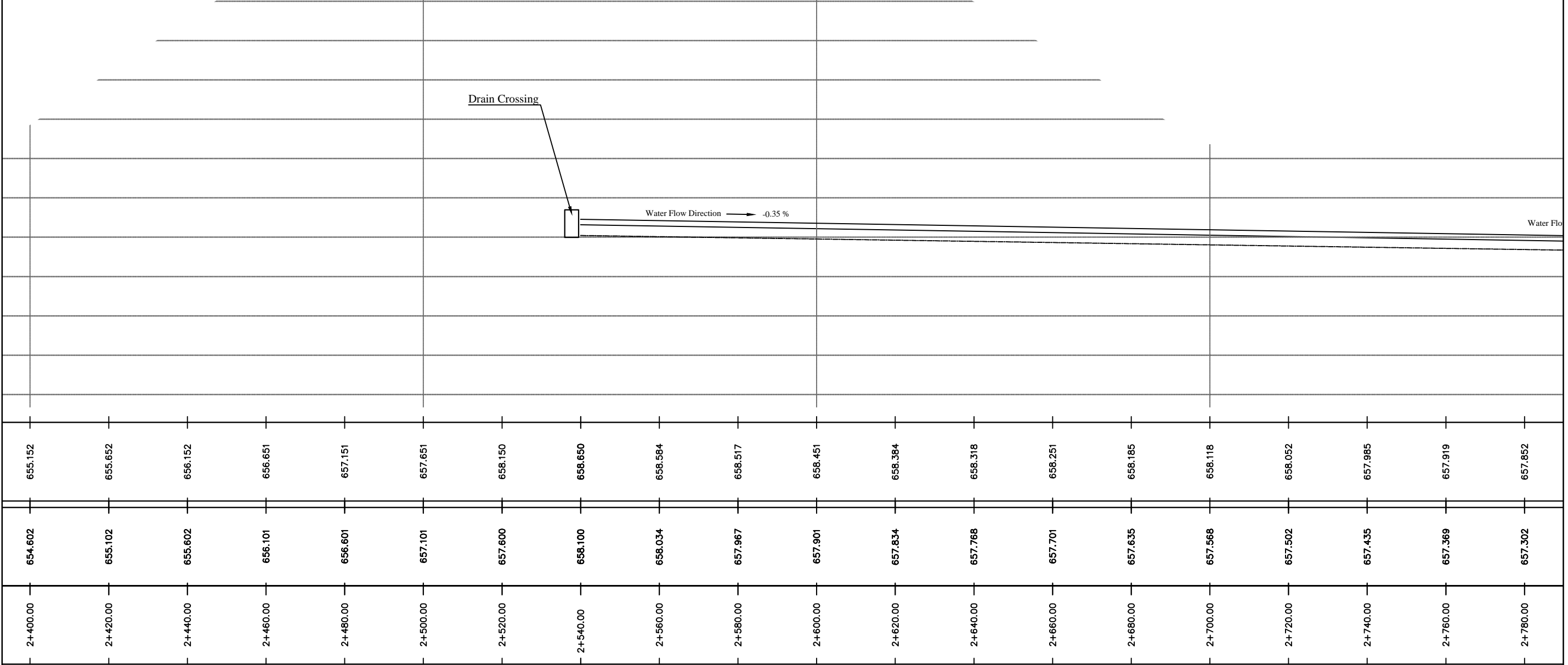
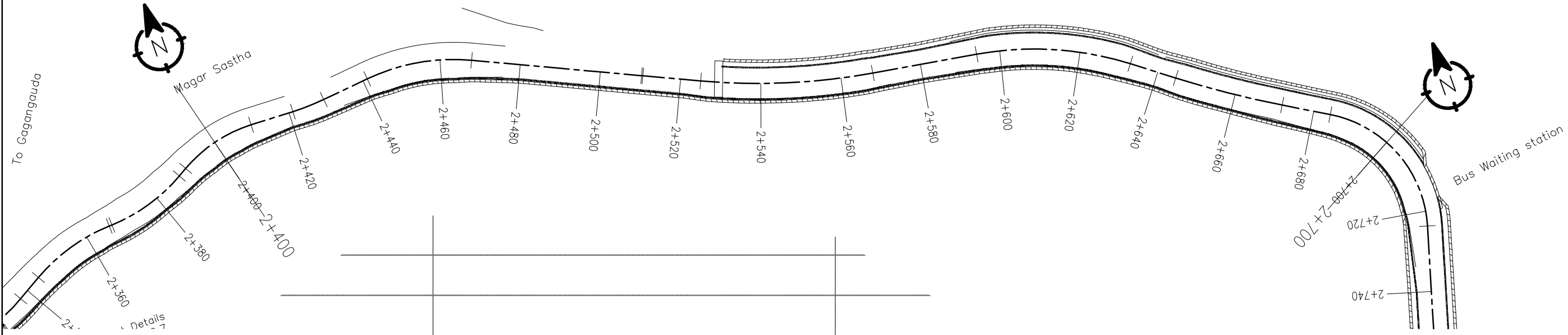
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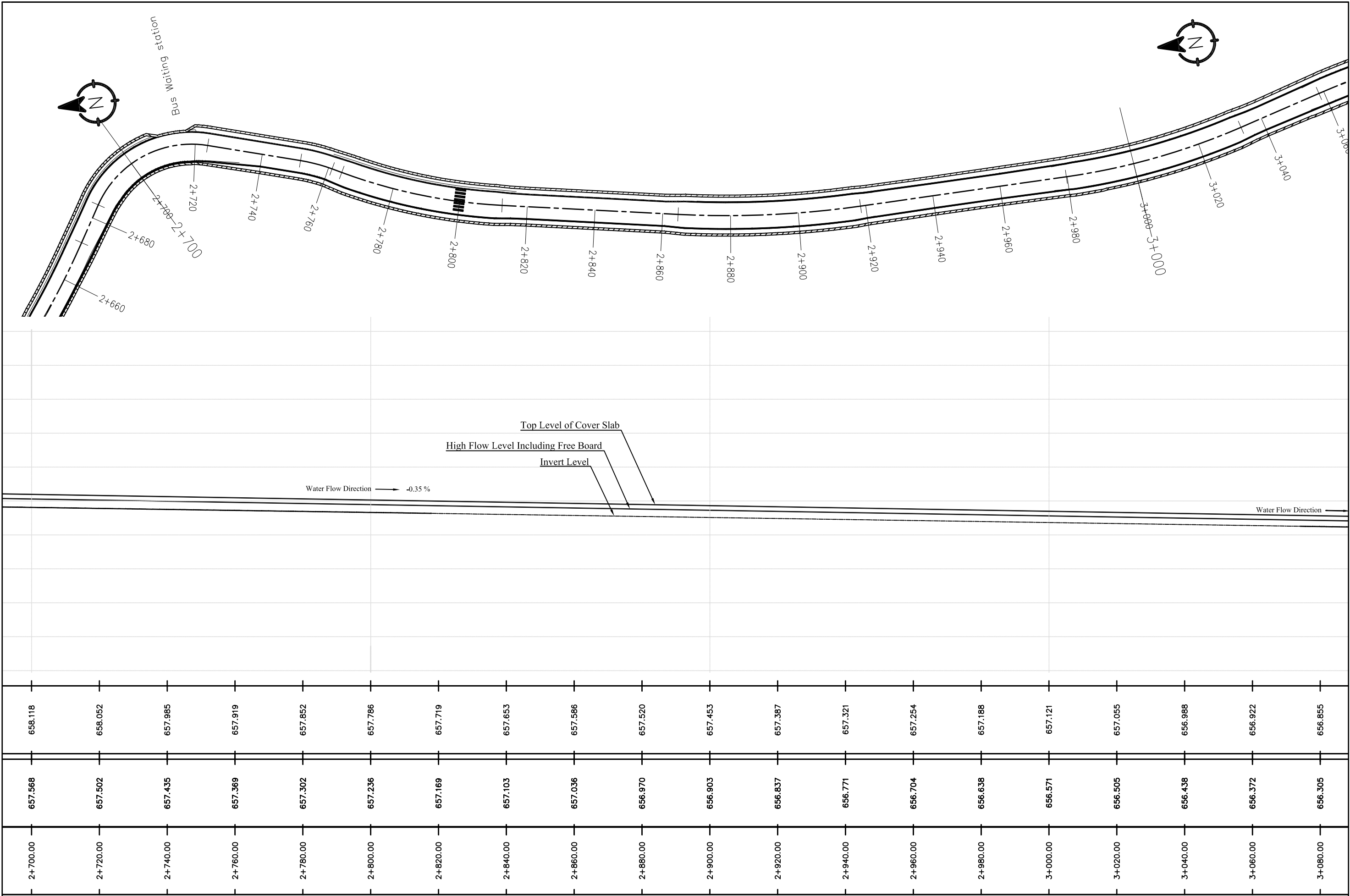
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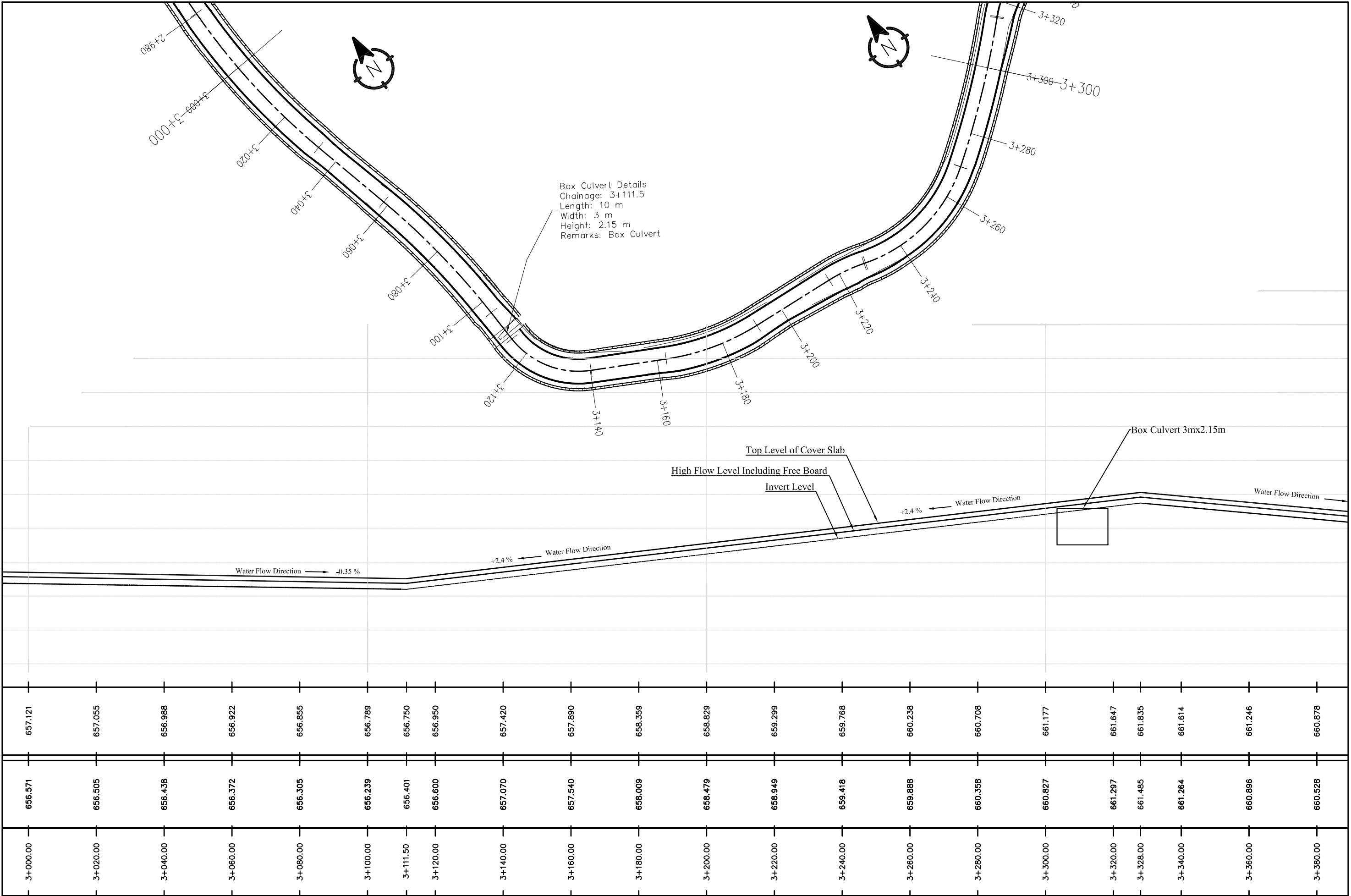
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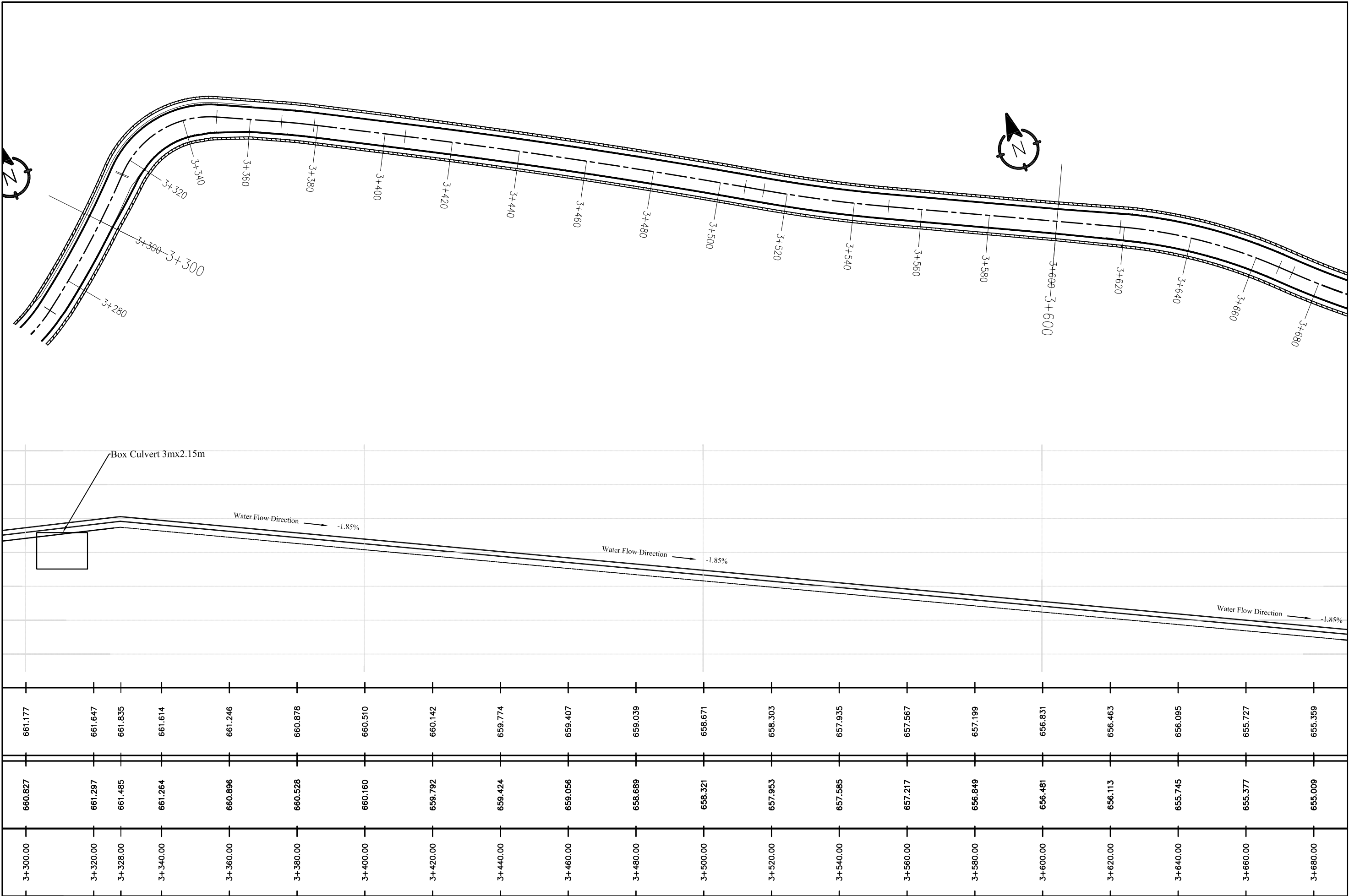
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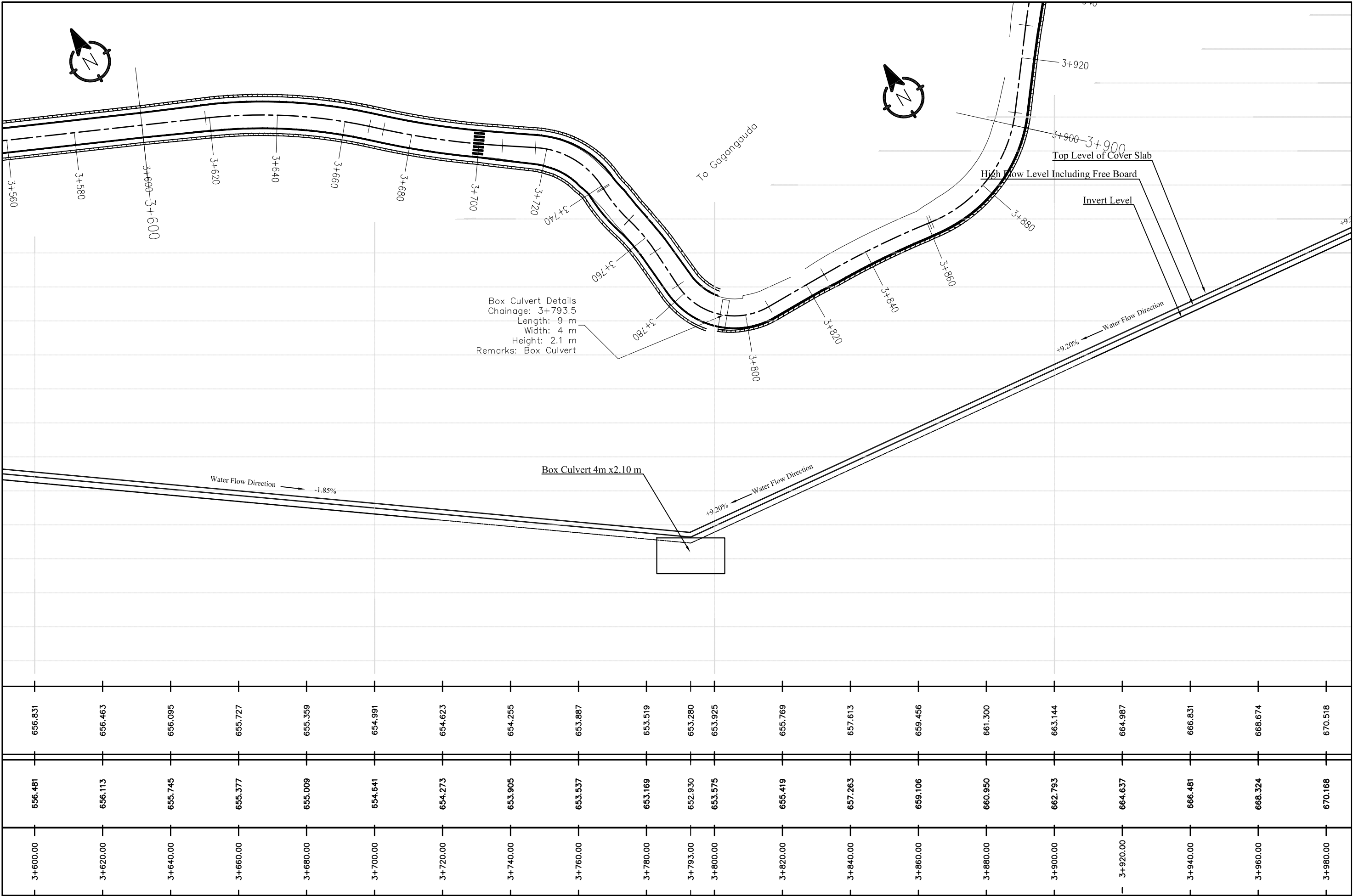


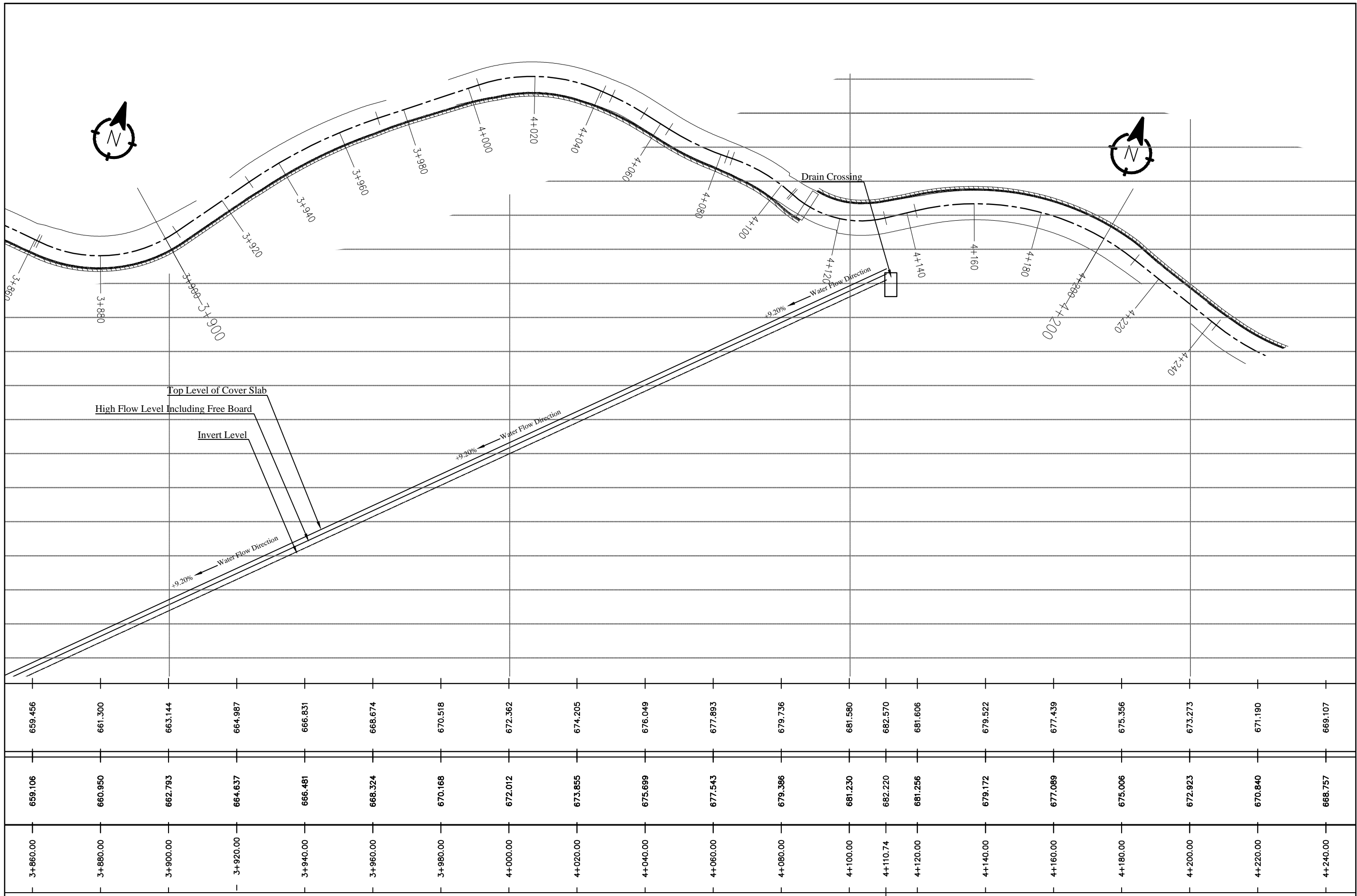
	Nepal Urban Governance and Infrastructure Project (NUGIP) Office of the Municipal Executive Pokhara Metropolitan City Kaski District, Gandaki Province	CONSULTANT: Plush Engineers and Architects (P.) Ltd. (PEA) B.N. Consultancy Pvt. Ltd. (BN) Soil Test Consultancy (P.) Ltd. (Soil Test) Kathmandu, Nepal	Project Name:- Nepal Urban Governance and Infrastructure Project (NUGIP)	DESIGNED BY :	SCALE HORIZONTAL 1:100 VERTICAL 1:200	Plan & Profile 2+400-2+780	DATE: Oct-2023
				DRAWN BY :			DRG NO : 1
				CHECKED BY :			SHEET NO :
				APPROVED BY :			

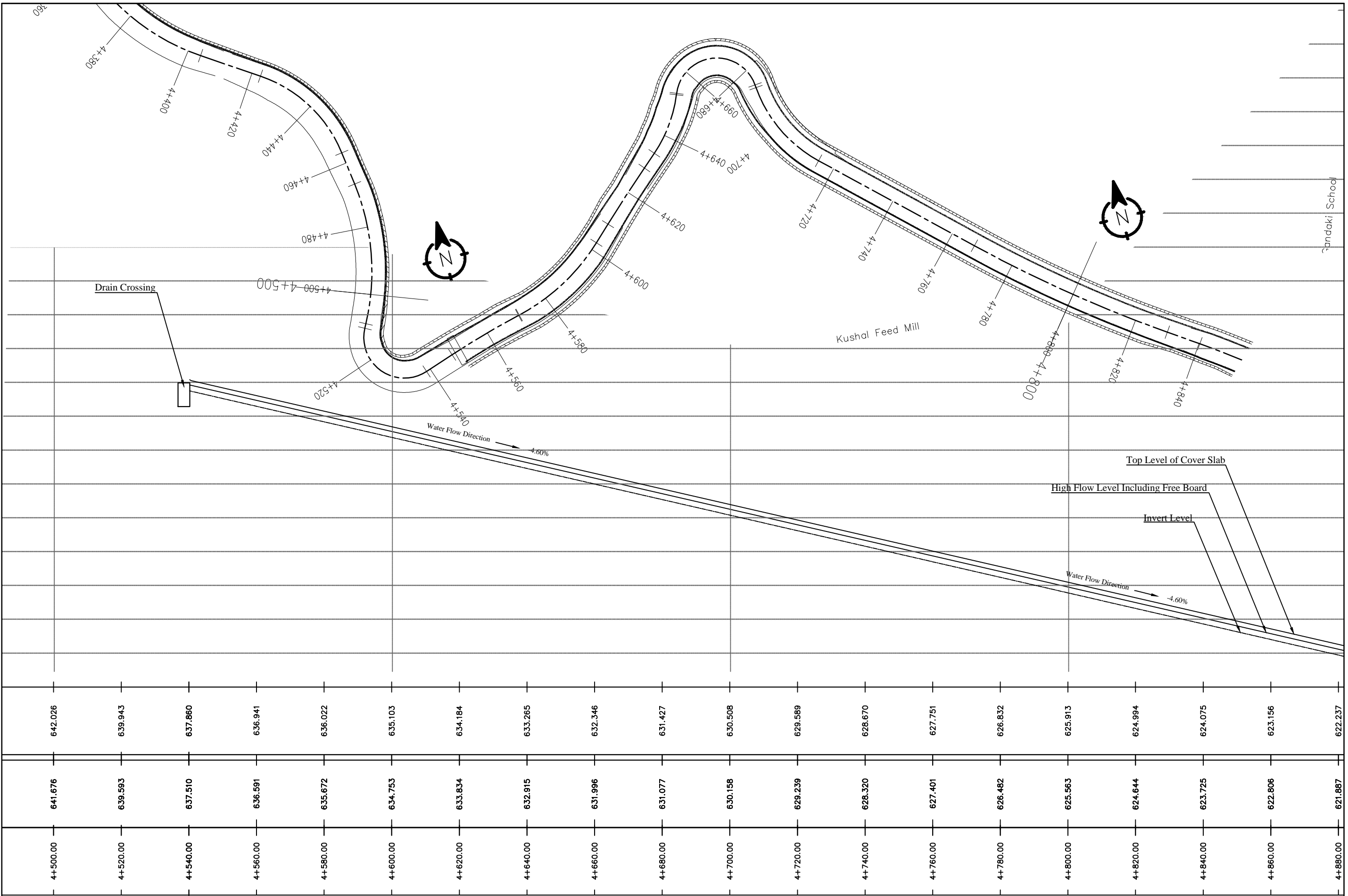


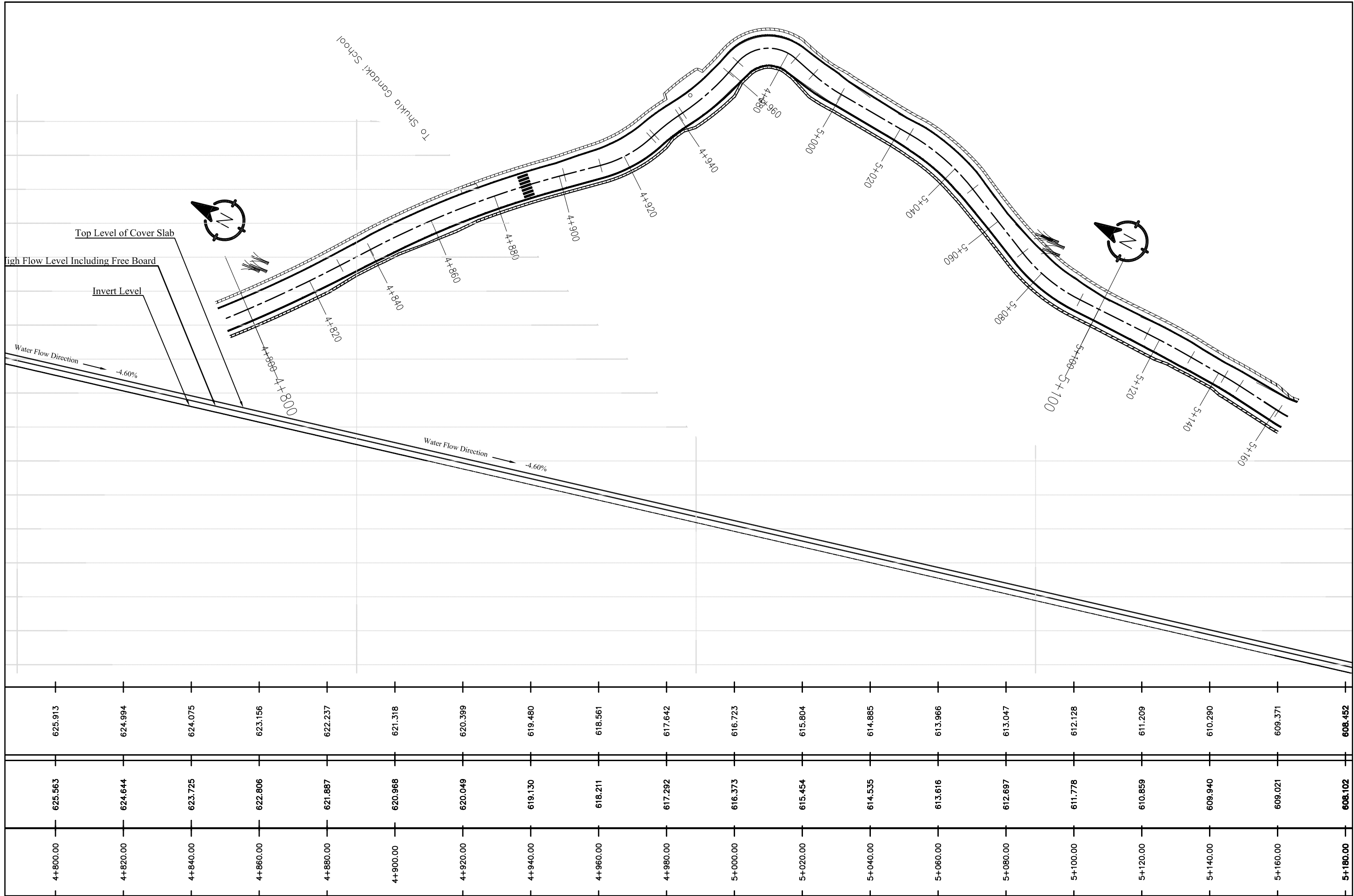


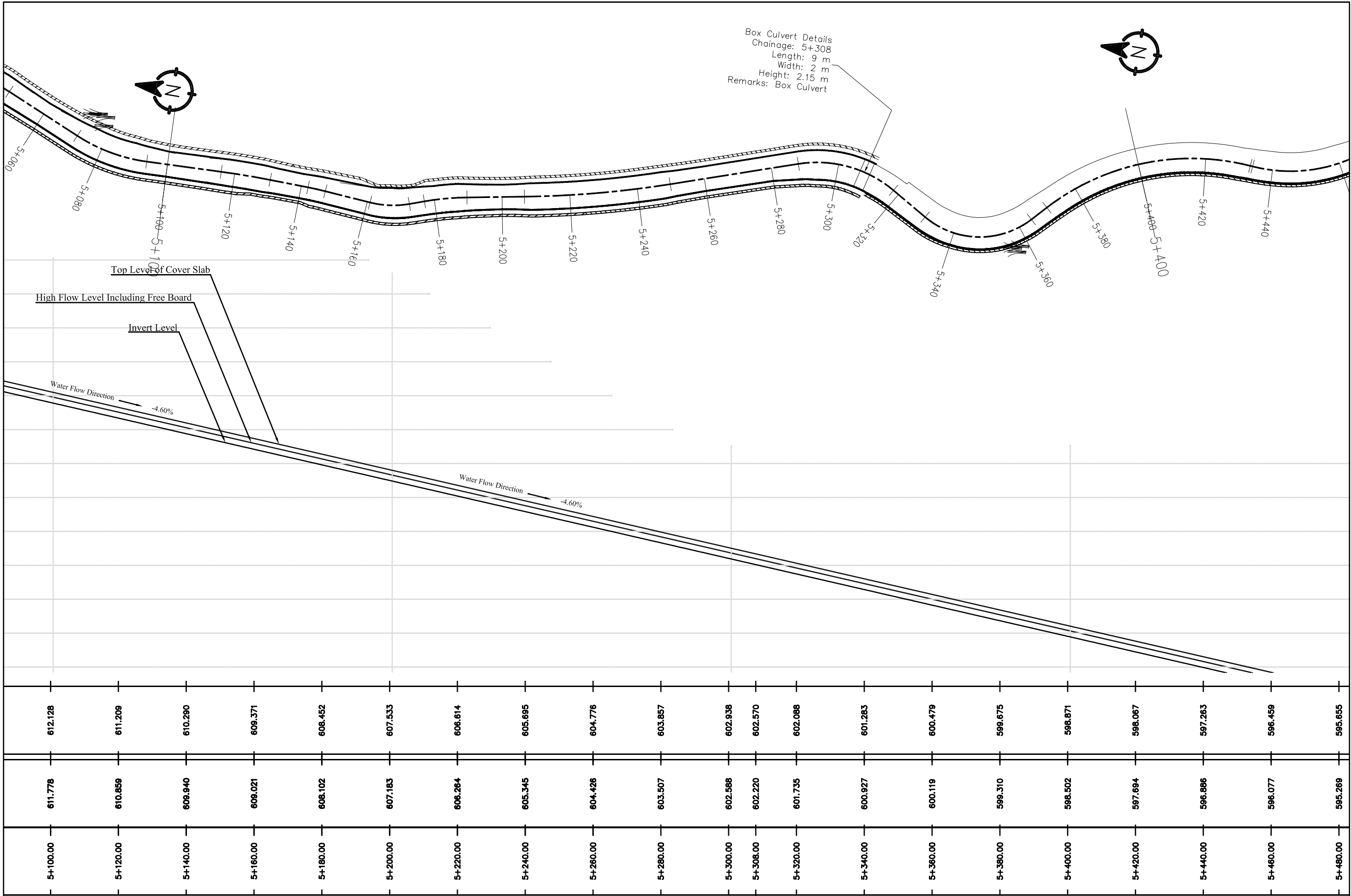


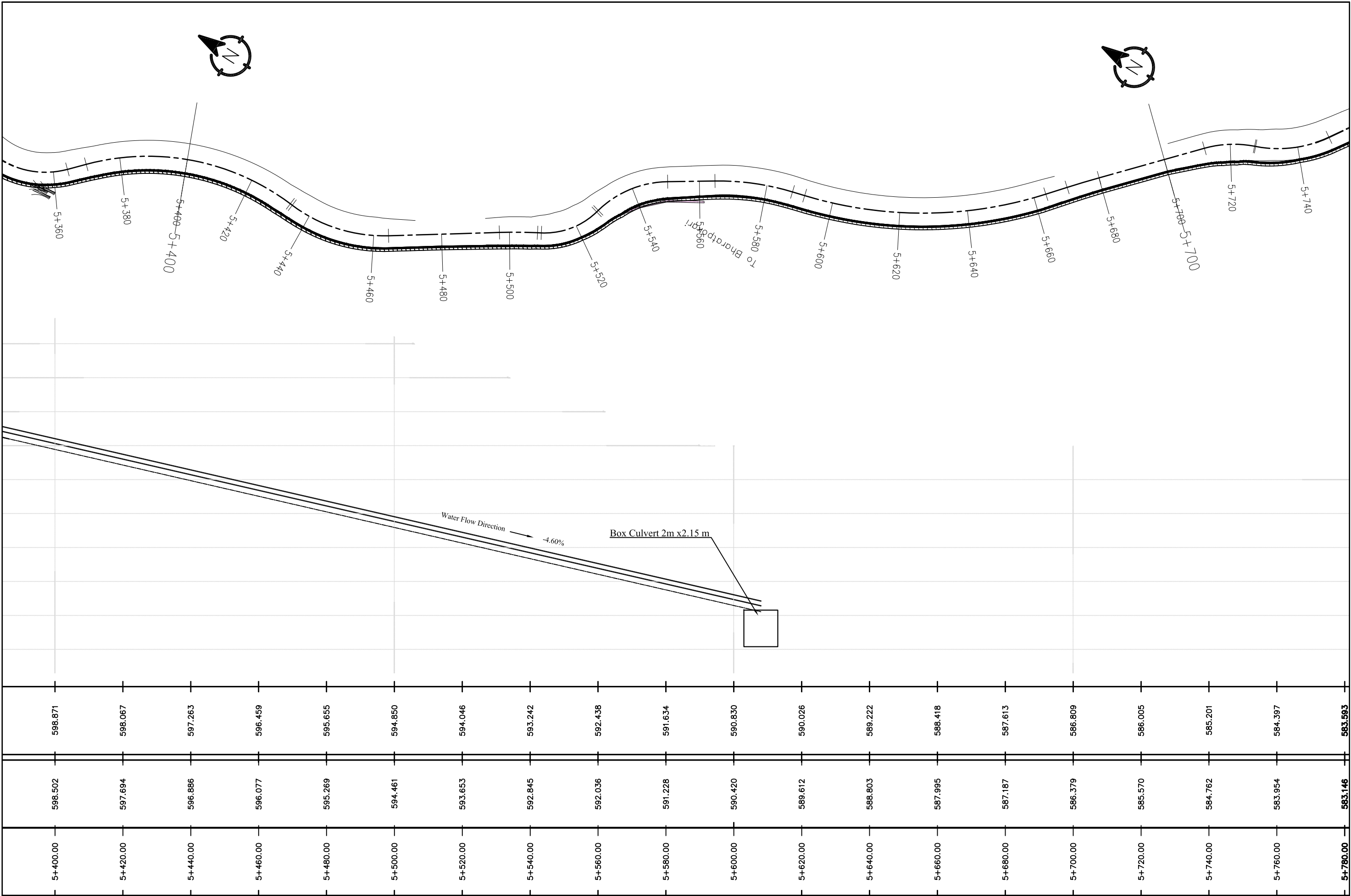


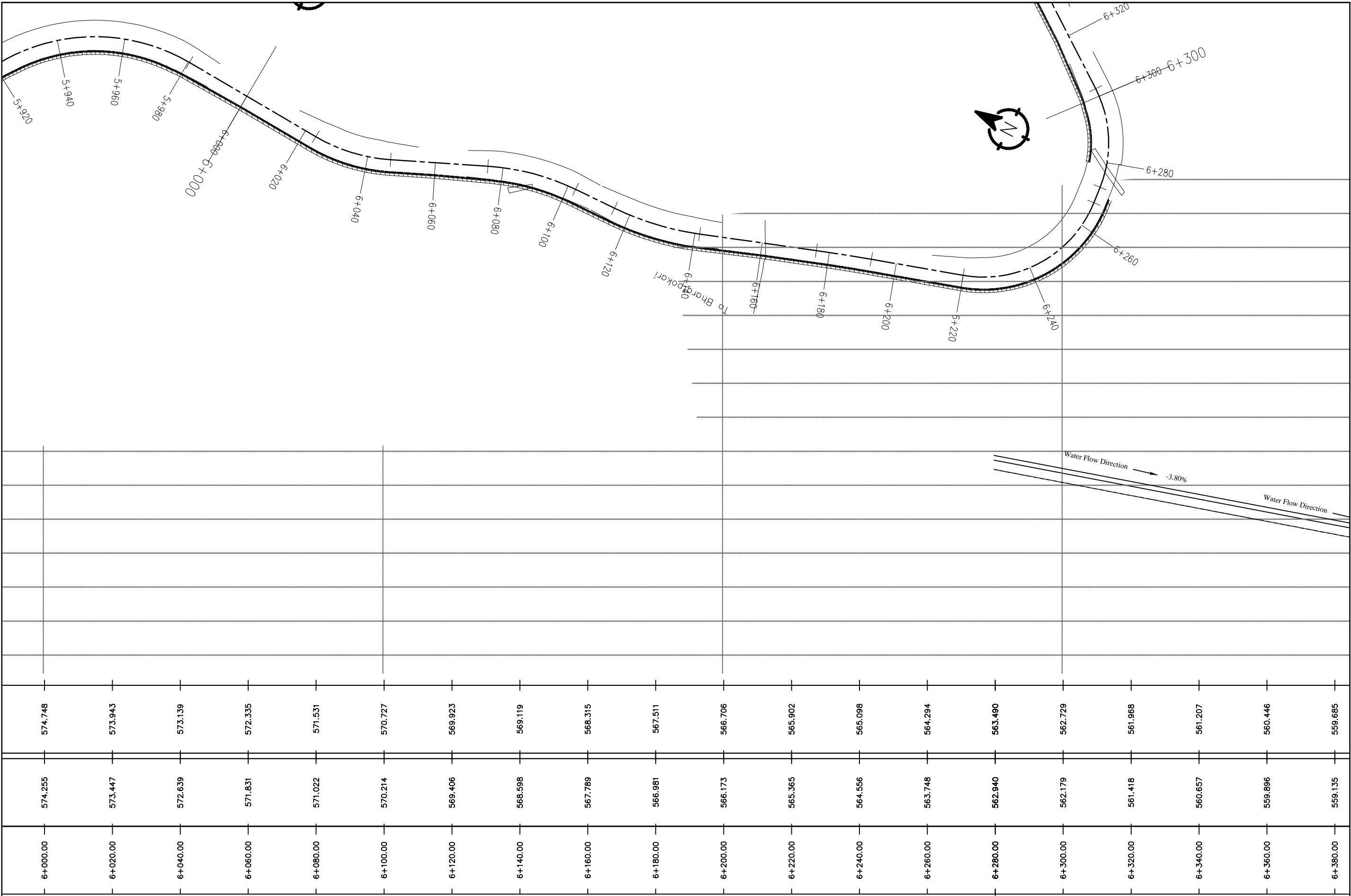


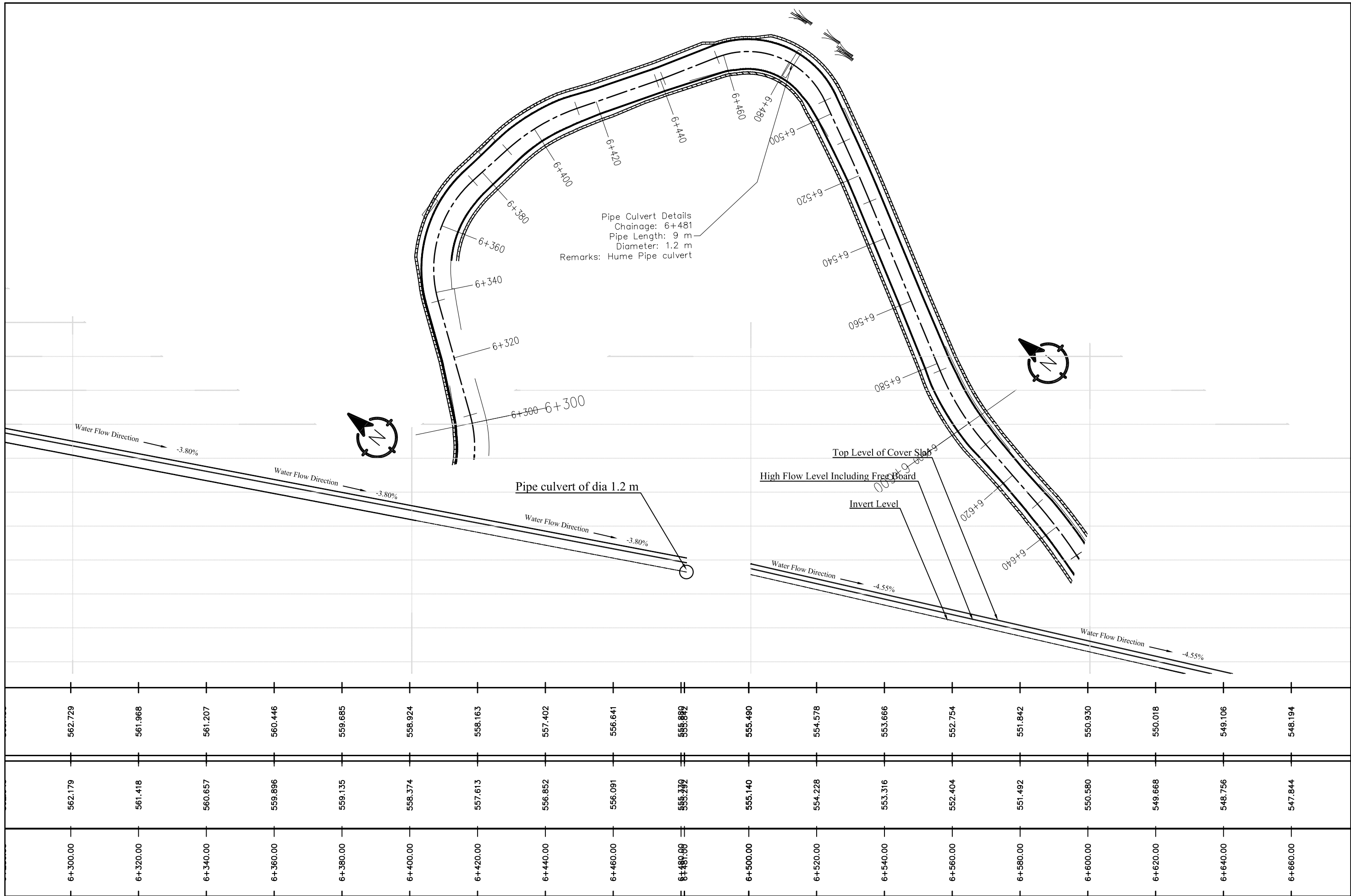


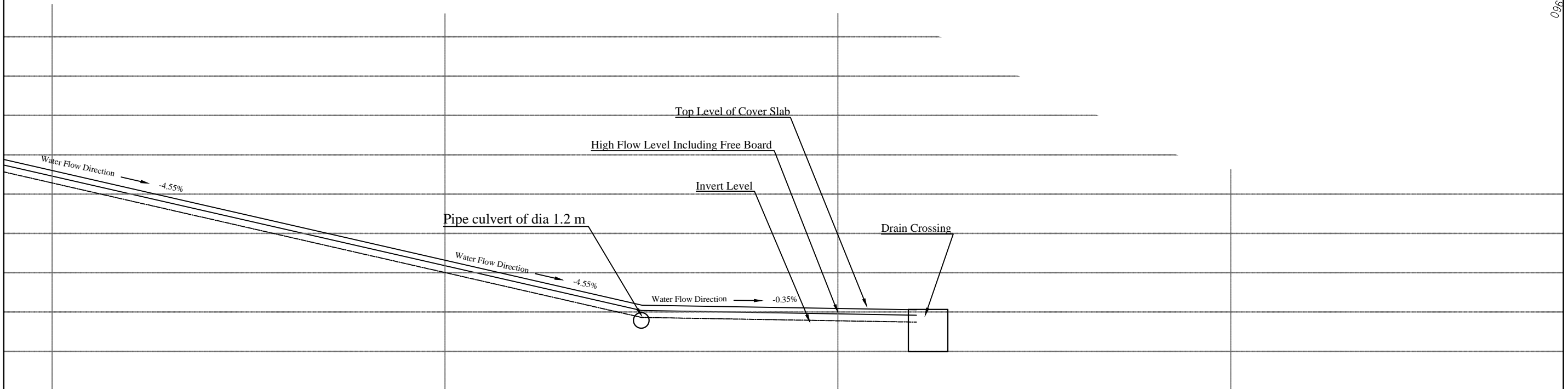
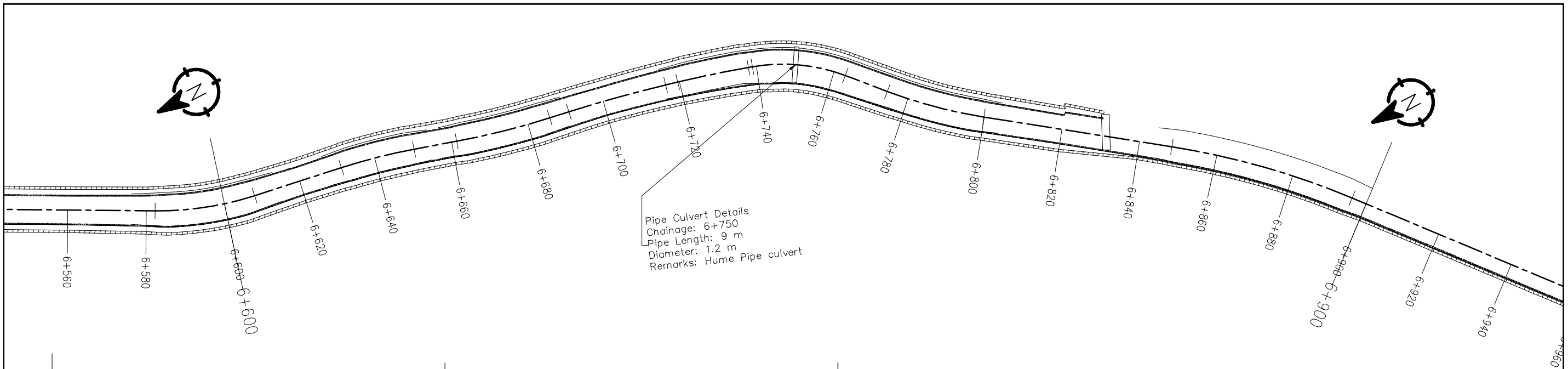




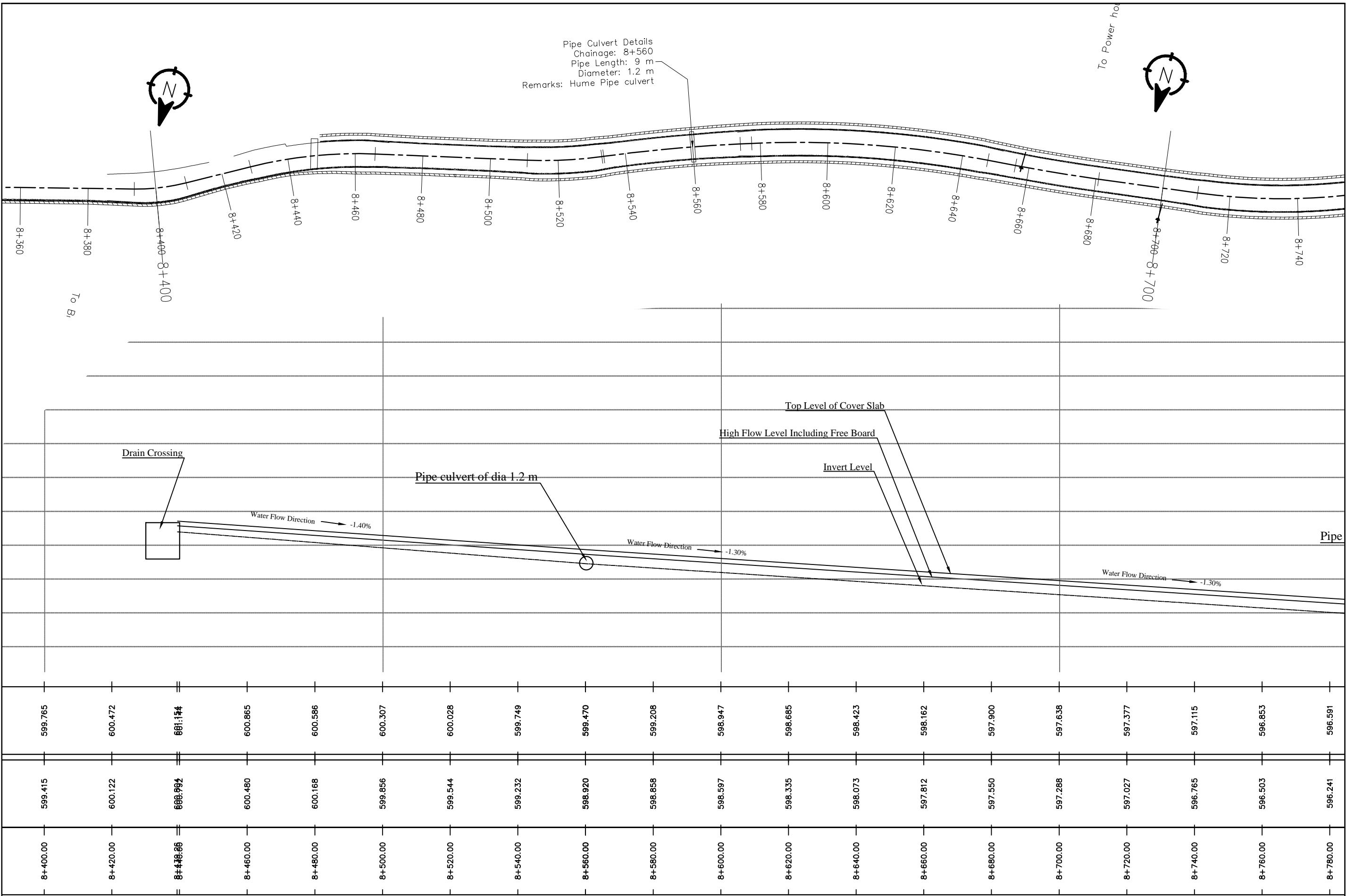








6+600.00	6+620.00	6+640.00	6+660.00	6+680.00	6+700.00	6+720.00	6+740.00	6+750.00	6+760.00	6+780.00	6+800.00	6+820.00	6+840.00	6+860.00	6+880.00	6+900.00	6+920.00	6+940.00	6+960.00	6+980.00
550.580	549.668	548.756	547.844	546.932	546.020	545.108	544.196	543.740	543.706	543.637	543.569	543.500	544.208	544.916	545.623	546.331	547.039	547.747	548.454	549.162
550.930	550.018	549.106	548.194	547.282	546.370	545.458	544.546	544.090	544.056	543.987	543.919	543.850	544.558	545.266	545.973	546.681	547.389	548.097	548.804	549.512



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)



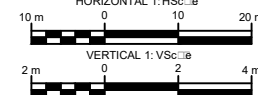
DESIGNED BY :

DRAWN BY :

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APPROVED BY :

SCALE



Plan & Profile

8+400-8+780

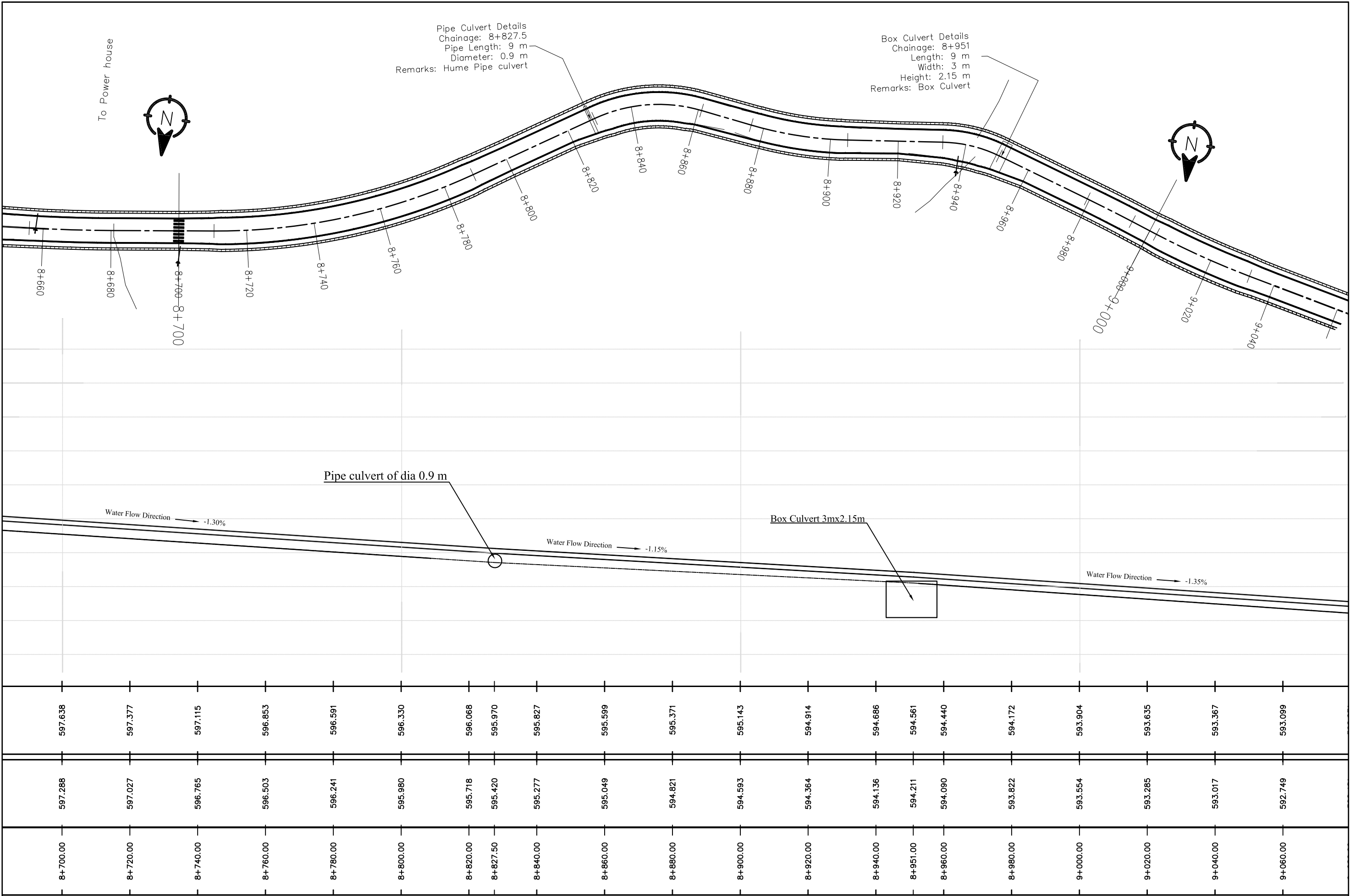
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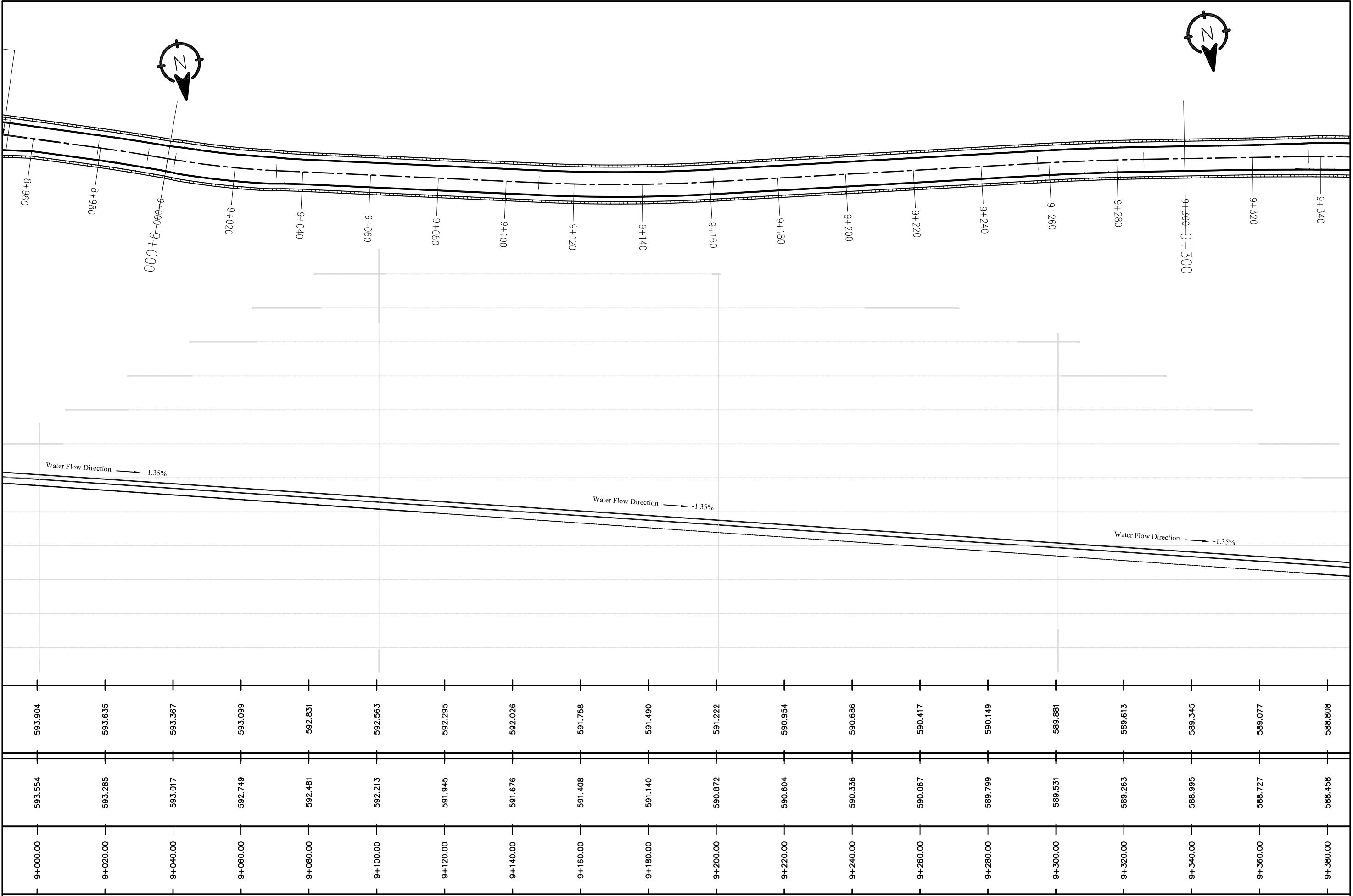
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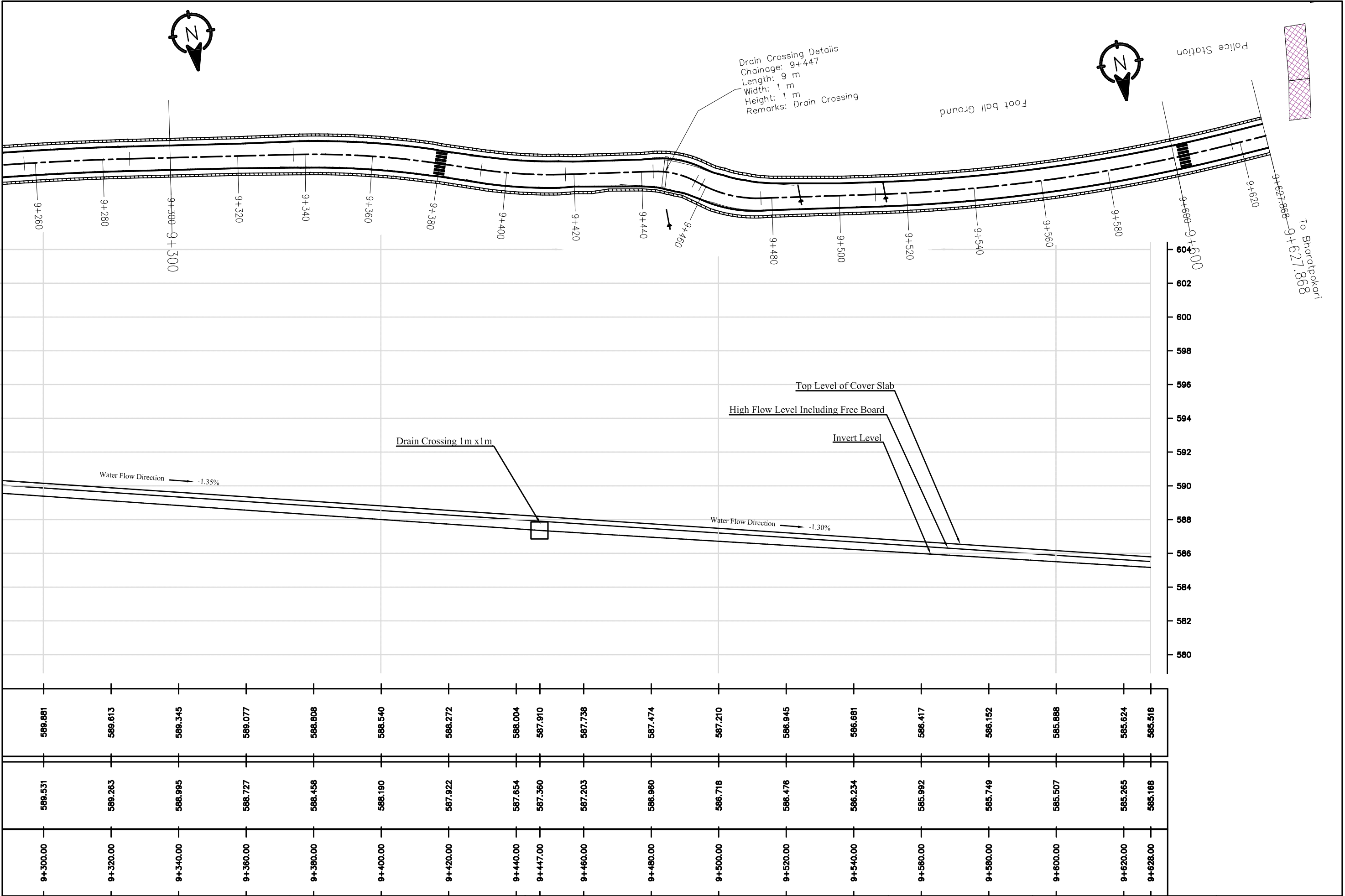
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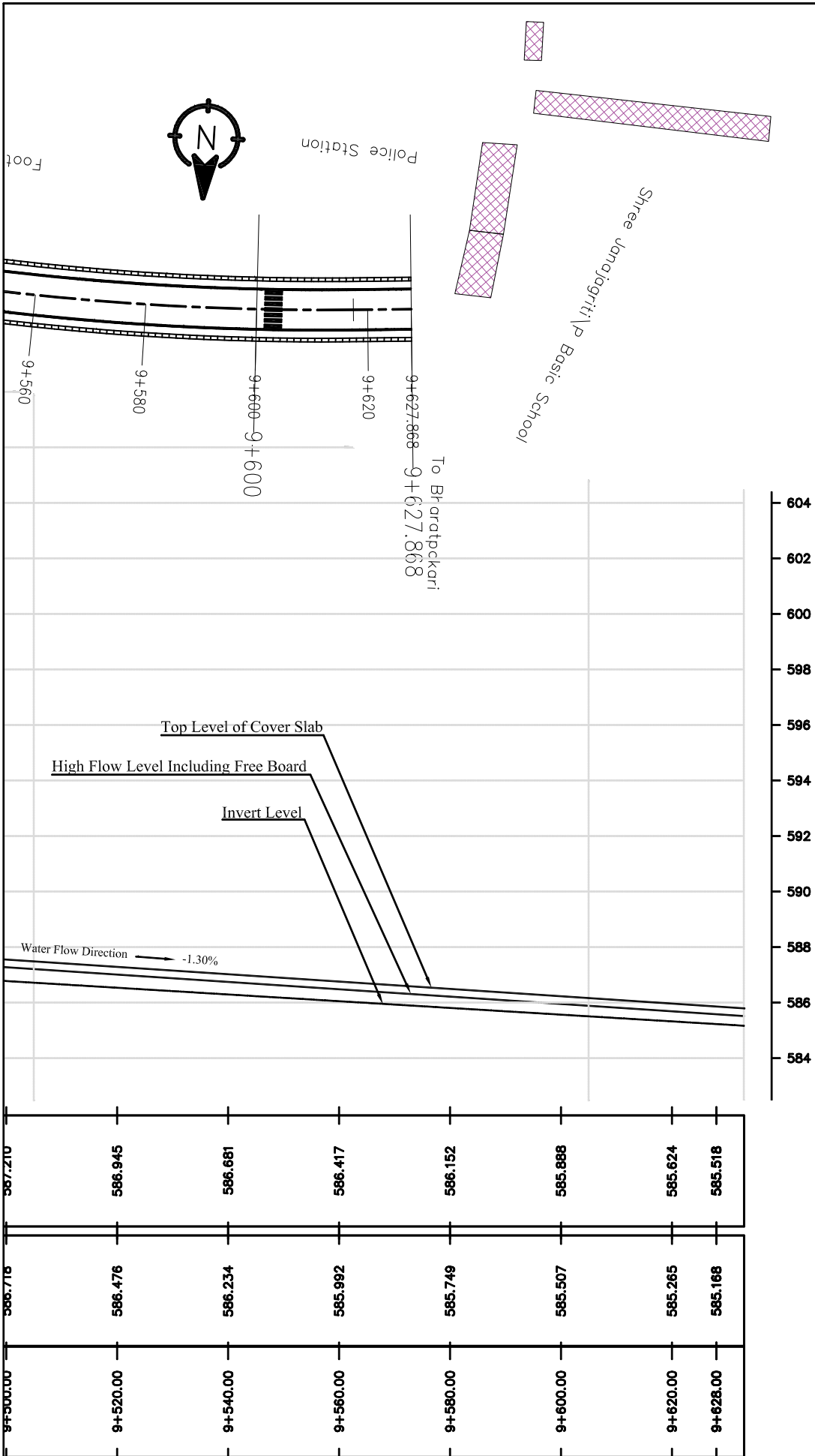
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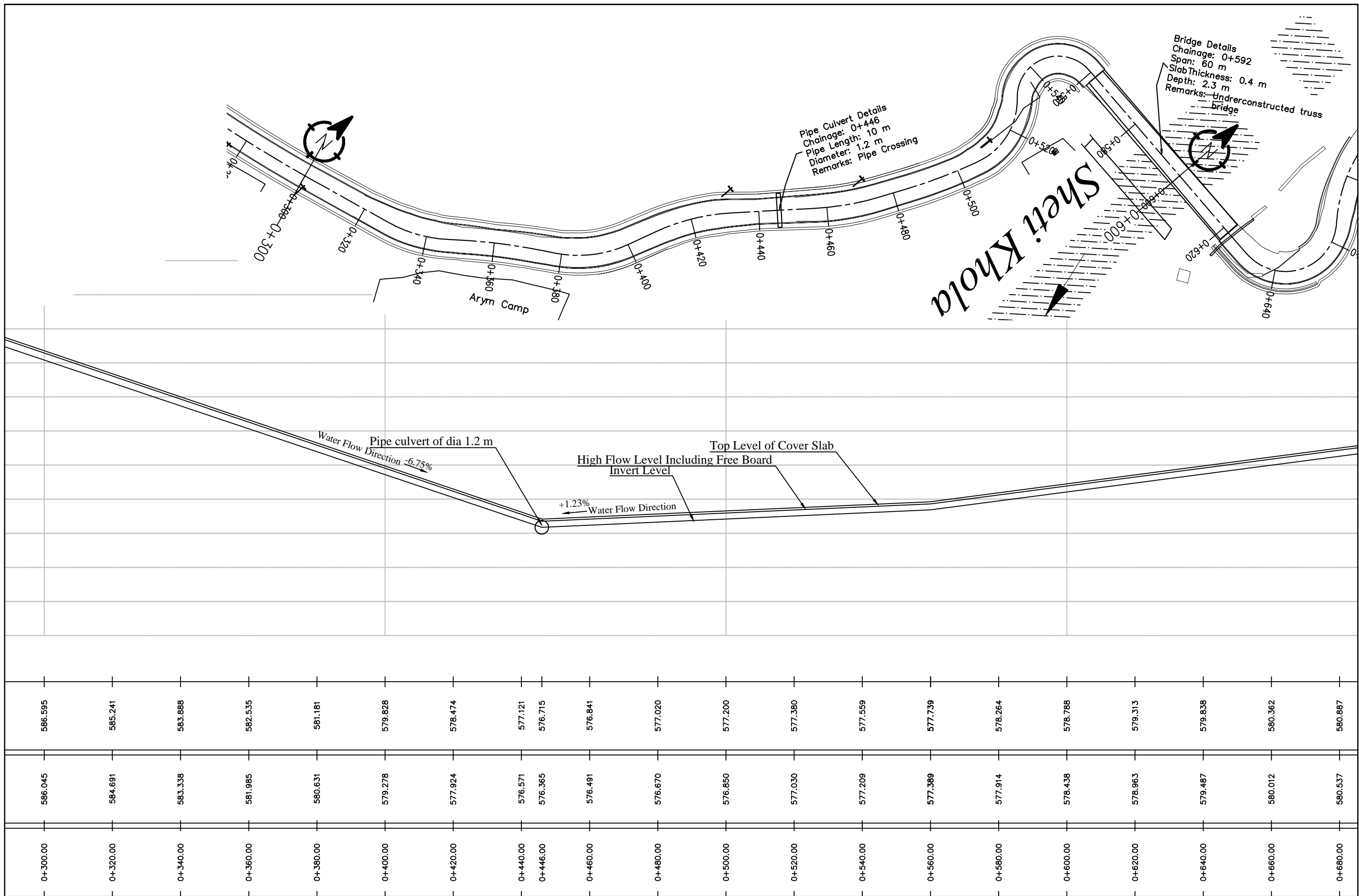


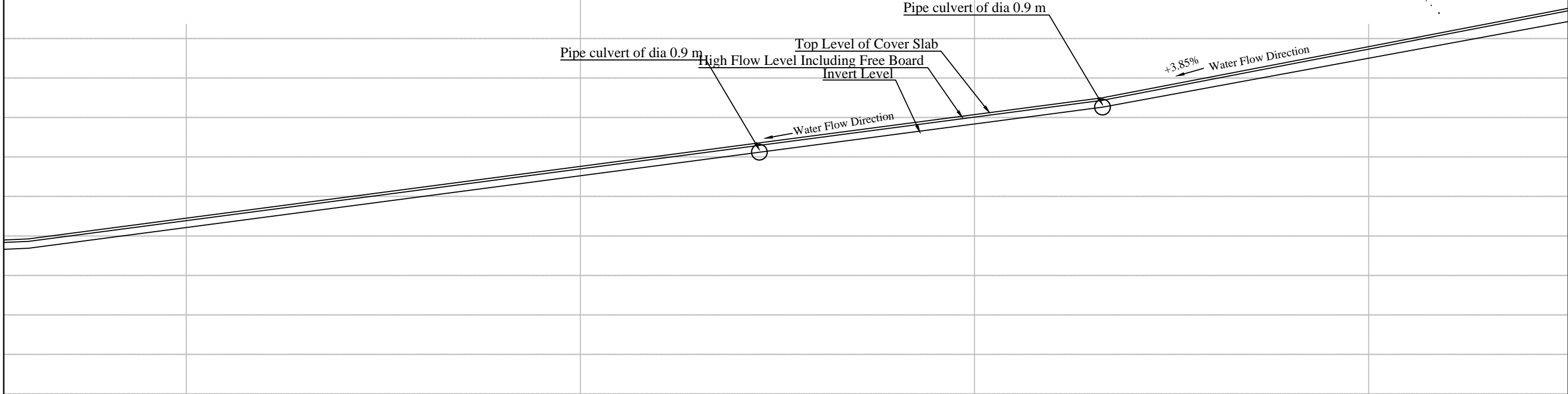
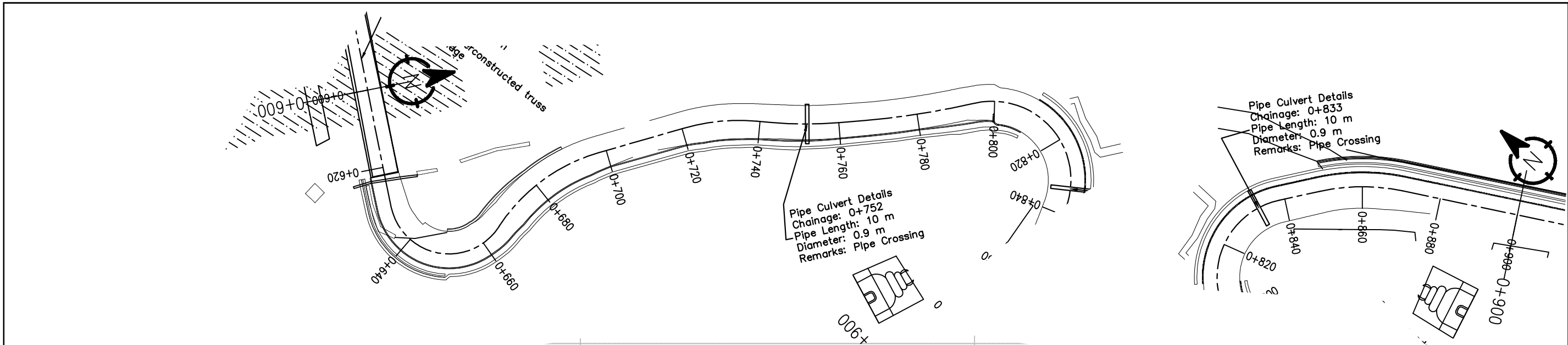




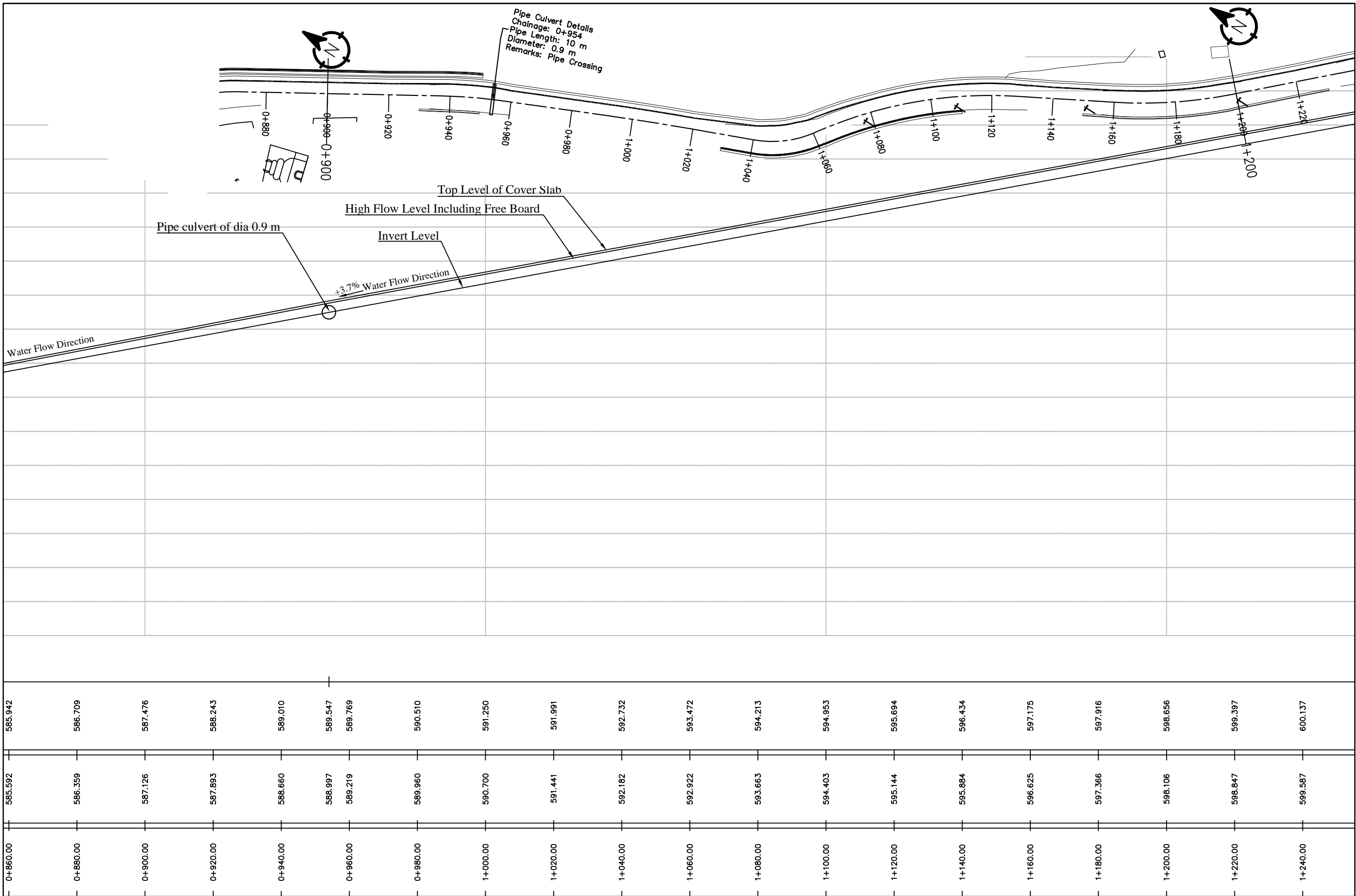
SIDE DRAIN PLAN AND PROFILE
SECTION - II

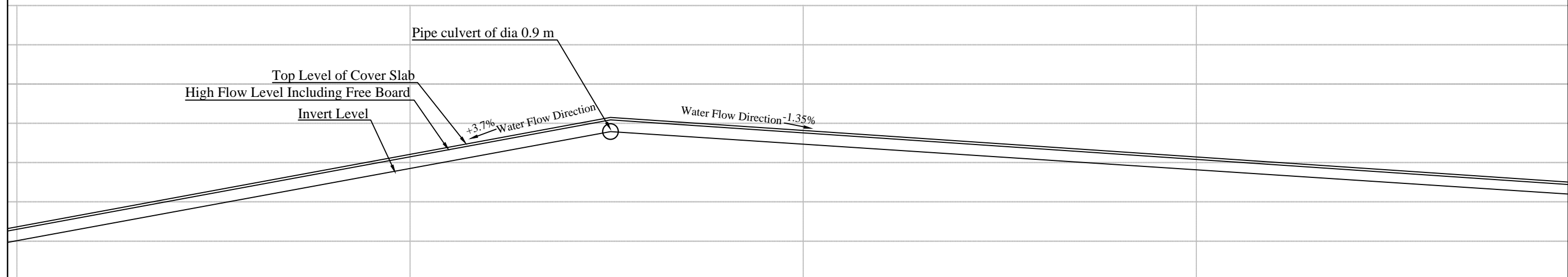
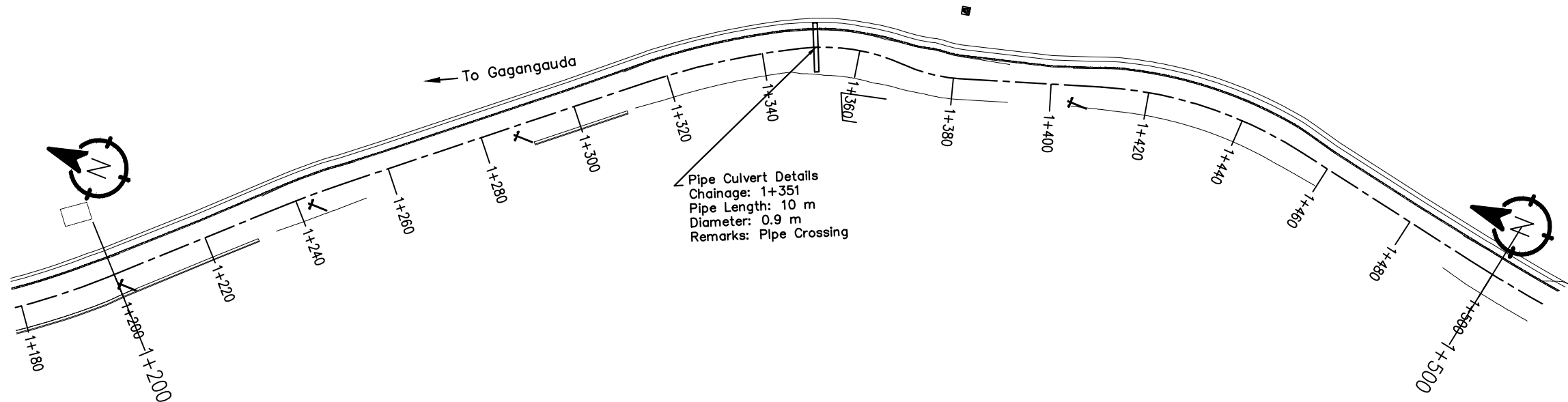
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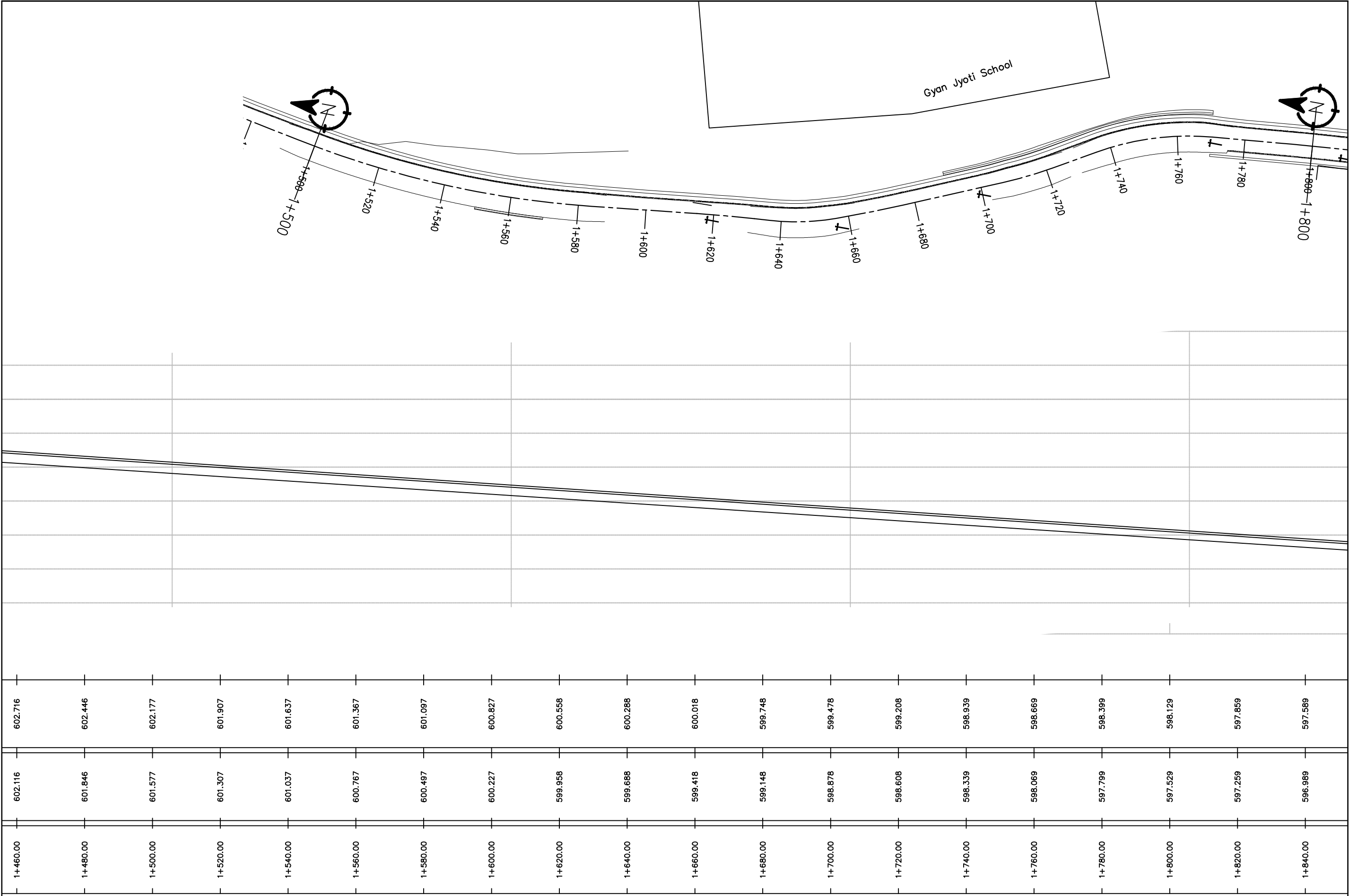


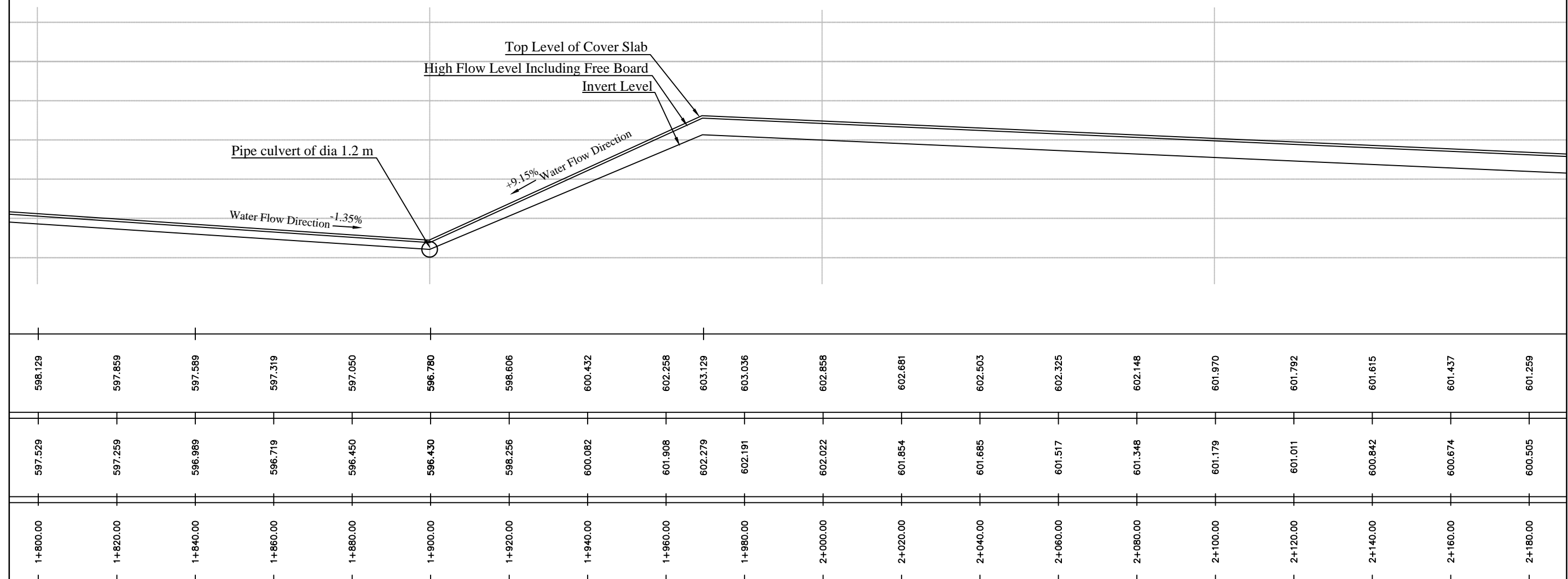
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577.389	577.914	578.438	578.963	579.487	580.012	580.537	581.061	581.586	582.111	582.635	583.160	583.684	584.209	584.537	584.825	585.592	586.359	587.126	587.893	588.660
0+560.00	0+580.00	0+600.00	0+620.00	0+640.00	0+660.00	0+680.00	0+700.00	0+720.00	0+740.00	0+760.00	0+780.00	0+800.00	0+820.00	0+840.00	0+860.00	0+880.00	0+900.00	0+920.00	0+940.00	

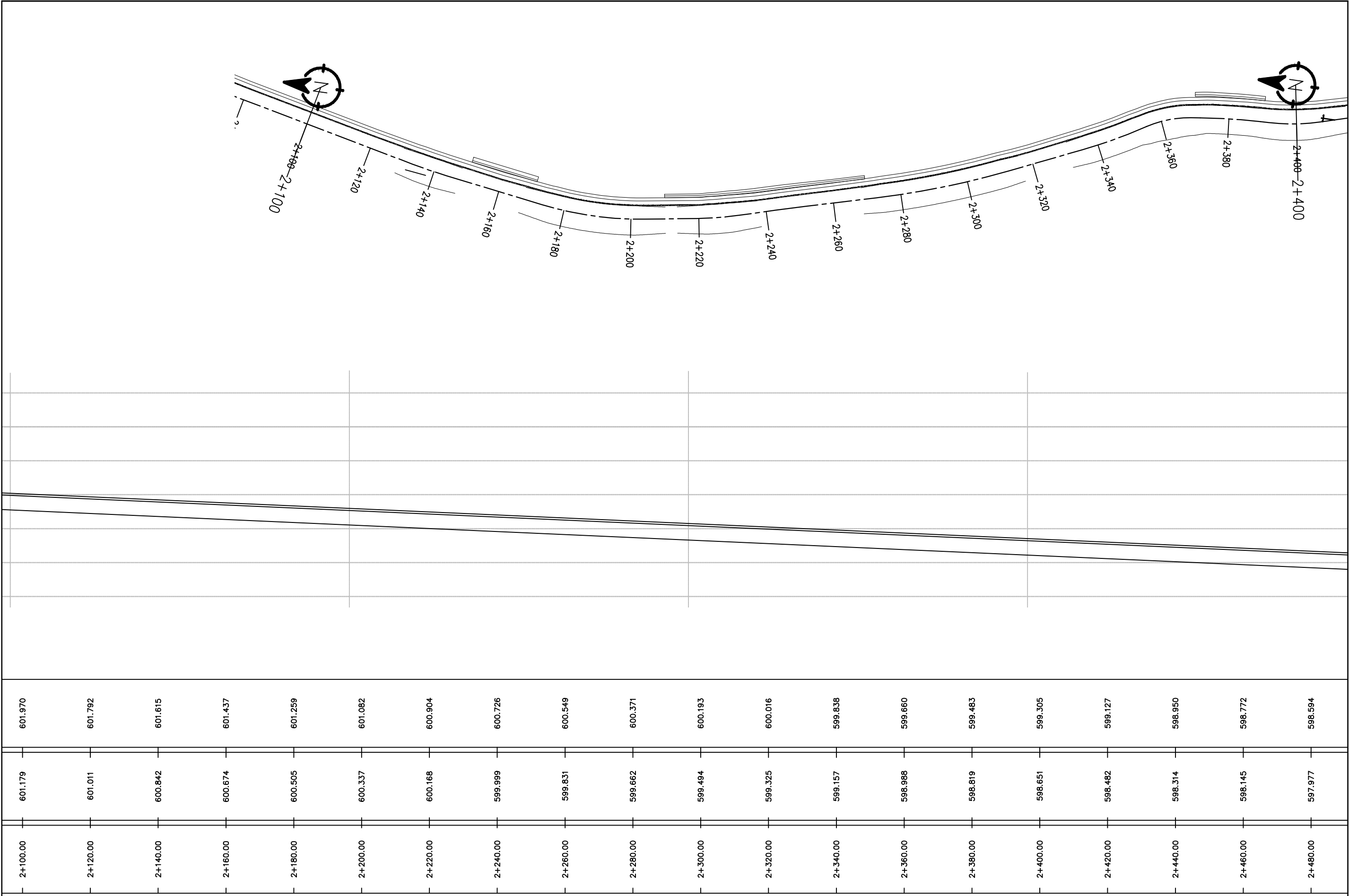


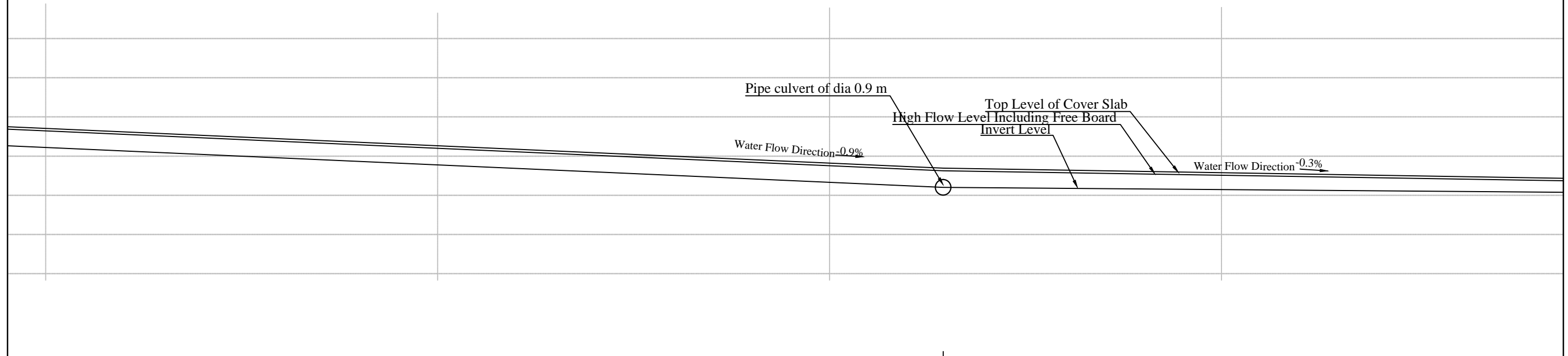
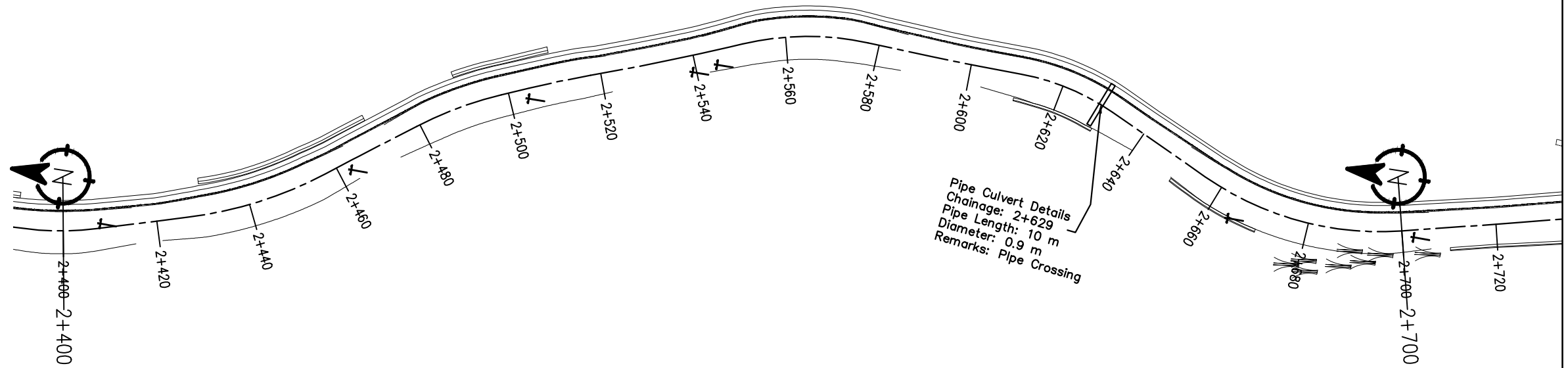


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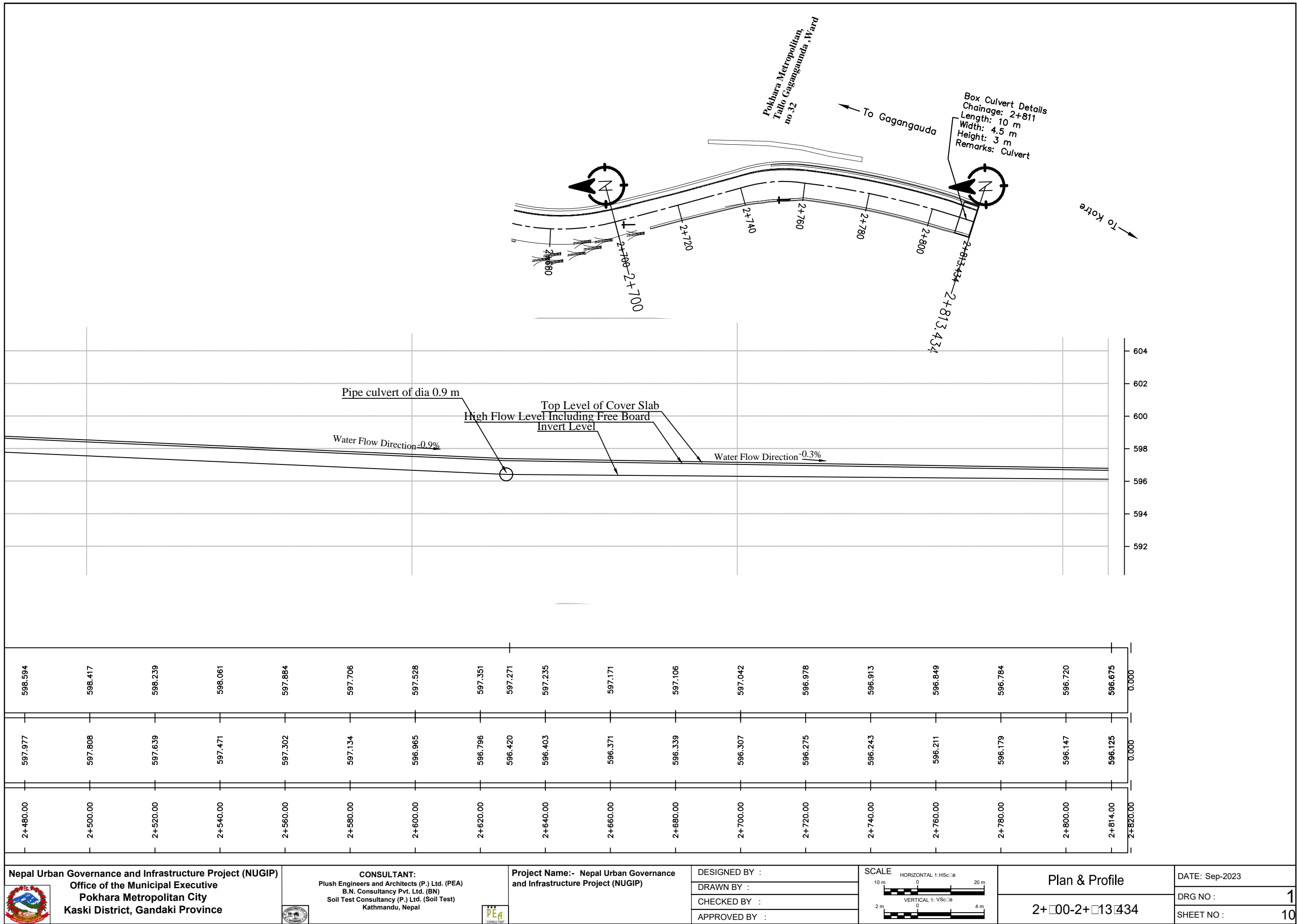




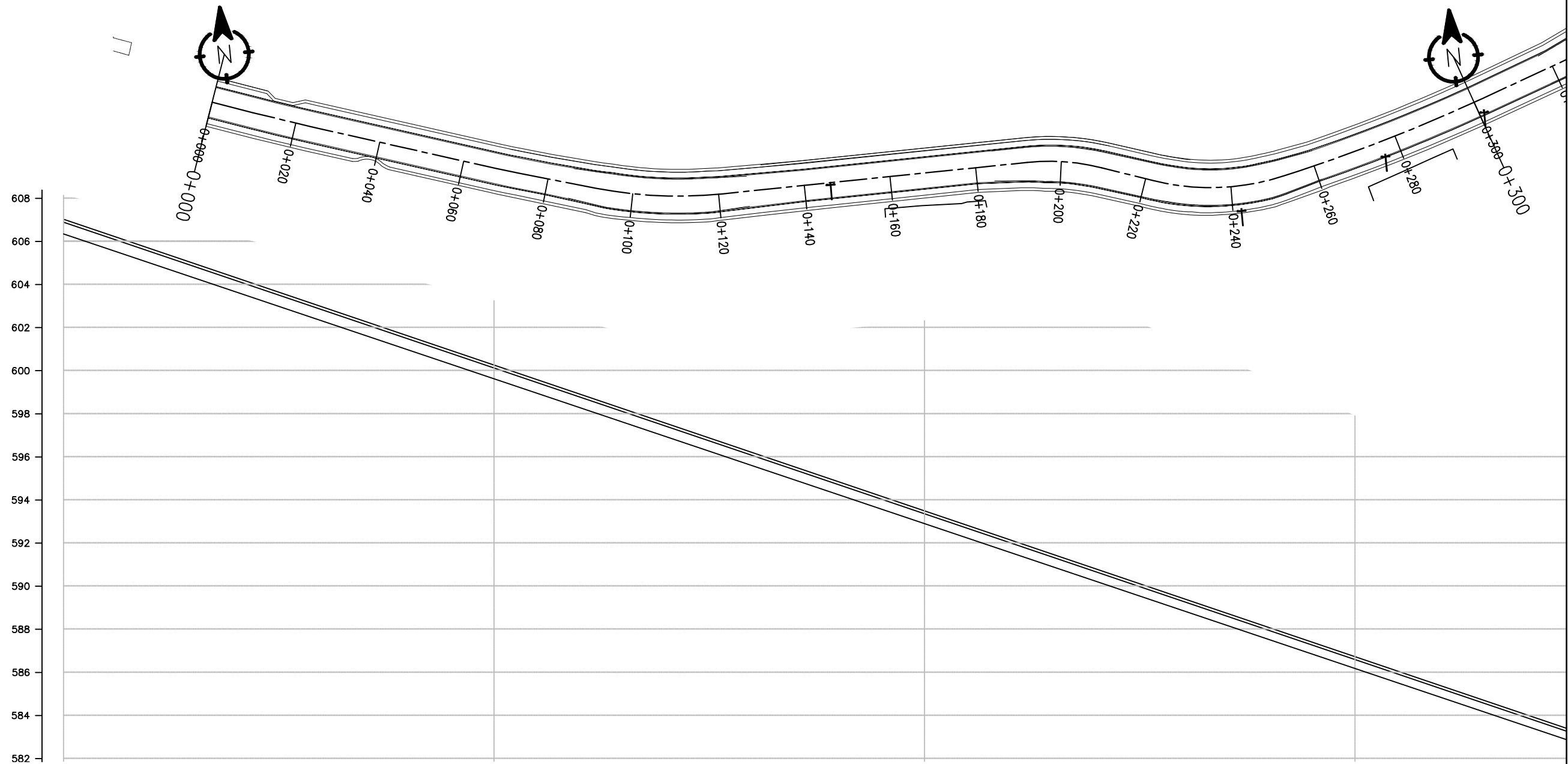




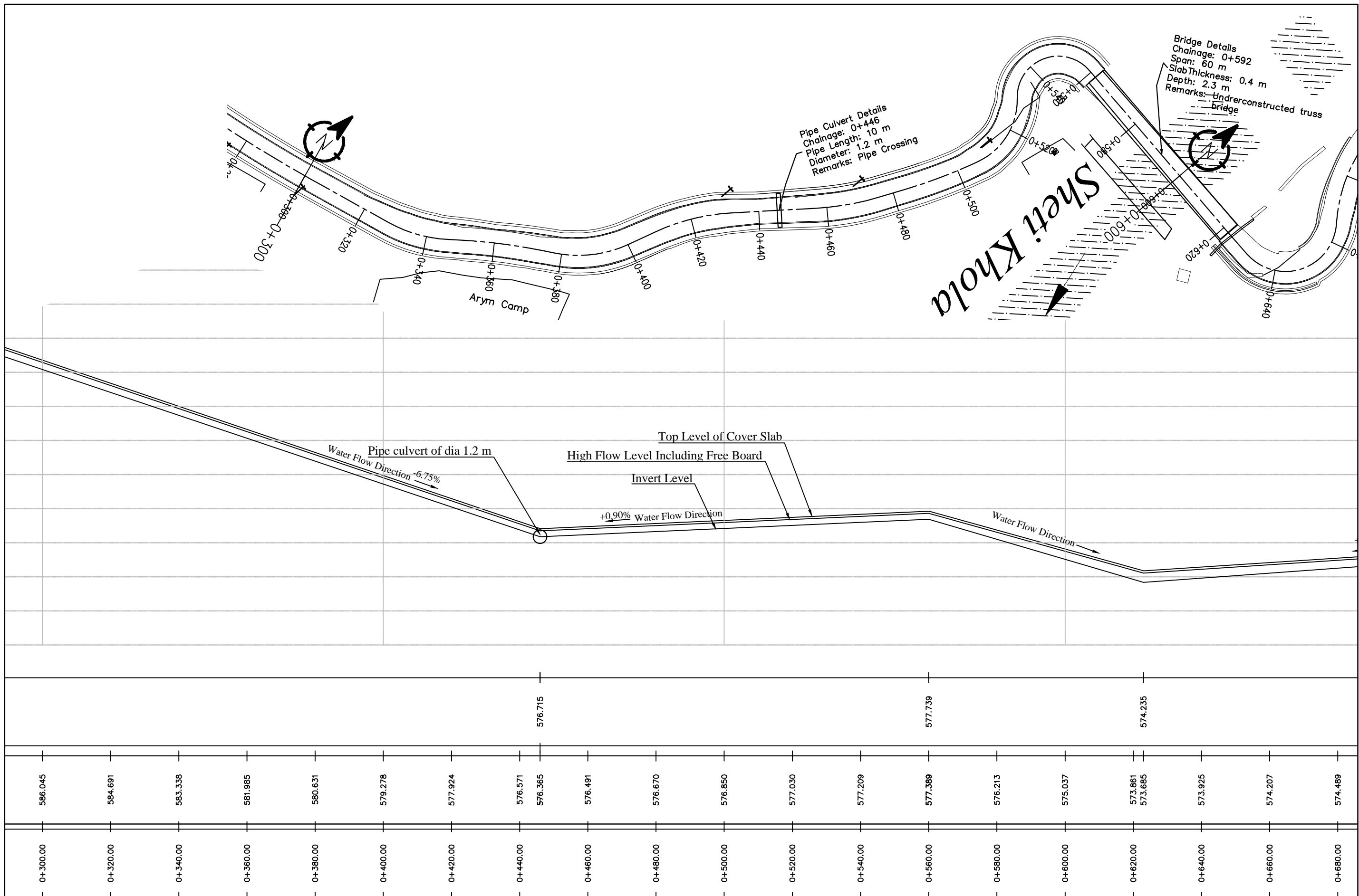
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2+500.00	597.808	598.417
2+520.00	597.639	598.239
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2+620.00	596.796	597.351
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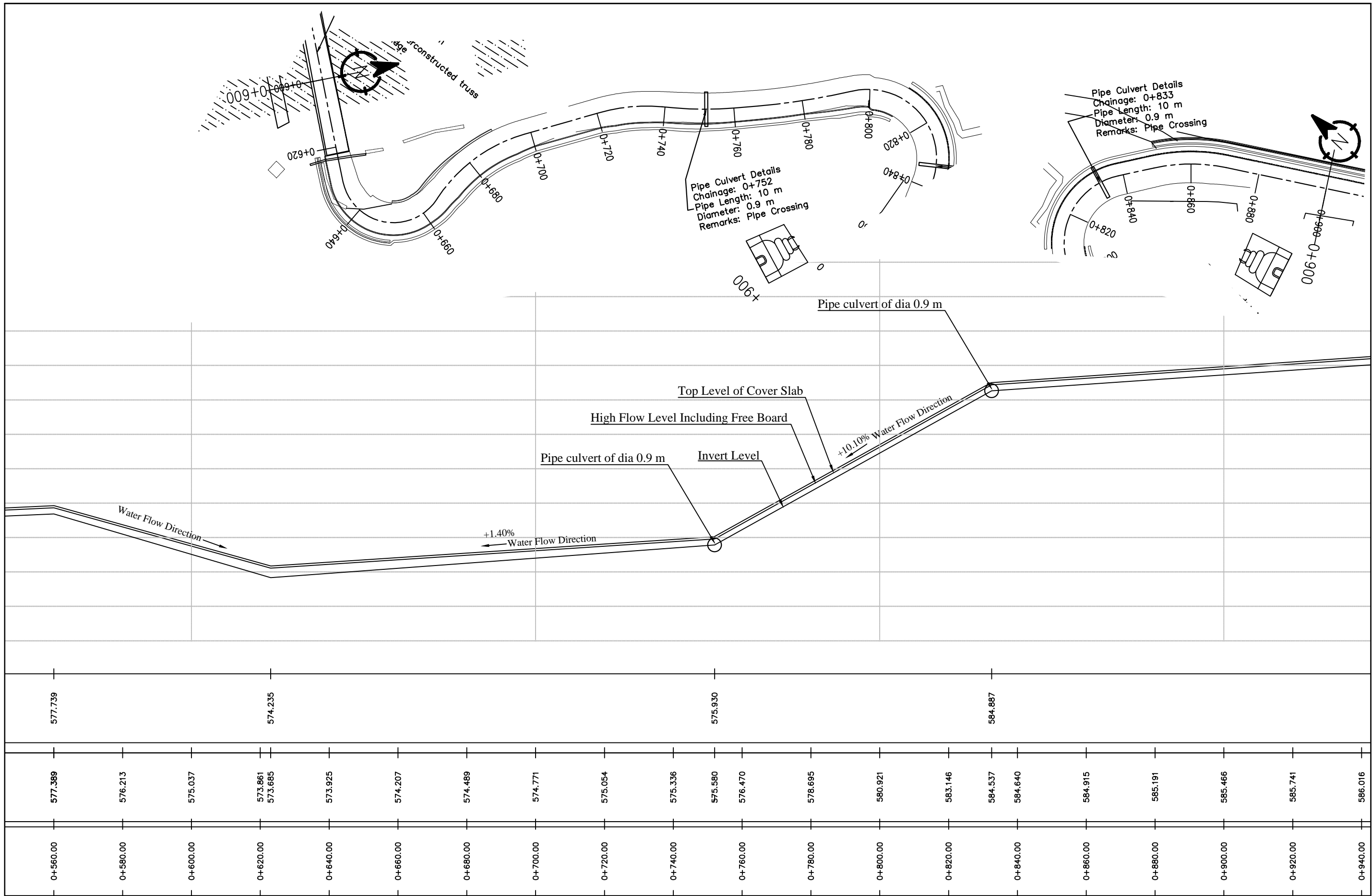


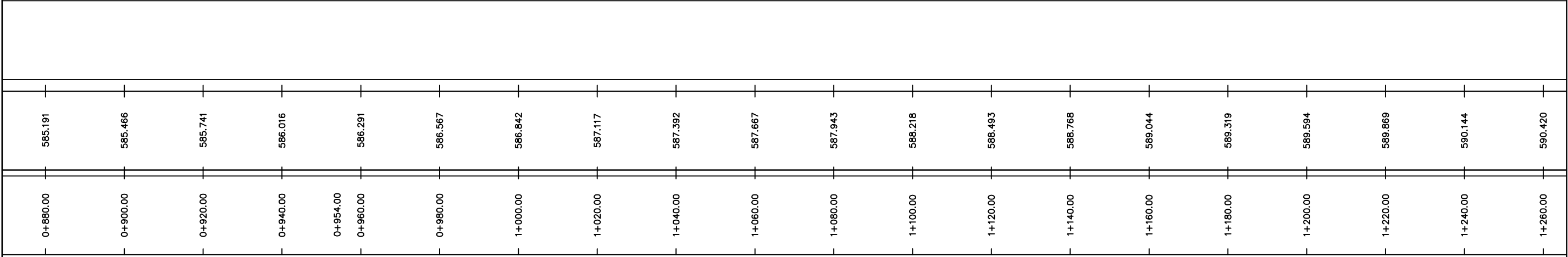
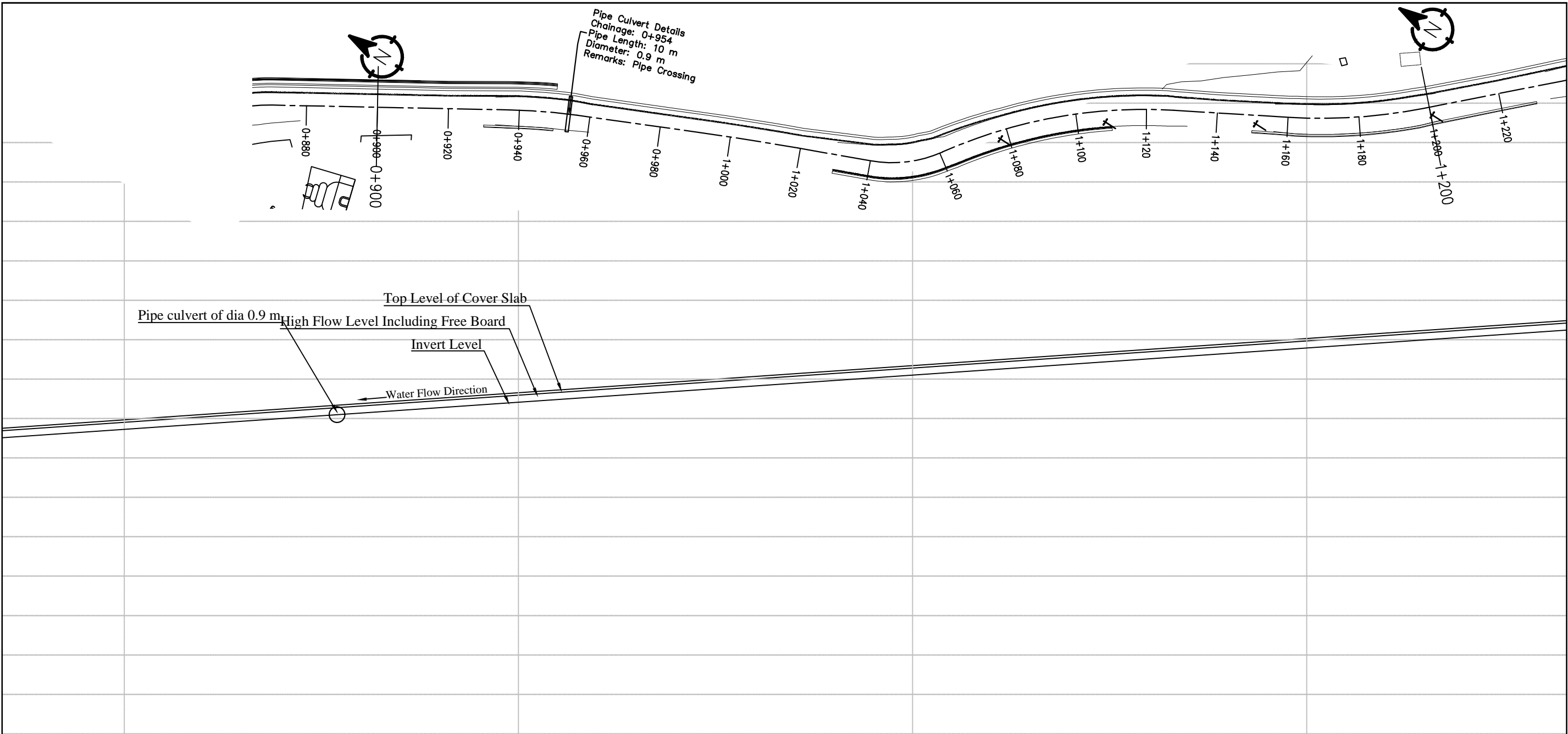
RIGHT SIDE

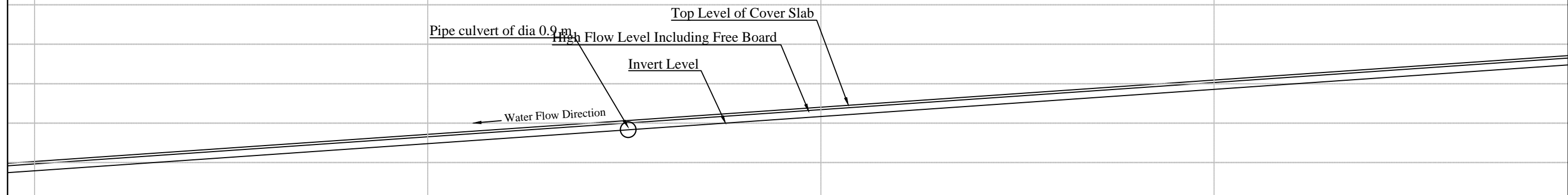
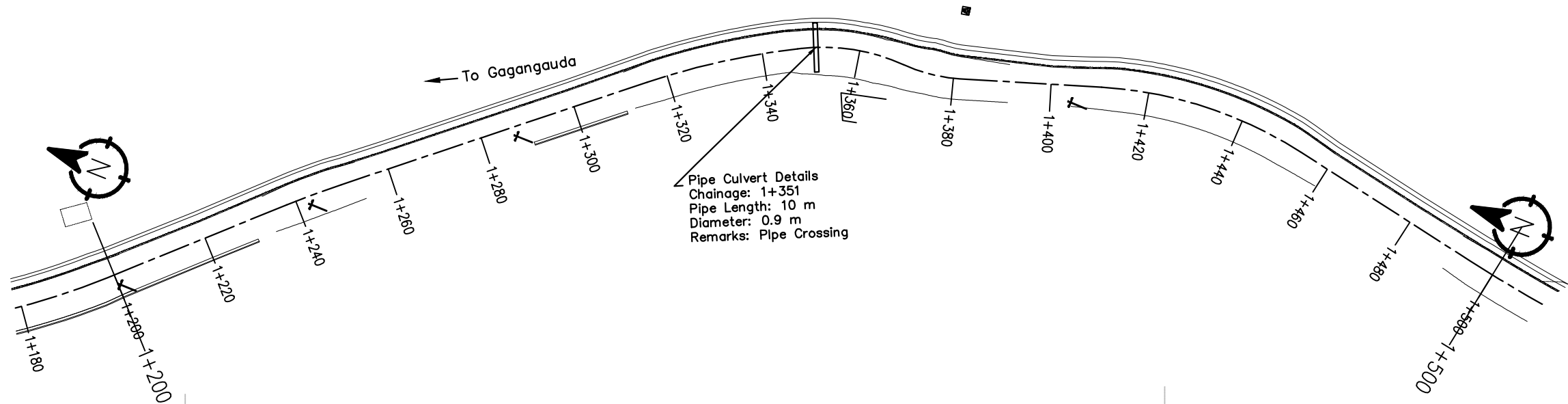


HFL LEVEL (m)	606.895																		
INVERT LEVEL (m)	606.345	604.992	603.638	602.285	600.932	599.578	598.225	596.871	595.518	594.165	592.811	591.458	590.105	588.751	587.398	586.045	584.691	583.338	
CHAINAGE (km)	0+000.00	0+020.00	0+040.00	0+060.00	0+080.00	0+100.00	0+120.00	0+140.00	0+160.00	0+180.00	0+200.00	0+220.00	0+240.00	0+260.00	0+280.00	0+300.00	0+320.00	0+340.00	

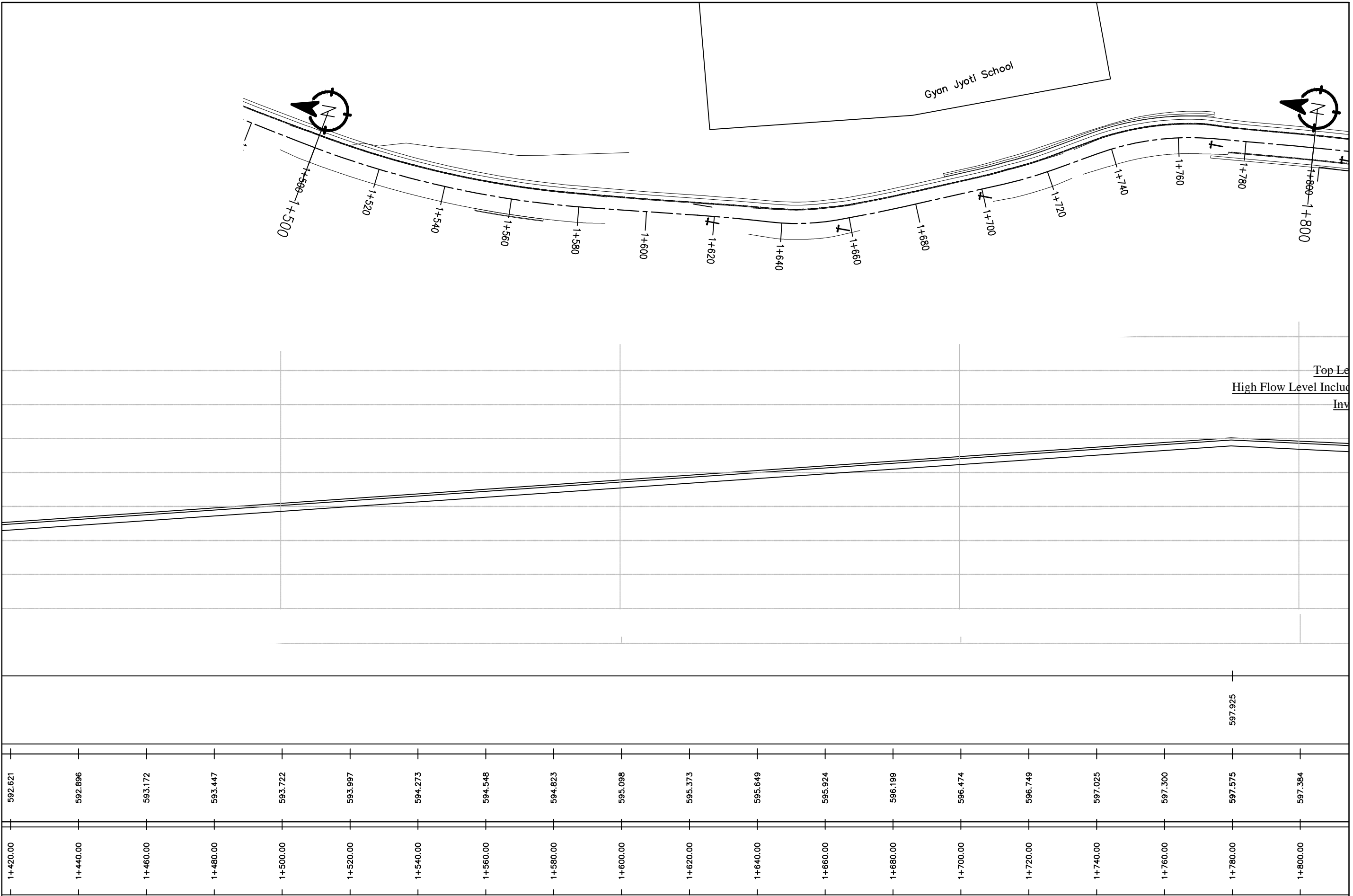


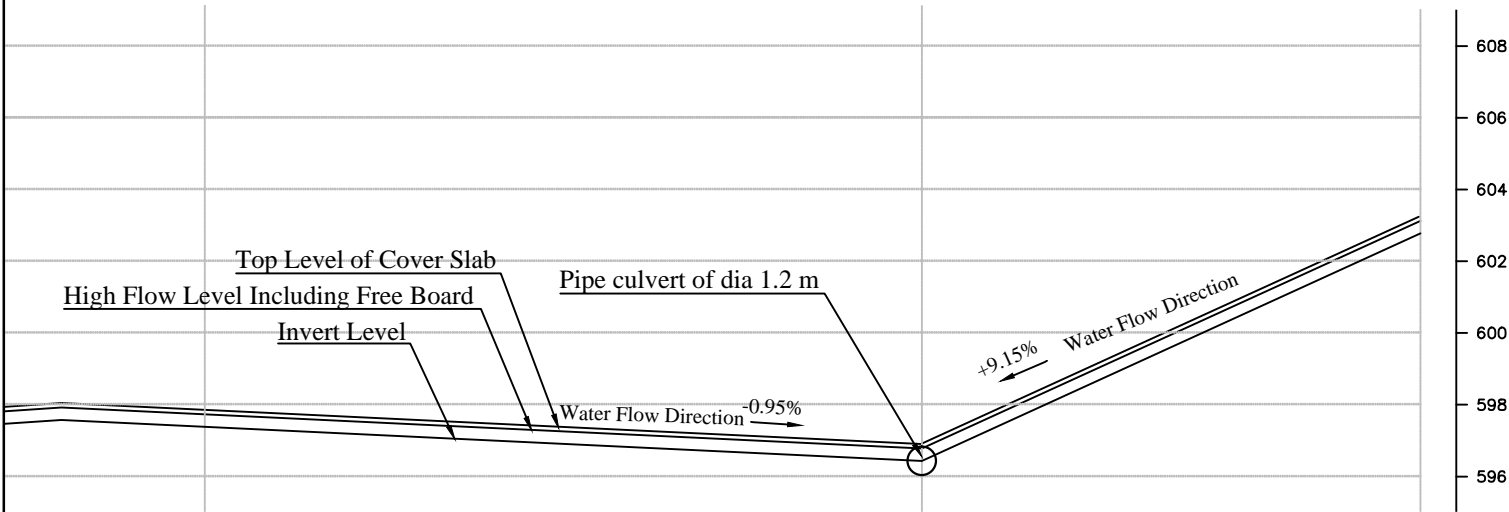
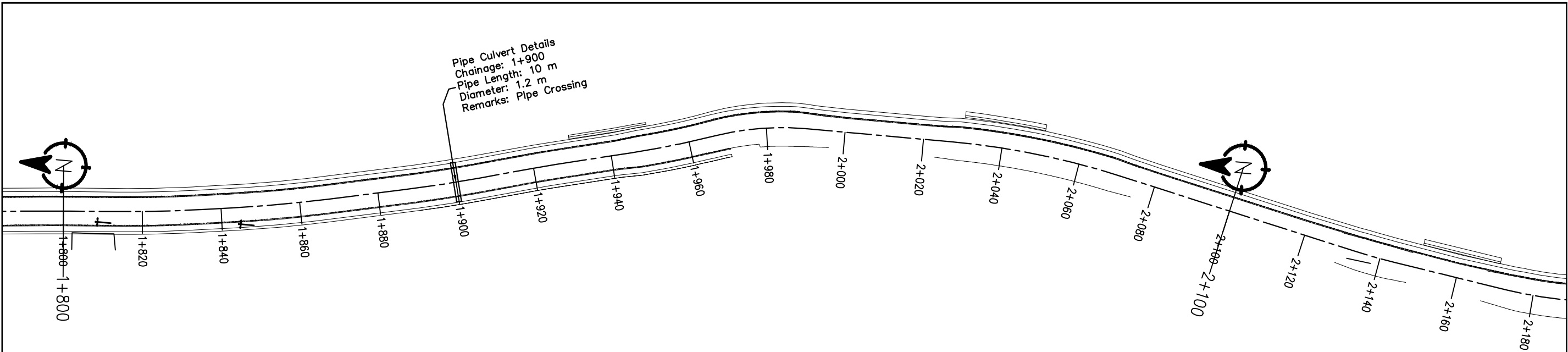




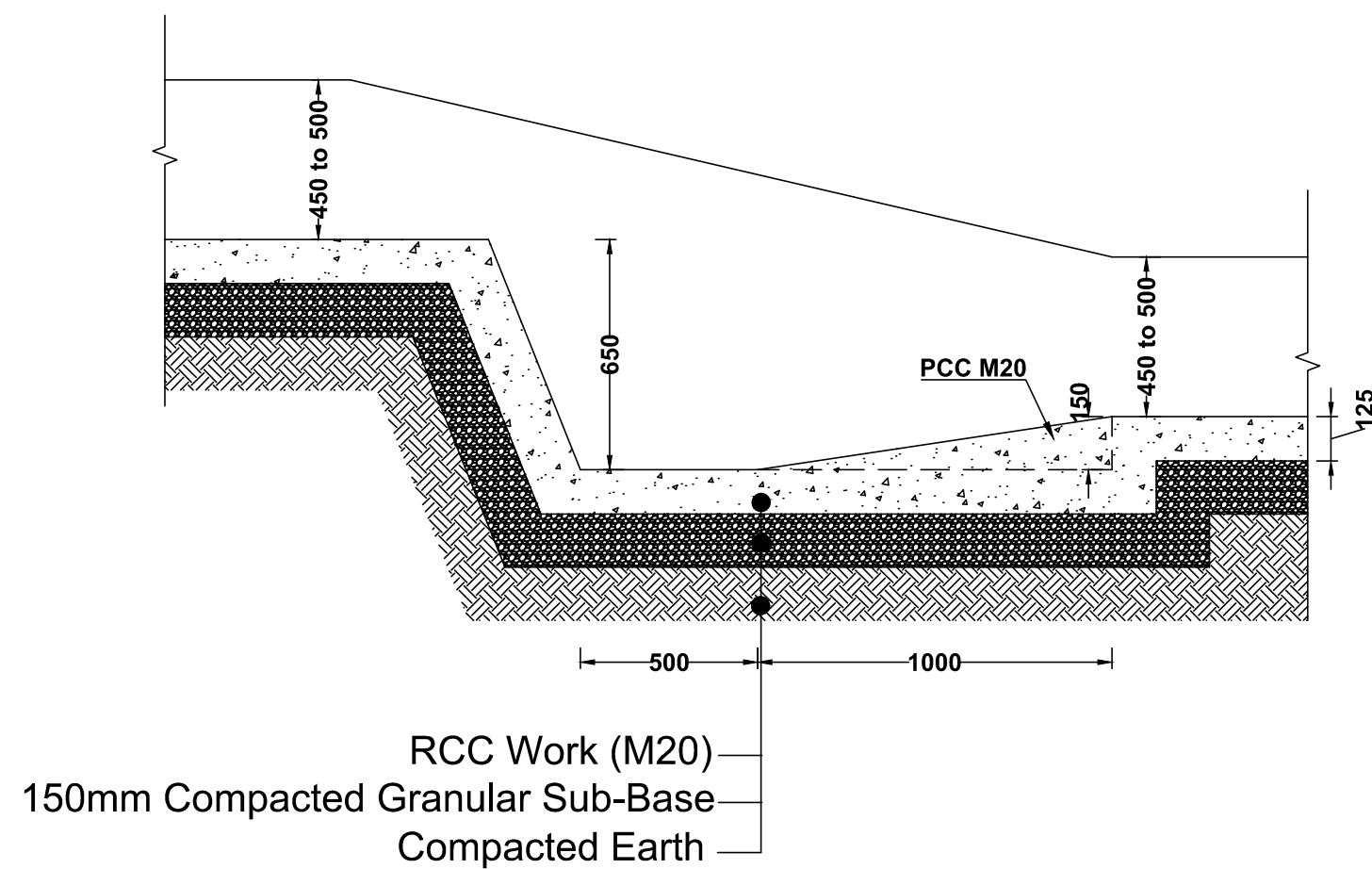


589.594	589.869	590.144	590.420	590.695	590.970	591.245	591.520	591.796	592.071	592.346	592.621	592.896	593.172	593.447	593.722	593.997	594.273	594.548	594.823
1+200.00	1+220.00	1+240.00	1+260.00	1+280.00	1+300.00	1+320.00	1+340.00	1+360.00	1+380.00	1+400.00	1+420.00	1+440.00	1+460.00	1+480.00	1+500.00	1+520.00	1+540.00	1+560.00	1+580.00





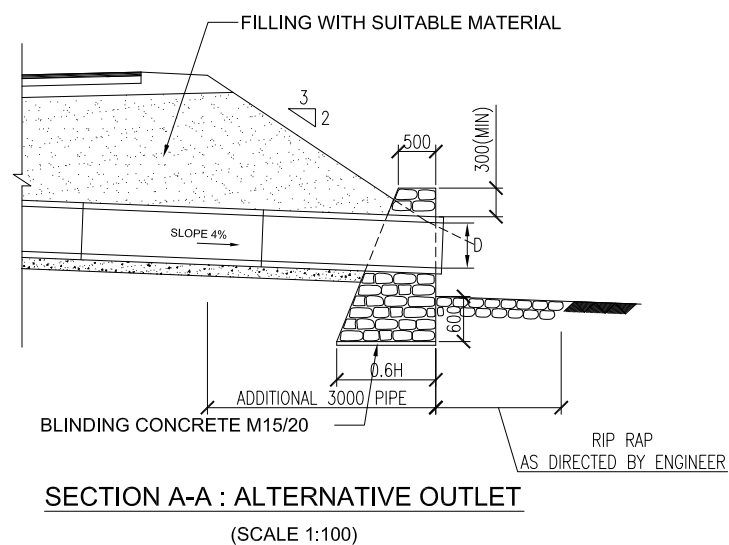
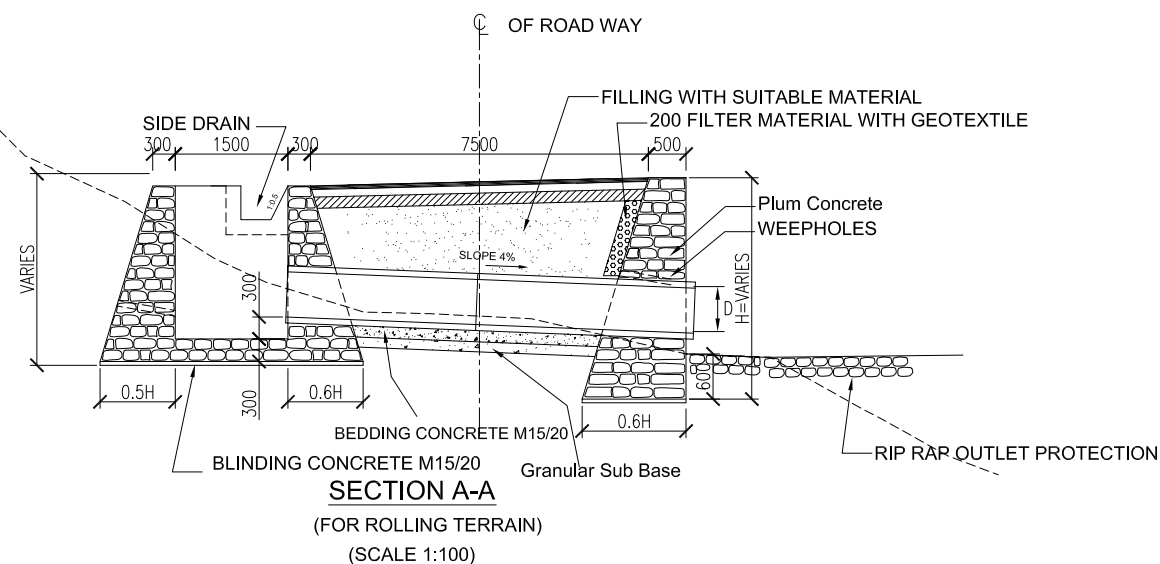
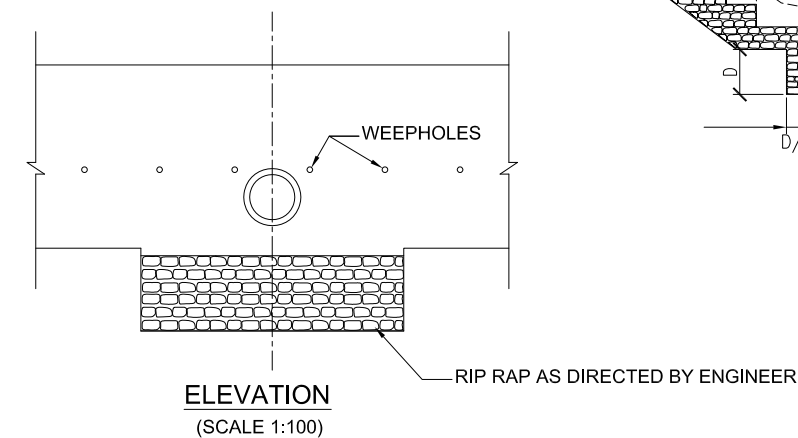
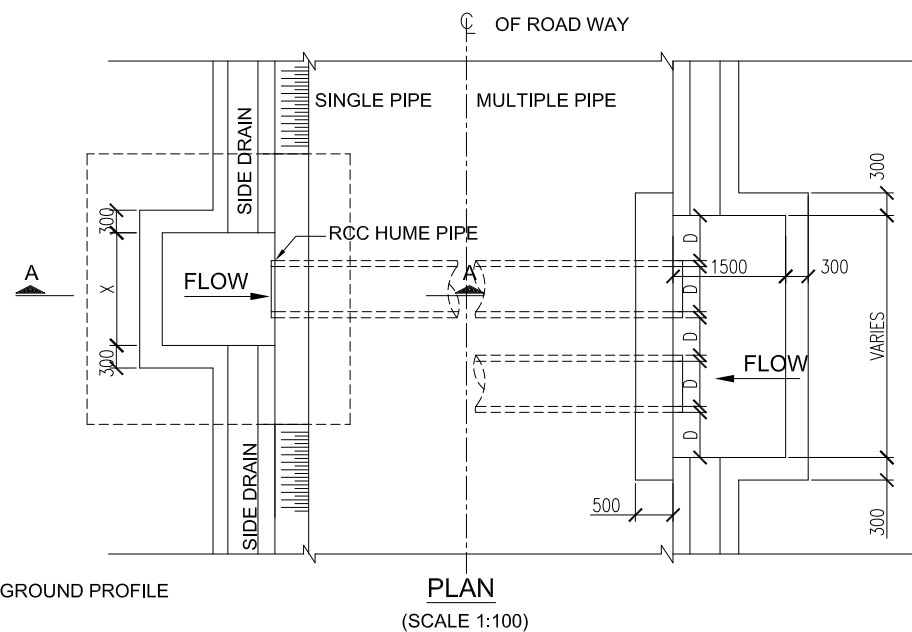
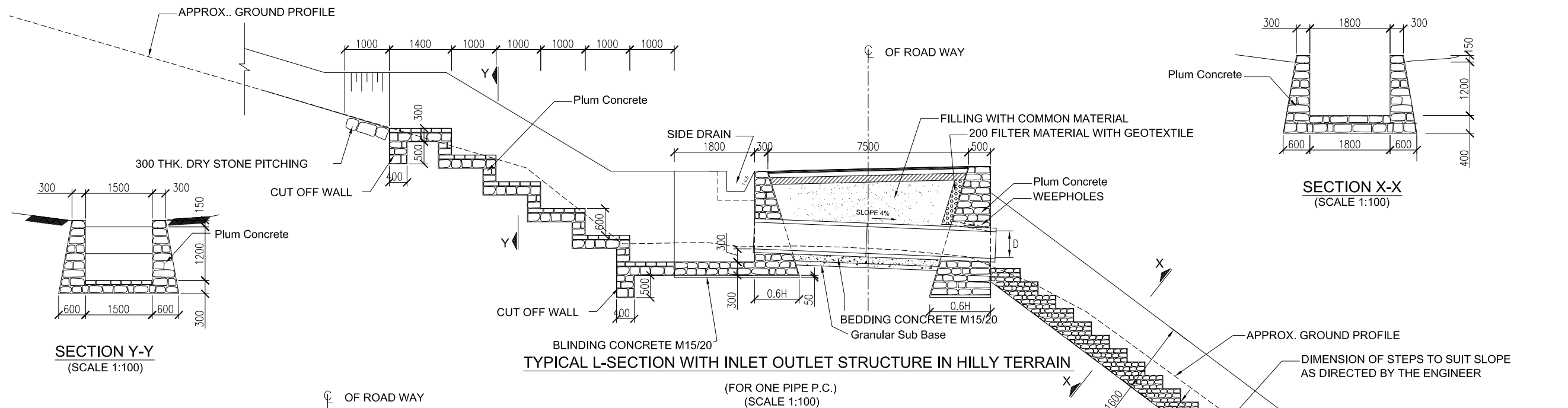
597.925							596.780				603.129
597.575	597.384	597.193	597.002	596.812	596.621	596.430	598.256	600.082	601.908	602.779	
1+780.00	1+800.00	1+820.00	1+840.00	1+860.00	1+880.00	1+900.00	1+920.00	1+940.00	1+960.00	1+980.00	



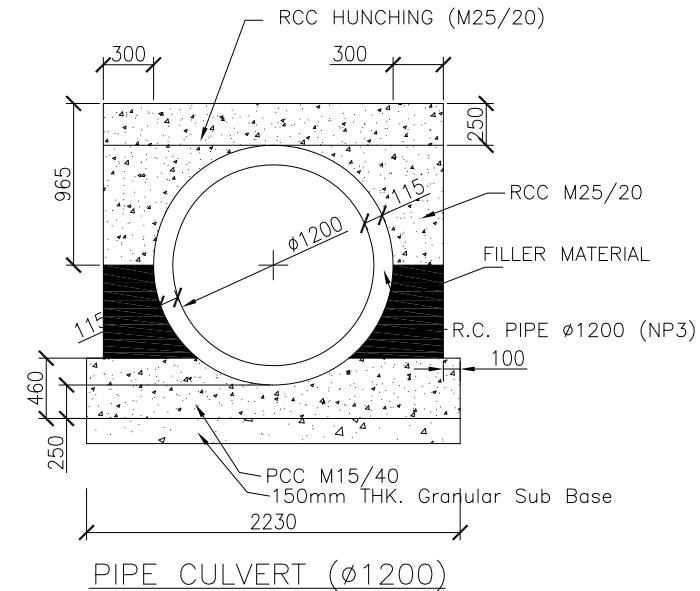
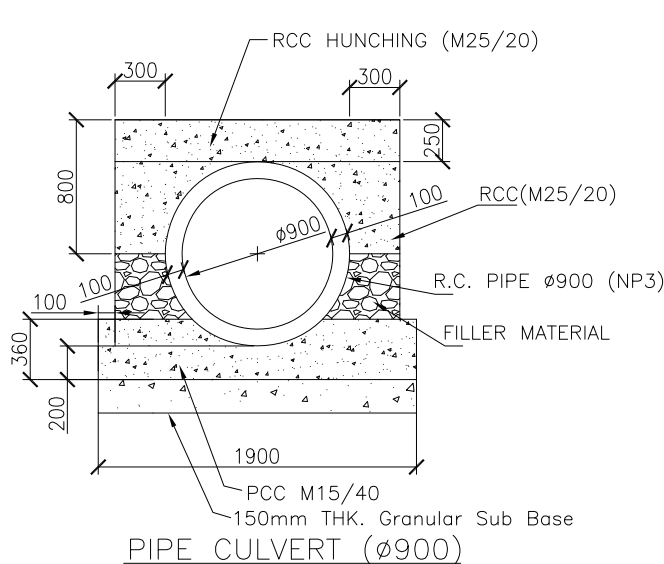
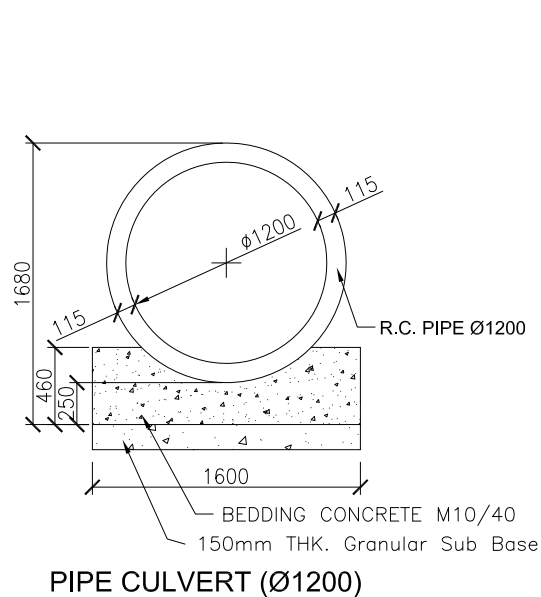
Vertical Drop For Drain

Vertical Drop Details					
S.N.	Chainage		Proposed Length Between each Drop (DL)	Proposed Height of Drop (DL)	Remarks
	From	To			
Section-I Right side drain					
1	0+000	0+500	83.33	0.50	
2	0+500	1+090	58.97	0.53	
3	4+111	3+793	17.65	0.53	
4	4+540	5+308	42.67	0.51	
5	5+549	5+308	15.06	0.58	
6	5+549	5+880	17.42	0.58	
7	5+880	6+270	11.47	0.60	
8	7+726	7+531	21.69	0.52	
9	7+969	7+721	20.67	0.52	
Section-I Left side drain					
1	0+000	0+500	83.33	0.50	
2	0+500	1+090	58.97	0.53	
3	4+111	3+793	24.44	0.53	
4	6+280	6+481	28.71	0.51	
Section-II Left side drain					
1	0+000	0+446	34.30	0.60	
Section-II Right side drain					
1	0+000	0+446	49.56	0.52	
2	1+970	1+900	23.18	0.49	

TYPICAL DRAWINGS



Note
Plum Concrete (60% PCC M15 & 40% Plum)



For Section - I

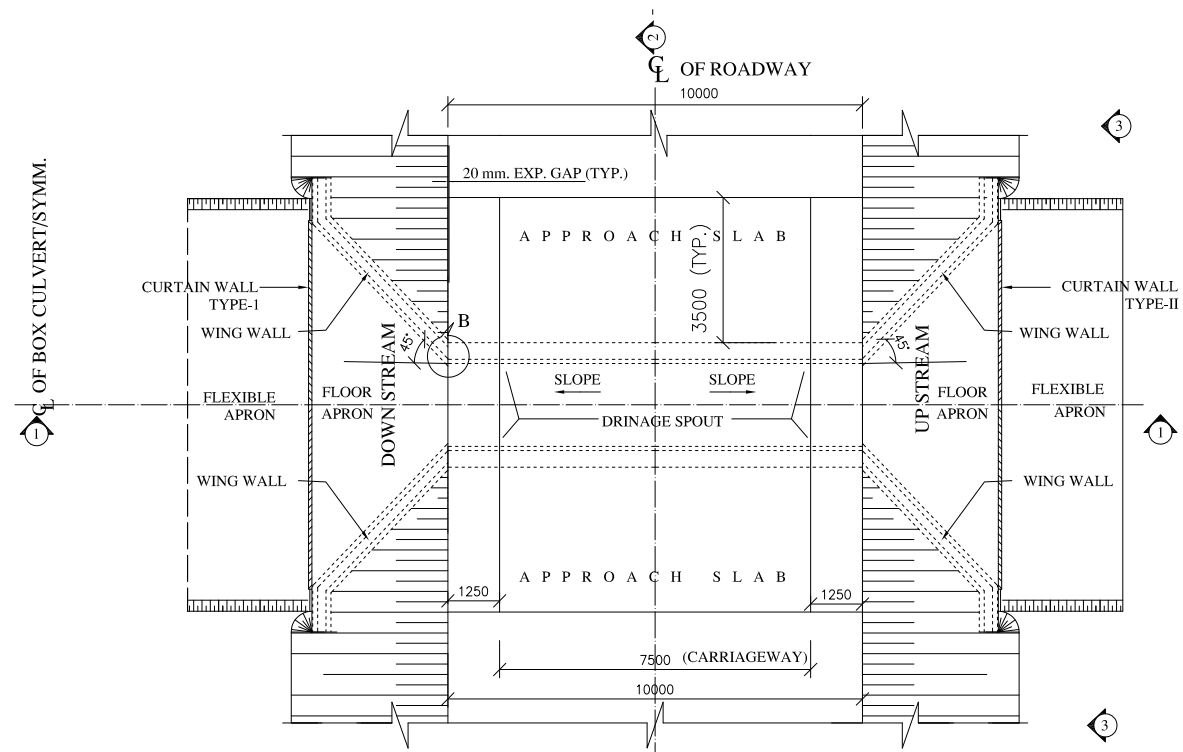
Summary of Cross Drainage Structures (Hume Pipe Types)

S.N.	Chainage	Proposed Bed level (m)	Proposed structure (Pipe Culvert) @	Structure Type	Cushion (60mm m) / Hunching (20mm thick M25)/ Cushion	Adopted FRL	Remark	Head Wall		Width of Foundation	Height of Cutoff Wall from Bed Level (m)
								Length (m)	Height (m)		
1	2+330	644.52	0.90	Hume Pipe Culvert	0.25	645.67	Single cell	3.30	1.85	1.11	1
2	5+873	599.08	1.20	Hume Pipe Culvert	1	601.28	Single cell/Cushion-0.75m	4.20	3.1	1.86	0.99
3	6+481	554.53	1.20	Hume Pipe Culvert	0.25	555.98	Single cell	4.20	2.25	1.35	1.04
4	6+750	542.64	1.20	Hume Pipe Culvert	0.25	544.09	Single cell	4.20	2.25	1.35	1.07
5	7+124	539.34	0.90	Hume Pipe Culvert	0.25	540.49	Single cell	3.30	1.85	1.11	1
6	7+400	537.51	0.90	Hume Pipe Culvert	0.25	538.66	Single cell	3.30	1.85	1.11	1
7	7+722	557.04	1.20	Hume Pipe Culvert	0.25	558.49	Single cell	4.20	2.25	1.35	1.5
8	7+989	583.59	0.90	Hume Pipe Culvert	0.25	584.74	Single cell	3.30	1.85	1.11	1
9	8+320	599.36	1.20	Hume Pipe Culvert	0.25	600.81	Single cell	4.20	2.25	1.35	1.1
10	8+560	598	1.20	Hume Pipe Culvert	0.25	599.45	Single cell	4.20	2.25	1.35	1.37
11	8+828	594.73	0.90	Hume Pipe Culvert	0.25	595.88	Single cell	3.30	1.85	1.11	1

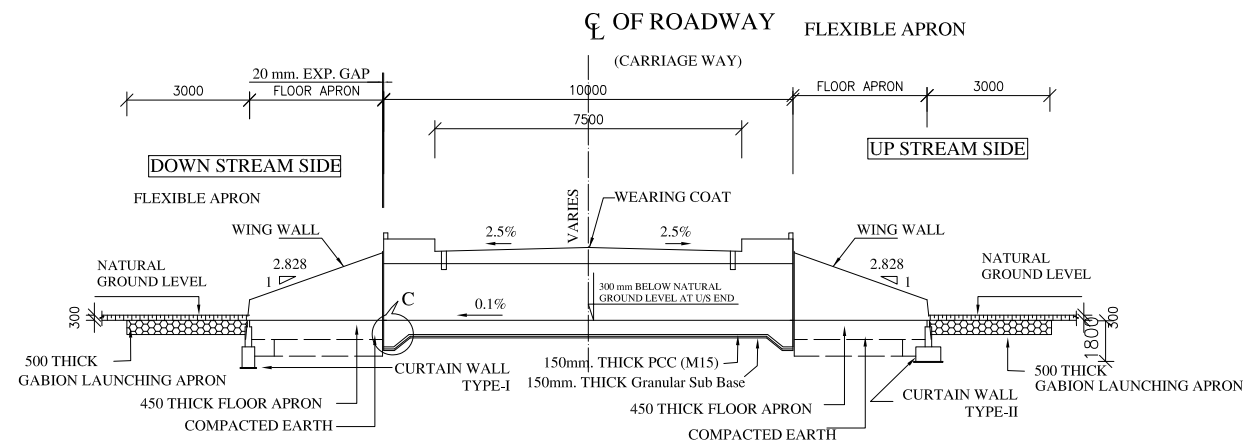
For Section - II

Summary of Cross Drainage Structures (Pipe Culverts)

S.N.	Chainage	Proposed Bed level (m)	Proposed structure (Pipe Culvert) @	Remark	Hunching (20mm thick M25)+ Cushion	Adopted FRL	Remark	Head Wall		Width of Foundation	Height of Cutoff Wall from Bed Level (m)
								Length (m)	Height (m)		
1	0+446	575.33	1.20	Hume Pipe Culvert	0.25	576.78	Single cell	4.20	2.25	1.35	1.39
2	0+752	575.04	0.90	Hume Pipe Culvert	0.25	576.19	Single cell	3.30	1.85	1.11	1
3	0+832.5	583.93	0.90	Hume Pipe Culvert	0.25	585.08	Single cell	3.30	1.85	1.11	1
4	0+954	588.32	0.90	Hume Pipe Culvert	0.25	589.47	Single cell	3.30	1.85	1.11	1
5	1+351	603.14	0.90	Hume Pipe Culvert	0.25	604.29	Single cell	3.30	1.85	1.11	1
6	1+900	595.52	1.20	Hume Pipe Culvert	0.25	596.97	Single cell	4.20	2.25	1.35	1
7	2+629	596.06	0.90	Hume Pipe Culvert	0.25	597.21	Single cell	3.30	1.85	1.11	1



PLAN AT ROAD LEVEL

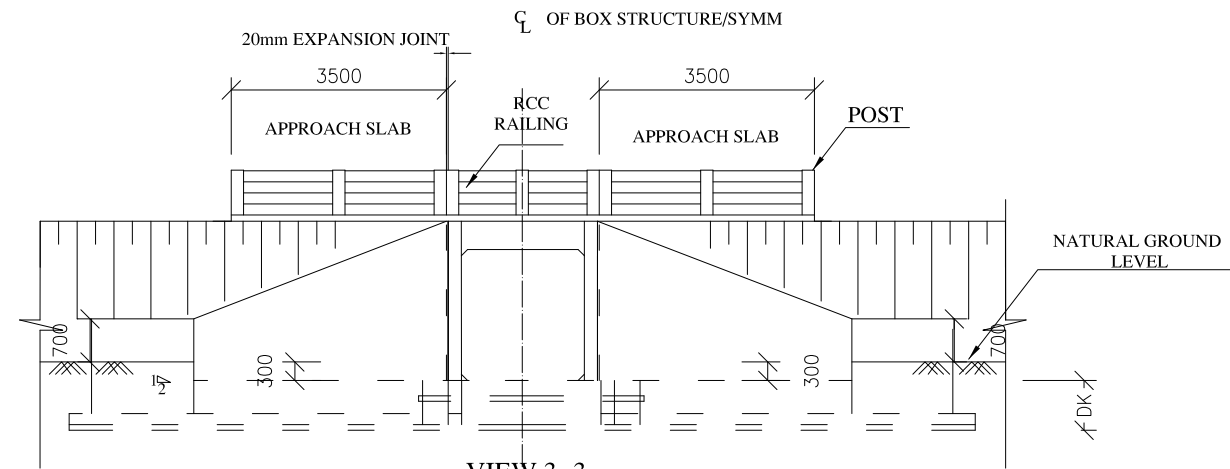


SECTION 1-1

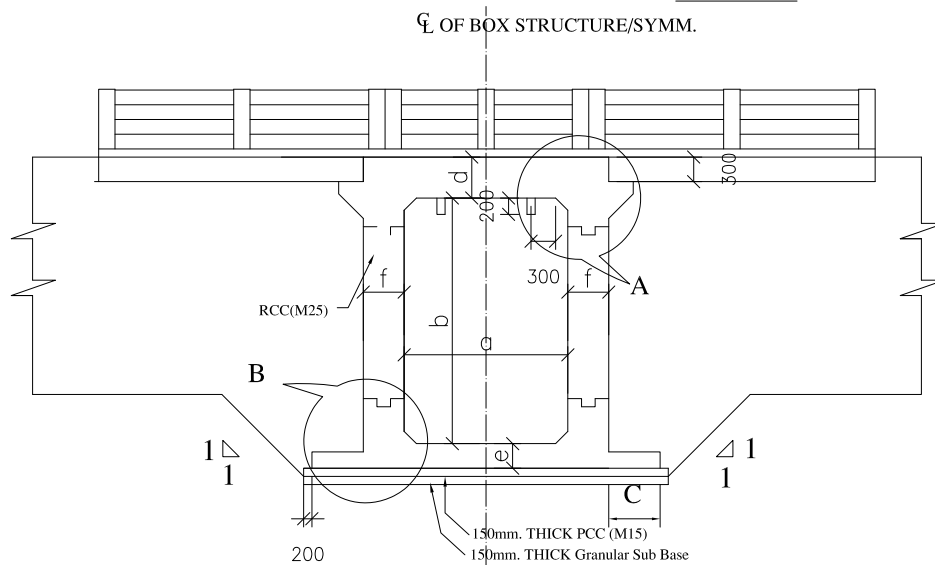
TABLE SHOWING SALIENT DIMENSIONS OF SINGLE CELL BOX CULVERT

Box Cell Designation	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)	f (mm)	g (mm)
3 m x 2.15 m	3000	2150	900	430	420	420	NA
2 m x 2.15 m	2000	2150	500	350	380	300	NA
2.5 m x 2.15 m	2500	2150	900	430	420	420	NA

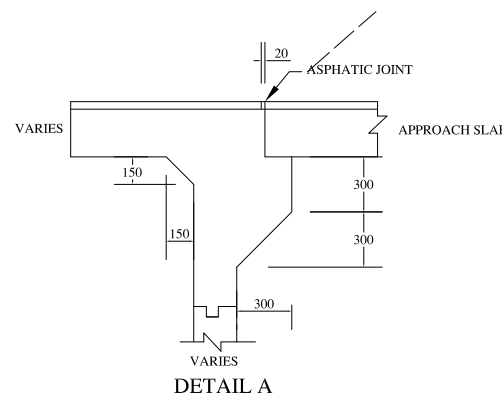
Summary of Cross Drainage Structures (Box Culvert)									
S.N.	Chainage	Proposed Bed level (m)	Proposed structure (Box Culvert) (m)		Cover Slab (mm)	Adopted FRL	Remarks	Adopted Scour Level (m)	Height of Curtain Wall From Bed Level (m) HS
			Clear Height (m)	Clear Width					
1	3+111.5	654.50	2.15	3	350	657	Single Cell (1x3)	654.00	1
2	3+793.5	650.81	2.15	2	350	653.31	Single Cell (1x2)	650.31	1
3	5+308	600.79	2.15	3	350	603.29	Single Cell (1x3)	600.30	1
4	7+531	537.80	2.15	2.5	350	540.3	Single Cell (1x2.5)	537.28	1.02
5	8+951	592.26	2.15	3	350	594.76	Single Cell (1x3)	590.76	2



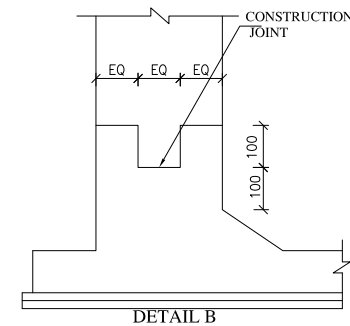
VIEW 3-3



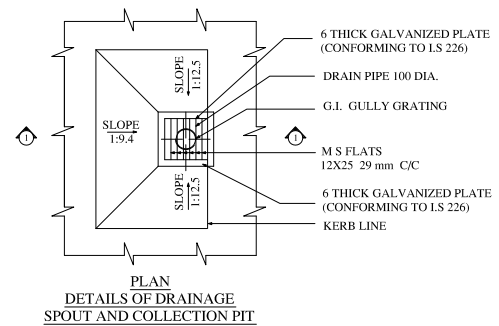
SECTION 2-2



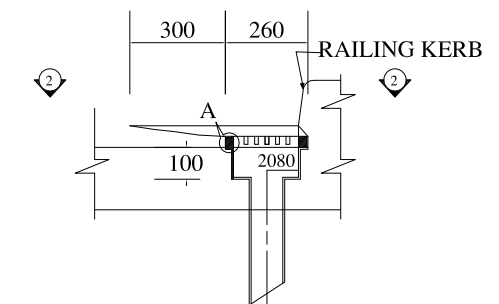
DETAIL A



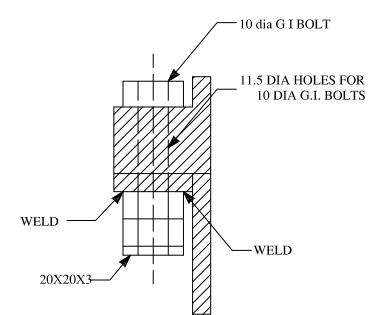
DETAIL B



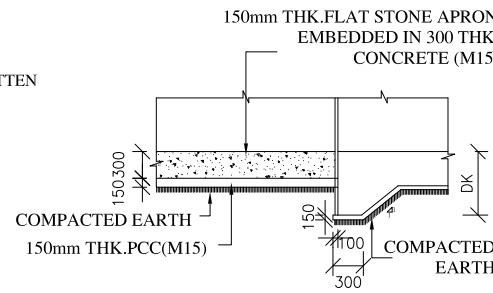
PLAN DETAILS OF DRAINAGE SPOUT AND COLLECTION PIT



SECTION 1-1



DETAIL -A



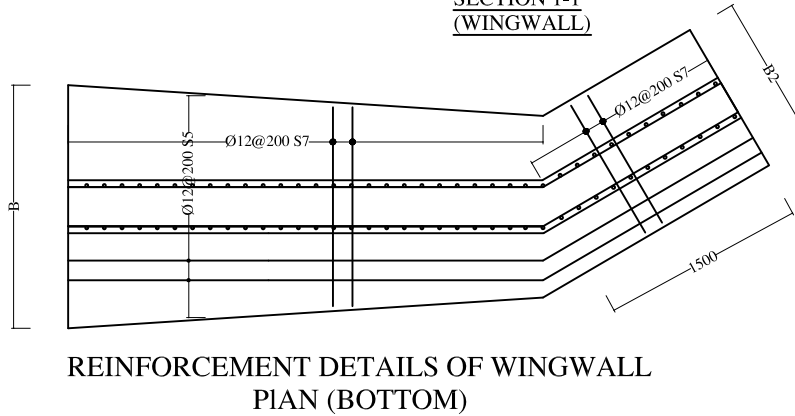
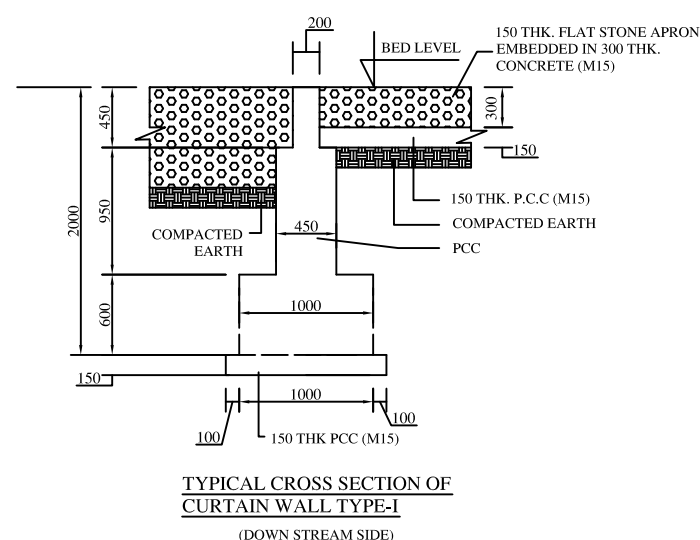
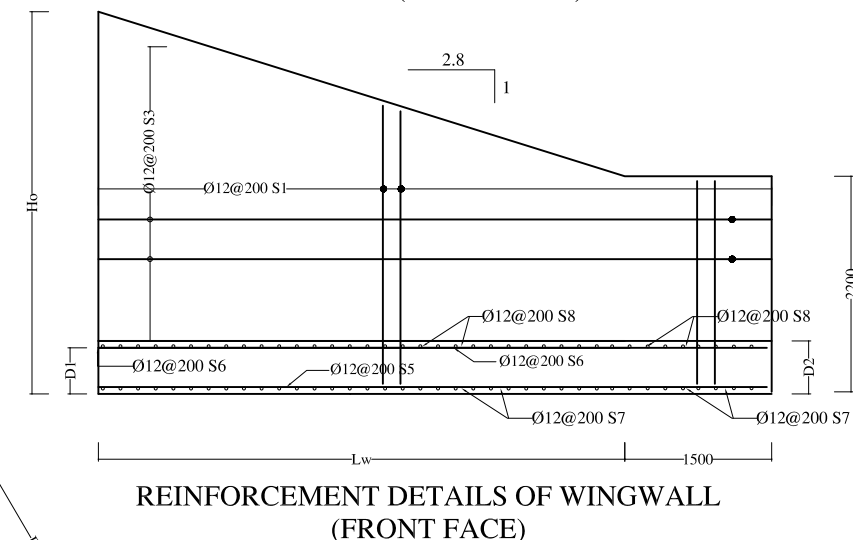
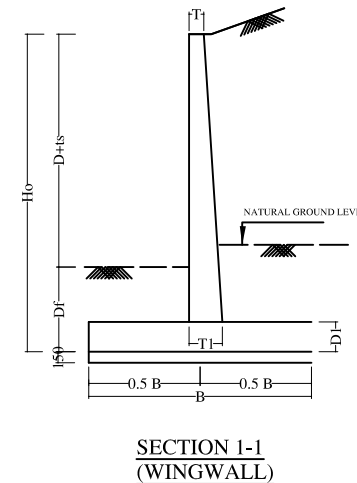
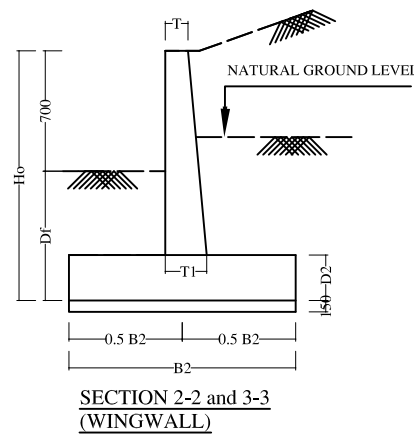
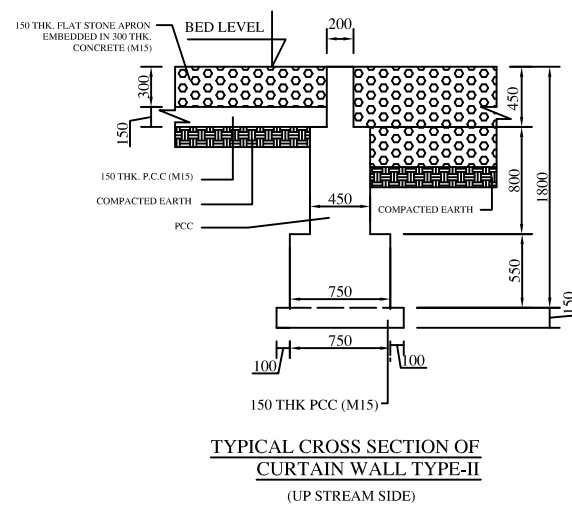
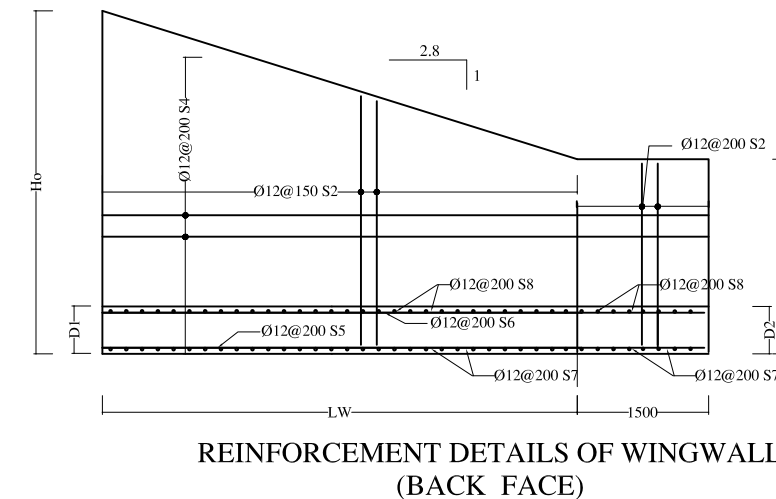
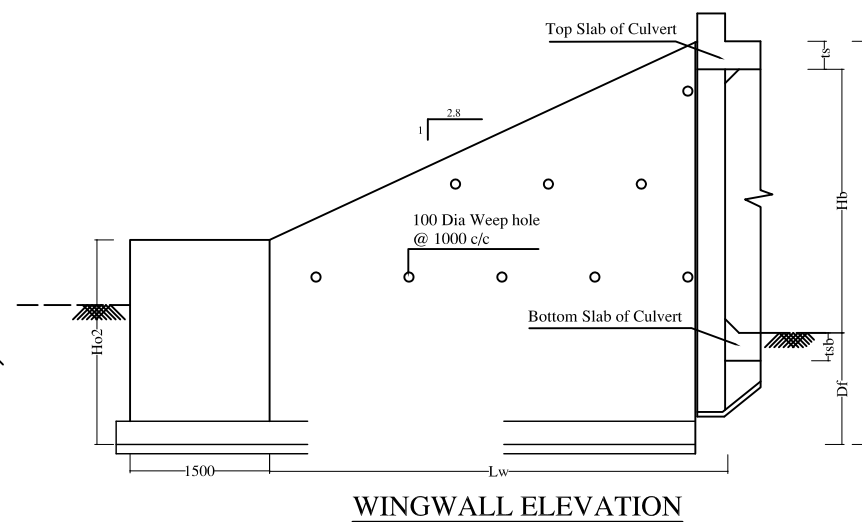
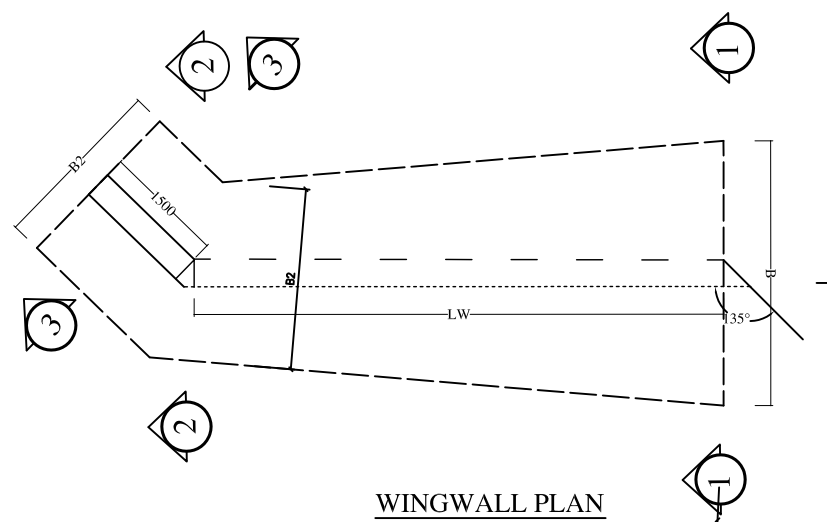
DETAIL -C

PLAN AT 2-2

NOTES:

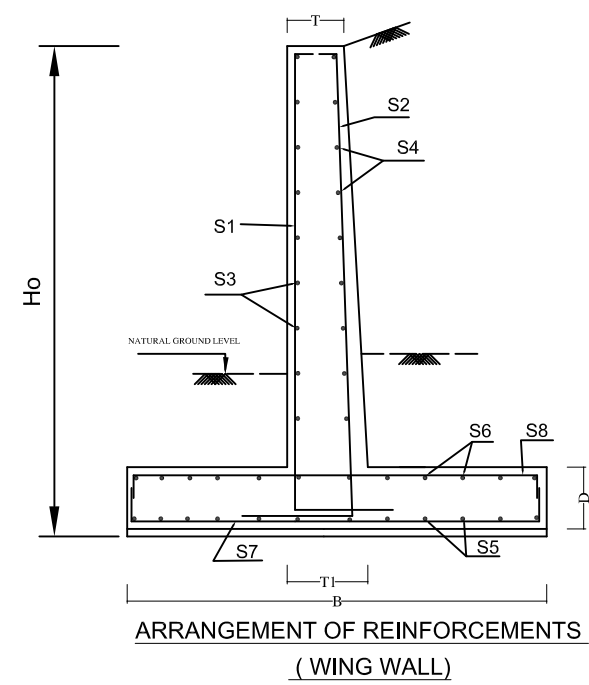
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.
- Concrete Grade M25 for box culvert and M20 for other members
- Reinforcing steel shall be new TMT bars having a minimum Yield Strength of 500 MPa.
- Min.reinforcing laps shall be in accordance with IS 456 : 2000 .
- Minimum development length for reinforcing bars shall be as follows :

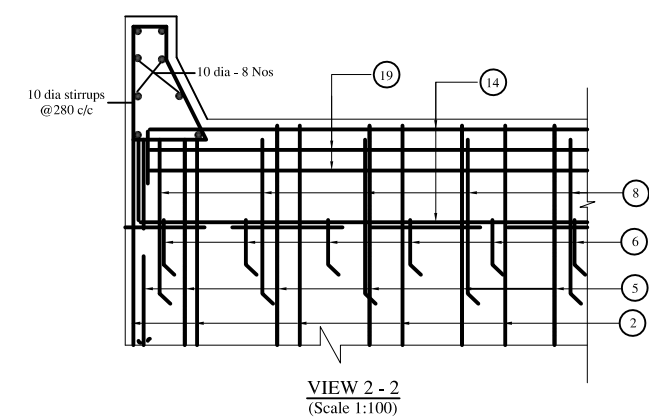
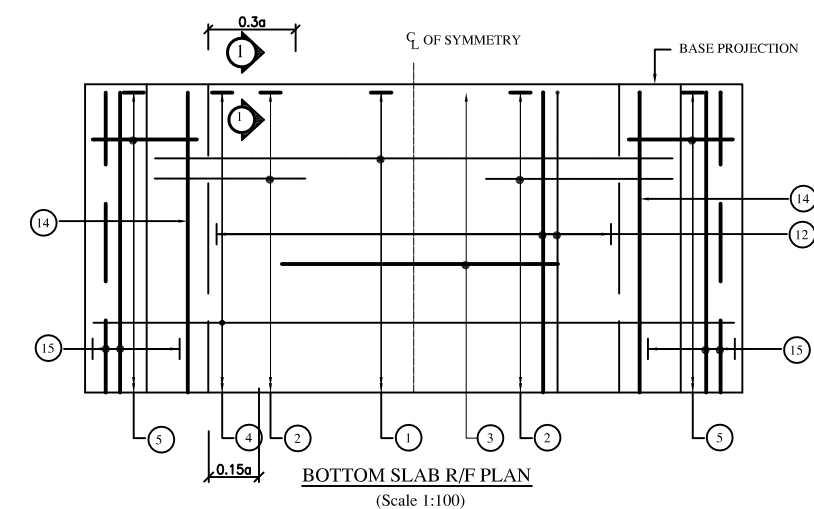
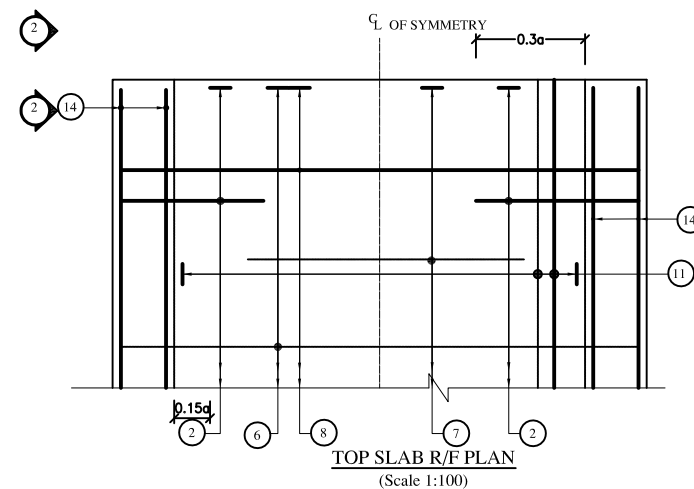
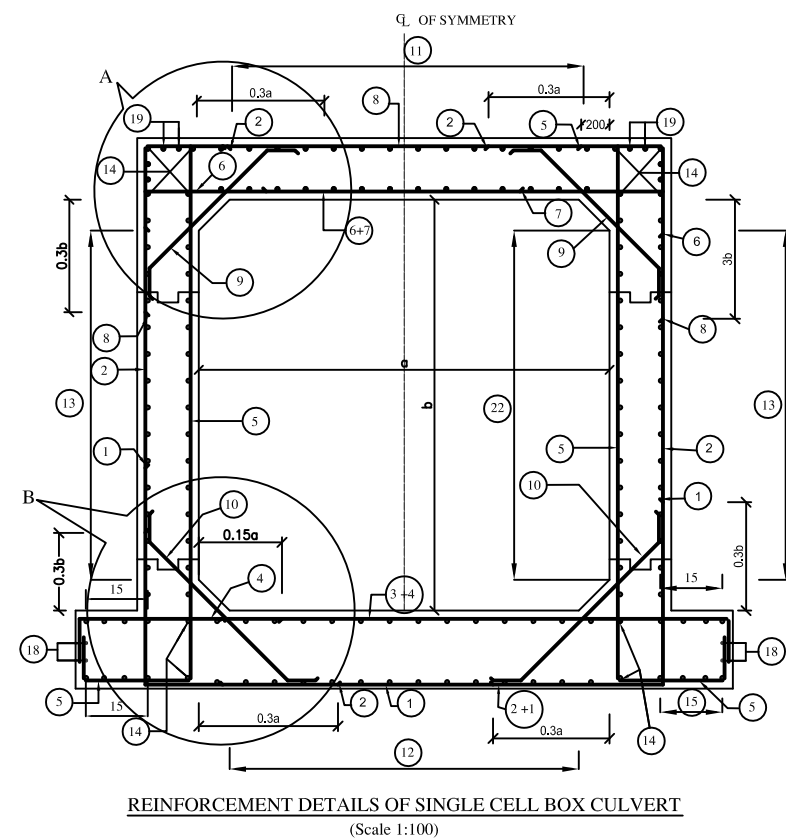
Dia (mm)	Ld (mm)
8	480
10	600
12	720
16	960
20	1200



S.No.	Height of Opening, Hb (mm)	Depth of Foundation, Df (mm)	Max. ht. Ho (mm)	Length of wing wall, Lw (mm)	Section 1 -1				Section 2 -2 and 3 -3			
					T (mm)	T1 (mm)	B (mm)	D1 (mm)	T (mm)	T1 (mm)	B2 (mm)	D2 (mm)
1	2150	1500	4080	1880	200	420	1000	400	200	400	1000	400

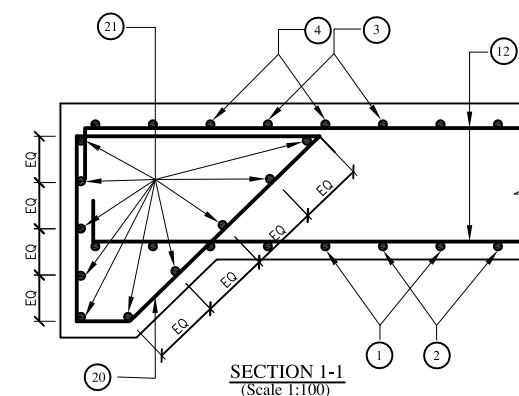
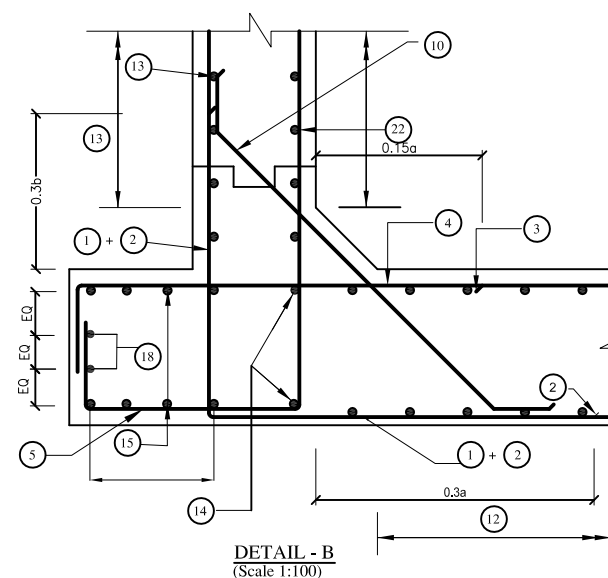
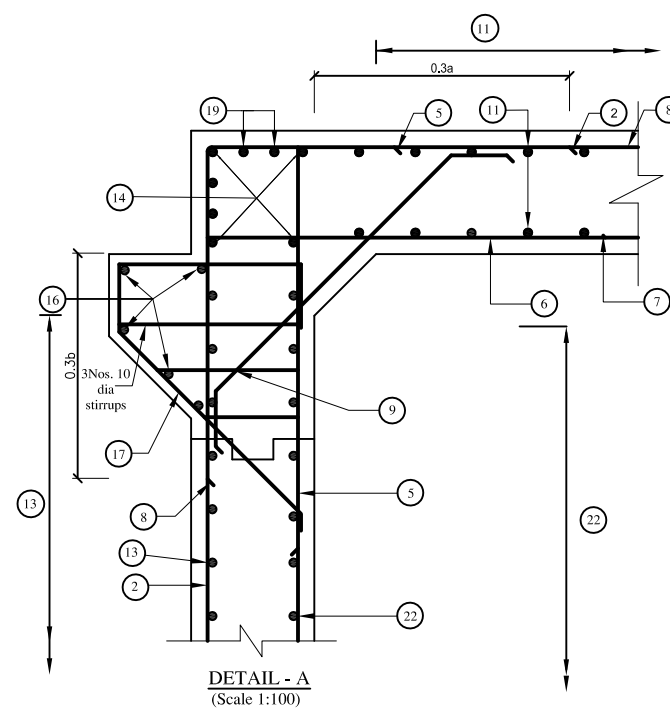
- NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.
 2. FOR GENERAL NOTES AND REFERENCE DRAWINGS REFER DRG NO.
 3. FOR REINFORCEMENT DETAIL REFER DRG. NO.
 4. FOR DETAILS OF WING WALL REFER \DRG. NO.



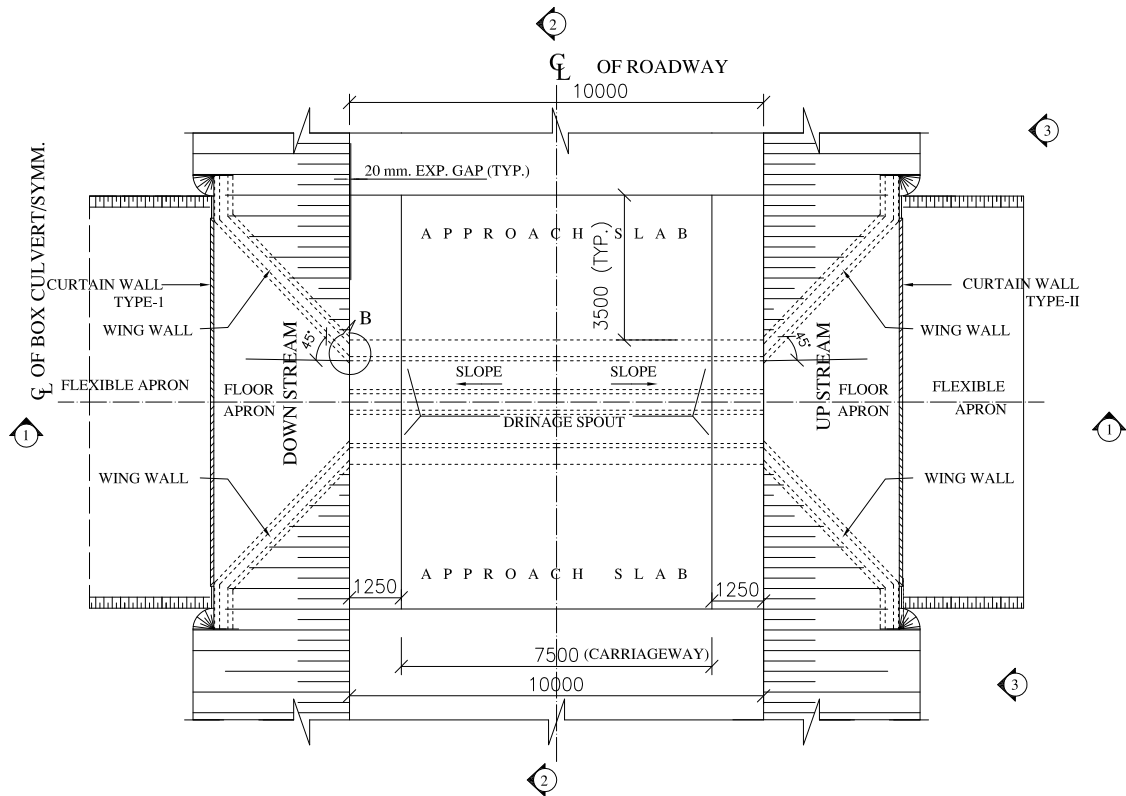


LEGEND:

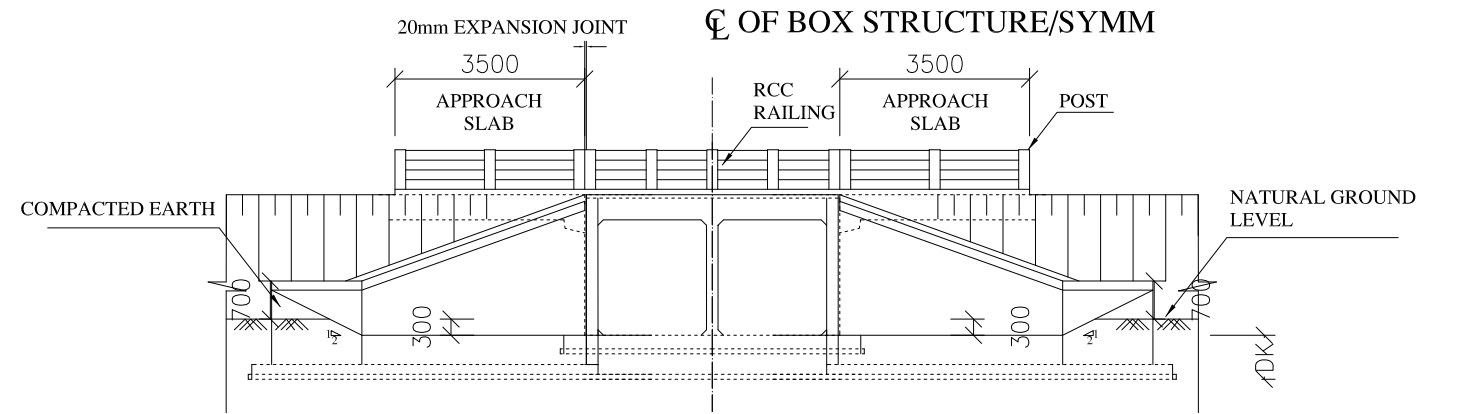
- : TOP FACE BARS / OUTER FACE BARS
 - - - : BOTTOM FACE BARS / INNER FACE BARS



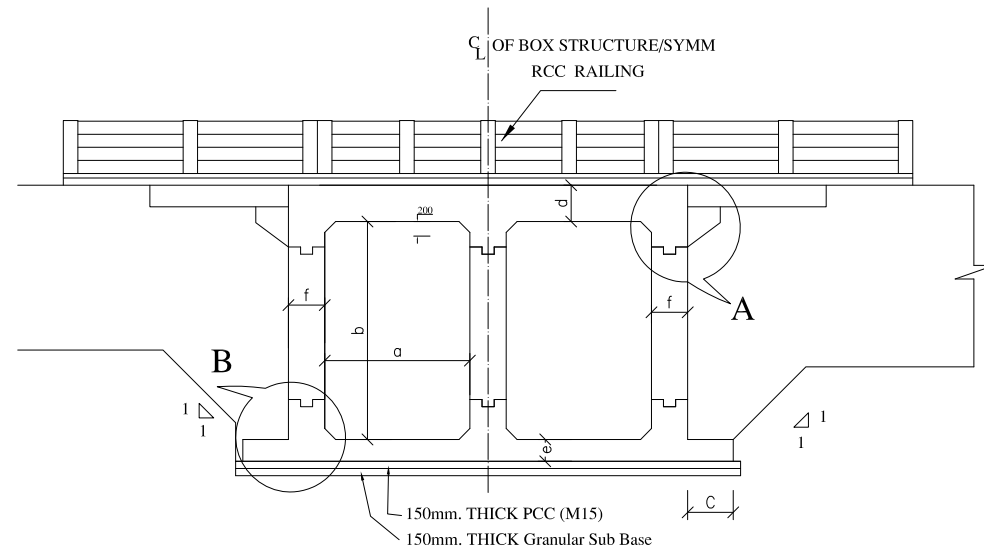
BAR MARK	BOX-CELL DESIGNATION Nc/ab/Ec SHAPE OF BARS (NOT TO SCALE)	Single Cell Box Culvert 2m x2.15m without earth cushion									Single Cell Box Culvert 3m x2.15m without earth cushion									Single Cell Box Culvert 2.5m x2.15m without earth cushion								
		BAR DIA. in mm.	SPACING in mm.	M1 in 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	250	930	2500	4360	40	174400	0.62	108.1	10	200	1270	3740	6280	50	314000	0.62	194.7	10	200	1270	3240	5780	50	314000	0.62	194.7
2		16	250	850	2630	4330	82	355060	1.58	561.0	16	200	1270	3000	5540	102	640560	1.58	1012.1	16	200	1270	3000	5540	102	640560	1.58	1012.1
3		Bar not needed									12	200	2100	0	2100	50	105000	0.89	93.5	12	200	2100	0	2100	50	105000	0.89	93.5
4		16	250	280	3500	4060	40	162400	1.58	256.6	16	200	320	5540	6180	50	309000	1.58	488.2	16	200	320	5040	5680	50	309000	1.58	488.2
5		16	250	2630	700	3730	80	298400	1.58	471.5	12	150	3000	1220	4620	100	536000	0.89	477.0	12	150	3000	1220	4620	100	536000	0.89	477.0
6		16	250	250	2500	3000	40	120000	1.58	189.6	16	200	260	3740	4260	50	213000	1.58	336.5	16	200	260	3240	3760	50	213000	1.58	336.5
7		Bar not needed									Bar not needed									Bar not needed								
8		10	250	900	2500	4300	40	172000	0.62	106.6	10	200	1270	3740	6280	50	314000	0.62	194.7	10	200	1270	3240	5780	50	314000	0.62	194.7
9		10	250	200	900	1300	80	104000	0.62	64.5	10	200	200	1160	1560	100	156000	0.62	96.7	10	200	200	1160	1560	100	156000	0.62	96.7
10		12	250	200	940	1340	80	107200	0.89	95.4	10	200	200	1160	1560	100	156000	0.62	96.7	10	200	200	1160	1560	100	156000	0.62	96.7
11		10	250	200	9900	10300	16	164800	0.62	102.2	10	200	200	9900	10300	28	288400	0.62	178.8	10	200	200	9900	10300	28	288400	0.62	178.8
12		10	250	200	9900	10300	16	164800	0.62	102.2	12	200	200	9900	10300	28	288400	0.89	256.7	12	200	200	9900	10300	28	288400	0.89	256.7
13		10	250	200	9900	10300	16	164800	0.62	102.2	10	200	200	9900	10300	28	288400	0.62	178.8	10	200	200	9900	10300	28	288400	0.62	178.8
14		10	-	160	9900	10220	12	122640	0.62	76.0	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	200	200	9900	10300	24	247200	0.62	153.3	10	200	200	9900	10300	24	247200	0.62	153.3
16		12	-	0	9900	9900	10	99000	0.89	88.1	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	200	1000	1260	2260	100	226000	0.89	201.1	12	200	1000	1260	2260	100	226000	0.89	201.1
18		10	-	160	9900	10220	4	40880	0.62	25.3	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	-	160	9900	10220	8	81760	0.62	50.7	10	-	160	9900	10220	8	81760	0.62	50.7
20		10	150	1100	1550	4150	36	149400	0.62	92.6	10	200	1100	1550	4150	56	232400	0.62	144.1	10	200	1100	1550	4150	56	232400	0.62	144.1
21		10	-	160	3500	3820	20	76400	0.62	47.4	10	-	160	5540	5860	20	117200	0.62	72.7	10	-	160	5540	5860	20	117200	0.62	72.7
22		10	250	160	9900	10220	14	143080	0.62	88.7	10	200	210	9900	10320	28	288960	0.62	179.2	10	200	210	9900	10320	28	288960	0.62	179.2
Total										2879.8									4594.9									4594.9



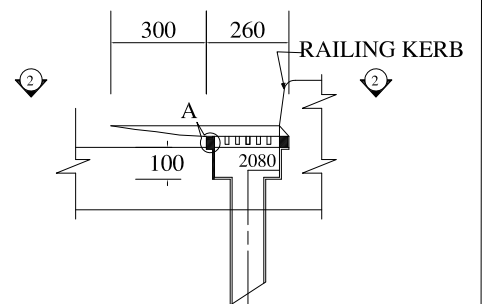
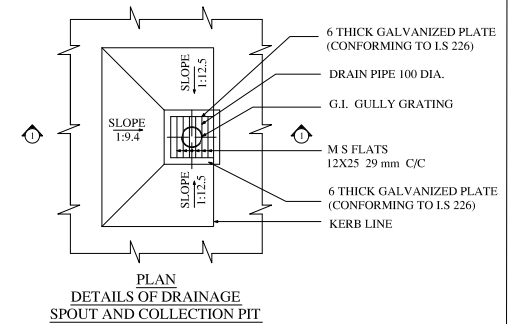
PLAN AT ROAD LEVEL



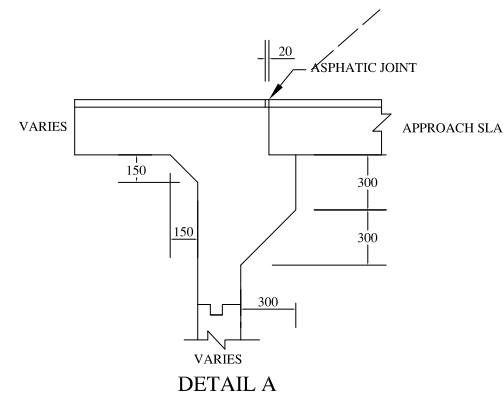
VIEW 3 -3



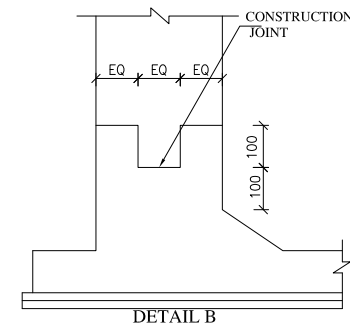
SECTION 2-2



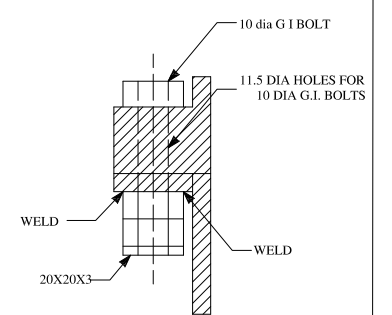
SECTION 1-1



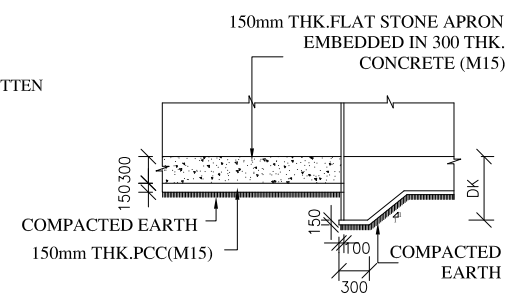
DETAIL A



DETAIL B



DETAIL -A



DETAIL -C

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)
2 m x 2.1 m	2000	2100	300	400	400	370	300

Summary of Cross Drainage Structures (Box Culvert)

S.N.	Chainage	Proposed Bed level (m)	Existing Structure Hume Pipe @ Dia (m)	Proposed structure (Box Culvert) (m)		Cover Slab (mm)	Adopted FRL	Remarks	Adopted Scour Level (m)	Height of Curtain Wall From Bed Level (m) HS
				Clear Height(m)	Clear Width					
1	7+295.5	538.50	Existing Pipe Culvert	2.1	4	400	541	Double Cell (2*2)	538.00	1

NOTES:

- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.
- Concrete Grade M25 for box culvert and M20 for other members
- Reinforcing steel shall be new TMT bars having a minimum Yield Strength of 500 MPa.
- Min.reinforcing laps shall be in accordance with IS 456 : 2000 .
- Minimum development length for reinforcing bars shall be as follows :

Dia (mm)	Ld (mm)
8	480
10	600
12	720
16	960
20	1200



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
Section - I

DESIGNED BY :

DRAWN BY :

CHECKED BY :

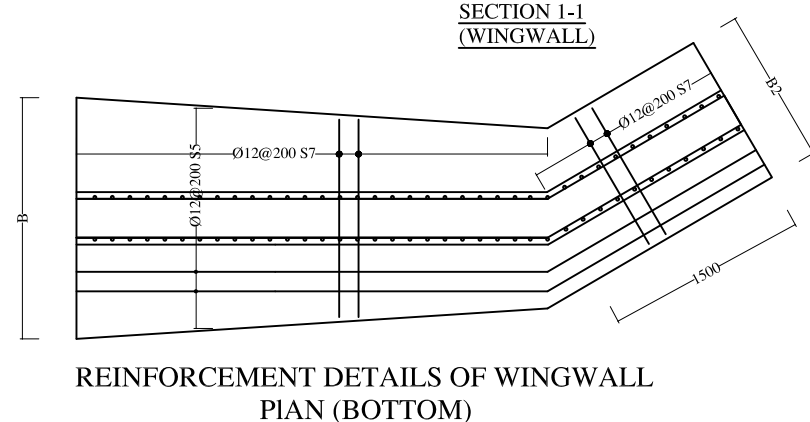
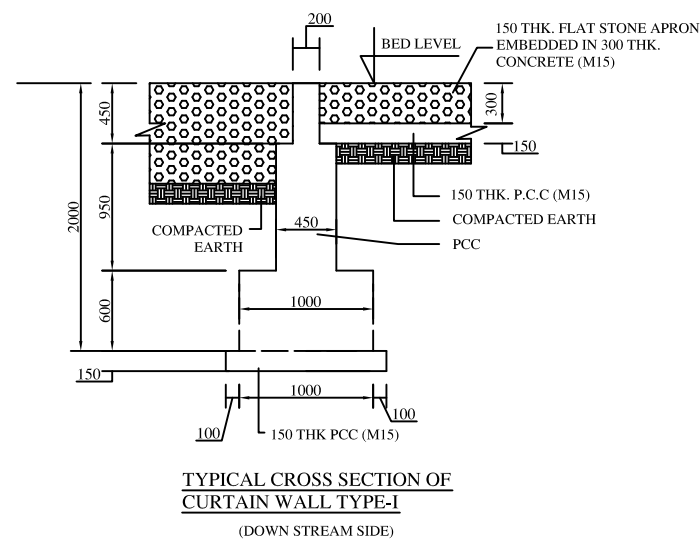
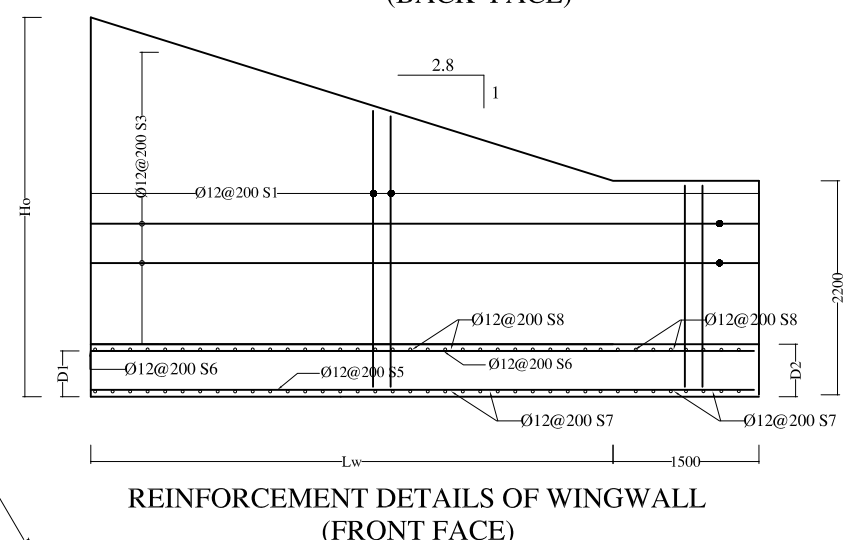
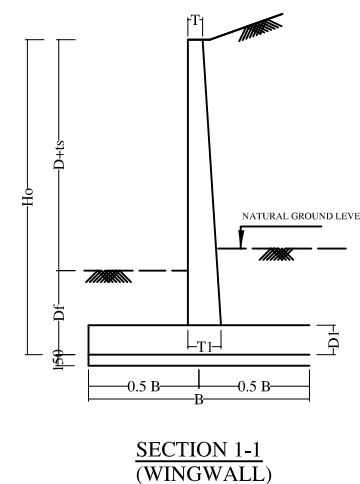
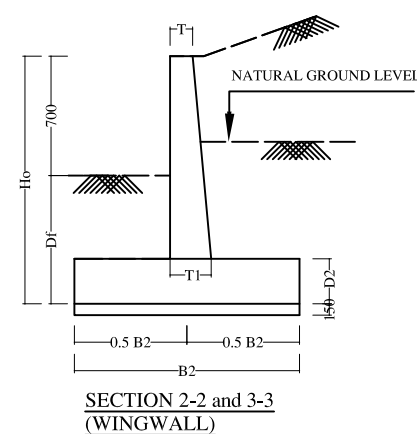
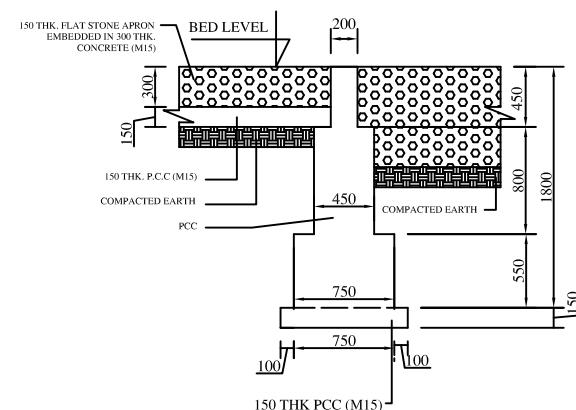
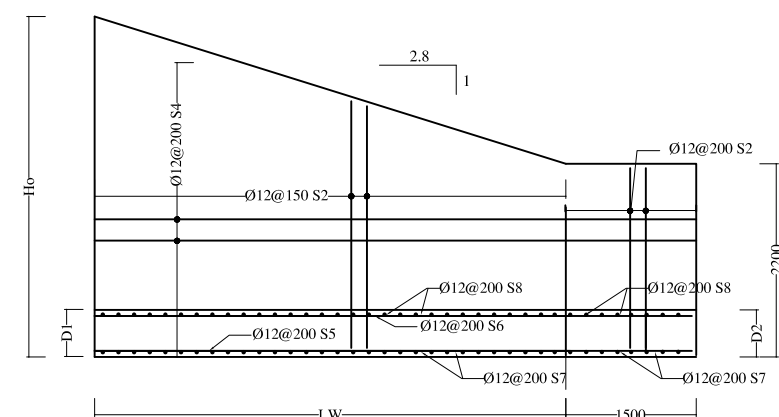
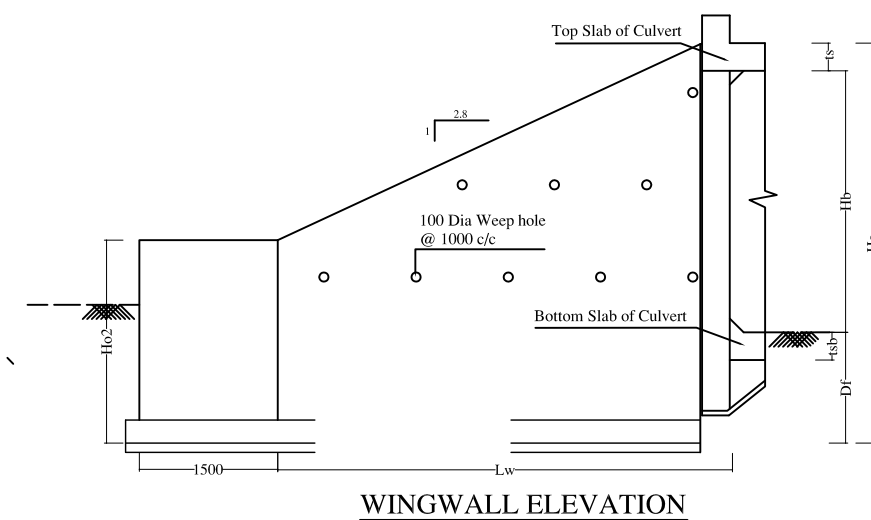
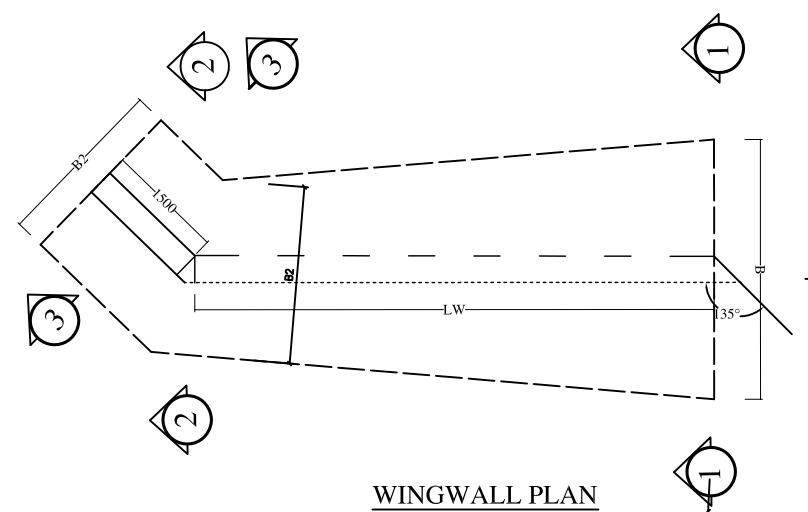
APPROVED BY :

Date : 2023

Scale : Not in Scale

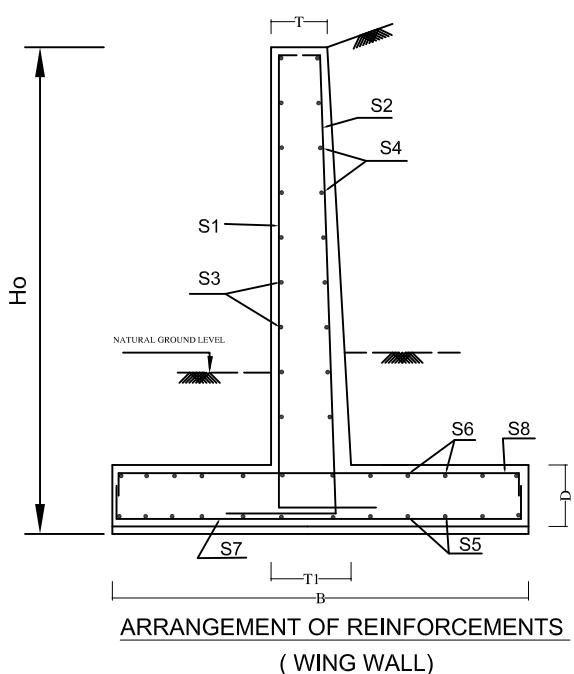
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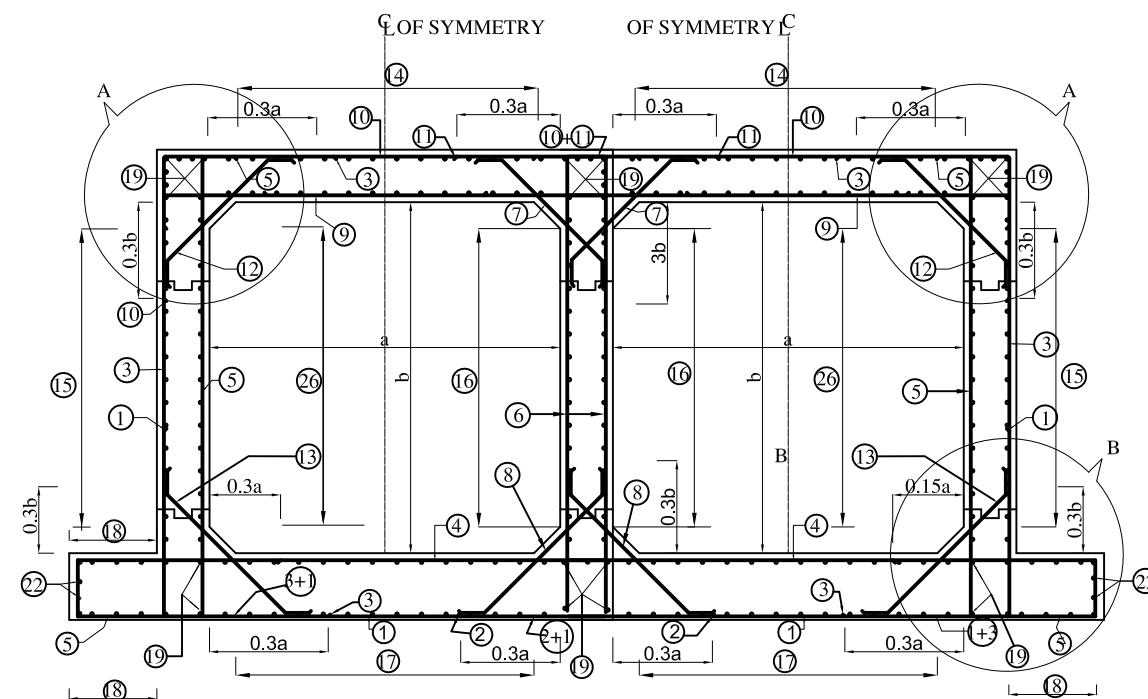
Sheet No. : 5



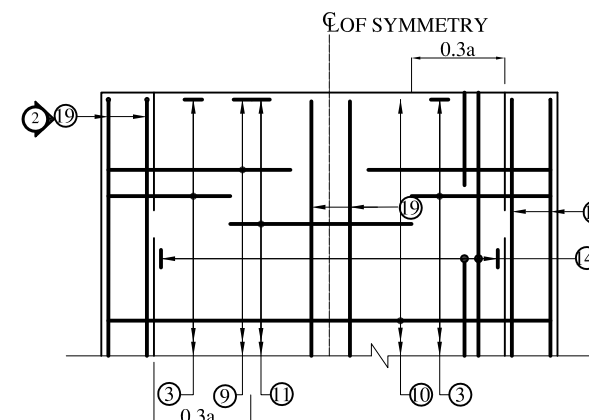
S.No.	Height of Opening, Hb (mm)	Depth of Foundation, Df (mm)	Max. ht. Ho (mm)	Length of wing wall, Lw (mm)	Section 1 - 1				Section 2 - 2 and 3 - 3			
					T (mm)	T1 (mm)	B (mm)	D1 (mm)	T (mm)	T1 (mm)	B2 (mm)	D2 (mm)
1	2100	1500	4000	5000	200	420	1000	400	200	400	1000	400

- NOTES:**
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.
 2. FOR GENERAL NOTES AND REFERENCE DRAWINGS REFER DRG NO.
 3. FOR REINFORCEMENT DETAIL REFER DRG. NO.
 4. FOR DETAILS OF WING WALL REFER DRG. NO.

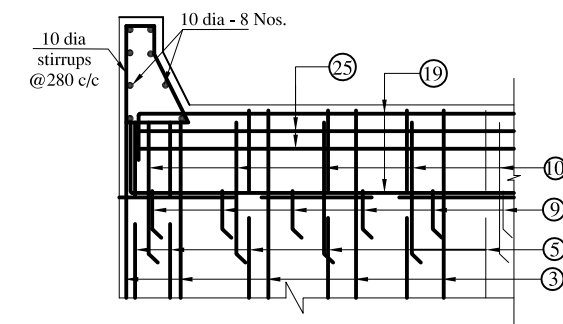




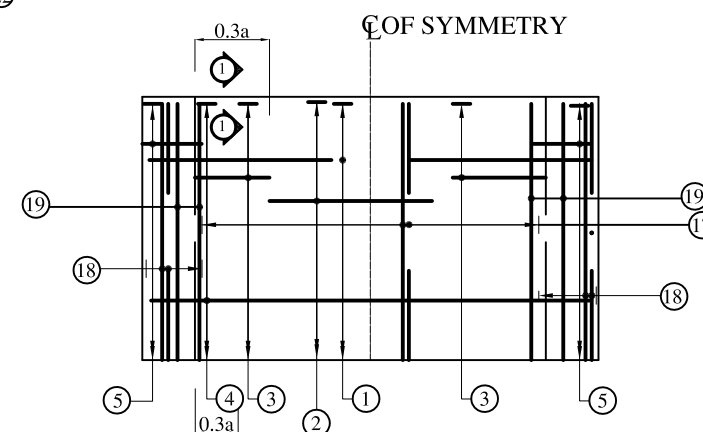
REINFORCEMENT DETAILS OF DOUBLE CELL BOX CULVERT



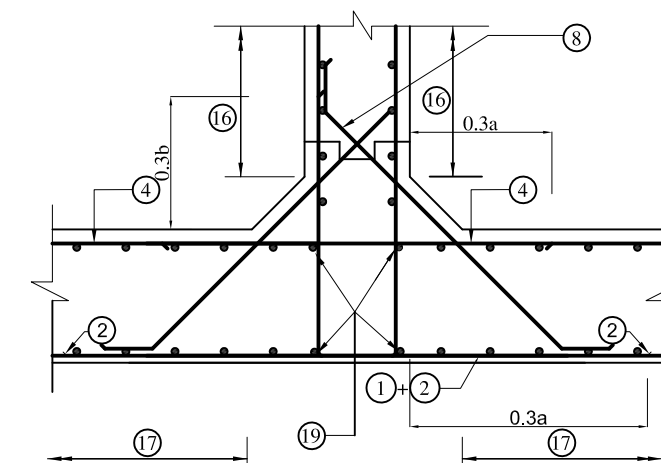
TOP SLAB R/F PLAN



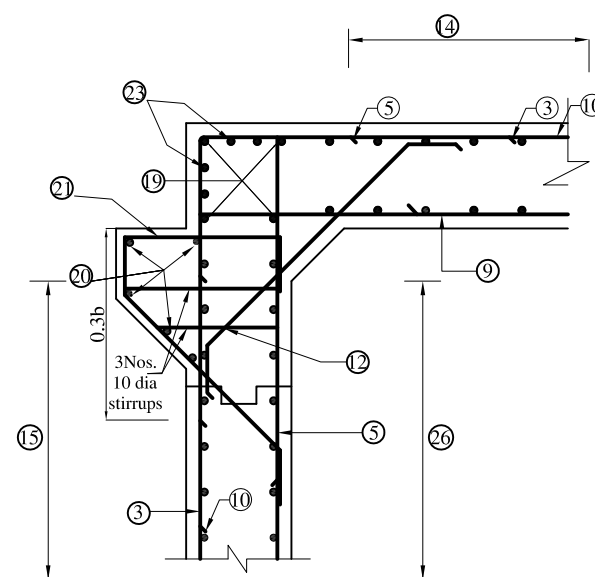
VIEW 2 - 2



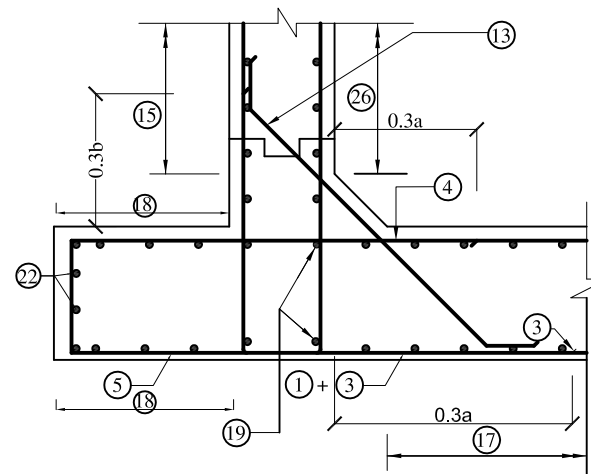
BOTTOM SLAB R/F PLAN



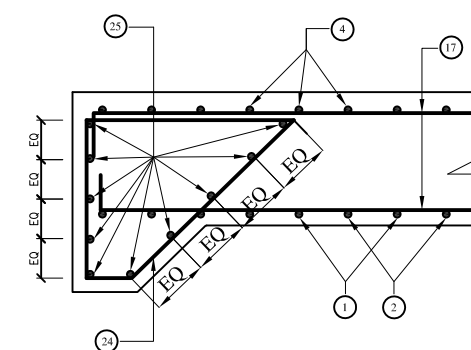
DETAIL - C



DETAIL - A



DETAIL - B



SECTION 1-1

LEGEND:

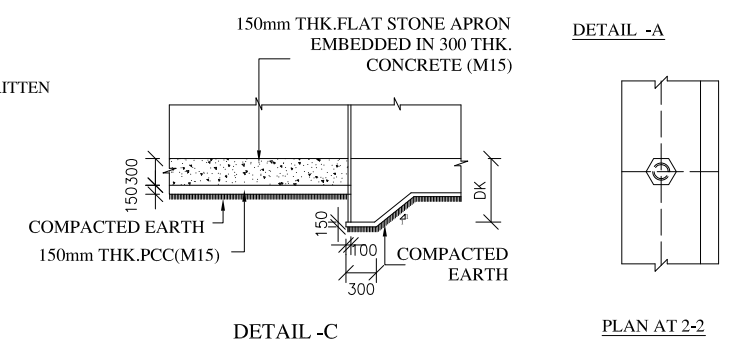
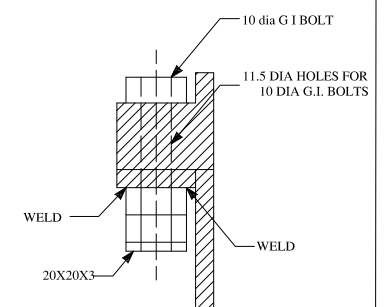
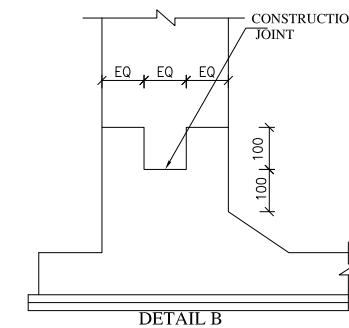
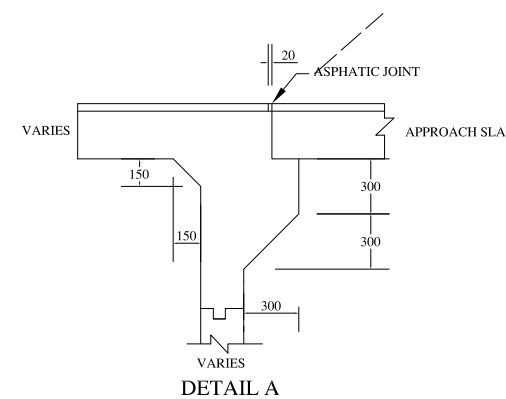
- : TOP FACE BARS / OUTER FACE BARS
- - - : BOTTOM FACE BARS / INNER FACE BARS

BAR MARK	BOX-CELL DESIGNATION Nc/ab/Ec SHAPE OF BARS (NOT TO SCALE)	Double Cell Box Culvert 2m x2.1m 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	950	4940	6840	51	348840	0.62	216.3
2		10	200	1500	0	1500	50	75000	0.62	46.5
3		12	200	920	2700	4540	102	463080	0.89	412.1
4		12	150	300	5540	6240	67	418080	0.89	372.1
5		12	125	2700	570	5970	162	967140	0.89	860.8
6		16	200	260	2700	3220	102	328440	1.58	518.9
7		12	200	200	960	1360	102	138720	0.89	123.5
8		12	200	200	960	1360	102	138720	0.89	123.5
9		12	125	200	4940	5340	81	432540	0.89	385.0
10		10	200	950	4940	6840	51	348840	0.62	216.3
11		16	200	1500	0	1500	50	75000	1.58	118.5
12		12	200	200	1060	1460	102	148920	0.89	132.5
13		12	200	200	1060	1460	102	148920	0.89	132.5
14		8	150	200	9900	10300	46	473800	0.4	189.5
15		8	150	200	9900	10300	23	236900	0.4	94.8
16		8	150	200	9900	10300	24	247200	0.4	98.9
17		8	150	200	9900	10300	48	494400	0.4	197.8
18		8	150	200	9900	10300	10	103000	0.4	41.2
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	99	223740	0.89	199.1
22		10	-	160	9900	10220	2	20440	0.62	12.7
23		10	-	180	9900	10260	4	41040	0.62	25.4
24		10	150	1100	1550	4150	76	315400	0.62	195.5
25		10	-	160	5540	5860	20	117200	0.62	72.7
26		10	250	180	9900	10260	16	164160	0.62	101.8
										5077.3



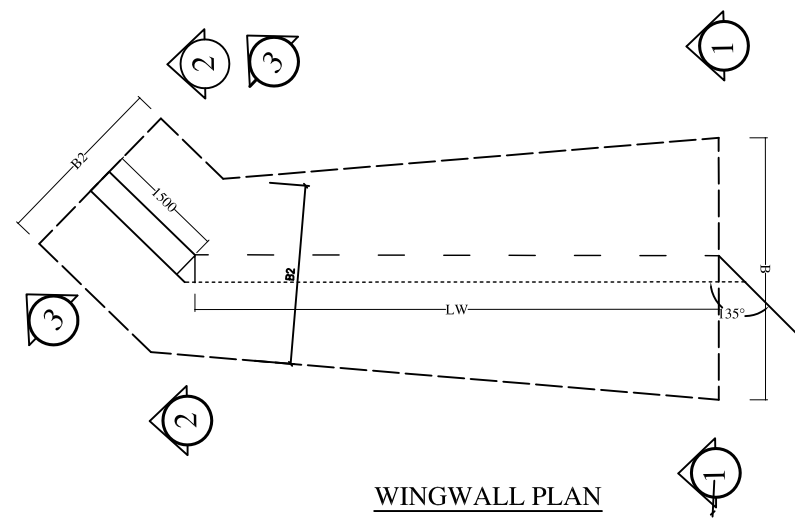
Box Cell Designation	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)	f (mm)	g (mm)	h (mm)	Design base Pressure t/m ²
3 m x 2.35 m	3000	2350	300	450	500	470	400	NA	7.1

S.N.	Chainage	Proposed Bed level (m)	Proposed structure (Box Culvert) (m)		Cover Slab (mm)	Adopted FRL	Remarks	Adopted Scour Level (m)	Height of Curtain Wall From Bed Level (m) HS
			Clear Height(m)	Clear Width					
1	2+444	647.70	3.5	7	450	651.7	Triple Cell (3*2.33)	646.82	1

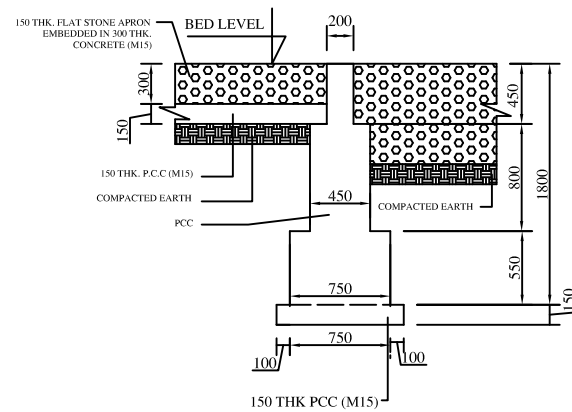


Dia (mm)	Ld (mm)
8	480
10	600
12	720
16	960
20	1200

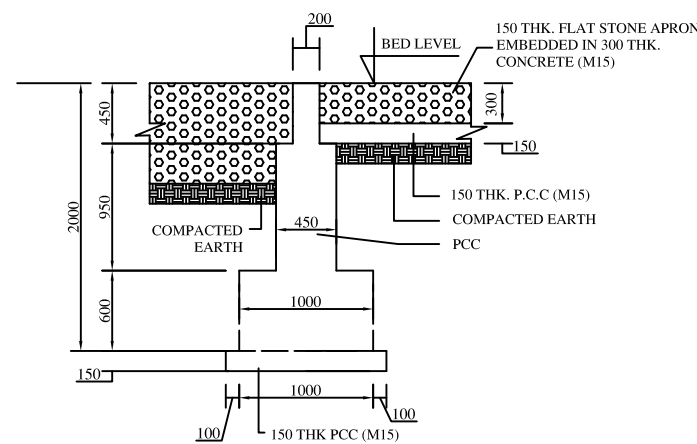




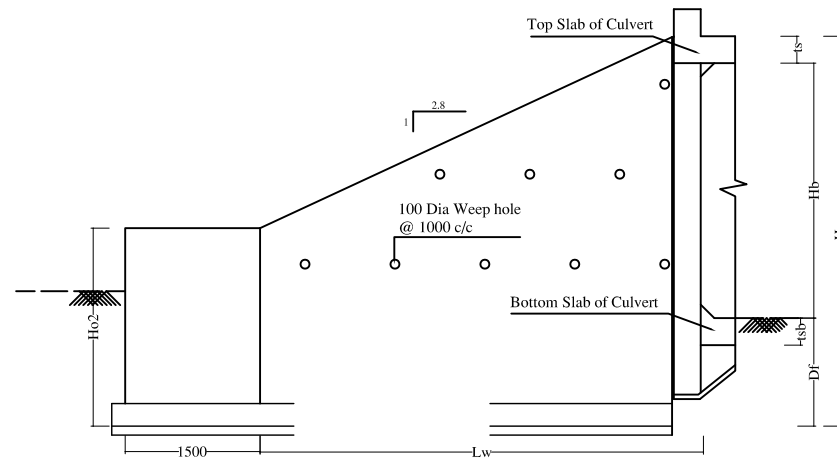
WINGWALL PLAN



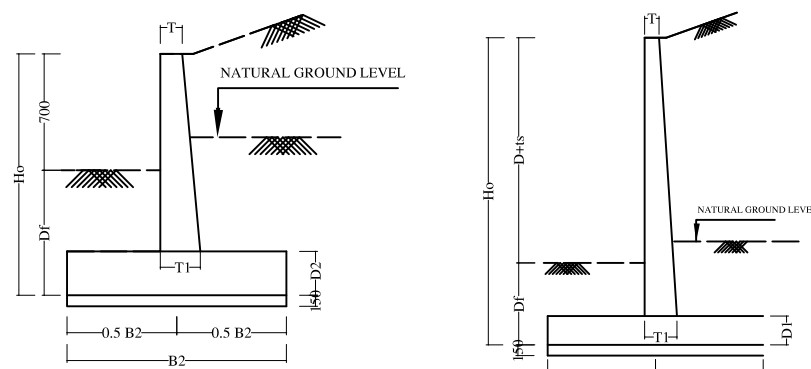
TYPICAL CROSS SECTION OF CURTAIN WALL TYPE-II (UP STREAM SIDE)



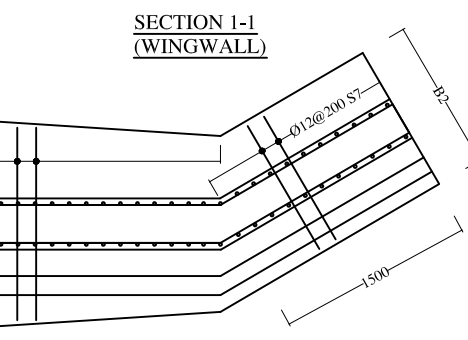
TYPICAL CROSS SECTION OF CURTAIN WALL TYPE-I (DOWN STREAM SIDE)



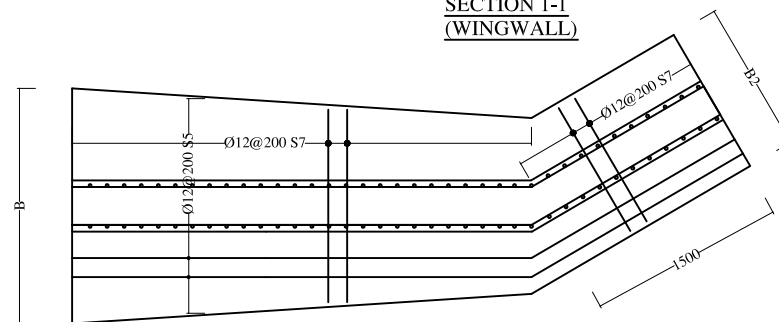
WINGWALL ELEVATION



SECTION 2-2 and 3-3 (WINGWALL)



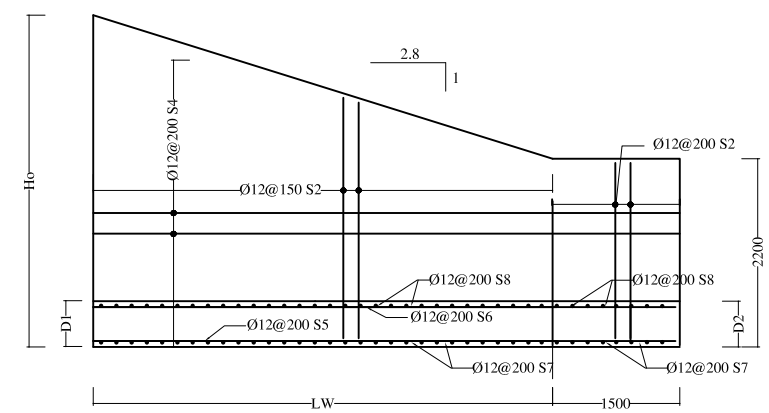
SECTION 1-1 (WINGWALL)



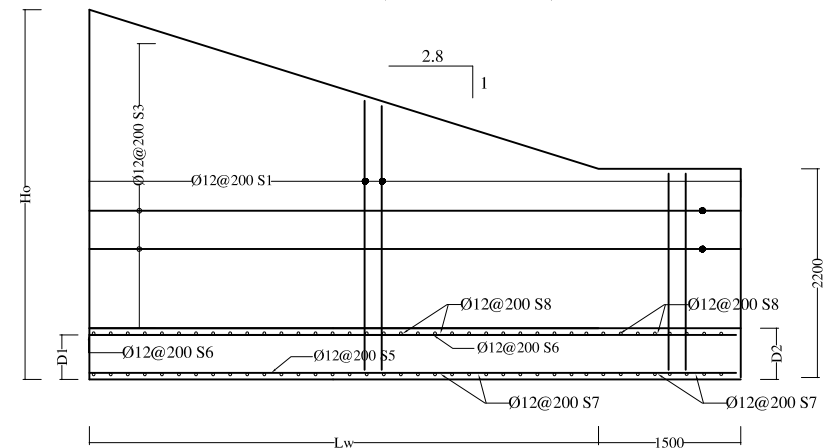
REINFORCEMENT DETAILS OF WINGWALL PLAN (BOTTOM)

S.No.	Height of Opening, Hb (mm)	Depth of Foundation, Df (mm)	Max. ht. Ho (mm)	Length of wing wall, Lw (mm)	Section 1 - 1				Section 2 - 2 and 3 - 3			
					T (mm)	T1 (mm)	B (mm)	D1 (mm)	T (mm)	T1 (mm)	B2 (mm)	D2 (mm)
1	3500	1500	5450	9000	200	420	1000	400	200	400	1000	400

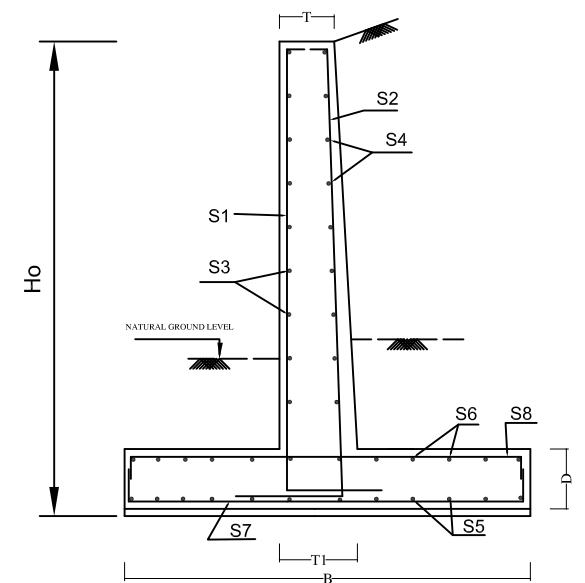
- NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.
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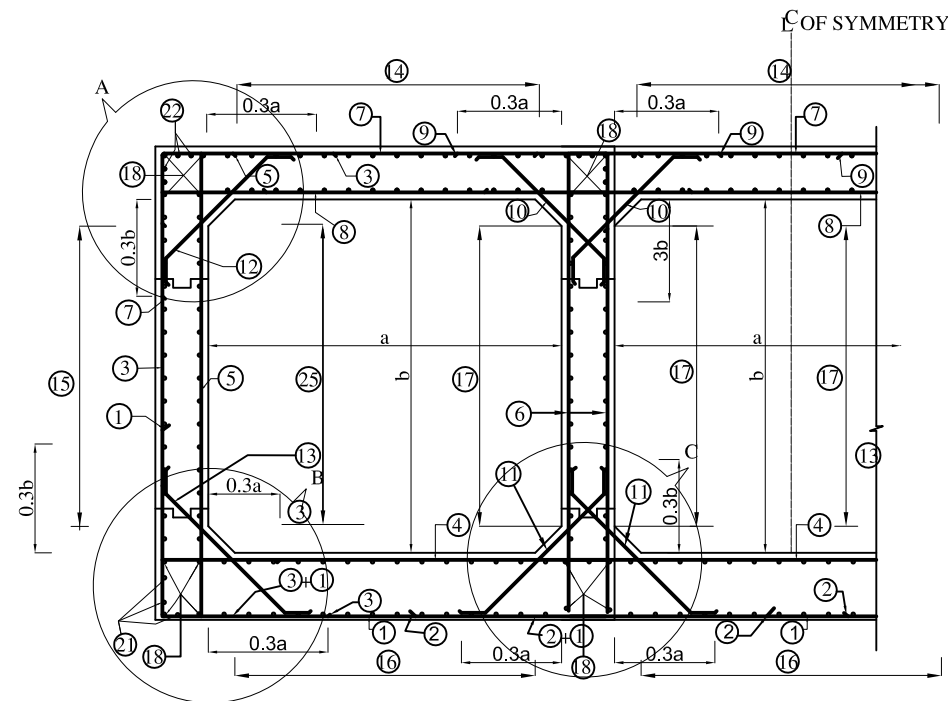
REINFORCEMENT DETAILS OF WINGWALL (BACK FACE)



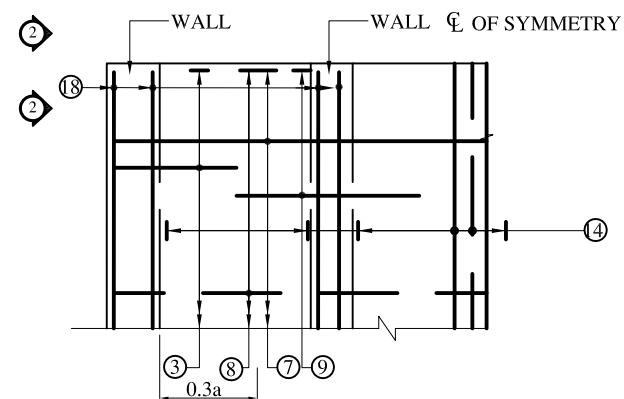
REINFORCEMENT DETAILS OF WINGWALL (FRONT FACE)



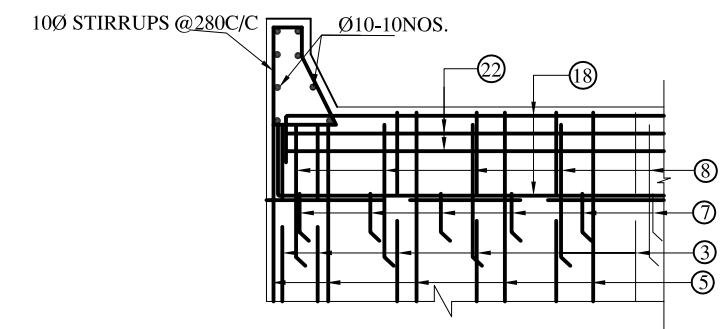
ARRANGEMENT OF REINFORCEMENTS (WING WALL)



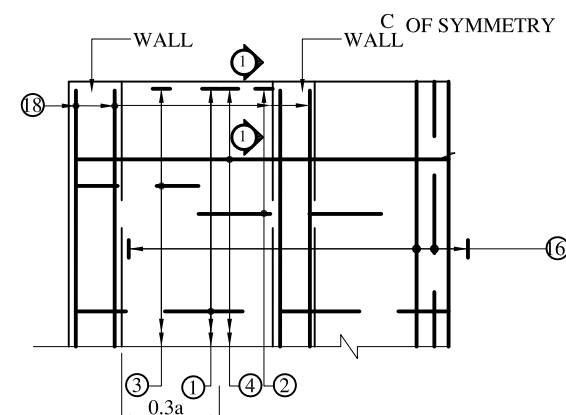
REINFORCEMENT DETAILS OF TRIPLE CELL BOX CULVERT



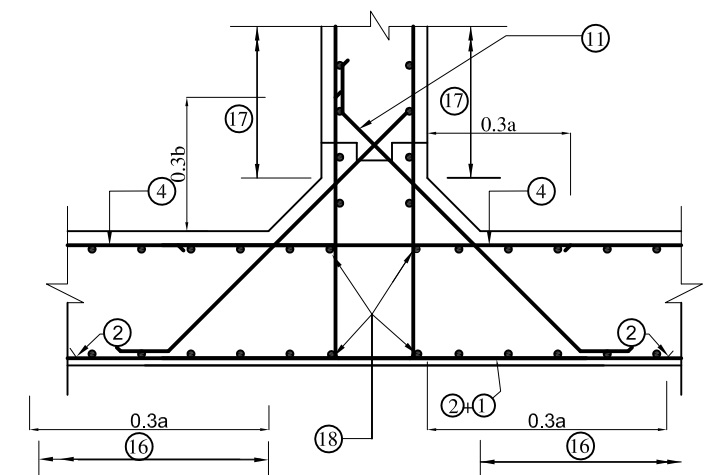
TOP SLAB R/F PLAN



VIEW 2 - 2



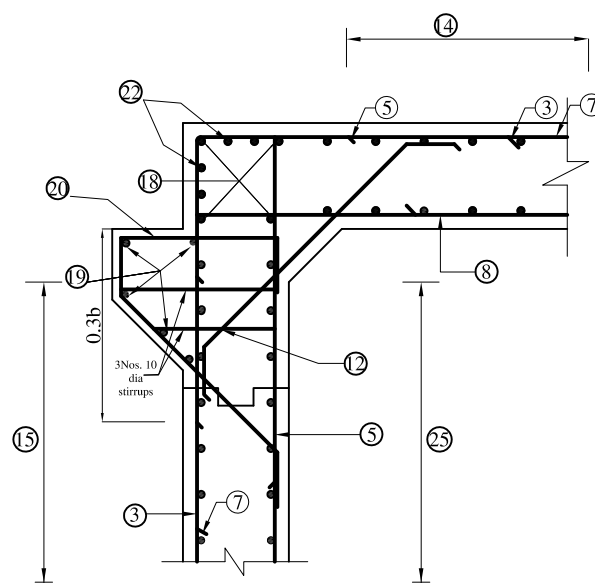
BOTTOM SLAB R/F PLAN



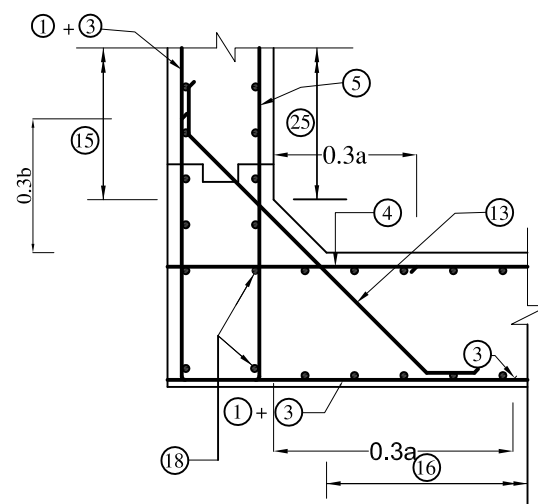
DETAIL - C

LEGEND:

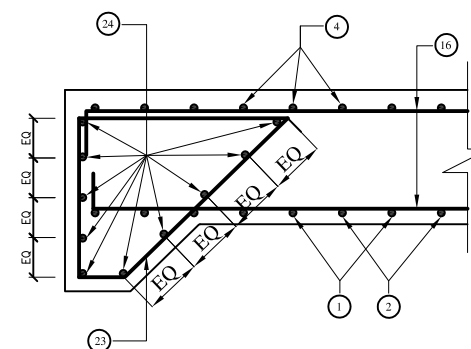
- : TOP FACE BARS / OUTER FACE BARS
 - - - : BOTTOM FACE BARS / INNER FACE BARS



DETAIL - A

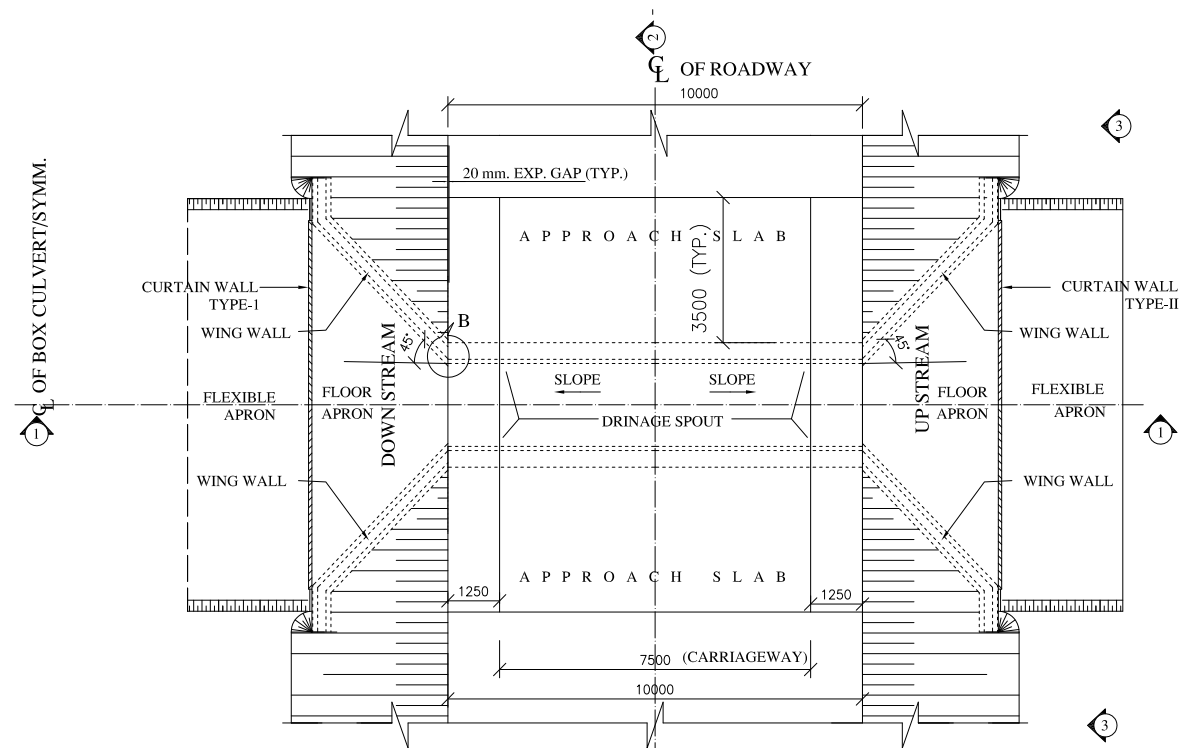


DETAIL - B

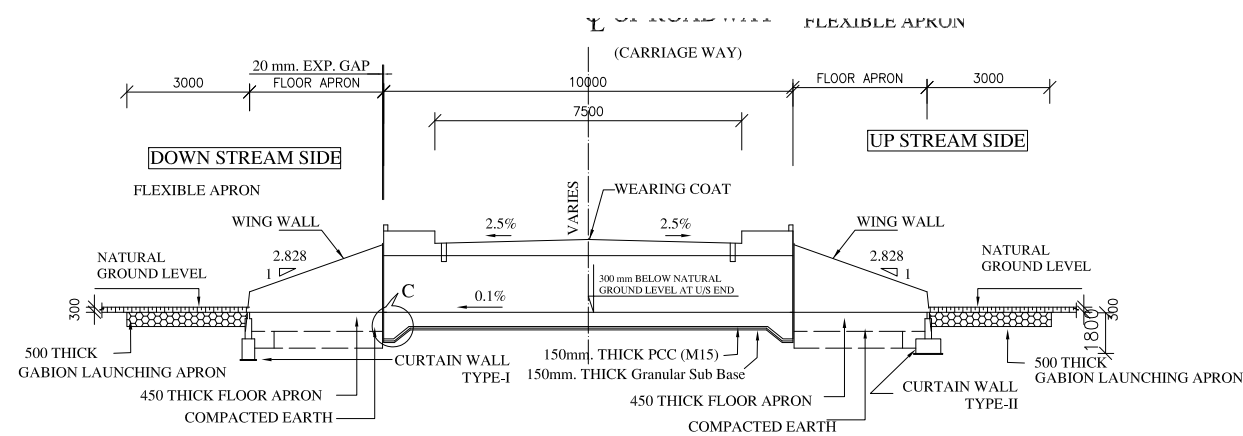


SECTION 1-1

BAR MARK	BOX-CELL DESIGNATION Nc/ab/Ec SHAPE OF BARS (NOT TO SCALE)	Triple Cell Box Culvert 2.35m x3.5m without earth cushion								
		BAR DIA.	SPACING	M1 in mm.	M2 in mm.	LENGTH in mm.	NO. OF BARS	TOTAL LENGTH in mm.	Wt/m, kg	Weight, kg
1		16	200	1350	9640	12340	50	667000	1.58	1053.9
2		12	200	2200	0	2200	100	220000	0.89	195.8
3		16	200	1320	3850	6490	102	661980	1.58	1045.9
4		20	200	200	9640	10040	50	552000	2.47	1363.4
5		16	200	260	3850	4370	102	445740	1.58	704.3
6		20	200	320	3850	4490	204	915960	2.47	2262.4
7		16	200	1300	9640	12240	50	662000	1.58	1046.0
8		20	200	320	9640	10280	50	564000	2.47	1393.1
9		16	200	2200	0	2200	102	224400	1.58	354.6
10		10	200	200	1170	1570	204	320280	0.62	198.6
11		10	200	200	1240	1640	204	334560	0.62	207.4
12		10	200	200	1270	1670	102	170340	0.62	105.6
13		10	200	200	1340	1740	102	177480	0.62	110.0
14		10	200	270	9900	10440	82	856080	0.62	530.8
15		12	200	230	9900	10360	28	290080	0.89	258.2
16		12	200	250	9900	10400	82	852800	0.89	759.0
17		12	200	190	9900	10280	56	575680	0.89	512.4
18		12	-	200	9900	10300	32	329600	0.89	293.3
19		12	-	9900	0	9900	10	99000	0.89	88.1
20		12	200	1000	1300	2300	102	234600	0.89	208.8
21		10	-	160	9900	10220	4	40880	0.62	25.3
22		10	-	160	9900	10220	4	40880	0.62	25.3
23		12	200	1100	1550	4150	102	423300	0.89	376.7
24		12	-	190	10640	11020	20	220400	0.89	196.2
25		10	250	230	9900	10360	24	248640	0.62	154.2
										13469.2



PLAN AT ROAD LEVEL



SECTION 1-1

TABLE SHOWING SALIENT DIMENSIONS OF SINGLE CELL BOX CULVERT

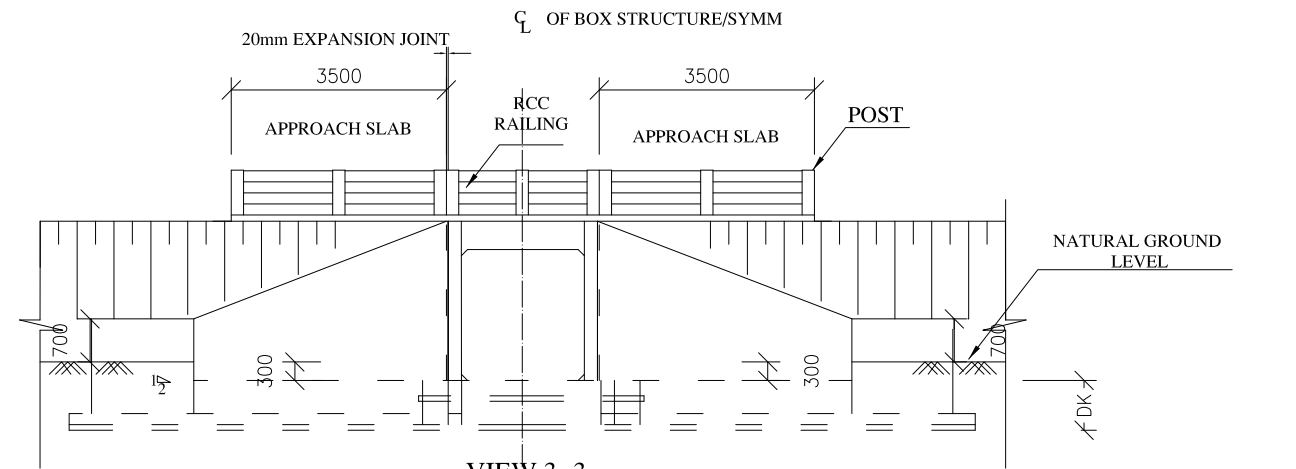
Box Cell Designation	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)	f (mm)	g (mm)
3 m x 3 m	3000	3000	900	430	420	420	NA

S.N.	Chainage	Proposed Bed level (m)	Proposed structure (Box Culvert) (m)		Cover Slab	Adopted FRL	Remark
			Clear Height(m)	Clear Width (m)			
1	2+811	596.02	3.00	3.00	0.4	599.42	Extension of existing box culvert

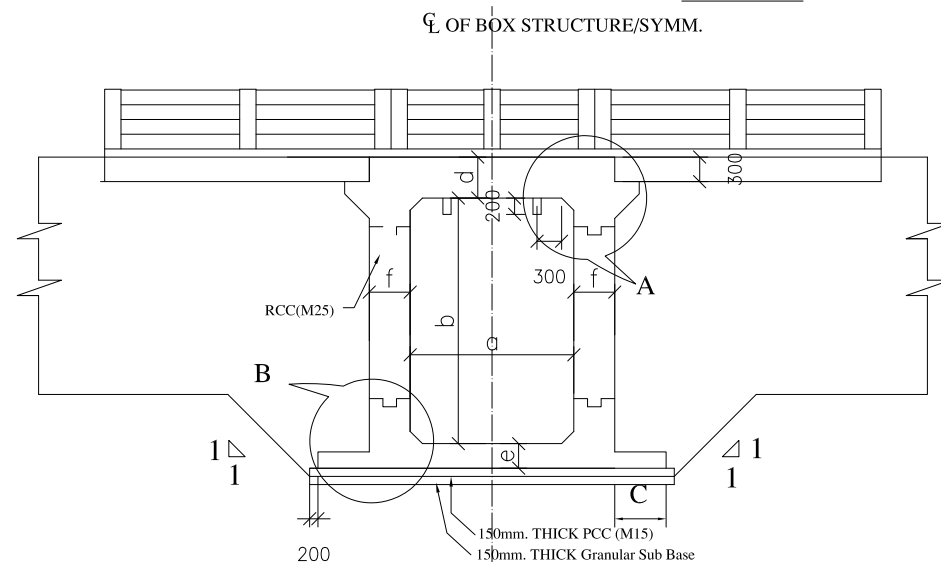
NOTES:

- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.
- Concrete Grade M25 for box culvert and M20 for other members
- Reinforcing steel shall be new TMT bars having a minimum Yield Strength of 500 MPa.
- Min.reinforcing laps shall be in accordance with IS 456 : 2000 .
- Minimum development length for reinforcing bars shall be as follows :

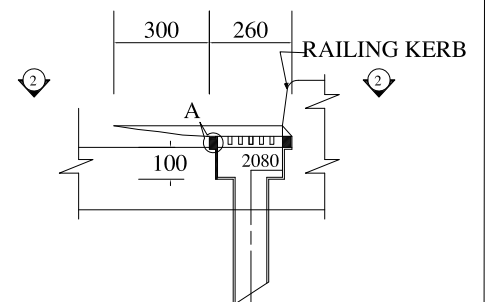
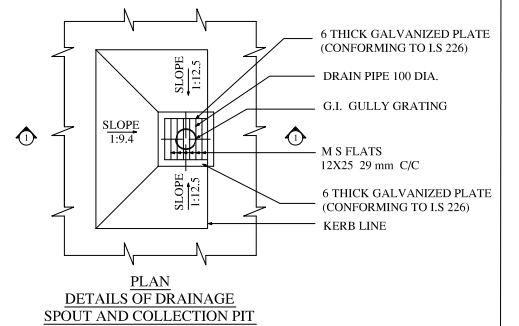
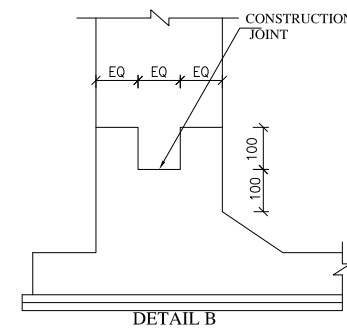
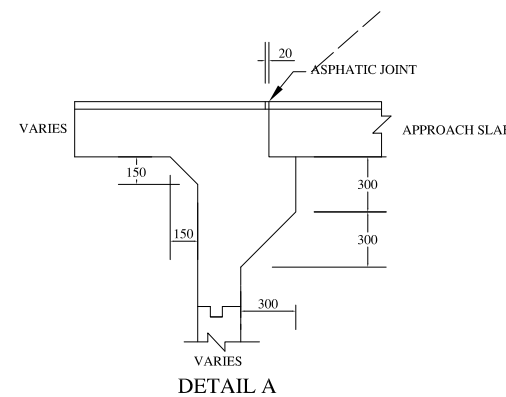
Dia (mm)	Ld (mm)
8	480
10	600
12	720
16	960
20	1200



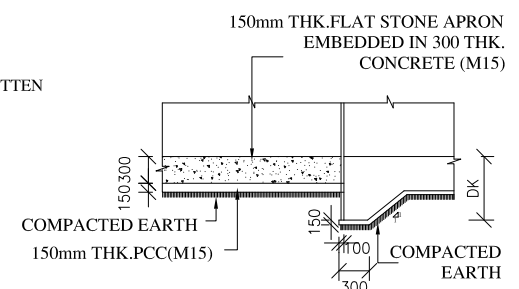
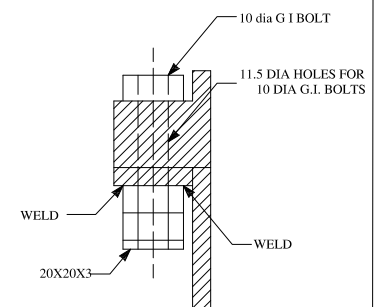
VIEW 3-3



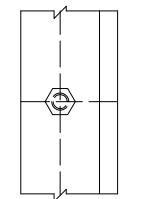
SECTION 2-2





SECTION 1-1

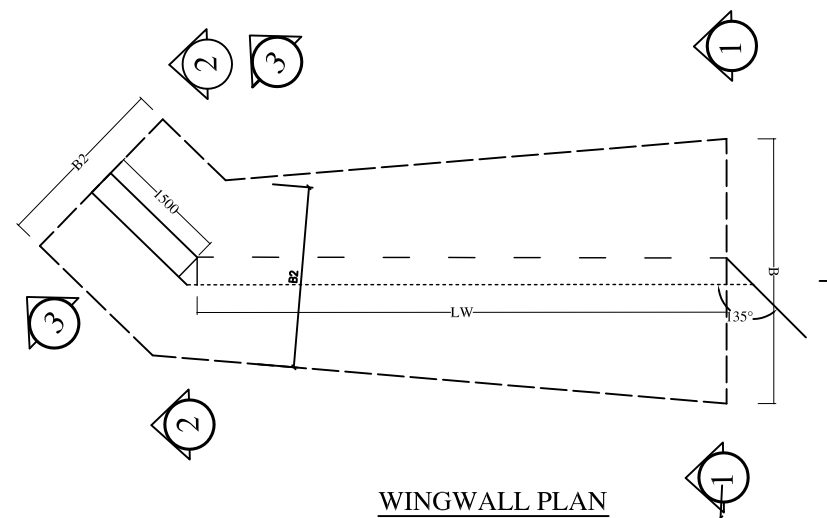


DETAIL -C

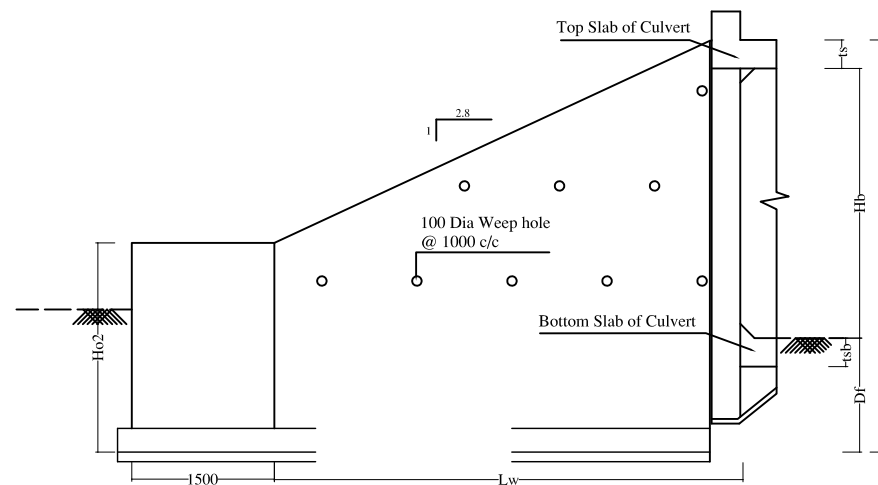


PLAN AT 2-2

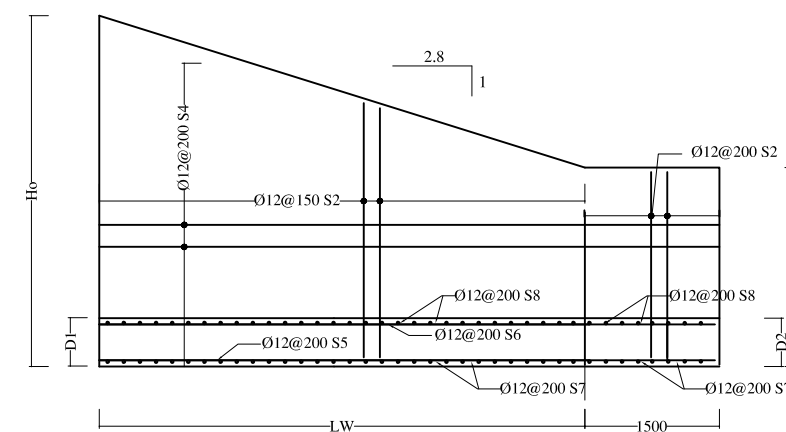
 <p>Nepal Urban Governance and Infrastructure Project (NUGIP) Office of the Municipal Executive Pokhara Metropolitan City Kaski District, Gandaki Province</p>	<p>CONSULTANT: Plush Engineers and Architects (P.) Ltd. (PEA) B.N. Consultancy Pvt. Ltd. (BN) Soil Test Consultancy (P.) Ltd. (Soil Test) Kathmandu, Nepal</p> 	<p>Project Name:- Nepal Urban Governance and Infrastructure Project (NUGIP)</p>	<p>Sheet Title:- Box Culvert Single Cell Section - II</p>	DESIGNED BY :	Date : 2023
				DRAWN BY :	Scale : Not in Scale
				CHECKED BY :	Chainage :
				APPROVED BY :	Sheet No. :1



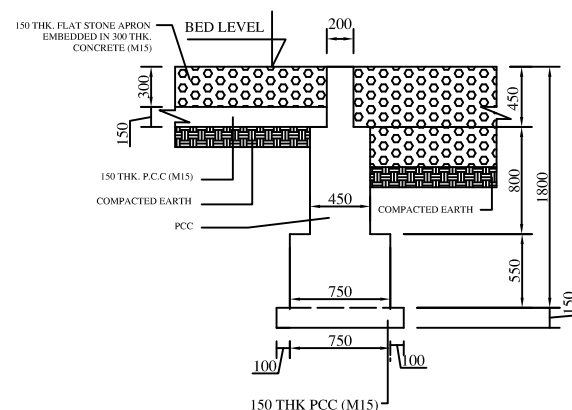
WINGWALL PLAN



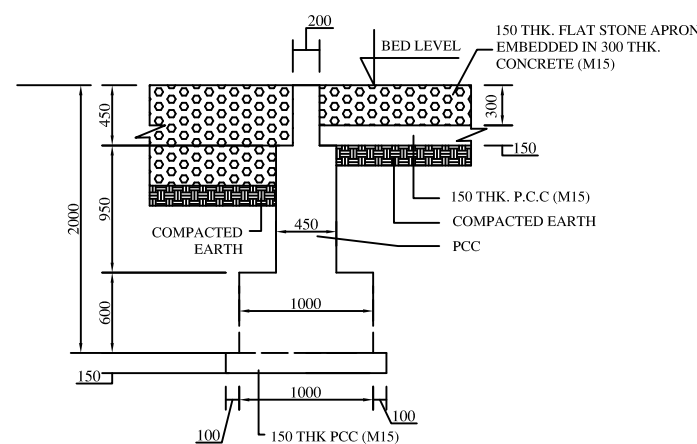
WINGWALL ELEVATION



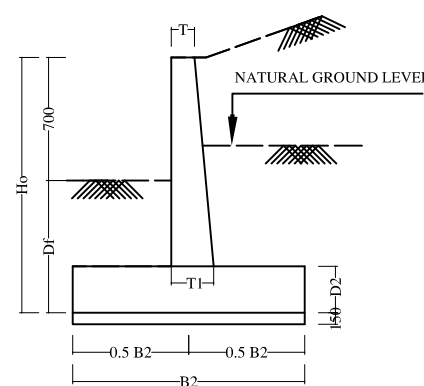
REINFORCEMENT DETAILS OF WINGWALL
(BACK FACE)



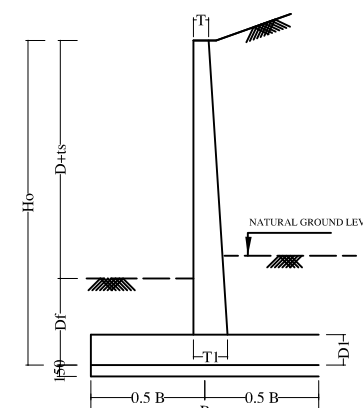
TYPICAL CROSS SECTION OF
CURTAIN WALL TYPE-II
(UP STREAM SIDE)



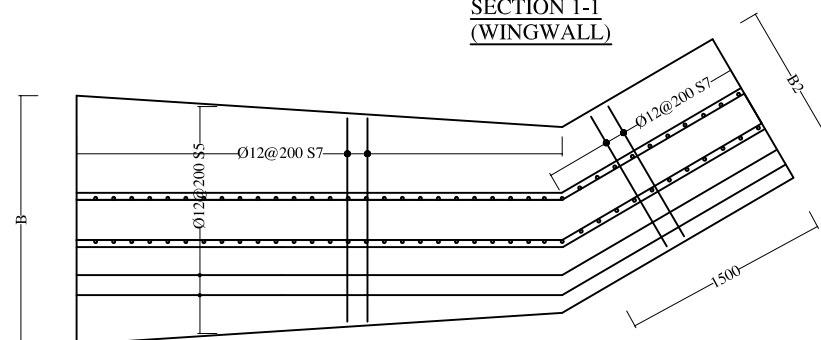
TYPICAL CROSS SECTION OF
CURTAIN WALL TYPE-I
(DOWN STREAM SIDE)



SECTION 2-2 and 3-3
(WINGWALL)



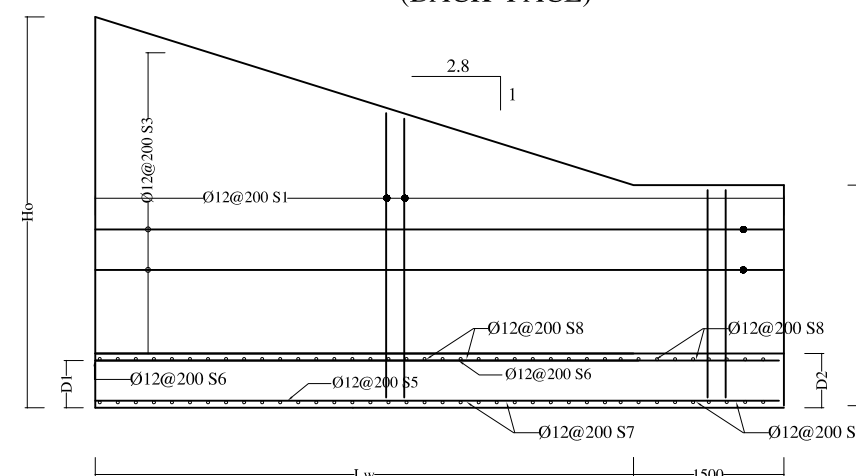
SECTION 1-1
(WINGWALL)



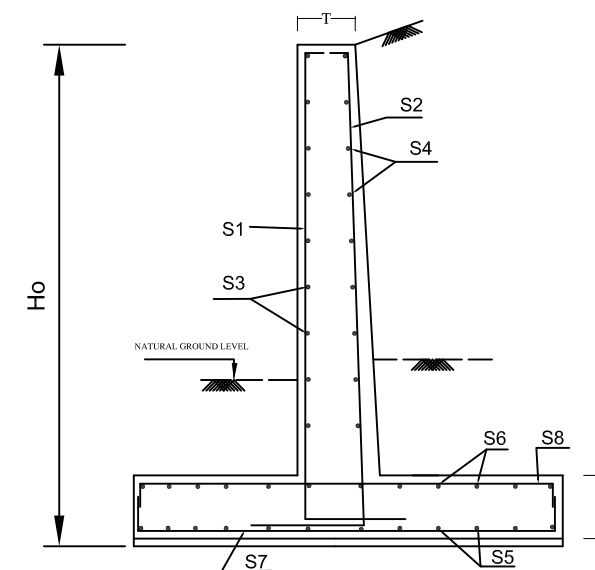
REINFORCEMENT DETAILS OF WINGWALL
PLAN (BOTTOM)

S.No.	Height of Opening, Hb (mm)	Depth of Foundation, Df (mm)	Max. ht. Ho (mm)	Length of wing wall, Lw (mm)	Section 1 -1				Section 2 -2 and 3 -3			
					T (mm)	T1 (mm)	B (mm)	D1 (mm)	T (mm)	T1 (mm)	B2 (mm)	D2 (mm)
1	3000	1500	4930	7720	200	420	1000	400	200	400	1000	400

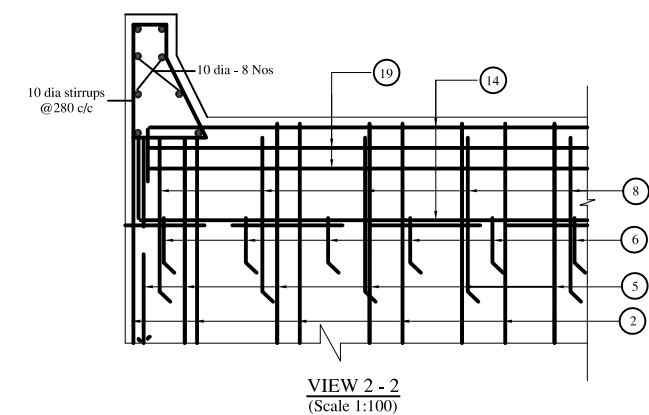
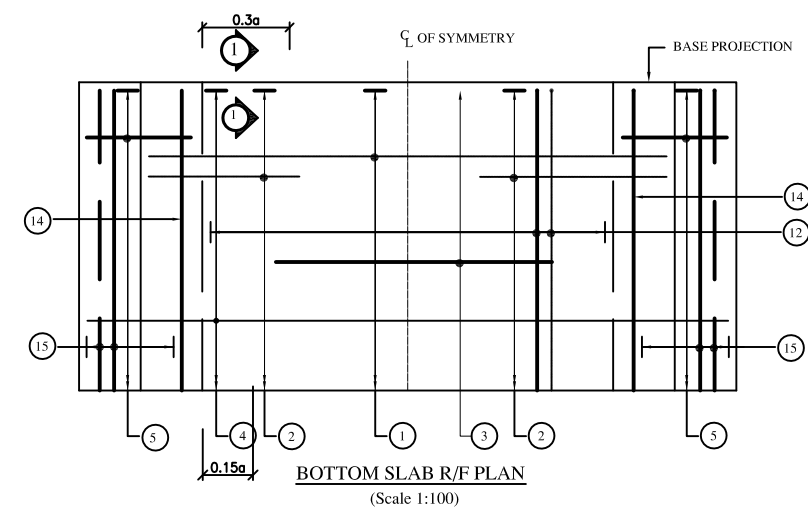
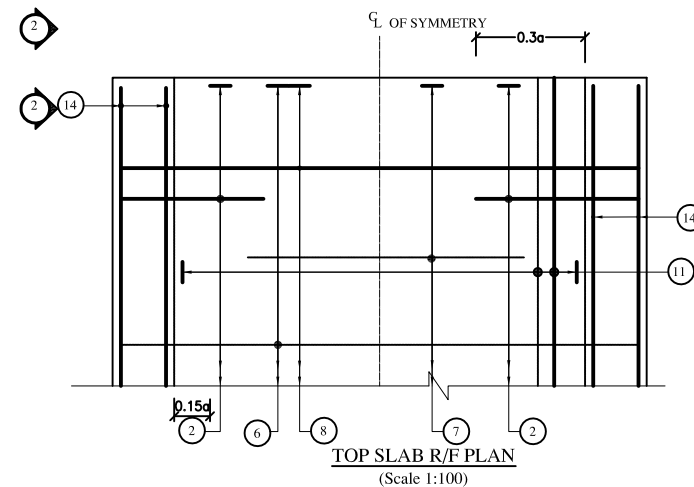
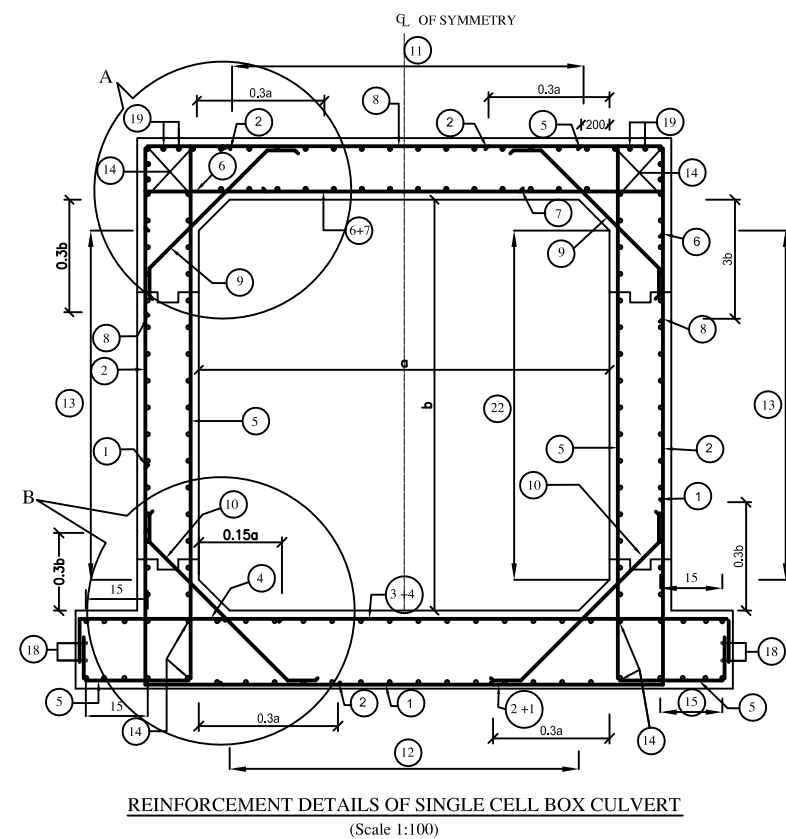
- NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.
 2. FOR GENERAL NOTES AND REFERENCE DRAWINGS REFER DRG NO.
 3. FOR REINFORCEMENT DETAIL REFER DRG. NO.
 4. FOR DETAILS OF WING WALL REFER DRG. NO.



REINFORCEMENT DETAILS OF WINGWALL
(FRONT FACE)



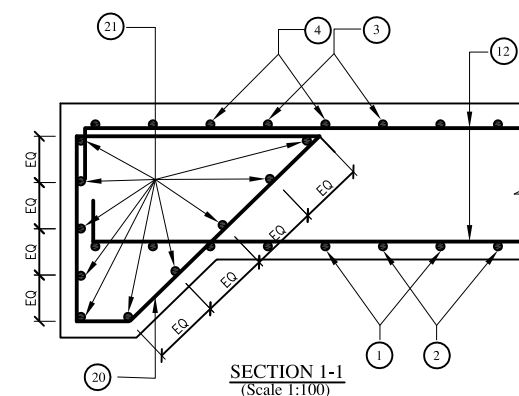
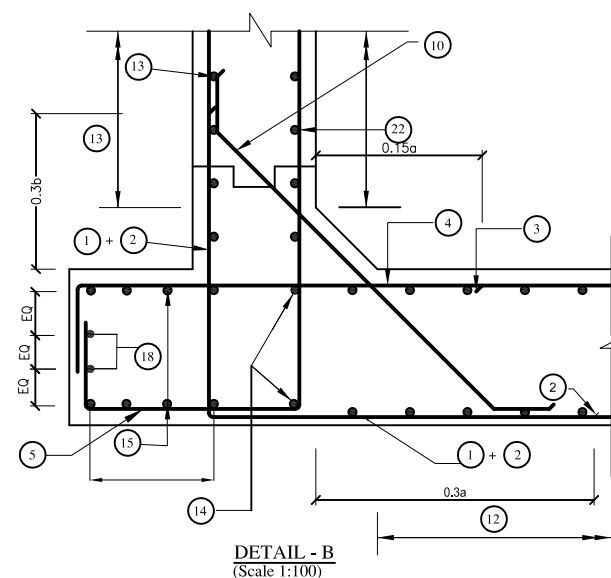
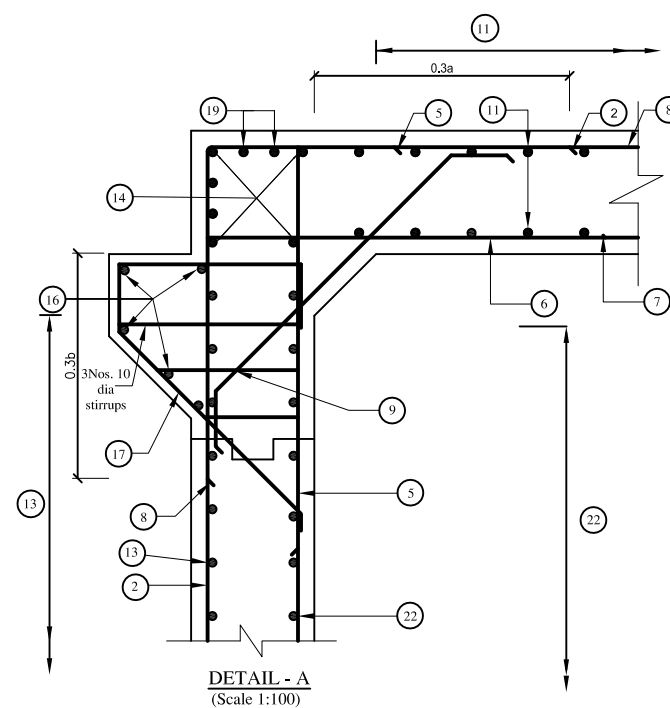
ARRANGEMENT OF REINFORCEMENTS
(WING WALL)



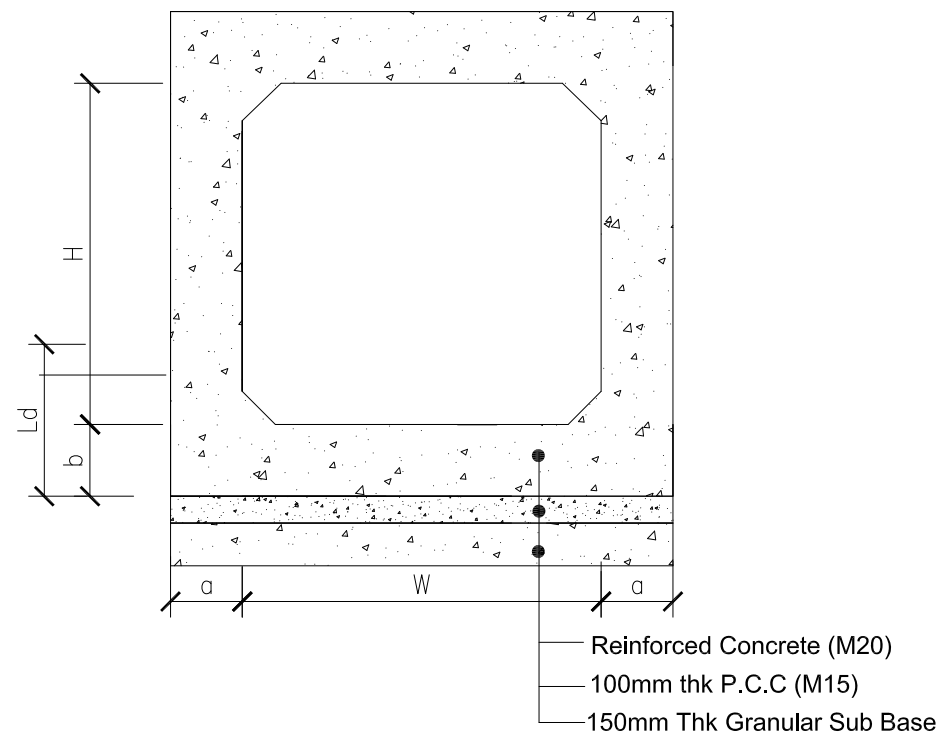
LEGEND:

— : TOP FACE BARS / OUTER FACE BARS

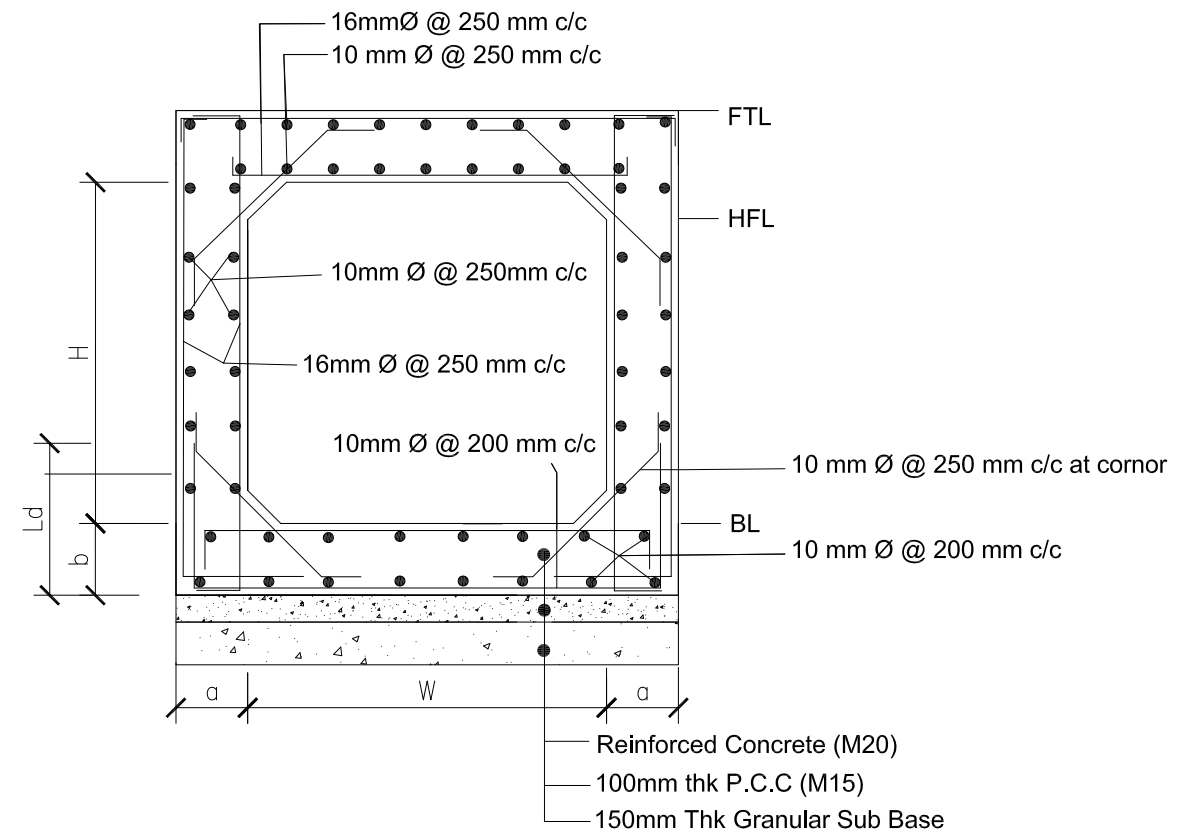
- - - : BOTTOM FACE BARS / INNER FACE BARS



BAR MARK	BOX-CELL DESIGNATION Nc/ab/Ec SHAPE OF BARS (NOT TO SCALE)	Single Cell Box Culvert 3m x3m 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.	W/m. kg	Weight. kg	
1		10	200	1270	3740	6280	50	314000	0.62	194.7	
2		16	200	1270	3740	6280	102	640560	1.58	1012.1	
3		12	200	2100	0	2100	50	105000	0.89	93.5	
4		16	200	320	5540	6180	50	309000	1.58	488.2	
5		12	150	3740	1220	5360	100	536000	0.89	477.0	
6		16	200	260	3740	4260	50	213000	1.58	336.5	
7		Bar not needed									
8		10	200	1270	3740	6280	50	314000	0.62	194.7	
9		10	200	200	1160	1560	100	156000	0.62	96.7	
10		10	200	200	1160	1560	100	156000	0.62	96.7	
11		10	200	200	9900	10300	28	288400	0.62	178.8	
12		12	200	200	9900	10300	28	288400	0.89	256.7	
13		10	200	200	9900	10300	28	288400	0.62	178.8	
14		10	-	160	9900	10220	12	122640	0.62	76.0	
15		10	200	200	9900	10300	24	247200	0.62	153.3	
16		12	-	0	9900	9900	10	99000	0.89	88.1	
17		12	200	1000	1260	2260	100	226000	0.89	201.1	
18		10	-	160	9900	10220	4	40880	0.62	25.3	
19		10	-	160	9900	10220	8	81760	0.62	50.7	
20		10	200	1100	1550	4150	56	232400	0.62	144.1	
21		10	-	160	5540	5860	20	117200	0.62	72.7	
22		10	200	210	9900	10320	28	288960	0.62	179.2	
										4594.9	

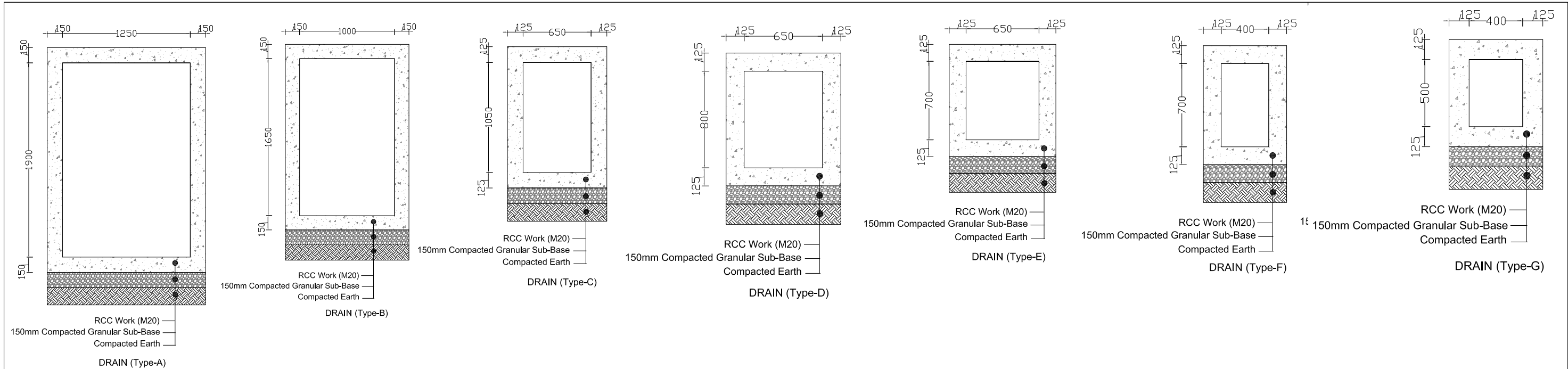


Drain Crossing



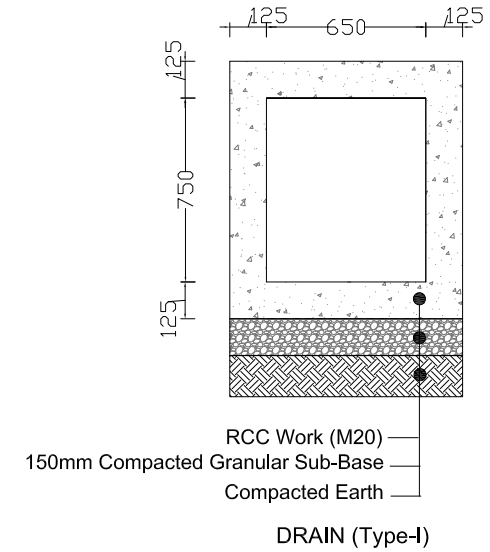
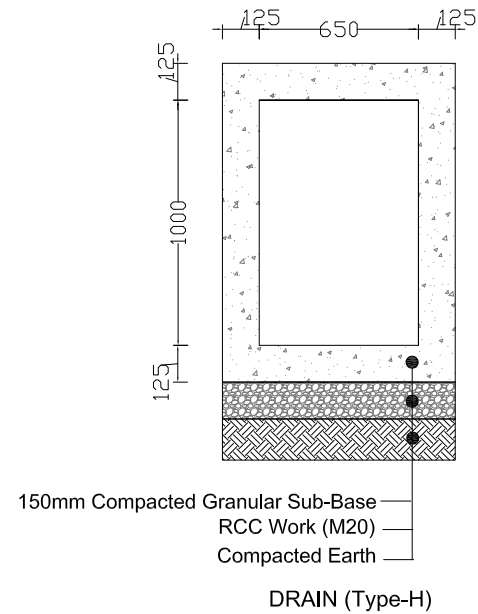
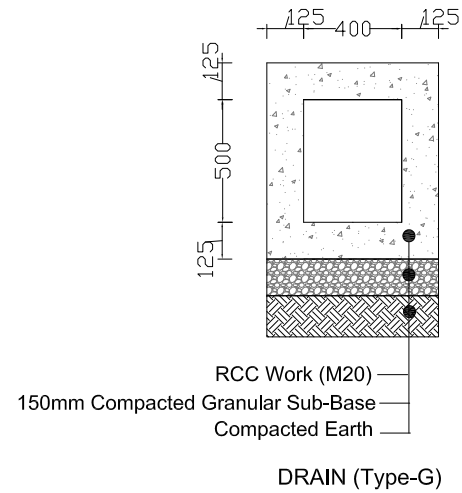
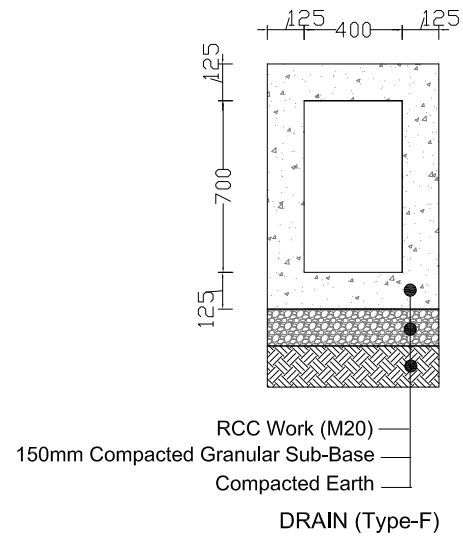
Reinforcement Details at Drain Crossing

S.N.	Chainage	Proposed Structure	Proposed size (H*W)m	Cover Slab (mm)	a (mm)	b (mm)
1.	1+089.7	Drain Crossing	2*1.5	350	300	300
2.	9+447	Drain Crossing	1*1	250	200	200



Summary of sizes of Road Side Drain - Right Sides						
CH		Length	Width	Final Gross Depth	Catageroy	Remarks
From	To	L	b	D		
Km+m		m	m	m		
0+500.0	1+089.7	589.70	1.250	1.900	A	RCC Rectagular Drain
0+000.0	0+500.0	500.00	1.000	1.650	B	
1+592.0	2+080.0	488.00	0.650	1.050	C	
1+092.0	1+592.0	500.00	0.650	0.800	D	
3+328.0	3+793.0	1093.00	0.650	0.700	E	
4+680.0	5+308.0					
6+750.0	7+124.0	3146.80	0.400	0.700	F	
7+299.5	7+124.0					
8+951.0	9+447.0					
2+780.0	2+329.7					
2+780.0	3+111.5					
5+549.0	5+880.0					
5+880.0	6+270.0					
8+320.0	7+989.0					
8+560.0	8+827.5					
2+244.0	2+329.7	2498.56	0.400	0.500	G	
3+328.0	3+111.5					
4+110.7	3+793.0					
5+549.0	5+308.0					
6+360.0	6+481.0					
6+481.0	6+750.0					
7+344.5	7+295.5					
7+344.5	7+400.0					
7+535.7	7+400.0					
7+726.2	7+531.0					
7+969.4	7+721.3					
7+969.4	7+989.0					
8+447.0	8+320.0					
8+447.0	8+560.0					
8+827.5	8+951.0					
9+447.0	9+628.0					

Summary of sizes of Road Side Drain -Left Sides						
CH		Length	Width	Final Gross Depth	Catageroy	Remarks
From	To	L	b	D		
Km+m		m	m	m		
0+500.0	1+089.7	589.70	1.250	1.900	A	rectangular RCC drain
0+000.0	0+500.0	500.00	1.000	1.650	B	
1+092.0	1+592.0	1352.00	0.650	0.700	E	
1+592.0	2+243.0					
6+280.0	6+481.0					
2+781.3	3+111.5	1093.70	0.400	0.700	F	
8+560.0	8+827.5					
8+951.0	9+447.0					
2+781.3	2+540.0	2753.78	0.400	0.500	G	
3+328.0	3+111.5					
3+328.0	3+793.0					
4+110.7	3+793.0					
4+540.0	5+308.0					
6+500.0	6+750.0					
6+750.0	6+820.0					
8+439.3	8+560.0					
8+827.5	8+951.0					
9+447.0	9+628.0					



Summary of sizes of Rad Side Drain - Right Sides

CH		Length	Width	Final Gross Depth	Catageroy	Remarks
From	To	L	b	D		
Km+m		m	m	m		
0+000.0	0+446.0	575.00	0.400	0.700	F	Rectangular RCC Drain
0+752.0	0+623.0					
0+560.0	0+446.0	384.04	0.400	0.500	G	
0+832.5	0+752.0					
1+780.0	1+900.0					
1+969.5	1+900.0					

Summary of sizes of Road Side Drain - Left Sides

CH		Length	Width	Final Gross Depth	Catageroy	Remarks
From	To	L	b	D		
Km+m		m	m	m		
1+969.5	2+629.0	659.47	0.650	1.000	H	Rectangular RCC Drain
1+351.0	1+900.0	549.00	0.650	0.750	I	
1+351.0	0+954.0	1025.99	0.400	0.700	F	
2+629.0	2+812.0					
0+000.0	0+446.0					
0+560.0	0+446.0	305.04	0.400	0.500	G	
0+954.0	0+832.5					
1+969.5	1+900.0					



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:-

Typical Side Drain - (Section II)

DESIGNED BY :

Date : 2023

DRAWN BY :

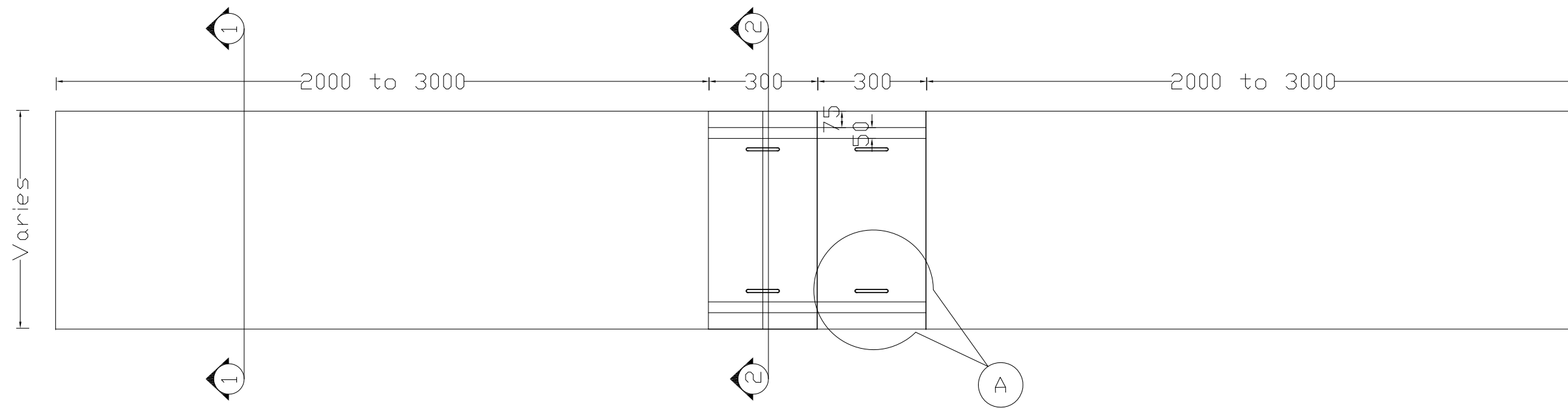
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CHECKED BY :

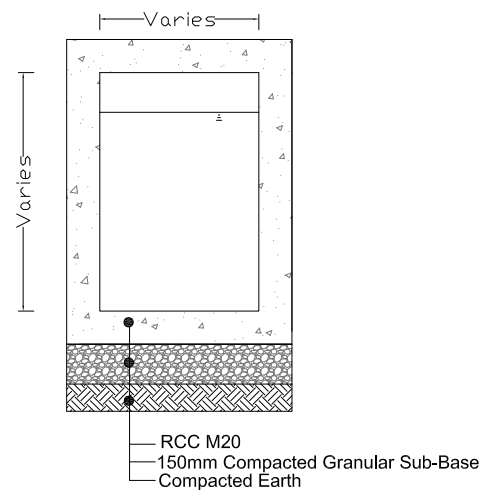
Chainage :

APPROVED BY :

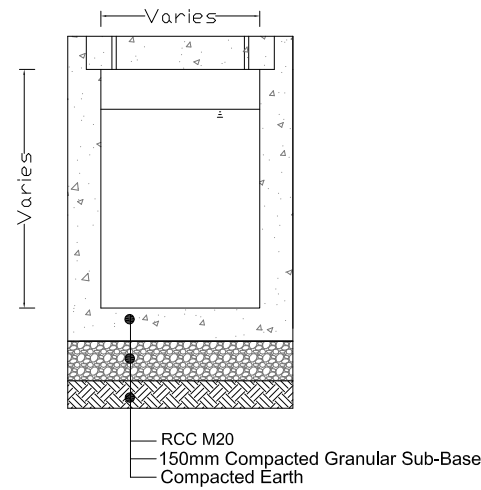
Sheet No. : 2



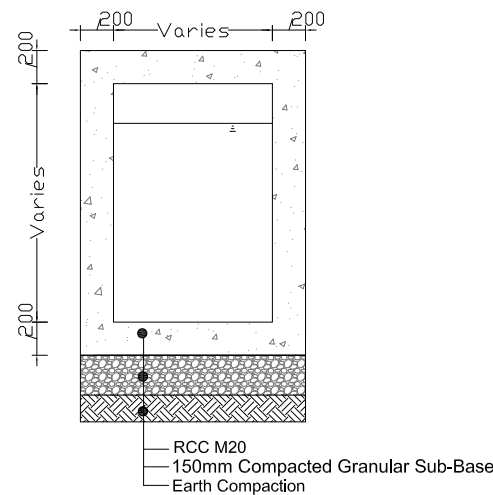
PLAN OF DRAIN



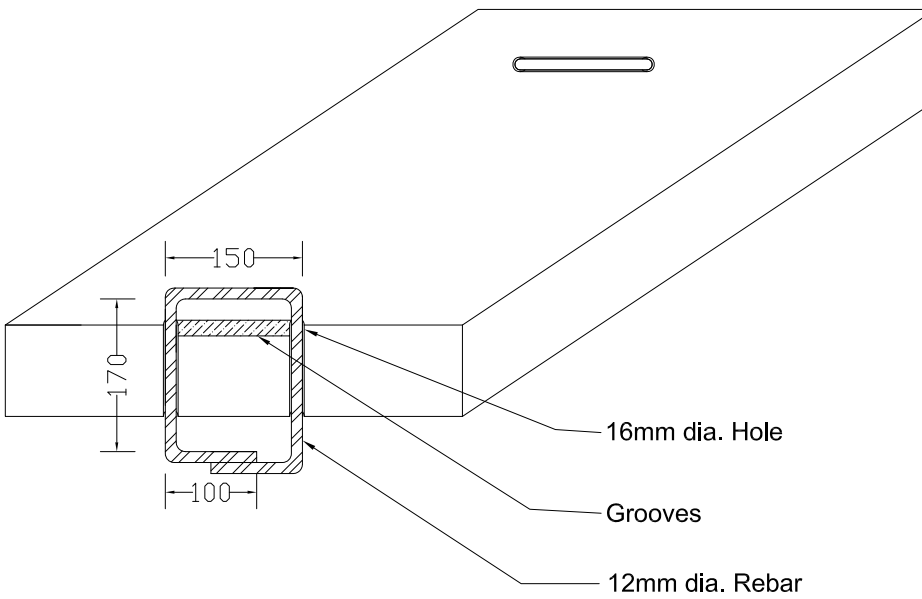
SECTION 1-1



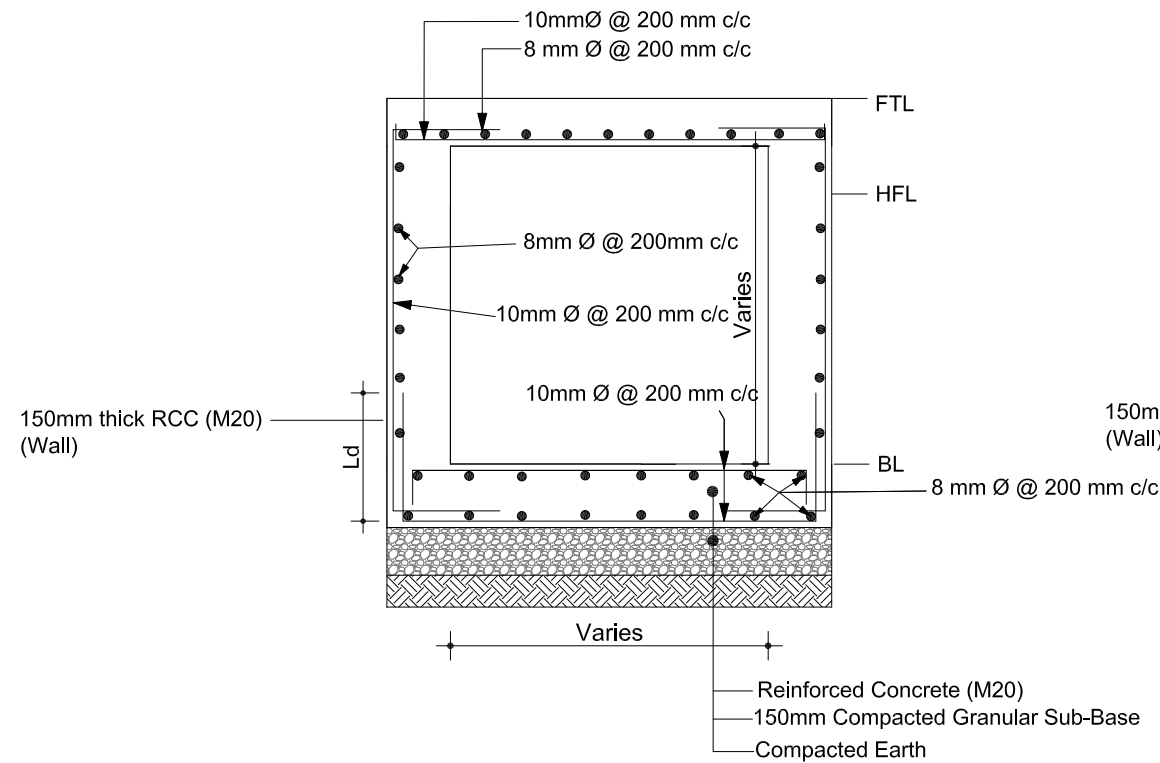
SECTION 2-2



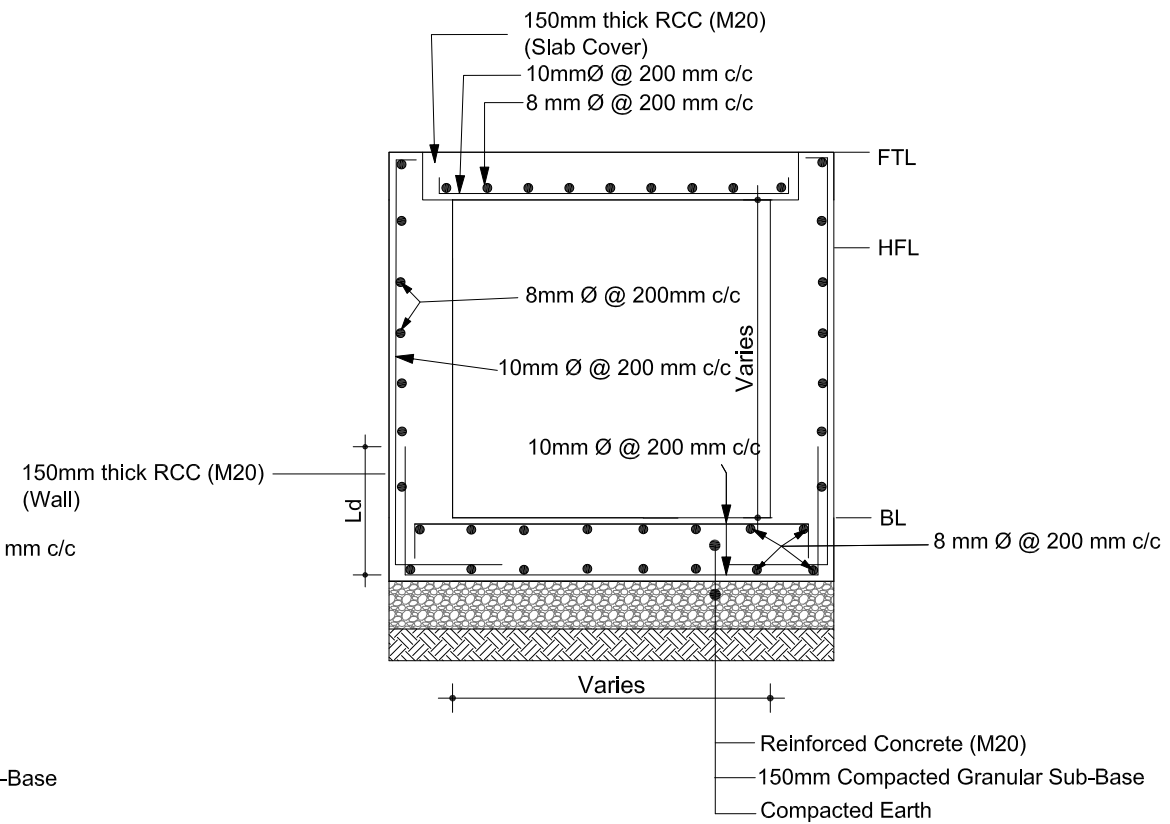
AT ROAD CROSSING



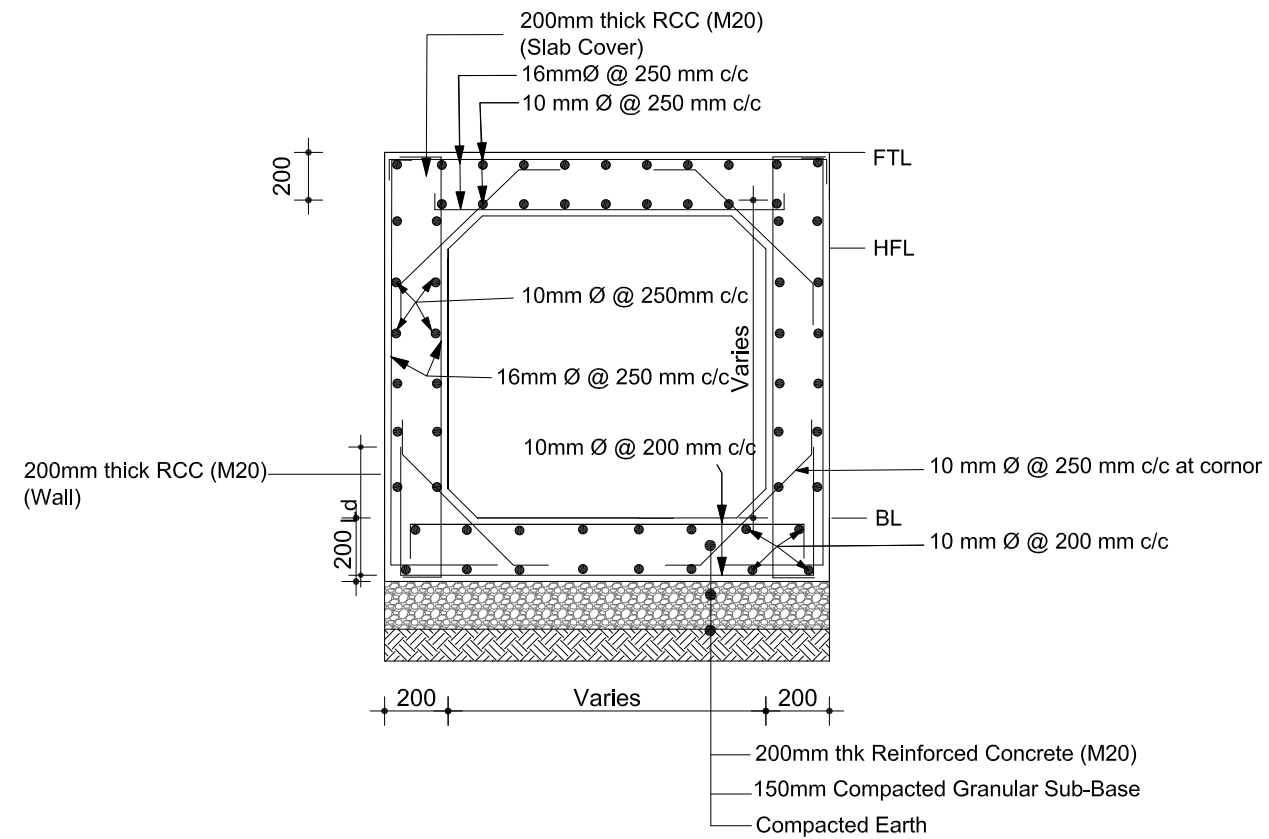
DETAIL AT- A



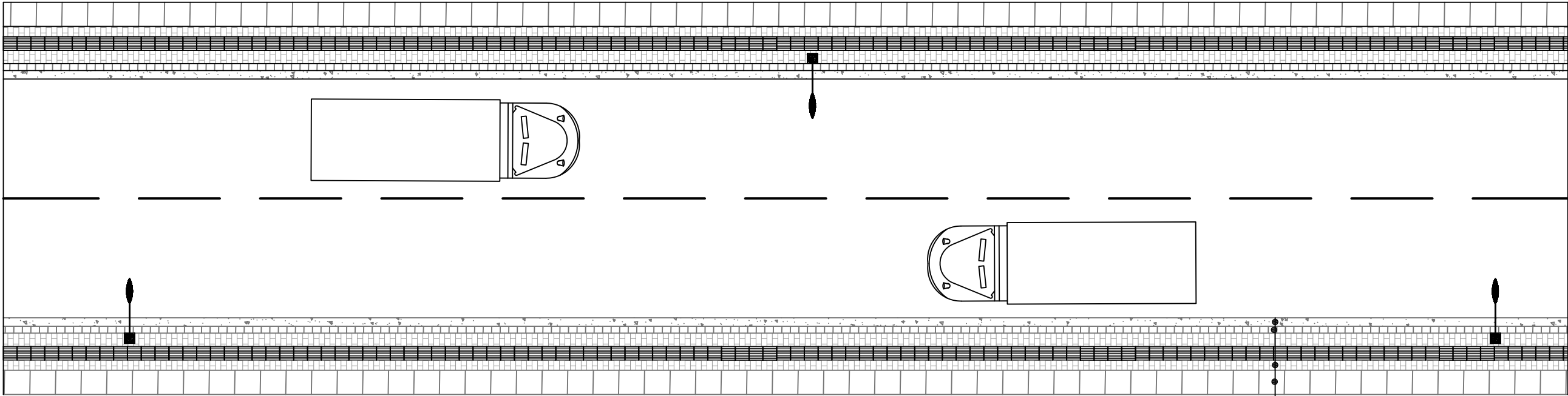
Reinforcement Details at Section 1-1



Reinforcement Details at Section 2-2

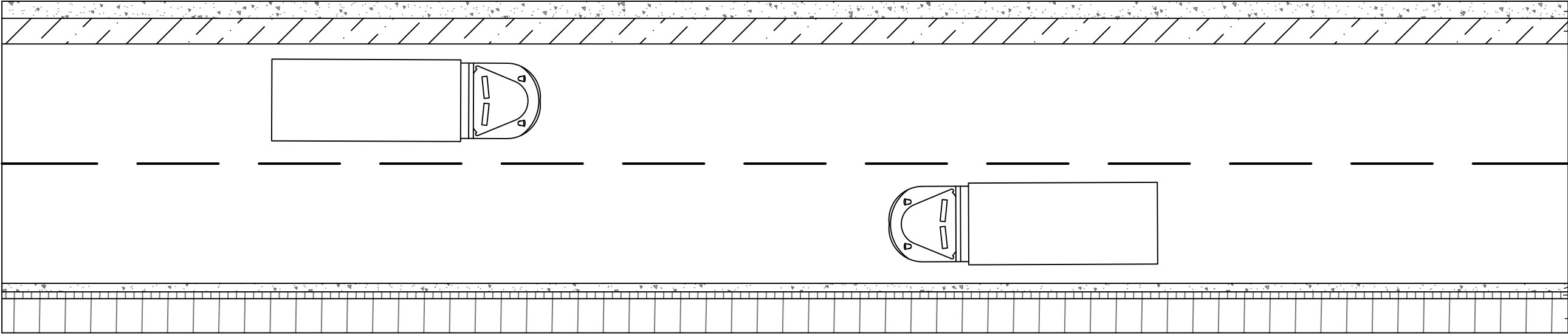


Reinforcement Details at Road Crossing



Typical Plan of Road
Type - A

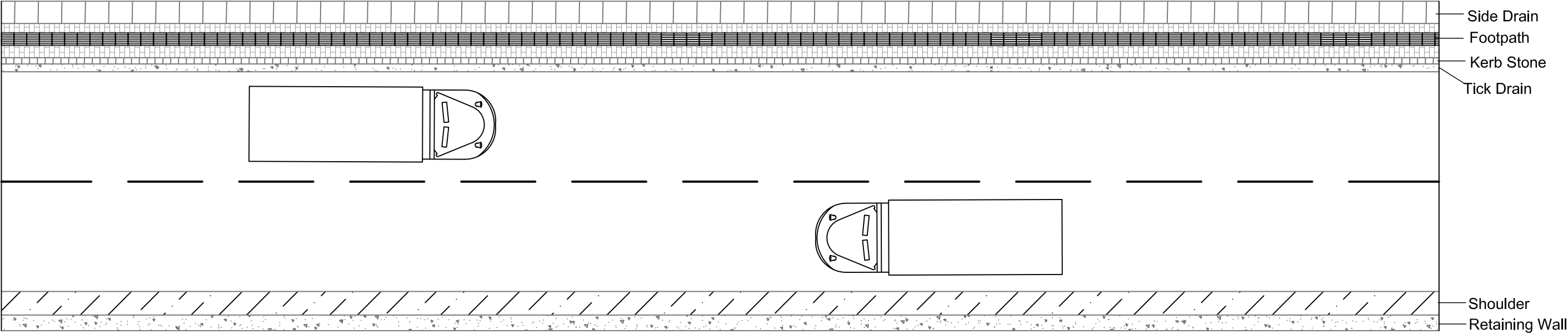
- Tick Drain
- Kerb Stone
- Footpath
- Side Drain



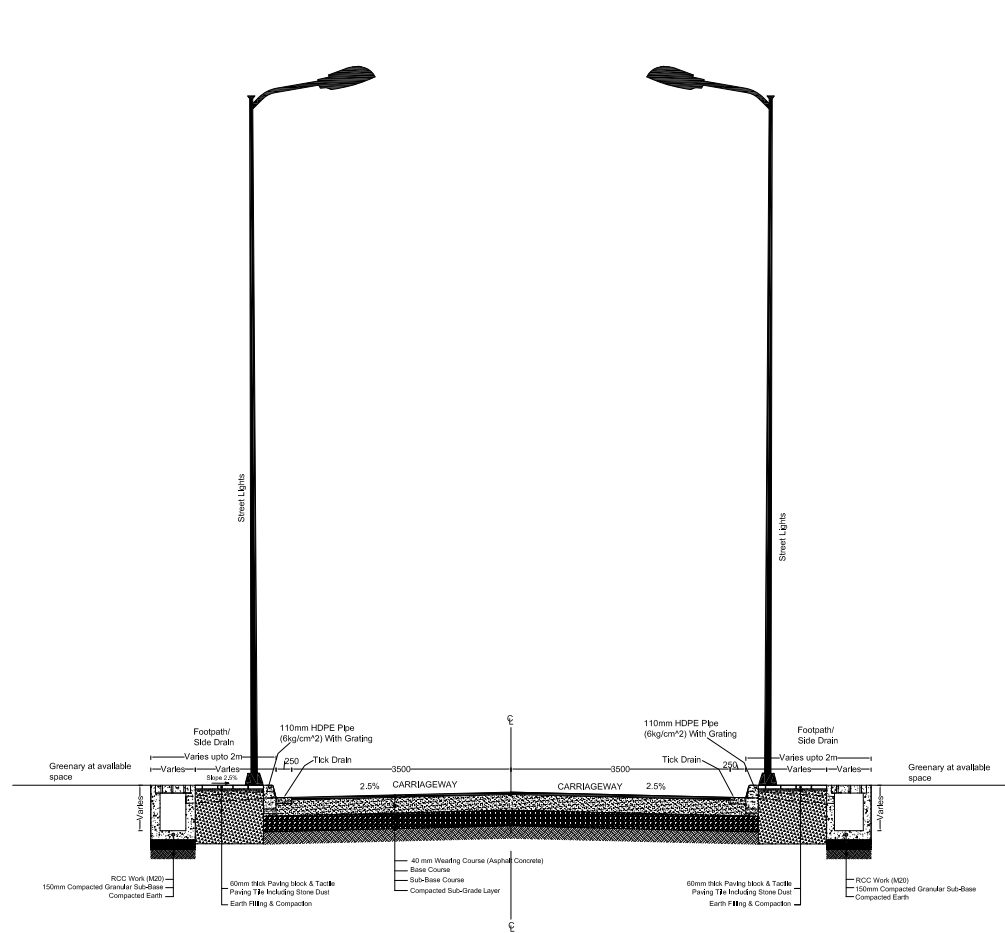
Retaining Wall
Shoulder

Tick Drain
Kerb Stone
Side Drain

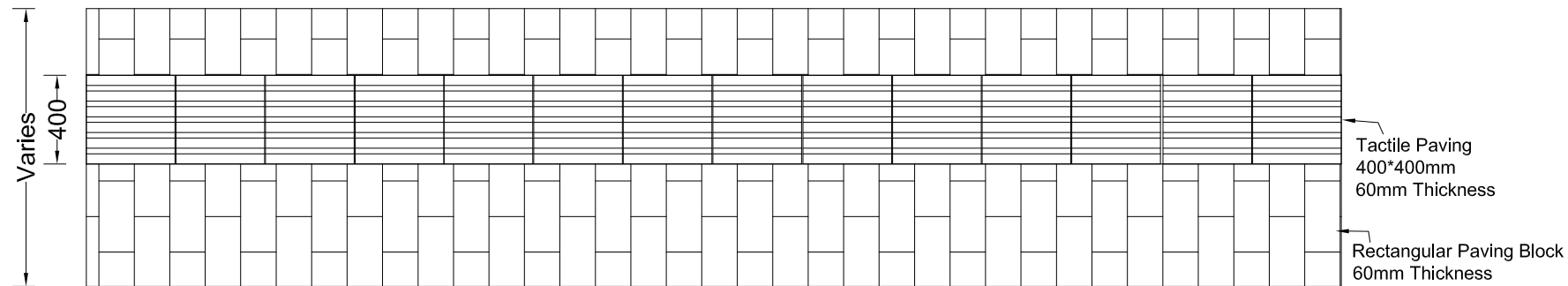
Typical Plan of Road
Type - B



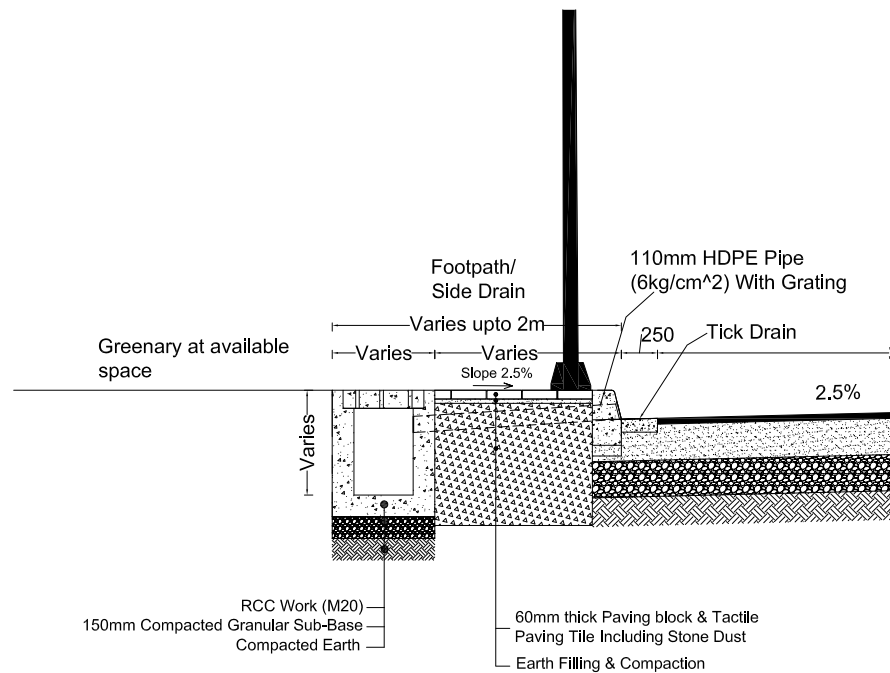
Typical Plan of Road
Type - C



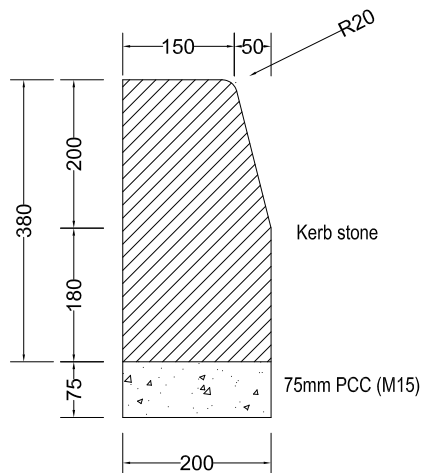
Typical Cross Section of Road



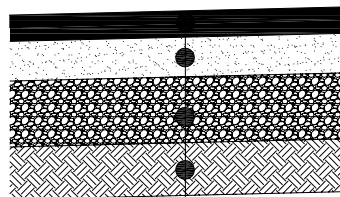
Footpath Plan



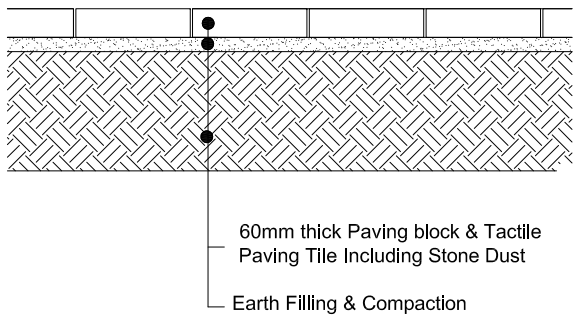
Typical Cross Section of Footpath



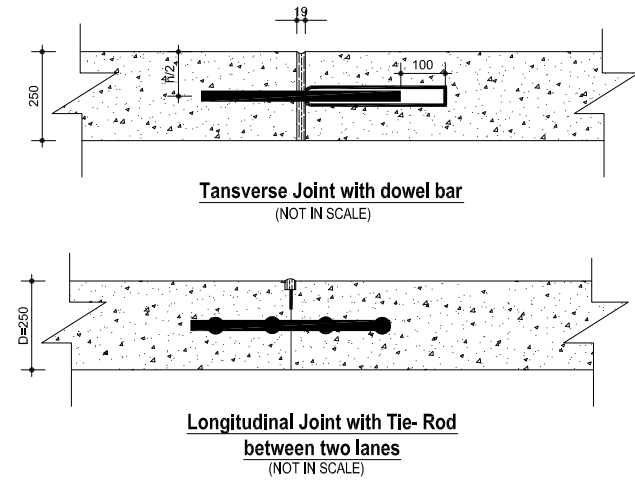
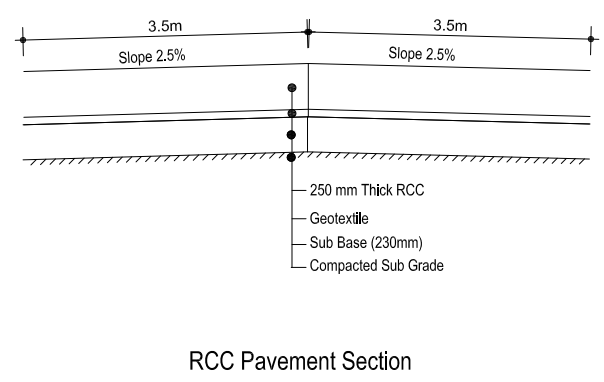
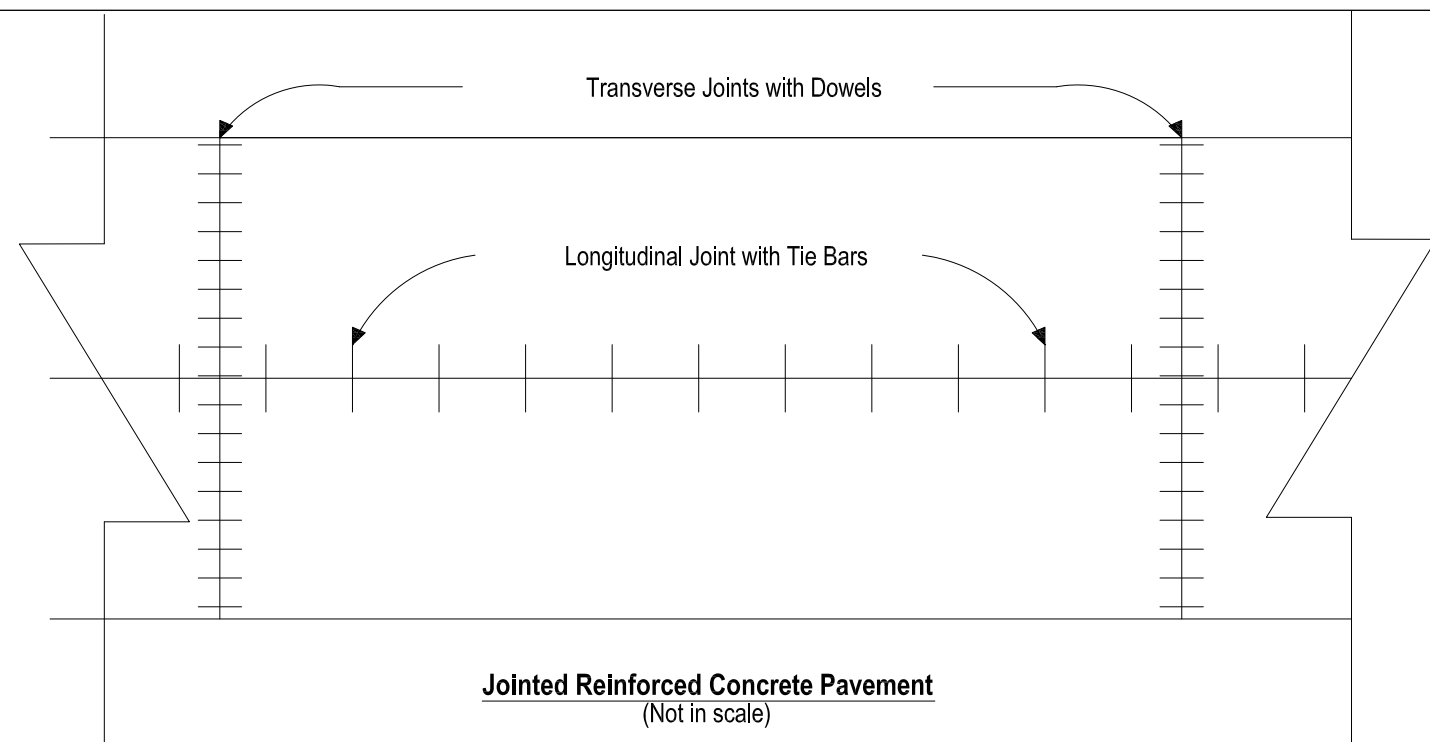
KERB STONE DETAILS



Typical Cross Section of Pavement



FOOTPATH DETAILS

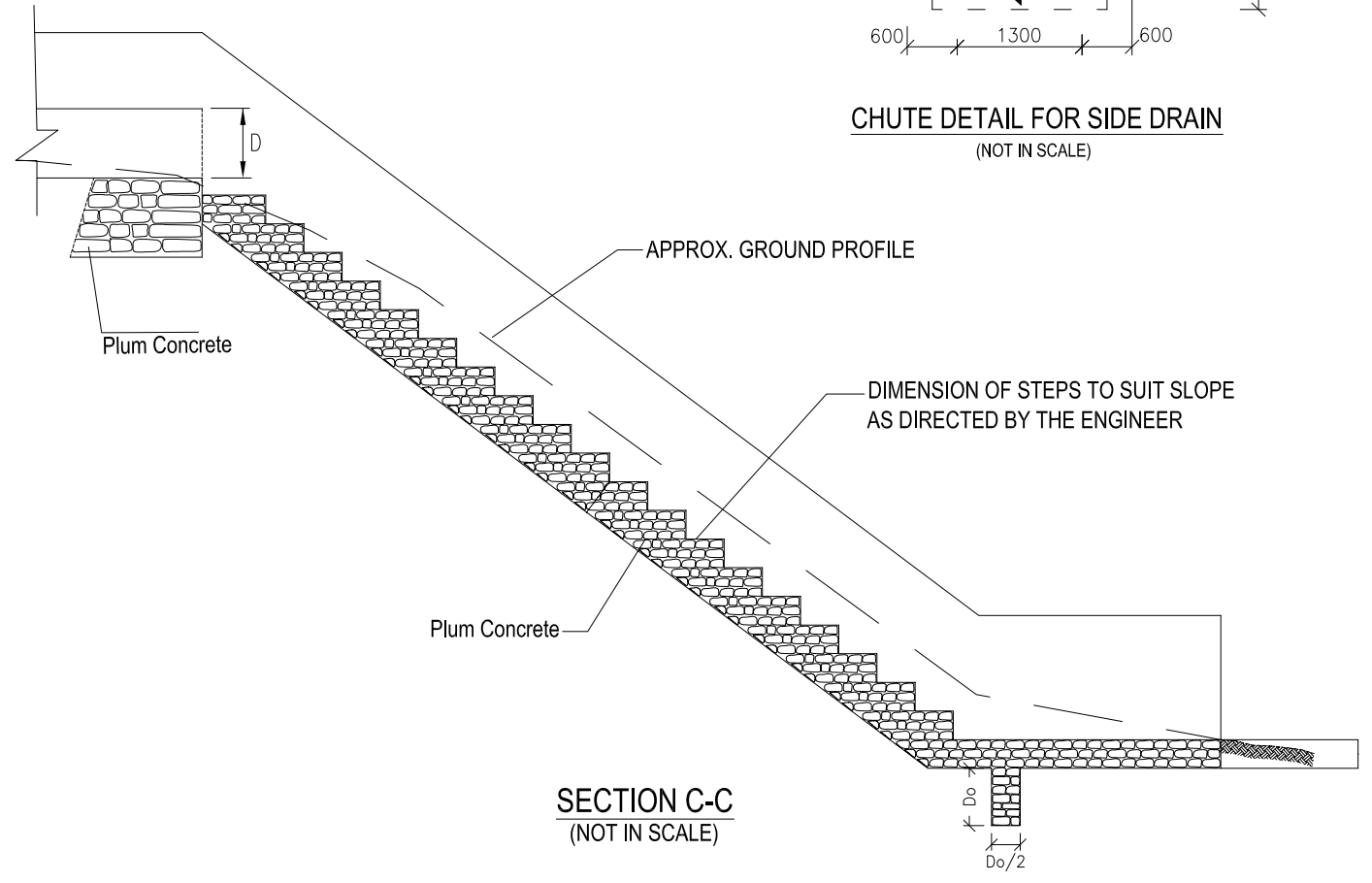
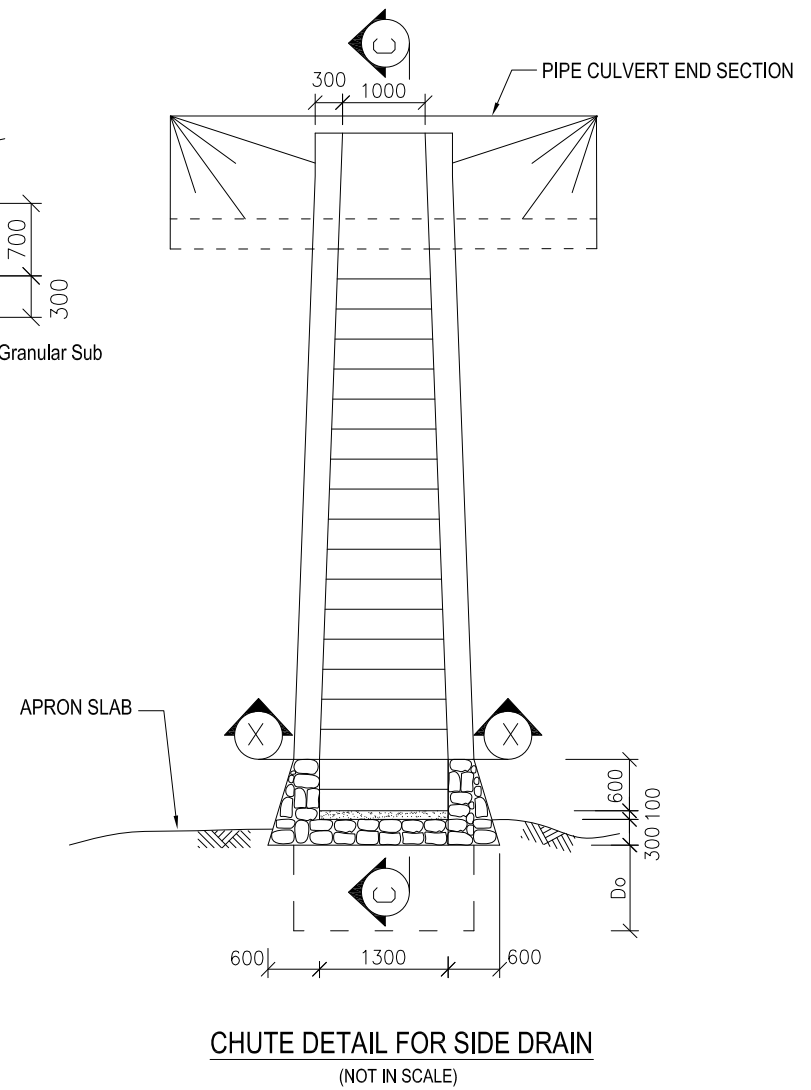
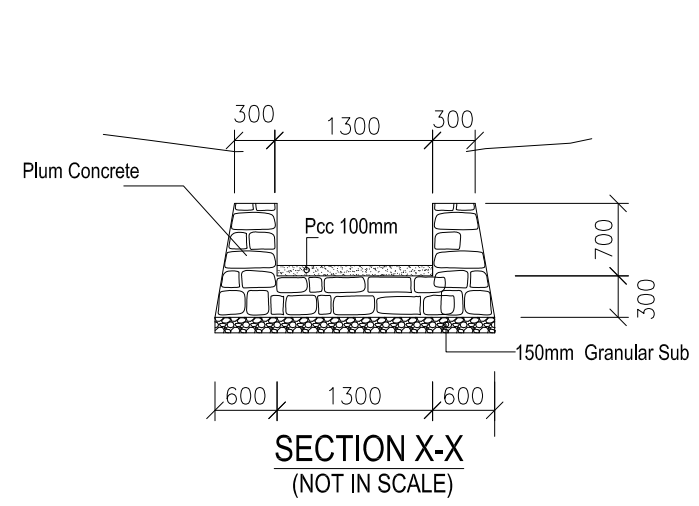


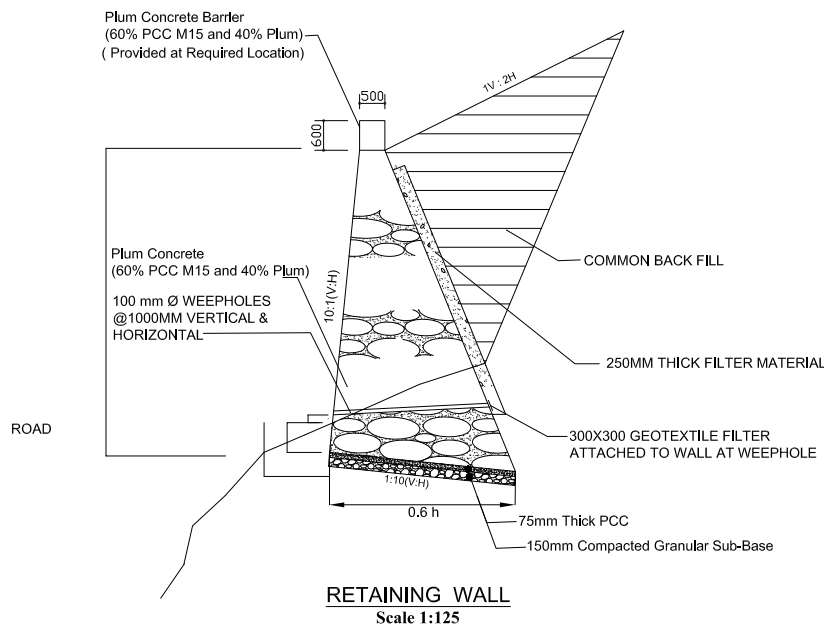
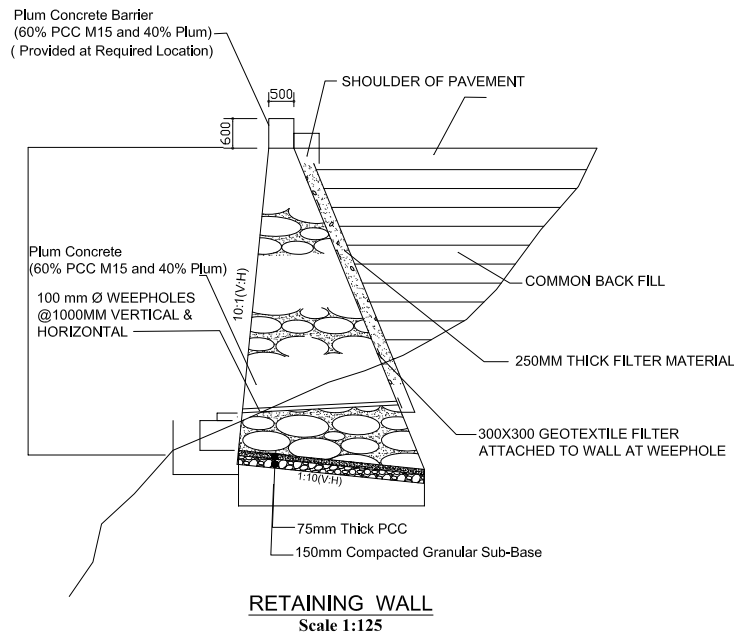
Details of Tie Bars for Longitudinal Joint of Rigid Pavements

Slab Thickness (mm)	Tie Bar Details				
	Diameter (d) mm	Max. Spacing (mm)		Min. Length (mm)	
		Plain	Deformed	Plain	Deformed
250	12	450	720	580	640

Details of Dowel Bars

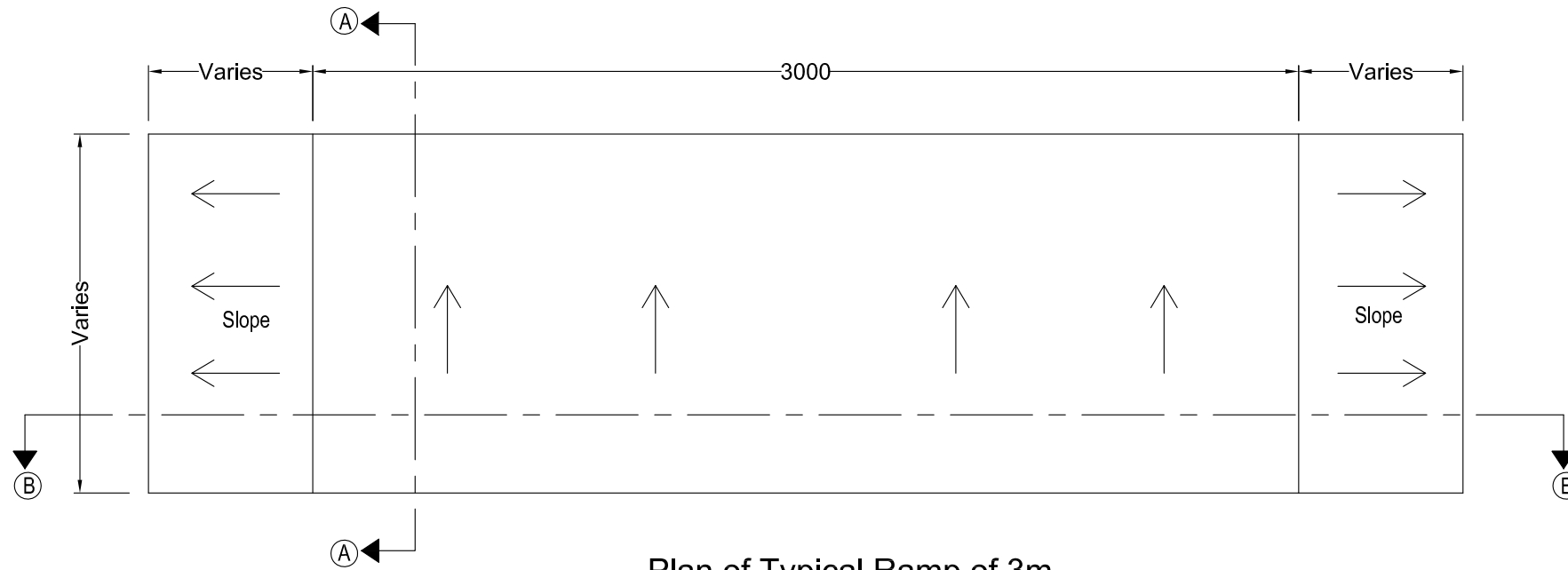
Slab Thickness (mm)	Dowel Bar Details		
	Diameter (d) mm	Length (mm)	Spacing (mm)
250	32	450	300



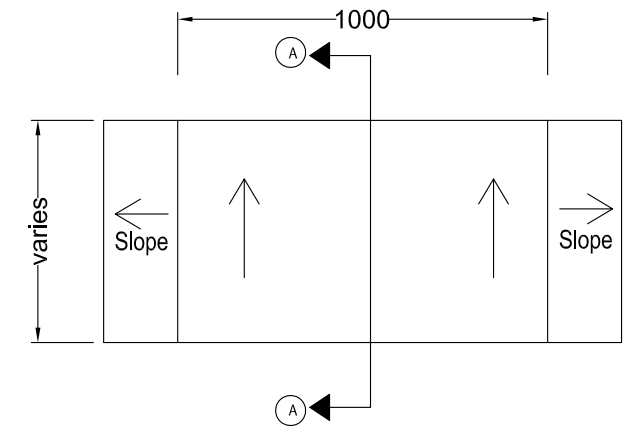


NOTES :

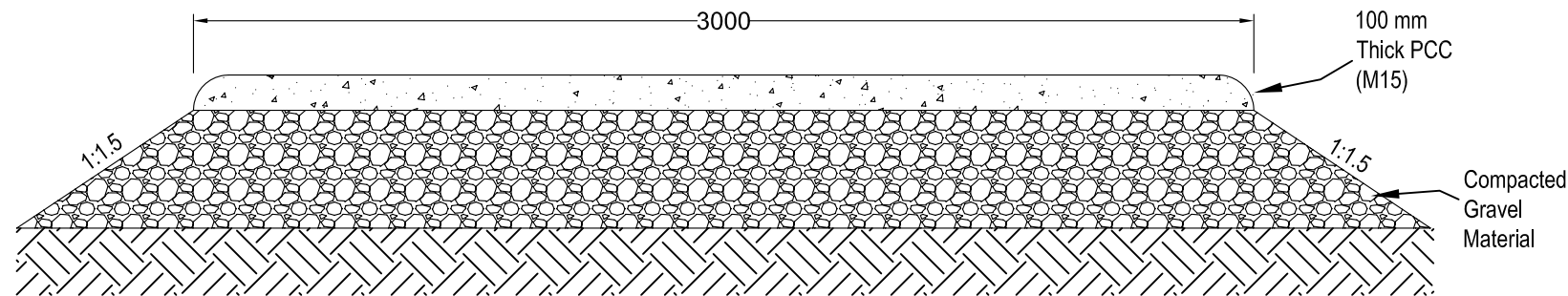
1. Wall height is to be modified as per actual site condition or as directed by the Engineer.
2. Wall height for more than 6.0 m, soil investigation is to be done or as directed by the Engineer.
3. Expansion Joint is to be provided maximum at a distance of 10.0 m C/C .It should be located, wherever possible, 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



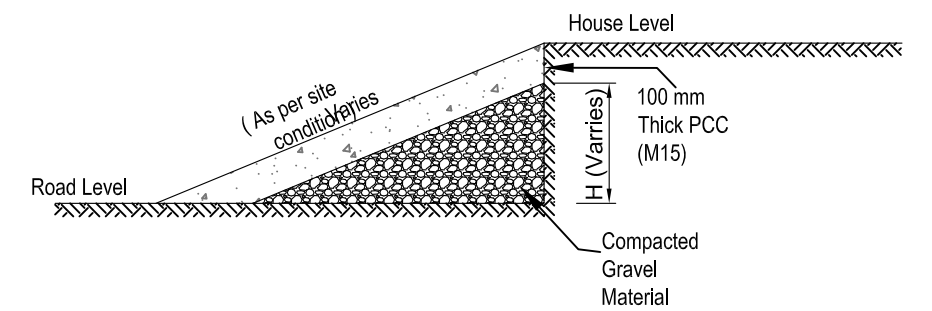
Plan of Typical Ramp of 3m
Scale (1:20)



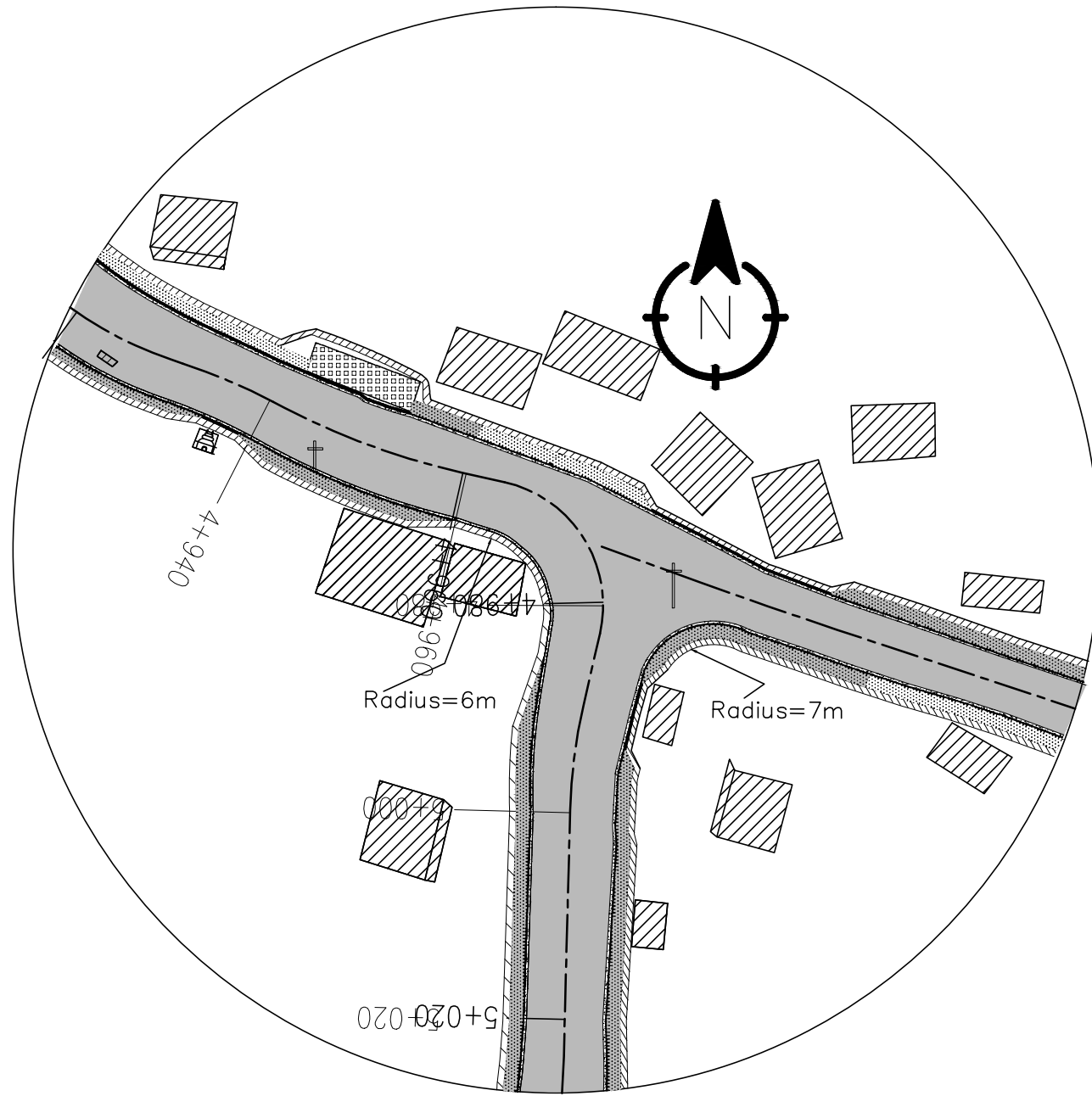
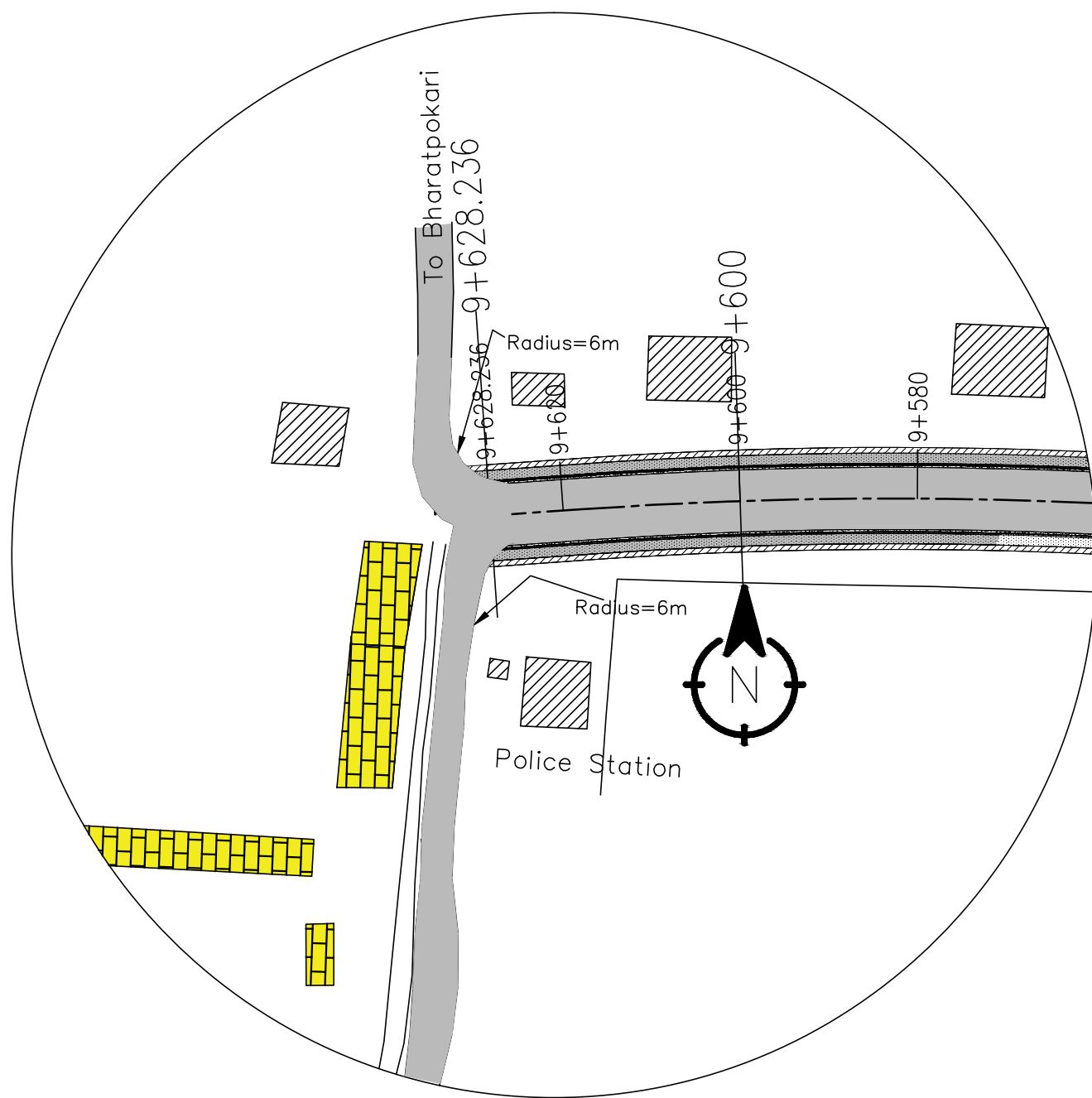
Plan of Typical Ramp of 1m
Scale (1:20)



Section at B-B
Scale (1:20)



Section at A-A
Scale (1:20)



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

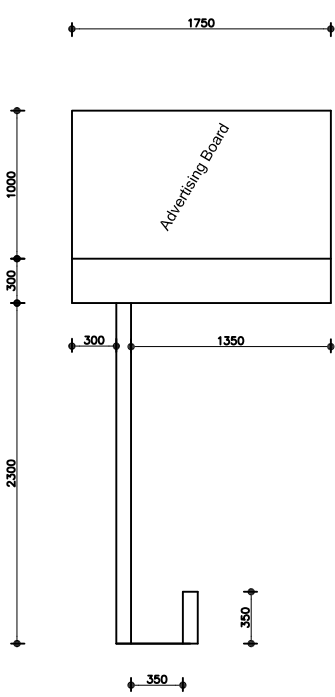
CONSULTANT:
Plush Engineers and Architects (P.) Ltd. (PEA)
B.N. Consultancy Pvt. Ltd. (BN)
Soil Test Consultancy (P.) Ltd. (Soil Test)
Kathmandu, Nepal

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

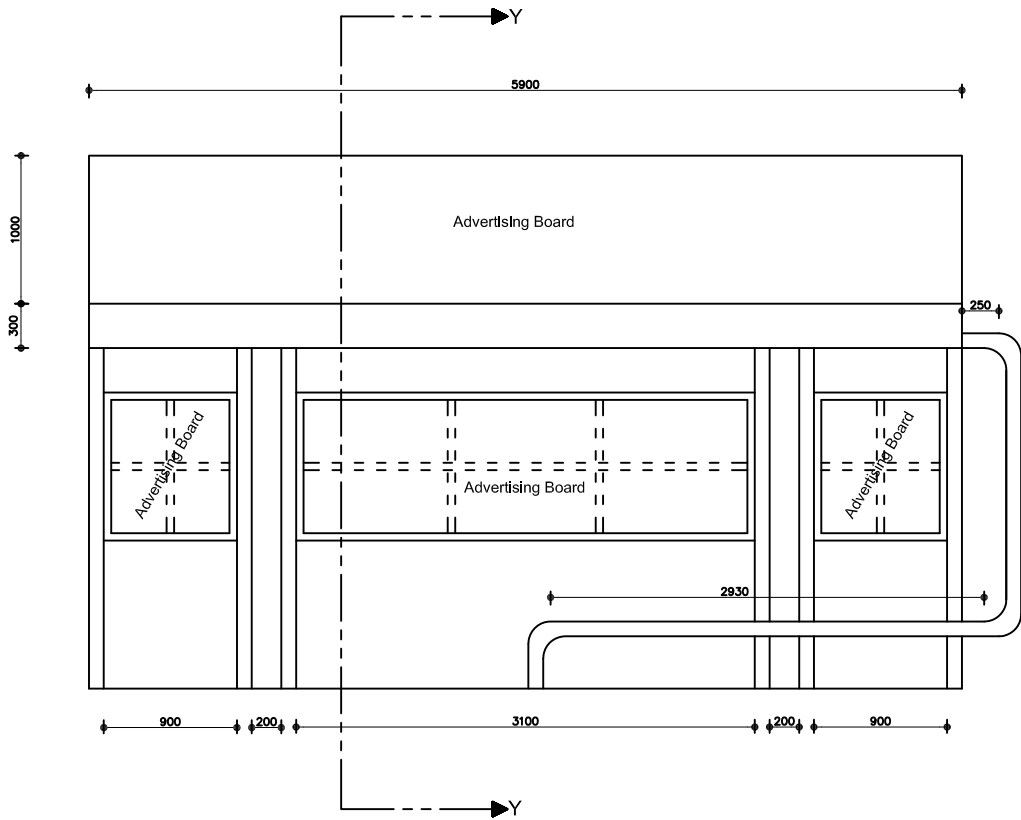
SHEET TITLE:
Intersection

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

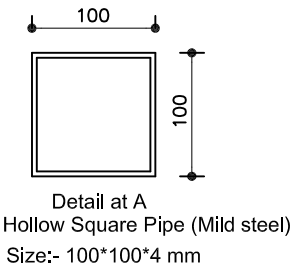
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Chainage:
Sheet No: 1



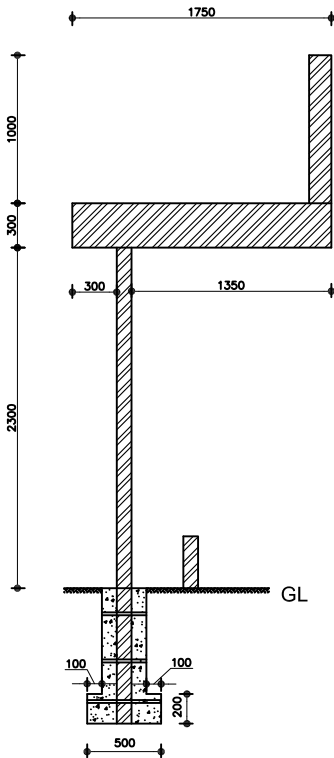
Bus Shelter Side View
Scale:- 1:50



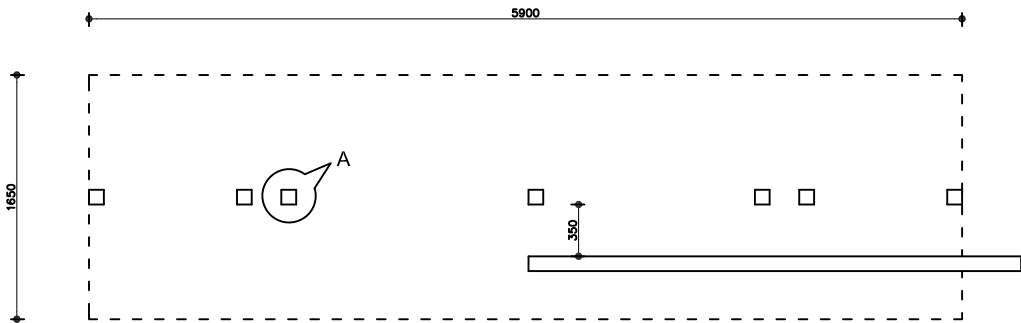
Bus Shelter Front View
Scale:- 1:50



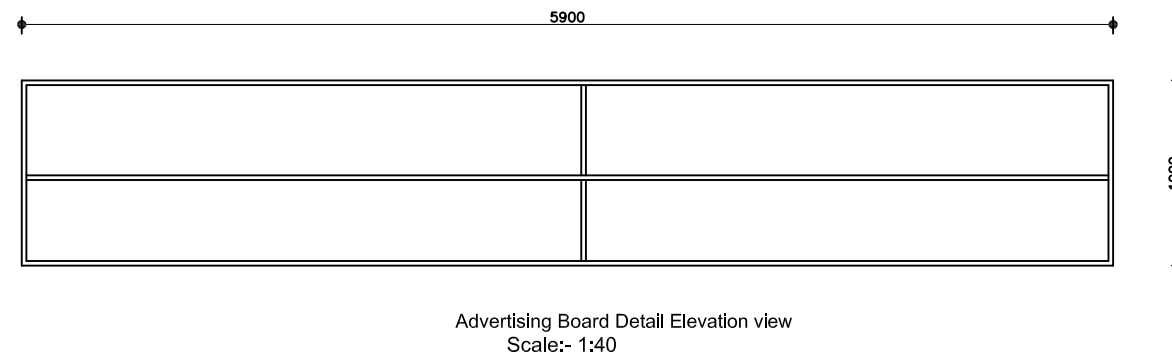
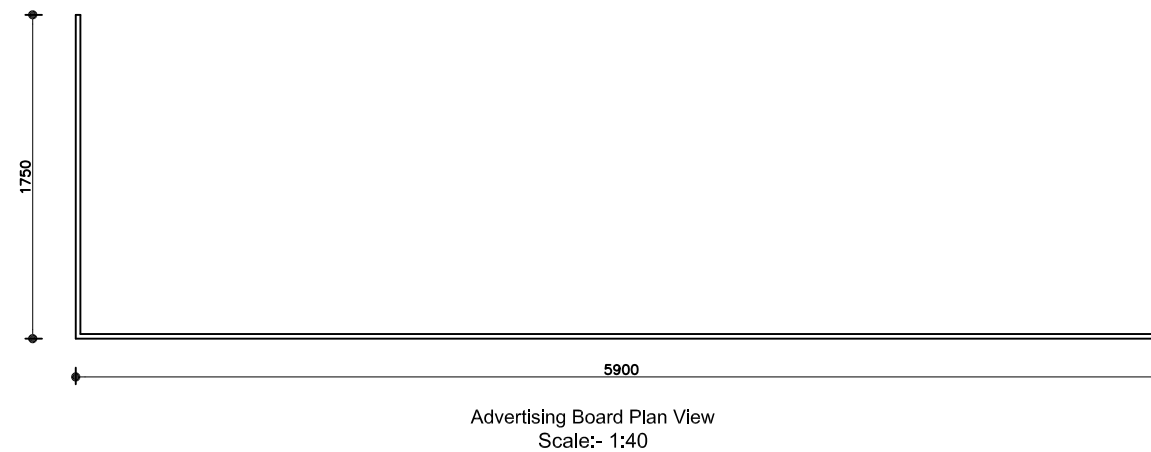
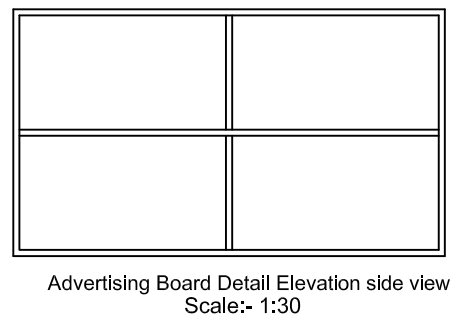
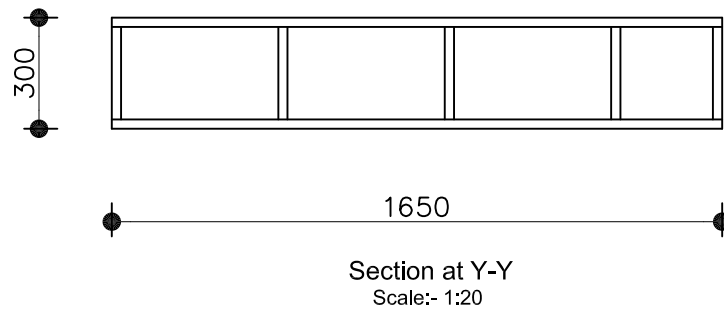
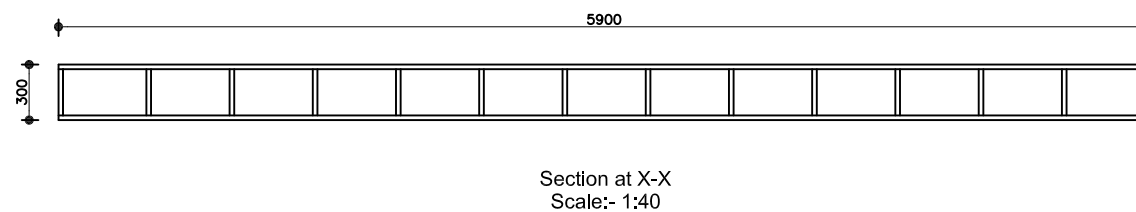
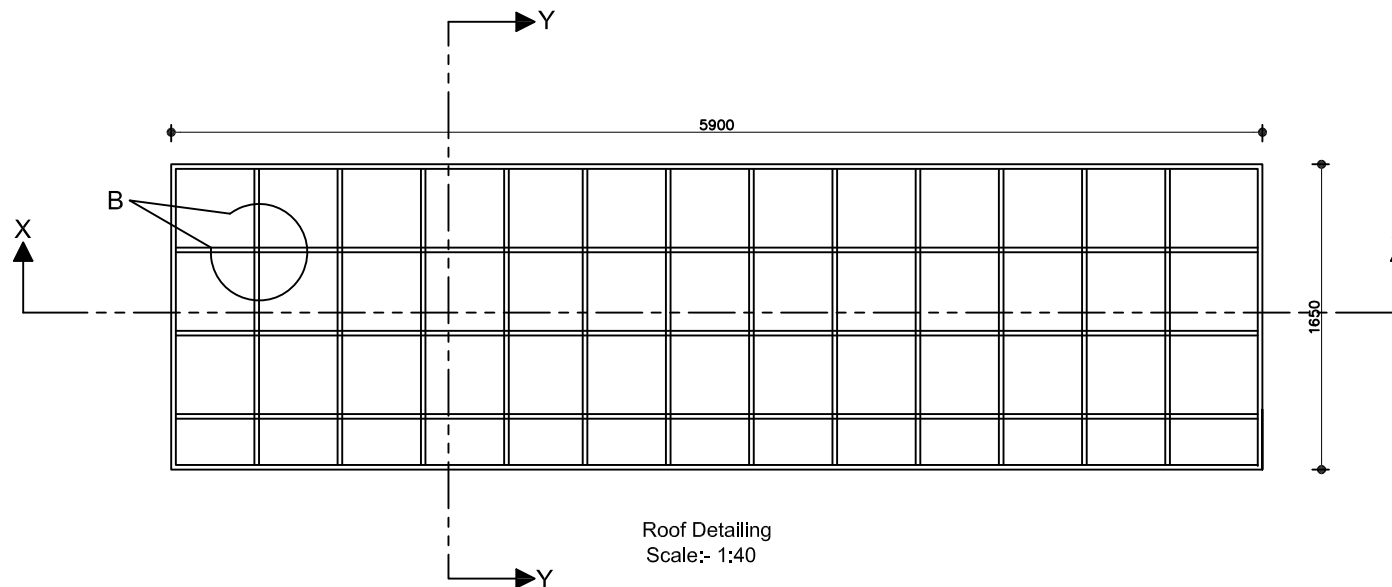
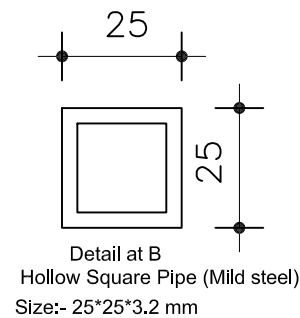
Detail at A
Hollow Square Pipe (Mild steel)
Size:- 100*100*4 mm

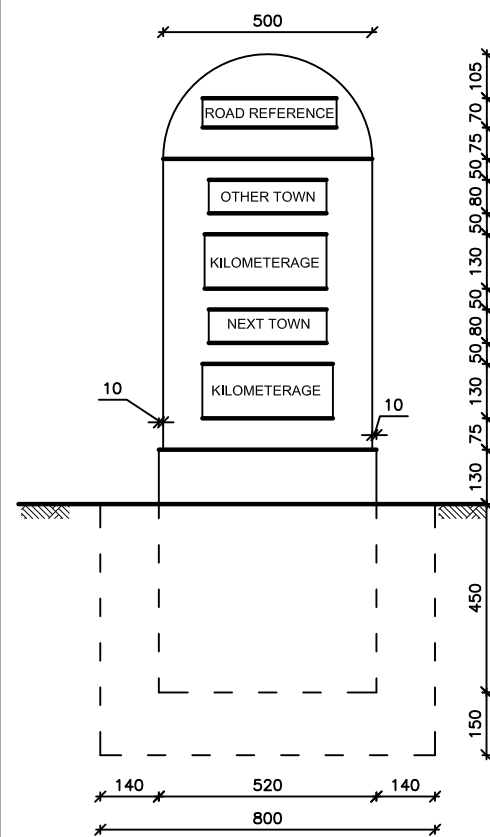


Section at Y-Y
Scale:- 1:50

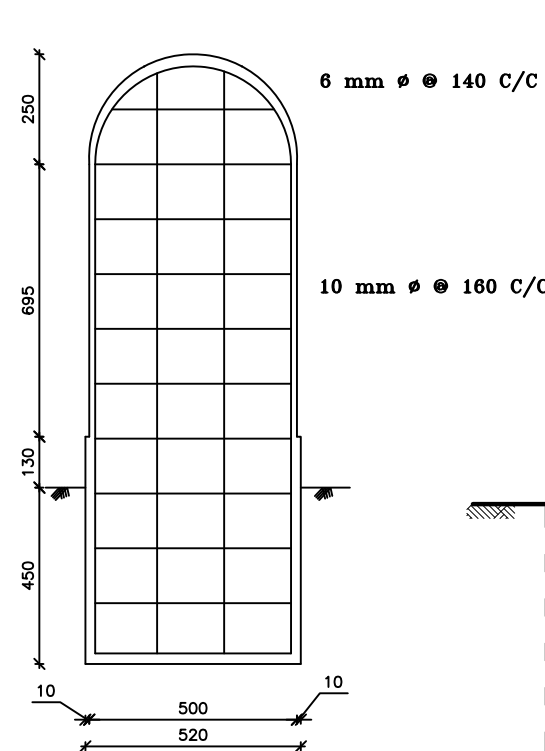


Bus Shelter (Plan View)
Scale:- 1:50

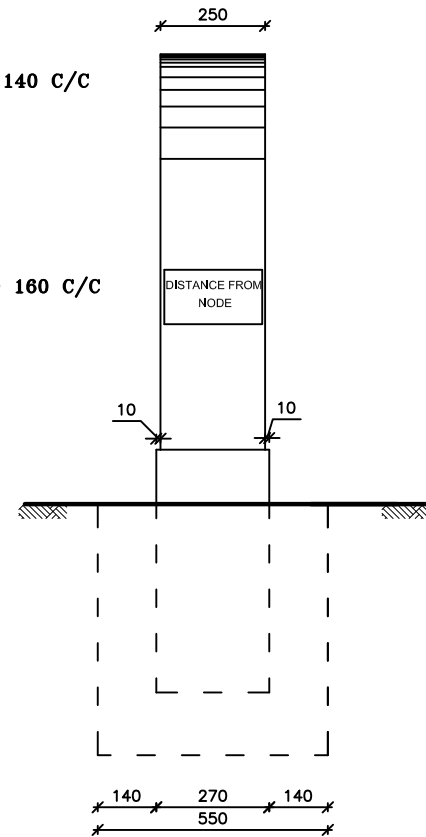




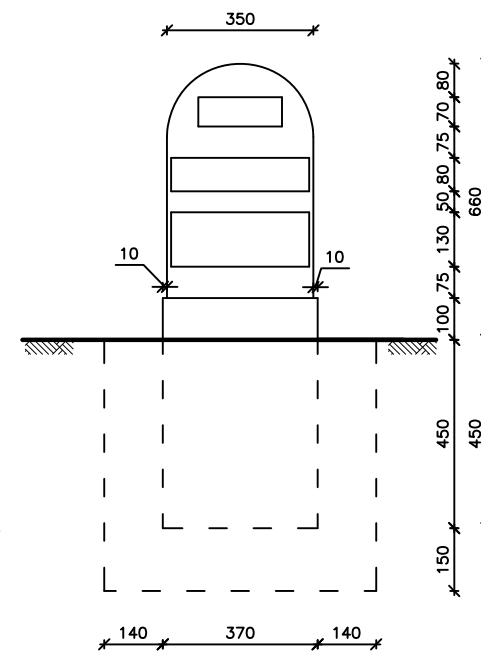
ELEVATION FACE 1 & 2



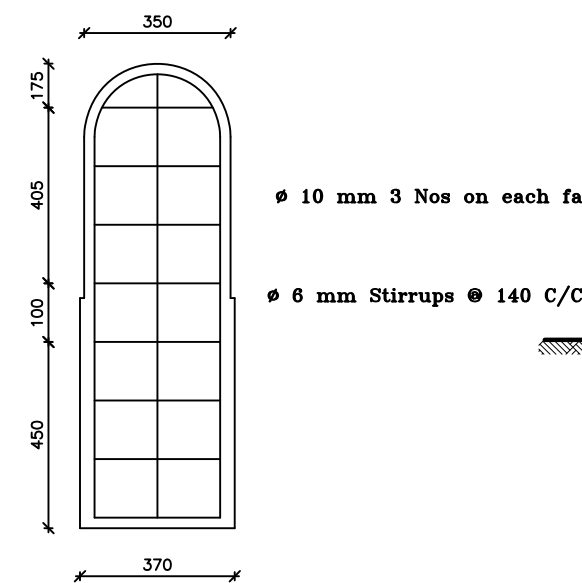
SECTION AT AA



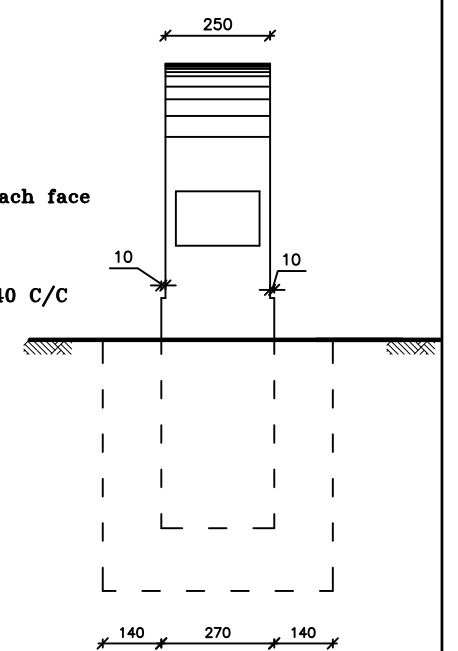
SIDE ELEVATION



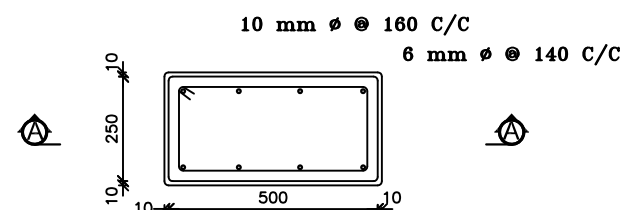
ELEVATION FACE 1 and 2



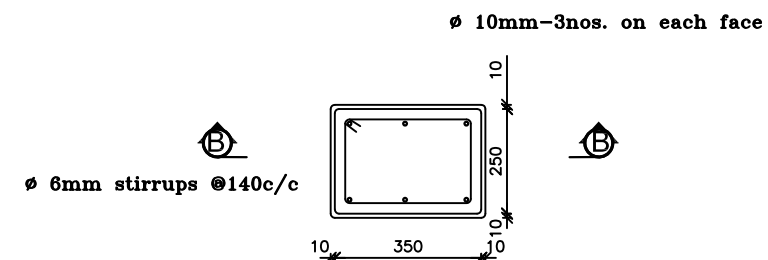
SECTION AT B-B



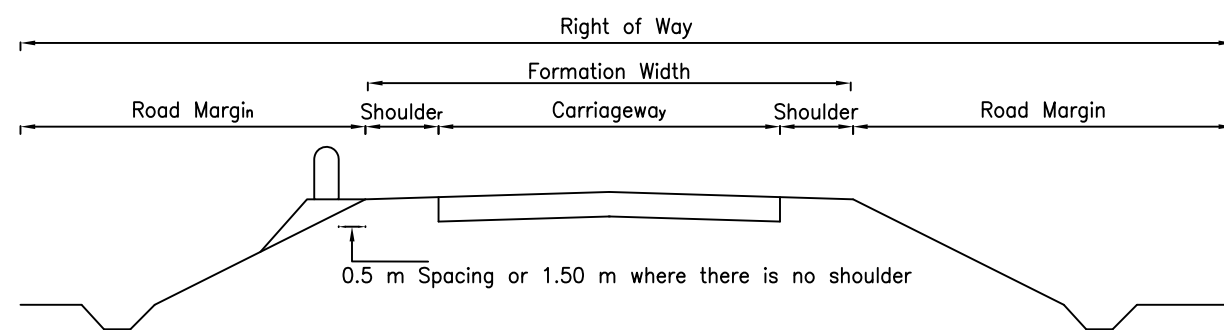
SIDE ELEVATION



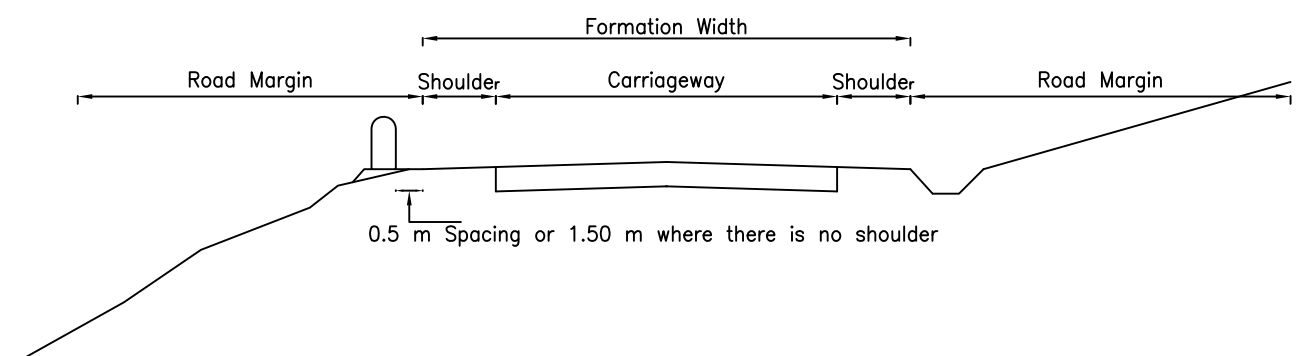
SECTIONAL PLAN



SECTIONAL PLAN



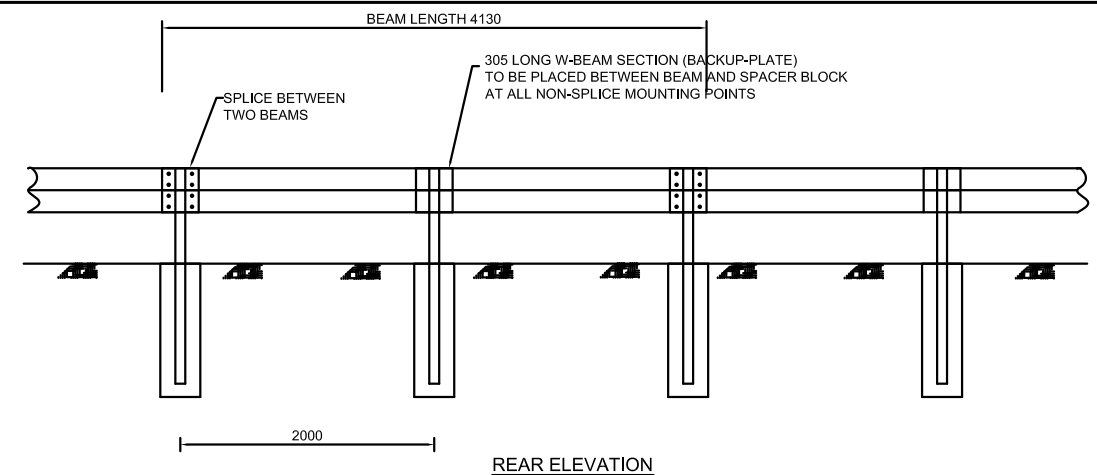
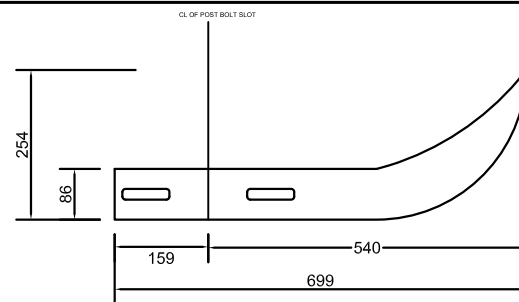
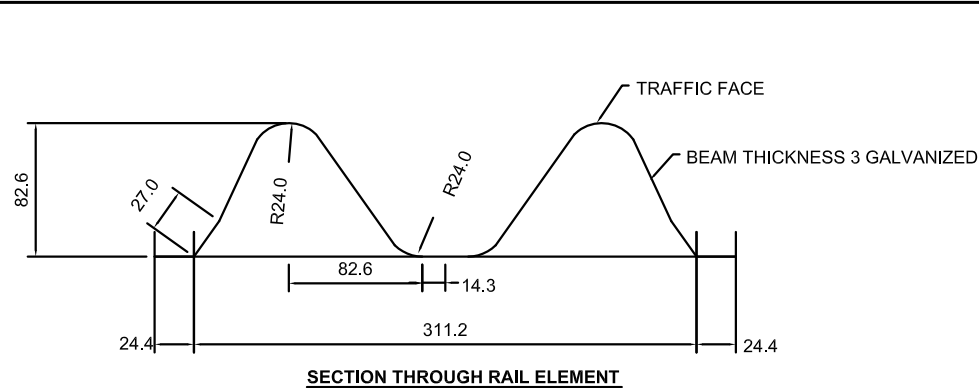
IN PLAIN



IN HILLS

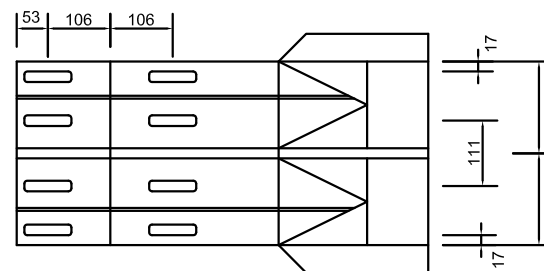
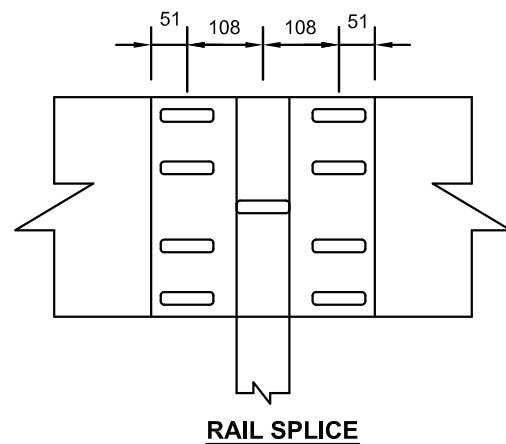
NOTE:

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.

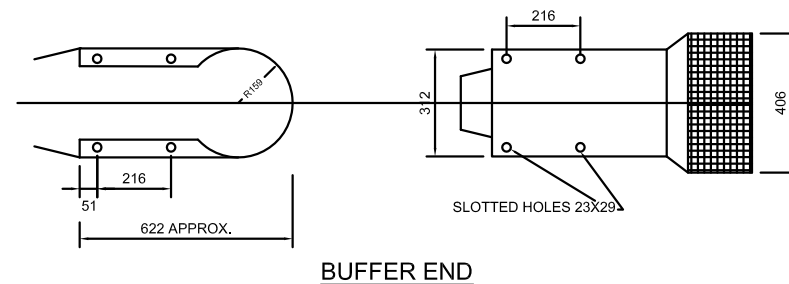


BEAMS ARE OVERLAPPED AT EACH SPLICE BY 318mm AND BUTTON HEAD 16mm DIA BOLTS

BEAMS ARE CONNECTED TO SPACER BLOCK BY ONE BUTTON HEAD 16mm DIA BOLT



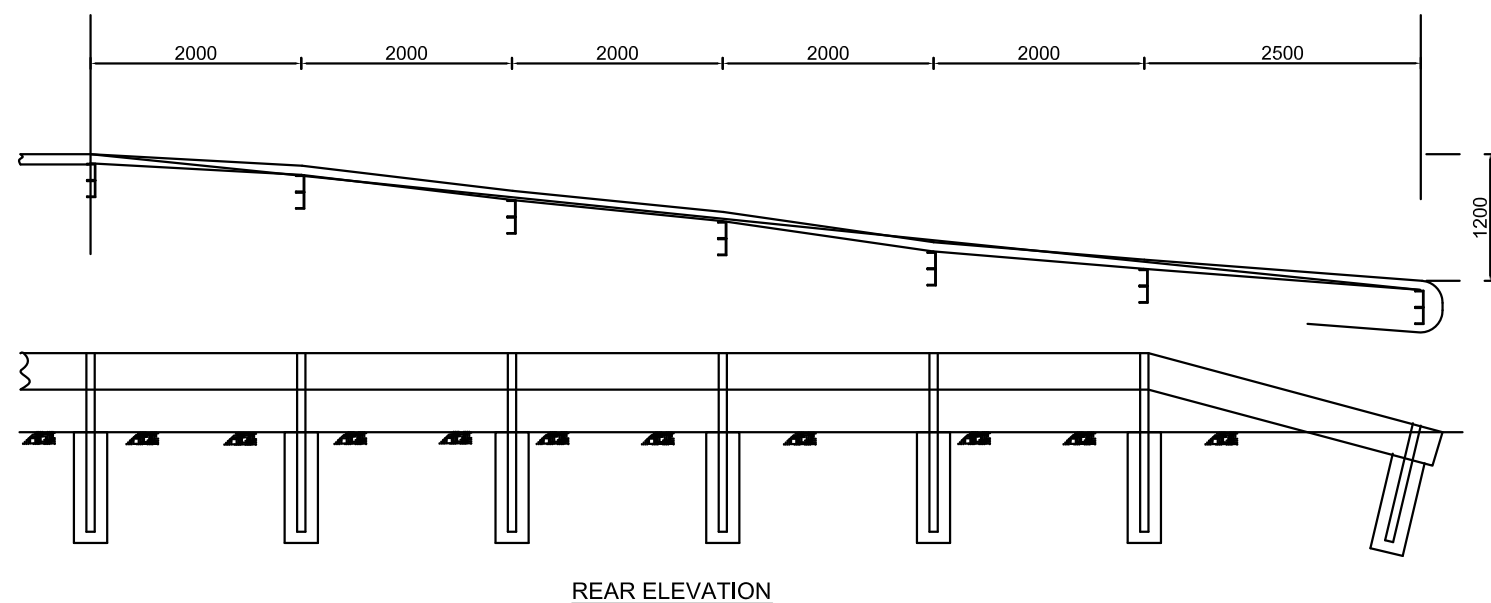
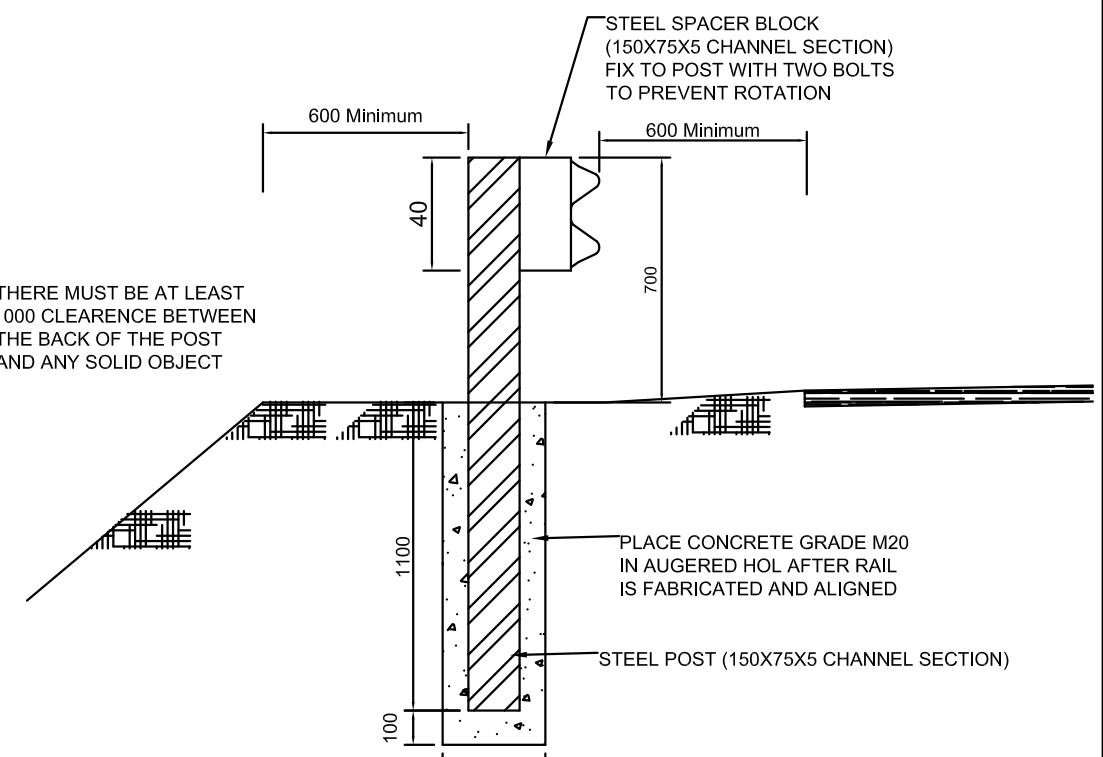
ONLY FOR USE AT THE DOWNSTREAM END OF THE GUARDRAIL ON ONE WAY ROADS

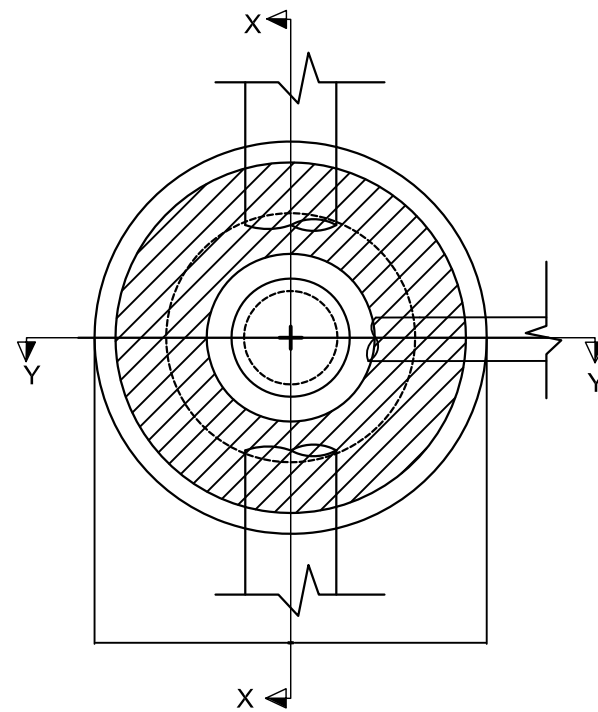


NOTE :
1. ALL DIMENSIONS ARE IN MILIMETER.
2. ALL GUARDRAIL COMPONENTS ARE TO BE HOT DIP GALVANIZED HAVING A MASS ZINC COATING OF 550gm/m²

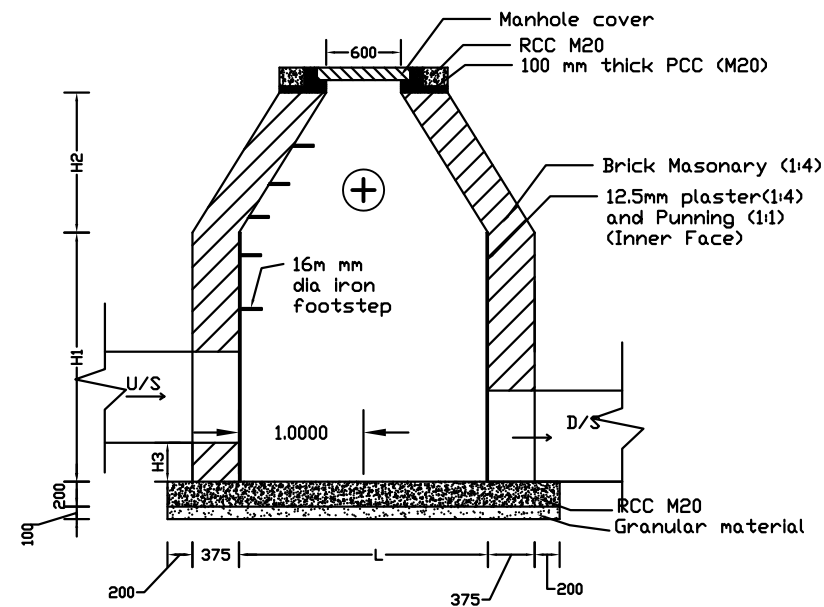
OVERLAPPING OF BEAMS AND POST POSITION TO BE AS SHOWN

THERE MUST BE AT LEAST 1000 CLEARANCE BETWEEN THE BACK OF THE POST AND ANY SOLID OBJECT

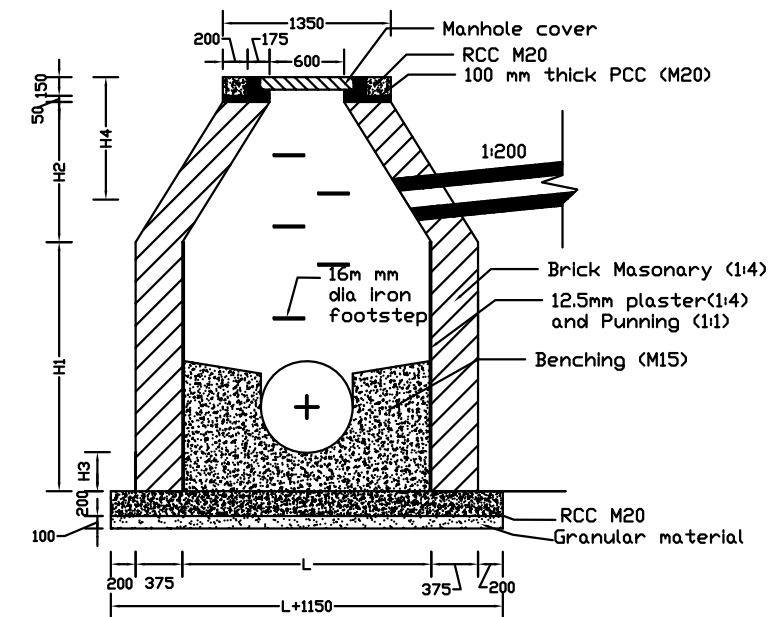




Plan Manhole
Scale 1:500

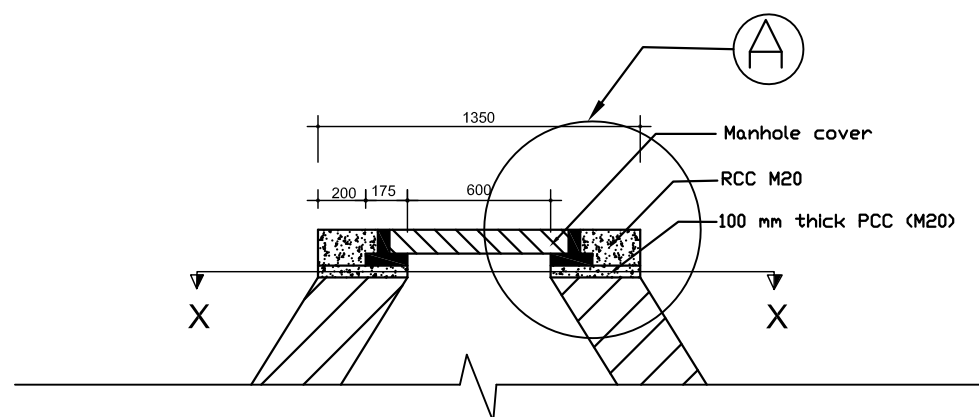


Cross section of Manhole at X-X
Scale 1:500

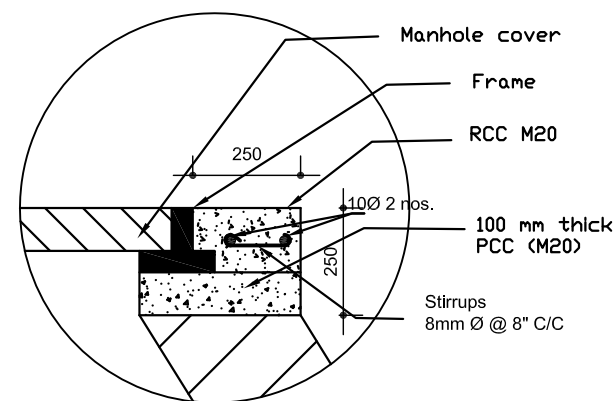


Cross section of Manhole Y-Y
Scale 1:500

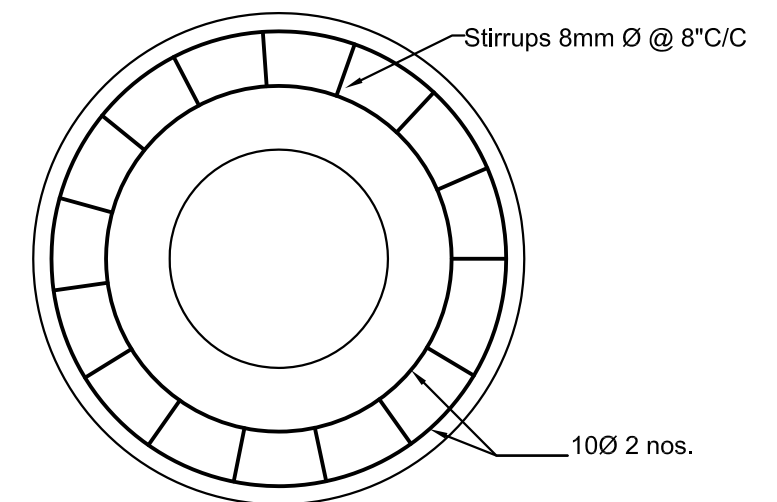
H1	H2	L	H3 and H4
H1<1.5m	0.5m	0.9m	Varies according to side condition
1.5m<H1<2m	0.5m	1.0m	Varies according to side condition
2m<H1<3m	1.5m	1.1m	Varies according to side condition



Manhole Rise detail



Reinforcement Detail at A



Reinforcement Detail at X-X

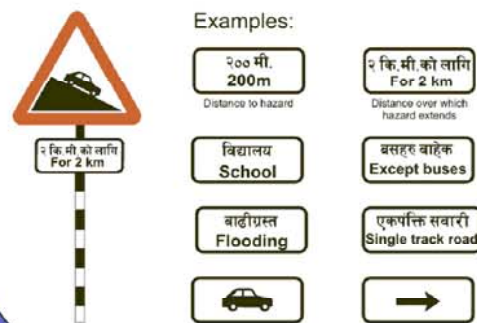
ROAD MARKING & TRAFFIC SIGN / SIGNAL

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



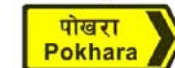
At the junction

Route confirmation sign - after junctions



At the junction

Temporary diversion signs - yellow background



On approaches to junctions

INFORMATION SIGNS

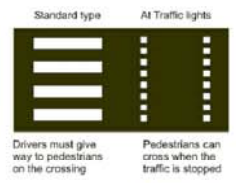


ROAD MARKINGS

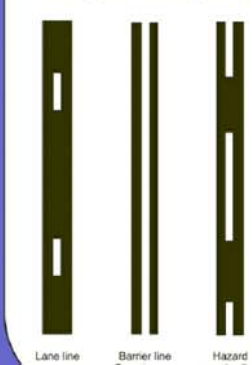
Across the carriageway



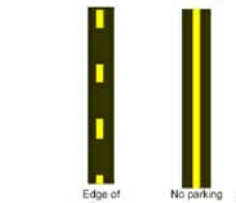
Pedestrian crossings



Along the carriageway

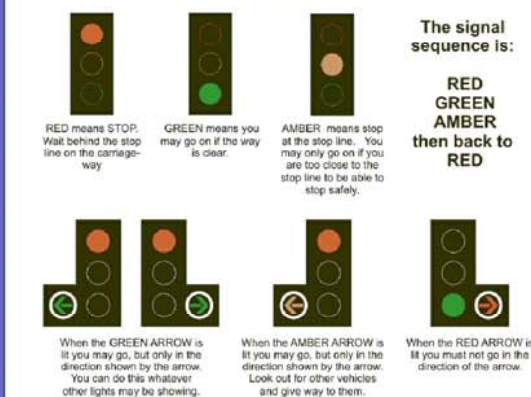


Along the edge of the carriageway



TRAFFIC LIGHT SIGNALS

For control of vehicles



For controlling pedestrian crossing movements



Traffic Engineering and Safety Unit, Department of Roads, 1997



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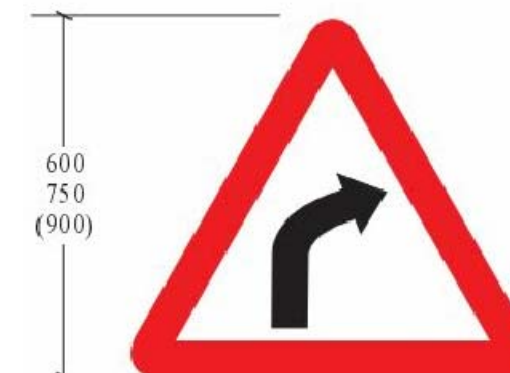
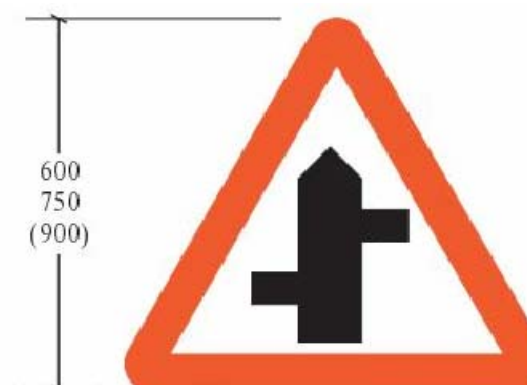
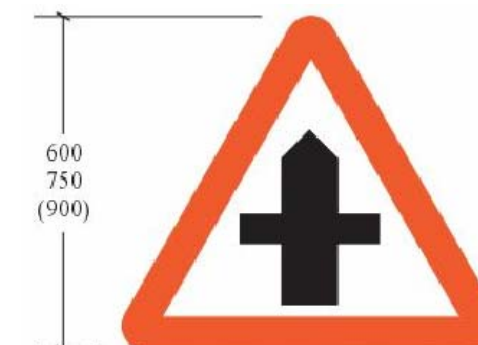
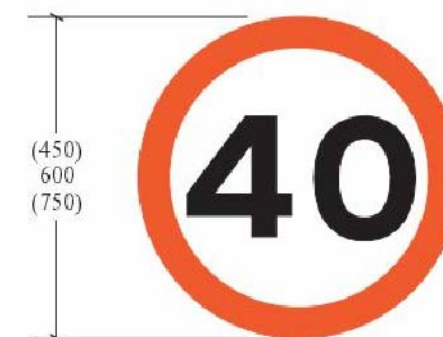
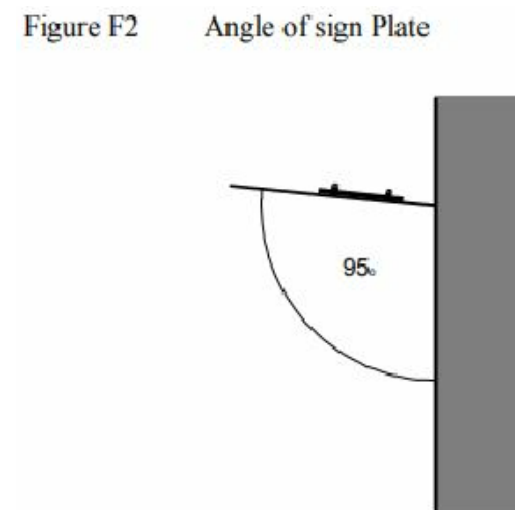
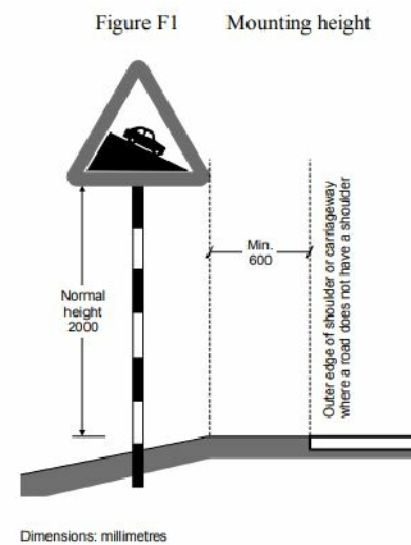
CONSULTANT:
Plush Engineers and Architects (P.) Ltd. (PEA)
B.N. Consultancy Pvt. Ltd. (BN)
Soil Test Consultancy (P.) Ltd. (Soil Test)
Kathmandu, Nepal

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
Kaski District, Gandaki Province

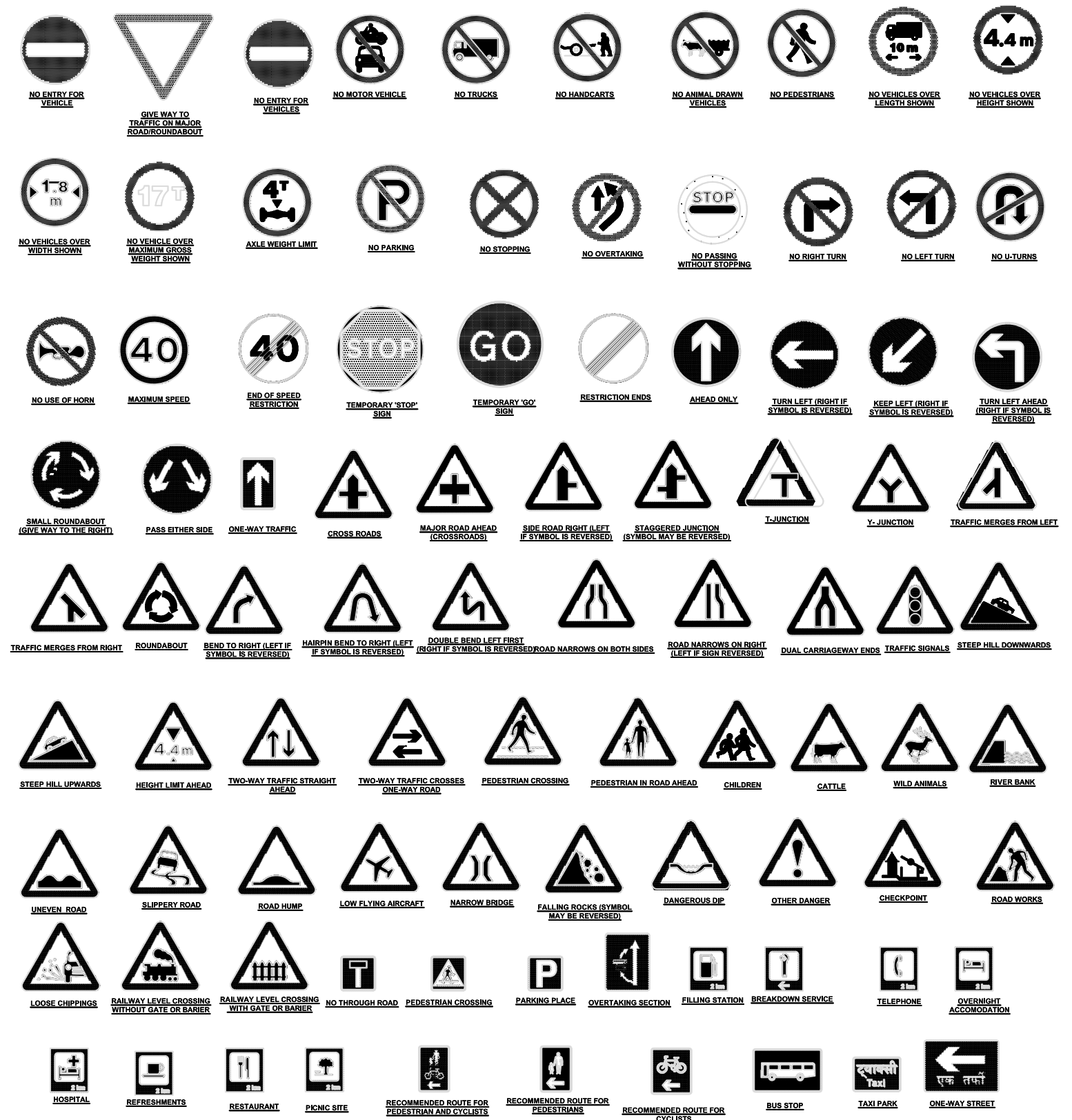
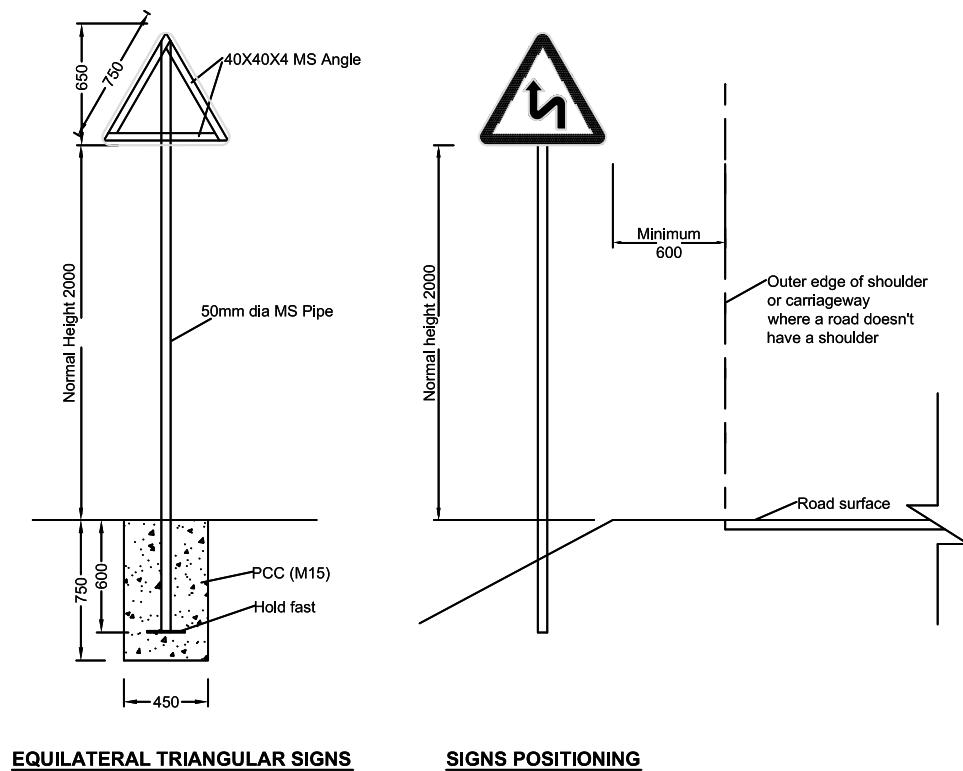
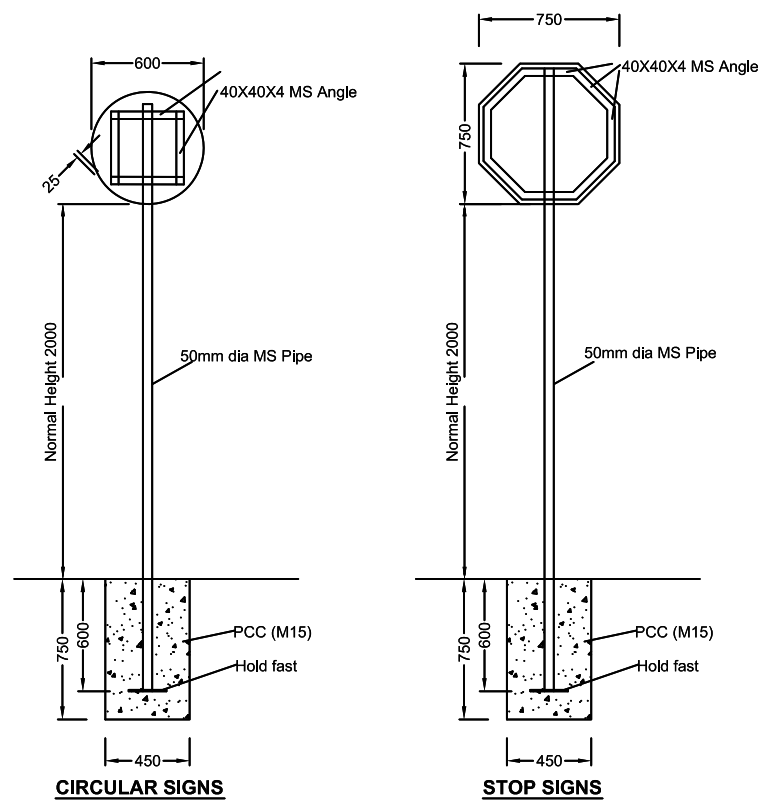
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Project Name:-
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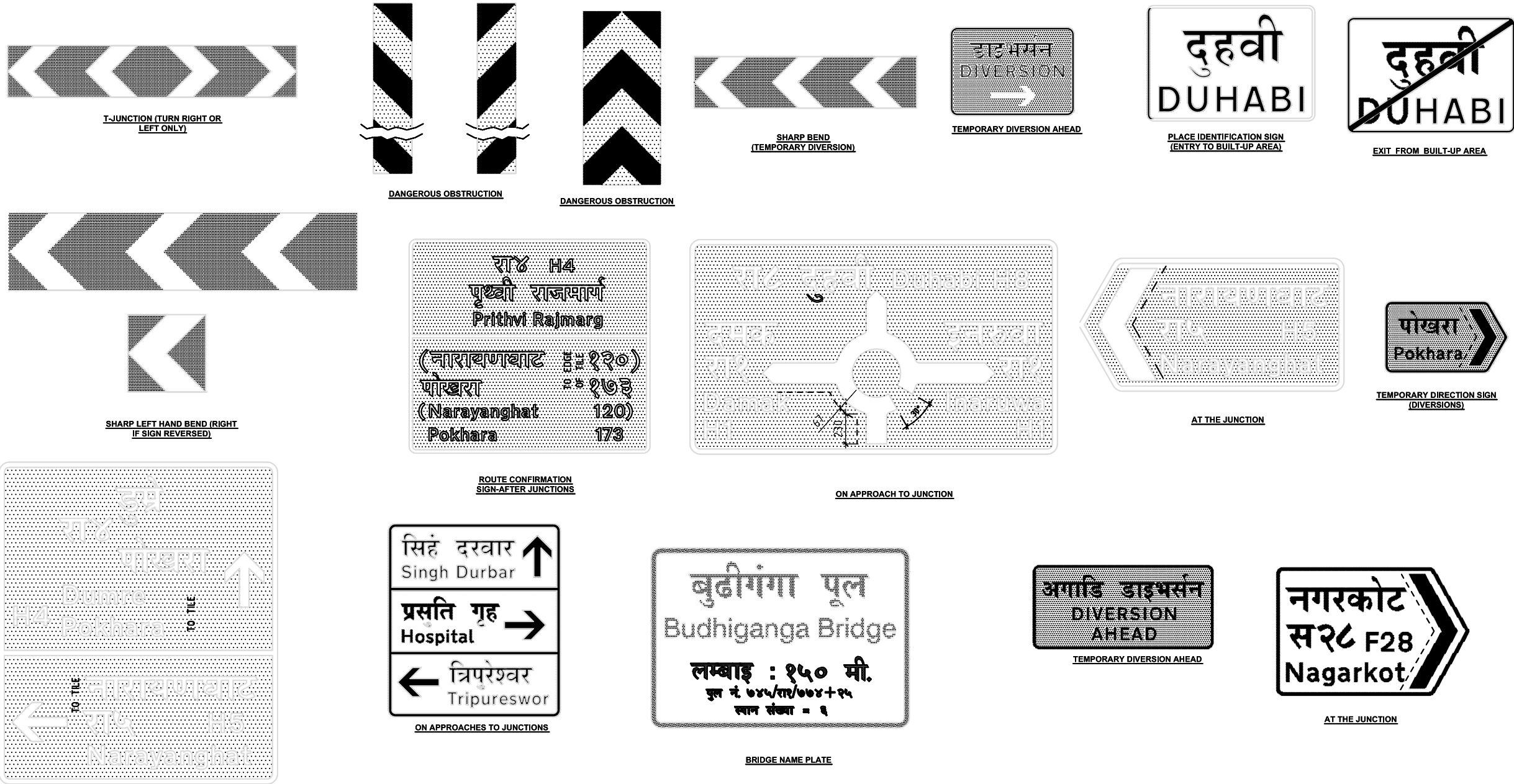
SHEET TITLE:
Standard Drawing of Traffic Sign

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

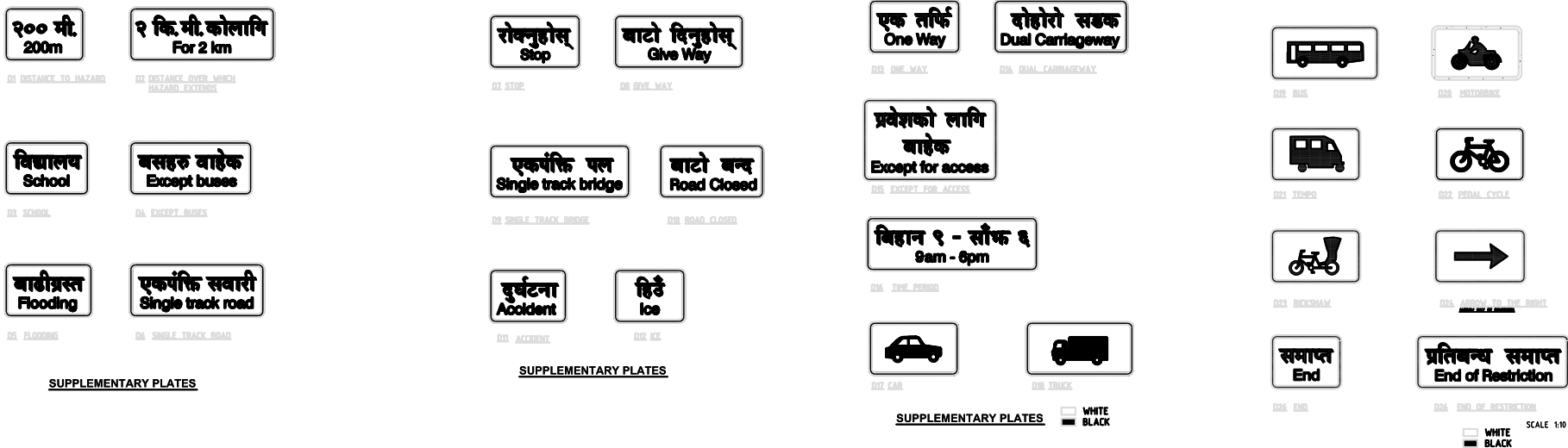
Date: 2023
Scale:
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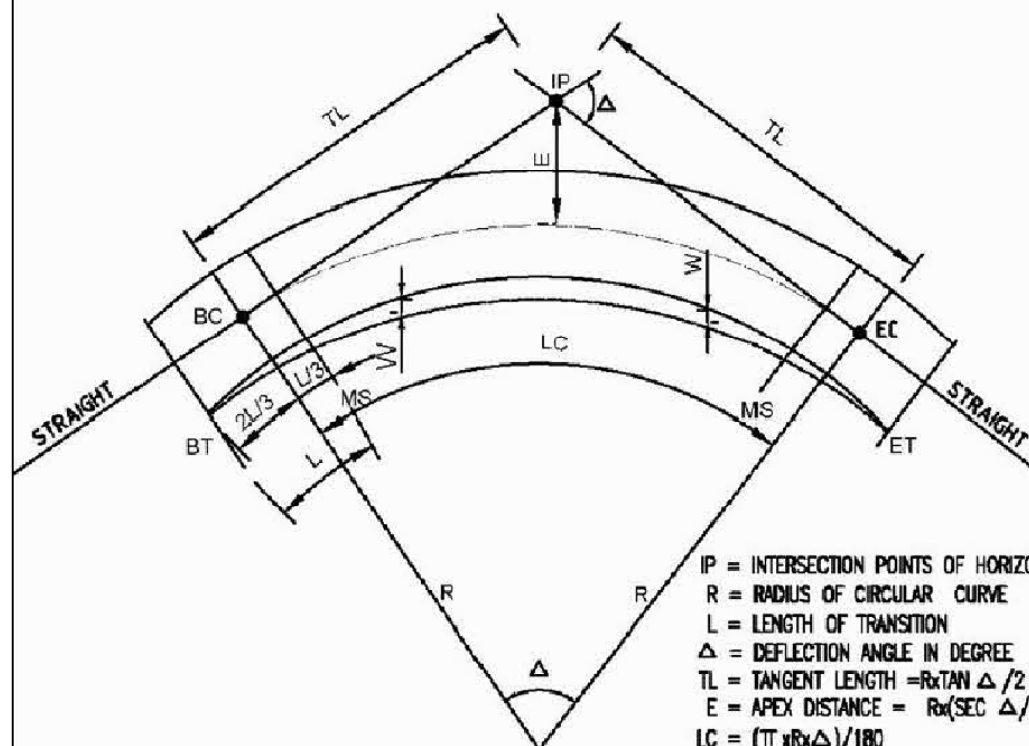


Note: For the dimensions of board signs and letter, please refer Traffic Signs Manual Vol 1 & 2



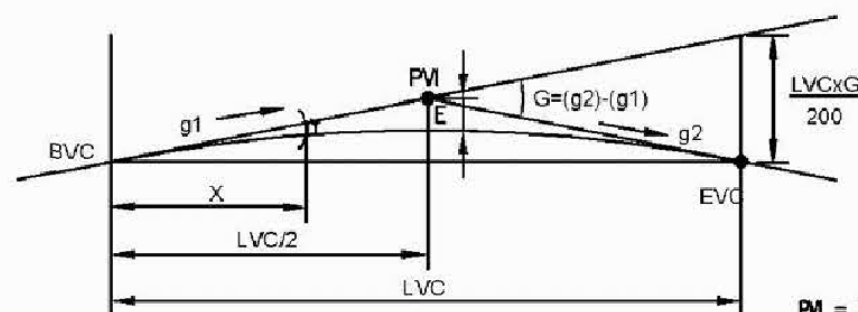
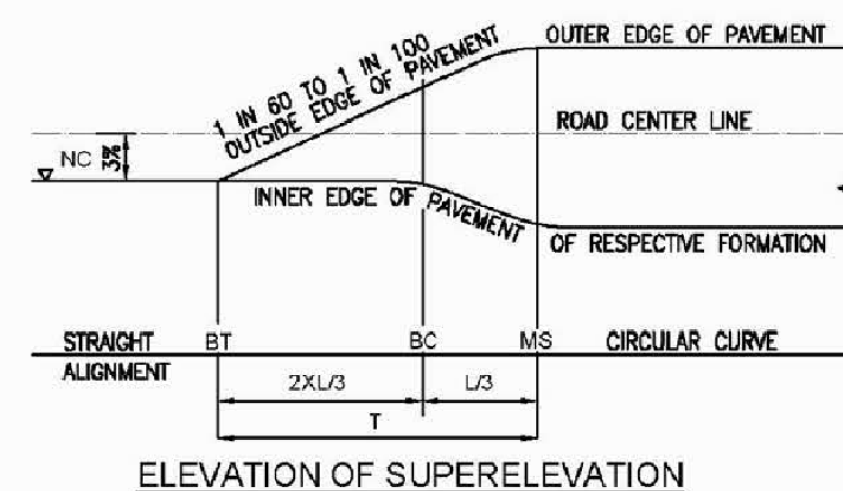
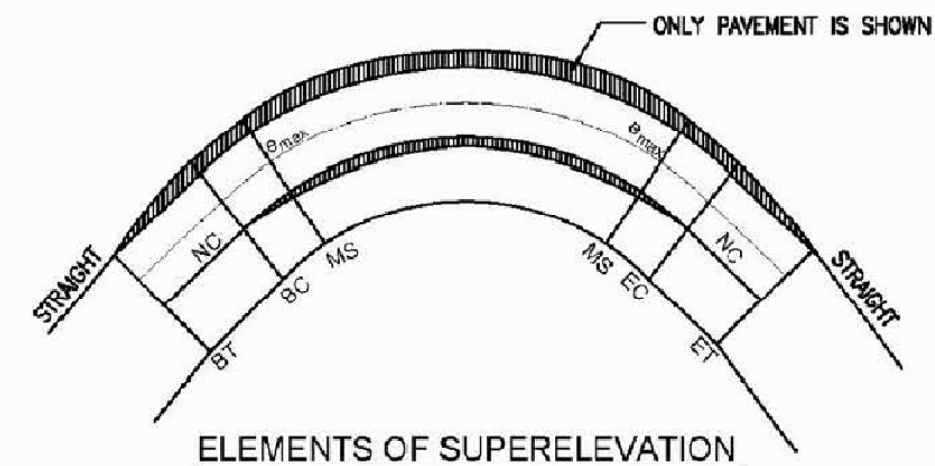
Note:For the dimensions of board signs and letter, please refer Traffic Signs Manual Vol 1 & 2





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

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

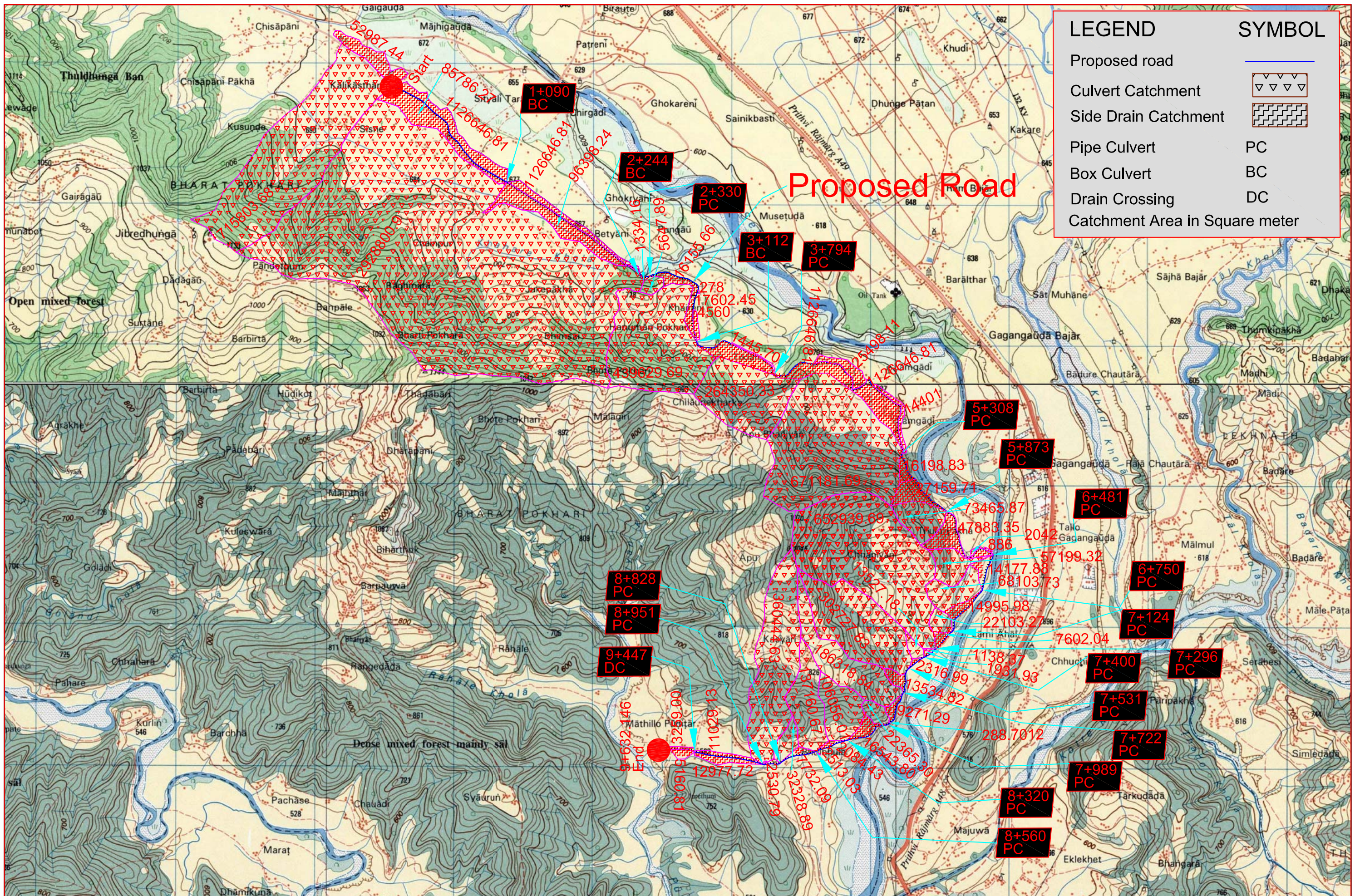
Project Name:-
 Nepal Urban Governance and Infrastructure Project
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SHEET TITLE:
 Standard Drawing of Traffic Sign

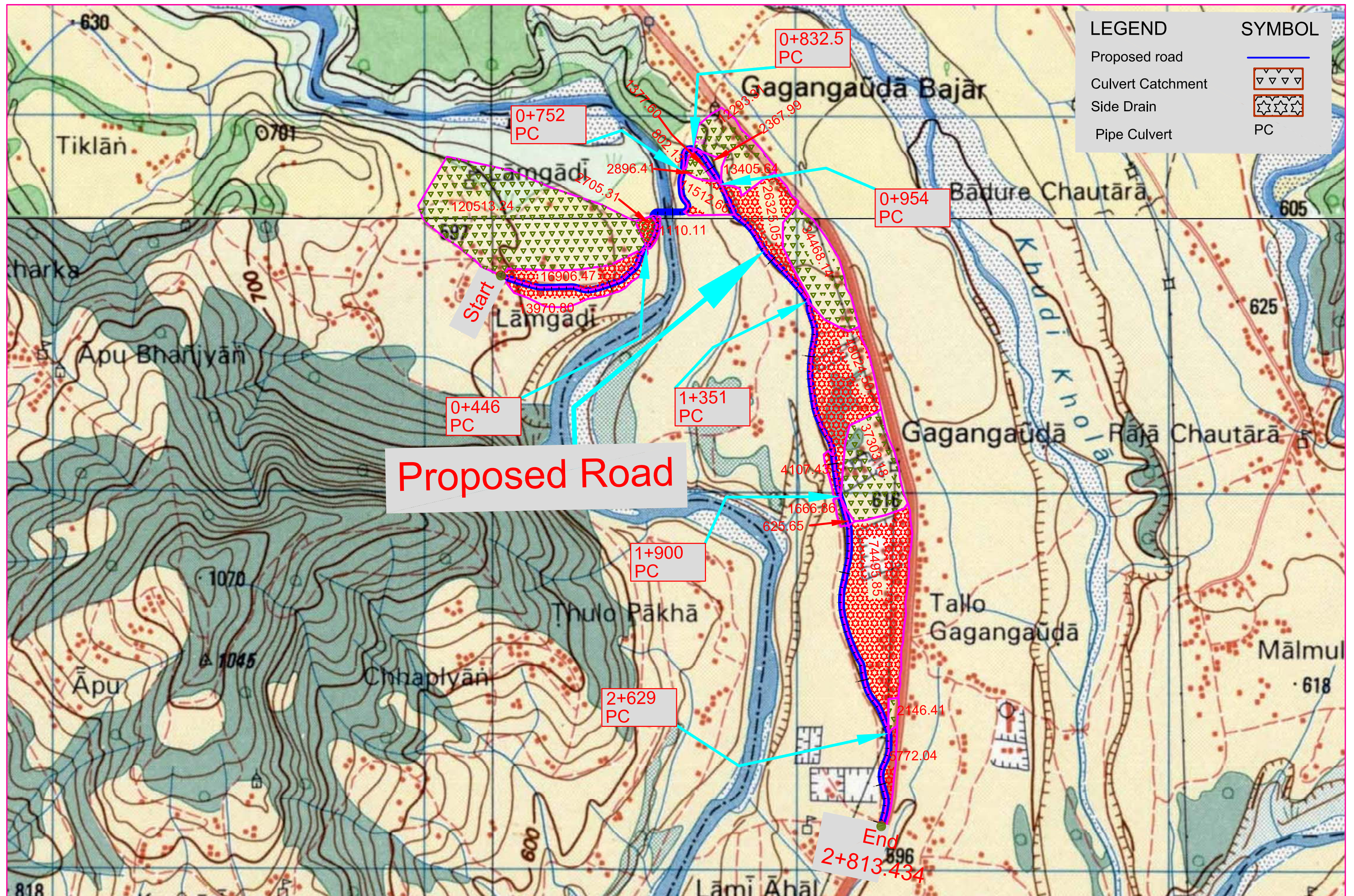
DESIGNED BY:
 DRAWN BY:
 CHECKED BY:
 APPROVED BY:

Date: 2023
 Scale:
 Chainage:
 Sheet No: 5

CATCHMENT AREA MAP



LEGEND	SYMBOL
Proposed road	
Culvert Catchment	
Side Drain Catchment	
Pipe Culvert	PC
Box Culvert	BC
Drain Crossing	DC
Catchment Area in Square meter	



LEGEND	SYMBOL
Proposed road	
Culvert Catchment	
Side Drain	
Pipe Culvert	PC

DESCRIPTION CARD

ROAD PROJECT

DESCRIPTION CARD

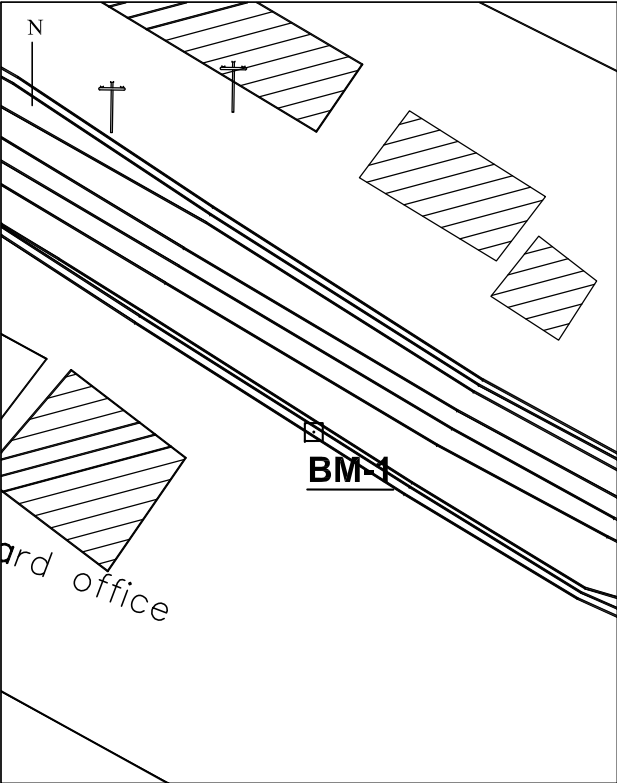
Bench Mark No. : BM-1
Place Name: Kalikasthan
Municipality/Rural Municipality Name: Pokhara Metropolitan City- 33
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-1		209814.401	3116642.935	691.920	Slab

Reference Point

R1 =	9.50m Fence	R2 =	16.34m Tree	R3 =	17.75m HC
------	-------------	------	-------------	------	-----------

Schematic Diagram



Photo



General Information

This point is established at Kalikasthan near 33 no ward office of Pokhara Metropolitan City. The point is marked on the slab near drain by nail and painted with red enamel. The BM2 is visible from BM 1.

ROAD PROJECT

DESCRIPTION CARD

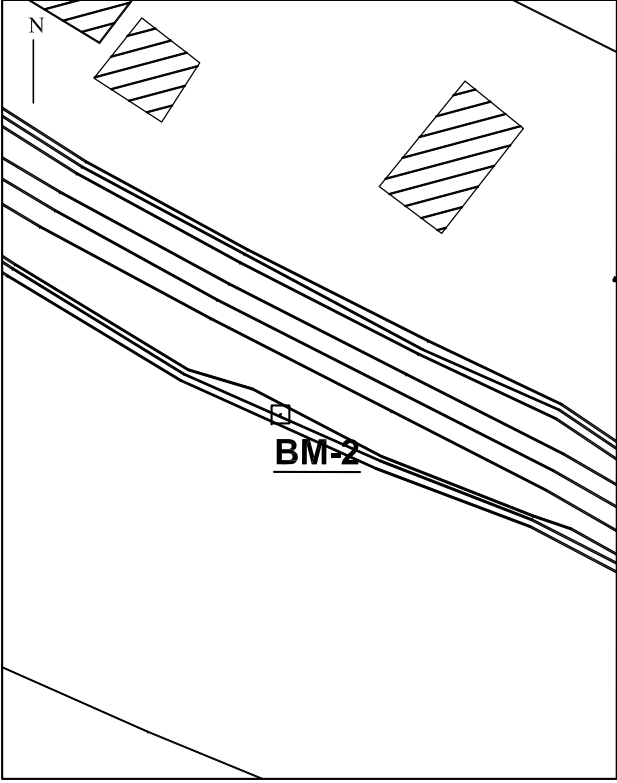
Bench Mark No. : BM-2
Place Name:Kalikasthan
Metropolitan Name: Pokhara Metropolitan City- 33
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-2		209843.259	3116627.019	691.006	Concrete Pillar

Reference Point

R1 =	4.75m Stone	R2 =	13.20m Tree	R3 =	30.51m HC
------	-------------	------	-------------	------	-----------

Schematic Diagram



Photo



General Information

This point is established at Kalikasthan near 33 no ward office of Pokhara Metropolitan City. The point is marked on the concrete pillar on east side of BM1 at a distance about 50m. The BM1 is visible from BM 2.



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:
DESCRIPTION CARD OF BAGMARA SECTION I

DESIGNED BY:	Date: 2023
DRAWN BY:	Scale: Not in Scale
CHECKED BY:	Chalnage:
APPROVED BY:	Sheet No: 1

ROAD PROJECT

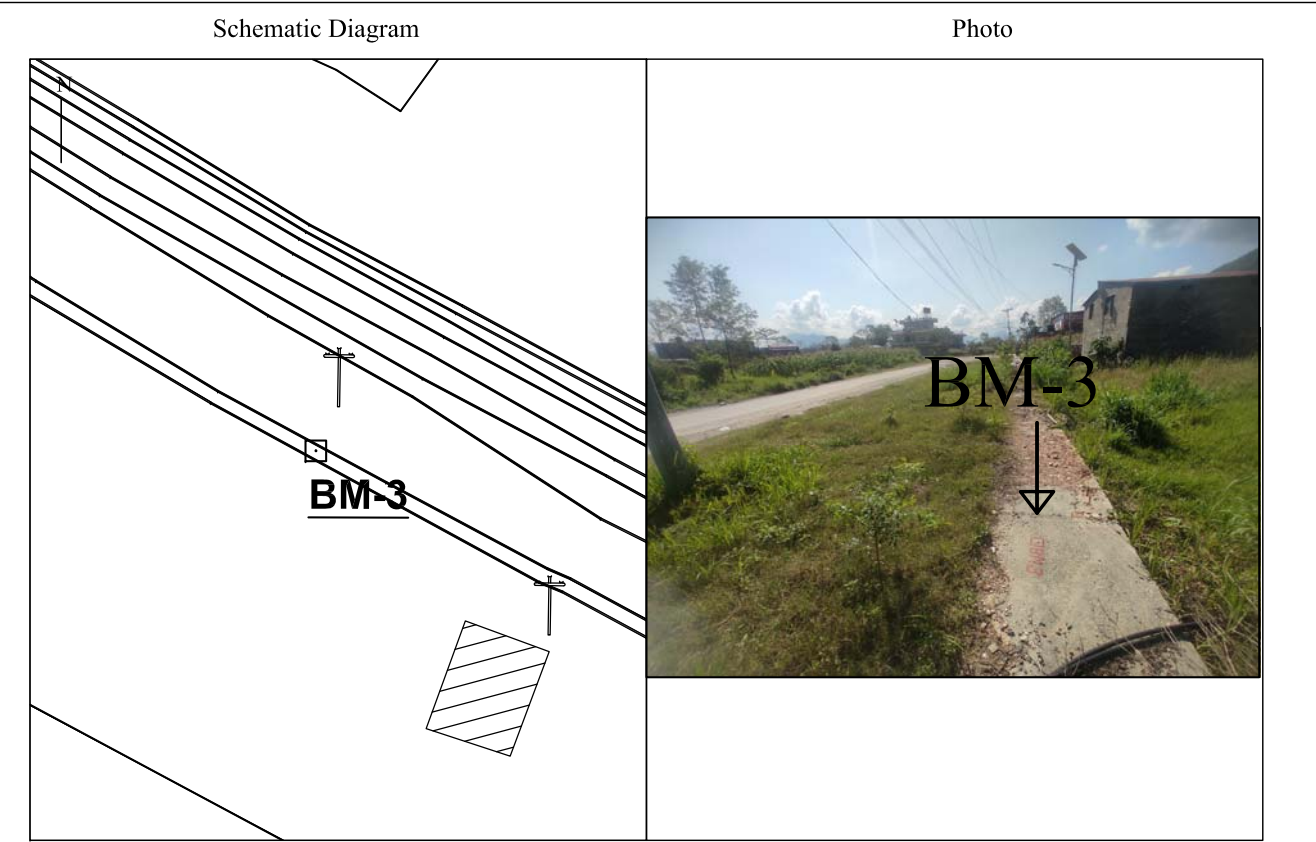
DESCRIPTION CARD

Bench Mark No. : BM-3
Place Name:Bareli Chowk
Metropolitan Name: Pokhara Metropolitan City- 33
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-3		210434.958	3116035.234	678.563	Slab

Reference Point

R1 =	3.25m EP	R2 =	6.45m DT	R3 =	12.0m DT
------	----------	------	----------	------	----------



General Information

This point is established at Bareli Chowk at front side of Keshar Acharya. The point is marked on the cover slab of drain by nail painted with red enamel. The BM4 is visible from BM 3.

ROAD PROJECT

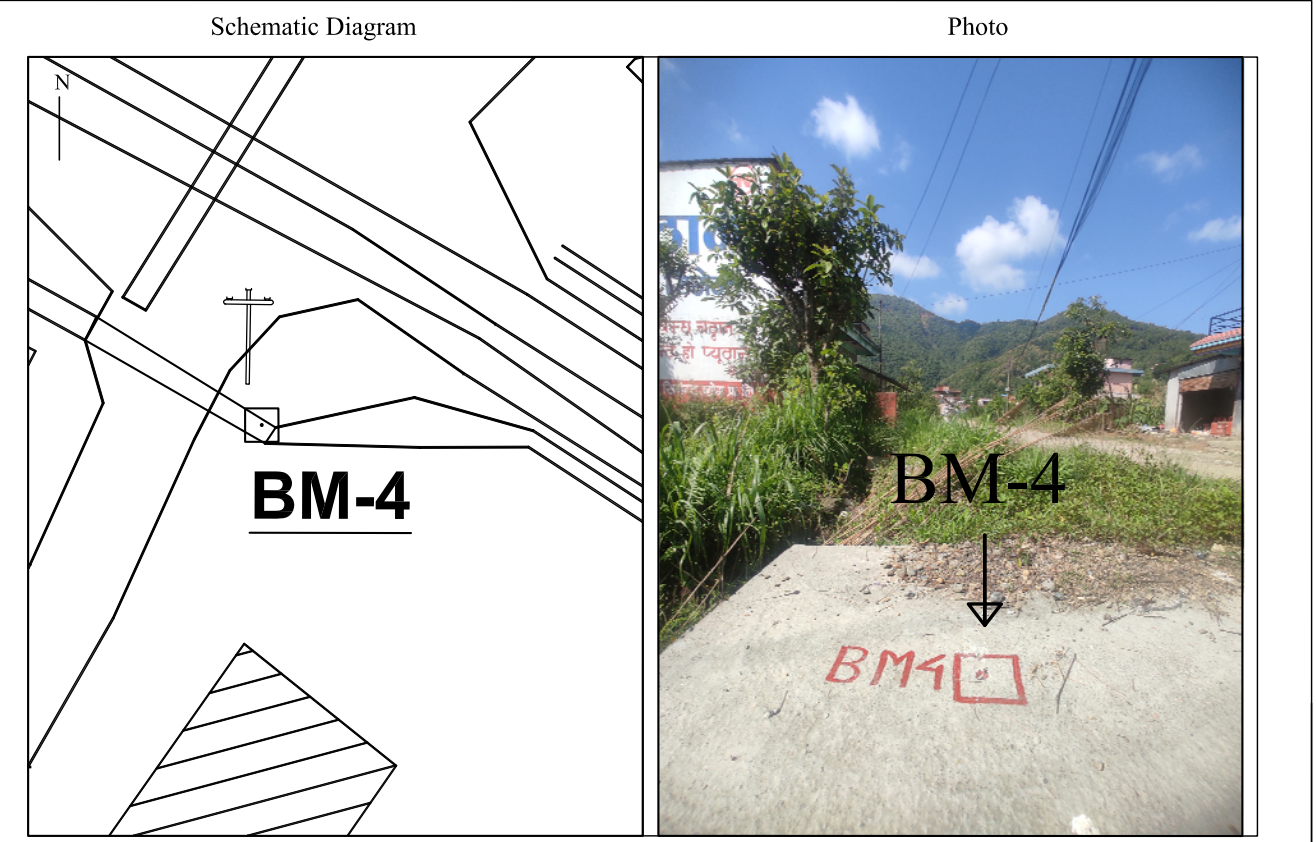
DESCRIPTION CARD

Bench Mark No. : BM-4
Place Name:Bareli Chowk
Metropolitan Name: Pokhara Metropolitan City- 33
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-4		210488.044	3116006.543	678.054	Slab

Reference Point

R1 =	1.80m EP	R2 =	10.0m HC	R3 =	9.40m HC
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General Information

This point is established at Bareli Chowk. The point is marked on the cover slab of drain by nail painted with red enamel. The BM 3 is visible from BM 4.



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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



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ROAD PROJECT

DESCRIPTION CARD

Bench Mark No. : BM-5

Place Name:Khahare Khola

Metropolitan Name: Pokhara Metropolitan City- 33

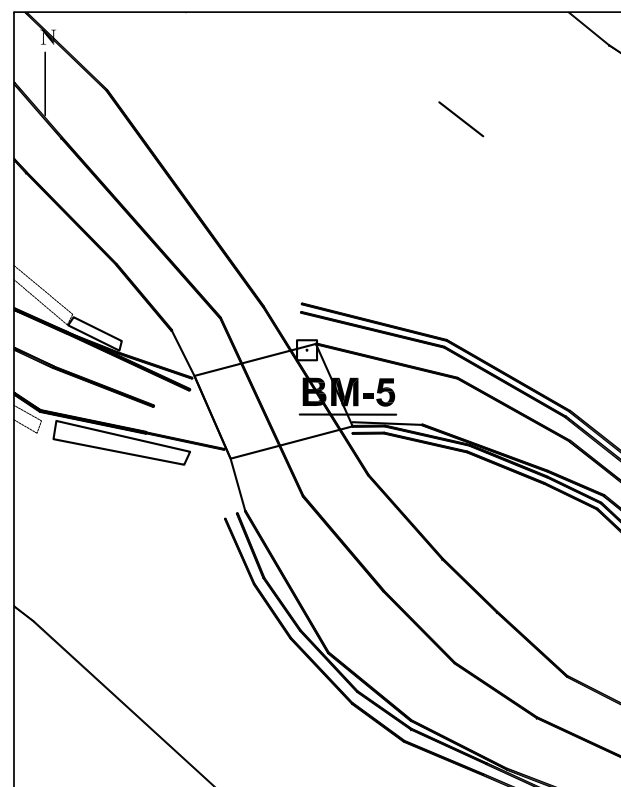
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-5		211425.668	3115357.867	651.584	Bridge

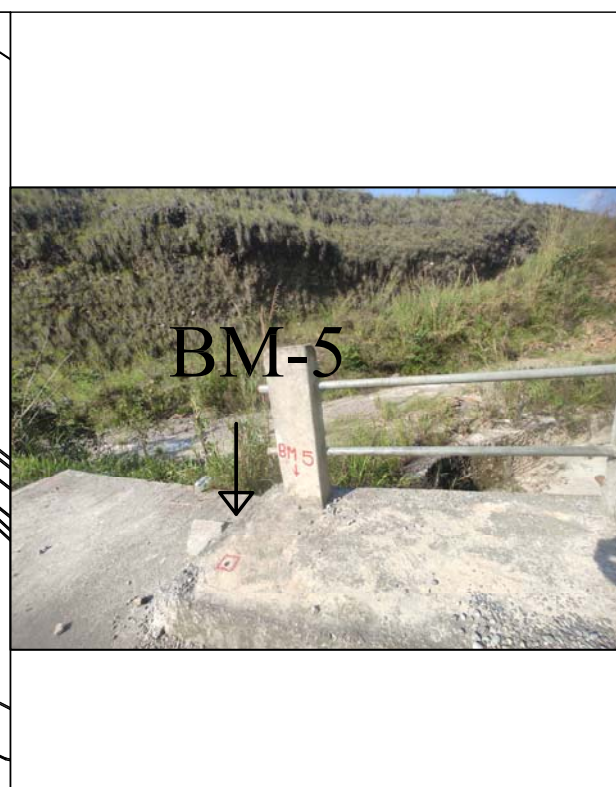
Reference Point

R1 =	3.30m Wall	R2 =	5.85m Bridge	R3 =	9.45m Bridge
------	------------	------	--------------	------	--------------

Schematic Diagram



Photo



General Information

This point is established at Bridge of Khahare Khola. The point is marked on the left side corner of the bridge by nail painted with red enamel. The BM6 is visible from BM 5.

ROAD PROJECT

DESCRIPTION CARD

Bench Mark No. : BM-6

Place Name:Khahare Khola

Metropolitan Name: Pokhara Metropolitan City- 33

District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-6		211460.477	3115321.960	647.829	Slab

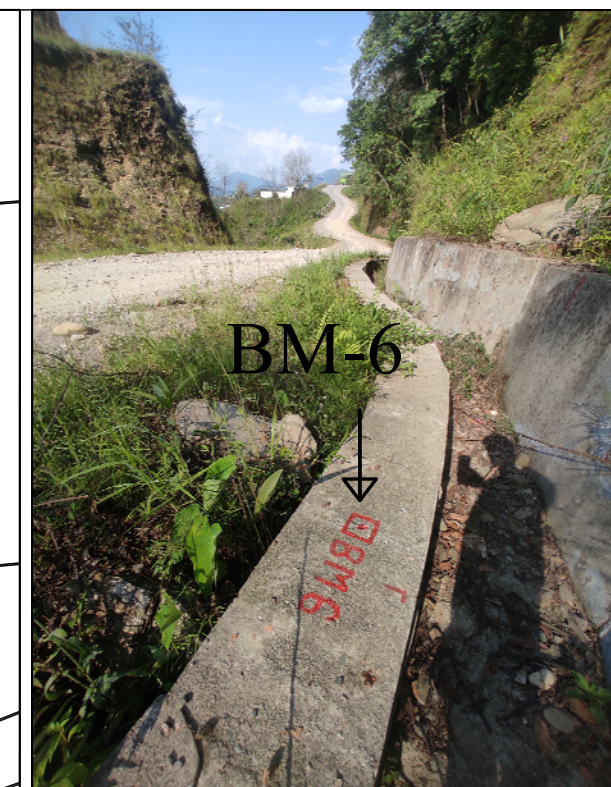
Reference Point

R1 =	6.70m Wall	R2 =	3.30m Wall	R3 =	2.10 Wall
------	------------	------	------------	------	-----------

Schematic Diagram



Photo



General Information

This point is established at Khahare Khola. The point is marked on the right side of drain nearby Khola by nail painted with red enamel. The BM5 is visible from BM 6



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ROAD PROJECT

DESCRIPTION CARD

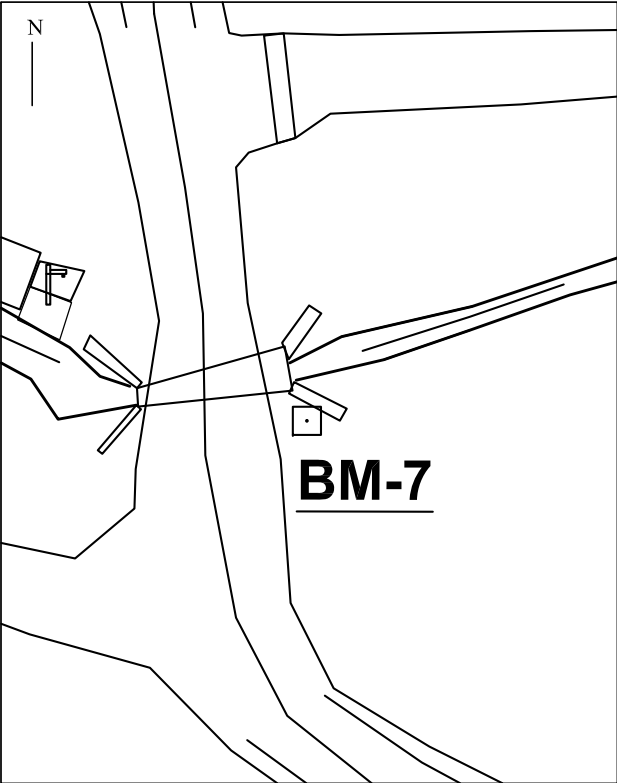
Bench Mark No. : BM-7
Place Name:Khaireni Kholsi
Metropolitan Name: Pokhara Metropolitan City- 33
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-7		211829.701	3114851.910	655.792	Concrete Pillar

Reference Point

R1 =	5.0m Wall	R2 =	11.60m Tree	R3 =	10.80m Wall
------	-----------	------	-------------	------	-------------

Schematic Diagram



Photo



General Information

This point is established at Khaireni Kholsi. The point is marked on the concrete pillar on right side of culvert. The BM8 is visible from BM 7.

ROAD PROJECT

DESCRIPTION CARD

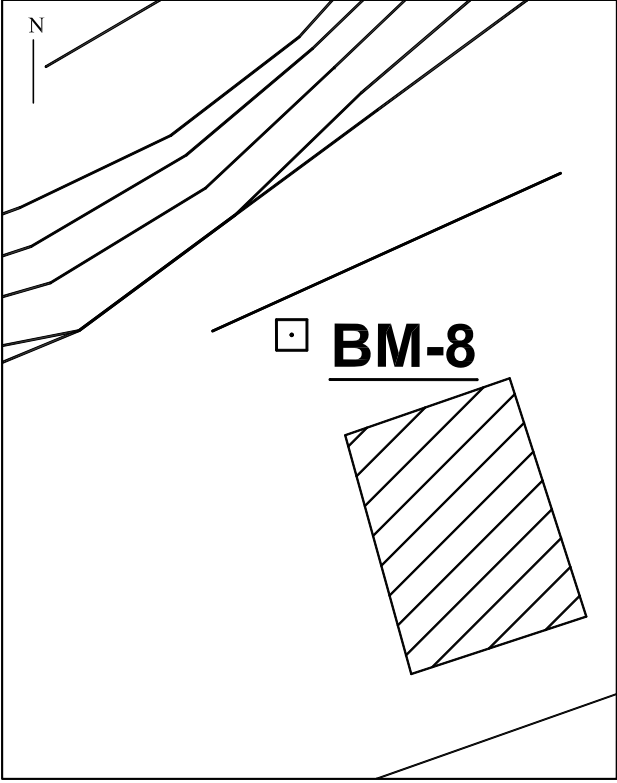
Bench Mark No. : BM-8
Place Name:Khaireni
Metropolitan Name: Pokhara Metropolitan City- 33
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-8		211968.528	3114805.225	662.296	Slab

Reference Point

R1 =	10.40m Wall	R2 =	6.90m HC	R3 =	3.20m Wall
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Schematic Diagram



Photo



General Information

This point is established at Khaireni. The point is marked on the concrete pillar on land of Sushil Malla. The BM7 is visible from BM 8.



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ROAD PROJECT

DESCRIPTION CARD

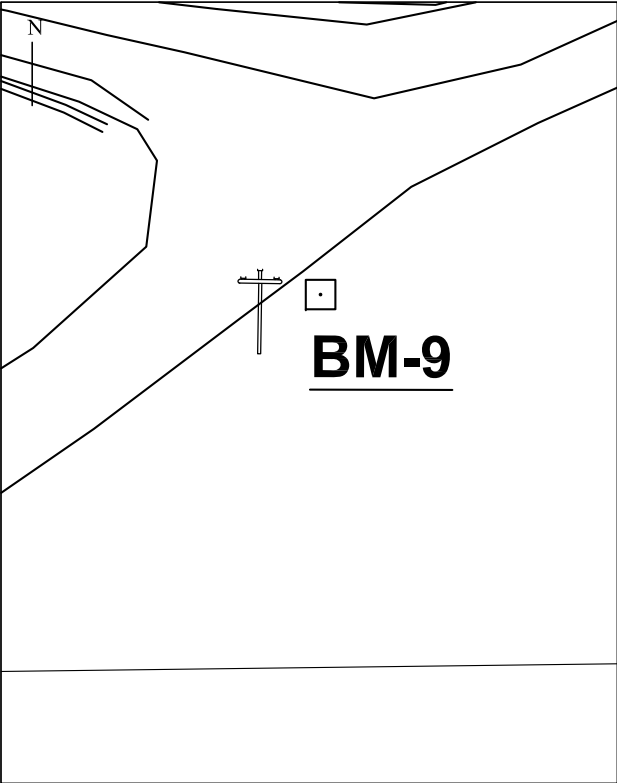
Bench Mark No. : BM-9
Place Name:Lamgadi Badarkot
Metropolitan Name: Pokhara Metropolitan City- 33
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-9		212654.230	3114672.693	683.520	Concrete Pillar

Reference Point

R1 =	16.0m Wall	R2 =	4.15m EP	R3 =	8.50m Tree
------	------------	------	----------	------	------------

Schematic Diagram



Photo



General Information

This point is established at Lamgadi Badarkot Apubhanjyang. The point is marked on the land of Parbati Lamichhane.

ROAD PROJECT

DESCRIPTION CARD

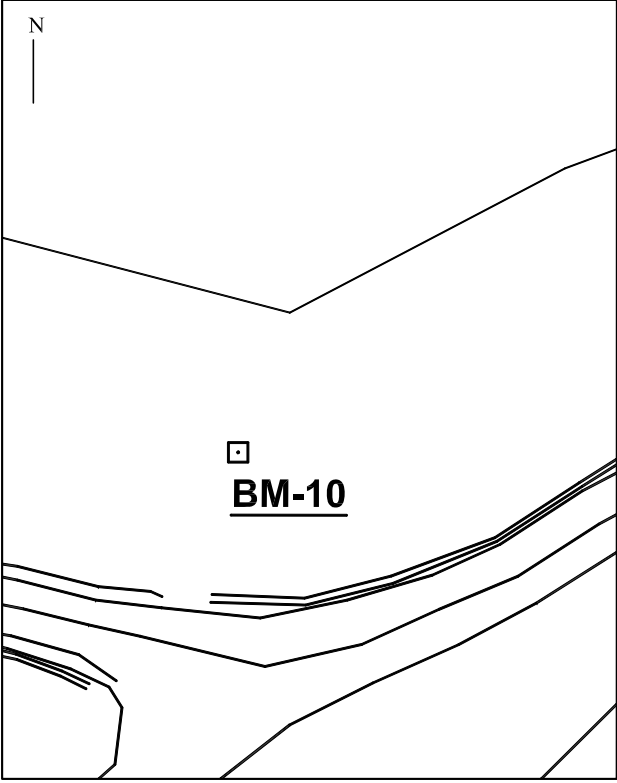
Bench Mark No. : BM-10
Place Name:Lamgadi Badarkot
Metropolitan Name: Pokhara Metropolitan City- 33
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-10		212654.838	3114697.662	688.826	Concrete Pillar

Reference Point

R1 =	3.80m Tree	R2 =	6.60m Tree	R3 =	9.70m Tree
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Schematic Diagram



Photo



General Information

This point is established at Lamgadi Badarkot. The point is marked on the land of Krishna Giri.



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ROAD PROJECT

DESCRIPTION CARD

Bench Mark No. : BM-11
Place Name:Lamgadi
Metropolitan Name: Pokhara Metropolitan City- 33
District: Kaski

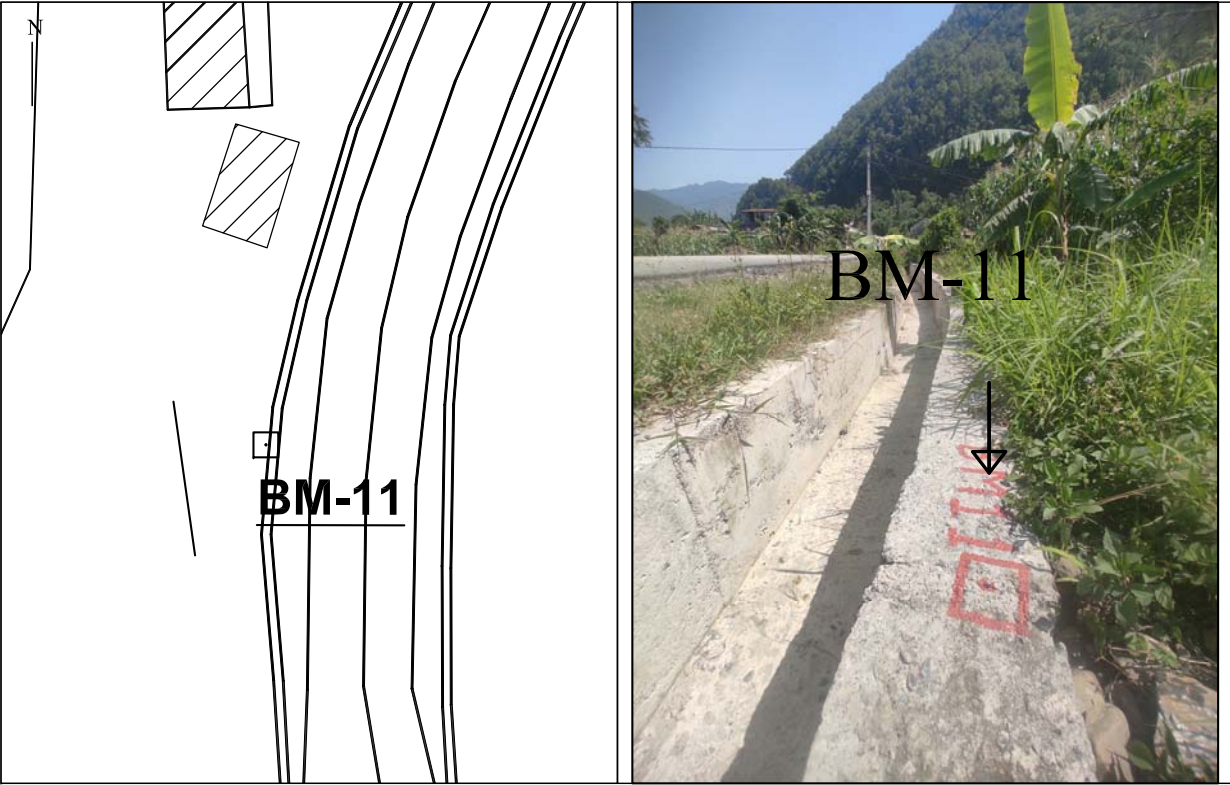
Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-11		213245.164	3114261.778	604.951	Slab

Reference Point

R1 =	4.10m Wall	R2 =	4.10m Wall	R3 =	10.0m Tree
------	------------	------	------------	------	------------

Schematic Diagram

Photo



General Information

This point is established at Lamgadi Badarkot. The point is marked on right side of the drain top near Fadar Maila land.

ROAD PROJECT

DESCRIPTION CARD

Bench Mark No. : BM-12
Place Name:Lamgadi
Metropolitan Name: Pokhara Metropolitan City- 33
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-12		213256.654	3114231.336	603.831	Slab

Reference Point

R1 =	4.50m Wall	R2 =	7.0m Wall	R3 =	9.10 EP
------	------------	------	-----------	------	---------

Schematic Diagram

Photo



General Information

This point is established at front side of Mamata Shrestha House. The point is marked on left side of road on top of drain.



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ROAD PROJECT

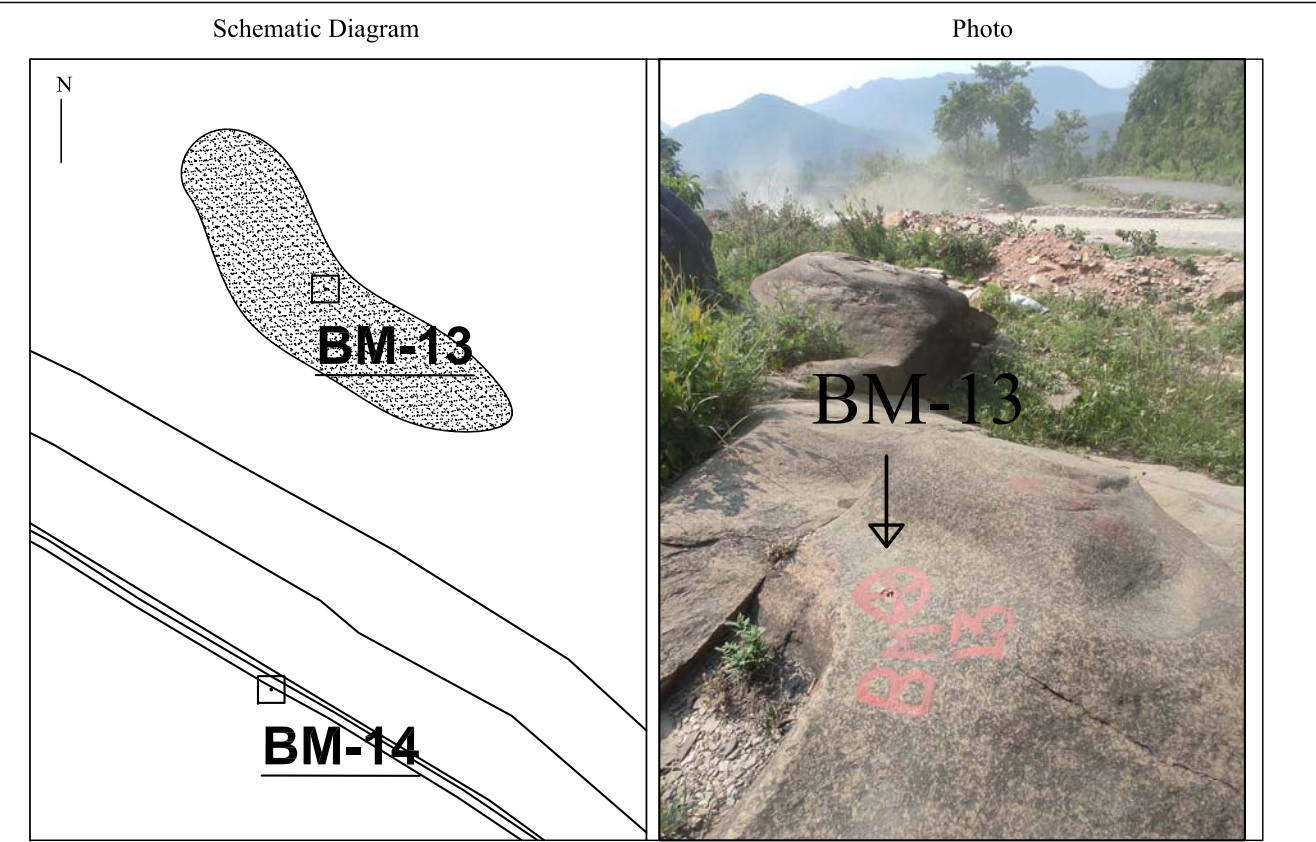
DESCRIPTION CARD

Bench Mark No. : BM-13
Place Name:Chyaplyang
Metropolitan Name: Pokhara Metropolitan City- 33
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-13		213611.854	3113619.023	599.332	Boulder

Reference Point

R1 =	3.10m Boulder	R2 =	2.50m Boulder	R3 =	10.50m Boulder
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General Information
This point is established at Chyaplyang right side of road carved on the big stone by nail.

ROAD PROJECT

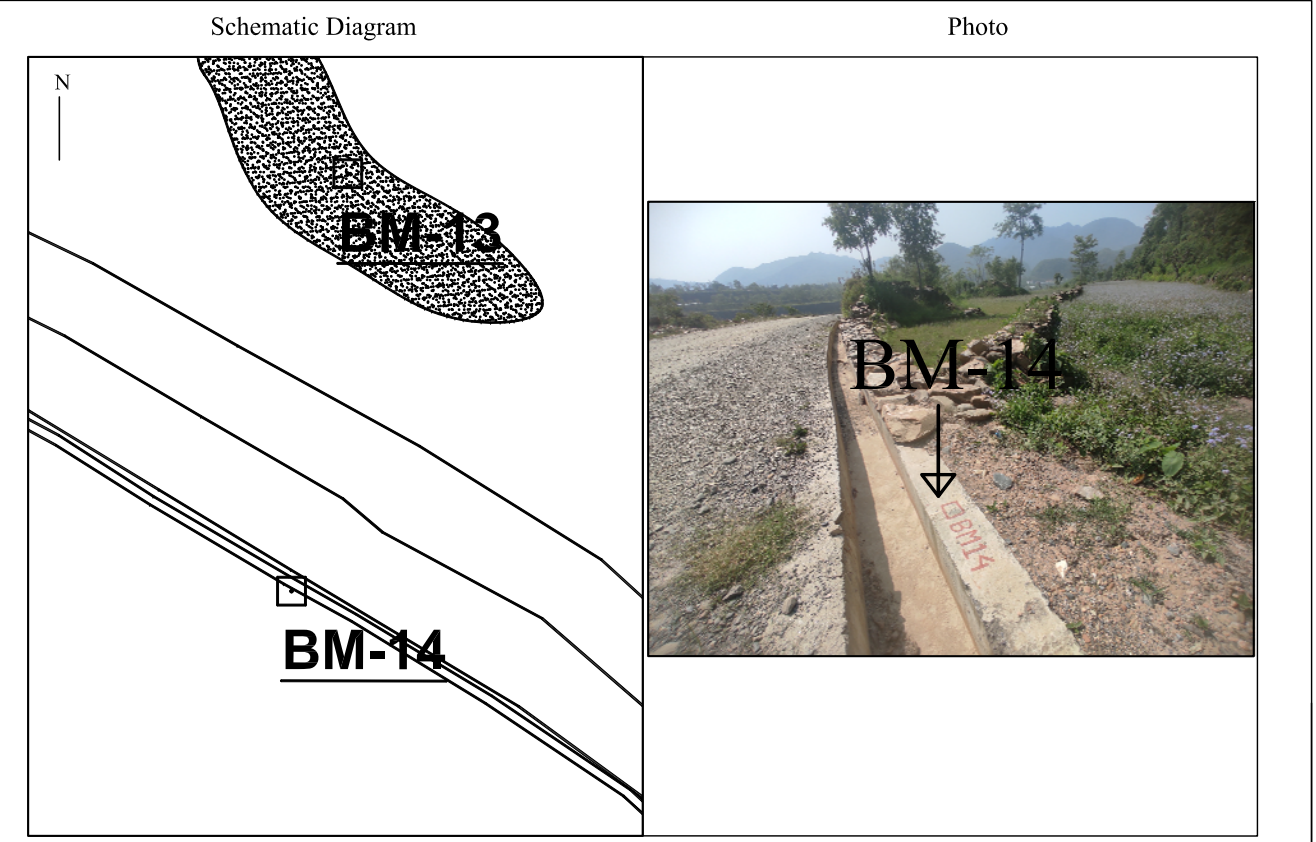
DESCRIPTION CARD

Bench Mark No. : BM-14
Place Name:Chyaplyang
Metropolitan Name: Pokhara Metropolitan City- 33
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-14		213608.984	3113597.808	598.251	Slab

Reference Point

R1 =	12.0m Wall	R2 =	4.30m Wall	R3 =	19.0m Boulder
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General Information
This point is established at Chaplyang near Jiban Prashad Pun land. The point is marked on the right side of road on drain top.

ROAD PROJECT

DESCRIPTION CARD

Bench Mark No. : BM-15

Place Name:Thula Khet

Metropolitan Name: Pokhara Metropolitan City- 33

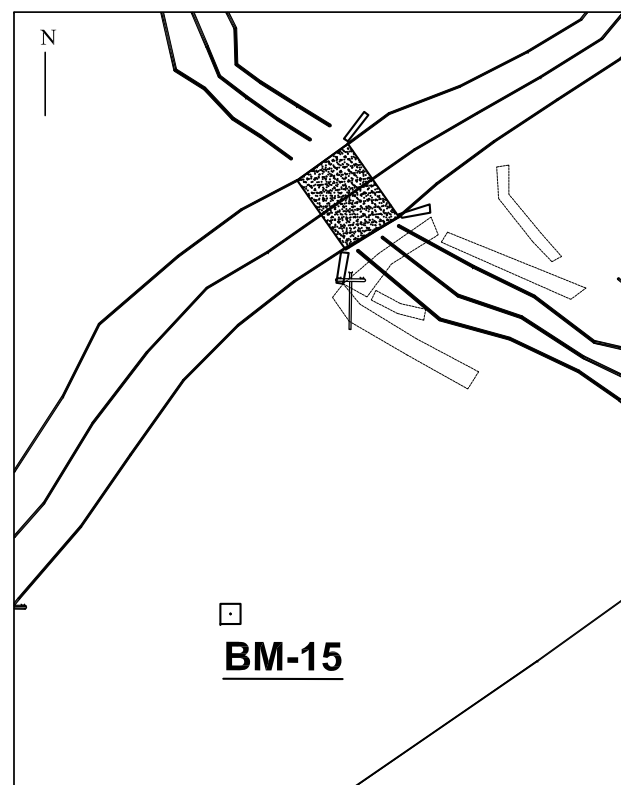
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-15		213482.388	3112607.861	539.700	Concrete Pillar

Reference Point

R1 =	15.60m EP	R2 =	11.90m Boulder	R3 =	21.50m Gabin Wall
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Schematic Diagram



Photo

General Information

This point is established at Thula Khet near Sansari Block Factory. The point is marked on a concrete pillar right side of Chalise Khola.

ROAD PROJECT

DESCRIPTION CARD

Bench Mark No. : BM-16

Place Name:Thula Khet

Metropolitan Name: Pokhara Metropolitan City- 33

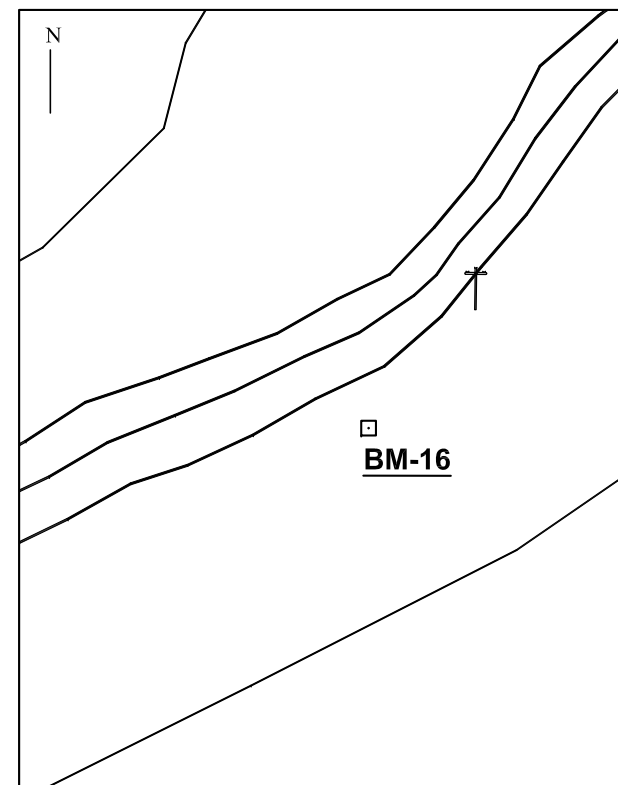
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-16		213456.736	3112593.531	539.860	Concrete Pillar

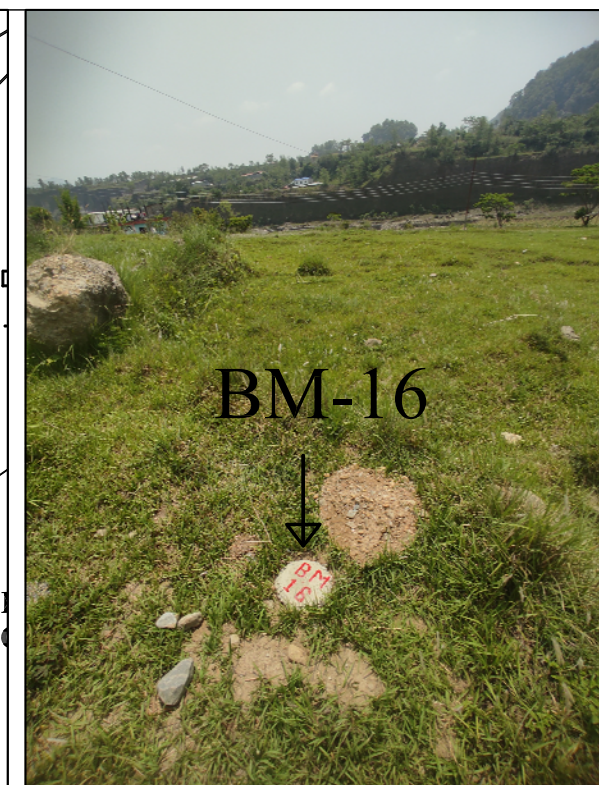
Reference Point

R1 =	15.20m EP	R2 =	4.90m Boulder	R3 =	8.20m Boulder
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Schematic Diagram



Photo

General Information

This point is established at land of Ram Bahadur Sahi. The point is marked on a concrete pillar near Chalise Khola.



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ROAD PROJECT

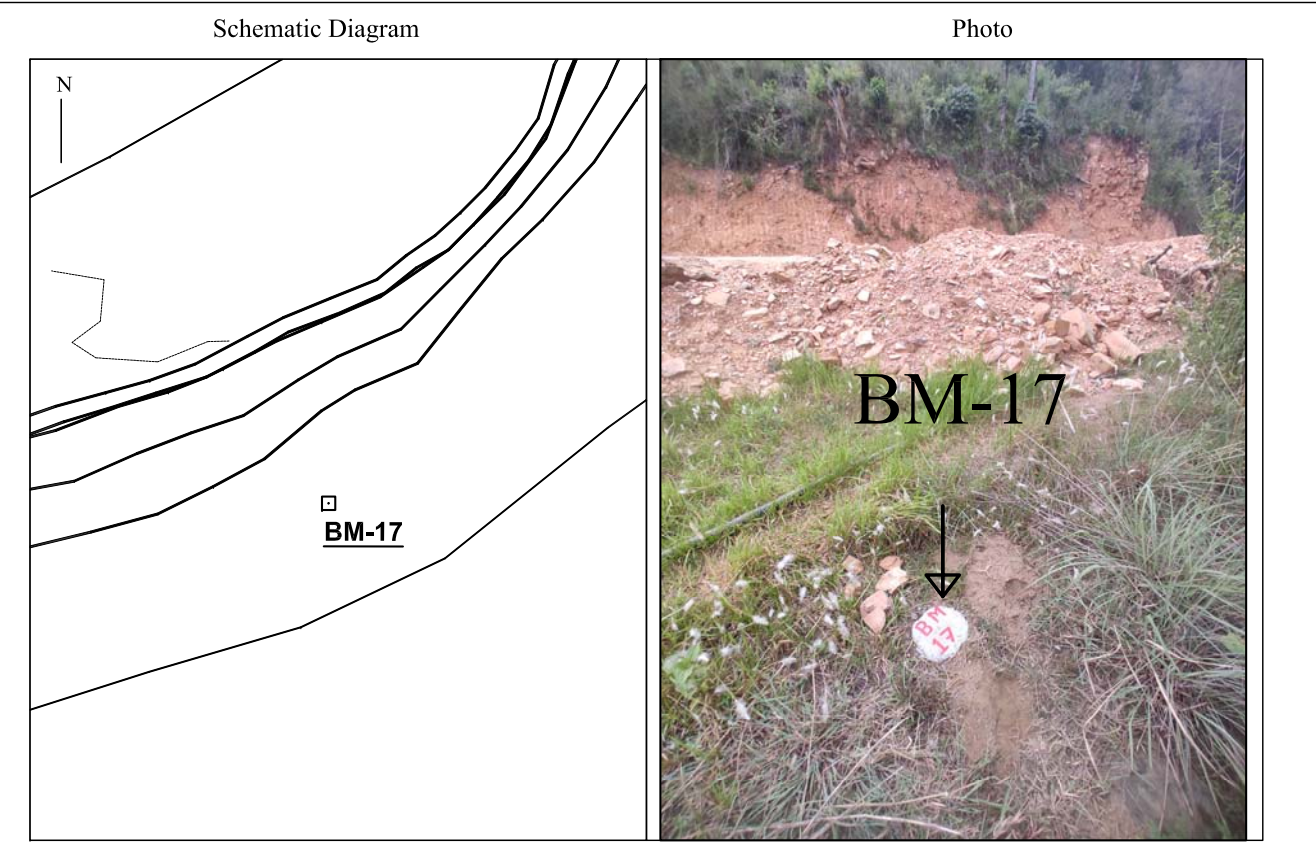
DESCRIPTION CARD

Bench Mark No. : BM-17
Place Name:Upallo Pudi
Metropolitan Name: Pokhara Metropolitan City- 33
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-17		213012.191	3112015.272	600.573	Concrete Pillar

Reference Point

R1 =	3.20m Tree	R2 =	10.60m Tree	R3 =	16.40m Boulder
------	------------	------	-------------	------	----------------



General Information

This point is established above the Seti Khola Power House Tunnel place called Pudi on the left side of road land.

ROAD PROJECT

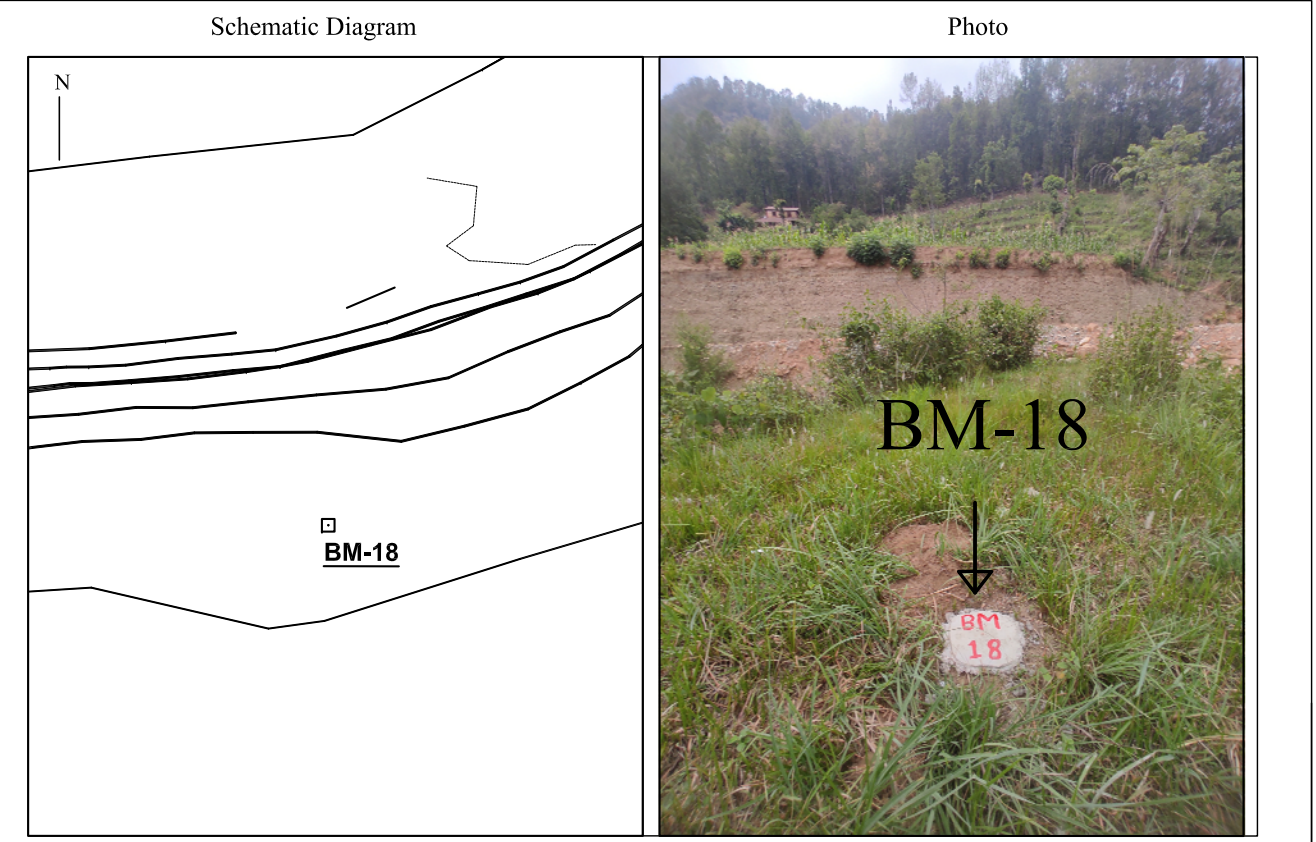
DESCRIPTION CARD

Bench Mark No. : BM-18
Place Name:Upallo Pudi
Metropolitan Name: Pokhara Metropolitan City- 33
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-18		212971.875	3112001.192	600.032	Concrete Pillar

Reference Point

R1 =	7.40m Tree	R2 =	4.60m Tree	R3 =	8.20m Tree
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General Information

This point is established above the Seti Khola Power House Tunnel place called Pudi on the left side of road land.



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ROAD PROJECT

DESCRIPTION CARD

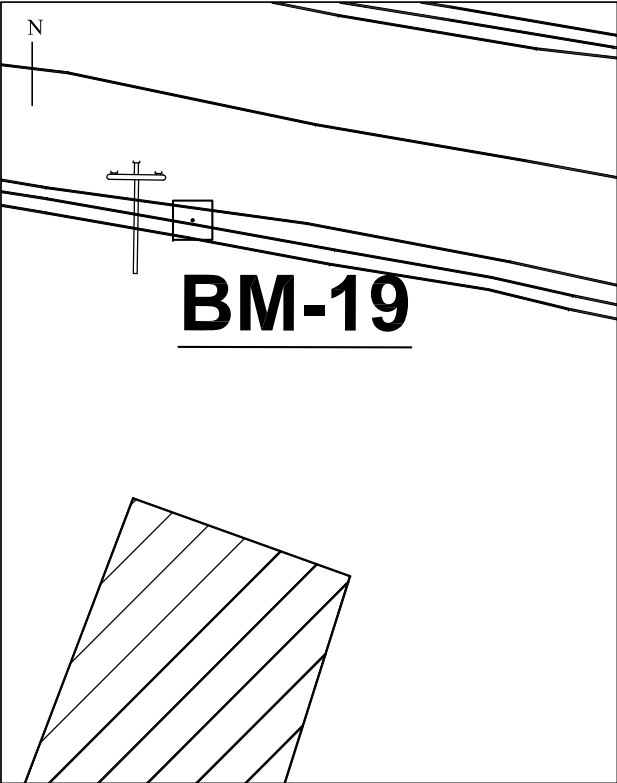
Bench Mark No. : BM-19
Place Name:Upallo Pudi
Metropolitan Name: Pokhara Metropolitan City- 33
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-19		212068.782	3111875.744	591.321	Slab

Reference Point

R1 =	2.50m EP	R2 =	6.0m Wall	R3 =	3.90m Wall
------	----------	------	-----------	------	------------

Schematic Diagram



Photo



General Information

This point is established at Upallo Pudi. The point is marked on the top of top drain.

ROAD PROJECT

DESCRIPTION CARD

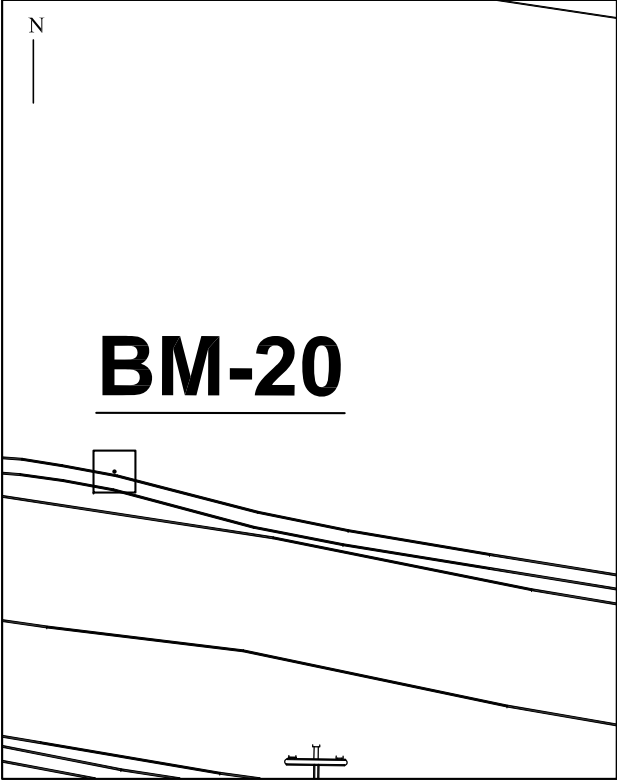
Bench Mark No. : BM-20
Place Name:Upallo Pudi
Metropolitan Name: Pokhara Metropolitan City- 33
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-20		212059.955	3111887.097	591.128	Slab

Reference Point

R1 =	2.40m Wall	R2 =	1.70m Tap	R3 =	4.0m Wall
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Schematic Diagram



Photo



General Information

This point is established at Upallo Pudi. The point is marked on the top of top drain.



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ROAD PROJECT

DESCRIPTION CARD

Bench Mark No. : BM-1

Place Name: Kalikasthan

Municipality/Rural Municipality Name: Pokhara Metropolitan City- 33

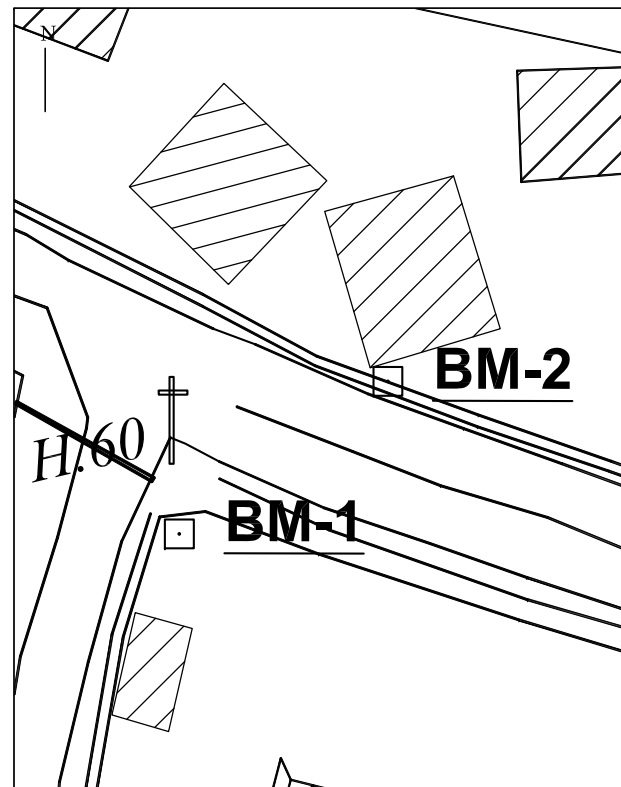
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-1		213283.1172	3114367.67	606.3030	Concrete Pillar

Reference Point

R1 =	4.635m Fence	R2 =	12.345 Fence	R3 =	17.75m HC
------	--------------	------	--------------	------	-----------

Schematic Diagram



Photo

General Information

This point is established at Kalikasthan near 33 no ward office of Pokhara Metropolitan City. The point is marked on the slab near drain by nail and painted with red enamel. The BM2 is visible from BM 1.

ROAD PROJECT

DESCRIPTION CARD

Bench Mark No. : BM-2

Place Name:Kalikasthan

Metropolitan Name: Pokhara Metropolitan City- 33

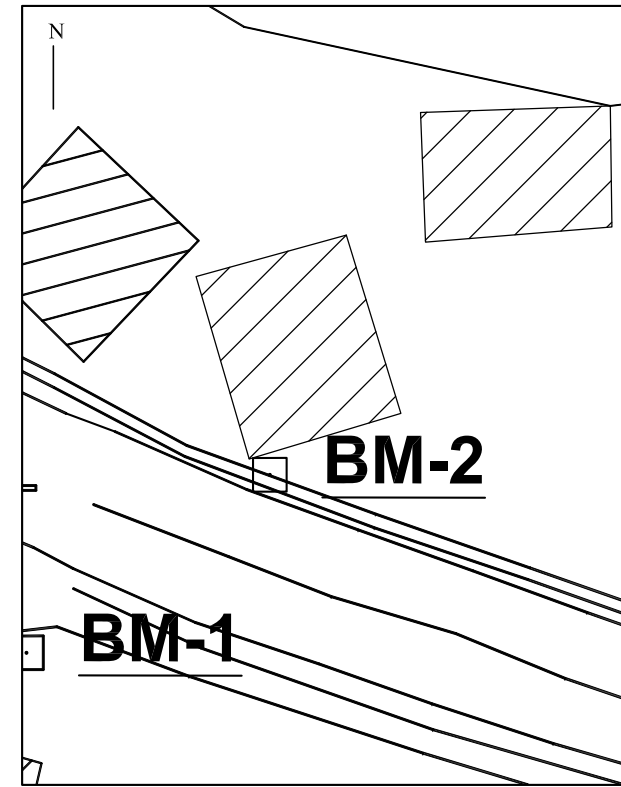
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-2		213290.9170	3114373.4850	605.8680	Concrete Pillar

Reference Point

R1 =	1.0932 Fence	R2 =	9.1650 Fence	R3 =	30.51m HC
------	--------------	------	--------------	------	-----------

Schematic Diagram



Photo

General Information

This point is established at Kalikasthan near 33 no ward office of Pokhara Metropolitan City. The point is marked on the concrete pillar on east side of BM1 The BM1 is visible from BM 2.



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ROAD PROJECT

DESCRIPTION CARD

Bench Mark No. : BM-3
Place Name:Block Chowk
Metropolitan Name: Pokhara Metropolitan City- 30
District: Kaski

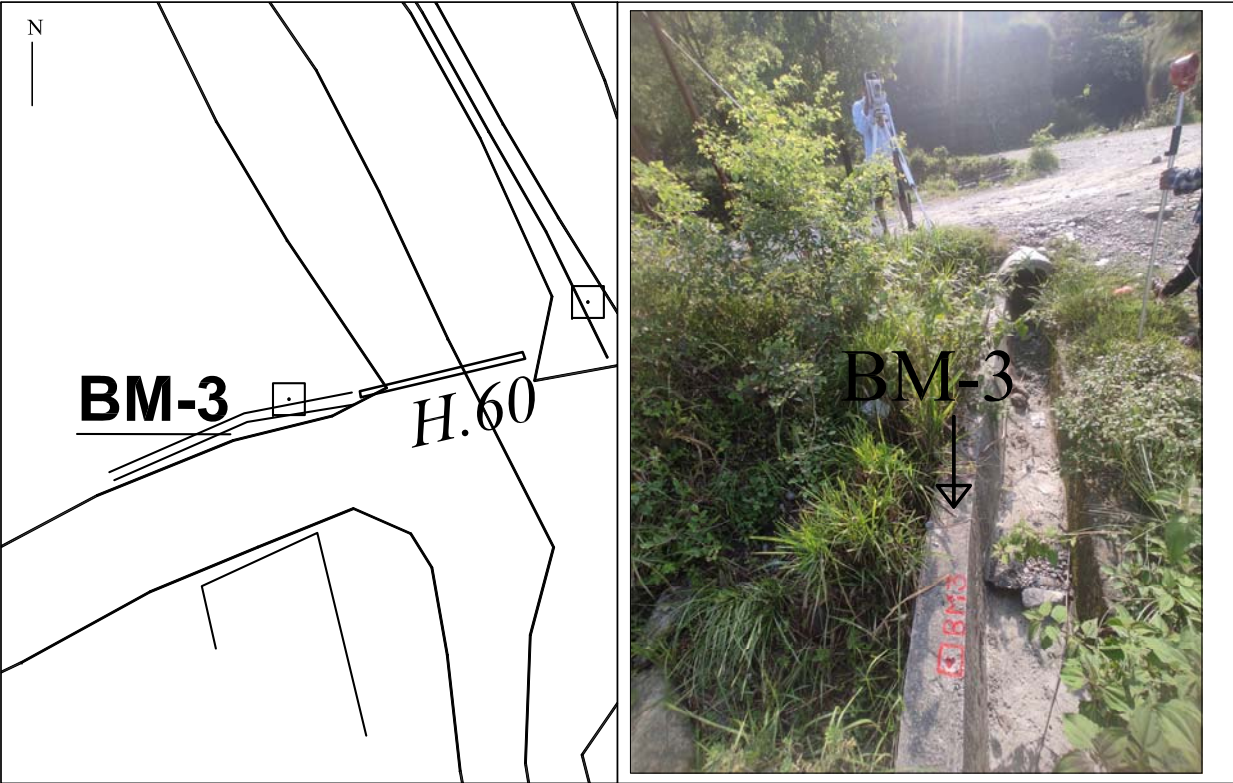
Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-3		214088.951	3114289.428	602.951	Concrete Pillar

Reference Point

R1 =	3.50m Wall	R2 =	6.0m B Wall	R3 =	4.50m Boulder
------	------------	------	-------------	------	---------------

Schematic Diagram

Photo



General Information

This point is established at Gagangauda. The point is marked on the way to Kutre on the right side of road 250m North from Gyan Jyoti School on drain top.

ROAD PROJECT

DESCRIPTION CARD

Bench Mark No. : BM-4
Place Name:Block Chowk
Metropolitan Name: Pokhara Metropolitan City - 30
District: Kaski

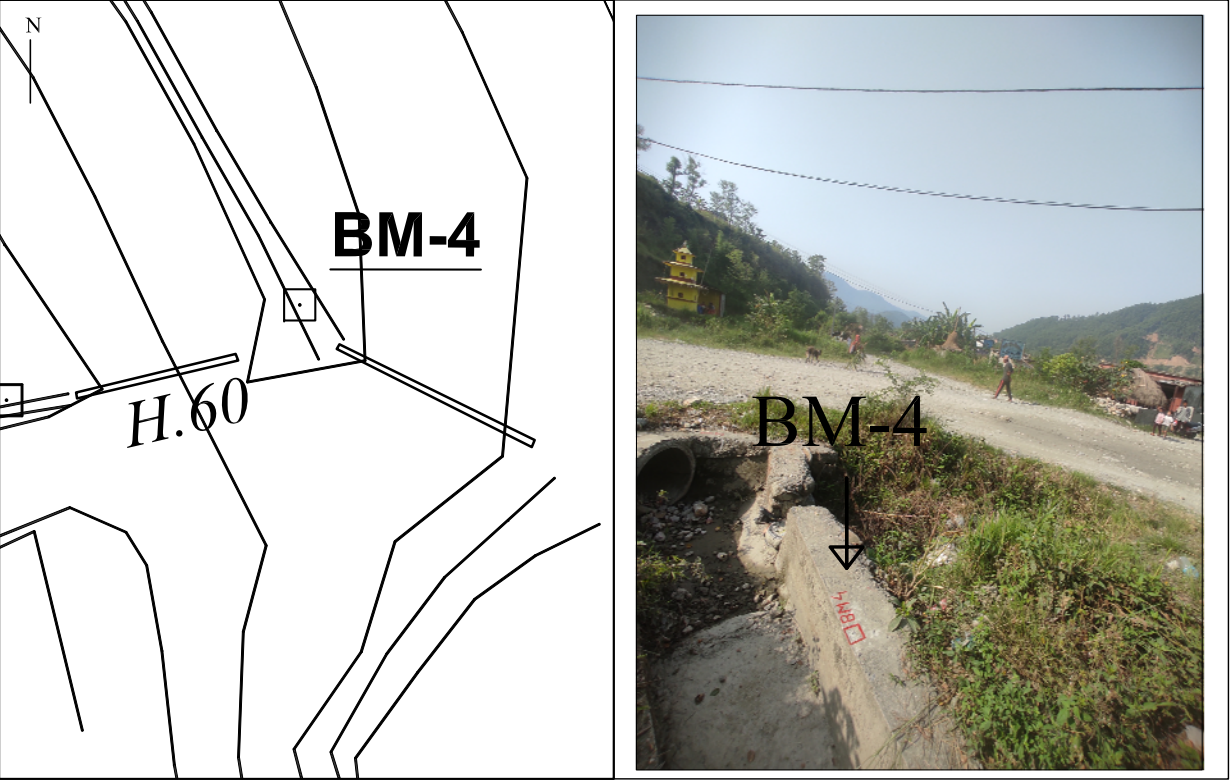
Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-4		214102.260	3114293.751	604.031	Concrete Pillar

Reference Point

R1 =	6.70m Wall	R2 =	12.70m Boulder	R3 =	3.0m Pipe
------	------------	------	----------------	------	-----------

Schematic Diagram

Photo



General Information

This point is established at Gagangauda. The point is marked on the way to Kutre on the left side of road 250m North from Gyan Jyoti School on drain top.



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Kathmandu, Nepal



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ROAD PROJECT

DESCRIPTION CARD

Bench Mark No. : BM-5
Place Name:Prithvi Highway
Metropolitan Name: Pokhara Metropolitan City- 30
District: Kaski

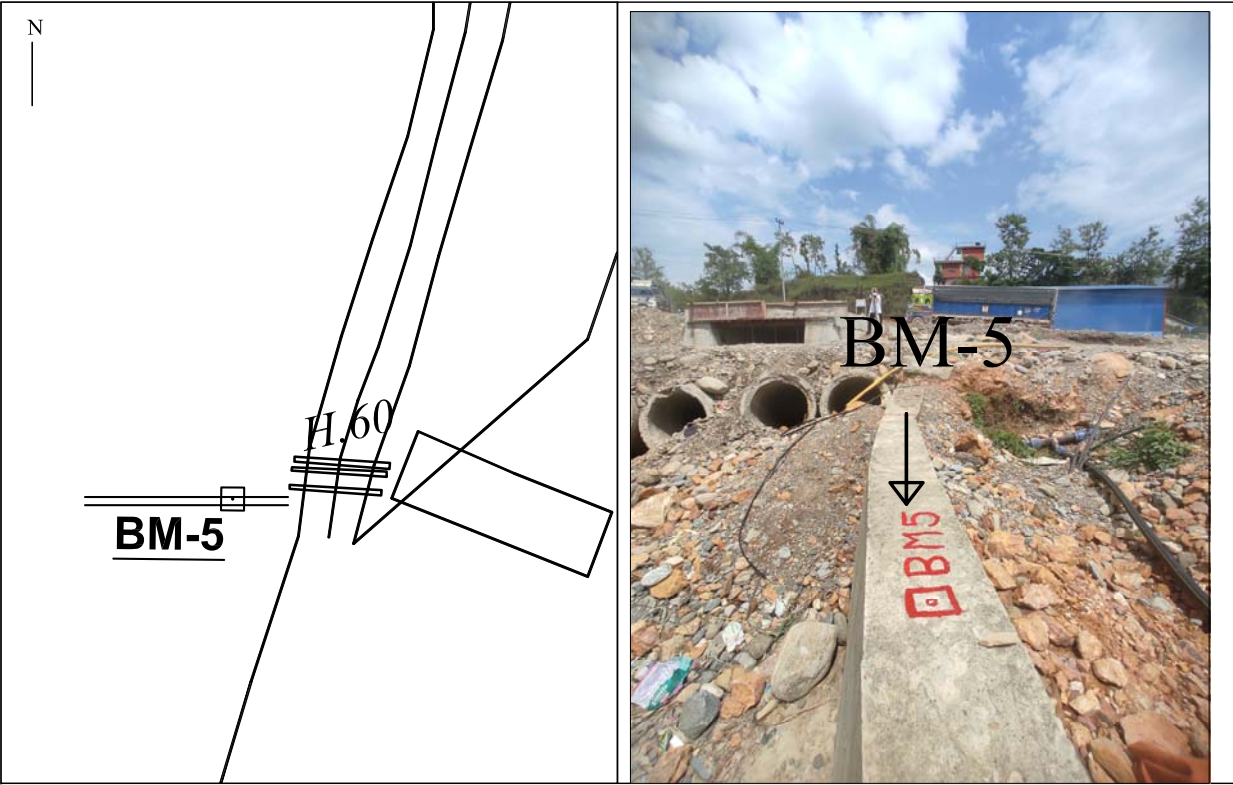
Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-5		214262.148	3112879.643	597.563	Concrete Pillar

Reference Point

R1 =	1.50m Boulder	R2 =	4.50m Boulder	R3 =	3.40m Boulder
------	---------------	------	---------------	------	---------------

Schematic Diagram

Photo



General Information

This point is established at Tallo Gagangauda. The point is marked near on the junction of Prithvi Highway.

ROAD PROJECT

DESCRIPTION CARD

Bench Mark No. : BM-6
Place Name:Prithvi Highway
Metropolitan Name: Pokhara Metropolitan City - 30
District: Kaski

Station	Coordinate	Easting	Northing	Elevation	Remarks
BM-6		214251.082	3112860.484	596.734	Concrete Pillar

Reference Point

R1 =	1.90m Boulder	R2 =	6.30m Boulder	R3 =	2.40m Boulder
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Schematic Diagram

Photo



General Information

This point is established at Tallo Gagangauda. The point is marked near by House and on the junction of Prithvi Highway.



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:
DESCRIPTION CARD OF
BAGMARA SECTION II

DESIGNED BY:	Date: 2023
DRAWN BY:	Scale: Not In Scale
CHECKED BY:	Chalnage:
APPROVED BY:	Sheet No: 3