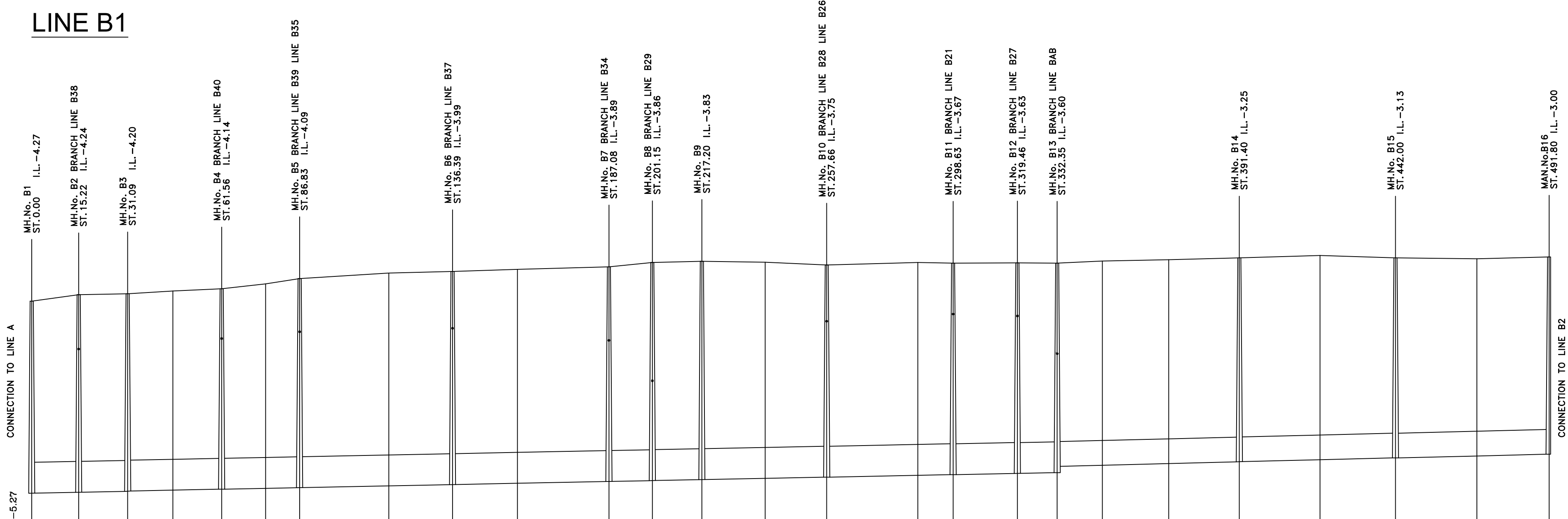


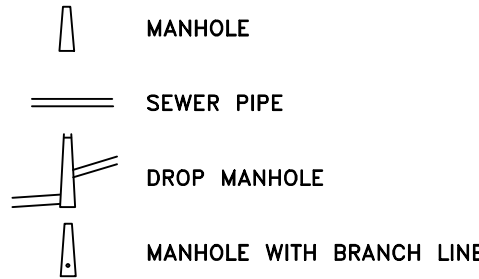
LINE B1



REFERENCE PLAN

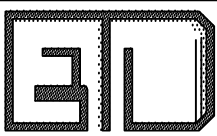
STATION NUMBER	A18P	A19	D1	D2	D3	D4	D5	D6	D7	D8	D9P	XA22P	XJ1	XJ2	XJ3	XJ4	XJ5	XV19	XV20	VZ1	VZ2	VZ3	VZ4	VZ5	VZ6	VZ7
NATURAL GROUND ELEVATION	2.00	2.21	2.24	2.33	2.40	2.56	2.73	2.91	2.96	3.03	3.11	3.25	3.29	3.26	3.17	3.25	3.23	3.24	3.23	3.30	3.34	3.40	3.48	3.40	3.37	3.43
SEWER INVERT LEVEL	-4.22	-4.19	-4.15		-4.09		-4.04		-3.94		-3.84	-3.81	-3.78		-3.70		-3.62	-3.58	-3.35			-3.20		-3.08		-2.95
SEWER GRADIENT	0.0020	0.0020		0.0020		0.0020		0.0020		0.0020	0.0020		0.0020		0.0020		0.0020	0.0020		0.0025		0.0025		0.0025		
SEWER SIZE (mm)	1000	1000		1000		1000		1000		1000	1000	1000	1000	1000	1000	1000	1000	1000	800		800		800		800	
PARTIAL DISTANCE	15.22	15.87	14.65	15.82	14.25	11.02	28.92	20.64	21.04	29.65	14.07	16.05	20.54	19.92	29.52	11.45	20.83	12.89	14.66	21.49	22.90	26.16	24.44	26.38	23.42	
CUMULATIVE DISTANCES	0.00	15.22	31.09	45.74	61.56	75.81	86.83	115.75	136.39	157.43	187.08	201.15	217.20	237.74	257.66	287.18	298.63	319.46	332.35	347.01	368.50	391.40	417.56	442.00	468.58	491.80

LEGEND



REPUBLIC OF LEBANON

COUNCIL FOR DEVELOPMENT AND RECONSTRUCTION



BUREAU TECHNIQUE POUR LE DEVELOPPEMENT

JALL ED DIB – HAJAL Bldg TEL:(04) 712157/712158
P.O.BOX:70492 – ANELIAS FAX:(04) 712159

EL MINA REMAINING COASTAL SEWER COLLECTORS
LOT 1 – COMPULSORY

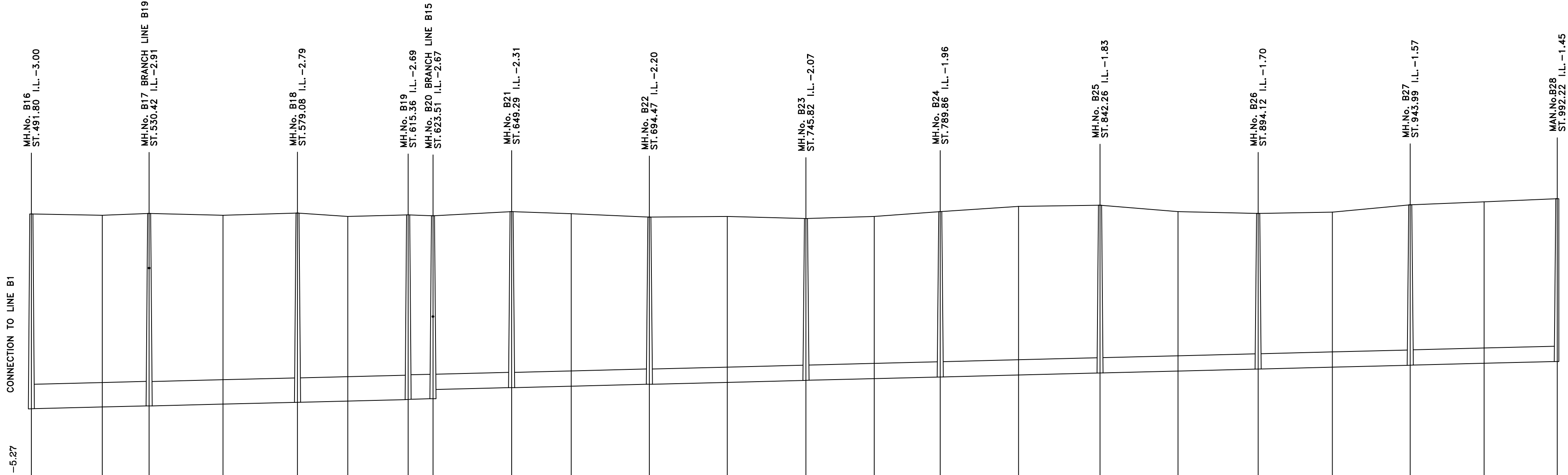
EL MINA REMAINING
COASTAL SEWER COLLECTORS

LINE B1
PROFILE

	DESIGNED BY	DRAWN BY	CHECKED BY
451W–B1P01	B.T.D	B.T.D	B.T.D

DATE	SCALE	SHEET No.	DRAWING No.
DECEMBER 2025	V=1:100 H=1:1000	1/2	451W–B1P01

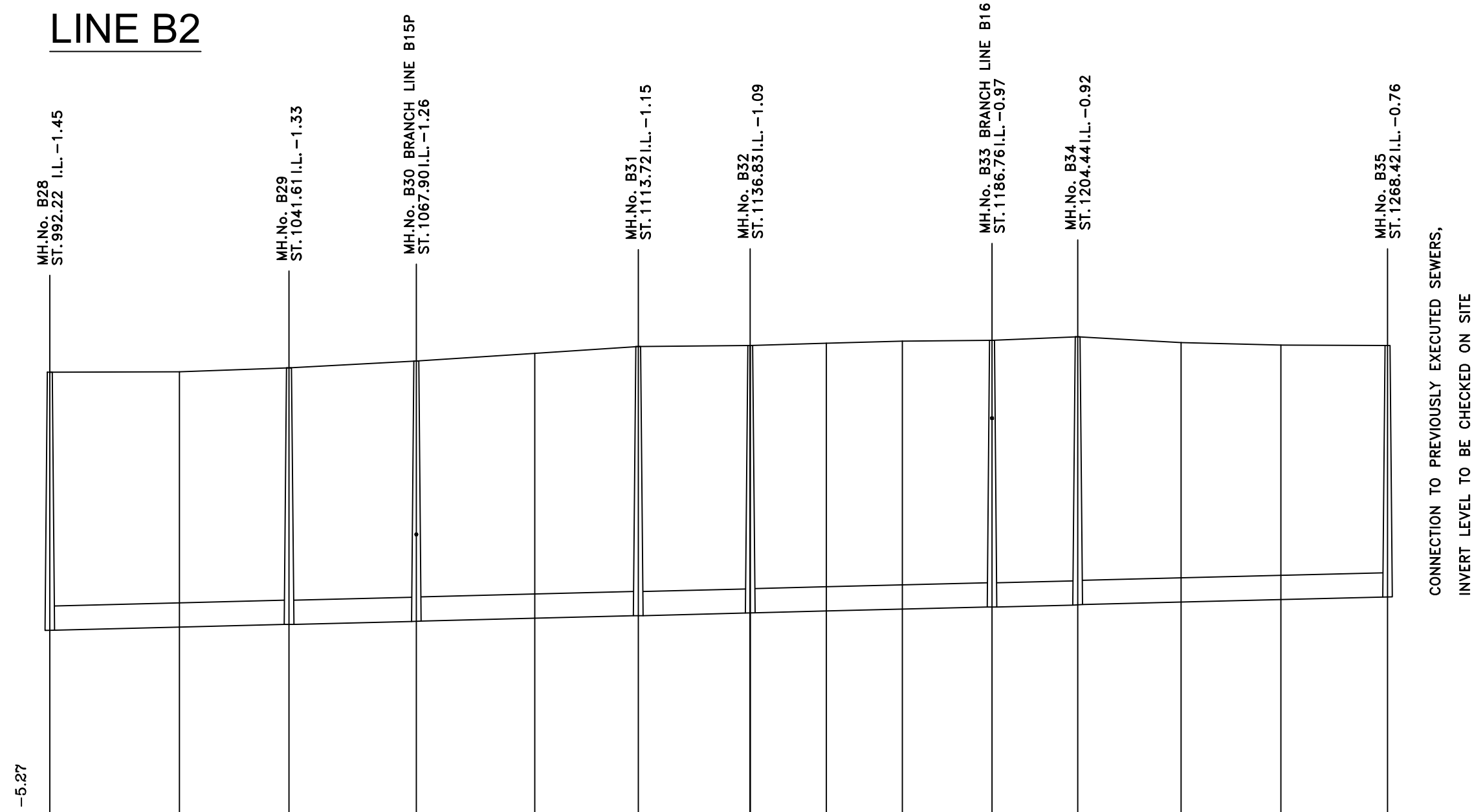
LINE B2



REFERENCE PLAN

STATION NUMBER	VZ7	VZ8	VZ9	VZ10	VZ11	VZ12	VZ13	YB33	ZA36	ZA35	ZA34	ZA33	ZA32	HA34	HA33	HA32	HA31	HA30	HA29	HA28	HA27	HA26	HA25
NATURAL GROUND ELEVATION	3.43	3.39	3.45	3.39	3.46	3.35	3.40	3.37	3.51	3.44	3.33	3.35	3.28	3.35	3.51	3.68	3.72	3.51	3.45	3.49	3.73	3.63	3.93
SEWER INVERT LEVEL	-2.95		-2.86		-2.74		-2.64	-2.32	-2.26		-2.15		-2.02		-1.91		-1.78		-1.65		-1.52		-1.40
SEWER GRADIENT		0.0025		0.0025		0.0025	0.0025	0.0025		0.0025		0.0025		0.0025		0.0025		0.0025		0.0025		0.0025	
SEWER SIZE (mm)		800		800		800	800	500		500		500		500		500		500		500		500	
PARTIAL DISTANCE		23.27	15.35	24.22	24.44	16.48	19.80	8.15	25.78	19.58	25.60	25.57	25.78	22.40	21.64	25.67	26.73	25.59	26.27	24.32	25.55	24.22	24.01
CUMULATIVE DISTANCES	0.00	23.27	38.62	62.84	87.28	103.76	123.56	131.71	157.49	177.07	202.67	228.24	254.02	276.42	298.06	323.73	350.46	376.05	402.32	426.64	452.19	476.41	500.42

LINE B2



REFERENCE PLAN

STATION NUMBER	HA25	HA24	HA23	HA22	HA21	HA20	HA18	HA17P	HA17	HA16	HA15	HA14	HA13	HA12
NATURAL GROUND ELEVATION	3.93	3.94	4.02	4.16	4.32	4.46	4.48	4.53	4.57	4.59	4.66	4.54	4.49	4.48
SEWER INVERT LEVEL	-1.40		-1.28	-1.21		-1.10	-1.04			-0.92	-0.87			-0.71
SEWER GRADIENT		0.0025		0.0025		0.0025	0.0025		0.0025		0.0025		0.0025	
SEWER SIZE (mm)		500		500		500	500		500		500		500	
PARTIAL DISTANCE		26.76	22.63	26.29	24.44	21.38	23.11	15.71	15.71	18.51	17.68	21.36	20.61	22.01
CUMULATIVE DISTANCES	500.42	527.18	549.81	576.10	600.54	621.92	645.03	660.74	676.45	694.96	712.64	734.00	754.61	776.62

- 1- THE CONDITION OF THE EXISTING WASTEWATER LINES IS TO BE VERIFIED ON SITE BY THE CONTRACTOR.
- 2- WHERE A NEW LINE IS CONNECTED TO AN EXISTING MANHOLE, THE INVERT LEVEL OF THE MANHOLE SHOULD BE VERIFIED ON SITE BY THE CONTRACTOR, AND THE CONTRACTOR WILL TAKE ALL THE MEASURES TO DEAL WITH FLOW.
- 3- WHERE THE PIPE COVER IS LESS THEN 90cm A CONCRETE SURROUND WILL
- 4- WHERE THERE IS AN INTERSECTION WITH A WATER SUPPLY LINE A CONCRETE SURROUND WILL BE EXECUTED.
- 5- THE NEW EXECUTED LINE WILL REPLACE THE EXISTING ONE WHICH WILL BE DISCONNECTED BY THE CONTRACTOR WHEN THE NEW SYSTEM WILL BE PUT IN SERVICE.
- 6- FOR THE HOUSE CONNECTIONS REFER TO THE PARTICULAR SPECIFICATIONS.
- 7- FOR MANHOLES DETAILS REFER TO THE PARTICULAR SPECIFICATIONS AND STANDARD DRAWINGS.
- 8- FOR TRENCH DETAILS REFER TO THE PARTICULAR SPECIFICATIONS AND STANDARD DRAWINGS.

LEGEND

- MANHOLE
- SEWER PIPE
- DROP MANHOLE
- MANHOLE WITH BRANCH LINE

REPUBLIC OF LEBANON

COUNCIL FOR DEVELOPMENT AND RECONSTRUCTION



BUREAU TECHNIQUE POUR LE DEVELOPPEMENT

JALL ED DIB – HAJAL Bldg TEL:(04) 712157/712158
P.O.BOX:70492 – ANELIAS FAX:(04) 712159

EL MINA REMAINING COASTAL SEWER COLLECTORS

LOT 2 – OPTIONAL

EL MINA REMAINING
COASTAL SEWER COLLECTORS

LINE B2
PROFILE

	DESIGNED BY	DRAWN BY	CHECKED BY
451W-B1P02	B.T.D	B.T.D	B.T.D

DATE	SCALE	SHEET No.	DRAWING No.
DECEMBER 2025	V=1:100 H=1:1000	2/2	451W-B1P02