

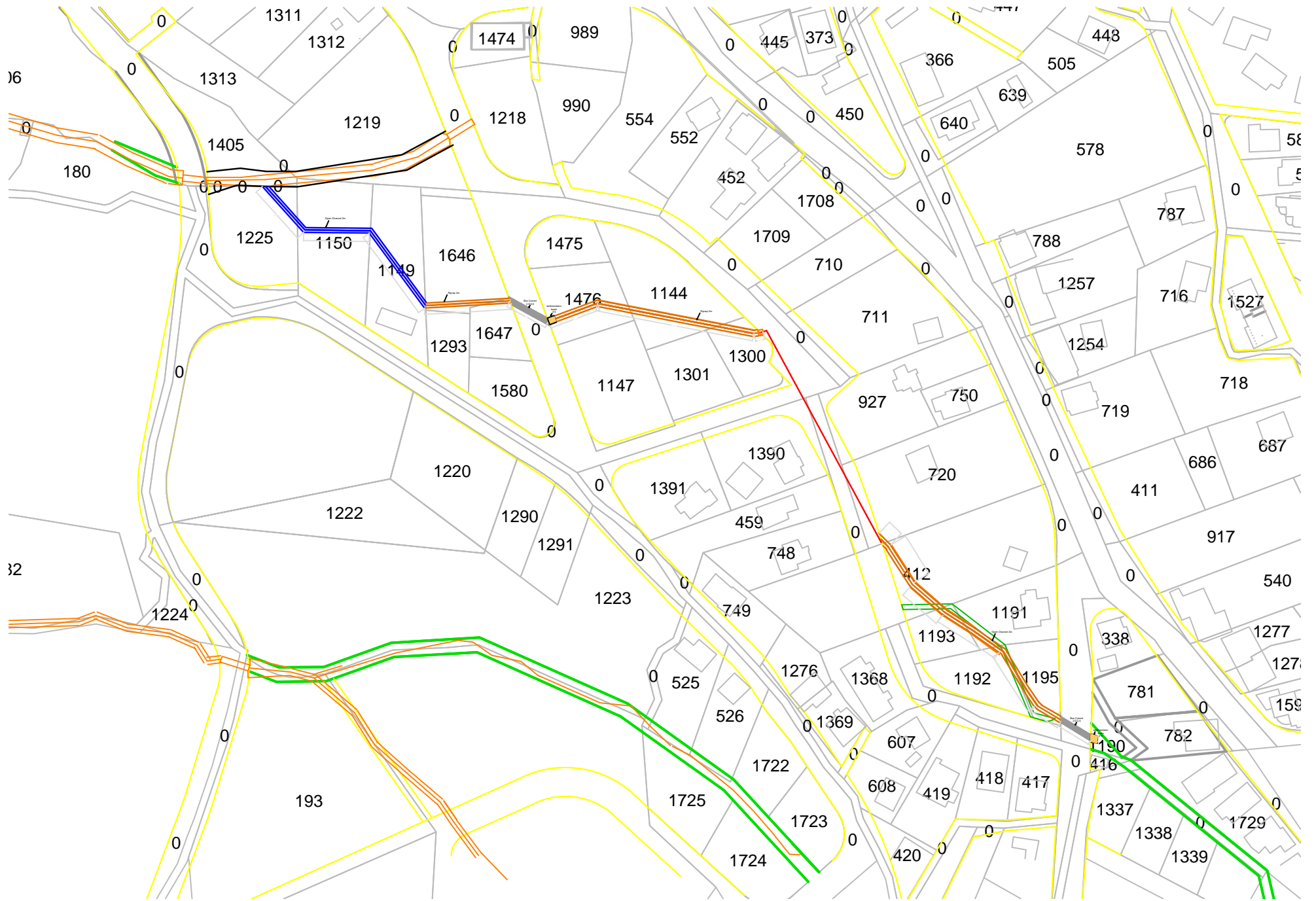
Petra

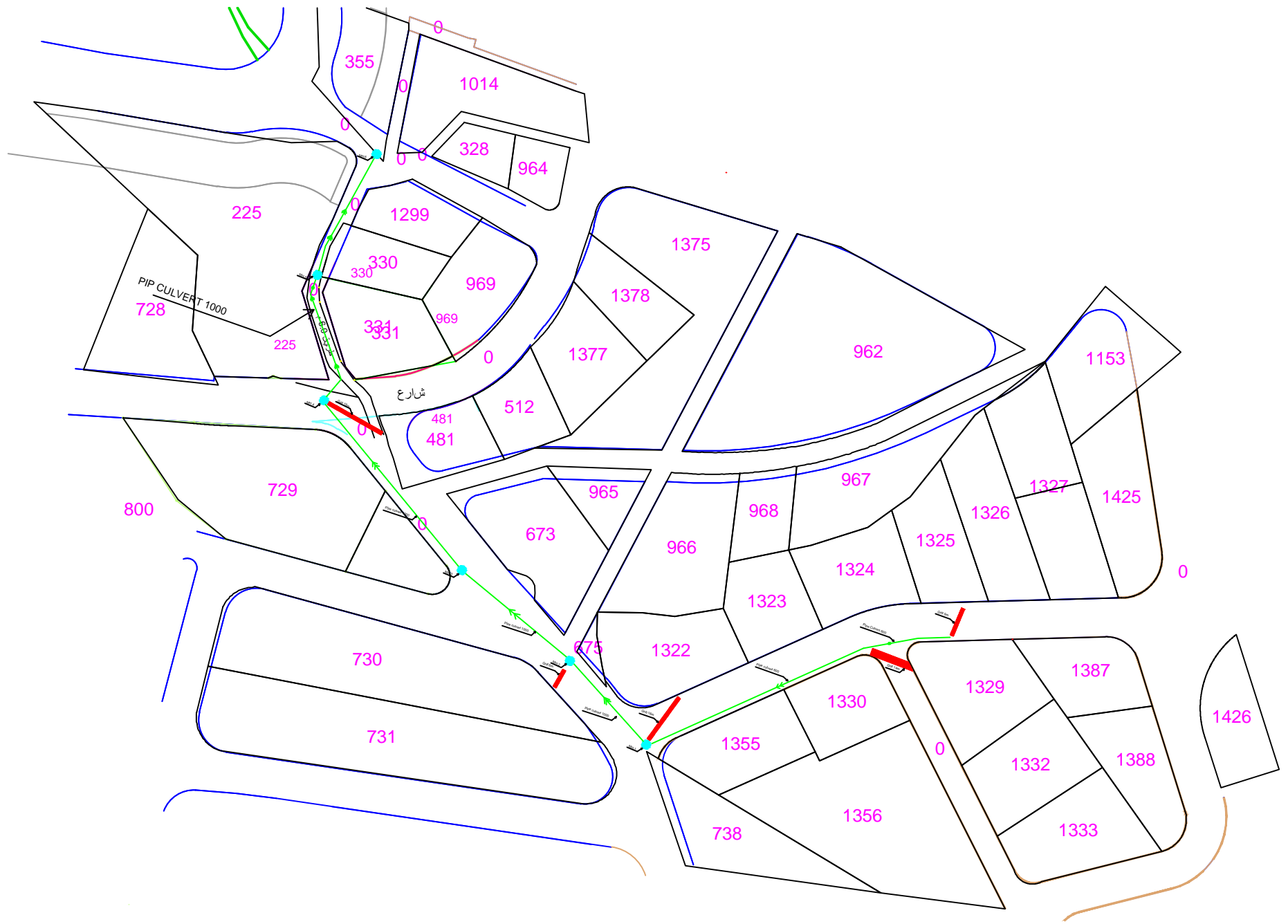
Petra Development & Tourism Region Authority

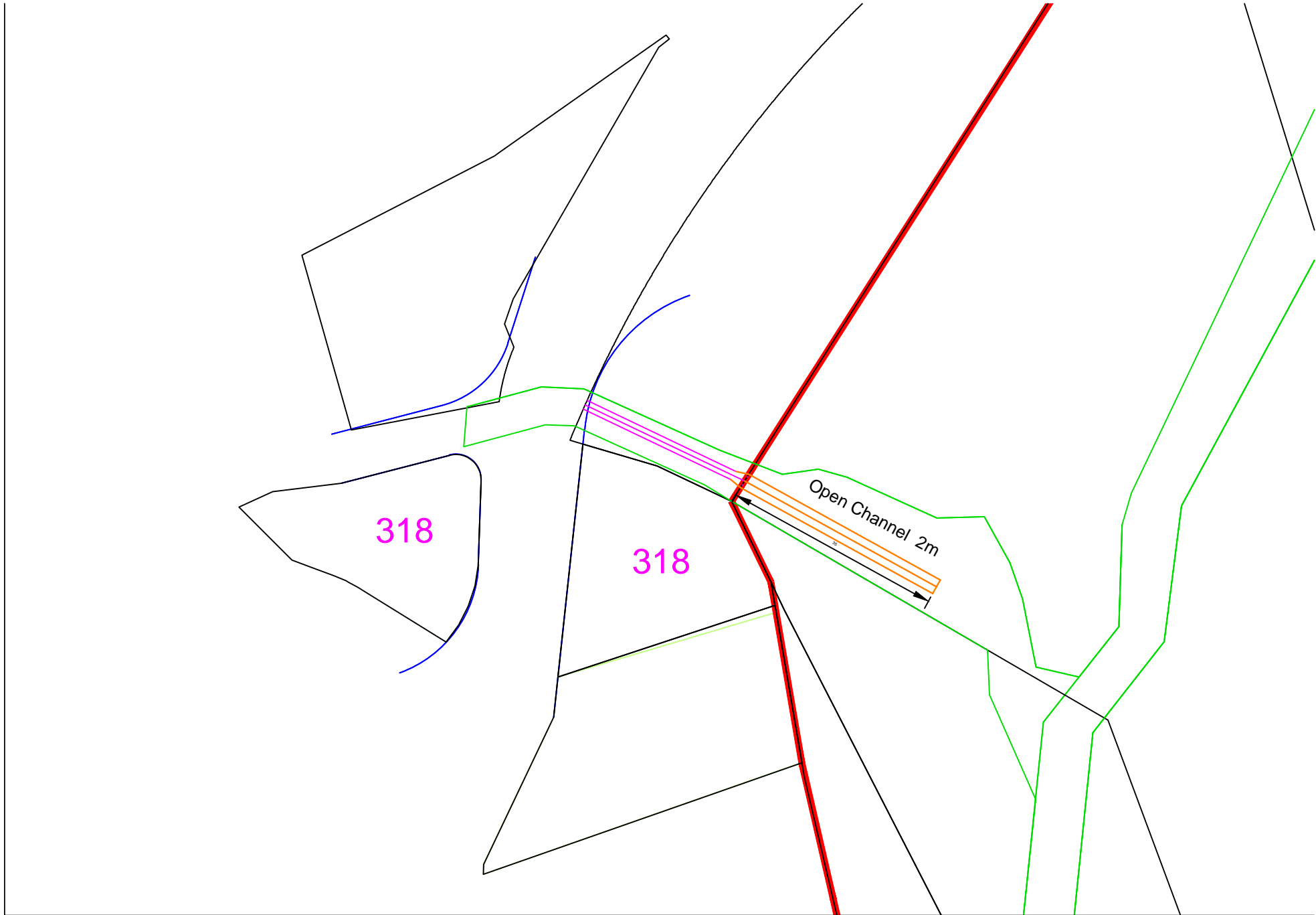
***Petra Development & Tourism
Region Authority***

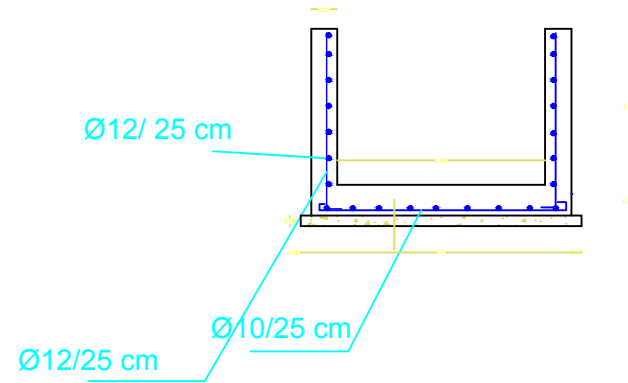
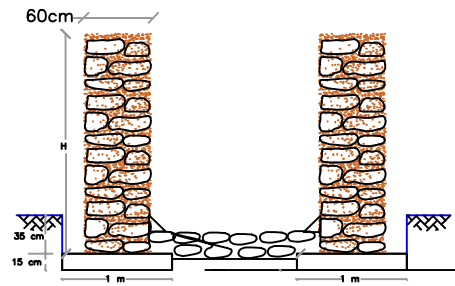
*Rainwater drainage project
Al Taibeh*

2017





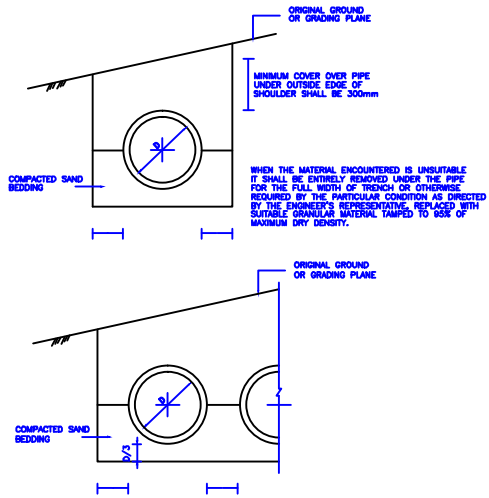




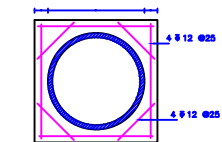
Open Channel & RipRap Details



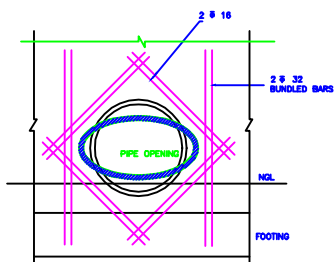
RainWater Drainage Project Al-Yasbeh	
PROJECT TITLE Open Channel Details	
DATE	REVISION NO.
17/04	01
P.D.T.A.	



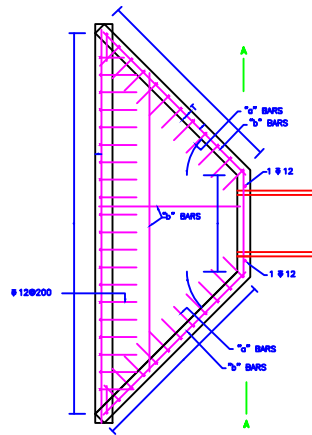
EXCAVATION AND BACKFILL OF PIPE TRENCHES AND BEDDING DETAIL



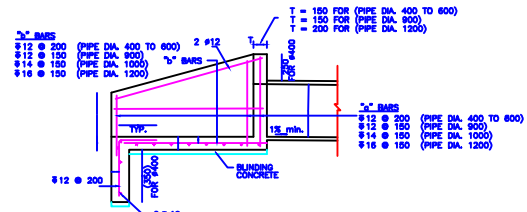
REINFORCED CONCRETE ENCASMENT FOR PIPE CULVERT AND OUTLET PIPE



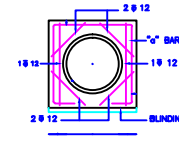
DETAIL IN RETAINING WALL AT PIPE INLET AND OUTLET



PLAN PIPE CULVERT WING WALL



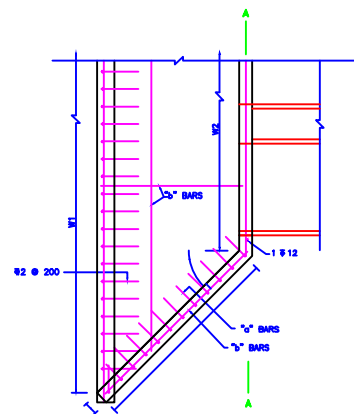
ELEVATION



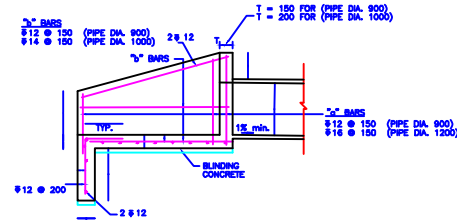
SECTION A - A

TABLE FOR SINGLE PIPE

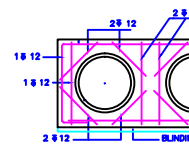
DA. (mm.)	≤ 900	900	750	900	1000
L (cm.)	170	200	230	280	315
H (cm.)	80	80	80	70	75
W1 (cm.)	320	385	435	540	585
W2 (cm.)	90	100	110	130	140
Con. (cm. Th. One Side of Pipe)	1.30	1.60	2.00	3.90	4.15



PLAN MULTIPLE PIPE CULVERT HEAD WALL SKEW 0° TO 45°



ELEVATION



SECTION A - A

TABLE FOR MULTIPLE PIPE

DA. (mm.)	Number of Pipes	L (cm.)	H (cm.)	W1 (cm.)	W2 (cm.)	Con. (cm. Th.)
1000	2	315	75	735	280	4.30
	3	315	75	885	440	5.25
1200	2	370	80	855	340	5.80
	3	370	80	1045	520	7.20

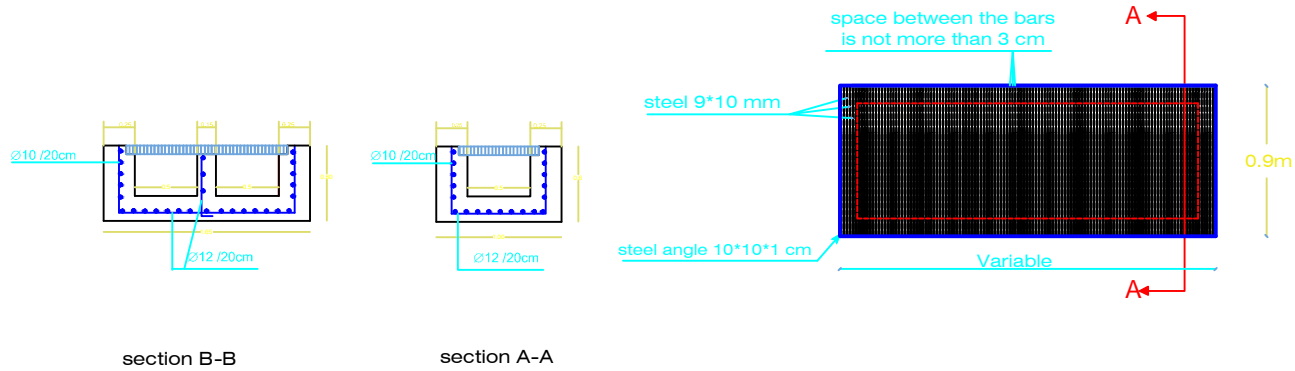


RainWater Drainage Project
Al Faibeh

DRAWING TITLE
PIPE CULVERT
PLAN - SECTION & DETAILS

DATE: 11/2018
DRAWING NO. 11.1

11.1



Grills Details



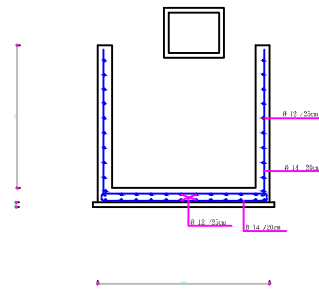
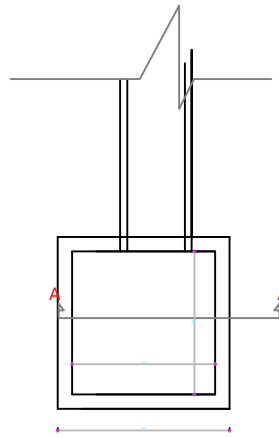
Petra
Petra Development & Tourism Region Authority

RainWater Drainage Project
Al-Tafhek

SECTION TITLE
Grills Details

NO.	REVISION/NO.	REVISION NO.

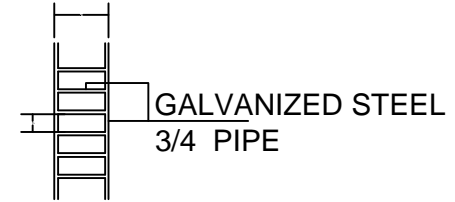
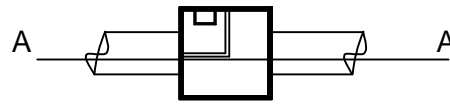
ED.A



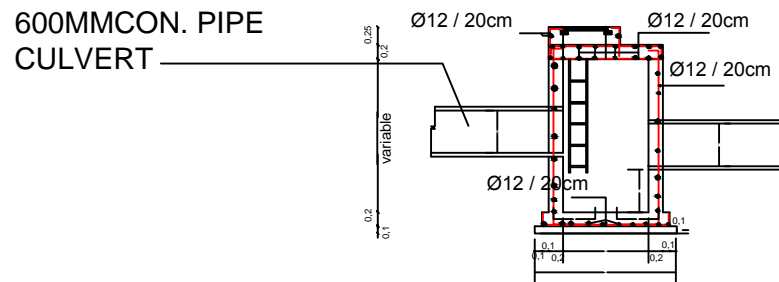
Sedimentation Tank Details



RainWater Drainage Project	
Al-Yasrah	
04/2020 07/2020	
Sedimentation Tank Details	
01/2020	04/2020 01/2020
01/2020	04/2020 01/2020
K.S.A	



THE INSIDE STEEL STAIR DETAIL

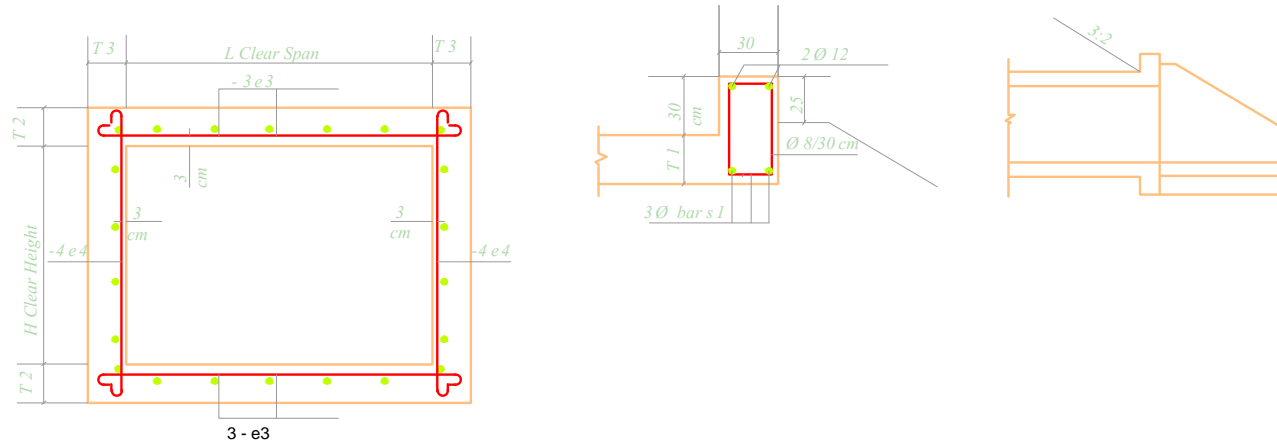


SECTION A-A
(FOR 600PIPE MANHOLES)




RainWater Drainage Project Al-Yasrah		
SECTION TITLE Sedimentation Tank Details		
DATE	DRAWING NO.	SCALE
E.S.A		

Culvert	Thicknesses					List of Reinforcing Steel										Quantities		Thicknesses					List of Reinforcing Steel										Quantities	
	Clear Span Height H	Top Slab T1	Bottom Slab T2	Walls T3	Ø Dia	1			2			3	4	3&4	Ø Dia	Concrete	Reinf.Steel	Top Slab T1	Bottom Slab T2	Walls T3	1			2			3	4	3&4	Ø Dia	Concrete	Reinf.Steel		
						bar Length	Spacing e1	Number	bar Length	Spacing e2	Number										bar Length	Spacing e1	Number	bar Length	Spacing e2	Number								
m	m	cm	cm	cm	mm	m	cm	mm	m	cm	mm	cm	mm	m	m ³ /m	kg/m	cm	cm	cm	mm	m	cm	mm	m	cm	mm	cm	mm	m	cm	mm	m ³ /m	kg/m	
6.01 m to 9.0m Fill																	9.01 m to 12.0 m Fill																	
1.0	1.0	24	26	22	16	1.53	12.50	14	1.56	20	10	25	6	30	12	1.16	73.45	27	29	25	16	1.59	10	14	1.62	20	10	25	6	30	12	1.34	85.73	
	1.5	24	26	23	16	1.55	12.50	14	2.06	18	10	25	10	30	12	1.42	86.32	27	29	25	16	1.59	10	16	2.15	16	10	25	10	30	12	1.42	86.32	
1.5	1.0	33	35	23	18	2.08	11	14	1.74	20	14	25	6	30	12	1.79	116.20	38	40	25	18	2.12	10	14	1.84	20	17	20	6	30	12	1.79	116.11	
	1.5	33	36	23	18	2.08	11	16	2.28	20	14	25	10	30	12	2.04	134.63	38	41	25	18	2.12	10	16	2.38	15	17	20	10	30	12	2.04	136.63	
2.0	33	36	26	18	2.81	11	18	2.81	16	14	25	14	30	12	2.43	174.55	38	41	29	18	2.20	10	18	2.91	15	17	20	14	30	12	2.44	174.55		
1.51 m to 3.0 m Fill																	3.01 m to 6.0 m Fill																	
2	1.0	28	28	22	16	2.53	11	12	1.60	20	18	25	6	30	12	1.85	109.88	35	36	24	18	2.60	10.5	14	1.77	25	18	25	6	30	12	2.24	139.13	
	1.5	28	28	22	16	2.53	11	14	2.12	22	18	25	10	30	12	2.03	122.50	35	37	24	18	2.60	10.5	14	2.28	15	18	25	10	30	12	2.51	162.30	
	2.0	28	30	24	16	2.57	11	14	2.64	22	18	25	14	30	12	2.40	132.92	35	38	26	18	2.64	10.5	14	2.29	15	18	25	14	30	12	2.88	175.60	
	2.5	28	30	26	16	2.61	11	14	3.14	17	18	25	16	30	12	2.76	151.48	35	39	28	18	2.68	10.5	14	3.30	14	18	25	16	30	12	3.29	190.91	
2.5	1.0	32	34	26	18	3.14	12	14	1.72	25	22	25	6	30	12	2.51	147.81	42	43	26	22	3.19	12	14	1.91	20	30	18	6	30	12	3.08	213.47	
	1.5	32	34	26	18	3.14	12	14	2.22	25	22	25	10	30	12	2.77	156.20	42	44	26	22	3.19	12	16	2.45	18	30	18	10	30	12	3.38	238.90	
	2.0	32	34	28	18	3.18	12	14	2.72	25	22	25	14	30	12	3.17	165.92	42	45	28	22	3.23	12	16	2.96	18	30	18	14	30	12	3.78	253.37	
	2.5	32	35	28	18	3.18	12	14	3.23	14	22	25	16	30	12	3.45	197.15	42	46	29	22	3.25	12	22	3.55	19	30	18	20	25	12	4.16	319.33	
3.0	1.0	38	40	26	18	3.64	9	14	1.84	25	32	20	6	30	12	3.27	214.92	50	51	30	22	3.77	10	14	2.07	19	42	15	6	30	12	4.24	295.71	
	1.5	38	40	26	18	3.64	9	14	2.34	25	32	20	10	30	12	3.53	223.30	50	52	30	22	3.77	10	14	2.58	19	42	15	10	30	12	4.57	305.75	
	2.0	38	40	31	18	3.74	9	14	2.84	20	32	20	14	30	12	4.10	242.98	50	53	31	22	3.79	10	16	3.12	18	42	15	14	30	12	4.97	332.40	
	2.5	38	41	31	18	3.74	9	16	3.38	17	32	20	16	30	12	4.40	273.21	50	54	33	22	3.83	10	18	3.66	17	42	15	20	25	12	5.46	371.44	
3.0	38	41	31	18	3.74	9	18	3.91	15	32	20	20	30	12	4.72	318.16	50	55	35	22	3.87	10	22	4.22	16	42	15	24	25	12	5.99	448.75		



Typical Section


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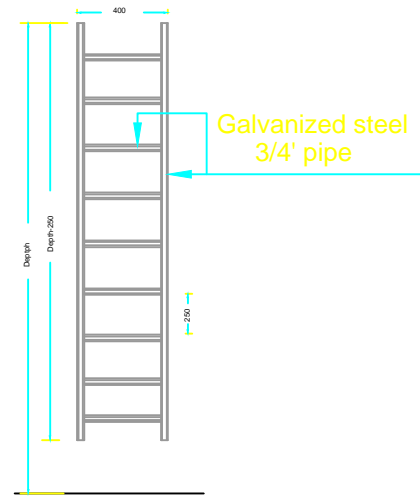
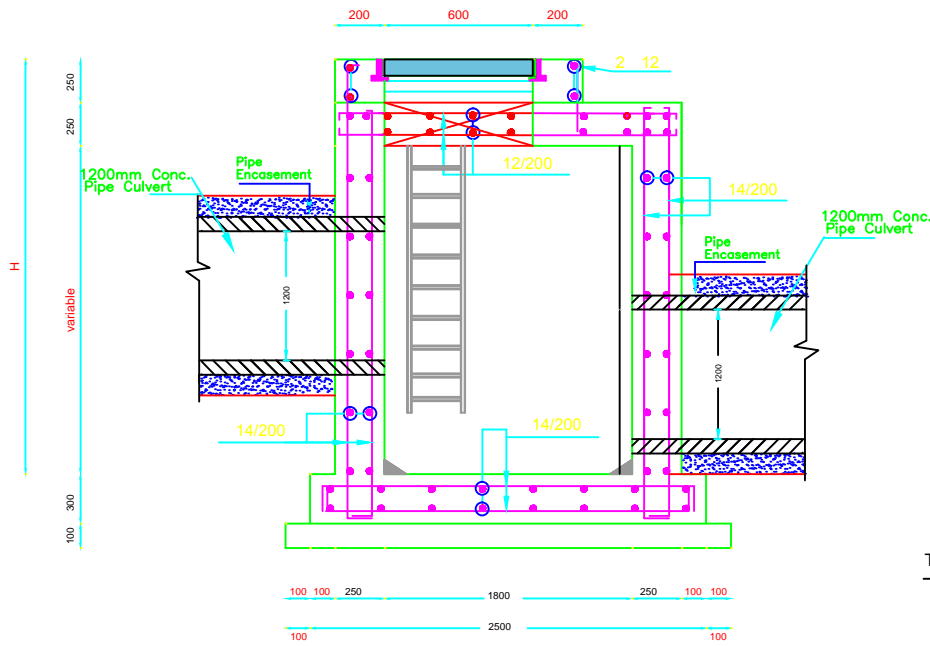
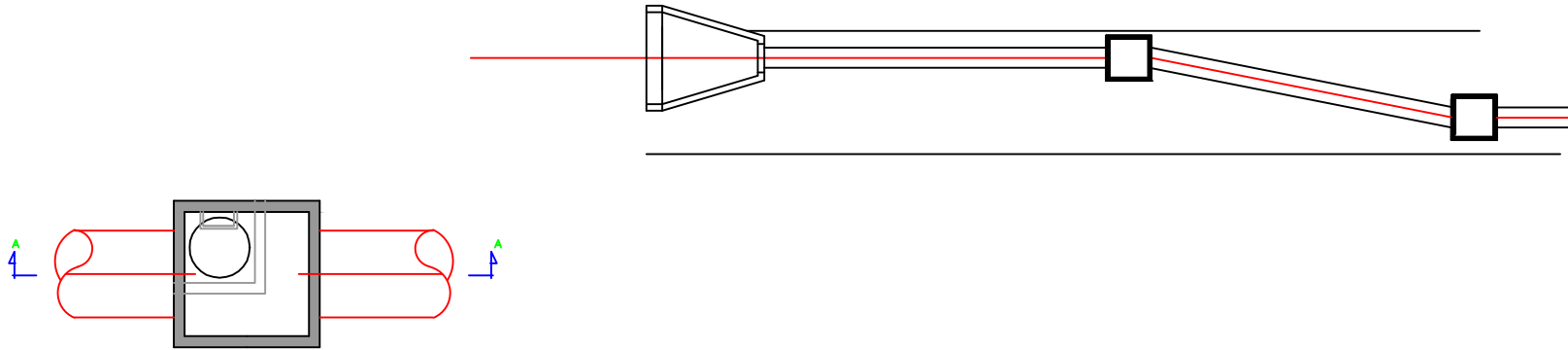
RainWater Drainage Project
Al-Futuh

Box Culvert Details

1/10

1/10

1/10



THE INSIDE STEEL STAIR DETAIL

SECTION A-A
SCALE 1/20
(FOR 1200 PIPE MANHOLES)



RainWater Drainage Project
Wadi Musa

ASBTD TITLE
1200mm PIPES LINE

NO.	REV.	DATE	BY	CHKD.

SA