

TABLE OF HORIZONTAL BENDS

STAKE N°	BEND
Z437	C118+112
Z438	C118
Z455	C152
8354	C152
8352	C118
8351	C118-152
8350	C118+152
Z449	C118
Z448	C152
Z447	C152
Z430	C152
Z429	C152
Z428	C118+152
Z427	C118
Z425	C118
S45	C152
S44	C152
Z422	C152
Z420	C118+152
S4	C118
453	C152
452	C152
451	C152
450	C152
449	C118
448E	C152
448F	C152
448I	C152
337	C118
329	C152
328	C118
327	C118
323	C118+152
317	C118
24	C118
S41	C118
19	C152
15	C118
S40	C152

TABLE OF VERTICAL BENDS

STAKE N°	BEND
Z447	C152
Z429	C152

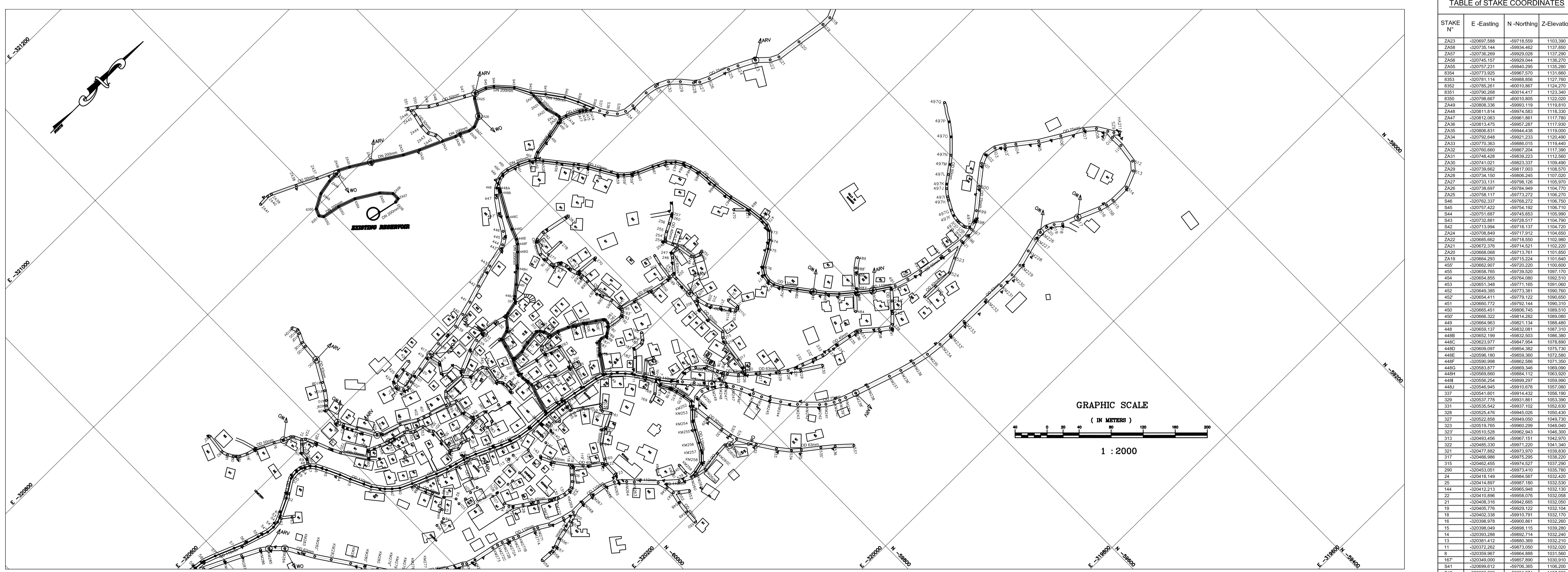
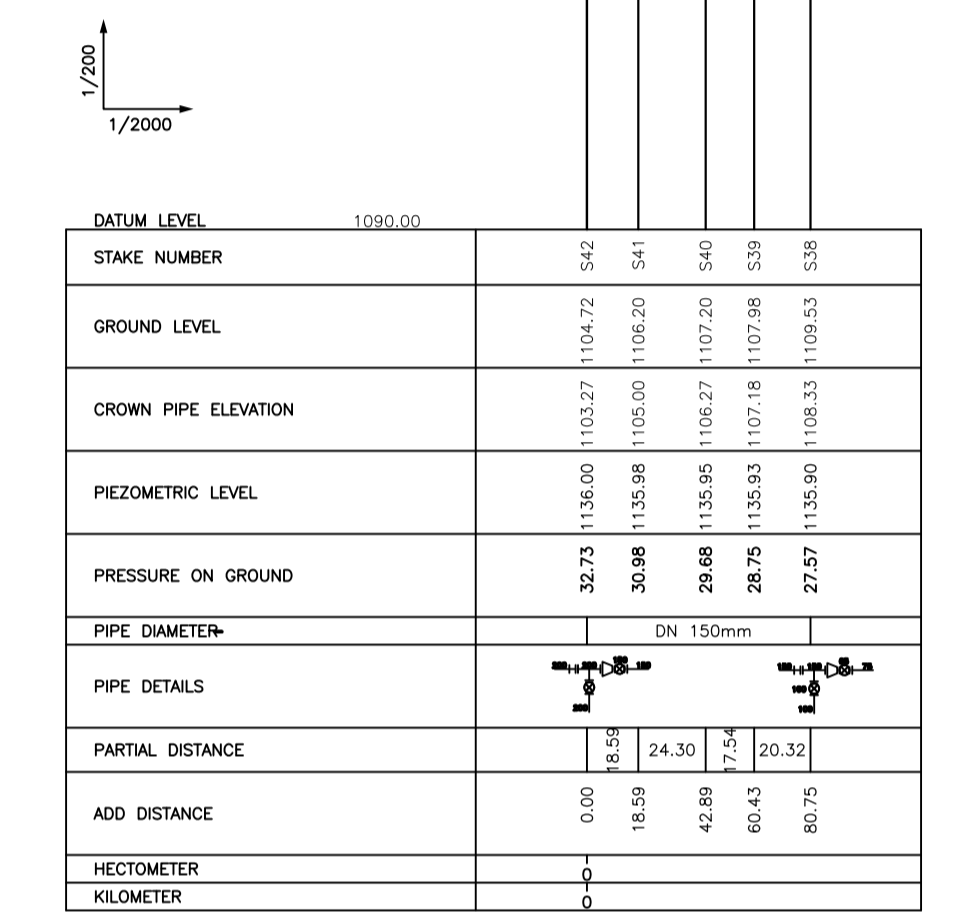
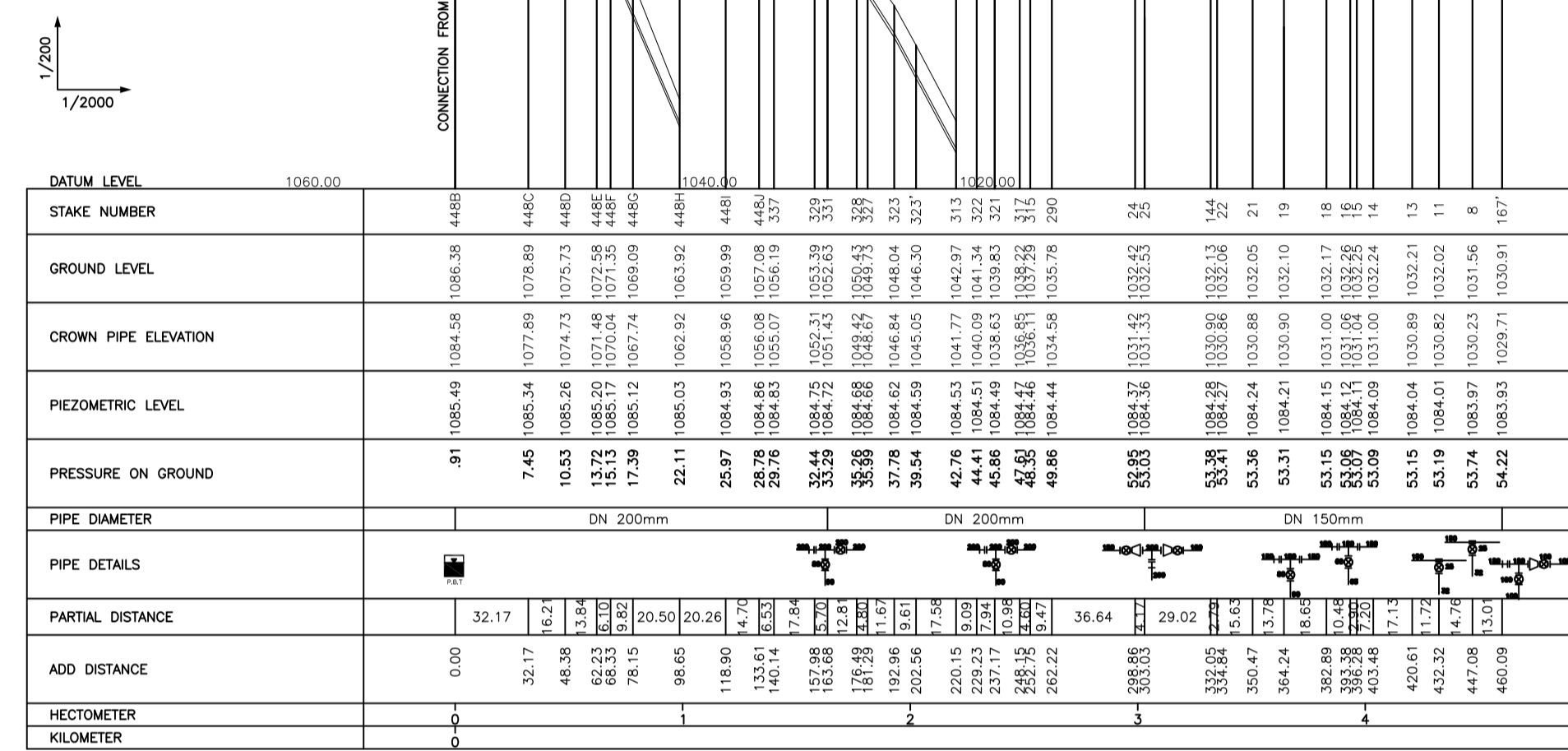
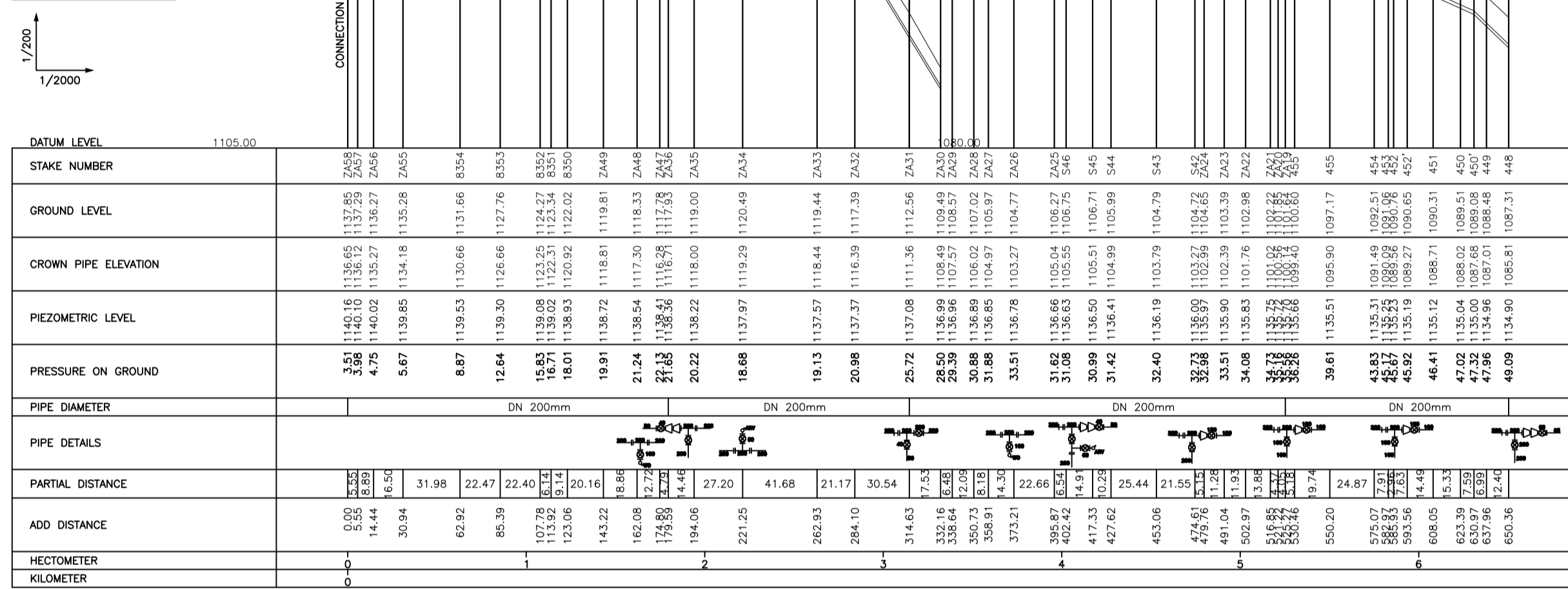


TABLE OF STAKE COORDINATES

STAKE N°	E-Easting	N-Northing	Z-Elevation
Z423	-320997.588	-59718.559	1103.390
Z426	-320726.146	-59996.462	1117.880
Z429	-320736.269	-59993.025	1137.290
Z426	-320745.157	-59929.044	1138.270
Z426	-320771.231	-59949.259	1115.280
8354	-320773.925	-59967.570	1131.680
8353	-320781.114	-59988.856	1127.760
8352	-320785.281	-59910.867	1134.270
8351	-320790.268	-59914.417	1123.340
8350	-320798.667	-59910.895	1122.020
Z449	-320808.338	-59960.119	1118.810
Z448	-320811.814	-59974.563	1118.330
Z447	-320812.063	-59961.961	1117.780
Z437	-320813.476	-59955.291	1117.620
Z436	-320808.831	-59944.438	1116.060
Z434	-320792.648	-59922.233	1120.480
Z431	-320770.363	-59988.015	1118.480
Z432	-320760.660	-59967.204	1117.380
Z431	-320748.428	-59939.223	1112.880
Z429	-320741.921	-59923.337	1108.480
Z429	-320739.662	-59917.003	1108.570
Z426	-320734.190	-59906.248	1107.020
Z427	-320731.131	-59908.198	1105.970
Z426	-320728.887	-59978.949	1104.770
Z426	-320718.117	-59973.272	1105.270
S46	-320762.337	-59768.272	1106.760
S45	-320747.422	-59754.192	1106.710
S44	-320731.687	-59743.653	1105.880
S43	-320732.881	-59728.517	1104.760
S42	-320713.994	-59718.137	1104.710
Z421	-320705.848	-59711.912	1104.650
Z422	-320685.662	-59718.550	1102.880
Z421	-320672.376	-59714.521	1102.220
Z420	-320661.968	-59711.761	1101.880
Z419	-320664.293	-59715.224	1101.640
457	-320662.907	-59720.220	1101.860
456	-320663.769	-59719.520	1097.170
454	-320664.855	-59764.080	1082.510
453	-320651.348	-59771.105	1081.080
452	-320648.389	-59773.381	1080.760
452	-320654.411	-59778.122	1080.650
451	-320661.772	-59792.144	1080.310
450	-320664.451	-59808.745	1080.570
450	-320668.322	-59814.282	1080.880
449	-320668.469	-59817.134	1080.880
448	-320669.137	-59832.081	1081.310
448	-320662.189	-59832.503	1080.380
448	-320661.877	-59834.754	1081.880
448	-320669.097	-59854.362	1075.710
448	-320658.180	-59850.300	1072.540
448	-320659.988	-59850.558	1071.350
448	-320653.877	-59859.346	1069.090
448	-320659.860	-59884.112	1063.320
448	-320668.266	-59903.220	1058.180
448	-320646.945	-59910.676	1057.080
337	-320541.891	-59914.432	1058.190
337	-320521.778	-59911.151	1058.480
338	-320538.542	-59917.102	1062.630
329	-320525.476	-59945.028	1050.430
327	-320526.868	-59940.050	1050.280
327	-320519.765	-59960.259	1048.040
323	-320519.026	-59960.343	1048.300
313	-320484.650	-59961.151	1042.970
322	-320485.330	-59971.220	1041.340
324	-320478.880	-59973.970	1039.880
317	-320466.888	-59975.250	1038.220
315	-320462.455	-59974.527	1037.280
289	-320463.051	-59971.470	1035.780
24	-320416.149	-59984.567	1032.420
25	-320414.887	-59987.180	1032.530
14	-320412.213	-59986.544	1032.130
22	-320410.898	-59985.078	1032.058
21	-320408.316	-59984.285	1032.050
18	-320408.795	-59982.122	1032.154
18	-320402.538	-59910.791	1032.170
16	-320398.878	-59900.861	1032.260
15	-320398.949	-59900.115	1032.280
14	-320393.288	-59892.714	1032.240
13	-320391.412	-59890.369	1032.210
11	-320391.262	-59891.050	1032.020
8	-320391.667	-59864.888	1031.560
16F	-320349.000	-59870.280	1030.910
S41	-320368.812	-59876.366	1105.500
S40	-320360.026	-59891.974	1107.290
S39	-320364.599	-59894.002	1107.880
S38	-320465.753	-59875.915	1106.330

- NOTES:
- MINIMUM PIPE COVER
 - MINIMUM PIPE COVER AT CHAMBERS LOCATIONS
 - AR VALVES WILL BE PROVIDED AT HIGH POINTS AND WASHOUT VALVES AT LOW POINTS
 - FINAL LOCATION OF CHAMBERS AND PIPES TO BE CONFIRMED ON SITE AND SHALL BE APPROVED BY THE ENGINEER
 - ALL LEVELS SHALL BE CHECKED BY THE CONTRACTOR PRIOR TO THE INSTALLATION PHASE AND SHALL BE REPORTED TO THE ENGINEER FOR APPROVAL
 - FOR PIPE DIAMETER LESS OR EQUAL TO 300mm, THE VALVES MUST BE TYPE GATE VALVE AND BUTTERFLY VALVE OTHERWISE
 - PIPES DIAMETERS LESS OR EQUAL TO 300mm SHALL BE POLYETHYLENE PIPES (PE) AND DUCTILE IRON (DI) OTHERWISE
 - DI PIPES SHALL BE SOCKET/SPIGOT PIPES AS PER ISO2531 AND BS4772
 - FITTINGS FOR DI PIPES SHALL BE K14 FOR TEES AND K12 FOR OTHER FITTINGS ACCORDING TO ISO2531 AND BS4772
 - ALL POLYETHYLENE PIPES SHALL BE PE100 OR PE80 WITH MINIMUM RATING PRESSURE PN10 OR OTHER MENTIONED
 - PROPOSED PIPELINE ALIGNMENTS MUST BE CHECKED AND CONFIRMED BY THE CONTRACTOR PRIOR TO THE INSTALLATION TO ASSURE THE FOLLOWINGS:
 - PIPELINE SHALL BE INSTALLED INSIDE PUBLIC LANDS
 - PROPOSED ALIGNMENTS ARE NOT INTERFERING WITH ANY OF THE EXISTING FACILITIES
 - PROPOSED CHAMBERS OR PIPES ALIGNMENTS ARE TO BE PLACED ON A SUITABLE LOCATION
 - ALL PIPES, FITTINGS, ACCESSORIES, VALVES, ETC. PROPOSED ON THIS DRAWING ARE TO BE PROVIDED WITH A PRESSURE RATING OF 70
 - THROAT/ANCHOR FLANGES SHALL BE USED WHERE DUCTILE IRON PIPES OR FITTINGS ARE CAST INTO CHAMBER WALL AND SHALL BE INSTALLED TO RESTRAIN THE CONNECTING VALVES OR OTHER EQUIPMENT INSTALLED INSIDE THE CHAMBER
 - THE PROPOSED CHAMBERS DETAILS ARE TO BE USED WHERE THE PRESSURE RATING IS LESS OR EQUAL TO PN10. OTHERWISE, THE CONTRACTOR MUST PROVIDE THE STRUCTURAL DESIGN OF ALL THE CHAMBERS TO THE ENGINEER FOR APPROVAL, ACCORDING TO THE PROPOSED SIZING AND BASED ON THE FOLLOWINGS:
 - CHAMBERS HAVE TO BE DESIGNED TO WITHSTAND THE LOADS TRANSMITTED THROUGH PIPES FLANGES OR TEES ACCORDING TO THE CORRESPONDING PRESSURE RATING
 - THE OVERALL STABILITY OF THE CHAMBERS AGAINST OVERTURNING AND SLIDING WILL BE ASSURED BY PROVIDING AN UNDERGROUND THIEBET WALL (IF ANY)
 - LOCATIONS OF THE PROPOSED PRESSURE BREAKER TANKS WILL BE SET ON SITE AND SUBMITTED TO THE ENGINEER FOR APPROVAL

- LEGEND :
- AIR VALVE (ARV)
 - WASHOUT VALVE (WO)
 - PRESSURE REDUCING VALVE (PRV)
 - GATE VALVE (G.V.)
 - BUTTERFLY VALVE (B.V.)
 - PRESSURE BREAKER TANK
 - RESERVOIR 1/3 OR ABOVE GROUND OR ELEVATED WATER TOWER
 - END CAP / BLANK FLANGE
 - FREE
 - TIRE HYDRANT (F.H.)
 - REDUCER (RED.)
 - D.F.B DUCT FOOT BEND
 - C1/8 BEND
 - FLOW METER
 - FLANGE SPOUT (L.S.P.)
 - FLANGE SPOUT WITH PUDDLE FLANGE (FL SP.(P))
 - PUMPING LINE
 - POTABLE WATER LINE
 - FLOW DIRECTION
 - HOUSE / STORE
 - PE POLYETHYLENE
 - DI DUCTILE IRON
 - FL ADAP. FLANGE ADAPTOR
 - DIS. JOINT DISMANTLING JOINT
 - TAPP. COLL. TAPPING COLLAR
 - H.D. HEAVY DUTY
 - FLAP V. FLAP VALVE

REPUBLIC OF LEBANON
COUNCIL FOR DEVELOPMENT AND RECONSTRUCTION

PROJECT NAME:
UPDATING DETAILED DESIGN AND TENDER DOCUMENTS OF THE WATER PROJECT COMPONENTS OF THE WESTERN BEKAU AREA

DRAWING TITLE:
WATER SUPPLY NETWORK
SAGHBI NE VILLAGE
PLAN VIEW & LONGITUDINAL PROFILE
SHEET 1 OF 1

DRAWING NUMBER:
WBK - WS - 244 - B

SCALE : 1/200 - 1/2000 DATE : JUNE 2010
DISCIPLINE : INFRASTRUCTURE PHASE : FINAL

Rev. DATE MODIFICATION DRAWN DESIGNED CHECKED