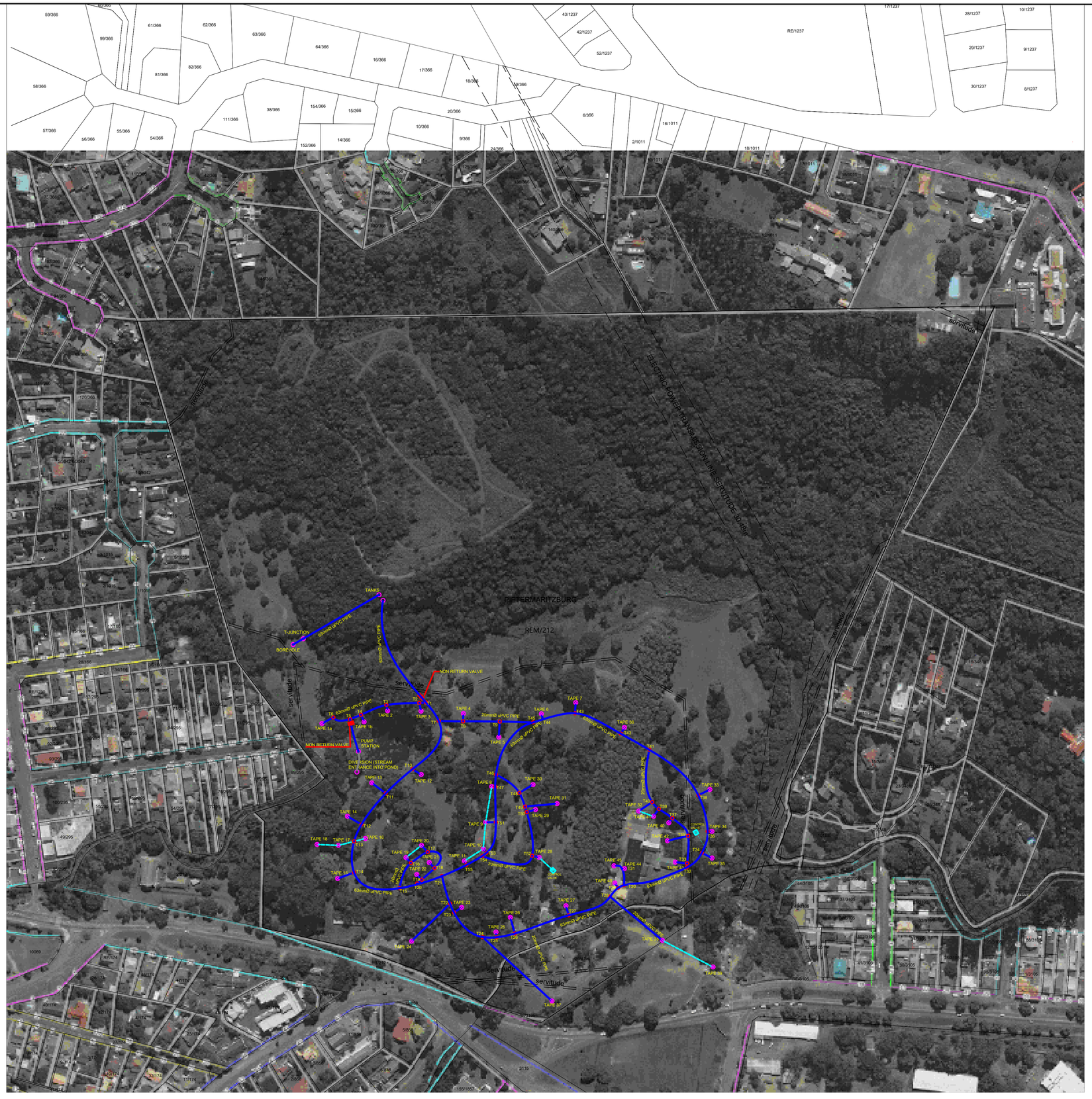

TEES COORDINATES		
ITEM	X	Y
T1	3648132,8247	6231733,1914
T2	3648119,3142	6231733,7012
T3	3648085,8636	6231745,8560
T4	3648058,2444	6231749,9550
T5	3648017,5631	6231776,0906
T6	3648001,8468	6231782,5055
T7	3648130,8976	6231727,8486
T8	3648184,7721	6231694,4526
T9	3648208,5281	6231675,4389
T10	3648076,0112	6231663,8884
T11	3648032,6322	6231653,5388
T12	3647964,1424	6231641,1776
T13	3647947,9866	6231630,2103
T14	3647926,0351	6231596,1762
T15	3647937,8501	6231556,7659
T16	3648010,4896	6231576,9097
T17	3648023,7886	6231571,9096
T18	3648019,7319	6231560,8225
T19	3647988,0186	6231535,7527
T20	3647976,0014	6231527,0047
T21	3647990,2007	6231518,6924
T22	3648009,6853	6231482,6831
T23	3648021,9573	6231469,0000
T24	3648053,3530	6231439,4793
T25	3648058,7940	6231437,6867
T26	3648086,6295	6231440,8876
T27	3648152,6304	6231421,2806
T28	3648210,9430	6231389,9267
T29	3648223,2656	6231399,8882
T30	3648228,5131	6231401,9224
T31	3648244,7900	6231422,1026
T32	3648325,3166	6231358,7092
T33	3648315,6974	6231386,6234
T34	3648346,3279	6231376,5817
T35	3648319,2711	6231407,2778
T36	3648361,8076	6231400,9424
T37	3648326,7991	6231438,1508
T38	3648378,9487	6231447,5414
T39	3648318,1797	6231462,2302
T40	3648304,5967	6231475,7532
T41	3648353,9537	6231546,1992
T42	3648326,7084	6231583,5043
T43	3648289,3814	6231621,6052
T44	3648244,3450	6231638,2229
T45	3648231,5445	6231640,6104
T46	3648181,7821	6231615,8942
T47	3648155,0074	6231590,2541
T48	3648186,2369	6231577,0777
T49	3648183,3737	6231558,3286
T50	3648180,8363	6231550,5298
T51	3648127,3147	6231559,5810
T52	3648151,7760	6231493,2691
T53	3648102,4438	6231528,1844
T54	3648098,4048	6231525,4427
T55	3648085,6836	6231517,5712

COORDINATES		
ITEM	X	Y
TANKS	3648138,4945	6231884,2971
TANKS	3648139,6139	6231881,4693
BOREHOLE	3648018,7013	6231882,7302
T-JUNCTION	3648027,7732	6231881,2633
TAPE 1a	3648001,6940	6231786,5685
PUMP STATION	3648010,9198	6231720,0042
TAPE 1b	3648056,8896	6231744,3977
TAPE 2	3648085,7079	6231742,7349
TAPE 3	3648118,3139	6231729,8304
TAPE 4	3648175,5732	6231685,4472
TAPE 5	3648194,3279	6231662,6025
TAPE 6	3648243,6600	6231646,0885
TAPE 7	3648296,7810	6231636,0460
TAPE 8 (Main Pipe)	3648141,3857	6231602,8521
TAPE 9	3648119,2484	6231571,0250
TAPE 10	3648096,1554	6231533,5741
TAPE 11	3648072,1456	6231542,9508
TAPE 12	3648077,1695	6231652,8120
TAPE 13	3648030,9157	6231665,8517
TAPE 14	3647958,4102	6231657,9951
Diversion (stream entrance into pond)	3648015,2369	6231684,2214
TAPE 15	3647911,6517	6231603,3150
TAPE 16	3647975,1335	6231618,4593
TAPE 17	3647931,8355	6231638,7922
TAPE 18	3647914,9456	6231650,8518
TAPE 19	3648010,0081	6231579,9954
TAPE 20	3648034,9874	6231582,7521
TAPE 21	3648023,5694	6231556,0136
TAPE 22	3647990,7350	6231529,1120
TAPE 23	3648031,7311	6231484,8916
TAPE 24	3647975,4212	6231445,3293
TAPE 25	3648058,5223	6231435,1162
TAPE 26	3648088,7968	6231435,9422
TAPE 27	3648152,5472	6231423,8546
TAPE 28	3648153,6293	6231488,5633
TAPE 29	3648188,4568	6231547,5540
TAPE 30	3648194,1828	6231577,2908
TAPE 31	3648209,9062	6231546,0263
TAPE 32	3648295,5927	6231471,1276
TAPE 33	3648385,5559	6231444,1929
TAPE 34	3648364,2984	6231400,1525
TAPE 35	3648356,0645	6231369,3770
TAPE 36	3648331,4890	6231587,8173
TAPE 37	3648085,4217	6231317,4289
TAPE 38	3648239,4353	6231301,1255
TAPE 39	3648275,3740	6231252,5101
TAPE 40	3648313,1294	6231439,4693
TAPE 41	3648309,7490	6231454,1494
TAPE 42	3648308,0291	6231414,0453
TAPE 43	3648304,9200	6231386,2857
TAPE 44	3648245,3573	6231421,4919
TAPE 45	3648232,5030	6231436,2036
TAPE 46	3648219,8030	6231404,5336

PIPE & FITTING SCHEDULE			
ITEM	DIA.	No. OFF	DESCRIPTION
uPVC PIPES	63	-	uPVC CLASS 9 (1424m)
uPVC PIPES	20	-	uPVC CLASS 9 (1085m)
STEEL SUPPORTING BAR	-	47	GALVANISED 25x25x5mm∠
ELBOWS	20	94	uPVC 90° ELBOWS
T-PIECES (20x20mm)	20	17	uPVC NON REDUCING TEE
T-PIECES (20x63mm)	63	37	uPVC REDUCING TEE
T-PIECES (63x63mm)	63	2	uPVC NON REDUCING TEE
VALVES (20mm)	20	47	uPVC VALVES
VALVES (63mm)	63	47	uPVC NON RETURNABLE VALVES
REDUCERS 20-63mmØ	-	38	uPVC REDUCERS
PUMPS	-	2	CLOSE COUPLED CENTRIFUGAL PUMPS. 1 ON DUTY AND 1 ON STANDBY

LEGEND	
SYMBOL	DESCRIPTION
- - - - - -	OLD PIPE
▬▬▬	NEW PIPE
	EXISTING CONTROL VALVE
	NON RETURN VALVE
	TAPE
	T-PIECE

PIPE LAYOUT

SCALE: 1:2

FOR TENDER

TECHI Engineers

Drawing No. **2318-C-01b**

Pr. Eng. Approved — ECSA PR 20150167 — Date 2024-01-08

REVISIONS			
REV No.	DESCRIPTION	DATE	APPROVED
A	ISSUED FOR INFORMATION	2023-11-28	
B	ISSUED FOR TENDER	2024-01-08	

REFERENCE DRAWINGS	
DRG No.	DESCRIPTION

CLIENT APPROVAL			
NAME	DESIGNATION	SIGN	DATE

Client: SANBI — Biodiversity For Life — South African National Biodiversity Institute

Signature:

Date:

PROJECT DESCRIPTION: PHASE 2 UPGRADE OF THE EXISTING IRRIGATION SYSTEM AT THE KWAZULU-NATAL NATIONAL BOTANICAL GARDEN, PIETERMARITZBURG

TITLE: PIPE LAYOUT AND DETAILS

A1

DRAWN:	DATE:	CHECKED:	DATE:	APPROVED:	DATE:	SCALE:	SECTION:	DRG.No:	REV:
G.V.M	2023.11.28	M.L.M	2023.11.28	M.L.M	2023.11.28	AS SHOWN	PIPE LAYOUT	2318-C-01b	A