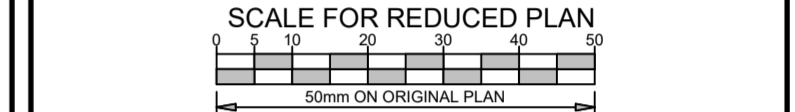


REVISION SCHEDULE

No	DATE	DESCRIPTION	DRW	CHK
C	10/09/24	FOR TENDER	BvS	AdW
B	24/07/24	FOR TENDER	BvS	AdW
A	15/07/24	FOR REVIEW	BvS	AdW

FOR TENDER



ixengineers retains the copyright in all intellectual property, including designs and/or documents prepared in terms of this appointment for the project covered by the appointment. The client may use the designs and/or documents for the sole purpose of their intended use on this project only subject to payment for the design having been received. Use for any other purpose, whether or not the design and/or documents have been paid for constitutes an infringement of copyright, and all rights are reserved.

All dimensions must be verified on site before the works commence. Refer any discrepancies to the Engineer.
Copyright reserved

NOTES

- ALL PIPEWORK, FITTINGS, ACCESSORIES, AND MECHANICAL EQUIPMENT TO BE INSPECTED FOR REFURBISHMENT. SHOULD REFURBISHMENT BE FEASIBLE, ITEM SHOULD BE REFURBISHED. IF REFURBISHMENT IS NOT POSSIBLE, ITEM TO BE REPLACED AS PER SPECIFICATION.
- ALL PIPEWORK DIMENSIONS PROVIDED ARE INDICATIVE. ACTUAL DIMENSIONS OF STRUCTURE, EXISTING PIPEWORK AND FITTINGS ON SITE AND OF ORDERED EQUIPMENT TO BE CONFIRMED BEFORE ANY MANUFACTURING.
- ALL PIPEWORK, EQUIPMENT, FITTINGS AND ACCESSORIES NOT USED IS TO BE REMOVED, AND TRANSPORTED TO EWS STORE, UNLESS OTHERWISE AGREED.
- NOTE: THE PUMP STATION IS TO REMAIN OPERATIONAL AS NEGOTIATED WITH ETHEKWINI MUNICIPALITY FOR THE DURATION OF THE CONSTRUCTION PERIOD.

CLIENT
WATER AND SANITATION
ETHEKWINI MUNICIPALITY

SANITATION OPERATIONS: MECHANICAL AND ELECTRICAL BRANCH

CONTRACT NO. 30661-5W

PROJECT TITLE
SOUTHERN WASTEWATER TREATMENT WORKS: ELECTRO-MECHANICAL UPGRADES

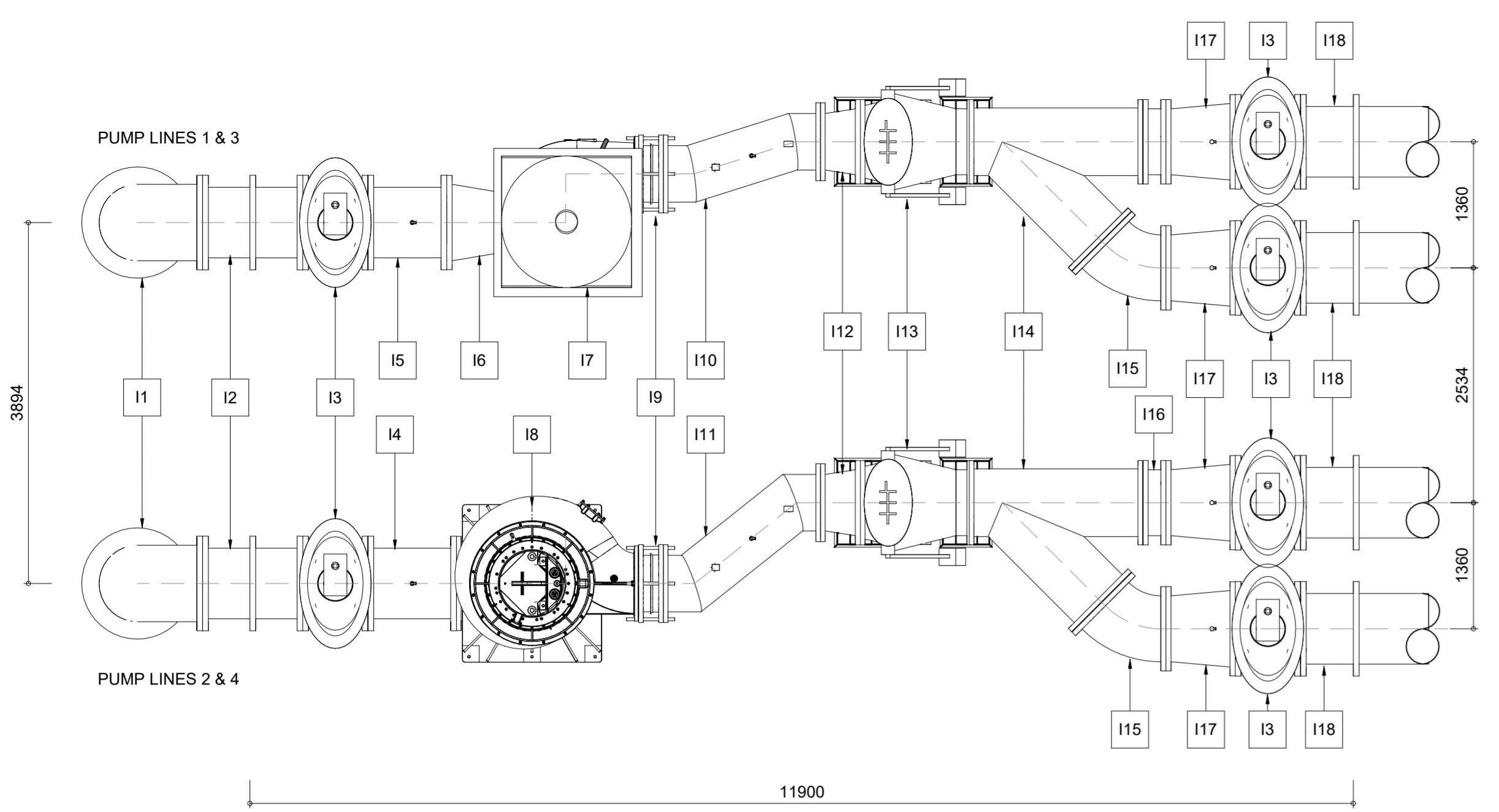
DRAWING TITLE
LOW-LEVEL PUMP STATION PIPEWORK LAYOUT & SCHEDULE

PROJECT MANAGER & M&E ENG. R. Kandhai
MECHANICAL ENGINEER: B. Coles
WORKS PROJECT MANAGER: A. Pillay
DEPUTY HEAD: SANITATION OPS: S. Vilane
HEAD: WATER AND SANITATION: E. Msweli

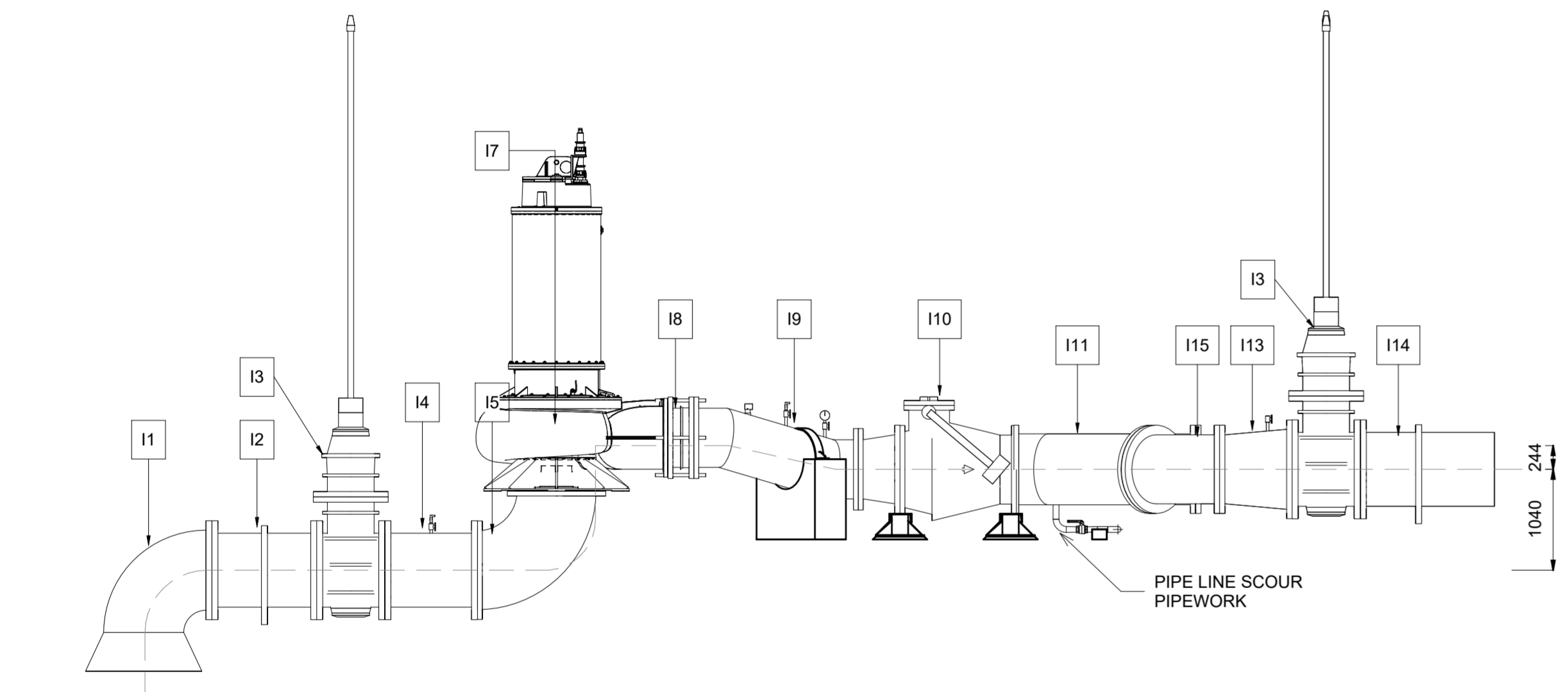
SCALE: AS SHOWN DATE: 2024/09/10
DRAWING NUMBER: 30661-5W/ PS/M/020 SHEET: 01 REV: C

PIPE SCHEDULE							ILLUSTRATION
ITEM	QTY	GRADE STEEL & WALL THICKNESS	FLANGE PRESSURE RATING	LINING	COATING	DESCRIPTION	ILLUSTRATION
11	4	STAINLESS STEEL 316L WT = 9.53 mm	SANS 1123 T 1000/3	SEE NOTE 10	SEE NOTE 10	1 200 mm ND TO 750 mm ND BELL MOUTH BEND, ONE END FLANGED	
12	4	CAST IRON WT = N/A	N/A	SEE NOTE 10	SEE NOTE 10	EXISTING 750 mm ND PUDDLE PIPE TO BE REFURBISHED IN PLACE	
13	12	-	SANS 1123 T 1000/3	SEE NOTE 11	SEE NOTE 12	750 mm NB WEGDE GATE VALVE, FLANGED, SANS 664. FACE TO FACE = 702 mm. SUITABLE FOR WASTE WATER APPLICATIONS. VALVE TO BE FITTED WITH GEARBOX AND EXTENDED SPINDLE (APPROX 3950 mm) TO GROUND LEVEL	
14	2	STAINLESS STEEL 316L WT = 9.53 mm	SANS 1123 T 1000/3	SEE NOTE 10	SEE NOTE 10	750 mm ND PIPE PIECE, BOTH ENDS FLANGE, FITTED WITH 3/4" THREADED SOCKET, COMPATIBLE WITH A PRESSURE TRANSDUCER, PRESSURE TRANSDUCER TO BE FITTED WITH BALL VALVE	
15	2	STAINLESS STEEL 316L WT = 9.53 mm	SANS 1123 T 1000/3	SEE NOTE 10	SEE NOTE 10	750 mm ND PIPE PIECE, BOTH ENDS FLANGE, FITTED WITH 3/4" THREADED SOCKET, COMPATIBLE WITH A PRESSURE TRANSDUCER, PRESSURE TRANSDUCER TO BE FITTED WITH BALL VALVE	
16	2	STAINLESS STEEL 316L WT = 9.53 mm	SANS 1123 T 1000/3	SEE NOTE 10	SEE NOTE 10	750 mm ND TO 600 mm ND CONCENTRIC REDUCER, BOTH ENDS FLANGED	
17	2	-	SANS 1123 T 1000/3	SEE NOTE 11	SEE NOTE 12	VERTICAL END SUCTION PUMP, INCLUDING EXTENDED CARBON SHAFT WITH MOTOR AND COUPLER, 90° INTAKE BEND WITH CLEANING PORT. PUMP DUTY OF 750 - 1 500 l/s @ 12 - 24 m HEAD, INCLUDING PUMP SUPPORT STRUCTURE STEEL OR CONCRETE. REFER TO MECHANICAL SPECIFICATION FOR FULL DETAILS	
18	2	-	SANS 1123 T 1000/3	SEE NOTE 11	SEE NOTE 12	IMMERSABLE PUMP, 90° INTAKE BEND WITH CLEANING PORT. PUMP DUTY OF 750 - 1 500 l/s @ 12 - 24 m HEAD, INCLUDING PUMP SUPPORT STRUCTURE, STEEL OR CONCRETE. REFER TO MECHANICAL SPECIFICATION FOR FULL DETAILS	
19	4	STAINLESS STEEL 316L WT = 9.53 mm	SANS 1123 T 1000/3	SEE NOTE 10	SEE NOTE 10	600 mm ND DISMANTLING COUPLING	
110	2	STAINLESS STEEL 316L WT = 9.53 mm	SANS 1123 T 1000/3	SEE NOTE 10	SEE NOTE 10	600 mm DOUBLE BEND TO ALIGN PUMP AND DISCHARGE VALVES. FITTED WITH 3/4" and 2" THREADED SOCKETS, COMPATIBLE WITH A NO-FLOW SWITCH, PRESSURE TRANSMITTER AND PRESSURE GAUGE. PRESSURE GAUGE AND TRANSDUCER TO BE FITTED WITH BALL VALVES	
111	2	STAINLESS STEEL 316L WT = 9.53 mm	SANS 1123 T 1000/3	SEE NOTE 10	SEE NOTE 10	600 mm DOUBLE BEND TO ALIGN PUMP AND DISCHARGE VALVES. FITTED WITH 3/4" and 2" THREADED SOCKETS, COMPATIBLE WITH A NO-FLOW SWITCH, PRESSURE TRANSMITTER AND PRESSURE GAUGE. PRESSURE GAUGE AND TRANSDUCER TO BE FITTED WITH BALL VALVES	
112	4	STAINLESS STEEL 316L WT = 9.53 mm	SANS 1123 T 1000/3	SEE NOTE 10	SEE NOTE 10	600 mm ND TO 700 mm ND CONCENTRIC REDUCER, BOTH ENDS FLANGED.	
113	4	-	SANS 1123 T 1000/3	SEE NOTE 11	SEE NOTE 12	700 mm NB SWING CHECK VALVE, FACE TO FACE = 1 200 mm	
114	4	STAINLESS STEEL 316L WT = 9.53 mm	SANS 1123 T 1000/3	SEE NOTE 10	SEE NOTE 10	700 mm ND 45° LATERAL JUNCTION PIECE, WITH 50 mm STAINLESS STEEL SOCKET FOR DRAINAGE PIPEWORK	
115	4	STAINLESS STEEL 316L WT = 9.53 mm	SANS 1123 T 1000/3	SEE NOTE 10	SEE NOTE 10	700 mm ND 45° BEND, BOTH ENDS FLANGED	
116	4	STAINLESS STEEL 316L WT = 9.53 mm	SANS 1123 T 1000/3	SEE NOTE 10	SEE NOTE 10	750 mm ND PIPE PIECE, BOTH ENDS FLANGED	
117	8	STAINLESS STEEL 316L WT = 9.53 mm	SANS 1123 T 1000/3	SEE NOTE 10	SEE NOTE 10	750 mm ND TO 700 mm ND CONCENTRIC REDUCER, BOTH ENDS FLANGED, FITTED WITH 3/4" THREADED SOCKET AND BALL VALVE	
118	8	CAST IRON	N/A	SEE NOTE 10	SEE NOTE 10	EXISTING 750 PUDDLE PIPE TO BE REFURBISHED IN PLACE	
119	16	-	-	-	-	750 mm ISOLATION KIT, STAINLESS STEEL TO CAST IRON. COMPLETE	
120	8	-	-	-	-	700 mm ISOLATION KIT, STAINLESS STEEL TO CAST IRON. COMPLETE	
121	8	-	-	-	-	600 mm ISOLATION KIT, STAINLESS STEEL TO CAST IRON. COMPLETE	

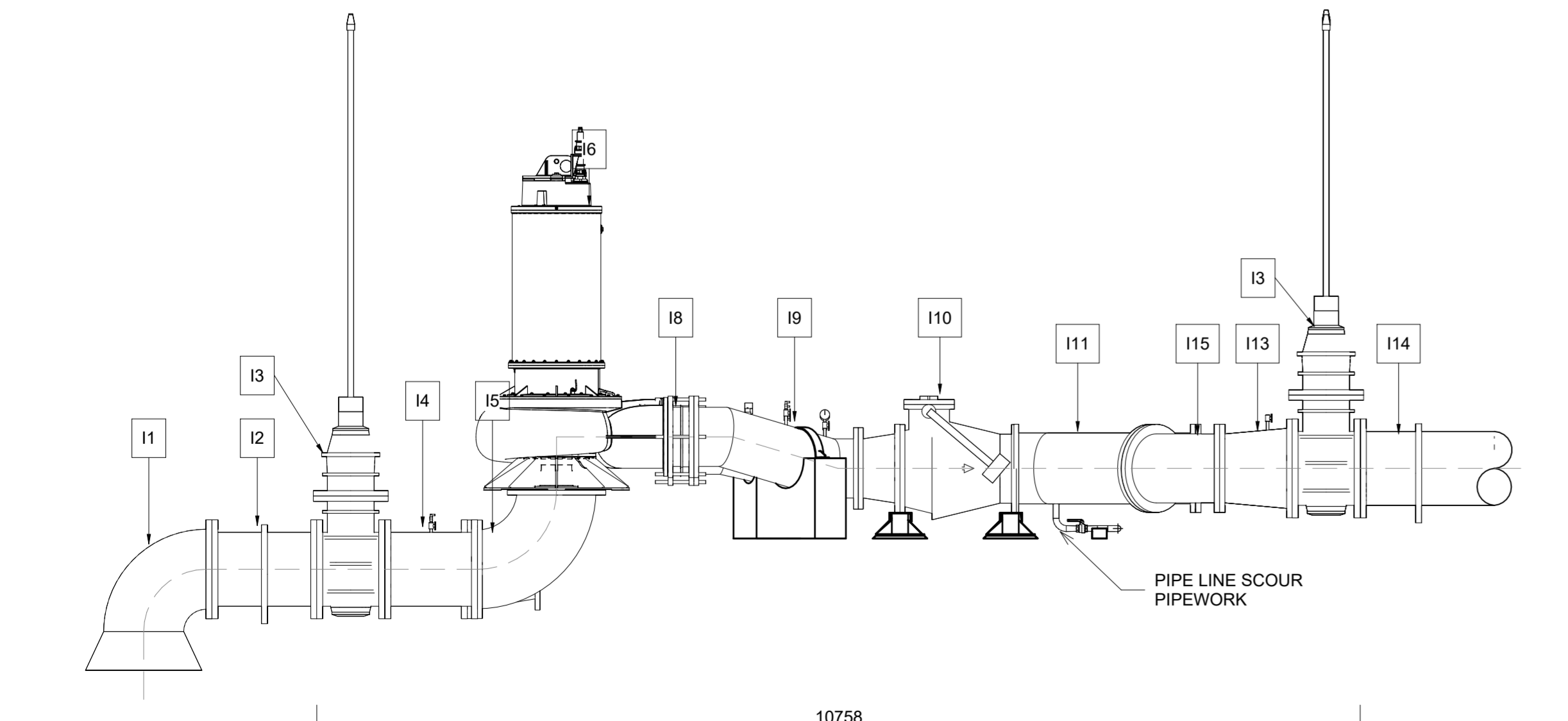
- SPECIAL NOTES**
- ALL PIPEWORK, FLANGES, FITTINGS, VALVES AND METERS SHALL CONFORM TO SPECIFICATIONS DETAILED IN THE SPECIFICATIONS DOCUMENT
 - ALL FLANGED CONNECTIONS TO BE FITTED WITH A 3 mm STYRENE BUTADIENE OR NEOPRENE GASKET
 - THE CONTRACTOR IS TO PRODUCE DETAILED SHOP DRAWINGS, ALL PIPEWORK, FITTINGS, INSTRUMENTATION, AS PER THE P&ID's, FOR ENGINEER'S APPROVAL.
 - INSTRUMENTATION AND EQUIPMENT DATA SHEETS TO BE SUBMITTED TO ENGINEER FOR APPROVAL BEFORE PURCHASING
 - SHOWN PIPEWORK IS INDICATIVE, WITH ALL PIPEWORK TO BE VERIFIED UPON CONFIRMATION OF PUMP AND VALVE SUPPLIERS.
 - ONLY LONG RADIUS BENDS WILL BE USED UNLESS OTHERWISE INDICATED. MITERED BENDS SHALL NOT BE ACCEPTED.
 - PIPEWORK SUPPORTS TO BE INSTALLED AND SPACED AS DETAILED. TYPICAL DETAILS OF PIPE SUPPORTS ARE INDICATED. HANGERS MANUFACTURED FROM STEEL TIE RODS MAY NOT BE USED.
 - ALL PIPES UP TO 150 mm ND TO SANS 62, HEAVY DUTY, OR STAINLESS STEEL 304L SCHEDULE 40.
 - ALL PIPES LARGER THAN 150 mm ND TO SANS 719, GRADE B, OR STAINLESS STEEL 316L WITH WALL THICKNESS AS INDICATED.
 - ALL STAINLESS STEEL PIPEWORK TO BE LINED AND COATED AS FOLLOWS:
1ST COAT = 125 MICRON CARBOLINE 891 BISCUIT
2ND COAT = 200 MICRON CARBOLINE 891 PIPE BLUE
CARBOLINE COATING AND LINING TO BE PREPARED WITH THINNERS TYPE 2
 - ALL VALVES AND PUMPS TO BE LINED AS FOLLOWS:
1ST COAT = 600 MICRON PIPE TANK 8800
2ND COAT = 1000 MICRON SIGMAGUARD 720
 - ALL VALVES AND PUMPS TO BE COATED AS FOLLOWS:
1ST COAT = 1000 MICRON SIGMAGUARD 720
2ND COAT = 1000 MICRON SIGMAGUARD 550



PIPEWORK PLAN VIEW
1:50



PIPEWORK SIDE VIEW PUMPLINES 1 & 3
1:50



PIPEWORK SIDE VIEW PUMPLINES 2 & 4
1:50