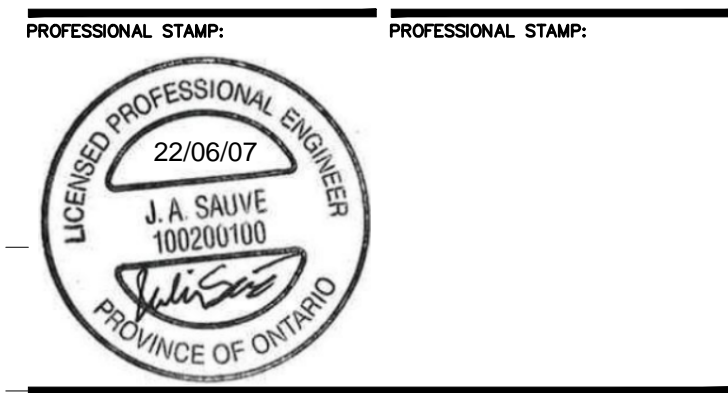


REVISION	DATE	DESCRIPTION
1	JUNE 7, 2022	ISSUED FOR SITE PLAN CONTROL REV. 2
2	DECEMBER 16, 2021	ISSUED FOR SITE PLAN APPROVAL

**PRELIMINARY 33%**  
NOT FOR CONSTRUCTION



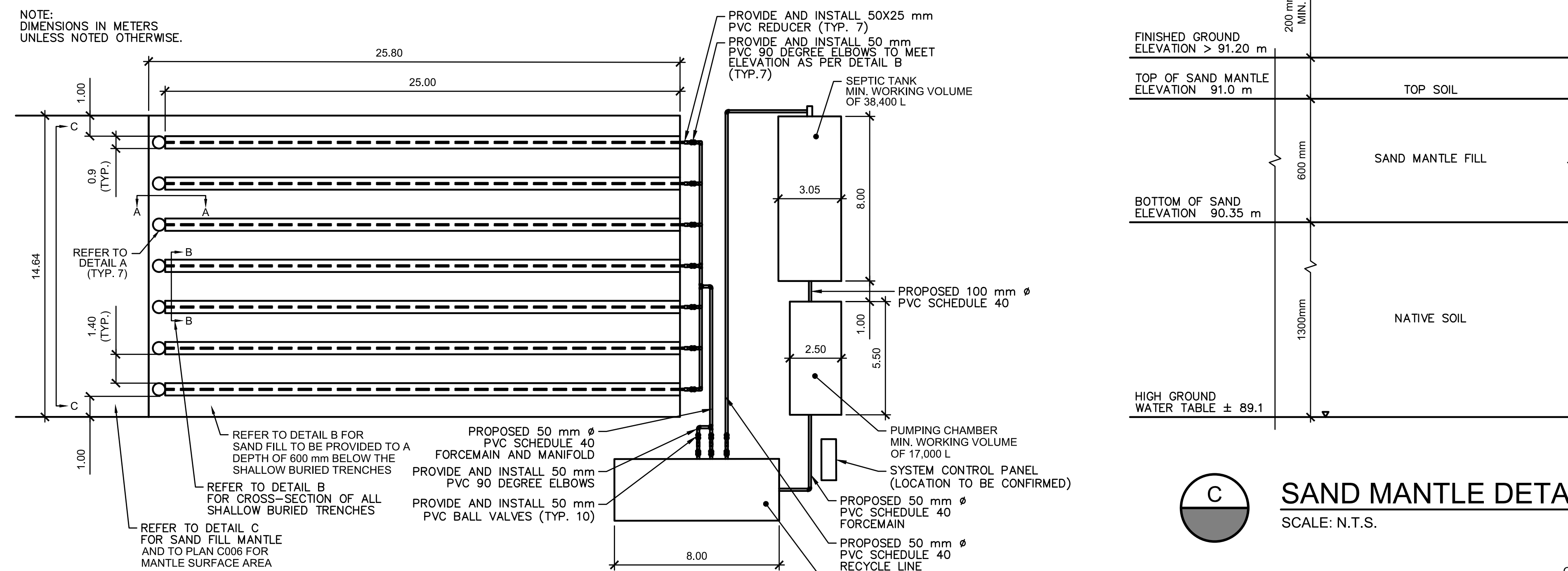
CIVITAS ARCHITECTURE INC. OTTAWA, ON T: 613.742.7482  
14 CHAMPLAIN AVENUE, SUITE 101 CANADA K1S 1V9 WWW.CIVITAS-INC.CA  
CONSULTANT LOGO:

PROJECT TITLE:  
FASTFRATE OTTAWA WAREHOUSE AND DISTRIBUTION FACILITY  
SCALE: NONE  
SOMME ST. OTTAWA, ON

**SEPTIC SYSTEM CONFIGURATION AND SECTIONS**

DRAWN BY: D.CANN DRAWING NUMBER:  
DATE: K.SJUSZCZYK **C008**  
REVIEWED BY: APPROVED BY:  
PRINT DATE: NOVEMBER 26, 2021 REVISION NUMBER:  
ISSUED DATE: NOVEMBER 26, 2021  
CLIENT PROJECT #: **A001083**

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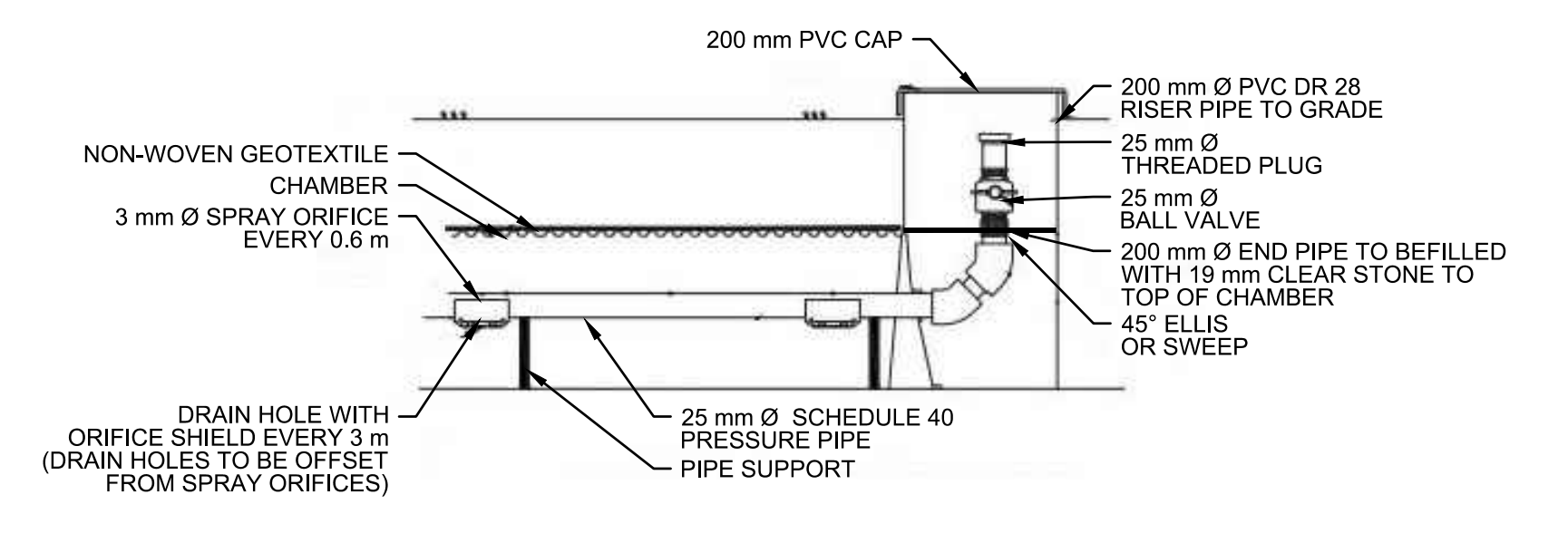


**PLAN VIEW - SEPTIC SYSTEM**  
SCALE: N.T.S.

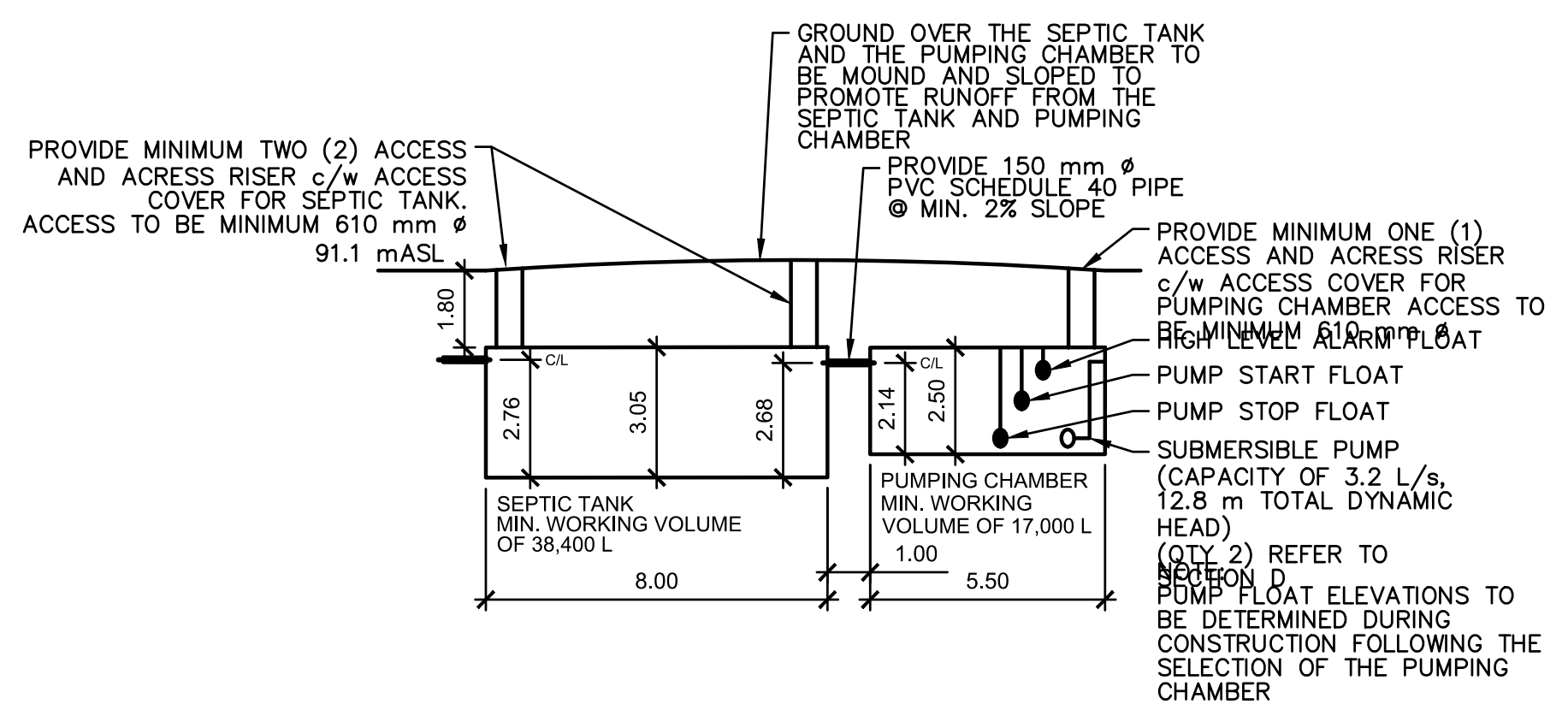
**SAND MANTLE DETAIL**  
SCALE: N.T.S.

**CLASS 4 SEPTIC SYSTEM NOTES**

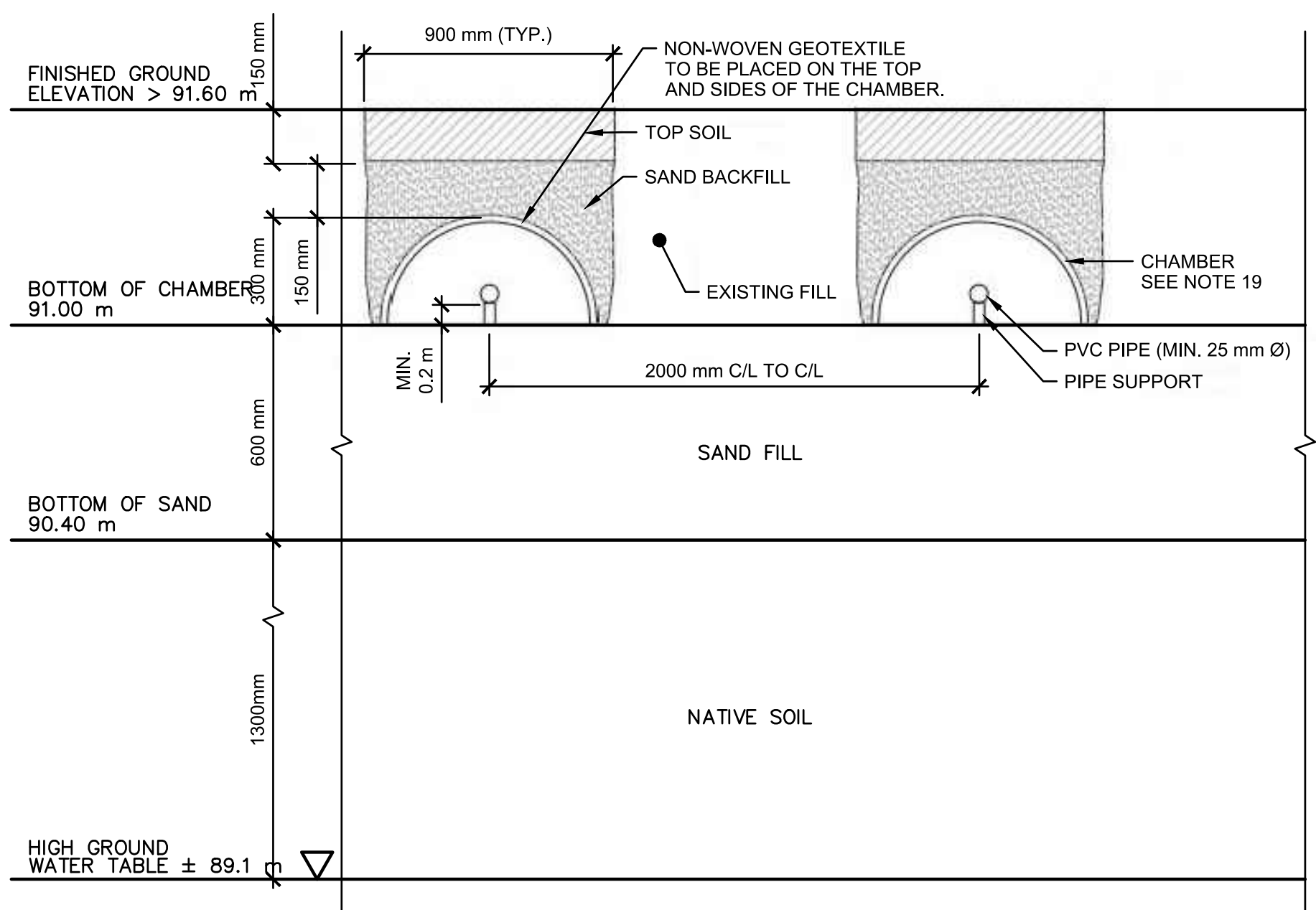
- THE SEPTIC SYSTEM AND ALL APPURTENANCES SHALL ADHERE TO ONTARIO BUILDING CODE (OBC) PART 8.
- THE DAILY DESIGN FLOW IS 12,800 L/DAY. THE SEPTIC TANK AND LEVEL IV TREATMENT UNIT TANK SHALL HAVE A MINIMUM WORKING VOLUME OF 38,400 L (THREE TIMES THE DAILY DESIGN FLOW).
- THE SEPTIC SYSTEM TANK, PUMPING CHAMBER, AND LEVEL IV TREATMENT UNIT SHOWN ON THE DRAWINGS ARE APPROXIMATE SIZES. CONTRACTOR TO SUBMIT CUTSHEETS OF PROPOSED SEPTIC SYSTEM TANK, PUMPING CHAMBER, AND LEVEL IV TREATMENT TANK TO ENGINEER. ENGINEER TO APPROVE TANKS PRIOR TO THE CONTRACTOR ORDERING THE TANKS.
- PROPOSED CHANGES TO SEPTIC SYSTEM DESIGN BY CONTRACTOR TO BE APPROVED BY THE ENGINEER.
- SANITARY FLOWS FROM THE WAREHOUSE BY GRAVITY TO THE SEPTIC TANK. THE EFFLUENT FROM THE SEPTIC TANK TO THE PUMPING CHAMBER IS GRAVITY DRIVEN.
- THE SEPTIC, PUMPING CHAMBER, AND LEVEL IV TREATMENT UNIT TO BE WRAPPED IN MEL-ROL (OR APPROVED EQUAL) ON THE TOP, BOTTOM AND SIDES.
- THE LEVEL IV TREATMENT UNIT TO BE PROVIDED BY WATERLOO BIOFILTER.
- THE LEVEL IV TREATMENT SYSTEM TO BE DESIGNED FOR THE FOLLOWING EFFLUENT OBJECTIVES: CBOD5 = 10 MG/L AND TSS = 10 MG/L.
- THE SIMPLEX PUMP IN THE LEVEL IV TREATMENT UNIT RECIRCULATES A PORTION OF THE EFFLUENT TO THE INLET OF THE SEPTIC TANK.
- THE PUMP TANK EFFLUENT TO BE DOSED TO THE WATERLOO BIOFILTER BASKET, HOUSING TWO BASKETS FILLED WITH BIOFILTER MEDIUM. THE PUMP TANK EFFLUENT TO BE EVENLY DISTRIBUTED OVER THE SURFACE OF THE MEDIUM. A PASSIVE CHARCOAL VENTING TO BE PROVIDED.
- ALL PUMPS TO BE OPERATED BY WATERLOO SMART PANEL(S). THE WATERLOO SMART PANEL SHALL PROVIDE REMOTE MONITORING, CONTROL, AND DATALOGGING OVER A STABLE WIRELESS CELLULAR NETWORK.
- PROVIDE ACCESS FROM GRADE TO SEPTIC TANK EFFLUENT FILTER AS PER THE OBC.
- PROVIDE SEPTIC TANK EFFLUENT FILTER PER OBC REQUIREMENTS DESIGNED FOR A MINIMUM CAPACITY OF 25,000 L/DAY.
- ALL TANKS TO BE DESIGNED FOR A MINIMUM OF 2m OF BURIAL OVERTOP OF THE TANK.
- PRIOR TO PLACEMENT OF THE IMPORTED SAND FILL ANY SURFICIAL ORGANICS ARE TO BE REMOVED FROM THE SBT BED AND MANTLE AREA.
- THE EXISTING FILL MATERIAL IS TO BE COMPACTED TO ENSURE UNEVEN SETTLEMENT DOES NOT OCCUR.
- ALL SAND FILL (SEPTIC SAND) TO HAVE A MINIMUM AND MAXIMUM PERCOLATION RATES OF 6 MINUTES/CM AND 10 MINUTES/CM RESPECTIVELY. SAND TO HAVE A MAXIMUM 5% FINES PASSING THROUGH A NO. 200 SIEVE. CONTRACTOR TO SUBMIT GRADATION CURVES AND PERCOLATION TEST RESULTS FOR PROPOSED SAND FILL MATERIAL TO THE ENGINEER FOR APPROVAL PRIOR TO DELIVERING MATERIAL TO THE SITE.
- CONTRACTOR TO SUBMIT WORKING DRAWINGS FOR: SEPTIC TANK, SEPTIC TANK APPURTENANCES, PUMPING CHAMBER, PUMPING CHAMBER APPURTENANCES, ALL PUMPS, WATERLOO BIOFILTER, LEVEL FLOATS, SBT CHAMBERS, PIPE SUPPORTS, CHECK VALVES, BALL VALVES, THREADED PLUG, PIPES, REDUCERS, PVC CAPS, GEOTEXTILE, ORFICE SHIELDS TO BE REVIEWED AND ACCEPTED BY THE ENGINEER.
- APPROVED CHAMBERS FOR SBT INCLUDE: CULTREC RECHARGER 150XLHD OR APPROVED EQUAL. CONTRACTOR TO SUBMIT WORKING DRAWINGS FOR REVIEW AND APPROVAL BY THE ENGINEER.
- SEPTIC TANK, PUMPING CHAMBER, AND LEVEL IV TREATMENT UNIT TANKS TO BE PRE-CAST CONCRETE. CONCRETE AND RATED FOR H-20 LOADING. ALL TANKS TO CONFORM TO NATIONAL STANDARDS OF CANADA CAN/CSA B86-10 AND CSA A23.4-19. CONTRACTOR TO SUBMIT WORKING DRAWINGS FOR REVIEW AND APPROVAL BY THE ENGINEER.



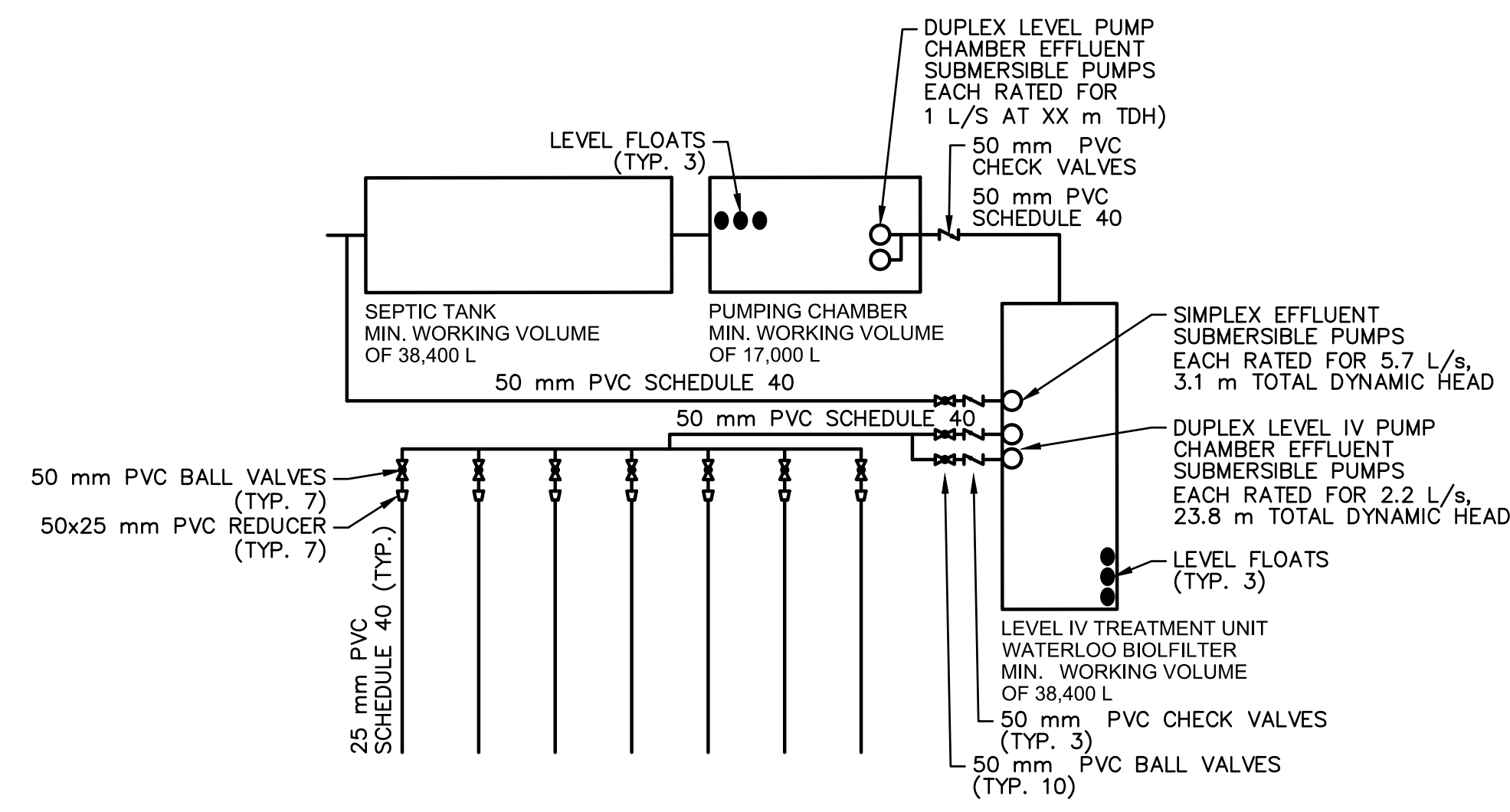
**SHALLOW BURIED TRENCH ENDPORT**  
SCALE: N.T.S.



**SECTION VIEW OF SEPTIC TANK, PUMPING CHAMBER PUMPS AND DISCHARGE PIPE**  
SCALE: N.T.S.



**SHALLOW BURIED TRENCH DETAIL**  
SCALE: N.T.S.



**PROCESS FLOW SCHEMATIC**  
SCALE: N.T.S.