

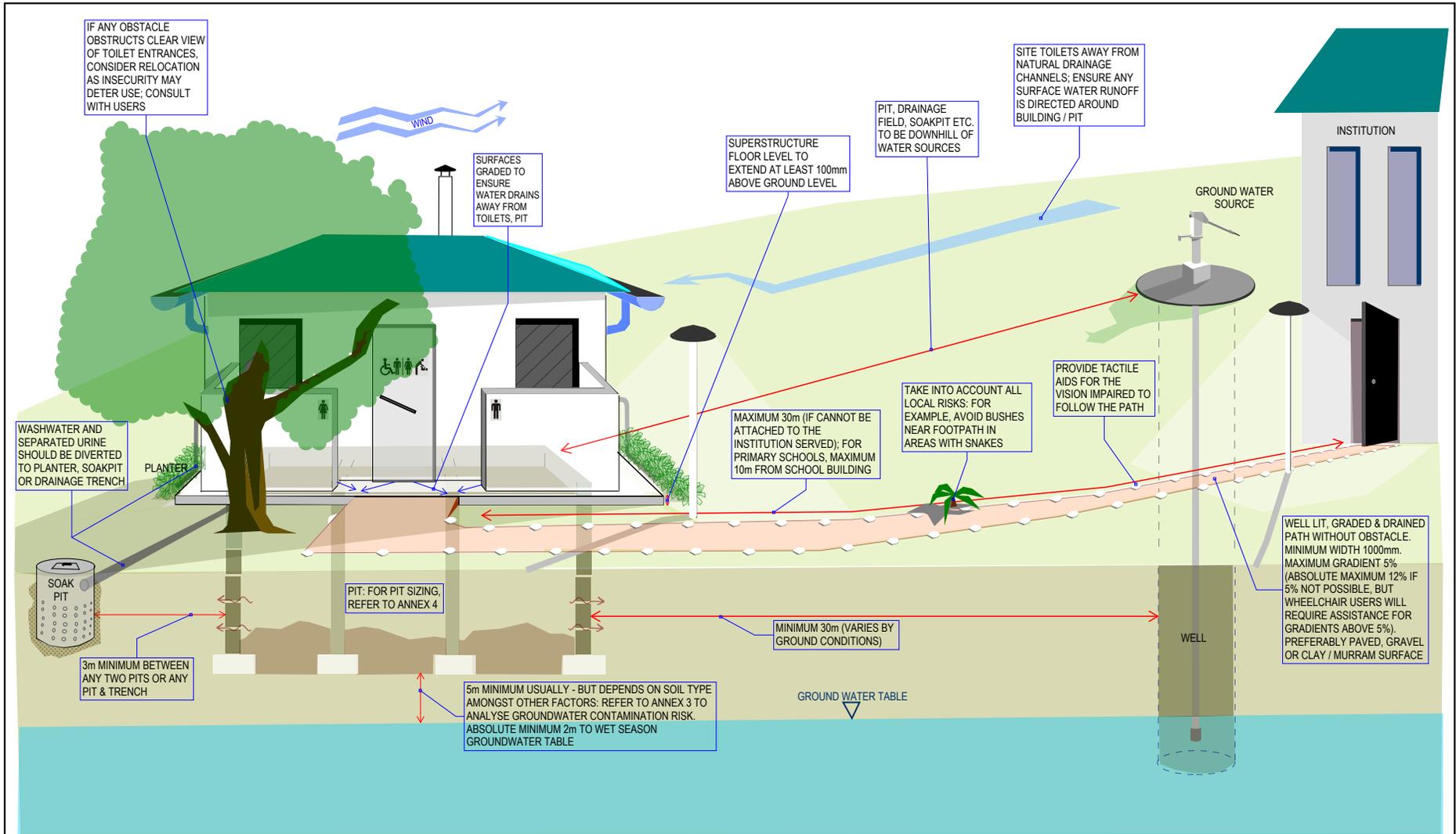
Technical guidelines for construction of institutional and public toilets - drawings



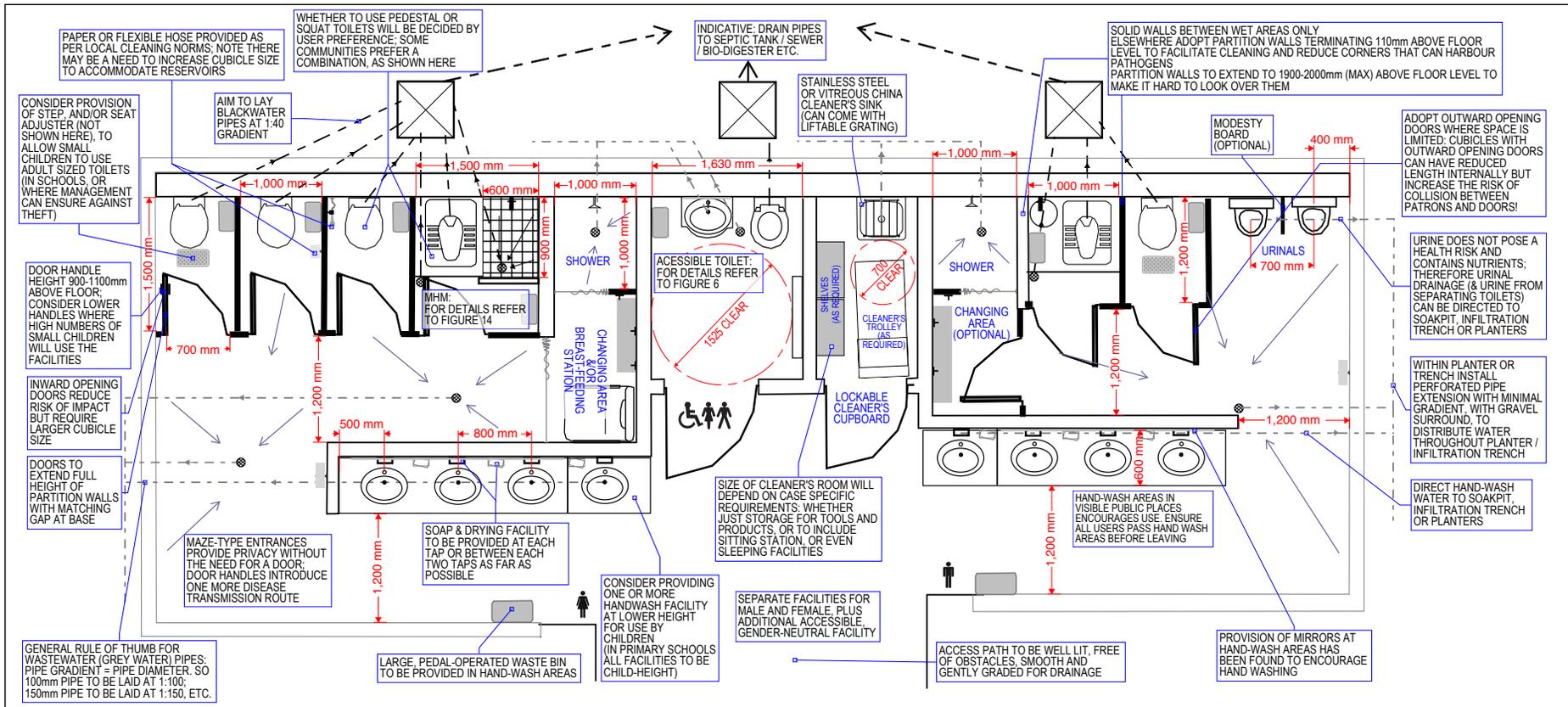
Drawings

- 1 Figure 4 Geographic location and siting
- 2 Figure 5 Site layout
- 3 Figure 6 Accessible toilet layout
- 4 Figure 7 Accessible toilet ramp access
- 5 Figure 8 Toilet pit design
- 6 Figure 10 Septic tank design
- 7 Figure 11 Infiltration field design
- 8 Figure 12 Slab reinforcement, footrests and drop-holes
- 9 Figure 13 Slab design for simple vs offset pits
- 10 Figure 14 Urinal design
- 11 Figure 15 Superstructure design
- 12 Figure 16 design of handwashing stations
- 13 Figure 17 Menstrual hygiene management design

This document contains copies of the key drawings from the Technical Guidelines. Please use this document to print out larger scale copies of individual drawings if required.



LOCATION & SITING



PAPER OR FLEXIBLE HOSE PROVIDED AS PER LOCAL CLEANING NORMS; NOTE THERE MAY BE A NEED TO INCREASE CUBICLE SIZE TO ACCOMMODATE RESERVOIRS

WHETHER TO USE PEDESTAL OR SQUAT TOILETS WILL BE DECIDED BY USER PREFERENCE; SOME COMMUNITIES PREFER A COMBINATION, AS SHOWN HERE

INDICATIVE: DRAIN PIPES TO SEPTIC TANK / SEWER / BIO-DIGESTER ETC.

SOLID WALLS BETWEEN WET AREAS ONLY ELSEWHERE ADOPT PARTITION WALLS TERMINATING 110mm ABOVE FLOOR LEVEL TO FACILITATE CLEANING AND REDUCE CORNERS THAT CAN HARBOUR PATHOGENS PARTITION WALLS TO EXTEND TO 1900-2000mm (MAX) ABOVE FLOOR LEVEL TO MAKE IT HARD TO LOOK OVER THEM

CONSIDER PROVISION OF STEP, AND/OR SEAT ADJUSTER (NOT SHOWN HERE), TO ALLOW SMALL CHILDREN TO USE ADULT SIZED TOILETS (IN SCHOOLS OR WHERE MANAGEMENT CAN ENSURE AGAINST THEFT)

AIM TO LAY BLACKWATER PIPES AT 1:40 GRADIENT

STAINLESS STEEL OR VITREOUS CHINA CLEANER'S SINK (CAN COME WITH LIFTABLE GRATING)

MODESTY BOARD (OPTIONAL)

ADOPT OUTWARD OPENING DOORS WHERE SPACE IS LIMITED; CUBICLES WITH OUTWARD OPENING DOORS CAN HAVE REDUCED LENGTH INTERNALLY BUT INCREASE THE RISK OF COLLISION BETWEEN PATRONS AND DOORS!

DOOR HANDLE HEIGHT 900-1100mm ABOVE FLOOR; CONSIDER LOWER HANDLES WHERE HIGH NUMBERS OF SMALL CHILDREN WILL USE THE FACILITIES

INWARD OPENING DOORS REDUCE RISK OF IMPACT BUT REQUIRE LARGER CUBICLE SIZE

DOORS TO EXTEND FULL HEIGHT OF PARTITION WALLS WITH MATCHING GAP AT BASE

MAZE-TYPE ENTRANCES PROVIDE PRIVACY WITHOUT THE NEED FOR A DOOR; DOOR HANDLES INTRODUCE ONE MORE DISEASE TRANSMISSION ROUTE

GENERAL RULE OF THUMB FOR WASTE WATER (GREY WATER) PIPES: PIPE GRADIENT = PIPE DIAMETER. SO 100mm PIPE TO BE LAID AT 1:100; 150mm PIPE TO BE LAID AT 1:150, ETC.

SOAP & DRYING FACILITY TO BE PROVIDED AT EACH TAP OR BETWEEN EACH TWO TAPS AS FAR AS POSSIBLE

CONSIDER PROVIDING ONE OR MORE HANDWASH FACILITY AT LOWER HEIGHT FOR USE BY CHILDREN (IN PRIMARY SCHOOLS ALL FACILITIES TO BE CHILD-HEIGHT)

SEPARATE FACILITIES FOR MALE AND FEMALE, PLUS ADDITIONAL ACCESSIBLE, GENDER-NEUTRAL FACILITY

ACCESS PATH TO BE WELL LIT, FREE OF OBSTACLES, SMOOTH AND GENTLY GRADED FOR DRAINAGE

PROVISION OF MIRRORS AT HAND-WASH AREAS HAS BEEN FOUND TO ENCOURAGE HAND WASHING

URINE DOES NOT POSE A HEALTH RISK AND CONTAINS NUTRIENTS; THEREFORE URINAL DRAINAGE (& URINE FROM SEPARATING TOILETS) CAN BE DIRECTED TO SOAKPIT, INFILTRATION TRENCH OR PLANTERS

WITHIN PLANTER OR TRENCH INSTALL PERFORATED PIPE EXTENSION WITH MINIMAL GRADIENT, WITH GRAVEL SURROUND, TO DISTRIBUTE WATER THROUGHOUT PLANTER / INFILTRATION TRENCH

DIRECT HAND-WASH WATER TO SOAKPIT, INFILTRATION TRENCH OR PLANTERS

ACCESSIBLE TOILET: FOR DETAILS REFER TO FIGURE 6

SHOWER

CHANGING AREA (OPTIONAL)

SHOWER

URINALS

LOCKABLE CLEANER'S CUPBOARD

CLEANER'S TROLLEY (AS REQUIRED)

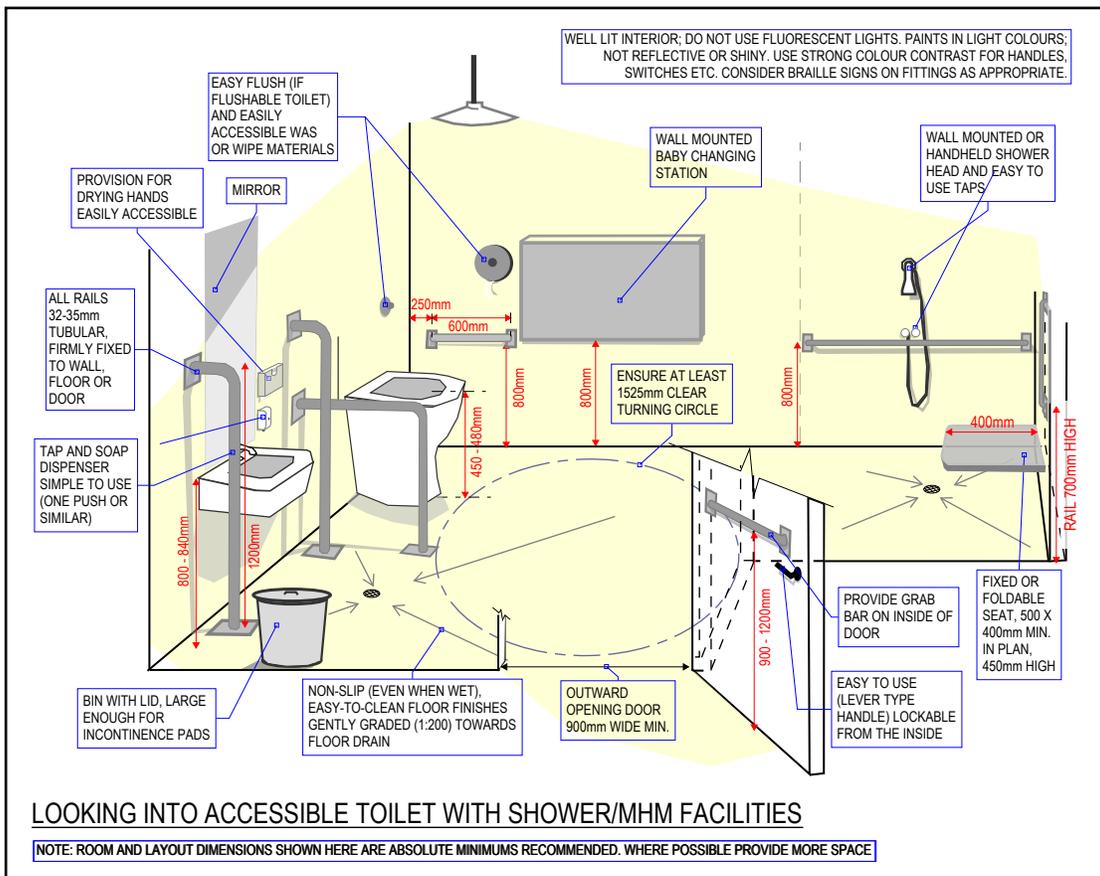
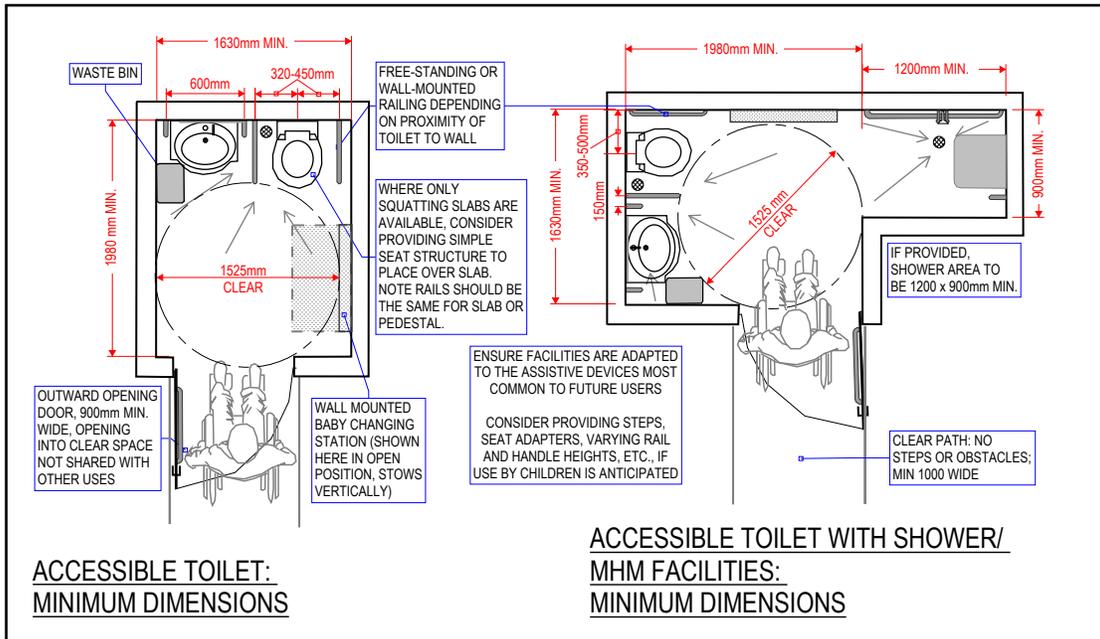
SHOULDER (AS REQUIRED)

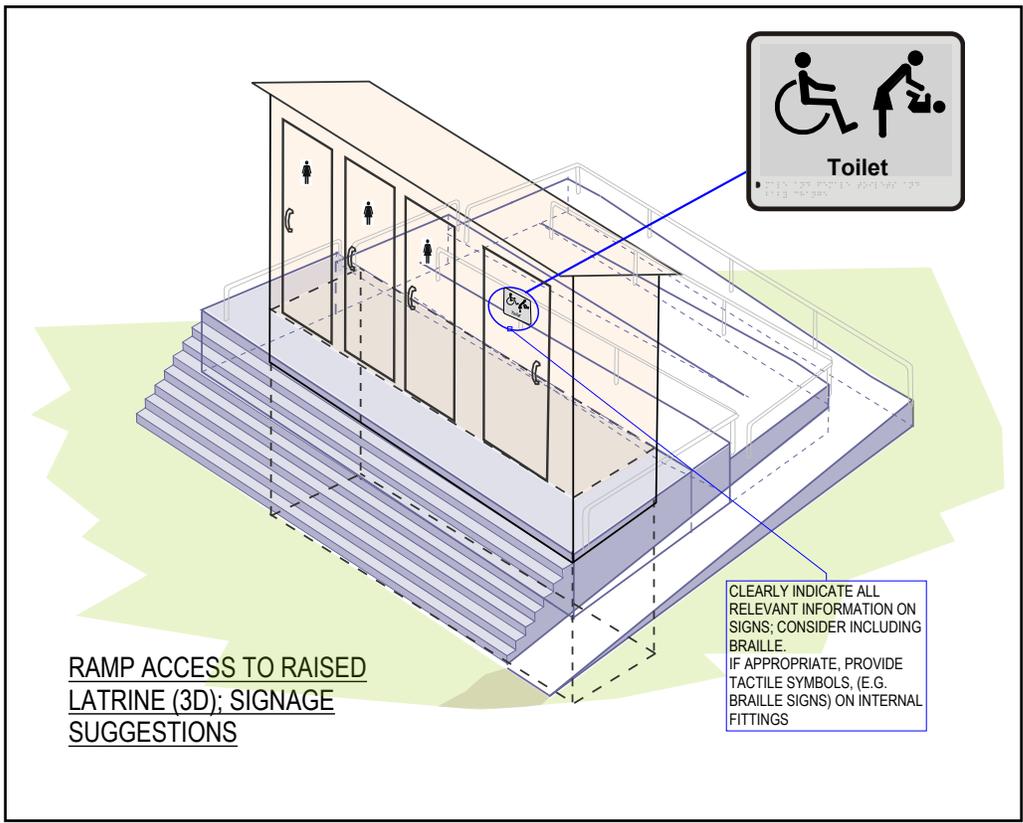
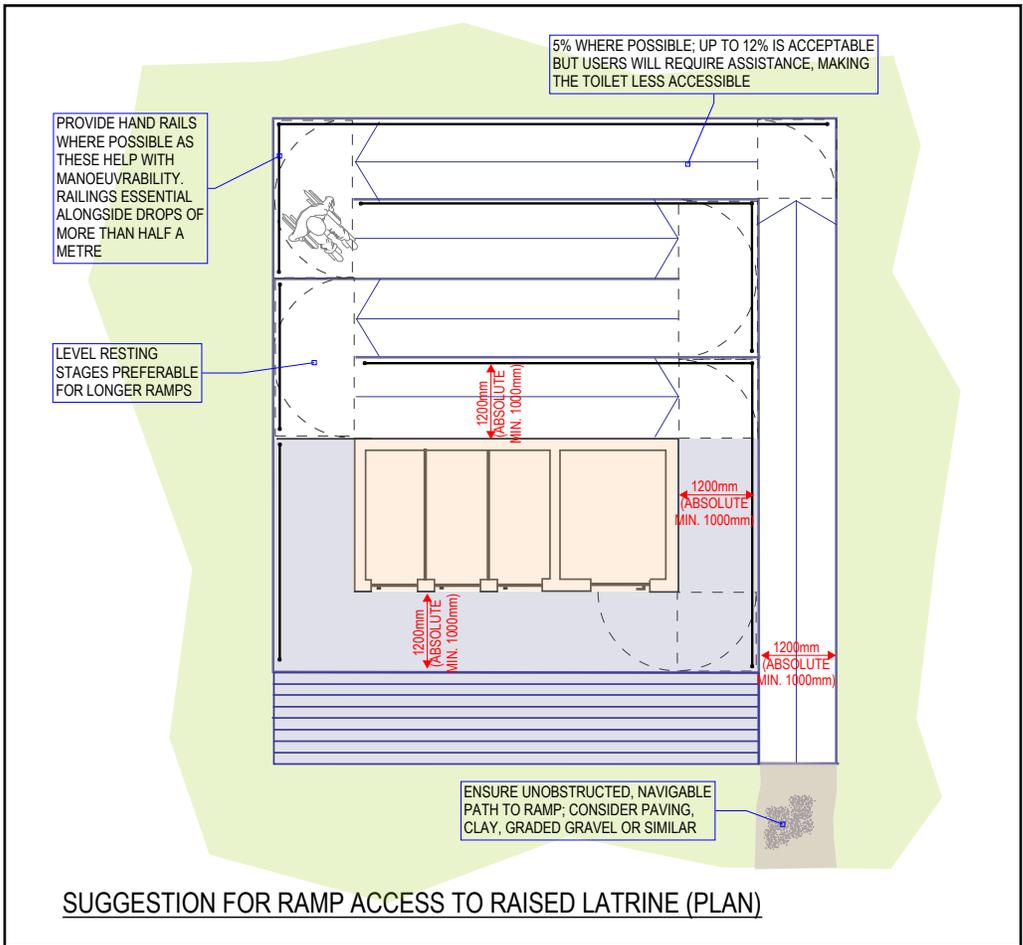
W.M.H.: FOR DETAILS REFER TO FIGURE 14

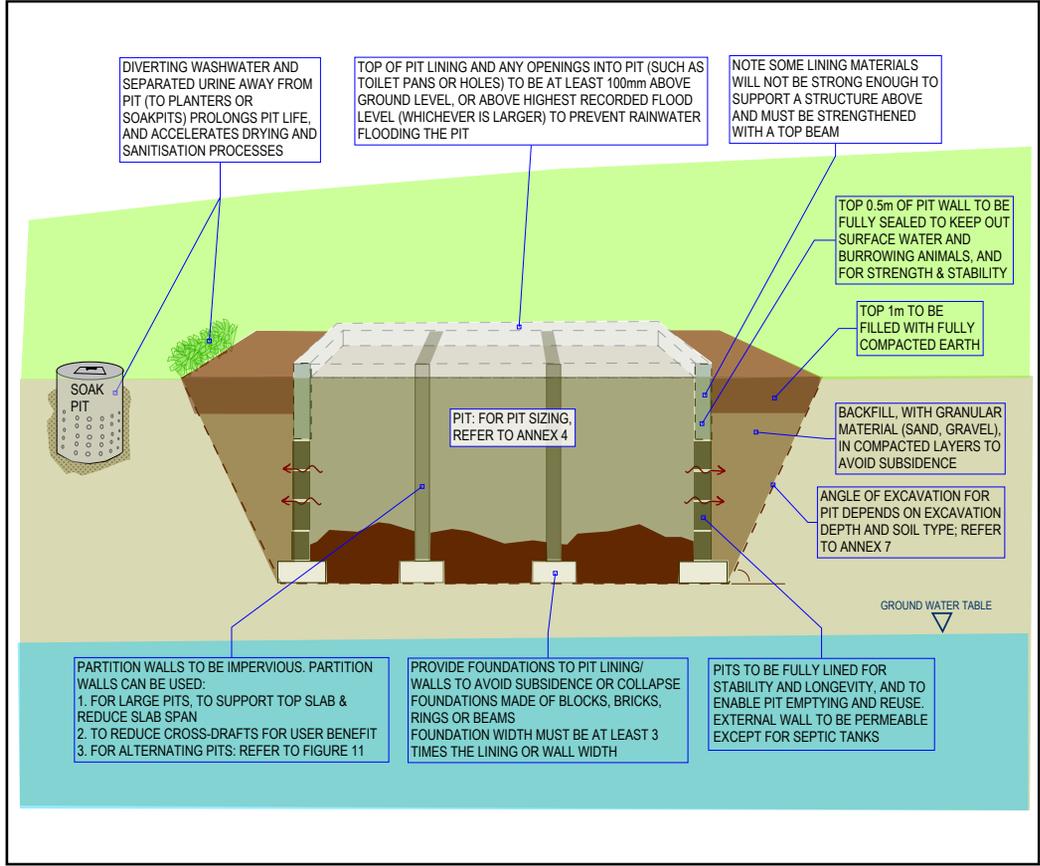
CHANGING AREA FOR BREAST-FEEDING STATION

SIZE OF CLEANER'S ROOM WILL DEPEND ON CASE SPECIFIC REQUIREMENTS; WHETHER JUST STORAGE FOR TOOLS AND PRODUCTS, OR TO INCLUDE SITTING STATION, OR EVEN SLEEPING FACILITIES

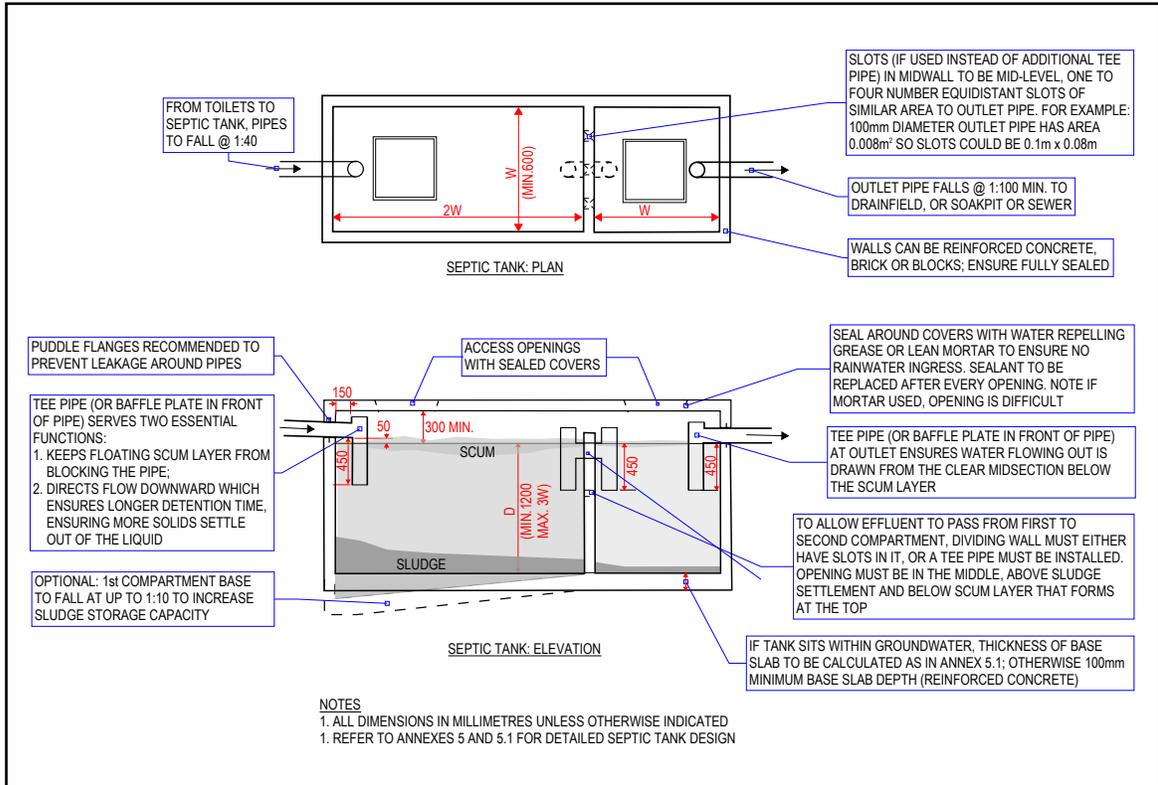
LARGE, PEDAL-OPERATED WASTE BIN TO BE PROVIDED IN HAND-WASH AREAS

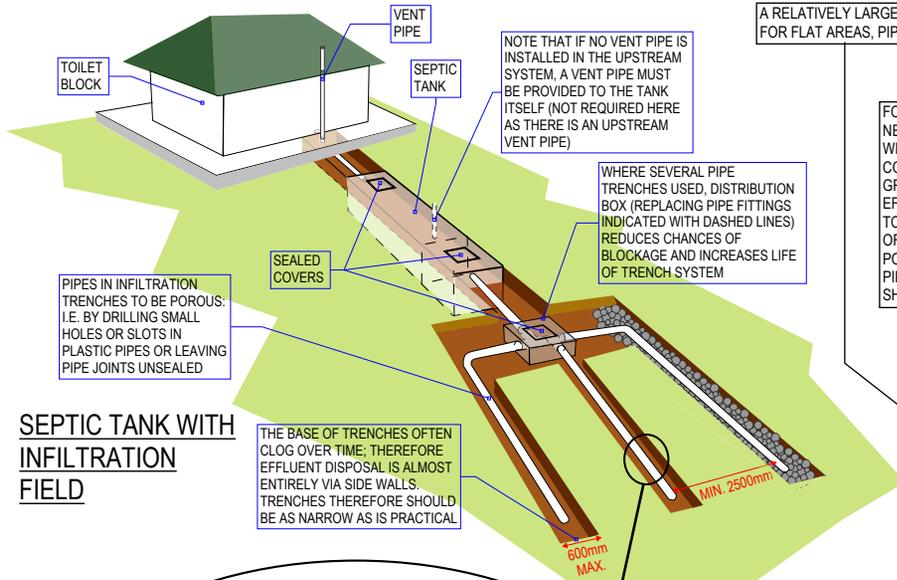






PIT DESIGN & LINING



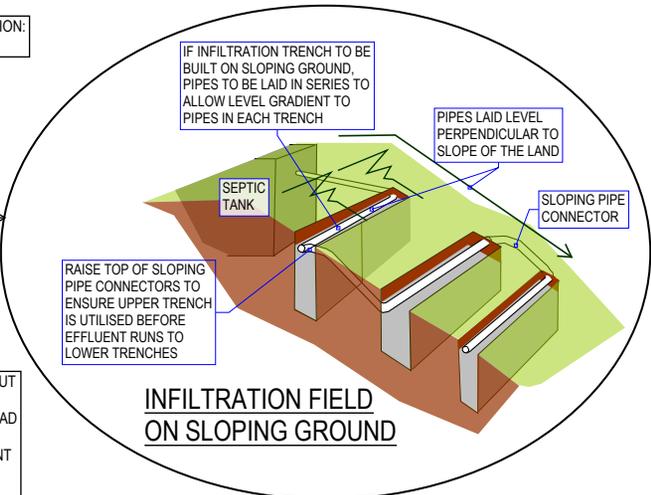


SEPTIC TANK WITH INFILTRATION FIELD

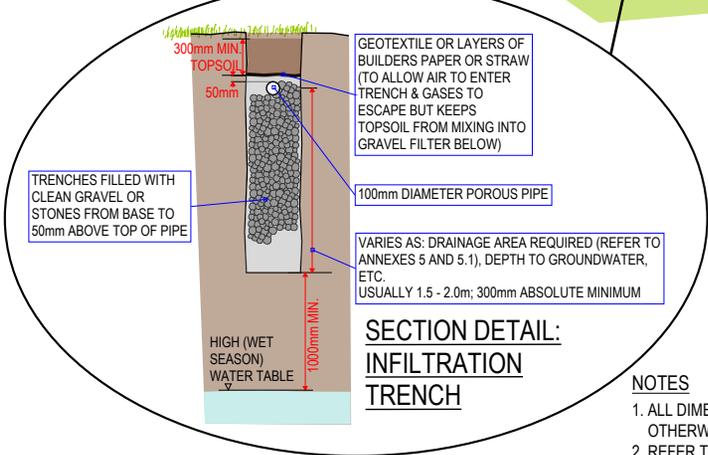
A RELATIVELY LARGE AREA IS REQUIRED FOR INFILTRATION: FOR FLAT AREAS, PIPES CAN BE LAID IN PARALLEL.

FOR SLOPING AREAS, PIPES NEED TO BE LAID IN SERIES WITH PIPES LAID ALONG CONTOURS (SINCE ANY GRADIENT WILL RESULT IN ALL EFFLUENT FLOWING DIRECTLY TO THE END RENDERING MOST OF THE TRENCH LENGTH POINTLESS). CONNECTING PIPES BETWEEN TRENCHES SHOULD NOT BE POROUS.

IF THERE IS LIMITED SPACE BUT SOME DEPTH AVAILABLE, A SOAKPIT MAY BE USED INSTEAD OF INFILTRATION TRENCHES. SOAKPITS ARE LESS EFFICIENT THAN TRENCHES AND NOT APPROPRIATE FOR LARGE INSTITUTIONS.

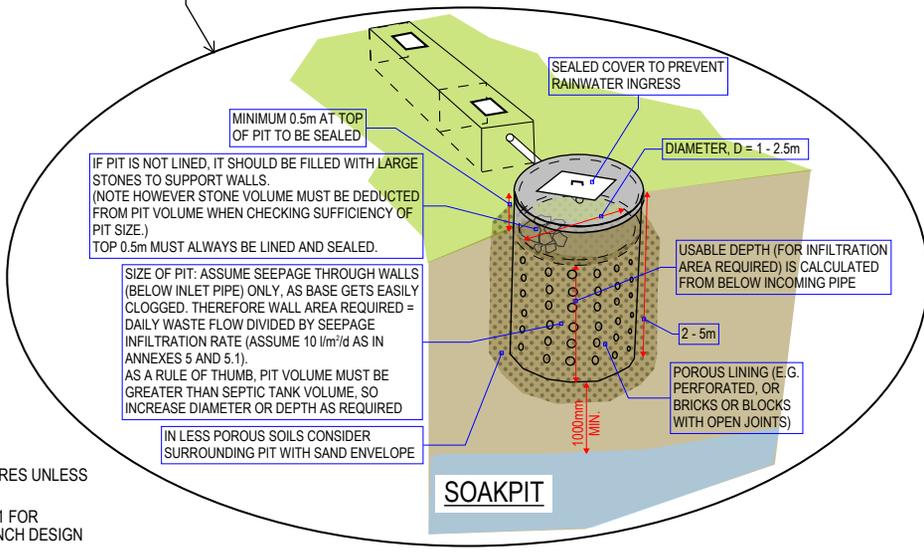


INFILTRATION FIELD ON SLOPING GROUND

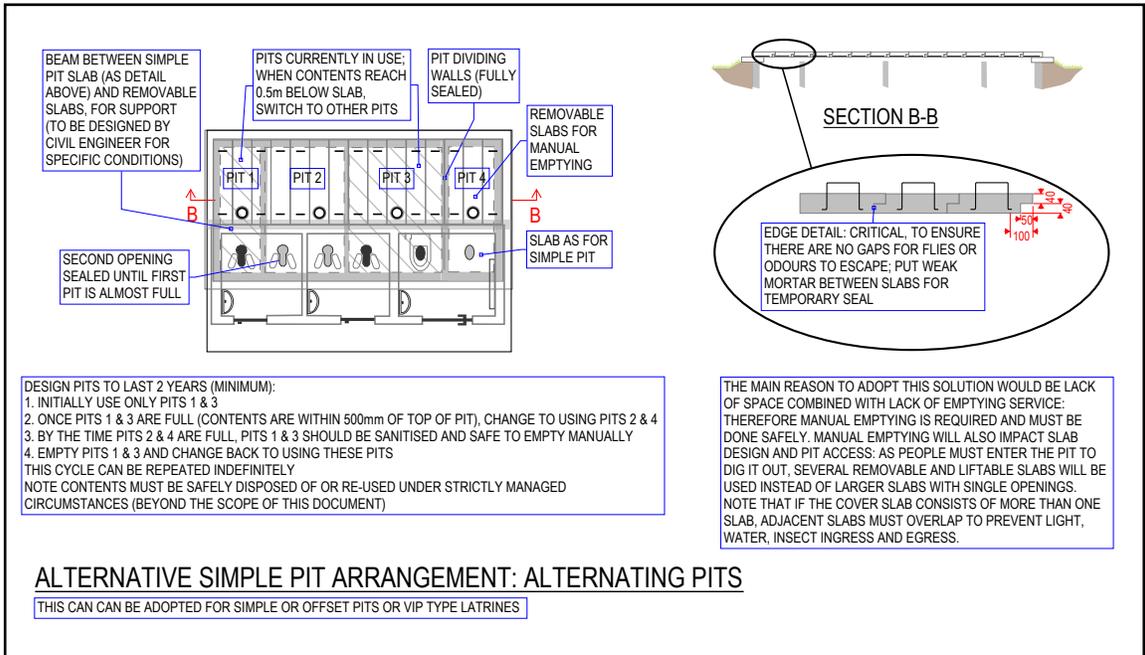
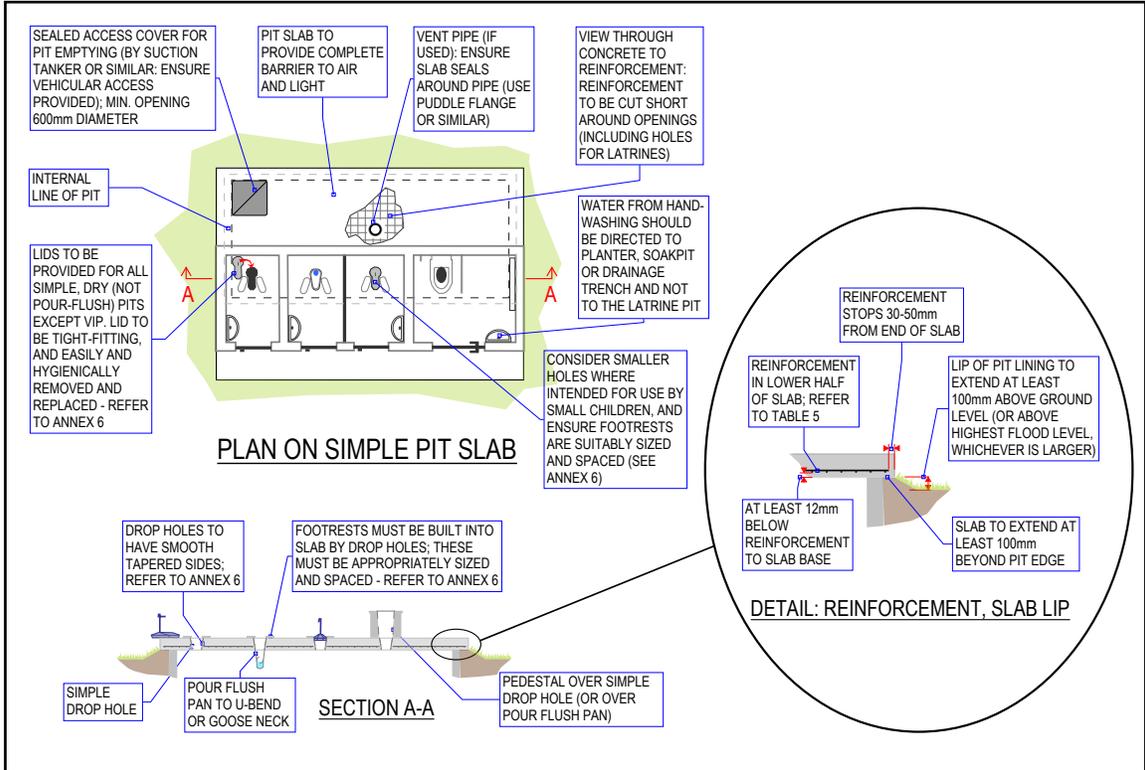


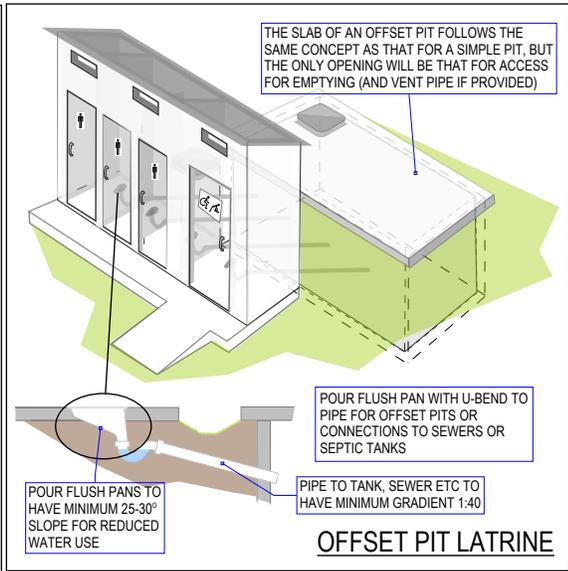
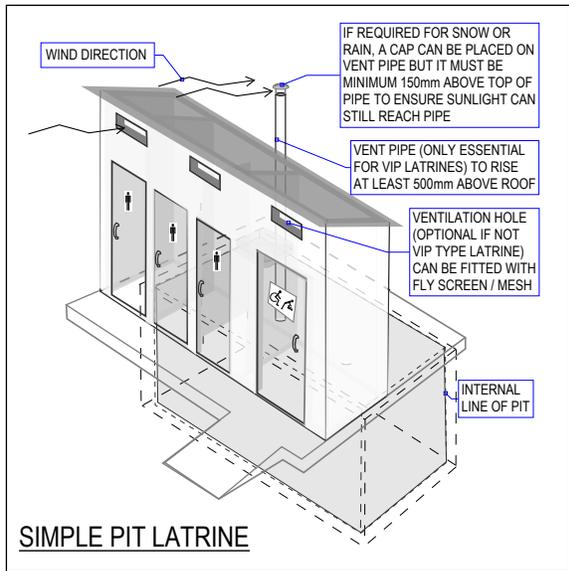
SECTION DETAIL: INFILTRATION TRENCH

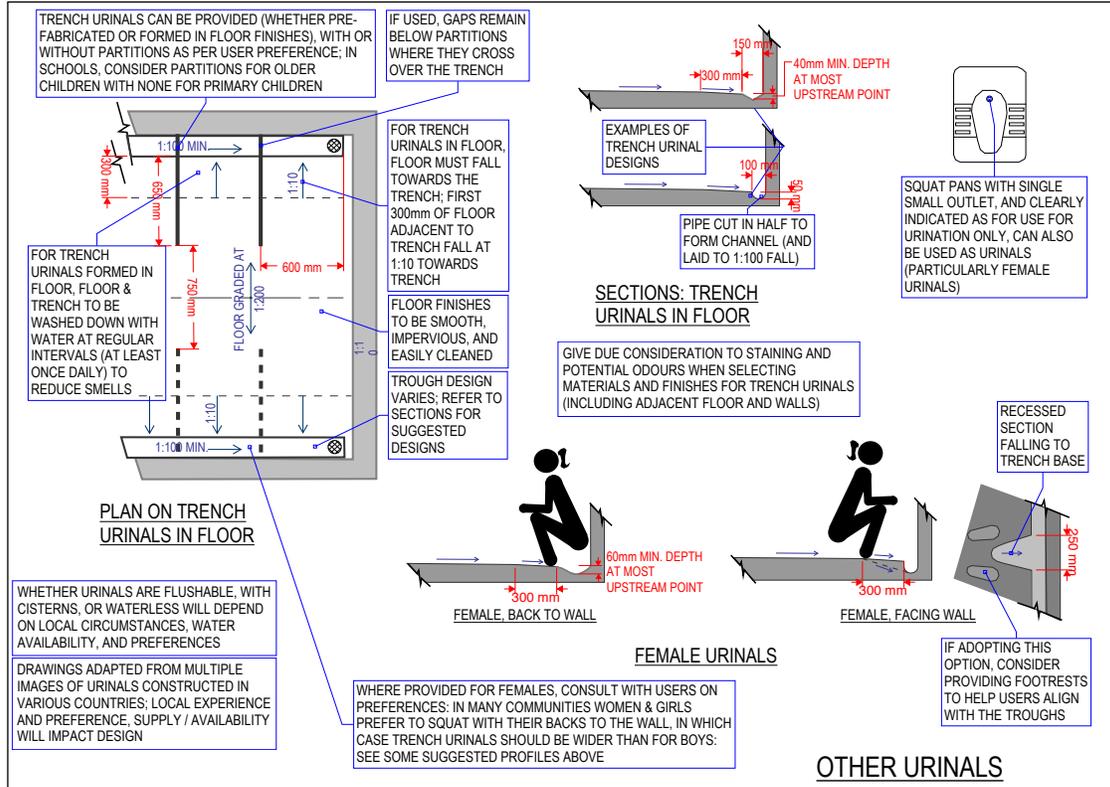
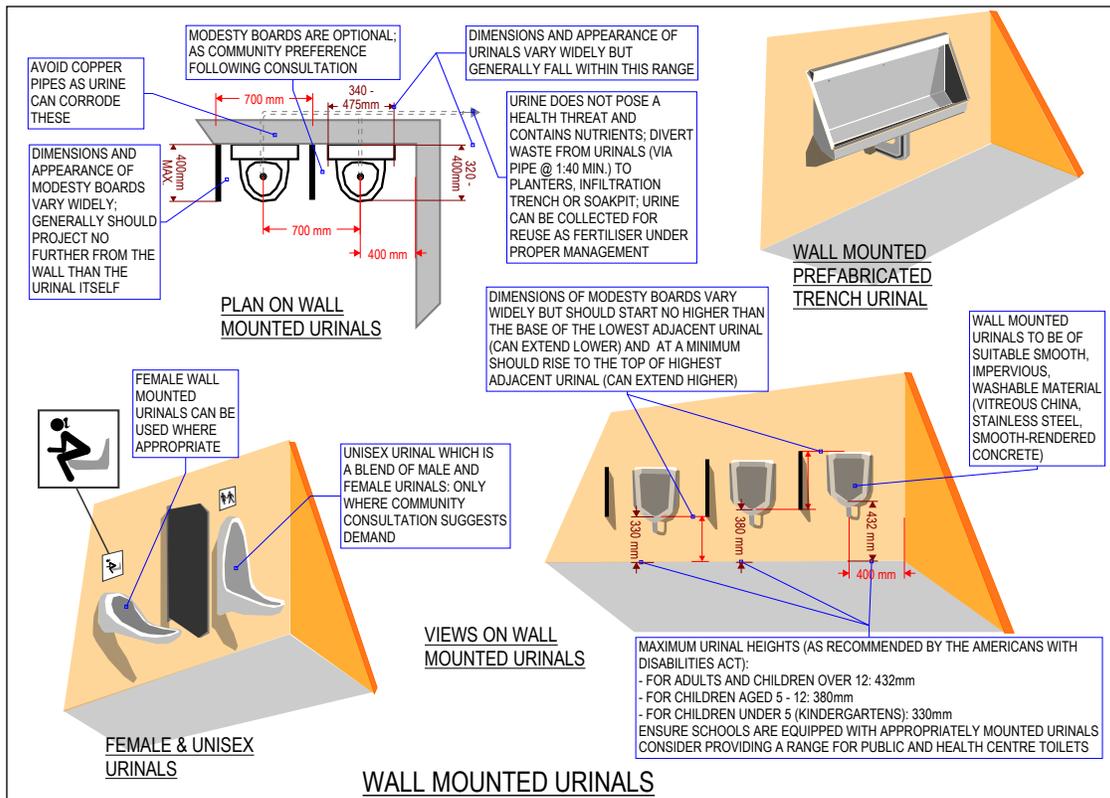
- NOTES**
1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED
 2. REFER TO ANNEXES 5 AND 5.1 FOR DETAILED INFILTRATION TRENCH DESIGN



SOAKPIT







OTHER URINALS

