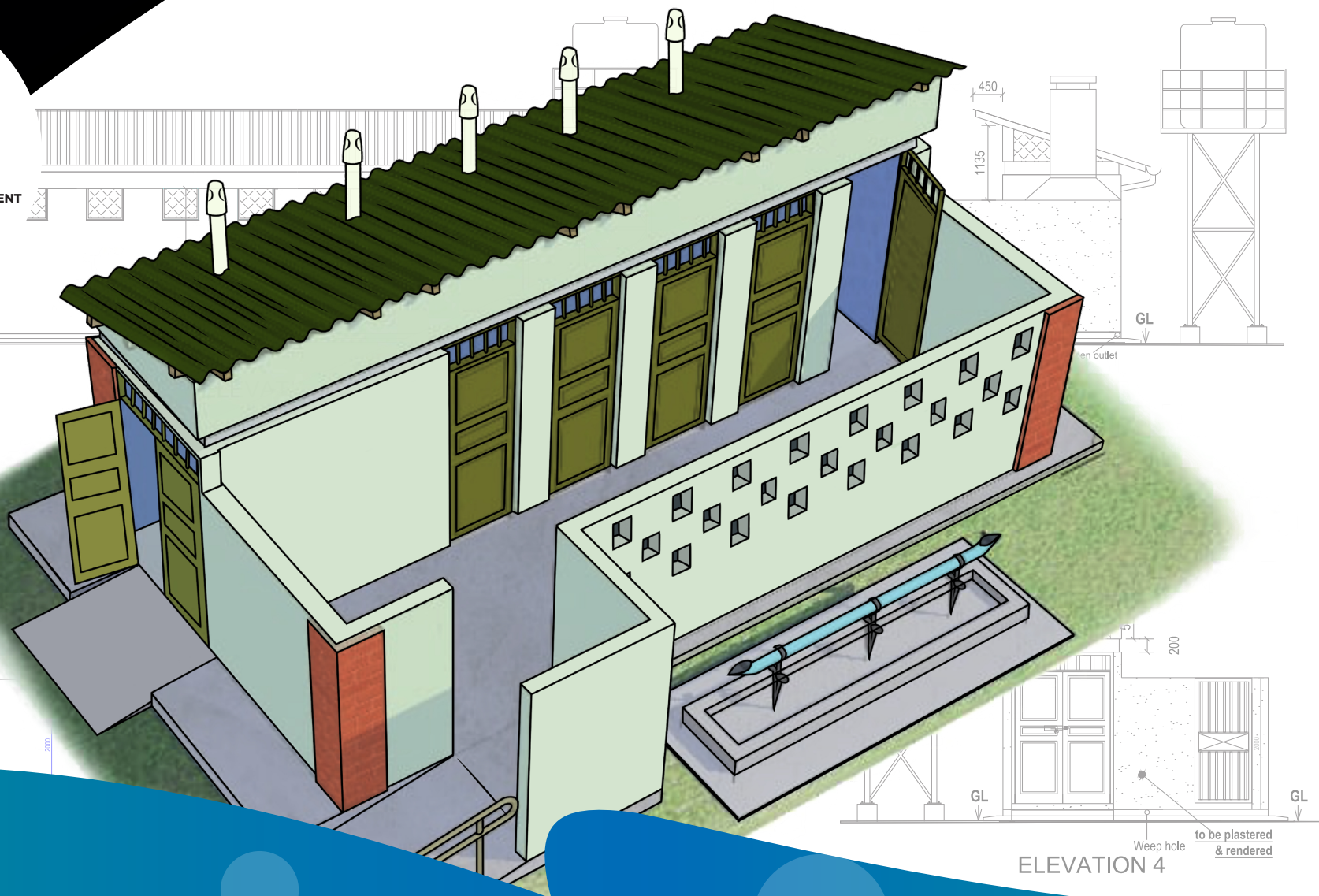




THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT
WATER AND SANITATION
DEVELOPMENT FACILITY
- NORTH -



MINIMUM STANDARDS FOR ONSITE SANITATION TECHNOLOGY OPTIONS FOR SMALL TO MEDIUM TOWNS IN NORTHERN UGANDA



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MINIMUM STANDARDS FOR ONSITE SANITATION TECHNOLOGY OPTIONS FOR SMALL TO MEDIUM TOWNS IN NORTHERN UGANDA

FIRST EDITION / 2024

Supported by:



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LIST OF ACRONYMS

C&T	Collection and transport	NGO	Non governmental organisation
FS	Faecal sludge	O & M	Operation and maintenance
FSM	Faecal sludge management	PWD	People with disabilities
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit	SDGs	Sustainable Development Goals
HH	Household	UDDT	Urine Diversion Dehydrating Toilet
HWF	Hand washing facility	UNAPD	Uganda National Action on Physical Disability
KCCA	Kampala Capital City Authority	VIP	Ventilated Improved Pit Latrine
MCA	Multi criteria analysis	WCs	Water closets
NEMA	National Environment Management Authority	WHO	World Health Organisation
NSSS	Non-Sewered Sanitation Systems	WSTF	Water Services Trust Fund

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Main Consultant	Eng. Dr. Swaib Semiyaga
GIZ Team	Eng. Fred Nuwagaba Mr. John Bosco Oryema Mr. Allan Conikane Ms. Irene Faith Alinga
Ministry of Water & Environment (WSDF-N)	Eng. Yusuf Lule Ms. Elizabeth Babita Eng. Catherine Agwai
Town Council / Municipality representation	Anaka Town Council Purongo Town Council Amuru Town Council Apac Municipality

PREFACE

In Northern Uganda, over 90% of the population relies on various forms of on-site sanitation, encompassing flush toilets, Urine Diversion Dehydrating Toilets (UDDTs), Ventilated Improved Pit Latrines (VIPs), and traditional pit latrines. However, the construction of these facilities lacks proper guidance, leading to inconsistencies in planning, construction, and enforcement. Existing practices rely heavily on past experiences without clear standards for what constitutes an acceptable sanitation facility.

The Sustainable Development Goals (SDGs) underscore the importance of adequate sanitation, emphasizing safe excreta management and handwashing facilities. Therefore, it is imperative that all sanitation facilities not only provide for safe waste disposal but also include provisions for handwashing. Despite the absence of explicit legal provisions and consistent guidelines, the need for minimum standards is evident.

Recognizing this need, the development of Minimum Standards for on-site sanitation facilities in Northern Uganda has been initiated. These standards draw upon existing legislation and guidelines related to sanitation in Uganda, with the Minimum Standards for Kampala Capital City Authority (KCCA) serving as a valuable reference.

This document comprises several chapters: Chapter 1 provides the basis and an overview of the standards, while Chapters 2 and 3 outline the minimum standards for household and public/institutional on-site toilet options, respectively. Finally, Chapter 4 delves into the operation and maintenance aspects of on-site sanitation facilities. Technical details and indicative costs are included in annexes to support implementation.

Furthermore, these Minimum Standards are designed to be dynamic, subject to regular review to incorporate technological advancements. Users of the Standards are expected to stay updated with the latest versions to ensure compliance and effectiveness in addressing sanitation challenges in Northern Uganda.

Despite the absence of explicit legal provisions and consistent guidelines, the need for minimum standards is evident.



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MINIMUM STANDARDS
THE BASIS



1. MINIMUM STANDARDS – THE BASIS

1.1 LEGAL, POLICY PROVISIONS AND NATIONAL STRATEGIES

Law/regulation	Provisions relevant to on-site sanitation
The 1995 Constitution of the Republic of Uganda (as variously amended)	<ul style="list-style-type: none"> Under Article 39 the Constitution of the Republic of Uganda entitles every citizen to a clean and healthy environment.
The Local Government Act 1997 (Cap.243)	<ul style="list-style-type: none"> Allows Local authority to implement and maintain public sanitation facilities, sanitary responsibility for the removal and disposal of night soil (Second Schedule, Part 3, 1(o and w)). Enables a Local Authority to make bye-laws for reinforcing existing laws (Part IV, Section 39-1). Creates opportunities to regulate (e.g. setting operational standards) the FSM business through licensing.
Public Health Act, 2000	<ul style="list-style-type: none"> Provides for prevention of diseases to the public arising from sewerage, poor sanitation and pollution of the environment. Mandates the Local Authority to safeguard and promote public health (Part II, Section 5). Requires all dwellings to have functional sanitation facilities that meet minimum standards (Part X, Sections 84-86 and 88-89).
The Local Governments (Apac Municipal Council) Sanitation Byelaws, 2019	<ul style="list-style-type: none"> Provides mandate for Municipal council to ensure every household to have and maintain a latrine or toilet. Provision for Council to construct toilets or pit latrines in commercial centres or busy areas including public markets, taxi and bus parks. Provision for Council to inspect any building within the Council for purposes of enforcing the construction of septic tanks and pit latrines. Building owner within town to ensure provision of septic tank or VIP latrine.
The National Environment (Waste Management) Regulations S.I. No 52/1999	<ul style="list-style-type: none"> Establishes NEMA as mandated institution for licensing persons intending to (i) transport waste (Clause 6, 1) and/or to operate a waste treatment plant or waste disposal site after an EIA study (Clause 13, 1). Recognizes enforcement as a strategy to minimize public health risks and prevent environmental pollution.

Law/regulation	Provisions relevant to on-site sanitation
The Building Regulations Statutory Instruments 281-1, 2, 3.20	<ul style="list-style-type: none"> • Provides for approval of drawings including plans and sections of buildings by the Local Authority (S.I. 281: 1-3). • Allows Council to enforce compliance by whoever is to erect a school (S.I. 281-20).
The Physical Planning Act, 2010	<ul style="list-style-type: none"> • Provides for the making and approval of physical development plans by the Local Authority and for the applications for development permission.
National Physical Planning Standards and Guidelines, 2011	<ul style="list-style-type: none"> • Provides guidelines on toilet and septic tank standards as well as planning guidelines for dwellings and public places.
Building Control Regulations and Schedule 22	<ul style="list-style-type: none"> • Provides guidance on standards for sanitation technology options and latrine accommodation.
The National Development Plan (NDP III) 2021/2022 – 2024/2025	<ul style="list-style-type: none"> • Aims among other human capital interventions, at improving population health, safety and management by increasing access to inclusive safe water, sanitation and hygiene • Emphasis on increased coverage of improved toilet facilities and handwashing practices.
The Water and Environment Sector Investment Plan 2018 – 2030	<ul style="list-style-type: none"> • Focuses on improvement of service delivery for social economic transformation and a healthy, clean and productive environment among others, which in the long run leads to achieving sustainable development in the sector through an efficient use of water resources and efforts to increase the availability of water and sanitation services.
Ministry of Water and Environment Sector Development Plan, 2015/16 – 2019/20	<ul style="list-style-type: none"> • Seeks increased access to safe water in rural and urban areas to 79% and 100%, respectively, • Increasing sanitation and hygiene levels in rural and sewerage coverage in urban areas to 95%; • Promotion of improved sanitation and hygiene practices in households, communities and rural growth centers in order to reduce the number of deaths and illness related to poor sanitation.

1.2 INSTITUTIONAL ROLES AND RESPONSIBILITIES

The key roles of the institutions in management of on-site sanitation in Uganda are shown below:

FUNCTIONS RELATED TO ONSITE SANITATION	Ministry of Health	Ministry of Education and Sports	Ministry of Water & Environment	Ministry of Finance, Planning and Economic Development	CBOs / NGOs	Directorate of Environmental Affairs	National Environment Management Authority	National Water & Sewerage Corporation	Local Governments
HOUSEHOLD ONSITE SANITATION	□				□				■
PUBLIC LATRINES	□		□						■
SCHOOL LATRINES	□	■			□				■
HEALTH/HYGIENE PROMOTION	□	□			□			□	■
FAECAL SLUDGE COLLECTION			□					□	■
FAECAL SLUDGE TREATMENT								■	□
SURFACE WATER DRAINAGE									■
WETLANDS MANAGEMENT						■			□
WASTE/DISCHARGE PERMITTING							■	□	□
INVESTMENT PLANNING			■	■				■	■
PHYSICAL PLANNING									■

■ = major role □ = minor role

1.3 GENERAL REQUIREMENTS

Each onsite sanitation technology should:

- i. Be emptiable
- ii. Have a hand washing facility with soap
- iii. Have anal cleansing materials
- iv. Allow for privacy of users including having a lockable door
- v. Allow for inclusiveness e.g. provisions for people with disabilities (PWD) and for menstrual hygiene management
- vi. Have a durable and sturdy superstructure
- vii. Be secure – safety for night use and from intrusion
- viii. Be well ventilated and have adequate lighting especially for night use
- ix. Be kept clean and have adequate lighting especially for night use
- x. Have provision for access for pit emptying.

1.4 PROVISIONS FOR PEOPLE WITH DISABILITY (PWDs)

- i. Minimum room/stance floor dimensions – 1.5m by 1.5m
- ii. Door – minimum 0.9m wide with a pull handle for closing
- iii. Toilet seat height – 0.48m from finished floor surface
- iv. Hand rails – diameter of 32mm to 38mm fitted at back and wall next to toilet seat; upper rails at 0.84m to 0.92m height and lower rails at 0.55m
- v. Two separate sinks at different heights – high sink at 0.8m and low sink at 0.4m
- vi. Urinals floor surface – 1.5m x 0.8m to allow wheel chair approach

1.5 CONSTRUCTION SPECIFICATIONS

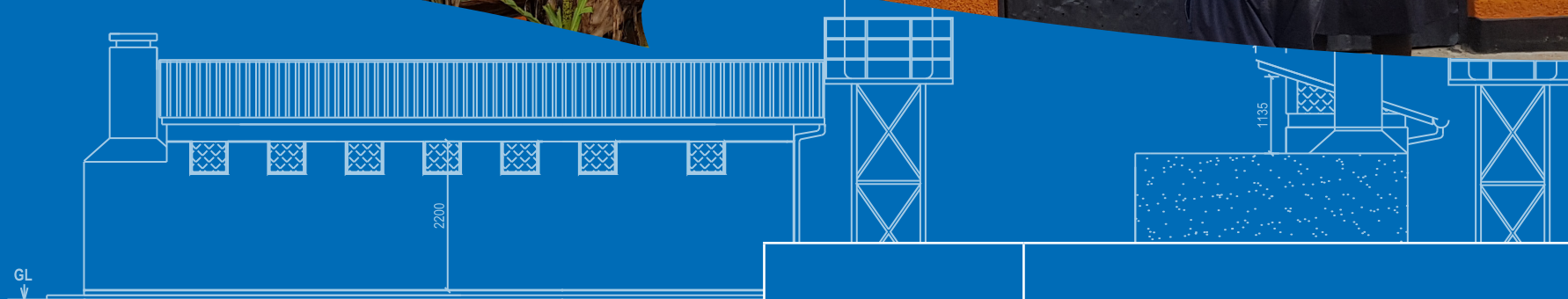
- i. Mortar (mix of cement and sand) – Minimum mix ratio of 1:4
- ii. Concrete – Minimum mix ratio of 1:3:6 (cement: sand: aggregates)
- iii. Superstructure walling – Burnt bricks with 150mm minimum thickness
- iv. Pit lining and substructure walling – Burnt bricks with 200mm thickness (header bond)

1.6 MENU OF SANITATION OPTIONS

The technology options presented in this guideline are mainly limited to containment (Table 1-1).

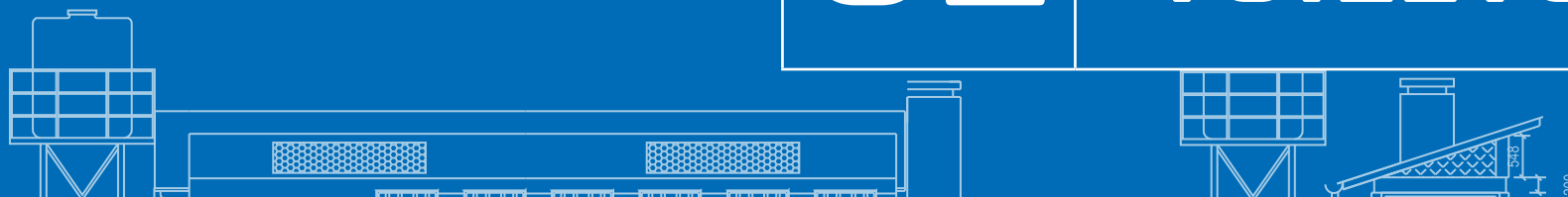
Table 1-1: Menu of sanitation technology options

Sanitation Technology Category	Component Technologies	Add-ons / Modifications
Water borne toilets	<ul style="list-style-type: none"> a. Cistern flush b. Pour flush toilet 	Add-ons <ul style="list-style-type: none"> i. Septic tank ii. Soak pit iii. Drainage field iv. Twin pit pour flush
Lined latrines	<ul style="list-style-type: none"> a. Ventilated Improved Pit latrine (VIP) 	Modifications <ul style="list-style-type: none"> i. Elevated pit latrine ii. VIP latrine precast
Urine Diversion Dry Toilets (UDDTs)		
Prefabricated Integrated Treatment Units	To conform to ISO 30500:2018 Provision for Non-Sewered Sanitation systems (NSSS) which range from urinals, toilet pans, dry toilets to novel evacuation mechanisms such as those employing mechanical forces requiring little to no water.	



ELEVATION 1

02 HOUSEHOLD TOILETS



2. HOUSEHOLD TOILETS

2.1 GENERAL REQUIREMENTS

- i. A single sanitation facility can be located inhouse or outdoors.
- ii. Inhouse sanitation facilities are only limited to cistern/pour flush toilets.
- iii. An inhouse facility should not be entered directly from the area of food preparation and a habitable room except a bedroom.
- iv. A shared facility can have multiple stances, with each stance limited to a maximum of 4 households.
- v. Connection of sinks, showers and toilets through a drainage trap to drainage system.
- vi. Greywater from the kitchen should be connected to discharge system or septic tank via a grease trap.
- vii. Septic tanks must be positioned so that they are accessible for emptying by trucks.
- viii. Superstructure can be built from permanent materials or any other whose performance has been approved by authority.
- ix. Smooth finish for floor and walls of the superstructure.
- x. Where applicable, allow support rails and ramp for PWDs.
- xi. Provide holder or container for anal cleansing material.
- xii. Provide container for MHM.
- xiii. Discharge drain pipes of minimum 100 mm (4 inches).

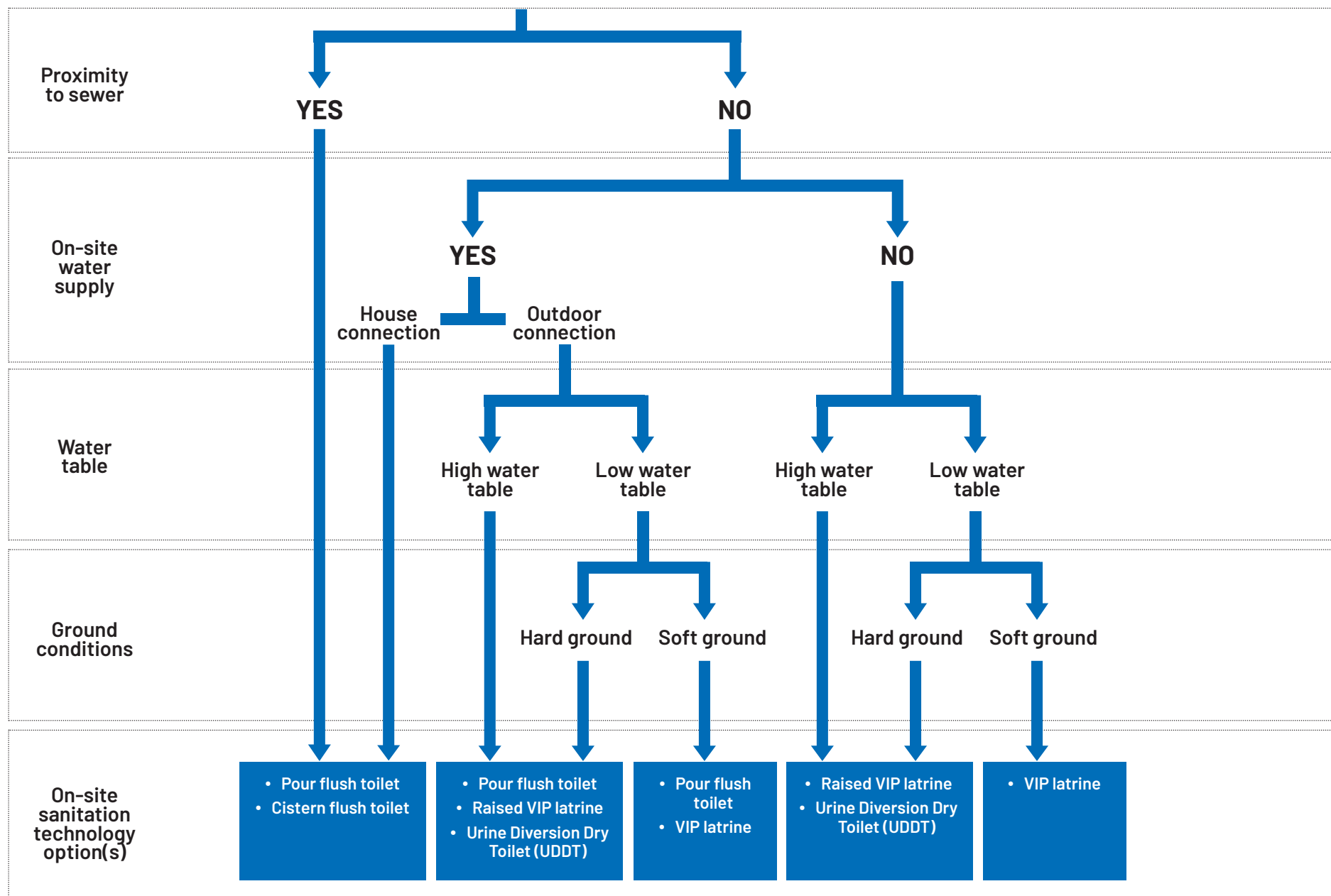
2.2 SELECTION GUIDE

The selection of appropriate sanitation technological options is often an iterative process involving multi criteria analysis of key composite factors either through multi-stakeholder engagements, computer aided systems and or expert opinions. Key factors influencing the decision on options to adapt include:

- i. socio-cultural including acceptability, perception, and usability,
- ii. environmental related to pollution and pathogen risk,
- iii. socio economic – number of users, affordability and resource optimization/re use,
- iv. physical environment including ground/soil conditions, ground water table levels and available land area,
- v. physical development of an area, and
- vi. water availability and service levels.

This minimum standard adopts three basic key criteria in the proposed simplified decision support framework (Figure 2-1) for minimum on-site containment technology options. These include availability of water supply, water table level and ground conditions. The menu of options for household toilets includes the cistern flush toilet, pour flush toilet, Lined VIP Latrines and Urine Diversion Dry Toilet (UDDT).

Figure 2-1: Household Toilet Selection Guide



2.3 STANDARDS FOR DIFFERENT TOILET OPTIONS

2.3.1 Lined Ventilated Improved pit latrine (VIP)

- This comprises a pit for containment of faecal sludge and a vent pipe that serves to prevent flies and odor from the pit.
- Pits are lined to prevent contamination of ground water and allow for emptying when full.
- The main features of a lined VIP are: a superstructure, lined substructure or pit, vent pipe, slab and access provision for pit emptying.
- This serves as the minimum option for households, institutions and public places in Northern Uganda.

KEY MINIMUM STANDARDS FOR VIP LATRINE

- Has access to facilitate emptying services.
- Pit should be emptied when contents are within 0.5 m below slab level.
- Light for night use.
- Stance to user ratio.
- Reinforced concrete slab thickness.

1:5
50 mm

VIP Latrine Location:

- Minimum distance from any habitable room/kitchen/food stores:
- Minimum distance from any plot boundary:

10m
1.5m

Vent pipe details:

- Minimum pipe diameter:
- Minimum distance between top end and the highest part of the roof:
- Fly screen (mesh) openings/holes:
- Connection to slab should be completely sealed:

110mm
at least 300mm
Max 1.5mm

Lined pit considerations:

- Minimum internal effective depth:
- Pit width:
- Pit bottom above the water table:
- Thickness of reinforced concrete slab above the pit:
- Drop hole length:

3.0m
1.2m
1.5m
50 mm
Max 250 mm

Superstructure/room details:

- Floor internal dimensions:
- Height from the floor to underside of ceiling:
- Dimension from hind superstructure wall to squat hole:
- Door raised from the floor to allow in air:
- Floor level above the surrounding above ground level:
- Door height:
- Door width:

1.0m x 1.5m
2.15m
Min 110 mm
150 mm
Min 150 mm
2100 mm
Min 750 mm

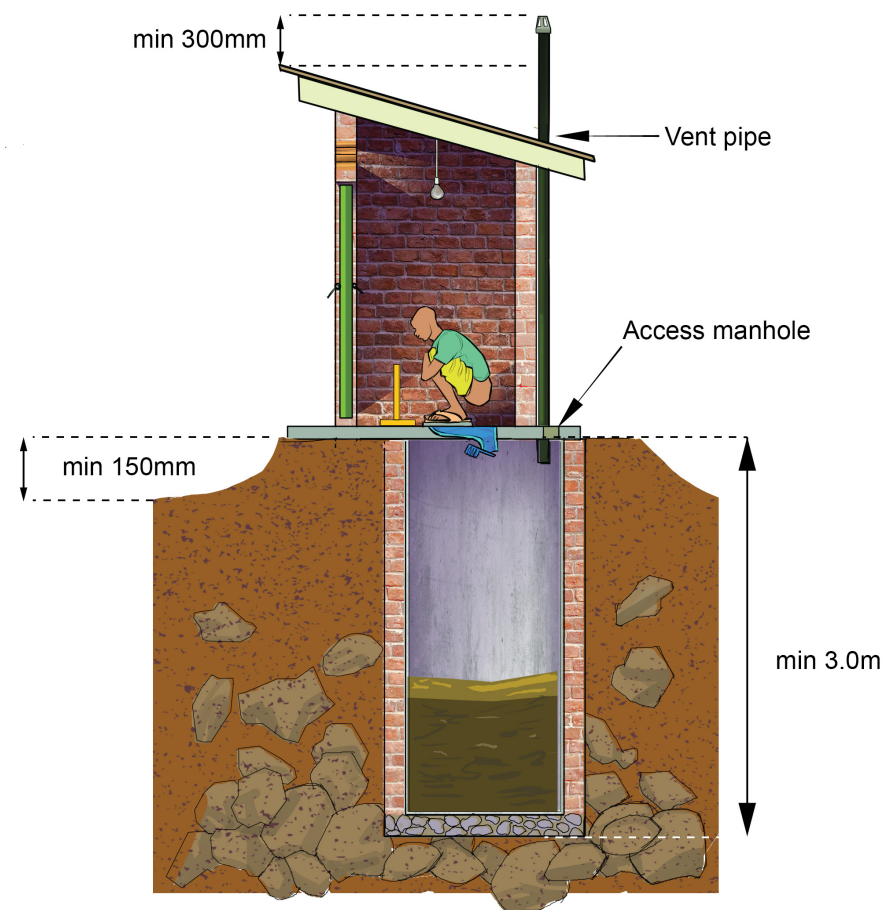


Figure 2-2: Ventilated Improved Pit Latrine

2.3.2 Precast VIP Latrine

- Prefabrication of components (substructure, superstructure and roof) can be a promising option for cost reduction as it can offer economies of scale. Moreover, prefabrication can be a way to control the material quality and reduce wastage.
- Examples include:
 - concrete rings (culverts) for lining the pits,
 - concrete panels for the outer walls of the superstructure or
 - prefab squat pans or toilet seats out of cement or plastic and
 - user interface products such as the SaTo pan and concrete slabs.

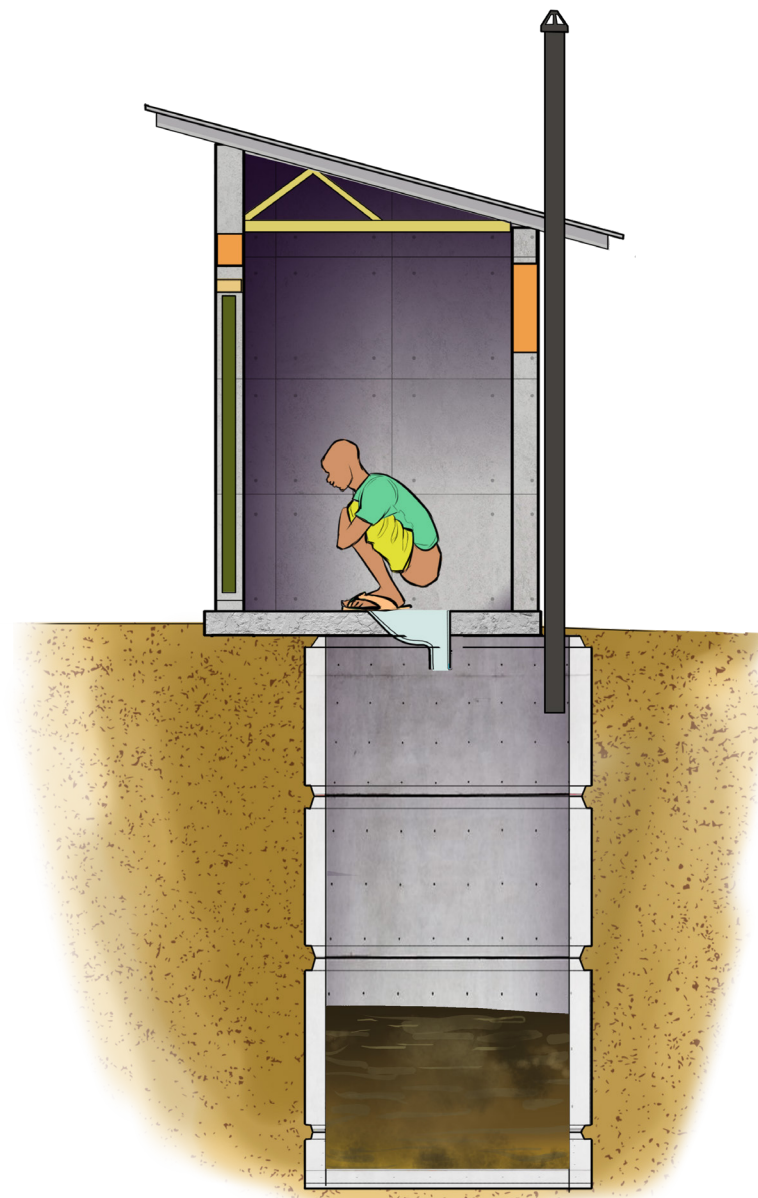
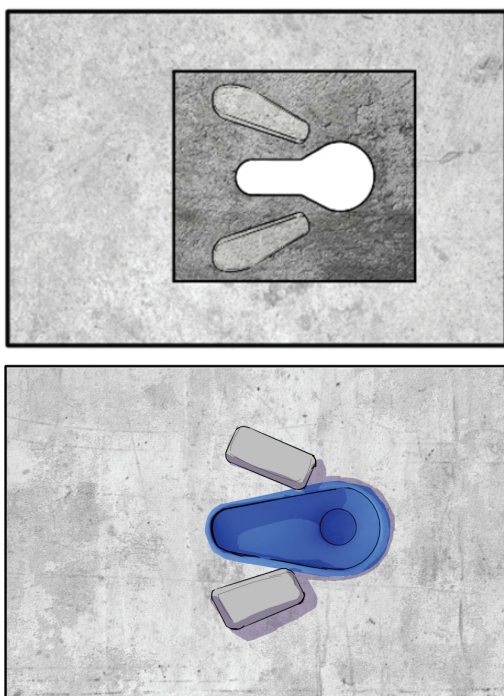


Figure 2-3: Precast Concrete Slabs (left) and Precast Concrete Ring Liners (right)

2.3.3 Waterborne Toilets

- Waterborne toilets can be **Pour Flush Toilet** or **Cistern Flush Toilet**.
- Water closets (WCs) use water to transport human excreta through a drainpipe either to a sewer for offsite treatment or to a septic tank or sewer (where present).
- A typical water borne toilet comprises a superstructure, toilet pans, flushing system, vent pipes, manholes for connecting drainage pipes at junctions and bends and a connection to a conveyance or treatment system.
- Cistern flush use 3 to 15 litres of water per flush while pour flush uses 1.5 to 3 litres.

KEY MINIMUM STANDARDS FOR CISTERN/POUR FLUSH TOILETS

- Light provision for night use.
- Holder or container for anal cleansing material.
- Cistern require overhead tank for storage of water to be used in flushing and cleaning.
- Discharge wastewater to: (i) sewer, (ii) septic tank or (iii) emptiable lined pit.

Superstructure/room details:

- Floor internal dimensions: 1.0m x 1.5m

Flushing water (litres per person per day)

- Cistern flush 10
- Pour flush 1.5

Water use per flushing event (litres)

- Cistern flush 3 to 15
- Pour flush 1.5 to 3

Pan/ bowl details:

- Dimensions: 450mm long and 200mm wide
- Shape: oval or pearshaped
- Rear outlet angle with bottom slope towards the back. 25 – 30 degrees
- Water seal depth minimum of 20mm
- Minimum outlet pipe diameter 70mm
- Minimum discharge pipe diameter 100mm
- Pipe slope for self-cleaning velocities 1:30

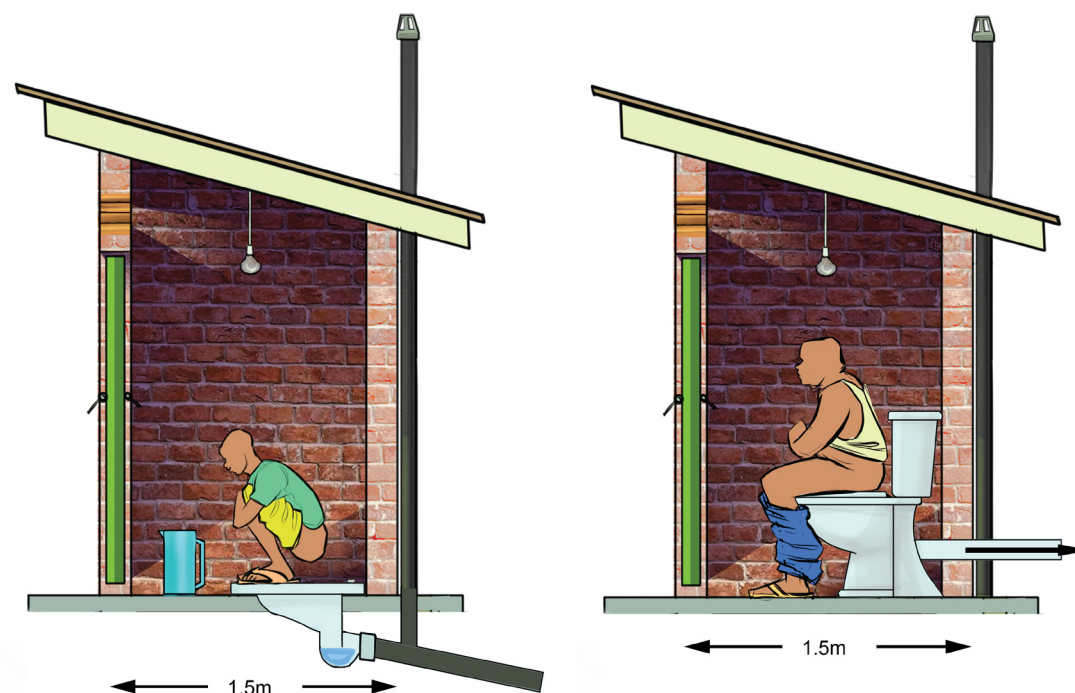


Figure 2-4: Pour Flush Toilet and Cistern Flush Toilet

2.3.3.1 Septic tank

- It's a containment technology connected to waterborne toilets.
- Septic tanks are watertight chambers sited below ground level for storage and partial treatment of excreta and grey water. They are made from reinforced concrete and brick work or plastic materials (prefabricated form or modular tank units).
- Septic tanks discharge the effluent in soak away pits or drainage trenches.

KEY MINIMUM STANDARDS FOR SEPTIC TANK

- Should comprise 2 underground water tight compartments/chambers
- The first chamber is at least twice the size of the second chamber
- Each compartment of a septic tank shall have an access:
 - not less than 455mm by 610mm (rectangular) or
 - opening 500mm diameter (circular).
- Location of septic tank (similar to that of a soak pit)
- Minimum and maximum water depth levels of 1.4m and 2m, respectively.
- A T-shaped outlet pipe to further reduce the amount of scum and solids discharge to soak pit
- The base should be at least 15cm thick concrete.
- Ventilation pipe of at least 50mm diameter fitted with mesh/fly screen
- Emptied at least after 5 years or when sludge fills ones-third of the tank volume, whichever occurs first.
- Media such as gravel, crushed rock, activated carbon can be included in the second chamber.

Location of Manholes leading to septic tank:

- Points of change in direction
- At junctions
- Where there is a change in gradient/grade
- At intervals of ≤ 50 m for very long straight sewer pipes.

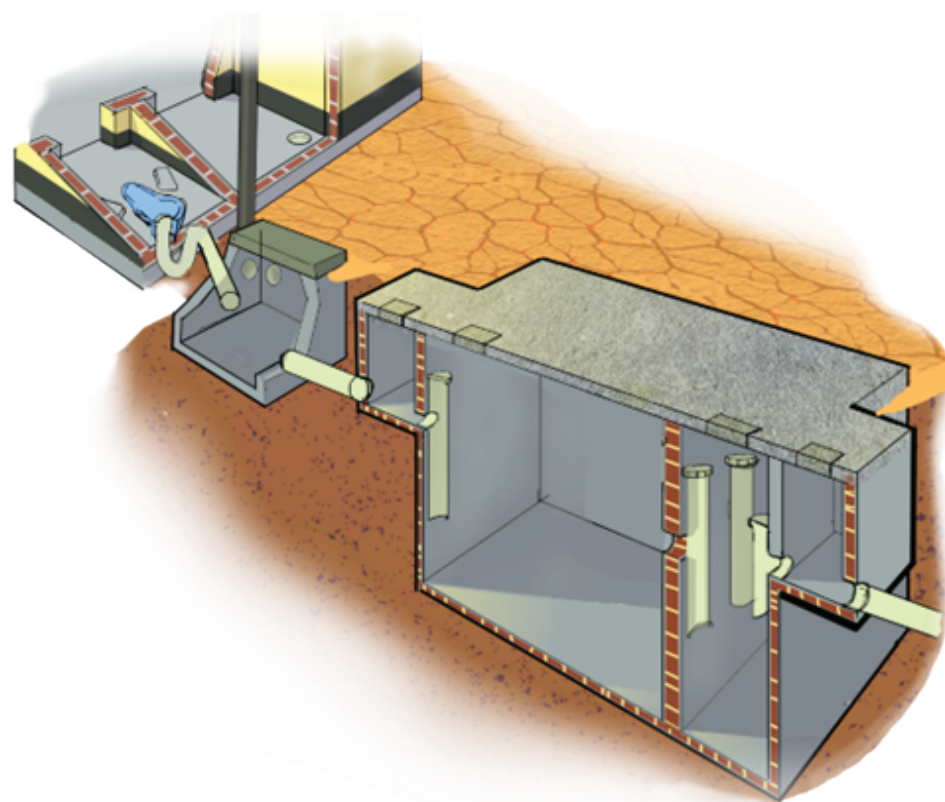


Figure 2-5: Septic Tank

2.3.3.2 Soak away pit

- A soak away is a porous-walled chamber or unlined chamber filled with gravel that allows the septic tank effluent to slowly soak into the ground.
- Gravel packed soak pits are the common practice in Uganda.

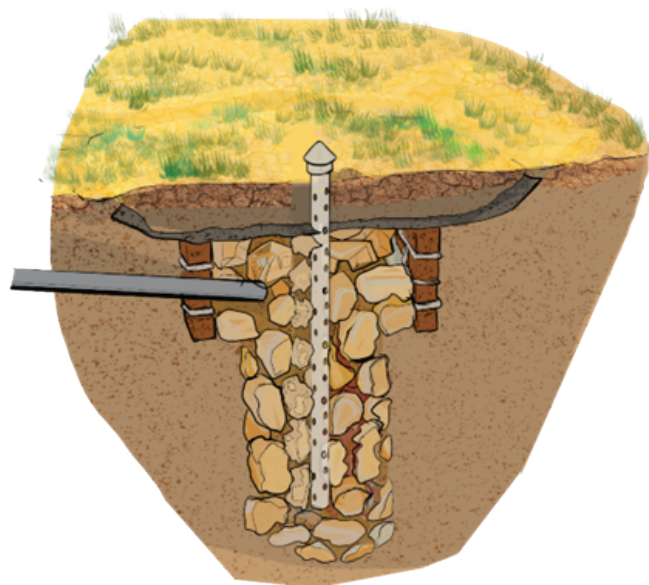


Figure 2-6: Gravel-filled Soak Pit

2.3.3.3 Drainage field

- It is a network of perforated pipes that are laid in underground gravel-filled trenches to dissipate the effluent from a septic tank. They require a large area and unsaturated soil with good absorptive capacity to effectively dissipate the effluent, hence are not appropriate for dense urban areas.

KEY MINIMUM STANDARDS FOR SOAK PITS

- Should be kept away from high-traffic areas not to compact the soil above or around it
- Can be empty or lined with a porous material to provide support and prevent collapse.
- It can be left unlined and filled with coarse rocks and gravel.
- A layer of sand and fine gravel should be spread across the bottom to help disperse the flow
- A removable cover can be used to seal the pit and allow for future access.
- Not appropriate for areas prone to flooding or that have high groundwater tables

Depth	1.5 to 4 m
-------	------------

Location of septic tank and soak away pit

• From buildings	1.5m
• From water pipes	3.0m
• Groundwater table from soak pit bottom	2m
• Paths/walkways	1.5m
• Large trees	3.0m
• Cuts/embankments	30.0m
• Streams/rivers	30.0m

KEY MINIMUM STANDARDS FOR DRAINAGE FIELDS

- Each trench is 0.3 to 1.5 m deep and 0.3 to 1 m wide.
- The bottom of each trench is filled with about 15 cm of clean rock and a perforated distribution pipe is laid on top.
- The pipe should be placed at least 15 cm beneath the surface to prevent effluent from surfacing.
- The trenches should be dug no longer than 20 m in length and at least 1 to 2 m apart.
- To prevent contamination, a leach field should be located at least 30m away from any drinking water source.
- A leach field should be laid out such that it will not interfere with a future sewer connection

2.3.4 Twin Pit Pour Flush toilet

- The excreta is carried into subsurface leach pits through pipes and one pit is used at a time. The liquid infiltrates into the soil through the holes in the pit lining. The gases also disperse into the soil, and therefore, the provision of a vent pipe for its outlet is not necessary. When one pit is full, the excreta is diverted to the second pit.
- The twin pit pour flush toilet consists of:
 - A squatting pan
 - A trap with a 20 mm water seal, to prevent the emission of foul smell and fly / mosquito nuisance
 - Two leaching pits(honey comb lining)
 - An interconnecting system between pits and trap
 - A superstructure

KEY MINIMUM STANDARDS FOR TWIN POUR FLUSH TOILET

- A toilet can be located inhouse or outside house while the pits are only located outdoors
- Has access to facilitate emptying services
- Pit should be emptied when contents are within 0.5 m below slab level
- Spacing between pits should be at least equal to effective depth of the pit.
- Impervious barrier (cut-off screen or clay seal) provided between the two pits

Shape of pits	Circular
Flushing water	5 litres
Number of users	5 to 15

Toilet Location:

- Not in flooded areas
- Pits under pit located under paths in small spaces

Squatting pan materials:

- Ceramic
- Glass fibre Reinforced Plastics (GRP)
- Cement concrete (CC)
- Poly Propylene (PP) or Poly Vinyl Chloride (PVC)

Superstructure/room details:

• Floor internal dimensions:	1.0m x 1.5m
• Height from the floor to underside of ceiling	2.15m
• Door raised from the floor to allow in air	150mm
• Floor level above the surrounding above ground level	Min 150 mm
• Door height	2100 mm
• Door width	Min 750 mm

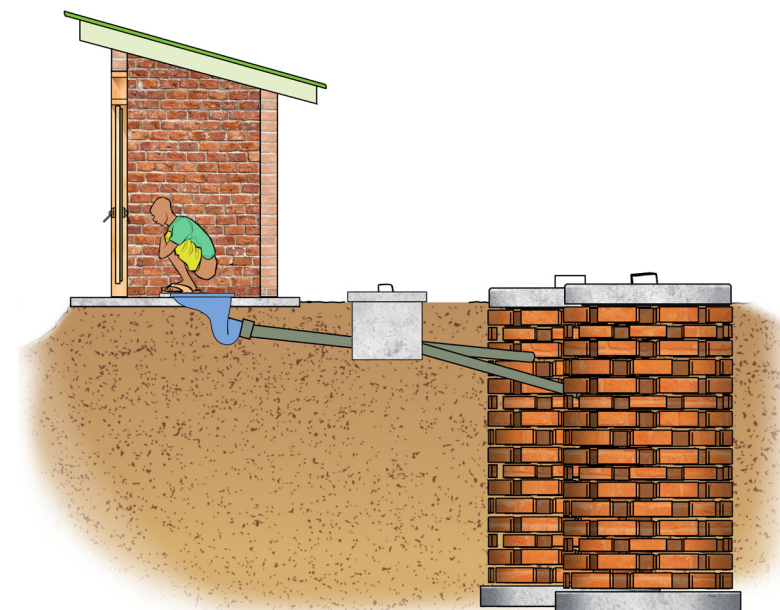
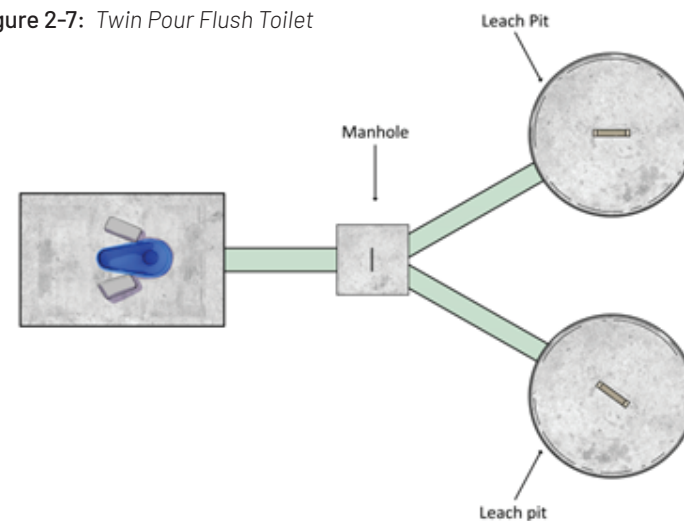


Figure 2-7: Twin Pour Flush Toilet



2.3.5 Urine Diversion Dry Toilet (UDDT)

- A Urine Diverting Dry Toilet (UDDT) is an ecological sanitation toilet option which involves separation of urine from faeces and operates on principle of waste sanitization for re use.
- UDDTs are only recommended for use by households (not institutions or public places) under special circumstances because of the operation and maintenance requirements.
- Only limited to households in places of high-water tables and firm/rocky ground as well as where urban agriculture is favoured.
- **NOTE:** The technology is not applicable at institutions or public places in Northern Uganda.

KEY MINIMUM STANDARDS FOR UDDT

- Door raised 50mm from the floor to allow in air.
- Include container for storing ash.
- Light for night use.
- Holder or container for anal cleansing material.
- Slab made of reinforced 50mm thick concrete.
- Vent pipe: same standards as VIP latrine.
- Wash the bowl with a mild acid and/or hot water to prevent buildup of deposits and scaling.
- 6 months minimum sanitisation period for excreta before reuse.
- 1-month minimum sanitisation period for urine excreta before reuse.

Superstructure/room details:

- Floor internal dimensions: 1.0m x 1.5m for a double vault with one door.
- Height: 2.15 m from the floor to the underside of ceiling.
- Burnt brick walling: flush pointed internal and external finishes.

Piping to urine storage tanks:

- Piping to urine storage tanks should be:
 - installed with at least a 1% slope for proper urine flow
 - water tight to prevent wetting vault contents
 - kept as short as possible and sharp angles (90°) avoided to limit scaling.

Vaults/ chambers:

- Two chambers facing direction of maximum sunshine.
- Minimum floor dimensions of 750mm x 600mm.
- Inclined (150) steel plate access door painted black for maximum heat retention.

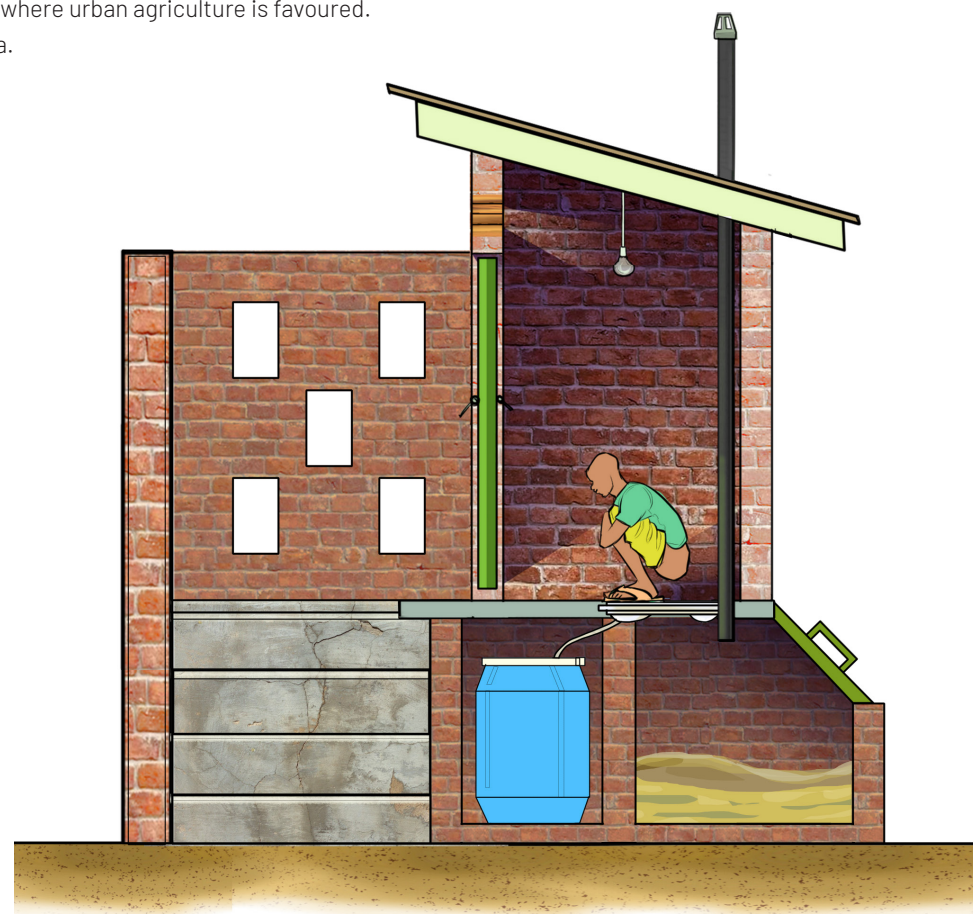


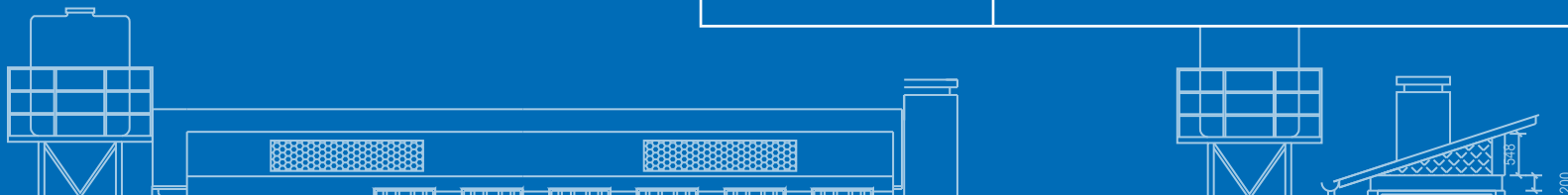
Figure 2-8: Urine Diversion Dry Toilet (UDDT)



ELEVATION 1

03

PUBLIC & INSTITUTIONAL
TOILETS



3. PUBLIC AND INSTITUTIONAL TOILETS

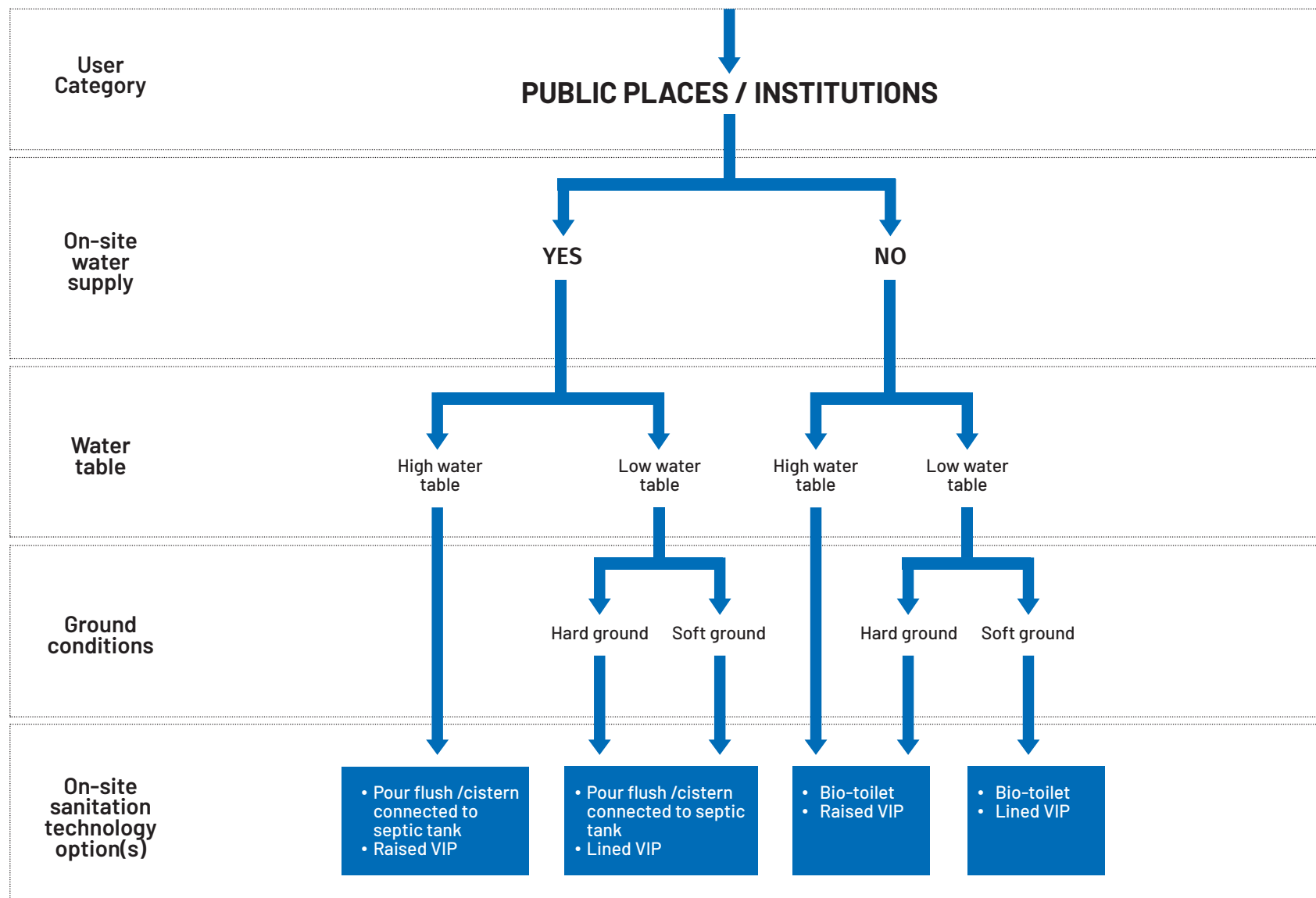
This section relates to toilets for public and institutional use such as markets, vehicle parks, recreational parks, offices, churches, mosques and commercial buildings (hotels, hostels, lodging houses, shopping malls and apartment blocks). On the other hand, institutional toilets include facilities used in health centres, prisons and schools (primary and secondary).

3.1 GENERAL REQUIREMENTS

- i. All public and institutional buildings/places can be lined VIP latrines or water borne toilet facilities drained to a septic tank and soak pit within the plot or connected to a sewer system.
- ii. Simple signage prominently displayed indicating EXIT, ENTRANCE, GENDER, as well as stances for PWD and ABLUTION.
- iii. Provisions for persons with disability (PWD) with at least one stance. The PWD should include the following:
 - Access ramp with a landing.
 - Hand rails on the ramps.
 - Interior support rails fixed on the walls and/or floor.
- iv. Provisions for persons with disability with at least one stance reserved for each gender.
- v. Separate toilet stances for male and female.
- vi. Urinals at the boys/male side: minimum is trough urinal.
- vii. Handwashing facility with soap on each toilet block side.
- viii. Toilet areas for each gender should be separated by solid walls (not lightweight partitions) and should have separate entrances.
- ix. Refuse bin in all toilets for females.
- x. **Waterborne toilets:** Provision for at least 10 liters per person per day for conventional (cistern) flushing toilets and at least 1.5 liters per person per day for pour flush toilets.
- xi. **For school toilets:**
 - Separate wash room for girls fitted with disposal or refuse bin and provision for water for cleansing.
 - Ablution tap or container for schools with washer population of more than 50.
 - One shower for every 20 users in boarding schools.
 - An incinerator near facilities for girls.

3.2 SELECTION GUIDE

Figure 3-1: Public and Institutional Toilet Selection Guide



3.3 STANDARDS FOR DIFFERENT TOILET OPTIONS

3.3.1 Lined VIP latrines for institutions and public places

- This is the minimum onsite technology across all institutions and public places.
- However, some specifics can differ for different institutions. For example, there are specific minimum requirements for schools that do not concern public facilities.
- Each VIP latrine stance to have a vent pipe, extending to the pit space.

KEY MINIMUM STANDARDS FOR VIP LATRINE FOR INSTITUTIONS AND PUBLIC PLACES

- Has access to facilitate emptying services
- Pit should be emptied when contents are within 0.5 m below slab level
- Light for night use
- Drop hole: Key shape of min size – 380mm long and 180mm wide at the back and 100mm at front end

Separate washroom for girls/ladies with the following:

- fitted with disposal/refuse bin
- provision of water for cleaning

Vent pipe details – Lined pit considerations – Superstructure/room details

- Refer to Household VIP details

SCHOOL LATRINES

- Separate blocks for boys, girls and teachers
- Girls' latrine block with Washroom / bathroom/ Menstrual Hygiene Management (MHM) room
- A local incinerator for MHM
- At least one stance for PWD on each latrine block
- Boys block with urinals (Trench urinals in VIP latrine)
- Handwashing facility with soap (group HWF as minimum) at Girls and Boys side.

Min size: 1.5 by 2.5 m

STANCE RATIO

Boys / Girls block (Without Urinals):

- Up to 100 users
- More than 100 users

1:25

1:40

Boys' latrines (With Urinals):

- Up to 100 users
- More than 100 users

1:50

1:80



Figure 3-2: Top: School VIP latrines – Girls' Block (with PWD, Bathroom and Incinerator) Bottom: VIP latrine Block for Health Centres – Maternity Wing (with PWD and bathrooms)

3.3.2 Water Closets/Flushing toilets for public places

- For public places such as parks, markets, commercial centres, etc., with waterborne toilets, the following standards can be adopted:

KEY MINIMUM STANDARDS FOR PUBLIC TOILETS

- Min of 2 Stances for females and 2 Stances for Males
- Holder or container for anal cleansing material
- Discharge to sewer (where available) or to septic tank
- 1 shower facility for females and males each
- Double hooks (for hanging) fixed behind cubical doors
- Ablution tap coupled with hose and a spring-loaded nozzle in at least 1 stance per sex
- Floor trap in stances with the ablution tap and flooring should drain towards floor trap.
- One stance for 100 users per day for public places such as markets and parking areas.
- Standby attendant and cleaning at 3-hour intervals if more than 200 users per stance.
- A hand washing facility with soap for each side (male and female)
- Windows clear enough to provide day light
- Raised water storage tank with a capacity of at least 1000 litres
- Access road of minimum 4.0m width to facilitate septic tank emptying with a vacuum truck
- Signage with visible and legible directions to toilet location
- Should face public areas such as footpaths, roads, or places of high human traffic
- Space for an operator to sit
- All pipe work and cables should be concealed
- Tiled walls (up to 1.5m above floor level in toilets and 2.0m in bathing rooms) and painted walls
- Sanitary disposal units for each female unit: clean, with a no touch lid, lined with removable polythene bag
- Rubbish bin: clean, with a "no touch" lid, lined with polythene for safe removal of garbage
- Use of low-cost energy/electric power fixes
- Cubicle doors lockable from the inside.

Superstructure/room details:

- | | |
|--------------------------------------|--------------|
| Room internal dimensions | 1.0m x 1.5m |
| Persons with Disability (PWD) Stance | 1.5m x 2.15m |

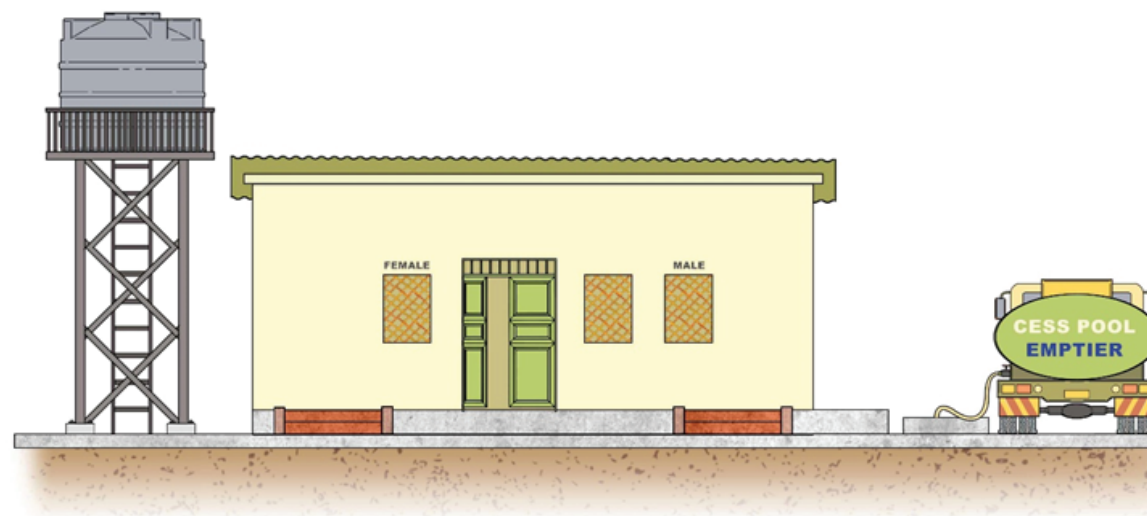
Provide access ramps with:

- | | |
|--|----------|
| Width | 1.5m |
| Slope for spans of maximum 1m | 1:10 |
| Slope for spans longer than 1m | 1:20 |
| Slope for slanting grounds at entrance | Max 1:25 |
| Hand rails of min 0.6m height ending 0.3m from both ends of the ramp | |
| Hard and nonslip surface | |
| Landing of minimum 1.3m wide by 1.3m long at every 10m, change of direction and bottom of ramp | |

Provide Urinals for Males

- 100 Users: Provide 1.0m length trough urinal or one single bowl
- 200 Users: Provide 1.9m length trough urinal or 2 Singles
- 300 Users: Provide 2.85m length trough urinal or 3 Singles.

Figure 3-3: Waterborne Public Toilets



3.3.3 Public Water Closets/Flushing toilets for Schools

KEY MINIMUM STANDARDS FOR SCHOOL TOILETS

- Separate stances for boys, girls and teachers
- Holder or container for anal cleansing material
- Hygienic to use and easy to clean
- 1 shower facility for girls with soap, water and basin
- A hand washing facility with soap for each side (girls and boys)
- At least a wheel chair disabled facility
- Sufficient ventilation and lighting
- Raised water storage tank with a capacity of at least 2500 litres
- Access road of minimum 4.0m width to facilitate septic tank emptying with a vacuum truck
- Signage with visible and legible directions to toilet location
- Gutters for all roofs for stormwater management
- A local incinerator for collecting and burning sanitary towels.
- All pipe work and cables should be concealed
- Tiled walls (up to 1.5m above floor level in toilets and 2.0m in bathing rooms) and painted walls
- Sanitary disposal units for each female unit: clean, with a no touch lid, lined with removable polythene bag
- Rubbish bin: clean, with a "no touch" lid, lined with polythene for safe removal of garbage
- Use of low-cost energy/electric power fixes
- Cubicle doors lockable from the inside.
- Cistern or pour flushing system
- Pupil to Stance ratio of 1:40



Figure 3-4: School Pour-flush toilet

3.3.4 Institutional / Public toilets Add-ons and Key accessories

- These are facilities that are added on to the toilets, such as handwashing facilities, urinals incinerators, etc.

3.3.4.1 Handwashing facilities

KEY MINIMUM STANDARDS FOR HANDWASHING FACILITIES

- Should be installed outside the toilets for common use by all users, especially for public toilets
- The wash basin in toilets for PWD should be within reach from a seated position so that one can use it without standing up.
- Recommended heights: high sink of 0.8m or low sink of 0.4m for crawling PWD children
- Convenient handwashing facilities at less than 5m from toilets
- Allow proper drainage of wastewater

For wash basins:

- Minimum size of 500mm in length and 400mm in width.
- For 2 or more basins in public places, one should be installed at child's height

For schools:

- Group handwashing facilities such as WASHaLOT 3.0 can be adopted.
- Handwashing points to student ratio is 1:40
- Located in most convenient places such as toilets, kitchen and classrooms

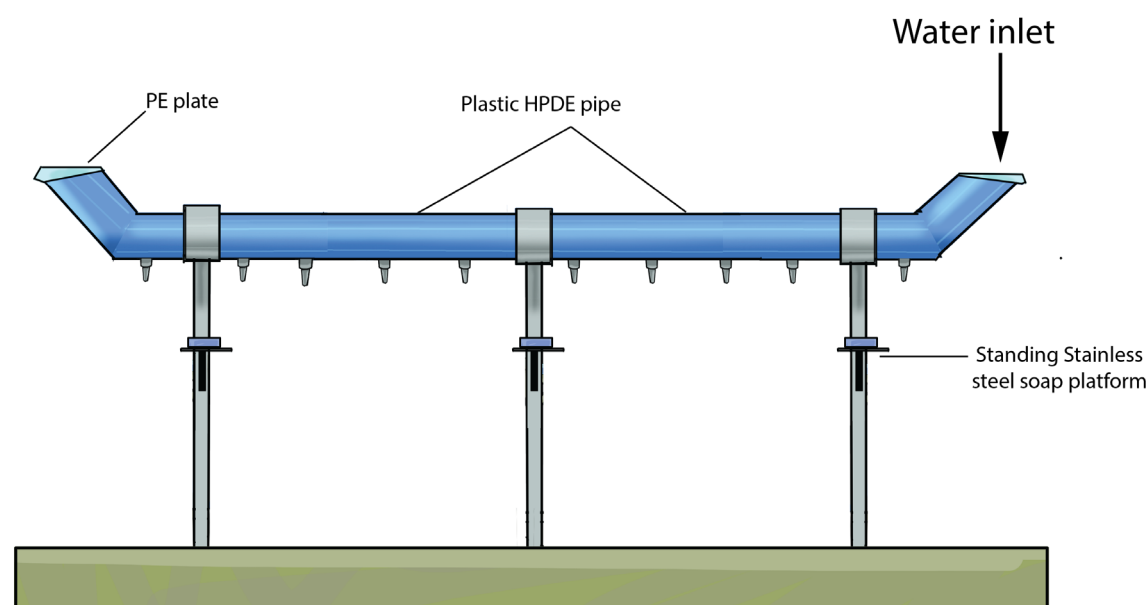


Figure 3-5: WASHaLOT 3.0 Handwashing Facility

3.3.4.2 Incinerator

An incinerator is used to safely and hygienically dispose of menstrual wastes from schools and medical wastes from health centres. Waste volume and mass reduce by over 90%. Incinerators can be built from bricks or metallic sheets.

KEY MINIMUM STANDARDS FOR INCINERATORS

- Every school is required to have at least an incinerator
- Minimum height of chimney is 1.5 m
- Operational temperature of at least 600°C to avoid emitting excess hazardous gases.

Site location Consideration:

- A flat, open terrain is desirable. Not in areas with tall trees and vegetation to prevent smoke disappearance.
- Not near populated areas, such as residential, markets, etc.
- Not near agricultural areas, such as leafy vegetables and animal feeds
- At least 30 m from nearest building and storage areas holding flammable materials
- Areas of low security risks.
- Away from the prevailing wind direction (always at the back of the facility)

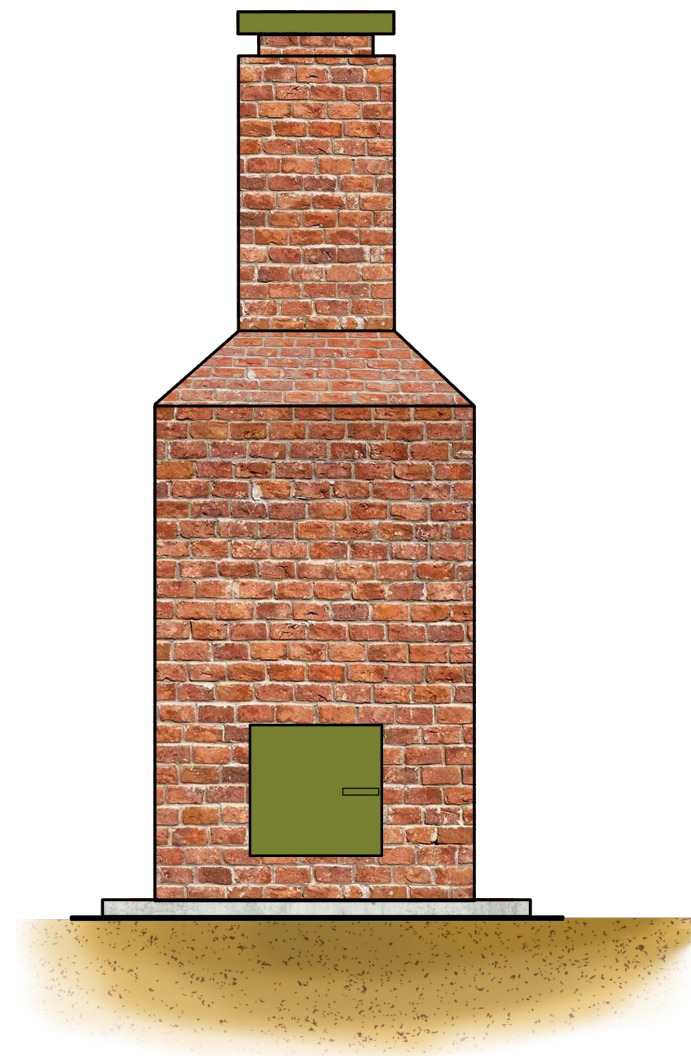
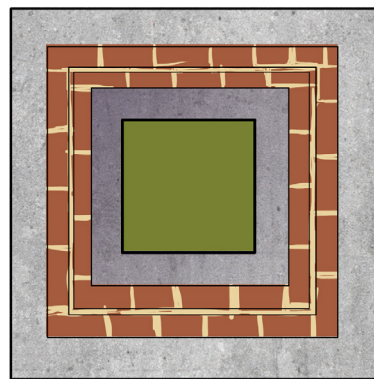


Figure 3-6: Incinerator

3.3.4.3 Urinals

KEY MINIMUM STANDARDS:

- May be individual wallmounted units, more than 300mm wide, or as a trough properly graded towards the opposite wall.
- If more than one wallmounted unit provided, one should be child friendly.
- Urinal troughs should be bordered by walls on the left and on the right side.
- Lip of the collection area should project from the wall by at least 250mm.
- A concrete step/landing of at least 325mm could be built in front of the urinal. Between the step and the wall behind should be at least 575mm.
- Distance between urinals 750mm.
- Discharge pipes or urinal channels should be laid at a slope of not less than 1 in 40.

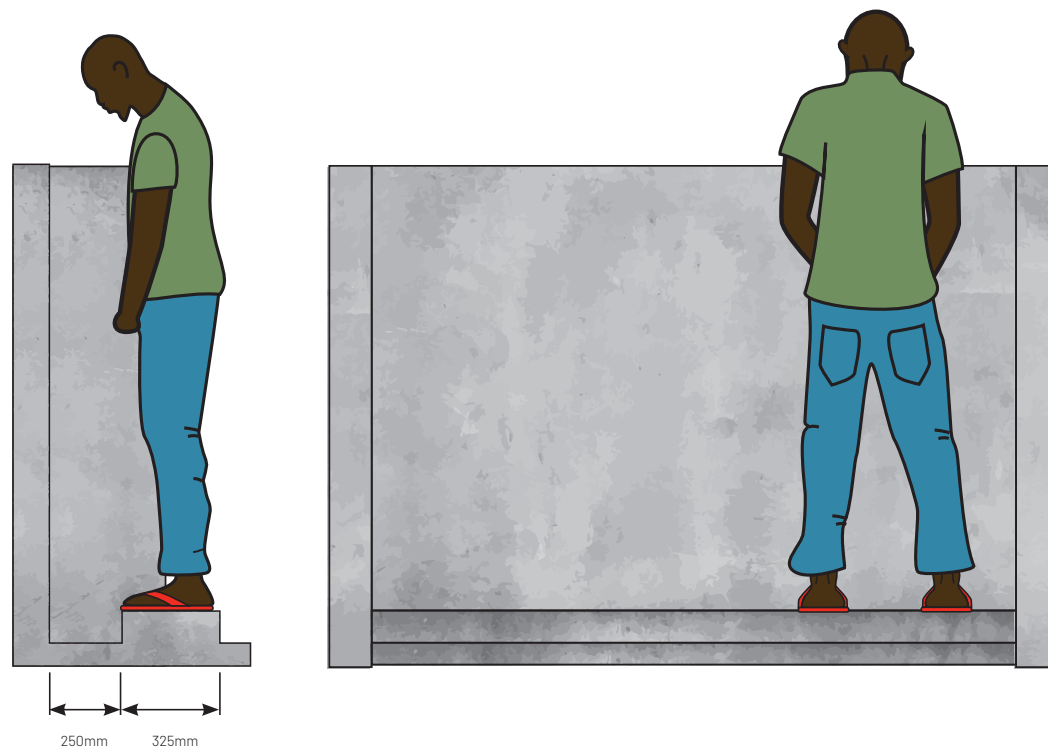
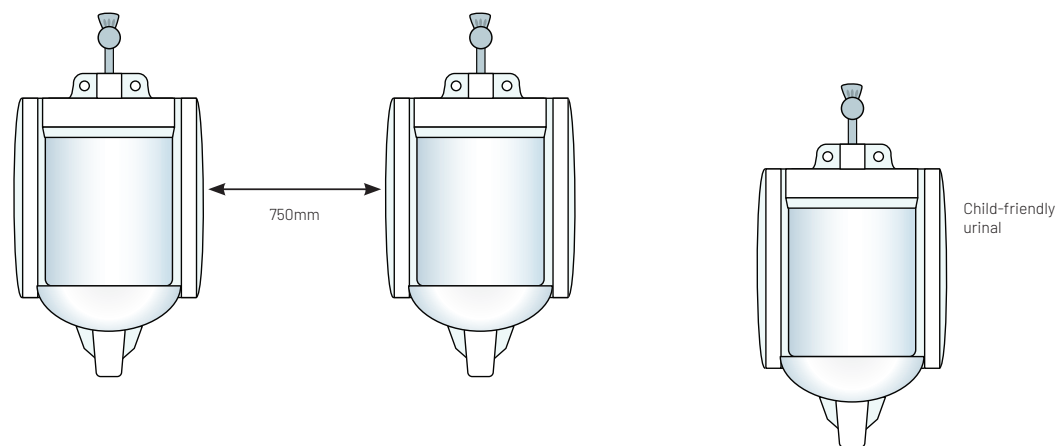


Figure 3-7: Trough and wall-mounted urinals for institutions and public places





04

OPERATION AND MAINTENANCE OF ONSITE SANITATION FACILITIES



4. OPERATION AND MAINTENANCE OF ONSITE SANITATION FACILITIES

4.1 Operation and Maintenance Requirements

Operation and maintenance should follow standard sanitation and asset management practice in line with O&M guidelines as well as other existing national provisions, such as the Ministry of Education and Sports Handbook for Operation and Maintenance of Water, Sanitation and Hygiene Facilities in Schools in Uganda, Ministry of Health WASH Guidelines (2022). Key provisions include: daily cleaning of facility, immediate repair to structures, safe operation in line with guidelines for each sanitation option.

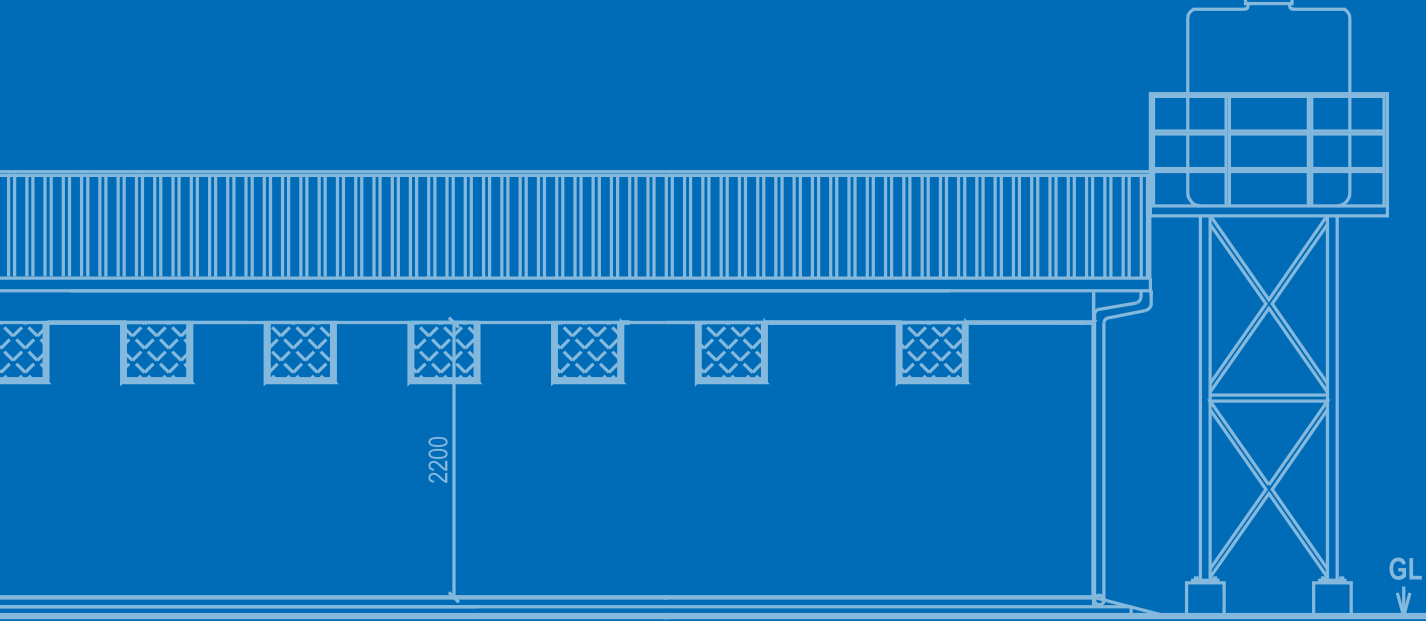
4.2 Operation and Maintenance Plan for Institutional and Public Toilets

Operation and maintenance plan must be put in place to cover for the running and repairs of sanitation infrastructure and services. This should include regular or incidental repairs and scheduled maintenance activities. The key particular operational and maintenance aspects are presented in **Table 4-1**.

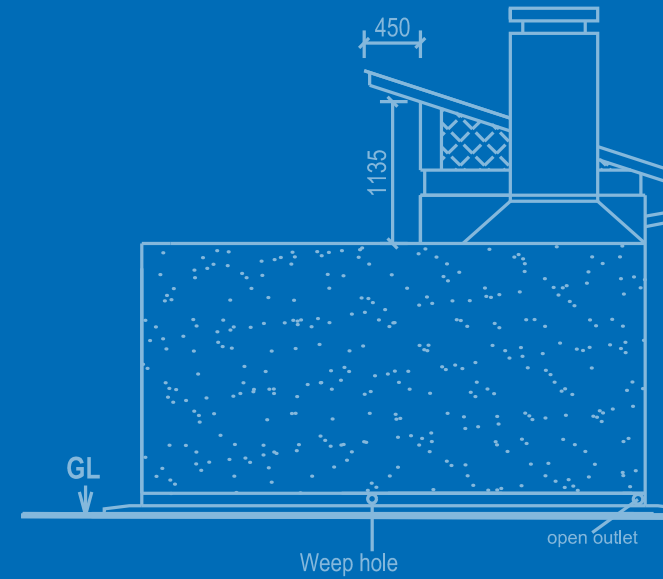
- Toilets should be cleaned whenever they are dirty, and at least thrice a day with a disinfectant used on all exposed surfaces and a brush to remove visible soiling.
 - Strong disinfectants are unnecessary and should not be used in large quantities
- There should be weekly and daily cleaning schedule that specify when sanitation facilities should be cleaned and supplied with cleaning and hygiene agents.
 - Cleaning schedule should identify persons or groups responsible for undertaking the cleaning tasks and their supervisors.
 - The schedules should be displayed for easy access and be shared among responsible managers.
- Orientation, training, and education of users. Orientation materials, personnel and time should be dedicated to help new comers, regular visitors, and staff members.
- Faecal sludge should be emptied when the septic tank is $\frac{3}{4}$ full.
 - Cleaning and maintenance inspection activities should be documented and reported meetings.
- Supervising and facilitating participation and empowering ownership over maintenance of toilets/latrines facilities.
- Carrying out vector control through:
 - Slashing of the toilet surrounding on regular basis
- Ensuring continued safe access to sanitary facilities including convenient design and lighting of sanitary facilities.
- Ensuring water supply infrastructure functions well (consistent fill rate) and that the lifespan of water supply facilities is maximized.

FACILITY	DAILY OPERATIONS	MONTHLY OPERATIONS	REGULAR MAINTENANCE
Lined VIP latrines and Waterborne toilets	<ul style="list-style-type: none"> • Clean the slab/floor with soap and water • Clean the Urinals to avoid staining • Check the cleaning schedule to ascertain when and who to clean facility • Check for the internal locks on the doors • Supply of anal cleansing material • Ensure clean handwashing facilities close to the toilet. • Check walls for faeces and clean (if any) • Ensure clean washroom(s) • Refill water tanks (if any) • For Sato Pan Interface: • Clean the pan after visiting the toilet • Use little water (<0.5 litres) and toilet brush 	<ul style="list-style-type: none"> • Check superstructure for damage and maintain if at all • Check for any damage of vent pipe • Check that the latrine or septic tank is not full. • Should be emptied when full. • Inspect the slab for cracks and holes • Presence of functional door that provides privacy • Availability of protective gloves and boots for cleaning • Slashing around the facilities and clear the access path 	<ul style="list-style-type: none"> • Keep toilets functional and prevent them from breakdown and expensive repairs. • Simple repair like fixing a door lock or replacing a broken tap should be done immediately. • Small tasks, like refilling soap, can easily be performed by students. • Regular scheduled maintenance inspection is helpful to prevent major repairs in the future • Trained staff for minor repairs • Possession of a tool box
Handwashing facilities	<ul style="list-style-type: none"> • Ensure presence of person(s) responsible for water refilling and cleaning of handwashing facilities. • Check on presence of stock for cleaning supplies • Presence of water and soap at handwashing stations. • Check taps and tanks for breakage • Check operation of pedal mechanism or foot pumps • Check for obvious smell or high turbidity in water • Check if the handwashing facility and its components are visibly clean • Check for any stagnant water around the base and drain it. 	<ul style="list-style-type: none"> • Check whether soak pit/ drain/ waste bucket is operational. • Slashing around the facilities and clear the access path. 	
Incinerator	<ul style="list-style-type: none"> • Check for evidence of cracks on brickwork • Carefully sweep the area around the incinerator • Clean tools and equipment • Store healthcare wastes in an orderly manner • Maintain fuel stock levels 	<ul style="list-style-type: none"> • Clean the chimney to remove soot • Remove lumps of melted glass/plastic and clean grate • Reinstall grit after cleaning • Check cement seal to bricks • Perform simple repairs • Inspect and replace metal parts, bricks and consumable parts • Check status of the ash pit. 	

Figure 4-2: Wall mounted urinals



ELEVATION 1



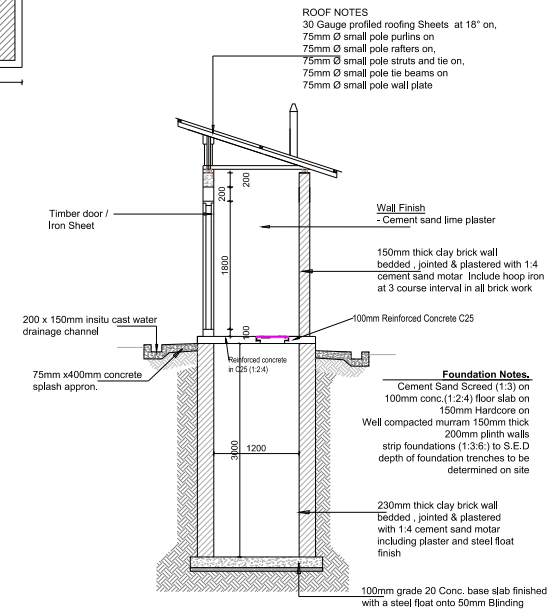
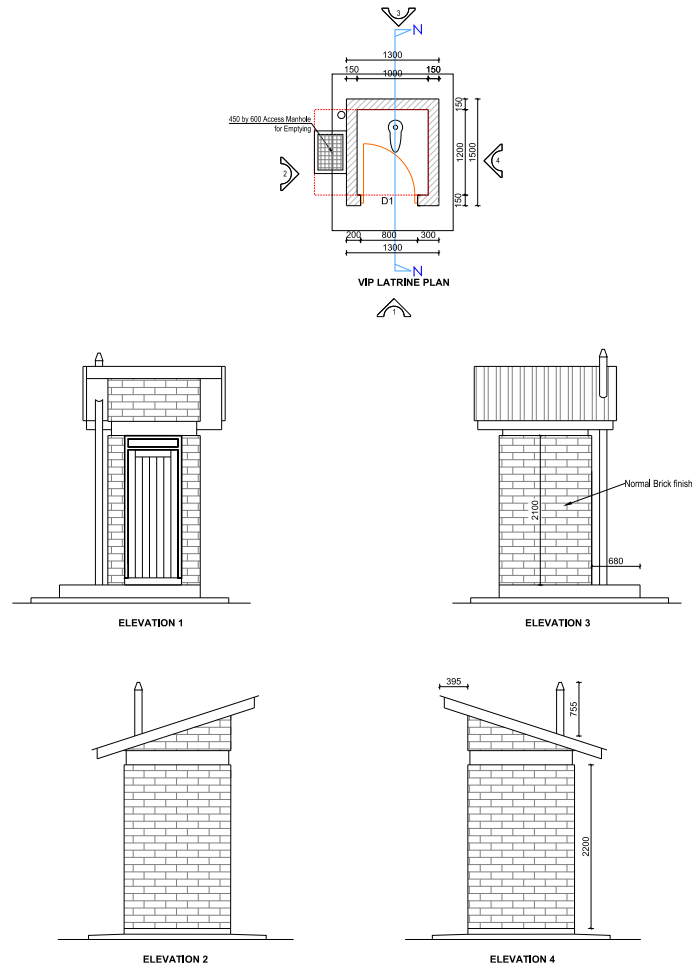
ELEVATION 3

APPENDIX A1

SAMPLE DETAILED ENGINEERING DRAWINGS

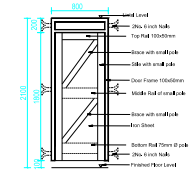
HOUSEHOLD SANITATION TECHNOLOGIES

LINED VENTILATED IMPROVED PIT LATRINE (VIP) - SINGLE STANCE



NOTES

- External Plastering has not been considered in the BoQ only floor screed and internal plastering are considered.
- All foundation walling is header bond
- The depth of external wall excavation is assumed not to exceed 800mm
- Painting, external plastering, facial board maybe costed separately.

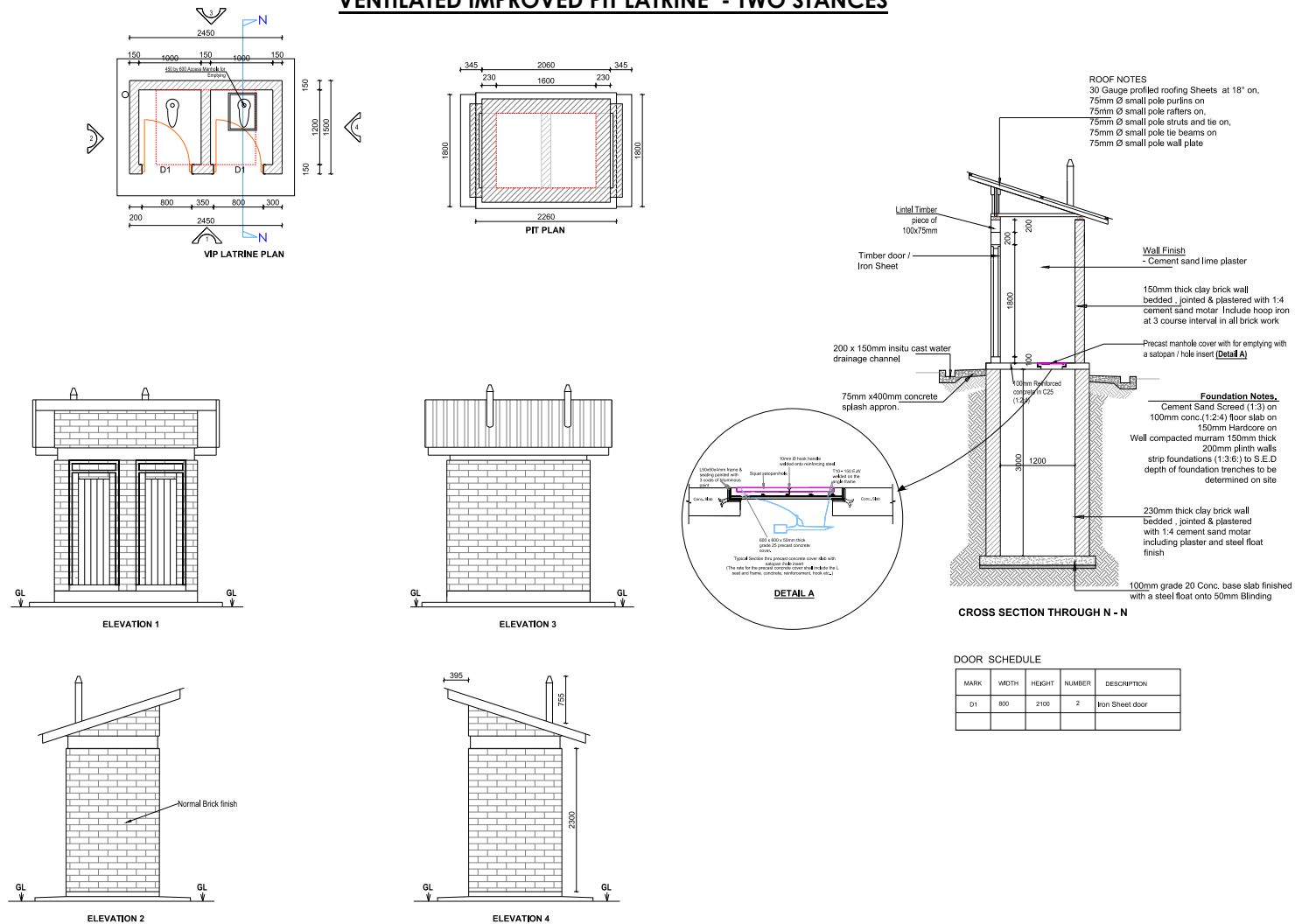


DOOR SCHEDULE

MARK	WIDTH	HEIGHT	NUMBER	DESCRIPTION
D1	800	2100	1	Timber door / Iron Sheeting

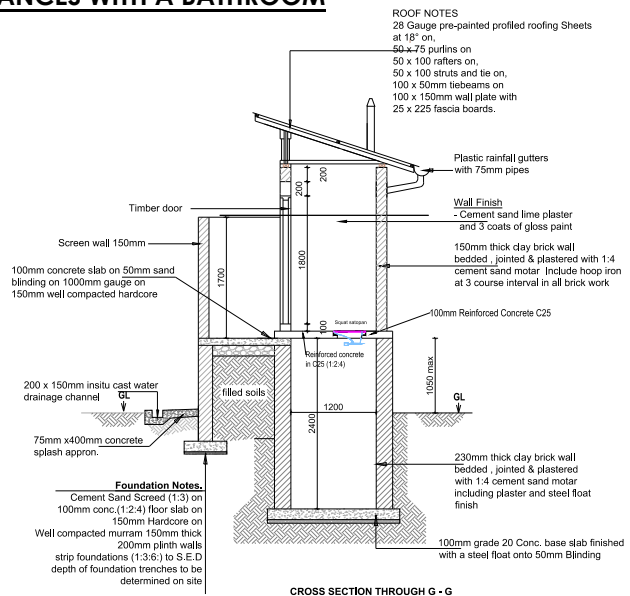
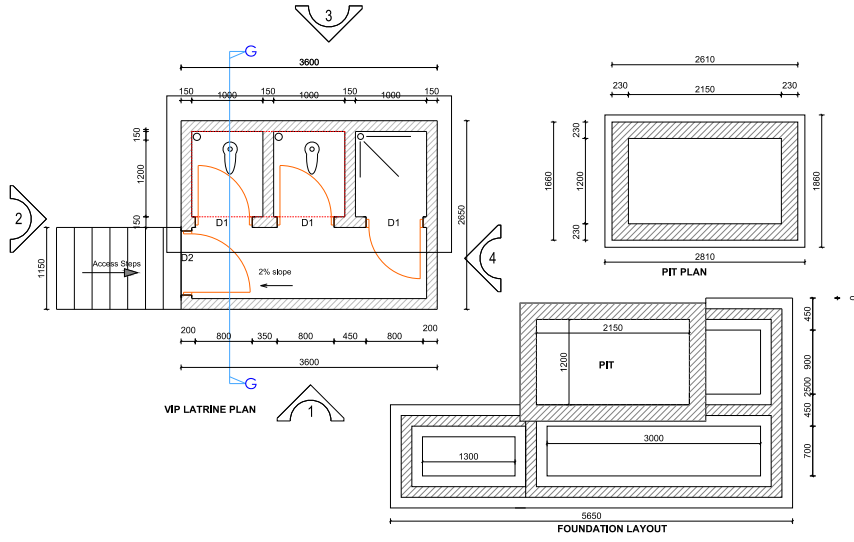
LEGEND	PROJECT	CLIENT	SURVEYED:	DRAWING TITLE:	REVISIONS	
					Rev	Description
1. All dimensions are in millimeters unless specified	MINIMUM STANDARDS FOR ONSITE SANITATION TECHNOLOGY OPTIONS IN NORTHERN UGANDA		DESIGNED: S.S	HOUSEHOLD SANITATION FACILITIES Single Stance Lined VIP Latrine	a.	February 2024 Version
			DRAWN: J.L			
			CHECKED: A.N	DRAWING NO. NMS_HSF_VIP_001		
			APPROVED:	DATE: February 2024		
				SCALE: 1:75		
				SHEET NO: 1 of 1		

VENTILATED IMPROVED PIT LATRINE - TWO STANCES



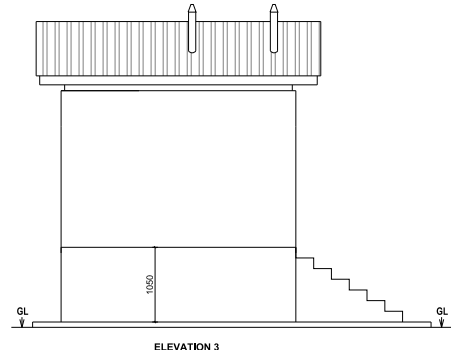
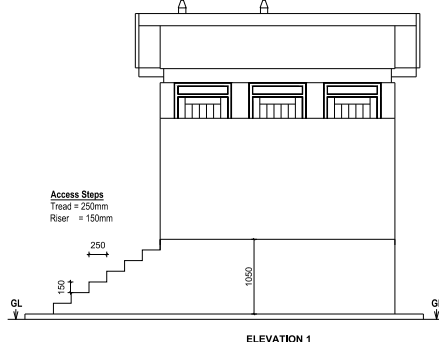
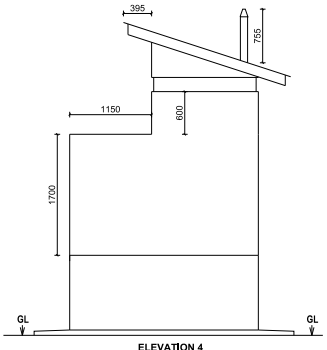
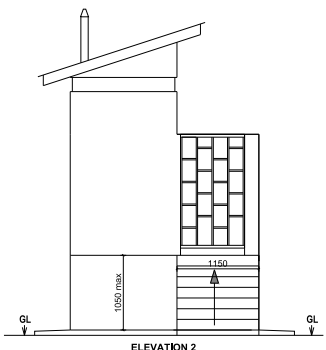
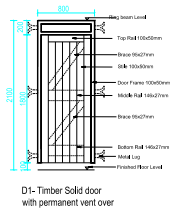
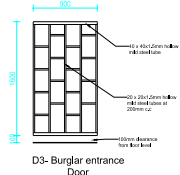
LEGEND	PROJECT	CLIENT	SURVEYED:	DRAWING TITLE:		REVISIONS	
				HOUSEHOLD SANITATION FACILITIES		Rev	Description
1. All dimensions are in millimeters unless specified	MINIMUM STANDARDS FOR ONSITE SANITATION TECHNOLOGY OPTIONS IN NORTHERN UGANDA		DESIGNED: S.S	Two Stance Lined VIP Latrine		a.	February 2024 Version
			DRAWN: J.L	DRAWING NO.	SCALE:		
			CHECKED: A.N	NMS_HSF_VIP_003	1:75		
			APPROVED:	DATE: February 2024	SHEET NO: 1 of 1		

RAISED VIP LATRINE - TWO STANCES WITH A BATHROOM



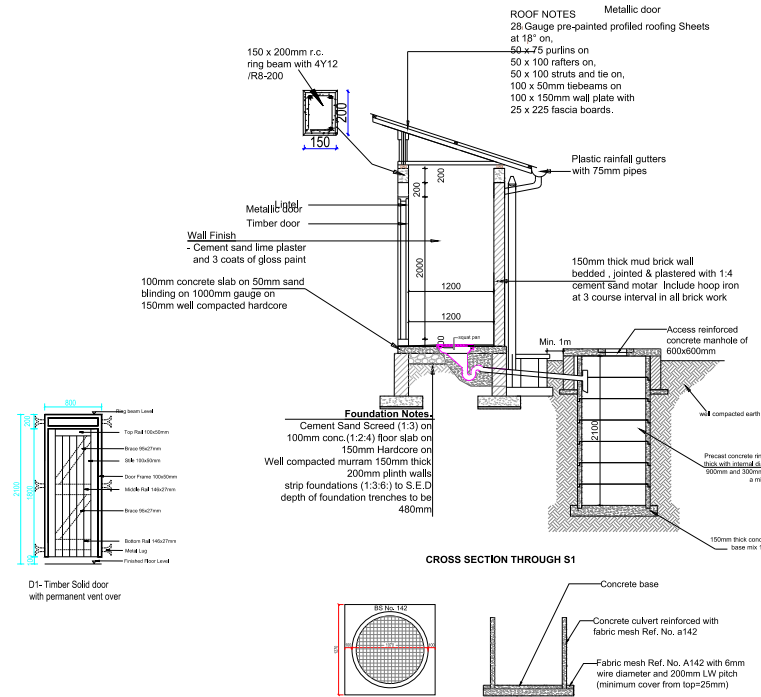
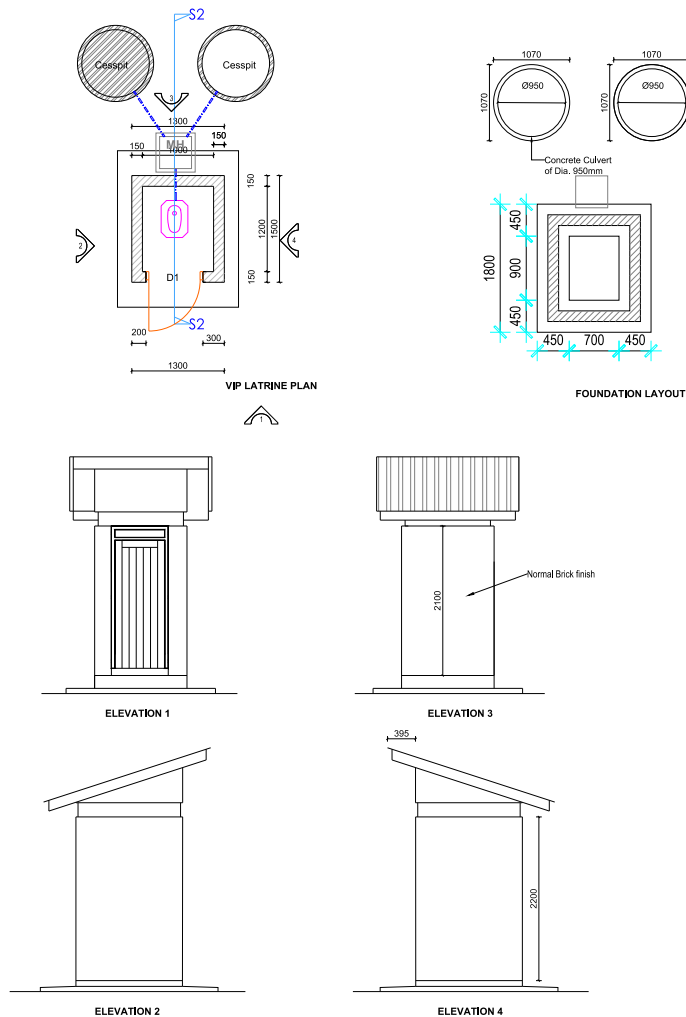
DOOR SCHEDULE

MARK	WIDTH	HEIGHT	NUMBER	DESCRIPTION
D1	800	2100	2	Timber door
D2	900	1650	1	Metal grided door



LEGEND 1. All dimensions are in millimeters unless specified	PROJECT MINIMUM STANDARDS FOR ONSITE SANITATION TECHNOLOGY OPTIONS IN NORTHERN UGANDA	CLIENT Implemented by	SURVEYED:	DRAWING TITLE: HOUSEHOLD SANITATION FACILITIES		REVISIONS	
			DESIGNED: S.S	Two Stance Raised Lined VIP Latrine with a Bathroom		Rev	Description
			DRAWN: J.L	DRAWING NO. NMS_HSF_VIP_004	SCALE: 1:75	a.	February 2024 Version
			CHECKED: A.N	DATE: February 2024	SHEET NO: 1 of 1		

POUR FLUSH TOILET CONNECTED TO DOUBLE LEACH PITS



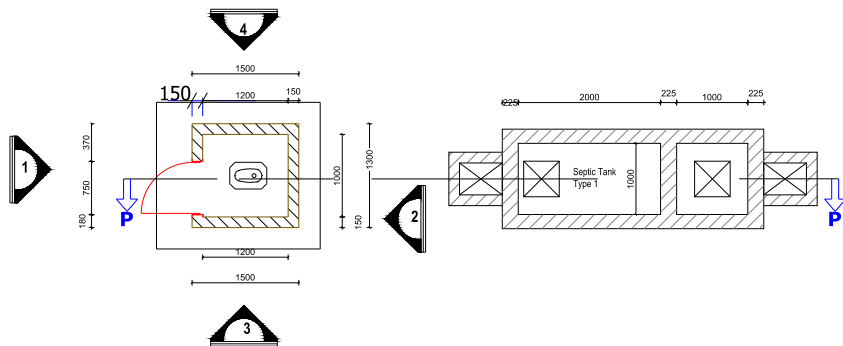
FOOTING REINFORCEMENT DETAILS

NOTES

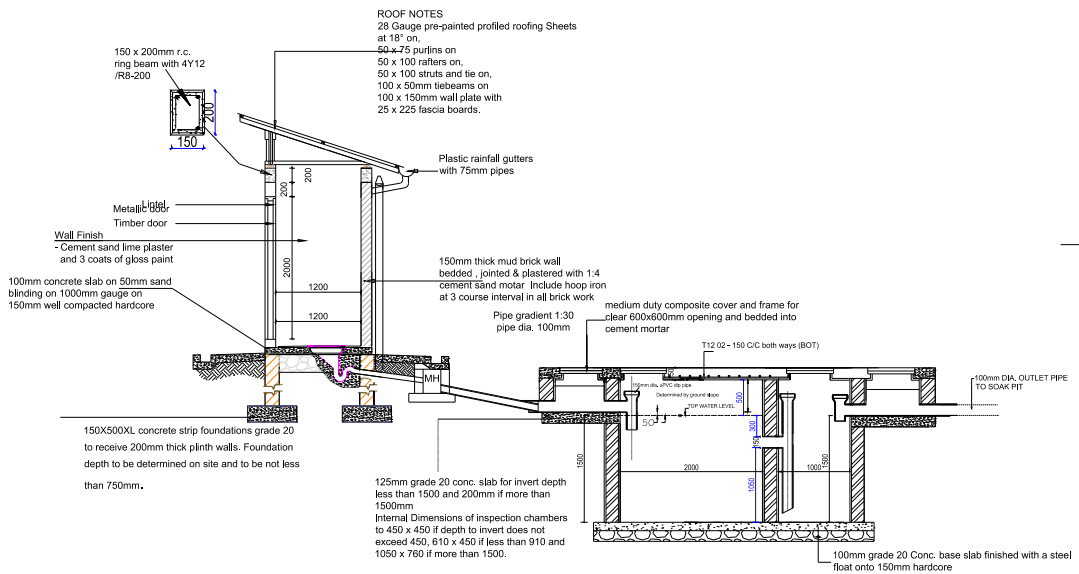
- The pit will be lined with concrete culverts of 950mm Ø and super structure formed of brick work
- Wall external foundation wall will be 230mm and internal walls and super structure 150mm
- Provide a soak pit of 1.5m diameter connected to both bathroom and pit

LEGEND	PROJECT	CLIENT	<div></div>	SURVEYED:	DRAWING TITLE:		REVISIONS	
				DESIGNED: S.S	HOUSEHOLD SANITATION FACILITIES		Rev	Description
				DRAWN: J.L	Double Leach pit one stance toilet		a.	February 2024 Version
				CHECKED: A.N	DRAWING NO.	SCALE:		
				APPROVED:	DATE:	SHEET NO:		
1. All dimensions are in millimeters unless specified	MINIMUM STANDARDS FOR ONSITE SANITATION TECHNOLOGY OPTIONS IN NORTHERN UGANDA				NMS_HSF_WBT_002	1:75	1 of 1	
				February 2024				

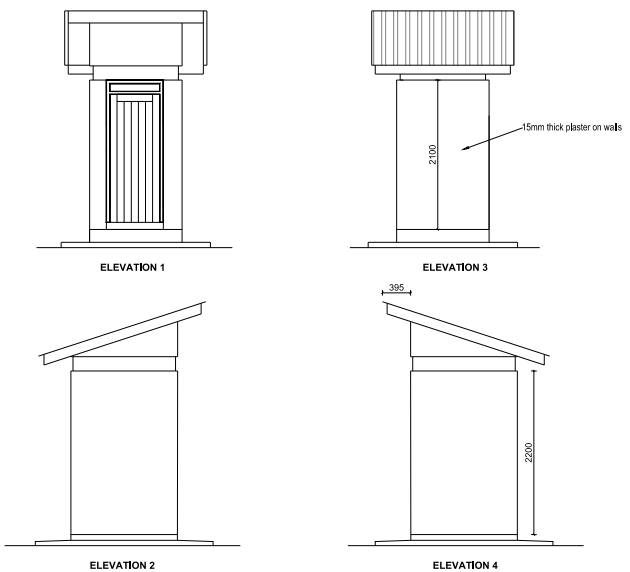
CISTERN OR POUR FLUSH TOILET - CONNECTED TO A SEPTIC TANK



FLOOR PLAN (Scale 1:50)

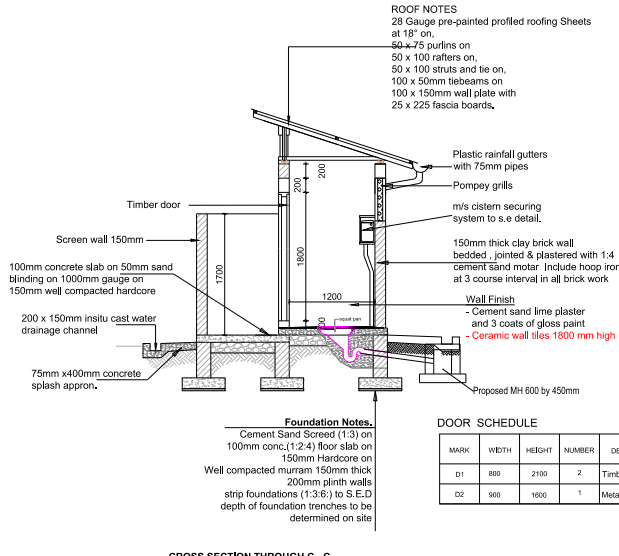
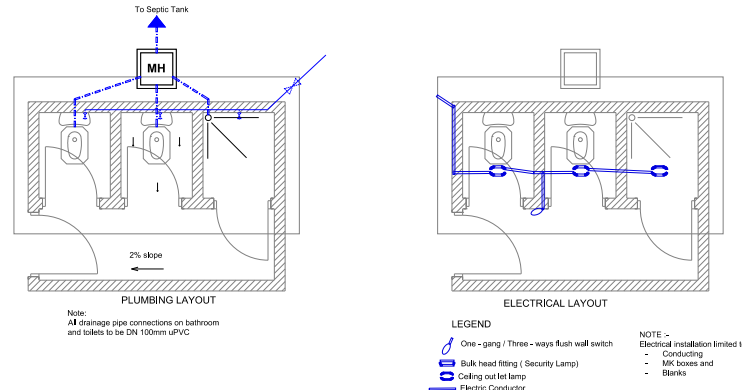
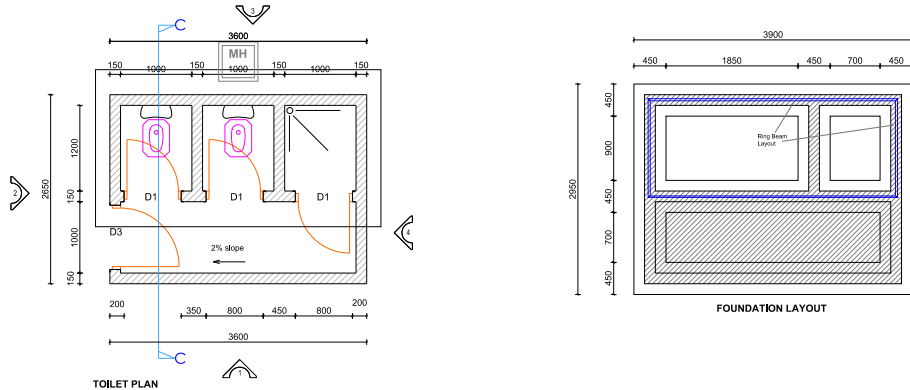


SECTION THROUGH P-P



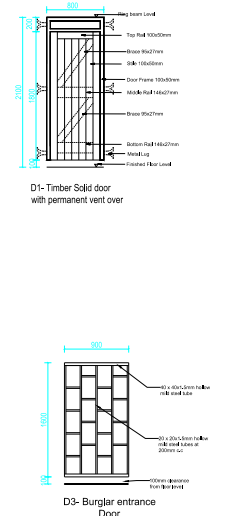
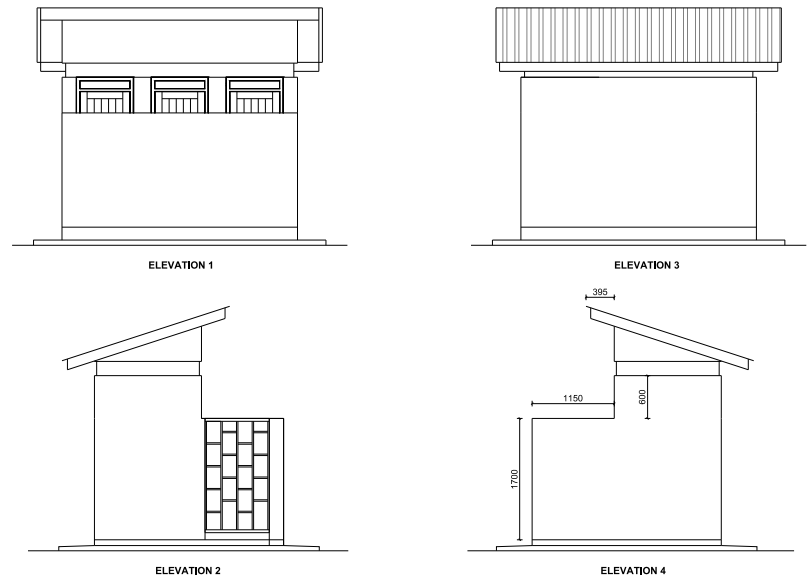
LEGEND	PROJECT	CLIENT	SURVEYED:	DRAWING TITLE:		REVISIONS	
				HOUSEHOLD SANITATION FACILITIES		Rev	Description
1. All dimensions are in millimeters unless specified	MINIMUM STANDARDS FOR ONSITE SANITATION TECHNOLOGY OPTIONS IN NORTHERN UGANDA		DESIGNED: S.S	Flush Toilet connected to septic tank		a.	February 2024 Version
			DRAWN: J.L	DRAWING NO.	SCALE:		
			CHECKED: A.N	NMS_HSF_WBT_004	1:75		
			APPROVED:	DATE: February 2024	SHEET NO: 1 of 1		

FLUSH TOILET - TWO STANCES WITH A BATHROOM



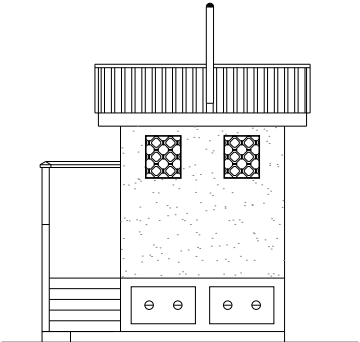
DOOR SCHEDULE

MARK	WIDTH	HEIGHT	NUMBER	DESCRIPTION
D1	800	2100	2	Timber door
D2	900	1600	1	Metal grided door

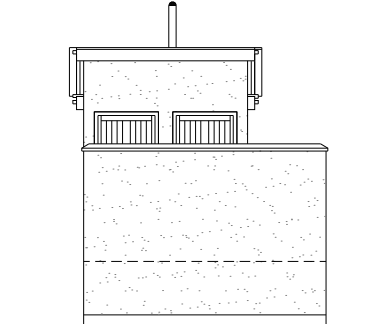


LEGEND	PROJECT	CLIENT	REVISIONS				
			Rev	Description			
			a.	February 2024 Version			
1. All dimensions are in millimeters unless specified	MINIMUM STANDARDS FOR ONSITE SANITATION TECHNOLOGY OPTIONS IN NORTHERN UGANDA		SURVEYED:	DRAWING TITLE: HOUSEHOLD SANITATION FACILITIES Flush Toilet - Two stances with a Bathroom			
			DESIGNED: S.S				
			DRAWN: J.L	DRAWING NO. NMS_HSF_WBT_005		SCALE: 1:75	
			CHECKED: A.N				
			APPROVED:	DATE: February 2024	SHEET NO: 1 of 1		

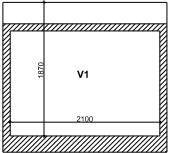
URINE DIVERSION DRY TOILET (UDDT)



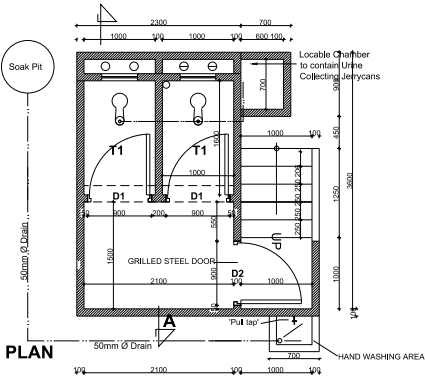
REAR VIEW



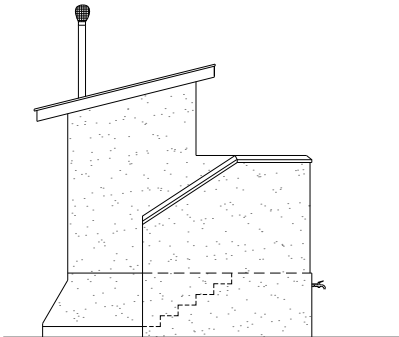
FRONT VIEW



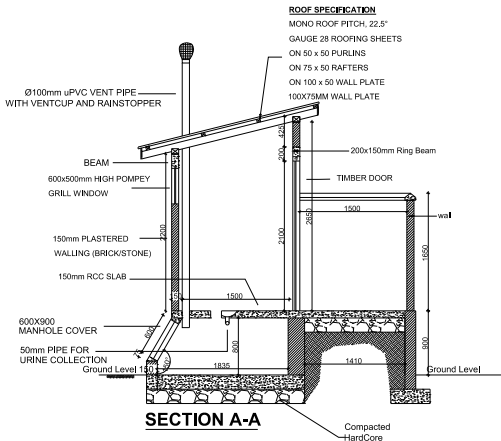
VAULT SECTION



PLAN



TYPICAL SIDE VIEW



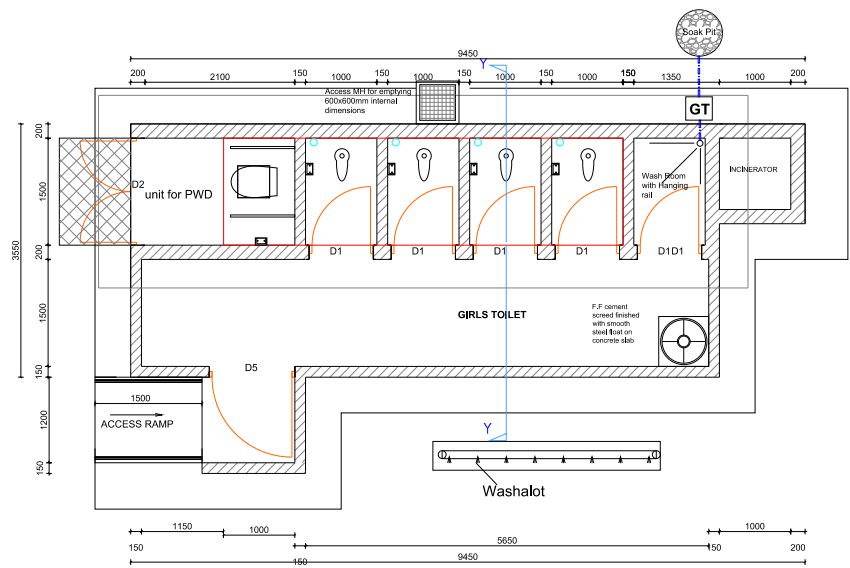
SECTION A-A

LEGEND	PROJECT	CLIENT	SURVEYED:	DRAWING TITLE:	REVISIONS	
					Rev	Description
1. All dimensions are in millimeters unless specified	MINIMUM STANDARDS FOR ONSITE SANITATION TECHNOLOGY OPTIONS IN NORTHERN UGANDA	 Implemented by  SANITATION FOR MILLIONS	DESIGNED: S.S	HOUSEHOLD SANITATION FACILITIES Urine Diversion Dry Toilet	a.	February 2024 Version
			DRAWN: J.L			
			CHECKED: A.N	DRAWING NO. NMS_HSF_UDT_001	SCALE: 1:75	
			APPROVED:	DATE: February 2024	SHEET NO: 1 of 1	

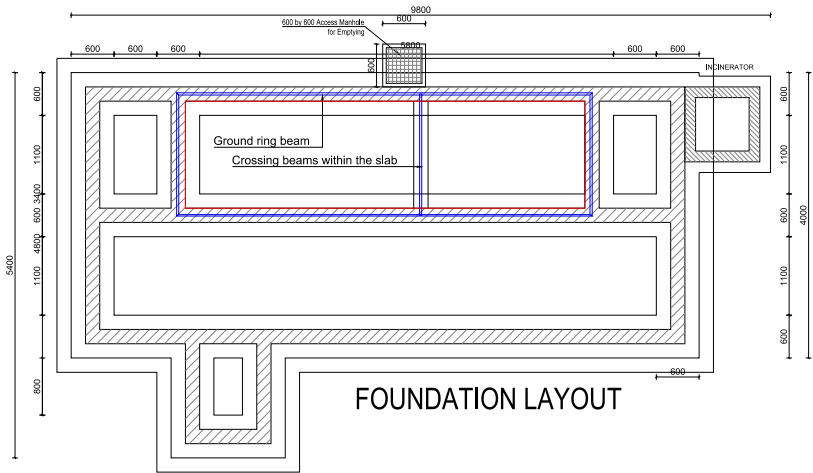
PUBLIC / INSTITUTIONAL SANITATION TECHNOLOGIES

LEARNING INSTITUTIONS (SCHOOLS)

FIVE STANCE GIRLS VIP LATRINE FOR SCHOOLS WITH A WASHROOM
AND INCINERATOR



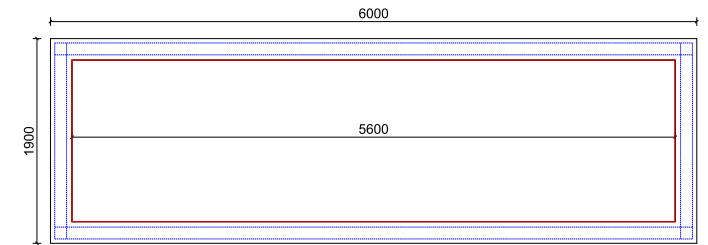
VIP LATRINE PLAN



FOUNDATION LAYOUT

LEGEND	PROJECT	CLIENT	SURVEYED:	DRAWING TITLE:	REVISTONS	
					Rev	Description
1. All dimensions are in millimeters unless specified	MINIMUM STANDARDS FOR ONSITE SANITATION TECHNOLOGY OPTIONS IN NORTHERN UGANDA		DESIGNED:	LEARNING INSTITUTION SANITATION FACILITIES Girls VIP Latrine Facility	a.	May 2024 Version
			S.S			
			DRAWN:	DRAWING NO.		
			J.L	NMS_LSF_VIP_001		
APPROVED:			CHECKED:	SCALE:	SHEET NO:	1 of 3
			A.N	1:75		
				DATE:		
				May 2024		

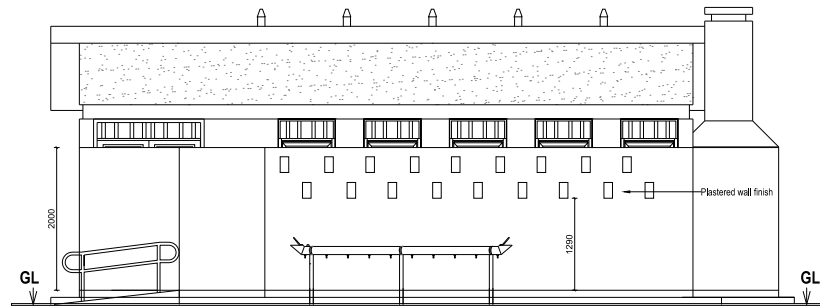
ROOF NOTES
28 Gauge pre-painted profiled roofing Sheets at 18° on,
50 x 75 purlins on
~~50 x 100~~ rafters on,
50 x 100 struts and tie on,
100 x 50mm tiebeams on
100 x 150mm wall plate with
25 x 225 fascia boards.



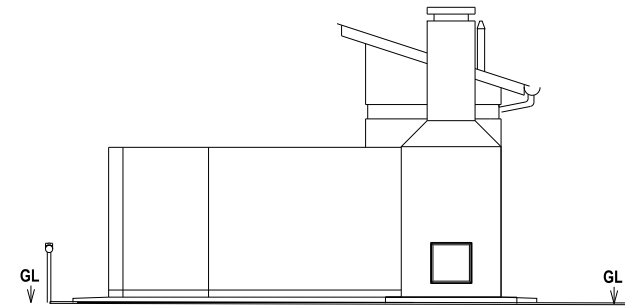
CROSS SECTION THROUGH Y-Y

40 | MINIMUM STANDARDS FOR ONSITE SANITATION TECHNOLOGIES IN NORTHERN UGANDA

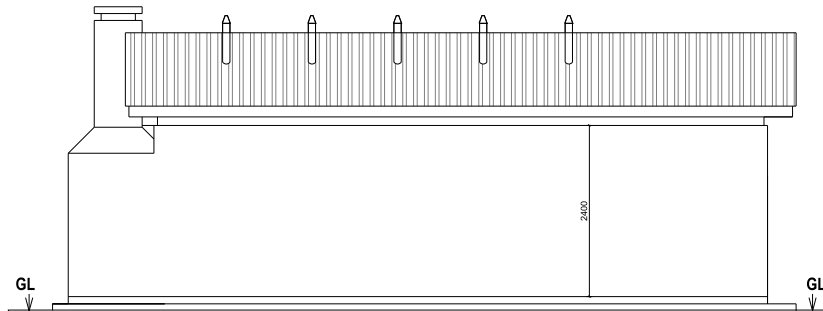
FIVE STANCE LINED VIP LATRINE FOR GIRLS- WITH A WASHROOM AND AN INCINERATOR



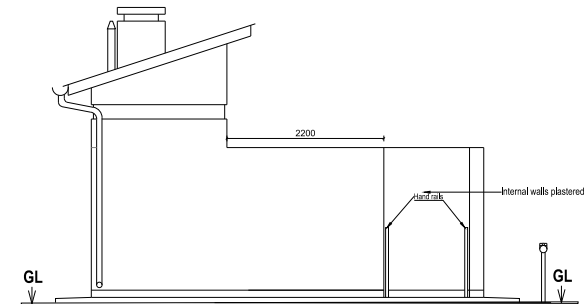
FRONT ELEVATION



EAST ELEVATION



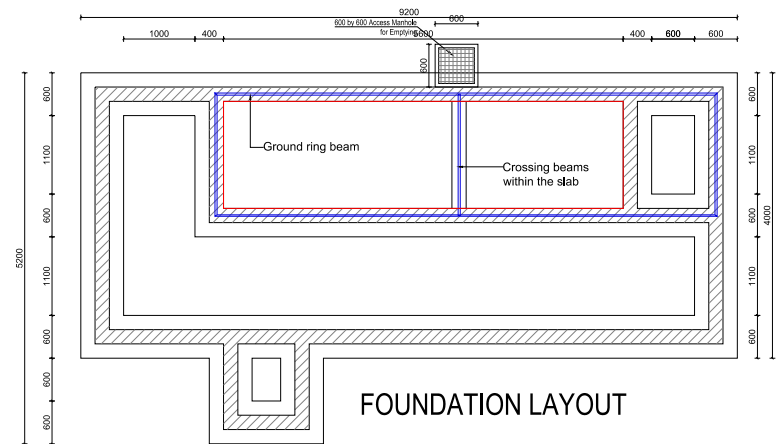
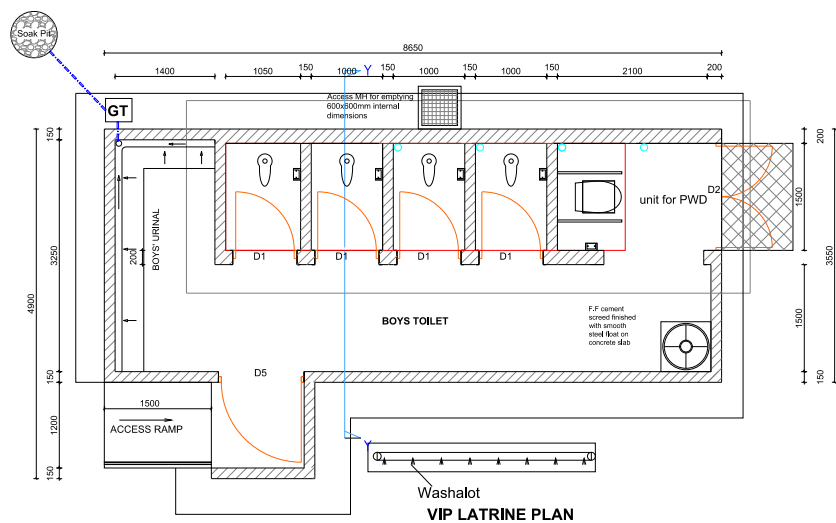
REAR ELEVATION



WEST ELEVATION

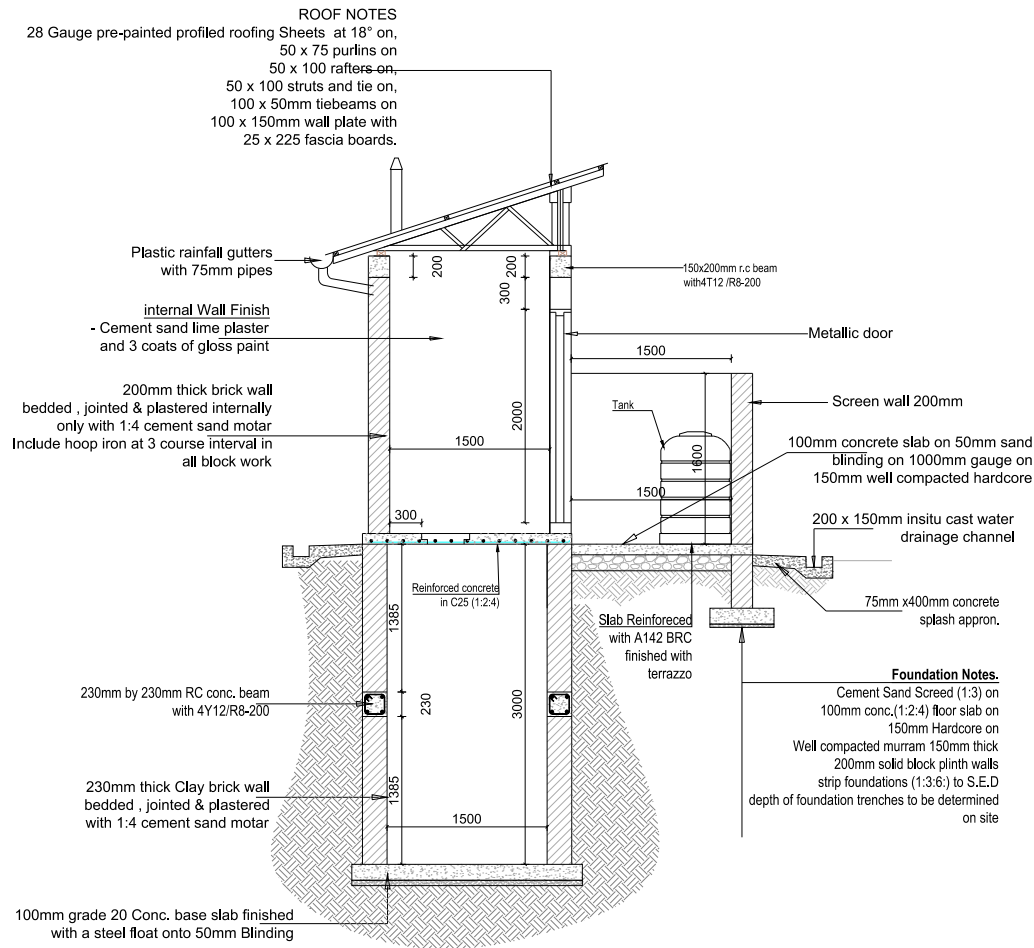
LEGEND	PROJECT	CLIENT	SURVEYED:	DRAWING TITLE:	REVISTONS	
					Rev	Description
1. All dimensions are in millimeters unless specified	MINIMUM STANDARDS FOR ONSITE SANITATION TECHNOLOGY OPTIONS IN NORTHERN UGANDA		DESIGNED: S.S	LEARNING INSTITUTION SANITATION FACILITIES Girls VIP Latrine Facility	a.	February 2024 Version
			DRAWN: J.L			
			CHECKED: A.N	DRAWING NO. NMS_LSF_VIP_001	SCALE: 1:75	
			APPROVED:	DATE: February 2024	SHEET NO: 3 of 3	

FIVE STANCE BOYS VIP LATRINE FOR SCHOOLS WITH A URINAL

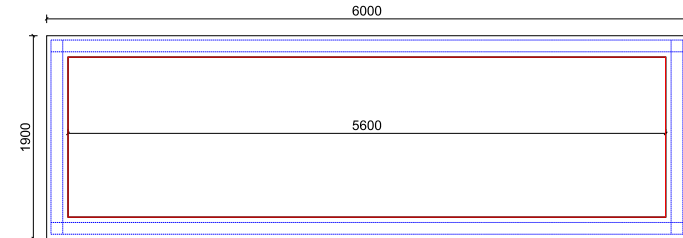


LEGEND	PROJECT	CLIENT	SURVEYED:		DRAWING TITLE:		REVISTONS	
			DESIGNED: S.S		LEARNING INSTITUTION SANITATION FACILITIES		Rev	Description
			DRAWN: J.L		Boys VIP Latrine Facility		a.	May 2024 Version
			CHECKED: A.N	DRAWING NO.	SCALE:			
				NMS_LSF_VIP_002	1:75			
APPROVED:	DATE: May 2024	SHEET NO:						
				1 of 3				

FIVE STANCE BOYS VIP LATRINE FOR SCHOOLS



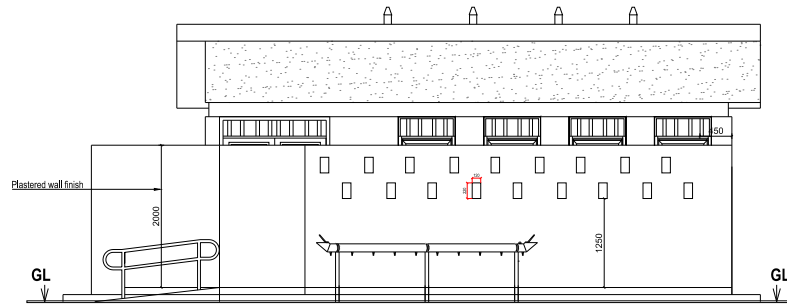
CROSS SECTION THROUGH Y-Y



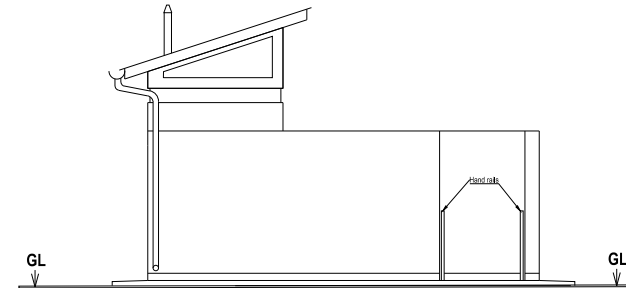
PIT BEAM LAYOUT

LEGEND	PROJECT	CLIENT	SURVEYED:	DRAWING TITLE:	REVISIONS	
					Rev	Description
1. All dimensions are in millimeters unless specified	MINIMUM STANDARDS FOR ONSITE SANITATION TECHNOLOGY OPTIONS IN NORTHERN UGANDA		DESIGNED: S.S	LEARNING INSTITUTION SANITATION FACILITIES Boys VIP Latrine Facility	α.	May 2024 Version
			DRAWN: J.L			
			CHECKED: A.N	DRAWING NO. NMS_LSF_VIP_002	SCALE: 1:50	
			APPROVED:	DATE: May 2024	SHEET NO: 2 of 3	

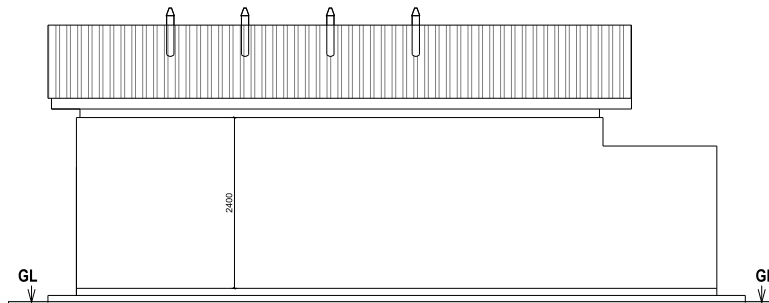
FIVE STANCE LINED VIP LATRINE FOR BOYS - WITH A URINAL



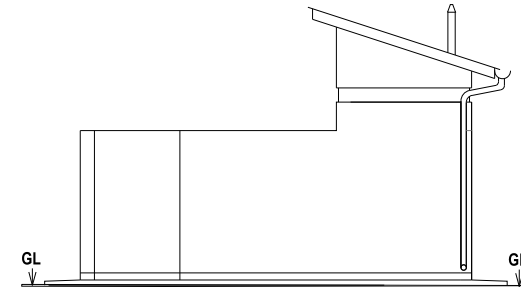
FRONT ELEVATION



WEST ELEVATION



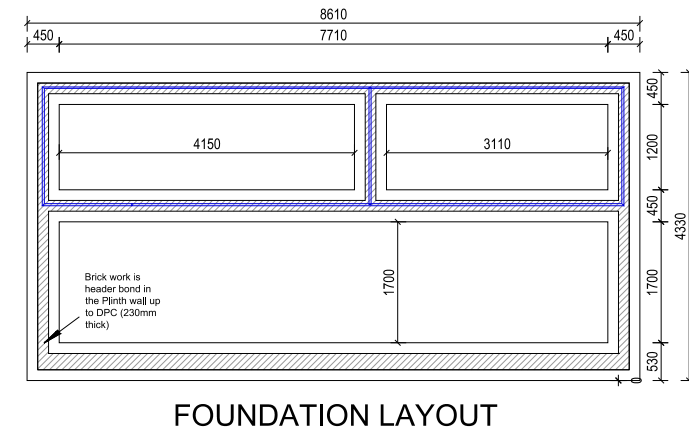
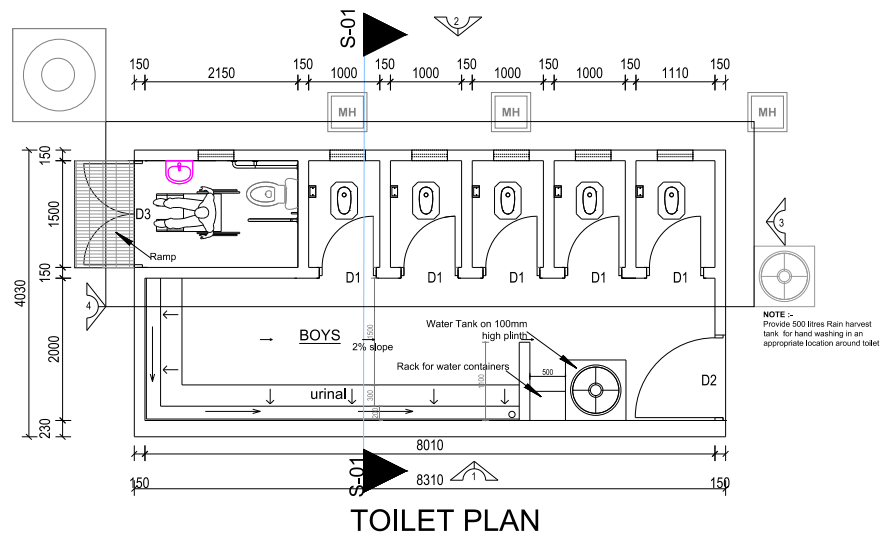
REAR ELEVATION



EAST ELEVATION

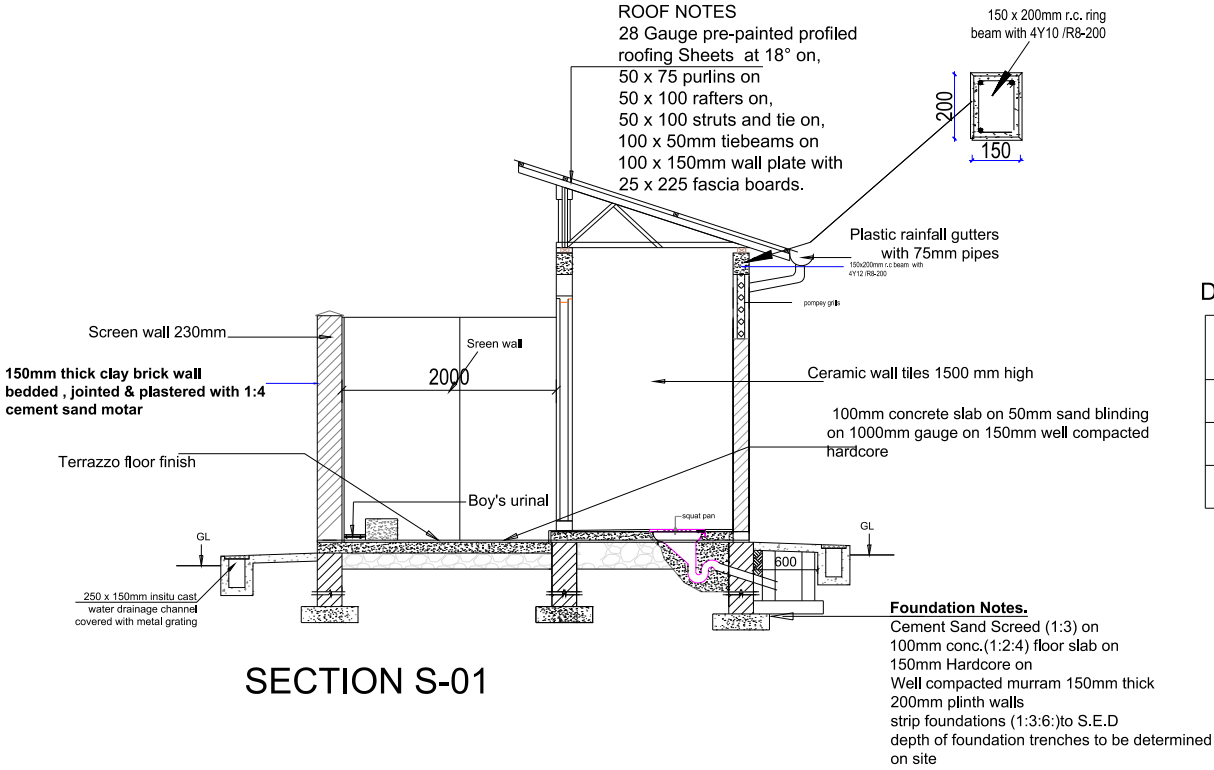
LEGEND	PROJECT	CLIENT	SURVEYED:	DRAWING TITLE:		REVISTONS	
				DESIGNED: S.S		Rev	Description
1. All dimensions are in millimeters unless specified	MINIMUM STANDARDS FOR ONSITE SANITATION TECHNOLOGY OPTIONS IN NORTHERN UGANDA		DRAWN: J.L	LEARNING INSTITUTION SANITATION FACILITIES Boys VIP Latrine Facility		a.	February 2024 Version
			CHECKED: A.N				
			APPROVED:	DRAWING NO. NMS_LSF_VIP_002	SCALE: 1:75		
				DATE: February 2024	SHEET NO: 3 of 3		

FIVE STANCE WATERBORNE BOYS TOILET WITH A DISABLED UNIT



LEGEND	PROJECT	CLIENT	SURVEYED:	DRAWING TITLE:		REVISIONS	
				DESIGNED:	Boys Waterborne Toilet Facility	Rev	Description
1. All dimensions are in millimeters unless specified	MINIMUM STANDARDS FOR ONSITE SANITATION TECHNOLOGY OPTIONS IN NORTHERN UGANDA		S.S.	J.L.	DRAWING NO. NMS_LSF_WBT_001	SCALE: 1:75	February 2024 Version
			APPROVED:	DATE:	February 2024	SHEET NO:	1 of 4

FIVE STANCE WATERBORNE BOYS TOILET WITH A DISABLED UNIT



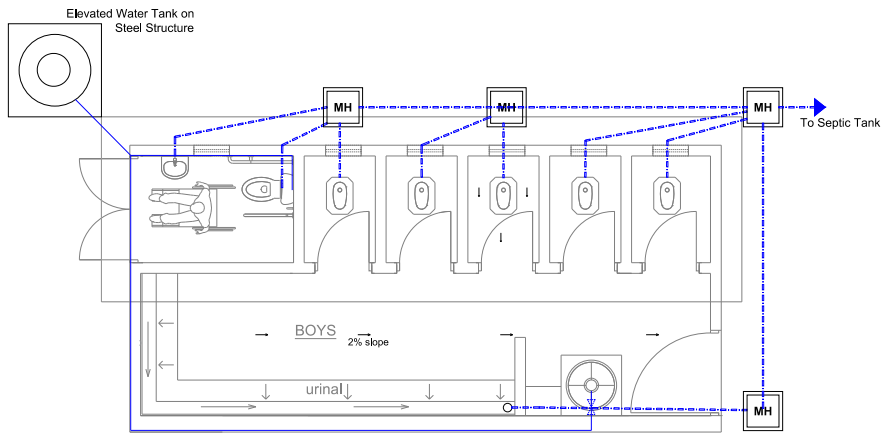
SECTION S-01

DOOR SCHEDULE

MARK	WIDTH	HEIGHT	NUMBER	DESCRIPTION
D1	800	2300	5	Metallic Solid door
D2	1200	1900	1	Metal grilled door
D3	1500	2300	1	Metallic Solid door

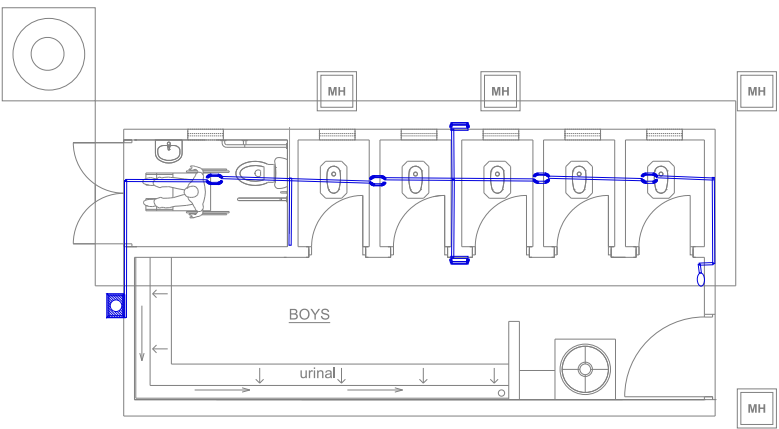
LEGEND	PROJECT	CLIENT	SURVEYED:	DRAWING TITLE:	REVISIONS	
					Rev	Description
1. All dimensions are in millimeters unless specified	MINIMUM STANDARDS FOR ONSITE SANITATION TECHNOLOGY OPTIONS IN NORTHERN UGANDA		DESIGNED: S.S	LEARNING INSTITUTION SANITATION FACILITIES Boys Waterborne Toilet Facility	a.	February 2024 Version
			DRAWN: J.L			
			CHECKED: A.N	DRAWING NO. NMS_LSF_WBT_001		
			APPROVED:	DATE: February 2024		
				SCALE: 1:50		
				SHEET NO: 2 of 4		

FIVE STANCE WATERBORNE BOYS TOILET WITH A DISABLED UNIT



Note:
All drainage pipe connections
on bathroom and toilets to be
DN 100mm uPVC

PLUMBING LAYOUT

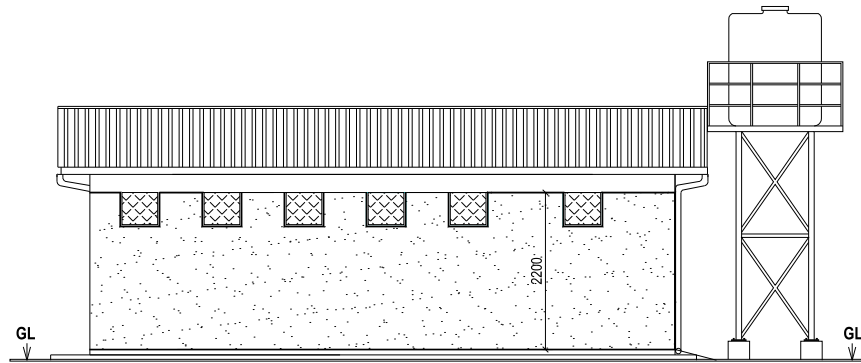


ELECTRICAL LAYOUT

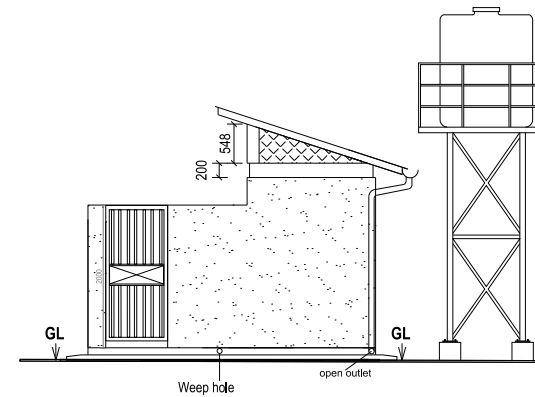
- LEGEND**
- Meter Reader Box
 - Main Switch
 - One - gang / Three - ways flush wall switch
 - Bulk head fitting (Security Lamp)
 - Ceiling out let lamp
 - Electric Conductor
- NOTE :-**
Electrical installation limited to
- Conducting
- MK boxes and
- Blanks

LEGEND	PROJECT	CLIENT	SURVEYED:	DRAWING TITLE:		REVISTONS	
				LEARNING INSTITUTION SANITATION FACILITIES		Rev	Description
1. All dimensions are in millimeters unless specified	MINIMUM STANDARDS FOR ONSITE SANITATION TECHNOLOGY OPTIONS IN NORTHERN UGANDA	 <div>Implemented by</div> <div> giz <small>Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH</small></div> <div> SANITATION FOR MILLIONS</div>	DESIGNED: S.S	Boys Waterborne Toilet Facility		α.	February 2024 Version
			DRAWN: J.L	DRAWING NO.	SCALE:		
			CHECKED: A.N	NMS_LSF_WBT_001	1:75		
			APPROVED:	DATE: February 2024	SHEET NO: 3 of 4		

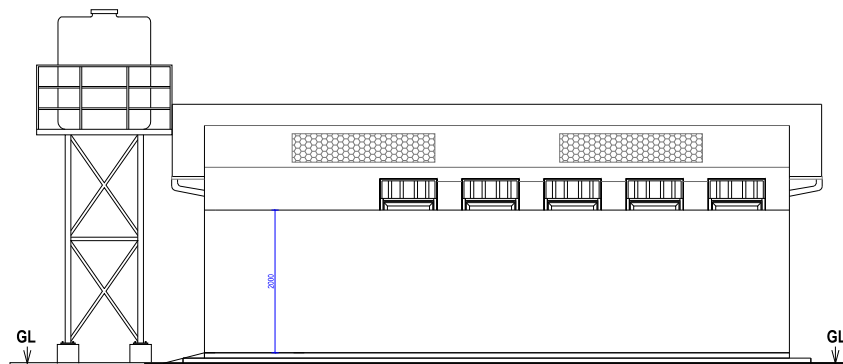
FIVE STANCE WATERBORNE BOYS TOILET WITH A DISABLED UNIT



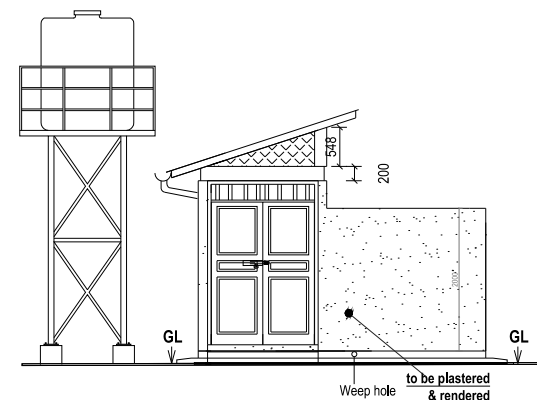
ELEVATION 1



ELEVATION 3



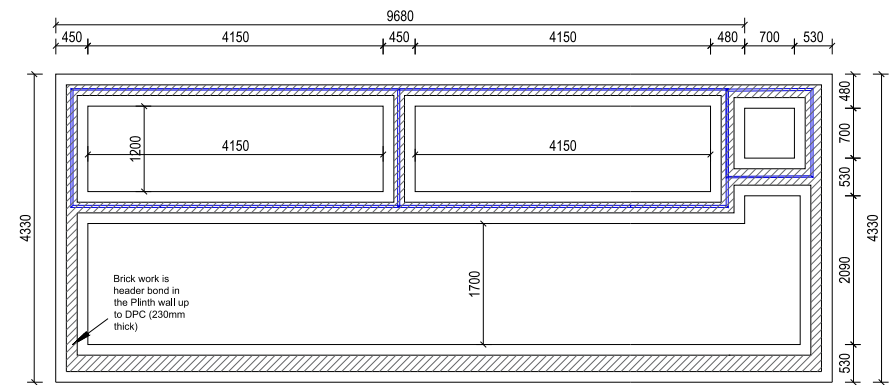
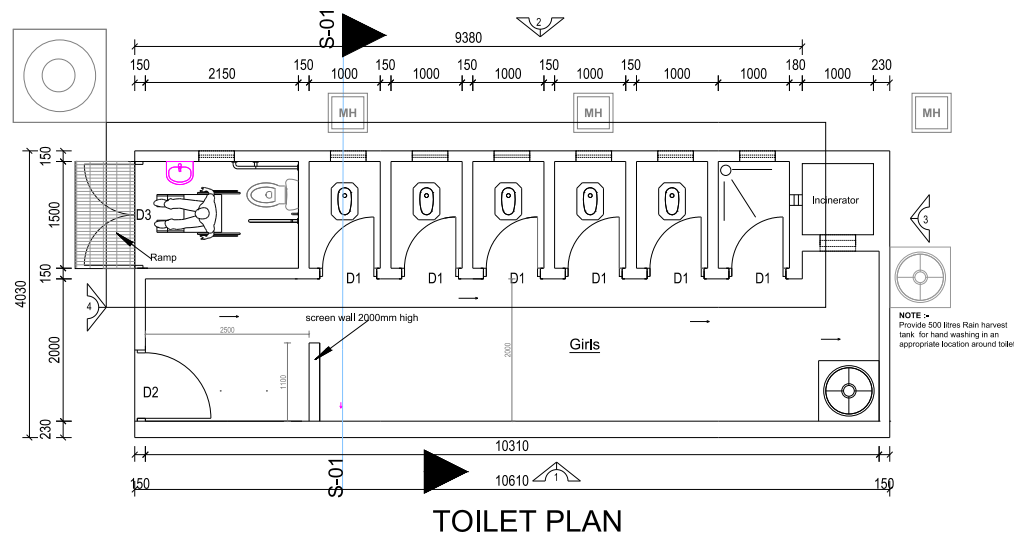
ELEVATION 2



ELEVATION 4

LEGEND	PROJECT	CLIENT	SURVEYED:	DRAWING TITLE:	REVISTONS	
					Rev	Description
1. All dimensions are in millimeters unless specified	MINIMUM STANDARDS FOR ONSITE SANITATION TECHNOLOGY OPTIONS IN NORTHERN UGANDA		DESIGNED: S.S	LEARNING INSTITUTION SANITATION FACILITIES Boys Waterborne Toilet Facility	a.	February 2024 Version
			DRAWN: J.L			
			CHECKED: A.N	DRAWING NO. NMS_LSF_WBT_001		
			APPROVED:	DATE: February 2024		
				SCALE: 1:75		
				SHEET NO: 4 of 4		

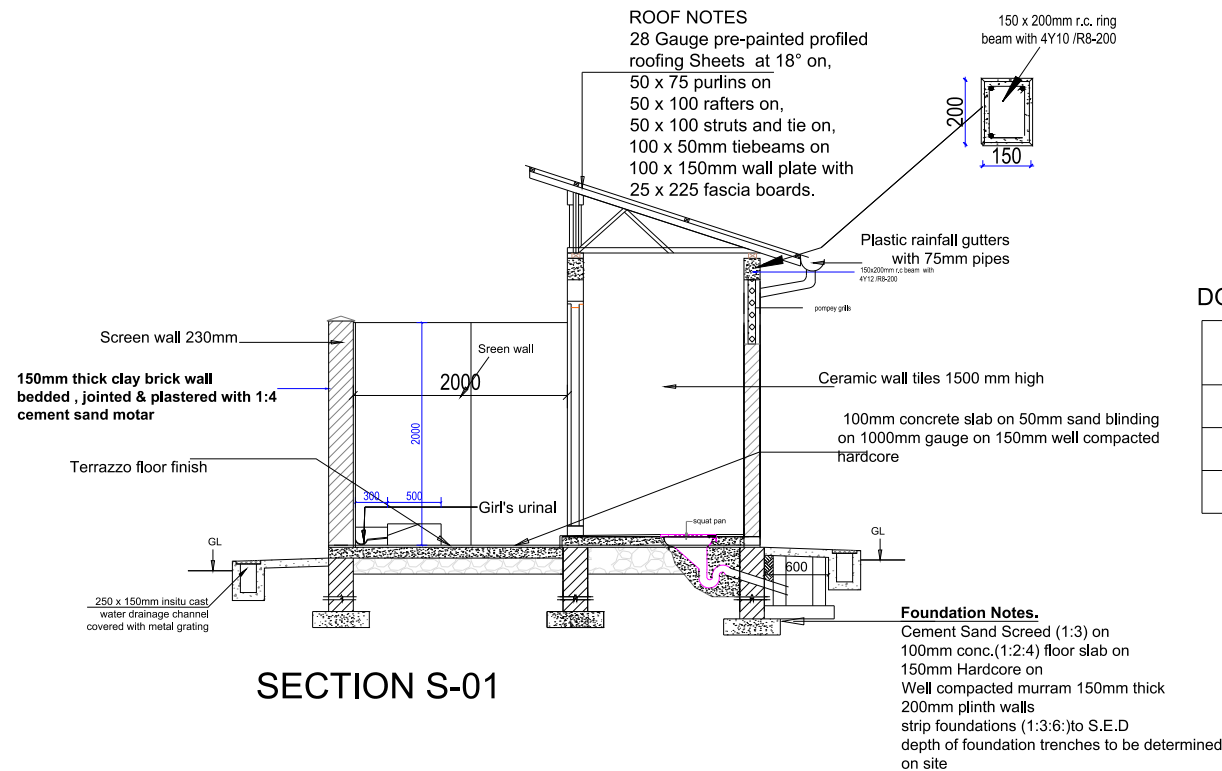
FOUR STANCE WATERBORNE TOILET FOR GIRLS WITH A BATHROOM, INCINERATOR AND A DISABLED UNIT



LEGEND	PROJECT	CLIENT	SURVEYED:	DRAWING TITLE:		REVISTONS	
				LEARNING INSTITUTION SANITATION FACILITIES		Rev	Description
1. All dimensions are in millimeters unless specified	MINIMUM STANDARDS FOR ONSITE SANITATION TECHNOLOGY OPTIONS IN NORTHERN UGANDA		DESIGNED: S.S	Girls Waterborne Toilet Facility		a.	February 2024 Version
			DRAWN: J.L	DRAWING NO.	SCALE:		
			CHECKED: A.N	NMS_LSF_WBT_002	1:75		
			APPROVED:	DATE: February 2024	SHEET NO: 1 of 4		

GREASE INTERCEPTOR TANK

FOUR STANCE WATERBORNE TOILET FOR GIRLS WITH A BATHROOM, INCINERATOR AND A DISABLED UNIT

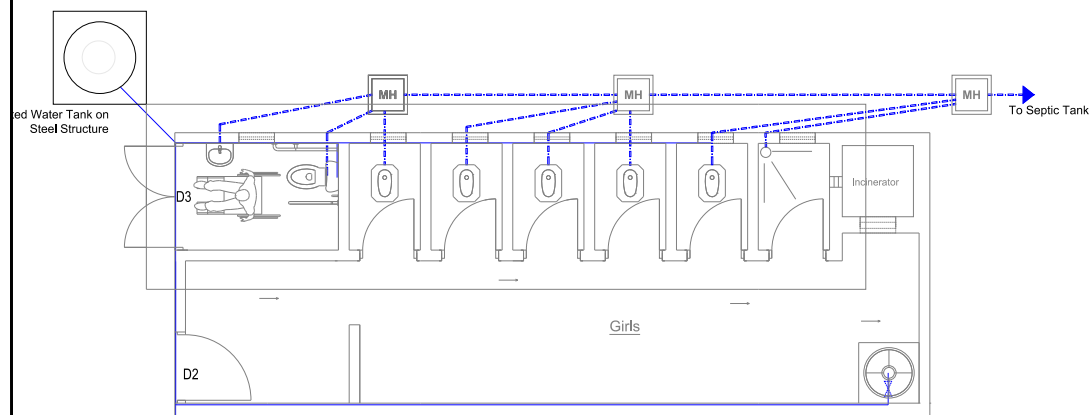


DOOR SCHEDULE

MARK	WIDTH	HEIGHT	NUMBER	DESCRIPTION
D1	800	2300	5	Metallic Solid door
D2	1200	1900	1	Metal grilled door
D3	1500	2300	1	Metallic Solid door

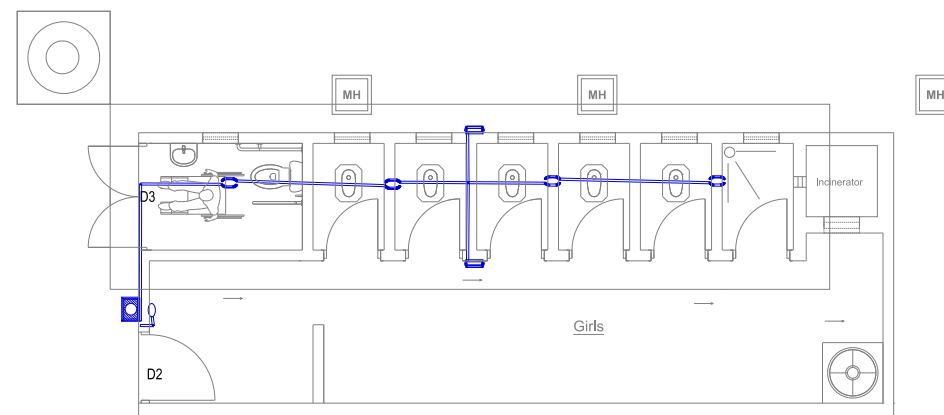
LEGEND	PROJECT	CLIENT	SURVEYED:	DRAWING TITLE:	REVISTONS	
					Rev	Description
1. All dimensions are in millimeters unless specified	MINIMUM STANDARDS FOR ONSITE SANITATION TECHNOLOGY OPTIONS IN NORTHERN UGANDA		DESIGNED: S.S	LEARNING INSTITUTION SANITATION FACILITIES Girls Waterborne Toilet Facility	a.	February 2024 Version
			DRAWN: J.L			
			CHECKED: A.N	DRAWING NO. NMS_LSF_WBT_002		
			APPROVED:	DATE: February 2024		
				SCALE: 1:50		
				SHEET NO: 2 of 4		

FOUR STANCE WATERBORNE TOILET FOR GIRLS WITH A BATHROOM, INCINERATOR AND A DISABLED UNIT



Note:
All drainage pipe connections
on bathroom and toilets to be
DN 100mm uPVC

PLUMBING LAYOUT



ELECTRICAL LAYOUT

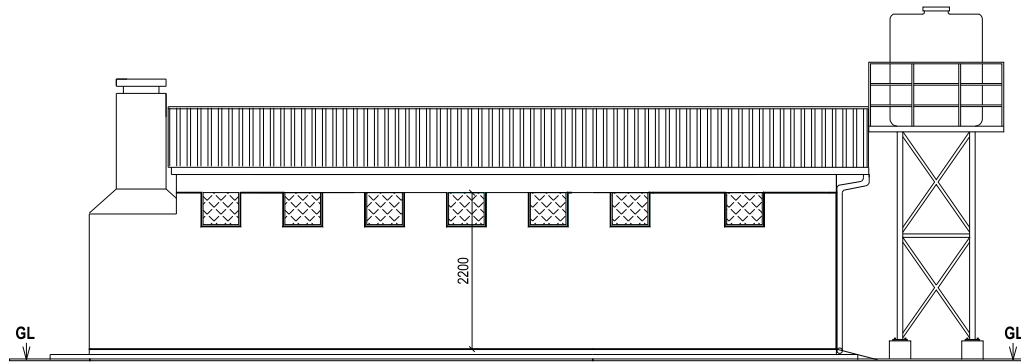
- LEGEND**
- Meter Reader Box
 - Main Switch
 - One - gang / Three - ways flush wall switch
 - Bulk head fitting (Security Lamp)
 - Ceiling out let lamp
 - Electric Conductor

NOTE :-
Electrical installation limited to

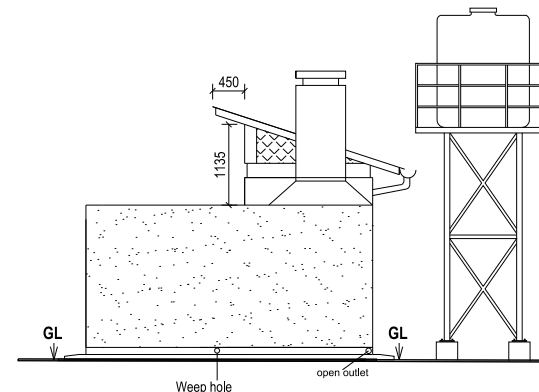
- Conducting
- MK boxes and
- Blanks

LEGEND	PROJECT	CLIENT	SURVEYED:	DRAWING TITLE:		REVISTONS	
				LEARNING INSTITUTION SANITATION FACILITIES		Rev	Description
1. All dimensions are in millimeters unless specified	MINIMUM STANDARDS FOR ONSITE SANITATION TECHNOLOGY OPTIONS IN NORTHERN UGANDA		DESIGNED: S.S	Girls Waterborne Toilet Facility		a.	February 2024 Version
			DRAWN: J.L	DRAWING NO.	SCALE:		
			CHECKED: A.N	NMS_LSF_WBT_002	1:75		
			APPROVED:	DATE: February 2024	SHEET NO: 1 of 4		

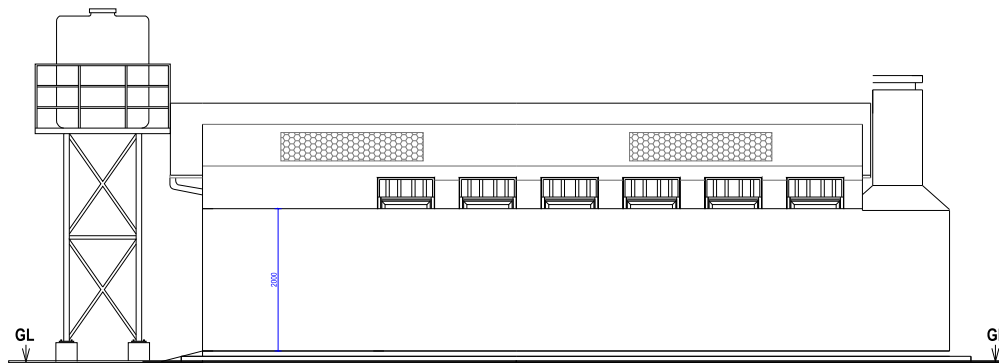
FOUR STANCE WATERBORNE TOILET FOR GIRLS WITH A BATHROOM, INCINERATOR AND A DISABLED UNIT



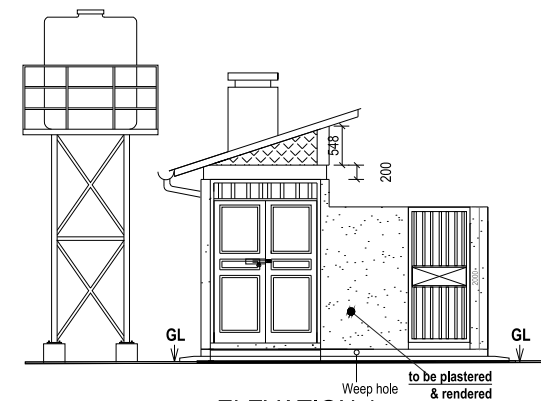
ELEVATION 1



ELEVATION 3



ELEVATION 2



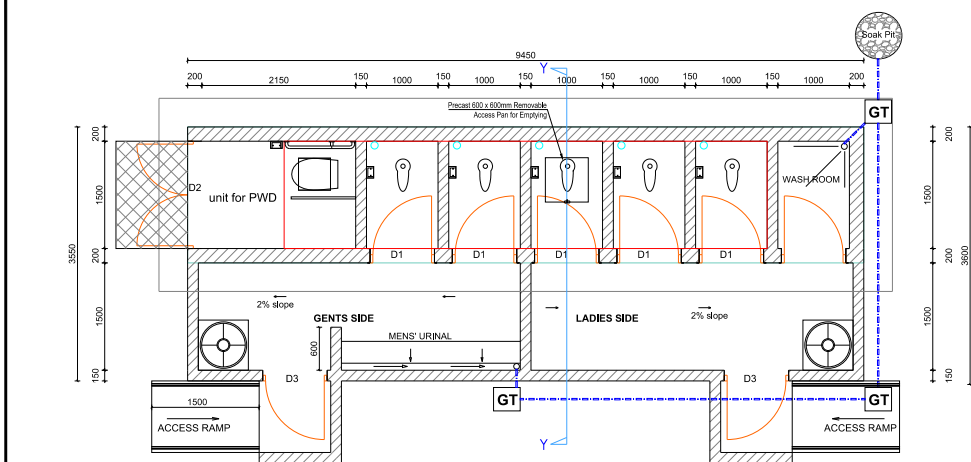
ELEVATION 4

LEGEND	PROJECT	CLIENT	SURVEYED:	DRAWING TITLE:	REVISTONS	
					Rev	Description
1. All dimensions are in millimeters unless specified	MINIMUM STANDARDS FOR ONSITE SANITATION TECHNOLOGY OPTIONS IN NORTHERN UGANDA		DESIGNED: S.S	LEARNING INSTITUTION SANITATION FACILITIES Girls Waterborne Toilet Facility	a.	February 2024 Version
			DRAWN: J.L			
			CHECKED: A.N			
			APPROVED:			
				DRAWING NO. NMS_LSF_WBT_002	SCALE: 1:75	
				DATE: February 2024	SHEET NO: 1 of 4	

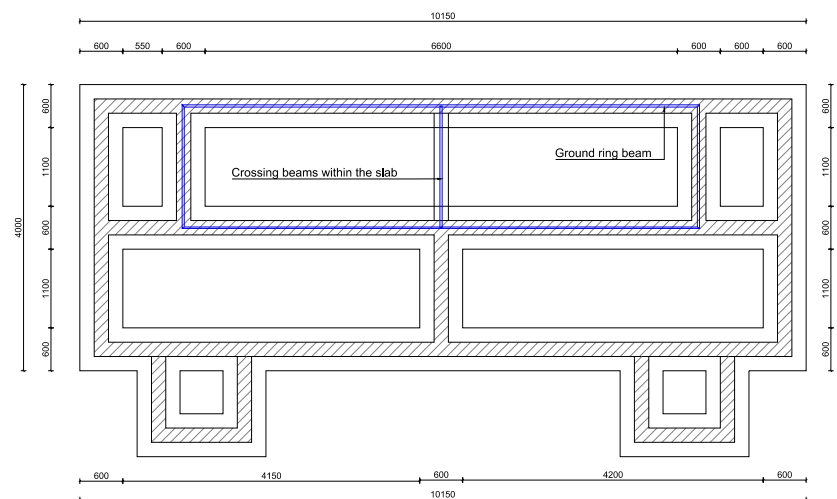
PUBLIC / INSTITUTIONAL SANITATION TECHNOLOGIES

**HEALTH CENTRE AND PUBLIC PLACES (MARKETS, RELIGIOUS INSTITUTIONS,
PARKS, COMMERCIAL BUILDINGS)**

SIX STANCE BLOCK VIP LATRINE FOR HEALTH CENTRES WITH A BATHROOM AND GENTS URINAL



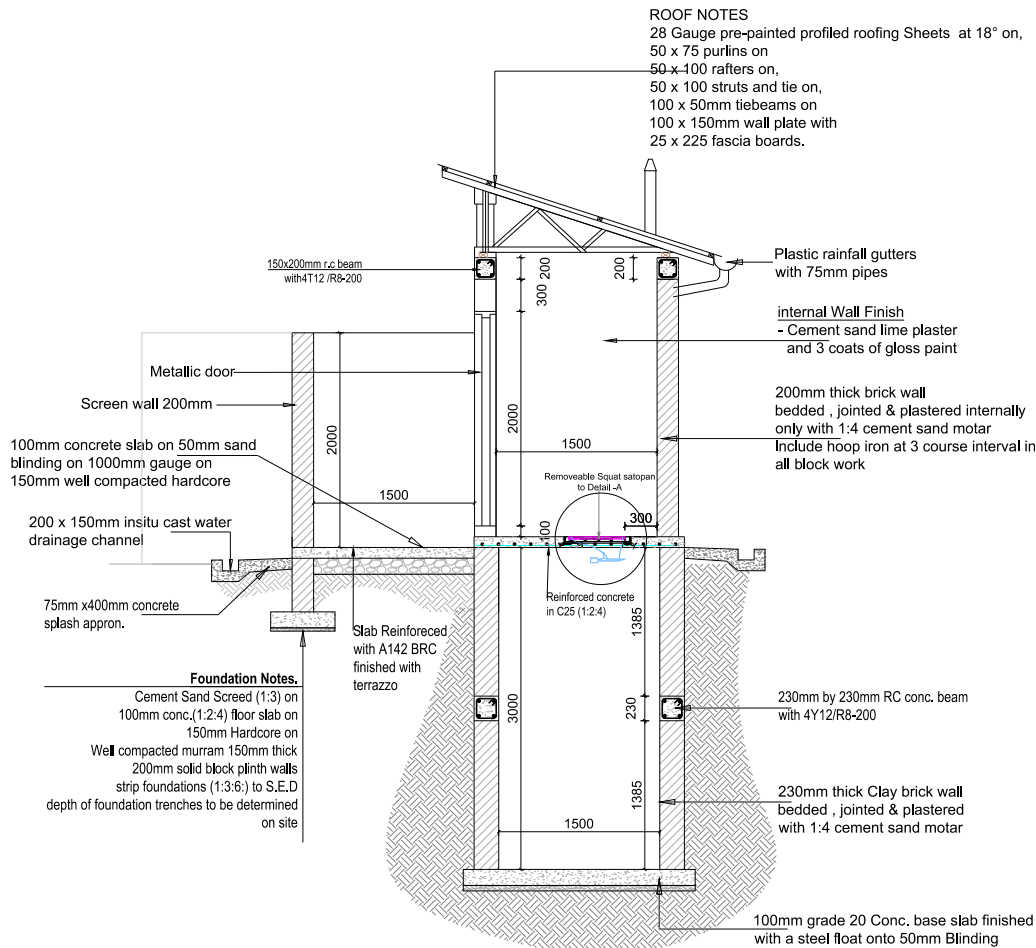
VIP LATRINE PLAN



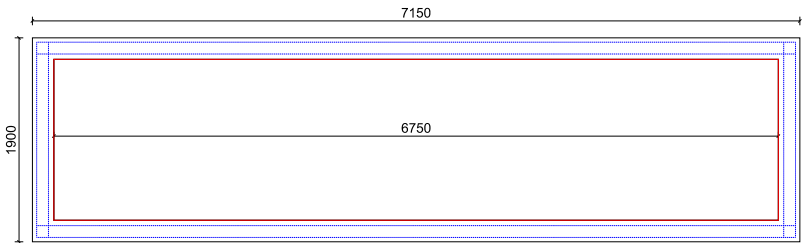
FOUNDATION LAYOUT

<div>LEGEND</div> <div>1. All dimensions are in millimeters unless specified</div>	<div>PROJECT</div> <div>MINIMUM STANDARDS FOR ONSITE SANITATION TECHNOLOGY OPTIONS IN NORTHERN UGANDA</div>	<div>CLIENT</div> <div></div>	SURVEYED:	DRAWING TITLE:		REVISIONS	
			DESIGNED: S.S	HEALTH INSTITUTION SANITATION FACILITIES		Rev	Description
			DRAWN: J.L	Combined VIP Latrine Facility		a.	February 2024 Version
			CHECKED: A.N	DRAWING NO. NMS_HIF_VIP_001	SCALE: 1:75		
			APPROVED:	DATE: February 2024	SHEET NO: 1 of 3		

SIX STANCE BLOCK VIP LATRINE FOR HEALTH CENTRES WITH A BATHROOM AND GENTS URINAL



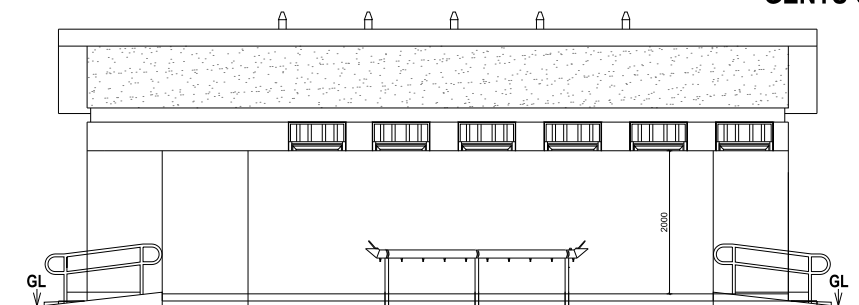
CROSS SECTION THROUGH Y-Y



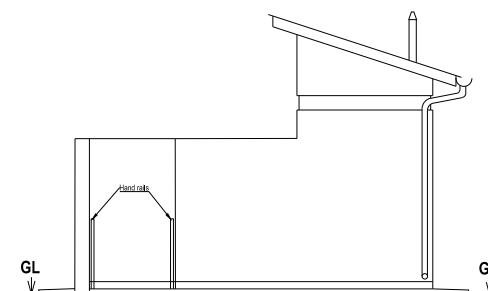
PIT BEAM LAYOUT

LEGEND	PROJECT	CLIENT	SURVEYED:	DRAWING TITLE:		REVISIONS	
				HEALTH INSTITUTION SANITATION FACILITIES		Rev	Description
1. All dimensions are in millimeters unless specified	MINIMUM STANDARDS FOR ONSITE SANITATION TECHNOLOGY OPTIONS IN NORTHERN UGANDA		DESIGNED: S.S	Combined VIP Latrine Facility		a.	February 2024 Version
			DRAWN: J.L	DRAWING NO.	SCALE:		
			CHECKED: A.N	NMS_HIF_VIP_001	1:50		
			APPROVED:	DATE: February 2024	SHEET NO: 2 of 3		

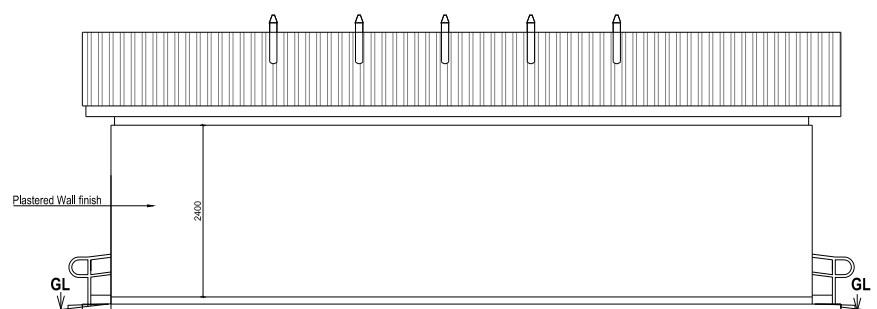
SIX STANCE BLOCK VIP LATRINE FOR HEALTH CENTRES WITH A BATHROOM AND GENTS URINAL



FRONT ELEVATION



EAST ELEVATION



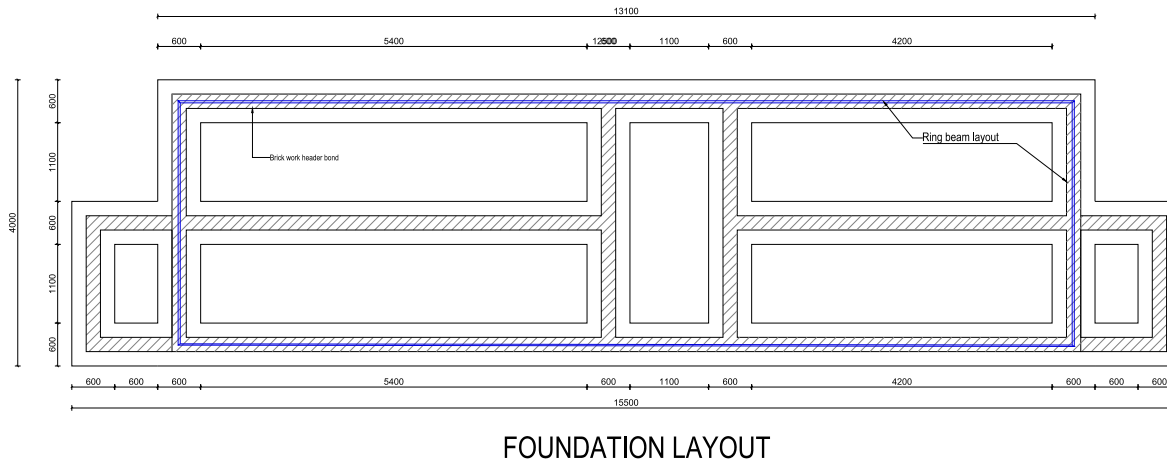
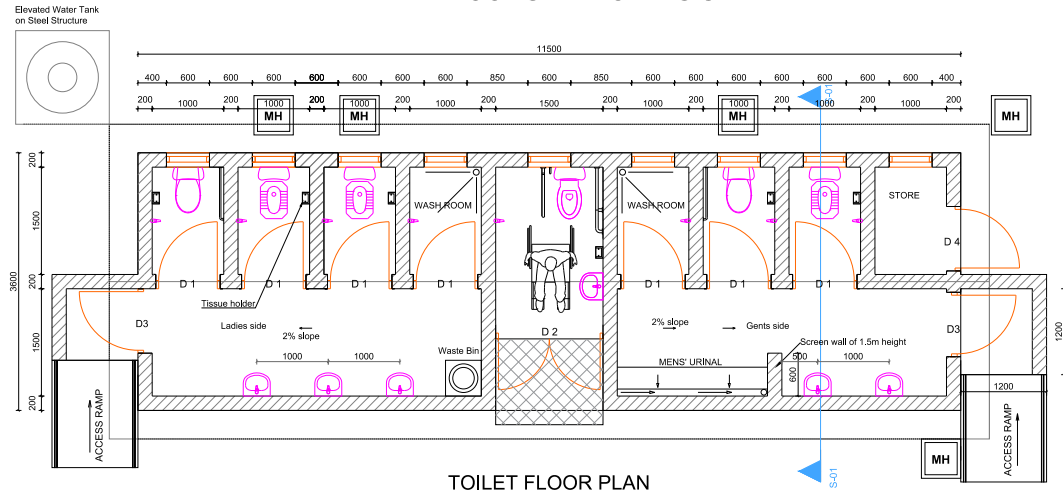
REAR ELEVATION



WEST ELEVATION

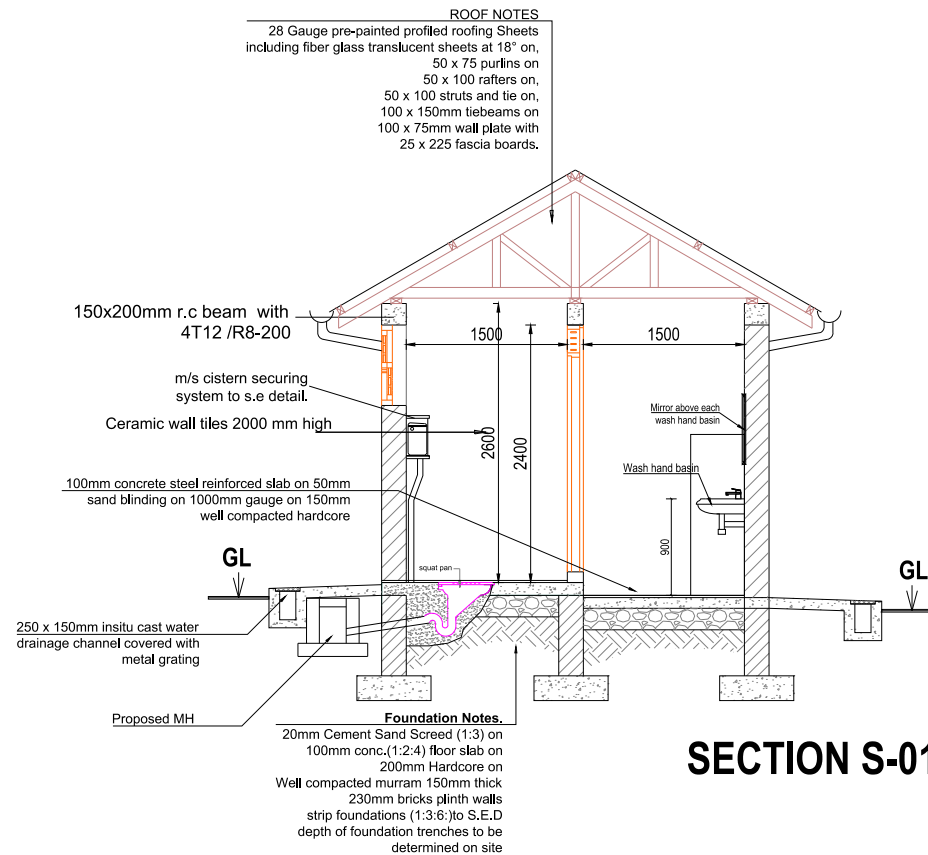
LEGEND	PROJECT	CLIENT	SURVEYED:		DRAWING TITLE:		REVISIONS	
			DESIGNED:	S.S	HEALTH INSTITUTION SANITATION FACILITIES		Rev	Description
1. All dimensions are in millimeters unless specified	MINIMUM STANDARDS FOR ONSITE SANITATION TECHNOLOGY OPTIONS IN NORTHERN UGANDA		DRAWN:	J.L	Combined VIP Latrine Facility		a.	February 2024 Version
			CHECKED:	A.N	DRAWING NO.	SCALE:		
			APPROVED:		NMS_HIF_VIP_001	1:75		
					DATE: February 2024	SHEET NO: 3 of 3		

SIX STANCE WATER BORNE TOILET FOR HEALTH CENTRES WITH TWO BATHROOMS AND GENTS URINAL



LEGEND	PROJECT	CLIENT	SURVEYED:	DRAWING TITLE:		REVISIONS	
				DESIGNED:	HEALTH INSTITUTION SANITATION FACILITIES	Rev	Description
1. All dimensions are in millimeters unless specified	MINIMUM STANDARDS FOR ONSITE SANITATION TECHNOLOGY OPTIONS IN NORTHERN UGANDA		S.S.	J.L.	Combined Waterborne Toilet Facility	a.	February 2024 Version
			CHECKED: A.N.	DRAWN: J.L.	DRAWING NO. NMS_HIF_WBT_001	SCALE: 1:75	
			APPROVED:	DATE: February 2024	SHEET NO: 1 of 4		

SIX STANCE WATER BORNE TOILET FOR HEALTH CENTRES WITH TWO BATHROOMS AND GENTS URINAL



SECTION S-01

LEGEND 1. All dimensions are in millimeters unless specified	PROJECT <h2>MINIMUM STANDARDS FOR ONSITE SANITATION TECHNOLOGY OPTIONS IN NORTHERN UGANDA</h2>	CLIENT <div>     </div>	SURVEYED:	DRAWING TITLE: HEALTH INSTITUTION SANITATION FACILITIES		REVISIONS	
			DESIGNED: S.S	Combined Waterborne Toilet Facility		Rev	Description
			DRAWN: J.L	DRAWING NO.	SCALE:	a.	February 2024 Version
			CHECKED: A.N	NMS_HIF_WBT_001	1:50		
			APPROVED:	DATE: February 2024	SHEET NO: 2 of 4		

SIX STANCE WATER BORNE TOILET FOR HEALTH CENTRES WITH TWO BATHROOMS AND GENTS URINAL

WEST ELEVATION

FRONT ELEVATION

EAST ELEVATION

REAR ELEVATION

LEGEND

1. All dimensions are in millimeters unless specified

PROJECT

MINIMUM STANDARDS FOR ONSITE SANITATION TECHNOLOGY OPTIONS IN NORTHERN UGANDA

CLIENT

Implemented by

SURVEYED:

DESIGNED: S.S

DRAWN: J.L

CHECKED: A.N

APPROVED:

DRAWING TITLE:

HEALTH INSTITUTION SANITATION FACILITIES

Combined Waterborne Toilet Facility

DRAWING NO.

NMS_HIF_WBT_001

DATE:

February 2024

SCALE:

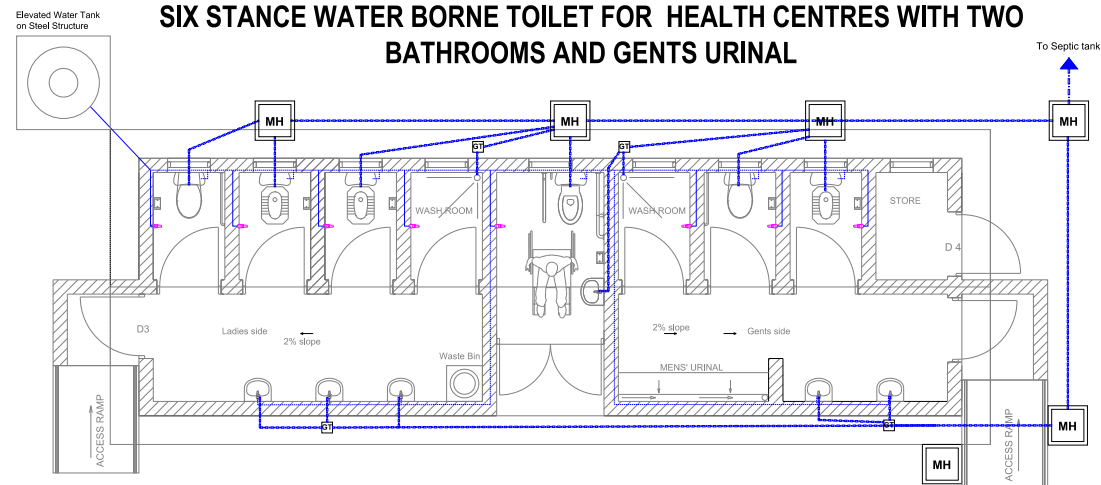
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SHEET NO:

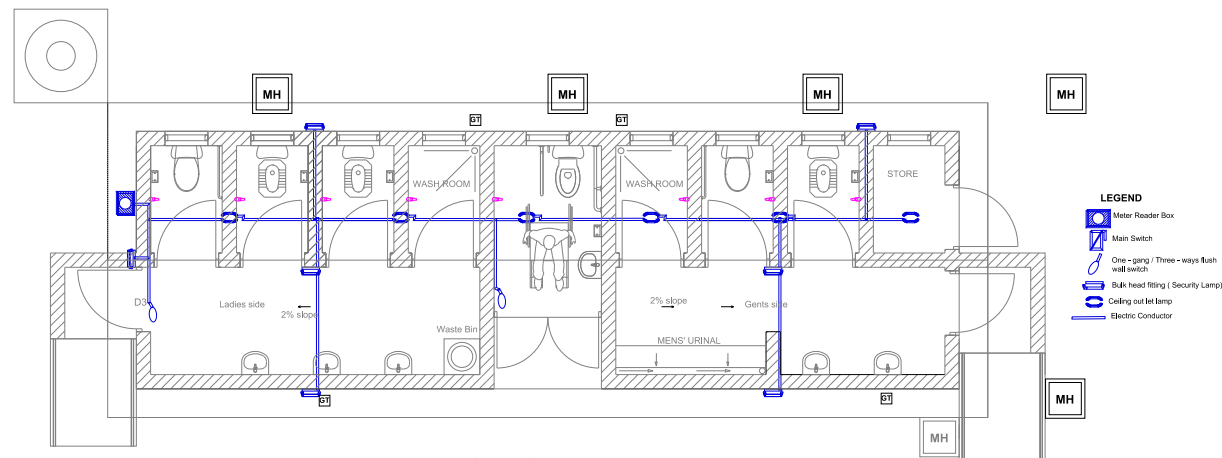
3 of 4

REVISIONS

Rev	Description
a.	February 2024 Version



PLUMBING LAYOUT

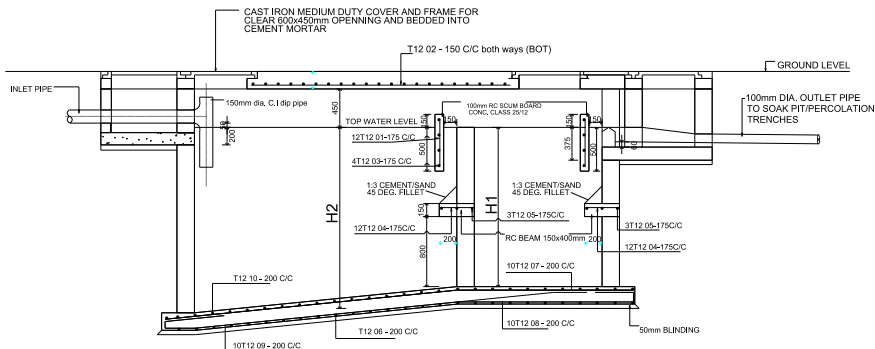


ELECTRICAL LAYOUT

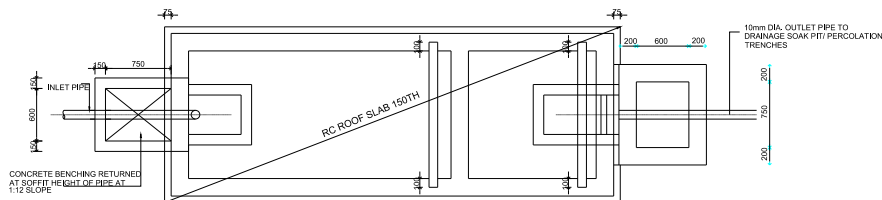
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				DESIGNED:	HEALTH INSTITUTION SANITATION FACILITIES		Rev	Description
				S.S	Combined Waterborne Toilet Facility		a.	February 2024 Version
				DRAWN:	DRAWING NO.	SCALE:		
				J.L	NMS_HIF_WBT_001	1:75		
CHECKED:	A.N	DATE:	SHEET NO:					
February 2024	4 of 4							

ADD ONs AND KEY TOILET ACCESSORIES

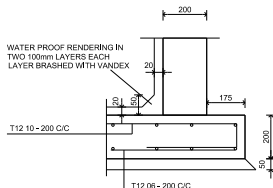
SEPTIC TANK SIZES - DEPENDING ON NUMBER OF USERS



SECTION A - A



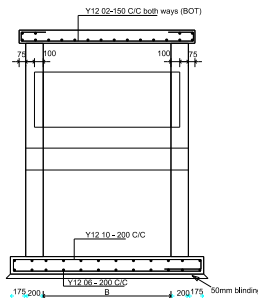
ROOF SLAB PLAN



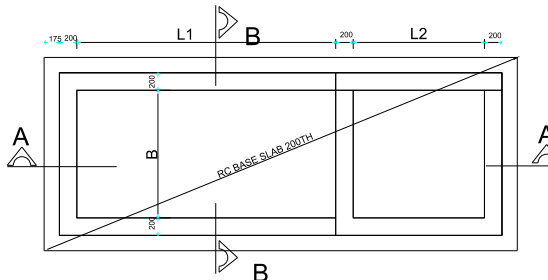
INTERNAL WATER PROOF TO
WALLS AND SLABS



CONC. WEIR BLOCK DETAIL



SECTION B - B

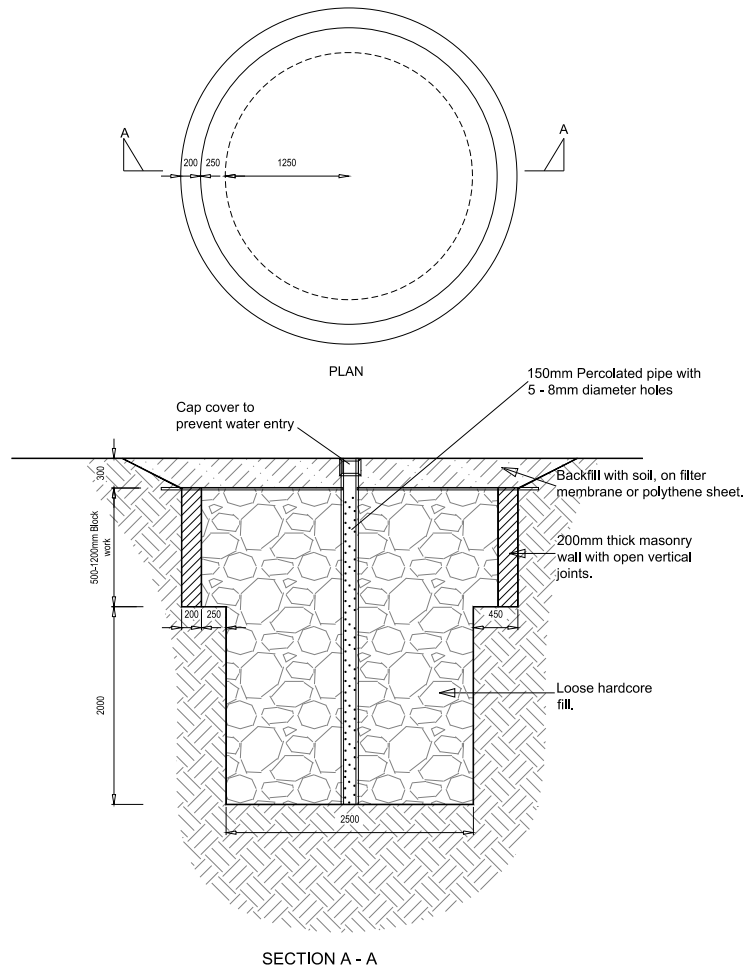


SEPTIC TANK DIMENSIONS

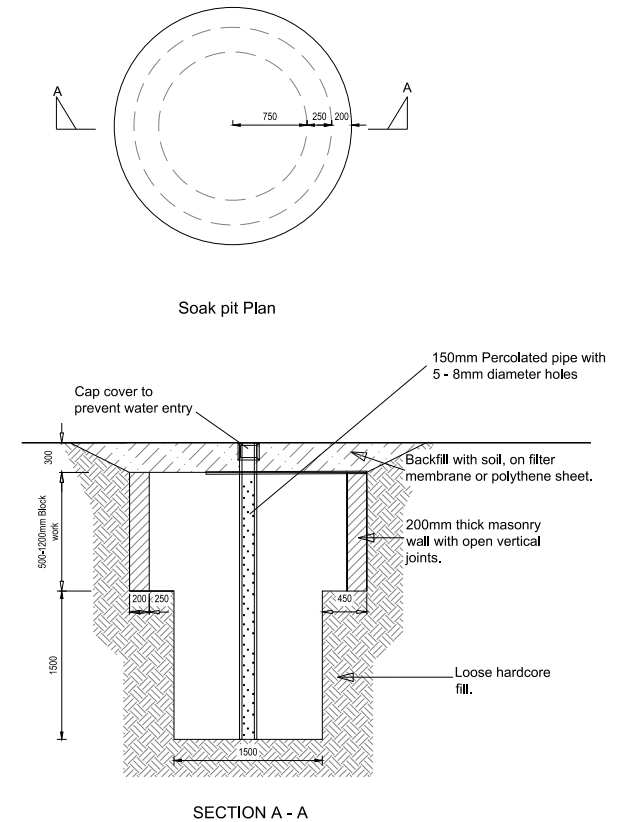
INTERNAL DIMENSIONS (mm)					CAPACITY	NO. OF USE
L1	L2	H1	H2	B	Cu, M	
1540	760	1600	1750	760	3,2	10
1900	900	1800	2000	900	4,5	20
2000	1000	1800	2000	1100	5,9	30
2400	1100	1800	2000	1150	7,24	40
2500	1200	1800	2000	1300	8,6	50
2000	1300	1800	2000	1400	10	60
2000	1400	1800	2000	1450	11,3	70
3000	1500	1800	2000	1560	12,7	80
3200	1600	1800	2000	1600	14	90
3300	1700	1800	2000	1700	15,4	100
4000	2000	1800	2000	2090	24	150
4500	2000	1800	2000	2650	34,3	200

<div>LEGEND</div> <div>1. All dimensions are in millimeters unless specified</div>	<div>PROJECT</div> <div>MINIMUM STANDARDS FOR ONSITE SANITATION TECHNOLOGY OPTIONS IN NORTHERN UGANDA</div>	<div>CLIENT</div> <div><div></div><div></div></div>	SURVEYED:	<div>DRAWING TITLE:</div> <div>ADD ONs AND KEY TOILET ACCESSORIES</div> <div>Septic Tank for Commercial Places</div>		Rev		REVISIONS	
			DESIGNED: S.S			Description			
			DRAWN: J.L	DRAWING NO.		SCALE:		a.	May 2024 Version
			CHECKED: A.N	NMS_AFD_002		On A3 Sheet			
			APPROVED:	DATE: May 2024		SHEET NO: 1 of 1			

SOAK PIT DETAILS - TYPE 1



SOAK PIT DETAILS - TYPE 2



LEGEND

1. All dimensions are in millimeters unless specified

PROJECT

**MINIMUM STANDARDS FOR
ONSITE SANITATION
TECHNOLOGY OPTIONS IN
NORTHERN UGANDA**

CLIENT



Implemented by



**SANITATION
FOR MILLIONS**

SURVEYED:

DESIGNED: S.S

DRAWN: J.L

CHECKED: A.N

APPROVED:

DRAWING TITLE:

ADD ONs AND KEY TOILET ACCESSORIES

Soak Pit

DRAWING NO.

NMS_AFD_004

DATE:

February 2024

SCALE:

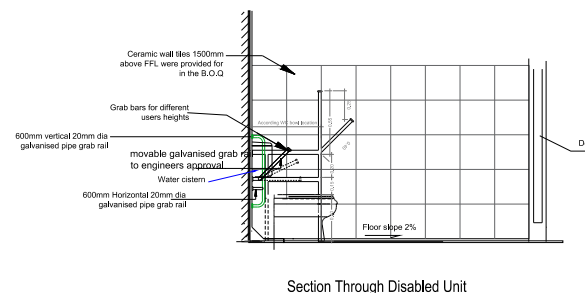
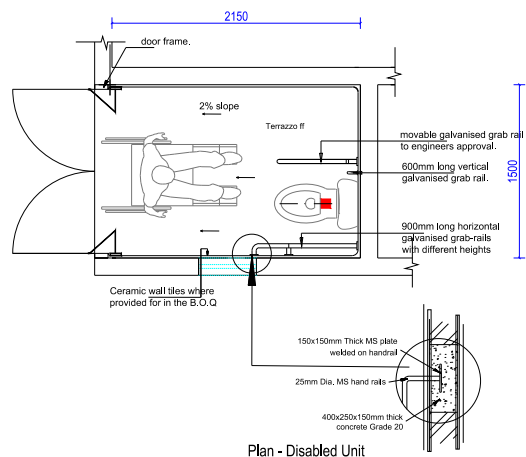
On A3 Sheet

SHEET NO:

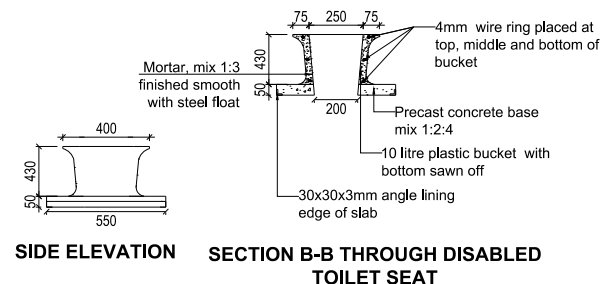
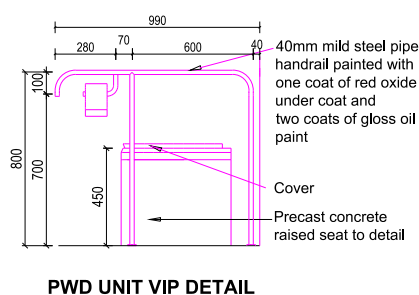
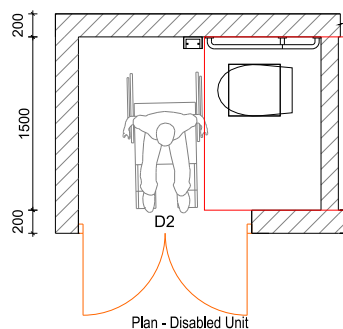
1 of 1

REVISIONS

Rev	Description
α.	February 2024 Version



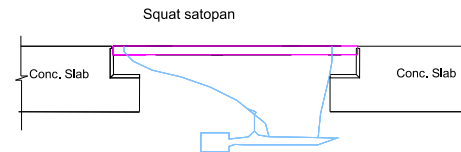
PWD UNIT FOR WATERBORNE TOILET



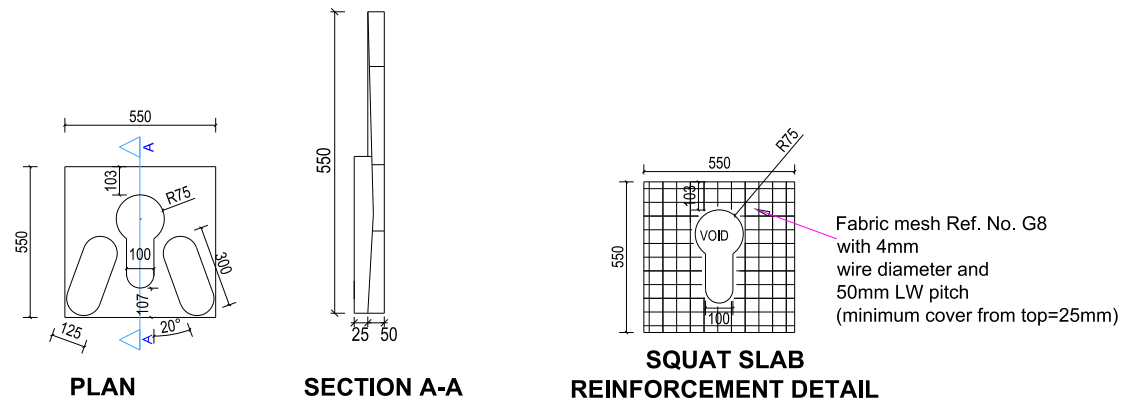
PWD UNIT FOR VIP LATRINE

LEGEND	PROJECT	CLIENT	SURVEYED:	DRAWING TITLE:	REVISIONS	
					Rev	Description
1. All dimensions are in millimeters unless specified	MINIMUM STANDARDS FOR ONSITE SANITATION TECHNOLOGY OPTIONS IN NORTHERN UGANDA		DESIGNED: S.S	ADD ONS AND KEY TOILET ACCESSORIES PWD Unit Facilities Details	a.	February 2024 Version
			DRAWN: J.L			
			CHECKED: A.N	DRAWING NO. NMS_AFD_005		
			APPROVED:	DATE: February 2024	SCALE: On A3 Sheet	SHEET NO: 1 of 1

SATO PAN

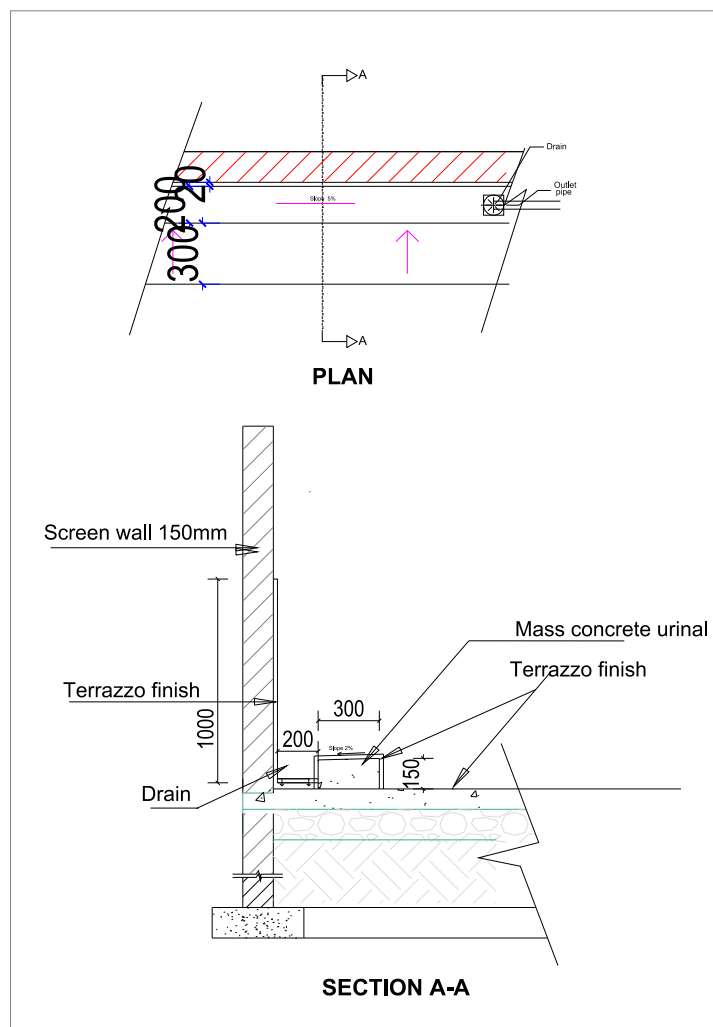


SAN PLAT

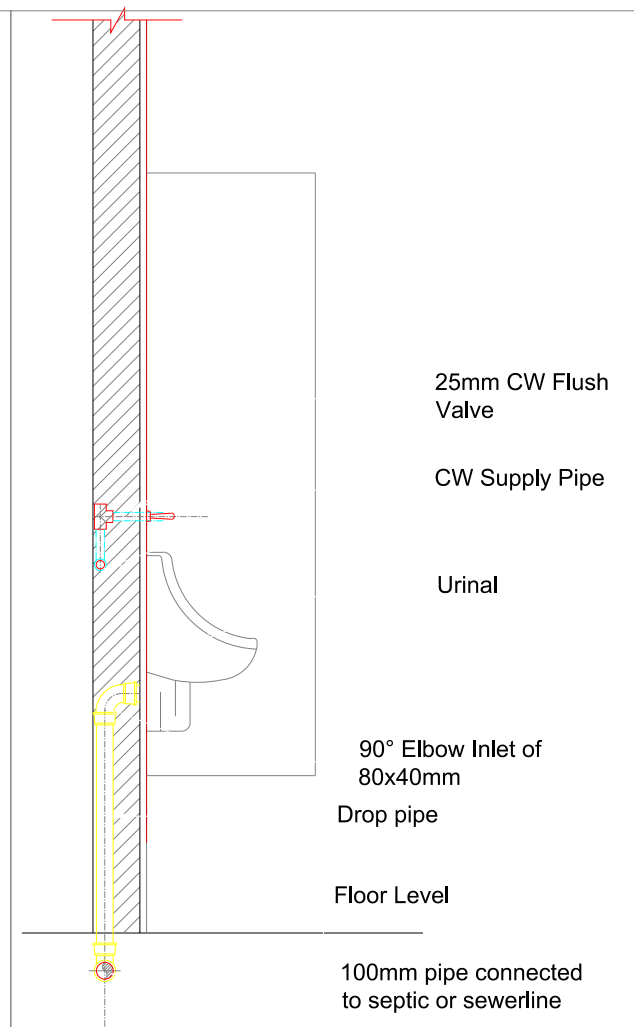


LEGEND	PROJECT	CLIENT	SURVEYED:	DRAWING TITLE:		REVISTONS	
				ADD ONs AND KEY TOILET ACCESSORIES		Rev	Description
1. All dimensions are in millimeters unless specified	MINIMUM STANDARDS FOR ONSITE SANITATION TECHNOLOGY OPTIONS IN NORTHERN UGANDA		DESIGNED: S.S	Sato Pan and San Plate Details		a.	February 2024 Version
			DRAWN: J.L	DRAWING NO.	SCALE:		
			CHECKED: A.N	NMS_AFD_006	On A3 Sheet		
			APPROVED:	DATE: February 2024	SHEET NO: 1 of 1		

BOYS' URINAL DETAIL

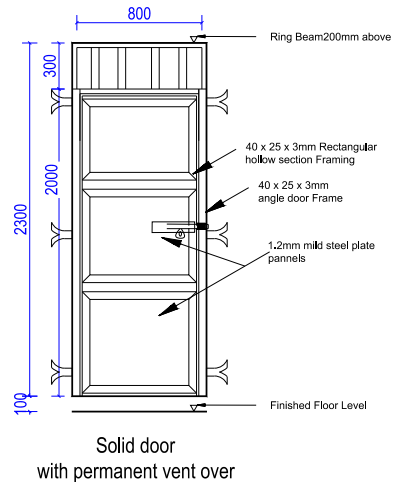
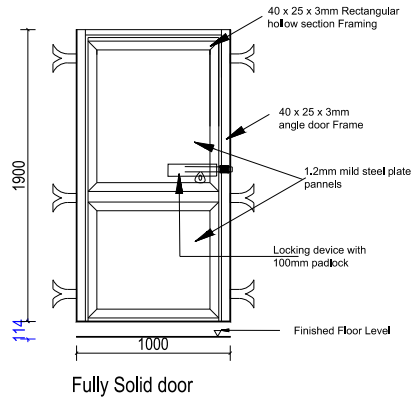


WALL MOUNTED URINAL

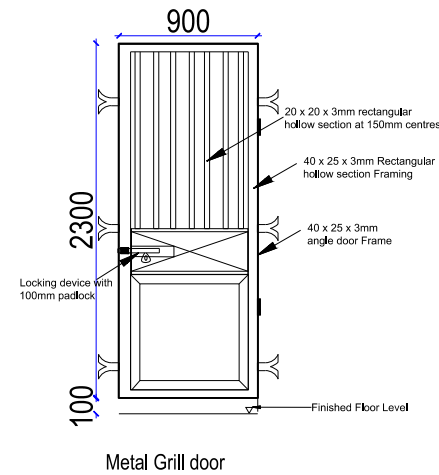
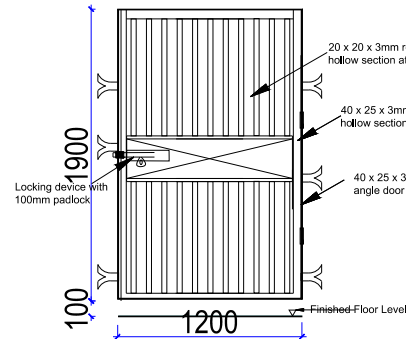


LEGEND	PROJECT	CLIENT	SURVEYED:	DRAWING TITLE:	REVISIONS	
					Rev	Description
1. All dimensions are in millimeters unless specified	MINIMUM STANDARDS FOR ONSITE SANITATION TECHNOLOGY OPTIONS IN NORTHERN UGANDA		DESIGNED: S.S	ADD ONS AND KEY TOILET ACCESSORIES Urinals Details	α.	February 2024 Version
			DRAWN: J.L			
			CHECKED: A.N	DRAWING NO. NMS_AFD_007	SCALE:	On A3 Sheet
			APPROVED:	DATE: February 2024	SHEET NO:	1 of 1

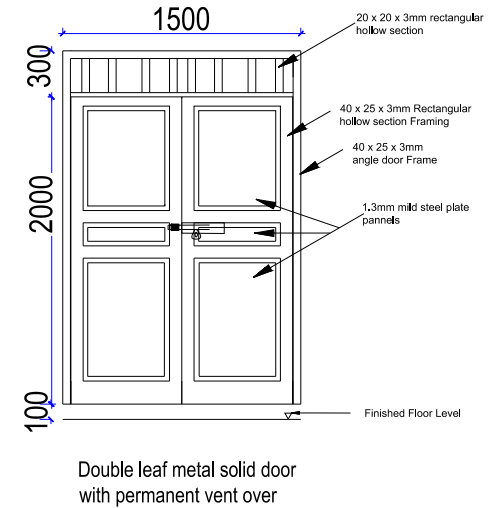
METAL SOLID DOORS



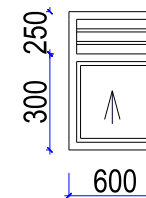
METAL GRILL DOORS



DOOR TO DISABLED UNIT

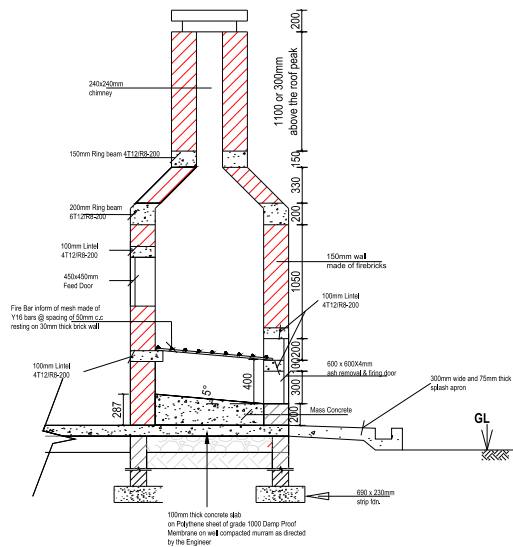
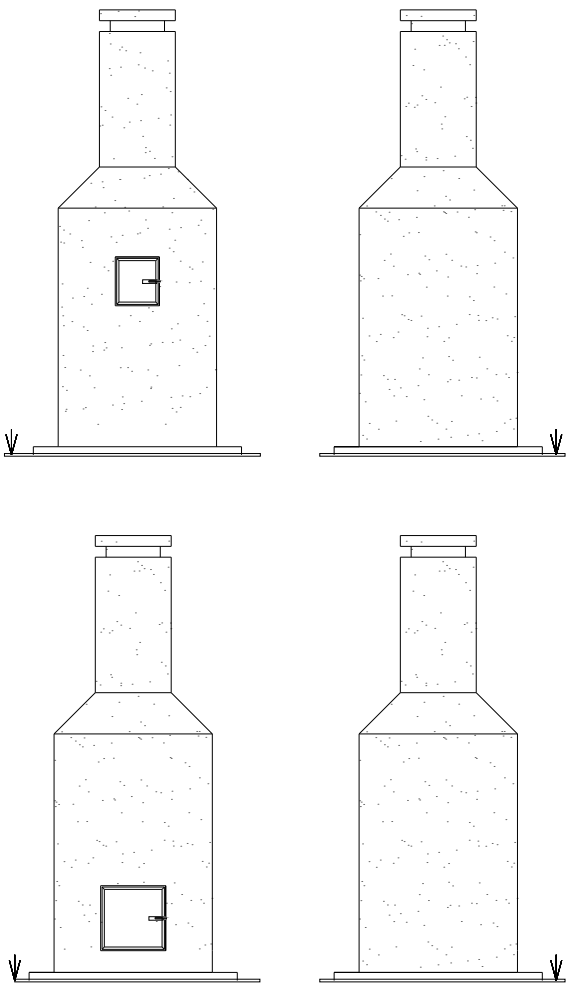
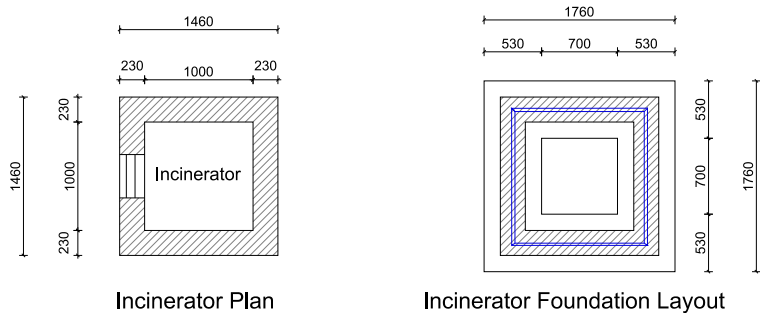


CASEMENT WINDOW

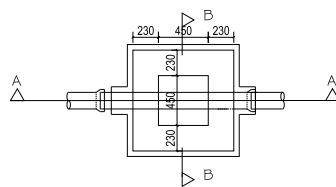


LEGEND	PROJECT	CLIENT		SURVEYED:	DRAWING TITLE:		REVISIONS	
				DESIGNED: S.S	ADD ONs AND KEY TOILET ACCESSORIES		Rev	Description
				DRAWN: J.L	Doors and Window Schedules		a.	February 2024 Version
				CHECKED: A.N	DRAWING NO. NMS_AFD_008	SCALE: On A3 Sheet		
				APPROVED:	DATE: February 2024	SHEET NO: 1 of 1		

INCINERATOR DETAILS

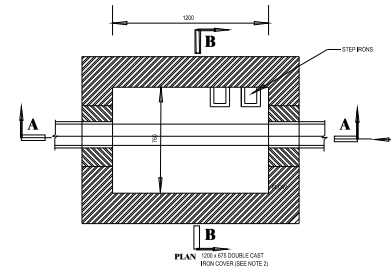


LEGEND	PROJECT	CLIENT	SURVEYED:	DRAWING TITLE:	REVISTONS		
					Rev	Description	
					1. All dimensions are in millimeters unless specified	α.	February 2024 Version
					MINIMUM STANDARDS FOR ONSITE SANITATION TECHNOLOGY OPTIONS IN NORTHERN UGANDA		
			DESIGNED:	ADD ONs AND KEY TOILET ACCESSORIES Incinerator Details		α.	February 2024 Version
	S.S						
	DRAWN:	DRAWING NO.	SCALE:				
	J.L	NMS_AFD_009	On A3 Sheet				
	CHECKED:	DATE:	SHEET NO:				
	A.N	February 2024	1 of 1				
	APPROVED:						



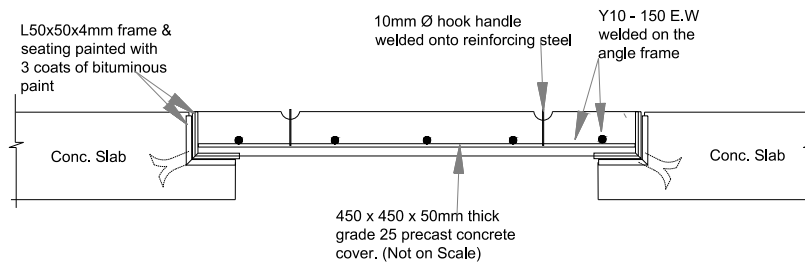
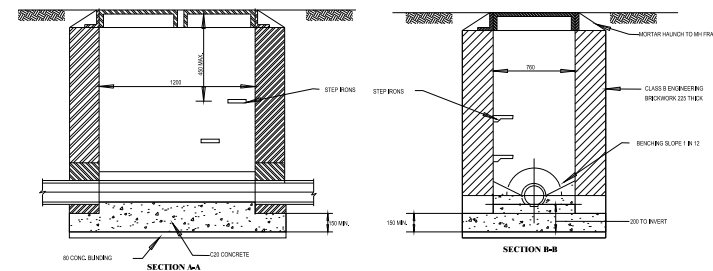
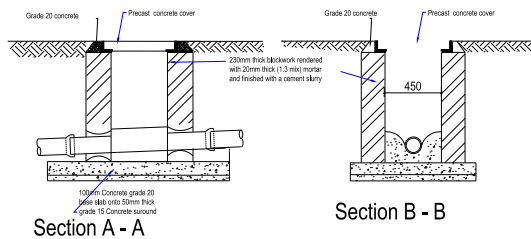
PLAN

SHALLOW MANHOLE (Depth <1000mm)



PLAN
1000MM SQUARE CAST
IRON COVER (SEE NOTE 2)

STANDARD MANHOLE (DEPTH : 1000–1350mm)

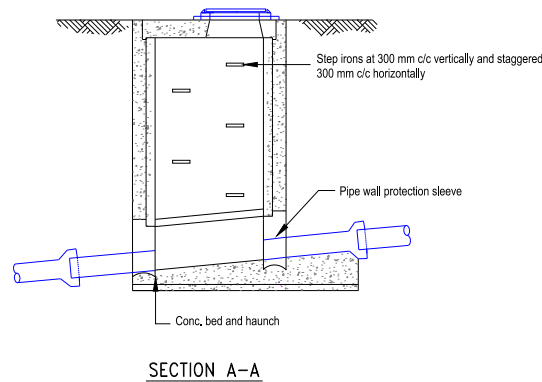
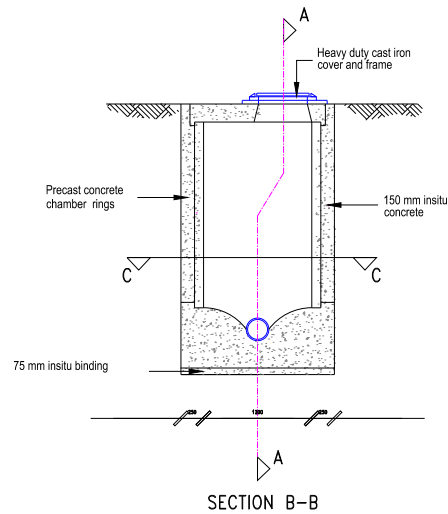
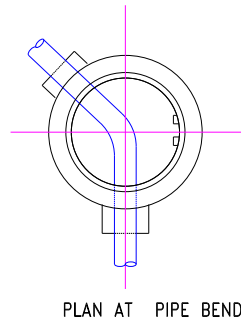
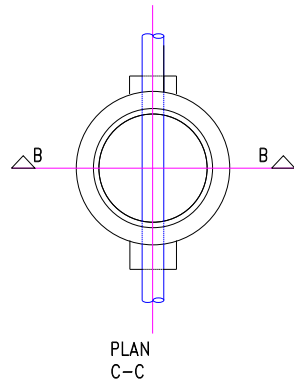


Typical Section thru precast concrete cover slab
(The rate for the precast concrete cover shall include the L seat and frame, concrete, reinforcement, hook etc.,)

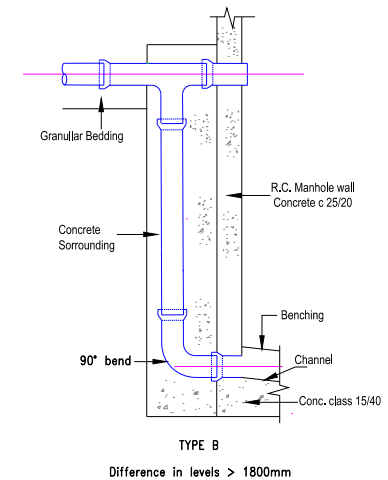
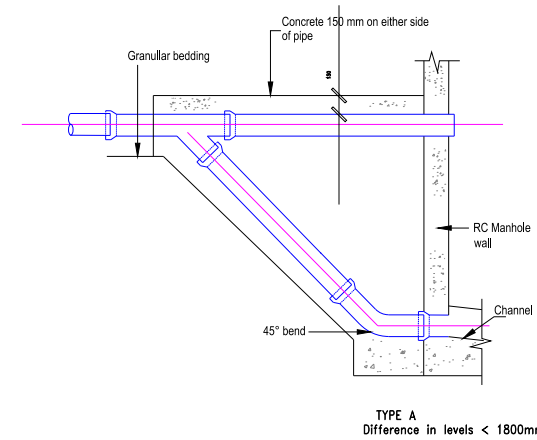
PRECAST CONCRETE COVER DETAIL

LEGEND	PROJECT	CLIENT		SURVEYED:	DRAWING TITLE:		REVISIONS	
				DESIGNED:	ADD ONs AND KEY TOILET ACCESSORIES		Rev	Description
				S.S	Shallow Manhole Details		a.	February 2024 Version
				DRAWN:	DRAWING NO.	SCALE:		
				J.L	NMS_AFD_010	On A3 Sheet		
CHECKED:	A.N	DATE:	SHEET NO:					
APPROVED:	February 2024	1 of 1						

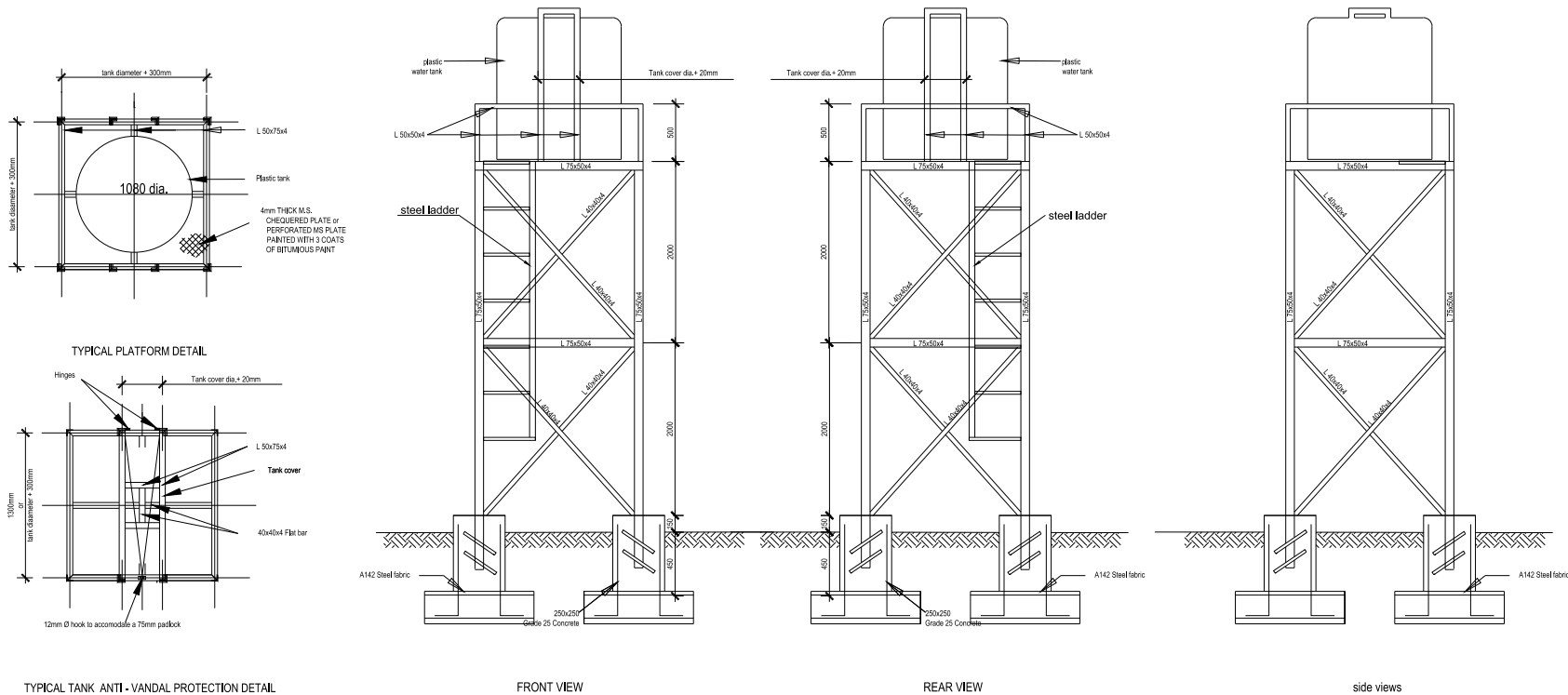
STANDARD MANHOLE (DEPTH : 1000-5000mm)



BACKDROP MANHOLE



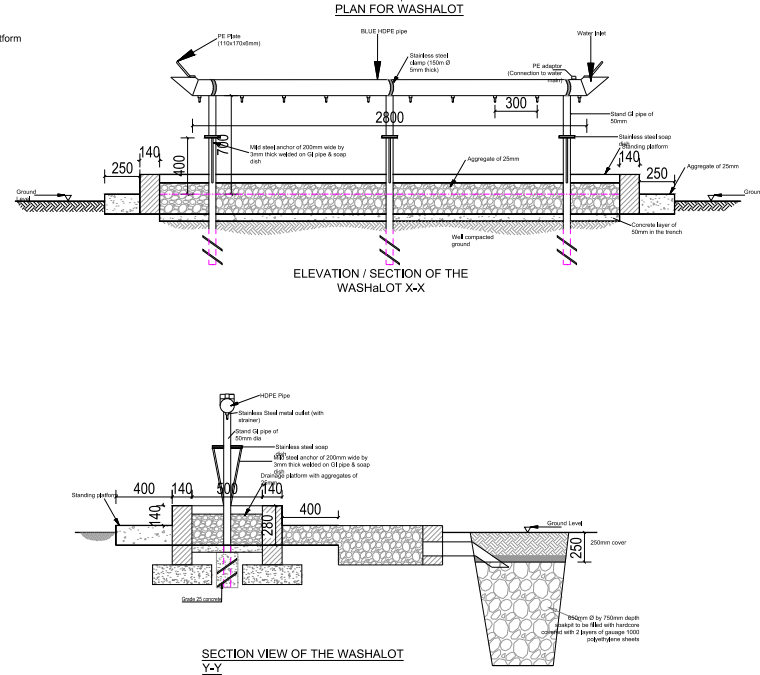
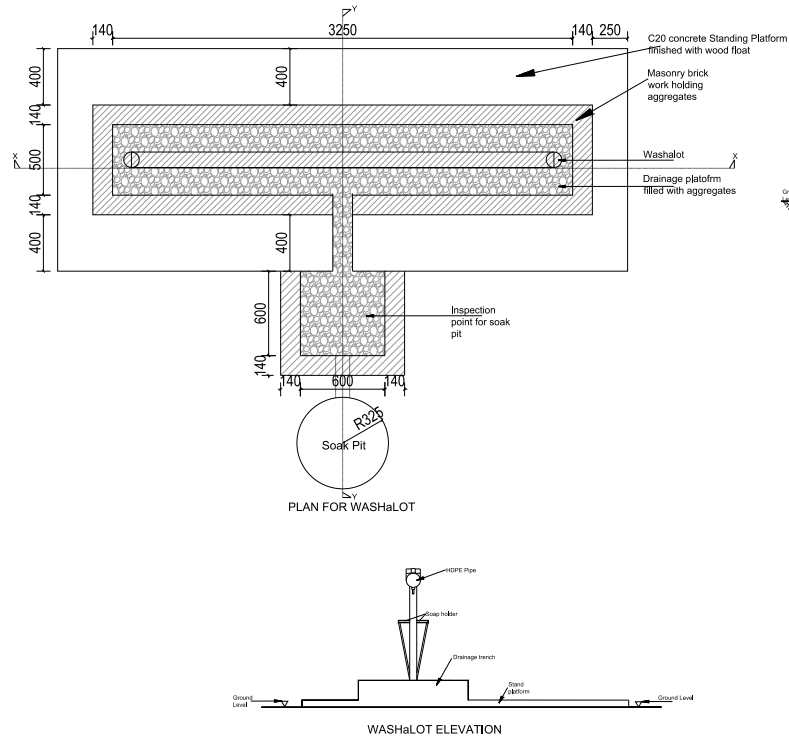
LEGEND	PROJECT	CLIENT	SURVEYED:		DRAWING TITLE:		REVISIONS	
			DESIGNED:	S.S	ADD ONs AND KEY TOILET ACCESSORIES BackDrop and Deep Manhole Details		Rev	Description
1. All dimensions are in millimeters unless specified	MINIMUM STANDARDS FOR ONSITE SANITATION TECHNOLOGY OPTIONS IN NORTHERN UGANDA		DRAWN:	J.L	DRAWING NO.	SCALE:	a.	February 2024 Version
			CHECKED:	A.N	NMS_AFD_011	On A3 Sheet		
			APPROVED:		DATE:	SHEET NO:		
					February 2024	1 of 1		



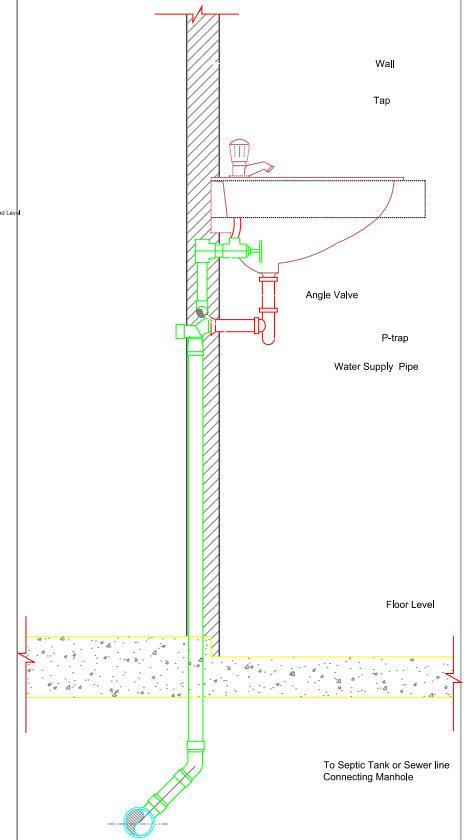
WATER TANK SUPPORTING STRUCTURE

<div>LEGEND</div> <div>1. All dimensions are in millimeters unless specified</div>	<div>PROJECT</div> <div>MINIMUM STANDARDS FOR ONSITE SANITATION TECHNOLOGY OPTIONS IN NORTHERN UGANDA</div>	<div>CLIENT</div> <div><div><div>german cooperation DEUTSCHE ZUSAMMENARBEIT</div></div><div><div>Implemented by giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH</div></div><div><div>SANITATION FOR MILLIONS</div></div></div>	<div>SURVEYED:</div>	<div>DRAWING TITLE:</div> <div>ADD ONs AND KEY TOILET ACCESSORIES</div> <div>Elevated Water Tank Structure</div>		<div>REVISTONS</div> <div>RevDescription</div> <div>a. February 2024 Version</div>	
			<div>DESIGNED:</div> <div>S.S</div>				
			<div>DRAWN:</div> <div>J.L</div>	<div>DRAWING NO.</div> <div>NMS_AFD_012</div>	<div>SCALE:</div> <div>On A3 Sheet</div>		
			<div>CHECKED:</div> <div>A.N</div>				
			<div>APPROVED:</div>	<div>DATE:</div> <div>February 2024</div>	<div>SHEET NO:</div> <div>1 of 1</div>		

WASHaLOT DETAILS 3.0

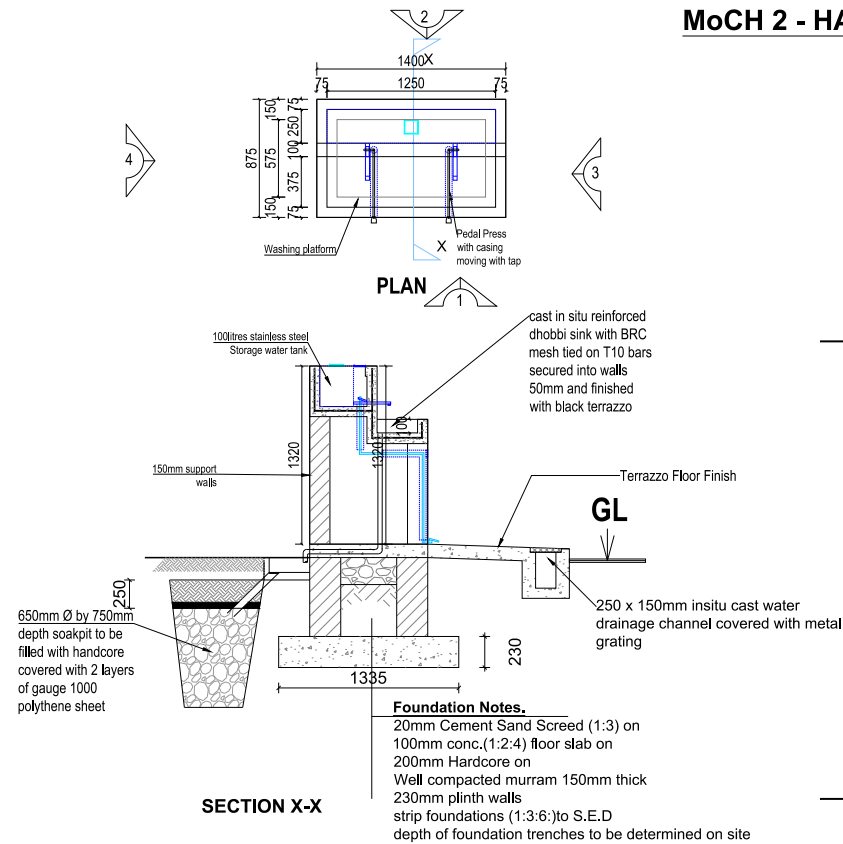


WASH HAND BASIN



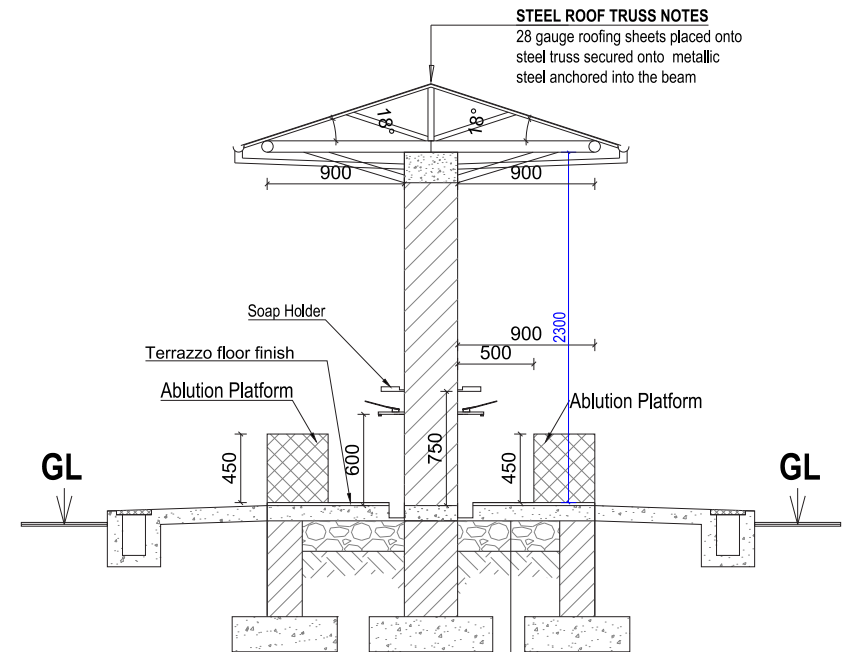
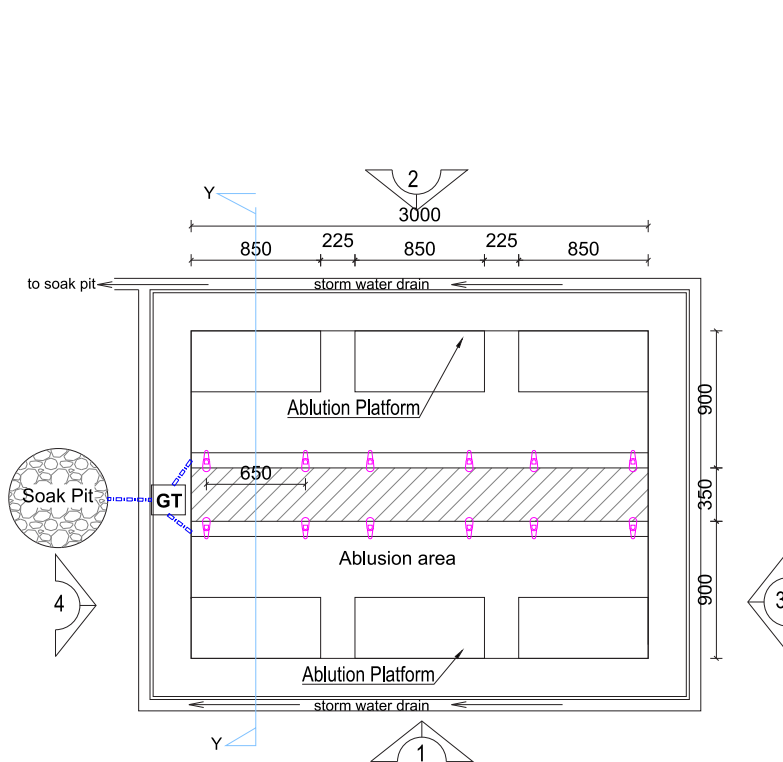
LEGEND	PROJECT	CLIENT	SURVEYED:	DRAWING TITLE:		REVISIONS	
				ADD ONs AND KEY TOILET ACCESSORIES		Rev	Description
1. All dimensions are in millimeters unless specified	MINIMUM STANDARDS FOR ONSITE SANITATION TECHNOLOGY OPTIONS IN NORTHERN UGANDA		DESIGNED: S.S	WashaLot Detail 3.0 and Hand wash Basin		α.	February 2024 Version
			DRAWN: J.L	DRAWING NO.	SCALE:		
			CHECKED: A.N	NMS_AFD_013	On A3 Sheet		
			APPROVED:	DATE: February 2024	SHEET NO: 1 of 1		

MoCH 2 - HAND WASH FACILITY



LEGEND	PROJECT	CLIENT	SURVEYED:	DRAWING TITLE:		REVISIONS	
				ADD ONs AND KEY TOILET ACCESSORIES		Rev	Description
1. All dimensions are in millimeters unless specified	MINIMUM STANDARDS FOR ONSITE SANITATION TECHNOLOGY OPTIONS IN NORTHERN UGANDA	 Implemented by  SANITATION FOR MILLIONS	DESIGNED: S.S	MoCH2 Hand wash facility		o.	May 2024 Version
			DRAWN: J.L	DRAWING NO.	SCALE:		
			CHECKED: A.N	NMS_AFD_015	On A3 Sheet		
			APPROVED:	DATE: May 2024	SHEET NO: 1 of 1		

WASH ABLUTION MILLIONS STATION

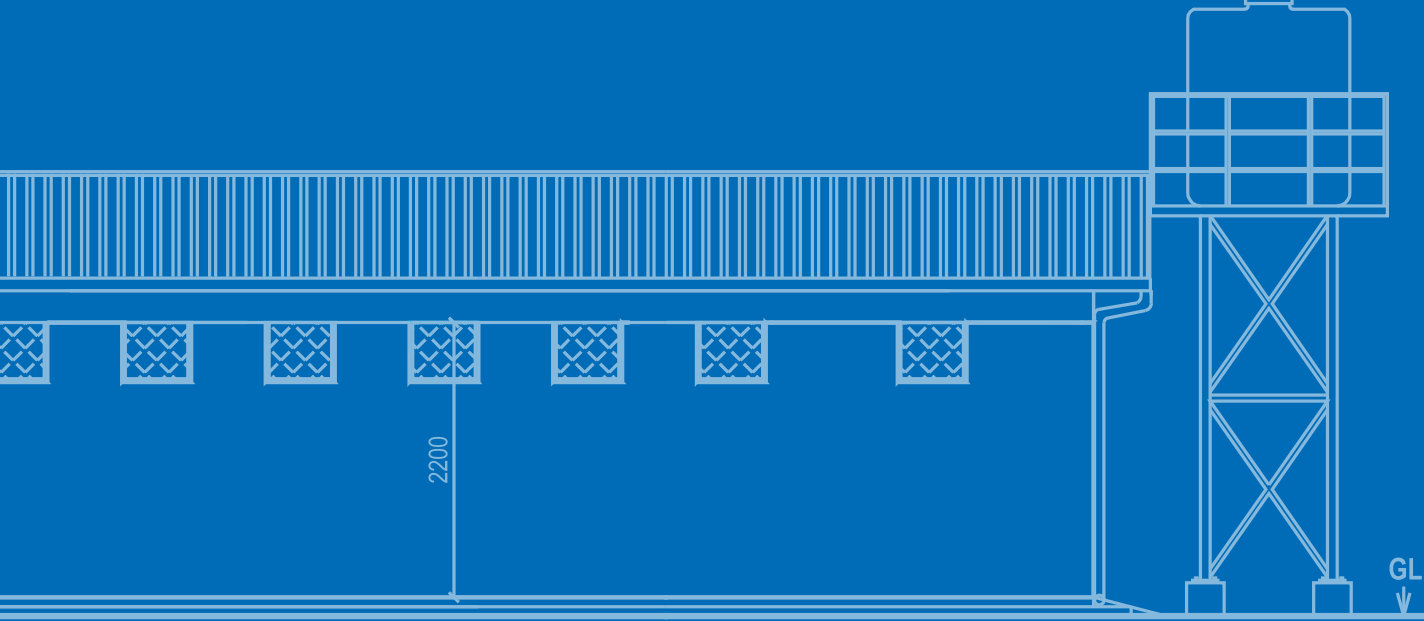


Foundation Notes.

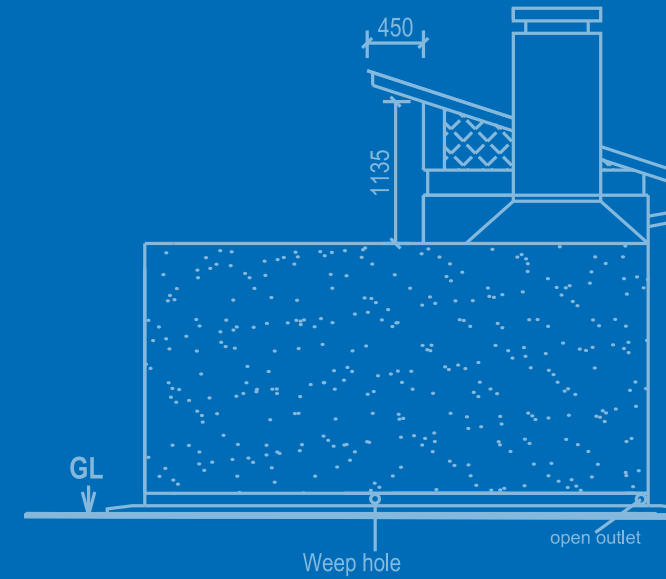
20mm Cement Sand Screed (1:3) on
100mm conc.(1:2:4) floor slab on
200mm Hardcore on
Well compacted murram 150mm thick
230mm plinth non load bearing wall
350mm plinth flemish bond center wall
strip foundations (1:3:6:) to S.E.D
depth of foundation trenches to be
determined on site

SECTION Y-Y

LEGEND	PROJECT	CLIENT	SURVEYED:	DRAWING TITLE:	REVISIONS	
					Rev	Description
1. All dimensions are in millimeters unless specified	MINIMUM STANDARDS FOR ONSITE SANITATION TECHNOLOGY OPTIONS IN NORTHERN UGANDA		DESIGNED: S.S	ADD ONS AND KEY TOILET ACCESSORIES Ablution Station	α.	February 2024 Version
			DRAWN: J.L			
			CHECKED: A.N	DRAWING NO. NMS_AFD_015	SCALE:	On A3 Sheet
			APPROVED:	DATE: February 2024	SHEET NO:	1 of 1



ELEVATION 1



ELEVATION 3

APPENDIX A2

INDICATIVE TECHNOLOGY COSTS

PROPOSED MATERIALS AND LABOUR FOR CONSTRUCTION OF ONE STANCE LINED VIP LATRINE

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
SUBSTRUCTURES (INCLUDING FLOOR SLABS)					
1	PPC Cement (50kg Bags)	Bags	5	34,000	170,000
2	Sand	elf truck	1	130,000	130,000
3	20mm Aggregates	elf truck	0.5	120,000	60,000
4	T10 mm bars for floor Slab	pcs	3	26,000	78,000
5	Binding wire for Floor Slab	Kg	1	6,000	6,000
6	12"x1" Timber Formwork including Slab Support	pcs	6	8,000	48,000
7	3"-4" Assorted Nails	Kg	1	6,000	6,000
8	Mud Bricks (225X112.7X75)	No	1300	350	455,000
9	Hoop iron in Brick work	Kg	1	15,000	15,000
	Subtotal				968,000
WALLS					
10	Mud Bricks (225X112.7X75) for walls	No	360	250	90,000
11	PPC Cement (50kg Bags)	Bags	1	34,000	34,000
12	Sand	elf truck	0.5	130,000	65,000
13	Lintel above the Door opening	pcs	1	10,000	10,000
14	Assorted nails	Kg	0.5	6,000	3,000
15	Damp proof course (gauge 1000)	meters	1	3,000	3,000
16	750 x 2100mm Iron sheet door with door frame	No	1	50,000	50,000
17	Door Accessories (2 hinges, inside and outside locks)	Item	1	10,000	10,000
18	Hoop iron in Brick work	Kg	1	15,000	15,000
	Subtotal				265,000

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
ROOF					
19	Timber Props (Kalitunsi) for roofing	pcs	2	4,000	8,000
20	30 Gauge corrugated sheets	pcs	1.5	31,000	46,500
21	Assorted roofing nails	Kg	2	6,000	12,000
22	100mm Diameter uPVC Vent pipe	pcs	0.5	35,000	17,500
	Subtotal				84,000
FINISHES					
23	Cement for floor screed and interior walls	Bags	1	34,000	34,000
24	Plaster Sand on Walls	elf truck	0.2	130,000	26,000
25	Precast Manhole covers for Access Manhole	No.	1	30,000	30,000
	Subtotal				90,000
	MATERIALS SUB-TOTAL				1,407,000
LABOUR					
	Labour for excavation, building and roofing	Item	1	500,000	500,000
	GRAND TOTAL				1,907,000

PROPOSED MATERIALS AND LABOUR FOR CONSTRUCTION OF ONE STANCE LINED VIP LATRINE WITH PRECAST SLAB

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
SUBSTRUCTURES (INCLUDING FLOOR SLABS)					
1	PPC Cement (50kg Bags)	Bags	3	34,000	102,000
2	Sand	elf truck	0.6	130,000	78,000
3	20mm Aggregates	elf truck	0.3	120,000	36,000
4	Precast Slab for the floor	pcs	1	80,000	80,000
8	Mud Bricks (225X112.7X75)	No	1300	350	455,000
9	Hoop iron in Brick work	Kg	1	15,000	15,000
7	3"-4" Assorted Nails	Kg	1	6,000	6,000
8	Mud Bricks (225X112.7X75)	No	1300	350	455,000
9	Hoop iron in Brick work	Kg	1	15,000	15,000
	Subtotal				766,000
WALLS					
10	Mud Bricks (225X112.7X75) for walls	No	360	250	90,000
11	PPC Cement (50kg Bags)	Bags	1	34,000	34,000
12	Sand	elf truck	0.5	130,000	65,000
13	Lintel above the Door opening	pcs	1	10,000	10,000
14	Assorted nails	Kg	0.5	6,000	3,000
15	Damp proof course (gauge 1000)	meters	1	3,000	3,000
16	750 x 2100mm Iron sheet door with door frame	No	1	50,000	50,000
17	Door Accessories (2 hinges, inside and outside locks)	Item	1	10,000	10,000
18	Hoop iron in Brick work	Kg	1	15,000	15,000
	Subtotal				265,000

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
ROOF					
19	Timber Props (Kalitunsi) for roofing	pcs	2	4,000	8,000
20	30 Gauge corrugated sheets	pcs	1.5	31,000	46,500
21	Assorted roofing nails	Kg	2	6,000	12,000
22	100mm Diameter uPVC Vent pipe	pcs	0.5	35,000	17,500
	Subtotal				84,000
FINISHES					
23	Cement for floor screed and interior walls	Bags	1	34,000	34,000
24	Plaster Sand on Walls	elf truck	0.2	130,000	26,000
25	Precast Manhole covers for Access Manhole	No.	1	30,000	30,000
	Subtotal				90,000
	MATERIALS SUB-TOTAL				1,205,000
LABOUR					
	Labour for excavation, building and roofing	Item	1	500,000	500,000
	GRAND TOTAL				1,705,000

PROPOSED MATERIALS AND LABOUR FOR CONSTRUCTION OF TWO STANCE LINED VIP LATRINE

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
SUBSTRUCTURES (INCLUDING FLOOR SLABS)					
1	PPC Cement (50kg Bags)	Bags	5	34,000	170,000
2	Sand	elf truck	1	130,000	130,000
3	20mm Aggregates	elf truck	0.5	120,000	60,000
4	T10 mm bars for floor Slab	pcs	3	26,000	78,000
5	Binding wire for Floor Slab	Kg	1	6,000	6,000
6	12"x1" Timber Formwork including Slab Support	pcs	6	8,000	48,000
7	3"-4" Assorted Nails	Kg	1	6,000	6,000
8	Mud Bricks (225X112.7X75) for Pit wall	No	1300	350	455,000
9	Hoop iron in Brick work	Kg	1	15,000	15,000
	Subtotal				968,000
WALLS					
10	Burnt mud Bricks (225X112.7X75)	No	770	350	269,500
11	PPC Cement (50kg Bags)	Bags	3	34,000	102,000
12	Sand	elf truck	0.8	130,000	104,000
13	Lintel above the Door opening	pcs	1	10,000	10,000
14	Assorted nails	Kg	0.5	6,000	3,000
15	Damp proof course (gauge 1000)	meters	1	3,000	3,000
16	750 x 2100mm Iron sheet door with door frame	No	2	50,000	100,000
17	Door Accessories (2 hinges, inside and outside locks)	Item	2	10,000	20,000
18	Hoop iron in Brick work	Kg	1	15,000	15,000
	Subtotal				611,500

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
ROOF					
19	Timber Props (Kalitunsi) for roofing	pcs	2	4,000	8,000
20	30 Gauge corrugated sheets	pcs	2.5	31,000	77,500
21	Assorted roofing nails	Kg	2	6,000	12,000
22	100mm Diameter uPVC Vent pipe	pcs	1	35,000	35,000
	Subtotal				132,500
FINISHES					
23	Cement for floor screed and interior walls	Bags	1.5	34,000	51,000
24	Plaster Sand on Walls	elf truck	0.3	130,000	39,000
25	Precast Manhole covers for Access Manhole	No.	1	30,000	30,000
	Subtotal				120,000
	MATERIALS SUB-TOTAL				1,832,000
LABOUR					
	Labour for excavation, building and roofing	Item	1	500,000	800,000
	GRAND TOTAL				2,632,000

PROPOSED MATERIALS AND LABOUR FOR SINGLE STANCE POUR FLUSH TOILET CONNECTED TO A SEPTIC TANK

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
SUBSTRUCTURES					
1	PPC Cement (50kg Bags)	Bags	2	34,000	68,000
2	Sand	elf truck	0.5	130,000	65,000
3	Burnt mud Bricks (225X112.7X75) for Plinth Walls	No	270	350	73,100
4	20mm Aggregates	elf truck	0.5	120,000	60,000
5	T10 mm bars for floor Slab	pcs	3	26,000	78,000
6	Binding wire for Floor Slab	Kg	1	6,000	6,000
7	12"x1" Timber Formwork including Slab Support	pcs	6	8,000	48,000
	Subtotal				398,100
WALLS					
8	Burnt mud Bricks (225X112.7X75)	No	390	350	136,500
9	PPC Cement (50kg Bags)	Bags	4	34,000	136,000
10	Sand	elf truck	1	130,000	130,000
11	T12 mm bars for beam	pcs	1	35,000	
12	R7 Rings for beam	pcs	1	10,000	
13	1.8mm Binding wire for beam	kg	1	6,000	
14	Timber props (kalitunsi) for support	Pcs	2	5,000	10,000
15	Assorted nails	Kg	1	6,000	6,000
16	Damp proof course (gauge 1000)	meters	2	3,000	6,000
17	750 x 2100mm Battened timber door with door frame	No	1	120,000	120,000
18	Door Accessories (2 hinges, inside and outside locks)	Item	1	20,000	20,000
	Subtotal				564,500

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
ROOF					
19	4" x 2" Timber for roof structure	pcs	6	6,000	36,000
20	30 Gauge corrugated sheets	pcs	2	31,000	62,000
21	8" x 1" Fascia Board (Optional)	Pcs	2	15,000	
22	Assorted roofing nails	Kg	2	6,000	12,000
23	100mm Diameter UPVC pipe (medium gauge) (Optional)	pcs	1	35,000	
24	100mm Diameter UPVC bend plain	pcs	1	15,000	
25	100mm clip	no	1	3,000	
26	100mm Diameter UPVC vents	pcs	0.5	35,000	17,500
27	Solvent cement - small tin	pcs	1	5,000	5,000
	Subtotal				132,500
FINISHES					
28	Lime (25kg bags) (Optional)	Bags	0.5	25,000	
29	Weather guard Paint (Optional)	4 ltr tins	2	25,000	
30	Precast Manhole covers for Access Manhole	No.	1	30,000	30,000
31	Normal ceramic squat pans	Pc	1	60,000	60,000
	Subtotal				90,000
SEPTIC TANK (20 OR LESS PEOPLE)					
32	PPC Cement (50kg Bags)	Bags	15	34,000	510,000
33	Sand	elf truck	3	130,000	390,000
34	20mm Aggregates	elf truck	1	120,000	120,000

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
35	Hardcore	elf truck	1.5	120,000	
36	Ribbed bars T12	pcs	9	35,000	315,000
37	R6 rings and binding wire		1	35,000	35,000
38	12"x1" Timber Formwork	pcs	12	8,000	96,000
39	4" x 2" Timber Formwork	pcs	3	6,000	18,000
40	Poles (Kalitunsi)	pcs	10	5,000	50,000
41	Burnt Clay Bricks (225X112.7X75)	No	1,200	350	420,000
42	3"-6" Assorted Nails	Kg	2	6,000	12,000
43	100mm Diameter UPVC pipe (medium gauge)	pcs	2	35,000	70,000
44	Bends	pcs	3	15,000	45,000
45	Precast concrete covers	pcs	4	30,000	120,000
46	Minimum manhole connections	No.	3	30,000	90,000
	Subtotal				2,291,000

SOAK PIT

47	Hardcore	elf truck	3	120,000	360,000
48	Gauge 1000, 6m polythen		6	3,000	18,000
49	Corner pipe 110mm		1	7,000	7,000
	Subtotal				385,000

LABOUR

	Labour for excavation, building and roofing	Item	1	1,200,000	1,200,000
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	GRAND TOTAL				5,061,100
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PROPOSED MATERIALS AND LABOUR FOR SINGLE TWO POUR FLUSH TOILET WITH A BATHROOM CONNECTED TO A SEPTIC TANK

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
SUBSTRUCTURES					
1	PPC Cement (50kg Bags)	Bags	5	34,000	170,000
2	Sand	elf truck	0.6	130,000	78,000
3	Burnt mud Bricks (225X112.7X75) for Plinth Walls	No	680	350	73,100
4	20mm Aggregates	elf truck	0.5	120,000	60,000
5	T10 mm bars for floor Slab	pcs	3	26,000	78,000
6	Binding wire for Floor Slab	Kg	1	6,000	6,000
7	12"x1" Timber Formwork including Slab Support	pcs	6	8,000	48,000
	Subtotal				513,100
WALLS					
8	Burnt mud Bricks (225X112.7X75)	No	1050	350	367,500
9	PPC Cement (50kg Bags)	Bags	3	34,000	102,000
10	Sand	elf truck	1	130,000	130,000
11	Lintel above the Door opening	pcs	1	10,000	10,000
12	R7 Rings for beam	pcs	1	10,000	10,000
13	1.8mm Binding wire for beam	kg	1	6,000	6,000
14	Timber props (kalitunsi) for support	Pcs	2	5,000	10,000
15	Assorted nails	Kg	1	6,000	6,000
16	Damp proof course (gauge 1000)	meters	2	3,000	6,000
17	750 x 2100mm Battened timber door with door frame	No	3	120,000	360,000
18	Door Accessories (2 hinges, inside and outside locks)	Item	1	20,000	20,000
	Subtotal				1,027,500

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
ROOF					
19	4" x 2" Timber for roof structure	pcs	6	6,000	36,000
20	30 Gauge corrugated sheets	pcs	4	31,000	124,000
21	8" x 1" Fascia Board (Optional)	Pcs	2	15,000	
22	Assorted roofing nails	Kg	2	6,000	12,000
23	100mm Diameter UPVC pipe (medium gauge) (Optional)	pcs	1	35,000	
24	100mm Diameter UPVC bend plain	pcs	1	15,000	
25	100mm clip	no	1	3,000	
26	100mm Diameter UPVC vents	pcs	1	35,000	35,000
27	Solvent cement - small tin	pcs	1	5,000	5,000
	Subtotal				212,000
FINISHES					
28	Lime (25kg bags) (Optional)	Bags	1	25,000	
29	Weather guard Paint (Optional)	4 ltr tins	2	25,000	
30	Precast Manhole covers for Access Manhole	No.	2	30,000	60,000
31	Normal ceramic squat pans	Pc	2	60,000	120,000
	Subtotal				180,000
SEPTIC TANK (20 OR LESS PEOPLE)					
32	PPC Cement (50kg Bags)	Bags	15	34,000	510,000
33	Sand	elf truck	3	130,000	390,000
34	20mm Aggregates	elf truck	1	120,000	120,000
35	Hardcore	elf truck	1.5	120,000	
36	Ribbed bars T12	pcs	9	35,000	315,000

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
37	R6 rings and binding wire		1	35,000	35,000
38	12"x1" Timber Formwork	pcs	12	8,000	96,000
39	4" x 2" Timber Formwork	pcs	3	6,000	18,000
40	Poles (Kalitunsi)	pcs	10	5,000	50,000
41	Burnt Clay Bricks (225X112.7X75)	No	1,200	350	420,000
42	3"-6" Assorted Nails	Kg	3	6,000	18,000
43	100mm Diameter UPVC pipe (medium gauge)	pcs	2	35,000	70,000
44	Bends	pcs	3	15,000	45,000
45	Precast concrete covers	pcs	4	30,000	120,000
46	Minimum manhole connections	No.	3	30,000	90,000
	Subtotal				2,297,000
SOAK PIT					
47	Hardcore	elf truck	3	120,000	360,000
48	Gauge 1000, 6m polythen		6	3,000	18,000
49	Corner pipe 110mm		1	7,000	7,000
	Subtotal				385,000
LABOUR					
	Labour for excavation, building and roofing	Item	1	1,200,000	1,200,000
	GRAND TOTAL				5,814,600

PROPOSED MATERIALS AND LABOUR FOR BOYS FOUR STANCE VIP LATRINE WITH A PWD UNIT

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
SUBSTRUCTURES INCLUDING FLOOR SLAB AND STRIP CONCRETE					
1	PPC Cement (50kg Bags)	Bags	33	34,000	1,122,000
2	Sand	elf truck	5	130,000	650,000
3	20mm Aggregates	elf truck	5	120,000	600,000
4	Hardcore	elf truck	2	120,000	240,000
5	12"x1" Timber Formwork to slab	pcs	8	8,000	64,000
6	4" x 2" Timber Formwork	pcs	6	6,000	36,000
7	3"-6" Assorted Nails	kg	3	6,000	18,000
8	T12 mm bars for beam	pcs	7	42,000	294,000
9	R8 Rings for beam	pcs	8	15,000	120,000
10	Binding wire for floor slab	kg	5	6,000	30,000
11	Burnt Clay Bricks (225X112.7X75) for pit lining	No	3150	400	1,260,000
12	Burnt Clay Bricks (225X112.7X75) for plinth walls	No	1030	400	412,000
13	Mesh for Floor slab within walkways and Urinal area 2400 x 1200 mm	Pcs	12	25,000	300,000
14	LABOUR for site clearance and removal of any shrubs		1	400,000	400,000
15	LABOUR for pit and Plinth foundation excavation		1	700,000	700,000
16	LABOUR for construction		1	2,000,000	2,000,000
	Subtotal				8,246,000
WALLS					
17	Burnt Clay Bricks (225X112.7X75)	No	3500	400	1,400,000
18	PPC Cement (50kg Bags)	Bags	21	34,000	714,000
19	Sand	elf truck	3	130,000	390,000
20	20mm Aggregates	elf truck	1	120,000	120,000
21	T12 mm bars for beam	pcs	5	35,000	175,000

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
22	R8 Rings for beam	pcs	6	12,000	72,000
23	1.8mm Binding wire for beam	kg	3	6,000	18,000
24	Timber props (kalitunsi) for support	Pcs	8	5,000	40,000
25	12"x1" Timber Formwork for beams	pcs	10	8,000	80,000
26	4" x 2" Timber Formwork for beams	pcs	5	6,000	30,000
27	Assorted nails	kg	4	6,000	24,000
28	Damp proof course (gauge 1000)	meters	4	3,000	12,000
29	Metallic fabricated doors with accessories	No	4	450,000	1,800,000
30	Door to disabled unit	Item	1	650,000	650,000
31	Grilled metallic door of 900 x 1600mm with lock	No	1	350,000	350,000
32	Hook iron in Brick work	Roll	1	65,000	65,000
33	LABOUR for construction		1	2,000,000	2,000,000
	Subtotal				7,940,000

ROOF

34	4" x 2" Timber for roof structure	pcs	18	6,000	108,000
35	3" x 2" Timber for roof structure	pcs	10	5,000	50,000
36	30 Gauge corrugated sheets	pcs	10	40,000	400,000
37	8" x 1" Fascia Board (Optional)	Pcs	6	25,000	150,000
38	Assorted roofing nails	kg	5	6,000	30,000
39	100mm Diameter UPVC pipe (medium gauge)	pcs	3	35,000	105,000
40	100mm Diameter UPVC pipe vent	no	5	5,000	25,000
41	Solvent cement - small tin	pcs	2	5,000	10,000
42	LABOUR		1	800,000	800,000
	Subtotal				1,678,000

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
TILING AND PAVED WALKWAYS					
43	Wall and floor tiles	SM	60	45,000	2,700,000
44	Cement for floor preparation (plastering)	bags	4	34,000	136,000
45	Adhesive	10kg bags	3	18,000	54,000
46	Grout	10kg bags	1	18,000	18,000
47	Cement	Bags	5	34,000	170,000
48	Sand	trucks	3	130,000	390,000
49	Plastic strips	pcs	10	7,000	70,000
50	Floor traps	pcs	1	10,000	10,000
51	Tile spacers	pkts	5	7,000	35,000
52	Pavers for walkways	SM	30	50,000	1,500,000
53	Walkway Kerb lines	LM	25	45,000	1,125,000
54	Road marking paint for kerblines	Tins	2	80,000	160,000
55	Lake sand	trucks	2	130,000	260,000
56	Transportation of pavers and tiles		1	300,000	300,000
57	LABOUR for tiles	SM	60	20,000	1,200,000
58	LABOUR for pavers	SM	30	15,000	450,000
59	LABOUR for kerblines	LM	25	15,000	375,000
	Subtotal				8,953,000
PLASTERING (INSIDE and OUTSIDE WALLS)					
60	Cement	Bags	7	34,000	238,000
61	Sand	elf trucks	4	130,000	520,000
62	Lime (25kg bags)(Optional)	Bags	3	28,000	84,000
63	LABOUR		1	1,200,000	1,200,000
	Subtotal				2,042,000

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
PAINTING					
64	Sand paper (portugal)	m	25	3,000	75,000
65	Undercoat	Jerrycans	4	65,000	260,000
66	Rollers	Pcs	3	15,000	45,000
67	White cement	bags	2	70,000	140,000
68	Weather guard	buckets	2	350,000	700,000
69	Silk paint	tins	2	65,000	130,000
70	Fast dry for metallic doors and tank stand	tins	2	75,000	150,000
71	Body filler for mettalic doors	tins	1	70,000	70,000
72	High glass thinner	Jerrycans	8	50,000	400,000
73	LABOUR for painting walls and doors		1	1,000,000	1,000,000
	Subtotal				2,970,000
SOAK PIT					
74	Hardcore	elf truck	3	120,000	360,000
75	Gauge 1000, 6m poltythen	m	6	3,000	18,000
76	Provisional perforated pipe for maintenance (optional)	pcs	1	80,000	80,000
77	Corner pipe 110mm	pcs	1	8,000	8,000
78	Labour for exavation and packing hardcore		1	300,000	300,000
	Subtotal				766,000
PLUMBING APPLIANCES AND ACCESSORIES					
79	Sato pan (normal size)	pcs	4	75,000	300,000
80	Vent caps	pcs	4	5,000	20,000
81	Bottle traps	pcs	1	15,000	15,000
82	Disabled Unit Seating pan	Item	1	120,000	120,000
83	Disabled Unit Handrail	Item	1	100,000	100,000

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
84	Toilet Paper holders	pcs	5	30,000	150,000
85	LABOUR		1	400,000	400,000
	Subtotal				1,105,000
OTHER ACCESSORIES					
86	Water for construction		1	2,500,000	2,500,000
87	200 litre drums holding flushing water	Pcs	2	120,000	240,000
88	WASHaLOT 3.0 for Handwashing	unit	1	1,400,000	1,400,000
	GRAND TOTAL				37,840,000

PROPOSED MATERIALS AND LABOUR FOR GIRLS FIVE STANCE VIP LATRINE WITH A PWD UNIT

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
SUBSTRUCTURES INCLUDING FLOOR SLAB AND STRIP CONCRETE					
1	PPC Cement (50kg Bags)	Bags	35	34,000	1,190,000
2	Sand	elf truck	6	130,000	780,000
3	20mm Aggregates	elf truck	5	120,000	600,000
4	Hardcore	elf truck	2	120,000	240,000
5	12"x1" Timber Formwork to slab	pcs	9	8,000	72,000
6	4" x 2" Timber Formwork	pcs	6	6,000	36,000
7	3"-6" Assorted Nails	kg	3	6,000	18,000
8	T12 mm bars for beam	pcs	8	42,000	336,000
9	R8 Rings for beam	pcs	8	15,000	120,000
10	Binding wire for floor slab	kg	5	6,000	30,000
11	Burnt Clay Bricks (225X112.7X75) for pit lining	No	3150	400	1,260,000
12	Burnt Clay Bricks (225X112.7X75) for plinth walls	No	1800	400	720,000
13	Mesh for Floor slab within walkways area 2400 x 1200 mm	Pcs	12	25,000	300,000
14	LABOUR for site clearance and removal of any shrubs		1	400,000	400,000
15	LABOUR for pit and Plinth foundation excavation		1	700,000	700,000
16	LABOUR for construction		1	2,200,000	2,200,000
	Subtotal				9,002,000
WALLS					
17	Burnt Clay Bricks (225X112.7X75)	No	3670	400	1,468,000
18	PPC Cement (50kg Bags)	Bags	23	34,000	782,000
19	Sand	elf truck	4	130,000	520,000
20	20mm Aggregates	elf truck	1	120,000	120,000
21	T12 mm bars for beam	pcs	5	35,000	175,000

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
22	R8 Rings for beam	pcs	6	12,000	72,000
23	1.8mm Binding wire for beam	kg	3	6,000	18,000
24	Timber props (kalitunsi) for support	Pcs	8	5,000	40,000
25	12"x1" Timber Formwork for beams	pcs	10	8,000	80,000
26	4" x 2" Timber Formwork for beams	pcs	5	6,000	30,000
27	Assorted nails	kg	4	6,000	24,000
28	Damp proof course (gauge 1000)	meters	4	3,000	12,000
29	Metallic fabricated doors with accessories	No	5	450,000	2,250,000
30	Door to disabled unit	Item	1	650,000	650,000
31	Grilled metallic door of 900 x 1600mm with lock	No	1	350,000	350,000
32	Hook iron in Brick work	Roll	1	65,000	65,000
33	LABOUR for construction		1	2,000,000	2,000,000
	Subtotal				8,656,000

ROOF

34	4" x 2" Timber for roof structure	pcs	21	6,000	126,000
35	3" x 2" Timber for roof structure	pcs	12	5,000	60,000
36	30 Gauge corrugated sheets	pcs	12	40,000	480,000
37	8" x 1" Fascia Board (Optional)	Pcs	7	25,000	175,000
38	Assorted roofing nails	kg	6	6,000	36,000
39	100mm Diameter UPVC pipe (medium gauge)	pcs	3	35,000	105,000
40	100mm Diameter UPVC pipe vent	no	5	5,000	25,000
41	Solvent cement - small tin	pcs	2	5,000	10,000
42	LABOUR		1	850,000	850,000
	Subtotal				1,867,000

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
TILING AND PAVED WALKWAYS					
43	Wall and floor tiles	SM	68	45,000	3,060,000
44	Cement for floor preparation (plastering)	bags	4	34,000	136,000
45	Adhesive	10kg bags	3	18,000	54,000
46	Grout	10kg bags	1	18,000	18,000
47	Cement	Bags	5	34,000	170,000
48	Sand	trucks	3	130,000	390,000
49	Plastic strips	pcs	12	7,000	84,000
50	Floor traps	pcs	1	10,000	10,000
51	Tile spacers	pkts	6	7,000	42,000
52	Pavers for walkways	SM	30	50,000	1,500,000
53	Walkway Kerb lines	LM	25	45,000	1,125,000
54	Road marking paint for kerblines	Tins	2	80,000	160,000
55	Lake sand	trucks	2	130,000	260,000
56	Transportation of pavers and tiles		1	300,000	300,000
57	LABOUR for tiles	SM	68	20,000	1,360,000
58	LABOUR for pavers	SM	30	15,000	450,000
59	LABOUR for kerblines	LM	25	15,000	375,000
	Subtotal				9,494,000
PLASTERING (INSIDE and OUTSIDE WALLS)					
60	Cement	Bags	8	34,000	272,000
61	Sand	elf trucks	4	130,000	520,000
62	Lime (25kg bags)(Optional)	Bags	3	28,000	84,000
63	LABOUR		1	1,300,000	1,300,000
	Subtotal				2,176,000

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
PAINTING					
64	Sand paper (portugal)	m	25	3,000	75,000
65	Undercoat	Jerrycans	4	65,000	260,000
66	Rollers	Pcs	3	15,000	45,000
67	White cement	bags	2	70,000	140,000
68	Weather guard	buckets	2	350,000	700,000
69	Silk paint	tins	2	65,000	130,000
70	Fast dry for metallic doors and tank stand	tins	2	75,000	150,000
71	Body filler for mettalic doors	tins	1	70,000	70,000
72	High glass thinner	Jerrycans	8	50,000	400,000
73	LABOUR for painting walls and doors		1	1,000,000	1,000,000
	Subtotal				2,970,000
SOAK PIT					
74	Hardcore	elf truck	3	120,000	360,000
75	Gauge 1000, 6m poltythen	m	6	3,000	18,000
76	Provisional perforated pipe for maintenance (optional)	pcs	1	80,000	80,000
77	Corner pipe 110mm	pcs	1	8,000	8,000
78	Labour for exavation and packing hardcore		1	300,000	300,000
	Subtotal				766,000
PLUMBING APPLIANCES AND ACCESSORIES					
79	Sato pan (normal size)	pcs	4	75,000	300,000
80	Vent caps	pcs	4	5,000	20,000
81	Bottle traps	pcs	1	15,000	15,000
82	Disabled Unit Seating pan	Item	1	120,000	120,000
83	Disabled Unit Handrail	Item	1	100,000	100,000

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
84	Toilet Paper holders	pcs	5	30,000	150,000
85	LABOUR		1	400,000	400,000
	Subtotal				1,105,000
OTHER ACCESSORIES					
86	Incinerator		1	5,000,000	5,000,000
87	Water for construction		1	2,500,000	2,500,000
88	200 litre drums holding flushing water	Pcs	2	120,000	240,000
89	WASHaLOT 3.0 for Handwashing	unit	1	1,400,000	1,400,000
	GRAND TOTAL				45,176,000

PROPOSED MATERIALS AND LABOUR FOR SIX STANCE VIP LATRINE BLOCK FOR HEALTH CENTRES WITH A BATHROOM, GENTS URINAL AND A PWD UNIT

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
SUBSTRUCTURES INCLUDING FLOOR SLAB AND STRIP CONCRETE					
1	PPC Cement (50kg Bags)	Bags	42	34,000	1,428,000
2	Sand	elf truck	8	130,000	1,040,000
3	20mm Aggregates	elf truck	6	120,000	720,000
4	Hardcore	elf truck	3	120,000	360,000
5	12"x1" Timber Formwork to slab	pcs	12	8,000	96,000
6	4" x 2" Timber Formwork	pcs	5	6,000	30,000
7	3"-6" Assorted Nails	kg	3	6,000	18,000
8	T12 mm bars for beam	pcs	10	42,000	420,000
9	R8 Rings for beam	pcs	11	15,000	165,000
10	Binding wire for floor slab	kg	6	6,000	36,000
11	Burnt Clay Bricks (225X112.7X75) for pit lining	No	3570	400	1,428,000
12	Burnt Clay Bricks (225X112.7X75) for plinth walls	No	2180	400	872,000
13	Mesh for Floor slab within walkways and Urinal area 2400 x 1200 mm	Pcs	14	25,000	350,000
14	LABOUR for site clearance and removal of any shrubs		1	400,000	400,000
15	LABOUR for pit and Plinth foundation excavation		1	700,000	700,000
16	LABOUR for construction		1	2,500,000	2,500,000
	Subtotal				10,563,000
WALLS					
17	Burnt Clay Bricks (225X112.7X75)	No	5060	400	2,024,000
18	PPC Cement (50kg Bags)	Bags	26	34,000	884,000
19	Sand	elf truck	6	130,000	780,000
20	20mm Aggregates	elf truck	1	120,000	120,000
21	T12 mm bars for beam	pcs	7	35,000	245,000

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
22	R8 Rings for beam	pcs	7	12,000	84,000
23	1.8mm Binding wire for beam	kg	4	6,000	24,000
24	Timber props (kalitunsi) for support	Pcs	10	5,000	50,000
25	12"x1" Timber Formwork for beams	pcs	12	8,000	96,000
26	4" x 2" Timber Formwork for beams	pcs	6	6,000	36,000
27	Assorted nails	kg	4	6,000	24,000
28	Damp proof course (gauge 1000)	meters	5	3,000	15,000
29	Metallic fabricated doors with accessories	No	6	450,000	2,700,000
30	Door to disabled unit	Item	1	650,000	650,000
31	Grilled metallic door of 900 x 1600mm with lock	No	2	350,000	700,000
32	Hook iron in Brick work	Roll	1	65,000	65,000
33	LABOUR for construction		1	2,400,000	2,400,000
	Subtotal				10,897,000

ROOF

34	4" x 2" Timber for roof structure	pcs	27	6,000	162,000
35	3" x 2" Timber for roof structure	pcs	15	5,000	75,000
36	30 Gauge corrugated sheets	pcs	14	40,000	560,000
37	8" x 1" Fascia Board (Optional)	Pcs	8	25,000	200,000
38	Assorted roofing nails	kg	7	6,000	42,000
39	100mm Diameter UPVC pipe (medium gauge)	pcs	4	35,000	140,000
40	100mm Diameter UPVC pipe vent	no	6	5,000	30,000
41	Solvent cement - small tin	pcs	2	5,000	10,000
42	LABOUR		1	1,000,000	1,000,000
	Subtotal				2,219,000

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
TILING AND PAVED WALKWAYS					
43	Wall and floor tiles	SM	84	45,000	3,780,000
44	Cement for floor preparation (plastering)	bags	5	34,000	170,000
45	Adhesive	10kg bags	4	18,000	72,000
46	Grout	10kg bags	2	18,000	36,000
47	Cement	Bags	5	34,000	170,000
48	Sand	trucks	4	130,000	520,000
49	Plastic strips	pcs	14	7,000	98,000
50	Floor traps	pcs	1	10,000	10,000
51	Tile spacers	pkts	7	7,000	49,000
52	Pavers for walkways	SM	60	50,000	3,000,000
53	Walkway Kerb lines	LM	50	45,000	2,250,000
54	Road marking paint for kerblines	Tins	3	80,000	240,000
55	Lake sand	trucks	4	130,000	520,000
56	Transportation of pavers and tiles		1	400,000	400,000
57	LABOUR for tiles	SM	84	20,000	1,680,000
58	LABOUR for pavers	SM	60	15,000	900,000
59	LABOUR for kerblines	LM	50	15,000	750,000
	Subtotal				14,645,000
PLASTERING (INSIDE and OUTSIDE WALLS)					
60	Cement	Bags	14	34,000	476,000
61	Sand	elf trucks	5	130,000	650,000
62	Lime (25kg bags)(Optional)	Bags	4	28,000	112,000
63	LABOUR		1	1,500,000	1,500,000
	Subtotal				2,738,000

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
PAINTING					
64	Sand paper (portugal)	m	30	3,000	90,000
65	Undercoat	Jerrycans	5	65,000	325,000
66	Rollers	Pcs	3	15,000	45,000
67	White cement	bags	3	70,000	210,000
68	Weather guard	buckets	3	350,000	1,050,000
69	Silk paint	tins	3	65,000	195,000
70	Fast dry for metallic doors and tank stand	tins	3	75,000	225,000
71	Body filler for mettalic doors	tins	1	70,000	70,000
72	High glass thinner	Jerrycans	9	50,000	450,000
73	LABOUR for painting walls and doors		1	1,400,000	1,400,000
	Subtotal				4,060,000
SOAK PIT					
74	Hardcore	elf truck	3	120,000	360,000
75	Gauge 1000, 6m poltythen	m	6	3,000	18,000
76	Provisional perforated pipe for maintenance (optional)	pcs	1	80,000	80,000
77	Corner pipe 110mm	pcs	1	8,000	8,000
78	Labour for exavation and packing hardcore		1	300,000	300,000
	Subtotal				766,000
PLUMBING APPLIANCES AND ACCESSORIES					
79	Sato pan (normal size)	pcs	5	75,000	375,000
80	Vent caps	pcs	5	5,000	25,000
81	Bottle traps	pcs	1	15,000	15,000
82	Disabled Unit Seating pan	Item	1	120,000	120,000
83	Disabled Unit Handrail	Item	1	100,000	100,000

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
84	Toilet Paper holders	pcs	6	30,000	180,000
85	LABOUR		1	500,000	500,000
	Subtotal				1,315,000
OTHER ACCESSORIES					
86	Water for construction		1	3,000,000	3,000,000
87	200 litre drums holding flushing water	Pcs	2	120,000	240,000
88	WASHaLOT 3.0 for Handwashing	unit	2	1,400,000	2,800,000
	GRAND TOTAL				53,243,000

PROPOSED MATERIALS AND LABOUR FOR FIVE STANCE WATERBORNE BOYS TOILET WITH PWD UNIT AND URINAL CONNECTED TO A SEPTIC TANK

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
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SUBSTRUCTURES INCLUDING FLOOR SLAB AND STRIP CONCRETE

1	PPC Cement (50kg Bags)	Bags	24	34,000	816,000
2	Sand	elf truck	3	130,000	390,000
3	20mm Aggregates	elf truck	2	120,000	240,000
4	Hardcore	elf truck	2	120,000	240,000
5	12"x1" Timber Formwork	pcs	6	8,000	48,000
6	4" x 2" Timber Formwork	pcs	4	6,000	24,000
7	3"-6" Assorted Nails	kg	2	6,000	12,000
8	Burnt Clay Bricks (225X112.7X75) for Plinth Walls Foundation Header Bond	No	1850	400	740,000
9	Mesh for Floor slab within walkways and Urinal area 2400 x 1200 mm	Pcs	12	25,000	300,000
10	LABOUR for site clearance and removal of any shrubs		1	300,000	300,000
11	LABOUR for fondation excavation		1	300,000	300,000
12	LABOUR for construction		1	700,000	700,000
	Subtotal				4,110,000

WALLS

13	Burnt Clay Bricks (225X112.7X75)	No	3310	400	1,324,000
14	PPC Cement (50kg Bags)	Bags	18	34,000	612,000
15	Sand	elf truck	2	130,000	260,000
16	T12 mm bars for beam	pcs	8	35,000	280,000
17	R8 Rings for beam	pcs	9	12,000	108,000
18	1.8mm Binding wire for beam	kg	4	6,000	24,000
19	Timber props (kalitunsi) for support	Pcs	6	5,000	30,000
20	12"x1" Timber Formwork for beams	pcs	14	8,000	112,000
21	4" x 2" Timber Formwork for beams	pcs	6	6,000	36,000
22	Assorted nails	kg	3	6,000	18,000
23	Damp proof course (gauge 1000)	meters	9	3,000	27,000

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
24	Metallic fabricated doors with accessories	No	5	45,000	225,000
25	Door to disabled unit	Item	1	650,000	650,000
26	Grilled metallic door of 900 x 1600mm with lock	No	1	350,000	350,000
27	Metallic fabricated window with glass and other accessories	No	6	250,000	1,500,000
28	Hook iron in Brick work	Roll	1	65,000	65,000
29	Pompe	No.	120	2,000	240,000
30	LABOUR for construction		1	1,500,000	1,500,000
	Subtotal				7,361,000 00

ROOF

31	4" x 2" Timber for roof structure	pcs	24	6,000	144,000
32	3" x 2" Timber for roof structure	pcs	12	5,000	60,000
33	30 Gauge corrugated sheets	pcs	11	40,000	440,000
34	8" x 1" Fascia Board (Optional)	Pcs	8	25,000	200,000
35	Assorted roofing nails	kg	4	6,000	24,000
36	100mm Diameter UPVC pipe (medium gauge)	pcs	3	35,000	105,000
37	100mm Diameter UPVC bend plain	pcs	4	8,000	32,000
38	100mm Diameter UPVC T with a vent	pcs	1	15,000	15,000
39	100mm clip	no	10	3,000	30,000
40	Solvent cement - small tin	pcs	2	5,000	10,000
41	LABOUR		1	900,000	900,000
	Subtotal				1,960,000

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
TILING AND PAVED WALKWAYS					
42	Wall and floor tiles	SM	52	45,000	2,340,000
43	Cement for floor preparation (plastering)	bags	4	34,000	136,000
44	Adhesive	10kg bags	7	18,000	126,000
45	Grout	10kg bags	2	18,000	36,000
46	Cement	Bags	11	34,000	374,000
47	Sand	trucks	4	130,000	520,000
48	Plastic strips	pcs	12	7,000	84,000
49	Floor traps	pcs	2	10,000	20,000
50	Tile spacers	pkts	12	5,000	60,000
51	Pavers for walkways	SM	30	50,000	1,500,000
52	Walkway Kerb lines	LM	25	45,000	1,125,000
53	Road marking paint for kerblines	Tins	2	80,000	160,000
54	Lake sand	trucks	3	130,000	390,000
55	Transportation of pavers and tiles		1	500,000	500,000
56	LABOUR for tiles	SM	52	20,000	1,040,000
57	LABOUR for pavers	SM	30	15,000	450,000
58	LABOUR for kerblines	LM	25	15,000	375,000
	Subtotal				9,236,000
PLASTERING (INSIDE and OUTSIDE WALLS)					
59	Cement	Bags	10	34,000	340,000
60	Sand	elf trucks	3	130,000	390,000
61	Lime (25kg bags)(Optional)	Bags	3	28,000	84,000
62	LABOUR		1	1,000,000	1,000,000
	Subtotal				1,814,000

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
PAINTING					
63	Sand paper (portugal)	m	15	3,000	45,000
64	Undercoat	Jerrycans	3	65,000	195,000
65	Rollers	Pcs	3	15,000	45,000
66	White cement	bags	2	70,000	140,000
67	Weather guard	buckets	2	350,000	700,000
68	Silk paint	tins	2	65,000	130,000
69	Fast dry for metallic doors and tank stand	tins	2	75,000	150,000
70	Body filler for mettalic doors	tins	2	70,000	140,000
71	High glass thinner	Jerrycans	4	50,000	200,000
72	LABOUR for painting walls and doors		1	700,000	700,000
	Subtotal				2,445,000
SEPTIC TANK (1.5m wide x 4.5 m length x 2.0 m deep)					
73	PPC Cement (50kg Bags)	Bags	25	34,000	850,000
74	Sand	elf truck	4	130,000	520,000
75	20mm Aggregates	elf truck	1	120,000	120,000
76	Hardcore	elf truck	1.5	120,000	180,000
77	Ribbed bars T12	pcs	18	35,000	630,000
78	R6 rings	pcs	12	12,000	144,000
79	Binding wire	Kg	6	6,000	36,000
80	12"x1" Timber Formwork	pcs	16	8,000	128,000
81	4" x 2" Timber Formwork	pcs	5	6,000	30,000
82	Poles (Kalitunsi)	pcs	16	5,000	80,000
83	Burnt Clay Bricks (225X112.7X75)	No	2,000	400	800,000

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
84	3"-6" Assorted Nails	Kg	4	6,000	24,000
85	Diameter UPVC pipe (medium gauge) - 6"	pcs	2	70,000	140,000
86	PVC bends (6")	pcs	4	20,000	80,000
87	Precast concrete covers	pcs	4	40,000	160,000
88	Labour for excavation		1	400,000	400,000
89	Labour for construction and plumbing		1	1,000,000	1,000,000
	Subtotal				5,322,000

MANHOLES

90	Iron bars T10	pcs	2	28,000	56,000
91	Binding wire	kg	3	6,000	18,000
92	Ring - R8	pcs	1	12,000	12,000
93	Wire mesh (4x8)	pcs	2	25,000	50,000
94	Burnt Clay Bricks (225X112.7X75)	No	300	4,000	1,200,000
95	Cement	bags	4	34,000	136,000
96	Aggregates (1/4")	truck	0.3	120,000	36,000
97	Smooth finished timber boards (1.5")	pcs	2	15,000	30,000
98	LABOUR		1	200,000	200,000
	Subtotal				1,738,000

SOAK PIT

99	Hardcore	elf truck	3	120,000	360,000
100	Gauge 1000, 6m polythen	m	6	3,000	18,000
101	Provisional perforated pipe for maintenance (optional)	pcs	1	80,000	80,000
102	Corner pipe 110mm	pcs	1	8,000	8,000
103	Labour for exavation and packing hardcore		1	300,000	300,000
	Subtotal				766,000

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
PLUMBING APPLIANCES AND ACCESSORIES					
104	squatting toilet pans (normal size) complete	pcs	4	300,000	1,200,000
105	Seating toilet complete	pcs	1	500,000	500,000
106	Yarn hemp	m	8	6,000	48,000
107	Shellac solution (small)	pcs	6	5,000	30,000
108	Wash hand basin (medium) complete	pcs	0	200,000	-
109	Thread tape (big)	pcs	5	3,000	15,000
110	Vent caps	pcs	3	5,000	15,000
111	Bottle traps	pcs	1	15,000	15,000
112	PVC bend door (4")	pcs	3	15,000	45,000
113	Disabled Unit Handrail	Item	1	150,000	150,000
114	LABOUR		1	800,000	800,000
	Subtotal				2,818,000
DRAAINAGE					
115	PVC pipes (6")	pcs	3	70,000	210,000
116	PVC Tees (6")	pcs	2	25,000	50,000
117	PVC bends (6")	pcs	2	20,000	40,000
118	PVC sockets (6")	pcs	1	15,000	15,000
119	PVC pipes (4")	pcs	4	35,000	140,000
120	PVC bends (4")	pcs	4	7,000	28,000
121	PVC sockets (4")	pcs	1	6,000	6,000
122	PVC Tees (4")	pcs	2	10,000	20,000
123	PVC plugs (4")	pcs	1	6,000	6,000
124	PVC 45 deg bend (4")	pcs	2	6,000	12,000

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
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125	Gulley traps (4")	pcs	2	7,000	14,000
126	PVC pipes (3/2)	pcs	1	20,000	20,000
127	PVC elbows	pcs	3	2,000	6,000
128	PVC Tees and Plugs	pcs	5	5,000	25,000
129	PVC floor traps (4x2")	pcs	2	15,000	30,000
130	Floor gratings (4")	pcs	1	5,000	5,000
131	Solvent compound (big size)	pcs	3	15,000	45,000
132	LABOUR		1	1,000,000	1,000,000
	Subtotal				1,672,000

ELECTRICAL FIRST FIX

133	Main switch - 4 ways	pcs	1	120,000	120,000
134	Moulded boxes	pcs	2	2,000	4,000
135	Meter Reader box	pcs	1	30,000	30,000
136	Conduit pipes (25mm)	pcs	5	3,000	15,000
137	Nails	kg	0.5	6,000	3,000
138	LABOUR	1	1	250,000	250,000
	Subtotal				422,000

WATER TANK AND ACCESSORIES

139	Cold water tank - 2000 liters	pcs	1	500,000	500,000
140	Fabricated metallic stand	unit	1	2,500,000	2,500,000
141	Ball valve	Pcs	1	35,000	35,000
142	Long screws	Pcs	3	7,000	21,000
143	PPR pipes	Pcs	3	8,000	24,000

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
144	PPR union	Pcs	1	4,000	4,000
145	PPR valve (half inch)	Pcs	1	20,000	20,000
146	PPR plain elbow (1/2)	pcs	2	2,000	4,000
147	PPR sockets	pcs	3	2,000	6,000
148	PPR valve (3/4 inch)	Pcs	1	35,000	35,000
149	PE elbows push	Pcs	1	8,000	8,000
150	PPR pipes	pcs	8	12,000	96,000
151	PPR plain elbows (3/4)	pcs	5	2,000	10,000
152	PPR sockets (3/4)	pcs	5	2,000	10,000
153	PPR Tee (3/4)	pcs	2	2,000	4,000
154	PPR female elbow	pcs	4	8,000	32,000
155	PPR male elbow	Pcs	4	8,000	32,000
156	Bib taps	pcs	2	20,000	40,000
157	PE pipes	m	30	2,000	60,000
158	PPR unions (3/4)	pcs	1	5,000	5,000
159	LABOUR (Installation and plumbing)		1	400,000	400,000
	Subtotal				3,846,000
OTHER ACCESSORIES					
160	Incinerator			4,000,000	-
161	Water for construction		1	2,500,000	2,500,000
162	200 litre drums holding flushing water	Pcs	1	120,000	120,000
163	WASHaLOT 3.0 for Handwashing	unit	1	1,400,000	1,400,000
	GRAND TOTAL				47,530,000

PROPOSED MATERIALS AND LABOUR FOR FIVE STANCE WATERBORNE GIRLS TOILET WITH PWD UNIT AND URINAL CONNECTED TO A SEPTIC TANK

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
SUBSTRUCTURES INCLUDING FLOOR SLAB AND STRIP CONCRETE					
1	PPC Cement (50kg Bags)	Bags	26	34,000	884,000
2	Sand	elf truck	3	130,000	390,000
3	20mm Aggregates	elf truck	2	120,000	240,000
4	Hardcore	elf truck	2	120,000	240,000
5	12"x1" Timber Formwork	pcs	8	8,000	64,000
6	4" x 2" Timber Formwork	pcs	5	6,000	30,000
7	3"-6" Assorted Nails	kg	2	6,000	12,000
8	Burnt Clay Bricks (225X112.7X75) for Plinth Walls Foundation Header Bond	No	2100	400	840,000
9	Mesh for Floor slab within walkways and Urinal area 2400 x 1200 mm	Pcs	14	25,000	350,000
10	LABOUR for site clearance and removal of any shrubs		1	300,000	300,000
11	LABOUR for fondation excavation		1	400,000	400,000
12	LABOUR for construction		1	800,000	800,000
	Subtotal				4,550,000

WALLS					
13	Burnt Clay Bricks (225X112.7X75)	No	3640	400	1,456,000
14	PPC Cement (50kg Bags)	Bags	20	34,000	680,000
15	Sand	elf truck	2	130,000	260,000
16	T12 mm bars for beam	pcs	9	35,000	315,000
17	R8 Rings for beam	pcs	9	12,000	108,000
18	1.8mm Binding wire for beam	kg	5	6,000	30,000
19	Timber props (kalitunsi) for support	Pcs	6	5,000	30,000
20	12"x1" Timber Formwork for beams	pcs	15	8,000	120,000
21	4" x 2" Timber Formwork for beams	pcs	6	6,000	36,000
22	Assorted nails	kg	3	6,000	18,000
23	Damp proof course (gauge 1000)	meters	10	3,000	30,000

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
24	Metallic fabricated doors with accessories	No	6	45,000	270,000
25	Door to disabled unit	Item	1	650,000	650,000
26	Grilled metallic door of 900 x 1600mm with lock	No	1	350,000	350,000
27	Metallic fabricated window with glass and other accessories	No	6	250,000	1,500,000
28	Hook iron in Brick work	Roll	1	65,000	65,000
29	Pompe	No.	130	2,000	260,000
30	LABOUR for construction		1	1,600,000	1,600,000
	Subtotal				7,778,000

ROOF

31	4" x 2" Timber for roof structure	pcs	27	6,000	162,000
32	3" x 2" Timber for roof structure	pcs	12	5,000	60,000
33	30 Gauge corrugated sheets	pcs	14	40,000	560,000
34	8" x 1" Fascia Board (Optional)	Pcs	8	25,000	200,000
35	Assorted roofing nails	kg	4	6,000	24,000
36	100mm Diameter UPVC pipe (medium gauge)	pcs	4	35,000	140,000
37	100mm Diameter UPVC bend plain	pcs	4	8,000	32,000
38	100mm Diameter UPVC T with a vent	pcs	1	15,000	15,000
39	100mm clip	no	10	3,000	30,000
40	Solvent cement - small tin	pcs	2	5,000	10,000
41	LABOUR		1	1,000,000	1,000,000
	Subtotal				2,233,000

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
TILING AND PAVED WALKWAYS					
42	Wall and floor tiles	SM	60	45,000	2,700,000
43	Cement for floor preparation (plastering)	bags	5	34,000	170,000
44	Adhesive	10kg bags	7	18,000	126,000
45	Grout	10kg bags	2	18,000	36,000
46	Cement	Bags	13	34,000	442,000
47	Sand	trucks	4.5	130,000	585,000
48	Plastic strips	pcs	16	7,000	112,000
49	Floor traps	pcs	2	10,000	20,000
50	Tile spacers	pkts	14	5,000	70,000
51	Pavers for walkways	SM	30	50,000	1,500,000
52	Walkway Kerb lines	LM	25	45,000	1,125,000
53	Road marking paint for kerblines	Tins	2	80,000	160,000
54	Lake sand	trucks	3	130,000	390,000
55	Transportation of pavers and tiles		1	500,000	500,000
56	LABOUR for tiles	SM	60	20,000	1,200,000
57	LABOUR for pavers	SM	30	15,000	450,000
58	LABOUR for kerblines	LM	25	15,000	375,000
	Subtotal				9,961,000
PLASTERING (INSIDE and OUTSIDE WALLS)					
59	Cement	Bags	10	34,000	340,000
60	Sand	elf trucks	4	130,000	520,000
61	Lime (25kg bags)(Optional)	Bags	3	28,000	84,000
62	LABOUR		1	1,000,000	1,000,000
	Subtotal				1,944,000

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
PAINTING					
63	Sand paper (portugal)	m	18	3,000	54,000
64	Undercoat	Jerrycans	3	65,000	195,000
65	Rollers	Pcs	3	15,000	45,000
66	White cement	bags	2	70,000	140,000
67	Weather guard	buckets	2	350,000	700,000
68	Silk paint	tins	2	65,000	130,000
69	Fast dry for metallic doors and tank stand	tins	2	75,000	150,000
70	Body filler for mettalic doors	tins	2	70,000	140,000
71	High glass thinner	Jerrycans	4	50,000	200,000
72	LABOUR for painting walls and doors		1	800,000	800,000
	Subtotal				2,554,000
SEPTIC TANK (1.5m wide x 4.5 m length x 2.0 m deep)					
73	PPC Cement (50kg Bags)	Bags	25	34,000	850,000
74	Sand	elf truck	4	130,000	520,000
75	20mm Aggregates	elf truck	1	120,000	120,000
76	Hardcore	elf truck	1.5	120,000	180,000
77	Ribbed bars T12	pcs	18	35,000	630,000
78	R6 rings	pcs	12	12,000	144,000
79	Binding wire	Kg	6	6,000	36,000
80	12"x1" Timber Formwork	pcs	16	8,000	128,000
81	4" x 2" Timber Formwork	pcs	5	6,000	30,000
82	Poles (Kalitunsi)	pcs	16	5,000	80,000
83	Burnt Clay Bricks (225X112.7X75)	No	2,000	400	800,000

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
84	3"-6" Assorted Nails	Kg	4	6,000	24,000
85	Diameter UPVC pipe (medium gauge) - 6"	pcs	2	70,000	140,000
86	PVC bends (6")	pcs	4	20,000	80,000
87	Precast concrete covers	pcs	4	40,000	160,000
88	Labour for excavation		1	400,000	400,000
89	Labour for construction and plumbing		1	1,000,000	1,000,000
	Subtotal				5,322,000

MANHOLES

90	Iron bars T10	pcs	2	28,000	56,000
91	Binding wire	kg	3	6,000	18,000
92	Ring - R8	pcs	1	12,000	12,000
93	Wire mesh (4x8)	pcs	2	25,000	50,000
94	Burnt Clay Bricks (225X112.7X75)	No	300	4,000	1,200,000
95	Cement	bags	4	34,000	136,000
96	Aggregates (1/4")	truck	0.3	120,000	36,000
97	Smooth finished timber boards (1.5")	pcs	2	15,000	30,000
98	LABOUR		1	200,000	200,000
	Subtotal				1,738,000

SOAK PIT

99	Hardcore	elf truck	3	120,000	360,000
100	Gauge 1000, 6m poltythen	m	6	3,000	18,000
101	Provisional perforated pipe for maintenance (optional)	pcs	1	80,000	80,000
102	Corner pipe 110mm	pcs	1	8,000	8,000
103	Labour for exavation and packing hardcore		1	300,000	300,000
	Subtotal				766,000

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
PLUMBING APPLIANCES AND ACCESSORIES					
104	squatting toilet pans (normal size) complete	pcs	5	300,000	1,500,000
105	Seating toilet complete	pcs	1	500,000	500,000
106	Yarn hemp	m	8	6,000	48,000
107	Shellac solution (small)	pcs	6	5,000	30,000
108	Wash hand basin (medium) complete	pcs	0	200,000	-
109	Thread tape (big)	pcs	5	3,000	15,000
110	Vent caps	pcs	3	5,000	15,000
111	Bottle traps	pcs	1	15,000	15,000
112	PVC bend door (4")	pcs	3	15,000	45,000
113	Disabled Unit Handrail	Item	1	150,000	150,000
114	LABOUR		1	800,000	800,000
	Subtotal				3,118,000
DRAINAGE					
115	PVC pipes (6")	pcs	3	70,000	210,000
116	PVC Tees (6")	pcs	2	25,000	50,000
117	PVC bends (6")	pcs	2	20,000	40,000
118	PVC sockets (6")	pcs	1	15,000	15,000
119	PVC pipes (4")	pcs	4	35,000	140,000
120	PVC bends (4")	pcs	4	7,000	28,000
121	PVC sockets (4")	pcs	1	6,000	6,000
122	PVC Tees (4")	pcs	2	10,000	20,000
123	PVC plugs (4")	pcs	1	6,000	6,000
124	PVC 45 deg bend (4")	pcs	2	6,000	12,000

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
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125	Gulley traps (4")	pcs	2	7,000	14,000
126	PVC pipes (3/2)	pcs	1	20,000	20,000
127	PVC elbows	pcs	3	2,000	6,000
128	PVC Tees and Plugs	pcs	5	5,000	25,000
129	PVC floor traps (4x2")	pcs	2	15,000	30,000
130	Floor gratings (4")	pcs	1	5,000	5,000
131	Solvent compound (big size)	pcs	3	15,000	45,000
132	LABOUR		1	1,000,000	1,000,000
	Subtotal				1,672,000

ELECTRICAL FIRST FIX

133	Main switch - 4 ways	pcs	1	120,000	120,000
134	Moulded boxes	pcs	2	2,000	4,000
135	Meter Reader box	pcs	1	30,000	30,000
136	Conduit pipes (25mm)	pcs	5	3,000	15,000
137	Nails	kg	0.5	6,000	3,000
138	LABOUR	1	1	250,000	250,000
	Subtotal				422,000

WATER TANK AND ACCESSORIES

139	Cold water tank - 2000 liters	pcs	1	500,000	500,000
140	Fabricated metallic stand	unit	1	2,500,000	2,500,000
141	Ball valve	Pcs	1	35,000	35,000
142	Long screws	Pcs	3	7,000	21,000
143	PPR pipes	Pcs	3	8,000	24,000

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
144	PPR union	Pcs	1	4,000	4,000
145	PPR valve (half inch)	Pcs	1	20,000	20,000
146	PPR plain elbow (1/2)	pcs	2	2,000	4,000
147	PPR sockets	pcs	3	2,000	6,000
148	PPR valve (3/4 inch)	Pcs	1	35,000	35,000
149	PE elbows push	Pcs	1	8,000	8,000
150	PPR pipes	pcs	8	12,000	96,000
151	PPR plain elbows (3/4)	pcs	5	2,000	10,000
152	PPR sockets (3/4)	pcs	5	2,000	10,000
153	PPR Tee (3/4)	pcs	2	2,000	4,000
154	PPR female elbow	pcs	4	8,000	32,000
155	PPR male elbow	Pcs	4	8,000	32,000
156	Bib taps	pcs	2	20,000	40,000
157	PE pipes	m	30	2,000	60,000
158	PPR unions (3/4)	pcs	1	5,000	5,000
159	LABOUR (Installation and plumbing)		1	400,000	400,000
	Subtotal				3,846,000
OTHER ACCESSORIES					
160	Incinerator	unit	1	4,000,000	4,000,000
161	Water for construction		1	2,500,000	2,500,000
162	200 litre drums holding flushing water	Pcs	1	120,000	120,000
163	WASHaLOT 3.0 for Handwashing	unit	1	1,400,000	1,400,000
	GRAND TOTAL				53,924,000

PROPOSED MATERIALS AND LABOUR FOR SIX STANCE BLOCK VIP LATRINE FOR HEALTH CENTRES WITH A BATHROOM, PWD UNIT AND GENTS URINAL CONNECTED TO A SEPTIC TANK

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
SUBSTRUCTURES INCLUDING FLOOR SLAB AND STRIP CONCRETE					
1	PPC Cement (50kg Bags)	Bags	40	34,000	1,360,000
2	Sand	elf truck	6	130,000	780,000
3	20mm Aggregates	elf truck	4	120,000	480,000
4	Hardcore	elf truck	4	120,000	480,000
5	12"x1" Timber Formwork	pcs	15	8,000	120,000
6	4" x 2" Timber Formwork	pcs	12	6,000	72,000
7	3"-6" Assorted Nails	kg	4	6,000	24,000
8	Burnt Clay Bricks (225X112.7X75) for Plinth Walls Foundation Header Bond	No	4000	400	1,600,000
9	Mesh for Floor slab within walkways and Urinal area 2400 x 1200 mm	Pcs	23	25,000	575,000
10	LABOUR for site clearance and removal of any shrubs		1	400,000	400,000
11	LABOUR for fondation excavation		1	400,000	400,000
12	LABOUR for construction		1	900,000	900,000
	Subtotal				7,191,000
WALLS					
13	Burnt Clay Bricks (225X112.7X75)	No	6600	400	2,640,000
14	PPC Cement (50kg Bags)	Bags	24	34,000	816,000
15	Sand	elf truck	3	130,000	390,000
16	T12 mm bars for beam	pcs	13	35,000	455,000
17	R8 Rings for beam	pcs	13	12,000	156,000
18	1.8mm Binding wire for beam	kg	6	6,000	36,000
19	Timber props (kalitunsi) for support	Pcs	8	5,000	40,000
20	12"x1" Timber Formwork for beams	pcs	17	8,000	136,000
21	4" x 2" Timber Formwork for beams	pcs	10	6,000	60,000
22	Assorted nails	kg	6	6,000	36,000
23	Damp proof course (gauge 1000)	meters	12	3,000	36,000

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
24	Metallic fabricated doors with accessories	No	8	45,000	360,000
25	Door to disabled unit	Item	1	650,000	650,000
26	Grilled metallic door of 900 x 1600mm with lock	No	2	350,000	700,000
27	Metallic fabricated window with glass and other accessories	No	9	250,000	2,250,000
28	Hook iron in Brick work	Roll	1	65,000	65,000
29	Pompe	No.	480	2,000	960,000
30	LABOUR for construction		1	1,800,000	1,800,000
	Subtotal				11,586,000

ROOF

31	4" x 2" Timber for roof structure	pcs	33	6,000	198,000
32	3" x 2" Timber for roof structure	pcs	21	5,000	105,000
33	30 Gauge corrugated sheets	pcs	29	40,000	1,160,000
34	8" x 1" Fascia Board (Optional)	Pcs	11	25,000	275,000
35	Assorted roofing nails	kg	5	6,000	30,000
36	100mm Diameter UPVC pipe (medium gauge)	pcs	5	35,000	175,000
37	100mm Diameter UPVC bend plain	pcs	6	8,000	48,000
38	100mm Diameter UPVC T with a vent	pcs	3	15,000	45,000
39	100mm clip	no	12	3,000	36,000
40	Solvent cement - small tin	pcs	4	5,000	20,000
41	LABOUR		1	1,200,000	1,200,000
	Subtotal				3,292,000

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
TILING AND PAVED WALKWAYS					
42	Wall and floor tiles	SM	110	45,000	4,950,000
43	Cement for floor preparation (plastering)	bags	8	34,000	272,000
44	Adhesive	10kg bags	14	18,000	252,000
45	Grout	10kg bags	2	18,000	36,000
46	Cement	Bags	17	34,000	578,000
47	Sand	trucks	8	130,000	1,040,000
48	Plastic strips	pcs	18	7,000	126,000
49	Floor traps	pcs	2	10,000	20,000
50	Tile spacers	pkts	18	5,000	90,000
51	Pavers for walkways	SM	50	50,000	2,500,000
52	Walkway Kerb lines	LM	35	45,000	1,575,000
53	Road marking paint for kerblines	Tins	2	80,000	160,000
54	Lake sand	trucks	6	130,000	780,000
55	Transportation of pavers and tiles		1	500,000	500,000
56	LABOUR for tiles	SM	110	20,000	2,200,000
57	LABOUR for pavers	SM	50	15,000	750,000
58	LABOUR for kerblines	LM	35	15,000	525,000
	Subtotal				16,354,000
PLASTERING (INSIDE and OUTSIDE WALLS)					
59	Cement	Bags	15	34,000	510,000
60	Sand	elf trucks	4	130,000	520,000
61	Lime (25kg bags)(Optional)	Bags	4	28,000	112,000
62	LABOUR		1	1,300,000	1,300,000
	Subtotal				2,442,000

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
PAINTING					
63	Sand paper (portugal)	m	23	3,000	69,000
64	Undercoat	Jerrycans	4	65,000	260,000
65	Rollers	Pcs	3	15,000	45,000
66	White cement	bags	2	70,000	140,000
67	Weather guard	buckets	2	350,000	700,000
68	Silk paint	tins	3	65,000	195,000
69	Fast dry for metallic doors and tank stand	tins	4	75,000	300,000
70	Body filler for mettalic doors	tins	2	70,000	140,000
71	High glass thinner	Jerrycans	8	50,000	400,000
72	LABOUR for painting walls and doors		1	1,000,000	1,000,000
	Subtotal				3,249,000
SEPTIC TANK (1.5m wide x 4.5 m length x 2.0 m deep)					
73	PPC Cement (50kg Bags)	Bags	25	34,000	850,000
74	Sand	elf truck	4	130,000	520,000
75	20mm Aggregates	elf truck	1	120,000	120,000
76	Hardcore	elf truck	1.5	120,000	180,000
77	Ribbed bars T12	pcs	18	35,000	630,000
78	R6 rings	pcs	12	12,000	144,000
79	Binding wire	Kg	6	6,000	36,000
80	12"x1" Timber Formwork	pcs	16	8,000	128,000
81	4" x 2" Timber Formwork	pcs	5	6,000	30,000
82	Poles (Kalitunsi)	pcs	16	5,000	80,000
83	Burnt Clay Bricks (225X112.7X75)	No	2,000	400	800,000

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
84	3"-6" Assorted Nails	Kg	4	6,000	24,000
85	Diameter UPVC pipe (medium gauge) - 6"	pcs	2	70,000	140,000
86	PVC bends (6")	pcs	4	20,000	80,000
87	Precast concrete covers	pcs	4	40,000	160,000
88	Labour for excavation		1	400,000	400,000
89	Labour for construction and plumbing		1	1,000,000	1,000,000
	Subtotal				5,322,000

MANHOLES

90	Iron bars T10	pcs	2	28,000	56,000
91	Binding wire	kg	3	6,000	18,000
92	Ring - R8	pcs	1	12,000	12,000
93	Wire mesh (4x8)	pcs	2	25,000	50,000
94	Burnt Clay Bricks (225X112.7X75)	No	360	4,000	1,440,000
95	Cement	bags	5	34,000	170,000
96	Aggregates (1/4")	truck	0.5	120,000	60,000
97	Smooth finished timber boards (1.5")	pcs	3	15,000	45,000
98	LABOUR		1	250,000	250,000
	Subtotal				2,101,000

SOAK PIT

99	Hardcore	elf truck	3	120,000	360,000
100	Gauge 1000, 6m polythen	m	6	3,000	18,000
101	Provisional perforated pipe for maintenance (optional)	pcs	1	80,000	80,000
102	Corner pipe 110mm	pcs	1	8,000	8,000
103	Labour for exavation and packing hardcore		1	300,000	300,000
	Subtotal				766,000

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
PLUMBING APPLIANCES AND ACCESSORIES					
104	squatting toilet pans (normal size) complete	pcs	3	300,000	900,000
105	Seating toilet complete	pcs	3	500,000	1,500,000
106	Yarn hemp	m	10	6,000	60,000
107	Shellac solution (small)	pcs	6	5,000	30,000
108	Wash hand basin (medium) complete	pcs	5	200,000	1,000,000
109	Thread tape (big)	pcs	10	3,000	30,000
110	Vent caps	pcs	3	5,000	15,000
111	Bottle traps	pcs	1	15,000	15,000
112	PVC bend door (4")	pcs	6	15,000	90,000
113	Disabled Unit Handrail	Item	1	150,000	150,000
114	LABOUR		1	800,000	800,000
	Subtotal				4,590,000
DRAINAGE					
115	PVC pipes (6")	pcs	4	70,000	280,000
116	PVC Tees (6")	pcs	3	25,000	75,000
117	PVC bends (6")	pcs	2	20,000	40,000
118	PVC sockets (6")	pcs	1	15,000	15,000
119	PVC pipes (4")	pcs	6	35,000	210,000
120	PVC bends (4")	pcs	6	7,000	42,000
121	PVC sockets (4")	pcs	1	6,000	6,000
122	PVC Tees (4")	pcs	2	10,000	20,000
123	PVC plugs (4")	pcs	1	6,000	6,000
124	PVC 45 deg bend (4")	pcs	2	6,000	12,000

ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
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125	Gulley traps (4")	pcs	3	7,000	21,000
126	PVC pipes (3/2)	pcs	1	20,000	20,000
127	PVC elbows	pcs	3	2,000	6,000
128	PVC Tees and Plugs	pcs	5	5,000	25,000
129	PVC floor traps (4x2")	pcs	2	15,000	30,000
130	Floor gratings (4")	pcs	1	5,000	5,000
131	Solvent compound (big size)	pcs	6	15,000	90,000
132	LABOUR		1	1,000,000	1,000,000
	Subtotal				1,903,000

ELECTRICAL FIRST FIX

133	Main switch - 4 ways	pcs	1	120,000	120,000
134	Moulded boxes	pcs	2	2,000	4,000
135	Meter Reader box	pcs	1	30,000	30,000
136	Conduit pipes (25mm)	pcs	5	3,000	15,000
137	Nails	kg	1	6,000	6,000
138	LABOUR	1	1	250,000	250,000
	Subtotal				425,000

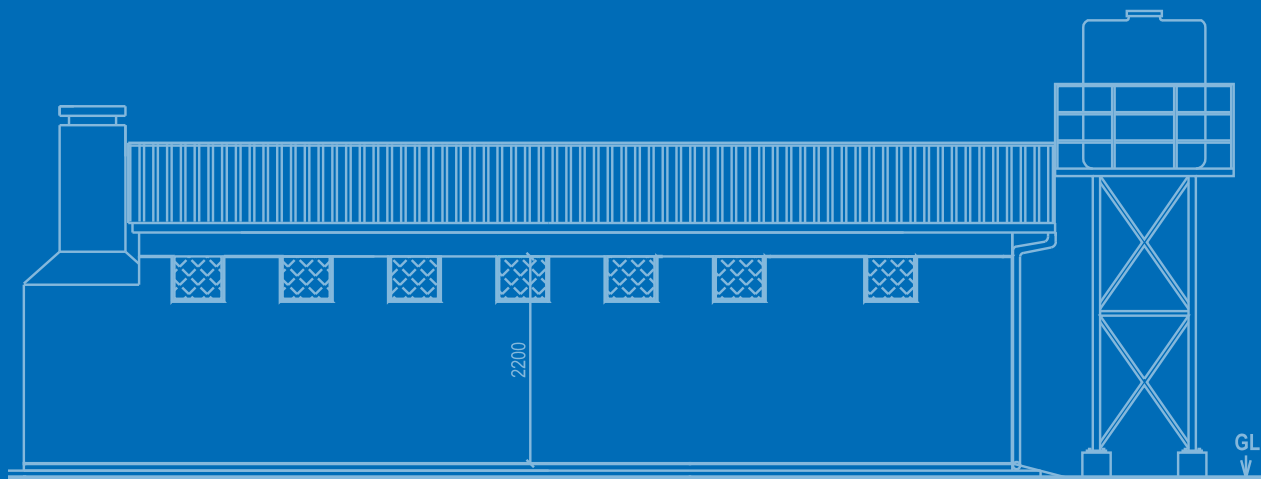
WATER TANK AND ACCESSORIES

139	Cold water tank - 2000 liters	pcs	1	500,000	500,000
140	Fabricated metallic stand	unit	1	2,500,000	2,500,000
141	Ball valve	Pcs	1	35,000	35,000
142	Long screws	Pcs	3	7,000	21,000
143	PPR pipes	Pcs	3	8,000	24,000

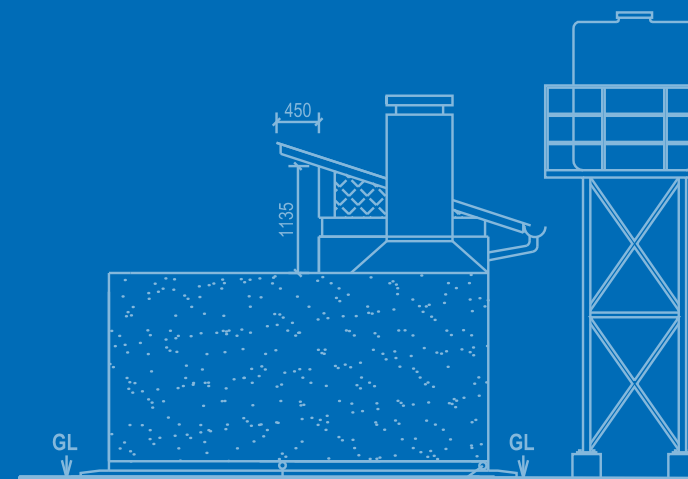
ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
144	PPR union	Pcs	1	4,000	4,000
145	PPR valve (half inch)	Pcs	1	20,000	20,000
146	PPR plain elbow (1/2)	pcs	2	2,000	4,000
147	PPR sockets	pcs	3	2,000	6,000
148	PPR valve (3/4 inch)	Pcs	1	35,000	35,000
149	PE elbows push	Pcs	1	8,000	8,000
150	PPR pipes	pcs	10	12,000	120,000
151	PPR plain elbows (3/4)	pcs	8	2,000	16,000
152	PPR sockets (3/4)	pcs	8	2,000	16,000
153	PPR Tee (3/4)	pcs	2	2,000	4,000
154	PPR female elbow	pcs	4	8,000	32,000
155	PPR male elbow	Pcs	4	8,000	32,000
156	Bib taps	pcs	2	20,000	40,000
157	PE pipes	m	50	2,000	100,000
158	PPR unions (3/4)	pcs	1	5,000	5,000
159	LABOUR (Installation and plumbing)		1	600,000	600,000
	Subtotal				4,122,000
OTHER ACCESSORIES					
160	Incinerator			4,000,000	-
161	Water for construction		1	2,500,000	2,500,000
162	200 litre drums holding flushing water	Pcs	2	120,000	240,000
163	WASHaLOT 3.0 for Handwashing	unit	2	1,400,000	2,800,000
	GRAND TOTAL				68,883,000

PROPOSED MATERIALS AND LABOUR FOR WASHqLOT

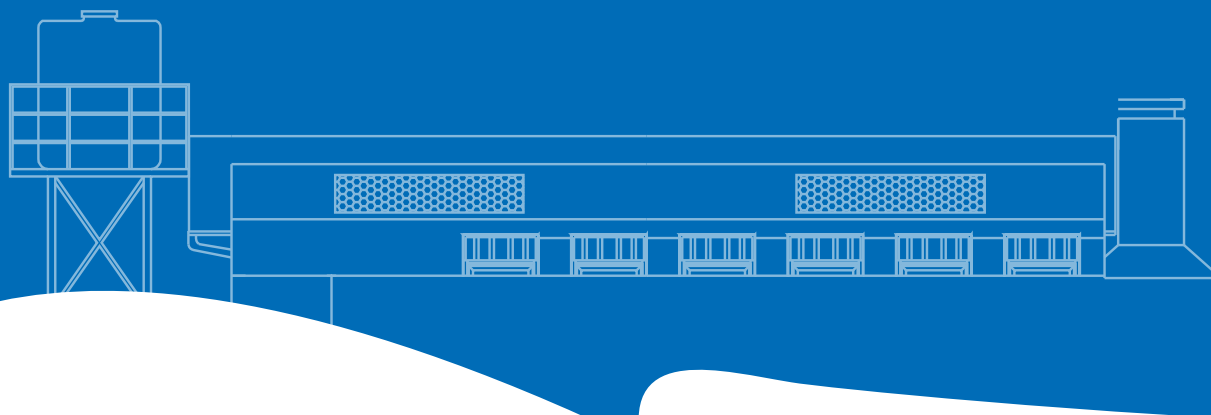
ITEM	DESCRIPTION	UNITS	QTY	RATE	AMOUNT (AS AT 2024)
1	PPC Cement (50kg Bags)	Bags	5	34,000	170,000
2	Sand	elf truck	1	130,000	130,000
3	20mm Aggregates	elf truck	2	120,000	240,000
4	Burnt Clay Bricks (225X112.7X75)	No	210	400	84,000
	Subtotal				624,000
MECHANICAL AND PLUMBING ACCESSORIES					
5	50mm diameter G.I 1.3m longpipes with welded anchors	No	2	15,000	30,000
6	PPR pipes	Pcs	2	12,000	24,000
7	PPR union	Pcs	1	4,000	4,000
8	PPR valve (half inch)	Pcs	1	20,000	20,000
9	110mm uPVC PN 10 pipe	No	0.5	50,000	25,000
10	100mm Pipe covers	No	2	10,000	20,000
11	Clamps	No	2	12,000	24,000
12	PE plates soap holders	No	6	15,000	90,000
13	Nipples	No	10	15,000	150,000
	Subtotal				387,000
SOAK PIT					
14	Hardcore	elf truck	0.4	120,000	48,000
15	Gauge 1000, 6m polythen		1	3,000	3,000
16	Corner pipe 110mm		1	8,000	8,000
	Subtotal				59,000
LABOUR					
17	Excavation for foundation wall		1	50,000	50,000
18	Building, plastering and concrete casting of the tank + filling with stones		1	180,000	180,000
19	Plumbing and installation, filling of soak pit with hardcore and covering it.		1	100,000	100,000
	Subtotal				330,000
	GRAND TOTAL				1,400,000



ELEVATION 1



ELEVATION 3



THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT
 WATER AND SANITATION
 DEVELOPMENT FACILITY
 - NORTH -



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SANITATION
 FOR MILLIONS