GUIDING DOCUMENT

POURAKARMIKARA VIRAMA KENDRA

Professional and Dignified Resting Space for Sanitation Workers

SEP
16

GUIDING DOCUMENT

POURAKARMIKARA VIRAMA KENDRA

Professional and Dignified Resting Space for Sanitation Workers

in collaboration with

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One day our society will come to respect the sanitation worker if it is to survive, for the person who picks up our garbage, in the final analysis, is as significant as the physician, for if he doesn't do his job, diseases are rampant.

— Martin Luther King Jr., All Labor Has Dignity

RAHIM KHAN
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No. MMAH/ 101 / 2024

Date: 4/12/2024

MESSAGE

Sanitation workers form the corner stone of urban health and hygiene, dedicating their lives to maintaining the cleanliness and well-being of our cities. Despite their critical role, many sanitation works face challenging working conditions and lack access to even the most basic facilities ,highlighting pressing need for systemic change.

As the Minister of Municipal Administration, I am deeply committed to addressing these challenges. It is both a privilege and a responsibility to advocate for the dignity, safety, and well-being of those who play such a fundamental role in the functioning of our cities. Ensuring that sanitation workers have access safe working environments is not merely and administrative duty. It is a moral imperative that reflects the values of safety and dignity.

This Toolkit- A guide to 'Pourakarmikara Viram Kendra' serves as a comprehensive guide for urban local bodies, offering step-by-step guidence on designing, implementing, and managing these facilities. It also explores funding options, leveraging schemes such as Swachh Bharath Mission 2.0(SBM 2.0) 15th Finance Commission grants, Karnataka's Nagarotthana Scheme ensuring that every municipality takes the initiative to build resting facilities and improve the working conditions of sanitation workers.

I urge all urban local bodies and stakeholders to use this guide as a resource to transform the lives of sanitation workers. Together, we can set a benchmark for inclusive and sustainable urban development that uplifts and empowers sanitation workers.

(RAHIM KHAN)

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Minister for Higher Education &
District-incharge Minister, Chikkaballapur
Govt. of Karnataka

FOREWORD

It is with great pride that I present ***Pourakarmikara Virama Kendra***—A Toolkit, which highlights our strong commitment to enhancing the lives and working conditions of sanitation workers in India. Despite their critical role, they have often been overlooked in terms of workplace dignity and safety.

This toolkit represents a significant step forward in recognizing the invaluable contributions of these workers. By providing comprehensive guidelines for designing and maintaining safe, hygienic, and inclusive WASH facilities, this document serves as a practical resource for Urban Local Bodies and other stakeholders. It underscores our collective responsibility to create spaces that support the well-being of sanitation workers and empower them with dignity and respect.

I commend the collaborative efforts of the Government of Karnataka, BORDA South Asia and TIDE in bringing this toolkit to fruition. It reflects our commitment to achieving Sustainable Development Goals (SDGs), particularly SDG 6 on clean water and sanitation.

As we move forward, I urge all stakeholders to embrace this toolkit and work together to ensure its successful implementation. By doing so, we will uplift the lives of sanitation workers and set a benchmark for equitable and sustainable urban development.

Let us pledge to make Karnataka a model state for inclusive sanitation, where every worker feels valued and supported.

Sudhakar M.C.

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FOREWORD

Sanitation workers are the backbone of our urban ecosystems, playing a vital role in maintaining public health and hygiene. Despite their invaluable contribution, these workers often face harsh conditions, inadequate facilities, and limited access to basic amenities. Recognizing their efforts and ensuring their dignity, safety, and well-being is not just an act of gratitude but a societal responsibility. The Pourakarmika Virama Kendra Toolkit aims to address these gaps by providing a structured approach to creating professional and safe resting spaces for sanitation workers. This initiative is a step toward valuing their contributions and improving their quality of life, aligning with our collective goal of inclusive urban development.

Urban Local Bodies (ULBs) hold the key to transforming these aspirations into reality. Leveraging funds from schemes like Swachh Bharat Mission, the Fifteenth Finance Commission grants, and state-level programs such as Karnataka's Nagarothana Scheme, ULBs can take a planning-centric approach to establish Pourakarmika Virama Kendras. This toolkit equips them with detailed guidance on need assessment, facility design, and resource allocation, operation and maintenance, ensuring a sustainable and impactful implementation.

Let this toolkit serve as a call to action, inspiring cities and towns across the state to honour the contributions of our sanitation workers. By adopting this we move closer to creating comfortable and safe spaces where every worker is valued, and their dignity is upheld.

Dr. Selvamani R, IAS

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ABBREVIATIONS

ADB	Asian Development Bank
BMGF	Bill & Melinda Gates Foundation
BORDA-SA	Bremen Overseas Research and Development Association - South Asia
CC	City Corporation
CMC	City Municipal Council
CPHEEO	Central Public Health and Environmental Engineering Organization
CPWD	Central Public Works Department
CSR	Corporate Social Responsibility
CSW	Core Sanitation Workers
DEWATS	Decentralised Wastewater Treatment System
DMA	Directorate of Municipal Administration
EWC	European Water Closet
FC	Finance Commission
FSM	Faecal Sludge Management
FSTP	Faecal Sludge Treatment Plant
GDP	Gross Domestic Product
IWC	Indian Water Closet
LEDeG	Ladakh Ecological Development Group
MFI	Microfinance Institution
MoHUA	Ministry of Housing and Urban Affairs
NAMASTE	National Action for Mechanised Sanitation Ecosystem
NGO	Non-Governmental Organisation
NIUA	National Institute of Urban Affairs
NSKFDC	National Safai Karamcharis Finance & Development Corporation
O&M	Operation and Maintenance
OSHA	Occupational Safety and Health Administration
PPE	Personal Protective Equipment
PPP	Public Private Partnership
SBM	Swachh Bharat Mission
SHG	Self-Help Group
STP	Sewage Treatment Plant
SRMS	Self-Employment Scheme for Rehabilitation of Manual Scavengers
SUY	Swachhta Udyami Yojana
SWRS	Sanitation Workers Rehabilitation Scheme
SWM	Solid Waste Management
TCPO	Town and Country Planning Organisation
TIDE	Technology Informatics Design Endeavour
TMC	Town Municipal Council
TP	Town Panchayat
UDD	Urban Development Department
ULB	Urban Local Body
UMC	Urban Management Centre
WC	Water Closet
WASH	Water, Sanitation, and Hygiene
WATCO	Water Corporation of Odisha

GLOSSARY

DEWATS: Decentralized Wastewater Treatment System is a locally managed, sustainable wastewater treatment system designed to treat and reuse wastewater close to its source, typically in small communities or individual facilities, without relying on extensive sewer networks or centralized treatment plants.

Liquid Waste Management: The process of collecting, treating, and disposing of liquid waste to prevent pollution and protect public health and the environment.

Mandatory features: Features that are essential for ensuring basic sanitation and hygiene such as urinal, handwash facility, bathing unit etc.

Sanitation Workers: Individuals employed to maintain cleanliness and hygiene in public and private spaces, including the collection and disposal of waste, cleaning public facilities, and managing sanitation infrastructure. Their work is crucial for public health and urban hygiene.

Sanitation Workers Resting Facility: A designated space where sanitation workers can rest and recover during their work shifts. This facility is designed to provide comfort and support to workers who perform physically demanding tasks.

Solid Waste Management: The process of collecting, treating, and disposing of solid materials in a way that reduces their impact on human health and the environment.

Sustainable Development Goals (SDG): A set of 17 global goals established by the United Nations to address critical issues such as poverty, inequality, climate change, and sanitation. The SDGs provide a framework for countries to work towards improving quality of life and ensuring sustainable development.

Optional Features: Features that offer additional amenities based on local context and preferences such as childcare room, pantry etc.

Personal Protective Equipment (PPE): Gear worn to protect individuals from health and safety hazards. In sanitation, PPE includes items like gloves, masks, and aprons to safeguard workers from exposure to harmful substances.

Recommended Features: Features that enhance usability and comfort but are not legally required such as storage unit, lounge area, etc.

Urban Local Body (ULB): Local government authorities responsible for the administration and management of urban areas. ULBs, such as municipal corporations or municipalities, handle local services, infrastructure, and development within their jurisdiction.

WASH (Water, Sanitation, and Hygiene): A comprehensive approach to ensuring access to clean water, safe sanitation, and effective hygiene practices. It is critical for public health and well-being, particularly in developing regions.

OVERVIEW

Imagine a scenario where an employee doesn't have access to basic sanitation services and is forced to use public toilets? Or an employee must eat lunch on the roadside in the open because there is no dining and drinking water facility? Will you work in such an environment? Professional dignity is critical for humans. It plays a substantial role in shaping up employee mental health and strengthening workplace association. Unfortunately, Sanitation Workers are devoid of these basic needs.

Sanitation workers play the pivotal role of maintaining the cleanliness and public health of our towns, yet they often work in unsafe environments without basic professional dignity. Their marginalization not only affects their physical health & life expectancy but also impacts their mental health while putting their families' health in direct risk.

India hosts a series of schemes and programs such as The Prohibition of Employment as Manual Scavengers and Their Rehabilitation Act and National Action for Mechanised Sanitation Ecosystem (NAMASTE) that talk about the physical health, need for mechanization, rights, inclusion etc. but none of these programs are designed to address professional dignity and hygiene issues faced by Sanitation Workers at their workplace.

Government of Karnataka has been committed to uplift the living conditions of Sanitation Workers through interventions around regularization, physical

health, safety & insurance, housing, education & capacity building. To uplift the professional dignity of Sanitation Workers, Bruhat Bengaluru Mahanagara Palike (BBMP) has made more than 150 Suvidha Cabins across 8 zones in Bangalore city. However, many of the sanitation workers across Karnataka, especially from small & medium sized towns, are still struggling to maintain this dignity.

Pourakarmikara Virama Kendra is a combined effort of the Government of Karnataka, BORDA and TIDE to highlight and mitigate the challenges faced by Sanitation Workers due to lack of basic services at workplace. Pourakarmikara Virama Kendra contributes to improvements in the professional dignity and workplace association through its state-of-the-art intervention. This facility provides gender specific toilets & bathrooms, wash areas to clean after work, drinking water facility and dining & resting space during breaks & shifts. This facility is managed by sanitation workers themselves and is something to call their own! Two such facilities were piloted with different features in Chikkaballapur and Chintamani towns of Karnataka.

To sensitise other ULBs of Karnataka and promote basic needs services for sanitation workers, Pourakarmikara Virama Kendra Report will act as a guiding document. The Pourakarmikara Virama Kendra aims to uplift the dignity and professionalism of sanitation workers by providing guidelines for creating safe, hygienic, and aspirational workspaces. This toolkit helps urban local bodies (ULBs) understand the importance of such facilities, offering a step-by-step guide on design, construction, and maintenance to ensure environments that promote worker dignity, safety, and professionalism. There are type designs and case studies as learning chapters for the ULBs. The document also discusses various financing options that can be explored for Pourakarmikara Virama Kendras.

Sanitation worker health significantly influences broader economic factors. Substandard working conditions can result in reduced productivity, higher healthcare expenses, and out-of-pocket costs for workers and their families. By improving workplace safety and addressing health needs, municipalities can mitigate income loss, lower healthcare expenses, and foster economic growth, aligning with SDG 6, focusing on access to basic sanitation and SDG 8, which focuses on promoting decent work and economic prosperity.

1

INTRODUCTION

PLANNING APPROACH

DESIGN PRINCIPLES

OPERATION AND MAINTENANCE

CASE STUDIES

WAY FORWARD

Introduction

2 million sanitation workers work without access to appropriate safety gear and equipment, a violation of Occupational Safety and Health Administration (OSHA) standards. (World Bank, 2021).

Sanitation workers in Karnataka and all over the country play a vital role in maintaining public health by keeping cities clean and managing waste. However, many of these workers, often from marginalized backgrounds, face challenging working conditions, lacking basic amenities such as water, toilets, and rest areas.

In response, the Karnataka government has implemented several welfare initiatives aimed at improving their living and working conditions. With approximately 27,508 sanitation workers across all Urban Local Bodies (ULBs) in Karnataka, the government, along with the Safai Karmachari Commission, has introduced schemes such as the Goods Vehicle Scheme, which provides financial assistance for the purchase of transport vehicles, and the Micro Credit Scheme to support women's self-help groups. Skill development programs offer training in fields like carpentry, plumbing, and mobile repair to help sanitation workers and their dependents secure better livelihoods.

A worker dies every five days cleaning sewers (NSCK, 2020).

Over 50% of India's sanitation workers lack basic WASH access (WaterAid, 2020).

Sanitation workers' life expectancy is 40-45 years, below the 70-year average (NSKFDC, 2020).

Healthcare costs from poor conditions can reach 5% of annual income (NSKFDC, 2020).

Additionally, the Griha Bhagya Yojana prioritizes housing for workers, recognizing the risks they face in hazardous environments. To further improve their work conditions, the Urban Development Department has mandated the establishment of Pourakarmikara Virama Kendras across ULBs in Karnataka, providing sanitation workers with essential services during working hours to improve workplace dignity and safety. These initiatives reflect the state's commitment to enhancing the well-being of sanitation workers and promoting their social and economic upliftment.

The Pourakarmikara Virama Kendra is a dedicated facility designed to improve the working conditions of sanitation workers, or Pourakarmikas, across Karnataka. These workers often perform their duties in unsafe and unhygienic environments, lacking access to essential amenities such as clean water, restrooms, and changing rooms. To address these challenges, the Urban Development Department has directed all ULBs in the state to establish these facilities. The Virama Kendra provides sanitation workers with essential services aimed at enhancing their safety and dignity at work. Key features of the facility include access to clean drinking water, hygienic toilets, rest areas, and changing rooms where workers can refresh after their physically demanding tasks. By offering these amenities, the Pourakarmikara Virama Kendras help create a more respectful and supportive work environment, contributing to the overall well-being of sanitation workers. This initiative recognizes their critical role in maintaining public health and strives to offer them a dignified and safer workplace.

Policy Environment

In India, numerous laws and policies have been enacted to protect sanitation workers, such as The Protection of Civil Rights Act, 1955, The Employment of Manual Scavengers and Construction of Dry Latrines (Prohibition) Act, 1993, and the Prohibition of Employment as Manual Scavengers and Their Employment Act, 2013.

To extend a social security net and upward occupational mobility to these workers, government policies are heavily oriented towards their rehabilitation through training for alternative livelihoods and welfare support as mandated by the Supreme Court. These policies are implemented through schemes that provide rehabilitation loans and promises of

indemnity, compensation, and welfare. However, the full benefits of these schemes are yet to be realized and documented.

While these initiatives aim to address safety and health concerns arising from manual scavenging and lack of proper kits and equipment, there is a notable gap in addressing the fundamental working conditions of sanitation workers at the workplace through national schemes and programs. This oversight contributes to numerous sanitation and hygiene-related challenges. The absence of adequate facilities and policies aimed at ensuring access to safe sanitation and hygiene practices for sanitation workers remains a persistent issue in many developing nations. Furthermore, the lack of reliable and comprehensive data within bureaucratic discourse hinders effective policy development and regulation.

- **2007, revised in 2013 – Self Employment Scheme for Rehabilitation of Manual Scavengers (SRMS):** This central scheme aids manual scavengers with cash assistance, loans, skill training, insurance, and camps.

- **2013 – The Prohibition of Employment as Manual Scavengers and Their Rehabilitation Act:** This law bans manual scavenging, unsafe sewer cleaning, and the construction of unsanitary latrines.

- **2013 – Sanitation Workers Rehabilitation Scheme (SWRS):** Loans are provided by SCAs, RRBs, and nationalized banks to mechanize sewer cleaning, replacing manual labor.

- **2014 - Swachhta Udyami Yojana (SUY):** This initiative provides concessional loans for sanitation workers to buy and operate sanitation vehicles, supporting cleanliness and sustainable livelihoods under the "Swachh Bharat Abhiyan."

- **2020 – GARIMA, Government of Odisha:** This initiative ensures sanitation workers' safety and dignity by providing machinery, protective gear, social security, and skill training.

- **2022 – National Action for Mechanised Sanitation Ecosystem (NAMASTE):** NAMASTE aims to enhance sanitation workers' safety and dignity by eliminating fatalities, removing direct contact with waste, upskilling, and empowering them through ERSUs and alternative livelihoods.

- Furthermore, the **National Safai Karamcharis Finance & Development Corporation (NSKFDC),** established in 1997, serves as the apex body dedicated to the comprehensive development of safai karamcharis, scavengers, and their dependents.

"Every job has its challenges, but dignity in our profession should never be negotiable.

"When we are valued and treated with dignity, it empowers us to take pride in our work and ourselves.

"We work just as hard, but having a safe, private place to refresh reminds us that our dignity as women matters just as much as our work.

Pourakarmikara Virama Kendra – Restoring Professional Dignity

In challenging weather conditions such as sweltering heat, heavy rains, and cold winters, sanitation workers often seek shelter under trees for rest or huddle behind buildings for meals during their work hours. They frequently use dilapidated and unhygienic public toilets during their shifts. They can be seen seeking water from neighborhood households, where their requests are often met with hesitation or outright denial. The lack of inadequate Virama Kendra exposes them to a wide range of pathogens, which they unknowingly carry to their homes, jeopardizing the well-being of their families, and communities, spreading the illness from the workplace to the home. Improving WASH access at their workplace can significantly reduce the disease burden among these frontline workers and enhance overall public health.

The Virama Kendra for sanitation workers is an innovative initiative designed to meet the basic hygienic needs of sanitation workers at their workplace, ensuring access to safe sanitation, clean restrooms, handwashing facilities and spaces to eat and rest. These facilities are crucial for fostering a decent and safe work environment and ensuring the well-being of sanitation workers. The Virama Kendra will not be a makeshift structure but rather a carefully planned and safe space equipped with suitable amenities, creating a sense of ownership and belonging for sanitation workers. As it is a government structure built for government employees, it should also be designed sustainably and with a sense of aesthetics to improve the working conditions of those who do the dirtiest and most thankless jobs in our society.

"A clean space to refresh and rest would make it easier to manage the physical strain that comes with age.

Guiding Document – A Guide to Pourakarmikara Virama Kendra

To promote the core principle of "Inclusive Sanitation for All" and enhance the dignity of sanitation workers, BORDA South Asia initiated a pilot project to establish five Virama Kendras in India and one in Nepal—in Chintamani and Chikballapura in Karnataka, Kargil and Leh in Ladakh, and Kirtipur in Nepal. This initiative aligns with global best practices in labour protection and sanitation management and can be easily scaled and replicated across various contexts. The Pourakarmikara Virama Kendra Guiding Document, developed based on BORDA South Asia's experiences, outlines a model for improving working conditions and public health.

KEY OBJECTIVES

This toolkit has two key objectives:

- **Promoting Dialogue:** Creating awareness around the importance of proper facilities for sanitation and other frontline workers to improve their working conditions, health, and safety; and
- **Empowering Decision-Makers:** Provide guidelines that enable local and state level governments to independently replicate the concept of the Virama Kendra model, ensuring that all 5 million sanitation workers across India have access to dignified working conditions.

2

INTRODUCTION

PLANNING APPROACH

DESIGN PRINCIPLES

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Planning Approach

As outlined in the introduction, Pourakarmikara Virama Kendra are crucial for ensuring the health, safety, and dignity of sanitation workers. These facilities provide essential services such as clean water, toilets, bathing areas, laundry services, and hygienic spaces for rest and meals. This chapter includes planning principles and approach to be taken into consideration during the development of a Virama Kendra.

Planning principles

The primary aim of planning Pourakarmikara Virama Kendra is to enhance the professional dignity of sanitation workers by being user centric. This can be achieved by adhering to four major principles: accessibility, safety, inclusivity, and sustainability.

Accessibility ensures that facilities are specifically designed to meet the unique needs of sanitation workers. This includes purpose-built components such as toilet units—including EWC, IWC, urinals, and handwash—bathing and changing areas with locker rooms, and sanitization areas that cover leg wash, PPE wash, and drying areas. Additionally, it encompasses the tool room, dining area with a pantry, seating area, and drinking water facility, waste disposal areas, and a multipurpose area that includes a first aid station, lounge area, and storage spaces. Accessibility also involves careful site selection to ensure these facilities are conveniently located at/near the worksite, making them easily reachable and minimizing unnecessary travel or physical strain.

Sustainability is important to ensure that the facilities are both environmentally friendly and economically viable. In terms of implementation, using local materials, minimizing carbon emissions, and incorporating nature-based solutions can reduce the environmental impact of the facilities. For operation and maintenance, adopting low-cost business models and sustainable practices helps in long-term upkeep and cost efficiency, ensuring that the facilities remain functional and beneficial for years to come.

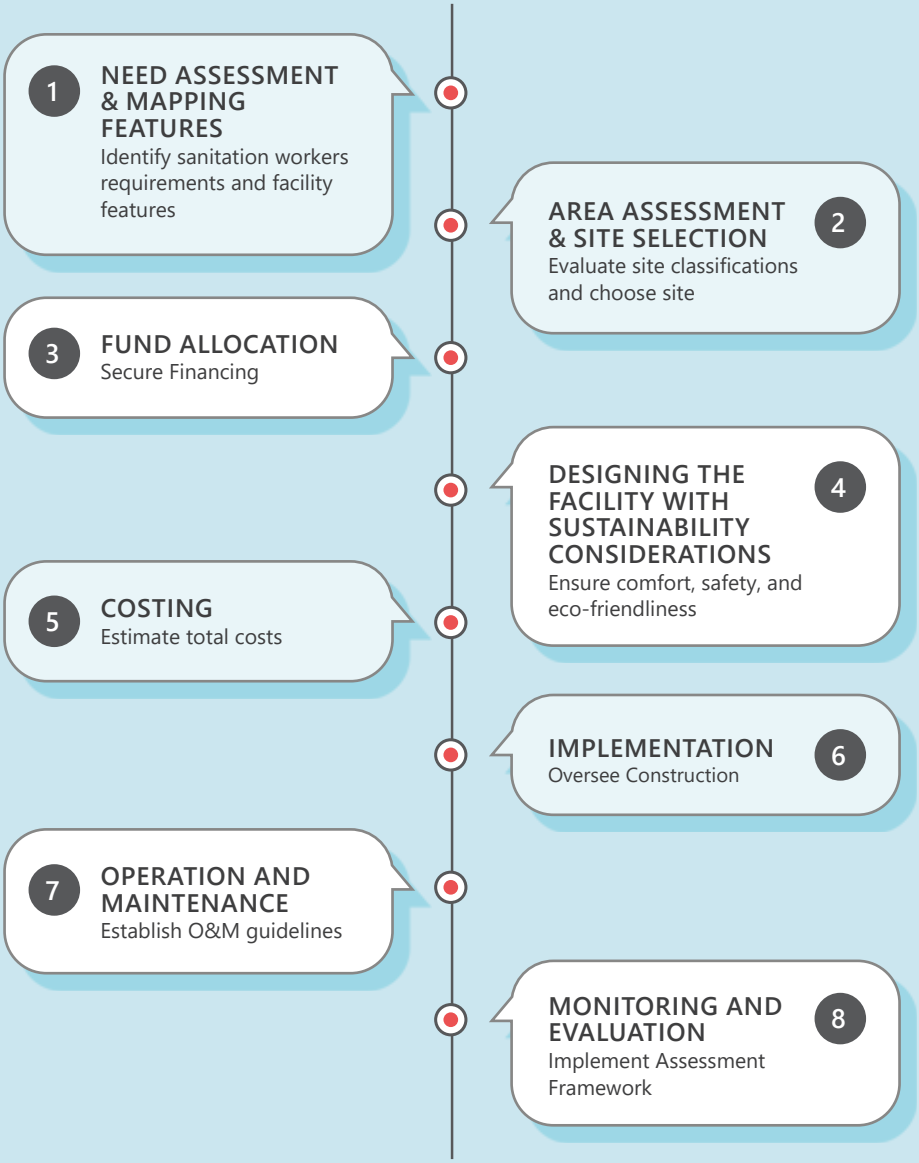
By integrating these principles, the planning and development of Pourakarmikara Virama Kendras can significantly improve the professional dignity and working conditions of sanitation workers, fostering a more respectful and supportive work environment.

Fig. 2.1. Planning Principles

Safety is crucial for sanitation workers due to their constant exposure to hazardous conditions. Safety measures in Virama Kendras should address privacy, health, and personal hygiene. Privacy ensures that workers have a secure space for personal activities without fear of intrusion. Health considerations involve providing clean, well-maintained facilities to prevent the spread of infectious diseases. Personal hygiene facilities, such as clean toilets, well-equipped bathing areas, facilities for storing personal belongings hygienically are essential to allow the sanitation workers to maintain hygiene standards while on break.

Inclusivity is vital to ensure that the facilities cater to all workers, regardless of age, gender, or other factors. Facilities must be designed to be accessible to sanitation workers of all ages and genders, including men, women, and third genders. This inclusivity extends to features for older workers and gender-neutral spaces, ensuring that every worker feels respected and comfortable.

Fig. 2.2. Roadmap- Planning to Operation & Maintenance



Step by Step: Planning to O&M

This section provides a comprehensive guide for ULBs on implementing Virama Kendras, detailing each step from initial planning through to O&M. The process is designed to ensure that municipalities can effectively plan, execute, and sustain Virama Kendra for sanitation workers.

The step-by-step approach outlined here is intended as a practical framework for ULBs to follow, ensuring a systematic and efficient implementation of Virama Kendras. The infographic below visually represents this process, offering a clear overview from the first step of planning through to monitoring and required framework.

The further sub-sections detail out each step, providing an in-depth explanation of the planning, design, and implementation phases. Each section offers practical guidance to ensure that every stage of the Virama Kendra development process is thoroughly addressed and executed.

Need Assessment

The first step in the planning process for Pourakarmikara Virama Kendra is conducting a comprehensive need assessment. This assessment can be divided into two primary components: demand assessment and provision assessment.

Demand Assessment

The demand assessment identifies the number and types of sanitation workers who will utilize the Virama Kendra. This user-centric approach ensures that the facilities are tailored to the specific requirements of the workforce in that region.

Demand: Type and Number of Sanitation Workers

To accurately assess demand, municipalities should collect data on the different types of sanitation workers, as outlined in the fig 2.3 (UMC, 2020). This table highlights only a few examples, and the types of workers may vary across states, cities, or towns. It is not a definitive list—municipalities can add or remove categories based on their specific needs and circumstances. The total number of sanitation workers should then be calculated, with guidance provided in Annexure 1. Based on these calculations, the appropriate size of the facility can be determined to meet the needs of the workforce.

Fig. 2.3. Types of Sanitation Workers

Sanitation workers under SOLID WASTE MANAGEMENT

- Street Sweeper
- Institutional Waste Collector (Hospitals and Quarantine Centers)
- Domestic Waste Collector
- Worker at Waste Processing Facility

Sanitation workers under LIQUID WASTE MANAGEMENT

- Latrine Cleaner
- Drain Cleaner
- Community/ Public Toilet Cleaner
- Septic Tank Desludger
- Sewer Cleaner
- STP / FSTP Worker

Provision Assessment

The provision assessment focuses on the components and features required for the Virama Kendras. This includes identifying mandatory, optional and recommended **components** of which there will be basic and aspirational **features** that the ULB can choose to build based on the needs assessment, local context and resource availability.

Provision: Components of Pourakarmikara Virama Kendra

The following table lists the various components that should be included in the Virama Kendra, categorized by gender. Each feature is classified as Mandatory, Recommended, or Optional based on guidelines from the Central Public Health and Environmental Engineering Organization (CPHEEO) for public and community toilets (CPHEEO, 2018).

According to the guidelines:

- **Mandatory features** are essential for ensuring basic sanitation and hygiene.
- **Recommended features** enhance usability and comfort but are not legally required.
- **Optional features** offer additional amenities based on local context and preferences.

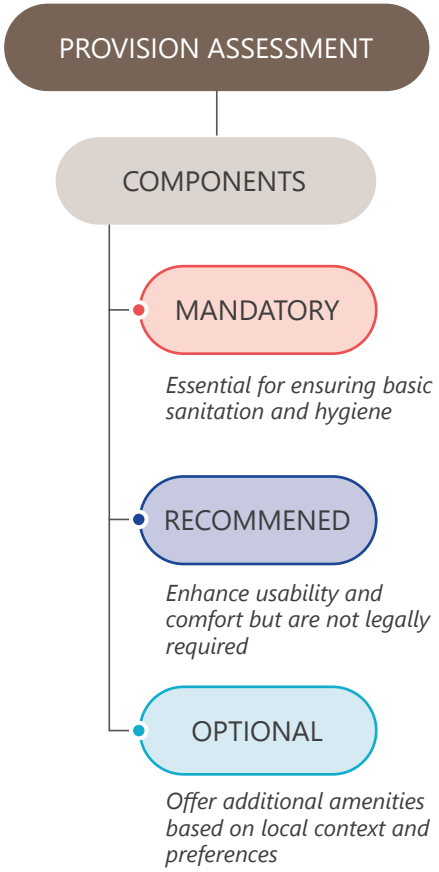
This classification helps ensure that Virama Kendras meet the fundamental needs of users while allowing for enhancements that improve the overall experience.

This table provides a clear outline of the necessary components for Virama Kendras, ensuring that all aspects of sanitation workers' needs are addressed. Additional features may be required depending on the specific city or town. For instance, areas with varying climates, such as plains, hilly regions, or coastal areas may have different needs based on factors like temperature, humidity, rainfall, and soil conditions. These factors can influence drainage systems, water supply, and facility design, making customization essential for each location.

Provision: Aspirational Features of Virama Kendra

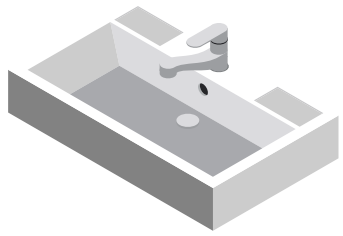
The components outlined above are the basic features of a Virama Kendra, providing essential amenities that enhance the dignity and comfort of sanitation workers. These basic features ensure a safer and more respectful workplace environment. In addition to these core elements, aspirational features further improve the working conditions and health and well-being of sanitation workers while also making the facility more sustainable.

Fig. 2.4. Components of a Virama Kendra



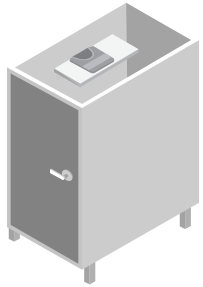
By conducting a thorough demand and provision assessment, municipalities can decide on the various components and features needed to design Virama Kendra that are functional, accessible, and tailored to the specific requirements of sanitation workers. This foundational step is crucial for ensuring the successful implementation of Virama Kendra that truly serve their intended purpose.

Fig. 2.5. Features of Pourakarmikara Virama Kendra



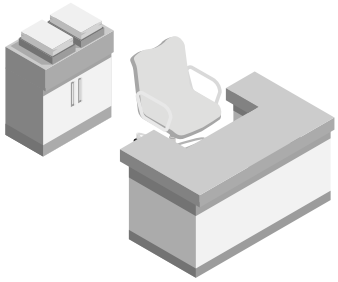
M F N

HANDWASH AREA
Toilet Area



M F N

CHANGING ROOM
Bathing Area



M F N

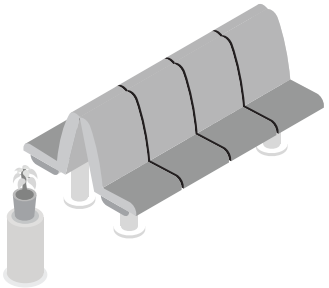
OFFICE SPACES
Multipurpose Room

M F N

MENSTRUAL HYGIENE
Toilet Area

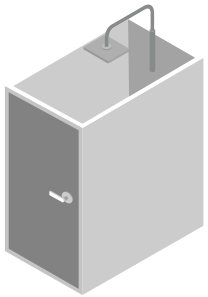
M F N

LOCKER ROOM
Bathing Area



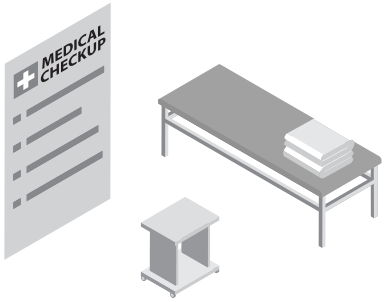
M F N

LOUNGE AREA
Multipurpose Room



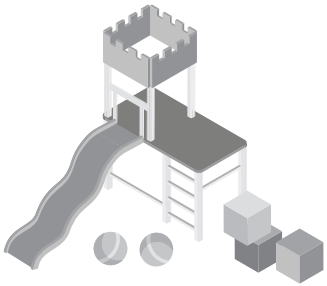
M F N

BATHING CUBICLES
Bathing Area



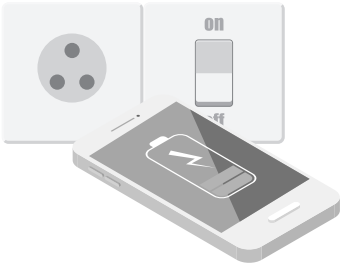
M F N

FIRST AID AREA
Multipurpose Room



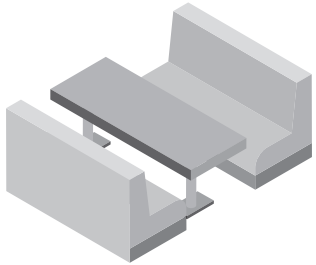
M F N

CHILD CARE ROOM
Multipurpose Room



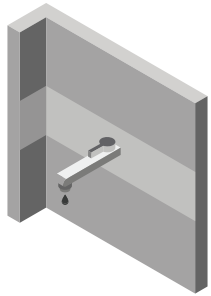
M F N

MOBILE CHARGING POINTS
Multipurpose Room



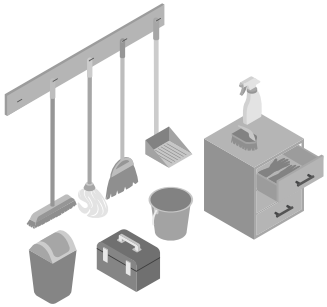
M F N

SEATING FOR DINING
Dining Area



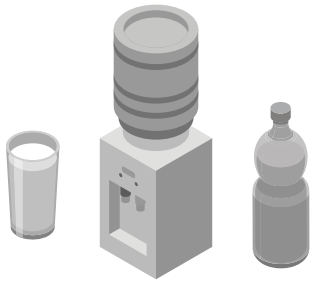
M F N

LEG WASH AREA
Sanitisation Area



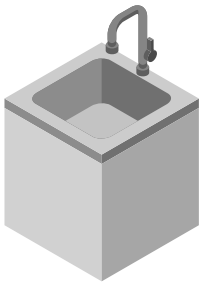
M F N

TOOL ROOM
Storage Area



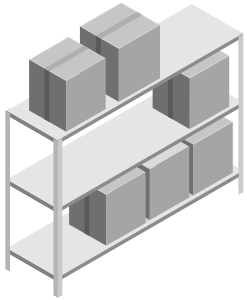
M F N

DRINKING WATER ZONE
Dining Area



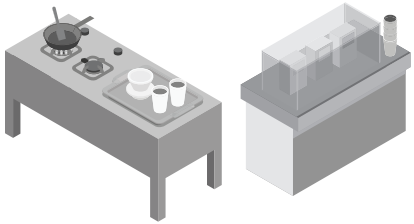
M F N

PPE WASH AREA
Sanitisation Area



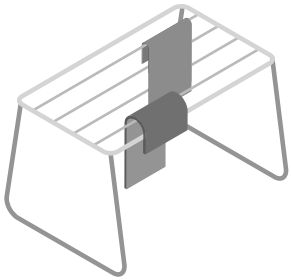
M F N

STORAGE SPACE
Storage Area



M F N

PANTRY
Dining Area



M F N

DRYING AREA
Sanitisation Area

Figure 2.6. Aspirational Features

Water Conservation
Installation of low-flow fixtures and rainwater harvesting systems to conserve water resources, as well as used water reuse.

Energy Efficiency
Incorporating energy-efficient lighting and appliances to reduce energy consumption, as well as design elements and materials to keep the structure cool during summers.

Accessibility Features
Enhanced accessibility for persons with disabilities, such as ramps and specialized facilities.

Green Building Materials
Use of sustainable materials that minimize environmental impact.

Nature-Based Solutions
Incorporating landscaping, DEWATS and green roofs to enhance aesthetic appeal, environmental sustainability and comfort of users—while also setting a benchmark for other municipal and private buildings.

Area Assessment and Site Selection

The area assessment and site selection are critical steps in the planning process for Virama Kendras, ensuring that the facilities are appropriately located and sized to meet the needs of sanitation workers. This section discusses the area assessment based on different classifications of Urban Local Bodies and outlines the site selection process to maximize accessibility and functionality.

Area Assessment

The area assessment process begins by categorizing Urban Local Bodies (ULBs) based on their population size and the number of sanitation workers. This evaluation is crucial for determining the appropriate size and features for Virama Kendras, following the norms set by the Central Public Health and Environmental Engineering Organization (CPHEEO, 2016).

Based on our work in Karnataka, we can observe the average number of sanitation workers in different types of ULBs, including

Table 2.1. Number of Sanitation Workers (SWM) in Karnataka ULBs

Category of ULB	No. in K'taka	Avg. No. of Workers	Avg. Female	Avg. Male
City Corporation	10	1,165	478	688
City Municipal Council	60	131	41	90
Town Municipal Council	117	49	14	36
Town Panchayat	115	19	6	15

Table 2.2. Area Assessment for Sanitation Workers Facility

Components	Standards/Provision	Number of Sanitation Workers							
		1 to 25		26 to 50		51 to 100		100 to 150	
		No.	Area (sq ft)	No.	Area (sq ft)	No.	Area (sq ft)	No.	Area (sq ft)
Urinal	One unit per 50 users	1	4	2	8	2	8	3	12
Male WC	One seat for 35 men	1	12	2	24	3	36	4	48
Female WC	One seat for 25 women	1	12	2	24	4	48	5	60
Shower Cubical-M/F	One unit per 50 users	2	27	2	27	3	40	4	54
Changing Room	One per Shower Cubical	2	27	2	27	3	40	4	54
Store Room for tools	Assumed 30 sqft	1	30	1	30	1	30	1	30
Dining/Resting Area	67 people per 1,100sqft	1	160	1	240	1	321	1	402
Drinking Water	One unit per 100 users	1	4	1	4	1	4	1	4
Mirror and Handwash	One per WC/urinal	2	9	2	9	4	18	6	28
Child care room	1 unit	1	40	1	40	1	40	1	40
Feet Washing area	One tap per urinal/WC	2	8	2	8	4	16	6	25
Sub-Total (Sq. Ft.)			**334**		**443**		**605**		**757**
Circulation Area (20%)			66		89		120		152
Total BUA (Sub-Total + Circulation Area + 15%)			**462**		**612**		**835**		**1045**
Tentative cost (in Rupees Lakhs)			**9.20**		**11.50**		**15.70**		**19.80**

(Guidelines referred: Advisory on Public and Community Toilets, MoHUA, 2018; Karnataka Building Bye-Laws; Model Building Bye-Laws, TCPO, 2016; Swachh Bharat Mission-Urban, GoI, 2014; National Building Code, Vol.2, 2016)

Town Panchayats (TP), Town Municipal Councils (TMC), City Municipal Councils (CMC), and City Corporations (CC). The data reveals that the number of sanitation workers varies significantly with the size of the ULB (DMA, Karnataka, 2022). The data used here is based on the available information from 2022 regarding sanitation workers in the solid waste management sector. Similar assessments can be conducted in other states to tailor the requirements to local conditions.

This assessment serves as a reference for states and district municipal authorities (DMAs) and should be used to determine the minimum area needed to help plan the development of the Pourakarmikara Virama Kendras accordingly.

Site Selection Process

A site selection process is essential for ensuring that the Pourakarmikara Virama Kendras are conveniently located for sanitation workers. The following key factors should be considered during the site selection process:

Assessing Physical Accessibility

The selected site must be easily accessible to sanitation workers and hence should be at or close to where workers gather before or after their work shifts. Thus, workers can conveniently use the facilities before and after work, promoting hygiene and comfort.

Alternative Approaches

In urban areas where space may be limited, alternative approaches should be considered. This may include designing multi-story facilities within a smaller footprint. Utilizing vertical space can help maximize the area available for Virama Kendras while maintaining accessibility.

Centralized and Decentralized Approaches

Municipalities must decide whether to implement a centralized facility (one large facility can conveniently serve their entire workforce) or multiple decentralized facilities (several smaller Virama Kendras distributed across the city). Decentralized facilities will be more convenient, depending on the work patterns and locations of workers. A centralized approach may offer economies of scale and be easier to manage, while a decentralized approach can improve accessibility for sanitation workers and it may be easier to find smaller locations.

A careful area assessment followed by a thorough site selection process is critical, for successful Pourakarmikara Virama Kendra.

Costing and Sources of Funding

Understanding the costs associated with developing Virama Kendras is essential for municipalities to ensure effective budgeting and resource allocation. This section presents a costing framework for both basic and aspirational Virama Kendras, to help municipalities determine the funds required for the construction of the facility as well as potential sources for these funds

Costing Framework

The following table gives a range for estimated costs for both basic and aspirational features. Users of this Toolkit can estimate the area from Table 2.2 and use this table to arrive at an approximate budget.

Table 2.3. Costing for Sanitation Workers Resting Facility

Costing Categories	Estimated Cost
Basic (Rs per sq. ft.)	2100
Aspirational (Rs per sq. ft.)	3000

Note: It is important to note that specific local contexts, such as the specific site layout and soil conditions, final design, local material and construction costs, and other factors will impact the final costs.

Sources of Funding

Funding for the development of Virama Kendras can be sourced from various channels, including:

Government Schemes

Note: While none of these schemes directly provide funds specifically for Virama Kendras for sanitation workers, Urban Local Bodies (ULBs) can explore utilizing them for related infrastructure improvements.

1. Swachh Bharat Mission (SBM) 2.0—Urban

Under Swachh Bharat Mission 2.0, WASH (Water, Sanitation, and Hygiene) facilities may be funded as part of Aspirational Public Toilets. Although the scheme does not explicitly earmark funds for sanitation workers' rest areas, ULBs can explore

Table 2.4. Features of an SBM Aspirational Toilet

Feature	Description
Clean Walls and Floors	Walls and floors are maintained to be clean, free of stains, and graffiti-free.
Low-Height Toilets and Basins (Optional)	Low-height toilets and basins for children are provided where needed.
Greenery Maintenance	Plants or shrubs in the vicinity of the toilet complex are well-maintained.
Advertisement Space	Designated space for advertisement is available to support revenue generation.
Hand Drying Facilities	Hand dryer or paper napkins are available for user convenience.
Sanitary Napkin Vending Machine	Vending machines for sanitary napkins are available in ladies' toilets.
Sanitary Napkin Incinerator	Incinerator for the disposal of used sanitary napkins is available for facilities with more than 10 seats.
Identification and Information Display	Toilet identification number, ULB jurisdiction, ward number, and maintenance authority are prominently displayed.
Feedback Mechanism	SMS-based feedback system with a visible number to send feedback is provided.

Note: These features constitute approximately 70% of the Pourakarmikara Virama Kendra's offerings. Additional features specific to the needs of sanitation workers—such as a PPE wash area, foot wash area, dining area, and tool room—must be integrated into the facility to ensure a comfortable and functional environment that addresses both their hygiene and occupational requirements.

using the budget of ₹2,50,000 per water closet (WC) seat and ₹32,000 per urinal for these purposes if applicable.

The following are essential features that an aspirational toilet must include to meet the standards set by the SBM. These features ensure cleanliness, accessibility, and convenience for all users.

2. Fifteenth Finance Commission (15th FC) Grants

The 15th Finance Commission has allocated ₹1.21 lakh crore to ULBs for water supply and sanitation projects. Approximately ₹72,600 crore of this is dedicated to infrastructure improvements, which can be used to support sanitation workers' facilities.

State Government and ULB Funds

States often have dedicated welfare schemes for sanitation workers that can be utilized to build or upgrade resting facilities. Additionally, ULBs can use their own funds or seek support through Public-Private Partnerships (PPP) to enhance infrastructure for sanitation workers.

State-Level Initiative: Karnataka's Nagarotthana Scheme

Karnataka's Nagarotthana Scheme funds urban infrastructure improvements, including sanitation. Through this scheme, the Shidlaghatta Virama Kendra is being constructed, offering sanitation workers a safer, more hygienic workplace. The scheme supports essential projects like water supply, solid waste management, and improved sanitation services across municipalities, enhancing the welfare of both workers and urban residents.

Alternative Funding Mechanisms

1. Grant Subsidies

International organizations such as the World Bank, Asian Development Bank (ADB), and Bill & Melinda Gates Foundation (BMGF) offer grants for urban sanitation projects. These funds can support both construction and O&M of resting facilities for sanitation workers.

2. Corporate Social Responsibility (CSR) Contributions

Private sector organizations provide CSR funds for urban sanitation initiatives. ULBs can partner with companies to secure financial support for developing and maintaining rest areas for sanitation workers.

By leveraging these diverse funding sources and understanding the associated costs, municipalities can effectively plan for the development and maintenance of Virama Kendras, thereby improving sanitation outcomes for sanitation workers.

In summary, this chapter provides a comprehensive overview of the key planning considerations in the development of a Pourakarmikara Virama Kendra: need assessment, area assessment, site selection, costing, and identifying funding sources. The critical aspect of operations and maintenance will be covered in the Operation & Maintenance chapter, underscoring its significance in ensuring the long-term functionality and effectiveness of Virama Kendras.

KLEEN

3

INTRODUCTION
PLANNING APPROACH
DESIGN PRINCIPLES
OPERATION AND MAINTENANCE
CASE STUDIES
WAY FORWARD

Design Principles

This chapter outlines the design principles for essential Virama Kendra components, focusing on wet and dry WASH components, sanitization components, utility components and resting components. It emphasizes creating inclusive, safe, and comfortable environments for sanitation workers. The principles advocate for eco-friendly practices, including water and energy efficiency, to promote sustainability. The design considerations span functional requirements, accessibility, hygiene, and low-maintenance features, ensuring that facilities are not only practical but also environmentally responsible and aligned with modern standards.

Design Principles

Designing Virama Kendras that are functional, durable, and accessible is crucial for ensuring the dignity and well-being of sanitation workers (BIS, 2016). The following principles guide the creation of such spaces, focusing on comfort, sustainability, and practicality.

Comfort, Privacy, and Hygiene: Creating a space where sanitation workers feel at ease is paramount. The facility should offer a welcoming environment that ensures privacy, catering to different genders with designated areas that respect these distinctions. Features such as well-ventilated and brightly lit common areas and lounge spaces provide comfort and a restful atmosphere. Additionally, the facility should include clean, stain-free walls and floors, with optional low-height toilets and basins for children if needed. Seasonal adaptability is essential, ensuring comfort in extreme climates like the harsh winters and warm summers in regions such as Leh.

Sustainable and Cost-Efficient Maintenance: Ease of maintenance and cost-efficiency are vital for the facility's long-term success. Durable, wear-resistant materials and water- and energy-efficient fixtures simplify upkeep and reduce costs. Sustainable practices like waterless urinals, sensor-based taps, and natural ventilation and lighting help reduce utility expenses. SBM aspirational toilets-inspired features like well-maintained plants or shrubs surrounding the toilet complex contribute to a pleasant atmosphere and easier upkeep.

Eco-Friendly and Low-Carbon Construction: Eco-friendly practices are integral to the facility's design,

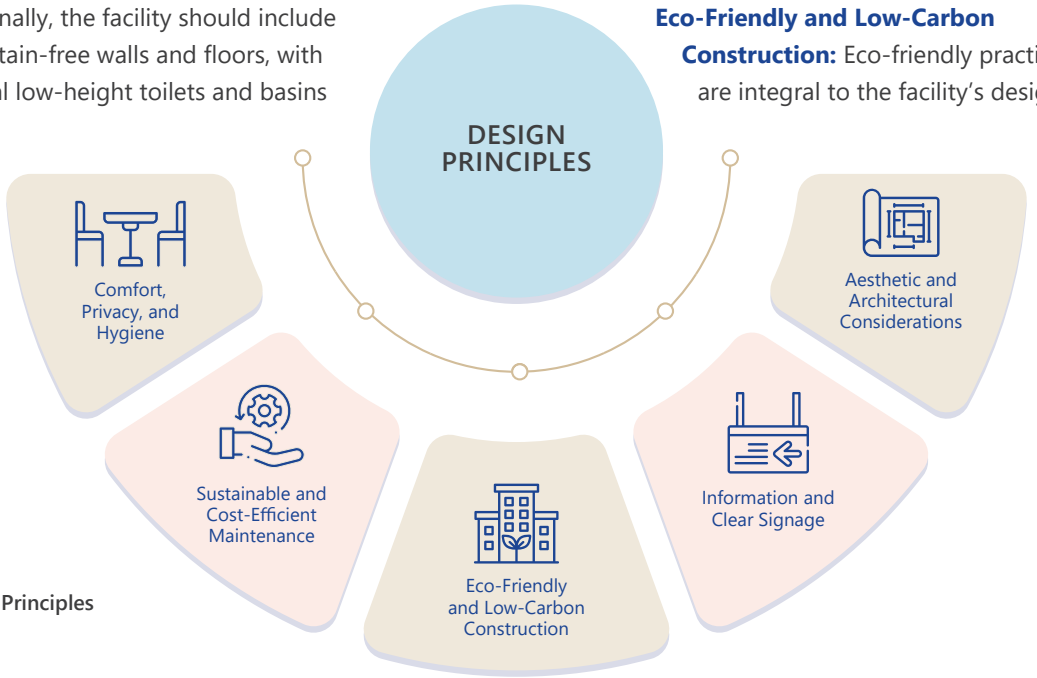


Fig. 3.1. Design Principles

with locally sourced materials and modular construction reducing waste. Nature-based wastewater systems and solar energy solutions align with sustainability goals, supporting water reuse and lowering the facility's carbon footprint. Revenue-generating advertising spaces, as suggested in the SBM checklist, add value while supporting low-carbon operation and upkeep.

Information and Clear Signage: Clear, informative signage guides users through the facility. Signs should be highly visible, easy to understand, and strategically placed so that all users, regardless of literacy level, can navigate confidently. Additional SBM-recommended signage should prominently display the toilet identification number, jurisdiction of the Urban Local Body (ULB), ward number, and maintenance authority for each block, fostering transparency and accountability.

Aesthetic and Architectural Considerations: The facility's design should reflect local culture and traditional architectural styles, blending functionality with visual appeal. Using an "inside-out" architectural approach ensures both the interior and exterior are well-considered and

Components of Pourakarmikara Virama Kendra

Designing each component of a Virama Kendra involves careful planning to ensure optimal functionality, safety, and comfort. The following outlines the key components, categorized by their purpose:

WASH Components

- **Wet Area:** Includes EWC, IWC, urinals, handwash stations, and bathing area.
- **Sanitization Area:** Comprises leg wash, PPE wash, and clothes drying area.
- **Dry Area:** Janitors closet, Locker room, changing room, and seating area, etc.

Utility Component

- **Tool Room:** Dedicated for storage of tools, machinery, and related equipment.

Resting Components

- **Dining/Seating Area:** Equipped with seating, pantry, drinking water facilities, plate racks, serving area, and dustbins.
- **Multipurpose Room:** Includes a first aid area, childcare space, lounge area, mini office setup, and charging points.

All components of the Virama Kendra must adhere to specific standards to ensure they are functional, safe, and durable. These standards, outlined in the next sub-section, provide detailed guidelines on the materials, dimensions, and installation practices that should be followed. Compliance with these standards is crucial for creating a facility that meets the needs of all users while ensuring long-term sustainability and ease of maintenance.

welcoming. Integrating features like sanitary napkin vending machines and incinerators in larger facilities with over 10 seats, as per SBM recommendations, supports comfort and hygiene for all users. The overall design should appeal aesthetically while meeting the practical needs of the sanitation workers who will use it.

References and Guidelines

In developing the design principles and key considerations for the Virama Kendra, several authoritative sources were consulted to ensure compliance with national standards and best practices. The following table lists the primary references used, which provide comprehensive guidelines and standards for building and maintaining public sanitation facilities.

The following tabular column presents the area requirements for each component of the Virama Kendra, scaled according to the expected number of users. The table provides guidelines for facilities accommodating 50 users, 50-100 users, and 100-150 users, ensuring that the design can be appropriately adjusted to meet varying demands.

In the following sub-sections, each of the components discussed will be detailed, offering specific guidelines and recommendations for effective design and implementation.

Table 3.1. Requirements for Typology: 25-50 workers

Program	Gender	Type	Classification	Length (mm)	Breadth (mm)	Quan-tity	Remarks
Wash Components for 20 Women & 30 Men	Female	WET AREA	IWC Cubicles	1300	1300	1	1 per 35 Users
			EWC Cubicles	1300	1300	1	1 per 50 Users
			Bathing Cubicle	1300	1300	1	1 per 50 Users
			Handwash Area	1000	900	2	1 per every WC
	Male	WET AREA	IWC Cubicles	1300	1300	1	1 per 35 Users
			EWC Cubicles	1300	1300	1	1 per 50 Users
			Urinals	1000	900	1	1 per 50 Users
			Bathing Cubicle	1300	1300	1	1 per 50 Users
			Handwash Area	1000	900	2	1 per every WC
	Female	DRY AREA	Changing Room	1300	1300	1	1 per 50 Users
			Locker Facility	450	450	20	1 per 50 Users
	Male		Changing Room	1300	1300	1	1 per 50 Users
			Locker Facility	450	450	30	1 per User
	Female	SANITIZATION AREA	Feet Washing Area	1200	900	1	1 per 25 Users
			PPE Washing Area	1500	900	1	1 per 25 Users
	Male		Feet Washing Area	1200	900	2	1 per 25 Users
			PPE Washing Area	1500	900	2	1 per 25 Users
			Clothes Drying	1500	900	1	1 per 50 Users
Utility Components		DRY AREA	Tool Storage Room	2400	2400	1	6sqm/ 50 Users
Resting for 50 Workers		DRY AREA	Dining Area	4000	3000	1	.75sqm per person
			Multi-purpose Room	3000	3000	1	.2sqm per person

Table 3.2. Requirements for Typology: 50-100 Workers

Program	Gender	Type	Classification	Length (mm)	Breadth (mm)	Quan-tity	Remarks
Wash Components for 35 Women & 65 Men	Female	WET AREA	IWC Cubicles	1300	1300	1	1 per 35 Users
			EWC Cubicles	1300	1300	1	1 per 50 Users
			Bathing Cubicle	1300	1300	1	1 per 50 Users
			Handwash Area	1000	900	2	1 per every WC
	Male	WET AREA	IWC Cubicles	1300	1300	2	1 per 35 Users
			EWC Cubicles	1300	1300	1	1 per 50 Users
			Urinals	1000	900	2	1 per 50 Users
			Bathing Cubicle	1300	1300	2	1 per 50 Users
			Handwash Area	1000	900	3	1 per every WC
	Female	DRY AREA	Changing Room	1300	1300	1	1 per 50 Users
			Locker Facility	450	450	35	1 per User
	Male		Changing Room	1300	1300	1	1 per 50 Users
			Locker Facility	450	450	65	1 per User
	Female	SANITIZATION AREA	Feet Washing Area	1200	900	2	1 per 25 Users
			PPE Washing Area	1500	900	2	1 per 25 Users
	Male		Feet Washing Area	1200	900	3	1 per 25 Users
			PPE Washing Area	1500	900	3	1 per 25 Users
			Clothes Drying	1500	900	2	1 per 50 Users
Utility Components		DRY AREA	Tool Storage Room	4000	3000	1	6sqm/ 50 Users
Resting for 100 Workers		DRY AREA	Dining Area	10000	7500	1	.75sqm per person
			Multi-purpose Room	5000	4000	1	.2sqm per person

Table 3.3. Requirements for Typology: 100-150 Workers

Program	Gender	Type	Classification	Length (mm)	Breadth (mm)	Quan-tity	Remarks
Wash 100-150 Workers Components for 50 Women & 100 Men	Female	WET AREA	IWC Cubicles	1300	1300	2	1 per 35 Users
			EWC Cubicles	1300	1300	1	1 per 50 Users
			Bathing Cubicle	1300	1300	2	1 per 50 Users
			Handwash Area	1000	900	3	1 per every WC
	Male	WET AREA	IWC Cubicles	1300	1300	3	1 per 35 Users
			EWC Cubicles	1300	1300	2	1 per 50 Users
			Urinals	1000	900	2	1 per 50 Users
			Bathing Cubicle	1300	1300	2	1 per 50 Users
			Handwash Area	1000	900	5	1 per every WC
	Female	DRY AREA	Changing Room	1300	1300	1	1 per 50 Users
			Locker Facility	450	450	50	1 per User
	Male		Changing Room	1300	1300	2	1 per 50 Users
			Locker Facility	450	450	100	1 per User
	Female	SANITIZATION AREA	Feet Washing Area	1200	900	2	1 per 25 Users
			PPE Washing Area	1500	900	2	1 per 25 Users
	Male		Feet Washing Area	1200	900	4	1 per 25 Users
			PPE Washing Area	1500	900	4	1 per 25 Users
			Clothes Drying	1500	900	3	1 per 50 Users
Utility Components		DRY AREA	Tool Storage Room	5000	4000	1	6sqm/ 50 Users
Resting for 150 Workers		DRY AREA	Dining Area	14000	8000	1	.75sqm per person
			Multi-purpose Room	6000	5000	1	.2sqm per person

WASH Component

Before diving into the specifics of each component, it's important to understand the overall layout and arrangement of the Virama Kendra, categorized into Wet Area, Dry Area, and Sanitization Area, with considerations for indoor and outdoor placement.

- **Wet Area (Indoors):** This includes Indian Water Closets (IWC), European Water Closets (EWC), urinals, handwash stations, and bathing cubicles.
- **Dry Area (Indoors):** Consisting of lockers, changing rooms, janitors' closet and seating areas.
- **Sanitization Area (Outdoors):** Comprising leg wash, PPE wash, and clothes drying areas.

The diagram on the next page provides a conceptual plan illustrating how these components can be organized within the facility, keeping in mind their indoor and outdoor placements. This layout serves as a flexible reference and can be adapted to suit specific needs and space constraints. The following sections will delve into each area in detail, offering guidance on their design and functionality.

Key Considerations for Designing WASH Components:

When designing the WASH components, consider the following functional aspects:

- **Corridors:** Corridors should be spacious enough for comfortable movement, with proper ventilation, lighting, and drainage to maintain dry and safe pathways. Seating can be provided where necessary for comfort.
- **Feet Wash and Hand Wash Stations:** Ensure feet wash stations promote hygiene at the entrance, with hand wash stations conveniently located for ease of use.
- **Lockers:** Lockers should be easily accessible, ideally placed near areas where personal items are needed immediately after washing or changing.
- **Wet and Dry Zones:** Maintain a clear separation between wet areas (such as urinals, WCs, bathing, and hand wash stations) and dry areas (such as changing rooms, lockers, and seating) to ensure cleanliness and comfort.
- **Privacy and Accessibility:** Ensure that urinals and WCs offer sufficient privacy, with features that prevent direct visibility from common areas. Design separate, gender-specific blocks with considerations for women's specific needs.
- **Ventilation and Lighting:** Prioritize good ventilation and adequate lighting in all areas, particularly in wet zones, to ensure a hygienic and safe environment.
- **Maintenance:** Incorporate features like long hose pipes and efficient drainage systems to facilitate easy cleaning and upkeep of the facility.

Fig. 3.2. Wet Area Floor Plan

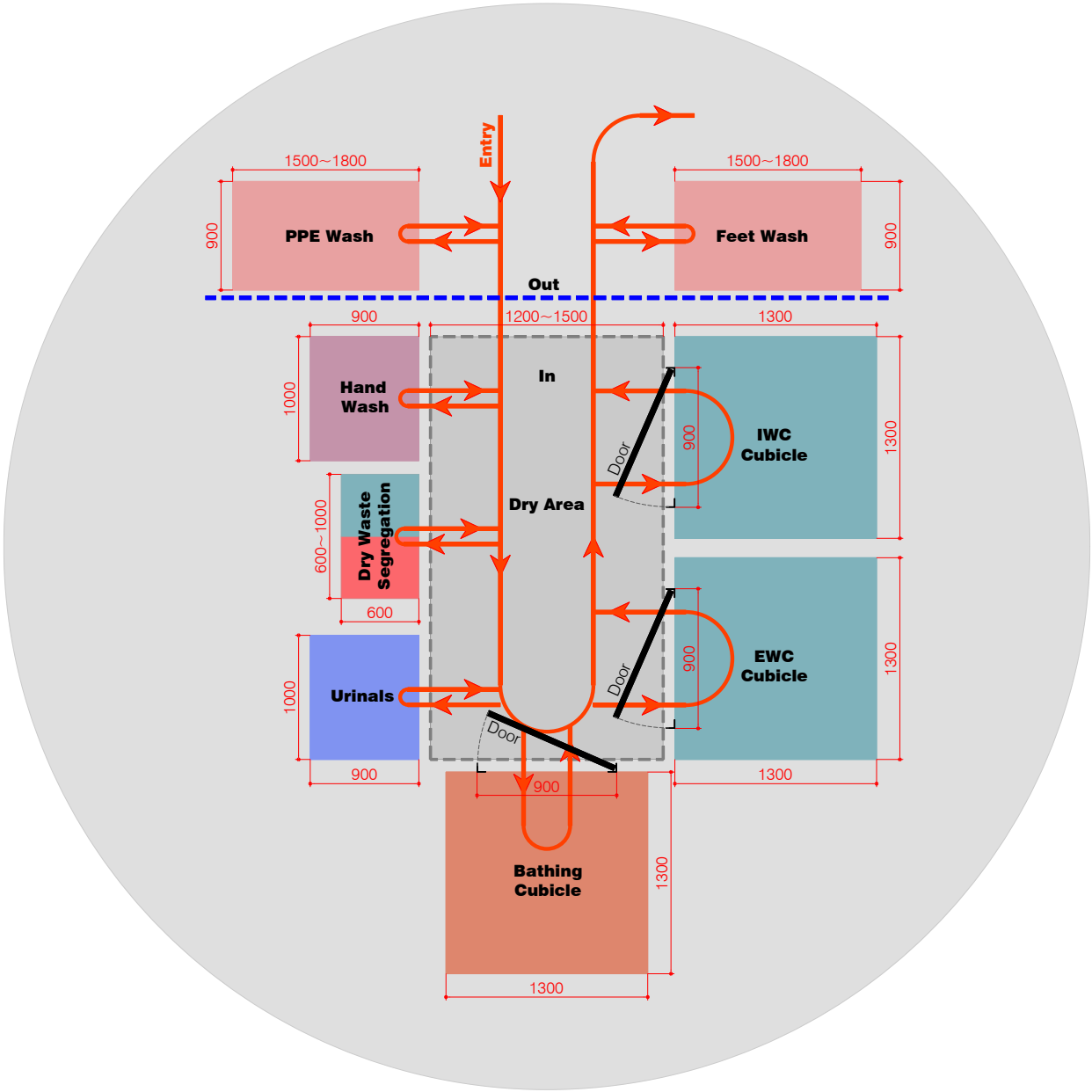
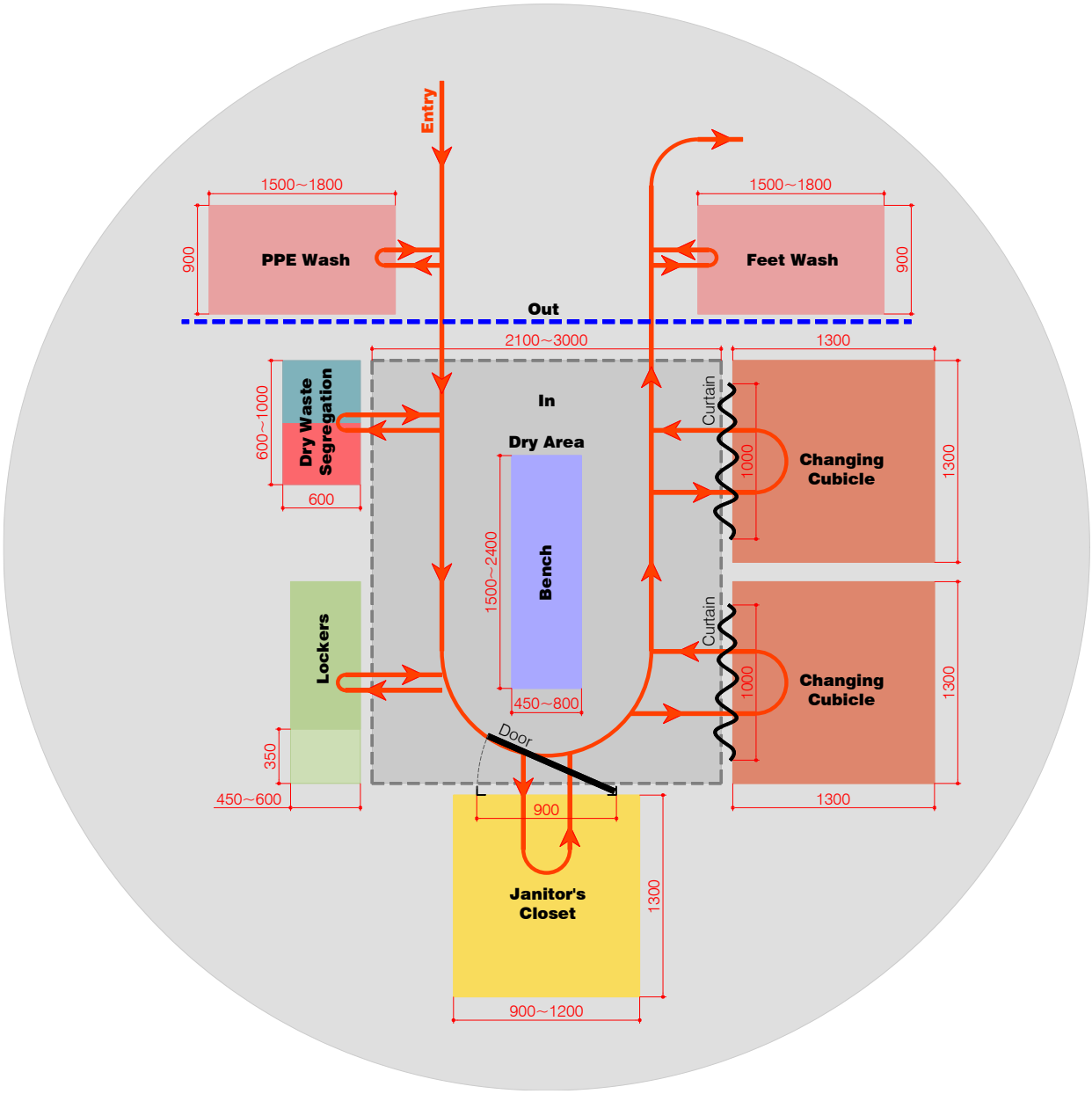


Fig. 3.3. Dry Area Floor Plan



Wet Area - IWC and EWC Toilets

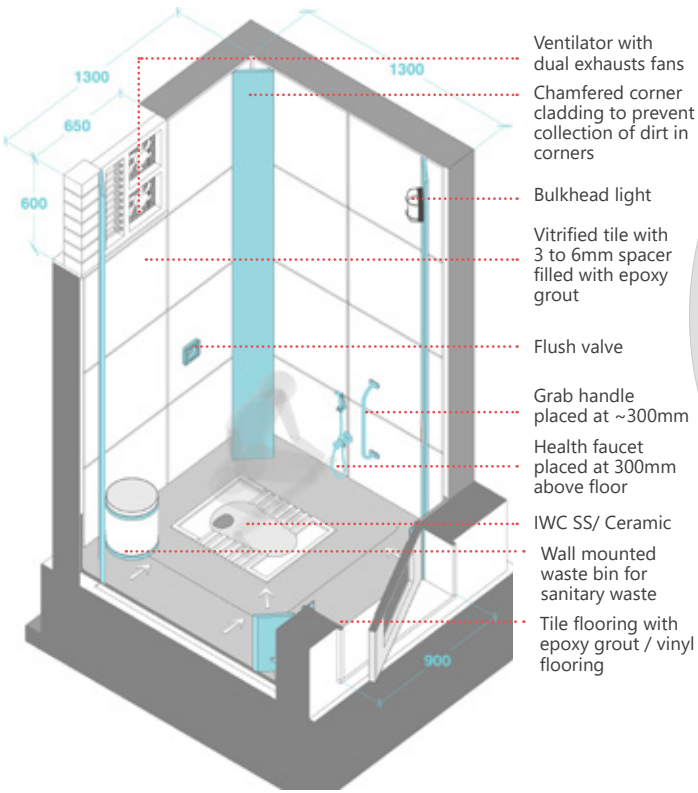
This subsection provides detailed information on one of the most crucial WASH components—the toilet. It includes an option both for an Indian Water Closet (IWC) and a European Water Closet (EWC).

Key Considerations for Designing Indian and European Water Closets:

When designing Indian Water Closets (IWC) and European Water Closets (EWC) for a Virama Kendra, the following key considerations should be kept in mind:

- **Space Optimization:** Maximize cubicle space by using center pans, ensuring efficient use of the area.
- **Safety Features:** Incorporate wider thresholds to reduce accident risks and elevate cubicles to prevent water from spilling into the corridor. Install grab bars for added support, especially for elderly users.

Fig. 3.4. IWC Plans and Views



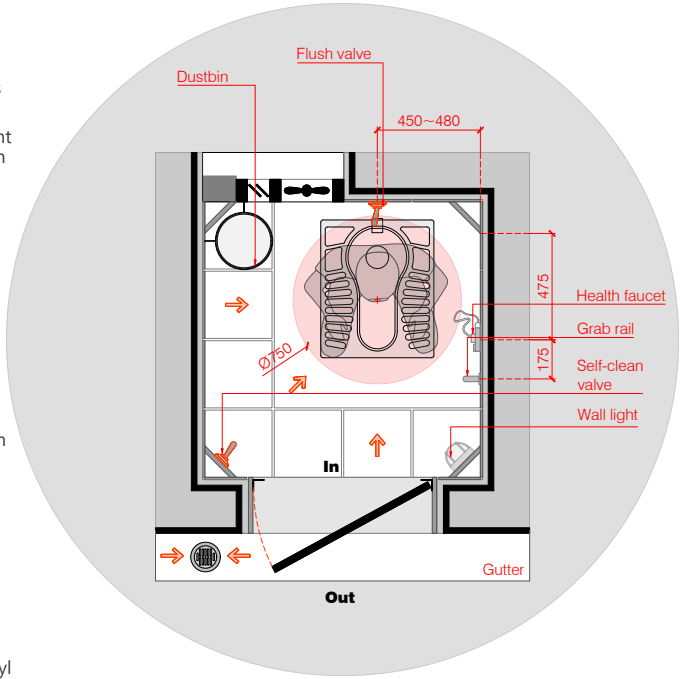
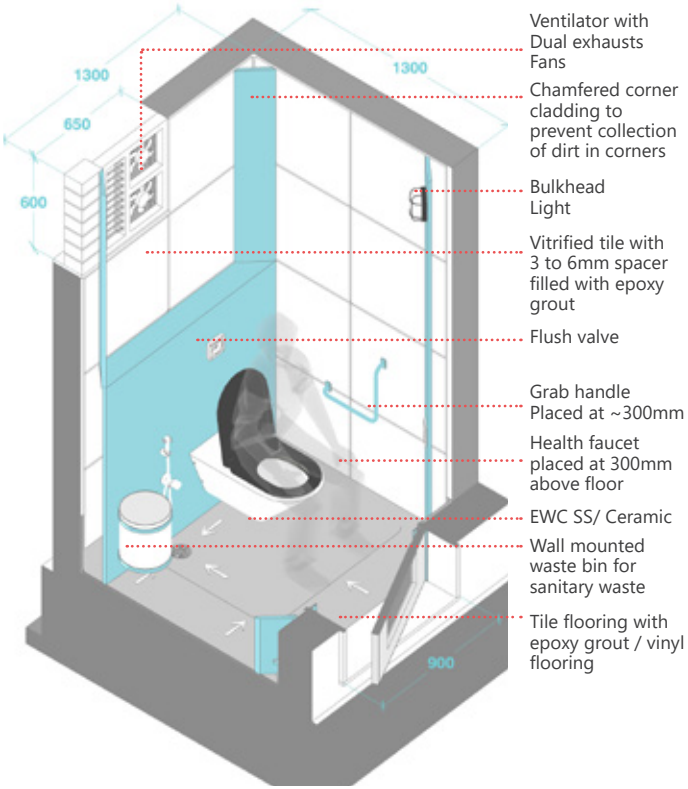
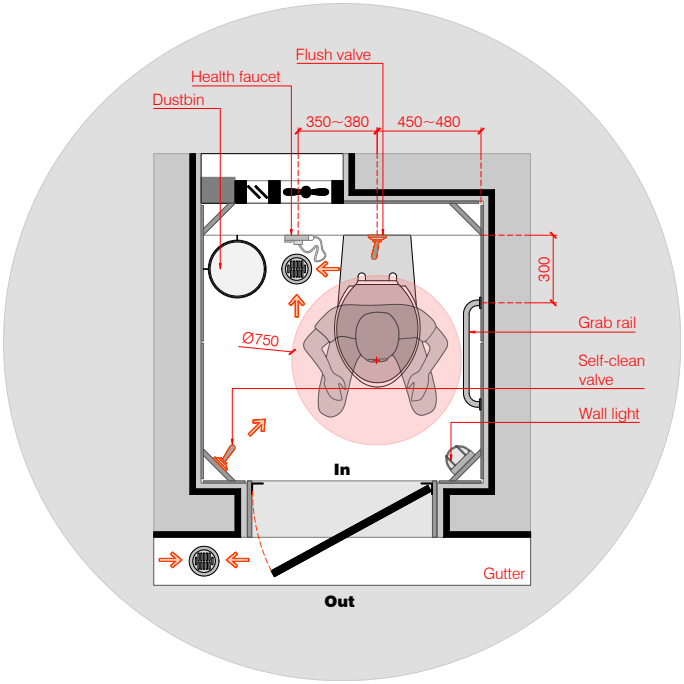


Fig. 3.5. EWC Plans and Views





- **Aspirational Water Efficiency:** Implement water-saving technologies such as dual-flush systems for IWC and low-flow options for EWCs to encourage water conservation.
- **Privacy and Gender Inclusivity:** Ensure separate cubicles for male, female, and third gender (if applicable). Provide sufficient privacy with proper partitioning to ensure dignity for all users.
- **Ventilation:** Ensure proper ventilation by installing ventilators with dual exhaust fans to maintain air quality and reduce odors.
- **Durability and Materials:** Use durable, easy-to-clean materials for floors, walls, and fixtures to withstand heavy use. Stainless steel is a cost-effective option, while ceramic can be used for easier maintenance.

Wet Area - Urinals

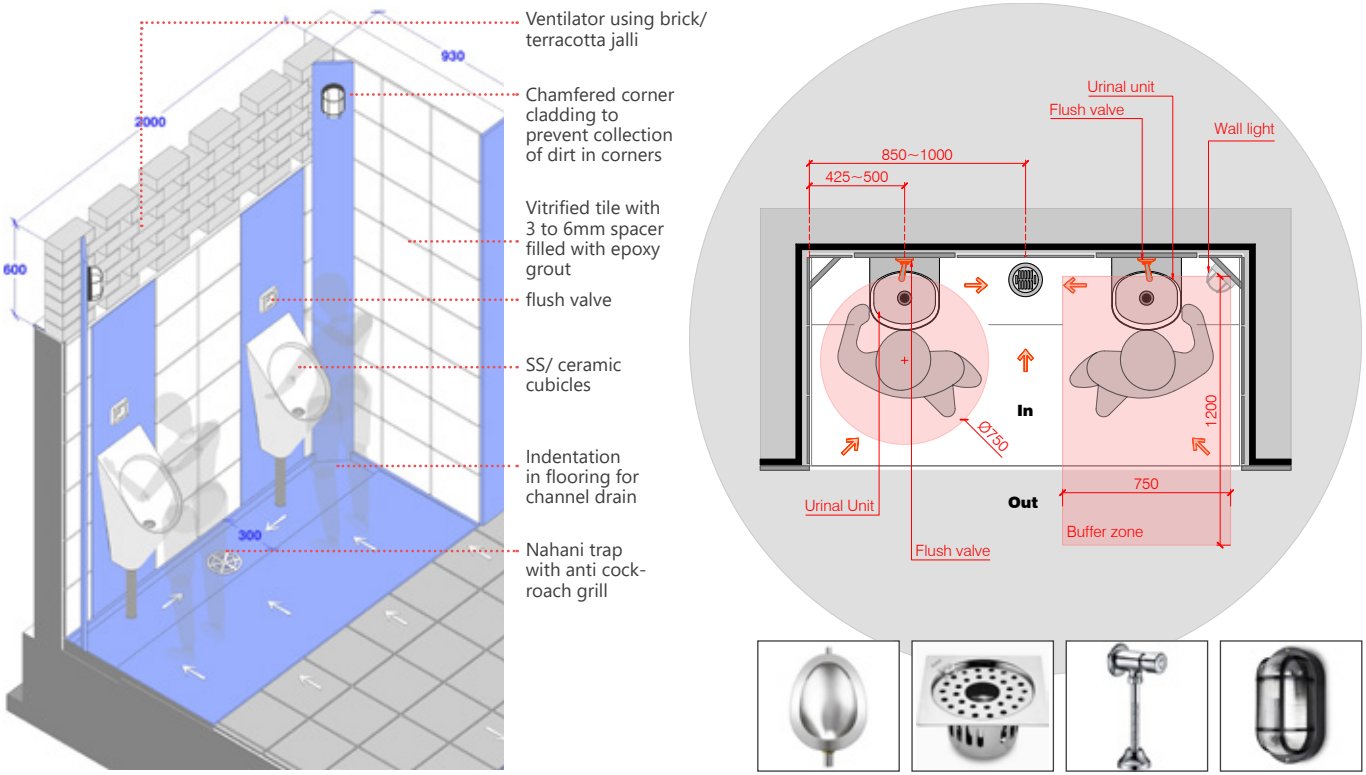
This subsection provides detailed information on the urinals. It outlines the design considerations and placement options to ensure optimal functionality and hygiene within the facility.

Key Considerations for Designing Urinals:

When designing urinals, consider the following key aspects:

- **Privacy:** Position urinals in corners or use partitions between units, and consider trough urinals as they are easier to maintain and more cost-effective, ensuring privacy and a respectful environment.
- **Ventilation:** Provide robust ventilation, such as jaali at the top of walls, to maintain air quality and reduce odors, essential for frequently used facilities.
- **Stepped Drain for Spillage:** Incorporate a stepped drain system to effectively manage spillage, keeping the area dry and preventing hazardous conditions.
- **Aspirational Water Efficiency:** Consider installing waterless urinals, which are aspirational

Fig. 3.6. Urinal Plans and Views



for significantly reducing water usage, along with ceramic material for easy maintenance while maintaining hygiene.

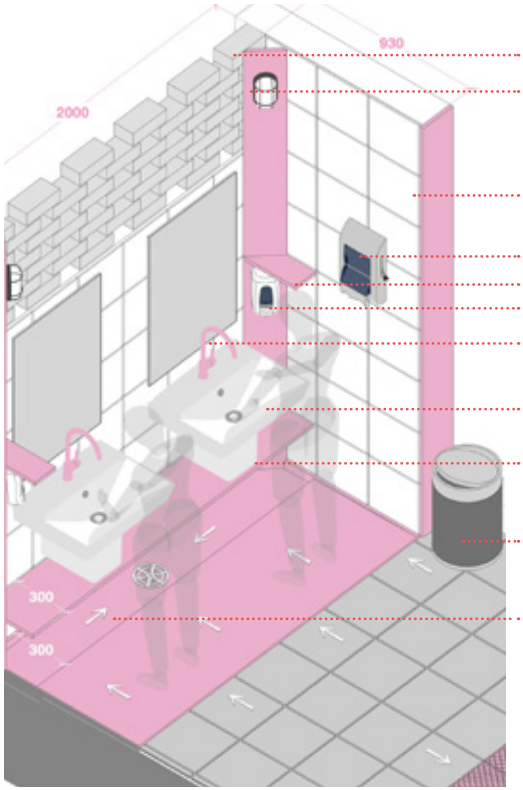
Wet Area - Handwash Stations

This subsection provides detailed information on the handwash stations. It outlines the design considerations and placement options to ensure optimal functionality and hygiene within the facility.

Key Considerations for Designing Hand wash Stations:

- **Accessibility:** Place handwash stations at a convenient height of 800-850mm from the floor, ensuring they are easily accessible from all areas of the facility. Provide storage space below (400-500mm height) to cover pipes and store cleaning supplies.
- **Aspirational Flow Control:** Incorporate sensor-based taps or timed flow faucets to control

Fig. 3.7. Handwash Station Plans and Views



Brick/ terracotta jaali to enable passive ventilation

Chamfered corner cladding to prevent collection of dirt in corners

Tile cladding with 3mm spacer filled with epoxy

Hand dryer

Ledge

Soap dispenser

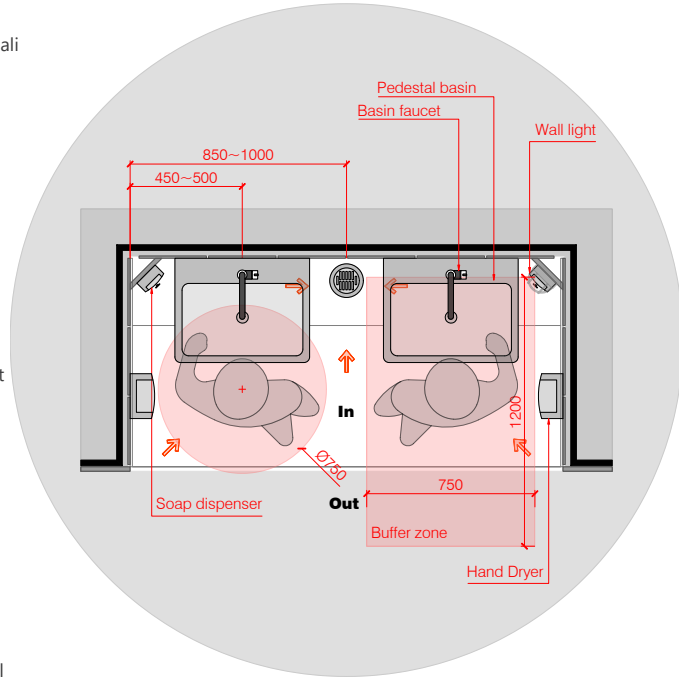
Counter top faucet

Half pedestal basin with in built bottle trap

Functional ledge below basin aligned to bottom of half pedestal

Wall mounted waste bin for sanitary waste

Tile flooring with epoxy grout / vinyl flooring sloping towards indentation channel for self cleaning



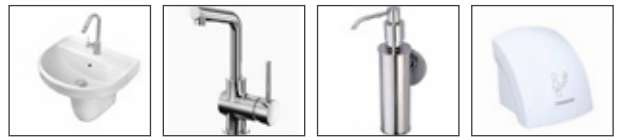
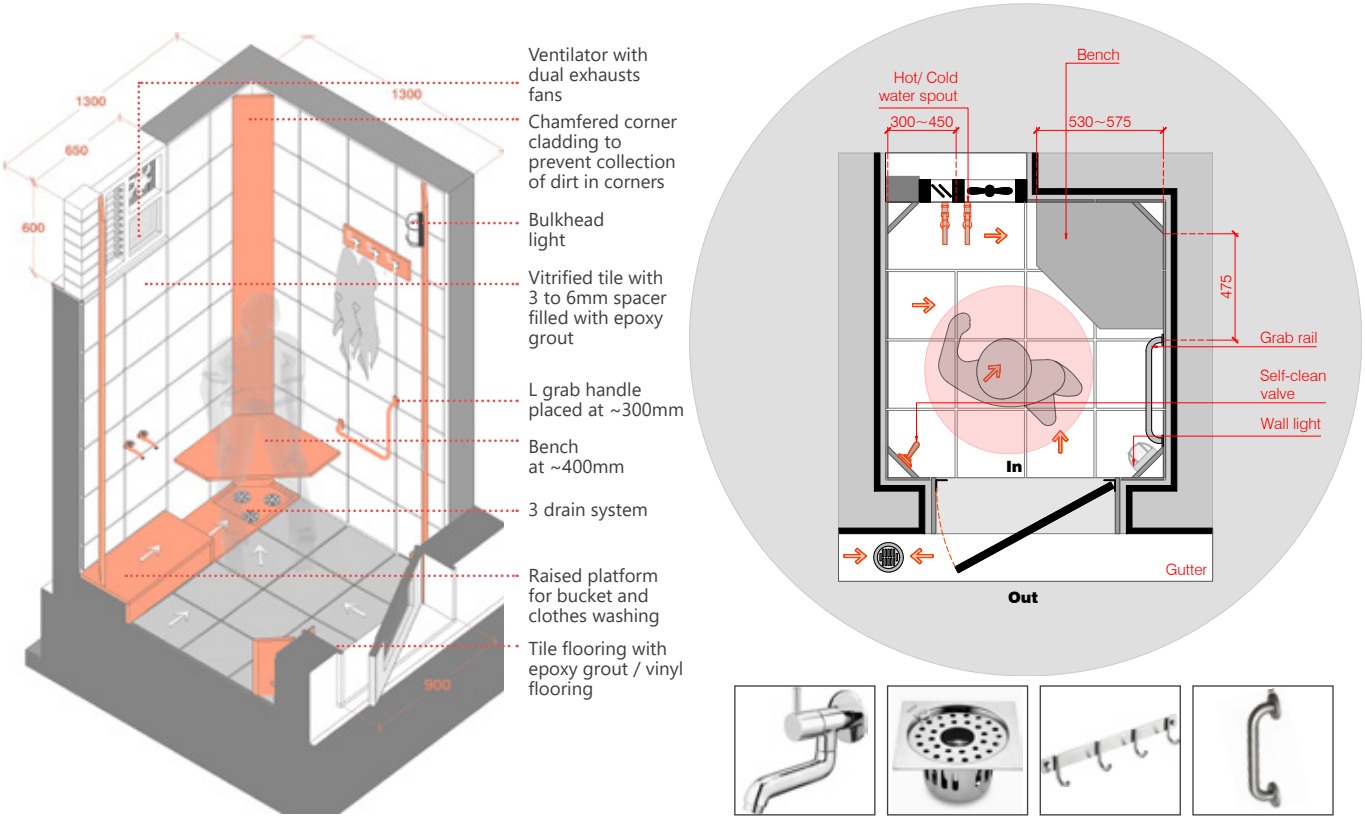


Fig. 3.8. Bathing Area Plans and Views



water usage and prevent wastage.

- **Drainage:** Ensure adequate drainage beneath handwash stations by incorporating a step-down drain system with filters to prevent blockages, keeping the area clean and dry.
- **Durable Materials:** Use ceramic materials for basins and countertops for easy maintenance and durability. Install mirrors for user convenience and hygiene.

Wet Area - Bathing Area

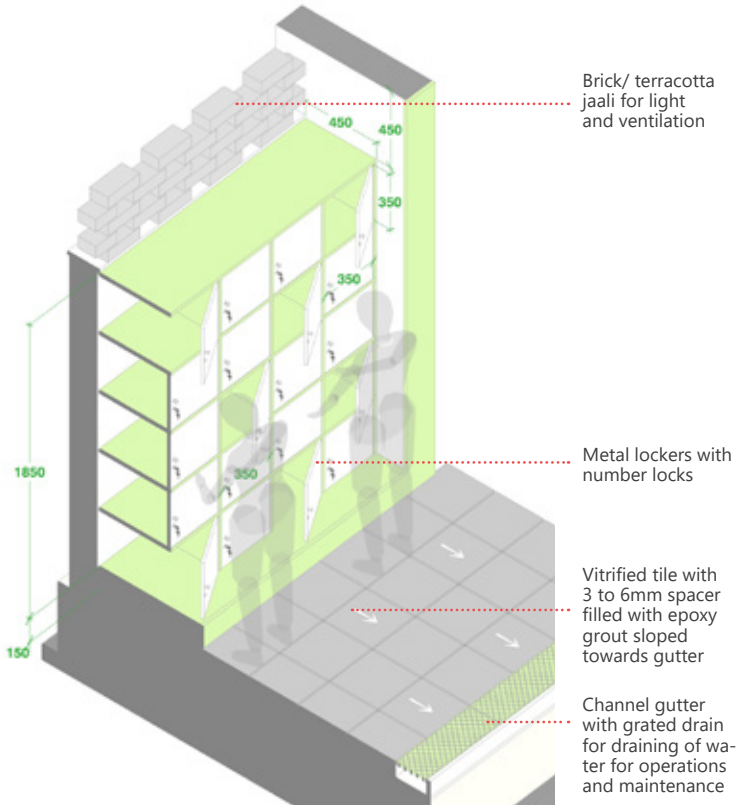
This subsection provides detailed information on essential WASH component—the bathing area. It outlines the design considerations and placement strategies to ensure these spaces offer comfort, privacy, and ease of use, while maintaining a hygienic environment within the facility.

Key Considerations for Designing Bathing Area

When designing bathing for a Virama Kendra, the following should be considered:

- **Privacy:** Design separate cubicles for male, female, and third gender users (if applicable) with secure locks, solid partitions, and hooks on doors for hanging clothes. Consider adding wall niches for storage.
- **Ventilation:** Install adequate ventilation systems, ensuring options like jaali for natural ventilation in all sections, without compromising privacy. This will help manage moisture and prevent mold or mildew.
- **Flooring and Drainage:** Use non-slip, water-resistant flooring with a three-drain system in all sections to effectively manage water and prevent pooling.
- **Ease of Cleaning:** Select tiles with epoxy grout for easy cleaning and durability across all cubicles. Use chamfered corner cladding to reduce dirt accumulation and conceal plumbing for a neat appearance.
- **Additional Features:** May include a stone corner bench for seating, Showers can be considered, but using buckets is advisable for water conservation.

Fig. 3.9. Locker Room View



Dry Area - Locker Rooms, Changing Rooms and Janitors Closet

This subsection provides detailed information on essential WASH components—the locker room, janitors closet and changing areas- separate for male and female. It outlines the design considerations and placement strategies to ensure these spaces offer comfort, privacy, and ease of use, while maintaining a hygienic environment within the facility.

Key Considerations for Designing Locker Rooms:

When designing locker room for a WASH facility, the following should be considered:

- **Security:** Install lockers with secure locking mechanisms to protect users' personal belongings. Lockers can be staggered or designed according to available space, and typical dimensions can range from 300-400mm

in width, 500-600mm in depth, and 1800mm in height.

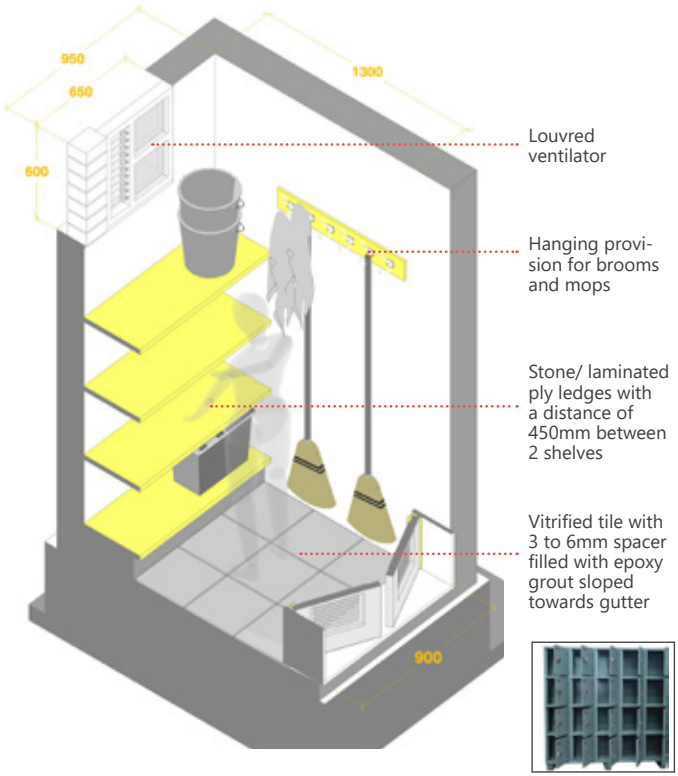
- **Accessibility:** Arrange lockers in a way that allows easy access, with sufficient space between rows to prevent congestion. Ensure lockers are placed away from wet areas to avoid water damage.
- **Durability:** Use robust, corrosion-resistant materials for lockers to withstand frequent use and humid conditions. Ensure lockers are installed on a raised platform to avoid contact with water during cleaning and maintenance.
- **Seating Area:** Provide benches or seating near the lockers to facilitate comfortable changing and storage of personal items, ensuring a practical layout for users.

Key Considerations for Designing Janitors Closet

When designing locker room for a Virama Kendra, the following should be considered:

- **Size and Storage:** The janitors' closet can be a small space designed to store cleaning tools, chemicals, mops, buckets, and other maintenance equipment. Ensure the closet has adequate shelving and hanging space to store all necessary items efficiently.
- **Ventilation:** Ensure proper ventilation in the closet to prevent the buildup of odors. A small exhaust fan or natural ventilation through a jaali could be useful.
- **Organization:** Incorporate hooks, shelves, and compartments to organize tools and cleaning products efficiently. A tall space for mops and brooms, and smaller shelves for cleaning supplies, should be included.

Fig. 3.10. Janitor Closet View

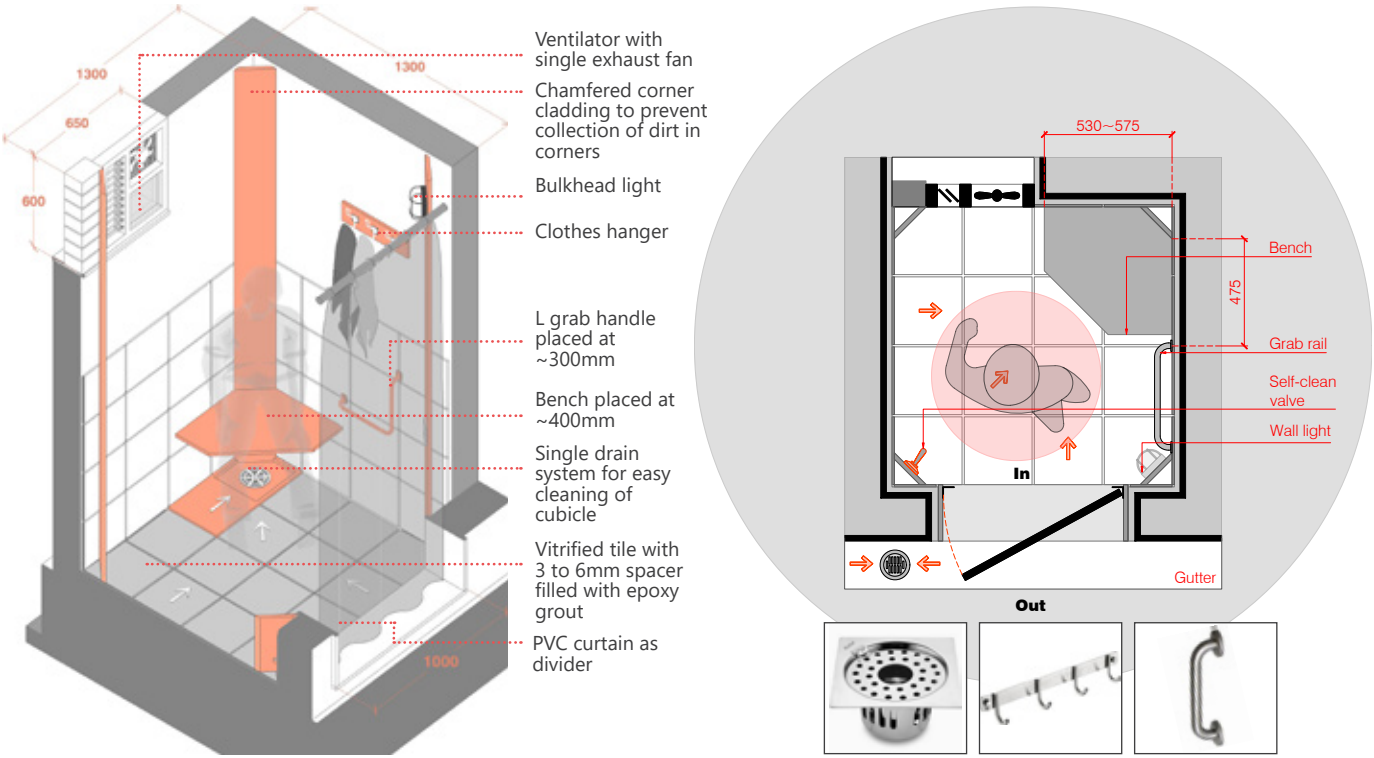


Key Considerations for Designing Changing Rooms:

When designing changing room for a Virama Kendra, the following should be considered:

- **Separate Facilities:** Design distinct changing rooms for male, female, and third-gender workers (if applicable) to ensure privacy and comfort. Each cubicle should offer enough space (1200-1500mm width) for easy movement. Curtains can be used instead of doors for flexibility while maintaining privacy.
- **Hooks, Racks, and Hanging Space:** Install

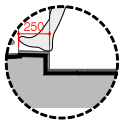
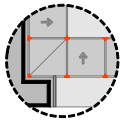
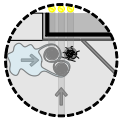
Fig. 3.11. Changing Room Plans and Views



sturdy hooks and racks at varying heights (between 1200-1600mm) to accommodate different users. Provide dedicated hanging space for wet or soiled clothes, keeping them separate from clean items. Adjustable or foldable racks can be considered for space optimization.

- **Non-Slip Flooring:** Use textured, non-slip materials such as rubber or anti-skid tiles to prevent accidents in wet or humid environments. Ensure floors slope gently (1-2%) towards drains to avoid water pooling.
- **Ventilation:** Prioritize natural ventilation through jaali (perforated walls) or louvered openings, ensuring airflow without compromising privacy. For added efficiency, dual exhaust fans can be installed to reduce odors and control moisture buildup.

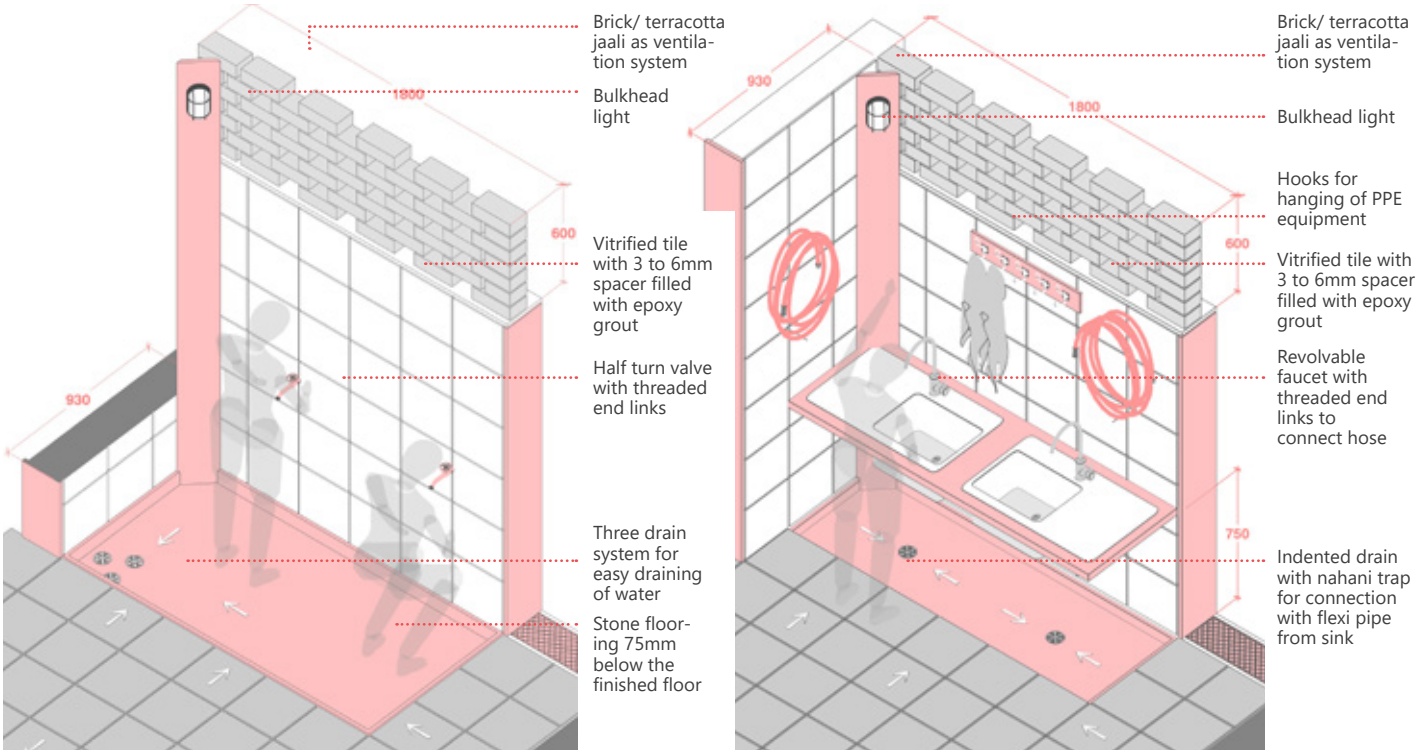
Table 3.4. Do's and Don'ts for designing WASH Components

✓	DO'S	✗	DON'T'S
	Install a sloped door threshold with a proper gutter for water drainage.		Don't use a raised, flat threshold that causes water to pool and flow back.
	Use flooring and cladding with chamfered edges for easier cleaning and reduced dirt accumulation.		Don't use sharp right-angled corners, as they trap dirt and are harder to clean.
	Place nahani traps near health faucets for efficient drainage and water flow.		Don't place the nahani trap far from the faucet, as it causes water to pool.
	Install proper drainage systems under doors to prevent water from accumulating outside.		Don't leave areas without a step-down drain, as it leads to water spillage into common areas.
	Conceal all plumbing and use durable fixtures to prevent exposure and damage.		Don't leave plumbing pipes exposed, as it creates a cluttered look and increases maintenance needs.

Sanitisation Area- Feet Wash, PPE Wash and Drying Area

This subsection provides detailed information on essential WASH components—the feet wash stations, PPE wash areas, and drying areas. It outlines the design considerations and placement strategies to ensure these spaces are functional, accessible, and promote hygiene within the facility.

Fig. 3.12. Feet Wash Plans and Views



Key Considerations for Designing Feet Wash, PPE Wash, and Drying Area

When designing the feet wash, PPE wash, and drying areas for a Virama Kendra, the following considerations are essential:

Feet Wash and PPE Wash Stations:

- **Accessibility:** Place stations outdoors, preferably near entrances and provide separate areas for men and women.
- **Non-Slip Surfaces:** Use non-slip flooring to prevent accidents in wet conditions.
- **Adequate Drainage:** Incorporate nahani traps (minimum 75mm diameter) near the wash area to ensure quick drainage and prevent water pooling. Use grated floor drains along the base for continuous water flow. Ensure the area slopes gently (1-2%) toward drains to prevent stagnant water.
- **Ergonomic Design:** Ensure sufficient height and width (600-800mm) for comfortable standing while washing feet or PPE. Install series of taps and hand showers (flexible water hoses) to ease cleaning and ensure thorough washing.

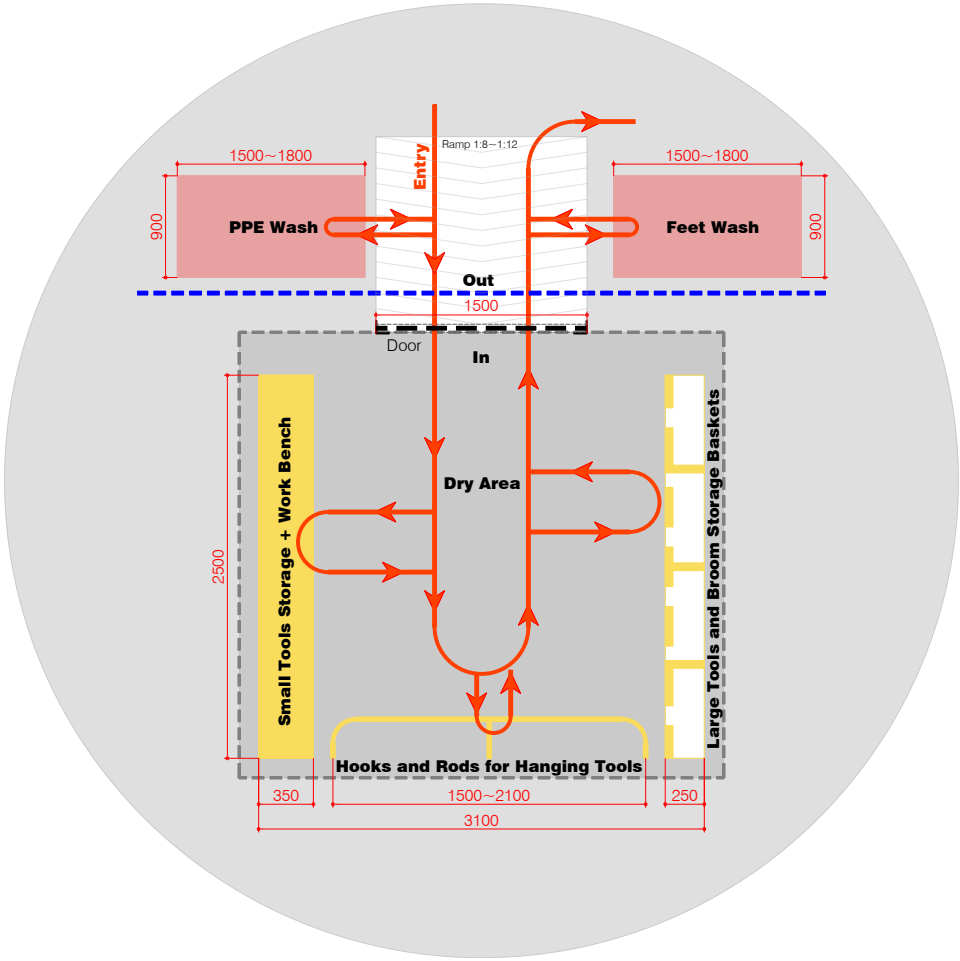
Clothes Drying Area:

- **Durable Fixtures:** Use rust-resistant rods, hooks, or racks to withstand frequent use and wet conditions.
- **Ease of Access:** Position the drying area near bathing and changing rooms for smooth workflow.
- **Separation from Other Areas:** Keep the drying area distinct from other WASH components to prevent cross-contamination and maintain hygiene.

Utility Component

This subsection provides a detailed overview of the tools room within the Virama Kendra, focusing on its design and functionality. The tools room is essential for storing equipment and ensuring that tools are readily accessible for maintenance and operational tasks.

Fig. 3.13. Utility Component Floor Plan

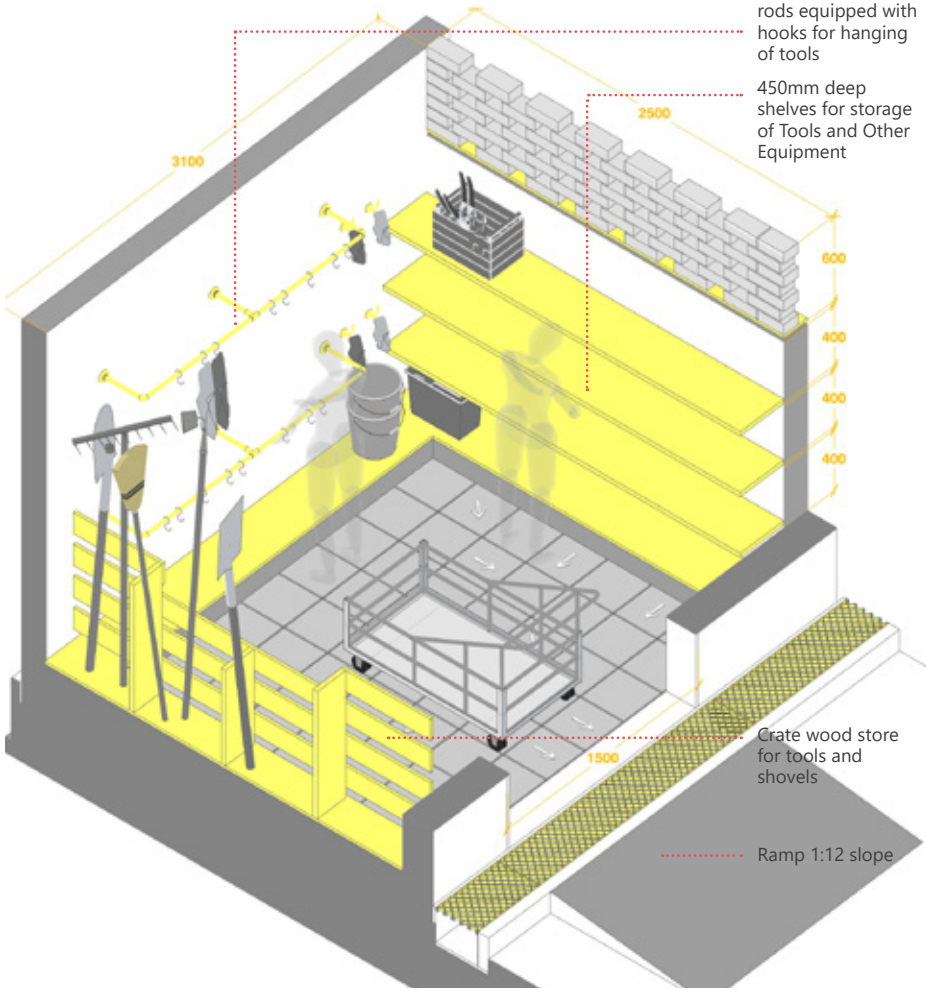


Key Considerations for Designing the Tools Room

When designing the tools room, consider the following aspects to ensure optimal functionality and efficiency:

- **Space and Layout:** Design the room to accommodate various tools used by sanitation workers, with wall-mounted hooks, racks, workbenches, and carts for organized storage. Ensure ramp access at the entry to allow smooth movement of heavy tools or equipment.
- **Accessibility:** Provide a wide entrance (minimum 800mm) and organize shelves at varying heights, keeping the lowest shelf no higher than 150mm from the floor. Ensure a level entry with no step-ups and ramp access for inclusive entry.
- **Sustainability:** Use energy-efficient lighting with motion sensors or solar-powered lights to minimize energy consumption.

Fig. 3.14. Tool Storage Room View



Resting Component

This section outlines the design and layout for two crucial resting components within the facility: the dining area and the multipurpose room. The dining area is equipped with essential services such as plate washing, hand washing, and a drinking water fountain, while the multipurpose room is designed for first aid and health check-ups.

Understanding the layout and arrangement of these areas is essential for ensuring seamless circulation and functionality. The provided diagram illustrates the conceptual plan for integrating these components, offering a visual guide for their organization. While this layout serves as a reference, it can be customized to fit specific needs and space constraints. The following sections will provide detailed insights into each component, focusing on their design and operational aspects.

Key Considerations for Designing Resting Components:

- **Dimensions and Accessibility:** Ensure dining tables are 750mm (2ft-6in) high with a minimum aisle width of 1500mm (5ft) for wheelchair access. Benches should be 450mm (1ft-6in) high and 450mm (1ft-6in) deep. Plate and hand wash sinks need to be 750mm high with knee clearance for ease of use.
- **Ventilation and Waste Management:** Install jaali screens to enhance natural ventilation and provide privacy. Use wall-mounted dustbins for efficient waste disposal. Opt for durable flooring, such as porcelain or ceramic tiles with stone capping and a 10mm spacer for easy maintenance.
- **Counter Heights and Service Accessibility:** Design serving counters to be no higher than 600mm (2ft) to accommodate users of different heights. Ensure tables and counters are designed to be accessible for all users.
- **Water and Lighting Efficiency:** Incorporate faucets with aerators or sensors to manage water flow and minimize waste. Use ambient and task lighting that provides 300-450 lux over tables to ensure proper illumination.

These considerations ensure the functionality, accessibility, and comfort of the Virama Kendra.

Dining Area

This subsection provides detailed information on the essential components of the dining area, which includes seating arrangements, pantry, handwash area, plate wash area, drinking water station, serving counter, plate rack, and both dry and wet dustbins. It outlines the design considerations and placement strategies to ensure these spaces are functional, accessible, and promote hygiene and convenience within the facility.

Fig. 3.15. Dining Area Floor Plan

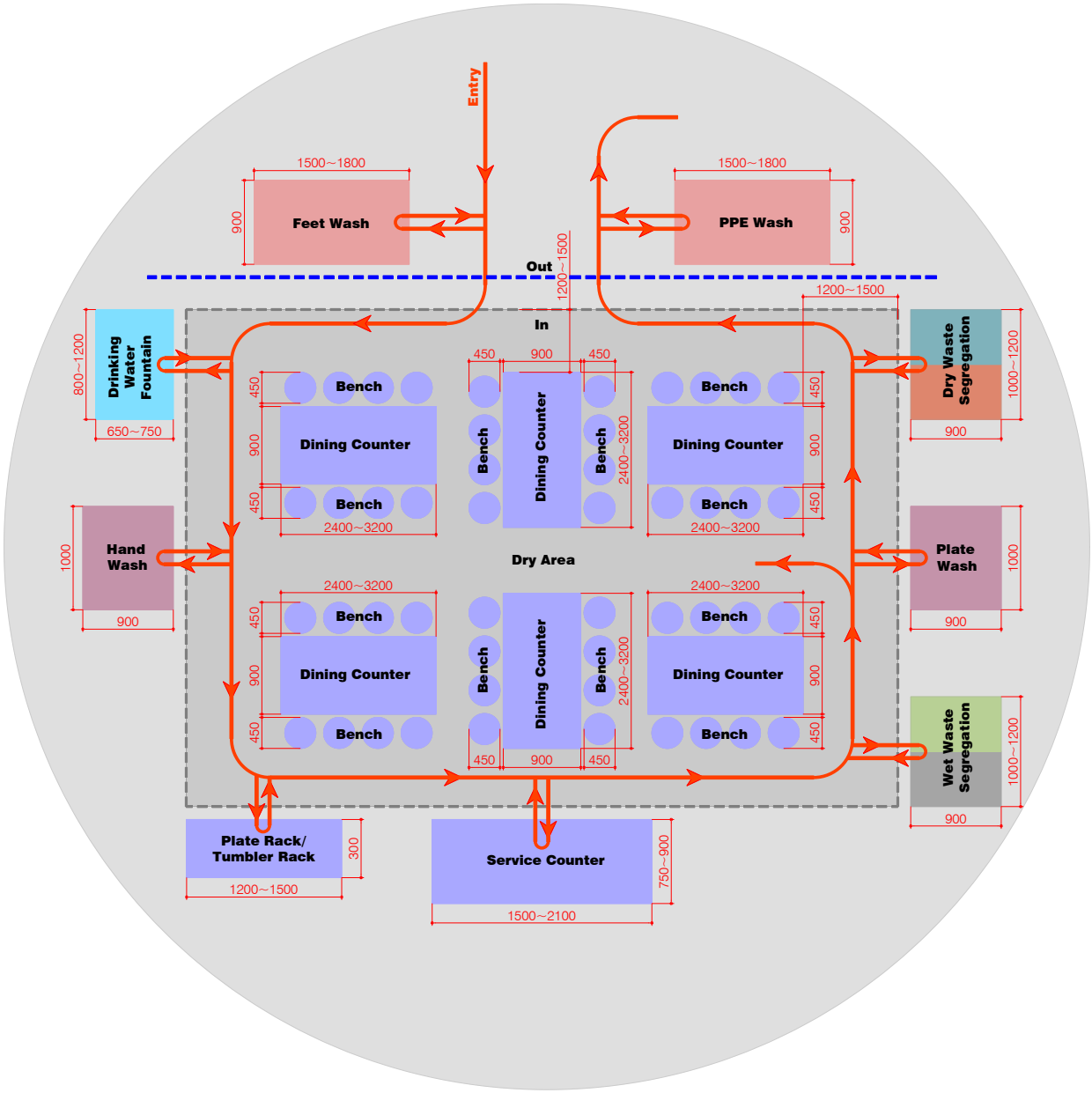
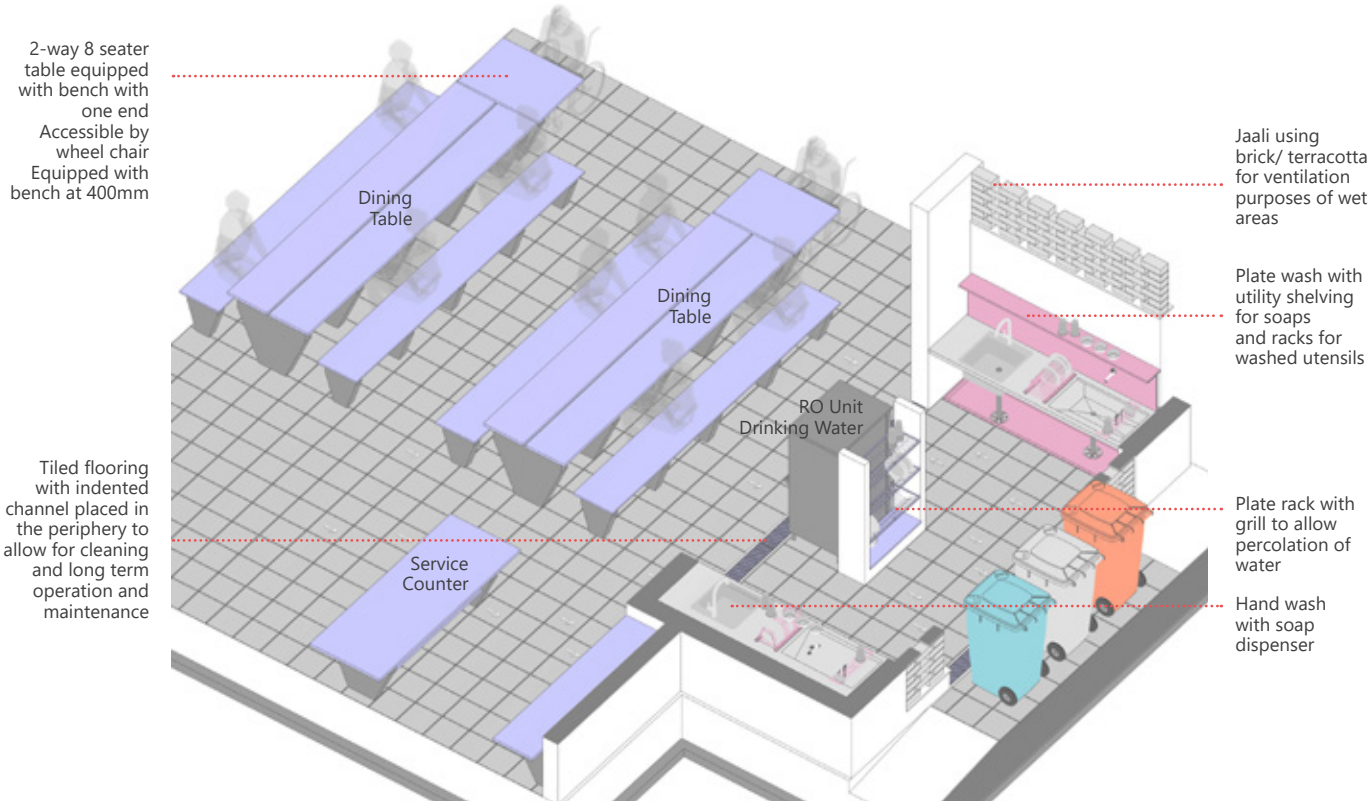


Fig. 3.16. Dining Area Views



Key Considerations for Dining Area:

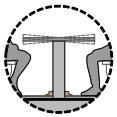
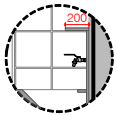
When designing the dining area for a Virama Kendra, the following key considerations should be considered:

- **Dimensions and Accessibility:** Ensure dining tables are 750mm high and benches 450mm high and deep. Provide a minimum aisle width of 1500mm for wheelchair access. Design plate and hand wash sinks at 750mm height with knee clearance for ease of use.
- **Ventilation and Privacy:** Use jaali screens to enhance natural ventilation, maintain privacy, and separate pantry areas. Ensure screens and flooring slope towards a gutter with grills to prevent water logging.
- **Ergonomic Counters and Storage:** Design

serving counters no higher than 600mm, with 2-way storage shelves underneath for utility items. Avoid supports along bench lengths to prevent dirt accumulation and ensure easy cleaning.

- **Water and Lighting Efficiency:** Install faucets with aerators or sensors to reduce water waste. Use ambient and task lighting (300-450 lux) for proper illumination over tables.
- **Durable Materials and Waste Management:** Opt for porcelain or ceramic tiles with stone capping and 10mm spacers for durability. Provide wall-mounted dustbins for efficient waste disposal and a 200mm ledge above wash areas to organize soaps and utensils.

Table 3.5. Do's and Don'ts for Designing Dining Area

✓	DO'S	✗	DON'T'S
	Install inclined bench supports along the depth at 900mm center-to-center to facilitate foot movement and easy cleaning and maintenance		Install bench supports along the length, as additional supports may be needed for stabilization and corners can collect dirt and food particles
	Install the serving counter at a maximum height of 600mm from the floor for easy use of large utensils		
	Install inclined table supports along the depth at 900mm center-to-center to facilitate foot movement		Install table supports along the length, as additional supports may be needed for stabilization and corners can collect dirt and food particles
	Install a ledge with a minimum width of 200mm above the plate wash area to store soaps and washed utensils like spoons and tumblers		Install screens at floor level without integrating gutters, as this can lead to the accumulation of dirt and food particles and potential water overflow
	Install privacy jaali screens with a parapet wall to establish appropriate boundaries		

Multipurpose Room

This subsection provides detailed information on the design of the multipurpose area, including lounge space, first aid facilities, storage space, office-style table and chair arrangements, and a childcare area. It outlines essential considerations to ensure that the space is functional, accessible, and versatile for various uses.

Key Considerations for Multipurpose Room:

When designing the multipurpose room for a Virama Kendra, the following key considerations should be considered:

- **Lounge Area:** Create comfortable seating with sofas and chairs at 450mm height, allowing 1.2 meters clearance around them for easy movement. This promotes relaxation and social interaction.
- **First Aid Facilities:** Position first aid supplies visibly, with a signage size of 600mm x 400mm.

Fig. 3.17. Multi-Purpose Room View

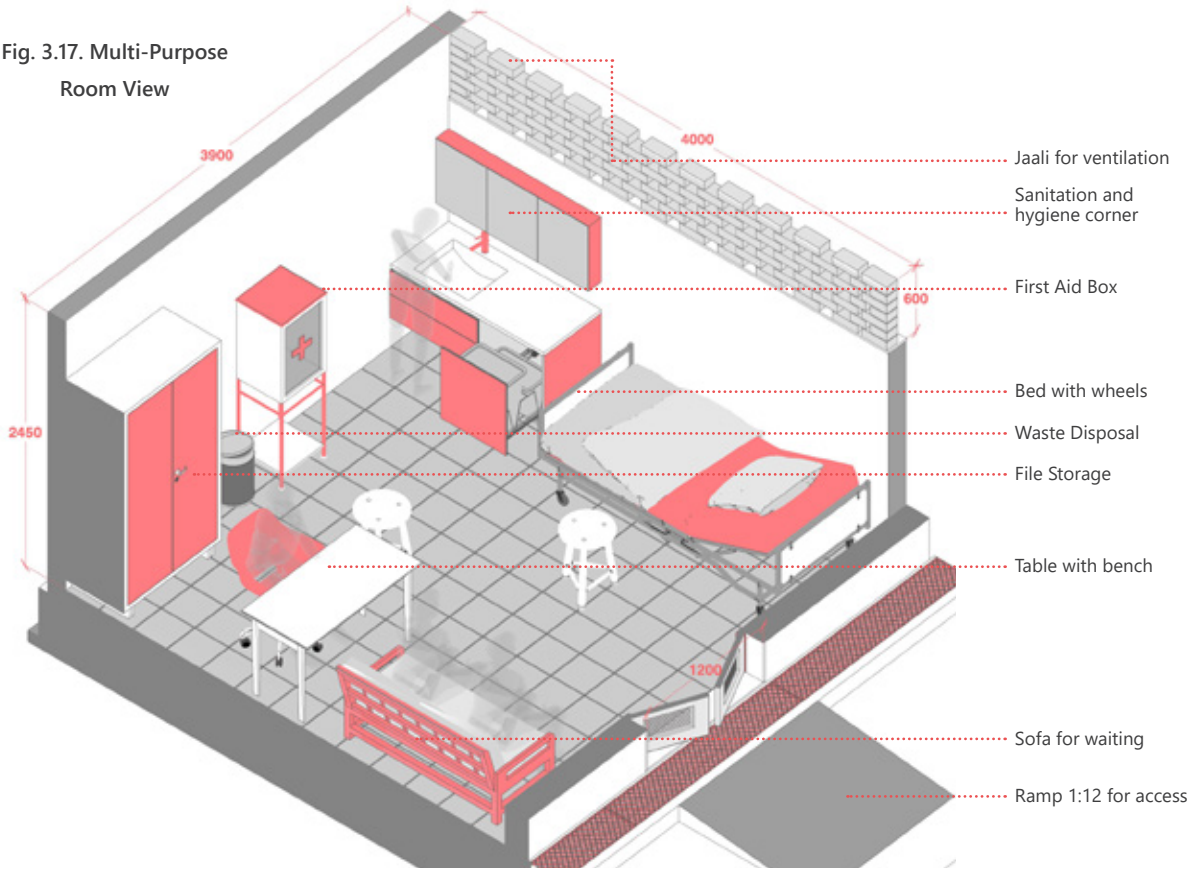
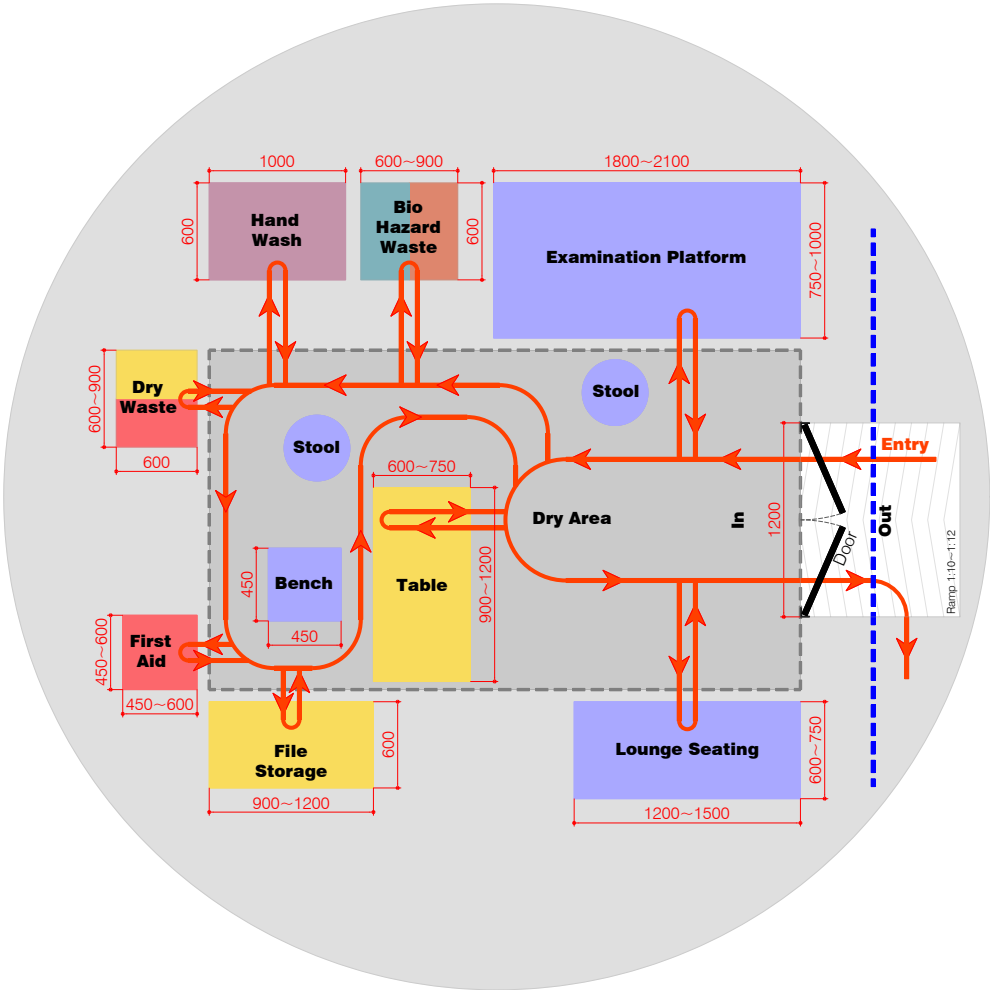


Fig. 3.18. Multi- Purpose Room Floor Plan



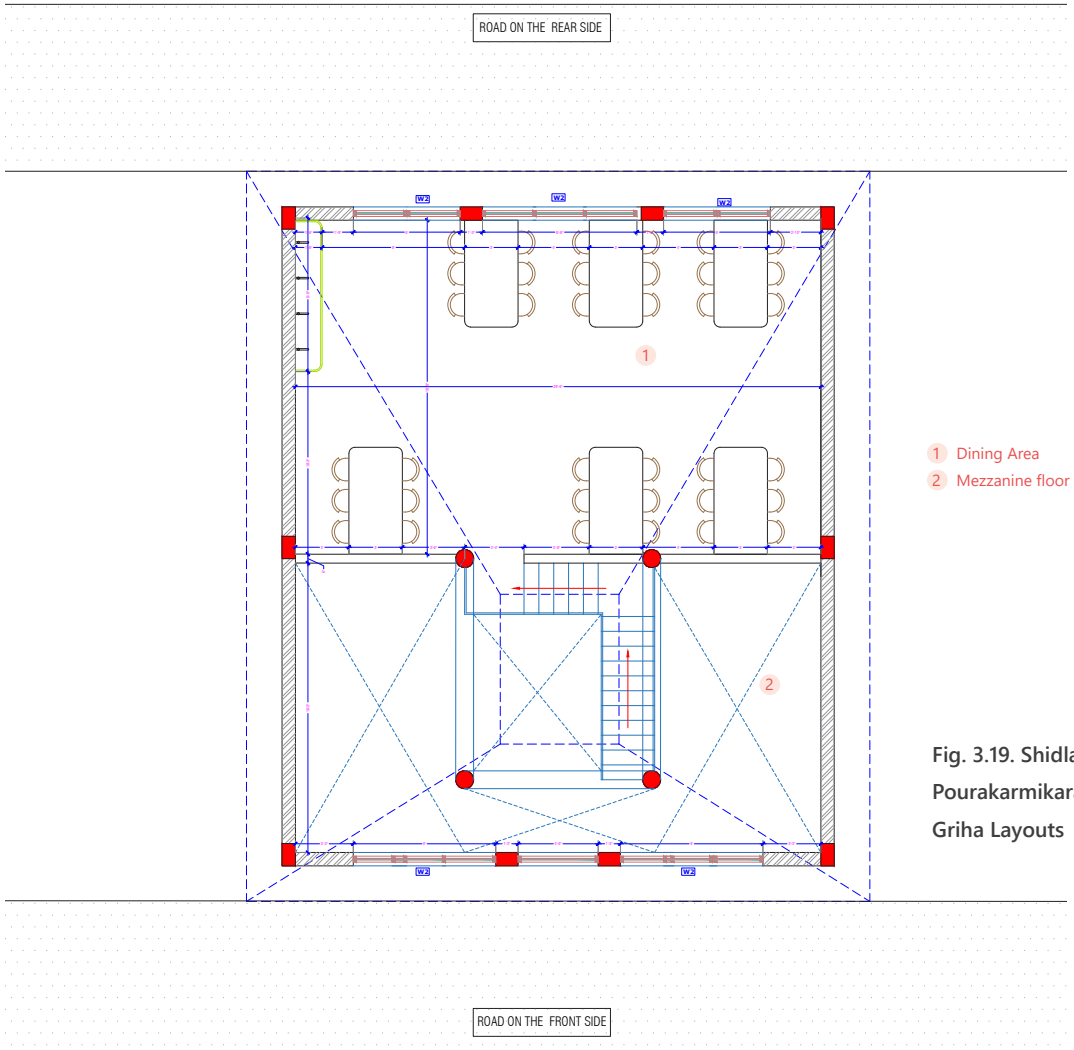
Ensure 800mm clearance around the cabinet for accessibility.

- **Storage Space:** Include adjustable shelving and cabinets up to 2 meters high and 600mm deep, with at least 1 meter aisle width for easy access.
- **Table and Chair Arrangement:** Use tables at 750mm high with chairs at 450mm seat height, allowing 1 meter clearance between tables for movement.
- **Child Care Area:** Design a secure space with child-friendly furniture, ensuring a 1-meter safety perimeter around play equipment for safety.

Design Example for Pourakarmikara Virama Kendra

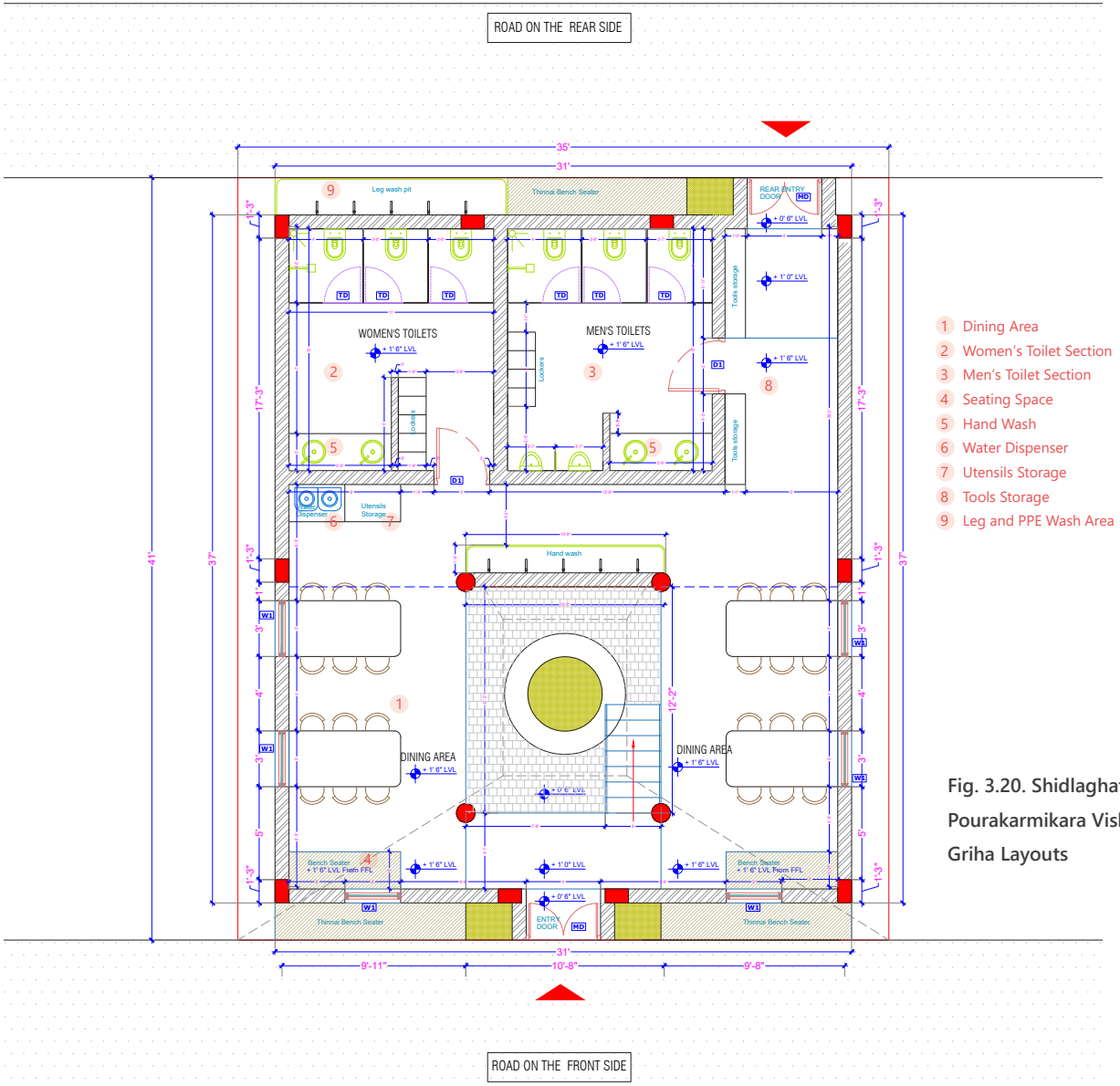
This section provides three design examples for a Virama Kendra, which can be adapted based on various factors such as area availability, budget, and specific feature requirements. The flexibility in design allows for customization, ensuring that the facility aligns with the local context and operational needs.

Example 1: Shidlaghatta Pourakarmikara Vishranti Griha



1 Dining Area
2 Mezzanine floor

Fig. 3.19. Shidlaghatta Pourakarmikara Vishranti Griha Layouts

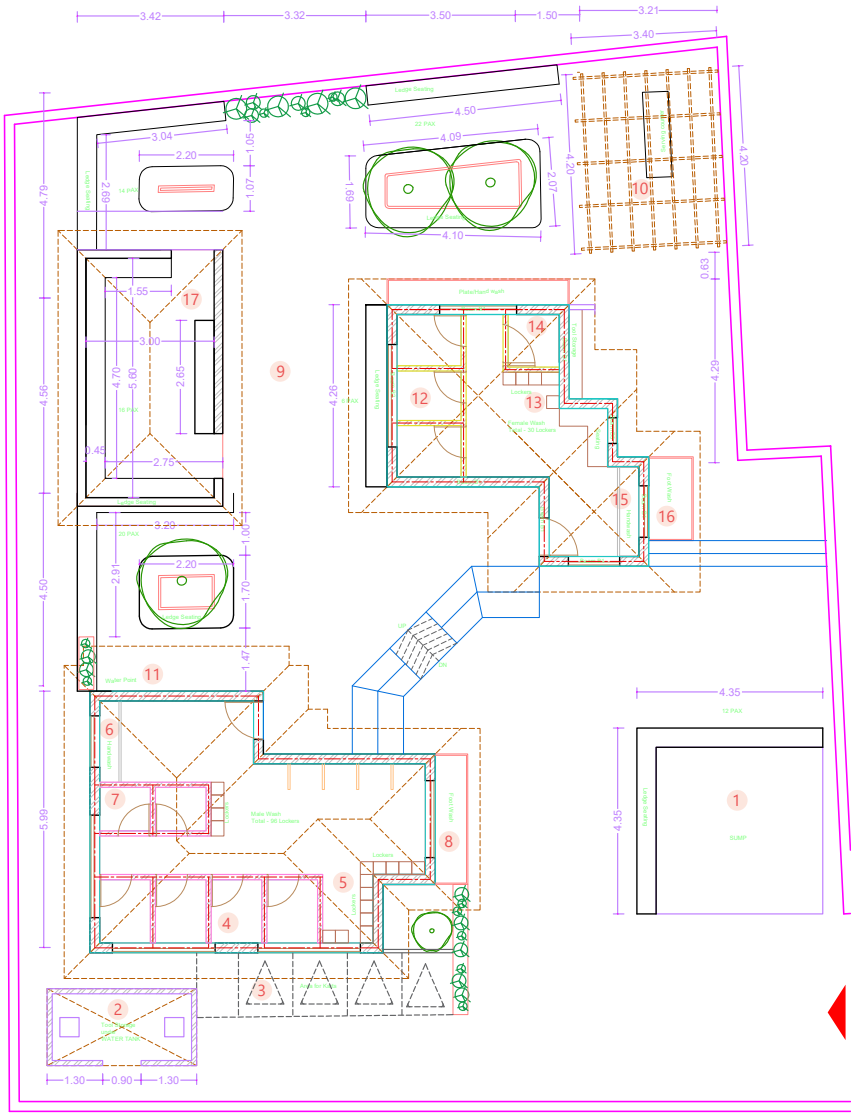


1 Dining Area
2 Women's Toilet Section
3 Men's Toilet Section
4 Seating Space
5 Hand Wash
6 Water Dispenser
7 Utensils Storage
8 Tools Storage
9 Leg and PPE Wash Area

Fig. 3.20. Shidlaghatta Pourakarmikara Vishranti Griha Layouts

This design includes all mandatory features on a single floor with a mezzanine for additional dining space, making it suitable for locations with limited horizontal spread.

Example 2: Chikballapura Pourakarmikara Vishranti Griha

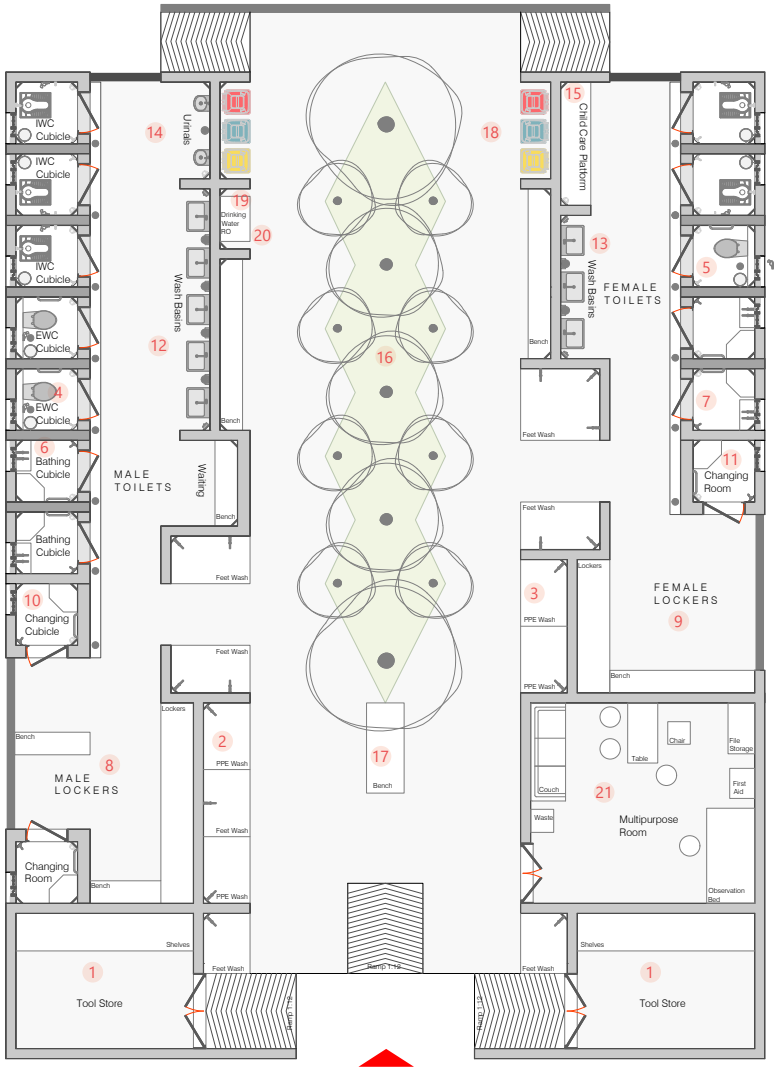


1 Garden Area
2 Tools Storage
3 Area for Carts
4 Male EWC and IWC
5 Male Lockers
6 Male Handwash
7 Male Bathrooms
8 Male PPE Wash and Feet Wash Area
9 Dining Area
10 Food Serving Counter
11 Drinking Water
12 Women EWC and IWC
13 Women Lockers
14 Women Bathing Area
15 Women Handwash
16 Women PPE and Feet Wash Area
17 Multipurpose Room

Fig. 3.21. Chikballapura Pourakarmikara Vishranti Griha Layout

With no space constraints, this layout integrates all mandatory features plus some recommended and aspirational elements on a single floor, offering enhanced comfort and amenities.

Example 3: Pourakarmikara Virama Kendra Prototype Design



1 Tool Storage
2 Male PPE and Feet Wash Area
3 Female PPE and Feet Wash Area
4 Male EWC and IWC
5 Female EWC and IWC
6 Male Bathing Area
7 Female Bathing Area
8 Male Lockers
9 Female Lockers
10 Male Changing Cubicles
11 Female Changing Cubicles
12 Male Handwash
13 Female Handwash
14 Urinals
15 Child Care Platform
16 Dining Area
17 Food Serving Counter
18 Dustbins
19 Drinking Water
20 Utensils and Plate Wash Area
21 Multipurpose Room

Fig. 3.22. Pourakarmikara Virama Kendra Prototype Design

While this example offers a comprehensive layout, modifications may be necessary depending on spatial constraints or budget limitations. For instance, in cases where space is restricted, a two-floor design might be considered. Similarly, more aspirational features, such as enhanced ventilation systems or advanced water fixtures, can be added in situations with a higher budget or long-term funding plans.

With this design framework, the upcoming chapter will shift focus to the critical aspect of Operation and Maintenance (O&M). While understanding the layout is vital, maintaining the functionality and cleanliness of the facility over time is equally important. The next section will explore best practices for upkeep, resource management, and strategies for ensuring the longevity and effectiveness of Pourakarmikara Virama Kendra.

4

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Operation and Maintenance

This chapter emphasizes the critical role of proper Operation and Maintenance (O&M) in ensuring the functionality, sustainability, and inclusivity of Pourakarmikara Virama Kendra. It outlines the importance of moving beyond infrastructure creation to focus on effective O&M strategies that enhance worker dignity, health, and morale. The chapter also introduces stakeholder engagement and financial sustainability models that support long-term success, along with guidelines for operational and maintenance practices, stakeholder roles, and feedback mechanisms to ensure continuous improvement of these vital facilities.

The Importance on adequate and proper Operation and Maintenance

The increasing emphasis on sanitation in urban development and its pivotal role in public health has brought to light the inadequacy of public convenience facilities. The significance of these facilities, particularly for frontline workers, was starkly underscored during the Covid-19 pandemic. Today, high-quality public conveniences are not just essential services but symbols of a developing, functional economy, making quality services aspirational. The evolution of public conveniences from a necessity to a marker of inclusivity, dignity, and good governance is evident.

Learning from India's public toilet experience, the mere construction of brick-and-mortar units will not result in increased performance and sustained utilisation unless it is complemented with adequate Operation &Maintenance (O&M) practises.

India's track record with public service outcomes has been less than stellar, with a disproportionate emphasis on infrastructure creation rather than on actual service delivery. There is an urgent need to

O&M in the context of sanitation workers' Virama Kendras is not just about maintaining infrastructure—it is about creating a sustainable, long-term model that supports worker dignity, health, and productivity. Effective O&M addresses several challenges:

Fig. 4.1. Need for an O&M Model

prioritize O&M models to ensure these largely publicly funded structures deliver the intended benefits.

While considerable progress has been made in building awareness and political will around the importance of sanitation, the development of effective O&M strategies has lagged. India's experiences with the Metros and high-speed railways demonstrate that a well-executed O&M model can significantly shift public perception of public infrastructure and drive higher engagement.

The rapid pace of urbanization and the critical role of sanitation workers present a unique opportunity for cities and operators to reshape public perception—from India being known for unsanitary public conveniences to a nation that values its citizens. Virama Kendras can be central to this transformation, serving as hubs of inclusivity, equity, and good governance. To make this a sustained movement, localized design, political commitment, and budgetary allocations must be bolstered by strong and effective O&M practices.

The success and sustainability of Pourakarmikara Virama Kendra depend on robust operation & maintenance frameworks. As these facilities are critical for the health, dignity and well-being of sanitation workers, it is vital to establish systems that ensure continuous functionality and hygiene standards. Without a proper O&M strategy, Virama Kendras risk falling into disrepair, leading to negative health outcomes, inefficiencies in service delivery, and diminished morale among sanitation workers. The Virama Kendras operational model must be resilient, adaptable, and sustainable, accommodating various local contexts while ensuring stakeholder engagement, financial sustainability, and effective service delivery. Multiple O&M models can be considered, ranging from municipality-driven to community-led initiatives.

Stakeholder Engagement Plan in Operation & Maintenance

Effective operation and maintenance (O&M) of Virama Kendras rely on the active participation of diverse stakeholders, each bringing unique insights, resources, and responsibilities to the table. Stakeholder engagement is critical to ensure that these facilities are not only maintained but also adapted to the specific needs of sanitation workers and the broader community. By fostering collaboration among key actors—such as sanitation workers, local governments, community members, private organisations, and community members—we create a shared sense of ownership and responsibility.

This approach encourages transparency, enhances accountability, and ensures that the O&M model is sustainable in the long run. Successful stakeholder engagement transforms Virama Kendras from mere infrastructure into inclusive, well-managed spaces that contribute to worker well-being, public health, and local economic development. In the following section, we will explore the roles and contributions of various stakeholders in ensuring the sustainability and efficiency of Virama Kendra operations.

Fig. 4.2. Stakeholder Engagement in O&M

Sanitation Workers

Roles & Responsibilities
- Provide Feedback
- Keep the facility clean

Engagement Methods
- Regular Meetings
- Training Sessions
- Feedback Forms

Facility Management Team

Roles & Responsibilities
- Day-to-day operations & maintenance
- Maintenance of financials

Engagement Methods
- Internal Meetings
- Training Sessions

Urban Local Body

Roles & Responsibilities
- Regulatory Oversight
- Support in funding

Engagement Methods
- Regular Reports
- Strategic Meetings

Suppliers/Contractors

Roles & Responsibilities
- Provide materials and services

Engagement Methods
- Service Level Contracts
- Regular communication

Donors

Roles & Responsibilities
- Funding support through Corporate Social Responsibility or other donor agencies

Engagement Methods
- Grant Application
- Agreements
- Impact Reports

NGOs/Educational Institutions

Roles & Responsibilities
- Training
- Community Engagement
- Awareness Campaigns

Engagement Methods
- Collaboration Agreements
- Awareness Campaigns
- Capacity Building

Community Leaders of Sanitation Workers Union
Safai Karmachari Commission

Roles & Responsibilities
- Support the facility
- Operations Oversight
- Maintenance of financials

Engagement Methods
- Community Forums
- Local Advocacy
- Training sessions
- Strategic meetings

Facility Management Team

The effective operation and maintenance of a Virama Kendra depends heavily on a well-structured facility management team. This team is essential to ensure that the facility remains functional, hygienic, and accessible to sanitation workers and other users. Their role goes beyond daily upkeep—they ensure compliance with health and safety standards, manage resources, address the needs of users, and help adapt the facility to changing demands.

The facility management team must include a mix of skilled personnel who can oversee operations, carry out maintenance tasks, and ensure that the

Below are some guidelines in the selection and structure of the facility management team

Selection

- Family members of active sanitation workers (spouses, adult children, or other close relatives) will be eligible to be nominated.
- Candidates must meet specific criteria, such as a minimum age and basic literacy skills, to ensure they can effectively manage operations and responsibilities.
- A simple majority voting system will be implemented, where sanitation workers vote for their preferred candidate.
- Elected members will serve for a defined period, after which new elections will be held to ensure rotation. This rotation brings fresh perspectives and prevents burnout.
- Sanitation workers will have a feedback system that allows them to evaluate the facility's performance and adjust operations if necessary.

Structure and Roles

- The elected facility management team will oversee day-to-day facility operations, including ensuring cleanliness, maintenance, and financial oversight.
- They will report regularly to the sanitation workers' union and the urban local body on the facility's performance and finances.
- Elected members can undergo training in facility management to enhance their capabilities in managing the Virama Kendra.
- The facility management team will consist of a facility manager, maintenance team, operations and finance team, and a liaison officer. Weekly meetings will be held to review operations.
- An honorarium system will be established as a financial incentive and recognition for the team's contributions to maintaining the Virama Kendra.
- Major decisions, such as repairs, budget allocations, or changes in procedures, will be made collectively in monthly meetings involving the facility management team, sanitation workers' union representatives, and urban local body representatives.
- A transparent financial system, including regular audits or oversight by the sanitation workers' union and municipality, will ensure accountability for honorarium disbursements and maintenance expenses.

facility serves its purpose of improving the working conditions and dignity of sanitation workers. Their collective responsibility is to create an environment that supports the health and well-being of these workers, who are often vulnerable to hazardous working conditions. The most effective facility management models are typically those that are locally owned and involve active participation from the community or users. Local engagement fosters timely and accurate reporting of malfunctions, ensures efficient resolution of identified issues, and promotes a strong sense of ownership.

The facility management team can be led by family members of sanitation workers to ensure that the sanitation workers can continue their primary roles in maintaining the cleanliness of our towns. Since their official duties are time-consuming and physically demanding, assigning facility management to their family members allows for efficient oversight of the Virama Kendra without disrupting sanitation services. This approach not only lightens the burden on the workers but also empowers their families, providing them with opportunities for involvement and skill development while ensuring that the facility is managed by individuals who have a personal stake in the well-being of the sanitation workers.

Financial Sustainability

Ensuring that the Virama Kendras are maintained and operated sustainably requires innovative and adaptable financial models. Given the diverse contexts in which these facilities operate, a one-size-fits-all approach is inadequate. Instead, various financial models can be explored to meet the unique needs of each locality while ensuring the long-term functionality of the facilities.

This section presents a range of financial models designed to address the operational and maintenance needs of Virama Kendras. From user fee-based systems to self-sustaining business ventures, these models provide multiple pathways to achieving a sustainable and effective management structure.

Model 1: A nominal monthly user fee is charged to sanitation workers, pooled into a dedicated bank account managed by the sanitation workers' union. This fund oversees the operational needs of the facility. Additionally, a QR code scanner can be installed to allow visitors or donors to contribute funds, ensuring continued support for facility upkeep.

***Example:* Pourakarmikara Vishranti Griha, Chikballapura**

Model 2: In this model, all operational and maintenance costs are fully covered by the municipality. While the municipality assumes responsibility, they can gather additional support from donor agencies, NGOs, or corporate social responsibility (CSR) funds to offset costs and ensure long-term sustainability.

***Example:* WASH Facility, Leh; Garima Griha, Orissa**

Model 3: The facility remains open to the public after sanitation workers' hours, with access offered for a fee. The revenue generated from public use can be used to fund the operations and maintenance costs of the facility.

Model 4: The facility management team, with approval from the sanitation workers' union and local authorities, operates a self-sustaining business such as a café or service hub. The revenue generated from the business helps fund operations and maintenance.
Example: Loo Café, Hyderabad

Model 5: During non-working hours, the facility's dining and rest areas are rented out for community gatherings, training sessions, or events. The rent generated from these activities is used to cover operational and maintenance costs.

The diverse O&M models presented reflect the need for flexibility in managing Virama Kendra. Each model offers different strengths and challenges, and municipalities, sanitation workers' unions, and local communities should evaluate their feasibility based on their unique contexts. By selecting an appropriate model, stakeholders can ensure that sanitation workers continue to have access to clean, safe, and well-maintained Virama Kendras. Ultimately, the goal is to create a management system that upholds the dignity and health of sanitation workers while fostering local ownership and long-term sustainability.

Model 1: Pourakarmikara Vishranti Griha, Chikkaballapura

Model 2: WASH Facility, Leh

Model 4: Loo Cafe, Hyderabad

Operation & Maintenance Guidelines

The following guidelines outline the core practices required to manage these facilities effectively.

Operational guidelines focus on day-to-day activities that ensure smooth functioning, from access control and operating hours to safety measures and supply management. These protocols are designed to maintain high standards of hygiene, security, and user convenience.

Maintenance guidelines, on the other hand, address the ongoing upkeep of the facility. They cover routine and reactive maintenance tasks, facility upgrades, and the importance of record-keeping.

Operational Guidelines

Access Control	• Implement a user identification system (ID cards, Entry logs) to monitor and control access to the facility
Operating Hours	• Establish operating hours that align with the working hours of sanitation workers and display the hours at the entrance of the facility.
Daily Cleaning Schedule	• Implement a strict daily cleaning schedule following a checklist (attached in annexure) to maintain hygiene and cleanliness in all areas of the facility including regular disinfection of high – touch surfaces, restrooms and communal areas
Waste Management	• Install waste disposal bins in key locations within the facility with clear signage to encourage proper waste segregation • Arrange for the timely collection and disposal of waste, in coordination with the municipality
Supply Management	• Maintain an inventory of essential supplies, such as soap, hand sanitisers, toilet paper, cleaning agents and restock supplies on a regular basis
Safety and Security	• Install emergency equipment such as fire extinguishers, first aid kits, etc. • Implement security measures such as CCTV cameras and adequate lighting around the facility

Maintenance Guidelines

Routine Maintenance	• Conduct regular scheduled inspections of the facility's infrastructure, including plumbing, electrical systems, sanitation equipment and structural components to identify any signs of wear & tear • Implement a preventive maintenance schedule based on manufacturer's recommendations for equipments and systems within the facility (lubrication, checking for leaks, testing electrical circuits, replacing worn-out components)
Reactive Maintenance	• Establish a rapid response protocol (with a list of municipality technicians and suppliers) for addressing unexpected damages and swift redressal.
Facility Upgrades	• Periodically assess the potential for integrating new technologies into the facility to enhance efficiency and sustainability (energy efficient appliances or water saving devices) • Encourage feedback from users to identify areas for improvement in the facility's operation and maintenance
Record Keeping	• Maintain detailed records of all maintenance activities, including routine inspection, repairs and upgrades (Data, Description of work performed, materials used, issues encountered) • Prepare periodic reports summarising the facility's maintenance activities, performance indicators and financial status, and to be shared with key stakeholders.
Training & Capacity Building	• Provide training for facility manager & staff on best practices in maintenance and operation of all equipment or technology in the facility. • Educate sanitation workers on how to properly use the facility and report any issues they encounter through training sessions and posters.

These practices are crucial for identifying and addressing issues promptly, ensuring that the facility remains in good condition and continues to meet the needs of its users.

Together, these operational and maintenance strategies provide a comprehensive framework for managing Virama Kendras, ensuring they remain functional and effective in supporting the well-being of sanitation workers. Regular adherence to these guidelines will contribute to the facility's long-term success and sustainability.

Monitoring and Feedback guidelines for Pourakarmikara Virama Kendra

To ensure that the Virama Kendra meets the needs and expectations of sanitation workers, implementing a structured monitoring and feedback system is crucial. This system will help in continuously improving the facility's operations and addressing any issues promptly. The following guidelines outline an effective approach to gathering and utilizing feedback from sanitation workers:

- **Feedback Mechanism Design:** Develop simple, accessible feedback forms (both physical and digital) where workers can provide comments and suggestions on a monthly basis to gather feedback on facility conditions, cleanliness, and services. Ensure that these forms are available in multiple languages if needed. Physical forms can be submitted in a suggestion box in a prominent location within the facility where workers can anonymously submit their feedback. For those who prefer online communication, use a digital platforms. Conduct quarterly meetings with sanitation workers to discuss their experiences, collect feedback, and address any concerns. These meetings can be organized by the facility management team or an independent facilitator.

- **Feedback Analysis & Reporting:** Collect and compile feedback data regularly. Analyze the data to identify common issues and areas for improvement. Prepare regular reports summarizing the feedback received, actions taken, and any changes implemented. Share these reports with the sanitation workers and other relevant stakeholders to maintain transparency.

- **Action Plan and Follow-Up:** Develop an action plan based on the feedback received, outlining specific measures to address identified issues. Assign responsibilities and timelines for implementing these measures. Follow up on the actions taken and communicate the outcomes to the sanitation workers. Ensure that their feedback has led to tangible improvements in the facility.

- **Continuous improvement:** Regularly review the effectiveness of the feedback system and make adjustments as needed. Encourage continuous improvement by integrating new suggestions and refining processes based on worker input. Recognize and reward constructive feedback and suggestions that lead to significant improvements. This will encourage more active participation and engagement from the workers.

By establishing a robust monitoring and feedback system, the facility can ensure that it remains responsive to the needs of sanitation workers and continuously improves in line with their feedback. This approach will enhance worker satisfaction, facility efficiency, and overall service quality.

In conclusion, this chapter has underscored the essential role that robust Operation and Maintenance (O&M) practices play in the success of Virama Kendras for sanitation workers. Effective O&M ensures that these facilities remain functional, hygienic, and inclusive, fostering a safe and dignified environment for workers. The chapter also highlighted success stories from Karnataka and other parts of India, showcasing real-world applications of these principles. By incorporating stakeholder engagement, financial sustainability models, and continuous feedback mechanisms, these practices help create long-lasting solutions that enhance worker well-being and community ownership. In the next section, we will explore case studies from across India to demonstrate how these principles have been implemented in different contexts, offering practical insights and lessons learned.

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Case Studies

Case 1

Pourakarmikara Vishranti Griha, Chikkaballapur, Karnataka

Key Details

Capacity: 143 sanitation workers

Location: Chikkaballapura, Karnataka

Built: 2023

Area: 4,600 sq. ft. (site) with 2,500 sq. ft. built-up

Key Stakeholders: BORDA South Asia, Technology Informatics Design Endeavour (TIDE), Lamotte Foods, City Municipal Council (CMC)

Background

Chikkaballapura, located 75 km from Bangalore, has 150 sanitation workers responsible for waste collection and sewer maintenance. Previously, these workers lacked essential facilities like toilets, drinking water, dining areas, and lockers, compromising their health, safety, and dignity. The Chikkaballapura Municipality established a Pourakarmikara Vishranti Griha to address these gaps and enhance worker well-being.

Key Features

- **Dedicated Facilities:** Toilets, separate washrooms for men and women, lockers, and janitorial areas for convenience and privacy.
- **Tool Storage:** Secured storage room for easy access to work equipment.
- **Dining and Rest Areas:** Cafeteria with natural ventilation, drinking water stations, and a lounge for resting between shifts.
- **Sustainability:** Waterless urinals, water sensors for overhead tanks, and eco-friendly features.
- **Hygiene:** Dedicated leg wash areas for workers after sanitation tasks.
- **Mobile Charging:** Charging stations for workers' devices.

Operation & Maintenance

The facility operates on a user-fee model, with each worker contributing ₹20 per month. A bank account managed by the sanitation workers' union ensures transparent use of funds, and visitors can donate via QR code.

Testimonial

The lounge and bathing units have made a huge difference, allowing me to rest and freshen up after work. The facility is spacious and welcoming, and I feel proud to use it.
– Savitha, Sanitation Worker, Chikkaballapura

Having access to clean water, handwashing stations, and areas to wash clothes has greatly improved our daily routine. Being involved in the facility's upkeep is rewarding and makes life easier for us all.
– Ramakka, Caretaker of the facility & Sanitation Worker, Chikkaballapura

Pourakarmikara Vishranti Griha Video

Pourakarmikara Vishranti Griha 3-D Walkthrough

Resources

- *Sanitation Workers' Resting Facility At Chikkaballapur"-A Demo report by TIDE and BORDA-2023*

Case 2

Pourakarmikara Vishranti Griha, Chintamani

Key Details

Capacity: 80-90 users daily

Location: Chintamani, Karnataka

Year of Completion: 2023

Implementation Cost: ₹16 lakhs

Partners: Chintamani Municipality, Sanitation Workers' Union, BORDA South Asia, Technology Informatics Design Endeavour

Background

Chintamani, a town with 80,000 residents, relies on more than 150 sanitation workers to maintain cleanliness across its 15 sq km area. Despite providing essential public services, sanitation workers lacked access to basic amenities.

To address this gap and support workers in their duties, the Chintamani Municipality developed a dedicated Resting and Dining Facility, transforming an old garage into a space promoting worker dignity and well-being.

Testimonial

This space has changed our routine completely. Now, we have a clean place to eat and rest during breaks. It feels good to come together and plan our work here.
– Shivanna,
Sanitation Worker

We feel valued for the first time. The photo gallery in the facility reminds us that our work matters. It's a space that gives us pride.
– Lakshmi,
Sanitation Worker

Features

- **Essential Amenities:** RO-filtered drinking water, dedicated changing rooms, hand and leg wash zones, and washroom facilities
- **Resting & Dining Spaces: I**ncludes plate racks, a plate washing area, and well-ventilated dining areas
- **Worker-Centered Design:**
  - Consultations and discussions with workers throughout the design process
  - Use of locally sourced materials for easy maintenance and reduced costs
  - Notice board and photo gallery honoring sanitation workers' contributions

Operations & Maintenance

The facility is owned by the municipality but managed by a 4-member sanitation workers' union. One member is designated full-time to oversee daily operations.

Resources

- *Sanitation Workers' Resting Facility at Chintamani CMC-A report by TIDE and BORDA- 2023*

Case 3

Suvidha Cabins, BBMP, Bangalore

Key Details

- **Capacity:** 181 cabins for 15,400 direct-payment workers and 1,200 permanent employees
- **Average Users:** 25 users per cabin daily
- **Location:** Across eight zones in Bangalore
- **Built:** 2018
- **Size:** 12x8 feet cabins costing ₹6.6 lakhs each
- **Key Stakeholders:** Bruhat Bengaluru Mahanagara Palike (BBMP), Agrya Infratech

Background

Pourakarmikas, Bangalore's sanitation workers, often face unsafe working conditions due to a lack of rest and hygiene facilities. They rely on public toilets and roadside dining, exposing them to health risks. The Suvidha Cabins project aims to address these challenges by improving workers' well-being and supporting public health.

Testimonial

Earlier, it was really difficult for us to access proper toilets, but now with this facility, it has become so much easier. We can use clean toilets, have changing rooms, and even a place to sit and eat. However, the current facility is a bit small. If it could be expanded, it would accommodate all of us comfortably

– Sanitation Worker and user of Suvidha Cabin

Key Features

- **Portable Design:** Repurposed shipping containers, relocatable as needed
- **Essential Amenities:** Toilets, changing rooms, feeding areas, and medical aid
- **Storage & Comfort:** Cubbyholes for personal items, charging points, and fans
- **Seating Capacity:** Each cabin accommodates 4-5 workers during breaks

Operation & Maintenance

Managed by BBMP, with a user-elected supervisor overseeing cleaning. Workers contribute to cleaning on a rotational basis, and BBMP covers utilities. Users reimburse drinking water and cleaning supply costs monthly.

Resources

- *https://www.deccanherald.com/india/karnataka/bengaluru/suvidha-cabin-for-civic-workers-848132.html*
- *https://citizenmatters.in/bbmps-promised-suvidha-cabins-for-pourakarmikas/*

Case 4

WASH Facility, Leh

Key Details

- **Capacity:** 140 users/day
- **Location:** Skampari, Leh
- **Built:** 2020
- **Area:** 1,008 sq. ft.
- **Key Stakeholders:** Bremen Overseas Research and Development Association (BORDA) South Asia, Municipal Committee of Leh (MCL), Urban Development Department (UDD), Ladakh Ecological Development Group (LEDeG)

Background

Leh's sanitation workers lacked accessible facilities, especially during harsh winters, highlighting the need for a dedicated WASH facility to ensure dignity, safety, and well-being.

Testimonial

Before, we had no place to wash after work, but now we can clean up, take showers, and relax at the facility. It's a huge improvement for our health and well-being, especially with hot water in winter.
– Farooq Ahmad, Sanitation Worker

We used to struggle for water and had no proper bathrooms, but now we have clean facilities with separate spaces for women, making life much more convenient.
– Anonymous Female Worker

Key Features

- **All-Weather Design:** Airlocks, insulated plumbing, and Solar Trombe walls for heat retention.
- **Amenities:** Toilets, showers, lockers, laundry, hot water via solar heaters, and recreational areas.
- **Essentials:** RO drinking water, first aid, and a pantry.
- **Local Identity:** Use of local materials and vibrant artwork to create an inviting space.
- **Accessibility:** Close to a major residential area for workers and their families.

Operation & Maintenance

MCL appointed two staff members for facility upkeep.

Resources

- *Swachh Bharat Mission - Leh Wash Facility (sbmurban.org)*
- *https://www.newsclick.in/Work-Hygiene-Relaxation-New-Chapter-Leh-Sanitation-Workers*
- *Leh facility handout- BORDA*

Case 5

Garima Griha, Orissa

Key Details

- **Capacity:** 10-12 users/day
- **Location:** Bhubaneswar
- **Built:** 2021 & 2023
- **Area:** 32.70 sqm
- **Key Stakeholders:** Urban Management Centre (UMC), Water Corporation of Odisha (WATCO), Odisha Government

Background

Sanitation workers in Bhubaneswar, especially those managing liquid waste, face daily risks from exposure to hazardous waste, harsh weather, and limited access to hygiene facilities. Many return home in soiled clothes or change in public, compromising their dignity. The need for proper rest areas, washing spaces, and PPE storage led to the creation of Garima Grihas.

Testimonial

Summers used to be especially tough for us, with no place to eat or rest during breaks. But now, after finishing a shift, I head back to the Garima Griha. It's more than just a place to rest; it's a space where I can connect with other workers. We've all been doing similar work for years, but we never had a place to come together until now. Garima Griha has brought us closer, giving us the chance to share our experiences and strengthen our community bond.

– Mr. Adhir Naik Sanitation Staff, WATCO Bhubaneswar

Key Features

- **Location & Accessibility:** Positioned at workers' reporting sections for ease of use.
- **Sanitation Infrastructure:** Showers, toilets, washrooms, and outdoor PPE washing and drying areas.
- **Comfortable Spaces:** Air-conditioned rest areas and designated dining spaces between shifts.
- **Gender Inclusivity:** Separate changing rooms with lockers for men and women.
- **Water & Sanitation:** Connected to reliable water supply and drainage systems.

Operation & Maintenance

WATCO employs a caretaker and part-time cleaner, with utility and maintenance costs around ₹10,000 per month. Sanitation workers assist in daily cleaning.

Resources

- *Report on Best practices from Indian cities Safaimitra Suraksha aur Sammaan, NFSSM Alliance*

6

INTRODUCTION
PLANNING APPROACH
DESIGN PRINCIPLES
OPERATION AND MAINTENANCE
CASE STUDIES
WAY FORWARD

Way Forward

The Pourakarmikara Virama Kendra Guiding Document builds on Karnataka's commitment to sanitation workers' welfare, offering Urban Local Bodies (ULBs) a practical framework for establishing safe, hygienic, and aspirational workspaces. Learning from successful initiatives such as Suvidha Cabins by Bruhat Bengaluru Mahanagara Palike (BBMP) and the WASH Facility pilots in Chikkaballapur and Chintamani, the toolkit empowers ULBs to address critical gaps in sanitation workers' workplace conditions.

The Pourakarmikara Virama Kendra Guiding Document provides actionable guidance for ULBs to create professional spaces equipped with:

- Gender-specific toilets and bathrooms to ensure safety and privacy.
- Wash areas for workers to clean up after shifts.
- Dining and resting spaces to promote dignity and physical well-being.
- Drinking water facilities for hydration and comfort during work hours.

With a focus on accessibility, safety, inclusivity, and sustainability, the document provides step-by-step guidance, covering planning, design, and maintenance. It includes adaptable type designs, financing options, and real-world case studies that offer practical insights for implementation in various urban contexts. By emphasizing worker-centered spaces, the document enables ULBs to create environments that not only meet hygiene standards but also build professional dignity. It further advocates for engaging workers in facility management, fostering pride and ownership in maintaining these essential spaces.

For meaningful change, Karnataka's ULBs, especially in small and medium towns, must adopt the Pourakarmikara Virama Kendra Guiding Document. Building on the success of pilot facilities in Chikkaballapur and Chintamani, the document includes adaptable designs, financing options, and case studies tailored to the state's unique urban challenges. To ensure sustainability, the document recommends flexible O&M models such as:

- User-fee systems to fund daily maintenance.
- Public-private partnerships to pool resources and expertise.
- Community-driven approaches, empowering workers to manage facilities while creating localized employment opportunities.

Karnataka's ULBs can capitalize on state and national schemes like Swachh Bharat Mission 2.0, Fifteenth Finance Commission grants, and the state's Nagarothana Scheme to finance these initiatives. Additionally, Karnataka's robust CSR ecosystem and partnerships with NGOs like BORDA and TIDE can supplement these efforts. Collaborative funding models combining government support, corporate contributions, and community engagement will ensure sustained impact.

The Pourakarmikara Virama Kendra Guiding Document highlights how safe, dignified workplaces for sanitation workers boost productivity, reduce healthcare costs, and strengthen community resilience. By prioritizing professional dignity, Karnataka aligns with SDG 6 (sanitation) and SDG 8 (decent work), fostering inclusive urban development. Implementing the toolkit will elevate sanitation workers' lives and create a resilient, urban landscape that values the contributions of its sanitation workforce.

Karnataka Government Officials visit to WASH Facility for Sanitation Workers at Leh

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ANNEXURE 1

You can use the table below to calculate the number of male, female, and non-binary sanitation workers in the town. This data is essential for ensuring that facilities are adequately planned and tailored to meet the needs of all workers. Accurate calculations will support effective resource allocation and help in designing inclusive Pourakarmikara Virama Kendra that cater to the entire workforce.

Sector	Type of Sanitation Worker	Male	Female	Non-Binary
Solid Waste Management	Street Sweeper			
	Institutional Waste Collector (Hospitals and Quarantine Centers)			
	Domestic Waste Collector			
	Informal Waste Picker			
	Worker at Waste Processing Facility			
Liquid Waste Management	Latrine Cleaner			
	Drain Cleaner			
	Community/ Public Toilet Cleaner			
	Septic Tank Desludger			
	Sewer Cleaner			
	STP / FSTP Worker			
Sub- total		X	Y	Z
Total		X + Y + Z		

ANNEXURE 2

Operation & Maintenance Checklist for the Pourakarmikara Virama Kendra:

Below is an Operation & Maintenance (O&M) checklist that can be adapted for the Pourakarmikara Virama Kendra.

Daily Record Maintenance Log				
Date				
Component	Activity	Time	Responsible Member	Status
Toilets and Bathing Areas	Morning Cleaning Shift			
	Evening Cleaning Shift			
	Labeled bins for waste segregation provided			
	Daily waste disposal			
	Daily checks for leaks, blockages, or plumbing issues			
	Inventory log updated			
	Broken supplies replaced during daily checks			
Sanitation Areas	Morning Cleaning Shift			
	Evening Cleaning Shift			
	Daily waste disposal			
	Daily checks for leaks, blockages, or plumbing issues			
	Inventory log updated			
	Broken supplies replaced during daily checks			
Tools Room	Daily Cleaning			
	Daily inspection/maintenance of tools			
	Inventory log updated			

Daily Record Maintenance Log				
Date				
Component	**Activity**	**Time**	**Responsible Member**	**Status**
Lockers & Changing Areas	Daily Cleaning			
	Broken supplies replaced during daily checks			
Resting area	Daily Cleaning and disinfection			
	Hand sanitizers refilled			
Dining Area and Pantry	Morning Cleaning Shift			
	Evening Cleaning Shift			
	Daily waste disposal			
	Proper handwashing facilities			
	Waste segregation bins provided			
	Inventory Log maintained			

Weekly Record Maintenance Log				
Week 1 :				
Sanitation areas	Deep cleaning			
	Equipment check			
Lockers & Changing Areas	Locker Maintenance – damage detected			
	Repair of damages			
Resting area	Furniture check			
Dining Area and Pantry	Furniture checks			

Notes

Notes

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