TOOLKIT

e-PARIWARTAN PROJECT

Housing and Urban Development Department, Jammu and Kashmir

CONTENTS

1   Introduction

1.1   General Introduction

1.1.1   Purpose of the document

This document is to detail out the functional requirements specification (FRS) for the design, development and implementation of proposed system with 'Works and Projects Management and Monitoring Application (WMS)' in Jammu Municipal Corporation, Jammu.

The purpose of this document is to clearly define the functional requirements of the proposed system within the scope of the project in detailed manner.

The as-is analysis of process flows and requirement gathering for the preparation of this document has been made by visiting JMC office and as per discussion with JMC authorities including all project stakeholders.

The document highlights the detailed understanding of the Processes, User Interfaces and the Outputs generated at various stages in the concerned departments during the Project Execution. It describes the project's target audience hardware and software requirements. It also concentrates on the capabilities required by stakeholders and their needs while defining high-level product features.

The overall purpose of the FRS is -

- To acts as a formal and structured communication tool between the stakeholders (clients, developers, testers, and project managers) to ensure a shared understanding of the project's requirements.

- To provides a comprehensive record of the software project's functional and non-functional requirements, which is essential for reference and future maintenance.

- To define the scope of the project by specifying what the software will and will not do. This prevents scope creep and keeps the project on track.

- To enables the validation of requirements against the customer's needs and the verification of whether the software meets these requirements.

- To provides a baseline for managing changes to the project. Any modifications to requirements can be assessed in terms of their impact on the project and its timeline.

- guide the design and development phases, as it outlines what features and functionalities need to be implemented and how they should work.

- To make clear definition of the project focus / hypothesis / goal / output / activities.

In short, the purpose of this FRS document is to provide a detailed functional overview of proposed WMS system, its parameters and goals. This document describes the project's target audience and its user interface, hardware and software requirements. It defines how our client, team and audience see the product and its functionality. Nonetheless, it helps any designer and developer to assist in software delivery lifecycle (SDLC) processes.

1.1.2   Position of the document

According to the section '4.1 Project Scope' of the RFP document for "Design, Development, Implementation, Integration, Testing, Commissioning, Operation and Maintenance of web-based Works and Projects Management and Monitoring Application (COTS Product) for Jammu Municipal Corporation" floated by Jammu Municipal Corporation (JMC) under 'Smart City Mission', the FRS document is required to be submitted to Jammu Municipal Corporation (JMC).

Therefore, this document is being submitted to JMC towards the project milestone of submission and acceptance of Design documents by JMC.

During the requirement gathering and analysis, the meetings and discussions, involving team members from SoftTech, the Jammu Municipal Corporation have been held to clarify the user processes and requirements specific to the project scope. Based on these discussions and requirements, the FRS documents indicates the detailed for the project. These discussions are made to provide a solid and sound base for the implementation of the project and to achieve the planned outcomes within the specified time available.

1.2   Definitions, Acronyms, and Abbreviations

The full forms of the abbreviations used in the document are as follows:

Abbreviation	Explanation
AA	Administrative Approval
ACCT	Accountant
B&R	Buildings and Roads
MC	Municipal Commissioner
JMC	Joint Municipal Commissioner
CE	Chief Engineer
SOR	Schedule of Rates
SOR	Basic Schedule of Rates
DD	Demand Draft
NIT	Notice Inviting tender
DTP	Draft Tender Papers
JMC	Jammu Municipal Corporation
JSCL	Jammu Smart City Limited
ACE	Add. Chief Engineer
WMS	Works and Projects Management and Monitoring Application (WMS)
JE	Junior Engineer
LAN	Local Area Network
WAN	Wide Area Network
LOA	Letter of Acceptance
LOI	Letter of Intent
MB	Measurement Book
Add. CO	Additional Commissioner
NA	Not Applicable
NIT	Notice of Inviting Tenders
PE	Preliminary Estimation
RA	Rate Analysis
RCE	Rough Cost Estimate

RFP	Request For Proposal
RMS	Road Management System
SE	Superintending Engineer
DC	Deputy Commissioner
SEL	SoftTech Engineers Ltd.
QC	Quality Control
TS	Technical Sanction
UAT	User Acceptance Testing
WCF	Windows Communication Foundation
WO	Work Order
ZO	Zone Office
XEN, Ex.En	Executive Engineer
DMS	Document Management System
MIS	Management Information System
WF	Work Flow
UI	User Interface

1.3   References

Reference	Description	Publishing Authority & Other details
Name of the Work	Design, Development, Implementation, Integration, Testing, Commissioning, Operation and Maintenance of Web Based Works and Projects Management and Monitoring Application (WMS) (COTS Product) for Jammu Municipal Corporation	JMC
Work Order No.	JMC/ESTT/7780-83 dated 08-09-2023	JMC
SOR	JKSOR-2022	PW(R&B) Department, Jammu & Kashmir
Other References	RFP document no. E-NIT JSCL- 82/05 of 2023-24 (2nd Call) Dt.: 05-05-2023 for above said work	JMC
Circulars & ACT	NA	NA
Meetings	All meetings with officers designated by the Jammu Municipal Corporation, Jammu.	NA
Website	http://jmcjammu.org/	JMC

1.4   Project Overview

The Engineering and Accounts Department of Jammu Municipal Corporation, Jammu (JMC) are involved in planning, designing, construction and maintenance of Government Projects/Assets under their jurisdictions to develop and improve the city's civic infrastructure to serve the citizens of Jammu City.

Currently offices of Jammu Municipal Corporation use different IT/ICT tools or manual process to manage their functions. They use word, excel, etc. for Works Management manual process like preparing projects and works documents like Administrative Approval, Estimate, Work Order, LOA, Tender papers, NIT, Billing, etc of initiating any work in its jurisdiction. They use these tools for HR, payroll and attendance as well registers to keep the records.

To address these challenges, JMC is proposed to have an integrated solution as a 'Works and Projects Management and Monitoring Application (WMS)' to improve Project work processing and monitoring with industry-class dashboards and MIS reports. The proposed system also includes to develop an online system HR Payroll & Establishment management and attendance system to computerize the human resource, payroll and attendance management of the Jammu Municipal Corporation.

To achieve the goal, under Smart City Mission, Jammu Smart City Limited (JSCL) & Jammu Municipal Corporation (JMC) has awarded the work order to SoftTech Engineers Limited to bring integrated solutions for Engineering and Accounts Department of Jammu Municipal Corporation, Jammu. JMC intends for computerization of Works and Projects Management and Monitoring Application (WMS) in Engineering and Procurement Department of Jammu Municipal Corporation, Jammu. This is required for the smooth functioning of its infrastructure development works with efficient and effective monitoring of the Project Works and fast services to all the Project stakeholders. The WMS is a web-based Works Management solution to manage the entire life cycle of Engineering and Accounts Department processes viz. Planning, Estimating, Contract Management, Execution, Monitoring and Billing of the works with managing daks, documents, stores and inventory, asset, payroll & establishment, attendance of the employees of the Jammu Municipal Corporation.

JMC intends to have a fully integrated system with real-time update and access of detail data. The solution should provide facility to provide centralized key corporate services with accurate and flexible mapping of organizational roles in the ERP, accurate and easy availability of information with drill downs, drill ups with supporting data and easy to set-up, learn and train. It should have authentic, reliable, accurate and timely data with MIS from the system (reports daily/weekly/monthly) having robust system architecture and scalable for future growth.

Vision of the project is to bring efficiency, effectiveness & transparency in operations of Jammu Municipal Corporation. The goals to achieve are as below:

- Easy and speedy access to services of department for all the stakeholders

- Transparency of information across the department and all the stake holders

- To put in place a strategic planning tool to facilitate effective resource allocation and budgeting

- To make existing processes more efficient by reducing duplication of efforts and enable them to be used as an effective management tool

- Authorized access of information across the department to all the stake holders.

- Efficient and better MIS systems for improving the internal efficiency of operations

- To incorporate fast decision making, effective monitoring and administrative control by discovering a seamless flow of information across the organization.

- To define workflow-based online solution to increase the efficiencies of internal operations and responsiveness of employees by cutting down time delays due to avoidable file movements which enhances the productivity of the organization.

- To define a seamless access of the information in the system and generate/ view all the reports in the system to reduce the paperwork of the organization.

- To enhance ease and convenience in accessing information and services for their employees and external users like contractors.

- To build a systematic library of scheduled items along with their description, rates and classification to prepare the Cost estimate of the related work based on the type of work categories.

- To schedule project plans systematically based on milestones and activities of the project work.

- To ease the controlling and monitoring of the works in progress for their physical as well as financial progress.

- To design, develop and customize effective MIS reporting and dashboards for analyzing, reporting and better decision making for higher management and administration of the organization.

- To facilitate location-based mobile app services like e-MB through Mobile Platform (Mobile App) for easy reporting and monitoring of the projects which can be adopted easily by the users.

- To ease the billing and disbursement process of the project works to the assigned contractors.

- To track the received and dispatched Daks within the organization with unique identification numbers.

- To implement robust document management system for storing the scanned documents in a proper defined library based on file attributes (categories, classification, purpose/case to be dealt on file, creation date, created by and modified by etc.) and associated parameters, timelines for file tracking.

- To maintain organizations stores/inventory for the stock of the items against the project works with the approval of the authority for stocking/unstocking of the items on the basis of their category.

- To manage assets of the organization, movable or immovable considering the various stakeholders in the process and easy monitoring of them.

- To manage tools and machinery of the organization for Works Management.

- To maintain, access and update organization's employee details from single source.

- To design, develop and implement a well-defined online Attendance system with facial recognition system (Mobile App and Web portal) to monitor and manage the organizations resources effectively.

The objective of this project is to support and enable the Jammu Municipal Corporation to make effective use of IT for the betterment of services that are being delivered to the stakeholder's orders.

The total period of project completion is 5 years and 6 months. The period of application system implementation is 6 months and period of operations and maintenance is 5 years inclusive of 1 year of warranty support.

1.4.1　About Client

Jammu Municipal Corporation:

Jammu Municipal Corporation is headed by the city's Mayor and governed by the Commissioner. The city has been divided into 75 wards with an approximately area of 240 sq. km.

Jammu Municipal Corporation is created for the following functions:

1. Planning for the town including its surroundings which are covered under its Department's Urban Planning Authority.
2. Approving construction of new buildings and authorizing use of land for various purposes.
3. Improvement of the town's economic and social status.
4. Arrangements of water supply for commercial, residential, and industrial purposes.
5. Planning for fire contingencies through Fire Service Departments.
6. Creation of solid waste management, public health system, and sanitary services.
7. Working for the development of ecological aspects like the development of Urban Forestry and making guidelines for environmental protection.

8. Working for the development of weaker sections of society like mentally and physically handicapped, old age, and gender-biased people.

9. Making efforts for improvement of slums and poverty removal in the town.

Jammu Smart City Limited (JSCL):

The Jammu Smart City Limited (JSCL) is the central government organization deputed to fulfill the purpose of Smart City Mission in Jammu which includes providing vital public and governmental services to the people of Jammu city. The mission of JSCL for Jammu city is to improve the economic as well as personal growth of every individual of the city by enabling the development of its local areas and obtaining latest technologies.

The idea of Jammu Smart City Project and the objective of the SPV, Jammu Smart City Limited, is to transform the city into a city "of the people, for the people and by the people"; a city, people take pride in calling their own; a city people own and take responsibility of; a city which is an epitome of good, sustainable and healthy living and a city where "happiness quotient" is high. The main objective of JSCL is to boost the smart solutions of the public works in the city for better and easy livelihood of its people.

The following are the names of the key SPOC(s) and domain experts from the client side:

S. No.	Core Business Activity Name	Primary SPOC / Owner	Secondary SPOC / Owner	Remarks
1.	Proposed system with all modules and sub modules	1. Mr. Ankush Kapoor, Informatics Officer, Jammu Municipal Corporation	1. Mr. Rahul Yadav, Municipal Commissioner, Jammu Municipal Corporation 2. Rimpy Ohri, Joint Municipal Commissioner, Jammu Municipal Corporation	NIL

1.5   Scope of Project

The scope of the project is to Design, Development, Implementation, Integration, Testing, Commissioning, Operation and Maintenance of web-based 'Works and Projects Management and Monitoring Application (WMS)' (COTS Product) for Jammu Municipal Corporation.

Overview of the proposed indicative functional modules and sub-modules as per RFP document for the WMS System are as follows:

1. Works Management Module
   a. Web Portal (The Service Provider shall develop a portal for integrated functioning of all above modules and as per the requirements of JMC)
   b. SOR & Rate Analysis
   c. Estimate Preparation
   d. Technical & Administrative Sanction
   e. E-Measurement
   f. MIS Reports & Dashboards.
2. Project Management Module
   a. Project Planning
   b. Project Scheduling
   c. Project Monitoring & Control
3. E-Billing for works Management Module.
4. Contract Management Module
5. Document and Dak Management Module
6. Stores/ Inventory Management Module.
7. Asset (Tools, Machinery, Hardware, Vehicles etc) Management Module
8. Complete HR, Payroll & Establishment Management Module
9. Online Attendance System with Facial Recognition System (Mobile App. & Web Portal).
10. Additional Works Module

To encore above said processes, the scope of the project work has been divided majorly into 2 phases as given below:

PHASE 1:   Design, Development & Implementation phase: The phase 1 of the project involves design, development & implementation of the required application system with the proposed modules. The completion period for phase 1 is 6 months from the date of contract agreement. The stages involved in the phase 1 are as given below:
Stage 1:   Requirement gathering & analysis
Stage 2:   System design and architecture
Stage 3:   Application development and customization of application on test server
Stage 5:   Application testing and acceptance on test server
Stage 4:   Comprehensive training programs to core team of 12 members selected by JMC and end users with user manuals.
Stage 5:   Final Go-Live of the application on public domain as per consultation with JMC.

PHASE 2:   Operational Support and Maintenance: The phase 2 of the project involves operational support and maintenance (O&M) of the live application system for the period of 5 years from the final Go-Live of the application.

Design phase to emphasize following points:

1. To understand the requirements of the stakeholders and propose solution to meet all the specific business functional requirements.

2. To prepare the Software Requirements Specifications (FRS) of functional and non-functional requirements of the proposed system

3. To assess existing IT system and the proposed solution to arrive on Gap analysis.

Development phase to emphasize following points:

1. To provide the hardware requirements as well as any system software or supporting software or database software required for hosting on data center / cloud server.

2. To develop mobile platform (Mobile App) and identify services that can be developed through mobile devices, facilitating ease of use and faster adoption.

Implementation and Go Live phase to emphasize following points:

1. Deployment of Portal & Applications on Centralized Server.

2. Provide a web-based interface for data entry.

3. Security Policy Implementation.

4. Installation & Configuration of the WMS application solution for Engineering and Procurement Department of Jammu Municipal Corporation, Jammu Authority.

5. User Acceptance Testing (UAT) which will be done in a phased manner.

6. UAT will be done module wise with masters, transactions and reports modules.

7. Training of the application to the requisite number of Jammu Municipal Corporation, Jammu officials.

Operational & Maintenance phase to emphasize following points:

1. Support and Maintenance of the WMS Application for Jammu Municipal Corporation, Jammu.

The below diagram depicts the high-level scope of work:
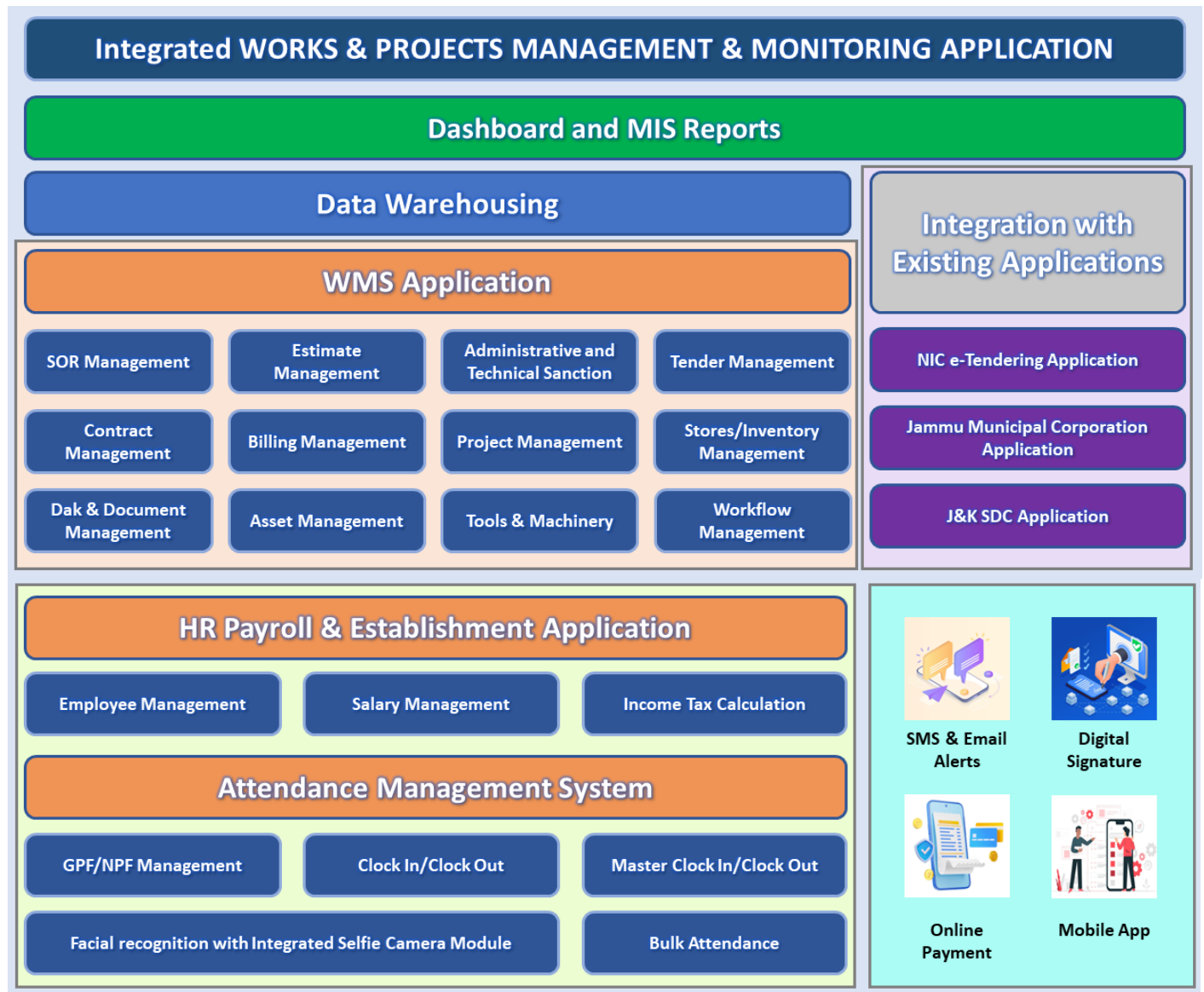
Fig. 1 : High Level Scope Diagram

2　General Description

2.1　Product Perspective

The integrated Works and Projects Management and Monitoring Application (WMS) is a product that is specifically designed to manage the Works/ Projects that are being executed by the various government organizations. In this system different types of works are executed along with various activities/ processes related to it and manages the complete work cycle. These activities can be defined as Administrative Approval, Technical Sanction, Drafting Tender Papers, and Preparing Notice for Inviting Tenders, Issuing Work Order and Billing, File Management (Dak), Store & Inventory Management, Asset management, HRMS, Payroll &Pensions and online attendance system.

This quality product will able to manage all above activities in digital manner. It will take care of Validations, Approvals, Process Flows, Documents Generation, tracking of records and maintains transaction approval history.

Having above salient functional features, this application is very user friendly, highly configurable, flexible reporting capability with built in data security and backup and recovery capabilities.

This section below describes, in brief, the business practices addressed by the new/target IT System:

S. No.	Business Flow Name	New / Existing	Addressed by System Module	Addressing Overview	Remarks
1.	Web Portal	New	Web Portal (JMC Website)	Gateway to access the proposed services with all the required details about the department.	
2.	Work Management	New	Works and Projects Management and Monitoring Application (WMS)	Integrated management of all the work execution related activities of Department like estimation and DPR preparation, technical sanction, tender document preparation, issuing LOA, work orders, project planning and monitoring, measurements and billing till work completion and approval process for all activities from competent authorities.	
3.	Project Management	New	Project Management	Project planning scheduling and monitoring	
4.	E-Billing Management	New	E-Billing Management	Measurements and monitoring of the works with the provision of taking measurements from mobile app and processing for the billing with the features of part/full payment, advances, recoveries, applicable taxes with approval process from competent authority. Provision for extra items approval, work extension and work completion.	
5.	Contract Management	New	Contract Management	Provision for contractor registration, issuing of LOA and work orders with incorporating contract agreement process	
6.	Dak and Document	New	File	Provision to store, create, edit,

	Management		Management	forward files in office & outside of office also user tracks each & every file	
7.	Store & Inventory Management	New	Store & Inventory Management	To capture the stock issued against the work to be done by the department	
8.	Asset management	New	Asset management	To maintain the department's assets which are movables properties and non-movable properties. Asset like building, houses, land, park, garden and movable assets like Machineries, vehicles etc.	
9.	Tools & Machinery Management	New	Fleet Management	To manage and maintain the movable assets of the electrical and mechanical department.	
10.	HRMS, Payroll & Establishment Management	New	HRMS, Payroll & Pension Management	To maintain and track the information pertaining to all the employees in the organization. To manage and disburse the wages pertaining to all the employees in an organization.	
11.	Online Attendance Management System	New	Attendance System	To capture organization employee's attendance using face recognition solution.	
12.	General Council Management	New	General Council Management	To manage the general house meetings, proceedings from various departments.	
13.	Workflow Management System	New	All modules	To receive and process the request / applications within the organization as per defined process of approval.	

NOTES:
- Detailed list of all Business Flows addressed by the new/target IT System appears in this document.
- Details of expected advantages from client's target IT System, appears in this document.

2.2 User Characteristics

The Users of the system shall be the officials of Jammu Municipal Corporation and contractors registered in JMC or non-registered contractors, who work for the state engineering departments. There are various categories of users ranging from AE, JE, AEE, EE, JMC, MC, Draftman, SO, AAO, CAO, Assistants.

This Section details out the users and their respective categories that use the System.

S. No.	IT System User Name	User Class / Category	Business Flow Responsibilities	Remarks
1.	Junior Engineer	Not available	Works Management, Store & Inventory, O&M	
2.	Assistant Engineer	Not available	Works Management	
3.	Assistant of Executive Engineer	Not available	Works Management	
4.	Executive Engineer	Not available	Works Management	

5.	Municipal Commissioner	Not available	Works Management	
6.	Joint Municipal Commissioner	Not available	Works Management	
7.	Chief Accounts Officer	Not available	Works Management, HR Management, Payroll & Wages Management	
8.	Assistant Accounts Officer	Not available	Works Management, HR Management, Payroll & Wages Managemen	
9.	Transport Officer	Not available	Asset Management, Transport Management	
10.	Draftsman	Not available	Engineering	
11.	Computer Operator	Not available	Council Cell	
12.	Head of Department	Not available	Council Cell	
13.	Store Officer	Not available	Store & Inventory Management	

NOTES:

The details of future/target/new/reengineered business flows of the client, including diagrammatic representation, appear in this document.

Based on the Office and Post assigned the users will get the access authorization of the WMS System.

2.3   Infrastructure & System Constraints

Below mentioned infrastructure is required for the effective and efficient use of the proposed system:

- Microsoft Windows Servers with the required configuration and supporting software's to deploy the application.

- Access of application through Static IP.

Hardware Limitations:

- LAN connectivity (Network) and other attached devices.

- Server that provides scalability (performance & memory) on the fly.

- High computing power to process huge amount of data for analytic reports.

- Memory / Storage – Especially in case of Document storage should be high.

Software Limitations: File corruption or conflict due to installation of any new or unknown application/program, which may or may not be hostile in nature.

The system can only be deployed on windows-based servers. However, there is no restriction on the operating system of the client machine.

Data Constraints: System is dependent on data from all existing applications and hence require the existing applications to maintain API so as to provide our system with correct data and without any discrepancies

API protocols constraints:

- Data should be provided in already agreed upon format only

- Any changes in API must be notified to us

Availability Constraints: Secure server which is available 24X7.

S. No.	Constraint Type	Description	Remarks
1.	Application criticality		
2.	Safety compliances		
3.	Regulatory compliances		
4.	Hosting compliances		
5.	Hardware limitations		e.g., signal timing requirements
6.	Hardware constraints		e.g., min. hardware requirements
7.	Parallel operation		
8.	Audit function compliances		
9.	Control function compliances		
10.	Signal handshake protocols		
11.	Security needs & compliances		

2.4   Assumptions & Dependencies

Following are the key assumptions made during the requirement analysis:

- Existing Jammu Municipal Corporation processes are the basis on which requirements are gathered as they are right reflection of how things are done.

- Core implementation team has good understanding of requirements/ needs within functions and exceptions (if any) across other department entities. All such requirements have been identified, communicated and incorporated herein post confirmation from the core team.

- Processes, needs & expectations in system shall be captured in subsequent analysis phase & incorporated after completion of the project.

- Owner of existing applications will provide well-formed APIs which provides raw as well as analyzed data in the format specified by JMC.

3　Proposed Product Functionality

After studying the business process of Jammu Municipal Corporation following modules and sub-modules are identified for computerization of Works & Projects Management & Monitoring, General Council Management, File Management, Asset Management, Store and Inventory Management, Human Resources Management and online Attendance system.

Proposed system shall comprise of below modules & sub-modules:

- Web Portal

- General Council Management

- SOR and Rate Analysis

- Administrative Approval

- Technical Sanction Module

- Tender Management Module – Draft Tender Papers (DTP) Module

- Tender Management Module – Notice Inviting Tenders (NIT)

- Contract Management – Contractor Empanelment

- Contract Management – Tender Award / Acceptance

- Contract Management – Agreement Module / Work Order (WO)

- E-Billing Management – E-MB / Measurement Abstract

- E-Billing Management – Billing

- Project Management

    - Project Planning

    - Project Scheduling

    - Project Monitoring & Control

- File Management (Dak)

- Asset Management

- Store and Inventory Management

- Fleet Management (Tools & Machinery Management)

- HR Payroll and Establishment Management

- Employee Management

- Salary Management

- Attendance Management

- GPF/NPS Management

Below diagram indicates the different modules of the WMS system which will be implemented in Jammu Municipal Corporation:

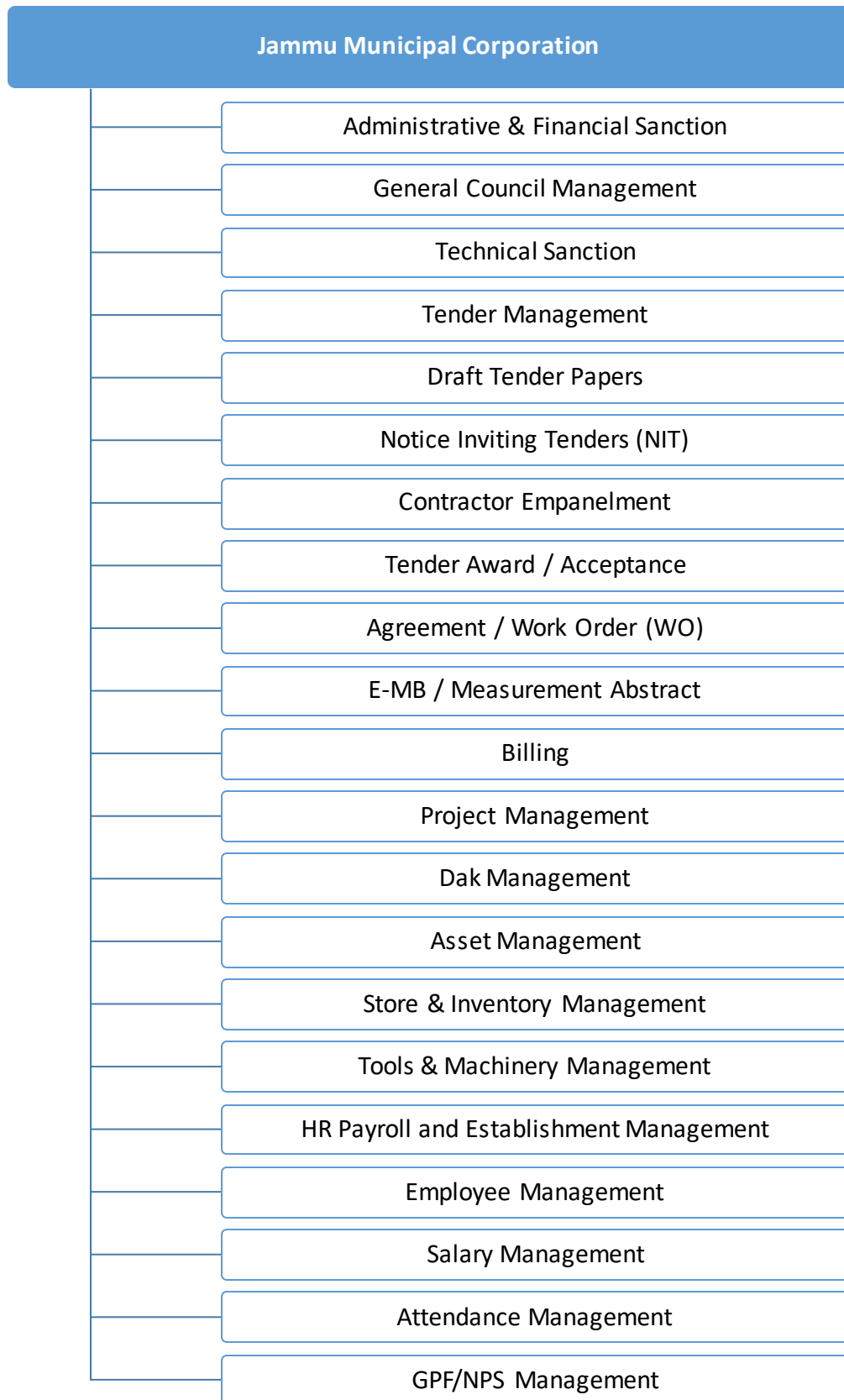| Jammu Municipal Corporation |
| --- |
| Administrative & Financial Sanction |
| General Council Management |
| Technical Sanction |
| Tender Management |
| Draft Tender Papers |
| Notice Inviting Tenders (NIT) |
| Contractor Empanelment |
| Tender Award / Acceptance |
| Agreement / Work Order (WO) |
| E-MB / Measurement Abstract |
| Billing |
| Project Management |
| Dak Management |
| Asset Management |
| Store & Inventory Management |
| Tools & Machinery Management |
| HR Payroll and Establishment Management |
| Employee Management |
| Salary Management |
| Attendance Management |
| GPF/NPS Management |

Figure 2 : Modules of Proposed Application System

3.1   Web Portal (JMC Website)

3.1.1   Description:

A web portal is a website or online platform that serves as a centralized gateway to access a wide range of information, services, and resources. It typically provides users with a unified interface to interact with various applications, databases, and content. Web portals can serve different purposes, such as serving as a corporate intranet, an e-commerce hub, a news aggregator, or a government service portal. They often offer personalized features, user authentication, and content aggregation, making it convenient for users to navigate and access information or perform tasks efficiently. Web portals are designed to streamline online experiences and enhance accessibility.

A user friendly, informative, interactive and easy to access web application shall be developed for JMC. The web portal shall be an integrated portal for all proposed modules. This comprehensive web application aims to enhance departmental transparency, streamline access to information and services, and improve engagement with citizens, officials, and stakeholders.

3.1.2   Functional Requirement:

The new website or web portal shall mirror the structure, content and functionality of the current JMC website with suitable changes as per the proposed system, serving as a common web portal for JMC-related activities and information. The link for current JMC website is https://www.jmcjammu.org.

The provided list details outline the sections and features required for the web application home page, with a focus on transparency, accessibility, and efficient information dissemination:

About the Department:

- The "About the Department" section will provide detailed information about the department's mission, functions, and objectives.
- Users, including the general public, department staff, and stakeholders, will have access to comprehensive content explaining the department's purpose and role.

Department Schemes:

- The "Department Schemes" section will present detailed information about the various schemes and initiatives offered by the department.
- Users, particularly citizens seeking to benefit from these schemes, will be able to access scheme details, eligibility criteria, and application procedures.

Vision and Objectives:

- The "Vision and Objectives" section will clearly outline the department's vision, objectives, and organizational structure.
- Users, such as department employees, stakeholders, and the public, will have a transparent view of the department's goals and structure.

Contact Information:

- The "Contact Information" section will feature a directory of department officers, organized by office and job designation, for easy access.
- Users seeking to contact specific department personnel for inquiries, support, or collaboration will find a convenient and organized contact directory.

Project Progress:

- The "Project Progress" section will offer real-time updates on the status and progress of department projects.
- Stakeholders, citizens, and department employees will have access to project-specific information and timelines.

Forms and Applications:

- The "Forms and Applications" section will provide easy access to various forms and applications related to department services.

- Users, including citizens, businesses, and contractors, can conveniently access, download, and submit the required forms.

Citizen Charter:

- The "Citizen Charter" section will articulate the department's commitment to service quality and standards for citizens.

- Citizens will have clear expectations of the quality of service they can anticipate from the department.

Photo Gallery:

- The "Photo Gallery" section will feature a collection of photographs providing visual insights into department activities.

- Users, including the general public, can visually engage with the department's initiatives and accomplishments.

Browser Compatibility:

- Ensuring "Browser Compatibility" is essential to ensure the web portal is accessible through all modern web browsers.

- All users, regardless of their choice of web browser, will be able to access the portal seamlessly.

Rules and Regulations:

- The "Rules and Regulations" section will provide users with easy access to department rules and regulations.

- Users seeking regulatory information will find a comprehensive source of guidance.

Notifications and News:

- The "Notifications and News" section will provide timely updates on department news and notifications.

- Users will stay informed about the latest developments, announcements, and notices from the department.

General Council Proceedings:

- Section to view the proceedings of the General House, including online submission of councilors' questions and resolutions, meeting minutes.

Online Payments:

- "Online Payments" will be integrated with payment gateways to enable online payment of fees or charges.

- Users, including citizens and businesses, will be able to make secure online payments for various department services.

Statistical Data:

- The "Statistical Data" section will allow users to query and access statistical data related to department projects.

- Researchers, analysts, and stakeholders will have a user-friendly platform to gather essential data.

Job Postings:

- The "Job Postings" section will provide information about job openings and recruitment details within the department.

- Job seekers and potential candidates will be able to explore career opportunities within the department.

Contractor Registration:

- The "Contractor Registration" section will offer a facility for contractors to register or update their project works information online.

- Contractors will have a user-friendly online platform to manage their profiles and qualifications.

NOC Application:

- The "NOC Application" section will feature an online application process for No Objection Certificates (NOC).

- Applicants, including individuals and businesses, can conveniently apply for and obtain NOCs through the portal.

Feedback and Contact:

- The "Feedback and Contact" section will include forms for users to provide feedback or get in touch with the department.

- Users will have a direct channel to communicate with the department, report issues, and offer suggestions.

3.1.3   Expectations from Proposed System:

- **Push Notifications**: Capability to send SMS or app notifications for important updates.

- **Data Migration**: Transfer of data from the existing website to the new portal as needed.

- **Custom Work**: Flexibility to add additional features or functionalities as per the specific needs of the department.

- **Content Management**: A Content Management System (CMS) for easy, front-end content updates and modifications.

- **Proposed Website**: Proposed website shall mirror the structure, content and available services in the current JMC website https://www.jmcjammu.org. The proposed modules and services shall also be availed from this website.

3.1.4   Functional link with other Module/Departments

- **Access**: Gateway to access all integrated proposed and current modules in JMC.

3.1.5   Configurable Master Table Management

- **Content Management**: A Content Management System (CMS) for easy, front-end content updates and modifications.

3.1.6   Access Matrix

Module	Role	Processes
Web Portal	Department users	Login with User credentials. Access role-based modules. Access web-portal details and information.
	Contractors	User registration. Login with User credentials. Access role-based modules. Service/registration payment. Access web-portal details and information.
	External users	Access web-portal details and information.

3.1.7   Reference Screen:

Few proposed screen for Web Portal shall be as below:

1. Home page:

2.   About JMC:

3.   Contact JMC:

JAMMU MUNICIPAL CORPORATION

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Contact Us

Officers/Officials of JMC　　Sanitation Supervisory Staff　　Enforcement Staff　　Works Staff　　Municipal Councillors

CONTACT ADDRESS & NUMBER OF JMC

Address : Town Hall Jammu, Jammu and Kashmir 180001

Phone No : 0191-2520448, 2520428

CONTACT NUMBERS OF OFFICERS / OFFICIALS OF JMC.

Helpline for Online Birth & Death Applications

S. No.	Name	Designation	Phone No	Mobile No
1.	Sh. Rahul Yadav, IAS	Commissioner	(O) 2542192 2547846	--
2.	Smt. Rimpy Ohri, JKAS	Joint Comm. (Adm.)	2546252	--
3.	Sh. Sanjay Badyal	Deputy Comm. (North)		9419137292
4.	Ms. Parvinder Kaur, JKAS	Secretary		9622502727
5.	Sh. Rakesh Gupta	Joint Comm., ACEO, JSCL		9419128265
6.	Sh. Kulbhushan Khajuria, JKAS	Joint Commissioner (H & S)		9419113689
7.	Sh. Sandeep Singh	Chief Accounts Officer		9419169102
8.	Smt. Roopali Puri	Deputy Legal Rememberence		7006615204
9.	Dr. Vinod Sharma	Health Officer		9419182088
10.	Parveen Gupta	Pvt. Secy. to commissioner	(O) 2542192	9419104451
11	Sh. Rajesh Sumbria	Joint Comm. (Works)		9419187824
12.	Sh. Arun Gupta	Xen (Division - I)		9419160239
13.	Sh. Lokesh Gupta	Xen (Division - II)		9419182645
14.	Sh. Ajay Gupta	Xen (Division - III)		9419183633
15.	Sh. Hansraj	Xen (Division - IV)		9796613587
16.	Sh. Arun Gupta	Xen(E)		9419160239
17.	Er. Rayaz-ul-Hussan Mir	Xen (Mech.)		9419211990
18.	Sh. Vijay Singh Manhas	Xen, UEED		9419142784
19.	Sh. Nisar Hussain Raza	Chief Transport Officer (Zone III)		9419795228
	Sh. Talat Mehmood Khan	Chief Transport Officer (Zone I & II)		7006480719, 9469748042
20.	Sh. Firdous Ahmed Qazi	Xen Projects Division		9419189175
21.	Dr. Sushil Sharma	M. V. O		9419203536
22.	Kamal kishore	Building Officer		8492081239
23.	Sh. Kapil Khajuria	Building Officer		9018896437
24.	Helpline For Online Birth & Death Applications		(O) 2578503	
25.	General helpline numbers	2520448	2520428	

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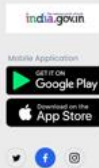
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> Achievements
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4.   Login page:
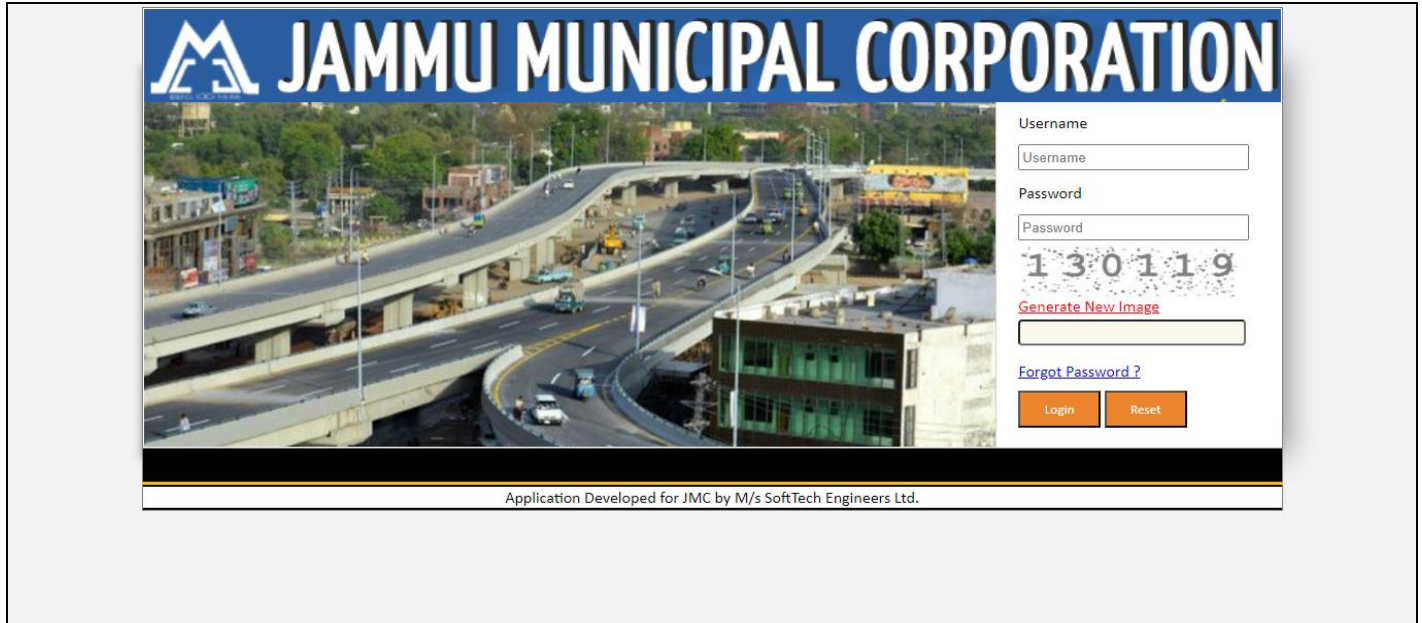
3.2   Works and Projects Management and Monitoring Application (WMS)

The Module covers the process of engineering section from Work Identification, Work Initialization, Approval of Work and Actual Work completion. This module consists of different processes or Sub Modules, as under:

- Work Identification, Survey and Preparation of Rough Cost Estimate using SOR & NON-SOR Items, Budget allotment to the Work (Administrative & Financial Approval)

- Approval of Detail Estimate (Technical Sanction)

- Preparation and Approval of Tender document including G-Schedule, Bill of Quantity (BOQ).

- Preparation and release of Letter of Acceptance

- Preparation and release of Work Order / Proceed to Execution of Work

- Preparation of Work Program (Project Scheduling) as per the Mile Stones considered in the Tender Documents.

- Work Execution as per Schedule Program.

- Measurement and Recording of Tender and Non-Tender Items (Extra Items) in E-Measurement Book through mobile as well as web application.

- Approval of Extra Items from Competent Authority.

- Entry of Project Progress Report (PPR).

- Preparation and release of Contractor Bills (Advance/ RA/ Final).

- Process of Time/Work Extension of the Work.

- Process of Completion of the Work.

- Enlisting of Contractors.

3.2.1 Process Flow
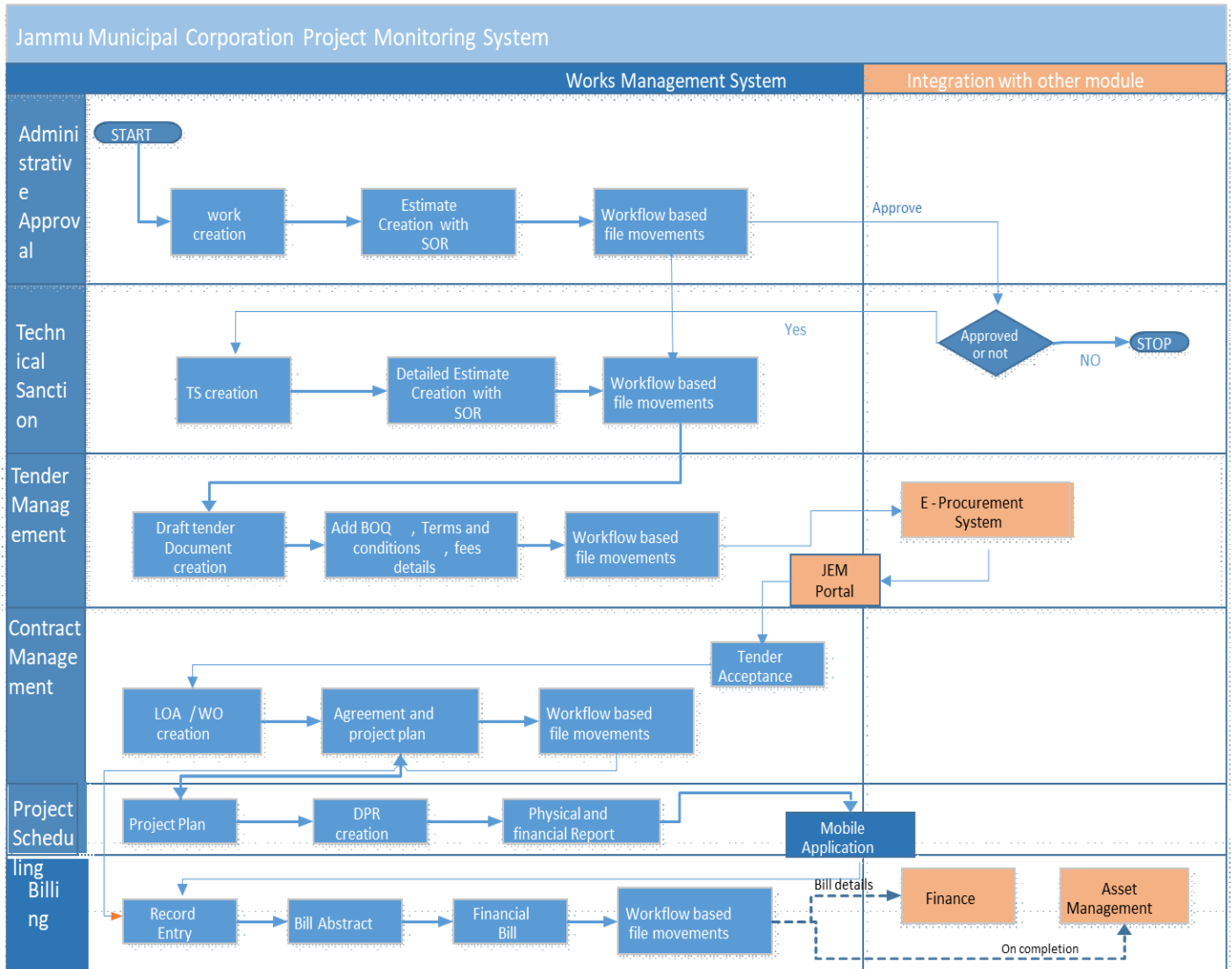
3.2.2 Administrative Approval

3.2.2.1 Description:

Administrative Approval (AA) is a process which includes creation of Work, its Detailed Estimate along with its financial provisions / approval of the work that is to be executed in public interest at selected location by competent authority. AA contains information such as Name of work, Type of work, Nature of work, Estimate of work, Ward No., Office under whom the work falls and Budgetary details like Budget Head regarding work if sanctioned in budget.

Sanction shall be obtained from the competent authority designated by the concerned Government Departments, depending on the Cost and Office of the project. An Administrative Approval Proposal in the form of Cost Estimate is prepared using the SOR/CSR and Estimation Module which facilitates the complete process of Estimation by use of various permissible SOR/CSR. Where ever SOR/CSR rates (Non SOR Items) for particular items is not available, Market Rates are used with the permission of competent Authority.

The Administrative Approval proposal may include projects like Building work, Internal & External services, Electrical & Mechanical installation, Ancillary works and firefighting. Leads and Lifts shall be considered as per the define rules in the SOR/CSR. No Specific provision is made in the financial sanction for material and labor escalation and price variation. However, Escalation and price variation costs if payable over and above the financial sanction is computed in the System.

3.2.2.2 Process of Proposal Creation:

The generation of a proposal is a very peculiar process in JMC. There are many ways by which a proposal can be generated. It may start with a requisition of work from the Constitution members and other competent authorities or as per the plan for infrastructure growth of the state. A Work can be proposed by Elected Members of Local / Constitutional Bodies.

Depending on the Location, it is allotted to the relevant Office preferably of the Category of the Office. This Office conducts necessary surveys, Feasibility Studies and take measurements to prepare a Detail Project Report (DPR). This proposal can be created on the basis of Rough Estimate, depending on the time constrain and the seriousness of the project.

The Cost Estimate is prepared using the Estimation and SOR Module. SOR/Rate Analysis modules contains details of Various Labour Categories in use, list of all the Materials required for execution of the items in SOR/CSR, various Machinery Item Rates, Lead and Lift Charges calculations etc.

The Integrated Schedule of Rates by Rajasthan Urban Infrastructure Development Project (RUIDP) are used by Jammu Municipal Corporation. This Booklet is categorized into various Categories like Building, Bridges, and Roads etc. Each Category is further sub categorized into Chapters which in turn has various items pertaining to the particular chapter. The rates of these items are worked by doing rate analysis with the help of the resources for Labor / Material / Machinery/ Lead charges listed in the SOR booklet. If a NON SOR item is required for Estimation purpose it can be used with the permission of Competent Authority. Mostly an authority of the Rank of Executive Engineer, Superintending Engineer, Add. Chief Engineer or Chief Engineer is authorized to approve any NON-SOR Item.

Administrative Approval is Approval given to execute a Project Work under approved Scope of Work with approved financial budgets.
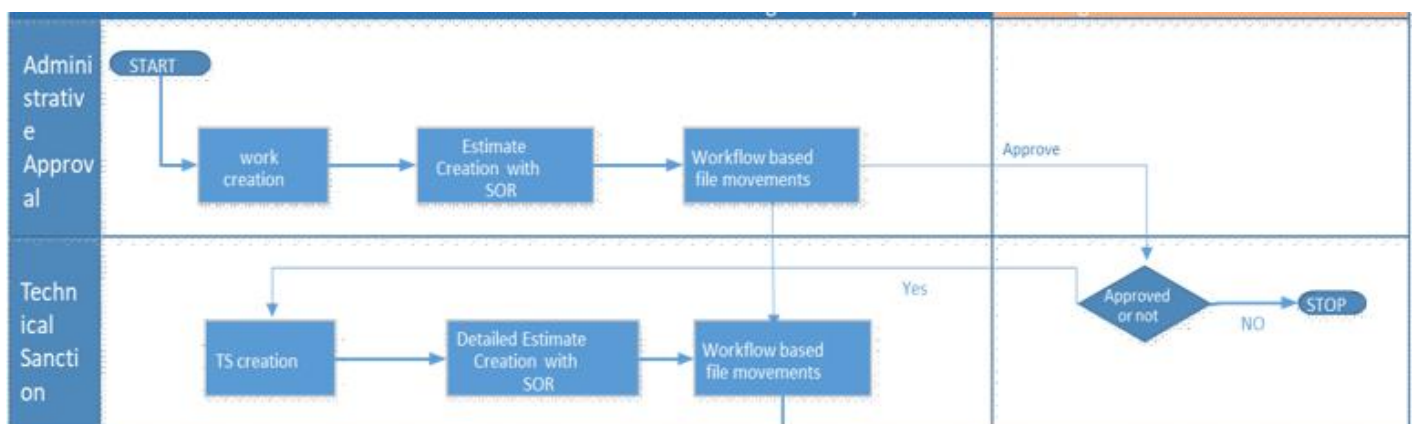
3.2.2.3   Functional Requirement:

The functional requirements underscore the capabilities and benefits of the system for users in maintaining SOR, estimating costs, and generating detailed estimates. The system's flexibility, automation, and robust reporting will enhance efficiency and accuracy in project planning and cost estimation.

For Department users:

Work details:

- Name of the Work

- Nature of Work

- Work Type/Category

- Scheme details

- Location details

- Sub-Work   details

Standard Schedule of Rates (SOR):

- The system will maintain a library of scheduled items, including descriptions and rates.

- Items will be classified into works and heads, with the option to further break items into sub-items at any level.

- The system will support version control for SOR items and will accommodate geographical location variances.

Maintenance of SOR Library:

- The system will maintain an extensive library of scheduled items with detailed descriptions and associated rates.

- Users can access the SOR library for reference when preparing estimates.

Multiple SOR Handling:

- The system will accommodate the management of multiple SORs to address various use cases.

- Users will have the flexibility to add items that are not defined in the standard SOR.

Hierarchical Item Representation:

- The system will offer a hierarchical representation of items, allowing the grouping of items based on departmental functions.

- This feature will enhance the organization of items within the system.

BOQ Calculation:

- The system will automatically calculate the Bill of Quantity (BOQ) based on the items selected from the SOR.

- Users will have the option to input the BOQ manually or import it from external sources, such as spreadsheets or CSV files.

Rate Analysis:

- The system will facilitate rate analysis for items, considering factors like units consumed per unit quantity.

- It will perform rate analysis for all SORs and connected items to derive optimal unit quantity rates.

- Overheads and additional cost parameters will be incorporated into the rate analysis process.

Databases for Unit Cost Items:

- The system will maintain databases for unit cost items, including labor wage rates, equipment rental charges, and material prices.

- This data will be crucial for accurate cost estimation.

Estimate Preparation:

- Users will be able to prepare detailed estimates for various works, utilizing both SOR and non-SOR items.

- The system will enable detailed measurements and calculations for estimate preparation.

- Estimates will be automatically generated by selecting items from the SOR, applying rates derived from rate analysis, and multiplying with the BOQ.

- Sub-estimates for different approval levels will be generated by the system.

- The system will support automatic revision of estimates when rate analysis is updated, and it will maintain a record of multiple revisions.

Custom Databases and Libraries:

- Users will have the capability to create and manage custom databases and libraries.

- These databases will be specifically designed for rate cards of resources, taking into account geographical variations.

Manual Review and Editing:

- The system will provide provisions for manual review, override, and editing of any cost element resulting from the cost estimation process.

- Users can make adjustments as needed, and the system will record comments on each override and edit for transparency.

Flexible Reporting:

- The system will support various reporting formats, including electronic reporting options alongside traditional paper-based reports.

- Users can choose the format that best suits their needs.

Bill of Materials (BOM) Generation:

- The system will automatically generate a Bill of Materials (BOM) from the estimate.

- This feature will streamline the materials procurement process for the respective users.

Approval Powers Management:

- The system will manage approval powers related to Administrative Approval (AA) Sanction.

- It will consider the competency level of the approving authority and permissible sanction amount for effective approval workflow.

3.2.2.4   Expectations from Proposed System:

- Facility to prepare Estimate / rough cost estimate and respective reports.

- Facility to prepare Estimate at broad level using the Cost Estimation Module, by selecting the desired SOR Chapter and Items.

- Estimate can be differentiating into Sub estimate as per work type and nature.

- System to provide facility to Copy a Work / Sub Work / Sub Estimate. After copying the works, the measurements can be modified / updated as per the actual requirements of the project.

- System will have provision of attaching drawings, maps and other attachments of the Work/AA Sanction where the work is to be executed.

- The Non-SOR items once defined will be available in Library for future use.

- System will have provision to store AA Sanctions for reference.

- General Reports related to AA Sanction for all concerned authorities like note sheet, cover note, AA approval reports, Abstract report etc.

- Facility to issue Approval / Sanction Letter for AA approval.

- WMS provides report which shows all AA Sanctions in a particular range with all possible filters Office wise, Work type wise, Budget year wise.

- Facility to take Print of Detailed / Brief Forecast Estimates.

- Facility to Maintain & Print AA Register from System.

- Facility to Filter sanctioned AA based on work category/Financial Years.
- Facility to filter the List of sanctioned AA for which no expenses are made.
- Facility to filter Budget head wise sanctioned AA proposals.
- To complete additional aspects to the system with respective to above functional requirements points.

3.2.2.5   Functional link with other Module/Departments

- Approved AA is forwarded for processing and approval of Technical Sanction and Detail estimate.

3.2.2.6   Configurable Master Table Management

Following parameters needs to be taken into consideration for Administrative & Financial Sanction:

Number configuration:

- Work Identification Number
- Administrative Approval Number
- Order Issuance Number

Nature of Work:

- Infrastructure
- Maintenance
- Others

Scheme:

- Scheme
- Scheme Type
- Scheme Source

Work types being covered:

Master Data:

S.No.	Work Category	Code	Work Sub-Category	Code
1	Road	1	CC Road	1
2			BT Road	2
3			Paver Road	3
4			WBM Road	4
5			Footpath	5
6			Other Road	6
7	Building	2	Office Building	1
8			School Building	2
9			Community Centre	3
10			Fire Station	4
11			Garage	5
12			Other Building	6
13	Sewerage	3	Sewer Line	1
14			Drains	2
15			Other Sewerage Work	3
16	Public Utilities	4	Public Toilet	1
17			Community Toilet	2
18			Other Public Utilitiy	3
19	Electrical	5	Street Lighting	1
20	Others	6	Parks	1

21			Water Tanks	2
22			Haajrigaah	3
23			Shed	4
24			Other Work	5

Estimate:

- Estimate with Item no., Item Description, Quantity, Unit, Rate and Amount

3.2.2.7   Access Matrix

Module	Role	Processes
Administrative Approval	Junior Engineer	Work creation. General details. Location details. Checklist details. Prepare rough estimate with SOR and Non-SOR items. Prepare measurements for the quantity taken in the estimate. Do the rate analysis for the item rates. Apply and calculate overheads. Attach additional documents, Send for internal review, Send forward.
	Assistant Engineer	Review, Attach additional documents, Send for internal review, Send forward, Send back
	Assistant Accounts Officer, Chief Accounts Officer	Budget allocation. Review, Attach additional documents, Send for internal review, Send forward, Send back
	Commissioner	Attach additional documents, Send for internal review, Send back, Approve

3.2.2.8   Sample Reports Format

Report format of Administrative Approval:

Administrative Approval Sanction Order

Memo No : ************   Date : ******

Subject : Administrative Approval of the estimate for Construction of Administrative building for VDOT

Please refer to your work id no PWD/22-23/EE CWD MO/BLD/OB/Original Work/0002 vide which you have requested for the administrative approval against the subject cited work.

The Governor of Punjab is pleased to accord Administrative Approval worth $ 53,429.00/- under head 21-2059-60-053-27-1212059600531900-00 for carrying out the subject cited work subject on the following terms and conditions that:-

1) The Rough Cost Estimate has been prepared as per schedule and manual after technical financial examination by the concerned officials. The rates taken are appropriate and most competitive.

2) The work will be allotted after calling bids and after giving wide publicity as per the instructions in this regard.

3) It should be ensured by the concerned Engineer that the work is executed at the lowest possible cost at the most competitive rates. The quality of work shall invariably be ensured in all cases at all levels.

4) No variation in terms of material or cost or scope of work shall be carried out without the approval of the Competent Authority.

5) Estimate for the work having cost more than one Crore will have to be vetted by the Technical Advisor.

6) The conditions prescribed by the Technical Advisor to the Government and contained in the technical notes shall be complied with.

7) All General terms and conditions imposed by PWD Code and Government Instructions are compiled with.

8) Technical Sanction of the estimate to be got accorded from the Competent Authority before approval of the tender.

9) The Administrative Approval is valid for one year from the date of issue. If the work is not allotted within this period, then approval will expire automatically.

Report format of MIS Reports:

Report format of Cost Estimate:

3.2.2.9   Reference Screens

The proposed screens for the module shall be as follows:

General AA Sanction screen

Screen of Cost Estimate

Approve AA screen

3.2.3　Technical Sanction

3.2.3.1　Description:

Technical Sanction is the process followed after the Administrative & Financial Sanction is accorded. During this process a purely Technical Proposal is prepared for the administratively approved Project / Work.

3.2.3.2　Process:

Once Administrative & Financial Sanction is accorded, the project / work has to be actually executed within the financial parameters prescribed in the AA Sanction. The AA Sanction also prescribes the actual Scope of Work. This is a very important criterion which has to be adhered to very strictly. Hence, the AA Order specifies

1. The Approved Scope of Work,
2. The financial Approval,
3. The Budget under which the Project/Work is approved.

Considering the above, a Technical Sanction has to be granted on the approved Estimate in AA Sanction. The Engineering Staff, involving Jr. Engineers / Assistant Engineers of relevant Office will prepare a full fledge Technical Proposal of the AA Approved Work and forward it for approval from competent authority.

The Administrative & Financial Approval can be split into number of proposals with the permission of competent authority, in most of the cases it is the AA Approving Authority which can give permission to split the Works. In this case there will be number of Technical Proposals.
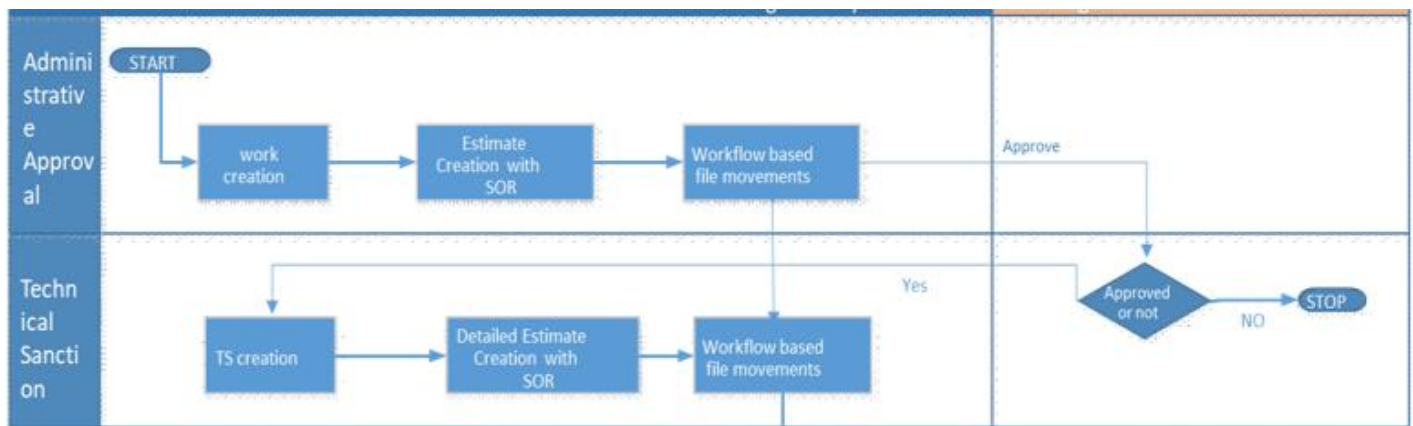
3.2.3.3　Functional Requirement:

The below functional requirements ensure that the system provides efficient workflow automation, document management, and historical record-keeping while accommodating the needs of different users and approval processes.

A Technical Sanction proposal necessarily comprise of a Detailed Estimate prepared in AA Sanction based on detailed Survey of the place of Work / Project, popularly known as DPR (Detail Project Report). This Technical Sanction Estimate is prepared using the Cost Estimation Modules which comprises of the number of approved and permissible SOR/CSR's.

The Estimate approved in AA Sanction shall be forwarded to competent authority for approval. There can be changes in AA approved estimate, addition/removal of item, increase/decrease of quantity of item but Total Amount cannot be more than AA Sanctioned Amount. Otherwise, AA Sanction needs to be processed again for the work.

Administrative Approval is Approval given to execute a Project Work under approved Scope of Work with approved financial budgets.

Functional requirements to the 'Technical Sanction' module are as follows:

Workflow Process Facilitation:

- The system will facilitate a streamlined workflow to move project plans and estimates through the approval process to competent authorities.

- The workflow will be user-friendly and adaptable for easy navigation.

Officer Review and Approval:

- Concerned officers will have access to the system to review project estimates.

- They will be able to provide comments, recommendations, and approvals.

- The system will enable them to forward the estimate to the next competent authority.

- Alternatively, officers can approve estimates within their financial powers directly through the system.

Document Management:

- The system will provide a centralized platform for document management.

- Users can view and upload all necessary documents required for Administrative Approval (AA) and Technical Sanction (TS).

- Documents will be organized in a structured manner, allowing for quick retrieval and reference.

Internal User Inclusion:

- The system will offer the flexibility to include internal users, particularly subordinates, in the approval workflow.

- Subordinates will have the opportunity to review and provide comments, enhancing the quality of the approval process.

- User roles and access levels will be clearly defined to manage participation.

Unique Reference Number Assignment:

- Upon the successful approval of an estimate, the system will automatically generate and assign a unique reference number for documentary reference.

- This reference number will serve as an identifier for tracking and reference purposes.

Workflow Automation:

- The application will implement a workflow-based system to automate the approval process for Project and Estimation Approval.

- This includes Administrative Approval (AA), Expenditure Sanction (ES), and Technical Sanction (TS).

- The system will dynamically adapt the workflow process based on the type of project and the competency levels of the users involved.

- Users with different roles and responsibilities will be guided through the approval process efficiently.

Configurable Workflow:

- The system will support the flexibility required for a fully configurable and adaptable workflow.

- Departmental procedures can be customized within the system to align with specific approval processes.

- Customization will be user-friendly, and administrators can easily define the workflow logic.

History Repository:

- The system will maintain a comprehensive repository that records the complete history of all approved works.

- Users can access a detailed log of the approval process, including comments, revisions, and relevant documents.

- The repository will serve as a reference point for auditing, analysis, and documentation of project and estimation approvals.

3.2.3.4   Expectations from Proposed System:

The Proposed System will have a full-fledged Cost Estimation Module with following facilities / utilities.

- The Library of this Module shall have all the SOR's that are permissible to use.

- The SOR / DSR to be in a systematic / formatted format wherein the user is facilitated to search for the desired items with

ease and comfort.

- Any update in the SOR Items or any part of SOR shall be updated in the System with providing the past History mapped with Dates and reasons and authority of Update

- The rules to be clearly defined for the preparation of Estimation process. Specifically, the quarry / lead calculations in the Rate Analysis for the items.

- Facility to upload supporting Documents / Check Lists with the Estimate Project.

- System will have provision to revise estimate send for TS with competent authority which System shall have provision to maintain the revision history of estimates.

- System will have provision for uploading drawings System shall have provision for attaching the standard drawings in archived PDF format.

- System will have facility to print, filter and create General Reports such as Face Sheet, Recapitulation Sheet, Abstract Sheet, Measurement Sheet, Lead / Quarry Detail Sheet, Rate Analysis, Drawings, Other Attachments.

- System will have facility to print and filter Estimate Summary Sheet

- System will have facility to print, filter and create TS Approvals Letter

- System will have facility to print and filter Item Specification

- System will have facility to print and filter Comparison statement between Preliminary Estimate and Detail Estimate

- To complete additional aspects to the system with respective to above functional requirements points.

3.2.3.5   Functional link with other Module/Departments

- Approved Technical sanctions are moved for tender document and NIT preparation.

3.2.3.6   Configurable Master Table Management

- Number Configuration – Technical Sanction Code.

3.2.3.7   Access Matrix

Module	Role	Processes
Technical Sanction	Junior Engineer	Prepare Detail Estimate. Prepare measurements for the quantity taken in the estimate. Do the rate analysis for the item rates. Apply and calculate overheads. Attach additional documents, Send for internal review, Send forward
	Assistant Engineer	Review, Attach additional documents, Send for internal review, Send forward, Send back
	Authority	Attach additional documents, Send for internal review, Send back, Approve

3.2.3.8   Sample Reports Format

Report Format of Technical Sanction:

JAMMU MUNICIPAL CORPORATION

Jammu Muncipal Corporation

Technical Sanction Order

Memo No : JMC/10/23/0003   Date : 16/10/2023

To

Guestae
Assistant Engineer
Sub Div-I

Subject : Construction of Multipurpose Hall at Circular Road Panjtirthi, Jammu.

Please refer to your letter no. JMC/10/23/0003 dated 16/10/2023 vide which you have requested for the Technical Sanction against the subject cited work.
S/R estimate for above noted work is Technically Sanctioned for Rs992,592.50/- under head ---N/A--- subject to technical regularities and allotment of funds.

Guestaee
Assistant Executive Engineer
Sub Div-I

Copy of the above is forwarded to the following for information and necessary action :-

Report format of Detail Estimate:

DETAILED ESTIMATE

Work Name :   Construction of metro line from Belapur to Pendhar.

Sr.No.	Code	Description	Amount In $
		Construction of metro line from Belapur to Pendhar.	1,195,102.00
		Work Portion	1,195,102.00
		Total	1,195,102.00
		Say	1,195,102.00 (N)

Report format of MIS Reports:

3.2.3.9　　　Reference Screens

The proposed screens for the module shall be as follows:

Screen of Import Administrative Approval for Technical Sanction

General Screen of Technical Sanction

Screen of Detail Estimate for Technical Sanction

3.2.4   Tender Management – Draft Tender Papers (DTP)

3.2.4.1   Description:

Jammu Municipal Corporation carries out its bidding process of inviting the tenders from the Registered and Eligible Contractors to execute the work which has been Accorded AA and TS. JSCL will initiate tendering process and float tenders. Tendering is usually undertaken by the use of bidding documents in which rates are quoted in the Bill of Quantities (BOQ).

The Process of Generating Tender Documents, floating Tender Notice, calling for bids, evaluation of Bids and awarding the contract is known as Tender Management.

3.2.4.2   Process:

Tender documents are prepared by Clerk, JE or AE on the basis of Technical Sanction then it is forwarded in the work flow for its approval. In this process first the draft tender paper is prepared in which along with noting sheets, estimate and other support documents such as general terms and conditions, specifications are approved through the work flow.
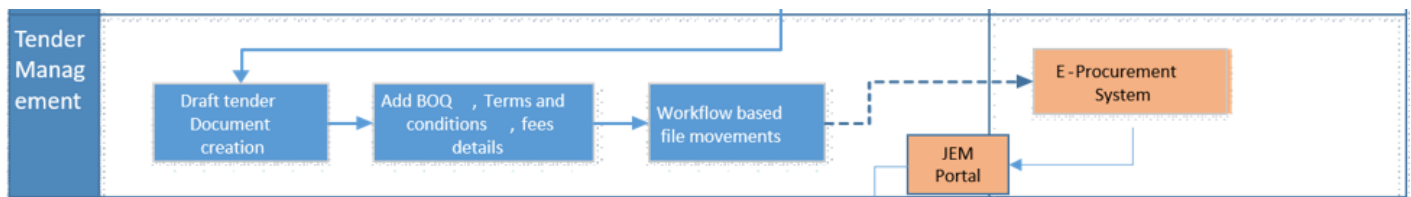
3.2.4.3   Functional Requirements:

the Tender Preparation and Management System will empower users to efficiently generate and manage tender documents and associated information. It will seamlessly integrate with the Contract Management Module and other systems, providing a cohesive and efficient environment for tendering processes.

For Department Users (Bidding Document Preparation and Management):

- Users will initiate the process of generating Draft Tender Papers automatically from the Sub Module of Stage II Estimate within the system. These papers will be created for all Technically Sanctioned Estimates.

- When generating Draft Tender Papers, the user will have the option to select the TYPE of TENDER from various classifications, including 'Item rate (Non-SOR Items)' and 'Percentage rate (SOR Items)'.

- The user will be able to choose to club multiple works or split existing work into more than one, as per project requirements.

- The system will automatically generate the following documents based on the Work Details:
  - Schedule G/H - Bill of Quantities (BOQ) after compilation of all sub-works
  - Tender Document with standard clauses
  - Annexures related to the specific tender

- Users will input and determine parameters, such as:
  - Cost of Tender
  - Earnest Money Deposit (EMD)
  - Processing Fee
  - Security Deposit
  - Tender Publish Date
  - Document Sale Start Date
  - Document Sale End Date
  - Bid Opening Date
  - Work Completion Period

Integration with Contract Management Module:

- The module will seamlessly integrate with the Contract Management Module of the proposed system. This integration

ensures that tendering and contract management processes are closely connected and streamlined.

Bidding Document Preparation:

- The system will provide a comprehensive set of tools for the preparation of Bidding Documents. Users can efficiently create all the necessary documents required for the tendering process.

BOQ Generation:

- The system will facilitate the automatic generation of the Bill of Quantities (BOQ) based on the Technical Sanctions, simplifying the estimation process.

Workflow-Based Approval Process:

- The approval process for the Document of Notice Inviting Tender (DNIT), BOQ, and Standard Bidding Documents (SBD) will be workflow-based. It will ensure that relevant stakeholders review and approve these documents in a structured manner.

Integration with Existing e-Tendering System:

- The system will integrate seamlessly with the existing e-Tendering System, promoting consistency and efficiency in the overall tendering process.

Additional Functional Requirements:

- The system will support various Tender Types, including Percent Rate and Item Rate, catering to different project requirements.

- Users will have access to dynamic templates for required documents based on Tender Types. They can customize and select conditions and Terms of Reference (ToR) that are relevant for specific works.

- The system will allow users to create multiple tenders from a single estimation, providing flexibility and adaptability to project needs.

- Users can combine and release multiple Tender Forms under one Tender Notice for better management.

- The system will provide options to split works, enabling multiple divisions to manage a single work. It will also allow for merging of works when necessary.

- Automatically, the system will generate the BOQ of a tender from various sub-works and sub-estimates within a work, reducing manual efforts.

- The system will maintain an updated Contractors database, covering all necessary parameters required for effective management and reporting.

- Users will have provisions to manage Billing data for contractors, especially when multiple contractors are involved in executing a single work. The system will streamline and maintain this data accurately.

- System shall have a module of financial evolution optionally available in two ways as:
  - Lower rate basis
  - Optimum rate on standard deviation basis

Tender Type	Purpose	Contents published	Expectations from Bidder	Evaluation & Decision Criteria
Percentage Rate	Percentage Rate Basis	Items (with specification), quantity & rates along with Estimated Cost are published	Vendor Quote % Above/Below/at per the Estimated Cost	L1/H1
Item Rate	Item Rate basis	Items (with specification) & quantity are published with Estimated Cost.	Vendor Quote Rate for every Item	L1/H1
Lumsum	Lumsum	Items (with specification) & quantity are published with Estimated Cost.	Vendor Quote % Above/Below/at per the Estimated Cost, Vendor Quote Rate for every Item	L1/H1

3.2.4.4　　　Expectations from Proposed System:

- Standardization of tender process and documentation.

- Generation of Item Specification reports.

- Generate and maintain tender Bill of Quantity (BOQ), Schedule G, Schedule H reports.

- Generate operational reports.

3.2.4.5　　　Functional link with other Module/Departments

- Approved Tender documents are moved for NIT preparation.

3.2.4.6　　　Configurable Master Table Management

Tender parameters with applicable criteria:

- Tender Type – Percent Rate, Item Rate, Lumpsum

- Tender fee –

- EMD Fee –

- Security Deposit Fee –

- Registration Class/Category of the Contractors –

- User defined – Tender document

- System generated – Tender document

3.2.4.7　　　Access Matrix

Module	Role	Processes
Tender Management – Draft Tender Papers (DTP)	Junior Engineer	Prepare Tender Document with all the general details of the tender like contractor eligibility, category, etc. Defining Tender Evaluation criteria. Important dates related to tender. Calculation applicable fee and deposits for the tender process. Attach additional documents, Send for internal review, Send forward
	Assistant Engineer	Review, Attach additional documents, Send for internal review, Send forward, Send back
	Authority	Attach additional documents, Send for internal review, Send back, Approve

3.2.4.8　　　Sample Reports Format

Report Format of Tender Document:

JAMMU MUNICIPAL CORPORATION

TENDER FOR

Name of Work   :   Construction of Multipurpose Hall at Circular Road
Panjtirthi, Jammu.

JAMMU MUNICIPAL CORPORATION

Work Name : Construction of Multipurpose Hall at Circular Road Panjtirthi, Jammu.

Index

Sr. No.	Particulars	Page From	Page To
1	Tender Important Dates	1	1
2	NIT_Online	2	2
3	Instructions to bidders (ITB)	3	3
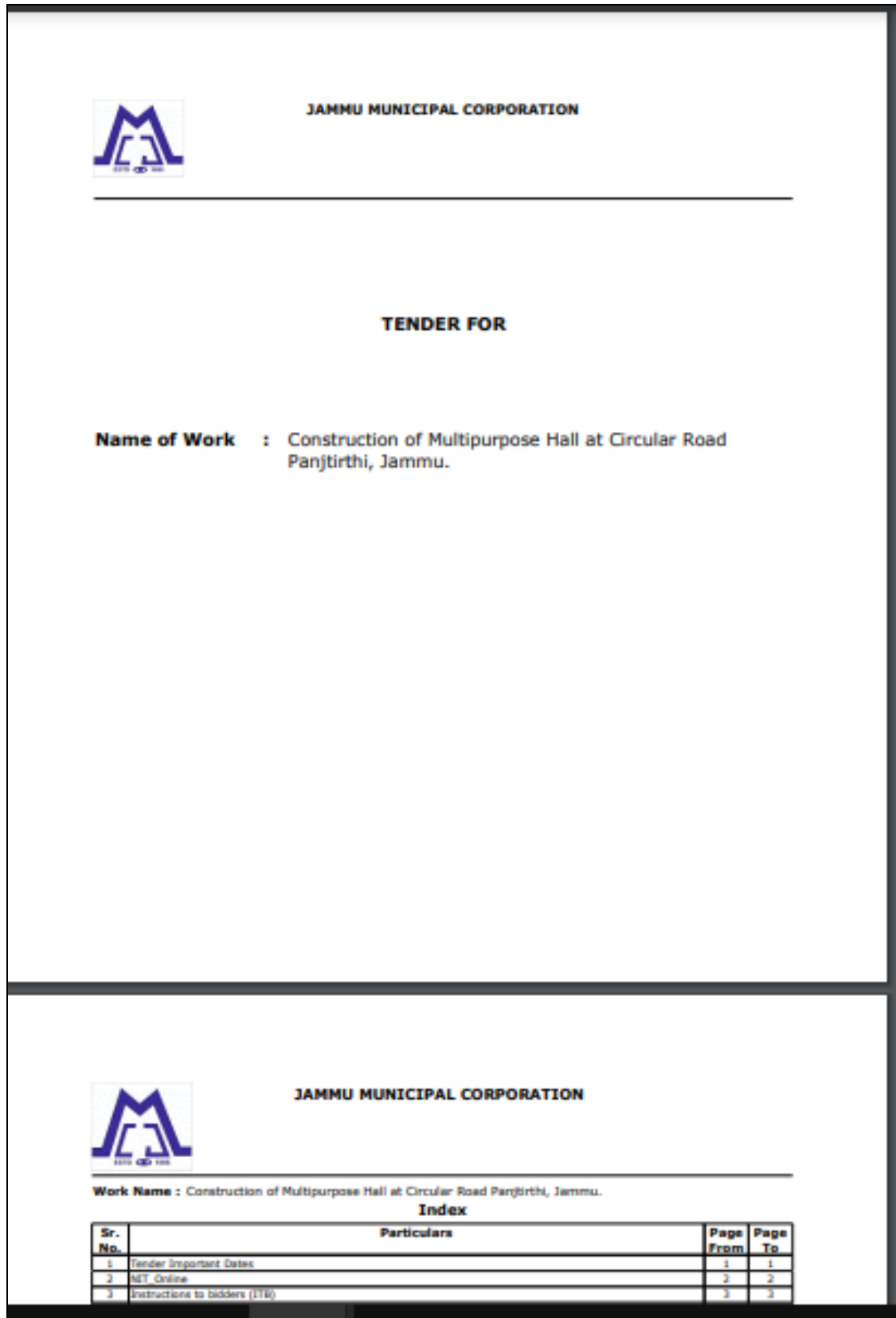
Report format of MIS Reports

3.2.4.9   Reference Screens

The proposed screens for the module shall be as follows:

Screen of Drafting a Tender Document:

BID Forms

Standard Clauses Screen

Tender Document Screen

Technical Evaluation Criteria Screen

Fees and Deposits

DTP Approval Screen

3.2.5   Tender Management – Notice Inviting Tenders (NIT)

3.2.5.1   Description:

Once the Draft Tender Papers are ready and approved by the competent authority, Tender Notice is published in News Papers as well as online e-tender portal.

3.2.5.2   Process:

There are standard norms prescribed for publication of Tender Notices in the News Papers. News Papers are categorized into local / District/ National level etc., and depending on the Cost and Nature of the of Work, the Notice is published at the prescribed time in the prescribed category of News Paper.

The Tender Notice contains Name of Work, Estimated Cost, Type of Tender, Tender Fee, EMD Fee, RISL Fee, Tender Publish Date and Time, Submission period and time limit etc.

3.2.5.3   Functional Requirement

The Tender Notice Preparation and Management System will empower users to create and manage DNITs effectively, ensuring that all essential details and dates are accurately recorded. This system will provide transparency and accessibility for general users and stakeholders, making the tendering process efficient and straightforward.

For Department Users (Preparing DNIT):

- Users will initiate the process of preparing Draft Notices Inviting Tender (DNIT) using the system. They will have access to a user-friendly interface for DNIT creation.

- When preparing the DNIT, users will have the flexibility to select tender-related dates, including critical milestones and deadlines.

- Users will define and process the DNIT through the approval workflow. This ensures that the DNIT is reviewed and approved by the relevant stakeholders before publication.

- Users will provide the following parameters for the Tender Notice within the DNIT:

  - Estimated Cost
  - Applicable Contractor Class/Category
  - EMD fees
  - Date and Time of Publishing the Tender
  - Date and Time of Pre-Bid Meeting (if applicable)
  - Date and Time of Query Reply (if applicable)
  - Bid Submission Start Date and Time
  - Bid Submission End Date and Time
  - Date and Time of Opening the Tender, both for Technical and Financial evaluations
  - The designated Place of Tender Opening
  - Details regarding the Awarding of Tender
  - Additional terms and conditions specified for the tender notice

For General Users and Stakeholders/Contractors:

- General users and stakeholders will have access to the web portal to view the DNITs and related tender notices. They will be able to access critical information such as bid submission deadlines and meeting schedules.

- The system will allow general users to access the DNITs and obtain important details, making it easier for them to participate in the tendering process.

3.2.5.4   Expectations from Proposed System:

- System shall have facility to publish tenders for multiple Works in one NIT

- On the basis of Data Entered in the System a draft tender Notice in Editable format shall be available for user interaction and finalization. After finalization, a PDF copy will be generated and made available to the user for his reference and use.

- System shall have provision of creating and printing of General Reports pertaining to the Notice Inviting Tenders.

- System shall have provision of Generating and Printing of Advertisement Register for Tender Notice

3.2.5.5   Functional link with other Module/Departments

- Prepared NIT & Tender documents are published on e-Tendering portals for tendering process.

- Post Tendering negotiation is done with the L1/H1 bidder and Letter of Acceptance is issued to the bidder for contract process.

3.2.5.6   Configurable Master Table Management

- Cost parameters related to tender.

3.2.5.7   Access Matrix

Module	Role	Processes
Tender Management – Notice Inviting Tender (NIT)	Junior Engineer	Important dates related to tender. Applicable fee and deposits for the tender process. Attach additional documents, Send for internal review, Send forward
	Assistant Engineer	Review, Attach additional documents, Send for internal review, Send forward, Send back
	Authority	Attach additional documents, Send for internal review, Send back, Approve

3.2.5.8   Sample Reports Format

Report Format of Notice Inviting Tender (NIT):

TENDER NOTICE NO E TENDER NOTICE NO.1 OF 2023-2024

E tenders are invited for the work of "Construction of Multipurpose Hall at Circular Road Panjtirthi, Jammu." Having estimated cost Rs. 992,592.50from the contractors registered with Jammu municipal Corporation.

The blank tender forms available on JAM portal. The tenders are requested to download the entire tender document from JMC websites. The last date of submission of signed tender documents is shall be 20/10/2023 11:00 Hrs. and shall be opened on the same day on JMC website.

Right to reject any or all tenders without assigning any reason there of is kept reserved by the component authority.

===================================**NOTICE ENDS HERE**===================================

Report format of MIS Reports

3.2.5.9　　Reference Screens

The proposed screens for the module shall be as follows:

Notice Preparation Screen

3.2.6   Contractor Empanelment (Contractor Registration)

3.2.6.1   Description:

Only contractors registered in Jammu Municipal Corporation can apply for floated tenders. Contractors are registered in the corporation by submitting minimum required documents. On the basis of class/categories, contractors apply for various tenders as specified.

3.2.6.2   Process:

For registration in JMC, contractors submit application form with required documents and fee payment. Department reviews the application and process the same in specified workflow and approved as per power of delegation. The final registration certificate is issued to the contractor after successful scrutiny of the documents and fees.

3.2.6.3   Functional Requirement:

The Contractor Registration and Management System will offer a wide range of features and functionalities to different user groups, streamlining the contractor registration process, project management, and financial transactions.

For Contractors:

- Users applying for registration as contractors will have a user-friendly interface to initiate the registration process. They will provide their registration details, including a unique Registration Code, area of expertise, valuation, past experience, and contributions made to PWD (Public Works Department).

- To access the system, users will provide login credentials, allowing them to manage their online profiles.

- Users will upload relevant mandatory documents and submit their registration applications, accompanied by the applicable registration fees according to their category.

- Contractors will update their work progress details for the work orders allotted to them. This includes recording the status of work execution and its completion.

- Contractors will be able to raise bills through the online system for work done during the execution and upon completion of projects, seeking subsequent payments.

- Contractors will upload scanned copies of relevant documents related to their bills for verification.

- The system will generate a unique Registration Code and password for each contractor, granting access to their online profiles and sharing this information with the concerned officers.

For Authority/Department:

- The authority or administrator will have the ability to approve or delist contractors based on their applications. When approved, the system will automatically generate registration certificates in PDF format, accessible to the contractor.

- The authority will also be able to change the category of a contractor as needed, ensuring accurate classification.

- The system will integrate with NIC's online e-tendering system, enhancing the department's efficiency and effectiveness in tendering and procurement processes.

- The system will also be integrated with a payment gateway for the deposition of registration fees, streamlining financial transactions.

- The system will maintain an auditable record of all requisitions, work orders, work execution status, approvals, rejections, deliveries, and cycle times for these processes, providing a complete history of transactions and activities.

- Junior Engineers will be able to confirm and verify the work done by contractors within the system. This verification process ensures quality control and accurate records of completed work.

- Statistical and graphical reports will be available for departmental users to monitor both physical and financial milestones, allowing for data-driven decision-making and performance analysis.

For General Users:

- General users will have access to the contractor database to check if a specific contractor is enlisted in JMC. This feature ensures transparency and easy verification.

3.2.6.4　　Expectations from Proposed System:

- Facility to register the contractor online with required details and uploading scanned documents.

- Provision to generate unique Registration Code and password to access online profile and information passed to contractor and concerned officers to approve/delist contractor

- Option to download auto generated registration Letter in PDF format to the contractor

- Contractors should receive the LOA for the respective work and accept the same

- Download tender document and upload/submit contract agreement online and the work order for the same is also issued online to the contractor.

- System should be integrated with payment gateway for deposition of registration fee.

- Contractor should update the project work progress and submit to the concerned authority for inspection.

- Contractor should raise bills for disbursement of payments pertaining the work completed and approved.

- SMS/Email and system alerts for the action required from the contractor in the system.

3.2.6.5　　Functional link with other Module/Departments

- Registered contractors are added in the bidders list for evaluation, negotiation and issuance of respective Letter of Acceptance for the work.

- Registered contractors submit signed contract agreements for issuance of the respective work orders.

- Registered contractors provide work progress details while work execution process.

- Registered contractors raise bills for the disbursement of the payment.

3.2.6.6　　Configurable Master Table Management

- Contractor Class/Category

3.2.6.7　　Access Matrix

Module	Role	Processes
Contractor Registration	Contractor	Registration form. Required documents. Fee payment. Receive Registration certificate. Download tender document. Uploading of the signed contract agreement. Work progress update. Raise bills. Receive LOA and work order. Attach additional documents, Send for internal review, Send forward
	Authority	Attach additional documents, Send for internal review, Approve/delist

3.2.6.8　　Sample Reports Format

Report Format of Contractor Registration Certificate:

Report format of MIS Reports

3.2.6.9　　Reference Screens

The proposed screens for the module shall be as follows:

Screen of Contractor registration:

3.2.7   Contract Management - Tender Award / Letter of Acceptance

3.2.7.1   Description:

The process of Evaluation of Tenders received, and based on the quotes of the bidders, the evaluation of tenders and awarding the contract to the successful bidder is known as Tender Award / Acceptance.

Letter of Intent/Acceptance is send and the contractors concern is taken and negotiation is also done in some cases. The contractor has to enter in the agreement after receiving the work order.

3.2.7.2   Process:

After successful negotiation with bidder, LOI is issued to the Bidder. For which the contractor has to submit the Letter of Acceptance to the Authority.
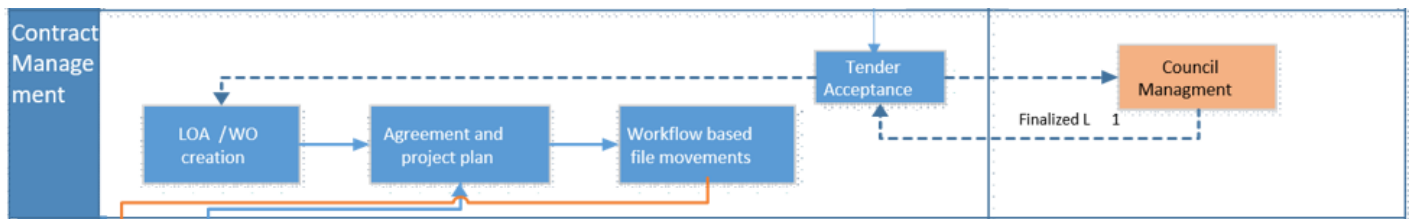
3.2.7.3   Functional Requirement:

the Contract Management – LOA module will offer a range of features and functionalities to different user groups, ensuring a streamlined process for contractor selection, LOA and Work RFP or contract agreement generation, and documentation.

For Contract Managers and Department users:

* The system will support the approval process by facilitating the selection of the right contractor for each project. It will provide tools and features that aid in evaluating contractor qualifications, past performance, and suitability for specific projects.

* The contractor database will be updated periodically by Contractors and department as well. Department Admins will have the responsibility to ensure that the database is current and reflects accurate information about registered contractors.

* Department will generate acceptance letters when needed based on negotiation outcomes. The system will offer a straightforward process for generating formal acceptance letters to notify contractors of their selection and initiate the contracting process.

* Department users will have the capability to generate contract agreements, with provisions for uploading signed copies into

the system. This ensures that all contract-related documentation is digitally stored and easily accessible.

- The system will capture details of acceptance letters, including the name of the office issuing the letter of acceptance, contractor information (name and address), subject (tender job title), EMD (Earnest Money Deposit) details, and court stamp details. These details will be recorded in the system for reference and documentation.

For General Users:

- The system will have a provision for generating general reports. General users will have access to these reports, which will provide insights into contractors, project assigned, and historical data related to acceptance and approval processes.

3.2.7.4   Expectations from Proposed System:

- Generate the LOI/LOA on the basis of the details provided in the system

3.2.7.5   Functional link with other Module/Departments

- LOA/LOI is issued to the contractor for which contractor has to submit their response

- If accepted, contractor shall proceed for the contract agreement process

3.2.7.6   Configurable Master Table Management

- No Master configuration

3.2.7.7   Access Matrix

Module	Role	Processes
Contractor Management – Tender Award / Letter of Acceptance	Junior Engineer	Provide Bid details. Provide Tender award details. Prepare bidding checklist. Negotiation with the contractor Generate LOA. Attach additional documents, Send for internal review, Send forward
	Authority	Attach additional documents, Send for internal review, Send back, Approve
	Contractor	Receive LOA.

3.2.7.8   Sample Reports Format

Report Format of Letter of Acceptance:

Letter of Acceptance

To

Brahmaputra Infrastructure Ltd
Brahmaputra Infrastructure Ltd

　　　　　　　Ref:

Dear Sir,

　　　This is to notify that your bid dated　for execution of the "5. BRISTOL-TruckLane ClimbingPrj" Name of the contract and identification number as given in the instructions to the bidders for the contract price of Rs21,363.00 (IND　Twenty One Thousand Three Hundred Sixty Three Only) as corrected and modified in accordance with the instructions to Bidders is hereby accepted by our agency.

　　　You are hereby requested to furnish performance security,in the form detailed in Para 30.1 of ITB for an equivalent to Rs0.00/- within 21 days of his letter of acceptance valid upto　28 days from the date of expiry of the defect of liability period ie upto and sign the contract failing which action as Stated in Para 30.3 of ITB will be taken.

　　　　　　　　　　　　　　　　　　Yours Faithfully

　　　　　　　　　　　　　　　　　　Authorized Signature
　　　　　　　　　　　　　　　　　　Brahmaputra Infrastructure Ltd
　　　　　　　　　　　　　　　　　　Brahmaputra Infrastructure Ltd

Delete "corrected and or" and modified "if only one of these actions applies".Delete as corrected and modified in accordance with the Instructions to Bidders.If corrections or modifcations have not been affected.

Report format of MIS Reports

3.2.7.9　　Reference Screens

The proposed screens for the module shall be as follows:

Contractor Registration Screen

DOC TITLE: Functional Requirements Specification (FRS)
DOC REF: Works & Projects Management & Monitoring Application System for Jammu Municipal Corporation

DOC VERSION: 2.0

LOA Creation Screen

3.2.8   Contract Management - Work Order / Contract Agreement Process

3.2.8.1   Description:

Post LOI is given to the successful bidder, LOA is submitted by the bidder and Work Order is issued by the Authority on final Work Order Amount. After issuing work order contractor has to enter into agreement as per policy. Contractor has to pay Security deposit, Work Order Amount and Additional Performance Security Amount (if applicable) within period mentioned in the agreement.

Once LOA is issued to contractor, department initiated the process of contract and issuing of Work Order.

3.2.8.2   Process:

After issuing work order contractor has to enter into agreement as per policy. Contractor has to pay Security deposit, Work Order Amount and Additional Performance Security Amount (if applicable) within period mentioned in the agreement
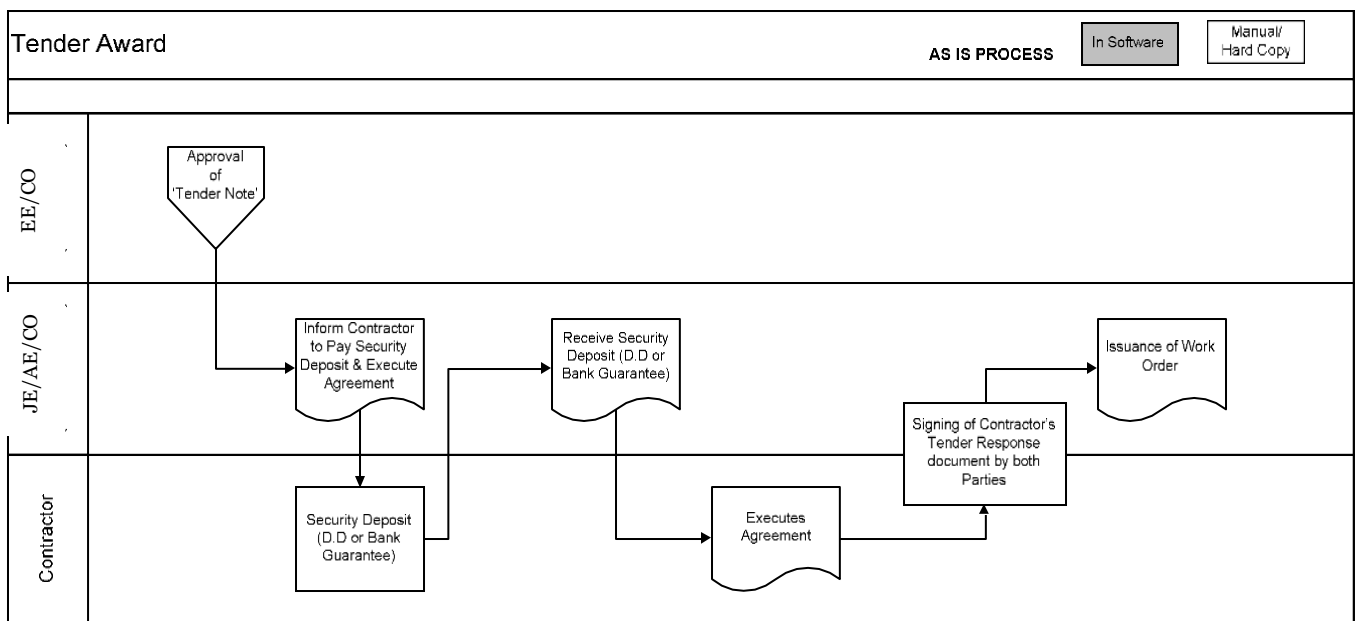
3.2.8.3   Functional Requirement:

The Contract Management module will offer a range of features and functionalities to different user groups, ensuring that the entire contract lifecycle, from creation to approval and execution, is streamlined and well-managed.

For Contract Managers and Department users:

- The system will provide a user-friendly interface for Contract Managers and Department users to generate Agreements register, Acceptance Letter, and Agreement Copy. These documents will be auto-generated based on the contract details entered into the system.

- Department users in these roles will be able to easily enter standard terms and conditions for different types of contracts. The system will allow for the customization and management of these terms, ensuring flexibility in contract management.

- Data entry options for contract details will be readily available, making it convenient for Department to input relevant information. The system will support the input of key contract parameters, including contractor details, contract agreement numbers, and commencement and completion dates.

- The system will empower Contract Managers and Department to generate and print contract documents effortlessly. This includes the ability to create professional contract documents that incorporate the specified terms and conditions.

- Change management will be a straightforward process within the system. Users will be able to edit and update contract details while maintaining a comprehensive history of changes. This will facilitate efficient tracking of contract modifications over time.

- A seamless workflow process will be established for the approval of contract details and final documents. Department will have the tools to initiate, monitor, and complete the approval process, ensuring that contracts are reviewed and finalized in a structured manner.

- Contractor profiles will be fully integrated into the system. Contract Managers and Administrators will be able to access and manage contractor information, including names, addresses, and historical contract data, ensuring that all relevant details are readily available.

For Contractors:

- For contractors, the system will automatically generate Work Orders (WO) based on the Letter of Acceptance (LOA) and the contract details. This feature will streamline the process of receiving and acknowledging work assignments.

- The system will also support the automatic generation of agreements, along with the option to upload signed copies directly into the system. This will provide contractors with a convenient method for acknowledging and confirming their contractual commitments.

- Contractors will have access to a provision for issuing Work Orders when required. This functionality will enable contractors to respond to work assignments and initiate the work process efficiently.

General Users:

- For general users who need access to contractor details, the system will provide a comprehensive view of contractor information. This includes the contractor's name, address, commencement date of contracts, completion date, and contract agreement numbers. Users can access and query this data as needed, ensuring transparency and easy access to critical contractor details.

3.2.8.4   Expectations from Proposed System:

- Downloading of the signed contract agreement

- System shall have provision to capture work order details. System shall have provision for Component based target date entry and progress of work.

- System generated work order.

3.2.8.5   Functional link with other Module/Departments

- Work order is issued to the contractor for which contractor.

- Post work order, work project plan is scheduled or work execution is initiated.

3.2.8.6   Configurable Master Table Management

- No master configuration.

3.2.8.7   Access Matrix

Module	Role	Processes
Contractor Management – Work Order / Contract Agreement	Contractor	Submit contract agreement. Attach additional documents, Submit
	Junior Engineer/Assistant Engineer	Attach signed contract agreement. Provide agreement details. Generate Work order. Attach additional documents, Send for internal review, Send forward
	Executive Engineer/Commissioner	Attach additional documents, Send for internal review, Send back, Approve

3.2.8.8   Sample Reports Format

Report Format of Work Order:

Work Order

To

VIJAY CONSTRUCTION
VIJAY

No : JMC/23-24/1   Dated :

Sub : pune road work EPC--8823

                                                 Amount : Rs544,540.92/-

Ref :   Your tender dated

Your tender for the above noted work has been accepted with the following terms and conditions as exhibited in the approved D.N.I.T.

	Below : 2%
Condition :	

The Time limit for the completion of work is 0 Weeks Including Monsoon , which shall be reckoned from the date of issue of this acceptance letter. You are requested to start the work at once the instructions of Executive Engineer and complete the same within stipulated time limit and also attend this office to sign your contract aggrement along with amounting to failing which no running payment shall be made.

Copy of the above is forwarded to the following for information and necessary action :-

Report format of MIS Reports

3.2.8.9   Reference Screens

The proposed screens for the module shall be as follows:

Screen for Work Order Generation

3.2.9   Project Management

3.2.9.1   Description:

Project management is process of monitoring and controlling the time and cost of the project based on the milestones mentioned in the agreement between contractor and department.

3.2.9.2   Process:

After award of the work, both parties' i.e., Contractor and Department execute mutual agreement in which project start date and end date are mentioned. Contractor has to submit detail project execution plan to the department which should match with the milestones mentioned in the agreement.

Project is divided into WBS so that department can monitor the project. WBS is religiously monitored by the department on the bases of the work executed by the contractor. Daily, weekly and monthly reports are submitted by the contractor against the work done. If department feels that work is getting delayed, then contractor has to submit the revised plan to overcome the delay.

3.2.9.3   Functional Requirement:

These functional requirements ensure that the Project Management and Monitoring System is equipped to handle planning, scheduling, monitoring, and controlling projects while generating comprehensive reports and ensuring timely alerts and approvals.

Graphical Interface:

- The system will provide a graphical interface to analyze the progress of work, cash flow, and resource requirements.

General Reports:

- The system will generate general reports.
- It will provide MIS reports showing the quantity and amount of work executed against time.
- Component-based progress reports will be generated as of the current date.
- The system will produce combined contract-based and component-based target reports, including physical and financial progress of work.

Project Planning:

- The application will enable the creation of a project plan with milestones, resources, and deliverables.
- Users will be able to add, edit, review, or block activities, sub-activities, and tasks related to activities.
- Workflow approval will be provided for activities when required.
- Users can define start dates, target dates, priorities, ownership, and weightage for each activity.

Project Scheduling:

- The system will enable the creation of milestones with timeframes for projects, mapping BOQ items, and deliverables.
- It will allow scheduling of multiple tasks, their due dates, planned effort against each task, and assignment to individuals, resources, or teams.
- The software will provide resource scheduling, including team availability and non-human resources.
- The system will automatically update dependent tasks when one task is not completed on time.
- It will generate automated email alerts for task due dates and resource availability changes.
- The software will prepare Gantt charts and relevant graphs and diagrams for project scheduling.

Project Monitoring & Control:

- The system will allow for the daily, weekly, and monthly entry of project status.

- It will generate milestone-based reports.

- SMS and email-based alerts will be sent for any project slippages.

- Project execution will be directly linked with billing for updating financial progress.

- The system will provide the feature to revise milestones and the project plan, integrated with the workflow.

- It should provide real-time status for planned versus actual progress.

- The system will fetch progress milestones and timelines from the Contract Management Module.

- It will be linked with the online Measurement Book (MB) for monitoring progress.

- The system will allow manual entry of project status as needed.

- Flexibility will be provided to revise milestones based on available data.

- The system will include an approval mechanism for scope enhancements and decisions on action against scope deviations.

- It will alert recoveries/penalties according to the contract agreement for delays or quality issues.

- The system will support the management in monitoring both physical and financial milestones through statistical and graphical reports.

- It will provide real-time updates on billing and payments to assess progress against financial milestones.

- The system will integrate with an Android-based mobile application for capturing geo-tagged photographs against a project/scheme and updating them to identify physical progress.

3.2.9.4　Expectations from Proposed System:

- System shall have provision to capture Actual work done against project plan. System shall have provision for Component based target date entry and progress of work.

- System shall have provision to monitor component wise progress and overall project of work.

- Resources and machinery planning.

3.2.9.5　Functional link with other Module/Departments

- Project scheduling is done

- Project plan is prepared which is monitored with actual work progress as per the Tender BOQ items.

- Financial monitoring is also done based on the disbursement of the bills.

- Work progress reports are prepared on the basis of actual work progress and financial progress.

3.2.9.6　Configurable Master Table Management

- No master configuration.

3.2.9.7　Access Matrix

Module	Role	Processes
Project Management	Contractor	Update project progress.
	Junior Engineer	Project schedule. Defining project deliverables, project milestones and activities. Attach additional documents, Send for internal review, Send forward
	Authority	Attach additional documents, Send for internal review, Send back, Approve

3.2.9.8　Sample Reports Format

Report format of Project Status Report:

Central Works Division
Project Status Report

Project: BRIDGE REPAIRS OVER POWELLS CREEK (MARTINS CONSTRUCTION)
Status Date: 10/20/23

Amount In (US Dollar)

Task Code	Task Name	Unit	Planned Start Date	Planned end Date	Planned Duration	Estimated Qty	Estimated Amount	Actual Start Date	Actual End Date	Actual Duration	Actual Qty	% completed
1	BRIDGE REPAIRS OVER POWELLS CREEK (MARTINS CONSTRUCTION)		12/12/22	08/02/24	390.00		6,464,261.94		08/02/24	0.00		1.15
1.1	Bridge Repair Over Powells Creek		12/12/22	08/02/24	390.00		6,464,261.94		08/02/24	0.00		1.15
1.1.1	Preliminary		12/12/22	05/24/23	390.00		14,653.00		05/24/23	0.00		0.00
1.1.1.1	Submittals		12/12/22	04/11/23	390.00		14,653.00		04/11/23	0.00		0.00
1.1.1.1.1	Project schedule submission		12/12/22	01/13/23	390.00		14,653.00			0.00		0.00
1.1.1.1.1.1	Baseline Progress Schedule	LS	12/12/22	12/23/22	10.00	1.00	10,605.00			0.00	0.00	0.00
1.1.1.1.1.2	Progress Schedule Updates	each	12/27/22	01/13/23	14.00	16.00	4,048.00	12/29/22		0.00	0.00	0.00
1.1.1.1.2	Temporary traffic control plans submission		01/16/23	02/20/23	25.00		0.00	01/16/23	02/20/23	35.00		0.00
1.1.1.1.3	QC plan submission		02/22/23	03/28/23	25.00		0.00	02/22/23	03/28/23	34.00		0.00
1.1.1.1.4	Temporary E&S plans submission		03/29/23	04/11/23	390.00		0.00	03/29/23	04/11/23	13.00		0.00
1.1.1.2	Materials		04/26/23	05/24/23	390.00		0.00	04/26/23	05/24/23	28.00		0.00
1.1.1.2.1	HMA Mix designs		04/26/23	05/24/23	390.00		0.00	04/26/23	05/24/23	28.00		0.00
1.1.1.2.2	Concrete mix designs submission		04/26/23	05/24/23	390.00		0.00	04/26/23	05/24/23	28.00		0.00
1.1.2	Construction		12/12/22	08/02/24	137.00		6,449,608.94		08/02/24	0.00		2.29
1.1.2.1	Stage 1 - Start-up		12/12/22	07/19/24	390.00		531,116.00			0.00		25.00
1.1.2.1.1	Preparatory & start-up		12/12/22	07/19/24	390.00		531,116.00			0.00		25.00
1.1.2.1.1.2	Construction Surveying	LS	12/21/22	12/29/22	6.00	1.00	35,350.00	12/29/22		0.00	1.00	100.00
1.1.2.1.1.3	Clearing And Grubbing	LS	12/30/22	01/05/23	5.00	1.00	60,600.00	12/29/22		0.00	0.00	0.01
1.1.2.1.1.4	Fence Fe-W2	LF	01/02/23	01/20/23	14.00	208.00	9,568.00			0.00	0.00	0.00
1.1.2.1.1.6	Ns Nbis Access, Under Bridge Str. No. 2005	Day	01/23/23	03/10/23	34.00	3.00	6,969.00			0.00	0.00	0.00
1.1.2.1.1.7	Ns Nbis Access, Under Bridge Str. No. 2006	Day	03/13/23	04/14/23	25.00	3.00	6,969.00			0.00	0.00	0.00
1.1.2.1.1.8	Allaying Dust	HR	12/30/22	07/19/24	377.00	1,880.00	5,640.00			0.00	0.00	0.00
1.1.2.1.1.5	Field Office TY.I	MO	01/06/23	01/11/23	4.00	6.00	57,570.00			0.00	0.00	0.00
1.1.2.1.1.1	Mobilization	Lumsum	12/12/22	12/29/22	13.00	1.00	348,450.00	12/29/22		0.00	1.00	100.00
1.1.2.2	Stage 2 - Temporary Traffic Control		04/17/23	04/28/23	390.00		215,138.00			0.00		2.50

Report format of MIS Reports

3.2.9.9   Reference Screens

The proposed screens for the module shall be as follows:

Screen for Project Plan:
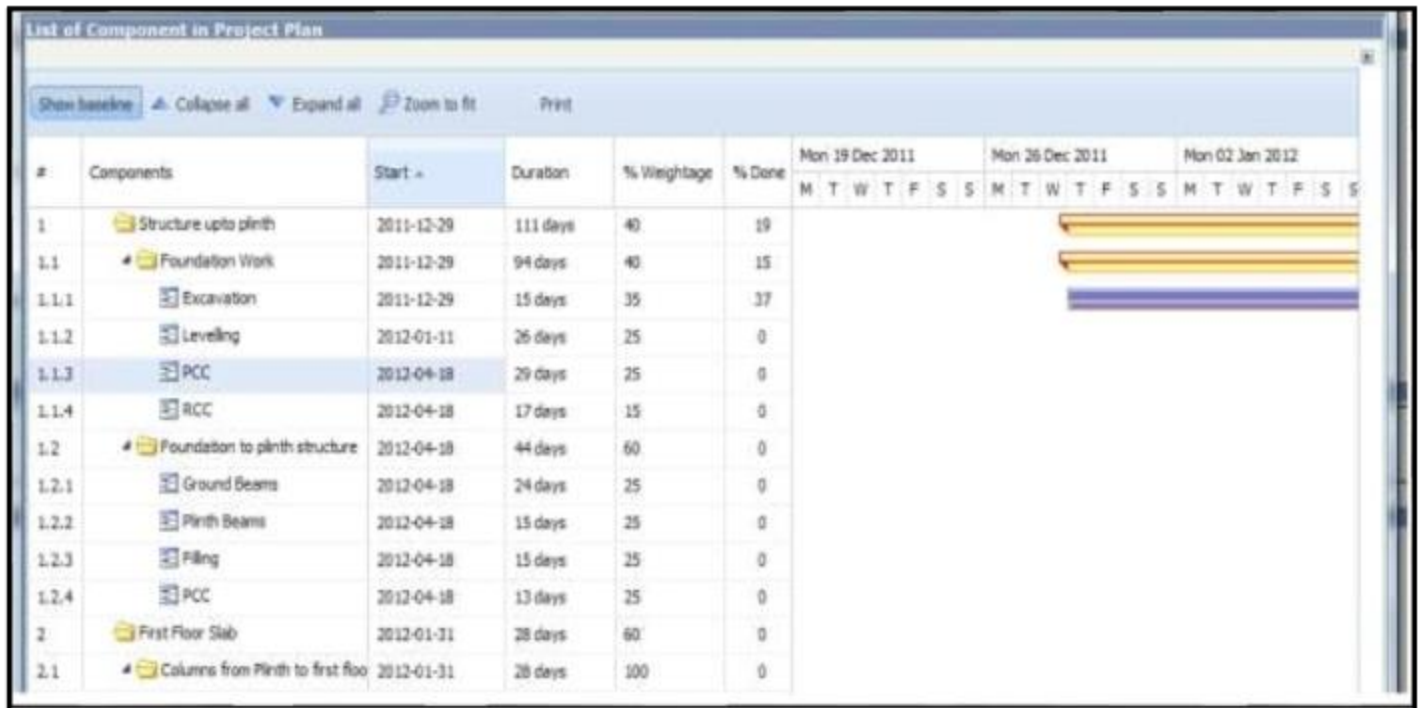
Project scheduling:
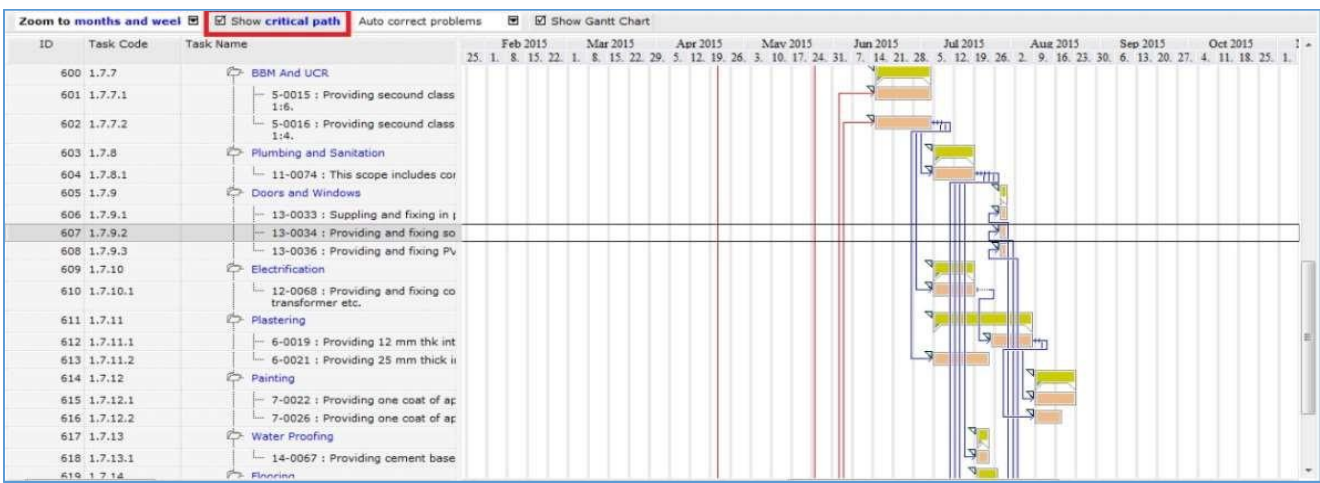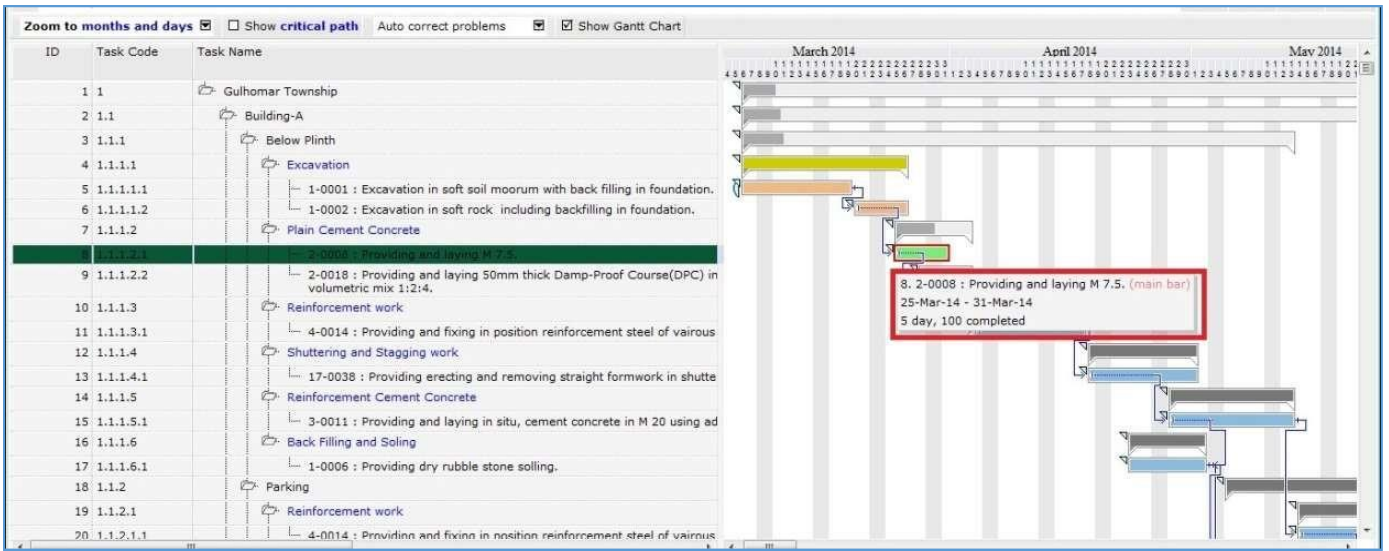
Physical and Financial progress:

Work Name	: Irrigation work for PP						
Report Date : 01/03/2020	Report From Date : 01/03/2020		Report To Date : 01/03/2020				

Financial Progress | **Physical Progress**

List of Component

Component	Unit	Planned Quantity	Weightage	Executed Quantity			
				Previous		Current Quantity	
				Quantity	% Progress	Quantity	% Progress
Earthwork			40.00	0.00	0.00	0.00	5.08
Activity 1	Cum	2,500.00	75.00	0.00	0.00	100.00	4.00
Activity 2	Cum	1,200.00	25.00	0.00	0.00	100.00	8.33
RCC work			30.00	0.00	0.00	0.00	0.00
Activity 3	Cum	850.00	50.00	0.00	0.00	0.00	0.00
Activity 4	Cum	50.00	50.00	0.00	0.00	0.00	0.00
Finalise work			30.00	0.00	0.00	0.00	0.00
Activity 5	Cum	200.00	80.00	0.00	0.00	0.00	0.00
Activity 6	Cum	200.00	20.00	0.00	0.00	0.00	0.00

3.2.10   E-Measurement and E-Billing Management

3.2.10.1   Description:

While monitoring the work, the concern Engineer records the measurement of work executed in that period. With reference to the measurement recorded the engineers prepares the abstract sheets. The abstract sheets contain the items from Agreement / Work order, the quantity executed in that period and the agreed rates as per tender. On this basis the contractor payments will be processed. These bills are called as Running Account Bills which are tracked serially up to completion of work. The billing cycle is pre-defined normally as one month or depending on the quantum of work. The billing is also defined in the agreement. The bills are raised for advance payments like Mobilization Advance, Adhoc Advance, Work Done but not measured and Material Advance etc. The bills are also raised for Price Variations, Price Escalations and RA bills. Advances paid to the contractors are adjusted in corres ponding RA bills.

Sometimes the Rate of the items are changed before payment to contractors and after measurements as part rate of the item or reduced rate of the item. Part rate of an item is the rate by which some no. of quantity from total Tender Quantity are paid with different rate and some no. of quantity of that item are paid with different rate. Part rate is done while Running bill. Reduced rate of an item is the rate by which the payment of the item is to be made to Contractor for Final bill.

3.2.10.2   Process:

As per the agreement if applicable the Mobilization advance is paid to the contractor, after receipt of security deposit/performance bond. On start of actual work concern Junior Engineer starts recording measurement, in the form of Record Entries, in the measurement book as work progress. Then Assistant Engineer sends RA bill as recorded MB's, Abstract sheet and supporting document to Executive Engineer/SE/ACE/CE for review. After the review and approval of RA bills, it sends to Executive Engineer for final review and approval. Once RA bill is approved by Concerned Engineer it is forward to Account Department for preparation of Contractor Payment Voucher. Deduction of different security deposit, taxes is done and after all verifications, payments are made to the contractors.
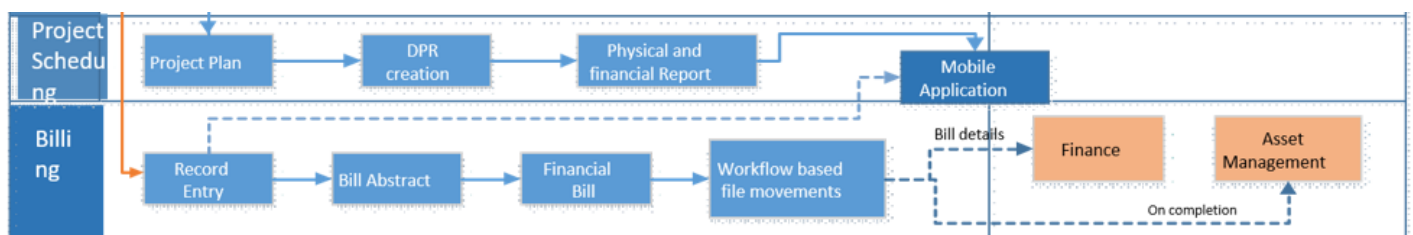
Following types of bills are raised by contractors as per contract type: -

- Mobilization advance

- Secured Advance on Material brought by the Contractor on site.

- Measured RA Bill duly recorded in Measurement Book

- Price Variation bills based on customer price index and labor price index.

- Extra Item bills if contractor has executed other than mentioned in Work order as per instruction given by department.

- Testing of work/equipment.

3.2.10.3   Functional Requirement:

These functional requirements ensure that the MB measurements and Billing System can efficiently manage measurements, inspections, billing, and disbursement in compliance with relevant rules and policies.

Measurements and Estimation:

- The system shall allow the entry of length, width, and height of items in multiple measuring units for each respective item.

- It will maintain archives of past projects for rapid cost estimate updating or modification for similar designs.

- The system shall support the export of estimates in Excel sheets for analytical purposes.

GPS-based Inspection:

- GPS-based photographic pre-work inspection will be conducted by Junior/Sub Engineers (JE) through the JMC inspection mobile app.

- Pre-work photographs will be captured with GPS coordinates for future data analytics.

- GPS-based photographic post-work inspection will also be done by JE through a mobile app.

- Post-work photographs will be captured with GPS coordinates for auto comparison with pre-work GPS coordinates for the relevant project ID.

- The system will have provisions for GIS-based identification of the work and capturing GPS coordinates of the work.

Measurement Book (MB) and Billing:

- The system will generate auto alerts to JE/Sub Engineer for not taking e-Measurement and enforce e-Measurement in defined intervals.

- It will support monitoring of both physical and financial milestones through statistical and graphical reports.

- The system will be integrated with the Accounts and Billing module for financial monitoring.

- It will have provisions for adjusting advances, retentions, and recoveries from Running Account (RA) bills.

- The system will have provisions for uploading supporting documents, checklists, questionnaires, etc.

- It will generate work completion certificates with salient features of work completed.

- The system will have provisions for issuing material advances with approved quantities and rates.

- It will capture the rate of royalty for materials at the central level.

- Actual resource consumption will be recorded based on the master data entered for specific Schedule of Rates (SOR) or SOR items.

- Tax master will be available as per government norms for contractor billing.

- The system shall have provisions to make part payments to the contractor.

Billing and Disbursement:

- The system shall implement the billing and disbursement process as per the rules and policies followed by the Authority.

- It will be connected to the billing module to enable verification of disbursement to the contractor.

- Measurement Books (MBs) of the items defined in the contract will be captured to identify actual physical progress.

- Bills will be prepared based on approved MBs, and disbursement will be directly associated with completed milestones.

- Project plans and milestones will be linked with disbursement plans and cash flow.

- A standard checklist will be maintained in the system for advances, RA bills, and final bills to enable verification before approving disbursement.

- The system will provide provisions for e-billing for POL (Petroleum, Oil, and Lubricants) consumption and vehicle/machinery repair, as per JMC's requirements.

- It will offer online processing of bills and claims, end-to-end, with the provision for online disbursement of payments.

3.2.10.4   Expectations from Proposed System:

- Above functional requirement shall be made in the proposed solution.

- System shall allow attaching the archive of standard drawings for Road/ Bridges in PDF format at the time of preparation of bill.

- System shall maintain the database of the bills raised as per contractor wise, work wise etc.

- System shall have filter on different parameters for easy selection of bills.

- System shall generate the Quality Control report after completion of the work at the time of billing.

- System shall generate Statement of Income Tax/Sales Tax / GST etc. as applicable, online

- E-MB through mobile app

System shall generate following Reports for contractors billing:

- First & Final Bill

- Bill payment checklist

- Running Account (RA) Bill

- Contractor's Ledger

- RA Bill & Final Bill Cover Note

- Excess Saving Statement

- Work Completion & No Dues Certificate

- Royalty statement for bill

- Material Recovery, Price Variation, Escalation process (if any)

- Statement of variation quantity of tender quantity, estimated quantity, executed quantity

- Work Extension Report

3.2.10.5   Functional link with other Module/Departments

- Measurements are submitted by the contractor.

- Bills are raised by the contractor.

- Work progress is updated towards measured items from the project plan.

- Approved work extension is given to the contractor.

- Approved work completion certificate is provided to the contractor.

3.2.10.6   Configurable Master Table Management

- Recoveries, Taxes, deductions.

3.2.10.7   Access Matrix

Module	Role	Processes
E-measurement and Billing Management	Junior Engineer	Measurement book is prepared for the bill against the tender items. MB Abstract is prepared with the BOQ items. Excess/Extra items are added. Work extension is prepared. Work completion is prepared. Billing checklist is prepared. Attach additional documents, Send for internal review, Send forward.
	Accounts	Running and final bills are prepared considering recoveries, taxes, deductions for Security deposit and advances. Attach additional documents, Send for internal review, Send forward, Send back
	Authority	Review, Attach additional documents, Send for internal review, Send back, Approve

3.2.10.8   Reference Screens

The proposed screens for the module shall be as follows:

Screen of Record Entry - MB Measurement

Screen for Bills Abstract/Part Rate/Reduced Rate

Screen of Recoveries from Bill:
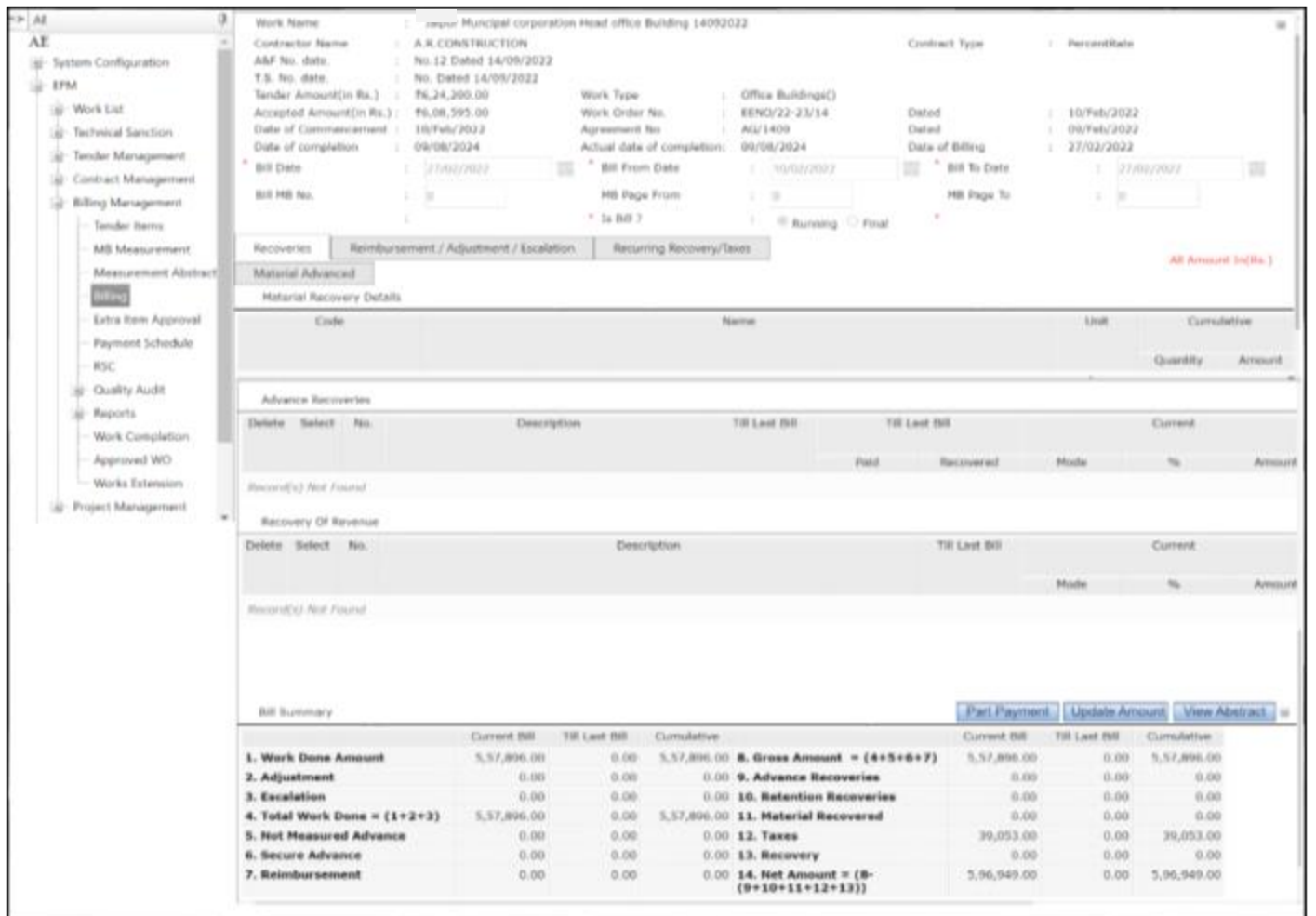
Screens of Recoveries & Taxes, Materials Advance

3.2.10.9   Sample Reports Format

Report Format of Measurement Book:

Report format of MB Abstract –

Abstract Of Measurement Detail

Bill No : Running Bill No- 1

Work Name	: Provide two way radio equipment, maintenance and repair services.
Contractor Name	: FORT MYER CONSTRUCTION CORPORATION
A&F No. & Dt.	: No.PWD(B&R)/EE CWD MO/0143 Dated : 13/01/2023
TS No. & Dt.	: No.PWD(B&R)/01/23/0037 Dated : 13/01/2023
W.O. No. & Dt.	: EENO/22-23/22 Dated : 07/01/2022
Agreement No	: 1
St. Date Of Commencement	: 07/01/2022
St. Date Of Completion	: 07/01/2022
Actual Date Of Completion	: Work In Progress
Date of Billing	: 13/01/2023

Tendered Items

Item Description	Tender Qty	Previous Paid Quantity	Current Quantity	Upto Date Quantity	% of Executed Quantity	Unit
2 15" Pipe	203.00	0.00	80.00	80.00	39.41	LF
RE No. 1	From Date :28/01/2022			80.00		LF

Description	No	Length	Width	Depth	Sub Total	Last Check By
test	1.00	4 =4.00	2 =2.00	10 =10.00	80.00	

Item Description	Tender Qty	Previous Paid Quantity	Current Quantity	Upto Date Quantity	% of Executed Quantity	Unit
12 Std. Curb Cg-3	239.00	0.00	120.00	120.00	50.21	LF
RE No. 1	From Date :28/01/2022			120.00		LF

Description	No	Length	Width	Depth	Sub Total	Last Check By
test	2.00	6	2	5	120.00	

Report Format of Running Bill:

Running Bill No- 1   **RPWA Form No:24**

Cash Book Voucher No. :		**Date** :
Cheque No :	**Date** :	**Amount** : 14,514.00
Name of Contractor	: FORT MYER CONSTRUCTION CORPORATION	
Name of Work	: Provide two way radio equipment, maintenance and repair services.	
Serial No. of this bill	: Running Bill No- 1	
No. and date of the previous bill for this work :		
Reference to Agreement No.	: 1	
Date of written order to commence work	: 07/01/2022	
Date of actual completion of work	: Work In Progress	

I - ACCOUNT OF WORK OF SUPPLIES MADE   * All Amount in $

						Payment on the basis of actual measurements			
Item No.	Quantity executed (or supplied) since last certificate	Quantity executed (or supplied) up-to-date as per measurement book	Item of Works Supplies	Part Rate -- Rate	Unit	Up-to-date Amount of this bill	Amount paid upto last bill	Amount payable in this bill	Remarks
1	2	3	4	5	6	7	8	9	10
Tendered Items									
: Provide two way radio equipment, maintenance and repair services.									
2	80.00000	80.00000	15" Pipe	117.00	LF	9,360.00	0.00	9,360.00	
12	120.00000	120.00000	Std. Curb Cg-3	41.00	LF	4,920.00	0.00	4,920.00	
					Total Amount	14,280.00	0.00	14,280.00	
					Gross Amount	14,280.00	0.00	14,280.00	

Report Format of Final Bill:

Report format of MIS Reports -

Report Format of Work Extension:

Report format of MIS Reports – Work Extension

*Other required report will be developed accordingly in the application.

Report Format of Completion of Work:

Work Completion & No Dues Certificate

Name of Work : Providing Laying And Jointing 700 Mm Dia Ms Pure Water Rising Main From Wtp Bandhan (Poynad) To Usar Indl. Area Through Bailkhind...(Deposit Contribution Work)

Authority : Agreement No.EENO/23-24/65 for 01/04/2023

Agency : sagres

Sr. No. of Bill : 0 & Running Bill

This is to certify that the above mentioned work has been completed by [!Contractor] in all respect as on SAGRES CONSTRUCTION CORPORATION and there is no dues outstanding against the agency.

Report format of MIS Reports – Work Completion

*Other required report will be developed accordingly in the application.

3.2.10.10 E-MB through Mobile App

Mobile App functional requirements:

- Native Mobile app with updated version of SOR and capability of clicking multiple geo-tagged images of the work which is being measured.

- Seamless integration with the main application for real time updating.

- Measurement taking facility should be activated only within 500 meters radius of construction location.

- App should capture/record data offline when mobile network is not available and upload data automatically when handheld device gets network coverage.

- App shall capture items as mentioned in the approved work contract

- App shall provide details of earlier measurements recorded for respective works.

- App shall record measurements on BOQ items and measurement items other than BOQ should be added as extra work.

- App shall compare BOQ with measured quantity and generate alerts on additional quantity.

- App shall have provision to enforce penalty or deduction in the bill on account of low quality of work

- App shall have provision for adding comments and image with each measurement, if needed.

- System shall support automatic periodic generation of the proforma bill based on verified MB entries, and other contract agreement terms and conditions.

- App shall support different screen sizes and resolutions of handheld device/mobiles.

- App shall be developed on both Android/IOS Platform.

- App shall provide log of previous made entries in the MB

- App shall allow to move the MB to the next competent level for approval.

- GPS based photographic pre work inspection done by JE through JMC inspection mobile App.

- Pre work photographs captured with GPS coordinates for future data analytics.

- GPS based photographic post work inspection done by JE through mobile App.

- Post work photographs captured with GPS coordinates for auto comparison with pre work GPS coordinates for relevant project ID.

- Provision for GIS based identification of the work. Provision for capturing GPS coordinates of the work.

- System shall generate auto alerts to the Junior/Sub Engineer for not taking e-Measurement and enforce to take e-Measurement in defined intervals.

- The system shall support the management in monitoring of both physical and financial milestones through statistical and graphical reports

- It shall be integrated with Accounts and Billing module for financial monitoring

Mobile App features:

- Login via Username and Password

- Take pictures from mobile camera & upload

- Upload pictures from mobile gallery

- Separate list of pending works available for Record entry measurement from completed RE works

- Separate RE Item list and BOQ item list

- View, Edit, Update and Save the REs for respective work

- Name of Work, Work Order No., Work Created by details

- RE Date, Measurement Start Date and Measurement End Date details to be captured specific to particular RE

- Measurement details like dimension of the measurements to be captured specific to particular BOQ item and respective quantity to be calculated automatically.

3.2.10.11 Reference Screens

The proposed screens for the module shall be as follows:

1. Login with Login name and password for Mobile Application

2. Once Login User can select the work and create the MB through mobile APP
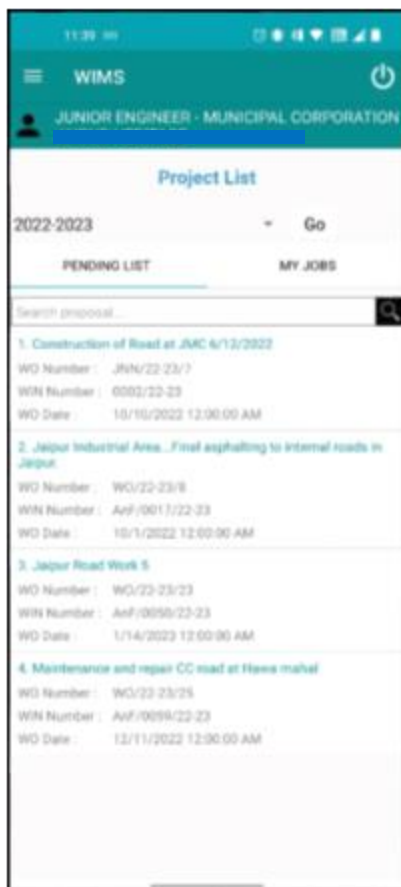
3. Select BOQ item and Add Measurements

4. Upload site photos through the Mobile app against the measurements

3.2.11   ARC (Annual Rate Contract) Type of Work Execution Process

3.2.11.1   Description:

Annual Rate Contracts (ARC): Mainly minor works of additions/alterations/replacements are streamlined and executed under this process. The works are planned in advance and a number of agencies for works in each area should be fixed before the start of financial year.

In ARC, the work, its detailed estimate along with its financial provisions / approval of the work that is to be executed in public interest at selected location(s) are decided by competent authority for a fixed unit price for a specified period of time i.e., till the validity of the rate contract.

3.2.11.2   Functional Requirement:

These functional requirements ensure that ARC type works and processes are covered in the proposed system:

- AA Sanction of the work will be approved from competent authority.

- G/H-Schedule of Detailed Estimate will be prepared for Tender published and bidder is evaluated on selection criteria of the bid.

- Letter of Acceptance will be issued to L1/H1 bidder.

- Technical sanction will be prepared for ARC Work Order and approved from competent authority.

- BOQ will be prepared for work order process.

- ARC Work Order will be prepared and approved.

- Measurements will be done and Measurements books will be prepared of the items from Estimate prepared and will be approved from competent authority.

- Running/Final Bills will be prepared and sent for approval.

- Work Completion Certificate will be issued for ARC Work Order wise.

- Simultaneously, Technical Sanction is prepared for next ARC Work Order and approved from competent authority.

- Then BOQ is prepared for next work order.

- Next Work Order is prepared and approved.

- Measurements are done and Measurements books are prepared of the items from Estimate prepared and are approved from competent authority.

- Running/Final Bills are prepared and sent for approval.

- Work Completion Certificate issued for ARC Work Order wise.

- The process for further work order start from Technical Sanction to above Work Completion process as repeated for multiple work orders.

3.2.11.3   Process Flow Diagram for ARC Type Work:

```
                    ┌──────────────────────────────┐
                    │   A&F Sanction of ARC Work Type │
                    └──────────────────────────────┘
                                   │
                    ┌──────────────────────────────┐        ┌──────────────────┐
                    │  Tender Process - G/H Schedule │───────▶│  EPROC Tendering │
                    │  preparation for Tender Publish │        └──────────────────┘
                    └──────────────────────────────┘
                                   │
                    ┌──────────────────────────────┐
                    │   Letter of Acceptance issuance │
                    └──────────────────────────────┘
                                   │
                    ┌──────────────────────────────┐
              ┌────▶│  Technical Sanction for ARC Type │
              │     │  Work Order - Preparation  and │
              │     │            Approval             │
              │     └──────────────────────────────┘
              │                    │
              │     ┌──────────────────────────────┐
              │     │  Tender Process - BOQ Preparation │
              │     │       (Current Estimate)        │
              │     └──────────────────────────────┘
              │                    │
              │     ┌──────────────────────────────┐
              │     │   ARC Work Order (Current      │
              ├─────│     Estimate) - Approval        │
              │     └──────────────────────────────┘
              │                    │
              │     ┌──────────────────────────────┐
              │     │  Measurments (Current Estimate) - │
              │     │     Preparation and Approval    │
              │     └──────────────────────────────┘
              │                    │
              │     ┌──────────────────────────────┐
              │     │  Measurement Abstract (Current │
              │     │   Estimate) - Preparation and  │
              │     │            Approval             │
              │     └──────────────────────────────┘
              │                    │
              │     ┌──────────────────────────────┐
              │     │  Running Bill/Final Bills (Current │
              │     │   Estimate) - Preparation and  │
              │     │            Approval             │
              │     └──────────────────────────────┘
              │                    │
              │     ┌──────────────────────────────┐
              └─────│      Work Completion           │
                    │      (Current Estimate)        │
                    └──────────────────────────────┘
```

Figure: Process Flow Diagram - Annual Rate Contract (ARC)

3.2.11.4   Expectations from Proposed System:

The Proposed System shall have a full-fledged ARC Type work process with following facilities / utilities.

- ARC Type process flow

- Multiple Technical Sanction, BOQ and Work Orders of the Work

3.2.11.5　Functional link with other Module/Departments

- Measurements are submitted by the contractor.

- Bills are raised by the contractor.

3.2.11.6　Configurable Master Table Management

- ARC type approval process between modules.

3.2.11.7　Access Matrix

Module	Role	Processes
All works modules	Junior Engineer/Assistant Engineer/ Executive Engineer	All processes Attach additional documents, Send for internal review, Send forward.
	Accounts	Bill and administrative sanction process. Attach additional documents, Send for internal review, Send forward, Send back
	Approval Authority	Review, Attach additional documents, Send for internal review, Send back, Approve

3.2.11.8　Sample Reports Format

Report format of MIS Report – ARC Work:

*Other required report will be developed accordingly in the application.

3.3   File Management (Dak Management)

3.3.1   Description:

In Government organizations, Dak Management comprises of all incoming and outgoing correspondance with all the relevant control information i.e. Letters, Memos, Emails, FAX, etc. File management, i.e. Dak Management is a critical aspect of information and data organization within both individual and corporate contexts. It refers to the systematic control, storage, retrieval, organization, and manipulation of electronic or physical files and documents to ensure efficient data access, security, and compliance with data governance policies.

3.3.2   Process flow

For General/Govt Letter (External):
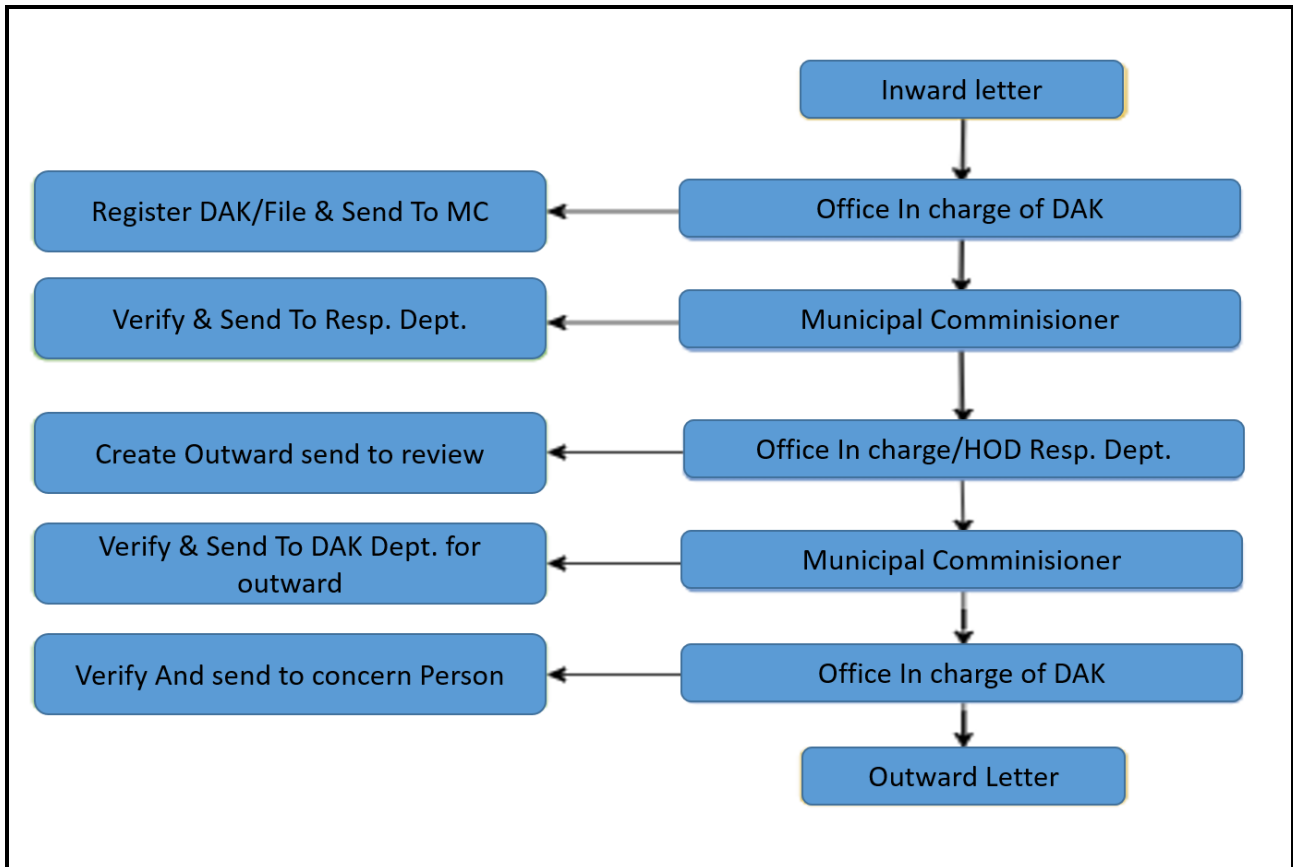
Fig.: Process Flow for File Management for General/Govt Letter

For Department to Department (Internal):
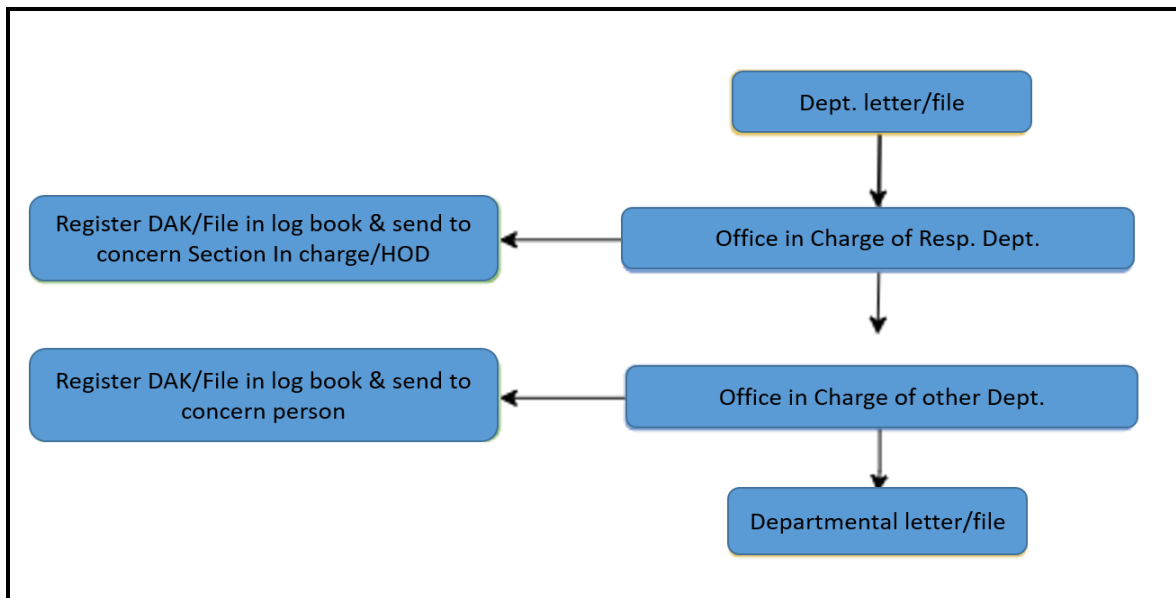
Fig. Process Flow For File Management From Department To Department

3.3.3　　Functional Requirement:

These functional requirements ensure that the File Management System is well-equipped to handle all aspects of dak and file management, from receipt and dispatch to electronic file creation, document security, and effective collaboration among departments.

File Management (Dak):

- The system shall allow for the inward (receive) and outward (dispatch) handling of daks.

  Dak Receipt:

- Daks can be received centrally or in a decentralized manner within the office/department.
- Receipt methods can include post, fax, email, or other channels.

  Dak Scanning and Forwarding:

- The system will support both electronic and paper-based scanning and forwarding of daks.

  Attaching Daks to Files:

- Daks can be attached to relevant files.
- The system will maintain information on actions taken and the status of attached daks.

  Dak Dispatch:

- Daks can be dispatched centrally or in a decentralized manner within the office/department.
- Dispatch may involve multiple recipients.

  Dispatch Number Generation:

- Dispatch numbers will be generated according to specified rules and procedures.

  Recording Dispatch Details:

- The system will record dispatch details.
- Documents can be scanned and attached to dispatches, whether delivered manually, by post, fax, email, or electronically through the system.

  Movement Tracking and Follow-up:

- Movement tracking, follow-up actions, and reminders will be supported for dispatched daks.

Electronic File Creation:

- The system will create electronic files using file scanning in supported formats (e.g., pdf, tiff, jpg).

- Users can add notes and comments to electronic files.

Digital Signature Authentication:

- The system will integrate digital signature authentication for the approval process, ensuring document integrity and security.

Managing Main and Part Files:

- Users will have the facility to maintain and link main files with all associated part files.

- A file viewer will allow the electronic viewing of both main and part files.

- Users can export or print files, either partially or in full.

File Attributes and Parameters:

- The system will allow the definition of file attributes, such as categories, classification, purpose/case to be dealt with on the file, creation date, and details of who created and modified the file.

- Associated parameters and timelines for file tracking will be recorded.

Comments and Notes:

- Users can add comments and notes for each case or purpose of file movement at each level.

- Movement tracking, follow-up actions, and reminders will be available for file-related activities.

Interoperability:

- The system will support interoperability between departments, allowing stakeholders to collaborate and share files efficiently.

Merging Part Files:

- The system will provide the option to merge part files with the main file, ensuring a comprehensive record.

3.3.4   Expectations from Proposed System:

- **Efficient Dak Management**: The system should streamline the inward and outward dak processes, making it easy to receive, dispatch, and track daks through various channels.

- **Multi-Channel Receipt**: It must support dak receipt through various means, including post, fax, email, and electronic submissions.

- **Comprehensive Tracking**: The system should allow for detailed tracking of dak movements, including comments, follow-ups, and status updates.

- **Attachment Handling**: Users should be able to attach daks to relevant files, maintain action records, and track the status of each attachment.

- **Dispatch Management**: The system must efficiently manage dak dispatch, allowing both centralized and decentralized methods, and enabling dispatch to multiple recipients.

- **Document Scanning**: It should support document scanning in various formats, such as PDF, TIFF, and JPG, while also allowing notes and comments to be attached.

- **Digital Signature Integration**: The system should integrate digital signature authentication for approval processes, ensuring document security and authenticity.

- **File Management**: It should provide the facility to create and manage electronic files, including main files and associated part files, with defined attributes and timelines for tracking.

- **Interoperability**: The system should enable collaboration and file-sharing between different departments, enhancing communication and workflow efficiency.

- **Merging Capability**: There should be a provision to merge part files with the main file, ensuring all related information is easily accessible within a single file.

3.3.5   Functional Links with other Modules/Departments

- Not to be linked to any other system of the department

3.3.6   Configurable Master Table Management

- Document Type Master.

3.3.7   Access Matrix

Module	Role	Processes
File Management (Dak)	Assistant	File creation. Inward Dak. Outward Dak. Attach additional documents, Send for internal review, Send Forward
	Joint Municipal Commissioner	Review, Attach additional documents, Send for internal review, Send back, Approve
	Municipal Commissioner	Review, Attach additional documents, Send for internal review, Send back, Approve
	Head of Department	Review, Attach additional documents, Send for internal review, Send back, Send Forward

3.3.8   Sample Reports Formats

Report formats:

DAK Inward Report

DAK Dispatch Report

DAK Dispatch Report

Sr.No.	Dak / Post letter Reference No	Date	Sent To	Subject
1	1904030001	03-04-2019	Anand,Shimla	Dispatch file
2	1904030001	03-04-2019	Hainak,Chennai	Dispatch file
3	1904030001	03-04-2019	Anand,Shimla	Dispatch file
4	1904030001	03-04-2019	Hainak,Chennai	Dispatch file
5	1904030002	03-04-2019	Anand,shimla	DOCUMENT FOR THE INFORMATION
6	1904030002	03-04-2019	Anand,shimla	DOCUMENT FOR THE INFORMATION
7	1904030003	03-04-2019	ABC,Shimla	Apple seeds approve
8	1904030003	03-04-2019	DCB,Himachal	Apple seeds approve
9	1904030003	03-04-2019	ABC,Shimla	Apple seeds approve
10	1904030003	03-04-2019	DCB,Himachal	Apple seeds approve
11	1904040001	04-04-2019	manisha,	dispatch here
12	1904040001	04-04-2019	manisha,	dispatch here
13	1904040002	10-04-2019	nikhil,ytyt	my dispatch
14	1904040002	10-04-2019	nikhil,ytyt	my dispatch
15	1904040004	04-04-2019	B,SHIMLA	Approval
16	1904050001	18-04-2019	sdf,sdfsd	ewrfwq
17	1904050001	18-04-2019	sfsd,sdfs	ewrfwq
18	1904050002	05-04-2019	AB,SH	ok
19	1904050002	05-04-2019	VV,FD	ok

Report format of MIS Reports

*Other required report will be developed accordingly in the application.

3.3.9　　Reference Screens

The proposed screens for the module shall be as follows:

1. Register Daak For Inward Letter:

   User have the option of Register Daak, user can enter Subject, letter Type, Category (all three parameters are mandatory) and upload/attach the letter or any other document in system, then click on save button. The system will generate a unique acknowledgement number. Then user will Assign the letter to the respective office-in-charge.

DAK Inward Screen
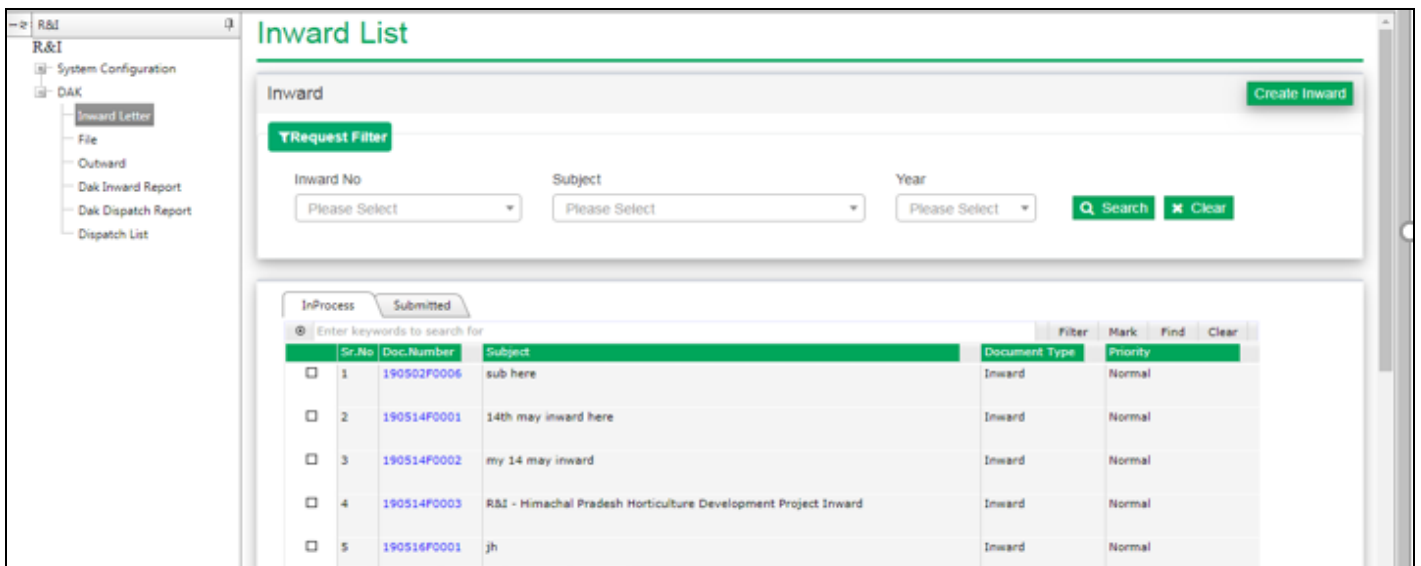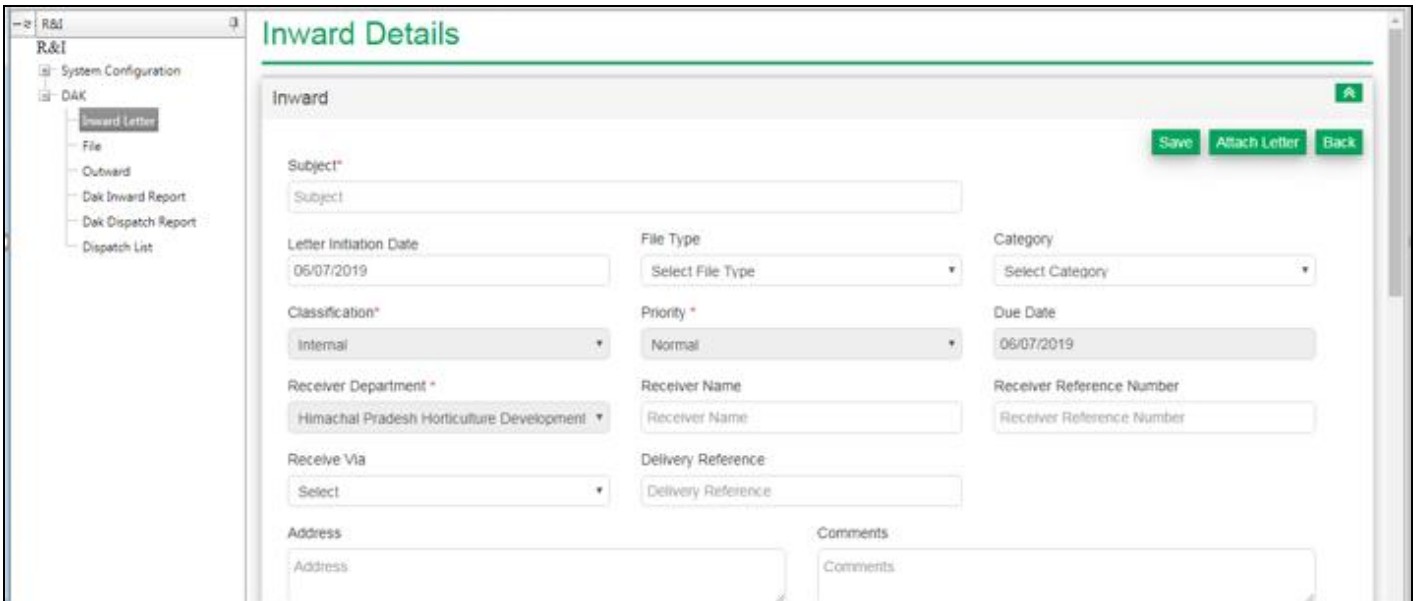
Fig. Process to register new Daak

2. <u>Letter Movement</u>:

    Once user click on forward button user will have options user can send it within office. If user select forward to within office then user just need to select whom user want to forward it set priority, date etc. & user can forward the file easily. System has ability to add comments, follow-up, & movement tracking of processes. System has ability to attach Daak with file and also can maintain status of it.

3. <u>Enter details for Outward Letter</u>:

    System has the ability to allow enter details Outward letter.   User can also check the letter details which will be available on the same page along with department, office, and location details.

DAK Out Ward Screen
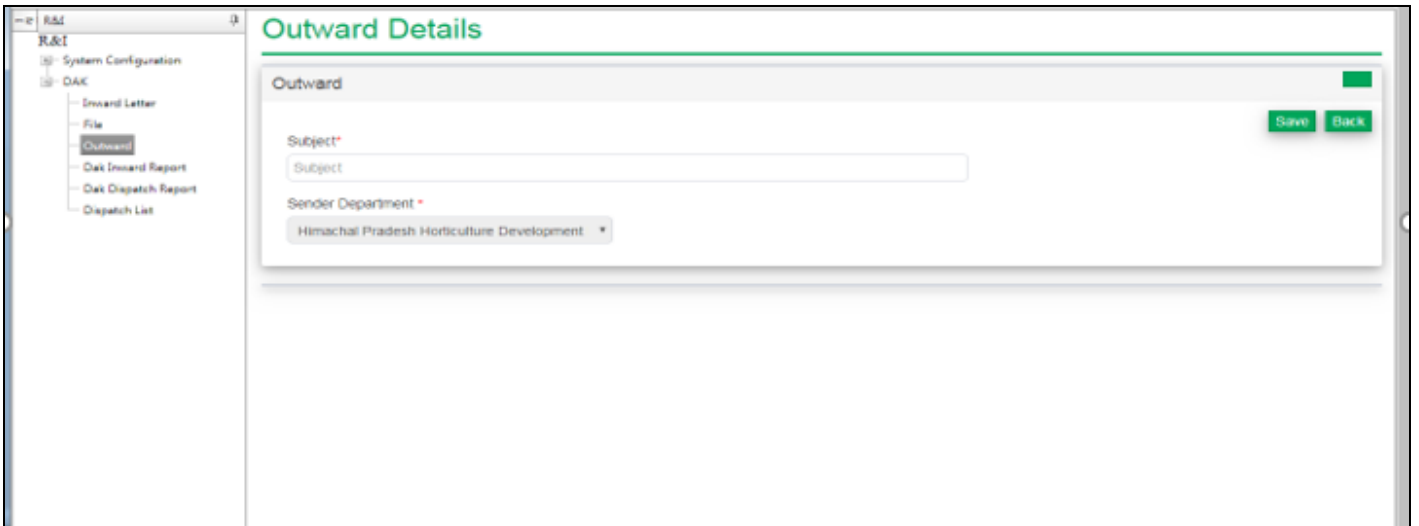
DAK Dispatch details Screen
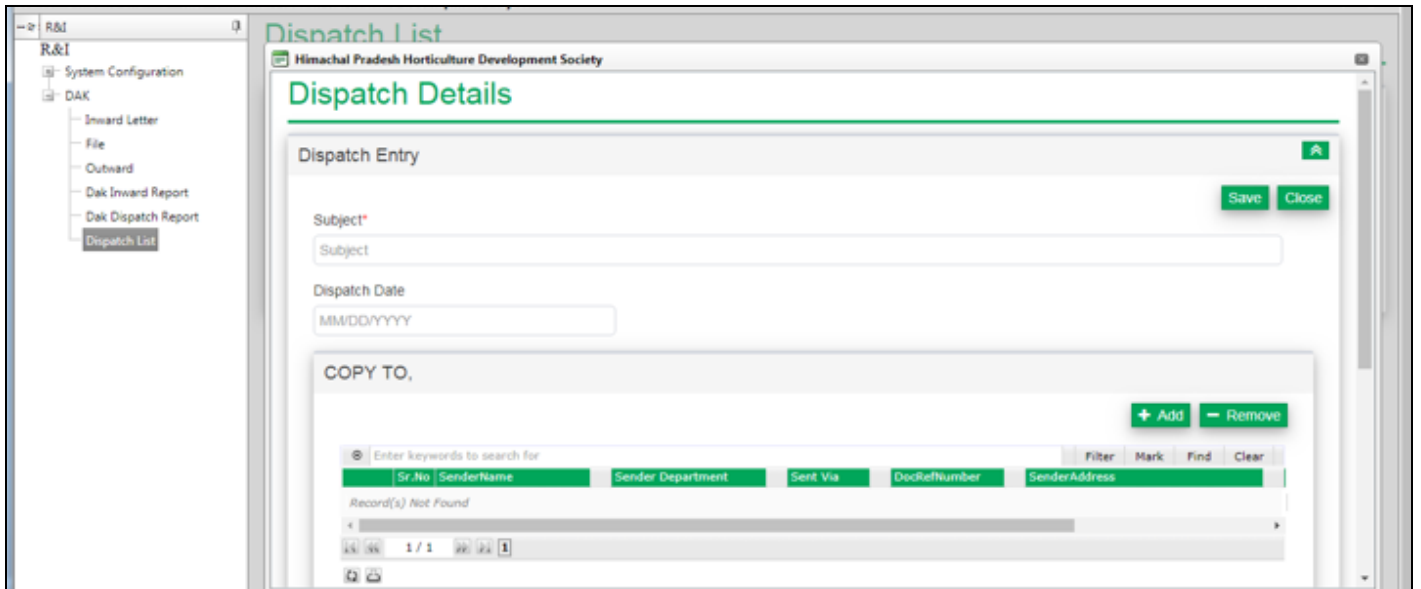
Fig. Process to Enter details for outward letter

3.4   Asset Management

3.4.1   Description

The Asset management comprises maintaining the assets of movables properties and non-movable properties. Asset like building, houses, land, park, garden and movable assets like Machineries, vehicles etc. will be maintain in ASM module. This module will be accessible to Housing commissioners, Estate officer, Estate user and Accounts officer. The system will allow user to transfer and move the properties. The system will generate Asset register for movable and non-movable properties. Below are details working of asset management module.

<u>Types of Asset:</u>

The Asset Register (AR) will maintain the details of movables and immovable Assets of JMC. The asset has major category such as:-

- Movable asset
- Immovable Asset
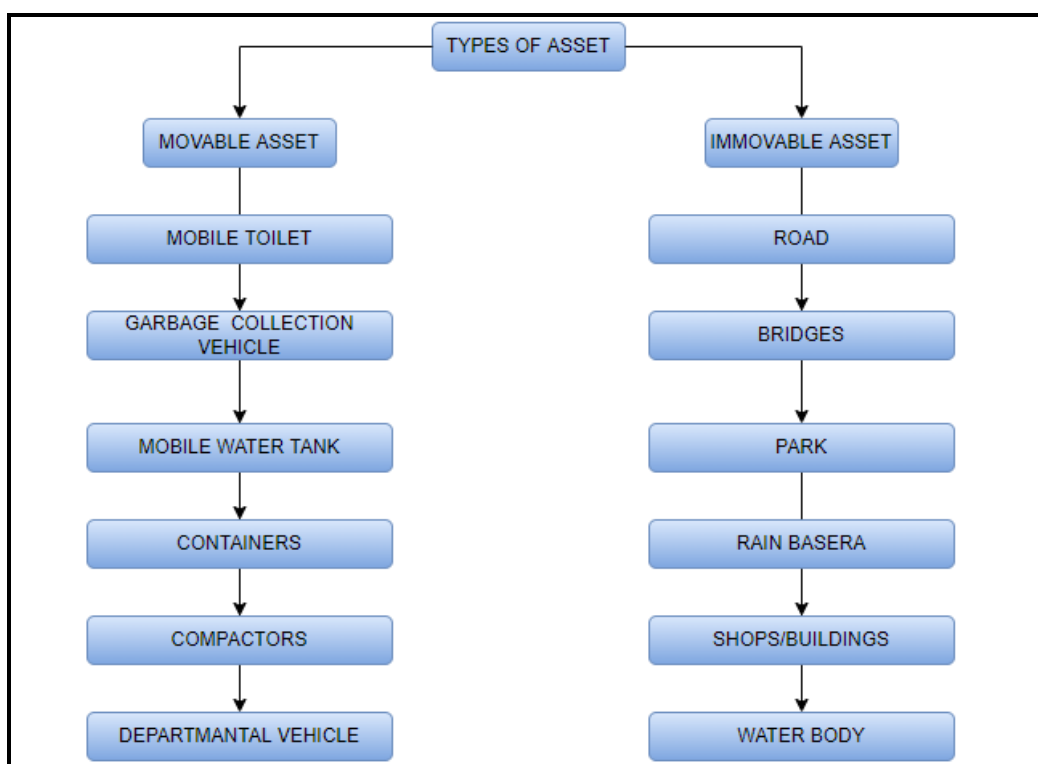
Fig. Types of Asset

3.4.2   Process flow
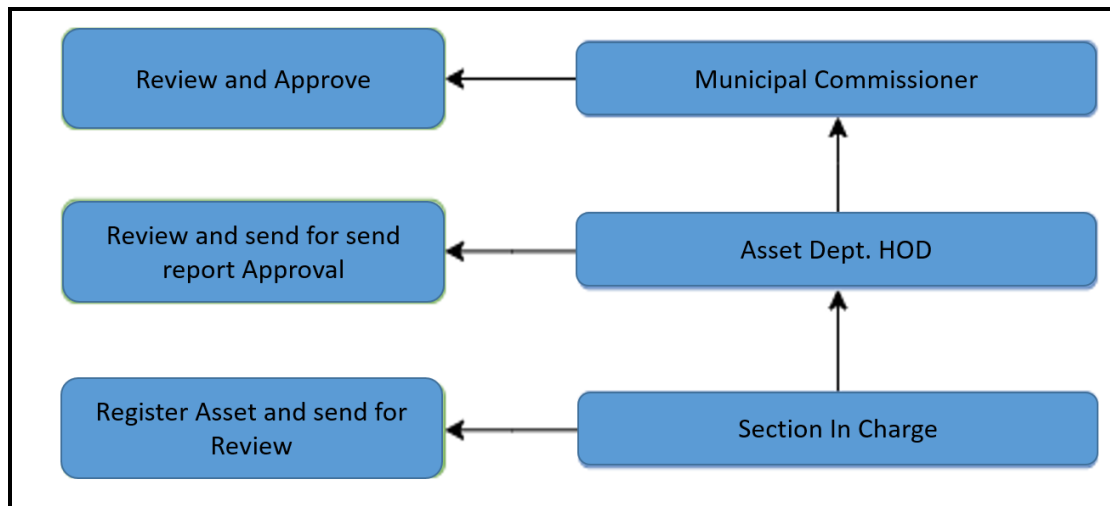
Fig. Process Flow of Asset Management

3.4.3   Functional Requirement:

Asset Management

Asset Registration:

- Asset registration will contain all important information of the Assets such as Date of purchase, Construction, Purchase Cost, Construction cost, life of Assets, Location technical information, Maintenance information etc. On completion of work, the same work becomes an asset for the organization. The asset inventory helps in creation of maintenance and inspection plans for the assets. Some asset will be added in application once it is purchased for the benefits of organization.

- JMC manages large number of buildings, houses, lands, internal roads and other assets like vehicles, furniture and fixtures in different offices (HQ office, Zonal office, Circle and division office). In order to maintain assets, JMC have maintain asset register and also track the record of transfer and movement of assets to various locations and deprecation processes as required. Below is the process for asset registration.

Depreciation of Assets

- System will maintain asset procurement details such as Purchase Date, Vendor Name and Procured Value etc. Along with this system will also maintain the details like whether the asset is sellable or not. User can define the depreciation percentage based on which the Schedule count, Salvage Value to be auto- populated. The System will have the provision to select the required Asset Type, Classification, Schedule Period and the Financial Year for which the Appreciation/Depreciation Report Should Be Attached. Asset revaluation can be done By the Other Third Party Consultancy.

Category of assets:

- User can add asset according to its category movable, immovable, Register will contain all important information of the Assets such as Date of purchase, Construction, Purchase Cost, Construction cost, life of Assets, Location technical information, Maintenance information etc.

Asset maintenance:

- Maintenance Information of Assets: Below screen captures the maintenance information of assets. Improvements done on any asset will be auto populated in the system along with its details such as Construction Start Date, Construction End Date etc.

- System should have provision for Asset definition:
    - Asset category definition
    - Asset master definition
    - Creation of asset ID
- System should have provision to configure asset category
    - Attach asset account
    - Attach P & L Account
    - Attach depreciation account

- Attach Fund Account

- Depreciation Type

- Floor Value

- System should have provision for Asset allocation to employee.

  - Asset Request

  - Asset Issue

  - Asset Return

  - Asset Ownership transfer

Provision for Asset Location Transfer:

- Asset Request

- Request for Asset location Transfer Out

- Asset Location Transfer in

- System should have provision for Asset Purchase

- System should have Asset Sales by using auction process

  - Publishing of advertisement of auction for assets and base price

  - Receive response from various customer

  - Asset sales

  - Receive payment (Online, Offline)

- System should have provision for Asset Write Off and Asset Value Adjustment.

- QR Code generation and labeling facility for easier asset management.

Asset Defect Management:

- Request for asset repair

- Resource Allocation

- Asset repair

- System should have provision for Asset depreciation processing month on month.

- System should have provision for month end processing

Reports:-

- Asset Status report

- Monthly/ Yearly depreciation reports

- Asset wise/ Ownership wise report,

- Verification of used and unused asset count with system count

- Any other work ancillary to above mentioned work as per the requirements of JMC.

3.4.4   Expectations from Proposed System:

- Asset Definition and Categorization: The system should enable the definition of assets, their categories, and individual asset details, along with the generation of unique asset IDs for easy identification.

- Configurable Asset Categories: It should allow for the configuration of asset categories and association with relevant financial and accounting accounts, including asset, P&L, and depreciation accounts.

- Asset Allocation and Ownership Management: The system should support asset allocation to employees, including asset requests, issues, returns, and ownership transfers.

- Asset Location Transfer: It should facilitate asset location transfers, including requests for transfers, transfer out, and transfer in.

- Asset Procurement: The system should provide a means to record asset purchases and maintain related financial information.

- Asset Sales and Auctions: It should enable the auction of assets, including the publication of auction advertisements, receipt of customer responses, asset sales, and payment processing (online and offline).

- Asset Maintenance and Repair: The system should manage asset defects and repairs, including requests for repair, resource allocation, and the actual repair process.

- Depreciation Processing: It should handle asset depreciation calculations on a month-to-month basis, ensuring accurate financial reporting.

- QR Code Generation: The system should generate and label QR codes for assets to simplify asset tracking and management.

- Reporting and Alerts: The system should generate various reports, including asset status, depreciation reports, ownership-wise reports, and alerts for used and unused asset counts. It should also support SMS and email alerts.

3.4.5   Functional Links with other Modules/Departments

- The movable assets like tools and machineries are used in works execution process

3.4.6   Configurable Master Table Management

This module will register all the assets of Jammu Municipal Corporation

Various Master lists will be maintained in the system.

- Asset Master

- Asset Classification Master

- Location Head Master

- Asset Type Master

- Asset Group Master

- Department Master

3.4.7   Access Matrix

Module	Role	Processes
Asset Management	Assistant/ Assistant Engineer, Junior Engineer	Asset creation. Register Asset. Update Asset details. Attach additional documents, Send for internal review, Send Forward
	Joint Municipal Commissioner	Review, Attach additional documents, Send for internal review, Send back, Approve
	Municipal Commissioner	Review, Attach additional documents, Send for internal review, Send back, Approve
	Head of Department	Review, Attach additional documents, Send for internal review, Send back, Send Forward

3.4.8   Sample Reports Formats

Report formats:

Asset History Report:

Asset History Report

Sr. No.	Asset Description	Asset Code	Historical APC	Capitalization Date	Useful Life (Month)	Remaining Life (Month)	APC on Start Date	Accum. Depr. on Start Date	NBV on Start Date	Depreciation	APC on End Date	NBV on End Date	Accum. Depr. on End Date
Land & Building													
1	C.ONYE BAL FOR MAZZANINE FLOORING @ THE WAREHOUSE	VACCIAST0096	1,675,223.75	05-Mar-09	120	0	1,675,223.75	1,675,223.75	1,675,223.75	0.00	0.00	1,675,223.75	1,675,223.75
2	BUILDING RENOVATION ADV. PMT FOR MD'S CAR PARK.	VACCIAST0108	766,479.00	31-Dec-11	120	7	766,479.00	766,479.01	76,647.90	0.00	-0.00	76,647.90	766,479.01
3	RENOVATION WORK AT ONIRU HSE (FINAL PYMT)	VACCIAST0221	455,233.00	12-Dec-11	120	7	455,233.00	451,438.39	49,316.91	0.00	3,793.61	49,316.91	451,438.39
Motor Vehicles													
4	AAA430CK-RANGE ROVER DISCOVERY-FOR CONNIE	VACCIAST0738	15,500,000.00	06-Dec-13	60	0	15,500,000.00	15,499,990.00	15,500,000.00	0.00	10.00	15,500,000.00	15,499,990.00
5	AKD 429 DG MITSUBISHI OUTLANDER AUTOMATIC TRANSMISSION-FOR CALLUN	VACCIAST0743	5,600,000.00	16-Dec-14	60	0	5,600,000.00	5,599,990.00	56,000.00	0.00	10.00	56,000.00	5,599,990.00
Plant and Machinery													
6	ACCESS LADDER FOR OSAPA	VACCIAST0033	62,700.00	18-Jun-15	60	0	62,700.00	57,475.00	17,765.00	0.00	5,225.00	17,765.00	57,475.00
7	CUTTING MACHINE FOR BOURDILLON SITE	VACCIAST0218	164,000.00	18-Nov-17	600	558	164,000.00	71,066.67	125,733.33	0.00	92,933.33	125,733.33	71,066.67

Report format of MIS Reports

*Other required report will be developed accordingly in the application.

- **A.**   MIS Reports.
- **B.**   Asset Register.

3.4.9   Reference Screens

The proposed screens for the module shall be as follows:

1. Add Building:

Building Assets

Building Details

| Save | Close |

*Code : _____　　　[Attachments]

*Name : _____

*Address : _____

Plot	:	_____ ▾	▦	Construction Year	:	_____ ▾
Unit	:	Sqm ▾		Plinth Area	:	0.00
Unit Conversion Factor	:	1 ▾		Converted Plinth Area(In Sqm.)	:	0.00
*Type	:	_____ ▾		***Ownership**	:	Owned ▾
*In Jurisdiction of	:	_____ ▾		***Maintained by**	:	_____ ▾
Latitude	:	_____		Longitude	:	_____
Rate	:	0.00		Cumulative Depriciation	:	0.00
Budget Head	:	_____		Name of Department	:	_____

Remarks : _____

| Add | Delete |

	Name	Numbers	TotalInstalledAssets
Assets Installed :	Record(s) Not Found		

☐ Show All　　　　　[Add] [Activate] [DeActivate]

List of Floor

Code	Name
Record(s) Not Found	

2. Building Summary Register:

3. Road Inventory Masters Configuration:

4. Add Roads:

5. Road Summary Register:

6. Add IT Assets:

7. IT Assets Report:

8. Asset Group Master:

Asset Group Master

Asset Group	Assets Ledger	Depreciation Ledger	Accumulated Depreciation Ledger
Moveable Assest	Vehicles (V)	Depreciation Vehicle (DV)	Accumulated Depre -Vehicle (ADV)
Machinery	Machinery (Machine)	Depreciation Machinary (DM)	Accumulated Depre -Machinery (ADM)
Software	Software (Sw)	Depreciation Software (DS)	Accumulated Depre -Software (ADS)
Furniture	Furniture (FR)	Depreciation Furniture (DF)	Accumulated Depre -Furniture (ADF)
Electronic Equipments	Electronic Equipments (EE)	Depreciation Electronic equip (DEE)	Electronic Equipments (EE)
Computer & Accessories	Computer (Comp)	Depreciation Computer (DC)	Accumulated Depre - Computer (ADC)
Concrete Pump	Machinery (Machine)	Depreciation Machinary (DM)	Accumulated Depre -Machinery (ADM)
Transit Mixture TM	Vehicles (V)	Depreciation Vehicle (DV)	Accumulated Depre -Vehicle (ADV)
Mixture machine	Machinery (Machine)	Depreciation Machinary (DM)	Accumulated Depre -Machinery (ADM)
Dumper	Vehicles (V)	Depreciation Vehicle (DV)	Accumulated Depre -Vehicle (ADV)
Auto Crane	Vehicle Consumables (StkVehCons)	Depreciation Vehicle (DV)	Accumulated Depre -Machinery (ADM)
RMC M25	Machinery (Machine)	Machinery Rent (MacRent)	Machinery (Machine)

9. Asset Master:

Asset Master

	Name	Asset Code	Purchase Date	Place of Service Date	Status	Deployment Status
	Auto Crane					Available
	Computer & Accessories					Available
☐	Computer Desktop 1 (TPL/TPL///2022/0025)	Comp/00000131	21-06-2022	21-06-2022	Active	Available
☐	Computer Desktop 2 (TPL/TPL///2022/0026)	Comp/00000133	21-06-2022	21-06-2022	Active	Available
☐	Computer Desktop 3 (TPL/TPL///2022/0027)	Comp/00000135	21-06-2022	21-06-2022	Active	Available
☐	Computer Desktop 4 (TPL/TPL///2022/0028)	00000137	21-06-2022	21-06-2022	Active	Available
☐	Computer Desktop 5 (TPL/TPL///2022/0029)	Comp/00000139	21-06-2022	21-06-2022	Active	Available
☐	Computer UPS 1 (TPL/TPL///2022/0030)	Comp/00000141	21-06-2022	21-06-2022	Active	Available
☐	Computer UPS 2 (TPL/TPL///2022/0031)	Comp/00000143	21-06-2022	21-06-2022	Active	Available
☐	Computer UPS 3 (TPL/TPL///2022/0032)	Comp/00000145	21-06-2022	21-06-2022	Active	Available
☐	Computer UPS 4 (TPL/TPL///2022/0033)	Comp/00000147	21-06-2022	21-06-2022	Active	Available
☐	Computer UPS 5 (TPL/TPL///2022/0034)	Comp/00000149	21-06-2022	21-06-2022	Active	Available
	Concrete Pump					Available
	Dumper					Available
☐	Dumper (TPL/TPL///2020/0013)	D@01	01-04-2020	15-08-2020	Active	Available
	Electronic Equipments					Available
	Furniture					Available
	Machinery					Available
☐	Back Hoe Loader (TPL/TPL///2022/0016)	Mac/00004	01-01-2021	01-01-2021	Active	Available

10. Asset Value:

Asset Opening Balance

All figures in ₹

Office Category: Corporate HQ   Office: Pune Head Office   As On Date: 01-11-2023

Opening Balance Date: 01-11-2023

	Sr. No.	Asset Code	Opening Balance Date	Asset List	As Per IT Act		As Per Company Act	
					Method	Asset Value	Method	Asset Value
					Line Method		Line Method	
☐	9	Comp/00000143	06/21/2022	Computer UPS 2 (TPL/TPL///2022/0031)	Straight Line Method	0.00	Straight Line Method	0.00
☐	10	Comp/00000145	06/21/2022	Computer UPS 3 (TPL/TPL///2022/0032)	Straight Line Method	0.00	Straight Line Method	0.00
☐	11	Comp/00000147	06/21/2022	Computer UPS 4 (TPL/TPL///2022/0033)	Straight Line Method	0.00	Straight Line Method	0.00
☐	12	Comp/00000149	06/21/2022	Computer UPS 5 (TPL/TPL///2022/0034)	Straight Line Method	0.00	Straight Line Method	0.00
☐	13			Concrete Pump		0.00		0.00
☐	14			Dumper		1,900,000.00		1,900,000.00
☐	15	D@01	08/15/2020	Dumper (TPL/TPL///2020/0013)	Straight Line Method	1,900,000.00	Straight Line Method	1,900,000.00
☐	16			Electronic Equipments		0.00		0.00
☐	17			Furniture		0.00		0.00
☐	18			Machinery		2,600,000.00		2,600,000.00
☐	19	Mac/00004	01/01/2021	Back Hoe Loader (TPL/TPL///2022/0016)	Straight	2,600,000.00	Straight	2,600,000.00

ⓘ ■ Assets Completely Depreciated / Asset Life is Over. This type of Assets can not be edited.

11. Asset Depreciation Rate(%) Update:

Depreciation Rate (%)

Method Type	IT Act	Method Name	All
Office Category	Corporate HQ	Office	Pune Head Office

Sr.No.	Asset Group	Effective Date	Depreciation Rate in %		Depreciation History
			Old	New	
15	└─ Dumper (TPL/TPL///2020/0013)	22-Jul-20	15.00	20.00	▦
16	─ Electronic Equipments				
17	─ Furniture	Dumper (TPL/TPL///2020/0013)			
18	⬜ Machinery				
19	── Back Hoe Loader (TPL/TPL///2022/0016)	01-Mar-15	20.00	20.00	▦
20	── Backhoe Loader 1 (TPL/TPL///2021/0014)	01-Mar-15	20.00	20.00	▦
21	── Concrete Pump 1 (TPL/TPL///2020/0007)	22-Mar-18	0.00	0.00	▦
22	── Concrete Pump 2 (TPL/TPL///2020/0008)	22-Mar-18	0.00	0.00	▦
23	⬜ Mixture machine				
25	⬜ Moveable Assest				
26	── Audi A8 (TPL/TPL///2020/0009)	22-Mar-18	3.00	3.00	▦
27	── Hero Honda 32 (TPL/TPL///2022/0017)	28-May-22	3.00	20.00	▦
28	── Mercedes-Benz E-Class (TPL/TPL///2022/0022)	22-Mar-18	3.00	3.00	▦
29	⬜ RMC M25				
31	─ Software				
32	⬜ Transit Mixture TM				

ℹ To Change Rate, right click on respective Group and Sub Group and use Change option.   ▮ Assets Completely Depreciated / Asset Life is Over. This type of Assets can not be edited.

Depreciation Rate History

SNo	Depreciation Method	Depreciation %	Effective Date	Modified By	Modified On
1	Straight Line Method	15	22-07-2020	Chandrajit Chakraborty	08-Sep-20 18:00:56
2	Straight Line Method	15	22-07-2020	Chandrajit Chakraborty	08-Sep-20 18:13:48

11. Asset Depreciation Method Allocation:

Depreciation Calculation Method And Rate (%)

Method Type	IT Act	Method Name	All
Office Category	Corporate HQ	Office	Pune Head Office

Sr.No.	Asset Group	Effective Date	Method		Depreciation Rate in %		Depreciation History
			Current	New	Old	New	
1	⬜ Auto Crane						
2	⬜ Computer & Accessories						
13	─ Concrete Pump						
14	⬜ Dumper						
16	─ Electronic Equipments						
17	─ Furniture						
18	⬜ Machinery						
19	── Back Hoe Loader (TPL/TPL///2022/0016)	01-Mar-15	Straight Line Method	Straight Line Method ▾	20.00	20.00	▦
20	── Backhoe Loader 1 (TPL/TPL///2021/0014)	01-Mar-15	Straight Line Method	Straight Line Method	20.00	20.00	▦
21	── Concrete Pump 1 (TPL/TPL///2020/0007)	22-Mar-18	Straight Line Method	Straight Line Method	0.00	0.00	▦
22	── Concrete Pump 2 (TPL/TPL///2020/0008)	Concrete Pump 1 (TPL/TPL///2020/0007)		Straight Line Method	0.00	0.00	▦
23	⬜ Mixture machine						
25	⬜ Moveable Assest						
26	── Audi A8 (TPL/TPL///2020/0009)	22-Mar-18	Straight Line Method	Straight Line Method	3.00	3.00	▦
27	── Hero Honda 32 (TPL/TPL///2022/0017)	28-May-22	Straight Line Method	Straight Line Method ▾	3.00	20.00	▦
	── Mercedes-Benz E-Class (TPL/TPL///2022/0022)	22-Mar-18	Straight Line Method	Straight Line Method ▾	3.00	3.00	▦

ℹ To Change Rate and Method, right click on respective Group and Sub Group and use Change option.   ▮ Assets Completely Depreciated / Asset Life is Over. This type of Assets can not be edited.

11. Asset Depreciation Calculation:

12. Asset Depreciation Calculation:

3.5 Fleet Management (Tools and Machinery)

3.5.1 Description

Jammu Municipal Corporation (JMC) is looking to implement a comprehensive Fleet Management System to enhance the efficiency and effectiveness of its Electrical and Mechanical wing. This division plays a crucial role in maintaining and operating heavy machinery and tools, including road construction equipment, Solid Waste Management Vehicles, JCBs, Door to Door Garbage Collection Autos, and government vehicles. The primary objective of this initiative is to streamline and optimize the management of these diverse fleets for improved service delivery and cost-effectiveness.

Key requirements for the Fleet Management System include:

1. **Real-time Monitoring:** The system should provide real-time tracking and monitoring of all vehicles and machinery, enabling better control over their operations and maintenance schedules.

2. **Preventive Maintenance:** Scheduled maintenance alerts and tracking of service history to ensure optimal working condition of the fleet.

3. **Fuel Efficiency:** Monitoring fuel consumption and optimizing routes to reduce fuel costs and minimize the environmental impact.

4. **Safety:** Ensuring the safety of operators and pedestrians through vehicle and equipment monitoring, as well as compliance with safety regulations.

5. **Data Analysis:** Collecting and analyzing data to make informed decisions, reduce downtime, and enhance overall operational efficiency.

6. **Cost Reduction:** Identifying opportunities to reduce operational costs and allocate resources more effectively.

The implementation of a Fleet Management System aligns with JMC's commitment to providing better services and maintaining its fleet of vehicles and machinery efficiently.

3.5.2 Process Flow
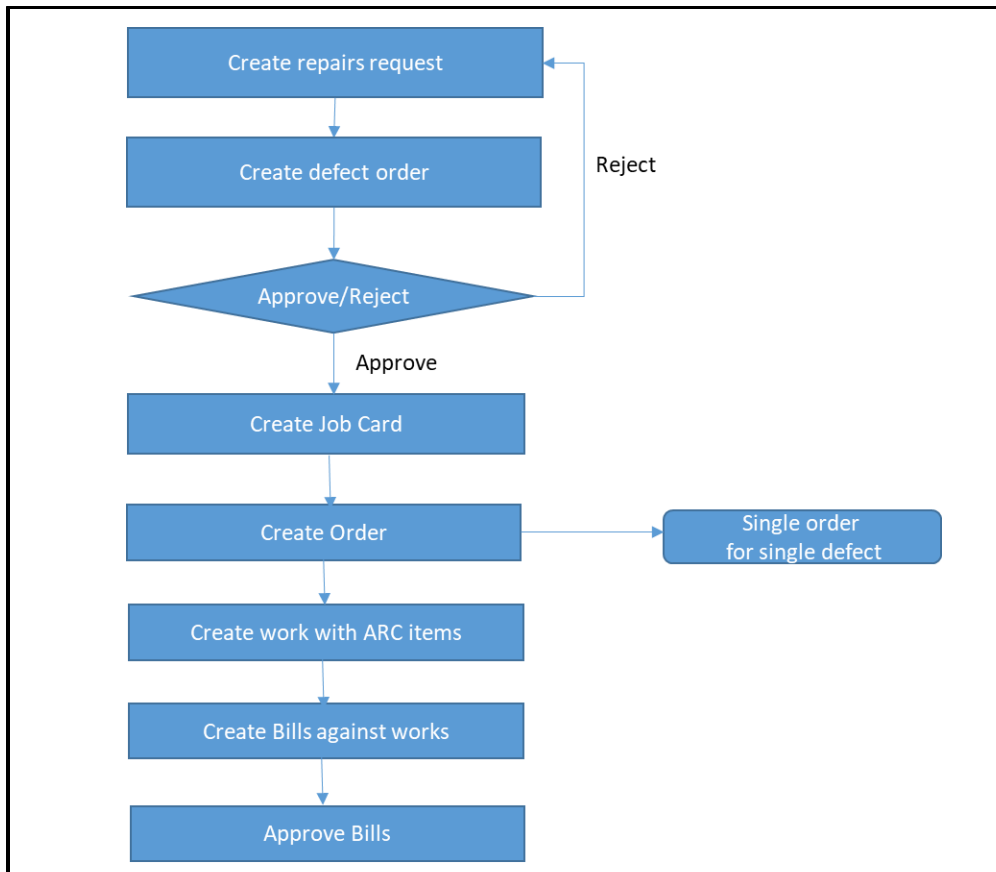
3.5.3   Functional Requirement:

Tools and Machinery for Works Management System

- The Electrical and Mechanical Wing Management module will streamline the management of heavy machinery and vehicles, ensuring efficient maintenance, tracking, and approval processes. It serves as a comprehensive tool for various stakeholders to monitor and manage assets effectively.

- The Electrical and Mechanical Wing Management module shall be designed to efficiently manage heavy machinery, tools, and vehicles used by the JMC (Jammu Municipal Corporation). This module will cater to the needs of the Electrical and Mechanical divisions, handling a variety of equipment such as road machinery, solid waste management vehicles, JCBs, door-to-door garbage collection autos, and government vehicles.

- QR Code Generation: The system shall generate and label QR codes for assets to simplify asset tracking and management.

Asset Inventory Management:

- The system will store information about all types of tools and machinery available within the JMC.

- Assets will be categorized and organized for easy reference.

Request Generation:

- JMC employees can generate requests for new machinery or equipment they require.

- They will specify the details and reasons for the request, and the system will capture this information.

Request Processing:

- The system will process requests generated by JMC employees.

- It will review and evaluate the necessity and feasibility of each request.

Alerts for Repair and Maintenance:

- The system will store and populate alerts for scheduled repair and maintenance activities for each asset.

- These alerts will help in ensuring timely maintenance and minimizing breakdowns.

Approval Workflow:

- For repair and maintenance of government vehicles and machinery, the system will provide an approval workflow.

- Requests for repair, purchase of machinery/vehicles, and estimates for repair charges will go through a defined approval process.

E-Billing:

- The system will support E-billing for expenses related to POL (Petroleum, Oil, and Lubricants) consumption and repair of vehicles and machinery.

- Invoices and bills shall be uploaded directly into the system.

Annual Maintenance Contracts (AMC):

- Details of annual maintenance contracts for machinery and vehicles will be maintained.

- The system will help in tracking the status and validity of these contracts.

Vehicle Management:

- The system will store comprehensive information related to all JMC vehicles, including government vehicles, within its jurisdiction.

- Details include the type and model of the vehicle, registration number, registration validity, insurance, repair and maintenance history, tire replacements, and lubricant issuance records.

- AMC details, driver information, deployment history, and other relevant data will be part of the database.

Integration with GPS and Petro Cards:

- The system will integrate with existing GPS devices installed in JMC vehicles.

- It will also connect with the existing GPS portals and petro cards portal used by the JMC.

- Integration allows real-time vehicle tracking and monitoring.

PHE Division Tool and Machinery Management:

- The system will maintain details of tools and machinery used by the PHE (Public Health Engineering) divisions under the jurisdiction of JMC.

- Similar features for tracking, maintenance, and management will be provided for PHE equipment.

Alerts and Tracking:

- The system will provide SMS and email alerts for various events and milestones.

- These alerts will include maintenance schedules, repair authorizations, vehicle deployments, and more.

- Movement tracking, follow-up reminders, and notifications will be an integral part of the system.

Stakeholders:

JMC Employees:

- JMC employees from various divisions, including Electrical and Mechanical, can generate equipment and machinery requests.

- They can access the system to check maintenance schedules and status, issue equipment, and receive alerts.

Maintenance Teams:

- Maintenance and repair teams will use the system to access repair requests, maintenance schedules, and repair histories.

- They will be responsible for ensuring that equipment and vehicles are in good working condition.

Management and Approvals:

- Senior management and approval authorities within JMC will review and approve requests for repair, purchase, and maintenance.

- They will use the system to provide the necessary approvals.

Drivers and Operators:

- Vehicle drivers and operators will be responsible for recording vehicle deployment details, fuel consumption, and maintenance issues.

- They will interact with the system to update the status of vehicles and machinery.

GIS and GPS Teams:

- The GIS (Geographic Information System) and GPS teams will work on integrating and maintaining the GPS devices and portals.

- They will monitor vehicle movements and locations.

PHE Division Staff:

- Employees from PHE divisions under JMC's jurisdiction will use the system to manage their tools and machinery.

- They can generate repair requests, access equipment records, and receive maintenance alerts.

IT and Support Teams:

- The IT department and support teams will ensure the system's functionality and provide assistance to users.

- They will be responsible for resolving any technical issues.

3.5.4   Expectations from Proposed System:

- Heavy Machinery and Tools Management: The system should store information about tools and machinery used by JMC, enabling employees to request new machinery and equipment.

- Maintenance Schedule Alerts: It should populate alerts for the repair and maintenance schedule of each asset, ensuring timely maintenance.

- Approval Workflows: The system should support approval workflows for repair, purchase, and repair charge estimates for government vehicles and machinery.

- E-billing and Invoice Management: It should facilitate electronic billing for POL consumption and vehicle/machinery repairs, allowing for the upload of repair invoices.

- Vehicle Information: The system should store comprehensive information about vehicles, including type, model, registration details, insurance, maintenance, and deployment data.

- Integration with GPS Devices: It should integrate with existing GPS devices in JMC vehicles and the associated GPS and petro cards portals.

- PHE Division Support: The system should be able to manage tools and machinery for PHE divisions under JMC's jurisdiction.

- SMS and Email Alerts: The system should provide SMS and email alerts for tracking movements, follow-ups, and reminders related to tools, machinery, and vehicles.

- QR Code Generation: The system should generate and label QR codes for assets to simplify asset tracking and management.

- Above functional requirements should be made available in the proposed solution.

3.5.5   Functional Links with other Modules/Departments

- Movable assets are managed through Fleet Management.

3.5.6   Configurable Master Table Management

- Master data for the tools and machinery in the organization.

- Category of the assets

3.5.7   Access Matrix

Module	Role	Processes
Fleet Management	Incharge / Assistant	Log Book preparation. Update movable assets details. GPS monitoring of the assets. Repairs of the assets. Consumption of POL. Attach additional documents, Send for internal review, Send Forward
	Store Officer	Log Book preparation. Update movable assets details. GPS monitoring of the assets. Repairs of the assets. Consumption of POL. Review, Attach additional documents, Send for internal review, Send back, Approve

3.5.8   Sample Reports Formats

Report formats:

1. Job Card Report:

JOB CARD Report

Project Name	Pavilion Park 012
Job Card No	2023/TPL/0015
Job card Date & Time	02-11-2023 11:33:15
PnM Code	2022/TPL/0024
PnM Name	Mercedes-Benz E-Class
Current Odometer	1
Type of Work	Initial Maintenance
Send to Service Station	Yes
Job Description	Car servicing
Address Of Service Location	Car servicing center

A. Requirement of Spares

Sr.No	Name of Spare	Unit	Brand	Rate	Quantity	Amount	Remarks
					Spare Amount	0.00	

B. Consumable List

Sr.No	Name of Spare	Unit	Brand	Rate	Quantity	Amount	Remarks
1	Diesel Filter Element Pri,0.012.0346.0	Number		1,000.00	1.00	1,000.00	ok
					Consumable Amount	1,000.00	

C. Labour Details

Sr.No	Labour	Duration Type	Rate	Duration	Amount
				Labour Amount	0.00

Total Amount (A+B+C) Rs.	1,000.00
Amount in word	One Thousand Rupees Only

Amol Kasturkar

Job Card Prepared By

Amol Kasturkar

Work Assigned To

Printed by : Amol Kasturkar   Printed On: 02-Nov-2023 12:53:41 PM   Page 1

1. Maintenance Invoice

Maintenance Invoice

Invoice No   : 2023/TPL/0007   Invoice Date   : 01-06-2023

Job Card No   : 2023/TPL/0013   Agency Name   : Abdul Hamid

Status   : Created   Agency GST No. :

Invoice Amount : 250.00   Labour Charges : 150.00   Other Charges   : 250.00

Total   : 650.00   Taxes   : 0.00   **Total Payable Amount : 650.00**

Total Payable Amount in word : Six Hundred Fifty Rupees Only

Spares Detail

Sr.No	Name	Unit	Brand	Rate	Quantity	Amount
1	Automotive Battery-123	Number	Okaya	5,000.00	1.00	5,000.00
					Spare Amount	**5,000.00**

Consumables Detail

Sr.No	Name	Unit	Brand	Rate	Quantity	Amount
1	MS Tower Bolt 8"	Number	HYT	30.00	20.00	600.00
					Consumable Amount	**600.00**

Prepared By   **Approved By**

2. Inward Slip:

Inward Slip

Project Name	Pavilion Park 012
Inward Slip Number	2022/TPL/0006
Intward Date & Time	04-08-2022 13:00:00
PnM Received By	Ashish B
Maintenance Carried out	Routine Maintenance
Outward Slip Number	2022/TPL/0007
Outward Date and Time	04-08-2022 0:00:00
Duration	2
Scheduled Inward Date	05-08-2022
Agency Name	Om Sai Enterprises
Agency Address	At- Kopra, Sec 10, Post-Kharghar, Navi Mumbai
Agency Contact Number	
Agency Contact Person	
Job Card	2022/TPL/0010
PnM Code	2022/TPL/0021
PnM Name	Dumper
Type of Work	Initial Maintenance

Ashish B　　　　　　　　　　　　　　　　　Ashish B
Inward Prepared By　　　　　　　　　　Inward Approved By

3. Outward Slip:

Outward Slip

Project Name	Pavilion Park 012
Outward Slip Number	2023/TPL/0010
Outward Date & Time	02-06-2023
Scheduled Inward Date	02-06-2023
Duration In Days	1
Status	Approved
Job Card	2020/TPL/0002
PnM Code	2020/TPL/0005
PnM Name	Tata-TP
Type of Work	Break Down Maintenance
Agency Name	Om Sai Enterprises
Agency Address	At- Kopra, Sec 10, Post-Kharghar, Navi Mumbai
Agency Contact Number	
Agency Contact Person	
Nature of Breakdown	
Job Description	break down work

Shubham J

Job Card Prepared By

Chandrajit Chakraborty

Work Assigned To

Printed by : Amol Kasturkar   Printed On: 02-Nov-2023 12:49:02 PM   Page 1

3.5.9   Reference Screens

The proposed screens for the module shall be as follows:

1. T&M Details: Machine master: Technical Specification

Configuration

PnM Group / Subgroup / Category ▦   Reset

| Technical Specification | Maintenance Checklist | Inspection Checklist | Nature Of Breakdown | Other |

Search   Add   Save   Delete

⊙ *Enter keywords to search for*   Filter Mark Find Clear

☐	Sr.No.	Resource	Particular	Remarks	Is Unit Required	Unit Group
☐	1	Backhoe Loader	Displacement- 4160 CC, Gross power 76 HP, Max pay load- 1760 Kg, Number of cylinder-4		☑	Time ▼
☐	2	Backhoe Loader	Displacement- 4160 CC, Gross power 76 HP, Max pay load- 1760 Kg, Number of cylinder-4		☑	Time ▼
☐	3	Bar Bending Machine	Bending speed 10-20 r/Min		☑	Weight ▼
☐	4	Bar Bending Machine	Rebar Dia 6-32 mm	Use for bar bending	☑	Weight ▼
☐	5	Car	Air pressure	Air Pressure	☐	Select ▼
☐	6	Car	Engine Oil	Engine Oil	☑	Volume ▼
☐	7	Car	Varient	D/P	☑	Number ▼
☐	8	Concrete Reversible Drum Mixer	Mild steel,13r/min,Electric motor,200kg-400kg	Good condition	☑	Time ▼
☐	9	Dumper	Capacity- 20 Cum, Transmission system- 2 speed automatic and manual selection, Brake	To move excavated material only	☑	Time ▼

|◁ ◁   1 / 1   ▷▷ ▷| Page Size 15 ▼

▶

2. T&M Details: Machine master: Maintenance Checklist

Configuration

PnM Group / Subgroup / Category ▦   Machinary Spares/Swing Cylinder, Part No.6188/Backhoe loader   Reset

| Technical Specification | Maintenance Checklist | Inspection Checklist | Nature Of Breakdown | Other |

Search   Add   Save   Delete

⊙ *Enter keywords to search for*   Filter Mark Find Clear

☐	Sr.No.	Resource	Description	Check Type	Expected Result
☐	1	Backhoe Loader	Grease checking	Manual	
☐	2	Backhoe Loader	Oil checking	Manual	
☐	3	Backhoe Loader	Radiator checking	Manual	
☐	4	Bar Bending Machine	Oil check	Manually	
☐	5	Bar Bending Machine	Voltage & Power	Machine	
☐	6	Car	Air pressure	electronic	ok
☐	7	Car	OIL	Manual	ok
☐	8	Car	Suspension	Electronics	0-10
☐	9	Car	Wheel Alignment	Electronics	0-10
☐	10	Concrete Reversible Drum Mixer	Drum Revolution service	Manual	
☐	11	Concrete Reversible Drum Mixer	Revolving handle oiling	Manual	
☐	12	Concrete Reversible Drum Mixer	Tyre checking	Manual	
☐	13	Dumper	Air filter	Manual	air must pass and light v
☐	14	Dumper	Engine oil	Manual	must feel soft on hand
☐	15	Dumper	Oil Filter	Manual	

|◁ ◁   1 / 2   ▷▷ ▷| Page Size 15 ▼

▶

3. T&M Details: Machine master: Inspection Checklist

Configuration

PnM Group / Subgroup / Category ▦   Machinary Spares/Swing Cylinder, Part No.6188/Backhoe loader   Reset

| Technical Specification | Maintenance Checklist | Inspection Checklist | Nature Of Breakdown | Other |

Search   Add   Save   Delete

⊙ *Enter keywords to search for*   Filter Mark Find Clear

☐	Sr.No.	Resource	Description	Check Type	Expected Result
☐	1	Swing Cylinder, Part No.6188			

|◁ ◁   1 / 1   ▷▷ ▷| Page Size 15 ▼

▶

4. T&M Details: Machine master: Nature of Breakdown

5. T&M Details: Machine master: Other/Departments

6. T&M Details: Tools & Machinery List: Owned

Plant & Machinery List

Owned	Rented	Hire Purchased						Block PnM	Unblock PnM	PnM List	Add PnM

Enter keywords to search for   Filter Mark Find Clear

	Resource/PnM Name	PnM Code	Company/Project	Warehouse	Date of Purchase	Contains Prime Mover	Deployment Status	Hire Charges	Hire Charges Imposed
	Machinary Spares								
	Backhoe loader								
	Tooth Point Kit								
☐	Pick & Carry Crane	2022/TPL/0020	Alcantara Bridge	Alcantara Bridge Warehouse	17-06-2022	No	Available	0.00	0.00
☐	Tooth Point Kit	2021/MC/0019	Pavilion Park 012	Pavilion Park 012 Warehouse	01-01-2021	No	Available	0.00	0.00
	Snap Ring								
	Side Cutter								
	Cover								
	Diesel Filter 1 Ltr Cloth BOSCH								
	Diesel Filter 1 Ltr Paper BOSCH								
	Cabin Fan								
	47699327/BU4050047 Headlight								
	BULB 12 V - 60W/H4 Headlight								
	BULB 12 V - 55 W/H3- Worklight								
	Breather								
	Skid Steer Loader								
	Bracket Assembly-RH,Part No.3H0966								
	Bracket Assembly-LH,Part No.3H0961								
	Main Shaft Part No 3K0008								

ℹ️ ▊PnM ▊Blocked PnM ▊Prime Mover

7. T&M Details: Tools & Machinery List: Rented

Plant & Machinery List

Owned	Rented	Hire Purchased						Block PnM	Unblock PnM	PnM List	Add PnM

Enter keywords to search for   Filter Mark Find Clear

	Resource/PnM Name	PnM Code	Company/Project	Warehouse	Date of Purchase	Contains Prime Mover	Deployment Status	Hire Charges	Hire Charges Imposed
	Machinary Spares								
	Backhoe loader								
	Tooth Point Kit								
	Snap Ring								
	Side Cutter								
	Cover								
	Diesel Filter 1 Ltr Cloth BOSCH								
	Diesel Filter 1 Ltr Paper BOSCH								
	Cabin Fan								
	47699327/BU4050047 Headlight								
	BULB 12 V - 60W/H4 Headlight								
	BULB 12 V - 55 W/H3- Worklight								
	Breather								
	Skid Steer Loader								
	Bracket Assembly-RH,Part No.3H0966								
	Bracket Assembly-LH,Part No.3H0961								
	Main Shaft,Part No.3K0008								
	Air Filter Inner								
	Air Filter Outer								
	Hydraulic Filter								

ℹ️ ▊PnM ▊Blocked PnM ▊Prime Mover

https://turnerprojects.civitbuild.in/SEPL.OPTICON.PMS/Master/PlantMachineryList.aspx?iVal=1&mId=509&pId=594797&rId=39&tId=862&WCount=0&DCount=0&RJCount=0#

4. T&M details: Tyre List

Tyre List

								Create	Delete

Enter keywords to search for   Filter Mark Find Clear

	Code	Date Of Purchase	Size	Make	Rate	Status	Project	Associated PnM
	Machinery							
	Tyres							
	Ceat Tyre 280/85 R 20							
☐	2020/TPL/0001	04-06-2020	280/85	Ceat	21,000.00	Available		

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8. Requisition:

9. Maintenance and Repair: Create Job Card

10. Maintenance and Repair: Create Outward Slip

Outward Slip Details   Save Print Back

Outward Slip Number	Y/CC/*****		
* Outward Date & Time		* Prepared By	Amol Kasturkar
* Scheduled Inward Date		* Duration In Days		* Status	Draft

Job Card Details

* Select Job Card	2023/TPL/0015	PnM Group	Machinery	PnM Category	Car
Type Of Work	Initial Maintenance	PnM Name	Mercedes-Benz E-Class	Project	Pavilion Park 012
		PnM Code	2022/TPL/0024	Location	

Agency Details

* Agency Name	Select Agency	Agency Address	
Agency Contact Person		Agency Contact Number	

Nature of Work

	(upto 250 Characters)
Nature of Breakdown	
	(upto 250 Characters)
Job Description	Car servicing

Outward Slip List   Create Delete

My Outward Slip | Available Outward Slip

Enter keywords to search for   Filter Mark Find Clear

☐ Sr. No.	Project	Outward Slip No.	Outward Date	Schedule Inward Date	Agency Name	Job Card No.	Job Card Dat	Type of Work	PNM Code	PNM Name	Status	Inward

No Outward Slip List Found.

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11. Maintenance and Repair: Create Inward Slip

Inward Slip Details   Save Print Back

Inward Slip Number	Y/CC/*****	* Prepared By	Amol Kasturkar	
* Inward Date & Time	02-11-2023 0:00:00	* PnM Received By	Amol Kasturkar	Invoice Code
	(upto 500 characters)			
* Maintenance Carried out				
	(upto 500 characters)			
Remarks				

Outward Details for Reference

* Outward Slip Number	Select Number	Outward Date and Time		Created Date
Duration		Scheduled Inward Date		

Agency Details

Agency Name		Agency Address	
Agency Contact Person		Agency Contact Number	

Job Card Details

Job Card Number		PnM Group		PnM Category	
Type Of Work	Select	PnM Name		Project	
Prepared By	Amol Kasturkar	PnM Code		Location	

11. Maintenance and Repair: Invoice generation

Invoice for Repairs / Maintenance

Invoice No	2023/TPL/0007	Invoice Amount	2,50.00	
Invoice Date	02-11-2023	Labour Charges	1,50.00	Flow Summary |
Outward Slip No	2023/TPL/0009	Other Charges	2,50.00	Invoicing Currency INR
Job Card No	2023/TPL/0013	Total	0.00	*(upto 500 characters)*
Agency Name	Abdul Hamid	Taxes	0.00	Remarks
Status	Created	Total Payable	0.00	

Spares | Consumables | Documents

Sr. No.	Name Of Spare	Unit	Brand	Quantity	Rate	Value	Remarks
1	Automotive Battery-123	Number	Okaya	1	5000	5000	

11. Log Book Generation:

Machine Log

Select Project	Select	Project Code	

Machines   Add Save Remove

	Sr. No.	Log Date	Trip/Work	Time		Duration in Hrs	Fuel Type	Fuel Quantity	Odometer			Rate
Enter keywords t Filter Mark Find Clear				From	To				Opening Reading	Closing Reading	Distance Traveled in KM	
Name												
No data found	No data found											

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ℹ️ Machine Log used in further process

12. T&M Deployment: Generate Work Order/Contract:

Work Order List   Create Work Order Delete

Enter keywords to search for   Filter Mark Find Clear

	Project Name / Work Order Title	Work Order No.	Contractor	Contract Typ	Order Value	Work Ord Date	Status
☐	No data found						

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ℹ️ Rejected Force Close

13. T&M Deployment: Allotment/Dispatch Order:

Allotment List

Pending | On Hold | Hold

Enter keywords to search for | Filter | Mark | Find | Clear

Sr. No.	Requisition No.	Allocation No.	Requested From	Requested To	Project	*Status
1	TG/TPL/PP/2022/2022/0021	2023/0002	19-08-2022	08-09-2022	Pavilion Park 012	NP
2	0022	2023/0001	06-04-2023	07-04-2023	Pavilion Park 012	NP

*Status: NP = Not Processed, PP = Partially Processed, FP = Fully Processed

Allotment Details

*Status: NP = Not Processed, PP = Partially Processed Create Dispatch Order | Back

Enter keywords to search for | Filter | Mark | Find | Clear

Sr. No.	Requisition Number	Allocation Number	PnM Code	PnM Name	Required From	Required To	Allocated From	Allocated To	Source Location	Destination Location	* Status
1	TG/TPL/PP/2022/2022	2023/0002	2022/TPL/0021	Dumper	19-08-2022 9:3	08-09-2022 9:3	19-08-2022 0:0	08-09-2022 0:0	Pavilion Park 012	Pavilion Park 012	NP

14. T&M Deployment: Released T&M List:

Released PnM List

Delete

My Released PnM | Available Released PnM

Enter keywords to search for | Filter | Mark | Find | Clear

Sr.No.	Release No.	Remarks	Status

No Released PnM record Found.

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https://turnerprojects.civitbuild.in/SEPL.OPTICON.PMS/Allotments/ReleasedPNMList.aspx?mId=509&pId=594788&rId=39&tId=883&WCount=0&DCount=0&RJCount=0#

3.6 Store & Inventory Management

3.6.1   Description

Store and inventory management is the process of overseeing and controlling an organization's stock of goods and materials. It plays a vital role in ensuring that a company can meet customer demand while minimizing excess inventory and associated costs.
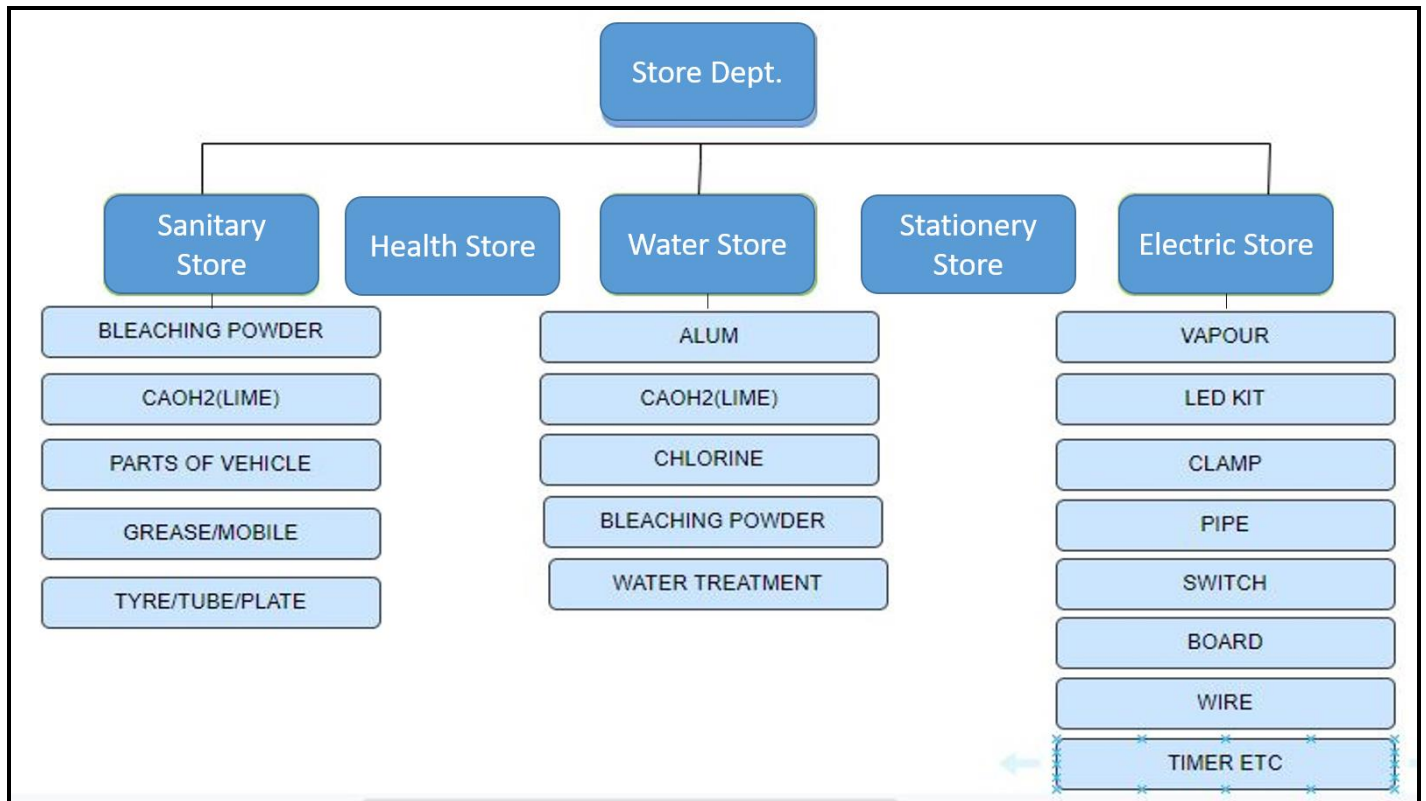
Fig: Inventory Category

3.6.2   Process Flow

The process for store & inventory management involves below steps:

- Requisition: Begin by forecasting the demand for different items in your inventory. This involves analyzing historical data, market trends, and future requirements to estimate how much of each item will be needed.

- Inventory Classification: Categorize your inventory items into different groups based on criteria such as value, importance, perishability, and usage frequency. Common methods include ABC classification, where items are labeled as A (high-value, high-importance), B (moderate), and C (low).

- Receiving: Upon the arrival of new inventory, verify the quantity and quality of items received. This step ensures that you received what you ordered and that the items are in good condition.

- Storage and Organization: Store items in a well-organized and efficient manner. Assign specific locations for each item, label shelves or bins, and use clear identification systems to make retrieval easier.

- Inventory Tracking: Continuously track the movement of items in and out of the inventory. This includes recording when items are issued or sold and when new stock is received.

- Reorder Point and Order Quantity: Set reorder points for each item, which trigger a reorder when the stock level reaches a certain threshold. Determine the optimal order quantity to avoid overstocking or stockouts.

- Stock Transfer: If you have multiple locations or stores, you may need to transfer items between them. Record these transfers accurately.

- Stock Adjustment: Periodically, conduct physical counts to reconcile the actual stock with the recorded quantities. Make necessary adjustments for any discrepancies.

- Depreciation Calculation: For assets and equipment in the inventory, calculate and record depreciation to reflect their decreasing value over time.

- Safety Stock: Maintain a safety stock level to account for unexpected surges in demand or delays in replenishment.

- Reporting and Analytics: Use inventory management software or tools to generate reports on stock levels, usage, procurement costs, and other key metrics. This data helps in decision-making.

- Inventory Control Policies: Establish and enforce inventory control policies that govern who has access to the inventory, who can approve orders, and other rules to prevent theft or misuse.

- Obsolete or Surplus Items: Identify and handle obsolete or surplus items by disposing of them or marking them down for clearance.

- Supplier Relationship Management: Maintain positive relationships with your suppliers to ensure a steady and reliable supply chain.

- Inventory Optimization: Regularly review and refine your inventory management strategies to ensure efficiency and cost-effectiveness.

The specific steps and processes may vary depending on the industry, organization, and the types of items in the inventory, but the principles of demand forecasting, categorization, tracking, and control are common to effective store and inventory management.

3.6.3   Functional Requirement:

Below functional requirements ensure that the Store Management System is well-equipped to handle the various aspects of inventory management, stock issuance, reporting, and asset identification using QR codes and labels:

Portal Integration:

- The Store Management System will be connected through the portal.

- Forms for store management will be hosted on the portal, and the entire system will be process-driven, managing business processes and actions.

Stock Issuance and Reporting:

- The system will capture stock issued against the work code by JMC.

- It will generate work code-wise reports of all items issued to contractors.

Item Database:

- The system will maintain a category-wise item database, ensuring organized inventory management.

Unique Item Codes:

- Each stock item will be assigned a unique code that is consistent across all JMC offices for standardized identification.

Stock Transfer:

- The system will provide the option to transfer items from one JMC store to another.

Indent Preparation:

- The system will offer an interface for the creation and preparation of indents, allowing authorized users to request specific items.

Indent Approval:

- There will be an interface for the approval of indents by competent authorities to ensure proper control and authorization.

Stock Issue Register:

- The system will maintain a detailed stock issue register, tracking all stock transactions and issuances.

Stock Transfer:

- The system will support stock transfers between different stores within the JMC.

Bills of Supplies:

- The system will generate bills of supplies for all items issued, providing a clear record of transactions.

Receipt of Material:

- The system will manage and record the receipt of materials, updating inventory and records accordingly.

QR Code Generation and Labeling:

- The system will have the facility to generate QR codes and labels for assets, making asset management more efficient.

- It will provide the capability to generate QR codes and labels for easy asset identification and tracking.

Item (Resource) Master data

System will have the ability to maintain the Item master data of the for any particular Project under that user can Add, delete or Search item detail and the same functionality will be available for Unit of measurement, item group and resource code as well. Each item will have unique code assigned to it. These items will be used across the system for various procurement and stores related transactions. System will allow user to select the Unit of measurement, Stock unit, that will have required for the further process in Store management.

Item (Resource)Group Type

System will allow user to classify items based on type and also fix the rate of any particular item at same platform. System has provision to define item category as well and that will reflect into the store management at different stages.

Define FIFO/LIFO Method

System will have the ability to define inventory method (FIFO/LIFO/Not Stated) into the Master data which will be processed throughout the Project. Before starting project user will go into the Master data where user can select the inventory method as per the requirement of the Project.

Manage Maximum and Minimum Stock value

System has the ability to manage the minimum, maximum or reorder level of the stock where user can define the quantities as per the requirement of the Project. User can set Project wise minimum or maximum stock quantity. System will have a provision where user can select the check box for local purchase and project wise rate

Supplier Details

In the Mater data user can do multiple things in vendor details like Addition, Modification, Deletion, and Search of Vendors. Venders details will be reflecting while making Purchase orders. If user wants to add new supplier, user can add from the master data in the supplier details where user can add all the details of the supplier. System has provision to activate or deactivate the supplier as well.

Stock Opening Balance

System has the ability to provide stock item wise details and user can also take the print of updated stock details. User can also search the items which is available into the stock along with quantities and rates for any particular Project. In stock opening balance, user can add stock quantities along with the rates and further user can also post the stock quantity which will be reflect into the stock report.

Preparation of Indent

System has the ability to create an Indent via requisition which will come from different department or through the policy. As per the requirement user can cancel or modify the existing Indent which will not be available in the list. System has the ability to make an indent with multiple items and user can also take the print of the indent as well.

The prepared indent will available in the task list of Stores Office. On availability of stock the material will be issued against the material indent. The master data which is readily available in the system will be used for preparing the material indents. On completion of the Indent preparation, it will be forwarded to the concerned authority for approval and further processing. Use can track the document and easily find the current status of the indent.

Issue of materials

The materials will be issued to the staff against the requirements submitted through the material indent. The Stores officer will get the list of pending indents for issue. The stores officer will select the Indents and issue the materials against based on the availability of the stock. In case of works, the details of the materials that need to be supplied to the contractor at the time of execution will be mentioned in the work order. Based on this the materials are issued to the contractors.

On receipt of Indent the stores officer will check for the availability of stock and if it is available, then Store Officer will open the indent and update the issue quantity.

Return of Materials

The extra materials after work will be returned back by the department users to the stores department through the material return form. The users will give information of Issue Number against which the material is returned back.

On receiving the materials, the stores officer will search the issue number from the system. After opening the form, he will update the return quantity and update the same in the system. On Posting, of the transactions the stock will be updated and internally the effects will be taken in Financial Accounting and Asset Management modules.

Stock Adjustments

The concerned authorities from stores department will conduct the stock audit of the stores at regular intervals. The findings of the audit are noted and in case stock quantity corrections are required then the same will be done through the Stock Adjustment process.

The above page shows the details of the stock adjustment done by the stores department. The concerned authority will select the materials from the master list and update the information about current stock quantity and adjustment quantity. On Posting of this transaction, the quantity will be updated in the stock.

Authorized user can perform stock adjustments by selecting the appropriate radio button for either adding to stock or reducing from stock.

Stock Register Report

Stock register report will define the opening, inward, Outward and closing quantities. User can select the duration in which user wants to check the Stock Register summary.

Stock Valuation Report

System shall have the ability to provide Stock valuation report with an updated quantity and rates provided by the user. System has an option in which user can print the report either for Company or Project wise. The updated quantity in the stock while making of stock opening balance will be reflect into the valuation report.

3.6.4   Expectations from Proposed System:

- Stock Capture and Issuance Tracking: The system should accurately capture stock issued against work codes by JMC and maintain a comprehensive record of these transactions.

- Work Code Reports: It should generate detailed work code-wise reports for all items issued to contractors, enabling transparent and organized record-keeping.

- Category-Wise Item Database: The system should categorize and maintain an organized database of items, making it easy to manage and locate specific products.

- Unique Item Codes: Each stock item should be assigned a unique code throughout all JMC offices, ensuring consistency and avoiding duplication.

- Inter-Store Item Transfer: There should be an option to transfer items from one JMC store to another, allowing for efficient stock management and distribution.

- Indent Creation: The system should provide an interface for creating indents, which are requests for the procurement of specific items or materials.

- Indent Approval Workflow: It should support an approval process for indents, ensuring that requests are reviewed and approved by the competent authority.

- Stock Issue Register: Detailed stock issue records should be maintained, providing information about the quantities, recipients, and purposes of issued items.

- Stock Transfers and Bills of Supplies: The system should facilitate stock transfers and maintain bills of supplies for accurate tracking and accountability.

- Receipt and QR Code Generation: It should allow the receipt of received materials and generate QR codes and labels for easier asset management and item identification.

- Above functional requirements should be made available in the proposed solution.

3.6.5   Functional Links with other Modules/Departments

- The items in the store and inventory are used in Project works

- Items issued to the supplier/contractor.

3.6.6   Configurable Master Table Management

- Item Resources Master data.

3.6.7   Access Matrix

Module	Role	Processes
Store & Inventory Management	Store Incharge / Store Assistant	Stock register. Update stock and inventory details. Attach additional documents, Send for internal review, Send Forward
	Store Officer	Review, Attach additional documents, Send for internal review, Send back, Approve

3.6.8   Sample Reports Formats

Report formats:

- Stock Register Report

Stock Register Summary

Stock Register for the period of 27-03-2018 to 17-07-2020

e

Resource Description	Unit	Opening	Inward	Outward	Closing
AAC Block Jointing Mortar	KG	200.00	804.00	402.00	602.00
Binding Wire MS	KG	20,000.00	60,200.00	38,504.72	41,695.28
Crystalline Waterproofing Admixture	KG	20,000.00	0.00	13,884.00	6,116.00
Flyash Bricks 6" Thick	No	50,00,000.00	0.00	31,23,900.00	18,76,100.00
Murum-1	Cum	4,500.00	12,000.00	8,245.40	8,254.60
Paver Block - 50 mm	Sqft	3,000.00	76,900.00	38,400.00	41,500.00
Reinforcement Steel Bar 20 mm	KG	60,000.00	19,54,000.00	17,42,330.34	2,71,669.66
River Sand	Cum	11,879.18	12,879.18	11,619.18	13,139.18
RMC M15 Grade	Cum	200.00	120.00	283.46	36.54
RMC M20 Grade	Cum	5,500.00	13,300.00	13,205.11	5,594.89
RMC M25 Grade	Cum	350.00	150.00	494.20	5.80
RMC M7.5 Grade	Cum	60.00	220.00	279.19	0.81
Spade (Phawda)With Handle	No	600.00	3,013.00	1,473.69	2,139.31
Waterproofing Liquid Admixture	Ltr	20,000.00	0.00	13,884.00	6,116.00

- Stock Details Report

- Stock Valuation Report

-
- Item Details Reports

- Department and material wise Material Consumption Reports

- Disposal Note Report

- Material Inspection Detail Report

- Un-used material report

- Goods rejection / Return Detail report

3.6.9 Reference Screens

The proposed screens for the module shall be as follows:

Fig. Items Resource Master data

Fig: Selection of Item Group Type
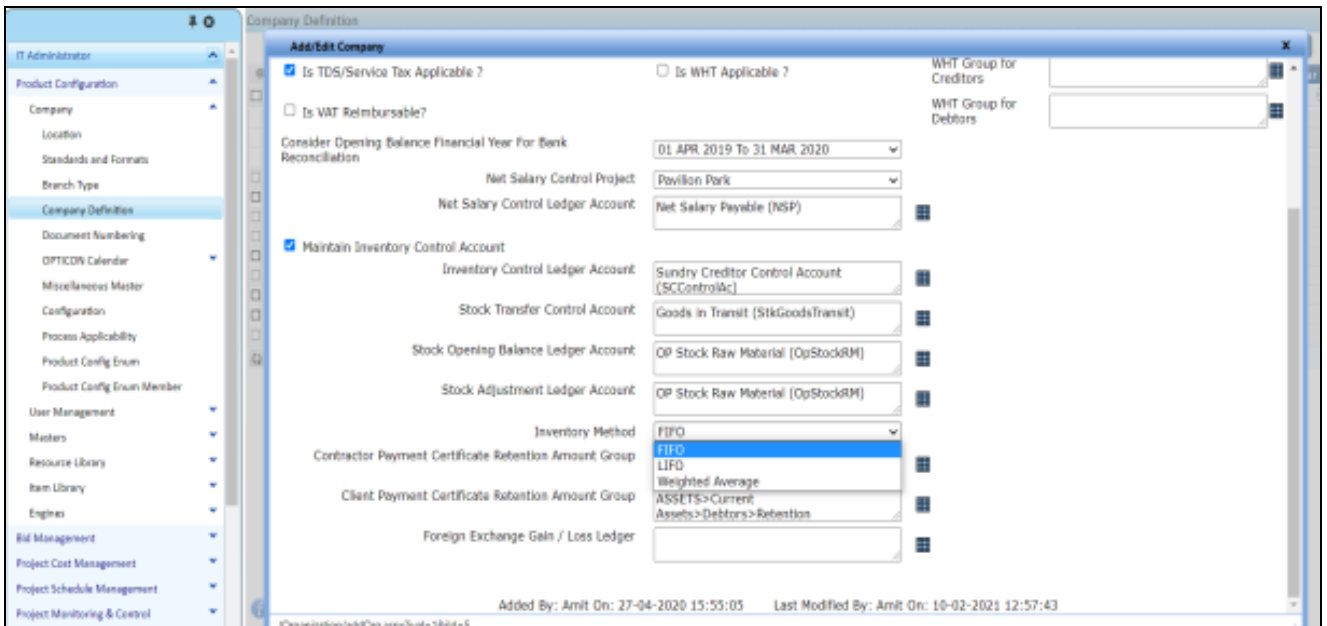
Fig: Selection of FIFO/LIFO Method
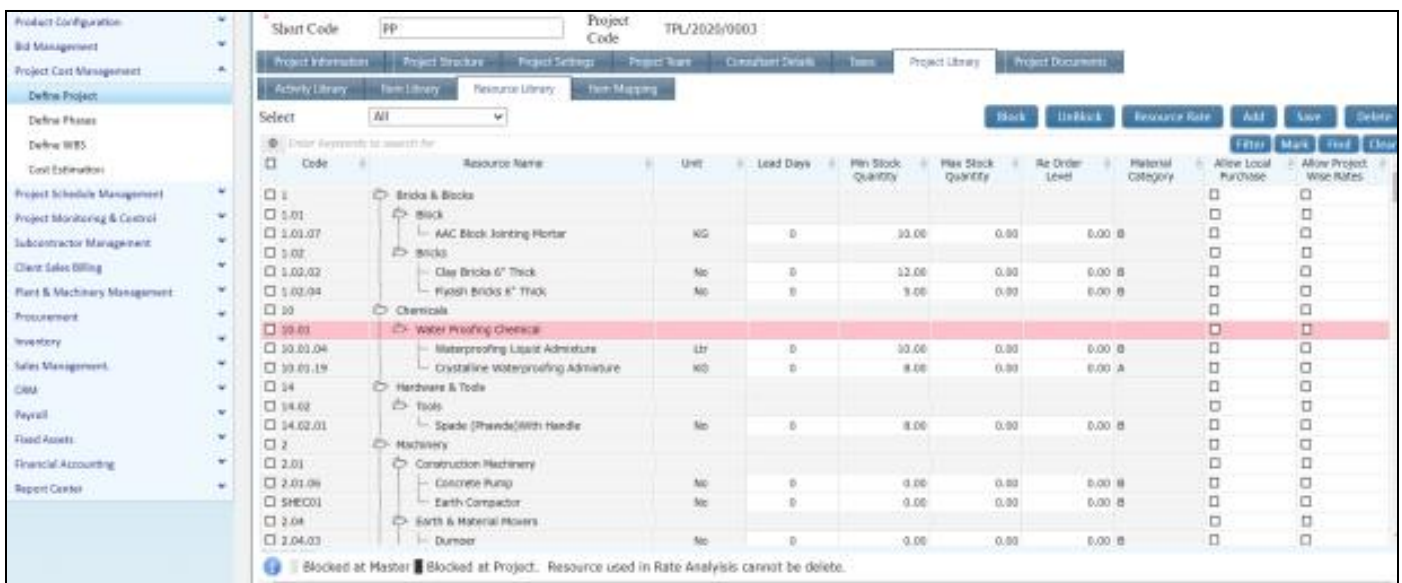
Fig. Manage Maximum and Minimum Sock value

Fig. Addition of Supplier Details Process

Fig. Selection of Resources in Stock Opening Balance

Fig. Issue of Materials

Fig. Material Return Process

Fig: Stock Adjustments

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3.7 HR Management

3.7.1 Description

The Human Resource Management maintains and tracks information pertaining to all the employees in an organization. Jammu Municipal Corporation maintain the employee record and the functions related to the establishment/personnel section, such as Appointment, joining, placement, ACR, Leave Management, Promotion & Transfer, Retirement, regularization of contractual employee, suspension etc. JMC maintain complete service records of an employee such as Name, Date of Birth, family details, Religion, Current Address, Permanent Address, date of joining, all posting records, promotion history, increment details, GPF number and balance, GIS details, nominee details, leave details, training and Education details.

Automation of JMC process and its integration with Payroll, Accounts Division module will allow them to process the payroll, adjustment/advances, GPF deduction, TDS deduction etc. and monitor the process efficiently.
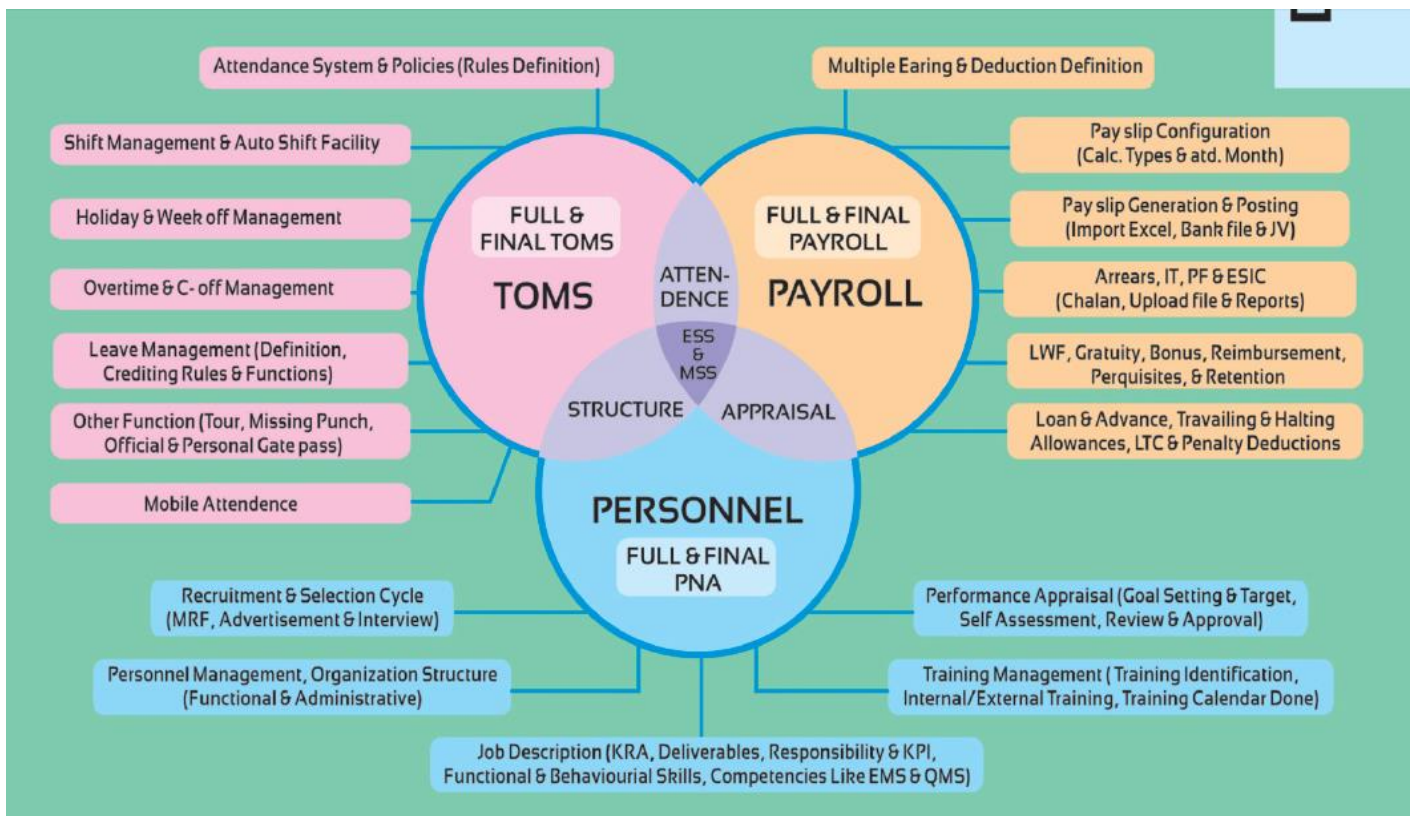
3.7.2 Process Flow
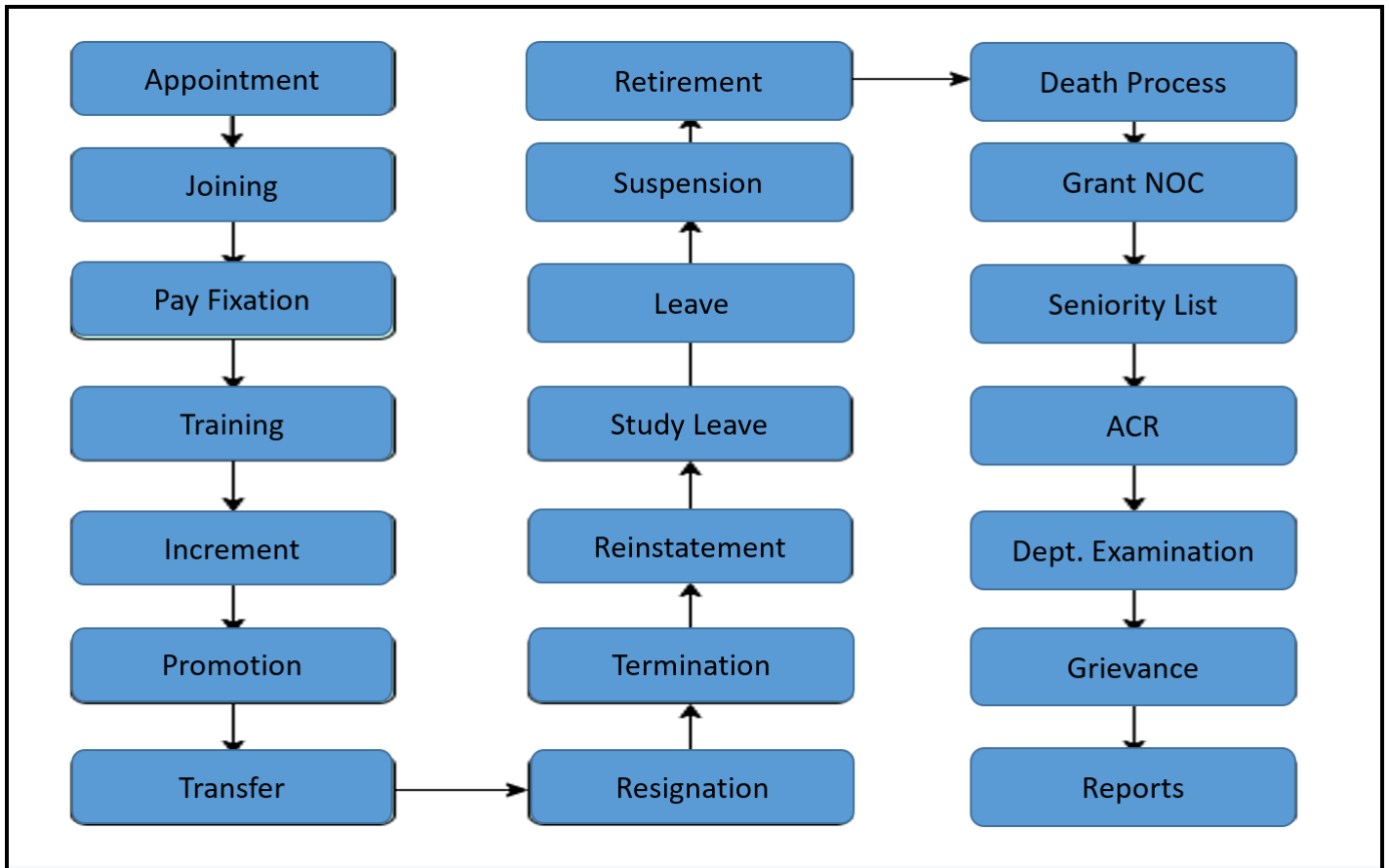
Fig. Process Flow HRMS

3.7.3   Functional Requirement:

The functional requirements for the proposed solution of the Human Resource Management system are provided below:

For Organization Structure:

- The system will provide the facility to create and manage the organization's structure, including:
  - Organization
  - Branches
  - Divisions
  - Departments
  - Grades
  - Levels
  - Designations
  - Employee Categories
  - Appointment Types

For Employee Data Management:

- The system will have provisions for adding and managing various employee-related details, including:
  - Personal Details
  - Joining Details
  - Salary Details

- Contact Details

- Qualification Details

- Bank Details

- Promotion Details

- Posting Details

- Nominee Details

- Family Details

- Transfer History

- Leave Records

- LTC (Leave Travel Concession) Records

- Form 16 Generation

- LPC (Last Pay Certificate)

- Service Book Details

For Outsource and Casual Employees:

- The system will provide provisions for the registration and management of outsource and casual employees.

- It will support unique requirements related to these categories of employees.

For NGO Management:

- The system will allow the management of NGOs and their employee details.

- It will facilitate the registration and maintenance of employee records associated with NGOs.

Integration with Biometric Attendance:

- The system will integrate with existing biometric attendance systems.

- This integration will enable real-time data synchronization between HR records and attendance data, including seniority lists, leave, and LTC records.

SMS and Email Alerts:

- The system will provide SMS and email alert functionality.

- It will send alerts to employees for various HR-related events, such as leave approvals, promotions, and appointment details.

Comprehensive HR Management:

- The HR Management system will be extensive and comprehensive, covering all employee-related processes from appointment to retirement.

- It will support and comply with processes related to contract employees, including registration, management, and specific contract-related procedures.

These functional requirements ensure that the Human Resource Management system provides robust support for all aspects of HR and employee data management, including special considerations for different employment categories and integration with existing attendance systems.

Further specific processes of the proposed solution are elated below as per the required solution:

Appointment of Employees:

This module will generate vacancy list sorted by cadre, ex-cadre & dying post and appropriate recruitment mode and the system will have provision of approval by Director and ACS System. This will also allow online communication via e-mail between administrative department and other recruitment agencies and conduct recruitment process. Module will have functionality in mapping of eligibility requirements against positions/grades/locations, and at the same time will maintain the vacancy database. This will also facilitate communication between administrative department and the candidate for recruitment and appointment process.

Joining of Employees:

This module will facilitate capturing joining details of employee. This module is integral module of employee management and will record joining details of employee as per employee type e.g. regular, contractual, temporary and accordingly joining details will be updated into the system. This will also deal with business rules related to joining of any employee in Jammu Municipal Corporation.

Pay fixation:

Module provides functionalities for pay fixation in the system which is initiated by concerned officer and routes to competent authority that can edit/view/approve/reject the case in system. Notification, status tracking services, service book updating will be implemented as required in the scope of work.

Training of Ministerial Staff:

Training Management is module to be implemented as part of Jammu Municipal Corporation application and all the training requirement, training schedules, training participant list etc. will be maintained through the same. This module will facilitate training request submission, view training calendar and approval/rejection of training participant by competent authority. Concerned officer can recommend the name of employee for a scheduled training, the competent authority can edit, view, approve and reject the case and put his comments. Employee can also submit his willingness /unwillingness to attend the training.

Annual Increment:

The module provides functionalities pertaining to providing annual increment to eligible candidates. The processes include service verification, sending communication and alerts in the event of verification and non-verification of employee service with various departments. The candidates whose services are verified are put to next stage of workflow to competent authority. Once all processes are completed admin division enters new salary, downloads PIC after which accounts division conducts review, verify, validate the increased salary and process the payroll as per revised structure, Increment of Basic Pay as in Jammu Municipal Corporation.

Promotion of Employees:

This module will facilitate automation of promotion process of employee as per approved promotion policy of JMC. This module will have facility to define the rules for promotion eligibility in terms of tenure, consistent achievement of high-performance grades, etc. Module will make a list of identified vacant posts for promotion on the basis of horizontal and vertical reservation rules and will capture the details of Department Promotion Committee (DPC). This module will also facilitate capturing of proceeding of DPC, finalization of promotion list on the basis of defined promotion rules. Integration of this module with Employee Management, Joining, increment etc. will facilitate complete automation of promotion process.

Placement of Employees:

The module provides functionalities for posting of employees at various places. It generates the report of various vacant positions available at various office/divisions/blocks/districts in the department and fetches the details of eligible employees for vacant posts. System facilitates concerned competent authority to edit/approve/reject individual or all employees' details for placement. The candidate whose placement is approved is forwarded to next level for concurrent. Respective division can view, download the personal document of each eligible employee like ACR, vigilance report etc. System provides email and alert facilities to all concerned authorities and divisions. Once request is approved, placement order is generated and can be downloaded from the system. System will also facilitate generation of various customized reports.

Regularization of Contract employees:

Module provides functionalities for regularization of the contract employees, lists eligible employees and provides edit/approve/reject features to competent authorities at every level along with email and alert features.

Termination of Contract Employees:

Module provides functionalities for termination, provides a form to concerned officer to enter, edit and review the case and workflow to next level of competent authority to view/take the decision on the termination case and enter the comments.

This will facilitate termination of contractual employee as per appointment terms & condition. This will facilitate auto termination of employment after contract expiry and initiate settlement as per rules. Module has feature to generate termination letter. Alert will be triggered in advance in case of contract is near to expire.

Transfer & Promotion:

The system will maintain the information pertaining to promotion of employees with their names, date of promotion, new salary structure, department, and grade. The system will Auto generate list of personnel due for promotion/ retirement on set days, prior to actual dates of retirement/ promotions. Also, system will maintain the information pertaining to vigilance cases that are pending against any employee and check the same for Promotion/ Transfer/ Deputation. The system will update status of employee and notify via SMS and E- mail.

Based on the user defined eligibility criteria, the system will identify the list of employees who are eligible for the promotions and transfers.

Transfer & Relieving of employees:

This module will provide following functions:

- Facility for generation of transfer order

- Capture rules related to posting policy of JMC

- Will maintain all transfer record of an employee

- Generate list of vacancies at various offices on the basis of sanction post and qualification

- Provide approval mechanism for transfer of employee from one place to another place etc.

- Mechanism to show the final list to administrative department and approval by Administration department on final list

- Alert for delay in joining in case transfer order generated

- Mechanism to provide joining leave to employee

- Provision to cancel transfer order.

ENQUIRY ,SHOWCASE features in the proposed solution.

Modification in posting orders:

Module provides functionalities required for modifying the posting orders as per process and to generate new posting order. Competent authority will have facility to view/ edit/approve/reject at every level as per the process and enter comments. It will also generate Email/SMS alert as per the requirement.

Reinstatement of Employees:

Module provides functionalities required for reinstatement of employees beginning with receipt of the order by the concerned officer from the competent authority. This process involves the employee re-joins after suspension and provides facility to generate total dues, arrears, if any, etc. Module provides view, edit, approve, reject facility officer/authority at every level as per the process and facility to enter comments as well as email/SMS alert as per the scope.

AFTER SUSPENSION INCREMENT/PROMOTION:

Secondment of Employees:

The module provides functionalities for secondment process of employees which could be employee initiated, department initiated or the government interventions. Module will provide facility to generate the list of vacant post from the system and prepare the case following the approval process applicable along with file movements. The Module will facilitate concerned officers and authorities so that they can view/edit/approve/reject the case and enter the comments as per the process. Module will have notification system to send Email and SMS alerts as per the process and scope.

Disciplinary Proceeding:

This module will facilitate following function to authorities:

- Facility to raise compliant against any employee cases like against disobedience of orders, misappropriation of funds or financial loss

- Issuance of Show cause notice by HOD to concerned employee

- Facility to submit replies within defined timelines

- Referral of case to admin/personnel section for framing charge sheet

- Mechanism of approval/rejection of case by competent authority at any stage through workflow process

- Facility to appoint inquiry officer and initiate Departmental Enquiry

- Mechanism to appeal against the decision of Departmental Enquiry Committee to respective authority

- Facility to download letters/order/memo

- Alert/notification through SMS/e-mail

Apply for study leave:

Study leave may be granted to a Government employee with due regard to the exigencies of public service to enable him to undergo, in or out of India, a special course of study consisting of higher studies or specialized training in a professional or a technical subject having a direct and close connection with the sphere of his/her duty. This module will enable the employee to raise online request for study leave and to upload the relevant documents with a facility to restrict the employee to raise the request before completion of five year of service.

Module will facilitate view/edit/approve/reject functionality to respective authority as per defined process.

Suspension Process:

Suspension process could be outcome of disciplinary proceeding. This module is tightly integrated with disciplinary proceeding module to deal with suspension process, reinstatement etc. This module will provide facility to generate suspension order, approval/rejection process by competent authority.

Retirement Process:

Module enables concerned officer/official for generating the list of employees getting retired in next sixth months. This module will have following key functionalities:

- Initiate process for no due and updating of service record with various departments

- Alert to Finance division to stop deducting GPF and other statutory deduction as per rule

- Facility to record clearance of vigilance cell

- Facility to initiate approval of competent authority after receiving no dues for respective departments

- Module will have the provision for report & alert generation relating to retirements

- Facility to generate reliving letter

- Facility to status tracking, notification services and service book updating etc.

Resignation Process:

Module provides functionalities for the resignation process, enables an employee to put his resignation which routes to concerned head of department for approval. Key functionalities of this module are as below:

- Submission of resignation by employee

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- Processing of resignation for approval of competent authority

- Facility to record approval/rejection comments of competent authority and defining relieving date

- Initiating No dues certificate from various department and updating of service record

- Facility to record clearance form vigilance cell

- Facility to generate relieving letter

- Facility to status tracking, notification services and service book updating etc.

Death Process of Employees

Module provides functionalities pertaining to employee death and to generate the Clearance Certificate for the employee to route it through workflow. It provides the terminal benefit calculation sheet for each type of benefit and final settlement advice to Accounts from HR. Module maintains Employee record for all future benefits computation and mercy recruitment, if applicable.

Service Verification Process:

Module provides functionalities to check the continuity of service for last six months. Module facilitates concerned officer and competent authority to approve, reject and put comments. Alert/notification, status tracking services will be implemented as required in the scope of work.

Service confirmation of regular employees:

Module provides functionalities for service confirmation. Module facilitates concerned officer and competent authority to approve, reject and put comments. Notification, status tracking services will be implemented as required in the scope of work

Step Up Process:

Module provides functionalities for step up processes, enables concerned officer to enter details like revised basic pay on the basis of revised data. Module facilitates concerned officer and accounts division to review, correct, approve, reject and put comments as applicable as per process. Notification, status tracking services, service book updating will be implemented as required in the scope of work.

Special Pay Process:

Module provides an option to employee to apply for special pay which admin division can verify. Notification, status tracking services, service book updating will be implemented as required in the scope of work.

Date of Option:

Module provides functionalities for date of option in the system which is initiated by concerned officer and routes to competent authority who can edit/view/approve/reject the case in system. Notification, status tracking services, service book updating will be implemented as required in the scope of work.

Cancellation of Orders:

Module provides an option to admin division to receive the cancellation order for an earlier approved order from different source.

Grant of NoC:

Module provides an option to employee to raise the online request for No Objection Certificate in system. This module enables concerned authority to view the request, approve/reject the request and enter the comments. Notification, status tracking services will be implemented as required in the scope of work.

Grant of Time Scale:

This module will record all the details related to applicability of Time Pay Scale against every sanction post and will provide

alert initiation of time pay scale to respective employee posted/designated. This module provides all functionalities to revise basic pay as per TPS rule defined and generate the revised salary structure as per the data. This is integrated with Finance division module to process the revised salary and validate the data.

Preparation of Seniority List:

Proposed module provides functionalities for generation of seniority list. Provision is made for concerned officer to enter rules for generating seniority list, accordingly to which the list gets generated. The tentative list is forwarded to competent authority for decision making and putting comments.

ACR Process:

This will facilitate admin division to initiate ACR process. It will also provide mechanism to respective controlling officer to define KRAs for employees of different class. Eligible employee may fill their ACR online and route to Controlling officer, reviewer and approver for their review, rating and approval. This will also generate alert/notification in case ACR is not submitted in due time. Admin division will have facility to extend ACR submission date as per requirement

Permission of Departmental Examination:

Module provides necessary functionalities for departmental examination. Employee can submit his application for departmental examination which can be approved, rejected by the competent authority. Notification, status tracking services will be implemented as required in the scope of work.

Training of Technical Staff:

Training of Technical Staff will be managed through Training Management module which will provide functionality to submit training request, view training calendar, update training calendar, approval / rejection of nominee, withdrawal of participant name etc. Notification, status tracking services will be implemented as required in the scope of work.

Grievance Redressal:

The module provides the necessary functionalities for grievance Redressal, and integrates with any software.

- Notification, status tracking services will be implemented as required in the scope of work. Permission for purchase/disposal of moveable/Immovable properties

- The module provides functionalities for employee online request for permission for purchase/disposal of movable/immovable property.

Employee Leave Management:

In the proposed system there be both of the scope to maintain the Employee leave. Therefore, to maintain the leaves of the employees. Employee can view the leaves available and leaves availed. The employees can apply for leaves online through the system. The employee's leaves will be approved by the concerned higher authorities. On Approval of leaves it will be considered in the attendance and salary processing.

The system has facility to create different leave types such as Paid Leaves, Casual Leaves, Sick Leaves, Maternity Leaves, Special Leaves, Medical Leaves and Sanctioned leaves. The leaves are applicable based on the eligibility of the employee. The system will maintain the rules for availing the leaves, en-cashing the leaves, and accruing of leaves.

The system will also have facility to extend the leave period, leave cancellation, and postponement of leaves.

The system will consider the approved leaves for attendance and process the salary of the employees.

This module deals with various leave type and provide mechanism to record all type of leave, auto credit of leave to various employee database etc. The key function and feature of leave module is as below;

Credit of various leave types i.e. CL, EL, Half Pay Leave, Maternity Leave, Paternity Leave, Study Leave, Commuted Leave etc. as per defined rule

Required provision:

- Facility to apply leave and approval by competent authority

- Facility to leave accumulation as per rule

- Module will have the ability to maintain leave eligibilities for each type of leave depending on the rules specified by JMC

- Module will have the ability to calculate actual leave balance at any point of time & it will be linked with Leave management for payroll generation and employee history

- Module will have the provision to accounting of leave including automatic credit of leave and also provision with manual credit/debit/modification/cancellation etc. in few cases such as Maternity Leave, Paternity Leave, study leave etc.

- Linkage with payroll for payroll processing

- Computation of leave encashment as per leave encashment policy at the time of retirement/resignation

Daily/Monthly Attendance:

The attendance can be updated by reading the access management system or by manual entry. The daily attendance will have employee in Time, Out Time and Over Time Details. In case an employee has taken leave, then the type of leave will be displayed in the attendance sheet.

Relieving of an Employee:

This relieving process is applicable for the contractual employees at JMC. After relieving of an employee, he/she may claim for his/her Experience and Relieving letter. Once the notice period starts of an employee, the proposed system will prepare the Relieving and Experience letter with the name and address of the employee on provided template. After submitting a letter to the HR manager manually, HR manager will initiate the letter/s to the Project Director for his/her approval. After getting the approval, the respective letter/s will be able to download for print out manually and hand over to the concerned employee manually.

Employee Master:

Employee can keep on updating their postings, current department, email ID, Mobile phone number, Immediate Superior details, HOD details, resume details online and the same will be notified via email/SMS/letter to the respective employee. Biometric device interface with Finance System for salary and leave calculations will make both employees & HR official's work easy. The system has online facility to apply/approve/reject the leave application. Employees can also view their salary structure, GPF, Rent, ACR.

3.7.4   Expectations from Proposed System:

- Above functional requirements should be made available in the proposed solution.

3.7.5   Functional Links with other Modules/Departments

- Links with Payroll & Pension for Salary Processing.
- Links with Attendance for employee management

3.7.6   Configurable Master Table Management

- Employee Master.

3.7.7   Access Matrix

Module	Role	Processes
HR	Assistant/Senior	New Employee creation, Outsource & Casual Employees registration and

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Management	Assistant	management. Attendance with facial recognition and GIS mapping Employee transfer. Leave management. Attach additional documents, Send for internal review, Send Forward
	Establishment HOD	Review, Attach additional documents, Send for internal review, Send back, Send forward
	Municipal Commissioner	Review, Attach additional documents, Send for internal review, Send back, Approve

3.7.8 Sample Reports Formats

Report formats:

*Other required report will be developed accordingly in the application.

Report format of MIS Reports

*Other required report will be developed accordingly in the application.

3.7.9 Reference Screens

The proposed screens for the module shall be as follows:

Some of Key sample screens of proposed application is shown below
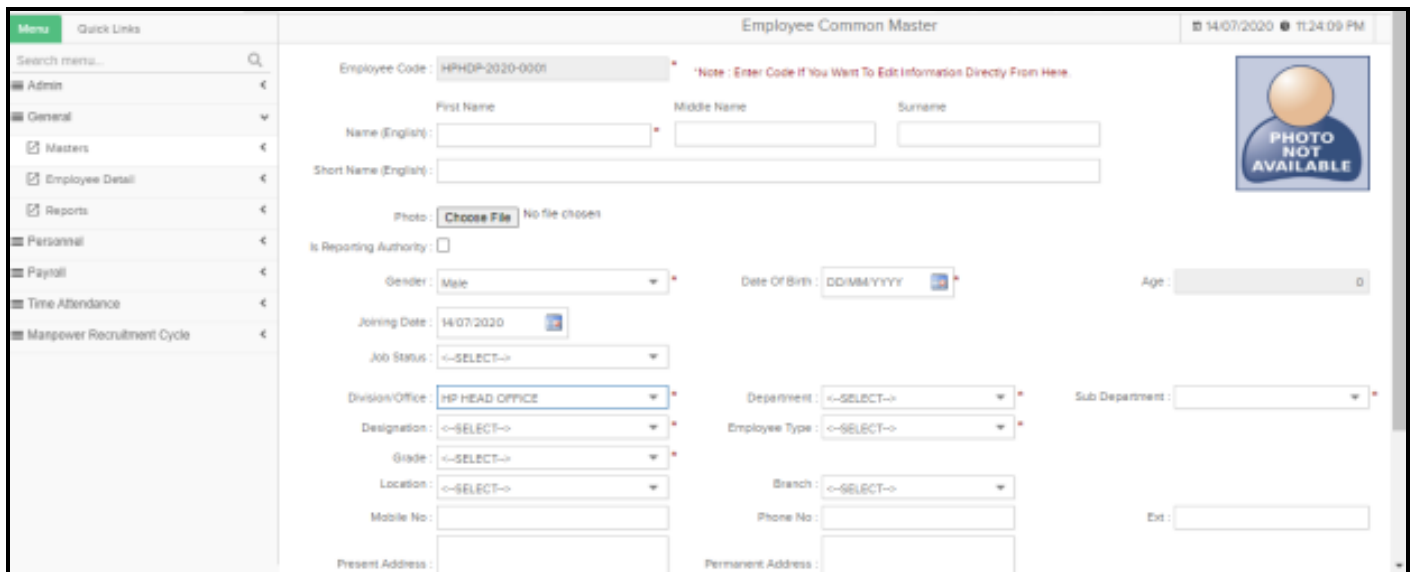
Fig. Employee Common Master

Fig. Service Verification Request

Fig. Job Offer

Fig. Job Appointment

Fig. Transfer Order

Fig: Leave master

Fig: Attendance Sheet

Fig: Employee Resignation

Fig: Full and Final Report

3.8   Payroll & Pensions Management

3.8.1   Description:

Payroll Module carries out the processing of the attendance and monthly salaries of the employees of the Organization. Various masters are defined which are used while processing the salary. The Period of the Payroll Year is defined in the Payroll Year Master. The start date and end date of the financial year is considered in every while processing the salary. The Payroll year can be different from the Financial Year.

Payroll Module

Multiple Earnings and Deductions Definitions:

- User definable Earnings & Deductions based on Attendance, Period Type etc.
- Define earnings and deductions based on classification like category, grade, location, branch etc.
- CTC/Gross structure definition.
- Pay Scale / Grade pay based salary structure for Government, Public Sector, Banks etc.
- Industry wise Dearness Allowance calculation. Effective date wise policy definition for HRA, CCA etc.
- Professional Tax Structure location /city wise.
- Income Tax deductions structure as per government norms.
- Provision for stipend, consolidated pay, gross emoluments and professional pay.
- Comparison of current Salary - to get discrepancy with last month Salary.
- Contractual Employee Salary based on Daily Wages - Skilled, Semi Skilled, Un Skilled and Super Skilled
- grades.
  Doctors and Consultants salary based on Flexible hours.
- Salary Calculation (Every Day Salary Cost) - for Each Employee, Department wise, Employee type wise, Division wise and company wise
- Salary comparison- with last month each employee wise. (Percentage deviation)

Loans & Advances:

-
- Loan/ Advance Policy definition.
- Loan/ Advance Disbursement.
- Loan/ Advance Repayment.
  Capital & Interest deduction in Salary.

Leave Travel Concession (LTC):

- LTC Block & Parameter Definition.
- LTC Advance Entry.
- LTC Claim and Settlement.
- LTC Encashment provision.

Arrears:

- Auto release and deduction on arrear calculation.
- Arrear calculation on late increment, absenteeism deductions, post leave application.
- Mass Arrear Settlement.
- Arrear Register month wise.
- Arrear affect on Income tax, PF, ESIC calculation.
- Arrear shown in Pay Slip separately.

Provident Fund (PF):

-
- Effective date wise PF Structure definition.
- PF nominee declaration.
- Voluntary PF Declaration and Approval.
- PF, Pension and Voluntary PF calculation.
- PF upload file generation with arrears.
- PF form 5 & form 10 upload file generation. Government Statutory Reports: 3A, 6A, 2, 5, 10, 12A, 19C, 10C, 10D.
- PF Challan.
- PF Inspection Detail.
  Employee wise Form 11 signed for EPF Declaration can be saved in Employee Master.

Other Features:

- Bonus & Ex-gratia.
- Gratuity.
- Labor Welfare Fund (LWF).
- Reimbursement Planning, claim & Payment.
- Perquisites calculation for Income Tax.
- Attendance based Allowances.
- Attendance based and Penalty Deductions.
- Professional Tax Challan & Reports.
- Salary Advance by Employee deduction in salary.
- Canteen expense upload facility.
- Canteen Coupon deduction in Salary.
- Canteen deduction based on Canteen Punch Machine with time slot and rate.

Easy, Scalable, Secured & Maintainable Solution

Pay slip configuration:

- Daily, Monthly and hourly Calculation types
- Monthly Attendance data fetching based on Last/Overlap/Current Month
- Manual form for monthly attendance data entry
- Periodically and monthly allowance and deduction entries
- Priority settings of earnings and deductions in pay slip.

Pay slip generation & posting:

- Import from Excel and CSV files for bulk transactions entries
- Salary Advance Recovery
- Coins carry forward facility with ceil/floor basis
- Hold Salary and Stop Payment features
- Alternative amount features for loan or other deductions
- Provision for manual, auto salary generation process
- Auto and manual lock facility for pay slip
- Bank file generation on various formats
- Journal Voucher preparation for accounting (Integration with SAP or other ERP possible)
- Salary verification and Approval (For Audit)

Exit / Resignation (Off Boarding):

- Request for Resignation
- Approval for Resignation
- Exit Interview - and Feedback for future corrections
- Retirement Intimation
- Death of Employee
- Probation period - With extension also and Due on

Income Tax:

- Investment Type and slab definition
- Employee wise investment declaration
- Projected and Non-projected based calculation
- Government Statutory Reports : Form 16, 12BA, Annexure B
- 24 Q Challan generation.

Full & Final Settlement:

- Full & Final Settlement from Time Office for Leave Balance,
- OT and Shift Allowances.
- Full & Final Salary preparation.
- Bonus Payment as per CTC.
- Leave recovery.
- Notice Pay Deduction.
- Leave Encasements.
- Gratuity Payment.
- Reimbursement Payment as per pro rata basis.

Employee State Insurance (ESI):

- Effective date wise ESI Structure definition.
- ESI Calculation.
- ESI upload file generation.
- Government Statutory Reports : 6, 7, 15, 29.
- ESI Inspection Detail.

Employee Asset Issue and Management:

- Asset Item Master (Returnable, Non Returnable).
- Asset Purchase, consumption and Inventory.
- Asset Issue to Employee.
- Asset Register.
- Employee wise asset report.
- Returnable Asset report at the time of exit.

Traveling and Halting Allowance:

- Travel Allowance configurable based on Kilometers slab.
- Self transport charges based on vehicle type and employee grade wise.
- Halting allowances policies based on cities and employee level wise.
- Lodging and boarding parameter definition.
- Advance and claim settlement.
- Payment after approval.
- Mobile App.: Traveling and regular expenses can be entered by field staff.

ESS & MSS:

ESS (Employee Self Service):

Time Office
- Employees can access their personal-official information
- Employees can apply online leave, Overtime, Week-off change, Shift change request, Miss punch application, Tour intimation
- Enables employees to apply online Claim for Leave Travel Allowance, Leave encashment.
- Shift schedule, Attendance Data and Leave Balance with leave Ledger View.
- Mobile operation from employee's Registered Mobile for all Applications, Remote Punching for attendance, Expense entries, etc.

Pay Roll
- Income Tax Declaration and approval.
- Reimbursement claims option and approval.
- Access to pay slip, income tax projections and form 16.

Personnel
- Self-Appraisal.
- Survey & Feedback.
- Status of approvals of relevant application.
- System populates alerts to make employees aware of their transactions.
- Training evaluation and feedback from mobile.

MSS (Manager Self Service)

Time Office
- HODs (Managers) are provided with special rights to access several transactions and reports.
- Have rights to approve/reject online leave, shift change, week-off change applications.
- Shift Scheduling.
- Recommending authority.
- Can forward manpower request to HR department.

Personnel
- Goal setting, Target Approval.
- Appraisal Review.
- Training Need Identification.
- Automated system alert to make managers aware
- about pending transaction.

Personnel module:
Organization structure Management:
- Divisions, Branches, Departments, Sub Department, Designation, Grade structure.
- Organization Structure Both functional & Administrative
- Hierarchies for approvals and reporting.
- Branch wise designation wise positions declaration.
- Position wise capacity, status and employee allocation.
- Employee transfer, Promotion and Position Change.
- Contractor (Multiple) wise data, attendance, PF, ESIC and salary calculation to match with their Bills
- Trainee and Apprentice can be managed in the system

Job Description:
- Key Result Area (KRA), Expected Deliverables, Responsibility and Key Performance Indicators (KPI)
- Job Description based on functional, level and reporting authorities wise.
- Designation for each Job Description.
- Functional Skills and level of skills, Behavioural Competencies.
- Minimum Experiences and Qualifications required.

Personnel module:
Personnel Management:
- Organization Structure Both functional & Administrative.
- Department & designation allocation after joining of employees.
- System alert available after completion of probation period of Particular Employee.
- Make available use of competency mapping.
- Company provided accommodation management.
- Enables to handle Facility management like Tour, Transportation, and Canteen.
- Handles employee leaving formalities & Exit Interviews.
- Enables to access data related attrition rate, causes & employee turn.
- Over keep track of employee grievances, suggestions
- Medical Reimbursement and leave encasement management

Widen Your Decision Power, Analysis and Monitoring Human Vision
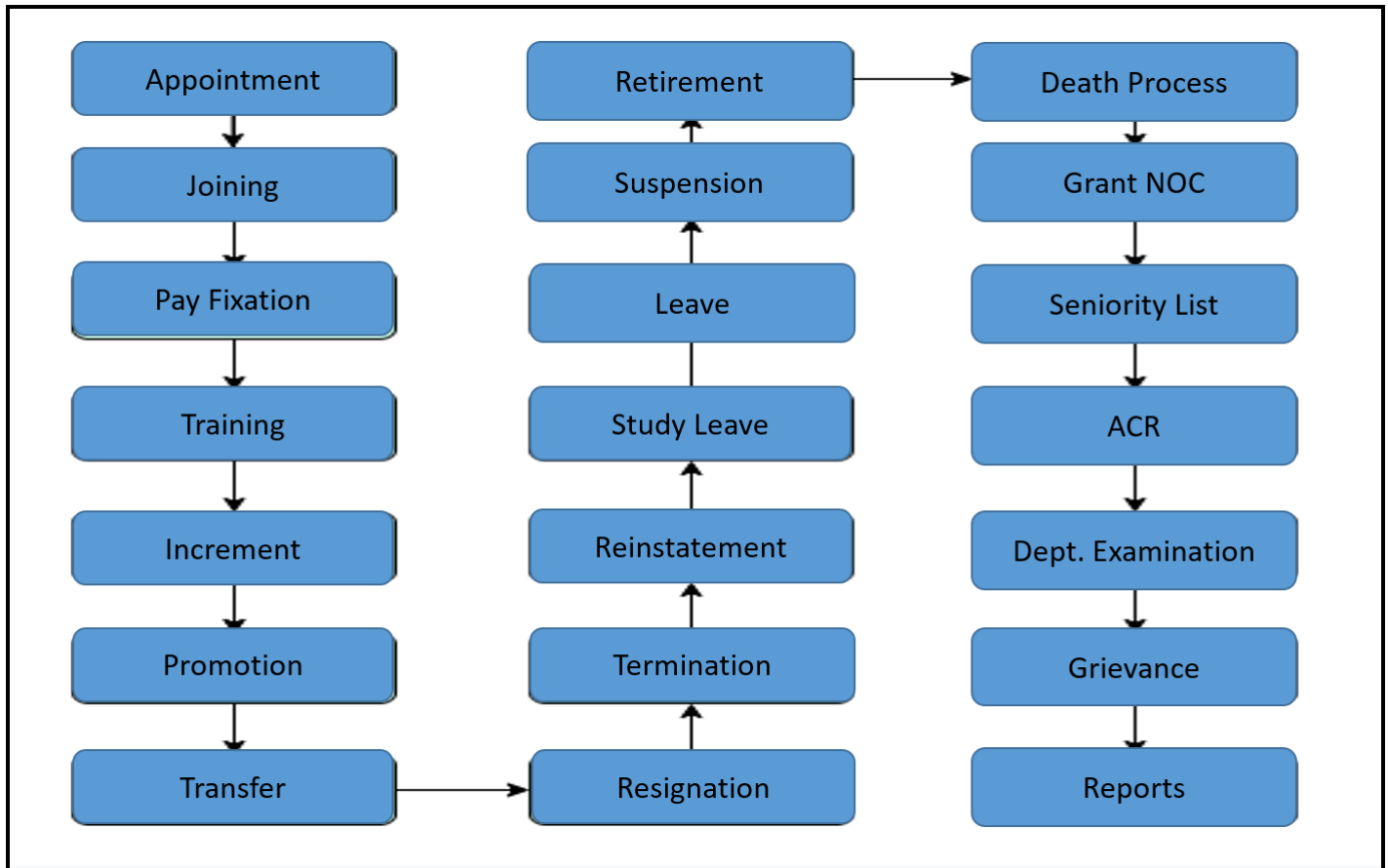
3.8.2　Process Flow:

Fig. Process Flow HRMS

3.8.3　　Functional Requirement:

The functional requirements for the proposed solution are provided below:

For 7th Pay Commission Matrix-Based Auto Basic Pay Selection:

- The system will automatically select the basic pay for employees based on the 7th Pay Commission matrix.
- It will consider the employee's grade, experience, and other relevant factors for accurate basic pay calculation.

For 2.5 Days Salary Calculation:

- The system will accurately calculate an employee's salary for 2.5 days of work.
- The calculation will consider daily wage rates and other relevant factors to ensure precise compensation.

For Bulk Updation of Deductions/Allowances:

- The system will provide a bulk update facility for deductions, allowances, or any other relevant fields.
- HR or admin users will be able to efficiently update multiple employee records simultaneously.

For Employee ID Card Printing Module:

- The system will have an ID card printing module.
- Employee IDs will be generated, and the system will provide the capability to design and print employee ID cards.

For E-Service Book and E-Personal File Module:

- The system will include an E-Service Book module for maintaining employee service records.
- An E-Personal File module will enable digital storage of employee-related documents, such as certificates and records.

For GPF/NPS Subscription/Deduction Management:

- The system will facilitate the management of General Provident Fund (GPF) and National Pension System (NPS) subscriptions and deductions.

- It will allow employees to select their preferred subscription options and manage deductions accordingly.

For Supplementary Salary Bills Module:

- The system will have a module for processing supplementary salary bills.

- It will consider additional payments or adjustments and generate supplementary bills as needed.

For DA Arrears Calculation and Due-Drawn Calculation:

- The system will calculate Dearness Allowance (DA) arrears accurately.

- It will also calculate and provide information on the due-drawn amount.

For Income Tax Calculation Module:

- The system will feature an income tax calculation module.

- It will use the current income tax calculation method and logic, with provisions for upgradation to accommodate changes in the tax calculation method for the next five years.

For Salary Certificate, Salary Statement, Form 16:

- The system will generate salary certificates, salary statements, and Form 16 documents.

- Employees can download these documents from the JMC website by entering their unique ID and receiving a one-time password (OTP).

For SMS & E-mail Alerts:

- The system will provide SMS and email alert functionality.

- It will send alerts to employees for important events such as salary deposits, tax-related updates, and document availability.

These functional requirements cater to the specific needs and features requested for the payroll and HR management system, ensuring accurate payroll processing and record-keeping.

Further specific processes of the proposed solution are elated below as per the required solution:

Salary Processing

- System will have the ability to maintain attendance details manually/imported for each employee. Attendance details are considered while processing salary. User can give Project wise attendance and system will have a provision to import the attendance as well.

- Salary to be processed for the month for all employees. Once the daily attendance is processed and in case of any discrepancy the details are updated manually in the system and used for processing of salary.

Salary Structure

- System will possess the extensive capability to defined salary structure with parameters like Grade, Job types, Levels.

- Employee wise Payroll Details

- System will have the ability to manage the Employee wise details under that user will have provision to defined shifts, Employee details, Job types etc.

Earning Heads

- The Earning Head Master defined will be used in the in the Salary Bifurcation and Employee Salary. Each Earning Head is mapped with an Account Head. These Account Heads are used while posting the salary into the Accounts module.

Deduction Heads

- The Deduction Head Master will be defined which will be used in the Salary Bifurcation and Employee Salary. Each Earning Head is mapped with an Account Head. These Account Heads are used while posting the salary into the Accounts module. The Deduction Heads - Professional Tax, TDS, PF, EPF, and ESI are predefined in the master.

Manage Pensions Data and Payments:

- Create the right, individually addressed Communication with employee as defined by the pension's regulator for each eventually.

- The Pensions process will have option to attach a copy to your employee's record to keep your audit trails Up to date.

- System has ability to keep a record of all the data and payments submissions showing when they were made, by who and store your receipt from the pension provider.

Professional Tax Slab:

- System has the ability to define tax slab for calculating the Professional Tax on the Gross Salary of the Employee. This is defined for each financial year. Based on the slabs defined the Professional Tax will be deducted while Processing the Employee Salary.

Loan or Advances types:

- System will have the ability to create Loan or advance type in the master data as per the requirement and that will be reflect for the further process like Emergency Loan. Any loan that may be required for the purpose of meeting monitory requirements in emergency like hospitalization, illness, treatment of injury due to accident of self or immediate family employee.

Loan Application

- System will have the ability to create Loan application by which user can apply for loan application. In the Loan application, user will have to select the Employee name, Loan type Loan amount, Number of instalment, Instalment amount and Recovery date. Once the application will be saved, it will be reflecting on the List page from where user can submit the application. The pending applications will be available on the Pending list page.

Leave Setting

- The Leave Records are defined for each financial year for the Employees. The Leave Records consists of Previous Years Leaves and Current Year Leaves. The leaves are categorized in to Privilege Leave, Casual Leave, Sick Leave, Compassionate Leave and Maternity Leave. These leave records are updated after processing of the attendance. This will also show the Availed Leaves and also the Balance Leaves.

3.8.4   Expectations from Proposed System:

- Above functional requirements should be made available in the proposed solution.

3.8.5   Functional Links with other Modules/Departments

- Links with HR Management.

- Links with Attendance system for employee management

3.8.6   Configurable Master Table Management

This module will register all the employee of Jammu Municipal Corporation

Master Data to be maintained in the system:

- Pay Code
- Deduction Code
- Basis Formula
- Reimbursement
- Benefit Code
- Loan and Advance
- Deduction Details

- Professional Tax Slabs

- TDS Calculation Slabs

- Provident fund

- Gratuity

3.8.7   Access Matrix

Module	Role	Processes
HR Management – Payroll and Pension	Assistant/Senior Assistant	Salary processing. Review deductions or additions. Attach additional documents, Send for internal review, Send Forward
	Establishment HOD	Review, Attach additional documents, Send for internal review, Send back, Send forward
	Assistant Accounts Officer	Review, Attach additional documents, Send for internal review, Send back, Send forward
	Municipal Commissioner	Review, Attach additional documents, Send for internal review, Send back, Approve
	Employee	Login using Unique ID and OTP. Income tax calculation Download Salary Certificate, Salary Statement, Form 16

3.8.8   Sample Reports Formats

Report formats:

- Employee Subscription details

- Employee Retirement Deduction Report

- Salary Register Details Report

- MIS Reports

CHATTARY AJWAN INFOTECH PVT. LTD.

Payslip For The Month Of August-2022

Emp Code & Name :   869   RAM P SHARMA   **Pay Date**   : 28/08/2022

Department   : ADMIN   **Designation**   : ADMIN OFFICER

DOB   : 30/06/1995   **DOJ**   : 16/11/2017   **PAN NO**   : ABCDE1234F   **Aadhar No.**   :456789123753

Pay Mode   : Bank Transfer   **Bank**   : STATE BANK OF INDIA   **A/c No.**   :0987654321123

PF No.   : AHD1235456ASF   **PF UAN No.**   : 123456879   **IFSC NO** : SBIN012345

Month Days	:	31.00	R A T E		E A R N I N G S		D E D U C T I O N S	
Working	:	26.00	Basic	5520.00	Basic	5164.00	Prof. Tax	200.00
			HRA	3680.00	HRA	3443.00	Provident Fu	620.00
Present	:	24.00	LTA	1840.00	LTA	1721.00	CANTEEN	105.00
			CONVEYANCE	3680.00	CONVEYANCE	3443.00	MED/INV	278.00
Week Off	:	5.00	ALLOWANCE	3680.00	ALLOWANCE	3443.00		
P.H.	:	0.00						
Leave	:	0.00						
L.W.P.	:	2.00						
Leave Days		**Bal**	**Gross Rate**	18400.00	**Gross Earning**	17214.00	**Gross Deduction**	1203.00
PL	0.00	18.00						
SL	0.00	15.00			**Net Amount**	16011.00		
CL	0.00	12.00						

In words : Rupees Sixteen Thousand Eleven Only

"This payslip is computer generated no signature is required"

3.8.9   Reference Screens

The proposed screens for the module shall be as follows:
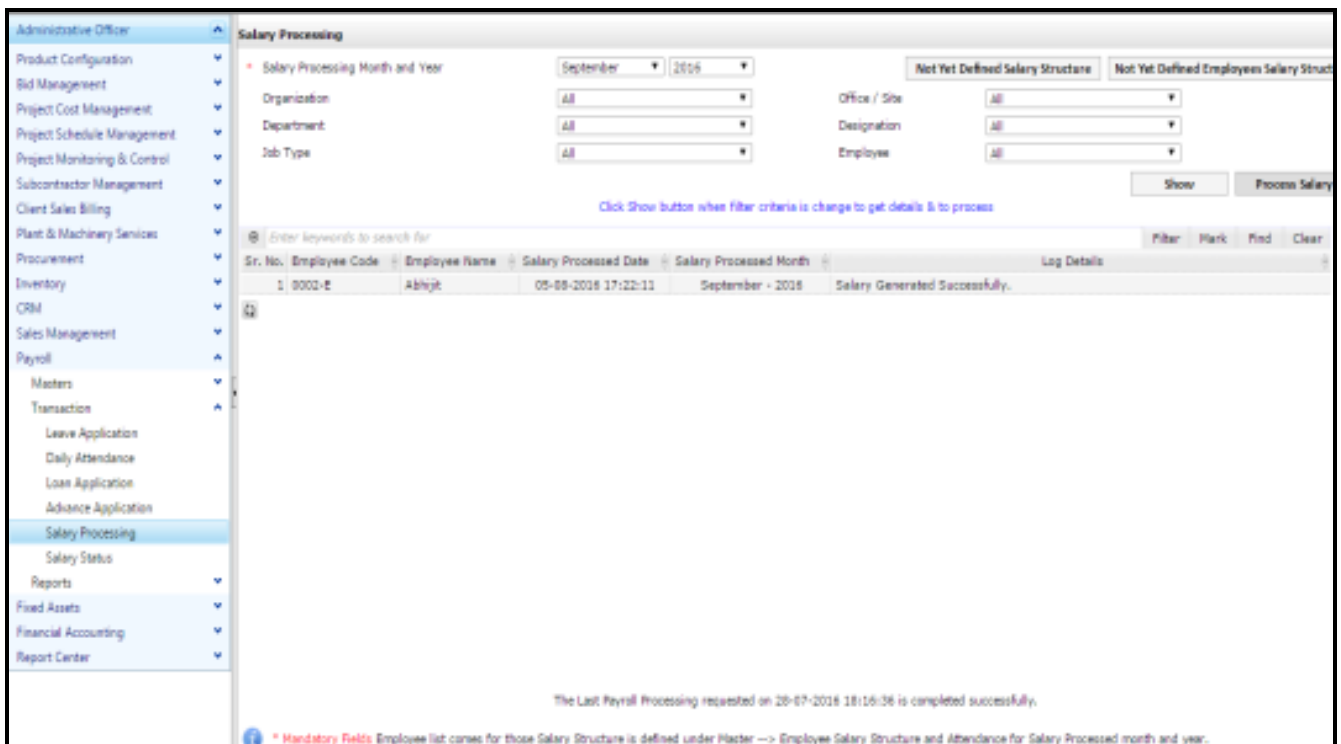
Fig. Salary Processing Process
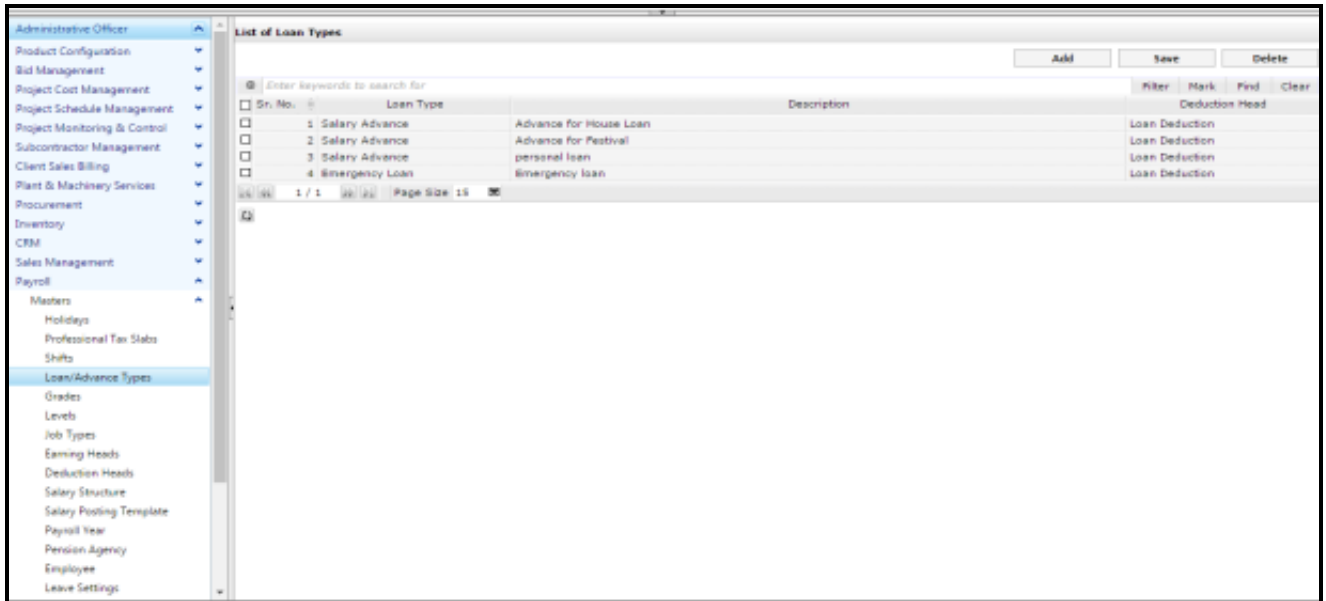
Fig. Process to Define Loan/Advance Types
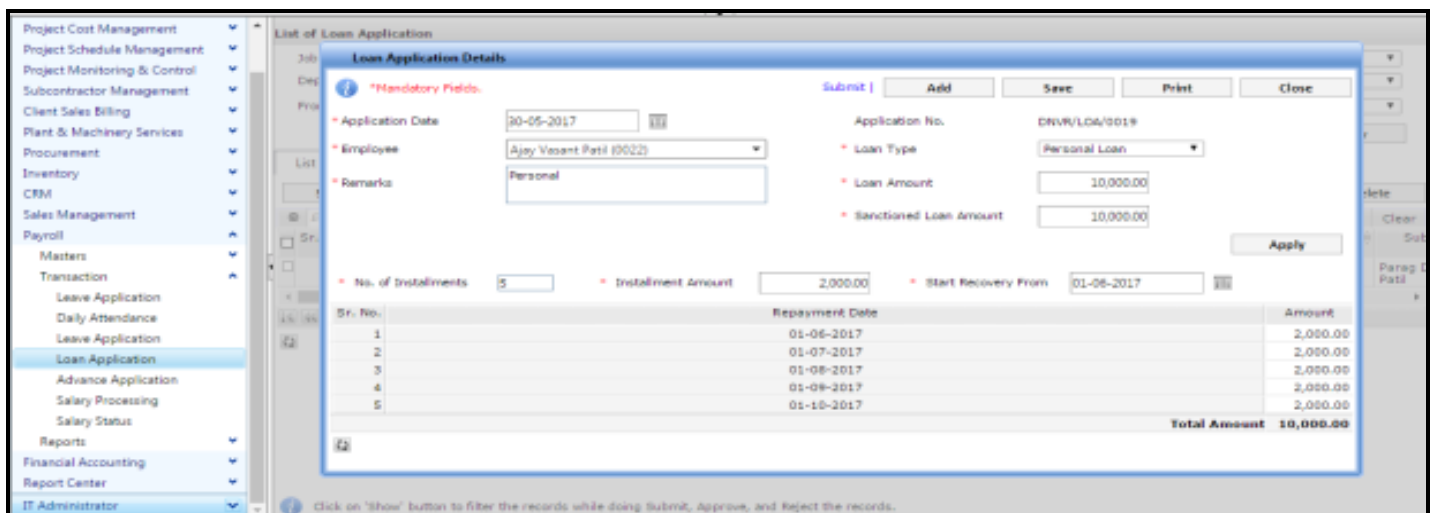
Fig. Loan Application process
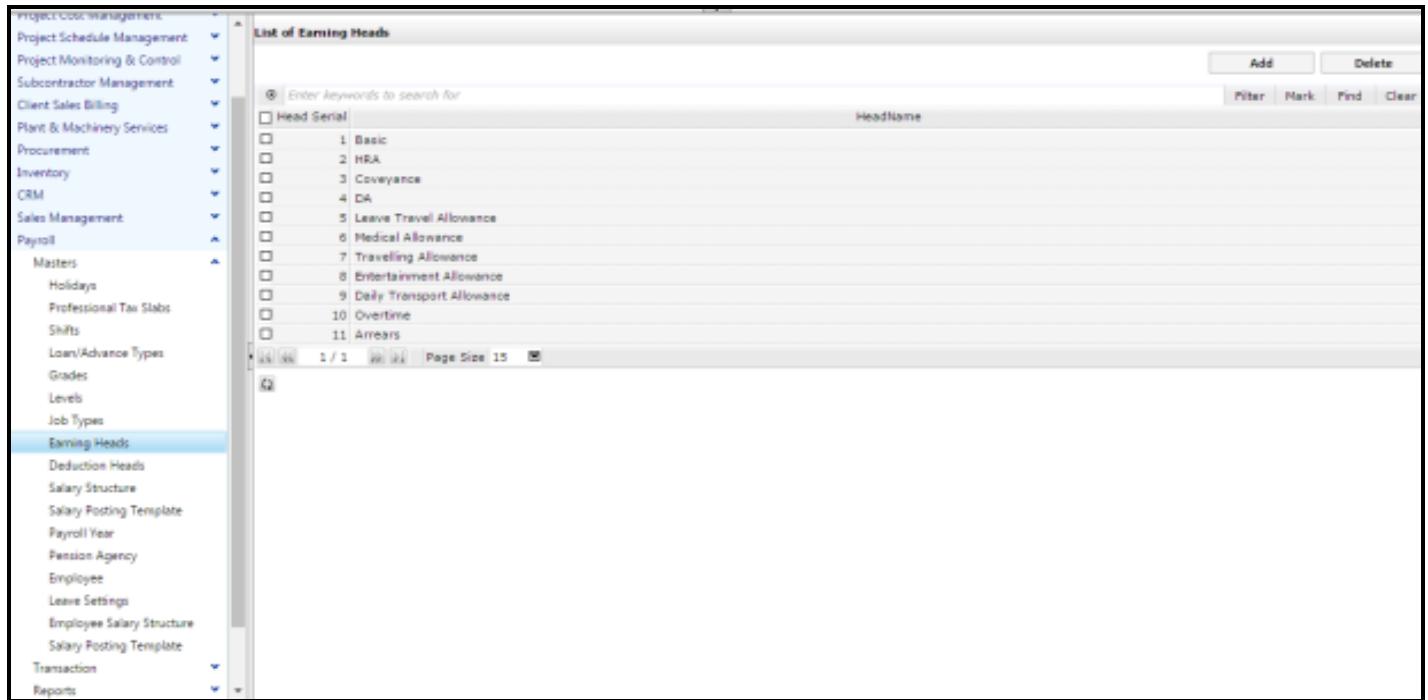
Fig. Process to define Earning Heads
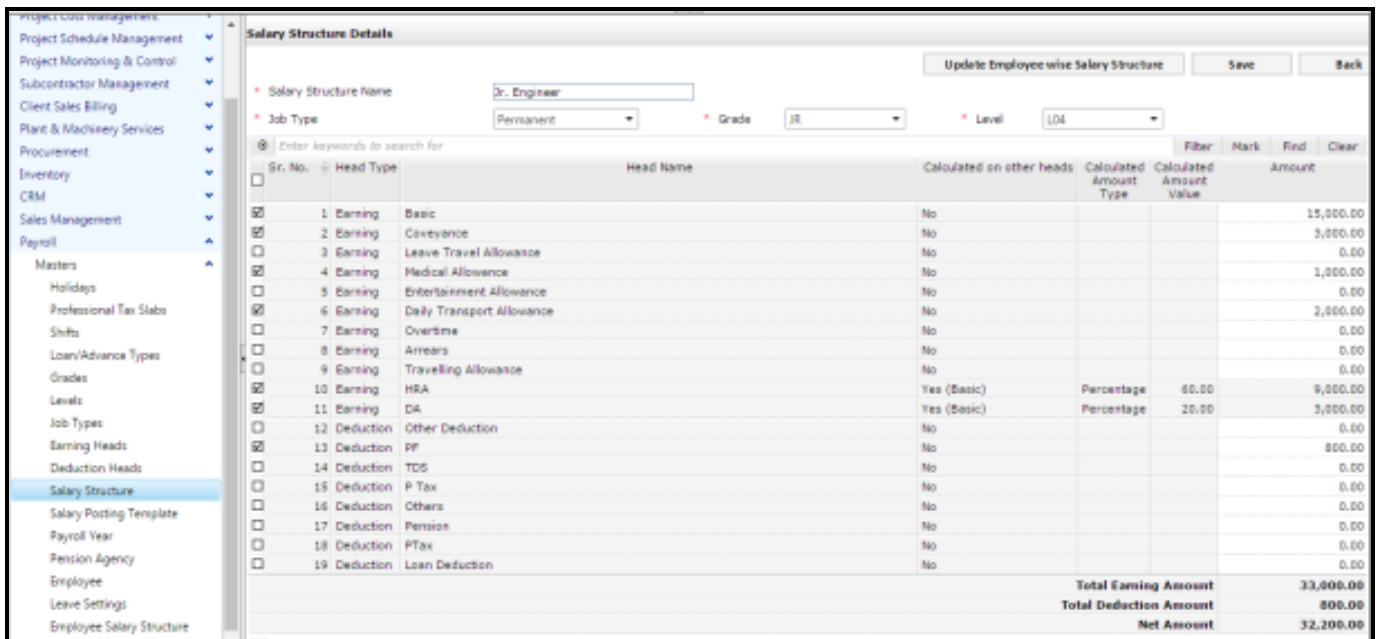
Fig. Define Salary Structure

Fig. Employee wise Payroll Details

Fig. Leave Setting Process

Fig. Daily Attendance Process

3.9   Online Attendance System with Facial Recognition System (Mobile App. & Web Portal)

3.9.1   Description

An Attendance Management System with facial recognition is a cutting-edge technology solution that revolutionizes workforce tracking and time management. It employs advanced facial recognition algorithms to accurately identify employees as they enter the workplace. This innovative system eliminates the need for traditional methods like manual attendance registers or card swiping, ensuring precision and efficiency. Employees' faces are scanned, allowing them to seamlessly record their attendance with a quick and contactless process. This not only enhances security but also streamlines payroll management and reduces the risk of time theft. Such systems have become invaluable tools for modern organizations seeking to optimize their attendance and workforce management processes.

3.9.2   Functional Requirement:

Certainly, here are the functional requirements for the attendance app and web portal, presented from the perspective of different user roles:

For Employees:

- **Attendance Tracking:**
    - Employees will use the app to clock in and out.
    - The app will recognize their faces for quick and accurate attendance.
    - GPS data will be captured for location verification.
- **Leave Management:**
    - Employees can mark different types of leave, such as earned leave, casual leave, and medical leave.

- **Attendance History:**
  - Employees can access their attendance history, including day-wise, monthly, and employee-wise records.

For Supervisors:

- **Bulk Attendance Marking:**
  - Supervisors can mark bulk attendance for teams using the Team Attendance feature.
  - Ward-wise attendance marking can be done for better organization.

- **Approval and Review:**
  - Supervisors will have the authority to approve or disapprove attendance, including updating missed punches.

For Attendance Admins:

- **Attendance Management:**
  - Admins can update employee records, manage missed punches, and disapprove attendance, especially in cases of fake locations or buddy punching.

- **Log Management:**
  - Admins can manage logs of unidentified entries and set up alarm systems for such occurrences.

For JMC Authorities:

- **Real-time Monitoring:**
  - JMC authorities can view real-time attendance details, ensuring better control and management.

- **Attendance Reporting:**
  - Comprehensive MIS reports, including daily attendance, monthly attendance, employee-wise attendance, absent reports, and leave reports, are available for in-depth analysis.

For IT Administrators:

- **System Management:**
  - IT administrators will be responsible for the integration of the attendance app with the existing systems.

- **Hosting and Availability:**
  - They will manage the hosting of the mobile app in Google/IOS Play Store accounts, ensuring availability on both iOS and Android platforms.

For Outsourced and Casual Employees:

- **Registration and Attendance:**
  - Outsourced and casual employees can register and manage their attendance using the same system.

For NGO's/Contractors:

- Employee Details Management:

- NGOs and contractors can manage their employee details and attendance using the system.

For Compliance and Reporting:

- **Reporting and Compliance:**

- The app will generate comprehensive reports to meet compliance requirements and provide insights for decision-making.

For Mobile Users:

- **Mobile Functionality:**

- Mobile users will utilize the app's features, including accurate face recognition, GPS location tracking, and quick attendance marking.

For System Administrators:

- **System Configuration:**

- System administrators will configure the app's settings, including geo-fencing, attendance policies, and shift plans.

- **User Management:**

- They will manage user accounts, including authorized access and role assignments.

- These functional requirements cater to the specific needs and roles of different users involved in the attendance tracking system, ensuring a user-centric approach to attendance management.

Following features shall be available in the app and web for the required attendance system:

- **Benefits**
    1. Anywhere
    2. Anytime
    3. Easy to do
    4. No paperwork
    5. Direct impacting the database and thus no reconciliation required
    6. Data configured based on Company Policy
    7. Making the work flow fast and thus reducing the cost of interactions
- **Mobile App**
    a. Android Application
    b. iOS Application
    c. Employee Mobile can be registered for Application excess and remote attendance from his/ her mobile only.
    d. Android based Mobile app is capable to register online on main HR server.
    e. Employee can give an IN or Out punch from his/her mobile by pressing one button. Mobile will take time and date and GPS location (coordinate will be mapped) and send to server with full security.
- **Web Browser**
    Also possible on Web Browser Based Software Application
    Compatible to major Browsers available in market.

- **Applications List**

    1. Leave Application
    2. Leave Balance View
    3. Shift Change Application (With Self as well as with other Employee)
    4. Week Off Change (With Self as well as with other Employee)
    5. Tour Intimation
    6. On Duty Application (Employee Out of Office for some official work)
    7. Personal Gate Pass (Employee Out of Office for some personal work)
    8. Holiday Application (When Organization working 365 days)
    9. Miss Punch Application (In case User forgot to punch or Machine was not working)
    10. Training – Evaluation
    11. Training – Feedback of Training

- **Remote Punching from Mobile App** –
    1. Apart from this Employee can Punch his or her IN and Out Punch and HR department can map it and can monitor the location wise punching.
    2. Multiple Offices, or Manufacturing Units or Branches can be checked where he has punched (In or Out Punches)

- **MSS – Management Self Service**
    1. Employee can recommend as well as Approve the Applications from his or her Mobile or from his or her Web browser based Software.
    2. Profile Page of the Mobile Application

Mobile Application for remote attendance:

- Geo fencing and Geo tagging.

3.9.3   Expectations from Proposed System:

- Above functional requirements should be made available in the proposed solution.

3.9.4   Functional Links with other Modules/Departments

- Links with HR Management.
- Links with Payroll and Establishment Management

3.9.5   Configurable Master Table Management

- Employee Master

3.9.6   Access Matrix

Module	Role	Processes
HR Management – Attendance System	Assitant/Senior Assistant	Attendance with facial recognition and GIS mapping. Regularization. Leave management. Attach additional documents, Send for internal review, Send Forward
	Establishment HOD	Review, Attach additional documents, Send for internal review, Send back, Send forward
	Assistant Accounts Officer	Review, Attach additional documents, Send for internal review, Send back, Send forward
	Municipal Commissioner	Review, Attach additional documents, Send for internal review, Send back, Approve
	Employee	Login using Unique ID and OTP. Income tax calculation. Apply leave. Clock In/Clock out. Download Salary Certificate, Salary Statement, Form 16

3.9.7   Sample Reports Formats

Report formats:
*Other required report will be developed accordingly in the application.

Report format of MIS Reports
*Other required report will be developed accordingly in the application.

3.9.8   Reference Screens

The proposed screens for the module shall be as follows:
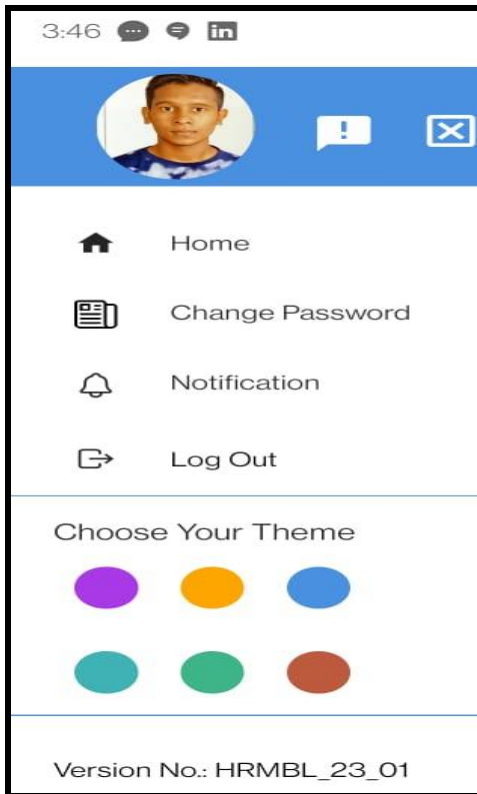
Mobile Application
Profile Page
Can move to Home
Can change the Password
Can view Notifications
Can set his or her own
theme Color

Home Page of the Mobile Application
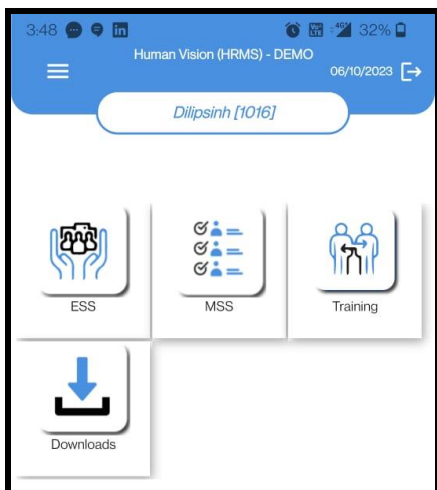
Here User has screen to navigate to

1. ESS – Employee Self Service
2. MSS – Management Self Service (To recommend and Approve)
3. Training Module
4. Downloads (to Download – a. Pay Slip b. Form 16. etc.)

From here User can navigate to all functionalities such as
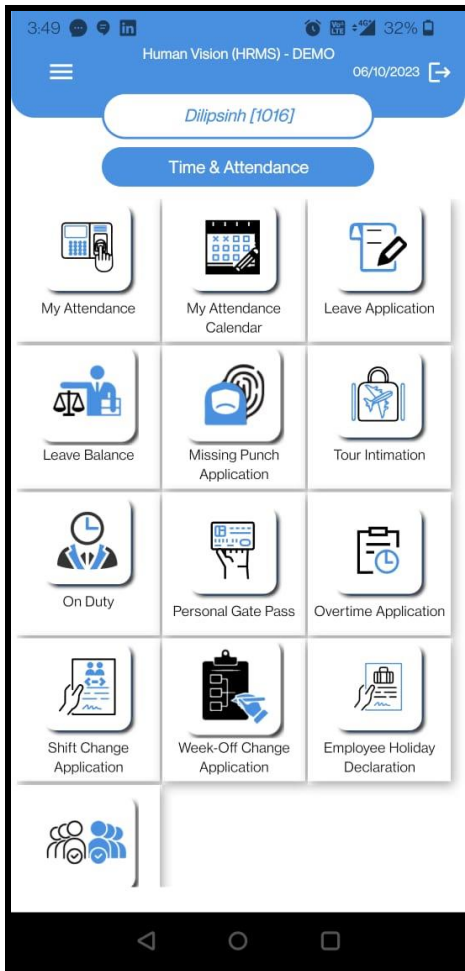
A. Applications List

1. Leave Application
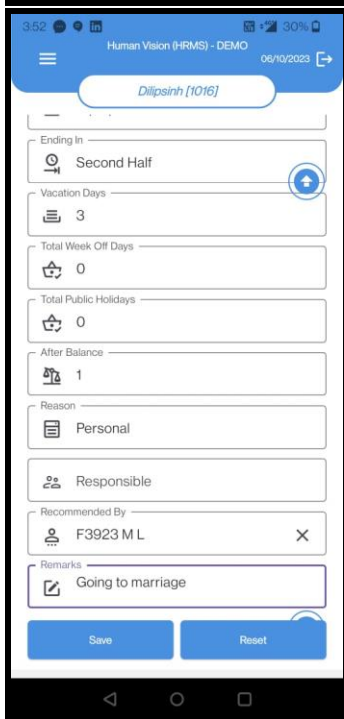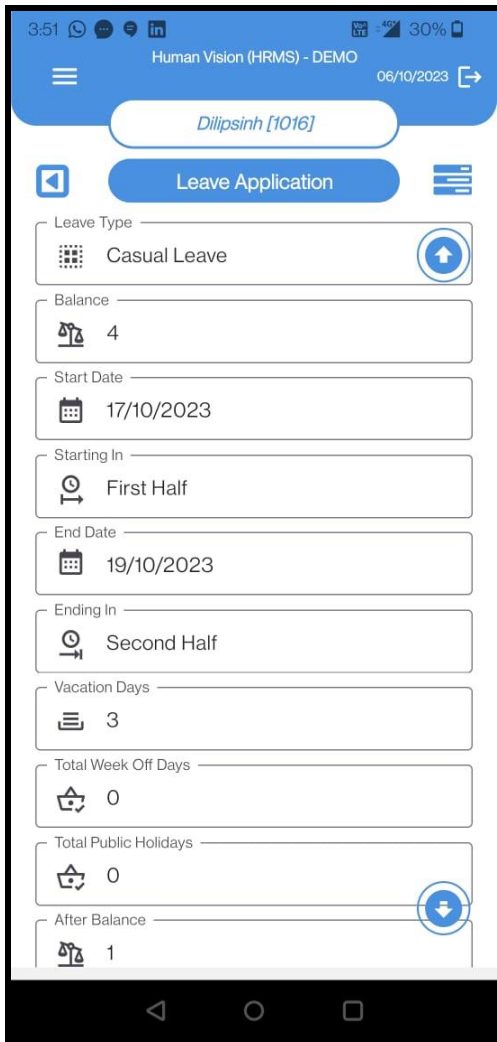
Leave Application -
Here Employee can apply for Leave from particular date to another date.
1. Half Day
2. Full Day
3. Or 1.5 Days or more possible

From first or second Half facility also available here.
After Approval the impact will be reflected in attendance.
In case of "other" employee involvement he will have to give his consent through software and then only it will go in Recommendation and Approval Cycle.
User can see his list of Transaction by clicking the 3 lines on the right side of this form.
User can Edit, Cancel or delete the transaction.

- This will enable Employee to apply his or her Leave Application and will move to his or her Boss for Recommendation and Approvals.
- This will take care of all policies for Clubbing of the Leaves or Sandwich rules for Week Off or for Holidays etc.
- From here System will deduct his or her Leave Balance.
- User will be able to see the status of his or her Leave Application and will be able to see who is holding the application.

- Employee can Edit the Application, Cancel the application and can delete the application.
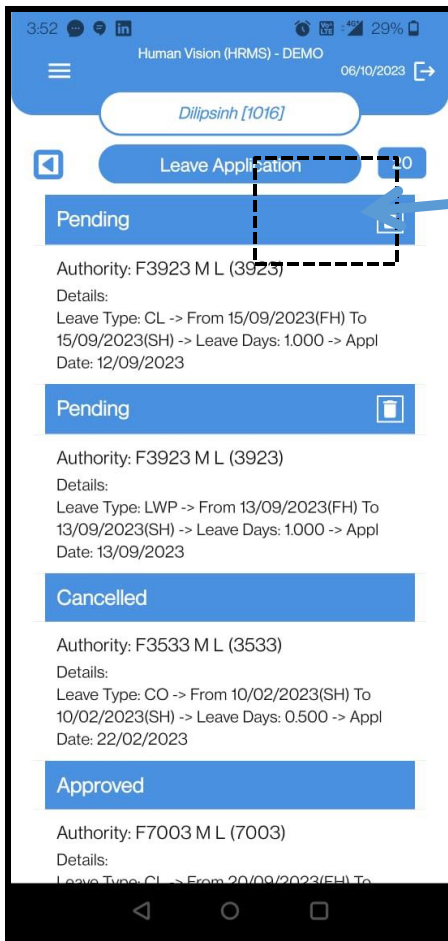
Delete Edit and Cancel Options based on rights provided to the end User.
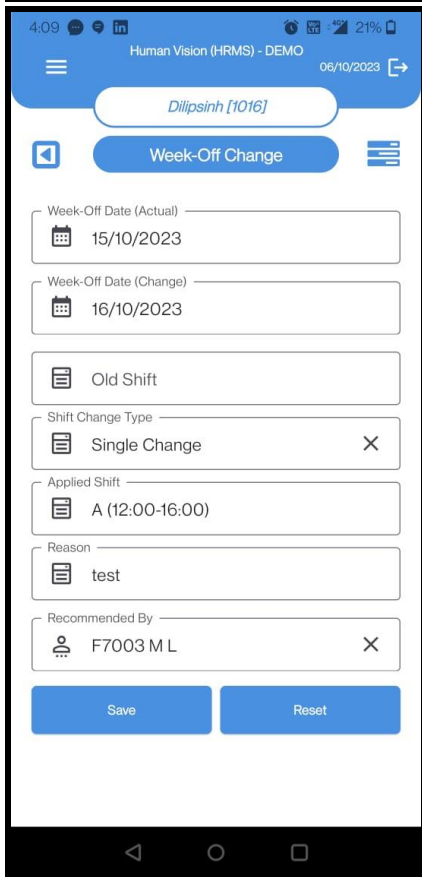
Week off Change Request – Here Employee can apply for Week off Change for particular date–
1. With Self
2. With other Employee

After Approval the impact will be reflected in attendance.
In case of "other" employee involvement he will have to give his consent through software and then only it will go in Recommendation and Approval Cycle.
User can see his list of Transaction by clicking the 3 lines on the right side of this form.
User can Edit, Cancel or delete the transaction.

Shift Change Request –
Here Employee can apply for Shift Change for particular date–
1. With Self
2. With other Employee

After Approval the impact will be reflected in attendance.
In case of "other" employee involvement he will have to give his consent through software and then only it will go in Recommendation and Approval Cycle.
User can see his list of Transaction by clicking the 3 lines on the right side of this form.
User can Edit, Cancel or delete the transaction.

Personal Gate Pass – To regularize attendance
Here Employee can apply for Personal Gate Pass (Un-Officially going out of Premises) on particular date (From Time – To Time)
After Approval the impact will be reflected in attendance.
It will go in Recommendation and Approval Cycle. Employee can view the Punches for that day or one day before or on that specific date.
User can see his list of Transaction by clicking the 3 lines on the right side of this form.
User can Edit, Cancel or delete the transaction.

On Duty – To regularize attendance
Here Employee can apply for On Duty (Officially going out of Premises) on particular date (From Time – To Time)
After Approval the impact will be reflected in attendance.
It will go in Recommendation and Approval Cycle.

Employee can view the Punches for that day or one day before or on that specific date.
User can see his list of Transaction by clicking the 3 lines on the right side of this form.
User can Edit, Cancel or delete the transaction.

Tour Intimation – To regularize attendance
Here Employee can apply for Tour Intimation from and to particular date (Time) – here user can enter for past , present or future days.
Employee will enter the place of visit for future reference.
After Approval the impact will be reflected in attendance.
It will go in Recommendation and Approval Cycle.
User can see his list of Transaction by clicking the 3 lines on the right side of this form.
User can Edit, Cancel or delete the transaction.

Missing Punch Application – To regularize attendance
Here Employee can apply for Miss Punch on particular date (Time)
   a. In Punch
   b. Out Punch

- Either he must have forgotten
- Machine had some fault

After Approval the impact will be reflected in attendance.
It will go in Recommendation and Approval Cycle.

Employee Holiday Declaration – To regularize attendance
Here Employee can apply for Holiday declared in the system at the start of every year on particular date.
This used in case Company working 365 days day and night.
This helps Operations team to decide whom should be provided particular Holiday to run smooth functioning of department
After Approval the impact will be reflected in attendance.
It will go in Recommendation and Approval Cycle.
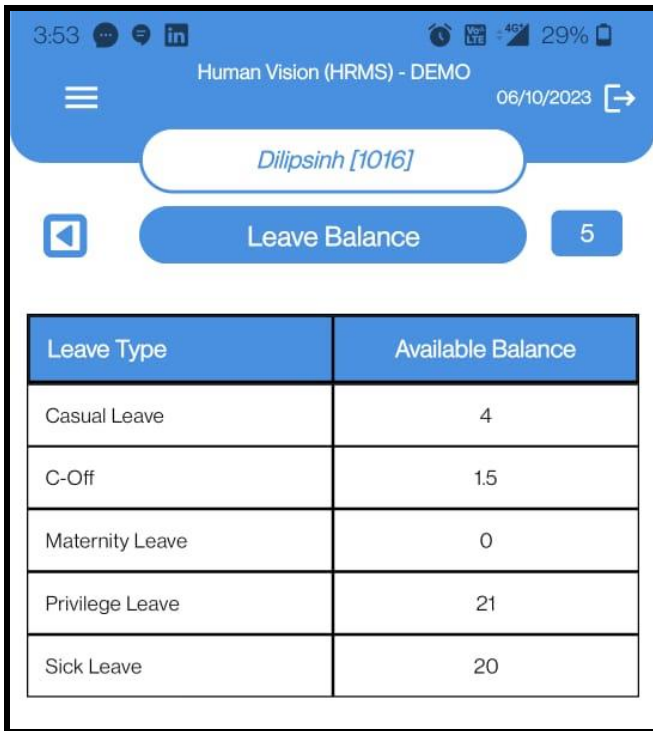
Leave Balance (view) – To decide which Leave should be used to regularize attendance.

It get impacted by

1. Leave Application
2. Leave Opening
3. Leave Accumulation
4. C Off generation based on Company policy and eligibility to use it.
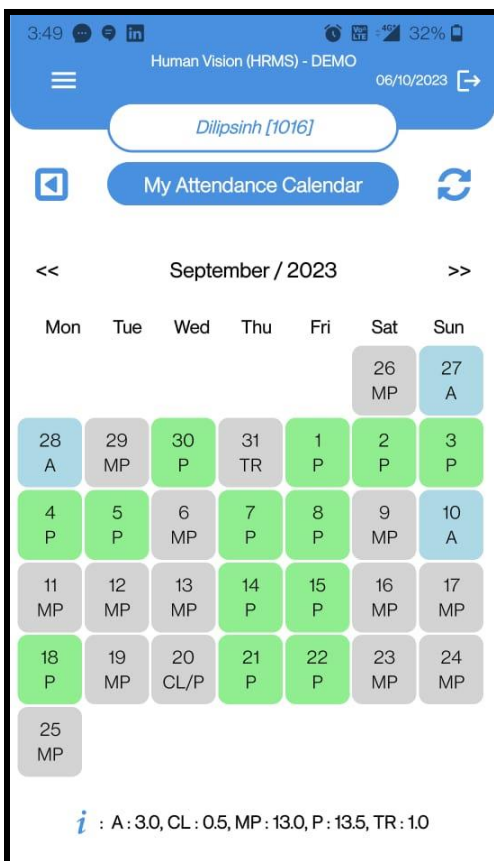
Calender (view) – To view

1. Attendance – Presence (full day of Half Day
2. Week Off,
3. Shift Scheduled and Shift Attended.
4. Leave Taken
5. Tour Applied
6. Miss Punch
7. Late Coming Early going
8. Over time
9. Total Hours working
10. Month Summary at bottom

Note – it works based on Calendar considered for the Salary – as can be seen in the photo Salary Month starts from 26 th and ends on 25 th.
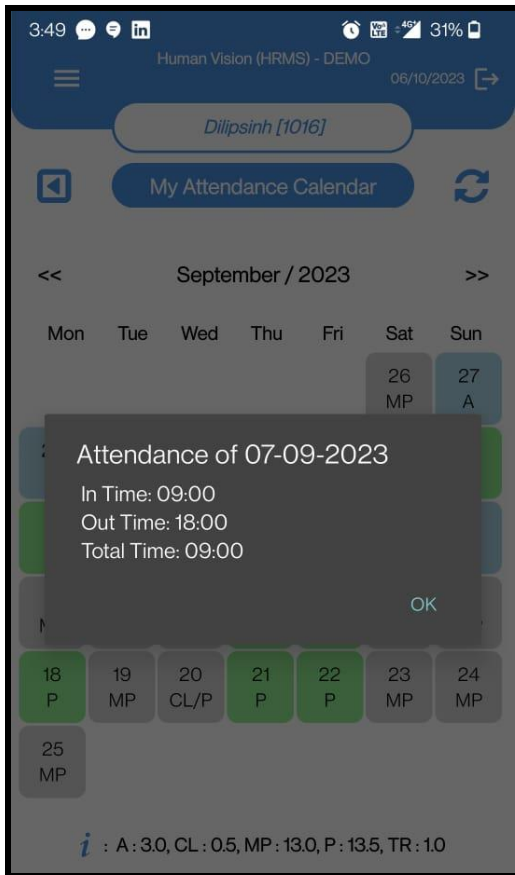
Calendar (view) – To view

1. On specific date if we click it will show us In Time, Out Time and Total Hours.
2. User can toggle from one Salary Month to another and can view future Holidays, Week Offs and Leaves applied on those dates.
3. If Employee is absent or having Miss punch then employee can just click and apply from there only (Leave, Tour, On Duty, Personal Gate Pass, Shift change, Week Off Change, Miss Punch etc).
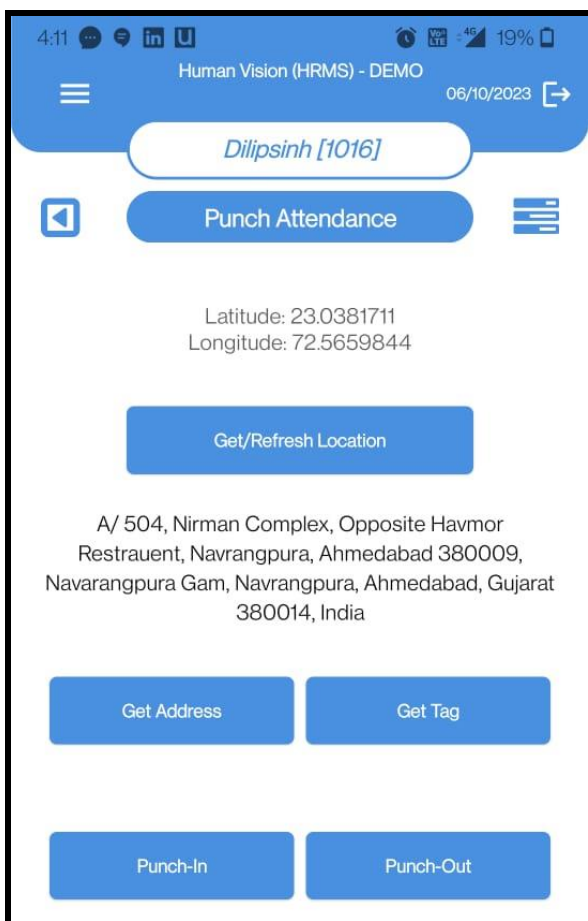
Mobile Punch from Mobile App –

1. Useful in cases where Biometric Machine is not possible due to technical reason, or due to financial constraints, or due to non-feasibility.
2. Also useful in case where we want to control and monitor the presence of the employee at some specific location.
3. As Output we get our required Punch with Date and time along with Longitudes, Latitudes, Address associated with the Punch Location.
4. We also get information whether the employee is going out or coming in.
5. As per company Policy he or she can be intimidated whether he has reached the right place for attendance or not.
6. System will provide message that he has correctly reached at some designated place in the Company or not.
7. User can see his or her Punches as on specific date (Click 3 lines in right hand upper corner)
8. This concept is called Geo Fencing and Geo Tagging.
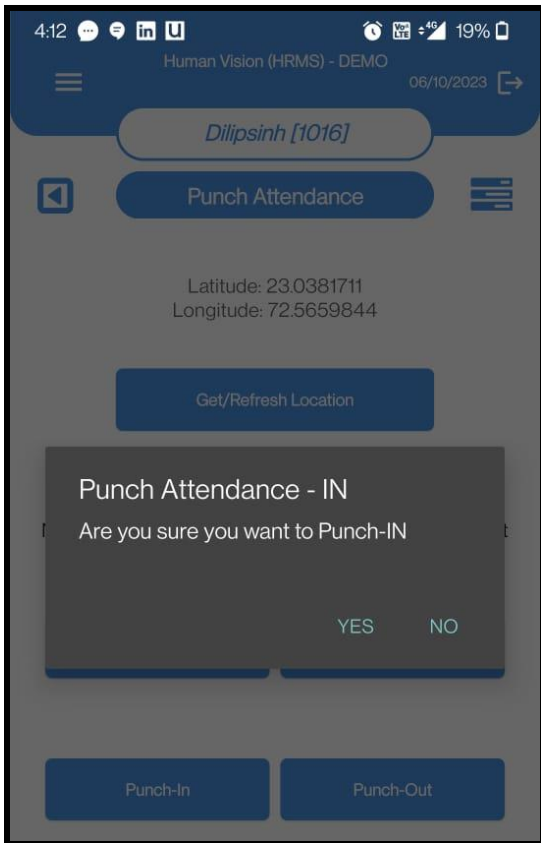
Finally Employee can Punch (In or Out)

Data captured will be
1. Punch Date along with Time
2. In or Out Flag to decide whether Employee is coming or going Out.
3. Longitude
4. Latitude
5. Address of the Punch Location
6. Will check whether he has reached the designated point or is away and how much meters he is away from that point.
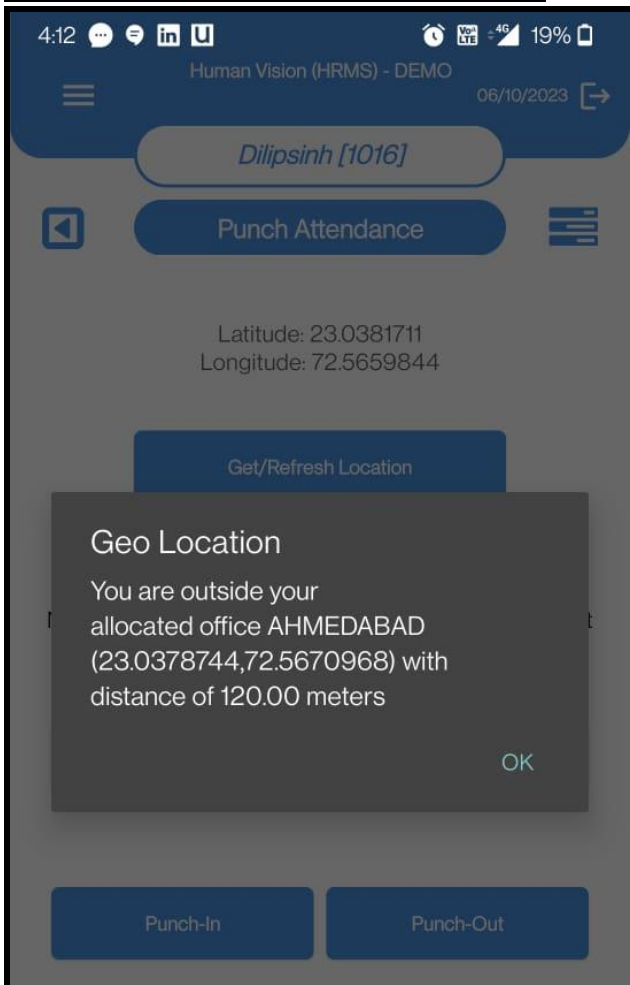
Control of Longitude and Latitudes.

Here we can see how system will interact with the Employee at the time of Punch capturing and it this is configuration based and thus can be set as per our Company policy.
Here system is showing the exact Longitude as well as Latitudes along with how much distance he is from the designated location he or she is supposed to reach to punch.
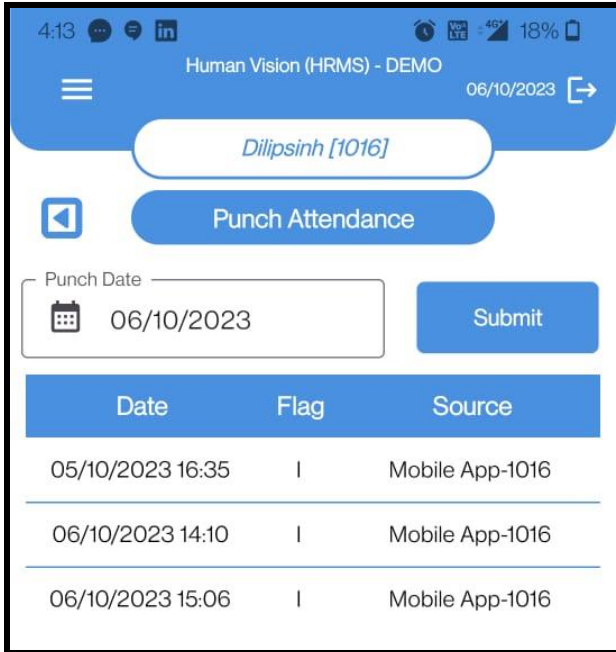
Here User can view his or her Punch Data

Employee can select the Date and will get in result all the data related to the Punch, in or Out Flag and Source of the Punch.
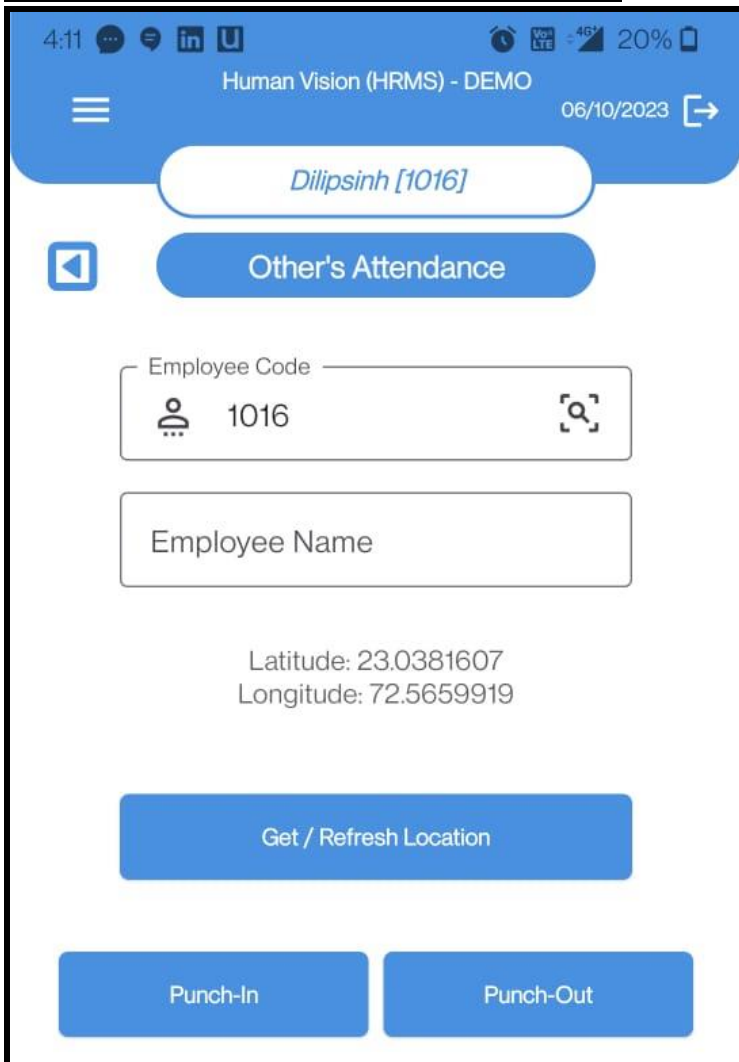
Supervisor taking Attendance in morning or evening

This will be captured and will be saved in the system.
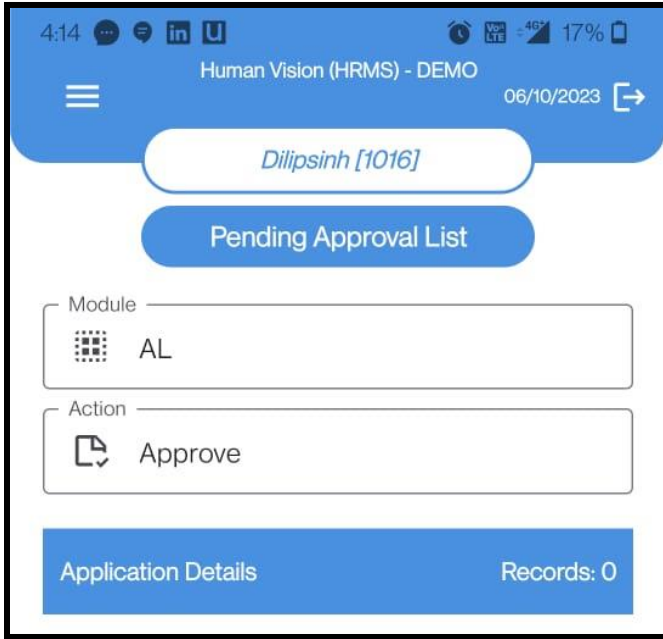
Here Employee who is Recommending or Approving Authority will be able to recommend or approve the applications or requests coming to him or her when an employee applies and select his or her name for recommendation or for approval.

He will be able to put his remark while rejecting, recommending or approving the request or application.

3.10 General Council Management

3.10.1 Description

The General Council Management Cell in JMC streamlines the proceedings of the General House. It enables councilors to submit questions and resolutions, provides a centralized repository for meeting schedules, agendas, and minutes. It serves various stakeholders, including councilors, council secretariats, committee members, general house attendees, and the public, enhancing transparency, communication, and overall local governance. This cell plays a vital role in promoting efficient governance and citizen engagement.

3.10.2 Process Flow:
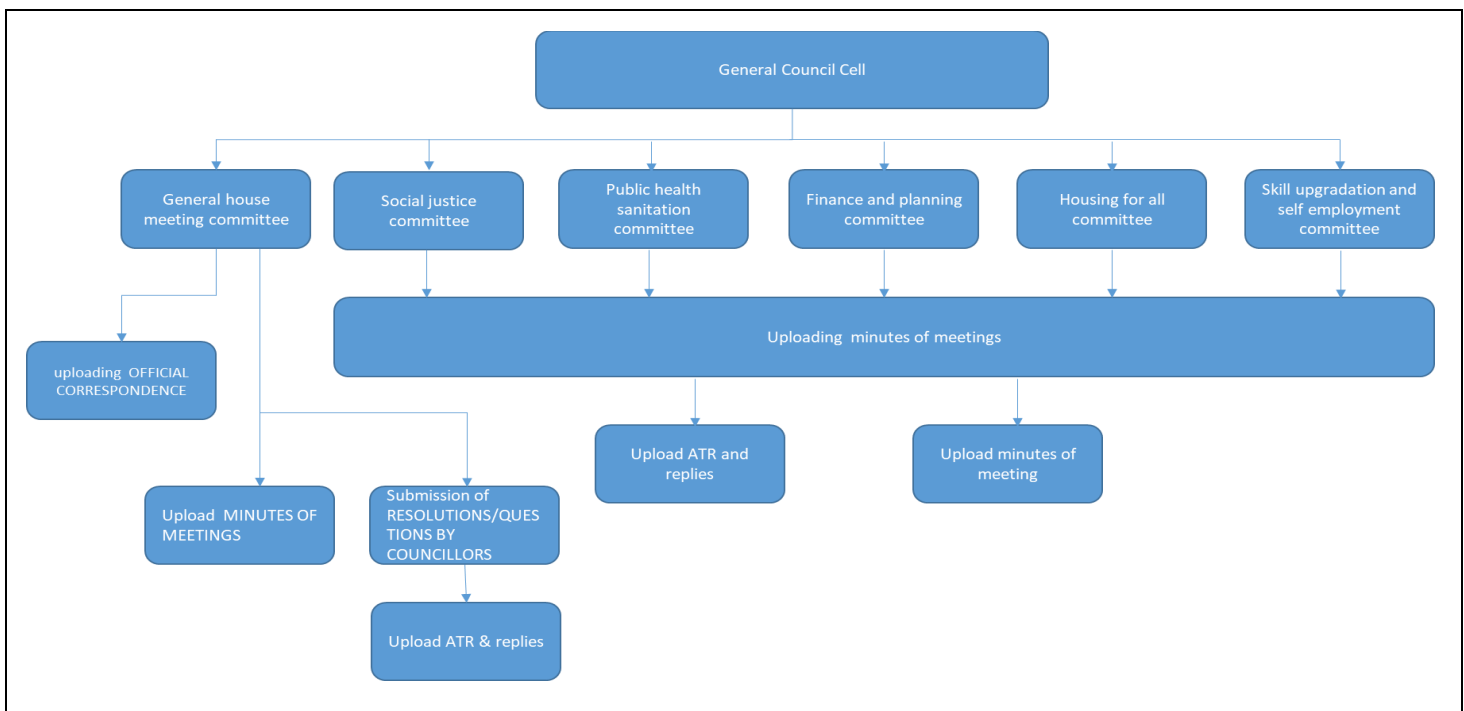
3.10.3   Functional Requirement:

The General Council Management module is a critical component for efficiently managing the proceedings of the General House, including the submission of Councilors' questions and resolutions, maintaining meeting minutes, sending SMS and email alerts, and managing the Standing Committee.

The functional requirements for the proposed solution are provided below:

General House Proceedings Management:

- This feature shall provide a central platform for managing and monitoring the proceedings of the General House.

- It shall allow stakeholders to access and review past and upcoming General House meetings, agendas, and discussions.

- The module shall enable the organization for meetings, tracking of meeting schedules, and maintaining a historical record of proceedings.

Online Submission of Councilors' Questions & Resolutions:

- Councilors shall submit their questions, concerns, and resolutions on web portal through CMS.

- The module shall facilitate the submission, tracking, and review of these queries by authorized individuals.

- It shall streamline the process of addressing councilors' concerns and ensuring timely responses.

Minutes of Meetings:

- The system shall capture and stores detailed minutes of General House meetings.

- Meeting minutes include discussions, decisions, and action items.

SMS and Email Alerts:

- The module shall send SMS and email alerts to relevant stakeholders.

- Alerts shall notify councilors and other concerned parties about upcoming meetings, changes in meeting schedules, or important announcements in the system.

Standing Committee Management:

- The module supports the creation and management of Standing Committees.

- It allows for the formation of specialized committees to address specific issues or areas of focus.

- Committee members shall access information related to their respective committees, review agendas, and collaborate efficiently.

Users/Stakeholders:

Councilors:

- Councilors play a central role in this module. They use the system to submit questions, resolutions, and access meeting details.

- Councilors benefit from easy access to meeting schedules, agenda items, and minutes of past meetings.

Council Secretariat:

- The Council Secretariat manages the overall functioning of the General House proceedings.

- They use the system to schedule meetings, maintain agendas, and record minutes.

- The secretariat ensures the efficient functioning of the General Council.

Committee Members:

- Members of Standing Committees leverage the module to access information related to their committees.

- They can review committee-specific agendas, minutes, and other relevant documents.

- The module facilitates collaboration among committee members.

IT and Support Teams:

- IT teams are responsible for maintaining and supporting the module.

3.10.4　Expectations from Proposed System:

- Above functional requirements should be made available in the proposed solution.

3.10.5　Functional Links with other Modules/Departments

- Final MOM/Proceedings and meeting notices to be published on web portal.

3.10.6　Configurable Master Table Management

Following masters are required for the proposed module:

- Employees of JMC

- Secretary members

- Various number generations for the reports

3.10.7　Access Matrix

Module	Role	Processes
General Council Management	HOD	MOM preparation, Notice generation for meetings, Meeting report. Attach additional documents, Send for internal review, Send Forward.
	Secretary	Review, Attach additional documents, Send for internal review, Send back, Approve

3.10.8　Sample Reports Formats

Report formats:

- Reports shall be developed while customization of the module.

3.10.9　Reference Screens

The proposed screens for the module shall be as follows:

1. Pre-Approval Agenda/ Admin Agenda:

2. Agenda Dashboard List:

3. Notice & Agenda Details and Add members:

4. Create Notice & Agenda:

5. Create Meeting Minutes (MOM):

6. Approved MOM:

Jammu Municipal Corporation

Guestjmcje, Junior Engineer - Sub Div-I (Z-I)

Logout ⏻

Notice & Agenda List

Proposal Submitted

Conceptual Proposals

Formal Proposals

Completion Proposals

Meeting

  Create Notice and Agenda

  Draft Notice and Agenda

  Sign Notice and Agenda

  Preview Notice and Agenda

  Meeting Agenda

  Create MOM

  Submitted MOM

  Pre-Approved MOM

  Approved MOM

VIP MOM

Enter keywords to search for

Filter   Mark   Find   Clear

Meeting No	Meeting Date	Meeting Status	Notice Status	Create/View MOM
MOM- Stand up Meet	10/05/2023 10:00:00	Completed	Approved	
1715	07/20/2023 14:30:00	Completed	Approved	
1715	07/20/2023 14:30:00	Completed	Approved	
1714	07/13/2023 14:30:00	Completed	Approved	
1714	07/13/2023 14:30:00	Completed	Approved	
1713	07/06/2023 15:00:00	Completed	Approved	
1713	07/06/2023 15:00:00	Completed	Approved	
1712	06/30/2023 14:30:00	Completed	Approved	
1711	06/23/2023 14:30:00	Completed	Approved	
1711	06/23/2023 14:30:00	Completed	Approved	
1710	06/15/2023 14:30:00	Completed	Approved	
1710	06/15/2023 14:30:00	Completed	Approved	
1709	06/08/2023 14:30:00	Completed	Approved	

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4   Delegation of Power and Work Flow

4.1   AA Work flow

For Administrative Approval all approval powers to – Municipal Commissioner:

| Junior Engineer | Assistant Engineer | Assistant of Executive Engineer | Executive Engineer | Joint Municipal Commissioner | Municipal Commissioner |
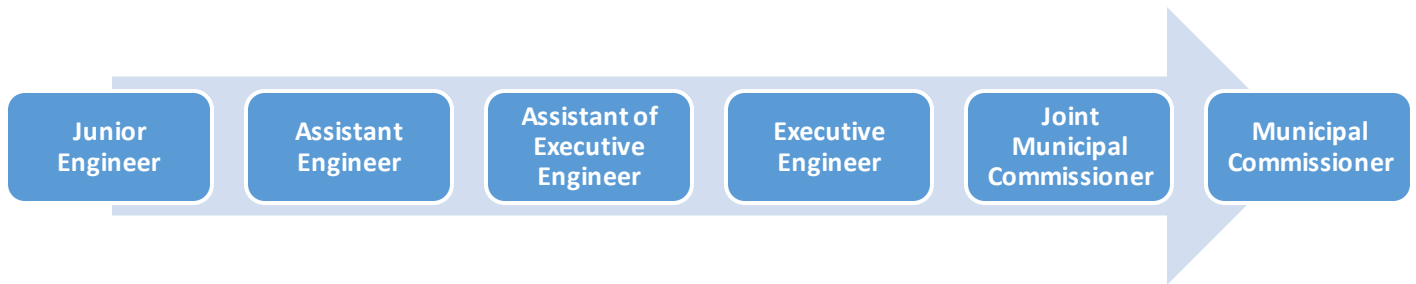
4.2   TS Work Flow

Up to 40 Lacs – Executive Engineer:

| Junior Engineer | Assistant Engineer | Assistant of Executive Engineer | Executive Engineer |

Above 40 Lacs:

| Junior Engineer | Assistant Engineer | Assistant of Executive Engineer | Executive Engineer | Municipal Commissioner |

4.3   Tender Management Work Flow

Draft NIT Papers (DNIT) – All – Executive Engineer:

| Junior Engineer | Assistant Engineer | Assistant of Executive Engineer | Executive Engineer | Municipal Commissioner |

4.4   LOA Work Flow

Letter of Intent/Acceptance (LOA) – All – Executive Engineer:

| Junior Engineer | Assistant Engineer | Assistant of Executive Engineer | Executive Engineer |
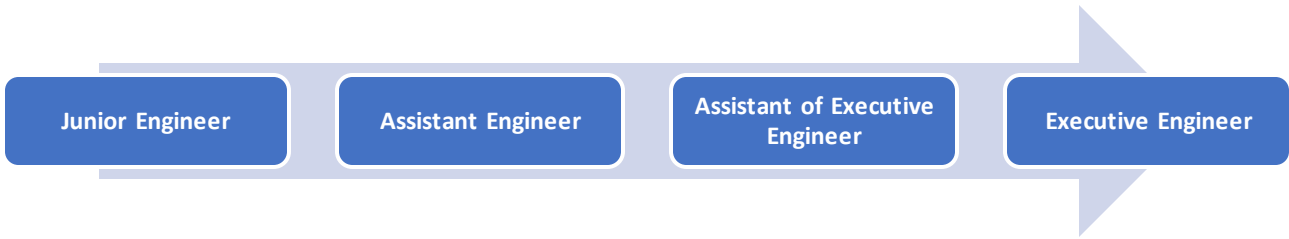
4.5   Work Order - Work Flow

For all work orders – Executive Engineer:

| Junior Engineer | Assistant Engineer | Assistant Executive Engineer | Executive Engineer |

4.6   Billing Management – Work Flow

4.6.1   Record Entry (MB) & Measurement Abstract Approval:

For all – Executive Engineer:

| Junior Engineer | Assistant Executive Engineer | Executive Engineer |

4.6.2   Extra Item Approval (DSR Extra Items) :

For all – Executive Engineer:

| Junior Engineer | Assistant Engineer | Executive Engineer |
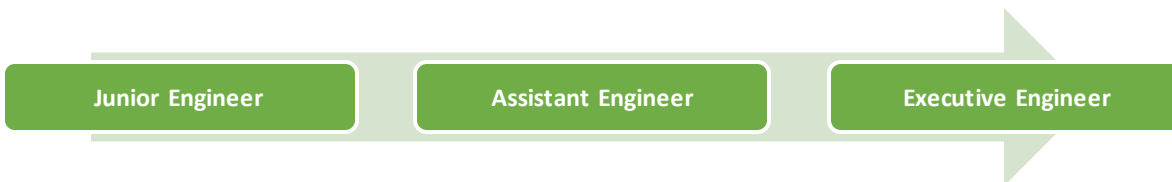
4.6.3   Extra Item Approval (Non-DSR Extra Items):

For all – Executive Engineer:

| Junior Engineer | Assistant Engineer | Executive Engineer | Superintendent Engineer |
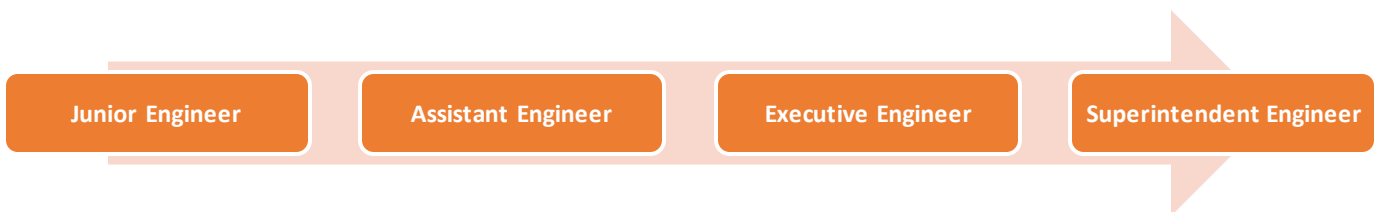
4.6.4   Excess Item Approval:

Up to 20 % variation of G- Schedule Amount or quantity – Executive Engineer :

| Junior Engineer | Assistant Engineer | Executive Engineer |
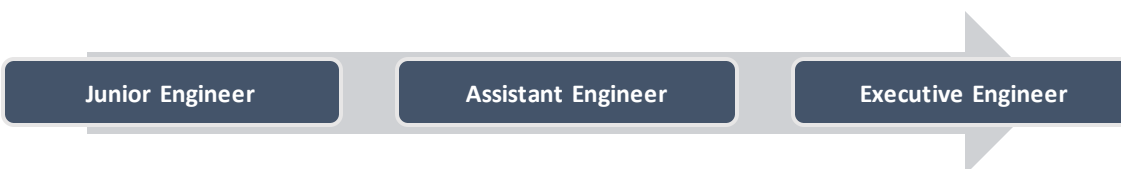
4.6.5   Billing:

For All – Commissioner:

| Junior Engineer | Assistant | Assist Executive Engineer | Executive Engineer | Sr. Accounts Officer | Add. Commissioner | Commissioner |
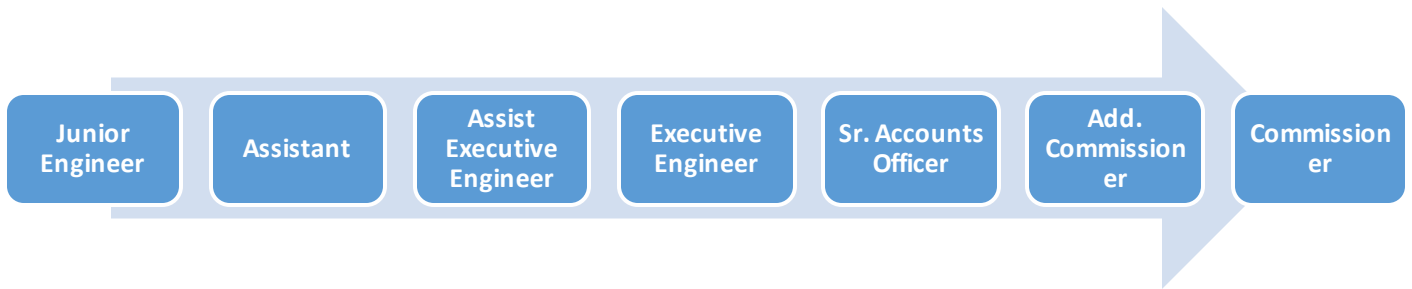
4.6.6   Work Extension

For all – Executive Engineer:

| Junior Engineer | Assistant Engineer | Executive Engineer |

4.6.7   Work Completion

For all – Executive Engineer:

| Junior Engineer | Assistant Engineer | Executive Engineer |

5   Specific Departmental Requirement

The scope of implementation for Jammu Municipal Corporation is as below:

5.1   Admin Module (Master Data Management)

5.1.1   Office Category

Under this master interface, the Jammu Municipal Corporation Engineering office structure will be defined in the system. The offices are categorized based on the operations conducted by these offices. Under each category of office there will be one or multiple physical office(s).

Office category will be named as Head Office and Zone Office.

This feature is fully compliant to the product and will be adopted as is.

Path: Login -**>** System Configuration -> Office Category

Owner/ creator Admin	Visibility / Usage Admin only can add /edit/delete

Function of Master:
- Define hierarchical representation of various types of office categories like Head Office and Zone Office.

5.1.2   Office

Under this master all the physical offices of the Jammu Municipal Corporation will be captured. Each physical office will be fall under one of the categories defined in section above.

Offices to be added shall be as per below table:

S.No.	Head Office	Zone Office
1	Jammu Municipal Corporation	Not Available

Path: Login-> System Configuration -> Office

Owner/ creator Admin	Visibility / Usage Admin only can add /edit/delete

Function of Master:
- Capture all physical offices and build office hierarchy

- Capture office attributes such as Full Name, Short Name, Category, Office Code, Reporting office

5.1.3   Department

The operations of Jammu Municipal Corporation are managed through various sections. In this master all Office Sections (Departments) are to be defined. In this master user can add, delete different sections (Departments) according to their hierarchy.

Sections are termed as Administration, Accounts, etc.

Sections information like Name, Short Name, Code, Department Head and Post information are captured in this master.

Path: Login ->Configuration -> Department

Owner/ creator	Visibility / Usage
Admin	Admin only can add /edit/delete

Function of Master:
- Add and Delete the different departments of organization as per requirement.

- Department details like Department Name, Short Name are captured.

- Department Head details like Office Name, Post to be captured.

5.1.4   Designation

In this master all designations of Jammu Municipal Corporation organization are to be captured in the system. The interface allows adding, deleting and saving designations under their reporting designation so as to complete organization chart.

Typical Designations in Jammu Municipal Corporation is Mayor, Municipal Commissioner (MC), Joint Municipal Commissioner (JMC), Chief Account Officer (CAO), Assistant Accounts Officer (AAO), Chief Engineer (CE), Add. Chief Engineer (ACE), Superintending Engineer (SE), Executive Engineer (EE), Assistant Executive Engineer (AAE), Assistant Engineer (AE), Junior Engineer (JE), Assistants, etc. are to be defined.

The attributes captured for Designation are: Name of Designation, Abbreviation of the designation (Not more than 3 characters), and the name of Designation to which this designation reports to.

Path: System Configuration → Designation → Add designation (This is available into the Admin Module.)

Path: Login → Configuration → Designation

Owner/ creator	Visibility / Usage
Admin	Admin only can add /edit/delete

5.1.5   Role Management/Authentication Management

Under the head of master data creation, user has to create the database of all roles defined in the organization chart of Jammu Municipal Corporation.

For each role the access privileges (Add, Edit, Delete, View and Print) are allowed as per the modules & sub- modules of application.

Typical roles are Mayor, MC, JMC, CE, ACE, SE, EE, AAE, AE, JE, etc.

In this master Role, Name and Roles information are captured.

Function of Master:
- Create, delete different roles as required.

- Module and sub module wise privileges like Add, Delete, View and Print rights are provided. Assign the role to employee as per post or designation.

- The System follows a role-based approach; thus, the Read/write/Delete rights is being handled that time making the system more customized and easier to use.

- Users are authenticated with windows authentication and digital signature authentication with their user name and password and valid users can access sensitive resources and trusted roles.

- Process and programs can be controlled by admin user by using roles. Admin user can provide access rights of process and programs to particular user roles and based on that role's application will authenticate before its use.

5.1.6   User Management/Employee Creation

In this master the information of all employees of Jammu Municipal Corporation organization (Including Regular, Consultant, on Deputation, or on Contract) will be captured. The operations under this interface are to add an Employee, Edit information of an Employee, Activate or deactivate an employee for transaction purpose and filter an employee from the employee database based on attributes of employee.

For each Employee the personal information attributes defined are:

- First Name, Middle Name, Last Name

- Permanent Address, Current Address

- Service information: Date of joining, Office, Designation, and current role of the employee, Current Reporting officer and additional roles being played will also be captured.

- Login information for each employee includes User ID and Password

- Office / Department the Employee associated to

- Each employee will be assigned a Role. The post associated to the console will automatically be assigned to the employee.

Path: System Configuration -> Employee -> Add/Edit/Save

5.1.7   Contractor Master

In this master the information of all Contractor/Supplier registered for Jammu Municipal Corporation organization will be captured. The operations under this interface are to Add Contractor/Supplier, Edit information of a Contractor/Supplier, Activate or Deactivate a Contractor/Supplier for transaction purpose and filter Contractor/Supplier from the database based on attributes of Contractor/Supplier.

For each Contractor/Supplier the personal/company/Organization information attributes are:

- Company Name, Company type, Specialization,

- Registration with Jammu Municipal Corporation, Establishment of Company

- PAN Card No, VAT, TIN and ST No.

- First Name, Middle Name, Last Name of owner.

- Area of expertise

- Valuation

- Past experience

- Contributions made to Jammu Municipal Corporation

- Permanent Address, Current Address

Owner/ creator Authorized Person	Visibility / Usage Authorized can only Add /Edit Admin only can delete

Path: System Configuration->Contractor Registration and Supplier Registration

Function of Master:
- Register new company as contractor/ supplier in the department. Maintain the database of the contractor/supplier.

- System will send Notification through email and SMS to the owner of the Company after any modification.

5.1.8   Work Category Master

Under this head of master, the works undertaken by Jammu Municipal Corporation is listed and categorized. The major categories of works are: Roads, Buildings, Sewer Lines, Water tank, etc.

Under each of these categories there is further classification of work termed as Sub category.

Under Road as Category: National Highway, State Highway and Major District Road

Under Building as Category: Residential Building, Institutional Buildings, Hospitals, Courts, Municipal Corporation Building, etc.

Operations allowed under this master are: Add, Edit, Save and Delete the work categories

Attributes captured are:
- Name of category

- Parent of this category,

- Work under which this category lies

- Category code

Path: Admin Configuration->Work category

Owner/ creator Admin	Visibility / Usage Admin only can add /edit/delete

5.1.9   Nature of work master

In Jammu Municipal Corporation, the works are further classified as Capital Works, Consultancy Works, Repair and Maintenance Works, Deposit work.

Operations allowed are: Add, Edit, Save, Delete, Activate and Deactivate nature of the work.

Attributes captured are: Name, Description

Owner/ creator	Visibility / Usage
Admin	Admin only can add /edit/delete

Path: Admin Configuration ->Members Configuration -> Proposal Nature

5.1.10 Location Category master

In this master Location are captured like, Country, State, Districts, city etc.

Operations allowed are: Add, Edit, Save, Delete, the locations.

Attributes captured are: Names of Country, State, Districts, city etc.

Path: Admin Configuration->Location Category

Owner/ creator	Visibility / Usage
Admin	Admin only can add /edit/delete

5.1.11 Miscellaneous Master

In Miscellaneous master user will add the master data required for other processes such as definition of contractors, suppliers, employees. For example, List of Titles, type of firms etc. All such titles will be available for selection while registering employees/contractors/suppliers into the system. Administrator can add new, edit, or delete the miscellaneous master as required.

In Miscellaneous Master all the relevant information like ID, Name of module, Parent title and display status are maintained. Following table illustrates the use of miscellaneous master.

Sr. No.	Miscellaneous Master	Abbreviation	Description	Example
1	List of Title	Mr.	Mister	At the time of registration of Employee, Contractor and Supplier, required title can be selected from dropdown list.
		Miss.	Miss	
2	list of Firms Type	PVT Ltd.	Private Limited	Required firm type can be selected while adding firms.
		Ltd.	Limited	
		Prop	Proprietor	

Path: Admin Configuration -> Miscellaneous Master

This feature is fully compliant to the product and will be adopted as is.

Owner/ creator	Visibility / Usage
Admin	Admin only can add /edit/delete

Function of Master:
- Add, Delete different items / parameters as per requirement

Operations: Under this interface application administrator can Add, Edit and Delete miscellaneous items.

5.1.12 System Configuration

Admin level configurations are maintained here. Only one-time configuration is required. Here we define various configurations related with modules. Information like round off configuration, decimal places required at various modules is to be configured that help for the transactions in the business process.

Path: Login ->Configuration ->System Configuration

Owner/ creator Admin	Visibility / Usage Admin only can add /edit/delete

Function of Master:
- User can set configurations for business modules and processes for the engineering departments.

5.1.13 Specialization Master

In the Specialization Master is actually a sub category for create details of miscellaneous masters like in List of Titles the sub category will be Dr., Capt., Maj., Col etc., specialization of work like civil work, electrical work and mechanical work. This specialization master will help in creating other masters.

Path: Login ->Configuration -> Specialization

Owner/ creator Admin	Visibility / Usage Admin only can add /edit/delete

Customizations: None

Function of Master:
- Specialization master can be inserted using ADD button and can be updated any number of times.

5.1.14 Number Configuration

In this master, user can set document number for various business processes. In this master user can add New, Edit, Save and Delete document number configurations. In Number configuration, user can create WORK CODE, APPROVAL Number, etc. by using pre define codes like Department code, Project code, etc., alphanumeric characters and automatic serial numbers.

Path: Login ->Configuration -> Number Configuration

Owner/ creator Admin	Visibility / Usage Admin only can add /edit/delete

5.1.15 SOR Management

Schedule of Rates or SOR is defined as Universal Master Table by using any of the estimates with any work type can be prepared. In the system, Data Book can be kept as a master data.

In Item Master user will create the SOR structure as Chapters and items. In this item master non SOR items are defined. This item master will be contained SOR item code, specification, unit of measurement and rate.

Path: Admin Configuration-> SOR Management> SOR> Items

This feature is fully compliant to the product and will be adopted as is.

Owner/ creator Admin	Visibility / Usage Admin only can add /edit/delete

Workflow / Approvals: No work flow is defined for Item Master.
Dashboard: No Dashboard is required for SOR master.

5.1.16 Mail Server/SMS

The WMS consists of pre-defined components & utilities for SMS & Email gateway integration that are capable of being integrated by any service provider through the existing source and services.

Only the pre requisite and API details are required from particular service provider which is to be configured in the system's configuration file in order to integrate with system.

Every time a Mail or SMS is sent, a Log is maintained against each Email & SMS.

****Section will get updated once Mail & SMS service provider has been finalized by the department.

5.1.17 Alert Management

With the help of WMS alert management, organizations to create and manage communications related to major issues or incidents. This allows incident alert administrators to bring together all involved users during these events and establish quick and easy communication within organization.

System will Provide option to check the Alert generate by the system to authorized user. Alerts will be like:

- Database Size

- SMS not delivered

- Email Not Delivered

5.1.18 Payment gateway

The WMS consists of pre-defined components & utilities for payment gateway integration that are capable of being integrated by any service provider through the existing source and services.

Only the pre requisite and API details are required from particular payment aggregator which we have to configure in our configuration file in order to integrate with system.

Key aspects of the integration between the WMS and payment gateway are described as follows:

- Payment Request

- As the customer clicks on PAY [within WMS], a request is generated by WMS to the payment gateway URL for each payment with the required parameters.

- Payment Response

- The payment response is sent to the return URL specified by WMS for each transaction.

5.1.19 Session Management

In session-based authentication the Server does all the heavy lifting server-side. It associates the identifier with a user account (e.g., in memory or in a database). It will restrict, limit this session to certain operations for certain time period and will invalidate it if there are security concerns. Furthermore, it will log the users every move on the application. Session ID sent as cookie via HTTPS is not easily eavesdropped. Session time-out is to maintain for idle time is 20 seconds (configurable). Every session initiated by user, irrespective of the fact that the same User ID is already login, the application should ask for authentication. Application should shut down after a defined period of inactivity to prevent access by unauthorized persons. Session time-out would close the application even if the network session continues till the user provides credentials.

Session active or In-Active user will be not allowed to open application using any direct URL copy in browser. Currently system is allowing multiple logins for same user either on same computer or browser and Different Computer or Different Browser. However, this can be restricted for single session of single user if required with any additional effort as part of the scope.

5.1.20 Password Management

All the Application passwords, encryption keys, and other sensitive data used in identification & authentication processes are adequately protected with SHA-1 algorithm to avoid disclosures and tampering.

WMS application uses SSL for secured communications for network transactions. SSL stands for Secure Sockets Layer, a global standard security technology that enables encrypted communication between a web browser and a web server. It is utilized for online businesses and transactions to decrease the risk of sensitive information (e.g., usernames, passwords, emails, etc.) from being stolen or tampered with by hackers and identity thieves. In essence, SSL allows for a private "conversation" just between the two intended parties.

All URL and Service calls in plain HTTP requests is redirected to HTTPS preventing authentication token theft through eaves-dropping.

- The application uses 128-bit encryption to transmit or store sensitive or confidential data.

- All the application passwords are always encrypted while transmitting across any network.

- Admin has to create a Password for each and every user added by itself.

- User can update, modify or change the password.

- "Forgot Password?" functionality is also provided with email & SMS option

- Password policy can be maintained as per requirement mentioned below and can be configured and implemented as part of the project scope:

- Password length

- Combination of Upper and Lower Case with Special Character.

- Password expired policy can be configured as per requirement.

5.1.21 Multilingual Functionality

WMS application supports multi lingual for all the process in the application. Multilingual interface and content open up new layers of required features. The interface can consist of built-in text provided by the system, as well as input provided by the administrators (site name, menu items, disclaimers, etc.). A common requirement shall allow the interface to be presented in various languages. Users should have the possibility to choose the desired interface language, and the system might choose a reasonable default for the user when visiting the site for the first time. User specified interface text is given in all languages used. Application have provision to maintain multi language master within the system and based the selection/configuration of the language the all-application's interfaces and input fields behavior will be work.

5.1.22 External Components / Status Tracking

The communication gateway for the application is through a state level portal. The system uses HTTP/HTTPS protocol to communicate with the server. The system is configured to be accessed via any available port. The web-based User Interface (UI) is the only means of communication between the Jammu Municipal Corporation users and the WMS system. The system is accessible through all popular web browsers that interact with ASP.NET and HTML pages.

The existing application can be connected to external applications by developing and integrating custom Web/WCF services. The scope of integration will be limited to push or pull data from the applications of Jammu Municipal Corporation by using standard connector.

The system has an integration provision for push and pulls services provided by Jammu Municipal Corporation for status reporting/tracking and other queries of the users.

6　　Change Management Process

Effective change management and version control processes are crucial for maintaining system stability and reliability. Effecient change control procedures have been identified and implemented as part of the Quality Methodology. These procedures will ensure that all changes to controlled items (especially concerning Requirements and Design changes, because of their direct relevance and critical nature from a previously approved baseline) are executed in conformance with the stipulated review, approval and version control methodologies.

The following functional processes and descriptions outline how the change management requirement will be implemented:

Figure Showing: Change Control Process
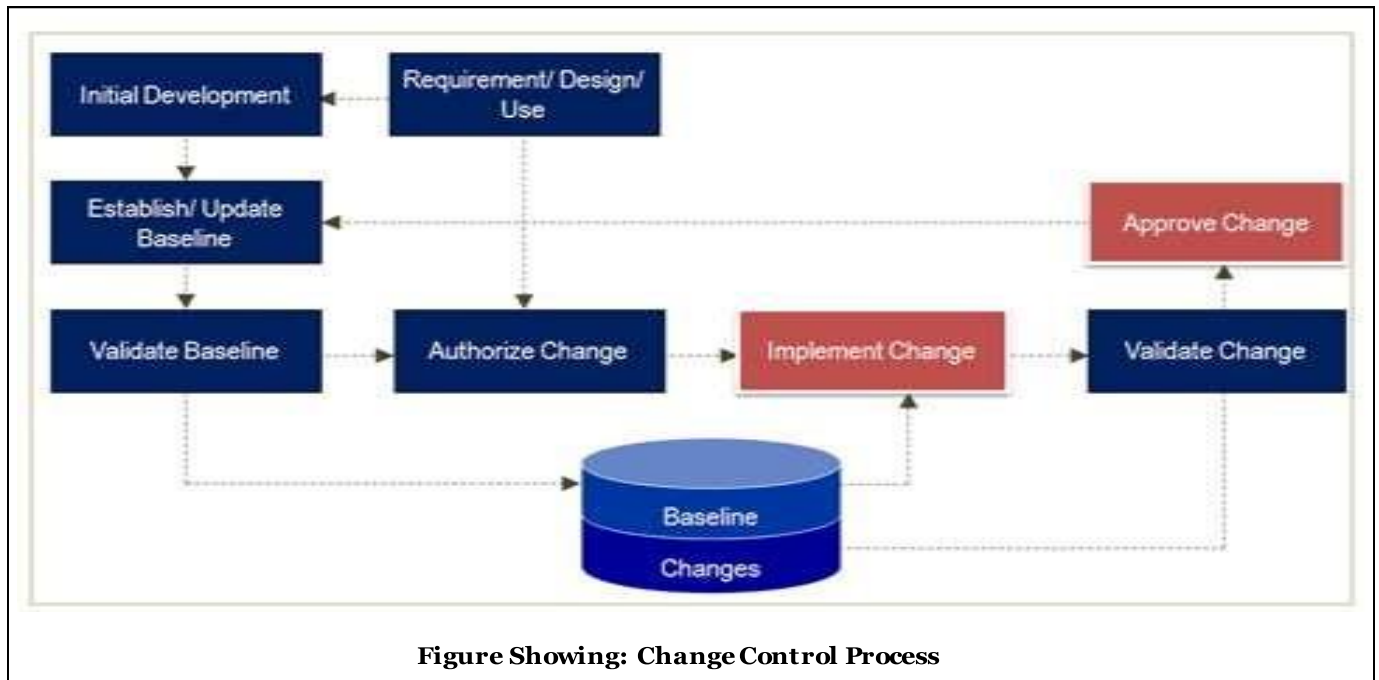
Change Initiation - Change request received from Department's project management team will be logged on the change request form, describing in detail the requested change and the rationale for the request.

Change Evaluation and Approval - In this stage, a designated team will evaluate and report on the impact of a change request on schedule, effort, cost, and any other items affected. This evaluation ensures that changes align with project goals and can be accommodated without significant disruptions.

　Process:

- When a change request is submitted, a designated team consisting of technical experts, project managers, and relevant stakeholders will assess the request's feasibility and impact.

- The team will analyze how the proposed change may affect the project's schedule, effort, cost, and other aspects. A detailed report will be prepared.

- The report will include recommendations for approval or rejection of the change request.

Change Acceptance and Authorization – Once a change request has been evaluated, the Project Manager and the Project team, representing the client, will review and approve the change on the Change Control Form before execution.

　Process:

- The Project Manager and the client's Project team will review the change request along with the evaluation report.

- They will consider the impact, risks, and benefits of the change and determine whether it aligns with project objectives.

- If approved, the change will be documented on the Change Control Form and authorized for execution.

Change Execution and Verification – After receiving approval, the assigned team members will execute the tasks associated with implementing the approved change within the revised time frames. Verification ensures that the change has been successfully implemented and meets the defined objectives.

Process:

- Once the change is authorized, the assigned team members, including developers, testers, and relevant experts, will execute the necessary tasks to implement the change.

- These tasks will be completed within the specified time frames to avoid project delays.

- After implementation, a verification process will be conducted to confirm that the change has been successfully executed and aligns with the approved objectives.

In this change management process, SoftTech and the client collaborate to ensure that proposed changes are evaluated, approved, and executed with minimal disruption to the project. Regular reviews and documentation play a vital role in maintaining system stability and reliability. These processes will be continuously improved to enhance the software's performance and capabilities.

7 Appendices

7.1 Organization Structure for Jammu Municipal Corporation

REORGANIZATION OF JAMMU MUNICIPAL CORPORATION (GAZETTED)

COMMISSIONER-1
L-13 (123100-215900)

Joint Commissioner (Administration)-1 L-12 (78800-209200)

Joint Commissioner (Revenue)-1 L-12 (78800-209200)

Joint Commissioner (Health & Sanitation)-1 L-12 (78800-209200)

Joint Commissioner (Works-1) L-12 (78800-209200)

Senior Town Planner-1 L-12 (78800-209200)

Senior Architect-1 L-12 (78800-209200)

FA/CAO-1 L-12(78800-209200)

Project Management & Procurement Officer-1 L-11 (67700-208700)

Compost-cum-Transport Officer-1 L-10A (56600-179800)

Law Officer-2 L-8 (47600-151100)

Municipal Veterinary Officer-1 L-11 (67700-208700)

Chief Informatics Officer-1 L-10A (56600-179800)

Solid Waste Management Officer-1 L-11 (67700-208700)

Floriculture Officer-1 L-11 (67700-208700)

Secretary-1 L-11 (67700-

Deputy Commissioner (North/South)-2 L-11 (67700-208700)

Transport Officer-2 L-8 (47600-151100)

Health Officer-1 L-11 (67700-208700)

Veterinary Assistant Surgeon-5 L-9 (52700-166700)

Informatics Officer-4 L-8 (47600-151100)

Ex. Engineer (Projects)-1 L-11 (67700-208700)

Under Secretary (Council)-1 L-8 (47600-151100)

Chief Revenue Officer-2 L-10A (56600-179800)

Ex. Engineer (Civil)-4 L-11 (67700-208700)

Divisional Town Planner-1 L-11 (67700-208700)

Divisional Architect-2 L-11 (67700-208700)

Under Secretary (Admn)-1 L-8 (47600-151100)

Chief Enforcement Officer-2 L-10A (56600-179800)

Ex. Engineer (Mech)-1 L-11 (67700-208700)

Deputy Director (Planning & Satistics) L-11(67700-208700)

Private Secretary-3 L-8 (47600-151100)

Revenue Officer-10 L-8 (47600-151100)

Ex. Engineer (Electric)-1 L-11 (67700-208700)

Building Officer-2 L-8 (47600-151100)

Public Relations Officer-1 L-8 (47600-151100)

Enforcement Officer-8 L-8 (47600-151100)

Assistant Ex. Engineer (Projects)-2 L-10A (56600-179800)

Accounts officer (Internal Audit) – 1 L-8(47600-151100)

Assistant Ex. Engineer (Civil)-08 L-10A (56600-179800)

Assistant Ex. Engineer (Mechanical) -2 L-10A (56600-179800)

Assistant Ex. Engineer (Electric) -2 L-10A (56600-179800)

Assistant Engineer (Technical Officer) (Project)-01 L-8A (50700-160600)

Assistant Engineer (Technical Officer)(Electrical)-2 L-8A (50700-160600)

Assistant Engineer (Technical Officer)(Mech)-2 L-8A (50700-160600)

Assistant Engineer (Technical Officer)(Civil)-4 L-8A (50700-160600)

(1) ESTABLISHMENT SECTION

COMMON MINISTERIAL STAFF (ESTT)
Section Officer-1 Level-7 (44900-142400)
Desk Officer-2, (Grade-II)
Level-5 (29200-92300)
Desk Asstt-1, Level-4 (25500-81100)
Jamadar-1 SL-2 (15900-50400)

COMMISSIONER
Level 13 (123100-215900)

Personal Section:
Pvt Secretary=1, Level-8 (47600-151100)
PRO-1, Level-8 (47600-151100)
Desk Officer-1, (Grade-I) Level-6(35400-112400)
Desk Asstt-1, (Level -4) (25500- 81100)
Jamadar-1, SL-2 (15900-50400)
Peon-1 ((SL1) (14800-47100)

Joint Commissioner (Adm)
Level-12(78800-209200)

Personal Section:
Desk Officer-1(Grade-II) Level-5 (29200-92300)
Jamadar-1 SL-2 (15900-50400)

Under Secretary (1)
Level-8 (47600-151100)

Section Officer-1 (Records)
Level-7 (44900-142400)

Desk Asstt-6
Level-4 (25500-81100)
1-Peon
SLI (14800-47100)

SCOPE OF WORK/UTILITY

Under Secretary shall work under the Administrative Control of Joint Commissioner (Adm). All official correspondences, Administrative matters and service matter process/initiated by the Central Establishment Section shall route through the Under Secretary. SO will deal with Service Matters of Health & Sanitation Wing and prepare replies to AQ/CQ during popular assembly session and also deal with all service other matters of Municipal Employees and official correspondences of JMC & other Deptts.

(2) LEGAL SECTION.

Common Ministerial Staff
Desk Asstt-1, Level-4(25500-81100)
Peon-1 SL1 (14800-47100)

Joint Commissioner (Adm)
Level-12(78800-209200)

Law Officer (2)
Level-8(47600-151100)

Legal Assistant (2)
Level-6(35400-112400)
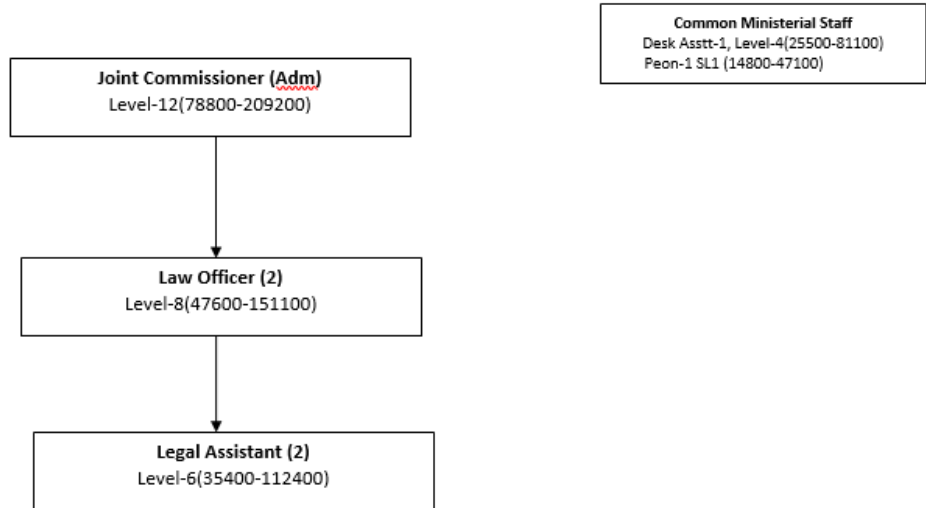
Scope of Work/Utility

All Legal matters/cases of JMC shall be dealt by the Law Officer. Legal Assistant shall provide assistance to the Law Officer in the legal matters of the Corporation for timely legal proceedings.

(3) PROJECT MANAGEMENT & PROCUREMENT SECTION.

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                        ┌─────────────────────────────────┐
                        │     Joint Commissioner (Adm)    │
                        │     Level-12(78800-209200)      │
                        └────────────────┬────────────────┘
                                         │
                        ┌────────────────▼──────────────────────┐
                        │ Project Management & Procurement       │
                        │ Officer (1)                            │
                        │ Level-11(67700-208700)                 │
                        └──┬──────────────────────┬──────────────┘
                           │        ┌─────────────┴──────────────────────┐
                           │        │ Personal Section                   │
                           │        │ Desk Officer-1 (Grade-I),          │
                           │        │ Level-6(35400-112400)              │
                           │        │ Desk Asstt-1, Level-4(25500-81100) │
                           │        │ Peon-1 (SL1(14800-47100)           │
                           │        └────────────────────────────────────┘
          ┌────────────────▼─────────┐           ┌──────────────────────┐
          │ Assistant Accounts       │           │ City Support Unit    │
          │ Officer-1                │           │                      │
          │ (Store Officer)          │           └──────────┬───────────┘
          │ Level-7(44900-142400)    │                      │
          └────────────┬─────────────┘                      │
                       │                                     │
   ┌───────────────────▼──────────────────┐      ┌──────────▼───────────┐
   │ 1-Desk Officer (Grade-II) Level-5     │      │ Consultants          │
   │ 29200-92300)                          │      │                      │
   │ 1-Desk Asstt. Level-4(25500-81100)    │      └──────────────────────┘
   └───────────────────────────────────────┘
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SCOPE OF WORK/UTILITY

Project Management & Procurement Officer will coordinate with City Support Unit. All the Procurement and Contract Management excluding civil works shall be dealt by the said officer. Consultants to be utilized for (1) Transport, (2) Solid & Liquid Waste Management, (3) E-Governance, (4) Governance/Legal issue, (5) Procurement & (6) Livelihood.

(4) INFORMATICS SECTION
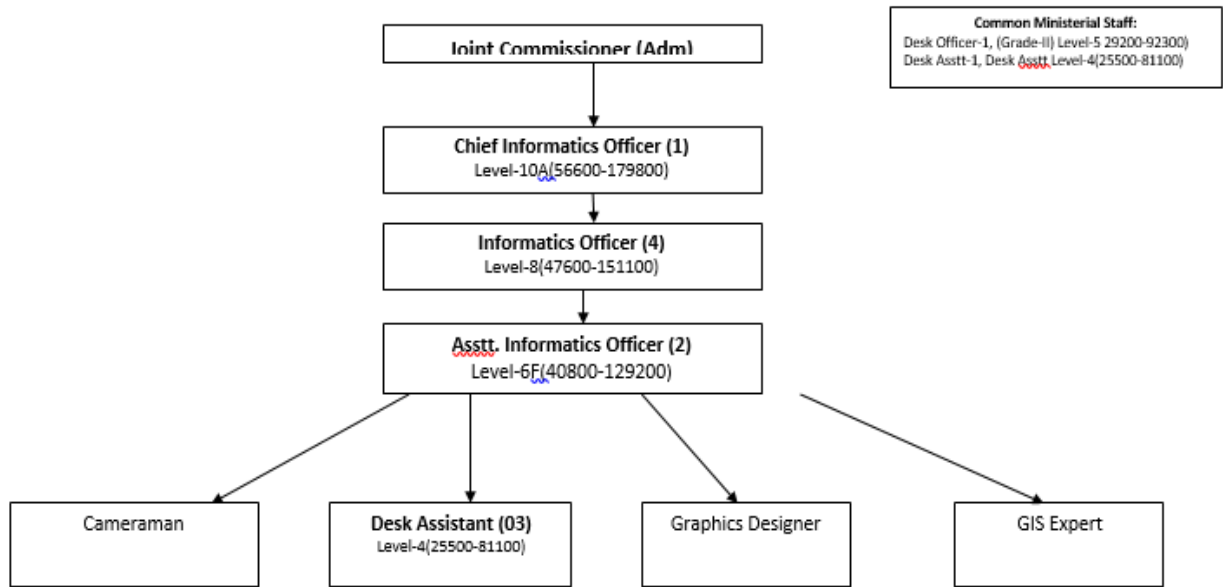
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                    ┌─────────────────────────┐        ┌──────────────────────────────────────┐
                    │  Joint Commissioner (Adm)│        │ Common Ministerial Staff:            │
                    └────────────┬────────────┘        │ Desk Officer-1, (Grade-II) Level-5 29200-92300)│
                                 │                      │ Desk Asstt-1, Desk Asstt Level-4(25500-81100)│
                                 ▼                      └──────────────────────────────────────┘
                    ┌─────────────────────────┐
                    │ Chief Informatics Officer (1)│
                    │   Level-10A(56600-179800)│
                    └────────────┬────────────┘
                                 ▼
                    ┌─────────────────────────┐
                    │  Informatics Officer (4) │
                    │   Level-8(47600-151100)  │
                    └────────────┬────────────┘
                                 ▼
                    ┌─────────────────────────┐
                    │ Asstt. Informatics Officer (2)│
                    │   Level-6F(40800-129200) │
                    └─────────────────────────┘
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| Cameraman | Desk Assistant (03) Level-4(25500-81100) | Graphics Designer | GIS Expert |

SCOPE OF UTILITY

Chief Informatics Officer (1): Shall work as E- Governance and will be responsible for overall implementation of Digital India and E-Governance in JMC, Informatics Officer (1): Responsible for performing duties related to E-Governance and digitization of JMC; Asstt. Informatics Officer : To assist informatics Officer in day to day activities related to e-governance and digitization; GIS Expert : To be deployed in Engineering wing or Building for accurate Urban Planning using GIS platform; Graphics Designer : For preparing Advertisement, IEC material etc. shall work on software's like Photoshop, Coral Draw, PageMaker etc; Desk Assistants are required in the IT Section for Birth and Death online registration, issuance of Birth & Death Certificates, preparation of salary bill and other allied job of the Corporation assigned to the Informatics Section; Cameraman : To cover the daily development works and other outdoor activities of JMC like demolition or sanitation drives etc. Other than this to cover the video recordings of General House proceedings etc.

(5 – 6) ENGINEERING SECTION

1-AAO & 1- Accounts Assistant for each zone and 1-AAO in Mech. Div. (Total-5 AAO)
3 Accounts Asstt for 4 Zones and 1 Accounts Asstt. each for Project/Mechanical (Total-5 Acctt Asstt.)

COMMISSIONER

Joint Commissioner (W)
Level-12(78800-209200)

Personal Section: 1-TO (AE).
Desk Officer-1 (Grade-I), Level-6(35400-112400)
Jamdar-1 SL2(15900-50400)
Tracer Level-4(25500-81100)

Personal Section Staff:
7 Executive Engineer will have personal section comprising:
Desk Officer (Grade-II) Level-5 (29200-92300)
Total: 7 Desk Officer (Grade-II) (1 for each Div.)
Desk Asstt-7, Level-4(25500-81100) (1 for each Div)
Peon-7 SL1 (14800-47100) (1 for each Div)

XEN Project Level-11 (67700-208700)
AEE-2 Level 10-A (56600-179800)
AE-2 Level-8A (50700-160600)
JE-6 Level-6(35400-112400)
1-HD Level-6E (35900-113500)
1 Draftsman Level-4 (25500-81100)
02 Works Supervisor Level-4 (25500-81100)
03 Works Supervisor-Gr. II Level-2 (19900-63200)

XEN Zone-1
AEE-2
AE-1
JE-8
1-HD, 2 Draftsman
3 Works Supervisor Level-4 (25500-81100)
09 Works Supervisor-Gr. II Level-2 (19900-63200)

XEN Zone-II
AEE-2
AE-1
JE-8
1-HD, 2 Draftsman
3 Works Supervisor Level-4 (25500-81100)
09 Works Supervisor-Gr. II Level-2 (19900-63200)

XEN Zone-III
AEE-2
AE-1
JE-8
1-HD, 2 Draftsman
3 Works Supervisor Level-4 (25500-81100)
9 Works Supervisor-Gr. II Level-2 (19900-63200)

XEN Zone-IV
AEE-2
AE-1
JE-8
1-HD, 2 Draftsman
3 Works Supervisor Level-4 (25500-81100)
8 Works Supervisor-Gr. II Level-2 (19900-63200)

XEN-(M)
AEE-2
AE-1
JE-4
1 Draftsman
Mechanic, Level-4 (25500-81100)
Greaser, Level-2 (19900-63200)
Painter, Level-2 (19900-63200)

XEN (E)
AEE-2
AE-1
JE-6
1 Draftsman
1 Works Supervisor Level-4 (25500-81100)
03 Works Supervisor-Gr. II Level-2 (19900-63200)
Foreman. Level-6(35400-112400)
Electrician, Level-2 (25500-81100)

SCOPE OF WORK/UTILITY

The scope of work and utility of Engineering Staff in Zone-I, II, III, IV, Elect & Project is as per enclosed Annexure 'A'.

The scope of work and utility of Mechanical Division will be related to repair/maintenance of existing 150 Municipal vehicles/machines and also to initiate proposal for procurement of required machinery from time to time.

ANNEXURE -A

XEN Project (Level -11)	XEN Zone-I (Level -11)	XEN Zone-II (Level -11)	XEN Zone-III (Level -11)	XEN Zone-IV (Level -11)	XEN (E) (Level -11)	XEN (Mech) (Level -11)
• Multilevel Panjtirthi Parking • NAFED-SWM • Slaughter Houses • Lairage • Gyms in Parks • Cattle Pond • Fountains • Legacy Waste • C&D Waste • BSUP DUs • Shelter for Homeless	Lanes/Drains & Other Allied Works+ drainage works in Wards-	Lanes/Drains & Other Allied Works+ drainage works in Wards-	Lanes/Drains & Other Allied Works+ drainage works in Wards- + floriculture related works	Lanes/Drains & Other Allied Works+ drainage works in Wards-	Installation and ma intenance of street lights, Water Coolers & Traffic Signals	Repair work of vehicles, fixation of iron gratings and miscellaneous
A.E.E- 2 NO.	A.E.E- 2 NO.	A.E.E- 2 NO.	A.E.E- 2 NO.	A.E.E- 2 NO.	A.E.E- 2 NO.	A.E.E- 2 NO.
A.E.- 2 NO.	A.E.-1	A.E.-1	A.E.-1	A.E.-1	A.E.-1	A.E.-1-Mech
J.E- 6 NO.	J.E.-8 No.	J.E.-8 No.	J.E.-8 No.	J.E.-8 No.	J.E- 6 NO.	J.E.-4 No.

(7) FLORICULTURE SECTION.

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                    ┌──────────────────────────────┐
                    │  Joint Commissioner (Works)  │
                    │  Level-12 (78800-209200)     │
                    └──────────────┬───────────────┘
                                   │
                    ┌──────────────▼───────────────┐
                    │   Floriculture Officer (1)    │
                    │   Level-11 (67700-208700)     │
                    └──────────────┬───────────────┘
                                   │
                    ┌──────────────▼───────────────┐
                    │     Garden Assistant (2)      │
                    │     Level-6 (35400-112400)    │
                    └──────────────┬───────────────┘
                                   │
                    ┌──────────────▼───────────────┐
                    │     Field Assistant (3)       │
                    │     Level-2 (19900-63200)     │
                    └──────────────┬───────────────┘
                                   │
                    ┌──────────────▼───────────────┐
                    │   Gardeners/Head Mali-(6)     │
                    │     Level-2(19900-63200)      │
                    └──────────────┬───────────────┘
                                   │
                    ┌──────────────▼───────────────┐
                    │      Gardeners/Mali (43)      │
                    │      SL2(15900-50400)         │
                    └──────────────────────────────┘
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The Horticulture/Floriculture Section will be strengthened with implementation of 74th Amendment.

(8) HEALTH SECTION

Common Ministerial Staff:
Section Officer-1, Level-7(44900-142400)
Assistant Accounts Officer-1, Level-7 (44900-142400)
Desk Asstt-1, Level-4(25500-81100)

Joint Commissioner (Health & Sanitation)
Level-12 (78800-209200)

Personal Section:
Desk Officer-1, (Grade-I) Level-6(35400-112400)
Desk Asstt-1, Level-4 (25500-81100)
Jamadar-1, Level SL2(15900-50400)

Health Officer -1
(Level -11 (67700-208700)

Personal Section:
Desk Officer-1, (Grade-II) Level-5(29200-92300)
Desk Asstt-2, Level-4(25500-81100)
Peon-1 SL1(14800-47100)

Disinfector Supervisor (1)
Level-4 (25500-81100)

Birth & Death Registration

Assignment on Implementation of 74th Amendment Act.

Disinfector (30)
Level-2(19900-63200)

Sub Registrar by delegation Section Officer -1
Level-7(44900-142400) (Under B&D Reg Act)

SCOPE OF WORK/UTIITY

Health Officer shall function as Registrar, Vital Statistics as per Central Birth and Death Registration Act 1969 and rule there under. The Sanitation Officer by virtue of delegation of powers under B&D Reg. Act, shall ensure registration of all B&D within stipulated time frame as per provisions of said Act. The Disinfection Section under the control of Health Officer perform disinfectant spray work fogging within Municipal jurisdiction.

(9) SANITATION SECTION/SOLID WASTE MANAGEMENT.

Joint Commissioner (Health & Sanitation)
Level-12 (78800-209200)

Solid Waste Management Officer (1)
Level-11 (67700-208700)

Sanitation Officer (4)
Level-7(44900-142400)

Personal Section:
Desk Officer-1 (Grade-I) Level-6 (35400-112400)
Desk Officer-1 (Grade-II) Level-5 (29200-92300)
Desk Asstt-1, Level-4(25500-81100)
Peon-1 SL-1(14800-47100)

Compost-cum-Transport Officer (1)
Level-10A (56600-179800)

Assistant Sanitation Officer (3)
Level-6F(40800-129200)

Sanitary Inspector (23)
Level 6D(35800-113200)

Asstt. Solid Waste Management Officer (1)
Level-6(35400-112400)

Transport Officer (2)
Level-8(47600-151100)

Senior Sanitary Supervisor (11)
Level-6 (35400-112400)
Sanitary Supervisor (Grade-I)(24)
Level-4 (25500-81100)
Sanitary Supervisor (Grade-II)-40
Lvel-2 (19900-63200)

Chauffer/Excavator(13)
Driver-(56), (Grade-I =28 & Grade- II=28)
Cleaner SL1 (14800-47100)

Safai Saathi-1654
SL1 (14800-47100)

SCOPE OF WORK/UTIITY

Solid Waste Management Officer, assisted by Assistant Solid Waste Management Officer shall deal with integrated Solid Waste Management Plant, Door to Door collection, IEC activities, Composing Initiatives, MRF, Nodal Officer for NGT and any other Solid Waste Management Projects/Plants. He shall have control over Sanitation Supervisory for maintenance of proper sanitation in Municipal Wards and also ensure disposal of refuse garbage by having control over Compost-cum-Transport Officer/Transport Officer and Drivers/Cleaner working under their respective control. The Officers/Officials working under the control of Solid Waste Management Officer shall perform allotted assignment are as under. 4-Sanitation Officers for four sanitation zone i.e. Zone, I, II , III & IV. 3- Asstt. Sanitation Officer to assist the Sanitation Officer, 23 Sanitary Inspectors for conduct of sanitation inspection and look after the working of sanitary supervisor in allotted wards i.e. 1 Sanitary inspector to look after 3-4 wards. 11- Senior Sanitary Supervisor & 64 Sanitary Supervisor to look after Sanitation Work in each ward and have supervision over SKCs. They will assist the Revenue Section in collection of User Charges, Deployment details of 1654 SKCs: Sweeping of lanes/roads 15 SKCs per ward (Appx) (15x75)=1125 Nallah desisting-12 SKC per ward (Appx) (12x75)=900. Door to Door collection of house hold waste/refuse = 10 SKCs, per ward (Appx) (10x75) =750, Sanitation vehicles of Transport Wing=250, Slaughter Houses/Veterinary Centre/Cattle Pons-50 SKCs. 2- Transport Officer for deployment of vehicles in the allotted zones for collection of refuse/garbage and clearance of collection points on daily basis. The Transport Officers have to deploy Septic Tank Cleaning Machine, Mobile Toilet Van, Water Tanks on demand and keep proper record of revenue generator for providing these services. Presently 156 drivers are being utilized for driving municipal vehicles that includes 56 permanent drives. 100 outsourced through NGO. Apart from officer vehicles they are on job for garbage collection, Veterinary Section Vehicles, Electric Section Vehicles & etc. These drivers work under immediate control of Compost-Cum Transport Officer.

(10) VETERINARY SECTION.

Joint Commissioner (Health & Sanitation)
Level-12 (78800-209200)

Common Ministerial Staff:
Desk Officer-1 (Grade-II) Level-5 29200-92300)
Desk Asstt-1, Level-4(25500-81100)

Municipal Veterinary Officer (1)
Level-11(67700-208700)

Personal Section:
Desk Asstt-1, Level-4(25500-81100)
Peon-1 SL-1(14800-47100)

Vet. Asstt. Surgeon-5
Level-9(52700-166700)

Veterinary Pharmacists-(6), Level -4 (25500-81100)
Head Vaccinator-(1), Level 4 (25500-81100)
Vaccinator-(4), Level-2 (19900-63200)
Cattle Catcher/Dog Catcher (SL1 (14800-47100)

SCOPE OF WORK/UTILITY

2-VAS for ABC programme (Sterilization of Stray Dogs and for conduct of other emergency surgeries. 1-VAS for treatment of sick/injured animals. 2-VAS for conduct of Ante Mortem and Post Mortem examination at slaughter houses, 6-Veterinary Pharmacists for around the clock working of the centre. 1-Head Vaccinator for supervision for vaccination of cattle/dogs, 3-Vaccinator for vaccination of cattle/dogs.

(11) REVENUE SECTION.

Joint Commissioner (Revenue)
Level-12 (78800-209200)

Personal Section
Desk Officer-1, (Grade-II)
Level-5(29200-92300)
Desk Asstt-1 Level-4(25500-81100)
Jamadar-1 Level SL2(15900-50400)

Common Ministerial Staff:
Section Officer-1, Level-7 (44900-142400)
Desk Officer-1, (Grade-II) Level-5 29200-92300)

Dy. Commissioner North-1
Level-11(67700-208700)

Personal Section:
Desk Asstt-1, Level-4(25500-81100)
Peon-1 SL-1(14800-47100)

Naib Tehsildar (Rev) - (02)
Level-6E (35900-113500)

Dy. Commissioner South-1
Level-11(67700-208700)

Personal Section:
Desk Asstt-1, Level-4(25500-81100)
Peon-1 SL-1(14800-47100)

Chief Revenue Officer (1)
Level 10-A (56600-179800)

Chief Revenue Officer (1)
Level 10-A (56600-179800)

Revenue Officer (5)
Level-8 (47600-151100)

Patwari (4)
Level-4 (25500-81100)

Revenue Officer (5)
Level-8 (47600-151100)

Revenue Inspector (38)
Level 6E(35900-113500)

Revenue Inspector (37)
Level 6E(35900-113500)

Summon Server

Summon Server

SCOPE OF WORK/UTILITY

Deputy Commissioners i.e. North and South shall be for Revenue affairs of JMC as per jurisdiction. 2-Chief Revenue Officer, 10-Revenue Officer will work under their control. 75 Revenue Inspectors shall function under the control of Deputy Commissioner, North/South. The deployment of Revenue Inspector shall be in each ward i.e. 1 for each ward. They shall perform duties in their respective ward regarding Municipal Assets, Permission of Exhibition Mela/Religious/Social/Political functions and establishments of open stalls for fire crackers, Municipal Taxes/Fee, Site Inspections of various establishment for issuance of NDC/License, Advertisement/Hoardings and Mobile Towers, Rehri Licence, Parking Management, Removal of Illegal rehri/phari. The allotment of tenders, management of contract Revenue Collections, removal of violation shall also be dealt by the Revenue Section.

Naib Tehsildar (Rev) and Patwaris shall deal Land matters/disputes of JMC in coordination with Land Revenue Department.

(12) ENFORCEMENT SECTION.

Common Ministerial Staff:
Desk Officer-1 (Grade-II)
Level-5 29200-92300)
Desk Asstt-1, Level-4(25500-81100)
Summon Server, SL-1 14800-47100)

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          Joint Commissioner (Revenue)
            Level-12 (78800-209200)
                      │
                      ▼
          Chief Enforcement Officer (2)
            Level 10A (56600-179800)
                      │
                      ▼
          Enforcement Officer (8)
            Level-8 (47600-151100)
                      │
                      ▼
          Enforcement Inspector (45)
            Level-6E(35900-113500)
                      │
                      ▼
          Demolishing Squad Helper
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SCOPE OF WORK/UTILITY

2-Chief Enforcement Officer, 8-Enforcement Officer under the control of Joint Commissioner (Rev) for Enforcement purposes. 45-Enforcement Inspectors will be deployed in Municipal wards by allotting them 1 ward each. The Enforcement Inspector shall conduct inspections in their respective wards to check and ensure that building permissions are complied with. In case of violation, illegal constructions report the matter to the concerned officers for taking legal action as per relevant provisions of law. The services of demolishing squad shall be utilized during conduct of demolishing activities removal of encroachment within jurisdiction of JMC.

(13) BUILDING SECTION

Common Ministerial Staff:
Desk Officer-1 (Grade-I) (Level-6 35400-112400)

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                    COMMISSIONER
                    │          │
          ┌─────────┘          └─────────┐
          ▼                              ▼
  Senior Town Planner-1          Senior Architect-1
  Level-12 ((78800-209200)       Level-12 (78800-209200)
          │                              │
   Personal Section:           Desk Asstt-1, Level-4(25500-81100)
   Desk Asstt-1, Level-4(25500-81100)   Peon-1 SL-1(14800-47100)
   Peon-1 SL-1(14800-47100)             │
          │                              ▼
          ▼                      Divisional Architect-2
   Div. Town Planner-1           (Level-11 (67700-208700)
   Level-11(67700-208700)                │
          └──────┐         ┌─────────────┘
                 ▼         ▼
            Building Officer-2
            Level-8 (47600-151100)
            │                  │
            ▼                  ▼
  Surveyor /Tech Asstt.(4)     Surveyor /Tech Asstt (6)
  Level-6(35400-112400)        Level-6(35400-112400)
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SCOPE OF WORK/UTILITY

4 Nos. of Surveyor/Tech. Asstt will take the measurement of unauthorized const. under Enf. Wing as per ward wise division & submit the report to JC (R).

6 Nos. of Surveyor/Tech. Asstt will take the Site Inspector of building permission cases and submit the report to concerned Building Officer of the Zone.

(14) ACCOUNTS & PLANNING SECTION.

SCOPE OF WORK/UTILITY

AAO (C): All files of Civil, Estt, Salary & Other payment, Accountant to assist AAO (C), Accounts Asstt: GPF & Income Tax.

AAO (W): All files of Works payment, Accountant to assist AAO (W), Accounts Assistant Work related, projects, tenders.

AAO(H) & , Accountant: Salary, Wages & other payment of Health Section.

(15) MUNICIPAL COUNCIL SECTION.

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                              ┌─────────────────────────────────┐
                              │         COMMISSIONER            │
                              │   Level-13 (123100-215900)      │
                              └─────────────────────────────────┘
                                            │
                                            ▼
                              ┌─────────────────────────────────┐
                              │         Secretary (1)           │
                              │    Level-11(67700-208700)       │
                              └─────────────────────────────────┘
                                            │      ┌─────────────────────────────────────────┐
                                            │      │ Personal Section:                       │
                                            │      │ Desk Officer-1 (Grade-I) Level -6        │
                                            │      │ (35400-112400)                          │
                                            │      │ Desk Asstt-1. Level-4(25500-81100)      │
                                            │      │ Jamadar-1. SL2I15900-50400              │
                                            │      └─────────────────────────────────────────┘
                                            ▼
                              ┌─────────────────────────────────┐
                              │    Under Secretary Council -1   │
                              │     Level-8(47600-151100)       │
                              └─────────────────────────────────┘
                                            │
                                            ▼
                              ┌─────────────────────────────────┐
                              │    Common Ministerial Staff:    │
                              │ Desk Officer-1 (Grade-II)        │
                              │ Level-5(292200-93200)           │
                              │ Desk Asstt-1. Level-4(25500-81100)│
                              │ Minutes Writer. Level-4(25500-81100)│
                              │ Marshall (S LI-14800-47100)     │
                              │ Cameraman (Level-4(25500-81100) │
                              └─────────────────────────────────┘
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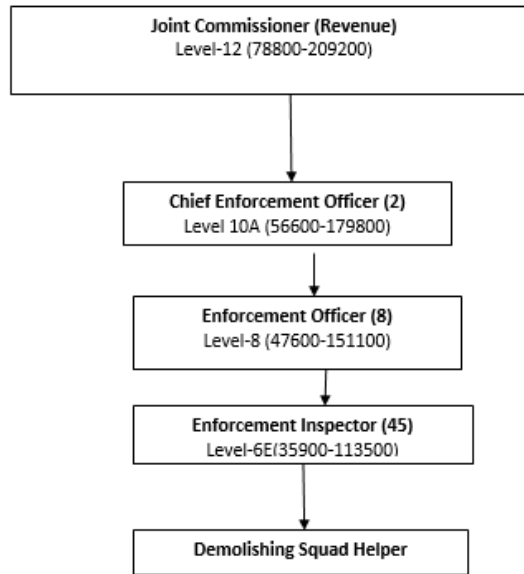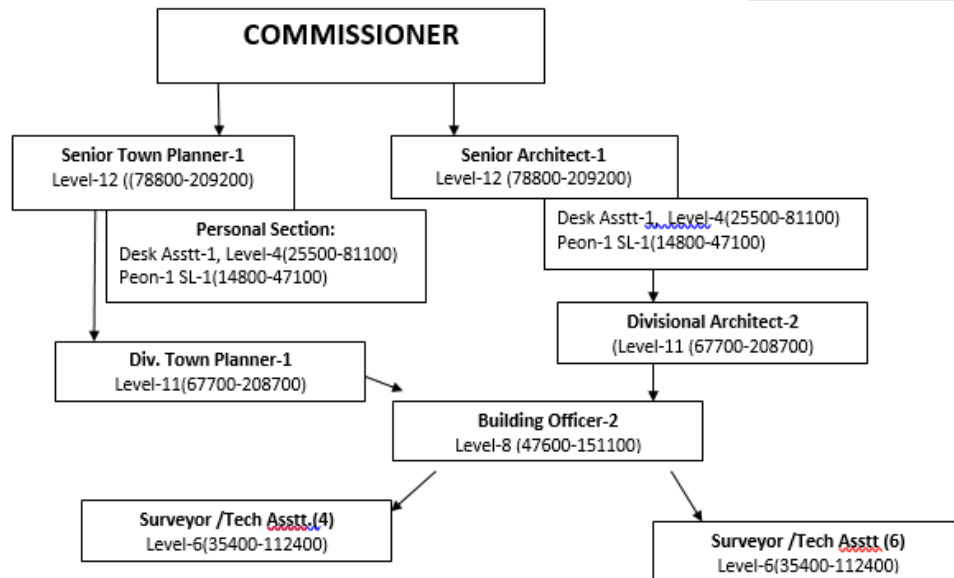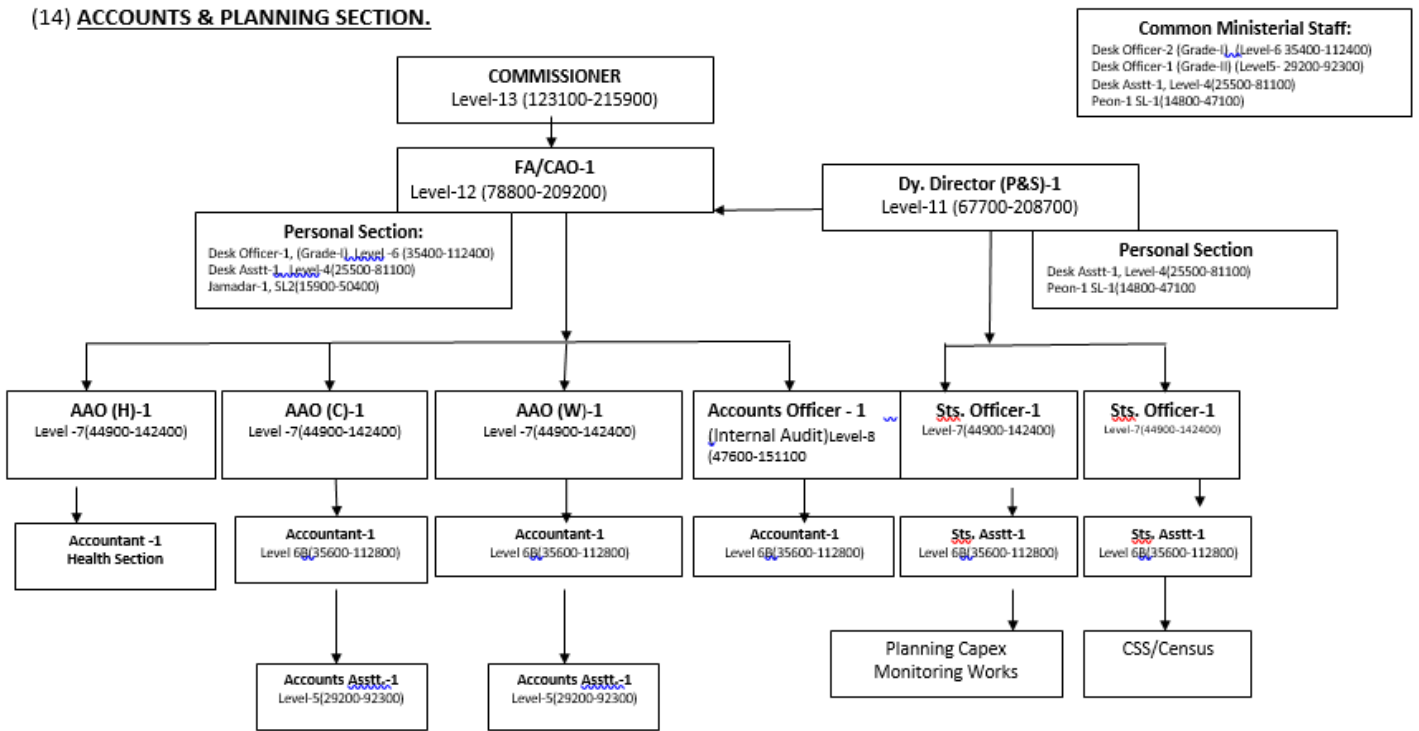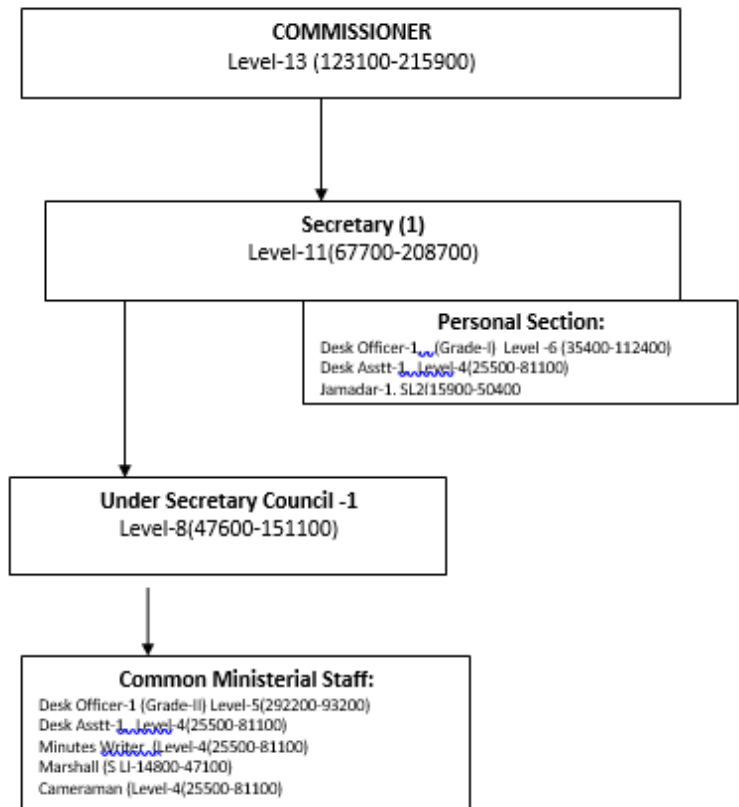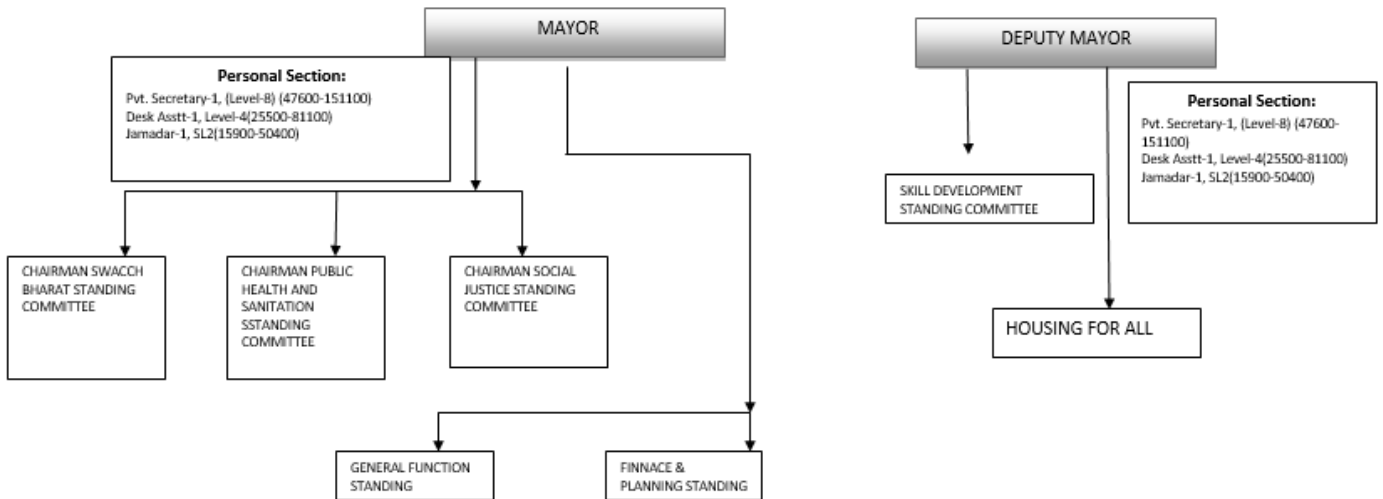
SCOPE OF WORK/UTILITY

1-Under Secretary Council shall assist the Secretary in all General House and Standing Committee functions. The minutes writers shall note all the proceedings/decisions of the General House and Standing Committee.

OFFICE/STANDING COMMITTEE OF JAMMU MUNICIPAL CORPORATION.

Chairman of 3 standing committee viz. Swachh Bharat Standing Committee, Health & Sanitation Standing Committee and Social Justice Standing Committee shall have

Desk Asstt-1, Level-4(25500-81100) X3 = Total 3

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