TERMS OF REFERENCE

SUPPLY, DELIVERY, INSTALLATION, TESTING, AND COMMISSIONING OF THE QUEZON CITY DEPARTMENT OF ENGINEERING ROAD AND DRAINAGE FIX: INFRA ASSET MANAGEMENT SYSTEM (QC ROADFIX)

I.   Rationale and Brief Background

The QC Department of Engineering Road and Drainage Fix: Infra Asset Management System (QC ROADFIX) is designed to address the need for an efficient and centralized platform to manage road and drainage maintenance projects in Quezon City. The current manual processes and lack of a comprehensive system make it challenging to effectively track project status, allocate resources, and ensure timely completion of maintenance projects. By implementing this system, the Quezon City Local Government, District Action Offices, citizens, and the City Engineer can benefit from streamlined project management, optimized resource utilization, improved decision-making, correctness of data, and enhanced communication between stakeholders. The system will also integrate with other existing Department systems, if necessary. With this system, the Quezon City local government unit can ensure transparency, accountability, and timely completion of maintenance projects, leading to improved public service delivery and enhanced citizen satisfaction.

II. Project Description

The QC Department of Engineering Road and Drainage Fix: Infra Asset Management System (QC ROADFIX) is a web-based application that offers a range of features to manage road and drainage maintenance projects in Quezon City. The system consists of the following key specifications:

- Dashboard View
- Creation of Job Requests
- View of Assets and Projects History
- Creation of Target Schedule
- Input of Actual Work Accomplishments
- Inventory Management
- Database Creation of Work-item vs. Materials-Needed Relationship

- Management of Inventory Categories
- User Group and Account Type Management
- System Users Management
- Report Generation
- Request and Feedback from Citizens
- Requests from District Action Offices

By implementing the Quezon City Department of Engineering Road and Drainage Fix: Infra Asset Management System (QC ROADFIX), stakeholders can benefit from efficient project management, optimized resource allocation, improved decision-making, correctness of data, and enhanced communication. The system serves as a centralized platform to streamline processes, track project progress, and facilitate collaboration among stakeholders involved in road and drainage maintenance projects in Quezon City.

III. Project Scope of Work

The service provider shall provide the City with a system with the following specifications:

i. The Quezon City Department of Engineering Road and Drainage Fix: Infra Asset Management System (QC ROADFIX) will be cloud-based, SSL-protected, and accessible using the most recent versions of Chrome, Firefox, and Safari.

ii. QC ROADFIX will be mobile responsive and compatible with the browsers of mobile smartphones and tablets.

iii. QC ROADFIX will be integrated to other existing systems of the Department if needed.

iv. QC ROADFIX will be integrated to other systems of the City such as but not limited to the QC-eservices system, using authenticated and authorized API communications.

v. The QC ROADFIX shall provide the following modules
- Dashboard View: The system provides a comprehensive dashboard with multiple views, allowing users to manage projects by status, statistics, project types, locations, number of available assets, and inventory item availability. Customizable attributes and notifications enable users to focus on relevant information.

- Creation of Job Requests: Users can create job requests by inputting project details such as name, asset selection, location, start date, and expected completion date. The system allows the selection of work-items from a pool based on the nature of work, and users can input approved quantities for each work-item. The system automatically computes the needed materials, equipment, and manpower based on the selected work-items, and compares the quantities of on-hand items with the project requirements. Supplemental items can be added when on-hand items are insufficient.

- View of Assets and Projects History: The system provides a feature to view the history of assets and projects, allowing users to track past projects and access relevant information.

- Creation of Target Schedule: Users can input quantities of work-items on a daily or weekly basis to create a target schedule. The system automatically computes the consolidated percentage of all work-items and plots a projected work schedule on a graph. For horizontal projects, the system generates a roadmap to visualize the scope and range.

- Input of Actual Work Accomplishments: Users can input the accomplished quantity of each work-item, and the system computes the consolidated percentage of all accomplished work-items. A graph displays the actual progress of the project, and a graph overlay compares the target schedule with the actual progress. For horizontal projects, a roadmap illustrates the target vs. actual accomplishment.

- Inventory Management: The system provides a view of all items with various filters, allowing users to manage inventory items efficiently. Users can access inventory history, track ingress of inventory items, and manage inventory quantities and statuses.

- Database Creation of Work-item vs. Materials-Needed Relationship: The system allows users to input per unit information for work-items and uses an algorithm to determine the needed materials, equipment, and manpower. This ensures accurate resource planning for each work-item.

- Management of Inventory Categories: Users can add, edit, and delete inventory categories such as materials, equipment, and manpower to organize and manage inventory items effectively.

- User Group and Account Type Management: The system provides functionality to add, edit, view, and delete user groups or account types. Each group can

have specific roles and permissions assigned to control system access and functionality.

- System Users Management: Administrators can add, edit, view, and delete system users. Users are associated with usernames, names, email addresses, account types, and affiliations (e.g., district engineer, admin).
- Report Generation: The system offers comprehensive report generation capabilities with various filters, allowing stakeholders to generate reports based on specific criteria and project attributes.
- Request and Feedback from Citizens: The system includes a feature for citizens to submit requests and provide feedback through the QC E-services platform, ensuring transparency and citizen engagement.
- Requests from District Action Offices: The system allows District Action Offices to submit requests related to road and drainage projects, facilitating communication and collaboration between different stakeholders.

vi. The system will implement industry standard measures to protect user data and prevent unauthorized access. A firewall will be implanted for secured cloud connection.

vii. The cloud-based hosting will operate for one (1) year and subject to renewal thereafter. A minimum of 8 GB memory, 2 virtual CPU, and 240 GB storage will be allocated for the online system and database. A separate cloud storage system will be maintained for database and system backups and for uploaded pictures and files. The cloud storage can be scaled up or down as needed by the system.

viii. The system will allow daily backups of the database.

ix. The system will conform with applicable data privacy laws.

x. The QC ROADFIX, including source code and data captured and generated by the system, will be owned and controlled by the City. If the service agreement expires or is terminated the data on cloud can be retrieved without additional cost to the City.

xi. The service provider will provide all necessary training for at least 1 day to at least 5 Engineering personnel comprising of encoders, project engineers, project managers, and administrators for the usage, administration, and management of the system.

IV. Area of Coverage

The Quezon City Department of Engineering Road and Drainage Fix: Infra Asset Management System (QC ROADFIX) will be for all road and drainage maintenance related activities of QC Engineering.

V. Project Standard & Requirements

A. Track Record
1. The Bidder must have Platinum status in PHILGEPS
2. The Bidder must be a duly registered corporation with SEC filing or DTI registration
3. The Bidder must be able to fully deliver all components of the project within 60 calendar days upon issuance of Notice to Proceed.
4. The Bidder must be duly registered under the National Privacy Commission
5. The Bidder must conform/abide with the DICT Philippine Government's Cloud First Policy

B. Organization
1. The Bidder must present an Organizational Chart indicating at least the following personnel for the project
   - One (1) Software Development Manager with at least 8 years of experience
   - Two (2) Project Managers with at least 5 years of experience
   - Eight (8) Software Developers with at least 1 year of experience each
2. The service provider must have its own regular employee pool of personnel for systems administration, deployment, proper quality assurance analysts and technical support staff for the project.
3. The service provider shall guarantee that the system shall abide with the DATA PRIVACY ACT OF 2012 to ensure that the personal information is protected

C. Training
The service provider will provide all necessary trainings within seven (7) days after project turn over to at least five (5) Engineering personnel comprising of encoders, project engineers, project managers, administrators and at least one (1) ITDD personnel for the administration and management of the system. Training would at least be four (4) hours per session. The scope of the training will include:

- Usage of the system
- Administration and management of the system
- Maintenance of the system

VI. Delivery Period

The delivery period must be within sixty (60) calendar days upon issuance of the Notice to Proceed observing the schedule of delivery as stated below:

MILESTONES	DELIVERY PERIOD
Project Implementation Plan	5 calendar days from the Notice to Proceed
Application Development	60 calendar days from the date of the Notice to Proceed
Training and Turnover	7 calendar days from Certificate of Acceptance
Project Support and Maintenance	1 year

VII. Approved Budget for the Contract (ABC)

The Approved Budget for the Contract is Twenty Million Pesos Only (Php20,000,000.00) VAT Inclusive.

Cost Derivation:

Hosting, Database, Storage, Security	
Data Architecture Design	
Software Development Cost	
• Dashboard View	
• Creation of Job Requests	
• View of Assets and Projects History	
• Creation of Target Schedule	
• Input of Actual Work Accomplishments	
• Inventory Management	

• Database Creation of Work-item vs. Materials-Needed Relationship	
• Management of Inventory Categories	
• User Group and Account Type Management	
• System Users Management	
• Report Generation	
• Request and Feedback from Citizens	
• Requests from District Action Offices	
Software Customization for 1 Year	
Documentation, Training, End User Support, Maintenance	
TOTAL	**20,000,000.00**

VIII. Basis of Payments

MILESTONES	ACCEPTANCE CRITERIA	PERCENTAGE BILLING
Project Turnover	Signoff from End User	100%
TOTAL		**100%**

IX. Conditions and Penalties for Breach of Contract

A. Delivery

The failure of The Service provider to perform any of the obligations or covenants provided in this Section shall constitute a breach and shall make it liable for damages, without prejudice to the right of the CITY to seek other remedies as may be allowed by law.

The Service provider must deliver all system components within 60 calendar days upon issuance of Notice to Proceed. Failure to do so will be subject to penalties as prescribed by law.

B. Product Warranty

The following are the terms of the product/system warranty guaranteed by The Service provider:

- Software Component shall have one (1) year warranty upon implementation.
- User manual and installer shall be provided for software components.
- All hardware requirements are existing and to be provided by the Quezon City Government.

X. Cancellation or Termination of Contract

The guidelines contained in RA 9184 and its revised IRR shall be followed in the termination of any service contract. In the event the City terminated the Contract due to default insolvency, or for cause, it may enter negotiated procurement pursuant to RA 9184 and its IRR.

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