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TERMS OF REFERENCE

PROJECT	: GEOGRAPHIC INFORMATION SYSTEM – REAL AND OTHER PROPERTIES ACQUIRED (GIS-ROPA)
PROPOSED ABC	: PhP 10,617,425.00
LOCATION OF PROJECT	: MAKATI CITY

June 2, 2021

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1.0 AGENCY BACKGROUND

PDIC is a government instrumentality created in 1963 by virtue of Republic Act 3591 to insure the deposits of all banks which are entitled to the benefits of insurance. The latest amendments to RA 3591 are contained in RA 10846 signed into law on May 23, 2016. RA 10846 empowered PDIC with stronger authorities to protect the depositing public and promote financial stability. The new law also includes important provisions to ensure that the PDIC remains financially and institutionally strong to fulfill its mandate under its Charter.

The PDIC now has the authority to help depositors to have quicker access to their insured deposits should their bank closes; resolve problem banks while still open; hasten the liquidation process for closed banks; and mete out stiffer sanctions and penalties against those who engage in unsafe and unsound banking practices.

The PDIC is an attached agency of the Department of Finance.

2.0 OVERVIEW OF CURRENT & RELATED SYSTEMS

The PDIC maintains computerized systems and tools in managing, monitoring and disposal of real and other properties of closed banks and those acquired by PDIC. Following are the related systems used to manage and record transactions related to ROPAs:

2.1 Real and Other Properties Acquired Monitoring System (ROPAMS)

The ROPA Manager Module is one of the three (3) modules bundled with the ROPAMS, the other two are the Leasing Manager Module and Sales Contract Receivables (SCR) Module. The ROPA Manager Module is used to monitor, maintain and dispose ROPAs which include, among others, real and other properties from the books of Closed Banks and PDIC. It maintains two (2) separate databases, one for Corporate Assets and another one for Closed Banks Assets. The system maintains the status of the ROPA such as "Available for Sale", "For Public Bidding", "Not Available for Sale", etc. Those tagged "For Public Bidding" and "For Negotiated Sale" are projected in the Asset for Sale Microsite.

The ROPAMS is synchronized (pushed/pulled) with the Assets for Sale (AFS) Microsite and the eBidding Portal before and after the conduct of electronic public bidding. All ROPAs already identified for disposal, be it with a set bidding schedule or not, are synchronized (pulled) from the ROPAMS databases (Corporate and Closed Bank) for posting to the AFS Microsite and eBidding Portal. Upon conclusion of electronic public bidding, the results of disposal are synchronized (pushed) back to their respective databases in the ROPAMS.

The current ROPAMS is running under a client/server platform, which is deployed in a Windows Server 2008 R2 Operating System. The front-end is Java while the back-end, Microsoft SQL Server 2005. The application is

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hosted on Tomcat version 5.5 which is accessible via Internet Explorer 8.0 or higher with the required Java Runtime Environment.

2.2 Assets For Sale (AFS) Microsite

The AFS Microsite is a marketing site for all ROPAs identified for sale. Prospective buyers not necessarily those registered in the eBidding Portal can search target properties through the Property Finder. In the Property Finder, properties can be searched and/or filtered by status (Awaiting Public Bidding, For Public Bidding, For Negotiated Sale), area, MDP, classification, and location (region, province, municipality/city). Other images of the properties for sale, including vicinity maps are also available in the site,

In the AFS Microsite, aside from the Property Finder several contents are posted to provide more bidding related information for prospective bidders' reference. It has a Download Corner where Full list of properties for negotiated sale and public bidding, negotiated sale forms and public bidding forms are available for downloading. Also in the AFS Microsite, is the Message Box, which allows for submission of inquiries on particular property and is automatically directed to the assigned Account Officer (AO) from AMDG or Public Assistance Department (PAD). The said contents are posted and maintained by AMDG using the AFS Content Management System (CMS) which is an add-on application.

The AFS Microsite is a web-based application that can be directly accessed via <https://assetsforsale.pdic.gov.ph> or by clicking the Assets For Sale button on the PDIC Website. It is deployed in a Windows Server 2016 Operating System. The front-end is MVC C#.Net while the back-end, Microsoft SQL Server 2019. The application is hosted on IIS version 10.0 which is accessible via web browsers (preferably Chrome). While the AFS CMS is also a web application, only PDIC users authenticated through the Active Directory can access it internally through the PDIC network.

2.3 eBidding Portal

The Portal synchronizes (pulls and pushes) ROPAs tagged "For Public Bidding" from the ROPAMS database for automatic posting. Among the information synchronized are the Property Classification, Minimum Disposal Price (MDP), area, geographical location (Region, Province and Municipality/City), disclosures and static images. These ROPA information are published for public consumption.

The Portal allows for the prospective buyers to submit their bids and documentary requirements for target properties. The system has two views, the public view and the internal view. The public view allows the bidders to see the status of the bids including the results of evaluation. The internal view allows the evaluator, the members and the Chairman of the RDC to enter their evaluation on the bids submitted. The system automatically sends notification to the bidders. Upon conclusion of the bidding activities, the results of the opening and evaluation of bids are synchronized (pushed back to the ROPAMS database) in that all sold properties are automatically tagged "Disposal In Progress", and those not sold, "For Negotiated Sale". Correspondingly, in the eBidding Portal, sold ROPAs are automatically

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removed from the inventory, and statuses of unsold properties are tagged "For Negotiated Sale".

Currently, the eBidding Portal is an add-on application to the AFS Microsite, which is invoked by clicking the eBidding icon on the PDIC Website. The eBidding Portal is also a web-based application that is deployed in a Windows Server 2016 Operating System. The front-end is Model-View-Controller (MVC) C#.Net while the back-end, Microsoft SQL Server 2019. The application is hosted on Internet Information Service (IIS) version 10.0 which is accessible via web browsers preferably Chrome. While the AFS CMS is also a web-based application, only PDIC users authenticated through the Active Directory can access it internally through the PDIC domain.

2.4 Electronic Filing, Archiving and Retrieval System (EFARS)

The current EFARS provides a single repository for content and metadata, which includes among others, primary documents turned over by AO to the Asset Administrative Services Department (AASD).

The documents can be located using the system's location tab that holds the physical location where the document is filed. The system's Access Control List (ACL) defines the permission sets that are assigned to user groups and folders.

The EFARS is a Documentum 6.5 application that provides a single repository for content and metadata. It uses the extensible object-oriented model to store content and metadata in the repository. Everything in the repository is stored as objects. The metadata for each object is stored in tables in the underlying RDBMS (MS SQL 2005).

2.5 SAM'S Plotter

It is a stand-alone tool used by the Property Appraisal Department (PrAD) in plotting and locating parcel of lots offsite, by encoding the coordinates of a given lot which are manually extracted from the Technical Description indicated in the title and/or approved survey plan from the Land Registration Authority (LRA)/Land Management Bureau of the Department of Environment and Natural Resources (DENR)/Department of Agrarian Reform (DAR). The plotting is facilitated using reference points/tie point that are built-in the software. The tie-point coordinates were obtained from the Land Management Bureau (LMB) compliant with Philippine Reference System (PRS) 92 which the tool automatically converts to World Geodetic System (WGS) 84 and project it to Google Maps. Other property details or attributes are not displayed since the tool is only designed for plotting the shape and geographic coordinates of all corners of the property, which can be printed and used as reference during the conduct of field appraisal and inspection activities.

Currently, SAM'S Plotter is a stand-alone application installed in a Windows 7 Operating System and subscribed on a yearly basis.

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3.0 OBJECTIVES

To procure and implement a client-server/web and mobile application that will manage the real-time visual presentation of ROPAs acquired by PDIC and those of Closed Banks and shall seamlessly integrate with the ROPAMS. The system shall be known as the Geographic Information System-Real and Other Properties Acquired or GIS-ROPA. It is aimed at:

- Setting up a GIS platform that will help PDIC management, prospective buyers and/or stakeholders get a better view of all ROPAs managed by PDIC and facilitate the decision-making process with the help of real-time geospatial data;
- Improving the efficiency in the visual presentation for disposal of ROPAs through public bidding and/or negotiated sale; and
- Improving the efficiency in the real-time capture of field/inspection data via field mobility

4.0 PROJECT SCOPE AND DELIVERABLES

This section defines the scope of work and deliverables of the proposed GIS-ROPA, which include, but not limited to, the following:

Software. It is the base system to be procured and subjected to customization by the provider in accordance with the business and functional requirements of PDIC as specified under Section 5: Business Requirements and Functional Requirements, pp. 11-18. Licensing shall cover different roles/functions as described in the table below.

Implementation Services. The services shall encompass a series of implementation activities which include, among others, submission of approved project plans, review of current requirements, gap analysis, customization of the base system and documentation of the user tested and accepted final version of the system.

Migration. Migration is the uploading of readable digitized land titles/shapefiles to the system. The PDIC Project Working Team shall ensure the availability of the shape files of properties as identified for uploading.

Training. There will be two types of training, one for the users and another for the technical support. The users training aims to have the participants gain knowledge on how the system works, i.e., configuration of dashboards and widgets, as well as the creation and maintenance of dashboards and shapefiles in particular. It shall be conducted in two stages. The first one has the application testers as target and the other one for all the users of the system. On the other hand, the Technical Support (System Administration and Server Configuration) Trainings are aimed at familiarizing the deployment of the system, as well as the maintenance of user access rights and roles, among others.

Others. All other project activities, like Project Status update meetings, monthly status reporting, and Go-Live strategies are to be conducted for more effective coordination between the Provider's Team and the PDIC Team and to be documented and reported. The output documents shall form part of the official references of the project.



	ACTIVITIES	DELIVERABLES
Software	Deployment of application	<ul style="list-style-type: none"> • Details of software/modules • Certificate of Licenses based on the following number of users to cover: <ul style="list-style-type: none"> ○ GIS ROPA Production Server – 1 license ○ GIS ROPA Development Server – 1 license ○ GIS ROPA Clients <ul style="list-style-type: none"> ▪ 15 licenses for AMDG ▪ 2 licenses for System Admin and DB Admin ○ Mobile Application <ul style="list-style-type: none"> ▪ 12 licenses for PrAD
Implementation Services	Project Planning	<ul style="list-style-type: none"> • Approved Project Management Plan/Charter • Approved Risk Management Plan • Approved Acceptance Plan
	Review of current business and user requirements	<ul style="list-style-type: none"> • Approved Blueprint of current processes and user requirements
	Gap Analysis	<ul style="list-style-type: none"> • Approved Initial Blueprint of proposed processes
	Customization of GIS	<ul style="list-style-type: none"> • Approved Final Blueprint of as-built processes • Data Privacy Impact Analysis Report
	Testing	<ul style="list-style-type: none"> • Approved Test Plan • UAT Document (test cases/scripts) • Approved Issue Management Plan • Test Results/Error Logs
	Acceptance	<ul style="list-style-type: none"> • Approved Blueprint of As-Built process • Certificate of entitlement of 1-year Maintenance • Final Installation/setup program (including drivers, plug-ins, etc.) • System Architecture • E/R Diagram • List of Modules • List of Tables • Table-Module Matrix • Table Abstracts • Physical Data Model • High Level Design (HLD) • Other Technical Specifications • Signed User Acceptance Document
Migration	Design Migration Strategy	<ul style="list-style-type: none"> • Approved Migration Strategy including timeline

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	Execute Migration Strategy/Plan	<ul style="list-style-type: none"> • Approved Migration logs and issues • Completed data build-up and/or migration of pre-identified digitized land titles and related data
Training	Conduct of Training <ul style="list-style-type: none"> • User's Training • System Administration • Server Configuration 	<ul style="list-style-type: none"> • Approved Training Plan • Training Materials/Certificates • Approved User and System Administrator manuals • Approved Server Configuration Manual
Others	Report on project status on a monthly basis	<ul style="list-style-type: none"> • Monthly Status Update Report
	Review monthly project status	<ul style="list-style-type: none"> • Minutes of Meetings
	Go Live	

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5.0 BUSINESS AND FUNCTIONAL REQUIREMENTS

BUSINESS REQUIREMENTS (BRs)	FUNCTIONAL REQUIREMENTS (FRs)
BR #1: Standard Features	
	<p>FR #1: Data Management</p> <ul style="list-style-type: none"> • Shall have the facility to create and maintain record of spatial data, which includes, but not limited to, a unique identifier, plotted parcels, lot images and other corresponding attributes • Shall have the facility to automatically collect data from external sources which include, but not limited to, the following: <ul style="list-style-type: none"> ○ Database ○ Structured Excel File • Shall have the facility to manually upload structured demographic and other related datasets from a pre-defined location • Shall have the facility to automatically tag/untag, color code spatial data based on pre-defined attributes • Shall make available the following layers and have the facility to reconfigure/maintain other readily available layers: <ul style="list-style-type: none"> ○ Philippine Map (mandatory) ○ Road Maps (mandatory) ○ Hazard Maps (mandatory) ○ Topographic/Terrain Maps, if any ○ Political Boundary Maps, if any ○ Tax Maps, if any ○ Demographics, if any <p>With the option to upload additional layers from a pre-defined location</p> • Shall have the facility to zoom, in the current Philippine base map, the target location, enabling <ul style="list-style-type: none"> ○ Satellite views up to street level of its vicinity, or ○ Road Map view <p>With the option to pin/unpin searched property, as well as save search history</p> • Shall have the facility to search location based on: <ul style="list-style-type: none"> ○ Target Location ○ Pinned location ○ Search History <p>With the option to record/delete history of searched/pinned location</p>

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- Shall have the functionality to search target properties that are within a user-defined distance/radius from a chosen location, with the options to add additional filters and display results in a dashboard/window
- Shall have the facility to select/view the target layer(s), i.e., hazard, road network, etc., with the option to generate reports on the following:
 - Inventory of layers
 - Inventory of dashboards/templates
 - No. of properties in critical zones (flooded area, tsunami areas, volcanic areas, fault zones, etc.)
- Shall have the facility to search/filter target property and related images based on the following attributes which include, but not limited to, the following:
 - Property No.
 - Bundle No.
 - Title/TD No.
 - Description
 - Category
 - Classification
 - Location (Region, Province, Municipality/City)
 - Area (Lot Area & Floor Area)
 - Minimum Disposal Price (MDP)
 - Disclosures (primary/common disclosures)
 - Status (For Public Bidding, For Negotiated Sale, Awaiting Bidding Schedule)
 - Public Bidding Date (For Public Bidding)
 - Appraisal Validity Date (For Negotiated Sale)
 - Other Remarks

With the option to display results

- Shall work using the World Geodetic System 84 geographic coordinate system

FR #2: Data Analysis

- Shall have the functionality to integrate sourced, collected and/or uploaded datasets and transform the same into actionable information in the form of dashboard and/or graphs, with the option to preview/print/download
- Shall have the facility to maintain/configure built-in dashboard templates (strategic, tactical, operational and informational), with the option to insert selected widgets
- Shall have the facility to create/maintain dashboard and grant access to appropriate users

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	<ul style="list-style-type: none"> • Shall have the facility to manually tag/untag sharable spatial data, among others, with the functionality to attach pertinent links • Shall have the facility to disseminate sharable data to systems users, both internal and external, with appropriate permission
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BR #2: Specific Features

	<p>FR #3: Data Management</p> <ul style="list-style-type: none"> • Shall provide a minimum of five (5) dashboards and templates, which will display at least five (5) widgets of the data items, including but not limited to, the following: <ul style="list-style-type: none"> ○ Property Category ○ Property Classification ○ Location of Properties (Region, Province, Municipality/City) ○ Size of Properties (Lot Area & Floor Area) ○ Minimum Disposal Price (MDP) ○ Disclosures (primary/common disclosures) ○ Properties with Occupants ○ Status (For Public Bidding, For Negotiated Sale, Awaiting Bidding Schedule, Sold) ○ Public Bidding Date (For Public Bidding) ○ Timing of Offer submission (For Negotiated Sale) ○ Market Data ○ Appraisal Data ○ Inspection Data ○ Sales Data <p>With mathematical considerations (count, sum, etc.)</p> • Shall have the facility to export dashboard to PDF, Excel, Word format • Shall have the facility to stage or temporarily hold field data prior to posting for public view • Shall have the facility to download location information of all properties as maybe required for compliance with statutory requirements • Shall have the facility to display the parcels or lots under a bank name (if Corporate – PDIC Owned) used as search/filter criteria
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BR #3: Dashboards

	<p>FR #4: Strategic Dashboard</p> <ul style="list-style-type: none"> • Shall have the functionality to track key performance indicators (KPIs) and make strategic decisions by evaluating performance
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based on their organization's goals which include but not limited to, the following:

- o No. of properties appraised
- o No. of properties offered
- o No. of properties sold
- o Percentage of sold properties against unsold properties
- o Portfolio performance
- o Sales Performance

FR #5: Tactical Dashboard

- Shall have the functionality to help analysts and line-of-business managers analyze historical data and visualize trends to gain deeper understanding which include but not limited to, the following:
 - o Period to period market value trend
 - o Period to period sales per classification
 - o Period to period sales turn out rate

FR #6: Operational Dashboard

- Shall have the facility to monitor status of (?) operational data in real time which include but not limited to, the following:
 - o Status of properties (For Public Bidding, For Negotiated Sale, Awaiting Bidding Schedule, Sold)
 - o Status of Appraisal activities (On-going appraisals, expiring appraisals)
 - o Public Bidding Date (For Public Bidding)

FR #7: Informational Dashboard

- Shall have the facility to inform and engage stakeholders which include but not limited to, the following:
 - o Property details
 - o Scheduled Biddings

with the option to display the corresponding document (Copy of Title, TD and other primary documents) stored inside EFARS by clicking the associated hyperlinks to its physical location inside the EFARS database

- Shall have the facility to maintain links to the following:
 - o Link to the physical locations of individual softcopies of primary documents stored inside EFARS
 - o Assets for Sale (AFS) Microsite

to be invoked from within the dashboard

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BR #4: PrAD Field Mobility**FR #8: Field Mobility**

- Shall have the facility to quickly get information In and out of the field on real-time using mobile devices, which include, but not limited to, the following:
 - Field data (in)
 - Back-office data (out)

With the option to transmit to staging sever on real-time or offline

- Shall have the facility to view all field data uploaded to the pre-defined location of Staging Server, with the option to submit Individual field record one at a time (by default) or by batch to the Staging Server
- Shall have the facility upon cleansing or sanitation to push to appropriate ROPAMS database (Closed Bank and Corporate)

FR #9: Inspection Dashboard

- Shall have the facility to create and maintain Inspection Dashboard which includes elements that are mapped from predefined inspection data, appraisal data, market data, among others, with the option to publish by authorized creators/editors
- Shall have the facility to translate dashboard into its equivalent inspection Form and to push the elements in succession to the mobile device of the inspector to be manually filled-in based on predefined set of answers, except for images that shall be captured and pushed to the Staging Server from the field, with the additional functionality to ensure complete reply
- Shall have the functionality to automatically push to the Staging Server a complete record of inspection data, with the Title/TD No. as the primary key

BR #5: Migration of Existing Titles**FR #10: Uploading of Shapefile and Related Data**

- Shall have the facility to upload shapefiles and related data in batch (as default) from a pre-defined location, with the option to generate exception report for issues on the uploaded file.

BR #6: Secure application by implementing (1) access rules during user login and approval transactions, (2) an audit trail of all changes to the System, and (3) backup, recovery, archiving and reloading policies to manage the data.

FR #11: User Login

- Shall have the facility to create or update user login credentials (user name, password)
- User accounts during login shall be integrated with the Windows Active Directory being used by PDIC
- Shall have the facility to support activation of a separate password policy, which includes, but not limited to, the following:
 - Password history
 - Password aging
 - Password length and complexity
 - Forced changing of password
 - Account lockout due to failed logon attempts
 - Password encryption when stored in the database

FR #12: Maintain PDIC Users

- Shall have the facility to create new or update users, either through manual encoding or uploading of a pre-defined MS Excel HOF from a pre-defined location, which includes, among others, the following:
 - First Name
 - Middle Name
 - Family Name
 - Department/Group
 - Position
 - PDIC ID
- Shall have the facility to configure user idle time to trigger automatic logout

FR #13: User Roles and Rights

- Shall have the facility to create new or update user access rights and roles on GIS Application, Dashboards, Widgets and Field Inspection, either through manual encoding or uploading of a pre-defined MS Excel HOF from a pre-defined location, which users' roles and rights include the following:
 - Roles
 - Maker
 - Reviewer
 - Approver
 - Rights
 - Read
 - Write

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	<ul style="list-style-type: none"> ▪ Read-Write • Shall have the facility to restrict access to menus and data sources such as databases, tables and folders
	<p>FR #14: Provide an Audit Trail</p> <ul style="list-style-type: none"> • Shall include, but not limited to, the following: <ul style="list-style-type: none"> ○ File updating and maintenance ○ Errors and abnormal activities in the system ○ User and system administrator activities ○ User logon/logoff ○ User activities relative to the stored information which include updating, printing, downloading, deletion, annotation, and other changes ○ List of records/files removed from the active database for backup purposes • Shall have the facility to view, print and download audit trail report in PDF, MS Excel and CSV file formats • Shall have the facility to display current users of the system any time <p>See Annex B.1: Audit Trail Report</p>
	<p>FR #15: Housekeeping</p> <ul style="list-style-type: none"> • Shall have the facility to define or redefine archiving, reloading, backup and recovery policies • Shall have the facility to tag data fields as mandatory or optional, with an option to prevent uploading of HOFs or saving of records with null mandatory fields • Shall have the facility to indicate location of HOFs, schedule and frequency of uploading • Shall have the facility to indicate location or drop zone of generated reports and forms • Shall have the facility to set the value to "N/A" for all empty fields
BR #7: Uploading Interface Files	
	<p>FR #16: Import HOFs</p> <ul style="list-style-type: none"> • Shall have the facility to upload ROPA related data via pre-defined MS Excel HOFs, as specified. This is a contingency facility in case the interface encounters problem. • Shall have the facility to:

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	<ul style="list-style-type: none"> o auto-generate distinct reference number for each upload o preview or generate exception reports when <ul style="list-style-type: none"> ▪ duplicate records are detected ▪ incomplete field is detected ▪ erroneous date field format ▪ missing interdependent field ▪ upload is aborted o Use the same reference number to <ul style="list-style-type: none"> ▪ Preview or generate proof list ▪ Search through uploaded ROPA ▪ rollback the transaction/uploading <p>See Annex B.2: HOF Exception Report</p> <ul style="list-style-type: none"> • Shall have the facility to upload template of pre-defined MS Excel HOF <p>See Annex C: Table of Hand-Off Files (HOFs)</p>
<p>BR #8: Application Programming Interface (API)</p>	
	<p>FR #17 API For 360 Degree Streetview¹</p> <ul style="list-style-type: none"> • Shall have the facility to add 360 Degree Street view through an API, with the option to enable/disable the interface • Shall have the functionality to automatically display 360-degree street view upon clicking of the target property
<p>BR #9: Geographic Coordinates System</p>	
	<p>FR #18 WGS 84</p> <ul style="list-style-type: none"> • Shall have the functionality to automatically and correctly project the shapes based on the property's technical description to the Philippine Base Map • Shall have the functionality generate link to the Google Map, with the option to store and share the link to the public via dashboard view and emails, among others, with appropriate controls

NOTE: All functional requirements shall be clarified during implementation.

¹ Subscription Cost for the provider of the 360view, if any, is excluded in this project and shall be enrolled by PDIC, separately.

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6.0 NON-FUNCTIONAL REQUIREMENTS

6.1 Work Duration

All activities, outputs, and deliverables required in this TOR shall be delivered, completed and made operational within **six (6) months** from issuance of the Notice to Proceed (NTP).

Compliance with all other specifications, conditions and/or provisions stipulated in the agreed/approved Project Management Plan and related plans mentioned in the TOR shall be strictly required.

6.2 Migration of Digitized Land Titles/Data Build-up

The migration shall cover pre-identified land titles and related data, as well as master or reference data and other relevant electronic files maintained by PDIC which is necessary for the successful operation of the GIS-ROPA.

The Project Team shall agree on the set of land titles to be uploaded to the system. Files for uploading/migration to the GIS shall be provided by Land Registration Authority (LRA).²

6.3 Qualification Criteria

6.3.1 System

6.3.1.1 The GIS should interface directly and/ or be integrated with the ROPAMS that will be providing and requiring information to and from GIS and should allow cross company/multi-company transaction.

6.3.1.2 The GIS should be readily available as packaged applications, which can be configured and customized, if needed, to meet specific requirements of PDIC. The proposed solution should be presented during the post qualification stage and shall be evaluated using the non-discretionary "Pass" or "Fail" approach (see **Annex D**). It should be able to at least provide the following functionalities: a) Standard Data Management, b) Data Analysis, c) Field Mobility and d) Dashboards and Widgets

6.3.2 Vendor

6.3.2.1 If the vendor is not the author of the software, the vendor should be an accredited re-seller and the accreditation

² A separate engagement shall be entered into by PDIC with the LRA for the provision of the necessary data to plot the titled properties in the GIS.

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should cover the contract duration up to expiry of warranty as per contract.

6.3.2.2 The vendor must be able to demonstrate an operational system/setup. Application response time using the existing facility of PDIC shall not be longer than 10 seconds regardless of the number of concurrent users logged-in.

6.3.2.3 The vendor should have successfully implemented the GIS being proposed in at least one (1) private or government financial institution within the last five (5) years from the date of posting of the Invitation to Bid.

6.3.2.4 The members of the Project Team (PT) of the Vendor must have at least two (2) years of technical experience maintaining/ supporting/ implementing their proposed solution. The resume of the members of the PT should be submitted and will be included in the post-qualification of the Vendor.

6.4 General Requirements

6.4.1 All outputs can be viewed on screen, printed and saved to a file (PDF, Excel, or Text).

6.4.2 Availability of report writer for all other ad hoc reports.

6.4.3 All reports shall be date stamped, date and time of printing, and with three signatories i.e., maker, reviewer and approver, as applicable.

6.4.4 System shall be highly parameterized and whenever applicable, shall make use of reference tables for easy updating.

6.4.5 All modules shall have the search functionality.

6.5 Look and feel

Screen should be maximized in an 800x600/1366x768 resolution screen but has an auto-resize feature according to the screen resolution of the user.

6.6 Maintainability Requirements

The system will be designed as highly parameterized in terms of business rules. This means that business rules shall not be hard-coded but rather database driven for the system to be flexible and maintainable without recompiling the User Interface codes, as far as practicable.

6.7 Installation and Operations Requirements

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- 6.7.1 The GIS shall be packaged with all the required literature and installed by the vendor. It shall be turned-over to the PDIC IT Group for subsequent installations. The vendor shall train the PDIC system support staff to be able to install and support the GIS during actual system deployment.
- 6.7.2 Training sessions for the actual system users shall include the following:
 - 6.7.2.1 User's Training
 - 6.7.2.2 Technical Support Training
 - 6.7.2.2.1 System Administration
 - 6.7.2.2.2 Server Configuration
- 6.7.3 A warranty period of twelve (12) months shall commence upon issuance of the Certificate of Acceptance, which shall be consistent with the provisions under R.A. 9184.
- 6.7.4 The VENDOR should include the provision of technical support equivalent to 2 days per month for one (1) year. This will start upon acceptance of the system. The accumulated and unused technical support hours shall be convertible to training hours.
- 6.7.5 The Vendor shall provide/disclose its standard computations for the annual software maintenance and onsite/offsite technical support fees.

6.8 System Environment Requirements

The GIS shall be able to operate in the hardware and software environment specified in the table below, which the PDIC shall set-up.

	SOFTWARE	HARDWARE
Server	Windows Server OS 2016 MS SQL SERVER 2019 Internet Information Services (IIS) 10.0	PDIC is running in a virtualized environment.
Client PC / Browser	Windows 10 Compatible with all browser (latest version) Latest Windows Active Directory 2012 or higher	Desktops/Notebooks – at least Intel Core i5 Minimum of 2 GB RAM 500 GB Hard Disk

6.9 Security Requirements

- 6.9.1 User Authentication – User authentication shall be done by Microsoft Active Directory (MAD) and only registered users with appropriate

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access rights can access the system. Shall also be capable of implementing multifactor authentication.

6.9.2 User Access Rights – Access rights are controlled within the system. Defined per user role created in the system, access rights may vary depending on the access level assigned for each role.

6.9.3 System Audit Trail – changes made by the user of the system are logged in the audit trail. This audit trail is able to track all committed changes on the data and transactions done by user in the system.

6.10 Report Type Requirements

All reports generated by the system shall come in the following file types: text file (.txt), portable document format (.pdf) and MS Excel (.xls).

7.0 ASSUMPTIONS/CONSTRAINTS

7.1 User Performance Support Requirements

Access to the system is limited only to workstations or computers within the PDIC Domain (Microsoft AD) and authorized mobile devices for field works, and shall work with the existing Internet access or bandwidth of the PDIC or the mobile data subscription of the authorized mobile devices.

7.2 Business Requirements

The herein defined requirements are stated for purposes of estimating the extent of work and the corresponding work only. As such, should there be a change in the business requirements during the contract period, the contractor shall undertake such change at no extra charge to PDIC.

7.3 Project

The vendor shall provide manpower and technical support to PDIC for the UAT and deployment of the system.

7.4 Such other assumptions or constraints as may later be determined or identified by PDIC.

8.0 MISCELLANEOUS REQUIREMENTS

8.1 The VENDOR warrants that it shall conform strictly with all the terms and conditions of this Terms of Reference.

8.2 The VENDOR shall not replace key personnel after the approval of the Gap Analysis, Current and Proposed Process. Key personnel shall be understood

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to refer to the following: The Project Manager, Business Analyst, Systems Analyst, Application Architect, and Team Lead Programmer.

- 8.3 The VENDOR undertakes that the manpower complement that it will assign to PDIC have the required technical skills and knowledge, and that they shall perform their assigned tasks with undivided attention and with utmost efficiency and effectiveness and in accordance with the best professional standards and ethical considerations. Further, the VENDOR undertakes that it shall exercise all reasonable skill, care and diligence in the discharge of its services, and shall always work to the best interests of PDIC. To this end, the VENDOR shall provide personnel with adequate qualifications and experience, and of such number as may be required for the efficient fulfillment of the required services.

Moreover, the VENDOR undertakes that it shall not employ, in any capacity whatsoever, PDIC personnel involved in the project. This prohibition shall be enforceable up to a period of two (2) years from the date of acceptance of the project by PDIC.

- 8.4 The VENDOR shall issue in favor of PDIC, a certification that it is an accredited reseller of the software to be supplied, and that said accreditation, shall sufficiently cover the period for development and the one-year warranty and one year maintenance subscription.
- 8.5 The VENDOR shall provide in favor of PDIC a one (1) year warranty which shall be reckoned from the date the system is accepted.
- 8.6 The VENDOR shall not assign, transfer, pledge any interest therein or subcontract any activity or deliverable required herein.
- 8.7 The VENDOR and its project staff shall be required to sign a confidentiality or non-disclosure agreement.
- 8.8 To facilitate the completion of the project within the prescribed period, PDIC may provide a project work area at the PDIC head office for the contractor throughout the duration of this contract. However, activities in PDIC shall be conducted only during work days, from 8:00 a.m. to 5:00 p.m., Monday to Friday, except legally declared holidays. Unless warranted by the circumstances and properly coordinated with, and authorized by PDIC, no overtime work shall be permitted within PDIC's premises.

Notwithstanding this, all the activities herein required shall be completed by the contractor within the allotted/prescribed period of **six (6) months**, reckoned from the date of the issuance of the NTP.

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9.0 TERMS OF PAYMENT

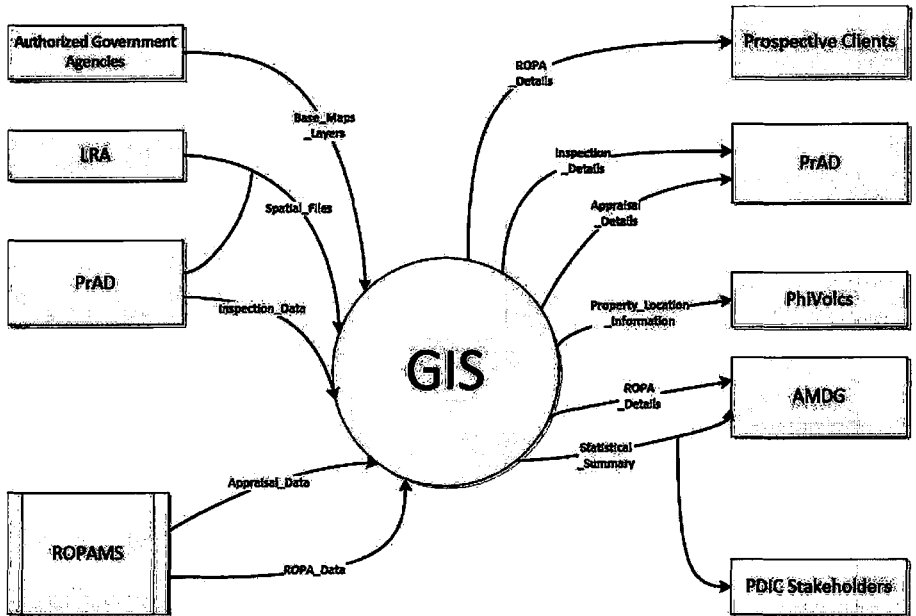
The payment schedule shall be based on the progress or completion of the milestones of the project that shall be set by PDIC and reflected in the Contract.

Milestones	Progress Billing (% of ABC)	Progress Billing and Documentary Requirements
1. Submission and approval of plans and completion of mobilization, delivery of software licenses	10%	<ul style="list-style-type: none"> Approved Project Management Plan/Charter Approved Risk Management Plan Approved Acceptance Plan Certificate of Licenses
2. Submission and approval of blue prints	10%	<ul style="list-style-type: none"> Approved Blueprints of current processes, Gap Analysis, and proposed processes Data Privacy Impact Analysis Report
3. Upon completion of UAT using dummy data	40%	<ul style="list-style-type: none"> Approved Test Plan UAT Document (test cases/scripts) Test Results/Error Logs Approved Issue Management Plan
4. Upon completion of data build-up and/or migration of pre-identified digitized land titles and related data	10%	<ul style="list-style-type: none"> Approved Migration Strategy Plan Approved Migration Logs and Issues Completed data build-up and/or migration of pre-identified digitized land titles and related data
5. Upon completion of training <ul style="list-style-type: none"> UAT User's Training Technical Support (System Administration and Server Configuration) 	10%	<ul style="list-style-type: none"> Approved Training Plan Training Materials/Certificates Approved User manual Approved Technical Support (System Administrator and Server Configuration) manuals
6. Final Acceptance	20%	<ul style="list-style-type: none"> Approved Blueprint of As-Built process Certificate of entitlement of 1-year Maintenance Monthly Status Update Reports Minutes of Meetings Final Installation/setup program (including drivers, plug-ins, etc.) System Architecture E/R Diagram List of Modules List of Tables Table-Module Matrix Table Abstracts Physical Data Model High Level Design (HLD) Other Technical Specifications Signed User Acceptance Document

Note: Issuance of Certificate of Acceptance by PDIC for all deliverables corresponding to each progress billing shall trigger the processing of payment.

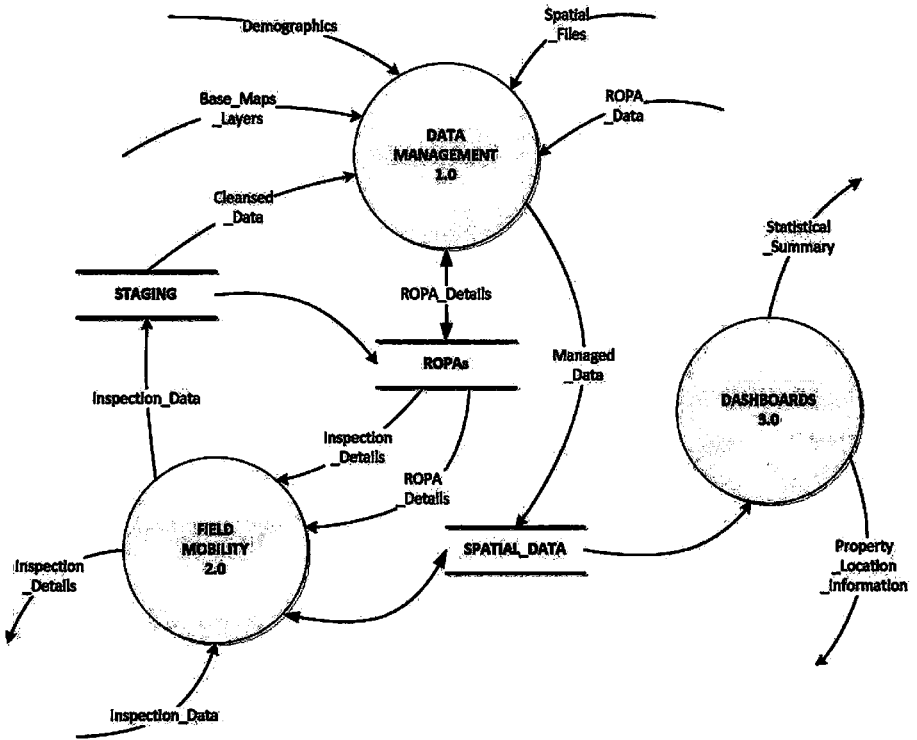
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ANNEX A1: CONTEXT DIAGRAM – DIAGRAM 0



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ANNEX A2: DATA FLOW DIAGRAM (DFD) – LEVEL 0



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ANNEX B: TABLE OF PROPOSED REPORTS AND INPUT FORMS

Annex	Title	TYPE	Description	Applicability
B.1	Audit Trail Report	REPORT	It shows the user's name and module, record and field he accessed and or modified, the date and time of access, among others.	AMDG
B.2	HOF Exceptions Report	REPORT	This ad hoc report lists all records that were not successfully uploaded to the system, showing the running totals and counts of numeric columns, if any, and remarks indicating which field failed the uploading business rule, e.g., Datasets (to and from the system),	AMDG
B.3	Inspection Form	FORM	This input form shall be filled in during the conduct of inspection of properties and submitted to the staging server on real time (or upon reconnection), whose structure shall be based on the elements of the pre-defined corresponding Inspection Dashboard.	PrAD

Note: Report templates and input forms fields to be determined at the time of implementation.

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ANNEX C: TABLE OF HAND-OFF FILES (HOFs)

Annex	Title	Purpose	Description	Applicability
C.1	Matrix of Users and Access Rights	Upload	Contains list of users and their corresponding roles or rights to modules, dashboards and widgets.	AMDG
C.2	ROPA Related Data	Upload	Contains list of ROPA related data with unique identifier (property account no.) to be uploaded to GIS example of related data contains list	AMDG

Note: Mandatory fields of each HOF to be determined at the time of implementation.

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ANNEX D: PASS/FAIL MATRIX

SUMMARY	PRESENT/ABSENT (P/A)
Data Management	
Shall have the facility to create and maintain record of spatial data, which includes, but not limited to, a unique identifier, plotted parcels, lot images and other corresponding attributes	
Shall have the facility to automatically collect data from external sources which include, but not limited to, the following: <ul style="list-style-type: none"> o Database o Structured Excel File 	
Shall have the facility to manually upload structured demographic and other related datasets from a pre-defined location	
Shall have the facility to automatically tag/untag, color code spatial data based on pre-defined attributes	
Shall make available the following layers and have the facility to reconfigure/maintain other readily available layers: <ul style="list-style-type: none"> o Philippine Map (mandatory) o Road Maps (mandatory) o Hazard Maps (mandatory) o Topographic/Terrain Maps, if any o Political Boundary Maps, if any o Tax Maps, if any o Demographics, if any <p>With the option to upload additional layers from a pre-defined location</p>	
Shall have the facility to zoom, in the current Philippine base map, the target location, enabling <ul style="list-style-type: none"> o Satellite views up to street level of its vicinity, or o Road Map view <p>With the option to pin/unpin searched property, as well as save search history</p>	
Shall have the facility to search location based on: <ul style="list-style-type: none"> o Target Location o Pinned location o Search History <p>With the option to record/delete history of searched/pinned location</p>	
Shall have the functionality to search target properties that are within a user-defined distance/radius from a chosen location, with the options to add additional filters and display results in a dashboard/window	

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<p>Shall have the facility to select/view the target layer(s), i.e., hazard, road network, etc., with the option to generate reports on the following:</p> <ul style="list-style-type: none"> o Inventory of layers o Inventory of dashboards/templates o No. of properties in critical zones (flooded area, tsunami areas, volcanic areas, fault zones, etc.) o 	
<p>Shall have the facility to search/filter target property and related images based on the following attributes which include, but not limited to, the following:</p> <ul style="list-style-type: none"> o Property No. o Bundle No. o Title/TD No. o Description o Category o Classification o Location (Region, Province, Municipality/City) o Area (Lot Area & Floor Area) o Minimum Disposal Price (MDP) o Disclosures (primary/common disclosures) o Status (For Public Bidding, For Negotiated Sale, Awaiting Bidding Schedule) o Public Bidding Date (For Public Bidding) o Appraisal Validity Date (For Negotiated Sale) o Other Remarks <p>With the option to display results</p>	
<p>Shall work using the World Geodetic System 84 geographic coordinate system</p>	
<p>Data Analysis</p>	
<p>Shall have the functionality to integrate sourced, collected and/or uploaded datasets and transform the same into actionable information in the form of dashboard and/or graphs, with the option to preview/print/download</p>	
<p>Shall have the facility to maintain/configure built-in dashboard templates (strategic, tactical, operational and informational), with the option to insert selected widgets</p>	
<p>Shall have the facility to create/maintain dashboard and grant access to appropriate users</p>	
<p>Shall have the facility to manually tag/untag sharable spatial data, among others, with the functionality to attach pertinent links</p>	
<p>Shall have the facility to disseminate sharable data to systems users, both internal and external, with appropriate permission</p>	
<p>Field Mobility</p>	
<p>Shall have the facility to quickly get information in and out of the field on real-time using mobile devices, which include, but not limited to, the following:</p> <ul style="list-style-type: none"> o Field data (in) o Back-office data (out) <p>With the option to transmit to staging server on real-time or offline</p>	

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Shall have the facility to view all field data uploaded to the pre-defined location of Staging Server, with the option to submit individual field record one at a time (by default) or by batch to the Staging Server	
Shall have the facility upon cleansing or sanitation to push to appropriate ROPAMS database (Closed Bank and Corporate)	
FINAL	

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ANNEX E: GLOSSARY OF TERMS

TERMS	DEFINITION
Dashboard	A dashboard is a tool used for information management and business intelligence. Much like the dashboard of a car, data dashboards organize, store, and display important information from multiple data sources into one, easy-to-access place. ³
Geographic Information System (GIS)	A geographic information system (GIS) is a framework for gathering, managing, and analyzing data. Rooted in the science of geography, GIS integrates many types of data. It analyzes spatial location and organizes layers of information into visualizations using maps and 3D scenes. With this unique capability, GIS reveals deeper insights into data, such as patterns, relationships, and situations—helping users make smarter decisions. ⁴
Hand Off File (HOF)	A HOF is an external pre-defined tabular file used by the GIS-ROPA as a tool to upload properties and related data. The preferred file format is MS Excel file.
LRA Shapefile	The shapefile from LRA that shall be consumed by the GIS platform.
Portfolio Performance	The portfolio performance evaluation involves the determination of how a managed portfolio has performed relative to some comparison benchmark ⁵
Sales Performance	Sales Performance is the effectiveness of the unit, AO or the whole group, in disposing properties; the ability to achieve sales goals ⁶
Shapefile	A shapefile is a simple, nontopological format for storing the geometric location and attribute information of geographic features. Geographic features in a shapefile can be represented by points, lines, or polygons (areas). The workspace containing shapefiles may also contain dBASE tables, which can store additional attributes that can be joined to a shapefile's features. ⁷
Staging Server	A separate server that will be used as drop zone for all spatial/non-spatial data captured during inspection, from which reviewed/approved field data shall be migrated to production server
Widget	A widget is a mini-report that can display your data in a

³ <https://www.idashboards.com/guides/what-is-a-dashboard>

⁴ <https://www.esri.com/en-us/what-is-gis/overview>

⁵ https://link.springer.com/referenceworkentry/10.1007%2F978-0-387-26336-6_60

⁶ <https://www.opensymmetry.com/blog/what-is-sales-performance-management-SPM>

⁷ <https://desktop.arcgis.com/en/arcmap/10.3/manage-data/shapefiles/what-is-a-shapefile.htm>

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	number of presentation styles, including simple numeric metrics, tables and charts. You can define widgets within the Dashboard itself. Widgets can also provide snapshots of and link to standard or custom reports. ⁸
World Geodetic System (WGS) 84	WGS 84 is an Earth-centered, Earth-fixed terrestrial reference system and geodetic datum. WGS 84 is based on a consistent set of constants and model parameters that describe the Earth's size, shape, and gravity and geomagnetic fields. WGS 84 is the standard U.S. Department of Defense definition of a global reference system for geospatial information and is the reference system for the Global Positioning System (GPS). It is compatible with the International Terrestrial Reference System (ITRS) ⁹ .

⁸ <https://support.google.com/analytics/answer/1068216?hl=en>

⁹ https://www.unoosa.org/pdf/cg/2012/template/WGS_84.pdf

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BIDS AND AWARDS COMMITTEE (BAC)

**PROCUREMENT OF A GEOGRAPHIC INFORMATION SYSTEM – REAL AND OTHER
PROPERTIES ACQUIRED (GIS-ROPA)**

SUPPLEMENTAL/BID BULLETIN NO. 1

In line with Section 22.5.2 of the Implementing Rules and Regulations of Republic Act No. 9184, the Bids and Awards Committee (BAC), after due deliberation, and in coordination with the Technical Working Group, hereby resolved to clarify that the following provisions of the Philippine Bidding Documents (PBDs) issued/posted for the Procurement of a Geographic Information System – Real and Other Properties Acquired (GIS-ROPA) (the “**Project**”) shall be modified, to wit:

From

“The vendor should have successfully implemented the GIS being **proposed in at least one (1) private or government financial institution within the last five (5) years from the date of posting of the Invitation to Bid.**” (Item 6.3.2.3 of the Terms of Reference under the Functional Requirements and Page 8 of the Philippine Bidding Documents)

To

“The vendor should have successfully implemented the GIS being proposed in **at least one (1) local institution within the last five (5) years from the date of posting of the Invitation to Bid.**” (Item 6.3.2.3 of the Terms of Reference under the Functional Requirements and Page 8 of the Philippine Bidding Documents)

All other requirements specified under the PBDs for the Project, which are not affected by the foregoing, shall remain valid, effective, and subsisting.

BIDS AND AWARDS COMMITTEE

10 November 2021

