



SUPPLEMENTAL BID BULLETIN NO. 21-003-2

3rd Bidding for the Supply, Delivery, Installation, Implementation, Commissioning and Maintenance of Complete and Fully Integrated Hospital Information Management System (10-year Contract)

Bid Reference IB No. 21-003

This Supplemental Bid Bulletin **No. 21-003-2** is being issued as reply to all the Prospective Proponents' queries and amendments to the provisions specified in the Terms of Reference of the above project, to wit:

A. Changes in Bidding Documents

Particulars	Changes
1. Instructions to Bidders (Clause 20. Post-Qualification)	1. Instructions to Bidders (Clause 20. Post-Qualification)
20.1. For multi-year Framework Agreement, all bidders initially determined to be eligible and financially compliant shall be subject to initial post-qualification. The BAC shall then recommend the execution of a Framework Agreement among all eligible, technically and financially compliant bidders and the Procuring Entity and shall be issued by HoPE a Notice to Execute Framework Agreement. The determination of the Lowest Calculated Bid (LCB) shall not be performed by the BAC until a Mini-Competition is conducted among the bidders who executed a Framework Agreement. When a Call for Mini-Competition is made, the BAC shall allow the bidders to submit their best financial proposals on such pre-scheduled date, time and place to determine the bidder with the LCB.	DELETED
Special Conditions of Contract (Clause 2.2) The term of the Agreement shall be for ten (10) years, commencing from the date of issuance of Certificate of Acceptance of a fully operational NHIMS.	Special Conditions of Contract (Clause 2.2) The terms of the Agreement shall be for ten (10) years, commencing from the date of issuance of Certificate of Inspection and Acceptance of a fully operational NHIMS.

<p>SCC Clause 2.2.1.c</p> <p>c. The equal quarterly Payment will commence three (3) months after the issuance of the Certificate of Acceptance of a fully operational NHIMS.</p>	<p>SCC Clause 2.2.1.c</p> <p>c. The equal quarterly Payment will commence three (3) months after the issuance of the Certificate of Inspection and Acceptance of a fully operational NHIMS.</p>
<p>TERMS OF REFERENCE</p> <p>1. Application Systems Management</p> <p>1.4.1 General Functional Requirements</p> <ul style="list-style-type: none"> • Must interface or meet system and hardware requirements of Laboratory, Radiology, Operating Room, HR, and other existing and future medical equipment. Cost of integration and data migration shall be borne by the Proponent. This would be including but not limited to the following systems: <ul style="list-style-type: none"> ○ Laboratory Information System ○ Picture Archiving Communication System ○ Radiology Information System ○ Blood Bank Information System ○ Hemodialysis software ○ Existing information system of the engineering department ○ Chart and medical record management system ○ Patient queuing system ○ Document Management System <p>1.6.1. Clinical Information Management System</p> <p>The clinical information management will serve as the electronic health record of the NKTJ and therefore has to be accessible and usable by the health professionals through a desktop, laptop, and mobile device (tablets, smartphones). All departments, divisions, sections, clinical units, and outpatient clinics that facilitate patient management will be interconnected in the systems through the clinical information System. The clinical information System will also be interconnected with all core systems of the Systems. It is important that systems will be made available to all wards, departments, units, and offices, using appropriate desktop devices and/or tablet computers. The clinical information management System will also serve as point of interoperability with other existing systems in the NKTJ, such as the</p>	<p>TERMS OF REFERENCE</p> <p>1. Application Systems Management</p> <p>1.4.1 General Functional Requirements</p> <ul style="list-style-type: none"> • Must interface or meet system and hardware requirements of Laboratory, Radiology, Operating Room, HR, and other existing and future medical equipment. Cost of integration and data migration shall be borne by the Proponent. This would be including but not limited to the following systems: <ul style="list-style-type: none"> ○ Laboratory Information System ○ Picture Archiving Communication System ○ Radiology Information System ○ Blood Bank Information System ○ Hemodialysis software (DELETED) ○ Existing information system of the engineering department (DELETED) ○ Chart and medical record management system (DELETED) ○ Patient queuing system (DELETED) ○ Document Management System (DELETED) <p>1.6.1. Clinical Information Management System</p> <p>The clinical information management system will serve as the electronic health record repository of the NKTJ and therefore has to be accessible and usable by the health professionals through a desktop, laptop, and mobile device (tablets, smartphones). All departments, divisions, sections, clinical units, and outpatient clinics that facilitate patient management will be interconnected in the systems through the clinical information System. The clinical information System will also be interconnected with all core systems of the NHIMS. It is important that systems will be made available to all wards, departments, units, and offices, using appropriate desktop devices and/or tablet computers. The Clinical Information Management Systems should be seamlessly</p>

laboratory information management system, radiology information system, picture archiving and communication system, PhilHealth Z Benefits Tracking System (Z-BITS), PhilHealth eClaims and Forms, among others. The electronic health record should be able to accommodate easy accessing of Philhealth ICD-10 diagnosis and RVS code by the health professionals during consultations and rounds at bedside.

For general specifications, all clinical information systems should be able to accommodate patient search and retrieval of information, input of notes, computerized patient order entry, patient monitoring, laboratory request and result viewing, diagnostic procedure request and result viewing, charging, medication prescription, messaging, alerts and reminders, co-management, inter-departmental referral, clinical decision support system, room information and transfer, patient tracking, notes and documentation, patient discharge notice, readers fee, professional fee and professional fee sharing, and entry of customized templates based on the departmental terms of reference prepared by the NKTl clinical units, offices, and departments. The clinical information system should support an efficient management of health data using barcode technology. Patient's barcodes should be scannable using the system's barcode reader. Medical devices and ancillary systems used for the patients should also be barcode-ready. The systems should have linkages with the Asset & inventory System. System should be capable to generate quick consultation note. This would enable the department to determine the status and other data related to the devices inquired. In addition to the general system requirements, the Systems should be able to cater to the specific functionalities of the following systems:

integrated and interconnected with all other offered systems (ERP Finance, ERP Administrative, Data Analytics) of the NHIMS using HL7 protocols. will also serve as point of interoperability with other existing systems at the NKTl, such as the laboratory information management system, radiology information system, picture archiving and communication system, PhilHealth Z Benefits Tracking System (Z-BITS), PhilHealth eClaims and Forms, among others. The electronic health record should contain the updated ~~be able to accommodate easy accessing of Philhealth ICD-10 diagnosis with RUV/RVS codes~~ by the health professionals during consultations and rounds at bedside.

For general specifications, all clinical information systems should be able to accommodate patient search and retrieval of information, input of notes, computerized patient order entry, patient monitoring, **patient safety reporting**, laboratory request and result viewing, diagnostic procedure request and result viewing, charging, medication prescription, messaging, alerts and reminders, co-management, inter-departmental referral, clinical decision support system, room information and transfer, patient tracking, notes and documentation, patient discharge notice, readers fee, professional fee and professional fee sharing, and entry of customized templates based on the departmental terms of reference prepared by the NKTl clinical units, offices, and departments. The clinical information system should support an efficient management of health data using **QR**/barcode technology. Patient's barcodes should be scannable using the system's barcode reader. Medical devices and ancillary systems used for the patients should also be **QR**/barcode-ready. The systems should have linkages with the Asset & inventory System. System should be capable to generate quick consultation note. This would enable the department to determine the status and other data related to the devices inquired. **All modules under Clinical Information Management Systems and Ancillary Information Management Systems must include, among others, all clinical and ancillary workflow processes unique to each area.**

1.6.1.2 Radiology Information System and Picture Archiving and Communication System (RIS/PACS)

The system should be able to provide a complete Radiology Information System and Picture Archiving and Communication System (RIS/PACS) (RIS/PACS) and integrate with the existing or future system of the radiology department, including the existing radiology information system and the picture archiving and communications system. Should the Radiology Department decide not to continue with the existing RIS/PACS, the Systems should be able to provide functionalities for the Radiology Information System, with the ability to control PACS viewing from inside the systems computer terminal. The system should have integrated radiology orders and Billing, doctor's prescription and radiology orders for radiology work list and reporting, radiology and imaging services work list generation, radiology reporting, PACS integration with radiology modality work list, online report publishing, radiology stock consumption analysis, adherence to regulatory compliance, third party device integration (Bar coding and the use of HL7 and DICOM standards), radiology-related master data control and management and remote referral system.

The Radiology Information System should have the following functionalities but not limited to:

1.6.1.4 Pathology information management system

Pathology management system would include an archiving system for surgical pathology specimens from which a registry can be created and analyzed. The Department of Pathology and Laboratory Medicine will be in charge of setting the specifications for the archiving system. All charging, messaging, alert and notification features apply in this department's system.

1.6.1.5 Hematology and transfusion medicine information management system

The transfusion medicine system should be able to perform functions of reporting blood transfusion reactions as well monitoring the progress of patients

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The Radiology Information System should have the following functionalities but not limited to:

1.6.1.3.1 Pathology information management system

Pathology management system would include an archiving system for surgical pathology specimen images from which a registry can be created and analyzed. The Department of Pathology and Laboratory Medicine will be in charge of setting the specifications for the archiving system. All charging, messaging, alert and notification features apply in this department's system.

1.6.1.3.2 Hematology and transfusion medicine information management system

The transfusion medicine system should be able to perform functions of reporting blood transfusion reactions as well monitoring the progress of patients

who would be transfused with blood and blood products. All charging, messaging, alert and notification features apply in this department's system.

1.6.1.22 Nuclear medicine information management system

The system should be able to assist the patients at the nuclear medicine section in terms an electronic registry for their patients, as well as data entry and information retrieval. The patient should be able to provide monthly report for audit reports, census, professional services, Readers fee, PF, PF sharing, and all others as seen in the department Terms of Reference submitted for nuclear medicine. All charging, messaging, alert and notification features apply in this department's system.

1.6.1.30 Industrial clinic information management system

The system should be able to monitor admission and consultations of employees of NKTl. The system should also be able to perform pre-employment and annual Physical exam. The system should also be connected with the human resources System, but still maintain the patient-physician confidentiality environment, allowing only the designated physician to see the patient's data, but the HR department being allowed to see the services rendered for the patient (for salary deduction). All charging, messaging, alert and notification features apply in this department's system.

who would be transfused with blood and blood products. All charging, messaging, alert and notification features apply in this department's system.

The current Blood Bank Information System (BBIS) must integrate with the offered system for the duration of the BBIS subscription until year 2022 after which BBIS database must be migrated to the bidder's Hematology and Transfusion Medicine Information Management System. Migration of database shall be borne by the provider. (Pls refer to Section 1.4.1 General Functional Requirements)

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The system should be able to monitor admission and consultations of employees of NKTl. The system should also be able to perform pre-employment and annual Physical exam. The system should also be connected with the human resources System, but still maintain the patient-physician confidentiality environment, allowing only the designated physician to see the patient's data, but the HR department being allowed to see the services rendered for the patient (for salary deduction). The System must conform to the reportorial requirements of OSH (occupational safety and health) of the Philippine Civil Service Commission.

All charging, messaging, alert and notification features apply in this department's system.

1.6.1.39.a Nursing Administrative Services

12. The System should be able to produce the following reports:
- a. Patient Listings per Station
 - b. Lists of Completed Chart Report (Discharged)
 - c. Lists of Incomplete Chart Reports (Discharged)
 - d. Summary of available and filled Plantilla and Non-plantilla positions with differentiation as to position.
 - e. Summary of leave filed and approved for each nursing staff
 - f. Lists of schedule of duties encoded and not encoded
 - g. Generation of rosters schedules
 - h. overtime reports

1.6.1.39.b IANAHP

The System should be able to support masterlist of Programs, academic faculty, trainees, and link nurses. The System should support online registration of the participants for short and long term courses. It must be capable of online scheduler, academic calendar and Library of courses. Academic calendar should be linked to other units and clinical areas. The system should be able to support all charging, messaging, alert and notification features apply in this department's system.

1.6.2.2 Statistics system

1.6.2.4 Nutrition and dietetics system

The Nutrition and Dietetics Division (NDD) Therapeutic/Clinical section facilitates receiving of diet orders of daily admitted patients, change of diets and room transfers for currently admitted patients, as well as charging of in- and out-patients (including Medical Assistance Program/MAP transactions). This system should be linked with all areas in the NKT I that has a ward, such as the general ward, ICU, OPD, ER, among others. All charges done by the Nutrition and Dietetics Division should be reflected in the Billing Section. Since the Nutrition and Dietetics system would require daily

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 - g. ~~Generation of rosters schedules~~
 - h. ~~overtime reports~~

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1.6.2.2 Hospital Performance Dashboard ~~Statistics System~~

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monitoring of patients' diets, it should have an alert and notification system that will call for action from the division. Meal cards generated from the system should also be supporting a barcode technology that allows monitoring of meal availment using barcodes. The Nutrition and Dietetics system should likewise be linked to the Laboratory System such that they can monitor the laboratory results of patients to be used in adjusting the diet accordingly, and for diet instruction purposes. This system should likewise be able to detect possible side effects and complications resulting from administration of particular food systems to certain patients through a clinical decision support system. The system should also be able to perform automatic calculation of tube feeding based on the formula being used by the division.

The Nutrition and Dietetics Division is also responsible for food production and inventory of materials needed to produce food for the hospital. The food production function should be able to facilitate preparation of PR, and approved requests for functions that will require the services of NDD. This would include creation of package of menus with quotation, viewing, and charge slip functionalities, both for cash (e.g. paid caterings) and non-cash (e.g. IANAHP, REDCOP, BAC) transactions. The request function should also be made available such that both internal and external requests for room availment with food services can be handled. This function should be integrated with the Housekeeping and Linen Section. As for the inventory, the NHIMS should be able to facilitate inventory of stock level of NDD food items (perishable and non-perishable), and have access and link with the MMID module. The NHIMS should provide monitoring and update functions for stock levels of food items, as well as create an inventory control system.

1.6.2.5 Pharmacy medication inventory, prescription and administration system

All NKTl Doctors should be able to perform patient charting, progress notes, medical prescription, lab/radiologic orders using voice to text software (dictation) including their real-time electronic signature capture while working on their Electronic Practice

would require daily monitoring of patients' diets, it should have an alert and notification system that will call for action from the division. Meal cards generated from the system should also be supporting a barcode technology that allows monitoring of meal availment using barcodes. The Nutrition and Dietetics system should likewise be linked to the Laboratory System such that they can monitor the laboratory results of patients to be used in adjusting the diet accordingly, and for diet instruction purposes. ~~This system should likewise be able to detect possible side effects and complications resulting from administration of particular food systems to certain patients through a clinical decision support system. The system should also be able to perform automatic calculation of tube feeding based on the formula being used by the division.~~

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1.6.2.5 Pharmacy medication inventory, prescription and administration system

- 33. Automated expiration prompt
- 34. Slow and non-moving drugs

~~All NKTl Doctors should be able to perform patient charting, progress notes, medical prescription,~~

Management (EPM) system on pen and touch-based tablet and/or mobile device and/or desktop with electronic signature pad.

1.6.2.6.a Computerized Physician Order Entry (CPOE)

This add-on module represents the ideal enhancement of pharmacological prescriptions. The Proponent must provide the following licensed Enterprise Grade Clinical Decision Support Programs such as: Wolters Kluwer's Up-to-date point of care reference, any drug reference database with drug to drug interaction like Medi-Span or Epocrates, it not only provides full information on drugs prescribed, but performs automated dosage suggestions based on the patients' conditions; as well as automatic evaluation of possible medication interactions. CPOE integrates the smart pharmacy provision processes enabling pharmacist to identify the doses prescribed by the doctors and prepare, assort, send or deliver accordingly, to the nursing area. This enables the pharmacist as well to define a selection of materials or supplies, such as swabs or syringe into kits (previously or by request), to be consumed and accounted for the application of specific doses.

1.7.1 Systems integration with existing information systems, including but not limited to:

- a. Radiology information system
- b. Picture Archiving and Communication System
- c. Laboratory equipment interface
- d. Customer queuing management system
- e. PhilHealth Z Benefits Information Tracking System (ZBITS) - for Billing
- f. Hemodialysis software

lab/radiologic orders using voice to text software (dictation) including their real-time electronic signature capture while working on their Electronic Practice Management (EPM) system on pen and touch-based tablet and/or mobile device and/or desktop with electronic signature pad.

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All NKTI Doctors should be able to perform patient charting, progress notes, medical prescription, lab/radiologic orders using voice to text software (dictation) including their real-time electronic signature capture while working on their Electronic Practice Management (EPM) system on pen and touch-based tablet and/or mobile device and/or desktop with electronic signature pad.

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1.7.1 Systems integration with existing information systems, including but not limited to:

- a. Radiology information system
- b. Picture Archiving and Communication System
- c. Blood Bank Information System until year 2023
- d. Hemodialysis Patients Treatment Software (provider dependent)

<p>1.7.2 Database migration</p> <p>As part of the change management methodology, it is expected that the winning entity will implement a database migration protocol in such matter as to maintain, if not improve upon, the data integrity and quality experienced at the previously installed application. Likewise, the database migration activity shall planned and carried out in such that it will not interfere with the usual 24x7 operations of the hospital. Cost of data migration shall be borne by the winning bidder.</p>	<p>e. DOH Medical Assistance to Indigent Patients (MAIP), Guarantee Letter running balance</p> <p>e. Laboratory equipment interface</p> <p>d. Customer queuing management system</p> <p>e. PhilHealth Z Benefits Information Tracking System (ZBITS) for Billing</p> <p>f. Hemodialysis software</p> <p>1.7.2 Database migration</p> <p>As part of the change management methodology, it is expected that the winning entity will implement a database migration protocol in such matter as to maintain, if not improve upon, the data integrity and quality experienced at the previously installed application. Data migration should include data cleaning among others. Likewise, the database migration activity shall planned and carried out in such that it will not interfere with the usual 24x7 operations of the hospital. Cost of data migration shall be borne by the winning bidder.</p>

This Supplemental Bid Bulletin including the revised Terms of Reference, Bid Data Sheets, Annexes and other Attachments as herein attached, shall form part of the Bidding Documents. As part of its Annexes, Annex O (Procurement Process under RA 9184) is also hereby attached. Any provisions in the Bid Documents inconsistent herewith is hereby amended, modified and superseded accordingly.

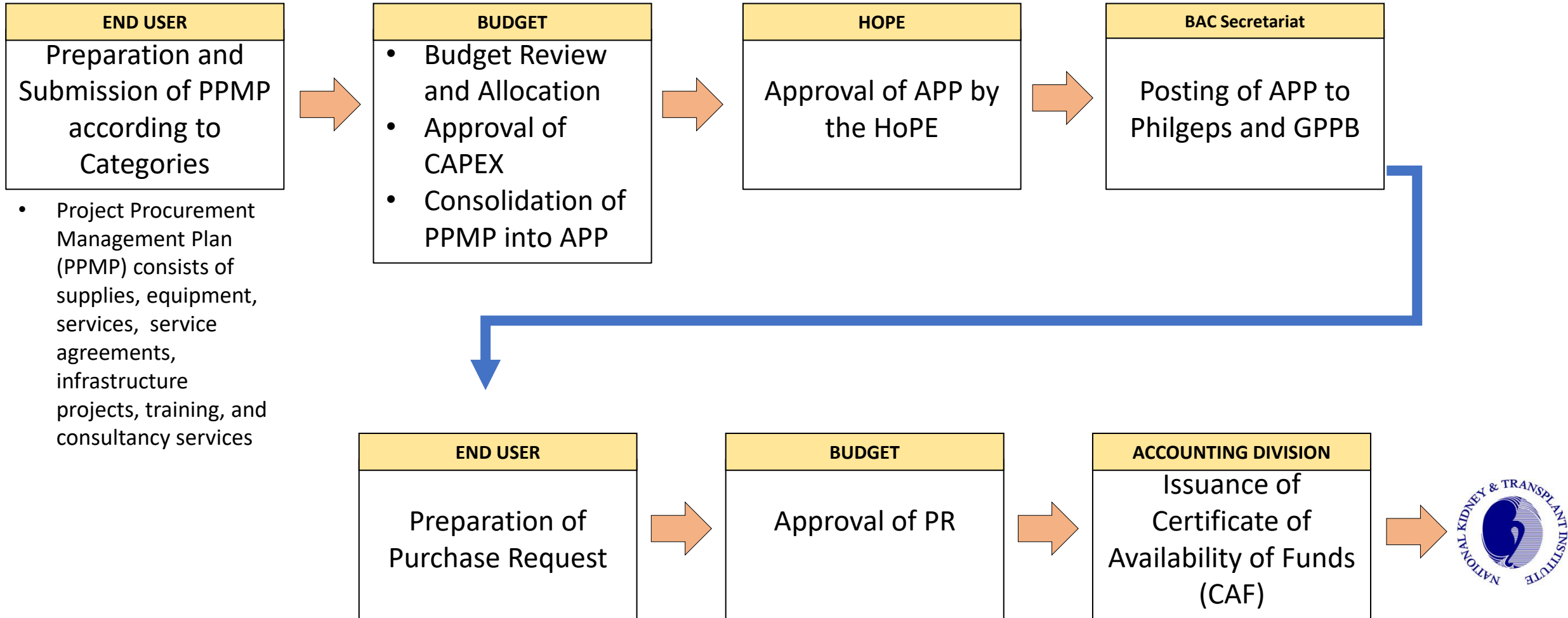
For guidance and information of all concerned.

Issued this 13th day of November in Quezon City.

(SGD) JOSEPH MICHAEL A. JARO, MD
SBAC Chairman

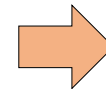
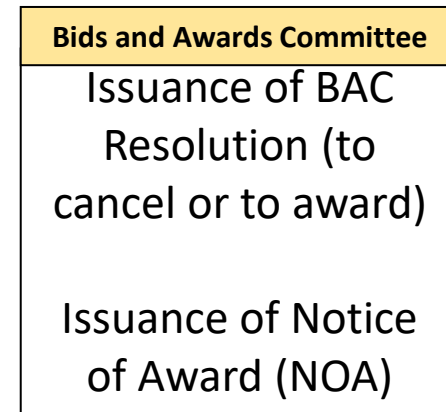
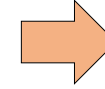
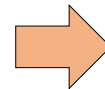
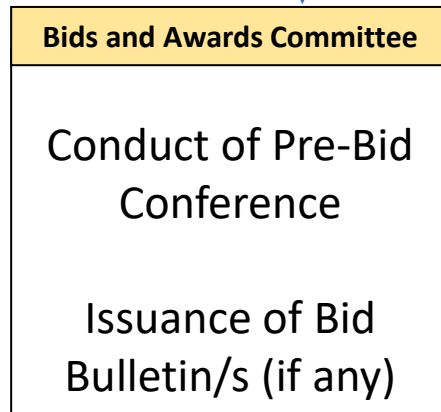
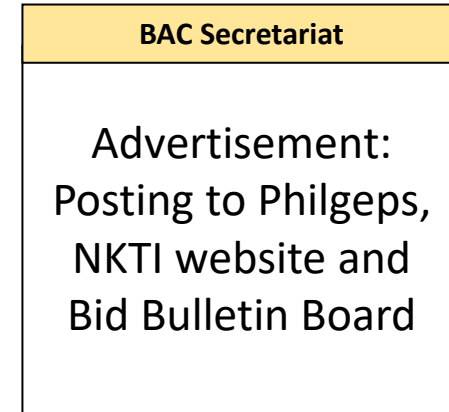
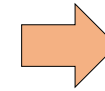
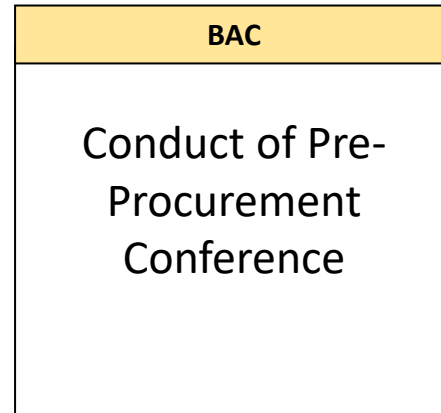
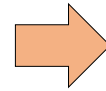
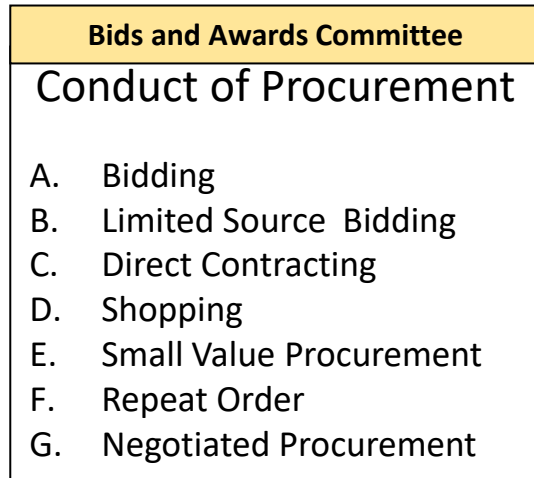
Procurement Process under RA9184

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