

PHILIPPINE BIDDING DOCUMENTS

Procurement of GOODS

**MEDICAL LINEAR ACCELERATOR
WITH 4D COMPUTED TOMOGRAPHY
SIMULATOR PACKAGE FOR
ADVANCED, MULTI-DISCIPLINARY
PROVISION OF RADIATION ONCOLOGY
SERVICES FOR SOUTHERN PHILIPPINES
MEDICAL CENTER**

Bid No: 2021-03-02-025 (ABC NO. 2020-045)

Government of the Republic of the Philippines

**Sixth Edition
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Table of Contents

Glossary of Acronyms, Terms, and Abbreviations	3
Section I. Invitation to Bid.....	6
Section II. Instructions to Bidders.....	9
1. Scope of Bid	10
2. Funding Information.....	10
3. Bidding Requirements	10
4. Corrupt, Fraudulent, Collusive, and Coercive Practices	10
5. Eligible Bidders.....	11
6. Origin of Goods	11
7. Subcontracts	12
8. Pre-Bid Conference	12
9. Clarification and Amendment of Bidding Documents	12
10. Documents comprising the Bid: Eligibility and Technical Components	12
11. Documents comprising the Bid: Financial Component	12
12. Bid Prices	13
13. Bid and Payment Currencies	13
14. Bid Security	14
15. Sealing and Marking of Bids	14
16. Deadline for Submission of Bids	14
17. Opening and Preliminary Examination of Bids	14
18. Domestic Preference	14
19. Detailed Evaluation and Comparison of Bids	15
20. Post-Qualification	15
21. Signing of the Contract	15
Section III. Bid Data Sheet	16
Section IV. General Conditions of Contract	18
1. Scope of Contract	19
2. Advance Payment and Terms of Payment	19
3. Performance Security	19
4. Inspection and Tests	19
5. Warranty	20
6. Liability of the Supplier	20
Section V. Special Conditions of Contract	21
Section VI. Schedule of Requirements	29
Section VII. Technical Specifications	31
Section VIII. Checklist of Technical and Financial Documents	72

Glossary of Acronyms, Terms, and Abbreviations

ABC – Approved Budget for the Contract.

BAC – Bids and Awards Committee.

Bid – A signed offer or proposal to undertake a contract submitted by a bidder in response to and in consonance with the requirements of the bidding documents. Also referred to as *Proposal* and *Tender*. (2016 revised IRR, Section 5[c])

Bidder – Refers to a contractor, manufacturer, supplier, distributor and/or consultant who submits a bid in response to the requirements of the Bidding Documents. (2016 revised IRR, Section 5[d])

Bidding Documents – The documents issued by the Procuring Entity as the bases for bids, furnishing all information necessary for a prospective bidder to prepare a bid for the Goods, Infrastructure Projects, and/or Consulting Services required by the Procuring Entity. (2016 revised IRR, Section 5[e])

BIR – Bureau of Internal Revenue.

BSP – Bangko Sentral ng Pilipinas.

Consulting Services – Refer to services for Infrastructure Projects and other types of projects or activities of the GOP requiring adequate external technical and professional expertise that are beyond the capability and/or capacity of the GOP to undertake such as, but not limited to: (i) advisory and review services; (ii) pre-investment or feasibility studies; (iii) design; (iv) construction supervision; (v) management and related services; and (vi) other technical services or special studies. (2016 revised IRR, Section 5[i])

CDA - Cooperative Development Authority.

Contract – Refers to the agreement entered into between the Procuring Entity and the Supplier or Manufacturer or Distributor or Service Provider for procurement of Goods and Services; Contractor for Procurement of Infrastructure Projects; or Consultant or Consulting Firm for Procurement of Consulting Services; as the case may be, as recorded in the Contract Form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.

CIF – Cost Insurance and Freight.

CIP – Carriage and Insurance Paid.

CPI – Consumer Price Index.

DDP – Refers to the quoted price of the Goods, which means “delivered duty paid.”

DTI – Department of Trade and Industry.

EXW – Ex works.

FCA – “Free Carrier” shipping point.

FOB – “Free on Board” shipping point.

Foreign-funded Procurement or Foreign-Assisted Project– Refers to procurement whose funding source is from a foreign government, foreign or international financing institution as specified in the Treaty or International or Executive Agreement. (2016 revised IRR, Section 5[b]).

Framework Agreement – Refers to a written agreement between a procuring entity and a supplier or service provider that identifies the terms and conditions, under which specific purchases, otherwise known as “Call-Offs,” are made for the duration of the agreement. It is in the nature of an option contract between the procuring entity and the bidder(s) granting the procuring entity the option to either place an order for any of the goods or services identified in the Framework Agreement List or not buy at all, within a minimum period of one (1) year to a maximum period of three (3) years. (GPPB Resolution No. 27-2019)

GFI – Government Financial Institution.

GOCC – Government-owned and/or –controlled corporation.

Goods – Refer to all items, supplies, materials and general support services, except Consulting Services and Infrastructure Projects, which may be needed in the transaction of public businesses or in the pursuit of any government undertaking, project or activity, whether in the nature of equipment, furniture, stationery, materials for construction, or personal property of any kind, including non-personal or contractual services such as the repair and maintenance of equipment and furniture, as well as trucking, hauling, janitorial, security, and related or analogous services, as well as procurement of materials and supplies provided by the Procuring Entity for such services. The term “related” or “analogous services” shall include, but is not limited to, lease or purchase of office space, media advertisements, health maintenance services, and other services essential to the operation of the Procuring Entity. (2016 revised IRR, Section 5[r])

GOP – Government of the Philippines.

GPPB – Government Procurement Policy Board.

INCOTERMS – International Commercial Terms.

Infrastructure Projects – Include the construction, improvement, rehabilitation, demolition, repair, restoration or maintenance of roads and bridges, railways, airports, seaports, communication facilities, civil works components of information technology projects, irrigation, flood control and drainage, water supply, sanitation, sewerage and solid waste management systems, shore protection, energy/power and electrification facilities, national

buildings, school buildings, hospital buildings, and other related construction projects of the government. Also referred to as *civil works or works*. (2016 revised IRR, Section 5[u])

LGUs – Local Government Units.

NFCC – Net Financial Contracting Capacity.

NGA – National Government Agency.

PhilGEPS - Philippine Government Electronic Procurement System.

Procurement Project – refers to a specific or identified procurement covering goods, infrastructure project or consulting services. A Procurement Project shall be described, detailed, and scheduled in the Project Procurement Management Plan prepared by the agency which shall be consolidated in the procuring entity's Annual Procurement Plan. (GPPB Circular No. 06-2019 dated 17 July 2019)

PSA – Philippine Statistics Authority.

SEC – Securities and Exchange Commission.

SLCC – Single Largest Completed Contract.

Supplier – refers to a citizen, or any corporate body or commercial company duly organized and registered under the laws where it is established, habitually established in business and engaged in the manufacture or sale of the merchandise or performance of the general services covered by his bid. (Item 3.8 of GPPB Resolution No. 13-2019, dated 23 May 2019). Supplier as used in these Bidding Documents may likewise refer to a distributor, manufacturer, contractor, or consultant.

UN – United Nations.

Section I.

Invitation to Bid



Republic of the Philippines
DEPARTMENT OF HEALTH
Regional Office No. XI
SOUTHERN PHILIPPINES MEDICAL CENTER
J.P. Laurel Avenue, Davao City



**INVITATION TO BID for MEDICAL LINEAR ACCELERATOR WITH
4D COMPUTED TOMOGRAPHY SIMULATOR PACKAGE FOR
ADVANCED, MULTI-DISCIPLINARY PROVISION OF
RADIATION ONCOLOGY SERVICES
FOR SOUTHERN PHILIPPINES MEDICAL CENTER**
IB NO. 2021-03-02-025

1. The *Southern Philippines Medical Center*, through the *NGA*, the *General Appropriations Act* or *Special Appropriations* intends to apply the sum **Three-Hundred Fifty Million Pesos (Php 350,000,000.00)** being the ABC to payments under the contract for the **Medical Linear Accelerator With 4D Computed Tomography Simulator Package for Advanced Multi-Disciplinary Provision of Radiation Oncology Services for Southern Philippines Medical Center**. Bids received in excess of the ABC shall be automatically rejected at bid opening.
2. The *Southern Philippines Medical Center* now invites bids for the above Procurement Project. Delivery of the Goods is required on or before *September 12, 2021* or not more than *120 Calendar Days* from receipt of the *Notice to Proceed*. Bidders should have completed, within *three (3) years* from the date of submission and receipt of bids, a contract similar to the Project. The description of an eligible bidder is contained in the Bidding Documents, particularly, in Section II (Instructions to Bidders).
3. Bidding will be conducted through open competitive bidding procedures using a non-discretionary “*pass/fail*” criterion as specified in the 2016 revised Implementing Rules and Regulations (IRR) of Republic Act (RA) No. 9184.

Bidding is open to all interested bidders, whether local or foreign, subject to the conditions for eligibility provided in the 2016 revised IRR of RA 9184.

4. Prospective Bidders may obtain further information from *Southern Philippines Medical Center* and inspect the Bidding Documents at the address given below during 8:00 A.M. to 5:00 P.M., Monday to Friday, except holidays.
5. A complete set of Bidding Documents may be acquired by interested Bidders on **March 20, 2021** from the given address, SPMC website (<http://spmcdoh.gov.ph>), PhilGEPS website (www.philgeps.gov.ph) and send through email upon payment of the applicable fee for the Bidding Documents, pursuant to the latest Guidelines issued by the GPPB, , in the amount of **Php 50,000.00**. The Procuring Entity shall allow the bidder to present its proof of payment for the fees if paid personally or through electronic means.

6. The *Southern Philippines Medical Center* will hold a Pre-Bid Conference on **March 29, 2021, 9:00 o'clock in the morning** through video conferencing or webcasting via Webex Platform (<https://www.webex.com>), which shall be open to prospective bidders.
7. Bids must be duly received by the BAC Secretariat through *online or electronic submission* on or before **April 12, 2021, 8:00 A.M. to 12:00 NN**. Late bids shall not be accepted.
8. All Bids must be accompanied by a bid security in any of the acceptable forms and in the amount stated in **ITB** Clause 14.
9. Bid opening shall be on **April 13, 2021, 9:00 o'clock in the morning** through video conferencing or webcasting via Webex Platform (<https://www.webex.com>). Bids will be opened in the presence of the bidders' representatives who choose to attend the activity.
10. The *Southern Philippines Medical Center* reserves the right to reject any and all bids, declare a failure of bidding, or not award the contract at any time prior to contract award in accordance with Sections 35.6 and 41 of the 2016 revised IRR of RA No. 9184, without thereby incurring any liability to the affected bidder or bidders.
11. For further information, please refer to:

ROMEO PANDAPATAN

Supervising Administrative Officer / Head BAC Secretariat

Southern Philippines Medical Center

Second Floor, Beside ICU and Medical Ward Building

SPMC Compound, Bajada, Davao City

Email Address: bac.spmc@gmail.com

Telephone No. (082) 287-7730/227-2731 loc. 5071

Fax No. (082) 221-7029 / 282-0316

Website: <http://spmcdoh.gov.ph>.

12. You may visit the following websites:

For downloading of Bidding Documents:

SPMC website (<http://spmcdoh.gov.ph>)

PhilGEPS website (www.philgeps.gov.ph)

For online bid submission, submit to SPMC Email Address: bac.spmc@gmail.com

Date of Issue: **March 20, 2021**


ATTY. DANILO A. CULLO
Chairman, Bids and Awards Committee

Section II.

Instructions to Bidders

1. Scope of Bid

The Procuring Entity, *Southern Philippines Medical Center* wishes to receive Bids for the ***Medical Linear Accelerator with 4D Computed Tomography Simulator Package for Advanced, Multi-Disciplinary Provision of Radiation Oncology Services for Southern Philippines Medical Center***, with identification number 2021-03-02-025 (ABC NO. 2020-045).

The Procurement Project (referred to herein as “Project”) is composed of ***Medical Linear Accelerator with 4D Computed Tomography Simulator Package for Advanced, Multi-Disciplinary Provision of Radiation Oncology Services for Southern Philippines Medical Center***, the details of which are described in Section VII (Technical Specifications).

2. Funding Information

2.1. The GOP through the source of funding as indicated below for *Special Funds (PAGCOR) NGAs / Funds for the Calendar Year 2020* in the amount of ***Three-Hundred Fifty Million Pesos (Php 350,000,000.00)***.

2.2. The source of funding is:

NGA, the General Appropriations Act or Special Appropriations

3. Bidding Requirements

The Bidding for the Project shall be governed by all the provisions of RA No. 9184 and its 2016 revised IRR, including its Generic Procurement Manuals and associated policies, rules and regulations as the primary source thereof, while the herein clauses shall serve as the secondary source thereof.

Any amendments made to the IRR and other GPPB issuances shall be applicable only to the ongoing posting, advertisement, or **IB** by the BAC through the issuance of a supplemental or bid bulletin.

The Bidder, by the act of submitting its Bid, shall be deemed to have verified and accepted the general requirements of this Project, including other factors that may affect the cost, duration and execution or implementation of the contract, project, or work and examine all instructions, forms, terms, and project requirements in the Bidding Documents.

4. Corrupt, Fraudulent, Collusive, and Coercive Practices

The Procuring Entity, as well as the Bidders and Suppliers, shall observe the highest standard of ethics during the procurement and execution of the contract. They or through an agent shall not engage in corrupt, fraudulent, collusive, coercive, and

obstructive practices defined under Annex “I” of the 2016 revised IRR of RA No. 9184 or other integrity violations in competing for the Project.

5. Eligible Bidders

- 5.1. Only Bids of Bidders found to be legally, technically, and financially capable will be evaluated.
- 5.2. Foreign ownership exceeding those allowed under the rules may participate pursuant to:
 - i. When a Treaty or International or Executive Agreement as provided in Section 4 of the RA No. 9184 and its 2016 revised IRR allow foreign bidders to participate;
 - ii. Citizens, corporations, or associations of a country, included in the list issued by the GPPB, the laws or regulations of which grant reciprocal rights or privileges to citizens, corporations, or associations of the Philippines;
 - iii. When the Goods sought to be procured are not available from local suppliers; or
 - iv. When there is a need to prevent situations that defeat competition or restrain trade.
- 5.3. Pursuant to Section 23.4.1.3 of the 2016 revised IRR of RA No.9184, the Bidder shall have an SLCC that is at least one (1) contract similar to the Project the value of which, adjusted to current prices using the PSA’s CPI, must be at least equivalent to:

For the procurement of Non-expendable Supplies and Services: The Bidder must have completed a single contract that is similar to this Project, equivalent to at least fifty percent (50%) of the ABC.
- 5.4. The Bidders shall comply with the eligibility criteria under Section 23.4.1 of the 2016 IRR of RA No. 9184.

6. Origin of Goods

There is no restriction on the origin of goods other than those prohibited by a decision of the UN Security Council taken under Chapter VII of the Charter of the UN, subject to Domestic Preference requirements under **ITB** Clause 18.

7. Subcontracts

- 7.1. The Bidder may subcontract portions of the Project to the extent allowed by the Procuring Entity as stated herein, but in no case more than twenty percent (20%) of the Project.

The Procuring Entity has prescribed that: **Subcontracting is not allowed.**

8. Pre-Bid Conference

The Procuring Entity will hold a pre-bid conference for this Project on the specified date and time through videoconferencing/webcasting as indicated in paragraph 6 of the **IB**.

9. Clarification and Amendment of Bidding Documents

Prospective bidders may request for clarification on and/or interpretation of any part of the Bidding Documents. Such requests must be in writing and received by the Procuring Entity, either at its given address or through electronic mail indicated in the **IB**, at least ten (10) calendar days before the deadline set for the submission and receipt of Bids.

10. Documents comprising the Bid: Eligibility and Technical Components

- 10.1. The first envelope shall contain the eligibility and technical documents of the Bid as specified in **Section VIII (Checklist of Technical and Financial Documents)**.
- 10.2. The Bidder's SLCC as indicated in **ITB** Clause 5.3 should have been completed within *three (3) years* prior to the deadline for the submission and receipt of bids.
- 10.3. If the eligibility requirements or statements, the bids, and all other documents for submission to the BAC are in foreign language other than English, it must be accompanied by a translation in English, which shall be authenticated by the appropriate Philippine foreign service establishment, post, or the equivalent office having jurisdiction over the foreign bidder's affairs in the Philippines. Similar to the required authentication above, for Contracting Parties to the Apostille Convention, only the translated documents shall be authenticated through an apostille pursuant to GPPB Resolution No. 13-2019 dated 23 May 2019. The English translation shall govern, for purposes of interpretation of the bid.

11. Documents comprising the Bid: Financial Component

- 11.1. The second bid envelope shall contain the financial documents for the Bid as specified in **Section VIII (Checklist of Technical and Financial Documents)**.

- 11.2. If the Bidder claims preference as a Domestic Bidder or Domestic Entity, a certification issued by DTI shall be provided by the Bidder in accordance with Section 43.1.3 of the 2016 revised IRR of RA No. 9184.
- 11.3. Any bid exceeding the ABC indicated in paragraph 1 of the **IB** shall not be accepted.
- 11.4. For Foreign-funded Procurement, a ceiling may be applied to bid prices provided the conditions are met under Section 31.2 of the 2016 revised IRR of RA No. 9184.

12. Bid Prices

- 12.1. Prices indicated on the Price Schedule shall be entered separately in the following manner:
 - a. For Goods offered from within the Procuring Entity's country:
 - i. The price of the Goods quoted EXW (ex-works, ex-factory, ex-warehouse, ex-showroom, or off-the-shelf, as applicable);
 - ii. The cost of all customs duties and sales and other taxes already paid or payable;
 - iii. The cost of transportation, insurance, and other costs incidental to delivery of the Goods to their final destination; and
 - iv. The price of other (incidental) services, if any, listed in e.
 - b. For Goods offered from abroad:
 - i. Unless otherwise stated in the **BDS**, the price of the Goods shall be quoted delivered duty paid (DDP) with the place of destination in the Philippines as specified in the **BDS**. In quoting the price, the Bidder shall be free to use transportation through carriers registered in any eligible country. Similarly, the Bidder may obtain insurance services from any eligible source country.
 - ii. The price of other (incidental) services, if any, as listed in **Section VII (Technical Specifications)**.

13. Bid and Payment Currencies

- 13.1. For Goods that the Bidder will supply from outside the Philippines, the bid prices may be quoted in the local currency or tradeable currency accepted by the BSP at the discretion of the Bidder. However, for purposes of bid evaluation, Bids denominated in foreign currencies, shall be converted to Philippine currency based on the exchange rate as published in the BSP reference rate bulletin on the day of the bid opening.
 - a. Payment of the contract price shall be made in: **Philippine Pesos**.

14. Bid Security

- 14.1. The Bidder shall submit a Bid Securing Declaration¹ or any form of Bid Security in the amount indicated in the **BDS**, which shall be not less than the percentage of the ABC in accordance with the schedule in the **BDS**.
- 14.2. The Bid and bid security shall be valid until *August 11, 2021 or One Hundred Twenty (120) calendar days from the date of the opening of bids*. Any Bid not accompanied by an acceptable bid security shall be rejected by the Procuring Entity as non-responsive.

15. Sealing and Marking of Bids

Each Bidder shall submit **one copy of the first and second components of its Bid**.

The Procuring Entity may request additional hard copies and/or electronic copies of the Bid. However, failure of the Bidders to comply with the said request shall not be a ground for disqualification.

If the Procuring Entity allows the submission of bids through online submission or any other electronic means, the Bidder shall submit an electronic copy of its Bid, which must be digitally signed. **An electronic copy that cannot be opened or is corrupted shall be considered non-responsive and, thus, automatically disqualified.**

16. Deadline for Submission of Bids

- 16.1. The Bidders shall submit on the specified date and time and either at its physical address or through online submission as indicated in paragraph 7 of the **IB**.

17. Opening and Preliminary Examination of Bids

- 17.1. The BAC shall open the Bids in public at the time, on the date, and at the place specified in paragraph 9 of the **IB**. The Bidders' representatives who are present shall sign a register evidencing their attendance. In case videoconferencing, webcasting or other similar technologies will be used, attendance of participants shall likewise be recorded by the BAC Secretariat.

In case the Bids cannot be opened as scheduled due to justifiable reasons, the rescheduling requirements under Section 29 of the 2016 revised IRR of RA No. 9184 shall prevail.

- 17.2. The preliminary examination of bids shall be governed by Section 30 of the 2016 revised IRR of RA No. 9184.

18. Domestic Preference

- 18.1. The Procuring Entity will grant a margin of preference for the purpose of comparison of Bids in accordance with Section 43.1.2 of the 2016 revised IRR of RA No. 9184.

19. Detailed Evaluation and Comparison of Bids

- 19.1. The Procuring BAC shall immediately conduct a detailed evaluation of all Bids rated “*passed*,” using non-discretionary pass/fail criteria. The BAC shall consider the conditions in the evaluation of Bids under Section 32.2 of the 2016 revised IRR of RA No. 9184.
- 19.2. If the Project allows partial bids, bidders may submit a proposal on any of the lots or items, and evaluation will be undertaken on a per lot or item basis, as the case maybe. In this case, the Bid Security as required by **ITB** Clause 15 shall be submitted for each lot or item separately.
- 19.3. The descriptions of the lots or items shall be indicated in **Section VII (Technical Specifications)**, although the ABCs of these lots or items are indicated in the **BDS** for purposes of the NFCC computation pursuant to Section 23.4.2.6 of the 2016 revised IRR of RA No. 9184. The NFCC must be sufficient for the total of the ABCs for all the lots or items participated in by the prospective Bidder.
- 19.4. The Project shall be awarded as One Project having several items that shall be awarded as one contract.
- 19.5. Except for bidders submitting a committed Line of Credit from a Universal or Commercial Bank in lieu of its NFCC computation, all Bids must include the NFCC computation pursuant to Section 23.4.1.4 of the 2016 revised IRR of RA No. 9184, which must be sufficient for the total of the ABCs for all the lots or items participated in by the prospective Bidder. For bidders submitting the committed Line of Credit, it must be at least equal to ten percent (10%) of the ABCs for all the lots or items participated in by the prospective Bidder.

20. Post-Qualification

- 20.1. Within a non-extendible period of five (5) calendar days from receipt by the Bidder of the notice from the BAC that it submitted the Lowest Calculated Bid, the Bidder shall submit its latest income and business tax returns filed and paid through the BIR Electronic Filing and Payment System (eFPS) and other appropriate licenses and permits required by law and stated in the **BDS**.

21. Signing of the Contract

- 21.1. The documents required in Section 37.2 of the 2016 revised IRR of RA No. 9184 shall form part of the Contract. Additional Contract documents are indicated in the **BDS**.

Section III.

Bid Data Sheet

Bid Data Sheet

ITB Clause	
5.3	<p>For this purpose, contracts similar to the Project shall be:</p> <ol style="list-style-type: none"> a. <i>Similar Contract shall refer to Supply, Delivery and Installation of Medical Linear Accelerator with Computed Tomography Simulator.</i> b. Completed within three (3) years prior to the deadline for the submission and receipt of bids.
7.1	Subcontracting is not allowed.
12	The price of the Goods shall be quoted DDP <i>Southern Philippines Medical Center, J, P, Laurel Avenue, Davao City</i> or the applicable International Commercial Terms (INCOTERMS) for this Project.
14.1	<p>The bid security shall be in the form of a Bid Securing Declaration, or any of the following forms and amounts:</p> <ol style="list-style-type: none"> a. The amount of not less than <u>7,000,000.00</u> if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit; or b. The amount of not less than <u>17,500,000.00</u> if bid security is in Surety Bond.
19.3	<p>Project: Medical Linear Accelerator with 4D Computed Tomography Simulator Package for Advanced for Multi-Disciplinary Provision of Radiation Oncology Services for Southern Philippines Medical Center</p> <p>Group title, items, and the quantity: One (1) Lot</p> <p>The ABC: Three-Hundred Fifty Million Pesos (Php 350,000,000.00)</p>
20.2	<i>License to Operate issued by the Food and Drug Administration.</i>
21.2	<i>Not applicable.</i>

Section IV.

General Conditions of Contract

1. Scope of Contract

This Contract shall include all such items, although not specifically mentioned, that can be reasonably inferred as being required for its completion as if such items were expressly mentioned herein. All the provisions of RA No. 9184 and its 2016 revised IRR, including the Generic Procurement Manual, and associated issuances, constitute the primary source for the terms and conditions of the Contract, and thus, applicable in contract implementation. Herein clauses shall serve as the secondary source for the terms and conditions of the Contract.

This is without prejudice to Sections 74.1 and 74.2 of the 2016 revised IRR of RA No. 9184 allowing the GPPB to amend the IRR, which shall be applied to all procurement activities, the advertisement, posting, or invitation of which were issued after the effectivity of the said amendment.

Additional requirements for the completion of this Contract shall be provided in the **Special Conditions of Contract (SCC)**.

2. Advance Payment and Terms of Payment

2.1. Advance payment of the contract amount is provided under Annex “D” of the revised 2016 IRR of RA No. 9184.

2.2. The Procuring Entity is allowed to determine the terms of payment on the partial or staggered delivery of the Goods procured, provided such partial payment shall correspond to the value of the goods delivered and accepted in accordance with prevailing accounting and auditing rules and regulations. The terms of payment are indicated in the **SCC**.

3. Performance Security

Within ten (10) calendar days from receipt of the Notice of Award by the Bidder from the Procuring Entity but in no case later than prior to the signing of the Contract by both parties, the successful Bidder shall furnish the performance security in any of the forms prescribed in Section 39 of the 2016 revised IRR of RA No. 9184.

4. Inspection and Tests

The Procuring Entity or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Project specifications at no extra cost to the Procuring Entity in accordance with the Generic Procurement Manual. In addition to tests in the **SCC, Section IV (Technical Specifications)** shall specify what inspections and/or tests the Procuring Entity requires, and where they are to be conducted. The Procuring Entity shall notify the Supplier in writing, in a timely manner, of the identity of any representatives retained for these purposes.

All reasonable facilities and assistance for the inspection and testing of Goods, including access to drawings and production data, shall be provided by the Supplier to the authorized inspectors at no charge to the Procuring Entity.

5. Warranty

- 5.1 In order to assure that manufacturing defects shall be corrected by the Supplier, a warranty shall be required from the Supplier as provided under Section 62.1 of the 2016 revised IRR of RA No. 9184.
- 5.2 The Procuring Entity shall promptly notify the Supplier in writing of any claims arising under this warranty. Upon receipt of such notice, the Supplier shall, repair or replace the defective Goods or parts thereof without cost to the Procuring Entity, pursuant to the Generic Procurement Manual.

6. Liability of the Supplier

The Supplier's liability under this Contract shall be as provided by the laws of the Republic of the Philippines.

If the Supplier is a joint venture, all partners to the joint venture shall be jointly and severally liable to the Procuring Entity.

Section V.

Special Conditions of Contract

Special Conditions of Contract

GCC Clause		
1	<p><i>List of additional technical requirements for the completion of this Contract:</i></p> <p><i>If not available during the opening and preliminary examination of bids, the bidder when declared as the Lowest Calculated Bid (LCB) shall submit the document within a <u>non-extendible period of Five (5) calendar days</u> from receipt of the notification.</i></p> <ol style="list-style-type: none"> 1.) Notarized Certificate of Exclusive or Authorized Distributorship in the Philippines issued by the Principal or Manufacturer of the equipment to be supplied. <i>If the certificate is issued from abroad, the signature of its notary public must be authenticated by the Philippine Consulate Office in that country (Apostille). In lieu of the original copy of the document, a photocopy certified as true copy by a practicing lawyer in the Philippines shall be submitted.</i> 2.) IEC Certificate of conformance or Test Report issued by the International its authorized independent bodies as follows: <ol style="list-style-type: none"> 2.1 IEC 60601-1 “Medical Electrical Equipment –Part I General Requirement for Basic Safety and Essential Performance (For LINAC and CT Scan) 2.2 IEC 60601-1-3 Medical Electrical Equipment – Part 1-3: General requirement for basic safety and essential performance – Collateral Standard: radiation protection in diagnostic x-ray equipment. 2.3 IEC 60601-2-44 Medical electrical equipment - Part 2-44: Particular requirements for the basic safety and essential performance of X-ray equipment for computed tomography 2.4 IEC 60601-2-1 Medical electrical equipment: Particular Requirements for the Basic Safety and Essential Performance of Electron Accelerators in the Range 1 MeV to 50 MeV 2.5 IEC 62083:2009 Medical Electrical Equipment: Requirements for the safety of radiotherapy treatment planning systems 3.) Certificate showing that the manufacturer of the equipment is a certified ISO9001-2015 Quality Management System and/or ISO13485-2016 Medical 	

	<p>Equipment Quality Management System or its latest version.</p> <p>4.) DICOM Conformance Statement for the equipment being offered</p> <p>5.) HL7 Conformance Statement for the CT Scan Simulator being offered</p> <p>6.) Notarized certificate of the availability of spare parts and accessories for the next ten (10) years.</p> <p>7.) Notarized Certificate that the brand of LINAC and CT Simulator being offered has been in the Philippine market for the last 10 years.</p> <p>8.) Training Certificate of the Technical Personnel / Service Engineer of the bidder or principal who were trained for the equipment being offered and will conduct the installations, preventive and corrective maintenance of the said equipment. The certification must be issued by the principal or manufacturer of the equipment being offered and it must contain name of person concerned, date when training was conducted and the description or title of training.</p> <p>9.) Notarized Certification that the authorized service engineer was based in Davao City or Mindanao together with the Service Record issued by the Company's Human Resource Department</p> <p>10.) Notarized Certificate that the bidder shall provide at least Three (3) YEARS COMPREHENSIVE WARRANTY <i>covering parts and service on the following equipment (hardware and software components), its subsystems, auxiliary equipment and accessories:</i></p> <p><i>a) Linear accelerator</i></p> <p><i>b) CT simulator</i></p> <p><i>c) Treatment planning system</i></p> <p><i>d) Oncology information management system</i></p> <p><i>e) Patient immobilization system</i></p> <p><i>f) Dosimetry and QA equipment</i></p> <p><i>g) Intercom system</i></p> <p><i>h) Other computers and software supplied but not in (a) to (f)</i></p> <p>11.) Commitment under oath (Notarized) Certification from the manufacturer or principal that any changes of their Philippine exclusive representative will not in any way affect the five (5) years warranty of the equipment.</p>	
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If the certificate is issued from abroad, the signature of its notary public must be authenticated by the Philippine Consulate Office in that country (Apostille). In lieu of the original copy of the document, a photocopy certified as true copy by a practicing lawyer in the Philippines shall be submitted.

- 12.) Valid Marketing Authorization. Registration Approval or Free Sale certificate of the product issued by the Health Authority in the country of origin.
- 13.) Certification that the equipment being offered must be brand new, unused, not a discontinued model, of the latest version or model, no record of violations such as electrical or mechanical malfunction since the time of its production, and was not listed in the product recall.

Delivery and Documents –

For purposes of the Contract, “EXW,” “FOB,” “FCA,” “CIF,” “CIP,” “DDP” and other trade terms used to describe the obligations of the parties shall have the meanings assigned to them by the current edition of INCOTERMS published by the International Chamber of Commerce, Paris. The Delivery terms of this Contract shall be as follows:

[For Goods supplied from abroad, state:] “The delivery terms applicable to the Contract are DDP delivered Southern Philippines Medical Center, J.P. Laurel Avenue, Davao City. In accordance with INCOTERMS.”

[For Goods supplied from within the Philippines, state:] “The delivery terms applicable to this Contract are delivered Southern Philippines Medical Center, J.P. Laurel Avenue, Davao City. Risk and title will pass from the Supplier to the Procuring Entity upon receipt and final acceptance of the Goods at their final destination.”

Delivery of the Goods shall be made by the Supplier in accordance with the terms specified in Section VI (Schedule of Requirements).

For purposes of this Clause the Procuring Entity’s Representative at the Project Site is *MS. CATALINA BERSABAL, Head of Material Management Service, Southern Philippines Medical Center, J.P. Laurel Avenue, Davao City.*

Incidental Services –

	<p>The Supplier is required to provide all of the following services, including additional services, if any, specified in Section VI. Schedule of Requirements: <i>Select appropriate requirements and delete the rest.</i></p> <ul style="list-style-type: none"> a. performance or supervision of on-site assembly and/or start-up of the supplied Goods; b. furnishing of tools required for assembly and/or maintenance of the supplied Goods; c. furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied Goods; d. performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract; and 	
	<ul style="list-style-type: none"> e. training of the Procuring Entity's personnel, at the Supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied Goods. f. acceptance testing where cost and other expenses shall be shouldered by the supplier. <p>The Contract price for the Goods shall include the prices charged by the Supplier for incidental services and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services.</p> <p>Spare Parts –</p> <p>The Supplier is required to provide all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the Supplier:</p> <ul style="list-style-type: none"> a. such spare parts as the Procuring Entity may elect to purchase from the Supplier, provided that this election shall not relieve the Supplier of any warranty obligations under this Contract; and b. in the event of termination of production of the spare parts: <ul style="list-style-type: none"> i. advance notification to the Procuring Entity of the pending termination, in sufficient time to permit the Procuring Entity to procure needed requirements; and 	

	<p>ii. following such termination, furnishing at no cost to the Procuring Entity, the blueprints, drawings, and specifications of the spare parts, if requested.</p> <p>The spare parts and other components required are listed in Section VI (Schedule of Requirements) and the cost thereof are included in the contract price.</p> <p>The Supplier shall carry sufficient inventories to assure ex-stock supply of consumable spare parts or components for the Goods for a period of <i>five (5) years or more</i>.</p> <p>Spare parts or components shall be supplied as promptly as possible, but in any case, within <i>one (1) month</i> of placing the order.</p>	
	<p>Packaging –</p> <p>The Supplier shall provide such packaging of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in this Contract. The packaging shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packaging case size and weights shall take into consideration, where appropriate, the remoteness of the Goods’ final destination and the absence of heavy handling facilities at all points in transit.</p> <p>The packaging, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Contract, including additional requirements, if any, specified below, and in any subsequent instructions ordered by the Procuring Entity.</p> <p>The outer packaging must be clearly marked on at least four (4) sides as follows:</p> <p>Name of the Procuring Entity</p> <p>Name of the Supplier</p> <p>Contract Description</p> <p>Final Destination</p> <p>Gross weight</p> <p>Any special lifting instructions</p> <p>Any special handling instructions</p>	

	Any relevant HAZCHEM classifications	
	<p>A packaging list identifying the contents and quantities of the package is to be placed on an accessible point of the outer packaging if practical. If not practical the packaging list is to be placed inside the outer packaging but outside the secondary packaging.</p> <p>Transportation –</p> <p>Where the Supplier is required under Contract to deliver the Goods CIF, CIP, or DDP, transport of the Goods to the port of destination or such other named place of destination in the Philippines, as shall be specified in this Contract, shall be arranged and paid for by the Supplier, and the cost thereof shall be included in the Contract Price.</p> <p>Where the Supplier is required under this Contract to transport the Goods to a specified place of destination within the Philippines, defined as the Project Site, transport to such place of destination in the Philippines, including insurance and storage, as shall be specified in this Contract, shall be arranged by the Supplier, and related costs shall be included in the contract price.</p>	
	<p>Where the Supplier is required under Contract to deliver the Goods CIF, CIP or DDP, Goods are to be transported on carriers of Philippine registry. In the event that no carrier of Philippine registry is available, Goods may be shipped by a carrier which is not of Philippine registry provided that the Supplier obtains and presents to the Procuring Entity certification to this effect from the nearest Philippine consulate to the port of dispatch. In the event that carriers of Philippine registry are available but their schedule delays the Supplier in its performance of this Contract the period from when the Goods were first ready for shipment and the actual date of shipment the period of delay will be considered force majeure.</p> <p>The Procuring Entity accepts no liability for the damage of Goods during transit other than those prescribed by INCOTERMS for DDP deliveries. In the case of Goods supplied from within the Philippines or supplied by domestic Supplier's risk and title will not be deemed to have passed to the Procuring Entity until their receipt and final acceptance at the final destination.</p> <p>Intellectual Property Rights –</p> <p>The Supplier shall indemnify the Procuring Entity against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the Goods or any part thereof.</p>	
2.2	<i>Not applicable,</i>	

4	The inspections and tests that will be conducted are: <i>Physical inspection and performance and physics tests.</i>	
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Section VI.

Schedule of Requirements

Schedule of Requirements

The delivery schedule expressed as weeks/months stipulates hereafter a delivery date which is the date of delivery to the project site.

Item Number	Description	Quantity	Total	Delivered, Weeks/Months
1	<i>Medical Linear Accelerator with 4D Computed Tomography Simulator Package for Advanced for Multi-Disciplinary Provision of Radiation Oncology Services for Southern Philippines Medical Center</i>	1 Lot	1 Lot	Not exceeding One Hundred Twenty (120) calendar days from receipt of Notice to Proceed.

Section VII.

Technical Specifications

Technical Specifications

Item	Specification	Statement of Compliance
I. GENERAL REQUIREMENTS	<p>The project shall comprise of the following major components</p> <ul style="list-style-type: none"> ○ Advanced Linear Accelerator with image guidance technologies ○ CT Simulator ○ Oncology information management system ○ Treatment planning system ○ Patient immobilization devices ○ Radiation dosimetry, radiation protection and quality assurance equipment <p>The supplier shall also deliver, install and assist in the commissioning of a treatment planning system (TPS) and oncology information management system (OIMS). These should be able to operate with current radiotherapy systems for treatment delivery, verification-and-recording, and treatment planning.</p> <p>It is extremely vital that the supplied equipment be inter-operable to the current equipment setup. Maximal efficiency in workflow processes in moving the original patient CT planning data set between linear accelerators during machine downtime is vital. Separate bunker already built for 6 MV and 10 MV, and is adjacent but no physical connection to the current LINAC1. However, LINAC2 and its TPS and OIMS must be able to interconnect and handle the same patient CT planning data in the event of LINAC1 downtime; with treatment plan dosimetry (planning and measured) comparable or better if transfer is LINAC1 to LINAC2. It should also be</p>	<p><i>[Bidders must state here either “Comply” or “Not Comply” against each of the individual parameters of each Specification stating the corresponding performance parameter of the equipment offered. Statements of “Comply” or “Not Comply” must be supported by evidence in a Bidders Bid and cross-referenced to that evidence. Evidence shall be in the form of manufacturer’s un-amended sales literature, unconditional statements of specification and compliance issued by the manufacturer, samples, independent test data etc., as appropriate. A statement that is not supported by evidence or is subsequently found to be contradicted by the evidence presented will render the Bid under evaluation liable for rejection. A statement either in the Bidder’s statement of compliance or the supporting evidence that is found to be false either during Bid evaluation, post-qualification or the execution of the Contract may be regarded as fraudulent and render the Bidder or supplier liable for prosecution subject to the applicable laws and issuances.]</i></p>

	<p>possible to transfer 3D-CRT and IMRT patients of LINAC2 to LINAC1 in the event of LINAC2 downtime with near-equivalent planned dose quality. Therefore supplied immobilization systems must be compatible with current systems for 3D-CRT and IMRT procedures without further need for repositioning or re-simulation of patient. Supplier shall supply appropriate patient positioning and immobilization for advanced radiotherapy procedures SRS/SBRT/SRT.</p> <p>Imaging to support new LINAC capabilities and advanced RT procedures is required from a CT simulator also to be supplied.</p> <ul style="list-style-type: none"> • Big bore 80 cm or better • 4D-CT • DICOM connectivity to hospital HIS/RIS and TPS (current and new) • Images from other imaging modalities available at SPMC (CT/MRI/SPECT-CT/PET-CT) can be loaded and displayed <u>either</u> at the CT simulator console, treatment planning system, or third-party image workstation for image fusion and analysis via DICOM network transfer, or storage media readout via CD/DVD or secure USB drive. <p>To ensure equipment reliability and safety of procedures the supplier shall also deliver radiation dosimetry, radiation protection and quality assurance equipment appropriate for the level of services being provided in order for SPMC to periodically assess that the safety and quality of all aspects of its radiotherapy procedures from imaging to treatment delivery.</p>	
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2. SYSTEM SPECIFICATIONS		
2.1	LINEAR ACCELERATOR: A brand-new and latest model fully-digital medical linear accelerator equipped with fully-integrated high-definition multi-leaf collimator (MLC), electronic portal imaging device (EPID) for megavoltage (MV) imaging, kilovoltage imager for planar and volumetric (kVCT) imaging and is capable of three-dimensional conformal radiotherapy (3D-CRT), conformal arc therapy, intensity-modulated radiotherapy (IMRT), as well as more advanced radiotherapy techniques such as image-guided radiotherapy (IGRT), adaptive radiotherapy (ART), volumetric modulated arc therapy (VMAT), stereotactic radiosurgery/stereotactic radiotherapy (SRS/SRT), stereotactic body radiotherapy (SBRT) and enabled with flattening-filter-free technology and high-dose rate modes.	
2.1.1	Tight isocenter alignment	
2.1.1.1	At least less than 1 mm isocenter accuracy for the following:	
2.1.1.1a	Gantry isocenter accuracy	
2.1.1.1b	Collimator isocenter accuracy	
2.1.1.1c	Couch isocenter accuracy	
2.1.1.1d	Radiation beam axis with the rotation of the head and gantry	
2.1.2	Collision detectors with touch guard/stop sensors for the following:	
2.1.2.1	kV imaging panel	

2.1.2.2	kV imaging source	
2.1.2.3	MV imaging panel	
2.1.2.4	Electron applicator	
2.1.3	Fully/Completely digitally-controlled system	
2.1.4	Waveguide and filter design allows at least two (2) flattened photon energies.	
2.1.5	Allows for online remote diagnostic monitoring of the LINAC machine and treatment planning system during the warranty period; post warranty remote diagnostic monitoring will be the option of the procuring entity	
2.1.6	Beam Energies	
2.1.6.1	Dual Photon Energies – 6 and 10 MV	
2.1.6.2	At least three (3) electron energies within the range of 6 to 21 MeV; final energy selection to be specified by end-user to the winning bidder.	
2.1.7	Power Source	
2.1.7.1	Magnetron or Klystron as power source	
2.1.8	Back-up Power Supply	
2.1.8.1	Uninterrupted Power Supply (UPS) to support the Linear Accelerator Machine and all its accessories for at least 15 minutes in case of power failure (as provided by a third-party supplier)	
2.1.9	Dose Rate and Beam Stability	

2.1.9.1	6 MV Photon:	
2.1.9.1a	Flattening Filter Free/High Intensity Mode: maximum dose rate of at least 1200 MU/min with user selectable intermediate ranges	
2.1.9b	Flattened Beam: maximum dose rate of at least 500 MU/min for flattened beam with user selectable intermediate ranges	
2.1.9.2	10 MV Photon:	
2.1.9.2a	Flattening Filter Free/High Intensity Mode: maximum dose rate of at least 2000 MU/min with user selectable intermediate ranges	
2.1.9.2b	Flattened Beam: maximum dose rate of at least 500 MU/min for flattened beam with user selectable intermediate ranges	
2.1.9.3	Electron Energies (Within 6 to 21 MeV): maximum dose rate of at least 600 MU/min with user selectable intermediate ranges	
2.1.10	GANTRY	
2.1.10.1	Gantry Rotation Range: minimum of $0 \pm 182.5^\circ$	
2.1.10.2	Optical Distance Indicator: 75 cm to 150 cm with 0.5 cm resolution	
2.1.10.3	Mechanical Front Pointer (Single or Set): To cover the range 85 to 110 cm.	
2.1.10.4	Gantry Display: Digital-type display within the vicinity of the gantry or such equivalent arrangement	

	within the treatment room for ease of visibility of machine settings or parameters.	
2.1.10.5	Gantry Control: can be controlled using the hand- pendant and the control console	
2.1.10.7	With Compatible Gantry head collision detector/collision prevention system/gantry collision stopper	
2.1.11	Collimation System	
2.1.11.1	Collimator Rotation Range: 0 \pm 175° or better; supplier to provide details	
2.1.11.2	Beam Field Size:	
2.1.11.2a	Minimum Field Size: not bigger than 0.5 x 0.5 cm ² at 100 cm SSD as defined by the collimator jaws system with the MLC system retracted.	
2.1.11.2b	Maximum Field Size: not smaller than 40.0 x 40.0 cm ² at 100 cm SSD as defined by the collimator system with the MLC system retracted.	
2.1.11.3	The collimators must be motorized.	
2.1.11.4	Asymmetric Jaw Movement:	
2.1.11.4a	Collimators can move asymmetrically	
2.1.11.4b	At least one pair of jaws must be able to cross the central line by at least 10 cm	

2.1.11.5	Collimator Display: Should have two (2) digital displays and must be visible inside the bunker and treatment console	
2.1.11.6	Collimator Control: can be controlled using the hand-pendant and the control console	
2.1.12	PATIENT COUCH	
2.1.12.1	Six degrees of freedom (longitudinal/Y, lateral/X, vertical/Z, rotational/yaw, pitch, and roll couch movements)	
2.1.12.2	Electrical and mechanical control of couch motion	
2.1.12.3	Control of couch motion at the treatment console for:	
2.1.12.3a	Corrective motions: small translations (in x, y, and z)	
2.1.12.3b	Planned motions: Large rotations of the couch along its mechanical isocenter to sequence between non-coplanar fields and arcs	
2.1.12.4	Couch weight limit (supporting patient weight) up to 200 kilograms	
2.1.12.5	Couch compatible with the following:	
2.1.12.5a	Intensity Modulated Radiation Therapy (IMRT)	
2.1.12.5b	Image Guided Radiation Therapy (IGRT)	
2.1.12.5c	Volumetric Modulated Arc Therapy (VMAT)/RapidArc	

2.1.12d	Stereotactic Radiosurgery (SRS)	
2.1.12.5e	Stereotactic Radiation Therapy (SRT)	
2.1.12.5f	Stereotactic Body Radiation Therapy (SBRT)	
2.1.12.7	Fully compatible with existing immobilization accessories of SPMC	
2.1.12.8	With controls for manual motion and emergency off buttons on both sides of the couch	
2.1.12.9	Head extension with interface for patient immobilization and positioning device	
2.1.12.10	Carbon fiber material; free of metal and radiation-opaque materials	
2.1.12.11	Two (2) pairs lock bars (ordinary and MRI compatible); must be compatible with all immobilization devices purchased, treatment couch and CT simulator couch	
2.1.13	<i>INTENSITY MODULATED RADIATION THERAPY</i>	
2.1.13.1	Able to do large field IMRT procedures (Minimum of 40 x 20 cm to a maximum of 40 cm x 40 cm field size)	
2.1.13.2	Able to do sliding window/dynamic MLC, step & shoot/ static and dynamic conformal arc	
2.1.14	Volumetric Modulated Radiation Therapy (such as VMAT or RapidArc)	
2.1.14.1	Able to do 360-degree rotation of gantry in single and multi-arc treatment	

2.1.14.2	Able to do simultaneous modulation of MLC aperture shape, beam dose rate, and gantry rotation speed during beam delivery	
2.1.14.3	Able to do gated-volumetric modulated radiation therapy	
2.1.15	Fully Integrated Image-Guided Stereotactic Radiosurgery, Stereotactic Radiation Therapy, Stereotactic Body Radiation Therapy	
2.1.15.1	Able to deliver stereotactic treatment at high dose rate: 6MV/10MV maximum dose rate of at least 1200/2000 MU/min	
2.1.15.4	Includes stereotactic reference box or equivalent device if required for stereotactic patient setup with consumables good for 20 cases.	
2.1.15.5	Includes couch mount for imaging	
2.1.15.5a	Fine Adjustment controls for AP, lateral, and vertical movement for stereotactic treatment.	
2.1.15.5b	Calibration of tilt to compensate for table declination for stereotactic treatment	
2.1.15.5c	Locks for adjustments to ensure stability	
2.1.15.5d	Compatible with the included couch top for stereotactic treatment	
2.1.16	<i>CONTROL CONSOLE</i>	

2.1.16.1	The computerized control console, consisting of several workstations depending on the manufacturer, must be provided outside the treatment room.	
2.1.16.1a	All the functions and modes of the accelerator must be software controlled	
2.1.16b	Console shall provide key control system that must be activated in order for the accelerator to become operational in any of its various modes of operation	
2.1.16.1d	UPS per computer system with at least 15-minute working time	
2.1.16.2	Able to do auto-field sequencing integrated with oncology information system	
2.1.16.3	Integrated with oncology information system to display patient setup, treatment verification, and recording of treatment history into the OIS and file	
2.1.16.4	Integrated with oncology information system for imaging of treated fields before, during, and after the treatment for verification requirements	
2.1.16.5	Integrates use of the linear accelerator, MLC, MV imaging system, kV imaging system or separate workstations for MV imaging system and kV imaging system	
2.1.17	<i>LINEAR ACCELERATOR SUPPORT SYSTEMS</i>	
2.1.17.1	Supply and installation of Chilled water supply system: Independently -operating as Primary and Backup supply units.	

2.1.17.2	Supply and installation of Compressed air supply system if required: Independently Operating Primary and backup units	
2.1.17.3	Supply and installation of radiation warning lights working with linac interlock system	
2.1.17.3	Supply and installation of Audio-visual patient monitoring system consisting of high-quality 2-way intercom between treatment room and console; 4-camera CCTV with recording capability 1 PZT camera, 2 fixed camera and 1 tripod-mounted and movable to within 5-meters	
2.1.17.4	Patient alignment lasers for coronal sagittal axial alignment colored green with remote controlled for calibration / adjustment of laser positions and focusing	
2.2	<i>LINEAR ACCELERATOR BEAM MODIFICATION DEVICES AND ACCESSORIES</i>	
2.2.1	Multileaf Collimator (MLC):	
2.2.1.2	At least 120 MLC leaves (60 leaf pairs)	
2.2.1.2.1	Leaf width at projected at isocenter: maximum of 5 mm or smaller for all leaves	
2.2.1.3	MLC control must be fully integrated with the digital control system; if not, an interface between MLC and existing network system shall be provided	
2.2.2	<i>Wedge system capable of one or more of the following:</i> <ul style="list-style-type: none"> • <i>Physical wedges</i> 	.

	<ul style="list-style-type: none"> • <i>Dynamic wedge</i> • <i>Universal wedge</i> <p><i>With continuous variable angle selection for non-physical wedges or discrete 15, 30, 45, and 60 angles for physical wedges. Bidder to indicate maximum and minimum field sizes that can be wedged.</i></p>	
2.2.4	Four (4) Electron Applicators with different field sizes:	
2.2.4.1	Minimum Field size: not bigger than 6 x 10 cm ²	
2.2.4.2	Maximum Field size: not smaller than 25 x 25 cm ²	
2.2.5	Electron beam shaping kit	
2.2.5.1	Two (2) sets Cerrobend alloy melting pot	
2.2.5.2	500 kilograms of Cerrobend alloy	
2.2.5.3	400 pcs of high density styrofoam for electron cutout mould	
2.2.5.4	Two (2) sets wire cutter for electron Styrofoam mould with supply of 2 spools spare cutting wire.	
2.2.5.5	Twenty (20) pieces of electron cutout holder for each applicator size provided	
2.2.6	Provide the following mounting accessories:	
2.2.6.1	Two (2) sets of assorted pre-cut photon block shapes and shadow tray mounting	

2.2.6.2	Accessory mount / linear accelerator latch mounting system	
2.2.7	Four (4) units large capacity dehumidifier	
2.2.8	Two (2) units 1-step stainless steel foot stool with non-slip coating; Two (2) units 2-step stainless steel foot stool with non-slip coating	
2.3	IMAGE GUIDANCE TECHNOLOGIES	
2.3.1	Kilovoltage (kV) x-ray imager	
2.3.1.1	Active imaging area: at least 39 cm x 29 cm	
2.3.1.2	With a detector made of amorphous silicon material	
2.3.1.3	Pixel resolution: must be at least 1024 x 1024 image matrix	
2.3.1.4	Able to do the following imaging modes:	
2.3.1.4.1	2D radiographic acquisition with offline or online mode for acquisition, analysis, correction and review	
2.3.1.4.2	2D fluoroscopic / movie image acquisition	
2.3.1.4.3	3D cone beam computed tomography (CBCT) acquisition (Full-fan and Half-fan or Small, Medium and Large)	
2.3.1.4.4	4D image acquisition using respiratory gating or respiratory motion management	
2.3.1.5	kV Source/X-Ray tube: Fan-cooled x ray tube	

2.3.1.6	X-Ray Collimation:	
2.3.1.6.1	Comprised of a fixed primary beam definer and an adjustable system blade collimation	
2.3.1.6.2	Symmetric and asymmetric field opening	
2.3.1.6.3	Field of View	
2.3.1.6.3.a	Bidder to specify minimum field of view	
2.3.1.6.3.b	Bidder to specify maximum field of view	
2.3.1.7	Mechanical specification of KV imaging system	
2.3.1.7.1	Fully-motorized assemblies that support and position the kV source.	
2.3.1.7.2	Fully-motorized, retractable robotic arm is used to position and support the imaging detector.	
2.3.1.7.3	Automated motion from either inside the treatment room or remotely from the control console to correct patient setups	
2.3.1.7.4	Can be controlled using the hand-pendant and the control console	
2.3.1.7.5	Collision detection capability: contact or non-contact layer of safety that stops the motion of the kV imaging source if the active area is encroached upon	
2.3.1.7.6	Emergency features of KV imaging system:	

2.3.1.7.6.a	Includes back-up motion control in case the imager and controller become defective or when communication with hand pendant cannot be established	
2.3.1.8	Images acquired from CBCT (cone beam computed tomography) can be used for adaptive treatment planning	
2.3.1.9	Quality Assurance and calibration phantoms (as supplied by a third party)	
2.3.1.9.1	Isocenter cube phantom	
2.3.1.9.1.a	Composed of PMMA or material equivalent in density	
2.3.1.9.1.b	At least 4 x 4 x 4 cm ³ in size	
2.3.1.9.2	Marker phantom to check for imaging-treatment isocenter coincidence for 2D and 3D imaging system or MV isocenter determination and kV system calibration (ball bearing, fiducial, or commercial device) with software for analysis	
2.3.1.9.3	Phantom to quantify uniformity, spatial resolution and contrast:	
2.3.1.9.3.a	Contrast and spatial resolution 2D kV system: phantom with low- contrast and high contrast objects (such as Leeds phantom)	
2.3.1.9.3.b	Contrast 3D system: an appropriate volumetric image quality phantom (such as a CT phantom)	
2.3.1.9.3.c	Volumetric Image Quality Phantom with the following modules:	

2.3.1.9.3.c.i	geometry, sensitometry module	
2.3.1.9.3.c.ii	high resolution module with 1 to 30-line pairs per cm gauge	
2.3.1.9.3.c.iii	low contrast module with supra-slice and subslice contrast targets	
2.3.1.9.3.c.iv	wave ramp and bead module or wave insert	
2.3.1.9.3.c.v	image uniformity module	
2.3.1.9.3.d	Simulates respiratory motion for 4D System (such as CIRS Dynamic Thorax Phantom or Quasar Respiratory Motion Phantom)	
2.3.1.9.4	CBCT Phantom for the evaluation of the image quality of 3D CBCT, includes various inserts and can be used to measure different aspects of CBCT image quality	
2.3.1.9.4.a	CBCT body normalization phantom (polyurethane foam)	
2.3.1.9.4.b	CBCT head normalization phantom (high density polyethylene foam)	
2.3.1.9.4.c	CBCT geometry calibration phantom	
2.3.2	MEGAVOLTAGE (MV) X-RAY IMAGER	
2.3.2.1	Active imaging area: must be at least 30 cm x 40 cm	
2.3.2.2	With a detector made of amorphous silicon material	

2.3.2.3	The robotic motorized arm must be integrated with the linear accelerator and can be remotely controlled. MV imaging system must be retractable when not in use.	
2.3.2.4	Port film/Hook or Latch graticule, and phantom for portal imaging QA	
2.3.2.5	Full integration with Oncology Information system, network and database. Should also be compatible to other (3 rd party) oncology information systems.	
2.3.2.6	Includes application software and acquisition workspace	
2.3.2.6.1	Online and offline image registration, evaluation, and correction	
2.3.2.6.2	Match verification tools and image matching tools (blend, color blend, spyglass window, split window)	
2.3.2.7	Able to do portal dosimetry to record intensity patterns of IMRT & VMAT/RapidArc fields for pre-treatment quality assurance of IMRT & VMAT/RapidArc planning and delivery	
2.3.2.7.1	Able to do continuous imaging in single, multiple or movie-loop mode	
2.3.2.7.2	Includes image analysis software for field fluence evaluation and analysis.	
2.3.2.7.3	<u>OPTIONAL</u> : EPID-based dosimetry during actual patient IMRT/VMAT/RapidArc treatment (in vivo dosimetry), to be supplied if available. If not available for the Philippine Market, must provide a notarized certification	

2.4	IMAGING SOLUTIONS FOR MULTI-DISCIPLINARY ADAPTIVE RADIOTHERAPY	
2.4.1	<p>Mobile imaging workstation (running Windows or MacOS) with latest and adequate hardware and with software for:</p> <ul style="list-style-type: none"> • Image fusion (rigid and deformable registration algorithms) <ul style="list-style-type: none"> ○ old and revised radiation treatment plan doses ○ image fusion of planning CT with other imaging modalities (CT, SPECT-CT, PET-CT) ○ Images acquired from kV-CBCT (kilovoltage conebeam computed tomography) can also be received and registered and used for adaptive treatment planning • dose summation algorithms of DICOM-RT compliant plans of previous radiation treatment plans and revised treatments plans merged during image fusion with dose reporting capability and rendering • editing DICOM header files • send and receive DICOM images to/from TPS • import/export DICOM images and DICOM-RT datasets to CD/DVD/USB <p>Multi-disciplinary teleconference workstation:</p> <ul style="list-style-type: none"> ○ Collaborative meeting software and hardware for multi-disciplinary teleconsults or case discussions that allows case imaging studies and documents to be virtually shared or projected on screen at the conference room. • <i>See Annex I</i> 	

2.5	<i>MOTION MANAGEMENT SOLUTIONS FOR ADVANCED RADIOTHERAPY</i>	
2.5.1	Able to do respiration-synchronized imaging and treatment or 3D real-time patient position monitoring	
2.5.2	Includes the following components for the CT scan and LINAC machine	
2.5.2.1	Two (2) sets of manufacturers solution for Respiratory Gating or Management of Respiratory Motion for use in the LINAC and CT Simulator.	
2.5.2.1.a	Able to do respiration synchronized imaging or 3D real time patient position monitoring	
2.5.2.1.b	Includes all components and software required to implement gated treatment delivery/management of respiratory motion, simulation and image acquisition on the accelerator and CT scan machine	
2.5.2.1.c	Isocenter calibration devices, other calibration devices and all required components, QA software and tools, for respiratory gating or management of respiratory motion.	
2.5.2.3	<p>High-resolution mobile ultrasound from reputable manufacturer with 19” monitor or better, keyboard, DVD and USB drive, with built-in image printer. It must complete with the following ultrasound probes.</p> <ul style="list-style-type: none"> • Linear probe (up to 12 MHz or better) • Convex probe (up to 6 MHz or better) • Endocavitary biplane probe (up to 14 MHz or better) with tested and proven / demonstrated compatibility SPMC brachytherapy system for prostate HDR brachytherapy. 	

	<p>The system must have B, M, and Doppler modes</p> <p>High resolution 19" LCD/LED color monitor with minimum display size of 1280 x 1080 and better (preferably touchscreen)</p> <p>With built-in or integrated secondary storage</p> <p>Full DICOM readiness.</p> <p>Supplied with Uninterrupted Power Supply (UPS) of appropriate KVA for the machine</p> <p>The ultrasound machine and its endocavitary biplane probe must have proven or tested/ demonstrated compatibility with the existing SPMC Brachytherapy machine and treatment planning system for prostrate HDR brachytherapy procedure.</p>	
2.6	COMPUTED TOMOGRAPHY SIMULATOR WITH 4D CAPABILITY	
2.6.1	<p><i>Gantry</i></p> <ul style="list-style-type: none"> • <i>Gantry aperture: 80 cm or bigger</i> • <i>Scan field of 50 cm or higher</i> • <i>Effective display FOV of 80 cm or better</i> • <i>Rotation time 0.8 s or faster</i> • <i>Distance focal spot to isocenter: at least 60 cm</i> • <i>Three laser light markers</i> 	

	<ul style="list-style-type: none"> • <i>Camera (independently mounted or integrated) for monitoring the patient through the gantry while scanning</i> • <i>Controls on the gantry or remotely within the examination room</i> • <i>RT planning lasers for simulation (vertical and sagittal movement)</i> • <i>RT planning Laser color: green</i> 	
2.6.2	<p>X-ray tube assembly</p> <ul style="list-style-type: none"> • Minimum tube voltage: 80 kV or lower • Maximum tube voltage: 140 kV or higher • Anode heat storage capacity: of at least 7 MHU or higher • To provide iterative reconstruction capability if available • Tube cooling rate: at least 780 kHU/min • Tube current range: <ul style="list-style-type: none"> ○ Minimum: 13 mA or lower ○ Maximum: 625 mA or higher • Focal spot size <ul style="list-style-type: none"> ○ Small focal spot: 0.8 x 0.8 or smaller ○ Large focal spot: 1.0 x 1.2 or smaller 	

2.6.3	<p>Generator</p> <p>75 KW generator power or higher</p>	
2.6.4	<p>Couch</p> <ul style="list-style-type: none"> • TG-66 complaint over the scan range • Vertical travel range: Supplier to specify • Vertical travel speed: Supplier to specify • Scanning range 125 cm or higher • Minimum scan height: Supplier to specify • To support patient weight 200 kg or higher • Indexed Flat tabletop (integrated, or couch-compatible overlay from reputable brand), compatible with offered immobilization devices and linear accelerator couch • 1-step foot stool stainless steel with rubberized surface coating 	
2.6.5	Simulation and Contouring: Integrated to CT console or Separate Workstation	
2.6.6	<p>Console Software and Hardware</p> <ul style="list-style-type: none"> • Operating panel/control desk Displays all scanning parameters • At least 19" Flat screen monitor with best resolution available 	

	<ul style="list-style-type: none"> • High Performance Computer CPU: Based on latest technology meeting manufacturers specifications • RAM: at least 32 GB • Image storage capacity: (at least 600 GB) • Hard disc: Based on latest technology meeting manufacturers specifications but at least 500 GB • Recon Matrix: at least 512 x 512 • CT Fluoroscopy <ul style="list-style-type: none"> ○ Fast repetitive acquisition and display of several low dose sequential scans ○ Real time CT Fluoroscopy Hardware such as Footswitch for triggering scan from the examination room for interventional procedures. • Dual monitor setup based on manufacturers specifications, bidder to supply technical specifications materials on proposed configuration. 	
2.6.7	<p>Detector System:</p> <ul style="list-style-type: none"> • Detector Rows: Supplier to specify 	

	<ul style="list-style-type: none"> • Minimum number of acquired slices per rotation is twenty (20) • Maximum number of reconstructed slices per rotation is sixty-four (64) or higher • Smallest sequence acquisition mode: Supplier to specify • Spiral acquisition mode: Supplier to specify • Smallest reconstructed slice thickness: 1.5 mm or smaller • High contrast resolution at 2% MTF (+/- 10%) is 15 lp/cm or higher; supplier to demonstrate during acceptance 	
2.6.8	Secondary (2 nd) Workstation (Radiologist Reading Workstation) Hardware, with Basic non-Radiotherapy Simulation Clinical Applications and Software Capabilities matched to CT capabilities.	
2.6.8.1	<p>Hardware Specifications</p> <ul style="list-style-type: none"> • Based on latest technology meeting manufacturer specifications • Gigabit Network Interface Card • USB keyboard and Mouse • 2kVA Line Interactive UPS 	
2.6.9	<p>FULL DICOM 3.0 Compatible</p> <ul style="list-style-type: none"> • DICOM Storage (send / receive) • DICOM Query/ Retrieve • DICOM Basic print • DICOM Get Worklist (HIS/RIS) • DICOM SR Viewer 	

	<ul style="list-style-type: none"> • DICOM Storage Commitment • DICOM Viewer on CD/DVD 	
2.6.10	<p>Room and Power</p> <ul style="list-style-type: none"> • Bidder/Supplier to submit a sample planning guide of the room with the unit for the proposed system • ≤ 115 kVA maximum power consumption • ≤ 3 kVA standby power consumption 	
2.6.11	<p>Accessories & Supplies</p> <ul style="list-style-type: none"> • Automatic CT Injector (Single) <ul style="list-style-type: none"> ○ single barrel type, with free 200 pcs injector set. • Four (4) units portable, external solid-state drive (SSD)- 2 TB storage capacity for backup or archiving of patient data • Lead Glass – Sufficiently sized to be fitted in a 100 x 90 cm opening, 2mm Pb-equivalent • An integrated intercom for bi-directional speaker communication between operator and patient with automated patient instruction (API) system should be provided • Restraints/ straps for adult and pediatric patients • Patient transfer board • 1-step foot stool stainless steel with rubberized surface coating 	

2.6.12	<p><i>CT Phantom and Test Tools: For calibration and acceptance/ conformance test and other quality control tests</i></p> <p><i>I. Phantom for CTDI measurements</i></p> <p><i>A) Nested PMMA CTDI Phantom for adult head and abdomen pediatric head and abdomen</i></p> <p><i>B) with 13 acrylic rods/inserts</i></p> <p><i>C) with carrying or transport case that is portable. Water- and dust-resistant, air-tight. crushproof solid wall design. with egg-crate foam lining, and has double throw latches</i></p> <p><i>II. Ionization Chamber br CTDI and DLP Measurements with Reading/ Data Logging Unit/ Base Unit with rigid carrying ease .</i></p> <p><i>1) Ionization Chamber for CTDI and DLP Measurements</i></p> <p><i>A) pencil-type and has an active length of 100 mm;</i></p> <p><i>B) cable length of at least 10 m ;</i></p> <p><i>C) can be used in other available CTDI dose phantoms;</i></p> <p><i>D) compliance with IFC Standards</i></p>	<p>Deleted: Item VII. Radiation Survey Meter (ion-chamber type) and renumbered succeeding items.</p> <p>VII. Ruler</p> <p>A) Aluminum, 50 cm ruler</p> <p>B) precise and durable</p> <p>VIII. Metric Measuring Steel Tape</p> <p>A) 5-7.5m long</p> <p>B) calibrated in SI units</p> <p>C) precise, wide, tough, and durable blade</p> <p>D) with retraction speed brake</p> <p>E) measurement scale printed on front and back sides of the blade</p> <p>IX. Manufacturer's CT Scan Phantom or System Phantom</p> <p>A) can assess linearity, uniformity, contrast, slice thickness, noise, etc.</p>
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	<p>2) Reading or Data Logging Unit! Base Unit</p> <p><i>A) automatically identifies the connected CT ionization chamber and displays the settings and parameters available for that detector</i></p> <p><i>B) with mA/mAs capabilities</i></p> <p><i>C) with built-in active compensation that automatically applies corrections for different beam qualities, filtrations and temperatures</i></p> <p><i>D) with battery charger</i></p> <p><i>E) Power supply of 220-240 V</i></p> <p>III. ACR CT Accreditation Phantom for CT Image Quality and Performance Evaluation</p> <p><i>A) designed to perform the following tests:</i></p> <ul style="list-style-type: none"> - <i>Positioning Accuracy</i> - <i>CT number accuracy</i> - <i>Low contrast resolution</i> - <i>High contrast (spatial) resolution</i> - <i>CT number uniformity</i> - <i>Image noise</i> <p><i>B. With adjustable stand</i></p> <p><i>C. With carrying case</i></p> <p>IV. AAPM TG66 Laser alignment phantom</p> <p>V. Spirit level or Bubble Level</p>	
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	<p><i>A. Metallic and box type</i> <i>B. With horizontal, vertical and diagonal bubble level</i> <i>C. Durable and reliable</i></p> <p>VI. Two (20 boxes of radiochromic films for table indexing tests in CT.</p> <p>VII. Ruler</p> <p>A) Aluminum, 50 cm ruler</p> <p>B) precise and durable</p> <p>VIII. Metric Measuring Steel Tape</p> <p>A) 5-7.5m long</p> <p>B) calibrated in SI units</p> <p>C) precise, wide, tough, and durable blade</p> <p>D) with retraction speed brake</p> <p>E) measurement scale printed on front and back sides of the blade</p> <p>IX. Manufacturer's CT Scan Phantom or System Phantom</p> <p>A) can assess linearity, uniformity, contrast, slice thickness, noise, etc.</p>	
2.6.14	Other Requirements	MODIFIED ITEMS 8) AND 9)

	<ol style="list-style-type: none"> 1) One (1) unit Transformer for CT unit 2) One (1) unit Transient Voltage Surge Suppressor 3) One (1) unit UPS – Provided up to 10 minutes of back up for console computer and secondary workstation 4) One (1) set of the Operation and instruction manuals 5) Three (3) sets of dehumidifiers 6) Two (2) sets personal radiation protection equipment (lead gown, gloves, thyroid and gonadal shields, goggles) with storage rack (for specification of storage rack, refer to end-users preference prior to delivery) 7) Emergency Cart 8) One (1) unit portable continuous patient monitors (non-invasive blood pressure, ECG, oxygen saturation, temperature) with digital display (12-inches or better) <ol style="list-style-type: none"> a) Complete measurement accessories for one (1) set adult and two (2) pediatrics patients b) Portable roll stand c) 100-240 VAC; 50/60 Hz power cord and plug compatible with Philippine standard d) At least 6 hours operation under battery power e) Audible and visual alarm indicators f) Applications training for nurses 9. One (1) unit anesthesia machine: Compact, mobile with integrated ventilator, with volume, pressure and oxygen 	
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	<p>monitoring system. Should have working surface and storage space for accessories.</p> <ul style="list-style-type: none"> a) Operating volume 110-240 VAC; 50/60 Hz b) Power cable at least 5 meters with plug compatible with Philippine standards c) Should have compatible connectors to connect to the hospital central supply (O₂, N₂O & air) d) Should have dual cascaded flow meter for O₂ and NO₂ and single flow meter e) Should have hypoxia guard f) Should have oxygen flow meter g) Should have compact breathing system and soda lime chamber capacity of 1.5L h) Should have electronically controlled and electrically / pneumatically driven ventilator i) Should have battery backup of at least 1 hour j) Basic and advanced ventilation modes with integrated display of measured ventilator parameters: <ul style="list-style-type: none"> i) Minute volume ii) Tidal volume iii) fiO₂ concentration iv) Peak pressure, mean pressures, plateau and PEEP 	
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	<p>m) Adjustable high/low limits setting for FiO₂, expired tidal volume, minute volume, frequency and airway pressure</p> <p>n) With advanced patient monitor and capable of monitoring of all patient age group .</p> <p>i) Should have integrated screen of 12” and able to display 6 channel wave form</p> <p>ii) Audio visual alarm system</p> <p>iii) Monitor should have 5 lead ECG with ST segment analysis, NIBP, SPO₂ and Temperature</p> <p>p) Applications training for nurses and anesthesiologist</p> <p>q) Disposable circuits with filters</p> <p>10.) Two (2) Units Automated External Defibrillator (bidder to indicate its specification)</p>	
2.6.15	Training Requirements: 2-day onsite training for radiotherapy radiologic technologists by applications specialist fluent in English or Filipino.	
2.6.16	<p>Other Terms and Conditions</p> <ul style="list-style-type: none"> Three (3) years warranty on tube, spare parts and service after acceptance testing of the FDA-CDRRHR, Department of Health (DOH); Warranty commences upon completion of equipment commissioning 	

	<p>and issuance of a License to Operate by the DOH/FDA-CDRRHR</p> <ul style="list-style-type: none"> • There should be one (1) locally based (in Region XI) CT trained engineer currently employed by the principal or bidder. • The bidder must have previously delivered at least 3 “big bore” RT CT systems with the same brand to medical institutions. • Transportation to site, delivery, installation and testing expenses on site (hospital) • Certification that the supplier/manufacturer has the capability for corrective and preventive maintenance of the unit. • There should be a minimum of one (1) local-based (in Region 11) CT-trained engineers currently employed by the principal or bidder • The supplier must provide applications training on site for users and maintenance personnel of the hospital • Certification that the brand has been sold in the Philippines for at least ten (10) years. • The principal must have an existing office in the Philippines for at least ten (10) years. • The supplier or bidder must have in its employ a Philippine-based application specialist to provide support onsite or on call basis. 	
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	<ul style="list-style-type: none"> • The principal or bidder must be able to do remote pro-active and predictive monitoring including critical equipment parameters, remote diagnosis and repair and remote updates and upgrades. • The principal or bidder must be able to do remote assistance to help improve staff productivity and run their daily operations effectively. • The principal or bidder must have a team who are always available to provide quick application guidance or advice on troubleshooting remotely. • Supplier must submit a certified true copy of a certificate of compliance from an international products standard accreditation body or organization or (preferably US-FDA, European-CE) 	
2.7	PATIENT IMMOBILIZATION DEVICES: All immobilizations devices and accessories should be compatible with the existing immobilization devices used by SPMC. Couch overlays are required to fit in other imaging modalities available in SPMC especially the Nuclear Medicine imaging equipment (SPECT-CT and PET-CT)	
2.7.1	Head, neck and shoulder devices	
2.7.1.1	Baseplate: appropriate for linac couch top and CT couch top with head able to extend beyond couch end	
2.7.1.1.a	Four (4) head and neck baseplates:	

2.7.1.1.a.i	Carbon fiber material	
2.7.1.1.a.ii	Two (2) standard and two (2) tilting	
2.7.1.1.b	Two (2) head, neck and shoulder baseplates: carbon fiber	
2.7.1.1.c	One (1) head, neck and shoulder MRI compatible baseplate	
2.7.1.2	Thermoplastic mask	
2.7.1.2.a	Thirty (30) head and neck masks	
2.7.1.2.b	Twenty (20) head, neck and shoulder masks	
2.7.1.3	Head rest:	
2.7.1.3.a	Two (2) sets of head rests with standard sizes of A-F (hard clear plastic), and Two (2) sets of head rests with standard sizes of A-F (foam) with comprehensive range of neck angulations for LINAC and CT	
2.7.1.3.b	Two (2) adult prone pillow	
2.7.1.3.c	Pediatric headrest and baseplate sets: Two (2) prone and Two (2) supine	
2.7.1.4	Bite Block System with Warmer:	
2.7.1.4.a	Twenty (20) pieces standard bite blocks with tongue depressor	
2.7.1.4.b	Twenty (20) pieces standard bite blocks	
2.7.1.4c	One (1) Unit Warmer for bite block fabrication	

2.7.1.5	Two (2) shoulder retractors with footboard and handle grips	
2.7.2	Chest and breast immobilizer	
2.7.2.1	Two (2) breast board; carbon fiber material	
2.7.2.1.a	Two (2) sets of round head cup for breast board	
2.7.2.1.b	Two (2) sets of donut-shaped gel head cup for breast board	
2.7.2.2	Two (2) sets wing board with two (2) types of hand grips	
2.7.2.3	Vacuum bag body immobilizer systems (e.g. BodyFix or Vac Lok)	
2.7.2.3.a	Ten (10) whole/full body	
2.7.2.3.b	Ten (10) half body	
2.7.2.3.c	Two (2) vacuum/compressor pump	
2.7.2.4	Twenty (20) Units of Breast Thermoplastic Mask Set compatible with the breast board and needed accessories as prescribed for use by the manufacturer.	
2.7.3	Abdomen and pelvis immobilizers	
2.7.3.1	Two (2) belly board: carbon fiber material	
2.7.3.2	Two (2) abdomen and pelvis immobilization system with abdomen and pelvis baseplate	

2.7.3.3	Twenty (20) Units reinforced abdomen and pelvis thermoplastics compatible with the abdomen and pelvis baseplate	
2.7.4	Complete set of SBRT immobilization and fixation system compatible with indexed couch top	
2.7.4.1	Ten (10) T-shaped, total body and other activated cushion (patient mold integrity for six weeks or more)	
2.7.4.2	Two (2) carbon fiber platforms/base plates	
2.7.4.3	Two (2) sets of adjustable bridges (covering different sizes from small to large)	
2.7.4.4	Two (2) respiratory plates/diaphragms control to assist in restricting respiratory movement	
2.7.4.5	One (1) set of stereotactic localizer and target positioner	
2.7.4.6	Two (2) pairs of lock bars/indexing adaptor compatible to the LINAC couch and CT flat couch	
2.7.4.7	Two (2) vacuum pump	
2.7.4.8	Two (2) knee support cushion	
2.7.4.9	Two (2) ankle support cushion	
2.7.4.10	Two (2) forehead and Two (2) shoulder restraints	
2.7.4.11	One (1) Flat couch overlay each for Nuclear Medicine SPECT-CT and PET-CT compatible with CT and Linac Treatment Couch	
2.7.4.12	CT Simulation Fiducial markers	

2.7.4.12.a	Ball bearing CT markers, 300 pcs	
2.7.4.12.b	Wire CT markers, 300 pcs	
2.7.4.12.c	Cross wire CT markers, 300 pcs	
2.7.4.12.d	Implantable tumor localization markers (prostate and solid tumor types) with good visibility in kV and MV imagers under planar and volumetric imaging conditions . 20 sets consisting of sterile markers and implantation accessories.	
2.7.5	Complete set tungsten eye shields	
2.7.6	Complete set tungsten testicular shields	
2.7.7	Two (2) sets each of 0.5,1.0, 1.5, and 2.0 tissue equivalent bolus	
2.7.8	Waterbath with programmable temperature control and digital display for thermoplastic preparation with transport cart with locking wheels and storage space for essential supplies and tools, 220 VAC \pm 10%, 60 Hz	
2.8	TREATMENT PLANNING SYSTEM	
2.8.1	Contouring	
2.8.1.1	Supports contouring templates that list structures of interest	
2.8.1.2	Boolean operations (such as AND, OR, XOR, AND NOT) with structures to create complex structure definitions or equivalent contouring tools (margin, subtraction and addition)	

2.8.1.3	Advanced contouring tools with patient identity information should be available	
2.8.1.4	Automatic segmentation/contouring based on electron density values for different organs should be included	
2.8.2	Image Registration	
2.8.2.1	Image registration support includes CT, MRI, PET, and SPECT images via direct DICOM transfer and registration via TPS or indirectly through 3 rd -party software in imaging workstation for images not directly transferrable.	
2.8.2.2	Able to do image fusion	
2.8.2.3	Patient data acquisition through DICOM import facility from CT Sc, CBCT, MRI, PET and SPECT and from Imaging Workstation (Item 2.4.1).	
2.8.3	Planning and Dose Calculation	
2.8.3.1	Treatment planning for photon and electron beam of all energies in the therapeutic range	
2.8.3.2	Able to do treatment plans for conventional, 3D-conformal, IMRT, VMAT/RapidArc, SRS, SRT, and SBRT (licenses to compute included)	
2.8.3.2.a	IMRT Planning License: utilizing sliding window, large field, and step and shoot technique	
2.8.3.2.b	VMAT/RapidArc Planning License with multi-arc capabilities	

2.8.3.2.c	SRS, SRT & SBRT Planning License with MLC based planning	
2.8.3.3	Includes standard dose calculation algorithms (pencil beam, convolution, collapse cone convolution, etc.) and advanced dose calculation algorithms for Monte Carlo equivalent photon calculation (such as Monte Carlo, Boltzmann, or similarly-based algorithms) and Monte Carlo algorithm for electron.	
2.8.3.4	Inverse planning software for IMRT and VMAT/RapidArc	
2.8.3.5	Able to display target and critical structure motions using 4D tools for respiratory-gated treatment plans for IMRT, VMAT/RapidArc and SBRT	
2.8.3.6	Able to do treatment planning based on CBCT images acquired from the LINAC CBCT to facilitate adaptive therapy	
2.8.3.7	Support regular and irregular fields for all types of beam modifiers such as bolus, blocks, MLCs, tissue compensator, wedge, dynamic/motorized wedge, and asymmetric beam	
2.8.3.8	Capable of making tissue inhomogeneity correction (as per electron density), irregular point dose calculation and auto contouring as per CT data	
2.8.4	Plan Evaluation and Analysis	
2.8.4.1	Side by side plan comparison	
2.8.4.2	DVH for multiple plans in one plot, DVH for any multiple structure volumes in one plot	

2.8.4.3	Differential or cumulative dose volume histogram	
2.8.4.4	Absolute or relative scale for the structure volume axis of DVH plot	
2.8.4.5	Plan summation/subtraction for external beam plans, can store summed plans	
2.8.4.6	Electronic plan approval	
2.8.5	Quality Assurance	
2.8.5.1	Able to do portal dosimetry calculation for VMAT/RapidArc and IMRT fields on electronic portal imaging device/MV system	
2.8.5.2	<u>OPTIONAL</u> : EPID-based dosimetry during actual patient IMRT/VMAT/RapidArc treatment (in vivo dosimetry), to be supplied if available. If not available for the Philippine Market, must provide a notarized certification	
2.8.6	Connectivity of TPS	
2.8.6.1	Workstations integrated to the LINAC console through the OIS network/record and verify system	
2.8.6.2	Able to import patient image and plan data	
2.8.6.3	Supports DICOM-RT import/export of at least DICOM 3.0 images or higher and radiotherapy images, structures, plans, dose matrix, dose points, fluence, dMLC for IMRT, blocks, compensators, etc.	
2.8.6.4	Able to connect and exchange data with the existing planning system (Eclipse). If the same brand, the existing OIS should be upgraded to have the same software version if needed.	

2.8.6.5	Able to contour and plan for the existing linac (Varian Clinac); assistance to be provided in commissioning the new linac on the existing TPS for 3D and IMRT procedures.	.
2.8.7	System administration utilities including back-up, archive, and restore	
2.8.8	Workstations	
2.8.8.1	Two (2) calculation workstation/treatment planning system with physics license and UPS with at least 15 minutes working time capacity for every workstation with licenses. With display not smaller than 23”.	
2.8.8.2	Two (2) non calculation workstation/contouring station with contouring license and UPS with at least 15 minutes working time capacity for every workstation with licenses. With display not smaller than 23”.	
2.8.9	Printers	
2.8.9.1	One (1) heavy duty laser monochromatic printer with two additional sets of in	
2.8.9.2	One (1) heavy duty laser colored printer with two additional sets of ink per color type	
2.9	ONCOLOGY INFORMATION MANAGEMENT SYSTEM	
2.9.1	Server	
2.9.1.1	High storage capacity server	
2.9.1.2	Monitor: not smaller than 20” LED monitor	

2.9.1.3	Uninterrupted power supply with at least 15 minutes working capacity	
2.9.1.4	With appropriate port hubs and all necessary network connections as prescribed by the manufacturer	
2.9.2	Workstations	
2.9.2.1	<p>Provision of six (6) computer workstations with monitors, OIS licenses and UPS with at least 15 minutes working time capacity for each unit: Located at the following:</p> <ul style="list-style-type: none"> • Nurse Station – with colored printer • Doctors Clinic – with colored printer • Linac console – with monochrome laser printer • Physics/treatment planning @ 2nd floor • Doctors Clinics 1 and 2 at main onco unit with colored printer 	
2.9.2.2	Processor: Latest generation based on manufacturer's specification (of comparable performance to an Intel i5)	
2.9.2.3	Latest generation chipset	
2.9.2.4	Memory: not smaller than 16GB, DDR4 RAM	
2.9.2.5	Has the latest generation HD graphics card based on manufacturers specifications	
2.9.2.6	Has keyboard, USB, mouse	
2.9.2.7	Storage: not smaller than 1TB	

2.9.2.8	Optical drive DVD – writer	
2.9.2.9	Display 23” LED	
2.9.2.10	Has wifi card for wireless connectivity	
2.9.3	OIS Software includes the following:	
2.9.3.1	Patient data administration and electronic medical record	
2.9.3.2	Independent treatment verification	
2.9.3.3	Treatment and port image review	
2.9.3.4	Time planner/scheduler	
2.9.3.5	Electronic patient RT chart	
2.9.3.6	Chart audit and checking/assessment	
2.9.3.7	Capable to archive and restore Patient data	
2.9.4	OIS Connectivity:	
2.9.4.1	Should be connected to an IGRT device and to import MV, kV, and volumetric DICOM images	
2.9.4.2	Should be connected to the existing CT-simulation machine (SOMATOM Definition AS) and supports import of DICOM CT images	
2.9.4.3	Should be connected to the purchased linear accelerator (to verify that the machine is set up according to plan and automatically records actual set-up parameters)	

2.9.4.4	Should be connected to the treatment planning system	
2.9.5	Connectivity to the existing OIS (Aria). If the same brand, the existing OIS should be upgraded to have the same software version if needed. In the event of patient transfers between linacs during machine downtime, supplier to define solution to maintain accuracy of the overall patient treatment record from treatments in both machines.	
2.9.6	Provision for remote access to the distributor for remote service and diagnosis; including cabled high-speed internet connection during the warranty period	
2.10	DOSIMETRY, QUALITY ASSURANCE AND RADIATION PROTECTION: All chambers, diodes, and electrometer must be of the same connector design with the existing dosimetry system used by SPMC.	
2.10.1	Radiation Field Analyzer or Beam Scanner	
2.10.1.1	Advanced 3D computer-controlled radiation scanning system to measure dose distribution comprised of:	
2.10.1.1.a	3D mechanics with scanning volume of not smaller than 45 cm x 45 cm x 40cm	
2.10.1.1.b	Calibrated high-precision mechanics with built-in leveling frame	
2.10.1.1.c	Water phantom carriage with electrically operated telescopic lift	
2.10.1.1.d	Water reservoir carriage with bi-directional pump (fill and drain water)	
2.10.1.1.e	Control unit with built in two channel electrometer and with TNC connector	

2.10.1.1.g	Fast, accurate, simple and easy setup scanning system	
2.10.1.1.h	Technical data and user manual in English	
2.10.1.2	Advanced acquisition and analysis software with desktop computer system	
2.10.1.2.a	Support of all international and industry protocol (such as IAEA, AAPM, etc)	
2.10.1.2.b	Compatible with all commercial radiation treatment planning systems	
2.10.1.2.c	License for installation of the software on up to (3) three additional workstations	
2.10.1.2.d	Can measure electron and photon profiles, depth dose curves and TMR/TPR	
2.10.1.2.e	Flexible ASCII tables including export to MS Excel	
2.10.1.2.f	Capability for radiation treatment planning software specific measurement queue creation and data conversion to the treatment planning system	
2.10.1.2.g	Laptop (latest model) of adequate hardware and operating system able to support the dosimetry software with licensed MS Office application (Word, Excel and Powerpoint)	
2.10.2	Farmer Type Ion Chamber	
2.10.2.1	Farmer-type ionization chamber 0.6 cc with graphite walls, Co-60 build-up cap, waterproof and fully-guarded, calibrated in a standards laboratory in terms of absorbed dose to water	

2.10.2.2	Ionization chamber model must be included in IAEA TRS 277/381/398 protocols	
2.10.2.3	With accompanying calibration certificate and chamber technical data and user manuals in English	
2.10.2.4	With ion chamber holder or adapter for absolute measurements in water phantom	
2.10.3	Plane Parallel Ion Chamber (PPC)	
2.10.3.1	Plane parallel ionization chamber for electron beams, vented sensitive volume of at least 0.35 cc., waterproof and fully guarded, calibrated in a standards laboratory in terms of absorbed dose to water	
2.10.3.2	Ionization chamber model must be included in IAEA TRS 277/381/398 protocols	
2.10.3.3	With accompanying calibration certificate and chamber technical data and user manuals in English	
2.10.3.4	With PPC holder or adapter for absolute measurements in water phantom	
2.10.4	Ionization Chambers for Small Field Dosimetry	
2.10.4.1	Ion chambers with the following volume, cylindrical, waterproof and fully guarded:	
2.10.4.1.a	One (1) not bigger than 0.015 cc Cavity Volume with graphite central electrode	
2.10.4.1.b	Two (2) not bigger than 0.125 cc Cavity Volume	
2.10.4.1.c	One (1) not bigger than 0.04 cc Cavity Volume	

2.10.4.2	Ionization chamber model must be included in IAEA TRS 277/381/398 protocols. Supplementary data sheets to be provided if chamber data not provided in published protocol	
2.10.4.3	With accompanying calibration certificate and chamber technical data and user manuals in English	
2.10.4.4	With ion chamber holder or adapter for absolute measurements in water phantom	
2.10.5	Therapy Dose Meter (Electrometer)-Reference class	
2.10.5.1	Must be compatible with the delivered ionization chambers, calibrated in a standards laboratory	
2.10.5.1.a	Power supply is 220 VAC \pm 10%, 60Hz, stable and high accuracy in the measurements, with display of accumulated charge and dose, varying bias voltage with V1/V2 ratio equal or greater than 3, dose rate, exposure time, leakage and other important information that ensure validity of the instruments and with possibility of reverse polarity	
2.10.5.1.b	With calibration certificate, electrometer technical and user manual	
2.10.5.1.c	Complete with necessary accessories and robust transport case	
2.10.6	Reference Signal Chamber for small field dosimetry	
2.10.6.1	Perturbation free transmission chamber	
2.10.6.2	Reproducible reference signal chamber	

2.10.7	Large Transmission ionization chamber designed for relative dosimetry	
2.10.7.1	Used as reference signal chamber in relative dosimetry for clinical use in water phantom scanning system	
2.10.7.2	Used for PDD and profiles of small fields since perturbation due to the presence of the chamber in the field is minimal and the chamber can be considered invincible to the beam	
2.10.7.3	Air-vented ionization chamber and is fully guarded	
2.10.8	Detector Extension Cables	
2.10.8.1	One (1) low noise triaxial cable on reel not shorter than 20 meters	
2.10.8.2	Two (2) low noise triaxial cable on reel not shorter than 10 meters	
2.10.8.3	Compatible with the existing IC & electrometer	
2.10.8.4	Low radiation leakage cable and resistant against radiation damage	
2.10.9	Barometer	
2.10.9.1	Digital, with selectable unit of pressure, 1 hPa or 0.5 mm Hg minimum scale, calibrated in a standard laboratory, with calibration certificate, technical data and user manuals in English	
2.10.10	Thermometer	
2.10.10.2	Digital, with selectable unit of temperature, 0.5°C min scale calibrated in Standards Laboratory, with	

	calibration certificate, technical data and user manual in English	
2.10.11	Hygrometer	
2.10.11.1	Digital calibrated in SI units in a Standards Laboratory, with calibration certificate, technical data and user manuals in English	
2.10.12	Desiccator cabinet, at least 4 levels, with at least 114 Liters Capacity with humidity and temperature indicators and controls, calibrated to SI units, 220 VAC \pm 10%, 60 Hz. Additional units may be supplied to fit all ion chambers, electrometers and electronics of QA equipment	
2.10.13	Radiotherapy Area Monitor	
2.10.13.1	Two (2) units radiation area monitoring system installed inside the treatment room and at the control area	
2.10.13.2	Flashing red lights alarm with 180° field of view, with aural alarm switch ON/OFF and with battery back-up for at least 24 hours	
2.10.14	Two boxes of Ready Pack radiotherapy verification films, at least twenty (20) films per box	
2.10.15	Digital level: magnetic horizontal, vertical and diagonal bubble level; durable	
2.10.16	Phantom pointer for performing stereotactic QA tests/Winston Lutz Testing QA Tooling kit or Ball bearing	
2.10.16.1	Includes two (2) boxes of gafchromic radiotherapy films with compatible scanner and isocenter (gantry,	

	couch and collimator) image analysis; at least 25 sheets per box	
2.10.16.2	Film holder for gafchromic film strip during Winston-Lutz testing	
2.10.16.3	Film holder has attachment to the stereotactic couch mount adapter	
2.10.16.4	Maximum freedom of gantry and couch rotation during film recording of Winston-Lutz test	
2.10.16.5	Embossed lines for easy alignment with the laser isocenter	
2.10.16.6	EPID recording of Winston Lutz Test results and export to analysis software	
2.10.17	Waterproof diode detector, high performance p-type Si diode for small field dosimetry	
2.10.17.1	Sensitive volume: not bigger than 0.06 mm ³	
2.10.17.2	Relative dosimetry (beam profile: PDD/TMR, symmetry and flatness) for energy range from 60Co to 25 MV photon energy and electron energies.	
2.10.17.3	For absolute dosimetry and patient specific QA and stereotactic beams	
2.10.17.4	Must be compatible with the existing 3D water phantom system and software	
2.10.17.5	Includes holder and adaptors needed for the relative measurements in 3D water phantom	
2.10.18	4D Patient Plan Verification Dosimetry System	

2.10.18.1	For stereotactic and volumetric modulated RT patient treatment plan verification	
2.10.18.2	Matrix detector grid	
2.10.18.3	Able to do the following analyses:	
2.10.18.3.a	2D dose analysis: compare data or absolute dose data using Distance to Agreement (DTA), Gamma (Y) and Gradient Compensation	
2.10.18.3.b	Control point analysis (VMAT/RapidArc): individual control points and user-defined arc sections can be analyzed for a full arc or sub arc.	
2.10.18.3.c	Equivalent VMAT/RapidArc Analysis system: verification of VMAT/RapidArc plans using densities of ROIs from a TPS to calculate SSD, geometric and effective depth automatically for VMAT/RapidArc and IMRT plans	
2.10.18.3.d	MLC analysis: evaluate the difference between the planned and delivered MLC pattern	
2.10.18.4	Include detector array, compatible phantom and software capable of DVH QA analysis	
2.10.19	Chamber matrix for daily QA checks of radiotherapy beam	
2.10.19.1	Measure fields up to a size of 20 cm x 20 cm or better	
2.10.19.2	Complete accessories to enable analysis of beam parameters which shall include flatness, symmetry, field size, light-radiation field coincidence, penumbra, dose rate and beam center for both photons and electrons;	

2.10.19.3	Include gantry holder for easy attachment to the gantry or to be provided if required by the system	
2.10.20	Radiation Survey Meter	
2.10.20.1	Battery-operated ionization radiation survey meter	
2.10.20.2	Digital, accurate, auto ranging, zeroing with warm up of less than 2 minutes	
2.10.20.3	Units of measurement are indicated at all times and capable of showing messages for unit operating conditions	
2.10.20.4	Radiation detected: alpha, beta, gamma and x-ray, 0-2 Sv/hr	
2.10.20.5	Calibrated in SI units	
2.10.20.6	With calibration certificates and user manual	
2.10.21	Stereotactic QA Phantom for end-to-end testing (e.g. Lucy Phantom)	
2.10.21.2	Includes leveling plate or precision mounting platform	
2.10.21.3	Includes ionization chamber inserts	
2.10.21.4	Interfaces with SRS frames and frameless system purchased	
2.10.21.5	Compatible with CT and MRI imaging system	
2.10.21.6	Inserts for film dosimetry	
2.10.22	Independent Monitor Units (MU) Check Software	

2.10.22.1	Software for accurate and independent verification of monitor units, dose, and overall validity of standard, IMRT, VMAT, and SRS/SRT/SBRT plans	
2.10.23	Water phantom for absolute dose measurement	
2.10.23.1	One dimensional, stand-alone water phantom for absolute dose measurements according to IAEA TRS-398 dosimetry protocols	
2.10.23.2	Minimum of 25cm x 35cm x 25cm volume, with PMMA wall	
2.10.23.3	The measurement depth can be manually adjusted with 0.1mm steps and read out on the incremental encoder with integrated digital display	
2.10.23.4	With chamber adapters and holding devices for all available detectors supplied; electric plugs should be appropriate for Philippine plug standards	
2.10.24	Advanced Electron Density Phantom with hardcase for transport	
2.10.24.1	Evaluate CT scan data	
2.10.24.2	Correct for inhomogeneities	
2.10.24.3	Includes the following tissue equivalent interchangeable rod inserts:	
2.10.24.3.a	Lung equivalent electron density plug (inhale and exhale)	
2.10.24.3.b	Breast equivalent electron density plug	

2.10.24.3.c	Solid trabecular bone equivalent electron density plug	
2.10.24.3.d	Liver equivalent electron density plug	
2.10.24.3.e	Muscle equivalent electron density plug	
2.10.24.3.f	Adipose equivalent electron density plug	
2.10.24.3.g	Solid dense bone equivalent electron density plug	
2.10.24.3.h	Water-fillable equivalent electron density plug	
2.10.24.3i	Additional titanium, stainless steel, and aluminum rods	
2.10.25	IMRT Thorax Phantom for Film and Ion Chamber Dosimetry (for TPS QA)	
2.10.25.1	Verify heterogeneity corrections	
2.10.25.2	Correlate CTU to electron density	
2.10.25.3	Includes the following tissue equivalent interchangeable rod inserts:	
2.10.25.3.a	five (5) water equivalent solid rod insert	
2.10.25.3.b	one (1) bone equivalent solid rod insert	
2.10.25.3.c	four (4) lung equivalent solid rod insert	
2.10.25.3.d	one (1) water equivalent rod insert with ion chamber cavity	

2.10.25.3.e	one (1) bone equivalent rod insert with ion chamber cavity	
2.10.26	Radioactive <i>Check sources for ionization chambers supplied with accessories such as thermometers and any compatible adapters, if available for other chambers that do not have a dedicated check source.</i>	
3	ADDITIONAL REQUIREMENTS	
3.1	Facility Pre-installation and Post-Installation works: Installation shall occur with the building almost complete. Supplier shall consider the following as part of their scope of works:	
3.1.1	<p>Civil works:</p> <ul style="list-style-type: none"> • Cabinet works for equipment and accessories in the linear accelerator treatment room and operator console; equipment and accessories in the CT simulation room and control console; workstation counters and cabinetworks for manuals in the physics treatment planning room. Design and fabrication subject to end-user's approval • Remedial concreting works in preparation for machine installation and actual installation • Remedial / corrective works for any damage during delivery and installation to finished areas of the building • Restoration of damages on the existing facility that will be incurred during delivery and installation of all equipment and other accessories will be the responsibility of the supplier. 	

3.1.2	<p>Mechanical works:</p> <ul style="list-style-type: none"> • Pipe installation and insulation for chilled water supply and return and compressed air piping • Installation and mounting of fixation points for lasers and other auxiliary equipment 	
3.1.3	<p>Electrical Works:</p> <ul style="list-style-type: none"> • Supply, delivery and complete installation of electrical power supply including protective and safety devices for supplier-installed equipment going to the main electrical panel board of the building. • Electrical cabling for lasers and auxiliary equipment 	
3.1.4	<p>IT and Cabling:</p> <ul style="list-style-type: none"> • Cabling to connect TPS and OIMS workstations to server and connectivity between the two OIMS servers; establishment of DICOM connectivity ports to other SPMC imaging modalities and Imaging Workstation. • Supply, delivery and installation of an intercom system linking the following areas of the building: <ul style="list-style-type: none"> ○ C-arm linac console ○ Ring-type linac console ○ CT simulation console ○ Nurse station ○ Doctors clinic/Examination Room ○ Physics Treatment planning • 4 personal computers (with latest hardware and Windows based with licensed OS and office applications) 	
3.2	<p>Acceptance Testing: In addition to supplier-recommended acceptance procedures, the downtime of</p>	

	LINAC1 will be simulated and the transfer of patient planning data and re-planning for continuation of treatment to LINAC2 will be tested.	
3.4	Commissioning and End-to-End Testing: Supplier to provide physics and clinical support in commissioning and end-to-end testing of advanced radiotherapy procedures (SRS/SRT/SBRT/ IGRT with motion management [4D-CT/4D-RT]).	
3.5	<p>Training</p> <p><i>Bidder may consider delivery of offsite non-clinical training to onsite if restrictive travel restrictions prevent trainees' travel to training facility. Onsite training for this must be equivalent in duration and content to original offsite training course.</i></p> <p><i>Clinical trainings to be done in facilities with comparable equipment and procedures.</i></p>	
3.5.1	<p>The following personnel shall undergo training to be provided by the supplier or its principals for specific equipment trainings (Linac, TPS, OIMS, Immobilization, Dosimetry and QA, basic and advanced radiotherapy):</p> <ul style="list-style-type: none"> • Radiation Oncologist • Neurosurgeon • Radiotherapy Radiologic Technologists • Medical Physicists • Biomedical Engineers 	
3.5.1	On-site training: The personnel above shall undergo onsite training by an English speaking or local language speaker; the end-users have the right to refuse to undergo	

	<p>training if there are communication difficulties with the trainer; supplier or manufacturer shall send another one.</p> <ul style="list-style-type: none"> • Minimum of 2 weeks training for radiotherapy staff (technologists and physicists) for major radiation equipment hardware and software systems. • Minimum 1 week training for radiotherapy staff (technologists and physicists) for each: <ul style="list-style-type: none"> ○ patient immobilization, and ○ dosimetry and QA equipment. • A clinical specialist, applications specialist and/or qualified medical physicist shall be onsite to work with the radiotherapy team during the first 5 cases of each type of advanced radiotherapy procedure (SRS/SRT/SBRT/IGRT with motion-management) or available for consult during preliminary planning and case evaluations. 	
3.5.2	Off-site training: The following shall undergo offsite training at a training facility of the manufacturer for equipment or software training, or at a clinical facility with comparable equipment	
3.5.2.1	Radiation Oncologist and Neurosurgeon: Four (4) radiation oncologists and 2 neurosurgeons shall undergo training within one year from acceptance of equipment.	
3.5.2.2	Medical Physicist: Training for two (2) medical physicists shall commence 3 months prior to installation. A medical physicist shall join a radiation oncologist or radiation oncologist/neurosurgeon team during their clinical offsite training for advanced radiotherapy procedures.	
3.5.2.3	Radiotherapy Radiologic Technologists: Two (2) radiotherapy technologist shall undergo training for 4 months in a radiotherapy facility with comparable equipment under the supervision of the facility's CMP-	

	<p>ROMP. Training should have been completed 1 month before acceptance testing.</p> <p>One (1) of the radiotherapy radiologic technologist shall undergo training at a vendor training facility for basic linear accelerator operations and the use of OIMS for basic applications in managing a radiation oncology facility.</p> <p>Two Radiologic Technologist shall undergo onsite training on Ultrasound machine (refer to section 2.5.2.3) for five (5) days</p>	
3.5.2.4	<p><i>3.5.4 Supplementary Training materials to be supplied in the form of books</i></p> <ul style="list-style-type: none"> a) Heron, Dwight E., et al., eds. <i>Stereotactic radiosurgery and stereotactic body radiation therapy (SBRT)</i>. Springer Publishing Company, 2018. b) Sethi, Rajni A., et al., eds. <i>Handbook of evidence-based stereotactic radiosurgery and stereotactic body radiotherapy</i>. Springer, 2015 c) Lee, Nancy Y., Nadeem Riaz, and Jiade J. Lu, eds. <i>Target volume delineation for conformal and intensity-modulated radiation therapy</i>. Springer, 2014. d) Ward, Matthew C., Rahul D. Tendulkar, and Gregory MM Videtic, eds. <i>Essentials of clinical radiation oncology</i>. Springer Publishing Company, 2017. e) Cefaro, Giampiero Ausili, et al. <i>A guide for delineation of lymph nodal clinical target volume in radiation therapy</i>. Springer-Verlag, 2008. f) Van Dyk, Jacob. The modern technology of radiation oncology, 3 volume set, Hardcover 	

3.6	<i>One unit (1) of 65” or better flat screen LED TV with mounting bracket. Full HD 1080p Smart TV. Connectivity optios: 2 HDMI port/ USB porty, Built-in wifi, Dolby audio, Dynamic color Latest model and of reputable and reliable brand.</i>	

ANNEX I: *Multi-disciplinary teleconference Equipment and Accessories*

A. **Teleconference AV equipment and computer**

Camera:

Ultra-HD Imaging Supports:

x 4k ,1440p 1080p, 900p, 720p, and SD at least 30fps

x 1080p, 720p at 30 and 60 fps, Smooth motorized pan, tilt and zoom,

Pan: ±90°,Tilt:

+50° / -90°,

at least 15x HD zoom

x Field of View: Diagonal: at least 90°,Horizontal: at least 82° and at least Vertical of 52 inches

x Autofocus

x at least 3 camera presets

X with video mute and unmute indicator

x standart Tripod thread

X lens park at least -90°

x Video mute/unmute indicator

DESKTOP PC ON MOBILE CART

Latest windows OS, hardware and software specs to meet intended use; 110-240 VAC 50/60Hz

USB ports compatible in number and type to peripherals above; AV ports to match equipment above

19” monitor or better with support for VGA to 4K UHD resolution

Mic Pod:

xPickup range of 4 m diameter

xFour omnidirectional microphones

xAcoustic Echo Cancellation

xVoice Activity Detector

xBackground noise suppression

xMute button with status indicator

x Captive Pin cable

x Daisy chain upto 7 mic pods

xFrequency response: 90 Hz – 16 kHz

Speaker:

xsuspension system that eliminates vibration-induced camera shake and audio interference

xXLR cable

xSpeaker Volume

PROJECTOR

Support for VGA to 4K UHD resolution; VGA, HDMI, USB ports; at least 2000 ANSI lumens in brightness

Throw ratio 1.13 -1.47

110-240 VAC 50/60 Hz

With two (2) spare lamp kits

B. Digital White Board (Smart board) for digital boardwork and capture of board output

a. 87 in x 77 in

b. Touch support

- c. Writing and drawing support
 - d. Remote control
 - e. Audio support
 - f. Gesture recognition (1 finger to write, 2 fingers to select, and full palm to erase)
 - g. Easy Plug-and-play setup and configuration to external computer
 - h. Hot keys on both sides for handy operation
 - i. No special pen required
- C. Conference Table and Chairs
- a. 2-seater foldable training/conference table – 25 pieces
 - b. Matching folding chairs to training/conference table – 50 pcs
 - c. Gas-lift chairs with arm rests and adjustable backrests Chairs for 10 persons
 - d. Small table for mounting a projector or microphone pod system
 - e. Speaker rostrum - 2 pcs
 - f. Flag holder, floor type
- D. Conference room AV equipment
- a. Wired microphone – 4 pcs
 - b. Wireless microphone – 2 pcs
 - c. Microphone stand – 2 pcs
 - d. Desktop microphone – 2 pcs
 - e. 12-channel powered mixer – 1 unit
 - f. Professional grade 12 channel XLR 100-foot snake cable – 1 set
 - g. Wall-mounted speakers – 2pairs
 - h. Bracket for ceiling mounting of projector in Annex 1A, including installation, configuration.

ANNEX II: EQUIPMENT E DOWNTIME AND WARRANTY COVERAGE DURING THE THREE (3)-YEAR WARRANTY PERIOD

WARRANTY AND DOWNTIME PENALTY: MONTHLY AND ANNUAL LIMITS

Maximum of three (3) days downtime per month **AND** Maximum of fourteen (14) days downtime per year

Additional three (3) days extension for every day in excess of the allowable maximum three (3) days downtime per month, **AND**

Additional five (5) days extension for every day in excess of the allowable maximum FOURTEEN (14) days downtime per month

													WARRANTY AND DOWNTIME PENALTY							
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL DAYS DOWNTIME IN YEAR	TOTAL DAYS EXCEEDING ANNUAL LIMITS	# OF MONTHS EXCEEDING MONTHLY LIMITS	TOTAL DAYS EXCEEDING MONTHLY LIMIT	PENALTY DAYS: ANNUAL	PENALTY DAYS: MONTHLY	PENALTY DAYS TOTAL	
D O W N T I M E	14	4	4	3	3	0	0	0	2	1	1	0	32	18	3	13	90	39	129	
	1	1	1	1	1	1	1	1	1	1	1	1	12	0	0	0	0	0	0	
	2	0	2	0	2	0	2	0	2	0	2	2	14	0	0	0	0	0	0	
	3	3	3	3	3	3	3	3	3	3	3	3	36	22	0	0	110	0	110	
	0	0	0	0	0	0	0	28	0	0	0	0	28	14	1	25	70	75	145	
	4	4	1	1	1	1	1	1	1	1	1	1	18	4	2	2	20	6	26	
	2	2	2	2	2	2	2	2	2	2	2	2	24	10	0	0	50	0	50	
	4	4	4	4	4	4	4	4	4	4	4	4	48	34	12	12	170	36	206	
	14	0	0	0	0	0	0	0	0	0	0	0	0	14	0	1	11	0	33	33
	7	2	3	1	1	0	0	0	0	0	0	0	14	0	1	4	0	12	12	
	7	4	1	1	1	0	0	0	0	0	0	0	14	0	2	4	0	12	12	
	7	3	2	1	1	0	0	0	0	0	0	0	14	0	1	5	0	15	15	
	14	0	0	0	0	0	0	0	0	0	0	0	14	28	14	2	22	70	66	136
	16	0	0	0	5	0	0	0	7	0	0	8	0	36	22	4	23	110	69	179

Section VIII.

Checklist of Technical and Financial Documents

Checklist of Technical and Financial Documents

I. TECHNICAL COMPONENT ENVELOPE

Class “A” Documents

Legal Documents

- ☐ (a) Valid PhilGEPS Registration Certificate (Platinum Membership) (all pages);
Or
- ☐ (b) Registration certificate from Securities and Exchange Commission (SEC), Department of Trade and Industry (DTI) for sole proprietorship, or Cooperative Development Authority (CDA) for cooperatives or its equivalent document, **and**
- ☐ (c) Mayor’s or Business permit issued by the city or municipality where the principal place of business of the prospective bidder is located, or the equivalent document for Exclusive Economic Zones or Areas; **and**
- ☐ (d) Tax clearance per E.O. No. 398, s. 2005, as finally reviewed and approved by the Bureau of Internal Revenue (BIR).

Technical Documents

- ☐ (e) Statement of the prospective bidder of all its ongoing government and private contracts, including contracts awarded but not yet started, if any, whether similar or not similar in nature and complexity to the contract to be bid; **and**
- ☐ (f) Statement of the bidder’s Single Largest Completed Contract (SLCC) similar to the contract to be bid, except under conditions provided for in Sections 23.4.1.3 and 23.4.2.4 of the 2016 revised IRR of RA No. 9184, within the relevant period as provided in the Bidding Documents; **and**
- ☐ (g) Original copy of Bid Security. If in the form of a Surety Bond, submit also a certification issued by the Insurance Commission; **or**
Original copy of Notarized Bid Securing Declaration; **and**
- ☐ (h) Conformity with the Technical Specifications, which may include production/delivery schedule, manpower requirements, and/or after-sales/parts, if applicable; **and**
- ☐ (i) Original duly signed Omnibus Sworn Statement (OSS); **and** if applicable,

Original Notarized Secretary's Certificate in case of a corporation, partnership, or cooperative; or Original Special Power of Attorney of all members of the joint venture giving full power and authority to its officer to sign the OSS and do acts to represent the Bidder.

Financial Documents

- ☐ (j) The Supplier's audited financial statements, showing, among others, the Supplier's total and current assets and liabilities, stamped "received" by the BIR or its duly accredited and authorized institutions, for the preceding calendar year which should not be earlier than two (2) years from the date of bid submission; **and**
- ☐ (k) The prospective bidder's computation of Net Financial Contracting Capacity (NFCC); **or**
A committed Line of Credit from a Universal or Commercial Bank in lieu of its NFCC computation.

Class "B" Documents

- ☐ (l) If applicable, a duly signed joint venture agreement (JVA) in case the joint venture is already in existence; **or**
Duly notarized statements from all the potential joint venture partners stating that they will enter into and abide by the provisions of the JVA in the instance that the bid is successful.

II. FINANCIAL COMPONENT ENVELOPE

- ☐ (m) Original of duly signed and accomplished **Financial Bid Form**; **and**
- ☐ (n) Original of duly signed and accomplished **Price Schedule(s)**

Other documentary requirements under RA No. 9184 (as applicable)

- ☐ (o) *[For foreign bidders claiming by reason of their country's extension of reciprocal rights to Filipinos]* Certification from the relevant government office of their country stating that Filipinos are allowed to participate in government procurement activities for the same item or product.
- ☐ (p) Certification from the DTI if the Bidder claims preference as a Domestic Bidder or Domestic Entity.

