



NC DEPARTMENT OF  
**HEALTH AND  
HUMAN SERVICES**

ROY COOPER • Governor

MANDY COHEN, MD, MPH • Secretary

MARK PAYNE • Director, Division of Health Service Regulation

January 6, 2020

Lisa Griffin  
2085 Frontis Plaza Boulevard  
Winston-Salem, NC 27103

**Exempt from Review – Replacement Equipment**

**Record #:** 3176  
**Facility Name:** Novant Health Brunswick Medical Center  
**FID #:** 061342  
**Business Name:** Novant Health Brunswick Medical Center  
**Business #:** 2420  
**Project Description:** Replace CT scanner at hospital  
**County:** Brunswick

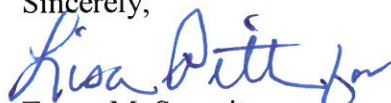
Dear Ms. Griffin:

The Healthcare Planning and Certificate of Need Section, Division of Health Service Regulation (Agency), determined that based on your letter of December 19, 2019, the above referenced proposal is exempt from certificate of need review in accordance with N.C. Gen. Stat. §131E-184(a)(7). Therefore, you may proceed to acquire without a certificate of need the GE HD 128 CT scanner to replace the existing GE Optima 660 CT scanner.

Moreover, you need to contact the Agency's Construction, Radiation Protection and Acute and Home Care Licensure and Certification Sections to determine if they have any requirements for development of the proposed project.

It should be noted that the Agency's position is based solely on the facts represented by you and that any change in facts as represented would require further consideration by this office and a separate determination. If you have any questions concerning this matter, please feel free to contact this office.

Sincerely,

  
Tanya M. Saporito  
Project Analyst

  
Martha J. Frisone  
Chief

cc: Construction Section, DHSR  
Radiation Protection Section, DHSR  
Acute and Home Care Licensure and Certification Section, DHSR

**NC DEPARTMENT OF HEALTH AND HUMAN SERVICES • DIVISION OF HEALTH SERVICE REGULATION  
HEALTHCARE PLANNING AND CERTIFICATE OF NEED SECTION**

LOCATION: 809 Ruggles Drive, Edgerton Building, Raleigh, NC 27603  
MAILING ADDRESS: 809 Ruggles Drive, 2704 Mail Service Center, Raleigh, NC 27699-2704  
<https://info.ncdhhs.gov/dhsr/> • TEL: 919-855-3873

AN EQUAL OPPORTUNITY / AFFIRMATIVE ACTION EMPLOYER

## Waller, Martha K

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**From:** Griffin, Lisa L (CON) <lgriffin@novanthealth.org>  
**Sent:** Thursday, December 19, 2019 11:27 AM  
**To:** Tanya, Saporito  
**Cc:** Waller, Martha K  
**Subject:** [External] Replacement Equipment Exemption for NH Brunswick Medical Center  
**Attachments:** BMC CT REER Ltr to Agency 12.19.19.pdf

**CAUTION:** External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to [CS@novanthealth.org](mailto:CS@novanthealth.org)

Tanya,

Attached is an exemption notice regarding the replacement of a CT scanner at Novant Health Brunswick Medical Center. If you have any questions or need more information, please contact me.

Thank you,

***Lisa Griffin***

Manager, CON/Operational Planning  
Novant Health, Inc.  
(704) 384 - 3462

----- This message and any included attachments are from NOVANT HEALTH INC. and are intended only for the addressee(s). The information contained herein may include trade secrets or privileged or otherwise confidential information. Unauthorized review, forwarding, printing, copying, distributing, or using such information is strictly prohibited and may be unlawful. If you received this message in error, or have reason to believe you are not authorized to receive it, please promptly delete this message and notify the sender by email. If you believe that any information contained in this message is disparaging or harassing or if you find it objectionable please contact Novant Health, Inc. at 1-844-266-8268 or forward the email to [reports@novanthealth.org](mailto:reports@novanthealth.org). Thank you.

Received by Healthcare  
Planning & CN Section  
DEC 19 2019



December 19, 2019

**Via Email**

Ms. Tanya Saporito, Project Analyst, Certificate of Need  
N.C. Department of Health Service Regulation  
809 Ruggles Drive  
Raleigh, North Carolina 27603

2085 Frontis Plaza Boulevard  
Winston-Salem, NC 27103

Re: Novant Health Brunswick Medical Center  
Replacement of Existing CT Scanner  
Bolivia, NC (FID 061342; Brunswick County)

Dear Ms. Saporito:

This letter outlines Novant Health Brunswick Medical Center's (NHBMC's) project to replace an existing CT scanner in the Radiology Department with a new GE HD 128 CT scanner and to relocate the existing CT scanner to Novant Health's Coastal Diagnostic Center located in Jacksonville, North Carolina in Onslow County. The current CT scanner is a 64-slice and is seeking to upgrade their CT capability to 128-slice with the new unit. Since the existing unit is still functional, NHBMC is planning to relocate it to Novant Health's Coastal Diagnostic Center in Jacksonville, North Carolina. The costs of the relocation, including the fair market value of the existing scanner, is less than \$750,000 and is below the Major Medical Equipment threshold per the definition at N.C.G.S. Section 131E-176(14o).

The costs related to the replacement of the NHBMC CT scanner is \$1,134,600 (of which the equipment cost is \$810,000). See **Attachment A** for the Equipment Quote of the new CT scanner to be installed at NHBMC. As part of the equipment cost, the vendor will provide onsite clinical training for the equipment. See **Attachment B – Projected Capital Cost**.

This exempt project will replace a functionally similar operational CT scanner at NHBMC. The proposed new CT scanner is consistent with the replacement equipment definition at N.C.G.S. Section 131E-176(22a) which states that the replacement equipment is comparable to the equipment being replaced if it has the same technology as the equipment currently in use, although it may possess expanded capabilities due to technological improvements. The existing CT scanner is used for CT imaging and the replacement CT scanner will be used for CT imaging in the existing facility.

Pursuant to 10A N.C.A.C .0303 the proposed CT scanner replacement equipment because:

- (1) It is comparable to the equipment currently in use. It has the same technology as the equipment currently in use, although it does possess expanded capabilities due to technological improvements.
- (2) It is functionally similar and is used for the same diagnostic or treatment purposes as the equipment currently in use and is not used to provide a new health service.
- (3) The acquisition of the proposed CT scanner not result in more than a 10% increase in patient charges or per procedure operating expenses within the first twelve months after the replacement equipment is acquired.
- (4) The existing equipment was not purchased second-hand nor was the existing equipment leased. (Note that the existing equipment was purchased used, but it has been in use for over 3 years and is to be redeployed within the Novant Health system.)
- (5) The replacement equipment is not capable of performing procedures that will result in the provision of a new health service or type of procedure that has not been provided with the existing equipment.

Ms. Tanya Saporito  
December, 19, 2020  
Page 2

In support of our request, please find attached:

- Attachment A – Vendor Equipment Quote
- Attachment B – Project Capital Cost Summary
- Attachment C – Equipment Comparison chart

NHBMC's acquisition of the replacement CT scanner does not require a certificate of need because none of the definitions of "new institutional health services" set forth in N.C.G.S. Section 131E-176(16) apply to the proposed project. As outlined above, the total cost for the project is \$1,364,600. The proposed capital cost includes equipment, as well as studies, surveys, designs, plans, working drawings, specifications, construction installation and other activities essential to making the equipment operational.

Based on the information provided, please confirm that NHBMC's replacement equipment request does not constitute a new institutional health service and is exempt from certificate of need review.

If you need additional information, please do not hesitate to contact me.

Sincerely,



Lisa Griffin  
Manager, CON/Operational Planning  
Novant Health, Inc.

Enclosures

coastal diagnostic imaging, PLLC      020373      FID  
509      Bid  
NR id      3175

NHBMC  
061342  
NR id 3176  
Bus id 2420

# **ATTACHMENT A**



December 12, 2019  
 Quote Number: 2004459196.19  
 Customer ID: 23917  
 Agreement Expiration Date: 3/11/2020

Novant Health Brunswick Medical Center  
 240 Hospital Dr NE  
 Bolivia, NC 28422-8346

This Agreement (as defined below) is by and between the Customer and the GE Healthcare business ("GE Healthcare"), each as identified below for the sale and purchase of the Products and/or Services identified in this Quotation, together with any applicable schedules referred to herein ("Quotation"). "Agreement" is this Quotation and either: (i) the Governing Agreement identified below; or (ii) if no Governing Agreement is identified, the GE Healthcare Terms and Conditions and Warranties that apply to the Products and/or Services identified in this Quotation. In the event of conflict, the Quotation supersedes.

GE Healthcare can withdraw this Quotation at any time before Customer: (i) signs and returns this Quotation or (ii) provides evidence of Quotation acceptance satisfactory to GE Healthcare ("Quotation Acceptance"). On Quotation Acceptance, this Agreement is the complete and final agreement of the parties relating to the Products and/or Services Identified in this Quotation. There is no reliance on any terms other than those expressly stated or incorporated by reference in this Agreement and, except as permitted in this Agreement, no attempt to modify will be binding unless agreed to in writing by the parties. Modifications may result in additional fees and cannot be made without GE Healthcare's prior written consent.

Handwritten or electronic modifications on this Agreement (except an indication of the form of payment, Customer purchase order number and signatures on the signature blocks below) are void.

Governing Agreement:	Novation Vizient Supply LLC
Terms of Delivery	FOB Destination
Billing Terms	80% delivery / 20% Installation
Payment Terms	NET 30
Total Quote Net Selling Price	\$810,000.00
Sales and Use Tax Exemption	No Certificate on File

**INDICATE FORM OF PAYMENT:**

(If there is potential to finance with a lease transaction, by GE HEF otherwise, select lease)

- Cash\*
- Lease
- GE HEF Loan
- If financing, please provide name of finance company: \_\_\_\_\_

\*Selecting "Cash" or not identifying GE HEF as the finance company declines the option for GE HEF financing.

The parties have caused this Agreement to be executed by their authorized representative as of the last signature date below.

Novant Health Brunswick Medical Center

Signature: \_\_\_\_\_

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

\_\_\_\_\_  
 Purchase Order Number, if applicable

GE Precision Healthcare LLC, a GE Healthcare business

Signature: Herb Klann

Title: Imaging Account Manager

Date: December 12, 2019



**To Accept This Quotation**

Please sign and return this quotation together with your Purchase Order to:

Name: Herb Klann  
Email: herb.klann@ge.com  
Phone: 724-504-8778  
Fax:

**Payment Instructions**

Please remit payment for invoices associated with this quotation to:

GE Precision Healthcare LLC  
P.O. Box 96483  
Chicago, IL 60693  
  
FEIN: 83-0849145

**Novant Health Brunswick Medical Center**

**Addresses:**

**Bill To:** Novant Health Brunswick Medical Center 240 Hospital Dr NE, Bolivia, NC, US, 28422-8346  
**Ship To:** NOVANT HEALTH BRUNSWICK MEDICAL MEDICAL CENTER, 240 HOSPITAL DR NE, , BOLIVIA, NC, 28422-8346  
CENTER

**To Accept This Quotation**

- Please sign the quote and any included attachments (where requested).
- If requested, please indicate your form of payment.
- If you include a purchase order, please make sure it references the following information:
  - The correct Quote number and Version number above
  - The correct Remit To information as indicated in "Payment Instructions" above
  - Your correct SHIP TO and BILL TO site name and address
  - The correct Total Price as indicated above

Upon submission of a purchase order in response to this quotation, GE Healthcare requests the following to evidence agreement to contract terms: Signature page on quote filled out with signature and P.O. number \*\*\*\* OR\*\*\*\* Verbiage on the purchase order must state one of the following:

(i) Per the terms of Quotation # \_\_\_\_\_, (ii) Per the terms of GPO # \_\_\_\_\_; (iii) Per the terms of MPA# \_\_\_\_\_; or (iv) Per the terms of SAA # \_\_\_\_\_.

Include applicable quote/agreement number with the reference on the purchase order. In addition, Source of Funds (choice of Cash/Third Party Load or GE HFS Lease Loan or Third Party Lease through \_\_\_\_\_), must be indicated, which may be done on the Quote Signature Page (for signed quotes), or the Purchase Order (where quotes are not signed) or via a separate written source of funds statement (if provided by GE Healthcare)."



Line	Qty.	Catalog	
1	1.00	S7910EX	Rev HD66 EX

**A better exam with superb clarity.**

High definition image quality requires Innovation throughout the image chain. With technologies and features that have set new benchmarks for image clarity, Revolution(TM) HD enables diagnostic confidence for a wide range of clinical applications. Spatial and temporal resolution, signal-to-noise ratio, low-contrast detectability and artifact reduction are all fundamental to CT image quality. Revolution HD offers a true diagnostic breakthrough with best-in-class spatial resolution of 0.23 mm across the full scan length (Calculated using 0% MTF). With this system, you can also easily upgrade to cutting-edge applications in oncology, cardiology and neurology - including applications such as Gemstone Spectral Imaging that take you beyond anatomical analysis to quantitative tissue characterization and advanced functional imaging. The Revolution HD EX configuration includes, low dose 5-Beat cardiac acquisition package, SnapShot Freeze acquisition, volume shuttle and ASiR-V.

**Low dose made possible by iterative reconstruction**

ASiR-V is the newest technology in GE's family of industry leading iterative reconstruction techniques. ASiR-V allows healthcare providers to lower dose by up 82% as compared to standard filtered back-projection (FBP) reconstruction at the same image quality.

ASiR-V may provide the following.

- ASiR-V reduces dose by up to 82% relative to FBP at the same image quality
- ASiR-V improves low contrast detectability by 59% to 135% at the same dose
- ASiR-V reduces image noise up to 91% at the same dose+
- ASiR-V improves spatial resolution up to 2X (107%) at same image noise+
- ASiR-V image reconstruction has the capability to reduce low signal artifact such as streak artifact compared to FBP

In clinical practice, the use of ASiR-V may reduce CT patient dose depending on the clinical task, patient size, anatomical location, and clinical practice. A consultation with a radiologist and a physicist should be made to determine the appropriate dose to obtain diagnostic image quality for the clinical task. Low Contrast Detectability (LCD), Image Noise, Spatial Resolution and Artifact were assessed using reference factory protocols comparing ASiR-V and FBP. The LCD measured in 0.625 mm slices and tested for both head and body modes using the MITA CT IQ Phantom (CCT183, The Phantom Laboratory), using model observer method." Image quality is defined by low contrast detectability.

**Best-in-class cardiac CT**

Revolution HD has best-in-class cardiac CT spatial resolution. At 18.2 lp/cm(1), the system provides up to 66% greater spatial resolution than comparable systems. Additionally, SnapShot(TM) Freeze is designed to reduce blurring artifacts due to motion in coronary vessels that cannot be addressed by gantry speed alone. Providing up to 6x improvement while maintaining high spatial resolution, the reduction in motion artifacts is equivalent to a 0.058s equivalent gantry rotation speed with effective temporal resolution of 29 msec as demonstrated in cardiac phantom testing.

(1) Based upon Internal test data comparing Discovery(TM) CT750 HD cardiac half-scan spatial resolution to data from "Advanced CT Scanners for Coronary Angiography", ImPACT Report CEP10043, March, 2010, available at [www.impactscan.org](http://www.impactscan.org)

**Focus less on the system and more on your patients**

The Xtream display prominently shows the patient name, making exams more personal. It also includes a number of educational videos that explain CT procedures or can be used as a distraction technique for younger patients. In addition, with one-stop ED mode, you can select and confirm patient, protocol and scan settings at the gantry.

**Helping you lead the way in delivering high quality care at ultra-low dose with Smart Technologies**

Better patient care, improved efficiency, expanded applications. Smart Technologies is a suite of intelligent CT tools designed to help you achieve these goals, delivering diagnostic confidence with lower levels of radiation. Revolution HD is MITA XR-29-2013 compliant.

The Revolution HD gantry design includes the Xtream display and provides a number of workflow enhancements for you, such as Prospective Exam Split, and helps you to focus less on the system and more on your patients.



## Revolution HD Technology

**Gemstone (TM) Detector:** This key technological advancement enables improvements in spatial resolution, low contrast detectability, and the foundation for spectral imaging.

- 98% efficient at 120kV
- Fastest primary speed in the industry by 100x
- 4x faster afterglow performance
- 0.23mm spatial resolution across the 2 meters
- Backlit diode technology

## Smart Technologies:

- Smart Dose
  - Iterative reconstruction technology: ASiR-V is standard on Revolution HD.
  - Scout based technologies: Allows for the Revolution HD scanner to tailor the x-ray beam to the patient being scanned by utilizing the patient attenuation scout data.
  - kV Assist: Recommends tube voltage and current to achieve the low dose while meeting desired image quality.
  - Organ Dose Modulation: Provides reduction of radiation dose via X-ray tube current modulation for superficial organs and tissues, such as breasts while maintaining diagnostic quality.
  - AutomA / SmartmA(TM): 3D modulation of the tube current to deliver the right dose at the right place.
  - Dose Reporting - provides access to the CTDIvol and DLP with the patient record prior and post exam. DICOM Structured Dose Report is also supported.
  - Dose Check - provides prospective dose alerts and warnings if pre-determined dose levels will be exceeded.
  - CT 4Kids - Dose-optimized, procedure based protocols for pediatric imaging provide more options for ensuring balanced radiation dose and image quality for specific pediatric applications.
  - University of Wisconsin-Madison School of Medicine and Public Health dose-optimized protocols: Developing, optimizing and managing protocols can be a time-consuming and expensive task- which is why we've looked to the clinical professionals at the University of Wisconsin Madison School of Medicine and Public Health for protocols optimized for GE CT systems.

There are over 150 size-specific protocols, verified and validated using rigorous ISO-9000 style processes and procedures.

- DoseWatch Explore is an introductory dose management software application that provides you secure access, via any PC with internet access, to dose and protocol data from this system. An InSite connection to the system and completion of the registration process is required to use the DoseWatch Explore application. For US and Canadian Customers, this quotation includes access to the DoseWatch Explore application for a period of time concurrent with the system warranty.

- Smart Flow - Xstream Display: A multi-purpose LCD display on the gantry that provides the following functionality.
  - Basic patient information on the gantry allowing the user to confirm patient information in the scan room, improving workflow.
  - Default Patient Positioning provides target reference points at table side allowing streamlined patient positioning for the user.
  - Movie function to assist the user in explaining the examination to patients.
  - One Stop Scanning Mode: Provides a streamlined workflow such as patient selection, protocol selection and confirm. Pre-scanning can be accomplished in as few as five touches.
  - Emergency patient mode is a dedicated user interface for emergency cases to start the examination quickly. Patient Name/Patient ID are assigned automatically and once a protocol is selected, the scan setup interface displays.
  - Dynamic Transition - allows the scan phase to start automatically when the HU of the transition ROI reaches the desired enhancement threshold.
  - AWE Connect: For facilities that have a GE AW server, this provides direct access to AW server post-processing software
- Smart Cardiac
    - SnapShot(TM) Assist package: Designed to enable successful cardiac acquisitions the first time.
    - SnapShot(TM) Freeze: Helps significantly reduce coronary motion, transcending the limits of a hardware only system.
    - SnapShot(TM) Pulse: Provides prospective gating of the coronary arteries and structures that are near the heart.
- The Low Dose 5-Beat Cardiac with SnapShot Assist package allows the user to acquire cardiac imaging exams with retrospective or prospective gated acquisitions utilizing up to 0.35 second rotation speed for excellent cardiac exams.

This package contains the following items necessary for CT Coronary Angiography:

### SnapShot Pulse

- Prospectively gated cardiac scanning technique that helps reduce patient dose by up to 83%, and improves cardiac workflow, with excellent image quality. In essence, the technique captures a complete picture of the heart using a series of three to four



snapshots taken at precise patient table positions and precisely gated (relative to conventional cardiac CT acquisitions). SnapShot Pulse helps improve workflow by reducing the size of image set to be reconstructed, reviewed and post processed. A typical SnapShot Pulse series consists of 280 to 400 images, compared with up to 3,000 images in a typical helical cardiac scan series. Since there are a smaller number of images to reconstruct, SnapShot Pulse takes less time, yet still delivers the same amount of information as a helical cardiac exam.

#### SnapShot Imaging

- Retrospectively gated helical gated cardiac scanning technique used to acquire ECG gated CT images of the coronary arteries when prospective gating can't be used. SnapShot imaging option allows users to acquire cardiac images of patients using the following cardiac imaging techniques:

- Retrospectively EKG-gated helical scanning method - SnapShot: primarily used for cardiac morphology imaging, with this technique, cardiac images of single or multiple cardiac phases at any given Z-axis location can be acquired and generated.

- EKG-gated Multi-slice CINE Scan mode: used primarily for coronary artery calcification scoring (CACS) studies or for cardiac morphology imaging.

Once a specific imaging model is selected, helical pitch and/or gantry rotation speed will be automatically selected for optimal scan coverage and image quality. SnapShot Assist: Helps users Optimize ECG-gated CT acquisitions based on patient heart rate characteristics. SnapShot Assist uses the patient's recorded heart rate information to display scan parameters (including scan mode, cardiac phases, padding and pitch) that could be used during the cardiac CT scan. SnapShot Assist generates a cardiac scan parameter recommendation using the patient's ECG analysis and user defined protocol selection algorithm. It uses the patient's recorded heart rate information to predict the heart rate behavior during a CCTA scan to assist the user with optimization of the parameters on a per-patient basis. Acquisition parameters displayed include scan mode (Cine SnapShot Pulse, Helical SnapShot Segment, etc.), cardiac phases, padding, and pitch. User Profiles define scan parameters within the heart rate and variability categories for a specific patient group and cardiac scan mode. Xstream 12" Gantry and Operator Console ECG Trace: The ECG trace provided by the ECG monitor will be displayed on the CT gantry and operator's console with this option. Allowing the user to display the live trace of the patient's heart rate and display the actual location of the window of time when the images are being acquired. It will provide easy access to patient cardiac output status and assist in providing visual feedback for optimum acquisition start.

ECG Editor: The ECG Editor allows the user to retrospectively modify trigger points identifying R-peaks on ECG trace as displayed on the console. The capability may improve successful cardiac acquisition rate by enabling users to perform the modification in the cases with irregular heartbeat or suboptimal triggers. Cardiac Enhance: Cardiac Enhance Filters provides users the capability to reconstruct filtered images using three steps of noise (pixel noise standard deviation) reduction for helical and axial cardiac imaging, which may allow a reduction of mA while maintaining an acceptable level of image performance.

ECG Dose Modulation: ECG gated dose modulation reduces patient dose by modulating x-ray technique during acquisition based on heart phase. The ECG monitor comes with this cardiac package. It will be used to monitor patient cardiac output and synchronize acquisition with that output.

#### VolumeShuttle

VolumeShuttle innovatively provides the 80-mm of coverage necessary for accurate dynamic neuro angiographic and perfusion studies with a single contrast injection. GE's exclusive real-time scan control, system architecture, and fast, smooth table acceleration and deceleration enable the patient to be effortlessly shuttled back and forth between two adjacent axial locations, with minimal inter-scan delay.

VolumeShuttle provides the wider coverage margin needed to allow for patient variability in the Circle of Willis (80mm) and from the basal ganglia to lateral ventricles (60mm) - all with the existing 40-mm-wide detector and without the multiple contrast injections necessary with today's standard CT systems.

#### Gantry:

- Xstream Display
- Aperture: 70 cm
- Rotational speeds: VariSpeed technology 360 degrees in 0.35, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0 seconds
- Integrated breathing lights & countdown timer
- Integrated start scan button with countdown timer
- Tilt: +/- 30 degrees, 1 degree per second
- Remote tilt from operator's console

Performix HD X-ray Tube: Performix HD tube with electrostatic cathode collimator design allows the focal spot to be dynamically positioned and customized to the clinical protocol and patient. The anode heat storage capability and wide range of technique gives you the flexibility to tailor protocols for even the most demanding acute care and cardiac exams without tube cooling.

- Heat storage capacity: 8.0 MHU
- Maximum power: 100 kW (835mA)
- Small focal spot power: 570mA at 120kv, standard solution
- Small focal spot power: 420mA at 120kv, high resolution
- Beam collimated to 56-degree fan angle
- Heat dissipation: -Anode (Max)2,100 KHU/min -Casing (cont) 648 KHU/min
- Dynamic Z-Axis Tracking: Automatic and continuous correction of the x-ray beam position to block unused x-ray at the beginning and end of a helical scan to reduce unnecessary radiation.

HD High Voltage Generator: The HD Generator allows for continuous high power demands required for acute care, cardiac and bariatric exams. It also supports fast kV switching capabilities

- 100 kW output power
- kV: 80, 100, 120,140
- Energy Switching Speed: up to 0.25 msec
- mA: 10 to 835, in 5 mA increments Maximum mA for each
- kV selection/Max mA:
  - 80 kV / 700 mA
  - 100kV / 800 mA
  - 120kV / 835mA
  - 140kV / 715mA

Volara HD Digital Data Acquisition System (DAS):

- Up to 2,496 views per rotation for improvement in spatial resolution and improved image quality across the entire 50cm field of view
- 7,131Hz maximum sample rate
- 58,368 available input channels
- 23 bit dynamic range, 8,000,000 to 1

Integrated Laser Alignment Lights:

- Internal and external scan planes to +/- 1 mm accuracy
- Coronal light remains perpendicular to axial light as gantry tilts making visual readout easy from tableside or the operator console

Patient Table:

- Designed for easy patient access and stability
- Vertical range: 43 cm to 99.1 cm, scannable: 78.5 cm to 99.1 cm
- Horizontal range: 1700mm, (2000mm option)
- Horizontal speed: up to 137.5 mm/sec
- Table automatically re-centers on scan plane with changes in vertical position
- Helical pitches: 0.5:1, 0.9:1, 1.375:1, 1:531:1
- Capacity: 227kg(500lb) +/- 0.25mm positional accuracy
- Heavy Capacity (Optional): 306kg (675lb) with 2,000 mm scannable range

Xtream HD Reconstruction: Breaks through existing limits on speed, image quality and flexibility to provide an optimized volumetric workflow solution from acquisition to final report.

- Delivers up to 62 fps full fidelity reconstruction
- Delivers up to 70 fps reconstruction time with image check. Provides 340x340 matrix images for confirming reconstructed image coverage in real time and tracking up to 1800mm length with less than 1s delay.
- Up to 16 fps network transfer rates
- Direct Multiplanar Reformate (DMPR) enables prospective 3D review of sagittal, coronal and oblique planes automatically
- Exam Split delivers the capability to split a series of patient images into separate groups for networking
- Data Export and Interchange that allows you to easily share images with referring physicians and patients
- Complete set of clinically proven, low dose protocols and the ability to customize your own for a total of 8,460 programmable protocols. Xtream allows you to automate or build every task into protocols to increase throughput.
- Image decomposition to: Retrospective thin images from data sets where thicker images were initially reconstructed.

Facilitates more detailed image analysis and improves 3D and reformat visualization

- Neuro 3D Filters provide users the capability to filter angiographic data using a specially designed and optimized 3D filter. May be



prospectively applied with Auto-Launch

- VariViewer is an interactive axial review mode that can change the slice thickness reconstruction instantaneously Volume Viewer provides state-of-the-art 3D visualization and processing capabilities for reading and comparing CT, MR, 3D X-ray, PET and PET/CT datasets. Volume Viewer also features a broad portfolio of high-performance analysis tools, automating routine tasks and helping to make 3D image processing a stress-free component of your routine workflow.

Scan: Xstream HD workflow allows simultaneous scanning, image reconstruction, display, processing and analysis, as well as networking, archival and filming.

- Anatomical programmer allows quick and easy access to user programmable protocols, including adult and pediatric protocols
- Protocols include preset scan time, kV, mA, scan mode, image thickness and spacing, table speed, scan FOV, display FOV and center, recon algorithm, networking destination, archiving and special processing options like Direct MPR
- AutoVoice: 3 preset (English) and 17 user defined messages automatically deliver patient breathing instructions, especially useful for multiple helical scanning
- Reconstruction Algorithms: Soft Tissue, Standard, Detail, Bone, Bone Plus, Lung and Edge

Image Networking

- Exam Transfer up to 16 frames per second on dedicated 1 Gbit connection
- Standard auto-configuring Ethernet (UTP connection) 1000/100/10 BaseT Direct network connection; multi-suite ethernet card not required for gateway out of suite
- Protocols supported: DICOM network send (one IP address at a time) and receive, pull/query, and storage commitment push, InSite point-to-point

Host Computer

PC: HP Z840 Workstation  
CPU : Dual Intel Xeon E5-2640 V3 2.6GHz eight core processor  
O/S: 64-bit  
Cache: 20 Mb cache  
RAM: 64GB DDR4  
Storage: 2x300GB SAS for system and image, RAID5 with 8x300GB SAS for raw data

Peripheral Components

- Scan control interface assembly with intercom speaker, microphone, volume controls and controls for table and gantry tilt
- 19in 1280x1024 Color LCD Monitor (2 standard)
- 104-Key USB 2.0 Keyboard
- 3-Button USB 2.0 Mouse
- 3-Button USB 2.0 Trackball (Option)
- Slim-Line Tray-Load 16X DVD-ROM Optical Drive SATA 1st Drive
- 5.25 in Bare Media
- 9.4 GB Capacity
- 480 Mb/s
- USB 2.0 port Interface supports External Hard Drive for Scan Data and USB key for System

DICOM Conformance:

- DICOM 3.0 Storage Service Class
- Service Class User (SCU) for image send
- Service Class Provider (SCP) for receive
- DICOM 3.0 Query/Retrieve Service Class
- DICOM 3.0 MOD Media Service Class
- DICOM 3.0 Storage Commitment Class Push
- DICOM 3.0 Modality Worklist (incl: Performed Procedure Step through ConnectPro option)
- DICOM 3.0 Print

InSite Broadband included: All hardware and software required to connect this CT system to GE's InSite On-Line Center via secure VPN high-speed internet connection This enables customer to access services designed to: reduce downtime, improve quality, enhance performance, increase productivity, and expand imaging capabilities, and increased privacy and security of data transmissions.

Warranty: The published Company warranty in effect on the date of shipment shall apply. The Company reserves the right to make

changes. All specifications are subject to change.

**Regulatory Compliance:** This product is designed to comply with applicable standards under the Radiation Control for Health and Safety Act of 1968.

Laser alignment devices contained within this product are appropriately labeled according to the requirements of the Center for Devices and Radiological Health.

This product complies with the performance standards of 21 CFR, sub-chapter J, and the applicable IEC 60601-1 series.

This product is a CE-compliant device that satisfies regulations regarding Electro-Magnetic Compatibility (EMC) and Electro-Magnetic Interference (EMI), pursuant to IEC-60601-1-2.

This product complies with the NEMA XR 29-2013 / MITA Smart Dose Standard.

Siting Considerations: See the Pre-Installation manual for details of the siting requirement

Line	Qty.	Catalog	
2	1.00	B7590EN	English Keyboard Kit

English Keyboard Kit

Line	Qty.	Catalog	
3	1.00	B7877LP	Long cable set

Line	Qty.	Catalog	
4	1.00	B7877DY	VT 2000 Table

The CT system 2000 table enables volume scanning. Key features of the VT 2000 table include: 500 lb weight capacity, 2000 mm scannable range, 175 mm/sec travel time, real-time position control to support advanced application such as SnapShot Pulse, VolumeShuttle, and Volume Helical Shuttle.

Line	Qty.	Catalog	
5	1.00	B7540Z5	SmartStep Interventional Software and Hardware Package

The SmartStep interventional software and hardware package allows for quick step and shoot acquisition of axial images to support CT guidance using a simple foot pedal and remote control.

A highly functional image display presents a set of 3 interventional images in 3 viewports, a free viewport, and timers for the remaining and accumulated time. The display control panel provides roam, zoom, magnify, measurement, annotation, grid, image orientation, and save screen image review capabilities.

Reference image shown on same display screen

Hand held controller - Provides the operator with controls to prepare the scanner for imaging, to turn alignment lights on and off, to move the cradle, review images, and adjust the WW/WL

Foot switch - provides in-room control of x-ray on

This package includes a in-room ceiling boom and monitor.

SmartStep

Enables an Imaging Mode for Performing Biopsies and Other Interventional Procedures. An In-room Monitor, Hand Held Controller, X-ray Exposure Foot Pedal and Cradle Handle Provide In-room Control for Image Acquisition and Image Review. The Hand Held



Controller Provides the Operator with Controls to Prepare the Scanner for Imaging, to Turn Alignment Lights On and Off, to Move the Cradle, Review Images and Adjust the Window Width and Level; and the Foot Switch Provides In-room Control of X-ray On.

A Highly Functional Image Display Presents a Set of 3 Interventional Images in 3 Viewports, a Free Viewport, and Timers for the Remaining and Accumulated Time. The Display Control Panel Provides Roam, Zoom, Magnify, Measurement, Annotation, Grid, Image Orientation, and Save Screen Image Review Capabilities. Data Acquisition Includes a 4i Data Acquisition Mode Using 4x1.25 mm, 4x2.25 mm, and 4x3.75 mm Detector Configurations and a 3i Reconstruction Mode to Create 2.5, 3.75 and 7.5 mm Thick 512 Matrix Images. All Scan Fields of View and Reconstruction Algorithms are Available with 0.8s and 1.0s Gantry Rotation Speed.

System Includes the In-room Monitor & Boom .

Line	Qty.	Catalog	
6	1.00	B7877JS	SmartMAR option

SmartMAR (Metal Artifact Reduction) software helps reduce photon starvation, beam hardening and streak artifacts cause by high Z materials in the body, such as hip implants, dental fillings, screws and other metal objects. MAR uses a novel three-step, sinogram-based iterative algorithm providing exceptional image quality. MAR also helps streamline workflow by requiring only one scan, making the process of obtaining a correct image fast and efficient.

Line	Qty.	Catalog	
7	1.00	B7900LC	Low Dose CT Lung Screening Option with Indication For Use

This option provides lung screening reference protocols that are tailored to the CT system, patient size (small, average large), and the most current recommendations from a wide range of professional medical and governmental organizations. Now, qualified GE Healthcare CT scanners with this option are formally indicated for, and can be confidently used by physicians for low dose CT lung cancer screening of identified high-risk patient populations. These protocols deliver low dose, short scan times, and clear and sharp images for the detection of small lung nodules. Early detection from an annual lung screening with low dose CT in high-risk individuals can prevent a substantial number of lung cancer-related deaths.

All new GE 64-slice and greater CT scanners, and virtually all of the 16-slice CT scanners that GE Healthcare sells are qualified for this screening option. This solution is also available to thousands of qualified GE CT scanners currently in use, increasing access to the quality scanners that satisfy both patient and physician needs. The new protocols, do include the choice for the user to be able to utilize GE Healthcare's industry-leading technologies such as ASIR™, ASIR-V™ and Veo™ that are designed to reduce image noise, which is undesirable for physicians looking for small nodules.

This option contains two documents. Lung Cancer Screening Option Reference Protocol Guide, and the Lung Cancer Screening Option User Manual / Technical Reference Manual

i) The following GE Healthcare CT scanners are qualified to receive the new low dose CT Lung Cancer Screening Option: LightSpeed 16, BrightSpeed Elite, LightSpeed Pro16, Optima CT540, Discovery CT590 RT, Optima CT580, Optima CT580 W, Optima CT590 RT, LightSpeed Xtra, LightSpeed RT16, LightSpeed VCT, LightSpeed VCT XT, LightSpeed VCT XTe, LightSpeed VCT Select, Optima CT660, Revolution EVO, Discovery CT750 HD, Revolution HD, Revolution CT, Revolution Frontier.

ii) Moyer V. Screening for Lung Cancer: U.S. Preventive Services Task Force Recommendation Statement. Ann Intern Med. 2014;160:330-338.

<http://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/lung-cancer-screening>

Line	Qty.	Catalog	
8	1.00	B7820GT	Xtream Integrated Injector Interface Kit - Class IV

Xtream Injector provides one handed synchronized start of the scan and injection from the CT Operators console or from the scan



room providing consistent simultaneous start of contrast injection and scan acquisition protocols.

It utilizes the CIA Class 4 functionality which includes the following benefits:

Up to a 50% reduction in the number of user interface selections needed when compared to systems not utilizing the Xtream Injector. The 50% reduction comes from the fact that users select one button to start the scan acquisition and injection.

- Better control of contrast enhancement by synchronizing start time of the contrast injection and CT scan
- Improved workflow by enabling single-button start of both the injector and scanner from the scanner
- Injection parameter preview from the scanner console prior to beginning the scan
- Post-study review of injection results from the scanner console
- Automatic documentation of injection results in PACS

Line	Qty.	Catalog	
9	1.00	B77292CA	CT Service Cabinet

Service cabinet for system accessories storage

Line	Qty.	Catalog	
10	1.00	B7660B	Chair

Chair for CT scanner

Line	Qty.	Catalog	
11	1.00	B75342CA	Coronal Head Holder

Coronal Head Holder.

Line	Qty.	Catalog	
12	1.00	B7864PZ	Eaton 14.4 KVA 3-Phase Partial System UPS for GE CT and PET/CT Scanners

Eaton's 14.4 KVA 3-Phase partial system UPS (Uninterruptible Power Supply) has been specifically configured to coordinate with compatible GE CT and PET/CT scanners.

The partial system UPS provides clean, reliable, constant voltage power to the scanner electronics. It helps protect the system's sensitive electronic components from damaging power anomalies such as high frequency noise transients and over voltage and under voltage conditions.

Utilizing the Partial system UPS can help maintain user productivity and improve system reliability. It can also help to reduce service costs and prevent system downtime.

Specifications:

1. Rating: 14.4 KVA
2. Input voltage range: three phases; 102-132V/phase
3. Input frequency range: 45-65 Hertz
4. Input power factor: >95% typical
5. Output frequency: 50 or 60 Hertz, autosensing
6. Output regulation: <3% steady state for all conditions of line and load



- 7. Voltage distortion: <5% threshold
- 8. Overload capacity: 110% for 10 minutes; 125% for 1 minute; 149% for 5 seconds.
- 9. Efficiency: >90% typical
- 10. Battery backup time: >10 minutes typical
- 11. Battery recharge time: < 3 hours to 80% capacity typical
- 12. Operating temperature: 50°F - 104°F (10°C - 40°C)
- 13. Floor heat dissipation: 5122 BTU/hour typical @11.5 KVA
- 14. Humidity: 20-80% relative humidity, non-condensing
- 15. Audible noise (norm mode): <60 dBA @1 meter
- 16. Dimensions (H x W x D): 49 inches x 12 inches x 32 inches (1245 mm x 305 mm x 813 mm)
- 17. Weight: 620 lbs (277 kg)

NOTE: THE PARTIAL SYSTEM UPS HAS DIFFERENT INTERACTIONS WITH COMPATIBLE SCANNERS, BASED ON DIFFERENT SCANNER POWER ARCHITECHURE. REFER TO THE PARTIAL SYSTEM UPS PRODUCT DATA SHEET FOR DETAILS.  
 NOTE: ITEM IS NON-RETURNABLE AND NON-REFUNDABLE  
 NOTE: REMOVAL/DISPOSAL OF OLD UPS IS THE CUSTOMERS RESPONSIBILITY  
 NOTE: CONTACT GE SERVICE OR EATON FOR START-UP ASSISTANCE

Line	Qty.	Catalog	
13	1.00	B78552CA	CT Operator Console Desk

The Freedom workspace is an ergonomic working environment specifically designed for use with the GE Healthcare imaging systems. The sleek table design enables the efficient use of space while enhancing clinical workflow and technologist comfort.

The Freedom workspace provides a minimalist footprint to improve patient visibility and giving the user easier access to patients in the imaging suite.

It offers sit/stand and horizontal/vertical monitor flexibility. It can also help reduce noise and heat with remote location options of the console. The non-adjustable Freedom workspace version is 1300mm long x 895mm wide x 850mm height and weighs 55.8kg.

Line	Qty.	Catalog	
14	1.00	E4502BE	CT Main Disconnect and UPS Control 380-480V 50 60Hz 125A

Main Disconnect Panel (MDP) UL 125A 400/480V 50/60Hz 3 phases for CT, PET and PETCT

The (Main Disconnect and UPS Control Panel serves as the main facility power disconnect source installed ahead of the CT system PDU. On systems where the optional partial system UPS is included in the system, the panel provides NEC mandated UPS emergency power-off control function via a UPS control cable included with the UPS. The optimized design PDB saves time, installation labor, and valuable mounting space by consolidating the main circuit breaker, control power source and required warning lights into a compact factory manufactured panel. The panel provides short circuit protection, overload protection and National Electrical Code and Canadian Electrical Code required emergency shutdown for the system. The 24-volt low voltage controls all power, using either the panel cover mounted EMERGENCY OFF push button or the remote EMERGENCY OFF push button included with each system. The PDB is painted to match the imaging system for a total coordinated system appearance. Available in a combination surface/semi-flush mounted enclosure. The system provides stock availability of otherwise special-order devices, saving time and installation costs.

**Benefits**

- The System Main Disconnect saves time, installation labor, and valuable mounting space by consolidating the main circuit breaker, the feeder overcurrent devices, magnetic contactors and UPS emergency power-off into one compact panel
- The system provides stock availability of otherwise special-order devices, saving time and installation costs
- Reduces installation time and cost by eliminating delays in obtaining individually enclosed components and by eliminating on site assembly
- UPS emergency power-off functions are included for future, partial system UPS addition.





- Disconnects system power on first loss of incoming power, preventing damage to system components
- Provides a standardized platform for UPS or other future GE engineered modifications or upgrades
- Main power disconnect operating handle can be padlocked in the OFF position for servicing safety and OSHA lock out/tag out
- The door has provisions for padlocking
- Enclosure door is interlocked with ON / OFF disconnect handle to prevent unauthorized access if disconnect is in the ON position

**Features**

- Optional partial system UPS provides clean uninterrupted power to the system computer, maintaining system integrity during power loss while also providing a solution to power quality problems
- UL, cUL listed, and CE labeled
- Supplied with low voltage, cover mounted Push to Stop, Twist to Restore pushbutton and long-life LED pilot lights
- Provides overcurrent and short circuit protection with GE GuardEON solid-state circuit breakers
- Suitable for use on systems with 25,000A of short circuit current. It is the installer's responsibility to verify that the available short circuit current is 25,000A or less for compliance to all electrical codes
- Emergency-off disconnects power to both the PDU and optional partial system UPS output, per National Electric Code
- Factory wired and tested
- All devices are selected for high reliability and long life
- Panel disconnect provides OSHA lockout / tag out provisions

**Remote EPO**

- This MDP comes with two normally closed contact blocks attached to the back of the emergency off push button.

**Seismic Specifications**

- This Panel has been certified by an independent California structural engineer in conformance with the shake testing requirements of ICC-AC 156. The California OSHPD number is OSP-0457-10.
- The seismic performance characteristics are as follows: SDS(g) ≤ 2.56; z/h ≤ 1.0 ; Ip ≤ 1.5

**Physical Characteristics**

- Dimensions: Height x Width x Depth: 30 x 16 x 8 inches (762 x 407 x 203 mm)
  - Handle depth: 2.75 inches (70 mm)
  - Weight: 55 pounds (25 kg)
- Components supplied with each panel

- The Main Disconnect and UPS Control Panel
- An Installation, Operations & Service Manual
- (2) sets of Emergency Power Off pushbuttons with 2NC on each EPO
- Drawings and Electrical Schematics

**NOTES:**

- Customer is responsible for arranging for installation with a qualified party
- ITEM IS NON-RETURNABLE AND NON-REFUNDABLE

Line	Qty.	Catalog	
15	1.00	EB016AN	CT Table Slicker with Cushion - 2000 Systems (2-pc Set)

**FEATURES/BENEFITS**

- Two-piece, sealed slicker cushion set has comfort pads enclosed inside the slicker cover and extender cover
- Durable, clear PVC plastic cover facilitates faster, more thorough cleanup of blood and fluids
- Increase system uptime by protecting table from spills and particulate contaminants
- Thermo-sealed seams and flaps prevent contaminate buildup in hard to clean areas

**COMPATIBILITY**

- VCT with GT 2000 Table, CT HD750

Line	Qty.	Catalog	
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16 1.00 E80168A CT Footswitch Slicker - 2000 & 1700 Systems

The footswitch slicker for CT VCT 2000 and 1700 systems is made of durable, clear PVC plastic that protects the footswitch and facilitates faster, more thorough cleanup of contamination caused by blood and other body fluids. Cover is held securely in place with Velcro.

Line	Qty.	Catalog	
17	1.00	W0301CT	TIP CT Scanner 1 Training Program

This training program is designed for customers purchasing a GEHC CT system to include Optima, EVO, or Cardiographe. GEHC will work with the designated Customer contact to agree upon a reasonable training schedule for a pre-defined group of core technologists that will leverage blended content delivery and may include a combination of onsite days and virtual offerings, to include TIP Virtual Assist, the GEHC Answerline, and available on-demand courses ("Virtual Inclusions"). This blended curriculum with multiple delivery platforms promotes learner retention and allows for an efficient and effective skill development.

This program may contain:

- Onsite training (generally 10 days)
- Virtual Inclusions may include:
  - o Remote instructor-led training: Instructor leads a remote training session one-on-one or in a group, typically for 1 hour
  - o Answerline Support-Access to GEHC experts for clinical, non-emergency applications assistance via phone or by using the iUnq button on the imaging console
  - o Tip Virtual Assist-Direct interactive access to a GEHC expert for enhanced support.
  - o On Demand courses-On healthcare learning system. Self-paced courses and webinars (CE and non-CE).

Onsite training days will be mutually agreed upon, but generally will not exceed 14 days. Onsite training will be provided from 8am-5pm local time Monday-Friday. Virtual Offerings are unlimited. This training program has a term of six (6) months commencing on Acceptance, where all onsite training must be scheduled and completed within six (6) months of Acceptance, and all Virtual Inclusions also expire at the end of such six (6) month period. Additional onsite days may be available for purchase separately.

All GEHC "Training" terms and conditions apply. Given the unique nature of this program, if this program is purchased as part of a purchase under a Governing Agreement, including any Master Purchase Agreement, Group Purchasing Organization Agreement, or Strategic Alliance Agreement, this program shall take precedence over any conflicting training deliverables set forth therein.

Line	Qty.	Catalog	
18	1.00	R23053AC	Standard Service License

GE Healthcare has reclassified its service tools, diagnostics and documentation into various classes (please refer to the Service Licensing Notification statement at the beginning of this Quotation). The Standard License provides access to service tools used to perform basic level service on the Equipment and is included at no charge for the warranty period.

Line	Qty.	Catalog	
19	1.00	E8007PJ	OCS III Mounting Plate

Line	Qty.	Catalog	
20	1.00	MB1521XF	Volume Viewer Refresh

Line	Qty.	Catalog	
21	1.00	B79821RE	CardIQ Xpress 2.0 Reveal

CardIQ Xpress 2.0 Reveal is an integrated post processing image analysis software for Cardiovascular CT on GE's Advantage Workstation.

The optional CardIQ Xpress Reveal software can be used to effectively display, reformat and analyze 2D, 3D, and GSI CT images for qualitative or quantitative assessment of the anatomy of the heart and coronary artery vessels from single or multiple cardiac phase image data sets. When used with CardIQ Function, CardIQ Xpress Reveal can also provide functional assessment including relative perfusion information.

CardIQ Xpress Reveal can be launched directly or from within Volume Viewer applications using gated axial, helical or GSI CT images; including images created using the SnapShot Freeze intelligent motion correction option.

The software includes a variety of different 2D, 3D or reformatted protocols including: display of the coronary vessel tree, angiographic view, 2D and 3D rendering of single or multiple coronary artery vessels or grafts, automatic reformation of cross sectional cardiac images into planes along short or long axis of the heart, one-touch cath views for 3D or reformatted images, 3D angiographic view phase registration, color mapped plaque density measurements, IVUS-like views, 3D ejection fraction, 4D aortic and Mitral valve views, relative perfusion, transparency views and beating heart images from single or multiple cardiac phase image data sets.

CardIQ Xpress Reveal combines simplified user workflow with SnapShot Freeze intelligent motion correction imaging.

- o Pre-processing the images & models including SnapShot Freeze exams, for faster review
- o Loading images into the auto launch area for real-time review of multiple exams
- o Easy switching from one protocol to the other without exiting the application
- o Single click one-touch cath views
- o Batch movie output within cardiac reformat
- o User defined layouts within vessel analysis for simplified viewing and filming
- o Multi-phase load to single phase review

The CardIQ Xpress reveal option allows the user to:

- o Rendering and display of 2D/3D coronary vascular tree images with automatic vessel tracking & labeling with single click of a protocol. Images can be reviewed in axial, reformat, curved, oblique MPVR, and cross section views
- o Measurements of coronary arteries including stenosis and stenosis length, and density
- o PlaQID to color code non-calcified and calcified plaque with volume measurements.
- o 2D reformat review with predefined views to review all coronary vessels.
- o Color enhanced relative perfusion defect pattern recognition for detection of ischemic heart disease with 4 color patterns
- o Automatically render data for streamlined reading to include: 3D rendered heart, angiographic view, tree VR, and ejection fraction.
- o Reformat standard axial CT images of single or multiple cardiac phases automatically into short, long and two chamber long axis of the heart for easy review
- o Perform functional evaluation of the heart and cine capabilities for multiphase beating heart images with one easy click
- o Extraction of the left ventricle and automated ejection fraction and volume measurements. Note: CardIQ Function Xpress is needed if myocardial wall motion, mass, wall thickness or chamber volumes for the Right Ventricle, Left Atrium, Right Atrium is needed.
- o 4D aortic valve and mitral valve views with one touch
- o Ability to select different protocols without exiting the application
- o Pre-defined VR IVUS-like views for virtually determining plaque compositions
- o One touch angiographic view protocol display coronary vessel tree and myocardium with automatic removal of heart chambers for cath comparative view
- o Heart transparency model allowing for full visualization of coronaries in relations to the heart chambers with the ability to fade out the chambers of the heart
- o Oblique reformat views in the standard cath angles for easy analysis of the coronary vessels



GE Healthcare

December 12, 2019

Quote Number: 2004459196.19

Customer ID: 23917

Agreement Expiration Date: 3/11/2020

- o Load multi-phase images, review the data and decide which phase or phases will be reviewed for further processing by dropping the non-essential phases
- o Phase registration - ability to register images from different cardiac phases into a unique data set. The data set can then be saved as a 3D object and/or used for further analysis

**System requirements:**

- o AW VolumeShare 7 or AW Server 3.2
- o Auto Launch and Preprocessing Option

**Total Quote Net Selling Price: \$810,000.00**

# ATTACHMENT B

**Projected Capital Cost Form  
NHBMCT**

Building Purchase Price	NA
Purchase Price of Land	NA
Closing Costs	NA
Site Preparation	NA
Construction/Renovation Contract(s)	\$463,000
Landscaping	NA
Architect / Engineering Fees	\$45,300
Medical Equipment	\$810,000
Non-Medical Equipment	NA
Furniture	NA
Consultant Fees (specify)	NA
Financing Costs	NA
Interest during Construction	NA
Other (Construction Contingency)	\$46,300
<b>Total Capital Cost</b>	<b>\$1,364,600</b>

**CERTIFICATION BY A LICENSED ARCHITECT OR ENGINEER**

I certify that, to the best of my knowledge, the projected capital cost for the proposed project is complete and correct.

*Nelson C. Souza*

Signature of Licensed Architect or Engineer

Date Signed: 12/12/2019

**CERTIFICATION BY AN OFFICER OR AGENT FOR THE PROPONENT**

I certify that, to the best of my knowledge, the projected total capital cost for the proposed project is complete and correct and that it is our intent to carry out the proposed project as described.

*Shelburne Stevens*

Signature of Officer/Agent

Date Signed: 12/12/2019

Chief Executive Officer

**EQUIPMENT COMPARISON**

NH Brunswick Medical Center – CT Scanner Replacement	EXISTING EQUIPMENT	REPLACEMENT EQUIPMENT
Type (e.g., Cardiac Catheterization, Gamma Knife®, Heart-lung bypass machine, Linear Accelerator, Lithotripter, MRI, PET, Simulator, CT Scanner, Other Major Medical Equipment)	CT	CT
Manufacturer	GE	GE
Model number	Optima 660	HD 128
Other method of identifying the equipment (e.g., Room #, Serial Number, VIN #)	445957CN4	TBD
Is the equipment mobile or fixed?	Fixed	Fixed
Date of acquisition	August 2016	2020
Was the existing equipment new or used when acquired? / Is the replacement equipment new or used?	Used	New
Total projected capital cost of the project <Attach a signed Projected Capital Cost form>	\$567,054	\$1,364,600
Total cost of the equipment	\$397,000	\$810,000
Location of the equipment <Attach a separate sheet for mobile equipment if necessary>	Brunswick Co.	Brunswick Co.
Document that the existing equipment is currently in use	Attached <sup>(1)</sup>	NA
Will the replacement equipment result in any increase in the average charge per procedure?	NA	No
If so, provide the increase as a percent of the current average charge per procedure	NA	NA
Will the replacement equipment result in any increase in the average operating expense per procedure?	NA	No
If so, provide the increase as a percent of the current average operating expense per procedure	NA	NA
Type of procedures performed on the existing equipment <Attach a separate sheet if necessary>	CT Scans	CT
Type of procedures the replacement equipment will perform <Attach a separate sheet if necessary>	NA	CT Scans

Date of last revision: 5/17/19

<sup>(1)</sup> See attached. BMC operates 1 CT & will operate 1 CT after this project.

# ATTACHMENT C



All responses should pertain to October 1, 2017 through September 30, 2018.

d. **Mobile MRI Services** Campus - if multiple sites: N/A for NHBMC  
 During the reporting period.

1. Did the facility own one or more mobile MRI scanners?  Yes  No

If Yes, how many? \_\_\_\_\_ Of these, how many are grandfathered? \_\_\_\_\_  
 CON Project ID numbers for non-grandfathered mobile scanners owned by facility:  
 \_\_\_\_\_

Did the facility contract for mobile MRI services?  Yes  No

If Yes, name of mobile vendor: \_\_\_\_\_

e. **Other MRI**

Patients served on units listed in the next table should not be included in the MRI Patient Origin Table on page 30 of this application. For hospitals that operate medical equipment at multiple sites/campuses, please copy the MRI pages and provide separate data for each site/campus.

Campus - if multiple sites: N/A for BMC

Other Scanners	Units	Inpatient Procedures*			Outpatient Procedures*			TOTAL Procedures
		With Contrast or Sedation	Without Contrast or Sedation	TOTAL Inpatient	With Contrast or Sedation	Without Contrast or Sedation	TOTAL Outpatient	
Other Human Research MRI scanners	<u>0</u>							
Intraoperative MRI (iMRI)	<u>1</u>							

\* An MRI procedure is defined as a single discrete MRI study of one patient (single CPT coded procedure). An MRI study means one or more scans relative to a single diagnosis or symptom.

f. **Computed Tomography (CT)** Campus - if multiple sites: NHBMC

How many fixed CT scanners does the hospital have? 1  
 Does the hospital contract for mobile CT scanner services?  Yes  No  
 If yes, identify the mobile CT vendor N/A

Complete the following table for fixed and mobile CT scanners.

	Type of CT Scan	FIXED CT Scanner # of Scans	MOBILE CT Scanner # of Scans
1	Head without contrast	4,253	<u>0</u>
2	Head with contrast	609	
3	Head without and with contrast	42	
4	Body without contrast	3,894	
5	Body with contrast	5,325	
6	Body without contrast and with contrast	393	
7	Biopsy in addition to body scan with or without contrast	25	
8	Abscess drainage in addition to body scan with or without contrast	5	
	Total	14,556	<u>1</u>