

We treat you like family.

NORTHEASTERN
VERMONT REGIONAL
HOSPITAL



Docket No. GMCB-009-15con

**Certificate of Need Application
Replacement of Mobile MRI with a Fixed MRI Unit
Northeastern Vermont Regional Hospital
March 2, 2017**

Submitted by:
Paul Bengtson, Chief Executive Officer
Northeastern Vermont Regional Hospital
1315 Hospital Drive
St. Johnsbury, VT 05819
802-748-7399
p.bengtson@nvrh.org

**Northeastern Vermont Regional Hospital
Replacement of Mobile MRI with a Fixed MRI Unit
Docket No. GMCB-009-15con**

Table of Contents

- I. Transmittal Letter
- II. Request for Expedited Review of Application
- III. Application Form
- IV. Project Budget
- V. Organization Chart
- VI. Project Description
 - a. MRI Replacement
 - b. Construction and Renovation
- VII. HRAP CON Standards and Statutory Criteria Responses
 - a) MRI Replacement
 - b) Construction and Renovation
- VIII. Completed Financial Tables
- IX. Verification Under Oath

Appendices

- 1. Complete Description of Existing Siemens Magnetom Symphony RS MRI Scanner
- 2. Complete Description of New Siemens Magnetom Aera MRI Scanner
- 3. Architectural Plans
 - a. Site Plan
 - b. Key Plan –Project Location
 - c. Existing Conditions Floor Plan
 - d. Schematic Floor Plan
 - e. Schematic Elevations, Schematic Building Section
- 4. Estimated Construction Budget
- 5. Letter from Efficiency Vermont
- 6. Compliance With Applicable Facility Guideline Institute Requirements, 2014 Edition
- 7. Trended MRI Volume Statistics

We treat you like family.

March 2, 2017

NORTHEASTERN
VERMONT REGIONAL
HOSPITAL



Donna Jerry, Senior Health Policy Analyst
Green Mountain Care Board
89 Main Street, Third Floor, City Center
Montpelier, VT 05620

**RE: Docket No. GMCB-009-15con
Replacement of Mobile MRI with Fixed MRI Unit**

Dear Ms. Jerry:

Northeastern Vermont Regional Hospital (NVRH) is applying for a Certificate of Need (CON) to replace its existing MRI scanner, contained in an onsite trailer, with a fixed MRI scanner. To accommodate the fixed MRI scanner NVRH will construct new space totaling 1,374 square feet and renovate approximately 252 square feet of existing space.

The enclosed application includes the following documents:

- Request for Expedited Review
- Completed Application Form
- Project Budget
- Organization Chart
- Project Description
- Responses to Applicable Statutory Requirements and Appendices
- Completed Financial Tables
- Verification of Oath

I understand the Green Mountain Care Board (GMCB) will invoice NVRH for the application fee.

We thank the GMCB for considering NVRH's application to replace its existing MRI scanner, contained in an onsite trailer, with a fixed MRI scanner and to complete the construction and renovations required to house the new scanner.

Sincerely,

A handwritten signature in black ink, appearing to read "Paul R. Bengtson", written in a cursive style.

Paul R. Bengtson, CEO
802-748-7399
p.bengtson@nvrh.org

CC: NVRH Board of Trustees



March 2, 2017

Donna Jerry, Senior Health Policy Analyst
Green Mountain Care Board
89 Main Street, Third Floor, City Center
Montpelier, VT 05620

**RE: Docket No. GMCB-009-15con
CON for MRI equipment and Construction**

Dear Ms. Jerry:

In connection with filing its application for a Certificate of Need (CON) to replace an existing MRI scanner with a new fixed MRI scanner and, to complete the required construction and renovations, Northeastern Vermont Regional Hospital (NVRH) respectfully requests expedited review of its application by the Green Mountain Care Board (GMCB) pursuant to Green Mount Care Board Rule §4.304.

Under Rule §4.304(1)(a) "an applicant seeking expedited review of an application must show, and the Board must determine, that: (a) the application is likely to be uncontested and the proposed project does not substantially alter services." NVRH's application consists of replacing a MRI scanner, contained in an onsite trailer, with a fixed MRI scanner. NVRH is the only facility with MRI capability in our service area and we are unaware of any competing MRI units being considered in our service area. Therefore, we believe it is very unlikely our application will be contested. Additionally, this CON application does not substantially alter the services being offered as the "project does not raise any significant health policy issues or planning concerns" and the "project consists of routine replacement of existing equipment that is ...out of date..." (See Green Mountain Care Board Rule §4.304(2)(a) and (b)(ii.)

Please contact me if you have any questions regarding this request for an expedited review of this application.

Sincerely,

A handwritten signature in blue ink that reads "Paul R. Bengtson". The signature is fluid and cursive, with the first name "Paul" and last name "Bengtson" clearly legible.

Paul R. Bengtson, CEO
802-748-7399
p.bengtson@nvrh.org

Certificate of Need Application Form

Name of Applicant Northeastern Vermont Regional Hospital
Date of Application March 2, 2017
Project Title Replacement of MRI Scanner
Address Street 1 1315 Hospital Drive
Street 2 _____
City/Town St. Johnsbury
State VT
Zip Code 05819
Telephone number 802-748-7520
FAX 802-748-4098
E-mail address r.hersey@nvrh.org

Project Type & Amount (indicate project category below)

Non-Hospital Categories

- Construction, development, purchase, renovation, or other establishment of a health care facility, or any capital expenditure by or on behalf of a health care facility, for which the capital cost exceeds \$1,500,000.
- A change from one licensing period to the next in the number of licensed beds of a health care facility through addition or conversion, or through relocation from one physical facility or site to another.
- Offering any home health service.
- The purchase, lease, or other comparable arrangement of a single piece of diagnostic or therapeutic equipment for which the cost, or in the case of a donation, the value, is in excess of \$1,000,000.¹
- Offering of a health care service or technology having an annual operating expense which exceeds \$500,000 for either of the next two budgeted fiscal years, if the service or technology was not offered or employed by the health care facility within the previous three fiscal years.
- A project which is exempt from the requirements above solely because the cost or value does not exceed financial thresholds, if the cost or value is greater than \$750,000 or, in the case of medical equipment, \$500,000 and if the commissioner finds that the proposed development:
 1. may be inconsistent with the health resource allocation plan;
 2. has the potential for significantly increasing utilization or rates; or
 3. may substantially change the type, scope or volume of service.

¹ For purposes of this subdivision, the purchase or lease of one or more articles of medical equipment which are necessarily interdependent in the performance of their ordinary functions or which would constitute any health care facility as determined by the commissioner, are considered together in calculating the amount of an expenditure.

Project Type & Amount, continued

Hospital Categories

- Construction, development, purchase, renovation, or other establishment of a health care facility, or any capital expenditure by or on behalf of a health care facility, for which the capital cost exceeds \$3,000,000.
- The purchase, lease, or other comparable arrangement of a single piece of diagnostic or therapeutic equipment for which the cost, or in the case of a donation, the value, is in excess of \$1,000,000.²
- Offering a health care service or technology having an annual operating expense which exceeds \$500,000 for either of the next two budgeted fiscal years, if the service or technology was not offered or employed by the hospital within the previous three fiscal years.
- Change from one licensing period to the next in the number of licensed beds of a health care facility through addition or conversion, or through relocation from one physical facility or site to another.

Proposed Capital Expenditure (Total from Table 1 in application)

\$ 3051,564

Proposed Lease Amount (payment times term)

\$ _____

Please note:

The Chief Executive Officer of the applying entity must sign and attach verification form 'A'.

² See footnote 1.

NOTE: When completing this table make entries in the shaded fields only.

**Northeastern VT Regional Hospital
Replacement of MRI Scanner
TABLE 1
PROJECT COSTS**

Construction Costs	
1. New Construction	\$ 1,367,384
2. Renovation	
3. Site Work	
4. Fixed Equipment	1,385,769
5. Design/Bidding Contingency	
6. Construction Contingency	\$67,784
7. Construction Manager Fee	55,627
8. Other (please specify)	-
Subtotal	\$ 2,876,564
Related Project Costs	
1. Major Moveable Equipment	
2. Furnishings, Fixtures & Other Equip.	
3. Architectural/Engineering Fees	\$175,000
4. Land Acquisition	
5. Purchase of Buildings	
6. Administrative Expenses & Permits	
7. Debt Financing Expenses (see below)	-
8. Debt Service Reserve Fund	-
9. Working Capital	-
10. Other (please specify)	-
Subtotal	\$ 175,000
Total Project Costs	\$ 3,051,564

Debt Financing Expenses	
1. Capital Interest	\$ -
2. Bond Discount or Placement Fee	-
3. Misc. Financing Fees & Exp. (issuance costs)	-
4. Other	-
Subtotal	\$ -
Less Interest Earnings on Funds	
1. Debt Service Reserve Funds	\$ -
2. Capitalized Interest Account	-
3. Construction Fund	-
4. Other	-
Subtotal	\$ -
Total Debt Financing Expenses	\$ -
feeds to line 7 above	

Northeastern Vermont Regional Hospital
Replacement of Mobile MRI with a Fixed MRI Unit
Docket No. GMCB-009-15con

Project Description

MRI Replacement

Northeastern Vermont Regional Hospital (NVRH) proposes to replace a refurbished Siemens Magnetom Symphony RS MRI scanner with a Siemens Magnetom Aera MRI scanner. The existing Symphony scanner is housed in a fixed onsite trailer. A complete description of the existing Magnetom Symphony scanner is presented in Appendix 1. A complete description of the new Magnetom Aera scanner is presented in Appendix 2. Schematic floor plans are presented in Appendix 3. NVRH has signed an agreement with Siemens, pending CON approval, to purchase the Magnetom Aera for \$1,385,769 (See Appendix 2.)

MRI technology came to NVRH on a part-time basis in October 1999. At that time a trailer would arrive at NVRH on Monday night carrying a mobile MRI machine. The trailer would leave NVRH on Tuesday night. A few years later MRI service was extended from two nights a week to three nights a week on alternating weeks. In March, 2012 a MRI scanner, the refurbished Magnetom Symphony, was installed at NVRH in a fixed onsite trailer. That unit is still in use at the hospital.

The refurbished Magnetom Symphony scanner was manufactured in 2006 and is based on technology available since the early 2000's. Since the Symphony was developed there have been vast improvements in scanner technology. These include:

- Increased homogeneity of the magnetic field
- Increased power and accuracy of RF coils
- Increased software efficiency

These technological improvements in scanner technology have resulted in:

- Increased spatial resolution of images
- Increased signal to noise ratio
- Decreased scanner times
- Decreased scan artifacts
- Increased ease of operation and fewer scanning errors
- Increased flexibility of use of the scanner with varying patient body types

The resulting image quality improvement allows much greater diagnostic certainty in many imaging situations. Some examples include:

- Greatly increased diagnostic accuracy in scanning of musculoskeletal structures particularly the ligamentous and cartilaginous structures of the shoulder, knee and elbow, which are commonly scanned body parts

Northeastern Vermont Regional Hospital
Replacement of Mobile MRI with a Fixed MRI Unit
Docket No. GMCB-009-15con

- Greatly increased visualization in the postsurgical examinations of the cervical, thoracic and lumbar spine with more clear-cut differentiation between postsurgical changes and new pathology
- Greatly increased reliability of scanning of vascular structures including commonly performed MR angiography of carotid arteries and intracranial arteries
- Greatly increased efficacy and accuracy of abdominal scanning, particularly including commonly performed examinations such as MR cholangiopancreatography

Our Radiologist Group provided the following examples of how large a difference a new scanner will make in providing better images for clinical decision making:

- One of our most common scans is a knee MRI. On our current scanner we are often uncertain whether there is a torn ACL or meniscus. We are left with many indeterminate scans. This will happen far less often with a scanner from the current generation of MRI technology such as the Magnetom Aera
- One of our next most common scans is a lumbosacral spine MRI. The current generation of MRI technology such as the Magnetom Aera scanner, is much more accurate in delineating the margins of the intervertebral discs so that we are more likely to be able to see a small disc herniation and to determine whether a disc herniation is actually impinging on a nerve root or not. The new scanners are also much less susceptible to artifact and we will have far fewer non-diagnostic scans.
- Another common scan is a brain MRI. With our current scanner brain MRIs are acceptable in most circumstances. However, increased detail available in a current generation such as the Magnetom Aera will be able to show us additional detail that we may not currently be able to see; an example of this would be answering the question of whether there is optic nerve enhancement in a patient with multiple sclerosis, which we typically are unable to determine on our current scanner. The pattern of enhancement of the pituitary gland will also be much easier to see on the new scanner.
- The most clear-cut improvement in scanning accuracy will be on a shoulder MRI, which is another of our more commonly performed examinations. Currently we are typically unable to evaluate most of the ligamentous structures and are often uncertain of the exact anatomy of a rotator cuff tear, which may be important in determining the need for surgery. With the current generation of scanners, such as the new Magnetom Aera, the anatomy is much more easily seen and we will much more frequently be able to provide useful and complete diagnostic results.

In addition to the Magnetom Symphony MRI scanner, other diagnostic imaging modalities are available at NVRH. Images from all of the diagnostic imaging equipment are stored in a PACS system making them readily available to NVRH providers throughout the enterprise. Some of the fluoroscopic and diagnostic equipment take digital images and some take analog images that are converted into a digital

Northeastern Vermont Regional Hospital
Replacement of Mobile MRI with a Fixed MRI Unit
Docket No. GMCB-009-15con

format by a computed radiography reader. Following is a list of all diagnostic imaging equipment available at NVRH:

- Philips fluoroscopic and diagnostic Machine;
- Siemens diagnostic machine;
- Siemens diagnostic machine;

- (2) Siemens diagnostic machines located in Orthopedic Clinics
- Siemens Symbia T SPECT CT Gamma Camera nuclear medicine machine

The following equipment is available at NVRH through an arrangement with our Radiologist group:

- Siemens Perspective 128 Slice CT scanner
- (2) Siemens S2000 diagnostic Ultrasound scanner
- Siemens SC200 Cardiac scanner

Images from the CT scanner and both ultrasound machines are also stored in our PACS system.

Project Description

New Construction and Renovation of Existing Space

In August, 2010 NVRH completed a building expansion project, the Diagnostic Imaging, Day Surgery and Information Services project (Docket No. 06-001-H.) Space to park the fixed MRI trailer against an exterior building wall was provided during that project, as was a corridor leading to the MRI trailer from the main Diagnostic Imaging department. Currently, a large overhead door seals off the space between the building and the onsite trailer when the MRI is not in use. The total existing MRI square footage consists of a 150 square foot corridor and 400 square feet within the onsite trailer. To house the new fixed MRI scanner the space where the current fixed trailer is parked will be converted to a completely enclosed structure by constructing a 1,374 gross square foot addition (*) and renovating 252 square feet of existing space. The MRI square footage will increase from 550 square feet to 1,473 square feet. The new space will include:

- Magnet room
- Equipment room
- Access control vestibule
- Control Area
- Injection room
- Post-screened holding room

An existing Access office will be converted to a toilet and changing room area. A new Access Office will be constructed to replace the existing Access office.

A construction manager, HP Cummings, has provided a construction budget. Their estimated project cost is \$1,490,795 (See Appendix xx.) Architect fees, permitting fees and miscellaneous other expenses will add approximately \$175,000 to the project cost.

(*) 1,374 square feet at floor level and 1,446 at roof level due to an overhang

**Northeastern Vermont Regional Hospital
Replacement of Mobile MRI with a Fixed MRI Unit
Docket No. GMCB-009-15con**

STATUTORY CRITERIA 1

(1) The application is consistent with the Health Resource Allocation Plan:

- **Institute of Healthcare Improvement (IHI), "Triple Aims": (a) improving the individual experience of care; (b) improving the health of populations; (c) reducing the per capita costs of care for populations.**

The application is consistent with the health resource allocation plan as evidenced by consistency with the Institute of Healthcare Improvement (IHI) Triple Aims.

Our existing MRI equipment was manufactured in 2006 and based on technology first available in the early 2000s. As compared to that technology, the scanner technology available today provides better quality image, fewer scan artifacts and decreased scan time. Also, the scanner opening is wider and will allow scanning of claustrophobic patients. The following summarizes the application's consistency with each of the IHI's Triple Aims:

- **Enhanced MRI patient experience**
 - Wider bore is less stressful for many patients especially those who experience claustrophobia
 - Decreased scan times reduce the level of radiation patients are exposed to
 - Fewer patients will need to travel out of the area for MRI scans
 - Those who experience claustrophobia
 - Those requiring repeat scans due to poor image quality
 - Lower out of pocket costs for patient for those requiring repeat scans
- **Lower costs per capita**
 - Fewer repeat MRI studies due to poor image quality with current scanner
 - Lower out of pocket cost to patients requiring repeat studies due to poor image quality
 - Reduced cost for patients to travel for repeat MRI scans
- **Improved population health**
 - Improved clinical decision capability will result in quicker diagnosis of condition and therefore quicker treatment of detected problem
 - Population will benefit by having access to highest quality MRI equipment currently available for a community hospital

Northeastern Vermont Regional Hospital
Replacement of Mobile MRI with a Fixed MRI Unit
Docket No. GMCB-009-15con

APPLICABLE HRAP CON STANDARDS

MRI Equipment

CON STANDARD 1.1: Applicants shall include published BISHCA quality measures for services related to a specific application, for the applicant and other hospitals that report on that quality measure. The applicant shall demonstrate how the project will improve or assist in the improvement of the relevant quality measures, if the applicant's score is not above the national or the Vermont average. This application is for replacement of an existing MRI scanner contained in a fixed onsite trailer with a fixed MRI scanner located in newly constructed space within our diagnostic imaging department. NVRH is unaware of any published BISHCA quality measures for MRI scans. We are aware that the current MRI scanner does not always produce quality images. This results in repeated studies at another facility. The increased power and accuracy of radio frequency coils included in the fixed unit and other technologic improvements will significantly improve the quality of MRI images. These improvements will allow much greater diagnostic certainty in many imaging situations. Some examples include:

- Greatly increased diagnostic accuracy in scanning of musculoskeletal structures particularly the ligamentous and cartilaginous structures of the shoulder, knee and elbow, which are commonly scanned body parts
- Greatly increased visualization in the postsurgical examinations of the cervical, thoracic and lumbar spine with more clear-cut differentiation between postsurgical changes and new pathology
- Greatly increased reliability of scanning of vascular structures including commonly performed MR angiography of carotid arteries and intracranial arteries
- Greatly increased efficacy and accuracy of abdominal scanning, particularly including commonly performed examinations such as MR cholangiopancreatography

In summary, better image quality will result in fewer repeat MRI scans, which means lower system costs to obtain a usable image.

CON STANDARD 1.3: To the extent neighboring health care facilities provide the services proposed by a new health care project, an applicant shall demonstrate that a collaborative approach to delivering the service has been taken or is not feasible or appropriate.

NVRH does collaborate with neighboring health care facilities when it's practicable to do so. Examples of our collaborative efforts include a joint venture with North Country Hospital to operate a Sleep Study program in St. Johnsbury; sharing of our three general surgeons with Cottage Hospital and collaborating with Littleton Regional Healthcare for Otolaryngology services in St. Johnsbury.

However, this project does not present an opportunity to collaborate with a neighboring provider. MRI technology has become the standard of care for all community hospitals in order to provide timely diagnostic information for clinical decision making. NVRH's primary service area includes a population of approximately 30,000 people. Based on available data (OECD), one scanner for a population of 30,000 people is about average for the United States. We anticipate the scanner will run at about 70%

Northeastern Vermont Regional Hospital
Replacement of Mobile MRI with a Fixed MRI Unit
Docket No. GMCB-009-15con

of its capacity, further supporting the need for a dedicated MRI scanner at NVRH. Further, not having current technology such as quality MRI images available for clinicians will make the challenging process of recruiting high quality providers exponentially more challenging.

CON STANDARD 1.4: If an application proposes services for which a higher volume of such service is positively correlated to better quality, the applicant shall show that it will be able to maintain appropriate volume for the service and that the addition of the service at the facility will not erode volume at any other Vermont facility in such a way that quality at that facility could be compromised. The new Siemens Magnetom Aera scanner will produce better quality images than the existing Siemens Magnetom Symphony. The new scanner will also make it possible to comfortably scan claustrophobic patients. For these reasons, and with the recent addition of a busy orthopedic surgeon, we anticipate MRI volume will increase from 1,216 to 1,400 scans per year. Seventy-five of the additional scans will result from the new scanner. The 1,400 scans per year is well within the Aera' capacity.

Patients who are referred elsewhere for MRI scans either because the Symphony doesn't always produce the quality image needed for clinical decision making, or because its narrow bore is too narrow for claustrophobic patients, currently go to a New Hampshire facility. Therefore, the increased MRI volume at NVRH will not erode volume at any other Vermont facility.

CON STANDARD 1.6: Applicants seeking to develop a new health care project shall explain how the applicant will collect and monitor data relating to health care quality and outcomes related to the proposed new health care project. To the extent practicable, such data collection and monitoring shall be aligned with related data collection and monitoring efforts, whether within the applicant's organization, other organizations or the government.

NVRH constantly evaluates the quality of MRI images, as well as the quality of all diagnostic images. As a result, we are aware the current MRI scanner does not always produce quality images. Image quality will significantly improve with the new MRI scanner, for reasons provided below.

The new MRI scanner offers several technologic improvements including:

- Increased homogeneity of the magnetic field
- Increased power and accuracy of RF coils
- Increased software efficiency

These technological improvements provide:

- Increased spatial resolution of images
- Increased signal to noise ratio
- Decreased scanner times
- Decreased scan artifacts
- Increased ease of operation and fewer scanning errors
- Increased flexibility of use of the scanner with varying patient body types

Northeastern Vermont Regional Hospital
Replacement of Mobile MRI with a Fixed MRI Unit
Docket No. GMCB-009-15con

The resulting image quality improvement will provide better outcomes. Specific examples include:

- Greatly increased diagnostic accuracy in scanning of musculoskeletal structures particularly the ligamentous and cartilaginous structures of the shoulder, knee and elbow, which are commonly scanned body parts
- Greatly increased visualization in the postsurgical examinations of the cervical, thoracic and lumbar spine with more clear-cut differentiation between postsurgical changes and new pathology
- Greatly increased reliability of scanning of vascular structures including commonly performed MR angiography of carotid arteries and intracranial arteries
- Greatly increased efficacy and accuracy of abdominal scanning, particularly including commonly performed examinations such as MR cholangiopancreatography

Once the project is complete, image quality will be monitored to assure these desired outcomes are achieved.

CON STANDARD 1.7: Applicants seeking to develop a new health care project shall explain how such project is consistent with evidence-based practice. Such explanation may include a description of how practitioners will be made aware of evidence based practice guidelines and how such guidelines will be incorporated into ongoing decision making. (2005 State Health Plan, page 48.)

The Radiologists at NVRH use the American College of Radiology (ACR) criteria to assure the most appropriate imaging decision is made for all diagnostic imaging, including MRI imaging. To further support the Radiologists efforts, NVRH just signed an agreement with National Decision Support for ACR Select. ACR Select is a comprehensive national standards clinical decision support database that provides evidence-based support for the appropriate utilization of all medical imaging procedures.

Whenever an imaging procedure is requested that isn't considered appropriate based on evidence-based practices, the Radiologists will have a discussion with the referring provider to explain a more appropriate imaging procedure.

Another method of making referring practitioners aware of evidence-based practice guideline is the use of

- Reference sheets provided to referring providers by Diagnostic Imaging that indicate the best practice based on desired diagnosis, for example, CT vs MRI for muscle tears
- Ongoing conversations between the referring provider and our radiologists on best practices
- The provider's traditional clinical training

These methods of assuring evidence-based practices for use of MRI capabilities will continue after the new MRI unit is placed into service.

CON STANDARD 3.4: Applicants subject to budget review shall demonstrate that a proposed project has been included in hospital budget submissions or explain why inclusion was not feasible.

Northeastern Vermont Regional Hospital
Replacement of Mobile MRI with a Fixed MRI Unit
Docket No. GMCB-009-15con

The MRI project was included in Report 6 of NVRH's fiscal year 2016 budget submission as Plan Year 2017 CON expenditure. The project was also include in Report 6 of NVRH's fiscal year 2017 budget submission as a Budget Year 2017 expenditure

CON STANDARD 3.5: Magnetic resonance imaging (MRI) capacity shall not be increased until current capacity is in excess of valid state, regional and/or national benchmarks for medically necessary exams per year and sufficient additional need is demonstrated based on such benchmarks. An applicant proposing a project involving MRI shall provide information on current use, document the effectiveness of the internal program utilized by the applicant to prevent overuse, and verify that the applicant does not have financial incentives in place to encourage MRI utilization.

The project does not increase current MRI capacity. Rather the project replaces an existing MRI scanner with outdated technology with a new MRI scanner. The project is required due to poor image quality with the existing scanner, a refurbished Magnetom Symphony machine.

For budget year 2017 MRI volume at NVRH was estimated at 1,216 scans per year (see Appendix 7 for trended MRI volume). Due to the availability of better image quality and the recent addition of a busy orthopedic surgeon, we anticipated MRI volume will increase to 1,400 scans per year.

There are no financial incentives in place at NVRH that would encourage MRI utilization.

To prevent overutilization of all diagnostic imaging services NVRH's Radiologist group uses the American College of Radiology (ACR) criteria to assure the most appropriate imaging decision is used. To further support the Radiologists efforts, NVRH just signed an agreement with National Decision Support for ACR Select. ACR Select is a comprehensive national standards clinical decision support database that provides evidence-based support for the appropriate utilization of all medical imaging procedures.

Whenever an imaging procedure is requested that isn't considered appropriate based on evidence-based practices, the Radiologists will have a discussion with the referring provider to explain a more appropriate imaging procedure.

As one additional step toward eliminating over-utilization of all services the NVRH Board of Trustees voted to adopt the Choosing Wisely Program.

We do anticipate having a new MRI scanner will increase volume. Due to the poor image quality from the current Symphony scanner some patients are referred out of the area for MRI scans. The new scanner will provide the following improvements over the current refurbished scanner:

- Greatly increased diagnostic accuracy in scanning of musculoskeletal structures particularly the ligamentous and cartilaginous structures of the shoulder, knee and elbow, which are commonly scanned body parts
- Greatly increased visualization in the postsurgical examinations of the cervical, thoracic and lumbar spine with more clear-cut differentiation between postsurgical changes and new pathology
- Greatly increased reliability of scanning of vascular structures including commonly performed MR angiography of carotid arteries and intracranial arteries

Northeastern Vermont Regional Hospital
Replacement of Mobile MRI with a Fixed MRI Unit
Docket No. GMCB-009-15con

- Greatly increased efficacy and accuracy of abdominal scanning, particularly including commonly performed examinations such as MR cholangiopancreatography

The improved quality of images will result in fewer patients being referred out of the area for MRI scans. In addition to the above improvements, the Magnetom Aera also provides a wider-opening for patients.

The narrow opening of the current Magnetom Symphony scanner makes it difficult, and sometimes impossible, to scan claustrophobic patients. Therefore, it is not uncommon for claustrophobic patients to be referred out of the area to a facility with newer MRI technology for scans

We do not anticipate the new MRI scanner will reduce utilization of other diagnostic imaging modalities. Patients who are not getting MRI scans at NVRH with the current machine, due to either poor image quality or claustrophobia, receive scans at other facilities rather than getting a diagnostic image by another modality at NVRH.

The hours of service are Monday thru Friday, 8:00 to 4:30 pm. The hours will not change after the project is completed. The current MRI is used at approximately 65% of its capacity. We anticipate the new MRI will operate at approximately 70% of capacity.

CON STANDARD 3.7: Applicants proposing to replace diagnostic or therapeutic equipment shall demonstrate that existing equipment is fully depreciated, or the cost of the early replacement, including the cost of the remaining depreciation on existing equipment, is less costly than keeping the existing equipment.

NVRH leases the current Magnetom Symphony from Siemens. The equipment is 11 years old. The estimate useful life of an MRI scanner is 7 years. Therefore, had NVRH purchased a scanner manufactured in 2006, it would be fully depreciated. Further, the current scanner is technologically obsolete as explained in the Project Description.

CON STANDARD 3.19: An applicant seeking to purchase a piece of diagnostic or therapeutic equipment shall include an analysis of whether other health care system costs may be reduced through more effective interventions through the use of the equipment. As appropriate, hospitals shall provide scientific evidence supporting the migration of such equipment and technology outside of tertiary care facilities.

The project is for replacement of an existing MRI scanner primarily to improve image quality. It is not anticipated that other health care system costs will be reduced significantly although there may be a reduction of MRI scanning costs at those facilities receiving patients from NVRH for either primary or secondary MRI scans due to poor image and or inability to scan claustrophobic patients with our existing scanner.

CON STANDARD 3.20: Applications to purchase diagnostic or therapeutic equipment, or to expand facilities to accommodate major medical equipment purchases, shall address the appropriateness of such distribution as compared to population, the availability of appropriately trained personnel, an evaluation of patient need versus convenience, urgent versus non-urgent use, and appropriate protocol to reduce the risk of repetitive testing (both within the facility purchasing the equipment and within the health care system).

**Northeastern Vermont Regional Hospital
Replacement of Mobile MRI with a Fixed MRI Unit
Docket No. GMCB-009-15con**

The project is for replacement of an existing MRI scanner contained in onsite trailer with an onsite MRI scanner in newly constructed space. We are not expanding the capacity of diagnostic equipment.

NVRH serves a geographic area with a population of approximately 30,000. Based on available data (OECD), one scanner for a population of 30,000 people is about average in the United States. We anticipate the scanner will run at about 70% of its capacity, further supporting the need for a dedicated MRI scanner at NVRH

To prevent repetitive MRI scans at NVRH our radiologist group uses the American College of Radiology (ACR) criteria to assure the most appropriate imaging decision is used each time a scan is requested.

Whenever an imaging procedure is requested that isn't considered appropriate based on evidence-based practices, the Radiologists will have a discussion with the referring provider to explain a more appropriate imaging procedure

The main purpose of installing a new MRI scanner is to improve the image quality. With the current scanner some patients do need repeat scans due to the poor image quality. Therefore, the project will reduce repetitive testing in the overall health care system.

CON STANDARD 3.22: For applications involving the purchase of diagnostic or therapeutic equipment, applicants shall establish, through the submission of evidence in the form of peer-reviewed or similar articles, the clinical efficacy of the diagnoses or procedures to be performed.

The project is for replacement of an existing MRI scanner. We do not anticipate any new images will be performed after the new scanner is installed. Therefore, this standard does not apply.

CON STANDARD 3.23: In addition to proving need, applicants seeking to add or expand diagnostic or therapeutic equipment shall show that the equipment reduces costs and/or improves quality.

This project is for replacement of an existing MRI scanner contained in an onsite trailer with a fixed onsite MRI scanner. The project does add or expand diagnostic or therapeutic equipment. The project is intended to improve image quality for clinical decision making and reducing the number of repeat MRI scans.

Examples of quality improvements anticipated with the new scanner as compared to the quality of images produced by our current scanner include:

- One of our most common scans is a knee MRI. On our current scanner we are often uncertain whether there is a torn ACL or meniscus. We are left with many indeterminate scans. This will happen far less often with a scanner from the current generation of MRI technology such as the Magnetom Aera
- One of our next most common scans is a lumbosacral spine MRI. The current generation of MRI technology such as the Magnetom Aera scanner, is much more accurate in delineating the margins of the intervertebral discs so that we are more likely to be able to see a small disc herniation and to determine whether a disc herniation is actually impinging on a nerve root or not. The new scanners are also much less susceptible to artifact and we will have far fewer non-diagnostic scans.

**Northeastern Vermont Regional Hospital
Replacement of Mobile MRI with a Fixed MRI Unit
Docket No. GMCB-009-15con**

-
- Another common scan is a brain MRI. With our current scanner brain MRIs are acceptable in most circumstances. However, increased detail available in a current generation such as the

Magnetom Aera will be able to show us additional detail that we may not currently be able to see; an example of this would be answering the question of whether there is optic nerve enhancement in a patient with multiple sclerosis, which we typically are unable to determine on our current scanner. The pattern of enhancement of the pituitary gland will also be much easier to see on the new scanner.

- The most clear-cut improvement in scanning accuracy will be on a shoulder MRI, which is another of our more commonly performed examinations. Currently we are typically unable to evaluate most of the ligamentous structures and are often uncertain of the exact anatomy of a rotator cuff tear, which may be important in determining the need for surgery. With the current generation of scanners, such as the new Magnetom Aera, the anatomy is much more easily seen and we will much more frequently be able to provide useful and complete diagnostic results

CON STANDARD 3.24: An applicant shall disclose potential financial conflicts of interest between hospitals and physicians and an equipment purchase.

There are no conflicts of interest between NVRH and any physician with the purchase the new MRI scanner.

Northeastern Vermont Regional Hospital
Replacement of Mobile MRI with a Fixed MRI Unit
Docket No. GMCB-009-15con

APPLICABLE HRAP CON STANDARDS

Construction and Renovation

CON STANDARD 1.9: Applicants proposing construction projects shall show that costs and methods of the proposed construction are necessary and reasonable. Applicants shall show that the project is cost-effective and that reasonable energy conservation measures have been taken.

In August, 2010 NVRH completed a building expansion project, the Diagnostic Imaging, Day Surgery and Information Services project (Docket No. 06-001-H.) Space to park the fixed MRI trailer against an exterior building wall was provided during that project, as was a corridor leading to the MRI trailer from the main Diagnostic Imaging department. Currently, a large overhead door seals off the space between the building and the onsite trailer when the MRI is not in use. The total existing MRI square footage consists of a 150 square foot corridor and approximately 400 square feet within the trailer. To house the new fixed MRI scanner the space where the current fixed trailer is parked will be converted to a completely enclosed structure by constructing a 1,374 (*) gross square foot addition (1,224 for MRI and 150 for Access office.) The MRI square footage will increase from 550 square feet to 1,375 square feet.

The new space will include:

- A magnet room
- An equipment room
- An access control vestibule
- A control Area
- An injection room
- A post-screened holding room

An existing Access office will be converted to a toilet and changing room area. A new Access Office will be constructed to replace the existing Access office

The building expansion and renovation project has a life expectancy of 25 years.

Schematic level plans have been prepared by the project architect, Craig Lewis, from Fleck and Lewis. A construction manager previously used by NVRH, HP Cummings, has prepared a cost estimate for the project from the schematic plans. Their estimated construction and renovation cost is \$1,490,795 or \$877.97 per square foot based on total additional and renovated space of 1,698 square feet. We believe our plan is the most cost effective solution to meet our needs for new MRI space. Upon receipt of a Certificate of Need, NVRH will work with the architect, construction manager and sub-contractors and complete a comprehensive review of the plans to assure the most cost effective design has been achieved. We will also work with Efficiency Vermont to assure that all reasonable energy conservation measures will be taken.

Following is a summary of key construction assumptions:

(*) 1,374 square feet at floor level and 1,446 at roof level due to an overhang

**Northeastern Vermont Regional Hospital
Replacement of Mobile MRI with a Fixed MRI Unit
Docket No. GMCB-009-15con**

The structural system for the addition will be a concrete foundation system, structural steel building structure, concrete slab on grade.

The exterior wall system will include:

- Brick veneer
- 2" air cavity
- 3" rigid insulation
- 5/8" gypsum sheathing
- 5/8" interior gypsum wall board

The roof system will include:

- Metal roof deck
- Tapered rigid insulation
- Single ply membrane roofing

Other construction and renovation assumptions include:

- Fire protection - Extending existing sprinkle system into the building for the new addition and pre-action system
- Plumbing – Extending existing services into the addition to accommodate new plumbing fixtures and medical gases
- HVAC – Extending existing HVAC into the addition to accommodate heating and cooling air exchanges
- Electrical – Reworking the existing MRI service to the new addition and extending existing services to the addition to accommodate general electrical, fire alarm and communication systems.

Following is an estimated project timeline:

- | | |
|--|------------------|
| • Begin Construction Floor and Engineering Plans | July 10, 2017 |
| • Finalize contractor and sub-contractor selection | October 9, 2017 |
| • Relocate Existing MRI Trailer | October 13, 2017 |
| • Construction Begins | October 16, 2017 |
| • Construction Ends | April 15, 2018 |
| • New MRI Service Begins | May 1, 2018 |

CON STANDARD 1.10: Applicants proposing new health care projects requiring construction shall show such projects are energy efficient. As appropriate, applicants shall show that Efficiency Vermont, or an organization with similar expertise, has been consulted on the proposal.

Our goal is to achieve the highest level of energy efficiency that is appropriate for a construction project of this nature. NVRH and the project architects are working in partnership with Efficiency Vermont to achieve that goal. Please refer to the letter from Efficiency Vermont included as Appendix 5.

CON STANDARD 1.11: Applicants proposing new health care projects requiring new construction shall demonstrate that new construction is the more appropriate alternative when compared to renovation.

Northeastern Vermont Regional Hospital
Replacement of Mobile MRI with a Fixed MRI Unit
Docket No. GMCB-009-15con

In addition to looking at constructing the 1,374 addition NVRH considered a modular-structure solution for the fixed site MRI scanner. We received two proposals. The first was a PDC Cassette Entrée Diagnostic Imaging Suite Building. The second was a Medical Structures Magnum 1657 MRI Modular Building. Installing the modular unit would require extensive site work. Based on estimates from HP

Cummings, the cost difference between constructing a 1,374 addition and installing the modular option was approximately \$400,000. The following factors were considered in making the decision to construct more space:

- The new construction is a permanent solution and provides 1,374 of additional footprint. It's a "real" building with life expectancy of 30 years. The life expectancy of the modular unit is considerably less.
- The new construction provides more net workable space for staff and patients
- The new construction provides more options when it is time to replace the Magnetom Aera in 5-7 years. For example, the modular unit may or may not be large enough for a replacement MRI scanner.
- The new construction retains an Access Department office in the area of diagnostic services (Laboratory and Diagnostic Imaging)
- The new construction allows for a more efficient flow of patients from zone to zone.

CON STANDARD 1.12: New construction health care projects shall comply with the Guidelines for Design and Construction of Health Care Facilities as issued by the Facility Guidelines Institute (FGI), 2014 edition.

The project will comply with all pertinent Facility Guideline Institute, 2014 Edition, requirements as explained in Appendix 6, a letter from the project architect, Craig Lewis from the firm Fleck and Lewis. Also refer to Appendix 3, which are schematic level plans for the construction and renovation project.

The construction and renovation project will take approximately 26 weeks to complete. During that time the existing onsite trailer will be relocated on the hospital campus to ensure MRI scanning is available until the project is completed.

**Northeastern Vermont Regional Hospital
Replacement of Mobile MRI with a Fixed MRI Unit
Docket No. GMCB-009-15con**

STATUTORY CRITERIA Nos. 2-8

(2) The cost of the project is reasonable because;

(A) the applicant's financial condition will sustain any financial burden likely to result from completion of the project;

Please note that the responses on the projects impact on the hospitals financial condition apply to both the MRI equipment project and the construction/renovation project as the components can't be separated.

As highlighted in the table below the project will not materially change NVRH's annual operating margin or other key financial metrics. The maximum reduction in net operating margin anticipated with the project is \$124,146, as shown in Financial Tables. NVRH will be looking for opportunities within the diagnostic imaging department and elsewhere to offset this possible operating margin reduction.

	Proposed Year 1 W/Out Project	Proposed Year 2 W/Out Project	Proposed Year 3 W/Out Project	Proposed Year 1 W/ Project	Proposed Year 2 W/ Project	Proposed Year 3 W/ Project
Operating Margin %	1.9%	1.9%	1.9%	1.9%	1.8%	1.8%
Bad Debt & Free Care%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Compensation Ratio	60.1%	60.1%	60.1%	60.0%	59.8%	59.8%
Capital Cost % of Total Expenses	4.2%	4.2%	4.2%	4.4%	4.6%	4.6%

(B) the project will not result in an undue increase in the costs of medical care. In making a finding under this subdivision, the commissioner shall-consider and weigh relevant factors, including:

- (i) the financial implications of the project on hospitals and other clinical settings, including the impact on their services, expenditures, and charges;**
- (ii) whether the impact on services, expenditures, and charges is outweighed by the benefit of the project to the public; and**

The project will allow NVRH to maintain and improve and critical diagnostic imaging tool for our clinicians. The project will not significantly increase the cost of medical care and will not impact other services. It will allow us to continue meeting an essential community need for quality diagnostic imaging services.

C) less expensive alternatives do not exist, would be unsatisfactory, or are not feasible or appropriate;

Northeastern Vermont Regional Hospital
Replacement of Mobile MRI with a Fixed MRI Unit
Docket No. GMCB-009-15con

To our knowledge, for the types of images produced by an MRI scanner, there are no known alternatives.

(3) there is an identifiable, existing, or reasonably anticipated need for the proposed project which is appropriate for the applicant to provide;

There is an existing need in the community for an MRI scanner. NVRH currently performs 1,200 MRI scans per year. We anticipate with the new scanner and with the addition of a third orthopedic surgeon, MRI volume will increase to 1,400 scans per year, which would put the machine at 70% of its capacity. With this project, we are looking to significantly improve the quality of MRI images available to our providers in order for them to make better clinical decisions and improve patient outcomes.

(4) the project will improve the quality of health care in the state or provide greater access to health care for Vermont's residents, or both;

The project will have a significant impact on the quality of MRI images produced at NVRH. Examples of quality improvements anticipated with the new scanner as compared to the quality of images produced by our current scanner include:

- One of our most common scans is a knee MRI. On our current scanner we are often uncertain whether there is a torn ACL or meniscus. We are left with many indeterminate scans. This will happen far less often with a scanner from the current generation of MRI technology such as the Magnetom Aera
- One of our next most common scans is a lumbosacral spine MRI. The current generation of MRI technology such as the Magnetom Aera scanner, is much more accurate in delineating the margins of the intervertebral discs so that we are more likely to be able to see a small disc herniation and to determine whether a disc herniation is actually impinging on a nerve root or not. The new scanners are also much less susceptible to artifact and we will have far fewer non-diagnostic scans.
- Another common scan is a brain MRI. With our current scanner brain MRIs are acceptable in most circumstances. However, increased detail available in a current generation such as the Magnetom Aera will be able to show us additional detail that we may not currently be able to see; an example of this would be answering the question of whether there is optic nerve enhancement in a patient with multiple sclerosis, which we typically are unable to determine on our current scanner. The pattern of enhancement of the pituitary gland will also be much easier to see on the new scanner.

The most clear-cut improvement in scanning accuracy will be on a shoulder MRI, which is another of our more commonly performed examinations. Currently we are typically unable to evaluate most of the ligamentous structures and are often uncertain of the exact anatomy of a rotator cuff tear, which may be important in determining the need for surgery. With the current generation of scanners, such as the new Magnetom Aera, the anatomy is much more easily seen

Northeastern Vermont Regional Hospital
Replacement of Mobile MRI with a Fixed MRI Unit
Docket No. GMCB-009-15con

and we will much more frequently be able to provide useful and complete diagnostic resultsNVRH response unbolded

- (5) the project will not have an undue adverse impact on any other existing services- provided by the applicant;**

We do not anticipate the new MRI scanner will reduce utilization of other diagnostic imaging modalities

- (6) the project will serve the public good;**

The new MRI scanner will be available and will provide better quality images on an equal basis to all 30,000 residents of our primary service area and to those residing outside our service area that chose NVRH for their health care needs. Our Patient Assistance Program will make the scanner available to those who do not have the financial means to pay for this service.

- (7) the applicant has adequately considered the availability of affordable, accessible patient transportation services to the facility; and**

This project will not affect the availability of affordable, accessible transportation services to patients. Patients will continue to have the same access as is currently available.

- (8) if the application is for the purchase or lease of new health care information technology, it conforms with the health information technology plan established under section 9351 of this title. (Added 1979, No. 65, § 1; amended 1985, No. 234 (Adj. Sess.), § 5; 1987, No. 96, § 12; 1991, No. 160 (Adj. .Sess.), § 27, eff. May 11, 1992; 1993, No. 50, § 4; 1995, No. 180 (Adj. Sess.), §§ 27, 38(a); 1997, No. 159 (Adj. Sess.), § 10, eff. March 15, 1999; 2003, No. 53, § 13, eff. July 1, 2005; No. 53, § 26; 2005, No. 71, § 277a; 2007, No. 70, § 34; 2007, No. 139 (Adj; Sess.), § 8; 2009, No. 61, § 5; 2009, No. 83 (Adj. Sess.), § 3, eff. April 21, 2010.)**

No new health care information technology will be purchased or leased as part of the MRI project.

**Northeastern VT Regional Hospital
Replacement of MRI Scanner**

TABLE 1
PROJECT COSTS

Construction Costs	
1. New Construction	\$ 1,367,384
2. Renovation	
3. Site Work	
4. Fixed Equipment	1,385,769
5. Design/Bidding Contingency	
6. Construction Contingency	\$67,784
7. Construction Manager Fee	55,627
8. Other (please specify)	-
Subtotal	<u>\$ 2,876,564</u>
Related Project Costs	
1. Major Moveable Equipment	
2. Furnishings, Fixtures & Other Equip.	
3. Architectural/Engineering Fees	\$175,000
4. Land Acquisition	
5. Purchase of Buildings	
6. Administrative Expenses & Permits	
7. Debt Financing Expenses (see below)	-
8. Debt Service Reserve Fund	-
9. Working Capital	-
10. Other (please specify)	-
Subtotal	<u>\$ 175,000</u>
Total Project Costs	<u><u>\$ 3,051,564</u></u>

Debt Financing Expenses	
1. Capital Interest	\$ -
2. Bond Discount or Placement Fee	-
3. Misc. Financing Fees & Exp. (issuance costs)	-
4. Other	-
Subtotal	<u>\$ -</u>
Less Interest Earnings on Funds	
1. Debt Service Reserve Funds	\$ -
2. Capitalized Interest Account	-
3. Construction Fund	-
4. Other	-
Subtotal	<u>\$ -</u>
Total Debt Financing Expenses	<u><u>\$ -</u></u>
feeds to line 7 above	



**Northeastern VT Regional Hospital
Replacement of MRI Scanner**

TABLE 2
DEBT FINANCING ARRANGEMENT, SOURCES & USES OF FUNDS

Sources of Funds		
1. Financing Instrument	Bond	
a. Interest Rate	0.0%	
b. Loan Period	To: [REDACTED]	
c. Amount Financed		\$ -
2. Equity Contribution		3,051,564
3. Other Sources		
a. Working Capital		-
b. Fundraising		-
c. Grants		-
d. Other		-
Total Required Funds		\$ 3,051,564

Uses of Funds		
<u>Project Costs (feeds from Table 1)</u>		
1. New Construction		\$ 1,367,384
2. Renovation		-
3. Site Work		-
4. Fixed Equipment		1,385,769
5. Design/Bidding Contingency		-
6. Construction Contingency		67,784
7. Construction Manager Fee		55,627
8. Major Moveable Equipment		-
9. Furnishings, Fixtures & Other Equip.		-
10. Architectural/Engineering Fees		175,000
11. Land Acquisition		-
12. Purchase of Buildings		-
13. Administrative Expenses & Permits		-
14. Debt Financing Expenses		-
15. Debt Service Reserve Fund		-
16. Working Capital		-
17. Other (please specify)		-
Total Uses of Funds		\$ 3,051,564

Total sources should equal total uses of funds.

NORTHEASTERN VT REGIONAL HOSPITAL

Replacement of MRI Scanner

INCOME STATEMENT
Table 3A

WITHOUT PROJECT

	2015	2016	2016	2016	2017	2018	2019	2020	
	Actual	Budget	% change	Projection	% change	Budget	% change	Budget	% change
			#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!
REVENUES									
INPATIENT CARE REVENUE	30,362,996	30,462,800	0.3%	29,426,000	-3.4%	30,834,700	4.8%	30,834,700	0.0%
OUTPATIENT CARE REVENUE	83,758,833	90,561,600	8.1%	96,383,700	6.4%	100,998,100	4.8%	100,998,100	0.0%
OUTPATIENT CARE REVENUE - PHYSICI/	16,347,393	18,315,600	12.0%	17,976,600	-1.9%	18,885,100	5.1%	18,885,100	0.0%
CHRONIC/SNF PT CARE REVENUE	-	1,749,000	23.0%	1,387,300	-20.7%	1,453,600	4.8%	1,453,600	0.0%
SWING BEDS PT CARE REVENUE	1,421,770	-		-		-		-	
GROSS PATIENT CARE REVENUE	131,890,992	141,089,000	7.0%	145,173,600	2.9%	152,171,500	4.8%	152,171,500	0.0%
DISPROPORTIONATE SHARE PAYMENTS	1,636,300	1,460,700	-10.7%	1,528,100	4.6%	1,730,400	13.2%	1,730,400	0.0%
BAD DEBT FREE CARE	(5,368,700)	(5,930,000)	10.5%	(5,747,600)	-3.1%	(6,022,700)	4.8%	(6,022,700)	0.0%
DEDUCTIONS FROM REVENUE	(62,609,998)	(68,524,400)	9.4%	(71,743,900)	4.7%	(76,539,800)	6.7%	(76,539,800)	0.0%
NET PATIENT CARE REVENUE	65,548,594	68,095,300	3.9%	69,210,200	1.6%	71,339,400	3.1%	71,339,400	0.0%
OTHER OPERATING REVENUE	1,292,542	1,648,676	27.6%	1,554,200	-5.7%	1,585,100	2.0%	1,585,100	0.0%
TOTAL OPERATING REVENUE	66,841,136	69,743,976	4.3%	70,764,400	1.5%	72,924,500	3.1%	72,924,500	0.0%
OPERATING EXPENSE									
SALARIES NON MD	22,292,961	22,978,900	3.1%	23,397,700	1.8%	24,290,000	3.8%	24,290,000	0.0%
FRINGE BENEFITS NON MD	8,356,620	7,799,600	-6.7%	7,605,800	-2.5%	7,813,400	2.7%	7,813,400	0.0%
FRINGE BENEFITS MD	1,646,055	2,375,100	44.3%	2,191,900	-7.7%	2,337,200	6.6%	2,337,200	0.0%
PHYSICIAN FEES SALARIES CONTRACTS	6,021,231	8,504,500	41.2%	7,977,800	-6.2%	8,506,800	6.8%	8,506,800	0.0%
HEALTH CARE PROVIDER TAX	3,610,431	3,800,000	5.3%	3,950,000	3.9%	4,100,000	3.8%	4,100,000	0.0%
DEPRECIATION AMORTIZATION	2,507,862	2,658,300	6.0%	2,396,000	-9.9%	2,606,000	8.8%	2,606,000	0.0%
INTEREST - LONG/SHORT TERM	390,431	472,000	20.9%	337,700	-28.5%	378,000	11.9%	378,000	0.0%
OTHER OPERATING EXPENSE	20,548,000	20,108,000	-2.1%	21,500,900	6.9%	21,478,100	-0.1%	21,478,100	0.0%
TOTAL OPERATING EXPENSE	65,373,391	68,696,400	5.1%	69,357,800	1.0%	71,509,500	3.1%	71,509,500	0.0%
NET OPERATING INCOME (LOSS)	1,467,745	1,047,576	-28.6%	1,406,600	34.3%	1,415,000	0.6%	1,415,000	0.0%
NON-OPERATING REVENUE	(1,099,487)	-	-100.0%	-	-	-	-	-	-
EXCESS (DEFICIT) OF REVENUE OVER E	368,258	1,047,576	184.5%	1,406,600	34.3%	1,415,000	0.6%	1,415,000	0.0%
Operating Margin %	2.2%	1.5%		2.0%	1.9%	1.9%	1.9%	1.9%	1.9%
Bad Debt & Free Care %	4.1%	4.2%		4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Compensation Ratio	58.6%	60.6%		59.4%	60.1%	60.1%	60.1%	60.1%	60.1%
Capital Cost % of Total Expenses	4.4%	4.6%		3.9%	4.2%	4.2%	4.2%	4.2%	4.2%

NORTHEASTERN VT REGIONAL HOSPITAL

Replacement of MRI Scanner

INCOME STATEMENT
Table 3B

	2015		2016		2017		Proposed Yr 2018		Proposed Yr 2019		Proposed Yr 2020		
	Actual	Budget	% change	Projection	% change	Budget	% change	2018	% change	2019	% change	2020	% change
REVENUES													
INPATIENT CARE REVENUE			#DIV/0!		#DIV/0!		#DIV/0!	109,375	#DIV/0!	262,500	#DIV/0!	262,500	#DIV/0!
OUTPATIENT CARE REVENUE			#DIV/0!		#DIV/0!				#DIV/0!		#DIV/0!		#DIV/0!
OUTPATIENT CARE REVENUE - PHYSICIAN			#DIV/0!		#DIV/0!				#DIV/0!		#DIV/0!		#DIV/0!
CHRONIC/SNF PT CARE REVENUE			#DIV/0!		#DIV/0!				#DIV/0!		#DIV/0!		#DIV/0!
SWING BEDS PT CARE REVENUE			#DIV/0!		#DIV/0!				#DIV/0!		#DIV/0!		#DIV/0!
GROSS PATIENT CARE REVENUE	-	-	#DIV/0!	-	#DIV/0!	-	109,375	262,500	#DIV/0!	262,500	140.0%	262,500	0.0%
DISPROPORTIONATE SHARE PAYMENTS			#DIV/0!		#DIV/0!		(45,000)	(108,000)	#DIV/0!	(108,000)	140.0%	(108,000)	0.0%
BAD DEBT FREE CARE			#DIV/0!		#DIV/0!		(2,200)	(5,300)	#DIV/0!	(5,300)	140.9%	(5,300)	0.0%
DEDUCTIONS FROM REVENUE			#DIV/0!		#DIV/0!		(2,200)	(5,300)	#DIV/0!	(5,300)	140.9%	(5,300)	0.0%
NET PATIENT CARE REVENUE	-	-	#DIV/0!	-	#DIV/0!	-	59,975	143,900	#DIV/0!	143,900	139.9%	143,900	0.0%
OTHER OPERATING REVENUE			#DIV/0!		#DIV/0!				#DIV/0!		#DIV/0!		#DIV/0!
TOTAL OPERATING REVENUE	-	-	#DIV/0!	-	#DIV/0!	-	59,975	143,900	#DIV/0!	143,900	139.9%	143,900	0.0%
OPERATING EXPENSE													
SALARIES NON MD			#DIV/0!		#DIV/0!				#DIV/0!		#DIV/0!		#DIV/0!
FRINGE BENEFITS NON MD			#DIV/0!		#DIV/0!				#DIV/0!		#DIV/0!		#DIV/0!
FRINGE BENEFITS MD			#DIV/0!		#DIV/0!				#DIV/0!		#DIV/0!		#DIV/0!
PHYSICIAN FEES SALARIES CONTRACTS & FRINGES			#DIV/0!		#DIV/0!				#DIV/0!		#DIV/0!		#DIV/0!
HEALTH CARE PROVIDER TAX			#DIV/0!		#DIV/0!				#DIV/0!		#DIV/0!		#DIV/0!
DEPRECIATION AMORTIZATION			#DIV/0!		#DIV/0!		171,893	343,786	#DIV/0!	343,786	100.0%	343,786	0.0%
INTEREST - LONG/SHORT TERM			#DIV/0!		#DIV/0!				#DIV/0!		#DIV/0!		#DIV/0!
OTHER OPERATING EXPENSE			#DIV/0!		#DIV/0!		(88,000)	(75,740)	#DIV/0!	(75,740)	-13.9%	(75,740)	0.0%
TOTAL OPERATING EXPENSE	-	-	#DIV/0!	-	#DIV/0!	-	63,893	268,046	#DIV/0!	268,046	219.5%	268,046	0.0%
NET OPERATING INCOME (LOSS)	-	-	#DIV/0!	-	#DIV/0!	-	(23,918)	(124,146)	#DIV/0!	(124,146)	419.0%	(124,146)	0.0%
NON-OPERATING REVENUE			#DIV/0!		#DIV/0!				#DIV/0!		#DIV/0!		#DIV/0!
EXCESS (DEFICIT) OF REVENUE OVER EXPENSES	-	-	#DIV/0!	-	#DIV/0!	-	(23,918)	(124,146)	#DIV/0!	(124,146)	419.0%	(124,146)	0.0%

NORTHEASTERN VT REGIONAL HOSPITAL

Replacement of MRI Scanner
 Note: This table requires no "fill-in" as it is populated automatically

INCOME STATEMENT
 Table 3C
 WITH PROJECT

	2015	2016	2016	2017	2018	2019	2020	% change	% change	% change	% change	% change
	Actual	Budget	Projection	Budget	change	2018	2019	2018	2019	2020	2020	% change
			% change	% change	% change	% change	% change	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	% change
REVENUES												
INPATIENT CARE REVENUE	30,362,996	30,462,800	29,426,000	30,834,700	4.8%	30,834,700	30,834,700	0.0%	0.0%	30,834,700	30,834,700	0.0%
OUTPATIENT CARE REVENUE	83,758,833	90,561,600	96,383,700	100,998,100	4.8%	101,107,475	101,260,600	0.1%	0.2%	101,260,600	101,260,600	0.0%
OUTPATIENT CARE REVENUE - PHYSICI/	16,347,393	18,315,600	17,976,600	18,885,100	-1.9%	18,885,100	18,885,100	0.0%	0.0%	18,885,100	18,885,100	0.0%
CHRONIC/SNF PT CARE REVENUE	-	-	-	-	#DIV/0!	-	-	#DIV/0!	-	-	-	#DIV/0!
SWING BEDS PT CARE REVENUE	1,421,770	1,749,000	1,387,300	1,453,600	-20.7%	1,453,600	1,453,600	0.0%	0.0%	1,453,600	1,453,600	0.0%
GROSS PATIENT CARE REVENUE	131,890,992	141,089,000	145,173,600	152,171,500	4.8%	152,280,875	152,434,000	0.1%	0.1%	152,434,000	152,434,000	0.0%
DISPROPORTIONATE SHARE PAYMENTS	1,636,300	1,460,700	1,528,100	1,730,400	4.6%	1,685,400	1,622,400	-2.6%	-3.7%	1,622,400	1,622,400	0.0%
BAD DEBT FREE CARE	(5,368,700)	(5,930,000)	(5,747,600)	(6,022,700)	-3.1%	(6,024,900)	(6,028,000)	0.0%	0.1%	(6,028,000)	(6,028,000)	0.0%
DEDUCTIONS FROM REVENUE	(62,609,999)	(69,524,400)	(71,743,900)	(76,539,800)	4.7%	(76,542,000)	(76,545,100)	0.0%	0.0%	(76,545,100)	(76,545,100)	0.0%
NET PATIENT CARE REVENUE	65,549,594	69,095,300	69,210,200	71,339,400	3.1%	71,399,375	71,483,300	0.1%	0.1%	71,483,300	71,483,300	0.0%
OTHER OPERATING REVENUE	1,292,542	1,648,676	1,554,200	1,585,100	-5.7%	1,585,100	1,585,100	0.0%	0.0%	1,585,100	1,585,100	0.0%
TOTAL OPERATING REVENUE	66,841,136	69,743,976	70,764,400	72,924,500	3.1%	72,984,475	73,068,400	0.1%	0.1%	73,068,400	73,068,400	0.0%
OPERATING EXPENSE												
SALARIES NON MD	22,292,961	22,978,900	23,397,700	24,290,000	1.8%	24,290,000	24,290,000	0.0%	0.0%	24,290,000	24,290,000	0.0%
FRINGE BENEFITS NON MD	8,356,620	7,799,600	7,605,800	7,813,400	-2.5%	7,813,400	7,813,400	0.0%	0.0%	7,813,400	7,813,400	0.0%
FRINGE BENEFITS MD	1,646,055	2,375,100	2,191,900	2,337,200	-7.7%	2,337,200	2,337,200	0.0%	0.0%	2,337,200	2,337,200	0.0%
PHYSICIAN FEES SALARIES CONTRACTS	6,021,231	8,504,500	7,977,800	8,506,800	-6.2%	8,506,800	8,506,800	0.0%	0.0%	8,506,800	8,506,800	0.0%
HEALTH CARE PROVIDER TAX	3,610,431	3,800,000	3,950,000	4,100,000	3.9%	4,100,000	4,100,000	0.0%	0.0%	4,100,000	4,100,000	0.0%
DEPRECIATION AMORTIZATION	2,507,662	2,658,300	2,396,000	2,606,000	-9.9%	2,777,893	2,949,786	6.6%	6.2%	2,949,786	2,949,786	0.0%
INTEREST - LONG/SHORT TERM	390,431	472,000	337,700	378,000	-28.5%	378,000	378,000	0.0%	0.0%	378,000	378,000	0.0%
OTHER OPERATING EXPENSE	20,548,000	20,108,000	21,500,900	21,478,100	6.9%	21,390,100	21,402,360	-0.4%	0.1%	21,402,360	21,402,360	0.0%
TOTAL OPERATING EXPENSE	65,373,391	68,696,400	69,357,800	71,509,500	1.0%	71,593,393	71,777,546	0.1%	0.3%	71,777,546	71,777,546	0.0%
NET OPERATING INCOME (LOSS)	1,467,745	1,047,576	1,406,600	1,415,000	34.3%	1,391,082	1,290,854	-1.7%	-7.2%	1,290,854	1,290,854	0.0%
NON-OPERATING REVENUE	(1,089,487)	-	-	-	#DIV/0!	-	-	#DIV/0!	-	-	-	#DIV/0!
EXCESS (DEFICIT) OF REVENUE OVER E	368,258	1,047,576	1,406,600	1,415,000	34.3%	1,391,082	1,290,854	-1.7%	-7.2%	1,290,854	1,290,854	0.0%
Operating Margin %	2.2%	1.5%	2.0%	1.9%	1.9%	1.9%	1.8%	1.9%	1.8%	1.8%	1.8%	1.8%
Bad Debt & Free Care%	4.1%	4.2%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Compensation Ratio	58.6%	60.6%	59.4%	60.1%	60.0%	60.0%	59.8%	60.0%	59.8%	59.8%	59.8%	59.8%
Capital Cost % of Total Expenses	4.4%	4.6%	3.9%	4.2%	4.4%	4.4%	4.6%	4.4%	4.6%	4.6%	4.6%	4.6%

NORTHEASTERN VT REGIONAL HOSPITAL

Replacement of MRI Scanner

Balance Sheet

WITHOUT PROJECT

	2015	2016	2016	2017	2018	2019	2020	
	Actual	Budget	% change	Projection	% change	Proposed year 1	Proposed year 2	Proposed year 3
						% change	% change	% change
ASSETS								
CURRENT ASSETS								
CASH & INVESTMENTS	4,156,379	808,000	-80.6%	8,038,000	894.8%	9,026,671	9,026,671	9,026,671
PATIENT ACCOUNTS RECEIVABLE, GROSS	12,757,037	14,000,000	9.7%	14,000,000	0.0%	14,208,900	14,208,900	14,208,900
LESS: ALLOWANCE FOR UNCOLLECTIBLE ACCTS	(4,651,691)	(5,000,000)	7.2%	(6,057,900)	21.2%	(6,000,000)	(6,000,000)	(6,000,000)
DUE FROM THIRD PARTIES	-	-	#DIV/0!	-	-	-	-	-
OTHER CURRENT ASSETS	3,436,078	4,000,000	16.4%	2,430,000	-39.3%	2,230,000	2,230,000	2,230,000
TOTAL CURRENT ASSETS	15,699,803	13,808,000	-12.0%	18,410,100	33.3%	19,465,571	19,465,571	19,465,571
BOARD DESIGNATED ASSETS								
FUNDED DEPRECIATION	18,448,311	-	-100.0%	15,176,800	#DIV/0!	15,176,800	15,176,800	15,176,800
ESCROWED BOND FUNDS	109,883	-	-100.0%	-	#DIV/0!	-	-	-
OTHER	-	16,600,000	#DIV/0!	-	-100.0%	-	-	-
TOTAL BOARD DESIGNATED ASSETS	18,557,194	16,600,000	-10.5%	15,176,800	-8.6%	15,176,800	15,176,800	15,176,800
PROPERTY, PLANT, AND EQUIPMENT								
LAND, BUILDINGS & IMPROVEMENTS	30,363,259	33,277,800	9.6%	31,709,059	-4.7%	32,089,059	32,089,059	32,089,059
CONSTRUCTION IN PROGRESS	1,162,191	1,100,000	-5.4%	1,162,191	5.7%	2,100,000	2,100,000	2,100,000
MAJOR MOVABLE EQUIPMENT	20,860,154	26,513,900	27.0%	23,044,994	-13.1%	25,390,799	25,390,799	25,390,799
FIXED EQUIPMENT	2,324,457	2,557,998	10.0%	2,324,457	-9.1%	2,324,457	2,324,457	2,324,457
TOTAL PROPERTY, PLANT AND EQUIPMENT	54,730,061	63,449,698	15.9%	58,240,701	-8.2%	61,904,315	61,904,315	61,904,315
LESS: ACCUMULATED DEPRECIATION								
LAND, BUILDINGS & IMPROVEMENTS	(16,316,952)	(17,429,214)	6.8%	(17,788,873)	2.1%	(19,279,793)	(19,279,793)	(19,279,793)
EQUIPMENT - FIXED	(1,733,014)	(2,035,198)	17.4%	(1,762,586)	-13.4%	(1,792,158)	(1,792,158)	(1,792,158)
EQUIPMENT - MAJOR MOVEABLE	(15,167,220)	(19,036,526)	25.5%	(16,241,727)	-14.7%	(17,483,435)	(17,483,435)	(17,483,435)
TOTAL ACCUMULATED DEPRECIATION	(33,217,186)	(38,500,938)	15.9%	(35,793,186)	-7.0%	(38,555,386)	(38,555,386)	(38,555,386)
TOTAL PROPERTY, PLANT AND EQUIPMENT, NET	21,512,875	24,948,760	-16.0%	22,447,515	-10.0%	23,348,929	23,348,929	23,348,929
OTHER LONG-TERM ASSETS	5,070,773	2,500,000	-50.7%	5,327,285	113.1%	4,338,000	4,338,000	4,338,000
TOTAL ASSETS	60,840,645	57,856,760	-4.9%	61,361,700	6.1%	62,329,300	62,329,300	62,329,300
LIABILITIES AND FUND BALANCE								
CURRENT LIABILITIES								
ACCOUNTS PAYABLE	3,409,315	3,300,000	-3.2%	4,516,000	36.8%	4,630,900	4,630,900	4,630,900
SALARIES, WAGES AND PAYROLL TAXES PAYABLE	3,880,596	3,000,000	-22.7%	3,000,000	0.0%	3,100,000	3,100,000	3,100,000
ESTIMATED THIRD-PARTY SETTLEMENTS	2,316,733	2,000,000	-13.7%	2,084,700	4.7%	2,192,000	2,192,000	2,192,000
OTHER CURRENT LIABILITIES	1,605,904	1,500,000	-6.6%	1,600,000	6.7%	1,600,000	1,600,000	1,600,000
CURRENT PORTION OF LONG-TERM DEBT	505,000	535,000	5.9%	760,000	42.1%	770,000	770,000	770,000
TOTAL CURRENT LIABILITIES	11,717,548	10,335,000	-11.8%	11,970,700	15.8%	12,292,900	12,292,900	12,292,900
LONG-TERM DEBT								
BONDS & MORTGAGES PAYABLE	12,510,000	11,945,000	-4.5%	11,632,200	-2.6%	10,862,300	10,862,300	10,862,300
CAPITAL LEASE OBLIGATIONS	-	-	#DIV/0!	-	-	-	-	-
OTHER LONG-TERM DEBT	729,879	700,000	-4.1%	464,100	-33.7%	464,100	464,100	464,100
TOTAL LONG-TERM DEBT	13,239,879	12,645,000	-4.5%	12,096,300	-4.3%	11,326,400	11,326,400	11,326,400
OTHER NONCURRENT LIABILITIES								
TOTAL LIABILITIES	24,957,427	22,980,000	-7.9%	24,067,000	-4.7%	23,619,300	23,619,300	23,619,300
FUND BALANCE	35,883,218	34,876,760	-2.8%	37,294,700	6.9%	38,710,000	38,710,000	38,710,000
TOTAL LIABILITIES AND FUND BALANCE	60,840,645	57,856,760	-4.9%	61,361,700	6.1%	62,329,300	62,329,300	62,329,300

NORTHEASTERN VT REGIONAL HOSPITAL

Replacement of MRI Scanner

Balance Sheet
PROJECT ONLY

	2015 Actual	2016 Budget	2016 Projection	2017 Budget	2018		2019		2020	
					% change	Proposed Year 1	% change	Proposed Year 2	% change	Proposed Year 3
ASSETS										
CURRENT ASSETS										
CASH & INVESTMENTS	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
PATIENT ACCOUNTS RECEIVABLE - GROSS	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
LESS: ALLOWANCE FOR UNCOLLECTIBLE ACCTS	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
DUE FROM THIRD PARTIES	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
OTHER CURRENT ASSETS	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
TOTAL CURRENT ASSETS	-	-	-	-	-	-	-	-	-	-
BOARD DESIGNATED ASSETS										
FUNDED DEPRECIATION	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
ESCROWED BOND FUNDS	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
OTHER	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
TOTAL BOARD DESIGNATED ASSETS	-	-	-	-	(2,903,589)	(2,683,949)	(2,464,289)	(2,248,289)	(2,031,564)	(1,817,564)
PROPERTY, PLANT, AND EQUIPMENT										
LAND, BUILDINGS & IMPROVEMENTS	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
CONSTRUCTION IN PROGRESS	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
MAJOR MOVABLE EQUIPMENT	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
FIXED EQUIPMENT	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
TOTAL PROPERTY, PLANT AND EQUIPMENT	-	-	-	-	3,051,564	3,051,564	3,051,564	3,051,564	3,051,564	3,051,564
LESS: ACCUMULATED DEPRECIATION										
LAND, BUILDINGS & IMPROVEMENTS	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
EQUIPMENT - FIXED	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
EQUIPMENT - MAJOR MOVABLE	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
TOTAL ACCUMULATED DEPRECIATION	-	-	-	-	(171,893)	(515,679)	(959,465)	(1,480,664)	(2,031,564)	(2,581,128)
TOTAL PROPERTY, PLANT AND EQUIPMENT, NET	-	-	-	-	2,879,671	2,535,885	2,092,099	1,570,905	1,020,000	470,436
OTHER LONG-TERM ASSETS										
TOTAL ASSETS	-	-	-	-	(23,918)	(148,064)	(272,190)	(401,285)	(581,285)	(710,849)
LIABILITIES AND FUND BALANCE										
CURRENT LIABILITIES										
ACCOUNTS PAYABLE	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
SALARIES, WAGES AND PAYROLL TAXES PAYABLE	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
ESTIMATED THIRD-PARTY SETTLEMENTS	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
OTHER CURRENT LIABILITIES	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
CURRENT PORTION OF LONG-TERM DEBT	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
TOTAL CURRENT LIABILITIES	-	-	-	-	-	-	-	-	-	-
LONG-TERM DEBT										
BONDS & MORTGAGES PAYABLE	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
CAPITAL LEASE OBLIGATIONS	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
OTHER LONG-TERM DEBT	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
TOTAL LONG-TERM DEBT	-	-	-	-	-	-	-	-	-	-
OTHER NONCURRENT LIABILITIES										
TOTAL LIABILITIES	-	-	-	-	-	-	-	-	-	-
FUND BALANCE										
TOTAL LIABILITIES AND FUND BALANCE	-	-	-	-	(23,918)	(148,064)	(272,190)	(401,285)	(581,285)	(710,849)

NORTHEASTERN VT REGIONAL HOSPITAL

Replacement of MRI Scanner

Note: This table requires no "fill-in" as it is populated automatically

Balance Sheet
WITH PROJECT

	2015	2016	2016	2016	2017	2018	2019	2020	
	Actual	Budget	% change	Projection	% change	Budget	Proposed Year 1	Proposed Year 2	Proposed Year 3
							% change	% change	% change
ASSETS									
CURRENT ASSETS									
CASH & INVESTMENTS	4,158,379	808,000	-80.6%	8,038,000	894.8%	9,026,671	9,026,671	9,026,671	9,026,671
PATIENT ACCOUNTS RECEIVABLE, GROSS	12,257,037	14,000,000	9.7%	14,000,000	0.0%	14,208,900	14,208,900	14,208,900	14,208,900
LESS: ALLOWANCE FOR UNCOLLECTIBLE ACCTS	(4,651,691)	(5,000,000)	7.5%	(6,057,900)	21.2%	(6,000,000)	(6,000,000)	(6,000,000)	(6,000,000)
DUE FROM THIRD PARTIES							0	0	0
OTHER CURRENT ASSETS	3,436,078	4,000,000	16.4%	2,430,000	-39.3%	2,230,000	2,230,000	2,230,000	2,230,000
TOTAL CURRENT ASSETS	15,659,803	13,808,000	-12.0%	18,410,100	33.3%	19,465,571	19,465,571	19,465,571	19,465,571
BOARD DESIGNATED ASSETS									
FUNDED DEPRECIATION	18,448,311	-	-100.0%	15,176,800	#DIV/0!	15,176,800	12,273,211	12,492,651	12,712,511
ESCROWED BOND FUNDS	108,863	-	-100.0%	-	#DIV/0!	-	0	0	0
OTHER		16,600,000	-100.0%	-	-100.0%	-	0	0	0
TOTAL BOARD DESIGNATED ASSETS	18,557,194	16,600,000	-10.5%	15,176,800	-6.6%	15,176,800	12,273,211	12,492,651	12,712,511
PROPERTY, PLANT, AND EQUIPMENT	30,363,259	33,277,800	9.6%	31,709,059	-4.7%	32,089,059	33,754,854	33,754,854	33,754,854
LAND, BUILDINGS & IMPROVEMENTS	1,162,191	1,100,000	-5.4%	1,162,191	5.7%	2,100,000	2,100,000	2,100,000	2,100,000
CONSTRUCTION IN PROGRESS	20,880,154	26,513,900	27.0%	23,044,984	-13.1%	25,390,799	25,390,799	25,390,799	25,390,799
MAJOR MOVABLE EQUIPMENT	2,324,457	2,557,998	10.0%	2,324,457	-9.1%	2,324,457	3,710,226	3,710,226	3,710,226
FIXED EQUIPMENT							#DIV/0!	#DIV/0!	#DIV/0!
TOTAL PROPERTY, PLANT AND EQUIPMENT	54,730,061	63,449,698	15.9%	58,240,701	-8.2%	61,904,315	64,955,879	64,955,879	64,955,879
LESS: ACCUMULATED DEPRECIATION	(16,316,952)	(17,429,214)	6.8%	(17,788,873)	2.1%	(19,279,793)	(19,313,109)	(19,379,741)	(19,446,373)
LAND, BUILDINGS & IMPROVEMENTS	(1,733,014)	(2,035,198)	17.4%	(1,782,586)	-13.4%	(1,792,158)	(1,930,735)	(2,207,869)	(2,485,043)
EQUIPMENT - FIXED	(15,167,220)	(19,036,526)	25.5%	(16,241,727)	-14.7%	(17,483,435)	(17,483,435)	(17,483,435)	(17,483,435)
TOTAL ACCUMULATED DEPRECIATION	(33,217,186)	(38,500,938)	15.9%	(35,793,186)	-7.0%	(38,555,386)	(38,727,279)	(39,071,065)	(39,414,851)
TOTAL PROPERTY, PLANT AND EQUIPMENT, NET	21,512,875	24,948,760	16.0%	22,447,515	-10.0%	23,348,929	26,228,600	25,884,814	25,541,028
OTHER LONG-TERM ASSETS	5,070,773	2,500,000	-50.7%	5,327,285	113.1%	4,338,000	4,338,000	4,338,000	4,338,000
TOTAL ASSETS	60,840,645	57,856,760	-4.9%	61,361,700	5.1%	62,329,300	62,305,382	62,181,236	62,057,110
LIABILITIES AND FUND BALANCE									
CURRENT LIABILITIES									
ACCOUNTS PAYABLE	3,409,315	3,300,000	-3.2%	4,516,000	36.8%	4,630,900	4,630,900	4,630,900	4,630,900
SALARIES, WAGES AND PAYROLL TAXES PAYABLE	3,880,596	3,000,000	-22.7%	3,000,000	0.0%	3,100,000	3,100,000	3,100,000	3,100,000
ESTIMATED THIRD-PARTY SETTLEMENTS	2,316,733	2,000,000	-13.7%	2,094,700	4.7%	2,192,000	2,192,000	2,192,000	2,192,000
OTHER CURRENT LIABILITIES	1,605,904	1,500,000	-6.6%	1,600,000	6.7%	1,600,000	1,600,000	1,600,000	1,600,000
CURRENT PORTION OF LONG-TERM DEBT	505,000	535,000	5.9%	760,000	42.1%	770,000	770,000	770,000	770,000
TOTAL CURRENT LIABILITIES	11,717,548	10,335,000	-11.8%	11,970,700	15.6%	12,292,900	12,292,900	12,292,900	12,292,900
BONDS & MORTGAGES PAYABLE	12,510,000	11,945,000	-4.5%	11,632,200	-2.6%	10,862,300	10,862,300	10,862,300	10,862,300
CAPITAL LEASE OBLIGATIONS	729,879	700,000	-4.1%	464,100	-33.7%	464,100	464,100	464,100	464,100
OTHER LONG-TERM DEBT									
TOTAL LONG-TERM DEBT	13,239,879	12,645,000	-4.5%	12,096,300	-4.3%	11,326,400	11,326,400	11,326,400	11,326,400
OTHER NONCURRENT LIABILITIES									
TOTAL LIABILITIES	24,957,427	22,980,000	-7.9%	24,067,000	-4.7%	23,619,300	23,619,300	23,619,300	23,619,300
FUND BALANCE	35,883,218	34,876,760	-2.8%	37,294,700	6.9%	38,710,000	38,686,082	38,561,936	38,437,810
TOTAL LIABILITIES AND FUND BALANCE	60,840,645	57,856,760	-4.9%	61,361,700	5.1%	62,329,300	62,305,382	62,181,236	62,057,110

PLEASE PROVIDE ASSUMPTIONS

Replacement of MRI Scanner

STATEMENT OF CASH FLOWS PROJECTIONS- Table 5

	Proposed Yr 1 2018	Proposed Yr 2 2019	Proposed Yr 3 2020
BEGINNING CASH	24,203,271	21,299,682	21,519,322
OPERATIONS			
EXCESS REVENUE OVER EXPENSE	(23,918)	(124,146)	(124,146)
DEPRECIATION/AMORTIZATION	171,893	343,786	343,786
PATIENT A/R			
OTHER CHANGES			
TOTAL CASH FROM OPERATIONS	147,975	219,640	219,640
INVESTING ACTIVITY			
CAPITAL SPENDING	(3,051,564)	-	-
CAPITAL			
CAPITALIZED INTEREST			
CHANGE IN ACCUM DEPR LESS DEPRECIATION			
CHANGE IN CAPITAL ASSETS			
TOTAL CAPITAL SPENDING	(3,051,564)	-	-
(INCREASE)/DECREASE			
FUNDED DEPRECIATION			
OTHER LT ASSETS & ESCROWED BONDS & OTHER			
TOTAL (INCREASE)/DECREASE	(3,051,564)	-	-
TOTAL INVESTING ACTIVITY			
FINANCING ACTIVITY			
DEBT INCREASE/(DECREASE)			
BONDS & MORTGAGES			
REPAYMENT			
CAPITAL LEASE & OTHER LONG TERM DEBT			
TOTAL FINANCING ACTIVITY	-	-	-
OTHER CHANGES			
MANUAL ADJUSTMENT			
OTHER			
CHANGE IN FUND BALANCE LESS NET INCOME			
TOTAL OTHER CHANGES	-	-	-
NET INCREASE/(DECREASE) IN CASH	(2,903,589)	219,640	219,640
ENDING CASH	21,299,682	21,519,322	21,738,962

NOTES:

PLEASE PROVIDE ASSUMPTIONS

MRI Scanner Replacement
 PAYER PROJECTIONS--TABLE 6

	Proposed Yr 1 2018	Proposed Yr 2 2019	Proposed Yr 3 2020
Commercial			
Hospital	40,468	97,125	97,125
Physician			
Total Revenue	40,468	97,125	97,125
Allowances - Hospital	(7,101)	(17,044)	(17,044)
Allowances - Physicians			
Free Care	(2,200)	(5,300)	(5,300)
Bad Debt	(2,200)	(5,300)	(5,300)
Net Payer Revenue	28,967	69,481	69,481
Medicaid			
Hospital	22,969	55,125	55,125
Physician			
Total Revenue	22,969	55,125	55,125
Allowances - Hospital	(14,930)	(35,831)	(35,831)
Allowances - Physicians			
Free Care			
Bad Debt			
Graduate Medical Education Payments_Phys.			
Graduate Medical Education Payments-Hosp			
Net Payer Revenue	8,039	19,294	19,294
Medicare			
Hospital	45,938	110,250	110,250
Physician			
Total Revenue	45,938	110,250	110,250
Allowances - Hospital	(22,969)	(55,125)	(55,125)
Allowances - Physicians			
Free Care			
Bad Debt			
Net Payer Revenue	22,969	55,125	55,125
Disproportionate Share Payments			
Total Payer Revenue			
Hospital	109,375	262,500	262,500
Physician	-	-	-
Total Revenue	109,375	262,500	262,500
Allowances - Hospital	(45,000)	(108,001)	(108,001)
Allowances - Physicians	-	-	-
Free Care	(2,200)	(5,300)	(5,300)
Bad Debt	(2,200)	(5,300)	(5,300)
Disproportionate Share Payments	-	-	-
Graduate Medical Education Payments_Phys.	-	-	-
Graduate Medical Education Payments-Hosp	-	-	-
Net Payer Revenue	59,975	143,900	143,900

NOTES:

PLEASE PROVIDE ASSUMPTIONS

Replacement of MRI Scanner UTILIZATION PROJECTIONS--TABLE 7

	Proposed ` 2018	Proposed ` 2019	Proposed Yr 3 2020
Inpatient Utilization			
Acute Beds (Staffed)			
Acute Admissions			
Acute Patient Days			
Acute Average Length Of Stay			
Outpatient			
All Outpatient Visits			
Operating Room Procedure			
Operating Room Cases			
Physician Office Visits			
Ancillary			
All Operating Room Procedure			
Emergency Room Visits			
Cat Scan Procedures			
Magnetic Resonance Image Exams	31	75	75
Nuclear Medicine Procedures			
Radiology - Diagnostic Procedures			
Laboratory Tests			
Adjusted Statistics			
Adjusted Admissions			
Adjusted Days			

NOTES:

The project alone is expected to increase MRI scans by 75 per year. Year 1 assumes new project will be operation on May 1, 2018

The combination of the new MRI scanner and the addition of a third orthopedic surgeon is expected to increase total MRI scan volume to 1,400 per year

NORTHEASTERN VT REGIONAL HOSPITAL

MRI Scanner Replacement

Table 8

STAFFING REPORT WITHOUT PROJECT													
	2015 Actual	2016 Budget	% change	2016 Projection	% change	2017 Budget	% change	Proposed Year 1 2018	% change	Proposed Year 2 2019	% change	Proposed Year 3 2020	% change
PHYSICIAN FTEs	24.7	33.4	35.5%	30.1	-9.9%	30.6	1.7%	30.6	0.0%	30.6	0.0%	30.6	0.0%
TRAVELERS	-	-	#DIV/0!	-	#DIV/0!	-	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Residents & Fellows	-	-	#DIV/0!	-	#DIV/0!	-	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
MLPs	-	-	#DIV/0!	-	#DIV/0!	4.1	0.0%	4.1	0.0%	4.1	0.0%	4.1	0.0%
Non-MD FTEs	393.9	398.9	1.3%	404.4	1.4%	414.7	2.5%	414.7	0.0%	414.7	0.0%	414.7	0.0%
TOTAL NON-MD FTEs	393.9	398.9	1.3%	404.4	1.4%	418.8	3.6%	418.8	0.0%	418.8	0.0%	418.8	0.0%

Note: Mid-Level Providers and Residents are now included in Non-MD Employees, prior to 2013 Actual they were included in Physician FTEs

STAFFING REPORT PROJECT ONLY													
	2015 Actual	2016 Budget	% change	2016 Projection	% change	2017 Budget	% change	Proposed Year 1 2018	% change	Proposed Year 2 2019	% change	Proposed Year 3 2020	% change
PHYSICIAN FTEs	-	-	#DIV/0!	-	#DIV/0!	-	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
TRAVELERS	-	-	#DIV/0!	-	#DIV/0!	-	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Residents & Fellows	-	-	#DIV/0!	-	#DIV/0!	-	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
MLPs	-	-	#DIV/0!	-	#DIV/0!	-	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Non-MD FTEs	-	-	#DIV/0!	-	#DIV/0!	-	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
TOTAL NON-MD FTEs	-	-	#DIV/0!	-	#DIV/0!	-	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Note: Mid-Level Providers and Residents are now included in Non-MD Employees, prior to 2013 Actual they were included in Physician FTEs

STAFFING REPORT WITH PROJECT													
	2015 Actual	2016 Budget	% change	2016 Projection	% change	2017 Budget	% change	Proposed Year 1 2018	% change	Proposed Year 2 2019	% change	Proposed Year 3 2020	% change
PHYSICIAN FTEs	24.7	33.4	35.5%	30.1	-9.9%	30.6	1.7%	30.6	0.0%	30.6	0.0%	30.6	0.0%
TRAVELERS	-	-	#DIV/0!	-	#DIV/0!	-	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Residents & Fellows	-	-	#DIV/0!	-	#DIV/0!	-	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
MLPs	-	-	#DIV/0!	-	#DIV/0!	4.1	0.0%	4.1	0.0%	4.1	0.0%	4.1	0.0%
Non-MD FTEs	393.9	398.9	1.3%	404.4	1.4%	414.7	2.5%	414.7	0.0%	414.7	0.0%	414.7	0.0%
TOTAL NON-MD FTEs	393.9	398.9	1.3%	404.4	1.4%	418.8	3.6%	418.8	0.0%	418.8	0.0%	418.8	0.0%

Note: Mid-Level Providers and Residents are now included in Non-MD Employees, prior to 2013 Actual they were included in Physician FTEs

Note: This table requires no "fill-in" as it is populated automatically

Paul R. Bengtson

Paul R. Bengtson

On March 2, 2017, Paul R. Bengtson appeared before me and swore to the truth, accuracy and completeness of the foregoing.

William C. Leach

Notary public

My commission expires 2/10/19

APPENDIX 1

SIEMENS

Siemens Medical Solutions USA, Inc.
51 Valley Stream Parkway, Malvern, PA 19355
Fax: (866) 309-6992

SIEMENS REPRESENTATIVE
Gordon Wilhelm - (610) 448-1736

PRELIMINARY PROPOSAL

Customer Number: 0000008653

Date: 9/22/2011

NORTHEASTERN VERMONT REG HOSPITAL
1315 HOSPITAL DR
SAINT JOHNSBURY, VT 05819

Quote Nr: 1-16ZMTH Rev. 1

MAGNETOM Symphony, RS Proven Excellence System

All items listed below are included for this system: *(See Detailed Technical Specifications at end of Proposal.)*

Qty	Part No.	Item Description
1	14417634	RS MAGNETOM Symphony - System (P) Refurbished Siemens systems for the Magnetic Resonance Imaging are systems which were previously owned and which have been refurbished by the Siemens Refurbished Systems business unit so that they meet Siemens' stringent quality standards. It is the goal of the Siemens RS business unit to assure excellent functionality and reliability, similar to that of new systems. This allows Siemens to provide a 12 month warranty for refurbished MR systems. Important note: This offer is subject to confirmation, due to the limited availability of refurbished systems. The availability will be clarified prior to the signing of any contract.
1	14408857	RS Standard Patient Table #Symphony The patient table is mounted directly to the magnet assembly. The table can support up to 200 kg (440 lbs) patients and has a positioning accuracy of +/- 0.5 mm. The table comes with a comprehensive set of patient positioning cushions. Depending on availability instead of the ordered standard table a removable table with the function of a standard table can be delivered with RS Proven Excellence systems.
1	14418174	RS Mobile Trailer for MR
1	14407618	RS Power-class #S Supplementary mandatory option for MAGNETOM Symphony, option Power-class.
1	14408854	RS Quantum Gradient System #S Quantum Gradient System of the new Maestro Class Generation: - Maximum gradient field strength 30 mT/m, per axis, - max. slew rate 125 T/m/s per axis, - 100% Duty Cycle, - acquisition of oblique and double oblique slices, - extremely compact water-cooled gradient amplifier, - integrated circularly polarized body coil.
1	14408855	RS Advanced Array Interface #S The Advanced Array option increases flexibility of the new Integrated Panoramic Array (IPA) coil concept even more.
1	14406229	RS Whole-Body Arr. Int. iPAT+ #S;SON The Whole-Body Array option increases flexibility of the new Integrated Panoramic Array (IPA) coil concept.
1	14408856	RS Cover #S Cover color and design are subject to availability.
1	14406234	RS CORE Package syngo #H;S;SON Scan protocols for all body regions, are based on the fundamental sequence types and techniques.

SIEMENS

Siemens Medical Solutions USA, Inc.
51 Valley Stream Parkway, Malvern, PA 19355
Fax: (866) 309-6992

SIEMENS REPRESENTATIVE
Gordon Wilhelm - (610) 448-1736

PRELIMINARY PROPOSAL

Qty	Part No.	Item Description
1	14406292	RS PC Keyboard US english Standard PC keyboard with 101 keys.
1	14408860	RS PMU Electronics #Symphony ECG, pulse and respiration sensors and for physiologically synchronized imaging e.g. ECG triggering, pulse triggering and respiratory triggering incl. ECG cables and 30 disposable electrodes
1	14406253	RS Panoramic Table syngo #H;S;SON Protocol-driven automatic patient table movement realizing a FoV of up to 154 cm.
1	14406254	RS Advanced Angio Pack. syngo #H;S;SON Advanced MR Angiography sequences and protocols optimized for the head / neck, body and peripheral region. 3D contrast enhanced MRA technique for fast high-resolution Angio imaging and 2D/3D Time-of-Flight (ToF), triggered and segmented, with automatic MIP and automatic Subtraction functions as well as 2D / 3D Phase Contrast (PC) Angiography.
1	14406255	RS Care Bolus syngo #H;S;SON Care Bolus technique, for realtime visualization of contrast agent enhancement on the integrated online display with the possibility of switching from a 2D sequence to a 3D MRA sequence interactively with a single mouse click.
1	14406260	RS EPI syngo #H;S;SON Technology based on Single Shot EPI with diffusion weighting, perfusion imaging and T2 weighting as well as segmented SE and FID-EPI sequence.
1	14406265	RS Advanced Turbo syngo #H;S;SON Selection of advanced fast imaging techniques optimized for breathhold and ultrafast imaging.
1	14408873	RS CP Head Array Coil #S High signal-to-noise Circularly Polarized no-tune coil with completely detachable upper part. Using the IPA (TM) concept, the CP Head Array may be used in combination with the CP Spine Array and the CP Neck Array for head and neck imaging. A detachable RF signal amplifier as a passive component is provided.
1	14406274	RS Head Coil Mirror #S;SON Detachable mirror which attaches to the CP Head Array and enables the patient to see outside even when their head is in the centre of the magnet.
1	14408874	RS CP Spine Array Coil #S High signal-to-noise Circularly Polarized coil for high resolution imaging of the whole spine.
1	14408875	RS CP Neck Array Coil #S Circularly Polarized no-tune receive coil, anatomically fitted to the neck region.
1	14408876	RS Flex Coil Interface #S;Av;Es Interface with integrated preamplifiers for the connection of the following flexible coils to the system: - CP Flex Coil, large - CP Flex Coil, small - Loop Flex Coil, large - Loop Flex Coil, small - Endorectal Coil
1	NV800218	Invivo 4 ch. Small Extremity coil
1	14408877	RS CP Flex Coil; large #S;Av;Es Light-weight wrap-around coil made of soft and flexible material. Circularly Polarized no-tune receive coil for examinations of the upper and lower extremities (e.g. medium to large shoulder, hip or knee) or of the abdominal region.
1	14408878	RS CP Flex Coil; small #S;Av;Es Light-weight wrap-around coil made of soft and flexible material. Circularly Polarized no-tune receive coil for examinations of the upper and lower extremities (e.g. small to medium shoulder, wrist, elbow or ankle).
1	14406286	RS CP Body Array Flex Coil #S;SON Circularly polarized flexible no-tune receive coil for Symphony and Sonata 1.5 Tesla used for abdominal studies with 2 CP pairs and 4 integrated extremely low-noise preamplifiers (extendable).

SIEMENS

Siemens Medical Solutions USA, Inc.
51 Valley Stream Parkway, Malvern, PA 19355
Fax: (866) 309-6992

SIEMENS REPRESENTATIVE
Gordon Wilhelm - (610) 448-1736

PRELIMINARY PROPOSAL

Qty	Part No.	Item Description
1	14408883	RS Shoulder Array Coil #S Receive array coil consisting of two different sized, anatomically adapted coil tops attached to a base plate, either for the left or for the right shoulder.
1	14406328	RS Cabinet Cooler; Water #S Integrated water-cooled heat exchanger for cooling the electronics cabinets. It enables operation in ambient temperature up to 30 degrees C (86 degrees F) without additional air conditioning.
1	14406337	RS Venting Kit Airfreight #H;S;SON Overpressure valve as a transport safety device for cold delivery of the magnet by air (designed for air pressure conditions below atmospheric during transport by plane).
1	14406340	RS Helium Fill 30/70 #S;Av;Es;TATS Helium Fill for cold delivery ex works.
1	14406307	RS Ethernet Twisted Pair syngo Ethernet Twisted Pair Adapter incl. 10 m cable.
1	4MR5142869	Armrest #MR
1	MR_CRYO	Standard Cryogens
1	MR_INITIAL_32	Initial onsite training 32 hrs
1	MR_FOLLOWUP_24	Follow-up training 24 hrs
1	MR_INT_SYN_BCLS	Basic syngo MR Class
2	MR_ADD_32	Additional onsite training 32 hours
2	MR_ADD_CLASSES	Additional Training Class
1	MR_MOB_RIG_INST	MR Mobile Rigging and Installation
1	NV474SI64E	Invivo 1.5T lower extremity coil
1	NV800146	Invivo 1.5T Knee array coil
1	M3SSMR300E PM	Spectris Solaris EP Injector-mobile
1	14408861	RS Advanced High Order Shim #S The 'Advanced High Order Shim' System includes the control of 5 additional non-linear electric channels of second order for precise additional fine-tuning of the field homogeneity once the patient is inside the system.
1	14407412	RS Cable Set syngo 10/10 #S Cable length inside the cabin 10 m, cable length outside the cabin 10 m.
1	14408904	RS Mobile Conversion Kit #H;S;SON Conversion Kit for installation of a MAGNETOM Harmony/ Symphony/ Sonata in a mobile trailer. This kit contains special cables and installation material.
1	14427963	RS License USA License for US specific software functionality.
1	14408866	RS BLADE #S Motion insensitive multi-shot Turbo Spin Echo (TSE) sequence with inter-shot motion correction for in-plane motion in all body regions.
1	14406252	RS Composing syngo #H;S;SON;Trio This application provides dedicated evaluation software for creating full-format images from overlapping MR volume data sets and MIPs (starting from syngo MR A30) acquired at multiple stages.

SIEMENS

Siemens Medical Solutions USA, Inc.
51 Valley Stream Parkway, Malvern, PA 19355
Fax: (866) 309-6992

SIEMENS REPRESENTATIVE
Gordon Wilhelm - (610) 448-1736

PRELIMINARY PROPOSAL

Qty	Part No.	Item Description		
1	14408868	RS SWI #S; Trio Susceptibility Weighted Imaging is a high-resolution 3D imaging technique for the brain with ultra-high sensitivity for microscopic magnetic field inhomogeneities caused by deoxygenated blood, products of blood decomposition and microscopic iron deposits. Among other things, the method allows for the highly sensitive proof of cerebral hemorrhages and the high-resolution display of venous cerebral blood vessels.		
1	14408885	RS CP Breast Array Coil #S;Av;Es iPAT compatible coil for high SNR imaging of the breasts. No-tune coil with 4 array coil elements with 4 integrated preamplifiers (2 CP pairs).		
System Total:				\$988,200

OPTIONS:

Qty	Part No.	Item Description	Extended Price
1	PWR9390ISO90	Isolation Transformer	+ \$10,000
1	PWR9390MMO BKIT	Mounting kit f.Pwrwre9390 mobile MR	+ \$1,200
1	PWR9390PC100	Powerware 9390 100KVA Power Conditioner	+ \$25,000

FINANCING: The equipment listed above may be financed through Siemens. Ask us about our full range of financial products that can be tailored to meet your business and cash flow requirements. For further information, please contact your local Sales Representative.

Siemens Healthcare is pleased to submit this Preliminary Pricing Proposal. To place an order for the above listed items, please notify your Siemens Healthcare Sales Representative who will submit to you a formal Siemens Healthcare Proposal, inclusive of Terms, Conditions, and Warranty coverage. Only a formal Siemens Healthcare Proposal may be used to create a binding order for this equipment.

Siemens Healthcare
Gordon Wilhelm
(610) 448-1736
gordon.wilhelm@siemens.com

SIEMENS

Siemens Medical Solutions USA, Inc.
51 Valley Stream Parkway, Malvern, PA 19355
Fax: (866) 309-6992

SIEMENS REPRESENTATIVE
Gordon Wilhelm - (610) 448-1736

PRELIMINARY PROPOSAL

Detailed Technical Specifications

MAGNETOM Symphony, RS Proven Excellence System

Part No. / Product	Description
<p>14417634 RS MAGNETOM Symphony - System (P)</p>	<p>MAGNETOM Symphony – Power-class. The MAGNETOM Symphony system Power-class enables most advanced applications e.g. syngo BLADE or syngo SWI and provides state of the art 3D imaging e.g. syngo SPACE and syngo VIEWS. The proven performance at 1.5 T assures top image quality across the entire spectrum of applications and patients. The strong gradient system of the MAGNETOM Symphony system Power-class is available at 3 performance levels and includes the Integrated Panoramic Array IPA™ coil system. IPA allows flexible combinations of up to four different coils with up to 16 CP coil elements for even faster and more comfortable exams. The performance is even enhanced by the superior Parallel Imaging with Siemens unique GRAPPA.</p> <p>Siemens' easy-to-use and intuitive software platform syngo provides a highly ergonomic user interface and promotes efficient workflow.</p> <p>The MAGNETOM Symphony system Power-class includes a high performance dual processor based computer system and is ideally suited for highly demanding clinical applications.</p> <p>With its short and very homogeneous, superconductive magnet the MAGNETOM Symphony system Power-class meets the highest requirements concerning image quality at 1.5 T, innovative imaging capabilities, siting, productivity and ease of use. The new MAGNETOM Symphony system Power-class design features provide enhanced patient comfort.</p> <p>The MAGNETOM Symphony System Power-class Basic Unit Includes:</p> <ul style="list-style-type: none"> - Short, whole-body, 4th generation Actively Shielded superconductive magnet with wide magnet bore, External Interference Shielding (E.I.S.) and excellent homogeneity allowing up to 50 cm FoV imaging, - prepared for the actively shielded water-cooled gradient system (it can be ordered in three different performance levels. The gradient system is not included in the basic unit and must be ordered separately). - Integrated magnet cooling system - Digital radio frequency transmit and receive system - Compact water-cooled RF amplifier with 15 kW peak power - Simultaneous receive capability of 8 (optionally up to 16) CP coil elements from up to 4 different IPA coils using Integrated Panoramic Array™ (IPA) technology - Ergonomically designed patient communication unit consisting of: tabletop intercom unit, pneumatic headphones for the patient, table stop, volume control of speaker and headphones in the examination room, volume control of speaker in control room, connection for hi-fi stereo system for music playback (stereo system is not included in the basic unit) - Pneumatic assistance-call squeeze-bulb for patient - High-precision Laser Positioning System - Variable ventilation and lighting for the patient in the magnet aperture. - Two Control Units, one on each side of the flared magnet bore for controlling all table functions, laser light localizer, patient-space comfort elements (light, air, volume of headphone and loudspeaker, loudspeaker sound) and scan start. - LCD display with integrated laser light localizer above the magnet bore showing important system settings such as currently occupied coil connectors and current patient table position in mm, - syngo Acquisition Workplace including a high performance dual processor 2x Dual Core CPU with 2.6 GHz clock rate / 3 GB RAM incl. color LCD monitor and a separate high speed Pentium 4 / 3GHz dual processor based image reconstruction processor - Easy-to-use, syngo-based syngo MR Operating software - DICOM 3.0 interface with Send/Receive, Query/Retrieve, Basic Print, Paper Print, DICOM Worklist and Storage Commitment (SC) as well as MPPS (Modality Performed Procedure Steps), - Components for controlling and securing image quality, incl. software for automatic recording and evaluation

SIEMENS

Siemens Medical Solutions USA, Inc.
 51 Valley Stream Parkway, Malvern, PA 19355
 Fax: (866) 309-6992

SIEMENS REPRESENTATIVE
 Gordon Wilhelm - (610) 448-1736

PRELIMINARY PROPOSAL

Part No. / Product	Description
<p>(Continued) 14417634 RS MAGNETOM Symphony - System (P)</p>	<p>of data relevant for image quality and a set of MR phantoms.</p> <p>System Highlights <i>(some options are mentioned in order to give a clearer overview):</i></p> <ul style="list-style-type: none"> - MAGNETOM Symphony system Power-class has a modular system design which enables precisely tailored configurations to suit your exact needs and budget, with the confidence of knowing that you can upgrade later as your needs grow. MAGNETOM Symphony system Power-class is offered with a strong gradient system in 3 easily upgradeable classes of performance. - Cover color and design is subject to availability. - The asymmetric design combines a large 120 cm flare with a patient friendly 60 cm opening to enhance comfort for the patients. The tunnel is only 160 cm long and thus gives a short and open appearance that can significantly help patients with claustrophobia or anxiety about the MR examination. The cantilevered table design (in two alternative versions) gives the system a light and unimposing appearance while providing unobstructed foot space for attending staff and better access to the patient. - The relatively lightweight design of the MAGNETOM Symphony system Power-class in most cases eliminates the need for structural building reinforcements and thus facilitates installation in upper floors. - The unique compact design reduces the required space to only 30 sqm (325 sq. ft.) for the entire installation. The necessary room height clearance is only 2.40 m (7' 9"). - The MAGNETOM Symphony system Power-class allows siting of the system without a dedicated computer room in many cases, if the optionally available integrated electronics cabinet water cooling is installed. - The Integrated Panoramic Array (™) (IPA) system is a modular CP Array concept that greatly accelerates coil set-up and therefore significantly enhances throughput and productivity. IPA enables the Spine Array coil (option) to remain on the patient table (option) for most studies - except Breast and Shoulder MR (scan protocols and coils optionally available). With IPA, up to 4 independent coils can be connected simultaneously and 8 (optionally up to 16) CP elements can simultaneously receive acquired signals. Furthermore, the active coil elements can be freely selected by the operator at the console with a mouse-click. - The optional removable table top and trolley system (option) allow even greater ease in patient preparation outside the examination room and therefore increase patient throughput. This method can help to save time and energy by minimizing the number of times a patient has to be repositioned, e.g. inpatients. Immobile patients are repositioned directly from their bed to the mobile examination table (option). - MAGNETOM Symphony system Power-class offers advanced, fast 3D Shim which optimizes homogeneity once the patient is inside the magnet. This procedure also improves fat saturation. The system offers the option of higher order shimming capability which further enhances shimming results particularly for off-center fat saturation, Single Shot EPI, BOLD and other imaging techniques such as Turbo GSE (scan protocols available as an option in appropriate clinical packages). - MAGNETOM Symphony system Power-class combines state-of-the-art performance with an overall harmonized concept. High system availability is ensured by our expert, highly trained Siemens MR service engineers. - Your Siemens service contract (not included in the basic unit) offers a comprehensive range of benefits such as Uptime Remote Diagnostics for improved productivity and maximum uptime. <p>MAGNETOM Symphony System Power-class Magnet:</p> <ul style="list-style-type: none"> - The 1.5 T MAGNETOM Symphony system Power-class magnet utilizes a stainless-steel cryostat with proven structural reliability and excellent behavior in minimizing artifact-inducing eddy currents. - Magnet length is only 160 cm while the excellent homogeneity allows for 50 cm FoV imaging. This is unique for such a short magnet and provides excellent image quality over a wide range of diagnostic applications. - Homogeneity: < 4 ppm Vrms (typ.: < 2.4 ppm Vrms, Vrms = Volume root-mean-square) in a spherical volume of 50 cm using the most accurate 24-plane method with 20 sampling points per plane. The 24-plane plot method measures the largest number of sampling points per plane in the industry and therefore ensures highly accurate values, which other methods do not achieve; the results of the Vrms technique are thus more significant than those of the conventional peak-peak method). - The MAGNETOM Symphony system Power-class magnet represents the 4th generation of Actively Shielded magnets with integrated, patented External Interference Shielding (E.I.S.). E.I.S. protects against external interferences caused by moving ferromagnetic objects (e.g. elevators, cars) and works continuously (especially also during scanning when you need it most) to maintain premium image quality. - The magnetic 0.5 mT scatter field is 2.5 m radially (x, y) and 4.0 m axially (z) for easy siting, mostly even without additional shielding.

SIEMENS

Siemens Medical Solutions USA, Inc.
 51 Valley Stream Parkway, Malvern, PA 19355
 Fax: (866) 309-6992

SIEMENS REPRESENTATIVE
 Gordon Wilhelm - (610) 448-1736

PRELIMINARY PROPOSAL

Part No. / Product	Description
<p>(Continued) 14417634 RS MAGNETOM Symphony - System (P)</p>	<ul style="list-style-type: none"> - The helium boil-off rate in standby is typically 0.075 l/h. The helium refill interval depends on the type of gradient and the number and type of the performed examinations. In general, refilling must be done 1 x per year. - Magnet weight: 4050 kg. In many cases will allow siting on upper floors or older rooms without special floor reinforcement. - Hybrid shim system: Active (with 3 electric linear shim channels) and passive shims for maintaining extremely high homogeneity and excellent image quality over a wide range of applications. Auto-shimming is performed using 3D shim, a patient and coil specific technique which optimizes the homogeneity for each patient in normally less than 25 seconds. <p>MAGNETOM Symphony System Power-class Digital Radio Frequency System:</p> <ul style="list-style-type: none"> - The digital signal processing system operates at 63 MHz resonance frequency and utilizes digital filtering, digital quadrature demodulation as well as digital controls for RF amplitude stabilization for superior resolution and image quality. - The RF transmitter incorporates a compact semi-conductor 15 kW RF amplifier with integrated water cooling. - The receiver operates over a very large 1 MHz bandwidth for outstanding sampling speed and high signal-to-noise ratio. The high bandwidth enables fast imaging techniques including Single Shot EPI (option). - The transmit amplitude digitization resolution is 50 ns and the receive amplitude digitization resolution is 100 ns; this ensures highest precision at maximum speed. - Dynamic signal control eliminates the need for receiver coil adjustments, thus saving up to 30 seconds for every study. - The system has built-in bandwidth flexibility which compensates for natural magnetic field drift for a period of up to 5 years, without the need for adjustments <p>MAGNETOM Symphony System Power-class Integrated Panorama Array™ (IPA) coil system: The Integrated Panoramic Array™ (IPA) system is a modular CP Array Coil concept with circular polarization that greatly accelerates coil set-up and can significantly enhance throughput and productivity. IPA enables the CP Spine Array Coil (option) to remain on the table for most studies except Breast and Shoulder MR (scan protocols and coils are optionally available). For the operator this considerably facilitates the daily clinical examinations because he rarely needs to handle what is in general the largest and heaviest coil. All coils and scan protocols mentioned below are optionally available in appropriate clinical packages:</p> <ul style="list-style-type: none"> - With IPA, up to 4 independent coils can be connected simultaneously and up to 8 freely selectable CP elements (16 CP elements optional) can simultaneously receive the MR signal. The operator can select the active coil elements with a mouse-click. This makes examinations requiring coverage of multiple anatomical regions very flexible. - The lower part of the CP Head Array (option) perfectly fits with the CP Spine Array Coil (option) to be one unit. It can also be operated without the upper part. - The CP Neck Array coil (option) works in combination with various other coils, e.g. CP Spine Array Coil (option). - The optionally available CP Body Array Flex coil also works in combination with the CP Spine Array coil (option) and is placed on top of the patient's thorax, abdomen, pelvis or thighs, depending on the desired application. It is especially suited for cardiac examinations (scan protocols and PMU optionally available). - A second flexible CP Body Array Extension coil (option) can be combined with the above-mentioned CP Body Array Coil, thus enlarging the FoV. - For studies of the lower extremities (in 'feet first' position), the available CP Extremity coil (option) may simply be placed on top of the CP Spine Array coil (option). This allows the operator unprecedented flexibility and speed in coil set-up, patient preparation, and patient positioning. - IPA is much more than just CP Array coil technology. It is the next revolution in coil technology in terms of simplicity, speed and ease of use. It was made possible by the latest integrated preamplifier technology, active decoupling of all the coils, flexibility in the combination of the electronic components, the careful overlapping of coil elements, the excellent S/N of the CP technology and the modular building-block design of the MAGNETOM Symphony system Power-class coil family (all coils are optional). <p>MAGNETOM Symphony System Power-class - Table and System controls: <i>(The patient table is not included in the basic unit. The basic unit always has to be supplemented with the standard patient table or the removable tabletop with trolley).</i></p>

SIEMENS

Siemens Medical Solutions USA, Inc.
 51 Valley Stream Parkway, Malvern, PA 19355
 Fax: (866) 309-6992

SIEMENS REPRESENTATIVE
 Gordon Wilhelm - (610) 448-1736

PRELIMINARY PROPOSAL

Part No. / Product	Description
<p>(Continued) 14417634 RS MAGNETOM Symphony - System (P)</p>	<p>Two ergonomically designed units (one on each side of the magnet aperture, optional also on the rear of the magnet) at waist level, control numerous patient table (option) and system functions. The functions are:</p> <ul style="list-style-type: none"> - Direct-response joystick for "table up/down" and "table in/out" movements. The horizontal speed of the table is proportional to the extent the joystick is pushed and the direction of motion intuitively corresponds to the joystick motion. Do not let go of the joystick during transition from the vertical to the horizontal direction. The table movement seamlessly transitions from the "table up" to the "table in" movement. The same applies to the opposite direction. - "Table Stop" button, - The "Light Localizer" button activates and deactivates the laser light localizer for accurate patient positioning; - The "Center Position" button automatically moves the table (option) into the magnet isocenter after the laser light localizer has been used for positioning. If the laser light localizer has not been used, the system automatically centers to the position of the CP Head Array coil (option); - The "Home Position" button drives the tabletop (option) all the way out of the magnet, but not down. This will facilitate repositioning the patient and will save time at the end of an examination. - The "Fan" button controls the ventilation within the patient opening. The fan has 4 settings: off, low, medium, high; - The "Light" button controls the lighting within the magnet tunnel. The light also has 4 settings: off, low, medium, high; - The "Scan Start/Stop" button starts a pre-loaded protocol. This is particularly useful, e.g. for breath-hold, when the operator is inside the examination room. <p>MAGNETOM Symphony System Power-class Computer and Intercom: The new PC-based computer system uses <i>syngo</i>, the easy-to-use and intuitive user interface from Siemens.</p> <ul style="list-style-type: none"> - High-performance image processor of the latest Pentium 4 CPU generation with dual processor, 3 GHz clock rate, 1 GB RAM, one hard disk for system software and 4 hard disks for raw data storage, one DVD-ROM drive and one floppy disk drive, - 2.8 ms image reconstruction time, i.e. 355 recons per second, for online Fast Fourier Transformation (FFT) of a 256² matrix, - High-performance host computer with dual processor 2x Dual Core with 2.6 GHz clock rate, 3 GB RAM or more, one 73 GB system hard disk, one 73 GB hard disk for the database, one 73 GB hard disk for about 110,000 images (256 or 512 matrix, uncompressed), high-speed graphic board, one CD/DVD-R drive for uncompressed image storage (CD approx. 4,000 image in 256 matrix, DVD approx. 25,000 images in 256 matrix) on CD-R in DICOM format (ISO 9660 Level 1) or storage of other data such as AVI files, a CD-ROM or DVD-R drive and an electronic mouse. The combination of host computer and image processor offers a truly powerful imaging system designed for large matrix sizes of up to 1024 x 1024. The unrestricted multitasking capability allows time-saving parallel scanning and reconstruction, - High resolution color LCD flat screen monitor with 1280 x 1024 pixel display, integrated gamma correction for optimum display of radiographic grayscale and automatic backlight control for longterm brightness stability, - Support of USB memory sticks, - Access to the file system by means of a secure and convenient browser, - Interface for separate magneto-optical disk (MOD), 5 ¼", 1.7 GB, read-only, - The intercom system includes an ergonomically designed patient communication unit for desktop positioning on the <i>syngo</i> Acquisition Workplace control board and pneumatic headphones for the patient during examination; the intercom unit controls the volume of speaker and headphones in examination room, volume of speaker in control room, response to the patient's activation of the assistance-call button and provides a connection to a hi-fi stereo system (stereo system is not included in the basic unit) for music playback. <p>MAGNETOM Symphony System Power-class <i>syngo</i> MR Software:</p> <ul style="list-style-type: none"> - The <i>syngo</i>-based, graphical user interface offers optimized clinical workflow. Parallel working and one-click exams are efficiently supported. - Parallel scanning and reconstruction are standard. - The task card approach enables structured workflow with multiple patients by easy image exchange between tasks.

SIEMENS

Siemens Medical Solutions USA, Inc.
 51 Valley Stream Parkway, Malvern, PA 19355
 Fax: (866) 309-6992

SIEMENS REPRESENTATIVE
 Gordon Wilhelm - (610) 448-1736

PRELIMINARY PROPOSAL

Part No. / Product	Description
<p><i>(Continued)</i> 14417634 RS MAGNETOM Symphony - System (P)</p>	<ul style="list-style-type: none"> - In addition to the three segments of graphical slice positioning the <i>syngo</i> user interface shows small reference views from other series. The drag&drop functionality is fully supported. After image reconstruction scanned series can fully automatically be loaded into the user interface and displayed in cine mode. - Prepared exam-oriented scan programs can be customized to meet the clinical requirements in daily routine and can then be stored. - The context-sensitive "Online Help" function and the Protocol Assistant offer support and propose solutions to MR-specific questions and parameter conflicts. - Support of the proven Integrated Panoramic Array™ (IPA™) coil system. - The software is prepared for Integrated Panoramic Positioning™ (IPP™). Together with the optional, automatically controlled table move this technology reduces the need for time-consuming patient repositioning. This enables optimum and fast examinations covering multiple body regions, e.g. for peripheral MR angiography (scan protocols and specific coils are optionally available). - Inline technology reconstructs and processes image data on-the-fly, i.e. many post-processing steps are automatically carried out via inline technology during or directly after the scan. Thus the offline image filter can be used for inline filtering as well. - 1D and 2D motion correction procedures (1D/2D PACE) are included. - Phoenix enables direct scanning of drag & drop images, using the parameter settings; - Integrated Parallel Acquisition Techniques (iPAT) further increase the acquisition speed compared with conventional standard scan techniques by a factor of 2 (up to a factor of 4 in combination with the 8 channel 'Whole Body Array' interface option). iPAT is fully compatible with the Integrated Panoramic Array Coil concept (IPA). - The Image Viewing Card allows simultaneous management, viewing and processing of up to three patients. - Dynamic Analysis evaluation software allows calculation of functions such as addition/subtraction, division/multiplication, T1 and T2, and standard deviation. - Mean Curve can be used to evaluate dynamic examinations, e.g. employing contrast media. - The 3D Post-Processing Card includes the basic functionalities for manual MPR, MIP and SSD image reconstructions. (Multiplanar Reconstruction, Maximum Intensity Projection, Shaded Surface Display) - The system is prepared for advanced applications e.g. <i>syngo</i> BLADE and <i>syngo</i> SWI. - VIEWS (Volume Imaging with Enhanced Water Signal) allows <ul style="list-style-type: none"> - bilateral, simultaneous display of both breasts directly, fat-saturated, or water-exited. - due to the high resolution in the 3D procedure, subsequent reconstructions in arbitrary directions. - with submillimeter voxels highest resolution for precise assessment of both breasts or also smaller regions. - Efficient filming is possible directly from the different user interfaces and can be controlled by minimum user interaction. There is a wide range of different film layouts with regular and irregular formats. The Mother and Child function allows to display the position of the measured slice in a scout showing a small image in the upper right-hand or the lower left-hand corner of the larger image (image within an image). With the Patient Browser the images can be freely positioned on the film via drag&drop. Pan&zoom and windowing of images on the film sheet is also possible. As an additional guide a reference image can be displayed in the upper right corner of the image segment (Camera not included in the basic unit). - Studies can be easily networked and managed using the standard DICOM 3.0 protocol for efficient support of workflow. The following standard functions are supported: Send/Receive, Query/Retrieve, Basic Print for DICOM-compatible laser cameras (camera is not included in the basic unit), DICOM Worklist, DICOM Storage Commitment (SC), DICOM MPPS (Modality Performed Procedure Steps) functionality is offered for efficient organization of workflow within HIS/RIS systems.
<p>14408857 RS Standard Patient Table #Symphony</p>	<p>The cantilevered table design gives the system a light and unimposing appearance while providing unobstructed foot space for attending staff and better access to the patient. The table can be lowered to a minimum height of 45 cm (18") from the floor, for easier patient positioning and better access for geriatric or pediatric patients. The tabletop can travel 42 cm beyond the rear end of the system, for additional patient access.</p>

SIEMENS

Siemens Medical Solutions USA, Inc.
 51 Valley Stream Parkway, Malvern, PA 19355
 Fax: (866) 309-6992

SIEMENS REPRESENTATIVE
 Gordon Wilhelm - (610) 448-1736

PRELIMINARY PROPOSAL

Part No. / Product	Description
14418174 RS Mobile Trailer for MR	Refurbished Mobile Trailers are systems which were previously owned and which have been refurbished by the Siemens Refurbished Systems business unit so that they meet Siemens' stringent quality standards. It is the goal of the Siemens RS business unit to assure excellent functionality and reliability, similar to that of new systems. This allows Siemens to provide a 12 month warranty for refurbished Mobile Trailer systems. Important note : This offer is subject to confirmation, due to the limited availability of refurbished systems. The availability will be clarified prior to the signing of any contract.
14408854 RS Quantum Gradient System #S	The Quantum Gradient System consists of: <ul style="list-style-type: none"> - Actively shielded, water-cooled gradient coil with a maximum gradient field strength of 30 mT/m per axis, i.e. 52 mT/m effective and a maximum slew rate SR of 125 T/m/s per axis, i.e. 216 T/m/s effective. - Minimum rise time of 240 microsec. from 0 to maximum amplitude, - Separate cooling channels that simultaneously cool primary and secondary coils allow the application of extremely gradient intensive techniques in a new class of performance. - 100% duty cycle for fast and demanding techniques such as ultra-short TE MRA in continuous operation, thin slice single breath-hold liver studies and EPI imaging techniques (all optional in appropriate clinical packages). - Variable Field-of-View selection from 0.5 cm to 50 cm for optimum coverage and highest resolution in diagnostics. The minimum slice thickness in 2D and 3D is 0.1 mm and 0.05 mm, respectively. - Acquisition of sagittal, transverse, coronal, oblique and double oblique slices with highest resolution. - The extremely compact water-cooled gradient amplifier features a modular expandable design with excellent linearity and pulse reproducibility. It is digitally controlled and has very low switching losses due to ultrafast solid state technology. - Integrated circularly polarized body coil. - Designed for the new functions of the Maestro Class Generation.
14408855 RS Advanced Array Interface #S	With this option, up to 8 CP coil elements may be used simultaneously and are selectable via software. This offers additional large Field of View coverage and increased flexibility of coil combination.
14406229 RS Whole-Body Arr. Int. iPAT+ #S;SON	Up to 16 CP coil elements are selectable via software and can thus be used simultaneously. This offers additional field of view (FOV) coverage and increased flexibility of coil combination (options). The Whole-Body Array Interface option includes the application package iPATplus (integrated Parallel Acquisition Technique). iPATplus is a rapid acquisition technique for advanced applications up to a PAT factor 4.
14406234 RS CORE Package syngo #H;S;SON	The kit contains: <ul style="list-style-type: none"> - Spin Echo (single-echo, double- and multi-echo) - Inversion Recovery with selectable inversion times - 2D Turbo SE with T1, T2 and proton density weighting in single, double and triple contrast sequences, unique shared echo technique included - 2D Turbo Spin Echo with 2D PACE - 3D Turbo SE with strong T2 weighting - 2D/3D RESTORE TSE - Turbo IR for significantly faster IR applications with fat suppression - Dark Fluid IR for rapid T2 weighted imaging with dark CSF - True IR for stronger gray/white matter differentiation - 2D and 3D MEDIC (Multi-Echo Data Image Combination) especially for improved cervical spine image quality - 2D/3D gradient echo (FLASH, FISP) - 2D gradient echo segmented - 2D gradient echo with 2D PACE - 2D and 3D PSIF for very heavily T2 weighted studies in the head or body regions - 2D TurboFLASH, rapid single shot technique - 3D MPRAGE (3D TurboFLASH) for the acquisition of super-high resolution 3D data sets especially useful for head studies (e.g. isotropic resolution of 1 mm x 1 mm x 1 mm, for head with 128 sections in less than 5 minutes scan time) - 2D and 3D Time-of-Flight (ToF) angiography, 3D multi-slab technique for reduced saturation in small vessels - 2D and 3D Time-of-Flight (ToF) angiography with selective water excitation - MTC (Magnetization Transfer Contrast), for optimization of contrast and optimized background suppression

SIEMENS

Siemens Medical Solutions USA, Inc.
 51 Valley Stream Parkway, Malvern, PA 19355
 Fax: (866) 309-6992

SIEMENS REPRESENTATIVE
 Gordon Wilhelm - (610) 448-1736

PRELIMINARY PROPOSAL

Part No. / Product	Description
<p>(Continued) 14406234 RS CORE Package syngo #H;S;SON</p>	<ul style="list-style-type: none"> - TONE (Tilt Angle Optimized Non-saturated Excitation) used with 3D TOF angiography, to visualize distal parts of the vessels by minimizing saturation effects - Travelling saturation band techniques combined with 2D TOF angiography (Travelling Sat Angio) - SAT Recovery - Gradient Motion Rephasing (GMR) - Variable readout bandwidths - Fat or water saturation - Water excitation - Simultaneous slice excitation for 2D Gradient Echo - LOTA (Long Term Averaging) for reduced motion artifacts - Multi-slice multi-angle capability - 1024 matrix capability - Whisper Mode, for acoustic noise reduction - 2D and 3D in-plane interpolation for higher matrix visualization (e.g.: interpolation of base resolution 256/512 and 512/1024) - 3D slice interpolation for calculation of thinner slices in a shorter measurement time - Elliptical scanning for reduced scan time in 3 D - MIP (Maximum Intensity Projection) - MPR (Multiplanar Reconstruction) - SSD (Shaded Surface Display) - 2D evaluations and quantitative analysis functions (e.g.: addition, subtraction, T1 and T2 calculation, Z-score, Time-to-Peak) <p>The sequences are stored in a clinically-oriented system (Clinically Optimized Regional Exams - CORE), with optimized scan parameters, as ready measurement protocols. These can be modified and saved under user-defined names for easy call-up and frequent use.</p> <ul style="list-style-type: none"> - Maximum FoV of MAGNETOM Harmony / Symphony: 500 mm - Maximum FoV of MAGNETOM Sonata: 400 mm - Scans in different planes can be acquired simultaneously in a single sequence, such as for the acquisition of superimposed orthogonal survey images (Scout) or studies in the spinal region, in order to image several vertebral disks exactly in their transverse orientation - The sequences can be combined with spectral fat saturation (Fat/Sat) or Water excitation for the optimization of image contrast and with gradient-rephasing (GMR) techniques for flow-related artifact reduction - Variable readout bandwidths in multi-echo sequences and optimized RF pulses in Spin Echo sequences improve the Signal-to-Noise ratio - The high signal-to-noise ratio permits the use of the half-fourier technique to further reduce the scan time (by about half), while maintaining the same spatial resolution - Rectangular FoV capability from 10% to 100% in steps of 1%, enables reduction in scan time by reducing the number of phase encoding steps while maintaining the same in-plane resolution - The 2D PACE (Prospective Acquisition CorrEction) technique can be used to conduct abdominal examinations with real-time motion correction. 2D PACE is compatible with 2D Gradient Echo and 2D Turbo Spin Echo. - Automatic voice commands for breath-hold examinations - Fast, interactive 3D post-processing: MPR, MIP, and SSD <ul style="list-style-type: none"> - MPR (Multiplanar Reconstruction) is a post-processing program for reconstruction of reformatted cuts from 3D data sets with freely selectable slice thickness and distance. It allows the real-time reconstruction of orthogonal, oblique, double oblique, and curved cuts. Single cuts, as well as series of parallel, planar or rotated cuts can be calculated interactively. The displayed results can be filmed directly and they can be stored easily to the Patient database. - MIP (Maximum Intensity Projection) is a powerful post-processing program for real-time reconstruction and display of vascular information from 2D or 3D MR data sets. The program allows the reconstruction of projection images of vascular structures in any arbitrary perspective, with free definition of angular increments from the measured data. To prevent vascular overlapping in the projections, the original input data can be reduced to the volume of interest freely selectable for optimized visualization of vascular ROI (freehand MIP). Reconstructions can be performed interactively. - SSD (Shaded Surface Display) provides three dimensional display of surfaces, e.g.: vessels. The displayed results can be filmed directly and they can be stored easily to the Patient database.

SIEMENS

Siemens Medical Solutions USA, Inc.
 51 Valley Stream Parkway, Malvern, PA 19355
 Fax: (866) 309-6992

SIEMENS REPRESENTATIVE
 Gordon Wilhelm - (610) 448-1736

PRELIMINARY PROPOSAL

Part No. / Product	Description
14406292 RS PC Keyboard US english	The keys of the numerical key panel are assigned to syngo-specific functions and labeled with the corresponding syngo icons. The keyboard supports the country specific special characters.
14408860 RS PMU Electronics #Symphony	The electronics are mounted inside the foot-end of the patient table for easy guidance of the cable and minimization of the possibility of loops. For each 2 nd tabletop with trolley an additional PMU is required. <ul style="list-style-type: none"> - Superior gradient interference suppression in the ECG signal via Digital Signal Processing - Infrared pulse sensor for peripheral pulse signal - Pneumatic chest belt for respiratory signal - External trigger interface for connection of an external trigger source such as a pulse generator. - Interface to external patient monitoring unit is available The physiologic signals are displayed on the console monitor. They can be also displayed on the optional Exam Room PMU display.
14406253 RS Panoramic Table syngo #H;S;SON	Panoramic Table supports the Siemens unique Integrated Panoramic Positioning (IPP). IPP extends the benefits of IPA and allows the operator to remotely move the table for high productivity, optimal diagnosis and minimizes the need to reposition the patient. <p>The user can define protocol-driven automatic patient table movement realizing a Field-of-view of up to 154 cm. Panoramic Table can be used with virtually all RF coils (appropriate RF Coils are optionally available).</p> <p>The IPP technique is particularly useful for Peripheral MR Angiography and for imaging large or multiple regions : spine, abdomen, and periphery (all imaging techniques in appropriate clinical optionally packages available).</p>
14406254 RS Advanced Angio Pack. syngo #H;S;SON	The package includes: <ul style="list-style-type: none"> - 2D timing protocols for accurate determination of contrast bolus arrival to provide optimized contrast and separation of arterial and venous vessels - 3D FLASH MRA technique for fast imaging with excellent image quality and coverage, with fully automatic MIP and fully automatic Subtraction inline - Dynamic MRA (4D Freeze Frame MRA): Visualization of the abdominal and thoracic vasculature with 3D technique using FLASH 3D sequences for fast acquisition of high resolution T1-weighted studies after contrast media injection - High-resolution imaging with short echo times to minimize dephasing effects - ECG-triggered standard and segmented 2D FLASH sequences using Time-of-Flight technique, for studies with high signal-to-noise ratio - 2D/3D Phase Contrast sequences optimized for various flow velocities or for fast scout studies with large Field-of-View - 3D VIBE (Volume Interpolated Breath-hold Examination): A 3D T1 weighted abdominal imaging and Angiography breath-hold technique. VIBE provides superior spatial resolution with exquisite anatomical and vascular contrast.
14406255 RS Care Bolus syngo #H;S;SON	This enables exact time scheduling for contrast enhanced MR Angiography without additional time expenditure. For optimal vascular contrast, "centric/elliptical phase reordering" can be selected, if necessary.
14406260 RS EPI syngo #H;S;SON	<ul style="list-style-type: none"> - IR pulse based Dark Fluid EPI sequence with strong T2 weighting - Sequences with up to 16 b-values up to 10000 sec/mm² - Sequences with integrated post-processing for an ADC-Map - Sequences with integrated post-processing for a trace-weighted image. - Special multi-direction diffusion sequence - Special 3-scan Trace EPI with strong diffusion weighting and short echo times. An optimized EPI sequence for perfusion-diagnostics is included. Real-time calculations are done of anatomical images and, in addition, of a global bolus plot for controlling the contrast agent enrichment and a Time-to-Peak

SIEMENS

Siemens Medical Solutions USA, Inc.
 51 Valley Stream Parkway, Malvern, PA 19355
 Fax: (866) 309-6992

SIEMENS REPRESENTATIVE
 Gordon Wilhelm - (610) 448-1736

PRELIMINARY PROPOSAL

Part No. / Product	Description
<p><i>(Continued)</i> 14406260 RS EPI syngo #H;S;SON</p>	<p>map for visualizing the time dependence of tissue perfusion.</p> <p>For rapid, T1 weighted survey images with high spatial resolution, a segmented EPI is provided, which can be used both in 2D and in 3D mode.</p>
<p>14406265 RS Advanced Turbo syngo #H;S;SON</p>	<p>The protocols are integrated in the clinically oriented CORE system with optimized parameters. This package includes techniques with Turbo Factor in the range of 64 - 512.</p> <p>Provided techniques include:</p> <ul style="list-style-type: none"> - 2D/3D True FISP for fast T2 Imaging in combination with fat suppression - HASTE (Half-Fourier Acquisition with Single Shot Turbo Spin Echo) - HASTE IR for fat suppression - Single shot Turbo SE for very heavy T2 weighting - 2D/3D EPI segmented - PSIF Diffusion <p>Using Turbo Spin Echo sequences reduces acquisition times especially for T2 weighted images significantly.</p> <p>This allows:</p> <ul style="list-style-type: none"> - Rapid single shot imaging with HASTE or Single Shot TSE, both single-shot spin echo techniques yielding images with medium to very strong T2 contrast. As whole slices are acquired sequentially, each in typically less than one second, HASTE is useful in particular for examinations of patients who have difficulty holding their breath. Examinations in the abdominal region can be made even without using breath-hold technique, opening promising new application fields, such as MR Cholangiography or MR Urography. - True FISP for subsecond T2 imaging provides very fine spatial resolution in a short time. This is helpful in imaging of uncooperative patients as well as for vessels and fluid visualization. - Segmented Echo Planar Imaging (EPI) for fast imaging with reduced distortion artifacts. This technique also provides very good spatial resolution in 3D. - PSIF Diffusion can be used for visualization of the bone marrow in diffusion weighting. A typical application for that is the discrimination between benign and pathological compression fractures of the spinal column.
<p>14408873 RS CP Head Array Coil #S</p>	<p>Open and patient-friendly appearance that is also open at the top (cranial direction). Excellent for acquisition of very thin slices, high resolution imaging at short examination times or MR angiography studies. The design allows it to be smoothly integrated in the patient table and also to be streamlined with the CP Spine Array. Lower part of the coil may be used for imaging without the upper part, useful for example, in pediatric imaging. The lower part may also stay connected and used for all head-first imaging. Using the IPA (TM) concept, the CP Head Array may be used in combination with the CP Spine Array or the CP Neck Array for head and neck imaging. The coil is equipped with movable positioning devices for lateral fixation of the patient's head. The positioning devices can be totally removed as necessary, or in case the comfort kit (option) is used for patient stabilization. The detachable RF signal amplifier serves to optimize the sagittal/coronal illumination in the upper head area as well as the image homogeneity.</p>
<p>14406274 RS Head Coil Mirror #S;SON</p>	<p>The double mirror design shows all objects in their correct up/down and left/right orientation. The mirror can accommodate a wide variety of patients as it can slide along the length of the upper opening of the CP Head Array. It can be totally removed, in case the patient would not like to use the mirror for seeing outside. A special adapter also enables the use of the mirror with only the lower part of the CP Head Array.</p>
<p>14408874 RS CP Spine Array Coil #S</p>	<p>No-tune receive 6 CP element design with 12 integrated extremely low noise preamplifiers. One, two, three or four neighboring CP elements can be activated under software control as an array. The maximum imaging field of 50 cm and the anatomically adapted segments in the cervical spine region make the coil well suited to high resolution examinations of the entire spinal region. The design allows it to be smoothly integrated in the patient table and streamlined with the CP Head Array.</p> <p>The CP Spine Array is the foundation of the IPA™ concept. It can remain on the table for all studies except breast imaging which is performed using the CP Breast Array. The CP Spine Array has a coil receptor to which the CP Neck Array or the CP Body Array can connect. It may be used simultaneously with the CP Head Array and CP</p>

SIEMENS

Siemens Medical Solutions USA, Inc.
 51 Valley Stream Parkway, Malvern, PA 19355
 Fax: (866) 309-6992

SIEMENS REPRESENTATIVE
 Gordon Wilhelm - (610) 448-1736

PRELIMINARY PROPOSAL

Part No. / Product	Description
<i>(Continued)</i> 14408874 RS CP Spine Array Coil #S	Neck Array under user control of the active coil elements. It may also be used simultaneously with the CP Body Array for imaging of the thorax, abdomen, or pelvis.
14408875 RS CP Neck Array Coil #S	It consists of 1 CP pair around the neck and 1 LP element over the mediastinum, containing a total of 3 extremely low noise integrated preamplifiers. The loop portion over the nose may be removed if the area of interest is not in its vicinity. The CP Neck Array connects into the CP Spine Array and can operate in an integrated fashion with it for coverage of the anterior and posterior neck region under user control of the active coil elements. The excellent signal-to-noise ratio enables studies of the cervical spine, neck, larynx/oesophagus and mediastinum to be performed, as well as MR angiography studies of the region. The CP Neck Array is a semi-flexible structure with a holding grip and is fixed with provided Velcro bands directly to the patient.
14408876 RS Flex Coil Interface #S;Av;Es	The interface is not permanently mounted and therefore allows free positioning of the flexible coils as required by the examination procedure.
NV800218 Invivo 4 ch. Small Extremity coil	<p>Four channel Invivo small extremity array coil for imaging of the upper extremities including elbow, wrist, hand, fingers and toes.</p> <ul style="list-style-type: none"> - 4-channel phased array design provides versatility for high resolution imaging of the elbow, hand, wrist, forefoot, and toes. - Coil locks to base plate, greatly reducing motion artifact. - Small FOV coil for a variety of extremity applications. - Max FOV: 18cm <p>Includes 3 year warranty through Invivo.</p> <p>This product has been tested and verified for compatibility with the following Siemens' products: MAGNETOM Symphony (minimum software version N4VA21A and higher versions), Avanto (minimum software version N4VB11A and higher versions), Espree (minimum software version N4VB12A and higher versions) and Symphony a Tim System (minimum software version N4VB12T and higher versions). Compatibility with other products cannot be assured and may void service contracts and/or system warranties.</p> <p>Quality assurance measurement is performed by the customer according to the instructions provided with the coil. In case of problems with these coils, the customer shall contact the coil manufacturer directly; Siemens Service has to make sure that the problem is not caused by the MR system. Siemens does not stock any spare parts.</p>
14408877 RS CP Flex Coil; large #S;Av;Es	The coil can be wound around or placed flat on top of the area of interest. This rectangular coil measures approx. 21 cm x 52 cm and connects to the Flex Coil Interface. The optional comfort kit enhances positioning flexibility and helps minimize involuntary patient motion artifacts.
14408878 RS CP Flex Coil; small #S;Av;Es	The coil can be wound around or placed flat on top of the area of interest. This rectangular coil measures approx. 17 cm x 36 cm and connects to the Flex Coil Interface. The optional comfort kit enhances positioning flexibility and helps minimize involuntary patient motion artifacts.
14406286 RS CP Body Array Flex Coil #S;SON	<p>The CP Body Array Flex Coil connects into the CP Spine Array (option) and yields excellent results in this combination. The outstanding signal-to-noise ratio allows examinations of the chest (including the heart), the abdomen, the pelvis and also the thigh, all with excellent image quality. (Scan protocols and PMU are available in corresponding clinical packages.)</p> <p>The coverage in Z direction is approximately 30 cm. The set of straps supplied with the CP Body Array Flex Coil enables easy positioning. With about 1 kg the coil is light in weight and easy to handle by the operator.</p>

SIEMENS

Siemens Medical Solutions USA, Inc.
 51 Valley Stream Parkway, Malvern, PA 19355
 Fax: (866) 309-6992

SIEMENS REPRESENTATIVE
 Gordon Wilhelm - (610) 448-1736

PRELIMINARY PROPOSAL

Part No. / Product	Description
<i>(Continued)</i> 14406286 RS CP Body Array Flex Coil #S;SON	It is prepared for combination with a second directly connectable 'CP Body Array Extender Coil' (option) of identical dimensions to extend the coverage to about 55 cm. Like with all other IPA coils, the active coil elements are easily selectable through the software from the <i>syngo</i> Acquisition Workplace.
14408883 RS Shoulder Array Coil #S	To obtain maximum image quality for different body shapes two different sized coil tops are included. <ul style="list-style-type: none"> - 165 mm (6.5 in) diameter for small and medium sized shoulders - 200 mm (7.9 in) diameter for large shoulders The coil top can be used either for left or right shoulders. It features slidable attachment to the base plate and can easily be adjusted for comfortable positioning. The coil excels in highest resolution imaging with exceptional signal/noise ratio.
14406328 RS Cabinet Cooler; Water #S	This cabinet cooler fits inside the sealed electronics cabinet and provides a self-contained cooling unit which also contributes to quieter operation.
4MR5142869 Armrest #MR	An MR-compatible arm rest that supports the patient's arm on the magnet patient table when starting intravenous lines. The board is removed after the IV is inserted. This product has been tested and verified for compatibility with the following Siemens' products: MAGNETOM Trio, Verio, Espree, Essenza, Avanto and Symphony. Compatibility with other products cannot be assured and may void service contracts and/or system warranties.
MR_INITIAL_32 Initial onsite training 32 hrs	MR_INITIAL_32 Up to (32) hours of on-site clinical education training, scheduled consecutively (Monday – Friday) during standard business hours for a maximum of (4) imaging professionals. Training will cover agenda items on the ASRT approved checklist. Uptime Clinical Education phone support is provided during the warranty period for specified posted hours. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.
MR_FOLLOWUP_24 Follow-up training 24 hrs	Up to (24) hours of follow-up on-site clinical education training, scheduled consecutively (Monday – Friday) during standard business hours for a maximum of (4) imaging professionals. Uptime Clinical Education phone support is provided during the warranty period for specified posted hours. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.
MR_INT_SYN_BCLS Basic syngo MR Class	MR_INT_SYNGO_BCLS Tuition for (1) imaging professional to attend Classroom Course at Siemens Training Center. The objectives of this class are to introduce the user interface of the common <i>syngo</i> platform and instructions on building protocols, demonstration of software functions, and hands-on sessions. This class includes lunch, economy airfare, and lodging for (1) imaging professional. All arrangements must be arranged through Siemens designated travel agency. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.
MR_ADD_32 Additional onsite training 32 hours	Up to (32) hours of on-site clinical education training, scheduled consecutively (Monday – Friday) during standard business hours for a maximum of (4) imaging professionals. Training will cover agenda items on the ASRT approved checklist if applicable. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.
MR_ADD_CLASS Additional Training Class	Tuition for (1) attendee for a customer classroom course of choice at one of the Siemens training centers. Includes economy airfare and lodging for (1) attendee. All arrangements must be arranged through Siemens designated travel agency. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.

SIEMENS

Siemens Medical Solutions USA, Inc.
 51 Valley Stream Parkway, Malvern, PA 19355
 Fax: (866) 309-6992

SIEMENS REPRESENTATIVE
 Gordon Wilhelm - (610) 448-1736

PRELIMINARY PROPOSAL

Part No. / Product	Description
NV474SI64E Invivo 1.5T lower extremity coil	<p>1.5T circularly polarized lower extremity coil. Circularly polarized birdcage design maximizes image quality for superior spatial and contrast resolution images of the foot, ankle and knee. This product has been tested and verified for compatibility with the following Siemens' products (minimum software version): MAGNETOM Symphony (N4 VA21B). Compatibility with other products cannot be assured and may void service contracts and/or system warranties.</p> <p>Quality assurance measurement is performed by the customer according to the instructions provided with the coil. In case of problems with these coils, the customer shall contact the coil manufacturer directly; Siemens Service has to make sure that the problem is not caused by the MR system. Siemens does not stock any spare parts.</p>
NV800146 Invivo 1.5T Knee array coil	<p>Invivo's 8 channel, 1.5T High Resolution Knee Array Coil for the Siemens Symphony and Sonata</p> <ul style="list-style-type: none"> - 8-channel coil takes advantage of today's expanded system capabilities. - Optimized for iPAT imaging. - Anatomical design encapsulates the knee to provide unrivaled image quality. - Receive only design is complete with alternate knee ramp pad to minimize wrap artifact. - Left/right offsets and pivot rotation enhance positioning and ensure patient comfort. - Coil locks to base plate to reduce coil motion artifact. - S/I coverage: 20cm <p>Includes 3 year warranty through Invivo.</p> <p>This product has been tested and verified for compatibility with the following Siemens' products: MAGNETOM Symphony (minimum software version Syngo MR 2004A SP1 and higher versions) and Sonata (minimum software version Syngo MR 2004A SP1 and higher versions). Compatibility with other products cannot be assured and may void service contracts and/or system warranties.</p> <p>Quality assurance measurement is performed by the customer according to the instructions provided with the coil. In case of problems with these coils, the customer shall contact the coil manufacturer directly; Siemens Service has to make sure that the problem is not caused by the MR system. Siemens does not stock any spare parts.</p>
M3SSMR300EPM Spectris Solaris EP Injector-mobile	<p>Spectris Solaris EP injector for mobile use.</p> <ul style="list-style-type: none"> - Optimized color touch screen with few keystrokes. - Six user-programmable phases for added flexibility. - Independent Keep Vein Open (KVO) allows more time to focus on patient. - Large 115 mL saline syringe allows for longer KVO and multiple flushes. - Design of low pressure tubing eliminates dead space in the "T" connection that can waste contrast. - The clear barrel design with molded FluidDots help detect the presence of air in a syringe. - Pressure Limit Setting control software enables user to select from one to six preset maximum pressure limits, ranging from 100-300 psi, and to view current pressure during injection next to the pre-selected maximum value on the Solaris display. <p>Installation, applications and one year warranty provided by Medrad.</p> <p>For mobile use only. For fixed site injector refer to Siemens part # M3SSMREPICBC.</p>

SIEMENS

Siemens Medical Solutions USA, Inc.
51 Valley Stream Parkway, Malvern, PA 19355
Fax: (866) 309-6992

SIEMENS REPRESENTATIVE
Gordon Wilhelm - (610) 448-1736

PRELIMINARY PROPOSAL

Part No. / Product	Description
(Continued) M3SSMR300EPM Spectris Solaris EP Injector-mobile	This product has been tested and verified for compatibility with the following Siemens' products: MAGNETOM Trio, Espree, Essenza, Verio, Avanto and Symphony. Compatibility with other products cannot be guaranteed and use with any other products may void service contracts and/or system warranties.
14408866 RS BLADE #S	BLADE supports T2-weighted, dark fluid and STIR contrast imaging as well as inversion recovery T1-weighted imaging. To support imaging of uncooperative patients a 2D (in-plane) motion correction is performed during the scan after every echo train. Resulting from this, image motion artifacts resulting from patient motion during imaging are greatly reduced. Complete protocols for brain studies in uncooperative patients are provided including all clinical contrasts and orientations. With BLADE the clinical work up of non sedated pediatric patients and of patients with mental status changes e.g. suffering from cerebral stroke or Alzheimers disease becomes feasible with uncompromised image quality.
14406252 RS Composing syngo #H;S;SON;Trio	The option features: <ul style="list-style-type: none"> - Display and storage of full-format images, e.g. of the spine, the central nervous system or the vessel tree (starting from <i>syngo</i> MR A30), combined from multiple overlapping stages. - Dedicated composing algorithms, optimized for the generation of anatomical or angiographic (starting from <i>syngo</i> MR A30) full-format images. - Data sets with different FoV, resolution, matrix and slice thickness can be combined (starting from <i>syngo</i> MR A30). - Generation of full-format images from inline MIPs (starting from <i>syngo</i> MR A30). - Original, detail and reconstructed images can be displayed in different layouts. - Comparison of two reconstructed images for evaluation and diagnosis is thus made possible. - Filming in different layouts is supported. - Measurements of basic functions via reconstructed images is then possible. - Measurements of extended orthopedic functions: scoliotic angle, kyphotic angle, vertical distance measurement and differences in width of the intervertebral spaces.
14408868 RS SWI #S;Trio	Despite a strong sensitivity for local magnetic field inhomogeneities Susceptibility Weighted Imaging (SWI) as a 3D technology keeps up the signal near large susceptibility leaps due to very thin slices and high resolution in the slice (high image quality e.g. in the area of the forebrain near the frontal sinus). Moreover, the phase information of the MR signal is integrated in the image display. In order to further increase sensitivity for localized microscopic magnetic field inhomogeneities, large-area magnetic field inhomogeneities (e.g. caused by susceptibility leaps near the sinus) are specifically suppressed in the phase images. This allows even smallest amounts of deoxygenated hemoglobin (e.g. in cerebral veins) or from products of hemoglobin decomposition (e.g. from hemorrhages) to be displayed. Interesting measuring times for the ultra-high-resolution 3D protocols are achieved through parallel imaging with iPAT (GRAPPA). The Susceptibility Weighted Imaging package includes: <ul style="list-style-type: none"> - SWI measuring sequence, iPAT compatible - optimized measuring protocols for the head - inline-postprocessing for automatic calculation of relevant images within the scope of image reconstruction: <ul style="list-style-type: none"> - calculation of susceptibility-weighted images - venous angiography: MIP of a thin slice block SWI has been optimized for clinical use to support diagnostics with cerebrovascular diseases (e.g. cerebral insult), venous malformation, brain trauma and tumors.
14408885 RS CP Breast Array Coil #S;Av;Es	Fixation pads are provided for adjustment and optimal filling adopting adaptable to the wide anatomical variations among patients. The coil is padded for additional comfort in prone position. The coil features a mechanism for mediolateral compression of both breasts for best image quality.

SIEMENS

Siemens Medical Solutions USA, Inc.
 51 Valley Stream Parkway, Malvern, PA 19355
 Fax: (866) 309-6992

SIEMENS REPRESENTATIVE
 Gordon Wilhelm - (610) 448-1736

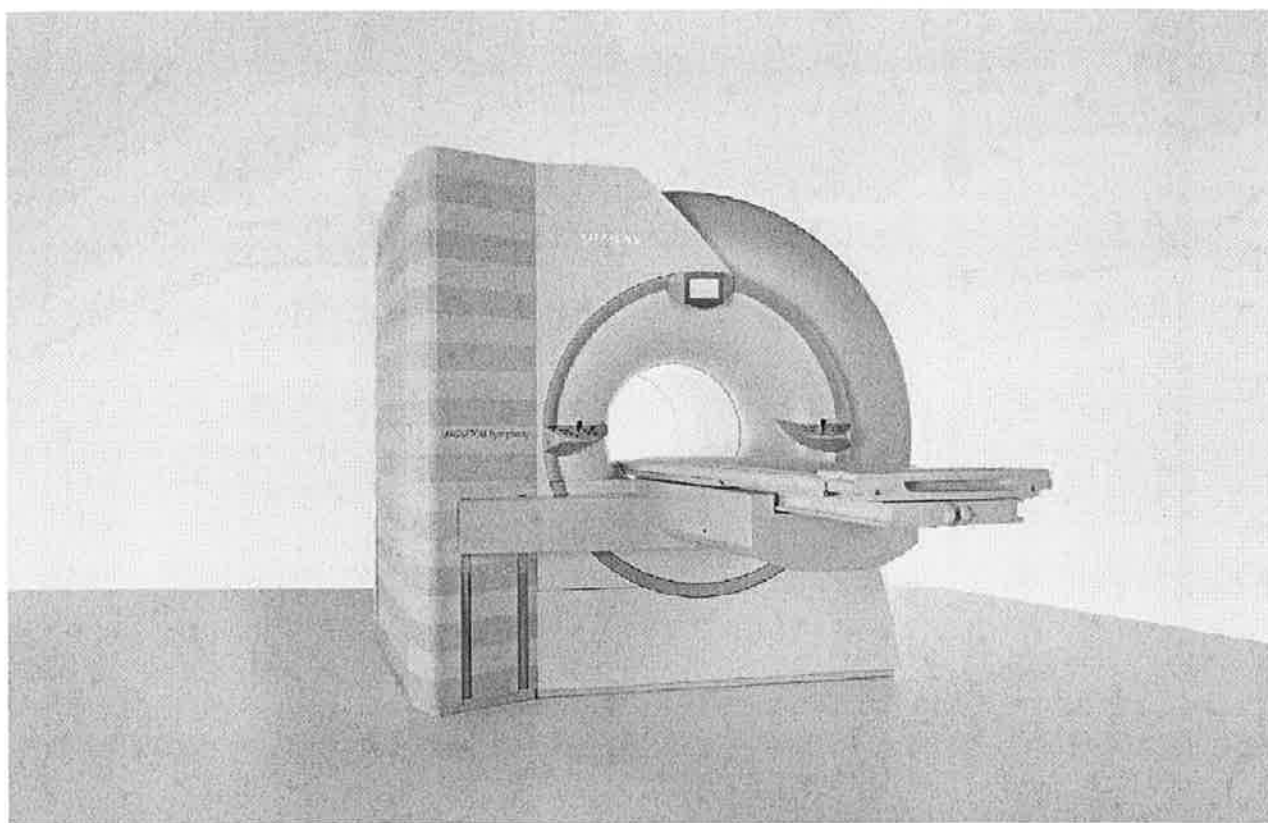
PRELIMINARY PROPOSAL

Part No. / Product	Description
PWR9390ISO90 Isolation Transformer (Optional)	Isolation transformer for optional use with Eaton / Power Ware 9390 power conditioner or UPS system (Capacity: 100 KVA to 160 KVA). Dimensions 12 in x 32 in x 74 in Weight 1100 lbs
PWR9390MMOBKIT Mounting kit f.Pwrwre9390 mobile MR (Optional)	Used to safely secure, the Powerware 9390: power conditioner and optionally available transformer to the interior of a certified Siemens Medical Solutions mobile MR coach. Mounting Kit includes: top and bottom brackets and necessary hardware. <u>Note:</u> This kit is intended for use in conjunction with the mounting brackets and hardware provided on the shipping pallets for both the Power Conditioner and transformer cabinet. Do not discard these items when disposing of the shipping materials.
PWR9390PC100 Powerware 9390 100KVA Power Conditioner (Optional)	The Powerware 9390 is an output scalable, double-conversion unit sold through Eaton/Powerware. It is designed and tested to help resolve utility power problems and supplies clean power to the MAGNETOM MRI system. This unit is configured as a power conditioner at 100 kVA to accommodate the recommended capacity to support the MAGNETOM Harmony and MAGNETOM Symphony. This unit is for power conditioning only, and therefore does not provide any back up power in the case of a power outage. However, it can easily be upgraded to a UPS by adding an optionally available battery cabinet. Standard system specifications: <u>Power Conditioner</u> Dimensions: W 36 in x D 32 in x H 74 in Weight: 950 lbs. System rating: 100 kVA / 90 kW Input Voltage: 480 Volts, 3 phase (3 wire + ground) , 60 Hz Input voltage range: + 10% - 15% Power Factor: 0.99 (minimum) Output Voltage: 480 Volts, 3 phase (3 wire + ground), 60 Hz Output Voltage regulation: +/- 1% Load Power factor range: 0.9 lagging to 0.9 leading Audible Noise Level: less than 65 dBA @ 1 meter Altitude (max): 2000 meters at 40 degrees C Operating temperature: 0-40 degrees C Relative Humidity: 95%, non-condensing Control Panel (LCD screen) UL 1778 /CUL approved and listed Option- Isolation Transformer: (<i>pn PWR9390ISO90</i>) Dimensions: W 12 in x D 32 in x H 74 in Weight: 1100 lbs. <i>Can be purchased separately, see your local sales rep for details.</i> Warranty and Service Features one-year limited factory warranty (parts and labor). Service protection package includes startup service, performance check, and one year of Web remote monitoring. <i>Optional service plans are available at additional cost.</i>

SIEMENS

MAGNETOM SYMPHONY TYPICAL ROOM PLAN

MR



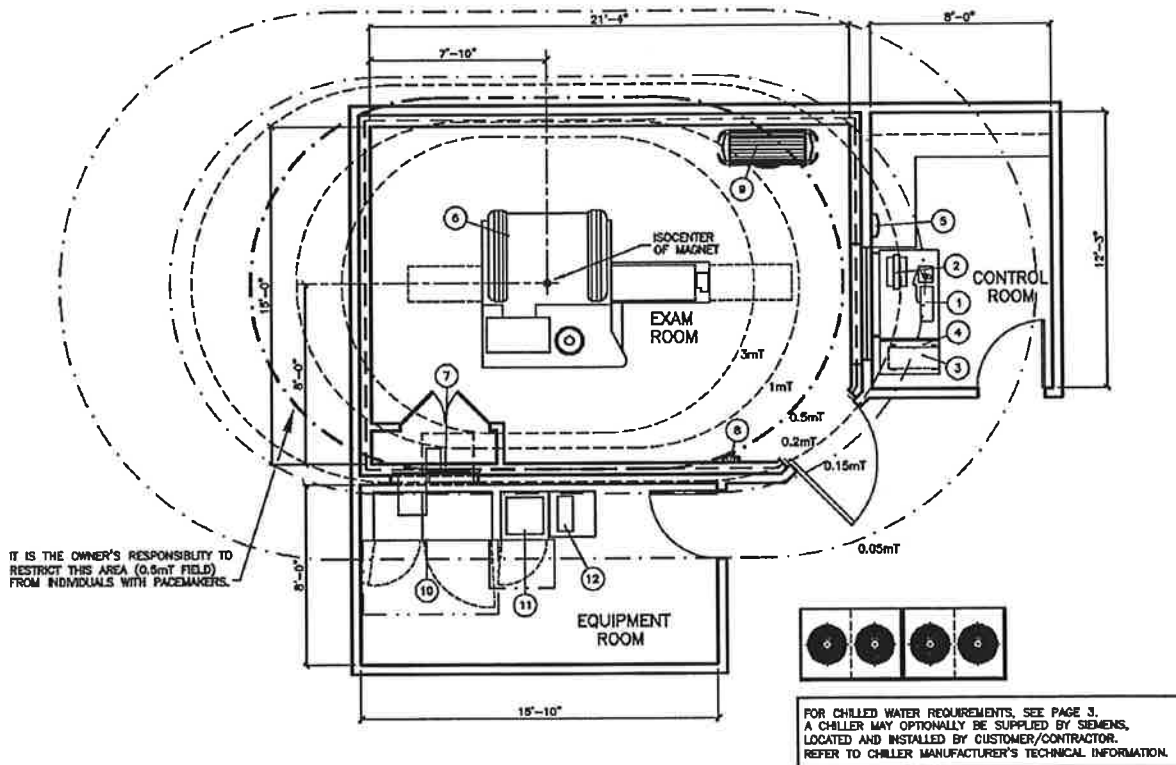
The intended use for this Cut Sheet is to communicate the spatial requirements as well as the basic architectural, electrical, structural, and mechanical requirements for this piece of imaging equipment. The information provided in this document is for reference only, during the pre-planning stage, and therefore does not contain any site specific detailed requirements. This information is subject to change without notice. Federal, state and/or local requirements may impact the final placement of the components. It is the customer's responsibility to ensure that the final layout and placement of the equipment complies with all applicable requirements.

SIEMENS

FOR REFERENCE ONLY,
NOT FOR CONSTRUCTION.

MAGNETOM SYMPHONY TYPICAL ROOM PLAN

MR



TYPICAL PLAN

SCALE: 1/8" = 1'-0"

EQUIPMENT LEGEND								
NO	DESCRIPTION	SMS SYM	WEIGHT (LBS)	BTU/HR TO AIR	DIMENSIONS (INCHES)			REMARKS
					W	D	H	
①	MRC OPERATING CONSOLE AND KEYBOARD	Ⓚ	132	----	45 11/16	35 1/4	26 3/8	
②	COLOR MONITOR FOR MRC	Ⓜ	22	239	18 5/16	16 15/16	4 3/4	ON CONSOLE/COUNTER
③	HOST PC MRC	Ⓟ	49	2389	11	27	18 1/8	
④	CONTAINER FOR HOST 500	Ⓢ	238	----	19 5/8	31 1/2	26 3/8	
⑤	ALARM BOX	Ⓛ	3	----	12	4	8	
⑥	1.5T MAGNET WITH COVERS AND PATIENT TABLE	Ⓜ	12130	6630	84	119 1/2	92 1/4	
⑦	RF-FILTER PLATE	Ⓡ	165	----	46 1/2	21 3/4	21 1/2	
⑧	MAGNET STOP	Ⓢ	1	----	3	5	3	
⑨	SURFACE COIL CART (OPTION)	Ⓢ	110	----	21 1/4	53 1/2	50	WEIGHT WITHOUT COILS
⑩	ELECTRONICS CABINET	Ⓢ	2425	17060	63	26	78 1/2	
⑪	RCA CABINET	Ⓢ	1103	3415	26	26	74 1/4	
⑫	IMAGER PC	Ⓢ	49	3415	16 7/8	18 3/8	7	ON TABLE BY CUST./CONT.

MAGNETOM SYMPHONY SPECIFICATIONS

MR

POWER REQUIREMENTS	
VOLTAGE RANGE: 480 VAC ±10% FOR ALL LINE AND LOAD CONDITIONS. VOLTAGE BALANCE: 2% MAXIMUM DIFFERENCE BETWEEN PHASES	
FREQUENCY:	60 Hz ± 1.0 Hz
LINE IMPEDENCE:	0.20 OHMS
STAND BY POWER:	16 KW
LONG TIME POWER (HEAVY SCAN PROTOCOLS)	30 KW
MAXIMUM POWER (LESS THAN 5 MINUTES)	70 KVA
MOMENTARY POWER	85 KVA
RECOMMENDED TRANSFORMER	112 KVA
RECOMMENDED UPS	100 KVA
MR SYSTEM OVERCURRENT PROTECTION	100 A
UPS SYSTEM OVERCURRENT PROTECTION	200 A
MAXIMUM ALLOWABLE VOLTAGE DROP AT MAX. POWER	6.0%

NOISE LEVELS	
SYSTEM ROOM	NOISE LEVEL
CONTROL ROOM	APP. 55 dB(A)
EXAMINATION ROOM	APP. 91 dB(A)
EQUIPMENT ROOM	APP. 65 dB(A)
IT IS THE CUSTOMER'S RESPONSIBILITY TO ENSURE THAT ALL LOCAL/ STATE/OSHA NOISE REGULATIONS ARE ADHERED TO. ADDITIONAL NOISE DATA MAY BE PROVIDED BY SIEMENS PROJECT MANAGER UPON REQUEST.	

POWER REQUIREMENTS	
DEMAND AND CAPACITY REQUIREMENTS NOTES	
1) IF EQUIPMENT UPGRADE IS ANTICIPATED, INSTALLING ELECTRICAL POWER TO MEET THE REQUIREMENTS OF THE HIGHER POWER GRADIENT PACKAGE AT THE TIME OF INITIAL INSTALLATION WILL REDUCE THE COST TO UPGRADE THE ELECTRICAL SYSTEM LATER.	
2) RECOMMENDED TRANSFORMER SIZE (SYSTEM WITHOUT UPS) IS BASED ON INDUSTRY STANDARD ISOLATION TRANSFORMER KVA RATINGS. SOURCE IMPEDANCE FEEDING THE MAGNETOM SYSTEM, INCLUDING ANY ISOLATION TRANSFORMERS, MUST MEET EQUIPMENT REQUIREMENTS AS LISTED HERE. SIEMENS RECOMMENDS A TRANSFORMER WITH COPPER WINDINGS, AN ELECTRO-STATIC SHIELD, AND A LOW IMPEDANCE (<3%) TO ENSURE THAT SOURCE IMPEDANCE REQUIREMENTS ARE MET.	
3) OVERCURRENT PROTECTION IS SPECIFIED FOR SYSTEMS WITHOUT AN UNINTERRUPTIBLE POWER SUPPLY (UPS). ADDITION OF A UPS REQUIRES A HIGHER CAPACITY MAINS CONNECTION (DEPENDENT UPON UPS MODEL AND SIZE). MAXIMUM FAULT CURRENT IS DEPENDENT UPON THE IMPEDANCE OF THE FACILITY ELECTRICAL SYSTEM. CUSTOMER'S ARCHITECT OR ELECTRICAL CONTRACTOR TO SPECIFY AIC RATING OF OVERCURRENT PROTECTION BASED ON FACILITY IMPEDANCE CHARACTERISTICS.	
4) MOMENTARY POWER IS BASED ON A MAXIMUM RMS VALUE FOR A PERIOD NOT TO EXCEED FIVE (5) SECONDS, AS DEFINED IN NEC 517.2. STAND-BY AND AVERAGE CURRENT ARE SUBSTANTIALLY LOWER.	
5) THE CONDUCTOR SIZE SHOULD BE SELECTED TO MEET THE VOLTAGE DROP REQUIREMENTS, TAKING INTO CONSIDERATION THE MAINS CAPACITY, RUN LENGTH, AND ANY ADDITIONAL TRANSFORMERS USED TO OBTAIN THE PROPER EQUIPMENT VOLTAGE LEVEL. NEMA STANDARD XR-9-1989 (R1994,R2000) PROVIDES GENERAL GUIDELINES FOR SIZING CONDUCTORS, TRANSFORMERS, AND ELECTRICAL SYSTEMS FOR MEDICAL IMAGING SYSTEMS.	
6) LONG-TIME POWER IS BASED ON THE HIGHEST AVERAGE RMS VALUES FOR A PERIOD EXCEEDING 5 MINUTES DURING CLINICAL SYSTEM OPERATION, AS DEFINED IN NEC 517.2.	
7) A CIRCUIT BREAKER WITH A HIGH INRUSH RATING (>8x RATED CURRENT) IS REQUIRED TO PERMIT SWITCH-ON OF THE UPS SYSTEM WITHOUT SPURIOUS TRIPPING. CIRCUIT BREAKERS WITH AN ADJUSTABLE MAGNETIC TRIP (SIEMENS FD6 SERIES OR SIMILAR) ARE HIGHLY RECOMMENDED.	

CEILING HEIGHTS	
MAGNET ROOM:	8'-6" CLEAR RECOMMENDED 7'-11" TECHNICAL MINIMUM
EQUIPMENT ROOM:	8'-6" CLEAR RECOMMENDED 7'-4" WITH RESTRICTIONS
ALL ANCILLARY AREAS:	8'-0" RECOMMENDED

TRANSPORTING REQUIREMENTS	
LARGEST ITEM WITHOUT PACKING MATERIAL: MAGNET-12,125 POUNDS	
<u>MINIMUM REQUIRED OPENING FOR MAGNET DELIVERY:</u>	
WALL OPENING - 7'-11" HIGH x 7'-3" WIDE (WITHOUT TRANSPORT DEVICE)	
STANDARD ROOF OPENING - 10'-4" x 7'-4"	
* FOR SPECIAL CASES THE TABLE MAY BE REMOVED *	
MINIMUM ROOF OPENING - 6'-9" x 7'-4"	
IF TRANSPORTING THE MAGNET UP A RAMP, A 15° MAXIMUM ANGLE MUST BE MAINTAINED.	
TO TRANSPORT THE GPA/CCA CABINET (74" x 37" x 89" HIGH; 2971 POUNDS CRATED), A MINIMUM ROOM HEIGHT OF 6'-9" WITH TRANSPORT ROLLERS, OR 6'-5" WITHOUT ROLLERS IS REQUIRED.	

REMOTE SYSTEM DIAGNOSTICS	
SIEMENS REMOTE SERVICES (SRS) REQUIRES A CONNECTION BETWEEN THE SRS REMOTE SERVER AND SIEMENS SYSTEMS VIA REMOTE LOCAL AREA NETWORK ACCESS, TO ENSURE THE UPTIME OF YOUR SYSTEM.	
<u>THIS SERVICE REQUIRES ONE OF THE FOLLOWING CONNECTION METHODS:</u>	
1. (PREFERRED) VPN - WHERE THE CUSTOMER HAS AVAILABLE A VPN CAPABLE FIREWALL OR OTHER VPN APPLIANCE.	
2. (OPTIONAL) *SRS ROUTER* - CONNECTED TO ANALOG PHONE LINE VIA *ANALOG MODEM*, ETHERNET CONNECTION TO CUSTOMER'S LAN, AND A POWER OUTLET.	
NOTE: = *SUPPLIED BY SIEMENS*	

FOR MORE INFORMATION	
FOR MORE DETAILED PLANNING REQUIREMENTS FOR THIS SYSTEM, SEE THE TYPICAL FINAL DRAWING SET NUMBER: 98002	

MAGNETOM SYMPHONY SPECIFICATIONS

MR

CHILLED WATER

A CHILLED WATER SUPPLY IS REQUIRED TO THE RCA CABINET 24 HOURS A DAY, YEAR ROUND FOR THE COLD HEAD AND GRADIENT SYSTEMS. THE MINIMUM FLOW RATE IS 15.85 GPM WITH EITHER 0% OR 38% GLYCOL. THE REQUIRED WATER TEMPERATURE IS 43°F-53°F WITH A TEMPERATURE GRADIENT OF LESS THAN 2°F OVER 5 MINUTES. THE WATER PRESSURE IS 87 PSI MAX. IT IS VERY IMPORTANT TO MAINTAIN THIS DURING FILLING. THE DIFFERENTIAL WATER PRESSURE IS 22PSI WITHOUT GLYCOL, 36 PSI WITH GLYCOL. THE HEAT DISSIPATION INTO THE WATER IS APPROXIMATELY 153,684 BTU PER HOUR (CCS - WATER) THE WATER SUPPLY MUST BE IN THE ACIDITY RANGE OF 6-8 pH WITH A HARDNESS OF <178 PPM CALCIUM CARBONATE, <10⁴dH. FILTRATION OF 5-50 μm WITH <10mg/l SUSPENDED PARTICLES. CONNECTION TO A CLOSED LOOP WATER SUPPLY IS RECOMMENDED.

ENVIRONMENTAL REQUIREMENTS

- 1) AIR CONDITIONING IS TO PROVIDE A TEMPERATURE OF 70°F ±5°F IN THE EXAM ROOM, 70°F±10°F IN THE EQUIPMENT & CONTROL AREAS. RELATIVE HUMIDITY OF 40-60% (NON-CONDENSING) IS REQUIRED EXAMINATION ROOM AND 40-80% (NON-CONDENSING) IN ALL OTHER AREAS WHERE SIEMENS EQUIPMENT IS INSTALLED. THESE CONDITIONS ARE TO BE MET AT ALL TIMES; 24 HOURS A DAY, 7 DAYS A WEEK.
- 2) A DEDICATED AIR CONDITIONING AND HUMIDIFICATION SYSTEM IS RECOMMENDED FOR THE EXAM ROOM. A MINIMUM FRESH AIR EXCHANGE RATE OF 6 TIMES PER HOUR FOR THE EXAM ROOM IS REQUIRED. AIR SUPPLY AND RETURN ABOVE THE FINISHED CEILING IN THE EXAM ROOM IS RECOMMENDED. EACH ROOM SHOULD HAVE A DEDICATED CONTROL AND SENSOR TO MONITOR AND ADJUST THE AIR.
- 3) THE HEAT INTO THE EXAM ROOM IS LESS THAN 6,824 BTU/HR. THE HEAT INTO THE EQUIPMENT ROOM IS LESS THAN 20,473 BTU/HR. THIS HEAT DISSIPATION IS FROM THE SIEMENS EQUIPMENTS ONLY. AUXILIARY SUPPORT EQUIPMENT (ie UPS) AND LIGHTING MUST BE CONSIDERED FOR TOTAL HEAT LOADS.
- 4) IT IS IMPORTANT FOR FRESH AIR INTAKE SYSTEMS TO EXHAUST AIR DIRECTLY OUT OF THE BUILDING. THE EXHAUST AIR MUST NOT BE DEFLECTED INTO ANOTHER ROOM. THE MAGNET ROOM EXHAUST AIR SHOULD BE INSTALLED AT LEAST 6'-6" ABOVE FINISHED FLOOR.
- 5) THE AIR INTAKE OF THE AIR CONDITIONING SYSTEM MUST NOT BE LOCATED IN THE VICINITY OF THE QUENCH VENT EXHAUST.
- 6) IF THE INPUT DRAWS UPON AIR FROM OUTSIDE THE BUILDING, IT IS RECOMMENDED TO INSTALL AN ON-SITE FILTER TO REMOVE DUST PARTICLES GREATER THAN 10 MICRONS.

QUENCH VENT NOTES

LIQUID AND GASSEOUS HELIUM ARE USED IN THE OPERATION OF A SUPERCONDUCTING MRI SYSTEM. THE MECHANICAL CONTRACTOR SHALL PROVIDE A VENT, ACCORDING TO SIEMENS SPECIFICATIONS, TO EXHAUST GASSEOUS HELIUM FROM THE MAGNET TO OUTSIDE THE BUILDING. PLEASE SEE THE SIEMENS TYPICAL DRAWINGS FOR DETAILS.

CHILLED WATER REQUIREMENTS

WATER REQUIREMENTS TO BE MEASURED AT THE RCA CABINET.

WATER SUPPLY FLOW RATE REQUIRED: 0% OR 38% GLYCOL (CCS - WATER)	15.85 GPM MINIMUM
WATER TEMPERATURE:	48°F ±4°F
BTU DISCHARGE TO THE WATER	153,684 BTU/HR
WATER PRESSURE	58-87 PSI
PRESSURE DIFFERENTIAL	22 PSI WITHOUT GLYCOL
	36 PSI WITH GLYCOL
CHILLED WATER ACIDITY RANGE	6 pH TO 8 pH
CHILLED WATER HARDNESS	107 ppm TO 142 ppm CALCIUM CARBONATE
ALLOWABLE TEMPERATURE FLUCTUATION	LESS THAN 2°F PER 5 MINUTES

- 1) APPROXIMATELY 30 GALLONS OF DISTILLED WATER IS REQUIRED FOR THE SECONDARY CHILLED WATER LOOP. THIS WATER IS TO BE SUPPLIED BY THE CUSOTMER/CONTRACTOR AND SHOULD BE AVAILABLE AT THE SITE PRIOR TO THE INSTALLATION.
- 2) ETHYLENE GLYCOL MAY BE ADDED TO THE PRIMARY CHILLED WATER LOOP UP TO 38% OF THE TOTAL VOLUME. IT IS TO BE SUPPLIED BY THE MECHANICAL CONTRACTOR. AUTOMOTIVE ANTIFREEZE IS NOT ACCEPTABLE UNDER ANY CONDITION.
- 3) LOSSES IN PRESSURE AND TEMPERATURE ASSOCIATED WITH A CHILLER IS NOT INCLUDED IN THESE VALUES.
- 4) THE CHILLED WATER SUPPLY IS REQUIRED TO THE RCA CABINET 24 HOURS A DAY, YEAR ROUND.

BUILDING VIBRATIONS

EXTERNAL VIBRATIONS OR SHOCKS AFFECTING THE MAGNET MAY DEGRADE IMAGE QUALITY. VIBRATIONAL ACCELERATION a_{max} TRANSFERRED THROUGH BUILDING VIBRATIONS TO THE MAGNET MAY NOT BE EXCEEDED IN THE THREE SPATIAL ORIENTATIONS IN THE FREQUENCY RANGE FROM 0 TO 70 Hz.
BUILDING VIBRATION SPECIFICATION: $a_{max} = -70dB g$
THE REQUIREMENT FOR a_{max} IS $-70dB g$ MEASURED AS MAX. RMS VALUE IN THE FOURIER TRANSFORMATION OF THE RECORDED SIGNAL SPECTRUM.

SIEMENS

FOR REFERENCE ONLY,
NOT FOR CONSTRUCTION.

MAGNETOM SYMPHONY SPECIFICATIONS

MR

PROTECTING THE ENVIRONMENT

PROTECTING THE IMMEDIATE ENVIRONMENT FROM THE EFFECT OF THE MAGNETIC FIELD REQUIRES CONSIDERATION. INFORMATION STORED ON MAGNETIC DATA CARRIERS SUCH AS DISKS, TAPES, AND CREDIT CARDS MAY BE ERASED IF IN CLOSE PROXIMITY. CAUTION WITH REGARD TO HEART PACEMAKERS MUST BE EXERCISED. MOST PACEMAKER UNITS EMPLOY A REED RELAY WHICH MAY CHANGE OPERATING MODE WHEN EXPOSED TO AN EXTERNAL MAGNETIC FIELD. THEREFORE, PACEMAKER USERS MUST BE KEPT AT A SPECIFIED DISTANCE FROM THE MAGNET WHICH IS DETERMINED BY THE MAGNETIC FIELD STRENGTH.

PROTECTING THE MAGNETIC FIELD

THE SIEMENS MAGNETOM UTILIZES A SUPERCONDUCTIVE MAGNET WITH AN EXTREMELY HOMOGENEOUS FIELD WITHIN THE MAGNET TO PROVIDE DISTORTION-FREE IMAGING. THE PRESENCE OF FERROMAGNETIC MATERIAL WITHIN THE VICINITY OF THE MAGNET CAN ADVERSELY AFFECT THE UNIFORMITY OF THE USEFUL MAGNETIC FIELD. THIS APPLIES TO STATIONARY FERROUS MATERIAL (STRUCTURAL STEEL) WHICH IS TO BE MINIMIZED. STATIONARY STEEL COMPENSATION MAY BE ACHIEVED BY MAGNET POSITIONING AND SELECTIVE USE OF SHIMS. FIELD DISTORTION ENCOUNTERED BY MOVING FERROMAGNETIC OBJECTS IS MORE DIFFICULT TO COMPENSATE AND MAY REQUIRE THE USE OF MAGNETIC SHIELDING.

MAGNETIC FRINGE FIELDS

MAGNETIC FIELDS MAY AFFECT THE FUNCTION OF DEVICES IN THE VICINITY OF THE MAGNET. THESE DEVICES MUST BE OUTSIDE CERTAIN MAGNETIC FIELDS. THE DISTANCES LISTED ARE FROM THE MAGNET ISOCENTER AND DO NOT CONSIDER ANY MAGNETIC ROOM SHIELDING.

X/Y AND Z AXIS	DEVICES
6'-6" / 9'-3" 3.0mT	SMALL MOTORS, WATCHES, CAMERAS, CREDIT CARDS, MAGNETIC DATA CARRIERS (SHORT-TERM EXPOSURE)
7'-3" / 11'-2" 1.0mT	COMPUTERS, MAGNETIC DISK DRIVES, OSCILLOSCOPES, PROCESSORS
8'-3" / 13'-2" 0.5mT	CARDIAC PACEMAKERS, X-RAY TUBES, INSULIN PUMPS, B/W MONITORS, MAGNETIC DATA CARRIERS (LONG-TERM STORAGE)
8'-11" / 15'-9" 0.2mT	SIEMENS CT SCANNERS
9'-3" / 16'-9" 0.15mT	COLOR MONITORS, SIEMENS LINEAR ACCELERATORS
12'-2" / 21'-8" 0.05mT	X-RAY IMAGE INTENSIFIERS, GAMMA CAMERAS, PET/CYCLOTRON, ELECTRON MICROSCOPES, LINEAR ACCELERATORS

THE OWNER/USER IS TO VERIFY THE LOCATION OF THE 0.5mT FIELD AND ENSURE THAT IT IS MAINTAINED AS A RESTRICTED AREA.

MAGNET SITING REQUIREMENTS

IT MUST BE ENSURED THAT THE MAGNET IS LOCATED SO THAT THE STABILITY AND HOMOGENEITY OF THE MAGNETIC FIELD ARE NOT ADVERSELY AFFECTED BY EXTRANEOUS FIELDS AND STATIC OR DYNAMIC FERROMAGNETIC OBJECTS.

X/Y AND Z AXIS	SOURCE OF INTERFERENCE
3'-6"	FLOOR STEEL REINFORCEMENT < 20 LBS./ FT ² IRON BEAMS < 66 LBS./FT.
16'-0" / 19'-0"	STRETCHERS UP TO 110 LBS.
13'-1"	A/C CHILLERS
17'-4" / 21'-3"	TRANSPORT DEVICES UP TO 440 LBS.
18'-0" / 24'-7"	VEHICLES UP TO 2,000 LBS.
20'-4" / 29'-6"	ELEVATORS, TRUCKS UP TO 10,000 LBS.
39'-4"/26'-6"	AC TRANSFORMERS LESS THAN 100 KVA
41'-0"/32'-9"	AC TRANSFORMERS LESS THAN 250 KVA
42'-7"/32'-9"	AC TRANSFORMERS LESS THAN 650 KVA
45'-11"/36'-1"	AC TRANSFORMERS LESS THAN 1600 KVA
9'-10"/6'-6"	AC CABLES, MOTORS LESS THAN 100 AMPS
19'-8"/6'-6"	AC CABLES, MOTORS LESS THAN 250 AMPS
131'-2"	ELECTRIC RAILWAY SYSTEMS

FOR IRON OBJECTS LOCATED UP TO 45' FROM THE Z AXIS, THE DISTANCES FOR THE Z AXIS MUST BE USED. REDUCTION IS POSSIBLE WITH STEEL SHIELDING.

MAXIMUM CABLE LENGTH

THERE ARE 6 DIFFERENT CABLE SETS THAT ARE AVAILABLE FOR THE MRI SYSTEM DIFFERENTIATED BY MAXIMUM LENGTHS FROM THE MAGNET TO THE FILTER PANEL (INSIDE) AND FROM THE FILTER PANEL TO THE ELECTRONICS (OUTSIDE).

	INSIDE	OUTSIDE
SET 1	20'	4'
SET 2	20'	32'
SET 3	20'	39'
SET 4	30'	4'
SET 5	30'	29'
SET 6	46'	13'

THE VERTICAL DISTANCE FOR CABLE TRAVEL FROM THE FILTER PANEL TO THE CABLE TRAY, AND FROM THE CABLE TRAY TO THE MAGNET MUST BE CONSIDERED.

THE MAXIMUM DISTANCE FROM THE ACC CABINET TO THE CONTROL CONSOLE IS 75 FEET.

RF SHIELDING

THE EXAMINATION AREA MUST BE SHIELDED TO PROVIDE A REDUCTION OF RADIO FREQUENCY WAVES EMANATING FROM EXTERNAL TRANSMITTERS. THE REQUIRED ATTENUATION IS 90dB IN THE FREQUENCY RANGE OF 15-128 MHz. IF CO-SITING TWO SYSTEMS EACH ROOM SHOULD BE 100 dB. THE RF SHIELD MUST BE TESTED BEFORE AND AFTER MAGNET PLACEMENT IN THE RF ROOM AND AFTER THE SIEMENS RF FILTER PANEL IS INSTALLED.

THE RF-SHIELDING MUST BE INSULATED FROM ALL GROUNDS SUCH THAT THE ONLY GROUND IS THE SINGLE POINT GROUND ON THE OUTSIDE OF THE RF-ROOM WALL.

ALL ELECTRICAL LINES INTO THE RF ROOM MUST BE ROUTED THROUGH RF FILTERS (PROVIDED BY RF SHIELDING SUPPLIER). ALL ELECTRICALLY NON-CONDUCTIVE SUPPLY LINES (E.G. OXYGEN) INTO THE RF ROOM MUST BE ROUTED THROUGH RF SEALED WAVE GUIDES (PROVIDED BY RF SHIELDING SUPPLIER).

FOR PRESSURE EQUALIZATION PURPOSES THE RF DOOR SHOULD OPEN TO THE OUTSIDE OF THE RF ROOM. AS AN ALTERNATIVE A 24"x24" OPENING IN THE RF ROOM FOR PRESSURE EQUALIZATION IS REQUIRED.

APPENDIX 2



Siemens Medical Solutions USA, Inc.
40 Liberty Boulevard, Malvern, PA 19355
Fax: (866) 309-6992

SIEMENS REPRESENTATIVE
Victor Voglino - (978) 239-7061

Customer Number: 0000008653

Date: 9/24/2016

NORTHEASTERN VERMONT REG HOSP
1315 HOSPITAL DR
SAINT JOHNSBURY, VT 05819

Siemens Medical Solutions USA, Inc. is pleased to submit the following quotation for the products and services described herein at the stated prices and terms, subject to your acceptance of the terms and conditions on the face and back hereof, and on any attachment hereto.

<u>Table of Contents</u>	<u>Page</u>
MAGNETOM Aera - USA (Quote Nr. 1-BGRRL9 Rev. 6).....	3
General Terms and Conditions.....	10
Warranty Information.....	18
Cut Sheets.....	following page 18

Contract Total: \$1,385,769
(total does not include any Optional or Alternate components which may be selected)

Proposal valid until 9/30/2016

Estimated Delivery Date: 1/2017

Estimated delivery date is subject to change based upon factory lead times, acceptance date of this quote, customer site readiness, and other factors. A Siemens representative will contact you regarding the final delivery date.

MAGNETOM Aera 48

Pricing in this proposal is contingent up Customer signing a POS Service contract on the equipment for a period of 4 (four) years.

This quote is based upon standard delivery terms and conditions (e.g., standard work hours, first floor delivery, etc.), basic rigging, mechanical installation and calibration. Siemens Medical Solutions USA, Inc., Project Management shall perform a site-specific assessment to ascertain any variations that are out of scope and not covered by the standard terms (examples such as, but not limited to: larger crane, nonstandard work hours, removal of existing equipment, etc.). Any noted variations identified by Siemens Project Management shall remain the responsibility of the customer and will be subject to additional fees.

As part of this upgrade offer, the existing Siemens scanner being traded in must be free of encumbrances, and becomes the property of Siemens Medical Solutions, Inc.

This proposal includes the trade-in of equipment referenced in Trade Sheet Project #2016-2088.

SIEMENS / VIZIENT GROUP BUY 2016 PROMOTIONAL OFFERING



Siemens Medical Solutions USA, Inc.
40 Liberty Boulevard, Malvern, PA 19355
Fax: (866) 309-6992

SIEMENS REPRESENTATIVE
Victor Voglino - (978) 239-7061

Confidentiality Agreement: This Quotation is strictly confidential and you agree that this information will be held in the strictest of confidence and not shared with any third parties, buying evaluation groups or anyone not directly employed by your facility.

Siemens & Vizient Group Buy Promotion:

- Group Buy ends September 30, 2016.
- Binding purchase orders and signed Service Agreements must be received by Siemens on or before September 30, 2016.
- Contingent purchase orders (except State CON) are not acceptable.
- 45 day quote validity period is not applicable for this proposal.

Accepted and Agreed to by:

Siemens Medical Solutions USA, Inc.
 By (sign): [Signature]
 Name: Victor Voglino
 Title: Account Executive
 Date: 9/29/16

NORTHEASTERN VERMONT REG HOSP
 By (sign): [Signature] (*)
 Name: Robert N Hershey
 Title: CFO
 Date: 9/29/16

By signing below, signor certifies that no modifications or additions have been made to the Quotation. Any such modifications or additions will be void.

By (sign): [Signature]

(*) Acceptance subject to receiving Certificate of Need from State of Vermont (RB)

Siemens Medical Solutions USA, Inc.
40 Liberty Boulevard, Malvern, PA 19355
Fax: (866) 309-6992



SIEMENS REPRESENTATIVE
Victor Voglino - (978) 239-7061

Quote Nr: 1-BGRRL9 Rev. 6
Terms of Payment: 00% Down, 80% Delivery, 20% Installation
Free On Board: Destination
Purchasing Agreement: VIZIENT SUPPLY LLC
VIZIENT SUPPLY LLC terms and conditions apply to Quote Nr 1-BGRRL9

MAGNETOM Aera - USA

All items listed below are included for this system:

Qty	Part No.	Item Description
1	14416900	<p>MAGNETOM Aera - System</p> <p>MAGNETOM Aera is designed to provide you the versatility you need to meet the increasing demands in healthcare. Maximize 1.5T with its core technologies Tim(r) 4G and Dot(r), along with its comprehensive application portfolio and experience unique functionalities to increase patient comfort. Every case. Every day.</p> <p>System Design</p> <ul style="list-style-type: none">- Short and open appearance (145 cm system length and 70 cm Open Bore Design) to reduce patient anxiety and claustrophobia- Whole-body superconductive Zero Helium Boil-Off 1.5T magnet- Actively Shielded water-cooled Siemens gradient system for maximum performance- TrueForm Magnet and Gradient Design <p>Tim 4G (Total imaging matrix in the 4th generation) for excellent image quality and speed</p> <ul style="list-style-type: none">- Siemens unique DirectRF(tm) technology enabling the all digital-in/ digital-out design- Dual-Density Signal Transfer Technology- Head/Neck 20 DirectConnect- Spine 32 DirectConnect- Body 18- Flex Large 4- Flex Small 4- Flex Coil interface- Tim Coil interface <p>Dot (Day optimizing throughput) for higher consistency, flexibility and efficiency</p> <ul style="list-style-type: none">- Dot Display- Dot Control Centers- Brain Dot Engine <p>Tim Application Suite allowing excellent head-to-toe imaging</p> <ul style="list-style-type: none">- Neuro Suite- Angio Suite- Cardiac Suite- Body Suite- Onco Suite- Breast Suite

Siemens Medical Solutions USA, Inc.
 40 Liberty Boulevard, Malvern, PA 19355
 Fax: (866) 309-6992



SIEMENS REPRESENTATIVE
 Victor Voglino - (978) 239-7061

Qty	Part No.	Item Description
		<ul style="list-style-type: none"> - Ortho Suite - Pediatric Suite - Scientific Suite <p>Further included</p> <ul style="list-style-type: none"> - High performance host computer and measurement and reconstruction system - Siemens uniqueTimCT FastView localizer and CAIPIRINHA - syngo MR software including - 1D/2D PACE - BLADE - iPAT² - Phoenix - Inline Diffusion - WARP - MDDW (Multiple Direction Diffusion Weighting) - CISS - DESS <p>The system (magnet, electronics and control room) can be installed in 30sqm space. For system cooling either the Eco Chiller options or the Separator is required.</p>
1	14416901	<p>Tim [204x48] XJ Gradients #Ae</p> <p>Tim [204x48] XJ-gradient performance level Tim 4G with it's newly designed RF system and Innovative coil architecture enables high resolution imaging and increased throughput. Up to 204 simultaneously connected coil elements in combination with the standard 48 independent RF channels, allow for more flexible parallel imaging. Maximum SNR through the new Tim 4G matrix coil technology. XJ - gradients The XJ- gradients are designed combining high performance and linearity to support clinical whole body imaging at 1.5T. The force compensated gradient system minimizes vibration levels and accoustic noise. The XJ gradients combine 33 mT/m peak amplitude with a slew rate of 125 T/m/s.</p>
1	08464872	<p>PC Keyboard US english #Tim</p> <p>Standard PC keyboard with 101 keys.</p>
1	14416914	<p>Pure White Design #T+D</p> <p>The MAGNETOM Aera / MAGNETOM Skyra design is available in different light and appealing variants which perfectly integrates into the different environments. The color of the main face plate cover of the Pure White Design Variant with the integrated Dot Control Centers and the unique Dot Display is brilliant white surrounded by a brilliant silver trim. The asymetrical deco area on the left side is colored white matte and also with a brilliant surrounding silver trim.</p> <p>The table cover is presented also in the same color and material selection.</p>
1	14416906	<p>Tim Dockable Table #Ae</p> <p>The Tim Dockable Table is designed for maximum patient comfort and smooth patient preparation. Tim Dockable Table can support up to 250 kg (550 lbs) patients without restricting the vertical or horizontal movement.</p> <p>The one step docking mechanism and the innovative multi-directional navigation wheel ensure easy maneuvering and handling. Critically ill or immobile patients can now be prepared outside the examination room for maximum patient care, flexibility and speed.</p>
1	14446650	<p>SW syngo MR E11C</p> <p>syngo MR E11C software with new features and applications. GOBrain protocols (for Aera and Skyra with 48 or more rf-channels).</p>
1	14441748	<p>Quiet Suite #T+D</p> <p>Quiet Suite enables complete, quiet examinations for neurology and orthopedics with at least 70% reduction in sound pressure levels.</p>
1	14426310	<p>Angio Dot Engine</p> <p>The timing of contrast injection and scan is widely considered the most challenging part of an angiographic exam. Angio Dot guides the user through angiographic single or multi station examinations by providing semi-automatic</p>

Siemens Medical Solutions USA, Inc.
 40 Liberty Boulevard, Malvern, PA 19355
 Fax: (866) 309-6992



SIEMENS REPRESENTATIVE
 Victor Voglino - (978) 239-7061

Qty	Part No.	Item Description
		<p>detection of arterial and venous timing windows using a test bolus technique. This information is fed back into the next planning steps automatically adapting scan parameters to the individual patient and patient's condition. Where needed, AutoVoiceCommands support the communication with the patient and ensure optimal timing of breathing, scanning and contrast media. All steps of contrast injection are presented in a simple, automated graphic on the monitor.</p> <p>syngo Inline Composing and the Tim Planning Suite are included.</p>
1	14441759	<p>FREEZEit Body MRI Package #T+D</p> <p>FREEZEit Body Package contains two robust sequences for advanced body imaging: TWIST VIBE and StarVIBE.</p> <ul style="list-style-type: none"> - TWIST VIBE is a new fast, high-resolution 4D imaging sequence for multi-arterial liver imaging. - StarVIBE is a motion insensitive VIBE sequence using a stack-of-stars trajectory.
1	14441766	<p>Large Joint Dot Engine E11 #T+D</p> <p>Large Joint Dot Engine optimizes image quality of knee, hip and shoulder scans by proposing the most appropriate protocols according to the examination strategy chosen for the specific patient. It ensures reproducible image quality and streamlines large joint examinations to the greatest extent.</p> <p>Large Joint Dot Engine features AutoAlign and AutoCoverage for knee, hip and shoulder. Susceptibility artifact reduction functionality can be used on knee and hip examinations. The WARP technique enables susceptibility artifact reduction functionality, optimized protocols are provided.</p> <p>With syngo MR E11, the Advanced WARP option is also included.</p> <p>Inline MPR (Multi Planar Reconstruction) calculations provide increased efficiency, reproducibility and ease of use.</p>
1	14446591	<p>Advanced Diffusion #T+D</p> <p>Advanced Diffusion is a package consisting of the diffusion-weighted, readout-segmented EPI sequence RESOLVE and the noise reduced QuietX DWI sequence.</p>
1	14416963	<p>2/4/8-ch Sentinelle BreastCoil #Ae</p> <p>The 2-/4-/8-channel Sentinelle Breast Coil consists of a positioning frame with exchangeable coils with different numbers of channels as described in detail in the E text.</p> <p>The 2-/4-/8-channel Sentinelle Breast Coil can be used as an 8-channel imaging coil, 4-channel biopsy coil for lateral biopsy access as well as a 2-channel biopsy coil for medial biopsy access. This coil provides a large biopsy access.</p> <p>The preamplifiers are integrated into the coil.</p> <p>The coil is iPAT-compatible.</p> <p>A positioning guidance is provided.</p>
1	14416960	<p>Shoulder 16 Coil Kit #Ae</p> <p>The new Tim 4G coil technology with Dual Density Signal Transfer and SlideConnect Technology combines key imaging benefits: excellent image quality, high patient comfort, and unmatched flexibility. The Shoulder 16 Coil Kit for examinations of the left or right shoulder consists of a base plate and two different sized iPAT compatible 16 channel coils (Shoulder Large 16 and Shoulder Small 16). These will be attached and can be relocated on the base plate. The 16-element coils with 16 integrated pre-amplifiers ensure maximum signal-to-noise ratio. Shoulder Large 16 and Shoulder Small 16 will be connected via a SlideConnect plug for fast and easy coil set-up and patient preparation.</p>
1	14416961	<p>Hand/Wrist 16 #Ae</p> <p>The new Tim 4G coil technology with Dual Density Signal Transfer and SlideConnect Technology combines key imaging benefits: excellent image quality, high patient comfort, and unmatched flexibility.</p> <p>Hand/Wrist 16 for examinations of the left or right hand and wrist region consists of a base plate and an iPAT compatible 16-channel coil and allows high resolution imaging of the wrist and the hand within one examination. Hand/Wrist 16 will be connected via a SlideConnect plug for fast and easy patient preparation.</p>
1	14416962	<p>Foot/Ankle 16 #Ae</p> <p>The new Tim 4G coil technology with Dual Density Signal Transfer and DirectConnect Technology combines key imaging benefits: excellent image quality, high patient comfort, and unmatched flexibility.</p> <p>Foot/Ankle 16 for examinations of the left or right foot and ankle region consists of a base plate and an iPAT compatible 16-channel coil and allows high resolution imaging of the foot and ankle within one examination. Foot/Ankle 16 is a cable-less coil and will be connected via DirectConnect for fast and easy patient preparation.</p>

Siemens Medical Solutions USA, Inc.
40 Liberty Boulevard, Malvern, PA 19355
Fax: (866) 309-6992

SIEMENS REPRESENTATIVE
Victor Voglino - (978) 239-7061

Qty	Part No.	Item Description
1	14430403	Tx/Rx 15-channel Knee Coil DDST #Ae New 15-channel transmitter/receiver coil for joint examinations in the area of the lower extremities. Main features : - 15-element design (3x5 coil elements) with 15 integrated preamplifiers, - iPAT-compatible - SlideConnect Technology
1	14407258	MR Workplace Table 1.2m Table suited for syngo Acquisition Workplace and syngo MR Workplace based on syngo Hardware.
1	14407261	MR Workplace Container, 50cm 50 cm wide extra case for the syngo host computer with sliding front door to allow change of storage media (CD/DVD/USB).
1	08857828	UPS Cable #Tim Power cable for connecting the UPS Powerware PW 9130-3000i (14413662) to the ACC of MAGNETOM Tim and MAGNETOM Tim+Dot systems for backing up the computer. Standard cable length: 9 m.
1	14413662	UPS Powerware PW9130G-3000T-XLEU UPS system Eaton PW9130G-3000T-XLEU for MAGNETOM Tim, MAGNETOM Tim+Dot and MAGNETOM Symphony systems for safeguarding computers. Power output: 3.0 kVA / 2.7 kW Bridge time: 5 min full load / 14 min half load Input voltage: 230 VAC
1	14413663	UPS Battery module UPS battery module Eaton PW 9130N-3000T-EBM for all MAGNETOM Tim, MAGNETOM Tim+Dot and MAGNETOM Symphony systems for safeguarding computers. Extension for: PW9130i-3000T Battery type: Closed, maintenance-free Extension of the bridge time to: 24 minutes with a module Dimensions (H x W x D): Battery module: 346 x 214 x 412 mm incl. bracket set Weight: approx. 50 kg
1	MR_STD_RIG_INST	MR Standard Rigging and Installation MR Standard Rigging and Installation This quotation includes standard rigging and installation of your new MAGNETOM system Standard rigging into a room on ground floor level of the building during standard working hours (Mon. - Fri. / 8 a.m. to 5 p.m.) It remains the responsibility of the Customer to prepare the room in accordance with the SIEMENS planning documents Any rigging requiring a crane over 80 tons and/or special site requirements (e.g. removal of existing systems, etc.) is an incremental cost and the responsibility of the Customer. All other "out of scope" charges (not covered by the standard rigging and installation) will be identified during the site assessment and remain the responsibility of the Customer.
1	MR_BTL_INST ALL	MR Standard Rigging & Install
1	MR_PREINST_DOCK	T+D Preinstall kit for dockable table
1	MR_CRYO	Standard Cryogens

Siemens Medical Solutions USA, Inc.
40 Liberty Boulevard, Malvern, PA 19355
Fax: (866) 309-6992

SIEMENS REPRESENTATIVE
Victor Voglino - (978) 239-7061

Qty	Part No.	Item Description
1	MR_PM	<p>MR Project Management</p> <p>A Siemens Project Manager (PM) will be the single point of contact for the implementation of your Siemens equipment. The assigned PM will work with the customer's facilities management, architect or building contractor to assist you in ensuring that your site is ready for installation. Your PM will provide initial and final drawings and will coordinate the scheduling of the equipment, installation, and rigging, as well as the initiation of on-site clinical education.</p>
1	MR_INITIAL_32	<p>Initial onsite training 32 hrs</p> <p>MR_INITIAL_32 Up to (32) hours of on-site clinical education training, scheduled consecutively (Monday - Friday) during standard business hours for a maximum of (4) imaging professionals. Training will cover agenda items on the ASRT approved checklist. Uptime Clinical Education phone support is provided during the warranty period for specified posted hours. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.</p>
1	MR_FOLLOWU P_24	<p>Follow-up training 24 hrs</p> <p>Up to (24) hours of follow-up on-site clinical education training, scheduled consecutively (Monday - Friday) during standard business hours for a maximum of (4) imaging professionals. Uptime Clinical Education phone support is provided during the warranty period for specified posted hours. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.</p>
1	MR_INT_DOT_ BCLS	<p>MR Dot Training Class</p> <p>Tuition for (1) imaging professional to attend Classroom Course at Siemens Training Center. The objectives of this class are to introduce the user interface of the common syngo platform, including Dot, and instructions on building protocols, demonstration of software functions, and hands-on sessions. This class includes lunch, economy airfare, and lodging for (1) imaging professional. All arrangements must be arranged through Siemens designated travel agency. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.</p>
1	MR_ADD_24	<p>Additional onsite training 24 hours</p> <p>Up to (24) hours of on-site clinical education training, scheduled consecutively (Monday - Friday) during standard business hours for a maximum of (4) imaging professionals. Training will cover agenda items on the ASRT approved checklist if applicable. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.</p>
1	4MR5142869 KKTECOMR_6 0	<p>Armrest #MR</p> <p>KKT ECOCHILLER 133L</p> <p>The KKT ECO 133 -L chiller is a dedicated 20°C cooling system for MAGNETOM Aera and MAGNETOM Skyra which automatically adapts to the different cooling requirements (e.g. system in operation, standby, ...) to reduce the energy consumption for cooling.</p> <p>The cooling system must be used in combination with the IFP (Interface Panel), if there is no on-site chilled water supply at all.</p> <p>The IFP is included in the scope of supply.</p>
1	CHILINST_AV IECMR480V25 0A	<p>Chiller Start-up and Warranty for TIM</p> <p>IEC Main Disconnect Panel - MR</p> <p>Integrated Electrical Cabinet/Main Disconnect Panel for MR.</p> <p>Components supplied: The IEC Main Disconnect Panel This Operations & Maintenance Manual (4) sets of Emergency Power Off pushbuttons and installation instructions Drawings and electrical schematics</p> <p>DOES NOT INCLUDE installation. Customer is responsible for the installation of the cabinet. Includes one year warranty.</p>

Siemens Medical Solutions USA, Inc.
 40 Liberty Boulevard, Malvern, PA 19355
 Fax: (866) 309-6992

SIEMENS
Healthineers

SIEMENS REPRESENTATIVE
 Victor Voglino - (978) 239-7061

Qty	Part No.	Item Description
1	M3SSMREPIC BC	<p>Spectris Solaris EP Injector iCBC</p> <p>Includes Spectris Solaris EP injector and Integrated Continuous Battery Charger (iCBC).</p> <ul style="list-style-type: none"> - Optimized color touch screen with few keystrokes. - Six user-programmable phases for added flexibility. - Independent Keep Vein Open (KVO) allows more time to focus on patient. - Large 115 mL saline syringe allows for longer KVO and multiple flushes. - Design of low pressure tubing eliminates dead space in the "T" connection that can waste contrast. - The clear barrel design with molded FluidDots help detect the presence of air in a syringe. - Pressure Limit Setting control software enables user to select from one to six preset maximum pressure limits, ranging from 100-300 psi, and to view current pressure during injection next to the pre-selected maximum value on the Solaris display. <p>Installation, applications and one year warranty provided by Medrad.</p> <p>Not for mobile use, refer to Siemens part number M3SSMR300EPM for the Solaris injector used in a mobile environment.</p> <p>This product has been tested and verified for compatibility with the following Siemens' products: MAGNETOM Trio, Espree, Essenza, Verio, Avanto, Symphony, Aera, Skyra and Biograph mMR. Compatibility with other products cannot be guaranteed and use with any other products may void service contracts and/or system warranties.</p>
1	MR_TRADE_IN _ALLOW	<p>MR Trade-in-Allowance Symphony with the projectnumber 2016-2088 Expires 12/22/2016 De-install 9/2017 -\$174,250</p>
1	MRLOC_ANGI ODOT	<p>Local Offset - Angio Dot Engine</p>
1	MR_PR_DOTE NG1	<p>Dot Engine 1 pricing offset</p> <p>To be eligible for this promotion, a binding purchase order of the application(s) must be received by Siemens Medical on or before September 30, 2016.</p>
1	MRLOC_LRGJ DOT	<p>Local Offset - LargeJoint Dot Engine</p>
1	MR_PR_DOTE NG1	<p>Dot Engine 1 pricing offset</p> <p>To be eligible for this promotion, a binding purchase order of the application(s) must be received by Siemens Medical on or before September 30, 2016.</p>
1	MR_BUDG_AD DL_RIG	<p>Budgetary Add'l/Out of Scope Rigging \$20,000</p>
1	SY_PR_TEAM PLAY	<p>teamply Welcome & Registration Package</p> <p>teamply is a cloud-based network that brings together your imaging modality users, the systems' dose and utilization data, and the users' expertise to help you improve the delivery of care to your patients. Basic features are provided free of charge. Premium features (benchmarking, non-Siemens devices) are provided on a trial basis for three months at no charge, and may be used thereafter on a subscription fee basis.</p> <p>To register: http://teamply.siemens.com/#/institutionRegistration/1</p>
1	14402527	<p>SWI #Tim</p> <p>Susceptibility Weighted Imaging is a high-resolution 3D imaging technique for the brain with ultra-high sensitivity for microscopic magnetic field inhomogeneities caused by deoxygenated blood, products of blood decomposition and microscopic iron deposits. Among other things, the method allows for the highly sensitive proof of cerebral hemorrhages and the high-resolution display of venous cerebral blood vessels.</p>

System Total: \$1,385,769



Siemens Medical Solutions USA, Inc.
40 Liberty Boulevard, Malvern, PA 19355
Fax: (866) 309-6992

SIEMENS REPRESENTATIVE
Victor Voglino - (978) 239-7061

FINANCING: The equipment listed above may be financed through Siemens. Ask us about our full range of financial products that can be tailored to meet your business and cash flow requirements. For further information, please contact your local Sales Representative.

ACCESSORIES: Don't forget to ask us about our line of OEM imaging accessories to complete your purchase. All accessories can be purchased or financed as part of this order. To purchase accessories directly or to receive our accessories catalog, please call us directly at 1-888-222-9944 or contact your local Sales Representative.

COMPLIANCE: Compliance with legal and internal regulations is an integral part of all business processes at Siemens. Possible infringements can be reported to our Helpdesk "Tell us" function at www.siemens.com/tell-us.

Siemens Medical Solutions USA, Inc. General Terms and Conditions

1. GENERAL

1.1 Contract Terms and Acceptance. These terms and conditions constitute an integral part of any contract between Seller and Purchaser identified on the first page hereof and shall govern the sale of the products identified in such contract ("Products"). Purchaser acknowledges that this is a commercial and not a consumer transaction. Purchaser shall be deemed to have assented to, and to have waived any objection to, this Agreement upon the earliest to occur of any of the following: Purchaser's completion or execution of this Agreement; Purchaser's acceptance of all or any part of the Products; Purchaser's issuance of a purchase order for any Products identified on Seller's quotation or proposal; or delivery of the Products to the common carrier for shipment pursuant hereto.

1.2 Refurbished/Used Products. For Products identified on this Agreement as used or refurbished Products, these Products have been previously owned and used. When delivered to Purchaser, such Products will perform in accordance with the manufacturer's specifications. Since pre-owned Products may be offered simultaneously to several customers, the availability of such Products to Purchaser cannot be guaranteed. If the Products are no longer available, Seller will use its best efforts to identify other suitable products in its inventory. If substitute products are not acceptable to Purchaser, then Seller will cancel the order and refund to Purchaser any deposits previously paid. The warranty period for any used or refurbished Products will be separately stated on the quotation.

1.3 Third Party Products. If this Agreement includes the sale of third party products not manufactured by Seller, then Purchaser agrees and acknowledges that (a) Purchaser has made the selection of these products on its own, (b) the products are being acquired by Seller solely at the request of and for the benefit and convenience of Purchaser, (c) no representation, warranty or guarantee has been made by Seller with respect to the products, (d) the obligation of Purchaser to pay Seller for the products is absolute and unconditional, (e) use of the products may be subject to Purchaser's agreement to comply with any software licensing terms imposed by the manufacturer; and (f) unless otherwise indicated by Seller in writing, Seller is not responsible for any required installation, validation, product recall, warranty service, maintenance, complaint handling, or any other applicable FDA regulatory requirements, and the Purchaser will look solely to the manufacturer regarding these services and will assert no claim against Seller with respect to these products.

2. PRICES

2.1 Quotations. Unless otherwise agreed to in writing or set forth in the quotation, all prices quoted by Seller and amounts payable by Purchaser are in U.S. dollars, and include Seller's standard packaging. The prices quoted to Seller assume that the Seller is located in, and will use the Products in, the U.S. If not, such quotation will be void. Unless otherwise stated, the quotation shall only be valid for forty-five (45) days from the date of the quotation.

2.2 Delay in Acceptance of Delivery. Should the agreed delivery date be postponed by Purchaser, Seller shall have the right to deliver the Products to storage at Purchaser's risk and expense, and payments due upon delivery shall become due when Seller is ready to deliver.

3. TAXES

3.1 Any sales, use or manufacturer's tax which may be imposed upon the sale or use of Products, or any property tax levied after readiness to ship, or any excise tax, license or similar fee (excluding the Medical Device Excise Tax as set forth in Section 4191 of the Internal Revenue Code of 1986, as amended) required under this transaction, shall be in addition to the quoted prices and shall be paid by Purchaser. Notwithstanding the foregoing, Seller agrees to honor any valid exemption certificate provided by Purchaser.

4. TERMS OF PAYMENT; DEFAULT

4.1 Payments; Due Date. Unless otherwise set forth in the quotation, Purchaser shall pay Seller as follows: an initial deposit of 10% of the purchase price for each Product is due upon submission of the purchase order, an additional 80% of the purchase price is due upon delivery of each Product, and the final 10% of the purchase price is due upon completion of installation or when the Products are available for first patient use, whichever occurs first. Unless otherwise agreed, all payments other than the initial deposit are due net thirty (30) days from the date of invoice. Seller shall have no obligation to complete installation until the payment due upon delivery is received. Partial

shipments shall be billed as made, and payments for such shipments will be made in accordance with the foregoing payment terms.

4.2 Late Payment. A service charge of 1½% per month, not to exceed the maximum rate allowed by law, shall be made on any portion of Purchaser's outstanding balance which is not paid when due. Payment of such service charge shall not excuse or cure Purchaser's breach or default for late payment.

4.3 Payment of Lesser Amount. If Purchaser pays, or Seller otherwise receives, a lesser amount than the full amount provided for under this Agreement, such payment shall not constitute or be construed other than as on account of the earliest amount due Seller. No endorsement or statement on any check or payment or elsewhere shall constitute or be construed as an accord or satisfaction.

4.4 Where Payment Due Upon Installation or Completion. Should any terms of payment provide for either full or partial payment upon completion of installation or thereafter, and completion of installation is delayed for any reason for which Seller is not responsible beyond the installation date set forth in the Notice to Manufacture Letter issued by Seller, as applicable, then the balance of payments shall be due on the day following such installation date.

4.5 Default; Termination. Each of the following shall constitute an event of default under this Agreement: (i) a failure by Purchaser to make any payment when due; (ii) a failure by Purchaser to perform any other obligation under this Agreement within thirty (30) days of receipt of written notice from Seller; or (iii) the commencement of any insolvency, bankruptcy or similar proceedings by or against Purchaser.

Upon the occurrence of any event of default, at Seller's election: (a) the entire amount of any indebtedness and obligation due Seller under this Agreement and interest thereon shall become immediately due and payable; (b) Seller may suspend the performance of any of Seller's obligations hereunder, including, but not limited to, obligations relating to delivery, installation and warranty services; (c) Purchaser shall put Seller in possession of the Products upon demand; (d) Seller may sell or otherwise dispose of all or any part of the Products and apply the proceeds thereof against any indebtedness or obligation of Purchaser under this Agreement; (e) if this Agreement or any indebtedness or obligation of Purchaser under this Agreement is referred to an attorney for collection or realization, Purchaser shall pay to Seller all costs of collection and realization (including, without limitation, a reasonable sum for attorneys' fees); and Purchaser shall pay any deficiency remaining after collection of or realization by Seller on the Products. In addition, Seller may terminate this Agreement upon written notice to Purchaser in the event that Purchaser is not approved for credit or upon the occurrence of any material adverse change in the financial condition or business operations of Purchaser.

4.6 Financing. Notwithstanding any arrangement that Purchaser may make for the financing of the purchase price of the Products, the parties agree that any such financing arrangement shall have no effect on the Purchaser's payment obligations under this Agreement, including but not limited to Sections 4.1 and 4.2 above.

5. EXPORT TERMS

5.1 Unless other arrangements have been made, payment on export orders shall be made by irrevocable confirmed letter of credit, payable in U.S. dollars against Seller's invoice and standard shipping documents. Such letter of credit shall be in an amount equal to the full purchase price of the Products and shall be established in a U.S. bank acceptable to Seller. Purchaser shall have sole responsibility to procure all necessary permits and licenses for shipment and compliance with any governmental regulations concerning control of final destination of Products.

5.2 Purchaser agrees that Products shall not at any time directly or indirectly be used, exported, sold, transferred, assigned or otherwise disposed of in a manner which will result in non-compliance with applicable export Control and US Sanction laws and regulations. If Purchaser purchases a Product at the domestic price and exports such Product, or transfers such Product to a third party for export, outside of the U.S., Purchaser shall pay to Seller the difference between the domestic price and the international retail price of such Product. Purchaser shall deliver to Seller, upon Seller's request, written assurance regarding compliance with this Section in form and content acceptable to Seller.

6. DELIVERY, RISK OF LOSS

6.1 Delivery Date. Delivery and installation dates will be established by mutual agreement of the parties as set forth in the Notice to Manufacture Letter issued

Siemens Medical Solutions USA, Inc.
40 Liberty Boulevard, Malvern, PA 19355
Fax: (866) 309-6992

SIEMENS REPRESENTATIVE
Victor Voglino - (978) 239-7061

by the Seller, as applicable. Seller shall make reasonable efforts to meet such delivery date(s).

6.2 Risk of Loss; Title Transfer. Unless otherwise agreed to in writing, the following shall apply:

(a) For Products that do not require installation by Seller, and for options and add-on products purchased subsequent to delivery and installation of Products purchased under this Agreement, delivery shall be complete upon transfer of possession to common carrier, F.O.B. Shipping Point, whereupon title to and all risk of loss, damage to or destruction of the Products shall pass to Purchaser.

(b) For Products that require installation by Seller, delivery shall be complete upon delivery of the Products to Purchaser's designated site, F.O.B. Destination; whereupon title to and all risk of loss, damage to or destruction of such Products shall pass to Purchaser upon completion of delivery.

(c) All freight charges and other transportation, packing and insurance costs, license fees, custom duties and other similar charges shall be the sole responsibility of Purchaser unless included in the purchase price or otherwise agreed to in writing by Seller. In the event of any loss or damage to any of the Products during shipment, Seller and Purchaser shall cooperate in making any insurance claim.

7. SECURITY INTEREST/FILING

7.1 Purchaser grants to Seller a security interest in the Products until payment in full by Purchaser. Purchaser shall sign any financing statements or other documents necessary to perfect Seller's security interests in the Products. Purchaser further represents and covenants that (a) it will keep the Products in good order and repair until the purchase price has been paid in full, (b) it will promptly pay all taxes and assessments upon the Products or the use thereof, (c) it will not attempt to transfer any interest in the Products until the purchase price has been paid in full, and (d) it is solvent and financially capable of paying the full purchase price for the Products.

8. CHANGES, CANCELLATION, AND RETURN

8.1 Orders accepted by Seller are not subject to change except upon Seller's written agreement.

8.2 Orders accepted by Seller are non-cancellable by Purchaser except upon Seller's written consent and payment by Purchaser of a cancellation charge equal to 10% of the price of the affected Products, plus any shipping, insurance, inspection and refurbishment charges; the cost of providing any training, education, site evaluation or other services completed by Seller; and any return, cancellation or restocking fees with respect to any Third Party Products ordered by Seller on behalf of Purchaser. Seller may retain any payments received from Purchaser up to the amount of the cancellation charge. In no event can an order be cancelled by Purchaser or Products be returned to Seller after shipment.

8.3 Seller reserves the right to change the manufacture and/or design of its Products if, in the judgment of Seller, such change does not alter the general function of the Products.

9. FORCE MAJEURE

9.1 Seller shall not be liable for any loss or damage for delay in delivery, inability to install or any other failure to perform due to causes beyond its reasonable control including, but not limited to, acts of God or the public, war, civil commotion, blockades, embargoes, calamities, floods, fires, earthquakes, explosions, storms, strikes, lockouts, labor disputes, or unavailability of labor, raw materials, power or supplies. Should such a delay occur, Seller may reasonably extend delivery or production schedules or, at its option, cancel the order in whole or part without liability other than to return any unearned deposit or prepayment.

10. WARRANTY

10.1 Seller warrants that the Products manufactured by Seller and sold hereunder shall be free from defects in material or workmanship under normal use and service for the warranty period. The final assembled Products shall be new although they may include certain used, reworked or refurbished parts and components (e.g., circuit boards) that comply with performance and reliability specifications and controls. Seller's obligation under this warranty is limited, at Seller's option, to the repair or replacement of the Product or any part thereof. Unless otherwise set forth in the Product Warranty attached hereto and incorporated herein by reference ("Product Warranty"), the warranty period shall commence upon the earlier of the date that the Products have been installed in accordance with Section 12.5 hereof (which date shall be confirmed in writing by Seller) or first patient use, and shall continue for twelve (12) consecutive months. Seller makes no warranty for any Products made by persons other than Seller or its affiliates, and Purchaser's sole warranty herefor, if any, is the original manufacturer's warranty, which Seller agrees to pass on to Purchaser, as applicable. The warranty provided by Seller under this

Section 10 extends only to the original Purchaser, unless the Purchaser obtains the Seller's prior written consent with respect to any sale or other transfer of the Products during the term of the warranty.

10.2 No warranty extended by Seller shall apply to any Products which have been damaged by fire, accident, misuse, abuse, negligence, improper application or alteration or by a force majeure occurrence as described in Section 9 hereof or by the Purchaser's failure to operate the Products in accordance with the manufacturer's instructions or to maintain the recommended operating environment and line conditions; which are defective due to unauthorized attempts to repair, relocate, maintain, service, add to or modify the Products by the Purchaser or any third party or due to the attachment and/or use of non-Seller supplied parts, equipment or software without Seller's prior written approval; which failed due to causes from within non-Seller supplied equipment, parts or software including, but not limited to, problems with the Purchaser's network; or which have been damaged from the use of operating supplies or consumable parts not approved by Seller. In addition, there is no warranty coverage for any transducer or probe failure due to events such as cracking from high impact drops, cable rupture from rolling equipment over the cable, delamination from cleaning with inappropriate solutions, or TEE bite marks. Seller may effectuate any repairs at Purchaser's facility, and Purchaser shall furnish Seller safe and sufficient access for such repair. Repair or replacement may be with parts or products that are new, used or refurbished. Repairs or replacements shall not interrupt, extend or prolong the term of the warranty. Purchaser shall, upon Seller's request, return the non-complying Product or part to Seller with all transportation charges prepaid, but shall not return any Product or part to Seller without Seller's prior written authorization. Purchaser shall pay Seller its normal charges for service and parts for any inspection, repair or replacement that falls outside of Seller's warranty. Seller's warranty does not apply to consumable materials, disposables, supplies, accessories and collateral equipment, except as specifically stated in writing or as otherwise set forth in the Product Warranty.

10.3 This warranty is made on condition that immediate written notice of any noncompliance be given to Seller and Seller's inspection reveals that Purchaser's claim is covered under the terms of the warranty (i.e., that the noncompliance is due to traceable defects in original materials and/or workmanship).

10.4 Purchaser shall provide Seller with both on-site and remote access to the Products. The remote access shall be provided through the Purchaser's network as is reasonably necessary for Seller to provide warranty services under this Agreement. Remote access will be established through a broadband internet-based connection to either a Purchaser owned or Seller provided secure end-point. The method of connection will be a Peer-to-Peer VPN IPsec tunnel (non-client based) with specific inbound and outbound port requirements.

10.5 Warranty service will be provided without charge during Seller's regular working hours (8:30-5:00), Monday through Friday, except Seller's recognized holidays. If Purchaser requires that service be performed outside these hours, such service can be made available at an additional charge, at Seller's then current rates. The obligations of Seller described in this Section are Seller's only obligations and Purchaser's sole and exclusive remedy for a breach of product warranty.

10.6 SELLER MAKES NO WARRANTY OTHER THAN THE ONE SET FORTH HEREIN AND IN THE PRODUCT WARRANTY. SUCH WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSES, AND SUCH CONSTITUTES THE SOLE AND EXCLUSIVE WARRANTY MADE WITH RESPECT TO THE PRODUCTS, SERVICE OR OTHER ITEM FURNISHED UNDER THIS AGREEMENT.

10.7 In the event of any inconsistencies between the terms of this Section 10 and the terms of the Product Warranty, the terms of the Product Warranty shall prevail.

11. LIMITATION OF LIABILITY

11.1 In no event shall Seller's liability hereunder exceed the actual loss or damage sustained by Purchaser, up to the purchase price of the Products. The foregoing limitation of liability shall not apply to claims for bodily injury or damages to real property or tangible personal property to the extent arising from Seller's negligence or a product defect.

11.2 SELLER SHALL NOT BE LIABLE FOR ANY LOSS OF USE, REVENUE OR ANTICIPATED PROFITS; COST OF SUBSTITUTE PRODUCTS OR SERVICES; LOSS OF STORED, TRANSMITTED OR RECORDED DATA; OR FOR ANY INDIRECT, INCIDENTAL, UNFORESEEN, SPECIAL, PUNITIVE OR CONSEQUENTIAL DAMAGES WHETHER BASED ON CONTRACT, TORT, STRICT LIABILITY OR ANY OTHER THEORY OR FORM OF ACTION, EVEN IF SELLER HAS BEEN ADVISED OF THE POSSIBILITY THEREOF, ARISING OUT OF OR IN CONNECTION WITH THIS

Siemens Medical Solutions USA, Inc.
40 Liberty Boulevard, Malvern, PA 19355
Fax: (866) 309-6992

SIEMENS REPRESENTATIVE
Victor Voglino - (978) 239-7061

AGREEMENT OR THE SALE OR USE OF THE PRODUCTS. THE FOREGOING IS A SEPARATE, ESSENTIAL TERM OF THIS AGREEMENT AND SHALL BE EFFECTIVE UPON THE FAILURE OF ANY REMEDY, EXCLUSIVE OR NOT.

12. INSTALLATION - ADDITIONAL CHARGES

12.1 General. Unless otherwise expressly stipulated in writing, the Products shall be installed by and at the expense of Seller except that Seller shall not provide rigging or site preparation services unless otherwise agreed to in writing by Seller for an additional charge. Seller will not install accessory items such as cabinets, illuminators, darkroom equipment or processors for X-Ray and CT equipment, unless otherwise agreed to in writing by Seller.

12.2 Installation by Seller. If Seller specifies it will install the Products, the following applies: subject to fulfillment of the obligations set forth in Section 12.3 below, Seller shall install the Products and connect them to the requisite safety switches and power lines to be installed by Purchaser. Except as otherwise specified below, if such installation and connection are performed by Seller's technical personnel, prices shown include the cost thereof, provided that the installation and connection can be performed within the Continental United States or Puerto Rico and during normal business hours. Any overtime charges or other special expenses shall be additional charges to the prices shown.

12.3 Purchaser's Obligations. Purchaser shall, at its expense, provide all proper and necessary labor and materials for plumbing service, carpentry work, conduit wiring, and other preparations required for such installation and connection. All such labor and materials shall be completed and available at the time of delivery of the Products by Seller. Additionally, Purchaser shall provide free access to the installation site and, if necessary, safe and secure space for storage of Products and equipment prior to installation by Seller. Purchaser shall be responsible, at its sole cost and expense, for obtaining all permits, licenses and approvals required by any federal, state or local authorities in connection with the installation and operation of the Products, including but not limited to any certificate of need and zoning variances. Purchaser shall provide a suitable environment for the Products and shall ensure that its premises are free of hazardous conditions and any concealed or dangerous conditions and that all site requirements are met. Seller shall delay its work until Purchaser has completed the removal of any hazardous materials or has taken any other precautions and completed any other work required by applicable regulations. Purchaser shall reimburse Seller for any increased costs and expenses incurred by Seller that are the result of or are caused by any such delay. In the event that Seller is requested to supervise the installation of the Products, it remains the Purchaser's responsibility to comply with local regulations. Seller is not an architect and all drawings furnished by Seller are not construction drawings. If local labor conditions, including a requirement to use union labor, require the use of non-Seller employees to participate in the installation of the Product or otherwise causes delays or any additional expenses, then any such additional costs shall be at Purchaser's expense.

12.4 Regulatory Reporting. In the event that any regulatory activity is performed by anyone other than Seller's authorized personnel, then Purchaser shall be responsible for fulfilling any and all reporting requirements.

12.5 Completion of Installation. Installation shall be complete upon the conclusion of final calibration and checkout under Seller's standard procedures to verify that the Products meet applicable written performance specifications. Notwithstanding the foregoing, first use of the Products by Purchaser, its agents or employees for any purpose after delivery shall constitute completion of installation.

13. PATENT, COPYRIGHT AND OTHER INFRINGEMENT CLAIMS

13.1 Infringement by Seller. Seller warrants that the Products manufactured by Seller and sold hereunder do not infringe any U.S. patent or copyright. If Purchaser receives a claim that any such Products, or parts thereof, infringe upon the rights of others under any U.S. patent or copyright, Purchaser shall notify Seller immediately in writing. Provided that Purchaser gives Seller information, assistance and exclusive authority to evaluate, defend and settle such claims, Seller shall at its own expense and option: indemnify and defend Purchaser against such claims; settle such claims; procure for Purchaser the right to use the Products; or remove or modify them to avoid infringement. If none of these alternatives is available on terms reasonable to Seller, then Purchaser shall return the Products to Seller and Seller shall refund to Purchaser the purchase price paid by Purchaser less reasonable depreciation for Purchaser's use of the Products. The foregoing states Seller's entire obligation and liability, and Purchaser's sole remedy, for claims of infringement.

13.2 Infringement by Purchaser. If some or all of the Products sold hereunder are made by Seller pursuant to drawings or specifications furnished by Purchaser, or if Purchaser modifies or combines, operates or uses the

Products other than as specified by Seller or with any product, data, software, apparatus or program not provided or approved by Seller, then the indemnity obligation of Seller under Section 13.1 shall be null and void.

14. DESIGNS AND TRADE SECRETS; LICENSE; CONFIDENTIALITY

14.1 Any drawings, data, designs, software programs or other technical information supplied by Seller to Purchaser in connection with the sale of the Products shall remain Seller's property and shall at all times be held in confidence by Purchaser.

14.2 For all Products which utilize software for their operation, such "Applications Software" shall be licensed to Purchaser under the terms of Seller's Software License Schedule attached hereto.

14.3 Seller and Purchaser shall maintain the confidentiality of any information provided or disclosed to the other party relating to the business, customers and/or patients of the disclosing party, as well as this Agreement and its terms (including the pricing and other financial terms under which the Purchaser will be purchasing the Products). Each party shall use reasonable care to protect the confidentiality of the information disclosed, but no less than the degree of care it would use to protect its own confidential information, and shall only disclose the other party's confidential information to its employees and agents having a need to know this information. The obligations of confidentiality set forth herein shall not apply to any information in the public domain at the time of disclosure or that is required to be disclosed by court order or by law.

15. ASSIGNMENT

15.1 Neither party may assign any rights or obligations under this Agreement without the prior written consent of the other, which shall not be unreasonably withheld. Any attempt to do so shall be void, except that Seller may assign this Agreement without consent to any subsidiary or affiliated company, and may delegate to authorized subcontractors or service suppliers any work to be performed under this Agreement so long as Seller remains liable for the performance of its obligations under this Agreement. This Agreement shall inure to and be binding upon the parties and their respective successors, permitted assigns and legal representatives.

16. COSTS AND FEES

16.1 In the event that any dispute or difference is brought arising from or relating to this Agreement or the breach, termination or validity thereof, the prevailing party shall be entitled to recover from the other party all reasonable attorneys' fees incurred, together with such other expenses, costs and disbursements as may be allowed by law.

17. MODIFICATION

17.1 This Agreement may not be changed, modified or amended except in writing signed by duly authorized representatives of the parties.

18. GOVERNING LAW; WAIVER OF JURY TRIAL

18.1 This Agreement shall be governed by the laws of the state where the Product(s) will be installed, without regard to that state's choice of law principles.

18.2 EACH OF THE PARTIES EXPRESSLY WAIVES ALL RIGHTS TO A JURY TRIAL IN CONNECTION WITH ANY DISPUTE UNDER THIS AGREEMENT.

19. COST REPORTING

19.1 Purchaser agrees that it must fully and accurately report prices paid under this Agreement, net of all discounts, as required by applicable law and contract, including without limitation 42 CFR §1001.952(h), in all applicable Medicare, Medicaid and state agency cost reports. Purchaser shall retain a copy of this Agreement and all other communications regarding this Agreement, together with the invoices for purchase and permit agents of the U.S. Department of Health and Human Services or any state agency access to such records upon request.

20. INTEGRATION

20.1 These terms and conditions, including any attachments or other documents incorporated by reference herein, constitute the entire, complete and exclusive statement of agreement with respect to the subject matter hereof, and supersede any and all prior agreements, understandings and communications between the parties with respect to the Products. Purchaser's additional or different terms and conditions stated in a purchase order, bid documents or any other document issued by Purchaser are specifically rejected and shall not apply to the transactions contemplated under this Agreement.

Siemens Medical Solutions USA, Inc.
40 Liberty Boulevard, Malvern, PA 19355
Fax: (866) 309-6992

21. SEVERABILITY; HEADINGS

21.1 No provision of this Agreement which may be deemed unenforceable will in any way invalidate any other portion or provision of this Agreement. Section headings are for convenience only and have no substantive effect.

22. WAIVER

22.1 No failure and no delay in exercising, on the part of any party, any right under this Agreement will operate as a waiver thereof, nor will any single or partial exercise of any right preclude the further exercise of any other right.

23. NOTICES

23.1 Any notice or other communication under this Agreement shall be deemed properly given if in writing and delivered in person or mailed, properly addressed and stamped with the required postage, to the intended recipient at its address specified on the face hereof.

24. RIGHTS CUMULATIVE

24.1 The rights and remedies afforded to Seller under this Agreement are in addition to, and do not in any way limit, any other rights or remedies afforded to Seller by any other agreement, by law or otherwise.

25. END USER CERTIFICATION

25.1 Purchaser represents, warrants and covenants that it is acquiring the Products for its own end use and not for reselling, leasing or transferring to a third party (except for lease-back financings).

26. ACCESS TO BOOKS AND RECORDS

26.1 To the extent required by Section 1861(v)(1)(I) of the Social Security Act and the regulations promulgated thereunder, until the expiration of four (4) years after the furnishing of any Product or service pursuant to this Agreement, Seller shall make available, upon written request by the Secretary of Health

and Human Services (the "Secretary"), or upon request by the Comptroller General (the "Comptroller"), or any of their duly authorized representatives, copies of this Agreement and any books, documents, records or other data of Seller that are necessary to certify the nature and extent of any costs incurred by Purchaser for such Products and services. If Seller carries out any of its duties under this Agreement through a subcontract with a related organization involving a value or cost of ten thousand dollars (\$10,000) or more over a twelve (12) month period, Seller will cause such subcontract to contain a clause to the effect that, until the expiration of four (4) years after the furnishing of any Product or service pursuant to said contract, the related organization will make available upon the written request of the Secretary or the Comptroller, or any of their duly authorized representatives, copies of records of said related organization that are necessary to certify the nature and extent of cost incurred by Purchaser for such Product or service.

27. DISPOSITION OF PRODUCTS

27.1 Purchaser expressly agrees that should Purchaser sell, transfer or otherwise dispose of the Products, Purchaser shall notify Seller in writing and give Seller the opportunity to purchase such Products. With Purchaser's notice, Purchaser shall provide Seller with a copy of the third party's binding offer to purchase the Products and Seller shall have seven (7) days to notify the Purchaser of an offer to purchase the Products.

05/15 Rev.

Siemens Medical Solutions USA, Inc.
40 Liberty Boulevard, Malvern, PA 19355
Fax: (866) 309-6992



SIEMENS REPRESENTATIVE
Victor Voglino - (978) 239-7061

Software License Schedule to the Siemens Medical Solutions USA, Inc. General Terms and Conditions

1. DEFINITIONS: The following definitions apply to this Schedule:
"Agreement" shall mean the attached (i) Quotation for Products and/or Services including the Terms and Conditions of Sale and applicable schedules; and/or (ii) Software License Agreement describing the software licensed herein and the specific system for which the license is issued.
"Licensor" shall mean Siemens Medical Solutions USA, Inc.
"Licensee" shall mean the end-user to whom Licensor provides Software or Documentation for its internal use under the Agreement.
"Software" shall mean the software described in the attached Agreement, including the following as contained therein: (i) software programs consisting of a series of statements or instructions to be used directly or indirectly in a programmable controller or computer to bring about a certain result and (ii) databases consisting of systemized collections of data to be used or referenced directly or indirectly by a programmed controller or computer. Notwithstanding the foregoing, "Software" does not include "firmware" as such term is conventionally understood. Diagnostic/Maintenance Software also is not included within the scope of the Software licensed under this Schedule, and is available only as a special option under a separate Diagnostic Materials License Agreement and may be subject to a separate licensing fee.
"Documentation" shall mean the documents and other supporting materials which are intended to support the use of an associated product, including (but not limited to) instructions, descriptions, flow charts, logic diagrams and listings of the Software, in text or graphic form, on machine readable or printed media.
"Designated Unit" shall mean a single control unit or computer identified on the first page of the Agreement, on which Software licensed hereunder may be used by Licensee.

2. SCOPE: The following terms and conditions shall apply to all Software and Documentation provided by Licensor to Licensee under the Agreement (whether included with other products listed in the Agreement or listed separately in the Agreement), together with any updates or revisions thereto which Licensor may provide to Licensee, and all copies thereof, except any Software and/or Documentation licensed directly by Licensor's supplier under a separate end-user license agreement accompanying the Software or the Documentation, in which case Licensee agrees to be bound by that license agreement as a condition to using the Software and/or Documentation. Except as expressly provided herein, and provided that in no event shall the warranties or other obligations of Licensor with respect to such Software or Documentation exceed those set forth in this Schedule, this Schedule shall be subject to the liability limitations and exclusions and other terms and conditions set forth in the Agreement. **ANY USE OF THE SOFTWARE, INCLUDING BUT NOT LIMITED TO USE ON THE DESIGNATED UNIT, WILL CONSTITUTE LICENSEE'S AGREEMENT TO THIS SOFTWARE LICENSE SCHEDULE (OR RATIFICATION OF ANY PREVIOUS CONSENT).**

3. SOFTWARE AND DOCUMENTATION LICENSE: Subject to the payment of any applicable annual license fee(s), whether stated separately or included in the purchase price of another product, and to Licensee's acceptance of all of the obligations set forth herein and to the fulfillment of those obligations, Licensor or, if applicable, its licensor or supplier, hereby grants to Licensee a paid-up, nonexclusive and nontransferable (except as expressly provided in this Schedule) limited license to use the Software provided by Licensor under the Agreement solely for Licensee's own use on the Designated Unit and to use the Documentation in support of Licensee's authorized use of the Software, for the purpose of operating the Designated Unit in accordance with the instructions set forth in the user's manual supplied with the Designated Unit and for no other purpose whatsoever. A separate license is required for each Designated Unit on which the Software is to be used. Licensee may obtain from Licensor one copy of the Software licensed hereunder for backup and archival purposes only as is necessary to support Licensee's own authorized use of the Software, provided that Licensee includes on or in all copies (in any form) all copyright, trade secret or other proprietary notices contained on or in the Software as provided by Licensor. Additional copies of the Documentation may be licensed from Licensor at its then applicable charges. Licensee may make the Software and Documentation (including any copies) available only to its employees and other persons on Licensee's premises to whom such disclosure is necessary to enable Licensee to use the Software or Documentation within the scope of the license provided in this Schedule. If the Software is supplied to any unit or agency of the United States Government other than

the Department of Defense, the Software and Documentation are classified as "restricted computer software" and the Government's rights in the Software and Documentation shall be as provided in paragraph (c) (2) of the Commercial Computer Software-Restricted Rights clause in FAR 52.227-19 and any successor laws, rules or regulations thereto. If the Software is supplied to the United States Department of Defense, the Software is classified as "commercial computer software" and the Government is furnished the Software and Documentation with "restricted rights" as defined in paragraph (c) (1) of the Rights in Technical Data and Computer Software clause in DFARS 252.227-7013 and any successor laws, rules or regulations thereto.

4. PROPRIETARY PROTECTION AND CONFIDENTIALITY: Ownership of and title to the Software and Documentation and all copies, in any form, licensed under this Schedule are and will remain in Licensor or its suppliers at all times. Licensee shall not (i) remove any copyright, trade secret or other proprietary right notices contained on or in the Software or Documentation as provided by Licensor, (ii) reproduce or modify any Software or Documentation or copy thereof, (iii) reverse assemble, reverse engineer or decompile any Software, or copy thereof, in whole or in part (except and only to the extent that such activity is expressly permitted by applicable law notwithstanding this limitation), (iv) sell, transfer or otherwise make available to others the Software or Documentation, or any copy thereof, except as expressly permitted by this Schedule, or (v) apply any techniques to derive any trade secrets embodied in the Software or Documentation. Licensee shall take all appropriate actions to ensure that: (i) the Software does not leave the Designated Unit's equipment location as set forth above, (ii) the Software is not copied by Licensee or any third parties, and (iii) the Software is not used in any equipment other than the Designated Unit. Licensee shall secure and protect the Software and Documentation and copies thereof from disclosure and shall take such actions with its employees and other persons who are permitted access to the Software or Documentation or copies as may be necessary to satisfy Licensee's obligations hereunder. Prior to disposing of any computer medium, computer memory or data storage apparatus, Licensee shall ensure that all copies of Software and Documentation have been erased therefrom or otherwise destroyed. In the event that Licensee becomes aware that any Software or Documentation or copies are being used in a manner not permitted by the license, Licensee shall immediately notify Licensor in writing of such fact and if the person or persons so using the Software or Documentation are employed or otherwise subject to Licensee's direction and control, Licensee shall use reasonable efforts to terminate such impermissible use. Licensee will fully cooperate with Licensor so as to enable Licensor to enforce its proprietary and property rights in the Software. Licensee agrees that, subject to Licensee's reasonable security procedures, Licensor shall have immediate access to the Software at all times and that Licensor may take immediate possession thereof upon termination or expiration of the associated license or this Schedule. Licensee's obligations under this paragraph shall survive any termination of a license, the Schedule or the Agreement.

5. UPDATES AND REVISIONS: During the warranty period or under a separate service contract or software update subscription, revised or updated versions of the Software licensed under this Schedule may be made available, at Licensor's option, to Licensee to use or to test while Licensee continues use of a previous version. Licensee has the right to decide whether to install any such revised or updated versions or to continue use of the previous version after giving due regard to the United States Food and Drug Administration rules and regulations. However, Licensee shall pay Licensor for any services necessitated by any modifications of the Software by Licensee or by Licensee's failure to utilize the current non-investigational version of the Software provided by Licensor. Software updates that provide new features or capabilities or that require hardware changes will be offered to Licensee at purchase prices established by Licensor. Licensor retains the sole right to determine whether an update represents an enhancement of a previously purchased capability or a new capability for which the Licensee will be charged. In addition, some updates may require Applications Training performed by Licensor's personnel that will be offered at Licensor's prevailing rates. Licensor retains the sole right to determine whether an update requires such training.

6. DELIVERY, RISK OF LOSS AND TITLE: Notwithstanding the provisions of Section 6 of the attached Terms and Conditions of Sale, if any, the Software and Documentation licensed hereunder shall be delivered on or

Siemens Medical Solutions USA, Inc.
40 Liberty Boulevard, Malvern, PA 19355
Fax: (866) 309-6992

SIEMENS REPRESENTATIVE
Victor Voglino - (978) 239-7061

about the delivery date stated in the Agreement unless a separate delivery date is agreed upon. If Software or Documentation licensed hereunder is lost or damaged during shipment from Licensor, Licensor will replace it at no charge to Licensee. If any Software or Documentation supplied by Licensor and licensed hereunder is lost or damaged while in the possession of Licensee, Licensor will replace it at Licensor's then current applicable charges, if any, for materials, processing and distribution. Notwithstanding the provisions of Section 6 of the attached Terms and Conditions of Sale, if any, the Software and Documentation, in any form, and all copies made by Licensee, including partial copies, and all computer media provided by Licensor are and remain the property of Licensor or its supplier. Licensee has no right, title or interest in the Software, the Documentation, or any computer media provided by Licensor, or copies, except as stated herein, and ownership of any such Software, Documentation and computer media shall at all times remain with Licensor or its suppliers.

7. LICENSE TRANSFER: The Software and Documentation, and the license hereunder, may not be assigned, transferred or sublicensed except as hereinafter provided. Upon the sale or lease of the Designated Unit to a third party, Licensee may transfer to such third party, with Licensor's written consent and in accordance with Licensor's then current policies and charges, the license to use the Software and Documentation hereunder, together with the Software, the Documentation, the computer media provided by Licensor, and all copies provided that: (i) Licensee notifies Licensor in writing of the name and address of such third party; (ii) such third party agrees in a written instrument delivered to Licensor to the terms of this Schedule; and (iii) Licensee does not retain any copies of the Software or Documentation in any form.

8. WARRANTIES: Licensor warrants that for the warranty period provided by Licensor under the attached Terms and Conditions of Sale, if any, the Software shall conform in all material respects to Licensor's published specifications as contained in the applicable supporting Documentation. This paragraph replaces Paragraphs 10.1 and 10.4 of any such Terms and Conditions of Sale with respect to the Software and Documentation. Such Documentation may be updated by Licensor from time to time and such updates may constitute a change in specification. Licensee acknowledges that the Software is of such complexity that it may have inherent or latent defects. As Licensee's sole remedy under the warranty, Licensor will provide services, during the warranty period, to correct documented Software errors which Licensor's analysis indicates are caused by a defect in the unmodified version of the Software as provided by Licensor. Licensor does not warrant that the Software will meet Licensee's requirements, or will operate in combinations which may be selected for use by Licensee, or that the operation of the Software will be uninterrupted or error free. Licensee is responsible for determining the appropriate use of and establishing the limitations of the Software and its associated Documentation as well as the results obtained by use thereof.

LICENSOR MAKES NO WARRANTY WITH RESPECT TO THE SOFTWARE AND DOCUMENTATION OTHER THAN THOSE SET FORTH IN THIS SECTION. THE WARRANTY HEREIN IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED, AND CONSTITUTES THE ONLY WARRANTY MADE WITH RESPECT TO THE SOFTWARE AND DOCUMENTATION.

9. LICENSE TERM AND TERMINATION: The license for the Software and Documentation is effective on the shipment date of the Software and Documentation (F.O.B. shipping point or F.A.S., as the case may be) and continues until Licensee's possession of the Software and all copies ceases (except in connection with a transfer of the license as permitted by this Schedule) or until otherwise terminated as provided herein. Licensee may terminate the license for the Software and Documentation at any time after discontinuance of use of the Software and Documentation and all copies, upon written notice to Licensor. If Licensee (i) fails to comply with its obligations herein and does not cure such failure within ten (10) days after receipt of notice from Licensor, or (ii) attempts to assign the Agreement or this Schedule or any rights or obligations hereunder without Licensor's prior written consent, then Licensor may terminate the license hereunder and require the immediate discontinuance of all use of the Software and Documentation and all copies thereof in any form, including modified versions and updated works. Within five (5) days after the termination of the license, Licensee shall, at Licensor's option either: (i) return to Licensor the Software and Documentation, and all copies, in any form, including updated versions, along with any computer media provided by Licensor; or (ii) destroy the affected Software and Documentation, and all copies, in any form, including updated versions, and certify such return or destruction in writing to Licensor.

10. MISCELLANEOUS: Since the unauthorized use of the Software and/or Documentation may leave Licensor without an adequate remedy at law, Licensee agrees that injunctive or other equitable relief will be appropriate to restrain such use, threatened or actual. Licensee further agrees that to the extent applicable, (i) any of Licensor's suppliers of Software and/or Documentation is a direct and intended beneficiary of this Schedule and may enforce it directly against Licensee with respect to the Software and/or Documentation provided by such supplier, and that (ii) **NO SUPPLIER OF LICENSOR SHALL BE LIABLE FOR ANY GENERAL, SPECIAL, DIRECT, INDIRECT, CONSEQUENTIAL, INCIDENTAL OR OTHER DAMAGES ARISING OUT OF ANY SUBLICENSE OF THE SOFTWARE AND/OR DOCUMENTATION. THIS LIMITATION ON LIABILITY SHALL APPLY EVEN IF ANY REMEDY FAILS OF ITS ESSENTIAL PURPOSE.**

11. ADDITIONAL PROVISIONS RELATING TO THIRD-PARTY SOFTWARE: If the Software includes software licensed by Licensor from third parties, the following additional provisions shall apply:

(a) If Software is provided by Licensor on separate media and labeled "Recovery Media," Licensee may use the Recovery Media solely to restore or reinstall the Software and/or Documentation originally installed on the Designated Unit.

(b) Licensee is licensed to use the Software to provide only the limited functionality (specific tasks or processes) for which the Designated Unit has been designed and marketed by Licensor. This license specifically prohibits any other use of the software programs or functions, or inclusion of additional software programs or functions that do not directly support the limited functionality, on the Designated Unit. If Licensee uses the Designated Unit to access or utilize the services or functionality of Microsoft Windows Server products (such as Microsoft Windows NT Server 4.0 (all editions) or Microsoft Windows 2000 Server (all editions)), or uses the Designated Unit to permit workstation or computing devices to access or utilize the services or functionality of Microsoft Windows Server products, Licensee may be required to obtain a Client Access License for the Designated Unit and/or each such workstation or computing device. Licensee should refer to the end user license agreement for its Microsoft Windows Server product for additional information.

(c) The Software may contain support for programs written in Java. Java technology is not fault tolerant and is not designed, manufactured, or intended for use or resale as online control equipment in hazardous environments requiring fail-safe performance, such as in the operation of nuclear facilities, aircraft navigation or communication systems, air traffic control, direct life support machines, or weapons systems, in which the failure of Java technology could lead directly to death, personal injury, or severe physical or environmental damage. Sun Microsystems, Inc. has contractually obligated Licensor's supplier to make this disclaimer.

(d) The Software may permit Licensor, its supplier(s), or their respective affiliates to provide or make available to Licensee Software updates, supplements, add-on components, or Internet-based services components of the Software after the date Licensee obtains its initial copy of the Software ("Supplemental Components").

- If Licensor provides or makes available to Licensee Supplemental components and no other end-user software licensing agreement terms are provided along with the Supplemental Components, then the terms of this Software License Schedule shall apply.

- If a supplier of Licensor or affiliates of such a supplier make available Supplemental Components, and no other end-user software licensing agreement terms are provided, then the terms of this Schedule shall apply, except that the supplier or affiliate entity providing the Supplemental Component(s) shall be the licensor of the Supplemental Component(s). Licensor, its supplier(s), and their respective affiliates reserve the right to discontinue any Internet-based services provided to Licensee or made available to Licensee through the use of the Software.

(e) The Software and Documentation supplied by Licensor's suppliers are provided by such suppliers "AS IS" and with all faults. **SUCH SUPPLIERS DO NOT BEAR ANY OF THE RISK AS TO SATISFACTORY QUALITY, PERFORMANCE, ACCURACY, OR EFFORT (INCLUDING LACK OF NEGLIGENCE) WITH RESPECT TO SUCH SOFTWARE AND DOCUMENTATION. ALSO, THERE IS NO WARRANTY BY SUCH SUPPLIERS AGAINST INTERFERENCE WITH LICENSEE'S ENJOYMENT OF THE SOFTWARE OR AGAINST INFRINGEMENT. IF LICENSEE HAS RECEIVED ANY WARRANTIES REGARDING THE DESIGNATED UNIT OR THE SOFTWARE, THOSE WARRANTIES DO NOT ORIGINATE FROM, AND ARE NOT BINDING ON, LICENSOR'S SUPPLIERS.**

(f) Licensee acknowledges that portions of the Software are of U.S. origin. Licensee agrees to comply with all applicable international and national laws that apply to the Software, including the U.S. Export Administration Regulations, as well as applicable end-user, end-use and destination

Siemens Medical Solutions USA, Inc.
40 Liberty Boulevard, Malvern, PA 19355
Fax: (866) 309-6992



SIEMENS REPRESENTATIVE
Victor Voglino - (978) 239-7061

restrictions issued by U.S. and other governments. For additional
information on exporting software supplied by Microsoft, see

| <http://www.microsoft.com/exporting/>.

Revised 03/15/05



Siemens Medical Solutions USA, Inc.
40 Liberty Boulevard, Malvern, PA 19355
Fax: (866) 309-6992

SIEMENS REPRESENTATIVE
Victor Voglino - (978) 239-7061

TRADE-IN EQUIPMENT REQUIREMENTS

THE FOLLOWING APPLIES ONLY TO THE EXTENT THAT THE QUOTATION INCLUDES AN EQUIPMENT TRADE-IN. THESE REQUIREMENTS ARE IN ADDITION TO ANY OTHER REFERENCED TERMS AND CONDITIONS ON THE QUOTATION AND SHALL REMAIN IN EFFECT REGARDLESS OF ANY CONTRARY LANGUAGE IN THE QUOTATION.

This Quotation includes the trade-in equipment described herein and referenced by either the Project Number identified in the Quotation hereof (non-ultrasound) or the Trade Allowance Part Number (Ultrasound) as further described in the associated Trade Sheet which is incorporated herein by reference. Purchaser certifies that the description of the trade-in equipment as set forth on the Trade Sheet is a true and accurate representation of the equipment, and that the equipment is in good working condition unless otherwise noted on the Trade Sheet.

The trade-in equipment must be made available for removal no later than turnover of the new equipment. Purchaser must vacate the room of all items not listed on the Trade Sheet, or otherwise clearly identify all items listed on the Trade Sheet, prior to the start of the de-installation. If this is not done, Seller will have no liability for items which are subsequently removed or scrapped. If the de-installation or return of the trade-in equipment is delayed by Purchaser for reasons other than a force majeure event, or if upon inspection by Seller it is determined that the equipment does not meet the manufacturer's operating specifications, or if any items listed as included on the Trade Sheet are not made available at the time of de-installation, then trade-in value will be re-evaluated and any loss in value or additional costs incurred by Seller shall be deducted from the established trade-in value and the pricing set forth on this Quotation will be adjusted by change order. In the event that access to the non-ultrasound trade-in equipment is denied past 14 days from turnover, or access to ultrasound trade-in equipment is denied past 30 days from turnover, then Purchaser shall pay to Seller a rental fee in the amount 3.5% of the total trade-in value plus any additional value provided by an Elevate/Promotional program included in this quotation (no less than \$1000) for each month, or part thereof, that access is denied. In addition, if the purchase and installation of the new equipment covered by this Quotation is not completed, then Seller shall invoice Purchaser for all costs and expenses incurred by Seller in connection with the de-installation and removal of the trade-in equipment, including but not limited to labor, materials, rigging out, and transportation, which costs shall be paid by Purchaser within thirty (30) days of the invoice date.

Purchaser further acknowledges and agrees that (i) the trade-in equipment will be free and clear of all liens and encumbrances including, but not limited to, unpaid leases and loans, and that upon request, it will execute a bill of sale or other documents reasonably satisfactory to Siemens to transfer title and ownership of the equipment to Seller, (ii) it is Purchaser's sole responsibility to delete all protected health information and any other confidential information from the equipment prior to de-installation, without damaging or cannibalizing the equipment or otherwise affecting the operation of the equipment in accordance with its specifications, (iii) the equipment, including all updates, upgrades, modifications, enhancements, revisions, software, S/W disks and manuals, shall be returned to Siemens in good operating condition, reasonable wear and tear excepted, and (iv) to the extent not prohibited by applicable law, Purchaser shall indemnify and hold Seller harmless from and against any and all claims, demands, causes of action, damages, liability, costs and expenses (including reasonable attorney's fees) resulting or arising from Purchaser's failure to comply with item (i) above.

FOR MR SYSTEMS: cryogen levels must be least 65% upon time of de-installation. FOR MOBILE SYSTEMS: system must be road worthy and a state issued title transferring ownership to Seller (or Designee) must be received prior to the removal of the mobile system. FOR MODALITY TRADE SYSTEMS (non-ultrasound): The trade-in equipment must be available for inspection within two weeks of the scheduled de-installation date. In addition, Purchaser must provide a clear path for the removal of the trade-in equipment. Any additional costs due to the need to use a larger rig (other than a standard 80 ton rig), as well as any construction activities, street closings, permits, etc., required to de-install/remove the equipment are out-of-scope costs and will be the responsibility of Purchaser.

Siemens Medical Solutions USA, Inc.
 40 Liberty Boulevard, Malvern, PA 19355
 Fax: (866) 309-6992



SIEMENS REPRESENTATIVE
 Victor Voglino - (978) 239-7061

MR Warranty Information

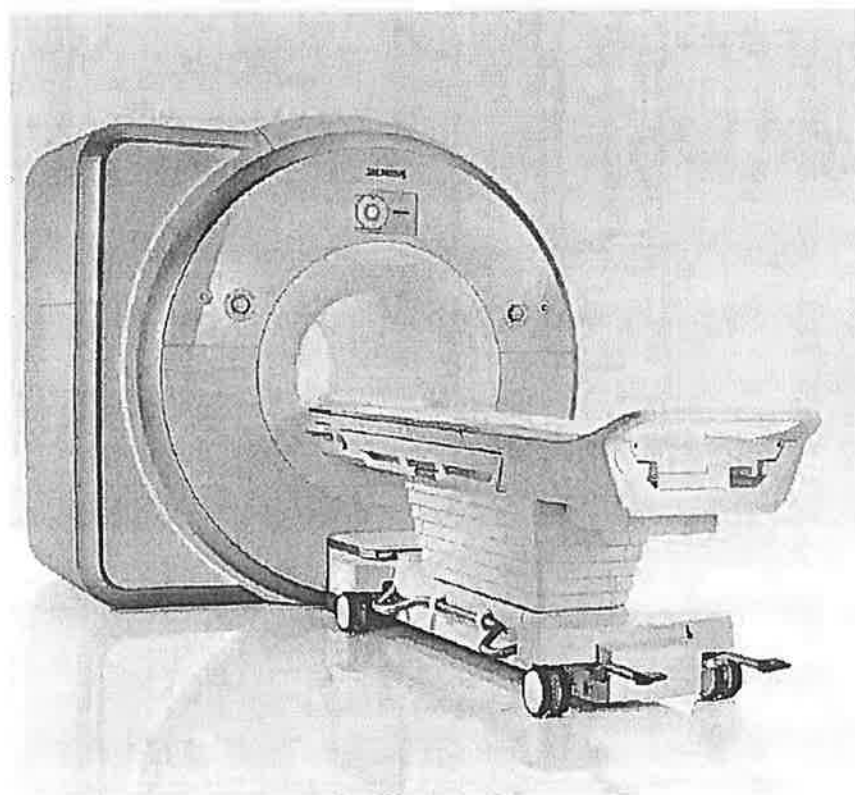
Product (New Systems and "ECO" Refurbished Systems Only)	Period of Warranty ¹	Coverage	
MR System (not including consumables)	12 months	Full Warranty (parts & labor)	
Post-Warranty (after expiration of system warranty) – Replacement parts only¹			
Magnet	12 months	Parts only	
Spare Parts	6 months	Parts only	
Consumables	Not Covered		

Note: Optional extended warranty coverage can be obtained by purchase of a service agreement.

¹ Period of warranty commences from the date of first use or completion of installation, whichever occurs first. In the event the completion of installation is delayed for reasons beyond Siemens' control, the stated warranty period shall commence 60 days after delivery of equipment.

SIEMENS

MAGNETOM AERA 1.5T TYPICAL ROOM PLAN

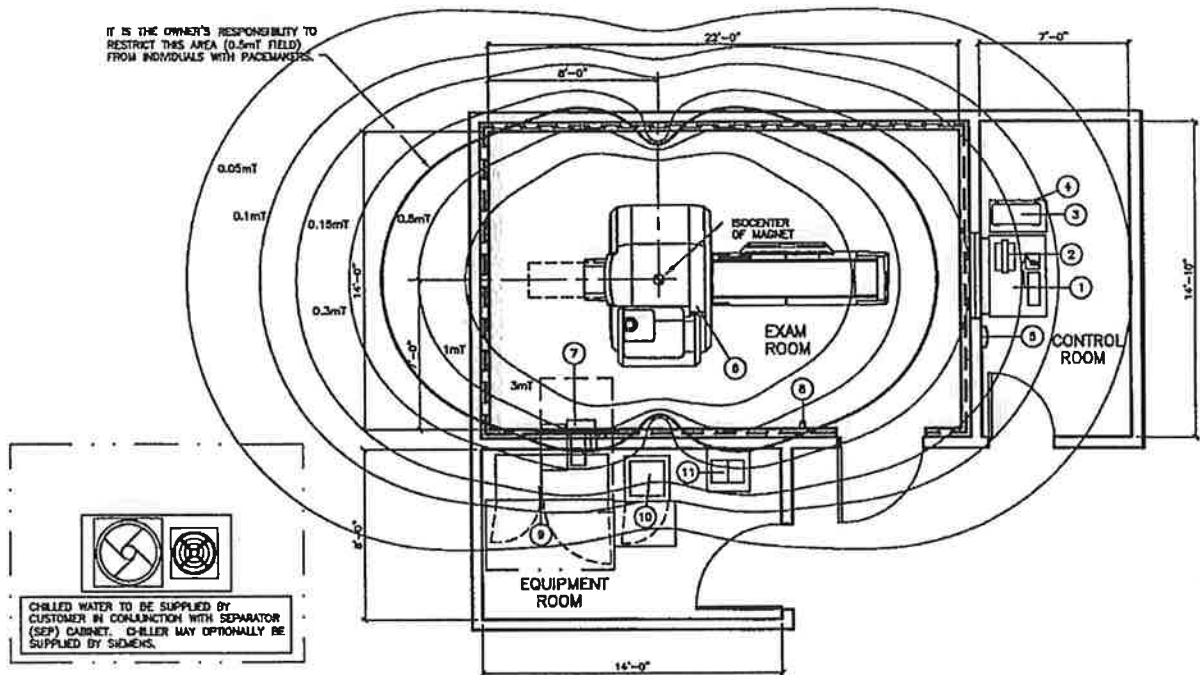


The intended use for this Cut Sheet is to communicate the spatial requirements as well as the basic architectural, electrical, structural, and mechanical requirements for this piece of imaging equipment. The information provided in this document is for reference only, during the pre-planning stage, and therefore does not contain any site specific detailed requirements. This information is subject to change without notice. Federal, state and/or local requirements may impact the final placement of the components. It is the customer's responsibility to ensure that the final layout and placement of the equipment complies with all applicable requirements.

SIEMENS

FOR REFERENCE ONLY,
NOT FOR CONSTRUCTION.

MAGNETOM AERA 1.5T TYPICAL ROOM PLAN



TYPICAL PLAN

SCALE: 1/8" = 1'-0"

EQUIPMENT LEGEND

NO	DESCRIPTION	SMS SYM	WEIGHT (LBS)	BTU/HR TO AIR	DIMENSIONS (INCHES)			REMARKS
					W	D	H	
①	MRC OPERATING CONSOLE AND KEYBOARD	Ⓢ	132	----	45 11/16	35 1/4	28 3/8	
②	COLOR MONITOR FOR MRC	Ⓢ	22	239	18 5/16	16 15/16	4 3/4	ON CONSOLE/COUNTER
③	HOST PC MRC	Ⓢ	49	2,389	11	27	18 1/8	
④	CONTAINER FOR HOST 500	Ⓢ	238	----	19 5/8	31 1/2	28 3/8	
⑤	ALARM BOX	Ⓢ	2	----	9	4	9	
⑥	1.5T MAGNET WITH COVERS AND PATIENT TABLE	Ⓢ	10,093	3,415	91	170	86	
⑦	RF-FILTER PLATE	Ⓢ	285	853	48 1/2	21 3/4	21 1/2	
⑧	MAGNET STOP	Ⓢ	1	----	3	5	3	
⑨	ELECTRONICS CABINET (GPA/EPC CABINET)	Ⓢ	3,307	13,849	61 1/2	26	77 1/2	
⑩	SEP CABINET	Ⓢ	750	3,415	25 5/8	25 5/8	73 5/8	
⑪	POWERWARE 9130 UPS WITH EBM (OPTION)	Ⓢ	188	1,257*	16 7/8	12 7/8	16 1/4	*1,755 ON BATTERIES

SIEMENS

FOR REFERENCE ONLY,
NOT FOR CONSTRUCTION.

MAGNETOM AERA 1.5T SPECIFICATIONS

POWER REQUIREMENTS	
VOLTAGE RANGE: 480 VAC ±10% FOR ALL LINE AND LOAD CONDITIONS. VOLTAGE BALANCE: 2% MAXIMUM DIFFERENCE BETWEEN PHASES	
FREQUENCY:	60 Hz ± 1.0 Hz
LINE IMPEDENCE:	95 mOHMS
STAND BY POWER CONSUMPTION	9.0 kW
TYPICAL POWER CONSUMPTION DURING EXAM	20.1 kW
CONNECTION VALUE (LESS THAN 5 MINUTES)	110 KVA
MOMENTARY POWER	140 KVA
RECOMMENDED TRANSFORMER	150 KVA
MR SYSTEM OVERCURRENT PROTECTION	150 AMPS
RECOMMENDED UPS	160 KVA
UPS SYSTEM OVERCURRENT PROTECTION	250 AMPS
MAX. ALLOWABLE VOLTAGE DROP AT MAX. POWER	6.0%

POWER REQUIREMENTS
<p>DEMAND AND CAPACITY REQUIREMENTS NOTES</p> <p>1) IF EQUIPMENT UPGRADE IS ANTICIPATED, INSTALLING ELECTRICAL POWER TO MEET THE REQUIREMENTS OF THE HIGHER POWER GRADIENT PACKAGE AT THE TIME OF INITIAL INSTALLATION WILL REDUCE THE COST TO UPGRADE THE ELECTRICAL SYSTEM LATER.</p> <p>2) RECOMMENDED TRANSFORMER SIZE (SYSTEM WITHOUT UPS) IS BASED ON INDUSTRY STANDARD ISOLATION TRANSFORMER KVA RATINGS. SOURCE IMPEDANCE FEEDING THE MAGNETOM SYSTEM, INCLUDING ANY ISOLATION TRANSFORMERS, MUST MEET EQUIPMENT REQUIREMENTS AS LISTED HERE. SIEMENS RECOMMENDS A TRANSFORMER WITH COPPER WINDINGS, AN ELECTRO-STATIC SHIELD, AND A LOW IMPEDANCE (<3%) TO ENSURE THAT SOURCE IMPEDANCE REQUIREMENTS ARE MET.</p> <p>3) OVERCURRENT PROTECTION IS SPECIFIED FOR SYSTEMS WITHOUT AN UNINTERRUPTIBLE POWER SUPPLY (UPS). ADDITION OF A UPS REQUIRES A HIGHER CAPACITY MAINS CONNECTION (DEPENDENT UPON UPS MODEL AND SIZE). MAXIMUM FAULT CURRENT IS DEPENDENT UPON THE IMPEDANCE OF THE FACILITY ELECTRICAL SYSTEM. CUSTOMER'S ARCHITECT OR ELECTRICAL CONTRACTOR TO SPECIFY AIC RATING OF OVERCURRENT PROTECTION BASED ON FACILITY IMPEDANCE CHARACTERISTICS.</p> <p>4) MOMENTARY POWER IS BASED ON A MAXIMUM RMS VALUE FOR A PERIOD NOT TO EXCEED FIVE (5) SECONDS, AS DEFINED IN NEC 517.2. STAND-BY AND AVERAGE CURRENT ARE SUBSTANTIALLY LOWER.</p> <p>5) THE CONDUCTOR SIZE SHOULD BE SELECTED TO MEET THE VOLTAGE DROP REQUIREMENTS, TAKING INTO CONSIDERATION THE MAINS CAPACITY, RUN LENGTH, AND ANY ADDITIONAL TRANSFORMERS USED TO OBTAIN THE PROPER EQUIPMENT VOLTAGE LEVEL. NEMA STANDARD XR-9-1989 (R1994,R2000) PROVIDES GENERAL GUIDELINES FOR SIZING CONDUCTORS, TRANSFORMERS, AND ELECTRICAL SYSTEMS FOR MEDICAL IMAGING SYSTEMS.</p> <p>6) LONG-TIME POWER IS BASED ON THE HIGHEST AVERAGE RMS VALUES FOR A PERIOD EXCEEDING 5 MINUTES DURING CLINICAL SYSTEM OPERATION, AS DEFINED IN NEC 517.2.</p> <p>7) A CIRCUIT BREAKER WITH A HIGH INRUSH RATING (>8x RATED CURRENT) IS REQUIRED TO PERMIT SWITCH-ON OF THE UPS SYSTEM WITHOUT SPURIOUS TRIPPING. CIRCUIT BREAKERS WITH AN ADJUSTABLE MAGNETIC TRIP (SIEMENS FD6 SERIES OR SIMILAR) ARE HIGHLY RECOMMENDED.</p>

NOISE LEVELS	
SYSTEM ROOM	NOISE LEVEL / dB(A)
CONTROL ROOM	<55
EXAMINATION ROOM	86.1 dB(A) - 8 HOUR AVERAGE 108.2 dB(A) MAXIMUM
EQUIPMENT ROOM	<85
IT IS THE CUSTOMER'S RESPONSIBILITY TO ENSURE THAT ALL LOCAL/ STATE/OSHA NOISE REGULATIONS ARE ADHERED TO. ADDITIONAL NOISE DATA MAY BE PROVIDED BY SIEMENS PROJECT MANAGER UPON REQUEST.	

CEILING HEIGHTS
EXAM ROOM 7'-11" MINIMUM
CONTROL ROOM 6'-11" MINIMUM
EQUIPMENT ROOM 7'-3" MINIMUM

REMOTE SYSTEM DIAGNOSTICS
<p>SIEMENS REMOTE SERVICES (SRS) REQUIRES A CONNECTION BETWEEN THE SRS REMOTE SERVER AND SIEMENS SYSTEMS VIA REMOTE LOCAL AREA NETWORK ACCESS, TO ENSURE THE UPTIME OF YOUR SYSTEM.</p> <p>THIS SERVICE REQUIRES ONE OF THE FOLLOWING CONNECTION METHODS:</p> <p>1. (PREFERRED) VPN - WHERE THE CUSTOMER HAS AVAILABLE A VPN CAPABLE FIREWALL OR OTHER VPN APPLIANCE.</p> <p>2. (OPTIONAL) *SRS ROUTER* - CONNECTED TO ANALOG PHONE LINE VIA *ANALOG MODEM*, ETHERNET CONNECTION TO CUSTOMER'S LAN, AND A POWER OUTLET.</p> <p>NOTE: * = *SUPPLIED BY SIEMENS*</p>

FOR MORE INFORMATION
FOR MORE DETAILED PLANNING REQUIREMENTS FOR THIS SYSTEM, SEE THE TYPICAL FINAL DRAWING SET NUMBER: 10023

SIEMENS

FOR REFERENCE ONLY,
NOT FOR CONSTRUCTION.

MAGNETOM AERA 1.5T SPECIFICATIONS

CHILLED WATER SUPPLY

A CHILLED WATER SUPPLY IS REQUIRED TO THE MRI SYSTEM 24 HOURS A DAY, YEAR ROUND FOR THE COLD HEAD AND GRADIENT SYSTEMS. THIS CAN BE PROVIDED BY A CENTRAL CHILLED WATER SUPPLY OR A SEPARATE STAND ALONE CHILLER THAT MEETS THE STATED REQUIREMENTS. THE CHILLED WATER CAN ALSO BE SUPPLIED BY A DEDICATED KRAUS ECO CHILLER AND INTERFACE PANEL.

WITHOUT THE USE OF A DEDICATED KRAUS CHILLER, A SEP (SYSTEM SEPARATOR CABINET), MUST BE INCLUDED WITH THE SIEMENS ORDER. THE PIPE SIZE BETWEEN THE KRAUS CHILLER AND INTERFACE PANEL OR BETWEEN THE WATER SUPPLY AND SEP MUST BE 2 INCH UP TO 82 FEET, 2-1/2 INCH UP TO 148 FEET, CONSULT FOR LONGER PIPE. PERMISSIBLE MATERIALS THAT CAN BE USED FOR THE PIPING ARE: STAINLESS STEEL (V2A, V4A), NON-FERROUS METAL (COPPER, BRASS), SYNTHETIC MATERIAL, PLASTICS, BRAZING SOLDER, HARD SOLDER, OR FITTING SOLDER TYPE 3 AND 4. THERE ARE MATERIALS THAT MAY CAUSE DAMAGE TO THE COOLING SYSTEM AND CANNOT BE USED, THESE MATERIALS ARE ALUMINUM, IRON, CARBON STEEL, ZINC, ZINC PLATED STEEL, OR STANDARD STEEL PIPES.

THESE REQUIREMENTS ARE REQUIRED FOR NEW INSTALLATIONS, IF EXISTING WATER PIPES COMPLY WITH SIEMENS WATER SPECIFICATIONS, THEY DO NOT NEED TO BE REPLACED.

NORMAL TAP WATER MUST BE AVAILABLE FOR FILLING THE SECONDARY WATER CIRCUIT. THERE SHALL BE A HOSE BIB LOCATED WITHIN 65' OF THE SEP, IFF, ACC OR THE KRAUS CHILLER.

THE SUPPLY AND RETURN CHILLED WATER PIPES MUST BE LABELED. THE LOCATION OF THE LABELS MUST BE AT ALL CONNECTION AND REFILLING POINTS AND MUST CONTAIN FLOW DIRECTION AND CONTENTS.

ENVIRONMENTAL REQUIREMENTS

1) AIR CONDITIONING IS TO PROVIDE A TEMPERATURE OF 70°F ±5°F IN THE EXAM ROOM, 70°F±10°F IN THE EQUIPMENT & CONTROL AREAS, RELATIVE HUMIDITY OF 40-60% (NON-CONDENSING) IS REQUIRED EXAMINATION ROOM AND 40-80% (NON-CONDENSING) IN ALL OTHER AREAS WHERE SIEMENS EQUIPMENT IS INSTALLED. THESE CONDITIONS ARE TO BE MET AT ALL TIMES; 24 HOURS A DAY, 7 DAYS A WEEK.

2) A DEDICATED AIR CONDITIONING AND HUMIDIFICATION SYSTEM IS RECOMMENDED FOR THE EXAM ROOM. A MINIMUM AIR EXCHANGE RATE OF 6 TIMES PER HOUR FOR THE EXAM ROOM IS REQUIRED. IT IS RECOMMENDED TO INSTALL A FRESH AIR SYSTEM WITH 30%-50% FRESH AIR INTAKE.

AIR SUPPLY AND RETURN ABOVE THE FINISHED CEILING IN THE EXAM ROOM IS RECOMMENDED. EACH ROOM SHOULD HAVE A DEDICATED CONTROL AND SENSOR TO MONITOR AND ADJUST THE AIR.

3) THE HEAT INTO THE EXAM ROOM IS LESS THAN 10,236 BTU/HR. THE HEAT INTO THE EQUIPMENT ROOM IS LESS THAN 3,412 BTU/HR. THIS HEAT DISSIPATION IS FROM THE SIEMENS EQUIPMENT ONLY. AUXILIARY SUPPORT EQUIPMENT (16 UPS) AND LIGHTING MUST BE CONSIDERED FOR TOTAL HEAT LOADS.

4) IT IS IMPORTANT FOR FRESH AIR INTAKE SYSTEMS TO EXHAUST AIR DIRECTLY OUT OF THE BUILDING. THE EXHAUST AIR MUST NOT BE DEFLECTED INTO ANOTHER ROOM. THE MAGNET ROOM EXHAUST AIR SHOULD BE INSTALLED AT LEAST 6'-6" ABOVE FINISHED FLOOR.

5) THE AIR INTAKE OF THE AIR CONDITIONING SYSTEM MUST NOT BE LOCATED IN THE VICINITY OF THE QUENCH VENT EXHAUST.

6) IF THE INPUT DRAWS UPON AIR FROM OUTSIDE THE BUILDING, IT IS RECOMMENDED TO INSTALL AN ON-SITE FILTER TO REMOVE DUST PARTICLES GREATER THAN 10 MICRONS.

7) DO NOT LOCATE ANY HVAC DIFFUSERS ABOVE THE MAGNET. THERE SHALL NOT BE AIR BLOWING DIRECTLY ON THE MAGNET.

CHILLED WATER REQUIREMENTS

WATER REQUIREMENTS TO BE MEASURED AT THE SEP CABINET.

FLOW RATE:	23.78-29.05 GPM
WATER TEMPERATURE:	48°F ±4°F
BTU DISCHARGE TO THE WATER	204,729 BTU/HR
WATER PRESSURE	MAXIMUM 87 PSI
LOSS OF PRESSURE FOR SEP CABINET	14.5 PSI MAXIMUM
CHILLED WATER ACIDITY RANGE	6 pH TO 8 pH
CHILLED WATER HARDNESS	<250 ppm CALCIUM CARBONATE
CHLORINE GAS CONCENTRATION	<200 ppm
FILTRATION	500 µm

FOR INSTALLATION OF A KRAUS KSC 215 CHILLER, IT IS THE RESPONSIBILITY OF THE CUSTOMER/MECHANICAL CONTRACTOR TO PROVIDE A MIXTURE OF WATER WITH 35%-38% ETHYLENE GLYCOL PRIOR TO CHILLER START UP. DO NOT USE PROPYLENE GLYCOL OR AUTOMOTIVE ANTI-FREEZE.

THE AMOUNT OF THE MIXTURE MUST FILL THE CHILLER, MR SYSTEM AND PIPING (SUPPLY AND RETURN), SEE EXAMPLES BELOW.

(1) GALLON OF UNDILUTED GLYCOL, OR (2) GALLONS OF WATER/GLYCOL MIXTURE MUST REMAIN ON SITE FOR USE AFTER START UP.

MIXTURE VOLUME INCLUDING SUPPLY & RETURN+15 GAL CHILLER & MR			
PIPE DIAMETER	TOTAL LENGTH	MIXTURE VOLUME	GLYCOL NEEDED
2"	100'	31.3 GALLONS	11.9 GALLONS
2"	200'	47.6 GALLONS	18.1 GALLONS
2.5"	100'	40.5 GALLONS	15.4 GALLONS
2.5"	200'	66.0 GALLONS	25.1 GALLONS

MIXTURE VOLUME = $3.14 \times (\text{PIPE RADIUS})^2 \times \text{PIPE LENGTH} + 15 \text{ GALLONS}$.
GLYCOL AMOUNT = 35-38% OF MIXTURE VOLUME.

QUENCH VENT NOTES

LIQUID AND GASSEOUS HELIUM ARE USED IN THE OPERATION OF A SUPERCONDUCTING MRI SYSTEM. THE MECHANICAL CONTRACTOR SHALL PROVIDE A VENT, ACCORDING TO SIEMENS SPECIFICATIONS, TO EXHAUST GASSEOUS HELIUM FROM THE MAGNET TO OUTSIDE THE BUILDING. PLEASE SEE THE SIEMENS TYPICAL DRAWINGS FOR DETAILS.

SIEMENS

FOR REFERENCE ONLY,
NOT FOR CONSTRUCTION.

MAGNETOM AERA 1.5T SPECIFICATIONS

PROTECTING THE ENVIRONMENT

PROTECTING THE IMMEDIATE ENVIRONMENT FROM THE EFFECT OF THE MAGNETIC FIELD REQUIRES CONSIDERATION. INFORMATION STORED ON MAGNETIC DATA CARRIERS SUCH AS DISKS, TAPES, AND CREDIT CARDS MAY BE ERASED IF IN CLOSE PROXIMITY. CAUTION WITH REGARD TO HEART PACEMAKERS MUST BE EXERCISED. MOST PACEMAKER UNITS EMPLOY A REED RELAY WHICH MAY CHANGE OPERATING MODE WHEN EXPOSED TO AN EXTERNAL MAGNETIC FIELD. THEREFORE, PACEMAKER USERS MUST BE KEPT AT A SPECIFIED DISTANCE FROM THE MAGNET WHICH IS DETERMINED BY THE MAGNETIC FIELD STRENGTH.

PROTECTING THE MAGNETIC FIELD

THE SIEMENS MAGNETOM UTILIZES A SUPERCONDUCTIVE MAGNET WITH AN EXTREMELY HOMOGENEOUS FIELD WITHIN THE MAGNET TO PROVIDE DISTORTION-FREE IMAGING. THE PRESENCE OF FERROMAGNETIC MATERIAL WITHIN THE VICINITY OF THE MAGNET CAN ADVERSELY AFFECT THE UNIFORMITY OF THE USEFUL MAGNETIC FIELD. THIS APPLIES TO STATIONARY FERROUS MATERIAL (STRUCTURAL STEEL) WHICH IS TO BE MINIMIZED. STATIONARY STEEL COMPENSATION MAY BE ACHIEVED BY MAGNET POSITIONING AND SELECTIVE USE OF SHIMS. FIELD DISTORTION ENCOUNTERED BY MOVING FERROMAGNETIC OBJECTS IS MORE DIFFICULT TO COMPENSATE AND MAY REQUIRE THE USE OF MAGNETIC SHIELDING.

MAGNETIC FRINGE FIELDS

MAGNETIC FIELDS MAY AFFECT THE FUNCTION OF DEVICES IN THE VICINITY OF THE MAGNET. THESE DEVICES MUST BE OUTSIDE CERTAIN MAGNETIC FIELDS. THE DISTANCES LISTED ARE FROM THE MAGNET ISOCENTER AND DO NOT CONSIDER ANY MAGNETIC ROOM SHIELDING.

X/Y AND Z AXIS	DEVICES
6'-1" / 9'-2" 3.0mT	SMALL MOTORS, WATCHES, CAMERAS, CREDIT CARDS, MAGNETIC DATA CARRIERS (SHORT-TERM EXPOSURE)
7'-3" / 11'-6" 1.0mT	COMPUTERS, MAGNETIC DISK DRIVES, OSCILLOSCOPES, PROCESSORS
8'-3" / 13'-2" 0.5mT	CARDIAC PACEMAKERS, X-RAY TUBES, INSULIN PUMPS, B/W MONITORS, MAGNETIC DATA CARRIERS (LONG-TERM STORAGE)
9'-9" / 16'-1" 0.2mT	SIEMENS CT SCANNERS
10'-4" / 17'-1" 0.15mT	COLOR MONITORS, SIEMENS LINEAR ACCELERATORS
13'-1" / 22'-3" 0.05mT	X-RAY IMAGE INTENSIFIERS, GAMMA CAMERAS, PET/CYCLOTRON, ELECTRON MICROSCOPES, LINEAR ACCELERATORS

THE OWNER/USER IS TO VERIFY THE LOCATION OF THE 0.5mT FIELD AND ENSURE THAT IT IS MAINTAINED AS A RESTRICTED AREA.

MAGNET SITING REQUIREMENTS

IT MUST BE ENSURED THAT THE MAGNET IS LOCATED SO THAT THE STABILITY AND HOMOGENEITY OF THE MAGNETIC FIELD ARE NOT ADVERSELY AFFECTED BY EXTRANEOUS FIELDS AND STATIC OR DYNAMIC FERROMAGNETIC OBJECTS.

X/Y AND Z AXIS	SOURCE OF INTERFERENCE
3'-6"	STEEL REINFORCEMENT RODS IN FLOOR - MAXIMUM 20 LBS/SQ. FT.
18'-1" / 21'-4"	STRETCHERS UP TO 110 LBS.
13'-1"	A/C CHILLERS
19'-9" / 23'-0"	TRANSPORT DEVICES UP TO 440 LBS.
21'-4" / 26'-3"	VEHICLES UP TO 2,000 LBS.
23'-0" / 31'-3"	ELEVATORS, TRUCKS UP TO 10,000 LBS.
39'-4"/26'-2"	AC TRANSFORMERS LESS THAN 100 KVA
41'-0"/32'-9"	AC TRANSFORMERS LESS THAN 250 KVA
42'-7"/39'-4"	AC TRANSFORMERS LESS THAN 650 KVA
45'-11"/49'-3"	AC TRANSFORMERS LESS THAN 1600 KVA
9'-10"/6'-6"	AC CABLES, MOTORS LESS THAN 100 AMPS
22'-11"/9'-10"	AC CABLES, MOTORS LESS THAN 250 AMPS
131'-2"	ELECTRIC RAILWAY SYSTEMS

FOR IRON OBJECTS LOCATED UP TO 45' FROM THE Z AXIS, THE DISTANCES FOR THE Z AXIS MUST BE USED. REDUCTION IS POSSIBLE WITH STEEL SHIELDING.

MAXIMUM CABLE LENGTH

THERE ARE 3 DIFFERENT LENGTHS OF CABLE THAT ARE AVAILABLE FOR THE MRI SYSTEM DIFFERENTIATED BY MAXIMUM LENGTHS FROM THE MAGNET TO THE FILTER PANEL (INSIDE) AND FROM THE FILTER PANEL TO THE ELECTRONICS (OUTSIDE).

INSIDE	OUTSIDE
20'	4'
20'	32'
20'	39'

THE VERTICAL DISTANCE FOR CABLE TRAVEL FROM THE FILTER PANEL TO THE CABLE TRAY, AND FROM THE CABLE TRAY TO THE MAGNET MUST BE CONSIDERED.

THE MAXIMUM DISTANCE FROM THE ACC CABINET TO THE CONTROL CONSOLE IS 75 FEET.

SIEMENS

FOR REFERENCE ONLY,
NOT FOR CONSTRUCTION.

MAGNETOM AERA 1.5T SPECIFICATIONS

RF SHIELDING

THE EXAMINATION AREA MUST BE SHIELDED TO PROVIDE A REDUCTION OF RADIO FREQUENCY WAVES EMANATING FROM EXTERNAL TRANSMITTERS. THE REQUIRED ATTENUATION IS 90dB IN THE FREQUENCY RANGE OF 15-128 MHz. IF CO-SITING TWO SYSTEMS EACH ROOM SHOULD BE 100 dB. THE RF SHIELD MUST BE TESTED BEFORE AND AFTER MAGNET PLACEMENT IN THE RF ROOM AND AFTER THE SIEMENS RF FILTER PANEL IS INSTALLED.

THE RF-SHIELDING MUST BE INSULATED FROM ALL GROUNDS SUCH THAT THE ONLY GROUND IS THE SINGLE POINT GROUND ON THE OUTSIDE OF THE RF-ROOM WALL. RESISTANCE \geq 100 OHMS.

ALL ELECTRICAL LINES INTO THE RF ROOM MUST BE ROUTED THROUGH RF FILTERS (PROVIDED BY RF SHIELDING SUPPLIER). ALL ELECTRICALLY NON-CONDUCTIVE SUPPLY LINES (E.G. FIBER OPTIC CABLES, OR HOSES) INTO THE RF ROOM MUST BE ROUTED THROUGH RF SEALED WAVEGUIDES (PROVIDED BY RF SHIELDING SUPPLIER).

FOR PRESSURE EQUALIZATION PURPOSES THE RF DOOR SHOULD OPEN TO THE OUTSIDE OF THE RF ROOM. AS AN ALTERNATIVE A 24"x24" OPENING IN THE RF ROOM FOR PRESSURE EQUALIZATION IS REQUIRED.

BUILDING VIBRATIONS

VIBRATION OF THE SITE HAS THE ABILITY TO AFFECT THE STABILITY AND HOMOGENEITY OF THE MAGNETIC FIELD. THEREFORE EXTERNAL VIBRATIONS OR SHOCKS AFFECTING THE MAGNET MAY DEGRADE IMAGE QUALITY. IN THE THREE SPATIAL ORIENTATIONS THE BUILDING MUST NOT EXCEED ACCELERATION OF 0.001m/s or -80dB(g) $g=9.81$ m/s

THE REQUIREMENT FOR a_{max} IS MEASURED AS MAXIMUM RMS VALUE PER FREQUENCY COMPONENT <0.5 Hz IN THE FOURIER TRANSFORMATION OF THE RECORDED SIGNAL (SPECTRUM).

THE VIBRATION LEVEL OF CONTINUOUS VIBRATIONS (CAUSED BY AIR CONDITIONER, COMPRESSOR, ETC.) AT THE LOCATION OF THE MAGNET MUST NOT EXCEED THE SPECIFIED VALUES. FOR ALL NON-CONTINUOUS TRANSIENT VIBRATIONS THE FIGURES SHOULD BE MULTIPLIED BY 4 (OR 12dB).

CONTACT SIEMENS PROJECT MANAGER FOR MORE DETAILS.

TRANSPORTING REQUIREMENTS

LARGEST ITEM -- MAGNET -- 9,566 LBS.

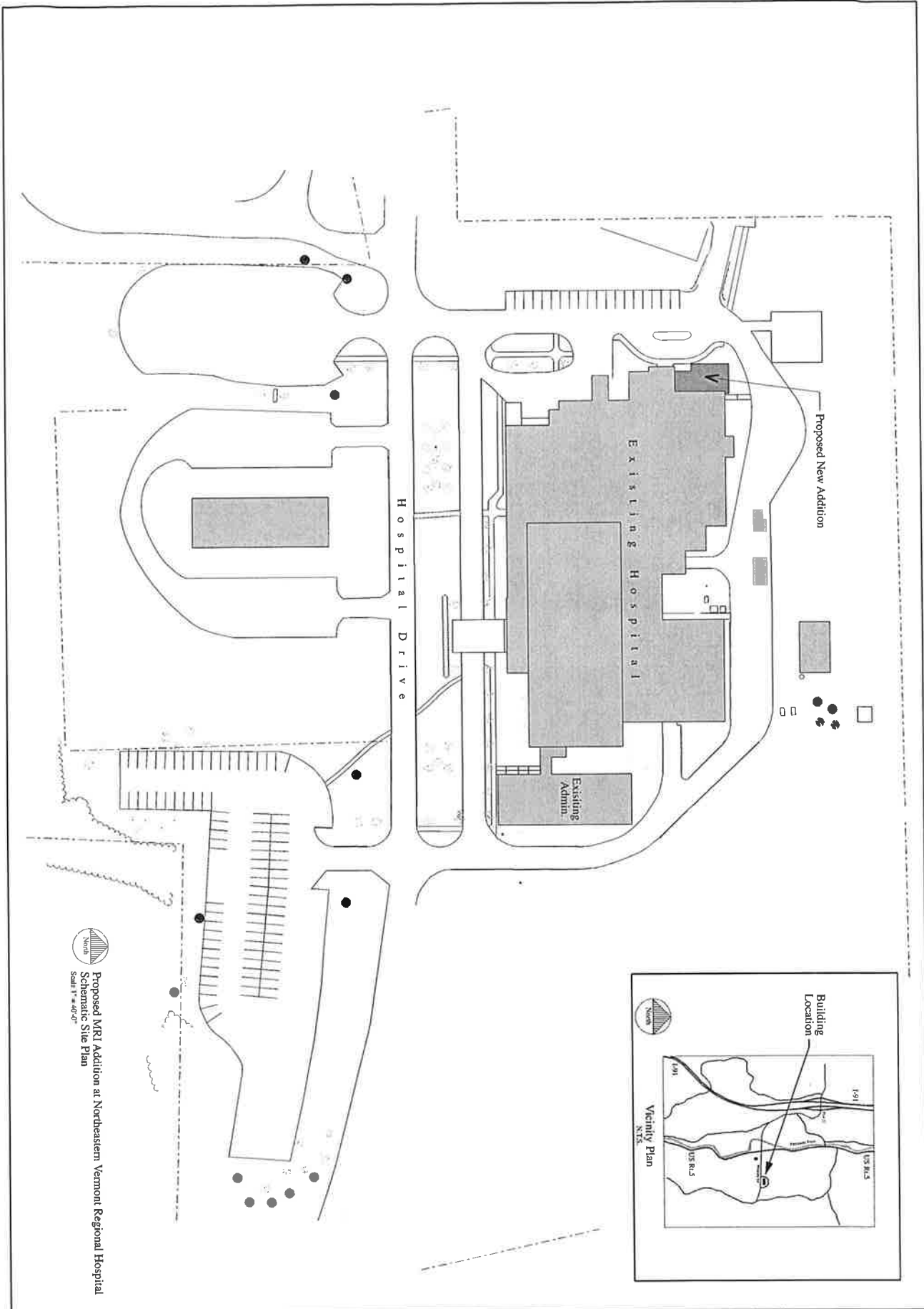
MINIMUM MAGNET DIMENSIONS WITH TRANSPORT WHEELS UNDER MAGNET:

7'-7" HIGH X 7'-7" WIDE X 5'-2" DEEP WITHOUT TABLE SUPPORT, 8'-0" DEEP WITH TABLE SUPPORT.

THE ROOF HATCH/DELIVERY OPENING SHOULD BE 4" LARGER.

TO TRANSPORT THE CPA/EPG CABINET (3,307 POUNDS) A MINIMUM ROOM HEIGHT OF 8'-9" IS REQUIRED, 8'-3" WITH WHEELS REMOVED, 6'-1" WITH WHEELS AND MAINS CONNECTION REMOVED.

APPENDIX 3

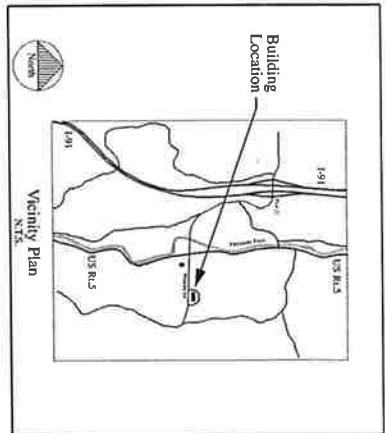




 Proposed MRI Addition at Northeastern Vermont Regional Hospital

 Schematic Site Plan

 Scale: 1" = 40'-0"



Project No.	1518.00
Proj. Manager	COL
Proj. Designer	COL
Drawn By	COL
Checked By	
Scale	AS SHOWN
Approved	
Date	January 2017

C.O.N.
SP-1

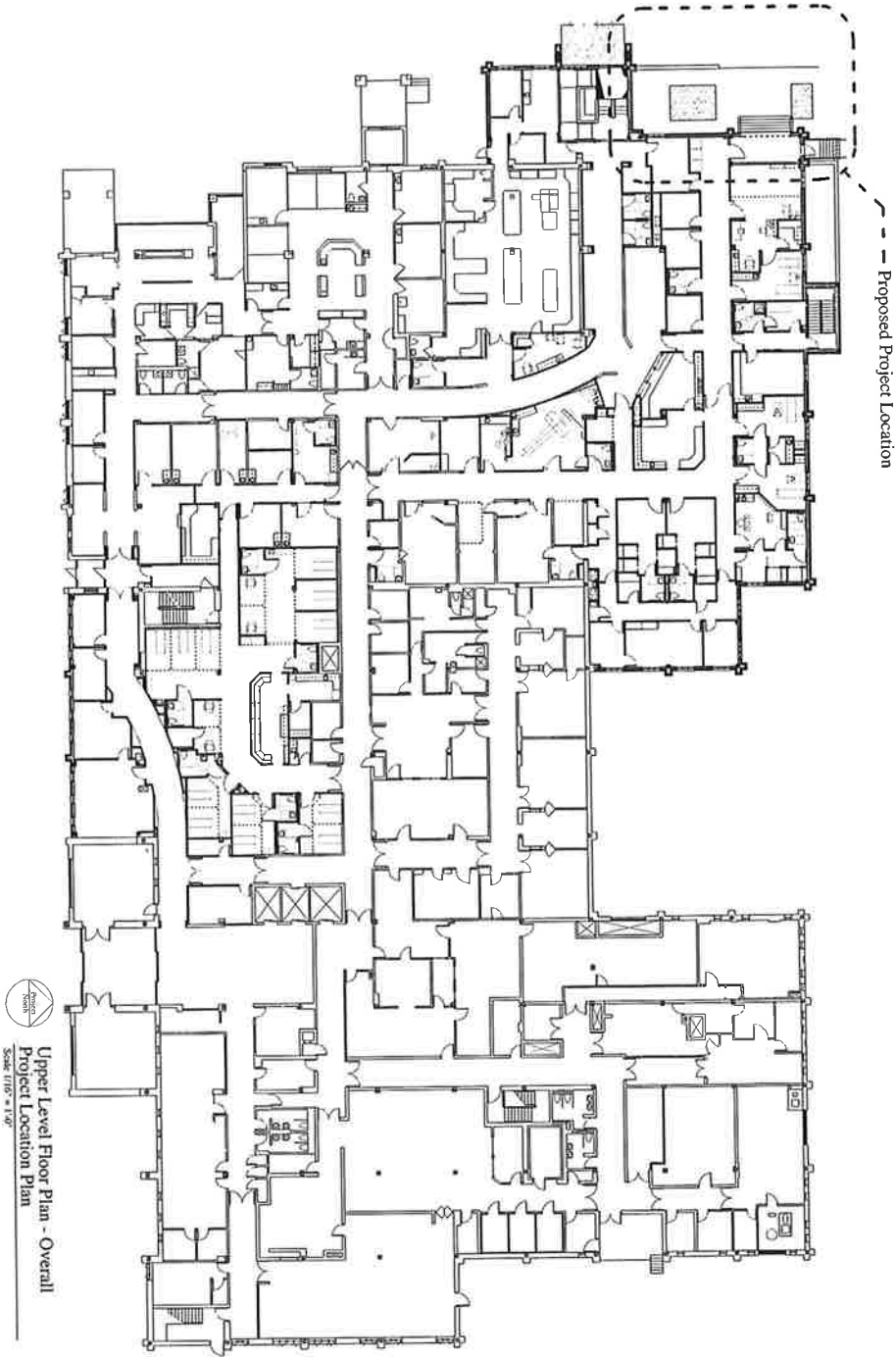
PROPOSED MRI ADDITION
 NORTHEASTERN VERMONT REGIONAL HOSPITAL

Schematic Site Plan

REV	DESCRIPTION	BY	DATE

Fleck & Lewis
Architects P.C.

65 and Miller Road
 Shelburne, Vermont 05482
 (802) 452-1270



Upper Level Floor Plan - Overall
 Project Location Plan
 Scale: 1/16" = 1'-0"

Project No.	1134.00
Proj. Manager	COL
Proj. Designer	
Drawn By	COL
Checked By	
Scale	AS SHOWN
Approved	
Date	January 2011

CON
 A-1

PROPOSED MRI ADDITION
 NORTHEASTERN VERMONT REGIONAL HOSPITAL

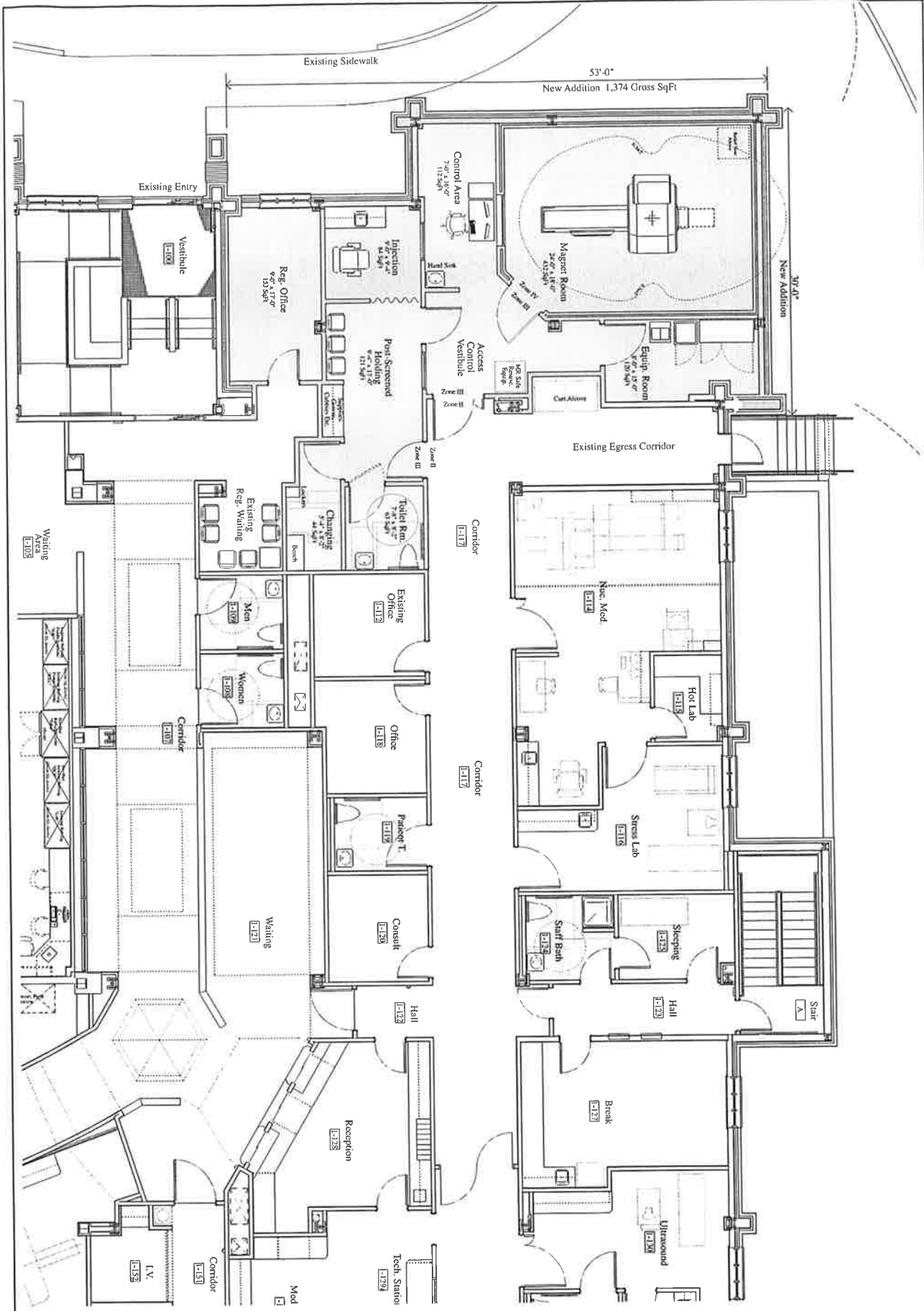
Key Plan
 Project Location

11. 30.00.00.00

Rev.	Description	By	Date

**Fleck & Lewis
 Architects P.C.**

Crane Hollow, P.O. Box 100
 Barre, Vermont, New Hampshire 05743
 (802) 813-1176



Project No.	1018-00
Prog. Manager	GA
Prog. Designer	GA
Drawn By	GA
Checked By	
Scale	1/4" = 1'-0"
Approved	
Date	January 2017

PROPOSED MRI ADDITION
NORTHEASTERN VERMONT REGIONAL HOSPITAL

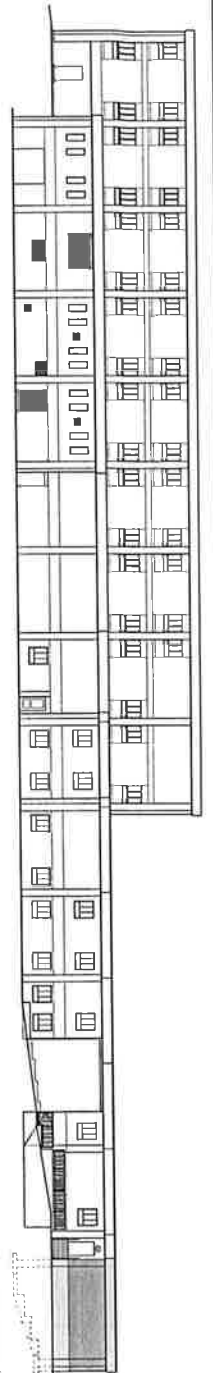
ST. JOHNSBURY

Schematic Floor Plan

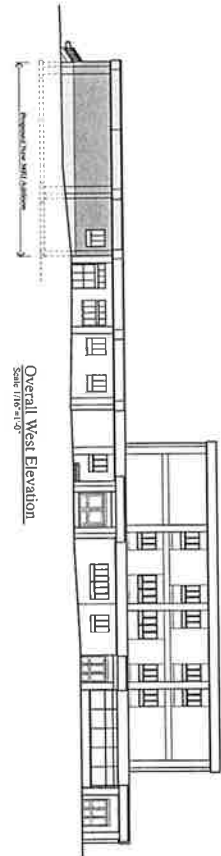
Rev.	Description	By	Date

**Fleck & Lewis
Architects P.C.**
200 North Street
 Box 66, St. Johnsbury, New Hampshire 05782
 (603) 821-1776

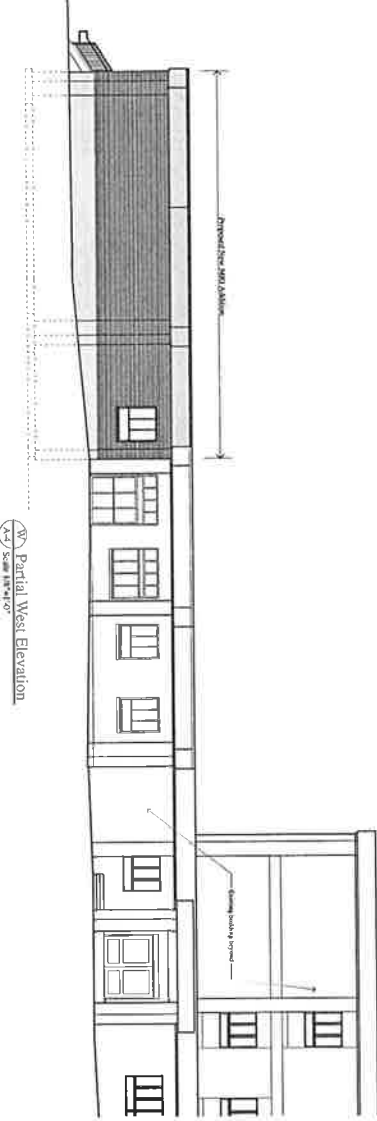
Sheet
A-3
of
CON



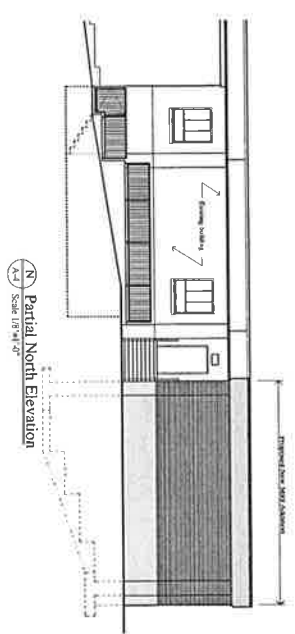
Overall North Elevation
Scale: 1/16" = 1'-0"



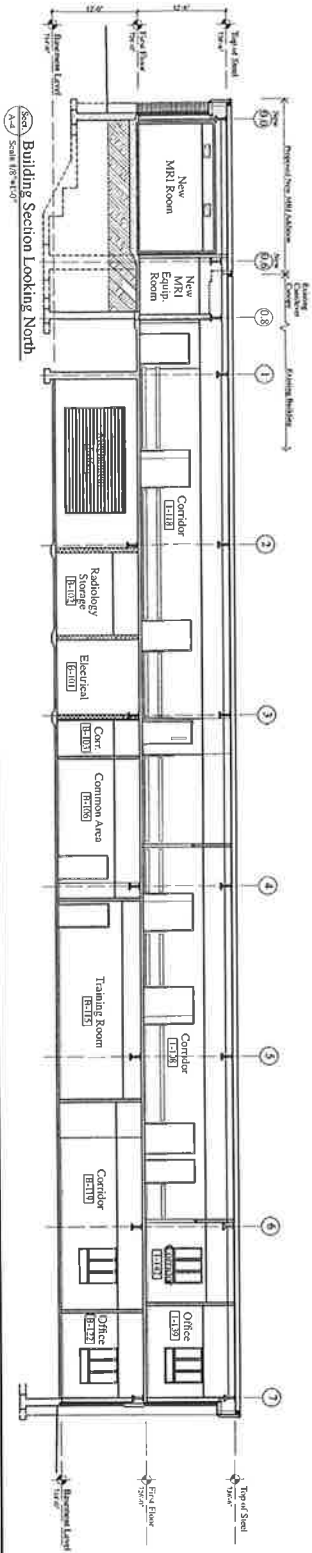
Overall West Elevation
Scale: 1/16" = 1'-0"



Partial West Elevation
Scale: 1/16" = 1'-0"



Partial North Elevation
Scale: 1/16" = 1'-0"



Building Section Looking North
Scale: 1/8" = 1'-0"

Project No.	1334-00
Proj. Manager	COL
Proj. Designer	COL
Drawn By	COL
Checked By	COL
Scale	AS SHOWN
Approved	
Date	January 2017

PROPOSED MRI ADDITION
NORTHEASTERN VERMONT REGIONAL HOSPITAL

Schematic Elevations
Schematic Building Section

ST. JOHNSBURGH

No.	Description	By	Date

Fleck & Lewis Architects P.C.

1000 Water Street
St. Johnsbury, Vermont 05476
802.875.1170

APPENDIX 4



CON budget Estimate rev 1 022317

Rev 0 printed on 02/23/17

Project: NVRH MRI Addition
 Architect: Fleck & Lewis

ITEM	DESCRIPTION	QUAN	U/M	UNIT LABOR	LABOR	UNIT MAT'L	MAT	SUB COST	TOTAL
1	GENERAL CONDITIONS				\$88,140		\$100,905	\$0	\$189,045
2	DEMOLITION & ALTERATIONS				\$21,810		\$19,810	\$0	\$41,620
3	CONCRETE				\$1,615		\$61,515	\$0	\$63,130
4	MASONRY				\$0		\$44,810	\$0	\$44,810
5	METALS				\$1,410		\$65,515	\$0	\$66,925
6A	ROUGH CARPENTRY				\$7,666		\$8,723	\$0	\$14,389
6B	FINISH CARPENTRY & MILLWORK				\$1,580		\$12,090	\$0	\$13,670
7	THERMAL & MOISTURE PROTECTION				\$7,860		\$105,419	\$0	\$113,279
8	DOORS, WINDOWS & GLASS				\$3,370		\$21,050	\$0	\$24,420
9	FINISHES				\$750		\$120,796	\$0	\$121,546
10	SPECIALTIES				\$2,660		\$7,543	\$0	\$10,203
11	EQUIPMENT				\$0		\$0	\$0	\$0
12	FURNISHINGS				\$0		\$450	\$0	\$450
13	SPECIAL CONSTRUCTION				\$1,000		\$219,160	\$0	\$220,160
14	CONVEYING SYSTEMS				\$0		\$0	\$0	\$0
21	FIRE SUPPRESSION				\$0		\$34,936	\$0	\$34,936
22	PLUMBING				\$0		\$30,500	\$0	\$30,500
23	HEATING, VENTILATING, AND AIR-CONDITIONING (HVAC)				\$0		\$203,760	\$0	\$203,760
25	INTEGRATED AUTOMATION				\$0		\$0	\$0	\$0
26	ELECTRICAL				\$0		\$72,920	\$0	\$72,920
27	COMMUNICATIONS				\$0		\$9,000	\$0	\$9,000
28	ELECTRONIC SAFETY & SECURITY				\$0		\$5,094	\$0	\$5,094
31	EARTHWORK				\$0		\$57,376	\$0	\$57,376
32	EXTERIOR IMPROVEMENTS				\$0		\$6,700	\$0	\$6,700
33	UTILITIES				\$0		\$11,750	\$0	\$11,750
					\$137,861		\$1,217,822	\$0	\$1,355,683

CM Estimating Contingency	5.00%	\$67,784
sub tot		\$1,423,467
G.C. BOND		\$11,701
sub tot		\$1,435,168
CM FEE	3.75%	\$55,627
TOTAL		\$1,490,795

<u>Building Floor Areas:</u>	
Addition	1446 sf
Renovations	252 sf
Total Building	1,698 sf
Cost /SF	\$877.97

The construction estimate excludes typical owner costs such as:

- Property
- Environmental clearance
- Mold Remediation
- Abatement of Hazardous Materials
- Legal/Administrative
- Financing
- Clerk of the Works/Owners Representative
- Architectural and Special Consultants Fees and Reimbursables
- Moving Costs
- Utility Company Charges
- Permits
- Furnishings (System Furnishings, Furniture, Loose Equipment, etc.)
- Interior Signage
- Owner Provided Equipment and Wire
- Property Insurance, Builder's Risk including Deductable
- Owner's Construction Contingency

Our estimate assumes there are no unusual sub-surface conditions such as, but not limited to:

- Boulders
- Ledge
- Ground Water
- Unsuitable or Contaminated Soils
- Inadequate Bearing



CON budget Estimate rev 1 022317

Rev 0 printed on 02/23/17

Project: NVRH MRI Addition
Architect: Fleck & Lewis

ITEM	DESCRIPTION	QUAN	U/M	UNIT LABOR	LABOR	UNIT MAT'L	MAT	SUB COST	TOTAL
1 GENERAL CONDITIONS									
010	General & Special Conditions								
0101004	Overtime Premium				\$0		\$0		\$0
012	Field Supervision								
0101201	Superintendent \$75/hr	40 hrs	26 wks	\$3,000	\$78,000		\$0		\$78,000
0101202	Field engineer \$55/hr				\$0		\$0		\$0
014	Expenses								
0101401	Key Person Expenses		26 wks		\$0	\$25.00	\$650		\$650
016	Field Office								
0101601	Office Trailer Rental		6 mo		\$0	\$270.00	\$1,620		\$1,620
0101602	Move Trailers		2 ea		\$0	\$1,200.00	\$2,400		\$2,400
0101603	Storage trailer/shed		6 mo		\$0	\$200.00	\$1,200		\$1,200
0101604	Office supplies		6 mo		\$0	\$50.00	\$300		\$300
018	Safety Program								
0101801	First aid		1 ls		\$0	\$1,300.00	\$1,300		\$1,300
0101805	Protective Equipment		1 ls		\$0	\$1,500.00	\$1,500		\$1,500
0101807	Infect Control/Life Safety		26 wks		\$0	\$200.00	\$5,200		\$5,200
022	Tools								
0102202	Small Tools		26 wks		\$0	\$25.00	\$650		\$650
0102203	Equipment to Plant		6 mo		\$0	\$50.00	\$300		\$300
0102204	Rental, Company	TBD			\$0		\$0		\$0
0102205	Rental, Non-Company		6 mo		\$0	\$3,000.00	\$18,000		\$18,000
0102206	Pick-Up Trucks		6 mo		\$0	\$600.00	\$3,600		\$3,600
0102207	Company Gas		26 wks		\$0	\$100.00	\$2,600		\$2,600
0102208	Tool Repair		1 ls		\$0	\$1,500.00	\$1,500		\$1,500
0102209	Lifts for Trades				\$0		\$0		\$0
041	Project Management								
0104101	Project Manager \$93.71 x 6 hrs p/wk		26 wks		\$0	\$562.26	\$14,619		\$14,619
0104102	Support Staff \$71.66 x 4 hrs p/wk		26 wks		\$0	\$286.64	\$7,453		\$7,453
0104103	Admin Travel Expense		26 wks		\$0	\$75.00	\$1,950		\$1,950
0104104	Executive Management		inc. in fee		\$0		\$0		\$0
0104105	Accounting	Fee	wks		\$0		\$0		\$0
0104106	Clerical	Fee	wks		\$0		\$0		\$0
042	Scheduling								
0104201	In House Scheduling		inc. in fee		\$0		\$0		\$0
0104202	Scheduling Consultant		ls		\$0		\$0		\$0
0104203	Maintain Schedules		inc. in fee		\$0		\$0		\$0
043	Preconstruction Services								
0104301	Fee	allow	1 ls		\$0	\$3,000.00	\$3,000		\$3,000
0104302	Reimbursables		1 ls		\$0	\$500.00	\$500		\$500
045	Insurances/Taxes								
0104501	State Sales Tax, EXEMPT		1 ls		\$0		\$0		\$0
0104503	Builders Risk		by owner		\$0		\$0		\$0
0104504	Owner Protective Liability		by owner		\$0		\$0		\$0
0104505	Bridge B.R. Deduct		ls		\$0		\$0		\$0
0104506	Other Insurance		ls		\$0		\$0		\$0
065	Permits								
0106502	Zoning/Local By Owner	TBD	1 ls		\$0		\$0		\$0
0106503	State /Fire Safety By Owner	TBD	1 ls		\$0		\$0		\$0
330	Survey & Layout								
0133003	Engineer Layout		1 ls		\$0	\$2,500.00	\$2,500		\$2,500
335	Protect/Repair Grounds								
0133504	Maintain Egress		1 ls		\$0	\$1,500.00	\$1,500		\$1,500
0133505	Temp Signage		1 ls		\$0	\$1,000.00	\$1,000		\$1,000
510	Temporary Utilities								
0151002	Temp Power Consump		by owner		\$0		\$0		\$0
0151003	Temp Lights & Wire		by subs		\$0		\$0		\$0
520	Winter Conditions								
0152001	Temp heat/fuel	TBD			\$0		\$0		\$0
0152002	Temp heat equipment	TBD			\$0		\$0		\$0
0152003	Winter weather shelter	TBD			\$0		\$0		\$0
0152004	Snow removal	TBD			\$0		\$0		\$0
525	Construction Aids								
0152507	Temp water		6 mo		\$0	\$150.00	\$900		\$900
0152508	Temp Toilets & Wash		6 mo		\$0	\$240.00	\$1,440		\$1,440
530	Barriers and Enclosures								
0153001	Temp Laydown area		1 ls		\$0	\$5,000	\$5,000		\$5,000
0153002	Temp fencing		200 lf		\$0	\$4.00	\$800		\$800
0153003	Temp Barricades		1 ls		\$0	\$1,000.00	\$1,000		\$1,000
540	Security								
0154001	Watchman				\$0		\$0		\$0



CON budget Estimate rev 1 022317

Rev 0 printed on 02/23/17

Project: NVRH MRI Addition
 Architect: Fleck & Lewis

ITEM	DESCRIPTION	QUAN	U/M	UNIT LABOR	LABOR	UNIT MAT'L	MAT	SUB COST	TOTAL
0154002	Security Systems				\$0		\$0		\$0
560	Quality Control/Testing								
0156001	Test Soils/Concrete	allow	1	ls	\$0	\$2,500.00	\$2,500		\$2,500
0156002	Test Steel/Fire	allow	1	ls	\$0	\$3,500.00	\$3,500		\$3,500
0156003	Assist with Testing				\$0		\$0		\$0
0156004	IBC Testing	allow	1	ls	\$0	\$1,000.00	\$1,000		\$1,000
565	Temporary Fire Protection								
0156501	Temp fire extinguishers		3	ea	\$0	\$200.00	\$600		\$600
580	Project Identification								
0158001	Project Sign				\$0		\$0		\$0
660	Testing Systems								
0166001	Commissioning	none			\$0		\$0		\$0
0166002	Operational Testing				\$0		\$0		\$0
710	Cleaning								
0171001	Recycle Plan		1	ls	\$0		\$0		\$0
0171002	Dumpsters		6	mo	\$0	\$950.00	\$5,700		\$5,700
0171005	Progress Clean \$39 x 10 hrs p/wk		26	wks	\$390.00	\$10,140	\$0		\$10,140
0171007	Final Clean Building		1698	sf	\$0	\$1.25	\$2,123		\$2,123
720	Project Documents								
0172001	Document Print & Distrib		1	ls	\$0	\$1,000.00	\$1,000		\$1,000
0172002	Photos				\$0		\$0		\$0
0172003	As-Built Drawings		1	ls	\$0	\$1,000.00	\$1,000		\$1,000
0172004	Coordination Drawings				\$0		\$0		\$0
0172007	CAD Record Files				\$0		\$0		\$0
770	Project Closeout								
0177001	Warranties				\$0		\$0		\$0
0177002	O&M Manuals		1	ls	\$0	\$1,000.00	\$1,000		\$1,000
0177003	Closeout Expenses				\$0		\$0		\$0
800	LEED Objectives								
0180001	General				\$0		\$0		\$0
810	Allowances								
0181001	General				\$0		\$0		\$0
820	Alternatives								
0182001	General				\$0		\$0		\$0
830	Owner Furnish								
0183001	General				\$0		\$0		\$0
840	Contractor Install								
0184001	General				\$0		\$0		\$0
850	Project Management								
0185001	Environmental Protection				\$0		\$0		\$0
0185002	Indoor Air Quality				\$0		\$0		\$0
0185003	Storm Water Control				\$0		\$0		\$0
0185004	Moisture & Mold Control				\$0		\$0		\$0
860	Supplemental GC's								
0186001	Punch List				\$0	\$2,500.00	\$0		\$0
0186002	Training				\$0		\$0		\$0
ITEM TOTAL					\$88,140	\$100,905	\$0	\$0	\$189,045

2 DEMOLITION & ALTERATIONS									
024100 Selective Demolition									
	Remove dock seal		1	ea	\$800.00	\$800	\$250.00	\$250	\$1,050
	Remove OH door/tracks		1	ea	\$500.00	\$500	\$200.00	\$200	\$700
	Temp patch wall		64	sf	\$5.00	\$320	\$15.00	\$960	\$1,280
	Interior demo		100	hr	\$50.00	\$5,000		\$0	\$5,000
	Remove exterior finishes		60	hr	\$50.00	\$3,000		\$0	\$3,000
	Remove exterior soffit		60	hr	\$50.00	\$3,000		\$0	\$3,000
	Interior Demo - Renovation/Add.					\$0		\$0	\$0
	Phasing work		2	ea		\$0	\$2,000.00	\$4,000	\$4,000
	Mechanical/elect demo cut & patch		1	ea		\$0	\$1,200.00	\$1,200	\$1,200
	Temp partitions		400	sf	\$4.00	\$1,600	\$1.50	\$600	\$2,200
	Temp movable partitions	allow	200	sf	\$2.00	\$400	\$0.50	\$100	\$500
	Core for plumbing		1	ls	\$1,400.00	\$1,400	\$400.00	\$400	\$1,800
	Walk-off mats		20	pads	\$25.00	\$500	\$80.00	\$1,600	\$2,100
	Negative air machines		26	wks	\$15.00	\$390	\$75.00	\$1,950	\$2,340
	Ceilings remove and reinstall		500	sf	\$2.00	\$1,000	\$1.00	\$500	\$1,500
	HEPA filters		1	ls	\$250.00	\$250	\$1,000.00	\$1,000	\$1,250
	Carts		1	ea		\$0	\$750.00	\$750	\$750
	Pressure indicator		2	ea	\$200.00	\$400	\$1,000.00	\$2,000	\$2,400
	Dumpsters		4	ea		\$0	\$950.00	\$3,800	\$3,800
	Off hour work		50	hrs	\$25.00	\$1,250		\$0	\$1,250



CON budget Estimate rev 1 022317

Rev 0 printed on 02/23/17

Project: NVRH MRI Addition
 Architect: Fleck & Lewis

ITEM	DESCRIPTION	QUAN	U/M	UNIT LABOR	LABOR	UNIT MAT'L	MAT	SUB COST	TOTAL
	Structural Demo				\$0		\$0		\$0
	Misc @ demo, bracing & framing	1	allow	\$2,000.00	\$2,000	\$500.00	\$500		\$2,500
					\$0		\$0		\$0
	ITEM TOTAL				\$21,810		\$19,810	\$0	\$41,620

3 CONCRETE

	033000 Cast-In-Place Concrete								
	Subcontract Furnish & Install	1	Bid		\$0		\$0		\$0
	Area	1446	sf		\$0		\$0		\$0
	Footings	22	cy		\$0	\$450.00	\$9,900		\$9,900
	Foundation walls	65	cy		\$0	\$550.00	\$35,750		\$35,750
	Piers	3	cy		\$0	\$750.00	\$2,250		\$2,250
	Slab on grade, 5" thick	33	cy		\$0	\$375.00	\$12,375		\$12,375
	Hilti adhesive anchors to existing	100	ea	\$8.00	\$800	\$3.00	\$300		\$1,100
	Under-slab vapor barrier 10 mil	1500	sf	\$0.10	\$150	\$0.25	\$375		\$525
	Under-slab vapor barrier tape	1500	sf	\$0.10	\$150	\$0.10	\$150		\$300
	SOG curing	1500	sf	\$0.15	\$225	\$0.15	\$225		\$450
	Isolation joint filler	180	lf	\$0.50	\$90	\$0.50	\$90		\$180
	Saw cut joints	100	lf	\$2.00	\$200	\$1.00	\$100		\$300
	Concrete testing and inspection	see GC			\$0		\$0		\$0
	Traffic control during pours	TBD	ea		\$0		\$0		\$0
					\$0		\$0		\$0
	034500 Precast Architectural Concrete				\$0		\$0		\$0
	Subcontract Furnish & Install	SEE 042000			\$0		\$0		\$0
					\$0		\$0		\$0
	ITEM TOTAL				\$1,615		\$31,515	\$0	\$33,130

4 MASONRY

	042000 Unit Masonry								
	Winter conditions	N/A	1	ls			\$0		\$0
	Brick Veneer (Neat Area)				\$0		\$0		\$0
	Type 1		968	sf	\$0	\$45.00	\$43,560		\$43,560
	Staging	in above	1000	sf			\$0		\$0
	Ties				\$0		\$0		\$0
	Window Sill		1	ea	\$0	\$500.00	\$500		\$500
	Remove rubble from site		1	ls	\$0	\$750.00	\$750		\$750
					\$0		\$0		\$0
	ITEM TOTAL				\$0		\$44,810	\$0	\$44,810

5 METALS

	051200 Structural Steel Framing								
	Subcontract Furnish & Install	1	Bid		\$0		\$0		\$0
	Structural steel - total	12.00	tons		\$0	\$4,500.00	\$54,000		\$54,000
	Angle framing @ roof penetrations	3.00	ea		\$0	\$500.00	\$1,500		\$1,500
	Grout base Plates	7.00	ea	\$30.00	\$210	\$15.00	\$105		\$315
					\$0		\$0		\$0
	053100 Steel Decking				\$0		\$0		\$0
	Subcontract Furnish & Install (See Struct.)				\$0		\$0		\$0
	Addition, 1 1/2" decking	1590	sf		\$0	\$4.00	\$6,360		\$6,360
	Patch roof deck	155	sf		\$0	\$10.00	\$1,550		\$1,550
					\$0		\$0		\$0
	054000 Cold-Formed Metal Framing				\$0		\$0		\$0
	Subcontract Furnish & Install	SEE 092116			\$0		\$0		\$0
					\$0		\$0		\$0
	055000 Metal Fabrications				\$0		\$0		\$0
	055213 Pipe and Tube Railings				\$0		\$0		\$0
	Subcontract Furnish & Install	1	Bid		\$0		\$0		\$0
	Brick lintels at windows/door	2	ea		\$0	\$400.00	\$800		\$800
	Unistrut at RF ceiling	600	sf	\$2.00	\$1,200	\$2.00	\$1,200		\$2,400
					\$0		\$0		\$0
	ITEM TOTAL				\$1,410		\$65,515	\$0	\$66,925

6A ROUGH CARPENTRY

	061054 Wood Blocking and Curbing								
	Addition				\$0		\$0		\$0
	Exterior blocking				\$0		\$0		\$0
	PT 2x6 roof blocking @ penetrations	200	lf	\$2.50	\$500	\$2.00	\$400		\$900
	PT 2x6 roof edge/perimeter blocking	400	lf	\$2.50	\$1,000	\$2.50	\$1,000		\$2,000
	Nails and hardware	1	ls		\$0	\$200.00	\$200		\$200



CON budget Estimate rev 1 022317

Rev 0 printed on 02/23/17

Project: NVRH MRI Addition
 Architect: Fleck & Lewis

ITEM	DESCRIPTION	QUAN	U/M	UNIT LABOR	LABOR	UNIT MAT'L	MAT	SUB COST	TOTAL
	Window blocking	40	lf	\$2.00	\$80	\$2.00	\$80		\$160
	Interior Blocking				\$0		\$0		\$0
	Int FT running blocking	350	lf	\$2.50	\$875	\$2.00	\$700		\$1,575
	Framing inside RF system FT	1850	lf	\$1.50	\$2,775	\$1.25	\$2,313		\$5,088
	Plywood at RF system for radiation panels	1624	sf	\$1.50	\$2,436	\$1.25	\$2,030		\$4,466
					\$0		\$0		\$0
	ITEM TOTAL				\$7,656		\$6,723	\$0	\$14,389

6B FINISH CARPENTRY & MILLWORK

062000 Finish Carpentry & Architectural Woodwork									
064100 Architectural Wood Casework									
123600 Countertops									
	Control Room				\$0		\$0		\$0
	Base cab	2	lf	\$50.00	\$100	\$375.00	\$750		\$850
	Counter top	6	lf	\$15.00	\$90	\$120.00	\$720		\$810
	Changing Room				\$0		\$0		\$0
	Bench	4	lf	\$50.00	\$200	\$250.00	\$1,000		\$1,200
	Lockers	2	ea	\$100.00	\$200	\$450.00	\$900		\$1,100
	Post Screen Holding				\$0		\$0		\$0
	Wardrobe	4	lf	\$75.00	\$300	\$500.00	\$2,000		\$2,300
	Injection Room				\$0		\$0		\$0
	Base cab	6	lf	\$50.00	\$300	\$375.00	\$2,250		\$2,550
	Counter top	6	lf	\$15.00	\$90	\$120.00	\$720		\$810
	Upper cab	6	lf	\$50.00	\$300	\$325.00	\$1,950		\$2,250
					\$0		\$0		\$0
	RF enclosure	1	ls		\$0	\$1,800.00	\$1,800		\$1,800
					\$0		\$0		\$0
	ITEM TOTAL				\$1,580		\$12,090	\$0	\$13,670

7 THERMAL & MOISTURE PROTECTION

071113 Bituminous Dampproofing									
Subcontract Furnish & Install									
	Addition	1	Bid		\$0		\$0		\$0
	Bit. Damp. @ fdn walls	800	sf		\$0	\$2.50	\$2,000		\$2,000
	Column bases below grade	7	ea	\$15.00	\$105	\$5.00	\$35		\$140
	Patch existing walls	allow	1	ls	\$0	\$1,000.00	\$1,000		\$1,000
					\$0		\$0		\$0
					\$0		\$0		\$0
072100 Thermal Insulation									
Subcontract Furnish & Install									
	Rigid @ Found and slab, 2" Thick	800	sf	\$1.00	\$800	\$1.90	\$1,520		\$2,320
	Rigid @ Slab	1400	sf	\$1.00	\$1,400	\$1.90	\$2,660		\$4,060
	Rigid @ masonry cavity, 3" thick	1000	sf	\$2.00	\$2,000	\$3.00	\$3,000		\$5,000
	Foam Ins. (Seal Crack)	1	ls	\$500.00	\$500	\$600.00	\$600		\$1,100
	Hardware	1	ls		\$0	\$200.00	\$200		\$200
					\$0		\$0		\$0
					\$0		\$0		\$0
072150 EIFS									
Subcontract Furnish & Install									
	Ext ins fin area	264	sf		\$0	\$60.00	\$15,840		\$15,840
	Ext ins fin frame	264	sf		\$0	\$15.00	\$3,960		\$3,960
	Patch existing	1	ls		\$0	\$750.00	\$750		\$750
					\$0		\$0		\$0
					\$0		\$0		\$0
072500 Weather Barriers									
Subcontract Furnish & Install									
	Addition	1	Bid		\$0		\$0		\$0
	Exterior air barrier	1000	sf		\$0	\$5.00	\$5,000		\$5,000
	Door & window membrane	40	lf		\$0	\$3.00	\$120		\$120
					\$0		\$0		\$0
					\$0		\$0		\$0
075300 Elastomeric Membrane Roofing									
Subcontract Furnish & Install									
	Roof Insulation 5-1/2" plus taper	1590	sf		\$0	\$20.00	\$31,800		\$31,800
	Adhered Membrane	in above	1590	sf		\$0	\$0		\$0
	Roof vapor retarder	1590	sf		\$0		\$0		\$0
	Deck sheathing, 5/8" gyp	1590	sf		\$0		\$0		\$0
	Patch new penetrations	allow	1	ls	\$0	\$1,500.00	\$1,500		\$1,500
					\$0		\$0		\$0
					\$0		\$0		\$0
076200 Sheet Metal Flashing & Trim									
Subcontract Furnish & Install (See Roof)									
	Addition	1	Bid		\$0		\$0		\$0
	Aluminum flashing @ roof to wall tie in	88	lf		\$0	\$15.00	\$1,320		\$1,320
					\$0		\$0		\$0



CON budget Estimate rev 1 022317

Rev 0 printed on 02/23/17

Project: NVRH MRI Addition
 Architect: Fleck & Lewis

ITEM	DESCRIPTION	QUAN	U/M	UNIT LABOR	LABOR	UNIT MAT'L	MAT	SUB COST	TOTAL	
077200 Roof Accessories							\$0		\$0	
Subcontract Furnish & Install							\$0		\$0	
	Babcock-Davis, equipment series roof hatch, 10'-9"x10'	1	ea	\$800.00	\$800	\$17,000.00	\$17,000		\$17,800	
	Crane	1	ea		\$0	\$1,200.00	\$1,200		\$1,200	
	Insulate after install	121	sf	\$5.00	\$605	\$4.00	\$484		\$1,089	
					\$0		\$0		\$0	
078100 Applied Fireproofing							\$0		\$0	
Subcontract Furnish & Install				1	Bid		\$0		\$0	
Addition							\$0		\$0	
	Fire proof new steel (area of new)	1590	sf		\$0	\$7.00	\$11,130		\$11,130	
	Patch	allow	1	ls		\$1,200.00	\$1,200		\$1,200	
	Clean and support	1	ls	\$1,000.00	\$1,000	\$250.00	\$250		\$1,250	
					\$0		\$0		\$0	
078400 Firestopping							\$0		\$0	
Subcontract Furnish & Install				1	Bid		\$0		\$0	
Addition							\$0		\$0	
	Misc not by trades	1	ls	\$250.00	\$250	\$250.00	\$250		\$500	
Renovation							\$0		\$0	
	Misc not by trades	1	ls	\$150.00	\$150	\$150.00	\$150		\$300	
					\$0		\$0		\$0	
079005 Joint Sealers							\$0		\$0	
Subcontract Furnish & Install				1	Bid		\$0		\$0	
	Interior Joint	1	ls	\$250.00	\$250	\$150.00	\$150		\$400	
	Exterior Joint	200	lf		\$0	\$4.00	\$800		\$800	
					\$0		\$0		\$0	
"079513 Expansion joint covers							\$0		\$0	
Subcontract Furnish & Install							\$0		\$0	
	Expansion joint cover	20	lf		\$0	\$75.00	\$1,500		\$1,500	
					\$0		\$0		\$0	
ITEM TOTAL							\$7,860	\$105,419	\$0	\$113,278

8 DOORS, WINDOWS & GLASS

081113 Hollow Metal Doors and Frames									\$0
Subcontract Furnish Only				1	Bid		\$0		\$0
	Unload, sort, store & protect	1	ls		\$0		\$0		\$0
Int HM Door Frames							\$0		\$0
	HM door frame	6	ea	\$100.00	\$600	\$175.00	\$1,050		\$1,650
	Double HM door frame	1	ea	\$150.00	\$150	\$250.00	\$250		\$400
Int Standard HM Window Frames							\$0		\$0
	Type A, 4'-6" x 3'-10"	2	ea	\$150.00	\$300	\$350.00	\$700		\$1,000
					\$0		\$0		\$0
081416 Flush Wood Doors							\$0		\$0
	Uneven pairs	1	pr	\$240.00	\$240	\$1,000.00	\$1,000		\$1,240
	Flush	6	ea	\$80.00	\$480	\$600.00	\$3,600		\$4,080
					\$0		\$0		\$0
083100 Access Doors & Panels							\$0		\$0
	18 x 18" clg access	5	ea	\$100.00	\$500	\$200.00	\$1,000		\$1,500
					\$0		\$0		\$0
083313 Folding Doors							\$0		\$0
Subcontract Furnish & Install				1	Bid		\$0		\$0
Addition							\$0		\$0
	Folding doors at injection	1	ea		\$0	\$1,500.00	\$1,500		\$1,500
					\$0		\$0		\$0
084313 Aluminum Storefronts							\$0		\$0
Subcontract Furnish & Install				1	Bid		\$0		\$0
Addition							\$0		\$0
	Exterior Windows, 5' x 6' secure	1	ea	\$200.00	\$200	\$2,000.00	\$2,000		\$2,200
					\$0		\$0		\$0
087100 Door Hardware							\$0		\$0
087200 Door Hardware Schedule							\$0		\$0
Subcontract Furnish & Install				1	Bid		\$0		\$0
	Door Openings (leafs)	9	ea	\$100.00	\$900	\$350.00	\$3,150		\$4,050
	Access control	2	ea		\$0	\$2,500.00	\$5,000		\$5,000
	Power swing operators	TBD			\$0		\$0		\$0
					\$0		\$0		\$0
088000 Glazing							\$0		\$0
Subcontract Furnish & Install				see 084313			\$0		\$0
Int. Glazing							\$0		\$0
	Door glazing, half lites	10	sf		\$0	\$45.00	\$450		\$450
	Window glazing	30	sf		\$0	\$45.00	\$1,350		\$1,350



CON budget Estimate rev 1 022317

Rev 0 printed on 02/23/17

Project: NVRH MRI Addition
 Architect: Fleck & Lewis

ITEM	DESCRIPTION	QUAN	U/M	UNIT LABOR	LABOR	UNIT MAT'L	MAT	SUB COST	TOTAL
					\$0		\$0		\$0
ITEM TOTAL					\$3,370		\$21,050	\$0	\$24,420

9 FINISHES

090561 Common Work Results For Flooring Preparation									
Subcontract Furnish & Install				1	Bid			\$0	\$0
Addition									
	Floor moisture & Ph testing	1698	sf					\$0	\$0
	Prep existing floor for new	1698	sf					\$0	\$0
	Moisture mitigation	allow	1698	sf		\$3.00	\$5,094	\$0	\$5,094
092116 Gypsum Board Assemblies									
Subcontract Furnish & Install				1	Bid			\$0	\$0
Addition									
	Exterior Wall System	1000	sf			\$15.00	\$15,000	\$0	\$15,000
	3" Rigid cavity wall insulation (in Div 07 thermal barrier)						\$0	\$0	\$0
	Weather barrier system (in Div 07 weather barrier)						\$0	\$0	\$0
	Exterior fascia soffit	264	sf			\$20.00	\$5,280	\$0	\$5,280
	Interior Wall systems						\$0	\$0	\$0
Wall Types:									
1	Lin FT wall	1836	sf			\$12.00	\$22,032	\$0	\$22,032
2	Sq FT wall	840	sf			\$8.00	\$6,720	\$0	\$6,720
3	Sq FT wall	2676	sf			\$3.00	\$8,028	\$0	\$8,028
4	Add for impact resistant drywall		sf				\$0	\$0	\$0
	Joint treatment	in above	4518	sf			\$0	\$0	\$0
	Ceiling	500	sf			\$5.00	\$2,500	\$0	\$2,500
095100 Acoustical Ceilings									
Subcontract Furnish & Install				1	Bid			\$0	\$0
	ACT-1 2x2 Armstrong	1100	sf			\$6.50	\$7,150	\$0	\$7,150
	ACT-3 @ Magnet room	450	sf			\$6.50	\$2,925	\$0	\$2,925
	Patch-to-match @ existing to remain	1	ls			\$750.00	\$750	\$0	\$750
096500 Resilient Flooring									
Subcontract Furnish & Install				1	Bid			\$0	\$0
	Sheet Vinyl	536	sy			\$8.50	\$4,556	\$0	\$4,556
	LVT static guard at magnet room	430	sf			\$32.00	\$13,760	\$0	\$13,760
	Protect floors	1000	sf			\$1.50	\$1,500	\$0	\$1,500
	Patch at existing	300	sf			\$3.00	\$900	\$0	\$900
	Floor prep	1000	sf	\$0.75	\$750	\$0.75	\$750	\$0	\$1,500
	Protect existing flooring to remain	300	sf			\$1.50	\$450	\$0	\$450
097100 Access Floor									
Subcontract Furnish & Install				1	Bid			\$0	\$0
	Access floor @ equip room	120	sf			\$35.00	\$4,200	\$0	\$4,200
097500 Acoustic Roof Components									
Subcontract Furnish & Install				1	Bid			\$0	\$0
	Flat panel sonex	200	sf			\$50.00	\$10,000	\$0	\$10,000
096800 Carpeting									
Subcontract Furnish & Install				1	Bid			\$0	\$0
	Carpet Squares at offices	260	sf			\$6.00	\$1,560	\$0	\$1,560
099000 Painting and Coating									
Subcontract Furnish & Install				1	Bid			\$0	\$0
	Exterior paint	none					\$0	\$0	\$0
	Interior painting	1698	sf			\$4.50	\$7,641	\$0	\$7,641
ITEM TOTAL					\$750		\$120,796	\$0	\$121,546

10 SPECIALTIES

101425 Code Required Building Signage									
Building Signage Furnish & Install				1	Bid			\$0	\$0
Addition									
	Code Req'd Interior Signage			by Owner			\$0	\$0	\$0
Renovation									
	Code Req'd Interior Signage			by Owner			\$0	\$0	\$0
102123 Cubicles									
							\$0	\$0	\$0



CON budget Estimate rev 1 022317

Rev 0

printed on 02/23/17

Project: NVRH MRI Addition

Architect: Fleck & Lewis

ITEM	DESCRIPTION	QUAN	U/M	UNIT LABOR	LABOR	UNIT MAT'L	MAT	SUB COST	TOTAL
Cubicles Furnish Only									
	Curtain track & curtain	5	lf	\$15.00	\$75	\$25.00	\$125		\$200
					\$0		\$0		\$0
					\$0		\$0		\$0
102601 Wall & Corner Protection									
Wall & Corner Prot Furnish & Install									
	Floor area	1698	sf	\$1.00	\$1,698	\$2.50	\$4,245		\$5,943
	WPP-2A 60 mil rigid vinyl wall panels				\$0		\$0		\$0
	4' high	80	sf	\$5.00	\$400	\$8.00	\$640		\$1,040
	Corner guard 4'	5	ea	\$25.00	\$125	\$100.00	\$500		\$625
					\$0		\$0		\$0
					\$0		\$0		\$0
102800 Toilet & Healthcare Accessories									
Toilet Accessories Furnish & Install									
	Soap Disp	2	ea	\$15.00	\$30	\$50.00	\$100		\$130
	Sharps Container	2	ea	\$10.00	\$20	\$50.00	\$100		\$120
	Glove Disp	2	ea	\$10.00	\$20	\$50.00	\$100		\$120
	Hand Sanitizers	2	ea	\$15.00	\$30	\$50.00	\$100		\$130
	Paper towel dispenser	2	ea	\$15.00	\$30	\$75.00	\$150		\$180
	Mirror 7A, 18" x 36"	2	ea	\$20.00	\$40	\$100.00	\$200		\$240
	Robe Hook	6	ea	\$7.00	\$42	\$20.00	\$120		\$162
					\$0		\$0		\$0
					\$0		\$0		\$0
104400 Fire Protection Specialties									
Fire Extingh's & Cab's Furnish Only									
	Fire Extinguisher Cab & ext	2	ea	\$75.00	\$150	\$300.00	\$600		\$750
					\$0		\$0		\$0
ITEM TOTAL					\$2,660		\$7,543	\$0	\$10,203

11 EQUIPMENT

117713 MRI Ferromagnetic Detection System									
Subcontract Furnish & Install									
		1	Bid		\$0		\$0		\$0
Furnish Only									
		1	Bid		\$0		\$0		\$0
Install Only									
	Wallmounted ferrogaurd	1	ea		\$0		\$0		\$0
					\$0		\$0		\$0
ITEM TOTAL					\$0		\$0	\$0	\$0

12 FURNISHINGS

123600 Window Treatment									
Subcontract Furnish & Install SEE 064100									
	Window area	30	sf		\$0	\$15.00	\$450		\$450
					\$0		\$0		\$0
ITEM TOTAL					\$0		\$450	\$0	\$450

13 SPECIAL CONSTRUCTION

134713 Temp MRI Pad									
Subcontract Furnish Only SEE 092116									
	Temp pad	1	ea		\$0	\$75,000	\$75,000		\$75,000
	Temp entrance/Bridge	1	ea		\$0	\$25,000	\$25,000		\$25,000
					\$0		\$0		\$0
					\$0		\$0		\$0
134941 RF/EMI Shielding									
Subcontract Furnish Only									
	RF enclosure w/ observation window	Lingren	1	budget	\$0	\$62,500	\$62,500		\$62,500
	Magnetic shielding	Lingren	1	budget	\$0	\$11,500	\$11,500		\$11,500
	Evo door 40 STC	Lingren	1	budget	\$0	\$3,200	\$3,200		\$3,200
	Auto seal system on door	Lingren	1	budget	\$0	\$9,800	\$9,800		\$9,800
	Ferromagnetic detection system	Lingren	1	budget	\$0	\$21,500	\$21,500		\$21,500
	ZXR LED down lights		10	ea	\$100.00	\$1,000	\$1,066		\$11,660
	Mag shield enclosure plywood			sf		\$0	\$0		\$0
					\$0		\$0		\$0
ITEM TOTAL					\$1,000		\$219,166	\$0	\$220,166

14 CONVEYING SYSTEMS

not used									
		none			\$0		\$0		\$0
ITEM TOTAL					\$0		\$0	\$0	\$0

21 FIRE SUPPRESSION

210000 Fire Protection									
Subcontract Furnish & Install									
	New System	1446	sf		\$0	\$6.00	\$8,676		\$8,676
	Rework existing	252	sf		\$0	\$5.00	\$1,260		\$1,260



CON budget Estimate rev 1 022317

Rev 0 printed on 02/23/17

Project: NVRH MRI Addition
Architect: Fleck & Lewis

ITEM	DESCRIPTION		QUAN	U/M	UNIT LABOR	LABOR	UNIT MAT'L	MAT	SUB COST	TOTAL
	Preaction system	allow	1	ls		\$0	\$25,000.00	\$25,000		\$25,000
						\$0		\$0		\$0
	ITEM TOTAL					\$0		\$34,936	\$0	\$34,936
22 PLUMBING										
	220000 Plumbing									
	Subcontract Furnish & Install		1	Bid		\$0		\$0		\$0
	Sinks		2	ea		\$0	\$4,500	\$9,000		\$9,000
	Med gas outlets, O,V,A,S		6	ea		\$0	\$2,250	\$13,500		\$13,500
	Water for equipment room		1	ls		\$0	\$4,000	\$4,000		\$4,000
	Water for Chiller		1	ls		\$0	\$4,000	\$4,000		\$4,000
						\$0		\$0		\$0
	ITEM TOTAL					\$0		\$30,500	\$0	\$30,500
23 HEATING, VENTILATING, AND AIR-CONDITIONING (HVAC)										
	230000 HVAC									
	Subcontract Furnish & Install		1	bid		\$0		\$0		\$0
	New HVAC		1698	sf		\$0	\$120	\$203,760		\$203,760
						\$0		\$0		\$0
	ITEM TOTAL					\$0		\$203,760	\$0	\$203,760
25 INTEGRATED AUTOMATION										
	250000 HVAC Instrumentation and Controls									
	Subcontract Furnish & Install	SEE 230000				\$0		\$0		\$0
						\$0		\$0		\$0
	ITEM TOTAL					\$0		\$0	\$0	\$0
26 ELECTRICAL										
	260000 Electrical									
	Subcontract Furnish & Install		1	Bid		\$0		\$0		\$0
	New electrical		1698	sf		\$0	\$40.00	\$67,920		\$67,920
	Wall and sky panel		2	ea		\$0	\$2,500.00	\$5,000		\$5,000
						\$0		\$0		\$0
	ITEM TOTAL					\$0		\$72,920	\$0	\$72,920
27 COMMUNICATIONS										
	270000 Communications									
	Subcontract Furnish & Install	SEE 260000				\$0		\$0		\$0
	New data/Phone		20	drops		\$0	\$450.00	\$9,000		\$9,000
						\$0		\$0		\$0
	ITEM TOTAL					\$0		\$9,000	\$0	\$9,000
28 ELECTRONIC SAFETY & SECURITY										
	283100 Fire Detection and Alarm									
	Subcontract Furnish & Install	SEE 260000				\$0		\$0		\$0
	New fire alarm		1698	sf		\$0	\$3.00	\$5,094		\$5,094
						\$0		\$0		\$0
	ITEM TOTAL					\$0		\$5,094	\$0	\$5,094
31 EARTHWORK										
	312256 Foundation Related Earthwork									
	Subcontract Furnish & Install	Budget	1	Bid		\$0		\$0		\$0
	Site mobilization & laydown		1	ls		\$0	\$2,000.00	\$2,000		\$2,000
	Site erosion control		1	ls		\$0	\$1,500.00	\$1,500		\$1,500
	Protect/support		1	ls		\$0	\$2,500.00	\$2,500		\$2,500
	Traffic control	allow	1	ls		\$0	\$2,000.00	\$2,000		\$2,000
	Site Demolition					\$0		\$0		\$0
	Remove existing retaining wall		1	ls		\$0	\$4,000.00	\$4,000		\$4,000
	Remove existing MRI slabs		160	sf		\$0	\$7.50	\$1,200		\$1,200
	Strip and remove pave, pads & organic matter		2500	sf		\$0	\$2.00	\$5,000		\$5,000
	Earthwork					\$0		\$0		\$0
	Ex/BF for addition		1698	sf		\$0	\$12.00	\$20,376		\$20,376
	Import new fill		400	cy		\$0	\$30.00	\$12,000		\$12,000
	Slab prep		60	cy		\$0	\$30.00	\$1,800		\$1,800
	Dress site final grade		2500	sf		\$0	\$2.00	\$5,000		\$5,000
						\$0		\$0		\$0
	ITEM TOTAL					\$0		\$57,376	\$0	\$57,376
32 EXTERIOR IMPROVEMENTS										
	320000 Exterior Improvements	not specified								



CON budget Estimate rev 1 022317

Rev 0 printed on 02/23/17

Project: NVRH MRI Addition

Architect: Fleck & Lewis

ITEM	DESCRIPTION	QUAN	U/M	UNIT LABOR	LABOR	UNIT MAT'L	MAT	SUB COST	TOTAL
	New concrete curb	70	lf		\$0	\$40.00	\$2,800		\$2,800
	Patch pavement @ bldg excavation	150	sf		\$0	\$20.00	\$3,000		\$3,000
	Concrete sidewalk	120	sf		\$0	\$7.50	\$900		\$900
	Landscaping	allow			\$0	\$2,500.00	\$0		\$0
					\$0		\$0		\$0
ITEM TOTAL					\$0		\$6,700	\$0	\$6,700

33 UTILITIES

330000 Utilities		not specified							
	Interior UG ex/bf	200	lf		\$0	\$15.00	\$3,000		\$3,000
	Roof leader	75	lf		\$0	\$50.00	\$3,750		\$3,750
	Rework existing sewer manhole	allow	1	ls	\$0	\$5,000.00	\$5,000		\$5,000
					\$0		\$0		\$0
ITEM TOTAL					\$0		\$11,750	\$0	\$11,750

S:\VPC\PROPOSALS\BNHST\PPHASE\ESTIMATES\DESTREV1 031711.xls

APPENDIX 5



www.efficiencyvermont.com
888-921-5990 | 802-860-4095

To: Robert Hersey
From: Rachael Mascolino
Date: January 4, 2017
Re: Proposed MRI Addition at Northeastern Vermont Regional Hospital

This memo confirms that Efficiency Vermont is working in partnership with Richard DeGrenia of Northeastern Vermont Regional Hospital and Craig Lewis of Fleck & Lewis Architects, P.C. on the proposed addition to accommodate a permanent MRI machine, peripheral equipment, and associated building systems at Northeastern Vermont Regional Hospital located on Hospital Dr., St. Johnsbury, Vermont.

As part of the project team, Efficiency Vermont has a designated energy consultant, who will provide support services as part of the design process, including:

- Technical assistance & recommendations on energy efficiency opportunities
- Cost/benefit analysis of options
- Collaboration with engineers and contractors
- Provide "Objective Expertise"
- Financial incentives & assistance

The collaborative goal of these efforts is to achieve the highest levels of efficiency that are appropriate for a project of this nature, and in the process, reduce energy costs, strengthen the economy, and protect our environment.

Please feel free to contact me with any questions.

Sincerely,

A handwritten signature in cursive script that reads "Rachael Mascolino".

Rachael Mascolino
Senior Energy Consultant
Efficiency Vermont
(802) 540-7846 | rmascolino@veic.org

APPENDIX 6

February 24, 2017
Northeastern Vermont Regional Hospital
St. Johnsbury, Vermont

Proposed New MRI Addition

**Summary of Compliance with FGI Guidelines for Hospitals and Outpatient Facilities
2014 Edition**

2.2-3.4.4 Magnetic Resonance Imaging (MRI) Facilities

2.2-3.4.4.1 General: Re: suite and room sizes. Rooms are sized to comply with manufacturer's technical specifications

2.2-3.4.4.2 MRI Scanner room space requirements:

- 1) Re: Scanner Room: Scanner room will be large enough to accommodate manufacturer's required clearances.
- 2) Re: Minimum Clearances: A minimum clearance of 4 feet on all sides will be maintained.

2.2-3.4.4.3 Planning the configuration of the MRI Suite:

- 1) Re: ACR four-zone screening: The floor plan is designed to comply with the ACR "Guidance Document for Safe MR Practices". The four zones are indicated on the floor plans.
- 2). Re: FDA requirements related to 5-gauss line: The 5-gauss line is contained within the magnet room except at the North exterior wall where appropriate fencing will prevent access.
- 3). Re: various provisions of the layout:
 - a). Re: Patient interviews: Patient interviews and clinical screening will take place in existing portions of the radiology suite.
 - b). Re: Physical screening: Physical screening will be done in Zone II, patient waiting area or injection area.
 - c). Re: Ferromagnetic screening: Ferromagnetic screening will also be done in Zone II, patient waiting room or injection area. In addition here will be a ferromagnetic detection device at the entrance to the magnet room.
 - d). Re: Access control: Badge access control to Zones III and IV. MRI personnel only. Entry to Zones III and IV are in sight of MRI technologist.
 - e). Re: Site specific clinical requirements: No special requirements beyond changing area, waiting area, and injection area.
 - f). Re: Containment of non-MRI-safe objects: Non-MRI-safe objects will be stored outside of Zones III and IV whenever possible. All non-MRI-safe objects (e.g. chairs) that are housed within Zone III (none should be housed in Zone IV) will be under the direct supervision of MRI personnel in order to ensure that they do not enter Zone IV.
 - g). Re: Storage for patient belongings: Lockers will be provided in the changing room.

4). Re: Control Vestibule: An access control vestibule is indicated on the floor plans. It is outside the restricted area of the MRI field. Patients and providers must pass through it before entering the control room or the scanning area.

5). Re: Restricted access to areas with field strength greater than 5-gauss: The 5-gauss line is contained within the treatment room. Access will be via a locking door controlled from the control console.

2.2-3.4.4.4 Superconducting MRI: Re: Cryogen venting: Cryogen venting will be through the roof. A pressure relief hatch is indicated on the floor plan.

2.2-3.4.4.5 Hand-Washing Station: A hand wash station is provided and is indicated on the floor plan.

2.2-3.4.4.6 MRI Control Room:

1). Re: View from control room: The control room is provided with a full view of the patient and all activity in the MRI room.

a). Re: Position of control console: The control console will have a full view of the approach and entrance to the MRI room.

b). Re: Obstructed view from console: The door to the MRI room will not block the view of the operator console when it is in the open position.

2). Re: number of rooms served by the control room: The control room will serve only one scanner room.

3). Re: Patient resuscitation: There is room for patient resuscitation in the access control vestibule outside of the 5-gauss line.

2.2-3.4.4.7 Pre-Procedure patient care area or room: Re: Interventional imaging: There are no plans to perform interventional MRI.

2.2-3.4.4.8 Computer room:

1). Re: number provided: One computer equipment room is provided and is indicated on the floor plan.

2). Re: Number of scanners: The computer room in this project will serve only one MRI scanner.

2.2-3.4.4.9 Equipment installation requirements:

1). Re: Power conditioning and supply: Power conditioning and uninterrupted power supply systems will be designed per manufacturer's requirements.

2). Re: Magnetic shielding: Magnetic shielding will not be required for this project.

2.2-3.4.4.10 Special design elements for the MRI scanner room:

1). General:

a). Re: Ferromagnetic materials in the scanner room: No ferromagnetic materials will be allowed in the scanner room.

b). Re: RFI shielding: RFI shielding will be designed for site specific conditions.

2). Architectural details:

a). Re: Floor structure: The floor structure will be a concrete slab on grade.

b). Re: Door swing: The door to the scanner room will swing out.

c). Re: Magnet-on indicators: A "magnet-on" light will be provided.

d). Re: Acoustic controls: Acoustic materials will be used within the room for sound control and the room itself is not adjacent to any other spaces so room to room transmission should not be a problem.

Prepared by Craig O. Lewis, Vermont License #1890
Fleck and Lewis Architects, Hanover, NH

APPENDIX 7

NVRH
 CON Application - MRI Replacement
 Docket No. GMCB-009-15con
 Trended MRI Volume

	Actual FY 2014	Actual FY 2015	Actual FY 2016	Budget FY 2017	Projected FY 2017
Inpatient MRI Scans	64	83	101	85	100
Outpatient MRI Scans	969	1,142	1,134	1,131	1,225
Total MRI Scans	1,033	1,225	1,235	1,216	1,325