



North Carolina Department of Health and Human Services
Division of Health Service Regulation

Pat McCrory
Governor

Richard O. Brajer
Secretary DHHS

Drexdal Pratt
Division Director

VIA EMAIL ONLY

December 18, 2015

Tiffany Brooks
MedQuest Associates, Manager, Certificate of Need

Exempt from Review – Replacement Equipment

Record #: 1821
Facility Name: Novant Health Breast Clinic
FID #: 060617
Business Name: Foundation Health Systems, Corp., an affiliate of Novant Health, Inc.
Business #: 767
Project Description: Replace an existing dedicated breast MRI scanner
County: Forsyth

Dear Ms. Brooks:

The Healthcare Planning and Certificate of Need Section, Division of Health Service Regulation (Agency), determined that based on your letter emailed on December 16, 2015, the above referenced proposal is exempt from certificate of need review in accordance with G.S 131E-184(a)(7). Therefore, you may proceed to acquire, without a certificate of need, the Siemens Aera 1.5 T MRI scanner, with special breast coil. This determination is based on your representations that the replacement unit will be used for breast scans only and the unit being replaced will be removed from North Carolina and will not be used again in the State without first obtaining a certificate of need.

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

It should be noted that the Agency's position is based solely on the facts represented by you and that any change in facts as represented would require further consideration by this office and a



Healthcare Planning and Certificate of Need Section

www.ncdhhs.gov

Telephone: 919-855-3873 • Fax: 919-715-4413

Location: Edgerton Building • 809 Ruggles Drive • Raleigh, NC 27603

Mailing Address: 2704 Mail Service Center • Raleigh, NC 27699-2704

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separate determination. If you have any questions concerning this matter, please feel free to contact this office.

Sincerely,



Celia C. Inman
Project Analyst



Martha J. Frisone,
Assistant Chief, Certificate of Need

cc: Kelli Fisk, Program Assistant, Healthcare Planning
Denise Gunter
Per Normark



Registration and Inventory of Medical Equipment
Fixed Magnetic Resonance Imaging Scanners
January 2015

✓
KF
2-7-15

Instructions

This is the legally required "Registration and Inventory of Medical Equipment" (G.S. 131E-177) for fixed magnetic resonance imaging (MRI) scanners. Please complete all sections of this form and return to the Medical Facilities Planning Branch by **Friday, January 30, 2015**.

1. Complete and sign the form
2. Return the form by one of two methods:
 - a. Email a scanned copy to DHSR.SMFP.Registration-Inventory@dhhs.nc.gov
 - b. Mail the form to Kelli Fisk, Medical Facilities Planning Branch, 2714 Mail Service Center, Raleigh, NC 27699-2714.

Note: Fixed equipment operated in a facility licensed under a hospital should be reported on that hospital's license renewal application, and not duplicated on this form.

If you have questions, call Kelli Fisk in the Medical Facilities Planning Branch at (919) 855-3865 or email DHSR.SMFP.Registration-Inventory@dhhs.nc.gov.

Section 1: Contact Information

1. Full legal name of corporation, partnership, individual, or other legal entity that acquired the equipment by purchase, donation, lease, transfer, or comparable arrangement:

Forsyth Memorial Hospital, Inc. d/b/a/ Novant Health Imaging Breast Center. former d/b/a Forsyth Medical Center Imaging – Breast Clinic (FMCI-Breast Clinic)

(Legal Name)

2. Address of the corporation, partnership, individual, or other legal entity that acquired the equipment:

2025 Frontis Plaza Blvd, Suite 300

(Street and Number)

Winston-Salem

(City)

NC 27103

(State) (Zip)

(336) 397-6035

(Phone Number)

3. Chief Executive Officer or approved designee who is certifying the information in this registration form:

Kelly A. Israel

(Name)

Project Coordinator

(Title)

3480 Preston Ridge Road, Suite 600

(Street and Number)

Alpharetta

(City)

GA

(State)

30005

(Zip)

(770) 300-0101

(Phone Number)

kisrael@medquestmail.com

(Email)

4. Information Compiled or Prepared by: kisrael@medquestmail.com

(Name)

(678) 992-7235

(Phone Number)

kisrael@medquestmail.com

(Email)



Section 2: Equipment and Procedures Information

Time Period for Report: 10/01/2013 – 9/30/2014 Other time period: _____

(Please make additional copies of pages of this form as needed.)

	Scanner Number	Scanner Number
Manufacturer/Tesla	Aurora 1.5T	
Model Number		
Open or Closed Scanner	Closed-Breast	
Serial or I.D. Number	678293	
Date of acquisition	November 2007	
Purchase price (if purchased)	\$1,430,680	
Certificate of Need Project ID	G-7601-06	
Certificate Holder, as listed on Certificate of Need	Excel Imaging	
If Leased or Rented, Name Owner of Equipment		
Service Site Information: Please include all of the information requested for each location.	Service Site <u>Novant Health Imaging Breast Ctr</u> Address <u>2025 Frontis Plaza Blvd Suite 300</u> City, State, Zip <u>Winston-Salem, NC 27103</u> County <u>Forsyth</u>	Service Site _____ Address _____ City, State, Zip _____ County _____
Inpatient Procedures*: - with Contrast or Sedation - without Contrast or Sedation Outpatient Procedures*: - with Contrast or Sedation - without Contrast or Sedation Total Number of Procedures	Inpatient: with: _____ w/out: _____ Total: _____ Outpatient: with: <u>514</u> w/out: <u>7</u> Total: <u>521</u> ✓ Total: <u>521</u>	Inpatient: with: _____ w/out: _____ Total: _____ Outpatient: with: _____ w/out: _____ Total: _____ Total: _____
Put a check by the days per week, and write in the number of hours per day, the scanner is in operation.	<u>✓</u> Sun: _____ hours <u>✓</u> Mon: <u>11</u> hours <u>✓</u> Tue: <u>11</u> hours <u>✓</u> Wed: <u>11</u> hours <u>✓</u> Thu: <u>11</u> hours <u>✓</u> Fri: <u>11</u> hours Sat: _____ hours	____ Sun: _____ hours ____ Mon: _____ hours ____ Tue: _____ hours ____ Wed: _____ hours ____ Thu: _____ hours ____ Fri: _____ hours ____ Sat: _____ hours
Total number of hours in operation for report period	2,805 Hours	

*An MRI procedure is defined as a single discrete MRI study of one patient (single CPT coded procedure). An MRI study means one or more scans relative to a single diagnosis or symptom. The total number of procedures should be equal to or more than the total number of patients reported on the MRI Patient Origin Table on page 5 of this form.

Name of entity that acquired the equipment (from page 1) Novant Health Imaging – Breast Center



Section 3: MRI Procedures by CPT Code by Service Site

Please write the number of procedures provided by CPT Code during the time period of this report. Report separately for each service site. Make additional copies of pages 3 and 4 as needed. The total number of procedures should equal the total number of procedures reported on page 2 of this form.

Service Site Name: Novant Health Imaging Breast Center

CPT Code	CPT Description	Number of Procedures
70336	MRI Temporomandibular Joint(s)	
70540	MRI Orbit/Face/Neck w/o contrast	
70542	MRI Orbit/Face/Neck with contrast	
70543	MRI Orbit/Face/Neck w/o & with contrast	
70544	MRA Head w/o contrast	
70545	MRA Head with contrast	
70546	MRA Head w/o & with contrast	
70547	MRA Neck w/o contrast	
70548	MRA Neck with contrast	
70549	MRA Neck w/o & with contrast	
70551	MRI Brain w/o contrast	
70552	MRI Brain with contrast	
70553	MRI Brain w/o & with contrast	
7055A	IAC Screening	
71550	MRI Chest w/o contrast	
71551	MRI Chest with contrast	
71552	MRI Chest w/o & with contrast	
71555	MRA Chest with OR without contrast	
72126	Cervical Spine Infusion only	
72141	MRI Cervical Spine w/o contrast	
72142	MRI Cervical Spine with contrast	
72156	MRI Cervical Spine w/o & with contrast	
72146	MRI Thoracic Spine w/o contrast	
72147	MRI Thoracic Spine with contrast	
72157	MRI Thoracic Spine w/o & with contrast	
72148	MRI Lumbar Spine w/o contrast	
72149	MRI Lumbar Spine with contrast	
72158	MRI Lumbar Spine w/o & with contrast	
72159	MRA Spinal Canal w/o OR with contrast	
72195	MRI Pelvis w/o contrast	
72196	MRI Pelvis with contrast	
72197	MRI Pelvis w/o & with contrast	
72198	MRA Pelvis w/o OR with contrast	
73218	MRI Upper Ext, other than joint w/o contrast	
73219	MRI Upper Ext, other than joint with contrast	
73220	MRI Upper Ext, other than joint w/o & with contrast	
	Subtotal for page	0

Name of entity that acquired the equipment (from page 1) Novant Health Imaging – Breast Center



Section 3: MRI Procedures by CPT Code by Service Site continued

Service Site Name: Novant Health Imaging Breast Center

CPT Code	CPT Description	Number of Procedures
73221	MRI Upper Ext, any joint w/o contrast	
73222	MRI Upper Ext, any joint with contrast	
73223	MRI Upper Ext, any joint w/o & with contrast	
73225	MRA Upper Ext, w/o OR with contrast	
73718	MRI Lower Ext other than joint w/o contrast	
73719	MRI Lower Ext other than joint with contrast	
73720	MRI Lower Ext other than joint w/o & with contrast	
73721	MRI Lower Ext any joint w/o contrast	
73722	MRI Lower Ext any joint with contrast	
73723	MRI Lower Ext any joint w/o & with contrast	
73725	MRA Lower Ext w/o OR with contrast	
74181	MRI Abdomen w/o contrast	
74182	MRI Abdomen with contrast	
74183	MRI Abdomen w/o & with contrast	
74185	MRA Abdomen w/o OR with contrast	
75557	MRI Cardiac Morphology w/o contrast	
75561	MRI Cardiac Morphology with contrast	
75554	MRI Cardiac Function Complete	
75555	MRI Cardiac Function Limited	
75563	MRI Cardiac Velocity Flow Mapping	
77058	MRI Breast, unilateral w/o and/or with contrast	5
77059	MRI Breast, bilateral w/o and/or with contrast	509
76125	Cineradiography to complement exam	
76390	MRI Spectroscopy	
76393	MRI Guidance for needle placement	7
76394	MRI Guidance for tissue ablation	
76400	MRI Bone Marrow blood supply	
7649A	MR functional imaging	
7649D	MRI infant spine comp w/ & w/o contrast	
7649E	Spine (infants) w/o infusion	
7649H	MR functional imaging	
N/A	Clinical Research Scans	
	Subtotal for page	521
	Total Number of Procedures (both pages)	521

Total Number of Procedures for All Service Sites: 521

Name of entity that acquired the equipment (from page 1) Novant Health Imaging – Breast Center



Section 4: Patient Origin Data by Service Site

Please provide the county of residence for each patient who received MRI services during the time period of this report. Provide patient origin data separately for each service site. Make additional copies of this page as needed. The total number of patients receiving services should be equal to or less than the total number of procedures reported on page 2 of this form.

Service Site Name: Novant Health Imaging Breast Center

County in which service was provided: _____

Patient County	Number of Patients	Patient County	Number of Patients	Patient County	Number of Patients
1. Alamance		37. Gates		73. Person	
2. Alexander	1	38. Graham		74. Pitt	
3. Alleghany	1	39. Granville		75. Polk	
4. Anson		40. Greene		76. Randolph	1
5. Ashe	3	41. Guilford	12	77. Richmond	
6. Avery		42. Halifax		78. Robeson	
7. Beaufort		43. Harnett		79. Rockingham	2
8. Bertie		44. Haywood		80. Rowan	1
9. Bladen		45. Henderson		81. Rutherford	
10. Brunswick		46. Hertford		82. Sampson	
11. Buncombe		47. Hoke		83. Scotland	
12. Burke		48. Hyde		84. Stanly	
13. Cabarrus		49. Iredell	3	85. Stokes	32
14. Caldwell	1	50. Jackson		86. Surry	31
15. Camden		51. Johnston		87. Swain	
16. Carteret		52. Jones		88. Transylvania	
17. Caswell		53. Lee		89. Tyrrell	
18. Catawba		54. Lenoir		90. Union	
19. Chatham		55. Lincoln		91. Vance	
20. Cherokee		56. Macon		92. Wake	
21. Chowan		57. Madison		93. Warren	
22. Clay		58. Martin		94. Washington	
23. Cleveland		59. McDowell		95. Watauga	1
24. Columbus		60. Mecklenburg		96. Wayne	
25. Craven		61. Mitchell		97. Wilkes	19
26. Cumberland		62. Montgomery		98. Wilson	
27. Currituck		63. Moore		99. Yadkin	22
28. Dare		64. Nash		100. Yancey	
29. Davidson	44	65. New Hanover			
30. Davie	29	66. Northampton		101. Georgia	
31. Duplin		67. Onslow		102. South Carolina	
32. Durham		68. Orange		103. Tennessee	
33. Edgecombe		69. Pamlico		104. Virginia	17
34. Forsyth	245	70. Pasquotank		105. Other (specify)	1
35. Franklin		71. Pender			
36. Gaston		72. Perquimans		Total Number of Patients	466

Name of entity that acquired the equipment (from page 1) Novant Health Imaging – Breast Center



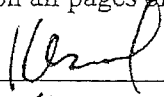
Section 5: Reimbursement/Payment Source

Please provide the source of reimbursement/payment for MRI procedures. Total procedures should equal the total number of procedures reported on page 2 of this form.

Primary Payer Source	Number of MRI Procedures
Self Pay	2
Medicare & Medicare Managed Care	175
Medicaid	8
Commercial Insurance	21
Managed Care	301
Unreimbursed Care (Indigent/Charity)	14
Other (Specify)	
Total	521

Section 6: Certification and Signature

The undersigned Chief Executive Officer or approved designee certifies the accuracy of the information contained on all pages of this form.

Signature 
 Print Name Kelly Israel
 Date signed 1/30/15

Please complete all sections of this form and return to the Medical Facilities Planning Branch by **Friday, January 30, 2015.**

1. Complete and sign the form
2. Return the form by one of two methods:
 - a. Email a scanned copy to DHSR.SMFP.Registration-Inventory@dhhs.nc.gov
 - b. Mail the form to Kelli Fisk in the Medical Facilities Planning Branch, 2714 Mail Service Center, Raleigh, NC 27699-2714.

If you have questions, call Kelli Fisk in the Medical Facilities Planning Branch at (919) 855-3865 or email DHSR.SMFP.Registration-Inventory@dhhs.nc.gov.

Name of entity that acquired the equipment (from page 1) Novant Health Imaging – Breast Center

MedQuest

ASSOCIATES

December 16, 2015



VIA EMAIL

Martha J. Frisone, Assistant Chief
North Carolina Department of Health and Human Services
Division of Health Service Regulation
Certificate of Need Section
809 Ruggles Drive
Raleigh, North Carolina 27603

Re: Notice of Replacement Equipment for Health Service Area II, Forsyth County/Novant Health Breast Clinic in Winston-Salem, North Carolina

Dear Martha:

On behalf of Novant Health and in accordance with N.C. Gen. Stat. § 131E-184(a)(7), I am writing to notify the Department of Novant Health's intention to (1) replace an existing dedicated breast MRI scanner currently located at Novant Health Breast Clinic.

Novant Health Breast Clinic (NHBC) owns an Aurora Breast MRI Scanner ("Aurora") that was acquired in 2007¹. See Exhibit B, attached replacement equipment comparison form. This MRI scanner is the subject of this replacement request. The Aurora equipment manufacturer has gone out of business and cannot replace or repair the Novant Health Aurora unit. Novant Health intends to replace the existing Aurora with a Siemens Aera 1.5T MRI scanner ("Siemens Aera") and a special breast coil, which will offer the same, if not improved, scanning results for breast imaging. The replacement breast MRI scanner will only be used for breast scans.

The estimated construction costs, including architect's fees and project contingency, for the proposed replacement equipment total \$350,278. The purchase price of the Siemens Aera is \$1,587,069. The total capital expenditure for the proposed replacement equipment project is \$1,947,347.

This proposal meets the definition of "replacement equipment" as set forth in N.C. Gen. Stat. § 131E-176(22a) because:

1. The cost of the equipment and the cost of all activities essential to acquiring and making operational the replacement equipment are less than \$2 million; and
2. The sole purpose of this proposal is to replace comparable medical equipment currently in use, which will be sold or otherwise disposed of when replaced.

¹ Novant Health was approved to acquire the fixed dedicated breast scanner in November 2006 (Project ID No. G-7601-06).

Further, this proposal meets the requirements of 10A NCAC 14C .0303(d) because:

- The Siemens Aera has the same technology as the Aurora although it may possess expanded capabilities due to technological improvements;
- The Siemens Aera is functionally similar and is used for the same diagnostic or treatment purposes as the Aurora and is not used to provide a new health service; and
- The acquisition of the Siemens Aera will not result in more than a 10% increase in patient charges or per procedure operating expenses within the first twelve months after the replacement equipment is acquired.

None of the exclusions in 10A NCAC 14C .0303(e) applies here.

Based on the foregoing, Novant Health respectfully requests that the CON Section confirm, in writing that the above referenced proposal is exempt from CON review pursuant to N.C. Gen. Stat. § 131E-184(a)(7).

Thank you for your time and attention.

Sincerely,



Tiffany Brooks
Manager, Certificate of Need

Enclosures

cc: Denise Gunter
Per Normark

SIEMENS

Siemens Medical Solutions USA, Inc.
40 Liberty Boulevard, Malvern, PA 19355
Fax: (866) 309-6967

SIEMENS REPRESENTATIVE
Karen Dixon - (865) 360-8644

PRELIMINARY PROPOSAL

Customer Number: 0000075931

Date: 12/15/2015

NOVANT HEALTH BREAST CENTER

2025 Frontis Plaza Blvd. Greystone Professional Ctr. Suite 300
Winston Salem, NC 27103

Quote Nr:

1-DBICFK Rev. 1

MAGNETOM Aera - USA

All items listed below are included for this system:

Qty	Part No.	Item Description
1	14416900	MAGNETOM Aera - System MAGNETOM Aera - 1.5T Tim+Dot system - The integration of the next generation Tim - "Tim 4G" and the Siemens unique Dot Engines (Day optimizing throughput Engine). Short and open appearance (145 cm system length with 70 cm Open Bore Design). Tim 4G's redesigned RF system and all-new coil architecture. - Siemens unique DirectRF(tm) technology enable Tim's new all digital-in/ digital-out design - All-new coil architecture including Dual-Density Signal Transfer Technology - Whole-body superconductive Zero Helium Boil-Off 1.5T magnet - TrueForm Magnet and Gradient Design - Actively Shielded water-cooled Siemens gradient system - Head/Neck 20 DirectConnect, Spine 32 DirectConnect, Body 18, Flex Large/Small 4 Dot offers patient personalization, user guidance and process automation that result in consistent examination results. - Brain Dot Engine is designed to simplify general brain examinations through personalized, guided and automated workflows. - Dot Display and Dot Control Centers - efficient patient preparation. Additional features include: -Tim Application Suite including Neuro, Angio, Cardiac, Body, Onco, Breast, Ortho, Pediatric and Scientific Suite - syngo MR software including 1D/2D PACE, syngo BLADE, iPAT ² , Phoenix, Inline Technologies. - High performance host computer and measurement and reconstruction system 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.
1	14416901	Tim [204x48] XJ Gradients #Ae 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.
1	08464872	PC Keyboard US english #Tim Standard PC keyboard with 101 keys.
1	14416914	Pure White Design #T+D 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 asymmetrical deco area on the left side is colored white matte and also with a brilliant surrounding silver trim. The table cover is presented also in the same color and material selection.
1	14416905	Tim Table #Ae The new Tim Table is designed for maximized patient comfort and smooth patient preparation.

SIEMENS

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Fax: (866) 309-6967

SIEMENS REPRESENTATIVE
Karen Dixon - (865) 360-8644

PRELIMINARY PROPOSAL

Qty	Part No.	Item Description
1	14441850	<p>The unique design of the Tim Table can support up to 250 kg (550 lbs) patients without restricting the vertical or horizontal movement.</p> <p>SW syngo MR E11 syngo MR E11 software with new Dot features and applications.</p> <p>DotGO Go for consistent results, efficiently with Dot engines.</p> <p>Dot Cockpit The central tool to continuously build knowledge into standardized exam strategies and to make those available for every user in the MRI department. Dot Cockpit is the new starting point for every exam.</p> <p>- TGSE - WARP including VAT</p>
1	14441748	<p>Quiet Suite #T+D Quiet Suite enables complete, quiet examinations for neurology and orthopedics with at least 70% reduction in sound pressure levels.</p>
1	14441866	<p>DotGO Routine Package #T+D The DotGO Routine Package includes both: - Spine Dot Engine and - Large Joint Dot Engine.</p> <p>As a package they offer a comprehensive set of workflows with guidance and automation, for standardized image quality in Spine and MSK MR imaging. The Spine Dot Engine provides the functionality of Inline Composing and Tim Planning Suite for streamlining workflows in all spine imaging. Tools, such as auto-positioning and vertebral recognition with AutoAlign Spine, AutoCoverage and Spine Labelling support and optimize reproducibility for your cervical, thoracic and lumbar spine imaging for all clinical indications. The Large Joint Dot Engine enhances standardization of the knee, hip and shoulder workflows and optimizes reproducible image quality by incorporating automation tools, such as anatomically based auto-positioning (AutoAlign). Dedicated imaging techniques, such as Advanced WARP, are included and can help to expand the access of diagnostic MRI to a broader range of patient types.</p>
1	14405224	<p>Composing syngo #Tim This application provides dedicated evaluation software for creation of full-format images from overlapping MR volume data sets and MIPs (starting from syngo MR B13) acquired at multiple stages.</p>
1	14430391	<p>RESOLVE #T+D RESOLVE is a diffusion-weighted, readout-segmented EPI sequence optimized towards high resolution imaging with reduced distortions. The sequence uses a very short echo-spacing compared to single-shot EPI, substantially reducing susceptibility effects. A 2D-navigator correction is applied to avoid artefacts due to motion-induced phase errors. This combination allows diffusion weighted imaging of the breast, prostate, brain and spine with a high level of detail and spatial precision.</p>
1	14416908	<p>Tim Whole Body Suite #T+D Tim Whole Body Suite puts it all together. This suite enables table movement for imaging of up to 205 cm (6' 9") FoV without compromise. In combination with Tim's newly designed ultra highdensity array higher spatial and temporal resolution can be achieved along with unmatched flexibility of any coverage up to Whole Body. For faster exams and greater diagnostic confidence.</p>
1	14405328	<p>TWIST syngo #Tim This package contains a Siemens unique sequence and protocols for time-resolved (4D) MR angiographic and dynamic imaging in general with high spatial and temporal resolution. syngo TWIST supports comprehensive dynamic MR angio exams in all body regions. It offers temporal information of vessel filling in addition to conventional static MR angiography, which can be beneficial in detecting or evaluating malformations such as</p>

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PRELIMINARY PROPOSAL

Qty	Part No.	Item Description
		shunts. In case of general dynamic imaging, for example an increase in spatial resolution by a factor of up to 2 at 60 seconds temporal resolution (compared to conventional dynamic imaging) is possible due to intelligent k-space sampling strategies. Alternatively, increased temporal resolution at constant spatial resolution is possible.
1	14430458	Breast Dot Engine, USA #T+D A set of predefined Breast Dot Engines are provided for lesion detection, implant evaluation and breast biopsy. The Engines offer a comprehensive set of user guidance, workflow automation and personalization towards the individual patient so that excellent image quality and increased consistency for breast diagnosis and intervention can be achieved. The following Breast Dot Engine configurations will be provided: <ul style="list-style-type: none">- 16ch AI FatSat- 16ch AI NonFatSat- 4ch BI FatSat- 4ch BI NonFatSat- 8ch Sentinelle FatSat- 8ch Sentinelle NonFatSat- Biopsy Sentinelle 4/2ch- Biopsy 4ch BI They include: <ul style="list-style-type: none">- Patient View for fast adaptation to patient conditions- Evaluation of patients implant situation- Guidance View with image and text guidance- Auto-Coverage- Auto Bolus Detection- Inline MPR Planning- Display of Biopsy Target Coordinates at Dot Display if a Siemens' planning software is used.
1	14436740	syngo BreVis Biopsy #T +D syngo BreVis Biopsy is a task card for easy and effective breast biopsy planning for the Acquisition Workplace (AWP).
1	14416963	2/4/8-ch Sentinelle BreastCoil #Ae 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. 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. The preamplifiers are integrated into the coil. The coil is iPAT-compatible. A positioning guidance is provided.
1	14407259	MR Workplace Table, height adjust. The table is suitable for the syngo Acquisition Workplace and the syngo MR Workplace based on syngo hardware. This 110V version has motorized table height adjustment.

SIEMENS

Siemens Medical Solutions USA, Inc.
40 Liberty Boulevard, Malvern, PA 19355
Fax: (866) 309-6967

SIEMENS REPRESENTATIVE
Karen Dixon - (865) 360-8644

PRELIMINARY PROPOSAL

Qty	Part No.	Item Description
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	MR Standard Rigging & Install
1	MR_BUDG_AD	Budgetary Add'l/Out of Scope Rigging
1	DL_RIG	
1	MR_PREINST_FIXED	T+D Preinstall kit for fixed table
1	MR_CRYO	Standard Cryogenes
1	MR_PM	MR Project Management 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.

SIEMENS

Siemens Medical Solutions USA, Inc.
40 Liberty Boulevard, Malvern, PA 19355
Fax: (866) 309-6967

SIEMENS REPRESENTATIVE
Karen Dixon - (865) 360-8644

PRELIMINARY PROPOSAL

Qty	Part No.	Item Description
1	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.
1	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.
1	MR_INT_DOT_BCLS	MR Dot Training Class 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.
1	MR_ADD_24	Additional onsite training 24 hours 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.
1	4MR5142869	Armrest #MR
1	KKTECOMR_6 0	KKT ECOCHILLER 133L 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. The cooling system must be used in combination with the IFP (Interface Panel), if there is no on-site chilled water supply at all. The IFP is included in the scope of supply.
1	CHILINST_AVT	Chiller Start-up and Warranty for TIM

System Total: \$1,587,069

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PRELIMINARY PROPOSAL

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.

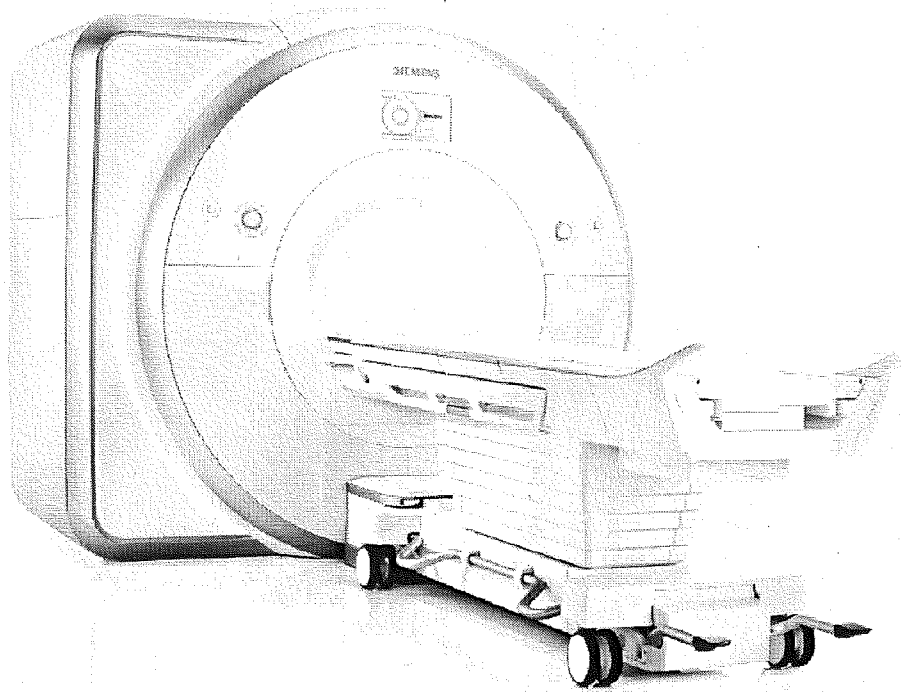
Siemens Healthcare is pleased to submit this Preliminary Pricing Proposal. A Preliminary Pricing Proposal is provided for planning purposes only; it is not contractually binding. To receive a contractually binding proposal for the Products listed above, inclusive of Terms, Conditions, and Warranty coverage, please contact your Siemens Healthcare Sales Representative.

Siemens Healthcare

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SIEMENS

MAGNETOM AERA 1.5T TYPICAL ROOM PLAN

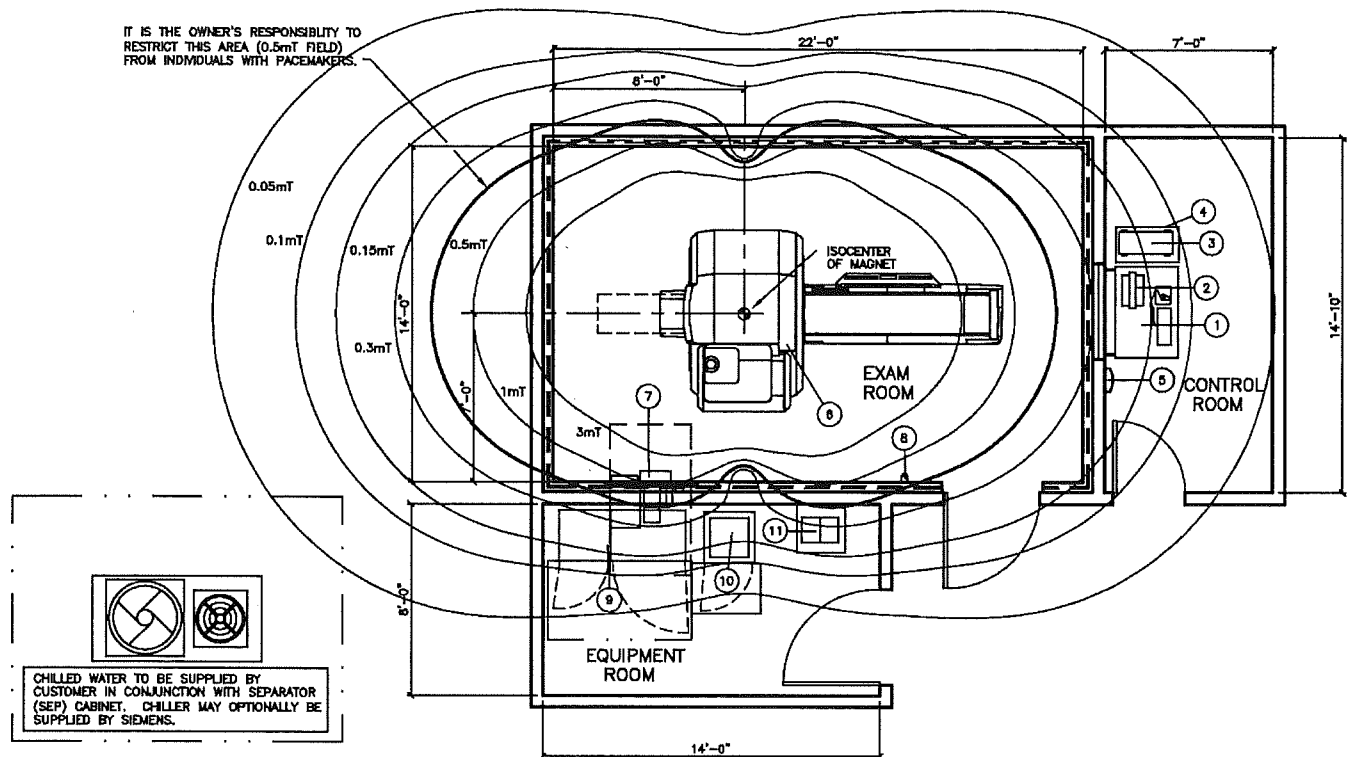


The intended use for this Cut Sheet is to communicate the spatial requirements as well as the basic architectural, electrical, structural, and mechanical requirements for this piece of imaging equipment. The information provided in this document is for reference only, during the pre-planning stage, and 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.

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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	46 1/2	21 3/4	21 1/2	
⑧	MAGNET STOP	Ⓢ	1	---	3	5	3	
⑨	ELECTRONICS CABINET (GPA/EPC CABINET)	Ⓟ	3,307	13,649	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)	Ⓢ	186	1,257*	16 7/8	12 7/8	16 1/4	*1,755 ON BATTERIES

SIEMENS

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NOT FOR CONSTRUCTION.

MAGNETOM AERA 1.5T SPECIFICATIONS

POWER REQUIREMENTS

VOLTAGE RANGE: 480 VAC $\pm 10\%$ FOR ALL LINE AND LOAD CONDITIONS.
VOLTAGE BALANCE: 2% MAXIMUM DIFFERENCE BETWEEN PHASES

FREQUENCY:	60 Hz \pm 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

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.

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	<65

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

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.

THIS SERVICE REQUIRES ONE OF THE FOLLOWING CONNECTION METHODS:

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: 10023

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 (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.

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.

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 EXTRANEEOUS 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.

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, 6'-0" DEEP WITH TABLE SUPPORT.

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

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

EQUIPMENT COMPARISON – MR REPLACEMENT

Novant Health Imaging – Breast Center

	EXISTING EQUIPMENT	REPLACEMENT EQUIPMENT
Type of Equipment (List Each Component)	MRI Scanner	MRI Scanner
Manufacturer of Equipment	Aurora	Siemens
Tesla Rating for MRIs	1.5T	1.5T
Model Number		
Serial Number	678293	TBD
Provider's Method of Identifying Equipment	Serial Number	Serial Number
Specify if Mobile or Fixed	Fixed	Fixed
Mobile Trailer Serial Number/VIN #	N/A	N/A
Mobile Tractor Serial Number/VIN #	N/A	N/A
Date of Acquisition of Each Component	Nov. 2007	TBD
Does Provider Hold Title to Equipment or Have a Capital Lease?	Title	N/A
Specify if Equipment Was/Is New or Used When Acquired	New	New
Total Capital Cost of Project (Including Construction, etc.) <Use Attached Form>	\$	\$1,947,347
Total Cost of Equipment	\$1,430,680	\$1,587,069
Fair Market Value of Equipment	\$	Same
Net Purchase Price of Equipment	Same	Same
Locations Where Operated	2025 Frontis Plaza Blvd. Winston-Salem, NC	2025 Frontis Plaza Blvd. Winston-Salem, NC
Number Days In Use/To Be Used in N.C. Per Year	255	255
Percent of Change in Patient Charges (by Procedure)	NA	NA
Percent of Change in Per Procedure Operating Expenses (by Procedure)	NA	NA
Type of Procedures Currently Performed on Existing Equipment	Breast MRI scans	
Type of Procedures New Equipment is Capable of Performing		Breast MRI scans

PROJECT CAPITAL COST

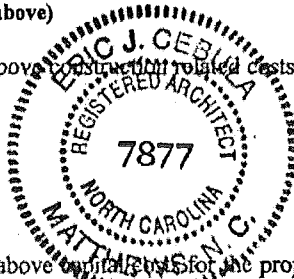
Project Name: Novant Health Imaging – Breast Center - Breast MRI Scanner Replacement

Proponent: Novant Health, Inc.

A. <u>Site Costs</u>			
(1)	Full purchase price of land	\$	N/A
	# Acres _____ Price per Acre \$ _____		
(2)	Closing costs	\$	_____
(3)	Site Inspection and Survey	\$	_____
(4)	Legal fees and subsoil investigation	\$	_____
(5)	Site Preparation Costs [Include]		
	Soil Borings		
	Clearing and Grading		
	Roads and Parking		
	Sidewalks		
	Water and Sewer		
	Excavation and Backfill		
	Termites Treatment		
	Sub-Total Site Preparation Costs	\$	_____
(6)	Other (Specify)	\$	_____
(7)	Sub-Total Site Costs		\$ _____
B. <u>Construction Contract</u>			
(8)	Cost of Materials [Include]		
	General Requirements		
	Concrete/Masonry		
	Woods/Doors & Windows/Finishes		
	Thermal & Moisture Protection		
	Equipment/Specialty Items		
	Mechanical/Electrical		
	Sub-Total Cost of Materials	\$	_____
(9)	Cost of Labor	\$	_____
(10)	Other	\$	_____
(11)	Sub-Total Construction Contract		<u>\$350,278</u>
C. <u>Miscellaneous Project Costs</u>			
(12)	Building Purchase	\$	_____
(13)	Fixed Equipment Purchase/Lease	\$	<u>\$1,587,069</u>
(14)	Movable Equipment Purchase/Lease	\$	_____
(15)	Furniture	\$	_____
(16)	Landscaping	\$	_____
(17)	Consultant Fees		
	Architect/Engineering Fees	\$	_____
	Legal Fees	\$	_____
	Market Analysis	\$	_____
	Other	\$	_____
	Total Consultant Fees	\$	_____
(18)	Financing Costs (e.g. Bond, Loan, etc.)	\$	Not Applicable
(19)	Interest During Construction	\$	Not Applicable
(20)	Other (Contingency)	\$	<u>10,000</u>
(21)	Sub-Total Miscellaneous		<u>\$1,597,069</u>
D.	Total Capital Cost of Project (Sum A-C above)		<u>\$1,947,347</u>

I certify that to the best of my knowledge, the above construction related costs of the proposed project named above are complete and correct.

(Signature of Licensed Architect or Engineer)



I assure that, to the best of my knowledge, the above capital costs for the proposed project are complete and correct and that it is my intent to carry out the proposed project as described.

(Proponent – signature of officer)

(Title of officer)

Per [Signature]
ATTY IN FACT

BC MEDICINE
ATTORNEY IN FACT