**Applicant’s Responses**

**9/30/2020**

*Responses should be sent to DoN staff at* [DPH.DON@State.MA.US](mailto:DPH.DON@State.MA.US)

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| While you may submit each answer as available, please   * List question number and question for each answer you provide * Submit responses as a separate word document, using the above application title and number as a running header and page numbers in the footer * When providing the answer to the final question, submit all questions and answers in one final document * Submit responses in WORD or EXCEL; only use PDF’s if absolutely necessary. If “cutting and pasting” charts, provide them in a PDF so they can be clearly seen |

**Questions**

1. **Based on your long term strategic planning, as we approach the end of the stated timeframe for the build-out of the Hospital of the Future (HOF) provide an account of the status by floor of the 7 story HOF:**
   1. **which areas are complete, what is in those spaces and will thus no longer be considered part of this long term project (DoN#1-3B36),**
      1. Basement – Will be complete after this DoN amendment; floor is fit-out as mechanical, electrical, locker rooms, support spaces, and SPD
      2. First Floor – Will be complete after this DoN amendment; floor is fit-out as the emergency department with a small portion supporting the ORs above
      3. Second Floor – Will be complete after this DoN amendment; floor is fit-out as a surgical and procedure floor
      4. Third Floor – Mass Mutual Wing (fit-out as ICU) and South Wing (fit-out as Pediatric Procedure Unit) are complete; North Wing remains shell space
      5. Fourth Floor – South Wing (fit-out as Pharmacy) is complete; Mass Mutual Wing and North Wing remain shell space
      6. Fifth Floor – Complete; Mass Mutual Wing and South Wing are fit-out as patient bed floors
      7. Sixth Floor – Complete; Mass Mutual Wing and South Wing are fit-out as patient bed floors
      8. Seventh Floor – Complete; Mass Mutual Wing and South Wing are fit-out as patient bed floors
   2. **which areas remain to be developed within the shell space of the HOF, and Include-**
      1. **where and how much GSF remains to be built out,** 
         1. Third Floor – North wing 20,777 SF
         2. Fourth Floor – Mass Mutual Wing 29,019 SF and North Wing 23,196 SF
      2. **what your intended uses for those areas is, and**
         1. Third Floor – Patient bed floor
         2. Fourth Floor – Mass Mutual Wing – ICU; North Wing – Patient bed floor
      3. **what your intended timeframe is.**
         1. The Baystate Medical Center facilities master plan was updated in 2019. This master plan identified the fit-out of these three patient bed floors to begin within 3-5 years. Due to the current COVID status, the previously agreed to timeframe has the potential to be re-evaluated pending available capital.
2. **What is the GSF of the vacated space for this Amendment?** Daly 1 – 43,194 SF
   1. **How will it be used?** The backfill of the vacated space on Daly 1 has not been determined. Baystate Medical Center has identified that it will likely be support space for the hospital. This area was not included as part of this DoN amendment. Once the use has been confirmed, BMC will submit a DoN if required.
   2. **Is the renovation of these spaces included in this Amendment?** No
3. **With respect to Table 8 that depicts the various Amendment project and the net effect of this project, truncated below, staff has calculated the difference between the currently approved GSF of each column. Explain** 
   1. **What renovations are you undertaking and where?** 
      1. Basement Level, SPD – Installing new washers and sterilizer to support second floor build-out
      2. First Floor, Lockers – Renovating the locker rooms, staff lounge space that serves the second floor to accommodate the larger volume of staff
      3. First Floor, Radiology – Renovating an existing reading room into a control room; replacing reading room in shell build-out
      4. First Floor, Radiology – Renovating existing storage and tech area into an ultrasound room; relocating the tech area
      5. Second Floor, ORs – Converting two existing ORs into Cath Labs; ORs will be replaced in shell build-out
      6. Second Floor, Support Space – Support space serving the existing six ORs needs to be reconfigured to serve the full floor build-out; this will be done in a phased approach to allow ORs to be kept operational during construction
      7. Third Floor, Vestibule/Corridor – Reconfiguration of existing entry vestibule and adjacent corridor to accommodate new surgical lobby and waiting room
   2. **On page 2 of your narrative, explain the difference in your statements of the build-out of 82,254GSF in the first paragraph and 60,921GSF in the chart below.**
      1. Refer to the paragraph at the bottom of page 2 of the narrative which states the 82,254 GSF includes the following: 60,921 GSF of shell space fit-out, 15,914 GSF of renovation, and 5,419 GSF of new addition for lobby/waiting expansion. The ‘New Const GSF’ number in column B includes the 60,921 GSF of shell space fit-out and the 5,419 GSF for the new addition. The 15,914 GSF for the renovation is listed separately in column D.

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|  |  |  | **Approved Gross Square Footage (“GSF”)** | | |  |
|  | **Approval**  **Date** | **Total GSF** | **New Const GSF**  **(without shell)** | **Shell Space**  **GSF** | **Renovation**  **GSF** | **Approved**  **MCE** |
|  |  | **A**  **(B+C+D)** | **B** | **C** | **D** | **E** |
| DoN #1-3B36 | 11/2007 | 641,250 | 303,300 | 295,800 | 42,150 | $239,318,527 |
| % change |  |  |  |  |  |  |
| Amendment 7 | 11/2018 | 703,560 | 509,389 | 133,913 | 60,258 | $411,125,829 |
| Proposed Project | - | 724,893 | 575,729 | 72,992 | 76,172 | $481,007,406 |
| Difference  Amend 7-project |  | 21,333 | 66,340 | -60,921 | 15,914 | $69,881,577 |

1. **On page 8 of your Application Narrative, you state that the Western MA region is underserved for the specialty of Neuro-interventional radiology.** 
   1. **What criteria have you used to determine this? Please provide supporting data such as wait times, referrals, or other such documentation.**

As previously stated, the hospital entered into a long-term arrangement for neurointerventional radiology physician services. This arrangement will support the Hospital’s existing acute stroke service that serves emergent cases. The additional physician support will also allow the Hospital to develop an elective service that is needed to serve patients who have had or are at risk of stroke and who may require further evaluation and intervention. Once treated, such neurovascular patients require a regular cadence of radiology studies performed to ensure that their condition remains stable.

Prior this arrangement, approximately 100-150 patients were referred annually for care to other regional neurovascular centers located in Hartford, CT, Albany, NY, Boston or Worcester, MA. This requires patients in need of ongoing services to travel outside the Hospital’s service area. This is not convenient for patients and can result in non-compliance with regular appointments and lead to poor outcomes. The Hospital believes that access to elective neuro-interventional radiology and related physician services will ensure improved health outcomes and quality of life for stroke patients and patients at risk for stroke and other neurological conditions.

The Hospital plans to pursue Joint Commission accreditation as a Comprehensive Stroke Center. The requirements for such accreditation includes the availability of two neurointerventional radiology suites to care for two acute stroke patients simultaneously. A dedicated neurointerventional suite and a shared suite will allow the Hospital to meet current accreditation standards.

* 1. **What is the capacity of an interventional radiology room?** The capacity for the room once fully ramped up is estimated to be 500 procedures per year. The majority of cases will come from the elective clinic that will be established as noted above.

1. **With respect to the addition of the CT in the ED at Baystate-** 
   1. **To what do you attribute the growth in CT volume of 15% from 2017-2019? Including, what is the reason for the 10% increase in cardiac patients.**

The growth in CT volume by 15% from 2017-2019 was largely due to a number of factors. Such factors include the increasing complexity of ED patients presenting at BMC when compared with peer institutions and the increased utilization of the BMC stroke program. In addition, CT angiography (“CTA”) of the head and neck is now being done for most potential stroke patients as a matter of protocol. With the advent of effective and more aggressive intra-arterial therapy, more patients are presenting to the ED with acute neurologic conditions, and the threshold for imaging with combined CT and CTA has diminished, dramatically increasing this volume. Due to the need for rapid diagnosis and therapy of vessel occlusion, these patients are imaged with CT and CTA immediately as both a diagnostic and triage tool. This same protocol is used at most stroke centers. Finally, stroke patients in the community hospital being considered for clot retrieval may get a CTA in the community hospital but the perfusion CT is performed at BMC. Perfusion CT provides greater detail about stroke size and the probability of improvement after intra-arterial therapy. It is not done in every stroke case but is used when the stoke is felt to be more than a few hours in age, which increases the risk of bleeding with therapy. CT perfusion can indicate the volume of salvageable brain and assists in the risk/benefit analysis of potential treatment.

The increase in cardiac CT is due to continued growth of endovascular aortic and mitral valve replacements as well as left atrial appendage clips (less expensive/invasive than surgical alternatives). The introduction of higher sensitivity troponin test for acute myocardial ischemia will increase the number of patients referred for coronary artery CTA in the acute setting. The new CT scanners have significantly improved cardiac CT capabilities and will result in some shift from echocardiography and MRI to CT. Cardiac CT volume has been suppressed to date by limited cardiac CT capabilities. The aging local population will increase disease prevalence and increase demand for cardiac imaging. Additionally, the respected national consulting firm The Advisory Board predicts 46% growth in cardiac CT over next 5 years. This projected growth is consistent with what BMC is experiencing.

* 1. **Provide the number of cases by specialty at the main campus.**

The number of cases by specialty at the main campus for FY19 is as follows:

Neuroradiology 32,848

Abdomen 15,201

Cardiovascular 6,397

Chest 6,594

Musculoskeletal 1,102

CT guidance, unspecified 903

**Total 63,072**

* 1. **Do you have an estimate of the number and percent of MRI’s for fractures that you describe might be avoided?**

MRI for fracture is used for injury to the hip. The estimated volume of hip MRI for occult fracture that could be avoided is relatively small, approximately 12 per year.

* 1. **Do you have the number and percent of second kidney scans that you describe might be avoided?**

The Applicant is acquiring a CT unit that allows the performance of dual **energy CT,** also known as **spectral CT**. A spectral CT is a computed tomography technique that uses two separate x-ray photon energy **spectra,** allowing the interrogation of materials that have different attenuation properties at different energies. At present, we estimate that 5-10% of all abdominal CT scans with intravenous contrast enhancement have “incidental” findings in the liver, kidney or adrenal glands requiring a second non-enhanced scan for characterization. The use of the new spectral CT could eliminate the need for 500-1000 CT scans/year as the information needed can be acquired during the abdominal CT without the need for a follow-up scan to characterize “incidental” findings.

* 1. **Will the reimbursement rate for Spect- CT scans increase?**

Please note that the Applicant is not acquiring a Spet-CT. It is acquiring a Spectral (dual energy) CT, which has no additional charge above standard CT.

* 1. **What, if any, types of population health strategies does Baystate have, or anticipate implementing, to help decrease the incidence of heart disease in the patient population?**

Baystate Health is committed to reducing heart disease through regular screening and risk factor reduction, including appropriate hypertension and lipid control across our populations through primary care. Enhanced access to high quality coronary CT angiography, will allow us to reduce invasive cardiology procedures in accordance with the recently published ISCHEMIA trial, as well as identify subclinical coronary artery disease in our population. The latter will allow more aggressive risk factor modification (for instance more aggressive lipid reduction in accordance with currentguidelines, which should reduce acute coronary events (MI’s, strokes)), as well as prevent vascular disease progression.

* 1. **You state that your 9% walkout rate would be diminished if the wait time from CT order to completion is reduced. How do you determine how much of the walk out time is attributable to the CT wait time, and how will you demonstrate that it is reduced due to increased CT capacity?**

The Hospital currently tracks both CT Turnaround and ED walkout rate. Our current CT turnaround averages from order to complete for a CT scan in the emergency room is between 90 minutes and 120 minutes. It is our hope that with three CT scanners we will get this down closer to the industry goal of 60 minutes and this will have a positive effect on total ED turnaround and the walk out rate. However, we do understand the walk out rate and ED total turnaround is multifactorial and impacted by a number of variables including acuity of the patients, trauma and stroke patients, as well as total volume.

It should be noted that the two CT scanners in the ED support some of the inpatient volume as well as the total ED volume. During peak times or during down time it is increasingly difficult to accommodate all the patients in a timely manner. We will continue to track various parameters including CT turnaround time, ED wait times and ED walkout rates. Significant changes in the walk out rate temporally related to the introduction of the new scanner, particularly if there are matching decreases in the CT turnaround time and ED wait time, can be inferred to be secondary to the increased CT capacity.