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SC Court of Appeals

THE STATE OF SOUTH CAROLINA
In the Court of Appeals

APPEAL FROM THE ADMINISTRATIVE LAW COURT

The Honorable Ralph King Anderson, III
Chief Administrative Law Judge

APPELLATE CASE NO. 2020-001323

ADMINISTRATIVE LAW COURT CASE NO.: 18-ALJ-07-0358-CC
ADMINISTRATIVE LAW COURT CASE NO.: 18-ALJ-07-0360-CC
ADMINISTRATIVE LAW COURT CASE NO.: 18-ALJ-07-0366-CC

CareAlliance Health Services, d/b/a Roper St. Francis Healthcare, Roper Hospital, Inc., Bon Secours-St. Francis Xavier Hospital, Inc., Roper St. Francis Berkeley Hospital and Roper Mount Pleasant Hospital,……Respondent,

v.

South Carolina Department of Health and Environmental Control and Medical University Hospital Authority, d/b/a MUHA Community Hospital,…….Respondents,

AND

Walterboro Community Hospital, Inc., d/b/a Colleton Medical Center,……Appellant,

v.

South Carolina Department of Health and Environmental Control and Medical University Hospital Authority, d/b/a MUHA Community Hospital,…….Respondents,

AND

Trident Medical Center, LLC d/b/a Trident Medical Center and Summerville Medical Center,……...Appellants,

v.

South Carolina Department of Health and Environmental Control and Medical University Hospital Authority, d/b/a MUHA Community Hospital,…….Respondents.

RECORD ON APPEAL - VOLUME 1 OF 12

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The South Carolina Court of Appeals

CareAlliance Health Services, d/b/a Roper St. Francis Healthcare, Roper Hospital, Inc., Bon Secours-St. Francis Xavier Hospital, Inc., Roper St. Francis Berkeley Hospital and Roper Mount Pleasant Hospital, Respondent,

v.

South Carolina Department of Health and Environmental Control and Medical University Hospital Authority, d/b/a MUHA Community Hospital, Respondents,

AND

Walterboro Community Hospital, Inc, d/b/a Colleton Medical Center, Appellant,

v.

South Carolina Department of Health and Environmental Control and Medical University Hospital Authority, d/b/a MUHA Community Authority, Respondents,

AND

Trident Medical Center, LLC, d/b/a Trident Medical Center and Summerville Medical Center, Appellants,

v.

South Carolina Department of Health and Environmental Control and Medical University Hospital Authority, d/b/a MUHA Community Hospital, Respondents.

Appellate Case No. 2020-001323

ORDER

Trident Medical Center, LLC d/b/a Trident Medical Center and Summerville Medical Center ("Trident") and Walterboro Community Hospital d/b/a Colleton Medical Center ("CMC") (collectively, Appellants) appeal the Administrative Law Court's (ALC's) order affirming the Department of Health and Environmental Control's (DHEC's) decision to issue a Certificate of Need (CON) to Medical University Hospital Authority d/b/a MUHA Community Hospital ("MUHA") for a hospital located in Berkeley County.[1]

Section 44-7-220(B) of the South Carolina Code (2018), requires that Appellants post an appeal bond to perfect their appeals; however, Appellants have moved for relief from the bond requirement, arguing the statutory requirement is unconstitutional. Appellants further request that this court stay any dismissal of their appeals for failure to deposit the appeal bonds within the five-day time frame required by section 44-7-220(B). Respondents have moved to dismiss the appeals, arguing Appellants' failure to post the bonds, as well as their concession that they will not do so, mandates dismissal.

We deny Appellants' requests for relief from the application of the appeal bond statute; however, Appellants' requests to stay dismissal of their appeals are granted to the extent that Appellants shall post a collective $1.5 million bond by Friday, December 4, 2020, or their appeals will be dismissed.[2] We deny Respondents' motion to dismiss at this time.[3]

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[1] CareAlliance Health Services d/b/a Roper St. Francis Healthcare, Roper Hospital, Inc., Bon Secours-St. Francis Xavier Hospital, Inc., Roper St. Francis Berkeley Hospital, and Roper Mount Pleasant Hospital ("Roper") joined in Appellants' motion; however, Roper and MUHA agreed to the dismissal of Roper's appeal; this court issued an order dismissing Roper's appeal on October 26, 2020.

[2] This December 4 deadline reflects our consideration of section 44-7-220(B)'s five calendar day deadline as well as the Thanksgiving holiday closings.

[3] Nothing in this order prevents the parties from presenting arguments in their briefs addressing the issues raised in the current motions.

James E. Lockemy C.J.

Stephanie P. McDonald J.

D. Garfield J.

Columbia, South Carolina

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FILED
Nov. 25, 2020

STATE OF SOUTH CAROLINA
ADMINISTRATIVE LAW COURT

CareAlliance Health Services, d/b/a Roper St. Francis Healthcare, Roper Hospital, Inc., Bon Secours-St. Francis Xavier Hospital, Inc., Roper St. Francis Berkeley Hospital and Roper Mount Pleasant Hospital, Petitioners, vs. South Carolina Department of Health and Environmental Control and Medical University Hospital Authority, d/b/a MUHA Community Hospital, Respondents.	Docket No.: 18-ALJ-07-0358-CC **AMENDED FINAL ORDER**
Walterboro Community Hospital, Inc., d/b/a Colleton Medical Center, Petitioner, vs. South Carolina Department of Health and Environmental Control and Medical University Hospital Authority, d/b/a MUHA Community Hospital, Respondents.	Docket No.: 18-ALJ-07-0360-CC
Trident Medical Center, LLC, d/b/a Trident Medical Center and Summerville Medical Center, Petitioners, vs. South Carolina Department of Health and Environmental Control and Medical University Hospital Authority, d/b/a MUHA Community Hospital, Respondents.	Docket No.: 18-ALJ-07-0366-CC

FILED
September 4, 2020
SC ADMIN. LAW COURT

Appearances:

For Petitioner Roper:	Jennifer J. Hollingsworth, Esq., Cheryl Shoun, Esq., and Shannon Lipham, Esq.
For Petitioners Trident and CMC:	William R. Thomas, Esq., and David B. Summer, Jr., Esq.
For Respondent MUHA:	M. Elizabeth Crum, Esq., Celeste T. Jones, Esq., and Pamela A. Baker, Esq.
For Respondent DHEC:	Vito Wicevic, Esq., and Rupinderjit S. Grewal, Esq.

STATEMENT OF THE CASE

The above-captioned matters come before the South Carolina Administrative Law Court (ALC or Court) pursuant to Requests for Contested Cases filed by Trident Medical Center, LLC, d/b/a Trident Medical Center (TMC) and Summerville Medical Center (SMC) (collectively, Trident), Walterboro Community Hospital, Inc., d/b/a Colleton Medical Center (CMC), and CareAlliance Health Services, d/b/a Roper St. Francis Healthcare, Roper Hospital, Inc., Bon Secours-St. Francis Xavier Hospital, Inc., Roper St. Francis Berkeley Hospital, and Roper Mount Pleasant Hospital (collectively, Roper, and together with Trident and CMC, Petitioners). Petitioners challenge the decision of the South Carolina Department of Health and Environmental Control (Department or DHEC) to issue a Certificate of Need (CON) to the Medical University Hospital Authority (MUHA or Respondent) for a 128-bed general acute hospital to be located in Berkeley County at a cost of $325,000,000 (Project or MUHA Berkeley). The parties moved to consolidate the contested cases and the Court granted the motion in an Order dated December 4, 2018. After various pre-hearing motions,[1] the Court conducted a hearing on the merits from November 6, 2019 through November 21, 2019. On July 8, 2020, a Final Order was issued. On July 20, 2020, Petitioners filed Motions for Reconsideration (Motions). On July 30, 2020, the Court rescinded its Final Order to better consider and respond to the parties' lengthy Motions and

[1] On March 26, 2019, MUHA filed a Motion for Summary Judgment, which this Court denied by Order dated April 15, 2019. Thereafter, MUHA filed a Motion in Limine and a Motion to Make More Definite with regard to Roper, which this Court denied in part and granted in part. MUHA also filed a Motion in Limine with regard to Trident and CMC, which this Court also denied. MUHA next filed a Motion to Lift Stay, which this Court denied by Order dated June 6, 2019. MUHA filed a Motion for Reconsideration of the Court's June 6, 2019 Order. After a hearing, the Court issued an Amended Order Denying MUHA's Motion to Lift the Stay.

responses. This Amended Final Order is now issued and incorporates the Court's response, if any was deemed necessary, to the issues Petitioners raised in their Motions.[2]

After an exhaustive and thorough review of the testimony and filings in this case, I find MUHA's CON application satisfies the State Health Plan, the Project Review Criteria (PRC),[3] the section 501 findings, and the purposes of the Certificate of Need and Health Facility Licensure Act. Therefore, I conclude that MUHA should be granted a CON for the Project.

FINDINGS OF FACT

Having observed the witnesses and exhibits present at the hearing and closely passed upon their credibility, and taking into consideration the burden of proof upon the parties, I make the following findings of fact by a preponderance of the evidence:

The Parties

DHEC is the State agency charged with implementing South Carolina's CON program, which includes publishing the South Carolina Health Plan (SHP), promulgating regulations, reviewing and approving CON applications, issuing CONs, and monitoring the implementation of CON projects. *See, e.g.*, S.C. Code Ann. § 44-7-140 (2018); S.C. Code Ann. § 44-7-150 (2018). On July 23, 2018, DHEC approved MUHA's CON Application for development of the Project.

The Medical University Hospital Authority is an agency of the State of South Carolina. S.C. Code § 59-123-60(E) (2020). MUHA owns and operates the Medical Center of the Medical University of South Carolina (MUSC), an academic medical center, which consists of University Hospital, the Ashley River Tower Hospital (ART), the Shawn Jenkins Children's Hospital and Women's Pavilion (Shawn Jenkins),[4] and the Institute of Psychiatry, all of which are located on the peninsula in downtown Charleston. The mission of MUHA and MUSC[5] is, in part, to preserve

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[3] The PRC, consisting of thirty-three general criteria (and accompanying sub-criteria), are set forth in Regulation 61-15 § 802 of the South Carolina Code of Regulations (2012 & Supp. 2019). Each criterion will henceforth be referred to using PRC in place of the regulatory citation followed by the subsection. For example, Regulation 61-15 § 802(2)(b) will be cited as PRC 2(b).

[4] At the time of the hearing in November 2019, Shawn Jenkins was expected to open in early 2020.

[5] Although MUHA and MUSC are distinct entities, because of their inter-related nature, the Court will primarily refer to MUHA in this order even if it is technically referring to MUSC's operations.

and optimize human life in South Carolina through learning, discovery, healing, education, research, and the provision of clinical care.

As an academic medical center, MUSC provides general hospital services but also provides tertiary and quaternary services, which are specialized services delivered to high acuity[6] patients. No other hospital providers in Charleston, Berkeley, or Dorchester counties offer quaternary services.[7] Pursuant to the 2017-2018 SHP, MUSC has 656 existing beds and an institutional need for 147 more beds. In addition to the downtown medical complex, MUHA owns and operates a pediatric imaging center and a pediatric ambulatory surgery center in North Charleston, an ambulatory surgery center in Mount Pleasant, and the MUSC Musculoskeletal Institute in Charleston.

After the Department issued its decision approving MUHA's 128-bed Project, MUHA acquired an additional 715 acute care hospital beds as result of its $137 million purchase of Springs Hospital in Lancaster County, Carolinas Hospital System in Florence County, Chester Regional in Chester County, and Marion Regional Medical Center in Marion County (collectively, CHS hospitals).

In addition to the Project currently under review by this Court, MUHA has a pending CON application to add twenty-nine additional acute care beds to its downtown Charleston facilities and an approved, but appealed, CON for a freestanding emergency department (FSED) to be located in Summerville, two miles from the Project.[8] In its CON application, MUHA asserts this FSED will be relocated to the proposed hospital "in order to co-locate services and reduce duplication of Emergency Services within the same zip code."

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[6] Acuity generally refers to complexity of services provided by a hospital or, stated differently, how sick the patients are – the sicker the patient, the higher the acuity.

[7] TMC and Roper Hospital in downtown Charleston offer tertiary services.

[8] Pursuant to Rule 201 of the South Carolina Rules of Evidence, the Court takes judicial notice of the Court's own docket in which the MUHA FSED CON is now under appeal. *See Trident Med. Ctr, LLC, d/b/a Trident Med. Ctr. & Summerville Med. Ctr. v. S.C. Dep't of Health & Envtl. Control and Med. Univ. Hosp. Auth., d/b/a MUSC Health Emergency Servs.*, 17-ALJ-07-0441-CC; *CareAlliance Health Servs., d/b/a Roper St. Francis Healthcare, Roper Hosp., Inc., Bon Secours-St. Francis Xavier Hosp., Inc., Roper Mount Pleasant Hosp. and Roper St. Francis Berkeley Hosp.*, 17-ALJ-07-0444-CC. On May 28, 2020, the Court issued its decisions in these cases denying MUHA's request for a CON for the proposed FSED. On June 8, 2020, MUHA filed a Motion to Alter or Amend the May 28, 2020 Order, which was denied on July 6, 2020 Thereafter, MUHA filed a Notice of Appeal at the South Carolina Court of Appeals, where the matter is currently pending.

Roper St. Francis (Roper) is a 501(c)(3) non-profit healthcare system consisting of four acute care hospitals: Roper Hospital is a 266-bed hospital located in downtown Charleston;[9] Bon Secours St. Francis is a 204-bed community hospital located in West Ashley; Roper St. Francis Mount Pleasant Hospital is a 85-bed community hospital located north of Mount Pleasant; and Roper St. Francis – Berkeley Hospital (Roper Berkeley) is a 50-bed community hospital located in southern Berkeley County. Roper Berkeley was under construction when MUHA filed this CON application. Roper Berkeley has since opened and began providing inpatient hospital services on October 4, 2019. The Project is approximately four miles from Roper Berkeley.

Trident Health System (Trident) is a subsidiary of Hospital Corporation of America (HCA), a for-profit operator of health care facilities. Trident owns and operates two acute care hospitals: Trident Medical Center (TMC), located in North Charleston, and Summerville Medical Center (SMC), located in Dorchester County. TMC is a 296-bed tertiary hospital that had an institutional need for thirty-one additional beds in the 2017-2018 SHP. Trident was recently approved to add another six beds at TMC. SMC is a 124-bed community hospital that had a surplus of 8 beds in the 2017-2018 SHP. TMC and SMC recently consolidated their women's and children's services at SMC. MUHA's Project is approximately 10.7 miles from TMC and 11.2 miles from SMC.

Trident also obtained a CON to build a fifty-bed hospital in Moncks Corner called Berkeley Medical Center (BMC). The fifty beds associated with BMC were not included in the 2017-2018 SHP in error. However, because of wetlands issues, BMC is still in the pre-construction phase.

Colleton Medical Center (CMC) is a 116-bed for-profit community hospital located in Walterboro, South Carolina. Like Trident, CMC is a subsidiary of HCA. CMC is the only hospital in Colleton County. The 2017-2018 SHP shows a thirty-one-bed surplus in the Colleton County service area.

Application at Issue

Procedural Background

MUHA submitted its CON application for the Project on December 27, 2017. Thereafter, by publication in the March 23, 2018 State Register, DHEC notified the public and affected

[9] According to the 2017-2018 Plan, Roper Hospital had a total of 316 existing general acute beds; however, fifty of the 316 existing beds were transferred for the construction of Roper Berkeley pursuant to CON-SC-16-01.

persons that MUHA's CON Application was "deemed complete, and the review cycle began."[10] In the deemed complete letter, the Department prioritized four PRC that it deemed most important to its review, to include: (1) Compliance with the Need Outlined in the South Carolina Health Plan; (2) Community Need Documentation; (3) Distribution (Accessibility); and (4) Ability to Complete the Project. On March 22, 2018, Roper notified DHEC by letter of its status as an "affected person" and specifically stated its opposition to MUHA's CON application. On April 19, 2018, and July

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[10] The notification in the State Register provided that a "proposed decision will be made no earlier than 30 days, but no later than 120 days, from March 23, 2018." One-hundred and twenty days from March 23, 2018 was July 23, 2018. The letter notifying the parties of the application's deemed-complete status was dated May 21, 2018, but it was not actually sent to the parties until July 11, 2018, a couple weeks before DHEC's decision was due on July 23rd. Margaret Murdock, the Department employee in charge of reviewing the application, acknowledged the deemed-complete letter was not mailed when it was ready. As a result, DHEC extended the time to respond to the deemed-complete letter to July 18, 2018, only a few days before the Department was required to make a decision.

Pursuant to regulation 61-15, DHEC is required to first notify the applicant that the application is complete and invoice the applicant with the CON application fee; in particular, DHEC is required to collect the application fee before publishing notice that the review cycle has begun in the State Register. S.C. Code Ann. Regs. 61-15 § 303(1), § 305(1) (Supp. 2019). This notification to the applicant also includes notice of the relative importance of the PRC to be used in review of the application. *See id.* § 304(1). Thus, the applicant should be in receipt of the relative importance of the PRC prior to publication in the State Register, which initiates the review time frame and decision deadline. *See id.* § 305(2). In this matter, DHEC published MUHA's CON application as "deemed complete" in the March 23, 2018 State Register when the notification to the applicant and the applicant's application fee had not yet been received in violation of regulation 61-15 §§ 304-305.

Despite the procedural irregularities in this case, I find neither Roper nor Trident were prejudiced. At the agency level, MUHA had to show its proposed hospital met all statutory and regulatory requirements for a CON, and the Department determined MUHA met the requirements. To the extent the review period was shortened to such to an extent that Petitioners could not properly mount an offense against the proposed hospital, they have received due process before this Court. Specifically, an adjudicatory hearing held before the Administrative Law Court satisfies the requirements of due process in cases involving agency decisions. In *Ross v. Medical University of South Carolina*, 328 S.C. 51, 68, 492 S.E.2d 62, 71 (1997), the South Carolina Supreme Court held:

> Article I, § 22 requires an administrative agency provide notice and an opportunity to be heard, but does not require notice and an opportunity to be heard at each level of the administrative process. It mandates notice and opportunity to be heard at some point before the agency makes its final decision.

In other words, even if a party does not receive review at the agency level, an adjudicatory hearing held before the Administrative Law Court satisfies the requirements of due process unless a fundamental right is at stake which could only be addressed by the party having an earlier opportunity to be heard before the agency and which right can only be protected by imposing an additional procedure at the Department level. Furthermore, "[a]n adequate de novo review renders harmless a procedural due process violation based on the insufficiency of the lower administrative body." *Unisys Corp. v. South Carolina Budget and Control Bd. Div. of General Services Information Technology Management Office*, 346 S.C. 158, 174, 551 S.E.2d 263, 272 (2001). Because Petitioners have failed to show prejudice, I find any error was harmless. *See Palmetto Alliance, Inc. v. S. C. Public Service Comm'n.*, 282 S.C. 430, 319 S.E.2d 695 (1984) (holding that to prove the denial of due process, a party must show that it has been substantially prejudiced by the administrative process).

10, 2018, Trident and CMC each respectively notified DHEC of their status as "affected persons" and specifically detailed their grounds for opposition.[11]

DHEC declined to hold an in-person project review meeting and instead accepted written submissions in support or in opposition to the Project. On July 23, 2018, DHEC issued its decision granting MUHA a CON. Petitioners Roper, Trident, and CMC timely requested the DHEC Board conduct a final review of the staff decision. The DHEC Board declined to conduct a final review conference, thereby rendering the staff decision the final agency decision. S.C. Code Ann. § 44-1-60(F) (2018).

Application

MUHA's CON application proposes to construct a 128-bed general acute care community hospital (MUHA Berkeley) on a forty-acre site in the Nexton Community, a planned development located in southern Berkeley County at the Interstate-26 and Highway 17A interchange. Berkeley County is part of the Tri-County service area in the 2017-2018 State Health Plan (SHP). The Tri-County service area includes Berkeley County, Charleston County, and Dorchester County. The 2017-2018 SHP identifies a 147-bed institutional need at MUHA's downtown peninsula campus. Pursuant to Standard 5 of the 2017-2018 SHP, MUHA proposes to transfer 128 beds of this institutional need to create MUHA Berkeley, a new "greenfield" hospital. Because MUHA Berkeley will be a community hospital, it will not offer the specialized tertiary and quaternary services that are offered at MUHA's downtown campus. Nevertheless, MUHA asserts MUHA Berkeley will be a "natural, complementary component" to its downtown facilities.[12] The Project will include the following components:

- 100 medical/surgical beds;
- 12 intensive care beds;
- 16 post-partum beds;

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[11] The Regional Medical Center of Orangeburg and Calhoun counties also submitted an affected person and opposition letter to DHEC dated July 13, 2018, but it did not join in requesting a contested case before this Court.

[12] In its application, MUHA notes it plans to open a freestanding emergency department (FSED) approximately two miles from the Project, but that it plans to close the FSED once MUHA Berkeley opens in order to consolidate emergency services into the community hospital and reduce duplication of emergency services in the service area. MUHA therefore incorporated the patients it expected to treat at the FSED in its projected utilization calculations for MUHA Berkeley. However, after DHEC approved MUHA's CON for MUHA Berkeley, MUHA decided not to close the FSED and retain both emergency departments. It did not update its volume totals accordingly.

- 8 labor and delivery rooms;
- Newborn nursery with 8 newborn bassinets; the facility will foster a couplet-care environment similar to Shawn Jenkins Children's Hospital;
- Surgery – 4 operating rooms (ORs), 2 cesarean section ORs;
- 2 endoscopy suites;
- Vascular lab;
- Emergency department;
- Diagnostic and imaging department;
- Non-invasive testing;
- Administration (executive, nursing, general, auditorium, staff facilities);
- Clinical support (laboratory/pharmacy); and
- Logistics and support (food service, technology, building support, central sterile processing, and materials management).

MUHA purchased the Project site for $8,200,000 in October 2018. MUHA has already acquired the requisite environmental permits to begin construction as soon as DHEC approves the architectural plans. The projected total project cost is $325,000,000 and the proposed hospital will be 311,221 square feet. The construction cost per square foot is $538 and the construction cost per bed is $1,307,154. The overall, total cost per bed is $2,539,062. MUHA intends to finance the capital cost of the proposed hospital through loan programs insured by the U.S. Department of Housing and Urban Development (HUD) Section 242 Hospital Mortgage Insurance Program. As part of the application, MUHA included a letter from Armadale Capital indicating Armadale's commitment to helping MUHA secure financing from HUD. MUHA projects the design phase of the Project will take twelve to thirteen months and construction will take approximately twenty-seven months. The estimated time of completion in the application is May 2022.

MUHA cites three reasons for construction of the Project in its application: (1) a large percentage of MUHA's adult inpatients originate from the Berkeley County area and establishing a Berkeley County hospital will provide improved access to these patients; (2) Berkeley County is a dramatically underserved market and only has one acute care hospital planned and one under

construction; (3) increased demand for inpatient services at MUHA and in the Tri-County Area have resulted in capacity constraints and prolonged boarding hours[13] at MUHA.

The application explains MUHA's occupancy rate at its downtown hospital has been above 80% for the three years prior to the application, sometimes exceeding 90%. Thus, MUHA wants to use the Project to address and alleviate its capacity constraints at its downtown campus by shifting lower acuity patients away from its downtown facilities and providing primary and secondary care to those patients in their own communities. MUHA also states it cannot accept all transfer requests from other hospitals because it does not have enough bed capacity. MUHA claims this shift in the treatment location for lower acuity patients will allow MUHA to provide patients with better access to the tertiary and quaternary services it provides at the downtown campus. MUHA notes that even with the Project, its downtown campus will remain full. MUHA specifically predicts that the addition of the Project in will decrease its downtown hospital's utilization in 2023 from over 90% to 77% and diminish further to 72% by 2025.

In choosing to pursue the Project, MUHA considered several alternatives, including the advantages and disadvantages of each alternative. The alternatives included: (1) maintain the status quo, which would not address the excessive demand for inpatients and would not address the operational issues associated with MUHA's increased capacity; (2) further expand MUHA's existing hospital-based inpatient services at its downtown campus, which would require significant renovation cost expenditures approaching the cost of the Project, result in lesser improvements in quality of care compared to the Project, and create disruption in the provision of existing services; and (3) construct the Project, which would improve access to a significant portion of MUHA's existing patients, allow the MUHA downtown hospital to focus on tertiary patients, and increase efficiency of care for the MUHA system.

The proposed hospital will have a more efficient layout than the current facility on the peninsula, which will decrease the overall cost of care while improving collaboration and multidisciplinary care for patients. MUHA asserts the enhanced collaboration will decrease duplicated efforts and promote cost containment. MUHA also asserts the new location will help decant patients from the downtown hospital during flooding events because the elevation of the

[13] Boarding hours refer to the time a patient is waiting (boarding) in the hallway or other area for an inpatient bed.

Project should insulate it from flooding. Additionally, the Nexton location will have sufficient surface parking to allow quick and easy access to the hospital. This will eliminate "way-finding" time experienced on the MUHA peninsula campus.

MUHA Berkeley's primary service area would consist of Berkeley, Dorchester, and Charleston counties. Its secondary service area would consist of Georgetown, Horry, Williamsburg, Florence, Colleton, Orangeburg, and Beaufort counties. The CON application also includes some ZIP codes in tertiary service areas. The need projections in the CON application are based on the redirection of patients who are already "aligned" with MUHA, and the application justifies the need for the new hospital based entirely upon the redirection of these existing patients. Because MUHA justifies the new hospital using its existing patients, MUHA found the Project would have no adverse effect on other providers in the service area. MUHA also predicts no impact on existing facilities "because it is only filling an unmet need identified by the 2017-2018 State Health Plan." Nevertheless, the application notes that Roper Berkeley was under construction at the time of the application and that Trident had been granted a CON for BMC.[14]

A significant portion of MUHA's historic patient volume originates from ZIP codes within the Berkeley County, Dorchester County, and North Charleston markets. According to MUHA's CON application, 56% of its overall adult inpatient population (17,272 patients) in fiscal year 2017 originated from the Tri-county service area and 29% of patients (8,796) originated from the North Charleston, Summerville, and Moncks Corner submarkets that are near the site of the Project.

MUHA's patient utilization calculations are based on a ZIP code analysis of MUHA's historic patient utilization. For example, MUHA projects it will be able to redirect 65% of its current patients who live within zero to fifteen minutes of the proposed hospital, and the percentage shift decreases as drivetime increases.[15] The lowest percentage of redirection is 2% from secondary counties and other areas with a drive-time of over seventy-one minutes. MUHA

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[14] MUHA notes in its application that Trident had yet to begin construction on BMC and its completion appeared uncertain.

[15] On July 23, 2018, the day the Department issued its decision, MUHA's healthcare planning expert, David Levitt, responded to a request from Ms. Murdock and provided additional information concerning MUHA's proposed redirection of patients. Mr. Levitt's email identifies by submarket the actual number (rather than percentages) of MUHA patients treated at MUHA's downtown facilities in fiscal year 2017 and projects the actual number of patients to be redirected to the Proposed Hospital in 2025, its anticipated third year of operation. By applying the correlating redirection percentage and a 1.7% growth rate, Mr. Levitt expected that MUHA would redirect a total of 5,700 patients from its downtown facilities to its new Proposed Hospital in 2025.

predicts the patient shift will result from proximity to the new hospital and patient choice to receive "MUHA-level care" in the lower acute setting. MUHA also predicts a small portion of its patients who are closer to its downtown location will choose the new community hospital because they prefer its less acute, community setting with less traffic and more parking.

In Attachment N to its application, MUHA provides a detailed chart showing patient redirection percentages from each of the 94 ZIP Codes it included in its service area.[16] However, during the litigation preparation for this matter, it was discovered that these re-direction percentages were incorrect. Nevertheless, even though the redirection percentages in Attachment N were incorrect, MUHA based its volume calculations in the application on the correct redirection percentages. MUHA provided a correct version of Attachment N during the litigation. The corrected version predicts 65% of MUHA's current patients from ZIP Codes within zero to fifteen minutes of the Proposed Hospital will redirect to MUHA Berkeley. For the remaining drive time categories, MUHA predicts that redirection will occur as follows: ten to twenty-five minutes – 55%; twenty-six to forty minutes – 35%; forty-one to fifty-five minutes – 30%; fifty-six to seventy minutes – 10%; and for seventy-one minutes and over, and for all of the ZIP Codes that are outside of the Tri-county Service Area – 2%. Thus, for example, in the corrected version of Attachment N, the redirection percentage of patients living in Orangeburg County ZIP Code 29059, which is thirty-one minutes from the Proposed Hospital, is 2% because Orangeburg County is outside the primary service area. On the other hand, MUHA still projects that 35% of patients who live in West Ashley, about thirty-two minutes away, will redirect to MUHA Berkeley. The predicted volume of patients that would redirect in each submarket as follows: North Charleston 1,984; Summerville 1,131; West Ashley 616; East Cooper 522; Sea Islands 500; Peninsula Charleston

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[16] One of the criticisms Petitioners leveled at MUHA was MUHA's failure to include patient volume schedules with its CON application. Petitioners contend these volumes were needed to support the percentages of patients MUHA asserted would redirect under its ZIP code analysis because, without the volumes, MUHA's assertions could not be reviewed for accuracy. I find MUHA's failure to include the patient volume schedules was an oversight, but a significant one. Nevertheless, MUHA remedied this oversight during trial preparation, which allowed the parties and this Court to review all the relevant data underlying MUHA's need analysis. Accordingly, I find the error was harmless in the context of this Court's *de novo* review.

However, MUHA's volume calculations in its CON application were based in part on absorbing the emergency room volumes from its proposed FSED in Nexton and MUHA has not revised its volume predictions consistent with its decision not to absorb the FSED in the Project.

354; Outside Tri-county Area 321; Moncks Corner 252; and Outside South Carolina 0 for a total projection of 5,700 redirected patient admissions in 2025.

The application projects an average length of stay (ALOS) of 5.2 days for med/surg patients at the Project, which is 10% less than 5.73, the ALOS at MUSC Medical Center for non-tertiary patients. The application also projects an OB ALOS of 2.9, which is 10% less than 3.2, the non-tertiary ALOS for OB at MUSC Medical Center. The application also used an estimated population growth of 1.7% per year. Based on these assumptions, the application projects an average daily census (ADC) of 64 or a 57% utilization at year three for med/surg patients. Similarly, it predicts an ADC of 9.8 or 61% occupancy for OB patients.

The MUSC medical staff will have staff privileges at the community hospital and will be on faculty. The primary manner patients will have access to the community hospital is through the emergency department (self-referral) and by physician referral. The Project will provide all types of inpatient hospital services, excluding only the tertiary/quaternary services specifically identified by Diagnosis Related Group (DRG).[17]

The 2017-2018 State Health Plan

The 2017-2018 SHP applies to the application at issue. In accordance with section 44-7-180(B) of the South Carolina Code (2018), the SHP contains

> (1) an inventory of existing health care facilities, beds, specified health services and equipment; (2) projections of need for additional healthcare facilities, beds, specified health services, and equipment; (3) standards for distribution of healthcare facilities, beds, specified health services, and equipment ("Certificate of Need Standards"); and (4) the project review criteria considered to be the most important in evaluating Certificate of Need applications for each type of facility, service and equipment.

2017-2018 SHP at 1-2.

A central aspect of the SHP is predicting the need for additional healthcare facilities and services. The need for hospital beds is based on the utilization of individual facilities, which is derived from Joint Annual Reports (JARs) —annual reports with facility statistics.[18] To predict

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[17] DRG means diagnostic related grouping. A DRG contains a group of similar type patients, such as open-heart surgery, normal delivery, etc. Using DRGs to segregate patients by acuity level is an accepted practice.

[18] The 2017-2018 SHP utilizes the 2015 JAR Reports.

utilization trends, the SHP uses population data from the South Carolina Revenue and Fiscal Affairs Office (RFA).

Calculations of hospital bed[19] need are made for individual hospitals and totaled by county to determine the overall bed need for that service area. For individual hospitals, the methodology for calculating bed need is as follows:

a) Determine the current facility use rate by dividing the current utilization by the current population in each of the three age cohorts.

b) Multiply the current facility use rate by age cohort[20] by the projected population for seven years in the future by age cohort (in thousands) and divide by 365 to obtain a projected average daily census by age cohort.

c) Divide the sum of the age cohort projected facility average daily census by the variable occupancy (.65/.70/.75)[21] to determine the number of beds needed to meet the hospital's need.

d) The number of additional beds needed or excess beds for the hospital is obtained by subtracting the number of existing beds from the bed need.

e) The totals for each hospital in a county or service area are summed to determine whether there is an overall projected surplus or need for additional beds.

2017-2018 SHP at 9.

MUHA applied to create a new hospital pursuant to Standard 5 in the 2017-2018 SHP, which provides:

> A facility may apply to create a new additional hospital at a different site within the same service area through the transfer of existing licensed beds, the projected bed need for the facility, or a combination of both existing beds and projected bed need. The facility is not required to have a projected need for additional beds in order to create a new additional hospital. There is no required minimum number of beds in order to approve the CON application. The applicant must justify, through patient origin and other data, the need for a new hospital at the chosen site and the potential adverse impact a new hospital at the chosen site could have on the existing hospitals in the service area.

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[19] "'Hospital Bed' means a bed for an adult or child patient. Bassinets for the newborn in a maternity unit nursery, beds in labor rooms, recovery rooms, and other beds used exclusively for emergency purposes are not included in this definition." 2017 SHP at 8.

[20] The age cohorts include 0-17, 18-64, and 65 and over, in recognition that different population groups have different hospital utilization rates. 2017 SHP at 9.

[21] The variable occupancy rates represent the occupancy at which a hospital of a certain size is considered full. For a hospital with 0 - 174 beds the variable occupancy rate is 65%; for a hospital with 175 - 349 beds, it is 70%; and for a hospital with 350+ beds, it is 75%. 2017 SHP at 9.

2017-2018 SHP at 10-11.

The 2017-2018 SHP also contains the following project review criteria (PRC) that "are considered to be the most important in evaluating Certificate of Need applications" for hospitals: (1) Compliance with the Need Outlined in this Section of this Plan; (2) Community Need Documentation; (3) Distribution (Accessibility); (4) Acceptability; (5) Record of the Applicant; (6) Cost Containment; and (7) Adverse Effects on Other Facilities. 2017-2018 SHP at 12. Additionally, the 2017-2018 SHP provides that "[g]eneral hospital beds are typically located within approximately thirty (30) minutes' travel time for the majority of the residents of the State" and "[t]he benefits of improved accessibility will be equally weighed with the adverse effects of duplication in evaluating Certificate of Need applications for these beds." 2017-2018 SHP at 13.

Although the 2017-2018 SHP states individual counties are the service areas for CON purposes generally, the 2017-2018 SHP combines Berkeley, Charleston, and Dorchester counties into one service area, the Tri-County Service Area, for the purpose of establishing general bed need.[22] According to the 2017-2018 SHP, the Tri-County Service Area has a need for 1,798 beds and an existing supply of 1,811 beds for a total excess of thirteen beds in the Tri-County Service Area. If the fifty beds from BMC are added to this total, then the Tri-County area has an excess of sixty-three beds.

On the other hand, the 2017-2018 SHP shows an institutional need for 147 additional beds at MUHA's downtown campus. In particular, in the 2017-2018 SHP, MUHA's downtown campus

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[22] During the pendency of this action, the DHEC Board adopted the 2018-2019 SHP. Under the CON Act, the Court may consider this SHP. S.C. Code Ann. § 44-7-225 (2018) (providing "the Administrative Law Court . . . shall consider the South Carolina Health Plan in place at the time the application was filed and may consider the current South Carolina Health Plan when making its decision."). The 2018-2019 SHP contains one significant change for the purposes of this case. Specifically, it dissolved the Tri-County Service Area in favor of each county becoming an individual service area. Therefore, Berkeley County, where the Project will be located, is its own service area for the purpose of the 2018-2019 SHP. According to the 2018-2019 SHP, Berkeley County has two fifty-bed hospitals (BMC and Roper Berkeley) for a total of 100 existing beds and a bed need of zero. The bed need is zero because no hospital was open in Berkeley County prior to Roper Berkeley opening its doors during this action; therefore, the bed need of zero is somewhat misleading because it simply represents a lack of historical data from hospitals upon which to calculate the need.

Under the 2018-2019 SHP Charleston County has a bed need of 1,707 with 1,687 existing beds, resulting in a service area bed need of twenty. Dorchester County has a bed need of 126, with 124 existing beds, resulting in a service area bed need of two. Under the 2018-2019 SHP, the individual bed need for MUHA, TMC, and SMC each increased—MUHA to 157, TMC to thirty-seven, and SMC to two.

Additionally, the Court declines to consider either the October 25, 2019, or the November 1, 2019, drafts of the 2019-2020 State Health Plan proffered by the Department and MUHA during the hearing.

has 656 beds and an occupancy rate of a little over 76%, which is considered full for a hospital of its size. Because MUHA has an identified institutional need, it was appropriate for MUHA to apply under Standard 5 to transfer 128 beds of its 147-bed-need to create another hospital in the service area. However, to obtain a CON, MUHA must also meet the other requirements of Standard 5: a need for the new hospital at the chosen site and the potential adverse impact the new hospital could have on existing hospitals in the service area. I will discuss these requirements below in conjunction with other similar requirements in the SHP and PRC.

Need

Need Under Standard 5

Projected Need and Capacity Constraints at MUHA Downtown

Standard 5 allows a party to use "projected bed need for the facility," which is synonymous with "institutional need," to establish a new hospital in a different location in the service area. The parties do not dispute the 2017-2018 SHP properly identifies an institutional need at MUHA's downtown campus for 147 beds. Indeed, MUHA's downtown hospital is overly full on a consistent basis with the result that it must turn patients away and cannot fulfill its mission to take care of all the patients that come to them for care. For the last five years, the MUHA Board has been searching for a solution to the overcrowding. The most crowded part of the hospital is the emergency room (ER) where there are on average fifteen to twenty patients boarding at any given time. Two hours is the median boarding time, but some patients wait for up to twenty hours. The second area of crowding is the lack of beds for people who have come out of the operating room (OR). The third area of crowding is represented by patients who simply do not attempt to come MUHA downtown because of the lack of capacity.

MUHA's utilization downtown is often at or over 100% on Tuesday, Wednesday, and Thursday with the result that the hospital is over-burdened. Additionally, MUHA denies fifty to sixty transfer requests a month and about half of these requests are denied because of a lack of floor beds or ICU beds. Although MUHA denies a relatively small number of its transfer request because of a lack of beds, the percentage of transfers denied for this reason has consistently increased from 2011 to 2017. The need to accept transfers will only increase with MUHA's acquisition of the four CHS hospitals because some of those patients will now redirect to MUHA for tertiary and quaternary care instead of North Carolina hospitals. To free up capacity, MUHA

calls "EP3" status on a weekly basis at the downtown hospital, which means that staff must try to discharge as many patients as possible to move people out of the emergency room and make room for them in the hospital. This weekly occurrence impacts the patient experience and interferes with the hospital's ability to cohort patients with similar illnesses together on specialty units within the hospital.

MUHA's goal in building MUHA Berkeley is to create more capacity downtown by moving patients with lower acuity to MUHA Berkeley. In choosing Berkeley County for the proposed site of the new hospital, MUHA was reacting to the fact that a large percentage of MUHA's adult inpatients originate from the Berkeley County area. Relieving capacity through the new hospital would not only provide better access to patients who originate in the southeastern Berkeley County area, but would allow MUHA to provide better care to all its patients, both low and high acuity, who seek to utilize MUHA's downtown facility and may face difficulty accessing the hospital because of the capacity constraints and prolonged boarding hours. Decanting lower-acuity patients to another hospital would also allow MUHA accept more transfer patients downtown thereby focusing more on its high acuity patients downtown. MUHA is also in need of more clinical rotations for students, and MUHA Berkeley would add a rotation site. MUHA Berkeley, like the downtown hospital, will have a teaching and research component and support MUSC's mission as an academic training facility for physicians, nurses, and other healthcare professionals.

I find that MUHA has presented substantial credible evidence of its capacity constraints at its downtown campus that are reflected by the institutional need identified in the 2017-2018 SHP.

Need for the New Hospital at the Chosen Site

Standard 5 requires the applicant to "justify, through patient origin and other data, the need for a new hospital at the chosen site." 2017 SHP at 10-11. The parties disagree whether MUHA demonstrated a need for the hospital "at the chosen site" under Standard 5. Mark Richardson, who the Court qualified as an expert in healthcare planning on behalf of Roper, opined that MUHA can transfer its institutional need under Standard 5, but it much also show a need for the new facility at the chosen site in southern Berkeley County. Dan Sullivan, Trident's expert in health planning, similarly opined that MUHA must demonstrate a need at the specific site chosen for the new hospital. Mr. Richardson and Mr. Sullivan testified that, in their opinions, MUHA failed to

demonstrate a need at the chosen site. Petitioners argue MUHA can only demonstrate need on the peninsula where its institutional need originated.[23]

Indeed, the institutional need in this case "originates" on the Charleston peninsula, whereas the new hospital will be located near the Berkeley County line in the new community of Nexton. However, Standard 5 refers to justifying need using patient origin and other data. Generally, the SHP calculates need for service areas based upon **hospital utilization**, which does not directly take into account **patient origin**, particularly at a highly specialized hospital like MUHA's downtown campus, which draws people from a very broad geographic area and not just the peninsula where this institutional need, on its face, would seem to "originate." Therefore, Petitioners' argument that the need originates on the peninsula and the resulting new hospital should be confined to that area, in either the form of an expansion, remodel, or construction of a new hospital on the peninsula, ignores where MUHA's patients actually originate from to focus on where they travel to for care.

MUHA's historic patient origin data for its downtown campus reveals that 56% of MUHA's existing adult inpatients originate in the Tri-County Service Area. More specifically, 29% of MUHA's adult inpatients originate in the Summerville, Moncks Corner, and North Charleston submarkets that make-up and surround the chosen site of Nexton. In fact, the highest percentage of MUHA's adult inpatients originate in the submarket of North Charleston (18%) and only 5% of MUHA's adult inpatients come from the peninsula, which diminishes Petitioners' argument that MUHA should locate the additional beds on the peninsula.

In this case, for the purposes of justifying need at the chosen site under Standard 5, which is the Standard that deals with **transferring** institutional need from one site to another within a service area, it is sufficient that MUHA demonstrated a large portion of the patient population it seeks to transfer originates in the Tri-County Service Area, and more particularly the Nexton area, based upon its historic patient origin data. MUHA thus justified the need for its proposed hospital through its patient origin data. Moreover, the population where the proposed hospital is to be built is predicted to grow at a strong rate, as will be discussed further *infra*. Locating the Project amidst MUHA's largest submarkets is also consistent with the health planning tenant of placing healthcare

[23] The Court's interpretation of the phrase "at the chosen site" is different from Petitioners' interpretation as explained in the conclusions of law portion of this order.

facilities where people are and where they can best access it, which is currently the I-26 corridor. In fact, it is much more reasonable to place the new hospital in Nexton—a place from which a large percentage of the patients currently originate; than a site with only 5% of the patient origin population.

Need in the Service Area

Although it is readily apparent that MUHA has a demonstrated institutional need, and a sizeable portion of the patients who have produced that institutional need originate in the Tri-County Service Area, it is also apparent that the Tri-County Service Area has an excess of thirteen beds, and excess of as much as sixty-three beds if BMC is counted.[24] Nevertheless, Standard 5 does not prohibit a bed transfer when the service area has a surplus of beds overall, but that does not mean this fact should not to be considered when, as in this case, there is conflict between MUHA's institutional need and the need within the service area.

The bed surplus in the Tri-County Service Area suggests there are enough hospital beds at non-MUHA providers to absorb all of MUHA's 147-bed institutional need.[25] In other words, the target population MUHA seeks to serve—lower acuity patients who originate near the proposed site—could theoretically decant to the existing providers in the service area, such as Roper Berkeley. However, despite the capacity constraints present at MUHA, these patients have not chosen to seek health care at other providers, nor can this Court or anyone else force patients to choose a certain provider. This fact reflects that many patients choose where to obtain healthcare and are often aligned with a certain provider. Thus, there is tension between the CON Act's goal to ensure beds match need in an efficient manner and the CON Act's inability to actually distribute

[24] The State Health Plan reflects an excess bed need of thirteen beds in the Tri-County service area. Additionally, if the fifty beds from BMC are added to this total, then the Tri-County area has an excess of sixty-three beds. Unfortunately, it is unclear when, or, more importantly, if, BMC's fifty beds will come to fruition. If BMC is not built, its absence will decrease accessibility in the northern Tri-County Area, increase the maldistribution of beds in the Tri-County Area, and implicitly create a need for fifty beds in the Tri-County Area, which MUHA's proposed hospital could alleviate. In resolving this issue, the Court must also consider the population growth in Berkeley County, patient origin data for MUHA Berkeley, and the projected utilization proposed hospital.

[25] MUHA's institutional need appears to be driven by two factors: patients who need its unique level of care and patient choice. In other words, while some of MUHA's overcrowding is the result of too many patients who need MUHA's unique level of care, another portion of the institutional need is driven by patients who could seek and receive care at other hospitals in the Tri-County area that have capacity but who choose MUHA anyway.

patients in an efficient fashion.[26] Recognizing this tension, the Court must consider whether the surplus in the service area should prevent MUHA from building a new hospital and adding beds to the service area.

To settle this issue, the Court turns to the State Health Plan which sets forth that its purpose is to "promote cost containment, prevent unnecessary duplication of health care facilities and services, guide the establishment of health facilities and services which will best serve public needs, and ensure that high quality services are provided in health facilities in this State." S.C. Code Ann. § 44-7-120 (2018). Here, in balancing those purposes, it is clear that if MUHA's CON is denied, the public's need for health facilities, high quality care, and specialty services only MUHA provides, will not be best served. For instance, if the CON is denied, MUHA downtown will continue to be over-capacity to the detriment of **all** patients who seek care there, and particularly to the detriment of those who seek a level of care that only MUHA downtown provides. Accordingly, there is an incontrovertible benefit of improved access[27] to all levels of patients who continue to seek care at MUHA's downtown hospital. Further, to the extent decanting patients allows MUHA's downtown campus to better focus on high acuity patients that only it can serve, this also brings better access to Tri-County Service Area as a whole for this particular sub-set of patients.

Therefore, considering Standard 5 allows the transfer of institutional need, with no prohibition of this transfer tethered to whether the service area has a bed surplus, and considering

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[26] In its Motion for Reconsideration, Roper argues MUHA's theory of patient redirection is faulty because it cannot force its existing patients to decant to the proposed location because patients have a choice in where to receive care. However, the opposite is also true patients cannot be forced to decant to other providers who currently have capacity. Generally, patients are often aligned with a health care system and would be more likely to decant within that same health system.

Roper also argues that the Court's acceptance of the theory of decanting lower acuity patients to another facility is contrary to two other decisions by this Court wherein this theory was rejected. *See Trident Med. Ctr., LLC, et al., v. S.C. Dept. of Health and Envtl. Control*, Docket No. 2017-ALJ-07-0441-CC, 2020 WL 3033191 *38-40 (S.C. Admin. Law J. Div. May 28, 2020). However, those cases dealt with a freestanding emergency department and a pediatric ambulatory surgery center, which have a different patient bases than a hospital and the use of which are driven by different factors than the use of a hospital. Therefore, these cases were significantly different than the case before the Court. But also, as Roper acknowledges, this Court is not bound by the decision of another administrative law judge.

[27] In discussing improved access, the Court recognizes both the improved access to transfer patients who are denied admission due to capacity constraints, patients who do not even try to access MUHA because of its capacity constraints, and the improved access that comes from decreased wait times and boarding hours even if this latter issue does not represent an actual denial of access but merely difficulty in obtaining access.

the benefits to both the target population but also the inescapable benefits to the whole population served by MUHA downtown—and in particular their unique high acuity patients—I find that the surplus in the service area is not determinative as to whether MUHA's proposed hospital is needed. In fact, after thoroughly considering and weighing the evidence in this case, I find that despite the surplus of beds in the Tri-County Area, MUHA demonstrated that its proposed hospital is needed for the reasons already stated and those that follow.

Community Need

Target Population

MUHA's target population to serve at the proposed hospital is lower acuity adult patients originating in the southeastern Berkeley County area. MUHA's goal it to decant (and serve) lower acuity patients who originate near the proposed site in Nexton, which is close to the borders of Charleston and Dorchester Counties.[28]

The proposed primary service area for MUHA Berkeley includes Berkeley, Dorchester, and Charleston counties.[29] MUHA will also serve, to a much lesser extent, a secondary service area that extends to several ZIP codes surrounding the primary service area. In total, MUHA selected 94 ZIP Codes to analyze in its re-direction analysis that complimented its service area. MUHA did not factor in-migration into the CON application because using the broad 94-zip code service area would achieve the same result as using a smaller service area that factored in in-migration.

Mr. Richardson testified on behalf of Roper that MUHA's designated service area for patient origin is too broad and inappropriate for a community hospital. He contended that a service area of eight to ten miles for a community hospital would be more appropriate. Likewise, Mr. Sullivan opined on behalf of Trident that MUHA's service area for MUHA Berkeley is too broad.[30]

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[28] Mr. Sullivan criticized MUHA's patient origin data because it showed the majority of MUHA Berkeley's patient base would come from Charleston and Dorchester counties, not Berkeley County where the hospital it located. Nevertheless, Mr. Levitt made it clear that MUHA Berkeley is intended to serve the Tri-County area, not just Berkeley County. Indeed, the Project will be located only a couple miles from the border of Charleston and Dorchester counties.

[29] This primary service area for the proposed hospital is distinct from the Tri-County Service Area in the SHP even though they include the same counties and similar terminology.

[30] Petitioners' experts did not necessarily find that MUHA's historic patient origin data upon which MUHA relied to define its service area was incorrect, but rather argued MUHA had failed to properly adjust its service area to reflect the draw of a lower-acuity community hospital.

Although MUHA's proposed service area is larger than Petitioners' experts would project for other community hospitals in the Tri-County Service Area, I find MUHA's community hospital will be unique such that its service area is likely to be broader than other community hospitals in the Tri-County Service Area. MUHA's status as a Level 1 trauma center and academic medical center make it a regional draw with a strong reputation. Because of the unique medical services available at MUHA, around 50% of MUHA's patients come from outside the Tri-County area, and MUHA expects that some of these patients will also take advantage of the services offered at MUHA Berkeley. I find this expectation is reasonable. The breadth of MUHA's patient origins is unique compared to other hospitals, and its community hospital is likely to also have a broader patient base consistent with its parent hospital's base. Therefore, I find Petitioners' evidence of what other community hospitals in the area have experienced to be less persuasive than MUHA's historic patient origin data presented in the application.

Population Changes

MUHA Berkeley will be located in the Nexton Community, which will be easily accessible to the surrounding submarkets of Summerville, Moncks Corner, and North Charleston because it will be located a short distance off the I-26 exit at the I-26 and US Highway 17A interchange. This is an area of significant growth in Berkeley County. Berkeley County has a growing population, particularly in the southern portion of the county near the I-26 corridor where the proposed hospital will be located. The growth rate in Berkeley County is approximately 2% per year, which appreciably outpaces the State's average growth rate. In fact, between 2017 and 2022, the overall population in the nearby submarkets of Summerville, Moncks Corner, and North Charleston are projected to grow by 8-9% compared to the State average of 6%. As a result of this growth, the Nexton development is anticipated to have 8,500 new residences and the nearby Cane Bay development could add another 25,000 residents. In contrast, the peninsula, where MUHA's downtown campus is located, is supposed to grow at a rate of only 5%, which is the slowest rate in the Tri-County area and below the State average. MUHA's projected population growth rate of 1.7% is a reasonable projection of the growth in the area. Moreover, that projected rate of growth is in line with accepted demographic methodologies and consistent with the state demographer's data and methodologies.

Identified Need of the Target Population

The target population MUHA chose represents a significant portion of MUHA's existing adult inpatients. These patients are faced with long boarding hours and difficulty accessing the peninsula hospital because it is at capacity; in other words, the target population is part of the institutional need identified in the SHP. Relieving capacity through the proposed hospital would not only provide better access to patients who originate in the southeastern Berkeley County area, but would allow MUHA to provide better care to all its patients, both low and high acuity, who seek to utilize MUHA's downtown facility. Thus, to resolve MUHA's institutional need as allowed under Standard 5, it is reasonable to assume that a significant portion of MUHA's need is driven by, and can be alleviated by, servicing the target population at a different location in the service area. Therefore, MUHA has demonstrated a need in the target population.

Utilization

MUHA projected the Project's utilization from the expected volume that would redirect in its 94-ZIP-code service area using its drive-time analysis, the average length of stay (ALOS), and the average daily census (ADC).

a. Redirection Analysis

Based upon its identified service area, MUHA created a drive-time analysis to predict the percentage of patients that would re-direct from each ZIP code in its primary and secondary service areas to forecast its projected volumes and utilization. The percentages for different travel times were based upon past experience with MUSC patients. This drive-time redirection analysis includes 94 ZIP codes and assumes a blanket two percent redirection for all ZIP Codes outside of the primary service area of Berkeley, Charleston, and Dorchester counties. Both Petitioners' experts disputed MUHA's analysis. For example, in Mr. Sullivan's opinion, MUHA's shift analysis unreasonably assigned a thirty to thirty-five percent shift to the proposed hospital for patients who live on the peninsula or the sea islands (James Island, Seabrook Island, etc.). He opined it made no sense to postulate that thirty-five percent of patients coming from the southern

tip of the peninsula in zip code 29401 would travel thirty-nine minutes to MUHA Berkeley instead of five minutes to MUHA's downtown hospital.[31]

However, the percent shift cannot be looked at in isolation. The highest percentage of MUHA's lower-acuity patients originate in the submarket of North Charleston (18%) and only 5% of MUHA's patients come from the peninsula; thus a 35% shift of an already small percentage of patients coming from the peninsula is not unreasonable, especially given that many of the same doctors who practice at the peninsula hospital will also practice at MUHA Berkeley. Furthermore, MUHA Berkeley is not only overcrowded within the hospital, but parking and wayfinding at MUHA's downtown campus can also be difficult. Because MUHA downtown is often full and has a wait-time for admissions, some patients who are located closer to MUHA downtown, but who do not need immediate access to an emergency room, will likely choose to be seen or have elective surgeries at MUHA Berkeley to avoid the overcrowding and parking issues at the downtown hospital. Notably, the same doctors who practice at MUHA's prestigious hospital downtown will have privileges at the community hospital, which will also draw patients. Accordingly, I find it reasonable for MUHA to predict a thirty-five percent shift of patients from 29401 (the peninsula) in consideration of the above factors.

Overall, I find MUHA's redirection analysis to be sound. While some of MUHA's percentages may overestimate how many patients will travel from some ZIP codes that are closer to MUSC downtown, I also find MUHA's blanket 2% for secondary counties underestimates the draw of MUHA's proposed community hospital because it creates an artificial border that does not exist. It is more likely there will be some gradation in the percentage of patients who redirect from some areas of secondary counties. For example, one Orangeburg County (secondary service area) ZIP code is almost equidistant to the Project as one West Ashley ZIP code, yet a two percent redirection is applied to Orangeburg and a thirty-five percent redirection is applied to West Ashley; this is not entirely logical. Consequently, to the extent MUHA may have overestimated redirection percentages in some areas such as the sea islands, I find it also underestimated them in others,

[31] Although this particular criticism of ZIP code 29401 remains viable after MUHA corrected its redirection percentages, Mr. Sullivan's opinion of MUHA's redirection analysis was based on MUHA's original, incorrect Attachment N.

including some nearby areas of secondary counties, and neither deficiency is great enough to offset the overall justification of the application.

b. Average Length of Stay (ALOS)

In its CON application, MUHA projects patient days by multiplying the volume of patients it expects to redirect by the projected average length of stay (ALOS). MUHA assumed an ALOS of 5.2 days for med/surg patients and 2.9 days for OB patients for a combined ALOS of 4.7 at the proposed hospital. This ALOS represents a ten percent reduction of the non-tertiary ALOS experienced at MUHA's downtown hospital.[32] Specifically, Figure 18 in MUHA's application states that current non-tertiary med/sur adult patients at MUHA's downtown campus have an ALOS of 5.73. When 5.73 is reduced by 10% the result is 5.2. Similarly, MUHA's downtown campus current has a non-tertiary OB ALOS of 3.2 When 3.2 is reduced by 10% the result is 2.9. Therefore, MUHA has taken its patient data for non-tertiary patients and reduced it further to predict the ALOS at the proposed community hospital. I find this is reasonable.

In finding that MUHA's ALOS for the proposed hospital is reasonable, I do not disregard the fact that this predicted ALOS is high compared to other providers in the Tri-County Service Area. MUHA Berkeley's combined ALOS of 4.7 is equal to, or very close to, Roper and Trident's tertiary hospitals. In 2018, Roper reported a combined ALOS of 4.9 days and TMC reported a combined ALOS of 4.7 days. MUHA has not represented its hospital to be a tertiary facility, but its projected ALOS is on par with other tertiary hospitals in the area. In fact, looking at the component parts of the combined ALOS, the predicted ALOS's for MUHA Berkeley are higher than any other hospitals in the area except MUHA's downtown campus.[33]

On the other hand, both Mr. Richardson and Mr. Sullivan opined that an ALOS of around three would better reflect the acuity at a community hospital. I find those estimates unreasonable. Specifically, Mr. Sullivan offered opinions that resulted projected only a need for forty-two/three

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[32] MUHA's Case Mix Index (CMI) is increasing, which means the acuity of its patients is increasing. Increasing case mix correlates with a higher ALOS.

[33] Specifically, MUHA predicts an ALOS of 5.2 for med/surg patients while Roper's downtown tertiary facility has a med/surg ALOS of 4.9 and TMC has a med/surg ALOS of 5.0. Similarly, for OB services, MUHA's downtown hospital, which is a regional perinatal center, and Summerville Medical Center, which has a Level II neonatal nursery, reported the highest ALOS's at 3.1 and 2.6 days, respectively. MUHA Berkeley has a projected OB ALOS of 2.9 days. All other providers were below these numbers and reported ALOS ranging from 2.5 down to 2.2 days.

beds in one scenario and a bed need of thirty-three/four beds and in another scenario. In reaching his opinion of the appropriate size for MUHA Berkeley, Mr. Sullivan applied a modified redirection percentage. I find Mr. Sullivan's redirection percentages underestimated MUHA Berkeley's patient population.

Mr. Richardson reached a similar conclusion by narrowing the service area to a twenty-minute drive or ten-mile radius. He determined these re-adjustments would lead to a decline in utilization from 50-60% down to 40% with the result that MUHA Berkeley should have forty to sixty beds rather than 128 beds. Mr. Richardson also concluded that a more realistic estimate for patient days in year three would be 9,700-14,000 patient days rather than the 26,805 patient days MUHA predicted and on which they based their financial forecasts. I also do not agree with Mr. Richardson's analysis.

In sum, I find MUHA's projected ALOS is reasonable because it is based upon MUHA's historic patient data for non-tertiary patients. Dr. Patrick Cawley, MUHA's CEO, testified that although MUHA Berkeley is expected to have lower acuity patients than MUHA's downtown campus, it will have higher acuity patients than other community hospitals because of its academic function. This testimony is supported by the high ALOS already demonstrated by MUHA's existing non-tertiary patients. Therefore, I find it is reasonable to predict that MUHA's community hospital will have a higher than average ALOS compared to other community hospitals in the area.

c. Patient Days, ADC, and Overall Utilization

Having found MUHA's underlying service area, redirection percentages, and ALOS are reasonable, I now turn to patient days and the utilization of the proposed hospital. Using the volume projections and redirection percentages from its defined service area, MUHA multiplied these volumes by the predicted ALOS to determine the projected patient days for MUHA Berkeley's first three years of operation. MUHA separated calculated patient days for its med/surg and OB patients. For med/surg patients, MUHA projected 12,776 patient days in Year 1 (FY23), 16,261 patient days in Year 2 (FY24), and 23,230 patient days in Year 3 (FY25). These projections incorporated 1.7% population growth rate and gradually redirected patients to the full redirection amount over the course of the three years. The resulting average daily census (ADC) for each year of operation was 35, 45, and 64, respectively. When these ADC are looked at in the context of a

112 med/surg and ICU beds,[34] the utilization of the proposed hospital for med/surg patients is projected to be 31%, 40%, and 57% for each successive year, respectively.

For OB patients, MUHA projected 1,966 patient days in Year 1 (FY23), 2,503 patient days in Year 2 (FY24), and 3,575 patient days in Year 3 (FY25). These projections also incorporated a 1.7% population growth rate and gradually redirected patients to the full redirection amount over the course of the three years. The resulting ADC for each year of operation was 5.39, 6.86, and 9.80, respectively. In the context of 16 OB beds, this translates into projected utilizations of 34%, 43%, and 61% for each successive year, respectively.

MUHA's predicted utilizations of 57% for med/surg and 61% for OB for in Year 3 are sufficient to justify the hospital's proposed size of 128 beds. Petitioners argued that the actual utilization would be lower based upon the alleged problems with MUHA's various assumptions in calculating utilization as discussed above, yet Petitioners failed to show MUHA's predicted utilization in its application is too low for it to be a successful hospital. SMC has been operating successfully below 50% utilization; according to the 2017-2018 SHP, SMC had an occupancy rate of 48.9%. In contrast, MUHA is predicted to operate at a higher utilization than SMC by Year 3, and its utilization predictions are sufficient to justify the proposed hospital, particularly in a location of high population growth. However, it is likely that MUHA will capture some market share because of the Project's proximity to Roper Berkeley, TMC, and SMC. All four hospitals will share portions of their primary service area. I find MUHA's assumption that it will only serve its existing patients to be unreasonable.[35] Because of this, I further find that MUHA underestimated its patient volumes at MUHA Berkeley and, therefore, underestimated its utilization numbers as well. Overall, I find MUHA justified the need for its proposed 128-bed hospital.

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[34] Only 112 beds of the 128 beds proposed are for med/surg patients. The remaining 16 beds are for OB patients.

[35] Mr. Richardson opined that MUHA's error (in his opinion) in making its service area too big was compounded by MUHA's assumption that 100% of patients at the Project would be filled by patients redirected from MUHA's existing patient base without any patient shift from other hospitals and providers. Mr. Richardson cited his recent work on Roper Berkeley as more reasonable, for which he assumed 10% of patients would be cannibalized from other providers. Mr. Sullivan likewise did not think MUHA's 100% redirection was accurate as evidenced by his estimate that MUHA would gain approximately 4-5% in market share as a result of the new hospital. I agree that MUHA Berkeley is likely to capture some market share. This will be discussed more fully in the section discussing adverse effects.

Conclusion

Petitioners suggest that MUHA either (1) inflated its service area and redirection percentages to achieve the volume of its patients necessary to justify the need for a 128-bed hospital or (2) intends to reach the necessary volume numbers to justify the need for a 128-bed hospital by capturing market share from other providers. I find neither of these criticisms to be borne out by the evidence presented. I do not find MUHA's proposed service area is too large; rather, it is reasonable for the community hospital of an academic medical center that draws from an unusually large area itself. I also find MUHA's redirection percentages are reasonable based upon MUHA's historic patient origin data and the likelihood that some patients from some zip codes closer to the downtown hospital will choose elective procedures at Berkeley to avoid congestion. Furthermore, the population in and around the Project site is projected to grow significantly and there is a high likelihood that MUHA will capture market share in that area, but I do not find MUHA is trying to subversively capture market share when it has justified the need for the proposed hospital by using its existing patient base.

I find the greater weight of the evidence justifies the need for a 128-bed hospital as presented in the CON application.[36] MUHA has demonstrated its proposed hospital is needed based upon such factors as: an overwhelming need to redirect patients from the peninsula hospital; the significant population growth in the area; and the reasonableness of its service area, patient redirection percentages, ALOS, and projected utilizations based upon its historic patient origin data.[37]

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[36] MUHA's decision to create a 128-bed hospital considered not only the projected patient volume but also the unit sizes within the hospital needed to efficiently accommodate those projected patient volumes. Nevertheless, while unit size became a consideration for this Court once MUHA explained that it was used, in part, to size the proposed hospital, this consideration was not determinative of this Court's decision.

[37] Although I find MUHA justified the need for its hospital with patient origin data, it must be emphasized that MUHA's application relies in part on patient volumes that will be redirected from MUHA's FSED at Nexton because the application states the FSED will be absorbed by MUHA Berkeley. However, it now appears MUHA plans to keep the FSED open independently. The extent to which this change would affect the volume numbers supporting MUHA Berkeley is unclear, but likely significant. Therefore, my decision in this case is premised on the FSED and its patient volume being absorbed by MUHA Berkeley as premised in MUHA's CON application.

Distribution (Accessibility)

Justified Duplication

A consideration in determining whether a CON project should be approved is the distribution of medical resources. This project review criteria requires consideration of whether the project will unnecessarily duplicate services in the area. Petitioners provided testimony that MUHA Berkeley will offer the same services their respective hospitals already offer.[38] Mr. Richardson opined that MUHA's Project's size, at 2.5 bigger than Roper's or Trident's community hospitals in or near Berkeley County, has the potential to be excessive development. In Mr. Sullivan's opinion, the Project would unnecessarily duplicate services.

The evidence demonstrates MUHA's Project will provide similar services to those provided at Roper Berkeley, TMC, and SMC, with the caveat that TMC will provide more services than MUHA Berkeley and SMC will have a greater focus on OB. However, it also appears that MUHA will be a more acute hospital than other community hospitals in the area based upon MUHA's unique patient mix as an academic medical center. As Mr. Levitt pointed out, there is always duplication when another hospital is added. Here, the more important question is whether that duplication is unnecessary. In this case, because MUHA has demonstrated a need for the new hospital and justified its size with utilization data, I find the duplication is necessary.

Medically Underserved Areas or Populations and Duplication

Another consideration is whether the Project will be located in a medically underserved area or in a location that will serve a medically underserved population.[39] Blended into this consideration is whether the location will result in an unnecessary duplication of services.

In 2010, Berkeley County had 27% of the population, Charleston County had 53%, and Dorchester had 20%. However, Charleston County had 95% of the beds, Dorchester had 5% of the beds, and Berkeley County had 0% of the beds. Using RFA data to predict the distribution for

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[38] James O'Neal Hiott, III, the CEO of CMC, noted he was unsure if MUHA was going to have an invasive vascular lab, which is a service that CMC does not offer. Tr. vol2 at 246.

[39] Included in this consideration is the issue of the extent to which the CON applicant will grant access to "medically underserved groups" such as "low income persons, racial and ethnic minorities, women, the elderly, handicapped persons." *See* S.C. Code Ann. Regs. 61-15 § 802(3)(f). Petitioners did not challenge whether MUHA Berkeley will serve "medically underserved groups." Nevertheless, the evidence established that MUHA Berkeley will serve those groups.

2021, Berkeley County will have 29% of the population, Charleston County will have 51%, and Dorchester County will have 20%. In this scenario, Charleston County has 88% of the beds, Dorchester has 7% of the beds, and Berkeley County has 5% of the beds.

MUHA asserts that "Berkeley County is a dramatically underserved market in the tri-county area that only has one acute care hospital planned and one under construction to service the entire population." MUHA also claims MUHA Berkeley will increase access to its downtown facilities because it will shift lower acuity patients away from the downtown campus. Another component of MUHA's argument is patient choice. MUHA contends patients in Dorchester and Berkeley Counties have limited choices for healthcare in their area and the addition of MUHA Berkeley will increase access to those patients who would choose care at a MUHA facility. In sum, MUHA asserts its new hospital would increase access to its own patients and Berkeley County residents while better distributing healthcare facilities and healthcare choices in the Tri-County area.

Mr. Sullivan averred there is no access problem for the Project to resolve. Mr. Richardson, likewise, contends there is no access problem in Berkeley County. He believes Roper Berkeley, TMC, SMC, and eventually BMC, provide a good distribution of beds for Berkeley County. Both Mr. Sullivan and Mr. Richardson further contended that using county lines to fragment the larger Tri-County Service Area creates artificial barriers to patient travel that do not exist. They opined that patients flow across county lines and artificial borders at county lines cannot be used to determine whether a particular county is underserved or there is a maldistribution of beds.

In Mr. Levitt's opinion, calculating the beds per capita for each county is a useful measure to quantify maldistribution. He calculated that in Charleston County there are 4.33 beds per thousand people and in Dorchester and Berkeley Counties there is less than one bed per thousand people, which is a "very mal-distributed volume of beds." Even counting the 100 licensed or approved beds in Berkeley County, Mr. Levitt testified Berkeley County has 0.5 beds per thousand people, which is five times less than the 2.4 beds per thousand people in the State of South Carolina. Berkeley County clearly has the least beds per capita in the State when the County is considered by itself.

I agree with Petitioners that healthcare is delivered across county lines, and this is particularly true when hospitals are located near county lines. For this reason, I find Berkeley

County is not "dramatically" underserved considering the recent opening of Roper Berkeley and the close proximity of TMC and SMC—only TMC is fully utilized at this time and, overall, the Tri-County Service Area has an excess of beds.[40] However, simply because healthcare crosses county lines does not mean it is not probative to consider the distribution of beds in each county. Beds are clearly maldistributed across the Tri-County Service Area in favor of Charleston County. In consideration of this factor, while I find Berkeley County is not "dramatically" underserved, I do find it is an underserved area.

Moreover, MUHA Berkeley will provide access to an underserved population that originates in the area surrounding the Project. MUHA Berkeley has not been offered as a hospital for Berkeley County alone,[41] but rather as a hospital to serve MUHA's lower acuity patients in the Tri-County Service Area. The proposed site is very close to the border of Charleston and Dorchester Counties and approximately 79-80% of MUHA Berkeley's projected patients trace back to zip codes in Charleston and Dorchester Counties. Additionally, approximately 21% of MUHA Berkeley's projected patient population will come from Berkeley County. Based upon this framework, I find the area surrounding MUHA Berkeley is underserved because a substantial percentage of existing MUHA patients originate from the submarkets near the proposed site and there is clearly a problem with access due to capacity constraints at MUHA downtown.

Furthermore, recognizing that county lines are artificial borders as asserted by Petitioners, the underserved medical need is further highlighted. The patients MUHA seeks to redirect are receiving care from an overcrowded hospital that needs capacity relief to provide the best patient care possible. These MUHA-aligned patients could choose to re-align themselves with Roper

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[40] The effect of the addition of BMC is difficult to assess at this time because of the uncertainty of its completion. If it is built, it will increase access and reduce any maldistribution of healthcare in Berkeley County that may exist, particularly considering it will primarily service an area of Berkeley County in the north where no other hospital is physically present. Therefore, its existence would lessen, to some extent, the need for MUHA Berkeley. However, if it is not built, the addition of MUHA Berkeley will most certainly increase access and improve the distribution of health services in the northern Tri-County area. At this time, I find it most reasonable to consider need without reference to BMC because of BMC's on-going difficulties with moving forward, which will be discussed further as part of the adverse effects analysis.

[41] The Court may consider the 2018-2019 SHP that recognizes Berkeley County as its own service area. However, I chose not to exercise that discretion, in part, because there is not data for Berkeley County to base need calculations on and thus, there is not a reliable forecast of bed need for Berkeley County alone.

Berkeley or SMC, which, more so than TMC, have excess capacity. However, it is unlikely that the vast majority of MUHA-aligned patients will redirect if they are well-established with MUHA.

Conjointly, MUHA Berkeley will increase access to MUHA's downtown hospital for all patients who have difficulty accessing the hospital due to crowding, but particularly those patients who need MUHA's level of care. These patients are also underserved. Petitioners contend the Project will not result in increased capacity downtown because the CON application concedes MUHA Berkeley will only "slightly alleviate these constraints, but MUHA will remain full downtown." However, I do not find this concession to diminish MUHA's argument that MUHA Berkeley will help reduce capacity constraints. The evidence shows MUHA downtown is consistently operating at 90-100% capacity during peak times and even reducing its operation to 85% capacity, which is still "full," would be a significant benefit compared to how it is currently operating. In fact, MUHA predicts the addition of MUHA Berkeley will reduce capacity down to almost 70% as MUHA Berkeley ramps up. Alleviation of the current patient load would allow MUHA to accept more transfers and high-acuity patients and thereby better serve the citizens of South Carolina.

In sum, MUHA Berkeley will increase access to the medically underserved target population and Berkeley County residents while better distributing healthcare facilities in the Tri-County Area. I further find MUHA Berkeley will have the effect of improving access for high acuity patients at MUHA's downtown facility as well. Moreover, based on these findings and the fact that MUHA justified the need for the Project, I do not find a duplication of the services provided by Roper Berkeley, TMC, or SMC, will be unnecessary. Finally, although Petitioners raised a reasonable concern that MUHA Berkeley will result in an expansion of MUHA's base by capturing tertiary referrals, enhancing its brand, and granting it leverage to negotiate for higher prices in its reimbursement from third party payers, the evidence supporting that assertion was merely speculative. Therefore, Petitioners did not prove the geographic spread of a MUHA's system will result in MUHA extracting higher prices from payors and thus result in higher premiums for patients.

Adverse Effects[42]

The Department did not include PRC 23, Adverse Effects on Other Facilities, in its review.[43] Petitioners' experts both asserted the Department was remiss in not including PRC 23. Specifically, both Petitioners' experts testified that because of the Project's size and proximity to TMC, SMC, and Roper Berkeley, it would have an impact on these providers. In particular, Mr. Sullivan opined that Roper Berkeley's ability to grow its market share as projected in its CON would be severely constrained by MUHA's new hospital in the same area. Mr. Sullivan testified he believed the Project would have a material impact on Trident.

100% Redirection

In its application, MUHA asserts its Project will have no impact on existing facilities because MUHA Berkeley's patient base will be 100% redirected from MUHA's existing patients.[44] However, MUHA's assertion that it will not have any impact on other healthcare providers because 100% of its patients will be redirected from its existing patient population is unreasonable. A new hospital is going to have some degree of impact on existing providers, especially when another provider is only four miles away and the new hospital has an emergency room, the use of which is largely driven by patient proximity.

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[42] In this Court's Order on Summary Judgment, the Court found "there is a subtle distinction between Standard 5, which asks for the applicant to justify the potential adverse impact on existing hospitals, and the criterion in PRC 23 requiring the Department to consider adverse effects on other facilities, which is not necessarily limited to hospitals." Order filed May 8, 2019, p. 10. In this case, the expert health planners testified during the hearing that only hospitals can provide inpatient services and they provide different services than outpatient facilities. I find that for purposes of adverse effects on existing facilities under PRC Reg. 61-15 § 802.23, the review is properly limited to the review of MUHA Berkeley's impact on existing hospitals. Even if the word "facility" includes outpatient facilities, I further find that Petitioners presented no credible evidence that any of their existing or proposed outpatient facilities will be materially affected by MUHA Berkeley.

[43] Ms. Murdock testified she did not list Reg. 6-15 § 802.23 as a PRC in the "deemed complete" letter because she interpreted the PRC phrase "existing facilities" as limiting her review only to licensed hospitals and not to approved but not licensed hospitals. In order to consider the adverse effects on both licensed and approved hospitals, Ms. Murdock testified she reviewed potential adverse effects in light of the purposes of the CON Act, specifically, unnecessary duplication of services and establishment of health facilities and services that best serve public needs.

[44] Although, MUHA did not rely upon this assertion at trial, the Court nevertheless addresses the argument. Furthermore, in its application, MUHA acknowledged the pending opening of Roper Berkeley and the speculative construction of BMC but did not engage in any meaningful examination of the possible impact MUHA Berkeley would have on these facilities. Although Roper Berkeley and BMC were not technically existing facilities at the time of MUHA's application, TMC or SMC were existing facilities and were not discussed at all.

Trident, Roper, and MUHA are the three dominant inpatient providers in the Tri-County Service Area.[45] TMC is approximately ten miles from the Project with 296 acute care beds and SMC is approximately eleven miles from the Project with 124 acute care beds. Roper Berkeley is approximately four miles away with 50 beds. Obviously, the closer a project is to existing providers, the more likely it will impact those providers. Patients tend to go to the closest hospital; in particular, emergency rooms drive a substantial portion of hospital admissions and a patient is likely to go to the closest emergency room. The RFA data show 63% of Berkeley County admissions come through the ED. A patient who was previously driving to Trident who now lives closer to MUHA Berkeley is likely to redirect in an emergency situation where time is of the essence.

However, close proximity does not necessarily indicate the impact will be material, significant, or adverse such that a CON application should be denied. Several hospitals successfully coexist in close proximity to each other, including Roper's downtown campus and MUHA's downtown campus whose ERs are less than 1000 feet from each other. Similarly, Richland Hospital, Baptist Hospital, and Providence Hospital in Columbia are all within a few miles of each other. The close proximity of these hospitals reflects a need to put hospitals where people and populations exist and within easy access to those populations. Therefore, while the location of MUHA's proposed project is within four miles of Roper's Berkeley hospital, that does not inherently mean that MUHA Berkeley will have an adverse impact on Roper Berkeley that requires denial of the CON application. MUHA's decision to locate its hospital in the southern part of Berkeley County is reasonable based upon where the growing portion of Berkeley County is located, which is in the southern portion of the county, and the location's proximity to Interstate 26, which provides good access to the hospital for the population living in that area.

Overall, because the proximity of the Project to Roper Berkeley, TMC, and SMC, it is likely to have an impact. All four hospitals will share portions of their primary service area (approximately thirty-minute radius around each hospital). In light of these over-lapping service areas, the impact of MUHA's Project on market share of the existing hospitals is probative in determining potential adverse impacts or effects.

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[45] With the exception of CMC, Petitioners are located in the Tri-County service area.

Market Share

Market share has been fairly stable between the three health systems in the Tri-County Service Area with each having about thirty percent of the overall market share. However, Trident has 50% of the market share in Berkeley County and 60% of the market in Dorchester County. Generally, the first provider into a market has an advantage because it can establish its patient based first and, essentially, develop some loyalty and familiarity in the community. Trident, having been in the northeastern Tri-County area since the 1970s, has the advantage of an established patient base. Similarly, Roper Berkeley is the first hospital in Berkeley County in approximately forty years and will have an advantage as a result. Even if MUHA's Project is approved, Roper Berkeley will have approximately five years to establish and grow its patient base before the Project comes online.

Trident

Because of Trident's longstanding presence in, and commitment to, the northeast portion of the Tri-County, and its current utilization levels, I find any adverse impact to Trident will be minimal and the impact is justified by the increased accessibility MUHA Berkeley will offer. The likely impact is demonstrated by the already quantifiable impact Roper Berkeley has had on Trident's volume.[46] Trident compared the thirty days prior to Roper Berkeley opening to the thirty days after and found a significant change in admission patterns as well as ER visits. Trident was down an average of five admissions per day during this period, which equates to approximately 150-155 patients a month and would result in an almost $10 million decrease in margin per year.

The loss of five admissions per day, or even ten, will undoubtedly affected Trident's bottom line, but it is not a large percentage of Trident's overall ADC. According to the 2018-2019 SHP, TMC has a projected ADC of 233 and SMC has a projected ADC of 82 compared to existing beds of 296 and 124, respectively. Both facilities have an institutional bed need of thirty-seven and two, respectively. Therefore, even if ten patients are redirected to MUHA, this is only three percent of Trident's overall projected ADC in the 2018-2019 SHP and a fraction of Trident's

[46] It appears the impact was to Trident Health System as a whole rather than just TMC, but the record is unclear.

institutional need. Moreover, in 2018, TMC's utilization was around 82%.[47] Additionally, TMC typically reaches 90% capacity at least once a week, usually on Wednesday or Thursday. For a hospital of its size, TMC is considered full at a utilization of 70%; therefore, TMC is running at, and even above, full capacity much of the time. The need for more capacity at TMC is demonstrated by Trident expanding TMC's ER over the last five years to give an additional 25% capacity in response to growth in the area. SMC is going through a similar addition to expand capacity.[48]

Trident's situation is not one in which a new provider will enter a market where the existing provider is only at 50% capacity and has excess beds, which could result in a material adverse impact to both providers. As evidenced by TMC's high utilization, more capacity would likely be a benefit to patients and ease the burden on TMC. Although hospitals can run at higher utilizations than the percent that deems them "full" under the SHP, utilization demonstrating a hospital is full remains an indicator that the addition of more capacity could be advantageous rather than adverse.[49] Additionally, the impact of Roper Berkeley is small relative to Trident's overall ADC; and, although it is a measurable impact, it has not been tested over a long period of time to show a sustained, or increasing impact. Trident has a well-established and strong presence in the area where the Project is proposed and, for these reasons, is likely to have strong patient-alignment to insulate it somewhat from a new provider in the area. Overall, I find the evidence in the record demonstrates Trident will only be marginally adversely impacted by MUHA Berkeley. It will lose some market share, but that adverse impact is not the kind of material adverse impact that justifies denying MUHA's application in light of Trident's strong presence in the region and current utilization. Moreover, when balanced against the benefits of increased access at MUHA Berkeley, the benefits of access outweigh the small impact to Trident.

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[47] The data in the 2017-2018 and 2018-2019 SHPs has lower occupancy rates for TMC; however, the data in these plans comes from 2015 and 2016, respectively. Specifically, the 2017-2018 SHP shows TMC had a 2015 occupancy rate of 66.6%. The 2018-2019 SHP shows TMC had an occupancy rate of 68.73%.

[48] Pursuant to the 2017-2018 SHP, SMC had an occupancy rate of 48.9% in 2015. Pursuant to the 2018-2019 SHP, SMC had an occupancy rate of 52.87% in 2016.

[49] The State Health Plan has a specific disclaimer that use of the term "hospital bed need" in the Health Plan "does not suggest that facilities cannot operate at higher occupancy rates than used in the calculations without adding additional beds." 2017-2018 SHP at 9.

Notably, I have not discussed BMC although it is also part of Trident Health System. I find the impact of MUHA Berkeley on BMC (if any, considering BMC's construction is not underway or assured) is speculative at this time. In applying for the CON application to build a fifty-bed hospital in Moncks Corner, Trident was concerned about the possible adverse impact of Roper Berkeley's fifty-bed hospital being located so close to BMC and whether both hospitals would have a large enough patient base to be sustainable. Both Trident and Roper received CONs to build their hospitals; however, while Roper Berkeley is now open, Trident has yet to break ground on BMC.[50] Trident has received approval from the Army Corps of Engineers to modify drainage on the site, and Trident is in the process of letting the contract out to start the site work to resolve the drainage issue per the Corps' plan. However, Trident is still three years away from resolving the drainage issue and starting on architectural and engineering plans for the site.

Based on the status of BMC, it is difficult analyze the impact of the Project in any material way. The only foreseeable impact at this time is Trident's inability to capitalize on the fact that its CON was approved first, which would theoretically give it the advantage of coming to the market first in the northern part of Berkeley County. However, at this point it is difficult to determine when, and if, BMC will be built, and I find it would be unreasonable to prohibit MUHA from entering the market solely based upon the speculative impact on the uncertain development of another hospital several years in the future.

Roper

Petitioners contend that MUHA's project will adversely impact Roper Berkeley because it will decrease Roper Berkeley's market share. In 2017, prior to the CON application in this case, Roper prepared a report or impact analysis predicting what would happen if MUHA entered the market in Berkeley County. The analysis showed different scenarios in which MUHA captured patients from other providers – one where 70% of captured patients came from Trident's patient base and 30% from Roper Berkeley's patient base and another scenario where the split was 50/50. Specifically, Roper reflected the projected capture in market share through discharges. In the

[50] Interestingly, in its application for BMC, Trident justified the need for the hospital using its existing patients – in other words, like MUHA's current application, it premised its application on 100% redirection of its existing patients. Based upon that premise, Trident argued its new hospital would not have an impact on other systems. However, Trident now argues MUHA's new hospital, also based upon 100% redirection, will affect it and BMC. The irony is inescapable.

70/30 scenario, Roper predicted MUHA Berkeley would "ramp up" beginning in 2021, and Roper Berkeley would go from 7,405 discharges in 2021 to 7,145 discharges in 2025, a decline of 4%. In the 50/50 scenario, Roper predicted it would go from to 7,405 discharges in 2021 to 6,594 discharges in 2025, a decline of 11%. Under both scenarios, Roper determined there would be a material impact to Roper Berkeley. I find that this internal impact analysis over-predicts the impact on Roper Berkeley because Roper Berkeley will have more time to establish itself before MUHA Berkeley comes online based upon the current timeline. Although MUHA Berkeley initially forecast that it would come online in 2021, this litigation has pushed back this timeline by almost a year thus far. Roper Berkeley will be able to capitalize on its successful bid to be first-to-market in Berkeley County for longer than predicted in its analysis, thus building a larger base of aligned patients. Additionally, population growth in the area during this time will also benefit both Roper Berkeley and lessen the impact of MUHA Berkeley eventually entering the market.

Mr. Richardson also analyzed the impact of MUHA on Roper. His impact analysis was premised on MUHA not being able to redirect enough existing patients to meet its projected number of patient days in Year 3 (26,805) and instead fall short by 12,000 to 17,000 patient days. To make up that deficient, Mr. Richardson looked at how many patients would probably be poached from Roper Berkeley based upon Roper's market share in the area and its proximity to the proposed hospital. Mr. Richardson testified he expects between 33% and 50% of the patient days projected by MUHA would come from Roper Berkeley and that, in his opinion, Roper Berkeley would lose between 3,000 to 8,000 patient days to MUHA Berkeley. He opined that with a Year 3 patient day forecast for Roper Berkeley of 12,775, the loss would represent at least 25% and upwards of 50% to two-third of Roper Berkeley's projected volume. Similarly, Mr. Sullivan, without predicting how many patient days are likely to be redirected, simply averred that MUHA will capture less days than it predicted and will then specifically seek to redirect patients from Roper to fill its deficit.

As already discussed, I found MUHA's proposed service area and redirection analysis to be reasonable; therefore, I do not agree with the premise of Petitioners' adverse impact analysis. Specifically, I do not agree with Mr. Richardson's estimation of MUHA's deficit and market capture in Year 3 because I find the underlying premise of a large deficit in patient days to be flawed. Moreover, even if MUHA were to fall short of its patient days in Year 3, the evidence did

not reflect that MUHA Berkeley would or could single-handedly poach as many patients as it wants to fill a patient deficit. Patients have a choice in where they go. Therefore, I do not find Petitioners experts' analyses to be helpful. Further, while Roper Berkeley's internal analysis described the projected impact of a MUHA hospital as a "material" impact, I disagree. This analysis over-estimates the impact since Roper Berkeley will have the benefit of more time than this analysis predicted before MUHA Berkeley comes online and it will have the benefit of strong population growth in the area. BMC is likewise delayed and will probably take even longer than MUHA Berkeley to come online **if** it ever does.

Overall, MUHA's project is more likely to have an impact on Roper Berkeley because Roper Berkeley is new and less well-established compared to TMC and SMC. The Project will be located less than four miles away from Roper Berkeley and, as a result, it will share a larger part of its primary service area with MUHA Berkeley. Nevertheless, I do not accept the impact to Roper Berkeley will be significant. While I agree that MUHA Berkeley's entry into the market will result Roper Berkeley losing some market share, which is an adverse impact, the loss of market share will be minimal. Furthermore, I do not find this impact outweighs the benefits of increased access that MUHA Berkeley will provide to its target patient population who continue to receive care at MUHA Berkeley's downtown campus. Because it is first in the market, and considering the strong population growth in the area, these factors should significantly reduce any impact on Roper Berkeley. Moreover, while I find that MUHA's reliance upon **100%** redirection is unreasonable, the preponderance of the evidence demonstrates that the vast majority of MUHA's patients will be redirected and the impact to market share will be small. Balanced against the increased access MUHA Berkeley will provide, I do not find Petitioner Roper presented convincing evidence that MUHA will have an adverse impact on Roper Berkeley such that MUHA's application should be denied.

CMC

Lastly, I find that the extent to which MUHA Berkeley has an adverse effect on CMC, this impact would be more of a product of CMC's already precarious financial situation rather than a product of bad healthcare planning. This finding is not intended to suggest that under the appropriate circumstances, a CON application should not be denied because of the adverse impact on an existing provider that is struggling financially. However, here the evidence demonstrates

that CMC has lost money every year since 2015. CMC currently has 116 beds but a bed need of only sixty-eight, resulting in an excess of forty-eight beds. CMC's 2016 occupancy rate was 38.5%. Its utilization went down in 2018 compared to 2017. Like many rural hospitals, CMC is struggling with a relatively stagnant population in its service area. And, while MUHA is CMC's biggest competitor for patients, CMC's primary service area will be in MUHA Berkeley's secondary service area. MUHA Berkeley is likely to draw some patients away from CMC and I do not discount this impact to CMC. Nevertheless, although Mr. Hiott concluded even a 10% loss would result in a financial loss of $168,030 to this struggling hospital,[51] his analysis was based upon a 30% redirection of MUHA's patients from the secondary area when the evidence reflects a 2% redirection is the more likely scenario. Therefore, I do not find Mr. Hiott's analysis to be persuasive.

In sum, the number of patients that will redirect is likely to be small. The Court nevertheless recognizes that because CMC is already in a vulnerable position, what would be a relatively insignificant redirection of patients may be more material to CMC. However, the impact to a hospital teetering on insolvency must be weighed against the benefits of increasing access to the target population and MUHA's patients at its downtown hospital. This factor when viewed in combination with CMC's location outside the service area, leads the Court to conclude that the minimal adverse impact to CMC does not outweigh the benefits of increased accessibility provided by MUHA. For these reasons, I find any adverse impact to CMC is justified and the benefits of MUHA's proposed hospital outweigh any adverse impact to CMC.

FSED

Despite the above findings concerning lack of adverse impact, the Project would result in an unacceptable adverse impact if MUHA's proposed Nexton FSED is not absorbed by the Project. Originally, MUHA set forth in its CON application that upon opening the new hospital, MUHA would close the FSED the Department had approved for Berkeley County. However, after Petitioners objected to this CON for this Project, MUHA changed its position and now seeks to keep the FSED open. Presumably, MUHA's FSED's physicians would be apt to refer patients to

[51] To estimate the losses, Mr. Hiott looked at the contribution margin, which is net revenue minus operating expenses associated with the care of a patient.

MUHA Berkeley. Thus, MUHA Berkeley would potentially receive the benefit of duplicate emergency room referrals, thereby increasing its patient volumes and revenues for the Project. Although the increase in patient referrals would make MUHA Berkeley more financially feasible, it would do so at the financial harm to the existing local hospitals—specifically to Roper Berkeley. I find this impact would be a material adverse effect. This is especially pertinent in light of MUHA's contention that it did not intend to redirect patients from those existing hospitals. Therefore, I find the granting of the CON must be dependent upon MUHA honoring its original declaration that upon opening MUHA Berkeley, its FSED, if operating, will be closed. Otherwise, the Project will create an adverse impact to existing hospitals in violation of Standard 5.

Staffing

Nursing Shortage

Petitioners presented evidence that there is a nursing shortage in South Carolina and Tri-County area and the opening of MUHA Berkeley will adversely impact Petitioners' ability to staff their hospitals. MUHA did not necessarily disagree with the existence of a nursing shortage; however, it argued the nursing shortage has been an on-going issue for several years and has not prevented any of the providers in this case from expanding or building new facilities.

The evidence reflects that although there may be a shortage of permanent, full-time nurses at many hospitals, this shortage can be compensated for using temporary nurses or "travelers." All hospitals have been relying, to some extent, upon traveling nurses to fill areas where a provider is under-staffed. Hiring traveling nurses is not ideal for a provider because travelers are not conditioned to the protocols and culture of the hospitals they serve and they cost up to three times more than a regular nurse; however, they are a part of a hospital's administration in today's climate.

If MUHA Berkeley's CON is granted, there will be some nurses who leave another provider to work at the Project. For example, Trident lost eight RNs to Roper Berkeley; nevertheless, Trident continues to expand. I find that similar losses are likely to occur upon the opening MUHA Berkeley. However, because traveling nurses have been developed as a means by which to address the nursing shortage, the impact is likely to be immaterial overall.

Similarly, Trident raised the concern that the addition of MUHA Berkeley will drive up hiring costs for nurses. In order to retain staff, Trident has increased nursing pay three times in the last year to be more competitive in the market. Trident's Vice President of Human Resources,

Victoria Cummings,[52] testified MUHA is currently offering $20,000 sign-on bonuses for the Florence and Marion County markets in which MUHA operates. She is concerned that if MUHA offers significant sign-on bonuses for the Project, her staff would be interested in leaving. Again, I do not find that this concern established a material adverse impact that distinctly exacerbates the existing market conditions.

In sum, although MUHA Berkeley is likely to exacerbate the issues associated with hiring and retaining nurses, including the cost, Trident's own evidence shows that costs are increasing whether MUHA Berkeley is built or not. If the nursing shortage alone were material, then no new CONs should be granted in the Tri-County area for any facilities requiring nurses to be hired. I do not find that to be the case.

Physician Staffing

As with the nursing staffing, Petitioners also raised concerns that the opening of MUHA Berkeley would adversely affect their physician staffing. However, the evidence established that each health system has strong physician-alignment, and, unlike the nursing shortage, there is no evidence of a physician shortage. Roper has a strong, well-established physician network in the Tri-County area. The Medical Society of South Carolina is a large physician group that is a support organization for Roper and has a large presence in the service area. Trident has been serving northern Charleston, Berkeley, and Dorchester counties since 1975 and it also has a well-established physicians' referral networks.

Although challenges in physician staffing do exist, the evidence did not establish that the addition of MUHA Berkeley will trigger a loss of physicians from other providers that will create a material adverse impact upon the existing hospitals. In fact, the staffing of MUHA Berkeley will be unique because MUHA requires that every physician on staff at MUHA Berkeley be a member of the academic faculty. Moreover, each physician is expected to engage in clinical care, teaching, and research or some kind of academic productivity. This requirement will limit any potential impact of physicians leaving the existing hospitals systems because many physicians will not want the additional burden of teaching.

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[52] The Court qualified Victoria Cummings as an expert in clinical human resources. Tr. vol2 at 303.

Additionally, like Roper and Trident, MUHA's existing physicians will practice across its system and, therefore, some of the physicians who currently practice at the downtown campus will also practice at MUHA Berkeley. Also, some physician practices have privileges across health systems. For example, certain group practices like Lowcountry Women's Specialists and Lowcountry Orthopedics practice at both Trident and Roper locations. Furthermore, the majority of referrals to hospitals systems come from physicians who are not employed by hospitals and there are no restrictions as to which hospital they can refer patients. Overall, I find no evidence to indicate the Project will cause a material adverse impact to physician staffing in the area.

Financial Feasibility

Petitioners contend the Project is not financially feasible. To show the Project's financial feasibility, Lisa Goodlett, CPA and MUHA CFO, and Mr. Levitt, both testified as to its feasibility. MUHA's pro forma for MUHA Berkeley projects it will lose $11,442,000 in year one, become negligibly profitable at $39,000 in year two, and make a reasonable profit of $14,029,000 in year three.[53] Ms. Goodlett testified the pro formas are reasonable, accurate, and based upon data from MUHA's historic performance.

MUHA submitted three pro formas that were certified by Ms. Goodlett. The three pro formas reflect the time period of July 1, 2019, through June 30, 2025, with 2023-2025 reflecting the first three years of operation of the project. The first pro forma predicts the financial position of MUHA with the addition of the project, the second pro forma predicts the financial position of MUHA without the hospital, and the third pro forma predicts the position of the project alone. The pro formas show that the addition of the hospital is predicted to increase net operating revenue by $94,755,000 in 2023,[54] $126,388,000 in 2024, and $176,348,000 in 2025. Petitioners criticized the incremental revenue shown by the pro formas with the addition of the Project because MUHA has premised its project on a 100% redirection of its own patients, which suggests that MUHA

[53] Mr. Levitt testified outpatient revenue in the CON application was a conservative estimate because it assumed a 65/35% split between inpatient and outpatient respectively when the split is usually more like 50/50% for a community hospital. When Mr. Levitt modified the outpatient volumes to be higher and more realistic and increased personnel expenses accordingly, he calculated a $30 million profit.

[54] When non-patient income is subtracted from the operating revenue of $94,755,000 in 2023, the result is approximately $92 million in patient-driven revenue the new hospital would add in year one. In other words, the pro formas show the new hospital would have $92 million in incremental income in year one.

should make the same amount of revenue with or without the project. Petitioners argue MUHA's pro formas show MUHA anticipates the Project will capture new patients rather than redirect existing ones.

Initially, MUHA's pro formas conflict with their assertion that this project will be supported only by patients redirected from MUHA's existing patients. However, although MUHA's pro formas conflict with its assertion that it will redirect 100% of the patients at the new hospital, MUHA's assertion that 100% of its patients will be redirected from its own patient population is unreasonable. Moreover, the important question is not just whether 100% of MUHA will redirect to MUHA Berkeley, but also whether MUHA will obtain additional patients and thus increase its revenue. In that light, it is important to recognize that while MUHA's pro formas are not necessarily consistent with how they framed their project, the evidence reflected that MUHA will receive incremental income from a shift in market share.

Petitioners nevertheless contend MUHA's assumptions do not adequately take into account the differences between a tertiary/quaternary hospital and a community hospital. Specifically, Petitioners assert MUHA's financial projections are based on an estimated ALOS that is too high for a community hospital and average adjusted net revenue per discharge that is also too high for a community hospital. For instance, Petitioners presented evidence that Roper usually has a net revenue per adjusted discharge of less than $10,000 for its community hospitals. Roper's tertiary hospital has a net revenue per adjusted discharge of about $14-15,000. Similarly, Trident's net revenue per adjusted discharge is approximately $13,000. In contrast, MUHA Berkeley's projected net revenue per discharge is $18,500. And, when MUHA downtown's net revenue per adjusted discharge ($21,808) is discounted by 15%, the net revenue is approximately $18,500 or approximately the amount projected by the pro formas.

Although this discount does not produce a charge that is consistent with the charges at other community hospitals in the Tri-County area as demonstrated by the adjusted charges at Roper and Trident, it is equally clear that MUHA is a unique provider in this State and its community hospital will reflect that uniqueness to some extent. In particular, although Roper's downtown facility is a tertiary hospital, its net revenue per adjusted discharge is significantly lower than MUHA's net revenue per adjusted discharge at its tertiary hospital. Throughout this case, it has been evident that MUHA's numbers are significantly higher than other hospitals in the area. It thus stands to

reason that its community hospital will also reflect higher than average numbers based on the type of patients MUHA tends to draw, which is a higher acuity mix. Therefore, while the Court recognizes the Project will be a community hospital, the Court reasonably expects a MUHA community hospital, even one purporting to decant lower acuity patients from its downtown facility, will still retain elevated numbers because it will reflect its parent hospital. For this reason, the Court is not persuaded MUHA's pro formas are not reasonable projections of the financial feasibility of the Project, even if they might be unreasonable for another hospital system in the area.[55]

Therefore, I find Petitioners failed to meet their burden of proof to establish the Project is not financially feasible.

Ability to Complete the Project

Timeframe

MUHA's time frame to initiate and complete the project is two years from beginning of construction and three years and seven months from architectural contract to project completion. Roper Berkeley was fifty beds and the projected timetable was three years. BMC's proposed construction timeline was thirty-eight months. MUHA has completed each of the projects for which it has received a CON. Petitioners presented no evidence to the contrary. I find MUHA Berkeley has demonstrated that it can initiate and complete the project within the application time frame.

Financing

MUHA asserts that to finance the project it will seek out either a FHS-insured tax-exempt loan or a GNMA-insured tax-exempt loan, both of which are insured under HUD Section 242 Hospital Mortgages Insurance. MUHA has an established history of financing its strategic projects

[55] Whether or not MUHA's significantly larger charges would result in a higher cost to patients was unclear. Ms. Goodlett opined that expanding MUHA's footprint, and thus servicing more patients, would allow MUHA to protect or defend its pricing power. As the Court understands it, this means MUHA will be able to extract more from private insurers. It was not clear whether this would also increase patient payments to compensate for the higher insurance payouts. Additionally, although MUHA's parent hospital would appear to have the highest charges in the area, no evidence was introduced as to whether that led to higher costs for patients at MUHA downtown than at other providers in the area for comparable services.

through HUD and there was no evidence presented that MUHA has struggled to obtain HUD financing in the past or has failed to meet its obligations under HUD in the past.

MUHA submitted a letter from Armadale Capital, a licensed FHA multifamily lender and SEC-registered municipal advisor. In the letter, Armadale states it is committed to helping MUHA secure FHA mortgage insurance approval for the project and indicates that a preliminary review of the project was favorable. Armadale's letter is not a guarantee to extend financing, but it is not the usual practice to acquire guaranteed financing prior to having a project approved. Indeed, Roper's own witness, Mr. Johnson, acknowledged that in Roper's 2008 CON application for its Berkeley Hospital, it submitted a letter from Wachovia Bank that was not a guarantee to finance but was rather subject to their subsequent review of revenues and expenses. Similarly, for MUHA to receive financing, a feasibility study will have to be performed in accordance with HUD requirements.

Although Petitioners presented evidence suggesting that HUD financing is financing of last resort that requires higher fees with more conditions placed upon the loan, I do not find this evidence to be persuasive in this particular case. The evidence showed MUHA can obtain good interest rates from HUD and it has been able to secure loans from private banking entities in the Wohl past; nevertheless, HUD is its preferred lender.[56] If MUHA cannot get HUD financing, it has five to six banks it works with for lending.[57] Additionally, MUHA most recently successfully used HUD financing to finance $316 million to build Shawn Jenkins and the purchase of the four CHS hospitals in 2019. Therefore, I do not find MUHA's decision to seek HUD financing indicates MUHA is in a poor financial position or otherwise unable to successfully finance and complete the Project.

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[56] Petitioners also presented evidence that six lending institutions would not service a previous MUHA request for $38 million in unsecured financing. The Court does not find this evidence convincing considering the nature of the debt requested and MUHA's status as a governmental organization for which different standard apply.

[57] Petitioners presented evidence that several commercial banks would not extend financing to MUHA for a smaller project of $38 million because of factors related to its financial position; however, I find that MUHA successfully rebutted this evidence because MUHA, as a government entity, is not judged by the market the same way as a regular for-profit or non-profit entity might be and rejection of this type of financing does not necessarily reflect that MUHA is a bad risk or in a poor position.

MUHA's Capacity for Debt Service

Petitioners argue MUHA's ability to complete the project is jeopardized by its recent acquisitions and increased debt load which they argue is over-taking MUHA's ability to fund all the projects it seeks to complete. Specifically, Mr. Sullivan questioned whether it makes "sound heath planning sense" for MUHA to pursue this project from a financial standpoint. Mr. Sullivan opined the Project's financial feasibility is already questionable and will probably drain MUHA's resources, especially in light of the other strategic projects it is undertaking at the same time, including the purchase of the four new hospitals.

According to Dr. Cawley, MUHA has a three-phase strategic plan that has been developed by the MUHA Board. Approximately every ten years, MUHA begins a new phase. The first phase was the Ashley River Tower (ART), the second phase was Shawn Jenkins, and the third phase is a replacement hospital for the downtown campus. Although this three-phase plan is the overall plan that was developed and has been updated by MUHA since the early 2000's, lately MUHA's expansion efforts have extended well beyond the projects outlined in this plan. Indeed, it was difficult to keep up with the number of projects MUHA has recently undertaken during the pendency of this action. For instance, in addition to this Project, MUHA has purchased the CHS hospitals and taken on the Shawn Jenkins project, a pediatric imaging project, the Nexton FSED, the Johns Island FSED, and a joint venture in Beaufort.

Based upon MUHA's 2019 audited financials, MUHA has approximately $1.7 billion in revenue and about $2 billion in assets. MUHA's balance sheet from its 2019 audited financials shows it has $2.1 billion in assets and $2.7 billion in liabilities resulting in a $623 million deficit in equity or "net position" for MUHA. Despite this deficit, Ms. Goodlett characterized MUHA's financial position as of June 2019 as "very strong" with operating revenue of $55 million and eighty-one days' cash on hand or approximately $420 million in the bank.

Nevertheless, MUHA's recent acquisitions have increased its debt load. Mr. Johnson testified MUHA's current debt load, including debt for Shawn Jenkins, equals approximately $1 billion. He estimated that $1 billion of debt at a 4% interest rate for thirty years will result in $125 million a year in annual debt service and MUHA's income statement shows $92 million of income available to pay debt service. However, on cross, Mr. Johnson conceded that MUHA's 2019

audited financials show it has $400+ million in restricted and unrestricted cash in the bank, an operating income of $35 million, and free cash flow of $150 million.

Additionally, Mr. Johnson's concerns must be evaluated in view of the timing when different debts will accrue. Not all of these projects will come online at the same time. In fact, it is notable that MUHA's method of funding its projects, including the Project at issue, is similar to other health systems in the area. Roper engages in major strategic projects approximately every five years and funds its projects through tax-exempt bond debt and substantial contributions from its founding members (Medical Society of South Carolina, Bon Secours Health System, and Atrium Health). Roper, like MUHA, spaces out its strategic projects to allow time to pay down the last project and increase its debt capacity again.

Furthermore, Ms. Goodlett testified MUHA's outstanding debt projected as of 6/30/20 is $750 million. In addition, MUHA's OPEB[58] and pension liabilities are a significant contributor to its overall negative financial position on the balance sheet, but it is unlikely MUHA will ever have to pay out these liabilities that it is carrying for the State. Because of these OPEB and pension liabilities, in part, MUHA does not satisfy HUD's debt to capitalization standard; however, MUHA is only required to meet three of five standards, which it does.

Specifically, HUD requires an applicant to have twenty-one days cash on hand. MUHA traditionally maintains around fifty to sixty days cash on hand. MUHA deems anything above sixty days cash on hand to be strategic reserves that can be reinvested in MUHA since they have no stockholders. Based upon HUD's requirements and MUHA's self-imposed requirements, MUHA clearly meets the cash on hand criteria.

HUD also requires an applicant to have a debt service ratio of 1.4. This means MUHA must have 1.4 times more cash than debt for a mortgage payment, and MUHA usually runs at around 2.8-3. Ms. Goodlett testified that if MUHA remained within the requirement of a 1.4 debt to cash ratio, MUHA would have the capacity to take on approximately $1.4 billion more in debt serviced over twenty-five years at 5% interest. This is based upon MUHA having approximately $149 million in unrestricted income in 2019 that could be applied towards the re-payment of any

[58] OPEB stands for "Other Post-Employment Benefits."

additional debt needed to build the proposed hospital. This Project only amounts to $325 million, which is a large expense, but about 25% of 1.4 billion.

Finally, MUHA does not rely on debt-financing alone to support its acquisitions and expansions. MUHA receives between $24-46 million in State funds every year, primarily for telehealth and innovation, but it occasionally receives grants for other projects like the $25 million it received for Shawn Jenkins. MUHA also receives funding through revenue from its clinical care, disproportionate share funding through Medicaid, and private donations and fundraising. And, because MUHA does not have shareholders, it is able to reinvest its revenues back into its healthcare system to improve the quality of care for patients.

Overall

While MUHA's increasing financial commitments are concerning, I find that questioning the impact of future projects that may change or not come to fruition is less probative than focusing on MUHA's financial position at the time this application was submitted. This does not mean the Court is ignoring, for example, the acquisition of the four hospitals which has already occurred. However, the Court finds the financial metrics presented by Ms. Goodlett to be credible and to indicate that despite MUHA's balance sheet deficit, it is well-positioned based upon its other metrics, including cash on hand and ability to service additional debt. I also find it remains well-within the parameters required by HUD. It is also significant that no evidence was presented showing that MUHA has ever previously failed to complete a project or defaulted on a project. Rather, the evidence presented shows that MUHA has always fulfilled its obligations.

Alternatives to the Project

In its application, MUHA considered three alternatives regarding its bed need: (1) maintain the status quo and not proceed with the project; (2) renovate and expand its inpatient services at its downtown campus; or (3) construct MUHA Berkeley for $325 million. MUHA found maintaining the status quo with its capacity constraints was not a viable option. It also found the cost to renovate various buildings on its campus was comparable to the cost of building the Project, but the quality of care would less if delivered in downtown Charleston. For this reason, it concluded building the Project was the best option.

Petitioners criticized MUHA for not further exploring alternatives to the Project—in particular, for not further exploring the option to add 128 beds downtown. Mr. Sullivan opined

that adding more beds downtown would reduce the need to duplicate administrative and overhead expenses that would be associated with a new hospital, it would be more convenient for MUHA faculty and students, and it would give patients access to MUHA's specialized equipment downtown. Mr. Sullivan suggested there may be space to add additional beds in the recently vacated children's hospital.[59]

However, there are numerous needs for the vacated space that is now available. In fact, MUHA intends to transfer some transplant services and imaging equipment to that area. Therefore, MUHA has submitted two CONS for thirty-three beds and twenty-nine beds respectively to backfill the old children's hospital. Furthermore, the old children's hospital, because of its age and construction, is simply unsuitable for adding 128 new beds. Rebecca Smith, AIA, MUHA's expert in health design and space planning, explained the array of problems associated with locating 128 additional beds on the downtown campus in existing facilities such as the recently evacuated old children's hospital.[60] Specifically, limitations on room size, construction challenges such as low ceiling height, ability to meet standards for air exchange, wiring and running cable for computer dependent equipment, and the increased burden on clinical services and therapies would result in a failure to meet the appropriate standard of care for hospitals if the beds were squeezed onto the downtown campus. In 2008, Roper, itself, addressed similar problems. It considered upfitting old buildings on the peninsula instead of building Roper Berkeley but found it would be much more expensive for Roper to upfit old buildings downtown from the 40's and 60's than to build a new greenfield project.

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[59] Mr. Sullivan also alluded to a MUHA master facilities plan that shows the potential for developing another tower downtown; however, this new tower is intended to be a replacement tower for the existing main hospital downtown. Dr. Cawley explained that MUHA developed a three-phase plan to build the Ashley River Tower ("ART") as phase I, the Shawn Jenkins Children's Hospital, phase II, and a future, potential replacement for the main hospital, phase III. ART was opened in 2008. The Children's Hospital will open in early 2020. Phase III would replace, in the future, the current main hospital, but no plans have ever been developed concerning this Phase.

[60] Ms. Smith conceded she had not been retained to, nor did she, perform any formal studies to determine the costs associated with expanding downtown or renovating/modernizing the soon-to-be empty old Children's Hospital as an alternative to establishment of a new hospital. However, I find Ms. Smith visited the old children's hospital and was familiar enough with its size and specs to credibly comment on the practicality of renovating the old children's hospital.

Additionally, the need for parking is already overburdened on the peninsula campus. Adding an additional 128 beds, with the required additional staffing and need for patient related parking, would thus further burden parking on the campus.

Flooding is also a concern on the peninsula. Although flooding did not prevent MUHA from constructing Shawn Jenkins on the peninsula, the Court recognizes that flooding is a serious concern for some aspects of hospital infrastructure. For example, Roper moved its data center off the Charleston peninsula in 2012 for several reasons, including flooding and the inability to get redundant power and fiber to ensure the reliability of the system. MUHA did the same. These movements off the peninsula were an appropriate response to this issue. Therefore, it is a reasonable response by MUHA to seek to move some of its hospital operations off the peninsula because of flooding. This is especially true since it gives MUHA the option to move patients to MUHA Berkeley in the case of a hurricane.

In sum, Petitioners' evidence failed to rebut MUHA's reasons for choosing to locate MUHA Berkeley at the proposed location. Rather, the evidence supporting MUHA Berkeley's location was more persuasive.

Cost Containment

Petitioners argue the Project's construction costs are too high and the Project will be the most expensive hospital ever built in South Carolina. Mr. Sullivan testified that the Project was going to cost 68% more per square foot compared to the new Shawn Jenkins tower. Shawn Jenkins had a construction and equipment cost per bed of $1,167,377 and a construction cost per square foot of $404 even with demolition of an existing hospital structure, as opposed to the $1,307,154 cost per bed and $538 per square foot construction cost in the CON Application for the Proposed Project. I do not find the difference in cost between the projects to be materially significant. Moreover, the overall cost per bed for the Project is 2.5 million, which is comparable with Roper Berkeley and BMC at $2.3 million $2.4 million per bed, respectively. Overall, I find the projected cost for the Project are not outside the bounds of comparable projects in the area, even if MUHA Berkeley will be at the higher end of the spectrum. It is expected that the cost will be slightly higher due to inflation compared to prior projects, like Shawn Jenkins.

CONCLUSIONS OF LAW

Based upon the above findings of fact, the court concludes the following as a matter of law:

The ALC has jurisdiction over this contested case proceeding pursuant to S.C. Code Ann. § 44-1-60(F) (Supp. 2006) and § 1-23-600(A) (2005). In DHEC permitting cases, the Administrative Law Judge is the finder of fact. *Brown v. S.C. Dep't of Health & Envtl. Control,* 348 S.C. 507, 560 S.E.2d 410 (2002). This court's review of a DHEC decision on a CON application is *de novo*. *Marlboro Park Hosp. v. S.C. Dep't of Health & Envtl. Control*, 358 S.C. 573, 595 S.E.2d 851 (Ct. App. 2004). Therefore, the weight and credibility assigned to evidence presented at the hearing of a matter is within the province of the trier of fact. *See S.C. Cable Television Ass'n v. S. Bell Tel. & Tel. Co.,* 308 S.C. 216, 222, 417 S.E.2d 586, 589 (1992).

Under Rule 702 of the South Carolina Rules of Evidence, "[i]f scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise." In general, "expert opinion evidence is to be considered or weighed by the triers of the facts like any other testimony or evidence . . . the triers of fact cannot, and are not required to, arbitrarily or lightly disregard, or capriciously reject, the testimony of experts or skilled witnesses, and make an unsupported finding to the contrary of the opinion." 32A C.J.S. *Evidence* § 727 (1996). However, the trier of fact may give an expert's testimony the weight he or she determines it deserves. *Florence County Dep't of Soc. Servs. v. Ward,* 310 S.C. 69, 72-73, 425 S.E.2d 61, 63 (Ct. App. 1992). Further, the trier of fact may accept the testimony of one expert over that of another. *See S.C. Cable Television Ass'n v. S. Bell Tel. & Tel. Co.,* 308 S.C. 216, 417 S.E.2d 586 (1992).

Here, Petitioners timely filed requests for contested cases challenging DHEC's decision to approve MUHA's CON application. As a result, Petitioners, as the moving parties, bear the burden of proof in this contested case. *See Leventis v. S.C. Dep't of Health & Envtl. Control,* 340 S.C. 118, 132-33, 530 S.E.2d 643, 651 (Ct. App. 2000) (holding that the burden of proof in administrative proceedings generally rests upon the party asserting the affirmative of an issue). Therefore, Petitioners must prove by a preponderance of the evidence that DHEC erred in approving MUHA's CON application. *See Anonymous v. State Bd. of Med. Exam'rs*, 329 S.C. 371, 375, 496 S.E.2d 17, 19 (1998) (holding that the standard of proof in an administrative

proceeding is generally the preponderance of the evidence); *Nat'l Health Corp. v. S.C. Dep't of Health & Envtl. Control*, 298 S.C. 373, 379, 380 S.E.2d 841, 844 (Ct. App. 1989) (stating that the preponderance of the evidence standard applies in CON disputes).

CON Law

The State Certification of Need and Health Facility Licensure Act, S.C. Code Ann. §§ 44-7-110 to -394 (2018 & Supp. 2019) (CON Act), requires a person or health care facility to obtain a CON before undertaking the construction or establishment of a new health care facility, including a hospital. S.C. Code Ann. §§ 44-7-130(10), -160(1) (2018). The purposes of the CON Act are "to promote cost containment, prevent unnecessary duplication of health care facilities and services, guide the establishment of health facilities and services which will best serve public needs, and ensure that high quality services are provided in health facilities in this State." S.C. Code Ann. § 44-7-120 (2018).

DHEC is responsible for administering the CON program in South Carolina. S.C. Code Ann. § 44-7-140 (2018). As such, DHEC's duties include promulgating regulations, S.C. Code Ann. § 44-7-150(3) (2018), and preparing a South Carolina Health Plan, S.C. Code Ann. § 44-7-180(B) (Supp. 2018). In determining whether to grant or deny a CON application, DHEC evaluates the proposed project under the project review criteria found in Regulation 61-15 § 802 and under the policies and standards in the applicable State Health Plan. S.C. Code Ann. § 44-7-210(C) (2018). Pursuant to the CON Act, the Department may not issue a CON to an applicant "unless the application complies with the South Carolina Heath Plan, Project Review Criteria, and other regulations." S.C. Code Ann. § 44-7-210(B) (2018); *see also MRI at Belfair, LLC v. S.C. Dep't of Health & Envtl. Control*, 379 S.C. 1, 9, 664 S.E.2d 471, 475 (2008) (holding that compliance with the State Health Plan and the Project Review Criteria are independent requirements for approval of a CON).

Regulation 61-15 § 802 sets forth thirty-three project review criteria applicable to CON applications. These criteria fall into five (5) general categories: (1) need for the proposed project; (2) economic considerations of the project; (3) the project's impact on the resources of the health care system; (4) suitability of the site of the project; and (5) certain special circumstances. S.C. Reg. 61-15 §§ 801-802. Specifically, the CON Act provides:

> [the PRC] promulgated in regulation must be used in reviewing all projects under the Certificate of Need process. When the criteria are weighted to determine the relative importance for the specific project, the department may reorder the relative importance of the criteria no more than one time after the project review meeting. When an application has been appealed, the department may not change the weighted formula.

S.C. Code Ann. § 44-7-190(B) (2018). The CON Regulations further provide that "[t]he criteria listed in Section 802 are to be used in reviewing all projects under the Certification of Need program." S.C. Code Ann. Regs. 61-15 § 801(1) (2011). Moreover, "[t]he relative importance assigned to each specific criterion is established by the Department depending upon the importance of the criterion applied to the specific project" and "[a] project does not have to satisfy every criterion in order to be approved, **but no project may be approved unless it is consistent with the South Carolina Health Plan**." S.C. Code Ann. Regs. 61-15 § 801(2) & (3) (emphasis added).

Taking into consideration the language of the CON Act and Regulations, every PRC "must be used" when evaluating a project, even if some are weighted more than others. § 44-7-190(B); Reg. 61-15 § 801(1). Moreover, in order to comply with the SHP, the PRC listed in the applicable SHP as the "most important" criteria must be considered. *See* Reg. 61-15 § 801(3); *see also* S.C. Code Ann. § 44-7-210(C). In this case, the 2017-2018 SHP lists the following PRC as the most important in evaluating CON applications for hospitals: (1) Compliance with the Need Outlined in this Section of this Plan; (2) Community Need Documentation; (3) Distribution (Accessibility); (4) Acceptability; (5) Record of the Applicant; (6) Cost Containment; and (7) Adverse Effects on Other Facilities. 2017-2018 SHP at 12. However, the Department is authorized to establish the relative important of the PRC for a particular project. § 44-7-190(B); Reg. 61-15 § 801(2). For this Project, the Department identified and ranked the following PRC as most important: (1) Compliance with the Need Outlined in the South Carolina Health Plan; (2) Community Need Documentation; (3) Distribution (Accessibility); and (4) Ability to Complete the Project.

This Court must consider the South Carolina Health Plan in effect at the time the CON applications were filed and may also consider the South Carolina Health Plan in effect at the time of this decision. S.C. Code Ann. § 44-7-225 (2018). Thus, this Court must consider the 2017-2018 South Carolina Health Plan and may also consider the 2018-2019 South Carolina Health Plan.

At the contested case hearing before this court, the issues to be considered are limited to those presented to or considered by DHEC during the staff review and decision-making process. S.C. Code Ann. § 44-7-210(E) (2018). As long as no new issues are considered in these contested case proceedings, any evidence pertinent to the issues considered by DHEC staff may be considered by this Court. *Marlboro Park Hosp. v. S.C. Dep't of Health & Envtl. Control*, 358 S.C. 573, 578-79, 595 S.E.2d 851, 854 (Ct. App. 2004). The following issues were raised by Petitioners when they expressed their opposition to the Project to DHEC and will be addressed below:

(a) the need for the proposed hospital;

(b) the unnecessary duplication of services;

(c) the adverse effects of the proposed hospital;

(d) the financial feasibility of the proposed hospital;

(e) the ability to complete the Project; and

(f) alternatives to the proposed Project

Each of Petitioners' issues are considered below within the applicable legal framework.

Standard 5

MUHA applied to create a new hospital pursuant to Standard 5 of the SHP. Standard 5 provides:

> A facility may apply to create a new additional hospital at a different site within the same service area through the transfer of existing licensed beds, the projected bed need for the facility, or a combination of both existing beds and projected bed need. The facility is not required to have a projected need for additional beds in order to create a new additional hospital. There is no required minimum number of beds in order to approve the CON application. The applicant must justify, through patient origin and other data, the need for a new hospital at the chosen site and the potential adverse impact a new hospital at the chosen site could have on the existing hospitals in the service area.

2017-2018 SHP at 10-11.

MUHA proposed to transfer its "projected bed need" (institutional need) for MUHA's downtown campus to a new hospital/site within the Tri-County Service Area. Specifically, it seeks to transfer 128 beds of its 147-bed institutional need identified in the 2017-2018 SHP to a new hospital at the Nexton site in southeastern Berkeley County. This transfer is allowed under Standard 5 as long as MUHA meets the other two requirements in the Standard. First, it must "justify, through patient origin and other data, the need for a new hospital at the chosen site."

Second, it must "justify, through patient origin and other data . . . the potential adverse impact a new hospital at the chosen site could have on the existing hospitals in the service area." Based on the reasons below, I conclude MUHA's application complies with Standard 5 in the 2017-2018 SHP.

Projected Bed Need/Institutional Need

Initially, I find that "projected bed need for the facility" under Standard 5 is synonymous with the "institutional bed need" established for general hospitals by the State Health Plan. Petitioners' nevertheless suggest that in assessing need under Standard 5 this Court should basically ignore the State Health Plan's determination of a 147-bed institutional bed need of MUHA's peninsula hospital. Specifically, they contend that determining need "at the chosen site" under Standard 5 requires the court to assess the need of the population found at the chosen geographical site without reference to the institutional need of the facility which seeks to transfer beds.

Although I agree with Petitioners that the institutional bed need is not **the** determining factor, it nonetheless is a consideration, along with other factors that reflect a bed need in the service area. If institutional bed need were not a factor, then Standard 5 would be rendered meaningless, in part, because one of its basic premises is that a hospital can use its institutional need to create a new hospital. The other premise being that a hospital can transfer its existing beds (or some combination of existing beds and institutional need). Thus, institutional need is a basic tenant of Standard 5.

Nevertheless, although the ability to transfer its institutional need to create a new hospital still requires a further evaluation of need, it is also important to note Standard 5 does not prohibit the transfer of institutional need when there is an overall surplus in the service area. Thus, the ability to transfer of institutional need when the service area has a surplus of beds functions to accommodate, to an extent, overcrowding that is the result of patient choice. For example, Standard 3 allows a hospital with institutional need to add beds when the service area, as a whole, has a surplus. 2017-2018 SHP at 10 ("If the service area indicates a surplus of beds, then no additional beds will be approved unless an individual hospital in the service area indicates a need for additional beds.").

Thus, while patient choice is not an explicit consideration under the 2017-2018 SHP, the SHP allows some expansion that reflects patient choice for a particular provider rather than need in the service area. While MUHA did not apply under Standard 3, it is relevant to show that additional beds can be approved even when the service area as a whole has a surplus. *See Trident Med. Ctr. v. S.C. Dep't of Health & Envtl. Control*, 412 S.C. 341, 357–58, 772 S.E.2d 177, 185–86 (Ct. App. 2015) (noting provisions of Chapter 2 of the SHP governing General Hospitals should not be read in isolation). More importantly, Standard 5 does not contain a prohibition against approving the transfer of beds if the service area as a whole has a surplus. Consequently, institutional need is an important factor in this case that is an essential part of Standard 5.

Need at the Chosen Site

Petitioners argue the phrase "at the chosen site" means that the hospital transferring beds must show that there is a need "near" the geographic site of the new hospital. More specifically, in its Motions for Reconsideration, Trident contends that: "The Court's attempt to extend Standard 5's reference to 'the chosen site' to include the entire Tri-County Service Area and beyond ignores the plain language of that Standard." Similarly, Roper contends that the Court's determination that need for MUHA Berkeley exists based upon the patients that would decant from the peninsula hospital "ignores the plain language of the Health Plan that the patient origin data must be the data demonstrating need at the chosen site."

The South Carolina Supreme Court held that "it is clear the legislature intended for the State Health Plan to be an enforceable document." *Trident Med. Ctr. v. S.C. Dep't of Health & Envtl. Control*, 412 S.C. 341, 350, 772 S.E.2d 177, 182 (Ct. App. 2015). Accordingly, interpretation of the State Health Plan is comparable to the interpretation of a DHEC regulation. "Regulations are interpreted using the same rules of construction as statutes." *Murphy v. S.C. Dep't of Health & Envtl. Control*, 396 S.C. 633, 639–40, 723 S.E.2d 191, 195 (2012). "The first question of statutory interpretation is whether the statute's meaning is clear on its face." *Wade v. Berkeley Cty.*, 348 S.C. 224, 229, 559 S.E.2d 586, 588 (2002).

Petitioners' interpretation of this phrase ignores the plain meaning of this phrase within the context of the Standard as a whole. *See Hodges v. Rainey*, 341 S.C. 79, 85, 533 S.E.2d 578, 581 (2000) ("Where the statute's language is plain and unambiguous, and conveys a clear and definite meaning, the rules of statutory interpretation are not needed and the court has no right to impose

another meaning."); *S.C. State Ports Auth. v. Jasper Cty.*, 368 S.C. 388, 398, 629 S.E.2d 624, 629 (2006) ("In construing statutory language, the statute must be read as a whole and sections which are a part of the same general statutory law must be construed together and each one given effect."). "At the chosen site" merely functions as an adjectival prepositional phrase to describe the noun "hospital" that precedes it, just like "at a different site" describes the "hospital" discussed in the first sentence in this Standard. In both cases, the phrases "at a different site" and "at the chosen site" describe the hospital that will be created under the Standard and differentiate it from the existing hospital from which the need will be transferred. The phrase "at the chosen site" answers the question of which hospital (the hospital at the existing site or the new site) is being discussed rather than identifying the geographic area from which the need for the new hospital must be justified. Indeed, if there was any doubt that "at the chosen site" functions as an adjectival prepositional phrase, the second time "at the chosen site" is utilized in the last sentence of Standard 5 is conclusive. Additionally, the word "new" identifies the hospital which will receive the transferred beds and "at the chosen site" identifies where that hospital is situated thus distinguishing it from the site of the existing hospital.

In contrast, Petitioners' interpretation, although a fair reading of a portion of the last sentence of Standard 5 in isolation, would force the Court and the parties to conjecture about the geographic scope of "the chosen site" in a way that is inconsistent with the State Health Plan, which always discusses need for general hospitals within the context of the service area—the county, or counties in this case. *See Jasper Cty.*, 368 S.C. at 398, 629 S.E.2d at 629 ("A statute should not be construed by concentrating on an isolated phrase."); *State v. Sweat*, 379 S.C. 367, 376, 665 S.E.2d 645, 650 (Ct. App. 2008), *aff'd as modified*, 386 S.C. 339, 688 S.E.2d 569 (2010) ("A statute as a whole must receive a practical, reasonable, and fair interpretation consonant with the purpose, design, and policy of the lawmakers."). Presumably, if the drafters of the State Health Plan intended to introduce a new geographical term— "at the chosen site" —to define the scope of where "the patient origin and other data" could come from to justify the need for the new hospital, it seems likely that they would have defined the term. Indeed, throughout the State Health Plan, the geographical and numerical consideration for determining need is the service area. The accompanying regulations also provide a structure for that consideration. Moreover, the context of the consideration of a facility's right to transfer beds pursuant to Standard 5 is a transfer "within

the same service area." Therefore, Standard 5, in its essence, requires MUHA to justify the need for its new hospital through patient origin and other data. The geographic context for this justification is the service area, just like the service area remains the context for analyzing the potential adverse impact of the "new hospital at the chosen site" under Standard 5.

Petitioners' construction also concentrates on the isolated definition of "at" to mean "near" without reading the Plan as a whole. Clearly, the rules of statutory construction provide that in construing regulatory language, the Court "should not concentrate on isolated phrases" but should read the law "as a whole and in a manner consonant and in harmony with its purpose" *CFRE, LLC v. Greenville County Assessor*, 395 S.C. 67, 74, 716 S.E.2d 877, 881 (2011). Furthermore, "[a] statute as a whole must receive practical, reasonable, and fair interpretation consonant with the purpose, design, and policy of lawmakers." *Trident Med. Ctr. v. S.C. Dep't of Health & Envtl. Control*, 412 S.C. 341, 357, 772 S.E.2d 177, 185 (Ct. App. 2015) (quoting *Sparks v. Palmetto Hardwood, Inc.*, 406 S.C. 124, 750 S.E.2d 61 (2013)). Here, the definition of "at" can mean an object is "in" or "on" or "near" a location. *See* MERRIAM-WEBSTER ONLINE DICTIONARY, https://www.merriam-webster.com/dictionary/at (last visited Aug. 27, 2020); *Lee v. Thermal Eng'g Corp.*, 352 S.C. 81, 572 S.E.2d 298 (Ct. App. 2002). ("Where a word is not defined in a statute, our appellate courts have looked to the usual dictionary meaning to supply its meaning."). Petitioners construction relies on interpreting "at" as "near." However, even if the Court were to narrowly find that the issue before this Court is the meaning of the word "at," rather than identifying the contested words as an adjectival prepositional phrase, Petitioners' argument fails.

The word "near" means "at, within, or to a short distance or time." MERRIAM-WEBSTER ONLINE DICTIONARY, https://www.merriam-webster.com/dictionary/near (last visited Aug. 27, 2020). Obviously, it would be unreasonable to require that the patient origins and data be from "within" the geographical footprint of the hospital site. Accordingly, Petitioners must be relying upon the interpretation that the patient origin and data must derive a short distance from the hospital site. Yet, Petitioners propose that that the Court consider a "seven or eight mile radius around the hospital as a primary service area, extending to ten miles out for a combined primary and secondary service area" to be the area from which the patient origin and data should come from to determine need under Standard 5. Thus, under their interpretation, a distance of ten miles,

which many would perceive as a substantial distance, would be considered "near" to the chosen site.

Petitioners' interpretation is even more problematic in light of the Court's factual determination that if the Court does not consider the Tri-County Service Area as a whole, the primary geographical area to be considered in determining patient origin should be a 30-minute drivetime. Indeed, in the same chapter of the State Health Plan which sets forth Standard 5, the plan provides that: "General hospital beds are typically located within approximately 30 minutes' travel time for the majority of the residents of the State." 2017-2018 SHP at 9. Utilizing this assessment, Petitioners ten-mile limitation would presume automobile travel at an average of only 20 mph, which is unreasonable. Construing the phrase to require consideration of only patient origin and other data a "short distance" from the proposed hospital is thus not a practical or reasonable interpretation of "at the chosen site."

In sum, the plain meaning of Standard 5 sets forth that a hospital seeking to transfer beds must establish that the receiving hospital has a need based upon patient origin and other data. And, the patient origin and other data for a hospital should be based upon the service area as set forth in the State Health Plan. This interpretation is the most practical and reasonable interpretation that is consonant with the purpose, design, and policy of lawmakers.

Need Conclusion

MUHA clearly has a large institutional need of 147 beds as set forth in the State Health Plan. Therefore, considering Standard 5 allows the transfer of institutional need, with no prohibition even if the service area has a bed surplus, and considering the benefits to both the target population but also the inescapable benefits to the whole population served by MUHA downtown—and in particular their unique high acuity patients—I find MUHA has demonstrated a need. Furthermore, the evidence shows MUHA justified the need for a 128-bed hospital based upon the significant percentage of its patient that originate in the Tri-County Service Area (including the submarkets near the Project), the significant population growth in the area; and the reasonableness of its service area, patient redirection percentages, ALOS, and projected utilizations. However, in this case, it ultimately does not matter whether the factual analysis is based upon Petitioners' interpretation that the Court consider only patient origins and data "near" the chosen site or the State Health Plan's geographical service area because, under either scenario,

MUHA established a bed need for MUHA Berkeley based upon patient origins and other data. For instance, the evidence established 29% of MUHA's existing patients originates in the submarkets "near" the proposed site and this baseline need, along with numerous other facts cited in this case that reflect the patient need in the area, is sufficient to justify a need near MUHA Berkeley. Accordingly, MUHA established a need for the proposed hospital in accordance with Standard 5 in the 2017-2018 SHP.

Adverse Impact (Burden of Proof)

Under Standard 5, MUHA is required to justify "through patient origin and other data . . . the potential adverse impact a new hospital at the chosen site could have on the existing hospitals in the service area." Petitioners contend MUHA failed to quantify that potential impact because MUHA simply determined its Project, based upon the redirection of its own patients, would have no adverse impact. In their Motions for Reconsideration, Petitioners contend MUHA's failure to conduct any adverse impact analysis based on its theory of redirection is equivocal to a failure to justify the potential adverse impact of its Project such that it did not meet its burden of proof before the agency. Petitioners complain that since they are placed in the position to seek contested case review of that failure, the burden of proof has been shifted to them to both conduct the adverse impact analysis and show how they are adversely impacted. Accordingly, Petitioners contend MUHA's request for a CON should, be denied because MUHA failed to conduct an adverse impact analysis to justify its Project in compliance with Standard 5.

Petitioners conflate MUHA's theory of redirection with a failure to justify adverse impact. The evidence demonstrates MUHA considered an adverse impact analysis, but determined that because it would be "only filling an unmet need identified by the 2017-2018 State Health Plan" through the redirection of its existing patients, it would not impact other providers by taking market share from them to cause an adverse impact on existing providers. MUHA also theorized that Berkeley County is a substantially underserved market with a lack of patient access such that more access was needed and would not have an adverse impact. Whether MUHA's theories were sound or not does not negate the fact that they conducted an analysis of various factors that could contribute to adverse impact and ultimately concluded that there would be no adverse impact. Thus, MUHA complied with the requirements of Standard 5 to present a justification for its project at the agency level.

Moreover, in this case, the Department determined that MUHA's CON should be granted. Following that decision, Trident took advantage of its legal privilege as an "affected person" to file a contested case with the ALC to challenge the Department's determination. Therefore, Trident erroneously characterizes this review as a review of MUHA's application rather than a review of the Department's determination. When considered in light of the correct legal review, it is clear why Trident holds the burden of proof and that is because it is seeking to establish that the Department's decision was in error. *See Leventis v. S.C. Dep't of Health & Envtl. Control,* 340 S.C. 118, 132-33, 530 S.E.2d 643, 651 (Ct. App. 2000) (holding that the burden of proof in administrative proceedings generally rests upon the party asserting the affirmative of an issue).

Justified Adverse Impact

In the case before this Court, Petitioners showed MUHA's theory of 100% redirection is unreasonable and, therefore, it is also unreasonable to assume there would be no impact on other providers in the service area. Petitioners have also shown, particularly regarding Roper Berkeley, that there is the potential for an adverse impact in terms of market share. However, although Petitioners' successfully poked holes in MUHA's theory, this is a *de novo* hearing and the Court must review all the evidence to determine whether MUHA failed to meet the requirements of Standard 5. And, ultimately, Petitioners failed to show by a preponderance of the evidence that MUHA's application does not meet the requirements of Standard 5. Rather, the evidence established that any potential adverse impact is justified by the benefits of accessibility MUHA Berkeley will offer.

In reaching this determination, the Court recognizes that any impact to another hospital's market share is going to be "adverse" to that hospital, but it does not immediately follow that the CON must be denied. Such is the case here. Trident will suffer some loss of market share, but the impact will be minimal compared to its operations as a whole and, since TMC already has high patient volumes, there is room for another provider in the area, especially considering the strong population growth in the area. In other words, even if Trident loses a few patients to MUHA Berkley, that loss will likely to be incidental and not be a material financial harm to Trident, especially in light population growth and this Court's restriction of MUHA not operating its proposed FSED. Additionally, the potential for impact to Trident must be viewed in light of the demonstrated need for the new hospital. The clear existence of MUHA's need by its current patient

base will allow MUHA Berkley to successful operate without cannibalizing Trident's patients. Thus, while there is a potential adverse impact to Trident, that impact would be minimal and is justified in light of the benefits the Project will provide to patients in the area.

Similarly, although sufficient data for Roper Berkeley's utilization does not exist yet, Roper will also have several years to establish itself before MUHA Berkeley comes online and it will be able to take advantage of strong population growth. Indeed, Roper's analysis did not account for MUHA Berkeley's delayed timeline and although Roper identifies the impact as "material," the Court did not find this analysis convincing. Similarly, the adverse impact analysis presented by Mr. Richardson was unconvincing because it was based upon an unreasonable premise. Moreover, MUHA's proposed hospital is justified by the redirection of its existing patients alone. While there is likely to be some loss of market share, the evidence established that it would most likely be small and completely offset by the population growth. Therefore, MUHA justified any potential adverse impact by showing its hospital is needed and can be supported by its existing patient base.

Balancing Adverse Effects of Duplication with Accessibility

The 2017-2018 SHP also proclaims "[t]he benefits of improved accessibility will be equally weighed with the adverse effects of duplication in evaluating Certificate of Need applications for these beds." 2017-2018 SHP at 13. I find MUHA's application complies with the SHP in this regard. Although, Roper Berkeley, TMC, and SMC provide similar services in the area, I do not find the any duplication of services to be unnecessary. MUHA's proposed hospital will improve accessibility in the Tri-County Area for the target population and reduce capacity constraints for the patients who continue to utilize MUHA's downtown campus. Any potential adverse effects will be likely be small. Weighing these considerations equally, I do not find the potential adverse effects of duplication necessitate denying the CON.

In addition, Petitioners have raised the issue that there is excess bed capacity in the Tri-County area and thus, MUHA Berkeley should not be approved. However, as discussed above, simply because a service area has a surplus of beds does not mean the SHP prohibits additional beds from being granted.

Need: PRC 1, PRC 2

Both PRC 1 and PRC 2 are listed in the 2017-2018 SHP as two of the most important criteria in evaluating CON application for hospitals. 2017-2018 SHP at 12. PRC 1, entitled "Need," provides "[t]he proposal shall not be approved unless it is in compliance with the South Carolina Health Plan." S.C. Code Ann. Reg. 61-15 § 802(1) (Supp. 2019). Additionally, PRC 2 sets forth the Community Need Documentation criteria. PRC 2 requires an applicant to:

> (a) clearly identify the project's target population as to the size, location, distribution, and socioeconomic status (if applicable);
>
> (b) present reasonable projections of anticipated population changes based upon accepted demographic or statistical methodologies, which are consistent with those generated by the state demographer, with assumptions and methodologies clearly presented in the application;
>
> (c) demonstrate that the project provides services that meet an identified (documented) need of the target population using assumptions and methods specified in the application and based on a reasonable approach;
>
> (d) for projects involving the reduction, relocation, or elimination of a facility or service, address the need that the population presently has for the service, the extent to which that need will be met by the proposed relocation or by alternative arrangements, and the effect of the reduction, elimination, or relocation of the service on the ability of low income persons, racial and ethnic minorities, women, the elderly, handicapped persons, and other underserved groups, to obtain needed health care; and
>
> (e) demonstrate current and/or projected utilization sufficient to justify the expansion or implementation of the proposed service.

S.C. Code Regs. Ann. 61-15 § 802(2) (Supp. 2019). However, subsection (d) is not applicable to this Project.

I find MUHA's application complies with need outlined in the State Health Plan. The 2017-2018 SHP shows MUHA has an institutional need for 147 beds. Under Standard 5, MUHA is allowed to transfer a portion of that institutional need to new hospital as long as it justifies a need for the proposed hospital at the chosen site. MUHA met the criteria of Standard 5.

Additionally, MUHA clearly identified the Project's target population, including its size, location, and distribution. MUHA used industry acceptable population data consistent with the State Demographer's methodology to sufficiently explain its assumptions and methodologies, and it remedied its oversight of failing to attach its volume schedules during this litigation. MUHA demonstrated an identified need in the target population and its approach to identifying the need

was reasonable. Finally, MUHA used appropriate and reasonable assumptions to project the utilization of its Project, and the projected utilization is sufficient to justify the Project. Therefore, the evidence supports approval of MUHA's proposed 128-bed hospital.

Distribution and Accessibility: PRC 3, PRC 22

Another important criterion for review is PRC 3, Distribution (Accessibility), which provides in relevant part:

> (a) Duplication and modernization of services must be justified. Unnecessary duplication of services and unnecessary modernization of services will not be approved.
>
> (b) The proposed service should be located so that it may serve medically underserved areas (or an underserved population segment) and should not unnecessarily duplicate existing services or facilities in the proposed service area.
>
> * * *
>
> (h) Potential negative impact of the proposed project upon the ability and/or resources of existing providers to serve medically underserved groups must be considered.

S.C. Code Regs. Ann. § 61-15 § 802(3) (Supp. 2019). This PRC is also designated as one of the most important criteria in evaluating CON applications for hospitals under the 2017-2018 SHP. 2017-2018 SHP at 12.

I conclude MUHA's application complies with PRC 3. MUHA has demonstrated its hospital is needed, and the services provided at it will not be an unnecessary duplication. The Project will be located in a growing area of southern Berkeley County. MUHA Berkeley will improve the distribution of health care services in the Tri-County area by adding another provider outside the bounds of Charleston County where the overwhelming number of hospital beds are currently located. Additionally, the Project will service a population of patients that are underserved because these patients are experiencing trouble accessing health care due to capacity constraints at MUHA's downtown campus.[61] This population is reflected by the institutional need for 147 more beds at MUHA's downtown campus. A significant portion of these patients originate

[61] Just because MUHA's existing patients receive care does not mean they are not facing access challenges or are not underserved. Lengthy boarding hours and over-crowding affect timely access and the quality of care patients receive. While there is no contention in this case that MUHA does not provide quality care, over-crowding certainly does not improve the quality of care.

in the Tri-County area and 29% originate from the submarkets near the hospital. The decanting of MUHA's lower-acuity population to MUHA-Berkley will allow all patients within this population to receive better care and allow MUHA to focus more on the patients who require MUHA's unique level of care at its downtown campus. Although the Project will likely have a small impact on surrounding providers, particularly Roper Berkeley, Petitioners failed to show by a preponderance of the evidence that the potential impact requires denial of MUHA's CON application in light of the benefit of increased accessibility.

Financial Feasibility: PRC 15

PRC 15 sets forth criteria for considering the financial feasibility of a proposed project and provides in relevant part that "the applicant must have projected both the immediate and long-term financial feasibility of the proposal [and] such projection should be reasonable and based upon accepted accounting procedures." S.C. Code Regs. Ann. 61-15 § 802(15) (Supp. 2019). This PRC was not listed by either the SHP or DHEC as one of the most important PRC for hospital CON applications or this Project. However, it was raised to DHEC by the opposition during the review process and is therefore properly before the Court.

I conclude MUHA's application complies with PRC 15. MUHA demonstrated its Project would produce significant net revenue by year three of operations and it utilized accepted accounting methods and procedures to project its expenses and revenues on the pro formas it submitted with its application.

Ability to Complete the Project: PRC 14

PRC 14 provides:

> (a) The applicant should have demonstrated that the project can be initiated and completed within the proposed time frame specified in the application.
>
> (b) The financial schedules and time frames contained in the application should be consistent with those usually experienced in the development of similar facilities or services.

S.C. Code Regs. Ann. 61-15 § 802(14) (Supp. 2019).

I conclude MUHA's application complies with PRC 14. Indeed, MUHA has never failed to complete a project, and Petitioners failed to show MUHA was likely to fail to complete this Project. The financial schedules and time frames were consistent with those for the development of other similar facilities.

Cost Containment: PRC 16

PRC 16, Cost Containment (Minimizing Costs), is designated in the 2017-2018 SHP as one of the most important criteria for general hospitals. PRC 16 provides, in relevant part:

> (a) The applicant should have identified and sought alternative sources and/or methods of funding and demonstrated that the method chosen was the most feasible option.
>
> * * *
>
> (c) The impact of the project upon the applicant's cost to provide services and the applicant's patient charges should be reasonable. The impact of the project upon the cost and charges of other providers of similar services should be considered if the data are available.

S.C. Code Regs. Ann. 61-15 § 802(16) (Supp. 2019).

MUHA adequately demonstrated that it has a viable source of financing with HUD. MUHA has been successful using HUD financing in the past and, in this instance, it meets all of HUD's requirements to obtain financing. Furthermore, as a result of HUD financing, MUHA would receive a good interest rate. Additionally, if MUHA fails to receive financing from HUD, then it has other banks from which it can seek financing.

MUHA's proposed charges for its patients at the Project are based on its historic patient charges at its downtown hospital but properly discounted to account for the lower patient acuity. Also, Petitioners could not provide sufficient evidence that MUHA's proposed charges at the Project would impact, if at all, other similar providers' charges.

Alternative Methods: PRC 19

PRC 19, Alternative Methods, provides:

> (a) the applicant should have considered any available or more effective alternatives which exist to the proposed service such as the use of less costly alternative, outpatient services, shared services, or extended hours of service.
>
> (b) For new construction projects, modernization of existing facilities should be considered as an alternative, and the rejection of this alternative by the applicant should be justified.

S.C. Code Regs. Ann. 61-15 § 802(19) (Supp. 2019). This PRC was raised by Petitioners in their opposition. However, it is not listed in SHP as one of the most important criteria for hospitals.

I find the application complies with PRC 19. MUHA considered alternatives and reasonably concluded there is no better alternative than to build the Project. Renovating existing buildings on the peninsula would be as costly as building the Project and provide a lower standard

of care. MUHA has also clearly demonstrated that continuing to serve patients under the status quo is untenable and results in many patients being turned away from care. In addition, MUHA Berkeley could be an important resource to assist in relocating patients off the peninsula hospital in the event of a hurricane.

Adverse Effects on Other Facilities: PRC 23

PRC 23, Adverse Effects on Other Facilities, provides:

> a. The impact on the current and projected occupancy rates or use rates of existing facilities and services should be weighed against the increased accessibility offered by the proposed services.
>
> b. The staffing of the proposed service should be provided without unnecessarily depleting the staff of existing facilities or services or causing an excessive rise in staffing costs due to increased competition.

S.C. Code Regs. Ann. 61-15 § 802(23) (Supp. 2019). This PRC is identified as one of the most important criteria in the 2017-2018 SHP.

For the reasons already stated in the conclusions of law section discussing adverse impact under Standard 5 and in the section weighing adverse impacts with accessibility, I conclude MUHA's project complies with PRC 23 despite MUHA's faulty theory of 100% redirection in its application.[62]

Moreover, while a nursing shortage exists in the Tri-County area and across South Carolina, this shortage has not prevented any provider in the Tri-County area from expanding and all providers have used traveling nurses to resolve shortage issues, even if this is not the preferred way to resolve the problem. There was also no evidence of a physician shortage. In addition, there was no evidence that the addition of MUHA Berkeley would materially exacerbate staffing costs that have already risen, at least in the nursing field, due to ongoing competition.

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[62] Interestingly, although Roper took issue with this Court's determination that no "material" adverse impacts would occur as a result of MUHA Berkeley because "material" was not used in Standard 5 as a threshold, Roper argues in its Motion for Reconsideration that adverse effects under PRC should be interpreted as follows: "[a]n 'adverse impact,' for CON purposes, can generally be construed to mean a **material** decrease in the present or future use or occupancy rates of existing providers for like procedures." *Roper Hosp., Inc. v. S.C. Dept. of Health and Envtl. Control*, Docket No. 01-ALJ-07-0378-CC, 2002 WL 31423787 *14 (S.C. Admin. Law J. Div. Sept. 5, 2002) (citing S.C. Code Ann. Regs. 61-15 § 802(23)(a)) (emphasis added). Yet PRC 23, like Standard 5, does not use the word "material."

Finally, it is important to note that even though the Department can re-order the PRC criteria, the Department's failure to specifically address this PRC in its decision when it is identified as one of the most important PRC in the 2017-2018 SHP was error. *See Trident Med. Ctr. v. S.C. Dep't of Health & Envtl. Control*, 412 S.C. 341, 350, 772 S.E.2d 177, 182 (Ct. App. 2015) (holding "it is clear the legislature intended for the State Health Plan to be an enforceable document"). However, because this is a *de novo* proceeding before this Court, the Department's error was cured by its consideration by this Court.[63] *See Ross v. Med. Univ. of S.C.*, 328 S.C. 51, 492 S.E.2d 62 (1997) ("Article I, § 22 requires an administrative agency provide notice and an opportunity to be heard, but does not require notice and an opportunity to be heard at each level of the administrative process. It mandates notice and opportunity to be heard at some point before the agency makes its final decision.").

Section 501: Findings of the Department

Section 501 provides that that:

> In the case of any proposed new institutional health service[64] for the provision of health services to inpatients, the Department shall not grant a Certificate of Need, or otherwise make a finding that such proposed new institutional health service is needed, unless:
>
> (1) The capital and operating costs of the proposal and their potential impact on patient charges are reasonable;
>
> (2) Superior alternatives to such services in terms of cost, efficiency, or appropriateness do not exist and that the development of such alternatives is not practicable;
>
> (3) In the case of new construction, alternatives to new construction (e.g., modernization or sharing arrangements) have been considered; [and]
>
> (4) Patients will experience serious problems in terms of costs, availability or accessibility, or such other problems as may be identified by the Department, in obtaining care of the type proposed in the absence of the project.

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[63] Moreover, despite the Department's failure to address this criterion, Petitioners raised the issue in their opposition, which allowed the issue to be reviewed by the Department and addressed before this Court. Therefore, the Court does not find Petitioners were so prejudiced by this failure at the agency level that MUHA's application must be denied or the issue remanded.

[64] S.C. Code Regs. Ann. 61-15 § 103.15 (Supp. 2019) defines institutional health services as "health services provided in or through health care facilities and includes the entities in or through which such services are provided."

S.C. Code Ann. Regs. 61-15, § 501 (Supp. 2019).

The Department concluded MUHA's application complied with section 501. I, likewise, find the evidence showed MUHA's application complies with section 501. I find the capital and operating costs of the Project are reasonable and the patient charges are reasonable and consistent with MUHA's historic charges when discounted for lower-acuity patients. MUHA demonstrated there were no superior alternatives to building the Project in terms of cost, efficiency, or appropriateness. MUHA considered alternatives to new construction and provided logical reasons why up-fitting or remodeling were inappropriate; Petitioners failed to carry their burden to show otherwise. Lastly, MUHA showed that its Project will improve access for patients who currently struggle to gain access at MUHA's over-capacity downtown location. MUHA demonstrated that its patients at its downtown hospital do not always receive the highest level of care possible due to capacity constraints and, therefore, the lower-acuity patients that are decanted to MUHA Berkeley will obtain better care with the Project. Moreover, increased access is especially important for those patients who seek a level of care only MUHA can provide. The Project will provide extra capacity to allow MUHA to focus on its higher-acuity patients and better serve the citizens of South Carolina. While it is true that capacity currently exists at other providers in the service area to help alleviate capacity constraints; the evidence shows patients are not choosing to decant to other providers and continue to face access issues at MUHA. Therefore, although the access problem appears to be the result of patient choice, in balancing the needs of the public, particularly the need for high quality health care, with duplication, in this case, the benefits of increased accessibility outweigh the adverse effects of duplication. *See* § 44-7-120. Further, MUHA Berkeley will increase the accessibility and distribution of health care in the northern Tri-County where there is currently a maldistribution of beds.

Overall Conclusion

The purposes of the CON Act are "to promote cost containment, prevent unnecessary duplication of health care facilities and services, guide the establishment of health facilities and services which will best serve public needs, and ensure that high quality services are provided in health facilities in this State." § 44-7-120. Petitioners have failed to meet their burden to show MUHA's application does not meet the requirements or fulfill the purposes of the CON Act, the

PRC, and the State Health Plan. As a result, I conclude MUHA should be granted a CON for the construction of MUHA Berkeley.

ORDER

IT IS THEREFORE ORDERED that a Certificate of Need for MUHA's proposed 128-bed MUHA Berkeley hospital in Berkeley County, South Carolina, is **APPROVED**. The Department shall issue a Certificate of Need to MUHA.

AND IT IS SO ORDERED.

Ralph King Anderson, III
Chief Administrative Law Judge

September 4, 2020
Columbia, South Carolina

CERTIFICATE OF SERVICE

I, Stephanie Perez, hereby certify that I have this date served this Order upon all parties to this cause by depositing a copy hereof in the United States mail, postage paid, or by electronic mail, to the address provided by the party(ies) and/or their attorney(s).

Stephanie Perez
Judicial Law Clerk

September 4, 2020
Columbia, South Carolina

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August 3, 2018

Via E-mail (LUCASLM@dhec.sc.gov) &
Via Hand Delivery

RECEIVED
AUG 03 2018
SC Department of
Health & Environmental Control

The Honorable Lisa Lucas Longshore
Clerk of the Board
SC Department of Health and Environmental Control
2600 Bull Street
Columbia, SC 29201

Re: **Request for Final Review**
Decision Granting Application for a Certificate of Need for:
Construction of a 128-bed general acute care hospital in Berkeley County at a total project cost of $325,000,000 ("Proposed Project" or "Proposed Hospital")
Applicant: **Medical University Hospital Authority, d/b/a MUHA Community Hospital**
Matter No.: **2520**
Berkeley County, South Carolina[1]

Dear Ms. Longshore:

Pursuant to S.C. Code Ann. § 44-1-60; the State Certification of Need and Health Facility Licensure Act (S.C. Code Ann. §§ 44-7-110 *et seq.*) ("CON Act"); S.C. Code Ann. Regs. 61-15 ("CON Regulations"); the South Carolina Administrative Procedures Act (S.C. Code Ann. §§ 1-23-310 *et seq.*) ("APA"); and Article I, Section 22 of the South Carolina State Constitution; on behalf of our client, Walterboro Community Hospital, Inc., d/b/a Colleton Medical Center ("Colleton"), I am writing to request that the Department Board conduct a final review conference of the Department staff's July 23, 2018 decision granting the Medical University Hospital Authority, d/b/a MUHA Community Hospital ("MUHA") a Certificate of Need ("CON") for the above-referenced Proposed Project. **Exhibit A**. Reserving its right to raise any issue considered by or presented to the Department, Colleton respectfully requests that the Department Board reverse the Department staff's decision and deny MUHA's application for a CON for the reasons set forth herein and within the exhibits attached hereto and incorporated herein by reference.

Also, enclosed with this Request for Final Review, please find a check in the amount of $100.00 as payment of the filing fee.

[1] The Department's decision letter incorrectly identifies the Proposed Project as affecting Charleston, South Carolina.

Procedural Background:

On December 27, 2017, MUHA submitted its CON application for its Proposed Hospital.[2] MUHA's CON application was deemed complete in the State Register on March 23, 2018. **Exhibit B**. The Department issued its letter, deeming the CON application complete, on May 21, 2018. **Exhibit C**.

On March 22, 2018, Care Alliance Health Services, d/b/a Roper St. Francis Healthcare; Roper Hospital, Inc.; Bon Secours-St. Francis Xavier Hospital, Inc.; Roper St. Francis Berkeley Hospital, and Roper Mount Pleasant Hospital (collectively, "Roper") provided notice to the Department of its status as an affected person and its opposition to the Proposed Project. By letters, dated April 19, 2018, Trident Medical Center, LLC, d/b/a Trident Medical Center ("Trident") and Summerville Medical Center ("Summerville") (collectively, "Trident Health System") also notified the Department of their status as affected persons and their opposition to the Proposed Project. Colleton submitted its notice of its status as an affected person and its opposition to the Proposed Project on July 10, 2018. **Exhibit D**. The Regional Medical Center of Orangeburg and Calhoun Counties ("TRMC") is also an affected person and opposes the Proposed Project. Colleton, as well as Roper and Trident Health System, provided additional comments in opposition to the Proposed Project by separate letters dated, July 18, 2018. A copy of Colleton's letter is attached as **Exhibit E**.

The Department staff issued its decision approving MUHA's CON application on July 19, 2018. Exhibit A. Colleton now respectfully requests that the Department Board conduct a final review conference on this matter and asks that the Board overturn the Department staff's decision to approve MUHA's Proposed Project as it fails to comply with the *2017 – 2018 South Carolina Health Plan* ("State Health Plan"), the CON Act, and the CON Regulations. *See* S.C. Code Ann. § 44-7-210(B). *See also* S.C. Code Ann. Regs. 61-15, § 307.1.

Arguments:

State Health Plan Standards

The Proposed Project fails to comply with the State Health Plan standards. Although the State Health Plan indicates that MUHA has an institutional need for 147 additional beds, the Berkeley, Charleston, and Dorchester Counties service area has an excess of 13 beds. *See* State Health Plan, p. 27. The State Health Plan allows a provider who has a need for additional beds to add beds when there is no bed need in the service area. *Id.* at p. 10. The provider may add beds at its existing site or another site. *Id.* However, the provider must "**justify, through patient origin and other data, the need for a new hospital at the chosen site and the potential adverse impact a new hospital at the chosen site could have on the existing hospitals in the service area.**" *Id.* at pp. 10-11 (emphasis added). MUHA failed to provide

[2] MUHA's Proposed Hospital will include 100 medical/surgical beds, 12 intensive care beds, 16 post-partum beds, 8 labor and delivery rooms, 8 newborn bassinets, 4 operating rooms, two Cesarean section operating rooms, two endoscopy suites, a vascular lab, an emergency department, and a diagnostic and imaging department. The Proposed Project encompasses 311,221 square feet. The total project cost is $325 million, which equates to a per bed cost of more than $2.5 million. For its size, MUHA's project appears to be the most expensive hospital ever approved in South Carolina. *See generally* Ltr. to M. Murdock from Sullivan Consulting, Inc., dated July 18, 2018, attached as **Exhibit F**.

justification for the establishment of a new hospital in Berkeley County and failed to provide a reasonable analysis of the Proposed Project's impact on existing hospitals.

In a letter from its counsel, dated June 19, 2018, MUHA argued that the parties and the Department have previously interpreted the State Health Plan bed need as "calculated for the Tri-county area as a single unit so that either projected need for additional hospital Bed Need or existing beds can be utilized to establish a hospital in any one of the counties as if there are no county lines." Colleton does not dispute that the bed need calculation covers the service area as a whole, which encompasses Berkeley, Charleston, and Dorchester Counties; however, MUHA fails to acknowledge that the State Health Plan also requires it to demonstrate need for the new hospital at the chosen site, as well as the potential for adverse impact on other providers. *Id.* Moreover, the fact that the State Health Plan allows a provider to utilize institutional bed need to establish a hospital at another site does not mean that the Department should disregard health planning principles and approve the Proposed Project.

As will be demonstrated below, there is no need for an additional hospital in Berkeley County, and the construction of a new hospital will substantially adversely impact other area providers, including Colleton. Consequently, MUHA's CON application fails to comply with the standards set forth in the State Health Plan and must be denied. *See* S.C. Code Ann. § 44-7-210(B). *See also* S.C. Code Ann. Regs. 61-15, § 307.1.

Community Need

Although MUHA has a need for additional beds at its downtown Charleston hospital, there is no justification for allowing MUHA to use its institutional bed need to establish a hospital in Berkeley County. The Department previously approved two new 50-bed hospitals in Berkeley County, one of which is scheduled to open in 2019. Exhibit F, p. 3. The Department also approved a 30-bed addition at Summerville, which should be completed soon. *Id.* Thus, Berkeley County will have 80 additional beds coming online in the very near future, and another 50 beds will be added when Trident completes its Berkeley Medical Center project. *Id.* MUHA proposes to locate its hospital less than 4 miles from Roper's new hospital ("Roper Berkeley"). *Id.* at p. 4. The area has ample inpatient acute care capacity for the foreseeable future, and the community's emergency medicine services are capably met by these local hospitals and the freestanding emergency departments ("FSED") serving area residents. *Id.* at p. 6.

Hospital utilization in the Lowcountry has experienced very little growth in recent years. Despite an aging and growing population, inpatient hospital volume averaged only a 1.7% increase per year between 2012 and 2016. *Id.* at p. 7. MUHA realized only a 1.6% average yearly growth between 2012 – 2016, less than the service area average. *Id.* Colleton's occupancy rate in 2016 was only 38.5%. Colleton has 116 licensed beds, but the 2018 - 2019 South Carolina Health Plan ("2018 State Health Plan") indicates Colleton has a need of only 68 beds, meaning Colleton has an excess of 48 beds. *See* 2018 State Health Plan, p. 27. Thus, again, there is ample capacity in the service area to meet the needs of the community, and Colleton cannot withstand the loss of patients to a new provider. As set forth in detail below, many of the ZIP Codes in Colleton's primary service area overlap with ZIP Codes in MUHA's secondary service area. Consequently, MUHA's Proposed Hospital will materially adversely impact Colleton's inpatient and outpatient utilization and the ability to staff its facility.

MUHA asserts that its Proposed Project will only serve Berkeley County patients currently seeking care at its downtown facility (hereinafter, "MUSC") closer to their homes, but

the data demonstrates that MUSC does not have sufficient patient volume originating in that area to sustain a new hospital, particularly one that will be located less than 4 miles from Roper Berkeley. The Moncks Corner area, which encompasses most of Berkeley County, accounted for only 3% of MUSC's inpatient volume in 2017. *Id.* at p. 9. North Charleston provided the largest percentage (18%). *Id.* By contrast, the Nexton area, where MUHA proposes to locate its Proposed Hospital, accounted for only 8% of MUSC's inpatient volume in 2017. *Id.* North Charleston is already well-served by Trident Health System, and the Nexton area will be well served by Roper Berkeley and Trident's Berkeley Medical Center. *Id.* Thus, to be viable, MUHA will have to redirect market share from other providers, including Colleton.

It in unreasonable to assume that the Proposed Hospital will only serve patients currently being treated at MUSC. Patients traveling from Berkeley County to seek care at MUSC in downtown Charleston are likely doing so because they are in need of the tertiary care services provided there, services that won't be available at MUHA's Proposed Hospital. Those patients are unlikely to suddenly seek services at a local community hospital in lieu of MUSC, as those patients are already bypassing local community hospitals to be treated at MUSC. MUHA vastly overestimated the number of patients that will be redirected from MUSC to its Proposed Hospital in Berkeley County. MUSC does not have sufficient volume of patients originating from that area, and those patients are unlikely to be redirected to the Proposed Hospital because the Proposed Hospital will not offer the same level of service. The patients who will access MUHA's Proposed Hospital for care are lower acuity patients residing closer to the site of the Proposed Hospital, patients who have previously sought services at Colleton and other area providers.

As explained in the submission from Roper's health care planning expert, Richardson/Knapp & Associates, Inc., community hospitals typically draw patients from the local area. **Exhibit G**, p. 3. There is rarely any significant in-migration from beyond the proximate area. *Id.* Yet, MUHA has predicted patients will travel past several other hospitals to be treated at its Proposed Hospital. This is a completely unreasonable assumption. Exhibit F, p. 14. The more likely scenario is that residents in the community near the Proposed Hospital will utilize the facility, putting it in direct competition with other area providers, and MUHA will have to redirect market share from those providers to be viable. *Id.* Given that Colleton and MUHA share service areas, Colleton stands to be substantially adversely affected by the Proposed Hospital.

MUHA provided no ZIP Code detail in its utilization projections; however, the assumption that patients in distant ZIP Codes will utilize the Proposed Hospital renders MUHA's utilization projections unreliable. Moreover, the inclusion of these ZIP Codes in MUHA's drive time analyses undermines its argument that it seeks only to treat its current Berkeley County patients closer to their homes. *Id.* The 29425 ZIP Code and ZIP Codes from distant areas such as West Ashley and the surrounding islands should not be included in any drive time analysis or in any utilization projections. *Id.*

MUHA's utilization projections reflect a 57% utilization rate of the medical/surgical beds and a 61% utilization rate of the obstetrical beds by the third year of operations. *Id.* These low utilization projections do not support the need for the Proposed Project, and given MUHA's underlying, unreasonable assumptions (e.g., that patients will travel long distances to seek services at the Proposed Hospital), the projections are unlikely to be realized. The more reasonable assumption is that the Proposed Project will replicate the results of a few years prior when East Cooper Medical Center constructed a replacement hospital and Roper constructed a new hospital within a few miles of each other. *Id.* at p. 11. Utilization at East Cooper declined,

and both East Cooper and Roper's Mount Pleasant Hospital continue to have low utilization rates. *Id.* East Cooper's utilization has been less than 35% each year since Mount Pleasant Hospital opened, and Mount Pleasant Hospital's utilization has never reach 20%. *Id.* If MUHA's Proposed Hospital is constructed less than four miles from Roper Berkeley, history demonstrates that both hospitals will be underutilized. *Id.* at 12. Once Trident's Berkeley Medical Center is complete the situation will be greatly magnified. *Id.*

In its CON application, MUHA cites the Community Health Needs Assessment ("Assessment"), completed in 2016 by MUHA, Roper, and Trident United Way, in support of its Proposed Project. *Id.* Notably, however, the Assessment did not identify the need for another acute care hospital in the area of Berkeley County where MUHA plans to locate its Proposed Project. *Id.* The community needs identified in the Assessment are needs that MUHA's Proposed Project will not address (e.g., lack of health insurance and physician shortages). In sum, the Assessment does not support MUHA's Proposed Project. MUHA's proposed service area is unrealistic. Its utilization projections are unreliable, and its drive time analyses are misleading.

MUHA failed to demonstrate need for its Proposed Project; therefore, its CON application fails to comply with the State Health Plan standards, the CON Act, and the project review criteria addressing community need. *See* State Health Plan, pp. 10 – 11. *See also* S.C. Code Ann. § 44-7-120 and S.C. Code Ann. Regs. 61-15 § 801.2.

Distribution (Accessibility)

Because there is no need for the Proposed Project, the Proposed Project does nothing to increase accessibility to services and is, in fact, an unnecessary duplication of services. Since 1952, Colleton has been providing acute care services to residents of some of the most rural and poorest areas of the Lowcountry. The Proposed Hospital will be located in the southwestern portion of Berkeley County, near the borders of Charleston and Dorchester Counties, in an area of high income development. Exhibit F, p. 4. If MUHA truly sought to serve its Berkeley County patients closer to their homes, as it proclaims, it would have located the Proposed Hospital more centrally. *Id.* Building a hospital in the Nexton community, less than four miles from Roper Berkeley, does nothing to increase accessibility to services, particularly for the more rural, medically underserved portions of Berkeley County and the surrounding communities where lower income residents primarily reside.

Colleton and MUHA share overlapping services areas, including Colleton's main service area ZIP Code, the Walterboro ZIP Code, 29488. Given Colleton's already low utilization rates, the loss of additional patients to MUHA would seriously jeopardize Colleton's operations, and it would significantly impair access to care for many of South Carolina's neediest citizens. Bamberg and Barnwell are harbingers of the damage that could result due to MUHA's Proposed Hospital.

As discussed above, to the extent that MUHA seeks to treat its patients currently seeking care at MUSC, the data demonstrate that the percentage of MUSC patients originating from Berkeley County is insufficient to sustain a new hospital, particularly one in such close proximity to other providers. It is unreasonable to expect that MUHA patients living in the Charleston peninsula or the more distant surrounding islands will drive long distances, past multiple hospitals to seek care at the Proposed Hospital. Thus, the Proposed Hospital does nothing to increase accessibility to services for those individuals. MUHA could alleviate its

internal capacity constraints by adding beds at its downtown facility. *Id.* at p. 13. MUHA will soon be opening its Children's Hospital and Women's Pavilion, vacating large portions of its downtown facility. *Id.* Those vacated areas could be renovated to accommodate additional medical/surgical beds in a much more economical and efficient manner. *Id.*

MUHA raised the issue of flooding in the downtown peninsula in support of its Proposed Project, arguing that flooding created a barrier to services at MUSC. Notably, however, Summerville recently sought to establish a neonatal intensive care unit ("NICU"), arguing that the flooded streets of downtown Charleston made it difficult to access NICU services at MUSC. *Id.* MUHA opposed Summerville's NICU and stated, "SMC continues to raise **false concern regarding MUSC's ability to provide care during weather emergencies and flooding**." *Id.* (emphasis added). Based on these two diametrically opposed positions, MUHA apparently inexplicably has no trouble providing care to fragile newborns during flooding but cannot adequately serve lower acuity acute care patients. MUHA's vacillating position reflects its true motivation, which is to serve its financial bottom line and not the residents of the community. Flooding on the peninsula should not be considered a barrier to services supporting the construction of a new community hospital in an area with no need.

MUHA's choice of location exposes its true purpose, to capture market share from competitors in the North Charleston area and beyond, which includes Colleton. A hospital in an area with no need, already well-served by other providers, located less than four miles from a new hospital that is already under construction and scheduled to open soon, does nothing to increase or improve accessibility to services and is the very definition of an unnecessary duplication of services. MUHA's Proposed Project fails to comply with the State Health Plan, the CON Act, and the project review criteria governing distribution and accessibility set forth in the CON Regulations. *See* State Health Plan, pp. 10 – 11. *See also* S.C. Code Ann. § 44-7-120 and S.C. Code Ann. Regs. 61-15, § 802.3.

Financial Feasibility; Ability to Complete the Project

The financial feasibility of MUHA's Proposed Project is highly questionable. There is no need for another community hospital in the area, and it is unlikely that MUHA will be able to meet its utilization projections. Exhibit F, p. 16. In all likelihood, the Proposed Hospital will be underutilized and will substantially adversely affect the utilization of other area providers. At a total project cost of $325 million, MUHA's Proposed Hospital would be the most expensive hospital ever approved in South Carolina. *Id.* at p. 19. The Proposed Project is far more expensive than MUHA's recently approved Children's Hospital and Women's Pavilion, which is being constructed on the Charleston peninsula and will include specialized units and ancillary areas. *Id.* To say that the cost of MUHA's Proposed Project is astronomical is a vast understatement.

MUHA currently has capital commitments totaling approximately $487 million for major projects for which it has already received CON approval. *Id.* at p. 16. If MUHA receives a CON for its Proposed Hospital, its capital projects would total approximately $812 million. *Id.* MUHA is highly leveraged, has limited cash reserves, and its net income was $28.6 million below budget for the eight months ending February 28, 2018. *Id.* at pp. 17 – 18. MUHA operates on very thin margins, and its ability to complete a $325 million project given its other financial commitments is highly suspect. *Id.* In fact, the funding letter from Armadale Partners, included in MUHA's CON application, states that HUD funding for the project cannot be guaranteed. *Id.* at p. 17.

The approval of an unneeded $325 million facility reflects unsound health care planning. MUHA's need for additional hospital beds could be addressed much more economically and efficiently through the renovation of space at its downtown facility. Risking taxpayer funds on a project for which there is no community need is irresponsible. The Proposed Project does nothing to promote cost containment, and MUHA's Proposed Project fails to comply with the State Health Plan, CON Act and multiple project review criteria contained within the CON Regulations. *See* State Health Plan, pp. 10 – 11. *See also* S.C. Code Ann. § 44-7-120 and S.C. Code Ann. Regs. 61-15, §§ 802.12, 802.13, 802.14, 802.15, 802.16, and 802.19.

Adverse Impact

Despite requests from affected persons to include adverse impact as one of the project review criteria considered most important, the Department inexplicably chose not to do so. *See* Exhibit C, p. 2. The Department also chose not to conduct a project review meeting for a $325 million project with multiple opposing parties, all of whom demonstrated that if approved, the Proposed Project would substantially adversely impact them. MUHA's claims that its Proposed Project will have no adverse impact on area providers is unreasonable and borders on the absurd. As demonstrated herein, MUHA's Proposed Project will not solely treat patients currently seeking care at MUSC as claimed. The Proposed Hospital will draw patients who reside in proximity to the proposed site. A high percentage of patients will originate from areas outside of Berkeley County, such as areas in and around Colleton County. Exhibit F, p. 20. MUHA will have to redirect market share from other area providers in order meet its utilization projections, and MUHA's Proposed Hospital will still likely be an underutilized facility. *Id.* The sheer proximity of the Proposed Hospital to Roper Berkeley will no doubt result in two underutilized hospitals just as it did when Roper's Mt. Pleasant Hospital opened within a few miles of East Cooper Medical Center. *Id.* at p. 10.

Colleton's primary service area includes many of the same ZIP Codes that are part of MUHA's secondary service area, including 29432 – Branchville, 29471 – Reevesville, 29477 – St. George, 29435 - Cottageville, and 29474 – Round O. MUHA's service area also includes Colleton's main ZIP Code, the 29488 ZIP Code covering Walterboro. The Walterboro ZIP Code is close to MUHA's Proposed Hospital site. Colleton expects that many patients residing in Walterboro, as well as other smaller, rural communities, will be redirected to MUHA's Proposed Hospital. The loss of patients to MUHA would substantially adversely impact Colleton. Colleton's utilization rates were only 38.5% in 2016, and the 2018 State Health Plan shows Colleton as having a bed need for only 68 beds. *See* 2018 State Health Plan, p. 27. Colleton is currently licensed to operate 116 beds, meaning Colleton has excess bed capacity of 48 beds. *Id.* Colleton is a small, rural hospital, serving poorer communities in the Lowcountry. A new 128-bed hospital threatens the very existence of Colleton. Even if Colleton could withstand the loss of patients to MUHA, the Proposed Hospital has the potential to affect the breadth of services provided at Colleton as well as the quality of care.

Colleton has been serving the Lowcountry since 1952. Rural hospitals, in general, have slim operating margins, and the loss of market share to encroaching competitors can have devastating effects. The State of South Carolina has a duty to ensure that all South Carolina residents have access to high quality care. That duty should not be subordinate to another provider's desire to control the market by establishing a new unneeded hospital in a high income area already well-served by other providers.

Given the substantial adverse impact that MUHA's Proposed Project will have on area providers, an impact that could be devastating for Colleton, it is unreasonable that the Department would not consider adverse impact as one of the most, *if not the most*, important project review criteria. Colleton strongly urges the Department Board to consider the adverse impact of this Proposed Project on Colleton and other providers in its final review conference on this matter, as the Proposed Project fails to comply with the State Health Plan standards, the CON Act, and the project review criteria governing adverse impact set forth in the CON Regulations. *See* State Health Plan, pp. 10 – 11. *See also* S.C. Code Ann. § 44-7-120 and S.C. Code Ann. Regs. 61-15, § 802.23.

Regulation 61-15, Section 501

Section 501 of the CON Regulations provides that

> [i]n the case of any proposed new institutional health service for the provision of health services to inpatients, the Department **shall not grant** a Certificate of Need, or otherwise make a finding that such proposed new institutional health service is needed **unless**:
>
> 1. The **capital and operating costs of the proposal and their potential impact on patient charges are reasonable**;
>
> 2. **Superior alternatives to such services in terms of cost, efficiency, or appropriateness do not exist** and that the development of such alternatives is not practicable;
>
> 3. In the case of new construction, **alternatives to new construction** (e.g., modernization or sharing arrangements) **have been considered**;
>
> 4. **Patients will experience serious problems in terms of costs, availability or accessibility**, or such other problems as may be identified by the Department **in obtaining care of the type proposed** in the absence of the project. . . .

Id. (emphasis added). The Department's findings with regard to Section 501's requirements are in error. *See* Exhibit A, p. 4.

As demonstrated herein, the capital costs of the Proposed Project are far from reasonable at $325 million, and the Proposed Project's adverse impact on area providers will drive up health care costs. There are superior alternatives to the project that are more economic, efficient, and appropriate. Primarily, MUHA can address its institutional bed need by renovating space and adding beds at MUSC, where they are actually needed. MUHA will have large amounts of vacated space available once its Children's Hospital and Women's Pavilion is open. That space could be easily renovated to accommodate additional medical surgical beds at a cost well below $325 million. Instead, MUHA chooses not to add beds to MUSC where its bed need exists but instead to construct the most expensive hospital ever proposed in South Carolina in a service area with no need shown in the State Health Plan in a county that is currently well served by other providers and which has ample bed capacity for the foreseeable future as a result of previously approved projects. Residents of Berkeley County have no problems in terms of costs, availability, or accessibility with regard to inpatient acute care services, emergency medicine services, or ancillary outpatient services. MUHA has chosen

Berkeley County, and the Nexton community in particular, for the sole purpose of expanding its territory and redirecting market share from other providers, including Colleton.

MUHA's Proposed Project fails to comply with the criteria set forth in S.C. Code Ann. Regs. 61-15, § 501 and, therefore, cannot be approved.

Conclusion:

For the reasons set forth above and within the exhibits attached hereto and incorporated herein by reference, Colleton respectfully requests that the Department Board conduct a final review conference on this matter and that the Board overturn the Department's decision to approve MUHA's CON application, as the Proposed Project fails to comply with the State Health Plan, the CON Act, and the CON Regulations in that (i) there is no need for the Proposed Project; (ii) the Proposed Project does nothing to increase accessibility to services and is an unnecessary duplication of services; (iii) the Proposed Project is not financially feasible and may not be able to be completed; (iv) the Proposed Project will substantially adversely impact other area providers; and (v) the Proposed Project fails to comply with the requirements of Section 501 of the CON Regulations. *See* S.C. Code Ann. § 44-7-210(B). *See also* S.C. Code Ann. Regs. §§ 307.1 and 501.

Colleton looks forward to the opportunity to more fully address its opposition to MUHA's Proposed Project at the final review conference.

With best regards, I am

Sincerely,

William R. Thomas

WRT
Enclosures
cc: Ashley C. Biggers, Esquire (via hand delivery with enclosures)
Vito Wicevic, Esquire (via hand delivery with enclosures)
Louis W. Eubank, MSW MPH (via hand delivery with enclosures)
Margaret P. Murdock, Esquire (via hand delivery with enclosures)
Ralph Barbier, Esquire (via hand delivery with enclosures)
M. Elizabeth Crum, Esquire (via hand delivery with enclosures)
Todd Gallati (via email with enclosures)
Lisa Valentine (via email with enclosures)
James O. Hiott, III (via email with enclosures)
Charles E. Williams, FACHE (via email with enclosures)

Exhibit A

To Request for Final Review Conference

July 23, 2018

VIA CERTIFIED MAIL, RETURN RECEIPT REQUESTED
Patrick J. Cawley, MD
Medical University Hospital Authority
169 Ashley Avenue
Charleston, SC 29425

Decision Granting Certificate of Need for:
Construction of a 128-bed general acute hospital in Berkeley County at a total project cost of $325,000,000.
Applicant: Medical University Hospital Authority d/b/a MUHA Community Hospital
Matter No.: 2520
Charleston, SC

Dear Dr. Cawley:

The South Carolina Department of Health and Environmental Control (Department) has reviewed the application of Medical University Hospital Authority d/b/a MUHA Community Hospital (MUSC) for construction of a 128-bed general acute hospital in Berkeley County at a total project cost of $325,000,000 (Project). After consideration of the entire administrative record of this matter, including documentation submitted by affected persons opposing approval of this application, the Department concludes MUSC has presented substantial evidence that the Project complies with the relevant project review criteria and with the *2017-2018 South Carolina Health Plan*, enacted June 9, 2017 (*Plan*). Accordingly, it is the decision of the Department that a Certificate of Need be issued for this Project. This decision is based on the following findings:

Compliance with the South Carolina Health Plan

Standard 1: The *Plan* does not specify a projected need for Berkeley County alone, but the *Plan* does identify a projected need for MUSC of 147 beds.

Standard 2: The *Plan* notes a projected bed need of 147 for MUSC.

Standard 3: The *Plan* does not calculate a surplus of beds or a bed need for Berkeley County. The *Plan* does indicate a surplus of beds in the area consisting of Berkeley, Charleston, and Dorchester Counties. The *Plan* indicates a need of 147 additional beds for MUSC, and MUSC is requesting approval of 128 beds at the proposed location, rather than at MUSC's existing hospital site.

Standard 4: This standard is not applicable because the *Plan* does not indicate a need for additional beds in the service area.

Standard 5: MUSC justified, through patient origin and other data, the need for a new hospital at the chosen site and the potential adverse impact of the new hospital at the chosen site on existing hospitals in the service area.

Standard 6: MUSC has satisfied this requirement.

Standards 7: This standard is not applicable.

Standard 8: This standard is not applicable.

Standard 9: This standard is not applicable.

Standard 10: This standard is not applicable.

Standard 11: This standard is not applicable.

Standard 12: This standard is not applicable.

The Department finds that MUSC has sufficiently complied with 3 S.C. Code Reg. 61-15, Section 802.1.

Community Need Documentation

MUSC clearly identified its target population and, using population statistics consistent with those generated by the State Demographer, MUSC made reasonable projections of anticipated population changes, with assumptions and methodologies clearly outlined in the application. MUSC has sufficiently demonstrated that the proposed Project will meet an identified need and that the projected utilization of the Project is sufficient to justify its implementation.

The Department finds that MUSC has sufficiently complied with 3 S.C. Code Reg. 61-15, Section 802.2.

Distribution (Accessibility)

The Department finds that the Project will not result in unnecessary duplication or modernization of services. In its application, MUSC included data showing that a significant percentage of its existing patients originate from areas in close proximity to the proposed location of the Project. After eliminating from its projections certain higher-acuity patients that would continue to be served at MUSC's existing location, MUSC's projected utilization of the Project includes a sufficient number of patients originating from the area in which the proposed hospital will be located to justify approval of the Project. The Department took into account the proposed utilization of two hospitals that have received CON approval but are not yet operational in Berkeley County, including Roper St. Francis Berkeley Hospital, which is currently under construction and is the closest existing or proposed hospital to the Project. The Department finds that approval of the instant application will not unnecessarily duplicate services of existing or proposed hospitals in the service area.

MUSC's application states that patients have access to MUSC by self-referral and by internal and external physician referral; that referrals derive from private physician practices, public clinics and other hospitals; and that access to the facility also comes from physicians affiliated with certain health care organizations listed by MUSC in its application. MUSC states that there are no limitations placed on admissions to the Project.

MUSC states that patients are admitted to MUHA facilities without regard to race, sex, creed or national origin. MUSC described its policy regarding indigent care and financial counseling for patients to determine whether indigent care discounts apply. MUSC states that it is committed to providing needed health care to all patients regardless of ability to pay. MUSC also submitted tables listing the percent of gross revenue and dollar amount of its historical and projected indigent care for years 2015 through 2019.

MUSC referenced its charity care and financial assistance policies as well as its historical and projected amount of indigent care to demonstrate that it has established provisions to insure that individuals in need of treatment as determined by a physician have access to the Project, regardless of ability to pay.

The Department finds that MUSC has sufficiently complied with 3 S.C. Code Reg. 61-15, Section 802.3.

Ability of the Applicant to Complete the Project

MUSC demonstrated that the Project will be initiated and completed within the proposed timeframe specified in its application. MUSC further demonstrated that the financial schedules and time frames contained in the application are consistent with those usually experienced in the development of similar facilities or services.

The Department finds that MUSC has sufficiently complied with 3 S.C. Code Reg. 61-15, Section 802.14.

Opposition

CareAlliance Health Services d/b/a Roper St. Francis Healthcare, Roper Hospital, Inc., Bon Secours-St. Francis Xavier Hospital, Inc., Roper St. Francis Berkeley Hospital, Roper Mount Pleasant Hospital, Trident Medical Center, LLC, Trident Medical Center, LLC d/b/a Summerville Medical Center, Walterboro Community Hospital, Inc. d/b/a Colleton Medical Center, and Regional Medical Center of Orangeburg & Calhoun Counties (collectively the Opposition) have opposed the Project on the grounds that the Project does not comply with the requirements under applicable South Carolina law and the *South Carolina Health Plan*. After consideration of the arguments and documentation submitted in opposition to the Project, the Department finds that the Opposition has not demonstrated sufficient grounds for denial of the Project.

Department Findings under S.C. Code Reg. 61-15 § 501

The Department finds the requirements of S.C. Code Reg. 61-15, Section 501 are applicable to the Project, as the Project is a new institutional health service. As such, the Department makes the following findings under this Section:

1. The capital and operating costs of the proposal and their potential impact on patient charges are reasonable;
2. Superior alternatives to such services in terms of cost, efficiency, or appropriateness do not exist and the development of such alternatives is not practicable;
3. Alternatives for new construction were considered; and
4. In the absence of the Project, patients will experience serious problems in terms of costs, availability, or accessibility in obtaining care of the type proposed.

The issuance of a Certificate of Need does not constitute approval for any proposed construction, licensing, or certification changes. You should contact, as needed, the following individuals for information concerning these related issues: Bureau of Radiological Health, Ms. Susan Jenkins (803.545.0530); Division of Health Facilities Construction, Mr. William McCallum (803.545.4215); Bureau of Health Facilities Licensing, Mr. Terry English, (803.545.4458); and Bureau of Certification, Ms. MaryJo Roué (803.545. 4293).

A copy of the Guide to Board Review is enclosed for your convenience.

Reviewed and Written By:

Maggie Parham Murdock
Director
Certificate of Need Program

Approved for Release By:

Louis Eubank
Chief, Bureau of Healthcare
Planning and Construction

Cc: Shannon Cantwell (Certified Mail)
Lisa Valentine (Certified Mail)
Todd Gallati (Certified Mail)
James O. Hiott III (Certified Mail)
Ralph Barbier, Esquire (Email)
William R. Thomas, Esquire (Email)
M. Elizabeth Crum, Esquire (Email)
Sarah Bacik (Email)
Caroline Cotter (Email)

South Carolina Board of Health and Environmental Control

Guide to Board Review

Pursuant to S.C. Code Ann. § 44-1-60

The decision of the South Carolina Department of Health and Environmental Control (Department) becomes the final agency decision fifteen (15) calendar days after notice of the decision has been mailed to the applicant, permittee, licensee and affected persons who have requested in writing to be notified, unless a written request for final review accompanied by a filing fee in the amount of $100 is filed with Department by the applicant, permittee, licensee or affected person.

Applicants, permittees, licensees, and affected parties are encouraged to engage in mediation or settlement discussions during the final review process.

If the Board declines in writing to schedule a final review conference, the Department's decision becomes the final agency decision and an applicant, permittee, licensee, or affected person may request a contested case hearing before the Administrative Law Court within thirty (30) calendar days after notice is mailed that the Board declined to hold a final review conference. In matters pertaining to decisions under the South Carolina Mining Act, appeals should be made to the South Carolina Mining Council.

I. Filing of Request for Final Review

1. A written Request for Final Review (RFR) and the required filing fee of one hundred dollars ($100) must be received by Clerk of the Board within fifteen (15) calendar days after notice of the staff decision has been mailed to the applicant, permittee, licensee, or affected persons. If the 15th day occurs on a weekend or State holiday, the RFR must be received by the Clerk on the next working day. RFRs will not be accepted after 5:00 p.m.
2. RFRs shall be in writing and should include, at a minimum, the following information:
   - The grounds for amending, modifying, or rescinding the staff decision;
   - a statement of any significant issues or factors the Board should consider in deciding how to handle the matter;
   - the relief requested;
   - a copy of the decision for which review is requested; and
   - mailing address, email address, if applicable, and phone number(s) at which the requestor can be contacted.
3. RFRs should be filed in person or by mail at the following address:

   South Carolina Board of Health and Environmental Control
   Attention: Clerk of the Board
   2600 Bull Street
   Columbia, South Carolina 29201

   Alternatively, RFR's may be filed with the Clerk by facsimile (803-898-3393) or by electronic mail (boardclerk@dhec.sc.gov).
4. The filing fee may be paid by cash, check or credit card and must be received by the 15th day.
5. If there is any perceived discrepancy in compliance with this RFR filing procedure, the Clerk should consult with the Chairman or, if the Chairman is unavailable, the Vice-Chairman. The Chairman or the Vice-Chairman will determine whether the RFR is timely and properly filed and direct the Clerk to (1) process the RFR for consideration by the Board or (2) return the RFR and filing fee to the requestor with a cover letter explaining why the RFR was not timely or properly filed. Processing an RFR for consideration by the Board shall not be interpreted as a waiver of any claim or defense by the agency in subsequent proceedings concerning the RFR.
6. If the RFR will be processed for Board consideration, the Clerk will send an Acknowledgement of RFR to the Requestor and the applicant, permittee, or licensee, if other than the Requestor. All personal and financial identifying information will be redacted from the RFR and accompanying documentation before the RFR is released to the Board, Department staff or the public.
7. If an RFR pertains to an emergency order, the Clerk will, upon receipt, immediately provide a copy of the RFR to all Board members. The Chairman, or in his or her absence, the Vice-Chairman shall based on the circumstances, decide whether to refer the RFR to the RFR Committee for expedited review or to decline in writing to schedule a Final Review Conference. If the Chairman or Vice-Chairman determines review by the RFR Committee is appropriate, the Clerk will forward a copy of the RFR to Department staff and Office of General Counsel. A Department response and RFR Committee review will be provided on an expedited schedule defined by the Chairman or Vice-Chairman.
8. The Clerk will email the RFR to staff and Office of General Counsel and request a Department Response within eight (8) working days. Upon receipt of the Department Response, the Clerk will forward the RFR and Department Response to all Board members for review, and all Board members will confirm receipt of the RFR to the Clerk by email. If a Board member does not confirm receipt of the RFR within a twenty-four (24) hour period, the Clerk will contact the Board member and confirm receipt. If a Board member believes the RFR should be considered by the RFR Committee, he or she will

respond to the Clerk's email within forty-eight (48) hours and will request further review. If no Board member requests further review of the RFR within the forty-eight (48) hour period, the Clerk will send a letter by certified mail to the Requestor, with copy by regular mail to the applicant, permittee, or licensee, if not the Requestor, stating the Board will not hold a Final Review Conference. Contested case guidance will be included within the letter.
NOTE: If the time periods described above end on a weekend or State holiday, the time is automatically extended to 5:00 p.m. on the next business day.

9. If the RFR is to be considered by the RFR Committee, the Clerk will notify the Presiding Member of the RFR Committee and the Chairman that further review is requested by the Board. RFR Committee meetings are open to the public and will be public noticed at least 24 hours in advance.
10. Following RFR Committee or Board consideration of the RFR, if it is determined no Conference will be held, the Clerk will send a letter by certified mail to the Requestor, with copy by regular mail to the applicant, permittee, or licensee, if not the Requestor, stating the Board will not hold a Conference. Contested case guidance will be included within the letter.

II. Final Review Conference Scheduling

1. If a Conference will be held, the Clerk will send a letter by certified mail to the Requestor, with copy by regular mail to the applicant, permittee, or licensee, if not the Requestor, informing the Requestor of the determination.
2. The Clerk will request Department staff provide the Administrative Record.
3. The Clerk will send Notice of Final Review Conference to the parties at least ten (10) days before the Conference. The Conference will be publically noticed and should:
    - include the place, date and time of the Conference;
    - state the presentation times allowed in the Conference;
    - state evidence may be presented at the Conference;
    - if the conference will be held by committee, include a copy of the Chairman's order appointing the committee; and
    - inform the Requestor of his or her right to request a transcript of the proceedings of the Conference prepared at Requestor's expense.
4. If a party requests a transcript of the proceedings of the Conference and agrees to pay all related costs in writing, including costs for the transcript, the Clerk will schedule a court reporter for the Conference.

III. Final Review Conference and Decision

1. The order of presentation in the Conference will, subject to the presiding officer's discretion, be as follows:
    - Department staff will provide an overview of the staff decision and the applicable law to include [10 minutes]:
        - Type of decision (permit, enforcement, etc.) and description of the program.
        - Parties
        - Description of facility/site
        - Applicable statutes and regulations
        - Decision and materials relied upon in the administrative record to support the staff decision.
    - Requestor(s) will state the reasons for protesting the staff decision and may provide evidence to support amending, modifying, or rescinding the staff decision. [15 minutes] *NOTE: The burden of proof is on the Requestor(s)*
    - Rebuttal by Department staff [15 minutes]
    - Rebuttal by Requestor(s) [10 minutes]

    Note: Times noted in brackets are for information only and are superseded by times stated in the Notice of Final Review Conference or by the presiding officer.
2. Parties may present evidence during the conference; however, the rules of evidence do not apply.
3. At any time during the conference, the officers conducting the Conference may request additional information and may question the Requestor, the staff, and anyone else providing information at the Conference.
4. The presiding officer, in his or her sole discretion, may allow additional time for presentations and may impose time limits on the Conference.
5. All Conferences are open to the public.
6. The officers may deliberate in closed session.
7. The officers may announce the decision at the conclusion of the Conference or it may be reserved for consideration.
8. The Clerk will mail the written final agency decision (FAD) to parties within 30 days after the Conference. The written decision must explain the basis for the decision and inform the parties of their right to request a contested case hearing before the Administrative Law Court or in matters pertaining to decisions under the South Carolina Mining Act, to request a hearing before the South Carolina Mining Council.. The FAD will be sent by certified mail, return receipt requested.
9. Communications may also be sent by electronic mail, in addition to the forms stated herein, when electronic mail addresses are provided to the Clerk.

The above information is provided as a courtesy; parties are responsible for complying with all applicable legal requirements.

Exhibit B

To Request for Final Review Conference

Affecting York County

Amisub of South Carolina, Inc. d/b/a Piedmont Medical Center
Addition of an Electrophysiology lab and a biplane lab as well as the purchase of a CT equipment at a total project cost of $7,062,274.

In accordance with Section 44-7-210(A), Code of Laws of South Carolina, and S.C. DHEC Regulation 61-15, the public and affected persons are hereby notified that for the following projects, applications have been deemed complete, and the review cycle has begun. A proposed decision will be made as early as 30 days, but no later than 120 days, from March 23, 2017. "Affected persons" have 30 days from the above date to submit requests for a public hearing to Nic Gerrald, Certificate of Need Program, 2600 Bull Street, Columbia, S.C. 29201. If a public hearing is timely requested, the Department's decision will be made after the public hearing, but no later than 150 days from the above date. For further information call (803) 545-3495.

Affecting Beaufort County

South of Broad Healthcare d/b/a South of Broad Hospital
Construction of a 20-bed acute care microhospital in Beaufort County at a total project cost of $39,334,924.

Affecting Berkeley County

Medical University Hospital Authority d/b/a MUHA Community Hospital
Construction of a 128-bed general acute hospital in Berkeley County at a total project cost of $325,000,000.

Palmetto Lowcountry Behavioral Health
The transfer of 44 psychiatric beds and 16 substance abuse beds and the addition of 48 psychiatric beds for a total of 108 beds in a newly constructed facility at a total project cost of $35,529,725.

Affecting Cherokee County

Well Care Home Health of the Upstate, Inc.
Establishment of a Home Health Agency in Cherokee County at a total project cost of $29,000.

Affecting Chester County

Well Care Home Health of the Upstate, Inc.
Establishment of a Home Health Agency in Chester County at a total project cost of $29,000.

Affecting Dorchester County

Trident Medical Center, LLC d/b/a Summerville Medical Center
Addition of a 2nd robotic surgical system, the da Vinci Xi System, at a total project cost of $2,474,384.

Affecting Greenville County

UHS of Greenville, LLC d/b/a The Carolina Center for Behavioral Health
Addition of 10 substance abuse beds for a total of 39 substance abuse beds at a total project cost of $2,364,837.

Affecting Lancaster County

Rebound Behavioral Health, LLC d/b/a Rebound Behavioral Health
Addition of 21 inpatient psychiatric beds for a total of 45 inpatient psychiatric beds at a total project cost of $50,000.

Exhibit C

To Request for Final Review Conference

May 21, 2018

VIA CERTIFIED MAIL, RETURN RECEIPT REQUESTED
Patrick J. Cawley, MD
Medical University Hospital Authority
169 Ashley Avenue
Charleston, SC 29425

Re: Medical University Hospital Authority d/b/a MUHA Community Hospital
Project: Construction of a 128-bed general acute hospital in Berkeley County at a total project cost of $325,000,000.
Matter No.: 2520

Dear Dr. Cawley:

This is to notify you the South Carolina Department of Health and Environmental Control ("Department") has determined the above-referenced project to be complete for purposes of review by the Certificate of Need Program. Enclosed is an invoice for the required application fee. It may be paid by check made payable to the S.C. Department of Health and Environmental Control or by electronic check through the Department's website (www.scdhec.gov) using the "Pay Invoices" hyperlink at the bottom of each webpage. This is a secure website. If payment is not received within fifteen (15) days of your receipt of this invoice, the pending application will be considered withdrawn and this matter closed. Should this deadline fall on a weekend or State holiday, it will be extended to the next calendar day that is neither weekend nor holiday pursuant to S.C. Regulation 61-15, Section 303.

Should the Department receive your application fee within the fifteen (15) day deadline, the Department will render a decision no earlier than thirty (30) days, but no later than one-hundred (120) days from the date notice is provided to affected persons in the State Register, unless a public hearing is held pursuant to Regulation 61-15, Section 305.

The Department has determined the relative importance of the project review criteria, pursuant to Regulation 61-15, Section 304, which will be used to review your application. The

specific criteria to be used are set forth below, with the most important being listed first. All other listed criteria will be given equal importance.

a. Compliance with the Need Outlined in the South Carolina Health Plan
b. Community Need Documentation;
c. Distribution (Accessibility);
d. Ability to Complete the Project.

The above criteria are set forth in Regulation 61-15, Section 802. Should you wish to submit any additional information to the Department in support of your application, you have thirty (30) days from the receipt of this correspondence to do so.

If you have any questions, please contact me at 803-545-4492.

Sincerely,

Maggie Murdock
Director
Certificate of Need Program

Enclosures: Application Fee Invoice

cc: Sarah Bacik
Liz Crum, Esq.
Shannon Cantwell
Ralph Barbier, Esq,
Will Thomas, Esq.
Lisa Valentine
Todd Gallati

Exhibit D

To Request for Final Review Conference

Colleton
Medical Center
Quality Counts.

VIA HAND DELIVERY AND EMAIL

Margaret P. Murdock, Esquire
Director, Certificate of Need Program
Bureau of Healthcare Planning and Construction
SC Department of Health and Environmental Control
301 Gervais Street
Columbia, South Carolina 29201

Re: Medical University Hospital Authority d/b/a MUHA Community Hospital ("MUHA") – Certificate of Need application for the construction of a 128 bed general acute hospital in Berkeley County at a total project cost of $325,000,000; DHEC Matter No. 2520

WALTERBORO COMMUNITY HOSPITAL, INC. D/B/A COLLETON MEDICAL CENTER AFFECTED PERSON STATUS AND OPPOSITION

Rural healthcare is very important to the State of South Carolina, and I have serious concerns about MUSC's proposed hospital in Berkeley County and its effect on rural healthcare facilities, such as Colleton Medical Center. If the Department permits MUSC to build a $325 million hospital in the Nexton area, it not only encroaches on Colleton Medical Center's service area, it also jeopardizes our stability in the market. MUSC's new hospital will be approximately 40 miles away, and only a 55 minute drive, from Colleton Medical Center.

The main problem with MUSC's proposed location is that it will be within 25 miles of several of our primary service area zip codes; 29432 - Branchville, 29471 - Reevesville, 29477 - St. George, 29435 - Cottageville, and 29474 - Round O. The one zip code that concerns me the most is Colleton Medical Center's main service area, 29488 – Walterboro. This zip code is within 30 miles of the proposed site, thus making it appear to me that MUSC's purpose is to capture market share rather than reduce drive time for its current patient population who reside in Berkeley, Dorchester and Colleton counties.

If DHEC permits MUSC to establish a hospital in the proposed area in Berkeley County, it will greatly enhance MUSC's ability to capture market share, and it will endanger the stability and longevity of Colleton Medical Center. Colleton Medical Center has been in operation since 1952 and MUSC's proposed hospital would have a significant adverse impact on Colleton Medical Center's inpatient and outpatient volumes and, quite frankly, it will impede Colleton Medical

Center's ability to provide high quality services. I do not want to see the residents of Colleton County and the City of Walterboro potentially lose access to local hospital based healthcare services. MUSC wants to locate a new hospital in an area that is already well served by existing facilities. Cities such as Bamberg and Barnwell have not recovered due to their hospitals' closing over the past several years. Moreover, Colleton Medical Center does not receive millions of dollars in state appropriated funds every year like MUSC, and it relies on the local population to support its hospital facility.

Therefore, pursuant to S.C. Code Ann. §§44-7-130(1) and 44-7-210(C) and Regulation 61-15 §§103(1) and 305, I am writing on behalf of Walterboro Community Hospital, Inc. d/b/a Colleton Medical Center ("Colleton Medical Center") to notify the Department that Colleton Medical Center is an "affected person" with respect to MUHA's CON application referenced above, and that it opposes the approval of MUHA's CON application because Colleton Medical Center is an existing provider of similar services located in Colleton County, which is in the secondary service area and geographic area to be served by the application. Colleton Medical Center is opposed to MUHA's hospital CON application because it does not satisfy the CON Act, its regulations and the applicable project review criteria. Moreover, MUSC's project is not needed, will adversely impact Colleton Medical Center, and does not contain costs.

Colleton Medical Center has excess bed capacity and MUSC's entry into Berkeley County will only cause additional excess capacity, and while there is some growth in the area where MUSC proposes to locate its $325 million hospital, the 80 beds coming on line at Roper-Berkeley and Summerville Medical Center in the next year will easily accommodate this growth. While Colleton Medical Center has not conducted a thorough analysis, it believes that once the Children's Hospital relocates to its new building currently under construction, there will be sufficient space for MUHA to locate more than 100 additional beds on its downtown campus at a cost far less than $325 million, as there are beds in use in that space today.

Please do not hesitate to contact me directly should you have any questions about Colleton Medical Center's opposition to this project.

Sincerely,

James O. Hiott III
CEO, Colleton Medical Center

Exhibit E

To Request for Final Review Conference

Parker Poe

William R. Thomas
Partner
Telephone: 803.253.8658
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Atlanta, GA
Charleston, SC
Charlotte, NC
Columbia, SC
Greenville, SC
Raleigh, NC
Spartanburg, SC

July 18, 2018

VIA US MAIL AND EMAIL

Margaret P. Murdock, Esquire
Director, Certificate of Need Program
Bureau of Healthcare Planning and Construction
SC Department of Health and Environmental Control
301 Gervais Street
Columbia, South Carolina 29201

Re: Medical University Hospital Authority d/b/a MUHA Community Hospital ("MUHA") – Certificate of Need application for the construction of a 128 bed general acute hospital in Berkeley County at a total project cost of $325,000,000 DHEC Matter No. 2520

Dear Ms. Murdock:

I write on behalf of Colleton Medical Center ("CMC") to state that CMC adopts by reference the letter dated July 18, 2018, filed on behalf of Trident Medical Center("TMC") and Summerville Medical Center ("SMC") by Daniel J. Sullivan. While some portions of Mr. Sullivan's letter are specific to TMC and SMC, CMC believes that many of the general issues raised by SMC and TMC apply in the context of CMC's opposition. MUHA is simply attempting to enhance its access to residents in Berkeley and Dorchester Counties, and certain parts of Colleton County, so that it can capture market share in these areas from existing and proposed providers.

This enhanced access will impact CMC's already low general acute care bed utilization. Colleton's stated bed need in the South Carolina Health Plan is 68, and it currently has 116 beds, meaning that its occupancy rate in 2016 was 58.6%. CMC cannot afford to lose additional patients to MUHA, and it will experience material adverse effects in both patient volumes and staffing if DHEC approves MUHA's Certificate of Need application. The residents of Colleton County have good access to a community hospital in Colleton County like the one MUHA is proposing to build in Berkeley County.

As Mr. Hiott expressed in his earlier letter, rural healthcare is under threat in many parts of South Carolina, and many hospitals have discontinued operations. As CMC is in a very rural county, it relies on the Department to make critical health planning decision that will preserve rural healthcare.

With best regards, I am

Sincerely,

William R. Thomas

WRT

cc: Jimmy Hiott
CEO, Colleton Medical Center

Exhibit F

To Request for Final Review Conference

Sullivan Consulting Group, Inc.

2090 Bethany Way · Alpharetta, Georgia 30004 · (770) 753-4222 · Fax: (770) 753-4223

SCDHEC Received:
JUL 18 2018
Certificate of Need Program

July 18, 2018

Margaret P. Murdock, Esquire
Director, Certificate of Need Program
Bureau of Healthcare Planning and Construction
SC Department of Health and Environmental Control
301 Gervais Street
Columbia, South Carolina 29201

RE: Medical University Hospital Authority d/b/a MUHA Community Hospital
Certificate of Need application for the construction of a 128 bed general acute hospital in Berkeley County at a total project cost of $325,000,000
DHEC Matter No. 2520

Dear Ms. Murdock:

On behalf of Trident Medical Center, LLC d/b/a Trident Medical Center ("Trident") and Trident Medical Center, LLC d/b/a Summerville Medical Center ("SMC"), both existing providers of similar services located in Charleston County, which is in the same health service area to be served by the applicant, Medical University Hospital Authority's ("MUHA"), I am submitting this statement of opposition to the above-captioned CON application. Trident and SMC are opposed to MUHA's hospital CON application because it does not satisfy the CON Act, its regulations, the 2017-2018 South Carolina Health Plan, and the applicable project review criteria.

1. Project Overview

MUHA proposes to construct a 5-story, 128-bed inpatient facility in the Nexton area of Summerville, Berkeley County ("MUHA-Nexton"). The project will include:

- 100 Medical/Surgical Beds
- 12 Intensive Care Beds
- 16 Post-Partum Beds
- 8 Labor and Delivery Rooms
- Newborn Nursery with 8 newborn bassinets;
- Surgery-4 ORs, 2 Cesarean Section ORs
- 2 Endoscopy Suites
- Vascular Lab
- Emergency Department
- Diagnostic and Imaging Department

The total project cost is $325 million with proposed square footage of 311,221. Construction cost per square foot is project at $538, and total cost per square foot excluding land is $1,021. MUHA's received CON approval for a Freestanding Emergency Department to be located in

Summerville approximately two miles from the site. According to MUHA, the Freestanding Emergency Department will ultimately be relocated to the new hospital if approved.

2. Project Review Criteria

In its letter deeming the application complete, the Department identified the following specific project review criteria important to the review.

a. Compliance with the Need Outlined in the South Carolina Health Plan
b. Community Need Documentation;
c. Distribution (Accessibility);
d. Ability to Complete the Project.

A significant omission from this criteria list is Adverse Effects on Other Facilities. Placing a new acute care hospital in close proximity to other acute care hospitals such as Trident, SMC, and the Roper St. Francis – Berkeley Hospital ("RSF-Berkeley"), currently under construction, will have a significant adverse impact on these providers, which MUHA has ignored in its application. The MUHA project will also have a significant adverse impact on existing and approved freestanding emergency departments in the area. These impacts will be detailed below. The Department should give great weight in its review to the multifaceted impacts that will result from the approval of the MUHA project that stand in stark contrast to any minimal benefits it will provide to the health care system in the Tri-County area.

Construction Costs and Methods is another criterion that should be of high priority. A capital expenditure of $325 million for a 128-bed hospital is exorbitant, and MUHA makes no effort to explain why this cost is reasonable.

The high price tag for this project also raises serious questions about the Financial Feasibility of the project in terms of Projected Revenues and Projected Expenses. The projections of utilization for the MUHA-Nexton hospital are also highly suspect, and under more reasonable assumptions would result in projections of ongoing losses for the project.

The massive capital expenditures that MUHA has already underway or approved raise serious concerns about the Applicant's Ability to Complete the Project and the wisdom of adding another major capital commitment to an organization that receives State appropriations and that is currently carrying a tremendous debt load already.

Each of these criteria will be addressed below.

3. Consistency with the 2017-2018 South Carolina Health Plan

The MUHA application states that there is need for 147 beds in the service area (p. 49), but that is the need identified for MUHA in downtown Charleston. In fact, while MUHA does have a bed need in the Health Plan, the Berkeley/Charleston/Dorchester service area as a whole has a negative bed need of 13. *See* **Exhibit 1**.

Exhibit 1
Acute Care Bed Need Calculation for Berkeley/Charleston/Dorchester Service Area

Facility by Region and County	Age Cat	2015 Pop	2022 Pop	2015 Pt Days	Proj ADC	Variable Rate Factor	Bed Need	Existing Beds	To Be Added / Excess	2015 % Occup Rate
Trident Medical Center & Berkeley	<18	166114	180030		0					
Medical Center *1, 10*	18-64	476343	535390		0					
	+65	102069	146830		0					
	TOTAL	744,526	862,250	71,955	228	70%	327	296	31	66.60%
Summerville Medical Center *11*	<18	166114	180030	2028	6					
	18-64	476343	535390	11593	36					
	+65	102069	146830	8513	34					
	TOTAL	744,526	862,250	22,134	75	65%	116	124	-8	48.90%
MUSC Medical Center *12*	<18	166114	180030	28399	84					
	18-64	476343	535390	105594	325					
	+65	102069	146830	48814	192					
	TOTAL	744,526	862,250	182,807	602	75%	803	656	147	76.35%
Mount Pleasant Hospital	<18	166114	180030	8	0					
	18-64	476343	535390	2645	8					
	+65	102069	146830	2400	9					
	TOTAL	744,526	862,250	5,053	18	65%	28	85	-57	16.29%
Roper Hospital *13*	<18	166114	180030	13	0					
	18-64	476343	535390	22148	68					
	+65	102069	146830	34258	135					
	TOTAL	744,526	862,250	56,419	203	70%	291	316	-25	48.92%
Bon Secours - Saint Francis Xavier Hospital	<18	166114	180030	92	0					
	18-64	476343	535390	19206	59					
	+65	102069	146830	12379	49					
	TOTAL	744,526	862,250	31,677	108	70%	155	204	-49	42.54%
East Cooper Medical Center	<18	166114	180030	19	0					
	18-64	476343	535390	8607	27					
	+65	102069	146830	5979	24					
	TOTAL	744,526	862,250	14,605	50	65%	78	130	-52	30.78%
Berkeley / Charleston / Dorchester County Total							1,798	1,811	-13	

The specific language regarding the bed need calculation in the Health Plan is:

1. ***Calculations of hospital bed need are made for individual hospitals and totaled by county to determine the overall bed need for that service area, which is the county for CON purposes.***

Clearly, there is no need for 128 additional acute care beds in a new facility when assessing need from a community-wide perspective. This lack of need is underscored by the fact that there are 130 new, approved acute care beds that have yet become operational. These include:

- 30 beds for SMC, which will be completed in the near future.
- 50 beds for the RSF-Berkeley Hospital, which will open in the Fall of 2019.
- 50 beds at Trident Berkeley Medical Center, which are under development but have been delayed due to wetlands issues with the site.[1]

[1] Trident is well aware of MUHA's position regarding Berkeley Medical Center. Even if the 50 approved beds for Berkeley Medical Center were removed from the inventory, there would be a need for only 37 acute care beds in the Berkeley/Charleston/Dorchester service area, which is insufficient to support a new 128-bed hospital located next to RSF-Berkeley.

In addition, Standard 5 of the Acute Care Bed Chapter is applicable to this project.

5. ***A facility may apply to create a new additional hospital at a different site within the same service area through the transfer of existing licensed beds, the projected bed need for the facility, or a combination of both existing beds and projected bed need. The facility is not required to have a projected need for additional beds in order to create a new additional hospital. There is no required minimum number of beds in order to approve the CON application. The applicant must justify, through patient origin and other data, the need for a new hospital at the chosen site and the potential adverse impact a new hospital at the chosen site could have on the existing hospitals in the service area.***

The MUHA-Nexton hospital is inconsistent with this standard because the applicant failed to document the need for the new hospital or reasonably present the potential adverse impact on existing providers.

As will be discussed in more detail under the Community Need criterion, there is no need that the MUHA project will address. The applicant states that there is a shortage of health care services in Berkeley County, but this project fails to address the new bed capacity that will be opened in Berkeley County in the future. MUHA-Nexton will be located in the southwestern portion of Berkeley County near its borders with Dorchester and Charleston Counties. Had its objective been to serve Berkeley County, MUHA could have sought a site more central to the county. Instead, MUHA chose a site that is near the higher income developments of Nexton and Cane Bay while the remainder of the county is more rural with lower income residents. Most astonishingly, the MUHA-Nexton site is less than 4 miles from the RSF-Berkeley location, a facility that is scheduled in the Fall 2019. It would be the abandonment of all rational health planning principles to approve a second new hospital to serve the same service area population before the first hospital has even opened, especially one so close.

The proposed site was also selected to draw patients from Dorchester County and Northern Charleston County, which are already well-served by existing hospitals, including SMC, which will soon open 30 new acute care beds, and Trident. These existing hospitals can address the needs of the population MUHA seeks to serve.

MUHA's approach to adverse impact project is the same implausible one it has used in its many other CON applications for projects in Berkeley and North Charleston: we seek only to serve our own patients. It defies logic that MUHA would invest $325 million in a facility that would attract no new market share. Moreover, patients from Berkeley and surrounding areas who have travelled to MUHA historically do so despite the presence of closer hospitals, largely because of the specialized tertiary and quaternary services offered at MUHA on the peninsula, which will not be offered at MUHA-Nexton. Community hospitals draw patients from the areas most proximate to their location, and MUHA-Nexton will draw patients primarily from the areas served by SMC and Trident currently and RSF-Berkeley in the future.

For these reasons, MUHA-Nexton is inconsistent with the South Carolina Health Plan.

4. Community Need

There is simply not a need for another hospital in the portion of the Tri-County region where MUHA seeks to construct a new 128-bed hospital, especially one that costs a staggering $325 million. As noted above, the calculations in the South Carolina Health Plan indicate no need for additional beds in the Tri-County area through 2022.

Community need for a new hospital is typically based on:

- Geographic Access – Service area residents are required to travel relatively long distances to receive the services proposed.

- Capacity Access – Existing facilities in the service area do not have sufficient capacity to accommodate all patients in need of care.

- Financial Access – Lower income service area residents are unable to access existing facilities in the service area.

None of these considerations supports approval of MUHA's project.

As a starting point, the service area claimed by MUHA for the new community is the entire Tri-County area and beyond, to include Horry county, which is not reasonable for a start-up facility offering primary and secondary services. A more reasonable assumption is that MUHA-Nexton will draw patients primarily from Berkeley and Dorchester counties, and the northern portion of Charleston County. **Exhibit 2** displays the MUHA-Nexton created maps depicting the service area MUHA claims in its application and the locations of existing and approved acute care hospitals.

Trident and Summerville Medical Centers do not believe the MUHA created maps in Exhibit 2 and 3are an accurate depiction of the service area regions given the representation of the North Charleston, Moncks Corner, Summerville and Sea Island areas. No one with any knowledge of the area would indicate that Summerville Medical Center is in the North Charleston area (which is where it would be on MUHA's map as depicted below); that the West Ashley area of Charleston is in the Sea Island region; that the West Ashley region would include Hollywood, South Carolina, or that Moncks Corner reaches down to Goose Creek, and includes portions of Berkeley County west and north of Lake Moultrie. These maps are simply being used in this letter because MUHA has represented in its application that these are the areas it intends to serve, but the service area representations are inaccurate.

Exhibit 2
MUHA-Nexton Proposed Service Area
Acute Care Hospital Providers



There is certainly no geographic access issue for the population located most proximate to MUHA-Nexton's site, which is only 8 miles from SMC, less than 4 miles from RSF-Berkeley (scheduled to open in 2019) and 9 miles from Trident. SMC and Trident are no more than 15 minutes' drive from MUHA's site, and Roper-Berkeley will be a 5 minute drive away from MUHA-Nexton. From a capacity perspective, SMC is completing a 30-bed addition in the near future, and RSF-Berkeley will add another 50 beds. Trident has approval for a new 50-bed hospital, Berkeley Medical Center, in Moncks Corner, Berkeley County, which has been delayed by wetlands issues. Once that project is completed there will be a total of 130 new acute care beds serving the same population that is most likely to use the MUHA-Nexton hospital.

In addition to acute care hospitals, there are also FSEDs to meet the emergent needs of the population in the areas most proximate to MUHA-Nexton's site. **Exhibit 3** displays all of the current and approved emergency services providers in the Tri-County area and demonstrates that Berkeley County will be well-served in the future.

Exhibit 3
MUHA-Nexton Proposed Service Area
Emergency Services Providers



With respect to financial access, MUHA has not made any claims that services are not accessible in its service area or that its project will address any financial barrier to care. Existing providers do accommodate patients regardless of financial status and RSF-Berkeley has made that same commitment when it opens.

Any growth in the service area population that is likely to use MUHA-Nexton hospital will be readily accommodated by the new bed capacity that is already approved. In fact, despite an aging and growing population, from 2012 to 2016, inpatient hospital volume growth in the Tri-County area has been increasing at only 1.7% per year based on data presented by the applicant. *See* **Exhibit 4**. MUHA's rate of growth has been below the Tri-County average, and the growth at Trident is primarily due to the addition of Level 2 trauma services and psychiatric beds in the last two years—services which will not be offered at MUHA-Nexton.

Exhibit 4
Adult Inpatient Trends for Tri-County Hospitals

Hospital	2012	2013	2014	2015	2016	Annual % Change
MUSC	26,479	26,801	27,028	26,625	28,184	1.6%
Trident Medical Ctr	20,160	20,285	20,136	21,811	23,065	3.4%
Roper Hospital	14,805	13,797	12,403	13,105	13,550	-2.2%
Bon Secours	8,491	8,667	8,608	8,698	9,030	1.6%
East Cooper	4,345	4,721	4,859	5,108	5,238	4.8%
Mount Pleasant Hospital	1,420	1,495	1,642	1,623	1,829	6.5%
Total	**75,700**	**75,766**	**74,676**	**76,970**	**80,896**	**1.7%**

Source: MUHA-Nexton application, p. 35

It would be difficult to envision a situation in which there is less evidence to support the development of a new hospital such as MUHA-Nexton. This project will duplicate existing and approved resources at an unreasonable cost to the health care system.

MUHA's Need Argument

Rather than address any community need, MUHA presents institution-specific arguments in support of its project, which include:

- A large percentage of MUHA' s adult inpatients originate from the Berkeley county area and establishing an acute care hospital in Berkeley County will allow patients to have convenient access to care near their place of work and home.

- Berkeley County is an underserved market in the Tri-County area and only has one acute care hospital planned and under construction to service the entire population.

- Increased demand for inpatient services at MUHA and within the Tri-County service area, resulting in capacity constraints and prolonged boarding hours.

- Flooding on the Peninsula constrains access to MUHA's existing hospital

MUHA's Reliance on Berkeley County

The applicant cites MUHA's historical reliance on the "Berkeley County area." The applicant's internal patient origin data for patients age 16 and older, its target population, indicates that the Moncks Corner subarea, which encompasses most of Berkeley County, provided only 3% of MUHA's inpatient volume in 2017. The North Charleston subarea provided the greatest percentage of MUHA's inpatient volume (18%). The North Charleston subarea includes both SMC and Trident with authorized 437 acute care beds, which provide residents of this area with exceptional access to inpatient care. The Summerville subarea, where MUHA proposes to locate its Nexton hospital, provided only 8% of MUHA's inpatient volume. This subarea also includes the new RSF-Berkeley facility.

Figure 3:
MUHA Adult (Ages 16+) Inpatient Origin FY 2017

MUSC Adult Inpatient Origin		
	FY 17	% of Total
Tri-County	17,272	56%
North Charleston	5,593	18%
Summerville	2,524	8%
West Ashley	2,435	8%
East Cooper	2,221	7%
Sea Islands	2,118	7%
Peninsula Charleston	1,404	5%
Moncks Corner	977	3%
Secondary	6,917	22%
Tertiary	5,278	17%
Outside SC	1,302	4%
Total	30,769	100%

An important question to be answered is: What is the likelihood that patients who currently travel from Berkeley County and other areas from which MUHA-Nexton is projected to serve will actually choose to use a smaller community hospital rather than an established teaching hospital? Based on discharge data for the 12 months ending September 30, 2018, the largest category of patients traveling from Berkeley County to MUHA on the Peninsula are obstetrical patients. MUHA has the region's only Level III neonatal intensive care unit and is a Regional Perinatal Center. Patients who are currently bypassing the obstetric units at Trident and SMC are primarily high risk mothers, who are referred by their physician or hospital due to the Regional Perinatal Center designated services offered by MUHA. The three largest acute DRG categories of patients MUHA serves from Berkeley County are:

- DRG 795 - Vaginal delivery w/o complicating diagnoses
- DRG 765 - Cesarean section w CC/MCC
- DRG 774 - Vaginal delivery w complicating diagnoses

Even mothers who are not diagnosed pre-delivery with complicating diagnoses often choose to seek care at perinatal centers that offer a full range of neonatal services. It is likely that patients who have historically bypassed the convenience of a closer community hospital perinatal program will continue to travel downtown even if MUHA-Nexton opens. MUHA argued vehemently in its opposition to SMC's Level III neonatal intensive care unit application that there is no hardship imposed on mothers who must travel to the peninsula for admission or in transporting neonates who require Level III services. This is in stark contrast to MUHA's current statements in its CON application for a new hospital.

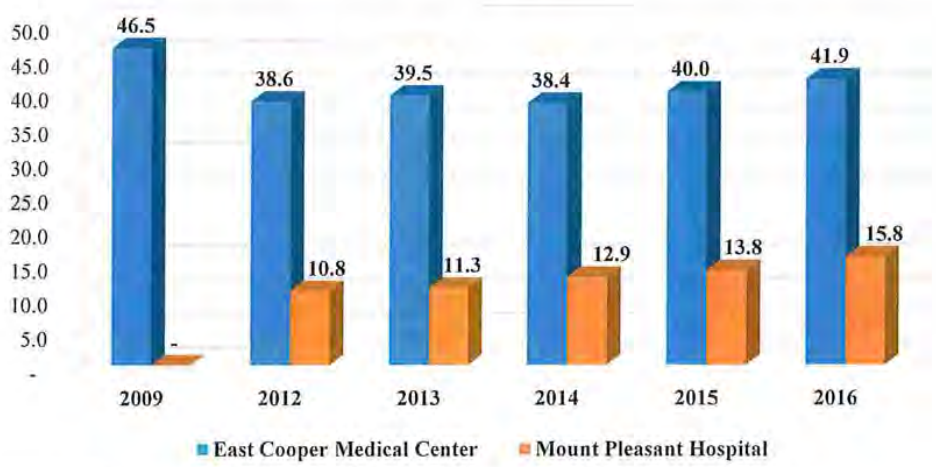
Some patients choose to travel to MUHA for more routine services simply because it is a teaching hospital. MUHA has far overestimated the number of its patients who can be redirected to MUHA-Nexton. At the same time, the applicant has overestimated how far patients from more distant parts of the Tri-County area are willing to travel to a new community hospital in Summerville. The most reasonable expectation is that the new MUHA hospital will compete directly with the hospitals in the local market including SMC, Trident, and RSF-Berkeley, and will draw patients from rural hospital like Colleton Medical Center and the Regional Medical Center for Orangeburg and Calhoun Counties.

The development of MUHA-Nexton in close proximity to RSF-Berkeley will likely result in both hospitals being underutilized. A review of the circumstances that occurred in Mount Pleasant with the opening of Mount Pleasant Hospital is instructive of what to expect in Berkeley County if two new hospitals open there in such close proximity.

East Cooper Medical Center ("East Cooper") applied to construct a replacement hospital and reduce its acute bed complement from 140 to 130 beds. At the same time, Roper St. Francis applied to open a new hospital, Mount Pleasant Hospital with 85 beds, approximately 7 miles north of East Cooper on U.S. 17. Roper St. Francis made the claim that it would seek to serve patients from Mount Pleasant who were travelling to Roper Hospital on the Peninsula and that its project would not adversely impact East Cooper. It also projected that its new hospital would be well utilized within three years of opening.

Neither of these claims was realized. As shown in **Exhibit 5**, during 2012, Mount Pleasant Hospital's first full year of operation, East Cooper's average daily census dropped by approximately 8 patients from its 2009 level, which was before Roper St. Francis began its development efforts for its new hospital. Mount Pleasant Hospital's ADC reached only 10.8 patients in 2012, indicating that the majority of Mount Pleasant Hospital's patients came from East Cooper rather than through redirection from Roper Hospital. Both hospitals have seen only modest growth in utilization since 2012.

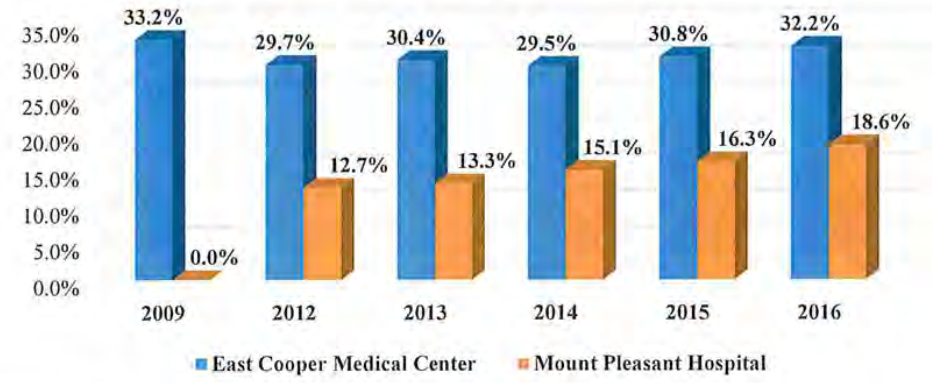
Exhibit 5
East Cooper Medical Center and Mount Pleasant Hospital
Average Daily Census



Source: JARs

East Cooper argued at the time of the review that the approval of Mount Pleasant Hospital would result in two hospitals operating at low occupancy rates in the community. That claim, unfortunately, was correct. Despite a reduction of 10 beds, East Copper's occupancy rate dropped to less than 30% in 2012 only reached 32% occupancy in 2016. Mount Pleasant Hospital has never exceeded 20% occupancy. *See* **Exhibit 6**. These low occupancy rates result in inefficient utilization of the significant capital investments each provider made in new facilities.

Exhibit 6
East Cooper Medical Center and Mount Pleasant Hospital
Occupancy Percent



Source: JARs

If MUHA-Nexton is approved to operate less than 4 miles from RSF-Berkeley, predictably both hospitals will struggle to reach reasonable levels of utilization for the foreseeable future. Once Trident Berkeley Medical Center opens in Moncks Corner, the MUHA-Nexton's impact will be magnified with three new, underutilized hospitals in the area.

Berkeley County is Not an Underserved Market

The applicant claims in several places that Berkeley County is severely underserved; however, it presents no evidence of underservice other than citing two planning documents that do not consider all of the new health care services that are entering the market. The applicant cited the most recent Berkeley County Comprehensive Plan as indicating a lack of health care facilities providing services for the general population in the county. There is a single reference in an appendix to the report that does not consider the two approved acute care hospitals or the two approved FSEDs.

The applicant also discusses the Community Health Needs Assessment (CHNA) completed in 2016 by MUHA, Roper St. Francis, and Trident United Way. This assessment discusses a number of aspects of health care access such as physician shortage and lack of health insurance, but these are not issues that MUHA-Nexton will address. There is no identification of a need for another acute care hospital in the portion of Berkeley County that will have the greatest access to inpatient services in the future with the opening of RSF-Berkeley.

It is premature to make any judgments about the need for a new hospital to serve Berkeley County when two approved hospitals and two new FSEDs that will serve the same local market as MUHA-Nexton have not yet opened. These new approved facilities will bring with them new physicians and services not currently available and will positively impact access to care.

The applicant presents a travel analysis to indicate that patients traveling to MUHA's downtown hospital will have reduced travel times to MUHA-Nexton. This is a one-dimensional analysis that does not consider travel times to all existing and approved hospital providers. Any improvements in travel times would be negligible if RSF-Berkeley, SMC, and Trident were factored into the analysis. Again, MUHA's travel time and accessibility arguments are in complete opposition to the arguments MUHA made recently at the Level III NICU project review meeting and in submissions to DHEC.

Another claim is that the addition of beds at MUHA-Nexton would move lower acuity patients to a new location and provide additional capacity and flexibility for MUHA to accept higher acuity transfers from other hospitals. *See* Application, p. 43. The same objective could be achieved in a far less disruptive manner by simply adding more bed capacity to MUHA's existing hospital.

Increased Demand at MUHA and the Tri-County Market

MUHA argues that utilization of its hospital on the peninsula has been increasing and it has a need for additional capacity. Assuming that this is true, the need for capacity at a regional referral center in downtown Charleston does not lead to a conclusion that 128 new acute beds should be placed in a community hospital in Berkeley County.

With the opening of the Children's Hospital and Women's Pavilion, MUHA will be vacating large areas of its downtown facilities, including beds which currently accommodate inpatients receiving reportedly high quality care and the facility has met licensing standards. Despite MUHA's claims to the contrary, these existing facilities could be renovated at a far lower cost than $325 million to accommodate additional acute care beds and these beds be available to serve MUHA patients from the across Lowcountry rather than placing the beds in an area from which MUHA draws only a small fraction of its patient volume.

The applicant also cites increasing demands on MUHA's existing emergency department as a reason to develop MUHA-Nexton. *See* Application, p. 44. MUHA has already addressed issues with emergency department volume through the construction of a separate pediatric ED at the new Children's Hospital and the CON for the construction of a FSED in Summerville. MUHA-Nexton would be duplicative of these efforts.

Flooding

To support the need for its project, MUHA makes the following claim:

Patients travelling to MUHA's downtown campus for care encounter many unforeseen challenges when it floods. MUHA's campus is located in a major flood zone and when it rains at high tide, this portion of the peninsula shuts down, delaying patient care and inhibiting access points. Furthermore, the outpatient operating rooms at Rutledge Tower are located on the first floor and are always the first part of the building to be affected by the floods. During the recent flood in October 2015, MUHA was forced to shut down four of its operating rooms and approximately 199 surgical cases were cancelled. Similarly, in September of 2017 hospital operations were disrupted and surgical cases were canceled. The new Community Hospital will allow for MUHA to decant cases from the peninsula during severe flooding and prevent the delays in patient care that occur today.

- MUHA application, p. 28.

In a recent review of applications by MUHA and SMC to add Level III neonatal intensive care bassinets, SMC presented information that flooding on the Peninsula created a barrier to care for critically ill infants. SMC specifically addressed the issue of flooded streets making it difficult for ambulances and patients' families to access MUHA's facilities. In response to SMC, MUHA summarily dismissed these concerns at Project Review and subsequently stated: "SMC continues to raise false concern regarding MUSC's ability to provide care during weather emergencies and flooding." *See* MUHA letter to Margaret Murdock, March 19, 2018, p. 5, in **Appendix A**.

It is the height of disingenuousness for MUHA to take the position that flooding on the Peninsula is a basis for approval of a new community hospital in Berkeley County while denying that any such barrier existed for Level III neonates coming from the very same communities that SMC sought to serve. Community hospital patients in most cases are not facing life-threatening situations, which is in contrast to fragile newborns with serious medical conditions.

The Department should give no weight to MUHA's vacillating position on the impact of flooding on patient access.

Projected Utilization

MUHA utilization projections are based on an illogical methodology and ultimately lead to unreasonable results. As noted above, the fundamental premise of MUHA's utilization projection is that MUHA-Nexton will serve patients who historically utilized MUHA and not impact utilization of other providers. For the reasons previously discussed, such an assumption is unsupportable.

Another assumption is that MUHA's historical patients from throughout the Tri-County area would shift to MUHA-Nexton in relation to the patient's ZIP Codes travel time to the new hospital. No consideration was given to the locations of other hospitals or the more limited drawing area for a new community hospital versus a teaching hospital such as MUHA. The expected redirection by travel time assumed in the application is reproduced below. There appears to be an error in the 55% category for patients traveling "10-25 minutes" in that it overlaps with the 65% category for patients traveling "0-15 minutes."

Figure 17:
Assumed MUHA Patient Redirection
Non-tertiary, Adult (Ages 16+) Patients

Scenario 1: Patient Redirection in Year 3	Redirection
0-15 minutes	65%
10-25 minutes	55%
26-40 minutes	35%
41-55 minutes	30%
56-70	10%
All Other: driving 71+ minutes & Secondary Counties	2%

Notes: Drive time source was Google maps, because this application has the most updated roads/traffic lights.

The absurdity of this assumed redirection by travel time can be seen by considering ZIP Codes in downtown Charleston. The applicant assumed that more than one-third of MUHA's patients who reside on the Charleston Peninsula, including those in MUHA's own ZIP Code, 29425, will travel 34 minutes or more to the proposed MUHA-Nexton hospital. *See* Exhibit 7. These downtown residents all live within a few minutes of MUHA and Roper Hospital. These patients would not only have to bypass the downtown hospitals but also Trident and SMC as they travel up I-26 to reach MUHA-Nexton. Given that MUHA's purported need for this project is to improve access to MUHA's existing patients in Berkeley County, there is no rationale for including these downtown ZIP Codes or other more distant ZIP Codes in the subareas identified

as West Ashley and the Sea Islands. The subsequent results of this methodology based on such a fundamentally flawed assumptions are wholly unreliable.

Exhibit 7
Assumed Redirection of MUHA Patients from Charleston Peninsula

ZIP Code	Description	Driving Distance to MUHA-Nexton	Driving Time to MUHA-Nexton	Assumed Shift to MUHA-Nexton
29401	Charleston Peninsula	25.7	39	35%
29402	Charleston Peninsula	25.3	41	30%
29403	Charleston Peninsula	23.4	34	35%
29409	Charleston Peninsula	24.0	36	35%
29413	Charleston Peninsula	24.8	34	35%
29424	Charleston Peninsula	25.3	38	35%
29425*	Charleston Peninsula	24.8	34	35%

*Home ZIP Code of MUHA

Source: MUHA application, Attachment N

The applicant fails to provide detailed projections of utilization by ZIP Code. The only ZIP Code-specific data included is the table in Attachment N, which indicates travel times and assumed percent shift by ZIP Code. A section of this table is illegible, and it is not possible to recreate the applicant's projections.

One element that is missing from the need and utilization discussion in the application is how it was determined that 128 beds were needed in Berkeley County. The ultimate utilization projections, inflated as they are by the inclusion of patients residing far from MUHA-Nexton, reflect only 57% utilization of the 112 medical/surgical and critical care beds and 61% utilization of the 16 obstetrical beds by the third year of operation. Certainly, a smaller facility based on the applicant's own dubious projections would be more efficiently utilized. These projections give no consideration to the new hospitals with which MUHA-Nexton must compete, which will inhibit MUHA's ability to build volume. There is simply no basis to conclude that a 128-bed hospital as proposed will achieve a reasonable level of utilization or justify the expenditure of $325 million.

5. Distribution (Accessibility)

As discussed above, MUHA's project does not improve the distribution of or increase access to hospital services. RSF-Berkeley will be located just a few miles away. There will be additional inpatient capacity at SMC, and eventually Moncks Corner as well. The applicant's utilization

projections assume that patients will be traveling long distances from throughout the Tri-County area to utilize MUHA-Nexton, which undermines any argument that the project is addressing an access issue.

MUHA's true goal, like that of its freestanding ED and radiation therapy projects in the Summerville area and its pediatric ambulatory surgery center and diagnostic center in North Charleston is to capture market share from its competitors. While MUHA claims that it seeks only to redirect its existing patients to MUHA-Nexton, that claim is neither credible nor realistic.

6. Financial Feasibility

MUHA has failed to demonstrate the financial feasibility of its project. As discussed below, MUHA is highly leveraged with long-term debt, which calls into question its ability to complete the project. In addition, MUHA currently has in progress or development $800+ million in health care facility projects.

The financial projections presented in MUHA's application are based on unsupported assumptions. As discussed above with respect to Community Need, the projection model that MUHA employed is seriously flawed. MUHA's patient shift analysis and its financial projections are not reasonable, and therefore the project's financial feasibility is uncertain. It is likely that the project will experience net losses for several years after opening based on more realistic expectations of the patient volumes that it would serve.

7. Ability to Complete the Project

MUHA's ability to fund this project in light of its existing and planning obligations is questionable. MUHA has been aggressively pursuing a wide range of new facility projects in recent years in an effort to gain market share outside the Peninsula, with a particular focus on expansion into North Charleston and Berkeley County. The development of the MUHA-Nexton hospital is a further extension of these efforts to capture market share from other providers as it expands its geographic footprint.

These efforts come at a considerable cost, as shown in **Exhibit 8**. MUHA has commitments to major projects already receiving CON approval totaling $487 million. With the addition of the Nexton hospital, the total capital projects just for new facilities (excluding MUHA's internal capital needs) will rise to $812 million.

Exhibit 8
Medical University Hospital Authority
Major Capital Projects

Project		Project Costs
Shawn Jenkins Children's Hospital and Women's Pavilion	$	366,397,822
MUHA North Charleston Pediatric Imaging Center		39,802,936
MUHA North Charleston Pediatric Ambulatory Surgery Center		26,389,808
Mount Pleasant Surgery Center		9,020,389
MUSC Musculoskeletal Institute		36,020,321
Expand Radiation Oncology Services to Berkeley County		9,020,389
Total Approved Project Costs	$	486,651,665
MUHA-Nexton Hospital	$	325,000,000
Total Capital Commitments*	**$**	**811,651,665**

*In addition, MUHA is a joint venture partner in the CON application for a new hospital in Beaufort County, currently under review, with a total cost of $36 million.

Source: DHEC website

Appendix U to the application includes a letter from Armadale Partners, which is working with MUHA to secure FHA financing to fund the project. This letter states in pertinent part regarding the ability to obtain funding for this project:

> *Ultimately a feasibility study will be performed in accordance with HUD requirements as part of the HUD application process. MUHA has had a long and successful relationship with HUD and ACI is confident that MUHA will meet or exceed HUD's loan underwriting guidelines for the Project. Notwithstanding the foregoing, MUHA and ACI recognize that there is no guarantee that HUD will ultimately issue a mortgage insurance commitment for the proposed financing.*

The equivocal nature of this commitment is understandable given the significant debt burden that MUHA is currently carrying.

According to its audited financial statements as of June 30, 2017, Medical University Hospital Authority (MUHA) had outstanding long-term indebtedness that totaled $406 million, including both current and non-current components. The majority of this debt was supported by credit enhancements provided by the U.S. Department of Housing and Urban Development (HUD) through the Federal Housing Administration (FHA) 242 Hospital Mortgage Insurance Program. As a result, the quality of the indebtedness was assured by the FHA and was not subject to independent ratings analysis, as provided by Standard and Poor's, Moody's, or Fitch.

The criteria that the ratings services employ to evaluate a health care facility's credit are well known and result in an assignment of a single measure of credit worthiness. This measure ranges from 'AAA' through 'BBB' and Speculative (unrated) and provides an indication of what interest rate is appropriate to balance the risk associated with an investment in the credit or of what covenants need to be included in the loan agreement to protect the investor. In addition, the assignment of a rating is used by financial institutions as fiduciaries to assess whether the credit is appropriate to be added to an investment portfolio, given its objectives and constraints.

Generally, the rating criteria are separated into two components.

- Statement of operations, which measure the management of revenue and expenses and, in particular, the ability of the entity to service its financial obligations.
- Balance sheet, which reflects the amount of debt in relation to its accumulated resources and provides an indication of the amount of debt relative to accumulated reserves of the entity.

In this analysis, the rating criteria of Standard and Poor's for health care systems in the year 2016 have been compared to the financial condition of MUHA as reported in audited financial statements for the fiscal years ended June 30, 2015 through 2017.

A table summarizing MUHA's balance sheets and statements of change in net position is included as **Appendix B**. The financial indicators associated with summary rating categories, 'AA', 'A', 'BBB', and 'Speculative Grade' and how MUHA's financial performance compares to these indicators is presented in **Appendix C**. For each rating criterion a range of values indicates which rating category would apply to a bond issue of MUHA.

MUHA is extremely highly leveraged. The capitalization of a health care system is the sum of its long-term debt and fund balance (net position). As the information presented in the table above shows, investment grade organizations have long-term debt to capitalization ratios less than 50%, MUHA's long-term debt to capitalization ratio exceeds 100 percent, which is possible only because MUHA's balance sheet shows a negative fund balance.

MUHA has relatively small cash reserves. Its ratio of unrestricted reserves to long-term debt has ranged from 28.3% to 53.0% over the past three years compared to 92.9% to 204.7% for investment grade debt issues. These limited cash reserves indicate that MUHA will be relying primarily on debt to fund this project as well as the many other capital expenditures it has planned.

While MUHA has been profitable over the past several years, its balance sheet indicators suggest that it can assume more debt only by further burdening its operations with increasing debt service obligations. MUHA's net income is $28.6 million below budget for the eight months ending February 28, 2018. See MUHA's Notes to the Interim Financial Statements, attached as **Appendix D**. Given that MUHA operates on very thin margins, its proposal to build a $325 million hospital given all of its other financial obligations and projects is not financially responsible, especially as interest rates are expected to rise in the coming years.

As a state-owned organization, the ultimate responsibility for maintaining the financial stability of MUHA will fall to the taxpayers of South Carolina. There is simply no reason to place additional financial demands on MUHA for a project that is not needed.

8. Construction Costs and Methods

MUHA makes no effort to explain why a capital expenditure of $325 million for a 128-bed community hospital, is reasonable. On a per bed basis, this project would be the most expensive new hospital project ever approved in South Carolina. To put into context the proposed costs of the MUHA-Nexton project, one need only to consider MUHA's Children's Hospital and Women's Pavilion that is under construction currently. **Exhibit 9** compare the square footage and costs of the Children's Hospital and MUHA-Nexton projects.

Exhibit 9
Comparison of MUHA Project Costs
Children's Hospital vs. MUHA Nexton

	Children's Hospital and Women's Pavilion	MUHA-Nexton
Beds*	225	128
Square Footage	649,485	311,211
Construction Costs	$ 207,492,286	$ 167,315,646
Construction Cost per Square Foot	**$ 319.47**	**$ 537.63**
Total Project Costs	$ 366,397,822	$ 325,000,000
Total Project Cost per Square Foot	**$ 564.14**	**$ 1,044.31**
Total Project Cost per Bed	**$ 1,628,434.76**	**$ 2,539,062.50**

Source: CON applications

MUHA-Nexton's proposed cost is dramatically higher than the Children's Hospital even though the Children's Hospital is a 12-story facility being constructed on the Peninsula with specialized units and ancillary areas. Among the key differences:

- MUHA-Nexton's construction cost per square foot is 68% higher.
- MUHA-Nexton's total project cost per square foot is 85% higher.

As another point of comparison, HCA built a new 146-bed hospital in Northern Virginia, a high construction cost area. The project was completed in 2015 at a cost $139.5 million excluding land. The HCA project also included a 100,000 square foot medical office building. MUHA's project cost excluding land is $315 million, nearly 2.5 times higher.

There is no justification for expending so much for a hospital that meets no need and adversely impact existing providers.

9. Adverse Impact

The applicant makes the claim that "MUHA's Community Hospital will have no impact on existing facilities due to high demand and an already staggering lack of patient access." *See* Application, p. 48. MUHA is well aware that there are two approved acute hospitals in Berkeley County, one FSED in Moncks Corner, and two approved FSEDs in close proximity to the MUHA-Nexton site. Moreover, as discussed above, MUHA-Nexton is expected to draw a high percentage of its patients from outside of Berkeley County from areas closer to the existing hospitals such as Trident and SMC.

MUHA makes the unsubstantiated claim that growth rates of existing hospitals indicate that they will not be impacted by the MUHA-Nexton project. *See* Application pp. 10 and 32. With 30 new beds at SMC and 50 beds at RSF-Berkeley opening in the next year, the total number of acute care beds in the area MUHA-Nexton proposes to serve will increase by 21.3% (based on 94 existing beds at SMC and 313 at Trident). The proposed 128 beds for MUHA-Nexton would represent another 31.5% increase in bed capacity over the current inventory in the local market. There is no credible projection that would support a 52.8% (21.3% + 31.5%) increase in acute care bed utilization over the next five years.

SMC and Trident are the largest existing providers of inpatient and outpatient services to the areas closest to MUHA-Nexton and from which the new hospital will draw the majority of its patients. Based on data for the 12 months ended September 30, 2017, Trident Health's two hospitals served 48% of the inpatients in Berkeley County and 57% of the Dorchester County inpatients. Trident Health will already be impacted by the opening of RSF-Berkeley, and the addition of another facility more than twice that size in essentially the same location will have an even more profound impact on Trident Health's operations.

The impact of MUHA-Nexton will not be limited to lost volume alone. The staffing budget for MUHA-Nexton calls for 368 FTEs in year 2023 and 613 FTEs by 2025. *See* Application, p. 59 and Attachment V. MUHA's efforts to hire this large number of staff will create a significant strain on other area hospitals in recruiting qualified staff, particularly after the expansion of SMC and the RSF-Berkeley opening in 2019.

As is well known, South Carolina has a nursing shortage, which means MUHA will likely go after existing area providers' staff. This will not only affect quality of care, but also the costs associated with healthcare staffing will increase. For more information on this, please see https://www.wspa.com/news/sc-has-critical-shortage-of-nurses/896609394. Also, the South Carolina Hospital Association list workforce development as one of its top priorities. In fact, the

nursing shortage is so dire, MUHA is currently conducting out-of-state job fairs to find nursing staff, and is using traveling nurses to fill nursing positions, as are all the other hospitals in the Tri-County area.

We appreciate the opportunity to submit these comments, and we would urge the Department to deny this costly, unneeded project.

Sincerely,

Daniel J. Sullivan
President

Attachments

Appendix A
MUHA Letter to DHEC
Re: Summerville Medical Center Level III NICU Project

LEVITT
healthcare
affiliates

March 19, 2018

Ms. Margaret "Maggie" Murdock
Director, Certificate of Need (C.O.N.) Program
South Carolina Dept. of Health & Environmental Control
2600 Bull Street
Columbia, SC 29201

RE: Medical University Hospital Authority d/b/a MUSC Shawn Jenkins Children's Hospital, Level III NICU Bassinets, Application No. 2461

Trident Health – Summerville Medical Center, Level III NICU Bassinets, Application No. 2505

Dear Ms. Murdock:

This letter, written on behalf of Medical University Hospital Authority d/b/a MUSC Shawn Jenkins Children's Hospital ("MUSC SJCH" or "SJCH"), serves to respond to items raised in the letter submitted February 20, 2018 by Trident Health – Summerville Medical Center ("Trident" or "SMC"). Several issues were presented in their letter that we felt warranted comment.

Articles
A February 21 letter from MUSC's counsel to DHEC included eight articles (Exhibits D1-8), three of which the Trident letter criticizes. All eight, however, undermine Trident's position. All eight support the concept of regionalization, as that concept is applied in the South Carolina Health Plan and Regulation 61-16. Furthermore, the articles show a strong link between high-volume NICUs and lower mortality rates for Very-Low-Birth-Weight ("VLBW") babies.

1. Wehby, *Medical Care* (Ex. D4)

The Wehby study found that VLBW infants were 3.5 times as likely to die at moderate-volume NICUs and 5.4 times as likely to die at low-volume NICUs than at high-volume NICUs. *Id.* at 714. Said another way, of the 136 infants in the Wehby study who died in low-volume hospitals, 87 (64%) would have survived in a high-volume facility. Of the 250 who died in moderate-volume hospitals, 138 (55%) would have survived in a high-volume facility. *Id.* at 719. Trident criticizes the Wehby study for being limited to one state. "Therefore," writes Trident, quoting from the Wehby article, "it is important to replicate this study in larger samples from other states." Replication, in fact, has occurred, as shown by the other articles submitted by MUSC. Studies with sample sizes ranging from 20,000 to 65,000 VLBW or preterm infants in other states and England confirm the key findings of Wehby that high-volume providers save infant lives.

2. Phibbs, *New England Journal of Medicine* (Ex. D8)

The Phibbs study (Ex. 8), which was based on ten years of data, confirmed the "many studies" that previously had shown "a lower mortality rate in hospitals with higher volumes." *Id.* at 2166. Phibbs found that the "odds ratios [for death] decreased as volume increased within each level of care . . . ." *Id.* at 2168. The study concluded that de-regionalization "has resulted in increasing numbers of high-risk newborns receiving care in low-volume units . . . ." *Id.* at 2166. Increased regionalization "could prevent 21% of deaths among [VLBW] infants." *Id.* at 2173.

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The Trident letter claims that Phibbs used "the worst possible study design imaginable." The Phibbs article, however, was published in the New England Journal of Medicine, one of the world prestigious medical journals and one whose reputation was not built on publishing articles that employ poor study designs.

Trident criticized the Phibbs study because it showed a stronger relationship between volume and mortality than did studies conducted by the Vermont Oxford Network ("VON"). The Phibbs article acknowledged that its results showed stronger relationships between mortality and volume than did VON studies, but offered a plausible explanation: the Phibbs data included a broader sampling of hospitals. *Id.* at 2173. Moreover, a fundamental difference exists between the Phibbs database and those used by VON. The Phibbs study, like the other studies relied on by MUSC, uses population-based data, meaning that it examines ***all*** data in a given population. VON studies, by contrast, are self-selected, meaning they examine certain ***selected*** data in a population, specifically, data from VON members. For this reason, population-based studies are generally more reliable than self-selected studies.

3. Chung, *Medical Care* (Ex. D6)

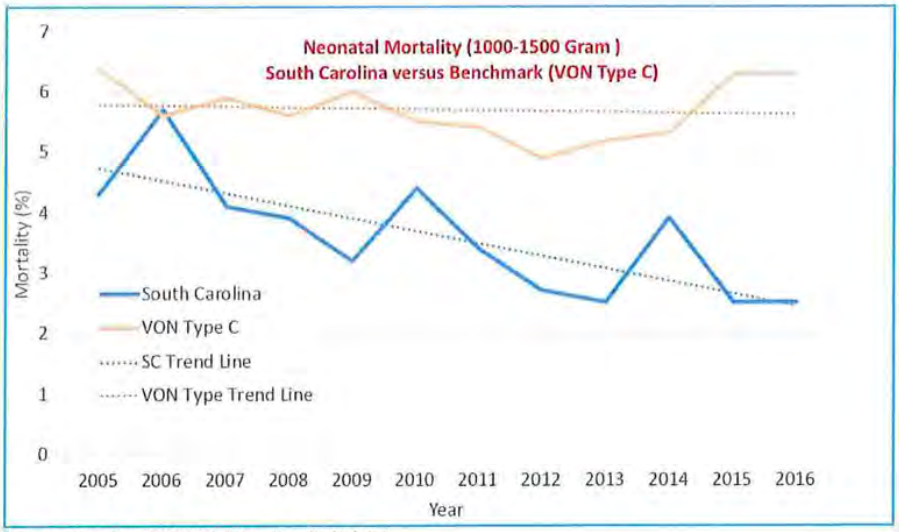
"The most significant finding" of the 2010 Chung study was that volume is more important than level of care in reducing neonatal risk. *Id.* at 642. Chung found that, for every 30 VLBW deliveries shifted to a high-level, high-volume NICU, one death could be averted. *Id.*

Trident criticizes both Chung and Phibbs for using data from the 1990s, but two of the articles Trident submitted also rely on 1990s data. Trident further criticizes Chung for assigning outcomes to birth hospitals, even though that is standard practice. Trident refers to "later studies" assigning outcomes to receiving hospitals for transfers prior to 3 days of age. Such studies, however, typically are conducted to evaluate complications of care and are not applicable to the question at hand, which is this: does South Carolina's current perinatal system protect the lives of VLBW infants, or should it be de-regionalized so that low- and moderate-volume providers, like Summerville, may treat high-risk neonates?

The eight articles submitted by MUSC, ranging from 2007 to 2015 representing the weight of clinical opinion today, provide the answer. The results of these articles are consistent over time and multiple locations. They rely on strong, population-based methodologies to show that high volume NICUs reduce death rates for VLBW infants.

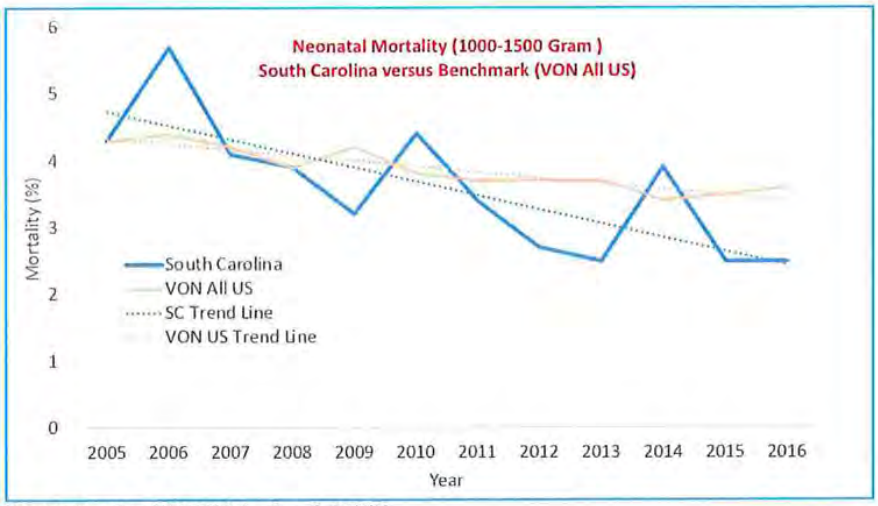
Although SMC claims that South Carolina's regionalized system has not improved VLBW mortality for infants with birth weights of 1000-1500 grams, the facts show otherwise. Since 2005 mortality for this subset of VLBW babies has fallen at a greater rate in South Carolina than nationally for members of the Vermont Oxford Network. The following graphs illustrate this fact.

Figure 1



Source: Data from VON Nightingale pulled 3/7/18

Figure 2



Source: Data from VON Nightingale pulled 3/7/18

Both Projects Cannot Be Approved
As mentioned in our previous submission and contrary to SMC's stated opinion, MUSC is not seeking approval for beds in excess of the calculated need in the plan. **SMC** is asking for beds beyond the calculated need in the plan. As a Level II provider, SMC does not qualify to seek that exception. MUSC's CON application was filed in September of 2017, while SMC's application wasn't submitted until the following month (October 2017). The MUSC application will meet all the projected need in the plan. Approval of the SMC application would require SMC to seek beds in excess of the published need.

SMC referenced MUSC's historically high level of utilization of the existing bassinets as evidence that **20** additional bassinettes are needed in the region. However, they are only applying for 6 not 20. The need methodology in the plan accounts for existing capacity and utilization and has calculated the need to be 14. With the approval of the 14 requested bassinets, MUSC's utilization is projected to be at a manageable level.

Approval of the SMC project would dilute the volume of NICU patients treated at MUSC and have a negative impact on services. **ALL** patients treated by SMC would have otherwise been treated at MUSC. SMC has not attempted to quantify the adverse impact on MUSC because it undeniable. SMC has not identified any barrier to care or an issue with the quality of care provided at MUSC. The proposed SMC project is not needed. Approval of both projects would exceed the need in the plan, therefore the projects are competing. MUSC's proposed project is the superior alternative that meets all applicable review criteria.

Community Need
Throughout all the SMC information submitted to DHEC, they have failed to acknowledge that 100 percent of their projected utilization will come from MUSC. SMC's 6 "Reasons for Approval" do not rise to the level of demonstrating need for their project.

1. *"Level III NICU bassinets in Region V are highly utilized"*

   MUSC has applied to expand their compliment of bassinets to remedy this fact.

2. *"Existing Level III NICU services are concentrated in a single location"*

   Concentrating services within a planning are is the very nature of regionalized healthcare. The central location of MUSC within Area V makes services accessible to patients and providers in the area. SMC's proposed project, approximately only 30 minutes from MUSC, does not remedy any perceived geographic access barrier.

3. *"Access to Level III NICU care will be enhanced through developing a regionalized, rather than centralized, system of care."*

   This "reason" is a restatement of item #2 above.

4. "*A program at SMC will reduce the risks associated with transporting medically fragile infants as well as high-risk mothers."*

   As discussed at the Project Review Meeting, MUSC has some of the most advanced pediatric transport capabilities and resources in the state. Care begins when the MUSC transport team arrives at the referring facility. Concern over risks associated with transport are unfounded and have not been demonstrated.

5. *"SMC's program will avoid separation of mothers and infants."*

   All Regional NICU providers take this factor into account and are acutely aware of this issue. In order to provide regionalized NICU services, infant and mothers are sometimes separated for a period of time for care. Back-transport and other accommodations are made to limit or minimize this factor. Approval of SMC's project would only address separation of mother and infants where the mothers deliver at SMC and only SMC. If mothers are transferred prior to delivery to MUSC, this perceived issue would be nonexistent.

6. *"A second program will reduce travel time, costs, and hardships for families, many of whom have limited resources."*

   SMC is only approximately 30 minutes from MUSC. For a large portion of SMC's proposed service area, reduction in travel times are not materially improved by their proposed project.

Overall these 6 factors do not demonstrate need for SMC's project nor demonstrate a "Community Need" for additional bassinettes.

Role of SMC's Level III Bassinettes
SMC outlined in their submittal a long list of neonatal patients that would still require transfer and treatment at MUSC. Is appears that while SMC is attempting to avoid separating mothers and babies, as well as remedy all the other "reasons" for approval of their application, they have admitted that their proposed service will in fact not achieve that goal. SMC's argument that geographic barriers exist in the Charleston market seems counter to their proposed continued referral to and collaboration with MUSC.

Flooding as a Barrier to Care
SMC continues to raise false concern regarding MUSC's ability to provide care during weather emergencies and flooding. The design of the Shawn Jenkins Childrens Hospital (SJCH) clearly contemplated and planned for such conditions.

In severe weather conditions, all hospitals in the regional will be impacted. It is important to note that flooding in not an issue isolated to the peninsula of Charleston. During the 2016 Hurricane Mathew incident, the governor of South Carolina called for **ALL** residents within **100 miles** of the coast (which included Summerville) to evacuate. During the 2017 Hurricane Irma incident many areas of inland Charleston, Berkeley and Dorchester counties also experienced flooding and access issues. **Attachment 1** includes an article that describes a resident of North Charleston, in labor, having access issues to Trident Medical Center for obstetrical services.

Purpose of the CON Program
The purpose of the CON program is to promote cost containment, prevent unnecessary duplication of health care facilities and services, guide the establishment of health facilities and services which will best serve public needs, and ensure that high quality services are provided in health facilities in the State. However, SMC's proposed project does not meet these purposes:

- **Cost Containment**—An additional Level III provider in the market would not promote cost containment and economies of scale would not be achieved through the proposed project. Furthermore, developing such a specialized, costly program for only six Level III bassinets results in unnecessary costs.
- **Unnecessary Duplication**—The proposed SMC project unnecessarily duplicates existing specialized services available at MUSC. Again, this results in unnecessary costs.
- **Public Needs**—MUSC has always been the regional provider and met all complex neonatal needs.
- **Quality**—Quality has never been an issue at MUSC.

Conclusion

The need for the proposed project has been demonstrated throughout the project review process and Certificate of Need application. The proposed MUSC project will relieve existing capacity constraints for Level III NICU services while promoting the long-term pediatric expansion envisioned in the hospital's master plan in a cost-effective manner. MUSC strives to provide an optimal environment for high quality NICU care, and the proposed project will significantly enhance the care provided to this patient population. Additionally, the MUSC proposal will enhance access and the delivery of care to residents in the area while not adversely impacting existing providers. These factors, coupled with MUSC's ability to more effectively serve its service area residents by increasing access and availability of Level III NICU services, support the need for the project. As such, the proposed project should be approved.

The need for SMC proposed project has not been established, compliance with the review criteria has not been demonstrated and approval would exceed the need in the State Health Plan. The SMC CON application must be denied.

I appreciate your diligent review of the information presented in this letter. If you have any questions, please feel free to contact me at 843-379-9372.

Sincerely,

David S. Levitt
Managing Principal

Attachment 1

Woman in labor travels via canoe to deliver baby at SC hospital

October 08, 2015 | Print | Email

A pregnant woman in South Carolina was transported to her local hospital in a canoe through rising floodwater after she went into labor in her home, according to a CBS News report.

Tyshenequia McLean delivered a healthy baby boy Sunday at Charleston, S.C.-based Trident Medical Center. She went into labor in her North Charleston home, which was surrounded by waist-high floodwater.

Firefighters arrived at her home with a canoe. They pulled her along until they reach dry land, where a waiting ambulance transported her to the hospital.

"I can honestly say in 15 years I think that's the first patient I've ever had that came to Trident via canoe," said Erin LaRoche, a registered nurse at Trident Medical Center, according to the report.

More articles on news and analysis:
NJ nurse administering flu shots accused of reusing syringes
Epic, athenahealth high performers in MU attestation; Allscripts shuffles leadership; Cerner conference kicks off Sunday — 12 health IT key notes
Allscripts promotes CFO to president, extends CEO Paul Black's contract

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Appendix B:
MUHA Historical Financial Information

Medical University Hospital Authority
Financial Statements
Years ended June 30,

Statement of Net Position

	2015	2016	2017
Assets and Deferred Outflows			
Current assets:			
Cash and cash equivalents	$ 117,725,317	$ 107,833,556	$ 215,160,012
Cash restricted for capital projects and major programs	16,568,662	40,151,522	42,423,262
Investments restricted for capital projects and major programs	9,993,605	15,057,095	19,939,220
Patients accounts receivable			
Gross patients accounts receivable	269,823,069	287,560,936	295,258,349
Allowance for uncollectible accounts, approximately	(86,800,000)	(88,600,000)	(79,600,000)
Net patients accounts receivable	183,023,069	198,960,936	215,658,349
Due from third-party payors	7,860,846	17,929,078	8,582,273
Other current assets	50,056,012	64,689,279	55,555,553
Total current assets	385,227,511	444,621,466	557,318,669
Investments held by trustees under indenture agreements	47,284,017	52,356,374	51,460,891
Investments In joint ventures and partnerships	-	-	162,706
Capital assets, net	509,198,425	512,516,286	556,737,311
Total assets	941,709,953	1,009,494,126	1,165,679,577
Deferred outflows	88,010,521	98,356,614	161,804,958
Total assets and deferred outflows	**$ 1,029,720,474**	**$ 1,107,850,740**	**$ 1,327,484,535**
Liabilities, Deferred Inflows and Net Position			
Current liabilities:			
Current installments of long-term debt and capital lease obligations	$ 17,787,496	$ 21,460,829	$ 22,260,398
Accounts payable	56,462,414	63,742,372	68,426,322
Accrued payroll, withholdings, and benefits	60,811,965	69,205,019	68,148,182
Liabilities payable from current restricted assets	-	-	8,703,844
Due to related parties	6,345,551	7,037,419	11,736,625
Due to third-party payors	2,801,341	5,049,668	
Other accrued expenses	5,471,151	5,416,800	14,515,649
Unearned revenue	-	-	521,859
Total current liabilities	149,679,918	171,912,107	194,312,879
Long-term debt and capital lease obligations net of current liabilities	368,617,611	359,323,624	383,598,928
Net pension liability	570,493,064	645,307,236	746,860,160
Other liabilities	-	-	7,229,315
Total liabilities	1,088,790,593	1,176,542,967	1,332,001,282
Deferred inflows	48,227,260	1,153,583	878,235
Total liabilities and deferred inflows	1,137,017,853	1,177,696,550	1,332,879,517
Net position:			
Net investment in capital assets	158,526,772	164,574,408	172,453,992
Restricted:			
Under indenture agreements	47,284,017	52,356,374	51,460,891
Capital projects	-	25,000,000	23,839,082
Major programs	27,062,267	30,758,617	29,819,556
Unrestricted (deficit)	(340,170,435)	(342,535,209)	(282,968,503)
Total net position	(107,297,379)	(69,845,810)	(5,394,982)
Total liabilities, deferred inflows, and net position	**$ 1,029,720,474**	**$ 1,107,850,740**	**$ 1,327,484,535**

Medical University Hospital Authority
Financial Statements
Years ended June 30,

Statement of Revenues, Expenses and Changes in Net Position

	2015	2016	2017
Operating revenues:			
Patient service revenue			
Gross patient service revenue	$ 1,390,721,978	$ 1,430,007,581	$ 1,453,183,139
Provision for uncollectable accounts	(159,221,000)	(128,683,666)	(83,116,441)
Net patient service revenue	1,231,500,978	1,301,323,915	1,370,066,698
Other revenue	26,301,004	25,333,565	31,384,513
Total operating revenues	1,257,801,982	1,326,657,480	1,401,451,211
Operating expenses:			
Compensation and employee benefits	520,199,569	554,624,082	570,284,785
Pension benefits	-	13,311,228	33,791,979
Services and supplies	631,910,527	679,934,296	684,571,224
Depreciation and amortization	60,666,452	63,840,599	66,267,743
Total operating expenses	1,212,776,548	1,311,710,205	1,354,915,731
Operating income	45,025,434	14,947,275	46,535,480
Nonoperating revenue (expense):			
State appropriations	20,000,000	42,000,000	29,000,000
Gifts and grants	1,392,082	549,999	25,982,108
Investment income	2,053,755	4,377,443	(1,439,526)
Interest expense	(15,893,550)	(15,388,607)	(18,294,818)
Loss on disposal of capital assets	(4,011,288)	(7,296,642)	(1,547,621)
CHWP debt issuance cost	-	(737,899)	(5,167,360)
Other nonoperating expenses	(1,000,000)	(1,000,000)	(1,565,463)
Total nonoperating revenue (expenses)	2,540,999	22,504,294	26,967,320
Income before payments to MUSC and UMA	47,566,433	37,451,569	73,502,800
Nonoperating expense - payments to MUSC and UMA	-	-	(9,051,972)
Increase in net position	47,566,433	37,451,569	64,450,828
Net position, beginning of year	(154,863,812)	(107,297,379)	(69,845,810)
Net position, end of year	$ (107,297,379)	$ (69,845,810)	$ (5,394,982)

Appendix C:
Comparison of MUHA Financial Indicators

U.S. Not-for-Profit Health Care System Medians by Rating Level - 2016

	AA	A	BBB	Speculative Grade	MUHA 2015	MUHA 2016	MUHA 2017
Sample Size	63	67	13	3			
Statement of Operations							
Net patient revenue (NPR: $000)	2,366,500	1,998,885	1,391,263	1,134,945	1,231,501	1,301,324	1,370,067
Salaries & benefits/NPR (%)	56.6	57.5	59.1	63.7	42.2	42.6	41.6
Maximum annual debt service coverage (x)	5.2	3.7	2.3	0.3	4.0	3.7	2.8
Operating lease-adjusted coverage (x)	3.8	2.9	1.9	0.6	4.0	3.7	2.8
Debt burden (%)	2.1	2.4	2.6	2.8	2.1	2.0	3.2
EBIDA ($000)	360,200	189,427	89,115	4,893	124,126	116,681	149,013
Nonoperating revenue/total revenue (%)	1.2	1.2	1.0	(0.2)	0.2	1.7	1.9
EBIDA margin (%)	11.4	9.4	5.7	0.4	9.7	8.5	10.2
Operating EBIDA margin (%)	10.2	8.4	5.2	0.6	8.4	5.9	8.0
Operating margin (%)	3.9	2.3	(0.9)	(3.3)	3.6	1.1	3.3
Excess margin (%)	6.6	3.3	0.2	(3.5)	3.8	2.8	4.6
Capital expenditures/depr. & amort. Exp (%)	128.5	126.7	95.8	76.4	68.8	96.7	128.1
Balance sheet							
Average age of plant (years)	9.9	11.1	10.3	13.2	8.9	9.0	8.9
Cushion ratio (x)	30.2	18.8	11.7	4.3	4.3	4.0	4.6
Days' cash on hand	264.4	168.6	115.8	53.6	36.8	31.2	60.1
Days in accounts receivable	49.1	47.6	44.0	51.6	54.2	56.0	57.5
Cash flow/total liabilities (%)	17.0	12.0	6.6	(0.2)	9.5	8.6	9.8
Unrestricted reserves ($000)	2,144,798	982,547	494,797	169,339	117,725	107,834	215,160
Unrestricted reserves/long-term debt (%)	204.7	146.2	92.9	29.3	30.5	28.3	53.0
Long-term debt/capitalization (%)	27.0	37.6	47.0	69.5	141.1	124.1	101.4
Pension-adjusted long-term debt/capitalization (%)	30.4	42.6	50.7	69.8	112.9	107.5	100.5

Source: Standard and Poor's, August 24, 2017

ROA 000138

Appendix D:
MUHA Interim Financial Statement 12/28/18

Statement of Revenues, Expenses, and Changes in Net Assets:
For the eight months ended February 28, 2018 and 2017
Actuals Compared to Budget

As of February 2018, MUHA's net income is $28.6 million below budget. The following drivers (YTD) explain this variance:

- Inpatient surgeries are 2.5% below budget;
- Outpatient surgeries are 2.2% below budget
- Case Mix Index is 1.9% below budget;
- Children's gross revenues are $9.8 million below budget, Heart and Vascular's gross revenues are $7.1 million below budget, Anesthesia gross revenues are $5.5 million below budget, and Therapies are $6.8 million below budget.
- Additional pension expense of $3.2 million
- Pharmaceutical costs are $4.1 million over budget
- Medical supplies are $4.6 million over budget

Net patient service revenues are below budget by 0.1%, mainly due to our overall Case Mix Index being 1.9% below budget. The Case Mix Index decrease correlates with our IP surgeries finishing 2.5% below budget.

Total operating expenses finished above budget by $26.4 million. Compensation and benefits are $7.6 million over budget. This is mainly due to FTE's per Adjusted Occupied Bed on a case mix adjusted basis finishing over budget by 1.8%, which correlates to 65 FTE's. Services and supplies are $20.2 million over budget, mainly due to purchased outside services being over budget by $7.9 million, pharmaceutical costs being over budget by $5.6 million, medical supplies being over budget by $5.6 million, and Telehealth expenses being $4.7 million over budget.

As of February 2018, the operating income is $27.3 million under budget. For the month of February, operating income is $8.9 million below budget, mainly due to the same drivers listed above.

Investment income is $1.3 million below budget. With the federal Reserve beginning to increase interest rates in the short-term, it has negatively impacted the market valuation of the fixed rate securities in our mortgage reserve funds.

Unusual and non-recurring items impacting current month earnings:

The Authority received $3 million in December 2017 of State Appropriations for the Adult Burn Unit. $1.5 million of these funds have been recognized as Non-operating revenue in the month of December 2017 and the remainder will be recognized pro-rata for the remainder of the fiscal year.

Statement of Revenues, Expenses, and Changes in Net Assets:
For the eight months ended February 28, 2018 and 2017
Actuals Compared to Prior Year

Operating Revenues:

Net patient revenue is up 3.8% from the same period last year. Inpatient census is up 1.9% compared to last fiscal year. February's ADC increased to 707 from the 706 census we saw in January, and is 0.3% higher than February last year. ER visits are up 0.7%. Inpatient surgical cases are down 1.0% and outpatient surgical cases are up 0.5%. 275 transplant cases have been performed for the fiscal year compared to 257 for last fiscal year – a 7.0% increase.

On a volume adjusted basis (adjusted discharges), net patient revenue is down 3.1% at $19,788 per case. The following drivers account for this variance:

- February's year-to-date Case Mix Index was 2.6% below prior year;
- Children's gross revenues are $9.8 million below budget, Heart and Vascular's gross revenues are $7.1 million below budget, Anesthesia gross revenues are $5.5 million below budget, and Therapies are $6.8 million below budget.
- Pharmacy is over prior year by $4.4 million year to date. Medical supplies are over prior year $6.5 million year to date; labor costs are over prior year $10.6 million year to date.

Other revenues increased 17.6% or $3.5 million over the same period last year.

Operating Expenses:

When compared to last fiscal year, salaries and benefits increased $18.1 million or 4.8%. This increase mainly relates to the merit increase and additional FTEs. Paid FTEs are up 96 from the same period last fiscal year. The average hourly rate is up 3.4% from the same period last fiscal year. Compensation costs (including benefits and excluding pension expense) are 42.9% of net patient revenue. FY 17 costs were 42.5% of net patient revenue.

Services and supplies are up $31.9 million or 7.2% compared to last year. The following explain the majority of this variance:

- Pharmaceuticals are $4.4 million or 5.2% higher;
- Medical Supplies are $6.5 million or 5.6% higher;
- College of Medicine expenses are $9.4 million or 23.1% higher;
- Resident support expenses are $1.1million higher;
- Telehealth expenses are $4.9 million higher as a result of adding three new agreements;

Depreciation and Amortization is 1.1% lower than prior year

Non-Operating Expenses:

Interest expense is up 0.4% compared to prior year. Interest expense is 2.4% unfavorable to budget through February 2018.

Exhibit G

To Request for Final Review Conference

RICHARDSON / KNAPP & ASSOCIATES, Inc.
Consultants to the Health Care Industry
115 Ripley Road
Cohasset, Massachusetts 02025
Tel. (781) 383-3119

July 18, 2018

Margaret P. Murdock
Director, Certificate of Need Program
Bureau of Healthcare Planning and Construction
South Carolina Department of Health and Environmental Control
301 Gervais Street
Columbia, SC 29201

RE: CareAlliance Health Services d/b/a Roper St. Francis Healthcare, Roper Hospital, Inc., Bon Secours-St. Francis Xavier Hospital, Inc. Roper St. Francis Berkeley Hospital, and Roper Mount Pleasant Hospital (collectively from time to time "Roper St. Francis") opposition to the Medical University Hospital Authority d/b/a MUHA Community Hospital Certificate of Need Application for the construction of a new 128 bed general acute hospital in Berkeley County at a Total Project Cost of $325,000,000 ("Application").

Dear Ms. Murdock:

On behalf of Roper St. Francis, please accept this letter of opposition to the proposed MUHA Community Hospital Certificate of Need Application for the establishment of a new 128 bed general acute care hospital in Berkeley County.

Most notable is that MUHA is proposing the construction of a third new community general hospital in Berkeley County at a cost of $325 million, while two new hospitals are already under development, bringing the total cost of new hospital construction to approximately $600 million in a county with a population of only 210,000. Such a result would defy the very underpinning of the CON Program: promoting cost containment and limiting the unnecessary duplication of services, turning the South Carolina CON Program on its head.

In summary, the Application does not comply with the South Carolina Health Plan, the project review criteria set forth in S.C. Ann. 61-15, §§ 801 and 802, and other applicable regulations.

Specifically, the Application's flaws and omissions that drive this opposition position include:

1. Berkeley County is not an underserved healthcare market and there is no need for additional hospital services in Berkeley County. Two new hospitals are currently under development and significant other health care development is currently underway in Berkeley County. Berkeley County runs the risk of excessive development that defies the very purpose set forth in the CON statute, namely cost containment and prevention of unnecessary duplication of services.

2. MUHA's proposed community hospital service area is not realistic or reasonable.

3. MUHA does not provide sufficient information supporting the patient volume forecasts for the new community hospital and the ultimate forecast volumes included in the CON application are unrealistically overstated.

4. The drive time comparisons presented in the application do not support MUHA's contention that the new community hospital will provide significant access improvements to patients in the entire service area.

5. There is not adequate information or documentation provided in the Application to support the proposed community hospital's financial projections and recent MUHA financial results do not support the financial projections included in the CON application.

6. The proposed new hospital will adversely impact existing and approved providers in the service area.

7. The proposed new MUHA hospital is inconsistent with the project review criteria identified by DHEC in its certificate of need completeness letter.

Additional information and detail regarding each of these points is presented below.

BERKELEY COUNTY IS NOT AN UNDERSERVED HEALTHCARE MARKET

Despite MUHA contentions in its CON application (CON pages 21-22 and page 48), Berkeley County is not an underserved healthcare market.

With Roper St. Francis's CON approved 50-bed hospital currently under construction and with Trident Health's CON approved 50-bed hospital a future acute care resource, Berkeley County will have two distinct acute care community hospitals, including the full medical and professional staff and technology infrastructure at each hospital, providing care to local patients.

In addition to the two acute care community hospitals, community medical care is provided at:

- Roper Hospital Berkeley in Moncks Corner – a comprehensive outpatient center providing a 24-hour ER service, outpatient surgery services, a broad array of medical diagnostic testing and scanning services and a medical office building with more than 20 doctors,

- Moncks Corner Medical Center (part of Trident Medical Center) – an outpatient center providing a 24-hour ER service, outpatient diagnostics and patient access to a broad range of services including radiology, mammography, labs, and physical rehabilitation and access to a range of medical specialists,

- Trident Medical Center's CON approved (under appeal) freestanding emergency department in Berkeley County,

- MUHA / MUSC's CON approved (under appeal) freestanding emergency department in Berkeley County,

- MUHA / MUSC's CON approved (under appeal) freestanding radiation therapy center in Berkeley County.

- Palmetto Primary Care Physicians outpatient medical campus in Nexton / Berkeley County – expected to be complete in 2018 -- including primary care, specialty care and urgent care services, as well as an imaging center and lab services, and,

- Broad array of community physician practices including private practitioners, physicians associated with Roper St. Francis Physician Partners and physicians associated with Trident Health.

As shown by this established and growing healthcare infrastructure within the County, there is / will be adequate access to and availability of healthcare services within Berkeley County, without the proposed addition of another community hospital which will add no new services or programs to the local community.

It is interesting to note that MUHA discusses the need for mental health services in Berkeley County as a reason for establishing the proposed new hospital, but excludes all psychiatric and substance abuse patient volume from its multiple assessments of need and includes zero inpatient psychiatric or substance abuse beds in its proposed new hospital.

MUHA'S PROPOSED COMMUNITY HOSPITAL SERVICE AREA IS NOT REALISTIC OR REASONABLE

MUHA defines its service area for the proposed community hospital at page 23 of the CON application as *"MUHA current patients residing from the tri-county area and surrounding markets based on a drive time analysis*." This defined service area is further identified at page 24 of the CON application as "*the service area for the project includes the primary service area of Berkeley, Dorchester and Charleston and secondary service area of Georgetown, Horry, Williamsburg, Florence, Colleton, Orangeburg and Beaufort."*

While the MUHA / MUSC existing tertiary and quaternary services may in fact draw patients from a broad and diverse geographic area, it is not reasonable or realistic to assume that a small community hospital, with no specialty or tertiary services, would draw patients from this same large regional area. Rather, it should be expected that the proposed new MUHA community hospital will draw patients primarily from the local area, with little or no in-migration from beyond the area proximate to the proposed new facility.

In addition, assuming that there will be a significant number of patients served in the new hospital that will travel past the existing MUHA inpatient resources, or will travel a further distance than to the existing MUHA facilities to obtain care at the new community hospital, is not a reasonable forecast assumption.

Examples of these unreasonable assumptions include the forecast assumption that up to 55% of current West Ashley MUHA patients will shift to the new community hospital and up to 35% of Orangeburg County MUHA patients / up to 35% of Peninsula Charleston MUHA patients (including 35% redirection from 29425 – the home ZIP for MUHA) / up to 30% of Sea Islands MUHA patients / up to 30% of Colleton County and Calhoun County MUHA residents will shift from current MUHA facilities to the new non-tertiary / non-specialty community hospital.

It should be noted that no patient origin data – patients by ZIP or by County – is presented for the proposed new community hospital. As a result, other than the service area descriptions provided in the CON application, and presented above, there is no other means to define what the applicant anticipates as its true service area for this proposed new community hospital.

MUHA's FIGURE 3 (PAGE 24) PROVIDES NO INFORMATION REGARDING POTENTIAL MUHA PATIENTS THAT COULD BE SERVED AT THE NEW COMMUNITY HOSPITAL

MUHA states in the CON application (page 23-24) that *"9,094 adult patients are from the northern tri-county markets of North Charleston, Summerville and Moncks Corner and therefore the site will be a more convenient site for these established patients to receive acute care than the downtown peninsula."*

As a starting point, it is clear that the 9,094 patients reflects 100% of the patient volume treated at all MUHA services and facilities. As presented in the source information for Figure 10 of the CON application (page 33 of the CON), the data in Figure 3 and Figure 10 reflect <u>all</u> inpatient procedures performed by MUHA physicians. Therefore, these patient volume levels overstate the potential volume to be served at the new community hospital, as the Figure 3 and 10 volumes include numerous specialty and tertiary care services which will not be available at the new facility.

In addition, there is confusion regarding whether the Figure 3 and 10 volumes represent all <u>inpatient procedures</u> performed by MUHA physicians as sourced in Figure 10, or just the <u>inpatient procedures performed by MUHA physicians at MUHA facilities</u>, or <u>inpatient procedures</u> versus <u>inpatient admissions or discharges.</u>

There is also a conflict in the number of MUHA patients and the percentage of total MUHA reported volume (however it is defined) that is generated from the North Charleston, Summerville and Moncks Corner area. At page 23 and at Figure 3 of the CON application, MUHA states that 29% of MUHA's adult inpatient volume, or approximately 9,094 patients were from the North Charleston, Summerville and Moncks Corner area. This contrasts to the information presented at the bottom of page 33 of the CON application where MUHA states that 32% of MUHA's overall inpatient origin, or approximately 12,273 patients were from the North Charleston, Summerville and Moncks Corner submarkets.

Finally, there is inconsistency in the definition of the target primary service area for the new hospital, with MUHA defining the primary service area as North Charleston, Summerville and Moncks Corner at pages 23-24, but defining the "*North Charleston and Summerville counties"* areas as the areas that will originate the majority of the community hospital volume in the source notes for Figure 10.

THE DEMOGRAPHIC DATA PRESENTED IN FIGURES 8 AND 9 ARE INCORRECT

Figure 8 in the MUHA CON application presents all ages population data for the MUHA service area. Figure 9 in the MUHA CON application presents age 16+ population data for the MUHA service area. Comparing the all age population data to the age 16+ population data shows that either one or the other population data sets in wrong.

As shown below, when the population data for North Charleston, Moncks Corner and Summerville from Figure 8 is compared to the data from Figure 9, it is clear that either the all age data (Figure 8) or the age 16+ data (Figure 9) is wrong.

	Figure 8 2017 All Ages	**Figure 9 2017 Age 16+**	**Figure 8 2022 All Ages**	**Figure 9 2022 Age 16+**
North Charleston	231,287	49,223	251,691	53,901
Moncks Corner	60, 817	105,678	66,130	116,106
Summerville	132,186	77,131	143,190	82,757

The data problems are not just in the areas proximate to the proposed new hospital presented above. When the population data for the remainder of areas identified in Figures 8 and 9 are compared, it is clear that there are data problems throughout this demographic assessment portion of the MUHA CON application.

THE MEDICAL / SURGICAL AND ICU BED VOLUME FORECASTS FOR THE PROPOSED NEW MUHA COMMUNITY HOSPITAL PRESENTED IN FIGURE 18 (PAGE 39) ARE NOT SUPPORTED BY ANY INFORMATION PRESENTED IN CON APPLICATION AND ARE UNREASONABLE AND UNREALISTIC

The forecast approach described in the MUHA CON application appears to be:

1. Define the current 2017 volume of non-tertiary / non-specialty patients treated at MUHA facilities – segmented by patient ZIP code
2. Inflate this current 2017 volume by 1.7% per year to forecast 2023 / 2024 / 2025 non-tertiary / non-specialty MUHA volume levels – again by ZIP code
3. Apply the re-direction percentages (% of MUHA applicable volume shifting to the new MUHA community hospital) identified in Attachment N to the forecasted MUHA applicable volumes – by ZIP code
4. Assume that 55% of total potential re-directed patients would be served in Year 1, 70% Year 2 and 100% Year 3
5. Calculate the total number of patients to be treated at the new MUHA community hospital in 2023 / 2024 / 2025
6. Apply a 5.2 day average length of stay to calculate forecast patient days for the new community hospital

The first issue with MUHA's forecast is that there is no documentation within the CON application identifying the number of non-tertiary and non-specialty patients by ZIP code during 2017 that were served by MUHA. The only MUHA geographic volume data presented within the CON application is in Figure 3 and Figure 10.

However, the volume data in Figures 3 / 10 are segmented by general market area versus ZIP code. In addition, this data appears to be the total patient volume served by MUHA including tertiary and specialty patients, instead of the applicable smaller non-tertiary / non-specialty volume that would be served at the new hospital and should be included in this forecast analysis. And finally, there is uncertainty if this volume reflects procedures or patients and whether this volume reflects all activity of MUHA physicians at any facility or activity at just MUHA facilities.

Without this baseline MUHA non-tertiary / non-specialty volume data by ZIP code, there is no way that the forecast calculations can be validated and there is no way to evaluate the reasonableness of the resulting forecast volume by ZIP code expected to be served at the new community hospital. The only conclusion that can be reached from the data presented in the CON application is that it results in an over-forecast of the actual non-tertiary / non-specialty volume that will actually be treated at the new MUHA community hospital.

The second issue with this forecast approach is the reasonableness of the expected re-direction percentages presented in Attachment N (% of MUHA applicable volume shifting to the new MUHA community hospital) included in this forecast. To begin, as discussed above, there is significant inconsistency in the defined travel distances and travel times to the proposed new hospital when the travel distances and travel times presented in Figure 6 are compared to travel distances and travel times presented in Attachment N.

In addition, the assumptions that up to 55% of current West Ashley MUHA patients will shift to the new community hospital and up to 35% of Orangeburg County MUHA patients / up to 35% of Peninsula Charleston MUHA patients (home of MUHA / MUSC) / up to 30% of Sea Islands MUHA patients / up to 30% of Colleton and Calhoun County MUHA residents will shift from current MUHA facilities to the new community hospital are not realistic or reasonable.

The third issue with this forecast approach is the use of a 5.2 day average length of stay for this new non-tertiary / non-specialty care community hospital. Based on review of the medical / surgical and ICU lengths of stay seen in similar hospitals within the Lowcountry area, it is clear that this 5.2 ALOS for a small community hospital without tertiary or specialty services is significantly higher than it should be. This higher than appropriate ALOS also results in a higher than appropriate patient day forecast for the proposed community hospital.

As presented below, based on data from 2016 JAR reports, the ALOS for adult medical surgical patients at similar local area hospitals range from 3.1 to 4.3 days. This is significantly below the 5.2 ALOS utilized in the MUHA forecast. In addition, as MUHA has assumed that a 10% reduction in ALOS will occur through the operational start of the new hospital, the future comparative ALOS levels would be in the 2.8 to 3.9 day range.

It should be noted that the ALOS data presented below excludes OB, Inpatient Rehab, Inpatient Psych and Inpatient Substance Abuse programs and data.

	Med / Surg / ICU Days	**Med / Surg / ICU Disch.**	**Med / Surg / ICU ALOS**
Bon Secours St. Francis	26,865	6,210	4.3 ALOS
Mount Pleasant	4,530	1,361	3.3 ALOS
Summerville (ex Ped)	20,899	5,276	4.0 ALOS
East Cooper	10,769	3,492	3.1 ALOS

Applying a lower length of stay assumption to MUHA's patient forecast results in a significant reduction in forecast patient days. Assuming that a 4.3 ALOS is appropriate, forecast 2025 patient days would decline from the MUHA forecast of 23,230 days to 19,208 days. Assuming that the lower 3.9 ALOS (factoring in the MUHA 10% ALOS reduction) is appropriate, forecast 2025 patient days would drop to 17,421.

Converting these revised 2025 MUHA community hospital patient day forecasts into a bed need (assuming that the MUHA patient volume forecasts are correct), utilizing a 65% occupancy standard, results in a 2025 bed need of 81 med / surg / ICU beds when a 4.3 ALOS is used and a 74 med / surg / ICU bed need when a 3.9 ALOS is used. Both of these modified bed need forecasts are well below the 112 med / surg / ICU beds proposed by MUHA. If fact, even utilizing the CON forecast approach and assuming it is correct, the forecast 23,230 med / surg / ICU patient days for 2025 reflects a bed need of only 98 beds – again well below the 112 beds proposed in this CON application.

THE OBSTETRIC VOLUME FORECASTS FOR THE PROPOSED NEW MUHA COMMUNITY HOSPITAL PRESENTED IN FIGURE 19 (PAGE 39) ARE NOT SUPPORTED BY ANY INFORMATION PRESENTED IN CON APPLICATION AND IT IS IMPOSSIBLE TO ASSESS THE REASONABLENESS OF THIS FORECAST

MUHA presents a forecast of obstetric patient days for the proposed 16 bed obstetric unit at Figure 19 (page 39) of the MUHA CON application. Unlike the description of the med / surg / ICU forecast included in the CON application (CON text and notes describing the Figure 18 forecast analysis), there is no information presented in the CON application which defines the forecast methodology that was used to reach the 2023 / 2024 / 2025 obstetric patient day volumes that are presented in Figure 19.

Even if the obstetric forecast followed an approach similar to that used for the med / surg / ICU forecast, the same limitations discussed above, and more, impact this obstetric analysis.

First, there is no definition of the non-tertiary obstetric DRGs that will be treated at the new community hospital and that would define baseline volumes currently treated by MUHA, even though the Notes to Figure 19 indicate that the forecast includes only no-tertiary OB DRGs. Second, there is no baseline obstetric volume data, by ZIP, identified within the CON application. Without this baseline MUHA non-tertiary obstetric volume data by ZIP code, there is no way that the forecast calculations can be validated and there is no way to evaluate the reasonableness of the resulting forecast volume by ZIP code expected to be served at the new community hospital.

Third is the issue of the reasonableness of the expected re-direction percentages presented in Attachment N (% of MUHA applicable obstetric volume shifting to the new MUHA community hospital) included in this obstetric forecast. As discussed prior, there is significant inconsistency in the defined travel distances and travel times to the proposed new hospital when the travel distances and travel times presented in Figure 6 are compared to travel distances and travel times presented in Attachment N. In addition, while the percent of re-direction in the med / surg / ICU forecasts is questionable, the high levels of re-direction are even more suspect in the case of non-tertiary obstetric care, where care closer to home for normal obstetric care is even more important.

Fourth is the issue of using a 2.9 day length of stay for a non-tertiary obstetric service. As shown below, review of obstetric ALOS levels for similar Lowcountry hospitals shows that 2016 obstetric ALOS within similar Lowcountry obstetric programs ranged from 2.2 days to 2.5 days.

	Obstetric Patient Days	**Obstetric Discharges**	**Obstetric ALOS**
Bon Secours St. Francis	6,406	2,736	2.3 ALOS
Mount Pleasant	1,256	561	2.2 ALOS
Summerville	2,062	830	2.5 ALOS
East Cooper	4,559	1,823	2.5 ALOS

Applying a lower length of stay assumption to the MUHA obstetric patient forecast results in a reduction in forecast patient days. Assuming that a 2.5 ALOS is appropriate for non-tertiary obstetric care, forecast 2025 obstetric patient days would decline from the MUHA forecast of 3,575 days to 3,083 days. Assuming that a lower 2.3 ALOS (factoring in the MUHA 10% ALOS reduction) is appropriate, forecast 2025 obstetric patient days would drop to 2,836.

Converting these revised 2025 MUHA non-tertiary obstetric patient day forecasts into a bed need, utilizing a 65% occupancy standard, results in a 2025 obstetric bed need of 13 beds when a 2.5 ALOS is used and a 12 obstetric bed need when a 2.3 ALOS is used. Both of these modified bed need forecasts are well below the 16 obstetric beds proposed by MUHA.

THE DRIVE TIME COMPARISONS PRESENTED IN FIGURE 6 (PAGE 26) DO NOT SUPPORT THE MUHA CONTENTION THAT THE NEW COMMUNITY HOSPITAL WILL PROVIDE SIGNIFICANT ACCESS IMPROVEMENTS TO PATIENTS WITHIN THE ENTIRE SERVICE AREA

To start, it is important to note that the drive time values and comparisons are based upon current drive time data, not the drive situation that will be in place during 2023 – 2025, the first three years of operation for the new hospital.

As described in the MUHA CON application (page 33), *"it is anticipated that an additional 7,327 jobs will be created in the North Charleston and Summerville submarkets."* The CON application also states (page 34) that *"The Nexton Community is located at the I-26 and Highway 17A interchange, and in the pathway of Charleston's explosive growth. The full build out of Nexton will be comprised of nearly 8,000 residents, 6 million square feet of commercial space, 3 schools and 2,000 acres of parks."*

It is clear, based on this information that the anticipated population and commercial growth in the proposed hospital's local area will result in increased travel congestion and travel times to the proposed community hospital site. As a result, the comparative travel times will shift toward increased travel times to get to the proposed new facility while travel times to the existing MUHA facilities are not expected to increase due to the already mature nature of the Peninsula area. The expected result of these increased travel times to the proposed new site is a reduction in the comparative travel time benefit that will accrue to the new community hospital location.

In addition, the use of a +10 minute and a +20 minute parking / wayfinding time to the drive times to the existing MUHA facilities is also unreasonable. If in fact parking / wayfinding additional time should be considered, then an appropriate additive time should also be added to the proposed new facility as patients traveling to the new facility will not be able to literally park at the front entrance of the new hospital and immediately gain access to its services.

Finally, it is important to note the inconsistencies in the defined travel distances and travel times to the proposed new hospital when the travel distances and travel times presented in Figure 6 are compared to travel distances and travel times presented in Attachment N. As shown below, there are inconsistencies observed in each ZIP code presented, with travel time distances showing the largest discrepancies. It should also be noted that discrepancies are seen within each ZIP when Figure 6 and Attachment N are compared, in addition to the examples presented below.

ZIP Code	**Fig. 6 Distance**	**Attach. N Distance**	**Fig. 6 Time**	**Attach. N Time**
29483 Summerville	5.0 miles	7.5 miles	13 min	11 min
29461 Moncks Corner	13.2 miles	16.3 miles	19 min	35 min
29403 Peninsula	22.3 miles	23.4 miles	24 min	34 min
29464 East Cooper	29.3 miles	29.4 miles	34 min	40 min
29412 James Island	31.6 miles	32 miles	41 min	49 min

ADEQUATE INFORMATION AND DOCUMENTATION IS NOT PROVIDED WITHIN THE MUHA CON APPLICATION TO SUPPORT THE PROPOSED COMMUNITY HOSPITAL FINANCIAL PROJECTIONS AND RECENT MUHA FINANCIAL RESULTS DO NOT SUPPORT THE FINANCIAL FORECASTS INCLUDED IN THIS CON APPLICATION.

Specific to the ability of MUHA to finance the capital costs associated with the construction and startup of this proposed new hospital, there is no firm commitment to finance the project and no clear evidence provided in the CON application that the project will meet financing guidelines.

While MUHA's financing advisor (Stephen Pack, President Armadale Capital) states in his letter presented in Attachment U that it is his opinion that MUHA will meet or exceed the FHA / HUD underwriting guidelines for this project, that opinion is based on market demand and financial feasibility studies of the community hospital project that have been performed by other advisors and consultants engaged by MUHA. It is important to note that no such market demand or financial feasibility studies have been included with the CON application. Further, if the assumption that MUHA will meet or exceed underwriting guidelines for the project is based on the information / data / forecast analyses presented in the CON application, the multiple issues identified above regarding the reasonableness of the volume forecasts and MUHA's current financial shortfalls raise significant questions concerning the ability to finance this project.

And finally, as documented in Mr. Pack's letter, *"there is no guarantee that HUD will ultimately issue a mortgage insurance commitment for the proposed financing."*

An additional issue which should be considered in assessing the ability to finance this proposed project – and the full $881 million in total capital expenditures planned by MUHA – is that while MUHA may be able to gain FHA / HUD financing, the question that should be raised is whether obtaining this level of capital financing is in the best interest of MUHA and the residents of the Lowcountry area. As shown below, when 2020 forecasted financial data and ratios taken from MUHA's Financial Feasibility Study for the Shawn Jenkins Children's Hospital (excluding the proposed $325 million proposed in this project) are compared to the same median data and ratios for hospitals rated by Moody's at the Baa3 level (Moody's lowest investment grade rating), it is clear that MUHA's financial position is well below that seen in organizations issuing even minimal investment grade debt.

With days of cash on hand lower than seen in typical organizations with investment grade debt and with debt levels well above that seen in organizations with investment grade debt (even without the proposed $325 million Berkeley County project), MUHA's actual financial forecasts show the weakness of MUHA's financial situation and the questions that must be raised regarding the appropriateness of issuing an additional $325 million debt to support this proposed project, and the total $881 million in debt proposed to support all planned MUHA projects.

Medical University Hospital Authority		
Financial Ratios Compared to Moody's Baa3		
	MUHA *	Moody's Baa3 **
Days Cash On Hand	67.0	109.8
Debt To Cap ^	116.2%	54.4%
Max Debt Service Coverage Ratio	2.3	3.0
* Calculated using MUHA's "Historical and Forecasted Statements of Net Position" for Year 2020.		
** From ratings medians published in 2017 for year 2016. Baa3 is the lowest investment grade rating.		
^ Debt includes $645,325,000 net pension liability.		

In addition to the issues raised above, the ability to finance this proposed new community hospital should not be assessed in a vacuum.

While this proposed project is estimated to cost $325 million, plus the first year operational subsidy for this hospital estimated to reach $11 million, the ability of MUHA to finance these project costs must be also be considered in light of MUHA's larger system-wide capital expenditure commitments over the past few years.

As presented on the following pages, MUHA / MUSC already has committed more than $556 million in new project capital since 2015, excluding this proposed new hospital. Adding this proposed project into MUHA's capital plans results in a commitment to finance and service the debt of $881 million in project costs. MUHA's ability to finance this proposed new community must be assessed in light of these larger organizational commitments.

MUHA / MUSC NEW CAPITAL COMMITMENTS 2015 TO PRESENT

Projects Under Development
(Certificate of Need Issuances 2015 – Present)

MUSC	Total Project Cost
New construction for the consolidation of pediatric and perinatal services	$366,398,000
Addition of 52 acute care beds	$9,178,000
Construction of a pediatric imaging center in North Charleston	$39,800,000
Construction of a pediatric only surgery center with five operating rooms in North Charleston	$26,300,000
Construction of a surgery center with four operating rooms and an imaging suite in West Ashley	$36,000,000
To establish a home health agency to serve Berkeley and Dorchester Counties	$ 30,000

Projects Under Development
(Certificate of Need Issuances 2015 – Present)

MUSC	Total Project Cost
Addition of a pediatric open heart operating room	$1,100,000
To license a surgery center with three operating rooms in Mount Pleasant	$9,000,000
State Approved Expenditures:	**$487,806,000**

Approved Projects Under Appeal

MUSC	Total Project Cost
Construction of a freestanding ED in Berkeley County	$13,600,000
Construction of a freestanding radiation therapy center in Berkeley County	$9,805,000
Conversion of fourteen Level II bassinets to Level III bassinets	$1,969,300
State Approved Expenditures:	**$25,374,300**

CON Applications Under Review

MUSC	Total Project Cost
d/b/a MUHA Community Hospital: Construction of a 128-bed acute care hospital in Berkeley County Submitted: December 27, 2017	$325,000,000
d/b/a South of Broad Hospital: A joint venture with Beaufort Memorial Hospital to construct a 20-bed acute care microhospital in Bluffton Submitted: January 22, 2018	$39,334,924
Addition of a hybrid operating room	$4,269,096
Total:	**$368,604,020**
Grand Total:	**$881,784,320**

In addition to issues related to the financing of this proposed project and the Applicant's ability to service this new debt, there are additional concerns regarding the financial forecasts for this project as presented in Attachment V to this CON application. First, the volume schedules that are referenced in Assumption (1) for the proposed new project are not presented in the CON application. While there are patient day forecasts presented in Figures 18 and 19, there is no indication that the data from these Figures is included in the financial forecasts.

It is also important to note, as discussed above, that the bases for the Figure 18 and 19 forecasts are not presented in the CON application and there are numerous concerns regarding incorrect or unsupported data in the MUHA volume forecasts. A realistic forecast approach would result in much lower forecasted volume levels and likely much lower revenue levels for the project. There is also no indication of the forecast payer class for the proposed new hospital, a factor that will have significant impact on the ultimate reimbursement received by the proposed new hospital and on the accessibility of the proposed new project to the local community.

Also, while Assumption (1) for the proposed project financial forecast indicates that the inpatient revenue for the new hospital is based on *"the average non-tertiary MUHA charge per discharge",* there is no definition in the financial forecasts of what the ultimate mix of non-tertiary med / surg / ICU discharges would include and there is no definition in the CON application or the financial forecasts of what non-tertiary obstetric cases would be served at the new hospital and included in the financial forecasts.

An additional issue that raises concern is the impact of unfunded pension liabilities and total pension expenses on MUHA's financial forecasts. With significant increases in MUHA's pension expenses -- $5 million for FY 2015, $13 million for FY 2016 and $33 million for FY 2017 – the impact of this rapidly rising expense is not discussed in the discussion / notes to the financial forecasts and does not appear to be factored into the future financial forecasts themselves. Combining this pension expense shortfall with the fact that other forecast operating expenses also appear to be understated and that the forecasts included in support of this project appear to be inconsistent with prior MUHA forecasts, drives the conclusion that there are serious questions of MUHA's ability to operate this proposed Berkeley County project and the other projects proposed by MUHA in a financially feasible manner.

Finally, with the most recent available financial data from MUHA (MUHA Interim Financial Statements for the eight months ending February 2018 as attached to Trident's 04/19/18 Affected Person Status and Opposition Letter) showing that operating income is $27.3 million below the FY 2018 budget, operating expenses are $26.4 million above the FY 2018 budget and MUHA's net income is $28.6 below FY 2018 budget, it is clear that the financial forecasts presented in support of this CON application are suspect. As stated in the Assumption 1 (Attachment V) to the baseline MUHA financial forecasts, without this proposed new hospital, all CON forecasts are based on the MUHA FY 2018 budget. With the FY 2018 budget overstating actual net income financial performance by $25-30 million, it is clear that the financial forecasts presented in the CON application are likewise overstated.

With only a $14.9 to $46.5 million operating income reported in the FY 2016 and 2017 MUHA financial statements (MUHA Basic Financial Statements and Required Supplementary Information, June 30, 2017, Management's Discussion and Analysis, page 6), an operating income shortfall of $28.6 million is significant, accounting for 60%+ to over 100% of actual operating income for the two most recent fiscal years.

Further, with only a $30-40 million operating income forecasted in the 2020 – 2025 budgets for MUHA without this proposed Berkeley County hospital (CON Attachment V – with future budgets based on the 2018 budget), based on what is now known to be an overstated FY 2018 budget, it is clear that the recent financial shortfalls will have a significant adverse impact on MUHA's financial capabilities and its ability to establish and operate this and the numerous other new capital projects either under development or planned by MUHA. And, with only $23.8 million in operating income forecast for MUHA, including this new hospital (CON Attachment V), for the first year of the new hospital operation (FY 2023), the recent $28.6 million shortfall has the potential to drive MUHA into an operating loss situation.

THE PROPOSED NEW HOSPITAL IS NOT NEEDED AND WILL ADVERSELY IMPACT EXISTING AND APPROVED PROVIDERS IN THE SERVICE AREA

Based on the information presented above it is clear that Berkeley County residents will be have adequate and appropriate access to health care services without the development of this proposed new MUHA community hospital. The MUHA project will bring no new services or programs to the local community and will ultimately be just a duplicate of already approved and under development programs and services.

In addition, as discussed above, MUHA's contention that the proposed new community hospital project will just serve MUHA's existing patient base within the local community is not reasonable or realistic, and is not supported by the data and information submitted in the CON application.

With MUHA proposing to serve higher than reasonable percentages of patients from an unrealistically large service area, incorrectly assuming that its current tertiary and specialty patients will be treated at the community hospital and artificially inflating forecast patient days for the new hospital by using unreasonably high average length of stay assumptions, it must be concluded that the MUHA-aligned patient volume to be served at the new community hospital will be significantly less than forecast in this CON application.

As a result, the only way that MUHA will meet its volume forecasts is by increasing its market share within the local Berkeley County marketplace at the expense of other local providers, and adversely shifting patients from existing and approved local providers to the proposed new MUHA facility.

THE PROPOSED NEW MUHA HOSPITAL IS INCONSISTENT WITH THE PROJECT REVIEW CRITERIA IDENTIFIED BY DHEC IN ITS CERTIFICATE OF NEED COMPLETENESS LETTER

As identified in DHEC's CON completeness letter for the MUHA new hospital project, the proposed project's Compliance with the Need Outlined in the *South Carolina Health Plan* is the most import project review criteria, with Community Need Documentation, Distribution (Accessibility) and Ability to Complete the Project criteria also to assessed. A discussion of each of these criteria is presented below.

Compliance with the Need Outlined in the *South Carolina Health Plan*

As shown in the *2017-2018 South Carolina Health Plan*, the net bed need for the applicable planning area for this proposed project (combined Berkeley, Charleston and Dorchester County planning area) is an excess of 13 beds. As such, the proposed project to add an additional 128 beds to the existing bed capacity within this planning area is inconsistent with the *Health Plan*.

Further, with a significant portion of MUHA's anticipated patient volume for the new facility to be re-directed from other local providers (details discussed above), it is not appropriate to look solely at MUSC Medical Center's (MUHA's) forecast institution specific bed need to support this proposed project. As is discussed in detail above, MUHA patient volume alone is inadequate to support this proposed new 128-bed community hospital. To reach CON forecast volume levels, MUHA must increase its local Berkeley County market share and effect the re-direction of local Berkeley County patients away from other local providers to the proposed new facility. As a result of having to serve both MUHA and non-MUHA patients, the use of the MUSC (MUHA) institution specific bed need is inappropriate and should not be used as a surrogate for the lack of need in the planning area.

Community Need Documentation

As discussed in detail above, Berkeley County is not an underserved healthcare market and there is no need for additional hospital services in Berkeley County. Two new hospitals are currently under development and significant other health care development is currently underway in Berkeley County. Berkeley County runs the risk of excessive development that defies the very purpose set forth in the CON statute, namely cost containment and prevention of unnecessary duplication of services. In addition, data and information presented above document significant errors and the application of numerous unreasonable assumptions in MUHA's attempt to document a local need for its proposed project.

The conclusion that must be reached from a detailed analysis and critique of MUHA's forecasts is that there is inadequate MUHA volume within the local Berkeley County marketplace to support the proposed new 128-bed community hospital and that documentation of a community need for this proposed project is not present. The only way that MUHA will reach its volume forecasts is by redirecting patient volume from existing providers and increasing its market share within the local Berkeley County area – resulting in adverse impact to existing and approved providers.

Distribution (Accessibility)

With two acute care community hospitals to be located within Berkeley County and with a significant portfolio of outpatient services and programs also existing and proposed for Berkeley County, there are no distribution or accessibility problems or limitations that will be resolved by this proposed new hospital. In fact, with no new services or programs to be added to the local market as part of this proposed project, the reality is that this proposed new hospital will do nothing but un-necessarily duplicate the already existing and under development local health care services and programs within the County.

Ability to Complete the Project

As discussed above, there are significant concerns regarding MUHA's ability to actually finance this proposed project and its ability to finance and operate this proposed project and the numerous other facility / program expansions and additions MUHA has under development. With over $881 million in capital projects planned or under development by MUHA, versus the $325 million identified for just this project, the Applicant's ability to actually complete this project, along with all of the other projects planned and under development, is uncertain. This is an especially important issue when MUHA's recent financial performance is considered.

With the most recent financial results for MUHA showing that the organization's net income is running $28.6 million below budget (8 months ending February 2018) and with FY 2016 and 2017 full year actual net income only in the $14.9 to $46.5 million range, it is clear that MUHA does not have a strong financial position or a strong financial buffer to absorb the addition of over $881 million in new capital costs as well as the debt service coverage costs and startup expenses associated with the Applicant's broad range of new projects under development.

When MUHA's complete list of financial commitments and actual recent financial performance is considered, there is no certainty that this proposed project will be completed and there are significant questions regarding MUHA's actual ability to accomplish all of the development activity that the organization has planned.

. . . . . .

In summary, the data and information presented above clearly documents that the proposed MUHA new community hospital CON application is not consistent with DHEC rules, policies, guidelines and criteria, that if approved and developed it will have an adverse impact on existing and approved health care providers, and that the proposed project should be denied.

Ms. Murdock, thank you for your consideration of this information. If any additional information or clarification is required, please let me know.

Regards,



Mark M. Richardson
Partner

KPMG

MEDICAL UNIVERSITY HOSPITAL AUTHORITY

(A Component Unit of The Medical University of South Carolina)

Basic Financial Statements and Required Supplementary Information

June 30, 2016

(With Independent Auditors' Report Thereon)

MUHA/Roper/FOIA 000051

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A Component Unit of The Medical University of South Carolina)

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KPMG LLP
Suite 400
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Greensboro, NC 27401

Independent Auditors' Report

The Board of Trustees
Medical University Hospital Authority:

We have audited the accompanying financial statements of the Medical University Hospital Authority (the Authority), a component unit of The Medical University of South Carolina, as of and for the year ended June 30, 2016, and the related notes to the financial statements, which collectively comprise the Authority's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with U.S. generally accepted accounting principles; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express opinions on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the Medical University Hospital Authority as of June 30, 2016, and the changes in its net position and its cash flows for the year then ended in accordance with U.S. generally accepted accounting principles.

KPMG LLP is a Delaware limited liability partnership, the U.S. member firm of KPMG International Cooperative ("KPMG International"), a Swiss entity.

Emphasis of Matter

As discussed in note 1(m) to the financial statements, during fiscal year 2016 the Authority adopted Governmental Accounting Standards Board Statement No. 72, *Fair Value Measurement and Application*. Our opinion is not modified with respect to this matter.

Other Matters

Required Supplementary Information

U.S. generally accepted accounting principles require that the Management's Discussion and Analysis on pages 3-13 and the schedules of proportionate share of the net pension liability to PEBA and the schedules of employer contributions to PEBA on pages 47-49 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated September 21, 2016 on our consideration of the Authority's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Authority's internal control over financial reporting and compliance.

KPMG LLP

Greensboro, North Carolina
September 21, 2016

MUHA/Roper/FOIA 000054

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A Component Unit of The Medical University of South Carolina)
Management's Discussion and Analysis
June 30, 2016
(Unaudited)

Our discussion and analysis of Medical University Hospital Authority's (the Authority) financial performance provides an overview of the activities for the fiscal year ended June 30, 2016.

The intent of this discussion and analysis is to provide further information regarding the Authority's financial performance as a whole. Readers should also review the basic financial statements, along with the notes to the basic financial statements, to further enhance their understanding of the Authority's financial performance.

Financial Highlights – Fiscal 2016 and 2015

At June 30, 2016, the Authority's liabilities and deferred inflows of $1,177.7 million exceeded its assets and deferred outflows of $1,107.9 million by $69.8 million. This financial result is again driven by the implementation of GASB 68 in fiscal 2015. Net position, the residual interest in the assets and deferred outflows after liabilities and deferred inflows are deducted, increased by $37.5 million in 2016, as compared to an increase of $47.6 million in 2015.

The Authority reported operating income in 2016 of $14.9 million, as compared to operating income of $45.0 million in 2015, a decrease of $30.1 million. Some of the major drivers for this change in operating income include increasing pension benefits costs, increases in compensation and employee benefit costs, and increases in the average length of stay for patients.

Net nonoperating revenue was $22.5 million for 2016, as compared to net nonoperating revenue of $2.5 million in 2015, an increase of $20.0 million or 785.6%. The major drivers for this net increase are a $22.0 million increase in the state appropriation that includes $25.0 million for the Phase II hospital replacement project and a $2.3 million increase in investment income.

Overview of the Financial Statements

The Authority, a major discreetly presented component unit of the Medical University of South Carolina (the University), owns and operates the clinical teaching sites of the University and serves the State of South Carolina as a principal diagnostic and treatment referral center.

The Authority's basic financial statements consist of three statements – a Statement of Net Position; a Statement of Revenues, Expenses and Changes in Net Position; and a Statement of Cash Flows. These basic financial statements are prepared in accordance with Governmental Accounting Standards Board (GASB) principles, and provide detailed information about the activities of the Authority and generally provide an indication of the Authority's financial health.

The Statement of Net Position and the Statement of Revenues, Expenses and Changes in Net Position

The Statement of Net Position and the Statement of Revenues, Expenses and Changes in Net Position report information about the Authority's resources and its activities. The Statement of Net Position presents the assets, both restricted and unrestricted, deferred outflows and inflows of resources, and all liabilities using the accrual basis of accounting. The Statement of Revenues, Expenses and Changes in Net Position reports all of the revenues and expenses for the time period indicated, regardless of when cash is received or paid, as well as payments to the University. These two statements report the Authority's net position and its changes.

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ROA 000166

The Statement of Cash Flows

The final required statement is the Statement of Cash Flows. This statement reports cash receipts, cash payments, and net changes in cash resulting from operating, investing, and capital and noncapital-related financing activities.

The Authority's Net Position

The Authority's net position is the difference between its assets and deferred outflows and liabilities and deferred inflows reported in the Statement of Net Position. A comparative summary of assets, deferred outflows, liabilities, deferred inflows and net position is as follows:

Summary Schedule of Net Position

(In thousands)

	2016	2015
Assets:		
Current assets	$ 444,622	385,228
Investments	52,356	47,284
Capital assets, net	512,516	509,198
Total assets	1,009,494	941,710
Deferred outflows	98,357	88,010
Total assets and deferred outflows	1,107,851	1,029,720
Liabilities:		
Current liabilities	171,912	149,680
Long-term debt	359,324	368,618
Net pension liability	645,307	570,493
Total liabilities	1,176,543	1,088,791
Deferred inflows	1,154	48,227
Total liabilities and deferred inflows	1,177,697	1,137,018
Net assets:		
Net investment in capital assets	164,574	158,527
Restricted:		
Under indenture agreements	52,356	47,284
Capital projects	25,000	—
Major programs	30,759	27,062
Unrestricted (deficit)	(342,535)	(340,170)
Total net position	$ (69,846)	(107,297)

(Continued)

MUHA/Roper/FOIA 000056

Analysis of the Financial Position as of June 30, 2016 Compared to June 30, 2015

Total assets and deferred outflows increased $78.1 million or 7.6% from $1,029.7 million in 2015 to $1,107.9 million in 2016. Current assets increased $59.4 million, largely driven by an increase in restricted cash of $23.6 million that includes $25.0 million for the Shawn Jenkins Children's Hospital and Pearl Tourville Women's Pavilion, a $15.9 million increase in patient accounts receivable, a $10.0 million increase in third-party receivables and a DSH receivable of $10.0 million. Investment activity increased $10.1 million and includes an increase in current investments of $5.0 million, an increase in noncurrent investments of $5.1 million and deferred outflows for pension activity increased 11.8% from $88.0 million in 2015 to $98.4 million in 2016.

Total liabilities and deferred inflows increased 3.6% from $1,137.0 million in 2015 to $1,177.7 million in 2016. Current liabilities increased 14.9% from $149.7 million in 2015 to $171.9 million in 2016, largely driven by increases in accrued payroll, accounts payable and current installments of capital lease obligations. The pension liability increased 13.1% from $570.5 million in 2015 to $645.3 million in 2016. This increase was partially offset by a decrease in deferred inflows for pension activity of 97.6% from $48.2 million in 2015 to $1.2 million in 2016.

From the data presented, readers of the Statement of Net Position are able to determine the assets available to continue the operations of the Authority. They are also able to determine how much is owed to vendors, employees, and others. Finally, the Statement of Net Position provides a picture of the net position (assets and deferred outflows minus liabilities and deferred inflows) and their availability for expenditure.

MUHA/Roper/FOIA 000057

Operating Results and Changes in the Authority's Net Position

Revenues, Expenses and Changes in Net Position

(In thousands)

	2016	2015
Operating revenues:		
Net patient service revenue	$ 1,301,324	1,231,501
Other revenue	25,333	26,301
Total operating revenues	1,326,657	1,257,802
Operating expenses:		
Compensation and employee benefits	554,624	515,052
Pension benefits	13,311	5,148
Services and supplies	679,934	631,911
Depreciation and amortization	63,841	60,666
Total operating expenses	1,311,710	1,212,777
Operating income	14,947	45,025
Nonoperating revenues (expenses):		
State appropriations	42,000	20,000
Gifts and grants	550	1,392
Investment income	4,377	2,054
Interest expense	(15,388)	(15,894)
Loss on disposal of capital assets	(7,297)	(4,011)
CHWP bond issuance cost	(738)	—
Other nonoperating expenses	(1,000)	(1,000)
Increase in net position	$ 37,451	47,566

The Statement of Revenues, Expenses and Changes in Net Position presents the revenues earned and expenses incurred during the year. Activities are reported as either operating or nonoperating. Operating revenues are received for providing goods and services. Operating expenses are paid to acquire or produce the goods and services and to carry out the mission of the Authority. Nonoperating revenues and expenses are the result of activities for which goods and services are not provided. The utilization of capital assets is reflected in the financial statements as depreciation and amortization, which is the impact of depreciating the cost of each asset over its expected useful life. Changes in net position are based on the activity presented in the Statement of Revenues, Expenses and Changes in Net Position.

(Continued)

MUHA/Roper/FOIA 000058

ROA 000169

Analysis of Operating Results for the Year ended June 30, 2016 Compared to the Year ended June 30, 2015

Net Patient Service Revenue

Compared to fiscal year 2015, net patient service revenue increased by approximately $69.8 million, or 5.7%. Gross patient charges increased by $305.6 million, or 9.3%, from 2015 to 2016 due to increases in patient activity and comprehensive rate increases. Net revenue recognized related to the DSH program administered by the state Department of Health and Human Services increased in 2016 to $48.0 million from $44.1 million in 2015. There can be no assurance that the Authority will continue to qualify for future participation in the DSH program or that the DSH program will not ultimately be discontinued or materially modified.

Payor class percentages changed somewhat from 2016 to 2015, showing an increase in Blue Cross and Medicare payor classes, a decrease in Medically Indigent/Self Pay/Other and no change in Medicaid and Private Insurance/Managed Care payor classes as shown in the table below:

Percentage of Net Patient Service Revenue by Payor Class

	2016	2015
Blue Cross	27%	25%
Medicare	32	30
Medicaid	24	24
Private Insurance/Managed Care	14	14
Medically Indigent/Self Pay/Other	3	7
Total	100%	100%

Inpatient Business Activity

Inpatient days of care increased by 2.76%, from 237,439 in 2015 to 243,992 in 2016, as summarized below. Average length of stay for all patients was 6.5 days in 2016 and 6.2 days in 2015. The average daily census increased in 2016 to 668 from the 2015 average of 643. Admissions increased in 2016 to 37,897 from the 2015 level of 37,666. Inpatient surgical procedures increased 3.2% from 19,981 in 2015 to 20,624 in 2016. The Medicare case mix index is a measure of inpatient acuity and remained flat at 2.2 in fiscal year 2015 and fiscal year 2016.

Summary of Inpatient Days

	2016	2015
Medical services	107,333	106,494
Surgical services	66,055	67,802
Psychiatric services	34,004	30,962
Women's services	36,600	32,181
Total inpatient days	243,992	237,439

(Continued)

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Outpatient Business Activity

Outpatient visits volume increased by 37,392 visits, or 3.6%, from 1,051,874 in 2015 to 1,089,266 in 2016. Emergency/Trauma visits increased to 84,060 in 2016 from the 2015 level of 82,426. Outpatient surgical procedures performed in 2016 totaled 8,310, as compared to 8,383 in 2015, a decrease of 0.9%.

Deductions from Revenue

Contractual and other adjustments, expressed as a percentage of gross revenue (60.4%), increased 2.5% from 2015 to 2016. Contractual and other adjustments expressed in dollars increased by $266.3 million from 2015 to 2016. The increase is due to the fact that reimbursements from Medicare, Medicaid and third-party insurers are less than billed charges and increases in charges implemented by the Authority are not matched by increased reimbursement rates.

The provision for uncollectible accounts decreased $30.5 million, or 19.2% from 2015 to 2016 to a total of $128.7 million for the year ended June 30, 2016. The decrease is due to an increase in charity care and an increase in bad debt recoveries. The Authority is an active, caring member of the communities it serves. In carrying out its mission of meeting the health and wellness needs of its service areas, the Authority has established policies under which it provides care to needy members of its communities. These policies include discount programs for both uninsured and indigent patients. Following these policies, charity care services totaling approximately $110.4 million and $63.0 million (as measured by established charges) were provided without charge during fiscal 2016 and 2015, respectively. The $47.4 million increase is related to a 21.0% increase in eligible charity care patients from 2015 to 2016. This increase is supported by the Authority's continued focus and efforts on enhancing policy and process to identify and qualify eligible Medicaid and charity care patients.

In total, uncompensated care write-offs at established rates as measured by the total of bad debts plus charity care totaled 6.4% and 6.6% of gross patient charges for fiscal 2016 and 2015, respectively.

Operating Expenses

Operating expenses increased by $98.9 million, from $1,212.8 million in 2015 to $1,311.7 million in 2016. This 8.2% increase is primarily the result of the increased costs associated with a higher average length of stay for patients, pension expense, staffing costs, and telehealth expenses (these expenses are offset by the State Appropriation for Telehealth recognized as revenue in the nonoperating section). These drivers impacted the following increases: services and supplies expense of $48.0 million or 7.6%, compensation and employee benefits of $39.6 million or 7.7% and pension benefits of $8.2 million or 158.6%.

(Continued)

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Additionally, supply costs and pharmaceutical costs continue to increase at rates exceeding those of general inflation; however, rates of increase are comparable to inflation rates for the healthcare industry. Depreciation and amortization expense increased $3.2 million or 5.2% in fiscal 2016.

Summary of Operating Expenses by Function

(In thousands)

	2016	2015
Patient services	$ 932,061	858,992
General and administrative	315,808	293,118
Depreciation and amortization	63,841	60,667
Total operating expenses	$ 1,311,710	1,212,777

Capital Assets

At the end of fiscal year 2016, the Authority had $512.5 million invested in capital assets, net of accumulated depreciation, as shown in note 4 to the financial statements. Total capital asset additions increased $29.9 million, from $47.1 million in 2015 to $77.0 million in 2016. The increase from 2015 to 2016 is the result of several significant contributors. Additions to major movable equipment increased $6.8 million and the Authority restructured multiple lease agreements that resulted in recording of capital lease assets of $6.7 million. Additions to construction in progress of $35.6 million increased CIP by $13.5 million, primarily related to the two projects discussed below.

Approximately $8.6 million of the $35.6 million of construction in progress additions relates to renovations of the 7th floor of the Ashley River Tower hospital. The 7th floor was converted from office space to patient care space, which was completed in November 2015.

Approximately $12.9 million of the $35.6 million of construction in progress additions relates to the Shawn Jenkins Children's Hospital and Pearl Tourville Women's Pavilion (CHWP), Phase II of the Authority's 30-year hospital replacement program. The CHWP facility is expected to cost approximately $385 million and hold about 200 beds. To prepare the construction site, the Authority demolished Charleston Memorial Hospital and the McClennan-Banks building, resulting in retirement of assets with costs of $7.9 million and $5.4 million, respectively, as of June 30, 2016. Construction is expected to start in August 2016 and the CHWP has a target opening date of August 2019. Phase II progress is contingent on obtaining the necessary funds for the project.

Efforts to improve the clinical equipment and vehicle inventory processes began in the latter part of fiscal year 2013 and have continued through fiscal year 2016. The result has been a decrease in the reported costs of assets of approximately $21.2 million and $30.4 million in 2016 and 2015, respectively. Most of the assets were fully depreciated upon disposal.

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The Authority uses both internal funds from operations and external debt capital in financing its capital acquisitions. Some capital acquisitions are also funded by federal grants and state appropriations. The most significant debt financing programs are discussed in further detail under "Financing" below.

See note 4 for more details on capital assets.

Financing

The Authority has begun a phased-approach replacement of much of its principal patient care facilities, a project planned for completion in stages over 30 years. Phase I of the project involved building a facility comprised of a four-story diagnostic and treatment center, a seven-story hospitality (bed) tower, and a garden atrium uniting the two sections of the building. Phase I of the project was completed in fiscal 2008. Ashley River Tower, the 641,000 square-foot facility was opened on February 4, 2008. No new clinical health services were added as a result of this phase of the project.

Phase II will be a Children's Hospital and Women's Pavilion (CHWP). Initial planning was begun in fiscal 2015 and continued in fiscal 2016 with architectural design derived from numerous clinical meetings and discussion of a financing plan. A preapplication document for the $350 million project was submitted to the US Department of Housing & Urban Development relating to the FHA Section 241 loan program in August 2015. At June 30, 2015, almost $68 million had been secured by way of state funding and philanthropy for Phase II. The State of South Carolina approved $25 million in the FY2016 budget and $10 million in the FY2017 budget for this project. Shawn Jenkins, a local business owner, pledged $25 million and the Tourville family pledged another $10 million. The hospital will be named the MUSC Shawn Jenkins Children's Hospital and Pearl Tourville Women's Pavilion in honor of their generosity. This level of money raised to support the project should make HUD financing possible and maintain the hospital's development and construction timeline.

On December 22, 2004, the Authority issued $422.1 million of FHA Insured Mortgage Hospital Facilities and Refunding Revenue Bonds, Series 2004 (Series 2004), consisting of $304.0 million Series A Tax-Exempt Bonds and $118.1 million Series B Taxable Bonds for the purpose of providing funds to (a) pay the costs of Phase I of the project mentioned above, (b) pay a portion of the interest accruing on the Bonds during construction of Phase I, (c) prepay the outstanding amount of the Charleston County Memorial Hospital Revenue Note, (d) advance refund the $102.8 million Hospital Facilities Refunding Revenue Bonds, Series 2002A, (e) fund a debt service reserve fund with respect to the Bonds, and (f) pay certain costs incurred in connection with the issuance of the Bonds.

On December 29, 2004, the South Carolina Jobs Economic Development Authority issued $61.0 million of Economic Development Revenue Bonds, CEP Series 2004. Proceeds of the bonds were loaned to MUFC Central Energy Plant, LLC, a single-member limited liability company organized under the laws of the State of South Carolina, whose sole member is Medical University Facilities Corporation. Pursuant to a Loan Agreement between the issuer and the borrower, the borrower shall use the proceeds to finance the construction of an approximately 52,000 square foot central energy plant and certain other improvements, renovations, and furnishings, fixtures, and equipment to provide steam and chilled water for the use and benefit of the new 156-bed Phase I Authority project mentioned above. Pursuant to the loan agreement, the borrower is obligated to make payments to the issuer in amounts sufficient to pay the principal and interest on the Bonds.

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On March 15, 2007, the construction of the Central Energy Plant was substantially completed, and the plant was put into service. In 2014, MUFC Central Energy Plant, LLC was terminated after the refunding of the CEP Series 2004 Bonds.

On February 1, 2008, MUFC Central Energy Plant, LLC converted the then outstanding $59.4 million bonds into Indexed Floating Rate Bonds to reduce the cost of capital and annual debt service payments detailed in note 6 to the financial statements. Concurrent with the conversion of the bonds, MUFC Central Energy Plant entered into a variable-to-fixed interest rate swap. The intention of the swap was to effectively convert the variable interest rate paid on the bonds to a synthetic fixed rate of 5.755%. This interest rate swap was terminated on December 30, 2013 and a payment of $2.1 million was made as part of the refinancing of the Central Energy Plant.

Management continues to look for opportunities to reduce nonoperating expenses. With interest expense being the largest nonoperating expense and interest rates at historically low levels, the Authority engaged a financial advisor in fiscal 2012 to help determine the most effective refinancing vehicle. On December 19, 2012, the refinancing of the Authority's Series 2004 bonds with Government National Mortgage Agency (GNMA) mortgage-backed securities (MBS) was completed. Long-term debt was reduced when funds in the debt service reserve and other accounts of approximately $47.4 million were made available to reduce principal. Interest was fixed at 2.94% and the amortization schedule was not extended. On December 30, 2013, the Authority refinanced the 2004 Central Energy Plant Economic Development Revenue Bonds (CEP Series 2004 bonds) with GNMA MBS. Interest was fixed at 3.85% and the amortization schedule was not extended.

The Authority entered into a six-month revenue anticipation note with Branch Banking and Trust Company (BB&T) on August 20, 2013 that expired February 20, 2014. This revenue anticipation note was renewed March 14, 2014 and expired September 14, 2014. The Authority entered into a similar contract with BB&T in August 2014 that renewed March 19, 2015, expired September 19, 2015 and was not renewed. There was no new activity on this note in fiscal year 2016.

In April 2013, the Authority entered into a $13.8 million equipment lease/purchase agreement with Wells Fargo Bank for energy conservation equipment for the Sabin Street central energy plant project. This agreement is subject to the master lease program agreement between Wells Fargo Bank and the State of South Carolina.

The Authority is in the process of structuring a transaction to facilitate the issuance of approximately $316.0 million GNMA MBS for the purpose of financing the construction of the Phase II CHWP and paying associated transaction costs. The Authority has received a commitment for Insurance Advances letter and anticipates issuing the new securities in the fall of 2016.

See note 6 for more details on financing activities.

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Current Operating Environment

The U.S. economy continues its recovery from the downturn of the past several years. Management of the Authority monitors these economic conditions closely, both with respect to potential impacts on the healthcare provider industry and from a more general business perspective. While the Authority was able to achieve certain objectives of importance in the current economic environment, management recognizes that economic conditions may continue to impact the Authority in a number of ways, including (but not limited to) uncertainties associated with the global economy, improvement in the unemployment rate and associated impact on uninsured patients, and stress on the federal, state and local budgets. Additionally, the general healthcare industry environment is increasingly uncertain, especially with respect to the impacts of the federal healthcare reform legislation which was passed in the spring of 2010. Potential impacts of ongoing healthcare industry transformation include, but are not limited to:

- Continuing volatility in the state and federal government reimbursement programs; for example, the Affordable Care Act reduces payments to all hospitals by $155 billion over ten years; it was projected that these cuts would be offset by the reduction in the uninsured population. While South Carolina chose not to expand Medicaid the uninsured rate has dropped from 18.7% to 15.4%;
- Exchange reimbursement levels that are significantly below those of traditional commercial insurance companies, payor policies that do not recognize valid assignment of benefits from patients and send payment for healthcare services to patients. Changes in combined state/federal disproportionate share payments, increasing reliance on managed care plans by Medicare and Medicaid and attendant increases in program complexity and payment delays and impact on the healthcare "demand curve" as the previously uninsured enter the insurance system;
- Effective management of multiple major regulatory mandates, including achievement of meaningful use of HCIT and the transition to ICD-10; and
- Significant potential business model changes throughout the healthcare industry, including recently announced mergers of the nation's largest health insurers.

In South Carolina, in order to control escalating Medicaid costs, the Department of Health and Human Services has maintained the changes that were implemented for hospital service rates to remain at the November, 2012 payment levels:

- Inpatient hospital base rates were increased 2.75% on October 1, 2013 and 2.50% on October 1, 2014 and adjusted on October 1, 2015 to maintain the ninety three percent (93%) of cost target;
- Inpatient Graduate Medical Education (Direct and Indirect Medical education) reimbursement rates remain at the November 1, 2012 level;
- Outpatient hospital multiplier was adjusted to maintain the ninety three percent (93%) of cost target.

(Continued)

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These reimbursement rate adjustments have had and will continue to have a significant impact on the Authority's financial performance. To help minimize the impact of this revenue reduction, the Authority continues implementation of a hospital-wide response plan directed at high-impact areas, both clinically and financially. All areas of a patient's stay are reviewed, including (but not limited to) reducing length of stay, standardization of supplies, use of generic vs. brand name drugs, staffing ratios, and new information technology to improve medical coding and billing.

The business of healthcare in the current economic, legislative and regulatory environment is volatile. Any of the above factors, along with others both currently in existence and which may or may not arise in the future, could have a material adverse impact on the Authority's financial position and operating results.

During the fiscal year ended June 30, 2016, the Authority created a consolidated clinical enterprise under the brand of MUSC Health. This enterprise is an effort to further integrate the clinical operations of the Authority and MUSC Physicians. Both entities will retain their existing separate legal entities under this enterprise, but will work more closely together to manage their combined clinical operations.

Contacting the Authority's Financial Management

This financial report is designed to provide interested parties with a general overview of the Authority's finances and to show the Authority's accountability for the money it receives. If you have questions about this report or need additional financial information, contact the Authority's Chief Financial Officer at Medical University Hospital Authority, P.O. Box 250332, Charleston, SC 29425.

MUHA/Roper/FOIA 000065

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A Component Unit of The Medical University of South Carolina)

Statement of Net Position

June 30, 2016

Assets and Deferred Outflows	
Current assets:	
Cash and cash equivalents	$ 107,833,556
Cash restricted for capital projects and major programs	40,151,522
Investments restricted for capital projects and major programs	15,057,095
Patient accounts receivable, net of allowance for uncollectible accounts of approximately $88,600,000	198,960,936
Due from third-party payors	17,929,078
Other current assets	64,689,279
Total current assets	444,621,466
Investments held by trustees under indenture agreements	52,356,374
Capital assets, net	512,516,286
Total assets	1,009,494,126
Deferred outflows	98,356,614
Total assets and deferred outflows	$ 1,107,850,740
Liabilities, Deferred Inflows and Net Position	
Current liabilities:	
Current installments of long-term debt and capital lease obligations	$ 21,460,829
Accounts payable	63,742,372
Accrued payroll, withholdings, and benefits	69,205,019
Due to related parties	7,037,419
Due to third-party payors	5,049,668
Other accrued expenses	5,416,800
Total current liabilities	171,912,107
Long-term debt and capital lease obligations net of current installments	359,323,624
Net pension liability	645,307,236
Total liabilities	1,176,542,967
Deferred inflows	1,153,583
Total liabilities and deferred inflows	1,177,696,550
Net position:	
Net investment in capital assets	164,574,408
Restricted:	
Under indenture agreements	52,356,374
Capital projects	25,000,000
Major programs	30,758,617
Unrestricted (deficit)	(342,535,209)
Total net position	(69,845,810)
Total liabilities, deferred inflows, and net position	$ 1,107,850,740

See accompanying notes to basic financial statements.

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ROA 000177

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A Component Unit of The Medical University of South Carolina)

Statement of Revenues, Expenses and Changes in Net Position

Year ended June 30, 2016

Operating revenues:	
Net patient service revenue (net of provision for uncollectable accounts of $128,683,666)	$ 1,301,323,915
Other revenue	25,333,565
Total operating revenues	1,326,657,480
Operating expenses:	
Compensation and employee benefits	554,624,082
Pension benefits	13,311,228
Services and supplies	679,934,296
Depreciation and amortization	63,840,599
Total operating expenses	1,311,710,205
Operating income	14,947,275
Nonoperating revenue (expense):	
State appropriations	42,000,000
Gifts and grants	549,999
Investment income	4,377,443
Interest expense	(15,388,607)
Loss on disposal of capital assets	(7,296,642)
CHWP bond issuance cost	(737,899)
Other nonoperating expenses	(1,000,000)
Increase in net position	37,451,569
Net position, beginning of year	(107,297,379)
Net position, end of year	$ (69,845,810)

See accompanying notes to basic financial statements.

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MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A Component Unit of The Medical University of South Carolina)

Statement of Cash Flows

Year ended June 30, 2016

Cash flows from operating activities:	
Receipts from patients and third-party payors	$ 1,266,350,236
Other cash receipts	24,758,670
Payments to suppliers and employees	(1,218,119,457)
Net cash provided by operating activities	72,989,449
Cash flows from noncapital financing activities:	
State appropriations	17,000,000
Net cash provided by noncapital financing activities	17,000,000
Cash flows from capital and related financing activities:	
Capital expenditures	(61,752,282)
Capital appropriations	25,000,000
Capital grants and gifts received	399,263
Proceeds from disposal of capital assets	101,400
Payments of principal on long-term debt	(17,325,315)
Payments of bond issuance cost	(737,899)
Payments of bond insurance premium	(1,533,324)
Payments on capital lease obligations	(1,777,595)
Payments on licensing fee obligations	(1,209,936)
Interest payments	(11,704,257)
Net cash provided by capital and related financing activities	(70,539,945)
Cash flows from investing activities:	
Proceeds from sale and maturity of investments	59,059,598
Investment income received	1,275,991
Purchases of investments	(40,074,531)
Net cash provided by investing activities	20,261,058
Net increase in cash and cash equivalents	39,710,562
Cash and cash equivalents at beginning of year	134,733,141
Cash and cash equivalents at end of year	$ 174,443,703
Reconciliation of operating income to net cash provided by operating activities:	
Operating income	$ 14,947,275
Adjustments to reconcile operating income to net cash provided by operating activities:	
Depreciation and amortization	63,840,599
Provision for uncollectible accounts	128,683,666
Changes in operating assets and liabilities:	
Patient accounts receivable	(144,621,533)
Due from third-party payors	(10,068,232)
Other current assets	(13,499,205)
Accounts payable	8,292,672
Other accrued expenses and accrued payroll, withholding and benefits	21,924,011
Due to third-party payors	2,248,328
Due to related parties	1,241,868
Net cash provided by operating activities	$ 72,989,449
Reconciliation of cash and cash equivalents at end of year to the statement of net position:	
Cash and cash equivalents	$ 107,833,556
Restricted for capital projects and major programs	40,151,522
Included in investments held by trustees under indenture agreements	26,458,625
	$ 174,443,703
Noncash transactions:	
Capital lease equipment	$ 13,482,256
Change in fair value of investments	3,209,614
Change in capital assets payable	(1,056,409)

See accompanying notes to basic financial statements

MUHA/Roper/FOIA 000068

(1) Summary of Significant Accounting Policies

Medical University Hospital Authority (the Authority) is a multidimensional healthcare system headquartered in Charleston, South Carolina. The Authority is a principal diagnostic and treatment referral center for the State of South Carolina, and also owns and operates the principal clinical teaching institutions for The Medical University of South Carolina (the University). The primary facilities used by the Authority, all located on or near the Authority's main campus in Charleston, consist of the following:

- University Hospital
- Ashley River Tower
- Children's Hospital
- Storm Eye Institute
- Institute of Psychiatry
- Digestive Disease Center
- Transplant Center
- Hollings Cancer Center
- MUSC Heart and Vascular Center

Reporting Entity

The Authority is a major discretely presented component unit of the University, as defined by the provisions of Governmental Accounting Standards Board (GASB) Statement No. 61, *The Financial Reporting Entity: Omnibus* (Statement No. 61). The Authority's component unit relationship to the University arises principally because the nature and significance of the relationship is such that exclusion would cause the University's financial statements to be misleading or incomplete. In particular, the legislation establishing the Authority as a stand-alone healthcare system, effective July 1, 2000, requires that the members of the University's Board of Trustees also constitute the Board of Trustees of the Authority.

The significant accounting policies used by the Authority in preparing and presenting its financial statements are as follows:

(a) Basis of Accounting

For financial reporting purposes, the Authority is considered a special purpose government engaged only in business-type activities. Accordingly, the financial statements have been presented using the economic resources measurement focus and the accrual basis of accounting. Under the accrual basis, revenues are recognized when earned and expenses are recorded when an obligation has been incurred.

(b) Cash Equivalents

The Authority considers investments in highly liquid individual debt instruments (with an original maturity of three months or less) and similar fund positions to be cash equivalents.

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(c) Inventories

Inventories, consisting principally of medical supplies and pharmaceuticals, are stated at the lower of cost (first-in, first-out) or replacement value and are included in other current assets in the accompanying Statement of Net Position.

(d) Investments and Investment Income

Investments are carried at fair value and consist of internally or externally restricted cash equivalents and treasury obligations with original maturities greater than three months. Fair value measurements are categorized within the fair value hierarchy established by generally accepted accounting principles and investment income or loss from investments (including realized and unrealized gains and losses on investments and interest) is reported as nonoperating revenue in the accompanying Statement of Revenues, Expenses and Changes in Net Position.

(e) Capital Assets

Capital assets are recorded at cost at the date of acquisition or, if donated, at fair value at the date of receipt. Depreciation is provided over the useful life of each class of depreciable assets using the straight-line method. Equipment under capital lease obligations is amortized using the straight-line method over the estimated useful life of the equipment or lease term, and such amortization is included in depreciation and amortization in the accompanying Statement of Revenues, Expenses and Changes in Net Position.

A summary of depreciable lives is as follows:

Land improvements	3–25 years
Buildings, improvements, and fixed equipment	5–50 years
Machinery, equipment, and vehicles	2–20 years
Software	3–5 years

(f) Statement of Revenues, Expenses and Changes in Net Position

For purposes of presentation, transactions deemed by management to be ongoing, major or central to the provision of healthcare services are reported as operating revenues and operating expenses. Principal nonoperating transactions include state appropriations, gifts and grants, investment income, interest expense, loss on disposal of capital assets and financing costs.

(g) Net Patient Service Revenue

Net patient service revenue is reported at estimated net realizable amounts from patients, third-party payors and others for services rendered, and includes estimated retroactive revenue adjustments due to future audits, reviews, and investigations, as well as the provision for uncollectible accounts. Retroactive adjustments are considered in the recognition of revenue on an estimated basis in the period the related services are rendered, and such amounts are adjusted in future periods as adjustments become known or as years are no longer subject to such audits, reviews, and investigations.

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(h) Charity Care

The Authority provides care to patients who meet certain criteria under its charity care policy without charge or at amounts less than its established rates. Because the Authority does not pursue collection of amounts determined to qualify as charity care, they are not reported as revenue.

(i) Net Position

Net position of the Authority is classified into the following components:

- Net investment in capital assets consists of capital assets, net of accumulated depreciation, reduced by outstanding balances of any borrowings used to finance the purchase or construction of those assets.
- Restricted under indenture agreements represents resources deposited with trustees as required by bond indentures or other debt agreements.
- Restricted for capital projects and major programs represents resources that the Authority is legally or contractually obligated to spend in accordance with restrictions imposed by external parties.
- Unrestricted represents remaining net position that does not meet either of the above definitions.

When the Authority has both restricted and unrestricted resources available to finance a particular program, it is the Authority's policy to use restricted resources before unrestricted resources.

(j) Costs of Borrowing

The deferred accounting loss on refunding is being amortized over the terms of the related indebtedness using the effective interest method. Refunding losses are classified as deferred outflows of resources on the Statement of Net Position. Costs of issuance are expensed in the period incurred.

Interest cost is capitalized on qualified construction expenditures, net of income earned on related assets, as a component of the cost of the related projects. For qualifying capital projects that are not financed with specific proceeds of tax-exempt debt, the Authority capitalizes interest cost on such projects based on accumulated expenditures and a weighted average borrowing rate.

(k) Income Taxes

The Authority is a political subdivision of the State of South Carolina and is treated as a governmental entity for tax purposes. Additionally, the Authority has received its determination letter from the Internal Revenue Service, indicating that it is exempt from income tax under Section 501(a) of the Internal Revenue Code, as an organization described in Section 501(c)(3). As such, the Authority is not generally subject to federal or state income taxes. However, the Authority remains subject to income taxes on any net income that is derived from a trade or business, regularly carried on and not in furtherance of the purpose for which it was granted exemption. No income tax provision has been recorded. If there is net income from any unrelated trade or business, such provision, in the opinion of management, is not material to the financial statements taken as a whole.

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(l) Use of Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires that management make estimates and assumptions affecting the reported amounts of assets, liabilities, revenues and expenses, as well as disclosure of contingent assets and liabilities. Actual results could differ from those estimates.

Significant items subject to such estimates include the allowances for uncollectible accounts and contractual adjustments for patient receivables, depreciation and amortization, liability for incurred but not reported claims under the self-insured health plan, and estimated third-party payor settlements. In particular, laws and regulations governing the Medicare and Medicaid programs are extremely complex and subject to interpretation. As a result, there is at least a reasonable possibility that recorded estimates related to these programs will change by a material amount in the near term.

(m) Recent Accounting Pronouncements

GASB Statement No. 72, *Fair Value Measurement and Application*, was issued in February 2015. This Statement addresses accounting and financial reporting issues related to fair value measurements and provides guidance for applying fair value to certain investments and disclosures related to all fair value measurements. The Authority implemented GASB Statement No. 72 in fiscal year 2016 and there was no impact on the financial statements beyond the additional disclosures added to note 2.

GASB Statement No. 75, *Accounting and Reporting for Postemployment Benefits Other than Pensions*, was issued in June 2015. The primary objective of this Statement is to improve accounting and financial reporting by state and local governments for postemployment benefits other than pensions (other postemployment benefits or OPEB). The scope of this Statement addresses accounting and financial reporting for OPEB that is provided to the employees of state and local governmental employers. This Statement establishes standards for recognizing and measuring liabilities, deferred outflows of resources, deferred inflows of resources, and expense/expenditures. For defined benefit OPEB, this Statement identifies the methods and assumptions that are required to be used to project benefit payments, discount projected benefit payments to their actuarial present value, and attribute that present value to periods of employee service. Note disclosure and required supplementary information requirements about defined benefit OPEB also are addressed. In addition, this Statement details the recognition and disclosure requirements for employers with payables to defined benefit OPEB plans that are administered through trusts that meet the specified criteria and for employers whose employees are provided with defined contribution OPEB. This Statement is effective for the Authority's fiscal year 2018.

GASB Statement No. 78, *Pensions Provided Through Certain Multiple-Employer Defined Benefit Pension Plans*, was issued in December 2015. This Statement amends the scope and applicability of Statement 68 to exclude pensions provided to employees of state or local governmental employers through a cost-sharing multiple-employer defined benefit pension plan that (1) is not a state or local governmental pension plan, (2) is used to provide defined benefit pensions both to employees of state or local governmental employers and to employees of employers that are not state or local governmental employers, and (3) has no predominant state or local governmental employer (either individually or collectively with other state or local governmental employers that provide pensions

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through the pension plan). This Statement establishes requirements for recognition and measurement of pension expense, expenditures, and liabilities; note disclosures; and required supplementary information for pensions that have the characteristics described above. GASB Statement No. 78 is effective for the Authority's fiscal year 2017 and is not expected to have an impact as the Authority's pensions are covered by GASB Statement No. 68 (note 11).

GASB Statement No. 82, *An Amendment of GASB Statements No. 67, No. 68 and No 73*, was issued in March 2016. This Statement addresses issues regarding (1) the presentation of payroll-related measures in required supplementary information, (2) the selection of assumptions and the treatment of deviations from the guidance in an Actuarial Standard of Practice for financial reporting purposes, and (3) the classification of payments made by employers to satisfy employee (plan member) contribution requirements. GASB Statement No. 82 is effective for the Authority's fiscal year 2017.

The Authority is in the process of evaluating the impact of GASB Statements No. 75, 78, 82 and other recent accounting pronouncements on the Authority's financial statements.

(2) Cash, Cash Equivalents and Investments

The Authority's cash balance at June 30, 2016 is as follows:

Insured (FDIC and SIPC)	$	759,972
Uninsured, uncollateralized, or collateralized by securities held by the pledging institution or by its trust department or agent in other than the Authority's name		153,194,299
Total	$	153,954,271
Carrying amount (cash and cash equivalents)	$	147,985,078

A summary of investments at June 30, 2016 is as follows:

	Fair value	Percentage	Maturities	Interest rate	Credit rating
Cash	$ 26,458,625	39.2%	N/A	N/A	N/A
Fixed-income securities:					
U.S. Treasury Note Bond	4,579,580	6.8	4/30/2017	0.9%	Aaa
Federal National Mortgage Association	16,706,549	24.8	11/26/2027–12/27/2027	2.5%	AA+
Federal Home Loan Bank	9,625,925	14.3	03/10/2017–4/25/2018	0.9%–1.1%	Aaa
Freddie Mac	10,042,790	14.9	7/28/2017	1.0%	Aaa
	$ 67,413,469				

The Authority categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset:

- Level 1 inputs are quoted prices in active markets for identical assets;
- Level 2 inputs are significant other observable inputs;

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- Level 3 inputs are significant unobservable inputs.

A summary of investments within the fair value hierarchy as of June 30, 2016 is as follows:

	Investments by fair value level	Fair value measurements		
		Level 1	Level 2	Level 3
Fixed-income securities:				
U.S. Treasury Note Bond	$ 4,579,580	4,579,580	—	—
Federal National Mortgage Association	16,706,549	—	16,706,549	—
Federal Home Loan Bank	9,625,925	—	9,625,925	—
Freddie Mac	10,042,790	10,042,790	—	—
	$ 40,954,844	14,622,370	26,332,474	—

The Authority's investment strategy has been developed to, among other things, ensure that the investment portfolio remains in compliance with the investments deemed permissible under the indenture agreement described in note 6. There is no formalized deposit or investment policy that otherwise addresses credit risk, interest rate risk, foreign currency risk or how investment income may be spent.

Guidelines for fixed-income investments and cash equivalents are as follows:

1. Direct obligations of the United States (U.S.) government, securities issued by federal agencies backed by the full faith and credit of the U.S. government, and securities issued by certain nonfull faith and credit federal agencies.

2. Cash, money market funds and certificates of deposit that are appropriately collateralized, insured or issued by investment grade financial institutions.

3. Investment agreements, including guaranteed investment contracts, commercial papers, repurchase agreements and other securities are subject to credit rating minimums, acceptance by related insurers, and other provisions, as described in the indenture agreements.

Concentration of credit risk is the risk of loss attributed to the magnitude of a government's investment in a single issuer. Except for restrictions imposed by the aforementioned indenture agreement, there are no limits on the amount the Authority may invest in any one issuer. As of June 30, 2016, 24.8% of the Authority's investments are in notes issued by the Federal National Mortgage Association.

Investment income is comprised of the following for the year ended June 30, 2016:

Dividend and interest income	$ 1,167,829
Realized and unrealized gain on investments	3,209,614
	$ 4,377,443

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(3) Other Current Assets

The composition of other current assets at June 30, 2016 is as follows:

Prepaid expenses	$	11,848,540
Inventories		27,168,524
Amounts due from the South Carolina Medicaid Disproportionate Share Hospital program (note 8)		11,491,860
Amounts due from the South Carolina Medicaid HMO Graduate Medical Education program		10,299,665
Other		3,880,690
	$	64,689,279

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(4) Capital Assets

Capital assets and related activity for the year ended June 30, 2016 consisted of the following:

	Beginning balance	Increases	Decreases	Ending balance
Capital assets not being depreciated:				
Land	$ 6,092,725	—	—	6,092,725
Assets not in service	2,662,311	5,709,689	(6,598,003)	1,773,997
Construction in progress	17,790,404	35,609,827	(30,082,444)	23,317,787
Total capital assets not being depreciated	26,545,440	41,319,516	(36,680,447)	31,184,509
Capital assets being depreciated:				
Buildings, improvements and fixed equipment	728,441,335	27,596,238	(13,574,158)	742,463,415
Machinery and equipment	243,377,274	39,272,803	(22,039,778)	260,610,299
Software	48,456,453	2,775,617	—	51,232,070
Vehicles	2,049,920	250,151	(176,805)	2,123,266
Total capital assets being depreciated	1,022,324,982	69,894,809	(35,790,741)	1,056,429,050
Less accumulated depreciation for:				
Buildings, improvements and fixed equipment	(346,535,706)	(34,359,766)	7,689,149	(373,206,323)
Machinery and equipment	(175,833,488)	(20,010,323)	20,595,922	(175,247,889)
Software	(15,347,803)	(9,437,875)	—	(24,785,678)
Vehicles	(1,955,000)	(79,188)	176,805	(1,857,383)
Total accumulated depreciation	(539,671,997)	(63,887,152)	28,461,876	(575,097,273)
Capital assets being depreciated, net	482,652,985	6,007,657	(7,328,865)	481,331,777
Capital assets, net	$ 509,198,425	47,327,173	(44,009,312)	512,516,286

Construction in progress at June 30, 2016 consists of costs associated with various renovation projects in process at existing hospital facilities and costs for the new Shawn Jenkins Children's Hospital & Pearl Tourville Women's Pavilion (CHWP). Construction in progress projects are generally scheduled for completion in fiscal years 2017, 2018, and 2019. Remaining costs to complete these projects are estimated to total approximately $388.0 million and include estimated costs for construction of CHWP.

Interest cost capitalized on qualifying assets was approximately $0.4 million for the year ended June 30, 2016.

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(5) Deferred Outflows

The composition of deferred outflows at June 30, 2016 is as follows:

Deferred loss on refunding GNMA MBS Series 2012	$ 31,088,401
Deferred loss on refunding CEP Series 2013	1,754,174
Pension Plans	65,514,039
Total	$ 98,356,614

(6) Long-Term Debt

A summary of long-term debt at June 30, 2016 is as follows:

GNMA MBS, 2012 Refinancing of Series 2004 Bonds, Series 2012, payable in varying amounts through 2033, with monthly interest payments at the rate of 2.94%	$ 314,047,788
MUHA Central Energy Plant, 2013 Refinancing of MUFC Central Energy Plant, LLC Economic Development Revenue Bonds, Series 2013, payable in varying amounts through 2032, with monthly interest payments at the rate of 3.85%	42,691,056
Note Payable to Wells Fargo Bank, for conservation equipment, payable in varying amounts through March 2023, with quarterly interest payments at the rate of 3.50%	9,778,649
	366,517,493
Less current installments	17,867,367
	$ 348,650,126

In December 2004, the Authority issued a total of $422.1 million of FHA Insured Mortgage Hospital Facilities and Refunding Revenue Bonds, Series 2004 (Series 2004) at a premium of $11.4 million. The net bond proceeds as well as monies from the Series 2002A Hospital Facilities Refunding Revenue Bonds (2002A Refunding Bonds) trusteed account were used to defease all amounts outstanding under the prior Series 2002A bonds and a promissory note payable to Charleston County, and fund construction of new replacement hospital facilities located in Charleston, South Carolina.

With respect to the 2002A Refunding Bonds defeasance, funds were deposited in an irrevocable trust to provide for the debt service of the bonds payable and, therefore, all related amounts have been removed from the Authority's Statement of Net Position. The deposits in trust have been or will be used to pay all scheduled principal and interest payments on the 2002A Refunding Bonds through 2032.

The 2004 refunding transaction resulted in an accounting loss totaling approximately $15.5 million, which has been deferred and is being amortized using the effective interest method through 2032. The deferred loss is related entirely to the in-substance defeasance of bonds payable.

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The Authority entered into a six month revenue anticipation note with Branch Banking and Trust Company (BB&T) on August 20, 2013 that expired February 20, 2014. This revenue anticipation note was renewed March 14, 2014 and expired September 14, 2014. The Authority entered into a similar contract with BB&T in August 2014 that renewed March 19, 2015, expired September 19, 2015 and was not renewed. There was no activity on this note in fiscal year 2016.

On December 29, 2004, the South Carolina Jobs Economic Development Authority issued $61.0 million of Economic Development Revenue Bonds, CEP Series 2004 for the benefit of the Authority. Proceeds of the bonds were loaned to MUFC Central Energy Plant, LLC, a single-member limited liability company organized under the laws of the State of South Carolina, whose sole member is Medical University Facilities Corporation. Pursuant to a Loan Agreement between the issuer and the borrower, the borrower shall use the proceeds to finance the construction of an approximately 52,000 square foot central energy plant and certain other improvements, renovations, and furnishings, fixtures, and equipment to provide steam and chilled water for the use and benefit of the new 156-bed Phase I Authority project. Pursuant to the loan agreement, the borrower is obligated to make payments to the issuer in amounts sufficient to pay the principal and interest on the Bonds. On March 15, 2007, the construction of the Central Energy Plant was substantially completed, and the plant was put into service. In 2014, MUFC Central Energy Plant, LLC was terminated after the refunding of the CEP Series 2004 Bonds.

On February 1, 2008, MUFC Central Energy Plant, LLC converted the then outstanding $59.4 million bonds into Indexed Floating Rate Bonds to reduce cost of capital and annual debt service payments.

On December 19, 2012, the Authority refinanced the CEP 2004 Series bonds with Government National Mortgage Agency (GNMA) mortgage-backed securities (MBS) (Series 2012). The refinance was done to substantially lower the Authority's interest rate from 5.18% and 5.14% on the 2004 Series bonds in fiscal 2013 to a 2.94% fixed rate on the Series 2012. At the time of refinancing, the long-term debt obligation was reduced by debt service reserve and other funds which became available to make additional principal payments. The net proceeds of $360.4 million (after payment of $1.1 million of issuance costs plus an additional $49.9 million of 2004 Series debt service fund monies), were deposited into an irrevocable trust with an escrow agent to provide for all future debt service payments on the 2004 Series bonds. The advance refunding of the 2004 Series bonds resulted in an economic gain of $1.0 million along with reducing total debt service payments over the next 20 years. The bond indenture contains certain terms and restrictive covenants, typical of such agreements, including maintenance of certain debt service coverage levels and limitations an additional indebtedness.

In April 2013, the Authority entered into a $13.8 million equipment lease/purchase agreement with Wells Fargo Bank for energy conservation equipment for the Sabin Street central energy plant project. The terms are 10 years with an interest rate of 3.50%. This agreement is subject to the master lease program agreement between Wells Fargo Bank and the State of South Carolina.

On December 30, 2013, the Authority refinanced the 2004 MUFC Central Energy Plant, LLC Economic Development Revenue Bonds (CEP Series 2004 bonds) with GNMA MBS (Series 2013). The refinance was done to lower the Authority's effective interest rate from 5.75% on the 2004 Series to a 3.85% fixed rate on the Series 2013. The net proceeds of $47.4 million (after payment of $1.3 million of issuance costs) were deposited into an irrevocable trust with an escrow agent to provide for all future debt service payments on

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the CEP Series 2004 bonds. As a result, the CEP Series 2004 bonds are considered to be defeased and the liability for those bonds has been removed from the Statement of Net Position. The advance refunding of the CEP Series 2004 bonds resulted in an economic gain of $2.4 million along with reducing total debt service payments over the next 18 years. The bond indenture contains certain terms and restrictive covenants, typical of such agreements, including maintenance of certain debt service coverage levels and limitations on additional indebtedness.

The Authority is in the process of structuring a transaction to facilitate the issuance of approximately $316.0 million GNMA MBS for the purpose of financing the construction of the Phase II CHWP and paying associated transaction costs. The Authority has received a commitment for Insurance Advances letter and anticipates issuing the new securities in the fall of 2016.

Debt service requirements associated with the Authority's outstanding bonds are as follows:

	Series 2013		Series 2012		
	Principal	Interest	Principal	Interest	Total
Fiscal year:					
2017	$ 2,098,708	1,606,829	14,455,775	9,039,246	27,200,558
2018	2,180,949	1,524,588	14,886,549	8,608,472	27,200,558
2019	2,266,413	1,439,124	15,330,159	8,164,862	27,200,558
2020	2,355,226	1,350,311	15,786,989	7,708,032	27,200,558
2021	2,447,520	1,258,017	16,257,432	7,237,589	27,200,558
2022	2,543,430	1,162,107	16,741,894	6,753,127	27,200,558
2023	2,643,099	1,062,438	17,240,793	6,254,228	27,200,558
2024	2,746,673	958,864	17,754,558	5,740,463	27,200,558
2025	2,854,306	851,231	18,283,634	5,211,387	27,200,558
2026	2,966,157	739,380	18,828,475	4,666,546	27,200,558
2027	3,082,390	623,146	19,389,553	4,105,469	27,200,558
2028	3,203,179	502,358	19,967,351	3,527,670	27,200,558
2029	3,328,701	376,836	20,562,366	2,932,655	27,200,558
2030	3,459,142	246,395	21,175,112	2,319,909	27,200,558
2031	3,594,694	110,843	21,806,119	1,688,903	27,200,559
2032	920,469	5,912	22,455,928	1,039,093	24,421,402
2033	—	—	23,125,101	369,915	23,495,016
Total	$ 42,691,056	13,818,379	314,047,788	85,367,566	455,924,789

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Debt service requirements associated with the Authority's note payable are as follows:

	Wells Fargo		
	Principal	Interest	Total
Fiscal year:			
2017	$ 1,312,884	325,146	1,638,030
2018	1,359,441	278,589	1,638,030
2019	1,407,650	230,380	1,638,030
2020	1,457,568	180,462	1,638,030
2021	1,509,257	128,773	1,638,030
2022	1,562,778	75,252	1,638,030
2023	1,169,071	20,177	1,189,248
Total	$ 9,778,649	1,238,779	11,017,428

A schedule of changes in the Authority's long-term debt and capital lease obligations for the year ended June 30, 2016 is as follows:

	Date of issuance	Beginning balance	Additions	Refunded and/or retired	Ending balance	Due within one year
Capital leases (note 14)	Various	$ 2,562,299	13,482,256	(1,777,595)	14,266,960	3,593,462
Series 2012	12/19/2012	328,085,255	—	(14,037,467)	314,047,788	14,455,775
Wells Fargo	4/25/2013	11,046,929	—	(1,268,280)	9,778,649	1,312,884
Series 2013	12/30/2013	44,710,624	—	(2,019,568)	42,691,056	2,098,708
		$ 386,405,107	13,482,256	(19,102,910)	380,784,453	21,460,829

(7) Other Accrued Expenses

The composition of other accrued expenses at June 30, 2016 is as follows:

Accrued interest	$ 797,938
Amounts due to contractors	422,426
Other	4,196,436
	$ 5,416,800

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(8) Net Patient Service Revenue

The Authority has agreements with governmental and other third-party payors that provide for reimbursement to the Authority at amounts different from its established rates. Contractual adjustments under third-party reimbursement programs represent the difference between the Authority's billings at established rates for services and amounts reimbursed by third-party payors. A summary of the basis of reimbursement with major third-party payors is as follows:

- Medicare – Substantially all inpatient acute care and outpatient services rendered to Medicare program beneficiaries are paid at prospectively determined rates. These rates vary according to patient classification systems that are based on clinical, diagnostic, and other factors. Additionally, the Authority is reimbursed for both its direct and indirect medical education costs, based principally on per-resident prospective payment amounts and certain adjustments to prospective rate-per-discharge operating reimbursement payments. The Authority generally is reimbursed for retroactively determined items at tentative rates, with final settlement determined after submission of annual cost reports by the Authority and audits by the Medicare fiscal intermediary. The Authority's cost reports have been audited and initially settled for all fiscal years through 2008, except for 2006.

  Revenue from the Medicare program accounted for approximately 32.2% of the Authority's net patient service revenue for the fiscal year ended June 30, 2016.

- Medicaid – Inpatient and outpatient services rendered to most Medicaid program beneficiaries are reimbursed based upon prospective reimbursement methodologies.

  The Authority participates in the Medicaid Disproportionate Share Hospital program (the DSH Program) available to certain qualifying hospitals in South Carolina. The net reimbursement benefits associated with this program totaled approximately $48.0 million in fiscal 2016, and are recognized as reductions in related contractual adjustments in net patient service revenue on the statement of revenues, expenses and changes in net position. There can be no assurance that the Authority will continue to qualify for future participation in this program or that the program will not ultimately be discontinued or materially modified. Any material reduction in such funds has a correspondingly material adverse effect on the Authority's operations.

  During the Authority's fiscal 2008, the State of South Carolina reconfigured certain terms and conditions of the DSH Program for participating providers, including the Authority. Because of associated funding deferrals and other changes which impacted the timing of historical net revenue and cash flows to the Authority under the program, the Authority recognized a receivable totaling approximately $1.5 million at June 30, 2016, in recognition of program net revenue earned but not received in fiscal 2016.

  In fiscal 2016, the Medicaid fiscal intermediary performed a cost settlement of the DSH program funding provided to the Authority in year 2012. The cost settlement identified an underpayment to the Authority of $10.0 million, and therefore the Authority recorded that amount as a receivable and related incremental contractual adjustment during fiscal 2016.

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In fiscal 2016, the Authority received from the Medicaid fiscal intermediary notices of retrospective cost settlements related to the Medicaid program funding for fiscal years 2009 and 2011. The Authority recognized an associated accrual for Medicaid underpayment totaling approximately $2.3 million.

During fiscal 2013, the Authority received notification that South Carolina Department of Health and Human Services (SCDHHS) will no longer retrospectively cost settle Medicaid inpatient and outpatient hospital services effective November 1, 2012.

Overall, revenue from the Medicaid program, including net disproportionate share funding and cost settlement liabilities described above, accounted for approximately 23.4% of the Authority's net patient service revenue for the year ended June 30, 2016.

The Authority has also entered into payment arrangements with various managed care organizations, commercial insurance carriers, and preferred provider organizations. Payment methodologies under these agreements include prospectively determined rates per discharge, discounts from established rates, and prospectively determined per diem rates.

Net patient service revenue is reported at estimated net realizable amounts from patients, third-party payors and others for services rendered. Associated estimates change as a result of confirming events such as completion of audits of the Authority's cost reports by third-party payors or receipt of final settlement payments from third-party payors. Net patient service revenue was increased by approximately $0.3 million for changes in prior year estimates of amounts receivable from or payable to third-party payors during the year ended June 30, 2016.

The composition of net patient service revenue for the year ending June 30, 2016 is as follows:

Gross patient service revenue	$ 3,608,447,093
Less:	
Provision for contractual and other adjustments	2,178,439,512
Provision for uncollectible accounts	128,683,666
Net patient service revenue	$ 1,301,323,915

The Health Information Technology for Economic and Clinical Health (HITECH) Act was enacted as part of the American Recovery and Reinvestment Act of 2009 and signed into law in February 2009. In the context of the HITECH Act, the Authority must implement a certified Electronic Health Record (EHR) system in an effort to promote the adoption and "meaningful use" of health information technology (HIT). The HITECH Act includes significant monetary incentives and payment penalties meant to encourage the adoption of EHR technology. The Authority implemented a certified Electronic Health Record (EHR) system as of July 1, 2014 enabling its compliance with the meaningful use objectives mandated in the HITECH legislation. The Authority collected $1.6 million in fiscal 2016, in incentive payments under the South Carolina Medicaid EHR incentive payment program related to its efforts at implementing certified EHR technology. The incentive payment is included in other revenue in the accompanying Statement of Revenues, Expenses and Changes in Net Position.

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(9) Service to the Community

The Authority is an active, caring member of the communities it serves. In carrying out its mission of meeting the health and wellness needs of its service areas, the Board of Trustees has established policies under which the Authority provides care to needy members of its communities. These policies include discount programs for both uninsured and indigent patients. Following these policies, charity care services totaling approximately $110.5 million (as measured by established charges) were provided without charge (and thus not recognized in gross patient service revenue) during fiscal 2016.

The Authority also participates in the Medicare and Medicaid programs. Under these programs, the Authority provides care to patients at payment rates that are determined by the federal and state governments, regardless of actual cost. The Authority wrote off discounts from established charges related to these programs totaling approximately $1.6 billion in fiscal 2016.

In addition to community service directly associated with providing Authority-based care, the Authority serves the community in other ways. For example:

- In keeping with the MUSC mission to improve health and maximize quality of life through education, research and patient care, the MUSC Urban Farm was developed, a half-acre educational garden with the goal of creating opportunities for our community to learn how to eat for health. The urban farm is designed to be a living classroom where students, faculty, staff and the community come together to explore the connection between food and health through hands-on learning about the many varieties of vegetables, fruits and herbs grown in South Carolina. Participants experience a unique opportunity to engage in hands-on learning about sustainable urban agriculture and are educated on the value of incorporating vegetables into their diets through cooking and nutrition lessons. The urban farm is a joint program between the Authority and the University and there were 190 classes in fiscal 2016.

- In 2015, the Authority and Sodexo partnered to address food insecurity and the rising cost of healthcare to become the first hospital in the southeast to offer the USDA's summer food service program, Kids Eat Free. In 2016, the program expanded to 7 days a week in four locations and included Saturdays in the MUSC Urban Farm. In fiscal 2016, 3,271 children participated in the Kids Eat Free program.

  The Authority and East Cooper Meals on Wheels (ECMOW) partnered to create the Blue Apron program, where physicians and case managers refer patients who are not able to shop or prepare meals for themselves to ECMOW for free meal delivery. This program addresses food insecurity and contributes to better health outcomes and fewer hospital readmissions. In fiscal 2016, 93 patients participated in the Blue Apron program and received 1,195 meal deliveries.

- The Authority and the University, in partnership with the City of Charleston, created the Adventure Out program to encourage community members to adopt a physically active lifestyle. This program is an outdoor fitness campaign that encourages residents to visit parks throughout the city where MUSC fitness instructors teach a free exercise class each week. In fiscal 2016, there were 39 free exercise classes taught via the Adventure Out program.

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A fitness park was installed on campus next to the MUSC Urban Farm where a community walk is hosted along the medical mile walking trail. This walking trail is designated a smoke free medical district and was created in partnership with the City of Charleston. In fiscal 2016, there were 150 participants in the medical mile community walk.

- The Authority, in conjunction with the University, also organizes employee participation in the Trident United Way. In fiscal 2016, Authority and University employees pledged over $108,000 to help support this organization.

While the Authority has estimated the cost of many of its community efforts to serve its broadly defined service area, management and the Board of Trustees believe that such costs represent only one facet of the many ways the Authority serves the citizens of South Carolina.

(10) Employee Benefit Plans

The Authority participates in a number of employee benefit plans sponsored by the state of South Carolina, and substantially all of the Authority's employees are covered by such plans. The following generally describes the benefits associated with the most significant plans, and the Authority's relevant participation:

- The Authority and substantially all of its employees contribute to the South Carolina Retirement System (SCRS), which sponsors a cost-sharing, multiple-employer defined benefit pension plan. SCRS provides retirement, disability and other insurance benefits to plan members and beneficiaries. For more details on the SCRS plan see footnote 11. SCRS issues a publicly available financial report that includes financial statements and required supplementary information, which can be obtained by writing SCRS's Retirement Division at 202 Arbor Lake Drive, Columbia, South Carolina 29223 or by calling (803) 737-6800.
- SCRS participants are required to contribute 8.16% of their annual covered salary to the plan and the Authority contributes at an actuarially determined rate (currently 16.39% of annual covered payroll). The Authority contributed approximately $46.1 million (11.06% statutorily required contribution plus 5.33% retiree insurance surcharge) to SCRS during fiscal 2016, equal to the required contributions. The Authority has no other liability under this plan other than to make its required contributions, which are fully funded through June 30, 2016. Effective July 1, 2016, the employee contribution rate increases from 8.16% to 8.66% and the employer contribution rate increases from 16.39% to 16.89%.
- The Authority's SCRS funding described above also funds the "pay-as-you-go" component of certain postretirement insurance benefits provided by the SCRS plan. The actual cost of providing such benefits to Authority retirees is not available. Nevertheless, as noted above, the Authority has no explicit liability associated with the postretirement health and life benefits component of the plan beyond its fully funded contributions obligation.
- Authority employees are eligible to participate in a state-sponsored multiemployer deferred compensation plan (SC Deferred Compensation Program) which provides for individual employee contributory trust accounts. The Authority does not contribute to this plan and has no liability associated with employee amounts deferred under the plan.

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Effective July 1, 2002, the Authority established and began sponsoring a profit sharing plan and trust titled the Special Healthcare Alternative Retirement Plan (SHARP). The Sharp is qualified under Section 401(a) of the Internal Revenue Code. Certain employees, as defined in SHARP, are eligible to participate at the commencement of employment. Contributions by the Authority to SHARP are discretionary and vest ratably over four years after two years of service. Contributions by the Authority in fiscal 2016 totaled approximately $794 thousand.

The Authority also independently sponsors a tax-advantaged defined contribution plan for its employees (The MUSC 403B plan). Substantially all Authority employees are eligible to participate in this plan. Employees may contribute up to $24 thousand of eligible compensation. The Authority does not match employee contributions.

(11) Pension Plans

The South Carolina Public Employee Benefit Authority (PEBA), which was created July 1, 2012, administers the various retirement systems and retirement programs managed by its Retirement Division. PEBA has an 11-member Board of Directors, appointed by the Governor and General Assembly leadership, which serves as co-trustee and co-fiduciary of the systems and the trust funds. By law, the Budget and Control Board, which consists of five elected officials, also reviews certain PEBA Board decisions regarding the funding of the South Carolina Retirement Systems (Systems) and serves as a co-trustee of the Systems in conducting that review.

For purposes of measuring the net pension liability, deferred outflows and deferred inflows of resources related to pensions, and pension expense, information about the fiduciary net position of the Systems and additions to/deductions from the Systems' fiduciary net position have been determined on the accrual basis of accounting as they are reported by the Systems in accordance with generally accepted accounting principles (GAAP). For this purpose, revenues are recognized when earned and expenses are recognized when incurred. Benefit and refund expenses are recognized when due and payable in accordance with the terms of the plan. Investments are reported at fair value.

PEBA issues a Comprehensive Annual Financial Report (CAFR) containing financial statements and required supplementary information for the Systems' Pension Trust Funds. The CAFR is publicly available through the Retirement Benefits' link on PEBA's website at www.peba.sc.gov, or a copy may be obtained by submitting a request to PEBA, PO Box 11960, Columbia, SC 29211-1960. PEBA is considered a division of the primary government of the state of South Carolina, and therefore, retirement trust fund financial information is also included in the comprehensive annual financial report of the state.

Plan Description

The South Carolina Retirement System (SCRS), a cost–sharing multiple-employer defined benefit pension plan, was established effective July 1, 1945, pursuant to the provisions of Section 9-1-20 of the South Carolina Code of Laws for the purpose of providing retirement allowances and other benefits for employees of the state, its public school districts, and political subdivisions.

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The State Optional Retirement Program (ORP) is a defined contribution plan that is offered as an alternative to certain newly hired state, public school, and higher education employees. State ORP participants direct the investment of their funds into a plan administered by one of four investment providers.

The South Carolina Police Officers Retirement System (PORS), a costsharing multiple-employer defined benefit pension plan, was established effective July 1, 1962, pursuant to the provisions of Section 9-11-20 of the South Carolina Code of Laws for the purpose of providing retirement allowances and other benefits for police officers and firemen of the state and its political subdivisions.

Membership

Membership requirements are prescribed in Title 9 of the South Carolina Code of Laws. A brief summary of the requirements under each system is presented below.

- SCRS – Generally, all employees of covered employers are required to participate in and contribute to the system as a condition of employment. This plan covers general employees and teachers and individuals newly elected to the South Carolina General Assembly beginning with the November 2012 general election. An employee member of the system with an effective date of membership prior to July 1, 2012, is a Class Two member. An employee member of the system with an effective date of membership on or after July 1, 2012, is a Class Three member.
- State ORP – As an alternative to membership in SCRS, newly hired state, public school, and higher education employees and individuals newly elected to the South Carolina General Assembly beginning with the November 2012 general election have the option to participate in the State ORP. State ORP participants direct the investment of their funds into a plan administered by one of four investment providers. PEBA assumes no liability for State ORP benefits. Rather, the benefits are the liability of the investment providers. For this reason, State ORP programs are not part of the retirement systems' trust funds for financial statement purposes. Employee and employer contributions to the State ORP are at the same rates as SCRS. A direct remittance is required from the employers to the member's account with investment providers for the employee contribution and a portion of the employer contribution (5%). A direct remittance is also required to SCRS for the remaining portion of the employer contribution and an incidental death benefit contribution, if applicable, which is retained by SCRS.
- PORS – To be eligible for PORS membership, an employee must be required by the terms of his employment, by election or appointment, to preserve public order, protect life and property, and detect crimes in the state; to prevent and control property destruction by fire; or to serve as a peace officer employed by the Department of Corrections, the Department of Juvenile Justice, or the Department of Mental Health. Probate judges and coroners may elect membership in PORS. Magistrates are required to participate in PORS for service as a magistrate. PORS members, other than magistrates and probate judges, must also earn at least $2,000 per year and devote at least 1,600 hours per year to this work, unless exempted by statute. An employee member of the system with an effective date of membership prior to July 1, 2012, is a Class Two member. An employee member of the system with an effective date of membership on or after July 1, 2012, is a Class Three member.

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Benefits

Benefit terms are prescribed in Title 9 of the South Carolina Code of Laws. PEBA does not have the authority to establish or amend benefit terms without a legislative change in the code of laws. Key elements of the benefit calculation include the benefit multiplier, years of service, and average final compensation. A brief summary of benefit terms for each system is presented below.

- SCRS – A Class Two member who has separated from service with at least five or more years of earned service is eligible for a monthly pension at age 65 or with 28 years credited service regardless of age. A member may elect early retirement with reduced pension benefits payable at age 55 with 25 years of service credit. A Class Three member who has separated from service with at least eight or more years of earned service is eligible for a monthly pension upon satisfying the Rule of 90 requirement that the total of the member's age and the member's creditable service equals at least 90 years. Both Class Two and Class Three members are eligible to receive a reduced deferred annuity at age 60 if they satisfy the five-or eight-year earned service requirement, respectively. An incidental death benefit is also available to beneficiaries of active and retired members of employers who participate in the death benefit program.

  The annual retirement allowance of eligible retirees or their surviving annuitants is increased by the lesser of one percent or five hundred dollars every July 1. Only those annuitants in receipt of a benefit on July 1 of the preceding year are eligible to receive the increase. Members who retire under the early retirement provisions at age 55 with 25 years of service are not eligible for the benefit adjustment until the second July 1 after reaching age 60 or the second July 1 after the date they would have had 28 years of service credit had they not retired.

- PORS – A Class Two member who has separated from service with at least five or more years of earned service is eligible for a monthly pension at age 55 or with 25 years of service regardless of age. A Class Three member who has separated from service with at least eight or more years of earned service is eligible for a monthly pension at age 55 or with 27 years of service regardless of age. Both Class Two and Class Three members are eligible to receive a deferred annuity at age ASU 55 with five or eight years of earned service, respectively. An incidental death benefit is also available to beneficiaries of active and retired members of employers who participate in the death benefit program. Accidental death benefits are also provided upon the death of an active member working for a covered employer whose death was a natural and proximate result of an injury incurred while in the performance of duty.

  The retirement allowance of eligible retirees or their surviving annuitants is increased by the lesser of one percent or five hundred dollars every July 1. Only those annuitants in receipt of a benefit on July 1 of the preceding year are eligible to receive the increase.

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Contributions

Contributions are prescribed in Title 9 of the South Carolina Code of Laws. Upon recommendation by the actuary in the annual actuarial valuation, the PEBA Board may adopt and present to the Budget and Control Board for approval an increase in the SCRS and PORS employer and employee contribution rates, but any such increase may not result in a differential between the employee and total employer contribution rate that exceeds 2.9% of earnable compensation for SCRS and 5% for PORS. An increase in the contribution rates adopted by the Board may not provide for an increase of more than one-half of one percent in any one year. If the scheduled employee and employer contributions provided in statute or the rates last adopted by the Board are insufficient to maintain a thirty year amortization schedule of the unfunded liabilities of the plans, the Board shall increase the contribution rates in equal percentage amounts for the employer and employee as necessary to maintain the thirty-year amortization period; and, this increase is not limited to one-half of one percent per year.

- Required employee contribution rates [1] for fiscal year 2015–2016 are as follows:

SCRS:	
Employee Class Two	8.16%
Employee Class Three	8.16
State ORP	8.16%
PORS:	
Employee Class Two	8.74%
Employee Class Three	8.74

- Required employer contribution rates [1] for fiscal year 2015–2016 are as follows:

SCRS:	
Employer Class Two	10.91%
Employer Class Three	10.91
Employer Incidental Death Benefit	0.15
State ORP:	
Employer Contribution [2]	10.91%
Employer Incidental Death Benefit	0.15
PORS:	
Employer Class Two	13.44%
Employer Class Three	13.44
Employer Incidental Death Benefit	0.20
Employer Accidental Death Program	0.20

[1] Calculated on earnable compensation as defined in Title 9 of the South Carolina Code of Laws.

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[2] Of this employer contribution, 5% of earnable compensation must be remitted by the employer directly to the ORP vendor to be allocated to the member's account with the remainder of the employer contribution remitted to the SCRS.

Allocation of Pension Amounts

The Authority's proportionate share of pension amounts was calculated on the basis of historical employer contributions. Although GASB 68 encourages the use of the employer's projected long-term contribution effort to the retirement plan, allocating on the basis of historical employer contributions is considered acceptable. Employer contributions recognized by the Systems that are not representative of future contribution effort are excluded in the determination of employers' proportionate shares. Examples of employer contributions not representative of future contribution efforts are contributions towards the purchase of employee service and employer contributions paid by employees in connection with early retirement.

The following table provides the employer contributions used in the determination of employers' proportionate shares of collective pension amounts reported in the Schedule of Employer Allocations.

	SCRS	PORS
The Authority's proportionate share of contributions for the fiscal year ended June 30, 2015	$ 34,516,724	364,104
The Authority's allocation percentage of proportionate shares of collective pension amounts – June 30, 2015 measurement date	3.377349%	0.21917%

Net Pension Liability

The net pension liability of each defined benefit pension plan was determined based on the July 1, 2014 actuarial valuations, as adopted by the PEBA Board and Budget and Control Board, which utilized membership data as of July 1, 2014. Information included in the following schedules is based on the certification provided by PEBA's consulting actuary, Gabriel, Roeder, Smith and Company.

The net pension liability (NPL) is calculated separately for each system and represents that particular system's total pension liability determined in accordance with GASB No. 67, *Financial Reporting for Pension Plans – an amendment of GASB Statement No. 25*, less that system's fiduciary net position. As of June 30, 2015, NPL amounts for SCRS and PORS and the Authority's proportionate share are as follows:

System	Total pension liability	Plan fiduciary net position	Collective net pension liability (asset)	The authority's portion of collective net pension liability	The authority's proportioned share of net pension liability
SCRS	$ 44,097,310,230	25,131,828,101	18,965,482,129	3.377349%	$ 640,530,521
PORS	6,151,321,222	3,971,824,838	2,179,496,384	0.21917%	4,776,715

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For the year ended June 30, 2016, the Authority recognized pension expense of $50,378,064 and $423,151 related to the SCRS and PORS pension plans, respectiely.

Actuarial Assumptions and Methods

Actuarial valuations involve estimates of the reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and future salary increases. Actuarial assumptions and methods used during the annual valuation process are subject to periodic revision, typically with an experience study, as actual results over an extended period of time are compared with past expectations and new estimates are made about the future. South Carolina state statute requires that an actuarial experience study be completed at least once in each five-year period. The last experience study was performed on data through June 30, 2010 and the next experience study, performed on data through June 30, 2015, is currently underway.

The following table provides a summary of the actuarial assumptions and methods used in the July 1, 2014 valuations for SCRS and PORS.

	SCRS	PORS
Actuarial cost method	Entry age normal	Entry age normal
Actuarial assumptions:		
Investment rate of return [1]	7.50%	7.50%
Projected salary increases	3.50% to 12.50% (varies by service) [1]	4.0% to 10.0% (varies by service) [1]
Benefit adjustments	lesser of 1% or $500 annually	lesser of 1% or $500 annually
	Annually	Annually

[1] Includes inflation at 2.75%

The post-retiree mortality assumption is dependent upon the member's job category and gender. This assumption includes base rates which are automatically adjusted for future improvement in mortality using published Scale AA projected from the year 2000. Assumptions used in the July 1, 2014, valuations for SCRS and PORS are as follows.

Former Job Class	Males	Females
Educators	RP-2000 Males (with White Collar adjustment) multiplied by 110%	RP-2000 Females (with White Collar adjustment) multiplied by 95%
General Employees and Members of the General Assembly	RP-2000 Males multiplied by 100%	RP-2000 Females multiplied by 90%
Public Safety and Firefighters	RP-2000 Males (with Blue Collar adjustment) multiplied by 115%	RP-2000 Females (with Blue Collar adjustment) multiplied by 115%

Long-Term Expected Rate of Return

The long-term expected rate of return on pension plan investments, as used in the July 1, 2014, actuarial valuations, was based upon the 30 year capital market outlook at the end of the fourth quarter 2013, as developed by the Retirement Systems Investment Commission (RSIC) in collaboration with its investment consultant, Aon Hewitt. The long-term expected rate of returns represent assumptions developed using an

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arithmetic building block approach, reflecting observable inflation and interest rate information available in the fixed-income markets as well as Consensus Economics forecasts. Long-term assumptions for other asset classes are based on historical results, current market characteristics, and professional judgment.

The RSIC has exclusive authority to invest and manage the retirement trust funds' assets. As co-fiduciary of the Systems, statutory provisions and governance policies allow the RSIC to operate in a manner consistent with a long-term investment time horizon. The expected returns, along with the expected inflation rate, form the basis for the target asset allocation as adopted by the RSIC for fiscal year 2015. The long-term expected rate of return is produced by weighting the expected future real rates of return by the target allocation percentage and by adding expected inflation and is summarized in the table below. For actuarial purposes, the 7.50% assumed annual investment rate of return set in statute and used in the calculation of the total pension liability includes a 4.75% real rate of return and a 2.75% inflation component.

Asset class	Target asset allocation (%)	Expected arithmetic real rate of return (%)	Long term expected portfolio real rate of return (%)
Short term	5.0		
Cash	2.0	1.90	0.04
Short duration	3.0	2.00	0.06
Domestic fixed income	13.0		
Core fixed income	7.0	2.70	0.19
Mixed Credit	6.0	3.80	0.23
Global fixed income	9.0		
Global fixed income	3.0	2.80	0.08
Emerging markets debt	6.0	5.10	0.31
Global public equity	31.0	7.10	2.20
Global tactical asset allocation	10.0	4.90	0.49
Alternatives	32.0		
Hedge funds (low beta)	8.0	4.30	0.34
Private debt	7.0	9.90	0.69
Private equity	9.0	9.90	0.89
Real estate (broad market)	5.0	6.00	0.30
Commodities	3.0	5.90	0.18
Total expected real return	100%		6.00%
Inflation for actuarial purposes			2.75%
Total expected nominal return			8.75%

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Discount Rate

The discount rate used to measure the total pension liability was 7.50%. The projection of cash flows used to determine the discount rate assumed that the funding policy specified in the South Carolina State Code of Laws will remain unchanged in future years. Based on those assumptions, each System's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Sensitivity Analysis

The following table presents the sensitivity of the Authority's net pension liability calculated using the discount rate of 7.50%, as well as what the Authority's net pension liability would be if it were calculated using a discount rate that is 1.00% lower (6.50%) or 1.00% higher (8.50%) than the current rate.

The Authority's Sensitivity of the Net Pension Liability to Changes in the Discount Rate

	1.00% Decrease (6.50%)	Current discount rate (7.50%)	1.00% Increase (8.50%)
SCRS	$ 807,525,960	640,530,521	500,567,112
PORS	6,507,001	4,776,715	3,229,933

Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

Deferred outflows of resources were related to differences between expected and actual experience and contributions made after the measurement date. Deferred inflows of resources were related to differences between projected and actual investment earnings. At June 30, 2016, the Authority reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	Deferred outflows of resources	Deferred inflows of resources
Net differences between expected and actual experience:		
SCRS	$ 11,380,042	1,145,472
PORS	94,675	—
Changes of assumption:		
SCRS	—	—
PORS	—	—
Net difference between projected and actual earnings on pension plan investments:		
SCRS	4,287,390	—
PORS	52,266	—

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	Deferred outflows of resources	Deferred inflows of resources
Changes in proportion and differences between the Authority's contributions and proportionate share of contributions:		
SCRS	$ 12,181,311	—
PORS	—	8,111
The Authority's contributions subsequent to the measurement date:		
SCRS	37,143,234	—
PORS	375,121	—
Total	$ 65,514,039	1,153,583

$37.5 million reported as deferred outflows of resources related to pensions resulting from the Authority's contributions subsequent to the measurement date will be recognized as a reduction of the net pension liability in the year ended June 30, 2017. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

	SCRS	PORS
Year ended June 30:		
2016	$ (6,592,216)	(12,735)
2017	(6,592,216)	(12,735)
2018	(2,683,353)	(8,553)
2019	(10,835,486)	(104,807)
Net balance of deferred outflows/(inflows) of resources	$ (26,703,271)	(138,830)

Pension Plan Fiduciary Net Position

Detailed information regarding the fiduciary net position of the plans administered by PEBA is available in the separately issued CAFR containing financial statements and required supplementary information for SCRS and PORS. The CAFR of the Pension Trust Funds is publicly available on PEBA's Retirement Benefits' website at www.retirement.sc.gov, or a copy may be obtained by submitting a request to PEBA, PO Box 11960, Columbia, SC 29211-1960.

(12) Business and Credit Concentrations

The Authority provides healthcare services through its inpatient and outpatient care facilities principally located in and around Charleston, South Carolina. The Authority grants credit to patients, substantially all of whom are residents of its service area. The Authority generally does not require collateral or other security in extending credit to patients; however, it routinely obtains assignment of (or is otherwise entitled to receive) patients' benefits payable under their health insurance programs, plans or policies (e.g., Medicare, Medicaid, Blue Cross, and commercial insurance policies).

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The mix of receivables from patients and third-party payors as of June 30, 2016 is as follows:

Blue Cross	13%
Medicare	27
Medicaid	26
Private Insurance/Managed Care	16
Medically Indigent/Self Pay/Other	18
	100%

(13) Risk Management

The Authority is exposed to various risks of loss related to torts; theft of, damage to and destruction of assets; business interruption; errors and omissions; employee injuries and illness; natural disasters; and professional and general liability claims and judgments. The Authority participates in the South Carolina Insurance Reserve Fund (IRF), which provides coverage for substantially all such risks. The Authority pays premiums to the IRF and effectively receives unlimited (when combined with related recovery limit protections provided by state statutes) occurrence-based coverage for all consequential risks of loss. There has been no change in coverage during the year ended June 30, 2016.

(14) Leases

The Authority has entered into capital lease agreements for the purpose of financing certain equipment acquisitions expiring in various years through 2024. Future minimum lease payments due under capital leases, by year and in the aggregate, follow:

2017	$ 3,989,521
2018	3,877,651
2019	3,233,648
2020	1,489,596
2021	1,139,049
Thereafter	1,644,800
	15,374,265
Less interest at rates from 0% to 4.83%	1,107,305
Present value of future minimum lease payments	14,266,960
Less current installments	3,593,462
Capital lease obligations, excluding current installments	$ 10,673,498

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The Authority also enters into operating leases for various capital assets expiring in various years through 2039. Future minimum lease payments due under noncancelable operating lease agreements with third parties are as follows:

2017	$ 19,592,768
2018	12,714,896
2019	10,856,831
2020	7,068,656
2021	5,263,617
2022–2026	12,338,236
2027–2031	2,449,620
2032–2036	704,115
2037–2039	492,880
Total	$ 71,481,619

Rental expense for all operating leases was approximately $25.3 million in fiscal 2016 and is included in services and supplies expense in the accompanying Statement of Revenues, Expenses and Changes in Net Position. Management expects that most lease agreements will be replaced, as they expire, with similar agreements.

(15) Related Party Transactions

The following describes the Authority's material agreements with related parties:

(a) The University

Under the terms of various agreements related to the Authority's establishment as a distinct healthcare system, the University provides a variety of shared services for the Authority, including facilities oversight, administrative and financial services, and other types of general operating support. The Authority also leases certain facilities space from the University under the Reciprocal Space Agreement. The cost of these services and leases totaled approximately $59.2 million for fiscal 2016, and is included in services and supplies expense in the accompanying Statement of Revenues, Expenses and Changes in Net Position.

The Authority also reimburses the University for certain professional clinical services provided by interns and residents receiving medical education at the University. The cost of these services totaled approximately $52.2 million for fiscal 2016, and is included in services and supplies expense in the accompanying Statement of Revenues, Expenses and Changes in Net Position.

In March 2010, the Internal Revenue Service (IRS) published its administrative determination that medical residents are exempt from Federal Insurance Contributions Act (FICA) payroll taxes based on "the student exception" for tax periods ending before April 1, 2005, when new IRS regulations went into effect that otherwise address this matter. The University timely filed a protective claim with the IRS for medical resident FICA taxes paid during the period from January 1, 1996 to March 31, 2005, and was expecting a refund of those taxes from the IRS. The University estimated the refund amount

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at $13.0 million, plus overpayment interest of $11.7 million, for a total estimated refund amount of $24.7 million. Given that the Authority reimbursed the University for residents' salaries (including FICA taxes) during the period subject to the refund of the FICA taxes, the estimated refund amount is recoverable by the Authority from the University upon collection and was, therefore, recorded as an amount due from the University. In fiscal year 2011, the estimated receivable was decreased to $22.2 million based on additional analysis performed by management. The Authority received $20.7 million and $1.5 million in fiscal 2013 and 2014, respectively, from the IRS.

Related to this matter, MUSC residents work at the Ralph H. Johnson Veterans Affairs Medical Center (VA) and MUSC is reimbursed by the VA for this work. The $22.2 million FICA refund included reimbursement of residents' FICA taxes and it is the Authority's position that this portion of the refund is owed to the VA. In fiscal year 2013, the Authority recorded a liability of approximately $1.8 million to the VA for this matter and the balance of the liability is the same as of June 30, 2016. This is a component of other accrued expenses on the Statement of Net Position (note 7).

The Authority rents certain facilities space to and provides limited support services for the University. The income earned by the Authority for such items was approximately $3.2 million during fiscal 2016, which is included in other revenue in the accompanying Statement of Revenues, Expenses and Changes in Net Position.

The Authority had a net payable to the University of $4.8 million at June 30, 2016. This net payable includes a receivable from the MUSC Foundations of $614 thousand and is a component of due to related parties on the Statement of Net Position.

(b) University Medical Associates (UMA)

UMA, a blended component unit of the University, is a separately organized professional services corporation associated with the University's faculty practice plan. UMA and the Authority have entered into certain agreements related to clinical and other services provided by UMA and its practicing physicians for the benefit of the Authority. Net amounts paid by the Authority to UMA under these agreements totaled approximately $58.5 million during fiscal 2016 and are included in services and supplies expense in the accompanying Statement of Revenues, Expenses and Changes in Net Position.

UMA also provides billing and collection services to the Authority related to certain limited clinical services, for which UMA receives an administrative fee. Total billings by UMA for the Authority services were approximately $49.3 million in fiscal 2016. The amounts collected and remitted by UMA to the Authority with respect to these billings amounted to approximately $9.7 million in fiscal 2016. The administrative fees paid by the Authority to UMA amounted to approximately $870 thousand for fiscal 2016 and are included in services and supplies expense in the accompanying Statement of Revenues, Expenses and Changes in Net Position.

UMA and the Authority jointly fund the costs of an ambulatory and revenue cycle Electronic Health Record (EHR) system. The funding percentages for each entity depend on the particular costs incurred. The types of costs paid in fiscal year 2016 were primarily operating costs. Net amounts paid by UMA to the Authority totaled approximately $2.8 million during fiscal year 2016.

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The Authority had a net payable to UMA in the amount of $2.2 million at June 30, 2016. This payable is a component of due to related parties on the Statement of Net Position.

(c) The State of South Carolina

The Authority benefits from certain administrative services provided by related State agencies and departments. The cost of these services (primarily related to insurance program administration, record-keeping, and centralized treasury management) is either insignificant relative to the Authority's allocable portion or is funded by the Authority with payments as described in notes 6, 8, 10, 11, 13 and 15.

(16) Purchase Commitments

The Authority originally entered into a long-term agreement on March 25, 2016 that requires certain minimum purchases of patient monitoring products and services through fiscal year 2024. The Authority amended the original agreement effective July 1, 2016, which reduced the required minimum purchases and corresponding unitary payments. This commitment is at a level consistent with normal business practices.

At June 30, 2016, the minimum purchase commitment from the amendment and extending beyond one year was as follows:

2017	$ 4,326,072
2018	4,326,072
2019	4,326,072
2020	4,326,072
2021	4,326,072
2022–2024	12,978,216
Total	$ 34,608,576

During 2016, the Authority's total purchases under the contract with a minimum purchase commitment were $3.7 million.

A portion of the minimum purchases under this contract are considered capital leases and, therefore, are included in the required lease disclosures in note 14.

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(17) Investment in Initiant

In April 2014, the Authority, became a founding member of a health collaborative named Initiant. Initiant is a limited liability company owned by the founding members, with the opportunity to add more members (owners) and participants (nonowners) over time. The Authority has representation on the Board of Managers of the collaborative and exercises joint control with the other members over Initiant, LLC. The other members are Greenville Health System (Greenville, SC), McLeod Health (Florence, SC), Palmetto Health (Columbia, SC) and Self Regional Healthcare (Greenwood, SC). The purpose of this collaborative is to create efficiencies and synergies that mitigate the rising costs of healthcare.

In May 2016, Initiant, LLC's Board of Managers voted to change from an expense reimbursement structure to a combination of capital calls and member loans. The Authority will be responsible for its respective share of all future capital calls. It contributed $400,000 of capital calls to the company in fiscal year 2016, which was based on its 20% ownership. The Authority also recorded and had outstanding at June 30, 2016 a $134,608 payable to Initiant for the Authority's portion of professional fees incurred by Initiant, which is included in other accrued expenses on the Statement of Net Position. The Authority carries its investment balance on the Statement of Net Position using the equity method of accounting. At June 30, 2016, the Authority's investment balance Initiant was $0.

Initiant, LLC will have separate financial statements going forward. However, financial statements were not available at June 30, 2016.

MUHA/Roper/FOIA 000098

ROA 000209

THE AUTHORITY'S
Schedule of Proportionate Share
of Net Pension Liability to PEBA

South Carolina Retirement System (SCRS) Pension Plan

June 30, 2015 Measurement Date

Year ended June 30	Proportion (percentage) of the collective net pension liability	Proportionate share (amount) of the collective net pension liability	Covered employee payroll	Proportionate share (amount) of the collective net pension liability as a percentage of covered employee payroll	Pension plan's fiduciary net position as a percentage of total pension liability
2016	3.377349%	$ 640,530,521	281,452,784	227.58%	57.00%
2015	3.289076	566,270,880	268,970,820	210.53	59.90
2014	3.289184	589,943,980	259,311,350	227.50	56.39

THE AUTHORITY'S
Schedule of Proportionate Share
of Net Pension Liability to PEBA

Police Officers Retirement System (PORS) Pension Plan

June 30, 2015 Measurement Date

Year ended June 30	Proportion (percentage) of the collective net pension liability	Proportionate share (amount) of the collective net pension liability	Covered employee payroll	Proportionate share (amount) of the collective net pension liability as a percentage of covered employee payroll	Pension plan's fiduciary net position as a percentage of total pension liability
2016	0.21917%	$ 4,776,715	2,730,140	174.96%	64.60%
2015	0.21963	4,204,542	2,692,311	156.17	67.50
2014	0.21962	4,552,745	2,589,067	175.85	62.98

The above schedules are intended to show ten years of information. Additional years will be provided as they became available

See accompanying notes to required supplementary information and accompanying independent auditors' report.

(Continued)

MUHA/Roper/FOIA 000099

THE AUTHORITY'S
Schedule of Employer Contributions to PEBA

South Carolina Retirement System (SCRS) Pension Plan

Fiscal Year ended June 30, 2016

Year ended June 30	Employer contributions	Statutorily or contractually required employer contributions	Contribution deficiency (excess)	Covered employee payroll	Contributions as a Percentage of covered employee payroll
2016	$ 31,128,678	31,128,678	—	281,452,784	11.06%
2015	29,317,819	29,317,819	—	268,970,820	10.90
2014	27,487,003	27,487,003	—	259,311,350	10.60
2013	27,997,059	27,997,059	—	264,123,194	10.60

THE AUTHORITY'S
Schedule of Employer Contributions to PEBA

Police Officers Retirement System (PORS) Pension Plan

Fiscal Year ended June 30, 2016

Year ended June 30	Employer contributions	Statutorily or contractually required employer contributions	Contribution deficiency (excess)	Covered employee payroll	Contributions as a percentage of covered employee payroll
2016	$ 375,121	375,121	—	2,730,140	13.74%
2015	361,039	361,039	—	2,692,311	13.41
2014	332,436	332,436	—	2,589,067	12.84
2013	349,962	349,962	—	2,845,220	12.30

The above schedules are intended to show ten years of information. Additional years will be provided as they became available

See accompanying notes to required supplementary information and accompanying independent auditors' report.

MUHA/Roper/FOIA 000100

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A Component Unit of The Medical University of South Carolina)

Notes to Required Supplementary Information

June 30, 2016

(Unaudited)

	SCRS
Valuation date	Actuarially calculated contribution rates are calculated as of July 1, 2012.
Methods and assumptions used to determine contribution rates:	
Actuarial cost method	Entry Age Normal
Amortization method	Level% of Pay
Amortization period	29 years, open
Asset valuation method	The market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual and the expected returns on a market value basis and is recognized over a five-year period.
Inflation	2.75%
Investment Rate of Return	7.50%
Salary Increases	3.50% plus step-rate increases for members with less than 25 years of service.
Mortality	RP-2000 Mortality Table (White Collar Adjustment for Educators), projected at Scale AA from Year 2000. Male rates multiplied by 100% for noneducators and 110% for educators. Female rates multiplied by 90% for noneducators and 95% for educators.
Other Comments	As a result of enactment of Act 278, the member and employer contribution rates for SCRS are determined in accordance with Section 9-1-1085 of the South Carolina Code. Contribution rates determined by an actuarial valuation are effective for the fiscal year beginning 24 months after the valuation date.

	PORS
Valuation date	Actuarially calculated contribution rates are calculated as of July 1, 2012.
Methods and assumptions used to determine contribution rates:	
Actuarial cost method	Entry Age Normal
Amortization method	Level% of Pay
Amortization period	30 years, open
Asset valuation method	The market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual and the expected returns on a market value basis and is recognized over a five-year period.
Inflation	2.75%
Investment Rate of Return	7.50%
Salary Increases	4% plus step-rate increases for members with less than 12 years of service.
Mortality	RP-2000 Mortality Table with Blue Collar Adjustment, projected at Scale AA from Year 2000. Male and female rates are multiplied at 115%
Other Comments	As a result of enactment of Act 278, the member and employer contribution rates for SCRS are determined in accordance with Section 9-11-225 of the South Carolina Code. Contribution rates determined by an actuarial valuation are effective for the fiscal year beginning 24 months after the valuation date.

See accompanying notes to required supplementary information and accompanying independent auditors' report.

MUHA/Roper/FOIA 000101

KPMG

MEDICAL UNIVERSITY HOSPITAL AUTHORITY

(A Component Unit of The Medical University of South Carolina)

Basic Financial Statements and Required Supplementary Information

June 30, 2017

(With Independent Auditors' Report Thereon)

MUHA/Roper/FOIA 000102

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A Component Unit of The Medical University of South Carolina)

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KPMG LLP
Suite 400
300 North Greene Street
Greensboro, NC 27401

Independent Auditors' Report

The Board of Trustees
Medical University Hospital Authority:

We have audited the accompanying financial statements of the Medical University Hospital Authority (the Authority), a component unit of The Medical University of South Carolina, as of and for the year ended June 30, 2017, and the related notes to the financial statements, which collectively comprise the Medical University Hospital Authority's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with U.S. generally accepted accounting principles; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Medical University Hospital Authority as of June 30, 2017, and the changes in its net position and its cash flows for the year then ended, in accordance with U.S. generally accepted accounting principles.

Emphasis of Matter

As discussed in note 1(m) to the financial statements, during fiscal year 2017, the Authority adopted Governmental Accounting Standards Board Statement No. 82, *An Amendment of GASB Statements No. 67, No. 68, and No. 73*. Our opinion is not modified with respect to this matter.

KPMG International Cooperative ("KPMG International"), a Swiss entity.

KPMG

Other Matters

Required Supplementary Information

U.S. generally accepted accounting principles require that the Management's Discussion and Analysis on pages 3–13 and the schedules of proportionate share of the net pension liability to PEBA and the schedules of employer contributions to PEBA on pages 47–50 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated September 28, 2017 on our consideration of the Authority's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Authority's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Authority's internal control over financial reporting and compliance.

KPMG LLP

Greensboro, North Carolina
September 28, 2017

MUHA/Roper/FOIA 000105

Our discussion and analysis of Medical University Hospital Authority's (the Authority) financial performance provides an overview of the activities for the fiscal year ended June 30, 2017.

The intent of this discussion and analysis is to provide further information regarding the Authority's financial performance as a whole. Readers should also review the basic financial statements, along with the notes to the basic financial statements, to further enhance their understanding of the Authority's financial performance.

Financial Highlights – Fiscal Years 2017 and 2016

At June 30, 2017, the Authority's liabilities and deferred inflows of $1,332.9 million exceeded its assets and deferred outflows of $1,327.5 million by $5.4 million. This financial result is again driven by the implementation of Governmental Accounting Standards Board (GASB) 68 in fiscal year 2015. Net position, the residual interest in the assets and deferred outflows after liabilities and deferred inflows are deducted, increased by $64.5 million in 2017, as compared to an increase of $37.5 million in 2016.

The Authority reported operating income in 2017 of $46.5 million, as compared to operating income of $14.9 million in 2016, an increase of $31.6 million. The major drivers for this increase in operating income include a net increase of 5.6% in operating revenues, largely resulting from volume increases in discharges, transplant procedures, and outpatient surgeries.

Net nonoperating revenue was $27.0 million for 2017, as compared to $22.5 million in 2016, an increase of $4.5 million or 19.8%. The major driver for this net increase is more than $25 million in Medical University of South Carolina (MUSC) Foundation donations for the Shawn Jenkins Children's Hospital and Pearl Tourville Women's Pavilion (CHWP).

Overview of the Financial Statements

The Authority is a major discreetly presented component unit of the Medical University of South Carolina (the University) that owns and operates the clinical teaching sites of the University and serves the State of South Carolina as a principal diagnostic and treatment referral center.

The Authority's basic financial statements consist of three statements – a Statement of Net Position; a Statement of Revenues, Expenses and Changes in Net Position; and a Statement of Cash Flows. These basic financial statements are prepared in accordance with GASB principles and provide detailed information about the activities of the Authority and generally provide an indication of the Authority's financial health.

The Statement of Net Position and the Statement of Revenues, Expenses and Changes in Net Position

The Statement of Net Position and the Statement of Revenues, Expenses and Changes in Net Position report information about the Authority's resources and its activities. The Statement of Net Position presents the assets, both restricted and unrestricted, deferred outflows and inflows of resources and all liabilities using the accrual basis of accounting. The Statement of Revenues, Expenses and Changes in Net Position reports all revenues and expenses for the time period indicated, regardless of when cash is received or paid, as well as payments to the University and University Medical Associates (UMA/MUSCP). These two statements report the Authority's net position and its changes.

(Continued)

MUHA/Roper/FOIA 000106

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The Statement of Cash Flows

The final required statement is the Statement of Cash Flows. This statement reports cash receipts, cash payments and net changes in cash resulting from operating, investing and capital and noncapital-related financing activities.

The Authority's Net Position

The Authority's net position is the difference between its assets and deferred outflows and liabilities and deferred inflows reported in the Statement of Net Position. A comparative summary of assets, deferred outflows, liabilities, deferred inflows and net position is as follows:

Summary Schedule of Net Position

(In thousands)

	2017	2016
Assets:		
Current assets	$ 557,319	444,622
Investments	51,624	52,356
Capital assets, net	556,737	512,516
Total assets	1,165,680	1,009,494
Deferred outflows	161,805	98,357
Total assets and deferred outflows	$ 1,327,485	1,107,851
Liabilities:		
Current liabilities	$ 194,313	171,912
Long-term debt	383,599	359,324
Net pension liability	746,860	645,307
Other liabilities	7,229	—
Total liabilities	1,332,001	1,176,543
Deferred inflows	878	1,154
Total liabilities and deferred inflows	$ 1,332,879	1,177,697

(Continued)

MUHA/Roper/FOIA 000107

Summary Schedule of Net Position

(In thousands)

	2017	2016
Net position:		
Net investment in capital assets	$ 172,454	164,574
Restricted:		
Under indenture agreements	51,461	52,356
Capital projects	23,839	25,000
Major programs	29,819	30,759
Unrestricted deficit	(282,968)	(342,535)
Total net position	$ (5,395)	(69,846)

Analysis of the Financial Position as of June 30, 2017 Compared to June 30, 2016

Total assets and deferred outflows increased $219.6 million or 19.8% from $1,107.9 million in 2016 to $1,327.5 million in 2017. The major drivers for this increase are unrestricted cash and cash equivalents increased $107.3 million; net capital assets increased $44.2 million; and deferred outflows for pension activity increased $63.4 million in 2017. Unrestricted cash mainly increased from higher collections resulting from volume increases in discharges, transplants, and outpatient surgeries.

Total liabilities and deferred inflows increased $155.2 million or 13.2% from $1,177.7 million in 2016 to $1,332.9 million in 2017. The major drivers for this increase are net pension liability increased $101.6 million; long-term debt and capital lease obligations increased $24.3 million, mainly due to the acquisition of new debt for the CHWP and other accrued expenses increased $9.1 million due to a Disproportionate Share Hospital (DSH) payable.

From the data presented, readers of the Statement of Net Position are able to determine the assets available to continue the operations of the Authority. They are also able to determine how much is owed to vendors, employees and others. Finally, the Statement of Net Position provides a picture of the net position (assets and deferred outflows minus liabilities and deferred inflows) and their availability for expenditure.

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MUHA/Roper/FOIA 000108

ROA 000219

Operating Results and Changes in the Authority's Net Position

Revenues, Expenses and Changes in Net Position

(In thousands)

	2017	2016
Operating revenues:		
Net patient service revenue	$ 1,370,067	1,301,324
Other revenue	31,385	25,333
Total operating revenues	1,401,452	1,326,657
Operating expenses:		
Compensation and employee benefits	570,285	554,624
Pension benefits	33,792	13,311
Services and supplies	684,571	679,934
Depreciation and amortization	66,268	63,841
Total operating expenses	1,354,916	1,311,710
Operating income	46,536	14,947
Nonoperating revenues (expenses):		
State appropriations	29,000	42,000
Gifts and grants	25,982	550
Investment income	(1,440)	4,377
Interest expense	(18,295)	(15,388)
Loss on disposal of capital assets	(1,548)	(7,297)
CHWP bond issuance cost	(5,167)	(738)
Other nonoperating expenses	(1,565)	(1,000)
Total nonoperating revenues	26,967	22,504
Nonoperating payments to MUSC and UMA	(9,052)	—
Increase in net position	$ 64,451	37,451

The Statement of Revenues, Expenses and Changes in Net Position presents the revenues earned and expenses incurred during the year. Activities are reported as either operating or nonoperating. Operating revenues are received for providing goods and services. Operating expenses are paid to acquire or produce the goods and services and to carry out the mission of the Authority. Nonoperating revenues and expenses are the result of activities for which goods and services are not provided. The utilization of capital assets is reflected in the financial statements as depreciation and amortization, which is the impact of depreciating the cost of each asset over its expected useful life. Changes in net position are based on the activity presented in the Statement of Revenues, Expenses and Changes in Net Position.

(Continued)

MUHA/Roper/FOIA 000109

Analysis of Operating Results for the Year ended June 30, 2017 Compared to the Year ended June 30, 2016

Net Patient Service Revenue

Compared to fiscal year 2016, net patient service revenue increased by approximately $68.7 million, or 5.3%. Gross patient charges increased by $355.9 million, or 9.86%, from 2016 to 2017 due to increases in patient activity and comprehensive rate increases. Net revenue related to the DSH program administered by the state Department of Health and Human Services decreased in 2017 to $29.7 million from $48.0 million in 2016. There can be no assurance that the Authority will continue to qualify for future participation in the DSH program or that the DSH program will not ultimately be discontinued or materially modified.

Payor class percentages changed somewhat from 2017 to 2016, showing an increase in Blue Cross and medically indigent/self-pay/other payor classes and a decrease in Medicare, Medicaid and private insurance/managed care payor classes as shown in the table below:

Percentage of Net Patient Service Revenue by Payor Class

	2017	2016
Blue Cross	28 %	27 %
Medicare	31	32
Medicaid	21	24
Private insurance/managed care	13	14
Medically indigent/self-pay/other	7	3
Total	100 %	100 %

(Continued)

MUHA/Roper/FOIA 000110

Inpatient Business Activity

Inpatient days of care increased by 2.3%, from 244,525 in 2016 to 250,268 in 2017, as summarized below. Average length of stay for all patients was 6.4 days in 2017 and 6.5 days in 2016. The average daily census increased in 2017 to 686 from the 2016 average of 668. Admissions increased in 2017 to 39,187 from the 2016 level of 37,897. Inpatient surgical procedures decreased 2.3% from 13,935 in 2016 to 13,609 in 2017. Additionally, transplant volume increased by 107 or 34.9% from 2016 to 2017. The Medicare case mix index is a measure of inpatient acuity and it remained flat at 2.2 in fiscal years 2016 and 2017.

Summary of Inpatient Days

	2017	2016
Medical services	$ 118,038	107,561
Surgical services	59,910	65,677
Psychiatric services	34,572	32,945
Women's services	37,748	38,342
Total inpatient days	$ 250,268	244,525

Outpatient Business Activity

Outpatient visits volume increased by 20,419 visits, or 1.93%, from 1,055,708 in 2016 to 1,076,127 in 2017. Emergency/trauma visits decreased to 82,337 in 2017 from the 2016 level of 84,060. Outpatient surgical procedures performed in 2017 totaled 16,037, as compared to 15,005 in 2016, an increase of 6.9%.

Deductions from Revenue

Contractual and other adjustments, expressed as a percentage of gross revenue (63.3%), increased 5% from 2016 to 2017. Contractual and other adjustments expressed in dollars increased by $332.7 million from 2016 to 2017. The increase is due to the fact that reimbursements from Medicare, Medicaid and third-party insurers are less than billed charges and increases in charges implemented by the Authority are not matched by increased reimbursement rates.

The provision for uncollectible accounts decreased $45.6 million, or 35.4% from 2017 to 2016 to a total of $83.1 million for the year ended June 30, 2017. The decrease is due to an increase in charity care. The Authority is an active, caring member of the communities it serves. In carrying out its mission of meeting the health and wellness needs of its service areas, the Authority has established policies under which it provides care to needy members of its communities. These policies include discount programs for both uninsured and indigent patients. Following these policies, charity care services totaling approximately $147.7 million and $110.4 million (as measured by established charges) were provided without charge during fiscal years 2017 and 2016, respectively. The $37.3 million increase is related to a 47.9% increase in eligible charity care patients from 2016 to 2017. This increase is supported by the Authority's continued focus and efforts on enhancing policy and process to identify and qualify eligible Medicaid and charity care patients.

(Continued)

MUHA/Roper/FOIA 000111

In total, uncompensated care write-offs at established rates as measured by the total of bad debts plus charity care totaled 5.6% and 6.4% of gross patient charges for fiscal years 2017 and 2016, respectively.

Operating Expenses

Operating expenses increased by $43.2 million, from $1,311.7 million in 2016 to $1,354.9 million in 2017. This 3.3% increase is primarily the result of continued increasing costs associated with staffing costs and pension expense. These drivers impacted the following increases: compensation and employee benefits of $15.7 million or 2.8% and pension benefits of $20.5 million or 153.9%.

Additionally, supply costs and pharmaceutical costs continue to increase at rates exceeding those of general inflation; however, rates of increase are comparable to inflation rates for the healthcare industry. Depreciation and amortization expense increased $2.4 million or 3.8% in fiscal year 2017.

Summary of Operating Expenses by Function

(In thousands)

	2017	2016
Patient services	$ 961,538	932,061
General and administrative	327,110	315,808
Depreciation and amortization	66,268	63,841
Total operating expenses	$ 1,354,916	1,311,710

Capital Assets

As shown in note 4 to the financial statements, at the end of fiscal year 2017, the Authority had $556.7 million invested in capital assets, net of accumulated depreciation, up from $512.5 million in net capital assets at the end of fiscal year 2016.

Capital assets not being depreciated increased by $97.1 million in fiscal year 2017, compared to an increase of $41.3 million in fiscal year 2016. The major driver for this increase is the construction in progress activity for the CHWP. Additions to construction in progress of $91.2 million in fiscal year 2017 exceeded fiscal year 2016 additions by $55.6 million and are discussed below.

Approximately $81.1 million of the $91.2 million in construction in progress additions relates to CHWP, Phase II of the Authority's 30-year hospital replacement program. Groundbreaking and construction began on the project in August 2016 and the target opening date is August 2019. The CHWP facility is expected to cost approximately $384.4 million and to hold about 200 beds at completion.

Decreases to capital assets not being depreciated is made up of approximately $9.3 million in projects and other capital assets completed and placed into service; this amount is also shown as an increase to capital assets being depreciated.

(Continued)

MUHA/Roper/FOIA 000112

There were fewer increases to capital assets being depreciated in fiscal year 2017, from $69.9 million in fiscal year 2016 to $25.7 million in fiscal year 2017. This decline results from the focus of capital assets activity being on the construction of the CHWP facility mentioned above.

As part of an ongoing effort to improve the reporting of its capital assets, the Authority reviewed its inventory records and processes for construction assets in fiscal year 2017. Approximately $34.5 million in assets costs were removed from inventory and most were fully depreciated at disposal. In fiscal year 2016, the Authority demolished Charleston Memorial Hospital and the McClennan-Banks building to prepare the CHWP construction site, resulting in a similar retirement of assets with costs of $7.9 million and $5.4 million, respectively, as of June 30, 2016.

Efforts to improve the clinical equipment and vehicle inventory records and processes began in the latter part of fiscal year 2013 and continued into fiscal year 2017. The result is a decrease in the reported costs of assets of approximately $19.9 million and $22.2 million in 2017 and 2016, respectively, and most of these assets were fully depreciated at disposal.

The Authority uses both internal funds from operations and external debt capital to finance capital acquisitions. Some capital acquisitions are also funded by state appropriations and federal grants, as available. The most significant debt financing programs are discussed in detail below under 'Financing'.

See note 4 to the financial statements for more details on capital assets.

Financing

The Authority has begun a phased-approach replacement of much of its principal patient care facilities, a project planned for completion in stages over 30 years. Phase I of the project involved building a facility comprised of a four-story diagnostic and treatment center, a seven-story hospitality (bed) tower, and a garden atrium uniting the two sections of the building. Phase I of the project was completed in fiscal year 2008. Ashley River Tower, the 641,000 square-foot facility was opened on February 4, 2008. No new clinical health services were added as a result of this phase of the project.

Phase II will be a Children's Hospital and Women's Pavilion (CHWP). Initial planning began in fiscal year 2016 and continued in fiscal year 2017 with architectural design derived from numerous clinical meetings and discussion of a financing plan. A preapplication document for the $350 million project was submitted to the U.S. Department of Housing & Urban Development (HUD) relating to the Federal Housing Administration Section 241 loan program in August 2015. At June 30, 2015, almost $68 million had been secured by way of state funding and philanthropy for Phase II. The State of South Carolina approved $25 million in the FY 2016 budget and $10 million in the FY 2017 budget for this project. Shawn Jenkins, a local business owner, pledged $25 million and the Tourville family pledged another $10 million. The hospital will be named the MUSC Shawn Jenkins Children's Hospital and Pearl Tourville Women's Pavilion in honor of their generosity. This level of money raised to support the project made HUD financing possible and maintains the hospital's development and construction time line.

On December 22, 2004, the Authority issued $422.1 million of FHA Insured Mortgage Hospital Facilities and Refunding Revenue Bonds, Series 2004 (Series 2004), consisting of $304.0 million Series A Tax-Exempt

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MUHA/Roper/FOIA 000113

ROA 000224

Bonds and $118.1 million Series B Taxable Bonds for the purpose of providing funds to (a) pay the costs of Phase I of the project mentioned above, (b) pay a portion of the interest accruing on the bonds during construction of Phase I, (c) prepay the outstanding amount of the Charleston County Memorial Hospital revenue note, (d) advance refund the $102.8 million Hospital Facilities Refunding Revenue Bonds, Series 2002A, (e) fund a debt service reserve fund with respect to the bonds, and (f) pay certain costs incurred in connection with the issuance of the Bonds.

On December 29, 2004, the South Carolina Jobs Economic Development Authority issued $61.0 million of Economic Development Revenue Bonds, CEP Series 2004. Proceeds of the bonds were loaned to MUFC Central Energy Plant, LLC, a single-member limited liability company organized under the laws of the State of South Carolina, whose sole member is Medical University Facilities Corporation. Pursuant to a Loan Agreement between the issuer and the borrower, the borrower shall use the proceeds to finance the construction of an approximately 52,000 square-foot central energy plant and certain other improvements, renovations, and furnishings, fixtures, and equipment to provide steam and chilled water for the use and benefit of the new 156-bed Phase I Authority project mentioned above. Pursuant to the loan agreement, the borrower is obligated to make payments to the issuer in amounts sufficient to pay the principal and interest on the Bonds.

On March 15, 2007, the construction of the central energy plant was substantially completed, and the plant was put into service. In 2014, MUFC Central Energy Plant, LLC was terminated after the refunding of the CEP Series 2004 Bonds.

On February 1, 2008, MUFC Central Energy Plant, LLC converted the then outstanding $59.4 million bonds into indexed floating rate bonds to reduce the cost of capital and annual debt service payments detailed in note 6 to the financial statements. Concurrent with the conversion of the bonds, MUFC Central Energy Plant, LLC entered into a variable-to-fixed interest rate swap. The intention of the swap was to effectively convert the variable interest rate paid on the bonds to a synthetic fixed rate of 5.755%. This interest rate swap was terminated on December 30, 2013 and a payment of $2.1 million was made as part of the refinancing of the central energy plant.

Management continues to look for opportunities to reduce nonoperating expenses. With interest expense being the largest nonoperating expense and interest rates at historically low levels, the Authority engaged a financial adviser in fiscal year 2012 to help determine the most effective refinancing vehicle. On December 19, 2012, the refinancing of the Authority's Series 2004 bonds with Government National Mortgage Agency (GNMA) mortgage-backed securities (MBS) was completed. Long-term debt was reduced when funds in the debt service reserve and other accounts of approximately $47.4 million were made available to reduce principal. Interest was fixed at 2.94% and the amortization schedule was not extended. On December 30, 2013, the Authority refinanced the 2004 Central Energy Plant Economic Development Revenue Bonds (CEP Series 2004 bonds) with GNMA MBS. Interest was fixed at 3.85% and the amortization schedule was not extended.

In April 2013, the Authority entered into a $13.8 million equipment lease/purchase agreement with Wells Fargo Bank for energy conservation equipment for the Sabin Street central energy plant project. This agreement is subject to the master lease program agreement between Wells Fargo Bank and the State of South Carolina.

In November 2016, the Authority closed on a $316.4 million mortgage for the construction of the (Phase II) MUSC CHWP. The mortgage is insured by HUD through the Federal Housing Administration's (FHA)

(Continued)

Section 242 Hospital Mortgage Insurance Program, the principal bears interest at 3.59%, the term is 25 years and the first principal payment is due after CHWP opens, which is expected in the fall of 2019.

See note 6 to the financial statements for more details on financing activities.

Current Operating Environment

The U.S. economy continues its recovery from the downturn of the past several years. Management of the Authority monitors these economic conditions closely, both with respect to potential impacts on the healthcare provider industry and from a more general business perspective. While the Authority was able to achieve certain objectives of importance in the current economic environment, management recognizes that economic conditions may continue to impact the Authority in a number of ways, including (but not limited to) uncertainties associated with the global economy, improvement in the unemployment rate and associated impact on uninsured patients, and stress on the federal, state and local budgets. Additionally, the general healthcare industry environment is increasingly uncertain, especially with respect to the impacts of the federal healthcare reform legislation, which was passed in the spring of 2010. Potential impacts of ongoing healthcare industry transformation include, but are not limited to:

- Continuing volatility in the state and federal government reimbursement programs; for example, the Affordable Care Act reduces payments to all hospitals by $155 billion over ten years; it was projected that these cuts would be offset by the reduction in the uninsured population. While South Carolina chose not to expand Medicaid the uninsured rate has dropped from 18.7% to 15.4%
- Exchange reimbursement levels that are significantly below those of traditional commercial insurance companies, payor policies that do not recognize valid assignment of benefits from patients and send payment for healthcare services to patients. Changes in combined state/federal disproportionate share payments, increasing reliance on managed care plans by Medicare and Medicaid and attendant increases in program complexity and payment delays and impact on the healthcare "demand curve" as the previously uninsured enter the insurance system
- Effective management of multiple major regulatory mandates, including achievement of meaningful use of Healthcare Information Technology (HCIT)
- Significant potential business model changes throughout the healthcare industry, including recently announced mergers of the nation's largest health insurers

(Continued)

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In South Carolina, in order to control escalating Medicaid costs, the Department of Health and Human Services has maintained the changes that were implemented for hospital service rates to remain at the November 2012 payment levels:

- Inpatient hospital base rates were increased 2.75% on October 1, 2013 and 2.50% on October 1, 2014 and adjusted on October 1, 2015 to maintain the 93% of cost target.
- Inpatient Graduate Medical Education (direct and indirect medical education) reimbursement rates remain at the November 1, 2012 level.
- Outpatient hospital multiplier was adjusted to maintain the 93% of cost target.

These reimbursement rate adjustments have had and will continue to have a significant impact on the Authority's financial performance. To help minimize the impact of this revenue reduction, the Authority continues implementation of a hospital-wide response plan directed at high-impact areas, both clinically and financially. All areas of a patient's stay are reviewed, including (but not limited to) reducing length of stay, standardization of supplies, use of generic versus brand name drugs, staffing ratios, and new information technology to improve medical coding and billing.

The business of healthcare in the current economic, legislative and regulatory environment is volatile. Any of the above factors, along with others both currently in existence and which may or may not arise in the future, could have a material adverse impact on the Authority's financial position and operating results.

During the fiscal year ended June 30, 2016, the Authority created a consolidated clinical enterprise under the brand of MUSC Health. This enterprise is an effort to further integrate the clinical operations of the Authority and MUSC Physicians. Both entities will retain their existing separate legal entities under this enterprise, but will work more closely together to manage their combined clinical operations.

MUSC Health's Integrated Centers of Clinical Excellence (ICCE) are the organizational units of MUSC Health. Committed to care models that improve patient experience and achieve optimal patient outcomes, these comprehensive care teams are led by physician chiefs and charged with providing patients the most innovative, efficient and effective subspecialized care.

Contacting the Authority's Financial Management

This financial report is designed to provide interested parties with a general overview of the Authority's finances and to show the Authority's accountability for the money it receives. If you have questions about this report or need additional financial information, contact the Authority's Chief Financial Officer at Medical University Hospital Authority, P.O. Box 250332, Charleston, South Carolina 29425.

MUHA/Roper/FOIA 000116

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A Component Unit of The Medical University of South Carolina)

Statement of Net Position

June 30, 2017

Assets and Deferred Outflows

Current assets:	
Cash and cash equivalents	$ 215,160,012
Cash restricted for capital projects and major programs	42,423,262
Investments restricted for capital projects and major programs	19,939,220
Patient accounts receivable, net of allowance for uncollectible accounts of approximately $79,600,000	215,658,349
Due from third-party payors	8,582,273
Other current assets	55,555,553
Total current assets	557,318,669
Investments held by trustees under indenture agreements	51,460,891
Investments in joint ventures and partnerships	162,706
Capital assets, net	556,737,311
Total assets	1,165,679,577
Deferred outflows	161,804,958
Total assets and deferred outflows	$ 1,327,484,535

Liabilities, Deferred Inflows and Net Position

Current liabilities:	
Current installments of long-term debt and capital lease obligations	$ 22,260,398
Accounts payable	68,426,322
Accrued payroll, withholdings, and benefits	68,148,182
Liabilities payable from current restricted assets	8,703,844
Due to related parties	11,736,625
Other accrued expenses	14,515,649
Unearned revenue	521,859
Total current liabilities	194,312,879
Long-term debt and capital lease obligations net of current installments	383,598,928
Net pension liability	746,860,160
Other liabilities	7,229,315
Total liabilities	1,332,001,282
Deferred inflows	878,235
Total liabilities and deferred inflows	1,332,879,517
Net position:	
Net investment in capital assets	172,453,992
Restricted:	
Under indenture agreements	51,460,891
Capital projects	23,839,082
Major programs	29,819,556
Unrestricted deficit	(282,968,503)
Total net position	(5,394,982)
Total liabilities, deferred inflows, and net position	$ 1,327,484,535

See accompanying notes to basic financial statements.

MUHA/Roper/FOIA 000117

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A Component Unit of The Medical University of South Carolina)

Statement of Revenues, Expenses and Changes in Net Position

Year ended June 30, 2017

Operating revenues:	
Net patient service revenue (net of provision for uncollectable accounts of $83,116,441)	$ 1,370,066,698
Other revenue	31,384,513
Total operating revenues	1,401,451,211
Operating expenses:	
Compensation and employee benefits	570,284,785
Pension benefits	33,791,979
Services and supplies	684,571,224
Depreciation and amortization	66,267,743
Total operating expenses	1,354,915,731
Operating income	46,535,480
Nonoperating revenue (expense):	
State appropriations	29,000,000
Gifts and grants	25,982,108
Investment income	(1,439,526)
Interest expense	(18,294,818)
Loss on disposal of capital assets	(1,547,621)
CHWP debt issuance cost	(5,167,360)
Other nonoperating expenses	(1,565,463)
Total nonoperating expenses	26,967,320
Income before payments to MUSC and UMA	73,502,800
Nonoperating expense – payments to MUSC and UMA	(9,051,972)
Increase in net position	64,450,828
Net position, beginning of year	(69,845,810)
Net position, end of year	$ (5,394,982)

See accompanying notes to basic financial statements

MUHA/Roper/FOIA 000118

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A Component Unit of The Medical University of South Carolina)

Statement of Cash Flows

Year ended June 30, 2017

Cash flows from operating activities:	
Receipts from patients and third-party payors	$ 1,378,139,469
Other cash receipts	32,878,635
Payments to suppliers and employees	(1,258,128,812)
Net cash provided by operating activities	152,889,292
Cash flows from noncapital financing activities:	
State appropriations	18,000,000
Nonmandatory payments to MUSC and UMA	(9,051,972)
Net cash provided by noncapital financing activities	8,948,028
Cash flows from capital and related financing activities:	
Capital expenditures	(84,915,451)
Capital appropriations	10,000,000
Capital grants and gifts received	28,748,588
Proceeds from disposal of capital assets	123,000
Payments of principal on long-term debt	(17,867,366)
Proceeds from issuance of long-term debt	44,529,222
Payments of bond issuance cost	(5,167,360)
Payments of bond insurance premium	(3,765,070)
Payments on capital lease obligations	(3,811,988)
Payments on equipment replacement obligations	(1,908,426)
Interest payments	(12,049,936)
Net cash used in capital and related financing activities	(46,084,787)
Cash flows from investing activities:	
Proceeds from sale and maturity of investments	13,690,280
Investment income received	1,186,545
Purchases of investments	(43,569,147)
Net distributions from joint ventures and partnerships	(728,169)
Net cash used in investing activities	(29,420,491)
Net increase in cash and cash equivalents	86,332,042
Cash and cash equivalents at beginning of year	174,443,703
Cash and cash equivalents at end of year	$ 260,775,745
Reconciliation of operating income to net cash provided by operating activities:	
Operating income	$ 46,535,480
Adjustments to reconcile operating income to net cash provided by operating activities:	
Depreciation and amortization	66,267,743
Provision for uncollectible accounts	83,116,441
Other	(127,869)
Changes in operating assets and liabilities:	
Patient accounts receivable	(99,813,854)
Due from third-party payors	9,346,805
Other current assets	8,911,998
Accounts payable	(3,332,068)
Other accrued expenses and accrued payroll, withholding and benefits	30,595,056
Due to third-party payors	6,168,495
Due to related parties	4,699,206
Unearned revenue	521,859
Net cash provided by operating activities	$ 152,889,292
Reconciliation of cash and cash equivalents at end of year to the statement of net position:	
Cash and cash equivalents	$ 215,160,012
Restricted for capital projects and major programs	42,423,262
Included in investments held by trustees under indenture agreements	3,192,471
	$ 260,775,745
Noncash transactions:	
Capital lease equipment	$ 2,225,006
Change in fair value of investments	(2,826,094)
Change in capital assets payable	23,890,216
Pro rata income from joint ventures	(440,463)

See accompanying notes to basic financial statements.

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(1) Summary of Significant Accounting Policies

Medical University Hospital Authority (the Authority) is a multidimensional healthcare system headquartered in Charleston, South Carolina. The Authority is a principal diagnostic and treatment referral center for the state of South Carolina that owns and operates the principal clinical teaching institutions for The Medical University of South Carolina (the University). The primary facilities used by the Authority, all located on or near the Authority's main campus in Charleston, consist of the following:

- University Hospital
- Ashley River Tower (ART) Hospital
- Children's Hospital
- Storm Eye Institute
- Institute of Psychiatry
- Digestive Disease Center
- Transplant Center
- Hollings Cancer Center
- MUSC Heart and Vascular Center

Reporting Entity

The Authority is a major discretely presented component unit of the University, as defined by the provisions of Governmental Accounting Standards Board (GASB) Statement No. 61, *The Financial Reporting Entity: Omnibus*. The Authority's component unit relationship to the University arises principally because the nature and significance of the relationship is such that exclusion would cause the University's financial statements to be misleading or incomplete. In particular, the legislation establishing the Authority as a stand-alone healthcare system, effective July 1, 2000, requires that the members of the University's board of trustees also constitute the board of trustees of the Authority.

The significant accounting policies used by the Authority in preparing and presenting its financial statements are as follows:

(a) Basis of Accounting

For financial reporting purposes, the Authority is considered a special purpose government engaged only in business-type activities. Accordingly, the financial statements have been presented using the economic resources measurement focus and the accrual basis of accounting. Under the accrual basis, revenues are recognized when earned and expenses are recorded when an obligation has been incurred.

(b) Cash Equivalents

The Authority considers investments in highly liquid individual debt instruments (with an original maturity of three months or less) and similar fund positions to be cash equivalents.

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(c) Inventories

Inventories, consisting principally of medical supplies and pharmaceuticals, are stated at the lower of cost (first-in, first-out) or replacement value and are included in other current assets in the accompanying Statement of Net Position.

(d) Investments and Investment Income

Investments are carried at fair value and consist of internally or externally restricted cash equivalents and treasury obligations with original maturities greater than three months. Fair value measurements are categorized within the fair value hierarchy established by generally accepted accounting principles (GAAP) and investment income or loss from investments (including realized and unrealized gains and losses on investments and interest) is reported as nonoperating revenue in the accompanying Statement of Revenues, Expenses and Changes in Net Position.

(e) Capital Assets

Capital assets are recorded at cost at the date of acquisition or, if donated, at fair value at the date of receipt. Depreciation is provided over the useful life of each class of depreciable assets using the straight-line method. Equipment under capital lease obligations is amortized using the straight-line method over the estimated useful life of the equipment or lease term, and such amortization is included in depreciation and amortization in the accompanying Statement of Revenues, Expenses and Changes in Net Position.

A summary of depreciable lives is as follows:

Land improvements	3–25 Years
Buildings, improvements, and fixed equipment	5–50 Years
Machinery, equipment, and vehicles	2–20 Years
Software	3–5 Years

(f) Statement of Revenues, Expenses and Changes in Net Position

For purposes of presentation, transactions deemed by management to be ongoing, major or central to the provision of healthcare services are reported as operating revenues and operating expenses. Principal nonoperating transactions include state appropriations, gifts and grants, investment income, interest expense, loss on disposal of capital assets and financing costs.

(g) Net Patient Service Revenue

Net patient service revenue is reported at estimated net realizable amounts from patients, third-party payors and others for services rendered, and includes estimated retroactive revenue adjustments due to future audits, reviews, and investigations, as well as the provision for uncollectible accounts. Retroactive adjustments are considered in the recognition of revenue on an estimated basis in the period the related services are rendered, and such amounts are adjusted in future periods as

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adjustments become known or as years are no longer subject to such audits, reviews and investigations.

(h) Charity Care

The Authority provides care to patients who meet certain criteria under its charity care policy without charge or at amounts less than its established rates. Because the Authority does not pursue collection of amounts determined to qualify as charity care, they are not reported as revenue.

(i) Net Position

Net position of the Authority is classified into the following components:

- Net investment in capital assets consists of capital assets, net of accumulated depreciation, reduced by outstanding balances of any borrowings used to finance the purchase or construction of those assets.
- Restricted under indenture agreements represents resources deposited with trustees as required by bond indentures or other debt agreements.
- Restricted for capital projects and major programs represents resources that the Authority is legally or contractually obligated to spend in accordance with restrictions imposed by external parties.
- Unrestricted represents remaining net position that does not meet any of the above definitions.

When the Authority has both restricted and unrestricted resources available to finance a particular program, it is the Authority's policy to use restricted resources before unrestricted resources.

(j) Costs of Borrowing

The deferred accounting loss on refunding is being amortized over the terms of the related indebtedness using the effective-interest method. Refunding losses are classified as deferred outflows of resources on the Statement of Net Position. Costs of issuance are expensed in the period incurred.

Interest cost is capitalized on qualified construction expenditures, net of income earned on related assets, as a component of the cost of the related projects. For qualifying capital projects that are not financed with specific proceeds of tax-exempt debt, the Authority capitalizes interest cost on such projects based on accumulated expenditures and a weighted average borrowing rate.

(k) Income Taxes

The Authority is a political subdivision of the State of South Carolina and is treated as a governmental entity for tax purposes. Additionally, the Authority has received its determination letter from the Internal Revenue Service indicating that it is exempt from income tax under Section 501(a) of the Internal Revenue Code as an organization described in Section 501(c)(3). As such, the Authority is not generally subject to federal or state income taxes. However, the Authority remains subject to income taxes on any net income that is derived from a trade or business, regularly carried on and not in furtherance of the purpose for which it was granted exemption. No income tax provision has been recorded. If there is net income from any unrelated trade or business, such provision, in the opinion of management, is not material to the financial statements taken as a whole.

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(l) Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires that management make estimates and assumptions affecting the reported amounts of assets, liabilities, revenues and expenses, as well as disclosure of contingent assets and liabilities. Actual results could differ from those estimates.

Significant items subject to such estimates include the allowances for uncollectible accounts and contractual adjustments for patient receivables, depreciation and amortization, liability for incurred but not reported claims under the self-insured health plan and estimated third-party payor settlements. In particular, laws and regulations governing the Medicare and Medicaid programs are extremely complex and subject to interpretation. As a result, there is at least a reasonable possibility that recorded estimates related to these programs will change by a material amount in the near term.

(m) Recent Accounting Pronouncements

- GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other than Pensions*, was issued in June 2015. The primary objective of this Statement is to improve accounting and financial reporting by state and local governments for postemployment benefits other than pensions (other postemployment benefits or OPEB). The scope of this Statement addresses accounting and financial reporting for OPEB that is provided to the employees of state and local governmental employers. This statement establishes standards for recognizing and measuring liabilities, deferred outflows of resources, deferred inflows of resources and expense/expenditures. For defined-benefit OPEB, this Statement identifies the methods and assumptions that are required to be used to project benefit payments, discount projected benefit payments to their actuarial present value and attribute that present value to periods of employee service. Note disclosure and required supplementary information requirements about defined-benefit OPEB also are addressed. In addition, this Statement details the recognition and disclosure requirements for employers with payables to defined-benefit OPEB plans that are administered through trusts that meet the specified criteria and for employers whose employees are provided with defined contribution OPEB. Additional information about the Authority's participation in OPEB can be found in note 10. GASB Statement No. 75 is effective for the Authority's fiscal year 2018.
- GASB Statement No. 78, *Pensions Provided Through Certain Multiple-Employer Defined Benefit Pension Plans*, was issued in December 2015. This Statement amends the scope and applicability of Statement No. 68 to exclude pensions provided to employees of state or local governmental employers through a cost-sharing multiple employer defined-benefit pension plan that (1) is not a state or local governmental pension plan, (2) is used to provide defined-benefit pensions both to employees of state or local governmental employers and to employees of employers that are not state or local governmental employers, and (3) has no predominant state or local governmental employer (either individually or collectively with other state or local governmental employers that provide pensions through the pension plan). This statement establishes requirements for recognition and measurement of pension expense, expenditures, and liabilities; note disclosures; and required supplementary information for pensions that have the characteristics described above. GASB Statement No. 78 was effective for the Authority's fiscal year 2017 and did not have an impact as the Authority's pensions are covered by GASB Statement No. 68 (note 11).

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- GASB Statement No. 82, *Pension Issues – An Amendment of GASB Statements No. 67, No. 68 and No 73*, was issued in March 2016. This statement addresses issues regarding (1) the presentation of payroll-related measures in required supplementary information, (2) the selection of assumptions and the treatment of deviations from the guidance in an Actuarial Standard of Practice for financial reporting purposes, and (3) the classification of payments made by employers to satisfy employee (plan member) contribution requirements. GASB Statement No. 82 was effective for the Authority's fiscal year 2017 and did not have a significant impact on reported amounts or disclosures.
- GASB Statement No. 87, *Leases*, was issued in June 2017. This statement requires recognition of certain assets/deferred outflows of resources and liabilities/deferred inflows of resources for leases previously classified as operating leases, based on the payment provisions of the contract. It establishes a single model for lease accounting based on the principle that leases are financings of the right to use an underlying asset. Under this Statement, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset and a lessor is required to recognize a lease receivable and a deferred inflow of resources to enhance the relevance and consistency of information about governments' leasing activities. GASB Statement No. 87 is effective for the Authority's fiscal year 2020. See note 14 for additional information about the Authority's leasing activities.

  The Authority is in the process of evaluating the impact of GASB Statements No. 75 and 87 and other recent accounting pronouncements on the Authority's financial statements.

(2) Cash, Cash Equivalents and Investments

The Authority's cash balance at June 30, 2017 is as follows:

Insured (FDIC and SIPC)	$	1,250,000
Uninsured, uncollateralized, or collateralized by securities held by the pledging institution or by its trust department or agent in other than the Authority's name		259,721,788
Total	$	260,971,788
Carrying amount (cash and cash equivalents)	$	257,583,274

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A summary of investments at June 30, 2017 is as follows:

	Fair value	Percentage	Maturities	Interest rate	Credit rating
Cash	$ 3,192,471	4.5 %	N/A	N/A	N/A
Fixed-income securities:					
Federal National Mortgage Association	28,905,649	40.5	4/24/26-12/27/27	2.1%–2.5%	AA+
Federal Home Loan Bank	10,390,008	14.5	4/25/18-10/01/18	0.9%–1.1%	Aaa
Federal Farm Credit Bank	18,912,333	26.5	8/10/26-8/17/26	2.1 %	Aaa
Freddie Mac	9,999,650	14.0	7/28/2017	1.0	Aaa
	$ 71,400,111				

The Authority categorizes its fair value measurements within the fair value hierarchy established by GAAP. The hierarchy is based on the valuation inputs used to measure the fair value of the asset:

- Level 1 inputs are quoted prices in active markets for identical assets.
- Level 2 inputs are significant other observable inputs.
- Level 3 inputs are significant unobservable inputs.

A summary of investments within the fair value hierarchy as of June 30, 2017 is as follows:

	Investments by fair value level	Fair value measurements		
		Level 1	Level 2	Level 3
Fixed-income securities:				
Federal National Mortgage Association	$ 28,905,649	—	28,905,649	—
Federal Home Loan Bank	10,390,008	—	10,390,008	—
Federal Farm Credit Bank	18,912,333	—	18,912,333	—
Freddie Mac	9,999,650	9,999,650	—	—
	$ 68,207,640	9,999,650	58,207,990	—

The Authority's investment strategy has been developed to, among other things, ensure that the investment portfolio remains in compliance with the investments deemed permissible under the indenture agreement described in note 6. There is no formalized deposit or investment policy that otherwise addresses credit risk, interest rate risk, foreign currency risk or how investment income may be spent.

Guidelines for fixed-income investments and cash equivalents are as follows:

1. Direct obligations of the U.S. government, securities issued by federal agencies backed by the full faith and credit of the U.S. government, and securities issued by certain nonfull faith and credit federal agencies.

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2. Cash, money market funds and certificates of deposit that are appropriately collateralized, insured or issued by investment grade financial institutions.

3. Investment agreements, including guaranteed investment contracts, commercial papers, repurchase agreements and other securities are subject to credit rating minimums, acceptance by related insurers, and other provisions, as described in the indenture agreements.

Concentration of credit risk is the risk of loss attributed to the magnitude of a government's investment in a single issuer. Except for restrictions imposed by the aforementioned indenture agreement, there are no limits on the amount the Authority may invest in any one issuer. As of June 30, 2017, 40.5% of the Authority's investments are in notes issued by the Federal National Mortgage Association.

Investment income comprises the following for the year ended June 30, 2017:

Dividend and interest income	$ 1,386,568
Realized and unrealized gain on investments	(2,826,094)
	$ (1,439,526)

(3) Other Current Assets

The composition of other current assets at June 30, 2017 is as follows:

Prepaid expenses	$ 14,768,247
Inventories	28,236,588
Amounts due from the South Carolina Medicaid Disproportionate Share Hospital program (note 8)	1,815,676
Amounts due from the South Carolina Medicaid HMO Graduate Medical Education program	10,720,964
Other	14,078
	$ 55,555,553

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(4) Capital Assets

Capital assets and related activity for the year ended June 30, 2017 consisted of the following:

	Beginning balance	Increases	Decreases	Ending balance
Capital assets not being depreciated:				
Land	$ 6,092,725	—	—	6,092,725
Assets not in service	1,773,997	5,947,891	(4,297,558)	3,424,330
Construction in progress	23,317,787	91,178,911	(6,446,041)	108,050,657
Total capital assets not being depreciated	31,184,509	97,126,802	(10,743,599)	117,567,712
Capital assets being depreciated:				
Buildings, improvements and fixed equipment	742,463,415	6,746,022	(34,545,828)	714,663,609
Machinery and equipment	260,610,299	18,465,965	(19,813,173)	259,263,091
Software	51,232,070	494,584	—	51,726,654
Vehicles	2,123,266	35,069	(55,375)	2,102,960
Total capital assets being depreciated	1,056,429,050	25,741,640	(54,414,376)	1,027,756,314

	Beginning balance	Increases	Decreases	Ending balance
Less accumulated depreciation for:				
Buildings, improvements and fixed equipment	$ (373,206,323)	(34,152,210)	33,574,822	(373,783,711)
Machinery and equipment	(175,247,889)	(22,563,164)	19,236,557	(178,574,496)
Software	(24,785,678)	(9,515,566)	—	(34,301,244)
Vehicles	(1,857,383)	(125,256)	55,375	(1,927,264)
Total accumulated depreciation	(575,097,273)	(66,356,196)	52,866,754	(588,586,715)
Capital assets being depreciated, net	481,331,777	(40,614,556)	(1,547,622)	439,169,599
Capital assets, net	$ 512,516,286	56,512,246	(12,291,221)	556,737,311

Construction in progress at June 30, 2017 consists of costs associated with various renovation projects in process at existing hospital facilities, leased properties and costs for the new CHWP. Construction in progress projects are generally scheduled for completion in fiscal year 2018, with CHWP scheduled for completion in fiscal year 2019. Remaining costs to complete these projects are estimated to total approximately $288.6 million and include estimated costs for construction of CHWP. Included in the table of capital assets is a transfer of certain assets from the Medical University of South Carolina with a depreciation balance of $0.09 million.

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Interest cost capitalized on qualifying assets was approximately $1 million for the year ended June 30, 2017.

(5) Deferred Outflows

The composition of deferred outflows at June 30, 2017 is as follows:

Deferred loss on refunding GNMA MBS Series 2012	$ 27,232,518
Deferred loss on refunding CEP Series 2013	1,572,804
Pension plans	132,999,636
Total	$ 161,804,958

(6) Long-Term Debt

A summary of long-term debt at June 30, 2017 is as follows:

GNMA MBS, 2012 Refinancing of Series 2004 Bonds, Series 2012, payable in varying amounts through 2033, with monthly interest payments at the rate of 2.94%	$ 299,592,013
MUHA Central Energy Plant, 2013 Refinancing of MUFC Central Energy Plant, LLC Economic Development Revenue Bonds, Series 2013, payable in varying amounts through 2032, with monthly interest payments at the rate of 3.85%	40,592,349
Note Payable to Wells Fargo Bank, for conservation equipment, payable in varying amounts through March 2023, with quarterly interest payments at the rate of 3.50%	8,465,765
GNMA MBS – FHA Insured Mortgage Acquisition Obligation, Series 2016, payable in varying amounts through 2044, with monthly interest payments at the rate of 3.59%	44,529,222
	393,179,349
Less current installments	18,426,939
	$ 374,752,410

In December 2004, the Authority issued a total of $422.1 million of FHA Insured Mortgage Hospital Facilities and Refunding Revenue Bonds, Series 2004 (Series 2004) at a premium of $11.4 million. The net bond proceeds as well as monies from the Series 2002A Hospital Facilities Refunding Revenue Bonds (2002A Refunding Bonds) trusteed account were used to defease all amounts outstanding under the prior Series 2002A bonds and a promissory note payable to Charleston County, and fund construction of new replacement hospital facilities located in Charleston, South Carolina.

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The 2004 refunding transaction resulted in an accounting loss totaling approximately $15.5 million, which has been deferred and is being amortized using the effective-interest method through 2032. The deferred loss is related entirely to the in-substance defeasance of bonds payable.

On December 29, 2004, the South Carolina Jobs Economic Development Authority issued $61.0 million of Economic Development Revenue Bonds, Central Energy Plant (CEP) Series 2004 for the benefit of the Authority. Proceeds of the bonds were loaned to MUFC Central Energy Plant, LLC, a single-member limited liability company organized under the laws of the State of South Carolina, whose sole member is Medical University Facilities Corporation. Pursuant to a loan agreement between the issuer and the borrower, the borrower shall use the proceeds to finance the construction of an approximately 52,000 square-foot central energy plant and certain other improvements, renovations, and furnishings, fixtures, and equipment to provide steam and chilled water for the use and benefit of the new 156-bed Phase I Authority project. Pursuant to the loan agreement, the borrower is obligated to make payments to the issuer in amounts sufficient to pay the principal and interest on the bonds. On March 15, 2007, the construction of the Central Energy Plant was substantially completed, and the plant was put into service. In 2014, MUFC Central Energy Plant, LLC was terminated after the refunding of the CEP Series 2004 Bonds.

On February 1, 2008, MUFC Central Energy Plant, LLC converted the then outstanding $59.4 million bonds into Indexed Floating Rate Bonds to reduce cost of capital and annual debt service payments.

On December 19, 2012, the Authority refinanced the 2004 Series bonds with Government National Mortgage Agency (GNMA) mortgage-backed securities (MBS) (Series 2012). The refinance was done to substantially lower the Authority's interest rate from 5.18% and 5.14% on the 2004 Series bonds in fiscal year 2013 to a 2.94% fixed rate on the Series 2012. At the time of refinancing, the long-term debt obligation was reduced by debt service reserve and other funds, which became available to make additional principal payments. The net proceeds of $360.4 million (after payment of $1.1 million of issuance costs plus an additional $49.9 million of 2004 Series debt service fund monies), were deposited into an irrevocable trust with an escrow agent to provide for all future debt service payments on the 2004 Series bonds. The advance refunding of the 2004 Series bonds resulted in an economic gain of $1.0 million along with reducing total debt service payments over the next 20 years. The bond indenture contains certain terms and restrictive covenants, typical of such agreements, including maintenance of certain debt service coverage levels and limitations an additional indebtedness. The amount of debt related to the advanced refunding related to the 2004 Series A bonds is $488.5 million through 2034 and $35.9 million through 2020 for the 2004 Series B bonds.

In April 2013, the Authority entered into a $13.8 million equipment lease/purchase agreement with Wells Fargo Bank for energy conservation equipment for the Sabin Street central energy plant project. The terms are 10 years with an interest rate of 3.50%. This agreement is subject to the master lease program agreement between Wells Fargo Bank and the State of South Carolina.

On December 30, 2013, the Authority refinanced the 2004 MUFC Central Energy Plant, LLC Economic Development Revenue Bonds (CEP Series 2004 bonds) with GNMA MBS (Series 2013). The refinance was done to lower the Authority's effective interest rate from 5.75% on the 2004 Series to a 3.85% fixed rate on the Series 2013. The net proceeds of $47.4 million (after payment of $1.3 million of issuance costs) were deposited into an irrevocable trust with an escrow agent to provide for all future debt service payments on the CEP Series 2004 bonds. As a result, the CEP Series 2004 bonds are considered to be

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defeased, and the liability for those bonds were removed from the Statement of Net Position. The advance refunding of the CEP Series 2004 bonds resulted in an economic gain of $2.4 million along with reducing total debt service payments over the next 18 years. The bond indenture contains certain terms and restrictive covenants, typical of such agreements, including maintenance of certain debt service coverage levels and limitations on additional indebtedness.

On November 17, 2016, the Authority closed on a $316.4 million mortgage insured by U.S. Department of Housing and Urban Development (HUD) through the Federal Housing Administration's (FHA) Section 242 Hospital Mortgage Insurance Program. The principal amount of the mortgage will bear interest at 3.59% and will be amortized over 25 years. The proceeds of this financing are being used for the purpose of (i) defraying and financing a portion of the costs of construction of the MUSC CHWP and other healthcare and related facilities of the Authority; and (ii) defraying and financing the costs associated with the incurrence of the mortgage indebtedness. The total project has an estimated cost of $384.8 million, with an equity contribution by the Authority of $68.4 million that included State funding and fund-raising in hand at closing. During fiscal year 2017, the Authority received $44.5 million in net mortgage proceeds (after payment of $5.2 million in issuance costs) and made monthly payments of interest only, at a rate of 3.59%, on the principal balance. The first principal payment will be due after CHWP opens, which is expected in the fall of 2019.

Debt service requirements associated with the Authority's outstanding bonds are as follows:

	Series 2013		Series 2012		Series 2016		
	Principal	Interest	Principal	Interest	Principal	Interest	Total
Fiscal year:							
2018	$ 2,180,949	1,524,588	14,886,549	8,608,472	—	—	27,200,558
2019	2,266,413	1,439,124	15,330,159	8,164,862	—	—	27,200,558
2020	2,355,226	1,350,311	15,786,989	7,708,032	7,288,255	10,303,736	44,792,549
2021	2,447,520	1,258,017	16,257,432	7,237,589	8,228,773	10,962,490	46,391,821
2022	2,543,430	1,162,107	16,741,894	6,753,127	8,529,096	10,662,167	46,391,821
2023	2,643,099	1,062,438	17,240,793	6,254,228	8,840,379	10,350,884	46,391,821
2024	2,746,673	958,864	17,754,558	5,740,463	9,163,023	10,028,240	46,391,821
2025	2,854,306	851,231	18,283,634	5,211,387	2,479,696	2,318,120	31,998,374
2026	2,966,157	739,380	18,828,475	4,666,546	—	—	27,200,558
2027	3,082,390	623,146	19,389,553	4,105,469	—	—	27,200,558
2028	3,203,179	502,358	19,967,351	3,527,670	—	—	27,200,558
2029	3,328,701	376,836	20,562,366	2,932,655	—	—	27,200,558
2030	3,459,142	246,395	21,175,112	2,319,909	—	—	27,200,558
2031	3,594,694	110,843	21,806,119	1,688,902	—	—	27,200,558
2032	920,470	5,911	22,455,928	1,039,093	—	—	24,421,402
2033	—	—	23,125,101	369,915	—	—	23,495,016
Total	$ 40,592,349	12,211,549	299,592,013	76,328,319	44,529,222	54,625,637	527,879,089

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Debt service requirements associated with the Authority's note payable are as follows:

	Wells Fargo		
	Principal	Interest	Total
Fiscal year:			
2018	$ 1,359,441	278,589	1,638,030
2019	1,407,650	230,380	1,638,030
2020	1,457,568	180,462	1,638,030
2021	1,509,257	128,773	1,638,030
2022	1,562,778	75,252	1,638,030
2023	1,169,071	20,177	1,189,248
Total	$ 8,465,765	913,633	9,379,398

A schedule of changes in the Authority's long-term debt and capital lease obligations for the year ended June 30, 2017 is as follows:

	Date of issuance	Beginning balance	Additions	Refunded and/or retired	Ending balance	Due within one year
Capital leases (note 14)	Various	$ 14,266,959	2,225,008	(3,811,988)	12,679,977	3,833,459
Series 2012	12/19/2012	314,047,788	—	(14,455,775)	299,592,013	14,886,549
Wells Fargo	4/25/2013	9,778,649	—	(1,312,884)	8,465,765	1,359,441
Series 2013	12/30/2013	42,691,056	—	(2,098,707)	40,592,349	2,180,949
Series 2016	11/17/2016	—	44,529,222	—	44,529,222	—
		$ 380,784,452	46,754,228	(21,679,354)	405,859,326	22,260,398

(7) Other Accrued Expenses

The composition of other accrued expenses at June 30, 2017 is as follows:

Accrued interest	$ 877,671
Amounts due to contractors	363,466
Amounts due to South Carolina Medicaid Disproportionate Share Hospital Program and other settlements (note 8)	11,218,163
Other	2,056,349
	$ 14,515,649

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(8) Net Patient Service Revenue

The Authority has agreements with governmental and other third-party payors that provide for reimbursement to the Authority at amounts different from its established rates. Contractual adjustments under third-party reimbursement programs represent the difference between the Authority's billings at established rates for services and amounts reimbursed by third-party payors. A summary of the basis of reimbursement with major third-party payors is as follows:

- Medicare – Substantially all inpatient acute care and outpatient services rendered to Medicare program beneficiaries are paid at prospectively determined rates. These rates vary according to patient classification systems that are based on clinical, diagnostic and other factors. Additionally, the Authority is reimbursed for both its direct and indirect medical education costs, based principally on per-resident prospective payment amounts and certain adjustments to prospective rate-per-discharge operating reimbursement payments. The Authority generally is reimbursed for retroactively determined items at tentative rates, with final settlement determined after submission of annual cost reports by the Authority and audits by the Medicare fiscal intermediary. The Authority's cost reports have been audited and initially settled for all fiscal years through 2010.

  Revenue from the Medicare program accounted for approximately 30.9% of the Authority's net patient service revenue for the fiscal year ended June 30, 2017.

- Medicaid – Inpatient and outpatient services rendered to most Medicaid program beneficiaries are reimbursed based upon prospective reimbursement methodologies.

  The Authority participates in the Medicaid Disproportionate Share Hospital program (the DSH Program) available to certain qualifying hospitals in South Carolina. The net reimbursement benefits associated with this program totaled approximately $29.7 million in fiscal year 2017 and are recognized as reductions in related contractual adjustments in net patient service revenue on the Statement of Revenues, Expenses and Changes in Net Position. There can be no assurance that the Authority will continue to qualify for future participation in this program or that the program will not ultimately be discontinued or materially modified. Any material reduction in such funds has a corresponding material adverse effect on the Authority's operations.

  During the Authority's fiscal year 2008, the state of South Carolina reconfigured certain terms and conditions of the DSH Program for participating providers, including the Authority. Because of associated funding deferrals and other changes which impacted the timing of historical net revenue and cash flows to the Authority under the program, the Authority recognized a receivable totaling approximately $1.8 million at June 30, 2017, in recognition of program net revenue earned but not received in fiscal year 2017.

  In fiscal year 2017, the Medicaid fiscal intermediary performed a cost settlement of the DSH program funding provided to the Authority in year 2013. The cost settlement identified an overpayment of $10.6 million and the Authority recorded that amount as a payable and related incremental contractual adjustment during fiscal year 2017.

  In fiscal year 2017, the Authority received notice from the Medicaid fiscal intermediary of a retrospective cost settlement related to the Medicaid program funding for fiscal year 2012. The

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Authority recognized an associated accrual for Medicaid overpayment totaling approximately $0.5 million.

Overall, revenue from the Medicaid program, including net disproportionate share funding and cost settlement liabilities described above, accounted for approximately 21% of the Authority's net patient service revenue for the year ended June 30, 2017.

The Authority has also entered into payment arrangements with various managed care organizations, commercial insurance carriers and preferred provider organizations. Payment methodologies under these agreements include prospectively determined rates per discharge, discounts from established rates and prospectively determined per diem rates.

Net patient service revenue is reported at estimated net realizable amounts from patients, third-party payors and others for services rendered. Associated estimates change as a result of confirming events such as completion of audits of the Authority's cost reports by third-party payors or receipt of final settlement payments from third-party payors. Net patient service revenue was decreased by approximately $2.80 million for changes in prior year estimates of amounts receivable from or payable to third-party payors during the year ended June 30, 2017.

The composition of net patient service revenue for the year ended June 30, 2017 is as follows:

Gross patient service revenue	$ 3,964,351,286
Less:	
Provision for contractual and other adjustments	2,511,168,147
Provision for uncollectible accounts	83,116,441
Net patient service revenue	$ 1,370,066,698

The Health Information Technology for Economic and Clinical Health (HITECH) Act was enacted as part of the American Recovery and Reinvestment Act of 2009 and signed into law in February 2009. In the context of the HITECH Act, the Authority must implement a certified Electronic Health Record (EHR) system in an effort to promote the adoption and "meaningful use" of health information technology. The HITECH Act includes significant monetary incentives and payment penalties meant to encourage the adoption of EHR technology. The Authority implemented a certified Electronic Health Record (EHR) system as of July 1, 2014 enabling its compliance with the meaningful use objectives mandated in the HITECH legislation. The Authority collected $584 thousand in fiscal year 2017 in incentive payments under the South Carolina Medicaid EHR incentive payment program related to its efforts at implementing certified EHR technology. The incentive payment is included in other revenue in the accompanying Statement of Revenues, Expenses and Changes in Net Position.

(9) Service to the Community

The Authority is an active, caring member of the communities it serves. In carrying out its mission of meeting the health and wellness needs of its service areas, the Board of Trustees has established policies under which the Authority provides care to needy members of its communities. These policies include

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discount programs for both uninsured and indigent patients. Following these policies, charity care services totaling approximately $147.7 million (as measured by established charges) were provided without charge (and thus not recognized in gross patient service revenue) during fiscal year 2017.

The Authority also participates in the Medicare and Medicaid programs. Under these programs, the Authority provides care to patients at payment rates that are determined by the federal and state governments, regardless of actual cost. The Authority wrote off discounts from established charges related to these programs totaling approximately $1.7 billion in fiscal year 2017.

In addition to community service directly associated with providing Authority-based care, the Authority serves the community in other ways. For example:

- In keeping with the MUSC mission to improve health and maximize quality of life through education, research and patient care, the MUSC Urban Farm was developed, a half-acre educational garden with the goal of creating opportunities for our community to learn how to eat for health. The urban farm is designed to be a living classroom where students, faculty, staff and the community come together to explore the connection between food and health through hands-on learning about the many varieties of vegetables, fruits and herbs grown in South Carolina. Participants experience a unique opportunity to engage in hands-on learning about sustainable urban agriculture and are educated on the value of incorporating vegetables into their diets through cooking and nutrition lessons. The urban farm is a joint program between the Authority and the University and there were 168 classes in fiscal year 2017.
- In 2015, the Authority and Sodexo partnered to address food insecurity and the rising cost of healthcare to become the first hospital in the southeast to offer the USDA's summer food service program, Kids Eat Free. The program operates in three cafeterias on the main campus – seven days a week at the University and Ashley River Tower (ART) cafeterias and five days a week at Rutledge Tower cafeteria. In fiscal year 2017, 5,143 children participated in the Kids Eat Free program.

  The Authority and East Cooper Meals on Wheels (ECMOW) partnered to create the Blue Apron program, where physicians and case managers refer patients who are not able to shop or prepare meals for themselves to ECMOW for free meal delivery. This program addresses food insecurity and contributes to better health outcomes and fewer hospital readmissions. In fiscal year 2017, 123 patients participated in the Blue Apron program and received 1,095 meal deliveries.
- The Authority and the University, in partnership with the city of Charleston, created the Adventure Out program to encourage community members to adopt a physically active lifestyle. This program is an outdoor fitness campaign that encourages residents to visit parks throughout the city where MUSC fitness instructors teach a free exercise class each week. In fiscal year 2017, there were 43 free exercise classes taught via the Adventure Out program.

  A fitness park was installed on campus next to the MUSC Urban Farm where a community walk is hosted along the medical-mile walking trail. This walking trail is designated in the smoke free medical district and was created in partnership with the city of Charleston. In fiscal year 2017, there were 120 participants in the medical mile community walk.

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- The Authority, in conjunction with the University, also organizes employee participation in the Trident United Way. In fiscal year 2017, Authority and University employees pledged over $55,000 to help support this organization.

While the Authority has estimated the cost of many of its community efforts to serve its broadly defined service area, management and the board of trustees believe that such costs represent only one facet of the many ways the Authority serves the citizens of South Carolina.

(10) Employee Benefit Plans

The Authority participates in a number of employee benefit plans sponsored by the state of South Carolina, and substantially all of the Authority's employees are covered by such plans. The following generally describes the benefits associated with the most significant plans and the Authority's relevant participation:

- The Authority and substantially all of its employees contribute to the South Carolina Retirement System (SCRS), which sponsors a cost-sharing, multiple-employer defined-benefit pension plan. SCRS provides retirement, disability and other insurance benefits to plan members and beneficiaries. For more details on the SCRS plan, see note 11. SCRS issues a publicly available financial report that includes financial statements and required supplementary information, which can be obtained by writing SCRS's Retirement Division at 202 Arbor Lake Drive, Columbia, South Carolina 29223 or by calling (803)737-6800.
- SCRS participants are required to contribute 8.66% of their annual covered salary to the plan and the Authority contributes at an actuarially determined rate (currently 16.89% of annual covered payroll). The Authority contributed approximately $48.6 million (11.56% statutorily required contribution plus 5.33% retiree insurance surcharge) to SCRS during fiscal year 2017, equal to the required contributions. The Authority has no other liability under this plan other than to make its required contributions, which are fully funded through June 30, 2017. Effective July 1, 2017, the employee contribution rate increases from 8.66% to 9.00%, and the employer contribution rate increases from 16.89% to 19.06%.
- The Authority's SCRS funding described above also funds the "pay-as-you-go" component of certain postretirement insurance benefits provided by the SCRS plan. The actual cost of providing such benefits to Authority retirees is not available. Nevertheless, as noted above, the Authority has no explicit liability associated with the postretirement health and life benefits component of the plan beyond its fully funded contributions obligation.
- Authority employees are eligible to participate in a state-sponsored multiemployer deferred compensation plan (SC Deferred Compensation Program), which provides for individual employee contributory trust accounts. The Authority does not contribute to this plan and has no liability associated with employee amounts deferred under the plan.

Effective July 1, 2002, the Authority established and began sponsoring a profit sharing plan and trust titled the Special Healthcare Alternative Retirement Plan (SHARP). The Sharp is qualified under Section 401(a) of the Internal Revenue Code. Certain employees, as defined in SHARP, are eligible to participate at the commencement of employment. Contributions by the Authority to SHARP are discretionary and vest ratably over four years after two years of service. Contributions by the Authority in fiscal year 2017 totaled approximately $999.7 thousand.

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The Authority also independently sponsors a tax-advantaged defined-contribution plan for its employees (the MUSC 403B plan). Substantially all Authority employees are eligible to participate in this plan. Employees may contribute up to $24 thousand of eligible compensation. The Authority does not match employee contributions.

(11) Pension Plans

The South Carolina Public Employee Benefit Authority (PEBA), which was created July 1, 2012, administers the various retirement systems and retirement programs managed by its Retirement Division. PEBA has an 11-member board of directors, appointed by the governor and general assembly leadership, which serves as cotrustee and cofiduciary of the systems and the trust funds. By law, the State Fiscal Accountability Authority (SFAA), which consists of five elected officials, also reviews certain PEBA board decisions regarding the funding of the South Carolina Retirement Systems (Systems) and serves as a cotrustee of the Systems in conducting that review.

For purposes of measuring the net pension liability, deferred outflows and inflows of resources related to pensions, and pension expense, information about the fiduciary net position of the Systems and additions to/deductions from the Systems fiduciary net position have been determined on the accrual basis of accounting as they are reported by the Systems in accordance with GAAP. For this purpose, revenues are recognized when earned, and expenses are recognized when incurred. Benefit and refund expenses are recognized when due and payable in accordance with the terms of the plan. Investments are reported at fair value.

PEBA issues a Comprehensive Annual Financial Report (CAFR) containing financial statements and required supplementary information for the Systems' Pension Trust Funds. The CAFR is publicly available through the Retirement Benefits' link on PEBA's web site at peba.sc.gov, or a copy may be obtained by submitting a request to PEBA, 202 Arbor Lake Drive, Columbia, SC 29223. PEBA is considered a division of the primary government of the state of South Carolina and, therefore, retirement trust fund financial information is also included in the comprehensive annual financial report of the state.

(a) Plan Description

The South Carolina Retirement System (SCRS), a cost–sharing multiple-employer defined-benefit pension plan, was established effective July 1, 1945, pursuant to the provisions of Section 9-1-20 of the South Carolina Code of Laws for the purpose of providing retirement allowances and other benefits for employees of the state, its public school districts, and political subdivisions.

The State Optional Retirement Program (ORP) is a defined-contribution plan that is offered as an alternative to SCRS to certain newly hired state, public school, and higher education employees. State ORP participants direct the investment of their funds into a plan administered by one of four investment providers.

The South Carolina Police Officers Retirement System (PORS), a cost-sharing multiple-employer defined-benefit pension plan, was established effective July 1, 1962, pursuant to the provisions of Section 9-11-20 of the South Carolina Code of Laws for the purpose of providing retirement allowances and other benefits for police officers and firemen of the state and its political subdivisions.

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(b) Membership

Membership requirements are prescribed in Title 9 of the South Carolina Code of Laws. A brief summary of the requirements under each system is presented below.

- SCRS – Generally, all employees of covered employers are required to participate in and contribute to the system as a condition of employment. This plan covers general employees and teachers and individuals newly elected to the South Carolina General Assembly beginning with the November 2012 general election. An employee member of the system with an effective date of membership prior to July 1, 2012, is a class two member. An employee member of the system with an effective date of membership on or after July 1, 2012, is a class three member.
- State ORP – As an alternative to membership in SCRS, newly hired state, public school, and higher education employees and individuals newly elected to the South Carolina General Assembly beginning with the November 2012 general election have the option to participate in State ORP. State ORP participants direct the investment of their funds into a plan administered by one of four investment providers. PEBA assumes no liability for State ORP benefits. Rather, the benefits are the liability of the investment providers. For this reason, State ORP programs are not part of the retirement systems' trust funds for financial statement purposes. Employee and employer contributions to State ORP are at the same rates as SCRS. A direct remittance is required from the employers to the member's account with investment providers for the employee contribution and a portion of the employer contribution (5%). A direct remittance is also required to SCRS for the remaining portion of the employer contribution and an incidental death benefit contribution, if applicable, which is retained by SCRS.
- PORS – To be eligible for PORS membership, an employee must be required by the terms of his employment, by election or appointment, to preserve public order, protect life and property, and detect crimes in the state; to prevent and control property destruction by fire; or to serve as a peace officer employed by the Department of Corrections, the Department of Juvenile Justice, or the Department of Mental Health. Probate judges and coroners may elect membership in PORS. Magistrates are required to participate in PORS for service as a magistrate. PORS members, other than magistrates and probate judges, must also earn at least $2,000 per year and devote at least 1,600 hours per year to this work, unless exempted by statute. An employee member of the system with an effective date of membership prior to July 1, 2012, is a class two member. An employee member of the system with an effective date of membership on or after July 1, 2012, is a class three member.

(c) Benefits

Benefit terms are prescribed in Title 9 of the South Carolina Code of Laws. PEBA does not have the authority to establish or amend benefit terms without a legislative change in the code of laws. Key elements of the benefit calculation include the benefit multiplier, years of service, and average final compensation. A brief summary of the benefit terms for each system is presented below.

- SCRS – A class two member who has separated from service with at least 5 or more years of earned service is eligible for a monthly pension at age 65 or with 28 years credited service regardless of age. A member may elect early retirement with reduced pension benefits payable at age 55 with 25 years of service credit. A class three member who has separated from service with

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at least 8 or more years of earned service is eligible for a monthly pension upon satisfying the Rule of 90 requirement that the total of the member's age and the member's creditable service equals at least 90 years. Both class two and class three members are eligible to receive a reduced deferred annuity at age 60 if they satisfy the 5-or 8-year earned service requirement, respectively. An incidental death benefit is also available to beneficiaries of active and retired members of employers who participate in the death benefit program.

The annual retirement allowance of eligible retirees or their surviving annuitants is increased by the lesser of 1% or $500 every July 1. Only those annuitants in receipt of a benefit on July 1 of the preceding year are eligible to receive the increase. Members who retire under the early retirement provisions at age 55 with 25 years of service are not eligible for the benefit adjustment until the second July 1 after reaching age 60 or the second July 1 after the date they would have had 28 years of service credit had they not retired.

- PORS – A class two member who has separated from service with at least 5 or more years of earned service is eligible for a monthly pension at age 55 or with 25 years of service regardless of age. A class three member who has separated from service with at least 8 or more years of earned service is eligible for a monthly pension at age 55 or with 27 years of service regardless of age. Both class two and class three members are eligible to receive a deferred annuity at age 55 with 5 or 8 years of earned service, respectively. An incidental death benefit is also available to beneficiaries of active and retired members of employers who participate in the death benefit program. Accidental death benefits are also provided upon the death of an active member working for a covered employer whose death was a natural and proximate result of an injury incurred while in the performance of duty.

  The retirement allowance of eligible retirees or their surviving annuitants is increased by the lesser of 1% or $500 every July 1. Only those annuitants in receipt of a benefit on July 1 of the preceding year are eligible to receive the increase.

(d) Contributions

Contributions are prescribed in Title 9 of the South Carolina Code of Laws. Upon recommendation by the actuary in the annual actuarial valuation, the PEBA Board may adopt and present to the SFAA for approval an increase in the SCRS and PORS employer and employee contribution rates, but any such increase may not result in a differential between the employee and total employer contribution rate that exceeds 2.9% of earnable compensation for SCRS and 5% for PORS. An increase in the contribution rates adopted by the Board may not provide for an increase of more than one-half of 1% in any 1 year. If the scheduled employee and employer contributions provided in statute or the rates last adopted by the board are insufficient to maintain a 30-year amortization schedule of the unfunded liabilities of the plans, the board shall increase the contribution rates in equal percentage amounts for the employer and employee as necessary to maintain the 30-year amortization period; and, this increase is not limited to one-half of 1% per year.

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- Required employee contribution rates [1] for fiscal year 2017 are as follows:

SCRS:	
Employee class two	8.66 %
Employee class three	8.66
State ORP	8.66 %
PORS:	
Employee class two	9.24 %
Employee class three	9.24

- Required employer contribution rates [1] for fiscal year 2017 are as follows:

SCRS:	
Employer class two	11.41 %
Employer class three	11.41
Employer incidental death benefit	0.15
State ORP:	
Employer contribution [2]	11.41 %
Employer incidental death benefit	0.15
PORS:	
Employer class two	13.84 %
Employer class three	13.84
Employer incidental death benefit	0.20
Employer accidental death program	0.20

[1] Calculated on earnable compensation as defined in Title 9 of the South Carolina Code of Laws.

[2] Of this employer contribution, 5% of earnable compensation must be remitted by the employer directly to the ORP vendor to be allocated to the member's account with the remainder of the employer contribution remitted to SCRS.

(e) Allocation of Pension Amounts

The Authority's proportionate share of pension amounts was calculated on the basis of historical employer contributions. Although GASB Statement No. 68 encourages the use of the employer's projected long-term contribution effort to the retirement plan, allocating on the basis of historical employer contributions is considered acceptable. Employer contributions recognized by the Systems that are not representative of future contribution effort are excluded in the determination of employers' proportionate shares. Examples of employer contributions not representative of future contribution efforts are contributions towards the purchase of employee service and employer contributions paid by employees in connection with early retirement.

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The following table provides the employer contributions used in the determination of employers' proportionate shares of collective pension amounts reported in the Schedule of Employer Allocations.

	SCRS	PORS
The Authority's proportionate share of contributions for the fiscal year ended June 30, 2016	$ 37,175,029	376,835
The Authority's allocation percentage of proportionate shares of collective pension amounts – June 30, 2016 measurement date	3.471014 %	0.215130 %

(f) Net Pension Liability

The net pension liability (NPL) is calculated separately for each system and represents that particular system's total pension liability determined in accordance with GASB Statement No. 67, *Financial Reporting for Pension Plans – An Amendment of GASB Statement No. 25*, less that System's fiduciary net position. NPL totals, as of June 30, 2016, for SCRS and PORS and the Authority's proportionate share are presented below.

System	Total pension liability	Plan fiduciary net position	Collective net pension liability (asset)	The Authority's portion of collective net pension liability	The Authority's proportioned share of net pension liability
SCRS	$ 45,356,214,752	23,996,362,354	21,359,852,398	3.471014 %	$ 741,403,467
PORS	6,412,510,458	3,876,035,732	2,536,474,726	0.215130	5,456,693

For the year ended June 30, 2017, the Authority recognized pension expense of $74,063,665 and $569,002 related to the SCRS and PORS pension plans, respectively.

(g) Actuarial Assumptions and Methods

Actuarial valuations involve estimates of the reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and future salary increases. Actuarial assumptions and methods used during the annual valuation process are subject to periodic revision, typically with an experience study, as actual results over an extended period of time are compared with past expectations and new estimates are made about the future.

South Carolina state statute requires that an actuarial experience study be completed at least once in each five-year period. An experience report on the Systems was most recently issued as of July 1, 2015. The June 30, 2016, total pension liability, net pension liability and sensitivity information were determined by the Systems consulting actuary, Gabriel, Roeder, Smith and Company (GRS) and are based on the July 1, 2015, actuarial valuations, as adopted by the PEBA Board and SFAA which utilized membership data as of July 1, 2015. The total pension liability was rolled forward from the valuation date to the Systems' fiscal year ended June 30, 2016, using generally accepted actuarial

(Continued)

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principles. Information included in the following schedules is based on the certification provided by GRS.

The following provides a summary of the actuarial assumptions and methods used in the July 1, 2015 valuations for SCRS and PORS.

	SCRS	PORS
Actuarial cost method	Entry age normal	Entry age normal
Actuarial assumptions:		
Investment rate of return [1]	7.50 %	7.50 %
Projected salary increases	3.50% to 12.50% (varies by service) [1]	4.0% to 10.0% (varies by service) [1]
Benefit adjustments	Lesser of 1% or $500 annually	Lesser of 1% or $500 annually

[1] Includes inflation at 2.75%

The post retiree mortality assumption is dependent upon the member's job category and gender. This assumption includes base rates which are automatically adjusted for future improvement in mortality using published Scale AA projected from the year 2000. Assumptions used in the July 1, 2015, valuations for SCRS and PORS are as follows.

Former job class	Males	Females
Educators	RP-2000 males (with white collar adjustment) multiplied by 110%	RP-2000 females (with white collar adjustment) multiplied by 95%
General employees and members of the general assembly	RP-2000 males multiplied by 100%	RP-2000 females multiplied by 90%
Public safety and firefighters	RP-2000 males (with blue collar adjustment) multiplied by 115%	RP-2000 females (with blue collar adjustment) multiplied by 115%

(h) Long-Term Expected Rate of Return

The long-term expected rate of return on pension plan investments, as used in the July 1, 2015, actuarial valuations, was based upon the 30-year capital markets outlook at the end of the third quarter 2015. The long term expected rate of returns represent assumptions developed using an arithmetic building block approach primarily based on consensus expectations and market-based inputs. Expected returns are net of investment fees.

(Continued)

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The expected returns, along with the expected inflation rate, form the basis for the revised target asset allocation adopted beginning January 1, 2016. The long-term expected rate of return is produced by weighting the expected future real rates of return by the target allocation percentage and by adding expected inflation and is summarized in the table below. For actuarial purposes, the 7.50% assumed annual investment rate of return used in the calculation of the total pension liability includes a 4.75% real rate of return and a 2.75% inflation component.

Asset class	Target asset allocation (%)	Expected arithmetic real rate of return (%)	Long term expected portfolio real rate of return (%)
Global equity:			
Global public equity	34.0 %	6.52 %	2.22 %
Private equity	9.0	9.30	0.84
Real assets:			
Real estate	5.0	4.32	0.22
Commodities	3.0	4.53	0.13
Opportunistic:			
GTAA/Risk parity	10.0	3.90	0.39
HF(Low beta)	10.0	3.87	0.39
Diversified credit:			
Mixed credit	5.0	3.52	0.17
Emerging markets debt	5.0	4.91	0.25
Private debt	7.0	4.47	0.31
Conservative fixed income:			
Core fixed income	10.0	1.72	0.17
Cash and short duration (net)	2.0	0.71	0.01
Total expected real return	100.0 %		5.10
Inflation for actuarial purposes			2.75
Total expected nominal return			7.85 %

(i) Discount Rate

The discount rate used to measure the total pension liability was 7.50%. The projection of cash flows used to determine the discount rate assumed that the funding policy specified in the South Carolina State Code of Laws will remain unchanged in future years. Based on those assumptions, each System's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan

(Continued)

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investments was applied to all periods of projected benefit payments to determine the total pension liability.

(j) Sensitivity Analysis

The following table presents the sensitivity of the Authority's net pension liability calculated using the discount rate of 7.50%, as well as what the Authority's net pension liability would be if it were calculated using a discount rate that is 1.00% lower (6.50%) or 1.00% higher (8.50%) than the current rate.

The Authority's Sensitivity of the Net Pension Liability to Changes in the Discount Rate

	1.00% Decrease (6.50%)	Current discount rate (7.50%)	1.00% Increase (8.50%)
SCRS	$ 924,880,524	741,403,467	588,665,730
PORS	7,151,463	5,456,693	3,933,624

(k) Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

Deferred outflows of resources were related to differences between expected and actual experience and contributions made after the measurement date. Deferred inflows of resources were related to differences between projected and actual investment earnings. At June 30, 2017, the Authority reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	Deferred outflows of resources	Deferred inflows of resources
Net differences between expected and actual experience:		
SCRS	$ 7,685,518	805,167
PORS	80,967	—
Changes of assumption:		
SCRS	—	—
PORS	—	—

(Continued)

MUHA/Roper/FOIA 000143

	Deferred outflows of resources	Deferred inflows of resources
Net difference between projected and actual earnings on pension plan investments:		
SCRS	$ 62,375,854	—
PORS	618,744	—
Changes in proportionate share and differences between employer contributions and proportionate share of total plan employer contributions:		
SCRS	21,431,373	—
PORS	—	73,068
The Authority's contributions subsequent to the measurement date:		
SCRS	40,427,071	—
PORS	380,109	—
Total	$ 132,999,636	878,235

Approximately $40.8 million reported as deferred outflows of resources related to pensions resulting from the Authority's contributions subsequent to the measurement date will be recognized as a reduction of the net pension liability in the year ended June 30, 2018. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

	SCRS	PORS
Year ended June 30:		
2017	$ 25,246,897	137,120
2018	21,229,628	133,016
2019	29,697,107	227,505
2020	14,513,946	129,002
Net balance of deferred outflows of resources	$ 90,687,578	626,643

(l) Pension Plan Fiduciary Net Position

Detailed information regarding the fiduciary net position of the plans administered by PEBA is available in the separately issued CAFR containing financial statements and required supplementary information for SCRS and PORS. The CAFR of the Pension Trust Funds is publicly available on PEBA's Retirement Benefits' web site at peba.sc.gov, or a copy may be obtained by submitting a request to PEBA, 202 Arbor Lake Drive, Columbia, SC 29223.

(Continued)

MUHA/Roper/FOIA 000144

(12) Business and Credit Concentrations

The Authority provides healthcare services through its inpatient and outpatient care facilities principally located in and around Charleston, South Carolina. The Authority grants credit to patients, substantially all of whom are residents of its service area. The Authority generally does not require collateral or other security in extending credit to patients; however, it routinely obtains assignment of (or is otherwise entitled to receive) patients' benefits payable under their health insurance programs, plans or policies (e.g., Medicare, Medicaid, Blue Cross and commercial insurance policies).

The mix of receivables from patients and third-party payors as of June 30, 2017 is as follows:

Blue Cross	$	18 %
Medicare		26
Medicaid		23
Private insurance/managed care		17
Medically indigent/self pay/other		16
	$	100 %

(13) Risk Management

The Authority is exposed to various risks of loss related to torts; theft of, damage to and destruction of assets; business interruption; errors and omissions; employee injuries and illness; natural disasters; and professional and general liability claims and judgments. The Authority participates in the South Carolina Insurance Reserve Fund (IRF), which provides coverage for substantially all such risks. The Authority pays premiums to the IRF and effectively receives unlimited occurrence-based coverage for all consequential risks of loss (when combined with related recovery limit protections provided by state statutes). There was no change in coverage during the year ended June 30, 2017.

(14) Leases

The Authority has entered into capital lease agreements for the purpose of financing certain equipment acquisitions expiring in various years through 2024. Future minimum lease payments due under capital leases, by year and in the aggregate, follow:

2018	$	4,242,070
2019		3,595,100
2020		1,843,181
2021		1,491,335
2022		981,176
Thereafter		1,716,839
		13,869,701
Less interest at rates from 1.95% to 4.83%		1,189,724
Present value of future minimum lease payments		12,679,977
Less current installments		3,833,459
Capital lease obligations, excluding current installments	$	8,846,518

The Authority also enters into operating leases for various capital assets expiring in various years through 2039. Future minimum lease payments due under noncancelable operating lease agreements with third parties are as follows:

2018	$	16,997,369
2019		12,377,003
2020		8,685,333
2021		6,658,412
2022		5,257,793
2023–2027		10,748,853
2028–2032		1,954,571
2033–2037		704,115
2038–2039		352,058
	$	63,735,507

Rental expense for all operating leases was approximately $20.4 million in fiscal year 2017 and is included in services and supplies expense in the accompanying Statement of Revenues, Expenses and Changes in Net Position. Management expects that most lease agreements will be replaced, as they expire, with similar agreements.

(Continued)

MUHA/Roper/FOIA 000146

(15) Related Party Transactions

The following describes the Authority's material agreements with related parties:

(a) The University

Under the terms of various agreements related to the Authority's establishment as a distinct healthcare system, the University provides a variety of shared services for the Authority, including facilities oversight, administrative and financial services and other types of general operating support. The Authority also leases certain facilities space from the University under the Reciprocal Space Agreement. The cost of these services and leases totaled approximately $67.0 million for fiscal year 2017, and is included in services and supplies expense in the accompanying Statement of Revenues, Expenses and Changes in Net Position.

The Authority also reimburses the University for certain professional clinical services provided by interns and residents receiving medical education at the University. The cost of these services totaled approximately $49.8 million for fiscal year 2017, and is included in services and supplies expense in the accompanying Statement of Revenues, Expenses and Changes in Net Position.

The Authority rents certain facilities space to and provides limited support services for the University. The income earned by the Authority for such items was approximately $3.2 million during fiscal year 2017, which is included in other revenue in the accompanying Statement of Revenues, Expenses and Changes in Net Position.

The Authority had a net payable to the University of approximately $9.56 million at June 30, 2017. This payable is a component of due to related parties on the Statement of Net Position.

(b) University Medical Associates (UMA)

UMA, a blended component unit of the University, is a separately organized professional services corporation associated with the University's faculty practice plan. UMA and the Authority have entered into certain agreements related to clinical and other services provided by UMA and its practicing physicians for the benefit of the Authority. Net amounts paid by the Authority to UMA under these agreements totaled approximately $64.8 million during fiscal year 2017 and are included in services and supplies expense in the accompanying Statement of Revenues, Expenses and Changes in Net Position.

UMA also provides billing and collection services to the Authority related to certain limited clinical services, for which UMA receives an administrative fee. Total billings by UMA for the Authority services were approximately $49.3 million in fiscal year 2017. The amounts collected and remitted by UMA to the Authority with respect to these billings amounted to approximately $6.7 million in fiscal year 2017. The administrative fees paid by the Authority to UMA amounted to approximately $825 thousand for fiscal year 2017 and are included in services and supplies expense in the accompanying Statement of Revenues, Expenses and Changes in Net Position.

(Continued)

MUHA/Roper/FOIA 000147

UMA and the Authority jointly fund the costs of an ambulatory and revenue cycle Electronic Health Record (EHR) system. The funding percentages for each entity depend on the particular costs incurred. The types of costs paid in fiscal year 2017 were primarily operating costs. Net amounts paid by UMA to the Authority totaled approximately $2.5 million during fiscal year 2017 and are included in compensation and employee benefits and services and supplies expense in the accompanying Statement of Revenues, Expenses and Changes in Net Position.

The Authority had a net payable to UMA in the amount of approximately $2.2 million at June 30, 2017. This payable is a component of due to related parties on the Statement of Net Position.

(c) The State of South Carolina

The Authority benefits from certain administrative services provided by related State agencies and departments. The cost of these services (primarily related to insurance program administration, record keeping and centralized treasury management) is either insignificant relative to the Authority's allocable portion or is funded by the Authority with payments as described in notes 6, 8, 10, 11, 13 and 15.

(16) Purchase Commitments

The Authority entered into a long-term agreement on March 25, 2016 that requires certain minimum purchases of patient monitoring products and services through fiscal year 2024. Effective July 1, 2016, the Authority amended the original agreement to reduce the required minimum purchases and corresponding unitary payments. The agreement cost is approximately $30.8 million and calls for 96 monthly unitary payments of $360,506. The patient monitoring products and services will be consumed over the agreement period and in conjunction with a time line that was developed at agreement inception. The time line can be modified by the parties and this commitment is at a level consistent with normal business practices.

At June 30, 2017, the minimum purchase commitments extending beyond one year are as follows:

2018	$ 4,326,072
2019	4,326,072
2020	4,326,072
2021	4,326,072
2022	4,326,072
2023–2024	8,652,144
Total	$ 30,282,504

During 2017, the Authority's total purchases under the contract were approximately $2.1 million. The Authority has an available balance of $25.2 million in goods and services at June 30, 2017.

A portion of the minimum purchases under this contract are capital leases and are included in the required lease disclosures in note 14.

(Continued)

MUHA/Roper/FOIA 000148

(17) Investment in Initiant, LLC

In April 2014, the Authority, became a founding member of a health collaborative named Initiant, LLC. The purpose of this collaborative is to create efficiencies and synergies that mitigate the rising costs of healthcare through joint purchasing of equipment, supplies, and services, shared administrative and clinical support systems and access to critical competencies not available or affordable to a single member. Initiant is a limited liability company owned by the founding members, with the opportunity to add more members (owners) and participants (nonowners) over time. The Authority has representation on the Board of Managers of the collaborative and exercises joint control with the other members over Initiant, LLC. The other members are Greenville Health System (Greenville, SC), McLeod Health (Florence, SC), Palmetto Health (Columbia, SC) and Self Regional Healthcare (Greenwood, SC).

In May 2016, Initiant, LLC's board of managers voted to change from an expense reimbursement structure to a combination of capital calls and member loans. In September 2016, the Authority made a member loan to Initiant of $684,839. The loan term is 10 years with no scheduled principal payback until the loan matures in September 2026. The loan accrues interest at a rate of 3.25% and is payable on September 30, 2017 and each consecutive year thereafter.

The Authority is responsible for its respective (20% ownership) share of all future capital calls. To date, the Authority has contributed $695,600 in capital calls to Initiant, LLC and this amount includes $125,000 in fiscal year 2017. The Authority uses the equity method of accounting for its investment in Initiant, LLC and its investment balance at June 30, 2017 is negative $440,463. This amount and the loan receivable are reported with "Investments in joint ventures and partnerships" on the Statement of Net Position.

Initiant, LLC issued separate financial statements during fiscal year 2017.

(18) Subsequent Events

There were no subsequent events in the current year.

MUHA/Roper/FOIA 000149

THE AUTHORITY'S

Schedule of Proportionate Share

of Net Pension Liability to PEBA

South Carolina Retirement System (SCRS) Pension Plan

June 30, 2016 Measurement Date

Year Ending June 30	Proportion (percentage) of the collective net pension liability	Proportionate share (amount) of the collective net pension liability	Covered payroll	Proportionate share (amount) of the collective net pension liability as a percentage of its covered payroll	Pension plan's fiduciary net position as a percentage of total pension liability
2017	3.471014 %	$ 741,403,467	287,923,152	257.50 %	52.90 %
2016	3.377349	640,530,521	281,452,784	227.58	57.00
2015	3.289076	566,270,880	268,970,820	210.53	59.90
2014	3.289184	589,943,980	259,311,350	227.50	56.39

The above schedules are intended to show ten years of information. Additional years will be provided as they become available.

See accompanying notes to required supplementary information and accompanying independent auditors' report.

(Continued)

MUHA/Roper/FOIA 000150

ROA 000261

THE AUTHORITY'S

Schedule of Proportionate Share

of Net Pension Liability to PEBA

Police Officers Retirement System (PORS) Pension Plan

June 30, 2016 Measurement Date

Year Ending June 30	Proportion (percentage) of the collective net pension liability	Proportionate share (amount) of the collective net pension liability	Covered payroll	Proportionate share (amount) of the collective net pension liability as a percentage of its covered payroll	Pension plan's fiduciary net position as a percentage of total pension liability
2017	0.21513 %	$ 5,456,693	2,653,533	205.64 %	60.40 %
2016	0.21917	4,776,715	2,730,140	174.96	64.60
2015	0.21963	4,204,542	2,692,311	156.17	67.50
2014	0.21962	4,552,745	2,589,067	175.85	62.98

The above schedules are intended to show ten years of information. Additional years will be provided as they become available.

See accompanying notes to required supplementary information and accompanying independent auditors' report.

MUHA/Roper/FOIA 000151

THE AUTHORITY'S

Schedule of Employer Contributions to PEBA

South Carolina Retirement System (SCRS) Pension Plan

Fiscal Year ended June 30, 2017

Year Ending June 30	Employer contributions	Statutorily or contractually required employer contributions	Contribution deficiency (excess)	Covered payroll	Contributions as a percentage of covered payroll
2017	$ 40,427,071	40,427,071	—	287,923,152	14.04 %
2016	37,175,029	37,175,029	—	281,452,784	13.21
2015	34,516,724	34,516,724	—	268,970,820	12.83
2014	31,652,157	31,652,157	—	259,311,350	12.21
2013	27,997,059	27,997,059	—	264,123,194	10.60

The above schedules are intended to show ten years of information. Additional years will be provided as they become available

See accompanying notes to required supplementary information and accompanying independent auditors' report.

(Continued)

MUHA/Roper/FOIA 000152

THE AUTHORITY'S

Schedule of Employer Contributions to PEBA

Police Officers Retirement System (PORS) Pension Plan

Fiscal Year ended June 30, 2017

Year Ending June 30	Employer contributions	Statutorily or contractually required employer contributions	Contribution deficiency (excess)	Covered payroll	Contributions as a percentage of covered payroll
2017	$ 380,109	380,109	—	2,653,533	14.32 %
2016	376,835	376,835	—	2,730,140	13.80
2015	364,104	364,104	—	2,692,311	13.52
2014	339,175	339,175	—	2,589,067	13.10
2013	349,962	349,962	—	2,845,220	12.30

The above schedules are intended to show ten years of information. Additional years will be provided as they become available.

See accompanying notes to required supplementary information and accompanying independent auditors' report.

MUHA/Roper/FOIA 000153

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A Component Unit of The Medical University of South Carolina)

Notes to Required Supplementary Information

June 30, 2017

(Unaudited)

	SCRS
Valuation date	Actuarially calculated contribution rates are calculated as of July 1, 2013.
Methods and assumptions used to determine contribution rates:	
Actuarial cost method	Entry age normal
Amortization method	Level% of pay
Amortization period	30 years, open
Asset valuation method	The market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual and the expected returns on a market value basis and is recognized over a five-year period.
Inflation	2.75%
Investment rate of return	7.50%
Salary increases	3.50% plus step-rate increases for members with less than 25 years of service.
Mortality	RP-2000 Mortality Table (White Collar Adjustment for Educators), projected at Scale AA from Year 2000. Male rates multiplied by 100% for noneducators and 110% for educators. Female rates multiplied by 90% for noneducators and 95% for educators.
Other comments	As a result of enactment of Act 278, the member and employer contribution rates for SCRS is determined in accordance with Section 9-1-1065 of the South Carolina Code. Contribution rates determined by an actuarial valuation are effective for the fiscal year beginning 24 months after the valuation date.

	PORS
Valuation date	Actuarially calculated contribution rates are calculated as of July 1, 2013.
Methods and assumptions used to determine contribution rates:	
Actuarial cost method	Entry age normal
Amortization method	Level% of pay
Amortization period	30 years, open
Asset valuation method	The market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual and the expected returns on a market value basis and is recognized over a five-year period.
Inflation	2.75%
Investment rate of return	7.50%
Salary increases	4% plus step-rate increases for members with less than 12 years of service.
Mortality	RP-2000 Mortality Table with Blue Collar Adjustment, projected at Scale AA from Year 2000. Male and female rates are multiplied at 115%.
Other comments	As a result of enactment of Act 278, the member and employer contribution rates for PORS are determined in accordance with Section 9-11-225 of the South Carolina Code. Contribution rates determined by an actuarial valuation are effective for the fiscal year beginning 24 months after the valuation date.

MUHA/Roper/FOIA 000154

ROA 000265

Medical University Hospital Authority

(A Component Unit of the Medical University of South Carolina)

Study of Financial Feasibility

MUSC Shawn Jenkins Children's Hospital

For the Years Ending June 30, 2016 through 2021



MUHA/Roper/FOIA 000680

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DHG
DIXON HUGHES GOODMAN

SECTION I - INDEPENDENT ACCOUNTANTS' EXAMINATION REPORT

The Board of Trustees
Medical University Hospital Authority
Charleston, South Carolina

U. S. Department of Housing and Urban Development
Office of Healthcare Programs
451 7th Street S.W.
Washington, DC 20410

Armadale Capital Inc.
99 Madison Ave, Suite 608
New York, New York 10016

We have prepared a Study of Financial Feasibility (the "Study") of the plans of Medical University Hospital Authority ("MUHA" or the "Authority") to construct a replacement Children's Hospital and Women's Pavilion (the "Project"), to be named the MUSC Shawn Jenkins Children's Hospital, on its campus in Charleston, South Carolina. The Study was undertaken to evaluate the ability of the Authority to meet its operating expenses, working capital needs, and other financial requirements, including the debt service requirements associated with the proposed $316,397,200 mortgage loan insured by the Federal Housing Administration ("FHA") Section 242/241 Supplemental Loan Program (the "Section 241 Supplemental Loan (2017)" or the "Mortgage").

The Project is a replacement Children's Hospital and Women's Pavilion and is the second phase of the Authority's plan to replace much of its primary patient care facilities in a phased approach over the next 20 years. The construction of the Project is expected to begin September 1, 2016 and be completed by May 1, 2019.

The estimated total cost of the Project is $384,896,151. The Mortgage is intended to be the primary source of funds for the Project. The responsibility for payment of debt service on the Mortgage is solely that of the Authority. Other necessary funds to finance the Project are assumed to be provided from the Authority's funds, an appropriation from the State of South Carolina, and a fundraising initiative.

MUHA/Roper/FOIA 000682

Our procedures included analysis of the following:

- Program history, objectives, timing, and financing;
- The future demand for the Authority's services, including consideration of the following:
  - Economic and demographic characteristics of the Authority's defined service area;
  - Locations, capabilities, and competitive information pertaining to other existing and planned area hospitals;
  - Physician support for the Authority and its programs; and
  - Historic and current utilization levels;
- Planning agency applications and approvals;
- Construction and equipment costs, debt-service requirements, and estimated financing costs;
- Staffing patterns and other operating considerations;
- Third-party reimbursement policy and history; and
- Revenue/expense/volume relationships.

We also participated in gathering other information, assisted the Authority's executive management team ("Management") in identifying and formulating its assumptions, and assembled the accompanying financial forecast (the "Forecast") based on those assumptions.

Historical amounts for the year ended June 30, 2015, are included for comparative purposes and were derived from the Authority's audited financial statements.

The accompanying Forecast for the annual periods ending June 30, 2016 through 2021 is based on assumptions that were provided by or evaluated with and approved by Management. The Forecast includes the following:

- Forecasted Statements of Net Position;
- Forecasted Statements of Revenues, Expenses, and Changes in Net Position;
- Forecasted Statements of Cash Flows; and
- Forecasted Financial Ratios.

We have examined the Forecast. Management is responsible for the Forecast. Our responsibility is to express an opinion on the Forecast based on our examination. Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants ("AICPA") and, accordingly, included such procedures as we considered necessary to evaluate both the assumptions used by Management and the preparation and presentation of the Forecast. We believe that our examination provides a reasonable basis for our opinion.

Legislation and regulations at all levels of government have affected and may continue to affect the operations of healthcare organizations. The Forecast is based upon legislation and regulations currently in effect. If future legislation or regulations related to MUHA's operations are subsequently enacted, such legislation or regulations could have a material effect on future operations.

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The interest rate, principal payments, Project costs, and other financing assumptions are described in Sections III and V of the Study. If actual interest rates, principal payments, and funding requirements are different from those assumed, the amount of the Mortgage and debt service requirements would need to be adjusted accordingly from those indicated in the Forecast. If such interest rates, principal payments, and funding requirements are lower than those assumed, such adjustments would not adversely affect the Forecast.

Our conclusions are presented below:

- In our opinion, the accompanying Forecast is presented in conformity with guidelines for presentation of a forecast established by the AICPA.
- In our opinion, the underlying assumptions provide a reasonable basis for Management's Forecast. However, differences between the forecasted and actual results may occur as events and circumstances frequently do not occur as expected. Those differences may be material.
- The accompanying financial Forecast indicates that sufficient funds could be generated to meet the Authority's operating expenses, working capital needs and other financial requirements during the forecast periods, including the debt service requirements associated with the proposed $316,397,200 Mortgage. The achievement of any financial forecast is dependent upon the assumptions and future events, the occurrence, of which, cannot be assured.

We have no responsibility to update this report for events and circumstances occurring after the date of this report.

Dixon Hughes Goodman LLP

February 12, 2016

MUHA/Roper/FOIA 000684

SECTION II - HISTORICAL AND FORECASTED FINANCIAL STATEMENTS

MUHA/Roper/FOIA 000685

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A COMPONENT UNIT OF THE MEDICAL UNIVERSITY OF SOUTH CAROLINA)

Historical and Forecasted Statements of Net Position (Shown in '000s)

For the Years Ending June 30, 2016 through 2021
(With Historical Amounts for Year Ended June 30, 2015)

	Historical	Forecasted					
	2015	2016	2017	2018	2019	2020	2021
Assets and Deferred Outflows							
Current assets:							
Cash and cash equivalents	$ 117,725	$ 116,548	$ 135,827	$ 141,767	$ 166,065	$ 173,322	$ 181,677
Short-term investments	9,994	-	-	-	-	-	-
Assets limited as to use, current portion	16,569	15,000	15,000	65,999	8,000	8,000	8,000
Patient accounts receivable, net of allowances for uncollectible accounts	183,023	187,713	194,863	202,682	211,445	220,035	230,394
Due from third-party payors	7,861	7,861	7,861	7,861	7,861	7,861	7,861
Other receivables	14,281	14,281	14,281	14,281	14,281	14,281	14,281
Drugs and supplies	25,086	25,818	27,132	28,439	29,872	31,295	32,977
Prepaid expense	10,688	11,721	12,133	12,574	12,992	13,553	14,104
Total current assets	385,227	378,942	407,097	473,603	450,516	468,347	489,294
Assets limited as to use:							
Investments held by trustees under indenture agreements	47,284	49,884	52,484	55,084	57,684	64,309	70,935
Restricted by contributors and grantors for specific operating activities	-	12,062	5,062	2,062	2,062	2,062	2,062
Restricted by contributors and grantors for specific capital activities	-	37,000	41,500	-	-	-	-
Allowance to Make the Project Operational (AMPO)	-	-	4,828	4,828	-	-	-
Total assets limited as to use	47,284	98,946	103,874	61,974	59,746	66,371	72,997
Capital assets:							
Non-depreciable capital assets	8,755	6,093	6,093	6,093	6,093	6,093	6,093
Construction in progress	17,790	10,000	127,016	252,514	-	-	-
Depreciable capital assets, net of accumulated depreciation	482,653	485,601	471,147	457,334	816,028	789,871	762,195
Total capital assets, net of accumulated depreciation	509,198	501,694	604,256	715,941	822,121	795,964	768,288
Other assets:							
Investments	-	25,751	40,415	68,168	84,683	84,780	84,776
Total assets	941,709	1,005,333	1,155,642	1,319,686	1,417,066	1,415,462	1,415,355
Deferred outflows	88,011	95,719	91,686	87,724	83,845	80,522	78,210
Total assets and deferred outflows	$ 1,029,720	$ 1,101,052	$ 1,247,328	$ 1,407,410	$ 1,500,911	$ 1,495,984	$ 1,493,565

Continued

MUHA/Roper/FOIA 000686

ROA 000272

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A COMPONENT UNIT OF THE MEDICAL UNIVERSITY OF SOUTH CAROLINA)

Historical and Forecasted Statements of Net Position (Shown in 000s), Continued

For the Years Ending June 30, 2016 through 2021
(With Historical Amounts for Year Ended June 30, 2015)

	Historical	Forecasted					
	2015	2016	2017	2018	2019	2020	2021
Liabilities, Deferred Inflows, and Net Position							
Current liabilities:							
Current installments of long-term debt	$ 17,787	$ 18,257	$ 18,832	$ 19,939	$ 26,322	$ 27,225	$ 27,984
Accounts payable	56,462	57,750	60,089	62,371	64,920	68,154	71,031
Estimated third-party payor settlements	2,801	2,801	2,801	2,801	2,801	2,801	2,801
Accrued payroll and employee benefits	60,812	63,717	64,976	68,271	71,607	74,674	78,764
Other accrued expenses	5,471	850	850	850	850	850	850
Due to related parties	6,346	6,346	6,346	6,346	6,346	6,346	6,346
Total current liabilities	149,679	149,721	153,894	160,578	172,846	180,050	187,776
Non-current liabilities:							
Long-term debt, excluding current installments	368,618	350,361	463,865	571,482	601,666	574,441	546,457
Net pension liability	570,493	645,325	645,325	645,325	645,325	645,325	645,325
Total non-current liabilities	939,111	995,686	1,109,190	1,216,807	1,246,991	1,219,766	1,191,782
Total liabilities	1,088,790	1,145,407	1,263,084	1,377,385	1,419,837	1,399,816	1,379,558
Deferred inflows	48,227	1,154	1,154	1,154	1,154	1,154	1,154
Total liabilities and deferred inflows	1,137,017	1,146,561	1,264,238	1,378,539	1,420,991	1,400,970	1,380,712
Net position:							
Net investment in capital assets	158,527	133,076	121,558	124,520	194,133	194,298	193,846
Restricted:							
Under indenture agreements	47,284	49,884	52,484	55,084	57,684	64,309	70,935
Expendable for specific capital activities	-	37,000	41,500	54,999	-	-	-
Expendable for specific operating activities (Center for Telehealth)	27,062	27,062	20,062	13,062	10,062	10,062	10,062
Unrestricted	(340,170)	(292,531)	(252,514)	(218,794)	(181,959)	(173,655)	(161,990)
Total net position	(107,297)	(45,509)	(16,910)	28,871	79,920	95,014	112,853
Total liabilities, deferred inflows, and net position	$ 1,029,720	$ 1,101,052	$ 1,247,328	$ 1,407,410	$ 1,500,911	$ 1,495,984	$ 1,493,565

See the Summary of Significant Forecast Assumptions and Accounting Policies and the Independent Accountants' Examination Report.

MUHA/Roper/FOIA 000687

ROA 000273

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A COMPONENT UNIT OF THE MEDICAL UNIVERSITY OF SOUTH CAROLINA)

Historical and Forecasted Statements of Revenues, Expenses and Changes in Net Position (Shown in 000s)

For the Years Ending June 30, 2016 through 2021
(With Historical Amounts for Year Ended June 30, 2015)

	Historical	Forecasted					
	2015	2016	2017	2018	2019	2020	2021
Operating Revenues:							
Net patient service revenue, net of provision for bad debts	$ 1,231,501	$ 1,266,521	$ 1,311,165	$1,363,776	$1,422,741	$1,484,600	$1,550,244
Other revenue	26,301	27,563	28,900	28,396	28,822	29,255	29,693
Total operating revenues	1,257,802	1,294,084	1,340,065	1,392,172	1,451,563	1,513,855	1,579,937
Operating expenses:							
Salaries and wages - Hospital	392,738	405,313	424,271	444,838	467,263	489,467	515,644
Salaries and wages - Residents	35,634	36,775	37,695	38,637	39,603	40,593	41,608
Employee benefits - Hospital	122,229	126,143	132,043	140,941	148,335	155,310	164,005
Employee benefits - Residents	10,486	10,822	11,092	11,370	11,654	11,945	12,244
Professional fees	41,928	43,271	44,569	45,906	47,283	48,701	50,163
Supplies and drugs	273,946	282,718	296,287	310,564	326,212	342,692	360,119
Purchased services	212,148	215,211	221,667	228,315	235,164	242,221	249,487
Purchased services - Center for Telehealth	3,849	17,000	15,000	15,000	11,000	8,000	8,000
Insurance - Hospital	3,024	3,121	3,215	3,311	3,411	3,513	3,618
Insurance - Residents	1,960	2,023	2,084	2,146	2,211	2,277	2,345
Leases and rentals	-	-	-	-	360	1,440	1,440
Utilities	15,992	16,504	17,037	17,588	18,669	25,415	26,274
Repairs and maintenance	31,040	32,034	32,675	33,328	33,995	34,675	35,368
Mortgage insurance premium	1,905	1,966	1,789	1,675	1,808	3,434	3,285
Pension expense	5,232	15,949	-	-	-	-	-
Depreciation and amortization	60,666	63,694	64,454	63,813	63,813	76,157	77,676
Total operating expenses	1,212,777	1,272,544	1,303,878	1,357,432	1,410,781	1,485,840	1,551,276
Operating income	$ 45,025	$ 21,540	$ 36,187	$ 34,740	$ 40,782	$ 28,015	$ 28,661

Continued

MUHA/Roper/FOIA 000688

ROA 000274

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A COMPONENT UNIT OF THE MEDICAL UNIVERSITY OF SOUTH CAROLINA)

Historical and Forecasted Statements of Revenues, Expenses and Changes in Net Position (Shown in 000s), Continued

For the Years Ending June 30, 2016 through 2021
(With Historical Amounts for Year Ended June 30, 2015)

	Historical	Forecasted					
	2015	2016	2017	2018	2019	2020	2021
Operating income	$ 45,025	$ 21,540	$ 36,187	$ 34,740	$ 40,782	$ 28,015	$ 28,661
Non-operating revenues (expenses):							
Noncapital grants and contributions	21,392	17,000	8,000	8,000	8,000	8,000	8,000
Loss on sale of capital assets	(4,011)	(2,267)	-	-	-	-	-
Investment income	2,054	4,398	5,495	6,042	5,971	5,608	5,724
Interest expense	(15,894)	(15,883)	(15,090)	(14,443)	(15,146)	(29,029)	(27,046)
Costs of issuance of long-term debt	-	-	(10,493)	(2,057)	(2,057)	-	-
Other non-operating expenses	(1,000)	-	-	-	-	-	-
Total non-operating revenues (expenses)	2,541	3,248	(12,088)	(2,458)	(3,232)	(15,421)	(13,322)
Excess of revenues over expenses before capital grants and contributions	47,566	24,788	24,099	32,282	37,550	12,594	15,339
Capital grants and contributions	-	37,000	4,500	13,499	13,499	2,500	2,500
Increase in net position	47,566	61,788	28,599	45,781	51,049	15,094	17,839
Net position, beginning of year (as restated, See Section V Note M.)	(154,863)	(107,297)	(45,509)	(16,910)	28,871	79,920	95,014
Net position, end of year	$ (107,297)	$ (45,509)	$ (16,910)	$ 28,871	$ 79,920	$ 95,014	$ 112,853

See the Summary of Significant Forecast Assumptions and Accounting Policies and the Independent Accountants' Examination Report.

MUHA/Roper/FOIA 000689

ROA 000275

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A COMPONENT UNIT OF THE MEDICAL UNIVERSITY OF SOUTH CAROLINA)

Historical and Forecasted Statements of Cash Flows (Shown in 000s)

For the Years Ending June 30, 2016 through 2021
(With Historical Amounts for Year Ended June 30, 2015)

	Historical	Forecasted					
	2015	2016	2017	2018	2019	2020	2021
Cash flows from operating activities:							
Receipts from and on behalf of patients	$ 1,234,682	$ 1,261,830	$ 1,304,015	$ 1,355,957	$ 1,413,977	$ 1,476,010	$ 1,539,885
Payments to suppliers and contractors	(593,171)	(618,944)	(633,710)	(657,300)	(679,413)	(711,118)	(739,456)
Payments to employees	(586,530)	(517,265)	(603,843)	(632,491)	(663,518)	(694,248)	(729,410)
Other receipts and payments, net	56,505	(33,768)	28,900	28,396	28,822	29,255	29,693
Net cash provided by operating activities	111,486	91,853	95,362	94,562	99,868	99,899	100,712
Cash flows from non-capital financing activities:							
Non-capital grants and contributions	20,392	17,000	8,000	8,000	8,000	8,000	8,000
Cash flows from capital and related financing activities:							
Capital grants and contributions	-	37,000	4,500	13,499	13,499	2,500	2,500
Purchases of capital assets	(40,054)	(56,190)	(167,016)	(175,498)	(169,993)	(50,000)	(50,000)
Proceeds from issuance of long-term debt	3,039	-	132,336	127,556	56,506	-	-
Principal paid on long-term debt	(17,304)	(17,787)	(18,257)	(18,832)	(19,939)	(26,322)	(27,225)
Interest paid on long-term debt	(12,115)	(11,601)	(11,056)	(10,480)	(11,269)	(25,706)	(24,734)
Payments of issuance costs	-	-	(10,493)	(2,057)	(2,057)	-	-
Net cash used in capital and related financing activities	(66,434)	(48,578)	(69,986)	(65,812)	(133,253)	(99,528)	(99,459)
Cash flows from investing activities:							
Investment income	2,054	4,398	5,495	6,042	5,971	5,608	5,724
Net change in assets limited as to use	(2,328)	(47,493)	2,500	(6,499)	57,999	-	-
Net change in other investments	(9,994)	(15,757)	(14,664)	(27,753)	(16,515)	(97)	4
Changes to debt-related funds	(2,758)	(2,600)	(7,428)	(2,600)	2,228	(6,625)	(6,626)
Net cash provided (used) by investing activities	(13,026)	(61,452)	(14,097)	(30,810)	49,683	(1,114)	(898)
Net increase (decrease) in cash and cash equivalents	52,418	(1,177)	19,279	5,940	24,298	7,257	8,355
Cash and cash equivalents, beginning of year	65,307	117,725	116,548	135,827	141,767	166,065	173,322
Cash and cash equivalents, end of year	$ 117,725	$ 116,548	$ 135,827	$ 141,767	$ 166,065	$ 173,322	$ 181,677

Continued

ROA 000276

MUHA/Roper/FOIA 000690

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A COMPONENT UNIT OF THE MEDICAL UNIVERSITY OF SOUTH CAROLINA)

Historical and Forecasted Statements of Cash Flows (Shown in 000s), Continued

For the Years Ending June 30, 2016 through 2021
(With Historical Amounts for Year Ended June 30, 2015)

	Historical	Forecasted					
	2015	2016	2017	2018	2019	2020	2021
Cash flows from operating activities:							
Operating income	$ 45,025	$ 21,540	$ 36,187	$ 34,740	$ 40,782	$ 28,015	$ 28,661
Adjustments to reconcile operating income to net cash provided by operating activities:							
Amortization of loss on refunding of long-term debt	(3,779)	(4,282)	(4,034)	(3,963)	(3,877)	(3,323)	(2,312)
Gain/loss on disposal of capital assets	(4,011)	(2,267)	-	-	-	-	-
Depreciation and amortization	60,666	63,694	64,454	63,813	63,813	76,157	77,676
Provision for uncollectible accounts	159,221	174,259	183,384	193,008	203,811	215,215	227,320
Net change in operating assets and liabilities:							
Patient accounts receivable, net	(156,275)	(178,949)	(190,534)	(200,827)	(212,574)	(223,805)	(237,679)
Other receivables	7,062	-	-	-	-	-	-
Deferred outflows	(15,114)	(7,708)	4,033	3,962	3,879	3,323	2,312
Prepaid expense	(91)	(1,033)	(412)	(441)	(418)	(561)	(551)
Drugs and supplies	(4,296)	(732)	(1,314)	(1,307)	(1,433)	(1,423)	(1,682)
Due to/from third-party payors	237	-	-	-	-	-	-
Accounts payable	(823)	1,288	2,339	2,279	2,549	3,234	2,877
Accrued payroll and employee benefits	3,794	2,905	1,259	3,298	3,336	3,067	4,090
Other accrued expenses	(2,171)	(4,621)	-	-	-	-	-
Other liabilities	(1,500)	-	-	-	-	-	-
Deferred inflows	48,227	(47,073)	-	-	-	-	-
Due to related parties	(682)	-	-	-	-	-	-
Net pension liability	(24,004)	74,832	-	-	-	-	-
Net cash provided by operating activities	$ 111,486	$ 91,853	$ 95,362	$ 94,562	$ 99,868	$ 99,899	$ 100,712

See the Summary of Significant Forecast Assumptions and Accounting Policies and the Independent Accountants' Examination Report.

ROA 000277

MUHA/Roper/FOIA 000691

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A COMPONENT UNIT OF THE MEDICAL UNIVERSITY OF SOUTH CAROLINA)

Forecasted Financial Ratios (Shown in 000s)

For the Years Ending June 30, 2016 through 2021
(With Historical Amounts for Year Ended June 30, 2015)

	Historical	Forecasted					
	2015	2016	2017	2018	2019	2020	2021
Debt Service Coverage Ratio							
Excess of revenues over expenses before capital grants and contributions	$ 47,566	$ 24,788	$ 24,099	$ 32,282	$ 37,550	$ 12,594	$ 15,339
Depreciation and amortization	60,666	63,694	64,454	63,813	63,813	76,157	77,676
Pension expense	5,232	15,949	-	-	-	-	-
Interest expense, net of capitalized interest[1]	15,894	15,883	15,090	14,443	15,146	29,029	27,046
Net revenue available for debt service	$ 129,358	$ 120,314	$ 103,643	$ 110,538	$ 116,509	$ 117,780	$ 120,061
Annual debt service	$ 33,198	$ 29,388	$ 29,312	$ 29,312	$ 31,208	$ 52,027	$ 51,959
Annual debt service coverage ratio	3.90	4.09	3.54	3.77	3.73	2.26	2.31
Days Cash on Hand							
Unrestricted cash and investments[2]	$ 117,725	$ 142,299	$ 176,242	$ 209,935	$ 250,748	$ 258,102	$ 266,453
Total expenses, less depreciation and amortization and pension expense	$ 1,146,879	$ 1,192,901	$ 1,239,424	$ 1,293,619	$ 1,346,968	$ 1,409,683	$ 1,473,600
Days in the year	365	366	365	365	365	366	365
	$ 3,142	$ 3,259	$ 3,396	$ 3,544	$ 3,690	$ 3,852	$ 4,037
Days cash on hand[3]	37.5	43.7	51.9	59.2	68.0	67.0	66.0

[1] *Includes amortization of loss on refunding of long-term debt.*

[2] *Includes cash and cash equivalents and other investments.*

[3] *Days cash on hand with interest expense included with total operating expenses, less depreciation and amortization and pension expense* — *37.0* | *43.1* | *51.3* | *58.6* | *67.2* | *65.7* | *64.8*

See the Summary of Significant Forecast Assumptions and Accounting Policies and the Independent Accountants' Examination Report.

MUHA/Roper/FOIA 000692

ROA 000278

SECTION III - GENERAL INFORMATION

A. General Description of the Hospital, its Affiliations and Collaborations

Medical University Hospital Authority (the "Authority" or "MUHA") is a multidimensional healthcare system headquartered in Charleston, South Carolina. The Authority is a principal diagnostic and treatment referral center for the State of South Carolina, and also owns and operates the principal clinical teaching institutions for The Medical University of South Carolina (the "University" or "MUSC"). The primary facilities used by the Authority, all located on or near the Authority's main campus in Charleston, consist of the following:

- University Hospital
- Ashley River Tower
- Children's Hospital
- Storm Eye Institute
- Institute of Psychiatry
- Digestive Disease Center
- Transplant Center
- Hollings Cancer Center
- MUSC Heart and Vascular Center

MUHA serves as an academic training facility for numerous medical residency programs. With 49 different medical specialty residency training programs, the hospital serves as a valuable resource for educating and preparing future physicians.

The Authority is a political subdivision of the State of South Carolina and is a blended component unit of the University, as defined by the provisions of Governmental Accounting Standards Board ("GASB") Statement No. 61, *The Financial Reporting Entity: Omnibus* ("Statement No. 61"). The Authority's component unit relationship to the University principally arises from the Authority's financial accountability to the University as defined in Statement No. 61. In particular, the legislation establishing the Authority as a stand-alone healthcare system, effective July 1, 2000, requires that the members of the University's Board of Trustees also constitute the Board of Trustees of the Authority.

The Hospital's Management team ("Management") is comprised of the following individuals:

Medical University Hospital Authority's Key Management

Name	Position	Experience in Healthcare	Tenure at MUHA
Patrick J. Cawley, MD	Chief Executive Officer	23 Years	12 Years
Matthew J. Wain	Chief Operating Officer	14 Years	2 Years
Stephen A. Hargett	Chief Financial Officer	40 Years	9 Years
Daniel A. Handel, MD	Chief Medical Officer	13 Years	1 Year
Marilyn J. Schaffner	Chief Nursing Officer	42 Years	20 Years

B. Project Description

The proposed construction of a replacement Children's Hospital and Women's Pavilion (the "Project") on 3.5 acres at the corner of Calhoun and Courtenay Drives in Charleston is the second phase in the Authority's three-phase plan to replace much of its primary patient care facilities in a phased approach over the next 20 years. Management finds that the current fragmentation of services is operationally inefficient presenting unique challenges to the delivery of high-quality pediatric patient care. In addition, the current facilities on Ashley Avenue are twenty-eight years old and do not have enough capacity to support all children's and perinatal services and require additional support in the form of emergency, diagnostic imaging, surgical, ambulatory, and inpatient care.

The Project, consisting of a 650,000 square foot, seven-story patient tower atop a three-story diagnostic and treatment podium, is intended to replace and consolidate pediatric and perinatal services from facilities across the MUHA campus and specifically relieve space constraints in MUHA's neonatal intensive care unit ("NICU"), which has been named one of the Country's top 10 and is one of the few Level III Neonatal Intensive Care Units in the State of South Carolina. The Authority will be able to add 21 neonatal bassinets to the service area when the Project becomes operational.

MUHA received approval of the Project's Certificate of Need ("CON") application to the South Carolina Department of Health and Environmental Control ("DHEC") on March 23, 2015. In June 2015, the Authority received approval of an additional CON application to add 52 beds and to increase the number of neonatal bassinets from 66 to 87. Upon approval of both CON applications, MUHA became licensed for 656 acute care beds and 105 Psychiatric and Substance Abuse beds, for a total licensed bed complement (beds and bassinets) of 848.

In the Fall of 2015, MUHA obtained approval to begin site preparation work on the Project's site, including demolition of the old Charleston Hospital and abatement of existing structures, the removal of two underground storage tanks, the extraction of existing piles, and general site grading. MUHA began the site preparation work upon obtaining this approval.

The estimated costs of the Project (with references to HUD Form 92013 line items in parentheses) are as follows:

Estimated Costs of the Project

Hard Costs:		
Construction costs (C-1)	$ 241,421,355	
Architect and engineering fees (C-6)	24,728,250	
Contingency and other (C-9)	13,136,876	
Equipment and furnishings (C-10)	60,658,098	
Total Hard Costs (C-11)	339,944,579	[1]
Soft Costs:		
Interest during construction (C-12)	25,517,257	[1]
Insurance (C-14)	350,000	[2]
HUD mortgage insurance premium (C-15)	6,169,745	[2]
HUD examination fee (C-16)	949,192	[2]
HUD inspection fee (C-17)	1,581,986	[2]
Permanent financing fee (C-18)	3,954,965	[2]
Title and recording (C-20)	600,000	[2]
Total Carrying Charges and Financing (C-21)	39,123,145	
Legal (C-22)	500,000	[2]
Consultant (C-25)	500,000	[2]
AMPO (C-26)	4,828,427	[1]
Total Legal and Other (C-27)	5,828,427	
Total Soft Costs (C-28)	44,951,572	
Total Project Costs (C-29)	$ 384,896,151	

SUM [1] Capital Assets	$ 370,290,263
SUM [2] Costs of Issuance	$ 14,605,888

See the Independent Accountants' Examination Report

C. Financing Plan

The Project will be funded through the proceeds of the sale of $316,397,200 of Governmental National Mortgage Company ("GNMA") securities, an appropriation from the State of South Carolina, and the cash derived from a fundraising initiative. The Mortgage will be insured by the Federal Housing Administration ("FHA") Section 241 Supplemental Loan Program. The Mortgage is assumed to bear interest at an average annual interest rate of 5.25 percent and will be collateralized by the Authority's capital assets, as well as its related operating revenue. Initial endorsement of the Mortgage is assumed to occur on September 1, 2016. Final endorsement of the Mortgage is assumed to occur on May 1, 2019, and the first principal payment on the Mortgage is assumed to occur on June 1, 2019.

The projected sources and uses of Project funds are as follows:

Sources of Funds:	
GNMA securities	$ 316,397,200
Appropriation from the State of South Carolina	25,000,000
Fundraising equity contribution	43,498,951
Total Sources of Funds	$ 384,896,151
Uses of Funds:	
Construction, equipment, and fees	$ 365,461,836
Costs of issuance	14,605,888
AMPO	4,828,427
Total Uses of Funds	$ 384,896,151

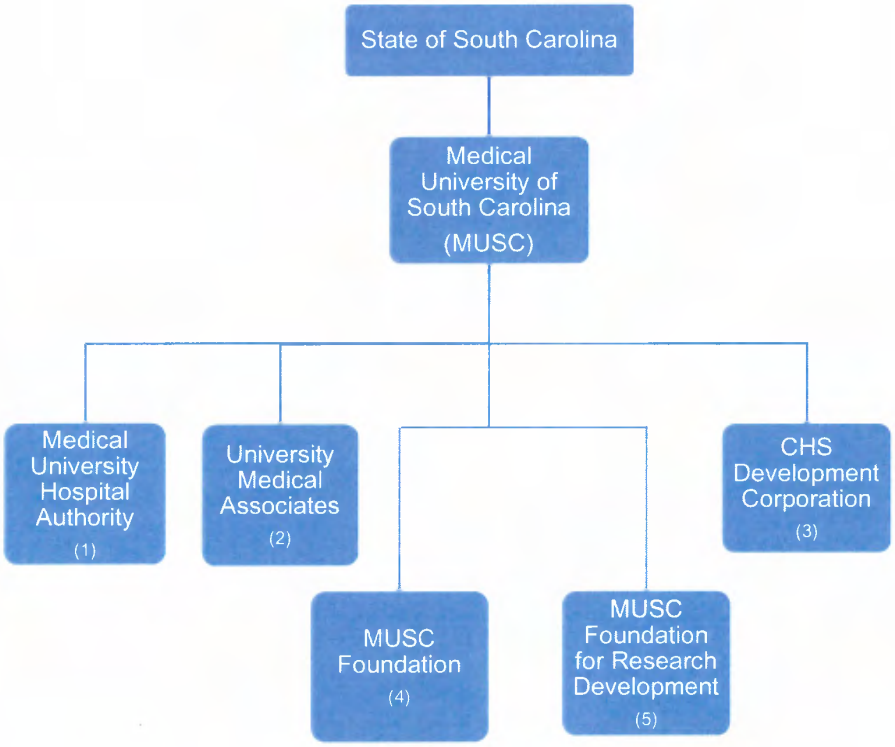
Mortgage Reserve Fund ("MRF") - As a condition of issuing FHA mortgage insurance, the Authority will be required to establish with the mortgagee a mortgage reserve fund ("MRF") to provide monies in case of a financial emergency to cure or prevent a default, engage a consultant, or implement a turn-around plan for the Authority. The MRF is required to receive monthly contributions that will equal 12 months and 24 months of mortgage debt service at 5 and 10 years, respectively, following completion of the Project. The Authority has a MRF on existing debt that will continue to accumulate in addition to the new MRF contribution requirements. The Forecast assumes a MRF deposit of $4,025,299 in fiscal year ("FY") 2020 and 2021.

Allowance to Make the Project Operational ("AMPO") - Allowance to Make the Project Operational ("AMPO") is 2.0 percent of the total construction cost of the Project and is used for items that HUD deems essential for the completion and start-up of the Project. The Forecast assumes that AMPO will be used for capital asset purchases to make the Project operational at the Project's completion.

Assumptions related to the proposed financing plan, interest rates, costs of issuance, MRF, AMPO, and other Mortgage-related costs for the Project were provided by FHA Mortgage Lender, Armadale Capital Inc.

D. Organizational Relationships

The organizational chart below describes the Authority and its relationship to its affiliated organizations.



1. The Medical University Hospital Authority was formed to manage and operate the hospitals and clinics of MUSC.
2. University Medical Associates d/b/a MUSC Physicians is a non-profit corporation associated with the University's faculty practice plan and was established to promote and support the educational, medical, scientific, and research purposes of the University.
3. CHS Development Corporation is a non-profit corporation established to obtain financing for the University to acquire and develop real property.
4. The MUSC Foundation is a non-profit corporation established as an educational, charitable, eleemosynary foundation.
5. The MUSC Foundation for Research Development is a non-profit corporation established to manage the University's intellectual property and technology marketing and to foster cooperation between the University, business, and industry.

Further discussion of transactions with the affiliates above and others (i.e., related-party transactions) is provided in Section V. Summary of Significant Financial Assumptions and Accounting Policies.

E. Service Area Definition and Patient Origin

The Authority's service area was determined by performing an analysis utilizing historical data for inpatient services by zip code. The service area was defined further into primary and secondary service areas based upon utilization percentages represented by each zip code.

Using these criteria, the Authority's service area has been defined by 59 zip codes in the primary service area and 45 zip codes in the secondary service area.

Primary Service Area:

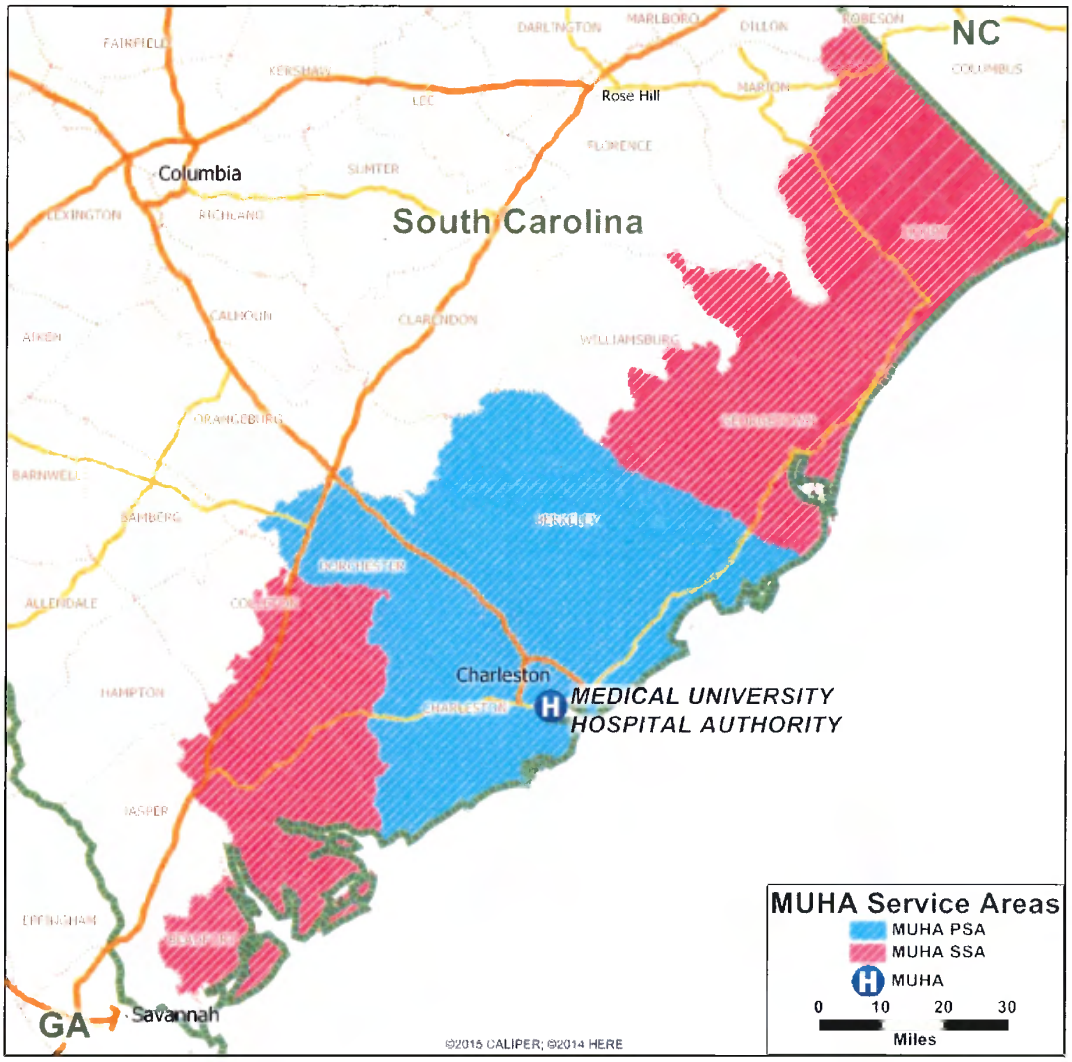
29401-Charleston	29445-Goose Creek
29402-Charleston PO	29447-Grover
29403-Charleston (Hampton Park)	29448-Harleyville
29404-Charleston (Charleston AFB)	29449-Hollywood
29405-Charleston (Charleston Heights)	29450-Huger
29406-Charleston (North Charleston)	29451-Isle of Palms
29407-Charleston (St Andrews)	29453-Jamestown
29409-Charleston (Citadel)	29455-Johns Island
29410-Charleston (Hanahan)	29456-Ladson
29412-Charleston (James Island)	29457-Johns Island PO
29413-Charleston PO 2	29458-McClellanville
29414-Charleston (West Ashley)	29461-Moncks Corner
29415-Charleston (Charleston Heights PO)	29464-Mt Pleasant
29416-Charleston 2	29465-Mt Pleasant PO
29417-Charleston (St Andrews PO)	29466-Mt Pleasant 2
29418-Charleston (Pepperhill)	29468-Pineville
29419-Charleston PO 3	29469-Pinopolis
29420-Charleston (North)	29470-Ravenel
29422-Charleston (James Island PO)	29471-Reevesville
29423-Charleston (USPS)	29472-Ridgeville
29424-Charleston (College of Charleston)	29476-Russellville
29425-Charleston (MUSC)	29477-St George
29426-Adams Run	29479-St Stephen
29429-Awendaw	29482-Sullivans Island
29431-Bonneau	29483-Summerville
29434-Cordesville	29484-Summerville PO
29436-Cross	29485-Summerville 2
29437-Dorchester	29487-Wadalaw Island
29438-Edisto Beach	29492-Wando
29439-Folly Beach	

Secondary Service Area:

29440-Georgetown	29588-Myrtle Beach
29442-Georgetown PO	29597-North Myrtle Beach
29446-Green Pond	29598-North Myrtle Beach PO
29510-Andrews	29901-Beaufort PO
29511-Aynor	29902-Beaufort
29526-Conway	29903-Beaufort 2
29527-Conway (Bucksport)	29904-Beaufort (Marine Corps Air)
29544-Galivants Ferry	29905-Beaufort (Parris Island)
29545-Green Sea	29906-Beaufort 3
29554-Hemmingway	29907-Layds Island
29566-Little River	29909-Okatie
29568-Longs	29910-Bluffton
29569-Loris	29920-Frogmore
29572-Myrtle Beach 2	29925-Hilton Head Island
29575-Myrtle Beach (Surfside)	29926-Hilton Head 2
29576-Murrells Inlet	29928-Hilton Head 3
29577-Myrtle Beach	29931-Lobeco
29578-Myrtle Beach PO	29935-Port Royal
29579-Myrtle Beach AFB	29938-Hilton Head 4
29581-Nichols	29940-Seabrook
29582-North Myrtle Beach	29941-Sheldon
29585-Pawleys Island	29945-Yemassee
29587-Surfside Beach	

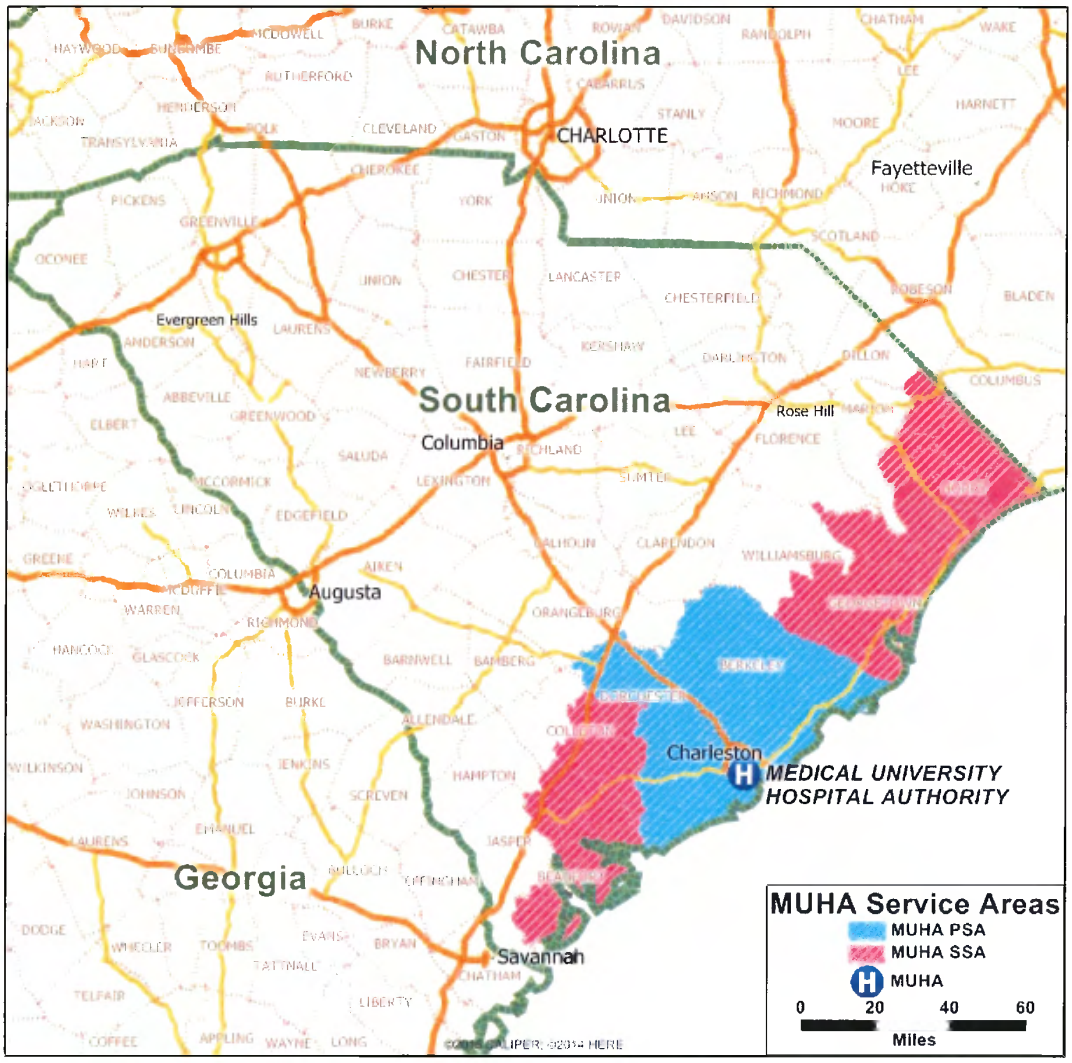
The map in Exhibit 1 illustrates the location of the Medical University Hospital Authority, the primary and secondary service area zip codes, and their geographical relationship to one another.

Exhibit 1
The Authority's Service Area



The map in Exhibit 2 illustrates the Authority's service area in relation to the state of South Carolina.

Exhibit 2
The Authority's Service Area and State Map



Patient Origin - Exhibit 3 illustrates the Authority's discharges and percentages drawn from each zip code in its primary and secondary service areas. The data shows that during the year 2014 84.0 percent of the Authority's total discharges came from zip codes in the primary and secondary service areas.

Exhibit 3
Medical University Hospital Authority
(A Component Unit of The Medical University of South Carolina)
Patient Origin by Service Area
For Years 2013 and 2014

Service Area	2013 Discharges	2013 % Total	2014 Discharges	2014 % Total
Primary Service Area				
29401 - Charleston	341	1.1%	308	1.0%
29403 - Charleston	1,424	4.4%	1,409	4.3%
29404 - Charleston AFB	37	0.1%	57	0.2%
29405 - North Charleston	2,067	6.4%	2,015	6.2%
29406 - Charleston	1,429	4.4%	1,426	4.4%
29407 - Charleston	1,412	4.4%	1,358	4.2%
29410 - Hanahan	483	1.5%	523	1.6%
29412 - Charleston	1,518	4.7%	1,416	4.4%
29414 - Charleston	918	2.9%	917	2.8%
29418 - North Charleston	937	2.9%	949	2.9%
29420 - North Charleston	588	1.8%	605	1.9%
29424 and 29425 - Charleston	152	0.5%	156	0.5%
29426 - Adams Run	63	0.2%	76	0.2%
29429 - Awendaw	90	0.3%	105	0.3%
29431 - Bonneau	135	0.4%	114	0.4%
29434 - Cordesville	25	0.1%	11	0.0%
29436 - Cross	123	0.4%	97	0.3%
29437 - Dorchester	55	0.2%	42	0.1%
29438 - Edisto Island	59	0.2%	55	0.2%
29445 - Goose Creek	1,359	4.2%	1,419	4.4%
29448 - Harleyville	74	0.2%	76	0.2%
29449 - Hollywood	272	0.8%	269	0.8%
29450 - Huger	124	0.4%	113	0.3%
29451 - Isle of Palms	107	0.3%	93	0.3%
29453 - Jamestown	30	0.1%	19	0.1%
29455 - Johns Island	731	2.3%	777	2.4%
29456 - Ladson	608	1.9%	646	2.0%
29458 - McClellanville	67	0.2%	90	0.3%
29461 - Moncks Center	705	2.2%	788	2.4%
29464 - Mount Pleasant	1,162	3.6%	1,204	3.7%
29466 - Mount Pleasant	632	2.0%	617	1.9%
29468 - Pineville	50	0.2%	39	0.1%
29469 - Pinopolis	16	0.0%	19	0.1%
29470 - Ravenel	175	0.5%	182	0.6%
29471 - Reevesville	39	0.1%	42	0.1%
29472 - Ridgeville	213	0.7%	261	0.8%
29477 - Saint George	159	0.5%	143	0.4%
29479 - Saint Stephen	162	0.5%	144	0.4%

(continued)

Exhibit 3, continued
Medical University Hospital Authority
(A Component Unit of The Medical University of South Carolina)
Patient Origin by Service Area
For Years 2013 and 2014

Service Area	2013 Discharges	2013 % Total	2014 Discharges	2014 % Total
Primary Service Area, continued				
29482 - Sullivans Island	37	0.1%	26	0.1%
29483 - Summerville	1,544	4.8%	1,641	5.0%
29485 - Summerville	922	2.9%	1,038	3.2%
29487 - Wadmalaw Island	99	0.3%	120	0.4%
29492 - Charleston	253	0.8%	269	0.8%
Total Primary Service Area	21,396	66.5%	21,674	66.7%
Secondary Service Area				
29440 - Georgetown	669	1.5%	564	1.8%
29510 - Andrews	249	0.8%	218	0.7%
29511 - Aynor	40	0.1%	61	0.2%
29526 - Conway	321	1.0%	364	1.1%
29527 - Conway	213	0.7%	219	0.7%
29544 - Galivants Ferry	49	0.2%	55	0.2%
29545 - Green Sea	19	0.1%	11	0.0%
29446 - Green Pond	37	0.1%	33	0.1%
29554 - Hemingway	147	0.5%	107	0.3%
29566 - Little River	149	0.5%	131	0.4%
29568 - Longs	72	0.2%	94	0.3%
29569 - Loris	170	0.5%	198	0.6%
29572 - Myrtle Beach	56	0.2%	73	0.2%
29575 - Myrtle Beach	173	0.5%	164	0.5%
29576 - Murrells Inlet	342	1.1%	336	1.0%
29577 - Myrtle Beach	210	0.7%	213	0.7%
29579 - Myrtle Beach	199	0.6%	248	0.8%
29581 - Nichols	22	0.1%	25	0.1%
29582 - North Myrtle Beach	113	0.4%	128	0.4%
29585 - Pawleys Island	216	0.7%	208	0.6%
29588 - Myrtle Beach	378	1.2%	363	1.1%
29902 - Beaufort	222	0.7%	187	0.6%
29906 - Beaufort	278	0.9%	352	1.1%
29907 - Beaufort	108	0.3%	133	0.4%
29909 - Okatie	183	0.6%	201	0.6%
29910 - Bluffton	242	0.8%	286	0.9%
29920 - Saint Helena Island	148	0.5%	173	0.5%
29926 - Hilton Head Island	196	0.6%	185	0.6%
29928 - Hilton Head Island	96	0.3%	107	0.3%
29935 - Port Royal	49	0.2%	47	0.1%
29940 - Seabrook	54	0.2%	63	0.2%
29941 - Sheldon	13	0.0%	12	0.0%
29945 - Yemassee	82	0.3%	79	0.2%
Total Secondary Service Area	5,515	17.1%	5,638	17.3%
Other	5,275	16.4%	5,211	16.0%
Total acute care discharges	32,186	100.0%	32,523	100.0%

Sources: South Carolina Revenue and Fiscal Affairs Office

Demographics - Historical and projected population for MUHA's service areas was obtained from The Nielson Company and was based upon the results of the 2010 U.S. Census. Population for zip codes that are post office boxes are reported under identified parent zip codes.

A summary of historical and projected population trends is presented in Exhibit 4.

Exhibit 4
Medical University Hospital Authority
(A Component Unit of The Medical University of South Carolina)
Historical and Projected Population Changes
For the Years 2010, 2015, and 2020

Service Area	2010 Historical Census	2015 Estimated Census	2015 % change since 2010	2020 Projected Census	2020 % change since 2015
Primary					
29401 - Charleston	10,012	10,352	3.4%	10,766	4.0%
29403 - Charleston	23,427	24,480	4.5%	25,663	4.8%
29404 - Charleston AFB	1,690	2,033	20.3%	2,137	5.1%
29405 - North Charleston	26,522	27,493	3.7%	28,645	4.2%
29406 - Charleston	29,550	32,628	10.4%	35,447	8.6%
29407 - Charleston	34,886	36,700	5.2%	38,719	5.5%
29410 - Hanahan	17,857	18,926	6.0%	20,003	5.7%
29412 - Charleston	38,231	41,199	7.8%	44,202	7.3%
29414 - Charleston	33,011	37,374	13.2%	41,028	9.8%
29418 - North Charleston	23,429	25,933	10.7%	28,266	9.0%
29420 - North Charleston	20,148	22,443	11.4%	24,568	9.5%
29424 and 29425 - Charleston	513	531	3.5%	552	4.0%
29426 - Adams Run	1,819	1,861	2.3%	1,920	3.2%
29429 - Awendaw	2,760	2,873	4.1%	3,006	4.6%
29431 - Bonneau	6,222	6,681	7.4%	7,139	6.9%
29434 - Cordesville	735	789	7.3%	843	6.8%
29436 - Cross	4,549	4,748	4.4%	4,966	4.6%
29437 - Dorchester	2,218	2,270	2.3%	2,338	3.0%
29438 - Edisto Island	2,406	2,533	5.3%	2,693	6.3%
29445 - Goose Creek	54,082	61,565	13.8%	67,662	9.9%
29448 - Harleyville	2,461	2,483	0.9%	2,526	1.7%
29449 - Hollywood	7,613	7,897	3.7%	8,240	4.3%
29450 - Huger	3,028	3,229	6.6%	3,434	6.3%
29451 - Isle of Palms	4,165	4,349	4.4%	4,541	4.4%
29453 - Jamestown	1,241	1,294	4.3%	1,352	4.5%
29455 - Johns Island	19,392	22,726	17.2%	25,509	12.2%
29456 - Ladson	27,340	30,968	13.3%	34,194	10.4%
29458 - McClellanville	2,681	2,763	3.1%	2,867	3.8%
29461 - Moncks Center	29,631	34,106	15.1%	37,648	10.4%
29464 - Mount Pleasant	43,634	47,491	8.8%	51,269	8.0%
29466 - Mount Pleasant	28,710	34,777	21.1%	39,594	13.9%
29468 - Pineville	2,007	2,087	4.0%	2,175	4.2%
29469 - Pinopolis	755	803	6.4%	852	6.1%

(continued)

Exhibit 4, continued
Medical University Hospital Authority
(A Component Unit of The Medical University of South Carolina)
Historical and Projected Population Changes
For the Years 2010, 2015, and 2020

Service Area	2010 Historical Census	2015 Estimated Census	2015 % change since 2010	2020 Projected Census	2020 % change since 2015
Primary, continued					
29470 - Ravenel	4,257	4,679	9.9%	5,084	8.7%
29471 - Reevesville	1,510	1,491	-1.3%	1,490	-0.1%
29472 - Ridgeville	9,761	9,981	2.3%	10,260	2.8%
29477 - Saint George	6,895	6,954	0.9%	7,074	1.7%
29479 - Saint Stephen	7,145	7,798	9.1%	8,412	7.9%
29482 - Sullivans Island	1,791	1,848	3.2%	1,920	3.9%
29483 - Summerville	67,203	75,662	12.6%	82,769	9.4%
29485 - Summerville	47,342	52,269	10.4%	56,575	8.2%
29487 - Wadmalaw Island	2,725	2,903	6.5%	3,095	6.6%
29492 - Charleston	10,400	13,433	29.2%	15,561	15.8%
Total Primary Service Area	665,754	735,403	10.5%	797,004	8.4%
Secondary					
29440 - Georgetown	28,733	28,306	-1.5%	28,408	0.4%
29510 - Andrews	10,437	10,023	-4.0%	9,858	-1.6%
29511 - Aynor	5,032	5,300	5.3%	5,594	5.5%
29526 - Conway	38,662	42,863	10.9%	46,630	8.8%
29527 - Conway	21,801	23,914	9.7%	25,911	8.4%
29544 - Galivants Ferry	5,128	5,367	4.7%	5,637	5.0%
29545 - Green Sea	1,592	1,666	4.6%	1,750	5.0%
29446 - Green Pond	1,538	1,421	-7.6%	1,351	-4.9%
29554 - Hemingway	9,195	8,624	-6.2%	8,318	-3.5%
29566 - Little River	15,901	18,054	13.5%	19,981	10.7%
29568 - Longs	10,907	12,361	13.3%	13,618	10.2%
29569 - Loris	15,810	16,715	5.7%	17,687	5.8%
29572 - Myrtle Beach	7,870	8,268	5.1%	8,708	5.3%
29575 - Myrtle Beach	15,446	16,302	5.5%	17,151	5.2%
29576 - Murrells Inlet	24,244	26,822	10.6%	29,140	8.6%
29577 - Myrtle Beach	27,044	29,156	7.8%	31,122	6.7%
29579 - Myrtle Beach	33,127	39,847	20.3%	45,342	13.8%
29581 - Nichols	4,778	4,737	-0.9%	4,769	0.7%
29582 - North Myrtle Beach	14,729	16,228	10.2%	17,581	8.3%
29585 - Pawleys Island	13,684	14,234	4.0%	14,953	5.1%
29588 - Myrtle Beach	36,896	42,721	15.8%	47,644	11.5%
29902 - Beaufort	17,600	17,802	1.1%	18,155	2.0%
29906 - Beaufort	22,731	24,027	5.7%	25,480	6.0%
29907 - Beaufort	12,564	13,510	7.5%	14,528	7.5%
29909 - Okatie	16,982	20,040	18.0%	22,674	13.1%
29910 - Bluffton	34,146	40,652	19.1%	46,109	13.4%
29920 - Saint Helena Island	9,478	9,902	4.5%	10,417	5.2%
29926 - Hilton Head Island	23,448	24,923	6.3%	26,554	6.5%
29928 - Hilton Head Island	16,204	16,838	3.9%	17,602	4.5%

(continued)

Exhibit 4, continued
Medical University Hospital Authority
(A Component Unit of The Medical University of South Carolina)
Historical and Projected Population Changes
For the Years 2010, 2015, and 2020

Service Area	2010 Historical Census	2015 Estimated Census	2015 % change since 2010	2020 Projected Census	2020 % change since 2015
Secondary, continued					
29935 - Port Royal	3,709	3,990	7.6%	4,284	7.4%
29940 - Seabrook	4,001	4,076	1.9%	4,206	3.2%
29941 - Sheldon	360	385	6.9%	413	7.3%
29945 - Yemassee	4,492	4,530	0.8%	4,632	2.3%
Total Secondary Service Area	508,269	553,604	8.9%	596,207	7.7%
Total Primary and Secondary	1,174,023	1,289,007	9.8%	1,393,211	8.1%

Source: The Nielson Company

As Exhibit 4 indicates, between 2010 and 2015 population in the primary service area for MUHA grew by 10.5 percent and is projected to increase from 2015 to 2020 by 8.4 percent. Population in the secondary service area grew by 8.9 percent from 2010 to 2015 and is expected to increase by 7.7 percent from 2015 to 2020.

As Exhibit 5 indicates, in the Authority's primary service area, the population age category 65 and over is projected to increase by 26.2 percent from 2015 to 2020 which exceeds the projected total population growth of 8.1 percent for the primary and secondary service area. Similar aging characteristics hold true in the secondary service area with the 65 and over population projected to increase by 19.4 percent. Exhibit 5 illustrates that in MUHA's primary and secondary service areas, all age categories are projected to increase between 2015 and 2020.

Statewide population in South Carolina is projected to increase by 2.1 percent between 2015 and 2020. The 65 and over population in South Carolina is projected to increase by 19.7 percent during the same time period.

Exhibit 5
Medical University Hospital Authority
(A Component Unit of The Medical University of South Carolina)
Trends in Age and Population
For the Years 2010, 2015 and 2020

	2010	2015		2020	
	Historical Census	Estimated Census	% change since 2010	Estimated Census	% change since 2015
Service Area					
Primary					
Age 65 and over	76,683	99,728	30.1%	125,874	26.2%
Age 45-64	172,750	188,587	9.2%	197,653	4.8%
Age 18-44 Female	130,375	138,529	6.3%	144,428	4.3%
Age 18-44 Male	131,104	140,283	7.0%	147,061	4.8%
Age 0-17	154,842	168,276	8.7%	181,988	8.1%
Total Primary	665,754	735,403	10.5%	797,004	8.4%
Median Age	35.5	36.7	3.4%	38.1	3.8%
Secondary					
Age 65 and over	93,364	118,421	26.8%	141,446	19.4%
Age 45-64	139,845	145,800	4.3%	146,849	0.7%
Age 18-44 Female	83,110	86,779	4.4%	91,290	5.2%
Age 18-44 Male	86,409	89,946	4.1%	95,235	5.9%
Age 0-17	105,541	112,658	6.7%	121,387	7.7%
Total Secondary	508,269	553,604	8.9%	596,207	7.7%
Median Age	41.5	43.0	3.6%	43.5	1.2%
Total Primary and Secondary	1,174,023	1,289,007	9.8%	1,393,211	8.1%
South Carolina					
Age 65 and over	631,874	767,871	21.5%	918,780	19.7%
Age 45-64	1,243,223	1,279,044	2.9%	1,287,037	0.6%
Age 18-44 Female	838,011	849,875	1.4%	868,610	2.2%
Age 18-44 Male	831,782	851,496	2.4%	883,380	3.7%
Age 0-17	1,080,474	1,099,592	1.8%	1,132,254	3.0%
Total South Carolina population	4,625,364	4,847,878	4.8%	5,090,061	5.0%
Median Age	37.7	38.7	2.7%	39.5	2.1%
USA					
Age 65 and over	40,267,984	46,876,971	16.4%	55,154,921	17.7%
Age 45-64	81,489,445	84,035,345	3.1%	84,781,967	0.9%
Age 18-44 Female	56,076,919	56,667,402	1.1%	57,209,167	1.0%
Age 18-44 Male	56,729,723	57,921,030	2.1%	59,126,498	2.1%
Age 0-17	74,181,467	73,959,243	-0.3%	74,416,812	0.6%
Total USA population	308,745,538	319,459,991	3.5%	330,689,365	3.5%
Median Age	37.1	37.9	2.2%	38.8	2.4%

Source: The Nielson Company

See the Independent Accountants' Examination Report

MUHA/Roper/FOIA 000707

F. Socioeconomic Characteristics of Service Area

The exhibits presented in this section highlight the socioeconomic characteristics of the Authority's service area and the Charleston Region. The Charleston Metro Chamber of Commerce (the "Chamber") describes the Charleston Region as "one of the busiest container ports along the Southeast and Gulf coasts, an internationally recognized visitor industry, one of the Southeast's most impressive medical hubs, a well-established base of national and international manufacturers, as well as a large military presence. Arts, recreational and cultural opportunities are abundant including: museums, music, dance and theater, water sports, golf, hunting, fishing, horseback riding and more."

In addition to the information highlighted here, additional economic, demographic, and occupational workforce data for the Charleston Region is available to the public via The Charleston Regional Competitiveness Center. The Center is designed to provide up-to-date economic and workforce information on the Charleston region, which consists of Berkeley, Charleston and Dorchester counties in South Carolina.

Major Employers - Exhibit 6 shows the top employers in MUHA's service area.

Exhibit 6
Medical University Hospital Authority
(A Component Unit of The Medical University of South Carolina)
Ten Largest Employers in Service Area

Employer	Industry Specialization	No. of Employees
Joint Base Charleston	Military	36,000
Medical University of South Carolina*	Education/Healthcare	12,200
The Boeing Company	Aircraft manufacturing	8,200
Charleston County School District	Education	5,300
Roper St. Francis Healthcare	Healthcare	5,200
Berkeley County School District	Education	4,200
Dorchester County School District II	Education	3,500
Charleston County	Local Government	2,500
Trident Health System	Healthcare	2,500
Walmart Inc.	Retail	2,500

**Includes approximately 6200 non-Resident MUHA employees.*

Source: Center for Business Research, Charleston Metro Chamber of Commerce 8/2014

Workforce Characteristics -

Exhibit 7 presents the total jobs in the Charleston County workforce in 2014, as well as the occupations employing the largest percentages of the Charleston County workforce as estimated by The Charleston Regional Competitiveness Center. In addition, the information below indicates that Charleston County is projected to provide approximately 19,000 new jobs between 2014 and 2019, a higher percentage growth than projected for the U.S. for the same time period.

Exhibit 7
Medical University Hospital Authority
Workforce Characteristics

Geography	Occupation Cluster	Jobs, '14	'14-'19 New Jobs	'09-'14 % Growth	'14-'19 % Growth	'09-'14 US % Growth	'14-'19 US % Growth
Charleston County	Hospitality: Food & Culinary	24,607	3,070	14.30%	7.40%	11.80%	6.90%
Charleston County	Personal Services: Retail Sales	22,396	1,681	8.10%	5.60%	5.20%	4.20%
Charleston County	Medical: Nurses, Aides & Therapists	19,026	2,495	15.10%	12.30%	11.40%	12.90%
Charleston County	Hospitality: Hotels & Conventions	9,615	703	7.90%	9.70%	4.40%	7.70%
Charleston County	Back Office: Information	9,270	844	10.00%	9.60%	4.90%	5.20%
Charleston County	Construction: Trade Workers	6,710	(152)	-2.20%	4.10%	1.60%	6.00%
Charleston County	Logistics: Miscellaneous	6,652	926	16.20%	4.40%	10.00%	3.80%
Charleston County	Back Office: Finances	6,277	138	2.20%	7.60%	4.20%	5.90%
Charleston County	Logistics: Vehicle Drivers & Operators	5,263	304	6.10%	5.20%	7.10%	5.70%
	Total	220,770	19,543	9.70%	7.90%	6.00%	6.00%

Source: The Charleston Regional Competitiveness Center

Unemployment Rates - Exhibit 8 shows that the unemployment rates for Charleston County, South Carolina (where MUHA is located) were 4.2 percent for November 2015 and 5.1 percent for 2014. Comparable unemployment statistics for South Carolina were 5.3 percent for November 2015 and 6.4 percent for 2014.

Exhibit 8
Medical University Hospital Authority
(A Component Unit of The Medical University of South Carolina)
Unemployment Statistics by Service Area County, State, and National
For the Years 2013, 2014, and November 2015

	2013			2014			Nov-15		
	Total	Unemployment		Total	Unemployment		Total	Unemployment	
County	Labor Force	Number	Rate	Labor Force	Number	Rate	Labor Force	Number	Rate
Charleston	186,706	11,057	5.9%	189,718	9,756	5.1%	195,408	8,195	4.2%
Dorchester	68,246	4,488	6.6%	69,376	4,020	5.8%	71,194	3,446	4.8%
Berkeley	88,374	6,110	6.9%	89,661	5,335	6.0%	91,734	4,372	4.8%
Beaufort	66,951	4,321	6.5%	68,502	3,877	5.7%	68,330	3,268	4.8%
Georgetown	24,227	2,440	10.1%	24,859	2,054	8.3%	26,058	2,003	7.7%
Horry	132,168	11,396	8.6%	132,999	9,662	7.3%	133,227	8,638	6.5%
Colleton	16,268	1,625	10.0%	16,660	1,266	7.6%	17,297	1,008	5.8%
State of South Carolina	2,180,093	166,641	7.6%	2,197,587	141,451	6.4%	2,247,479	118,244	5.3%
USA	155,389,000	11,460,000	7.4%	155,922,000	9,617,000	6.2%	157,301,000	7,937,000	5.0%

Source: U.S. Bureau of Labor Statistics

The recent *Economic Outlook Forecast* report, prepared by the Charleston Metro Chamber of Commerce, indicates that total employment for the Charleston region is projected to increase by more than 6,000 net new jobs in 2015 and another 6,000 in 2016, resulting in a continued declining unemployment rate in the area.

Household Income - Household income levels for the service area population were obtained and compared to statewide and national totals (See Exhibit 9). In the primary service area, between 2010 and 2015, median household income grew from $39,909 to $51,379, an increase of 28.7 percent. The secondary service area also experienced an increase of 13.9 percent during this same period. This growth is similar to the South Carolina statewide growth rate of 20.0 percent. Median household income is expected to grow by 5.9 percent in the primary service area and 0.9 percent in the secondary service area between 2015 and 2020.

Exhibit 9
Medical University Hospital Authority
(A Component Unit of The Medical University of South Carolina)
Household Income Trend
For the Years 2010, 2015, and 2020

	2010	2015		2020	
	Historical Census	Estimate	% change since 2010	Projection	% change since 2015
Service Area					
Primary					
Population	665,754	735,403	10.5%	797,004	8.4%
Households	260,520	290,774	11.6%	317,162	9.1%
Average household income	$ 51,579	$ 69,095	34.0%	$ 73,247	6.0%
Median household income	$ 39,909	$ 51,379	28.7%	$ 54,429	5.9%
% households w ith income <$15,000	17.2%	13.5%		12.7%	
Secondary					
Population	506,731	552,183	9.0%	594,856	7.7%
Households	207,575	228,123	9.9%	246,952	8.3%
Average household income	$ 52,492	$ 61,810	17.8%	$ 62,666	1.4%
Median household income	$ 39,201	$ 44,650	13.9%	$ 45,063	0.9%
% households w ith income <$15,000	15.7%	14.5%		14.3%	
State of South Carolina					
Population	4,625,364	4,847,878	4.8%	5,090,061	5.0%
Households	1,801,181	1,899,618	5.5%	2,002,663	5.4%
Average household income	$ 48,323	$ 61,065	26.4%	$ 65,092	6.6%
Median household income	$ 37,510	$ 45,004	20.0%	$ 47,352	5.2%
% households w ith income <$15,000	18.8%	15.7%		14.7%	
USA					
Population	308,745,538	319,459,991	3.5%	330,689,365	3.5%
Households	116,716,292	121,099,157	3.8%	125,616,498	3.7%
Average household income	$ 56,644	$ 74,165	30.9%	$ 79,486	7.2%
Median household income	$ 42,728	$ 53,706	25.7%	$ 57,294	6.7%
% households w ith income <$15,000	15.9%	12.7%		11.8%	

Source: The Nielson Company

Impact of Project on Local Economy - The Charleston Metro Chamber of Commerce's Center for Business Research is in the process of conducting an Economic Impact Analysis (the "Analysis") for the Authority's Children's Hospital and Women's Pavilion Project. The Analysis is expected to be released in Spring 2016.

SECTION IV – SUMMARY OF SIGNIFICANT DEMAND ASSUMPTIONS

A. General Methodology

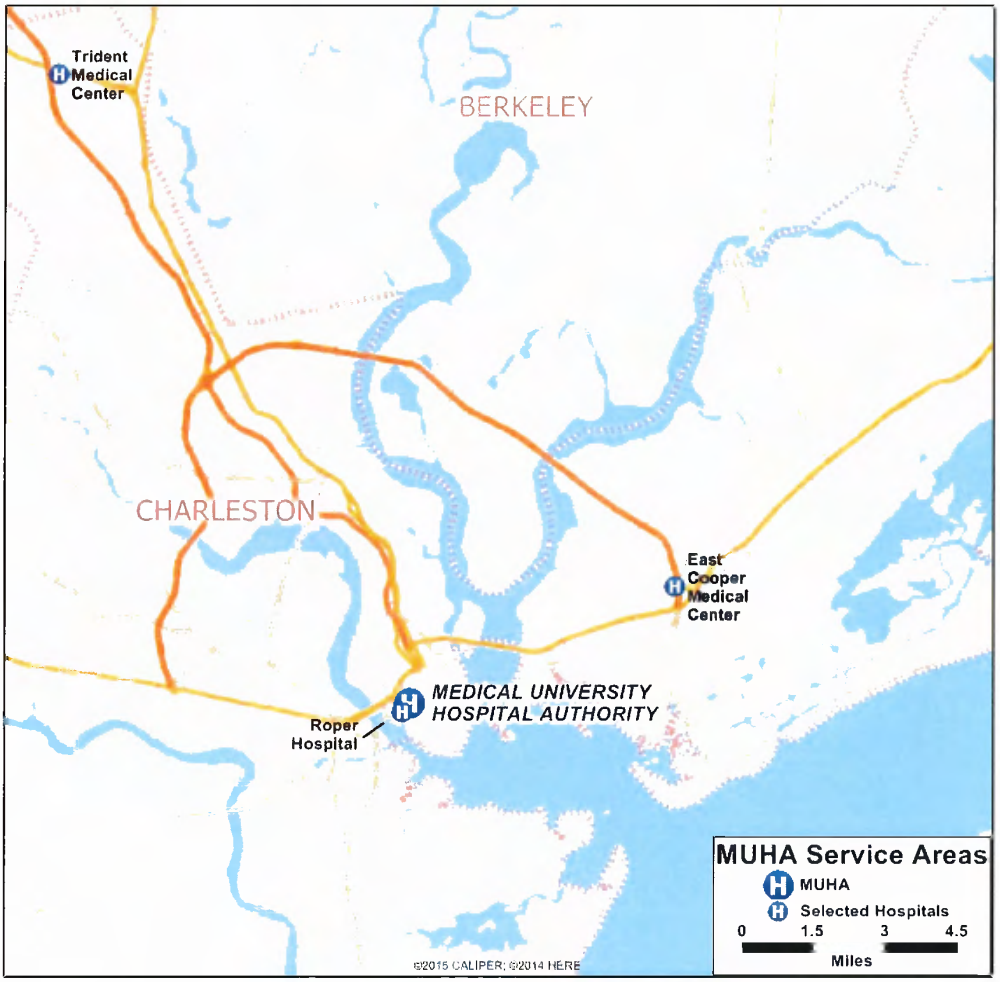
The demand for inpatient and outpatient services is determined by various factors. The following demand factors were analyzed and form the basis for forecasting the Authority's utilization:

- Service Area Definition (See Section III. E.)
  - Patient Origin
  - Demographics
- Socioeconomic Characteristics of Service Area (See Section III. F.)
  - Major Employers
  - Workforce Characteristics
  - Unemployment Rates
  - Household Income
- Market Assessment of Other Healthcare Providers in the Service Area
  - Competing Facilities Analysis
  - Use Rates
  - Market Share
- Historical and Forecasted Utilization
- Medical Staff
  - Utilization Profile
  - Turnover

B. Market Assessment of Other Healthcare Providers within the Service Area

Competing Facilities Analysis - The following map in Exhibit 10 illustrates the Authority in relation to the other significant health care facilities that provide services to residents within the Authority's service areas. The table that follows Exhibit 10 provides the distance to each facility from the Authority.

Exhibit 10
The Authority's Location Relative to Other Providers



Competing Facilities, Distance, and Travel time from MUHA

Facility Address	Number of Licensed Beds	Distance from MUHA	Travel time from MUHA
Roper St. Francis Hospital 316 Calhoun Street Charleston, SC 29401	316	0.7 miles	1 minute
East Cooper Medical Center 2000 Hospital Drive Mount Pleasant, SC 29464	120	8.2 miles	13 minutes
Trident Medical Center 9330 Medical Plaza Drive Charleston, SC 29406	390	17.5 miles	19 minutes

Exhibits 11 and 12 summarize services and other comparative data for facilities providing significant care to residents located within the Authority's service areas. The Authority is the only Level III Neonatal Intensive Care Unit in the area and, historically has maintained greater than 95 percent of the congenital heart volumes in the State of South Carolina.

Exhibit 11
Medical University Hospital Authority
(A Component Unit of The Medical University of South Carolina)
Other Area Hospital Services

Clinical Services	Medical University Hospital Authority	Roper St. Francis Hospital	East Cooper Medical Center	Trident Health
Cardiovascular Services:				
Cardiac Catheterization Lab	X	X		X
Cardiac Rehabilitation	X	X		X
Cardiac Surgery	X	X		X
Carotid Stenting	X	X		X
Coronary Intervention	X	X		X
Electrophysiology	X	X		X
Vascular Intervention	X	X	X	X
Vascular Surgery	X	X		X
Emergency Services:				
Emergency Department	X	X	X	X
Neurosciences:				
Electroencephalography (EEG)	X	X		X
Sleep Studies	X	X	X	X
Oncology Services:				
Cancer Program	X	X		X
Chemotherapy	X	X		X
Radiation Therapy	X	X		X

(continued)

Exhibit 11, continued
Medical University Hospital Authority
(A Component Unit of The Medical University of South Carolina)
Other Area Hospital Services, Continued

Clinical Services	Medical University Hospital Authority	Roper St. Francis Hospital	East Cooper Medical Center	Trident Health
Organ Transplant:				
Heart Transplant	X			
Kidney Transplant	X			
Liver Transplant	X			
Lung Transplant	X			
Pancreas Transplant	X			
Orthopedic Services:				
Arthroscopy	X	X	X	
Joint Replacement	X	X	X	X
Spine Surgery	X	X	X	X
Other Services:				
Hemodialysis	X	X	X	X
Home Health		X		
Hospice		X		
Lithotripsy	X	X	X	X
Obstetrics	X		X	
Radiology/Nuclear Medicine/Imaging:				
Computed Tomography	X	X	X	X
Computed Tomography Angiography	X	X	X	X
Intensity-Modulated Radiation Therapy	X	X		X
Magnetic Resonance Angiography				X
Magnetic Resonance Imaging	X	X	X	X
Positron Emission Tomography	X	X		X
Single Photon Emission Computerized Tomography	X	X	X	X
Rehabilitation Services:				
Physical Therapy	X	X	X	X
Speech Therapy	X			
Special Care:				
Coronary Intensive Care Unit	X			
Intensive Care Unit	X	X	X	X
Neonatal Intensive Care	X		X	X
Other Units:				
Psychiatric	X			
Rehabilitation		X		
Surgery:				
Inpatient Surgery	X	X	X	X
Robotic Surgery	X	X		X
Wound Care:				
Hyperbaric Oxygen		X	X	X
Wound Care	X	X	X	X

Source: American Hospital Directory

See the Independent Accountants' Examination Report

Section IV – Summary of Significant Demand Assumptions

Exhibit 12
Medical University Hospital Authority
(A Component Unit of The Medical University of South Carolina)
Historical Market Share
(Inpatient Services)
For the Years 2013 and 2014

Primary Service Area	2013		2014	
	Discharges	Market Share	Discharges	Market Share
Medical University Hospital Authority	21,396	29.1%	21,674	29.9%
Competing Facilities				
Roper St. Francis Hospital	24,491	33.3%	23,523	32.3%
East Cooper Medical Center	4,733	6.4%	4,946	6.8%
Trident Medical Center	21,319	29.0%	21,087	29.0%
Others	1,656	2.2%	1,500	2.0%
Subtotal	52,199	70.9%	51,056	70.1%
Total-Primary Service Area	73,595	100.0%	72,730	100.0%

Secondary Service Area	2013		2014	
	Discharges	Market Share	Discharges	Market Share
Medical University Hospital Authority	5,515	8.9%	5,638	9.0%
Competing Facilities				
Roper St. Francis Hospital	675	1.1%	629	1.0%
East Cooper Medical Center	644	1.0%	641	1.0%
Trident Medical Center	160	0.3%	121	0.2%
Others	54,703	88.7%	55,364	88.8%
Subtotal	56,182	91.1%	56,755	91.0%
Total-Secondary Service Area	61,697	100.0%	62,393	100.0%

Note: Discharges exclude normal newborn and psychiatric discharges.
Source: South Carolina Revenue and Fiscal Affairs Office

Potential Projects for Competing Facilities - Roper St. Francis and Trident Health each have Certificates of Need that have been approved by the State of South Carolina. Roper St. Francis plans to build a 50-bed acute care hospital at Carnes Crossroads in Goose Creek. Trident Health plans to build a 50-bed acute care hospital in Moncks Corner. These CONs were approved in 2009 but the two hospital systems have been in a legal battle over the facilities for the last six years.

In February 2015, the South Carolina Appeals Court ruled that the two hospitals would not be in direct competition and that the local market could support both hospitals. After complaints were filed in Summer of 2015, the Court upheld its ruling and both hospitals are moving forward with their planned facilities. Management does not deem either of the proposed, 50-bed hospitals to be a significant competitor to the Authority once constructed.

The Authority often collaborates with its competitors to benefit the entire Charleston community. Recently, the City of Charleston granted the Medical University of South Carolina, Roper St. Francis Hospital, and the Ralph H. Johnson V.A. Medical Center permission to collaborate to create a downtown "Medical District" consisting of pedestrian-oriented greenways and parking options between and among the three campuses. The Medical District is intended to transform the existing properties into "healthy space for the benefit of all patients and the entire community."

C. Historical and Forecasted Inpatient and Outpatient Utilization within the Service Area

On the following pages, Exhibit 13 presents historical and forecasted population and use rates (discharges per 1,000 population) for the Authority's primary and secondary service area, as well as the Authority's market share, average daily census, and occupancy percentage.

Exhibit 13
Medical University Hospital Authority
(A Component Unit of The Medical University of South Carolina)
Historical and Forecasted Utilization for Inpatient Service Lines
For the Years 2012 through 2021

	Historical				2012-2015	Forecasted						2016-2021
	2012	2013	2014	2015	CAGR**	2016	2017	2018	2019	2020	2021	CAGR**
Primary Service Area												
Population	693,614	707,543	721,473	735,403	1.97%	747,723	760,043	772,364	784,684	797,004	809,690	1.61%
65+	85,901	90,510	95,119	99,728	5.10%	104,957	110,186	115,416	120,645	125,874	131,341	4.59%
45-64	179,085	182,252	185,420	188,587	1.74%	190,400	192,213	194,027	195,840	197,653	199,513	0.94%
18-44F	133,637	135,267	136,898	138,529	1.21%	139,709	140,889	142,068	143,248	144,428	145,619	0.83%
18-44M	134,776	136,611	138,447	140,283	1.34%	141,639	142,994	144,350	145,705	147,061	148,433	0.94%
0-17	160,216	162,902	165,589	168,276	1.65%	171,018	173,761	176,503	179,246	181,988	184,783	1.56%
Discharges for all facilities*	73,410	73,337	72,495	72,485	-0.42%	72,402	72,279	72,120	71,924	71,696	71,491	-0.25%
65+	21,952	23,026	22,265	22,778	1.24%	23,392	23,962	24,491	24,979	25,429	25,888	2.05%
45-64	18,270	17,901	17,428	17,261	-1.88%	16,975	16,693	16,415	16,140	15,869	15,605	-1.67%
18-44F	15,236	14,745	14,874	14,686	-1.22%	14,449	14,215	13,983	13,755	13,529	13,307	-1.63%
18-44M	4,701	4,532	4,468	4,411	-2.10%	4,345	4,280	4,216	4,153	4,089	4,027	-1.51%
0-17	13,251	13,133	13,460	13,348	0.24%	13,240	13,128	13,014	12,898	12,780	12,664	-0.89%
Use Rate (Discharges per 1,000)	105.84	103.65	100.48	98.56	-2.35%	96.83	95.10	93.38	91.66	89.96	88.29	-1.83%
65+	255.55	254.40	234.08	228.40	-3.67%	222.87	217.47	212.20	207.05	202.02	197.11	-2.43%
45-64	102.02	98.22	93.99	91.53	-3.55%	89.16	86.85	84.60	82.41	80.29	78.21	-2.59%
18-44F	114.01	109.01	108.65	106.01	-2.40%	103.42	100.89	98.43	96.02	93.67	91.38	-2.45%
18-44M	34.88	33.17	32.27	31.44	-3.40%	30.68	29.93	29.21	28.50	27.81	27.13	-2.43%
0-17	82.71	80.62	81.29	79.32	-1.39%	77.42	75.55	73.73	71.96	70.22	68.53	-2.41%
MUHA discharges	20,695	21,396	21,674	21,912	1.92%	22,131	22,345	22,554	22,901	23,246	23,603	1.30%
65+	3,724	4,063	3,960	4,108	3.33%	4,280	4,449	4,615	4,808	5,001	5,201	3.98%
45-64	5,359	5,278	5,115	5,136	-1.41%	5,127	5,119	5,110	5,132	5,154	5,177	0.19%
18-44F	4,080	4,244	4,500	4,511	3.41%	4,512	4,512	4,512	4,540	4,567	4,595	0.37%
18-44M	2,052	2,056	2,109	2,114	1.00%	2,115	2,116	2,117	2,131	2,145	2,159	0.41%
0-17	5,480	5,755	5,990	6,042	3.31%	6,096	6,149	6,201	6,290	6,380	6,471	1.20%
MUHA's market share	28.2%	29.2%	29.9%	30.2%	2.31%	30.6%	30.9%	31.3%	31.8%	32.4%	33.0%	1.52%

(continued)

Exhibit 13, continued
Medical University Hospital Authority
(A Component Unit of The Medical University of South Carolina)
Historical and Forecasted Utilization for Inpatient Service Lines
For the Years 2012 through 2021

	Historical				2012-2015	Forecasted						2016-2021
	2012	2013	2014	2015	CAGR**	2016	2017	2018	2019	2020	2021	CAGR**
Secondary Service Area												
Population	526,403	535,470	544,537	553,604	1.69%	562,125	570,645	579,166	587,686	596,207	604,993	1.48%
65+	103,387	108,398	113,410	118,421	4.63%	123,026	127,631	132,236	136,841	141,446	146,216	3.51%
45-64	142,227	143,418	144,609	145,800	0.83%	146,010	146,220	146,429	146,639	146,849	147,092	0.15%
18-44F	84,578	85,311	86,045	86,779	0.86%	87,681	88,583	89,486	90,388	91,290	92,204	1.01%
18-44M	87,824	88,531	89,239	89,946	0.80%	91,004	92,062	93,119	94,177	95,235	96,309	1.14%
0-17	108,388	109,811	111,235	112,658	1.30%	114,404	116,150	117,895	119,641	121,387	123,171	1.49%
Discharges for all facilities*	62,053	61,903	62,589	63,235	0.63%	64,205	64,689	65,150	65,589	66,007	66,446	0.69%
65+	25,181	26,007	26,240	27,044	2.41%	27,839	28,515	29,169	29,802	30,415	31,043	2.20%
45-64	15,386	14,876	14,839	14,759	-1.38%	14,736	14,564	14,393	14,225	14,059	13,897	-1.16%
18-44F	9,664	9,535	9,853	9,801	0.47%	9,867	9,835	9,803	9,770	9,736	9,703	-0.33%
18-44M	3,269	3,107	3,353	3,333	0.65%	3,356	3,351	3,345	3,339	3,333	3,326	-0.18%
0-17	8,553	8,378	8,304	8,298	-1.01%	8,407	8,424	8,439	8,452	8,464	8,476	0.16%
Use Rate (Discharges per 1,000)	117.88	115.60	114.94	114.22	-1.05%	114.22	113.36	112.49	111.61	110.71	109.83	-0.78%
65+	243.56	239.92	231.37	228.37	-2.12%	226.29	223.42	220.58	217.79	215.03	212.31	-1.27%
45-64	108.18	103.72	102.61	101.23	-2.19%	100.92	99.60	98.30	97.01	95.74	94.48	-1.31%
18-44F	114.26	111.77	114.51	112.94	-0.39%	112.53	111.03	109.55	108.09	106.65	105.23	-1.33%
18-44M	37.22	35.09	37.57	37.06	-0.14%	36.88	36.40	35.92	35.45	34.99	34.54	-1.30%
0-17	78.91	76.29	74.65	73.65	-2.27%	73.49	72.53	71.58	70.65	69.73	68.82	-1.30%
MUHA discharges	5,364	5,515	5,638	5,712	2.12%	5,867	5,936	6,004	6,109	6,215	6,324	1.51%
65+	1,465	1,693	1,720	1,786	6.83%	1,860	1,918	1,975	2,044	2,114	2,186	3.29%
45-64	1,623	1,426	1,396	1,397	-4.88%	1,410	1,403	1,395	1,397	1,398	1,400	-0.15%
18-44F	660	684	794	794	6.37%	813	816	819	828	836	844	0.76%
18-44M	332	284	310	311	-2.16%	317	319	321	326	330	334	1.07%
0-17	1,284	1,428	1,418	1,424	3.52%	1,468	1,481	1,493	1,515	1,537	1,560	1.22%
MUHA's market share	8.6%	8.9%	9.0%	9.0%	1.53%	9.1%	9.2%	9.2%	9.3%	9.4%	9.5%	0.86%
Combined Service Areas												
Population	1,220,017	1,243,013	1,266,010	1,289,007	1.85%	1,309,848	1,330,689	1,351,529	1,372,370	1,393,211	1,414,683	1.55%
Discharges for all facilities	135,463	135,240	135,084	135,719	0.06%	136,607	136,968	137,269	137,513	137,702	137,936	0.19%
Discharges per 1,000	111.03	108.80	106.70	105.29	-1.75%	104.29	102.93	101.57	100.20	98.84	97.50	-1.34%
MUHA discharges	26,059	26,911	27,312	27,624	1.96%	27,998	28,281	28,558	29,010	29,461	29,927	1.34%
MUHA's market share	19.2%	19.9%	20.2%	20.4%	2.04%	20.5%	20.6%	20.8%	21.1%	21.4%	21.7%	1.14%
Other Discharges												
Out of service area %	18.1%	16.4%	16.0%	16.0%		16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	
Out of service area discharges	5,746	5,275	5,211	5,271		5,342	5,393	5,449	5,534	5,620	5,709	
Summary of Total Discharges												
MUHA acute discharges	31,805	32,186	32,523	32,895	1.13%	33,340	33,674	34,007	34,544	35,081	35,636	1.34%
MUHA psych discharges	3,505	3,506	3,778	3,765	2.41%	3,821	3,879	3,937	3,996	4,056	4,117	1.50%
MUHA total discharges	35,310	35,692	36,301	36,660	1.26%	37,161	37,553	37,944	38,540	39,137	39,753	1.36%
Average Daily Census and Occupancy Percentage												
MUHA total patient days	216,590	219,126	229,517	234,365		237,579	240,111	242,641	246,447	250,257	254,194	
MUHA average length of stay	6.13	6.14	6.32	6.39		6.39	6.39	6.39	6.39	6.39	6.39	
Average daily census	593	600	629	642		651	658	665	675	686	696	
Staffed Beds:												
Acute	435	436	420	431		473	473	473	473	473	473	
Psych	94	94	94	100		100	100	100	100	100	100	
Women's and Children's	210	210	210	216		216	216	216	261	261	261	
Total Staffed Beds	739	740	724	747		789	789	789	834	834	834	
Occupancy percentage	80.30%	81.13%	86.85%	85.96%		82.50%	83.38%	84.25%	80.96%	82.21%	83.50%	

**CAGR=Compound Annual Growth Rate

*Source: The Nielson Company, South Carolina Revenue and Fiscal Affairs Office (*2012-2014), and MUHA's internal records*

Average length of stay is forecast to remain at the Authority's FY 2015 experience throughout the forecast period. The number of beds in the Children's Hospital and Women's Pavilion is expected to increase to 261 in FY 2019 as a result of additional capacity. The increase consists of 12 additional pediatric beds (6 medical surgical and 6 pediatric ICU), 12 beds in the Women's Pavilion, and 21 bassinets.

The South Carolina Revenue and Fiscal Affairs Office has limited reliable outpatient data. As such, Exhibit 14 presents the Authority's outpatient service volumes as obtained from the Authority's records. Existing emergency room visits, outpatient surgeries, and other outpatient visits are forecast to increase 3.8 percent each year of the forecast period, a trend consistent with the Authority's historical experience.

Exhibit 14
Medical University Hospital Authority
(A Component Unit of The Medical University of South Carolina)
Historical and Forecasted Outpatient Utilization
For the Years 2012 through 2021

	Historical				Forecasted					
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Emergency room visits	74,967	77,601	77,249	82,426	85,074	87,807	90,627	93,538	96,543	99,644
Outpatient surgeries	7,250	7,911	7,611	8,383	8,799	9,235	9,693	10,174	10,678	11,208
Other outpatient visits	866,304	900,615	934,540	969,448	1,006,490	1,044,946	1,084,873	1,126,324	1,169,360	1,214,040
Total outpatient occurrences	948,521	986,127	1,019,400	1,060,257	1,100,363	1,141,988	1,185,193	1,230,036	1,276,581	1,324,892
Percentage change		4.0%	3.4%	4.0%	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%

Source: MUHA internal records

D. Historical and Forecasted Market Share

The data utilized to calculate the Authority's historical market share was obtained from the South Carolina Revenue and Fiscal Affairs Office, The Nielsen Company, and the Authority. The Authority's forecasted discharges were based on projected population, forecasted use rates by age category based on historical trends, and historical market share. The Authority's market share has increased slightly every year since 2012. The Authority's compound annual growth rate in market share from 2012 to 2015 was used as a basis for the Authority's forecasted market share growth over the forecast period.

Exhibit 15 summarizes the Authority's historical and forecasted inpatient market share.

Exhibit 15
Medical University Hospital Authority
(A Component Unit of The Medical University of South Carolina)
Historical and Forecasted Inpatient Market Share
For the Years 2012 through 2021

	Historical				Forecasted					
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Service Area										
Primary service area	28.2%	29.2%	29.9%	30.2%	30.6%	30.9%	31.3%	31.8%	32.4%	33.0%
Secondary service area	8.6%	8.9%	9.0%	9.0%	9.1%	9.2%	9.2%	9.3%	9.4%	9.5%

Note: Based upon inpatient acute care discharges, excluding newborns.

E. Hospital Use Rates

The Authority's historical and forecasted use rates are presented in Exhibits 13 and 14. While experiencing increased market share since 2012, the use rates within the Authority's service area have declined based on inpatient utilization data received from the South Carolina Revenue and Fiscal Affairs Office. There is much discussion regarding the effects that the Patient Protection and Affordable Care Act will have on inpatient and outpatient use rates. For purposes of this Forecast, the compound annual growth rate in use rates between 2012 and 2015 is used as a basis for forecasting the Authority's use rates over the forecast period.

F. Authority's Medical Staff

As of June 2015, the Authority's medical staff was composed of 846 active, associate, and community-based members, all of whom hold faculty appointments at MUSC. As required by the Authority's medical staff bylaws, faculty members of MUSC do not routinely admit patients to other hospitals. The chief of each clinical department in MUSC's College of Medicine is also the chief of his or her respective clinical service department within the Authority. The average age of the Authority's active medical staff is 46 years.

Exhibit 16 presents the Authority's total medical staff by specialty practice type. As shown, there are 846 physicians comprising one group (faculty) practice who utilize the Authority.

Exhibit 16
Medical University Hospital Authority
(A Component Unit of The Medical University of South Carolina)
Identification of Medical Staff by Practice Type
As of June 30, 2015

Department	# Physicians
Anesthesia	61
Cardiology	29
Dermatology	14
Emergency	36
Endocrinology	9
ENT (Otolaryngology)	29
Family Practice	21
Gastroenterology	16
General Surgery	58
Gynecology (Women's Services)	35
Hematology/Oncology	21
Infectious Disease	13
Internal Medicine	59
Nephrology	19
Neurology	37
Neurosurgery	19
Ophthalmology	16
Oral Surgery	8
Orthopedic	24
Pathology	27
Pediatric Cardiology	18
Pediatrics	128
Psychiatry	48
Pulmonary	25
Radiation Oncology	8
Radiology	47
Rheumatology	9
Urology	12
Total	846

Source: MUHA's internal records.

Utilization Profile - Exhibit 17 shows the Authority's medical staff, grouped by physician specialty, who admit to the Authority as of June 30, 2015, June 30, 2014 and June 30, 2013. These physicians were collectively responsible for 100.0 percent of the Authority's FY 2015 admissions.

Exhibit 17
Medical University Hospital Authority
(A Component Unit of The Medical University of South Carolina)
Medical Staff Utilization
Ranked From Highest to Lowest Admissions at February 28, 2015
For the Fiscal Years 2013, 2014 and 2015

Specialty	Curent Physicians	Average Age	Status	2013 Adm	2013 % Total	2014 Adm	2014 % Total	2015 Adm	2015 % Total
Pediatrics	128	45	Active	6,272	17.6%	6,359	17.5%	6,692	18.3%
General Surgery	58	46	Active	5,805	16.3%	5,563	15.3%	5,545	15.1%
Internal Medicine	59	42	Active	4,311	12.1%	4,259	11.7%	4,314	11.8%
Gynecology (Women's Services)	35	46	Active	3,261	9.1%	3,542	9.8%	4,011	10.9%
Psychiatry	48	48	Active	3,285	9.2%	3,637	10.0%	3,644	9.9%
Neurosurgery	19	41	Active	2,091	5.9%	2,338	6.4%	2,574	7.0%
Cardiology	29	55	Active	2,601	7.3%	2,224	6.1%	2,069	5.6%
Orthopedic	24	45	Active	1,206	3.4%	1,416	3.9%	1,542	4.2%
Hematology/Oncology	21	47	Active	1,324	3.7%	1,480	4.1%	1,336	3.6%
Neurology	37	46	Active	1,399	3.9%	1,298	3.6%	1,308	3.6%
ENT (Otolaryngology)	29	43	Active	708	2.0%	734	2.0%	786	2.1%
Pulmonary	25	46	Active	969	2.7%	990	2.7%	609	1.7%
Gastroenterology	16	45	Active	525	1.5%	551	1.5%	594	1.6%
Pediatric Cardiology	18	41	Active	512	1.4%	578	1.6%	484	1.3%
Urology	12	44	Active	487	1.4%	493	1.4%	462	1.3%
Family Practice	21	47	Active	577	1.6%	462	1.3%	339	0.9%
Nephrology	19	48	Active	229	0.6%	235	0.6%	222	0.6%
Oral Surgery	8	47	Active	109	0.3%	117	0.3%	110	0.3%
Ophthalmology	16	49	Active	9	0.0%	10	0.0%	12	0.0%
Endocrinology	9	52	Active	12	0.0%	15	0.0%	7	0.0%
Anesthesia	61	42	Active	-	0.0%	-	0.0%	-	0.0%
Dermatology	14	47	Active	-	0.0%	-	0.0%	-	0.0%
Emergency	36	43	Active	-	0.0%	-	0.0%	-	0.0%
Infectious Disease	13	50	Active	-	0.0%	-	0.0%	-	0.0%
Pathology	27	50	Active	-	0.0%	-	0.0%	-	0.0%
Radiation Oncology	8	48	Active	-	0.0%	-	0.0%	-	0.0%
Radiology	47	46	Active	-	0.0%	-	0.0%	-	0.0%
Rheumatology	9	51	Active	-	0.0%	-	0.0%	-	0.0%
Total	846			35,692	100.0%	36,301	100.0%	36,660	100.0%
AVERAGE AGE OF ABOVE LISTED MEDICAL STAFF:				46.4					

Admissions include acute admissions and psychiatric admissions.
Source: MUHA's internal records.

Turnover - Exhibit 18 shows the additions and deletions to the Authority's total medical staff for FY 2014 and 2015.

Exhibit 18
(A Component Unit of The Medical University of South Carolina)
Medical Staff Utilization
Summary of Medical Staff Turnover
For the Fiscal Years 2013, 2014 and 2015

Specialty	2013	Additions	Deletions	2014	Additions	Deletions	2015
Anesthesia	56	13	9	60	4	3	61
Cardiology	29	2	2	29	-	-	29
Dermatology	13	1	2	12	2	-	14
Emergency	30	9	6	33	5	2	36
Endocrinology	10	1	2	9	-	-	9
ENT (Otolaryngology)	25	5	3	27	7	5	29
Family Practice	22	5	2	25	1	5	21
Gastroenterology	17	5	5	17	1	2	16
General Surgery	58	9	7	60	2	4	58
Gynecology (Women's Services)	33	4	6	31	5	1	35
Hematology/Oncology	23	4	9	18	3	-	21
Infectious Disease	13	1	1	13	-	-	13
Internal Medicine	57	11	8	60	8	9	59
Nephrology	19	5	3	21	-	2	19
Neurology	32	8	4	36	2	1	37
Neurosurgery	18	2	5	15	4	-	19
Ophthalmology	16	4	4	16	3	3	16
Oral Surgery	7	2	1	8	-	-	8
Orthopedic	20	5	1	24	2	2	24
Pathology	25	4	4	25	4	2	27
Pediatric Cardiology	17	1	1	17	1	-	18
Pediatrics	118	14	10	122	12	6	128
Psychiatry	46	4	4	46	3	1	48
Pulmonary	24	-	2	22	4	1	25
Radiation Oncology	7	-	1	6	2	-	8
Radiology	45	9	8	46	9	8	47
Rheumatology	9	1	1	9	-	-	9
Urology	14	2	4	12	3	3	12
Totals	803	131	115	819	87	60	846

Source: MUHA's internal records.

G. **Physician Questionnaire Results** - A questionnaire was sent to all 846 physicians to gauge support and expected change in utilization due to the Project. The response rate was 43.1 percent or 365 physicians.

Exhibit 19
Medical University Hospital Authority
(A Component Unit of The Medical University of South Carolina)
Medical Staff Survey Responses

	Question			
1	Which of the following describes your awareness of Medical University Hospital Authority's ("MUHA") plans to construct a new Women and Children's Hospital (the "Project")?	Very Aware	Moderately Aware	Not Very Aware
		263	90	12
		Strong Support	Moderate Support	Do Not Support
2	Please indicate your level of support for the Project?	289	62	14
		Increase	Decrease	
3	Do you expect your utilization of MUHA's services to increase or decrease with the opening of the Project?	318	47	

SECTION V - SUMMARY OF SIGNIFICANT FINANCIAL ASSUMPTIONS AND ACCOUNTING POLICIES

A. Basis for Assumptions

The Forecast presents, to the best of the knowledge and belief of Management, the expected financial position, results of operations and changes in net position and cash flows for the forecast period. Accordingly, the Forecast reflects Management's judgment as of February 12, 2016, the date of the Forecast, of the Authority's most likely set of conditions and its most likely course of action.

The assumptions disclosed herein are those that Management believes are significant to the Forecast. There will usually be differences between forecasted and actual results, because events and circumstances frequently do not occur as expected. Those differences may be material. In addition, the validity of the Forecast may decrease in proportion to the time elapsed since its determination. Management does not intend to update this Forecast. Subsequent events and circumstances may differ from those assumed as of the date of this Forecast. Accordingly, the forecasted results should be evaluated in light of such changes.

This Forecast has been prepared in accordance with accounting principles generally accepted in the United States of America and follows formatting prescribed by the *Guide to Prospective Financial Information* published by the AICPA and applicable sections of HUD's *Guidelines for Studies of Market Need and Financial Feasibility – 4615.1 REV-1 – Appendix 4.*

B. Summary of Significant Accounting Policies

Basis of Accounting - For financial reporting purposes, the Authority is considered a special-purpose government engaged only in business-type activities. Accordingly, the forecasted financial statements have been presented using the economic-resources measurement focus and the accrual basis of accounting. Under the accrual basis, revenues are recognized when earned and expenses are recorded when an obligation has been incurred.

Cash and Cash Equivalents – The Authority considers investments in highly liquid individual debt instruments (with an original maturity of three months or less) and similar fund positions to be cash equivalents.

Supplies and Drugs – Supplies and drugs are stated at the lower of cost (first-in, first-out) or replacement value.

Investments and Investment Income - Investments consist of internally or externally restricted cash equivalents with original maturities greater than three months, all of which are carried at fair value, principally based on quoted market prices. Investment income or loss from investments (including realized and unrealized gains and losses on investments and interest) is reported as non-operating revenue.

Capital Assets - Capital assets are recorded at cost or, if donated, at fair value at the date of receipt. Depreciation is provided over the useful life of each class of depreciable assets using the straight-line method. Equipment under capital lease obligations is amortized using the straight-line method over the estimated useful life of the equipment, and such amortization is included in depreciation and amortization in the accompanying Forecasted Statements of Revenues, Expenses and Changes in Net Position.

A summary of depreciable lives is as follows:

Land improvements	3 – 25 years
Buildings and improvements	5 – 40 years
Machinery, equipment, and vehicles	3 – 20 years
Software	3 – 5 years

Capital assets are reviewed for impairment whenever prominent events or changes in circumstances occur that affect the Authority's capital assets. Such events or changes in circumstances that may be indicative of impairment include evidence of physical damage, enactment or approval of laws or regulations or other changes in environmental factors, technological changes or evidence of obsolescence, changes in the manner or duration of use of a capital asset, and construction or development stoppage. A capital asset generally is considered impaired if both (a) the decline in service utility of the capital asset is large in magnitude and (b) the event or change in circumstance is outside the normal life cycle of the capital asset.

Statement of Revenues, Expenses and Changes in Net Position - For purposes of presentation, transactions deemed by Management to be ongoing, major or central to the provision of healthcare services are reported as operating revenues and operating expenses. Peripheral or incidental transactions, including financing costs and investment income, are reported as non-operating revenues and expenses.

Net Patient Service Revenue - Net patient service revenue is reported at estimated net realizable amounts from patients, third-party payors, and others for services rendered, and includes estimated retroactive revenue adjustments due to future audits, reviews, and investigations, as well as the provision for uncollectible accounts. Retroactive adjustments are considered in the recognition of revenue on an estimated basis in the period the related services are rendered, and such amounts are adjusted in future periods as adjustments become known or as years are no longer subject to such audits, reviews, and investigations.

Charity Care - The Authority provides care to patients who meet certain criteria under its charity care policy without charge or at amounts less than its established rates. Because the Authority does not pursue collection of amounts determined to qualify as charity care, they are not reported as revenue.

Net Position - Net position of the Authority is classified into the following components:

- Net investment in capital assets consists of capital assets, net of accumulated depreciation, reduced by outstanding balances of any borrowings used to finance the purchase or construction of those assets.
- Restricted under indenture agreements represents amounts deposited with trustees as required by bond indentures or other debt agreements, specifically Mortgage Reserve Funds.
- Amounts restricted for capital projects and specific operating expenses represent amounts awarded from the State of South Carolina (for the Project or for the Center for Telehealth) to be used as stipulated by the state appropriation, as well as amounts contributed by donors for specific capital purchases.
- Unrestricted represents remaining net position that does not meet any of the above definitions.

When the Authority has both restricted and unrestricted resources available to finance a particular program, the Authority's policy is to use restricted resources before unrestricted resources.

Losses on Refunding of Long-Term Debt, Costs of Issuance of Long-Term Debt, and Interest on Long-Term Debt during the Construction Period - The deferred accounting loss on refunding of long-term debt is being amortized over the terms of the related indebtedness using the effective interest method and is classified as a deferred outflow of resources on the Forecasted Statements of Net Position.

Costs of issuance are expensed in the period incurred.

Interest cost is capitalized on qualified construction expenditures, net of income earned on related trusteed assets, as a component of the cost of the related projects. For qualifying capital projects that are not financed with specific proceeds of tax-exempt debt, the Authority capitalizes interest cost on such projects based on accumulated expenditures and a weighted average borrowing rate.

Income Taxes - The Authority is a political subdivision of the State of South Carolina and is treated as a governmental entity for tax purposes. Additionally, the Authority has received its determination letter from the Internal Revenue Service, indicating that it is exempt from income tax under Section 501(a) of the Internal Revenue Code, as an organization described in Section 501(c)(3). As such, the Authority is not generally subject to federal or state income taxes. However, the Authority remains subject to income taxes on any net income that is derived from a trade or business, regularly carried on and not in furtherance of the purpose for which it was granted exemption. No income tax provision has been recorded. Any provision for tax on the net income from unrelated trade or business, in the opinion of Management, is not material to the forecasted financial statements taken as a whole.

Use of Estimates - The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires that Management make estimates and assumptions affecting the reported amounts of assets, liabilities, revenues and expenses,

as well as disclosure of contingent assets and liabilities. Actual results could differ from those estimates.

Significant items subject to such estimates include the allowances for uncollectible accounts and contractual adjustments for patient receivables, depreciation and amortization, liability for incurred but not reported claims under the self-insured health plan, and estimated third-party payor settlements. In particular, laws and regulations governing the Medicare and Medicaid programs are extremely complex and subject to interpretation. As a result, there is at least a reasonable possibility that recorded estimates related to these programs will change by a material amount in the near term.

Recent Accounting Pronouncements – The following describes recent accounting pronouncements affecting the Authority's forecasted financial statements:

GASB Statement No. 68, *Accounting and Financial Reporting for Pensions* is an amendment of GASB Statement No. 27 ("Statement No. 68") and was published in June 2012. This new pronouncement improves information provided by state and local government employers about financial support for pensions that is provided by other entities.

GASB Statement No. 68 establishes standards for measuring and recognizing liabilities, deferred outflows of resources, deferred inflows of resources, and expenditures. For defined-benefit pension plans, Statement No. 68 identifies the methods and assumptions that should be used to project benefit payments, discount projected benefit payments to their actuarial present value, and attribute that present value to periods of employee service.

During FY 2015, the Authority implemented Statement No. 68. This statement details how cost-sharing multiple-employer defined-benefit plans, such as the one administered by the Public Employee Benefit Authority ("PEBA") on behalf of the Authority, will recognize pension liabilities based upon the employer's proportionate share of the collective net pension liability. Statement No. 68 also addresses the note disclosure and required supplementary information requirements for reporting on the pension liability. Statement No. 68 had a material impact on the Authority's financial statements as the Authority contributes to a pension plan administered by PEBA (Note M. Implementation of GASB Statements No. 68 and 71 in this section).

GASB Statement No. 71, *Pension Transition for Contributions Made Subsequent to the Measurement Date – an amendment of GASB Statement No. 68* ("Statement No. 71") was published in November 2013. This pronouncement requires that, at transition to Statement No. 68, a government recognize a beginning deferred outflow of resources for its pension contributions, if any, made subsequent to the measurement date of the beginning net pension liability. Statement No. 71 must be applied simultaneously with Statement No. 68. The Authority implemented Statement No. 71 for FY 2015.

GASB Statement No. 72, *Fair Value Measurement and Application*, ("Statement No. 72") was issued in February 2015. Statement No. 72 addresses accounting and financial reporting issues related to fair-value measurements. The definition of fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date and requires the use of valuation techniques

that are appropriate under the circumstances and for which sufficient data is available to measure fair value. These techniques should be consistent with one of the following approaches: the market approach, the cost approach, or the income approach. Use of the highest approach based on the following hierarchy of inputs should also be used: Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities; Level 2 inputs are inputs, other than quoted prices included in Level 1, that are either directly or indirectly observable for the asset or liability; or Level 3 inputs, which are unobservable inputs such as Management's assumption of the default rate amount underlying mortgages of a mortgage-backed security. Statement No. 72 also provides guidance for applying fair value to certain investments and disclosures related to all fair-value measurements. The provisions of Statement No. 72 are effective for financial statement periods beginning after June 15, 2015, FY 2016 for the Authority.

GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions* ("Statement No. 75"), was issued in June 2015. The primary objective of Statement No. 75 is to improve accounting and financial reporting by the state and local governments for postemployment benefits other than pensions ("OPEB"). Statement No. 75 establishes standards for recognizing and measuring liabilities, deferred outflows of resources, deferred inflows of resources, and expenses. For defined-benefit OPEB, Statement No. 75 identified the methods and assumptions that are required to be used to project benefit payments, discount projected benefit payments to their actuarial present value, and attribute that present value to a period of employee service. Note disclosure and required supplementary information requirements about OPEB are also addressed. In addition, Statement No. 75 details the recognition and disclosure requirements for employers with payables to defined-benefit OPEB plans that are administered through trusts that meet the specified criteria for employers whose employees are provided with defined contribution OPEB. The provisions of Statement No. 75 are effective for financial statement periods beginning after June 15, 2017, FY 2018 for the Authority.

The Authority is in the process of evaluating the impact of implementing GASB Statements No. 72, 75, and other recent accounting pronouncements on the Authority's financial statements. As such, no impact is included in the Forecasted Statements of Revenues, Expenses, and Changes in Net Position.

Business and Credit Concentrations - The Authority provides healthcare services through inpatient and outpatient care facilities principally located in and around Charleston, South Carolina. The Authority grants credit to patients, substantially all of whom are residents of its service area. The Authority generally does not require collateral or other security in extending credit to patients; however, it routinely obtains assignment of (or is otherwise entitled to receive) patients benefits payable under their health insurance programs, plans or policies (i.e., Medicare, Medicaid, Blue Cross, and commercial insurance policies).

Risk Management - The Authority is exposed to various risks of loss related to torts; theft of, damage to and destruction of assets; business interruption; errors and omissions; employee injuries and illness; natural disasters; and professional and general liability claims and judgments. The Authority participates in the South Carolina Insurance Reserve Fund ("IRF"), which provides coverage for substantially all such risks. The Authority pays premiums to the

IRF and effectively receives unlimited (when combined with related recovery limit protections provided by state statutes) occurrence-based coverage for all consequential risks of loss.

Related-Party Transactions - The following describes the Authority's material agreements with related parties:

The University - Under the terms of various agreements related to the Authority's establishment as a distinct healthcare system, the University provides a variety of shared services for the Authority, including facilities oversight, administrative and financial services, and other types of general operating support. The Authority also leases certain facilities space from the University under the Reciprocal Space Agreement. The cost of these services and leases are included in operating expenses in the accompanying Forecasted Statements of Revenues, Expenses and Changes in Net Position.

The Authority also reimburses the University for certain professional and/or clinical services provided by interns and residents receiving medical education at the University. The cost of these services are included in salaries and wages-residents, and benefits-residents expense in the accompanying Forecasted Statements of Revenues, Expenses and Changes in Net Position.

The Authority rents certain facility space to and provides limited support services for the University. The income earned by the Authority for such items is included in other operating revenue in the accompanying Forecasted Statements of Revenues, Expenses and Changes in Net Position.

The Authority's net payable to the University is a component of due to related parties on the Forecasted Statements of Net Position.

University Medical Associates d/b/a MUSC Physicians - University Medical Associates d/b/a MUSC Physicians ("UMA" or "MUSC Physicians"), a component unit of the University, is a separately organized professional services corporation associated with the University's faculty practice plan. MUSC Physicians and the Authority have entered into certain agreements related to clinical and other services provided by MUSC Physicians and its practicing physicians for the benefit of the Authority. Net amounts paid by the Authority to MUSC Physicians under these agreements are included in operating expenses in the accompanying Forecasted Statements of Revenues, Expenses and Changes in Net Position.

MUSC Physicians also provides billing and collection services to the Authority related to certain limited clinical services, for which MUSC Physicians receives an administrative fee. The administrative fees paid by the Authority to MUSC Physicians are included in operating expenses in the accompanying Forecasted Statements of Revenues, Expenses and Changes in Net Position.

During FY 2011, MUSC Physicians and the Authority agreed to jointly fund the costs of a new ambulatory care electronic health records ("EHR") system with Epic Systems Corporation on a 50/50 basis, generally because there is equal benefit ascribed to each organization from the use of the system. In this respect, an intercompany arrangement was made between MUSC

Physicians and the Authority whereby each entity would record and fund its 50 percent share of both capital and operating expenditures related to the new EHR system.

MUSC Physicians and the Authority agreed to jointly fund capital and operating costs of the revenue cycle component of the EHR system. The funding share of each entity varies on the particular costs incurred.

The Authority's net payable to and/or net receivable from MUSC Physicians is a component of due to related parties on the Forecasted Statements of Net Position.

Initiant, LLC - In April 2014, the Authority became a founding member of a health collaborative named Initiant, LLC (the "Collaborative"). The Collaborative is a limited-liability company owned by the founding members, with the opportunity to add more members (owners) and participants (non-owners) over time. The Authority has representation on the Board of Managers of the Collaborative and exercises joint control with the other members over Initiant, LLC. The other members are Greenville Health System (Greenville, SC), McLeod Health (Florence, SC), Palmetto Health (Columbia, SC) and Self Regional Healthcare (Greenwood, SC). These health systems work together to achieve economies of scale in the following areas:

- Joint purchasing of equipment, supplies, and services;
- Shared administrative and clinical support systems; and
- Access to critical competencies not currently available or affordable to a single member.

The Authority contributed $25,000 of startup capital to the Collaborative in FY 2015. The Authority also recorded and had outstanding payables to the Collaborative for the Authority's portion of professional fees incurred by Initiant, LLC.

The State of South Carolina - The Authority benefits from certain administrative services provided by related State agencies and departments. The cost of these services (primarily related to insurance program administration, record-keeping, and centralized treasury management) is either insignificant relative to the Authority's allocable portion or is funded by the Authority.

C. Net Patient Service Revenue/Historical and Forecasted Reimbursement Methodologies

The Authority has agreements with governmental and other third-party payors that provide for reimbursement to the Authority at amounts different from its established rates (i.e., gross charges). For purposes of the Forecast, the Authority assumes an increase in gross charges of 5.0 percent for FY 2016 and 3.0 percent per year for the remainder of the forecast period. In addition, the Forecast assumes that the Authority maintains the case mix indices, average lengths of stay, and the number of full-time equivalents ("FTEs") used in reimbursement calculations for graduate medical education ("GME") and indirect medical education ("IME") reimbursement to remain consistent with the Authority's 2015 experience and 2016 operating budget.

Contractual adjustments under third-party reimbursement programs represent the difference between the Authority's billings at established rates for services and amounts reimbursed by third-party payors. A summary of the basis of reimbursement with major third-party payors is as follows:

Medicare - Substantially all inpatient acute care and outpatient services rendered to Medicare program beneficiaries are paid at prospectively determined rates. These rates vary according to patient classification systems that are based on clinical, diagnostic, and other factors. Additionally, the Authority is reimbursed for both its direct and indirect medical education costs (as defined), based principally on per-resident prospective payment amounts and certain adjustments to prospective rate-per-discharge operating reimbursement payments. The Authority generally is reimbursed for retroactively determined items at tentative rates, with final settlement determined after submission of annual cost reports by the Authority and audits by the Medicare fiscal intermediary. The Authority's cost reports have been audited and initially settled for all fiscal years through 2008, except for 2006.

For purposes of the Forecast, Medicare payment adjustments are forecast based on CMS's 2016 Final Rules for Inpatient Prospective Payment System, Outpatient Prospective Payment Systems, and Inpatient Psychiatric Facility, as well as additional reductions outlined in the Patient Protection and Affordable Care Act and the Health Care and Education Reconciliation Act (the "Health Care Acts" or the "Acts").

The payment rate assumptions for Medicare inpatient and outpatient payments are presented below:

	Forecasted					
Medicare	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Medicare inpatient:						
Market basket update	2.40%	2.60%	2.60%	2.60%	2.60%	2.60%
American Taxpayer Relief Act ("ATRA") recoupment adjustmer	-0.80%	-0.80%	0.50%	0.50%	0.50%	0.50%
Market basket update reduction	-0.20%	-0.75%	-0.75%	-0.75%	-0.75%	-0.75%
Productivity adjustment	-0.50%	-0.70%	-0.80%	-1.00%	-1.00%	-0.90%
Adjusted market basket update	0.90%	0.35%	1.55%	1.35%	1.35%	1.45%
Medicare outpatient:						
Market basket update	2.40%	2.60%	2.60%	2.60%	2.60%	2.60%
Adj for lab. excess packaged payments	-2.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Market basket update reduction	-0.20%	-0.75%	-0.75%	-0.75%	-0.75%	-0.75%
Productivity adjustment	-0.50%	-0.70%	-0.80%	-1.00%	-1.00%	-0.90%
Adjusted market basket update	-0.30%	1.15%	1.05%	0.85%	0.85%	0.95%
Medicare inpatient psychiatric facility:						
Market basket update	2.40%	2.63%	2.63%	2.63%	2.63%	2.63%
Market basket update reduction	-0.20%	-0.75%	-0.75%	-0.75%	-0.75%	-0.75%
Productivity adjustment	-0.50%	-0.70%	-0.80%	-1.00%	-1.00%	-0.90%
Adjusted market basket update	1.70%	1.18%	1.08%	0.88%	0.88%	0.98%

In addition, the methodology for determining Medicare Disproportionate Share Hospital ("DSH") payments changed effective October 1, 2013. DSH-eligible hospitals will continue to receive 25.0 percent of DSH payments using the current payment calculation with the remaining 75.0 percent used to create a pool of funds which will be adjusted based on the reduction in the uninsured plus certain regulatory reductions as a part of the Acts. A hospital-specific multiplier for each DSH-eligible hospital is determined based on its uncompensated care that is used to redistribute the resulting pool of funds. The Authority estimates its

Medicare DSH payments to range between $20.0 million and $23.0 million for the forecast period based on this methodology.

The Acts also include the development of a Hospital Readmissions Reduction Program ("Readmissions"), a Hospital Value Based Purchasing Program ("VBP"), as well the Hospital Acquired Conditions Program ("HACs").

Beginning October 1, 2012, the Readmissions program requires DRG payment adjustments related to hospital readmissions.

The VBP program is a quality incentive program that is intended to reward higher quality of care for Medicare providers. The VBP program is funded by a 1.0 percent reduction from participating hospitals' base operating DRG payments beginning in FY 2013 with reductions increasing to 2.0 percent by FY 2017. Also beginning in FY 2013, a participating hospital can earn a value-based incentive payment percentage of its base operating DRG payment amount based on the hospital's performance in the VBP program.

The HACs program penalizes hospitals in the worst performing quartile nationally for hospital acquired conditions. The penalty is 1.0 percent of Medicare reimbursement.

The Authority's forecasted performance in these programs is presented below:

	Forecasted					
	2016	2017	2018	2019	2020	2021
Medicare Readmission Reduction Program:						
Medicare readmission adjustment factor*	0.9968	0.9968	0.9968	0.9968	0.9968	0.9968
Readmission penalty (in thousands)	$ (355)	$ (360)	$ (369)	$ (380)	$ (391)	$ (403)
**Adjustment factor for 2016 is from CMS impact proposed rule public use file.*						
Medicare VBP Program:						
Reduction to fund VBP Program	-1.8%	-2.0%	-2.0%	-2.0%	-2.0%	-2.0%
Hospital VBP Adjustment Factor*	1.001625	1.001625	1.001625	1.001625	1.001625	1.001625
Hospital VBP Incentive	1.9%	2.2%	2.2%	2.2%	2.2%	2.2%
Net adjustment	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
VBP bonus (in thousands)	$ 180	$ 183	$ 188	$ 193	$ 199	$ 205
**Adjustment factors 2016 are from CMS impact proposed rule public use file.*						
Medicare Hospital Acquired Conditions (HACs) Program:						
Is hospital in w orst performing quartile	Yes	Yes	Yes	Yes	Yes	Yes
Hospital acquired condition (HAC) percent penalty*	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
HAC penalty (in thousands)	$ (1,653)	$ (1,674)	$ (1,715)	$ (1,762)	$ (1,811)	$ (1,863)
**Authority's ranking for 2016 is based on 2015 performance from CMS Table 17 - FY2015 HAC Program Reduction Program.*						

Sequestration - Beginning in April 2013, a 2.0 percent reduction in Medicare payments took effect, impacting hospital inpatient, outpatient, and physician-generated revenue. These payment reductions have been incorporated into the determination of forecasted net patient service revenue for the Authority.

Medicaid - Inpatient and outpatient services rendered to most Medicaid program beneficiaries are reimbursed based upon prospective reimbursement methodologies. The Forecast assumes no payment rate adjustments for Medicaid payments throughout the forecast period.

The Authority participates in the Medicaid Disproportionate Share Hospital program (the "DSH Program") available to certain qualifying hospitals in South Carolina. The net reimbursement

benefits associated with this program are recognized as reductions in related contractual adjustments in the accompanying forecasted financial statements. The Authority received approximately $44.1 million in FY 2015 from the Medicaid DSH Program. The Forecast assumes the Authority continues to receive these payments for the forecast period at $37.3 million, $38.1 million, $38.8 million, $39.7 million, $40.6 million, and $41.6 million, in FY 2016, 2017, 2018, 2019, 2020, and 2021, respectively.

There can be no assurance that the Authority will continue to qualify for future participation in this program or that the program will not ultimately be discontinued or materially modified. Any material reduction in such funds has a correspondingly material adverse effect on the Authority's operations.

Medicaid Expansion - As a part of the Acts, states were provided the opportunity to expand the Medicaid program to cover individuals below 133 percent of the poverty level. At this time, the State of South Carolina has elected not to expand its Medicaid program and the Forecast assumes it will not be expanded during the forecast period.

Others - The Authority has also entered into payment arrangements with various managed care organizations, commercial insurance carriers, and preferred provider organizations. Payment methodologies under these agreements include prospectively determined rates per discharge, discounts from established rates, and prospectively determined per diem rates. In addition, beginning in FY 2014, subsidies were provided to certain individuals to purchase insurance through state health insurance marketplaces (the "Insurance Marketplace"). The Insurance Marketplace offers insurance at negotiated rates and is included in the "Commercial" payor class for purposes of this Forecast. The Authority's payment rate increases for payors other than Medicare and Medicaid are assumed to be 3.0 percent annually for FY 2017 through FY 2021 and are based on the Authority's historical experience.

Future Changes - Other federal and state legislative and regulatory initiatives may impact healthcare providers. These initiatives are in various stages of discussion and implementation. Because these initiatives are proposed, or are in the early stages of development, it is too early to determine and quantify the effects they may have. Sufficient information is not always available regarding proposed changes to these payment systems and, therefore, we have not attempted to determine and quantify the effects each of these initiatives may have on the Authority. In addition, many healthcare reform variables related to the Acts remain unknown and are, among other things, dependent on implementation by Federal and State Governments and reactions by providers, payors, employers, and individuals. The Authority continues to monitor developments in healthcare reform and participates actively in contemplating and designing new programs that are encouraged and/or required by the Health Care Acts.

Management believes the Authority is in compliance with all applicable laws and regulations. Compliance with such laws and regulations can be subject to future government review and interpretation as well as significant regulatory action including fines, penalties, and exclusion from the Medicare and Medicaid programs. As a result, there is at least a reasonable possibility that recorded estimates will change by a material amount in the near term.

Forecasted Contractual Adjustments

Contractual adjustments as a percentage of gross patient service revenue, based on the assumptions described above, are forecast as follows:

	Historical	Forecasted					
	2015	2016	2017	2018	2019	2020	2021
Medicare	66.86%	68.02%	69.12%	69.68%	70.28%	70.86%	71.39%
Medicaid	58.27%	60.33%	61.46%	62.56%	63.64%	64.70%	65.72%
Medicare Advantage	68.66%	69.77%	69.89%	70.01%	70.13%	70.24%	70.36%
Commercial	50.09%	51.16%	51.16%	51.16%	51.16%	51.16%	51.16%
Self pay	33.17%	33.73%	33.73%	33.73%	33.73%	33.73%	33.73%
Other	48.67%	49.58%	49.58%	49.58%	49.58%	49.58%	49.58%
Total contractual adjustment percentage	56.81%	58.09%	58.66%	59.06%	59.48%	59.88%	60.26%

D. Historical and Forecasted Payor Mix-Revenues from Inpatient Services

Inpatient gross revenue (in thousands) and payor mix percentages are presented below:

	Historical			
	2012	2013	2014	2015
Medicare	$ 464,476	$ 497,635	$ 550,464	$ 566,298
Medicaid	421,833	451,412	479,879	496,516
Medicare Advantage	74,548	90,568	124,430	137,633
Commercial	445,876	442,295	476,396	505,881
Self pay	101,524	111,319	113,621	135,065
Other	69,089	71,995	80,156	83,120
Total	$ 1,577,346	$ 1,665,224	$ 1,824,946	$ 1,924,513

	Historical			
	2012	2013	2014	2015
Medicare	29.5%	29.9%	30.2%	29.4%
Medicaid	26.7%	27.1%	26.3%	25.8%
Medicare Advantage	4.7%	5.4%	6.8%	7.2%
Commercial	28.3%	26.6%	26.1%	26.3%
Self pay	6.4%	6.7%	6.2%	7.0%
Other	4.4%	4.3%	4.4%	4.3%
Total	100.0%	100.0%	100.0%	100.0%

	Forecasted					
	2016	2017	2018	2019	2020	2021
Medicare	$ 611,516	$ 636,307	$ 662,023	$ 692,642	$ 724,500	$ 758,036
Medicaid	536,162	557,898	580,445	607,291	635,223	664,627
Medicare Advantage	148,623	154,648	160,898	168,340	176,082	184,233
Commercial	546,276	568,423	591,395	618,747	647,207	677,165
Self pay	145,849	151,762	157,896	165,198	172,797	180,795
Other	89,756	93,395	97,170	101,664	106,340	111,262
Total	$ 2,078,182	$ 2,162,433	$ 2,249,827	$ 2,353,882	$ 2,462,150	$ 2,576,118

	Forecasted					
	2016	2017	2018	2019	2020	2021
Medicare	29.4%	29.4%	29.4%	29.4%	29.4%	29.4%
Medicaid	25.8%	25.8%	25.8%	25.8%	25.8%	25.8%
Medicare Advantage	7.2%	7.2%	7.2%	7.2%	7.2%	7.2%
Commercial	26.3%	26.3%	26.3%	26.3%	26.3%	26.3%
Self pay	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%
Other	4.3%	4.3%	4.3%	4.3%	4.3%	4.3%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

E. Historical and Forecasted Payor Mix-Revenues from Outpatient Services

Outpatient gross revenue (in thousands) and payor mix percentages are presented below:

	Historical			
	2012	2013	2014	2015
Medicare	$ 324,293	$ 340,628	$ 373,657	$ 413,256
Medicaid	181,009	195,657	215,609	246,601
Medicare Advantage	49,035	59,779	82,600	91,708
Commercial	434,434	461,243	497,432	544,591
Self pay	61,660	72,316	74,683	100,189
Other	39,929	39,415	44,951	45,199
Total	$ 1,090,360	$ 1,169,038	$ 1,288,932	$ 1,441,544

	Historical			
	2012	2013	2014	2015
Medicare	29.7%	29.1%	29.0%	28.6%
Medicaid	16.6%	16.7%	16.7%	17.1%
Medicare Advantage	4.5%	5.1%	6.4%	6.4%
Commercial	39.8%	39.5%	38.6%	37.8%
Self pay	5.7%	6.2%	5.8%	7.0%
Other	3.7%	3.4%	3.5%	3.1%
Total	100.0%	100.0%	100.0%	100.0%

	Forecasted					
	2016	2017	2018	2019	2020	2021
Medicare	$ 437,035	$ 466,964	$ 498,955	$ 533,150	$ 569,702	$ 608,774
Medicaid	260,790	278,650	297,740	318,145	339,956	363,271
Medicare Advantage	96,984	103,626	110,726	118,314	126,425	135,096
Commercial	575,927	615,370	657,526	702,589	750,756	802,247
Self pay	105,954	113,210	120,966	129,256	138,118	147,590
Other	47,800	51,074	54,573	58,313	62,310	66,584
Total	$ 1,524,490	$ 1,628,894	$ 1,740,486	$ 1,859,767	$ 1,987,267	$ 2,123,562

	Forecasted					
	2016	2017	2018	2019	2020	2021
Medicare	28.6%	28.6%	28.6%	28.6%	28.6%	28.6%
Medicaid	17.1%	17.1%	17.1%	17.1%	17.1%	17.1%
Medicare Advantage	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%
Commercial	37.8%	37.8%	37.8%	37.8%	37.8%	37.8%
Self pay	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%
Other	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

F. Historical and Forecasted Reimbursement Methodologies

See Section V. Note C.

G. Historical and Forecasted Gross Patient Service Revenue and Deductions

Historical and forecasted gross patient service revenue, contractual allowances, charity care, bad debts, and net patient service revenue are presented in the following tables (in thousands):

	Historical				
	2011	2012	2013	2014	2015
Gross revenue	$ 2,370,557	$ 2,667,706	$ 2,834,262	$ 3,113,878	$ 3,366,057
Less contractual allow ances	(1,175,604)	(1,436,009)	(1,568,366)	(1,736,263)	(1,912,103)
Less charity care	(95,600)	(129,949)	(94,592)	(78,975)	(63,232)
Less bad debt expense	(86,932)	(71,415)	(92,693)	(149,638)	(159,221)
Net patient service revenue	$ 1,012,421	$ 1,030,333	$ 1,078,611	$ 1,149,002	$ 1,231,501
Inpatient revenue %	59.1%	59.1%	58.8%	58.6%	57.2%
Outpatient revenue %	40.9%	40.9%	41.2%	41.4%	42.8%
Contractual allow ance %	49.6%	53.8%	55.3%	55.8%	56.8%
Charity care %	4.0%	4.9%	3.3%	2.5%	1.9%
Bad debt %	3.7%	2.7%	3.3%	4.8%	4.7%
Total deduction %	57.3%	61.4%	61.9%	63.1%	63.4%

	Forecasted					
	2016	2017	2018	2019	2020	2021
Gross revenue	$ 3,602,672	$ 3,791,327	$ 3,990,313	$ 4,213,649	$ 4,449,417	$ 4,699,680
Less contractual allow ances	(2,092,688)	(2,223,950)	(2,356,879)	(2,506,156)	(2,664,133)	(2,831,839)
Less charity care	(69,204)	(72,828)	(76,650)	(80,941)	(85,469)	(90,277)
Less bad debt expense	(174,259)	(183,384)	(193,008)	(203,811)	(215,215)	(227,320)
Net patient service revenue	$ 1,266,521	$ 1,311,165	$ 1,363,776	$ 1,422,741	$ 1,484,600	$ 1,550,244
Inpatient revenue %	57.7%	57.0%	56.4%	55.9%	55.3%	54.8%
Outpatient revenue %	42.3%	43.0%	43.6%	44.1%	44.7%	45.2%
Contractual allow ance %	58.1%	58.7%	59.1%	59.5%	59.9%	60.3%
Charity care %	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%
Bad debt %	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%
Total deduction %	64.8%	65.4%	65.8%	66.2%	66.6%	67.0%

H. Other Operating Revenue

Other operating revenue primarily consists of income earned by the Authority for rental of certain facilities space to and providing limited support services for the University and HITECH payments (described below) and is forecast based on the historical experience of MUHA with an assumed annual growth of approximately 1.5 percent.

Health Information Technology for Economic and Clinical Health Act ("HITECH") - The Hospital recognizes revenue for incentives earned under the HITECH Electronic Health Records ("EHR") Medicare program in the period in which it is reasonably assured that it will comply with the applicable EHR meaningful use requirements. Incentive revenues are recognized ratably over the applicable meaningful use demonstration period. Incentive payments received under the Medicare program include a discharge-related portion, which is calculated by the Hospital for Medicare & Medicaid Services ("CMS") based on the Hospital's most recently filed cost report. Such amounts are subject to adjustment at the time of settling the 12-month cost report for the Hospital's fiscal year that begins after the beginning of the payment year. As a result, there is at least a reasonable possibility that recorded estimates will change by a material amount in the near term. Incentive payments are also subject to audit by CMS. The results of that audit and settlement could result in a potential payback in future periods.

The Authority recently implemented a new enterprise-wide EHR system that it has enabled its compliance with the meaningful use objectives mandated in the HITECH legislation. The Hospital achieved compliance with the Stage 2 meaningful use requirements under the Medicare and Medicaid programs during FY 2014. Stage 3 is expected to be achieved during FY 2016 with payments of approximately $900,000 forecast to be received in FY 2017.

I. Non-Operating Revenue and Expenses

Non-operating revenues and expenses are comprised of non-capital grants and contributions, investment income or loss, interest expense, and costs related to the issuance of long-term debt. For purposes of this Forecast, unrealized gains and loss from investments are forecast at zero for the forecast period.

Non-Capital Grants and Contributions - Non-capital grants and contributions for the forecast period include appropriations the Authority expects to continue to receive from the State of South Carolina in support of a statewide telehealth initiative, the Center for Telehealth. The funds received from the State of South Carolina are classified as restricted for specific operating expenses on the Forecasted Statements of Net Position. The Forecast assumes receipts of $17.0 million in FY 2016, and $8.0 million per year from FY 2017 through FY 2021. Expenses related to this program are included in purchased services on the Forecasted Statements Revenues, Expenses, and Changes in Net Position. Forecasted expenses related to the Center for Telehealth are forecast at $17.0 million in FY 2016, $15.0 million in FY 2017 and 2018, $11.0 million in FY 2019, and $8.0 million in FY 2020 and 2021.

Investment Income - Investment income is forecast based on the average annual balance of cash and investments. The average investment rate is forecast at 0.5 percent of the average balance of cash and at 2.5 percent of the average balance of investments.

Long-term Debt and Interest Expense - The Authority's existing long-term debt consists of various capital leases, an $11.0 million note payable to Wells Fargo for conservation equipment, as well as two issuances of Governmental National Mortgage Company ("GNMA") securities insured by FHA Sections 242 and 241 Mortgage Loan Programs ("FHA Programs").

The Authority first participated in the FHA Section 242 Mortgage Loan Program in 2004, with the issuance of $422,060,000 of FHA Insured Mortgage Hospital Facilities and Refunding Revenue Bonds. In December of 2012, these bonds were refinanced with GNMA Securities (with continued FHA mortgage insurance) at a fixed interest rate of 2.94 percent. At June 30, 2015, these GNMA Securities had an outstanding balance of approximately $348.1 million ("Section 242 Mortgage Loan (2013)"). In December of 2013, the Authority utilized the FHA Section 241 Mortgage Loan Program to refinance bonds that were issued in 2004 ("2004 CEP Bonds") to finance the construction of a central energy plant on the Authority's campus. The 2004 CEP Bonds were refinanced with GNMA Securities at a fixed rate of 3.85 percent. At June 30, 2015, these GNMA Securities had an outstanding balance of approximately $44.7 million ("Section 241 Supplemental Loan (2014)"). A loss on refunding from these refinancing transactions has been recorded as a deferred outflow and is amortized to interest expense on the Forecasted Statements of Revenue, Expenses and Net Position at approximately $4.1 million in FY 2016, $4.0 million in FY 2017 and FY 2018, $3.8 million in FY 2019, $3.3 million in FY 2020, and $2.3 million in FY 2021.

For purposes of this Forecast, the debt service requirements of the Authority's existing long-term debt are expected to continue throughout the forecast period. Interest expense relating to the Project's Mortgage ("Section 241 Supplemental Loan (2017)") has been projected based on an interest rate of 5.25 percent. Costs related to the issuance of the long-term debt are expensed as incurred in accordance with GASB Statement No. 65.

A summary of debt service requirements on long-term debt for the forecast period is presented below (in thousands):

Year	Capital Leases		Notes Payable		Section 242 Mortgage Loan (2013)	
	Principal	Interest	Principal	Interest	Principal	Interest
2016	$ 463	$ 99	$ 1,268	$ 360	$ 14,037	$ 9,458
2017	$ 390	$ 83	$ 1,312	$ 326	$ 14,456	$ 9,039
2018	$ 407	$ 67	$ 1,358	$ 280	$ 14,887	$ 8,608
2019	$ 424	$ 50	$ 1,406	$ 232	$ 15,330	$ 8,165
2020	$ 405	$ 32	$ 1,456	$ 182	$ 15,787	$ 7,708
2021	$ 353	$ 15	$ 1,508	$ 130	$ 16,257	$ 7,238

Year	Section 241 Supplemental Loan (2014)		Section 241 Supplemental Loan (2017)		Total Debt Service		
	Principal	Interest	Principal	Interest	Principal	Interest	Total
2016	$ 2,020	$ 1,684	$ -	$ -	$ 17,787	$ 11,601	$ 29,388
2017	$ 2,099	$ 1,607	$ -	$ -	$ 18,257	$ 11,056	$ 29,312
2018	$ 2,181	$ 1,525	$ -	$ -	$ 18,832	$ 10,480	$ 29,312
2019	$ 2,266	$ 1,439	$ 512	$ 1,384	$ 19,939	$ 11,269	$ 31,208
2020	$ 2,355	$ 1,350	$ 6,319	$ 16,433	$ 26,322	$ 25,706	$ 52,027
2021	$ 2,448	$ 1,258	$ 6,658	$ 16,094	$ 27,225	$ 24,734	$ 51,959

J. Capital Grants and Contributions

The State of South Carolina has formally appropriated $25.0 million to the Authority for the proposed Project. This Forecast assumes the Authority receives this appropriation in FY 2016 and the appropriation is spent on the Project in FY 2019.

The MUSC Foundation is actively fundraising to support the Project. Amounts transferred to the Authority are shown as capital grants and contributions on the Forecasted Statements of Revenues, Expenses, and Changes in Net Position. Shawn Jenkins, Charleston resident and CEO and Cofounder of Charleston-based software company, Benefitfocus, has pledged $25.0 million to the MUSC Foundation specifically for the Children's Hospital. This pledge is expected to be received over a 10-year period, $2.5 million per year, beginning in FY 2016. This donor has been given naming rights to the Children's Hospital; the anticipated name is the MUSC Shawn Jenkins Children's Hospital.

Capital grants and contributions for the Project are forecast as follows (in thousands):

	Forecasted					
	2016	2017	2018	2019	2020	2021
State of South Carolina	$ 25,000	$ -	$ -	$ -	$ -	$ -
Shawn Jenkins	2,500	2,500	2,500	2,500	2,500	2,500
Other	9,500	2,000	10,999	10,999	-	-
Total	$ 37,000	$ 4,500	$ 13,499	$ 13,499	$ 2,500	$ 2,500

K. Operating Expenses

Operating expenses include costs of salaries and wages, employee benefits, professional fees, supplies and drugs, purchased services, insurance, leases and rentals, utilities, repairs and maintenance, mortgage insurance premium, depreciation and amortization. The

Authority's FY 2016 expenses are forecast based on the Authority's FY 2016 operating budget. FY 2017 through FY 2021 expenses are forecast based on the Authority's historical relationships to patient service volumes, where possible, and historic usage rates.

Salaries and Wages - The table below compares the forecasted number of full-time equivalents ("FTEs") with the forecasted average daily census, adjusted for the effect of outpatient and non-acute care services ("adjusted occupied beds" or "AOB"), throughout the forecast period.

	Forecasted					
	2016	2017	2018	2019	2020	2021
FTEs (excluding Residents)	6,226	6,394	6,540	6,702	6,849	7,040
Adjusted occupied beds	1,125	1,153	1,179	1,209	1,236	1,271
FTEs per adjusted occupied bed	5.5	5.5	5.5	5.5	5.5	5.5

Management has assumed non-Resident FTEs per adjusted occupied bed of 5.5 throughout the forecast period. The Authority has maintained non-Resident FTEs/AOB of approximately 5.5 since FY 2014. Management monitors FTEs on a weekly basis and intends to continue monitoring FTEs closely throughout the forecast period.

For the forecast period, salaries and wages per FTE for the Authority are forecast to increase for inflation at 2.5 percent annually.

Salaries and Wages – Residents - The Authority reimburses the University for certain professional and/or clinical services provided by interns and residents receiving medical education at the University. For purposes of this Forecast, the salaries and wages, benefits, and insurance payments for these residents is indicated as such on the Forecasted Statements of Revenues, Expenses, and Changes in Net position.

Management has assumed the number of Resident FTEs will remain at the FY 2015 levels throughout the forecast period. Resident salaries and wages are based on the average salary per provider budgeted for FY 2016 and are forecast to increase for inflation at 2.5 percent annually.

Employee Benefits - Employee benefits expense is based on historical cost as related to salaries and wages and forecasted staffing patterns for the periods presented. Employee benefits expense for FY 2016 as a percent of salaries and wages is budgeted at 31.1 percent. Employee benefits expense is forecast to remain at 31.1 percent of salaries and wages in FY 2017 and then increase to approximately 31.7 percent of salaries and wages for the remainder of the forecast period due to increased contributions to the Authority's Pension Plans (see Note M.).

Employee Benefits - Residents - Employee benefits expense for residents is based upon historical cost as related to salaries and wages and forecasted staffing patterns for the periods presented. Employee benefits expense for residents for FY 2016 is budgeted at approximately 29.4 percent of the residents' salaries and wages. Employee benefits expense for residents is forecast to remain at that level throughout the forecast period.

Professional Fees - Professional fees are based on the Authority's operating budget for FY 2016 and are forecast to increase 3.0 percent per year throughout the forecast period.

Supplies and Drugs - Supplies and drugs expense is based on the budgeted cost for FY 2016 and is forecast to change at an annual rate for inflation of 3.2 percent plus changes in patient service volumes. These changes result in an overall increase of approximately 5.0 percent each year throughout the forecast period.

Purchased Services - Purchased services costs are forecast based on the Authority's budgeted cost for FY 2016 and are forecast to increase 3.0 percent per year throughout the forecast period. Purchased services for the Center for Telehealth are forecast based on Management's expectation of future appropriations from the State of South Carolina and are forecast at $17.0 million in FY 2016, $15.0 million in FY 2017 and FY 2018, $11.0 million in FY 2019, and $8.0 million in FY 2020 and FY 2021.

Insurance - Insurance expense for the Authority and the residents is based on budgeted cost for 2016 and is forecast to change at an annual rate for inflation of 3.0 percent per year throughout the forecast period.

Leases and Rentals - Leases and rental expense includes the lease of a building owned by the MUSC Foundation once the Project is complete. The MUSC Foundation expects the lease expense to be approximately $360,000 in FY 2019 and $1,440,000 in FY 2020 and FY 2021.

Utilities - Utilities expense is based on the Authority's budgeted expenditures for FY 2016 and is forecast to change at an annual rate for inflation of 3.0 percent plus changes in patient service volumes. In addition, the Project is expected to add approximately 650,000 square feet to the Authority's campus when complete. These changes result in an overall increase in utilities expense of 3.2 percent for FY 2017 and FY 2018, 6.1 percent in FY 2019, 36.1 percent in FY 2020, and 3.4 percent in FY 2021.

Repairs and Maintenance - Repairs and maintenance expense is based on the Authority's budgeted expenditures for FY 2016 and is forecast to change at an annual rate for inflation of 2.0 percent per year for the forecast period.

Mortgage Insurance Premium - Mortgage insurance premium ("MIP") is forecast based on the MIP requirements on the Section 242 Mortgage Loan (2013), Section 241 Supplemental Loan (2014), and the Section 241 Supplemental Loan (2017).

Depreciation and Amortization Expense - Depreciation on existing assets is based upon the Authority's existing plant ledger, remaining book values and useful lives. Depreciation on routine equipment purchases and Project expenditures are based upon the expected useful lives of the respective assets.

L. Balance Sheet Assumptions

Cash and Cash Equivalents - Cash and cash equivalents are based on total operating expenses less interest, depreciation, and amortization. The days in operating expenses less interest, depreciation and amortization for FY 2016 is forecast at 35 days and is forecast at 40 days at the end of FY 2017 and FY 2018, 45 days at the end of FY 2019, 2020, and 2021.

Assets Limited as to Use, Current Portion - The current portion of assets limited as to use represents the amount of donor restricted funds (for the Project or for the Center for Telehealth) that are expected to be expended for their designated purpose in the following fiscal year.

Patient Accounts Receivable, Net - Patient accounts receivable, net of allowance for uncollectible accounts and contractual allowances, are based on days in net patient service revenue. The days in net patient service revenue for FY 2015 were 54 days and are forecast to remain at that level throughout the forecast period. Management was prepared for the implementation of ICD-10 and, as a result, does not anticipate a significant increase in days in patient accounts receivable as a result of that transition.

Due From Third-Party Payors - Due from third-party payors are forecast to remain at the FY 2015 balance throughout the forecast period.

Other Receivables - Other receivables are forecast to remain at the FY 2015 balance throughout the forecast period for the purpose of the Forecast.

Drugs and Supplies - Drugs and supplies are forecast based on days of supplies expense. Days in supplies expense for FY 2015 were 33 days and are forecast to remain at that level throughout the forecast period.

Prepaid Expense - Prepaid expense is forecast based on days in non-salary expense less interest, depreciation, and amortization. Days in non-salary expense for FY 2015 were 6 days and are forecast to remain at that level throughout the forecast period.

Assets Limited as to Use:

Investments Held by Trustees Under Indenture Agreements - Investments held by trustees under indenture agreements are forecast based on the Mortgage Reserve Fund requirements for the existing FHA Mortgages, as well as the 241 Supplemental Loan.

Restricted by contributors and grantors for specific operating activities (Center for Telehealth) - Amounts restricted by contributors and grantors for specific operating activities is forecast based on Management's assumption that the State of South Carolina will appropriate $17.0 million in FY 2016 and $8.0 million for each subsequent year of the forecast period to be used for the Center for Telehealth. The amount presented as assets limited as to use the balance of these appropriations less the amount expended each year, net of the current portion.

Restricted by contributors and grantors for specific capital activities - Amounts restricted by contributors and grantors for specific activities is forecast based on the State of South Carolina's appropriation and donor contributions to the Authority to be used for the Project.

Allowance to Make the Project Operational - Allowance to Make the Project Operational ("AMPO") is forecast based on assumptions associated with the Mortgage.

Investments - Investments represent each forecast year's excess cash/working capital and is the result of all other forecast assumptions.

Deferred Outflows - Deferred outflows for FY 2016 are forecast based on the actuarial report provided to the South Carolina Public Employee Benefit Authority ("PEBA") as of June 30, 2015, and are forecast to decrease by the amortization of the deferred loss on the 2004 bond defeasance. The amortization is based on the effective-interest method and is expensed as interest expense for each year of the forecast period.

Current Installments of Long-Term Debt - Current installments of long-term debt are forecast based on amortization schedules for existing and Project debt.

Accounts Payable - Accounts payable is forecast based on days in non-salary expense less interest, depreciation, and amortization. Days in non-salary expense for FY 2015 were 35.0 and are forecast to remain at that level throughout the forecast period.

Accrued Payroll and Employee Benefits - Accrued payroll and employee benefits are forecast based on days in salary and benefits. Days in salary and benefits expense for FY 2015 were 39.0 and are forecast to remain at that level throughout the forecast period.

Other Accrued Expenses - Other accrued expenses are forecast to decline in FY 2016 as Management intends to make payment on outstanding liabilities during FY 2016.

Due To Related Parties - Due to related parties are based on agreements with the Authority's related parties and forecast to remain at the FY 2015 balance throughout the forecast period for the purpose of the Forecast.

Long Term Debt, Less Current Portion - Principal payments on long-term debt are forecast based on amortization schedules of existing debt as of FY 2015, as well as assumptions related to the 241 Supplemental Loan (2017).

Net Pension Liability - Net pension liability is forecast to remain at the FY 2016 balance throughout the forecast period (See Note M. Implementation of GASB Statements No. 68 and 71 in this Section).

Deferred Inflows - Deferred inflows for FY 2016 are forecast are forecast based on the actuarial report provided to the PEBA as of June 30, 2015, and are forecast to remain at the FY 2016 balance throughout the forecast period (See Note M. Implementation of GASB Statements No. 68 and 71 in this section.).

Capital Assets - Routine capital expenditures for buildings and equipment are forecast based on the Authority's historical experience and anticipated future needs. Non-Project-related capital expenditures are forecast at approximately $46 million for FY 2016 and $50 million for each remaining year of the forecast period. Project-related capital expenditures are forecast at approximately $10 million for FY 2016, $117 million for FY 2017, $125 million for FY 2018, and $120 million FY (including AMPO and additional capitalized interest) for FY 2019.

Forecasted capital asset balances are presented below (in thousands):

	Forecasted					
	2016	2017	2018	2019	2020	2021
Land	$ 6,093	$ 6,093	$ 6,093	$ 6,093	$ 6,093	$ 6,093
Building and fixed equipment	750,441	775,442	800,442	1,132,342	1,157,342	1,182,342
Equipment (major moveable)	338,526	363,526	388,526	479,133	504,133	529,133
Construction in progress	10,000	127,016	252,514	-	-	-
Capital assets at cost	1,105,060	1,272,077	1,447,575	1,617,568	1,667,568	1,717,568
Accumulated depreciation	(603,366)	(667,821)	(731,634)	(795,447)	(871,604)	(949,280)
Capital assets, net	$ 501,694	$ 604,256	$ 715,941	$ 822,121	$ 795,964	$ 768,288

M. Implementation of GASB Statements No. 68 and 71

The Authority implemented new accounting guidance for pension accounting and reporting during the year ended June 30, 2015, GASB Statement No. 68 *Accounting and Financial Reporting for Pensions* and GASB Statement No. 71 *Pension Transition for Contributions Made Subsequent to the Measurement Date—an amendment of GASB Statement No. 68.* The guidance affected the Authority's accounting and reporting related to the South Carolina Retirement System ("SCRS") and the South Carolina Police Officers Retirement System ("PORS") defined-benefit pension plans (the "Plans" or the "Pension Plans") during the year ended June 30, 2015, and required restatement of the Authority's June 30, 2015, beginning net position as presented in the Forecasted Statements of Revenues, Expenses, and Net Position. In addition, the implementation of Statement No. 68 and Statement No. 71 required the Authority to record a net pension liability, certain deferred outflows, and inflows of resources related to the Pension Plans as described below.

The SCRS, PORS, and the State's Optional Retirement Program ("ORP"), among others, are administered by the PEBA.

Descriptions of the Authority's Plans are included in the Authority's audited financial statements for the year ended June 30, 2015.

Contributions - The PEBA Board may increase the SCRS and PORS employer and employee contribution rates on the basis of the actuarial valuations, but any such increase may not result in a differential between the employee and employer contribution rate that exceeds 2.9 percent of earnable compensation for SCRS and 5.0 percent for PORS. An increase in the contribution rates adopted by the PEBA Board may not provide for an increase of more than one-half of one percent in any one year. If the scheduled employee and employer contributions provided in statute or the rates last adopted by the PEBA Board are

insufficient to maintain a thirty-year amortization schedule of the unfunded liabilities of the Plans, the board shall increase the contribution rates in equal percentage amounts for the employer and employee as necessary to maintain the thirty-year amortization period; and, this increase is not limited to one-half of one percent per year.

The Authority's contributions to the SCRS and PORS Plans as of the June 30, 2015, measurement date is 10.9 percent and 13.4 percent of the covered-employee payroll, respectively. The Authority's contribution rate is forecast assuming a 2.0 investment return and is forecast to increase for each Plan as follows:

	Forecasted					
	2016	2017	2018	2019	2020	2021
SCRS	11.06%	11.06%	11.11%	11.20%	11.30%	11.41%
PORS	13.41%	13.74%	13.74%	13.74%	13.74%	13.74%

Source: Projection of Contribution Rates and Cost Under Different Investment Return Scenarios (SC PEBA).

Net Pension Liability - The most recent annual actuarial valuation reports adopted by the PEBA Board and Budget and Control Board are as of July 1, 2014. The net pension liability of each defined-benefit Pension Plan was therefore determined based on the July 1, 2014 actuarial valuations, using membership data as of July 1, 2014, projected forward to the end of the fiscal year, and financial information of the pension trust funds as of June 30, 2015, using generally accepted actuarial procedures. Information included in the following schedules is based on the certification provided by PEBA's consulting actuary, Gabriel, Roeder, Smith and Company.

The net pension liability ("NPL") is calculated separately for each system and represents that particular system's total pension liability determined in accordance with GASB Statement No. 67 less that system's fiduciary net position. As of June 30, 2015, NPL amounts for SCRS and PORS and the Authority's proportioned share is approximately $645 million and is forecast on the June 30, 2016, Forecasted Statement of Financial Position as such. The Authority's net pension liability recorded on the June 30, 2015 and 2014, Statements of Financial Position was approximately $570 million and $594 million, respectively.

The actuarial valuations involve estimates of the reported amounts and assumptions about the probability of events far into the future, as well as particularly sensitive assumptions around the Plans' long-term expected rate of return and discount rate. The Authority's current discount rate used to determine the net pension liability at June 30, 2015, was 7.5 percent. If the discount rate were 1.0 percent higher or lower, the net pension liability would decrease or increase significantly. Actuarial assumptions around the determination of this liability are subject to the annual actuarial valuation. For purposes of this Forecast, the net pension liability is forecast to remain at the FY 2016 throughout the forecast period.

Deferred Outflows and Inflows of Resources Related to Pensions - At June 30, 2015, the Authority reported deferred outflows of resources and deferred inflows of resources related to pensions from the net differences between expected and actual experience, the net difference between projected and actual earnings on Pension Plan investments, as well as the Authority's contributions subsequent to the Plans' measurement date. As a result of

accounting for deferred outflows and inflows of resources, the Authority recorded pension expense of approximately $5.1 million for the year-ended June 30, 2015, and is forecast to record approximately $15.9 million for the year-ended June 30, 2016, based on the most recent actuarial valuation information from PEBA. The accounting for these differences will vary annually based on the actuarial valuation and assumptions. As such, for purposes of this Forecast, the deferred outflows and inflows of resources related to pensions is forecast to remain at the June 30, 2016, forecast balance. As a result, no pension expense related to the recording of the adjustments in deferred outflows and deferred inflows related to pensions is recorded in the Forecasted Statements of Revenues, Expenses, and Changes in Net Position subsequent to FY 2016.

Additional Information - In considering the performance of the Plans, it is important to consider the result of PEBA's Comprehensive Annual Financial Report ("CAFR") containing management's discussion and analysis, financial statements and required supplementary information for the South Carolina Retirement Systems' Pension Trust Funds. The CAFR is publicly available on the Retirement Benefits' link on PEBA's website at www.peba.sc.gov, or a copy may be obtained by submitting a request to PEBA, PO Box 11960, Columbia, SC 29211-1960. PEBA is considered a division of the primary government of the state of South Carolina and therefore, retirement trust fund financial information is also included in the comprehensive annual financial report of the state.

DHG
DIXON HUGHES GOODMAN LLP

SECTION VI - Report of Independent Accountants Report on Other Financial Information

The Board of Trustees
Medical University Hospital Authority
Charleston, South Carolina

U. S. Department of Housing and Urban Development
Office of Healthcare Programs
451 7th Street S.W.
Washington, DC 20410

Armadale Capital Inc.
99 Madison Ave, Suite 608
New York, New York 10016

Our feasibility study was conducted for the purposes of evaluating the ability of the Medical University Hospital Authority to meet its operating expenses, working capital needs, and other financial requirements during the fiscal years beginning July 1, 2016 and ending June 30, 2021. The following information is presented for purposes of additional analysis and is not a required part of the forecasted financial statements. Such information has not been subjected to the examination procedures applied in our feasibility study of the forecasted financial statements.

Dixon Hughes Goodman LLP

February 12, 2016

MUHA/Roper/FOIA 000748

SUPPLEMENTAL SCHEDULES - HISTORICAL FINANCIAL STATEMENTS

MUHA/Roper/FOIA 000749

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A COMPONENT UNIT OF THE MEDICAL UNIVERSITY OF SOUTH CAROLINA)

Historical Statements of Net Position (Shown in '000s)

For the Years Ended June 30, 2011 through 2014

	2011	2012	2013	2014
Assets				
Current assets:				
Cash and cash equivalents	$ 31,371	$ 33,154	$ 38,260	$ 65,307
Assets limited as to use, current portion	3,393	-	5,500	14,241
Patient accounts receivable, net of allowances for uncollectible accounts	155,229	153,830	169,293	185,968
Due from third-party payors	13,249	15,361	14,664	7,736
Other receivables	16,457	18,213	22,679	21,343
Accounts receivable - affiliates	10,655	4,012	-	-
Drugs and supplies	18,225	18,908	17,942	20,790
Prepaid expense	7,032	7,705	9,175	10,598
Total current assets	255,611	251,183	277,513	325,983
Assets limited as to use:				
Investments held by trustees under indenture agreements	93,849	87,405	46,257	44,526
Capital assets:				
Non-depreciable capital assets	6,093	6,093	25,950	47,331
Construction in progress	5,167	29,170	43,260	8,598
Depreciable capital assets, net of accumulated depreciation	513,990	486,653	457,480	473,881
Total capital assets, net of accumulated depreciation	525,250	521,916	526,690	529,810
Other assets, net				
Unamortized borrowing costs	15,970	14,731	-	-
Total assets	890,680	875,235	850,460	900,319
Deferred outflows	2,561	3,862	45,895	40,905
Total assets and deferred outflows	$ 893,241	$ 879,097	$ 896,355	$ 941,224

Continued

*2013 was restated for the implementation of GASB 65. The beginning net assets of 2013 have been restated and presented as such.

See the Independent Accountants' Report on Other Financial Information

MUHA/Roper/FOIA 000750

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A COMPONENT UNIT OF THE MEDICAL UNIVERSITY OF SOUTH CAROLINA)

Historical Statements of Net Position (Shown in '000s), continued

For the Years Ended June 30, 2011 through 2014

	2011	2012	2013	2014
Liabilities and Net Position				
Current liabilities:				
Current installments of long-term debt	$ 24,627	$ 22,333	$ 16,695	$ 16,798
Accounts payable	39,923	42,309	45,614	57,285
Due to third-party payors	-	-	7,600	2,440
Accrued payroll and employee benefits	47,748	50,919	51,847	57,018
Other accrued expenses	16,202	12,856	5,730	7,642
Due to related parties	-	-	5,936	7,028
Total current liabilities	128,500	128,417	133,422	148,211
Non-current liabilities:				
Long-term debt, excluding current installments	441,971	412,307	401,422	383,872
Derivative instruments	2,561	3,862	2,263	-
Other liabilities	-	6,929	3,983	1,500
Total non-current liabilities	444,532	423,098	407,668	385,372
Total liabilities	573,032	551,515	541,090	533,583
Deferred inflow s	-	-	5,500	-
Total liabilities and deferred inflow s	573,032	551,515	546,590	533,583
Net position:				
Net investment in capital assets	78,732	92,402	151,444	165,860
Restricted:				
Under indenture agreements	92,972	87,402	46,257	44,526
Expendable for specific capital activities	-	-	5,500	3,357
Expendable for specific operating activities	-	-	-	10,883
Unrestricted	148,505	147,778	146,564	183,015
Total net position	320,209	327,582	349,765	407,641
Total liabilities, deferred inflow s, and net position	$ 893,241	$ 879,097	$ 896,355	$ 941,224

*2013 was restated for the implementation of GASB 65. The beginning net assets of 2013 have been restated and presented as such.

See the Independent Accountants' Report on Other Financial Information

MUHA/Roper/FOIA 000751

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A COMPONENT UNIT OF THE MEDICAL UNIVERSITY OF SOUTH CAROLINA)

Historical Statements of Revenues, Expenses and Changes in Net Position (Shown in 000s)

For the Years Ended June 30, 2011 through 2014

	2011	2012	2013	2014
Operating Revenues:				
Net patient service revenue, net of provision for bad debts	$ 1,012,421	$ 1,030,333	$ 1,078,611	$ 1,149,002
Meaningful use revenue	-	2,679	-	4,082
Other revenue	15,365	14,508	14,733	20,217
Total operating revenues	1,027,786	1,047,520	1,093,344	1,173,301
Operating expenses:				
Salaries and w ages - Hospital	347,507	356,377	354,855	361,051
Salaries and w ages - Residents	30,770	31,850	33,600	35,283
Employee benefits	97,462	102,288	108,099	108,853
Benefits - Residents	8,018	8,529	9,213	9,869
Professional Fees	31,779	33,660	32,336	36,845
Supplies and drugs	209,350	215,361	221,375	248,260
Purchased services	153,004	163,951	186,865	209,654
Insurance - Hospital	5,042	2,688	3,375	2,934
Insurance - Residents	1,716	1,771	1,885	1,960
Utilities	16,625	16,200	16,640	17,676
Repairs and maintenance	23,731	27,265	28,768	30,004
Mortgage insurance premium	-	897	1,745	1,803
Depreciation and amortization	54,466	56,218	56,024	58,461
Total operating expenses	979,470	1,017,055	1,054,780	1,122,653
Operating income	48,316	30,465	38,564	50,648
Non-operating revenues (expenses):				
Noncapital grants and contributions	-	-	-	23,212
Investment income	1,666	1,685	8,416	1,357
Interest expense	(26,188)	(24,777)	(18,325)	(16,087
Refinance issuance costs	-	-	(1,071)	(1,254
Total non-operating revenues (expenses)	(24,522)	(23,092)	(10,980)	7,228
Increase in net position	23,794	7,373	27,584	57,876
Net position, beginning of year	296,415	320,209	322,181	349,765
Net position, end of year	$ 320,209	$ 327,582	$ 349,765	$ 407,641

*2013 was restated for the implementation of GASB 65. The beginning net assets of 2013 have been restated and presented as such.

See the Independent Accountants' Report on Other Financial Information

MUHA/Roper/FOIA 000752

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A COMPONENT UNIT OF THE MEDICAL UNIVERSITY OF SOUTH CAROLINA)

Historical Statements of Cash Flows (Shown in 000s)

For the Years Ended June 30, 2011 through 2014

	2011	2012	2013	2014
Cash flows from operating activities:				
Receipts from and on behalf of patients	$ 1,001,474	$ 1,029,620	$ 1,071,444	$ 1,134,095
Payments to suppliers and contractors	(462,442)	(462,809)	(498,914)	(542,088)
Payments to employees	(479,505)	(495,873)	(504,838)	(477,893)
Other receipts and payments, net	10,019	27,703	(19,263)	(8,257)
Net cash provided by operating activities	69,546	98,641	48,429	105,857
Cash flows from non-capital financing activities:				
Non-capital grants and contributions	-	-	(1,071)	21,958
Cash flows from capital and related financing activities:				
Purchases of capital assets	(32,577)	(52,884)	(60,798)	(61,581)
Principal paid on long-term debt	(23,494)	(31,958)	(16,523)	(17,447)
Interest paid on long-term debt and capital lease obligations	(26,188)	(24,777)	(18,325)	(16,087)
Unamortized borrowing costs	1,267	1,239	9,331	-
Net cash used in capital and related financing activities	(80,992)	(108,380)	(86,315)	(95,115)
Cash flows from investing activities:				
Investment income	1,666	1,685	8,416	1,357
Net change in assets limited as to use	(3,348)	9,837	35,647	(7,010)
Net cash provided (used) by investing activities	(1,682)	11,522	44,063	(5,653)
Net increase (decrease) in cash and cash equivalents	(13,128)	1,783	5,106	27,047
Cash and cash equivalents, beginning of year	44,499	31,371	33,154	38,260
Cash and cash equivalents, end of year	$ 31,371	$ 33,154	$ 38,260	$ 65,307

Continued

*2013 was restated for the implementation of GASB 65. The beginning net assets of 2013 have been restated and presented as such.

See the Independent Accountants' Report on Other Financial Information

MUHA/Roper/FOIA 000753

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A COMPONENT UNIT OF THE MEDICAL UNIVERSITY OF SOUTH CAROLINA)

Historical Statements of Cash Flows (Shown in 000s), continued

For the Years Ended June 30, 2011 through 2014

	Historical			
	2011	2012	2013	2014
Cash flows from operating activities:				
Operating income	$ 48,316	$ 30,465	$ 38,564	$ 50,648
Adjustments to reconcile operating income (loss) to net cash provided by operating activities:				
Depreciation and amortization	54,466	56,218	56,024	58,461
Provision for uncollectible accounts	86,932	71,415	92,693	149,638
Net change in operating assets and liabilities:				
Patient accounts receivable, net	(95,970)	(70,016)	(108,156)	(166,313)
Other receivables	(5,533)	4,887	(454)	1,336
Deferred outflows	188	(1,301)	(42,033)	4,990
Prepaid expense	(673)	(673)	(1,470)	(1,423)
Drugs and supplies	70	(683)	966	(2,848)
Estimated third-party payor settlements	(1,909)	(2,112)	8,297	1,768
Accounts payable	(2,686)	2,386	3,305	11,671
Accrued payroll and employee benefits	4,251	3,171	928	5,171
Other accrued expenses	(17,717)	(3,346)	(7,126)	1,912
Deferred inflows	-	-	5,500	(5,500)
Other liabilities	-	6,929	(2,946)	(2,483)
Due to related parties	-	-	5,936	1,092
Derivative instruments	(188)	1,301	(1,599)	(2,263)
	69,546	$ 98,641	$ 48,429	$ 105,857

*2013 was restated for the implementation of GASB 65. The beginning net assets of 2013 have been restated and presented as such.

See the Independent Accountants' Report on Other Financial Information

MUHA/Roper/FOIA 000754

SUPPLEMENTAL SCHEDULES - SENSITIVITY ANALYSES

MUHA/Roper/FOIA 000755

The following sensitivity analyses calculate the impact of changes to several significant forecast assumptions. Please note that, in the event that these events should occur, it is Management's intention to take required action in order to achieve the financial results included in the forecasted financial statements presented in Section II.

Sensitivity #1 – Reduction in Medicaid Disproportionate Share Hospital Program Payments

Management has assumed that the Authority continues to participate in the Medicaid Disproportionate Share Hospital program (the "DSH Program"), available to certain qualifying hospitals in South Carolina, for the forecast period and receives $37.3 million, $38.1 million, $38.8 million, $39.7 million, $40.6 million, and $41.6 million in DSH Program payments in FY 2016, 2017, 2018, 2019, 2020, and 2021, respectively. This sensitivity assumes that the Authority's payments under the DSH Program are reduced to approximately one-half of the payments the Authority is forecasted to receive or $19.0 million, $19.4 million, $19.9 million, $20.3 million, and $20.8 million in DSH payments in FY 2017, 2018, 2019, 2020, and 2021, respectively. The impact of this reduction is presented below:

	Forecasted					
	2016	2017	2018	2019	2020	2021
Forecasted Operating Income (in thousands)	$ 21,540	$ 36,187	$ 34,740	$ 40,782	$ 28,015	$ 28,661
Sensitivity Operating Income (in thousands)	21,540	17,142	15,320	20,908	7,678	7,844
Impact	$ -	$ (19,045)	$ (19,420)	$ (19,874)	$ (20,337)	$ (20,817)
Forecasted Debt Service Coverage Ratio	4.09	3.54	3.77	3.73	2.26	2.31
Sensitivity Debt Service Coverage Ratio	4.09	2.88	3.09	3.07	1.85	1.88
Impact	-	(0.66)	(0.68)	(0.66)	(0.41)	(0.43)
Forecasted Days Cash on Hand	43.66	51.90	59.24	67.95	67.00	66.00
Sensitivity Days Cash on Hand	43.66	47.07	49.00	52.50	46.59	45.00
Impact	-	(4.83)	(10.24)	(15.45)	(20.41)	(21.00)

Sensitivity #2 – Stabilization of Inpatient Market Share

Management has assumed that the Authority's market share in its primary and secondary service areas continues to increase over the forecast period. This sensitivity assumes that the Authority's market share remains constant at the FY 2016 percentage, which is 30.6 percent of the primary service area and 9.1 percent of the secondary service area. The impact of this sensitivity on the Authority's inpatient utilization and financial results are presented below:

	Forecasted					
	2016	2017	2018	2019	2020	2021
Forecasted Primary Service Area Inpatient Market Share	30.60%	30.90%	31.30%	31.80%	32.40%	33.00%
Sensitivity Primary Service Area Inpatient Market Share	30.60%	30.60%	30.60%	30.60%	30.60%	30.60%
Impact	0.00%	-0.30%	-0.70%	-1.20%	-1.80%	-2.40%
Forecasted Secondary Service Area Inpatient Market Share	9.10%	9.20%	9.20%	9.30%	9.40%	9.50%
Sensitivity Secondary Service Area Inpatient Market Share	9.10%	9.10%	9.10%	9.10%	9.10%	9.10%
Impact	0.00%	-0.10%	-0.10%	-0.20%	-0.30%	-0.40%
Forecasted Inpatient Discharges	37,161	37,553	37,944	38,540	39,137	39,753
Sensitivity Inpatient Discharges	37,161	37,196	37,231	37,260	37,293	37,355
Impact	-	(357)	(713)	(1,280)	(1,844)	(2,398)
Forecasted Operating Income (in thousands)	$ 21,540	$ 36,187	$ 34,740	$ 40,782	$ 28,015	$ 28,661
Sensitivity Operating Income (in thousands)	21,540	31,949	26,362	25,580	5,821	(491)
Impact	$ -	$ (4,238)	$ (8,378)	$ (15,202)	$ (22,194)	$ (29,152)
Forecasted Debt Service Coverage Ratio	4.09	3.54	3.77	3.73	2.26	2.31
Sensitivity Debt Service Coverage Ratio	4.09	3.39	3.48	3.24	1.82	1.73
Impact	-	(0.15)	(0.29)	(0.49)	(0.44)	(0.58)
Forecasted Days Cash on Hand	43.66	51.90	59.24	67.95	67.00	66.00
Sensitivity Days Cash on Hand	43.66	51.02	56.39	61.64	55.58	48.04
Impact	-	(0.88)	(2.85)	(6.31)	(11.42)	(17.96)

Sensitivity #3 – Reduction in the Increase in Outpatient Utilization

Management has assumed that the Authority's emergency room visits, outpatient surgeries, and other outpatient visits increase 3.8 percent each year of the forecast period, a trend consistent with the Authority's historical experience. This sensitivity assumes that the Authority's emergency room visits, outpatient surgeries, and other outpatient visits increase 1.5 percent each year of the forecast period, beginning in FY 2017. The impact of this sensitivity on the Authority's outpatient utilization and financial results are presented below:

	Forecasted					
	2016	2017	2018	2019	2020	2021
Forecasted Outpatient Occurrences	1,100,363	1,141,988	1,185,193	1,230,036	1,276,581	1,324,892
Forecasted Percentage Increase		3.8%	3.8%	3.8%	3.8%	3.8%
Sensitivity Outpatient Occurrences	1,100,363	1,116,867	1,133,620	1,150,625	1,167,884	1,185,402
Sensitivity Percentage Increase		1.5%	1.5%	1.5%	1.5%	1.5%
Impact	-	(25,121)	(51,572)	(79,412)	(108,697)	(139,490)
Forecasted Operating Income (in thousands)	$ 21,540	$ 36,187	$ 34,740	$ 40,782	$ 28,015	$ 28,661
Sensitivity Operating Income (in thousands)	21,540	29,645	21,563	20,230	(407)	(8,041)
Impact	$ -	$ (6,542)	$ (13,177)	$ (20,552)	$ (28,422)	$ (36,702)
Forecasted Debt Service Coverage Ratio	4.09	3.54	3.77	3.73	2.26	2.31
Sensitivity Debt Service Coverage Ratio	4.09	3.31	3.31	3.06	1.70	1.58
Impact	-	(0.23)	(0.46)	(0.67)	(0.56)	(0.73)
Forecasted Days Cash on Hand	43.66	51.90	59.24	67.95	67.00	66.00
Sensitivity Days Cash on Hand	43.66	50.60	54.93	58.90	51.36	45.00
Impact	-	(1.30)	(4.31)	(9.05)	(15.64)	(21.00)

Sensitivity #4—Increase in Charity Care and Bad Debt Expense

Management has assumed that the Authority's deductions related to charity care and bad debts remain at the FY 2016 percentages of gross patient service revenue, which is 6.7 percent. This sensitivity assumes that the Authority's total charity care and bad debts increase to 7.7 percent of forecasted gross patient service revenue beginning in FY 2017 and remains at that percentage for the remainder of the forecast period. The impact of this increase on the financial results is presented below:

	Forecasted					
	2016	2017	2018	2019	2020	2021
Forecasted Bad Debt and Charity Care Percentage	6.76%	6.76%	6.76%	6.76%	6.76%	6.76%
Sensitivity Bad Debt and Charity Care Percentage	6.76%	7.76%	7.76%	7.76%	7.76%	7.76%
Impact	0.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Forecasted Operating Income (in thousands)	$ 21,540	$ 36,187	$ 34,740	$ 40,782	$ 28,015	$ 28,661
Sensitivity Operating Income (in thousands)	21,540	(1,727)	(5,163)	(1,355)	(16,479)	(18,336)
Impact	$ -	$ (37,914)	$ (39,903)	$ (42,137)	$ (44,494)	$ (46,997)
Forecasted Debt Service Coverage Ratio	4.09	3.54	3.77	3.73	2.26	2.31
Sensitivity Debt Service Coverage Ratio	4.09	2.23	2.38	2.33	1.38	1.37
Impact	-	(1.31)	(1.39)	(1.40)	(0.88)	(0.94)
Forecasted Days Cash on Hand	43.66	51.90	59.24	67.95	67.00	66.00
Sensitivity Days Cash on Hand	43.66	42.30	40.00	45.00	45.00	45.00
Impact	-	(9.60)	(19.24)	(22.95)	(22.00)	(21.00)

Sensitivity #5 – Increase in Non-Resident Full-Time Equivalents per Adjusted Occupied Bed

The Authority has maintained non-Resident FTEs per adjusted occupied bed ("FTE/AOB") of approximately 5.5 since FY 2014. Management has assumed continued maintenance of non-Resident FTEs/AOB at 5.5 throughout the forecast period. This sensitivity assumes that the Authority's non-Resident FTE/AOB gradually increases over the forecast period to 5.9 FTE/AOB by FY 2020. As a result, if non-Resident FTE/AOB are 5.6, 5.7, 5.8, 5.9, 5.9 in FY 2017, 2018, 2019, 2020, and 2021, respectively, the impact on the financial results is presented below:

	Forecasted					
	2016	2017	2018	2019	2020	2021
Forecasted FTE/Adjusted Occupied Bed (non-Resident)	5.5	5.5	5.5	5.5	5.5	5.5
Sensitivity FTE/Adjusted Occupied Bed (non-Resident)	5.5	5.6	5.7	5.8	5.9	5.9
Impact	0.0	0.1	0.2	0.3	0.4	0.4
Forecasted Operating Income (in thousands)	$ 21,540	$ 36,187	$ 34,740	$ 40,782	$ 28,015	$ 28,661
Sensitivity Operating Income (in thousands)	21,540	27,587	19,101	11,767	(14,555)	(14,751)
Impact	$ -	$ (8,600)	$ (15,639)	$ (29,015)	$ (42,570)	$ (43,412)
Forecasted Debt Service Coverage Ratio	4.09	3.54	3.77	3.73	2.26	2.31
Sensitivity Debt Service Coverage Ratio	4.09	3.24	3.23	2.78	1.42	1.44
Impact	-	(0.30)	(0.54)	(0.95)	(0.84)	(0.87)
Forecasted Days Cash on Hand	43.66	51.90	59.24	67.95	67.00	66.00
Sensitivity Days Cash on Hand	43.66	49.28	52.12	52.89	45.00	45.00
Impact	-	(2.62)	(7.12)	(15.06)	(22.00)	(21.00)

Sensitivity #6 – Increase in Assumed Interest Rate on the Mortgage

Management assumes the Project will be funded through the proceeds of the sale of $316,397,200 of Governmental National Mortgage Company ("GNMA") securities, an appropriation from the State of South Carolina, and the cash derived from a fundraising initiative. The Mortgage (insured by the FHA Section 241 Supplemental Loan Program) is assumed to bear interest at an average annual interest rate of 5.25 percent. This sensitivity assumes that the average annual interest rate on the Mortgage is 5.75 percent. The impact of this sensitivity on the financial results is presented below:

	Forecasted					
	2016	2017	2018	2019	2020	2021
Forecasted Interest Expense	$ 15,883	$ 15,090	$ 14,443	$ 15,146	$ 29,029	$ 27,046
Sensitivity Interest Expense	15,883	15,090	14,443	15,278	30,608	28,618
Impact	$ -	$ -	$ -	$ (132)	$ (1,579)	$ (1,572)
Forecasted Debt Service Coverage Ratio	4.09	3.54	3.77	3.73	2.26	2.31
Sensitivity Debt Service Coverage Ratio	4.09	3.54	3.77	3.72	2.22	2.26
Impact	-	-	-	(0.01)	(0.04)	(0.05)
Forecasted Days Cash on Hand	43.66	51.90	59.24	67.95	67.00	66.00
Sensitivity Days Cash on Hand	43.66	51.90	59.24	67.88	66.64	65.36
Impact	-	-	-	(0.07)	(0.36)	(0.64)

Sensitivity #7 – Reclassification of Operating and Non-operating Revenues (Expenses)
Items in the Forecasted Statements of Revenues, Expenses and Changes in Net Position are classified as presented in the Authority's historical financial statements. As such, certain items, such as Interest Expense and Purchased Services- Center for Telehealth (see Section V. Note I), are classified as non-operating and operating expenses accordingly. If these items were reclassified to be comparable to the classifications utilized by other non-profit, nongovernmental health systems, the impact on Authority's forecasted operating income is presented below:

	Forecasted					
	2016	2017	2018	2019	2020	2021
Forecasted Operating Income	$ 21,540	$ 36,187	$ 34,740	$ 40,782	$ 28,015	$ 28,661
Adjusted for:						
Purchased Services--Center for Telehealth	17,000	15,000	15,000	11,000	8,000	8,000
Interest expense	(15,883)	(15,090)	(14,443)	(15,146)	(29,029)	(27,046)
Sensitivity Operating Income	$ 22,657	$ 36,097	$ 35,297	$ 36,636	$ 6,986	$ 9,615
Impact	$ 1,117	$ (90)	$ 557	$ (4,146)	$ (21,029)	$ (19,046)

MUHA/Roper/FOIA 000762

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A COMPONENT UNIT OF THE MEDICAL UNIVERSITY OF SOUTH CAROLINA)

FAST - 1(A)
Inpatient Statistics
For the Years 2011 through 2021

ITEMS	HISTORICAL					FORECAST					
						DURING CONSTRUCTION			COMPLETION		
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total Licensed Beds (same as Hospital License)											
Medical/Surgical	604	604	604	604	604	656	656	656	656	656	656
NICU	66	66	66	66	66	66	66	66	87	87	87
Other (Psych)	105	105	105	105	105	105	105	105	105	105	105
GRAND TOTAL	**775**	**775**	**775**	**775**	**775**	**827**	**827**	**827**	**848**	**848**	**848**
Beds In Service											
Medical/Surgical	556	572	572	564	581	623	623	623	647	647	647
NICU	66	66	66	66	66	66	66	66	87	87	87
Other (Psych)	95	101	102	94	100	100	100	100	100	100	100
GRAND TOTAL	**717**	**739**	**740**	**724**	**747**	**789**	**789**	**789**	**834**	**834**	**834**
Occupancy Rate											
	81.0%	**80.3%**	**81.1%**	**86.9%**	**86.0%**	**82.5%**	**83.4%**	**84.3%**	**81.0%**	**82.2%**	**83.5%**

ROA 000349

MUHA/Roper/FOIA 000763

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A COMPONENT UNIT OF THE MEDICAL UNIVERSITY OF SOUTH CAROLINA)

FAST - 1(B)
Inpatient Statistics
For the Years 2011 through 2021

ITEMS	HISTORICAL					FORECAST					
						DURING CONSTRUCTION			COMPLETION		
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Inpatient Discharges											
Children's Hospital	6,525	6,510	6,776	6,879	7,093	7,189	7,261	7,333	7,449	7,585	7,685
Digestive Disease Center	3,171	3,240	3,229	3,193	2,740	2,777	2,805	2,833	2,878	2,923	2,969
Heart & Vascular Center	3,218	3,519	3,462	3,375	3,175	3,218	3,250	3,282	3,334	3,386	3,440
Hollings Cancer Center	2,573	2,595	2,659	2,795	2,732	2,759	2,797	2,825	2,870	2,915	2,961
Institute of Psychiatry	3,186	3,505	3,506	3,778	3,765	3,821	3,879	3,937	3,996	4,056	4,117
Medical Acute & Critical Care	4,416	4,546	4,964	4,765	4,498	4,559	4,605	4,650	4,723	4,796	4,872
Musculoskeletal Services	1,513	1,521	1,266	1,421	1,573	1,594	1,610	1,626	1,652	1,678	1,705
Neuroscience Institute	3,265	3,537	3,529	3,625	3,761	3,812	3,850	3,888	3,949	4,010	4,073
Other Services	1,025	1,040	910	921	1,487	1,507	1,522	1,537	1,561	1,585	1,610
Surgery Acute & Critical Care	1,125	1,037	1,149	1,087	1,126	1,141	1,152	1,163	1,181	1,199	1,218
Transplant Center	256	288	254	262	294	298	301	304	309	314	319
Women's Care	3,944	3,972	3,988	4,200	4,416	4,476	4,521	4,566	4,638	4,710	4,784
TOTAL DISCHARGES	**34,217**	**35,310**	**35,692**	**36,301**	**36,660**	**37,161**	**37,553**	**37,944**	**38,540**	**39,137**	**39,753**
Inpatient Days											
Children's Hospital	47,370	47,841	47,765	49,983	49,351	50,019	50,520	51,021	51,828	52,635	53,470
Digestive Disease Center	18,801	18,077	17,210	16,810	14,994	15,196	15,350	15,503	15,749	15,995	16,247
Heart & Vascular Center	16,346	17,560	17,317	19,106	18,949	19,206	19,397	19,588	19,898	20,208	20,531
Hollings Cancer Center	17,610	18,054	17,911	19,665	18,575	18,827	19,017	19,207	19,513	19,819	20,132
Institute of Psychiatry	26,359	29,338	31,324	32,257	30,222	30,675	31,135	31,602	32,077	32,558	33,046
Medical Acute & Critical Care	32,799	32,801	34,849	36,184	38,305	38,824	39,216	39,599	40,221	40,843	41,490
Musculoskeletal Services	8,099	7,069	6,287	6,807	7,358	7,456	7,531	7,606	7,728	7,849	7,975
Neuroscience Institute	20,466	20,139	20,811	21,834	25,502	25,848	26,105	26,363	26,777	27,190	27,618
Other Services	3,662	4,545	3,931	3,967	7,518	7,619	7,695	7,771	7,892	8,013	8,140
Surgery Acute & Critical Care	8,345	7,900	8,874	9,272	10,056	10,190	10,288	10,386	10,547	10,708	10,878
Transplant Center	1,294	2,180	2,110	2,167	2,056	2,084	2,105	2,126	2,161	2,196	2,231
Women's Care	10,840	11,086	10,737	11,465	11,479	11,635	11,752	11,869	12,056	12,243	12,436
TOTAL DAYS	**211,991**	**216,590**	**219,126**	**229,517**	**234,365**	**237,579**	**240,111**	**242,641**	**246,447**	**250,257**	**254,194**
Average Length of Stay											
Children's Hospital	7.3	7.3	7.0	7.3	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Digestive Disease Center	5.9	5.6	5.3	5.3	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Heart & Vascular Center	5.1	5.0	5.0	5.7	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Hollings Cancer Center	6.8	7.0	6.7	7.0	6.8	6.8	6.8	6.8	6.8	6.8	6.8
Institute of Psychiatry	8.3	8.4	8.9	8.5	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Medical Acute & Critical Care	7.4	7.2	7.0	7.6	8.5	8.5	8.5	8.5	8.5	8.5	8.5
Musculoskeletal Services	5.4	4.6	5.0	4.8	4.7	4.7	4.7	4.7	4.7	4.7	4.7
Neuroscience Institute	6.3	5.7	5.9	6.0	6.8	6.8	6.8	6.8	6.8	6.8	6.8
Other Services	3.6	4.4	4.3	4.3	5.1	5.1	5.1	5.1	5.1	5.1	5.1
Surgery Acute & Critical Care	7.4	7.6	7.7	8.5	8.9	8.9	8.9	8.9	8.9	8.9	8.9
Transplant Center	5.1	7.6	8.3	8.3	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Women's Care	2.7	2.8	2.7	2.7	2.6	2.6	2.6	2.6	2.6	2.6	2.6
GRAND TOTAL	**6.20**	**6.13**	**6.14**	**6.32**	**6.39**	**6.39**	**6.39**	**6.39**	**6.39**	**6.39**	**6.39**

See the Independent Accountants' Report on Other Financial Information

MUHA/Roper/FOIA 000764

ROA 000350

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A COMPONENT UNIT OF THE MEDICAL UNIVERSITY OF SOUTH CAROLINA)

FAST – 2
Selected Other Statistics
For the Years 2011 through 2021

ITEMS	HISTORICAL					FORECAST					
						DURING CONSTRUCTION			COMPLETION		
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Admissions through Emergency Room	11,978	12,999	13,053	13,491	15,043	15,344	15,651	15,964	16,283	16,609	16,941
Admissions through Hospital's Clinics/FHC's	4,228	4,344	4,214	4,613	4,835	4,932	5,030	5,131	5,234	5,338	5,445
Medicare Case Mix Index	2.0831	2.0202	2.0483	2.1905	2.2176	2.2176	2.2176	2.2176	2.2176	2.2176	2.2176
Total Case Mix Index	1.7558	1.7559	1.8002	1.8619	1.8941	1.8941	1.8941	1.8941	1.8941	1.8941	1.8941
Surgical Operations:											
Inpatient	17,152	17,251	17,714	19,000	19,981	20,381	20,788	21,204	21,628	22,061	22,502
Outpatient	7,928	7,250	7,911	7,611	8,383	8,799	9,235	9,693	10,174	10,678	11,208
Births	2,228	2,168	2,104	2,392	2,699	2,753	2,808	2,864	2,921	2,980	3,040
Other Outpatient Visits	876,826	866,304	900,615	934,540	969,448	1,006,490	1,044,946	1,084,873	1,126,324	1,169,360	1,214,040
Emergency Room Visits	74,292	74,967	77,601	77,249	82,426	85,074	87,807	90,627	93,538	96,543	99,644

MUHA/Roper/FOIA 000765

ROA 000351

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A COMPONENT UNIT OF THE MEDICAL UNIVERSITY OF SOUTH CAROLINA)

FAST - 3(A)
Source of Payment
For the Years 2011 through 2021

ITEMS	HISTORICAL					FORECAST					
						DURING CONSTRUCTION			COMPLETION		
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Inpatient Discharges											
Medicare	8,531	9,209	9,419	9,282	9,021	9,144	9,241	9,337	9,484	9,631	9,782
Medicaid	10,675	10,664	10,694	11,051	10,754	10,901	11,016	11,131	11,305	11,481	11,661
Medicare Advantage	1,283	1,408	1,735	2,028	2,091	2,120	2,142	2,164	2,198	2,232	2,267
Commercial	9,306	9,638	9,508	9,554	10,182	10,321	10,430	10,539	10,704	10,870	11,041
Self Pay	2,670	2,686	2,751	2,660	3,056	3,098	3,130	3,163	3,213	3,262	3,314
Other	1,752	1,705	1,585	1,726	1,556	1,577	1,594	1,610	1,636	1,661	1,687
TOTAL DISCHARGES	**34,217**	**35,310**	**35,692**	**36,301**	**36,660**	**37,161**	**37,553**	**37,944**	**38,540**	**39,137**	**39,753**
Inpatient Days											
Medicare	54,637	57,996	58,473	60,680	61,041	61,878	62,538	63,197	64,188	65,180	66,206
Medicaid	73,979	73,719	75,634	76,852	73,033	74,035	74,824	75,612	76,798	77,985	79,212
Medicare Advantage	8,793	9,275	10,707	13,743	15,007	15,213	15,375	15,537	15,781	16,025	16,277
Commercial	50,351	51,880	49,043	51,417	52,188	52,904	53,468	54,031	54,878	55,727	56,603
Self Pay	14,974	14,163	15,739	17,068	23,983	24,312	24,571	24,830	25,219	25,609	26,012
Other	9,257	9,557	9,530	9,757	9,113	9,238	9,336	9,435	9,583	9,731	9,884
TOTAL DAYS	**211,991**	**216,590**	**219,126**	**229,517**	**234,365**	**237,579**	**240,111**	**242,641**	**246,447**	**250,257**	**254,194**

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A COMPONENT UNIT OF THE MEDICAL UNIVERSITY OF SOUTH CAROLINA)

FAST - 3(B)
Source of Payment
For the Years 2013 through 2021

PAYORS	HISTORICAL					
	2013		2014		2015	
	Base Rate per Disch. ($)	Gross Revenue ($)	Base Rate per Disch. ($)	Gross Revenue ($)	Base Rate per Disch. ($)	Gross Revenue ($)
Inpatient Revenue						
Medicare	52,833	497,634,645	59,304	550,464,079	9,021	566,297,930
Medicaid	42,212	451,411,588	43,424	479,879,411	10,754	496,515,633
Medicare Advantage	52,200	90,567,685	61,356	124,429,569	2,091	137,633,049
Commercial	46,518	442,295,421	49,864	476,396,427	10,182	505,881,291
Self Pay	40,465	111,318,710	42,715	113,621,095	3,056	135,064,701
Other	45,423	71,996,035	46,440	80,155,666	1,556	83,120,536
TOTAL INPATIENT REVENUE		**1,665,224,084**		**1,824,946,247**		**1,924,513,140**

PAYORS	FORECAST											
	DURING CONSTRUCTION						COMPLETION					
	2016		2017		2018		2019		2020		2021	
	Base Rate per Disch. ($)	Gross Revenue ($)	Base Rate per Disch. ($)	Gross Revenue ($)	Base Rate per Disch. ($)	Gross Revenue ($)	Base Rate per Disch. ($)	Gross Revenue ($)	Base Rate per Disch. ($)	Gross Revenue ($)	Base Rate per Disch. ($)	Gross Revenue ($)
Inpatient Revenue												
Medicare	66,873	611,515,848	68,859	636,307,364	70,904	662,023,189	73,036	692,642,093	75,230	724,500,080	77,493	758,036,456
Medicaid	49,184	536,161,554	50,645	557,898,125	52,148	580,445,107	53,716	607,290,983	55,330	635,223,256	56,994	664,627,099
Medicare Advantage	70,118	148,622,812	72,201	154,648,142	74,344	160,898,116	76,580	168,339,734	78,880	176,082,499	81,253	184,233,180
Commercial	52,927	546,276,124	54,499	568,422,751	56,117	591,395,077	57,804	618,747,395	59,541	647,206,604	61,332	677,165,144
Self Pay	47,082	145,849,386	48,480	151,762,278	49,919	157,895,622	51,420	165,198,373	52,965	172,796,652	54,558	180,795,234
Other	56,906	89,756,488	58,595	93,394,313	60,335	97,169,806	62,149	101,662,958	64,017	106,340,979	65,942	111,261,349
TOTAL INPATIENT REVENUE		**2,078,182,212**		**2,162,432,973**		**2,249,826,917**		**2,363,881,536**		**2,462,150,070**		**2,676,118,462**

ROA 000353

MUHA/Roper/FOIA 000767

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A COMPONENT UNIT OF THE MEDICAL UNIVERSITY OF SOUTH CAROLINA)

FAST – 4
Outpatient Service Revenue
For the Years 2013 through 2021

ITEMS	HISTORICAL								
	2013			2014			2015		
	Visits	Avg Rates	Gross Rev.	Visits	Avg Rates	Gross Rev.	Visits	Avg Rates	Gross Rev.
Emergency Room Visits	77,601	4,679	363,127,236	77,249	5,245	405,141,792	82,426	5,637	464,664,910
Outpatient Surgeries	7,911	13,870	109,725,760	7,611	16,623	126,520,185	8,383	17,327	145,248,702
Other outpatient visits	900,615	773	696,184,995	934,540	810	757,269,659	969,448	858	831,630,144
TOTAL OUTPATIENT			**1,169,037,991**			**1,288,931,636**			**1,441,543,755**

ITEMS	FORECASTED DURING CONSTRUCTION								
	2016			2017			2018		
	Visits	Avg Rates	Gross Rev.	Visits	Avg Rates	Gross Rev.	Visits	Avg Rates	Gross Rev.
Emergency Room Visits	85,074	5,776	491,401,597	87,807	5,949	522,402,387	90,627	6,128	555,358,907
Outpatient Surgeries	8,799	17,457	153,606,271	9,235	17,982	166,060,621	9,693	18,521	179,524,766
Other outpatient visits	1,006,490	874	879,481,907	1,044,946	900	940,431,012	1,084,873	927	1,005,602,331
TOTAL OUTPATIENT			**1,524,489,775**			**1,628,894,019**			**1,740,486,003**

ITEMS	FORECASTED COMPLETION								
	2019			2020			2021		
	Visits	Avg Rates	Gross Rev.	Visits	Avg Rates	Gross Rev.	Visits	Avg Rates	Gross Rev.
Emergency Room Visits	93,538	6,312	590,394,538	96,543	6,501	627,640,442	99,644	6,696	667,236,059
Outpatient Surgeries	10,174	19,077	194,080,579	10,678	19,649	209,816,574	11,208	20,238	226,828,438
Other outpatient visits	1,126,324	955	1,075,291,673	1,169,360	983	1,149,810,145	1,214,040	1,013	1,229,497,560
TOTAL OUTPATIENT			**1,859,766,790**			**1,987,267,161**			**2,123,562,057**

See the Independent Accountants' Report on Other Financial Information

ROA 000354

MUHA/Roper/FOIA 000768

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A COMPONENT UNIT OF THE MEDICAL UNIVERSITY OF SOUTH CAROLINA)

FAST – 5
Full-Time Equivalent Personnel
For the Years 2011 through 2021

ITEMS	HISTORICAL					FORECAST					
						DURING CONSTRUCTION				COMPLETION	
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total FTEs	5,815	5,923	6,017	5,973	6,218	6,226	6,394	6,540	6,702	6,849	7,040
Adjusted Average Daily Census	974	1,001	1,022	1,073	1,123	1,125	1,153	1,179	1,209	1,236	1,271
(Tot. Pat. Days * (Total Pat. Rev./Tot. Inpat. Rev.)/365											
FTEs per Adjusted Occupied Bed	6.0	5.9	5.9	5.6	5.5	5.5	5.5	5.5	5.5	5.5	5.5
(FTEs/Adj. Avg. Daily Census)											
Adjusted Discharges	57,399	59,718	60,749	61,940	64,120	64,422	65,840	67,298	68,990	70,726	72,522
Tot. Disch. * (Tot. Pat. Rev./Tot. Inpat. Rev.)											
FTE s per 100 Adjusted Discharges (CMI Adjusted)	5.8	5.6	5.5	5.2	5.1	5.1	5.1	5.1	5.1	5.1	5.1
((FTEs/Adj. Disch.) * 100)/Tot. CMI)											
Medical Staff											
Active	720	737	803	819	846	846	846	846	846	846	846
Medical Staff Average Age	47	47	47	46	46	46	46	46	46	46	46

ROA 000355

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A COMPONENT UNIT OF THE MEDICAL UNIVERSITY OF SOUTH CAROLINA)

FAST – 6
Aging of Accounts Receivable
Last Audited June 30, 2015

LATEST AUDITED - June 30, 2015					
PAYORS	TOTAL ($)	0-60 DAYS ($)	61-120 DAYS ($)	121-180 DAYS ($)	Over 180 DAYS ($)
Medicare	126,729,434	99,474,126	10,502,256	6,834,885	9,918,167
Medicaid	109,078,752	86,176,885	9,636,882	3,711,829	9,553,156
Commercial	135,721,218	90,603,232	21,990,056	12,415,939	10,711,991
Self Pay	105,465,334	42,025,182	28,026,063	19,476,192	15,937,897
Other (Specify)	35,434,458	20,107,266	9,034,401	2,763,722	3,529,069
TOTAL	**512,429,196**	**338,386,691**	**79,189,658**	**45,202,567**	**49,650,280**
Interim January 31, 2016					
PAYORS	**TOTAL ($)**	**0-60 DAYS ($)**	**61-120 DAYS ($)**	**121-180 DAYS ($)**	**181-360 DAYS ($)**
Medicare	168,115,021	133,499,506	15,557,630	6,257,841	12,800,044
Medicaid	109,326,499	93,913,036	5,676,863	2,437,575	7,299,025
Commercial	149,634,964	107,535,233	19,454,605	8,710,310	13,934,816
Self Pay	111,718,446	45,007,624	27,831,295	19,896,760	18,982,767
Other (Specify)	43,043,004	25,333,754	8,830,550	3,853,678	5,025,022
TOTAL	**581,837,935**	**405,289,153**	**77,350,944**	**41,156,163**	**58,041,674**

ROA 000356

MUHA/Roper/FOIA 000770

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A COMPONENT UNIT OF THE MEDICAL UNIVERSITY OF SOUTH CAROLINA)

FAST – 7
Aging of Accounts Payable
Last Audited June 30, 2015

LATEST AUDITED - June 30, 2015							
	TOTAL ($)	30 DAYS ($)	31-60 ($)	61-90 ($)	91-120 ($)	121-365 ($)	>365 ($)
TOTAL	53,716,361.48	46,484,034.64	6,575,434.22	191,476.35	250,217.48	215,198.79	
Interim -January 31, 2016							
	TOTAL ($)	30 DAYS ($)	31-60 ($)	61-90 ($)	91-120 ($)	121-365 ($)	>365 ($)
TOTAL	50,137,121.89	32,400,802.51	13,494,111.47	1,978,495.75	506,951.88	1,756,760.28	

TOP 15 CREDITORS AND AMOUNTS OUTSTANDING			
Interim -January 31, 2016	CREDITOR	AMOUNT	
	McKesson Corporation	$	8,871,553
	Owens & Minor Distribution, Inc.		4,438,877
	Medtronic USA Inc.		1,572,921
	Crothall Healthcare		1,234,289
	Sodexo Inc. & Affiliates		1,083,240
	Siemens Medical Solutions USA		1,067,750
	American Red Cross		918,337
	Sirius Computer Solutions		944,735
	Beckman Coulter Inc.		835,736
	Boston Scientific Corp.		835,262
	Moredirect Inc.		813,772
	Lifepoint Inc.		644,180
	Johnson and Johnson Healthcare Systems Inc.		617,319
	GE Medical Systems		607,306
	FFF Enterprises		549,806
		TOTAL $	25,035,085

See the Independent Accountants' Report on Other Financial Information

ROA 000357

MUHA/Roper/FOIA 000771

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A COMPONENT UNIT OF THE MEDICAL UNIVERSITY OF SOUTH CAROLINA)

FAST – 8
Land, Building, and Equipment
As of June 30, 2015

	VALUES AS OF June 30, 2015							
	Tax Lot or Street Address	Date Built/ Purchased	Cost	Accumulated Depreciation	Net	Leased/ Owned	HUD Project Proceeds to be Used for Purchase/Renovation on the Property (Y/N)	To be included in Proposed Insured REFINANCE (Y/N)
Land & Land Improvements:			21,369,708	7,358,524	14,011,184	Owned	N/A	
LAND TOTAL			**21,369,708**	**7,358,524**	**14,011,184**			
Building & Leasehold Improvements:			686,606,718	324,438,797	362,167,921	Owned	N/A	
BUILDING & IMPROVEMENTS TOTAL			**$ 686,606,718**	**$ 324,438,797**	**$ 362,167,921**			
Equipment:			$340,893,996	$207,875,055	133,018,941	Owned	N/A	
EQUIPMENT TOTAL			**$ 340,893,996**	**$ 207,875,055**	**$ 133,018,941**			
GRAND TOTAL			**$ 1,048,870,422**	**$ 539,672,376**	**$ 509,198,046**			

ROA 000358

MUHA/Roper/FOIA 000772

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A COMPONENT UNIT OF THE MEDICAL UNIVERSITY OF SOUTH CAROLINA)

FAST - 9(A)
Ratio Analysis
For the Years 2011-2021

ITEMS	HISTORICAL																
	2011					2012					2013					2014	2015
	Ratio	Nat Average - Teaching	Var. from Nat.	Reg Average - South	Var. from Reg.	Ratio	Nat Average - Teaching	Var. from Nat.	Reg Average - South	Var. from Reg.	Ratio	Nat Average - Teaching	Var. from Nat.	Reg Average - South	Var. from Reg.	Ratio	Ratio
Liquidity Ratios																	
Current Ratio	2.0	1.8	0.2	2.0	(0.0)	2.0	1.8	0.1	1.9	0.0	2.1	1.8	0.3	1.8	0.3	2.2	2.6
Cash Ratio	0.2	N/A		N/A		0.3	N/A		N/A		0.3	N/A		N/A		0.4	0.8
Days in Receivables (Net)	56.0	45.1	10.9	47.6	8.4	54.6	46.9	7.7	47.0	7.6	57.3	44.3	13.0	44.3	13.0	59.1	54.2
Average Payment Period	50.7	61.3	(10.6)	48.8	1.9	48.9	61.1	(12.2)	48.9	0.0	48.8	59.4	(10.6)	53.0	(4.2)	50.8	47.4
Days Cash on Hand	44.2	109.5	(65.3)	86.2	(42.0)	41.1	89.4	(48.3)	96.7	(55.6)	27.8	90.6	(62.8)	103.2	(75.4)	33.9	37.5
Capital Structure																	
Debt Serv. Coverage	2.1	3.7	(1.6)	3.5	(1.4)	1.8	4.8	(3.0)	4.2	(2.4)	2.5	4.3	(1.8)	2.1	0.4	4.0	3.9
Equity Financing	35.8	47.1	(11.3)	56.6	(20.8)	37.3	45.8	(8.5)	58.2	(20.9)	39.0	48.5	(9.5)	54.9	(15.9)	43.3	(10.4)
LT Debt/Cap Assets	88.8	65.7	23.1	27.8	61.0	83.3	55.8	27.5	24.5	71.6	79.4	61.8	45.2	53.5	25.9	75.6	75.9
Cap Debt/Cap Assets	59.3	33.9	25.4	15.0	44.3	57.0	30.5	26.5	11.7	57.0	54.5	34.2	54.5	31.0	23.5	49.6	138.4
Profitability																	
Total Margin	2.4	4.2	(1.8)	3.4	(1.0)	0.7	4.5	(3.8)	4.5	(3.8)	2.5	4.8	(2.3)	2.7	(0.2)	4.9	3.8
Operating Margin	4.7	2.2	2.5	1.5	3.2	2.9	3.4	(0.5)	2.6	0.3	3.5	1.0	2.5	(0.5)	4.0	4.3	3.6
Return on Assets	2.7	3.8	(1.1)	4.2	(1.6)	0.8	4.4	(3.6)	5.0	(4.1)	3.1	4.8	(1.7)	2.9	0.1	6.1	4.6
Return on Equity	7.4	7.4	0.0	8.1	(0.7)	2.3	8.8	(6.5)	8.3	(6.0)	7.9	9.4	(1.5)	5.5	2.4	14.2	(44.3)
Asset Efficiency																	
Average Age of Plant	7.3	11.2	(3.8)	10.9	(3.6)	8.0	10.5	(2.5)	10.6	(2.6)	8.9	11.1	(2.2)	11.0	(2.1)	8.8	8.9

ROA 000359

ROA 000360

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A COMPONENT UNIT OF THE MEDICAL UNIVERSITY OF SOUTH CAROLINA)

FAST - 9(A), Continued
Ratio Analysis
For the Years 2011-2021

ITEMS	FORECAST					
	CONSTRUCTION			COMPLETION		
	2016	2017	2018	2019	2020	2021
	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio
Liquidity Ratios						
Current Ratio	2.5	2.6	2.9	2.6	2.6	2.6
Cash Ratio	0.8	0.9	0.9	1.0	1.0	1.0
Days in Receivables (Net)	54.2	54.2	54.2	54.2	54.2	54.2
Average Payment Period	45.3	45.3	45.3	46.8	46.7	46.5
Days Cash on Hand	43.7	51.9	59.2	68.0	67.0	66.0
Capital Structure						
Debt Serv. Coverage	4.1	3.5	3.8	3.7	2.3	2.3
Equity Financing	(4.1)	(1.4)	2.1	5.3	6.4	7.6
LT Debt/Cap Ass.	73.5	79.9	82.6	76.4	75.6	74.8
Cap Debt/Cap Ass.	114.1	103.6	95.3	88.7	86.4	83.6
Profitability						
Total Margin	4.6	2.1	3.3	3.5	1.0	1.1
Operating Margin	1.7	2.7	2.5	2.8	1.9	1.8
Return on Assets	5.6	2.3	3.3	3.4	1.0	1.2
Return on Equity	(135.8)	(169.1)	158.6	63.9	15.9	15.8
Asset Efficiency						
Average Age of Plant	9.5	10.4	11.5	12.5	11.4	12.2

See the Independent Accountants' Report on Other Financial Information

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A COMPONENT UNIT OF THE MEDICAL UNIVERSITY OF SOUTH CAROLINA)

FAST - 9(B)
Financial Performance and Underwriting Guidelines
For Years 2011-2021

ITEMS	HISTORICAL					FORECAST						
						DURING CONSTRUCTION			COMPLETION			
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	OUTCOME*
Net Patient Service Revenue (000s)	$ 1,012,421	$ 1,030,333	$ 1,078,611	$ 1,149,002	$ 1,231,501	$ 1,266,521	$ 1,311,165	$ 1,363,776	$ 1,422,741	$ 1,484,600	$ 1,550,244	$ 1,122,362
Total Operating Revenue (000s)	1,027,786	1,047,520	1,093,344	1,173,301	1,257,802	1,294,084	1,340,065	1,392,172	1,451,563	1,513,855	1,579,937	1,142,992
Total Operating Expenses (000s)	979,470	1,017,055	1,054,780	1,122,653	1,212,777	1,272,544	1,303,878	1,357,432	1,410,781	1,485,840	1,551,276	1,101,816
Gain/(Loss) from Operations (000s)	48,316	30,465	38,564	50,648	45,025	21,540	36,187	34,740	40,782	28,015	28,661	41,176
Non Operating Revenue (000s)	(24,522)	(23,092)	(10,980)	7,228	2,541	40,248	(7,588)	11,041	10,267	(12,921)	(10,822)	(6,076)
Net Income (Loss) (000s)	$ 23,794	$ 7,373	$ 27,584	$ 57,876	$ 47,566	$ 61,788	$ 28,599	$ 45,781	$ 51,049	$ 15,094	$ 17,839	$ 35,100
Operating Margin	4.70	2.91	3.53	4.32	3.58	1.66	2.70	2.50	2.81	1.85	1.81	3.58
Debt Service Coverage	2.10	1.79	2.51	4.04	3.90	4.09	3.54	3.77	3.73	2.26	2.31	3.06
Current Ratio	1.99	1.96	2.08	2.20	2.57	2.53	2.65	2.95	2.61	2.60	2.61	2.20
Working Cap/Total Assets	14.23	13.97	16.08	18.89	22.87	20.82	20.30	22.24	18.50	19.27	20.19	17.95
Equity Financing Ratio	35.85	37.26	39.02	43.31	(10.42)	(4.13)	(1.36)	2.05	5.32	6.35	7.56	27.29
LT Debt to Capitalization	59.30	57.02	54.45	49.57	138.44	114.08	103.63	95.35	88.71	86.36	83.58	74.87
Debt Service/Op Revenue	0.05	0.04	0.04	0.03	0.03	0.03	0.03	0.02	0.03	0.04	0.03	0.03
Days in A/R (net)	55.96	54.64	57.29	59.08	54.25	54.25	54.25	54.25	54.25	54.25	54.25	
Days Cash on Hand	44.21	41.11	27.77	33.94	37.47	43.66	51.90	59.24	67.95	67.00	66.00	
Days Cash on Hand including Highly Liquid Assets	44.21	41.11	27.77	33.94	37.47	43.66	51.90	59.24	67.95	67.00	66.00	
Average Payment Period	50.71	48.92	48.76	50.83	47.42	45.33	45.32	45.31	46.84	46.75	46.51	

* Outcome based on 3-year actual average

ROA 000361

MUHA/Roper/FOIA 000775

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A COMPONENT UNIT OF THE MEDICAL UNIVERSITY OF SOUTH CAROLINA)

FAST - 9(C)
Utilization Trends
For Years 2011-2021

ITEMS	HISTORICAL					FORECAST					
						DURING CONSTRUCTION			COMPLETION		
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Acute Discharges	31,031	31,805	32,186	32,523	32,895	33,340	33,674	34,007	34,544	35,081	35,636
Psych Discharges	3,186	3,505	3,506	3,778	3,765	3,821	3,879	3,937	3,996	4,056	4,117
Acute Patient Days	185,632	187,252	187,802	197,260	204,143	206,904	208,976	211,039	214,370	217,699	221,148
Psych Days	26,359	29,338	31,324	32,257	30,222	30,675	31,135	31,602	32,077	32,558	33,046
Licensed Beds	775	775	775	775	775	827	827	827	848	848	848
Staffed Beds	717	739	740	724	747	789	789	789	834	834	834
Acute Average Length of Stay	5.98	5.89	5.83	6.07	6.21	6.21	6.21	6.21	6.21	6.21	6.21
Psych Average Length of Stay	8.27	8.37	8.93	8.54	8.03	8.03	8.03	8.03	8.03	8.03	8.03
Total Overall Occupancy (beds in service only)	81.00%	80.30%	81.13%	86.85%	85.96%	82.50%	83.38%	84.25%	80.96%	82.21%	83.50%
Acute Average Daily Census	509	513	515	540	559	567	573	578	587	596	606
Psych Average Daily Census	72	80	86	88	83	84	85	87	88	89	91
Inpatient Surgery Cases	17,152	17,251	17,714	19,000	19,981	20,381	20,788	21,204	21,628	22,061	22,502
Outpatient Surgery Cases	7,928	7,250	7,911	7,611	8,383	8,799	9,235	9,693	10,174	10,678	11,208
Births	2,228	2,168	2,104	2,392	2,699	2,753	2,808	2,864	2,921	2,980	3,040
ER Visits	74,292	74,967	77,601	77,249	82,426	85,074	87,807	90,627	93,538	96,543	99,644
Other Outpatient Occurrences	876,826	866,304	900,615	934,540	969,448	1,006,490	1,044,946	1,084,873	1,126,324	1,169,360	1,214,040

ROA 000362

MUHA/Roper/FOIA 000776

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A COMPONENT UNIT OF THE MEDICAL UNIVERSITY OF SOUTH CAROLINA)

FAST – 10
Economic and Community Benefits Model
Summary Data

ITEMS	HISTORICAL MOST RECENT HISTORICAL YEAR 2015	FORECAST TWO YEARS AFTER PROJECT COMPLETION 2021
Total Operating Revenues[1]	1,417,023,126	1,807,257,611
Salary, Wages, and Benefits Expense[2]	561,087,462	733,500,740
Total FTEs of the mortgagor	5,973	7,040
Total Construction length (in months)	30	

[1] Total operating revenues, excluding the reduction for bad debt expense.

[2] Not including professional/physician/medical fees or other purchased services.

ROA 000363

Parker Poe

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Atlanta, GA
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Charlotte, NC
Columbia, SC
Greenville, SC
Raleigh, NC
Spartanburg, SC

August 6, 2018

RECEIVED
AUG 06 2018
Clerk, Board of Health and Environmental Control
18-RFR-27

Via E-mail (LUCASLM@dhec.sc.gov) &
Via Hand Delivery

The Honorable Lisa Lucas Longshore
Clerk of the Board
SC Department of Health and Environmental Control
2600 Bull Street
Columbia, SC 29201

Re: **Request for Final Review**
Decision Granting Application for a Certificate of Need for:
Construction of a 128-bed general acute care hospital in Berkeley County at a total project cost of $325,000,000 ("Proposed Project" or "Proposed Hospital")
Applicant: **Medical University Hospital Authority, d/b/a MUHA Community Hospital**
Matter No.: **2520**
Berkeley County, South Carolina[1]

Dear Ms. Longshore:

Pursuant to S.C. Code Ann. § 44-1-60; the State Certification of Need and Health Facility Licensure Act (S.C. Code Ann. §§ 44-7-110 *et seq.*) ("CON Act"); S.C. Code Ann. Regs. 61-15 ("CON Regulations"); the South Carolina Administrative Procedures Act (S.C. Code Ann. §§ 1-23-310 *et seq.*) ("APA"); and Article I, Section 22 of the South Carolina State Constitution; on behalf of our client, Trident Medical Center, LLC, d/b/a Trident Medical Center ("Trident"), I am writing to request that the Department Board conduct a final review conference of the Department staff's July 23, 2018 decision granting the Medical University Hospital Authority, d/b/a MUHA Community Hospital ("MUHA") a Certificate of Need ("CON") for the above-referenced Proposed Project. **Exhibit A**. Reserving its right to raise any issue considered by or presented to the Department, Trident respectfully requests that the Department Board reverse the Department staff's decision and deny MUHA's application for a CON for the reasons set forth herein and within the exhibits attached hereto and incorporated herein by reference.

Also, enclosed with this Request for Final Review, please find a check in the amount of $100.00 as payment of the filing fee.

[1] The Department's decision letter incorrectly identifies the Proposed Project as being located in Charleston, South Carolina.

Procedural Background:

On December 27, 2017, MUHA submitted its CON application for its Proposed Hospital.[2] MUHA's CON application was deemed complete in the State Register on March 23, 2018. **Exhibit B**. The Department issued its letter, deeming the CON application complete, on May 21, 2018. **Exhibit C**.

On March 22, 2018, Care Alliance Health Services, d/b/a Roper St. Francis Healthcare; Roper Hospital, Inc.; Bon Secours-St. Francis Xavier Hospital, Inc.; Roper St. Francis Berkeley Hospital, and Roper Mount Pleasant Hospital (collectively, "Roper") provided notice to the Department of its status as an affected person and its opposition to the Proposed Project. By letters, dated April 19, 2018, Trident and its sister facility, Summerville Medical Center ("Summerville")[3] also notified the Department of their status as affected persons and their opposition to the Proposed Project. **Exhibit D** and **Exhibit E**. Walterboro Community Hospital, Inc., d/b/a Colleton Medical Center ("Colleton") and The Regional Medical Center of Orangeburg and Calhoun Counties are also affected persons who submitted letters of opposition. Roper, Colleton, and Trident Health System provided additional comments in opposition of the Proposed Project by separate letters dated, July 18, 2018. A copy of Trident Health System's letter from its health care planning expert, Sullivan Consulting Group, Inc., is attached as **Exhibit F**.

The Department staff issued its decision approving MUHA's CON application on July 23, 2018. Exhibit A. Trident now respectfully requests that the Department Board conduct a final review conference on this matter and asks that the Board overturn the Department staff's decision to approve MUHA's Proposed Project as it fails to comply with the *2017 – 2018 South Carolina Health Plan* ("State Health Plan"), the CON Act, and the CON Regulations. *See* S.C. Code Ann. § 44-7-210(B). *See also* S.C. Code Ann. Regs. 61-15, § 307.1.

Arguments:

State Health Plan Standards

The Proposed Project fails to comply with the State Health Plan standards. Although the State Health Plan indicates that MUHA has an institutional need for 147 additional beds, the Berkeley, Charleston, and Dorchester Counties service area has an excess of 13 beds. *See* State Health Plan, p. 27. The State Health Plan allows a provider who has a need for additional beds to add beds when there is no bed need in the service area. *Id.* at p. 10. The provider may add beds at its existing site or another site. *Id.* However, the provider must "**justify, through patient origin and other data, the need for a new hospital at the chosen site and**

[2] MUHA's Proposed Hospital will include 100 medical/surgical beds, 12 intensive care beds, 16 post-partum beds, 8 labor and delivery rooms, 8 newborn bassinets, 4 operating rooms, two Cesarean section operating rooms, two endoscopy suites, a vascular lab, an emergency department, and a diagnostic and imaging department. The Proposed Project encompasses 311,221 square feet. The total project cost is $325 million, which equates to a per bed cost of more than $2.5 million. If approved, it would be the most expensive hospital of its size ever approved in South Carolina. *See generally* Exhibit F.

[3] Trident and Summerville are sometimes herein collectively referred to as "Trident Health System."

the potential adverse impact a new hospital at the chosen site could have on the existing hospitals in the service area." *Id.* at pp. 10-11 (emphasis added).

MUHA failed to provide justification for the establishment of a new hospital in Berkeley County and failed to provide a reasonable analysis of the Proposed Project's impact on existing hospitals. As will be demonstrated below, there is no need for an additional hospital in Berkeley County, and the construction of a new hospital will substantially adversely impact other area providers, including Trident. Consequently, MUHA's CON application fails to comply with the standards set forth in the State Health Plan and must be denied. *See* S.C. Code Ann. § 44-7-210(B). *See also* S.C. Code Ann. Regs. 61-15, § 307.1.

Community Need

Although MUHA has a need for additional beds at its downtown Charleston hospital, there is no justification for allowing MUHA to use its institutional bed need to establish a hospital in Berkeley County. The Department previously approved two new 50-bed hospitals in Berkeley County, one of which is scheduled to open in 2019. Exhibit F, p. 3. The Department also approved a 30-bed addition at Summerville, which should be completed soon. *Id.* Thus, Berkeley County will have 80 additional beds coming online in the very near future, and another 50 beds will be added when Trident completes its Berkeley Medical Center project, which has been delayed due to wetlands issues. *Id.* MUHA proposes to locate its hospital less than four miles from Roper's new hospital ("Roper Berkeley") and approximately nine miles from Trident. *Id.* at p. 4. The area has ample inpatient acute care capacity for the foreseeable future, and the community's emergency medicine services are capably met by these local hospitals and the freestanding emergency departments ("FSED") serving area residents. *Id.* at p. 6.

Hospital utilization in the Lowcountry has experienced very little growth in recent years. Despite an aging and growing population, inpatient hospital volume averaged only a 1.7% increase per year between 2012 and 2016. *Id.* at p. 7. Trident realized slightly stronger growth, averaging 3.4% per year; however, this is likely attributable to Trident's recent certification as a Level II trauma center and its addition of psychiatric beds, two services that MUHA does not propose to provide. *Id.* at p. 8. MUHA realized only a 1.6% average yearly growth between 2012 – 2016, less than the service area average. *Id.*

MUHA asserts that its Proposed Project will only serve Berkeley County patients currently seeking care at its downtown facility (hereinafter, "MUHA") closer to their homes, but the data demonstrates that MUHA does not have sufficient patient volume originating in that area to sustain a new hospital, particularly one that will be located less than 4 miles from Roper Berkeley. The Moncks Corner area, which encompasses most of Berkeley County, accounted for only 3% of MUHA's inpatient volume in 2017. *Id.* at p. 9. North Charleston provided the largest percentage (18%). *Id.* By contrast, the Nexton area, where MUHA proposes to locate its Proposed Hospital, accounted for only 8% of MUHA's inpatient volume in 2017. *Id.* North Charleston is already well-served by Trident Health System, and the Nexton area, which is already well served by Trident and Summerville Medical Centers, will be further served by Roper Berkeley and Trident's Berkeley Medical Center. *Id.*

Furthermore, patients traveling from Berkeley County to seek care at MUHA in downtown Charleston are likely doing so because they are in need of the tertiary care services provided there—services that won't be available at MUHA's Proposed Hospital. For example, the three largest DRG categories of patients originating from Berkeley County currently seeking

services at MUHA are all obstetric related services. *Id.* Patients bypassing Trident and Summerville to deliver babies at MUHA have either been referred there because they are high-risk or because they wish to be treated in a facility with Level III neonatal intensive care services on site. *Id.* Patients seeking services at MUHA are unlikely to suddenly seek services at a local community hospital in lieu of MUHA, as those patients are already bypassing local community hospitals to be treated at MUHA. MUHA vastly overestimated the number of patients that will be redirected from MUHA to its Proposed Hospital in Berkeley County. MUHA does not have sufficient volume of patients originating from that area, and those patients are unlikely to be redirected to the Proposed Hospital because the Proposed Hospital will not offer the same level of service.

MUHA also vastly overestimated the boundaries of its proposed service area, which includes distant parts of the Tri-County area. *Id.* at p. 10. MUHA assumed that significant numbers of patients residing in West Ashley, the Charleston peninsula, and the surrounding islands, as well as Orangeburg and Colleton Counties would travel to be treated at its Proposed Hospital. As explained in the submission from Roper's health care planning expert, Richardson/Knapp & Associates, Inc., community hospitals typically draw patients from the local area. **Exhibit G**, p. 3. There is rarely any significant in-migration from beyond the proximate area. *Id.* Yet, MUHA has predicted patients will travel past several other hospitals to be treated at its Proposed Hospital. This is a completely unreasonable assumption. Exhibit F, p. 14. The more likely scenario is that residents in the community immediately adjacent to the Proposed Hospital will utilize the facility, putting it in direct competition with other area providers, including Trident and Summerville, and MUHA will have to redirect market share from those providers to be viable. *Id.*

Despite the fact that community hospitals are largely utilized by local residents, MUHA projected that more than one-third of its patients residing on the Charleston peninsula, including those residing in MUHA's home ZIP Code, 29425, would travel more than 30 minutes one way to be treated at the Proposed Hospital. *Id.* Thus, MUHA is assuming that these patients would forego treatment at MUHA and bypass both Trident and Summerville to seek care at the Proposed Hospital. *Id.* There is no logical rationale that supports this assumption. *Id.* Notably, MUHA provided no ZIP Code detail in its utilization projections; however, the assumption that patients in distant ZIP Codes will utilize the Proposed Hospital renders MUHA's utilization projections unreliable. Moreover, the inclusion of these ZIP Codes in MUHA's drive time analyses undermines its argument that it seeks only to treat its current Berkeley County patients closer to their homes. *Id.* The 29425 ZIP Code and ZIP Codes from distant areas such as West Ashley and the surrounding islands should not be included in any drive time analysis or in any utilization projections. *Id.*

MUHA's utilization projections reflect a 57% utilization rate of the medical/surgical beds and a 61% utilization rate of the obstetrical beds by the third year of operations. *Id.* These low utilization projections do not support the need for the Proposed Project, and given MUHA's underlying, unreasonable assumptions (e.g., that patients will travel long distances to seek services at the Proposed Hospital), the projections are unlikely to be realized. The more reasonable assumption is that the Proposed Project will replicate the results of a few years prior when East Cooper Medical Center constructed a replacement hospital and Roper constructed a new hospital within a few miles of each other. *Id.* at p. 11. Utilization at East Cooper declined, and both East Cooper and Roper's Mt. Pleasant Hospital continue to have low utilization rates. *Id.* East Cooper's utilization has been less than 35% each year since Roper's Mt. Pleasant Hospital opened, and Roper Mt. Pleasant Hospital's utilization has never reach 20%. *Id.* If

MUHA's Proposed Hospital is constructed less than four miles from Roper Berkeley, history demonstrates that both hospitals will be underutilized. *Id.* at 12. Once Trident's Berkeley Medical Center is complete the situation will be greatly magnified. *Id.*

In its CON application, MUHA cites the Community Health Needs Assessment ("Assessment"), completed in 2016 by MUHA, Roper, and Trident United Way, in support of its Proposed Project. *Id.* Notably, however, the Assessment did not identify the need for another acute care hospital in the area of Berkeley County where MUHA plans to locate its Proposed Project. *Id.* The community needs identified in the Assessment are needs that MUHA's Proposed Project will not address (e.g., lack of health insurance and physician shortages). In sum, the Assessment does not support MUHA's Proposed Project. MUHA's proposed service area is unrealistic. Its utilization projections are unreliable, and its drive time analyses are misleading.

MUHA failed to demonstrate need for its Proposed Project; therefore, its CON application fails to comply with the State Health Plan standards, the CON Act, and the project review criteria addressing community need. *See* State Health Plan, pp. 10 – 11. *See also* S.C. Code Ann. § 44-7-120 and S.C. Code Ann. Regs. 61-15 § 801.2.

Distribution (Accessibility)

Because there is no need for the Proposed Project, the Proposed Project does nothing to increase accessibility to services and is, in fact, an unnecessary duplication of services. The Proposed Hospital will be located in the southwestern portion of Berkeley County, near the borders of Charleston and Dorchester Counties, in an area of high income development. Exhibit F, p. 4. If MUHA truly sought to serve its Berkeley County patients closer to their homes, as it proclaims, it would have located the Proposed Hospital more centrally. *Id.* Building a hospital in the Nexton community, less than four miles from Roper Berkeley, does nothing to increase accessibility to services, particularly for the more rural, medically underserved portions of Berkeley County where lower income residents primarily reside.

As discussed above, to the extent that MUHA seeks to treat its patients currently seeking care at MUHA, the data demonstrates that the percentage of MUHA patients originating from Berkeley County is insufficient to sustain a new hospital, particularly one in such close proximity to other providers. It is unreasonable and illogical to expect that MUHA patients living in the Charleston peninsula or the more distant surrounding islands will drive long distances, past multiple hospitals to seek care at the Proposed Hospital. Thus, the Proposed Hospital does nothing to increase accessibility to services for those individuals. MUHA could alleviate its internal capacity constraints by adding beds at its downtown facility at a cost of much less than $325 million. *Id.* at p. 13. MUHA will soon be opening its Children's Hospital and Women's Pavilion, vacating large portions of its downtown facility. *Id.* Those vacated areas could be renovated to accommodate additional medical/surgical beds in a much more economical and efficient manner. *Id.*

MUHA raised the issue of flooding in the downtown peninsula in support of its Proposed Project, arguing that flooding created a barrier to services at MUHA. Notably, however, Summerville recently sought to establish a neonatal intensive care unit ("NICU"), arguing that the flooded streets of downtown Charleston made it difficult to access NICU services at MUHA. *Id.* MUHA opposed Summerville's NICU and stated, "SMC continues to raise **false concern regarding MUHA's ability to provide care during weather emergencies and flooding**." *Id.*

(emphasis added). Based on these two diametrically opposed positions, MUHA apparently and inexplicably has no trouble providing care to fragile newborns during flooding but it somehow cannot adequately serve lower acuity acute care patients. MUHA's vacillating position reflects its true motivation, which is to serve its financial bottom line and not the residents of the community. Flooding on the peninsula should not be considered a barrier to services supporting the construction of a new community hospital in an area with no need, especially when it is not a barrier to serving neonates.

MUHA's choice of location exposes its true purpose, to capture market share from competitors in the North Charleston area. MUHA has applied to undertake numerous projects in the area recently, including the construction of an FSED, a radiation therapy center, and a pediatric ambulatory surgery center and diagnostic center. *Id.* at p. 16. MUHA's Proposed Hospital is the culmination of its plan to expand its territory and dominate the market at the expense of current providers, including Trident and Summerville. *Id.* A hospital in an area with no need, already well-served by other providers, located less than four miles from a new hospital that is already under construction and scheduled to open soon, does nothing to increase accessibility to services and is the very definition of an unnecessary duplication of services. MUHA's Proposed Project fails to comply with the State Health Plan, the CON Act, and the project review criteria governing distribution and accessibility set forth in the CON Regulations. *See* State Health Plan, pp. 10 – 11. *See also* S.C. Code Ann. § 44-7-120 and S.C. Code Ann. Regs. 61-15, § 802.3.

Financial Feasibility; Ability to Complete the Project

The financial feasibility of MUHA's Proposed Project is highly questionable. There is no need for another community hospital in the area, and it is unlikely that MUHA will be able to meet its utilization projections. Exhibit F, p. 16. In all likelihood, the Proposed Hospital will be underutilized and will substantially adversely affect the utilization of other area providers. At a total project cost of $325 million, MUHA's Proposed Hospital would be the most expensive hospital ever approved in South Carolina for its size. *Id.* at p. 19. The Proposed Project is far more expensive than MUHA's recently approved Children's Hospital and Women's Pavilion, which is being constructed on the Charleston peninsula and will include specialized units and ancillary areas. *Id.* It is also far more expensive than a recently constructed HCA hospital in Northern Virginia, a high construction cost area. *Id.* at p. 20. That hospital was completed in 2015 at a cost of $139.5 million, excluding land, and included a 100,000 square foot medical office building. *Id.* MUHA's Proposed Hospital will cost $315 million, excluding land costs, which is approximately 2.5 times higher. *Id.* MUHA's Proposed Project is the antithesis of cost containment.

MUHA currently has capital commitments totaling approximately $487 million for major projects for which it has already received CON approval. *Id.* at p. 16. If MUHA receives a CON for its Proposed Hospital, its capital projects would total approximately $812 million. *Id.* MUHA is highly leveraged, has limited cash reserves, and its net income was $28.6 million below budget for the eight months ending February 28, 2018. *Id.* at pp. 17 – 18. MUHA operates on very thin margins, and its ability to complete a $325 million project given its other financial commitments is highly suspect. *Id.* In fact, the funding letter from Armadale Partners, included in MUHA's CON application, states that HUD funding for the project cannot be guaranteed. *Id.* at p. 17.

The approval of an unneeded $325 million facility does not comport with principles of reasonable health care planning. MUHA's need for additional hospital beds could be addressed much more economically and efficiently through the renovation of space at its downtown facility. Risking taxpayer funds on a project for which there is no community need is irresponsible. The Proposed Project does nothing to promote cost containment, and MUHA's Proposed Project fails to comply with the State Health Plan, CON Act and multiple project review criteria contained within the CON Regulations. *See* State Health Plan, pp. 10 – 11. *See also* S.C. Code Ann. § 44-7-120 and S.C. Code Ann. Regs. 61-15, §§ 802.12, 802.13, 802.14, 802.15, 802.16, and 802.19.

Adverse Impact

Despite requests from affected persons to include adverse impact as one of the project review criteria considered most important, the Department inexplicably chose not to do so. *See* Exhibit C, p. 2. The Department also chose not to conduct a project review meeting for a $325 million project with multiple opposing parties, all of whom demonstrated that if approved, the Proposed Project would substantially adversely impact them. MUHA's claims that its Proposed Project will have no adverse impact on area providers is unreasonable and borders on the absurd. As demonstrated herein, MUHA's Proposed Project will not solely treat patients currently seeking care at MUHA as claimed. The Proposed Hospital will draw patients who reside in close proximity to the proposed site. A high percentage of patients will originate from areas outside of Berkeley County, closer to Trident and Summerville. Exhibit F, p. 20. MUHA will have to redirect market share from other area providers in order meet its utilization projections, and MUHA's Proposed Hospital will still likely be an underutilized facility. *Id.* The sheer proximity of the Proposed Hospital to Roper Berkeley will no doubt result in two underutilized hospitals just as it did when Roper's Mt. Pleasant Hospital opened within a few miles of East Cooper Medical Center. *Id.* at p. 10.

Trident and Summerville are the two largest providers of inpatient and outpatient services in the area. *Id.* at p. 20. Trident Health System served 48% of the inpatients in Berkeley County and 57% in Dorchester County. *Id.* Summerville has expended substantial resources on its CON approved 30-bed addition, which will soon be completed. Trident has expended substantial resources in developing its CON approved Berkeley Medical Center project, which has been delayed due to wetlands issues, which it anticipates will be resolved soon. The opening of Roper Berkeley will adversely impact both Trident and Summerville; however, that impact will be magnified by the addition of MUHA's Proposed Hospital, resulting in substantial lost market share and lost revenue for Trident Health System. *Id.*

The Proposed Project will also impact staffing at local hospitals, making it more difficult for area providers to hire and retain qualified staff. *Id.* Local providers are already struggling with a state-wide nursing shortage, and Trident Health System cannot afford to lose qualified clinical staff to MUHA. *Id.* The Proposed Project will adversely impact Trident Health System and other area providers not only through lost market share but by driving up staffing costs and driving down quality of care. *Id.*

Thus, the Proposed Project fails to comply with the State Health Plan standards, the CON Act, and the project review criteria governing adverse impact set forth in the CON Regulations. *See* State Health Plan, pp. 10 – 11. *See also* S.C. Code Ann. § 44-7-120 and S.C. Code Ann. Regs. 61-15, § 802.23.

Regulation 61-15, Section 501

Section 501 of the CON Regulations provides that

> [i]n the case of any proposed new institutional health service for the provision of health services to inpatients, the Department **shall not grant** a Certificate of Need, or otherwise make a finding that such proposed new institutional health service is needed **unless**:
>
> 1. The **capital and operating costs of the proposal and their potential impact on patient charges are reasonable**;
>
> 2. **Superior alternatives to such services in terms of cost, efficiency, or appropriateness do not exist** and that the development of such alternatives is not practicable;
>
> 3. In the case of new construction, **alternatives to new construction** (e.g., modernization or sharing arrangements) **have been considered**;
>
> 4. **Patients will experience serious problems in terms of costs, availability or accessibility**, or such other problems as may be identified by the Department **in obtaining care of the type proposed** in the absence of the project. . . .

Id. (emphasis added). The Department's findings with regard to Section 501's requirements are in error. *See* Exhibit A, p. 4.

As demonstrated herein, the capital costs of the Proposed Project are far from reasonable at $325 million, and the Proposed Project's adverse impact on area providers will drive up health care costs. There are superior alternatives to the project that are more economic, efficient, and appropriate. Primarily, MUHA can address its need for additional beds at MUHA by renovating existing space and adding those beds at MUHA, where they are actually needed. MUHA will have large amounts of vacated space available once its Children's Hospital and Women's Pavilion is open. That space could be easily renovated to accommodate additional medical surgical beds at a cost well below $325 million. Instead, MUHA chooses not to add beds to MUHA where its bed need exists but instead to construct the most expensive hospital ever proposed in South Carolina in a service area with no need shown in the State Health Plan in a county that is currently well served by other providers and which has ample bed capacity for the foreseeable future as a result of previously approved projects. Residents of Berkeley County have no problems in terms of costs, availability, or accessibility with regard to inpatient acute care services, emergency medicine services, or ancillary outpatient services. MUHA has chosen Berkeley County, and the Nexton community in particular, for the sole purpose of expanding its territory and redirecting market share from other providers, including Trident Health System.

MUHA's Proposed Project fails to comply with the criteria set forth in S.C. Code Ann. Regs. 61-15, § 501 and, therefore, cannot be approved.

Conclusion:

For the reasons set forth above and within the exhibits attached hereto and incorporated herein by reference, Trident respectfully requests that the Department Board conduct a final review conference on this matter and that the Board overturn the Department's decision to approve MUHA's CON application, as the Proposed Project fails to comply with the State Health Plan, the CON Act, and the CON Regulations in that (i) there is no need for the Proposed Project; (ii) the Proposed Project does nothing to increase accessibility to services and is an unnecessary duplication of services; (iii) the Proposed Project is not financially feasible and may not be able to be completed; (iv) the Proposed Project will substantially adversely impact other area providers; and (v) the Proposed Project fails to comply with the requirements of Section 501 of the CON Regulations. *See* S.C. Code Ann. § 44-7-210(B). *See also* S.C. Code Ann. Regs. §§ 307.1 and 501.

Trident looks forward to the opportunity to more fully address its opposition to MUHA's Proposed Project at the final review conference.

With best regards, I am

Sincerely,

William R. Thomas

WRT
Enclosures
cc: Ashley C. Biggers, Esquire (via hand delivery with enclosures)
Vito Wicevic, Esquire (via hand delivery with enclosures)
Louis Eubank (via hand delivery with enclosures)
Ralph Barbier, Esquire (via hand delivery with enclosures)
M. Elizabeth Crum, Esquire (via hand delivery with enclosures)
Todd Gallati (via email with enclosures)
Lisa Valentine (via email with enclosures)
James O. Hiott, III (via email with enclosures)

Exhibit A

To Request for Final Review Conference

July 23, 2018

VIA CERTIFIED MAIL, RETURN RECEIPT REQUESTED

Patrick J. Cawley, MD
Medical University Hospital Authority
169 Ashley Avenue
Charleston, SC 29425

Decision Granting Certificate of Need for:
Construction of a 128-bed general acute hospital in Berkeley County at a total project cost of $325,000,000.
Applicant: Medical University Hospital Authority d/b/a MUHA Community Hospital
Matter No.: 2520
Charleston, SC

Dear Dr. Cawley:

The South Carolina Department of Health and Environmental Control (Department) has reviewed the application of Medical University Hospital Authority d/b/a MUHA Community Hospital (MUSC) for construction of a 128-bed general acute hospital in Berkeley County at a total project cost of $325,000,000 (Project). After consideration of the entire administrative record of this matter, including documentation submitted by affected persons opposing approval of this application, the Department concludes MUSC has presented substantial evidence that the Project complies with the relevant project review criteria and with the *2017-2018 South Carolina Health Plan*, enacted June 9, 2017 (*Plan*). Accordingly, it is the decision of the Department that a Certificate of Need be issued for this Project. This decision is based on the following findings:

Compliance with the South Carolina Health Plan

Standard 1: The *Plan* does not specify a projected need for Berkeley County alone, but the *Plan* does identify a projected need for MUSC of 147 beds.

Standard 2: The *Plan* notes a projected bed need of 147 for MUSC.

Standard 3: The *Plan* does not calculate a surplus of beds or a bed need for Berkeley County. The *Plan* does indicate a surplus of beds in the area consisting of Berkeley, Charleston, and Dorchester Counties. The *Plan* indicates a need of 147 additional beds for MUSC, and MUSC is requesting approval of 128 beds at the proposed location, rather than at MUSC's existing hospital site.

Standard 4: This standard is not applicable because the *Plan* does not indicate a need for additional beds in the service area.

Standard 5: MUSC justified, through patient origin and other data, the need for a new hospital at the chosen site and the potential adverse impact of the new hospital at the chosen site on existing hospitals in the service area.

Standard 6: MUSC has satisfied this requirement.

Standards 7: This standard is not applicable.

Standard 8: This standard is not applicable.

Standard 9: This standard is not applicable.

Standard 10: This standard is not applicable.

Standard 11: This standard is not applicable.

Standard 12: This standard is not applicable.

The Department finds that MUSC has sufficiently complied with 3 S.C. Code Reg. 61-15, Section 802.1.

Community Need Documentation

MUSC clearly identified its target population and, using population statistics consistent with those generated by the State Demographer, MUSC made reasonable projections of anticipated population changes, with assumptions and methodologies clearly outlined in the application. MUSC has sufficiently demonstrated that the proposed Project will meet an identified need and that the projected utilization of the Project is sufficient to justify its implementation.

The Department finds that MUSC has sufficiently complied with 3 S.C. Code Reg. 61-15, Section 802.2.

Distribution (Accessibility)

The Department finds that the Project will not result in unnecessary duplication or modernization of services. In its application, MUSC included data showing that a significant percentage of its existing patients originate from areas in close proximity to the proposed location of the Project. After eliminating from its projections certain higher-acuity patients that would continue to be served at MUSC's existing location, MUSC's projected utilization of the Project includes a sufficient number of patients originating from the area in which the proposed hospital will be located to justify approval of the Project. The Department took into account the proposed utilization of two hospitals that have received CON approval but are not yet operational in Berkeley County, including Roper St. Francis Berkeley Hospital, which is currently under construction and is the closest existing or proposed hospital to the Project. The Department finds that approval of the instant application will not unnecessarily duplicate services of existing or proposed hospitals in the service area.

MUSC's application states that patients have access to MUSC by self-referral and by internal and external physician referral; that referrals derive from private physician practices, public clinics and other hospitals; and that access to the facility also comes from physicians affiliated with certain health care organizations listed by MUSC in its application. MUSC states that there are no limitations placed on admissions to the Project.

MUSC states that patients are admitted to MUHA facilities without regard to race, sex, creed or national origin. MUSC described its policy regarding indigent care and financial counseling for patients to determine whether indigent care discounts apply. MUSC states that it is committed to providing needed health care to all patients regardless of ability to pay. MUSC also submitted tables listing the percent of gross revenue and dollar amount of its historical and projected indigent care for years 2015 through 2019.

MUSC referenced its charity care and financial assistance policies as well as its historical and projected amount of indigent care to demonstrate that it has established provisions to insure that individuals in need of treatment as determined by a physician have access to the Project, regardless of ability to pay.

The Department finds that MUSC has sufficiently complied with 3 S.C. Code Reg. 61-15, Section 802.3.

Ability of the Applicant to Complete the Project

MUSC demonstrated that the Project will be initiated and completed within the proposed timeframe specified in its application. MUSC further demonstrated that the financial schedules and time frames contained in the application are consistent with those usually experienced in the development of similar facilities or services.

The Department finds that MUSC has sufficiently complied with 3 S.C. Code Reg. 61-15, Section 802.14.

Opposition

CareAlliance Health Services d/b/a Roper St. Francis Healthcare, Roper Hospital, Inc., Bon Secours-St. Francis Xavier Hospital, Inc., Roper St. Francis Berkeley Hospital, Roper Mount Pleasant Hospital, Trident Medical Center, LLC, Trident Medical Center, LLC d/b/a Summerville Medical Center, Walterboro Community Hospital, Inc. d/b/a Colleton Medical Center, and Regional Medical Center of Orangeburg & Calhoun Counties (collectively the Opposition) have opposed the Project on the grounds that the Project does not comply with the requirements under applicable South Carolina law and the *South Carolina Health Plan*. After consideration of the arguments and documentation submitted in opposition to the Project, the Department finds that the Opposition has not demonstrated sufficient grounds for denial of the Project.

Department Findings under S.C. Code Reg. 61-15 § 501

The Department finds the requirements of S.C. Code Reg. 61-15, Section 501 are applicable to the Project, as the Project is a new institutional health service. As such, the Department makes the following findings under this Section:

1. The capital and operating costs of the proposal and their potential impact on patient charges are reasonable;
2. Superior alternatives to such services in terms of cost, efficiency, or appropriateness do not exist and the development of such alternatives is not practicable;
3. Alternatives for new construction were considered; and
4. In the absence of the Project, patients will experience serious problems in terms of costs, availability, or accessibility in obtaining care of the type proposed.

The issuance of a Certificate of Need does not constitute approval for any proposed construction, licensing, or certification changes. You should contact, as needed, the following individuals for information concerning these related issues: Bureau of Radiological Health, Ms. Susan Jenkins (803.545.0530); Division of Health Facilities Construction, Mr. William McCallum (803.545.4215); Bureau of Health Facilities Licensing, Mr. Terry English, (803.545.4458); and Bureau of Certification, Ms. MaryJo Roué (803.545. 4293).

A copy of the Guide to Board Review is enclosed for your convenience.

Reviewed and Written By:

Maggie Parham Murdock
Director
Certificate of Need Program

Approved for Release By:

Louis Eubank
Chief, Bureau of Healthcare
Planning and Construction

Cc: Shannon Cantwell (Certified Mail)
Lisa Valentine (Certified Mail)
Todd Gallati (Certified Mail)
James O. Hiott III (Certified Mail)
Ralph Barbier, Esquire (Email)
William R. Thomas, Esquire (Email)
M. Elizabeth Crum, Esquire (Email)
Sarah Bacik (Email)
Caroline Cotter (Email)

South Carolina Board of Health and Environmental Control

Guide to Board Review

Pursuant to S.C. Code Ann. § 44-1-60

The decision of the South Carolina Department of Health and Environmental Control (Department) becomes the final agency decision fifteen (15) calendar days after notice of the decision has been mailed to the applicant, permittee, licensee and affected persons who have requested in writing to be notified, unless a written request for final review accompanied by a filing fee in the amount of $100 is filed with Department by the applicant, permittee, licensee or affected person.

Applicants, permittees, licensees, and affected parties are encouraged to engage in mediation or settlement discussions during the final review process.

If the Board declines in writing to schedule a final review conference, the Department's decision becomes the final agency decision and an applicant, permittee, licensee, or affected person may request a contested case hearing before the Administrative Law Court within thirty (30) calendar days after notice is mailed that the Board declined to hold a final review conference. In matters pertaining to decisions under the South Carolina Mining Act, appeals should be made to the South Carolina Mining Council.

I. Filing of Request for Final Review

1. A written Request for Final Review (RFR) and the required filing fee of one hundred dollars ($100) must be received by Clerk of the Board within fifteen (15) calendar days after notice of the staff decision has been mailed to the applicant, permittee, licensee, or affected persons. If the 15th day occurs on a weekend or State holiday, the RFR must be received by the Clerk on the next working day. RFRs will not be accepted after 5:00 p.m.
2. RFRs shall be in writing and should include, at a minimum, the following information:
   - The grounds for amending, modifying, or rescinding the staff decision;
   - a statement of any significant issues or factors the Board should consider in deciding how to handle the matter;
   - the relief requested;
   - a copy of the decision for which review is requested; and
   - mailing address, email address, if applicable, and phone number(s) at which the requestor can be contacted.
3. RFRs should be filed in person or by mail at the following address:

   South Carolina Board of Health and Environmental Control
   Attention: Clerk of the Board
   2600 Bull Street
   Columbia, South Carolina 29201

   Alternatively, RFR's may be filed with the Clerk by facsimile (803-898-3393) or by electronic mail (boardclerk@dhec.sc.gov).
4. The filing fee may be paid by cash, check or credit card and must be received by the 15th day.
5. If there is any perceived discrepancy in compliance with this RFR filing procedure, the Clerk should consult with the Chairman or, if the Chairman is unavailable, the Vice-Chairman. The Chairman or the Vice-Chairman will determine whether the RFR is timely and properly filed and direct the Clerk to (1) process the RFR for consideration by the Board or (2) return the RFR and filing fee to the requestor with a cover letter explaining why the RFR was not timely or properly filed. Processing an RFR for consideration by the Board shall not be interpreted as a waiver of any claim or defense by the agency in subsequent proceedings concerning the RFR.
6. If the RFR will be processed for Board consideration, the Clerk will send an Acknowledgement of RFR to the Requestor and the applicant, permittee, or licensee, if other than the Requestor. All personal and financial identifying information will be redacted from the RFR and accompanying documentation before the RFR is released to the Board, Department staff or the public.
7. If an RFR pertains to an emergency order, the Clerk will, upon receipt, immediately provide a copy of the RFR to all Board members. The Chairman, or in his or her absence, the Vice-Chairman shall based on the circumstances, decide whether to refer the RFR to the RFR Committee for expedited review or to decline in writing to schedule a Final Review Conference. If the Chairman or Vice-Chairman determines review by the RFR Committee is appropriate, the Clerk will forward a copy of the RFR to Department staff and Office of General Counsel. A Department response and RFR Committee review will be provided on an expedited schedule defined by the Chairman or Vice-Chairman.
8. The Clerk will email the RFR to staff and Office of General Counsel and request a Department Response within eight (8) working days. Upon receipt of the Department Response, the Clerk will forward the RFR and Department Response to all Board members for review, and all Board members will confirm receipt of the RFR to the Clerk by email. If a Board member does not confirm receipt of the RFR within a twenty-four (24) hour period, the Clerk will contact the Board member and confirm receipt. If a Board member believes the RFR should be considered by the RFR Committee, he or she will

respond to the Clerk's email within forty-eight (48) hours and will request further review. If no Board member requests further review of the RFR within the forty-eight (48) hour period, the Clerk will send a letter by certified mail to the Requestor, with copy by regular mail to the applicant, permittee, or licensee, if not the Requestor, stating the Board will not hold a Final Review Conference. Contested case guidance will be included within the letter.
NOTE: If the time periods described above end on a weekend or State holiday, the time is automatically extended to 5:00 p.m. on the next business day.

9. If the RFR is to be considered by the RFR Committee, the Clerk will notify the Presiding Member of the RFR Committee and the Chairman that further review is requested by the Board. RFR Committee meetings are open to the public and will be public noticed at least 24 hours in advance.
10. Following RFR Committee or Board consideration of the RFR, if it is determined no Conference will be held, the Clerk will send a letter by certified mail to the Requestor, with copy by regular mail to the applicant, permittee, or licensee, if not the Requestor, stating the Board will not hold a Conference. Contested case guidance will be included within the letter.

II. Final Review Conference Scheduling

1. If a Conference will be held, the Clerk will send a letter by certified mail to the Requestor, with copy by regular mail to the applicant, permittee, or licensee, if not the Requestor, informing the Requestor of the determination.
2. The Clerk will request Department staff provide the Administrative Record.
3. The Clerk will send Notice of Final Review Conference to the parties at least ten (10) days before the Conference. The Conference will be publically noticed and should:
    - include the place, date and time of the Conference;
    - state the presentation times allowed in the Conference;
    - state evidence may be presented at the Conference;
    - if the conference will be held by committee, include a copy of the Chairman's order appointing the committee; and
    - inform the Requestor of his or her right to request a transcript of the proceedings of the Conference prepared at Requestor's expense.
4. If a party requests a transcript of the proceedings of the Conference and agrees to pay all related costs in writing, including costs for the transcript, the Clerk will schedule a court reporter for the Conference.

III. Final Review Conference and Decision

1. The order of presentation in the Conference will, subject to the presiding officer's discretion, be as follows:
    - Department staff will provide an overview of the staff decision and the applicable law to include [10 minutes]:
        - Type of decision (permit, enforcement, etc.) and description of the program.
        - Parties
        - Description of facility/site
        - Applicable statutes and regulations
        - Decision and materials relied upon in the administrative record to support the staff decision.
    - Requestor(s) will state the reasons for protesting the staff decision and may provide evidence to support amending, modifying, or rescinding the staff decision. [15 minutes] *NOTE: The burden of proof is on the Requestor(s)*
    - Rebuttal by Department staff [15 minutes]
    - Rebuttal by Requestor(s) [10 minutes]

    Note: Times noted in brackets are for information only and are superseded by times stated in the Notice of Final Review Conference or by the presiding officer.
2. Parties may present evidence during the conference; however, the rules of evidence do not apply.
3. At any time during the conference, the officers conducting the Conference may request additional information and may question the Requestor, the staff, and anyone else providing information at the Conference.
4. The presiding officer, in his or her sole discretion, may allow additional time for presentations and may impose time limits on the Conference.
5. All Conferences are open to the public.
6. The officers may deliberate in closed session.
7. The officers may announce the decision at the conclusion of the Conference or it may be reserved for consideration.
8. The Clerk will mail the written final agency decision (FAD) to parties within 30 days after the Conference. The written decision must explain the basis for the decision and inform the parties of their right to request a contested case hearing before the Administrative Law Court or in matters pertaining to decisions under the South Carolina Mining Act, to request a hearing before the South Carolina Mining Council.. The FAD will be sent by certified mail, return receipt requested.
9. Communications may also be sent by electronic mail, in addition to the forms stated herein, when electronic mail addresses are provided to the Clerk.

The above information is provided as a courtesy; parties are responsible for complying with all applicable legal requirements.

Exhibit B

To Request for Final Review Conference

Affecting York County

Amisub of South Carolina, Inc. d/b/a Piedmont Medical Center
Addition of an Electrophysiology lab and a biplane lab as well as the purchase of a CT equipment at a total project cost of $7,062,274.

In accordance with Section 44-7-210(A), Code of Laws of South Carolina, and S.C. DHEC Regulation 61-15, the public and affected persons are hereby notified that for the following projects, applications have been deemed complete, and the review cycle has begun. A proposed decision will be made as early as 30 days, but no later than 120 days, from March 23, 2017. "Affected persons" have 30 days from the above date to submit requests for a public hearing to Nic Gerrald, Certificate of Need Program, 2600 Bull Street, Columbia, S.C. 29201. If a public hearing is timely requested, the Department's decision will be made after the public hearing, but no later than 150 days from the above date. For further information call (803) 545-3495.

Affecting Beaufort County

South of Broad Healthcare d/b/a South of Broad Hospital
Construction of a 20-bed acute care microhospital in Beaufort County at a total project cost of $39,334,924.

Affecting Berkeley County

Medical University Hospital Authority d/b/a MUHA Community Hospital
Construction of a 128-bed general acute hospital in Berkeley County at a total project cost of $325,000,000.

Palmetto Lowcountry Behavioral Health
The transfer of 44 psychiatric beds and 16 substance abuse beds and the addition of 48 psychiatric beds for a total of 108 beds in a newly constructed facility at a total project cost of $35,529,725.

Affecting Cherokee County

Well Care Home Health of the Upstate, Inc.
Establishment of a Home Health Agency in Cherokee County at a total project cost of $29,000.

Affecting Chester County

Well Care Home Health of the Upstate, Inc.
Establishment of a Home Health Agency in Chester County at a total project cost of $29,000.

Affecting Dorchester County

Trident Medical Center, LLC d/b/a Summerville Medical Center
Addition of a 2nd robotic surgical system, the da Vinci Xi System, at a total project cost of $2,474,384.

Affecting Greenville County

UHS of Greenville, LLC d/b/a The Carolina Center for Behavioral Health
Addition of 10 substance abuse beds for a total of 39 substance abuse beds at a total project cost of $2,364,837.

Affecting Lancaster County

Rebound Behavioral Health, LLC d/b/a Rebound Behavioral Health
Addition of 21 inpatient psychiatric beds for a total of 45 inpatient psychiatric beds at a total project cost of $50,000.

Exhibit C

To Request for Final Review Conference

May 21, 2018

VIA CERTIFIED MAIL, RETURN RECEIPT REQUESTED
Patrick J. Cawley, MD
Medical University Hospital Authority
169 Ashley Avenue
Charleston, SC 29425

Re: Medical University Hospital Authority d/b/a MUHA Community Hospital
Project: Construction of a 128-bed general acute hospital in Berkeley County at a total project cost of $325,000,000.
Matter No.: 2520

Dear Dr. Cawley:

This is to notify you the South Carolina Department of Health and Environmental Control ("Department") has determined the above-referenced project to be complete for purposes of review by the Certificate of Need Program. Enclosed is an invoice for the required application fee. It may be paid by check made payable to the S.C. Department of Health and Environmental Control or by electronic check through the Department's website (www.scdhec.gov) using the "Pay Invoices" hyperlink at the bottom of each webpage. This is a secure website. If payment is not received within fifteen (15) days of your receipt of this invoice, the pending application will be considered withdrawn and this matter closed. Should this deadline fall on a weekend or State holiday, it will be extended to the next calendar day that is neither weekend nor holiday pursuant to S.C. Regulation 61-15, Section 303.

Should the Department receive your application fee within the fifteen (15) day deadline, the Department will render a decision no earlier than thirty (30) days, but no later than one-hundred (120) days from the date notice is provided to affected persons in the State Register, unless a public hearing is held pursuant to Regulation 61-15, Section 305.

The Department has determined the relative importance of the project review criteria, pursuant to Regulation 61-15, Section 304, which will be used to review your application. The

specific criteria to be used are set forth below, with the most important being listed first. All other listed criteria will be given equal importance.

a. Compliance with the Need Outlined in the South Carolina Health Plan
b. Community Need Documentation;
c. Distribution (Accessibility);
d. Ability to Complete the Project.

The above criteria are set forth in Regulation 61-15, Section 802. Should you wish to submit any additional information to the Department in support of your application, you have thirty (30) days from the receipt of this correspondence to do so.

If you have any questions, please contact me at 803-545-4492.

Sincerely,

Maggie Murdock
Director
Certificate of Need Program

Enclosures: Application Fee Invoice

cc: Sarah Bacik
Liz Crum, Esq.
Shannon Cantwell
Ralph Barbier, Esq,
Will Thomas, Esq.
Lisa Valentine
Todd Gallati

Exhibit D

To Request for Final Review Conference

Parker Poe

William R. Thomas
Partner
Telephone: 803.253.8658
Direct Fax: 803.255.8017
willthomas@parkerpoe.com

Atlanta, GA
Charleston, SC
Charlotte, NC
Columbia, SC
Greenville, SC
Raleigh, NC
Spartanburg, SC

April 19, 2018

SCDHEC Received: APR 19 2018 Certificate of Need Program

VIA HAND DELIVERY AND EMAIL

Margaret P. Murdock, Esquire
Director, Certificate of Need Program
Bureau of Healthcare Planning and Construction
SC Department of Health and Environmental Control
301 Gervais Street
Columbia, South Carolina 29201

Re: Medical University Hospital Authority d/b/a MUHA Community Hospital – Certificate of Need application for the construction of a 128 bed general acute hospital in Berkeley County at a total project cost of $325,000,000
DHEC Matter No. 2520

TRIDENT MEDICAL CENTER, LLC AFFECTED PERSON STATUS AND OPPOSITION

Dear Ms. Murdock:

Pursuant to S.C. Code Ann. §§44-7-130(1) and 44-7-210(C) and Regulation 61-15 §§103(1) and 305, we are writing on behalf of Trident Medical Center, LLC ("Trident"), an existing provider of similar services located in Charleston County, which is in the same health service area to be served by the applicant, to notify the Department that Trident is an "affected person" with respect to Medical University Hospital Authority's ("MUHA") CON application referenced above, and that it opposes the approval of MUHA's CON application. Trident is opposed to MUHA's hospital CON application because it does not satisfy the CON Act, its regulations and the applicable project review criteria. Trident is also requesting that a project review meeting be held by the Department prior to the Department making a decision on this CON application.

As the Department knows, Trident, as well as Roper-St. Francis Hospital-Berkeley ("Roper-Berkeley"), each currently hold a CON to build a 50 bed hospital located in the same service area as MUHA's proposed hospital. Roper's facility is scheduled to open in 2019. As the Department knows, Trident is currently dealing with a wetlands issue that it hopes to resolve soon so that its hospital project in Moncks Corner can progress.

There is simply not a need in the area of the Tri-County region where MUHA wants to locate for an additional 128 bed hospital, especially one that costs a staggering $325 million dollars. In fact, while MUHA does have a bed need in the State Health Plan, the service area as a whole **has a negative bed need of 13**. In fact, from 2012 to 2016, inpatient hospital volume growth in the Tri-County area has been averaging approximately 1.4% per year. MUHA fails to account for the additional 30 beds coming into operation at Summerville Medical Center in the second quarter of this year or the 50 beds at Roper-Berkeley in 2019. These beds will serve primarily the same area and zip codes MUSC is proposing to serve. While there is growth in the area where MUHA proposes to locate its $325 million hospital, the 80 beds coming on line in the next year will easily accommodate this growth.

MUHA's assumptions in its CON application regarding which patients will shift to the proposed 128 bed hospital is unreasonable and erroneous. For example, MUSC contends that 35% of the people who live in the zip code 29403, which actually encompasses the MUHA campus downtown, will shift from using the downtown campus and instead use a small community hospital 23 miles away in Berkeley County. This is not only aggressive, but patently absurd. MUHA makes similar assumptions about other downtown peninsula and East Cooper zip codes even though these zip codes are in some instances 25 to 40 miles away from MUHA's proposed hospital site in Berkeley County. These shifts are not going to happen.

Including this hospital project, MUHA currently has in progress or development $800+ million in healthcare facility projects. And yet, MUHA's net income is $28.6 million below budget for the eight months ending February 28, 2018. See MUHA's Notes to the Interim Financial Statements, attached as **Exhibit A**. Given that MUHA operates on very thin margins, its proposal to build a $325 million hospital given all of its other financial obligations and projects is not financially responsible, especially as interest rates are expected to rise in the coming years. Because MUHA's patient shift analysis is not reasonable, its financial projections are not reasonable, and therefore the project's financial feasibility is uncertain.

MUHA's project does not increase access to hospital services given that Roper's new facility will be located just a few miles away, and it will be open in 2019. Moreover, there will be additional inpatient capacity at Summerville Medical Center, and eventually Moncks Corner as well.

While Trident has not conducted a thorough analysis, it believes that once the Children's Hospital relocates to its new building currently under construction, there will be sufficient space for MUHA to locate more than 100 additional beds on its downtown campus at a cost far less than $325 million, as there are beds in use in that space today.

MUHA's true goal, like that of its freestanding ED and radiation therapy projects in the Summerville area, is to capture market share from its competitors. While MUHA includes the patient shift analysis in its CON application, it is merely a ruse because the shifts are unreasonable and won't occur. MUHA's true goal is to capture market share which will adversely impact the existing providers' volumes and net income.

Trident will supply additional information during the staff review period and project review meeting.

Please copy Todd Gallati at Trident and myself on any future correspondence to or from the Department concerning this CON application. Thank you for your consideration of Trident's opposition, and please let me know if you have any questions or concerns.

Sincerely,

William R. Thomas

WRT/ccq

cc: Todd Gallati, FACHE (*via email todd.gallati@HCAHealthcare.com*)

Exhibit A

Statement of Revenues, Expenses, and Changes in Net Assets:
For the eight months ended February 28, 2018 and 2017
Actuals Compared to Budget

As of February 2018, MUHA's net income is $28.6 million below budget. The following drivers (YTD) explain this variance:

- Inpatient surgeries are 2.5% below budget;
- Outpatient surgeries are 2.2% below budget
- Case Mix Index is 1.9% below budget;
- Children's gross revenues are $9.8 million below budget, Heart and Vascular's gross revenues are $7.1 million below budget, Anesthesia gross revenues are $5.5 million below budget, and Therapies are $6.8 million below budget.
- Additional pension expense of $3.2 million
- Pharmaceutical costs are $4.1 million over budget
- Medical supplies are $4.6 million over budget

Net patient service revenues are below budget by 0.1%, mainly due to our overall Case Mix Index being 1.9% below budget. The Case Mix Index decrease correlates with our IP surgeries finishing 2.5% below budget.

Total operating expenses finished above budget by $26.4 million. Compensation and benefits are $7.6 million over budget. This is mainly due to FTE's per Adjusted Occupied Bed on a case mix adjusted basis finishing over budget by 1.8%, which correlates to 65 FTE's. Services and supplies are $20.2 million over budget, mainly due to purchased outside services being over budget by $7.9 million, pharmaceutical costs being over budget by $5.6 million, medical supplies being over budget by $5.6 million, and Telehealth expenses being $4.7 million over budget.

As of February 2018, the operating income is $27.3 million under budget. For the month of February, operating income is $8.9 million below budget, mainly due to the same drivers listed above.

Investment income is $1.3 million below budget. With the federal Reserve beginning to increase interest rates in the short-term, it has negatively impacted the market valuation of the fixed rate securities in our mortgage reserve funds.

Unusual and non-recurring items impacting current month earnings:

The Authority received $3 million in December 2017 of State Appropriations for the Adult Burn Unit. $1.5 million of these funds have been recognized as Non-operating revenue in the month of December 2017 and the remainder will be recognized pro-rata for the remainder of the fiscal year.

Statement of Revenues, Expenses, and Changes in Net Assets:
For the eight months ended February 28, 2018 and 2017
Actuals Compared to Prior Year

Operating Revenues:

Net patient revenue is up 3.8% from the same period last year. Inpatient census is up 1.9% compared to last fiscal year. February's ADC increased to 707 from the 706 census we saw in January, and is 0.3% higher than February last year. ER visits are up 0.7%. Inpatient surgical cases are down 1.0% and outpatient surgical cases are up 0.5%. 275 transplant cases have been performed for the fiscal year compared to 257 for last fiscal year – a 7.0% increase.

On a volume adjusted basis (adjusted discharges), net patient revenue is down 3.1% at $19,788 per case. The following drivers account for this variance:

- February's year-to-date Case Mix Index was 2.6% below prior year;
- Children's gross revenues are $9.8 million below budget, Heart and Vascular's gross revenues are $7.1 million below budget, Anesthesia gross revenues are $5.5 million below budget, and Therapies are $6.8 million below budget.
- Pharmacy is over prior year by $4.4 million year to date. Medical supplies are over prior year $6.5 million year to date; labor costs are over prior year $10.6 million year to date.

Other revenues increased 17.6% or $3.5 million over the same period last year.

Operating Expenses:

When compared to last fiscal year, salaries and benefits increased $18.1 million or 4.8%. This increase mainly relates to the merit increase and additional FTEs. Paid FTEs are up 96 from the same period last fiscal year. The average hourly rate is up 3.4% from the same period last fiscal year. Compensation costs (including benefits and excluding pension expense) are 42.9% of net patient revenue. FY 17 costs were 42.5% of net patient revenue.

Services and supplies are up $31.9 million or 7.2% compared to last year. The following explain the majority of this variance:

- Pharmaceuticals are $4.4 million or 5.2% higher;
- Medical Supplies are $6.5 million or 5.6% higher;
- College of Medicine expenses are $9.4 million or 23.1% higher;
- Resident support expenses are $1.1million higher;
- Telehealth expenses are $4.9 million higher as a result of adding three new agreements;

Depreciation and Amortization is 1.1% lower than prior year

Non-Operating Expenses:

Interest expense is up 0.4% compared to prior year. Interest expense is 2.4% unfavorable to budget through February 2018.

Exhibit E

To Request for Final Review Conference

Parker Poe

William R. Thomas
Partner
Telephone: 803.253.8658
Direct Fax: 803.255.8017
willthomas@parkerpoe.com

Atlanta, GA
Charleston, SC
Charlotte, NC
Columbia, SC
Greenville, SC
Raleigh, NC
Spartanburg, SC

April 19, 2018

SCDHEC Received: APR 19 2018 Certificate of Need Program

VIA HAND DELIVERY AND EMAIL

Margaret P. Murdock, Esquire
Director, Certificate of Need Program
Bureau of Healthcare Planning and Construction
SC Department of Health and Environmental Control
301 Gervais Street
Columbia, South Carolina 29201

Re: Medical University Hospital Authority d/b/a MUHA Community Hospital – Certificate of Need application for the construction of a 128 bed general acute hospital in Berkeley County at a total project cost of $325,000,000
DHEC Matter No. 2520

TRIDENT MEDICAL CENTER, LLC D/B/A SUMMERVILLE MEDICAL CENTER'S AFFECTED PERSON STATUS AND OPPOSITION

Dear Ms. Murdock:

Pursuant to S.C. Code Ann. §§44-7-130(1) and 44-7-210(C) and Regulation 61-15 §§103(1) and 305, we are writing on behalf of Trident Medical Center, LLC d/b/a Summerville Medical Center ("SMC"), an existing provider of similar services located in Dorchester County, which is in the same health service area to be served by the applicant, to notify the Department that SMC is an "affected person" with respect to Medical University Hospital Authority's ("MUHA") CON application referenced above, and that it opposes the approval of MUHA's CON application. SMC is opposed to MUHA's hospital CON application because it does not satisfy the CON Act, its regulations and the applicable project review criteria. SMC is also requesting that a project review meeting be held by the Department prior to the Department making a decision on this CON application.

As the Department knows, SMC currently holds a CON for 30 additional beds and Trident Medical Center, as well as Roper-St. Francis Hospital-Berkeley ("Roper-Berkeley"), each currently hold a CON to build a 50 bed hospital, all located within the same service area as MUHA's proposed hospital. SMC's 30 bed project is on track to be completed in second quarter of this year, and Roper's Berkeley hospital is scheduled to open in 2019. Trident Medical Center is currently dealing with a wetlands issue that it hopes to resolve soon so that its Moncks Corner hospital project can progress.

There is simply not a need in the area of the Tri-County region where MUHA wants to locate for an additional 128 bed hospital, especially one that costs a staggering $325 million dollars. In fact, while MUHA does have a bed need in the State Health Plan, the service area as a whole **has a negative bed need of 13**. In fact, from 2012 to 2016, inpatient hospital volume growth in the Tri-County area has been averaging approximately 1.4% per year. MUHA fails to account for the additional 30 beds coming into operation at SMC or the 50 beds at Roper-Berkeley in the very near future. These beds will serve primarily the same area and zip codes MUSC is proposing to serve. While there is growth in the area where MUHA proposes to locate its $325 million hospital, the 80 beds coming on line in the next year will easily accommodate this growth.

MUHA's assumptions in its CON application regarding which patients will shift to the proposed 128 bed hospital is unreasonable and erroneous. For example, MUSC contends that 35% of the people who live in the zip code 29403, which actually encompasses the MUHA campus downtown, will shift from using the downtown campus and instead use a small community hospital 23 miles away in Berkeley County. This is not only aggressive, but patently absurd. MUHA makes similar assumptions about other downtown peninsula and East Cooper zip codes even though these zip codes are in some instances 25 to 40 miles away from MUHA's proposed hospital site in Berkeley County. These shifts are not going to happen.

Including this hospital project, MUHA currently has in progress or development $800+ million in healthcare facility projects. And yet, MUHA's net income is $28.6 million below budget for the eight months ending February 28, 2018. See MUHA's Notes to the Interim Financial Statements, attached as **Exhibit A**. Given that MUHA operates on very thin margins, its proposal to build a $325 million hospital given all of its other financial obligations and projects is not financially responsible, especially as interest rates are expected to rise in the coming years. Because MUHA's patient shift analysis is not reasonable, its financial projections are not reasonable, and therefore the project's financial feasibility is uncertain.

MUHA's project does not increase access to hospital services given that Roper's new facility will be located just a few miles away, and it will be open in 2019. Moreover, there will be additional inpatient capacity at SMC, and eventually Moncks Corner as well.

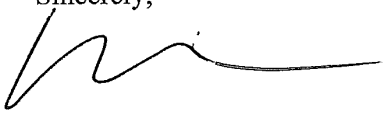
While SMC has not conducted a thorough analysis, it believes that once the Children's Hospital relocates to its new building currently under construction, there will be sufficient space for MUHA to locate more than 100 additional beds on its downtown campus at a cost far less than $325 million, as there are beds in use in that space today.

MUHA's true goal, like that of its freestanding ED and radiation therapy projects in the Summerville area, is to capture market share from its competitors. While MUHA includes the patient shift analysis in its CON application, it is merely a ruse because the shifts are unreasonable and won't occur. MUHA's true goal is to capture market share which will adversely impact the existing providers' volumes and net income.

SMC will supply additional information during the staff review period and project review meeting.

Please copy Lisa Valentine at SMC and myself on any future correspondence to or from the Department concerning this CON application. Thank you for your consideration of SMC's position, and please let me know if you have any questions or concerns.

Sincerely,



William R. Thomas

WRT/ccq

cc: Lisa R. Valentine, FACHE (*via email Lisa.valentine1@hcahealthcare.com)*

Exhibit A

Statement of Revenues, Expenses, and Changes in Net Assets:
For the eight months ended February 28, 2018 and 2017
Actuals Compared to Budget

As of February 2018, MUHA's net income is $28.6 million below budget. The following drivers (YTD) explain this variance:

- Inpatient surgeries are 2.5% below budget;
- Outpatient surgeries are 2.2% below budget
- Case Mix Index is 1.9% below budget;
- Children's gross revenues are $9.8 million below budget, Heart and Vascular's gross revenues are $7.1 million below budget, Anesthesia gross revenues are $5.5 million below budget, and Therapies are $6.8 million below budget.
- Additional pension expense of $3.2 million
- Pharmaceutical costs are $4.1 million over budget
- Medical supplies are $4.6 million over budget

Net patient service revenues are below budget by 0.1%, mainly due to our overall Case Mix Index being 1.9% below budget. The Case Mix Index decrease correlates with our IP surgeries finishing 2.5% below budget.

Total operating expenses finished above budget by $26.4 million. Compensation and benefits are $7.6 million over budget. This is mainly due to FTE's per Adjusted Occupied Bed on a case mix adjusted basis finishing over budget by 1.8%, which correlates to 65 FTE's. Services and supplies are $20.2 million over budget, mainly due to purchased outside services being over budget by $7.9 million, pharmaceutical costs being over budget by $5.6 million, medical supplies being over budget by $5.6 million, and Telehealth expenses being $4.7 million over budget.

As of February 2018, the operating income is $27.3 million under budget. For the month of February, operating income is $8.9 million below budget, mainly due to the same drivers listed above.

Investment income is $1.3 million below budget. With the federal Reserve beginning to increase interest rates in the short-term, it has negatively impacted the market valuation of the fixed rate securities in our mortgage reserve funds.

Unusual and non-recurring items impacting current month earnings:

The Authority received $3 million in December 2017 of State Appropriations for the Adult Burn Unit. $1.5 million of these funds have been recognized as Non-operating revenue in the month of December 2017 and the remainder will be recognized pro-rata for the remainder of the fiscal year.

Statement of Revenues, Expenses, and Changes in Net Assets:
For the eight months ended February 28, 2018 and 2017
Actuals Compared to Prior Year

Operating Revenues:

Net patient revenue is up 3.8% from the same period last year. Inpatient census is up 1.9% compared to last fiscal year. February's ADC increased to 707 from the 706 census we saw in January, and is 0.3% higher than February last year. ER visits are up 0.7%. Inpatient surgical cases are down 1.0% and outpatient surgical cases are up 0.5%. 275 transplant cases have been performed for the fiscal year compared to 257 for last fiscal year – a 7.0% increase.

On a volume adjusted basis (adjusted discharges), net patient revenue is down 3.1% at $19,788 per case. The following drivers account for this variance:

- February's year-to-date Case Mix Index was 2.6% below prior year;
- Children's gross revenues are $9.8 million below budget, Heart and Vascular's gross revenues are $7.1 million below budget, Anesthesia gross revenues are $5.5 million below budget, and Therapies are $6.8 million below budget.
- Pharmacy is over prior year by $4.4 million year to date. Medical supplies are over prior year $6.5 million year to date; labor costs are over prior year $10.6 million year to date.

Other revenues increased 17.6% or $3.5 million over the same period last year.

Operating Expenses:

When compared to last fiscal year, salaries and benefits increased $18.1 million or 4.8%. This increase mainly relates to the merit increase and additional FTEs. Paid FTEs are up 96 from the same period last fiscal year. The average hourly rate is up 3.4% from the same period last fiscal year. Compensation costs (including benefits and excluding pension expense) are 42.9% of net patient revenue. FY 17 costs were 42.5% of net patient revenue.

Services and supplies are up $31.9 million or 7.2% compared to last year. The following explain the majority of this variance:

- Pharmaceuticals are $4.4 million or 5.2% higher;
- Medical Supplies are $6.5 million or 5.6% higher;
- College of Medicine expenses are $9.4 million or 23.1% higher;
- Resident support expenses are $1.1million higher;
- Telehealth expenses are $4.9 million higher as a result of adding three new agreements;

Depreciation and Amortization is 1.1% lower than prior year

Non-Operating Expenses:

Interest expense is up 0.4% compared to prior year. Interest expense is 2.4% unfavorable to budget through February 2018.

Exhibit F

To Request for Final Review Conference

Sullivan Consulting Group, Inc.

2090 Bethany Way · Alpharetta, Georgia 30004 · (770) 753-4222 · Fax: (770) 753-4223

SCDHEC Received:
JUL 18 2018
Certificate of Need Program

July 18, 2018

Margaret P. Murdock, Esquire
Director, Certificate of Need Program
Bureau of Healthcare Planning and Construction
SC Department of Health and Environmental Control
301 Gervais Street
Columbia, South Carolina 29201

RE: Medical University Hospital Authority d/b/a MUHA Community Hospital
Certificate of Need application for the construction of a 128 bed general acute hospital in Berkeley County at a total project cost of $325,000,000
DHEC Matter No. 2520

Dear Ms. Murdock:

On behalf of Trident Medical Center, LLC d/b/a Trident Medical Center ("Trident") and Trident Medical Center, LLC d/b/a Summerville Medical Center ("SMC"), both existing providers of similar services located in Charleston County, which is in the same health service area to be served by the applicant, Medical University Hospital Authority's ("MUHA"), I am submitting this statement of opposition to the above-captioned CON application. Trident and SMC are opposed to MUHA's hospital CON application because it does not satisfy the CON Act, its regulations, the 2017-2018 South Carolina Health Plan, and the applicable project review criteria.

1. Project Overview

MUHA proposes to construct a 5-story, 128-bed inpatient facility in the Nexton area of Summerville, Berkeley County ("MUHA-Nexton"). The project will include:

- 100 Medical/Surgical Beds
- 12 Intensive Care Beds
- 16 Post-Partum Beds
- 8 Labor and Delivery Rooms
- Newborn Nursery with 8 newborn bassinets;
- Surgery-4 ORs, 2 Cesarean Section ORs
- 2 Endoscopy Suites
- Vascular Lab
- Emergency Department
- Diagnostic and Imaging Department

The total project cost is $325 million with proposed square footage of 311,221. Construction cost per square foot is project at $538, and total cost per square foot excluding land is $1,021. MUHA's received CON approval for a Freestanding Emergency Department to be located in

Summerville approximately two miles from the site. According to MUHA, the Freestanding Emergency Department will ultimately be relocated to the new hospital if approved.

2. Project Review Criteria

In its letter deeming the application complete, the Department identified the following specific project review criteria important to the review.

a. Compliance with the Need Outlined in the South Carolina Health Plan
b. Community Need Documentation;
c. Distribution (Accessibility);
d. Ability to Complete the Project.

A significant omission from this criteria list is Adverse Effects on Other Facilities. Placing a new acute care hospital in close proximity to other acute care hospitals such as Trident, SMC, and the Roper St. Francis – Berkeley Hospital ("RSF-Berkeley"), currently under construction, will have a significant adverse impact on these providers, which MUHA has ignored in its application. The MUHA project will also have a significant adverse impact on existing and approved freestanding emergency departments in the area. These impacts will be detailed below. The Department should give great weight in its review to the multifaceted impacts that will result from the approval of the MUHA project that stand in stark contrast to any minimal benefits it will provide to the health care system in the Tri-County area.

Construction Costs and Methods is another criterion that should be of high priority. A capital expenditure of $325 million for a 128-bed hospital is exorbitant, and MUHA makes no effort to explain why this cost is reasonable.

The high price tag for this project also raises serious questions about the Financial Feasibility of the project in terms of Projected Revenues and Projected Expenses. The projections of utilization for the MUHA-Nexton hospital are also highly suspect, and under more reasonable assumptions would result in projections of ongoing losses for the project.

The massive capital expenditures that MUHA has already underway or approved raise serious concerns about the Applicant's Ability to Complete the Project and the wisdom of adding another major capital commitment to an organization that receives State appropriations and that is currently carrying a tremendous debt load already.

Each of these criteria will be addressed below.

3. Consistency with the 2017-2018 South Carolina Health Plan

The MUHA application states that there is need for 147 beds in the service area (p. 49), but that is the need identified for MUHA in downtown Charleston. In fact, while MUHA does have a bed need in the Health Plan, the Berkeley/Charleston/Dorchester service area as a whole has a negative bed need of 13. *See* **Exhibit 1**.

Exhibit 1
Acute Care Bed Need Calculation for Berkeley/Charleston/Dorchester Service Area

Facility by Region and County	Age Cat	2015 Pop	2022 Pop	2015 Pt Days	Proj ADC	Variable Rate Factor	Bed Need	Existing Beds	To Be Added / Excess	2015 % Occup Rate
Trident Medical Center & Berkeley Medical Center *1, 10*	<18	166114	180030		0					
	18-64	476343	535390		0					
	+65	102069	146830		0					
	TOTAL	744,526	862,250	71,955	228	70%	327	296	31	66.60%
Summerville Medical Center *11*	<18	166114	180030	2028	6					
	18-64	476343	535390	11593	36					
	+65	102069	146830	8513	34					
	TOTAL	744,526	862,250	22,134	75	65%	116	124	-8	48.90%
MUSC Medical Center *12*	<18	166114	180030	28399	84					
	18-64	476343	535390	105594	325					
	+65	102069	146830	48814	192					
	TOTAL	744,526	862,250	182,807	602	75%	803	656	147	76.35%
Mount Pleasant Hospital	<18	166114	180030	8	0					
	18-64	476343	535390	2645	8					
	+65	102069	146830	2400	9					
	TOTAL	744,526	862,250	5,053	18	65%	28	85	-57	16.29%
Roper Hospital *13*	<18	166114	180030	13	0					
	18-64	476343	535390	22148	68					
	+65	102069	146830	34258	135					
	TOTAL	744,526	862,250	56,419	203	70%	291	316	-25	48.92%
Bon Secours - Saint Francis Xavier Hospital	<18	166114	180030	92	0					
	18-64	476343	535390	19206	59					
	+65	102069	146830	12379	49					
	TOTAL	744,526	862,250	31,677	108	70%	155	204	-49	42.54%
East Cooper Medical Center	<18	166114	180030	19	0					
	18-64	476343	535390	8607	27					
	+65	102069	146830	5979	24					
	TOTAL	744,526	862,250	14,605	50	65%	78	130	-52	30.78%
Berkeley / Charleston / Dorchester County Total							1,798	1,811	-13	

The specific language regarding the bed need calculation in the Health Plan is:

1. ***Calculations of hospital bed need are made for individual hospitals and totaled by county to determine the overall bed need for that service area, which is the county for CON purposes.***

Clearly, there is no need for 128 additional acute care beds in a new facility when assessing need from a community-wide perspective. This lack of need is underscored by the fact that there are 130 new, approved acute care beds that have yet become operational. These include:

- 30 beds for SMC, which will be completed in the near future.
- 50 beds for the RSF-Berkeley Hospital, which will open in the Fall of 2019.
- 50 beds at Trident Berkeley Medical Center, which are under development but have been delayed due to wetlands issues with the site.[1]

[1] Trident is well aware of MUHA's position regarding Berkeley Medical Center. Even if the 50 approved beds for Berkeley Medical Center were removed from the inventory, there would be a need for only 37 acute care beds in the Berkeley/Charleston/Dorchester service area, which is insufficient to support a new 128-bed hospital located next to RSF-Berkeley.

In addition, Standard 5 of the Acute Care Bed Chapter is applicable to this project.

5. ***A facility may apply to create a new additional hospital at a different site within the same service area through the transfer of existing licensed beds, the projected bed need for the facility, or a combination of both existing beds and projected bed need. The facility is not required to have a projected need for additional beds in order to create a new additional hospital. There is no required minimum number of beds in order to approve the CON application. The applicant must justify, through patient origin and other data, the need for a new hospital at the chosen site and the potential adverse impact a new hospital at the chosen site could have on the existing hospitals in the service area.***

The MUHA-Nexton hospital is inconsistent with this standard because the applicant failed to document the need for the new hospital or reasonably present the potential adverse impact on existing providers.

As will be discussed in more detail under the Community Need criterion, there is no need that the MUHA project will address. The applicant states that there is a shortage of health care services in Berkeley County, but this project fails to address the new bed capacity that will be opened in Berkeley County in the future. MUHA-Nexton will be located in the southwestern portion of Berkeley County near its borders with Dorchester and Charleston Counties. Had its objective been to serve Berkeley County, MUHA could have sought a site more central to the county. Instead, MUHA chose a site that is near the higher income developments of Nexton and Cane Bay while the remainder of the county is more rural with lower income residents. Most astonishingly, the MUHA-Nexton site is less than 4 miles from the RSF-Berkeley location, a facility that is scheduled in the Fall 2019. It would be the abandonment of all rational health planning principles to approve a second new hospital to serve the same service area population before the first hospital has even opened, especially one so close.

The proposed site was also selected to draw patients from Dorchester County and Northern Charleston County, which are already well-served by existing hospitals, including SMC, which will soon open 30 new acute care beds, and Trident. These existing hospitals can address the needs of the population MUHA seeks to serve.

MUHA's approach to adverse impact project is the same implausible one it has used in its many other CON applications for projects in Berkeley and North Charleston: we seek only to serve our own patients. It defies logic that MUHA would invest $325 million in a facility that would attract no new market share. Moreover, patients from Berkeley and surrounding areas who have travelled to MUHA historically do so despite the presence of closer hospitals, largely because of the specialized tertiary and quaternary services offered at MUHA on the peninsula, which will not be offered at MUHA-Nexton. Community hospitals draw patients from the areas most proximate to their location, and MUHA-Nexton will draw patients primarily from the areas served by SMC and Trident currently and RSF-Berkeley in the future.

For these reasons, MUHA-Nexton is inconsistent with the South Carolina Health Plan.

4. Community Need

There is simply not a need for another hospital in the portion of the Tri-County region where MUHA seeks to construct a new 128-bed hospital, especially one that costs a staggering $325 million. As noted above, the calculations in the South Carolina Health Plan indicate no need for additional beds in the Tri-County area through 2022.

Community need for a new hospital is typically based on:

- Geographic Access – Service area residents are required to travel relatively long distances to receive the services proposed.

- Capacity Access – Existing facilities in the service area do not have sufficient capacity to accommodate all patients in need of care.

- Financial Access – Lower income service area residents are unable to access existing facilities in the service area.

None of these considerations supports approval of MUHA's project.

As a starting point, the service area claimed by MUHA for the new community is the entire Tri-County area and beyond, to include Horry county, which is not reasonable for a start-up facility offering primary and secondary services. A more reasonable assumption is that MUHA-Nexton will draw patients primarily from Berkeley and Dorchester counties, and the northern portion of Charleston County. **Exhibit 2** displays the MUHA-Nexton created maps depicting the service area MUHA claims in its application and the locations of existing and approved acute care hospitals.

Trident and Summerville Medical Centers do not believe the MUHA created maps in Exhibit 2 and 3are an accurate depiction of the service area regions given the representation of the North Charleston, Moncks Corner, Summerville and Sea Island areas. No one with any knowledge of the area would indicate that Summerville Medical Center is in the North Charleston area (which is where it would be on MUHA's map as depicted below); that the West Ashley area of Charleston is in the Sea Island region; that the West Ashley region would include Hollywood, South Carolina, or that Moncks Corner reaches down to Goose Creek, and includes portions of Berkeley County west and north of Lake Moultrie. These maps are simply being used in this letter because MUHA has represented in its application that these are the areas it intends to serve, but the service area representations are inaccurate.

Exhibit 2
MUHA-Nexton Proposed Service Area
Acute Care Hospital Providers



There is certainly no geographic access issue for the population located most proximate to MUHA-Nexton's site, which is only 8 miles from SMC, less than 4 miles from RSF-Berkeley (scheduled to open in 2019) and 9 miles from Trident. SMC and Trident are no more than 15 minutes' drive from MUHA's site, and Roper-Berkeley will be a 5 minute drive away from MUHA-Nexton. From a capacity perspective, SMC is completing a 30-bed addition in the near future, and RSF-Berkeley will add another 50 beds. Trident has approval for a new 50-bed hospital, Berkeley Medical Center, in Moncks Corner, Berkeley County, which has been delayed by wetlands issues. Once that project is completed there will be a total of 130 new acute care beds serving the same population that is most likely to use the MUHA-Nexton hospital.

In addition to acute care hospitals, there are also FSEDs to meet the emergent needs of the population in the areas most proximate to MUHA-Nexton's site. **Exhibit 3** displays all of the current and approved emergency services providers in the Tri-County area and demonstrates that Berkeley County will be well-served in the future.

Exhibit 3
MUHA-Nexton Proposed Service Area
Emergency Services Providers



With respect to financial access, MUHA has not made any claims that services are not accessible in its service area or that its project will address any financial barrier to care. Existing providers do accommodate patients regardless of financial status and RSF-Berkeley has made that same commitment when it opens.

Any growth in the service area population that is likely to use MUHA-Nexton hospital will be readily accommodated by the new bed capacity that is already approved. In fact, despite an aging and growing population, from 2012 to 2016, inpatient hospital volume growth in the Tri-County area has been increasing at only 1.7% per year based on data presented by the applicant. *See* **Exhibit 4**. MUHA's rate of growth has been below the Tri-County average, and the growth at Trident is primarily due to the addition of Level 2 trauma services and psychiatric beds in the last two years—services which will not be offered at MUHA-Nexton.

Exhibit 4
Adult Inpatient Trends for Tri-County Hospitals

Hospital	2012	2013	2014	2015	2016	Annual % Change
MUSC	26,479	26,801	27,028	26,625	28,184	1.6%
Trident Medical Ctr	20,160	20,285	20,136	21,811	23,065	3.4%
Roper Hospital	14,805	13,797	12,403	13,105	13,550	-2.2%
Bon Secours	8,491	8,667	8,608	8,698	9,030	1.6%
East Cooper	4,345	4,721	4,859	5,108	5,238	4.8%
Mount Pleasant Hospital	1,420	1,495	1,642	1,623	1,829	6.5%
Total	**75,700**	**75,766**	**74,676**	**76,970**	**80,896**	**1.7%**

Source: MUHA-Nexton application, p. 35

It would be difficult to envision a situation in which there is less evidence to support the development of a new hospital such as MUHA-Nexton. This project will duplicate existing and approved resources at an unreasonable cost to the health care system.

MUHA's Need Argument

Rather than address any community need, MUHA presents institution-specific arguments in support of its project, which include:

- A large percentage of MUHA' s adult inpatients originate from the Berkeley county area and establishing an acute care hospital in Berkeley County will allow patients to have convenient access to care near their place of work and home.

- Berkeley County is an underserved market in the Tri-County area and only has one acute care hospital planned and under construction to service the entire population.

- Increased demand for inpatient services at MUHA and within the Tri-County service area, resulting in capacity constraints and prolonged boarding hours.

- Flooding on the Peninsula constrains access to MUHA's existing hospital

MUHA's Reliance on Berkeley County

The applicant cites MUHA's historical reliance on the "Berkeley County area." The applicant's internal patient origin data for patients age 16 and older, its target population, indicates that the Moncks Corner subarea, which encompasses most of Berkeley County, provided only 3% of MUHA's inpatient volume in 2017. The North Charleston subarea provided the greatest percentage of MUHA's inpatient volume (18%). The North Charleston subarea includes both SMC and Trident with authorized 437 acute care beds, which provide residents of this area with exceptional access to inpatient care. The Summerville subarea, where MUHA proposes to locate its Nexton hospital, provided only 8% of MUHA's inpatient volume. This subarea also includes the new RSF-Berkeley facility.

Figure 3:
MUHA Adult (Ages 16+) Inpatient Origin FY 2017

MUSC Adult Inpatient Origin		
	FY 17	% of Total
Tri-County	17,272	56%
North Charleston	5,593	18%
Summerville	2,524	8%
West Ashley	2,435	8%
East Cooper	2,221	7%
Sea Islands	2,118	7%
Peninsula Charleston	1,404	5%
Moncks Corner	977	3%
Secondary	6,917	22%
Tertiary	5,278	17%
Outside SC	1,302	4%
Total	30,769	100%

An important question to be answered is: What is the likelihood that patients who currently travel from Berkeley County and other areas from which MUHA-Nexton is projected to serve will actually choose to use a smaller community hospital rather than an established teaching hospital? Based on discharge data for the 12 months ending September 30, 2018, the largest category of patients traveling from Berkeley County to MUHA on the Peninsula are obstetrical patients. MUHA has the region's only Level III neonatal intensive care unit and is a Regional Perinatal Center. Patients who are currently bypassing the obstetric units at Trident and SMC are primarily high risk mothers, who are referred by their physician or hospital due to the Regional Perinatal Center designated services offered by MUHA. The three largest acute DRG categories of patients MUHA serves from Berkeley County are:

- DRG 795 - Vaginal delivery w/o complicating diagnoses
- DRG 765 - Cesarean section w CC/MCC
- DRG 774 - Vaginal delivery w complicating diagnoses

Even mothers who are not diagnosed pre-delivery with complicating diagnoses often choose to seek care at perinatal centers that offer a full range of neonatal services. It is likely that patients who have historically bypassed the convenience of a closer community hospital perinatal program will continue to travel downtown even if MUHA-Nexton opens. MUHA argued vehemently in its opposition to SMC's Level III neonatal intensive care unit application that there is no hardship imposed on mothers who must travel to the peninsula for admission or in transporting neonates who require Level III services. This is in stark contrast to MUHA's current statements in its CON application for a new hospital.

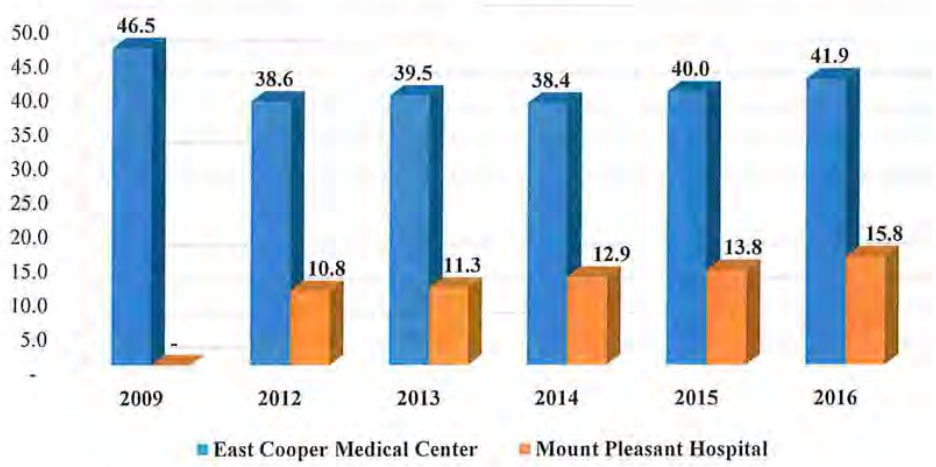
Some patients choose to travel to MUHA for more routine services simply because it is a teaching hospital. MUHA has far overestimated the number of its patients who can be redirected to MUHA-Nexton. At the same time, the applicant has overestimated how far patients from more distant parts of the Tri-County area are willing to travel to a new community hospital in Summerville. The most reasonable expectation is that the new MUHA hospital will compete directly with the hospitals in the local market including SMC, Trident, and RSF-Berkeley, and will draw patients from rural hospital like Colleton Medical Center and the Regional Medical Center for Orangeburg and Calhoun Counties.

The development of MUHA-Nexton in close proximity to RSF-Berkeley will likely result in both hospitals being underutilized. A review of the circumstances that occurred in Mount Pleasant with the opening of Mount Pleasant Hospital is instructive of what to expect in Berkeley County if two new hospitals open there in such close proximity.

East Cooper Medical Center ("East Cooper") applied to construct a replacement hospital and reduce its acute bed complement from 140 to 130 beds. At the same time, Roper St. Francis applied to open a new hospital, Mount Pleasant Hospital with 85 beds, approximately 7 miles north of East Cooper on U.S. 17. Roper St. Francis made the claim that it would seek to serve patients from Mount Pleasant who were travelling to Roper Hospital on the Peninsula and that its project would not adversely impact East Cooper. It also projected that its new hospital would be well utilized within three years of opening.

Neither of these claims was realized. As shown in **Exhibit 5**, during 2012, Mount Pleasant Hospital's first full year of operation, East Cooper's average daily census dropped by approximately 8 patients from its 2009 level, which was before Roper St. Francis began its development efforts for its new hospital. Mount Pleasant Hospital's ADC reached only 10.8 patients in 2012, indicating that the majority of Mount Pleasant Hospital's patients came from East Cooper rather than through redirection from Roper Hospital. Both hospitals have seen only modest growth in utilization since 2012.

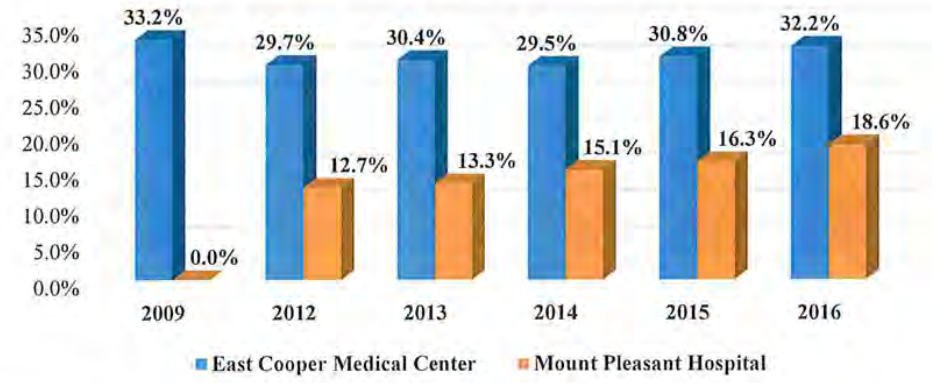
Exhibit 5
East Cooper Medical Center and Mount Pleasant Hospital
Average Daily Census



Source: JARs

East Cooper argued at the time of the review that the approval of Mount Pleasant Hospital would result in two hospitals operating at low occupancy rates in the community. That claim, unfortunately, was correct. Despite a reduction of 10 beds, East Copper's occupancy rate dropped to less than 30% in 2012 only reached 32% occupancy in 2016. Mount Pleasant Hospital has never exceeded 20% occupancy. *See* **Exhibit 6**. These low occupancy rates result in inefficient utilization of the significant capital investments each provider made in new facilities.

Exhibit 6
East Cooper Medical Center and Mount Pleasant Hospital
Occupancy Percent



Source: JARs

If MUHA-Nexton is approved to operate less than 4 miles from RSF-Berkeley, predictably both hospitals will struggle to reach reasonable levels of utilization for the foreseeable future. Once Trident Berkeley Medical Center opens in Moncks Corner, the MUHA-Nexton's impact will be magnified with three new, underutilized hospitals in the area.

Berkeley County is Not an Underserved Market

The applicant claims in several places that Berkeley County is severely underserved; however, it presents no evidence of underservice other than citing two planning documents that do not consider all of the new health care services that are entering the market. The applicant cited the most recent Berkeley County Comprehensive Plan as indicating a lack of health care facilities providing services for the general population in the county. There is a single reference in an appendix to the report that does not consider the two approved acute care hospitals or the two approved FSEDs.

The applicant also discusses the Community Health Needs Assessment (CHNA) completed in 2016 by MUHA, Roper St. Francis, and Trident United Way. This assessment discusses a number of aspects of health care access such as physician shortage and lack of health insurance, but these are not issues that MUHA-Nexton will address. There is no identification of a need for another acute care hospital in the portion of Berkeley County that will have the greatest access to inpatient services in the future with the opening of RSF-Berkeley.

It is premature to make any judgments about the need for a new hospital to serve Berkeley County when two approved hospitals and two new FSEDs that will serve the same local market as MUHA-Nexton have not yet opened. These new approved facilities will bring with them new physicians and services not currently available and will positively impact access to care.

The applicant presents a travel analysis to indicate that patients traveling to MUHA's downtown hospital will have reduced travel times to MUHA-Nexton. This is a one-dimensional analysis that does not consider travel times to all existing and approved hospital providers. Any improvements in travel times would be negligible if RSF-Berkeley, SMC, and Trident were factored into the analysis. Again, MUHA's travel time and accessibility arguments are in complete opposition to the arguments MUHA made recently at the Level III NICU project review meeting and in submissions to DHEC.

Another claim is that the addition of beds at MUHA-Nexton would move lower acuity patients to a new location and provide additional capacity and flexibility for MUHA to accept higher acuity transfers from other hospitals. *See* Application, p. 43. The same objective could be achieved in a far less disruptive manner by simply adding more bed capacity to MUHA's existing hospital.

Increased Demand at MUHA and the Tri-County Market

MUHA argues that utilization of its hospital on the peninsula has been increasing and it has a need for additional capacity. Assuming that this is true, the need for capacity at a regional referral center in downtown Charleston does not lead to a conclusion that 128 new acute beds should be placed in a community hospital in Berkeley County.

With the opening of the Children's Hospital and Women's Pavilion, MUHA will be vacating large areas of its downtown facilities, including beds which currently accommodate inpatients receiving reportedly high quality care and the facility has met licensing standards. Despite MUHA's claims to the contrary, these existing facilities could be renovated at a far lower cost than $325 million to accommodate additional acute care beds and these beds be available to serve MUHA patients from the across Lowcountry rather than placing the beds in an area from which MUHA draws only a small fraction of its patient volume.

The applicant also cites increasing demands on MUHA's existing emergency department as a reason to develop MUHA-Nexton. *See* Application, p. 44. MUHA has already addressed issues with emergency department volume through the construction of a separate pediatric ED at the new Children's Hospital and the CON for the construction of a FSED in Summerville. MUHA-Nexton would be duplicative of these efforts.

Flooding

To support the need for its project, MUHA makes the following claim:

Patients travelling to MUHA's downtown campus for care encounter many unforeseen challenges when it floods. MUHA's campus is located in a major flood zone and when it rains at high tide, this portion of the peninsula shuts down, delaying patient care and inhibiting access points. Furthermore, the outpatient operating rooms at Rutledge Tower are located on the first floor and are always the first part of the building to be affected by the floods. During the recent flood in October 2015, MUHA was forced to shut down four of its operating rooms and approximately 199 surgical cases were cancelled. Similarly, in September of 2017 hospital operations were disrupted and surgical cases were canceled. The new Community Hospital will allow for MUHA to decant cases from the peninsula during severe flooding and prevent the delays in patient care that occur today.

- MUHA application, p. 28.

In a recent review of applications by MUHA and SMC to add Level III neonatal intensive care bassinets, SMC presented information that flooding on the Peninsula created a barrier to care for critically ill infants. SMC specifically addressed the issue of flooded streets making it difficult for ambulances and patients' families to access MUHA's facilities. In response to SMC, MUHA summarily dismissed these concerns at Project Review and subsequently stated: "SMC continues to raise false concern regarding MUSC's ability to provide care during weather emergencies and flooding." *See* MUHA letter to Margaret Murdock, March 19, 2018, p. 5, in **Appendix A**.

It is the height of disingenuousness for MUHA to take the position that flooding on the Peninsula is a basis for approval of a new community hospital in Berkeley County while denying that any such barrier existed for Level III neonates coming from the very same communities that SMC sought to serve. Community hospital patients in most cases are not facing life-threatening situations, which is in contrast to fragile newborns with serious medical conditions.

The Department should give no weight to MUHA's vacillating position on the impact of flooding on patient access.

Projected Utilization

MUHA utilization projections are based on an illogical methodology and ultimately lead to unreasonable results. As noted above, the fundamental premise of MUHA's utilization projection is that MUHA-Nexton will serve patients who historically utilized MUHA and not impact utilization of other providers. For the reasons previously discussed, such an assumption is unsupportable.

Another assumption is that MUHA's historical patients from throughout the Tri-County area would shift to MUHA-Nexton in relation to the patient's ZIP Codes travel time to the new hospital. No consideration was given to the locations of other hospitals or the more limited drawing area for a new community hospital versus a teaching hospital such as MUHA. The expected redirection by travel time assumed in the application is reproduced below. There appears to be an error in the 55% category for patients traveling "10-25 minutes" in that it overlaps with the 65% category for patients traveling "0-15 minutes."

Figure 17:
Assumed MUHA Patient Redirection
Non-tertiary, Adult (Ages 16+) Patients

Scenario 1: Patient Redirection in Year 3	Redirection
0-15 minutes	65%
10-25 minutes	55%
26-40 minutes	35%
41-55 minutes	30%
56-70	10%
All Other: driving 71+ minutes & Secondary Counties	2%

Notes: Drive time source was Google maps, because this application has the most updated roads/traffic lights.

The absurdity of this assumed redirection by travel time can be seen by considering ZIP Codes in downtown Charleston. The applicant assumed that more than one-third of MUHA's patients who reside on the Charleston Peninsula, including those in MUHA's own ZIP Code, 29425, will travel 34 minutes or more to the proposed MUHA-Nexton hospital. *See* Exhibit 7. These downtown residents all live within a few minutes of MUHA and Roper Hospital. These patients would not only have to bypass the downtown hospitals but also Trident and SMC as they travel up I-26 to reach MUHA-Nexton. Given that MUHA's purported need for this project is to improve access to MUHA's existing patients in Berkeley County, there is no rationale for including these downtown ZIP Codes or other more distant ZIP Codes in the subareas identified

as West Ashley and the Sea Islands. The subsequent results of this methodology based on such a fundamentally flawed assumptions are wholly unreliable.

Exhibit 7
Assumed Redirection of MUHA Patients from Charleston Peninsula

ZIP Code	Description	Driving Distance to MUHA-Nexton	Driving Time to MUHA-Nexton	Assumed Shift to MUHA-Nexton
29401	Charleston Peninsula	25.7	39	35%
29402	Charleston Peninsula	25.3	41	30%
29403	Charleston Peninsula	23.4	34	35%
29409	Charleston Peninsula	24.0	36	35%
29413	Charleston Peninsula	24.8	34	35%
29424	Charleston Peninsula	25.3	38	35%
29425*	Charleston Peninsula	24.8	34	35%

*Home ZIP Code of MUHA

Source: MUHA application, Attachment N

The applicant fails to provide detailed projections of utilization by ZIP Code. The only ZIP Code-specific data included is the table in Attachment N, which indicates travel times and assumed percent shift by ZIP Code. A section of this table is illegible, and it is not possible to recreate the applicant's projections.

One element that is missing from the need and utilization discussion in the application is how it was determined that 128 beds were needed in Berkeley County. The ultimate utilization projections, inflated as they are by the inclusion of patients residing far from MUHA-Nexton, reflect only 57% utilization of the 112 medical/surgical and critical care beds and 61% utilization of the 16 obstetrical beds by the third year of operation. Certainly, a smaller facility based on the applicant's own dubious projections would be more efficiently utilized. These projections give no consideration to the new hospitals with which MUHA-Nexton must compete, which will inhibit MUHA's ability to build volume. There is simply no basis to conclude that a 128-bed hospital as proposed will achieve a reasonable level of utilization or justify the expenditure of $325 million.

5. Distribution (Accessibility)

As discussed above, MUHA's project does not improve the distribution of or increase access to hospital services. RSF-Berkeley will be located just a few miles away. There will be additional inpatient capacity at SMC, and eventually Moncks Corner as well. The applicant's utilization

projections assume that patients will be traveling long distances from throughout the Tri-County area to utilize MUHA-Nexton, which undermines any argument that the project is addressing an access issue.

MUHA's true goal, like that of its freestanding ED and radiation therapy projects in the Summerville area and its pediatric ambulatory surgery center and diagnostic center in North Charleston is to capture market share from its competitors. While MUHA claims that it seeks only to redirect its existing patients to MUHA-Nexton, that claim is neither credible nor realistic.

6. Financial Feasibility

MUHA has failed to demonstrate the financial feasibility of its project. As discussed below, MUHA is highly leveraged with long-term debt, which calls into question its ability to complete the project. In addition, MUHA currently has in progress or development $800+ million in health care facility projects.

The financial projections presented in MUHA's application are based on unsupported assumptions. As discussed above with respect to Community Need, the projection model that MUHA employed is seriously flawed. MUHA's patient shift analysis and its financial projections are not reasonable, and therefore the project's financial feasibility is uncertain. It is likely that the project will experience net losses for several years after opening based on more realistic expectations of the patient volumes that it would serve.

7. Ability to Complete the Project

MUHA's ability to fund this project in light of its existing and planning obligations is questionable. MUHA has been aggressively pursuing a wide range of new facility projects in recent years in an effort to gain market share outside the Peninsula, with a particular focus on expansion into North Charleston and Berkeley County. The development of the MUHA-Nexton hospital is a further extension of these efforts to capture market share from other providers as it expands its geographic footprint.

These efforts come at a considerable cost, as shown in **Exhibit 8**. MUHA has commitments to major projects already receiving CON approval totaling $487 million. With the addition of the Nexton hospital, the total capital projects just for new facilities (excluding MUHA's internal capital needs) will rise to $812 million.

Exhibit 8
Medical University Hospital Authority
Major Capital Projects

Project		Project Costs
Shawn Jenkins Children's Hospital and Women's Pavilion	$	366,397,822
MUHA North Charleston Pediatric Imaging Center		39,802,936
MUHA North Charleston Pediatric Ambulatory Surgery Center		26,389,808
Mount Pleasant Surgery Center		9,020,389
MUSC Musculoskeletal Institute		36,020,321
Expand Radiation Oncology Services to Berkeley County		9,020,389
Total Approved Project Costs	$	486,651,665
MUHA-Nexton Hospital	$	325,000,000
Total Capital Commitments*	**$**	**811,651,665**

*In addition, MUHA is a joint venture partner in the CON application for a new hospital in Beaufort County, currently under review, with a total cost of $36 million.

Source: DHEC website

Appendix U to the application includes a letter from Armadale Partners, which is working with MUHA to secure FHA financing to fund the project. This letter states in pertinent part regarding the ability to obtain funding for this project:

> *Ultimately a feasibility study will be performed in accordance with HUD requirements as part of the HUD application process. MUHA has had a long and successful relationship with HUD and ACI is confident that MUHA will meet or exceed HUD's loan underwriting guidelines for the Project. Notwithstanding the foregoing, MUHA and ACI recognize that there is no guarantee that HUD will ultimately issue a mortgage insurance commitment for the proposed financing.*

The equivocal nature of this commitment is understandable given the significant debt burden that MUHA is currently carrying.

According to its audited financial statements as of June 30, 2017, Medical University Hospital Authority (MUHA) had outstanding long-term indebtedness that totaled $406 million, including both current and non-current components. The majority of this debt was supported by credit enhancements provided by the U.S. Department of Housing and Urban Development (HUD) through the Federal Housing Administration (FHA) 242 Hospital Mortgage Insurance Program. As a result, the quality of the indebtedness was assured by the FHA and was not subject to independent ratings analysis, as provided by Standard and Poor's, Moody's, or Fitch.

The criteria that the ratings services employ to evaluate a health care facility's credit are well known and result in an assignment of a single measure of credit worthiness. This measure ranges from 'AAA' through 'BBB' and Speculative (unrated) and provides an indication of what interest rate is appropriate to balance the risk associated with an investment in the credit or of what covenants need to be included in the loan agreement to protect the investor. In addition, the assignment of a rating is used by financial institutions as fiduciaries to assess whether the credit is appropriate to be added to an investment portfolio, given its objectives and constraints.

Generally, the rating criteria are separated into two components.

- Statement of operations, which measure the management of revenue and expenses and, in particular, the ability of the entity to service its financial obligations.
- Balance sheet, which reflects the amount of debt in relation to its accumulated resources and provides an indication of the amount of debt relative to accumulated reserves of the entity.

In this analysis, the rating criteria of Standard and Poor's for health care systems in the year 2016 have been compared to the financial condition of MUHA as reported in audited financial statements for the fiscal years ended June 30, 2015 through 2017.

A table summarizing MUHA's balance sheets and statements of change in net position is included as **Appendix B**. The financial indicators associated with summary rating categories, 'AA', 'A', 'BBB', and 'Speculative Grade' and how MUHA's financial performance compares to these indicators is presented in **Appendix C**. For each rating criterion a range of values indicates which rating category would apply to a bond issue of MUHA.

MUHA is extremely highly leveraged. The capitalization of a health care system is the sum of its long-term debt and fund balance (net position). As the information presented in the table above shows, investment grade organizations have long-term debt to capitalization ratios less than 50%, MUHA's long-term debt to capitalization ratio exceeds 100 percent, which is possible only because MUHA's balance sheet shows a negative fund balance.

MUHA has relatively small cash reserves. Its ratio of unrestricted reserves to long-term debt has ranged from 28.3% to 53.0% over the past three years compared to 92.9% to 204.7% for investment grade debt issues. These limited cash reserves indicate that MUHA will be relying primarily on debt to fund this project as well as the many other capital expenditures it has planned.

While MUHA has been profitable over the past several years, its balance sheet indicators suggest that it can assume more debt only by further burdening its operations with increasing debt service obligations. MUHA's net income is $28.6 million below budget for the eight months ending February 28, 2018. See MUHA's Notes to the Interim Financial Statements, attached as **Appendix D**. Given that MUHA operates on very thin margins, its proposal to build a $325 million hospital given all of its other financial obligations and projects is not financially responsible, especially as interest rates are expected to rise in the coming years.

As a state-owned organization, the ultimate responsibility for maintaining the financial stability of MUHA will fall to the taxpayers of South Carolina. There is simply no reason to place additional financial demands on MUHA for a project that is not needed.

8. Construction Costs and Methods

MUHA makes no effort to explain why a capital expenditure of $325 million for a 128-bed community hospital, is reasonable. On a per bed basis, this project would be the most expensive new hospital project ever approved in South Carolina. To put into context the proposed costs of the MUHA-Nexton project, one need only to consider MUHA's Children's Hospital and Women's Pavilion that is under construction currently. **Exhibit 9** compare the square footage and costs of the Children's Hospital and MUHA-Nexton projects.

Exhibit 9
Comparison of MUHA Project Costs
Children's Hospital vs. MUHA Nexton

	Children's Hospital and Women's Pavilion	MUHA-Nexton
Beds*	225	128
Square Footage	649,485	311,211
Construction Costs	$ 207,492,286	$ 167,315,646
Construction Cost per Square Foot	**$ 319.47**	**$ 537.63**
Total Project Costs	$ 366,397,822	$ 325,000,000
Total Project Cost per Square Foot	**$ 564.14**	**$ 1,044.31**
Total Project Cost per Bed	**$ 1,628,434.76**	**$ 2,539,062.50**

Source: CON applications

MUHA-Nexton's proposed cost is dramatically higher than the Children's Hospital even though the Children's Hospital is a 12-story facility being constructed on the Peninsula with specialized units and ancillary areas. Among the key differences:

- MUHA-Nexton's construction cost per square foot is 68% higher.
- MUHA-Nexton's total project cost per square foot is 85% higher.

As another point of comparison, HCA built a new 146-bed hospital in Northern Virginia, a high construction cost area. The project was completed in 2015 at a cost $139.5 million excluding land. The HCA project also included a 100,000 square foot medical office building. MUHA's project cost excluding land is $315 million, nearly 2.5 times higher.

There is no justification for expending so much for a hospital that meets no need and adversely impact existing providers.

9. Adverse Impact

The applicant makes the claim that "MUHA's Community Hospital will have no impact on existing facilities due to high demand and an already staggering lack of patient access." *See* Application, p. 48. MUHA is well aware that there are two approved acute hospitals in Berkeley County, one FSED in Moncks Corner, and two approved FSEDs in close proximity to the MUHA-Nexton site. Moreover, as discussed above, MUHA-Nexton is expected to draw a high percentage of its patients from outside of Berkeley County from areas closer to the existing hospitals such as Trident and SMC.

MUHA makes the unsubstantiated claim that growth rates of existing hospitals indicate that they will not be impacted by the MUHA-Nexton project. *See* Application pp. 10 and 32. With 30 new beds at SMC and 50 beds at RSF-Berkeley opening in the next year, the total number of acute care beds in the area MUHA-Nexton proposes to serve will increase by 21.3% (based on 94 existing beds at SMC and 313 at Trident). The proposed 128 beds for MUHA-Nexton would represent another 31.5% increase in bed capacity over the current inventory in the local market. There is no credible projection that would support a 52.8% (21.3% + 31.5%) increase in acute care bed utilization over the next five years.

SMC and Trident are the largest existing providers of inpatient and outpatient services to the areas closest to MUHA-Nexton and from which the new hospital will draw the majority of its patients. Based on data for the 12 months ended September 30, 2017, Trident Health's two hospitals served 48% of the inpatients in Berkeley County and 57% of the Dorchester County inpatients. Trident Health will already be impacted by the opening of RSF-Berkeley, and the addition of another facility more than twice that size in essentially the same location will have an even more profound impact on Trident Health's operations.

The impact of MUHA-Nexton will not be limited to lost volume alone. The staffing budget for MUHA-Nexton calls for 368 FTEs in year 2023 and 613 FTEs by 2025. *See* Application, p. 59 and Attachment V. MUHA's efforts to hire this large number of staff will create a significant strain on other area hospitals in recruiting qualified staff, particularly after the expansion of SMC and the RSF-Berkeley opening in 2019.

As is well known, South Carolina has a nursing shortage, which means MUHA will likely go after existing area providers' staff. This will not only affect quality of care, but also the costs associated with healthcare staffing will increase. For more information on this, please see https://www.wspa.com/news/sc-has-critical-shortage-of-nurses/896609394. Also, the South Carolina Hospital Association list workforce development as one of its top priorities. In fact, the

nursing shortage is so dire, MUHA is currently conducting out-of-state job fairs to find nursing staff, and is using traveling nurses to fill nursing positions, as are all the other hospitals in the Tri-County area.

We appreciate the opportunity to submit these comments, and we would urge the Department to deny this costly, unneeded project.

Sincerely,

Daniel J. Sullivan
President

Attachments

Appendix A
MUHA Letter to DHEC
Re: Summerville Medical Center Level III NICU Project

LEVITT
healthcare
affiliates

March 19, 2018

Ms. Margaret "Maggie" Murdock
Director, Certificate of Need (C.O.N.) Program
South Carolina Dept. of Health & Environmental Control
2600 Bull Street
Columbia, SC 29201

RE: Medical University Hospital Authority d/b/a MUSC Shawn Jenkins Children's Hospital, Level III NICU Bassinets, Application No. 2461

Trident Health – Summerville Medical Center, Level III NICU Bassinets, Application No. 2505

Dear Ms. Murdock:

This letter, written on behalf of Medical University Hospital Authority d/b/a MUSC Shawn Jenkins Children's Hospital ("MUSC SJCH" or "SJCH"), serves to respond to items raised in the letter submitted February 20, 2018 by Trident Health – Summerville Medical Center ("Trident" or "SMC"). Several issues were presented in their letter that we felt warranted comment.

Articles
A February 21 letter from MUSC's counsel to DHEC included eight articles (Exhibits D1-8), three of which the Trident letter criticizes. All eight, however, undermine Trident's position. All eight support the concept of regionalization, as that concept is applied in the South Carolina Health Plan and Regulation 61-16. Furthermore, the articles show a strong link between high-volume NICUs and lower mortality rates for Very-Low-Birth-Weight ("VLBW") babies.

1. Wehby, *Medical Care* (Ex. D4)

The Wehby study found that VLBW infants were 3.5 times as likely to die at moderate-volume NICUs and 5.4 times as likely to die at low-volume NICUs than at high-volume NICUs. *Id.* at 714. Said another way, of the 136 infants in the Wehby study who died in low-volume hospitals, 87 (64%) would have survived in a high-volume facility. Of the 250 who died in moderate-volume hospitals, 138 (55%) would have survived in a high-volume facility. *Id.* at 719. Trident criticizes the Wehby study for being limited to one state. "Therefore," writes Trident, quoting from the Wehby article, "it is important to replicate this study in larger samples from other states." Replication, in fact, has occurred, as shown by the other articles submitted by MUSC. Studies with sample sizes ranging from 20,000 to 65,000 VLBW or preterm infants in other states and England confirm the key findings of Wehby that high-volume providers save infant lives.

2. Phibbs, *New England Journal of Medicine* (Ex. D8)

The Phibbs study (Ex. 8), which was based on ten years of data, confirmed the "many studies" that previously had shown "a lower mortality rate in hospitals with higher volumes." *Id.* at 2166. Phibbs found that the "odds ratios [for death] decreased as volume increased within each level of care . . . ." *Id.* at 2168. The study concluded that de-regionalization "has resulted in increasing numbers of high-risk newborns receiving care in low-volume units . . . ." *Id.* at 2166. Increased regionalization "could prevent 21% of deaths among [VLBW] infants." *Id.* at 2173.

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The Trident letter claims that Phibbs used "the worst possible study design imaginable." The Phibbs article, however, was published in the New England Journal of Medicine, one of the world prestigious medical journals and one whose reputation was not built on publishing articles that employ poor study designs.

Trident criticized the Phibbs study because it showed a stronger relationship between volume and mortality than did studies conducted by the Vermont Oxford Network ("VON"). The Phibbs article acknowledged that its results showed stronger relationships between mortality and volume than did VON studies, but offered a plausible explanation: the Phibbs data included a broader sampling of hospitals. *Id.* at 2173. Moreover, a fundamental difference exists between the Phibbs database and those used by VON. The Phibbs study, like the other studies relied on by MUSC, uses population-based data, meaning that it examines ***all*** data in a given population. VON studies, by contrast, are self-selected, meaning they examine certain ***selected*** data in a population, specifically, data from VON members. For this reason, population-based studies are generally more reliable than self-selected studies.

3. Chung, *Medical Care* (Ex. D6)

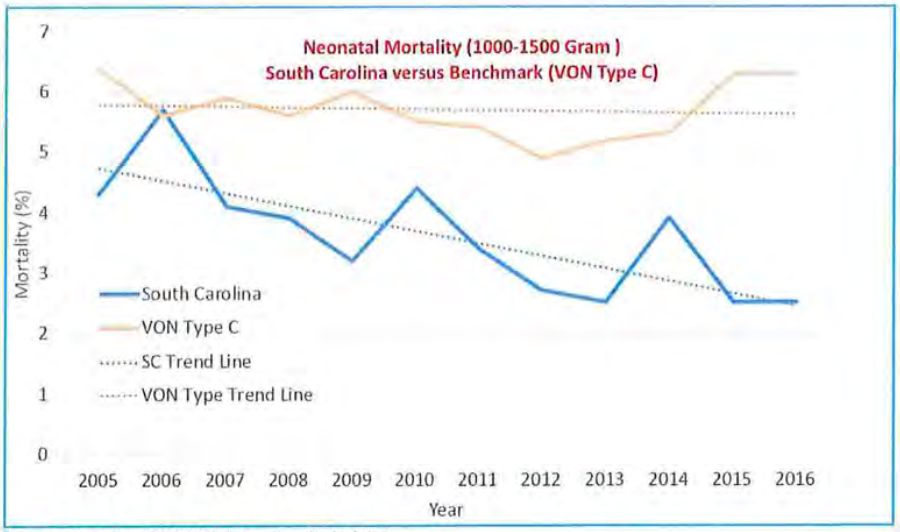
"The most significant finding" of the 2010 Chung study was that volume is more important than level of care in reducing neonatal risk. *Id.* at 642. Chung found that, for every 30 VLBW deliveries shifted to a high-level, high-volume NICU, one death could be averted. *Id.*

Trident criticizes both Chung and Phibbs for using data from the 1990s, but two of the articles Trident submitted also rely on 1990s data. Trident further criticizes Chung for assigning outcomes to birth hospitals, even though that is standard practice. Trident refers to "later studies" assigning outcomes to receiving hospitals for transfers prior to 3 days of age. Such studies, however, typically are conducted to evaluate complications of care and are not applicable to the question at hand, which is this: does South Carolina's current perinatal system protect the lives of VLBW infants, or should it be de-regionalized so that low- and moderate-volume providers, like Summerville, may treat high-risk neonates?

The eight articles submitted by MUSC, ranging from 2007 to 2015 representing the weight of clinical opinion today, provide the answer. The results of these articles are consistent over time and multiple locations. They rely on strong, population-based methodologies to show that high volume NICUs reduce death rates for VLBW infants.

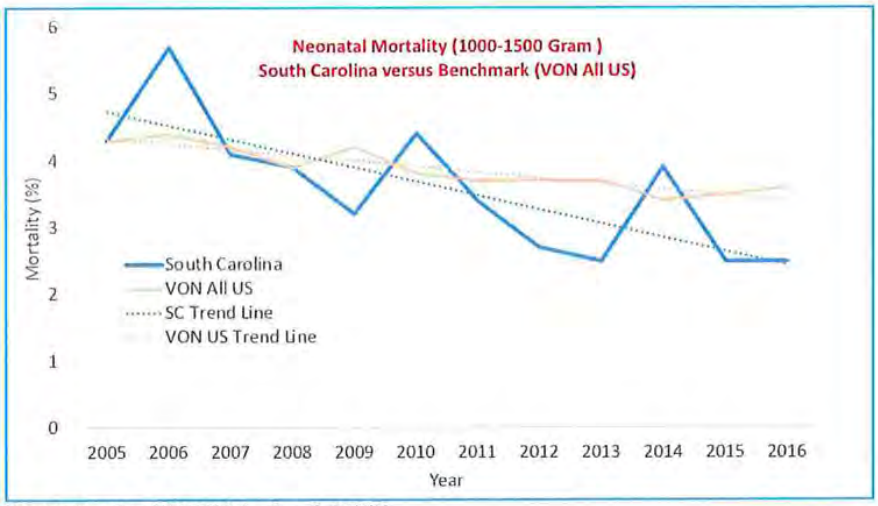
Although SMC claims that South Carolina's regionalized system has not improved VLBW mortality for infants with birth weights of 1000-1500 grams, the facts show otherwise. Since 2005 mortality for this subset of VLBW babies has fallen at a greater rate in South Carolina than nationally for members of the Vermont Oxford Network. The following graphs illustrate this fact.

Figure 1



Source: Data from VON Nightingale pulled 3/7/18

Figure 2



Source: Data from VON Nightingale pulled 3/7/18

Both Projects Cannot Be Approved
As mentioned in our previous submission and contrary to SMC's stated opinion, MUSC is not seeking approval for beds in excess of the calculated need in the plan. **SMC** is asking for beds beyond the calculated need in the plan. As a Level II provider, SMC does not qualify to seek that exception. MUSC's CON application was filed in September of 2017, while SMC's application wasn't submitted until the following month (October 2017). The MUSC application will meet all the projected need in the plan. Approval of the SMC application would require SMC to seek beds in excess of the published need.

SMC referenced MUSC's historically high level of utilization of the existing bassinets as evidence that **20** additional bassinettes are needed in the region. However, they are only applying for 6 not 20. The need methodology in the plan accounts for existing capacity and utilization and has calculated the need to be 14. With the approval of the 14 requested bassinets, MUSC's utilization is projected to be at a manageable level.

Approval of the SMC project would dilute the volume of NICU patients treated at MUSC and have a negative impact on services. **ALL** patients treated by SMC would have otherwise been treated at MUSC. SMC has not attempted to quantify the adverse impact on MUSC because it undeniable. SMC has not identified any barrier to care or an issue with the quality of care provided at MUSC. The proposed SMC project is not needed. Approval of both projects would exceed the need in the plan, therefore the projects are competing. MUSC's proposed project is the superior alternative that meets all applicable review criteria.

Community Need
Throughout all the SMC information submitted to DHEC, they have failed to acknowledge that 100 percent of their projected utilization will come from MUSC. SMC's 6 "Reasons for Approval" do not rise to the level of demonstrating need for their project.

1. *"Level III NICU bassinets in Region V are highly utilized"*

   MUSC has applied to expand their compliment of bassinets to remedy this fact.

2. *"Existing Level III NICU services are concentrated in a single location"*

   Concentrating services within a planning are is the very nature of regionalized healthcare. The central location of MUSC within Area V makes services accessible to patients and providers in the area. SMC's proposed project, approximately only 30 minutes from MUSC, does not remedy any perceived geographic access barrier.

3. *"Access to Level III NICU care will be enhanced through developing a regionalized, rather than centralized, system of care."*

   This "reason" is a restatement of item #2 above.

4. "*A program at SMC will reduce the risks associated with transporting medically fragile infants as well as high-risk mothers."*

   As discussed at the Project Review Meeting, MUSC has some of the most advanced pediatric transport capabilities and resources in the state. Care begins when the MUSC transport team arrives at the referring facility. Concern over risks associated with transport are unfounded and have not been demonstrated.

5. *"SMC's program will avoid separation of mothers and infants."*

   All Regional NICU providers take this factor into account and are acutely aware of this issue. In order to provide regionalized NICU services, infant and mothers are sometimes separated for a period of time for care. Back-transport and other accommodations are made to limit or minimize this factor. Approval of SMC's project would only address separation of mother and infants where the mothers deliver at SMC and only SMC. If mothers are transferred prior to delivery to MUSC, this perceived issue would be nonexistent.

6. *"A second program will reduce travel time, costs, and hardships for families, many of whom have limited resources."*

   SMC is only approximately 30 minutes from MUSC. For a large portion of SMC's proposed service area, reduction in travel times are not materially improved by their proposed project.

Overall these 6 factors do not demonstrate need for SMC's project nor demonstrate a "Community Need" for additional bassinettes.

Role of SMC's Level III Bassinettes
SMC outlined in their submittal a long list of neonatal patients that would still require transfer and treatment at MUSC. Is appears that while SMC is attempting to avoid separating mothers and babies, as well as remedy all the other "reasons" for approval of their application, they have admitted that their proposed service will in fact not achieve that goal. SMC's argument that geographic barriers exist in the Charleston market seems counter to their proposed continued referral to and collaboration with MUSC.

Flooding as a Barrier to Care
SMC continues to raise false concern regarding MUSC's ability to provide care during weather emergencies and flooding. The design of the Shawn Jenkins Childrens Hospital (SJCH) clearly contemplated and planned for such conditions.

In severe weather conditions, all hospitals in the regional will be impacted. It is important to note that flooding in not an issue isolated to the peninsula of Charleston. During the 2016 Hurricane Mathew incident, the governor of South Carolina called for **ALL** residents within **100 miles** of the coast (which included Summerville) to evacuate. During the 2017 Hurricane Irma incident many areas of inland Charleston, Berkeley and Dorchester counties also experienced flooding and access issues. **Attachment 1** includes an article that describes a resident of North Charleston, in labor, having access issues to Trident Medical Center for obstetrical services.

Purpose of the CON Program
The purpose of the CON program is to promote cost containment, prevent unnecessary duplication of health care facilities and services, guide the establishment of health facilities and services which will best serve public needs, and ensure that high quality services are provided in health facilities in the State. However, SMC's proposed project does not meet these purposes:

- **Cost Containment**—An additional Level III provider in the market would not promote cost containment and economies of scale would not be achieved through the proposed project. Furthermore, developing such a specialized, costly program for only six Level III bassinets results in unnecessary costs.
- **Unnecessary Duplication**—The proposed SMC project unnecessarily duplicates existing specialized services available at MUSC. Again, this results in unnecessary costs.
- **Public Needs**—MUSC has always been the regional provider and met all complex neonatal needs.
- **Quality**—Quality has never been an issue at MUSC.

Conclusion

The need for the proposed project has been demonstrated throughout the project review process and Certificate of Need application. The proposed MUSC project will relieve existing capacity constraints for Level III NICU services while promoting the long-term pediatric expansion envisioned in the hospital's master plan in a cost-effective manner. MUSC strives to provide an optimal environment for high quality NICU care, and the proposed project will significantly enhance the care provided to this patient population. Additionally, the MUSC proposal will enhance access and the delivery of care to residents in the area while not adversely impacting existing providers. These factors, coupled with MUSC's ability to more effectively serve its service area residents by increasing access and availability of Level III NICU services, support the need for the project. As such, the proposed project should be approved.

The need for SMC proposed project has not been established, compliance with the review criteria has not been demonstrated and approval would exceed the need in the State Health Plan. The SMC CON application must be denied.

I appreciate your diligent review of the information presented in this letter. If you have any questions, please feel free to contact me at 843-379-9372.

Sincerely,

David S. Levitt
Managing Principal

Attachment 1

Woman in labor travels via canoe to deliver baby at SC hospital

October 08, 2015 | Print | Email

A pregnant woman in South Carolina was transported to her local hospital in a canoe through rising floodwater after she went into labor in her home, according to a CBS News report.

Tyshenequia McLean delivered a healthy baby boy Sunday at Charleston, S.C.-based Trident Medical Center. She went into labor in her North Charleston home, which was surrounded by waist-high floodwater.

Firefighters arrived at her home with a canoe. They pulled her along until they reach dry land, where a waiting ambulance transported her to the hospital.

"I can honestly say in 15 years I think that's the first patient I've ever had that came to Trident via canoe," said Erin LaRoche, a registered nurse at Trident Medical Center, according to the report.

More articles on news and analysis:
NJ nurse administering flu shots accused of reusing syringes
Epic, athenahealth high performers in MU attestation; Allscripts shuffles leadership; Cerner conference kicks off Sunday — 12 health IT key notes
Allscripts promotes CFO to president, extends CEO Paul Black's contract

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To receive the latest hospital and health system business and legal news and analysis from *Becker's Hospital Review*, sign-up for the free *Becker's Hospital Review E-weekly* by clicking here.

Appendix B:
MUHA Historical Financial Information

Medical University Hospital Authority
Financial Statements
Years ended June 30,

Statement of Net Position

	2015	2016	2017
Assets and Deferred Outflows			
Current assets:			
Cash and cash equivalents	$ 117,725,317	$ 107,833,556	$ 215,160,012
Cash restricted for capital projects and major programs	16,568,662	40,151,522	42,423,262
Investments restricted for capital projects and major programs	9,993,605	15,057,095	19,939,220
Patients accounts receivable			
Gross patients accounts receivable	269,823,069	287,560,936	295,258,349
Allowance for uncollectible accounts, approximately	(86,800,000)	(88,600,000)	(79,600,000)
Net patients accounts receivable	183,023,069	198,960,936	215,658,349
Due from third-party payors	7,860,846	17,929,078	8,582,273
Other current assets	50,056,012	64,689,279	55,555,553
Total current assets	385,227,511	444,621,466	557,318,669
Investments held by trustees under indenture agreements	47,284,017	52,356,374	51,460,891
Investments In joint ventures and partnerships	-	-	162,706
Capital assets, net	509,198,425	512,516,286	556,737,311
Total assets	941,709,953	1,009,494,126	1,165,679,577
Deferred outflows	88,010,521	98,356,614	161,804,958
Total assets and deferred outflows	**$ 1,029,720,474**	**$ 1,107,850,740**	**$ 1,327,484,535**
Liabilities, Deferred Inflows and Net Position			
Current liabilities:			
Current installments of long-term debt and capital lease obligations	$ 17,787,496	$ 21,460,829	$ 22,260,398
Accounts payable	56,462,414	63,742,372	68,426,322
Accrued payroll, withholdings, and benefits	60,811,965	69,205,019	68,148,182
Liabilities payable from current restricted assets	-	-	8,703,844
Due to related parties	6,345,551	7,037,419	11,736,625
Due to third-party payors	2,801,341	5,049,668	
Other accrued expenses	5,471,151	5,416,800	14,515,649
Unearned revenue	-	-	521,859
Total current liabilities	149,679,918	171,912,107	194,312,879
Long-term debt and capital lease obligations net of current liabilities	368,617,611	359,323,624	383,598,928
Net pension liability	570,493,064	645,307,236	746,860,160
Other liabilities	-	-	7,229,315
Total liabilities	1,088,790,593	1,176,542,967	1,332,001,282
Deferred inflows	48,227,260	1,153,583	878,235
Total liabilities and deferred inflows	1,137,017,853	1,177,696,550	1,332,879,517
Net position:			
Net investment in capital assets	158,526,772	164,574,408	172,453,992
Restricted:			
Under indenture agreements	47,284,017	52,356,374	51,460,891
Capital projects	-	25,000,000	23,839,082
Major programs	27,062,267	30,758,617	29,819,556
Unrestricted (deficit)	(340,170,435)	(342,535,209)	(282,968,503)
Total net position	(107,297,379)	(69,845,810)	(5,394,982)
Total liabilities, deferred inflows, and net position	**$ 1,029,720,474**	**$ 1,107,850,740**	**$ 1,327,484,535**

Medical University Hospital Authority
Financial Statements
Years ended June 30,

Statement of Revenues, Expenses and Changes in Net Position

	2015	2016	2017
Operating revenues:			
Patient service revenue			
Gross patient service revenue	$ 1,390,721,978	$ 1,430,007,581	$ 1,453,183,139
Provision for uncollectable accounts	(159,221,000)	(128,683,666)	(83,116,441)
Net patient service revenue	1,231,500,978	1,301,323,915	1,370,066,698
Other revenue	26,301,004	25,333,565	31,384,513
Total operating revenues	1,257,801,982	1,326,657,480	1,401,451,211
Operating expenses:			
Compensation and employee benefits	520,199,569	554,624,082	570,284,785
Pension benefits	-	13,311,228	33,791,979
Services and supplies	631,910,527	679,934,296	684,571,224
Depreciation and amortization	60,666,452	63,840,599	66,267,743
Total operating expenses	1,212,776,548	1,311,710,205	1,354,915,731
Operating income	45,025,434	14,947,275	46,535,480
Nonoperating revenue (expense):			
State appropriations	20,000,000	42,000,000	29,000,000
Gifts and grants	1,392,082	549,999	25,982,108
Investment income	2,053,755	4,377,443	(1,439,526)
Interest expense	(15,893,550)	(15,388,607)	(18,294,818)
Loss on disposal of capital assets	(4,011,288)	(7,296,642)	(1,547,621)
CHWP debt issuance cost	-	(737,899)	(5,167,360)
Other nonoperating expenses	(1,000,000)	(1,000,000)	(1,565,463)
Total nonoperating revenue (expenses)	2,540,999	22,504,294	26,967,320
Income before payments to MUSC and UMA	47,566,433	37,451,569	73,502,800
Nonoperating expense - payments to MUSC and UMA	-	-	(9,051,972)
Increase in net position	47,566,433	37,451,569	64,450,828
Net position, beginning of year	(154,863,812)	(107,297,379)	(69,845,810)
Net position, end of year	$ (107,297,379)	$ (69,845,810)	$ (5,394,982)

Appendix C:
Comparison of MUHA Financial Indicators

U.S. Not-for-Profit Health Care System Medians by Rating Level - 2016

	AA	A	BBB	Speculative Grade	MUHA 2015	MUHA 2016	MUHA 2017
Sample Size	63	67	13	3			
Statement of Operations							
Net patient revenue (NPR: $000)	2,366,500	1,998,885	1,391,263	1,134,945	1,231,501	1,301,324	1,370,067
Salaries & benefits/NPR (%)	56.6	57.5	59.1	63.7	42.2	42.6	41.6
Maximum annual debt service coverage (x)	5.2	3.7	2.3	0.3	4.0	3.7	2.8
Operating lease-adjusted coverage (x)	3.8	2.9	1.9	0.6	4.0	3.7	2.8
Debt burden (%)	2.1	2.4	2.6	2.8	2.1	2.0	3.2
EBIDA ($000)	360,200	189,427	89,115	4,893	124,126	116,681	149,013
Nonoperating revenue/total revenue (%)	1.2	1.2	1.0	(0.2)	0.2	1.7	1.9
EBIDA margin (%)	11.4	9.4	5.7	0.4	9.7	8.5	10.2
Operating EBIDA margin (%)	10.2	8.4	5.2	0.6	8.4	5.9	8.0
Operating margin (%)	3.9	2.3	(0.9)	(3.3)	3.6	1.1	3.3
Excess margin (%)	6.6	3.3	0.2	(3.5)	3.8	2.8	4.6
Capital expenditures/depr. & amort. Exp (%)	128.5	126.7	95.8	76.4	68.8	96.7	128.1
Balance sheet							
Average age of plant (years)	9.9	11.1	10.3	13.2	8.9	9.0	8.9
Cushion ratio (x)	30.2	18.8	11.7	4.3	4.3	4.0	4.6
Days' cash on hand	264.4	168.6	115.8	53.6	36.8	31.2	60.1
Days in accounts receivable	49.1	47.6	44.0	51.6	54.2	56.0	57.5
Cash flow/total liabilities (%)	17.0	12.0	6.6	(0.2)	9.5	8.6	9.8
Unrestricted reserves ($000)	2,144,798	982,547	494,797	169,339	117,725	107,834	215,160
Unrestricted reserves/long-term debt (%)	204.7	146.2	92.9	29.3	30.5	28.3	53.0
Long-term debt/capitalization (%)	27.0	37.6	47.0	69.5	141.1	124.1	101.4
Pension-adjusted long-term debt/capitalization (%)	30.4	42.6	50.7	69.8	112.9	107.5	100.5

Source: Standard and Poor's, August 24, 2017

ROA 000435

Appendix D:
MUHA Interim Financial Statement 12/28/18

Statement of Revenues, Expenses, and Changes in Net Assets:
For the eight months ended February 28, 2018 and 2017
Actuals Compared to Budget

As of February 2018, MUHA's net income is $28.6 million below budget. The following drivers (YTD) explain this variance:

- Inpatient surgeries are 2.5% below budget;
- Outpatient surgeries are 2.2% below budget
- Case Mix Index is 1.9% below budget;
- Children's gross revenues are $9.8 million below budget, Heart and Vascular's gross revenues are $7.1 million below budget, Anesthesia gross revenues are $5.5 million below budget, and Therapies are $6.8 million below budget.
- Additional pension expense of $3.2 million
- Pharmaceutical costs are $4.1 million over budget
- Medical supplies are $4.6 million over budget

Net patient service revenues are below budget by 0.1%, mainly due to our overall Case Mix Index being 1.9% below budget. The Case Mix Index decrease correlates with our IP surgeries finishing 2.5% below budget.

Total operating expenses finished above budget by $26.4 million. Compensation and benefits are $7.6 million over budget. This is mainly due to FTE's per Adjusted Occupied Bed on a case mix adjusted basis finishing over budget by 1.8%, which correlates to 65 FTE's. Services and supplies are $20.2 million over budget, mainly due to purchased outside services being over budget by $7.9 million, pharmaceutical costs being over budget by $5.6 million, medical supplies being over budget by $5.6 million, and Telehealth expenses being $4.7 million over budget.

As of February 2018, the operating income is $27.3 million under budget. For the month of February, operating income is $8.9 million below budget, mainly due to the same drivers listed above.

Investment income is $1.3 million below budget. With the federal Reserve beginning to increase interest rates in the short-term, it has negatively impacted the market valuation of the fixed rate securities in our mortgage reserve funds.

Unusual and non-recurring items impacting current month earnings:

The Authority received $3 million in December 2017 of State Appropriations for the Adult Burn Unit. $1.5 million of these funds have been recognized as Non-operating revenue in the month of December 2017 and the remainder will be recognized pro-rata for the remainder of the fiscal year.

Statement of Revenues, Expenses, and Changes in Net Assets:
For the eight months ended February 28, 2018 and 2017
Actuals Compared to Prior Year

Operating Revenues:

Net patient revenue is up 3.8% from the same period last year. Inpatient census is up 1.9% compared to last fiscal year. February's ADC increased to 707 from the 706 census we saw in January, and is 0.3% higher than February last year. ER visits are up 0.7%. Inpatient surgical cases are down 1.0% and outpatient surgical cases are up 0.5%. 275 transplant cases have been performed for the fiscal year compared to 257 for last fiscal year – a 7.0% increase.

On a volume adjusted basis (adjusted discharges), net patient revenue is down 3.1% at $19,788 per case. The following drivers account for this variance:

- February's year-to-date Case Mix Index was 2.6% below prior year;
- Children's gross revenues are $9.8 million below budget, Heart and Vascular's gross revenues are $7.1 million below budget, Anesthesia gross revenues are $5.5 million below budget, and Therapies are $6.8 million below budget.
- Pharmacy is over prior year by $4.4 million year to date. Medical supplies are over prior year $6.5 million year to date; labor costs are over prior year $10.6 million year to date.

Other revenues increased 17.6% or $3.5 million over the same period last year.

Operating Expenses:

When compared to last fiscal year, salaries and benefits increased $18.1 million or 4.8%. This increase mainly relates to the merit increase and additional FTEs. Paid FTEs are up 96 from the same period last fiscal year. The average hourly rate is up 3.4% from the same period last fiscal year. Compensation costs (including benefits and excluding pension expense) are 42.9% of net patient revenue. FY 17 costs were 42.5% of net patient revenue.

Services and supplies are up $31.9 million or 7.2% compared to last year. The following explain the majority of this variance:

- Pharmaceuticals are $4.4 million or 5.2% higher;
- Medical Supplies are $6.5 million or 5.6% higher;
- College of Medicine expenses are $9.4 million or 23.1% higher;
- Resident support expenses are $1.1million higher;
- Telehealth expenses are $4.9 million higher as a result of adding three new agreements;

Depreciation and Amortization is 1.1% lower than prior year

Non-Operating Expenses:

Interest expense is up 0.4% compared to prior year. Interest expense is 2.4% unfavorable to budget through February 2018.

Exhibit G

To Request for Final Review Conference

RICHARDSON / KNAPP & ASSOCIATES, Inc.
Consultants to the Health Care Industry
115 Ripley Road
Cohasset, Massachusetts 02025
Tel. (781) 383-3119

July 18, 2018

Margaret P. Murdock
Director, Certificate of Need Program
Bureau of Healthcare Planning and Construction
South Carolina Department of Health and Environmental Control
301 Gervais Street
Columbia, SC 29201

RE: CareAlliance Health Services d/b/a Roper St. Francis Healthcare, Roper Hospital, Inc., Bon Secours-St. Francis Xavier Hospital, Inc. Roper St. Francis Berkeley Hospital, and Roper Mount Pleasant Hospital (collectively from time to time "Roper St. Francis") opposition to the Medical University Hospital Authority d/b/a MUHA Community Hospital Certificate of Need Application for the construction of a new 128 bed general acute hospital in Berkeley County at a Total Project Cost of $325,000,000 ("Application").

Dear Ms. Murdock:

On behalf of Roper St. Francis, please accept this letter of opposition to the proposed MUHA Community Hospital Certificate of Need Application for the establishment of a new 128 bed general acute care hospital in Berkeley County.

Most notable is that MUHA is proposing the construction of a third new community general hospital in Berkeley County at a cost of $325 million, while two new hospitals are already under development, bringing the total cost of new hospital construction to approximately $600 million in a county with a population of only 210,000. Such a result would defy the very underpinning of the CON Program: promoting cost containment and limiting the unnecessary duplication of services, turning the South Carolina CON Program on its head.

In summary, the Application does not comply with the South Carolina Health Plan, the project review criteria set forth in S.C. Ann. 61-15, §§ 801 and 802, and other applicable regulations.

Specifically, the Application's flaws and omissions that drive this opposition position include:

1. Berkeley County is not an underserved healthcare market and there is no need for additional hospital services in Berkeley County. Two new hospitals are currently under development and significant other health care development is currently underway in Berkeley County. Berkeley County runs the risk of excessive development that defies the very purpose set forth in the CON statute, namely cost containment and prevention of unnecessary duplication of services.

2. MUHA's proposed community hospital service area is not realistic or reasonable.

3. MUHA does not provide sufficient information supporting the patient volume forecasts for the new community hospital and the ultimate forecast volumes included in the CON application are unrealistically overstated.

4. The drive time comparisons presented in the application do not support MUHA's contention that the new community hospital will provide significant access improvements to patients in the entire service area.

5. There is not adequate information or documentation provided in the Application to support the proposed community hospital's financial projections and recent MUHA financial results do not support the financial projections included in the CON application.

6. The proposed new hospital will adversely impact existing and approved providers in the service area.

7. The proposed new MUHA hospital is inconsistent with the project review criteria identified by DHEC in its certificate of need completeness letter.

Additional information and detail regarding each of these points is presented below.

BERKELEY COUNTY IS NOT AN UNDERSERVED HEALTHCARE MARKET

Despite MUHA contentions in its CON application (CON pages 21-22 and page 48), Berkeley County is not an underserved healthcare market.

With Roper St. Francis's CON approved 50-bed hospital currently under construction and with Trident Health's CON approved 50-bed hospital a future acute care resource, Berkeley County will have two distinct acute care community hospitals, including the full medical and professional staff and technology infrastructure at each hospital, providing care to local patients.

In addition to the two acute care community hospitals, community medical care is provided at:

- Roper Hospital Berkeley in Moncks Corner – a comprehensive outpatient center providing a 24-hour ER service, outpatient surgery services, a broad array of medical diagnostic testing and scanning services and a medical office building with more than 20 doctors,

- Moncks Corner Medical Center (part of Trident Medical Center) – an outpatient center providing a 24-hour ER service, outpatient diagnostics and patient access to a broad range of services including radiology, mammography, labs, and physical rehabilitation and access to a range of medical specialists,

- Trident Medical Center's CON approved (under appeal) freestanding emergency department in Berkeley County,

- MUHA / MUSC's CON approved (under appeal) freestanding emergency department in Berkeley County,

- MUHA / MUSC's CON approved (under appeal) freestanding radiation therapy center in Berkeley County.

- Palmetto Primary Care Physicians outpatient medical campus in Nexton / Berkeley County – expected to be complete in 2018 -- including primary care, specialty care and urgent care services, as well as an imaging center and lab services, and,

- Broad array of community physician practices including private practitioners, physicians associated with Roper St. Francis Physician Partners and physicians associated with Trident Health.

As shown by this established and growing healthcare infrastructure within the County, there is / will be adequate access to and availability of healthcare services within Berkeley County, without the proposed addition of another community hospital which will add no new services or programs to the local community.

It is interesting to note that MUHA discusses the need for mental health services in Berkeley County as a reason for establishing the proposed new hospital, but excludes all psychiatric and substance abuse patient volume from its multiple assessments of need and includes zero inpatient psychiatric or substance abuse beds in its proposed new hospital.

MUHA'S PROPOSED COMMUNITY HOSPITAL SERVICE AREA IS NOT REALISTIC OR REASONABLE

MUHA defines its service area for the proposed community hospital at page 23 of the CON application as *"MUHA current patients residing from the tri-county area and surrounding markets based on a drive time analysis*." This defined service area is further identified at page 24 of the CON application as "*the service area for the project includes the primary service area of Berkeley, Dorchester and Charleston and secondary service area of Georgetown, Horry, Williamsburg, Florence, Colleton, Orangeburg and Beaufort."*

While the MUHA / MUSC existing tertiary and quaternary services may in fact draw patients from a broad and diverse geographic area, it is not reasonable or realistic to assume that a small community hospital, with no specialty or tertiary services, would draw patients from this same large regional area. Rather, it should be expected that the proposed new MUHA community hospital will draw patients primarily from the local area, with little or no in-migration from beyond the area proximate to the proposed new facility.

In addition, assuming that there will be a significant number of patients served in the new hospital that will travel past the existing MUHA inpatient resources, or will travel a further distance than to the existing MUHA facilities to obtain care at the new community hospital, is not a reasonable forecast assumption.

Examples of these unreasonable assumptions include the forecast assumption that up to 55% of current West Ashley MUHA patients will shift to the new community hospital and up to 35% of Orangeburg County MUHA patients / up to 35% of Peninsula Charleston MUHA patients (including 35% redirection from 29425 – the home ZIP for MUHA) / up to 30% of Sea Islands MUHA patients / up to 30% of Colleton County and Calhoun County MUHA residents will shift from current MUHA facilities to the new non-tertiary / non-specialty community hospital.

It should be noted that no patient origin data – patients by ZIP or by County – is presented for the proposed new community hospital. As a result, other than the service area descriptions provided in the CON application, and presented above, there is no other means to define what the applicant anticipates as its true service area for this proposed new community hospital.

MUHA's FIGURE 3 (PAGE 24) PROVIDES NO INFORMATION REGARDING POTENTIAL MUHA PATIENTS THAT COULD BE SERVED AT THE NEW COMMUNITY HOSPITAL

MUHA states in the CON application (page 23-24) that *"9,094 adult patients are from the northern tri-county markets of North Charleston, Summerville and Moncks Corner and therefore the site will be a more convenient site for these established patients to receive acute care than the downtown peninsula."*

As a starting point, it is clear that the 9,094 patients reflects 100% of the patient volume treated at all MUHA services and facilities. As presented in the source information for Figure 10 of the CON application (page 33 of the CON), the data in Figure 3 and Figure 10 reflect all inpatient procedures performed by MUHA physicians. Therefore, these patient volume levels overstate the potential volume to be served at the new community hospital, as the Figure 3 and 10 volumes include numerous specialty and tertiary care services which will not be available at the new facility.

In addition, there is confusion regarding whether the Figure 3 and 10 volumes represent all inpatient procedures performed by MUHA physicians as sourced in Figure 10, or just the inpatient procedures performed by MUHA physicians at MUHA facilities, or inpatient procedures versus inpatient admissions or discharges.

There is also a conflict in the number of MUHA patients and the percentage of total MUHA reported volume (however it is defined) that is generated from the North Charleston, Summerville and Moncks Corner area. At page 23 and at Figure 3 of the CON application, MUHA states that 29% of MUHA's adult inpatient volume, or approximately 9,094 patients were from the North Charleston, Summerville and Moncks Corner area. This contrasts to the information presented at the bottom of page 33 of the CON application where MUHA states that 32% of MUHA's overall inpatient origin, or approximately 12,273 patients were from the North Charleston, Summerville and Moncks Corner submarkets.

Finally, there is inconsistency in the definition of the target primary service area for the new hospital, with MUHA defining the primary service area as North Charleston, Summerville and Moncks Corner at pages 23-24, but defining the "*North Charleston and Summerville counties"* areas as the areas that will originate the majority of the community hospital volume in the source notes for Figure 10.

THE DEMOGRAPHIC DATA PRESENTED IN FIGURES 8 AND 9 ARE INCORRECT

Figure 8 in the MUHA CON application presents all ages population data for the MUHA service area. Figure 9 in the MUHA CON application presents age 16+ population data for the MUHA service area. Comparing the all age population data to the age 16+ population data shows that either one or the other population data sets in wrong.

As shown below, when the population data for North Charleston, Moncks Corner and Summerville from Figure 8 is compared to the data from Figure 9, it is clear that either the all age data (Figure 8) or the age 16+ data (Figure 9) is wrong.

	Figure 8 2017 All Ages	**Figure 9 2017 Age 16+**	**Figure 8 2022 All Ages**	**Figure 9 2022 Age 16+**
North Charleston	231,287	49,223	251,691	53,901
Moncks Corner	60, 817	105,678	66,130	116,106
Summerville	132,186	77,131	143,190	82,757

The data problems are not just in the areas proximate to the proposed new hospital presented above. When the population data for the remainder of areas identified in Figures 8 and 9 are compared, it is clear that there are data problems throughout this demographic assessment portion of the MUHA CON application.

THE MEDICAL / SURGICAL AND ICU BED VOLUME FORECASTS FOR THE PROPOSED NEW MUHA COMMUNITY HOSPITAL PRESENTED IN FIGURE 18 (PAGE 39) ARE NOT SUPPORTED BY ANY INFORMATION PRESENTED IN CON APPLICATION AND ARE UNREASONABLE AND UNREALISTIC

The forecast approach described in the MUHA CON application appears to be:

1. Define the current 2017 volume of non-tertiary / non-specialty patients treated at MUHA facilities – segmented by patient ZIP code
2. Inflate this current 2017 volume by 1.7% per year to forecast 2023 / 2024 / 2025 non-tertiary / non-specialty MUHA volume levels – again by ZIP code
3. Apply the re-direction percentages (% of MUHA applicable volume shifting to the new MUHA community hospital) identified in Attachment N to the forecasted MUHA applicable volumes – by ZIP code
4. Assume that 55% of total potential re-directed patients would be served in Year 1, 70% Year 2 and 100% Year 3
5. Calculate the total number of patients to be treated at the new MUHA community hospital in 2023 / 2024 / 2025
6. Apply a 5.2 day average length of stay to calculate forecast patient days for the new community hospital

The first issue with MUHA's forecast is that there is no documentation within the CON application identifying the number of non-tertiary and non-specialty patients by ZIP code during 2017 that were served by MUHA. The only MUHA geographic volume data presented within the CON application is in Figure 3 and Figure 10.

However, the volume data in Figures 3 / 10 are segmented by general market area versus ZIP code. In addition, this data appears to be the total patient volume served by MUHA including tertiary and specialty patients, instead of the applicable smaller non-tertiary / non-specialty volume that would be served at the new hospital and should be included in this forecast analysis. And finally, there is uncertainty if this volume reflects procedures or patients and whether this volume reflects all activity of MUHA physicians at any facility or activity at just MUHA facilities.

Without this baseline MUHA non-tertiary / non-specialty volume data by ZIP code, there is no way that the forecast calculations can be validated and there is no way to evaluate the reasonableness of the resulting forecast volume by ZIP code expected to be served at the new community hospital. The only conclusion that can be reached from the data presented in the CON application is that it results in an over-forecast of the actual non-tertiary / non-specialty volume that will actually be treated at the new MUHA community hospital.

The second issue with this forecast approach is the reasonableness of the expected re-direction percentages presented in Attachment N (% of MUHA applicable volume shifting to the new MUHA community hospital) included in this forecast. To begin, as discussed above, there is significant inconsistency in the defined travel distances and travel times to the proposed new hospital when the travel distances and travel times presented in Figure 6 are compared to travel distances and travel times presented in Attachment N.

In addition, the assumptions that up to 55% of current West Ashley MUHA patients will shift to the new community hospital and up to 35% of Orangeburg County MUHA patients / up to 35% of Peninsula Charleston MUHA patients (home of MUHA / MUSC) / up to 30% of Sea Islands MUHA patients / up to 30% of Colleton and Calhoun County MUHA residents will shift from current MUHA facilities to the new community hospital are not realistic or reasonable.

The third issue with this forecast approach is the use of a 5.2 day average length of stay for this new non-tertiary / non-specialty care community hospital. Based on review of the medical / surgical and ICU lengths of stay seen in similar hospitals within the Lowcountry area, it is clear that this 5.2 ALOS for a small community hospital without tertiary or specialty services is significantly higher than it should be. This higher than appropriate ALOS also results in a higher than appropriate patient day forecast for the proposed community hospital.

As presented below, based on data from 2016 JAR reports, the ALOS for adult medical surgical patients at similar local area hospitals range from 3.1 to 4.3 days. This is significantly below the 5.2 ALOS utilized in the MUHA forecast. In addition, as MUHA has assumed that a 10% reduction in ALOS will occur through the operational start of the new hospital, the future comparative ALOS levels would be in the 2.8 to 3.9 day range.

It should be noted that the ALOS data presented below excludes OB, Inpatient Rehab, Inpatient Psych and Inpatient Substance Abuse programs and data.

	Med / Surg / ICU Days	**Med / Surg / ICU Disch.**	**Med / Surg / ICU ALOS**
Bon Secours St. Francis	26,865	6,210	4.3 ALOS
Mount Pleasant	4,530	1,361	3.3 ALOS
Summerville (ex Ped)	20,899	5,276	4.0 ALOS
East Cooper	10,769	3,492	3.1 ALOS

Applying a lower length of stay assumption to MUHA's patient forecast results in a significant reduction in forecast patient days. Assuming that a 4.3 ALOS is appropriate, forecast 2025 patient days would decline from the MUHA forecast of 23,230 days to 19,208 days. Assuming that the lower 3.9 ALOS (factoring in the MUHA 10% ALOS reduction) is appropriate, forecast 2025 patient days would drop to 17,421.

Converting these revised 2025 MUHA community hospital patient day forecasts into a bed need (assuming that the MUHA patient volume forecasts are correct), utilizing a 65% occupancy standard, results in a 2025 bed need of 81 med / surg / ICU beds when a 4.3 ALOS is used and a 74 med / surg / ICU bed need when a 3.9 ALOS is used. Both of these modified bed need forecasts are well below the 112 med / surg / ICU beds proposed by MUHA. If fact, even utilizing the CON forecast approach and assuming it is correct, the forecast 23,230 med / surg / ICU patient days for 2025 reflects a bed need of only 98 beds – again well below the 112 beds proposed in this CON application.

THE OBSTETRIC VOLUME FORECASTS FOR THE PROPOSED NEW MUHA COMMUNITY HOSPITAL PRESENTED IN FIGURE 19 (PAGE 39) ARE NOT SUPPORTED BY ANY INFORMATION PRESENTED IN CON APPLICATION AND IT IS IMPOSSIBLE TO ASSESS THE REASONABLENESS OF THIS FORECAST

MUHA presents a forecast of obstetric patient days for the proposed 16 bed obstetric unit at Figure 19 (page 39) of the MUHA CON application. Unlike the description of the med / surg / ICU forecast included in the CON application (CON text and notes describing the Figure 18 forecast analysis), there is no information presented in the CON application which defines the forecast methodology that was used to reach the 2023 / 2024 / 2025 obstetric patient day volumes that are presented in Figure 19.

Even if the obstetric forecast followed an approach similar to that used for the med / surg / ICU forecast, the same limitations discussed above, and more, impact this obstetric analysis.

First, there is no definition of the non-tertiary obstetric DRGs that will be treated at the new community hospital and that would define baseline volumes currently treated by MUHA, even though the Notes to Figure 19 indicate that the forecast includes only no-tertiary OB DRGs. Second, there is no baseline obstetric volume data, by ZIP, identified within the CON application. Without this baseline MUHA non-tertiary obstetric volume data by ZIP code, there is no way that the forecast calculations can be validated and there is no way to evaluate the reasonableness of the resulting forecast volume by ZIP code expected to be served at the new community hospital.

Third is the issue of the reasonableness of the expected re-direction percentages presented in Attachment N (% of MUHA applicable obstetric volume shifting to the new MUHA community hospital) included in this obstetric forecast. As discussed prior, there is significant inconsistency in the defined travel distances and travel times to the proposed new hospital when the travel distances and travel times presented in Figure 6 are compared to travel distances and travel times presented in Attachment N. In addition, while the percent of re-direction in the med / surg / ICU forecasts is questionable, the high levels of re-direction are even more suspect in the case of non-tertiary obstetric care, where care closer to home for normal obstetric care is even more important.

Fourth is the issue of using a 2.9 day length of stay for a non-tertiary obstetric service. As shown below, review of obstetric ALOS levels for similar Lowcountry hospitals shows that 2016 obstetric ALOS within similar Lowcountry obstetric programs ranged from 2.2 days to 2.5 days.

	Obstetric Patient Days	**Obstetric Discharges**	**Obstetric ALOS**
Bon Secours St. Francis	6,406	2,736	2.3 ALOS
Mount Pleasant	1,256	561	2.2 ALOS
Summerville	2,062	830	2.5 ALOS
East Cooper	4,559	1,823	2.5 ALOS

Applying a lower length of stay assumption to the MUHA obstetric patient forecast results in a reduction in forecast patient days. Assuming that a 2.5 ALOS is appropriate for non-tertiary obstetric care, forecast 2025 obstetric patient days would decline from the MUHA forecast of 3,575 days to 3,083 days. Assuming that a lower 2.3 ALOS (factoring in the MUHA 10% ALOS reduction) is appropriate, forecast 2025 obstetric patient days would drop to 2,836.

Converting these revised 2025 MUHA non-tertiary obstetric patient day forecasts into a bed need, utilizing a 65% occupancy standard, results in a 2025 obstetric bed need of 13 beds when a 2.5 ALOS is used and a 12 obstetric bed need when a 2.3 ALOS is used. Both of these modified bed need forecasts are well below the 16 obstetric beds proposed by MUHA.

THE DRIVE TIME COMPARISONS PRESENTED IN FIGURE 6 (PAGE 26) DO NOT SUPPORT THE MUHA CONTENTION THAT THE NEW COMMUNITY HOSPITAL WILL PROVIDE SIGNIFICANT ACCESS IMPROVEMENTS TO PATIENTS WITHIN THE ENTIRE SERVICE AREA

To start, it is important to note that the drive time values and comparisons are based upon current drive time data, not the drive situation that will be in place during 2023 – 2025, the first three years of operation for the new hospital.

As described in the MUHA CON application (page 33), *"it is anticipated that an additional 7,327 jobs will be created in the North Charleston and Summerville submarkets."* The CON application also states (page 34) that *"The Nexton Community is located at the I-26 and Highway 17A interchange, and in the pathway of Charleston's explosive growth. The full build out of Nexton will be comprised of nearly 8,000 residents, 6 million square feet of commercial space, 3 schools and 2,000 acres of parks."*

It is clear, based on this information that the anticipated population and commercial growth in the proposed hospital's local area will result in increased travel congestion and travel times to the proposed community hospital site. As a result, the comparative travel times will shift toward increased travel times to get to the proposed new facility while travel times to the existing MUHA facilities are not expected to increase due to the already mature nature of the Peninsula area. The expected result of these increased travel times to the proposed new site is a reduction in the comparative travel time benefit that will accrue to the new community hospital location.

In addition, the use of a +10 minute and a +20 minute parking / wayfinding time to the drive times to the existing MUHA facilities is also unreasonable. If in fact parking / wayfinding additional time should be considered, then an appropriate additive time should also be added to the proposed new facility as patients traveling to the new facility will not be able to literally park at the front entrance of the new hospital and immediately gain access to its services.

Finally, it is important to note the inconsistencies in the defined travel distances and travel times to the proposed new hospital when the travel distances and travel times presented in Figure 6 are compared to travel distances and travel times presented in Attachment N. As shown below, there are inconsistencies observed in each ZIP code presented, with travel time distances showing the largest discrepancies. It should also be noted that discrepancies are seen within each ZIP when Figure 6 and Attachment N are compared, in addition to the examples presented below.

ZIP Code	**Fig. 6 Distance**	**Attach. N Distance**	**Fig. 6 Time**	**Attach. N Time**
29483 Summerville	5.0 miles	7.5 miles	13 min	11 min
29461 Moncks Corner	13.2 miles	16.3 miles	19 min	35 min
29403 Peninsula	22.3 miles	23.4 miles	24 min	34 min
29464 East Cooper	29.3 miles	29.4 miles	34 min	40 min
29412 James Island	31.6 miles	32 miles	41 min	49 min

ADEQUATE INFORMATION AND DOCUMENTATION IS NOT PROVIDED WITHIN THE MUHA CON APPLICATION TO SUPPORT THE PROPOSED COMMUNITY HOSPITAL FINANCIAL PROJECTIONS AND RECENT MUHA FINANCIAL RESULTS DO NOT SUPPORT THE FINANCIAL FORECASTS INCLUDED IN THIS CON APPLICATION.

Specific to the ability of MUHA to finance the capital costs associated with the construction and startup of this proposed new hospital, there is no firm commitment to finance the project and no clear evidence provided in the CON application that the project will meet financing guidelines.

While MUHA's financing advisor (Stephen Pack, President Armadale Capital) states in his letter presented in Attachment U that it is his opinion that MUHA will meet or exceed the FHA / HUD underwriting guidelines for this project, that opinion is based on market demand and financial feasibility studies of the community hospital project that have been performed by other advisors and consultants engaged by MUHA. It is important to note that no such market demand or financial feasibility studies have been included with the CON application. Further, if the assumption that MUHA will meet or exceed underwriting guidelines for the project is based on the information / data / forecast analyses presented in the CON application, the multiple issues identified above regarding the reasonableness of the volume forecasts and MUHA's current financial shortfalls raise significant questions concerning the ability to finance this project.

And finally, as documented in Mr. Pack's letter, *"there is no guarantee that HUD will ultimately issue a mortgage insurance commitment for the proposed financing."*

An additional issue which should be considered in assessing the ability to finance this proposed project – and the full $881 million in total capital expenditures planned by MUHA – is that while MUHA may be able to gain FHA / HUD financing, the question that should be raised is whether obtaining this level of capital financing is in the best interest of MUHA and the residents of the Lowcountry area. As shown below, when 2020 forecasted financial data and ratios taken from MUHA's Financial Feasibility Study for the Shawn Jenkins Children's Hospital (excluding the proposed $325 million proposed in this project) are compared to the same median data and ratios for hospitals rated by Moody's at the Baa3 level (Moody's lowest investment grade rating), it is clear that MUHA's financial position is well below that seen in organizations issuing even minimal investment grade debt.

With days of cash on hand lower than seen in typical organizations with investment grade debt and with debt levels well above that seen in organizations with investment grade debt (even without the proposed $325 million Berkeley County project), MUHA's actual financial forecasts show the weakness of MUHA's financial situation and the questions that must be raised regarding the appropriateness of issuing an additional $325 million debt to support this proposed project, and the total $881 million in debt proposed to support all planned MUHA projects.

Medical University Hospital Authority		
Financial Ratios Compared to Moody's Baa3		
	MUHA *	Moody's Baa3 **
Days Cash On Hand	67.0	109.8
Debt To Cap ^	116.2%	54.4%
Max Debt Service Coverage Ratio	2.3	3.0
* Calculated using MUHA's "Historical and Forecasted Statements of Net Position" for Year 2020.		
** From ratings medians published in 2017 for year 2016. Baa3 is the lowest investment grade rating.		
^ Debt includes $645,325,000 net pension liability.		

In addition to the issues raised above, the ability to finance this proposed new community hospital should not be assessed in a vacuum.

While this proposed project is estimated to cost $325 million, plus the first year operational subsidy for this hospital estimated to reach $11 million, the ability of MUHA to finance these project costs must be also be considered in light of MUHA's larger system-wide capital expenditure commitments over the past few years.

As presented on the following pages, MUHA / MUSC already has committed more than $556 million in new project capital since 2015, excluding this proposed new hospital. Adding this proposed project into MUHA's capital plans results in a commitment to finance and service the debt of $881 million in project costs. MUHA's ability to finance this proposed new community must be assessed in light of these larger organizational commitments.

MUHA / MUSC NEW CAPITAL COMMITMENTS 2015 TO PRESENT

Projects Under Development
(Certificate of Need Issuances 2015 – Present)

MUSC	Total Project Cost
New construction for the consolidation of pediatric and perinatal services	$366,398,000
Addition of 52 acute care beds	$9,178,000
Construction of a pediatric imaging center in North Charleston	$39,800,000
Construction of a pediatric only surgery center with five operating rooms in North Charleston	$26,300,000
Construction of a surgery center with four operating rooms and an imaging suite in West Ashley	$36,000,000
To establish a home health agency to serve Berkeley and Dorchester Counties	$ 30,000

Projects Under Development
(Certificate of Need Issuances 2015 – Present)

MUSC	Total Project Cost
Addition of a pediatric open heart operating room	$1,100,000
To license a surgery center with three operating rooms in Mount Pleasant	$9,000,000
State Approved Expenditures:	**$487,806,000**

Approved Projects Under Appeal

MUSC	Total Project Cost
Construction of a freestanding ED in Berkeley County	$13,600,000
Construction of a freestanding radiation therapy center in Berkeley County	$9,805,000
Conversion of fourteen Level II bassinets to Level III bassinets	$1,969,300
State Approved Expenditures:	**$25,374,300**

CON Applications Under Review

MUSC	Total Project Cost
d/b/a MUHA Community Hospital: Construction of a 128-bed acute care hospital in Berkeley County Submitted: December 27, 2017	$325,000,000
d/b/a South of Broad Hospital: A joint venture with Beaufort Memorial Hospital to construct a 20-bed acute care microhospital in Bluffton Submitted: January 22, 2018	$39,334,924
Addition of a hybrid operating room	$4,269,096
Total:	**$368,604,020**
Grand Total:	**$881,784,320**

In addition to issues related to the financing of this proposed project and the Applicant's ability to service this new debt, there are additional concerns regarding the financial forecasts for this project as presented in Attachment V to this CON application. First, the volume schedules that are referenced in Assumption (1) for the proposed new project are not presented in the CON application. While there are patient day forecasts presented in Figures 18 and 19, there is no indication that the data from these Figures is included in the financial forecasts.

It is also important to note, as discussed above, that the bases for the Figure 18 and 19 forecasts are not presented in the CON application and there are numerous concerns regarding incorrect or unsupported data in the MUHA volume forecasts. A realistic forecast approach would result in much lower forecasted volume levels and likely much lower revenue levels for the project. There is also no indication of the forecast payer class for the proposed new hospital, a factor that will have significant impact on the ultimate reimbursement received by the proposed new hospital and on the accessibility of the proposed new project to the local community.

Also, while Assumption (1) for the proposed project financial forecast indicates that the inpatient revenue for the new hospital is based on *"the average non-tertiary MUHA charge per discharge",* there is no definition in the financial forecasts of what the ultimate mix of non-tertiary med / surg / ICU discharges would include and there is no definition in the CON application or the financial forecasts of what non-tertiary obstetric cases would be served at the new hospital and included in the financial forecasts.

An additional issue that raises concern is the impact of unfunded pension liabilities and total pension expenses on MUHA's financial forecasts. With significant increases in MUHA's pension expenses -- $5 million for FY 2015, $13 million for FY 2016 and $33 million for FY 2017 – the impact of this rapidly rising expense is not discussed in the discussion / notes to the financial forecasts and does not appear to be factored into the future financial forecasts themselves. Combining this pension expense shortfall with the fact that other forecast operating expenses also appear to be understated and that the forecasts included in support of this project appear to be inconsistent with prior MUHA forecasts, drives the conclusion that there are serious questions of MUHA's ability to operate this proposed Berkeley County project and the other projects proposed by MUHA in a financially feasible manner.

Finally, with the most recent available financial data from MUHA (MUHA Interim Financial Statements for the eight months ending February 2018 as attached to Trident's 04/19/18 Affected Person Status and Opposition Letter) showing that operating income is $27.3 million below the FY 2018 budget, operating expenses are $26.4 million above the FY 2018 budget and MUHA's net income is $28.6 below FY 2018 budget, it is clear that the financial forecasts presented in support of this CON application are suspect. As stated in the Assumption 1 (Attachment V) to the baseline MUHA financial forecasts, without this proposed new hospital, all CON forecasts are based on the MUHA FY 2018 budget. With the FY 2018 budget overstating actual net income financial performance by $25-30 million, it is clear that the financial forecasts presented in the CON application are likewise overstated.

With only a $14.9 to $46.5 million operating income reported in the FY 2016 and 2017 MUHA financial statements (MUHA Basic Financial Statements and Required Supplementary Information, June 30, 2017, Management's Discussion and Analysis, page 6), an operating income shortfall of $28.6 million is significant, accounting for 60%+ to over 100% of actual operating income for the two most recent fiscal years.

Further, with only a $30-40 million operating income forecasted in the 2020 – 2025 budgets for MUHA without this proposed Berkeley County hospital (CON Attachment V – with future budgets based on the 2018 budget), based on what is now known to be an overstated FY 2018 budget, it is clear that the recent financial shortfalls will have a significant adverse impact on MUHA's financial capabilities and its ability to establish and operate this and the numerous other new capital projects either under development or planned by MUHA. And, with only $23.8 million in operating income forecast for MUHA, including this new hospital (CON Attachment V), for the first year of the new hospital operation (FY 2023), the recent $28.6 million shortfall has the potential to drive MUHA into an operating loss situation.

THE PROPOSED NEW HOSPITAL IS NOT NEEDED AND WILL ADVERSELY IMPACT EXISTING AND APPROVED PROVIDERS IN THE SERVICE AREA

Based on the information presented above it is clear that Berkeley County residents will be have adequate and appropriate access to health care services without the development of this proposed new MUHA community hospital. The MUHA project will bring no new services or programs to the local community and will ultimately be just a duplicate of already approved and under development programs and services.

In addition, as discussed above, MUHA's contention that the proposed new community hospital project will just serve MUHA's existing patient base within the local community is not reasonable or realistic, and is not supported by the data and information submitted in the CON application.

With MUHA proposing to serve higher than reasonable percentages of patients from an unrealistically large service area, incorrectly assuming that its current tertiary and specialty patients will be treated at the community hospital and artificially inflating forecast patient days for the new hospital by using unreasonably high average length of stay assumptions, it must be concluded that the MUHA-aligned patient volume to be served at the new community hospital will be significantly less than forecast in this CON application.

As a result, the only way that MUHA will meet its volume forecasts is by increasing its market share within the local Berkeley County marketplace at the expense of other local providers, and adversely shifting patients from existing and approved local providers to the proposed new MUHA facility.

THE PROPOSED NEW MUHA HOSPITAL IS INCONSISTENT WITH THE PROJECT REVIEW CRITERIA IDENTIFIED BY DHEC IN ITS CERTIFICATE OF NEED COMPLETENESS LETTER

As identified in DHEC's CON completeness letter for the MUHA new hospital project, the proposed project's Compliance with the Need Outlined in the *South Carolina Health Plan* is the most import project review criteria, with Community Need Documentation, Distribution (Accessibility) and Ability to Complete the Project criteria also to assessed. A discussion of each of these criteria is presented below.

Compliance with the Need Outlined in the *South Carolina Health Plan*

As shown in the *2017-2018 South Carolina Health Plan*, the net bed need for the applicable planning area for this proposed project (combined Berkeley, Charleston and Dorchester County planning area) is an excess of 13 beds. As such, the proposed project to add an additional 128 beds to the existing bed capacity within this planning area is inconsistent with the *Health Plan*.

Further, with a significant portion of MUHA's anticipated patient volume for the new facility to be re-directed from other local providers (details discussed above), it is not appropriate to look solely at MUSC Medical Center's (MUHA's) forecast institution specific bed need to support this proposed project. As is discussed in detail above, MUHA patient volume alone is inadequate to support this proposed new 128-bed community hospital. To reach CON forecast volume levels, MUHA must increase its local Berkeley County market share and effect the re-direction of local Berkeley County patients away from other local providers to the proposed new facility. As a result of having to serve both MUHA and non-MUHA patients, the use of the MUSC (MUHA) institution specific bed need is inappropriate and should not be used as a surrogate for the lack of need in the planning area.

Community Need Documentation

As discussed in detail above, Berkeley County is not an underserved healthcare market and there is no need for additional hospital services in Berkeley County. Two new hospitals are currently under development and significant other health care development is currently underway in Berkeley County. Berkeley County runs the risk of excessive development that defies the very purpose set forth in the CON statute, namely cost containment and prevention of unnecessary duplication of services. In addition, data and information presented above document significant errors and the application of numerous unreasonable assumptions in MUHA's attempt to document a local need for its proposed project.

The conclusion that must be reached from a detailed analysis and critique of MUHA's forecasts is that there is inadequate MUHA volume within the local Berkeley County marketplace to support the proposed new 128-bed community hospital and that documentation of a community need for this proposed project is not present. The only way that MUHA will reach its volume forecasts is by redirecting patient volume from existing providers and increasing its market share within the local Berkeley County area – resulting in adverse impact to existing and approved providers.

Distribution (Accessibility)

With two acute care community hospitals to be located within Berkeley County and with a significant portfolio of outpatient services and programs also existing and proposed for Berkeley County, there are no distribution or accessibility problems or limitations that will be resolved by this proposed new hospital. In fact, with no new services or programs to be added to the local market as part of this proposed project, the reality is that this proposed new hospital will do nothing but un-necessarily duplicate the already existing and under development local health care services and programs within the County.

Ability to Complete the Project

As discussed above, there are significant concerns regarding MUHA's ability to actually finance this proposed project and its ability to finance and operate this proposed project and the numerous other facility / program expansions and additions MUHA has under development. With over $881 million in capital projects planned or under development by MUHA, versus the $325 million identified for just this project, the Applicant's ability to actually complete this project, along with all of the other projects planned and under development, is uncertain. This is an especially important issue when MUHA's recent financial performance is considered.

With the most recent financial results for MUHA showing that the organization's net income is running $28.6 million below budget (8 months ending February 2018) and with FY 2016 and 2017 full year actual net income only in the $14.9 to $46.5 million range, it is clear that MUHA does not have a strong financial position or a strong financial buffer to absorb the addition of over $881 million in new capital costs as well as the debt service coverage costs and startup expenses associated with the Applicant's broad range of new projects under development.

When MUHA's complete list of financial commitments and actual recent financial performance is considered, there is no certainty that this proposed project will be completed and there are significant questions regarding MUHA's actual ability to accomplish all of the development activity that the organization has planned.

. . . . . .

In summary, the data and information presented above clearly documents that the proposed MUHA new community hospital CON application is not consistent with DHEC rules, policies, guidelines and criteria, that if approved and developed it will have an adverse impact on existing and approved health care providers, and that the proposed project should be denied.

Ms. Murdock, thank you for your consideration of this information. If any additional information or clarification is required, please let me know.

Regards,



Mark M. Richardson
Partner

KPMG

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A Component Unit of The Medical University of South Carolina)

Basic Financial Statements and Required Supplementary Information

June 30, 2016

(With Independent Auditors' Report Thereon)

MUHA/Roper/FOIA 000051

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A Component Unit of The Medical University of South Carolina)

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KPMG LLP
Suite 400
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Independent Auditors' Report

The Board of Trustees
Medical University Hospital Authority:

We have audited the accompanying financial statements of the Medical University Hospital Authority (the Authority), a component unit of The Medical University of South Carolina, as of and for the year ended June 30, 2016, and the related notes to the financial statements, which collectively comprise the Authority's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with U.S. generally accepted accounting principles; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express opinions on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the Medical University Hospital Authority as of June 30, 2016, and the changes in its net position and its cash flows for the year then ended in accordance with U.S. generally accepted accounting principles.

KPMG LLP is a Delaware limited liability partnership, the U.S. member firm of KPMG International Cooperative ("KPMG International"), a Swiss entity.

KPMG

Emphasis of Matter

As discussed in note 1(m) to the financial statements, during fiscal year 2016 the Authority adopted Governmental Accounting Standards Board Statement No. 72, *Fair Value Measurement and Application*. Our opinion is not modified with respect to this matter.

Other Matters

Required Supplementary Information

U.S. generally accepted accounting principles require that the Management's Discussion and Analysis on pages 3-13 and the schedules of proportionate share of the net pension liability to PEBA and the schedules of employer contributions to PEBA on pages 47-49 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated September 21, 2016 on our consideration of the Authority's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Authority's internal control over financial reporting and compliance.

KPMG LLP

Greensboro, North Carolina
September 21, 2016

MUHA/Roper/FOIA 000054

Our discussion and analysis of Medical University Hospital Authority's (the Authority) financial performance provides an overview of the activities for the fiscal year ended June 30, 2016.

The intent of this discussion and analysis is to provide further information regarding the Authority's financial performance as a whole. Readers should also review the basic financial statements, along with the notes to the basic financial statements, to further enhance their understanding of the Authority's financial performance.

Financial Highlights – Fiscal 2016 and 2015

At June 30, 2016, the Authority's liabilities and deferred inflows of $1,177.7 million exceeded its assets and deferred outflows of $1,107.9 million by $69.8 million. This financial result is again driven by the implementation of GASB 68 in fiscal 2015. Net position, the residual interest in the assets and deferred outflows after liabilities and deferred inflows are deducted, increased by $37.5 million in 2016, as compared to an increase of $47.6 million in 2015.

The Authority reported operating income in 2016 of $14.9 million, as compared to operating income of $45.0 million in 2015, a decrease of $30.1 million. Some of the major drivers for this change in operating income include increasing pension benefits costs, increases in compensation and employee benefit costs, and increases in the average length of stay for patients.

Net nonoperating revenue was $22.5 million for 2016, as compared to net nonoperating revenue of $2.5 million in 2015, an increase of $20.0 million or 785.6%. The major drivers for this net increase are a $22.0 million increase in the state appropriation that includes $25.0 million for the Phase II hospital replacement project and a $2.3 million increase in investment income.

Overview of the Financial Statements

The Authority, a major discreetly presented component unit of the Medical University of South Carolina (the University), owns and operates the clinical teaching sites of the University and serves the State of South Carolina as a principal diagnostic and treatment referral center.

The Authority's basic financial statements consist of three statements – a Statement of Net Position; a Statement of Revenues, Expenses and Changes in Net Position; and a Statement of Cash Flows. These basic financial statements are prepared in accordance with Governmental Accounting Standards Board (GASB) principles, and provide detailed information about the activities of the Authority and generally provide an indication of the Authority's financial health.

The Statement of Net Position and the Statement of Revenues, Expenses and Changes in Net Position

The Statement of Net Position and the Statement of Revenues, Expenses and Changes in Net Position report information about the Authority's resources and its activities. The Statement of Net Position presents the assets, both restricted and unrestricted, deferred outflows and inflows of resources, and all liabilities using the accrual basis of accounting. The Statement of Revenues, Expenses and Changes in Net Position reports all of the revenues and expenses for the time period indicated, regardless of when cash is received or paid, as well as payments to the University. These two statements report the Authority's net position and its changes.

MUHA/Roper/FOIA 000055

The Statement of Cash Flows

The final required statement is the Statement of Cash Flows. This statement reports cash receipts, cash payments, and net changes in cash resulting from operating, investing, and capital and noncapital-related financing activities.

The Authority's Net Position

The Authority's net position is the difference between its assets and deferred outflows and liabilities and deferred inflows reported in the Statement of Net Position. A comparative summary of assets, deferred outflows, liabilities, deferred inflows and net position is as follows:

Summary Schedule of Net Position

(In thousands)

	2016	2015
Assets:		
Current assets	$ 444,622	385,228
Investments	52,356	47,284
Capital assets, net	512,516	509,198
Total assets	1,009,494	941,710
Deferred outflows	98,357	88,010
Total assets and deferred outflows	1,107,851	1,029,720
Liabilities:		
Current liabilities	171,912	149,680
Long-term debt	359,324	368,618
Net pension liability	645,307	570,493
Total liabilities	1,176,543	1,088,791
Deferred inflows	1,154	48,227
Total liabilities and deferred inflows	1,177,697	1,137,018
Net assets:		
Net investment in capital assets	164,574	158,527
Restricted:		
Under indenture agreements	52,356	47,284
Capital projects	25,000	—
Major programs	30,759	27,062
Unrestricted (deficit)	(342,535)	(340,170)
Total net position	$ (69,846)	(107,297)

(Continued)

MUHA/Roper/FOIA 000056

Analysis of the Financial Position as of June 30, 2016 Compared to June 30, 2015

Total assets and deferred outflows increased $78.1 million or 7.6% from $1,029.7 million in 2015 to $1,107.9 million in 2016. Current assets increased $59.4 million, largely driven by an increase in restricted cash of $23.6 million that includes $25.0 million for the Shawn Jenkins Children's Hospital and Pearl Tourville Women's Pavilion, a $15.9 million increase in patient accounts receivable, a $10.0 million increase in third-party receivables and a DSH receivable of $10.0 million. Investment activity increased $10.1 million and includes an increase in current investments of $5.0 million, an increase in noncurrent investments of $5.1 million and deferred outflows for pension activity increased 11.8% from $88.0 million in 2015 to $98.4 million in 2016.

Total liabilities and deferred inflows increased 3.6% from $1,137.0 million in 2015 to $1,177.7 million in 2016. Current liabilities increased 14.9% from $149.7 million in 2015 to $171.9 million in 2016, largely driven by increases in accrued payroll, accounts payable and current installments of capital lease obligations. The pension liability increased 13.1% from $570.5 million in 2015 to $645.3 million in 2016. This increase was partially offset by a decrease in deferred inflows for pension activity of 97.6% from $48.2 million in 2015 to $1.2 million in 2016.

From the data presented, readers of the Statement of Net Position are able to determine the assets available to continue the operations of the Authority. They are also able to determine how much is owed to vendors, employees, and others. Finally, the Statement of Net Position provides a picture of the net position (assets and deferred outflows minus liabilities and deferred inflows) and their availability for expenditure.

MUHA/Roper/FOIA 000057

Operating Results and Changes in the Authority's Net Position

Revenues, Expenses and Changes in Net Position

(In thousands)

	2016	2015
Operating revenues:		
Net patient service revenue	$ 1,301,324	1,231,501
Other revenue	25,333	26,301
Total operating revenues	1,326,657	1,257,802
Operating expenses:		
Compensation and employee benefits	554,624	515,052
Pension benefits	13,311	5,148
Services and supplies	679,934	631,911
Depreciation and amortization	63,841	60,666
Total operating expenses	1,311,710	1,212,777
Operating income	14,947	45,025
Nonoperating revenues (expenses):		
State appropriations	42,000	20,000
Gifts and grants	550	1,392
Investment income	4,377	2,054
Interest expense	(15,388)	(15,894)
Loss on disposal of capital assets	(7,297)	(4,011)
CHWP bond issuance cost	(738)	—
Other nonoperating expenses	(1,000)	(1,000)
Increase in net position	$ 37,451	47,566

The Statement of Revenues, Expenses and Changes in Net Position presents the revenues earned and expenses incurred during the year. Activities are reported as either operating or nonoperating. Operating revenues are received for providing goods and services. Operating expenses are paid to acquire or produce the goods and services and to carry out the mission of the Authority. Nonoperating revenues and expenses are the result of activities for which goods and services are not provided. The utilization of capital assets is reflected in the financial statements as depreciation and amortization, which is the impact of depreciating the cost of each asset over its expected useful life. Changes in net position are based on the activity presented in the Statement of Revenues, Expenses and Changes in Net Position.

(Continued)

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Analysis of Operating Results for the Year ended June 30, 2016 Compared to the Year ended June 30, 2015

Net Patient Service Revenue

Compared to fiscal year 2015, net patient service revenue increased by approximately $69.8 million, or 5.7%. Gross patient charges increased by $305.6 million, or 9.3%, from 2015 to 2016 due to increases in patient activity and comprehensive rate increases. Net revenue recognized related to the DSH program administered by the state Department of Health and Human Services increased in 2016 to $48.0 million from $44.1 million in 2015. There can be no assurance that the Authority will continue to qualify for future participation in the DSH program or that the DSH program will not ultimately be discontinued or materially modified.

Payor class percentages changed somewhat from 2016 to 2015, showing an increase in Blue Cross and Medicare payor classes, a decrease in Medically Indigent/Self Pay/Other and no change in Medicaid and Private Insurance/Managed Care payor classes as shown in the table below:

Percentage of Net Patient Service Revenue by Payor Class

	2016	2015
Blue Cross	27%	25%
Medicare	32	30
Medicaid	24	24
Private Insurance/Managed Care	14	14
Medically Indigent/Self Pay/Other	3	7
Total	100%	100%

Inpatient Business Activity

Inpatient days of care increased by 2.76%, from 237,439 in 2015 to 243,992 in 2016, as summarized below. Average length of stay for all patients was 6.5 days in 2016 and 6.2 days in 2015. The average daily census increased in 2016 to 668 from the 2015 average of 643. Admissions increased in 2016 to 37,897 from the 2015 level of 37,666. Inpatient surgical procedures increased 3.2% from 19,981 in 2015 to 20,624 in 2016. The Medicare case mix index is a measure of inpatient acuity and remained flat at 2.2 in fiscal year 2015 and fiscal year 2016.

Summary of Inpatient Days

	2016	2015
Medical services	107,333	106,494
Surgical services	66,055	67,802
Psychiatric services	34,004	30,962
Women's services	36,600	32,181
Total inpatient days	243,992	237,439

(Continued)

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Outpatient Business Activity

Outpatient visits volume increased by 37,392 visits, or 3.6%, from 1,051,874 in 2015 to 1,089,266 in 2016. Emergency/Trauma visits increased to 84,060 in 2016 from the 2015 level of 82,426. Outpatient surgical procedures performed in 2016 totaled 8,310, as compared to 8,383 in 2015, a decrease of 0.9%.

Deductions from Revenue

Contractual and other adjustments, expressed as a percentage of gross revenue (60.4%), increased 2.5% from 2015 to 2016. Contractual and other adjustments expressed in dollars increased by $266.3 million from 2015 to 2016. The increase is due to the fact that reimbursements from Medicare, Medicaid and third-party insurers are less than billed charges and increases in charges implemented by the Authority are not matched by increased reimbursement rates.

The provision for uncollectible accounts decreased $30.5 million, or 19.2% from 2015 to 2016 to a total of $128.7 million for the year ended June 30, 2016. The decrease is due to an increase in charity care and an increase in bad debt recoveries. The Authority is an active, caring member of the communities it serves. In carrying out its mission of meeting the health and wellness needs of its service areas, the Authority has established policies under which it provides care to needy members of its communities. These policies include discount programs for both uninsured and indigent patients. Following these policies, charity care services totaling approximately $110.4 million and $63.0 million (as measured by established charges) were provided without charge during fiscal 2016 and 2015, respectively. The $47.4 million increase is related to a 21.0% increase in eligible charity care patients from 2015 to 2016. This increase is supported by the Authority's continued focus and efforts on enhancing policy and process to identify and qualify eligible Medicaid and charity care patients.

In total, uncompensated care write-offs at established rates as measured by the total of bad debts plus charity care totaled 6.4% and 6.6% of gross patient charges for fiscal 2016 and 2015, respectively.

Operating Expenses

Operating expenses increased by $98.9 million, from $1,212.8 million in 2015 to $1,311.7 million in 2016. This 8.2% increase is primarily the result of the increased costs associated with a higher average length of stay for patients, pension expense, staffing costs, and telehealth expenses (these expenses are offset by the State Appropriation for Telehealth recognized as revenue in the nonoperating section). These drivers impacted the following increases: services and supplies expense of $48.0 million or 7.6%, compensation and employee benefits of $39.6 million or 7.7% and pension benefits of $8.2 million or 158.6%.

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Additionally, supply costs and pharmaceutical costs continue to increase at rates exceeding those of general inflation; however, rates of increase are comparable to inflation rates for the healthcare industry. Depreciation and amortization expense increased $3.2 million or 5.2% in fiscal 2016.

Summary of Operating Expenses by Function

(In thousands)

	2016	2015
Patient services	$ 932,061	858,992
General and administrative	315,808	293,118
Depreciation and amortization	63,841	60,667
Total operating expenses	$ 1,311,710	1,212,777

Capital Assets

At the end of fiscal year 2016, the Authority had $512.5 million invested in capital assets, net of accumulated depreciation, as shown in note 4 to the financial statements. Total capital asset additions increased $29.9 million, from $47.1 million in 2015 to $77.0 million in 2016. The increase from 2015 to 2016 is the result of several significant contributors. Additions to major movable equipment increased $6.8 million and the Authority restructured multiple lease agreements that resulted in recording of capital lease assets of $6.7 million. Additions to construction in progress of $35.6 million increased CIP by $13.5 million, primarily related to the two projects discussed below.

Approximately $8.6 million of the $35.6 million of construction in progress additions relates to renovations of the 7th floor of the Ashley River Tower hospital. The 7th floor was converted from office space to patient care space, which was completed in November 2015.

Approximately $12.9 million of the $35.6 million of construction in progress additions relates to the Shawn Jenkins Children's Hospital and Pearl Tourville Women's Pavilion (CHWP), Phase II of the Authority's 30-year hospital replacement program. The CHWP facility is expected to cost approximately $385 million and hold about 200 beds. To prepare the construction site, the Authority demolished Charleston Memorial Hospital and the McClennan-Banks building, resulting in retirement of assets with costs of $7.9 million and $5.4 million, respectively, as of June 30, 2016. Construction is expected to start in August 2016 and the CHWP has a target opening date of August 2019. Phase II progress is contingent on obtaining the necessary funds for the project.

Efforts to improve the clinical equipment and vehicle inventory processes began in the latter part of fiscal year 2013 and have continued through fiscal year 2016. The result has been a decrease in the reported costs of assets of approximately $21.2 million and $30.4 million in 2016 and 2015, respectively. Most of the assets were fully depreciated upon disposal.

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The Authority uses both internal funds from operations and external debt capital in financing its capital acquisitions. Some capital acquisitions are also funded by federal grants and state appropriations. The most significant debt financing programs are discussed in further detail under "Financing" below.

See note 4 for more details on capital assets.

Financing

The Authority has begun a phased-approach replacement of much of its principal patient care facilities, a project planned for completion in stages over 30 years. Phase I of the project involved building a facility comprised of a four-story diagnostic and treatment center, a seven-story hospitality (bed) tower, and a garden atrium uniting the two sections of the building. Phase I of the project was completed in fiscal 2008. Ashley River Tower, the 641,000 square-foot facility was opened on February 4, 2008. No new clinical health services were added as a result of this phase of the project.

Phase II will be a Children's Hospital and Women's Pavilion (CHWP). Initial planning was begun in fiscal 2015 and continued in fiscal 2016 with architectural design derived from numerous clinical meetings and discussion of a financing plan. A preapplication document for the $350 million project was submitted to the US Department of Housing & Urban Development relating to the FHA Section 241 loan program in August 2015. At June 30, 2015, almost $68 million had been secured by way of state funding and philanthropy for Phase II. The State of South Carolina approved $25 million in the FY2016 budget and $10 million in the FY2017 budget for this project. Shawn Jenkins, a local business owner, pledged $25 million and the Tourville family pledged another $10 million. The hospital will be named the MUSC Shawn Jenkins Children's Hospital and Pearl Tourville Women's Pavilion in honor of their generosity. This level of money raised to support the project should make HUD financing possible and maintain the hospital's development and construction timeline.

On December 22, 2004, the Authority issued $422.1 million of FHA Insured Mortgage Hospital Facilities and Refunding Revenue Bonds, Series 2004 (Series 2004), consisting of $304.0 million Series A Tax-Exempt Bonds and $118.1 million Series B Taxable Bonds for the purpose of providing funds to (a) pay the costs of Phase I of the project mentioned above, (b) pay a portion of the interest accruing on the Bonds during construction of Phase I, (c) prepay the outstanding amount of the Charleston County Memorial Hospital Revenue Note, (d) advance refund the $102.8 million Hospital Facilities Refunding Revenue Bonds, Series 2002A, (e) fund a debt service reserve fund with respect to the Bonds, and (f) pay certain costs incurred in connection with the issuance of the Bonds.

On December 29, 2004, the South Carolina Jobs Economic Development Authority issued $61.0 million of Economic Development Revenue Bonds, CEP Series 2004. Proceeds of the bonds were loaned to MUFC Central Energy Plant, LLC, a single-member limited liability company organized under the laws of the State of South Carolina, whose sole member is Medical University Facilities Corporation. Pursuant to a Loan Agreement between the issuer and the borrower, the borrower shall use the proceeds to finance the construction of an approximately 52,000 square foot central energy plant and certain other improvements, renovations, and furnishings, fixtures, and equipment to provide steam and chilled water for the use and benefit of the new 156-bed Phase I Authority project mentioned above. Pursuant to the loan agreement, the borrower is obligated to make payments to the issuer in amounts sufficient to pay the principal and interest on the Bonds.

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On March 15, 2007, the construction of the Central Energy Plant was substantially completed, and the plant was put into service. In 2014, MUFC Central Energy Plant, LLC was terminated after the refunding of the CEP Series 2004 Bonds.

On February 1, 2008, MUFC Central Energy Plant, LLC converted the then outstanding $59.4 million bonds into Indexed Floating Rate Bonds to reduce the cost of capital and annual debt service payments detailed in note 6 to the financial statements. Concurrent with the conversion of the bonds, MUFC Central Energy Plant entered into a variable-to-fixed interest rate swap. The intention of the swap was to effectively convert the variable interest rate paid on the bonds to a synthetic fixed rate of 5.755%. This interest rate swap was terminated on December 30, 2013 and a payment of $2.1 million was made as part of the refinancing of the Central Energy Plant.

Management continues to look for opportunities to reduce nonoperating expenses. With interest expense being the largest nonoperating expense and interest rates at historically low levels, the Authority engaged a financial advisor in fiscal 2012 to help determine the most effective refinancing vehicle. On December 19, 2012, the refinancing of the Authority's Series 2004 bonds with Government National Mortgage Agency (GNMA) mortgage-backed securities (MBS) was completed. Long-term debt was reduced when funds in the debt service reserve and other accounts of approximately $47.4 million were made available to reduce principal. Interest was fixed at 2.94% and the amortization schedule was not extended. On December 30, 2013, the Authority refinanced the 2004 Central Energy Plant Economic Development Revenue Bonds (CEP Series 2004 bonds) with GNMA MBS. Interest was fixed at 3.85% and the amortization schedule was not extended.

The Authority entered into a six-month revenue anticipation note with Branch Banking and Trust Company (BB&T) on August 20, 2013 that expired February 20, 2014. This revenue anticipation note was renewed March 14, 2014 and expired September 14, 2014. The Authority entered into a similar contract with BB&T in August 2014 that renewed March 19, 2015, expired September 19, 2015 and was not renewed. There was no new activity on this note in fiscal year 2016.

In April 2013, the Authority entered into a $13.8 million equipment lease/purchase agreement with Wells Fargo Bank for energy conservation equipment for the Sabin Street central energy plant project. This agreement is subject to the master lease program agreement between Wells Fargo Bank and the State of South Carolina.

The Authority is in the process of structuring a transaction to facilitate the issuance of approximately $316.0 million GNMA MBS for the purpose of financing the construction of the Phase II CHWP and paying associated transaction costs. The Authority has received a commitment for Insurance Advances letter and anticipates issuing the new securities in the fall of 2016.

See note 6 for more details on financing activities.

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Current Operating Environment

The U.S. economy continues its recovery from the downturn of the past several years. Management of the Authority monitors these economic conditions closely, both with respect to potential impacts on the healthcare provider industry and from a more general business perspective. While the Authority was able to achieve certain objectives of importance in the current economic environment, management recognizes that economic conditions may continue to impact the Authority in a number of ways, including (but not limited to) uncertainties associated with the global economy, improvement in the unemployment rate and associated impact on uninsured patients, and stress on the federal, state and local budgets. Additionally, the general healthcare industry environment is increasingly uncertain, especially with respect to the impacts of the federal healthcare reform legislation which was passed in the spring of 2010. Potential impacts of ongoing healthcare industry transformation include, but are not limited to:

- Continuing volatility in the state and federal government reimbursement programs; for example, the Affordable Care Act reduces payments to all hospitals by $155 billion over ten years; it was projected that these cuts would be offset by the reduction in the uninsured population. While South Carolina chose not to expand Medicaid the uninsured rate has dropped from 18.7% to 15.4%;
- Exchange reimbursement levels that are significantly below those of traditional commercial insurance companies, payor policies that do not recognize valid assignment of benefits from patients and send payment for healthcare services to patients. Changes in combined state/federal disproportionate share payments, increasing reliance on managed care plans by Medicare and Medicaid and attendant increases in program complexity and payment delays and impact on the healthcare "demand curve" as the previously uninsured enter the insurance system;
- Effective management of multiple major regulatory mandates, including achievement of meaningful use of HCIT and the transition to ICD-10; and
- Significant potential business model changes throughout the healthcare industry, including recently announced mergers of the nation's largest health insurers.

In South Carolina, in order to control escalating Medicaid costs, the Department of Health and Human Services has maintained the changes that were implemented for hospital service rates to remain at the November, 2012 payment levels:

- Inpatient hospital base rates were increased 2.75% on October 1, 2013 and 2.50% on October 1, 2014 and adjusted on October 1, 2015 to maintain the ninety three percent (93%) of cost target;
- Inpatient Graduate Medical Education (Direct and Indirect Medical education) reimbursement rates remain at the November 1, 2012 level;
- Outpatient hospital multiplier was adjusted to maintain the ninety three percent (93%) of cost target.

(Continued)

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These reimbursement rate adjustments have had and will continue to have a significant impact on the Authority's financial performance. To help minimize the impact of this revenue reduction, the Authority continues implementation of a hospital-wide response plan directed at high-impact areas, both clinically and financially. All areas of a patient's stay are reviewed, including (but not limited to) reducing length of stay, standardization of supplies, use of generic vs. brand name drugs, staffing ratios, and new information technology to improve medical coding and billing.

The business of healthcare in the current economic, legislative and regulatory environment is volatile. Any of the above factors, along with others both currently in existence and which may or may not arise in the future, could have a material adverse impact on the Authority's financial position and operating results.

During the fiscal year ended June 30, 2016, the Authority created a consolidated clinical enterprise under the brand of MUSC Health. This enterprise is an effort to further integrate the clinical operations of the Authority and MUSC Physicians. Both entities will retain their existing separate legal entities under this enterprise, but will work more closely together to manage their combined clinical operations.

Contacting the Authority's Financial Management

This financial report is designed to provide interested parties with a general overview of the Authority's finances and to show the Authority's accountability for the money it receives. If you have questions about this report or need additional financial information, contact the Authority's Chief Financial Officer at Medical University Hospital Authority, P.O. Box 250332, Charleston, SC 29425.

MUHA/Roper/FOIA 000065

MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A Component Unit of The Medical University of South Carolina)

Statement of Net Position

June 30, 2016

Assets and Deferred Outflows

Current assets:	
Cash and cash equivalents	$ 107,833,556
Cash restricted for capital projects and major programs	40,151,522
Investments restricted for capital projects and major programs	15,057,095
Patient accounts receivable, net of allowance for uncollectible accounts of approximately $88,600,000	198,960,936
Due from third-party payors	17,929,078
Other current assets	64,689,279
Total current assets	444,621,466
Investments held by trustees under indenture agreements	52,356,374
Capital assets, net	512,516,286
Total assets	1,009,494,126
Deferred outflows	98,356,614
Total assets and deferred outflows	$ 1,107,850,740

Liabilities, Deferred Inflows and Net Position

Current liabilities:	
Current installments of long-term debt and capital lease obligations	$ 21,460,829
Accounts payable	63,742,372
Accrued payroll, withholdings, and benefits	69,205,019
Due to related parties	7,037,419
Due to third-party payors	5,049,668
Other accrued expenses	5,416,800
Total current liabilities	171,912,107
Long-term debt and capital lease obligations net of current installments	359,323,624
Net pension liability	645,307,236
Total liabilities	1,176,542,967
Deferred inflows	1,153,583
Total liabilities and deferred inflows	1,177,696,550
Net position:	
Net investment in capital assets	164,574,408
Restricted:	
Under indenture agreements	52,356,374
Capital projects	25,000,000
Major programs	30,758,617
Unrestricted (deficit)	(342,535,209)
Total net position	(69,845,810)
Total liabilities, deferred inflows, and net position	$ 1,107,850,740

See accompanying notes to basic financial statements.

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MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A Component Unit of The Medical University of South Carolina)

Statement of Revenues, Expenses and Changes in Net Position

Year ended June 30, 2016

Operating revenues:	
Net patient service revenue (net of provision for uncollectable accounts of $128,683,666)	$ 1,301,323,915
Other revenue	25,333,565
Total operating revenues	1,326,657,480
Operating expenses:	
Compensation and employee benefits	554,624,082
Pension benefits	13,311,228
Services and supplies	679,934,296
Depreciation and amortization	63,840,599
Total operating expenses	1,311,710,205
Operating income	14,947,275
Nonoperating revenue (expense):	
State appropriations	42,000,000
Gifts and grants	549,999
Investment income	4,377,443
Interest expense	(15,388,607)
Loss on disposal of capital assets	(7,296,642)
CHWP bond issuance cost	(737,899)
Other nonoperating expenses	(1,000,000)
Increase in net position	37,451,569
Net position, beginning of year	(107,297,379)
Net position, end of year	$ (69,845,810)

See accompanying notes to basic financial statements.

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MEDICAL UNIVERSITY HOSPITAL AUTHORITY
(A Component Unit of The Medical University of South Carolina)

Statement of Cash Flows

Year ended June 30, 2016

Cash flows from operating activities:	
Receipts from patients and third-party payors	$ 1,266,350,236
Other cash receipts	24,758,670
Payments to suppliers and employees	(1,218,119,457)
Net cash provided by operating activities	72,989,449
Cash flows from noncapital financing activities:	
State appropriations	17,000,000
Net cash provided by noncapital financing activities	17,000,000
Cash flows from capital and related financing activities:	
Capital expenditures	(61,752,282)
Capital appropriations	25,000,000
Capital grants and gifts received	399,263
Proceeds from disposal of capital assets	101,400
Payments of principal on long-term debt	(17,325,315)
Payments of bond issuance cost	(737,899)
Payments of bond insurance premium	(1,533,324)
Payments on capital lease obligations	(1,777,595)
Payments on licensing fee obligations	(1,209,936)
Interest payments	(11,704,257)
Net cash provided by capital and related financing activities	(70,539,945)
Cash flows from investing activities:	
Proceeds from sale and maturity of investments	59,059,598
Investment income received	1,275,991
Purchases of investments	(40,074,531)
Net cash provided by investing activities	20,261,058
Net increase in cash and cash equivalents	39,710,562
Cash and cash equivalents at beginning of year	134,733,141
Cash and cash equivalents at end of year	$ 174,443,703
Reconciliation of operating income to net cash provided by operating activities:	
Operating income	$ 14,947,275
Adjustments to reconcile operating income to net cash provided by operating activities:	
Depreciation and amortization	63,840,599
Provision for uncollectible accounts	128,683,666
Changes in operating assets and liabilities:	
Patient accounts receivable	(144,621,533)
Due from third-party payors	(10,068,232)
Other current assets	(13,499,205)
Accounts payable	8,292,672
Other accrued expenses and accrued payroll, withholding and benefits	21,924,011
Due to third-party payors	2,248,328
Due to related parties	1,241,868
Net cash provided by operating activities	$ 72,989,449
Reconciliation of cash and cash equivalents at end of year to the statement of net position:	
Cash and cash equivalents	$ 107,833,556
Restricted for capital projects and major programs	40,151,522
Included in investments held by trustees under indenture agreements	26,458,625
	$ 174,443,703
Noncash transactions:	
Capital lease equipment	$ 13,482,256
Change in fair value of investments	3,209,614
Change in capital assets payable	(1,056,409)

See accompanying notes to basic financial statements

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(1) Summary of Significant Accounting Policies

Medical University Hospital Authority (the Authority) is a multidimensional healthcare system headquartered in Charleston, South Carolina. The Authority is a principal diagnostic and treatment referral center for the State of South Carolina, and also owns and operates the principal clinical teaching institutions for The Medical University of South Carolina (the University). The primary facilities used by the Authority, all located on or near the Authority's main campus in Charleston, consist of the following:

- University Hospital
- Ashley River Tower
- Children's Hospital
- Storm Eye Institute
- Institute of Psychiatry
- Digestive Disease Center
- Transplant Center
- Hollings Cancer Center
- MUSC Heart and Vascular Center

Reporting Entity

The Authority is a major discretely presented component unit of the University, as defined by the provisions of Governmental Accounting Standards Board (GASB) Statement No. 61, *The Financial Reporting Entity: Omnibus* (Statement No. 61). The Authority's component unit relationship to the University arises principally because the nature and significance of the relationship is such that exclusion would cause the University's financial statements to be misleading or incomplete. In particular, the legislation establishing the Authority as a stand-alone healthcare system, effective July 1, 2000, requires that the members of the University's Board of Trustees also constitute the Board of Trustees of the Authority.

The significant accounting policies used by the Authority in preparing and presenting its financial statements are as follows:

(a) Basis of Accounting

For financial reporting purposes, the Authority is considered a special purpose government engaged only in business-type activities. Accordingly, the financial statements have been presented using the economic resources measurement focus and the accrual basis of accounting. Under the accrual basis, revenues are recognized when earned and expenses are recorded when an obligation has been incurred.

(b) Cash Equivalents

The Authority considers investments in highly liquid individual debt instruments (with an original maturity of three months or less) and similar fund positions to be cash equivalents.

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(c) Inventories

Inventories, consisting principally of medical supplies and pharmaceuticals, are stated at the lower of cost (first-in, first-out) or replacement value and are included in other current assets in the accompanying Statement of Net Position.

(d) Investments and Investment Income

Investments are carried at fair value and consist of internally or externally restricted cash equivalents and treasury obligations with original maturities greater than three months. Fair value measurements are categorized within the fair value hierarchy established by generally accepted accounting principles and investment income or loss from investments (including realized and unrealized gains and losses on investments and interest) is reported as nonoperating revenue in the accompanying Statement of Revenues, Expenses and Changes in Net Position.

(e) Capital Assets

Capital assets are recorded at cost at the date of acquisition or, if donated, at fair value at the date of receipt. Depreciation is provided over the useful life of each class of depreciable assets using the straight-line method. Equipment under capital lease obligations is amortized using the straight-line method over the estimated useful life of the equipment or lease term, and such amortization is included in depreciation and amortization in the accompanying Statement of Revenues, Expenses and Changes in Net Position.

A summary of depreciable lives is as follows:

Land improvements	3–25 years
Buildings, improvements, and fixed equipment	5–50 years
Machinery, equipment, and vehicles	2–20 years
Software	3–5 years

(f) Statement of Revenues, Expenses and Changes in Net Position

For purposes of presentation, transactions deemed by management to be ongoing, major or central to the provision of healthcare services are reported as operating revenues and operating expenses. Principal nonoperating transactions include state appropriations, gifts and grants, investment income, interest expense, loss on disposal of capital assets and financing costs.

(g) Net Patient Service Revenue

Net patient service revenue is reported at estimated net realizable amounts from patients, third-party payors and others for services rendered, and includes estimated retroactive revenue adjustments due to future audits, reviews, and investigations, as well as the provision for uncollectible accounts. Retroactive adjustments are considered in the recognition of revenue on an estimated basis in the period the related services are rendered, and such amounts are adjusted in future periods as adjustments become known or as years are no longer subject to such audits, reviews, and investigations.

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(h) Charity Care

The Authority provides care to patients who meet certain criteria under its charity care policy without charge or at amounts less than its established rates. Because the Authority does not pursue collection of amounts determined to qualify as charity care, they are not reported as revenue.

(i) Net Position

Net position of the Authority is classified into the following components:

- Net investment in capital assets consists of capital assets, net of accumulated depreciation, reduced by outstanding balances of any borrowings used to finance the purchase or construction of those assets.
- Restricted under indenture agreements represents resources deposited with trustees as required by bond indentures or other debt agreements.
- Restricted for capital projects and major programs represents resources that the Authority is legally or contractually obligated to spend in accordance with restrictions imposed by external parties.
- Unrestricted represents remaining net position that does not meet either of the above definitions.

When the Authority has both restricted and unrestricted resources available to finance a particular program, it is the Authority's policy to use restricted resources before unrestricted resources.

(j) Costs of Borrowing

The deferred accounting loss on refunding is being amortized over the terms of the related indebtedness using the effective interest method. Refunding losses are classified as deferred outflows of resources on the Statement of Net Position. Costs of issuance are expensed in the period incurred.

Interest cost is capitalized on qualified construction expenditures, net of income earned on related assets, as a component of the cost of the related projects. For qualifying capital projects that are not financed with specific proceeds of tax-exempt debt, the Authority capitalizes interest cost on such projects based on accumulated expenditures and a weighted average borrowing rate.

(k) Income Taxes

The Authority is a political subdivision of the State of South Carolina and is treated as a governmental entity for tax purposes. Additionally, the Authority has received its determination letter from the Internal Revenue Service, indicating that it is exempt from income tax under Section 501(a) of the Internal Revenue Code, as an organization described in Section 501(c)(3). As such, the Authority is not generally subject to federal or state income taxes. However, the Authority remains subject to income taxes on any net income that is derived from a trade or business, regularly carried on and not in furtherance of the purpose for which it was granted exemption. No income tax provision has been recorded. If there is net income from any unrelated trade or business, such provision, in the opinion of management, is not material to the financial statements taken as a whole.

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(l) Use of Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires that management make estimates and assumptions affecting the reported amounts of assets, liabilities, revenues and expenses, as well as disclosure of contingent assets and liabilities. Actual results could differ from those estimates.

Significant items subject to such estimates include the allowances for uncollectible accounts and contractual adjustments for patient receivables, depreciation and amortization, liability for incurred but not reported claims under the self-insured health plan, and estimated third-party payor settlements. In particular, laws and regulations governing the Medicare and Medicaid programs are extremely complex and subject to interpretation. As a result, there is at least a reasonable possibility that recorded estimates related to these programs will change by a material amount in the near term.

(m) Recent Accounting Pronouncements

GASB Statement No. 72, *Fair Value Measurement and Application*, was issued in February 2015. This Statement addresses accounting and financial reporting issues related to fair value measurements and provides guidance for applying fair value to certain investments and disclosures related to all fair value measurements. The Authority implemented GASB Statement No. 72 in fiscal year 2016 and there was no impact on the financial statements beyond the additional disclosures added to note 2.

GASB Statement No. 75, *Accounting and Reporting for Postemployment Benefits Other than Pensions*, was issued in June 2015. The primary objective of this Statement is to improve accounting and financial reporting by state and local governments for postemployment benefits other than pensions (other postemployment benefits or OPEB). The scope of this Statement addresses accounting and financial reporting for OPEB that is provided to the employees of state and local governmental employers. This Statement establishes standards for recognizing and measuring liabilities, deferred outflows of resources, deferred inflows of resources, and expense/expenditures. For defined benefit OPEB, this Statement identifies the methods and assumptions that are required to be used to project benefit payments, discount projected benefit payments to their actuarial present value, and attribute that present value to periods of employee service. Note disclosure and required supplementary information requirements about defined benefit OPEB also are addressed. In addition, this Statement details the recognition and disclosure requirements for employers with payables to defined benefit OPEB plans that are administered through trusts that meet the specified criteria and for employers whose employees are provided with defined contribution OPEB. This Statement is effective for the Authority's fiscal year 2018.

GASB Statement No. 78, *Pensions Provided Through Certain Multiple-Employer Defined Benefit Pension Plans*, was issued in December 2015. This Statement amends the scope and applicability of Statement 68 to exclude pensions provided to employees of state or local governmental employers through a cost-sharing multiple-employer defined benefit pension plan that (1) is not a state or local governmental pension plan, (2) is used to provide defined benefit pensions both to employees of state or local governmental employers and to employees of employers that are not state or local governmental employers, and (3) has no predominant state or local governmental employer (either individually or collectively with other state or local governmental employers that provide pensions

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through the pension plan). This Statement establishes requirements for recognition and measurement of pension expense, expenditures, and liabilities; note disclosures; and required supplementary information for pensions that have the characteristics described above. GASB Statement No. 78 is effective for the Authority's fiscal year 2017 and is not expected to have an impact as the Authority's pensions are covered by GASB Statement No. 68 (note 11).

GASB Statement No. 82, *An Amendment of GASB Statements No. 67, No. 68 and No 73*, was issued in March 2016. This Statement addresses issues regarding (1) the presentation of payroll-related measures in required supplementary information, (2) the selection of assumptions and the treatment of deviations from the guidance in an Actuarial Standard of Practice for financial reporting purposes, and (3) the classification of payments made by employers to satisfy employee (plan member) contribution requirements. GASB Statement No. 82 is effective for the Authority's fiscal year 2017.

The Authority is in the process of evaluating the impact of GASB Statements No. 75, 78, 82 and other recent accounting pronouncements on the Authority's financial statements.

(2) Cash, Cash Equivalents and Investments

The Authority's cash balance at June 30, 2016 is as follows:

Insured (FDIC and SIPC)	$	759,972
Uninsured, uncollateralized, or collateralized by securities held by the pledging institution or by its trust department or agent in other than the Authority's name		153,194,299
Total	$	153,954,271
Carrying amount (cash and cash equivalents)	$	147,985,078

A summary of investments at June 30, 2016 is as follows:

	Fair value	Percentage	Maturities	Interest rate	Credit rating
Cash	$ 26,458,625	39.2%	N/A	N/A	N/A
Fixed-income securities:					
U.S. Treasury Note Bond	4,579,580	6.8	4/30/2017	0.9%	Aaa
Federal National Mortgage Association	16,706,549	24.8	11/26/2027–12/27/2027	2.5%	AA+
Federal Home Loan Bank	9,625,925	14.3	03/10/2017–4/25/2018	0.9%–1.1%	Aaa
Freddie Mac	10,042,790	14.9	7/28/2017	1.0%	Aaa
	$ 67,413,469				

The Authority categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset:

- Level 1 inputs are quoted prices in active markets for identical assets;
- Level 2 inputs are significant other observable inputs;

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- Level 3 inputs are significant unobservable inputs.

A summary of investments within the fair value hierarchy as of June 30, 2016 is as follows:

	Investments by fair value level	Fair value measurements		
		Level 1	Level 2	Level 3
Fixed-income securities:				
U.S. Treasury Note Bond	$ 4,579,580	4,579,580	—	—
Federal National Mortgage Association	16,706,549	—	16,706,549	—
Federal Home Loan Bank	9,625,925	—	9,625,925	—
Freddie Mac	10,042,790	10,042,790	—	—
	$ 40,954,844	14,622,370	26,332,474	—

The Authority's investment strategy has been developed to, among other things, ensure that the investment portfolio remains in compliance with the investments deemed permissible under the indenture agreement described in note 6. There is no formalized deposit or investment policy that otherwise addresses credit risk, interest rate risk, foreign currency risk or how investment income may be spent.

Guidelines for fixed-income investments and cash equivalents are as follows:

1. Direct obligations of the United States (U.S.) government, securities issued by federal agencies backed by the full faith and credit of the U.S. government, and securities issued by certain nonfull faith and credit federal agencies.

2. Cash, money market funds and certificates of deposit that are appropriately collateralized, insured or issued by investment grade financial institutions.

3. Investment agreements, including guaranteed investment contracts, commercial papers, repurchase agreements and other securities are subject to credit rating minimums, acceptance by related insurers, and other provisions, as described in the indenture agreements.

Concentration of credit risk is the risk of loss attributed to the magnitude of a government's investment in a single issuer. Except for restrictions imposed by the aforementioned indenture agreement, there are no limits on the amount the Authority may invest in any one issuer. As of June 30, 2016, 24.8% of the Authority's investments are in notes issued by the Federal National Mortgage Association.

Investment income is comprised of the following for the year ended June 30, 2016:

Dividend and interest income	$ 1,167,829
Realized and unrealized gain on investments	3,209,614
	$ 4,377,443

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(3) Other Current Assets

The composition of other current assets at June 30, 2016 is as follows:

Prepaid expenses	$	11,848,540
Inventories		27,168,524
Amounts due from the South Carolina Medicaid Disproportionate Share Hospital program (note 8)		11,491,860
Amounts due from the South Carolina Medicaid HMO Graduate Medical Education program		10,299,665
Other		3,880,690
	$	64,689,279

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(4) Capital Assets

Capital assets and related activity for the year ended June 30, 2016 consisted of the following:

	Beginning balance	Increases	Decreases	Ending balance
Capital assets not being depreciated:				
Land	$ 6,092,725	—	—	6,092,725
Assets not in service	2,662,311	5,709,689	(6,598,003)	1,773,997
Construction in progress	17,790,404	35,609,827	(30,082,444)	23,317,787
Total capital assets not being depreciated	26,545,440	41,319,516	(36,680,447)	31,184,509
Capital assets being depreciated:				
Buildings, improvements and fixed equipment	728,441,335	27,596,238	(13,574,158)	742,463,415
Machinery and equipment	243,377,274	39,272,803	(22,039,778)	260,610,299
Software	48,456,453	2,775,617	—	51,232,070
Vehicles	2,049,920	250,151	(176,805)	2,123,266
Total capital assets being depreciated	1,022,324,982	69,894,809	(35,790,741)	1,056,429,050
Less accumulated depreciation for:				
Buildings, improvements and fixed equipment	(346,535,706)	(34,359,766)	7,689,149	(373,206,323)
Machinery and equipment	(175,833,488)	(20,010,323)	20,595,922	(175,247,889)
Software	(15,347,803)	(9,437,875)	—	(24,785,678)
Vehicles	(1,955,000)	(79,188)	176,805	(1,857,383)
Total accumulated depreciation	(539,671,997)	(63,887,152)	28,461,876	(575,097,273)
Capital assets being depreciated, net	482,652,985	6,007,657	(7,328,865)	481,331,777
Capital assets, net	$ 509,198,425	47,327,173	(44,009,312)	512,516,286

Construction in progress at June 30, 2016 consists of costs associated with various renovation projects in process at existing hospital facilities and costs for the new Shawn Jenkins Children's Hospital & Pearl Tourville Women's Pavilion (CHWP). Construction in progress projects are generally scheduled for completion in fiscal years 2017, 2018, and 2019. Remaining costs to complete these projects are estimated to total approximately $388.0 million and include estimated costs for construction of CHWP.

Interest cost capitalized on qualifying assets was approximately $0.4 million for the year ended June 30, 2016.

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(5) Deferred Outflows

The composition of deferred outflows at June 30, 2016 is as follows:

Deferred loss on refunding GNMA MBS Series 2012	$ 31,088,401
Deferred loss on refunding CEP Series 2013	1,754,174
Pension Plans	65,514,039
Total	$ 98,356,614

(6) Long-Term Debt

A summary of long-term debt at June 30, 2016 is as follows:

GNMA MBS, 2012 Refinancing of Series 2004 Bonds, Series 2012, payable in varying amounts through 2033, with monthly interest payments at the rate of 2.94%	$ 314,047,788
MUHA Central Energy Plant, 2013 Refinancing of MUFC Central Energy Plant, LLC Economic Development Revenue Bonds, Series 2013, payable in varying amounts through 2032, with monthly interest payments at the rate of 3.85%	42,691,056
Note Payable to Wells Fargo Bank, for conservation equipment, payable in varying amounts through March 2023, with quarterly interest payments at the rate of 3.50%	9,778,649
	366,517,493
Less current installments	17,867,367
	$ 348,650,126

In December 2004, the Authority issued a total of $422.1 million of FHA Insured Mortgage Hospital Facilities and Refunding Revenue Bonds, Series 2004 (Series 2004) at a premium of $11.4 million. The net bond proceeds as well as monies from the Series 2002A Hospital Facilities Refunding Revenue Bonds (2002A Refunding Bonds) trusteed account were used to defease all amounts outstanding under the prior Series 2002A bonds and a promissory note payable to Charleston County, and fund construction of new replacement hospital facilities located in Charleston, South Carolina.

With respect to the 2002A Refunding Bonds defeasance, funds were deposited in an irrevocable trust to provide for the debt service of the bonds payable and, therefore, all related amounts have been removed from the Authority's Statement of Net Position. The deposits in trust have been or will be used to pay all scheduled principal and interest payments on the 2002A Refunding Bonds through 2032.

The 2004 refunding transaction resulted in an accounting loss totaling approximately $15.5 million, which has been deferred and is being amortized using the effective interest method through 2032. The deferred loss is related entirely to the in-substance defeasance of bonds payable.

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The Authority entered into a six month revenue anticipation note with Branch Banking and Trust Company (BB&T) on August 20, 2013 that expired February 20, 2014. This revenue anticipation note was renewed March 14, 2014 and expired September 14, 2014. The Authority entered into a similar contract with BB&T in August 2014 that renewed March 19, 2015, expired September 19, 2015 and was not renewed. There was no activity on this note in fiscal year 2016.

On December 29, 2004, the South Carolina Jobs Economic Development Authority issued $61.0 million of Economic Development Revenue Bonds, CEP Series 2004 for the benefit of the Authority. Proceeds of the bonds were loaned to MUFC Central Energy Plant, LLC, a single-member limited liability company organized under the laws of the State of South Carolina, whose sole member is Medical University Facilities Corporation. Pursuant to a Loan Agreement between the issuer and the borrower, the borrower shall use the proceeds to finance the construction of an approximately 52,000 square foot central energy plant and certain other improvements, renovations, and furnishings, fixtures, and equipment to provide steam and chilled water for the use and benefit of the new 156-bed Phase I Authority project. Pursuant to the loan agreement, the borrower is obligated to make payments to the issuer in amounts sufficient to pay the principal and interest on the Bonds. On March 15, 2007, the construction of the Central Energy Plant was substantially completed, and the plant was put into service. In 2014, MUFC Central Energy Plant, LLC was terminated after the refunding of the CEP Series 2004 Bonds.

On February 1, 2008, MUFC Central Energy Plant, LLC converted the then outstanding $59.4 million bonds into Indexed Floating Rate Bonds to reduce cost of capital and annual debt service payments.

On December 19, 2012, the Authority refinanced the CEP 2004 Series bonds with Government National Mortgage Agency (GNMA) mortgage-backed securities (MBS) (Series 2012). The refinance was done to substantially lower the Authority's interest rate from 5.18% and 5.14% on the 2004 Series bonds in fiscal 2013 to a 2.94% fixed rate on the Series 2012. At the time of refinancing, the long-term debt obligation was reduced by debt service reserve and other funds which became available to make additional principal payments. The net proceeds of $360.4 million (after payment of $1.1 million of issuance costs plus an additional $49.9 million of 2004 Series debt service fund monies), were deposited into an irrevocable trust with an escrow agent to provide for all future debt service payments on the 2004 Series bonds. The advance refunding of the 2004 Series bonds resulted in an economic gain of $1.0 million along with reducing total debt service payments over the next 20 years. The bond indenture contains certain terms and restrictive covenants, typical of such agreements, including maintenance of certain debt service coverage levels and limitations an additional indebtedness.

In April 2013, the Authority entered into a $13.8 million equipment lease/purchase agreement with Wells Fargo Bank for energy conservation equipment for the Sabin Street central energy plant project. The terms are 10 years with an interest rate of 3.50%. This agreement is subject to the master lease program agreement between Wells Fargo Bank and the State of South Carolina.

On December 30, 2013, the Authority refinanced the 2004 MUFC Central Energy Plant, LLC Economic Development Revenue Bonds (CEP Series 2004 bonds) with GNMA MBS (Series 2013). The refinance was done to lower the Authority's effective interest rate from 5.75% on the 2004 Series to a 3.85% fixed rate on the Series 2013. The net proceeds of $47.4 million (after payment of $1.3 million of issuance costs) were deposited into an irrevocable trust with an escrow agent to provide for all future debt service payments on

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the CEP Series 2004 bonds. As a result, the CEP Series 2004 bonds are considered to be defeased and the liability for those bonds has been removed from the Statement of Net Position. The advance refunding of the CEP Series 2004 bonds resulted in an economic gain of $2.4 million along with reducing total debt service payments over the next 18 years. The bond indenture contains certain terms and restrictive covenants, typical of such agreements, including maintenance of certain debt service coverage levels and limitations on additional indebtedness.

The Authority is in the process of structuring a transaction to facilitate the issuance of approximately $316.0 million GNMA MBS for the purpose of financing the construction of the Phase II CHWP and paying associated transaction costs. The Authority has received a commitment for Insurance Advances letter and anticipates issuing the new securities in the fall of 2016.

Debt service requirements associated with the Authority's outstanding bonds are as follows:

	Series 2013		Series 2012		
	Principal	Interest	Principal	Interest	Total
Fiscal year:					
2017	$ 2,098,708	1,606,829	14,455,775	9,039,246	27,200,558
2018	2,180,949	1,524,588	14,886,549	8,608,472	27,200,558
2019	2,266,413	1,439,124	15,330,159	8,164,862	27,200,558
2020	2,355,226	1,350,311	15,786,989	7,708,032	27,200,558
2021	2,447,520	1,258,017	16,257,432	7,237,589	27,200,558
2022	2,543,430	1,162,107	16,741,894	6,753,127	27,200,558
2023	2,643,099	1,062,438	17,240,793	6,254,228	27,200,558
2024	2,746,673	958,864	17,754,558	5,740,463	27,200,558
2025	2,854,306	851,231	18,283,634	5,211,387	27,200,558
2026	2,966,157	739,380	18,828,475	4,666,546	27,200,558
2027	3,082,390	623,146	19,389,553	4,105,469	27,200,558
2028	3,203,179	502,358	19,967,351	3,527,670	27,200,558
2029	3,328,701	376,836	20,562,366	2,932,655	27,200,558
2030	3,459,142	246,395	21,175,112	2,319,909	27,200,558
2031	3,594,694	110,843	21,806,119	1,688,903	27,200,559
2032	920,469	5,912	22,455,928	1,039,093	24,421,402
2033	—	—	23,125,101	369,915	23,495,016
Total	$ 42,691,056	13,818,379	314,047,788	85,367,566	455,924,789

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Debt service requirements associated with the Authority's note payable are as follows:

	Wells Fargo		
	Principal	Interest	Total
Fiscal year:			
2017	$ 1,312,884	325,146	1,638,030
2018	1,359,441	278,589	1,638,030
2019	1,407,650	230,380	1,638,030
2020	1,457,568	180,462	1,638,030
2021	1,509,257	128,773	1,638,030
2022	1,562,778	75,252	1,638,030
2023	1,169,071	20,177	1,189,248
Total	$ 9,778,649	1,238,779	11,017,428

A schedule of changes in the Authority's long-term debt and capital lease obligations for the year ended June 30, 2016 is as follows:

	Date of issuance	Beginning balance	Additions	Refunded and/or retired	Ending balance	Due within one year
Capital leases (note 14)	Various	$ 2,562,299	13,482,256	(1,777,595)	14,266,960	3,593,462
Series 2012	12/19/2012	328,085,255	—	(14,037,467)	314,047,788	14,455,775
Wells Fargo	4/25/2013	11,046,929	—	(1,268,280)	9,778,649	1,312,884
Series 2013	12/30/2013	44,710,624	—	(2,019,568)	42,691,056	2,098,708
		$ 386,405,107	13,482,256	(19,102,910)	380,784,453	21,460,829

(7) Other Accrued Expenses

The composition of other accrued expenses at June 30, 2016 is as follows:

Accrued interest	$ 797,938
Amounts due to contractors	422,426
Other	4,196,436
	$ 5,416,800

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(8) Net Patient Service Revenue

The Authority has agreements with governmental and other third-party payors that provide for reimbursement to the Authority at amounts different from its established rates. Contractual adjustments under third-party reimbursement programs represent the difference between the Authority's billings at established rates for services and amounts reimbursed by third-party payors. A summary of the basis of reimbursement with major third-party payors is as follows:

- Medicare – Substantially all inpatient acute care and outpatient services rendered to Medicare program beneficiaries are paid at prospectively determined rates. These rates vary according to patient classification systems that are based on clinical, diagnostic, and other factors. Additionally, the Authority is reimbursed for both its direct and indirect medical education costs, based principally on per-resident prospective payment amounts and certain adjustments to prospective rate-per-discharge operating reimbursement payments. The Authority generally is reimbursed for retroactively determined items at tentative rates, with final settlement determined after submission of annual cost reports by the Authority and audits by the Medicare fiscal intermediary. The Authority's cost reports have been audited and initially settled for all fiscal years through 2008, except for 2006.

  Revenue from the Medicare program accounted for approximately 32.2% of the Authority's net patient service revenue for the fiscal year ended June 30, 2016.

- Medicaid – Inpatient and outpatient services rendered to most Medicaid program beneficiaries are reimbursed based upon prospective reimbursement methodologies.

  The Authority participates in the Medicaid Disproportionate Share Hospital program (the DSH Program) available to certain qualifying hospitals in South Carolina. The net reimbursement benefits associated with this program totaled approximately $48.0 million in fiscal 2016, and are recognized as reductions in related contractual adjustments in net patient service revenue on the statement of revenues, expenses and changes in net position. There can be no assurance that the Authority will continue to qualify for future participation in this program or that the program will not ultimately be discontinued or materially modified. Any material reduction in such funds has a correspondingly material adverse effect on the Authority's operations.

  During the Authority's fiscal 2008, the State of South Carolina reconfigured certain terms and conditions of the DSH Program for participating providers, including the Authority. Because of associated funding deferrals and other changes which impacted the timing of historical net revenue and cash flows to the Authority under the program, the Authority recognized a receivable totaling approximately $1.5 million at June 30, 2016, in recognition of program net revenue earned but not received in fiscal 2016.

  In fiscal 2016, the Medicaid fiscal intermediary performed a cost settlement of the DSH program funding provided to the Authority in year 2012. The cost settlement identified an underpayment to the Authority of $10.0 million, and therefore the Authority recorded that amount as a receivable and related incremental contractual adjustment during fiscal 2016.

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In fiscal 2016, the Authority received from the Medicaid fiscal intermediary notices of retrospective cost settlements related to the Medicaid program funding for fiscal years 2009 and 2011. The Authority recognized an associated accrual for Medicaid underpayment totaling approximately $2.3 million.

During fiscal 2013, the Authority received notification that South Carolina Department of Health and Human Services (SCDHHS) will no longer retrospectively cost settle Medicaid inpatient and outpatient hospital services effective November 1, 2012.

Overall, revenue from the Medicaid program, including net disproportionate share funding and cost settlement liabilities described above, accounted for approximately 23.4% of the Authority's net patient service revenue for the year ended June 30, 2016.

The Authority has also entered into payment arrangements with various managed care organizations, commercial insurance carriers, and preferred provider organizations. Payment methodologies under these agreements include prospectively determined rates per discharge, discounts from established rates, and prospectively determined per diem rates.

Net patient service revenue is reported at estimated net realizable amounts from patients, third-party payors and others for services rendered. Associated estimates change as a result of confirming events such as completion of audits of the Authority's cost reports by third-party payors or receipt of final settlement payments from third-party payors. Net patient service revenue was increased by approximately $0.3 million for changes in prior year estimates of amounts receivable from or payable to third-party payors during the year ended June 30, 2016.

The composition of net patient service revenue for the year ending June 30, 2016 is as follows:

Gross patient service revenue	$ 3,608,447,093
Less:	
Provision for contractual and other adjustments	2,178,439,512
Provision for uncollectible accounts	128,683,666
Net patient service revenue	$ 1,301,323,915

The Health Information Technology for Economic and Clinical Health (HITECH) Act was enacted as part of the American Recovery and Reinvestment Act of 2009 and signed into law in February 2009. In the context of the HITECH Act, the Authority must implement a certified Electronic Health Record (EHR) system in an effort to promote the adoption and "meaningful use" of health information technology (HIT). The HITECH Act includes significant monetary incentives and payment penalties meant to encourage the adoption of EHR technology. The Authority implemented a certified Electronic Health Record (EHR) system as of July 1, 2014 enabling its compliance with the meaningful use objectives mandated in the HITECH legislation. The Authority collected $1.6 million in fiscal 2016, in incentive payments under the South Carolina Medicaid EHR incentive payment program related to its efforts at implementing certified EHR technology. The incentive payment is included in other revenue in the accompanying Statement of Revenues, Expenses and Changes in Net Position.

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