ATTACHMENT - REQUIRED STATE AGENCY FINDINGS

FINDINGS
C = Conforming
CA = Conditional
NC = Nonconforming
NA = Not Applicable

DECISION DATE: February 27, 2012
FINDINGS DATE: February 29, 2012
PROJECT ANALYST: Fatimah Wilson
SECTION CHIEF: Craig R. Smith

PROJECT I.D. NUMBER: **F-8739-11** / The Charlotte-Mecklenburg Hospital Authority d/b/a Carolinas Medical Center / Develop a Satellite Emergency Department in the South Park area of Charlotte / Mecklenburg County

F-8740-11 / Mercy Hospital, Inc. d/b/a Carolinas Medical Center-Pineville / Develop a Satellite Emergency Department near the intersection of Providence Road and I-485 and change of site for the imaging equipment approved in Project I.D. # F-7709-06 (CMC Mint Hill Imaging Center). The capital cost to develop the satellite ED is $24,887,665. The total capital cost for the two projects is $27,725,000. / Mecklenburg County

REVIEW CRITERIA FOR NEW INSTITUTIONAL HEALTH SERVICES

G.S. 131E-183(a) The Department shall review all applications utilizing the criteria outlined in this subsection and shall determine that an application is either consistent with or not in conflict with these criteria before a certificate of need for the proposed project shall be issued.

(1) The proposed project shall be consistent with applicable policies and need determinations in the State Medical Facilities Plan, the need determination of which constitutes a determinative limitation on the provision of any health service, health service facility, health service facility beds, dialysis stations, operating rooms, or home health offices that may be approved.

C
Both Applications

CMC-Morrocroft (14). The applicant, The Charlotte-Mecklenburg Hospital Authority (**"CMHA")** d/b/a Carolinas Medical Center (**"CMC")** proposes to expand emergency services by constructing a healthcare pavilion in Morrocroft, located in the SouthPark area of Charlotte (Mecklenburg County). The proposed facility, CMC-Morrocroft, will be licensed as part of CMC and services will be billed under CMC's existing provider number. The proposed

healthcare pavilion will serve as an extension of Carolinas Hospital System's **("CHS's")** existing healthcare system by providing additional access to patient care services in high demand—emergency services. The applicant's proposed healthcare pavilion will consist of a satellite emergency department with 14 treatment rooms, observation care (two beds), emergency department related diagnostic imaging (CT, ultrasound and x-ray services), emergency department related laboratory and emergency department related pharmacy services. CMC-Morrocroft will not provide scheduled outpatient imaging procedures. The applicant does not propose to develop beds or services or acquire equipment for which there is a need determination in the 2011 State Medical Facilities Plan (SMFP).

CMC-Providence (10). The applicant, Mercy Hospital, Inc., d/b/a Carolinas Medical Center-Pineville (**"CMCP")** proposes to expand emergency services by constructing a healthcare pavilion near the intersection of Providence Road and Interstate 485 (Mecklenburg County). The proposed facility, CMC-Providence, will be licensed as part of CMC-Pineville and services will be billed under CMC-Pineville's existing provider number. The proposed healthcare pavilion will serve as an extension of Carolinas Hospital System's **("CHS's")** existing healthcare system by providing additional access to patient care services in high demand—emergency services. The applicant's proposed healthcare pavilion will consist of a satellite emergency department with 10 treatment rooms, observation care (two beds), emergency department related diagnostic imaging (CT, ultrasound and x-ray services), emergency department related laboratory and emergency department related pharmacy services. CMC-Providence will not provide scheduled outpatient imaging procedures. The applicant does not propose to develop beds or services or acquire equipment for which there is a need determination in the 2011 State Medical Facilities Plan (SMFP).

CMC-Morrocroft (14) and CMC-Providence (10). There is one policy in the 2011 SMFP applicable to the review of both applications:

Policy GEN-4: ENERGY EFFICIENCY AND SUSTAINABILITY FOR HEALTH SERVICE FACILITIES

> *"Any person proposing a capital expenditure greater than $2 million to develop, replace, renovate, or add to a health service facility pursuant to G.S. 131E-178 shall include in its certificate of need application a written statement describing the project's plan to assure improved energy efficiency and water conservation.*
>
> *In approving a certificate of need proposing an expenditure greater than $5 million to develop, replace, renovate, or add to a health service facility pursuant to G.S. 131E-178, the Certificate of Need Section shall impose a condition requiring the applicant to develop and implement an Energy Efficiency and Sustainability Plan for the project that conforms to or exceeds energy efficiency and water conservation standards incorporated in the latest editions of the North Carolina State Building Codes. The plan must be consistent with the applicant's representation in the written statement as described in paragraph one of Policy GEN 4.*

Any person awarded a certificate of need for a project or an exemption from review pursuant to G.S. 131E-184 are required to submit a plan for energy efficiency and water conservation that conforms to the rules, codes and standards implemented by the Construction Section of the Division of Health Service Regulation. The plan must be consistent with the applicant's representation in the written statement as described in paragraph one of Policy-GEN 4. The plan shall not adversely affect patient or resident health, safety, or infection control."

Regarding Policy GEN-4, in Section III.2, pages 124-126 and Section XI.7, pages 192-194 in CMC-Morrocroft's application and Section III.2, pages 123-125 and Section XI.7, pages 193-195 in CMC-Providence's application, the applicants state:

"CHS is committed to energy efficiency and sustainability that balances the need for healthcare services and environmental sustainability in the communities it serves. The project's plan to assure improved energy and water conservation in accordance with Policy GEN-4 requirements is discussed below.

…CMC will work with experienced architects and engineers to develop this proposed project to ensure energy efficient systems are an inherent part of the proposed project.

…CMC utilizes and enforces engineering standards that mandate use of state-of-the-art components and systems. The proposed project will be designed in full compliance with applicable local, state, and federal requirements for energy efficiency and consumption."

On pages 125-126 of CMC-Morrocroft's application and pages 124-125 of CMC-Providence's application, the applicants provide a detailed list of design specifications which the Facilities Management Group (architects, engineers, project managers, tradesman, and technicians) will strive to incorporate in the development of the project. Each applicant adequately described the project's plan to assure improved energy efficiency and water conservation. Thus, the applications are conforming to Policy GEN-4. Therefore, the applications are conforming to this criterion.

(2) Repealed effective July 1, 1987.

(3) The applicant shall identify the population to be served by the proposed project, and shall demonstrate the need that this population has for the services proposed, and the extent to which all residents of the area, and, in particular, low income persons, racial and ethnic minorities, women, handicapped persons, the elderly, and other underserved groups are likely to have access to the services proposed.

C
Both Applications

CMC-Morrocroft (14). The Charlotte-Mecklenburg Hospital Authority d/b/a Carolinas Medical Center proposes to expand emergency services by constructing a healthcare pavilion near the intersection of Fairview Road and Cameron Valley Parkway (Mecklenburg County).

The satellite emergency department, also known as CMC-Morrocroft, will be an extension of Carolinas Hospital System's **(**CHS's**)** existing healthcare system by providing additional access to patient care services in high demand—emergency care services. The proposed 30,000-square foot facility will include:

- Off-campus 14-bed emergency department (includes one trauma/resuscitation room;
- Observation care (two beds);
- Emergency department related diagnostic imaging, including, CT, ultrasound and diagnostic X-ray services;
- Emergency department related laboratory services;
- Emergency department related pharmacy services; and
- an automated pharmaceutical dispensing machine.

Population to be Served

In Section III.4, pages 130-135, the applicant provides the patient origin for emergency services provided at CMC during 2010, as shown in the following table:

CY 2010 CMC Emergency Services
Percent Patients by County

County	ED	CT	X-Ray	Ultrasound	Lab	Observation
Mecklenburg	77.8%	55.6%	58.5%	64.7%	59.2%	69.8%
Gaston	3.7%	6.3%	5.4%	5.2%	6.7%	4.9%
York, SC	3.4%	5.7%	5.3%	5.2%	6.4%	4.8%
Union	2.8%	5.4%	5.1%	4.5%	4.8%	4.3%
Cabarrus	1.1%	2.7%	2.6%	2.4%	4.3%	1.5%
Cleveland	0.9%	2.5%	2.4%	2.0%	2.1%	1.4%
Lancaster, SC	0.8%	2.2%	2.3%	1.8%	2.0%	1.1%
Lincoln	0.8%	2.1%	2.0%	1.6%	1.7%	1.0%
Iredell	0.5%	1.5%	1.5%	1.6%	1.6%	0.7%
Other*	8.2%	16.1%	15.0%	10.9%	11.1%	10.5%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: CHS Internal Data *Other includes Abbeville, Aiken, Alamance, Alexander, Alleghany, Allendale, Anderson, Anson, Ashe, Avery, Barnwell, Beaufort, Berkeley, Bertie, Bladen, Brunswick, Buncombe, Burke, Caldwell, Carteret, Caswell, Catawba, Charleston, Chatham, Cherokee, Cherokee (SC), Chester, Chesterfield, Clarendon, Colleton, Columbus, Craven, Cumberland, Dare, Darlington, Davidson, Davie, Dillon, Dorchester, Duplin, Durham, Edgecombe, Edgefield, Fairfield, Florence, Forsyth, Franklin, Georgetown, Granville, Greene, Greenville, Greenwood, Guilford, Halifax, Hampton, Harnett, Haywood, Henderson, Hertford, Hoke, Horry, Hyde, Jackson, Jasper, Johnston, Kershaw, Laurens, Lee, Lenoir, Lexington, Macon, Madison, Marion, Marlboro, Martin, McDowell, Mitchell, Montgomery, Moore, Orangeburg, Pamlico, Pasquotank, Pender, Person, Pickens, Pitt, Polk, Randolph, Richland, Richmond, Robeson, Rockingham, Rowan, Rutherford, Saluda, Sampson, Scotland, Spartanburg, Stanly, Stokes, Sumter, Surry, Swain, Transylvania, Union (SC), Vance, Wake, Warren, Washington, Watauga, Wayne, Wilkes, Williamsburg, Wilson, Yadkin, Yancey counties, as well as other states.

As shown in the table above, 77.8 % of CMC's 2010 Emergency Department patient visits are from residents of Mecklenburg County, 3.7% are from residents of Gaston County, 3.4% are from residents of York, SC, 2.8% are from residents of Union County and 12.3% are from residents of other North Carolina counties and states.

In Section III.5(c), page 137, the applicant provides the projected patient origin for the first two years of the proposed project, as illustrated in the following table:

CMC-Morrocroft
Projected Year Two Patient Origin

County	Year 1: Projected # Patients	Year 1: % of Total Patients	Year 2: Projected # Patients	Year 2: % of Total Patients
Mecklenburg County	17,968	99.6%	20,508	99.6%
York, SC	69	0.4%	78	0.4%
Total	**18,037**	**100.0%**	**20,587**	**100.0%**

In Section III.5(d), page 137, the applicant states,

> *"CMC-Morrocroft has based its projected patient origin on the county composition of its proposed service area. According to ESRI, 0.4 percent of the total population of the 15 minute drive time zone for CMC-Morrocroft are residents of York County, South Carolina and the remainder are residents of Mecklenburg County. CMC-Morrocroft assumes that projected immigration from outside the service area will be in direct proportion to the composition by county of the service area."*

Note: CMC-Morrocroft believes this projected patient origin is conservative based on the experience of CMC-Steele Creek.

The applicant adequately identified the population to be served.

Need for the Proposed Project

Regarding the need for the proposed project, in Section III.1(a), pages 34-35, the applicant states,

> *"…The proposed project is in response to a service-based need driven by highly utilized emergency services in the proposed service area. As discussed in detail below, existing emergency services in Mecklenburg County are currently operating above capacity targets. In addition to and further exacerbating these capacity constraints is the population growth and development within the proposed service area. Together, these factors support the need for local access to an expanded range of healthcare services; in particular, emergency services. Further, given the overwhelming need for cost-effective healthcare, CHS has determined that the healthcare pavilion model represents the most cost-effective solution to increasing access to emergency department services in the proposed service area.*
>
> *The proposed project is the result of CHS's ongoing evaluation and planning to address the significant need for emergency services in areas in Mecklenburg County experiencing significant and substantial population growth. …*

> *As a result of its evaluation and planning, CHS has determined that healthcare pavilions play a critical role in ensuring that it can meet community needs for emergency care today and in the future. …*
>
> *CMC-Steele Creek and each of the healthcare pavilions currently under development will expand geographic access to highly utilized emergency services in their respective service areas. CMC-Morrocroft, which will provide care to patients in the SouthPark area of Mecklenburg County, represents the next step in the evolution of CHS's development process for emergency services in Mecklenburg County.*
>
> *Given the success of the healthcare pavilion model in Steele Creek, CHS has determined to replicate this model in areas where strong need is indicated. …"*

In evaluating the need and projecting future volumes for emergency services, in Section III.1(a), pages 40-66, the applicant states they examined the following factors:

•National emergency utilization trends;
•Emergency needs in Mecklenburg County; and
•Need for access to emergency services in the service area.

Each factor is summarized below.

1. National Emergency Department Utilization Trends

On page 40, the applicant states,

> *"…Emergency department utilization is on the rise. At the same time, the number of emergency departments has declined, resulting in significant overcrowding and longer wait times in the facilities that remain.*[1]
>
> *Along with the cost, technology and patient preference are driving the shift of healthcare services from the inpatient to the outpatient setting.*
>
> *According to the Centers for Disease Control (CDC), not only is the demand for emergency services in the United States growing, but also certain groups utilize emergency department services at a higher rate.*[2] *In particular, older adults, non-Hispanic black persons, low income persons, and persons with Medicaid coverage*

[1] Landro, Laura, *The Informed Patient, ERs Move to Speed Care; Not Everyone Needs a Bed*, Wall Street Journal, Aug.2, 2011, available at http://online.wsj.com/article/SB10001424053111904888304576476242374040506.html (noting that while the number of emergency departments has dropped by nearly a third over the last two decades, the number of patients seeking care has risen almost 40 percent over the same time frame), Exhibit 22.

[2] Garcia, Tamyra Carroll; Bernstein, Amy B.; and Bush, Mary Ann, *Emergency Department Visitors and Visits: Who Used the Emergency Room in 2007?*, CDC, NCHS Data Brief No. 38, May 2010, available at http://www.cdc.gov/nchs/data/databriefs/db38.pdf, Exhibit 14.

were more likely to have had at least one emergency department visit in a 12 month period than those in other age, race, income and insurance groups.[3] *…*

Ultimately, historical and projected national trends indicate high utilization of emergency department services, resulting in overcrowding in many emergency departments nationwide. …

2. *Emergency Department Need in Mecklenburg County*

Mecklenburg County Population Growth

The population growth in Mecklenburg County is driving increased utilization of healthcare services. Mecklenburg County and its surrounding communities are among the fastest growing regions in the country. According to data from the North Carolina Office of State Budget and Management (NC OSBM), Exhibit 16,[4] *Mecklenburg County is the second fastest growing county in North Carolina based on numerical growth and the eighth fastest behind Union, Brunswick, Camden, Wake, Hoke, Johnston, and Cabarrus counties based on percentage growth.*

…In fact, the NC OSBM projects the population of Mecklenburg County to grow 19.3 percent between 2010 and 2015.[5]

In the coming decade, Mecklenburg County is projected to add over 175,000 people, which is more than the total 2010 population in each of 88 of North Carolina's 100 counties in the state.

…Further, over the next decade, Mecklenburg County's 65+ population is projected to grow by 58.1 percent. These data are significant because, typically, older residents utilize healthcare services at a higher rate than those who are younger.[6] *For these residents in particular, additional emergency department capacity and resulting improved access to services will support the expected higher utilization of this population group.*

Mecklenburg County Traffic Congestion

As a result of continued high population growth, Charlotte roadways are becoming highly congested. According to a 2007 study on North Carolina traffic

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[3] Id.

[4] Exhibit 16 contains NC OSBM county growth data for 2000-2010.

[5] Source: NC OSBM County Population Growth (2010-2020). Please see Exhibit 17 for NC OSBM county growth data for 2010-2020.

[6] Garcia, Tamyra Carroll; Bernstein, Amy B.; and Bush, Mary Ann, *Emergency Department Visitors and Visits: Who Used the Emergency Room in 2007?*, CDC, NCHS Data Brief No. 38, May 2010, available at http://www.cdc.gov/nchs/data/databriefs/db38.pdf, Exhibit 14 (noting that older adults, non-Hispanic black persons, low income persons with Medicaid coverage were more likely to have had at least one emergency room visit in a 12 month period than those in other age, race, income, and insurance groups.)

congestion[7] conducted by the John Locke Foundation, the average commute time in Charlotte has increased from 22.1 minutes in 1990 to 26 minutes in 2000.[8] This is relevant because timing is critical in an emergency. Despite numerous current and planned transportation projects, congestion delays in the Charlotte area are expected to double in the next 25 years.[9] …

Mecklenburg County Emergency Department Volume Growth

System-wide, CHS is experiencing emergency department utilization trends similar to those experienced nationwide. …As shown in the table below, emergency department visits at CHS facilities in Mecklenburg County have increased at a compound annual growth rate (CAGR) of 3.1 percent since 2008:

FFY Year	***CMC***	***CMC-Randolph***	***CMC-University***	***CMC-Mercy***	***CMC-Pineville***	***CMC-Steele Creek***	***Total***
2008	*110,537*	*14,232*	*70,623*	*28,400*	*50,725*	*NA*	*274,517*
2009	*109,441*	*16,477*	*71,497*	*30,488*	*53,045*	*NA*	*280,948*
2010	*106,365*	*17,038*	*70,486*	*30,904*	*51,400*	*15,385**	*291,575*
Compound Annual Growth Rate (CAGR)							***3.1%***

Source: Hospital License Renewal Applications (HLRAs) and internal data
**FFY 2010 volume for CMC-Steele Creek is a partial year. Please note that in every instance FFY 2010 visits for CMC-Steele Creek are provided, they represent a partial fiscal year as the facility opened in November 2009.*

Further, as illustrated below, all CHS emergency departments in Mecklenburg County are operating above the recommended American College of Emergency Physicians (ACEP) capacity ranges.

Facility	*FFY 2010 Visits*	*Existing ED Rooms*	*Visits/Room*	*Visits/Room*		*Percent Capacity*	
				Max Visits	*Min Visits*	*Max Visits*	*Min Visits*
CMC	*106,365*	*55*	*1934*	*1,818*	*1,296*	*106.4%*	*149.2%*
CMC-Randolph[10]	*17,038*	*10*	*1,704*	*1,250*	*909*	*136.3%*	*187.4%*
CMC University	*70,486*	*35*	*2,014*	*1,714*	*1,212*	*117.5%*	*166.2%*
CMC-Mercy	*30,904*	*15*	*2,060*	*1,333*	*1,053*	*154.6%*	*195.7%*
CMC-Pineville	*51,400*	*33*	*1,558*	*1,714*	*1,212*	*90.9%*	*125.5%*
CMC-Steele Creek	*15,382*	*8*	*1,923*	*1,250*	*909*	*153.8%*	*211.5%*

[7] Traffic congestion is defined as the delay in urban travel caused by the presence of other vehicles.
[8] Hartgen, David T., *Traffic Congestion in North Carolina: Status, Prospects, and Solutions*, John Locke Foundation, March 2007, available at http://www.johnlocke.org/sitedocs/traffic/TrafficCongestion.pdf. Please see Exhibit 19 for relevant excerpts.
[9] Hartgen, David T., *North Carolina Transportation Issues*, Remarks at the Shaftesbury Lecture, John Locke Foundation, February 23, 2009, Exhibit 20.

[10] Please note that CMC-Randolph is a dedicated psychiatric facility and thus operates differently from the other facilities in this table. In particular, the length of stay for psychiatric patients is usually higher. Please see Exhibit 21, page 70 for an excerpt from the ACEP Report suggesting higher lengths of stay for psychiatric patients. CHS believes that this facility represents an important component of the emergency care system in Mecklenburg County and such should be included in this table.

Mecklenburg County Emergency Department Room Need Based on ACEP Standards
Further, according to ACEP standards, given the 2010 inventory of emergency department rooms and utilization of those rooms in Mecklenburg County, there is a mean deficit of 69 emergency department rooms. …"

In Section III.1(a), page 53, the applicant states that the range of emergency department rooms needed was calculated by dividing FFY 2010 emergency department volume by the range of visits per room. The emergency department room surplus (shown as a negative number) or deficit (bolded) was calculated by subtracting the existing number of emergency department rooms from the range of emergency department rooms needed. Finally, CHS calculated the arithmetic mean (average) of the surplus/deficit range. In Exhibit 21, page 421, the applicant provides a table from the American College of Emergency Physicians (ACEP), of the recommended range of visits per room based on the total number of existing and approved emergency department rooms within Mecklenburg County.

	2010 Inventory of ED Room	***Visits/Room***		***Total Range of Visits***		***Actual FFY 2010 ED Visits***	***ED Rooms Needed***		***Mean ED Room Surplus (-) / Deficit (bolded)***
		Max Visits	***Min Visits***	***Based on Max Visits***	***Based on Min Visits***		***Based on Max Visits***	***Based on Min Visits***	
CMC	*55*	*1,818*	*1,296*	*99,990*	*71,280*	*106,365*	*59*	*82*	*15*
CMC-Randolph	*10*	*1,250*	*909*	*12,500*	*9,090*	*17,038*	*14*	*19*	*6*
CMC-University	*35*	*1,714*	*1,212*	*59,990*	*42,420*	*70,486*	*41*	*58*	*15*
CMC-Mercy	*15*	*1,333*	*1,053*	*19,995*	*15,795*	*30,904*	*23*	*29*	*11*
CMC-Pineville	*33*	*1,714*	*1,212*	*56,562*	*39,996*	*51,400*	*30*	*42*	*3*
CMC-Steele Creek	*8*	*1,250*	*909*	*10,000*	*7,272*	*15,382*	*12*	*17*	*7*
*Presbyterian^*	*43*	*1,778*	*1,250*	*76,454*	*53,750*	*79,761*	*45*	*64*	*11*
Presbyterian Matthews	*33*	*1,714*	*1,212*	*56,562*	*39,996*	*45,657*	*27*	*38*	*-1*
Presbyterian Huntersville	*23*	*1,600*	*1,154*	*36,800*	*26,542*	*32,047*	*20*	*28*	*1*
Total	***255***			***428,853***	***306,141***	***449,040***	***270***	***377***	***69***

In Section III.1(a), page 54, the applicant states that in order to further demonstrate the need for the proposed and existing facilities, CHS examined the projected future capacity and utilization of Mecklenburg County emergency departments by updating the previous table to include the 31 additional emergency department rooms approved to Presbyterian Hospital in Project I.D. # F-8040-08 based on the same calculations used in the previous table.

	Existing and Approved Inventory of ED Rooms	Visits/Room		Total Range of Visits		Actual FFY 2010 ED Visits	ED Rooms Needed		Mean ED Room Surplus (-) / Deficit (bolded)
		Max Visits	Min Visits	Based on Max Visits	Based on Min Visits		Based on Max Visits	Based on Min Visits	
CMC	*55*	*1,818*	*1,296*	*99,990*	*71,280*	*106,365*	*59*	*82*	*15*
CMC-Randolph	*10*	*1,250*	*909*	*12,500*	*9,090*	*17,038*	*14*	*19*	*6*
CMC-University	*35*	*1,714*	*1,212*	*59,990*	*42,420*	*70,486*	*41*	*58*	*15*
CMC-Mercy	*15*	*1,333*	*1,053*	*19,995*	*15,795*	*30,904*	*23*	*29*	*11*
CMC-Pineville	*33*	*1,714*	*1,212*	*56,562*	*39,996*	*51,400*	*30*	*42*	*3*
CMC-Steele Creek	*8*	*1,250*	*909*	*10,000*	*7,272*	*15,382*	*12*	*17*	*7*
Presbyterian	*74*	*1,867*	*1,333*	*138,158*	*98,642*	*118,654*	*64*	*89*	*2*
Presbyterian Matthews	*33*	*1,714*	*1,212*	*56,562*	*39,996*	*45,657*	*27*	*38*	*-1*
Presbyterian Huntersville	*23*	*1,600*	*1,154*	*36,800*	*26,542*	*32,047*	*20*	*28*	*1*
Presbyterian Mint Hill	*16*								*-16*
CMC-Huntersville	*9*								*-9*
Total	***313***			***493,057***	***352,851***	***487,933***	***289***	***402***	***33***

Source: HLRAs and internal data

^In conjunction with previously approved Project I.D. # F-8040-08, Presbyterian Hospital was approved to add 31 additional rooms for a total of 74 emergency department treatment rooms. The additional 31 emergency department rooms are not included in this table.

In Section III.1(a), page 57, the applicant states that they conducted additional analysis to determine the need for additional emergency department capacity in Mecklenburg County based on the assumption that Presbyterian Hospital would not achieve its projected volume. The applicants used the FFY 2009-2010 total growth rate of 1.25 percent for all facilities in the county as shown in the following table.

	Existing and Approved Inventory of ED Rooms	Visits/Room		Total Range of Visits		2010 ED Visits	2016 Projected ED Visits	ED Rooms Needed		Mean ED Room Surplus (-) / Deficit (bolded)
		Max Visits	Min Visits	Based on Max Visits	Based on Min Visits			Based on Max Visits	Based on Min Visits	
CMC	*55*	*1,818*	*1,296*	*99,990*	*71,280*	*106,365*	*114,564*	*59*	*82*	*15*
CMC-Randolph	*10*	*1,250*	*909*	*12,500*	*9,090*	*17,038*	*18,351*	*14*	*19*	*6*
CMC-University	*35*	*1,714*	*1,212*	*59,990*	*42,420*	*70,486*	*75,919*	*41*	*58*	*15*
CMC-Mercy	*15*	*1,333*	*1,053*	*19,995*	*15,795*	*30,904*	*33,286*	*23*	*29*	*11*
CMC-Pineville	*33*	*1,714*	*1,212*	*56,562*	*39,996*	*51,400*	*55,362*	*30*	*42*	*3*
CMC-Steele Creek	*8*	*1,250*	*909*	*10,000*	*7,272*	*15,382*	*16,568*	*12*	*17*	*7*
CMC-Huntersville	*9*									*-9*
CHS Subtotal	***167***	***9,079***	***6,591***	***261,537***	***187,671***	***291,575***	***314,050***	***193***	***267***	***63***
Presbyterian	*74*	*1,867*	*1,333*	*138,158*	*98,642*	*79,761*	*85,909*	*46*	*64*	*-19*
Presbyterian Matthews	*33*	*1,714*	*1,212*	*56,562*	*39,996*	*45,657*	*49,176*	*29*	*41*	*2*
Presbyterian Huntersville	*23*	*1,600*	*1,154*	*36,800*	*26,542*	*32,047*	*34,517*	*22*	*30*	*3*
Presbyterian Mint Hill	*16*									*-16*
Novant Subtotal	***146***	***5,181***	***3,699***	***231,520***	***165,180***	***157,465***	***169,603***	***96***	***135***	***-30***
Total	***313***	***14,260***	***10,290***	***493,057***	***352,851***	***449,040***	***483,653***	***289***	***402***	***32***

Based on the applicant's projections, the county would still have a mean deficit of 32 emergency department rooms which would be sufficient to support all existing and approved facilities, as well as CHS's concurrently filed healthcare pavilion projects.

In Section III.1(a), page 59, the applicant states that they were able to further define need by geographic area. The applicant suggested that the downtown, South I-485, North/East I-485 and Huntersville areas are those where the greatest need exists in the county. The following table shows this analysis.

	Existing and Approved Inventory of ED Rooms	Visits/Room		Total Range of Visits		2010 ED Visits	2016 Projected ED Visits	ED Rooms Needed		Mean ED Room Surplus (-) / Deficit (bolded)
		Max Visits	Min Visits	Based on Max Visits	Based on Min Visits			Based on Max Visits	Based on Min Visits	
CMC	*55*	*1,818*	*1,296*	*99,990*	*71,280*	*106,365*	*114,564*	*63*	*88*	*21*
CMC-Randolph	*10*	*1,250*	*909*	*12,500*	*9,090*	*17,038*	*18,351*	*15*	*20*	*7*
CMC-Mercy	*15*	*1,333*	*1,053*	*19,995*	*15,795*	*30,904*	*33,286*	*25*	*32*	*13*
Presbyterian	*74*	*1,867*	*1,333*	*138,158*	*98,642*	*79,761*	*85,909*	*46*	*64*	*-19*
Downtown Subtotal	***154***	***6,268***	***4,591***	***270,643***	***194,807***	***234,068***	***252,110***	***149***	***205***	***23***
Presbyterian Matthews	*33*	*1,714*	*1,212*	*56,562*	*39,996*	*45,657*	*49,176*	*29*	*41*	*2*
CMC-Pineville	*33*	*1,714*	*1,212*	*56,562*	*39,996*	*51,400*	*55,362*	*32*	*46*	*6*
*CMC-Steele Creek**	*10*	*1,250*	*909*	*12,500*	*9,090*	*15,382*	*16,568*	*13*	*18*	*6*
South I-485 Subtotal	***76***	***4,678***	***3,333***	***125,624***	***89,082***	***112,439***	***121,106***	***74***	***104***	***13***
CMC-University	*35*	*1,714*	*1,212*	*59,990*	*42,420*	*70,486*	*75,919*	*41*	*58*	*15*
Presbyterian Mint Hill	*16*									*-16*
North/East I-485 Subtotal	***51***	***1,714***	***1,212***	***59,990***	***42,420***	***70,486***	***75,919***	***44***	***63***	***2***
Presbyterian Huntersville	*23*	*1,600*	*1,154*	*36,800*	*26,542*	*32,047*	*34,517*	*22*	*30*	*3*
CMC-Huntersville	*9*									*-9*
Huntersville Subtotal	***32***	***1,600***	***1,154***	***36,800***	***26,542***	***32,047***	***34,517***	***22***	***30***	***-6***
Total	***313***	***14,260***	***10,290***	***493,057***	***352,851***	***449,040***	***483,653***	***289***	***402***	***32***

In Section III.1, page 61, the applicant states,

> *"As shown, the downtown area has a need for 23 additional emergency department rooms, which supports CMC-Morrocroft's proposed 14 rooms, and the South I-485 area has a need for 13 additional emergency department rooms, which supports CMC-Providence's proposed 10 rooms. Thus, this analysis supports both projects on a conservative basis."*

In Exhibit 21, page 421, the applicant provides a table from the American College of Emergency Physicians (ACEP), of the recommended range of visits per room based on the total number of existing and approved emergency department rooms within Mecklenburg County. After further review of the in Exhibit 21 and tables above from Section III.1, pages 53-60 of the application, the project analyst determined that in some cases, the range of visits per room used by the applicant does not correspond with the range of visits per rooms from Exhibit 21. There is no explanation from the applicant as to why the ranges used are different. The project analyst recalculated the tables above using the range of visits per room as outlined in Exhibit 21 and determined that the applicant still demonstrated a need for additional emergency department rooms based on ACEP Standards equivalent to the requested amount in the both the CMC-Morrocroft and CMC Providence applications.

3. Access to Emergency Services in the Service Area

> *"The service area for the proposed project is comprised of the area located within a 15 minute drive time from the proposed healthcare pavilion. …*

> *…Not only is the population in Mecklenburg County expected to grow, but the population in the proposed service area is experiencing high growth. In 2000, 328,604 people lived in the area within the 15 minute drive time zone from CMC-Morrocroft, Exhibit 23. According to ESRI data, Exhibit 23, the population of the proposed service area grew 13.1 percent between 2000 and 2010, or 1.2 percent annually.*
>
> *In 2010, 371,741 people lived in the area within the 15 minute drive time zone from CMC-Morrocroft, Exhibit 23. The proposed service area is expected to grow 1.5% annually through 2015. …*
>
> *Moreover, it bears mention that the proposed service area population is more than three times the size of the CMC-Steele Creek service area population. …"*

In addition to the historical and projected population growth of the service area, the applicant states that the SouthPark area of Charlotte is well-developed and established and is continuing to grow despite the state of the economy, therefore traffic congestion will continue to be a problem when it comes to the accessibility of emergency services. Thus, the applicant states that the proposal is needed to ensure and improve access to services for the population proposed to be served in the application.

Need Methodology and Assumptions

In Section IV.1, page 146, the applicant provides projected utilization for the first three years of operation for the project to include emergency department rooms, observation rooms, diagnostic imaging (CT, X-ray, and Ultrasound) and ancillary (laboratory) services, as shown in the table below.

	First Full FY 1/1/14 to 12/31/14	Second Full FY 1/1/15 to 12/31/15	Third Full FY 1/1/16 to 12/31/16
CT Scanner			
# of Units	1	1	1
# of Scans	4,028	4,598	5,183
# of HECT units*	6,459	7,372	8,310
X-ray			
# of Units^	2	2	2
# of Procedures	6,503	7,422	8,367
Ultrasound			
#of Units	1	1	1
# of Procedures	1,085	1,238	1,396
Laboratory	35,101	40,063	45,162
Emergency Department			
# of Treatment Rooms	14	14	14
# of Visits	18,037	20,587	23,207
Observation Beds			
# of Beds (unlicensed)	2	2	2
# of Patients	250	286	322
Average Length of Stay (hours)	Less than 24 hours	Less than 24 hours	Less than 24 hours

*HECT units based on CMC-Steele Creek's historical ratio of CT scans to HECT units per its 2011 HLRA.
^One fixed unit and one portable unit for patients who cannot go to the fixed x-ray room.

In Section III.1(a), page 47, the applicant provides the historical emergency department utilization (visits) for all CHS facilities in Mecklenburg County from FFY 2008-FFY2010. While emergency department visits for CMC has decreased by -3.77 percent [(106,365 – 110,537) = - 4,172 / 110,537 * 100 = -3.77] with 65 treatment rooms (10 in Randolph), the emergency department visits at CHS facilities combined have increased at a compound annual growth rate (CAGR) of 3.1 percent since 2008. The applicant states on page 50 that the decrease in emergency department volumes at CMC may be attributed to the number of patients who leave without being seen (LWBS) as a result of the number of emergency department rooms available and the resulting waiting times. As a result, it is likely that patients bypass CMC and go to CMC-Mercy because of the likelihood of shorter wait times.

With the addition of 14 new treatment rooms at the proposed healthcare pavilion, CMC proposes to have a total of 79 treatment rooms (55 at CMC, 10 at Randolph, and 14 at CMC-Morrocroft). With 1,934 visits per treatment room in 2010, CMC already exceeds the American College of Emergency Physician's (ACEP) guidelines on Emergency Department capacity (see Exhibit 21).[11] Assuming that CMC had 55 treatment rooms in 2010, it would have averaged 1,934 visits per treatment room (106,365 visits in 2010 / 55 treatment rooms =

[11] Note: The ACEP guidelines are guidelines. There are no capacity definitions or performance standards for emergency services in the Certificate of Need Law or Rules. Indeed, unlike beds, dialysis stations, home health agencies, or certain equipment, the Certificate of Need law does not regulate the number of Emergency Departments or treatment rooms. Thus, applications may be found conforming even if projected volumes do not reach or exceed the recommendations of the ACEP. The guidelines address annual capacity not sure capacity (i.e. the need for enough capacity to deal with an influx of a lot of patients at once.)

1,934 visits per treatment room), which is in line with the ACEP guidelines. In other words, based on the ACEP guidelines, the applicant exceeds the minimum number of visits for the existing number of emergency treatment beds based on the 2010 ED visits experienced in 2010 with no growth. The applicant states that expansion at CMC or CMC-Mercy would not serve the growing SouthPark community with emergency services closer to home because of the high utilization at both facilities.

In Section III.1(b), pages 68-121, the applicant provides the assumptions and methodology used to project utilization of the proposed healthcare pavilion, which are summarized below.

Step 1: Determine the current and projected population of the area within a 15 minute drive time from the proposed site

The applicant considered defining the service area by mileage radii (e.g. the area within a five-mile or ten-mile radius of a proposed site) in the same manner as in previous CHS healthcare pavilion applications. However, based on analysis of patient origin information from the CMC-Steele Creek application, the applicant determined that emergency department utilization within a radius is not consistent due to the concentration of high and low utilization within a five-mile radius that is influenced by factors such as population density, transportation accessibility and traffic patterns.[12] As a result of new software, the applicant was able to further define its methodology for determining the current and projected population of a service area from the methodologies previously used by CHS in other healthcare pavilion applications submitted. The applicant determined that a service area defined by drive time distance is more accurate than one defined by mileage radius because drive times capture the geographic proximity of the population in addition to a proposed site's accessibility by roads.[13]

On page 71, the applicant states,

> *"In 2010, 371,741 people lived in the area within the 15 minute drive zone for CMC-Morrocroft and this area is expected to grow 1.5 percent annually through 2015.[14] Please note that ESRI only provided projected population for 2010 and 2015. As such, CMC-Morrocroft has utilized the projected 2010 to 2015 growth rate to determine the population for the intervening and following years. The table below provides population totals for the 15 minute drive time zone for the proposed site from 2010 to 2016.*

CMC-Morrocroft
15 Minute Drive Time Zone Population

	2010	***2011***	***2012***	***2013***	***2014***	***2015***	***2016***	***CAGR***
15 Minute Drive Time	*371,741*	*377,421*	*383,188*	*389,043*	*394,987*	*401,022*	*407,149*	*1.5%*

Source: ESRI. See Exhibit 23."

Step 2: Adjust the service area population

[12] Please see Section III.1(a) for further discussion of traffic issues in Mecklenburg County.
[13] CHS's earlier healthcare pavilion CON applications were submitted before CHS acquired the necessary software (ESRI) to calculate the population of drive time zones.
[14] Source: ESRI. See Exhibit 23 for a detailed report on this population.

CHS is filing another application concurrently with this application (CMC-Providence). According to the applicant, the service areas defined by the 15 minute drive times from each facility for both CMC-Morrocroft and CMC-Providence overlap. As a result, both CMC-Morrocroft and CMC-Providence have adjusted its service area to account for both projects. The table below provides the population total for the 15 minute drive time zones that overlap for both the proposed sites from 2010 to 2016.

Area within both CMC-Morrocroft and CMC-Providence
15 Minute Drive Time Zones

	2010	***2011***	***2012***	***2013***	***2014***	***2015***	***2016***	***CAGR***
Overlap with Providence	*145,793*	*148,207*	*150,662*	*153,157*	*155,693*	*158,271*	*160,892*	*1.7%*

Source: ESRI. See Exhibit 23.

On page 73, the applicant states,

> *CMC-Providence proposes to begin operation in 2014. Thus, CMC-Morrocroft assumed that 50 percent of this overlap population should be excluded from its service area throughout its project years as these patients may choose to seek care at CMC-Providence. Given that residents of this overlap population reside within 15 minutes of both facilities, CMC-Morrocroft believes it is reasonable to split the overlap population equally between the two facilities. …Please note that while CMC-Morrocroft has adjusted for this overlap population, it still assumes its service area is comprised of the entire 15 minute drive time…*
>
> *The following table shows this adjustment to the service area population during the second and third project years.*

CMC-Morrocroft
Adjusted Service Area Population

	PY1 2014	*PY2 2015*	*PY3 2016*
15 Minute Drive Time	*394,987*	*401,022*	*407,149*
Adjustment of 50% of Overlap with CMC-Providence	*(77,846)*	*(79,136)*	*(80,446)*
Adjusted Service Area Population	*317,140*	*321,887*	*326,703*

Source: ESRI."

Step 3: Calculate the CMC-Morrocroft service area emergency department use rate

CMC-Morrocroft calculated the emergency department use rate (per 1,000) for its service area in order to determine the projected number of outpatient emergency department visits. The emergency department use rate for a given area is calculated using the population and the utilization of emergency department services in that area. The source for emergency department utilization data is Thomson. The Thomson data does not include enough detail to determine the emergency department utilization for only those patients within a 15 minute drive time zone of CMC-Morrocroft, the proposed service area. Thus, CMC-Morrocroft determined its service area

emergency department use rate using the ZIP codes within its 15 minute drive time zone as outlined below.

ZIP Code	Location	County
28134	Pineville, NC	Mecklenburg
28210	Charlotte, NC	Mecklenburg
28214	Charlotte, NC	Mecklenburg
28217	Charlotte, NC	Mecklenburg
28226	Charlotte, NC	Mecklenburg
28273	Charlotte, NC	Mecklenburg
28278	Charlotte, NC	Mecklenburg
29708	Fort Mill, SC	York
29710	Clover, SC	York
29715	Fort Mill, SC	York
29730	Rock Hill, SC	York
29732	Rock Hill, SC	York

Source: United States Postal Service website https://www.usps.com/

The applicant states that the codes above correspond geographically with the 15 minute drive zone as well those ZIP codes even if they were not entirely within the 15 minute drive time zone, thus providing a broad population over which to derive use rates.

Next, CMC-Morrocroft determined emergency department utilization. The applicant reviewed the number of emergency patients in Calendar Year 2010 at CMC-Steele Creek that were admitted for inpatient care and compared it to other emergency departments in Mecklenburg County and determined that a conservative and reasonable projection methodology would calculate the use rate based on outpatient emergency department visits alone.

On page 78, the applicant states,

> *"Using these assumptions, CMC-Morrocroft determined the number of outpatient emergency department visits from the area zip codes identified above and calculated the Calendar Year 2010 use rate (per 1,000)."*

Zip Code	*Total Zip Code Population (ESRI)*	*2010 Outpatient ED Visits (Thomson)*	*Outpatient ED Visits per 1,000 Pop.*
28105	*39,488*	*8,507*	*215.4*
28134	*9,709*	*3,091*	*318.4*
28202	*8,700*	*2,896*	*332.9*
28203	*11,816*	*4,761*	*402.9*
28204	*6,304*	*2,343*	*371.7*
28205	*49,265*	*22,385*	*454.4*
28206	*13,624*	*12,316*	*904.0*
28207	*7,813*	*1,137*	*145.5*
28208	*39,415*	*26,210*	*665.0*
29209	*21,556*	*5,063*	*234.9*
28210	*43,227*	*12,071*	*279.2*
28211	*29,378*	*6,291*	*214.1*
28212	*39,390*	*17,753*	*450.7*
28215	*52,215*	*22,390*	*428.8*
28216	*44,105*	*21,934*	*497.3*
28217	*26,852*	*12,465*	*464.2*
28226	*39,080*	*7,361*	*188.4*
28227	*50,883*	*15,546*	*305.5*
28270	*32,124*	*4,837*	*305.5*
28273	*30,415*	*9,754*	*320.7*
28274	*419*	*55*	*131.3*
28277	*64,164*	*7,633*	*119.0*
29708	*25,526*	*3,432*	*134.5*
29715	*24,630*	*4,652*	*188.9*
Total	***710,098***	***234,883***	***330.8***

Note: See Exhibit 24, Table A for the Thomson data

CMC-Morrocroft confirmed the reasonableness of this use rate by examining other sources. On page 79, the applicant states,

> *"To confirm reasonableness of this use rate, CMC-Morrocroft examined several sources. According to the North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT) Annual Report 2009, excerpted in Exhibit 25, the state average outpatient emergency department use rate was 360.6 visits per 1,000 in Calendar Year 2009.*[15]
>
> *According to Thomson emergency data and OSBM population data, the Mecklenburg County outpatient emergency department use rate was 332.6 per 1,000 in Calendar Year*

[15] The NC DETECT Annual Report 2009 states on page 21 that the 2009 North Carolina population is 9,382,609 and, on page 26, that 3,383,244 ED visits were discharged from the ED (or outpatient ED visits). 360.6 = 3,383,244 / (9,382,609 / 1,000).

2010.[16] Given these sources, CMC-Morrocroft believes its calculated use rate is reasonable. In addition, CMC-Morrocroft examined whether its use rate was likely to grow in future years by examining the use rate experience in the CMC-Steele Creek area."

The ZIP codes for CMC-Steele Creek were chosen in the same manner as for CMC-Morrocroft.

Zip Code	***2009***	***2010***	***Change***
28134	*304.1*	*318.4*	*4.7%*
28210	*259.0*	*279.2*	*7.8%*
28214	*409.2*	*395.7*	*-3.3%*
28217	*458.7*	*464.2*	*1.2%*
28226	*182.6*	*188.4*	*3.2%*
28273	*262.6*	*320.7*	*22.1%*
28278	*209.3*	*281.4*	*34.4%*
29708	*92.0*	*134.5*	*46.1%*
29710	*177.3*	*233.4*	*31.7%*
29715	*175.3*	*188.9*	*7.7%*
29730	*55.0*	*64.1*	*16.5%*
29732	*41.0*	*50.8*	*23.9%*
Total	*192.7*	*213.2*	*10.7%*
North Carolina Zips	***291.8***	***312.6***	***7.1%***
South Carolina Zips	***89.5***	***111.1***	***24.0%***
Mecklenburg County	***338.1***	***332.6***	***(1.6%)***

Source: Thomson databases; OSBM for Mecklenburg County and ESRI for zip code population. See Exhibit 24, Tables C & D

The applicant states that some of the increased use rate for South Carolina ZIP codes (those beginning with 29) is likely due to increasing immigration from South Carolina, therefore, an increase in the number of South Carolina patients choosing North Carolina facilities over South Carolina facilities would result in an increased use rate for North Carolina, as patients of South Carolina facilities are not counted in the use rate calculated here.

On page 83, the applicant states,

"…As the table above demonstrates there was a 7.1 percent increase in the use rate for the North Carolina zip codes. By contrast, the outpatient emergency department use rate in Mecklenburg County declined slightly from 2009 to 2010. Given these factors, CMC-Morrocroft believes that it is very likely that the development of CMC-Steele Creek resulted in an increase in the emergency department use rate in its service area.

While these data suggest that CMC-Steele Creek may have increased local emergency department use rates, CMC-Morrocroft does not assume in its projections that such a change will occur. …Given the data presented above, CMC-Morrocroft believes that both

[16] Thomson reports 307,262 outpatient ED visits from Mecklenburg County in Calendar Year 2010 and OSBM reports a population of 923,944 in the county. 332.6 = 307,262 visits / (923,944 / 1,000). See Exhibit 24, Table D.

the calculated use rate for the proposed service area and projecting that use rate to remain constant through the project years is reasonable and supported."

Step 4: Determine projected outpatient emergency department visits for the service area.

The applicant states that the projected outpatient emergency department visits for the service area was determined by applying the projected use rate from Step 3 to the adjusted service area population from Step 2. The outpatient emergency department volume for the service area is as projected as follows.

	PY1 2014	***PY2 2015***	***PY3 2016***
Adjusted Service Area Population	*317,140*	*321,887*	*326,703*
Outpatient ED Use Rate per 1,000	*330.8*	*330.8*	*330.8*
Projected Outpatient ED Visits	***104,902***	***106,472***	***108,065***

Note: Totals may not foot due to rounding

Step 5: Adjust service area emergency department visits for CMC-Waxhaw

CHS filed an application previously to develop a healthcare pavilion (CMC-Waxhaw) that will also overlap with the 15 minute drive time zone for CMC-Morrocroft. On page 85 the applicant states,

"In order to account for the future impact of CMC-Waxhaw, CMC Morrocroft has adjusted its projected service area emergency department visits determined in Step 4 by the number of CMC-Waxhaw visits that are likely to originate from the area within CMC-Morrcroft's 15 minute time zone.

Using ESRI, CMC-Morrocroft calculated that 237,634 people live within the entire 10-mile radius of CMC-Waxhaw (see Exhibit 23). By comparison, 32,985 people are estimated to live within a 10-mile radius of CMC-Waxhaw and within the 15 minute drive time zone of CMC-Morrocroft.[17] Thus, the overlap with the CMC-Morrocroft 15 minute drive time zone represents 14 percent of CMC-Waxhaw's service area (14 percent = 32,985 / 237,634)."

The applicant states that for Calendar Years 2015 to 2016, CMC-Morrocroft has assumed that the CMC-Waxhaw visits will grow at the same CAGR as the CMC-Waxhaw proposed 10-mile service area. CMC-Waxhaw projected to provide the following number of emergency department visits in its first three years.

	PY1 CY12	*PY2 CY13*	*PY3 CY14*	*PY4 CY15*	*PY5 CY16*	*CAGR*
CMC-Waxhaw ED Visits	*8,005*	*9,784*	*11,019*	*11,487*	*11,974*	*4.2%*
14% of Visits	*-*	*-*	*1,525*	*1,590*	*1,658*	*NA*

[17] ESRI was used for this calculation: CMC-Morrocroft drew a polygon around the area that is within a 10-mile radius of CMC-Waxhaw and within the 15 minute drive time zone of CMC-Morrocroft and ESRI calculated the population within that area to be 32,985 people.

For Project Years 1-3, CMC-Morrocroft adjusted the projected service area emergency department visits by 14 percent to account for CMC-Waxhaw visits as shown in the table below.

	2014	**2015**	**2016**
Projected Outpatient ED Visits	104,902	106,472	108,065
Adjustment for 14% of CMC-Waxhaw Visits	(1,525)	(1,590)	(1,658)
Adjusted Outpatient ED Visits	**103,377**	**104,882**	**106,408**

Step 6: Apply assumed market share to determine projected ED visits

The applicant determined the appropriate market share for CMC-Morrocroft by examining the experience of CMC-Steele Creek and all other emergency departments in Mecklenburg County. CMC-Steele Creek's outpatient emergency visit data includes CMC-Pineville and CMC-Mercy because these facilities share a hospital license. This data was then adjusted to account for the differences with the Thomson market data. The Thomson data shows that these three facilities served 93,095 outpatient emergency patients or 99.4 percent of the internal total.

Facility	***Thomson Data***	***CHS Internal Data***	***Thomson as Percentage of CHS Internal***
CMC-Mercy	*NA*	*47,025*	*NA*
CMC-Pineville	*NA*	*28,072*	*NA*
CMC-Steele Creek	*NA*	*18,603*	*NA*
Total	***93,095***	***93,700***	***99.4%***

The applicant multiplied the CMC-Steele Creek internal volumes by 99.4 percent in order to compare CMC-Steele Creek data to the Thomson market data.

Zip Code	***CMC-Steele Creek Interval***	***CMC-Steel Creek Adjusted (99.4% of Internal)***
28134	*83*	*82*
28210	*208*	*207*
28214	*206*	*205*
28217	*738*	*733*
28226	*41*	*41*
28273	*4,115*	*4,088*
28278	*3,185*	*3,164*
29708	*1,633*	*1,622*
29710	*2,764*	*2,746*
29715	*772*	*767*
29730	*461*	*458*
29732	*433*	*430*
Total from Zip Codes	***14,639***	***14,544***

See Exhibit 24, Table F

The applicant then compared the CMC-Steele Creek adjusted volumes to the Thomson emergency visit data for the same ZIP codes to determine the market share for CMC-Steele Creek.

Zip Code	***CMC-Steel Creek Adjusted (99.4% of Internal)***	***Thomson ED Market Data***	***Percent Share***
28134	*82*	*3,091*	*2.7%*
28210	*207*	*12,071*	*1.7%*
28214	*205*	*11,771*	*1.7%*
28217	*733*	*12,465*	*5.9%*
28226	*41*	*7,361*	*0.6%*
28273	*4,088*	*9,754*	*41.9%*
28278	*3,164*	*4,983*	*63.5%*
29708	*1,622*	*3,432*	*47.3%*
29710	*2,746*	*6,680*	*41.1%*
29715	*767*	*4,652*	*16.5%*
29730	*458*	*3,705*	*12.4%*
29732	*430*	*2,776*	*15.5%*
Total from Zip Codes	***14,544***	***82,741***	***17.6%***

See Exhibit 24, Table C for Thomson data

The applicant made one further adjustment by only calculating the market share for the North Carolina ZIP codes in order to estimate CMC-Steele Creek's market share. This is due to the limitations in obtaining market data for South Carolina facilities through Thomson data.

Zip Code	***CMC-Steel Creek Adjusted (99.4% of Internal)***	***Thomson ED Market Data***	***Percent Share***
28134	*82*	*3,091*	*2.7%*
28210	*207*	*12,071*	*1.7%*
28214	*205*	*11,771*	*1.7%*
28217	*733*	*12,465*	*5.9%*
28226	*41*	*7,361*	*0.6%*
28273	*4,088*	*9,754*	*41.9%*
28278	*3,164*	*4,983*	*63.5%*
Total from Zip Codes	***8,521***	***61,496***	***13.9%***

Based on the table above, CHS believes that CMC-Steele Creek's market share of the outpatient emergency department visits in its 15 minute drive time zone is 13.9 percent.

Using the same methodology as CMC-Steele Creek, CMC-Morrocroft estimates Mecklenburg County's market share of emergency department outpatient visits will be 17.6% from areas within its 15 minute drive time zone as shown in the table below.

	Est. Market Share of 15 Minute Drive Time Zone
CMC	*26.4%*
CMC-University	*22.9%*
Presbyterian-Matthews	*20.3%*
Presbyterian Hospital	*18.8%*
CMC-Pineville	*16.3%*
CMC-Steele Creek	*13.9%*
Presbyterian-Huntersville	*13.0%*
CMC-Mercy	*8.8%*
Average	***17.6%***
Average excluding CMC-Steele Creek	*18.1%*

On page 91, the applicant states,

> *"CMC-Morrocroft believes an assumed market share of 17.6 percent for its proposed service area, a share equivalent to the average of Mecklenburg emergency departments is reasonable and conservative given that these estimates rely upon zip code defined geographic areas that are broader than the 15 minute drive time zone for each facility.*
>
> *In order to determine its market emergency visits, CMC-Morrocroft applied its assumed market share to the adjusted outpatient emergency department visits projected for its service area from Step 6."*

	PY1 2014	***PY2 2015***	***PY3 2016***
Adjusted Outpatient ED Visits	*103,377*	*104,882*	*106,408*
Assumed Market Share	*17.6%*	*17.6%*	*17.6%*
CMC-Morrocroft ED Visits from Service Area	***18,194***	***18,459***	***17,728***

Step 7: Calculate immigration and total emergency department utilization

In order to determine the appropriate immigration assumption for the proposed project, the applicant examined the experience of CMC-Steele Creek as well as the experience of all other Mecklenburg County emergency departments. CMC-Morrocroft determined CMC-Steele Creek's immigration level by calculating the percentage of visits served from outside of the CMC-Steele Creek area ZIP Codes used above.

Zip Code	*CMC-Steele Creek Internal*	*CMC-Steel Creek Adjusted (99.4% of Internal)*
28134	*83*	*82*
28210	*208*	*207*
28214	*206*	*205*
28217	*738*	*733*
28226	*41*	*41*
28273	*4,115*	*4,088*
28278	*3,185*	*3,164*
29708	*1,633*	*1,622*
29710	*2,764*	*2,746*
29715	*772*	*767*
29730	*461*	*458*
29732	*433*	*430*
Total from Zip Codes	***14,639***	***14,544***
CMC-Steele Creek Total	***18,603***	***18,483***
Percent Inmigration	***21.3%***	***21.3%***

See Exhibit 24, Table F

Based on this analysis, CMC-Morrocroft believes that the estimated CMC-Steele Creek immigration from outside of its 15 minute drive time zone is 21.3 percent. In other words, 21.3 percent of CMC-Steele Creek's patients originated from outside of the ZIP codes above.

Using the same methodology as CMC-Steele Creek, CMC-Morrocroft estimates Mecklenburg County's emergency departments will experience 19.3 percent immigration for outpatient emergency department visits from areas outside of its 15 minute drive time zone as shown in the table below.

	Est. Inmigration from Outside 15 Minute Drive Time Zone
Presbyterian-Huntersville	*27.4%*
CMC-Pineville	*25.8%*
CMC	*22.7%*
CMC-Steele Creek	*21.3%*
Presbyterian Hospital	*16.1%*
Presbyterian Matthews	*15.9%*
CMC-University	*15.1%*
CMC-Mercy	*10.2%*
Average	***19.3%***
Average excluding CMC-Steele Creek	*19.0%*

On page 95, the applicant states,

> *"CMC-Morrocroft believes its assumed immigration rate of 19.3 percent from outside of its service area, equivalent to the average of all Mecklenburg emergency departments, is*

reasonable. The inmigration calculation is based on the zip code areas for each facility which are broader geographic areas with a larger population than the 15 minute drive time zones for each facility. …

In order to determine its potential emergency department visits, CMC-Morrocroft applied its assumed inmigration percentage to its projected market emergency visits from Step 6."

	PY1 2014	***PY2 2015***	***PY3 2016***
CMC-Morrocroft ED Visits from Service Area	*18,194*	*18,459*	*18,728*
Assumed Inmigration (19.3% of Total)	*4,351*	*4,415*	*4,479*
Potential CMC-Morrocroft ED Visits	***22,546***	***22,874***	***23,207***

The applicant projects that during the ramp-up period, CMC-Morrocroft will achieve 80 percent of its potential utilization in project year one (2014) and 90 percent in year two (2015) as shown in the table below.

	PY1 2014	***PY2 2015***	***PY3 2016***
Potential CMC-Morrocroft ED Visits	*22,546*	*22,874*	*23,207*
Ramp-Up	*80%*	*90%*	*100%*
Total CMC-Morrocroft ED Visits	***18,037***	***20,587***	***23,207***

On page 96, the applicant states,

"Based on the ACEP guidelines (see Exhibit 21), a facility with 20,000 projected annual visits should have between 15 and 19 bays for a range of 1,053 to 1,333 visits per bed. As the utilization projections above demonstrate, CMC-Morrocroft's 14 treatment bays are projected to serve 23,207 emergency patients by the third project year of 1,658 visits per bed, which exceeds the ACEP utilization guidelines. CMC-Morrocroft will effectively utilize its proposed emergency department capacity."

Step 8: Determine the impact on other providers

On pages 98-114, the applicant states,

"…There was a substantial increase in the use rates within CMC-Steele Creek's 15 minute drive time zone from 2009 to 2010. As a result, the opening of CMC-Steele Creek did not have a substantial impact on other North Carolina providers, particularly those outside the CHS system. …

…CMC-Kannapolis is also under development and is expected to begin operation in the first quarter of 2012. This facility is located in Cabarrus County and is expected to serve patients in Cabarrus and Rowan counties. Neither the facility itself nor any part of Cabarrus or Rowan counties is included in CMC-Morrocroft's proposed service area. Thus, CMC-Morrocroft does not expect to impact CMC-Kannapolis.

CMC-Harrisburg is currently under development in Cabarrus County and its timeline has been delayed by utility construction. Cabarrus County residents are expected to comprise 98 percent of this facility's emergency department patients. …Thus, CMC-Morrocroft does not expect to impact CMC-Harrisburg.

CMC-Huntersville is currently under construction and has a pending decision on its 2011 cost overrun application (Project I.D. # F-8705-11). This facility will become operational in the second quarter of 2012. There is no overlap between the service areas for these facilities. …As such, CMC-Morrocroft does not believe it will impact CMC-Huntersville

CR-Mount Holly is a project, currently under appeal, to develop a healthcare pavilion in Gaston County. …There is no overlap between the service area of CMC-Morrocroft and CR-Mount Holly. As such, CMC-Morrocroft does not believe it will impact CR-Mount Holly, should that facility be approved and developed.

Presbyterian-Mint Hill is projected to begin operation of its emergency department services on January 1, 2014 according to its February 2011 progress report (see Exhibit 30), the same day that CMC-Morrocroft is expected to open. Given the parallel timing, neither Presbyterian-Mint Hill nor CMC-Morrocroft will have time to develop market share in the other facility's service area. …There is almost no overlap between the service areas of CMC-Morrocroft and that of Presbyterian Mint Hill."

The applicant states on page 113, that all of the affected facilities will continue to operate above or within the range of effective utilization according to ACEP guidelines as shown in the previous tables of this section, and that Novant facilities are projected to provide emergency department visits in excess of the minimum visits per room capacity guidelines.

The applicant adequately demonstrated that projected utilization is based on reasonable and supported assumptions regarding historically high utilization of existing emergency department visits and projected population growth in the service area.

In summary, the applicant adequately identified the population to be served and demonstrated the need the population to be served has for the development of a satellite emergency department in the SouthPark area of Mecklenburg County. Therefore, the application is conforming to this criterion.

CMC-Providence (10). Mercy Hospital, Inc., d/b/a Carolinas Medical Center-Pineville (**"CMCP")** proposes to expand emergency services by constructing a healthcare pavilion near the intersection of Providence Road and Interstate 485 (Mecklenburg County). The satellite emergency department, also known as CMC-Providence, will be an extension of Carolinas Hospital System's (CHS's) existing healthcare system by providing additional access to patient care services in high demand—emergency care services. The proposed 26,500-square foot facility will include:

- Off-campus 10-bed emergency department
- Observation care (two beds);

- Emergency department related diagnostic imaging, including, CT, ultrasound and diagnostic X-ray services;
- Emergency department related laboratory services;
- Emergency department related pharmacy services; and
- An automated pharmaceutical dispensing machine.

Population to be Served

In Section III.4, pages 128-133, the applicant provides the patient origin for emergency services provided at CMC-Pineville during 2010, as shown in the following table:

CY 2010 CMC-Pineville Emergency Services
Percent Patients by County

County	ED	CT	X-Ray	Ultrasound	Lab	Observation
Mecklenburg	62.0%	55.6%	58.5%	64.7%	59.2%	69.8%
York, SC	23.7%	5.7%	5.3%	5.2%	6.4%	4.8%
Union	4.9%	5.4%	5.1%	4.5%	4.8%	4.3%
Lancaster, SC	1.9%					
Other*	7.5%	16.1%	15.0%	10.9%	11.1%	10.5%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: CHS Internal Data *Other includes Abbeville, Aiken, Alamance, Alexander, Alleghany, Allendale, Anderson, Anson, Ashe, Avery, Barnwell, Beaufort, Berkeley, Bertie, Bladen, Brunswick, Buncombe, Burke, Caldwell, Carteret, Caswell, Catawba, Charleston, Chatham, Cherokee, Cherokee (SC), Chester, Chesterfield, Clarendon, Colleton, Columbus, Craven, Cumberland, Dare, Darlington, Davidson, Davie, Dillon, Dorchester, Duplin, Durham, Edgecombe, Edgefield, Fairfield, Florence, Forsyth, Franklin, Georgetown, Granville, Greene, Greenville, Greenwood, Guilford, Halifax, Hampton, Harnett, Haywood, Henderson, Hertford, Hoke, Horry, Hyde, Jackson, Jasper, Johnston, Kershaw, Laurens, Lee, Lenoir, Lexington, Macon, Madison, Marion, Marlboro, Martin, McDowell, Mitchell, Montgomery, Moore, Orangeburg, Pamlico, Pasquotank, Pender, Person, Pickens, Pitt, Polk, Randolph, Richland, Richmond, Robeson, Rockingham, Rowan, Rutherford, Saluda, Sampson, Scotland, Spartanburg, Stanly, Stokes, Sumter, Surry, Swain, Transylvania, Union (SC), Vance, Wake, Warren, Washington, Watauga, Wayne, Wilkes, Williamsburg, Wilson, Yadkin, Yancey counties, as well as other states.

As shown in the table above, 62.0 % of CMC-Pineville's 2010 Emergency Department patient visits are from residents of Mecklenburg County, 23.7% are from residents of York, SC, 4.9% are from residents of Union County, and 7.5% are from residents of other North Carolina counties and states.

In Section III.5(c), page 135, the applicant provides the projected patient origin for the first two years of the proposed project, as illustrated in the following table:

CMC-Providence
Projected Year Two Patient Origin

County	Year 1: Projected # Patients	Year 1: % of Total Patients	Year 2: Projected # Patients	Year 2: % of Total Patients
Mecklenburg	10,303	96.8%	11,997	96.8%
Union	269	2.5%	313	2.5%
Lancaster, SC	32	0.3%	37	0.3%
York, SC	36	0.3%	42	0.3%
Total	**10,639**	**100%**	**12,388**	**100%**

In Section III.5(d), page 135, the applicant states,

> *"CMC-Providence has based its projected patient origin on the county composition of its proposed service area. According to ESRI, 90.5 percent of the total population of the 15 minute drive time zone for CMC-Providence are residents of Mecklenburg County, 8.7 percent are residents of Union County, 0.4 percent are residents of Lancaster County (SC), and the remaining 0.3 percent are residents of York County (SC). CMC-Providence assumes that projected immigration from outside the service area will be in direct proportion to the composition by county of the service area."*

Note: CMC-Providence believes this projected patient origin is conservative based on the experience of CMC-Steele Creek.

The applicant adequately identified the population to be served.

Need for the Proposed Project

Regarding the need for the proposed project, in Section III.1(a), pages 34-37, the applicant states,

> *"…The proposed project is in response to a service-based need driven by highly utilized emergency services in the proposed service area. As discussed in detail below, existing emergency services in Mecklenburg County are currently operating above capacity targets. In addition to and further exacerbating these capacity constraints is the population growth and development within the proposed service area. Together, these factors support the need for local access to an expanded range of healthcare services; in particular, emergency services. Further, given the overwhelming need for cost-effective healthcare, CHS has determined that the healthcare pavilion model represents the most cost-effective solution to increasing access to emergency department services in the proposed service area.*

> *The proposed project is the result of CHS's ongoing evaluation and planning to address the significant need for emergency services in areas in Mecklenburg County experiencing significant and substantial population growth. …*
>
> *As a result of its evaluation and planning, CHS has determined that healthcare pavilions play a critical role in ensuring that it can meet community needs for emergency care today and in the future. …*
>
> *CMC-Steele Creek and each of the healthcare pavilions currently under development will expand geographic access to highly utilized emergency services in their respective service areas. CMC-Providence, which will provide care to patients in the Promenade area of Mecklenburg County, represents the next step in the evolution of CHS's development process for emergency services in Mecklenburg County.*
>
> *Given the success of the healthcare pavilion model in Steele Creek, CHS has determined to replicate this model in areas where strong need is indicated. …"*

In evaluating the need and projecting future volumes for emergency services, in Section III.1(a), pages 40-65, the applicant states they examined the following factors:

•National emergency utilization trends;
•Emergency needs in Mecklenburg County; and
•Need for access to emergency services in the service area.

Each factor is summarized below.

3. National Emergency Department Utilization Trends

On page 40, the applicant states,

> *"…Emergency department utilization is on the rise. At the same time, the number of emergency departments has declined, resulting in significant overcrowding and longer wait times in the facilities that remain.*[18]
>
> *Along with the cost, technology and patient preference are driving the shift of healthcare services from the inpatient to the outpatient setting.*
>
> *According to the Centers for Disease Control (CDC), not only is the demand for emergency services in the United States growing, but also certain groups utilize emergency department services at a higher rate.*[19] *In particular, older adults, non-*

[18] Landro, Laura, *The Informed Patient, ERs Move to Speed Care; Not Everyone Needs a Bed*, Wall Street Journal, Aug.2, 2011, available at http://online.wsj.com/article/SB10001424053111904888304576476242374040506.html (noting that while the number of emergency departments has dropped by nearly a third over the last two decades, the number of patients seeking care has risen almost 40 percent over the same time frame), Exhibit 22.

[19] Garcia, Tamyra Carroll; Bernstein, Amy B.; and Bush, Mary Ann, *Emergency Department Visitors and Visits: Who Used the Emergency Room in 2007?*, CDC, NCHS Data Brief No. 38, May 2010, available at http://www.cdc.gov/nchs/data/databriefs/db38.pdf, Exhibit 14.

Hispanic black persons, low income persons, and persons with Medicaid coverage were more likely to have had at least one emergency department visit in a 12 month period than those in other age, race, income and insurance groups.[20] *…*

Ultimately, historical and projected national trends indicate high utilization of emergency department services, resulting in overcrowding in many emergency departments nationwide. …

4. Emergency Department Need in Mecklenburg County

Mecklenburg County Population Growth

The population growth in Mecklenburg County is driving increased utilization of healthcare services. Mecklenburg County and its surrounding communities are among the fastest growing regions in the country. According to data from the North Carolina Office of State Budget and Management (NC OSBM), Exhibit 16,[21] *Mecklenburg County is the second fastest growing county in North Carolina based on numerical growth and the eighth fastest behind Union, Brunswick, Camden, Wake, Hoke, Johnston, and Cabarrus counties based on percentage growth.*

…In fact, the NC OSBM projects the population of Mecklenburg County to grow 19.3 percent between 2010 and 2015.[22]

In the coming decade, Mecklenburg County is projected to add over 175,000 people, which is more than the total 2010 population in each of 88 of North Carolina's 100 counties in the state.

…Further, over the next decade, Mecklenburg County's 65+ population is projected to grow by 58.1 percent. These data are significant because, typically, older residents utilize healthcare services at a higher rate than those who are younger.[23] *For these residents in particular, additional emergency department capacity and resulting improved access to services will support the expected higher utilization of this population group.*

Mecklenburg County Traffic Congestion

As a result of continued high population growth, Charlotte roadways are becoming highly congested. According to a 2007 study on North Carolina traffic

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[20] Id.

[21] Exhibit 16 contains NC OSBM county growth data for 2000-2010.

[22] Source: NC OSBM County Population Growth (2010-2020). Please see Exhibit 17 for NC OSBM county growth data for 2010-2020.

[23] Garcia, Tamyra Carroll; Bernstein, Amy B.; and Bush, Mary Ann, *Emergency Department Visitors and Visits: Who Used the Emergency Room in 2007?*, CDC, NCHS Data Brief No. 38, May 2010, available at http://www.cdc.gov/nchs/data/databriefs/db38.pdf, Exhibit 14 (noting that older adults, non-Hispanic black persons, low income persons with Medicaid coverage were more likely to have had at least one emergency room visit in a 12 month period than those in other age, race, income, and insurance groups.)

congestion[24] conducted by the John Locke Foundation, the average commute time in Charlotte has increased from 22.1 minutes in 1990 to 26 minutes in 2000.[25] This is relevant because timing is critical in an emergency. Despite numerous current and planned transportation projects, congestion delays in the Charlotte area are expected to double in the next 25 years.[26] …

Mecklenburg County Emergency Department Volume Growth

System-wide, CHS ix experiencing emergency department utilization trends similar to those experienced nationwide. …As shown in the table below, emergency department visits at CHS facilities in Mecklenburg County have increased at a compound annual growth rate (CAGR) of 3.1 percent since 2008:

FFY Year	***CMC***	***CMC-Randolph***	***CMC-University***	***CMC-Mercy***	***CMC-Pineville***	***CMC-Steele Creek***	***Total***
2008	*110,537*	*14,232*	*70,623*	*28,400*	*50,725*	*NA*	*274,517*
2009	*109,441*	*16,477*	*71,497*	*30,488*	*53,045*	*NA*	*280,948*
2010	*106,365*	*17,038*	*70,486*	*30,904*	*51,400*	*15,385**	*291,575*
Compound Annual Growth Rate (CAGR)							***3.1%***

Source: Hospital License Renewal Applications (HLRAs) and internal data
**FFY 2010 volume for CMC-Steele Creek is a partial year. Please note that in every instance FFY 2010 visits for CMC-Steele Creek are provided, they represent a partial fiscal year as the facility opened in November 2009.*

Further, as illustrated below, all CHS emergency departments in Mecklenburg County are operating above the recommended American College of Emergency Physicians (ACEP) capacity ranges.

Facility	*FFY 2010 Visits*	*Existing ED Rooms*	*Visits/Room*	*Visits/Room*		*Percent Capacity*	
				Max Visits	*Min Visits*	*Max Visits*	*Min Visits*
CMC	*106,365*	*55*	*1934*	*1,818*	*1,296*	*106.4%*	*149.2%*
CMC-Randolph[27]	*17,038*	*10*	*1,704*	*1,250*	*909*	*136.3%*	*187.4%*
CMC University	*70,486*	*35*	*2,014*	*1,714*	*1,212*	*117.5%*	*166.2%*
CMC-Mercy	*30,904*	*15*	*2,060*	*1,333*	*1,053*	*154.6%*	*195.7%*
CMC-Pineville	*51,400*	*33*	*1,558*	*1,714*	*1,212*	*90.9%*	*125.5%*
CMC-Steele Creek	*15,382*	*8*	*1,923*	*1,250*	*909*	*153.8%*	*211.5%*

[24] Traffic congestion is defined as the delay in urban travel caused by the presence of other vehicles.
[25] Hartgen, David T., *Traffic Congestion in North Carolina: Status, Prospects, and Solutions*, John Locke Foundation, March 2007, available at http://www.johnlocke.org/sitedocs/traffic/TrafficCongestion.pdf. Please see Exhibit 19 for relevant excerpts.
[26] Hartgen, David T., *North Carolina Transportation Issues*, Remarks at the Shaftesbury Lecture, John Locke Foundation, February 23, 2009, Exhibit 20.

[27] Please note that CMC-Randolph is a dedicated psychiatric facility and thus operates differently from the other facilities in this table. In particular, the length of stay for psychiatric patients is usually higher. Please see Exhibit 21, page 70 for an excerpt from the ACEP Report suggesting higher lengths of stay for psychiatric patients. CHS believes that this facility represents an important component of the emergency care system in Mecklenburg County and as such should be included in this table.

Mecklenburg County Emergency Department Room Need Based on ACEP Standards
Further, according to ACEP standards, given the 2010 inventory of emergency department rooms and utilization of those rooms in Mecklenburg County, there is a mean deficit of 69 emergency department rooms. …"

In Section III.1.(a), page 51, the applicant states that the range of emergency department rooms needed was calculated by dividing FFY 2010 emergency department volume by the range of visits per room. The emergency department room surplus (shown as a negative number) or deficit (bolded) was calculated by subtracting the existing number of emergency department rooms from the range of emergency department rooms needed. Finally, CHS calculated the arithmetic mean (average) of the surplus/deficit range. In Exhibit 21, page 421, the applicant provides a table from the American College of Emergency Physicians (ACEP), of the recommended range of visits per room based on the total number of existing and approved emergency department rooms within Mecklenburg County.

	2010 Inventory of ED Room	***Visits/Room***		***Total Range of Visits***		***Actual FFY 2010 ED Visits***	***ED Rooms Needed***		***Mean ED Room Surplus (-) / Deficit (bolded)***
		Max Visits	***Min Visits***	***Based on Max Visits***	***Based on Min Visits***		***Based on Max Visits***	***Based on Min Visits***	
CMC	*55*	*1,818*	*1,296*	*99,990*	*71,280*	*106,365*	*59*	*82*	*15*
CMC-Randolph	*10*	*1,250*	*909*	*12,500*	*9,090*	*17,038*	*14*	*19*	*6*
CMC-University	*35*	*1,714*	*1,212*	*59,990*	*42,420*	*70,486*	*41*	*58*	*15*
CMC-Mercy	*15*	*1,333*	*1,053*	*19,995*	*15,795*	*30,904*	*23*	*29*	*11*
CMC-Pineville	*33*	*1,714*	*1,212*	*56,562*	*39,996*	*51,400*	*30*	*42*	*3*
CMC-Steele Creek	*8*	*1,250*	*909*	*10,000*	*7,272*	*15,382*	*12*	*17*	*7*
*Presbyterian^*	*43*	*1,778*	*1,250*	*76,454*	*53,750*	*79,761*	*45*	*64*	*11*
Presbyterian Matthews	*33*	*1,714*	*1,212*	*56,562*	*39,996*	*45,657*	*27*	*38*	*-1*
Presbyterian Huntersville	*23*	*1,600*	*1,154*	*36,800*	*26,542*	*32,047*	*20*	*28*	*1*
Total	***255***			***428,853***	***306,141***	***449,040***	***270***	***377***	***69***

Source: HLRAs and internal data
^In conjunction with previously approved Project I.D. # F-8040-08, Presbyterian Hospital was approved to add 31 additional rooms for a total of 74 emergency department treatment rooms. The additional 31 emergency department rooms are not included in this table.

In Section III.1.(a), page 53, the applicant states that in order to further demonstrate the need for the proposed and existing facilities, CHS examined the projected future capacity and utilization of Mecklenburg County emergency departments by updating the previous table to include the 31 additional emergency department rooms approved to Presbyterian Hospital in Project I.D. # F-8040-08 based on the same calculations used in the previous table.

	Existing and Approved Inventory of ED Rooms	Visits/Room		Total Range of Visits		Actual FFY 2010 ED Visits	ED Rooms Needed		Mean ED Room Surplus (-) / Deficit (bolded)
		Max Visits	Min Visits	Based on Max Visits	Based on Min Visits		Based on Max Visits	Based on Min Visits	
CMC	*55*	*1,818*	*1,296*	*99,990*	*71,280*	*106,365*	*59*	*82*	*15*
CMC-Randolph	*10*	*1,250*	*909*	*12,500*	*9,090*	*17,038*	*14*	*19*	*6*
CMC-University	*35*	*1,714*	*1,212*	*59,990*	*42,420*	*70,486*	*41*	*58*	*15*
CMC-Mercy	*15*	*1,333*	*1,053*	*19,995*	*15,795*	*30,904*	*23*	*29*	*11*
CMC-Pineville	*33*	*1,714*	*1,212*	*56,562*	*39,996*	*51,400*	*30*	*42*	*3*
CMC-Steele Creek	*8*	*1,250*	*909*	*10,000*	*7,272*	*15,382*	*12*	*17*	*7*
Presbyterian	*74*	*1,867*	*1,333*	*138,158*	*98,642*	*118,654*	*64*	*89*	*2*
Presbyterian Matthews	*33*	*1,714*	*1,212*	*56,562*	*39,996*	*45,657*	*27*	*38*	*-1*
Presbyterian Huntersville	*23*	*1,600*	*1,154*	*36,800*	*26,542*	*32,047*	*20*	*28*	*1*
Presbyterian Mint Hill	*16*								*-16*
CMC-Huntersville	*9*								*-9*
Total	***313***			***493,057***	***352,851***	***487,933***	***289***	***402***	***33***

In Section III.1(a), page 56, the applicant states that they conducted additional analysis to determine the need for additional emergency department capacity in Mecklenburg County based on the assumption that Presbyterian Hospital would not achieve its projected volume. The applicants used the FFY 2009-2010 total growth rate of 1.25 percent for all facilities in the county as shown in the following table.

	Existing and Approved Inventory of ED Rooms	Visits/Room		Total Range of Visits		2010 ED Visits	2016 Projected ED Visits	ED Rooms Needed		Mean ED Room Surplus (-) / Deficit (bolded)
		Max Visits	Min Visits	Based on Max Visits	Based on Min Visits			Based on Max Visits	Based on Min Visits	
CMC	*55*	*1,818*	*1,296*	*99,990*	*71,280*	*106,365*	*114,564*	*59*	*82*	*15*
CMC-Randolph	*10*	*1,250*	*909*	*12,500*	*9,090*	*17,038*	*18,351*	*14*	*19*	*6*
CMC-University	*35*	*1,714*	*1,212*	*59,990*	*42,420*	*70,486*	*75,919*	*41*	*58*	*15*
CMC-Mercy	*15*	*1,333*	*1,053*	*19,995*	*15,795*	*30,904*	*33,286*	*23*	*29*	*11*
CMC-Pineville	*33*	*1,714*	*1,212*	*56,562*	*39,996*	*51,400*	*55,362*	*30*	*42*	*3*
CMC-Steele Creek	*8*	*1,250*	*909*	*10,000*	*7,272*	*15,382*	*16,568*	*12*	*17*	*7*
CMC-Huntersville	*9*									*-9*
CHS Subtotal	***167***	***9,079***	***6,591***	***261,537***	***187,671***	***291,575***	***314,050***	***193***	***267***	***63***
Presbyterian	*74*	*1,867*	*1,333*	*138,158*	*98,642*	*79,761*	*85,909*	*46*	*64*	*-19*
Presbyterian Matthews	*33*	*1,714*	*1,212*	*56,562*	*39,996*	*45,657*	*49,176*	*29*	*41*	*2*
Presbyterian Huntersville	*23*	*1,600*	*1,154*	*36,800*	*26,542*	*32,047*	*34,517*	*22*	*30*	*3*
Presbyterian Mint Hill	*16*									*-16*
Novant Subtotal	***146***	***5,181***	***3,699***	***231,520***	***165,180***	***157,465***	***169,603***	***96***	***135***	***-30***
Total	***313***	***14,260***	***10,290***	***493,057***	***352,851***	***449,040***	***483,653***	***289***	***402***	***32***

Based on the applicant's projections, the county would still have a mean deficit of 32 emergency department rooms which would be sufficient to support all existing and approved facilities, as well as CHS's concurrently filed healthcare pavilion projects.

In Section III.1(a), page 58, the applicant states that they were able to further define need by geographic area. The applicant suggested that the downtown, South I-485, North/East I-485 and Huntersville areas are those where the greatest need exists in the county. The following table shows this analysis.

	Existing and Approved Inventory of ED Rooms	Visits/Room		Total Range of Visits		2010 ED Visits	2016 Projected ED Visits	ED Rooms Needed		Mean ED Room Surplus (-) / Deficit (bolded)
		Max Visits	Min Visits	Based on Max Visits	Based on Min Visits			Based on Max Visits	Based on Min Visits	
CMC	*55*	*1,818*	*1,296*	*99,990*	*71,280*	*106,365*	*114,564*	*63*	*88*	*21*
CMC-Randolph	*10*	*1,250*	*909*	*12,500*	*9,090*	*17,038*	*18,351*	*15*	*20*	*7*
CMC-Mercy	*15*	*1,333*	*1,053*	*19,995*	*15,795*	*30,904*	*33,286*	*25*	*32*	*13*
Presbyterian	*74*	*1,867*	*1,333*	*138,158*	*98,642*	*79,761*	*85,909*	*46*	*64*	*-19*
Downtown Subtotal	***154***	***6,268***	***4,591***	***270,643***	***194,807***	***234,068***	***252,110***	***149***	***205***	***23***
Presbyterian Matthews	*33*	*1,714*	*1,212*	*56,562*	*39,996*	*45,657*	*49,176*	*29*	*41*	*2*
CMC-Pineville	*33*	*1,714*	*1,212*	*56,562*	*39,996*	*51,400*	*55,362*	*32*	*46*	*6*
*CMC-Steele Creek**	*10*	*1,250*	*909*	*12,500*	*9,090*	*15,382*	*16,568*	*13*	*18*	*6*
South I-485 Subtotal	***76***	***4,678***	***3,333***	***125,624***	***89,082***	***112,439***	***121,106***	***74***	***104***	***13***
CMC-University	*35*	*1,714*	*1,212*	*59,990*	*42,420*	*70,486*	*75,919*	*41*	*58*	*15*
Presbyterian Mint Hill	*16*									*-16*
North/East I-485 Subtotal	***51***	***1,714***	***1,212***	***59,990***	***42,420***	***70,486***	***75,919***	***44***	***63***	***2***
Presbyterian Huntersville	*23*	*1,600*	*1,154*	*36,800*	*26,542*	*32,047*	*34,517*	*22*	*30*	*3*
CMC-Huntersville	*9*									*-9*
Huntersville Subtotal	***32***	***1,600***	***1,154***	***36,800***	***26,542***	***32,047***	***34,517***	***22***	***30***	***-6***
Total	***313***	***14,260***	***10,290***	***493,057***	***352,851***	***449,040***	***483,653***	***289***	***402***	***32***

In Section III.1, page 60, the applicant states,

> *"As shown, the South I-485 area has a need for 13 additional emergency department rooms, which supports CMC-Providence's proposed 10 rooms, and the downtown area has a need for 23 additional emergency department rooms, which supports CMC-Morrocroft's proposed 14 rooms. Thus, this analysis supports both projects on a conservative basis."*

In Exhibit 20, page 390, the applicant provides a table from the American College of Emergency Physicians (ACEP), of the recommended range of visits per room based on the total number of existing and approved emergency department rooms within Mecklenburg County. After further review of the in Exhibit 21 and tables above from Section III.1, pages 52-59 of the application, the project analyst determined that in some cases, the range of visits per room used by the applicant does not correspond with the range of visits per rooms from Exhibit 21. There is no explanation from the applicant as to why the ranges used are different. The project analyst recalculated the tables above using the range of visits per room as outlined

in Exhibit 21 and determined that the applicant still demonstrated a need for additional emergency department rooms based on ACEP Standards equivalent to the requested amount in the both the CMC-Providence and CMC Morrocroft applications.

3. Access to Emergency Services in the Service Area

> *"The service area for the proposed project is comprised of the area located within a 15 minute drive time from the proposed healthcare pavilion. …*
>
> *…Not only is the population in Mecklenburg County expected to grow, but the population in the proposed service area is experiencing high growth. In 2000, 218,589 people lived in the area within the 15 minute drive time zone from CMC-Providence, Exhibit 22. According to ESRI data, Exhibit 22, the population of the proposed service area grew 47.8 percent between 2000 and 2010, or four percent annually.*
>
> *In 2010, 323,005 people lived in the area within the 15 minute drive time zone from CMC-Providence, Exhibit 22. The proposed service area is expected to grow 3.2% annually through 2015. …*
>
> *Moreover, it bears mention that the proposed service area population is more than three times the size of the CMC-Steele Creek service area population. …"*

In addition to the historical and projected population growth of the service area, the applicant states that the Promenade area of Charlotte is well-developed and established and is continuing to grow despite the state of the economy, therefore traffic congestion will continue to be a problem when it comes to the accessibility of emergency services. Thus, the applicant states that the proposal is needed to ensure and improve access to services for the population proposed to be served in the application.

Need Methodology and Assumptions

In Section IV.1, page 144, the applicant provides projected utilization for the first three years of operation for the project to include emergency department rooms, observation rooms, diagnostic imaging (CT, X-ray, and Ultrasound) and ancillary (laboratory) services, as shown in the table below.

	First Full FY 1/1/14 to 12/31/14	Second Full FY 1/1/15 to 12/31/15	Third Full FY 1/1/16 to 12/31/16
CT Scanner			
# of Units	1	1	1
# of Scans	2,376	2,767	3,182
# of HECT units*	3,810	4,436	5,102
X-ray			
# of Units^	2	2	2
# of Procedures	3,836	4,466	5,136
Ultrasound			
#of Units	1	1	1
# of Procedures	640	745	857
Laboratory			
Procedures	20,704	24,109	27,724
Emergency Department			
# of Treatment Rooms	10	10	10
# of Visits	10,639	12,388	14,246
Observation Beds			
# of Beds (unlicensed)	2	2	2
# of Patients	148	172	198
Average Length of Stay (hours)	Less than 24 hours	Less than 24 hours	Less than 24 hours

*HECT units based on CMC-Steele Creek's historical ratio of CT scans to HECT units per its 2011 HLRA.
^One fixed unit and one portable unit for patients who cannot go to the fixed x-ray room.

In Section III.1.(a), page 47, the applicant provides the historical emergency department utilization (visits) for all CHS facilities in Mecklenburg County from FFY 2008-FFY2010. Emergency department visits for CMC-Pineville has increased by 1.33 percent [(51,400 – 50,725) = 675 / 50,725 * 100 =] with 33 treatment rooms, the emergency department visits at CHS facilities combined have also increased at a compound annual growth rate (CAGR) of 3.1 percent since 2008.

With the addition of 10 new treatment rooms at the proposed healthcare pavilion, CMC-Providence proposes to have a total of 43 treatment rooms. With 1,558 visits per treatment room in 2010, CMC-Providence already exceeds the American College of Emergency Physician's (ACEP) guidelines on Emergency Department capacity (see Exhibit 20).[28] Assuming that CMC-Providence had 33 treatment rooms in 2010, it would have averaged 1,558 visits per treatment room (51,400 visits in 2010 / 33 treatment rooms = 1,558 visits per treatment room), which is in line with the ACEP guidelines. In other words, based on the ACEP guidelines, the applicant exceeds the minimum number of visits for the existing number of emergency treatment beds based on the 2010 ED visits experienced in 2010 with

[28] Note: The ACEP guidelines are guidelines. There are no capacity definitions or performance standards for emergency services in the Certificate of Need Law or Rules. Indeed, unlike beds, dialysis stations, home health agencies, or certain equipment, the Certificate of Need law does not regulate the number of Emergency Departments or treatment rooms. Thus, applications may be found conforming even if projected volumes do not reach or exceed the recommendations of the ACEP. The guidelines address annual capacity not sure capacity (i.e. the need for enough capacity to deal with an influx of a lot of patients at once.)

no growth. The applicant states that due to the high utilization of CMC-Pineville's emergency department, the more effective alternative for serving a growing number of patients is to locate additional emergency department capacity closer to the patients.

In Section III.1.(b), pages 67-122, the applicant provides the assumptions and methodology used to project utilization of the proposed healthcare pavilion, which are summarized below.

Step 1: Determine the current and projected population of the area within a 15 minute drive time from the proposed site

The applicant considered defining the service area by mileage radii (e.g. the area within a five-mile or ten-mile radius of a proposed site) in the same manner as in previous CHS healthcare pavilion applications. However, based on analysis of patient origin information from the CMC-Steele Creek application, the applicant determined that emergency department utilization within a radius is not consistent due to the concentration of high and low utilization within a five-mile radius that is influenced by factors such as population density, transportation accessibility and traffic patterns.[29] As a result of new software, the applicant was able to further define its methodology for determining the current and projected population of a service area from the methodologies previously used by CHS in other healthcare pavilion applications submitted. The applicant determined that a service area defined by drive time distance is more accurate than one defined by mileage radius because drive times capture the geographic proximity of the population in addition to a proposed site's accessibility by roads.[30]

On page 70, the applicant states,

> *"In 2010, 323,005 people lived in the area within the 15 minute drive zone for CMC-Providence and this area is expected to grow 3.2 percent annually through 2015.[31] Please note that ESRI only provided projected population for 2010 and 2015. As such, CMC-Providence has utilized the projected 2010 to 2015 growth rate to determine the population for the intervening and following years. The table below provides population totals for the 15 minute drive time zone for the proposed site from 2010 to 2016.*

CMC-Providence
15 Minute Drive Time Zone Population

	2010	***2011***	***2012***	***2013***	***2014***	***2015***	***2016***	***CAGR***
15 Minute Drive Time	*323,005*	*333,255*	*343,830*	*354,740*	*365,997*	*377,611*	*389,597*	*3.2%*

Source: ESRI. See Exhibit 22."

Step 2: Adjust the service area population

[29] Please see Section III.1(a) for further discussion of traffic issues in Mecklenburg County.
[30] CHS's earlier healthcare pavilion CON applications were submitted before CHS acquired the necessary software (ESRI) to calculate the population of drive time zones.
[31] Source: ESRI. See Exhibit 23 for a detailed report on this population.

CHS is filing another application concurrently with this application (CMC-Morrocroft). According to the applicant, the service areas defined by the 15 minute drive times from each facility for both CMC-Providence and CMC-Morrocroft overlap. As a result, both CMC-Providence and CMC-Morrocroft have adjusted its service area to account for both projects. The table below provides the population total for the 15 minute drive time zones that overlap for both the proposed sites from 2010 to 2016.

Area within both CMC-Providence and CMC-Morrocroft

	2010	***2011***	***2012***	***2013***	***2014***	***2015***	***2016***	***CAGR***
Overlap with Morrocroft	*145,793*	*148,207*	*150,662*	*153,157*	*155,693*	*158,271*	*160,892*	*1.7%*

Source: ESRI. See Exhibit 22.

On page 73, the applicant states,

> *CMC-Morrocroft proposes to begin operation in 2014. Thus, CMC-Providence assumed that 50 percent of this overlap population should be excluded from its service area throughout its project years as these patients may choose to see care at CMC-Morrocroft. Given that residents of this overlap population reside within 15 minutes of both facilities, CMC-Providence believes it is reasonable to split the overlap population equally between the two facilities. …Please note that while CMC-Providence has adjusted for this overlap population, it still assumes its service area is comprised of the entire 15 minute drive time…*
>
> *The following table shows this adjustment to the service area population during the second and third project years.*

CMC-Providence
Adjusted Service Area Population

	PY1 2014	*PY2 2015*	*PY3 2016*
15 Minute Drive Time	*365,997*	*377,611*	*389,594*
Adjustment of 50% of Overlap with CMC-Morrocroft	*(77,846)*	*(79,136)*	*(80,446)*
Adjusted Service Area Population	*288,151*	*298,476*	*309,148*

Source: ESRI.

Step 3: Calculate the CMC-Morrocroft service area emergency department use rate

CMC-Providence calculated the emergency department use rate (per 1,000) for its service area in order to determine the projected number of outpatient emergency department visits. The emergency department use rate for a given area is calculated using the population and the utilization of emergency department services in that area. The source for emergency department utilization data is Thomson. The Thomson data does not provide ZIP code level data, nor does it include enough detail to determine the Providence department utilization for only those patients within a 15 minute drive time zone of CMC-Morrocroft, the proposed service area. Thus, CMC-Providence determined its service area emergency department use rate using the ZIP codes within its 15 minute drive time zone as outlined below.

ZIP Code	Location	County
28079	Indian Trail	Union
28104	Matthews	Mecklenburg
28105	Matthews	Mecklenburg
28134	Pineville	Mecklenburg
28173	Waxhaw	Union
28210	Charlotte	Mecklenburg
28211	Charlotte	Mecklenburg
28212	Charlotte	Mecklenburg
28217	Charlotte	Mecklenburg
28226	Charlotte	Mecklenburg
28227	Charlotte	Mecklenburg
28270	Charlotte	Mecklenburg
28273	Charlotte	Mecklenburg
28277	Charlotte	Mecklenburg
29707	Fort Mill	York
29715	Fort Mill	York

Source: United States Postal Service website https://www.usps.com/

The applicant states that the ZIP codes above correspond geographically with the 15 minute drive zone as well those ZIP codes even if they were not entirely within the 15 minute drive time zone, thus providing a broad population over which to derive use rates.

Next, CMC-Providence determined emergency department utilization. The applicant reviewed the number of emergency patients in Calendar Year 2010 at CMC-Steele Creek that were admitted for inpatient care and compared it to other emergency departments in Mecklenburg County and determined that a conservative and reasonable projection methodology would calculate the use rate based on outpatient emergency department visits alone.

On page 78, the applicant states,

> *"Using these assumptions, CMC-Providence determined the number of outpatient emergency department visits from the area zip codes identified above and calculated the Calendar Year 2010 use rate (per 1,000)."*

Zip Code	*Total Zip Code Population (ESRI)*	*2010 Outpatient ED Visits (Thomson)*	*Outpatient ED Visits per 1,000 Pop.*
28079	*31,794*	*7,055*	*221.9*
28104	*27,498*	*4,545*	*165.3*
28105	*39,488*	*8,507*	*215.4*
28134	*9,709*	*3,091*	*318.4*
28173	*44,557*	*6,588*	*147.9*
28210	*43,227*	*12,071*	*279.2*
28211	*29,378*	*6,291*	*214.1*
28212	*39,390*	*17,753*	*450.7*
28217	*26,852*	*12,465*	*464.2*
28226	*39,080*	*7,361*	*188.4*
28227	*50,883*	*15,546*	*305.5*
28270	*32,124*	*4,837*	*150.6*
28273	*30,415*	*9,754*	*320.7*
28277	*64,164*	*7,633*	*119.0*
29707	*17,227*	*2,149*	*124.7*
29715	*24,630*	*4,652*	*188.9*
Total	***550,416***	***130,298***	***236.7***

Note: See Exhibit 23, Table A for the Thomson data

CMC-Providence confirmed the reasonableness of this use rate by examining other sources. On page 79, the applicant states,

> *"To confirm reasonableness of this use rate, CMC-Morrocroft examined several sources. According to the North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT) Annual Report 2009, excerpted in Exhibit 25, the state average outpatient emergency department use rate was 360.6 visits per 1,000 in Calendar Year 2009.*[32]
>
> *According to Thomson emergency data and OSBM population data, the Mecklenburg County outpatient emergency department use rate was 332.6 per 1,000 in Calendar Year 2010.*[33] *Given these sources, CMC-Morrocroft believes its calculated use rate is reasonable. In addition, CMC-Morrocroft examined whether its use rate was likely to grow in future years by examining the use rate experience in the CMC-Steele Creek area."*

The ZIP codes for CMC-Steele Creek were chosen in the same manner as for CMC-Morrocroft.

[32] The NC DETECT Annual Report 2009 states on page 21 that the 2009 North Carolina population is 9,382,609 and, on page 26, that 3,383,244 ED visits were discharged from the ED (or outpatient ED visits). 360.6 = 3,383,244 / (9,382,609 / 1,000).

[33] Thomson reports 307,262 outpatient ED visits from Mecklenburg County in Calendar Year 2010 and OSBM reports a population of 923,944 in the county. 332.6 = 307,262 visits / (923,944 / 1,000). See Exhibit 24, Table D.

Zip Code	*2009*	*2010*	*Change*
28134	*304.1*	*318.4*	*4.7%*
28210	*259.0*	*279.2*	*7.8%*
28214	*409.2*	*395.7*	*-3.3%*
28217	*458.7*	*464.2*	*1.2%*
28226	*182.6*	*188.4*	*3.2%*
28273	*262.6*	*320.7*	*22.1%*
28278	*209.3*	*281.4*	*34.4%*
29708	*92.0*	*134.5*	*46.1%*
29710	*177.3*	*233.4*	*31.7%*
29715	*175.3*	*188.9*	*7.7%*
29730	*55.0*	*64.1*	*16.5%*
29732	*41.0*	*50.8*	*23.9%*
Total	*192.7*	*213.2*	*10.7%*
North Carolina Zips	***291.8***	***312.6***	***7.1%***
South Carolina Zips	***89.5***	***111.1***	***24.0%***
Mecklenburg County	***338.1***	***332.6***	***(1.6%)***

Source: Thomson databases; OSBM for Mecklenburg County and ESRI for zip code population. See Exhibit 24, Tables C & D

The applicant states that some of the increased use rate for South Carolina ZIP codes (those beginning with 29) is likely due to increasing immigration from South Carolina, therefore, an increase in the number of South Carolina patients choosing North Carolina facilities over South Carolina facilities would result in an increased use rate for North Carolina, as patients of South Carolina facilities are not counted in the use rate calculated here.

On page 83, the applicant states,

> *"…As the table above demonstrates there was a 7.1 percent increase in the use rate for the North Carolina zip codes. By contrast, the outpatient emergency department use rate in Mecklenburg County declined slightly from 2009 to 2010. Given these factors, CMC-Providence believes that it is very likely that the development of CMC-Steele Creek resulted in an increase in the emergency department use rate in its service area.*
>
> *While these data suggest that CMC-Steele Creek may have increased local emergency department use rates, CMC-Providence does not assume in its projections that such a change will occur. …Given the data presented above, CMC-Providence believes that both the calculated use rate for the proposed service area and projecting that use rate to remain constant through the project years ins reasonable and supported."*

Step 4: Determine projected outpatient emergency department visits for the service area.

The applicant states that the projected outpatient emergency department visits for the service area was determined by applying the projected use rate from Step 3 to the adjusted service area population from Step 2. The outpatient emergency department volume for the service area is as projected as follows.

	PY1 2014	***PY2 2015***	***PY3 2016***
Adjusted Service Area Population	*288,151*	*298,476*	*309,148*
Outpatient ED Use Rate per 1,000	*236.7*	*236.7*	*236.7*
Projected Outpatient ED Visits	***62,213***	***70,657***	***73,183***

Note: Totals may not foot due to rounding

Step 5: Adjust service area emergency department visits for CMC-Waxhaw

CHS filed an application previously to develop a healthcare pavilion (CMC-Waxhaw) that will also overlap with the 15 minute drive time zone for CMC-Morrocroft. On pages 84-85 the applicant states,

> *"In order to account for the future impact of CMC-Waxhaw, CMC Providence has adjusted its projected service area emergency department visits determined in Step 4 by the number of CMC-Waxhaw visits that are likely to originate from the area within CMC-Providence's 15 minute time zone.*
>
> *Using ESRI, CMC-Providence calculated that 237,634 people live within the entire 10-mile radius of CMC-Waxhaw (see Exhibit 23). By comparison, 159,029 people are estimated to live within a 10-mile radius of CMC-Waxhaw and within the 15 minute drive time zone of CMC-Providence.[34] Thus, the overlap with the CMC-Providence 15 minute drive time zone represents 66 percent of CMC-Waxhaw's service area (66 percent = 159,029 / 237,634)."*

The applicant states that for Calendar Years 2015 to 2016, CMC-Providence has assumed that the CMC-Waxhaw visits will grow at the same CAGR as the CMC-Waxhaw proposed 10-mile service area. CMC-Waxhaw projected to provide the following number of emergency department visits in its first three years.

	PY1 CY12	*PY2 CY13*	*PY3 CY14*	*PY4 CY15*	*PY5 CY16*	*CAGR*
CMC-Waxhaw ED Visits	*8,005*	*9,784*	*11,019*	*11,487*	*11,974*	*4.2%*
66% of Visits	*-*	*-*	*7,235*	*7,542*	*7,862*	*NA*

For Project Years 1-3, CMC-Providence adjusted the projected service area emergency department visits by 66 percent to account for CMC-Waxhaw visits as shown in the table below.

	2014	***2015***	***2016***
Projected Outpatient ED Visits	*68,213*	*70,657*	*73,183*
Adjustment for 66% of CMC-Waxhaw Visits	*(7,235)*	*(7,542)*	*(7,862)*
Adjusted Outpatient ED Visits	***60,978***	***63,115***	***65,321***

[34] ESRI was used for this calculation: CMC-Providence drew a polygon around the area that is within a 10-mile radius of CMC-Waxhaw and within the 15 minute drive time zone of CMC-Providence and ESRI calculated the population within that area to be 159,029 people.

Step 6: Apply assumed market share to determine projected ED visits

The applicant determined the appropriate market share for CMC-Providence by examining the experience of CMC-Steele Creek and all other emergency departments in Mecklenburg County. CMC-Steele Creek's outpatient emergency visit data includes CMC-Pineville and CMC-Mercy because these facilities share a hospital license. This data was then adjusted to account for the differences with the Thomson market data. The Thomson data shows that these three facilities served 93,095 outpatient emergency patients or 99.4 percent of the internal total.

Facility	***Thomson Data***	***CHS Internal Data***	***Thomson as Percentage of CHS Internal***
CMC-Mercy	*NA*	*47,025*	*NA*
CMC-Pineville	*NA*	*28,072*	*NA*
CMC-Steele Creek	*NA*	*18,603*	*NA*
Total	***93,095***	***93,700***	***99.4%***

The applicant then multiplied the CMC-Steele Creek internal volumes by 99.4 percent in order to compare CMC-Steele Creek data to the Thomson market data.

Zip Code	***CMC-Steele Creek Interval***	***CMC-Steel Creek Adjusted (99.4% of Internal)***
28134	*83*	*82*
28210	*208*	*207*
28214	*206*	*205*
28217	*738*	*733*
28226	*41*	*41*
28273	*4,115*	*4,088*
28278	*3,185*	*3,164*
29708	*1,633*	*1,622*
29710	*2,764*	*2,746*
29715	*772*	*767*
29730	*461*	*458*
29732	*433*	*430*
Total from Zip Codes	***14,639***	***14,544***

See Exhibit 23, Table F

The applicant then compared the CMC-Steele Creek adjusted volumes to the Thomson emergency visit data for the same ZIP codes to determine the market share for CMC-Steele Creek.

Zip Code	*CMC-Steel Creek Adjusted (99.4% of Internal)*	*Thomson ED Market Data*	*Percent Share*
28134	*82*	*3,091*	*2.7%*
28210	*207*	*12,071*	*1.7%*
28214	*205*	*11,771*	*1.7%*
28217	*733*	*12,465*	*5.9%*
28226	*41*	*7,361*	*0.6%*
28273	*4,088*	*9,754*	*41.9%*
28278	*3,164*	*4,983*	*63.5%*
29708	*1,622*	*3,432*	*47.3%*
29710	*2,746*	*6,680*	*41.1%*
29715	*767*	*4,652*	*16.5%*
29730	*458*	*3,705*	*12.4%*
29732	*430*	*2,776*	*15.5%*
Total from Zip Codes	***14,544***	***82,741***	***17.6%***

See Exhibit 24, Table C for Thomson data

The applicant made one further adjustment by only calculating the market share for the North Carolina ZIP codes in order to estimate CMC-Steele Creek's market share. This is due to the limitations in obtaining market data for South Carolina facilities through Thomson data.

Zip Code	*CMC-Steel Creek Adjusted (99.4% of Internal)*	*Thomson ED Market Data*	*Percent Share*
28134	*82*	*3,091*	*2.7%*
28210	*207*	*12,071*	*1.7%*
28214	*205*	*11,771*	*1.7%*
28217	*733*	*12,465*	*5.9%*
28226	*41*	*7,361*	*0.6%*
28273	*4,088*	*9,754*	*41.9%*
28278	*3,164*	*4,983*	*63.5%*
Total from Zip Codes	***8,521***	***61,496***	***13.9%***

Based on the table above, CHS believes that CMC-Steele Creek's market share of the outpatient emergency department visits in its 15 minute drive time zone is 13.9 percent.

Using the same methodology as CMC-Steele Creek, CMC-Providence estimates Mecklenburg County's market share for emergency department outpatient visits will be 17.6 from areas within its 15 minute drive time zone as shown in the table below.

	Est. Market Share of 15 Minute Drive Time Zone
CMC	*26.4%*
CMC-University	*22.9%*
Presbyterian-Matthews	*20.3%*
Presbyterian Hospital	*18.8%*
CMC-Pineville	*16.3%*
CMC-Steele Creek	*13.9%*
Presbyterian-Huntersville	*13.0%*
CMC-Mercy	*8.8%*
Average	***17.6%***
Average excluding CMC-Steele Creek	*18.1%*

On page 91, the applicant states,

> *"CMC-Providence believes an assumed market share of 17.6 percent for its proposed service area, a share equivalent to the average of Mecklenburg emergency departments is reasonable and conservative given that these estimates rely upon zip code defined geographic areas that are broader than the 15 minute drive time zone for each facility.*
>
> *In order to determine its market emergency visits, CMC-Providence applied its assumed market share to the adjusted outpatient emergency department visits projected for its service area from Step 6."*

	PY1 2014	***PY2 2015***	***PY3 2016***
Adjusted Outpatient ED Visits	*60,978*	*63,115*	*65,321*
Assumed Market Share	*17.6%*	*17.6%*	*17.6%*
CMC-Morrocroft ED Visits from Service Area	***10,732***	***11,108***	***11,497***

Step 7: Calculate immigration and total emergency department utilization

In order to determine the appropriate immigration assumption for the proposed project, the applicant examined the experience of CMC-Steele Creek as well as the experience of all other Mecklenburg County emergency departments. CMC-Providence determined CMC-Steele Creek's immigration level by calculating the percentage of visits served from outside of the CMC-Steele Creek area ZIP codes used above.

Zip Code	*CMC-Steele Creek Internal*	*CMC-Steel Creek Adjusted (99.4% of Internal)*
28134	*83*	*82*
28210	*208*	*207*
28214	*206*	*205*
28217	*738*	*733*
28226	*41*	*41*
28273	*4,115*	*4,088*
28278	*3,185*	*3,164*
29708	*1,633*	*1,622*
29710	*2,764*	*2,746*
29715	*772*	*767*
29730	*461*	*458*
29732	*433*	*430*
Total from Zip Codes	***14,639***	***14,544***
CMC-Steele Creek Total	***18,603***	***18,483***
Percent Inmigration	***21.3%***	***21.3%***

See Exhibit 23, Table F

Based on this analysis, CMC-Providence believes that the estimated CMC-Steele Creek immigration from outside of its 15 minute drive time zone is 21.3 percent. In other words, 21.3 percent of CMC-Steele Creek's patients originated from outside of the ZIP codes above.

Using the same methodology as CMC-Steele Creek, CMC-Providence estimates Mecklenburg County's emergency departments will experience 19.3 percent immigration for outpatient emergency department visits from areas outside of its 15 minute drive time zone as shown in the table below.

	Est. Inmigration from Outside 15 Minute Drive Time Zone
Presbyterian-Huntersville	*27.4%*
CMC-Pineville	*25.8%*
CMC	*22.7%*
CMC-Steele Creek	*21.3%*
Presbyterian Hospital	*16.1%*
Presbyterian Matthews	*15.9%*
CMC-University	*15.1%*
CMC-Mercy	*10.2%*
Average	***19.3%***
Average excluding CMC-Steele Creek	*19.0%*

On page 95, the applicant states,

> *"CMC-Providence believes is assumed immigration rate of 19.3 percent from outside of its service area, equivalent to the average of all Mecklenburg emergency departments, is reasonable. The inmigration calculation is based on the zip code areas for each facility*

which are broader geographic areas with a larger population than the 15 minute drive time zones for each facility. …

In order to determine its potential emergency department visits, CMC-Morrocroft applied its assumed inmigration percentage to its projected market emergency visits from Step 6."

	PY1 2014	***PY2 2015***	***PY3 2016***
CMC-Providence ED Visits from Service Area	*10,732*	*11,108*	*11,497*
Assumed Inmigration (19.3% of Total)	*2,567*	*2,657*	*2,749*
Potential CMC-Providence ED Visits	***13,299***	***13,765***	***14,246***

The applicant projects that during the ramp-up period, CMC-Providence will achieve 80 percent of its potential utilization in project year one (2014) and 90 percent in year two (2015) as shown in the table below.

	PY1 2014	***PY2 2015***	***PY3 2016***
Potential CMC-Providence ED Visits	*13,299*	*13,765*	*14,246*
Ramp-Up	*80%*	*90%*	*100%*
Total CMC-Morrocroft ED Visits	***10,639***	***12,388***	***14,246***

On page 96, the applicant states,

"Based on the ACEP guidelines (see Exhibit 21), a facility with 10,000 projected annual visits should have between eight and 11 bays for a range of 909 to 1,250 visits per bed. As the utilization projections above demonstrate, CMC-Providence's 10 treatment bays are projected to serve 14,246 emergency patients by the third project year of 1,424 visits per bed, which exceeds the ACEP utilization guidelines. CMC-Providence will effectively utilize its proposed emergency department capacity."

Step 8: Determine the impact on other providers

On pages 98-107, the applicant states,

"…There was a substantial increase in the use rates within CMC-Steele Creek's 15 minute drive time zone from 2009 to 2010. As a result, the opening of CMC-Steele Creek did not have a substantial impact on other North Carolina providers, particularly those outside the CHS system. …

…CMC-Kannapolis is also under development and is expected to begin operation in the first quarter of 2012. This facility is located in Cabarrus County and is expected to serve patients in Cabarrus and Rowan counties. Neither the facility itself nor any part of Cabarrus or Rowan counties is included in CMC-Providence's proposed service area. Thus, CMC-Providence does not expect to impact CMC-Kannapolis.

CMC-Harrisburg is currently under development in Cabarrus County and its timeline has been delayed by utility construction. Cabarrus County residents are expected to comprise 98 percent of this facility's emergency department patients. …Thus, CMC-Morrocroft does not expect to impact CMC-Harrisburg.

CMC-Huntersville is currently under construction and has a pending decision on its 2011 cost overrun application (Project I.D. # F-8705-11). This facility will become operational in the second quarter of 2012. There is no overlap between the service areas for these facilities. …As such, CMC-Morrocroft does not believe it will impact CMC-Huntersville

CR-Mount Holly is a project, currently under appeal, to develop a healthcare pavilion in Gaston County. …There is no overlap between the service area of CMC-Morrocroft and CR-Mount Holly. As such, CMC-Morrocroft does not believe it will impact CR-Mount Holly, should that facility be approved and developed.

Presbyterian-Mint Hill is projected to begin operation of its emergency department services on January 1, 2014 according to its February 2011 progress report (see Exhibit 30), the same day that CMC-Morrocroft is expected to open. Given the parallel timing, neither Presbyterian-Mint Hill nor CMC-Morrocroft will have time to develop market share in the other facility's service area. …There is almost no overlap between the service areas of CMC-Morrocroft and that of Presbyterian Mint Hill."

The applicant states on page 113, that all of the affected facilities will continue to operate above or within the range of effective utilization according to ACEP guidelines as shown in the previous tables of this section, and that Novant facilities are projected to provide emergency department visits in excess of the minimum visits per room capacity guidelines.

The applicant adequately demonstrated that projected utilization is based on reasonable and supported assumptions regarding historically high utilization of existing emergency department visits and projected population growth in the service area.

In summary, the applicant adequately identified the population to be served and demonstrated the need the population to be served has for the development of a satellite emergency department in the Promenade area of Mecklenburg County. Therefore, the application is conforming to this criterion.

(3a) In the case of a reduction or elimination of a service, including the relocation of a facility or a service, the applicant shall demonstrate that the needs of the population presently served will be met adequately 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, handicapped persons, and other underserved groups and the elderly to obtain needed health care.

C
Both Applications

CMC-Morrocroft (14). CMC currently has a total of six CT scanners and has recently purchased a seventh additional portable scanner. The proposed facility will relocate a CT scanner from CMC. In Section III.7, page 141, the applicant states that relocating one of CMC's existing CT scanners to the proposed healthcare pavilion, particularly given CMC's recent purchase of an additional portable CT scanner, will not unduly impact CT services provided by CMC. The table below shows the historical CT scanner utilization at CMC from FY2005 to FY2008:

CMC CT

	FY2007	FY2008	FY2009	FY2010
CT Scans	69,426	69,513	69,894	70,031
Annual Change		0.13%	0.55%	0.20%

Source: FFY 2007-2010 Hospital License Renewal Applications

On pages 141-142 of the application, the applicant states:

> *"Historically, CMC has been able to serve a large volume of patients on its six existing scanners and believes that will continue to be able to do so with the six scanners that will remain after the relocation to CMC-Morrocroft.*
>
> *…A CT scanner, partially owned by CHS, is currently in operation within the CMC-Morrocroft Medical Plaza. This CT scanner serves outpatient diagnostic patients for scheduled procedures and will continue to do so after the proposed project is developed. CMC-Morrocroft considered utilizing this existing CT scanner for its emergency department. However, this option was deemed unfeasible as there is no way to locate the scanner physically so that is could be accessed by both emergency and scheduled outpatients in a shared location. Nor was it considered reasonable to have the existing CT scanner remain in its Medical Plaza location and treat emergency department patients; this location would be too far removed from the planned emergency department to safely transport the large number of patients that are projected to require a CT associated with their emergency visit. Finally, relocating the existing CT scanner to the proposed emergency department was also considered infeasible as current outpatient diagnostic CT patients would be required to walk from the current radiology location in the Medical Plaza building to the proposed emergency department, which will be located in a separate building. For these reasons, CMC-Morrocroft believes it is reasonable to relocate a CT scanner from CMC for the proposed project."*

In Section IV.1, page 146, the applicant provides the projected CT utilization for CMC-Morrocroft as shown in the table below.

	First Full FY 1/1/14 to 12/31/14	Second Full FY 1/1/15 to 12/31/15	Third Full FY 1/1/16 to 12/31/16
CT Scanner			
# of Units	1	1	1
# of Scans	4,028	4,598	5,183

Source: Application page 146, Section IV.1

On page 144, the applicant states,

> *"The proposed relocation of CT equipment will not have unduly impact the services, costs, or level of access by medically underserved populations.*
>
> *…Moreover, the proposed relocation will provided expanded geographic access to CT services needed as part of an emergency visit for all patients of the service area, including the medically underserved.*
>
> *…As noted in Section VI.13 and 14, the projected payor mix of CMC-Morrocroft is expected to reflect a higher percentage of care to Medicaid and self-pay patients than currently served at CMC's emergency department; thus, the relocated CT scanner will improve access to medically underserved populations."*

The applicant demonstrates that the needs of the population presently served will be met adequately following relocation of the CT scanner from CMC to CMC-Morrocroft. Therefore, the application is conforming to this criterion.

CMC-Providence (10). CMC-Providence proposes a change in scope to Mint Hill Imaging Center, Project I.D. # F-7709-06, involving the relocation of a previously approved CT scanner, ultrasound unit, and one fixed X-ray unit from Mint Hill Imaging Center, an approved, but not yet developed diagnostic center in the Mint Hill area of Charlotte to the new healthcare pavilion. In Section III.7, page 141, the applicant states that relocating the approved imaging equipment to the proposed healthcare pavilion in order to meet the need for imaging services to support emergency patients that will be treated in the emergency room at CMC-Providence is reasonable. The table below shows the historical CT scanner utilization at CMC from FY2005 to FY2008:

CMC CT

	FY2007	**FY2008**	**FY2009**	**FY2010**
CT Scans	23,421	25,436	27,748	27,255
Annual Change		8.60%	9.09%	-1.78%

Source: FFY 2007-2010 Hospital License Renewal Applications

On pages 141-142 of the application, the applicant states:

> *"In order to provide imaging services for the proposed emergency department at the new CMC-Providence healthcare pavilion, the proposed project involves the relocation of one X-ray unit, one CT scanner, and one ultrasound unit from CMC-Mint Hill, an approved, but not yet developed diagnostic center in the Mint Hill area of Charlotte (Project I.D. # F-7709-06). CMC-Mint Hill was proposed by CHS in 2006. In 2007, CMC-NorthEast joined the CHS system. Prior to joining CHS, CMC-NorthEast was approved to develop Northeast Harrisburg now known as CMC-Harrisburg (Project I.D. # F-7731-06). CMC-Mint Hill and CMC-Harrisburg have sites less than eight miles apart. CMC-Mint Hill was approved to*

provide outpatient diagnostic testing but not emergency services.[35] *CMC-Harrisburg was approved to, and will develop, outpatient diagnostic testing as well as emergency services. Based on careful examination, CHS believes CMC-Mint Hill's approved imaging equipment is needed more acutely as part of the CMC-Providence healthcare pavilion, in order to treat emergency patients, than at is originally proposed site. CHS believes that the patients previously proposed to be served by CMC-Mint Hill will have adequate access to diagnostic testing services at CMC-Harrisburg, Presbyterian-Mint Hill, or at one of the many other diagnostic testing facilities operated in Mecklenburg County. Moreover, the need for imaging services to support emergency patients that will be treated in the emergency room at CMC-Providence is a critical need. For these reasons, CMC-Providence believes it is reasonable to relocate the imaging equipment proposed for the CMC-Mint Hill site to the proposed facility."*

In Section IV.1, page 144, the applicant provides the projected CT utilization for CMC-Providence as shown in the table below.

	First Full FY 1/1/14 to 12/31/14	***Second Full FY 1/1/15 to 12/31/15***	***Third Full FY 1/1/16 to 12/31/16***
CT Scanner			
# of Units	*1*	*1*	*1*
# of Scans	*2,376*	*2,767*	*3,182*

Source: Application page 144, Section IV.1

On page 142, the applicant states,

"The proposed relocation of CT equipment will not have unduly impact the services, costs, or level of access by medically underserved populations.

…The patients proposed to be served by CMC-Mint Hill will have access to outpatient diagnostic imaging at CMC-Harrisburg, Presbyterian-Mint Hill, or at one of the many other diagnostic testing facilities operated in Mecklenburg County.

The applicant demonstrates that the needs of the population presently served will be met adequately following relocation of the CT scanner, X-ray unit and ultrasound unit from CMC-Mint Hill to CMC-Providence. Therefore, the application is conforming to this criterion.

(4) Where alternative methods of meeting the needs for the proposed project exist, the applicant shall demonstrate that the least costly or most effective alternative has been proposed.

C
Both Applications

[35] CMC-Mint Hill proposed in its original CON application to develop ED services as well as diagnostic imaging. This application was initially denied by the Agency. Under the subsequent settlement, CMC-Mint Hill was approved to develop diagnostic imaging services only.

CMC-Morrocroft (14). In Section III.3, pages 127-128, the applicant discusses the alternatives considered in developing the proposed project. The applicant states that, in addition to constructing a new facility, which is the alternative presented in this application, they also considered maintaining the status quo. However, the applicant states that maintaining the status quo would result in patients in the service area facing delays in receiving care at existing emergency departments as utilization continues to increase. Thus, maintaining the status quo would not meet the identified need for additional capacity for emergency services in the service area. The applicant also considered adding to existing capacity at CMC or CMC-Mercy. However, this alternative was deemed infeasible because both CMC and CMC-Mercy are currently operating at or above ACEP recommended visits per treatment room for emergency departments and the needs of the growing SouthPark community with emergency services closer to home will not be met.

Furthermore, the application is conforming to all applicable statutory and regulatory review criteria. See Criteria (3), (5), (6), (7), (8), (12), (13), (14), (18a), and (20). Therefore, the applicant adequately demonstrated that the proposal is their most effective alternative. The application is conforming to this criterion and approved subject to the following conditions:

1. **The Charlotte-Mecklenburg Hospital Authority d/b/a Carolinas Medical Center shall materially comply with all representations made in the certificate of need application.**

2. **The Charlotte-Mecklenburg Hospital Authority d/b/a Carolinas Medical Center shall not acquire, as part of this project, any equipment that is not included in the project's proposed capital expenditure in Section VIII of the application or that would otherwise require a certificate of need.**

3. **The Charlotte-Mecklenburg Hospital Authority d/b/a Carolinas Medical Center shall develop and implement an Energy Efficiency and Sustainability Plan for the project that conforms to or exceeds energy efficiency and water conservation standards incorporated in the latest editions of the North Carolina State Building Codes. The plan must be consistent with the applicant's representations in the written statement as described in paragraph one of Policy GEN-4.**

4. **The Charlotte-Mecklenburg Hospital Authority d/b/a Carolinas Medical Center shall acknowledge acceptance of and agree to comply with all conditions stated herein to the Certificate of Need Section in writing prior to issuance of the certificate of need.**

CMC-Providence (10). In Section III.3, pages 126-127, the applicant discusses the alternatives considered in developing the proposed project. The applicant states that, in addition to constructing a new facility, which is the alternative presented in this application, they also considered maintaining the status quo. However, the applicant states that maintaining the status quo would result in patients in the service area facing delays in receiving care at existing emergency departments as utilization continues to increase. Thus, maintaining the status quo

would not meet the identified need for additional capacity for emergency services in the service area. The applicant also considered adding to existing capacity at CMC-Pineville. However, this alternative was deemed infeasible because adding to CMC-Pineville's capacity would not serve the growing Promenade community with emergency services closer to home. The alternative selected, which is to develop a satellite ED in the Promenade area of Charlotte, will require the relocation of approved equipment (one CT unit, one ultrasound unit, and one X-ray unit) from Mint Hill Imaging Center, Project I.D. #F-7709-06. As a result, CMC Mint Hill will not be developed.

Furthermore, the application is conforming to all applicable statutory and regulatory review criteria. See Criteria (3), (5), (6), (7), (8), (12), (13), (14), (18a), and (20). Therefore, the applicant adequately demonstrated that the proposal is their most effective alternative. The application is conforming to this criterion and approved subject to the following conditions:

1. **Mercy Hospital, Inc. d/b/a Carolinas Medical Center-Pineville shall materially comply with all representations made in the certificate of need application.**

2. **Mercy Hospital, Inc. d/b/a Carolinas Medical Center-Pineville shall not acquire, as part of this project, any equipment that is not included in the project's proposed capital expenditure in Section VIII of the application or that would otherwise require a certificate of need.**

3. **Mercy Hospital, Inc. d/b/a Carolinas Medical Center-Pineville shall develop and implement an Energy Efficiency and Sustainability Plan for the project that conforms to or exceeds energy efficiency and water conservation standards incorporated in the latest editions of the North Carolina State Building Codes. The plan must be consistent with the applicant's representations in the written statement as described in paragraph one of Policy GEN-4.**

4. **Upon completion this project (Project I.D. # F-8740-11), the certificate of need issued for Project I.D. #F-7709-06 (CMC-Mint Hill) shall be surrendered.**

5. **Mercy Hospital, Inc. d/b/a Carolinas Medical Center-Pineville shall acknowledge acceptance of and agree to comply with all conditions stated herein to the Certificate of Need Section in writing prior to issuance of the certificate of need.**

(5) Financial and operational projections for the project shall demonstrate the availability of funds for capital and operating needs as well as the immediate and long-term financial feasibility of the proposal, based upon reasonable projections of the costs of and charges for providing health services by the person proposing the service.

Both Applications

CMC-Morrocroft (14). In Section VIII.1, page 178, the applicant projects that the total capital cost of the project will be $28,095,590, as illustrated below.

A. Site Costs		
(1) Full purchase price of land # Acres_____Price per acre_____		
(2) Closing Cost		
(3) Site inspection and survey		
(4) Legal fees and Subsoil Investigation		
(5) Site preparation costs (Include)		
Soil Borings		
Clearing and grading		
Road and Parking		
Sidewalks		
Water and sewer		
Excavation and Backfill		
Termite Treatment		
Sub-Total Site Preparation Costs		
(6) Other		
(7) Sub-Total Site Costs		**Included in (11)**
B. Construction Contract(s)		
(8) Cost of Materials (Include)		
General Requirements		
Concrete/Masonry		
Woods/Doors & Windows/Finishes		
Thermal & Moisture Protection		
Equipment/Specialty Items		
Mechanical/Electrical		
Sub-Total Costs of Material	**$16,500,000**	
(9) Cost of Labor	**Included in (8)**	
(10) Other (Specify)		
(11) Sub-Total Construction Contract(s)		**$16,500,000**
C. Miscellaneous Project Costs		
(12) Building purchase		
(13) Fixed Equipment purchase/lease	$165,040	
(14) Movable Equipment	$4,638,000	
(15) Furniture	$587,630	
(16) Landscaping	Included in (8)	
(17) Consultant Fees		
Architect & engineering fees	$1,729,275	
Legal Fees	$85,000	
Market analysis		
Other (Material Testing, Moving, Fees and Permits)	$81,000	
Sub-Total Consultant Fees	$1,895,275	
(18) Financing cost (bond, loan, etc.)	$269,000	
(19) Interest during construction	$918,000	
(20) Other (contingency)	$3,122,645	
(21) Subtotal Miscellaneous Project Costs		**$11,595,590**
D. Total Capital Cost		**$28,095,590**

Source: Section VIII.1, page 177-178

In Section IX, page 182, the applicant projects that there will be no start up or initial operating expenses. The applicant states there will be no initial operating expenses, noting on page 17, *"CMC-Morrocroft will be licensed as part of CMC and services will be billed under CMC's existing provider number."* In Section VIII.3, page 178, the applicant states the project will be funded using a bond. Exhibit 41 includes a letter from Greg A. Gombar, Chief Financial Officer, Carolinas HealthCare System, documenting the availability of funding for the project, as follows:

> *"As the Chief Financial Officer for Carolinas HealthCare System (CHS), I am responsible for the financial operations of Carolinas Medical Center (CMC). As such, I am very familiar with the organization's financial position. The total capital expenditure for this project is estimated to be $28,095,590, and will be funded through proceeds from bonds issued in 2011.*
>
> *For verification of the availability of these funds and our ability to finance this project internally, please refer to the cover page from the official statements from bond issue 2011A, which has been included with this letter. This expenditure of funds will not impact any other capital projects currently underway or planned for during the coming years."*

Exhibit 41 contains a coverage page from the official statements from bond issue 2011A, which documents the availability of $149,995,000 in order to finance both CMC-Morrocroft and CMC-Providence.

Exhibit 42 contains audited financial statements for The Charlotte-Mecklenburg Hospital Authority d/b/a Carolinas HealthCare System for the years ended December 31, 2010 and 2009. The line item "*Cash and cash equivalents*," shows $128.6 million as of December 31, 2010. The applicant adequately demonstrated the availability of sufficient funds for the capital and working capital needs of the project.

In the Pro forma Section of the application, the applicant provides pro forma financial statements for the first three years of the project. On page 199, the applicant provides projected revenue and expenses for CMC. On page 200, the applicant provides the projected revenue and expenses for CMC-Morrocroft, to include each service component of the proposed project (ED, CT, Ultrasound, X-ray, Lab, and Observation Care). On pages 204-218, the applicant provides revenue and expense statements for each of the service components separately. The pro formas for CMC-Morrocroft is summarized below.

Projected Revenues and Expenses-Form B
CMC -Morrocroft

	Project Year 1 1/1/14 to 12/31/14	**Project Year 2 1/1/15 to 12/31/15**	**Project Year 3 1/1/16 to 12/31/16**
# of ED Visits	65,003	74,194	83,637
Gross Patient Revenue	$36,980,213	$43,474,706	$50,478,203
Deductions from Gross Patient Revenue	$27,642,018	$32,496,531	$37,731,514
Total Revenue	$9,338,195	$10,978,175	$12,746,689
Direct Expenses	$5,272,325	$5,672,237	$6,094,188
Indirect Expenses	$3,271,678	$3,300,912	$3,332,787
Net Income	**$794,192**	**$2,005,026**	**$3,319,714**

The applicant provides Pro forma financial statements for CMC-Morrocroft (Form B) for the first three years of the project. The applicant projects a positive net income for CMC-Morrocroft of $794,192 in Project Year 1, $2,005,026 in Project Year Two and $3,319,714 in Project Year Three. See the pro formas tab of the application for the pro formas and assumptions. The proposed facility will operate under CMC's hospital license. CMC-Morrocroft projects an excess of revenue over expenses for the first three project years. Thus, the applicant projects a positive net income for the entire facility for all service components of the project for the first three years following completion of the proposed project. Projected costs and revenues are based on reasonable and supported assumptions, including projected utilization. See Pro forma financial statements in the application and Criterion (3) for utilization assumptions.

In summary, the applicant adequately demonstrated the availability of sufficient funds for the capital and working capital needs of the project, and adequately demonstrated that the financial feasibility of the proposal is based upon reasonable projections of costs and charges. Therefore, the application is conforming to this criterion.

CMC-Providence (10). In Section VIII.1, pages 174-175, the applicant projects that the total capital cost of the project will be $27,725,000, as illustrated below.

	Previously Approved Mint Hill Imaging Center	Mint Hill Imaging Center Costs Not to be Expended	Mint Hill Imaging Center Costs to Shift to CMC-Providence	Additional Costs to Develop CMC-Providence	Total Cost of CMC-Providence
A. Site Costs					
(1) Full purchase price of land				$4,200,000	$4,200,000
(2) Closing costs					
(3) Site inspection and survey					
(4) Legal fees and subsoil Investigation					
(5) Site preparation costs					
Sub-Total Site Prep Costs	$290,000	($290,000)	$0	Included in (8)	Included in (8)
(6) Other (Specify)					
(7) Sub-Total Site Costs	$290,000	($290,000)		$4,200,000	$4,200,000
B. Construction Contract					
(8) Cost of Materials	$1,100,000	($1,100,000)	$0	$10,486,000	$10,486,000
(9) Labor	Included in (8)	Included in (8)	Included in (8)	Included in (8)	Included in (8)
(10) Other: Construction Contingency	Included in (8)	Included in (8)	Included in (8)	Included in (8)	Included in (8)
(11) Sub-Total Construction Contract	$1,100,000	($1,100,000)	$0	$10,486,000	$10,486,000
C. Miscellaneous Project Costs					
(12) Building Purchase					
(13) and (14) Fixed Moveable Equipment	$2,837,335	$0	$2,837,335	$3,087,665	$5,925,000
(15) Furniture	$30,000	($30,000)	$0	$600,000	$600,000
(16)Consultant Fees [include]					
Architect and Engineering Fees	$90,000	($90,000)	$0	$1,114,000	$1,114,000
Interior Design					
Legal Fees				$90,000	$90,000
Market Analysis					
Other (Fees, Material Testing, Moving and Permits)	$25,000	($25,000)	$0	$85,000	$85,000
Sub-Total Consultant Fees	$115,000	($115,000)	$0	$1,289,000	$1,289,000
(17) Financing Costs				$265,000	$265,000
(18) Interest during construction				$960,000	$960,000
(19) Other (Contingency)	$180,000	($180,000)	$0	$4,000,000	$4,000,000
(20) Sub-Total Miscellaneous	$3,162,335	($325,000)	$2,837,335	$10,201,665	$13,039,000
(21) Total Capital Cost of Project	$4,552,335	($1,715,000)	$2,837,335	$24,887,665	$27,725,000

Source: Section VIII.1, page 174-175

In Section IX, page 180, the applicant projects that there will be no start up or initial operating expenses. The applicant states there will be no initial operating expenses, noting on page 16, *"CMC-Providence will be licensed as part of CMC-Pineville and services will be billed under CMC-Pineville's existing provider number."* In Section VIII.3, page 176, the applicant states the project will be funded using a bond. Exhibit 41 includes a letter from Greg A. Gombar, Chief Financial Officer, Carolinas HealthCare System, documenting the availability of funding for the project, as follows:

"As the Chief Financial Officer for Carolinas HealthCare System (CHS), I am responsible for the financial operations of Carolinas Medical Center-Pineville. As such, I am very familiar with the organization's financial position. The total capital expenditure for this project is estimated to be $27,725,000, and will be funded through proceeds from bonds issued in 2011.

For verification of the availability of these funds and our ability to finance this project internally, please refer to the cover page from the official statements from bond issue 2011A, which has been included with this letter. This expenditure of funds will not impact any other capital projects currently underway or planned for during the coming years."

Exhibit 41 contains a coverage page from the official statements from bond issue 2011A, which documents the availability of $149,995,000 in order to finance both CMC-Morrocroft and CMC-Providence.

Exhibit 42 contains audited financial statements for The Charlotte-Mecklenburg Hospital Authority d/b/a Carolinas HealthCare System for the years ended December 31, 2010 and 2009. The line item "*Cash and cash equivalents*," shows $128.6 million as of December 31, 2010. The applicant adequately demonstrated the availability of sufficient funds for the capital and working capital needs of the project.

In the Pro forma Section of the application, the applicant provides pro forma financial statements for the first three years of the project. On page 200, the applicant provides projected revenue and expenses for CMC-Pineville. On page 201, the applicant provides the projected revenue and expenses for CMC-Providence, to include each service component of the proposed project (ED, CT, Ultrasound, X-ray, Lab, and Observation Care). On pages 202-219, the applicant provides revenue and expense statements for each of the service components separately. The Pro formas for CMC-Providence is summarized below.

Projected Revenues and Expenses-Form B
CMC -Providence

	Project Year 1 1/1/14 to 12/31/14	**Project Year 2 1/1/15 to 12/31/15**	**Project Year 3 1/1/16 to 12/31/16**
# of ED Visits	38,343	44,647	51,342
Gross Patient Revenue	$21,813,121	$26,161,772	$30,987,267
Deductions from Gross Patient Revenue	$15,595,956	$18,705,156	$22,155,291
Total Revenue	$6,217,165	$7,456,616	$8,831,976
Direct Expenses	$4,431,936	$4,730,352	$5,046,990
Indirect Expenses	$3,099,197	$3,113,714	$3,130,646
Net Income	**$(1,313,967)**	**($387,450)**	**$654,340**

The applicant provides Pro forma financial statements for CMC-Providence (Form B) for the first three years of the project. The applicant projects that projected expenses will exceed projected revenue in project years one and two for the proposed project, resulting in a loss of net income as shown in the above table. CMC-Providence projects a deficit in income of $1,313,967 in Project Year 1, $387,450 in Project Year Two and a positive net income of $654,340 in Project

Year Three. See the pro formas tab of the application for the pro formas and assumptions. The applicant also provides Pro Forma financial statements for CMC-Pineville (Form B) for the first three years of the project. The applicant projects a net income for CMC-Pineville of $141,213 in Project Year 1, $169,966 in Project Year 2 and $198,744 in Project Year Three. In Exhibit 42, the applicant provides the audited financial statements for the parent company, The Charlotte Mecklenburg Hospital Authority d/b/a Carolinas Healthcare System, which shows total revenue of $3,855,287,000 as of December 31, 2010. Because of the revenue of the parent company, the project analyst assumes that any loss in net income experienced by the applicant in Project Years one and two can be absorbed by the healthcare system. The proposed facility will operate under CMC-Pineville's hospital license. Projected costs and revenues are based on reasonable and supported assumptions, including projected utilization. See Pro forma financial statements in the application and Criterion (3) for utilization assumptions.

In summary, the applicant adequately demonstrated the availability of sufficient funds for the capital and working capital needs of the project, and adequately demonstrated that the financial feasibility of the proposal is based upon reasonable projections of costs and charges. Therefore, the application is conforming to this criterion.

6) The applicant shall demonstrate that the proposed project will not result in unnecessary duplication of existing or approved health service capabilities or facilities.

C
Both Applications

CMC-Morrocroft (14) proposes to expand emergency services by constructing a healthcare pavilion in Morrocroft, located in the SouthPark area of Charlotte (Mecklenburg County). The proposed facility, CMC-Morrocroft, will be licensed as part of CMC and services will be billed under CMC's existing provider number. The proposed healthcare pavilion will serve as an extension of Carolinas Hospital System's **("CHS's")** existing healthcare system by providing additional access to patient care services in high demand—emergency services. The applicant's proposed healthcare pavilion will consist of a satellite emergency department with 14 treatment rooms, observation care (two beds), emergency department related diagnostic imaging (CT, ultrasound and x-ray services), emergency department related laboratory and emergency department related pharmacy services. CMC-Morrocroft will not provide scheduled outpatient imaging or lab procedures. The applicant adequately demonstrated that the proposal would not result in the unnecessary duplication of existing or approved health service capabilities or facilities. The applicants filed concurrent applications to construct both CMC-Morrocroft and CMC-Providence and demonstrated a need for both projects. See Criterion (3) for discussion. Therefore, the application is conforming to this criterion.

CMC-Providence (10) proposes to expand emergency services by constructing a healthcare pavilion in the Promenade area of Charlotte (Mecklenburg County). The proposed facility, CMC-Providence, will be licensed as part of CMC-Pineville and services will be billed under CMC-Pineville's existing provider number. The proposed healthcare pavilion will serve as an extension of Carolinas Hospital System's **("CHS's")** existing healthcare system

by providing additional access to patient care services in high demand—emergency services. The applicant's proposed healthcare pavilion will consist of a satellite emergency department with 10 treatment rooms, observation care (two beds), emergency department related diagnostic imaging (CT, ultrasound and x-ray services), emergency department related laboratory and emergency department related pharmacy services. CMC-Providence will not provide scheduled outpatient imaging or lab procedures. The applicant adequately demonstrated that the proposal would not result in the unnecessary duplication of existing or approved health service capabilities or facilities. The applicants filed concurrent applications to construct both CMC-Morrocroft and CMC-Providence and demonstrated a need for both projects. See Criteria (3) and (3a) for discussion. Therefore, the application is conforming to this criterion.

(7) The applicant shall show evidence of the availability of resources, including health manpower and management personnel, for the provision of the services proposed to be provided.

C
Both Applications

CMC-Morrocroft (14). In Section VII.1, page 168, the applicant provides the projected staffing for CMC-Morrocroft in Project Year 2, as shown in the table below:

Position	Total # of FTE Positions Employed	Average Annual Salary per FTE Position
Facility and Nurse Manager	2.0	$101,296
Lab & Imaging Supervisor	2.0	$78,786
RN staffing for ED & OBS	24.5	$79,348
Aides	4.5	$33,765
Imaging Technician	8.5	$70,344
Lab Technician	4.5	$65,280
Patient Access	9.0	$36,016
Security Staff	4.5	$37,142
Environmental Staff	2.0	$29,263
Plant Maintenance Staff*	0.5	NA
Pharmacy Staff*	0.2	NA
Total	**62.2**	

*Plant maintenance and pharmacy staff to be added to CMC for coverage of CMC-Morrocroft. The expense for these services is covered in Other Indirect Expenses on Form B for CMC-Morrocroft.

As shown in the table above, in Project Year 2, the applicant proposes to have 62.2 full-time equivalent (FTE) positions for the service components included in the proposed project.

In Section VII.3, page 170, the applicant states,

> *"As an existing healthcare provider in the Mecklenburg County and the region, and a part of CHS, CMC has numerous resources from which to obtain staff. CHS is the fourth largest employer in North and South Carolina, with more than 18,000 clinical,*

administrative and support personnel on staff. For these reasons, CMC does not expect to have difficulty recruiting the additional FTE's following completion of the proposed project."

In Section VII.7(a), page 172, the applicant states,

"CMC-Morrocroft will be staffed by the physicians of Emergency Medicine Physicians (EMP), who currently staff the emergency departments of the following CHS facilities:

- *CMC-Mercy*
- *CMC-Pineville*
- *CMC-Steele Creek*
- *CMC-University, and*
- *CMC-Lincoln*

Exhibit 46 contains a letter documenting EMP's ability and desire to provide emergency physician coverage at CMC-Morrocroft.

In Section VII.8, page 173, the applicant states,

"As a hospital-based healthcare pavilion, the proposed project will have the same Chief of Staff as the hospital, Dr. Nancy Gritter, who is an internal medicine / nephrology physician."

Exhibits 33, 34, 35, and 45 contain letters confirming the physicians' ability to serve as president of the medical staff and medical directors.

The applicant demonstrates the availability of adequate health manpower and management personnel for the provision of the proposed services. Therefore, the application is conforming to this criterion.

CMC-Providence (10). In Section VII.1, page 165, the applicant provides the projected staffing for CMC-Providence in Project Year 2, as shown in the table below:

Position	Total # of FTE Positions Employed	Average Annual Salary per FTE Position
Facility and Nurse Manager	2.0	$101,296
Lab & Imaging Supervisor	2.0	$78,786
RN staffing for ED & OBS	21.0	$79,348
Aides	2.5	$33,765
Imaging Technician	8.0	$70,344
Lab Technician	4.5	$65,280
Patient Access	7.0	$36,016
Security Staff	4.5	$37,142
Environmental Staff	2.0	$29,263
Plant Maintenance Staff*	0.5	NA
Pharmacy Staff*	0.2	NA
Total	**54.2**	

*Plant maintenance and pharmacy staff to be added to CMC-Pineville for coverage of CMC-Providence. The expense for these services is covered in Other Indirect Expenses on Form B for CMC- Providence.

As shown in the table above, in Project Year 2, the applicant proposes to have 54.2 full-time equivalent (FTE) positions for the service components included in the proposed project.

In Section VII.3, page 167, the applicant states,

> *"As an existing healthcare provider in the Mecklenburg County and the region, and a part of CHS, CMC-Pineville has numerous resources from which to obtain staff. CHS is the fourth largest employer in North and South Carolina, with more than 18,000 clinical, administrative and support personnel on staff. For these reasons, CMC-Pineville does not expect to have difficulty recruiting the additional FTE's following completion of the proposed project."*

In Section VII.7.(a), page 169, the applicant states,

> *"CMC-Providence will be staffed by the physicians of Emergency Medicine Physicians (EMP), who currently staff the emergency departments of the following CHS facilities:*
>
> *•CMC-Mercy*
> *•CMC-Pineville*
> *•CMC-Steele Creek*
> *•CMC-University, and*
> *•CMC-Lincoln*

In Section VII.6. (b), page 169, the applicant states that any physician recruitment necessary for EMP to fulfill its contract for CMC-Providence will be handled by EMP.

In Section VII.8, page 170, the applicant states,

"As a hospital-based healthcare pavilion, the proposed project will have the same Chief of Staff as the medical center, Dr. Kevin Smith, who is a pathologist."

Exhibits 33, 34, and 35 contain letters confirming the physicians' ability to serve as president of the medical staff and medical directors.

The applicant demonstrates the availability of adequate health manpower and management personnel for the provision of the proposed services. Therefore, the application is conforming to this criterion.

(8) The applicant shall demonstrate that the provider of the proposed services will make available, or otherwise make arrangements for, the provision of the necessary ancillary and support services. The applicant shall also demonstrate that the proposed service will be coordinated with the existing health care system.

C
Both Applications

CMC-Morrocroft (14). In Section II.1(a), page 17, the applicant states the following imaging modalities will be provided at the healthcare pavilion:

- One (1) CT scanner
- One (1) ultrasound
- One (1) fixed X-ray
- One (1) portable X-ray

In Section II.1(a), pages 22-23, the applicant describes the additional ancillary services to be provided at the healthcare pavilion, including laboratory, pharmacy, and materials management services. As described by the applicant, all ancillary services will be provided by CMC. The following support services will also be provided at CMC-Morrocroft:

- Administrative
- Housekeeping
- Laundry

Exhibit 9 contains a letter from W. Spencer Lilly, Chief Operating Officer of CHS Central Division, documenting the availability of ancillary and support services.

Exhibit 32 contains a list of all the facilities in which CMC has transfer agreements in place with.

The applicant adequately demonstrated that the necessary ancillary and support services will be available and that the proposed project will be coordinated with the existing health care system. Therefore, the application is conforming to this criterion.

CMC-Providence (10). In Section II.1(a), page 16, the applicant states the following imaging modalities will be provided at the healthcare pavilion:

- One (1) CT scanner
- One (1) ultrasound
- One (1) fixed X-ray
- One (1) portable X-ray

In Section II.1(a), pages 23-24, the applicant describes the additional ancillary services to be provided at the healthcare pavilion, including laboratory, pharmacy, and materials management services. As described by the applicant, all ancillary services will be provided by CMC. The following support services will also be provided at CMC-Providence:

- Administrative
- Housekeeping
- Laundry

Exhibit 8 contains a letter from Chris Hummer, President of CMC-Pineville, documenting the availability of ancillary and support services.

Exhibit 32 contains a list of all the facilities in which CMC has transfer agreements in place with.

The applicant adequately demonstrated that the necessary ancillary and support services will be available and that the proposed project will be coordinated with the existing health care system. Therefore, the application is conforming to this criterion.

(9) An applicant proposing to provide a substantial portion of the project's services to individuals not residing in the health service area in which the project is located, or in adjacent health service areas, shall document the special needs and circumstances that warrant service to these individuals.

NA

(10) When applicable, the applicant shall show that the special needs of health maintenance organizations will be fulfilled by the project. Specifically, the applicant shall show that the project accommodates:

(a) The needs of enrolled members and reasonably anticipated new members of the HMO for the health service to be provided by the organization; and

NA

(b) The availability of new health services from non-HMO providers or other HMOs in a reasonable and cost-effective manner which is consistent with the basic method of operation of the HMO. In assessing the availability of

these health services from these providers, the applicant shall consider only whether the services from these providers:

(i) would be available under a contract of at least 5 years duration;

(ii) would be available and conveniently accessible through physicians and other health professionals associated with the HMO;

(iii) would cost no more than if the services were provided by the HMO; and

(iv) would be available in a manner which is administratively feasible to the HMO.

NA

(11) Repealed effective July 1, 1987.

(12) Applications involving construction shall demonstrate that the cost, design, and means of construction proposed represent the most reasonable alternative, and that the construction project will not unduly increase the costs of providing health services by the person proposing the construction project or the costs and charges to the public of providing health services by other persons, and that applicable energy saving features have been incorporated into the construction plans.

C
Both Applications

CMC-Morrocroft (14). The applicant proposes to expand emergency services by constructing a healthcare pavilion in Morrocroft, located in the SouthPark area of Charlotte. On page 190, the applicant proposes to construct 30,000 square feet for a satellite emergency department. Exhibit 44 of the application includes a letter from Jason C. Kolano, AIA, NCARB, certifying the $16,500,000 cost estimate of the construction contact. The architect's cost certification letter states:

> "*BBH Design, PA provides this cost certification letter, having worked with Carolinas Healthcare System to develop the design for the CMC-Morrocroft Healthcare Pavilion. …The estimated cost of construction experience of Carolinas Healthcare System. Based on this collective information, our knowledge and professional experience, BBH Design, PA certifies the estimated cost of construction of $16,500,000 and that the cost is complete, accurate, and reasonable for this project.*"

The above costs are consistent with costs in Section VIII on pages 177-178 of the application that shows the construction contract will be $16,500,000. In Section XI.7, pages 192-194, the applicant states that CHS is committed to energy efficiency and sustainability that balances the

need for healthcare services and environmental sustainability in the communities it serves. The applicant adequately demonstrates that the cost, design, and means of construction represent the most reasonable alternative, and that the construction costs will not unduly increase costs and charges for health services. See Criterion (5) for discussion of costs and charges. The application is conforming to this criterion.

CMC-Providence (10). The applicant proposes to expand emergency services by constructing a healthcare pavilion in Promenade area of Charlotte. On page 191, the applicant proposes to construct 26,500 square feet for a satellite emergency department. Exhibit 44 of the application includes a letter from Jason C. Kolano, AIA, NCARB, certifying the $10,486,000 cost estimate of the construction contact. The architect's cost certification letter states:

> "*BBH Design, PA provides this cost certification letter, having worked with Carolinas Healthcare System to develop the design for the CMC-Providence Healthcare Pavilion. …The estimated cost of construction experience of Carolinas Healthcare System. Based on this collective information, our knowledge and professional experience, BBH Design, PA certifies the estimated cost of construction of $10,486,000 and that the cost is complete, accurate, and reasonable for this project.*"

The above costs are consistent with costs in Section VIII on pages 174-175 of the application that shows the construction contract will be $10,486,000. In Section XI.7, pages 193-196, the applicant states that CHS is committed to energy efficiency and sustainability that balances the need for healthcare services and environmental sustainability in the communities it serves. The applicant adequately demonstrates that the cost, design, and means of construction represent the most reasonable alternative, and that the construction costs will not unduly increase costs and charges for health services. See Criterion (5) for discussion of costs and charges. The application is conforming to this criterion.

(13) The applicant shall demonstrate the contribution of the proposed service in meeting the health-related needs of the elderly and of members of medically underserved groups, such as medically indigent or low income persons, Medicaid and Medicare recipients, racial and ethnic minorities, women, and handicapped persons, which have traditionally experienced difficulties in obtaining equal access to the proposed services, particularly those needs identified in the State Health Plan as deserving of priority. For the purpose of determining the extent to which the proposed service will be accessible, the applicant shall show:

(a) The extent to which medically underserved populations currently use the applicant's existing services in comparison to the percentage of the population in the applicant's service area which is medically underserved;

C
Both Applications

CMC-Morrocroft (14) and CMC-Providence (10). CMC-Morrocroft and CMC-Providence do not currently have emergency treatment rooms. In the following tables provided in Section VI.11, pages 164-166 [CMC-Morrocroft (14) application] and pages 161-163 [CMC-Providence (10) application], the applicant provides the current payor mix for emergency services at CMC and CMC-Pineville, which are existing acute care hospitals providing emergency services operated by the applicant.

CMC CY 2010 (1/1/2010-12/31/2010) Patient Days as Percent of Total Utilization	
Medicare / Medicare Managed Care	32.9%
Medicaid / Pending	32.3%
Managed Care / Commercial	29.1%
Self-Pay / Indigent / Charity / Other	5.7%
Total	**100.0%**

Source: CHS internal data

CMC Emergency Department CY 2010 (1/1/2010-12/31/2010) Visits as Percent of Total Utilization	
Medicare / Medicare Managed Care	17.0%
Medicaid / Pending	23.5%
Managed Care / Commercial	25.6%
Other / Works Comp	5.9%
Self-Pay / Indigent / Charity / Other	28.0%
Total	**100.0%**

Source: CHS internal data

CMC-Pineville CY 2010 (1/1/2010-12/31/2010) Patient Days as Percent of Total Utilization	
Medicare / Medicare Managed Care	42.7%
Medicaid / Pending	13.1%
Managed Care / Commercial	40.0%
Other / Works Comp	1.4%
Self-Pay / Indigent / Charity / Other	2.8%
Total	**100.0%**

Source: CHS internal data

CMC-Pineville Emergency Department CY 2010 (1/1/2010-12/31/2010) Patient Days as Percent of Total Utilization	
Medicare / Medicare Managed Care	17.1%
Medicaid / Pending	18.1%
Managed Care / Commercial	35.8%
Other / Works Comp	5.0%
Self-Pay / Indigent / Charity / Other	23.9%
Total	**100.0%**

Source: CHS internal data

The Division of Medical Assistance (DMA) maintains a website which offers information regarding the number of persons eligible for Medicaid assistance and estimates of the percentage of uninsured for each county in North Carolina. The following table illustrates those percentages as of June 2009 and CY 2005, respectively. The data in the table were obtained on February 8, 2012. More current data, particularly with regard to the estimated uninsured percentages, were not available.

	Total # of Medicaid Eligible as % of Total Population	**Total # of Medicaid Eligibles Age 21 and older as % of Total Population**	**% Uninsured CY 2005 (Estimate by Cecil G. Sheps Center)**
Mecklenburg	15%	5.1%	20.1%
Statewide	17%	6.7%	19.7%

Source: DMA Website: http://www.ncdhhs.gov/dma/pub/index.htm

The majority of Medicaid eligibles are children under the age of 21.

Moreover, the number of persons eligible for Medicaid assistance may be greater than the number of Medicaid eligibles who actually utilize health services. The DMA website includes information regarding dental services which illustrates this point. For dental services only, DMA provides a comparison of the number of persons eligible for dental services with the number actually receiving services. The statewide percentage was 48.6% for those age 20 and younger and 31.6% for those age 21 and older. Similar information is not provided on the website for other types of services covered by Medicaid. However, it is reasonable to assume that the percentage of those actually receiving other types of health services covered by Medicaid is less than the percentage that is eligible for those services.

The Office of State Budget & Management (OSBM) maintains a website which provides historical and projected population data for each county in North Carolina. However, as of February 22, 2012, no population data was available by age, race or gender. Even if the data were available, a direct comparison to the applicants' current payor mix would be of little value. The population data by age, race or gender does not include information on the number of elderly, minorities or women utilizing health services. Furthermore, OSBM's website does not include information on the number of handicapped persons.

The applicants demonstrate that medically underserved populations currently have adequate access to the emergency services provided at CMC and CMC-Pineville. Therefore, the applications are conforming to this criterion.

(b) Its past performance in meeting its obligation, if any, under any applicable regulations requiring provision of uncompensated care, community service, or access by minorities and handicapped persons to programs receiving federal assistance, including the existence of any civil rights access complaints against the applicant;

C
Both Applications

CMC-Morrocroft (14) and CMC-Providence (10). Recipients of Hill-Burton funds were required to provide uncompensated care, community service and access by minorities and handicapped persons. In Section VI.2, page 157 [CMC-Morrocroft (14) application] and page 155 [CMC-Pineville (10) application], the applicants state that they will provide services to all persons in need of its services, including low income persons, racial and ethnic minorities, women, handicapped persons, elderly and other undeserved. In Section VI.9, page 163 [CMC-Morrocroft (14) application] and page 160 [CMC-Pineville (10) application], the applicants state that neither CMC, CMC-Pineville nor any other CHS facility has had any civil rights complaints filed against them in the last five years. According to the files in the acute and Home Care Licensure and Certification Section, CMC had substantiated EMTLA violations on April 15, 2010 and November 18, 2010. The facility has since been brought back into compliance. According to the files in the acute and Home Care Licensure and Certification Section, CMC-Pineville has had no EMTALA violations from December 2007 to December 8, 2011. Therefore, the applications are conforming to this criterion.

(c) That the elderly and the medically underserved groups identified in this subdivision will be served by the applicant's proposed services and the extent to which each of these groups is expected to utilize the proposed services; and

C
Both Applications

CMC-Morrocroft (14) and CMC-Providence (10). The following tables illustrate the projected payor mix for emergency services for CMC-Morrocroft and CMC-Pineville during the second operating year, as reported by the applicants in Section V1.12 and V1.13, page 164 [CMC-Morrocroft (14) application] and page 161 [CMC-Pineville (10) application]:

CMC-MORROCROFT-ALL SERVICES COMPONENTS SECOND FULL FISCAL YEAR (1/1/2015-12/31/2015) PROJECTED PATIENTS / PROCEDURES AS PERCENT OF TOTAL UTILIZATION	
Medicare / Medicare Managed Care	10.8%
Medicaid	32.1%
Managed Care / Commercial	29.1%
Self Pay / Indigent / Charity / Other	28.0%
TOTAL	100.0%

CMC-PROVIDENCE-ALL SERVICE COMPONENTS SECOND FULL FISCAL YEAR (1/1/2015-12/31/2015) PROJECTED PATIENTS / PROCEDURES AS PERCENT OF TOTAL UTILIZATION	
Medicare / Medicare Managed Care	11.7%
Medicaid	25.9%
Managed Care / Commercial	38.6%
Self Pay / Indigent / Charity / Other	23.9%
TOTAL	100.0%

On page 167 [CMC-Morrocroft (14) application] and page 164 [CMC-Providence (10) application], the applicants state,

> *"The proposed payor mix for each service component is assumed to be equivalent to the CY 2010 payor mix for outpatient emergency department visits in the zip codes identified in Section III.1(b) for the proposed service area based on Thomson data. …"*

In Section VI.4, page 158 [CMC-Morrocroft (14) application] and page 156 [CMC-Providence (10) application], the applicants state,

> *"No patients in need of services will ever be refused care based on their ability to pay."*

The applicants demonstrated that medically underserved populations would have adequate access to the proposed services. Therefore, the applications are conforming to this criterion.

(d) That the applicant offers a range of means by which a person will have access to its services. Examples of a range of means are outpatient services, admission by house staff, and admission by personal physicians.

C
Both Applications

CMC-Morrocroft (14) and CMC-Providence (10). See Section VI.9, page 162 [CMC-Morrocroft (14) application] and page 159 [CMC-Providence (10) application], the applicants discuss the means by which patients will have access to the proposed services. The applicants state,

> *"The primary means by which patients will have access to the healthcare pavilion is through voluntary admission to the emergency department, where they may also access imaging services. Patients may also access the emergency department and imaging services through physician referral. Physicians on the medical staff at other CHS facilities and other area physicians are expected to refer patients to the proposed healthcare pavilion."*

Exhibit 32 contains a list of facilities with which the applicants have transfer agreements. The applicants adequately demonstrate that the facility will offer a range of means by which patients will have access to services. Therefore, the applications are conforming to this criterion.

(14) The applicant shall demonstrate that the proposed health services accommodate the clinical needs of health professional training programs in the area, as applicable.

C
Both Applications

CMC-Morrocroft (14) and CMC-Providence (10). In Section V.1, pages 148-149 [CMC-Morrocroft (14) application] and 146-147 [CMC-Providence (10) application], the applicants identify the professional training programs that currently use CMC and CMC-Pineville as a clinical training site and state that the proposed healthcare pavilions will also serve as a clinical training site. The applicants adequately demonstrated that the proposed facilities will accommodate the clinical needs of area health professionals training programs. Therefore, the applications are conforming to this criterion.

(15) Repealed effective July 1, 1987.
(16) Repealed effective July 1, 1987.
(17) Repealed effective July 1, 1987.
(18) Repealed effective July 1, 1987.

(18a) The applicant shall demonstrate the expected effects of the proposed services on competition in the proposed service area, including how any enhanced competition will have a positive impact upon the cost effectiveness, quality, and access to the services proposed; and in the case of applications for services where competition between providers will not have a favorable impact on cost-effectiveness, quality, and access to the services proposed, the applicant shall demonstrate that its application is for a service on which competition will not have a favorable impact.

C
Both Applications

See Sections II, III, V, VI and VII. The information provided by the applicants in those sections is reasonable and credible and adequately demonstrates that the proposal would have a positive impact on cost-effectiveness, quality and access to the proposed services because:

- The applicants adequately demonstrates that the proposal is needed and that it is a cost-effective alternative to meet the demonstrated need [see Criteria (1), (3), (4) (5) and (12) for additional discussion];
- The applicants has and will continue to provide quality services [see Criteria (7), (8) and (20) for additional discussion];
- The applicants has and will continue to provide adequate access to medically underserved populations [see Criterion (13) for additional discussion].

Therefore, the application is conforming to this criterion.

(19) Repealed effective July 1, 1987.

(20) An applicant already involved in the provision of health services shall provide evidence that quality care has been provided in the past.

C
Both Applicants

CMC-Morrocroft (14). According to the Acute and Home Care Licensure and Certification Section, DHSR, CMC had a complaint investigation that resulted in an Immediate Jeopardy (IJ) on February 2, 2011. Condition-level deficiencies were cited under 482.12 Governing Body, 482.13 Patient's Rights and 482.23 Nursing Services. The facility was brought back into compliance on March 4, 2011. Another survey was conducted In June 2011 and no deficiencies were found. Therefore, the application is conforming to this criterion.

CMC-Providence (10). According to the Acute and Home Care Licensure and Certification Section, DHSR, no incidents occurred at CMC-Pineville, within the eighteen months immediately preceding the date of this decision, for which any sanctions or penalties related to quality of care were imposed by the State. Therefore, the application is conforming to this criterion.

(21) Repealed effective July 1, 1987.

(b) The Department is authorized to adopt rules for the review of particular types of applications that will be used in addition to those criteria outlined in subsection (a) of this section and may vary according to the purpose for which a particular review is being conducted or the type of health service reviewed. No such rule adopted by the Department shall require an academic medical center teaching hospital, as defined by the State Medical Facilities Plan, to demonstrate that any facility or service at another hospital is being appropriately utilized in order for that academic medical center teaching hospital to be approved for the issuance of a certificate of need to develop any similar facility or service.

NA
Both Applications

COMPARATIVE ANALYSIS

On September 15, 2011, the applicants submitted the following concurrent proposals:

- **CMC-Morrocroft (14).** The Charlotte-Mecklenburg Hospital Authority d/b/a Carolinas Medical Center proposes to expand emergency services by constructing a healthcare pavilion near the intersection of Fairview Road and Cameron Valley Parkway (Mecklenburg County). The satellite emergency department, also known as CMC-Morrocroft, will be an extension of Carolinas Hospital System's **(**CHS's**)** existing healthcare system by providing additional access to patient care services in high demand—emergency care services. The proposed 30,000-square foot facility will include:

    - Off-campus 14-bed emergency department (includes one trauma/resuscitation room;
    - Observation care (two beds);
    - Emergency department related diagnostic imaging, including, CT, ultrasound and diagnostic X-ray services;
    - Emergency department related laboratory services;
    - Emergency department related pharmacy services; and
    - An automated pharmaceutical dispensing machine.

- **CMC-Providence (10)**. The applicant, Mercy Hospital, Inc., d/b/a Carolinas Medical Center-Pineville (**"CMCP")** proposes to expand emergency services by constructing a healthcare pavilion in near the intersection of Providence Road and Interstate 485 (Mecklenburg County). The satellite emergency department, also known as CMC-Providence, will be an extension of Carolinas Hospital System's (CHS's) existing healthcare system by providing additional access to patient care services in high demand—emergency care services. The proposed 26,500-square foot facility will include:

    - Off-campus 10-bed emergency department
    - Observation care (two beds);
    - Emergency department related diagnostic imaging, including, CT, ultrasound and diagnostic X-ray services;
    - Emergency department related laboratory services;
    - Emergency department related pharmacy services; and
    - An automated pharmaceutical dispensing machine.

Pursuant to 10A NCAC 14C .0202(f), *"Applications are competitive if they, in whole or in part, are for the same or similar services and the agency determines that the approval of one or more of the applications may result in the denial of another application reviewed in the same review period."* The applications were submitted in the same review period, for the same or similar services, and in the same or similar service areas. Therefore, in accordance with Agency practice, the applications were treated as competitive until a thorough review and analysis of the proposals could be conducted. As a result of its analysis, the Certificate of Need Section determined that the two applications for new satellite

emergency departments were not competitive because it determined that the approval of one of the applications does not result in the denial of the other application.