

VIRGINIA DEPARTMENT OF HEALTH

Office of Licensure and Certification

Division of Certificate of Public Need

Staff Analysis

January 19, 2024

RE: COPN Request No. VA-8725

Winchester Medical Center

Winchester, Virginia

Expand CT Services through the addition of One Fixed CT Scanner

Applicant

Winchester Medical Center (WMC) is a Virginia nonstock 501(c)(3) corporation organized in 1984. WMC is a wholly owned subsidiary of Valley Health System. There are three subsidiaries wholly or partially owned by WMC—The Winchester Medical Center Foundation, Surgi-Center of Winchester, Inc., and Northern WV Home Health, LLC. WMC is located at 1840 Amherst Street, Winchester, Virginia 22601, within Planning District (PD) 7, further nested in Health Planning Region (HPR) I.

Background

WMC is a 495-bed acute care facility that provides a comprehensive array of inpatient and outpatient services, including but not limited to cardiology, behavioral medicine services, surgery, orthopedics, neurosciences, oncology, women's services, and pediatrics. WMC is the region's only Level II Trauma Center that serves a combined 13 counties in both Virginia and West Virginia and the City of Winchester, Virginia.

Population and Demographics

PD 7 is generally rural and is projected to make up only 2.84% of the statewide population in 2030 (**Table 1**). Between 2020 and 2030, the PD 7 population is projected to grow by approximately 4.33%, slightly less than the statewide average growth of 5.30% anticipated for the same period (**Table 1**). Between 2020 and 2030 the aged 65+ cohort is anticipated to grow from 45,093 to 57,841 persons, or a growth rate of 20.43% (**Table 1**). The PD 7 65+ population growth is slightly less than the statewide projection of 21.52% (**Table 1**). Taking note of the 65+ cohort growth rate is pertinent as this population group typically uses health care resources, including computed tomography (CT) diagnostic services, at a rate much higher than those individuals under the age of 65.

Table 1. PD 7 Population Data

Geography Name	2010	2020	% Change 2010-2020	2030	% Change 2020-2030	2020 65+	2030 65+	% Change 2020-2030 65+
Clarke County	14,034	14,783	5.07%	15,309	3.44%	3,026	3,941	23.21%
Frederick County	78,305	91,419	14.34%	103,035	11.27%	15,622	21,735	28.12%
Page County	24,042	23,709	-1.40%	23,041	-2.90%	5,139	5,969	13.91%
Shenandoah County	41,993	44,186	4.96%	45,714	3.34%	10,198	11,893	14.25%
Warren County	37,575	40,727	7.74%	43,250	5.83%	6,596	8,795	25.01%
Winchester city	26,203	28,120	6.82%	29,606	5.02%	4,512	5,508	18.08%
PD 7 Totals/Averages	222,152	242,944	6.25%	259,956	4.33%	45,093	57,841	20.43%
Virginia, Statewide	8,001,024	8,644,727	7.45%	9,129,002	5.30%	1,352,448	1,723,382	21.52%

Source: Weldon-Cooper Data from the UVA Weldon Cooper Center for Public Service

The average statewide poverty rate in Virginia is 10.6% (**Table 2**). The average PD 7 poverty rate is 10.0% (**Table 2**) and the weighted poverty rate average (based on percentage of PD 7 population) for PD 7 is 9.4%. The PD 7 poverty rate, whether an average or weighted average, is similar to that of Virginia as a whole.

Table 2. PD 7 Poverty Rates 2022 & Percentage of Total Population

Geography Name	Poverty Rate	% of Total PD 7 Population*
Clarke County	5.8%	5.9%
Frederick County	6.6%	39.6%
Page County	12.3%	8.6%
Shenandoah County	11.4%	17.6%
Warren County	10.9%	16.6%
Winchester city	13.3%	11.4%
PD 7 Totals/Averages	10.0%	100.0%
Virginia, Statewide	10.6%	N/A

Sources: U.S. Census Bureau

*2030 Projected

Computed Tomography

A CT scan is a diagnostic imaging tool that utilizes X-ray technology to produce imaging of the inside of the body and can show bones, muscles, organs, and blood vessels. CT scans are more detailed than X-rays; rather than the standard straight-line X-ray beam, CT imaging uses an X-ray beam that moves in a circle around the body to show anatomical structures in much greater detail.¹ The scans can be used to help diagnose tumors, investigate internal bleeding, or investigate other possible injuries or damage. The scans can be done with or without contrast, a substance taken orally or injected within the body, that causes a particular organ or tissue to be seen more clearly.²

All CT scanners in PD 7 are fixed-site scanners. There are currently 12 authorized scanners in PD 7, one of which is a limited use, interoperative, CT scanner, and one of which is a CT simulator,

¹ <https://www.hopkinsmedicine.org/health/treatment-tests-and-therapies/computed-tomography-ct-scan#:~:text=Computed%20tomography%20is%20commonly%20referred,fat%2C%20organs%20and%20blood%20vessels.>

² Ibid.

leaving 10 diagnostic CT imaging scanners; however, in 2021, there were 9 available diagnostic CT scanners. In 2021, the most recently available data reported to Virginia Health Information (VHI), the average utilization per scanner in PD 7 based upon the State Medical Facilities Plan (SMFP) threshold of 7,400 procedures per available scanner (9 scanners) was 110.8%; using the same procedure volume that occurred in 2021 with the current number of scanners (10 scanners), the utilization is 99.8% on average per scanner (**Table 3**). Additionally, three of the available scanners are located within critical access hospitals (CAH), namely Valley Health Shenandoah Memorial Hospital and Valley Health Page Memorial Hospital; these CAHs serve as a gateway for small, rural communities to have a point of access to medical care.³

Table 3. PD7 CTs and 2021 Utilization

Facility	# of Fixed-Site CTs	Total Number of Procedures	Procedures per Scanner	Utilization Rate
Valley Health Page Memorial Hospital	1	5,248	5,248	70.9%
Valley Health Shenandoah Memorial Hospital	2 ¹	9,981	4,991	67.4% ²
Valley Health Warren Memorial Hospital	1	10,613	10,613	143.4%
Valley Health Winchester Medical Center	5 ³	39,889	5,699	107.8%
Winchester Imaging	1	8,097	8,097	109.4%
Totals/Averages	10	73,828 Total	7,383 Average	99.8%⁴

Sources: COPN Records & VHI Data 2021

¹SMH had one CT scanner in 2021.

²Using the 1 scanner available in 2021, the utilization was 134.9%.

³WMC has 7 total CT scanners, but one is an interoperative scanner and one is a CT simulator.

⁴Using the scanners available in 2021, the utilization average was 110.8%.

The applicant reports that the volumes for WMC are not accurately reported from VHI and that the VHI figure does not include the procedure volumes for their outpatient diagnostic imaging center (the fifth diagnostic CT scanner that was completed and operational on May 8, 2020). The applicant provides the following volumes:

Table 4. CT Volumes at WMC as Reported by Applicant

	2019	2020	2021	2022	2023 (Annualized Jan-Jun)
WMC	44,040	42,589	48,174	50,942	53,792
Utilization Rate (based on 7,400 scans)	148.8%¹	115.1%²	130.2%	137.7%	145.4%

Source: COPN Request No. VA-8725

¹WMC had 4 diagnostic CT scanners in 2019.

²WMC had 5 diagnostic scanners starting May 8, 2020.

Using the corrected volumes provided by the applicant, the average number of procedures per scanner (assuming 10 scanners) in PD 7 in 2021 was 8,212, or 111.0% utilization per scanner. Considering the 9 scanners that were truly operational in 2021, the average procedure volume per scanner was 9,124, or 123.3% utilization.

Based upon the number of total procedures provided by VHI in 2021, 73,828 procedures (**Table 3**), and the SMFP threshold of 7,400 procedures per available scanner, there is a need for 9.98, or 10,

³ <https://www.vdh.virginia.gov/health-equity/critical-access-hospitals-cah/>

scanners in the PD. This calculation indicates there are an appropriate number of CT scanners in PD 7. However, this calculation neither accounts for the current number of procedures being performed by the fourth quarter of 2023 nor the effect that the COVID-19 pandemic had on the procedure volumes during 2021. With the corrected volumes provided by the applicant, there was a total of 82,113 diagnostic CT procedures in PD 7 in 2021, which would yield a need of 11.1, or 12 diagnostic CT scanners in the PD; this would indicate a deficit of 2 diagnostic CT scanners in PD 7.

Proposed Project

WMC proposes to expand CT services in the emergency department (ED) within the hospital through the addition of one CT scanner, for a total complement of two diagnostic CT scanners. The project will not consist of new construction, but rather the remodeling of the current space. The space to be converted is currently used as classroom space and is approximately 1,545 gross square feet or 1,490 net square feet of space. The site is appropriately zoned for the project and has access to all needed utilities.

The following is the projected timeline to completion:

Date of Drawings-	Preliminary: Quarter (Q) 4 of 2023	Final: Q1 of 2024
Date of Construction-	Begin: Q2 of 2024	Completion: Q3 of 2024
Target Date of Opening-	Late Q3 of 2024	

The total capital cost of the project is \$3,370,000, of which 100% is to be funded through accumulated reserves. Approximately 90.3%, or \$3,044,000, of the total capital cost is attributed to the direct construction costs.

Project Definition

Section 32.1-102.1:3 of the Code of Virginia defines a project, in part, as “[t]he addition by an existing medical care facility described in subsection A of any new medical equipment for the provision of...computed tomography (CT) scanning...” A medical care facility includes “[a]ny facility licensed as a hospital, as defined in § 32.1-123.”

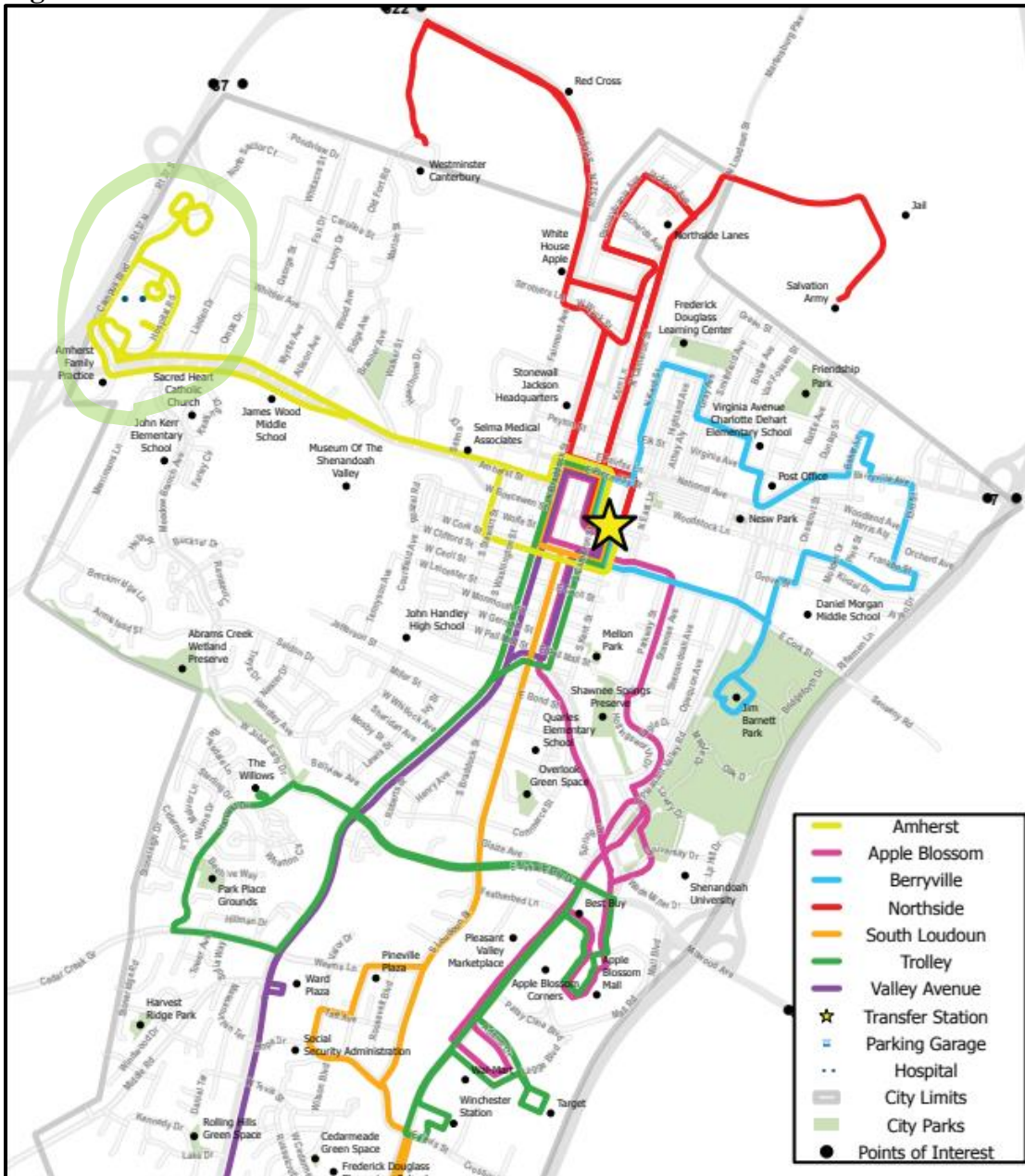
Required Considerations -- § 32.1-102.3, of the Code of Virginia

In determining whether a public need exists for a proposed project, the following factors shall be taken into account when applicable.

- 1. The extent to which the proposed service or facility will provide or increase access to needed services for residents of the area to be served, and the effects that the proposed service or facility will have on access to needed services in areas having distinct and unique geographic, socioeconomic, cultural, transportation, and other barriers to access to care.**

The WMC campus is situated at the intersections of Route 50 and Route 37 and is accessible by Interstates 66 and 81. WMC also has a helipad for receiving and dispatching emergency air transports. Winchester city has access to the WinTran public transportation system Monday-Saturday. The system uses buses and trolleys and accesses the WMC and other WMC medical office buildings (circled in green in **Figure 1**).

Figure 1. WinTran Route Extraction



Source: <https://www.winchesterva.gov/sites/default/files/documents/transit/guides/wintran-guide2022.pdf>

2. The extent to which the project will meet the needs of the residents of the area to be served, as demonstrated by each of the following:
 - (i) The level of community support for the project demonstrated by citizens, businesses, and governmental leaders representing the area to be served.

DCOPN received no letters of opposition and 26 letters of support for the proposed project from Valley Health and other area physicians. Collectively, these letters articulate several benefits of the project, including:

- The addition of the CT scanner will expand the imaging services and “enhance the state-of-the-art cancer center”.
- There has been a continued growth in the demand for imaging services in the community.
- Patients have experienced “extended wait times and disruptions in care when seeking CT scans through the emergency department”. Additional capacity would “alleviate these issues and allow patients to obtain comprehensive care in their home community.”

Section 32.1-102.6 B of the Code of Virginia directs DCOPN to hold one public hearing on each application in a location in the county or city in which the project is proposed or a contiguous county or city in the case of competing applications, or in response to a written request by an elected local government representative, a member of the General Assembly, the Commissioner, the applicant, or a member of the public. COPN Request No. VA-8725 is not competing with another project in this batch cycle and DCOPN did not receive a request to conduct a public hearing for the proposed project. Thus, no public hearing was held.

(ii) The availability of reasonable alternatives to the proposed service or facility that would meet the needs of the population in a less costly, more efficient, or more effective manner.

DCOPN finds no reasonable alternative to the proposed project that would meet the needs of the population in a less costly, more efficient, or more effective manner. Not only does WMC have a specific, institutional need for another machine to decant ED CT procedure volumes from the CT machines used for outpatient visits, but the PD is likely to need an additional unit as a result of the natural increase in volumes during the past two years that are not accounted for in most recently available VHI data. Regarding efficiency, the applicant reports that the current ED CT scanner workload is exceeding SMFP capacity and the three-year old CT scanner in use has to undergo considerable downtime for maintenance due to the stress on the system. Having a second unit in their ED would reasonably allow for decreased maintenance time for the existing unit, faster wait times for patients, and would reduce the outpatient scheduled appointments from being moved to accommodate the needs of the ED.

(iii) Any recommendation or report of the regional health planning agency regarding an application for a certificate that is required to be submitted to the Commissioner pursuant to subsection B of § 32.1-102.6.

Currently, there is no organization in HPR I designated by the Virginia Department of Health to serve as the Health Planning Agency for PD 7. Therefore, this consideration does not apply to the review of the proposed project.

(iv) Any costs and benefits of the project.

The total capital cost of the project is \$3,370,000, 100% of which is to be paid through accumulated reserves. The project will require an additional 6 full-time equivalent (FTE) staff; 3 FTE specific to CT technologists and 3 FTEs allocated for tech aides/support staff. The applicant is currently utilizing staffing agencies to cover open FTEs WMC is working to fill. The benefits of having another CT scanner in the ED that is located in a more remote PD

of the Commonwealth appear to outweigh the financial and staffing costs. Some of the benefits include:

- Shorter wait times for individuals needing emergency CT scans (e.g., head injuries, stroke, kidney stones, blood clots in the lungs, etc.)⁴.
- Less impact on patients scheduled for outpatient imaging when the ED imaging demands supersede the scheduled patients' imaging.
- Less stress on the one CT scanner currently located in the ED, allowing for less maintenance required on the unit, less downtime, and less impact on the CT scanners located outside of the ED.

(v) The financial accessibility of the project to the residents of the area to be served, including indigent residents.

The applicant has provided assurances that CT services will be accessible to all patients, regardless of financial considerations. In 2021, the most recent data available, WMC reports 0.67% of their gross revenues to be charity, which is less than the average of HPR I of 1.92% and is less than the inpatient hospital mean of 0.9%. Recent changes to §32.16-102.4B of the Code of Virginia now require DCOPN to place a charity care condition on all applicants seeking a COPN. For this reason, DCOPN recommends that the proposed project, if approved, be subject to a 1.92% charity care condition, to be derived from total CT gross patient services revenues, consistent with the HPR I average. DCOPN notes that its recommendation includes a provision allowing for the reassessment of the charity care rate at such time as more reliable data becomes available regarding the full impact of Medicaid expansion in the Commonwealth.

Health Planning Region I			
2021 Charity Care Contributions at or below 200% of Federal Poverty Level			
Hospital	Gross Patient Revenues	Adjusted Charity Care Contribution	Percent of Gross Patient Revenue:
UVA Transitional Care Hospital	\$ 53,021,859	\$3,256,725	6.14%
Encompass Health Rehab Hosp of Fredericksburg	\$ 42,215,195	\$1,984,765	4.70%
Culpeper Regional Hospital	\$ 445,240,580	\$15,076,533	3.39%
University of Virginia Medical Center	\$ 6,669,433,774	\$198,965,329	2.98%
Sentara RMH Medical Center	\$ 993,414,446	\$18,657,804	1.88%
Carilion Rockbridge Community Hospital	\$ 180,498,750	\$2,600,213	1.44%
Sentara Martha Jefferson Hospital	\$ 825,488,467	\$11,009,327	1.33%
UVA Encompass Health Rehabilitation Hospital	\$ 36,000,152	\$373,808	1.04%
Stafford Hospital Center	\$ 337,420,833	\$3,079,852	0.91%
Augusta Health	\$ 1,232,396,858	\$10,863,652	0.88%
Page Memorial Hospital	\$ 75,441,642	\$592,000	0.78%
Shenandoah Memorial Hospital	\$ 150,943,059	\$1,183,240	0.78%
Mary Washington Hospital	\$ 1,548,595,215	\$11,288,574	0.73%
Winchester Medical Center	\$ 1,541,736,262	\$10,319,447	0.67%
Spotsylvania Regional Medical Center	\$ 681,942,940	\$4,520,886	0.66%
Fauquier Hospital	\$ 462,729,762	\$2,463,787	0.53%
Warren Memorial Hospital	\$ 196,713,548	\$977,784	0.50%
Bath Community Hospital	\$ 25,547,880	\$73,591	0.29%
Total Inpatient Hospitals:			18
HPR I Inpatient Hospital Median			0.90%
HPR I Total Inpatient \$ & Mean %	\$ 15,498,781,222	\$ 297,287,317	1.92%

⁴ <https://www.acr.org/-/media/ACR/NOINDEX/RSCAN/CT-Scans-in-the-ED.pdf>

(vi) At the discretion of the Commissioner, any other factors as may be relevant to the determination of public need for a project.

DCOPN did not identify any other discretionary factors, not discussed elsewhere in this staff analysis report, to bring to the attention of the Commissioner as may be relevant in determining a public need for the proposed project.

3. The extent to which the application is consistent with the State Medical Facilities Plan.

Section 32.1-102.2:1 of the Code of Virginia calls for the State Health Services Plan Task Force to develop, by November 1, 2022, recommendations for a comprehensive State Health Services Plan (SHSP). In the interim, these regulations provide the best available criteria and DCOPN will consider the consistency of the proposed project with the predecessor of the SHSP, the State Medical Facilities Plan (SMFP).

Part II, Article 1 of the State Medical Facilities Plan (SMFP) contains the standards and criteria for the establishment of diagnostic services. They are as follows:

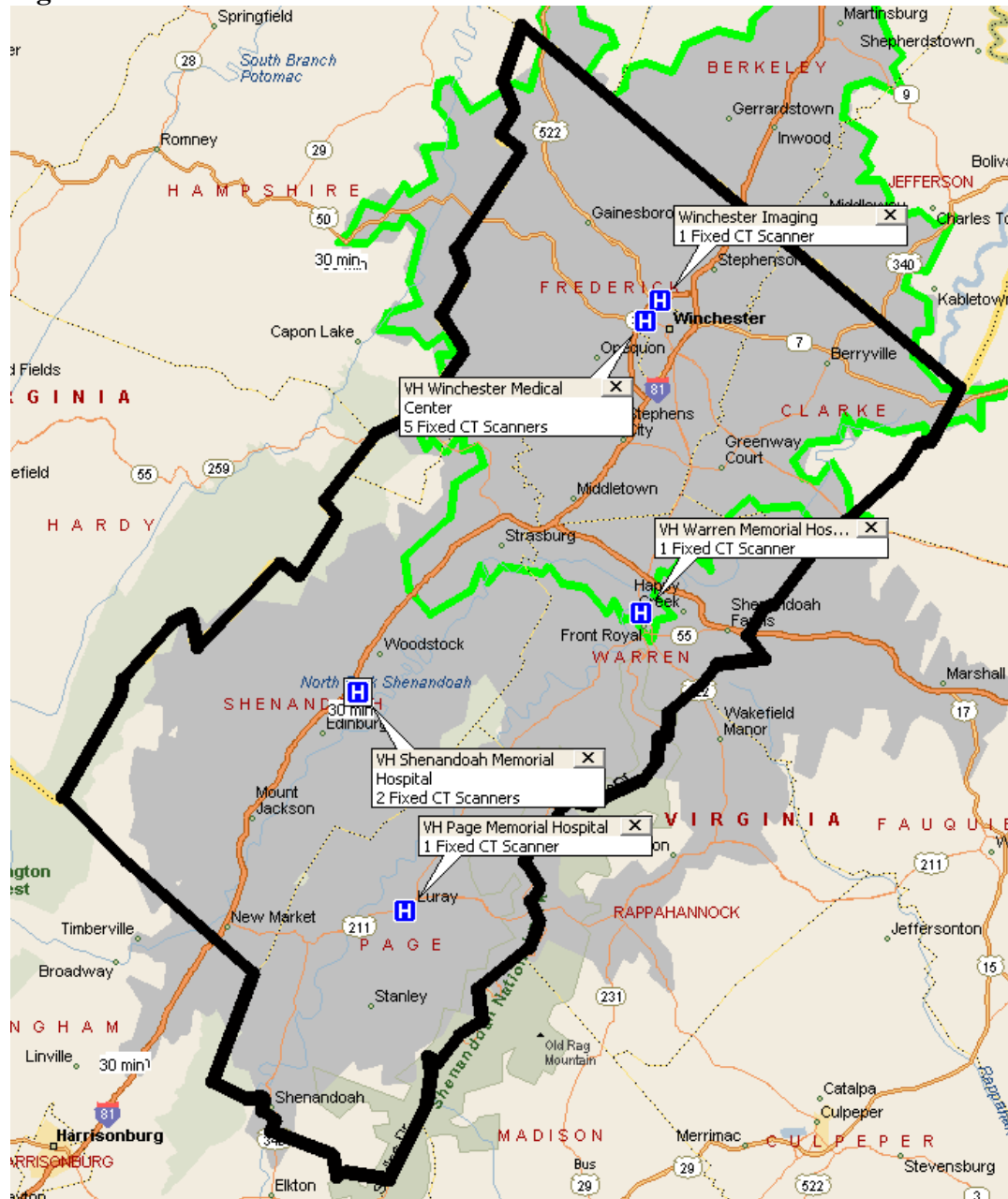
Part II. Diagnostic Imaging Services
Article 1. Criteria and Standards for Computed Tomography

12VAC5-230-90. Travel time.

CT services should be within 30 minutes driving time one way under normal conditions of 95% of the population of the health planning district using a mapping software as determined by the commissioner.

The geographic area within PD 7 that has access to CT services within 30 minutes driving time under normal conditions is shaded in grey on **Figure 2**. Outlined in green is the 30-minute driving distance radius from WMC (**Figure 2**). The areas not covered by the shaded grey in **Figure 2** are extremely rural or part of a national forest; it is reasonable to conclude that 95% or more of the PD 7 population has access to CT services within 30 minutes driving time one way under normal conditions.

Figure 2. CT Service Providers in PD 7



Sources: DCOPN Records, Google Maps, and Microsoft Streets & Trips

12VAC5-230-100. Need for new fixed site or mobile service.

A. No new fixed site or mobile CT service should be approved unless fixed site CT services in the health planning district performed an average of 7,400 procedures per existing and approved CT scanner during the relevant reporting period and the proposed new service would not significantly reduce the utilization of existing providers in the health planning district. The utilization of existing scanners operated by a hospital and serving an area distinct from the proposed new service site may be disregarded in computing the average utilization of CT scanners in such health planning district.

B. Existing CT scanners used solely for simulation with radiation therapy treatment shall be exempt from the utilization criteria of this article when applying for a COPN. In addition, existing CT scanners used solely for simulation with radiation therapy treatment may be disregarded in computing the average utilization of CT scanners in such health planning district.

The applicant is not proposing to add a new CT services site, but rather to expand services at a site that is currently authorized. As discussed previously in the Background section of the Staff Report and outlined in **Table 3**, the average utilization of the CT scanners in the PD (using procedure volumes from 2021) is 99.8% for the 10 available scanners in 2023. At WMC, the average utilization in 2021 per each of its 5 CT scanners was 107.8% (**Table 3**). Additionally, as discussed above, the volumes reported by the applicant (**Table 4**) alter the utilization to 111.0% in 2021 per scanner in the PD (assuming 10 current scanners) and an average utilization of 130.2% per scanner at WMC in 2021. With the updated figures provided in **Table 4**, there is a calculated deficit of 2 diagnostic CT scanners in the PD.

12VAC5-230-110. Expansion of fixed site service.

Proposals to expand an existing medical care facility's CT service through the addition of a CT scanner should be approved when the existing services performed an average of 7,400 procedures per scanner for the relevant reporting period. The commissioner may authorize the placement of a new unit at the applicant's existing medical care facility or a separate location within the applicant's primary service area for CT services, provided the proposed expansion is not likely to significantly reduce the utilization of existing providers in the health planning district.

In 2021, the data reported to VHI shows utilization of 107.8%, or 7,978 procedures per CT scanner at WMC (**Table 3**). The project meets this provision of the SMFP. The applicant is proposing to add the expanded service, one CT scanner, within the acute care ED to alleviate the need to push ED scanning needs onto other scanners being used primarily for scheduled outpatient procedures. Using the procedural data provided by the applicant in **Table 4**, WMC's diagnostic CT units were operating at an SMFP utilization rate of 130.2%, further justifying the need for additional CT scanning capacity. Also pertinent to this review is the following section of the SMFP:

2VAC5-230-80. When institutional expansion is needed.

A. Notwithstanding any other provisions of this chapter, the commissioner may grant approval for the expansion of services at an existing medical care facility in a health planning district with an excess supply of such services when the proposed expansion can be justified on the basis of a facility's need having exceeded its current service capacity to provide such service or on the geographic remoteness of the facility.

B. If a facility with an institutional need to expand is part of a health system, the underutilized services at other facilities within the health system should be reallocated, when appropriate, to the facility with the institutional need to expand before additional services are approved for the applicant. However, underutilized services located at a health system's geographically remote facility may be disregarded when determining institutional need for the proposed project.

C. This section is not applicable to nursing facilities pursuant to § 32.1-102.3:2 of the Code of Virginia.

D. Applicants shall not use this section to justify a need to establish new services.

As PD 7 and Valley Health system was near 100% utilization of the SMFP standard in 2021, it is reasonable to conclude that the procedure volumes in 2023 are greater than 2021, supporting the need for an additional scanner in the PD. Additionally, there is no underutilized CT scanner with which to relocate in lieu of this project as proposed.

12VAC5-230-120. Adding or expanding mobile CT services.

A. Proposals for mobile CT scanners shall demonstrate that, for the relevant reporting period, at least 4,800 procedures were performed and that the proposed mobile unit will not significantly reduce the utilization of existing CT providers in the health planning district.

B. Proposals to convert authorized mobile CT scanners to fixed site scanners shall demonstrate that, for the relevant reporting period, at least 6,000 procedures were performed by the mobile scanner and that the proposed conversion will not significantly reduce the utilization of existing CT providers in the health planning district.

This provision of the SMFP is not applicable as the applicant is not seeking to add or expand mobile services.

12VAC5-230-130. Staffing.

CT services should be under the direction or supervision of one or more qualified physicians.

The applicant provides assurances that the CT services will be under the supervision of one or more qualified physicians.

Required Considerations Continued

4. The extent to which the proposed service or facility fosters institutional competition that benefits the area to be served while improving access to essential health care services for all persons in the area to be served.

The project does not appear to foster institutional competition as the project is anticipated to alleviate an institutional need for additional CT scanning capacity rather than to be competitive with the existing market. The project is not expected to improve access as it is an expansion of services of an existing site.

5. The relationship of the project to the existing health care system of the area to be served, including the utilization and efficiency of existing services or facilities.

Whether the State Health Commissioner considers the data directly from VHI or the updated information provided by the applicant, the CT imaging services are at or above the SMFP utilization threshold as of 2021. These figures do not account for the growth that has likely

continued in the PD following the 2021 COVID-19 pandemic, nor does it account for the different imaging demands placed on CT scanners in different locations/different purposes. For example, CT imaging needs in an oncological setting are likely to take significantly longer than those in an ED setting.⁵ With this in mind, having additional scanning capacity (which is both arguably needed in the PD and in the institutional setting) in the WMC ED would alleviate ED patients making scheduled patients (such as those needing CT scanning from the oncology department) wait even longer for their scans when their appointments are pushed for ED emergent needs. The project would increase efficiencies within the hospital concerning clinical efficiencies as well as increase efficiencies for patients.

6. The feasibility of the project, including the financial benefits of the project to the applicant, the cost of construction, the availability of financial and human resources, and the cost of capital.

The total capital cost of the project is \$3,370,000, all of which are to be paid through accumulated reserves (**Table 5**). The costs are higher than projects of similar size and scope, however, there is more remodeling needed to accommodate the CT scanner being added close to the ED as well as post-pandemic costs of construction increasing. Compared to the following, with these factors in mind, the project costs appear reasonable:

- COPN No. VA-04830 was issued on February 9, 2023, authorizing Inova Health Care System d/b/a Inova Loudoun Hospital to add a CT scanner and an associated Control Room with a total capital cost of \$3,031,207 (\$3,093,788 when adjusted for inflation using the US Bureau of Labor Statistics' Consumer Price Index Calculator).
- COPN No. VA-04808, issued October 24, 2022, authorized Sentara Norfolk General Hospital to add 1 CT scanner in a renovated space with associated costs of \$2,427,511 (\$2,501,140 when adjusted for inflation using the US Bureau of Labor Statistics' Consumer Price Index Calculator).
- COPN No. VA-04804, issued August 22, 2022, authorized Carilion New River Valley Medical Center to add 1 CT scanner with \$2,254,532 in associated costs (\$2,337,354 when adjusted for inflation using the US Bureau of Labor Statistics' Consumer Price Index Calculator).

⁵ In a study published in Science Direct in February 2020, results found that when adjusting for age and CT body part, cancer staging CT exams were associated with an independently statistically significant increased turnaround time compared to non-oncological ED CT exams (114.5 minutes and 69 minutes, respectively).
<https://www.sciencedirect.com/science/article/abs/pii/S0735675719305844#:~:text=Results,%5D%2C%20respectively%2C%20p%20%3C%20>

Table 5. Total Capital Cost Summary

Direct Construction Costs Sub-total	\$3,044,000
Equipment included in the construction contract	\$3,044,000
Equipment Not Included in Construction Contract Sub-total	\$26,000
Furniture	\$19,000
Other (signage)	\$7,000
Architectural and Engineering Fees Sub-total	\$102,000
Consultant’s fees	\$102,000
Other Consultant Fees Sub-total	\$65,000
Legal fees/Insurance	\$7,000
COPN application fee	\$20,000
Other	\$38,000
Total Capital Cost	\$3,370,000

Source: COPN Request No. VA-8725

The Pro Forma provided by the applicant anticipates an incremental surplus of \$152,166 in Year 1 and \$836,832 for Year 2 (Table 6). The project appears to be financially viable in the short and long term.

Table 6. Pro Forma Summary

	Year 1	Year 2
Number of Procedures	1,200	2,400
Net Patient Revenue	\$640,159	\$1,305,924
Total Operating Expenses	\$487,993	\$469,092
Net Income	\$152,166	\$836,832

Source: COPN Request No. VA-8725

- The extent to which the project provides improvements or innovations in the financing and delivery of health services, as demonstrated by: (i) The introduction of new technology that promotes quality, cost-effectiveness, or both in the delivery of health care services. (ii) The potential for provision of services on an outpatient basis. (iii) Any cooperative efforts to meet regional health care needs. (iv) At the discretion of the Commissioner, any other factors as may be appropriate.**

The project will not introduce new technology, but it will expand CT services to promote quality in the delivery of healthcare services. While an excessive quantity of imaging equipment can increase healthcare costs, “[a]dvanced diagnostic tests [such as CT imaging] bring the advantage of minimizing uncertainty about diagnosis.”⁶ Unnecessary tests can increase costs; however, accurate diagnosing of conditions can reduce costs and time for effective and appropriate treatment implementation. The expansion of CT services will also support outpatient imaging as well as increase the effectiveness of other units in the hospital used for scheduled and outpatient imaging services. DCOPN did not identify any other discretionary factors, not discussed elsewhere in this staff analysis report, to bring to the

⁶ Litkowski, P., Smetana, G., Zeidel, M., Blanchard, , M. (2016). Curbing the urge to image - The American Journal of Medicine. Accessed December 21, 2023. [https://www.amjmed.com/article/S0002-9343\(16\)30680-5/fulltext](https://www.amjmed.com/article/S0002-9343(16)30680-5/fulltext).

attention of the Commissioner as may be relevant in determining the extent to which the project provides improvements or innovations in the financing and delivery of health services.

8. In the case of a project proposed by or affecting a teaching hospital associated with a public institution of higher education or a medical school in the area to be served.

(i) The unique research, training, and clinical mission of the teaching hospital or medical school. (ii) Any contribution the teaching hospital or medical school may provide in the delivery, innovation, and improvement of health care for citizens of the Commonwealth, including indigent or underserved populations.

Not applicable. The applicant is not affiliated with a teaching hospital associated with a public institution of higher education or a medical school in the area to be served.

DCOPN Staff Summary and Findings

PD 7 is generally rural and composed of a relatively small population, projected to only be 2.84% of the statewide population in 2030 (**Table 1**). Two of Virginia's eight CAHs are located in PD 7; these two CAHs are home to three of the PD 7's 10 diagnostic CT scanners. While the PD 7 weighted poverty rate is lower than that of the statewide average of 10.6%, the Winchester city poverty rate is greater than the statewide average, at 13.3% (**Table 2**).

Of the 10 diagnostic CT scanners in PD 7, 5 scanners are located at WMC. Despite having half of the diagnostic CT scanners in the PD at WMC, they are still experiencing an institutional need for additional CT scanning capacity whether one considers the VHI data or the applicant-corrected data. Furthermore, the addition of a CT scanner in the PD is not likely to negatively affect other providers as the PD is either right at the SMFP threshold for utilization (when considering 2021 VHI data) or over the threshold (when considering the applicant-corrected data) (**Tables 3 & 4**).

There was no opposition to the project submitted to DCOPN. There does not appear to be a reasonable alternative to the project that would be less costly, more efficient, or more effective at meeting the needs of the PD 7 population. The benefits appear to outweigh the financial and staffing costs associated with the project. The project would not increase access to services as approximately 95% or more of PD 7 residents are within a 30-minute driving distance from CT services under normal driving conditions; however, the project would reasonably increase quality and timeliness for patients to receive services. The project is not anticipated to foster institutional competition as it is designed to alleviate an institutional need for additional imaging capacity. Moreover, the project costs appear relatively reasonable, and the project appears viable over the immediate and long term.

DCOPN Staff Recommendations

COPN Request No. VA-8725 – Winchester Medical Center

The Division of Certificate of Public Need recommends the **conditional approval** of this project for the following reasons:

1. The proposal to expand CT imaging services at Winchester Medical Center is consistent with the applicable standards and criteria of the State Medical Facilities Plan and the 8 Required Considerations of the Code of Virginia.
2. The applicant has demonstrated an institutional specific need for the expansion of CT imaging services.
3. There does not appear to be any less costly alternative to the proposed project.
4. The capital costs of the proposed project are reasonable.
5. The proposed project is unlikely to have a significant negative impact upon the utilization, costs, or charges of other providers of CT services in PD 7.
6. The proposed project appears to be financially viable in the immediate and long-term.
7. There is no known opposition to the project.

Charity Conditions

DCOPN's recommendation is contingent upon Winchester Medical Center's agreement to the following charity care condition:

Winchester Medical Center will provide computed tomography (CT) services to all persons in need of this service, regardless of their ability to pay, and will provide as charity care to all indigent persons free services or rate reductions in services and facilitate the development and operation of primary care services to medically underserved persons in an aggregate amount equal to at least 1.92% of Winchester Medical Center's total patient services revenue derived from CT services as valued under the provider reimbursement methodology utilized by the Centers for Medicare and Medicaid Services for reimbursement under Title XVIII of the Social Security Act, 42 U.S.C. § 1395 et seq. Compliance with this condition will be documented to the Division of Certificate of Public Need annually by providing audited or otherwise appropriately certified financial statements documenting compliance with the preceding requirement. Winchester Medical Center will accept a revised percentage based on the regional average after such time regional charity care data valued under the provider reimbursement methodology utilized by the Centers for Medicare and Medicaid Services for reimbursement under Title XVIII of the Social Security Act, 42 U.S.C. § 1395 et seq. is available from Virginia Health Information. The value of charity care provided to individuals pursuant to this condition shall be

based on the provider reimbursement methodology utilized by the Centers for Medicare and Medicaid Services for reimbursement under Title XVIII of the Social Security Act, 42 U.S.C. § 1395 et seq.

Winchester Medical Center will provide CT services to individuals who are eligible for benefits under Title XVIII of the Social Security Act (42 U.S.C. § 1395 et seq.), Title XIX of the Social Security Act (42 U.S.C. § 1396 et seq.), and 10 U.S.C. § 1071 et seq. Additionally, Winchester Medical Center will facilitate the development and operation of primary and specialty medical care services in designated medically underserved areas of the applicant's service area.