VIRGINIA DEPARTMENT OF HEALTH
Office of Licensure and Certification

Division of Certificate of Public Need

Staff Analysis Report

January 19, 2023

COPN Request No. VA-8673
Inova Health Care System d/b/a Inova Loudon Hospital
Fairfax, Virginia
Add one CT scanner and Associated Scan/Control Room at Inova Loudon Hospital

Applicant

Inova Loudoun Hospital (ILH) is owned by Inova Health Care Services, a 501(c)(3) Virginia nonstock corporation. The sole member of Inova Health Care Services is the Inova Health System Foundation, which is also a 501(c)(3) Virginia nonstock corporation. The applicant is a subsidiary of Inova Health System Foundation (d/b/a Inova Health System). ILH is located at 4405 Riverside Parkway, Leesburg, Virginia 20176, in Planning District (PD) 8, within Health Planning Region (HPR) II.

Background

ILH is a 211-bed community hospital serving Loudon County, with its primary service area being Loudon County zip codes. ILH is home to Loudon County's only designated trauma center and opened its Surgical Trauma ICU in 2020 to support their trauma program. The Inova Children's Emergency Room (ER) is Loudon County's only ER dedicated solely to caring for children. ILH operates two additional 24/7 freestanding ERs in Loudon County, one in Leesburg and one in Ashburn; both facilities maintain Acute Stroke Ready Hospital Certification from The Joint Commission. ILH provides comprehensive cancer, heart and vascular, and neurologic and stroke care.

The applicant shared: ILH is consistently recognized for excellent care. Recent awards and recognition include:

- Magnet® status from the American Nurses' Credentialing Center (ANCC) for the fourth consecutive term.
- Five out of five stars for quality by the Centers for Medicare & Medicaid Services (CMS)
- One of only 27 hospitals nationwide and the only hospital in Northern Virginia to earn straight "A's" in patient safety since the inception of the Leapfrog Hospital Safety Grade in 2012.
- Joint Commission Seal of Approval as a Primary Stroke Center
- Joint Commission Center of Excellence for Hip and Knee Replacement and Spinal Surgery.

ILH's comprehensive radiology department offers comprehensive imaging services, including CT, MRI, digital mammography, fluoroscopy, interventional radiology, nuclear medicine, ultrasound, and x-ray. ILH maintains 4 CT scanners for diagnostic imaging: 2 CT scanners are located on ILH's main hospital campus at Lansdowne, 1 CT scanner is located at its Inova Leesburg Medical Campus, and 1 CT scanner is located at its Inova Ashburn HealthPlex. The Inova Leesburg Medical Campus is located approximately 7.5 miles from ILH's main hospital campus and the Inova Ashburn HealthPlex is located approximately 12 miles from the main campus. This COPN application proposes the addition of 1 CT scanner to the ILH hospital campus. Approval would bring the total complement of ILH CT scanners to 5.

The applicant provided the following utilization table (**Table 1**) which includes both historical data and projected data if the project were to be authorized. DCOPN confirmed historical data provided by applicant matches data provided by Virginia Health Information (VHI).

Table 1. ILH CT Utilization

		Historical Utilization						
		2017	2018	2019	2020	2021	Year 1 2024	Year 2 2025
CT scanners								
ILH Lansdowne Campus	Total CT Procedures	31,406	30,067	33,094	30,536	39,387	42,174	43,147
	% of SMFP	212%	203%	224%	206%	266%	190%	194%
	Number of CT Scanners	2	2	2	2	2	3	3
Leesburg Medical Campus	Total CT Procedures	8,287	9,941	10,628	9,741	12,289	13,159	13,462
	% of SMFP	112%	134%	144%	132%	166%	178%	182%
	Number of CT Scanners	1	1	1	1	1	1	1
Ashburn Healthplex	Total CT Procedures	4,445	5,182	5,673	5,787	8,092	8,665	8,864
	% of SMFP	60%	70%	77%	78%	109%	117%	120%
	Number of CT Scanners	1	1	1	1	1	1	1
ILH ALL	Total CT Procedures	44,138	45,190	49,395	46,064	59,768	63,998	65,473
	% of SMFP	149%	153%	167%	156%	202%	173%	177%
	Number of CT Scanners	4	4	4	4	4	5	5

Source: COPN Req. No. VA-8673

DCOPN records show that there are currently 69 COPN Authorized CT scanners in PD 8 (**Table 2**. Assuming the 2021 VHI data of 580,752 procedures for PD8, the average would be 8,417 scans per unit (assuming 69 units). Assuming this project is authorized and using 2021 VHI data of 580,752 scans for the year for PD8, the average procedure per unit (for 70 units) would be 8,297. The SMFP states that for approval of another fixed CT scanner, the average utilization for the district should be 7,400 or more. Using the SMFP threshold, the average utilization per scanner is 113.7% and the utilization with adding the proposed project would be 112.1%.

There is wide variation among CT programs and substantial unused capacity, principally in nonhospital freestanding services. Average service volumes in hospital and hospital-affiliated settings were 12,300 procedures per scanner in 2021, about 66% above the SMFP threshold. Average volumes in freestanding imaging centers are low, 4,615 procedures per scanner in 2021, about 38% below the recommended minimum service volume caseload. The ILH proposal would add capacity at a hospital-based service. Most of the unused CT scanning capacity in the region is in chronic low volume freestanding services. There is little unused capacity among hospital services.

Table 2. PD 8 COPN Authorized Fixed CT Units

Facility	Number of Scanners
Centreville-Clifton Imaging Center - Fairfax Radiology	1
Fair Oaks Imaging Center	1
Fairfax Diagnostic Imaging Center	1
Fairfax ENT & Plastic Surgery Center	1
Fairfax MRI and Imaging Center at Tysons	1
Fairfax Radiology Center at Prosperity	1
Fairfax Radiology Center of Reston-Herndon[1]	1
Fairfax Radiology Center at Woodburn	2
Inova Alexandria Hospital[2]	4
Inova Ashburn Healthplex	1
Inova Emergency Room of Fairfax City	1
Inova Fair Oaks Hospital	3
Inova Fairfax Hospital	7
Inova HealthPlex - Franconia/Springfield	1
Inova Imaging Center - Leesburg	1
Inova Imaging Center-Mark Center	1
Inova Lorton HealthPlex	1
Inova Loudoun Hospital	2
Inova Mount Vernon Hospital	2
Inova Oakville Ambulatory Center in the City of Alexandria	1
Insight Imaging - Arlington	1
Insight Imaging - Fairfax / Medical Imaging Center of Fairfax	1
Kaiser Permanente - Reston Medical Center	1
Kaiser Permanente - Tysons Corner Imaging Center	1
Kaiser Permanente - Woodbridge Imaging Center	1
Lakeside at Loudoun Tech Center	1
Loudoun Medical Group, P.C.[3]	1
Metro Region PET Center[4]	1
Metropolitan ENT & Facial Plastic Surgery	1
Novant Health Imaging Tysons Corner	1
Novant Health UVA Health System Imaging – Centreville	1
Orthopeadic Foot and Ankle Center	1
Prince William Hospital d/b/a UVA Haymarket Medical Center	2
Prince William Hospital d/b/a UVA Prince William Medical Center	2
Radiology Imaging Associates at Lansdowne	1
Radiology Imaging Associates at Sterling	1
Reston Hospital Center (HCA)	4[5]
Sentara Advanced Imaging Center - Alexandria	1
Sentara Lake Ridge Ambulatory Care Center	1

[1] COPN No. VA-04798, issued August 22, 2022, authorized IFRC dba Fairfax Radiology Center of Reston-Herndon to relocate and replace on CT scanner within PD 8.
[2] COPN No. VA-04793, issued July 7, 2022, authorized the addition of one fixed CT scanner at the relocated Inova Alexandria Hospital (Landmark).
[3] Pursuant to COPN No. VA-04799, issued August 22, 2022, Loudoun Medical Group, P.C. will add one fixed site CT scanner.
[4] Pursuant to COPN No. VA-04797, issued August 22, 2022, Metro Region PET Center will add one fixed site CT scanner and discontinue use of the PET/CT unit for diagnostic CT scanning.
[5] Pursuant to COPN No. VA-04810, issued October 24, 2022, Reston Hospital Center, LLC has added one CT scanner.

Facility	Number of Scanners
Sentara Northern Virginia Medical Center	2
Sentara Northern Virginia Medical Center - Century Medical Office Building	1
StoneSprings Hospital Center (HCA)	2
Tysons Corner Emergency Center (HCA)	1
VHC Emergency & Imaging Center	1
Virginia Hospital Center	4
Total	**69**

Source: DCOPN Inventory records

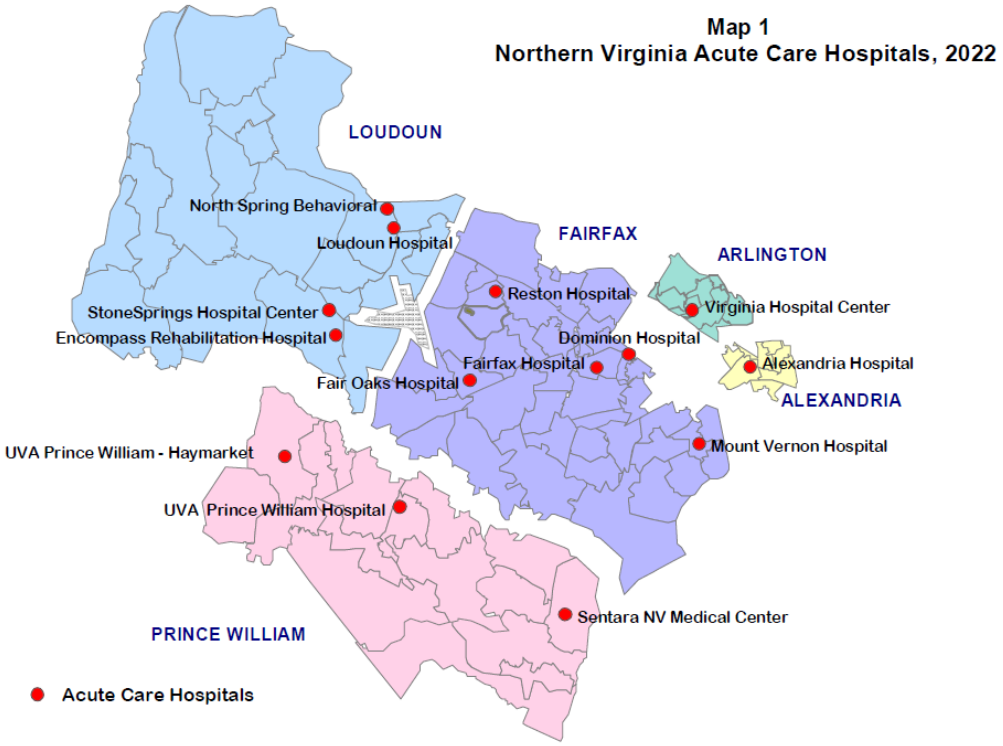
ILH's long range planning is guided by the mission, vision, beliefs, and commitments of Inova Health System (HIS). HIS's mission is: "To provide world class healthcare – every time, every touch – to each person in every community we have the privilege to serve." Their vision is: "To be among the leading health systems in the nation."

Proposed Project

This COPN application proposes the addition of 1 CT scanner to the ILH hospital campus located at 4405 Riverside Parkway, Leesburg, Virginia 20176, in PD 8, within HPR II (**Figure 1**). ILH seeks to expand its existing CT services through the on-campus addition of one CT scanner through renovation of existing space in the Diagnostic Imaging Department within Inova Loudon Hospital. Approval would bring the total complement of ILH CT scanners to 5, 3 of which would be located within the main hospital.

This project is proposed based on ILH's institution-specific need to expand CT services. In 2021, ILH's 4 CT scanners performed a total of 59,768 procedures, for an average of 14,942 procedures per unit, placing utilization at 202% of the State Medical Facilities Plan ("SMFP") standard of 7,400 scans per year per CT scanner. The 2 CT scanners on ILH's main campus are extremely busy, with average utilization at 266% of the SMFP standard in 2021. The applicant asserts a third CT scanner on the main hospital campus is necessary to address capacity constraints and ensure timely access to CT services. The project's target date of opening is 3/12/2024.

Figure 1. Northern Virginia Acute Care Hospitals, 2022



Source: HSANV Report prepared by Dean Montgomery

The proposed project involves the renovation of existing space rather than all new construction. Existing space within the existing Diagnostic Imaging Department will be renovated and repurposed for a new CT scan room and control area. The renovation includes new LED lighting utilizing recyclable and low VOC materials, as well as updated and more efficient HVAC components. The applicant provided utility bills and states that all major utilities, including water, sewer, solid waste, power, and HVAC capacity are provided and in use on-site. The proposed project will not have a material impact on utility usage, and no modifications to the existing utility systems are required to accomplish the proposed addition of the CT Scanner Room.

Space design criteria and rationale for determining the size of the total facility and each department within the facility is based on application of the 2022 (required by VUSBC) and 2010 (required by CMS) FGI Guidelines for the Design and Construction of Hospitals.

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 tomographic (CT) scanning…" A medical care facility includes "[a]ny facility licensed as a hospital…"

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 project will provide or increase access to health care services for people in the area to be served and the effects that the proposed project will have on access to health care services in areas having distinct and unique geographic, socioeconomic, cultural, transportation, and other barriers to access to health care;**

ILH is well-situated with respect to public and private transportation. Public bus transportation is available near the main patient entrance, and metro rail is available at the West Falls Church Metro Station via the Fairfax Connector and Loudoun Commuter bus services. From the Beltway (I-495), Leesburg Pike VA-7 West may be followed for approximately 20 miles to Claiborne Parkway, where hospital signs for ILH are first sighted. Difficult and challenging traffic congestion in Northern Virginia frequently results in much longer travel times. As the Northern Virginia population continues to grow, drive times are expected to become even more lengthy and challenging.

Table 3 shows projected population growth in PD 8 through 2030. Overall, the planning district was projected to add an estimated 356,377 people in the 10-year period ending in 2020. For the 10-year period ending in 2030, the planning district is projected to add an estimated 350,128 people. DCOPN notes that the population of PD 8 as a whole is expected to increase approximately 16% for the period ending in 2020 and approximately 14% for the period ending in 2030, rates nearly double that of the statewide average. Moreover, Loudon County- the primary service area fir ILH, is also projected to experience growth of 5.39% between 2020-2030.

Concerning the 65 and older aged cohort, Weldon-Cooper projects a much more rapid increase (**Table 3**). Specifically, Weldon-Cooper projects an increase of approximately 56% for the period ending in 2020 and approximately 38% for the period ending in 2030. This is significant, as this age group uses medical care resources, including diagnostic services, at a rate much higher than the rest of the population.

No other socioeconomic, cultural, or other barriers to access are likely to be affected by the project. The annual median household income (in 2021 dollars) from 2017-2021 was $156,821 and the county's poverty rate is 3.6% (much lower than the state's average poverty rate of 10.2%)[6].

[6] US Census Bureau website: www.uscensus.gov/quickfacts/loudoncountyvirginia

Table 3. Population Projections for PD 8, 2010-2030

Locality	2010	2020	% Change 2010-2020	Avg Ann % Change 2010-2020	2030	% Change 2020-2030	Avg Ann % Change 2020-2030
Arlington	139,966	166,261	18.79%	1.69%	182,067	9.51%	0.91%
Fairfax County	207,627	249,298	20.07%	1.80%	274,339	10.04%	0.96%
Loudoun	22,565	25,047	11.00%	1.02%	26,397	5.39%	0.53%
Prince William	1,081,726	1,162,504	7.47%	0.71%	1,244,025	7.01%	0.68%
Alexandria City	12,332	14,988	21.54%	1.92%	17,032	13.64%	1.29%
Fairfax City	312,311	430,584	37.87%	3.18%	554,808	28.85%	2.57%
Falls Church City	37,821	43,099	13.96%	1.28%	46,332	7.50%	0.73%
Manassas City	14,273	17,086	19.71%	1.77%	20,284	18.72%	1.73%
Manassas Park City	402,002	478,134	18.94%	1.71%	571,844	19.60%	1.81%
Total PD 8	**2,230,623**	**2,587,000**	**15.98%**	**1.46%**	**2,937,128**	**13.53%**	**1.28%**
PD 8 65+	**192,589**	**300,491**	**56.03%**	**4.44%**	**413,269**	**37.53%**	**3.24%**
Virginia	8,001,024	8,655,021	8.17%	0.77%	9,331,666	7.82%	0.76%
Virginia 65+	976,937	1,352,448	38.44%	3.22%	1,723,382	27.43%	2.45%

Source: U.S. Census, Weldon Cooper Center Projections (August 2019) and DCOPN (interpolations)

DCOPN is not aware of any other distinct and unique geographic, socioeconomic, cultural, transportation, or other barriers to care that this project would address.

2. The extent to which the proposed project will meet the needs of people in the area to be served, as demonstrated by each of the following:

(i) the level of community support for the proposed project demonstrated by people, businesses, and governmental leaders representing the area to be served;

DCOPN received four letters of support (from ILH Medical Director of Trauma Services, ILH Medical Director of Hospitalist Program, Chairman/Medical Director for ILH Department of Emergency Medicine, and ILH Medical Director of Diagnostic Imaging) for the proposed project, which addressed the following:

- The expansion of CT capacity will ensure ILH is able to meet the public need for CT services at ILH as demand continues to grow.
- ILH is busy and growing and must have adequate CT and capacity available to treat its patient population, including during periods of peak census.
- The additional CT capacity will help alleviate some of the difficulties associated with the high utilization of imaging services at ILH.

The applicant argues the project is for institutional need and provided all letters of support from within the ILH system. While there were no outside community letters of endorsement, there were no letters of opposition either.

Public Hearing
DCOPN provided notice to the public regarding these projects on November 2, 2022. The public comment period closed on January 6, 2022. On December 5, 2022, the Health Systems Agency of Northern Virginia (HSANV) held a vote with 9 in favor and 0 opposed in support of the project. No public comment was presented aside from letters of endorsement.

(ii) the availability of reasonable alternatives to the proposed project that would meet the needs of the people in the area to be served in a less costly, more efficient, or more effective manner;

Neither DCOPN nor the applicant identified a reasonable alternative to the proposed project that would meet the needs of the people in the area in a less costly, more efficient, or more effective manner. Dean Montgomery (who conducted analysis for the HSANV Board) concluded the only possible reasonable alternative would be to wait until after the two CT scanners that have been authorized for Loudon County become operational and their capacity assessed prior to authorizing another scanner. However, as detailed below in the section for Required Consideration 3, there is a deficit of scanners in the district when accounting for all authorized scanners, operational or not.

As **Table 5** shows, the Inova free-standing units in the district all have one CT per location, making it unreasonable to relocate as the scanners are being utilized (while less than 7,400 SMFP threshold, they are utilized appropriately when compared to other free-standing locations in the district). All of the Inova hospitals listed in **Table 5** show utilization per scanner above the 7,400 SMFP threshold. The ILH system has an overall average utilization of 202%, with the proposed location's 2 scanners operating at 266% of the SMFP's minimum threshold (**Table 1**). Therefore, there are no other scanners to reallocate to ILH Lansdowne.

ILH proposes to add one CT scanner at an estimated capital cost of $3,031,207. The proposed capital expenditure is high, but within the range reported locally and statewide for the equipment and service described. Service volumes at ILH indicate the imaging system sought would be used efficiently. The scanner acquired can be expected to be heavily used throughout its useful life. The average cost of providing a scan over the operational life of the scanner acquired is likely to be lower than at many freestanding centers, per Dean Montgomery. Additionally, the cost of building materials of all sorts is rising. The costs also include the construction of an associated Scan/Control Room.

(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;

HSANV was provided an analysis report by Dean Montgomery which outlined the following:

A. Summary Conclusions and Findings

The Inova Loudoun Hospital application, and related data and information, support the following findings and conclusions:

1. Northern Virginia CT scanning demand and service volumes are substantially lower, 20-25% lower, than those reported nationally, in the Washington metropolitan area, and in Virginia statewide.

2. With the authorization of six additional scanners within less than two years, projected demand and capacity are reasonably balanced.

3. Average use of hospital-based CT services is high, substantially higher than the nominal service volume planning standard. Average use of the ILH hospital-based scanners are among the highest in the region.

4. There is no identifiable unused capacity at the three ILH service sites, or within Inova Health System, that might be reallocated or otherwise used to respond to increased demand at ILH.

5. The project is consistent with the applicable provisions of the Virginia SMFP as it has been applied in assessing similar service expansion proposals.

6. The recent expansion of the StoneSprings Hospital Center CT service and the freestanding CT service being developed by Loudoun Medical Group are not practical alternatives to the expansion of the ILH service. Expanding the ILH service is not likely to affect demand at or use of those services.

7. The capital cost of the proposal is high but within the capital cost range commonly seen for similar projects locally and elsewhere in Virginia.

B. The Health Systems Agency of Northern Virginia may recommend to the Commissioner of Health that a Certificate of Public Need authorizing the project be granted. Support for the proposal could be based on concluding that:

- Use of the ILH CT service is unusually high and increasing. Additional capacity is needed to meet current and projected demand.

- The proposal is generally consistent with the applicable provisions of the Virginia State Medical Facilities Plan, including the institutional need provision of the plan.

- The projected capital expense is within the range commonly seen for the project described.

- Expansion of the ILH CT service would not negatively affect the service volumes or operations of nearby competing services.

C. Alternatives for Agency Action- The Health Systems Agency of Northern Virginia may recommend to the Commissioner of Health that a Certificate of Public Need not be granted: An unfavorable recommendation might be based on concluding that:

- Two CT scanners have been authorized recently at Loudoun County imaging services. Additional capacity should not be added in the county until these scanners are operational and their use assessed.

(iv) any costs and benefits of the proposed project;

As previously discussed, ILH proposes to expand CT services through the addition of one CT scanner. Estimated capital costs are $3,031,207, more than two-thirds of which ($2,128,612-70%) would be for the scanner and related equipment. The remainder ($902,595) would be largely for space renovation and related professional fees and expenses. All capital costs would be paid from internal Inova funds. There would be no direct long term financing expense.

The applicant identified numerous benefits of the proposed project, including:

- ILH has an institutional need for additional CT capacity that an additional scanner would help address. An additional scanner would allow the hospital to address patients' needs in a more timely manner.

- The project is efficiently using already existing space and renovating it rather than constructing new space.

- The project will allow them to be able to better meet the needs of patients as their utilization is significantly above that of the SMFP minimum threshold utilization volume.

ILH proposes to add one CT scanner at an estimated capital cost of $3,031,207. The proposed capital expenditure is high, but within the range reported locally and statewide for the equipment and service described. If found to be needed, or otherwise warranted, the capital investment is acceptable. Service volumes at ILH indicate the imaging system sought would be used efficiently. The scanner acquired can be expected to be heavily used throughout its useful life. The average cost of providing a scan over the operational life of the scanner acquired is likely to be lower than at many freestanding centers[7].

The project is essentially negligible in terms of revenue for the hospital. In Year 1, the project is exclusively estimated to have a loss of $30, while in Year 2 the estimated revenue gain is $261. Although the direct revenue may not increase, timely scanning may reduce length of stay for some patients, which would allow for more patient turnover.

(v) the financial accessibility of the proposed project to the people in the area to be served, including indigent people; and

[7] HSANV Report prepared by Dean Montgomery

According to regional and statewide data regularly collected by Virginia Health Information (VHI), for 2020, the most recent year for which such data is available, the average amount of charity care provided by HPR II facilities was 3.4% of all reported total gross patient revenues (**Table 4**). Pursuant to § 32.1–102.4 of the Code of Virginia, should the Commissioner approve the proposed project, ILH should be subject to the system-wide charity care condition applicable to Inova Health Care Services d/b/a Inova Heath System pursuant to COPN No. VA-04381 (issued April 2, 2013), as amended by the State Health Commissioner by letter dated January 4, 2016 (the Inova System-Wide Condition). Pursuant to the 2016 reconsideration, the Inova System-Wide Condition reset to 3.9% as of January 1, 2022.

Table 4. HPR II Charity Care Contributions: 2020

2020 Charity Care Contributions at or below 200% of Federal Poverty Level			
Hospital	**Gross Patient Revenues**	**Adjusted Charity Care Contribution**	**Percent of Gross Patient Revenue:**
Inova Alexandria Hospital	$949,158,182	$57,879,875	6.10%
Inova Mount Vernon Hospital	$499,398,426	$29,342,493	5.88%
Inova Loudoun Hospital	$817,869,692	$35,123,877	4.29%
UVA Health System Prince William Medical Center	$530,326,336	$21,923,014	4.13%
Inova Fairfax Hospital	$3,855,962,450	$147,813,100	3.83%
Sentara Northern Virginia Medical Center	$823,831,674	$29,925,512	3.63%
Inova Fair Oaks Hospital	$649,476,560	$21,302,369	3.28%
Virginia Hospital Center	$1,491,327,243	$29,205,595	1.96%
UVA Health System Haymarket Medical Center	$284,391,247	$4,747,340	1.67%
Reston Hospital Center	$1,535,959,085	$19,925,030	1.30%
StoneSprings Hospital Center	$247,806,370	$1,302,439	0.53%
Total Facilities			11
Median			3.6%
Total $ & Mean %	**$11,685,507,265**	**$398,490,644**	**3.4%**

Source: VHI (2020)

(vi) at the discretion of the Commissioner, any other factors as may be relevant to the determination of public need for a proposed 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 to determining a public need for the proposed projects.

3. The extent to which the proposed project is consistent with the State Health Services 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, DCOPN will consider the consistency of the proposed project with the predecessor of the SHSP, the SMFP.

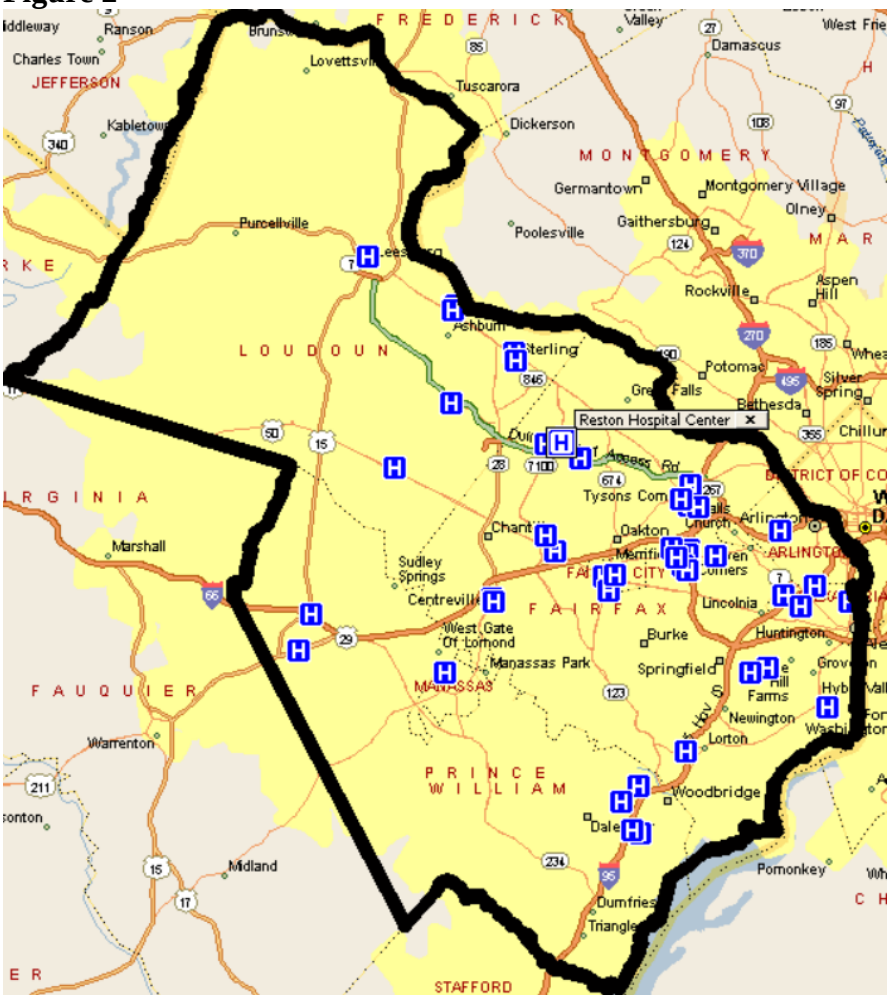
The SMFP contains criteria/standards for the establishment or expansion of CT services. They are as follows:

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

12VAC5-230-90. Travel time.
CT services should be available within 30 minutes driving time one way under normal conditions of 95% of the population of the health planning district using mapping software as determined by the commissioner.

The heavy black line in **Figure 2** is the boundary of PD 8. The blue "H" symbols mark the locations of existing CT providers in PD 8. The white "H" symbol marks the location of the proposed project. The yellow shaded area includes the area that is within 30 minutes driving time one-way under normal conditions of existing CT services in PD 8. **Figure 2** clearly illustrates that CT services are already well within a 30-minute drive under normal conditions of 95% of the residents of PD 8.

Figure 2



Source: DCOPN Generated

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.

ILH is not proposing to establish a new service, but rather, proposes to increase its current CT scanner complement by one CT scanner. Accordingly, DCOPN concludes that this provision is not applicable to the proposed project. Furthermore, as will be discussed later in this staff analysis report, ILH has demonstrated an institutional need for expansion. DCOPN includes the information below to present a full picture of the needs of PD 8.

Calculated Needed Fixed CT Scanners in PD 8
COPN authorized CT scanners = 69
Calculated Needed CT scanners = **580,725** scans in the PD in 2021
7,400 scans **= 79 scanners needed**

PD 8 Calculated Need = 79 CT scanners
2021 COPN authorized CT scanners = 69
PD 8 Calculated Deficit = 10 CT scanners

Table 5. PD 8 COPN Authorized Fixed CT Units and Utilization
Inova Loudoun Hospital, Expand CT Scanning Service (COPN Request VA-8673)
November 28, 2022

Table 1: Nothern Virginia CT Scanner Capacity, Service Volumes
2016 - 2021

Hospitals	*Scanners* 2022	2016	2017	2018	2019	2020	2021
Inova Alexandria Hospital (& Mark Imaging Center)	4	36,948	37,943	39,562	44,933	39,335	45,944
Inova Fair Oaks Hospital	3	28,571	29,752	30,608	33,010	29,171	34,828
Inova Fairfax Hospital [1]	6	78,972	80,375	83,836	90,161	94,661	112,482
Inova Mount Vernon Hospital	2	19,574	21,000	20,347	19,763	17,186	20,977
Inova Loudoun Hospital Center (2 sites)	3	38,046	39,713	30,067	43,733	40,277	51,676
UVA Prince William Medical Center	2	17,243	17,126	17,000	20,889	19,334	23,716
UVA Prince William Haymarket Center	1	8,717	10,787	12,071	13,285	12,197	14,665
Reston Hospital Center	4	20,497	23,539	25,159	29,278	27,344	32,315
Sentara Northern Virginia Medical Center	2	19,690	20,332	19,982	22,073	21,728	26,169
Virginia Hospital Center	4	42,934	48,085	51,021	38,997	38,869	47,231
StoneSprings Hospital Center (SSHC)[2]	1	4,404	5,093	5,839	6,872	6,548	8,182
Subtotal (Hospitals)	32	315,596	330,480	335,492	362,994	346,650	418,185
Free-Standing Sites							
Inova Ashburn HealthPlex	1	4,422	4,445	5,182	5,673	5,787	8,092
Fairfax ENT	1		-	-			533
Fairfax MRI & Imaging Center - Tysons	1	2,811	2,096	2,014	2,559	2,845	3,524
Fairfax Radiological Consultants (Multiple Sites)	6	38,366	40,722	31,213	34,290	25,941	39,582
Fair Oaks Imaging Center[3]	1	1,317	1,717	1,933	2,060	1,955	2,605
Inova HealthPlex-Springfield	1	13,511	12,707	13,242	14,444	12,830	16,679
Inova Lorton HealthPlex	1	5,707	5,856	6,178	6,347	6,165	7,504
Inova Emergency Care Center-Fairfax	1	2,712	2,506	2,784	3,147	4,134	6,430
Insight Imaging-Arlington[4]	1						199
Insight Imaging-Fairfax	1	2,800	3,335	3,799	3,798	4,134	4,299
Kaiser Permanente (Multiple Sites)	4	27,816	30,658	32,000	29,495	29,366	35,442
Orthopedic Foot & Ankle Center	1	-	-	683	87	205	168
Sentara Advanced Imaging - Lake Ridge	1	7,323	7,252	7,449	7,779	7,576	8,941
Sentara Advanced Imaging - Lorton [6]	1	45	14	0	0	0	2
Sentara Advanced Imaging - Springfield [6]	1	155	76	49	0	2	-
Radiology Imaging Associates (Formerly NVI)	2	5,872	6,095	3,883	6,968	6,086	10,761
Vienna Diagnostic Center (NH-Centerville)	1	131	739	241	844	1,359	2,313
Washington Radiology Associates (Lakeside)[7]	1	1,759	2,156	2,156	2,298	2,299	2,400
Woodburn Nuclear Medicine	1						2,815
Subtotal (Free-Standing Sites)	28	114,747	120,374	112,806	119,789	110,684	152,289
Total Northern Virginia	60	430,343	450,854	448,298	482,783	457,334	570,474

Source: Virignia Hospital Licensing Reports, Virginia Health Information, 2016 - 2021

[1] Seventh scanner authorized in 2022. [2] Second scanner authorized in 2022.

[3] Unauthorized service operated by Reston Radiology Consultants. [4] Authorized in 2019.

[5] Being replaced and relocated to SNVMC campus. [6] Being replaced and relocated in Springfield, VA.

[7] 2021 volume estimated.

Source: VHI (2021)**,** DCOPN records, and HSANV report prepared by Dean Montgomery.

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.

DCOPN has excluded existing CT scanners used solely for simulation prior to the initiation of radiation therapy from its inventory and average utilization of diagnostic CT scanners in PD 8 with respect to the proposed project.

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 placement of a new unit at the applicant's existing medical care facility or at 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.

ILH has cited an institutional specific need to expand its current CT services. As noted in **Table 5** above, for 2021, the most recent year for which VHI data is available, the 60 operational scanners performed at a utilization rate of 128.5%, or 9,509 scans per unit. As Dean Montgomery explained in his report for the HSANV Board, the hospitals' utilization was higher than that of free-standing sites. As explained above, including all authorized scanners,

In **Table 1** above, it is evident that ILH's 4 CT scanners are all operating well-above the 7,400 procedural volume threshold delegated by the SMFP. Aside from the average per scanner of operational units, the utilization average for Total Authorized CT scanners in PD 8 (**Table 2),** assuming the 2021 VHI data of 580,752 procedures for PD8, would be 8,417 scans per unit (assuming 69 units). Calculating utilization including this project as authorized and using 2021 VHI data of 580,752 scans for the year for PD8, the average procedure per unit (for 70 units) would be 8,297. The SMFP states that for approval of another fixed CT scanner, the average utilization for the district should be a minimum of 7,400. Using the SMFP, the average utilization per scanner is 113.7% and the utilization with adding the proposed project would be 112.1%. Both the PD and institutional need arguments are relevant and show the need for approval of this proposal.

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 CT scanner and that the proposed conversion will not

significantly reduce the utilization of existing CT providers in the health planning district.

Not applicable. The applicant does not propose to add or expand mobile CT services or to convert authorized mobile CT scanners to fixed site scanners.

12VAC5-230-130. Staffing.
CT services should be under the direction or supervision of one or more qualified physicians.

The applicant asserts that CT services will be under the direction of one or more qualified physicians. Additionally, the applicant states they will need an additional 5 CT Technologists; they do not anticipate difficulty meeting the hiring needs for the additional CT technologists. ILH's plan for obtaining additional personnel includes: (1) "recruiting initiatives targeted at labor pools which have been historically underutilized in the health care industry (e.g., minorities, seniors, retired military personnel, etc.), and in geographic areas well outside Northern Virginia, expanding the pool of available workers, without draining resources from other facilities", and (2) "initiatives to bolster the size and quality of the health services labor pool in Northern Virginia over the long-term by promoting health care career paths among area youth, benefitting all area health care providers with a vibrant and enthusiastic labor pool."

The SMFP also contains criteria/standards for when institutional expansion is needed. They are as follows:

Part 1
Definitions and General Information

12VAC5-230-80. When Institutional Expansion is Needed.

1. **Notwithstanding any other provisions of this chapter, the commissioner may grant approval for the expansion of services at an existing medical 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.**
2. **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.**
3. **This section is not applicable to nursing facilities pursuant to §32.1-102.3:2 of the Code of Virginia.**
4. **Applicants shall not use this section to justify a need to establish new services.**

The applicant argues for an institutional need for another CT scanner at the facility due to the above average utilization for their scanners at ILH without options to relocate scanners from elsewhere within the Inova Health System, or more specifically, within the ILH system. As **Table 5** shows, the Inova free-standing units in the district all have one CT per location, making

it unreasonable to relocate as the scanners are being utilized (while less than 7,400 SMFP threshold, they are utilized appropriately when compared to other free-standing locations in the district). All of the Inova hospitals listed in **Table 5** show utilization per scanner above the 7,400 SMFP threshold. The ILH system has an overall average utilization of 202%, with the proposed location's 2 scanners operating at 266% of the SMFP's minimum threshold (**Table 1**). Therefore, there are no other scanners to reallocate to ILH Lansdowne.

Required Considerations Continued

4. The extent to which the proposed project fosters institutional competition that benefits the area to be served while improving access to essential health care services for all people in the area to be served;

Expansion of the Lansdowne CT service would have no notable health system effect. There would be no change in the primary service area of the ILH service. The additional capacity is needed to accommodate the current high caseload more efficiently. Nearby services that might be affected are the other two ILH services whose primary service areas overlap with that of the Lansdowne service, the CT services at the hospital's Leesburg campus (about 6 miles west of Lansdowne) and Inova Ashburn HealthPlex (about 5 miles southeast of Lansdowne). Both have high use, and their service volumes are expected to continue to grow, with or without another scanner at the Lansdowne campus.

There is no indication of potential negative effects on other service providers. Two additional scanners have been authorized in Loudoun County recently. StoneSprings Hospital Center recently obtained authorization to add a second CT scanner, though its service volume was about half that of the Inova Loudoun services. Loudoun Medical Group, a local medical group obtained COPN authorization to establish a freestanding service near the Lansdowne campus earlier this year.

Neither of these additions is expected to reduce demand at ILH significantly. Neither is a practical alternative to the expansion of the ILH service.

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

As already discussed, DCOPN maintains that the applicant has adequately demonstrated an institutional need for the additional CT scanner. DCOPN further concludes that transferring a scanner from another location is not feasible as all ILH's other units are utilized above SMFP threshold; reallocation is not a reasonable alternative to the proposed project. The applicant and the report by Dean Montgomery for the HSANV Board both address the additional CT scanner as not impacting other providers due to the additional CT scanner being used to address current ILH utilization. Additionally, because the project hinges upon an institutional need, DCOPN contends that approval of the proposed project is not likely to have a significant negative impact on existing providers of CT services in PD 8. Ultimately, DCOPN contends that the project warrants approval.

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

The total capital cost for the project is estimated to be $3,031,207. 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. 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. COPN No. VA-04777, issued February 7, 2022, authorized the addition of 1 CT scanner at the Inova Fairfax Hospital Campus with $1,412,403 in associated costs. COPN No. VA-04758, issued November 9, 2021, authorized Community Memorial Hospital to expand CT services through the addition of 1 fixed CT scanner with $1,981,323 in associated costs.

As Dean Montgomery's report indicates, the costs associated with this project are higher than similar projects. The price of building materials, including lumber, metals, electrical, plumbing, and HVAC, are all rising with double digit inflation[8]. This rise in costs could account for some of the higher costs. The project is also adding an associated Scan/Control Room. The project is to be paid through Inova Health System's Accumulated Reserves; no debt financing will be needed for this project. As Dean Montgomery's report to the HSANV Board states, "The capital cost of the proposal is high but within the capital cost range commonly seen for similar projects locally and elsewhere in Virginia." The cost is not so far outside of the norm to warrant recommended denial.

[8] Obando, Sebastian. "Healthcare Construction Spending Surges despite Soaring Expenses." Construction Dive, August 29, 2022. https://www.constructiondive.com/news/healthcare-construction-spending-surges-despite-expensive-costs/630645/.

Table 6. Total Capital Cost for COPN Req. No. VA-8673

Part I. Direct Construction Costs	
Cost of Materials	$200,000
Cost of Labor	$200,000
Equipment Included in Construction Contract	$50,000
Builder's Overhead	$100,000
Builder's Profit	$100,000
Allocation for Contingencies	$65,000
Sub-Total	*$715,000*
Part II. Equipment Not Included in Construction Contract	
Major Equipment	$1,962,889
Minor Equipment	$16,125
Information Systems	$46,900
Other	$102,698
Sub-Total	*$2,128,612*
Part III. Site Acquisition	*N/A*
Part. IV. Site Preparation Costs	
Site Utilities: Building Permit	$9,200
Sub-Total	*$9,200*
Part. V. Off-Site Costs	*N/A*
Part. VI. Architectural and Engineering Fees	
Architect's Design Fee	$74,520
Architect's Supervision Fee	$0
Engineering Fees	$25,000
Consultant's Fees	$28,875
Sub-Total	*$128,395*
Part VII. Other Consultant Fees	
Project Management	$50,000
Sub-Total	*$50,000*
Part VIII. Taxes During Construction	N/A
Part IX-A- HUD Section 232 Financing	N/A
Part IX-B-Industrial Development Authority …	N/A
Part IX-C-Conventional Mortgage Loan Financing	N/A
Total Capital Cost	**$3,031,207**

Source: COPN Request No. VA-8673

The project is projected to provide a deficit of $30 for Year 1 and an income of $261 for Year 2 (**Table 7**). The project is essentially negligible in terms of impact on finances for ILH. ILH is proposing to add the CT for patients to receive timely care; this can be seen in the limited monetary benefit the project will have for the hospital.

Table 7. ILH Pro Forma Income Statement

	ILH Imaging-CT Without Project		ILH Project Only		ILH Imaging CT + Project	
	2024	2025	2024	2025	2024	2025
Gross Patient Revenue	$116,558.00	$116,558.00	$2,681.00	$5,423.00	$119,238.00	$121,981.00
Total Deductions	$89,193.00	$89,193.00	$2,051.00	$4,150.00	$91,244.00	$93,343.00
Net Patient Revenue	$27,365.00	$27,365.00	$629.00	$1,273.00	$27,994.00	$28,638.00
Total Operating Expenses	$14,145.00	$14,563.00	$660.00	$1,012.00	$14,805.00	$15,574.00
Excess of Revenue Over Expenses	**$13,219.00**	**$12,802.00**	**$(30.00)**	**$261.00**	**$13,189.00**	**$13,064.00**

Source: COPN Request No. VA-8673

7. The extent to which the proposed project provides improvements or innovations in the financing and delivery of health care 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 health care services on an outpatient basis; (iii) any cooperative efforts to meet regional health care needs; and (iv) at the discretion of the Commissioner, any other factors as may be appropriate; and

The proposed project would not introduce new technology. The applicant does not specify whether the CT will be used for inpatient, outpatient, or a combination of both types of procedures. The project will decrease wait times for CT use, which likely may impact length of stay days as patients can be scanned, and hopefully diagnosed, more timely- ultimately leading to more timely and effective treatment decisions.

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 Findings and Conclusion

DCOPN finds that Inova Loudon Hospital's proposed project to expand CT services with one CT scanner and Associated Scan/Control Room is generally consistent with the applicable criteria and standards of the SMFP and the Eight Required Considerations of the Code of Virginia. As previously discussed, the applicant has adequately demonstrated an institutional need to expand. Additionally, DCOPN concludes that Inova Health System does not have any underutilized capacity that would be appropriate for reallocation, and that the applicant has demonstrated an institutional need to expand. Moreover, for the reasons discussed, the status quo is not a preferable alternative to the proposed project.

DCOPN finds that the project appears to be economically feasible both in the immediate and long-term. Finally, there is no known opposition to the proposed project.

Staff Recommendation

The Division of Certificate of Public Need recommends **conditional approval** of Inova Loudon Hospital's COPN Request Number VA-8673 to add one fixed CT scanner and Associated Scan/Control Room in the hospital for the following reasons:

1. The proposed project is generally consistent with the applicable criteria and standards of the State Medical Facilities Plan and the Eight Required Considerations of the Code of Virginia.

2. The applicant has demonstrated an institutional need to expand its CT services.

3. The proposed project appears economically viable in the long-term.

4. There is no known opposition to the proposed project.

5. The project is more favorable than maintaining the status quo.

Recommended Condition

This project shall be subject to the system-wide charity care condition applicable to Inova Health Care Services d/b/a Inova Heath System pursuant to COPN No. VA-04381 (issued April 2, 2013), as amended by the State Health Commissioner by letter dated January 4, 2016 (the Inova System-Wide Condition). Pursuant to the 2016 reconsideration, the Inova System-Wide Condition reset to 3.9% as of January 1, 2022. Provided, however, that charity care provided under the Inova System-Wide condition shall be 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.

Inova Health System 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. In addition to any right to petition the Commissioner contained in the Inova System-Wide

condition, to the extent Inova Health System expects its Inova System-Wide condition 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. or any revised percentage to materially alter the value of its charity care commitment thereunder, it may petition the Commissioner for a modification to the Inova System-Wide condition to resolve the expected discrepancy.