

**COMMONWEALTH OF VIRGINIA**

**APPLICATION FOR A  
MEDICAL CARE FACILITIES CERTIFICATE OF PUBLIC NEED**

**(CHAPTER 4, ARTICLE 1:1 OF TITLE 32.1,  
SECTIONS 32.1-102.1 THROUGH 32.1-102.11 OF  
THE CODE OF VIRGINIA OF 1950, AS AMENDED)**

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| <b>HOSPITALS</b> |
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**COPN Request No. VA-8747**

**Inova Health Care Services d/b/a Inova Fairfax Hospital**

**Expansion of Cardiac Catheterization Services Through the Addition of One  
Cardiac Catheterization Laboratory**

**January 29, 2024**

## SECTION I FACILITY ORGANIZATION AND IDENTIFICATION

**A. Inova Fairfax Hospital  
Official Name of Facility**

3300 Gallows Road

**Address**

|                     |                 |              |
|---------------------|-----------------|--------------|
| <u>Falls Church</u> | <u>Virginia</u> | <u>22042</u> |
| <b>City</b>         | <b>State</b>    | <b>Zip</b>   |

(703) 776-1110

**Telephone**

**B. Inova Health Care Services  
Legal Name of Applicant**

8095 Innovation Park Dr.

**Address**

|                |                 |              |
|----------------|-----------------|--------------|
| <u>Fairfax</u> | <u>Virginia</u> | <u>22031</u> |
| <b>City</b>    | <b>State</b>    | <b>Zip</b>   |

**C. **Chief Administrative Officer**  
Steve Narang, MD, President, Inova Fairfax Hospital and Pediatric Service Line  
Name**

3300 Gallows Road

**Address**

|                     |                 |              |
|---------------------|-----------------|--------------|
| <u>Falls Church</u> | <u>Virginia</u> | <u>22042</u> |
| <b>City</b>         | <b>State</b>    | <b>Zip</b>   |

703-776-4001

**Telephone**

**D. **Person(s) to whom questions regarding application should be directed.****

Jessica Parker, Sr. Director, Strategic Planning, Inova Health System  
**Name**

8095 Innovation Park Dr.

**Address**

|                |                 |              |
|----------------|-----------------|--------------|
| <u>Fairfax</u> | <u>Virginia</u> | <u>22031</u> |
| <b>City</b>    | <b>State</b>    | <b>Zip</b>   |

|                       |                  |
|-----------------------|------------------|
| <u>(703) 517-9320</u> | <u>None</u>      |
| <b>Telephone</b>      | <b>Facsimile</b> |

Jessica.Parker@inova.org  
**E-mail**

**E. Type of Control and Ownership (Complete appropriate section for both owner and operator.)**

Will the facility be operated by the owner?        X   Yes       No

**Owner of Facility**  
(Check one)

**Proprietary**

**Operator of Facility**  
(Check one)

(1)   

(1) Individual

(1)   

(2)   

(2) Partnership - attach copy of Partnership Agreement and receipt showing that agreement has been recorded

(2)   

(3)   

(3) Corporate - attach copy of Articles of Incorporation and Certificate of Incorporation

(3)   

(4)   

(4) Other \_\_\_\_\_ (Identify)

(4)   

**Non-Profit**

(5)   X  

(5) Corporation - attach copy of Articles of Incorporation and Certification of Incorporation

(5)   X  

Please see Attachment A.

(6)   

(6) Other \_\_\_\_\_ (Identify)

(6)   

**Governmental**

(7)   

(7) State

(7)   

(8)   

(8) County

(8)   

(9)   

(9) City

(9)   

(10)   

(10) City/County

(10)   

(11)   

(11) Hospital Authority or Commission

(11)   

(12)   

(12) Other \_\_\_\_\_ (Identify)

(12)   

**F. Ownership of the Site (Check one and attach copy of document).**

(1)    Fee simple title held by applicant

(2)    Option to purchase held by the applicant

(3)   X   Leasehold interest for not less than   97   years. Please see Attachment B.

(4)    Renewable lease, renewable every    years

(5) \_\_\_ Other (Identify).

**G. Attach a list of names and addresses of all owners or persons having a financial interest of five percent (5%) or more in the medical care facility.**

Inova Fairfax Hospital (“IFH”) 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 corporate address for Inova Health Care Services is as follows:

Inova Health Care Services  
8095 Innovation Park Dr.  
Fairfax, Virginia 22031

**(a) In the case of a proprietary corporation also attach:**

- (1) A list of the names and addresses of the board of directors of the corporation.**
- (2) A list of the officers of the corporation.**
- (3) The name and address of the registered agent for the corporation.**

Not Applicable

**(b) In the case of a non-profit corporation also attach:**

- (1) A list of the names and addresses of the board of directors of the corporation.**

Please see Attachment C for the names of the board members. Please direct any questions to board members at the following address:

c/o Nena Jaspers  
8095 Innovation Park Dr.  
Fairfax, Virginia 22031

- (2) A list of the officers of the corporation.**

The Inova Health Care Services Board is charged with governance of the Inova hospitals.

The names of the officers are set forth on Attachment C.

- (3) The name and address of the registered agent for the corporation.**

CT Corporation System  
4701 Cox Road, Suite 285  
Glen Allen, Virginia 23060

**(c) In the case of a partnership also attach:**

- (1) A list of names and addresses of all partners.**
- (2) The name and address of the general or managing partner.**

Not Applicable

- (d) **In the case of other types of ownership, also attach such documents as will clearly identify the owner.**

Not Applicable

**H. List all subsidiaries wholly or partially owned by the applicant.**

Please see Attachment D for a comprehensive corporate organization chart.

**I. List all organizations of which the applicant is a wholly or partially owned subsidiary.**

Inova Health System Foundation d/b/a Inova Health System

**J. If the operator is other than the owner, attach a list of the name(s) and address(es) of the operator(s) of the medical care facility project. In the case of a corporate operator, specify the name and address of the Registered Agent. In the case of partnership operator, specify the name and address of the general or managing partner.**

(1) **A list of the names and addresses of the board of directors of the corporation.**

(2) **A list of the officers of the corporation.**

(3) **The name and address of the registered agent for the corporation**

Not Applicable

**K. If the operator is other than the owner, attach an executed copy of the contract or agreement between the owner and the operator of the medical care facility.**

Not Applicable

**SECTION II****ARCHITECTURE AND DESIGN****A. Location of the Proposed Project**

1. **Size of site:** 183.06 acres
2. **Located in** Fairfax County / PD 8 **City/County/Planning District**
3. **Address or directions** 3300 Gallows Road, Falls Church, Virginia 22042
4. **Has site been zoned for type of use proposed?:**

☒ **Yes** (attach a copy of zoning or use permit)

Please see Attachment E. The property is zoned to the “PDC” district under which inpatient and outpatient use is permitted.

☐ **No**

**If no, explain status**

Not Applicable

**B. Type of project for which Certificate of Need is requested. (Check one)**

1. ☐ **New construction**
2. ☒ **Remodeling/modernization of an existing facility**

Expand IFH’s cardiac catheterization services through addition of one Cardiac Catheterization Laboratory at the hospital.

3. ☐ **No construction or remodeling/modernization**
4. ☐ **Other**

**C. Design of the facility**

1. **Does the facility have a long range plan? If yes, attach a copy.**

Long range planning is guided by the mission, vision, and values of Inova Health System, set forth in Attachment F.

Inova Health System’s mission is:

To provide world-class healthcare – every time, every touch – to each person in every community we have the privilege to serve.

Our vision is:

To be among the leading healthcare systems in the nation.

**2. Briefly describe the proposed project with respect to location, style and major design features, and the relationship of the current proposal to the long-range plan.**

The proposed project will expand IFH's existing cardiac catheterization services through the addition of one cardiac catheterization laboratory. The proposed cardiac catheterization laboratory will be located in the existing cardiac catheterization laboratory suite at IFH, which is located at 3300 Gallows Road, Falls Church, Virginia. This proposed cardiac catheterization laboratory will occupy space that is currently used for storage. To accommodate the additional proposed cardiac catheterization laboratory, this plan also includes the addition of a control room, electronics room, electrical room, data room and two storage rooms. The site plan, including the proposed location of the cardiac catheterization laboratory can be found in Attachment G and the design drawing can be found in Attachment J.

This project is consistent with the Inova Health System mission and vision (as identified above and set forth in Attachment F). This project relates to Inova Health System's commitment to excellence in patient care. IFH is proposing to expand its cardiac catheterization services in response to the high utilization of its existing cardiac catheterization services, thereby enhancing timely access to cardiac catheterization services for IFH's patient population.

**3. Describe the relationship of the facility to public transportation and highway access.**

IFH is readily accessible. It is located 1/4 mile west of the Capital Beltway (Interstate 495) at 3300 Gallows Road, Falls Church, Virginia. It is accessible from the north and south via Interstates 495 and 95 and from the east and west via Route 50 and Interstate 66. Public bus transportation is available at the main entrance of the hospital and Metro-rail with shuttle service is available within three miles at the Dunn Loring Metro station.

**4. Relate the size, shape, contour, and location of the site to such problems as future expansion, parking, zoning, and the provision of water, sewer, and solid waste services.**

The proposed cardiac catheterization laboratory will be located in the existing cardiac catheterization laboratory suite at IFH, which is located at 3300 Gallows Road, Falls Church, Virginia. The site plan, including the proposed location of the cardiac catheterization laboratory can be found in Attachment G.

The site conforms to all current applicable land development ordinances, regulations and standards. There are multiple driving entrances to the property from Gallows Road and adequate parking is already available for patients, visitors and staff. Adequate public utilities currently exist on site, including water, sewer, and solid waste services. No zoning changes are required for this project.

**5. If this proposal is to replace an existing facility, specify what use will be made of the existing facility after the new facility is completed.**

Not Applicable

**6. Describe any design features which will make the proposed project more efficient in terms of construction costs, operating costs, or energy conservation.**

The proposed cardiac catheterization laboratory will be located in the existing cardiac catheterization laboratory suite at IFH. The existing cardiac catheterization suite utilizes energy saving features in accordance with local building ordinances, including but not limited to

occupancy sensor controlled lighting in support areas, and is compliant with local energy calculation requirements and specifications for high efficiency mechanical equipment, which contributes to energy conservation and reduces operating costs.

**D. Describe and document in detail how the facility will be provided with water, sewer, and solid waste services. Also describe power source to be used for heating and cooling purposes. Documentation should include, but is not limited to:**

- (1) Letters from appropriate governmental agencies verifying the availability and adequacy of utilities,**
- (2) National Pollution Discharge Elimination System permits,**
- (3) Septic tank permits, or**
- (4) Receipts for water and sewer connection fees.**

Adequate public utilities currently exist on-site, including water, sewer and solid waste services, in addition to heating and cooling equipment. The project does not require additional utility services. See Attachment H for copies of recent utility bills for IFH.

**E. Space tabulation - (show in tabular form)**

**1. If Item #1 was checked in II-B, specify:**

- a. The total number of square feet (both gross and net) in the proposed facility.**
- b. The total number of square feet (both gross and net) by department and each type of patient room (the sum of the square footage in this part should equal the sum of the square footage in (a) above and should be consistent with any preliminary drawings, if available).**

Not Applicable

**2. If Item #2 was checked in II-B, specify:**

- a. The total number of square feet (both gross and net) by department and each type of patient room in the existing facility.**
- b. The total number of square feet (both gross and net) to be added to the facility.**
- c. The total number of square feet (both gross and net) to be remodeled, modernized, or converted to another use.**
- d. The total number of square feet (both gross and net) by department and each type of patient room in the facility upon completion. (The sum of the square footage in this part should equal the sum of the square footages in parts (a) and (b) above and should be consistent with any preliminary drawings, if available). (The department breakdown should be the same as in (a) above.)**

See Attachment I.

**3. Specify design criteria used or rationale for determining the size of the total facility and each department within the facility.**

The proposed cardiac catheterization laboratory will be located in the existing cardiac catheterization laboratory suite at IFH. The existing cardiac catheterization laboratory suite has been sized to accommodate the necessary equipment and has a similar footprint to the cardiac catheterization suites at other Inova Health System facilities.





## SECTION III

## SERVICE DATA

- A. In brief narrative form describe the kind of services now provided and (and/or) the kind of services to be available after completion of the proposed construction or equipment installation.**

### IFH Overview

IFH is the largest and busiest hospital in the Commonwealth of Virginia. Since opening in 1961, it has become a premier medical center in the mid-Atlantic region and is a leader in healthcare services delivery in the Washington, DC metropolitan area.

- IFH is Northern Virginia's only tertiary/ quaternary hospital for adults and children, with a Level I Trauma Center for treating the most critically ill and injured patients;
- IFH maintains one of the nation's largest Obstetrical programs, including a dedicated high risk pregnancy unit and one of the country's largest Neonatal Intensive Care Units;
- IFH maintains a comprehensive organ transplantation program;
- IFH provides comprehensive pediatric services at its Children's Hospital; and
- IFH maintains one of the largest cancer programs in the Commonwealth.

### Inova Schar Heart and Vascular at IFH

Inova Schar Heart and Vascular offers adults and children the full spectrum of complex treatments for comprehensive cardiovascular and cardiopulmonary care – from medical evaluation and diagnostic testing to the latest minimally invasive surgical techniques and complex open surgeries, including Northern Virginia's only heart and lung transplantation program. Inova Schar Heart and Vascular offers services across all five Inova Hospitals and in nearly 60 outpatient locations interconnected to deliver seamless, consistent, high quality care.

IFH serves as the hub for Inova's cardiac and vascular services and has the most advanced technology and facilities focused on the prevention, diagnosis, and treatment of heart disease. IFH is consistently among the first U.S. hospitals trusted to study the latest advances in heart and vascular disease treatments. IFH's participation in clinical trials offers patients access to leading-edge medical advances in medications, treatments, and therapeutic devices.

IFH consistently exceeds national benchmarks for top performance in the treatment of heart attacks, emergency cardiac interventions, cardiac surgery, and across a broad range of highly specialized, innovative cardiovascular techniques.

### *Recent Awards for Excellence in Cardiovascular Care*

- 2023 American College of Cardiology – Proven Quality Program
- 2023 NCDR ACTION Registry Platinum Performance Achievement Award – Chest Pain – MI Registry
- Aetna Institute of Quality – Cardiac Care
- American Association of Cardiovascular and Pulmonary Rehab (AACVPR) Program Certification
- American Association of Critical-Care Nurses: 2022 Silver Beacon Award for Excellence (Progressive Coronary Care Unit at IFH)
- 2023 American Heart Association and Mitral Foundation – Mitral Valve Repair Reference Center Award
- 2022 Cardiovascular Operating Room Award – CNOR Strong Designation from the Competency & Credentialing Institute

- CMS 5-Star – Certified Adult Heart and Adult Lung Transplant Programs
- Platinum Level Extracorporeal Life Support Organization
- Intersocietal Accreditation Commission (IAC):
  - Cardiac Electrophysiology
  - Echocardiography
  - Nuclear Cardiology
  - Vascular Testing
- The Joint Commission: Certified Ventricular Assisted Device (VAD) Program
- Society of Thoracic Surgeons: 3-Star Ratings
  - Coronary Artery Bypass Surgery (CABG)
  - Aortic Valve Replacement (AVR)
  - AVR + CABG Combined
- 2023 TrueNorth Award
- 2023-2024 WebMD Patient Choice Award for excellence in Cardiology in the Northern Virginia area

#### Inova Schar Heart and Vascular Procedural Platform at IFH

Inova Schar Heart and Vascular at IFH maintains 6 cardiac surgery operating rooms (5 adult + 1 pediatric), 7 cardiac catheterization laboratories, 5 electrophysiology laboratories, 2 interventional radiology laboratories for use in the performance of cardiovascular-related interventional radiology procedures, and 48 prep and recovery bays (of which 39 are for the interventional rooms and 9 are for the cardiac operating rooms). Of note, IFH has one hybrid operating room/cardiac catheterization laboratory, which is included in both the operating room and cardiac catheterization counts above. The hybrid room is primarily used for structural heart cases (i.e., complex therapeutic).

All of the interventional rooms described above (cardiac catheterization, electrophysiology and interventional radiology laboratories) are co-located in one interventional suite on the ground floor of the Inova Schar Heart and Vascular building in IFH. The hybrid room is located with the cardiac operating rooms on the 2<sup>nd</sup> floor. Emergent cases are performed 24 hours a day, 7 days a week and scheduled cases are performed Monday through Friday from 7 a.m. to 5 p.m.

IFH performs both simple and complex therapeutic cases in its cardiac catheterization laboratories, including:

- Urgent and elective diagnostic and percutaneous coronary interventions
- Complex emergent percutaneous coronary interventions
- Complex coronary interventions including chronic total occlusions and high risk interventions with mechanical circulatory support, including Impella and ECMO for cardiogenic shock.
- Structural Heart Cases (performed in both the hybrid and non-hybrid cardiac catheterization laboratories): Procedures include transcatheter aortic valve replacement, percutaneous edge-to-edge repair of mitral and tricuspid valves, transcatheter mitral valve replacement and WATCHMAN/Amulet device implantation for left atrial appendage closure.

#### Proposed Project

This project proposes the expansion of cardiac catheterization services through the addition of an eighth cardiac catheterization laboratory based on institution-specific need. As outlined in the chart below, in 2022, the 7 cardiac catheterization laboratories performed 12,281 diagnostic equivalent procedures (“DEPs”), placing utilization at 146% of the State Medical Facilities Plan (“SMFP”) standard of 1,200 DEPs per laboratory. In 2023, total volumes remained steady, but the complex therapeutic cases continued to grow, placing utilization at 148% of the SMFP standard. Between 2021 and 2023 cardiac catheterization visits at IFH grew 3.6% and DEPs grew 9.2%. The growth was

primarily driven by complex therapeutic cases. The adult complex therapeutic cases grew 39.5% during this time frame. It is projected that the growth in cardiac catheterization cases will continue to be driven by complex therapeutic cases. To meet existing and future IFH patient need for cardiac catheterization services, IFH seeks approval to add an eight cardiac catheterization laboratory.

Inova Fairfax Hospital

Historical Visits and Diagnostic Equivalent Procedures

|  |    | Historical Visits |               |               |               |              |
|--|----|-------------------|---------------|---------------|---------------|--------------|
|  |    | 2021              | 2022          | 2023*         | 2021-2023     |              |
| <b>Adult</b>                             |    |                   |               |               |               |              |
| Diagnostic Cardiac Cath                  |    | 4,097             | 4,222         | 4,295         | 4.8%          |              |
| Simple Therapeutic Cardiac Cath          |    | 268               | 243           | 128           | -52.2%        |              |
| Same Session (Dx + Simple Cardiac Cath)  |    | 981               | 997           | 899           | -8.4%         |              |
| Complex Therapeutic                      |    | 669               | 770           | 933           | 39.5%         |              |
| <b>Adult Total</b>                       |    | <b>6,015</b>      | <b>6,232</b>  | <b>6,255</b>  | <b>4.0%</b>   |              |
| <b>Pediatrics</b>                        |    |                   |               |               |               |              |
| Diagnostic Cardiac Cath                  |    | 62                | 42            | 27            | -56.5%        |              |
| Simple Therapeutic Cardiac Cath          |    | -                 | 3             | 1             |               |              |
| Same Session (Dx + Simple Cardiac Cath)  |    | -                 | 1             | -             |               |              |
| Complex Therapeutic                      |    | 36                | 63            | 48            | 33.3%         |              |
| <b>Pediatrics Total</b>                  |    | <b>98</b>         | <b>109</b>    | <b>76</b>     | <b>-22.4%</b> |              |
| <b>Total (Adults + Pediatrics)</b>       |    | <b>6,113</b>      | <b>6,341</b>  | <b>6,331</b>  | <b>3.6%</b>   |              |
|  |    | Historical DEPs   |               |               |               |              |
|  |    | DEP Multiplier    | 2021          | 2022          | 2023*         | 2021-2023    |
| <b>Adult</b>                             |    |                   |               |               |               |              |
| Diagnostic Cardiac Cath                  | 1  |                   | 4,097         | 4,222         | 4,295         | 4.8%         |
| Simple Therapeutic Cardiac Cath          | 2  |                   | 536           | 486           | 256           | -52.2%       |
| Same Session (Dx + Simple Cardiac Cath)  | 3  |                   | 2,943         | 2,991         | 2,697         | -8.4%        |
| Complex Therapeutic                      | 5  |                   | 3,345         | 3,850         | 4,665         | 39.5%        |
| <b>Adult Total</b>                       |    |                   | <b>10,921</b> | <b>11,549</b> | <b>11,913</b> | <b>9.1%</b>  |
| <b>Pediatrics</b>                        |    |                   |               |               |               |              |
| Diagnostic Cardiac Cath                  | 2  |                   | 124           | 84            | 54            | -56.5%       |
| Simple Therapeutic Cardiac Cath          | 4  |                   | -             | 12            | 4             |              |
| Same Session (Dx + Simple Cardiac Cath)  | 6  |                   | -             | 6             | -             |              |
| Complex Therapeutic                      | 10 |                   | 360           | 630           | 480           | 33.3%        |
| <b>Pediatrics Total</b>                  |    |                   | <b>484</b>    | <b>732</b>    | <b>538</b>    | <b>11.2%</b> |
| <b>Total (Adults + Pediatrics)</b>       |    |                   | <b>11,405</b> | <b>12,281</b> | <b>12,451</b> | <b>9.2%</b>  |
| <b>% of SMFP (SMFP = 1,200 DEPs/Lab)</b> |    |                   | <b>136%</b>   | <b>146%</b>   | <b>148%</b>   |              |

\* 2023 visits are preliminary

**B. Specify the historical and projected utilization of the facility.**

|  | Past Three Years<br>(2023 is not available) |         |         | Projected Two Years<br>Following Completion |         |
|--|---|---------|---------|---|---------|
|  | 2020  | 2021    | 2022    | 2026  | 2027    |
| <u>Inpatient Total</u>                                   |   |         |         |   |         |
| Total Licensed Beds                                      | 928   | 928     | 928     | 928   | 928     |
| Total Patient Days                                       | 233,280                                     | 261,309 | 271,506 | 285,471                                     | 288,885 |
| Total Occupancy %  | 69%   | 77%     | 80%     | 84%   | 85%     |
| Total Discharges   | 44,902                                      | 47,760  | 50,036  | 52,610                                      | 53,274  |
| Average Length of Stay                                   | 5.2   | 5.5     | 5.4     | 5.4   | 5.4     |
| <u>Medical/Surgical (SMFP 80% Occupancy)</u>             |   |         |         |   |         |
| Total Licensed Beds                                      | 506   | 506     | 506     | 506   | 506     |
| Total Patient Days                                       | 135,853                                     | 150,043 | 156,730 | 164,792                                     | 166,871 |
| Total Occupancy %  | 74%   | 81%     | 85%     | 89%   | 90%     |
| Total Discharges   | 25,723                                      | 27,036  | 28,239  | 29,692                                      | 30,066  |
| Average Length of Stay                                   | 5.3   | 5.5     | 5.6     | 5.6   | 5.6     |
| <u>Adult ICU (SMFP 65% Occupancy)</u>                    |   |         |         |   |         |
| Total Licensed Beds                                      | 102   | 102     | 102     | 102   | 102     |
| Total Patient Days                                       | 29,125                                      | 31,136  | 30,330  | 31,890                                      | 32,292  |
| Total Occupancy %  | 78%   | 84%     | 81%     | 86%   | 87%     |
| Total Discharges   | 1,401                                       | 1,331   | 1,344   | 1,413                                       | 1,431   |
| Average Length of Stay                                   | 20.8  | 23.4    | 22.6    | 22.6  | 22.6    |
| <u>Pediatric ICU (SMFP 65% Occupancy)</u>                |   |         |         |   |         |
| Total Licensed Beds                                      | 26  | 26      | 26      | 26  | 26      |
| Total Patient Days                                       | 4,465                                       | 5,447   | 6,310   | 6,635                                       | 6,718   |
| Total Occupancy %  | 47%   | 57%     | 66%     | 70%   | 71%     |
| Total Discharges   | 456   | 440     | 456     | 479   | 486     |
| Average Length of Stay                                   | 9.79  | 12.38   | 13.84   | 13.84                                       | 13.84   |
| <u>Pediatric (SMFP 80% Occupancy)</u>                    |   |         |         |   |         |
| Total Licensed Beds                                      | 92  | 92      | 92      | 92  | 92      |
| Total Patient Days                                       | 13,338                                      | 15,454  | 19,733  | 20,748                                      | 21,010  |
| Total Occupancy %  | 40%   | 46%     | 59%     | 62%   | 63%     |
| Total Discharges   | 3,835                                       | 4,285   | 5,430   | 5,709                                       | 5,781   |
| Average Length of Stay                                   | 3.5   | 3.6     | 3.6     | 3.6   | 3.6     |
| <u>Obstetric (SMFP 80% Occupancy)</u>                    |   |         |         |   |         |
| Total Licensed Beds                                      | 96  | 96      | 96      | 96  | 96      |
| Total Patient Days                                       | 23,294                                      | 25,308  | 24,604  | 25,870                                      | 26,196  |
| Total Occupancy %  | 66%   | 72%     | 70%     | 74%   | 75%     |
| Total Discharges   | 9,831                                       | 10,268  | 10,211  | 10,736                                      | 10,872  |
| Average Length of Stay                                   | 2.4   | 2.5     | 2.4     | 2.4   | 2.4     |
| <u>Psychiatric Adult (SMFP 75% Occupancy)</u>            |   |         |         |   |         |
| Total Licensed Beds                                      | 41  | 41      | 41      | 41  | 41      |
| Total Patient Days                                       | 10,789                                      | 13,972  | 14,228  | 14,960                                      | 14,960  |
| Total Occupancy %  | 72%   | 93%     | 95%     | 100%  | 100%    |
| Total Discharges   | 977   | 1,295   | 1,103   | 1,160                                       | 1,174   |
| Average Length of Stay                                   | 11.0  | 10.8    | 12.9    | 12.9  | 12.9    |
| <u>Psychiatric Child/Adolescent (SMFP 75% Occupancy)</u> |   |         |         |   |         |
| Total Licensed Beds                                      | 15  | 15      | 15      | 15  | 15      |
| Total Patient Days                                       | 4,536                                       | 5,104   | 4,389   | 4,615                                       | 4,673   |
| Total Occupancy %  | 83%   | 93%     | 80%     | 84%   | 85%     |
| Total Discharges   | 491   | 499     | 565     | 594   | 602     |
| Average Length of Stay                                   | 9.2   | 10.2    | 7.8     | 7.8   | 7.8     |
| <u>Medical Rehabilitation (SMFP 75% Occupancy)</u>       |   |         |         |   |         |
| Total Licensed Beds                                      | 25  | 25      | 25      | 25  | 25      |
| Total Patient Days                                       | 4,877                                       | 7,827   | 8,300   | 8,727                                       | 8,837   |
| Total Occupancy %  | 53%   | 86%     | 91%     | 96%   | 97%     |
| Total Discharges   | 345   | 584     | 588     | 618   | 626     |
| Average Length of Stay                                   | 14.1  | 13.4    | 14.1    | 14.1  | 14.1    |
| <u>Alcohol/Drug (SMFP 75% Occupancy)</u>                 |   |         |         |   |         |
| Total Licensed Beds                                      | 25  | 25      | 25      | 25  | 25      |
| Total Patient Days                                       | 7,003                                       | 7,018   | 6,882   | 7,236                                       | 7,327   |
| Total Occupancy %  | 77%   | 77%     | 75%     | 79%   | 80%     |
| Total Discharges   | 1,843                                       | 2,022   | 2,100   | 2,208                                       | 2,236   |
| Average Length of Stay                                   | 3.8   | 3.5     | 3.3     | 3.3   | 3.3     |

### Inpatient Bed Projection Methodology:

The Weldon Cooper Center for Public Service, Demographic Research Group, projects that between 2022 and 2030, IFH's primary service area population, which includes all of PD 8, is expected to grow at a compound annual growth rate of 1.26%.

IFH conservatively projects inpatient discharges will grow at a rate consistent with the population and LOS will remain flat.

### **C. State assumptions and show methodology used to calculate projections for two years following completion of the proposed project.**

#### Proposed Project

This project proposes the expansion of cardiac catheterization services through the addition of an eighth cardiac catheterization laboratory based on institution-specific need. As outlined in the chart below, in 2022, the 7 cardiac catheterization laboratories performed 12,281 DEPs, placing utilization at 146% of the SMFP standard of 1,200 DEPs per laboratory. In 2023, total volumes remained steady, but the complex therapeutic cases continued to grow, placing utilization at 148% of the SMFP standard. Between 2021 and 2023 cardiac catheterization visits at IFH grew 3.6% and DEPs grew 9.2%. The growth was primarily driven by complex therapeutic cases. The adult complex therapeutic cases grew 39.5% during this time frame. It is projected that the growth in cardiac catheterization cases will continue to be driven by complex therapeutic cases. To meet existing and future IFH patient need for cardiac catheterization services, IFH seeks approval to add an eight cardiac catheterization laboratory.

#### Projection Methodology and Assumptions

The Advisory Board, a nationally recognized healthcare consulting company, projects PD 8 adult complex therapeutic cases will grow at a compound annual growth rate (CAGR) of 12.8% between 2022 and 2027.

IFH conservatively used Advisory Board's projected growth rates for diagnostic cardiac catheterization and complex therapeutic cases and assumed simple therapeutic cardiac catheterization and same session cardiac catheterization cases will remain flat for the first two full years following completion of the proposed project.

|   | Advisory Board<br>CAGR<br>(2022 to 2027) | Inova Actual<br>CAGR<br>(2021-2023*) | Annual Growth<br>Rate used for<br>Projections |
|---|--|--------------------------------------|---|
| <b>Adult</b>                            |  |                                      |   |
| Diagnostic Cardiac Cath                 | 1.5%                                     | 2.4%                                 | 1.5%  |
| Simple Therapeutic Cardiac Cath         | 2.7%                                     | -30.9%                               | 0.0%  |
| Same Session (Dx + Simple Cardiac Cath) | 2.7%                                     | -4.3%                                | 0.0%  |
| Complex Therapeutic                     | 12.8%                                    | 18.1%                                | 12.8%   |
| <b>Pediatrics</b>                       |  |                                      |   |
| Diagnostic Cardiac Cath                 | -1.2%                                    | -34.0%                               | -1.2%   |
| Simple Therapeutic Cardiac Cath         | -1.2%                                    |                                      | 0.0%  |
| Same Session (Dx + Simple Cardiac Cath) | -1.2%                                    |                                      | 0.0%  |
| Complex Therapeutic                     | 0.0%                                     | 15.5%                                | 0.0%  |

## Historical Utilization and Projections

Inova Fairfax Hospital

Historical and Projected Visits and Diagnostic Equivalent Procedures

| Historical Visits                       |              |              |              | Projected Visits |                |
|---|--------------|--------------|--------------|------------------|----------------|
|   | 2021         | 2022         | 2023*        | Year 1<br>2026   | Year 2<br>2027 |
| <b>Adult</b>                            |              |              |              |                  |                |
| Diagnostic Cardiac Cath                 | 4,097        | 4,222        | 4,295        | 4,497            | 4,567          |
| Simple Therapeutic Cardiac Cath         | 268          | 243          | 128          | 128              | 128            |
| Same Session (Dx + Simple Cardiac Cath) | 981          | 997          | 899          | 899              | 899            |
| Complex Therapeutic                     | 669          | 770          | 933          | 1,340            | 1,512          |
| <b>Adult Total</b>                      | <b>6,015</b> | <b>6,232</b> | <b>6,255</b> | <b>6,865</b>     | <b>7,106</b>   |
| <b>Pediatrics</b>                       |              |              |              |                  |                |
| Diagnostic Cardiac Cath                 | 62           | 42           | 27           | 26               | 26             |
| Simple Therapeutic Cardiac Cath         | -            | 3            | 1            | 1                | 1              |
| Same Session (Dx + Simple Cardiac Cath) | -            | 1            | -            | -                | -              |
| Complex Therapeutic                     | 36           | 63           | 48           | 48               | 48             |
| <b>Pediatrics Total</b>                 | <b>98</b>    | <b>109</b>   | <b>76</b>    | <b>75</b>        | <b>75</b>      |
| <b>Total (Adults + Pediatrics)</b>      | <b>6,113</b> | <b>6,341</b> | <b>6,331</b> | <b>6,940</b>     | <b>7,181</b>   |

| Historical DEPs                          |      |               |               | Projected DEPs |                |               |
|--|------|---------------|---------------|----------------|----------------|---------------|
| DEP<br>Multiplier                        | 2021 | 2022          | 2023*         | Year 1<br>2026 | Year 2<br>2027 |               |
| <b>Adult</b>                             |      |               |               |                |                |               |
| Diagnostic Cardiac Cath                  | 1    | 4,097         | 4,222         | 4,295          | 4,497          | 4,567         |
| Simple Therapeutic Cardiac Cath          | 2    | 536           | 486           | 256            | 256            | 256           |
| Same Session (Dx + Simple Cardiac Cath)  | 3    | 2,943         | 2,991         | 2,697          | 2,697          | 2,697         |
| Complex Therapeutic                      | 5    | 3,345         | 3,850         | 4,665          | 6,702          | 7,562         |
| <b>Adult Total</b>                       |      | <b>10,921</b> | <b>11,549</b> | <b>11,913</b>  | <b>14,152</b>  | <b>15,082</b> |
| <b>Pediatrics</b>                        |      |               |               |                |                |               |
| Diagnostic Cardiac Cath                  | 2    | 124           | 84            | 54             | 52             | 51            |
| Simple Therapeutic Cardiac Cath          | 4    | -             | 12            | 4              | 4              | 4             |
| Same Session (Dx + Simple Cardiac Cath)  | 6    | -             | 6             | -              | -              | -             |
| Complex Therapeutic                      | 10   | 360           | 630           | 480            | 480            | 480           |
| <b>Pediatrics Total</b>                  |      | <b>484</b>    | <b>732</b>    | <b>538</b>     | <b>536</b>     | <b>535</b>    |
| <b>Total (Adults + Pediatrics)</b>       |      | <b>11,405</b> | <b>12,281</b> | <b>12,451</b>  | <b>14,688</b>  | <b>15,617</b> |
| <b>% of SMFP (SMFP = 1,200 DEPs/Lab)</b> |      | <b>136%</b>   | <b>146%</b>   | <b>148%</b>    | <b>175%</b>    | <b>186%</b>   |

\* 2023 visits are preliminary

**D. Existing and/or Proposed Bed Complement**

This project will not impact the IFH bed complement, the distribution of which is as follows:

| <i><b>Inova Fairfax Hospital</b></i> | Distribution of Existing Licensed Beds | Total Beds to be Built, Remodeled | Total Beds to be Lost or Removed from Service | Total Beds After Construction (Should equal sum of Columns 1, 2 and 3) |
|--------------------------------------|--|-----------------------------------|---|--|
| <b>1. Hospitals</b>                  |  |                                   |   |  |
| Adult Medical/Surgical               | 506                                    |                                   |   | 506  |
| Adult Critical Care                  | 102                                    |                                   |   | 102  |
| Obstetrical                          | 96                                     |                                   |   | 96   |
| Pediatric/Adolescent Med/Surg        | 92                                     |                                   |   | 92   |
| Pediatric Critical Care              | 26                                     |                                   |   | 26   |
| Subtotal: Pediatric                  | 118                                    |                                   |   | 118  |
| Psychiatric                          | 81                                     |                                   |   | 81   |
| Long-Term/Extended Care              | N/A                                    |                                   |   | N/A  |
| Self-Care                            | N/A                                    |                                   |   | N/A  |
| Rehabilitation                       | 25                                     |                                   |   | 25   |
| <b>TOTAL BEDS</b>                    | <b>928</b>                             |                                   |   | <b>928</b>   |
|                                      |  |                                   |   |  |
| Neonatal Intensive Care              | 108                                    |                                   |   | 108  |
| Other Newborn Bassinets              | 114                                    |                                   |   | 114  |
|                                      |  |                                   |   |  |
| <b>2. Nursing Home Units</b>         | N/A                                    |                                   |   | N/A  |
| Skilled Care                         |  |                                   |   |  |
| Intermediate Care                    |  |                                   |   |  |
| Other (Specify)                      |  |                                   |   |  |
| <b>TOTAL</b>                         | <b>N/A</b>                             |                                   |   | <b>N/A</b>   |
|                                      |  |                                   |   |  |
| <b>3. Bed Assignment</b>             |  |                                   |   |  |
| One Bed Rooms                        | 928                                    |                                   |   | 928  |
| Two Bed Rooms                        | -                                      |                                   |   | -  |
| Three Bed Rooms                      | -                                      |                                   |   | -  |
| Four Bed Rooms                       | -                                      |                                   |   | -  |
| Other (Specify)                      | -                                      |                                   |   | -  |
| <b>TOTAL</b>                         | <b>928</b>                             |                                   |   | <b>928</b>   |
|                                      |  |                                   |   |  |



**E. Facilities and Services to be Provided**

The following services are currently provided at IFH:

| <i>Inova Fairfax Hospital</i>                | Existing | This Project to be Added | This Project to be Discontinued | This Project to be Expanded or Renovated |
|--|----------|--------------------------|---------------------------------|--|
| 1. Post-Operative Recovery Room              | <b>X</b> |                          |                                 |  |
| 2. Intensive Care Unit<br>Cardiac            | <b>X</b> |                          |                                 |  |
| Mixed  | <b>X</b> |                          |                                 |  |
| 3. Open Heart Surgery Facilities             | <b>X</b> |                          |                                 |  |
| 4. Pharmacy<br>with full-time pharmacists    | <b>X</b> |                          |                                 |  |
| with part-time pharmacists                   | <b>X</b> |                          |                                 |  |
| 5. Diagnostic Radiological Services<br>x-ray | <b>X</b> |                          |                                 |  |
| ultrasonography                              | <b>X</b> |                          |                                 |  |
| radioisotope                                 | <b>X</b> |                          |                                 |  |
| CT scanning                                  | <b>X</b> |                          |                                 |  |
| MRI scanning                                 | <b>X</b> |                          |                                 |  |
| 6. Therapeutic Radiological Services         | <b>X</b> |                          |                                 |  |
| Specify Source(s) Used                       |          |                          |                                 |  |
| Specify Source(s) or                         |          |                          |                                 |  |
| Type(s) of Equipment Used                    |          |                          |                                 |  |
| 7. Clinical Pathology Laboratory             | <b>X</b> |                          |                                 |  |
| 8. Organ Bank                                | <b>X</b> |                          |                                 |  |
| 9. Blood Bank                                | <b>X</b> |                          |                                 |  |
| 10. Electroencephalography                   | <b>X</b> |                          |                                 |  |
| 11. Electrocardiography                      | <b>X</b> |                          |                                 |  |
| 12. Respiratory Therapy                      | <b>X</b> |                          |                                 |  |
| 13. Premature Nursery                        | <b>X</b> |                          |                                 |  |
| 14. Self-Care Unit                           | <b>X</b> |                          |                                 |  |
| 15. Skilled Nursing or Long-Term<br>Nursing  | <b>X</b> |                          |                                 |  |
| 16. Renal Dialysis<br>acute                  | <b>X</b> |                          |                                 |  |
| chronic                                      | <b>X</b> |                          |                                 |  |
| inpatient                                    | <b>X</b> |                          |                                 |  |

| <i>Inova Fairfax Hospital</i>             | Existing | This Project to be Added | This Project to be Discontinued | This Project to be Expanded or Renovated |
|---|----------|--------------------------|---------------------------------|--|
| outpatient                                | X        |                          |                                 |  |
| home dialysis training                    | X        |                          |                                 |  |
| 17. Burn Care Unit                        |          |                          |                                 |  |
| 18. Physical Therapy Department           | X        |                          |                                 |  |
| 19. Occupational Therapy                  | X        |                          |                                 |  |
| 20. Medical Rehabilitation inpatient      | X        |                          |                                 |  |
| outpatient                                | X        |                          |                                 |  |
| 21. Tuberculosis Unit                     |          |                          |                                 |  |
| 22. Psychiatric Services inpatient        | X        |                          |                                 |  |
| outpatient                                | X        |                          |                                 |  |
| partial hospitalization program           | X        |                          |                                 |  |
| emergency services                        | X        |                          |                                 |  |
| foster and/or home care                   |          |                          |                                 |  |
| consultation                              | X        |                          |                                 |  |
| 23. Clinical Psychology                   | X        |                          |                                 |  |
| 24. Organized Outpatient Department       | X        |                          |                                 |  |
| 25. Outpatient Surgery                    | X        |                          |                                 |  |
| 26. Social Work Department                | X        |                          |                                 |  |
| 27. Family Planning Service               |          |                          |                                 |  |
| 28. Genetic Counseling Service            | X        |                          |                                 |  |
| 29. Abortion Services inpatient           | X        |                          |                                 |  |
| outpatient                                | X        |                          |                                 |  |
| 30. Pediatric Department                  | X        |                          |                                 |  |
| 31. Obstetric Service                     | X        |                          |                                 |  |
| 32. Alcoholic & Detoxification Department | X        |                          |                                 |  |
| 33. Home Care Department                  |          |                          |                                 |  |
| 34. Speech Pathology Services             | X        |                          |                                 |  |
| 35. Audiology Services                    | X        |                          |                                 |  |
| 36. Hospital Auxiliary                    | X        |                          |                                 |  |
| 37. Volunteer Service Department          | X        |                          |                                 |  |
| 38. Paramedical Training Program          |          |                          |                                 |  |

| <i>Inova Fairfax Hospital</i>                   | Existing | This Project to be Added | This Project to be Discontinued | This Project to be Expanded or Renovated |
|---|----------|--------------------------|---------------------------------|--|
| 39. Emergency Department                        | <b>X</b> |                          |                                 |  |
| 40. Dental Services (oral surgery)              | <b>X</b> |                          |                                 |  |
| 41. Podiatric Services                          | <b>X</b> |                          |                                 |  |
| 42. Pre-Admission Testing                       | <b>X</b> |                          |                                 |  |
| 43. Pre-Discharge Planning                      | <b>X</b> |                          |                                 |  |
| 44. Multiphasic Screening                       | <b>X</b> |                          |                                 |  |
| 45. Other (Identify)<br>Cardiac Catheterization | <b>X</b> |                          |                                 | <b>X</b>                                 |

**F. Staffing of Existing and/or Proposed Facility**

**In the following categories, indicate the number of full-time equivalent personnel (at least 35 hours per week).**

IFH's cardiac catheterization laboratory staffing needs are as follows:

| Staffing Category                                 | Current Staffing     |                  | Additional Full-Time | Total Needed |
|---|----------------------|------------------|----------------------|--------------|
|   | Full-Time Equivalent | Vacant Positions |                      |              |
| Administrative-Business Office                    | 9                    |                  |                      | 9            |
| Registered Nurses                                 | 8                    |                  | 3                    | 11           |
| License Practical Nurses                          | 0                    |                  |                      | 0            |
| Nurse Aides, Orderlies and Attendants             | 0                    |                  |                      | 0            |
| All Other Personnel (Techs: RTR-CV, CI, VI, RCIS) | 33                   | 1                | 2.5                  | 36.5         |
| <b>Grand Total</b>                                | <b>50</b>            | <b>1</b>         | <b>5.5</b>           | <b>56.5</b>  |

RTR= Radiologic Technologists Registered, Sub-credentials = CV = Cardiovascular, CI = Cardio Invasive, VI - Vascular Invasive)  
RCIS = Registered Cardiovascular Invasive Specialist

Note: Registered Nurses (RN) and Registered Cardiovascular Invasive Specialists (RCIS) perform the same role in the cardiac catheterization laboratories at IFH. The 5.5 additional full-time equivalent personnel required to support the proposed project could be any mix of RCIS and RNs.

**G. Present a plan for obtaining all additional personnel required to staff the project following completion and identify the sources from which such personnel are expected to be obtained.**

IFH does not anticipate difficulty meeting the hiring needs for the proposed expansion of cardiac catheterization services. Inova Health System's plan for obtaining additional personnel includes:

- Recruiting initiatives targeted at labor pools which have historically been underutilized in the health care industry (e.g., minorities, seniors, retired military personnel, etc.), thereby

- expanding the pool of available workers, not draining resources from other facilities.
- Recruiting in geographic areas well outside Northern Virginia, thereby expanding the pool of available workers, without draining resources from other Northern Virginia facilities.
- Continuing 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.

**H. Describe the anticipated impact that the project will have on the staffing of other facilities in the service area.**

The staffing requirements for this project are not anticipated to have an impact on the staffing of other facilities in the service area.

**I. Attach the following information or documents**

- 1. Roster of medical staff (existing facilities). Indicate their specialty, Board Certification, Board eligibility, and staff privileges (active, associate, etc.).**

Please see Attachment K.

- 2. Existing Facilities – Attach copy(ies) of letter of endorsement from the medical staff organization indicating the medical need for the proposed project.**

Please see Attachment L.

- 3. Copy of most recent licensing report from State Agency (existing facilities).**

Please see Attachment M.

- 4. Current accreditation status and copy of latest accreditation report from Joint Commission on Accreditation of Hospitals (existing facilities).**

Please see Attachment N.

## SECTION IV: PROJECT JUSTIFICATION AND IDENTIFICATION OF COMMUNITY NEED

### A. Please provide a comprehensive narrative description of the proposed project.

#### IFH Overview

IFH is the largest and busiest hospital in the Commonwealth of Virginia. Since opening in 1961, it has become a premier medical center in the mid-Atlantic region and is a leader in healthcare services delivery in the Washington, DC metropolitan area.

- IFH is Northern Virginia's only tertiary/ quaternary hospital for adults and children, with a Level I Trauma Center for treating the most critically ill and injured patients;
- IFH maintains one of the nation's largest Obstetrical programs, including a dedicated high risk pregnancy unit and one of the country's largest Neonatal Intensive Care Units;
- IFH maintains a comprehensive organ transplantation program;
- IFH provides comprehensive pediatric services at its Children's Hospital; and
- IFH maintains one of the largest cancer programs in the Commonwealth.

#### Inova Schar Heart and Vascular at IFH

Inova Schar Heart and Vascular offers adults and children the full spectrum of complex treatments for comprehensive cardiovascular and cardiopulmonary care – from medical evaluation and diagnostic testing to the latest minimally invasive surgical techniques and complex open surgeries, including Northern Virginia's only heart and lung transplantation program. Inova Schar Heart and Vascular offers services across all five Inova Hospitals and in nearly 60 outpatient locations interconnected to deliver seamless, consistent, high quality care.

IFH serves as the hub for Inova's cardiac and vascular services and has the most advanced technology and facilities focused on the prevention, diagnosis, and treatment of heart disease. IFH is consistently among the first U.S. hospitals trusted to study the latest advances in heart and vascular disease treatments. IFH's participation in clinical trials offers patients access to leading-edge medical advances in medications, treatments, and therapeutic devices.

IFH consistently exceeds national benchmarks for top performance in the treatment of heart attacks, emergency cardiac interventions, cardiac surgery, and across a broad range of highly specialized, innovative cardiovascular techniques.

#### *Recent Awards for Excellence in Cardiovascular Care*

- 2023 American College of Cardiology – Proven Quality Program
- 2023 NCDR ACTION Registry Platinum Performance Achievement Award – Chest Pain – MI Registry
- Aetna Institute of Quality – Cardiac Care
- American Association of Cardiovascular and Pulmonary Rehab (AACVPR) Program Certification
- American Association of Critical-Care Nurses: 2022 Silver Beacon Award for Excellence (Progressive Coronary Care Unit at IFH)
- 2023 American Heart Association and Mitral Foundation – Mitral Valve Repair Reference Center Award
- 2022 Cardiovascular Operating Room Award – CNOR Strong Designation from the Competency & Credentialing Institute
- CMS 5-Star – Certified Adult Heart and Adult Lung Transplant Programs

- Platinum Level Extracorporeal Life Support Organization
- Intersocietal Accreditation Commission (IAC):
  - Cardiac Electrophysiology
  - Echocardiography
  - Nuclear Cardiology
  - Vascular Testing
- The Joint Commission: Certified Ventricular Assisted Device (VAD) Program
- Society of Thoracic Surgeons: 3-Star Ratings
  - Coronary Artery Bypass Surgery (CABG)
  - Aortic Valve Replacement (AVR)
  - AVR + CABG Combined
- 2023 TrueNorth Award
- 2023-2024 WebMD Patient Choice Award for excellence in Cardiology in the Northern Virginia area

#### Inova Schar Heart and Vascular Procedural Platform at IFH

Inova Schar Heart and Vascular at IFH maintains 6 cardiac surgery operating rooms (5 adult + 1 pediatric), 7 cardiac catheterization laboratories, 5 electrophysiology laboratories, 2 interventional radiology laboratories for use in the performance of cardiovascular-related interventional radiology procedures, and 48 prep and recovery bays (of which 39 are for the interventional rooms and 9 are for the cardiac operating rooms). Of note, IFH has one hybrid operating room/cardiac catheterization laboratory, which is included in both the operating room and cardiac catheterization counts above. The hybrid room is primarily used for structural heart cases (i.e., complex therapeutic).

All of the interventional rooms described above (cardiac catheterization, electrophysiology and interventional radiology laboratories) are co-located in one interventional suite on the ground floor of the Inova Schar Heart and Vascular building in IFH. The hybrid room is located with the cardiac operating rooms on the 2<sup>nd</sup> floor. Emergent cases are performed 24 hours a day, 7 days a week and scheduled cases are performed Monday through Friday from 7 a.m. to 5 p.m.

IFH performs both simple and complex therapeutic cases in its cardiac catheterization laboratories, including:

- Urgent and elective diagnostic and percutaneous coronary interventions
- Complex emergent percutaneous coronary interventions
- Complex coronary interventions including chronic total occlusions and high risk interventions with mechanical circulatory support, including Impella and ECMO for cardiogenic shock.
- Structural Heart Cases (performed in both the hybrid and non-hybrid cardiac catheterization laboratories): Procedures include transcatheter aortic valve replacement, percutaneous edge-to-edge repair of mitral and tricuspid valves, transcatheter mitral valve replacement and WATCHMAN/Amulet device implantation for left atrial appendage closure.

#### Proposed Project

This project proposes the expansion of cardiac catheterization services through the addition of an eighth cardiac catheterization laboratory based on institution-specific need. As outlined in the chart below, in 2022, the 7 cardiac catheterization laboratories performed 12,281 diagnostic equivalent procedures (“DEPs”), placing utilization at 146% of the State Medical Facilities Plan (“SMFP”) standard of 1,200 DEPs per laboratory. In 2023, total volumes remained steady, but the complex therapeutic cases continued to grow, placing utilization at 148% of the SMFP standard. Between

2021 and 2023 cardiac catheterization visits at IFH grew 3.6% and DEPs grew 9.2%. The growth was primarily driven by complex therapeutic cases. The adult complex therapeutic cases grew 39.5% during this time frame. It is projected that the growth in cardiac catheterization cases will continue to be driven by complex therapeutic cases. To meet existing and future IFH patient need for cardiac catheterization services, IFH seeks approval to add an eight cardiac catheterization laboratory.

Inova Fairfax Hospital

Historical Visits and Diagnostic Equivalent Procedures

|  |    | Historical Visits |               |               |               |              |
|--|----|-------------------|---------------|---------------|---------------|--------------|
|  |    | 2021              | 2022          | 2023*         | 2021-2023     |              |
| <b>Adult</b>                             |    |                   |               |               |               |              |
| Diagnostic Cardiac Cath                  |    | 4,097             | 4,222         | 4,295         | 4.8%          |              |
| Simple Therapeutic Cardiac Cath          |    | 268               | 243           | 128           | -52.2%        |              |
| Same Session (Dx + Simple Cardiac Cath)  |    | 981               | 997           | 899           | -8.4%         |              |
| Complex Therapeutic                      |    | 669               | 770           | 933           | 39.5%         |              |
| <b>Adult Total</b>                       |    | <b>6,015</b>      | <b>6,232</b>  | <b>6,255</b>  | <b>4.0%</b>   |              |
| <b>Pediatrics</b>                        |    |                   |               |               |               |              |
| Diagnostic Cardiac Cath                  |    | 62                | 42            | 27            | -56.5%        |              |
| Simple Therapeutic Cardiac Cath          |    | -                 | 3             | 1             |               |              |
| Same Session (Dx + Simple Cardiac Cath)  |    | -                 | 1             | -             |               |              |
| Complex Therapeutic                      |    | 36                | 63            | 48            | 33.3%         |              |
| <b>Pediatrics Total</b>                  |    | <b>98</b>         | <b>109</b>    | <b>76</b>     | <b>-22.4%</b> |              |
| <b>Total (Adults + Pediatrics)</b>       |    | <b>6,113</b>      | <b>6,341</b>  | <b>6,331</b>  | <b>3.6%</b>   |              |
|  |    | Historical DEPs   |               |               |               |              |
|  |    | DEP Multiplier    | 2021          | 2022          | 2023*         | 2021-2023    |
| <b>Adult</b>                             |    |                   |               |               |               |              |
| Diagnostic Cardiac Cath                  | 1  |                   | 4,097         | 4,222         | 4,295         | 4.8%         |
| Simple Therapeutic Cardiac Cath          | 2  |                   | 536           | 486           | 256           | -52.2%       |
| Same Session (Dx + Simple Cardiac Cath)  | 3  |                   | 2,943         | 2,991         | 2,697         | -8.4%        |
| Complex Therapeutic                      | 5  |                   | 3,345         | 3,850         | 4,665         | 39.5%        |
| <b>Adult Total</b>                       |    |                   | <b>10,921</b> | <b>11,549</b> | <b>11,913</b> | <b>9.1%</b>  |
| <b>Pediatrics</b>                        |    |                   |               |               |               |              |
| Diagnostic Cardiac Cath                  | 2  |                   | 124           | 84            | 54            | -56.5%       |
| Simple Therapeutic Cardiac Cath          | 4  |                   | -             | 12            | 4             |              |
| Same Session (Dx + Simple Cardiac Cath)  | 6  |                   | -             | 6             | -             |              |
| Complex Therapeutic                      | 10 |                   | 360           | 630           | 480           | 33.3%        |
| <b>Pediatrics Total</b>                  |    |                   | <b>484</b>    | <b>732</b>    | <b>538</b>    | <b>11.2%</b> |
| <b>Total (Adults + Pediatrics)</b>       |    |                   | <b>11,405</b> | <b>12,281</b> | <b>12,451</b> | <b>9.2%</b>  |
| <b>% of SMFP (SMFP = 1,200 DEPs/Lab)</b> |    |                   | <b>136%</b>   | <b>146%</b>   | <b>148%</b>   |              |

\* 2023 visits are preliminary

## B. Identification of Community Need

1. Describe the geographic boundaries of the facility's primary service area. (Note: Primary service area may be considered to be geographic area from which 75% of patients are expected to originate.)

Please see Attachment O to view a map outlining the primary service area for IFH's cardiac catheterization services. IFH considers all of PD 8 as its primary service area.

2. Provide patient origin, discharge diagnosis or utilization data appropriate for the type of project being proposed.

Please see Attachment P for 2023 patient origin data for IFH's cardiac catheterization services.

- ## C.
1. Is (are) the service(s) to be offered presently being offered by any other existing facility(ies) in the Health Planning Region?

Yes

2. If yes,

- a. Identify the facility(ies)

Please see Attachment Q.

- b. Discuss the extent to which the facility(ies) satisfy(ies) the current demand for the service(s).

IFH has an institution-specific need to expand its cardiac catheterization services. In 2022, the most recent VHI submission year, IFH's 7 cardiac catheterization laboratories performed 12,281 DEPs, placing utilization at 146% of the SMFP standard of 1,200 DEPs per laboratory. In 2023, total volumes remained steady, but the complex therapeutic cases continued to grow, placing utilization of IFH's 7 cardiac catheterization laboratories at 148% of the SMFP standard. Without expansion, IFH's existing cardiac catheterization laboratories are projected to reach an untenable utilization level of 175% of the SMFP in 2026.

As the population continues to grow in IFH's primary service area, the demand for cardiac catheterization services will continue to increase. Approval of an additional cardiac catheterization laboratory is necessary to support existing and future demand for cardiac catheterization services at IFH.

- c. Discuss the extent to which the facility(ies) will satisfy the demand for services in five years.

As the population of IFH's service area continues to grow and open heart surgical cases continue to shift to interventional platforms, demand for cardiac catheterization services will continue to increase over the next five years and beyond. IFH seeks approval to expand its cardiac catheterization services so that it can meet the current and future demand for cardiac catheterization services at IFH.



- D. Discuss how the project will fill an unmet need in the delivery of health care in the service area including, where applicable, geographic barriers to access.**

Please see the response to Section IV.C.2.

- E. Discuss the consistency of the proposed project with applicable Regional Health Plan, State Health Plan, State Medical Facilities Plan, or other plans promulgated by State Agencies.**

The project is consistent with the applicable provisions of the SMFP. Please see Attachment R.

- F. Show the method and assumptions used in determining the need for additional beds, new services or deletion of service in the proposed project's service area.**

Please see Section III.C.

- G. Coordination and Affiliation with Other Facilities.**

**Describe any existing or proposed formal agreements or affiliations to share personnel, facilities, services or equipment. (Attach copies of any formal agreements with another health or medical care facility.)**

Inova Health System is a broad-based regional healthcare system and provides a comprehensive and coordinated range of acute, ambulatory, and tertiary services.

Pediatric Specialists of Virginia, LLC ("PSV"), a non-profit private pediatric medical group, is a 50-50 joint venture between Inova and Children's National Medical Center. PSV provides a variety of pediatric specialties including gastroenterology, hematology oncology, and orthopedics. Please see Attachment S for legal documentation of joint venture.

- H. Attach copies of the following documents:**

- 1. A map of the service area indicating:**

- a. Location of the proposed project.**
- b. Location of other existing medical facilities (by name, type (hospital, nursing home, outpatient clinic, etc.) and number of beds in each inpatient facility).**

Please see Attachment Q.

- 2. Any material which indicates community and professional support for this project; i.e. letter of endorsement from physicians, community organizations, local government, Chamber of Commerce, medical society, etc.**

Please see Attachment T.

- 3. Letters to other area facilities advising of the scope of the proposed project.**

Please see Attachment U.

## SECTION V

## FINANCIAL DATA

It will be the responsibility of the applicant to show sufficient evidence of adequate financial resources to complete construction of the proposed project and provide sufficient working capital and operating income for a period of not less than one (1) year after the date of opening:

- A. Specify the per diem rate for all existing negotiated reimbursement contracts and proposed contracts for patient care with state and federal governmental agencies, Blue Cross/Blue Shield Plans, labor organizations such as health and welfare funds and membership associations.

This question requires the disclosure of confidential and proprietary information.

- B. Does the facility participate in a regional program which provides a means for facilities to compare its costs and operations with similar institutions?

☒ Yes    ☐ No

If yes, specify program and provide a copy of report(s) which provide(s) the basis for comparison.

All Inova Health System facilities participate in VHI. Please see Attachment V for a copy of IFH's EPICS submission for 2021 and 2022.

- C. Estimated Capital Costs

Please see "Instructions for Completing Estimated Capital Costs" Section of the Certificate of Need application for detailed instructions for completing this question (attached)

**Part I – Direct Construction Costs**

|    |   |                    |
|----|---|--------------------|
| 1. | Cost of materials                           | <u>\$3,287,468</u> |
| 2. | Cost of labor                               | <u>\$0</u>         |
| 3. | Equipment included in construction contract | <u>\$0</u>         |
| 4. | Builder's overhead                          | <u>\$0</u>         |
| 5. | Builder's profit                            | <u>\$0</u>         |
| 6. | Allocation for contingencies                | <u>\$328,747</u>   |
| 7. | Sub-total (add lines 1 thru 6)              | <u>\$3,616,215</u> |

**Part II – Equipment Not Included in Construction Contract**  
(List each separately) If leasehold, lease expense for the entire term of the initial lease

|    |                           |                    |
|----|---------------------------|--------------------|
| 8. | a. Equipment              | <u>\$1,687,553</u> |
|    | b. Equipment Installation | <u>\$100,000</u>   |
|    | c. Furnishings            | <u>\$15,265</u>    |
|    | e. Signage                | <u>\$5,680</u>     |

|  |                    |
|--|--------------------|
| e. Data & Telecommunications               | \$55,380           |
| f. Contingency                             | \$92,837           |
| <b>9. Sub-total (add lines 8a thru 8e)</b> | <b>\$1,956,715</b> |

**Part III – Site Acquisition Costs**

|   |                   |
|---|-------------------|
| <b>10. Full purchase price</b>  | <b><u>\$0</u></b> |
| <b>11. For sites with standing structures</b>                                   | <b><u>\$0</u></b> |
| a. purchase price allocable to structures                                       | <u>\$0</u>        |
| b. purchase price allocable to land   | <u>\$0</u>        |
| <b>12. Closing costs</b>  | <b><u>\$0</u></b> |
| <b>13. If leasehold, lease expense for the entire term of the initial lease</b> | <b><u>\$0</u></b> |
| <b>14. Additional expenses paid or accrued:</b>                                 |                   |
| a. _____  | <u>\$0</u>        |
| b. _____  | <u>\$0</u>        |
| c. _____  | <u>\$0</u>        |
| <b>15. Sub-total (add lines 10 thru 14c)</b>                                    | <b><u>\$0</u></b> |

**Part IV – Site Preparation Costs**

|   |                   |
|---|-------------------|
| <b>16. Earth work</b>                       | <b><u>\$0</u></b> |
| <b>17. Site utilities</b>                   | <b><u>\$0</u></b> |
| <b>18. Roads and walks</b>                  | <b><u>\$0</u></b> |
| <b>19. Lawns and planting</b>               | <b><u>\$0</u></b> |
| <b>20. Unusual site conditions:</b>         |                   |
| a. _____                                    | <u>\$0</u>        |
| b. _____                                    | <u>\$0</u>        |
| <b>21. Accessory structures</b>             | <b><u>\$0</u></b> |
| <b>22. Demolition costs</b>                 | <b><u>\$0</u></b> |
| <b>23. Sub-total (add lines 16 thru 22)</b> | <b><u>\$0</u></b> |

**Part V – Off-site Costs (List each separately)**

|     |                                  |            |
|-----|----------------------------------|------------|
| 24. | _____                            | <u>\$0</u> |
| 25. | _____                            | <u>\$0</u> |
| 26. | _____                            | <u>\$0</u> |
| 27. | _____                            | <u>\$0</u> |
| 28. | Sub-total (add lines 24 thru 27) | <u>\$0</u> |

**Part VI – Architectural and Engineering Fees**

|     |                                  |                  |
|-----|----------------------------------|------------------|
| 29. | Architect's design fee           | <u>\$223,095</u> |
| 30. | Architect's supervision fee      | <u>\$0</u>       |
| 31. | Engineering fees                 | <u>\$148,730</u> |
| 32. | Consultant's fees                | <u>\$309,841</u> |
| 33. | Sub-total (add lines 29 thru 32) | <u>\$681,666</u> |

**Part VII – Other Consultant Fees (List each separately)**

|     |                                    |            |
|-----|------------------------------------|------------|
| 34. | a. _____                           | <u>\$0</u> |
|     | b. _____                           | <u>\$0</u> |
|     | c. _____                           | <u>\$0</u> |
| 35. | Sub-total (add lines 34a thru 34c) | <u>\$0</u> |

**Part VIII – Taxes During Construction**

|     |                                    |            |
|-----|------------------------------------|------------|
| 36. | Property taxes during construction | <u>\$0</u> |
| 37. | List other taxes:                  |            |
|     | a. _____                           | <u>\$0</u> |
|     | b. _____                           | <u>\$0</u> |
| 38. | Sub-total (add lines 36 thru 37b)  | <u>\$0</u> |

**Part IX-A – HUD Section 232 Financing**

|     |   |                 |
|-----|---|-----------------|
| 39. | Estimated construction time( in months) | <u>9 months</u> |
| 40. | Dollar amount of construction loan      | <u>\$0</u>      |

|     |   |            |
|-----|---|------------|
| 41. | Construction loan interest rate   | <u>n/a</u> |
| 42. | Estimated construction loan interest costs  | <u>\$0</u> |
| 43. | Term of financing (in years)  | <u>n/a</u> |
| 44. | Interest rate on permanent loan   | <u>n/a</u> |
| 45. | FHA mortgage insurance premium  | <u>\$0</u> |
| 46. | FHA mortgage fees   | <u>\$0</u> |
| 47. | Financing fees  | <u>\$0</u> |
| 48. | Placement fees  | <u>\$0</u> |
| 49. | AMPO (non-profit only)  | <u>\$0</u> |
| 50. | Title and recording fees  | <u>\$0</u> |
| 51. | Legal fees  | <u>\$0</u> |
| 52. | Total interest expense on permanent mortgage loan   | <u>\$0</u> |
| 53. | Sub-total Part IX-A HUD Section 232 Financing (add lines 42, 45, 46, 47, 48, 49, 50 and 51) | <u>\$0</u> |

#### Part IX-B – Industrial Development Authority Revenue and General

##### Obligation Bond Financing

(Circle selected method of financing)

54. Method of construction financing (construction loan, proceeds of bond sales, if other, specific: n/a using accumulated reserves)
- If construction is to be financed from any source other than bond sale proceeds, answer question 56 through 58. Otherwise, proceed to question 59.
55. Estimated construction time (in months) \_\_\_\_\_
56. Dollar amount of construction loan \$0
57. Construction loan interest rate \_\_\_\_%
58. Estimated construction loan interest cost \$0
59. Nature of bond placement (direct, underwriter, if other, specify) n/a
60. Will bonds be issued prior to the beginning of construction? n/a Yes \_\_\_\_ No \_\_\_\_

61. If the answer to question 60 is yes, how long before (in months)? n/a
62. Dollar amount of bonds expected to be sold prior to the beginning of construction \$0
63. Will principal and interest be paid during construction or only interest? n/a
64. Bond interest expense prior to the beginning of construction(in dollars) \$0
65. How many months after construction begins will last bond be sold? n/a
66. Bond interest expense during construction \$0
67. What percent of total construction will be financed from bond issue? \$0
68. Expected bond interest rate n/a% Anticipated term of bond issued (in years) n/a
70. Anticipated bond discount (in dollars) n/a
71. Legal costs \$0
72. Printing costs \$0
73. Placement fee \$0
74. Feasibility study \$0
75. Insurance \$0
76. Title and recording fees \$0
77. Other fees (list each separately)
- a. \_\_\_\_\_ \$0
- b. \_\_\_\_\_ \$0
- c. \_\_\_\_\_ \$0
78. Sinking fund reserve account  
(Debt Service Reserve) \$0
79. Total bond interest expenses (in dollars) \$0
80. Sub-total Part IX\_B (add lines 58, 64, 66,  
71, 72, 73, 74, 75, 76, 77a, b, c and 78) \$0

#### Part IX\_C – Conventional Mortgage Loan Financing

81. Estimated construction time (in months) \_\_\_\_\_

|     |  |             |
|-----|--|-------------|
| 82. | Dollar amount of construction loan                             | <u>\$0</u>  |
| 83. | Construction loan interest rate                                | <u>n/a%</u> |
| 84. | Estimated construction loan interest cost<br>(in dollars)      | <u>\$0</u>  |
| 85. | Term of long term financing (in years)                         | <u>n/a</u>  |
| 86. | Interest rate on long term loan _____%                         |             |
| 87. | Anticipated mortgage discount (in dollars)                     | <u>\$0</u>  |
| 88. | Feasibility study  | <u>\$0</u>  |
| 89. | Finder's fee   | <u>\$0</u>  |
| 90. | Legal fees   | <u>\$0</u>  |
| 91. | Insurance  | <u>\$0</u>  |
| 92. | Other fees (list each separately)                              |             |
|     | _____  | <u>\$0</u>  |
| 93. | _____  | <u>\$0</u>  |
| 94. | Total permanent mortgage loan<br>interest expense (in dollars) | <u>\$0</u>  |
| 95. | Sub-total Part IX_C (add lines 84 & 88 thru 93)                | <u>\$0</u>  |

#### Financial Data Summary Sheet

|      |                     |   |                    |
|------|---------------------|---|--------------------|
| 96.  | Sub-total Part I    | Direct Construction Cost (line 7)                           | <u>\$3,616,215</u> |
| 97.  | Sub-total Part II   | Equipment not included in<br>construction contract (line 9) | <u>\$1,956,715</u> |
| 98.  | Sub-total Part III  | Site Acquisition Costs (line 15)                            | <u>\$0</u>         |
| 99.  | Sub-total Part IV   | Site Preparation Cost (line 23)                             | <u>\$0</u>         |
| 100. | Sub-total Part V    | Off-Site Costs (line 28)                                    | <u>\$0</u>         |
| 101. | Sub-total Part VI   | Architectural and Engineering fees (line 33)                | <u>\$681,666</u>   |
| 102. | Sub-total Part VII  | Other Consultant fees (line 35)                             | <u>\$0</u>         |
| 103. | Sub-total Part VIII | Taxes During Construction (line 38)                         | <u>\$0</u>         |
| 104. | Sub-total Part IX-A | HUD-232 Financing (line 53)                                 | <u>\$0</u>         |

|      |  |   |                     |
|------|--|---|---------------------|
| 105. | Sub-total Part IX-B  | Industrial Development Authority Revenue & General Revenue Bond Financing (line 80) | <u>\$0</u>          |
| 106. | Sub-total Part IX-C  | Conventional Loan Financing (line 95)   | <u>\$0</u>          |
| 107. | TOTAL CAPITAL COST (lines 96 thru 106)   |   | <u>\$ 6,254,596</u> |
| 108. | Percent of total capital costs to be financed                                      |   | <u>0%</u>           |
| 109. | Dollar amount of long term mortgage (line 107 x 108)                               |   | <u>\$0</u>          |
| 110. | Total Interest Cost on Long Term Financing   |   | <u>\$0</u>          |
|      | a.   | HUD-232 Financing (line 53)   | <u>\$0</u>          |
|      | b.   | Industrial Development Authority Revenue & General Revenue Bond Financing (line 79) | <u>\$0</u>          |
|      | c.   | Conventional Loan Financing (line 94)   | <u>\$0</u>          |
| 111. | Anticipated Bond discount  |   |                     |
|      | a.   | HUD-232 Financing (line 53)   | <u>\$0</u>          |
|      | b.   | Industrial Development Authority Revenue & General Revenue Bond Financing (line 70) | <u>\$0</u>          |
|      | c.   | Conventional Loan Financing (line 87)   | <u>\$0</u>          |
| 112. | TOTAL CAPITAL AND FINANCING COST<br>(ADD LINES 107, 110a, b or c AND 111a, b or c) |   | <u>\$6,254,596</u>  |
| D.   | 1.   | Estimated costs for new construction (excluding site acquisition costs)             | <u>\$0</u>          |
|      | 2.   | Estimated costs of modernization and renovation (excluding site acquisition costs)  | <u>\$0</u>          |
| E.   | Anticipated Sources of Funds for Proposed Project                                  |   | <u>Amount</u>       |
|      | 1.   | Public Campaign   | <u>\$0</u>          |
|      | 2.   | Bond Issue (Specify Type) _____   | <u>\$0</u>          |
|      | 3.   | Commercial Loans  | <u>\$0</u>          |
|      | 4.   | Government Loans (Specify Type)_____  | <u>\$0</u>          |
|      | 5.   | Grants (Specify Type) _____   | <u>\$0</u>          |



|            |                              |                    |
|------------|------------------------------|--------------------|
| <b>6.</b>  | <b>Bequests</b>              | <u>\$0</u>         |
| <b>7.</b>  | <b>Private Foundations</b>   | <u>\$0</u>         |
| <b>8.</b>  | <b>Endowment Income</b>      | <u>\$0</u>         |
| <b>9.</b>  | <b>Accumulated Reserves</b>  | <u>\$6,254,596</u> |
| <b>10.</b> | <b>Other (Identify)_____</b> | <u>\$0</u>         |

**F. Describe in detail the proposed method of financing the proposed project, including the various alternatives considered. Attach any documents which indicate the financial feasibility of the project.**

The project will be funded through accumulated reserves of Inova Health System.

**G. Describe the impact of the proposed capital expenditure will have on the cost of providing care in the facility. Specify total debt service cost and estimated debt service cost per patient day for the first two (2) years of operation. (Total debt service cost is defined as total interest to be paid during the life of the loan(s). Estimate debt service cost per patient day by dividing estimated total patient days for year one into amount of debt service for the year. Repeat for year two.) Please attach an amortization schedule showing how the proposed debt will be repaid.**

The project will be funded through accumulated reserves and, as such, there are no debt service costs associated with the project. Inova does not expect the capital costs associated with the project to impact the cost of care at IFH.

**H. Attach a copy of the following information or documents.**

**1. The existing and/or proposed room rate schedule, by type of accommodation.**

This project will not impact the IFH room rate schedule. See Attachment W.

**2. The audited annual financial statements for the past two (2) years of the existing facility or if a new facility without operating experience, the financial state of the owner(s). Audited financial statements are required, if available.**

Please see Attachment X for the most recent audited financial statements for Inova Health System.

**3. Copy of the proposed facility's estimated income, expense and capital budget for the first two years of operation after the proposed project is completed.**

Please see Attachment Y.

**SECTION VI****ASSURANCES**

I hereby assure and certify that:

- (a) the work on the proposed project will be initiated within the period of time set forth in the Certificate of Public Need; and
- (b) completion of the proposed project will be pursued with reasonable diligence; and
- (c) the proposed project will be constructed, operated and maintained in full compliance with all applicable local, State and Federal laws, rules, regulations, and ordinances.

I hereby certify that the information included in this application and all attachments are correct to the best of my knowledge and belief and that it is my intent to carry out the proposed project as described.

Jessica K. Parker

Signature of Authorizing Officer

Inova Health System

Address – Line1

Jessica Parker

Type/Print Name of Authorizing Officer

8095 Innovation Park Drive

Address – Line 2

Senior Director, Strategy & Planning

Title of Authorizing Officer

Fairfax, Virginia 22031

City/State/Zip

January 29, 2024

Date

703-517-9320

Telephone Number

Copies of this request should be sent to:

- A. **Virginia Department of Health  
Division of Certificate of Public Need  
9960 Mayland Drive – Suite 401  
Henrico, Virginia 23233**
- B. **The Regional Health Planning Agency if one is currently designated by the Board of Health to serve the area where the project would be located.**

## **Article 1. Criteria and Standards for Cardiac Catheterization Services**

### **12VAC5-230-380. Travel time.**

**Cardiac catheterization services should be within 60 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.**

Cardiac catheterization services are generally within 60 minutes driving time one way under normal conditions of 95% of the population within PD 8. As the Northern Virginia population continues to grow and traffic congestion increases, drive times are expected to become even more lengthy and challenging.

### **12VAC5-230-390. Need for new service.**

- A. No new fixed site cardiac catheterization service should be approved for a health planning district unless:**
- 1. Existing fixed site cardiac catheterization services located in the health planning district performed an average of 1,200 cardiac catheterization DEPs per existing and approved laboratory for the relevant reporting period.**
  - 2. The proposed new service will perform an average of 200 DEPs in the first year of operation and 500 DEPs in the second year of operation; and**
  - 3. The utilization of existing services in the health planning district will not be significantly reduced.**

Not applicable. IFH is proposing to expand its existing cardiac catheterization services.

- B. Proposals for mobile cardiac catheterization laboratories should be approved only if such laboratories will be provided at a site located on the campus of an inpatient hospital. Additionally, applicants for proposed mobile cardiac catheterization laboratories shall be able to project that they will perform an average of 200 DEPs in the first year of operation and 350 DEPs in the second year of operation without significantly reducing the utilization of existing laboratories in the health planning district below 1,200 procedures.'**

Not applicable. IFH is proposing to expand its existing cardiac catheterization services through the addition of a fixed cardiac catheterization laboratory. Mobile cardiac catheterization laboratories are not proposed.

- C. Preference may be given to a project that locates new cardiac catheterization services at an inpatient hospital that is 60 minutes or more driving time one way under normal conditions from existing services if the applicant can demonstrate that the proposed new laboratory will perform an average of 200 DEPs in the first year of operation and 400 DEPs in the second year of operation without significantly reducing the utilization of existing laboratories in the health planning district.**

Not applicable. As discussed above, this project does not propose to establish a new cardiac catheterization service.

#### **12VAC5-230-400. Expansion of services.**

**Proposals to increase cardiac catheterization services should be approved only when:**

- 1. All existing cardiac catheterization laboratories operated by the applicant's facilities where the proposed expansion is to occur have performed an average of 1,200 DEPs per existing and approved laboratory for the relevant reporting period; and**

IFH has 7 cardiac catheterization laboratories: 6 are traditional cardiac catheterization laboratories and one is a hybrid cardiac catheterization laboratory and operating room. This project proposes the expansion of cardiac catheterization services through the addition of an 8<sup>th</sup> cardiac catheterization laboratory based on institution-specific need.

In 2022, the 7 cardiac catheterization laboratories performed 12,281 DEPs, placing utilization at 146% of the SMFP standard of 1,200 DEPs per laboratory. In 2023, total volumes remained steady, but the complex therapeutic cases continued to grow, placing utilization at 148% of the SMFP standard.

- 2. The applicant can demonstrate that the expanded service will achieve an average of 200 DEPs per laboratory in the first 12 months of operation and 400 DEPs in the second 12 months of operation without significantly reducing the utilization of existing cardiac catheterization laboratories in the health planning district.**

IFH is consistent with this standard. As demonstrated in Section III.C of the COPN application, even with an additional cardiac catheterization laboratory, IFH's cardiac catheterization laboratories are projected to perform well over the SMFP standard of 1,200 DEPs per laboratory on an annual basis. IFH is projecting 1,836 DEPs per laboratory in the first 12 months of operation of the expanded cardiac catheterization service following placement of the 8<sup>th</sup> cardiac catheterization laboratory into operation, and an average of 1,952 DEPs per laboratory in the second 12 months of operation. IFH does not anticipate that the addition of an 8<sup>th</sup> cardiac catheterization laboratory will reduce the utilization of other providers' existing cardiac catheterization laboratories in PD 8 because the project is proposed on to address an institutional need.

#### **12VAC5-230-410. Pediatric cardiac catheterization.**

**No new or expanded pediatric cardiac catheterization services should be approved unless:**

- 1. The proposed service will be provided at an inpatient hospital with open heart surgery services, pediatric tertiary care services or specialty or subspecialty level neonatal special care;**
- 2. The applicant can demonstrate that the proposed laboratory will perform at least 100 pediatric cardiac catheterization procedures in the first year of operation and 200 pediatric cardiac catheterization procedures in the second year of operation; and**
- 3. The utilization of existing pediatric cardiac catheterization laboratories in the health planning district will not be reduced below 100 procedures per year.**

Not applicable. IFH is not proposing to expand pediatric cardiac catheterization services.

**12VAC5-230-420. Nonemergent cardiac catheterization.**

- A. Simple therapeutic cardiac catheterization. Proposals to provide simple therapeutic cardiac catheterization are not required to offer open heart surgery service available on-site in the same hospital in which the proposed simple therapeutic service will be located. However, these programs shall adhere to the requirements described in subdivisions 1 through 9 of this subsection.**

IFH is consistent with this provision. IFH currently provides both simple and complex therapeutic cardiac catheterization services and is consistent with subdivisions 1 through 9 below.

**The programs shall:**

- 1. Participate in the Virginia Heart Attack Coalition, the Virginia Cardiac Services Quality Initiative, and the Action Registry-Get with the Guidelines or National Cardiovascular Data Registry to monitor quality and outcomes;**

IFH currently participates in the Virginia Heart Attack Coalition, the Virginia Cardiac Services Quality Initiatives, the Chest Pain – MI Registry (formerly the Action Registry – Get with the Guidelines) and the National Cardiovascular Data Registry.

- 2. Adhere to strict patient-selection criteria;**

IFH maintains strict patient-selection criteria, which involve evaluation of each prospective cardiac catheterization patient using the Mayo Clinic Risk Score model and the American College of Cardiology/Society for Cardiovascular Angiography & Interventions (ACC/SCAI) risk evaluation criteria, and which support the provision of cardiac catheterization services to patients with stable ischemic heart disease, acute coronary syndrome, valvular heart disease, and cardiomyopathy. This strict selection criteria, is routinely assessed by Inova.

- 3. Perform annual institutional volumes of 300 cardiac catheterization procedures, of which at least 75 should be percutaneous coronary intervention (PCI) or as dictated by American College of Cardiology (ACC)/American Heart Association (AHA) Guidelines for Cardiac Catheterization and Cardiac Catheterization Laboratories effective 1991;**

In 2023, IFH completed 4,322 diagnostic cardiac catheterizations, 129 simple therapeutic cardiac catheterizations, 899 same session (diagnostic + simple) cardiac catheterizations, and 981 complex therapeutic procedures, including over 1,000 PCIs.

- 4. Use only AHA/ACC-qualified operators who meet the standards for training and competency;**

All cardiologists who perform cardiac catheterization procedures at IFH must be AHA/ACC-qualified (board certified or board eligible interventional cardiologists (with certification completed within two years)).

- 5. Demonstrate appropriate planning for program development and complete both a primary PCI development program and an elective PCI development program that includes routine care process and case selection review;**

As an established provider of cardiac catheterization services, IFH maintains in place a primary and elective PCI program, which includes focused review on quality and other related initiatives.

- 6. Develop and maintain a quality and error management program;**

As an established provider of cardiac catheterization services, IFH maintains a comprehensive quality and error management program. The program includes monthly Myocardial Infarction quality conferences, along with ongoing evaluation of IFH's cardiac catheterization metrics against benchmark data available from the applicable registries which IFH participates (see response in subsection 1 above).

- 7. Provide PCI 24 hours a day, seven days a week;**

IFH's PCI and STEMI program operates 24 hours per day, 7 days per week.

- 8. Develop and maintain necessary agreements with a tertiary facility that must agree to accept emergent and nonemergent transfers for additional medical care, cardiac surgery, or intervention; and**

IFH is a tertiary facility and offers the highest level of care for cardiovascular services, including open heart cardiac surgery and heart transplant.

- 9. Develop and maintain agreements with an ambulance service capable of advanced life support and intra-aortic balloon pump transfer that guarantees a 30-minute or less response time.**

Inova Health System maintains agreements with Midwest Medical Transport that require 20-minute or less response time for emergency transports.

- B. Complex therapeutic cardiac catheterization. Proposals to provide complex therapeutic cardiac catheterization should be approved only when open heart surgery services are available on-site in the same hospital in which the proposed complex therapeutic service will be located. Additionally, these complex therapeutic cardiac catheterization programs will be required to participate in the Virginia Cardiac Services Quality Initiative and the Virginia Heart Attack Coalition.**

IFH provides open heart surgery services and participates in the Virginia Cardiac Services Quality Initiative and the Virginia Heart Attack Coalition.

#### **12VAC5-230-430. Staffing**

- A. Cardiac catheterization services should have a medical director who is board certified in cardiology and has clinical experience in performing physiologic and angiographic procedures.**

IFH's medical director for cardiac catheterization services is Behnam Tehrani, MD. Dr. Tehrani is board-certified in interventional cardiology and cardiovascular disease and has clinical expertise in performing physiologic and angiographic procedures.

- B. In the case of pediatric cardiac catheterization services, the medical director should be board-certified in pediatric cardiology and have clinical experience in performing physiologic and angiographic procedures.**

IFH's medical director for pediatric catheterization services is Catherine Tomasulo, MD. Dr. Tomasulo is board certified in pediatric cardiology and pediatrics and completed additional fellowships in interventional cardiology and lymphatic imaging and interventions. Dr. Tomasulo has experience in performing physiologic and angiographic procedures.

- C. Cardiac catheterization services should be under the direct supervision or one or more qualified physicians. Such physicians should have clinical experience in performing physiologic and angiographic procedures.**

IFH's cardiac catheterization services are provided under the direct supervision of board-certified physicians with clinical experience performing physiologic and angiographic procedures.

- D. Pediatric catheterization services should be under the direct supervision of one or more qualified physicians. Such physicians should have clinical experience in performing pediatric physiologic and angiographic procedures.**

IFH's pediatric cardiac catheterization services are provided under the direct supervision of board-certified physicians with clinical experience performing physiologic and angiographic procedures.

**12VAC5-230-80. When institutional expansion 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.**

IFH proposes expansion of cardiac catheterization services based on institutional need. In 2022, the most recent VHI submission year, IFH's 7 cardiac catheterization laboratories performed 12,281 DEPs, placing utilization at 146% of the SMFP standard of 1,200 DEPs per laboratory. In 2023, total volumes remained steady, but the complex therapeutic cases continued to grow, placing utilization of IFH's 7 cardiac catheterization laboratories at 148% of the SMFP standard. Without expansion, IFH's existing cardiac catheterization laboratories are projected to reach an untenable utilization level of 175% of the SMFP in 2026.

- 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.**

IFH proposes expansion of cardiac catheterization services based on institutional need. There are two other hospitals within the Inova Health System that provide cardiac catheterization services, Inova Alexandria Hospital (IAH) and Inova Loudoun Hospital (ILH). Neither of these hospitals have underutilized cardiac catheterization services.

In 2022, the most recent year for which VHI has published data, IAH performed 1,654 DEPs in its two cardiac catheterization laboratories, placing utilization at 69% of the SMFP standard. ILH's two cardiac catheterization laboratories performed 1,885 DEPs, placing utilization at 79% of the SMFP standard.

Moving a cardiac catheterization laboratory from either of these hospitals would place those hospitals in immediate need of additional capacity. Therefore, it is not reasonable to reallocate a cardiac catheterization laboratory from IAH or ILH to IFH.

Inova 2022 Cardiac Catheterization Laboratory Utilization

|  | Inova<br>Alexandria<br>Hospital | Inova<br>Loudoun<br>Hospital | Inova<br>Fairfax<br>Hospital | Inova Total   |
|--|---------------------------------|------------------------------|------------------------------|---------------|
| <b># of Cardiac Catheterization Laboratories</b> | <b>2</b>                        | <b>2</b>                     | <b>7</b>                     | <b>11</b>     |
| <b>Visits</b>                                    |                                 |                              |                              |               |
| Diagnostic Cardiac Cath                          | 809                             | 816                          | 4,264                        | <b>5,889</b>  |
| Simple Therapeutic Cardiac Cath                  | 37                              | 11                           | 246                          | <b>294</b>    |
| Same Session (Dx + Simple Cardiac Cath)          | 257                             | 349                          | 998                          | <b>1,604</b>  |
| Complex Therapeutic                              |                                 |                              | 833                          | <b>833</b>    |
| <b>Total</b>                                     | <b>1,103</b>                    | <b>1,176</b>                 | <b>6,341</b>                 | <b>8,620</b>  |
| <b>DEPs</b>                                      |                                 |                              |                              |               |
| Diagnostic Cardiac Cath                          | 809                             | 816                          | 4,306                        | <b>5,931</b>  |
| Simple Therapeutic Cardiac Cath                  | 74                              | 22                           | 498                          | <b>594</b>    |
| Same Session (Dx + Simple Cardiac Cath)          | 771                             | 1,047                        | 2,997                        | <b>4,815</b>  |
| Complex Therapeutic                              | -                               | -                            | 4,480                        | <b>4,480</b>  |
| <b>Total</b>                                     | <b>1,654</b>                    | <b>1,885</b>                 | <b>12,281</b>                | <b>15,820</b> |
| <b>% of SMFP (1,200 DEPs per Laboratory)</b>     | <b>69%</b>                      | <b>79%</b>                   | <b>146%</b>                  | <b>120%</b>   |



**Inova Fairfax Hospital  
Cardiac Catheterization Expansion**

| Financial Projections | IFH Cardiac Cath Lab (Existing) |        | Project Only |        | ILH Cardiac Cath Lab + Project |        |
|-----------------------|---------------------------------|--------|--------------|--------|--------------------------------|--------|
|                       | Year 1                          | Year 2 | Year 1       | Year 2 | Year 1                         | Year 2 |
|                       | 2026                            | 2027   | 2026         | 2027   | 2026                           | 2027   |

**Statement of Revenue and Expenses**

|  |                      |                      |                     |                     |                      |                      |
|--|----------------------|----------------------|---------------------|---------------------|----------------------|----------------------|
| <b>Gross Patient Revenue</b>           | \$497,197,221        | \$502,077,122        | \$71,202,458        | \$97,419,389        | \$568,399,678        | \$599,496,511        |
| <b>Deductions from Patient Revenue</b> |                      |                      |                     |                     |                      |                      |
| Provision for Charity                  | \$4,971,972          | \$5,020,771          | \$712,025           | \$974,194           | \$5,683,997          | \$5,994,965          |
| Contractual / Other Discounts          | \$290,632,829        | \$293,485,224        | \$41,719,276        | \$57,086,593        | \$332,352,104        | \$350,571,817        |
| <b>Total Deductions from Revenue</b>   | \$295,604,801        | \$298,505,995        | \$42,431,300        | \$58,060,787        | \$338,036,101        | \$356,566,783        |
| <b>Net Patient Revenue</b>             | <b>\$201,592,419</b> | <b>\$203,571,127</b> | <b>\$28,771,158</b> | <b>\$39,358,602</b> | <b>\$230,363,577</b> | <b>\$242,929,729</b> |
| <b>Operating Expenses</b>              |                      |                      |                     |                     |                      |                      |
| Salaries, Wages and Benefits           | \$79,462,936         | \$80,244,600         | \$9,868,291         | \$13,407,053        | \$89,331,226         | \$93,651,653         |
| Supplies                               | \$45,793,750         | \$46,240,526         | \$8,873,387         | \$12,285,769        | \$54,667,136         | \$58,526,295         |
| Purchased Services                     | \$18,326,412         | \$18,508,042         | \$1,105,252         | \$1,416,950         | \$19,431,664         | \$19,924,992         |
| Bad Debt                               | \$3,897,549          | \$3,935,802          | \$558,159           | \$763,674           | \$4,455,707          | \$4,699,477          |
| Depreciation & Amortization            | \$4,714,628          | \$4,761,134          | \$1,183,015         | \$1,344,767         | \$5,897,642          | \$6,105,901          |
| Indirect Expenses - Occupancy          | \$21,341,160         | \$21,551,339         | \$2,435,027         | \$3,292,661         | \$23,776,188         | \$24,844,000         |
| Other Expense                          | \$11,416,702         | \$11,529,503         | \$988,729           | \$1,312,261         | \$12,405,431         | \$12,841,765         |
| <b>Total Operating Expenses</b>        | <b>\$184,953,136</b> | <b>\$186,770,947</b> | <b>\$25,011,859</b> | <b>\$33,823,136</b> | <b>\$209,964,995</b> | <b>\$220,594,083</b> |
| <b>Excess of Revenue Over Expenses</b> | <b>\$16,639,283</b>  | <b>\$16,800,180</b>  | <b>\$3,759,299</b>  | <b>\$5,535,466</b>  | <b>\$20,398,582</b>  | <b>\$22,335,646</b>  |

**Visits & DEPs**

|   |              |              |            |            |              |              |
|---|--------------|--------------|------------|------------|--------------|--------------|
| <i>Cardiac Catheterization Visits</i>   |              |              |            |            |              |              |
| Diagnostic Cardiac Cath                 | 4,365        | 4,408        | 159        | 185        | 4,524        | 4,593        |
| Simple Therapeutic Cardiac Cath         | 130          | 132          | (1)        | (3)        | 129          | 129          |
| Same Session (Dx + Simple Cardiac Cath) | 908          | 917          | (9)        | (18)       | 899          | 899          |
| Complex Therapeutic                     | 990          | 1,000        | 398        | 561        | 1,388        | 1,560        |
| <b>Total Visits</b>                     | <b>6,393</b> | <b>6,456</b> | <b>547</b> | <b>725</b> | <b>6,940</b> | <b>7,181</b> |

*Cardiac Catheterization Diagnostic Equivalent Procedures*

|   |               |               |              |              |               |               |
|---|---------------|---------------|--------------|--------------|---------------|---------------|
| Diagnostic Cardiac Cath                 | 4,391         | 4,435         | 158          | 184          | 4,550         | 4,619         |
| Simple Therapeutic Cardiac Cath         | 263           | 265           | (3)          | (5)          | 260           | 260           |
| Same Session (Dx + Simple Cardiac Cath) | 2,724         | 2,751         | (27)         | (54)         | 2,697         | 2,697         |
| Complex Therapeutic                     | 5,192         | 5,239         | 1,990        | 2,803        | 7,182         | 8,042         |
| <b>Total Procedures</b>                 | <b>12,569</b> | <b>12,690</b> | <b>2,119</b> | <b>2,928</b> | <b>14,688</b> | <b>15,617</b> |

**Expected Payor Mix\***

|              |               |
|--------------|---------------|
| Managed Care | 39.4%         |
| Medicaid     | 8.8%          |
| Medicare     | 48.1%         |
| Other Govt   | 1.4%          |
| Charity      | 1.0%          |
| Self Pay     | 1.3%          |
| <b>Total</b> | <b>100.0%</b> |

\* Expected payor mix equals 2023 Cath Lab, as no change is expected as the result of additional Cath Lab. However, Inova Fairfax Hospital is owned by Inova Health Care Services and thus would fall under Inova's system-wide charity care condition.

Note: This proforma reflects the projected revenue and expenses associated with the cardiac catheterization patient's entire visit, including the entire inpatient stay for patients who receive cardiac catheterization services as part of an inpatient stay. Inpatient cases are reimbursed at the MS-DRG level.

**Proforma Assumptions**

- Volumes: Adult visits grow 1% over 2023 and pediatric visits stay flat from 2013
- Payor mix reimbursement is based on internal Inova information, % of Gross Charges
- Annual inflation estimates: gross charge per case = 5%, net revenue per case = 2%, all expense = 4%
- Equipment depreciation straight-lined for seven (7) years
- Construction/Renovation depreciation straight-lined for ten (10) years