
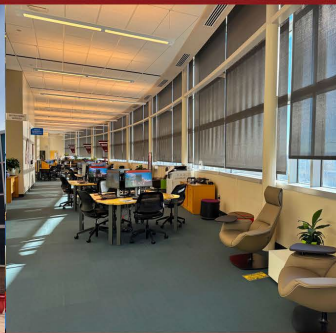


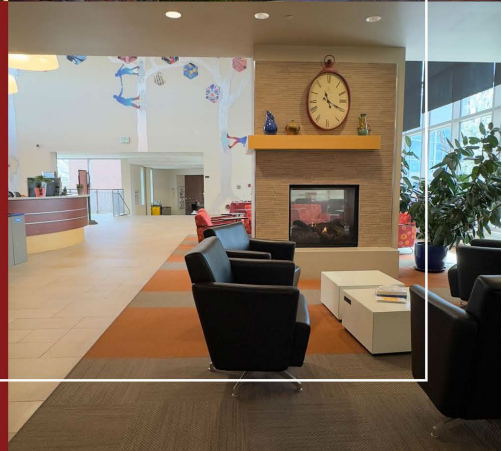
\*This in the initial version of the program plan for Arvada. It has been slightly modified in the interim (no Rad Tech) but for the most part is accurate.

# RED ROCKS COMMUNITY COLLEGE

## **NURSING AND HEALTH IMAGING BUILDING**



**RED ROCKS**  
COMMUNITY COLLEGE  
LAKEWOOD | ARVADA | ONLINE



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## ***Arvada Facility Program Plan***

### **I) Overview**

#### **a. Executive Summary**

The roots of Red Rocks Community College's (RRCC) Arvada campus trace back to 1989, when city officials and local business leaders requested that RRCC offer courses within the city limits. In response, the college opened its first Arvada facility in 1990, featuring three classrooms, a computer lab, and serving 173 students. From the beginning, healthcare was recognized as a critical focus area due to the growing healthcare industry and the presence of key healthcare employers in Arvada and nearby Wheat Ridge.

In 1999, RRCC broke ground on a new Arvada campus, culminating in the completion of a 23,000-square-foot building in early 2000. This expansion aimed to establish a full-service community college campus to better serve Arvada residents. The project garnered strong support from the Northwest Chamber of Commerce, Arvada Economic Development and Urban Renewal Authority, civic groups, and the Arvada City Council.

Today, Arvada represents the fastest-growing area within RRCC's service region. However, the current facility's limited size has hindered enrollment growth and restricted the college's ability to launch new career-focused healthcare programs that align with the area's workforce demands. Similarly, anticipated shortages across Colorado's health professions have made RRCC's inability to scale its healthcare programs increasingly problematic.

Health and science programs have long been a cornerstone of RRCC's academic offerings. The college currently provides accredited programs in a range of health-related fields, including credentials in Medical Assisting, Integrative Health, Wellness Coaching, Yoga Teacher Training, Certified Nursing Assistant, RN Refresher, Radiology Technology, Phlebotomy, Medical Billing and Coding, Medical Office Administration, and Diagnostic Medical Sonography. RRCC is the only community college in the country to offer a Masters for Physician Assistant. Looking ahead, RRCC is actively developing an Associate Degree in Nursing, with plans to welcome students by Fall 2025. In recent years, RRCC has further expanded its healthcare portfolio to include Echocardiography, Diagnostic Cardiac

Sonography, Computed Tomography, and Magnetic Resonance Imaging, and has been approved to offer a Bachelor of Applied Science in Sonography.

The existing Arvada 5400 building, which will temporarily house the Nursing program, has numerous deficiencies. Originally constructed as the dining facility for the Colorado State Home and Training School, also known as Ridge Home, the structure has served primarily as a storage space for more than 30 years. RRCC has modestly renovated 6000 square feet of this facility to provide a habitable space, however it does not provide an environment conducive to learning. The remainder of the building does not meet current building or ADA code requirements and lacks essential utilities, including electricity, heating, water, fire suppression, fire alarm systems and is beyond its useful life.

With this increase in the number of healthcare programs and increasing enrollment, the Arvada campus has numerous space and infrastructure limitations. There is insufficient room to accommodate additional full-time faculty, with an overall shortage of office space. The campus houses only two small conference rooms, four general classrooms, limited storage, and inadequate student support areas—all of which restrict the availability of essential student services. As a result, enrollment in existing programs has been capped, and the current facilities are inadequate for launching or expanding health care programs that require specialized infrastructure such as dedicated simulation laboratories, additional plumbing or electrical systems.

Ongoing enrollment growth, stringent program accreditation standards, and the evolving requirements of new academic offerings all contribute to an increasing need for more diverse, flexible instructional and learning spaces. RRCC aims to build an educational model that prepares students in both physical and behavioral health disciplines to work collaboratively in integrated care teams. Current on-campus simulation labs serve all health programs and offer continuing education to working health professionals but the number of programs using the available space is becoming challenging.

The proposed project seeks to accomplish the following key objectives:

- Obtain property adjacent to the Arvada campus from Foothills Housing Authority
- Expand and enhance instructional spaces dedicated to health careers, technology, and science programs.

- Increase capacity for faculty offices, storage, and student support services to support growth in health careers.
- Enable greater enrollment in high-demand programs and facilitate the launch of new offerings in nursing and sonography.
- Enhance the learning environment through improved simulation labs and student-centered facilities.

b. Description of academic programs affected

The demand for health professions continues to rise. According to the 2024 Colorado Talent Pipeline Report, the demand for Registered Nurses continues to hold the top position for most active job posting for the third year in a row. The leading certificates demanded by Colorado employers in 2024 included both nurses (RN, LPN and CNA) and radiologists.

**Associate Degree in Nursing**

Red Rocks Community College (RRCC) is set to launch a new Associate Degree in Nursing program in the Fall of 2025. According to Colorado General Assembly House Bill 23-1246, there are consistently around 20,000 job openings in the nursing sector across the state. This was also reported in the 2024 Colorado Talent Pipeline Report. The bill also highlights the urgent need for short-term education and training in nursing, a demand that currently exceeds the state's educational capacity. In response, state investment aims to expand training capacity to support the education of an additional 200 nurses each year.

RRCC's new program is designed to help meet this critical healthcare need. The college plans to admit a new cohort of up to 36 students in the Fall and Spring semesters, to be increased by 10% each year to a maximum size of 45 students per cohort. This program will also align with and complement RRCC's existing RN Refresher and Nurse Aide programs, creating synergies and additional pathways into nursing careers.

**Bachelor of Applied Science in Sonography**

RRCC's current Associate of Applied Science (AAS) degrees in Sonography have received approval to transition to Bachelor of Applied Science (BAS) degrees. The existing Echocardiography certificate will continue to be offered as an advanced credential for professionals already working in Sonography who wish to upskill.

The shift to a BAS degree will better serve students in the Sonography program. Currently, Sonography applicants must already hold a two-year allied health degree or a bachelor's degree in any field before being accepted into the Sonography program. Consequently, many graduates leave with two associate degrees. By transitioning to a BAS pathway, RRCC will offer a more practical and

valuable credential, better equipping students for opportunities in teaching, leadership, and supervisory roles within the healthcare field.

**Radiologic Technology**

The Radiologic Technology program at RRCC is an accredited degree pathway that prepares students for careers in x-ray imaging as Radiologic Technologists. Upon graduation, students are eligible to take the ARRT certification exam in Radiography, RT(R).

This comprehensive program combines in-depth instruction in anatomy, patient care, radiation safety, and imaging techniques with hands-on clinical training in real-world healthcare environments. RRCC graduates are equipped with both the technical expertise and compassionate care skills needed to operate sophisticated imaging equipment, support patients directly, and aid in accurate diagnosis and treatment. The degree also opens doors for further specialization in areas such as MRI, CT, mammography, and interventional radiology.

**Healthcare Career Readiness and Educational Pathways**

Labor market trends in RRCC’s service region show increasing demand for technically skilled professionals, particularly in healthcare. The College is committed to preparing students for essential roles in the healthcare system, helping to address the shortage of primary care practitioners in Colorado. To meet this need, RRCC offers pathways that enable students not only to enter the workforce but also to pursue further education. These programs serve as strong foundations for those planning to advance into baccalaureate, graduate, or professional degree programs, ultimately supporting long-term career growth in key service and healthcare professions.

**Service Area Occupation Data**

Occupation	Service Area Jobs including Denver (2021)	Projected Jobs (2025)	%Change	Growth compared to national	Annual Job Postings	Median Salary
Diagnostic Medical Sonographers	447	498	11.5%	-0.1%	447	\$102,268
Registered Nurses	14,614	15,569	6.5%	-3.8%	14,614	\$89,508
Radiologic Technology	1106	1024	-7.5%	-14.4%	1,179	\$82,955

*Source: Lightcast Occupation Overview Reports from Colorado Community College System*

The current Arvada Campus has course offerings in the following healthcare program areas.

### **Current Health Professions Programs**

- Diagnostic Medical Sonography
- Diagnostic Cardiac Sonography
- Phlebotomy
- Billing and Coding
- Medical Office
- Wellness Coaching
- Integrative Health
- Medical Assisting
- Nurse Aide
- RN Refresher
- Physician Assistant
- Radiologic Technology
- Computed Topography
- Echocardiography
- Magnetic Resonance Imaging

### **Supporting General Education and Transfer Courses offered at the RRCC Lakewood Campus and via Colorado Online**

- Anthropology 1001 and 2500
- Biology 1006, 1111, 2101, 2102, 2104, 2124, and 2110
- Chemistry 1011 and 1111
- Communications 1026, 1250 and 2300
- English 1021 and 1022
- Mathematics 1260 and 1340
- Philosophy 1012 and 1011
- History 2015
- Psychology 1001, 1002 and 2440
- Sociology 1001 and 2016
- Humanities 1015
- Literature 2005
- Health and Wellness 1050

The proposed facility will provide classroom space adequate to deliver the new Associate Degree in Nursing program, new BAS in Sonography and expand our offerings in Radiologic Technology.

c. Relationship to the 2013 RRCC Facilities Master Plan

The Arvada Campus is an ideal location for constructing a new facility designed to support the growth and development of additional health-related academic programs. This new building would provide modern and appropriate spaces that

meet industry standards, allowing these programs to expand and thrive in response to increasing demand. Currently, space limitations hinder the ability of these programs to grow or offer students an educational environment that reflects real-world clinical settings.

The RRCC Facilities Master Plan highlights the importance of placing high-growth programs at the Arvada Campus. While some of this was accomplished with the 2016 expansion, further growth is necessary—particularly to accommodate new Nursing and Sonography programs. These programs, not initially included in prior planning assessments, now require additional space to support four cohorts of 36 nursing students and to double the capacity of the Sonography program.

To support these academic offerings, more space will also be required for instructional and student services. This includes general classrooms and specialized areas such as hybrid lecture/demonstration rooms, dedicated teaching labs, simulation labs, clinical practice spaces, physical training areas, and adequate equipment storage.

Moreover, creating this new facility at the Arvada Campus is vital to address existing and projected space shortages. Without new development, these deficits will only worsen, limiting the college's ability to deliver instruction that meets modern curricular and industry needs. As enrollment continues to grow, the demand for Arvada Campus resources increases. The college's ongoing facilities master planning process will be instrumental in identifying the optimal use for the space vacated by relocated programs, ensuring the campus continues to evolve effectively with the institution's long-term goals

d. Relationship to the RRCC Mission

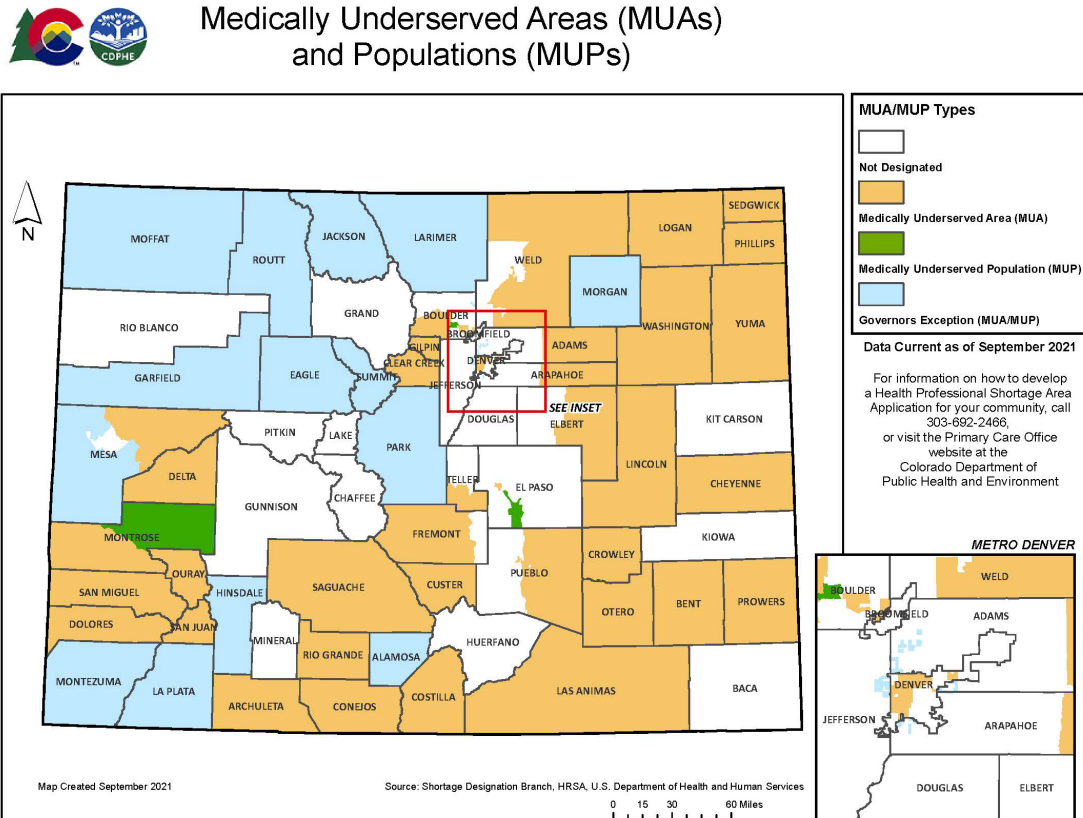
Our mission is to provide students with opportunities for growth and development that set the foundation for self-directed learning, academic achievement, and career accomplishment. We do this through high quality innovative educational programs that convey our passion for learning, our commitment to excellence, our dedication to our students, and the communities we serve.

This plan places a strong emphasis on student opportunity by focusing on the development and expansion of programs that are in high demand, offer strong earning potential, and address the evolving needs of our communities.

## II) Justification

### a. Existing conditions

According to the U.S. Department of Health and Human Services, Colorado has a significant amount of Medically Underserved Areas (MUAs) and Medically Underserved Population (MUPs).



According to the 2014 Colorado Health Care Workforce Development Strategy report, in rural, frontier and urban underserved communities, the primary care workforce, including physical, mental and oral health care providers, does not meet the current need. Although Colorado has taken strides to ameliorate the maldistribution of the primary care workforce, particularly in the Federally Qualified Health Care Center (FQHC) setting, the inability to enact meaningful policy and create lasting solutions to the uneven geographic distribution and projected shortages of the primary care workforce will only serve to exacerbate the health disparities that persist in many communities across the state. The report also outlines a

strategic approach to training and educating the state's health care workforce.

In 2022 the Colorado General Assembly passed SB 22-226 to support in-demand career workforce needs through Care Forward Colorado. The bill stated the nursing sector consistently has approximately twenty thousand job openings. It further stated the extraordinary demand for short-term education and training in nursing exceeds the state's current capacity to meet the demand. The state's investment in increasing the capacity is intended to support the training of two hundred additional nurses annually. Students at Red Rocks Community College (RRCC) will benefit from these investments by receiving training in high-demand healthcare roles such as Certified Nursing Assistant (CNA), Emergency Services Professional, Medical Assistant, EMT (Emergency Medical Technician), AEMT (Advanced EMT), Paramedic, Phlebotomy Technician, Medical Billing and Coding, Medical Office Assistant, and Echocardiography Technician, among others.

Building on this effort, in 2023 the General Assembly passed HB23-1246, creating Career Advance Colorado, which supports additional high-demand training programs at RRCC, specifically in the fields of Nursing. Red Rocks received a \$2.5M grant from HB 23-1246 to develop a new nursing program at its Arvada campus. The funds are to be used in FY 2024-2025 and FY 2025-2026

National data reinforces these workforce challenges. The National Institutes of Health reported that between 2011 and 2021, the number of ultrasound procedures increased more rapidly than the number of trained sonographers. This growing discrepancy between supply and demand has led to workforce shortages and strain across the healthcare sector. To bridge the gap, it is necessary to expand sonography program availability and address barriers to entry. Supporting this urgency, the American Society of Radiologic Technologists' Staffing Survey reports a sharp rise in sonography vacancy rates—from 6.9% in 2021 to 16.7% in 2023. Similarly, the U.S. Bureau of Labor Statistics projects a 10% growth in diagnostic medical sonographer jobs from 2021 to 2031, far outpacing average job growth across occupations.

### **Demographic data**

The Colorado Department of Local Affairs projects that by 2030, the population of Colorado residents aged 65 and older will grow by 28%, alongside a 10% increase across all age groups compared to 2022 figures. Significantly, this older demographic is expected to account for over 50%

of the state's total population growth during the decade, with the most substantial increase occurring among individuals aged seventy-five to eighty-four. This trend will place increased pressure on the healthcare sector due to higher healthcare needs among older adults.

At the same time, Colorado is facing a growing shortage of healthcare professionals. By 2025, the state is projected to be short approximately 10,000 nurses and currently averages 4,430 nursing-related job openings per year. Similar shortages are expected in the physician assistant field and other primary care professions. Additionally, other areas of healthcare face workforce gaps, with an average of 360 annual openings for Sonography and 480 for Radiologic Technology. These statewide challenges are mirrored in the Red Rocks Community College (RRCC) service area, emphasizing the urgent need to expand educational programs and facilities aligned with workforce demands.

The cities of Arvada and Wheat Ridge represent approximately 25% of the RRCC service area population. In Fall 2024, 1,639 students from these cities made up 19.6% of RRCC's total enrollment of 8,329 students. Notably, Arvada is the primary area of growth within the district, having experienced the largest population increase between the 2000 and 2010 censuses, along with a further 10.1% increase according to 2020 data. While the existing RRCC Arvada campus has served as a foundational resource, it is evident that expanded programming and greater access are needed to meet growing educational demand. Moreover, transfer program participation is higher among Arvada and Wheat Ridge residents—39% compared to 32% college-wide.

In Fall 2024, the Arvada campus enrolled 465 students, translating to an annualized full-time equivalent (FTE) of 123. These numbers are lower than expected, particularly given the campus's strategic location. However, this is not due to a lack of interest in higher education among Arvada and Wheat Ridge residents. In fact, 23% of students from these communities were enrolled in health sciences programs, significantly outpacing the 14% average across all students.

To address these needs, we propose the purchase of a portion of the adjacent Ridge Home property, now owned by Foothills Housing Authority, constructing a new facility dedicated to high-demand healthcare disciplines, including nursing, sonography, and radiologic technology. The new educational space will feature classrooms and shared laboratory environments designed to offer students the highest quality, hands-on learning experiences. These state-of-the-art facilities will include:

- Interprofessional education (IPE) lab space.
- Medical simulation center lab space including a simulated ER.
- Industry inspired training labs.
- Supplemental Instruction and Open Lab Space.
- Student Workstations.
- Student Meeting Rooms and Lounge Space.
- Student Computer Lab
- Conference rooms.

i. Assessment of space functionality

Since its founding in 1969, RRCC has prioritized health and science programs, with the goal of preparing students for in-demand careers in these fields and contributing a well-trained workforce to Colorado. The college continues to assess the viability of launching new academic offerings, with a particular emphasis on expanding health care programs to meet the growing demand from industry partners for support services in the health sector.

Enrollment in existing health programs has already exceeded the available facility capacity at the Arvada Campus. As RRCC looks to broaden its offerings—such as significantly expanding the Associate Degree in Nursing program and increasing capacity in Sonography and Radiologic Technology—additional space is urgently needed. These programs demand purpose-built laboratory environments, including specialized labs, skills labs, and high-fidelity simulation labs that align with current industry standards.

In addition, student support areas are currently insufficient to deliver the collaborative and practical learning experiences essential for integrated healthcare education. The campus also lacks adequate office space for full-time faculty, adjunct instructors, and clinical educators, impeding instructional delivery and faculty support.

ii. Current space utilization by classroom/lab hours of use and percent station utilization

The health professions lab spaces are very highly utilized. The five Arvada laboratories, with average utilization at 57 hours per week at 81% occupancy, met the CCCS standard.

iii. Facilities Condition Index

To accommodate the first cohorts of the Nursing program, RRCC has adapted a property just south of the existing Arvada Campus, known as

5400 Arvada. 5400 Arvada was the previous dining facility for the Colorado State Home and Training School, or simply Ridge Home, which fully closed in 1992.

5400 has been unoccupied until recently and has a facilities condition index rating of only 64 for the habitable portion of the building. Although RRCC has engaged in modest renovations to the 6000 square feet, the remainder of the facility is not currently compliant with building codes or the ADA. 5400 Arvada will not be able to house more than 36 students per cohort and is not a suitable long term academic space for nursing as it has no windows, no solid walls between classroom spaces, has limited office space for faculty and has significant deferred maintenance.

iv. Specific health/life safety deficiencies

The building is non-compliant with the current building and ADA code. The unhabitable portion has no power, heat, water, fire suppression or fire alarms. Some asbestos abatement would be required.

iv. Workforce Facts:

- In the 2023 Talent Pipeline Report published by the Colorado Department of Labor and Employment (CDLE), Healthcare Practitioners and Technical Occupations are the second most in-demand industry. RRCC programs that fall into this category include Physician Assistants, Registered Nurses, Nurse Practitioners, Diagnostic Medical Sonographers, Magnetic Resonance Imaging, Paramedics, and Medical Records Specialists. The report also provided that active job advertisements for registered nurses were the highest at 36,063
- Eight of the top 10 most in-demand certificates are health programs, including Basic Life Support, CPR, Registered Nurse, Advanced Cardiac Life Support, First Aid, Certified Nursing Assistant, Licensed Practical Nurse, and Pediatric Advanced Life Support.

[https://drive.google.com/file/d/1pH0aGwQWVeC7yImnfOiTCV0uMxZUQE\\_-/view](https://drive.google.com/file/d/1pH0aGwQWVeC7yImnfOiTCV0uMxZUQE_-/view)

- Projections Central, an initiative sponsored by the US Department of Labor, projects nearly 10,050 new Colorado jobs by 2032 in the fields that this project would support. The anticipated jobs reflect growth of 27% in Sonography, 17.1% in Imaging and 17.8% in Nursing.

<https://www.projectionscentral.org/>

- Most of these positions exceed the minimum living wage of \$55,931 for a single adult in Jefferson County. (Living Wage Calculator - MIT.
- Diagnostic Medical Sonographers, Registered Nurses, and Radiological Technicians median salaries exceed the minimum living wage for a home with 2 working adults and 2 children (\$73,777).

Field	Base Positions (2022)	Projected (2032)	Change	%Change	Avg Annual Openings
Registered Nurses	53,720	63,290	9570	17.8%	4,100
Diagnostic Medical Sonographers	1,370	1,740	370	27%	120
Radiologic Technologists	3,860	4,520	660	17.1%	280

b. Changes and Enrollment Projection

- Enrollment projections were calculated using the average change over the past three years and refined to reflect expected shifts in industry demand and population trends. Substantial increases are anticipated in health professions, precision production, and construction trades, consistent with projected growth in related career fields. Expansion in health professions is creating space constraints on the Arvada campus, while increased enrollment in precision production and construction programs will contribute to space compression on the Lakewood campus.

Course Category	2023-24 Annual FTE	Projected Annual Change	2029-30 Projected FTE
Health Professions	641	17%	1674
Precision Production	129	12%	260
Construction Trades	85	11%	158
Culinary Services	129	11%	237
Parks and Recreation	88	10%	157
Visual and Performing Arts	208	10%	363
Foreign Languages	145	9%	245
Biological Sciences	318	8%	497
Computer and Information Sciences	306	8%	474
Business, Management, and Marketing	282	8%	436
Liberal Arts and Sciences	62	7%	95
Engineering	144	7%	219
Family and Consumer Sciences	15	7%	21
Mathematics	444	6%	620
Protective Services (Fire and Law)	342	3%	419
Education	101	3%	123
Social Sciences	137	1%	147

Psychology	165	1%	174
Other	282	1%	295
Communication and Journalism	37	0%	37
English and Literature	362	-1%	336
Physical Sciences	262	-1%	242
Philosophy	78	-2%	68
Mechanic and Repair Technologies	130	3%	108
<b>TOTAL</b>	<b>4892</b>		<b>7405</b>

ii. New or modified academic programs/instructional methodology.

The new Arvada facility is designed to support an inter-professional education (IPE) model for health professions training. IPE is currently required by at least one health career accreditation body and is expected to become a universal standard across all health provider programs in the near future. This educational approach emphasizes collaborative, team-based, and patient-centered care as a foundational element from the onset of a provider's training.

Additionally, the curriculum is anchored in problem-based learning (PBL), which encourages students from various disciplines to integrate their unique perspectives into comprehensive, patient-focused solutions.

The facility's shared simulation laboratory is specifically designed to promote both IPE and PBL, enabling interdisciplinary collaboration across all health fields. Furthermore, general education courses tailored for health profession students will focus on fostering critical thinking, analytical reasoning, and interpersonal communication—key competencies for future primary health care providers.

iii. Changes to class sizes

With sufficient classroom and lab space, we expect improvements in class size efficiency and more effective use of instructional time to enhance student learning. Currently, the limited number of lab stations in our DMS and RTE programs restricts student enrollment in each discipline. Expanding our facilities will accommodate higher enrollment to meet growing demand, while also offering students lab environments that reflect real-world healthcare settings. Additionally, we are planning to launch a new Nursing (NUR) program and the current space limitations in the shared simulation laboratory is impacting both enrollment and the

efficiency of instruction. An increase in lab space will not only allow for more individualized hands-on training but will also support collaborative learning, aligning with the inter-professional education (IPE) model essential to modern healthcare delivery.

c. Total space requirements

i. Current Space Utilization

In Fall 2023, the Lakewood campus had a total of 54 classrooms. These classrooms averaged 23 square feet (ASF) per station, reflecting the quantity and quality of various furniture types used. The CCCS standard for classroom workstations is 22 ASF per station. On average, the classroom utilization is 26 weekly room hours at 67% student station occupancy.

In comparison, the Arvada campus has 9 classrooms with 28 ASF per station. The classrooms averaged 23 weekly room hours at 68% occupancy.

- The Arvada campus only has 4 science labs which have an average occupancy of 81%
- The campus has only one skills lab for health professions which has 72% occupancy for 33 hours per week. This demonstrates a need for more space for students in health professions to practice practical skills.
- Although science lab usage is relatively low with an average of 11 hours per week, we expect that to increase significantly with the addition of the Nursing program.
- This is compared to 67% occupancy and 26 hours for all classrooms on the Lakewood campus, demonstrating a need for more classroom space for these programs.

**Lakewood Classroom Utilization**

<b>Room Capacity</b>	<b>No. of Rooms</b>	<b>Average Room Size</b>	<b>Average of ASF per Station</b>	<b>Average Weekly Room Hours</b>	<b>Average Occupancy</b>
21 and under	5	427	30	28	36%
21-25	10	608	25	22	61%
26-30	20	613	21	24	71%
31-35	10	751	23	26	69%
36-40	8	778	21	39	74%
41 and greater	1	877	18	36	18%
<b>Total</b>	<b>54</b>	<b>668</b>	<b>23</b>	<b>26</b>	<b>67%</b>

### Lakewood Lab Utilization

Room Capacity	No. of Rooms	Average Room Size	Average of ASF per Station	Average Weekly Room Hours	Average Occupancy
21 and under	3	710	39	18	65%
21-25	10	756	32	16	64%
26-30	6	1700	60	40	70%
31-35	3	895	28	21	55%
<b>Grand Total</b>	<b>22</b>	<b>1177</b>	<b>44</b>	<b>24</b>	<b>65%</b>

### Arvada Classroom Utilization

Room Capacity	No. of Rooms	Average Room Size	Average of ASF per Station	Average Weekly Room Hours	Average Occupancy
21 and under	1	648	32	42	71%
21-25	7	652	27	23	69%
<b>Grand Total</b>	<b>8</b>	<b>652</b>	<b>28</b>	<b>26</b>	<b>69%</b>

### Arvada Lab Utilization

Lab	No. of Rooms	Average Room Size	Average of ASF per Station	Average Weekly Room Hours	Average Occupancy
Lab-A&P	1	1406	59	16	80%
Lab-Bio	1	1406	52	15	86%
Lab-Chem	1	1406	59	6	63%
Lab-Micro Bio	1	1406	59	5.5	79%
Skills room	1	1406	59	33	72%
<b>Grand Total</b>	<b>5</b>	<b>1406</b>	<b>57</b>	<b>15</b>	<b>81%</b>

ii. Total Assignable (ASF)

1. Nursing Program

New program opening Fall of 2025

On-campus headcount = 144 (4 cohorts)

Annualized FTE = 429

- a. Classroom Space – 3,500 ASF
- b. Dedicated Laboratory Space – 3,250
- c. Laboratory Space (Shared) - 1,075 ASF
- d. Lab preparation, and storage (Shared) – 700 ASF
- e. Contemporary Student Study Learning Environment - 500 ASF
- f. Faculty and Staff Space – 2,250
  - i. 9 faculty @ 125 ASF – 1,125
  - ii. 1 Clinical Coordinator @ 100 ASF - 100 ASF
  - iii. Director and Program Assistant @ 250 ASF - 500 ASF
  - iv. Adjunct Office Space (Shared) – 500 ASF

Total = 11,250 ASF

2. Diagnostic Medical Sonography

Existing program with a new Bachelor of Applied Science options for both General DMS and Cardiac DMS opening Fall of 2025

On-campus headcount = 21 current, 42 new capacity

Annualized FTE = 46.23 current, 92.46 new capacity

- a. Dedicated Classroom/Laboratory Space – 1,700 ASF
- b. Storage – 100 ASF
- c. 5 faculty @ 125 ASF – 625 ASF
- d. Adjunct Office Space (Shared) – 500 ASF

Total = 2,925 ASF

3. Radiologic Technology Education

On-campus headcount = 28 current, 501 new capacity

Annualized FTE = 33.8 current, 90.7 new capacity

- a. Dedicated Classroom/Laboratory Space – 950 ASF
- b. Dedicated Laboratory Space – 1,850 ASF
- c. Storage – 100 ASF
- d. 3 faculty @ 125 ASF – 375 ASF
- e. 2 Clinical Coordinators @ 100 ASF
- f. Adjunct Office Space (Shared) – 100 ASF

Total = 3,555 ASF

4. Shared Spaces

- g. Student Computer Lab – 1500

- h. Student Lounge/break area – 500
  - i. Break Room - 200
  - j. 2 Conference rooms @ 300 ASF – 600 ASF
  - k. Entrance welcome area – 300
  - l. 3 Student Study rooms @ 75 ASF – 225 ASF
- Totals = 3,325

5. Totals

On-campus headcount 737

Annualized FTE = 688

- a. Classroom Space – 4,450 ASF
  - b. Laboratory Space - 6,375 ASF
  - c. Classroom/Lab combinations space – 1,700 ASF
  - d. Faculty and Staff Space – 4,025ASF
  - e. Lab preparation and storage - 800 ASF
  - f. Student study space/peer mentors – 2,825 ASF
- Grand Total = 21,075 ASF

For the new Arvada facility, we are proposing the construction of 28,424.25 GSF.

d. Alternatives analysis

Due to limited space on both campuses, the health programs are currently “landlocked” with no room for growth. This presents a particular challenge for programs like the Associate Degree in Nursing, scheduled to launch in Fall 2025. Additionally, the current facilities for the Diagnostic Medical Sonography (DMS) and Radiologic Technology (RTE) programs are insufficient in both size and quality to meet growing industry needs or provide students with an environment that reflects real-world practices.

The existing DMS and RTE programs at Red Rocks Community College (RRCC) have specialized requirements for equipment and technology. These programs depend on building infrastructure that includes features such as steel-reinforced ceilings to support heavy, technical equipment. Leasing off-campus space is neither practical nor cost-effective due to the high costs of outfitting such spaces to meet program-specific needs. A new facility would provide the appropriate environment to support these programs effectively. A new facility allows for:

- Scalability and future growth
- Avoids ongoing renovation cost
- Increases efficiency and technology integration

- Provides for a greater ability to meet compliance and accreditation requirements.
- Improved learning environment
- Improved student services for growing on campus enrollment
- Potential long-term savings
- Attraction and Retention of students

Upon considering all options, while building a new facility requires a significant investment, it often proves to be more cost effective in the long run because it aligns with the current and future needs of the growing sonography and radiological technology fields, without the limitations and costs associated with retrofitting an insufficient existing space.

### III) Implementation and design criteria

#### a. Site acquisition

The initial task will be acquisition of the property adjacent to the Arvada campus from Foothills Housing Authority. The property will require razing the existing structure and some environmental remediation.

#### b. Site improvements and requirements

The primary focus of site improvement work will be raze the delapidated Ridge Home structures, the new facility, updating utility access, additional parking, landscaping and storm water retention required to support the new facility after demo of the existing Ridge Home facilities. Due to the sloping topography of the site, this involves significant grading and drainage work in addition to the not atypical poor soils remediation that will be required.

#### c. Design requirements

##### i. New utilities required

All utilities will need to be installed. Water and sanitary sewer will require updated, or new, water taps and gas system, while storm sewer will need to be addressed. A new electrical transformer will be required.

##### ii. Building systems and any applicable performance criteria

The goal of the building design will be to qualify for LEED Gold certification, thereby complying with the State of Colorado's High Performance Certification Program. Specific design elements that will assist in attaining the certification include: R20 roofing system, LED exterior/parking lot

lighting, low flow plumbing fixtures, low water usage landscaping, solar tubes, light shelves, HVAC units that incorporate free cooling, web-based building automation/monitoring systems, in-row cooling units for the data center.

iii. Architectural design features

The building envelope materials will mirror the campus standards (which are similar at both Arvada and Lakewood): colored CMU, brick veneer, aluminum storefront, metal wall panels, canopies and light shelves (a new addition to the campus standards, originating with the previous campus expansion project). The building design will maximize the unique site elements and spectacular western views of the Front Range.

- Interior finishes will also reflect the current campus standards, including an emphasis on sustainable, low maintenance materials.
- An emphasis on designing lab spaces with sufficient square footage and storage will support the instructional methodology required for inter-professional education and problem-based learning models which are accreditation elements for health career programs.
- The space planning for general labs will maximize the student space available by incorporating shared prep and storage spaces.
- The inclusion of spaces designed to encourage community among students and staff is a priority. A mix of classroom sizes, student study areas, collaborative workspaces, will be utilized to achieve this goal.

d. Project schedule, cost estimates and financial analysis

i. Project scheduling and phasing

Architecture and engineering and other professional services will begin immediately. It is anticipated that the traditional model of design-bid-build will be employed, with the design phase taking up to twelve months and construction approximately twelve months. If that timeline proves realistic, the building would be available for occupancy late in 2027.

- Summer 2025: Select and contract with an A/E firm
- Fall and Spring, 2025-26: Work with A/E to finalize programming requirements, design and contract documents.

- Summer 2026: Construction bidding and contractual process
  - Summer/Fall 2026: Begin construction
  - Summer 2027: Plan and implement FFE procurement
  - Fall 2027: Move into new facility
- ii. Cost estimates  
The estimated cost for renovation plus new construction is \$28,605,497.  
Reference Exhibit 1 Project Cost Estimate for details.
- iii. Financing explanation  
RRCC will leverage resources from college reserves and fund raising to complete this cash funded project.

#### **IV) APPENDICES**

- a. Supporting documents
- i. Exhibit 1: Project Cost Estimate
  - ii. Exhibit 2: Third Party Review Letter

## Exhibit 1: Project Cost Estimate

<b>COLORADO</b> Department of Higher Education								April 11, 2025
FY2026-27 Capital Construction / Capital Renewal Project Request - Cost Summary (CC CR-C)*								
(A)	(1) Funding Type (Cash, CCF, Cash & CCF):	Cash Funded		(2) Intercept Program Request? (Yes/No):		No		
(B)	(1) Institution:	Red Rocks Community College		(2) Name & Title of Preparer:		Bryan Bryant		
(C)	(1) Project Title:	Nursing and Health Imaging Building		(2) E-mail of Preparer:		bryan.bryant@rrcc.edu		
(D)	(1) Project Phase (Phase __ of __):	1-Jan-00		(2) State Controller Project # (if continuation):				
(E)	(1) Project Type (CC or CR):	Capital Construction (CC)		(2) Institution Signature Approval:		Landon K. Pirus, President		
(F)	(1) Year First Requested:	FY 26-27		(2) CDHE Signature Approval:				
(G)	(1) Priority Number (Leave blank for continuation projects):	___ of ___		(2) OSPB Signature Approval:				
(1)	(a) Project Budget Cost Components and Funding Sources	(b) Total Project Costs	(c) Total Prior Fiscal Year Appropriation(s)	(d) Current FY Request	(e) Year Two Request	(f) Year Three Request	(g) Year Four Request	(h) Year Five Request
<b>Land / Building - Acquisition / Disposition</b>								
(2)	Land Acquisition / Disposition	\$ 400,000	\$ -	\$ 400,000	\$ -	\$ -	\$ -	\$ -
(3)	Building Acquisition / Disposition	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
(4)	<b>Total Acquisition/Disposition Costs</b>	<b>\$ 400,000</b>	<b>\$ -</b>	<b>\$ 400,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
<b>Professional Services</b>								
(5)	Planning Documentation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
(6)	Site Surveys, Investigations, Reports	\$ 68,400	\$ -	\$ 68,400	\$ -	\$ -	\$ -	\$ -
(7)	Architectural/Engineering/ Basic	\$ 1,218,565	\$ -	\$ 1,218,565	\$ -	\$ -	\$ -	\$ -
(8)	Code Review/Inspection	\$ 114,000	\$ -	\$ 114,000	\$ -	\$ -	\$ -	\$ -
(9)	Construction Management	\$ 1,140,000	\$ -	\$ 1,140,000	\$ -	\$ -	\$ -	\$ -
(10)	Advertisements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
(11)	Other (Specify)	\$ 3,800	\$ -	\$ 3,800	\$ -	\$ -	\$ -	\$ -
(12)	Inflation Cost for Professional Services	\$ 101,791	\$ -	\$ 101,791	\$ -	\$ -	\$ -	\$ -
(13)	Inflation Percentage Applied		0.00%	4.00%	0.00%	0.00%	0.00%	0.00%
(14)	<b>Total Professional Services</b>	<b>\$ 2,646,556</b>	<b>\$ -</b>	<b>\$ 2,646,556</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
<b>Construction or Improvement (attached detailed cost estimate)</b>								
(15)	Infrastructure Service/Utilities	\$ 462,000	\$ -	\$ 462,000	\$ -	\$ -	\$ -	\$ -
(16)	Infrastructure Site Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
(17)	Structure/Systems/ Components							
(18)	Cost for New (GSF): 28,424	\$ 19,896,800	\$ -	\$ 19,896,800	\$ -	\$ -	\$ -	\$ -
(19)	New at \$ X GSF							
(20)	Cost for Renovation (GSF):	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
(21)	Renovation at \$ X GSF							
(22)	Cost for Capital Renewal (GSF):	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
(23)	Renewal at \$ X GSF							
(24)	Other (Specify)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
(25)	High Performance Certification Program	\$ 40,000	\$ -	\$ 40,000	\$ -	\$ -	\$ -	\$ -
(26)	Buy Clean Colorado Act	\$ 250,000	\$ -	\$ 250,000	\$ -	\$ -	\$ -	\$ -
(27)	Accessibility	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
(28)	Inflation for Construction	\$ 814,352	\$ -	\$ 814,352	\$ -	\$ -	\$ -	\$ -
(29)	Inflation Percentage Applied		0.00%	4.00%	0.00%	0.00%	0.00%	0.00%
(30)	<b>Total Construction Costs</b>	<b>\$ 21,463,152</b>	<b>\$ -</b>	<b>\$ 21,463,152</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
<b>Equipment and Furnishings</b>								
(31)	Equipment	\$ 1,500,000	\$ -	\$ 1,500,000	\$ -	\$ -	\$ -	\$ -
(32)	Furnishings	\$ 1,200,000	\$ -	\$ 1,200,000	\$ -	\$ -	\$ -	\$ -
(33)	Communications	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
(34)	Inflation for Equipment & Furnishings	\$ 108,000	\$ -	\$ 108,000	\$ -	\$ -	\$ -	\$ -
(35)	Inflation Percentage Applied		0.00%	4.00%	0.00%	0.00%	0.00%	0.00%
(36)	<b>Total Equipment &amp; Furnishings Cost</b>	<b>\$ 2,808,000</b>	<b>\$ -</b>	<b>\$ 2,808,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
<b>Miscellaneous</b>								
(37)	Art in Public Places	\$ -	\$ -	\$ 214,632	\$ -	\$ -	\$ -	\$ -
(38)	Relocation Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
(39)	Other Costs [specify]	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
(40)	Other Costs [specify]	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
(41)	Other Costs [specify]	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
(42)	<b>Total Misc. Costs</b>	<b>\$ 214,632</b>	<b>\$ -</b>	<b>\$ 214,632</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
<b>Total Project Costs</b>								
(43)	<b>Total Project Costs</b>	<b>\$ 27,532,339</b>	<b>\$ -</b>	<b>\$ 27,532,339</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
<b>Project Contingency</b>								
(44)	5% for New	\$ 1,073,158	\$ -	\$ 1,073,158	\$ -	\$ -	\$ -	\$ -
(45)	10% for Renovation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
(46)	<b>Total Contingency</b>	<b>\$ 1,073,158</b>	<b>\$ -</b>	<b>\$ 1,073,158</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
<b>Total Budget Request</b>								
(47)	<b>Total Budget Request</b>	<b>\$ 28,605,497</b>	<b>\$ -</b>	<b>\$ 28,605,497</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
<b>Funding Source</b>								
(48)	Capital Construction Fund (CCF)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
(49)	Cash Funds (CF)	\$ 28,605,497	\$ -	\$ 28,605,497	\$ -	\$ -	\$ -	\$ -
(50)	Reappropriated Funds (RF)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
(51)	Federal Funds (FF)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
(52)	Highway Users Tax Fund (HUTF)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
(53)	<b>Total Funds (TF)</b>	<b>\$ 28,605,497</b>	<b>\$ -</b>	<b>\$ 28,605,497</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

**Exhibit 2: Third Party Review Letter**



414 14th Street, Suite 300  
Denver, Colorado 80202  
[www.moaarch.com](http://www.moaarch.com)  
303.308.1190

April 14, 2025

Mark Bana, Director of Facilities  
Red Rocks Community College  
13300 West Sixth Avenue  
Lakewood, CO 80228

RE: Attestation or Estimate of Probable Cost  
FY 2026-27 CCCCR – Arvada Campus Expansion & Renovations


Mr. Bana,

I am writing to attest to the accuracy of the estimate of probable cost presented for the renovation and expansion of the Arvada Campus, to suit the growing Nursing and Health Sciences programs for Red Rocks Community College.

I have reviewed program and associated estimated costs for proposed project. Estimated project costs presented align with current local market and are similar to other colleges recently built.

Based on my professional opinion, as an Architect with experience in this project type, I believe the estimated costs presented for the program proposed is accurate and will properly fund this future project. If you have any questions, please feel free to reach out to discuss further.

Sincerely,  
MOA Inc. dba MOA ARCHITECTURE

  
Brian Konczak, DBIA, AIA, LEED AP BD+C  
Principal

