Attachment H
*UNAPPROVED*

**BOARD OF VISITORS BUILDINGS AND GROUNDS COMMITTEE**
**MINUTES**

**Monday, August 22, 2022**

**Open Session Meeting**

The Buildings and Grounds Committee of the Board of Visitors of Virginia Polytechnic Institute and State University convened on Monday, August 22, 2022 at 1:45 p.m. in open session in the Hokie Stone Room of the Newport News Center/Tech Center Research Park (700 Tech Center Parkway, Suite 305, Newport News, VA 23606). A quorum of the Committee was present.

**Board of Visitors Members**

| **Present:** | **Absent:** |
|---|---|
| Tish Long (Rector) | Carrie Chenery |
| Ed Baine | |
| Sharon Brickhouse Martin | |
| Shelly Butler Barlow (Committee Chair) | |
| David Calhoun | |
| Sandy Cupp Davis | |
| Greta Harris (Committee Member) | |
| C.T. Hill (Committee Member) | |
| Brad Hobbs | |
| Anna James | |
| Melissa Nelson | |
| Chris Petersen (Committee Member) | |
| Jeff Veatch | |

**Constituent Representative(s) Present:**
Robert Weiss (Faculty Representative)
Holli Drewry (Administrative and Professional Faculty Representative)
Serena Young (Staff Representative)
Jamal Ross (Undergraduate Student Representative)
Anna Buhle (Graduate Student Representative)

Also present were the following Virginia Tech staff members:
President Tim Sands, Lynsay Belshe, Bob Broyden, Brock Burroughs, Cyril Clarke, John Cusimano, Susan Duncan, Kari Evans, Mark Gess, Alan Grant, Kay Heidbreder, Patrick Hilt, Frances Keene, Chris Kiwus, Elizabeth McClanahan, Ken Miller, Liza Morris, Justin Noble, Kim O'Rourke, Mark Owczarski, Charlie Phlegar, Zohaib Qazi, Dan Sui, Dwyn Taylor, Jon Clark Teglas, Rob Viers, Tracy Vosburgh

1. **Welcome:** The Committee Chair convened the meeting and provided welcoming remarks.

2. **Approval of the Minutes from the June 2022 Meeting:** The Committee reviewed for approval the minutes from the June 2022 meeting.

   The minutes for the Committee's June 2022 meeting were approved.

*** Requires Full Board Approval**
**# Discusses Enterprise Risk Management Topic(s)**
**+ Discusses Strategic Investment Priorities Topic(s)**

**# + 3. Overview of the Capital Construction Program:** The Committee received an overview of the university's capital construction program from Bob Broyden, Associate Vice President for Campus Planning and Capital Financing. The Campus Planning and Capital Financing team provides leadership in the administration and management of all major capital outlay projects, which are defined as projects with a total project cost of $3 million or more inclusive of all expenditures necessary to complete the project, and/or projects involving the construction of 5,000 square feet or more. The university's current capital portfolio is valued at approximately $1.2 billion. Project managers work closely with sponsoring colleges and departments, future building users, and other project stakeholders to achieve project goals. Following milestone authorizations by the Board of Visitors, project managers coordinate all phases of a project from initiation through completion and close-out.

**# + 4. Acceptance of the Capital Project Status Report:** The Committee reviewed for acceptance the quarterly capital project status report from Dwyn Taylor, Assistant Vice President for Capital Construction. The Committee receives this report at each meeting in an effort to remain apprised of status, milestones, and updates related to active capital projects.

The Committee accepted the quarterly capital project status report.

**+ 5. Update on Agricultural Facilities:** The Committee received an update from Alan Grant, Dean of the College of Agriculture and Life Sciences, on agricultural facilities planning and construction. Dean Grant highlighted several areas of significant progress made to improve our agricultural facilities, including over $3.7 million in non-capital investments since 2019. The Committee expressed its appreciation for the Agricultural Research and Extension Center tours led by Dean Grant and team during this Board meeting.

**# + 6. Design Review for the Life, Health, Safety, Accessibility, and Code Compliance Project:** The Committee reviewed for approval a Design Review for the Life, Health, Safety, Accessibility, and Code Compliance project. Ensuring the safety, health, and accessibility of the campus environment is critical to the long-term success of the university and its service to the Commonwealth. This project is the first priority of three high priority accessibility initiatives identified by the university in the Life, Health, Safety, Accessibility, and Code Compliance category of the 2018-2024 Capital Outlay Plan. The project is scoped to create a new accessible route on an existing primary pedestrian corridor which will support equal access to key facilities in the North Academic District. The project is in the working drawings phase with construction anticipated to begin November of 2022 and to attain substantial completion November of 2023. The university received total project funding of $10.4 million in Life, Health, Safety, Accessibility, and Code Compliance funds from the state for three projects, $4.97 million of which will be applied to the first priority project.

The Committee approved the Design Review for the Life, Health, Safety, Accessibility, and Code Compliance project.

**# + 7. Overview of the Campus Master Plan:** The Committee received an overview of Beyond Boundaries 2047: The Campus Plan from Liza Morris, Assistant Vice President for Planning and University Architect. The current plan was approved by the Board of Visitors in November 2018. It guides the university as it imagines and develops the physical campus through 2047. The plan builds upon the Beyond Boundaries vision to ensure appropriate capacity in facilities and infrastructure. Since its completion, the plan has received two national achieivement awards. In

2019, the Society for College and University Planning awarded the university the Excellence in Planning for an Existing Campus Merit Award for its innovative, collaborative, multidisciplinary, and integrated approaches to planning and design. In 2021, the university received the Excellence in Landscape for Open Space Planning Award (also awarded by the Society for College and University Planning) for universal design features within the plan set to boost campus accessibility and mobility.

\+ **8. Resolution to Adopt the 2022 Student Life Village Master Plan:** The Committee held a robust discussion regarding the 2022 Student Life Village Master Plan. The university has prepared the Student Life Village master plan to guide the physical development of a new residential district in supplement to the 2018 Campus Master Plan. The plan sets forth a long-range vision that builds off the goals, objectives, and aspirations of the master plan and the university's strategic plan. The planning process for the Student Life Village included engagement with campus executive leadership, a broad range of constituents including students, and was shaped by the technical expertise of campus stakeholders. The plan incorporates analysis of land use, residential program needs, landscape, building massing, scale, and siting. Additionally, the plan evaluated and incorporated layers of infrastructure including mobility and accessibility, utilities and stormwater, technology, and safety. The topic will be discussed in more detail at the November Board meeting.

**9. Future Agenda Items and Closing Remarks:** The Committee discussed potential topics for inclusion on future meeting agendas.

There being no further business, the meeting adjourned at 4:16 p.m.

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*** Requires Full Board Approval**
**# Discusses Enterprise Risk Management Topic(s)**
**+ Discusses Strategic Investment Priorities Topic(s)**

**Joint Open Session with the Finance and Resource Management Committee**

The Buildings and Grounds Committee and the Finance and Resource Management Committee of the Board of Visitors of Virginia Polytechnic Institute and State University convened on Monday, August 22, 2022 at 4:16 p.m. in joint open session in the Hokie Stone Room of the Newport News Center/Tech Center Research Park (700 Tech Center Parkway, Suite 305, Newport News, VA 23606). A quorum of the joint Committee was present.

**Board of Visitors Members**

**Present:**
Tish Long (Rector)
Ed Baine (Committee Chair)
Sharon Brickhouse Martin
Shelly Butler Barlow (Committee Chair)
David Calhoun
Sandy Cupp Davis
Greta Harris (Committee Member)
C.T. Hill (Committee Member)
Brad Hobbs (Committee Member)
Anna James (Committee Member)
Melissa Nelson
Chris Petersen (Committee Member)
Jeff Veatch

**Absent:**
Carrie Chenery

**Constituent Representative(s) Present:**
Robert Weiss (Faculty Representative)
Holli Drewry (Administrative and Professional Faculty Representative)
Serena Young (Staff Representative)
Jamal Ross (Undergraduate Student Representative)
Anna Buhle (Graduate Student Representative)

Also present were the following Virginia Tech staff members:
President Tim Sands, Callan Bartel, Lynsay Belshe, Bob Broyden, Brock Burroughs, Cyril Clarke, John Cusimano, Kari Evans, Mark Gess, Kay Heidbreder, Patrick Hilt, Frances Keene, Chris Kiwus, Elizabeth McClanahan, Nancy Meacham, Ken Miller, Liza Morris, Justin Noble, Kim O'Rourke, Mark Owczarski, Charlie Phlegar, Zohaib Qazi, Dan Sui, Don Taylor, Dwyn Taylor, Jon Clark Teglas, Rob Viers, Tracy Vosburgh

* 1. **Approval of Resolution for a Capital Project for Building Envelope Improvements:** The Committees reviewed a resolution for a capital project for building envelope improvements for approval. The resolution is for a $47.2 million authorization to complete building envelope improvements.

The Committees recommended the Resolution for Building Envelope Improvements to the full Board for approval.

There being no further business, the meeting adjourned at 4:31 p.m.

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*** Requires Full Board Approval**
**# Discusses Enterprise Risk Management Topic(s)**
**+ Discusses Strategic Investment Priorities Topic(s)**

Attachment H

**Open Session Agenda**

**BUILDINGS AND GROUNDS COMMITTEE**

**Monday, August 22, 2022**

*Open session meeting begins at 1:30 p.m.*
*in the Hokie Stone Room of the Tech Center Research Park.*

| | | Agenda Item | Reporting Responsibility |
|---|---|---|---|
| | **1.** | Welcome | Committee Chair |
| | **2.** | Approval of the Minutes from the June 2022 Meeting | Committee Chair |
| **# +** | **3.** | Overview of the Capital Construction Program | Bob Broyden |
| **# +** | **4.** | Acceptance of the Capital Project Status Report | Dwyn Taylor |
| **+** | **5.** | Update on Agricultural Facilities | Alan Grant |
| **# +** | **6.** | Design Review for the Life, Health, Safety, Accessibility, and Code Compliance Project | Liza Morris |
| **# +** | **7.** | Overview of the Campus Master Plan | Liza Morris |
| *** +** | **8.** | Resolution to Adopt the 2022 Student Life Village Master Plan | Bob Broyden<br>Frances Keene<br>Liza Morris |
| | **9.** | Future Agenda Items and Closing Remarks | Committee Chair |

*** Requires Full Board Approval**
**# Discusses Enterprise Risk Management Topic(s)**
**+ Discusses Strategic Investment Priorities Topic(s)**

**Open Joint Session Agenda**

**FINANCE AND RESOURCE MANAGEMENT COMMITTEE**
**AND BUILDINGS AND GROUNDS COMMITTEE**

**3:45 p.m.**

**Hokie Stone Room, Newport News Center / Tech Center Research Park**

**August 22, 2022**

| | Agenda Item | Reporting Responsibility |
|---|---|---|
| * 1. | Approval of Resolution for a Capital Project for Building Envelope Improvements | Ken Miller<br>Chris Kiwus<br>Bob Broyden |

*** Requires full Board approval**
**# Discusses Enterprise Risk Management topic(s)**
**+ Discusses Strategic Investment Priorities topic(s)**

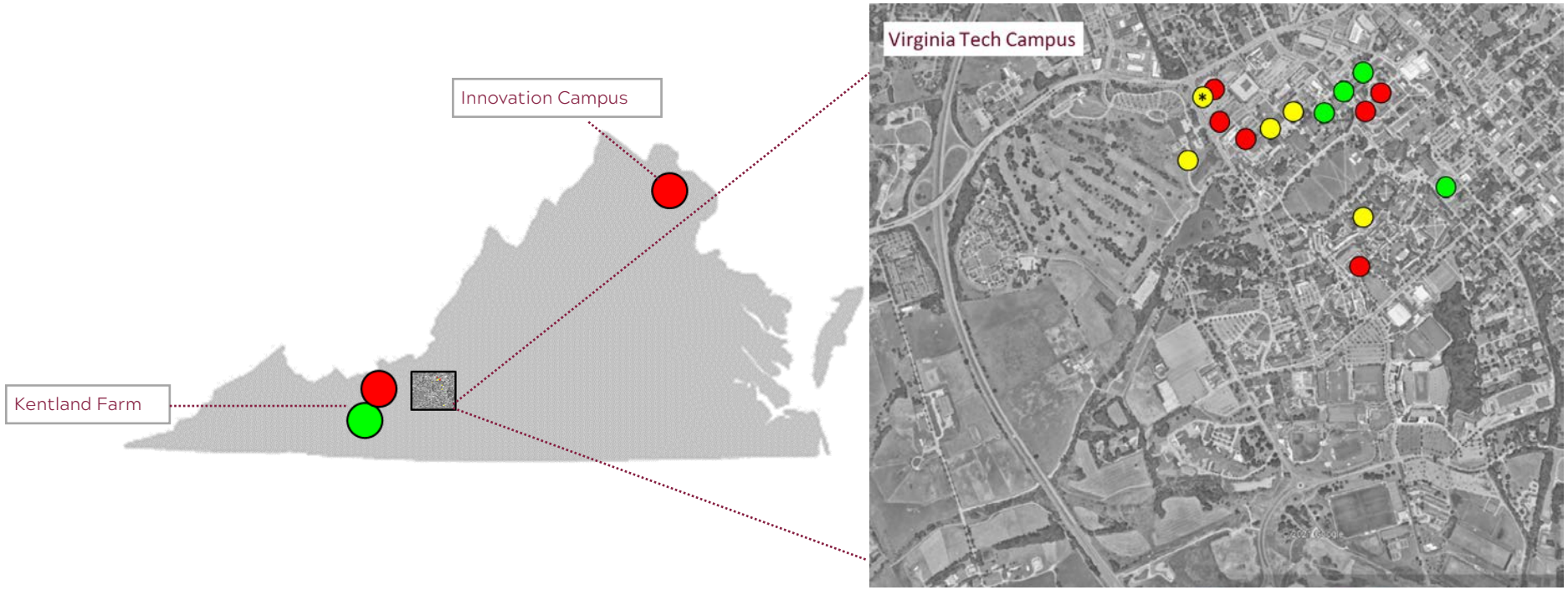
# OVERVIEW OF THE CAPITAL CONSTRUCTION PROGRAM

BOB BROYDEN
ASSOCIATE VICE PRESIDENT FOR CAMPUS PLANNING AND CAPITAL FINANCING
AUGUST 22, 2022

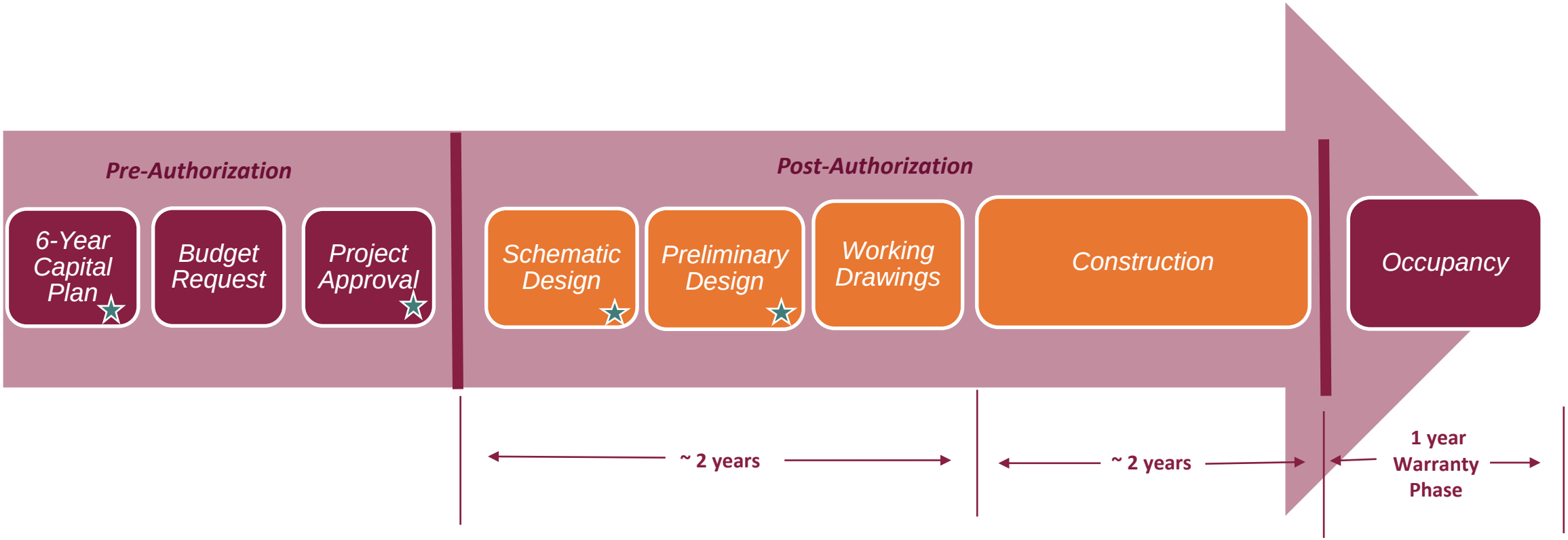
# Program

Current portfolio:

- 18 authorized projects -- active and complete (w/in 1-year warranty phase)
- Total value of ~$1.2B
- Adds ~1.6M gross square feet (GSF) of new construction
- Renovates nearly 300K GSF of existing space



# Overall Process

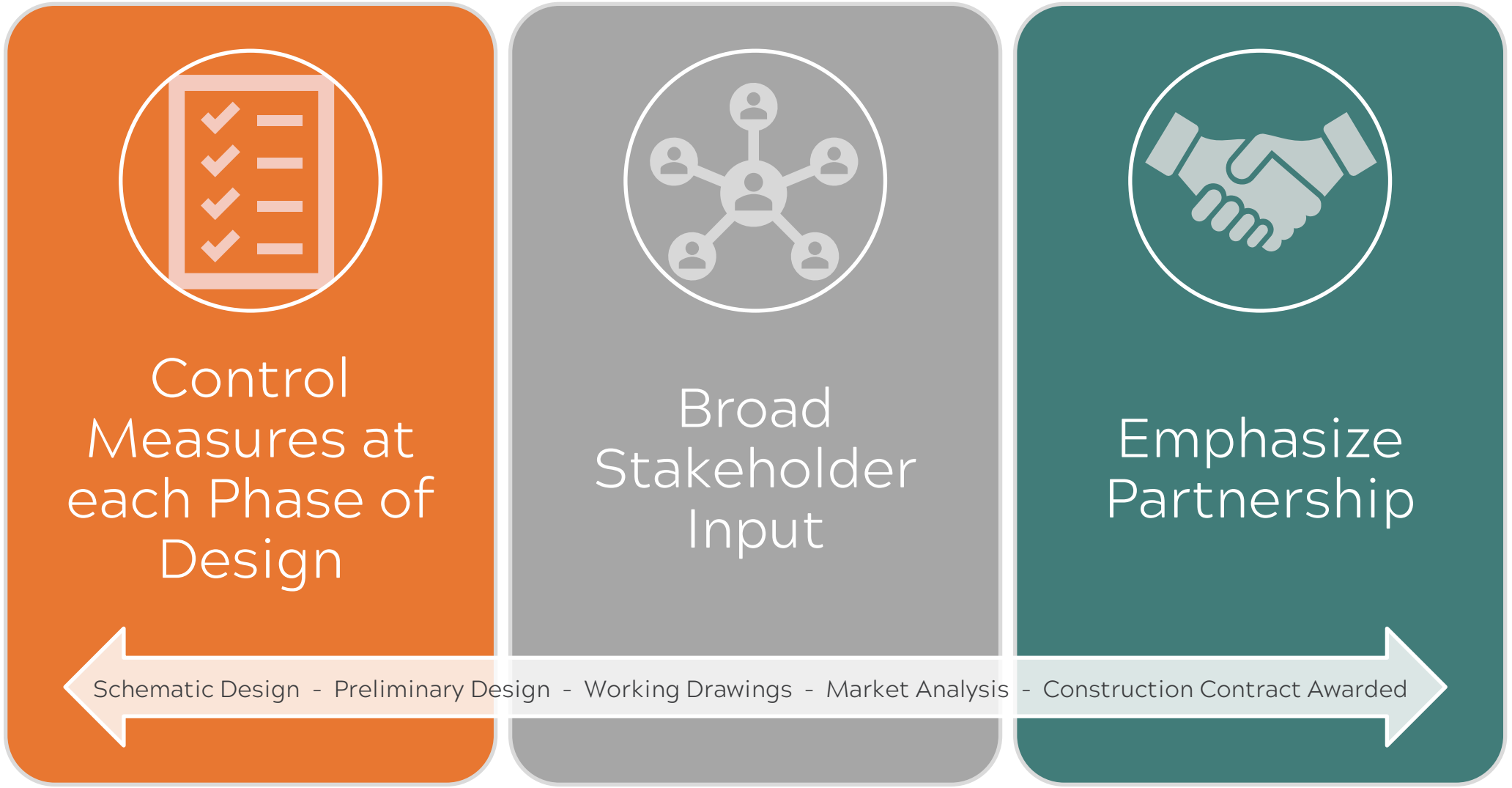



★ - *Buildings and Grounds review & approval*

# Our Project Managers are the "Hub"



# Ensuring Design Excellence



# Ensuring Construction Excellence

**Competitive Sealed Bids**
***"Design-Bid-Build"***

**Construction Manager at Risk**

**Design - Build**

# BOV Capital Project Report

## New Upper Quad Residence Hall

**CM at Risk**
**BOV Authorized**

**Status:**

- Project on track (50% complete)

**Next Actions:**

- Anticipated completion in August 2023

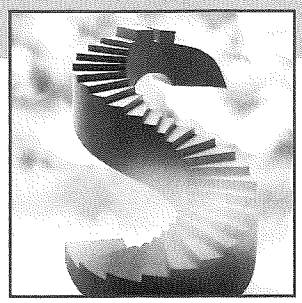
LEGEND: Design | Construction | SD = Schematic Design | PD = Prelminary Design | WD = Working Drawings

| Project Title | Total Project Budget ($M) | Construction Budget ($M) (Construction contract value) | New Const (GSF) | Renovation (GSF) | CY 2022 JAN-MAR | CY 2022 APR-JUN | CY 2022 JUL-SEP | CY 2022 OCT-DEC | CY 2023 JAN-MAR | CY 2023 APR-JUN | CY 2023 JUL-SEP | CY 2023 OCT-DEC | CY 2024 JAN-MAR | CY 2024 APR-JUN | CY 2024 JUL-SEP | CY 2024 OCT-DEC | CY 2025 JAN-MAR | CY 2025 APR-JUN | CY 2025 JUL-SEP | CY 2025 OCT-DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | FY22 | | | | FY23 | | | | FY24 | | | | FY25 | | | | FY26 | |
| | | | | | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 |
| New Upper Quad Residence Hall | $42.0 | $32.0 | 56,650 | | | | | | | | | | | | | | | | | |

Designer: Clark - Nexsen

Builder: Vannoy

# Discussion



# The High Cost of Building a Better University

*by Donald J. Guckert and Jeri Ripley King*

Higher education design and construction project managers perform their work on the forward-edge of an ever-changing world. We face increasingly complex facilities, shortening timelines, proliferating code and regulatory requirements, emerging technologies, and growing concerns for indoor air quality and environmental sustainability. As we strive to keep abreast of these changes, we continue to hear one question from governing boards, administrators, and customers: "Why does it cost so much?"

We cannot deny that educational facilities cost more to build than many other types of construction. Even in the realm of education, there is a hierarchy ranging from sophisticated research facilities to parking structures. Yet, all our facilities seem to come at a premium cost. Lower cost alternatives are always available, but our institutions choose, instead, to build to a quality level that is above the baseline. These choices flow from the institution's vision and strategic plan. The facilities we construct reflect the values and aspirations of our institutions.

## A Sense of Place

Many universities are vying for national and international recognition. To do this, they compete for students, faculty, and research funding. More than ever before, university building designs are viewed as enhancing and preserving our institutional heritage, while creating an attractive environment in which to learn, discover, and live. We do not just build or renovate structures; we create a "sense of place."

***Don Guckert is associate vice president and director of the facilities services group at the University of Iowa, Cedar Falls, Iowa. He serves as dean of planning, design, and construction for APPA's Institute for Facilities Management, and he can be reached at don-guckert@uiowa.edu. Jeri King is senior management analyst for planning, design, and construction at the University of Missouri-Columbia. She can be reached at kingj@missouri.edu.***

Clearly, this "sense of place" plays an important role in marketing the institution. In a 2001 study of college-bound high school seniors by Noel-Levitz, a market-research firm, the most notable experiences seniors encountered on their best college visit had to do with the appearance of the campus and its facilities. This study confirmed the report by the Carnegie Foundation for the Advancement of Teaching in 1986 that found 62 percent of prospective students thought that "appearance of the grounds and buildings was the most influential factor during a campus visit."

The attractive appearance of the grounds and buildings comes at a cost. In constructing a new building for a campus environment, we seek elaborate designs that convey emotions and reactions that range from stimulating debates over architecture to communicating notions of continuity and timelessness. Often the little extras add a lot to the quality of the built campus environment: prominent building entrances, buried utilities in tunnels and chases, hidden downspouts in interior walls, screened waste receptacles, underground cooling towers, discrete access for service vehicles, and extensive landscaping and courtyards.

Land must be used carefully, with attention to gathering places and circulation. The need for green space must balance the need for building space. This drives us to optimize building footprints, by building skyward and below grade to conserve precious campus real estate. Multiple stories require more costly foundations and structures designed to withstand seismic and wind loading standards. Stair towers and elevators consume project resources and decrease the percentage of assignable space. All these factors lead to a higher cost per square foot.

## Codes, Regulations, and Standards

The type of occupancy determines the applicable building code requirements. The large assemblies, found in most university facilities, dictate the highest level of life safety design. These code requirements have a tremendous impact on cost by requiring stair towers, fire rated corridors, fireproofing on structural members, fire alarm systems, sprinklers, and

An often-overlooked impact on cost is the expectation that construction activities will be conducted with minimal disruption to campus life.

smoke evacuation systems. Even the grade of carpeting in a university facility is selected to minimize concerns about flame spread.

In addition to codes, building design and construction must meet a myriad of legislative mandates and regulations. The list reads like alphabet soup: ADA, EPA, OSHA, and more. These laws and agencies govern building accessibility, removal of hazardous waste, asbestos, light ballasts, lead paint, storm water runoff, construction dust control, noise control, and more. Then, there are the state permits, local permits, contracts, agreements, and requirements by donors and funding agencies that must be managed.

The type of facility and occupancy also drives ventilation requirements. Labs require more ventilation than classrooms; classrooms require more ventilation than offices. Increased ventilation leads to upsizing HVAC systems, because outside air must be heated or cooled before it is delivered to the finished space. In a trend toward thwarting indoor air-quality problems, building mechanical codes have increased ventilation requirements far beyond the infrastructure capacities in many buildings built before the 1990s. The impact is profound on renovation projects where HVAC costs alone can consume the majority of the project budget.

## Institutional and Statutory Requirements

Institutional and statutory requirements can drive up costs, too. Contractors must provide the highest industry coverage for insurance and bonding and construct in accordance with the highest industry standards. Architects may be required to furnish professional liability insurance. Public owners must follow state procurement statutes, which increase design and bidding costs and constrain the use of more cost effective delivery approaches. Many institutions require contractors to pay prevailing wages to their workers, equating to union-scale.

An often-overlooked impact on cost is the expectation that construction activities will be conducted with minimal disruption to campus life. The campus is a protected environment that accommodates learning, social interaction, discovery, living, dining, recreation, and public service. As invited guests into this haven, contractors are required to conduct their activities in a manner that minimizes the impact on the institution's primary missions. This is not a typical construction site. Project costs go up dramatically when universities restrict access to building sites; limit space for staging; require off-campus parking; enforce jobsite cleanliness, add fencing and protection; route construction vehicles around, rather than through the campus; limit noise and hours of operation; and impose complex phasing schemes to accommodate academic calendars.

## Time is Money

Demanding schedules are an inherent part of higher education design and construction efforts. In general, shortening the timeline will drive up costs, lengthening the schedule will drive them down. An aggressive three-month renovation will be unaffordable if we only allow six weeks for completion of the work. Conversely, easing the schedule to six months will yield savings.

Contractors, when bidding a shortened schedule, will increase their bids to reflect overtime payments to workers, incentive payments to vendors, reduced worker productivity, and contingencies to cover the risks of falling behind schedule or completing late. On the other hand, extra time in the schedule reduces the contractor's risk, facilitates effective coordination among subcontractors, provides sufficient time for fabrication and delivery of materials and equipment, and other accommodations that result in a more cost-effective project delivery.

More often than not, we aggressively work toward inflexible milestones, such as semester starts and athletic event schedules. In research environments, the need to be up-and-running is paramount. When the higher education environment demands design and construction projects delivered on increasingly shorter timelines, this drives up the cost of university projects.

## Complexity

The facilities we build are among the most challenging in the building construction industry. We build state-of-the-art research facilities, high occupancy performance and athletic venues, heavily trafficked and technological learning environments, and living and social environments that must appeal to a new generation. In short, we are constructing complex communities.

Program activities often dictate the need for a combination of classrooms, laboratories, meeting rooms, and offices. While grouping one type of activity in a facility would reduce costs, our buildings rarely house only one type of activity. In addi-

*Continued on page 21*

We are resolved not to repeat the shortsighted mistakes that were made by a previous generation of campus administrators and facilities managers.

*Continued from page 19*

tion, they must meet the functional requirements of the campus environment.

For example, classrooms and auditoriums are usually on the lower levels of a building and demand larger, column-free spans. The lower levels may then have to support upper floors designed to accommodate floor loadings for bookshelves and lab equipment. Inverting these spaces, by placing the column-free classrooms on the upper floors and the heavy load-bearing spaces on the lower floors, would be more cost effective, but less functional in a campus setting.

Our facilities must accommodate a mix of functions and heavy traffic. To manage this, we install complex building systems. Mechanical systems are designed for extreme conditions: hottest and coldest temperatures, humidity extremes, strictest climate control, and highest occupancy. We recognize that the design of a mechanical system represents the greatest opportunity for energy conservation in the future. Investments in energy efficient mechanical systems will yield a lower stream of future utility costs.

## Maintainability, Sustainability, and Longevity

Good stewardship involves constructing buildings that will last, buildings that can be easily maintained, and buildings that can be converted to other programmatic or technologic uses in the future.

With many people using university facilities in frequent cycles throughout the course of a day, not only do the structures need to be able to handle this, but also the components of these facilities must be of a quality to withstand constant heavy use and abuse. Because of the campus building boom in the 1960s, we know all too well the consequences of cheaper designed and constructed facilities that were not built to survive the test of time. Our requirement for durability raises the price of doors, door hardware, carpeting, entrance mats, floor tile, and restroom fixtures, but it lowers the future costs of maintaining and replacing the lower quality products. We are resolved not to repeat the shortsighted mistakes that were made by a previous generation of campus administrators and facilities managers.

The way we use our facilities demands that we construct utility systems within the building to high reliability standards. This often results in paying for system redundancies, generators, uninterruptible power supply systems, harmonics reduction, and central utility systems. In addition, telecommunication/computer wiring and pathways are often over-built to enable user flexibility, and save the expense of rewiring and reconstructing walls or ceilings in the near future. We have learned that planning for tomorrow can cut down on the costs of retrofitting existing buildings.

Environmental sustainability is another factor having an increasing impact on construction costs within higher education. An emerging trend on campuses, facilities are being constructed with recyclable materials, materials are certified as manufactured from renewable sources, and building and system designs are using progressive methods and technologies to conserve energy and reduce the waste stream. Pursuing Leadership in Energy and Environmental Design, or LEED certification, developed by the U.S. Green Building Council, brings the prestige and positive publicity sought by many institutions seeking a progressive and environmentally sensitive image. However, this comes at a higher cost.

Making these long-term, sound, investment choices is what separates higher education from the vast array of other building environments. Higher education, more than any other built community and commercial environment, constructs buildings to last beyond our lifetimes. Every institution with an active building program envisions itself in existence into perpetuity. We make the choice to invest in higher quality construction of our campus, in part, because we have so many years ahead of us to reap the benefits on these initial investments.

## Why Does it Cost so Much?

It is said that excellence is in the details. Thousands of details go into the construction of a university building. Rarely can we point to one item as driving the high project cost. The high cost of university construction is caused by the accumulation of investments in all of the details that go into building a quality facility. If we are to compete with the best institutions, we must meet the demands for higher quality facilities.

Construction costs mirror the values and aspirations of the institution. Our universities choose to provide stimulating, enriching environments that will serve our students, faculty, and researchers well into the future. We are building a better university, one that is built on the traditions of the past and constructed to compete for faculty and students into the next century.

Attachment H

# CAPITAL PROJECTS UPDATE

PREPARED FOR THE BUILDINGS AND GROUNDS COMMITTEE OF THE BOARD OF VISITORS

DWYN TAYLOR
ASSISTANT VICE PRESIDENT FOR CAPITAL CONSTRUCTION
AUGUST 22, 2022

VIRGINIA TECH | 150

# Project Portfolio

- 18 authorized projects -- active and complete (w/in 1-year warranty phase)
- Total value of ~$1.2B
- Adds ~1.6M gross square feet (GSF) of new construction
- Renovates nearly 300K GSF of existing space

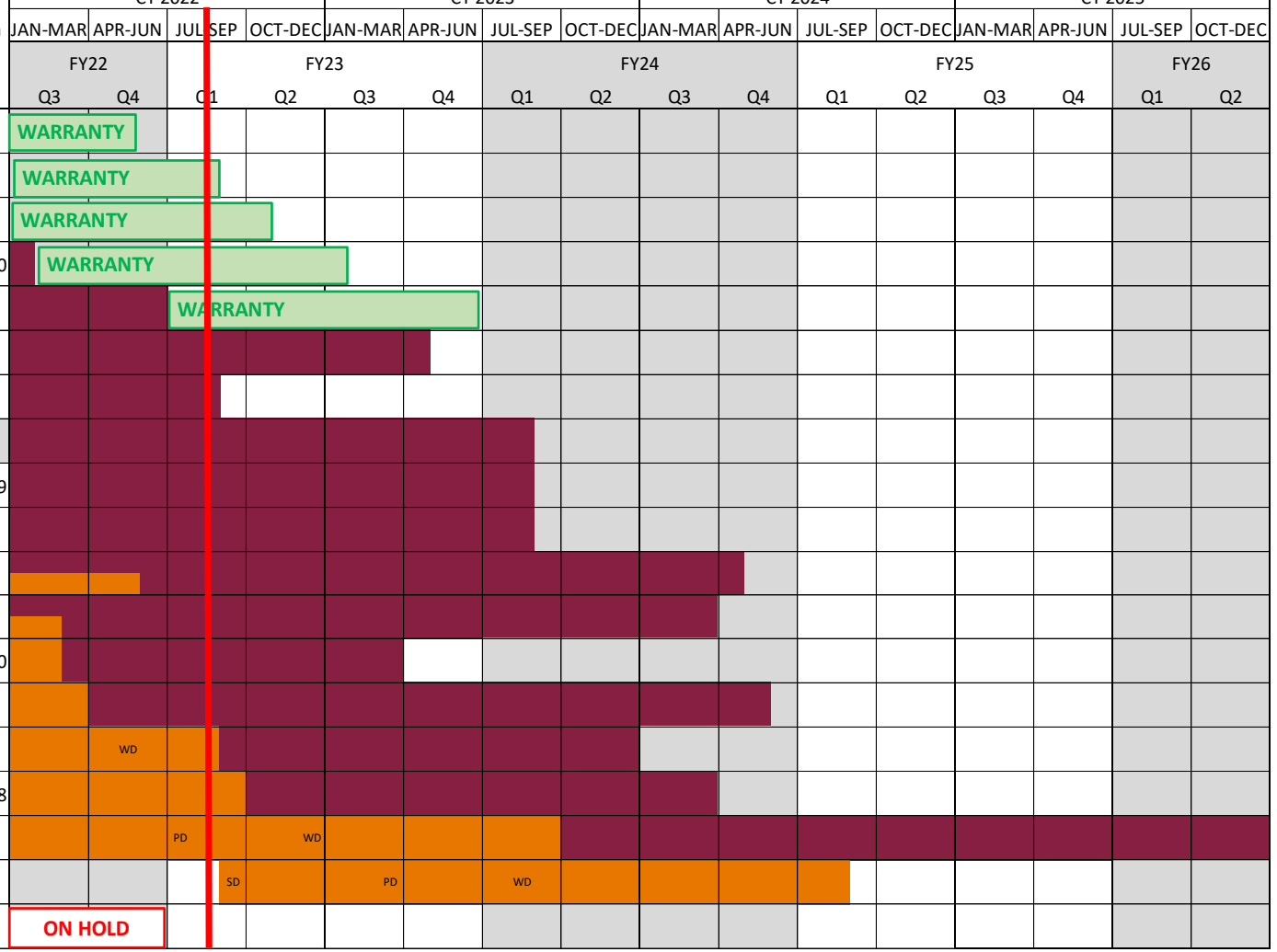
# Capital Construction Executive Summary (Progressive)

Attachment H

Date Prepared: 15 JUL 2022

**LEGEND:** Design | Construction | **SD = Schematic Design** | **PD = Prelminary Design** | **WD = Working Drawings**

| Project Title | Total Project Budget ($M) | Construction Budget ($M) *(Construction contract value)* | New Const (GSF) | Renovation (GSF) |
|---|---|---|---|---|
| Improve Kentland Facilities (Phase II) -- Various Locations | $12.5 | $10.1 | 28,403 | |
| Creativity & Innovation District Living Learning Community | $105.5 | $85.3 | 232,000 | |
| Gas-Fired Boiler at Central Steam Plant | $8.2 | $3.8 | N/A | |
| Holden Hall Renovation | $74.9 | $58.5 | 82,905 | 20,240 |
| Chiller Plant Phase II | $42.9 | $32.7 | N/A | |
| Data & Decision Sciences Building (D&DS) | $79.0 | $58.9 | 120,000 | |
| Livestock & Poultry Research Facilities (Ph I) -- Various Locations | $25.3 | $18.2 | 129,100 | |
| Multi-Modal Transit Facility (Note 1) | N/A | N/A | 13,606 | |
| Corps Leadership & Military Science Building | $52.0 | $37.9 | 65,428 | 8,449 |
| New Upper Quad Residence Hall | $42.0 | $32.0 | 56,650 | |
| Innovation Campus - Academic Building (Note 2) | $302.1 | $226.3 | 299,733 | |
| HITT Hall (Note 2) | $85.0 | $65.5 | 101,000 | |
| Dietrick Renovation | $9.1 | $6.8 | 6,298 | 11,960 |
| Undergraduate Science Laboratory Building | $90.4 | $69.5 | 102,746 | |
| Life, Health, Safety, Accessibility and Code Compliance (Note 3) | $10.4 | $3.7 | | |
| Student Wellness Improvements | $70.0 | $54.6 | | 217,708 |
| Mitchell Hall (Replace Randolph Hall) | $248.0 | $185.0 | 284,000 | |
| Planning: New Business Building -- *Design Only* | $8.0 | $60.6M | 104,000 | |
| Global Business & Analytics Complex Residence Halls | | | | |
| **TOTALS** | **$1,265.3** | | **1,625,869** | **258,357** |

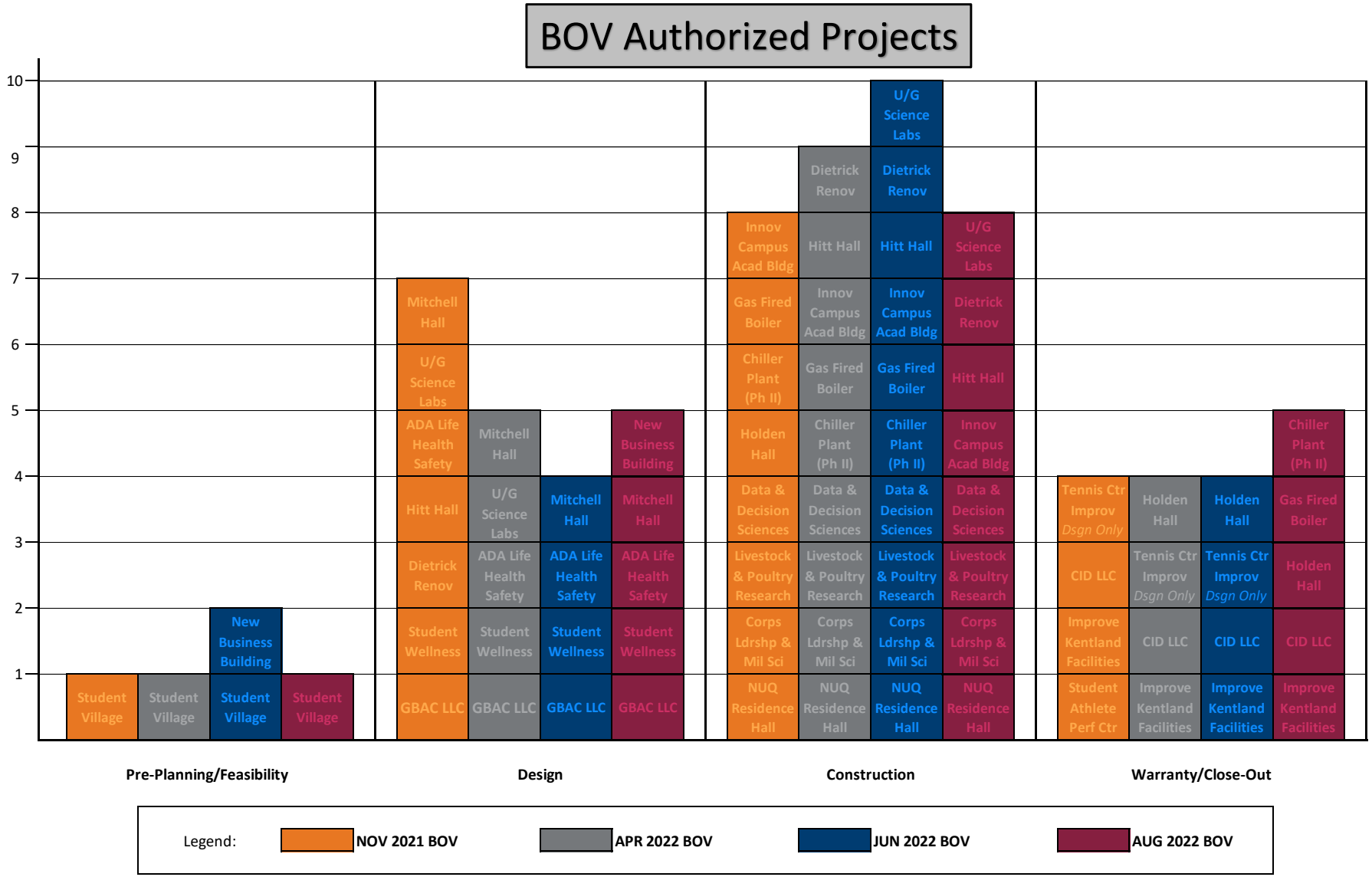



Note 1: Non-VT project

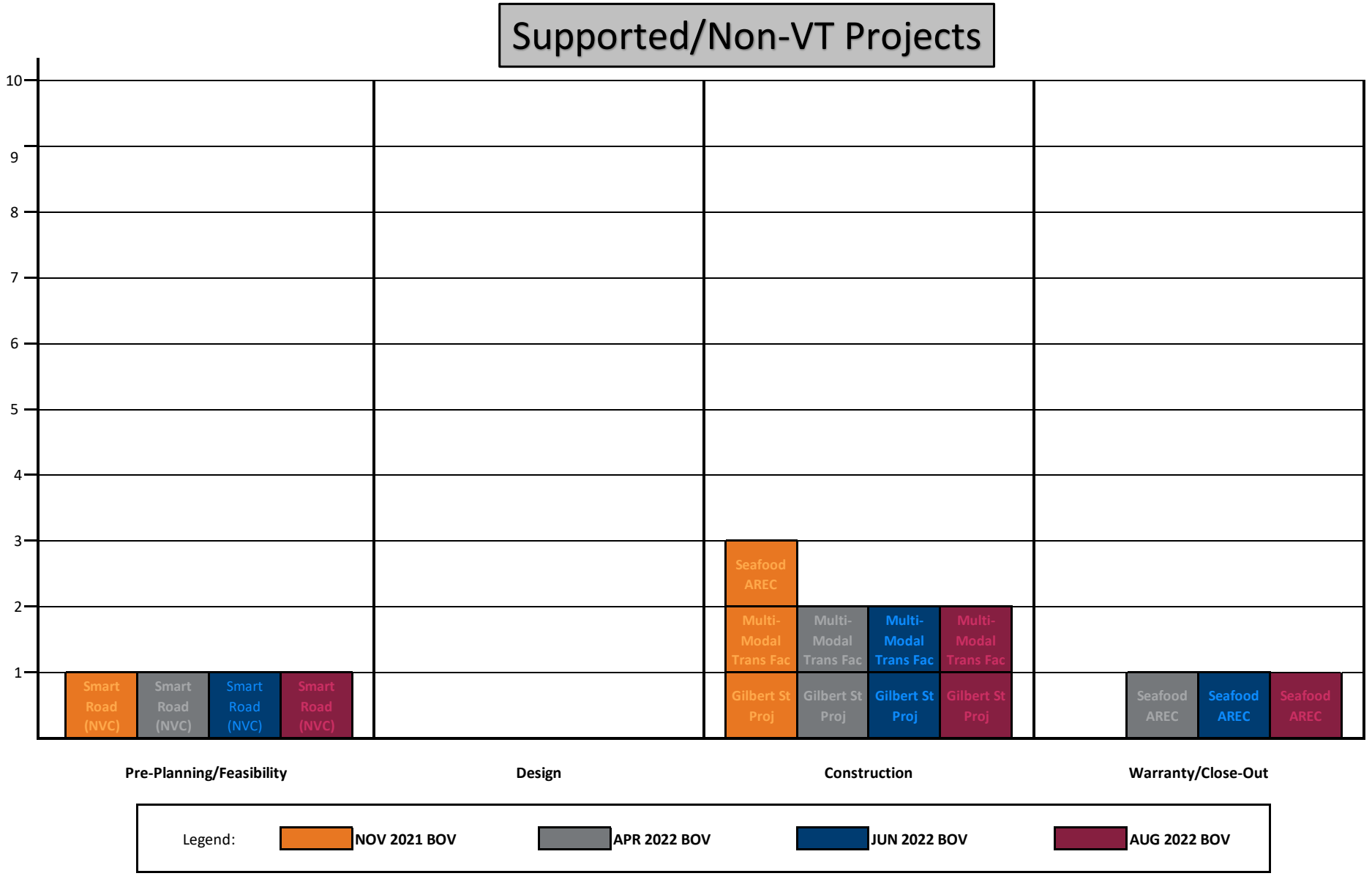
Note 2: Multiple GMPs results in design/construction overlap (fast track)

Note 3: Project will be executed in prioritized sub-projects; first priority sub-project has a construction budget of $3.7M

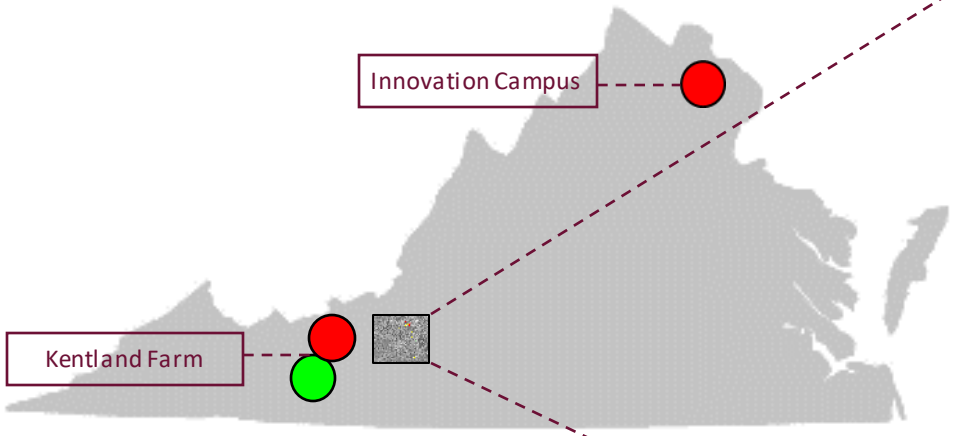
# Project Portfolio Distribution



# Project Portfolio Distribution

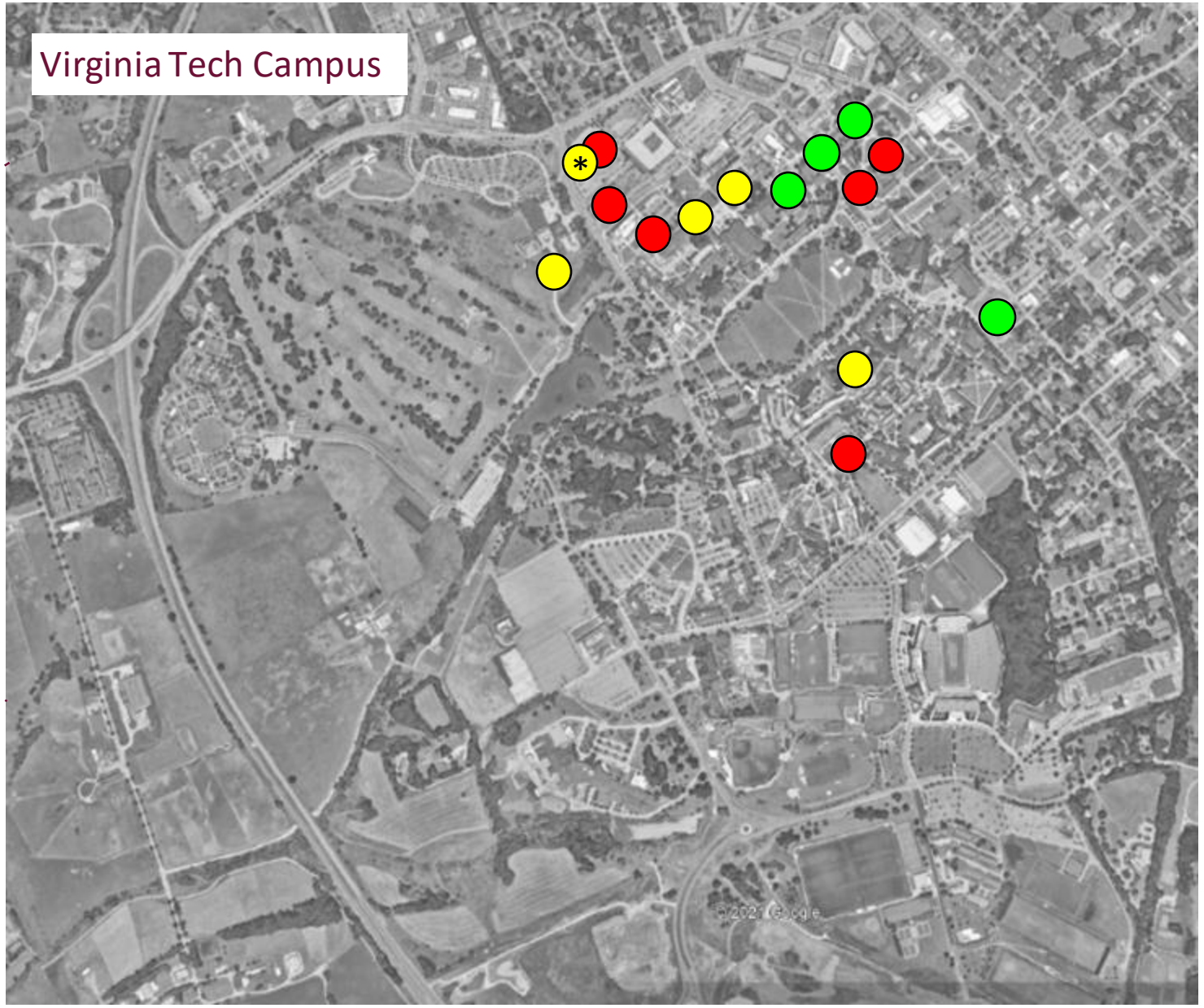


# Capital Project Portfolio




Legend

- = In Design
- = Under Construction
- = Warranty/Complete
- * = *Design only*



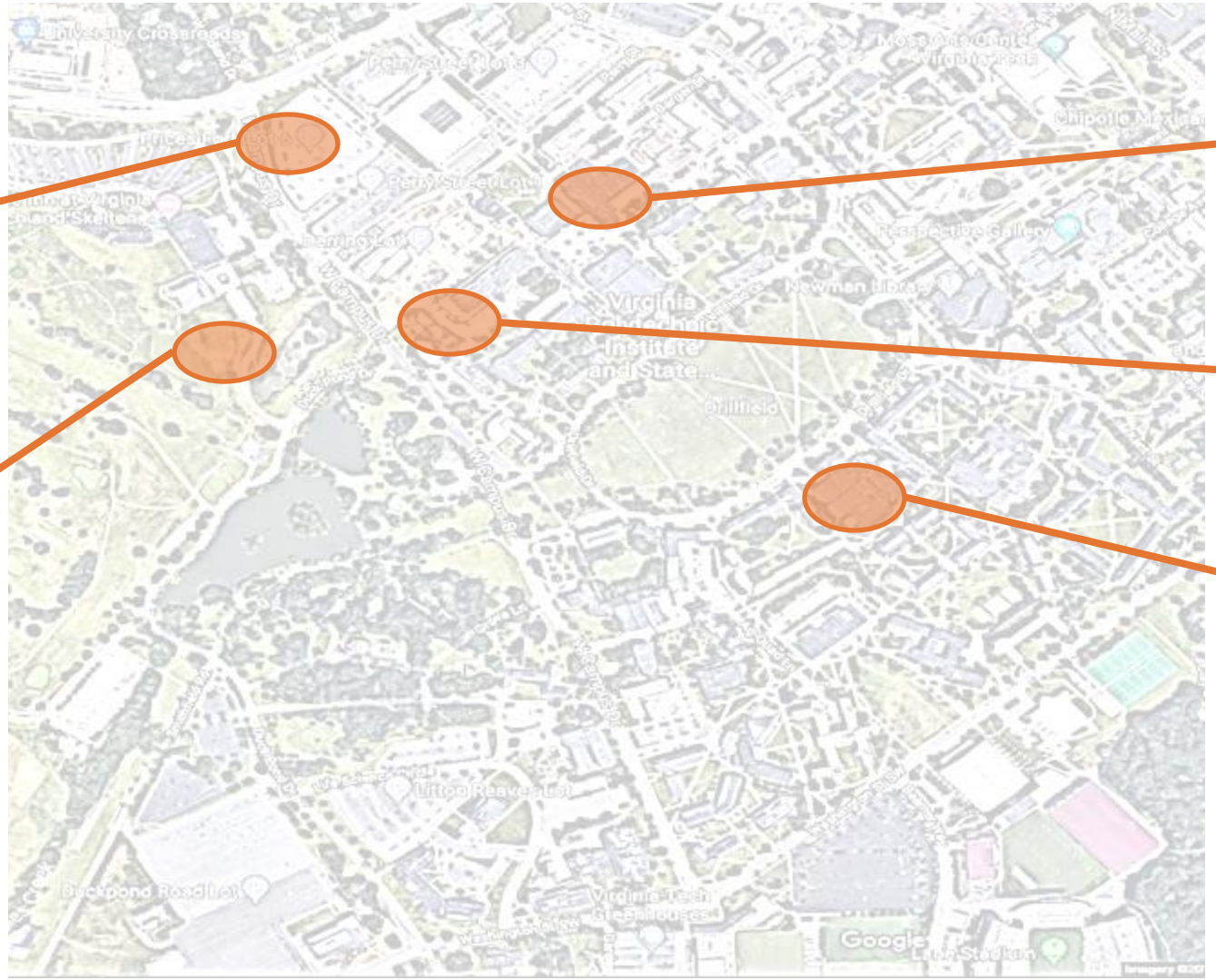
# In Design

# Projects In Design

New College of Business*

*A/E Procurement underway for design

GBAC LLCs *(On Hold)*



Mitchell Hall

Life, Health, Safety, Accessibility

Student Wellness Improvements*

*Pricing underway for construction

# Mitchell Hall
## *(Replace Randolph Hall)*

**CMaR**
**State Authorized**

Status:

- Project fully authorized for construction by General Assembly
- Schematic Design Phase complete
- Preliminary Design initiated
- CMaR pre-construction services contract is underway

Next Actions:

- BOV Preview (targeted for November 2022 session)

LEGEND: Design | Construction | SD = Schematic Design | PD = Prelminary Design | WD = Working Drawings

| Project Title | Total Project Budget ($M) | Construction Budget ($M) *(Construction contract value)* | New Const (GSF) | Renovation (GSF) | CY 2022 JAN-MAR | CY 2022 APR-JUN | CY 2022 JUL-SEP | CY 2022 OCT-DEC | CY 2023 JAN-MAR | CY 2023 APR-JUN | CY 2023 JUL-SEP | CY 2023 OCT-DEC | CY 2024 JAN-MAR | CY 2024 APR-JUN | CY 2024 JUL-SEP | CY 2024 OCT-DEC | CY 2025 JAN-MAR | CY 2025 APR-JUN | CY 2025 JUL-SEP | CY 2025 OCT-DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | FY22 | | FY23 | | | | FY24 | | | | FY25 | | | | FY26 | |
| | | | | | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 |
| Mitchell Hall (Replace Randolph Hall) | $248.0 | $185.0 | 284,000 | | | | PD | | | | | WD | | | | | | | | |

Designer: Perkins & Will

Builder: Skanska

# Planning: New Business Building

**CMaR**
**State Authorized**

Status:

- A/E procurement underway

Next Actions:

- Finalize A/E selection/contracting process and initiate design
- Targeting BOV Construction Authorization in summer 2023

LEGEND: Design | Construction | SD = Schematic Design | PD = Prelminary Design | WD = Working Drawings

| Project Title | Total Project Budget ($M) | Construction Budget ($M) *(Construction contract value)* | New Const (GSF) | Renovation (GSF) | CY 2022 JAN-MAR | CY 2022 APR-JUN | CY 2022 JUL-SEP | CY 2022 OCT-DEC | CY 2023 JAN-MAR | CY 2023 APR-JUN | CY 2023 JUL-SEP | CY 2023 OCT-DEC | CY 2024 JAN-MAR | CY 2024 APR-JUN | CY 2024 JUL-SEP | CY 2024 OCT-DEC | CY 2025 JAN-MAR | CY 2025 APR-JUN | CY 2025 JUL-SEP | CY 2025 OCT-DEC |
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| | | | | | FY22 | | FY23 | | | | FY24 | | | | FY25 | | | | FY26 | |
| | | | | | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 |
| Planning: New Business Building -- *Design Only* | $8.0 | $60.6M | 104,000 | | | | | SD | | PD | | WD | | | | | | | | |

Designer: TBD

Builder: TBD

# Life, Health, Safety, Accessibility & Code Compliance

**Design-Bid-Build**
**State Authorized**

Status:

- Supplemental funding request approved by General Assembly for full scope of this project which also addresses other accessibility priorities on campus
- Working Drawings complete and under review by VT

Next Actions:

- Issue Invitation for Bids for construction contract

LEGEND: Design | Construction | SD = Schematic Design | PD = Preliminary Design | WD = Working Drawings

| Project Title | Total Project Budget ($M) | Construction Budget ($M) *(Construction contract value)* | New Const (GSF) | Renovation (GSF) | CY 2022 JAN-MAR | CY 2022 APR-JUN | CY 2022 JUL-SEP | CY 2022 OCT-DEC | CY 2023 JAN-MAR | CY 2023 APR-JUN | CY 2023 JUL-SEP | CY 2023 OCT-DEC | CY 2024 JAN-MAR | CY 2024 APR-JUN | CY 2024 JUL-SEP | CY 2024 OCT-DEC | CY 2025 JAN-MAR | CY 2025 APR-JUN | CY 2025 JUL-SEP | CY 2025 OCT-DEC |
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| | | | | | FY22 | | FY23 | | | | | | FY24 | | | | FY25 | | | | FY26 | |
| | | | | | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q1 | Q2 |
| Life, Health, Safety, Accessibility and Code Compliance (Note 3) | $10.4 | $3.7 | | | | WD | | | | | | | | | | | | | | | | |

Designer: Quinn Evans

Builder: TBD

# Student Wellness Improvements

**CM at Risk**
**BOV Authorized**

Status:

- Design complete
- CMaR finalizing Guaranteed Maximum Price (GMP)

Next Actions:

- Complete negotiations for construction and award contract

**LEGEND:** Design | Construction | **SD = Schematic Design** | **PD = Prelminary Design** | **WD = Working Drawings**

| Project Title | Total Project Budget ($M) | Construction Budget ($M) *(Construction contract value)* | New Const (GSF) | Renovation (GSF) | CY 2022 | | | | CY 2023 | | | | CY 2024 | | | | CY 2025 | | | |
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| | | | | | JAN-MAR | APR-JUN | JUL-SEP | OCT-DEC | JAN-MAR | APR-JUN | JUL-SEP | OCT-DEC | JAN-MAR | APR-JUN | JUL-SEP | OCT-DEC | JAN-MAR | APR-JUN | JUL-SEP | OCT-DEC |
| | | | | | FY22 | | FY23 | | | | FY24 | | | | FY25 | | | | FY26 | |
| | | | | | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 |
| Student Wellness Improvements | $70.0 | $54.6 | | 217,708 | | | | | | | | | | | | | | | | |

Designer: Cannon Design

Builder: Whiting-Turner

# Global Business & Analytics Complex Residence Halls

**Design-Bid-Build**
**BOV Authorized**

Status:

- Program originally conceived for this project is now envisioned to be included in Phase 1 of the Student Life Village

Next Actions:

- This project may be closed and its budget redirected to the support the program within the Student Life Village

LEGEND: Design | Construction | SD = Schematic Design | PD = Prelminary Design | WD = Working Drawings

| Project Title | Total Project Budget ($M) | Construction Budget ($M) *(Construction contract value)* | New Const (GSF) | Renovation (GSF) | CY 2022 JAN-MAR | CY 2022 APR-JUN | CY 2022 JUL-SEP | CY 2022 OCT-DEC | CY 2023 JAN-MAR | CY 2023 APR-JUN | CY 2023 JUL-SEP | CY 2023 OCT-DEC | CY 2024 JAN-MAR | CY 2024 APR-JUN | CY 2024 JUL-SEP | CY 2024 OCT-DEC | CY 2025 JAN-MAR | CY 2025 APR-JUN | CY 2025 JUL-SEP | CY 2025 OCT-DEC |
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| | | | | | FY22 | | FY23 | | | | FY24 | | | | FY25 | | | | FY26 | |
| | | | | | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 |
| Global Business & Analytics Complex Residence Halls | | | | | ON HOLD | | | | | | | | | | | | | | | |

Designer: TBD

Builder: TBD

# Under Construction

# Active Construction Projects

Multi-Modal Transit Facility *(ToB project)*

Data & Decisions Science Building

Undergraduate Science Laboratory Building

HITT Hall


Corps Leadership & Military Science Building

New Upper Quad Residence Hall

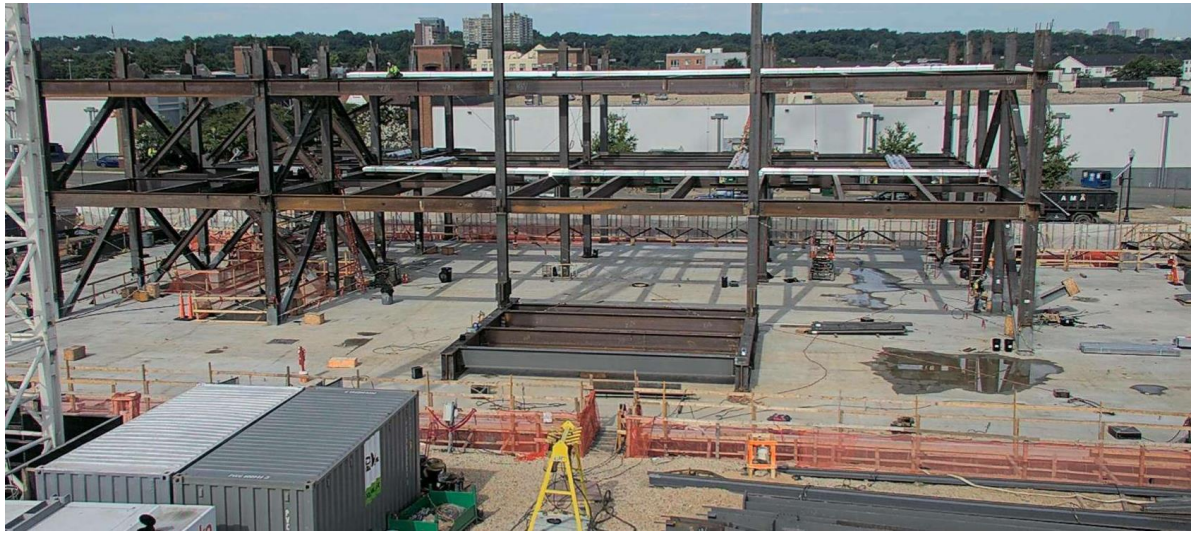
Dietrick Renovation

Innovation Campus Academic Building *(Alexandria, VA)*

Livestock & Poultry Research Facilities *(Various locations)*

# Innovation Campus- Academic Building

**CM at Risk**
**State Authorized**



Status:

- Project on track (20% complete)
- Underground parking structure nearing completion
- Vertical construction underway

Next Actions:

- Anticipated completion in April 2024

**LEGEND:** Design | Construction | **SD = Schematic Design** | **PD = Preliminary Design** | **WD = Working Drawings**

| Project Title | Total Project Budget ($M) | Construction Budget ($M) *(Construction contract value)* | New Const (GSF) | Renovation (GSF) | CY 2022 | | | | CY 2023 | | | | CY 2024 | | | | CY 2025 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | JAN-MAR | APR-JUN | JUL-SEP | OCT-DEC | JAN-MAR | APR-JUN | JUL-SEP | OCT-DEC | JAN-MAR | APR-JUN | JUL-SEP | OCT-DEC | JAN-MAR | APR-JUN | JUL-SEP | OCT-DEC |
| | | | | | FY22 | | FY23 | | | | FY24 | | | | FY25 | | | | FY26 | |
| | | | | | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 |
| Innovation Campus - Academic Building (Note 2) | $302.1 | $226.3 | 299,733 | | | | | | | | | | | | | | | | | |

Designer: SmithGroup

Builder: Whiting-Turner

# Undergraduate Science Laboratory Building

**CMAR**
**State Authorized**

Status:

- Project on track (3% complete)

Next Actions:

- Anticipated completion in April 2024

**LEGEND:** Design | Construction | **SD = Schematic Design** | **PD = Prelminary Design** | **WD = Working Drawings**

| Project Title | Total Project Budget ($M) | Construction Budget ($M) *(Construction contract value)* | New Const (GSF) | Renovation (GSF) | CY 2022 JAN-MAR | CY 2022 APR-JUN | CY 2022 JUL-SEP | CY 2022 OCT-DEC | CY 2023 JAN-MAR | CY 2023 APR-JUN | CY 2023 JUL-SEP | CY 2023 OCT-DEC | CY 2024 JAN-MAR | CY 2024 APR-JUN | CY 2024 JUL-SEP | CY 2024 OCT-DEC | CY 2025 JAN-MAR | CY 2025 APR-JUN | CY 2025 JUL-SEP | CY 2025 OCT-DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | FY22 | | FY23 | | | | FY24 | | | | FY25 | | | | FY26 | | | |
| | | | | | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 |
| Undergraduate Science Laboratory Building | $90.4 | $69.5 | 102,746 | | | | | | | | | | | | | | | | | |

Designer: ZGF

Builder: Skanska

# Dietrick Renovation
## *(& Quillen Family Spirit Plaza)*

**Design-Bid-Build**
**BOV Authorized**

Status:

- Project on track (45% complete)

Next Actions:

- Anticipated completion in March 2023

**LEGEND:** Design | Construction | **SD = Schematic Design** | **PD = Prelminary Design** | **WD = Working Drawings**

| Project Title | Total Project Budget ($M) | Construction Budget ($M) *(Construction contract value)* | New Const (GSF) | Renovation (GSF) | CY 2022 JAN-MAR | CY 2022 APR-JUN | CY 2022 JUL-SEP | CY 2022 OCT-DEC | CY 2023 JAN-MAR | CY 2023 APR-JUN | CY 2023 JUL-SEP | CY 2023 OCT-DEC | CY 2024 JAN-MAR | CY 2024 APR-JUN | CY 2024 JUL-SEP | CY 2024 OCT-DEC | CY 2025 JAN-MAR | CY 2025 APR-JUN | CY 2025 JUL-SEP | CY 2025 OCT-DEC |
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| | | | | | FY22 | | | | FY23 | | | | FY24 | | | | FY25 | | | | FY26 | |
| | | | | | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 |
| Dietrick Renovation | $9.1 | $6.8 | 6,298 | 11,960 | | | | | | | | | | | | | | | | |

Designer: Hanbury

Builder: Branch Builds

# Hitt Hall

**CM at Risk**
**BOV Authorized**

Status:

- Project on track (18% complete)

Next Actions:

- Anticipated completion in March 2024

**LEGEND:** Design | Construction | **SD = Schematic Design** | **PD = Preliminary Design** | **WD = Working Drawings**

| Project Title | Total Project Budget ($M) | Construction Budget ($M) *(Construction contract value)* | New Const (GSF) | Renovation (GSF) | CY 2022 JAN-MAR | CY 2022 APR-JUN | CY 2022 JUL-SEP | CY 2022 OCT-DEC | CY 2023 JAN-MAR | CY 2023 APR-JUN | CY 2023 JUL-SEP | CY 2023 OCT-DEC | CY 2024 JAN-MAR | CY 2024 APR-JUN | CY 2024 JUL-SEP | CY 2024 OCT-DEC | CY 2025 JAN-MAR | CY 2025 APR-JUN | CY 2025 JUL-SEP | CY 2025 OCT-DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | FY22 | | FY23 | | | | FY24 | | | | FY25 | | | | FY26 | |
| | | | | | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 |
| HITT Hall (Note 2) | $85.0 | $65.5 | 101,000 | | | | | | | | | | | | | | | | | |

Designer: Cooper Cary

Builder: W M Jordan

# New Upper Quad Residence Hall

**CM at Risk**
**BOV Authorized**

Status:

- Project on track (50% complete)

Next Actions:

- Anticipated completion in August 2023

**LEGEND:** Design | Construction | **SD = Schematic Design** | **PD = Prelminary Design** | **WD = Working Drawings**

| Project Title | Total Project Budget ($M) | Construction Budget ($M) *(Construction contract value)* | New Const (GSF) | Renovation (GSF) |
|---|---|---|---|---|
| New Upper Quad Residence Hall | $42.0 | $32.0 | 56,650 | |

| CY 2022 | | | | CY 2023 | | | | CY 2024 | | | | CY 2025 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JAN-MAR | APR-JUN | JUL-SEP | OCT-DEC | JAN-MAR | APR-JUN | JUL-SEP | OCT-DEC | JAN-MAR | APR-JUN | JUL-SEP | OCT-DEC | JAN-MAR | APR-JUN | JUL-SEP | OCT-DEC |
| FY22 | | FY23 | | | | FY24 | | | | FY25 | | | | FY26 | |
| Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 |

Designer: Clark - Nexsen

Builder: Vannoy

# Corps Leadership & Military Science Building

**CM at Risk**
**BOV Authorized**

Status:

- Project on track (54% complete)

Next Actions:

- Anticipated completion in July 2023

**LEGEND:** Design | Construction | **SD = Schematic Design** | **PD = Prelminary Design** | **WD = Working Drawings**

| Project Title | Total Project Budget ($M) | Construction Budget ($M) *(Construction contract value)* | New Const (GSF) | Renovation (GSF) | CY 2022 JAN-MAR | CY 2022 APR-JUN | CY 2022 JUL-SEP | CY 2022 OCT-DEC | CY 2023 JAN-MAR | CY 2023 APR-JUN | CY 2023 JUL-SEP | CY 2023 OCT-DEC | CY 2024 JAN-MAR | CY 2024 APR-JUN | CY 2024 JUL-SEP | CY 2024 OCT-DEC | CY 2025 JAN-MAR | CY 2025 APR-JUN | CY 2025 JUL-SEP | CY 2025 OCT-DEC |
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| | | | | | FY22 | | FY23 | | | | FY24 | | | | FY25 | | | | FY26 | |
| | | | | | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 |
| Corps Leadership & Military Science Building | $52.0 | $37.9 | 65,428 | 8,449 | | | | | | | | | | | | | | | | |

Designer: Clark - Nexsen

Builder: Vannoy

# Livestock & Poultry Research Facilities (Phase I)

**Design-Bid-Build**
**State Authorized**

Poultry Facility

Swine Facility

Equine Facility

Beef Facility

Status:

- Construction underway on 4 of 6 bid packages:
  Poultry: 99% complete  Swine: 80% complete
  Equine: 99% complete  Beef: 95% complete

Next Actions:

- Supplemental funding request for 3 hay barns and demolition submitted to DEB for allocation

LEGEND: Design | Construction | SD = Schematic Design | PD = Prelminary Design | WD = Working Drawings

| Project Title | Total Project Budget ($M) | Construction Budget ($M) *(Construction contract value)* | New Const (GSF) | Renovation (GSF) | CY 2022 JAN-MAR | CY 2022 APR-JUN | CY 2022 JUL-SEP | CY 2022 OCT-DEC | CY 2023 JAN-MAR | CY 2023 APR-JUN | CY 2023 JUL-SEP | CY 2023 OCT-DEC | CY 2024 JAN-MAR | CY 2024 APR-JUN | CY 2024 JUL-SEP | CY 2024 OCT-DEC | CY 2025 JAN-MAR | CY 2025 APR-JUN | CY 2025 JUL-SEP | CY 2025 OCT-DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | FY22 | | FY23 | | | | FY24 | | | | FY25 | | | | FY26 | |
| | | | | | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 |
| Livestock & Poultry Research Facilities (Ph I) -- Various Locations | $25.3 | $18.2 | 129,100 | | | | | | | | | | | | | | | | | |

Designer: Spectrum Design

Builder: (Various)

# Data & Decisions Sciences Building

**CM at Risk**
**State Authorized**

Status:

- Project on track (80% complete)

Next Actions:

- Anticipated completion in April 2023

**LEGEND:** Design | Construction | **SD = Schematic Design** | **PD = Prelminary Design** | **WD = Working Drawings**

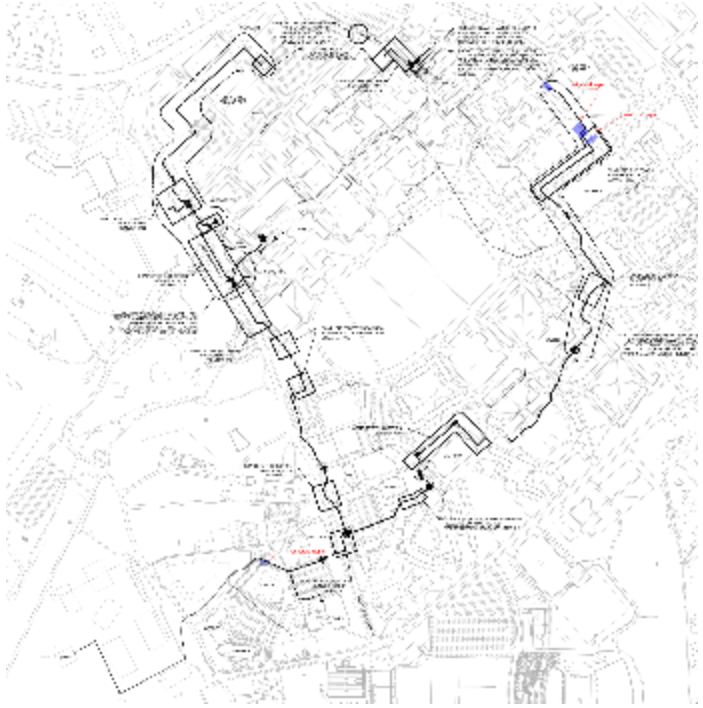
| Project Title | Total Project Budget ($M) | Construction Budget ($M) *(Construction contract value)* | New Const (GSF) | Renovation (GSF) | CY 2022 | | | | CY 2023 | | | | CY 2024 | | | | CY 2025 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | JAN-MAR | APR-JUN | JUL-SEP | OCT-DEC | JAN-MAR | APR-JUN | JUL-SEP | OCT-DEC | JAN-MAR | APR-JUN | JUL-SEP | OCT-DEC | JAN-MAR | APR-JUN | JUL-SEP | OCT-DEC |
| | | | | | FY22 | | FY23 | | | | FY24 | | | | FY25 | | | | FY26 | |
| | | | | | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 |
| Data & Decision Sciences Building (D&DS) | $79.0 | $58.9 | 120,000 | | | | | | | | | | | | | | | | | |

Designer: Moseley

Builder: Kjellstrom & Lee

# Chiller Plant (Phase II)

**Design-Bid-Build**
**State Authorized**

Status:

- Project complete

Next Actions:

- Contract finalization and close-out underway

LEGEND: Design | Construction | SD = Schematic Design | PD = Preliminary Design | WD = Working Drawings

| Project Title | Total Project Budget ($M) | Construction Budget ($M) *(Construction contract value)* | New Const (GSF) | Renovation (GSF) | CY 2022 JAN-MAR | CY 2022 APR-JUN | CY 2022 JUL-SEP | CY 2022 OCT-DEC | CY 2023 JAN-MAR | CY 2023 APR-JUN | CY 2023 JUL-SEP | CY 2023 OCT-DEC | CY 2024 JAN-MAR | CY 2024 APR-JUN | CY 2024 JUL-SEP | CY 2024 OCT-DEC | CY 2025 JAN-MAR | CY 2025 APR-JUN | CY 2025 JUL-SEP | CY 2025 OCT-DEC |
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| | | | | | FY22 | | FY23 | | | | FY24 | | | | FY25 | | | | FY26 | |
| | | | | | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 |
| Chiller Plant Phase II | $42.9 | $32.7 | N/A | | | | WARRANTY | | | | | | | | | | | | | |

Designer: AEI

Builder: Faulconer

# Gas-Fired Boiler at Central Steam Plant

**Design-Bid-Build**
**BOV Authorized**


Status:

- Project complete

Next Actions:

- Waiting DEQ issuance of final boiler permit for alternative fuel source (fuel oil)

**LEGEND:** Design | Construction | **SD = Schematic Design** | **PD = Prelminary Design** | **WD = Working Drawings**

| Project Title | Total Project Budget ($M) | Construction Budget ($M) *(Construction contract value)* | New Const (GSF) | Renovation (GSF) | CY 2022 JAN-MAR | CY 2022 APR-JUN | CY 2022 JUL-SEP | CY 2022 OCT-DEC | CY 2023 JAN-MAR | CY 2023 APR-JUN | CY 2023 JUL-SEP | CY 2023 OCT-DEC | CY 2024 JAN-MAR | CY 2024 APR-JUN | CY 2024 JUL-SEP | CY 2024 OCT-DEC | CY 2025 JAN-MAR | CY 2025 APR-JUN | CY 2025 JUL-SEP | CY 2025 OCT-DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | FY22 | | FY23 | | | | FY24 | | | | FY25 | | | | FY26 | | | |
| | | | | | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 |
| Gas-Fired Boiler at Central Steam Plant | $8.2 | $3.8 | N/A | | WARRANTY | | | | | | | | | | | | | | | |

Designer: AEI

Builder: Southern Air

# Holden Hall Renovation

**CM at Risk**
**State Authorized**


Status:

- Project complete

Next Actions:

- Address punch list and close out contract

LEGEND: Design | Construction | SD = Schematic Design | PD = Prelminary Design | WD = Working Drawings

| Project Title | Total Project Budget ($M) | Construction Budget ($M) *(Construction contract value)* | New Const (GSF) | Renovation (GSF) | CY 2022 JAN-MAR | CY 2022 APR-JUN | CY 2022 JUL-SEP | CY 2022 OCT-DEC | CY 2023 JAN-MAR | CY 2023 APR-JUN | CY 2023 JUL-SEP | CY 2023 OCT-DEC | CY 2024 JAN-MAR | CY 2024 APR-JUN | CY 2024 JUL-SEP | CY 2024 OCT-DEC | CY 2025 JAN-MAR | CY 2025 APR-JUN | CY 2025 JUL-SEP | CY 2025 OCT-DEC |
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| | | | | | FY22 | | | | FY23 | | | | FY24 | | | | FY25 | | | | FY26 | |
| | | | | | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q1 | Q2 |
| Holden Hall Renovation | $74.9 | $58.5 | 82,905 | 20,240 | | WARRANTY | | | | | | | | | | | | | | | | |

Designer: Moseley

Builder: WM Jordan

# Creativity & Innovation District LLC

**Design-Build**
**BOV Authorized**


Status:

- Project complete

Next Actions:

- Close out contract

**LEGEND:** Design | Construction | **SD = Schematic Design** | **PD = Prelminary Design** | **WD = Working Drawings**

| Project Title | Total Project Budget ($M) | Construction Budget ($M) *(Construction contract value)* | New Const (GSF) | Renovation (GSF) | CY 2022 JAN-MAR | CY 2022 APR-JUN | CY 2022 JUL-SEP | CY 2022 OCT-DEC | CY 2023 JAN-MAR | CY 2023 APR-JUN | CY 2023 JUL-SEP | CY 2023 OCT-DEC | CY 2024 JAN-MAR | CY 2024 APR-JUN | CY 2024 JUL-SEP | CY 2024 OCT-DEC | CY 2025 JAN-MAR | CY 2025 APR-JUN | CY 2025 JUL-SEP | CY 2025 OCT-DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | FY22 | | FY23 | | | | FY24 | | | | FY25 | | | | FY26 | |
| | | | | | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 |
| Creativity & Innovation District Living Learning Community | $105.5 | $85.3 | 232,000 | | WARRANTY | | | | | | | | | | | | | | | |

Designer: Hanbury

Builder: WM Jordan

# Improve Kentland Facilities (Phase II)

**Design-Bid-Build**
**State Authorized**

APR Building


MRL Building


BETR Building


Status:

- APR Building construction complete
- BETR Building construction complete
- MRL Building construction complete

Next Actions:

- APR Building: None -- warranty period complete)
- BETR Building: None -- warranty period complete)
- MRL Building: Resolve manure treatment issue (design/warranty issue)

LEGEND: Design | Construction | SD = Schematic Design | PD = Prelminary Design | WD = Working Drawings

| Project Title | Total Project Budget ($M) | Construction Budget ($M) *(Construction contract value)* | New Const (GSF) | Renovation (GSF) | CY 2022 JAN-MAR | CY 2022 APR-JUN | CY 2022 JUL-SEP | CY 2022 OCT-DEC | CY 2023 JAN-MAR | CY 2023 APR-JUN | CY 2023 JUL-SEP | CY 2023 OCT-DEC | CY 2024 JAN-MAR | CY 2024 APR-JUN | CY 2024 JUL-SEP | CY 2024 OCT-DEC | CY 2025 JAN-MAR | CY 2025 APR-JUN | CY 2025 JUL-SEP | CY 2025 OCT-DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | FY22 | | | | FY23 | | | | FY24 | | | | FY25 | | | | FY26 | |
| | | | | | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 |
| Improve Kentland Facilities (Phase II) -- Various Locations | $12.5 | $10.1 | 28,403 | | WARRANTY | | | | | | | | | | | | | | | |

Designer: Spectrum Design

Builder(s): APR = Snyder; MRL & BETR = CPPI

# Multi-Modal Transit Facility

**Design-Bid-Build**
**Town of Blacksburg (ToB) Project**


Status:

- Construction underway (approx 50% complete)

Next Actions:

- Anticipated completion in April 2023

LEGEND: Design | Construction | SD = Schematic Design | PD = Prelminary Design | WD = Working Drawings

| Project Title | | Total Project Budget ($M) | Construction Budget ($M) *(Construction contract value)* | New Const (GSF) | Renovation (GSF) | CY 2022 JAN-MAR | CY 2022 APR-JUN | CY 2022 JUL-SEP | CY 2022 OCT-DEC | CY 2023 JAN-MAR | CY 2023 APR-JUN | CY 2023 JUL-SEP | CY 2023 OCT-DEC | CY 2024 JAN-MAR | CY 2024 APR-JUN | CY 2024 JUL-SEP | CY 2024 OCT-DEC | CY 2025 JAN-MAR | CY 2025 APR-JUN | CY 2025 JUL-SEP | CY 2025 OCT-DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | FY22 | | | | FY23 | | | | FY24 | | | | FY25 | | | | FY26 | |
| | | | | | | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 |
| Multi-Modal Transit Facility | (Note 1) | N/A | N/A | 13,606 | | | | | | | | | | | | | | | | | |

Designer: Wendel (ToB contract)

Builder: WM Schlosser (ToB contract)

# Definitions

- **State Authorized:** Authorized and funded (whole or in part) by the Virginia General Assembly
- **BOV Authorized:** Authorized and funded by the Virginia Tech Board of Visitors

- **Schematic Design Phase** = 0% to approx 20% design complete
- **Preliminary Design Phase** = Approx 20% to approx 50% design complete
- **Working Drawing Phase** = Approx 50% to 100% design complete

- **GMP** = Guaranteed Maximum Price

# Construction Methods

**Design-Bid-Build (DBB):**

- A/E completes full design
- Invitation For Bid (IFB) issued…contract awarded to lowest bidder

**Construction Manager at Risk (CMaR):**

- A/E completes full design
- CMaR's compete for project during early stage of design
- CMaR hired during schematic design phase
- When final designs are complete, CMaR develops Guaranteed Maximum Price (GMP)

**Design-Build (D/B):**

- A/E completes partial design ("criteria docs")
- D/B teams (builder + A/E) compete for project and propose full price for project delivery
- Selection based upon "best value"
- D/B team completes design and executes construction

# CAPITAL PROJECTS UPDATE

PREPARED FOR THE BUILDINGS AND GROUNDS COMMITTEE OF THE BOARD OF VISITORS

DWYN TAYLOR
ASSISTANT VICE PRESIDENT FOR CAPITAL CONSTRUCTION
AUGUST 22, 2022

VIRGINIA TECH | 150

# Mitchell Hall
## *(Replace Randolph Hall)*

**CMaR**
**State Authorized**

Status:

- Project fully authorized for construction by General Assembly
- Schematic Design Phase complete
- Preliminary Design initiated
- CMaR pre-construction services contract is underway

Next Actions:

- BOV Preview (targeted for November 2022 session)

LEGEND: Design | Construction | SD = Schematic Design | PD = Prelminary Design | WD = Working Drawings

| Project Title | Total Project Budget ($M) | Construction Budget ($M) *(Construction contract value)* | New Const (GSF) | Renovation (GSF) | CY 2022 JAN-MAR | CY 2022 APR-JUN | CY 2022 JUL-SEP | CY 2022 OCT-DEC | CY 2023 JAN-MAR | CY 2023 APR-JUN | CY 2023 JUL-SEP | CY 2023 OCT-DEC | CY 2024 JAN-MAR | CY 2024 APR-JUN | CY 2024 JUL-SEP | CY 2024 OCT-DEC | CY 2025 JAN-MAR | CY 2025 APR-JUN | CY 2025 JUL-SEP | CY 2025 OCT-DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | FY22 | | FY23 | | | | FY24 | | | | FY25 | | | | FY26 | |
| | | | | | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 |
| Mitchell Hall (Replace Randolph Hall) | $248.0 | $185.0 | 284,000 | | | | PD | WD | | | | | | | | | | | | |

Designer: Perkins & Will

Builder: Skanska

# Planning: New Business Building

**CMaR**
**State Authorized**

Status:

- A/E procurement underway

Next Actions:

- Finalize A/E selection/contracting process and initiate design
- Targeting BOV Construction Authorization in summer 2023

LEGEND: Design | Construction | SD = Schematic Design | PD = Prelminary Design | WD = Working Drawings

| Project Title | Total Project Budget ($M) | Construction Budget ($M) *(Construction contract value)* | New Const (GSF) | Renovation (GSF) | CY 2022 JAN-MAR | CY 2022 APR-JUN | CY 2022 JUL-SEP | CY 2022 OCT-DEC | CY 2023 JAN-MAR | CY 2023 APR-JUN | CY 2023 JUL-SEP | CY 2023 OCT-DEC | CY 2024 JAN-MAR | CY 2024 APR-JUN | CY 2024 JUL-SEP | CY 2024 OCT-DEC | CY 2025 JAN-MAR | CY 2025 APR-JUN | CY 2025 JUL-SEP | CY 2025 OCT-DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | FY22 | | | | FY23 | | | | FY24 | | | | FY25 | | | |
| | | | | | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 |
| Planning: New Business Building -- *Design Only* | $8.0 | $60.6M | 104,000 | | | | | SD | | PD | | WD | | | | | | | | |

Designer: TBD

Builder: TBD

# Innovation Campus-Academic Building

**CM at Risk**
**State Authorized**

Status:

- Project on track (20% complete)
- Underground parking garage nearing completion
- Steel structure construction underway

Next Actions:

- Anticipated completion in April 2024

**LEGEND:** Design | Construction | **SD = Schematic Design** | **PD = Prelminary Design** | **WD = Working Drawings**

| Project Title | Total Project Budget ($M) | Construction Budget ($M) *(Construction contract value)* | New Const (GSF) | Renovation (GSF) | CY 2022 JAN-MAR | CY 2022 APR-JUN | CY 2022 JUL-SEP | CY 2022 OCT-DEC | CY 2023 JAN-MAR | CY 2023 APR-JUN | CY 2023 JUL-SEP | CY 2023 OCT-DEC | CY 2024 JAN-MAR | CY 2024 APR-JUN | CY 2024 JUL-SEP | CY 2024 OCT-DEC | CY 2025 JAN-MAR | CY 2025 APR-JUN | CY 2025 JUL-SEP | CY 2025 OCT-DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | FY22 | | FY23 | | | | | | FY24 | | | | FY25 | | | |
| | | | | | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 |
| Innovation Campus - Academic Building (Note 2) | $302.1 | $226.3 | 299,733 | | | | | | | | | | | | | | | | | |

Designer: SmithGroup

Builder: Whiting-Turner

# Hitt Hall

**CM at Risk**
**BOV Authorized**

Status:

- Project on track (18% complete)

Next Actions:

- Anticipated completion in March 2024

**LEGEND:** Design | Construction | **SD = Schematic Design** | **PD = Prelminary Design** | **WD = Working Drawings**

| Project Title | Total Project Budget ($M) | Construction Budget ($M) *(Construction contract value)* | New Const (GSF) | Renovation (GSF) | CY 2022 JAN-MAR | CY 2022 APR-JUN | CY 2022 JUL-SEP | CY 2022 OCT-DEC | CY 2023 JAN-MAR | CY 2023 APR-JUN | CY 2023 JUL-SEP | CY 2023 OCT-DEC | CY 2024 JAN-MAR | CY 2024 APR-JUN | CY 2024 JUL-SEP | CY 2024 OCT-DEC | CY 2025 JAN-MAR | CY 2025 APR-JUN | CY 2025 JUL-SEP | CY 2025 OCT-DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | FY22 Q3 | FY22 Q4 | FY23 Q1 | FY23 Q2 | FY23 Q3 | FY23 Q4 | FY24 Q1 | FY24 Q2 | FY24 Q3 | FY24 Q4 | FY25 Q1 | FY25 Q2 | FY25 Q3 | FY25 Q4 | FY26 Q1 | FY26 Q2 |
| HITT Hall (Note 2) | $85.0 | $65.5 | 101,000 | | | | | | | | | | | | | | | | | |

Designer: Cooper Cary

Builder: W M Jordan

# Data & Decisions Sciences Building

**CM at Risk**
**State Authorized**

Status:

- Project on track (80% complete)

Next Actions:

- Anticipated completion in April 2023

**LEGEND:** Design | Construction | **SD = Schematic Design** | **PD = Prelminary Design** | **WD = Working Drawings**

| Project Title | Total Project Budget ($M) | Construction Budget ($M) *(Construction contract value)* | New Const (GSF) | Renovation (GSF) | CY 2022 JAN-MAR | CY 2022 APR-JUN | CY 2022 JUL-SEP | CY 2022 OCT-DEC | CY 2023 JAN-MAR | CY 2023 APR-JUN | CY 2023 JUL-SEP | CY 2023 OCT-DEC | CY 2024 JAN-MAR | CY 2024 APR-JUN | CY 2024 JUL-SEP | CY 2024 OCT-DEC | CY 2025 JAN-MAR | CY 2025 APR-JUN | CY 2025 JUL-SEP | CY 2025 OCT-DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | FY22 | | FY23 | | | | FY24 | | | | FY25 | | | | FY26 | |
| | | | | | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 |
| Data & Decision Sciences Building (D&DS) | $79.0 | $58.9 | 120,000 | | | | | | | | | | | | | | | | | |

Designer: Moseley

Builder: Kjellstrom & Lee

# QUESTIONS?

Attachment H

# UPDATE ON AGRICULTURAL FACILITIES

Alan L. Grant, Ph.D.
*Dean of the College of Agriculture and Life Sciences*

August 22, 2022

VIRGINIA TECH | 150

# WHERE ARE VIRGINIA TECH'S AGRICULTURAL FACILITIES?

## Agricultural Research And Extension Centers (ARECs)

### Virginia Agricultural Experiment Station

**11 ARECs**

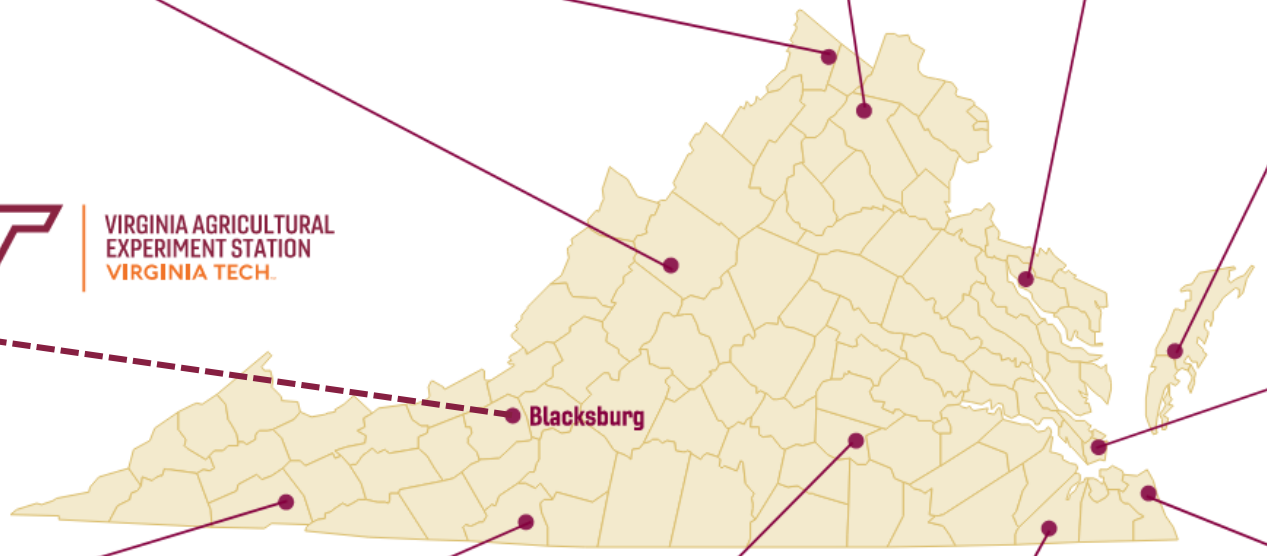
- 227 active ag buildings
- 570,258 GSF
- 4,626 acres

**Montgomery County**

- 140 active ag buildings
- 648,559 GSF
- 3,379 acres

**TOTAL AG FACILITIES**

- **367** active buildings
- **1,218,817** GSF
- **8,005** acres




**Shenandoah Valley AREC**
Steeles Tavern
- Cattle
- Forestry

**Alson H. Smith Jr. AREC**
Winchester
- Viticulture
- Pests
- Horticulture

**Middleburg AREC**
Middleburg
- Horses
- Cattle
- Environment
- Forestry

**Eastern Virginia AREC**
Warsaw
- Agriculture

**Eastern Shore AREC**
Painter
- Agriculture
- Disease

**Virginia Seafood AREC**
Hampton
- Aquaculture
- Microbiology
- Training
- Engineering

**Southwest Virginia AREC**
Glade Spring
- Agriculture
- Disease
- Environment
- Forestry
- Sheep

**Reynolds Homestead Forest Resources Research Center**
Critz
- Forestry

**Southern Piedmont AREC**
Blackstone
- Cattle
- Agriculture
- Disease
- Pests
- Environment
- Horticulture

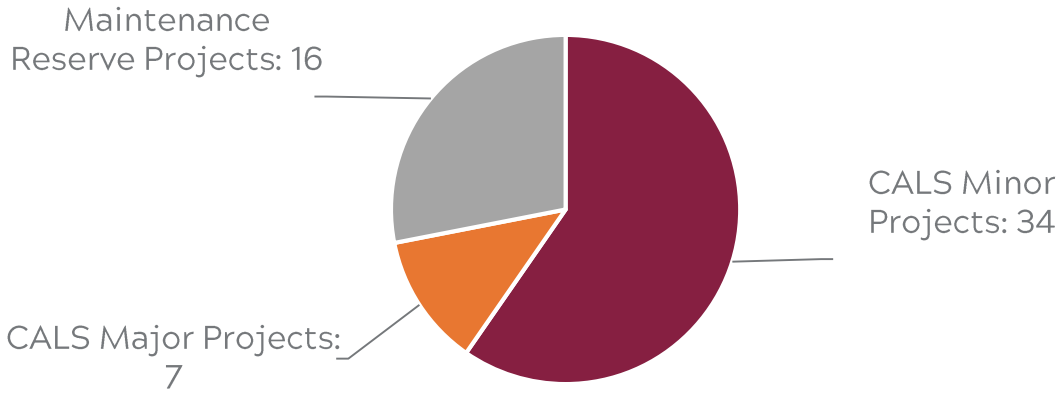
**Tidewater AREC**
Suffolk
- Agriculture
- Swine

**Hampton Roads AREC**
Virginia Beach
- Environment
- Horticulture

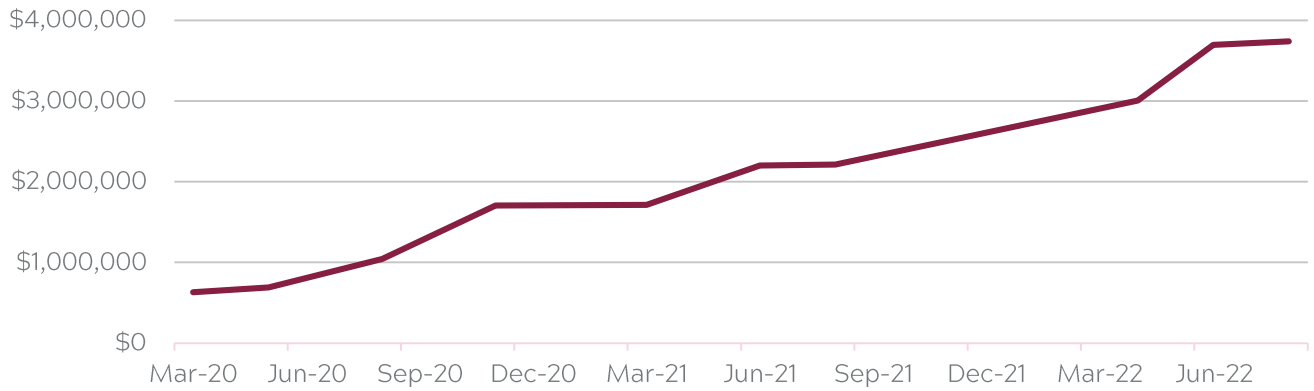
# AG FACILITIES IMPROVEMENTS 3-YEAR UPDATE

- Since the AREC Bus Tour in February 2019…

## Non-Capital Projects Completed: 57




## Non-Capital Project Investment: $3,741,000



Attachment H

# AG FACILITIES IMPROVEMENTS 3-YEAR UPDATE

## Capital project development over the last 3 years:

| Phase | No. of New Buildings or Major Renovation | Gross Square Feet |
|---|---|---|
| Pre-Planning | 41 | 137,916 |
| Capital Budget Request | 13 | 50,660 |
| Design | 3 | 27,860 |
| Under Construction | 7 | 99,091 |
| Completed | 4 | 48,340 |
| **Total** | **68** | **363,867** |

- ✓ AREC Strategic Facility Plan completed
- ✓ 3 Federal earmark requests submitted for new facilities
- ✓ 27 acres of land acquired, 47 additional acres leased
- ✓ Exterior signage upgraded at 9 ARECs, 2 in progress.


# PROGRESS SINCE LAST MEETING

- Electrical upgrades in cattle barn, sheep barn, two tobacco barns and workshop/equipment shed at SWAREC
- New public water system connection at TAREC
- Began planning renovation to Campbell Arena
- Developed wayfinding signage plan for Kentland Farm and Plantation Road area
- Began installation of new emergency generator for Entomology Quarantine Lab at Price's Fork Research Center
- Installation underway for new LED lighting in four buildings at the Kentland Dairy Center and two buildings at the Urban Horticulture Center

# Hampton Roads AREC Relocation Study

- General Assembly requested VAES to evaluate a plan for possible relocation of the Hampton Roads AREC (HB30 Chapter 2, Item C-25.10)
- Provided $500,000 to fund the study
- Report to include timeline, suitable location requirements, building costs, and moving costs.
- Kickoff meeting held July 22, 2022
- Term Contract planning consultant hired
- Study components:
    1. Current assets and program definition
    2. 1:1 replacement strategy
    3. Alternatives considered
- Report is due to General Assembly by December 15, 2022

# TECHNOLOGY AND CONNECTIVITY

# Technology and Connectivity

- Continue to await delivery of hardware for the following:
  - Routers and switches at all ARECs designated for 1 Gbps service
  - Additional wireless access points for both interior and exterior expansion of wifi service
  - 4G/5G radios for field-level wireless service at Eastern Va. AREC
- Final service pricing confirmed for 10 Gbps at Kentland Farm. Deployment of service expected in 6 weeks.

**College of Agriculture Life Sciences (CALS) Projects Status Report**
**BUILDINGS AND GROUNDS COMMITTEE**
**August 22, 2022**

| PROJECT NAME | PROJECT DESCRIPTION | ESTIMATED TOTAL PROJECT COST | FUND SOURCE | PROJECT TEAMS | CONTRACT COMPLETION DATE | PROJECT STATUS |
|---|---|---|---|---|---|---|
| **CAPITAL PROJECTS** Updates through July 31, 2022 | | | | | | |
| **PROJECTS IN CONSTRUCTION** | | | | | | |
| Improve Kentland Facilities, Phase II | Applied Reproduction Facility (APR): 4,510 SF barn at Vet-Med for palpation and breeding instruction. Bovine Extension, Teaching and Research (BETR) Facility: 3,500 SF classroom bulding and 5,100 SF demonstration arena at livestock center on Plantation Road. Metabolic Research Laboratory (MRL): 11,330 SF animal laboratory at the Dairy Center at Kentland Farm. | $12,463,000 | Capital Outlay | Spectrum<br>Snyder, CPPI | Fall 2020 | All projects have reached substantial completion and have certificate of occupancy. Minor corrective work is ongoing and owner furnished equipment installation is in progress. |
| New Virginia Seafood AREC Building | 21,698 SF, 3-story bulding to replace existing aging and structurally unsound facility in Hampton, Virginia with state-of-the-art aquaculture research and extension facilities. Facility owned and developed by Virginia Tech Foundation. | $9,260,000 | Various | RRMM<br>E.T. Gresham | April 2022 | Certificate of Occupancy has been received. Remaining punch list items are being addressed and change order work completed. Move in is complete. Equipment from old building has been surplused. |
| Livestock and Poultry Research Facilities, Phase I | Pkg 1: New Swine Center at Kentland Farm.<br>Pkg 2: New Beef Nutrition Facility & Hay Shed at Kentland Farm<br>Pkg 3: New Broiler &Turkey Grow-out facilities at the Turkey Research Center (Glade Rd.)<br>Pkg 4: New Equitation Barn & Equipment Storage Building at Livestock Center (Plantation Rd.)<br>Pkg 5: 3 New Hay Sheds at Smithfield Horse Center, Fields west of US 460, and Heth Farm<br>Pkg 6: Final Demolition of remaining facilities | $31,074,000 | Capital Outlay | Spectrum<br>Pkg 1: SIMCON<br>Pkg 2: CPPI<br>Pkg 3: CPPI<br>Pkg 4: Clark Nexsen<br>Pkg 5: TBD<br>Pkg 6: TBD | Packages 1-4:<br>Summer and Fall 2022 | Packages 1-4 are under construction and progressing toward late summer / early fall completions.<br>Packages 5-6: Design on hold pending funding appeal |
| **PROJECTS IN DESIGN** | | | | | | |
| (none) | | | | | | |
| **PROJECT INITIATION / PLANNING STAGE** | | | | | | |
| System-Wide AREC Improvements, Phase I | Renew and expand 50,660 GSF of aging and deteriorating AREC facilities - 12,160 SF of renovations and 38,500 SF of new construction storage, greenhouse, housing, research and outreach facilities - to update condition and expand capacity. 13 projects identified at 10 ARECs. | $16,850,000 | Capital Outlay | TBD<br>TBD | TBD | Capital budget request submitted to state for consideration in 2023 budget. |
| Relocation of Hampton Roads AREC | Study requested by the General Assembly to evaluate possible relocation of the Hampton Roads AREC to a new site. Report to assess existing asset inventory, programmatic needs, new site requirements and possible alternatives. | $500,000 | Capital Outlay | AECOM<br>TBD | Dec-22 | Project has been initiated with term contract planning consultant. Evaluation is underway. |
| Human and Agricultural Biosciences Building II | Construct new research lab facility for the School of Plant and Environmental Sciences to co-locate numerous research teams in one location with modernized facilities to focus on studying climate change. | $68,000,000 | Capital Outlay | EYP<br>TBD | TBD | Re-programming effort underway for a $53.5 M construction target. Draft Feasibility report is under review. |
| 6-Year Capital Outlay Plan for the 2022-24 biennium | Capital budget requests for six projects: CNRE Center Woods, System-Wide AREC Improvements Phase I, Glade Road Relocation, Livestock and Poultry Research Facilities Phase II, Human and Agricultural Biosciences Building II, and System-Wide AREC Improvements Phase II. | TBD | TBD | TBD<br>TBD | TBD | Scope and budget development. |
| **NON-CAPITAL PROJECTS** Updates through July 31, 2022 | | | | | | |
| **PROJECTS COMPLETED SINCE LAST REPORT** | | | | | | |
| <u>Minor Projects (<$25,000 each):</u><br>AH Smith Jr. AREC New Hoophouse<br>AH Smith Jr. AREC Greenhouse Controls Upgrade<br>SWAREC Tobacco Barn #3 Demolition<br>EVAREC LED Lighting Upgrade<br>Southwest AREC Smart Feeder Power Connection | Construct a 20' x 48' gable high tunnel hoophouse for horticultural research projects.<br>Replace aging controls system.<br>Demolish structure that has deteriorated beyond repair<br>Upgrade lighting to LED in Main Office and Lab Building; Scott Farm Shop Buliding<br>Power connections for new smart feeding equipment in Cattle Barn | $56,000 | CALS / VAES | -<br>Multiple | Ongoing | Complete |
| Alphin-Stuart Arena Roof Drain repair | Repair failing roof drains. | TBD | Maintenance Reserve | -<br>NRV Roofing, Varney | Spring 2022 | Complete |

**College of Agriculture Life Sciences (CALS) Projects Status Report**
**BUILDINGS AND GROUNDS COMMITTEE**
**August 22, 2022**

| PROJECT NAME | PROJECT DESCRIPTION | ESTIMATED TOTAL PROJECT COST | FUND SOURCE | PROJECT TEAMS | CONTRACT COMPLETION DATE | PROJECT STATUS |
|---|---|---|---|---|---|---|
| **PROJECTS IN CONSTRUCTION** | | | | | | |
| <u>Minor Projects (<$25,000 each):</u><br>Middleburg AREC Hot Walker Installation<br>Reyolds Homestead FRRC Exterior Repairs<br>Shenandoah Valley AREC Working Pens<br>Middleburg AREC Laundry Hookup | Site prep and electrical hookup for installation of new horse exercising research equipment.<br>Repair deteriorating eaves and trim on main AREC building.<br>Installation of new working pens and open shed.<br>Washer and dryer connections for two buildings. | $34,000 | CALS / VAES | -<br>Multiple | Ongoing | In Progress |
| AREC Exterior Signage Upgrades | Installation of 2 new exterior signs at each AREC with refreshed design to match current branding. | $81,000 | CALS / VAES | -<br>Westview | TBD | Signage instation complete at Tidewater, Southwest Virginia, Alson H. Smith Jr., Eastern Virginia, Middleburg, Southern Piedmont, and Shenandoah Valley ARECs. Final design and fabrication pending at others. |
| Beef Barn Repairs | Exterior and interior demolition followed by the installation of new roofing, hay loft flooring, doors, windows and lighting. This work was originally included in LPRF Phase 1, but removed due to scope concerns. | $1,064,000 | Maintenance Reserve | HDH, FEA<br>Thor, SRC | Summer 2023 | Construction in progress. Roofing and lighting replacement complete. Structural repairs underway. Additional structural deterioration discovered during construction requiring extension of project schedule. |
| Eastern Virginia AREC - Experiment Building Renovation | Renovation and upgrade of existing under-utilized office, workshop and meeting space. Building HVAC system has failed and is not working. Electrical and plumbing are outdated. Building is not ADA accessible. General condition is deteriorating. | $195,000 | Maintenance Reserve | Structures Group<br>Eagle River | TBD | Construction is underway. |
| Eastern Shore AREC - Exterior Building Repairs | Multiple buildings are in need of exterior repairs. Head house (1214) and Shop Building (1215) is in need of structural repairs to walls and repointing. Implement Shed (1216), Sweet Potato Storage (1217), Produce Grading (1218), and Insectary (1220) need exterior waterproofing, door repair, pointing repairs and gutters. | $596,000 | Maintenance Reserve | Structures Group<br>ET Gresham | TBD | Costruction is underway |
| Tidewater AREC - Water system repair | Water line from well to main office complex is failing in multiple locations and requires frequent repairs, creating water quality concerns. Project is to connect to public water system with 1.5-inch water line. | $40,000 | Maintenance Reserve | -<br>Lewis Construction | Summer 2022 | Construction is underway. |
| Urban Horticulture Center LED Lighting Retrofit | Replace failing fixtures to restore operational effectivenes and realize energy savings (2 buildings) | TBD | Energy Management | In house<br>Bell Electric | TBD | Construction is underway. |
| Kentland Farm Dairy Complex LED Lighting Retrofit | Replace failing fixtures to restore operational effectivenes and realize energy savings (5 buildings). | TBD | Energy Management / CALS | In house<br>Shively | TBD | Construction is underway. |
| Prices Fork Quarantine Lab Emergency Generator | Installation of new backup generator for operational reliability at Entomology Quarantine Facility at Prices Fork Research Center. | $66,000 | CALS | Gibson Engineering<br>Davis H. Elliott | TBD | Costruction is underway |
| Southwest Virginia AREC Electrical Repairs | Replace aging electrical infrastructure (panels, wiring, lighting, receptacles) in 5 buildings | $50,000 | Maintenance Reserve | -<br>Woodward Electrical | Summer 2022 | Costruction is underway |
| **PROJECTS IN DESIGN** | | | | | | |
| <u>Minor Projects (<$25,000) each:</u><br>Tidewater AREC Peanut Storage Shed<br>Eastern Virginia AREC RTK Tower Installation<br>Tidewater AREC RTK Tower Installation | 960 square foot prefabricated structure for field storage of harvested peanuts.<br>Power and data connections for new GPS and Wi-Fi tower.<br>Power and data connections for new GPS and Wi-Fi tower. | $27,000 | CALS / VAES | -<br>Multiple | Various | In Progress |
| Southern Piedmont AREC - Packhouse Restroom Repairs | Packhouse (0897) restroom is in need of plumping repairs and upgrade to be reconfigured for ADA access. Packhouse roof is leaking and needs repair. | $122,000 | Maintenance Reserve | Thompson & Litton<br>TBD | TBD | Design is in progress. |

**College of Agriculture Life Sciences (CALS) Projects Status Report**
**BUILDINGS AND GROUNDS COMMITTEE**
**August 22, 2022**

| PROJECT NAME | PROJECT DESCRIPTION | ESTIMATED TOTAL PROJECT COST | FUND SOURCE | PROJECT TEAMS | CONTRACT COMPLETION DATE | PROJECT STATUS |
|---|---|---|---|---|---|---|
| Heth Farm Shed and Silo Demolition | Demolish two structures that are currently unsafe and operationally unnecessary | TBD | CALS | TBD<br>TBD | TBD | Lead and asbestos study complete. Obtaining quotes and permits for demolition. |
| Prices Fork Quarantine Lab Room 8 Renovation | Minor Modifications to improve workflow and safety within Entomology Quarantine Facility at Prices Fork Research Center. | TBD | CALS | TBD<br>TBD | TBD | Design issues have been resolved. Updated pricing is in progress. |
| Southern Piedmont AREC - Pavement repairs | Existing main parking lots (3) and primary internal roadways are deteriorating and in need of repair. Approximately 1,300 square feet of milling and 8,400 square yards of 2-inch asphalt overlay required. | $126,000 | CALS / VAES | -<br>TBD | TBD | Contractor quote received. Funding options being evaluated. |
| Judging Pavilion Repairs | Exterior and interior demolition followed by installation of new flooring, doors, windows, HVAC system, lighting, a covered walkway and exterior paint. This work was originally included in LPRF Phase 1, but removed due to scope concerns. | $362,000 | Maintenance Reserve | TBD<br>TBD | TBD | Scope review with University Building Official (UBO) is necessary to resolve code requirements and funding eligibility. Project deferred to 2023. |
| Campbell Arena Repairs | New enclosure of the existing open-air steel structure constructed of metal panel siding over steel girts and posts. This work was originally included in LPRF Phase 1, but removed due to scope concerns. Existing equitation barn to be repurposed for small animal reserach and extension activities. | $93,000 | Maintenance Reserve, CALS | Hughes<br>TBD | TBD | Scope and building code issues being evaluated. |
| **PROJECT INITIATION / PLANNING STAGE** | | | | | | |
| Alson H. Smith Chilled Water System repairs | Existing chillers are leaking and utilize a refrigerant that is no longer readily available. System condition is deteriorating and in need of major repair and replacement. | $338,000 | Maintenance Reserve | TBD<br>TBD | TBD | Funding request has been submitted. |
| Middleburg AREC Stable exterior repairs | Existing roof and windows are leaking. Several stalls are unuseable due to leaks. Several windows are rotten. | $100,000 | Maintenance Reserve | TBD<br>TBD | TBD | Funding request has been submitted. |
| Middleburg AREC Clinic/Admin Building HVAC repairs | Two existing heat pump systems have failed during critical and ongoing research projects. | $40,000 | Maintenance Reserve | TBD<br>TBD | TBD | Funding request has been submitted. |
| Tidewater AREC Main Office and Lab Roof Replacement | Existing roof is leaking causing damage to main lobby interior walls and classroom area. | $78,000 | Maintenance Reserve | TBD<br>TBD | TBD | Funding request has been submitted. |
| Compost Facility (to support main campus & surrounding farms) | CALS is experiencing significant and growing land pressure to meet nutrient management plan requirements, which would be greatly eased by the proposed compost facility. This initiative also has an extremely high level of student support as well as potential partnerships with Dining Services, Athletics and Facilities. Project is included in 228-2 Capital Budget Request, but is a high priority for separate, earlier funding, if possible, due to regulatory risk exposure from limited manure storage during winter months. | $1,823,000 | TBD | Coker Composting & Consulting<br>TBD | TBD | Capital and operational costs for project under review internally. |
| Turkey Farm Processing Building Repair | Interior Demolition followed by the installation of new cold-formed steel stud interior partitions, new doors and a window, fiberglass reinforced plastic paneling and epoxy painted floors. This work was originally included in LPRF Phase 1, but removed due to scope concerns. | $140,000 | Maintenance Reserve | TBD<br>TBD | TBD | Scope and budget development. |
| Moore Farm Barn 0501 Repairs | This highly visible and prominent barn is for many purposes such as lambing of sheep, loafing facility, hay bale storage, emergency storage for weather-affected crops, and equipment and parts storage. The condition of the roof and siding is poor, failing to provide the necessary weather protection. Without mitigation soon, the condition will deteriorate to the point of loss. | TBD | Maintenance Reserve | TBD<br>TBD | TBD | Scope and budget development. |
| Moore Farm Shed 0508 Repairs | This hay shed was built in the 1950's and received heavy use for that purpose. Over the years its condition has continued to worsen and recent wind and snow storms have accelerated the deterioration. In order to execute research projects utilizing recently renovated fields, the Beef Cattle unit now needs to utilize this shed as a working facility for cattle. This would involve pouring a concrete floor and moving in cattle working equipment. However, the structural condition of this facility is poor and should be addressed prior to additional use. It may be more cost effective to rebuild than to repair this structure. | TBD | Maintenance Reserve | TBD<br>TBD | TBD | Scope and budget development. |

**College of Agriculture Life Sciences (CALS) Projects Status Report**
**BUILDINGS AND GROUNDS COMMITTEE**
**August 22, 2022**

| PROJECT NAME | PROJECT DESCRIPTION | ESTIMATED TOTAL PROJECT COST | FUND SOURCE | PROJECT TEAMS | CONTRACT COMPLETION DATE | PROJECT STATUS |
|---|---|---|---|---|---|---|
| Alson H. Smith AREC - Repair paving and parking | Existing asphalt parking lot and drives are deteriorating and in need of repaving. | $56,000 | Maintenance Reserve | TBD<br>TBD | TBD | Scope and budget development. Construction planned in FY 2023. |
| Middleburg AREC - Exterior Repairs | Siding on several buildings is in need of repair/replacement due to advanced age: Annex (0812), Frame Beef Barn (0807), Milking Barn and Milk House (0809), Loafing Barn (0810), Clinic/Admin Building (0823), Stable (0824). 8 run-in sheds (0799) are deteriorating and in need of repair or replacement. Corn House and Machinery Shed (0803) is in need or structural repairs. Basement of Annex (0812) floods and needs drainage corrections. | $158,000 | Maintenance Reserve | TBD<br>TBD | TBD | Scope and budget development. Construction planned in FY 2022. |
| Shenandoah Valley AREC - Repair/Replace Sheep Barn | Sheep Barn (0854) has rotten posts at ground level and leaking roof. The building should be evaluated for repair or replacement. | $76,000 | Maintenance Reserve | TBD<br>TBD | TBD | Scope and budget development. |
| Shenandoah Valley AREC - Renovate Carriage House | Renovate Carriage House to add two single-user public restrooms and welcome center area for visitors to the McCormick Farm. | TBD | CALS / VAES | TBD<br>TBD | TBD | Scope and budget development underway. Study will be necessary to address development within historic property for Department of Historic Resources. |
| Southern Piedmont AREC - Building Repairs | Repair/replace siding and five deteriorated lean-to equipment storage sheds attached to four tobacco curing barns (0893A, 0893B, 0893C, 0893D) | $51,000 | Maintenance Reserve | TBD<br>TBD | TBD | Fuding request has been submitted |
| Smithfield Equine Complex | Develop new facilities for Equine Complex on Plantation Road including covering outdoor arena, add bleachers, restrooms, announcer stand, fencing, quarantine facility. | TBD | Private | TBD<br>TBD | TBD | Scope and budget development. |
| Smithfield Equine Classroom Renovations, Phase 2 | Completion of building envelope repairs, restroom repairs, accessibility improvements. | $110,000 | Maintenance Reserve, CALS | TBD<br>TBD | TBD | Scope and budget development. |

**INFORMATION TECHNOLOGY (IT) EVALUTATION & PROJECTS**

Updates through July 31, 2022. **New information is in bold.**

**PROJECTS COMPLETED**

| | | | | | | |
|---|---|---|---|---|---|---|
| AREC A/V Upgrades, Phase 1 | Installation of new audio and video equipment for ARECs to provide enhanced conferencing capability in meeting rooms. Phase 1 includes Alson H. Smith, Eastern Shore, Hampton Roads, Southern Piedmont and Tidewater ARECs. | $34,000 | CALS / VAES | CALS IT<br>Lee Hartman and Sons | Fall 2019 | Phase 1 (five ARECs) is complete. Scope and schedule for Phase 2 project (remaining ARECs) to be evaluated upon completion of Phase 1. |
| AREC A/V Upgrades, Phase 2 | Installation of new audio and video equipment for ARECs to provide enhanced conferencing capability in larger conference rooms. Phase 2 includes Alson H. Smith, Hampton Roads, Southern Piedmont and Tidewater ARECs. | $238,000 | CALS / VAES | CALS IT<br>Lee Hartman and Sons | Spring 2022 | These 4 installations are complete. |

**College of Agriculture Life Sciences (CALS) Projects Status Report**
**BUILDINGS AND GROUNDS COMMITTEE**
**August 22, 2022**

| PROJECT NAME | PROJECT DESCRIPTION | ESTIMATED TOTAL PROJECT COST | FUND SOURCE | PROJECT TEAMS | CONTRACT COMPLETION DATE | PROJECT STATUS |
|---|---|---|---|---|---|---|
| **PROJECTS IN PROGRESS** | | | | | | |
| Bandwidth and Internet Connectivity | ARECs: All ARECs have 200 Mb service except Shenandoah Valley (50 Mb), Southwest Virginia (10 Mb), Reynolds Homestead (2 Mb), Hampton Roads (50 Mb), Eastern Shore (30 Mb) and Virginia Seafood (30 Mb). Northern Piedmont Center has a 50 Mb cable connection. Goal is to upgrade all to at least 200 Mb. 200 Mb service for Hampton Roads has been ordered. Eastern Shore has been upgraded to 100 Mb service. Reynolds Homestead is in the process of having an order placed for 100 Mb service. A quote has been recieved for 100 Mb service at Southwest Virginia. 1 Gbps service is now available at Alson H Smith, and Hampton Roads ARECs, and has been ordered for Southern Piedmont, and Tidewater. Eastern Shore AREC will be upgraded to 200 Mbps.<br><br>Campus Farm locations: Kentland Farm has adequate 200 Mb service. Moore Farm and Urban Horticulture Center share a 50 Mb cable service which is currently adequate. The CSES Research Farm (Agronomy Farm) also has a 50 Mb cable connection. Prices Fork Research Center has a 50 Mb fiber connection. Turkey Farm cable service is being upgraded from 50 Mb to 200 Mb during LPRF phase 1, no additional cost. Upgrades are needed to provide sufficient bandwidth for existing video-based research and future initiatives after LPRF phase 1 construction. Turfgrass center is currently using a cellular hotspot for internet service. Providing standard service requires excessive installation cost. Alternative service providers are being sought. No complaints have been received about service to facilities in the Livestock Center along Plantation Road, but service levels and coverage is being reviewed. A dark fiber connection to campus is being considered that would both lower the current monthly cost and increase the Kentland bandwidth to nearly 10 Gbps is being explored. | $245,000 Annually | CALS / VAES | CALS IT<br>Various | Ongoing | Alternative service providers are being sought for turfgrass center and local tenant houses. Reviewing service levels and needs at Livestock Facilities on Plantation Road. Ordered and partially installed fiber to extend internet service to employee housing at Eastern Shore, Hampton Roads, Shenandoah Valley and Middleburg. Service to the Turfgrass Center is now tentatively scheduled for **mid-September**. |
| AREC Voice-Over Internet Protocol (VOIP) Conversion | Conversion of legacy voice telephone system at all ARECs to unified VOIP system matching voice service on campus. | $75,000 | CALS / VAES | CALS IT<br>Division of IT | Ongoing | VOIP conversion projects have been completed at 7 of the 11 ARECs. Remaining locations include Hampton Roads, Reynolds Homestead, and Southwest Virginia ARECs where the existing telephone service has been adequate. The Virginia Seafood AREC **has been converted to VOIP.** |
| Network Equipment Upgrades and Expansion | A project to upgrade routers and switches as well as expand in-building wireless and some external wireless has been started. This project will replace LAN gear as well as enhance wireless connectivity within AREC buildings and expand wi-fi and the AREC network to additional buildings and some exterior spaces. | $1,140,000 | CALS/VAES | CALS IT | TBD | Orders for equipment have been placed. **Still awaiting delivery of most components.** |
| Real Time Kinematic (RTK) | A project to install RTK systems at select ARECs has been started. RTK enables the ARECs to implement precision agriculture research practices. RTK increases the accuracy over and above standard GPS from an accuracy of 2-4 meters to ~1 centimeter.Installation is planned for Spring 2022. | $213,000 | CALS/VAES | CALS IT<br>John Deere<br>Trimble | Summer 2022 | RTK tower and equipment has been installed at Tidewater AREC. Mobile units for Middleburg AREC and Shenandoah Valley AREC have been received. Tower installations for Eastern Shore, Eastern Va., and Southern Piedmont are expected by end of **August 2022**. |
| Eastern Virginia AREC Field-level Wireless<br>(a SmartFarm Project) | Installation of new technology, similar to Wi-Fi but with better exterior coverage and security management, in fields at Eastern Virginia AREC to study the effectiveness of this equipment for supporting data-intensive agricultural, plant-based research as well as providing ready access to the internet and data network. | $90,000 | CALS/VAES | CALS IT<br>Dell<br>JMA<br>Pierson Wireless<br>John Deere | Summer 2022 | Funding has been authorized. Installation expected to coincide with RTK installation sometime in late **August**. |
| SmartFarm Projects | A project has been initiated by faculty in the Department of Animal and Poultry Sciences, in partnership with CALS IT and the Division of IT, to potentially install new technology, similar to Wi-Fi but with better exterior coverage and security management, in fields at Shenandoah Valley and Middleburg ARECs. The proposal is to study the effectiveness of this equipment for supporting data-intensive agricultural, animal-based research. Project has expanded to include faculty from the School of Plant and Environtmental Sciences, and now includes work at Kentland Farm. An additional project in cooperation with DoIT, CALS, and COE would create a 5G/CBRS testbed at Kentland Farm. | TBD | TBD | CALS IT<br>DoIT<br>MAAP<br>VTNSI<br>TBD | TBD | Funding needs and sources are being resolved. |

Attachment H

# Life, Health, Safety, Accessibility & Code Compliance

Board of Visitors Design Review

Liza L.C. Morris, NCARB
Assistant Vice President for Planning and University Architect

August 22, 2022

# PROJECT INFORMATION



| | |
|---|---|
| Scope: | Two Elevator Towers |
| Delivery method: | Design Bid Build |
| Total project budget: | $4,970,000* for Priority 1 |
| Design phase: | Working Drawings |
| Estimated construction start: | November 2022 |
| Estimated construction completion: | November 2023 |

* Total project budget of $10.4M includes priority 1, 2, and 3 accessibility projects

# PROJECT LOCATION

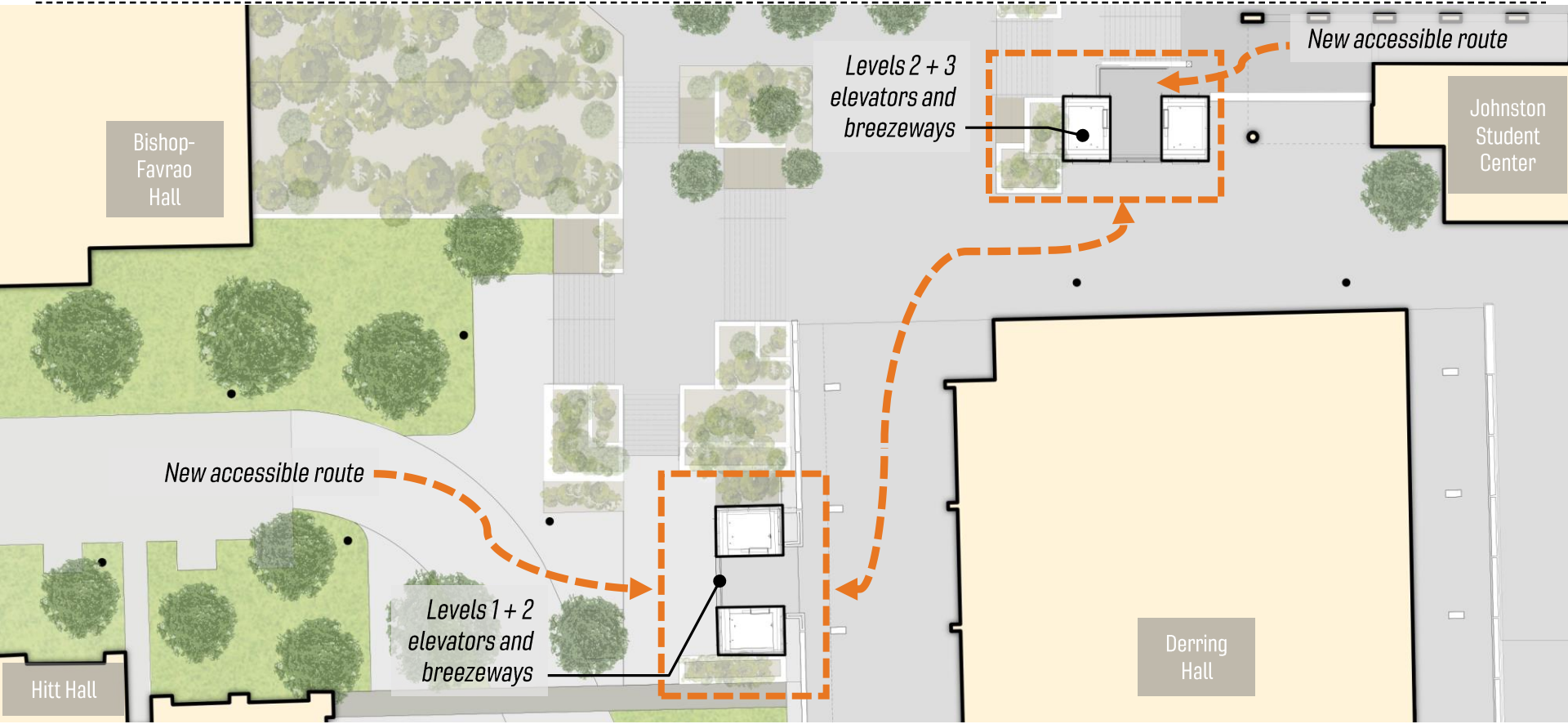
Attachment H

# EXISTING CONDITION

Attachment H

# SITE PLAN

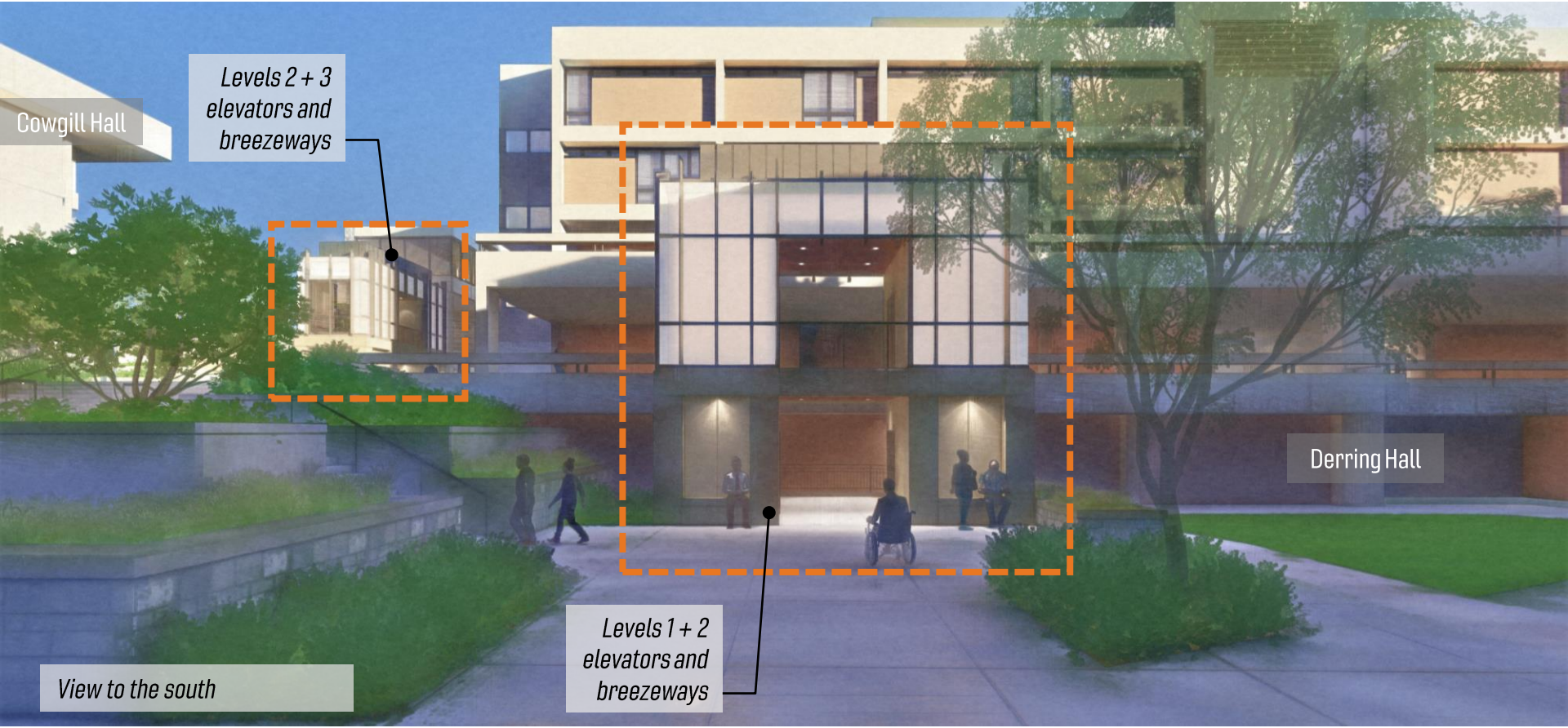
Attachment H




/ LIFE, HEALTH, SAFETY, ACCESSIBILITY & CODE COMPLIANCE

# EXTERIOR RENDERING

Attachment H



# EXTERIOR RENDERING

Attachment H


/ LIFE, HEALTH, SAFETY, ACCESSIBILITY & CODE COMPLIANCE

# EXTERIOR RENDERING

Attachment H

# EXTERIOR RENDERING

Attachment H

# RECOMMENDATION



That the Design Review graphics be approved, and authorization be provided to continue with the project design consistent with the drawings shown.

**DESIGN REVIEW FOR LIFE, HEALTH, SAFETY, ACCESSIBILITY & CODE COMPLIANCE**

Ensuring the safety, health, and accessibility of the campus environment is critical to the long-term success of the university and its service to the Commonwealth. This project is the first priority of three high priority accessibility initiatives identified by the university in the Life, Health, Safety, Accessibility & Code Compliance category of the 2018-2024 Capital Outlay Plan. The project is scoped to create a new accessible route on an existing primary pedestrian corridor which will support equal access to key Education and General funded facilities in the North Academic District.

The project is in the working drawings phase with construction anticipated to begin November of 2022 and to attain substantial completion November of 2023. The university received total project funding of $10.4 million in Life, Health, Safety, Accessibility & Compliance funds from the state for three projects, $4.97 million of which will be applied to the first priority project.

**Capital Project Information Summary – Life, Health, Safety, Accessibility & Code Compliance Design Review**

**BUILDINGS AND GROUNDS COMMITTEE**

**August 22, 2022**

**Title of Project:**

Life, Health, Safety, Accessibility & Code Compliance

**Location:**

The project is sited within the North Academic District, on an existing primary pedestrian route that connects the core of the academic enterprise with a transportation intensive portion of the district. This route runs between Derring Hall, Bishop-Favrao Hall, Cowgill Hall and Johnston Student Center, and is currently not an accessible route. Alternative accessible routes through this area of campus are circuitous, lengthy and difficult to locate and navigate.

**Current Project Status and Schedule:**

The project will be delivered under design-bid-build procurement and is currently in the working drawings phase. Construction is anticipated to begin November of 2022 with substantial completion anticipated November of 2023.

**Project Description:**

The project is approximately 1,524 gross square feet and is comprised of two separate standalone structures. The lower level of the two structures provides two, two-stop elevators from the Perry Street elevation (level 1) to the intermediate level between Derring Hall and Cowgill Hall (level 2). The upper level structure provides two, two-stop elevators from level 2 to the Tech Plaza level (level 3).

A new accessible route will be created by the completion of these structures which will provide a more direct accessible route to key academic facilities in the district and beyond.

**Brief Program Description:**

Ensuring the safety, health, and accessibility of the campus environment is critical to the long-term success of the university and its service to the Commonwealth. This project is the first priority of three high priority accessibility initiatives identified by the university in the Life, Health, Safety, Accessibility & Code Compliance category of the 2018-2024 Capital Outlay Plan. The project is scoped to create a new accessible route on an existing primary pedestrian corridor which will support equal access to key Education and General funded facilities in the North Academic District. The project is a crucial component toward resolving the lack of accessible routes in this area of campus.

**Contextual Issues and Design Intent:**

The Northern Academic District straddles vertical topography created by two branches of Stroubles Creek. The land use pattern to address the steep slopes resulted in the creation of multiple levels in the campus environment. Many of these levels are currently not directly accessible via the primary pedestrian routes.

Alternative accessible routes through this area of campus are circuitous, lengthy and difficult to locate and navigate. This project is the first - of three high priority accessibility initiatives identified by the university to address these issues in this area of campus.

Due to elevation changes exceeding thirty feet in the project area, with compressed spaces outside of existing building footprints, and extensive underground utilities, an accessible solution involving two structures, with each providing two, two-stop elevators, is the best method to create an accessible route in this area.

The proposed architecture is consistent with the Campus Design Principles, yet is also sensitive to the context of several adjacent brutalist-era buildings. Each proposed structure is designed as a wayfinding ‘lantern’. The base of each is rendered in precast concrete and responds to the context of bold brutalist framework while retaining a proportional relationship to the university’s collegiate gothic aesthetic. The top of each structure is designed with clear and semi-opaque glazing and will be lit from within. Vertical emphasis is achieved through the use of extruded aluminum fins. Integrated planters will be clad in Hokie Stone at the lower level.

**Funding:**

This project was first proposed under the 2018-2024 Capital Outlay Plan and received a portion of the initial request, $3.1 million in Life, Health, Safety, Accessibility & Compliance funding by the 2020 General Assembly. In the 2022-2028 Capital Outlay Plan, $7.3 million of supplemental General Fund support was requested and received. The total appropriation authorized by the General Assembly for this project is $10.4 million, $4.97 million of which will be applied to the first priority project.

**Architect/Engineer:**

Quinn Evans

**Contractor:**

TBD

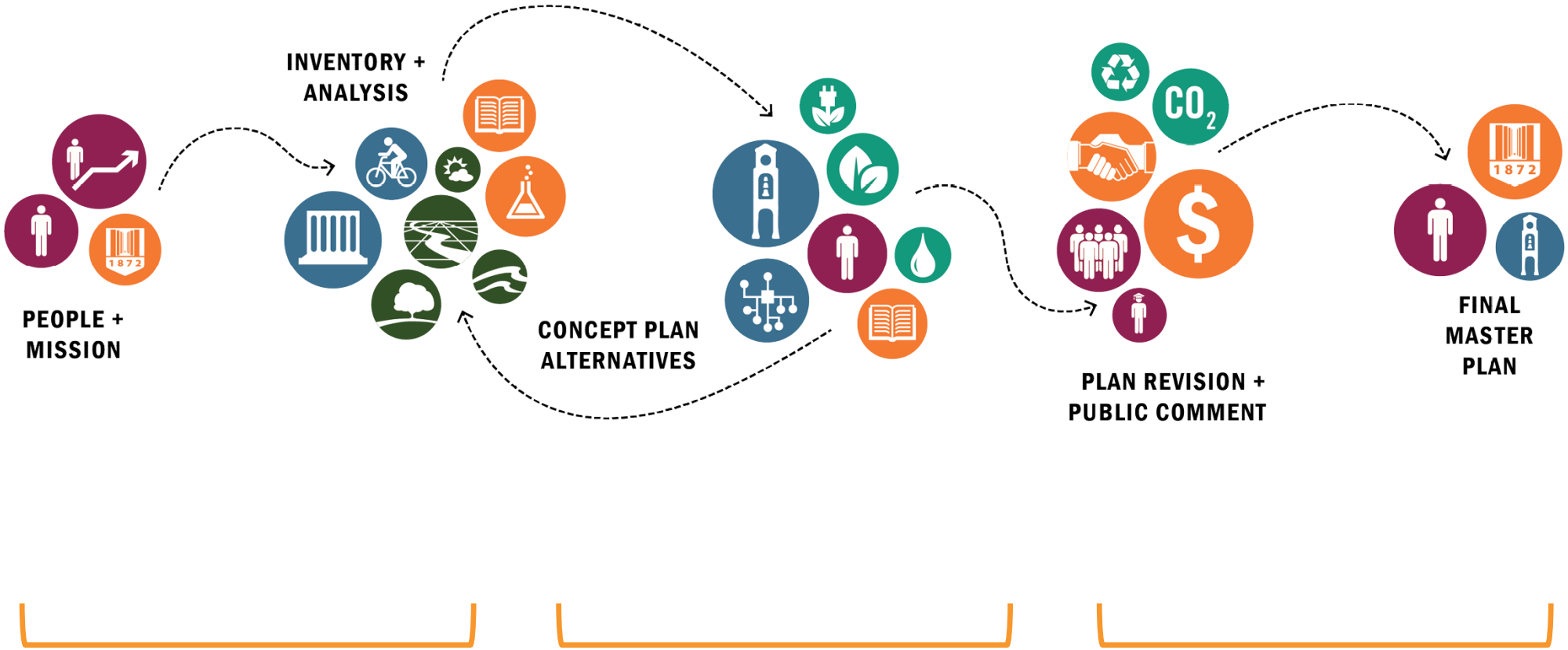
Attachment H

# OVERVIEW OF THE CAMPUS MASTER PLAN

LIZA MORRIS, ASSISTANT VICE PRESIDENT FOR PLANNING AND UNIVERSITY ARCHITECT

AUGUST 22, 2022

# PLANNING PROCESS

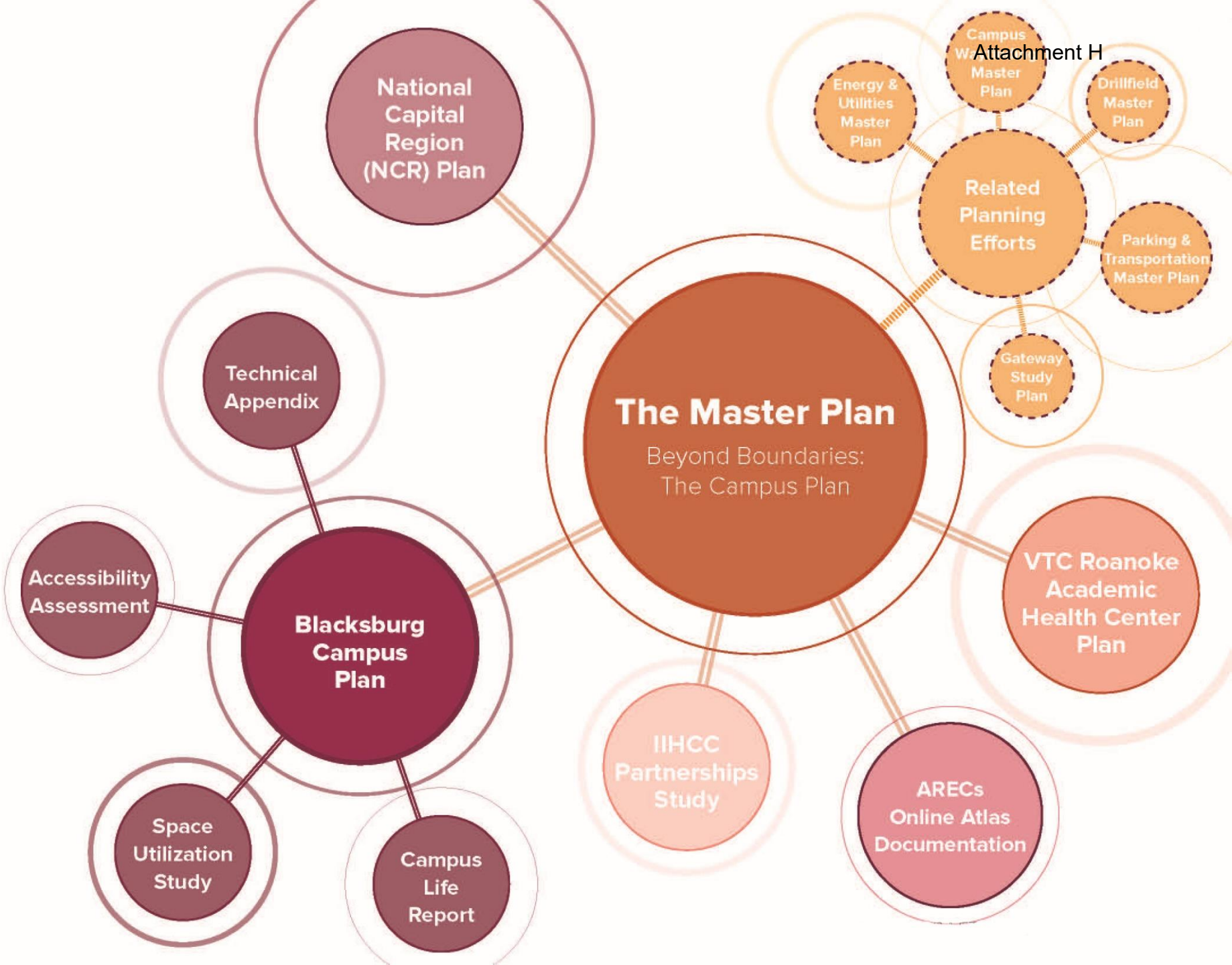


# *VT-Shaped Discovery*

- VT SHAPED STUDENTS
- INTERDISCIPLINARY TEAMS
- PURPOSE-DRIVEN AND PERSON-CENTERED CURRICULUM

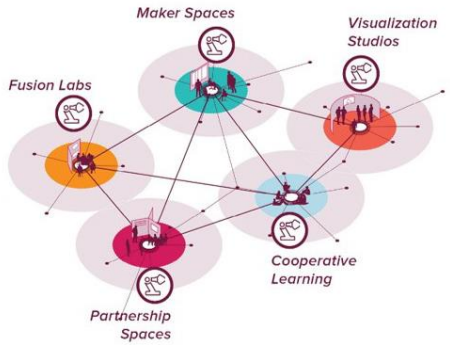
The VT student of 2047 learns by doing, creating, and engaging, service to humanity, and does so not in isolation or as an academic exercise but rather with the support of a community.

# PLAN COMPONENTS



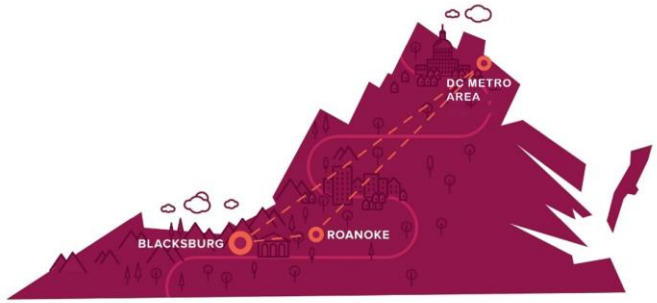
# Contents

# PLAN DRIVERS

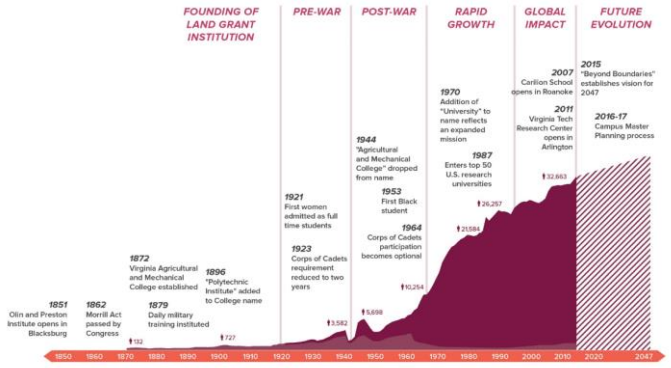



## 01 The VT Experience

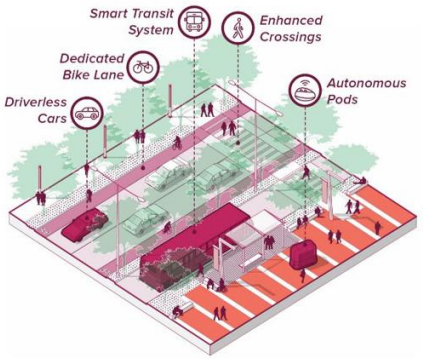

## 02 Sense of Place




## 03 Connections




## 04 Growth




## 05 Access for All


## 06 Sustainability

# CAMPUS VISION

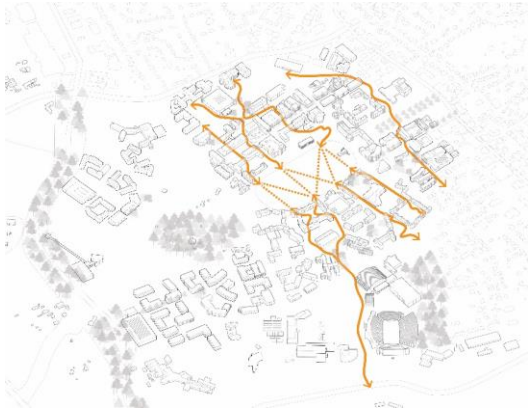

## 01: The Central Spine


## 02: The Agricultural Belt

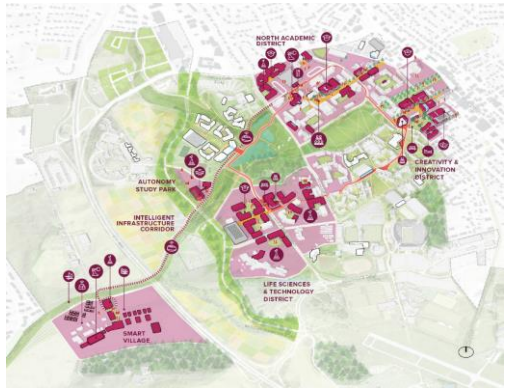
## 03: The Campus Districts


## 04: Tech + Town

## 05: The Infinite Loop



## 06: The Green Links

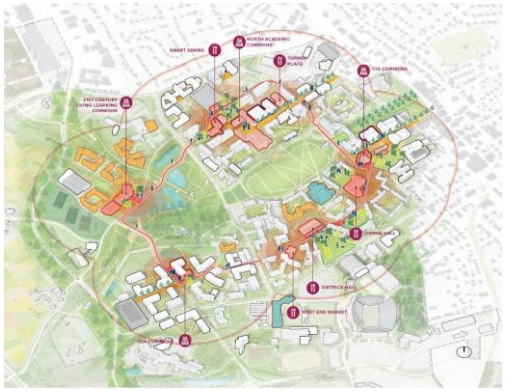



## 01 Academic & Research Framework

ENHANCING LEARNING AND RESEARCH ENVIRONMENTS


## 02 Strategic Partnerships Framework

EXPANDING STRATEGIC PARTNERSHIPS



## 03 Campus Life Framework

FOSTERING AN INCLUSIVE CAMPUS LIFE EXPERIENCE


## 04 Landscape Framework

PROTECTING THE LAND GRANT LEGACY


## 05 Mobility Framework

PROMOTING ACCESS AND MOBILITY

# DISTRICTS

01 **North Academic District**

02 **Northeast & Upper Quad District**

03 **Creativity & Innovation District**

04 **Student Life District**

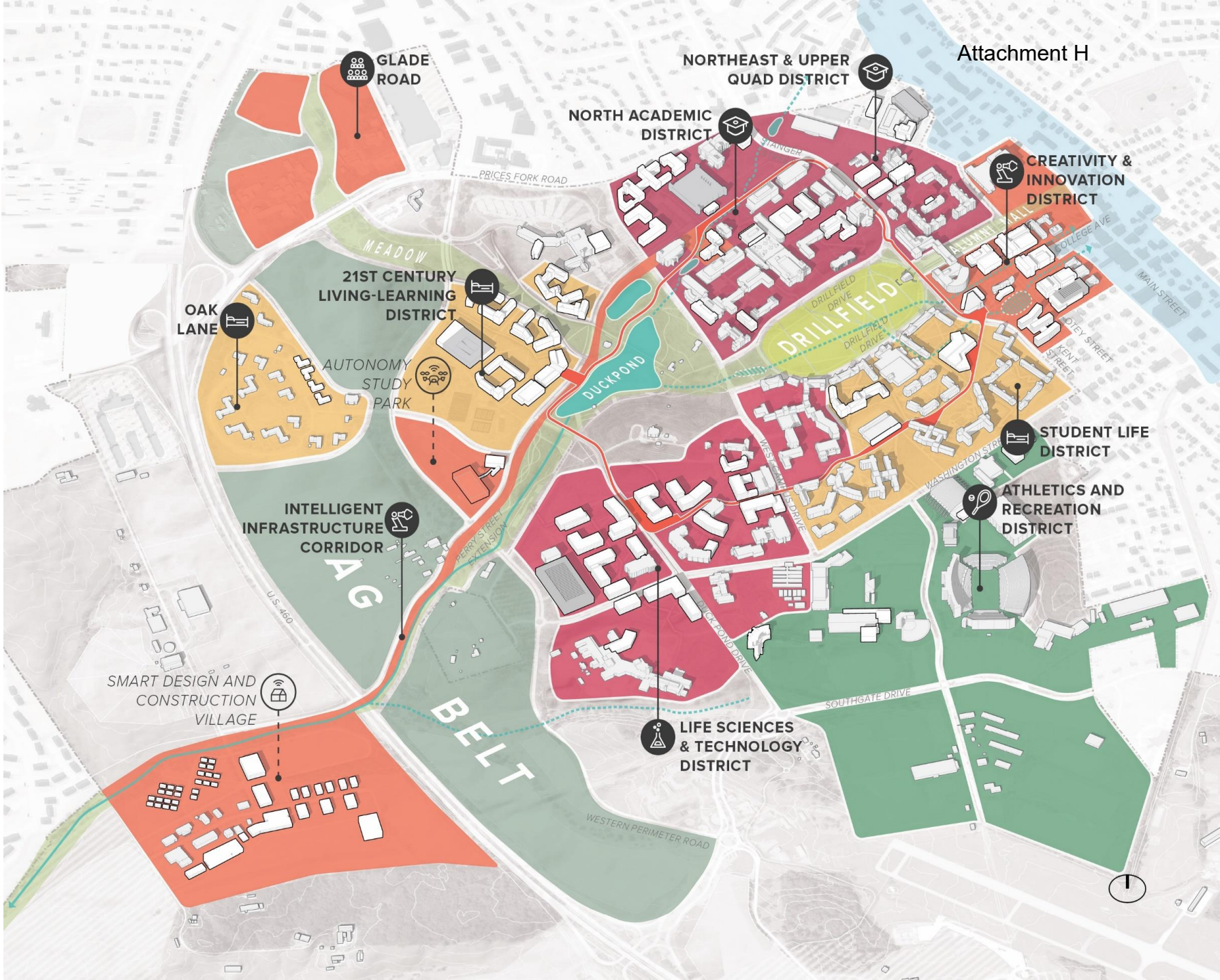
05 **Life Sciences & Technology District**

06 **21st Century Living-Learning District**

07 **Intelligent Infrastructure Corridor**

08 **Peripheral Districts**

- Athletics and Recreation
- Glade Road
- Oak Lane

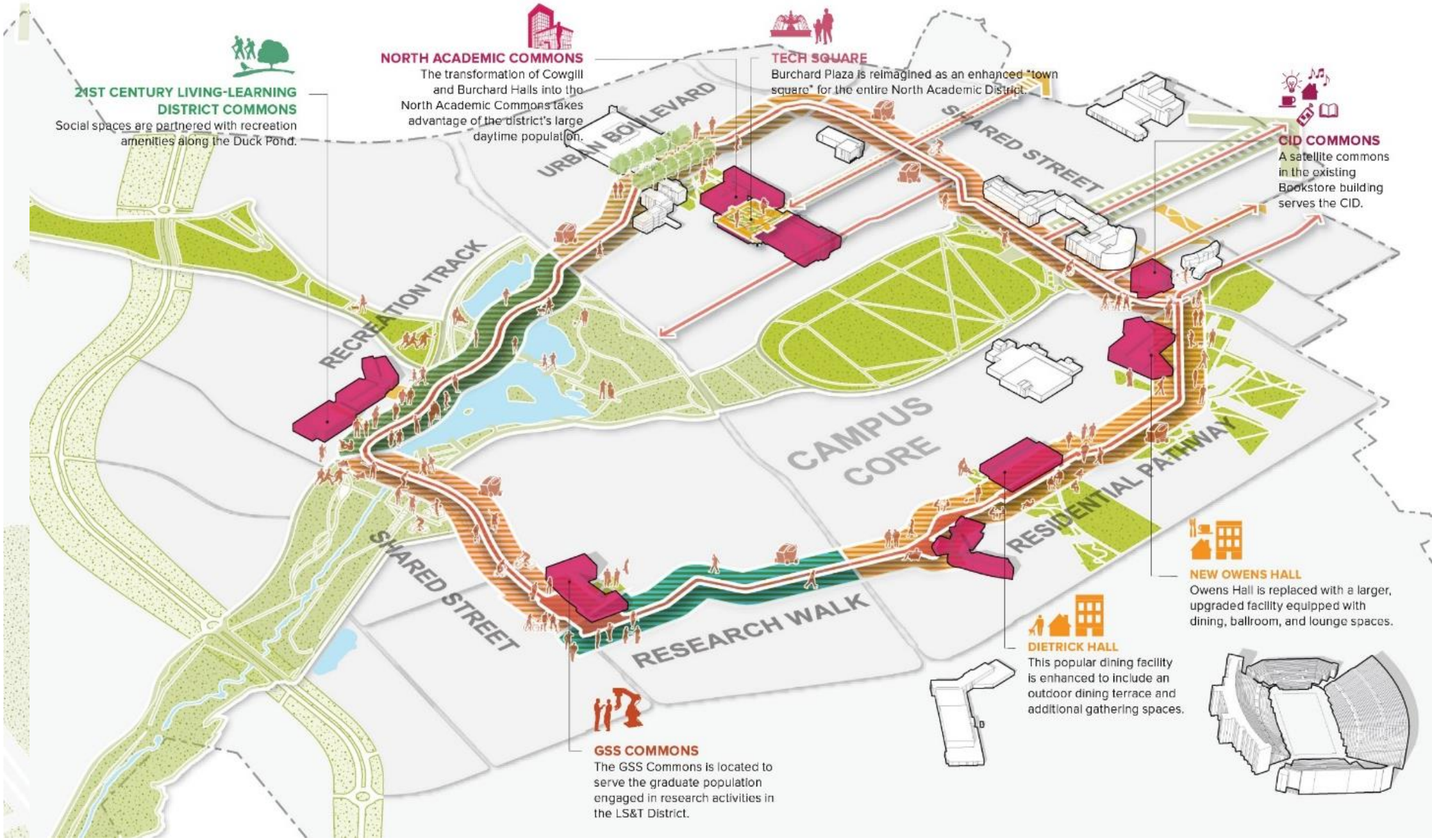


# MAJOR OUTCOMES

*Infinite Loop*

*Green Links*

*North Academic Commons*



# *ILLUSTRATIVE PLAN*

# DISCUSSION

# Readahead: Virginia Tech Campus Master Plan earns national recognition for excellence in university planning

**BUILDINGS AND GROUNDS COMMITTEE**

**August 22, 2022**

https://vtx.vt.edu/articles/2019/08/ops-masterplanaward.html

# Campus Master Plan

https://www.facilities.vt.edu/planning-financing/campus-master-plan.html

Attachment H

# RESOLUTION FOR A CAPITAL PROJECT FOR BUILDING ENVELOPE IMPROVEMENTS

BOB BROYDEN, ASSOCIATE VICE PRESIDENT FOR CAMPUS PLANNING AND CAPITAL FINANCING

August 22, 2022

# Building Envelope Improvements

- This request is a follow up to previous briefings to the Board of Visitors
- A new envelope system methodology was used during the 2000s and later modified because it did not meet the needs of the university
- The modified methodology is proven to meet our requirements
- The Board provided guidance to refurbish the envelope systems introduced in the 2000s that do not meet our requirements
- The university has developed a plan to refurbish the envelope systems of all the effected buildings
- Most of the buildings will be refurbished by an in-house team of stonemasons
- This request is for a capital project authorization to make improvements to the four buildings that exceed the capabilities of the in-house team
- The university has developed an entirely nongeneral fund financing plan for the project; thus, the project may be authorized by the Board

# RESOLUTION FOR A CAPITAL PROJECT FOR BUILDING ENVELOPE IMPROVEMENTS

Attachment H

*NOW, THEREFORE, BE IT RESOLVED,* that the university be authorized to complete the Building Envelope Improvements project and to secure temporary short-term financing through any borrowing mechanism that, prior to such borrowing, has been approved by the Board, as applicable, in an aggregate principal amount not to exceed the $47.2 million authorized for the total project budget, plus related issuance costs and financing expenses.

## RECOMMENDATION

That the resolution authorizing Virginia Tech to proceed with the Building Envelope Improvement Package be approved.

August 23, 2022