

Open Session Minutes

BUILDINGS AND GROUNDS COMMITTEE

Tuesday, August 29, 2023

Open Session Meeting

The Buildings and Grounds Committee of the Board of Visitors of Virginia Polytechnic Institute and State University convened on Tuesday, August 29, 2023 at 8:48 a.m. in open session in Room G101 A/B of the Fralin Biomedical Research Institute at VTC (4 Riverside Circle) in Roanoke, Virginia. A quorum of the Committee was present. Ms. Long presided in the absence of Chair Harris.

Board members present: Ed Baine, Carrie Chenery, Sandy Davis, Nancy Dye, Donald Horsley, Tish Long, Joseph Merola – Faculty Representative, William Storey – Undergraduate Student Representative, Emily Tirrell – Graduate and Professional Student Representative

University personnel and guests: Laura Belmonte, Lynsay Belshe, Bob Broyden, Brock Burroughs, Mary Burrows, Joe Cooley, Gannon Davis, Jeff Earley, Alisha Ebert, Mike Friedlander, Mark Gess, Luisa Havens Gerardo, Emily Gibson, Alan Grant, Suzanne Griffin, Rebekah Gunn, Wendy Halsey, Patrick Hilt, Chris Kiel, Chris Kiwus, Rob Mann, Meghan Marsh, Elizabeth McClanahan, Liza Morris, Mike Mulhare, Heidi Myers, Ed Nelson, Nam Nguyen, Justin Noble, Kim O'Rourke, Kelly Oaks, Stephanie Overton, Charlie Phlegar, Julie Ross, Tim Sands, Amy Sebring, Ken Smith, Michael Stowe, Dan Sui, Dwyn Taylor, Jon Clark Teglas, and Tracy Vosburgh

1. **Welcome and Introductions:** Ms. Long convened the meeting and provide welcoming remarks.
2. **Consent Agenda:** The Committee approved the Consent Agenda and the items it contained.
 - a. **Minutes from the June 2023 Committee Meeting:** The Committee approved the minutes from its June 2023 meeting.
 - * b. **Resolution for Disposition of University Buildings at Southern Piedmont AREC:** The Committee reviewed for approval a resolution to disposition university buildings at the Southern Piedmont Agricultural Research and Extension Center (AREC) in Blackstone, Virginia. Specifically, Buildings No. 0903A and 0903B. The Southern Piedmont AREC engages in research of tobacco, fruit, and other crop research and educational programs requiring multiple types of facilities. Buildings No. 0903A and 0903B have fallen into disrepair and are beyond their useful life for the teaching and research programs. The university desires to surplus

the vacant structures before they fall into further disrepair. Buildings 0903A and 0903B are vacant greenhouses, and each is 432 square feet. They were erected on site in 2005 and 2007 respectively. The structures will be disassembled, removed and sent to surplus. The existing concrete slab will remain. The university will obtain required approvals prior to the disposition of these structures.

The Committee recommended the resolution authorizing the disposition of Buildings No. 0903A and 0903B to the full Board for approval.

- * **c. Resolution on Appointments to the Blacksburg-Virginia Polytechnic Institute Sanitation Authority:** The Committee reviewed for approval a resolution on appointments to the Blacksburg-Virginia Polytechnic Institute Sanitation Authority. The Blacksburg-Virginia Polytechnic Institute Sanitation Authority was created January 30, 1962, pursuant to the Virginia Water and Sewer Authorities Act, Code of Virginia (1950, as amended) for the purpose of constructing and maintaining a sewer disposal system for the participating entities, which include the Town of Blacksburg and Virginia Tech. The Authority's Board consists of five members. The Town of Blacksburg and the Board of Visitors of Virginia Tech each appoint one member to the Board; the remaining three members are jointly appointed by the two entities. From time to time, it is necessary to appoint and reappoint members of its Board of Directors in connection therewith. Current terms for the university's representative and two of the three at-large members expire January 1, 2024. In anticipation of these term expirations and to ensure appropriate continuity of operations, Virginia Tech desires to reappoint Chris Kiwus, Vice President for Campus Planning, Infrastructure, and Facilities, as the university's representative and member of the Authority's Board of Directors for a new four-year term expiring January 1, 2028. Additionally, Virginia Tech and the Blacksburg Town Council desire to reappoint Ray Smoot and Ron Rordam as at-large members of the Authority's Board of Directors for new four-year terms expiring January 1, 2028. The term of the third jointly appointed representative and at-large member, third, Lu Merritt, is a four-year term effective January 1, 2022 and expiring January 1, 2026. No action was requested for Mr. Merritt's appointment, as that would be considered at the recommendation of the university and pleasure of the Board in a future meeting as the term expiration nears.

The Committee recommended the resolution on appointments to the full Board for approval.

- # + **3. Overview of the University's Physical Assets and Investment Approach:** The Committee received an overview of the university's physical assets and investment approach from Chris Kiwus, Vice President for Campus Planning, Infrastructure, and Facilities. Virginia Tech is committed to providing a safe, inclusive, accessible,

sustainable, mission-centric, partner-focused, and cost-effective infrastructure that preserves, fosters, complements, and advances the university's distinct senses of place and service. Extensive land holdings, effectively maintained and growing facilities, and a modern inventory of equipment and systems provide a sound foundation for current programs and future initiatives. The university's strategic physical asset investment programs include operations and maintenance, customer requested renovations, facilities renewal, maintenance reserve, and capital project.

- # + **4. 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 — approved by the Board of Visitors in November 2018 — guides current and future campus leaders as they imagine and develop the Blacksburg campus and the university's agricultural research and extension centers through 2047. The plan, a key initiative connecting across all core values of the university's strategic plan prepares the university for the next generation of higher education. The plan builds upon the Beyond Boundaries vision to ensure appropriate capacity in facilities and infrastructure, as seen in the plan's vision for living-learning communities anchored by flexible learning spaces. Since its completion, the plan has received two national achievement 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.
- # + **5. 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, and Dwyn Taylor, Assistant Vice President for Capital Construction. The Capital Construction 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. Project managers work closely with sponsoring colleges and departments, future building users, and other project stakeholders to achieve project goals. Following project authorization by the Board of Visitors, project managers coordinate all phases of a project from initiation through completion and close-out.
- # + **6. Acceptance of the Capital Project Status Report:** The Committee accepted the quarterly capital project status report from Dwyn Taylor, Assistant Vice President for Capital Construction. The current active portfolio of projects includes 16 authorized projects -- active and complete (within a 1-year warranty phase), has a total value of approximately \$1.1 billion, adds approximately 1.6 million gross

square feet (GSF) of new construction, and renovates nearly 300,000 gross square feet of existing space. Reports in November 2023, April 2024, and June 2024 be included on the Committee's consent agenda.

- + **7. 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. The update included project status information and an introduction of Mary Burrows, the new Associate Dean and Director of the Virginia Agricultural Experiment Station.
- # + **8. Design Preview and Review for the Life, Health, Safety, Accessibility, and Code Compliance - Priority 2:** The Committee reviewed for approval the joint design preview and review for the Life, Health, Safety, Accessibility, and Code Compliance - Priority 2 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 second 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 late fall of 2023 and to attain substantial completion late fall of 2024. The university received total project funding of \$10.4 million in Life, Health, Safety, Accessibility & Compliance funds from the state for three priority projects, \$3.9 million of which will be applied to the second priority project.

The Committee approved the design preview and review graphics and authorized continuation with the project design consistent with the drawings shown.

- + **9. Design Review for Mitchell Hall:** The Committee reviewed for approval the design review for Mitchell Hall. Virginia Tech's top ranked College of Engineering has grown 68 percent since the fall of 2006. As of 2022-2023 the number of Bachelors, Masters and Doctorate represents 39 percent degree production at the institution. To address this growth and aging facilities, as well as accommodate changing pedagogies, a new Mitchell Hall facility will replace undersized and outdated Randolph Hall with a state-of-the-art engineering hub. The facility will primarily house Aerospace and Ocean Engineering, Mechanical Engineering, and Engineering Education departments; it will provide project space for student teams, supporting national team-based research and development competitions. The project also provides student collaboration and general assignment classroom spaces serving the entire campus community. The project received \$11 million of authorization for design funding in the 2020 Acts of Assembly, full project funding in the 2022 Acts of Assembly with a total budget of \$292 million, and is in the working drawing phase. Construction activities are anticipated to begin in the winter of 2023 with substantial completion planned for the summer of 2027. Dean

Julie Ross offered comments of support and appreciation, noting the transformational impact of the project on the College of Engineering and on Virginia Tech as a whole.

The Committee approved the design review graphics and authorized continuation with the project design consistent with the drawings shown.

10. Future Agenda Items and Closing Remarks: The Committee deferred the discussion of potential topics for inclusion on future meeting agendas.

There being no further business, the meeting adjourned at 11:00 a.m.

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 Tuesday, August 29, 2023 at 11:05 a.m. in joint open session in Room G102 A/B of the Fralin Biomedical Research Institute at VTC (4 Riverside Circle) in Roanoke, Virginia. A quorum of the joint Committee was present.

Board members present: Janice Austin – A/P Faculty Representative, Ed Baine, LaTawnya Burleson – Staff Representative, Carrie Chenery, Sandy Davis, Nancy Dye, Donald Horsley, Anna James, Tish Long, Joseph Merola – Faculty Representative, John Rocovich, William Storey – Undergraduate Student Representative, Emily Tirrell – Graduate and Professional Student Representative

University personnel and guests: Callan Bartel, Laura Belmonte, Lynsay Belshe, Haley Bennett, Eric Brooks, Bob Broyden, Brock Burroughs, Cyril Clarke, Al Cooper, Gannon Davis, Corey Earles, Jeff Earley, Alisha Ebert, Mike Friedlander, Mark Gess, Luisa Havens Gerardo, Emily Gibson, Alan Grant, Ellington Graves, Suzanne Griffin, Rebekah Gunn, Kay Heidbreder, Tim Hodge, Anne Keeler, Chris Kiwus, Sharon Kurek, Rob Mann, Meghan Marsh, Elizabeth McClanahan, Nancy Meacham, Ken Miller, Liza Morris, Mike Mulhare, Heidi Myers, Justin Noble, Kelly Oaks, Mark Owczarski, John Pastor, Charlie Phlegar, Jon Porter, Paul Richter, Julie Ross, Tim Sands, Amy Sebring, Cliff Shaffer, Brennan Shepard, Ken Smith, Michael Stowe, Dan Sui, Aimee Surprenant, Don Taylor, Jon Clark Teglas, Rob Viers, Tracy Vosburgh, Melinda West, Chris Yianilos

*# +

1. Ratification of the Capital Outlay Plan for 2024-2030: For first item on the joint open session agenda, the Committees reviewed for ratification the Capital Outlay Plan for 2024-2030.

At the March 2023 meeting, the Board approved a resolution for the university's 2024-2030 Capital Outlay Plan, and since that time, the state issued the

instructions for preparation and submission. The final plan was updated in accordance with guidelines from the state and submitted on June 22, 2023.

Bob Broyden, Associate Vice President for Campus Planning and Capital Financing, updated the committee on changes to the plan since the March 2023 approval.

The Committees recommended the Capital Outlay Plan for 2024-2030 to the full Board for ratification.

- * **2. Approval of Resolution to Amend a Long-term Lease for Children’s National Hospital:** The Committees reviewed for approval a Resolution to Amend a Long-term Lease for Children’s National Hospital. This request is for authorization to amend the university’s existing lease with the Children’s National Research Center to include an additional 12,350 rentable square feet for furthering research.

The Committees recommended the Resolution to Amend a Long-term Lease for Children’s National Hospital to the full Board for approval.

There being no further business, the meeting adjourned at 11:23 a.m.

Open Session Agenda

BUILDINGS AND GROUNDS COMMITTEE

Tuesday, August 29, 2023

*Open session meeting begins at 8:45 a.m.
in Room 101 A/B, Fralin Biomedical Research Institute*

| <u>Agenda Item</u> | <u>Reporting Responsibility</u> |
|---|--|
| 1. Welcome and Introductions | Committee Chair Chris Kiwus |
| 2. Consent Agenda | Committee Chair Chris Kiwus |
| a. Minutes from the June 2023 Committee Meeting | |
| * b. Resolution for Disposition of University Buildings at Southern Piedmont AREC | |
| * c. Resolution on Appointments to the Blacksburg- Virginia Polytechnic Institute Sanitation Authority | |
| # + 3. Overview of the University's Physical Assets and Investment Approach | Chris Kiwus |
| # + 4. Overview of the Campus Master Plan | Liza Morris |
| # + 5. Overview of the Capital Construction Program | Bob Broyden Dwyn Taylor |
| # + 6. Acceptance of the Capital Project Status Report | Dwyn Taylor |
| + 7. Update on Agricultural Facilities | Alan Grant |
| # + 8. Design Preview and Review for the Life, Health, Safety, Accessibility, and Code Compliance - Priority 2 | Liza Morris |
| + 9. Design Review for Mitchell Hall | Liza Morris |
| 10. Future Agenda Items and Closing Remarks | Committee Chair |

Open Joint Session Agenda

FINANCE AND RESOURCE MANAGEMENT COMMITTEE AND BUILDINGS AND GROUNDS COMMITTEE

Room 102 A/B, Fralin Biomedical Research Institute

10:45 a.m.

August 29, 2023

| <u>Agenda Item</u> | <u>Reporting Responsibility</u> |
|---|--|
| *#+ 1. Ratification of the Capital Outlay Plan for 2024-2030 | Ken Miller Chris Kiwus Bob Broyden |
| * 2. Approval of Resolution to Amend a Long-term Lease for Children's National Hospital | Ken Miller Chris Kiwus Bob Broyden |

* Requires full Board approval

Discusses Enterprise Risk Management topic(s)

+ Discusses Strategic Investment Priorities topic(s)

Consent Agenda
BUILDINGS AND GROUNDS COMMITTEE

Tuesday, August 29, 2023

The Committee will consider for approval and acceptance the items listed on the Consent Agenda.

Consent Agenda

- a. Minutes from the June 2023 Committee Meeting
- * b. Resolution for Disposition of University Buildings at Southern Piedmont AREC
- * c. Resolution on Appointments to the Blacksburg-Virginia Polytechnic Institute Sanitation Authority

*** Requires full Board approval.**

OVERVIEW OF THE **UNIVERSITY'S PHYSICAL ASSETS AND INVESTMENT APPROACH**

CHRISTOPHER H. KIWUS, PE, PHD

VICE PRESIDENT FOR CAMPUS PLANNING, INFRASTRUCTURE, AND FACILITIES

August 29, 2023

Overview

With 250,000 living alumni and students who have come to Tech from every state and more than 100 countries, Virginia Tech is rooted in many places.

Virginia Tech has a 2,800-acre campus in Blacksburg, Virginia; a significant presence across the commonwealth, including the Innovation Campus in Northern Virginia, the Health Sciences and Technology Campus in Roanoke, and sites in Newport News and Richmond; educational and research facilities across the state; a study-abroad site in Switzerland; and a 1,800-acre agriculture research farm near the main campus.

As the university meets the global demands of the future, the 'campus' is constantly adapting to fulfill learning and research needs.



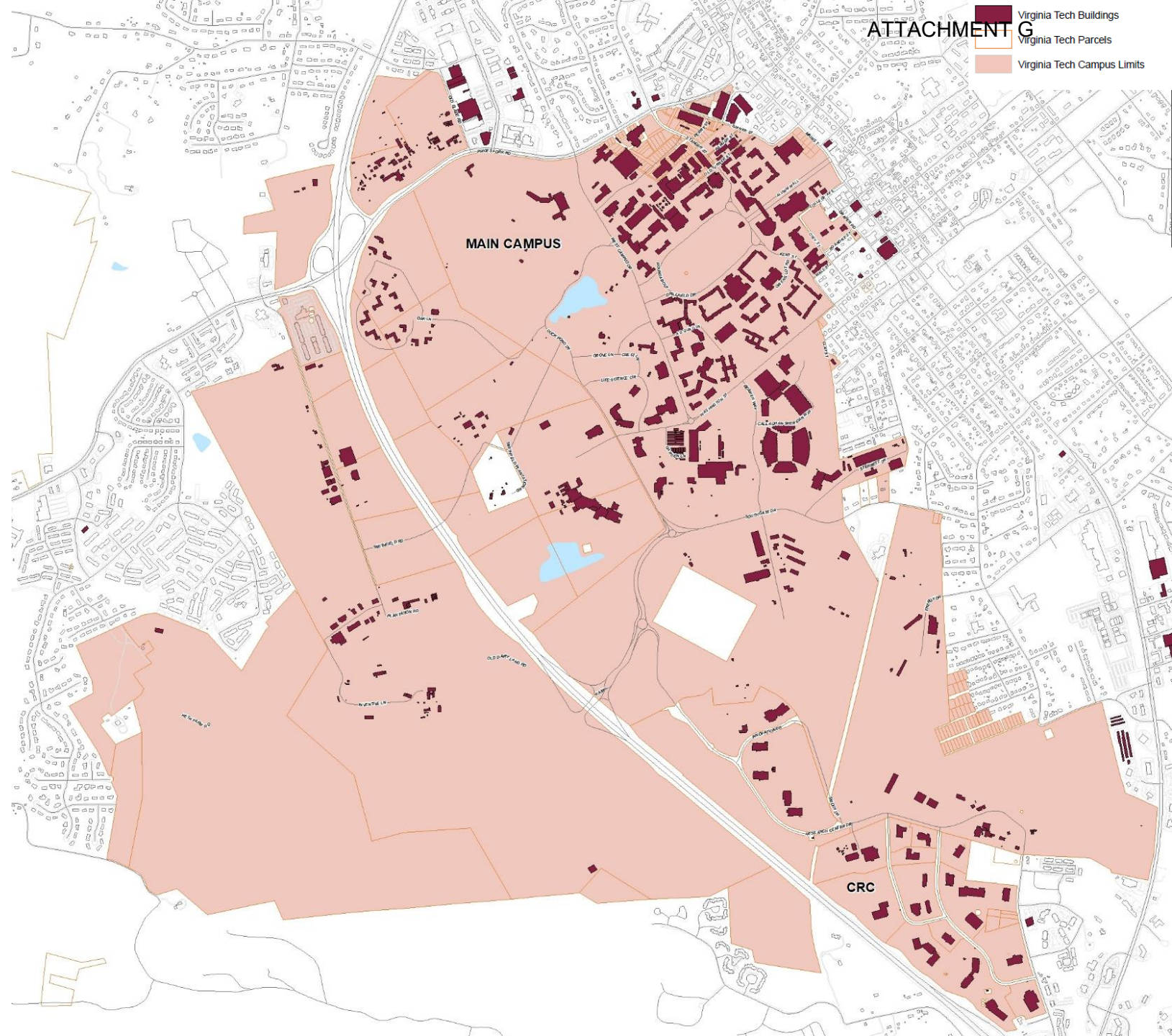
Blacksburg

Virginia Tech's Blacksburg campus consists of approximately **7,000 acres**, **13.3 million gross square feet (GSF)**, and **455 buildings** located in Montgomery County.

The campus proper is located in the Town of Blacksburg and consists of **2,800 acres**.

The Blacksburg campus, including the Corporate Research Center (a Virginia Tech Foundation, Inc. property), consists of approximately **4.1 square miles**. These buildings include **359 Educational and General buildings** containing approximately **5.8 million GSF**, and **114 Auxiliary buildings** containing approximately **5.5 million GSF**.

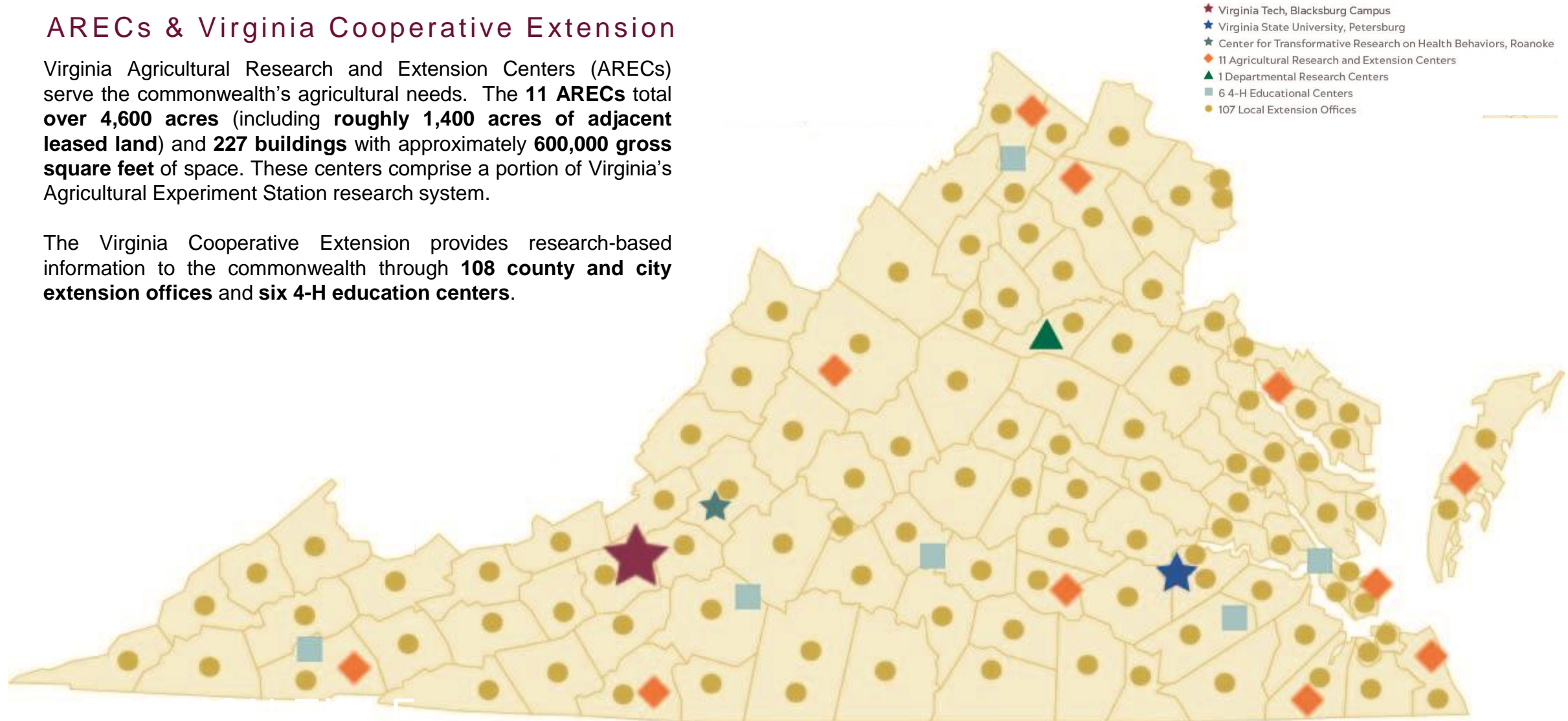
Associated with the Blacksburg campus are **376 buildings** containing over **11.3 million GSF** (not including two Virginia Tech Foundation, Inc. owned buildings). There are **219 major buildings** ($\geq 5,000$ GSF and/or normally occupied) and nearly **24 miles of maintained roadways**.



ARECs & Virginia Cooperative Extension

Virginia Agricultural Research and Extension Centers (ARECs) serve the commonwealth's agricultural needs. The **11 ARECs** total **over 4,600 acres** (including **roughly 1,400 acres of adjacent leased land**) and **227 buildings** with approximately **600,000 gross square feet** of space. These centers comprise a portion of Virginia's Agricultural Experiment Station research system.

The Virginia Cooperative Extension provides research-based information to the commonwealth through **108 county and city extension offices** and **six 4-H education centers**.



Roanoke

The New River and Roanoke valleys are linked more tightly than ever thanks to collaborations among Virginia Tech, Carilion Clinic, and other partners. Roanoke is the home to the university's ninth college, the Virginia Tech Carilion School of Medicine and the adjoining Fralin Biomedical Research Institute at VTC.

Both are part of the VTC Health Sciences and Technology Campus in the Roanoke Innovation Corridor. The city is also home to Virginia Tech Roanoke Center, the Virginia Tech Center for Organizational and Technological Advancement, and the Hotel Roanoke & Conference Center, which is owned by the Virginia Tech Foundation.



Greater Washington, D.C., Metro Area

With facilities, faculty, graduate degrees, and research in the region since 1969, Virginia Tech has a long history in the Washington, D.C., area.

The university offers 45 graduate degree and certificate programs and has facilities in seven Northern Virginia locations. These include the Northern Virginia Center in Falls Church, the Marion duPont Scott Equine Medical Center in Leesburg, the Virginia Tech Research Center – Arlington and Advanced Research Institute in Arlington, Washington-Alexandria Architecture Center in Alexandria, the Occoquan Watershed Monitoring Laboratory in Manassas, and the Middleburg Agricultural Research and Extension Center in Middleburg.

In June 2019, Virginia Tech officials announced plans to build the university's Innovation Campus, National Gateway, in Alexandria.

The campus's strategic location, on 15 acres just south of the Four Mile Run stream that separates Alexandria and Arlington, positions Virginia Tech and its future partners near the nation's capital, diverse industries, and leading tech companies, including Amazon and its HQ2 project.

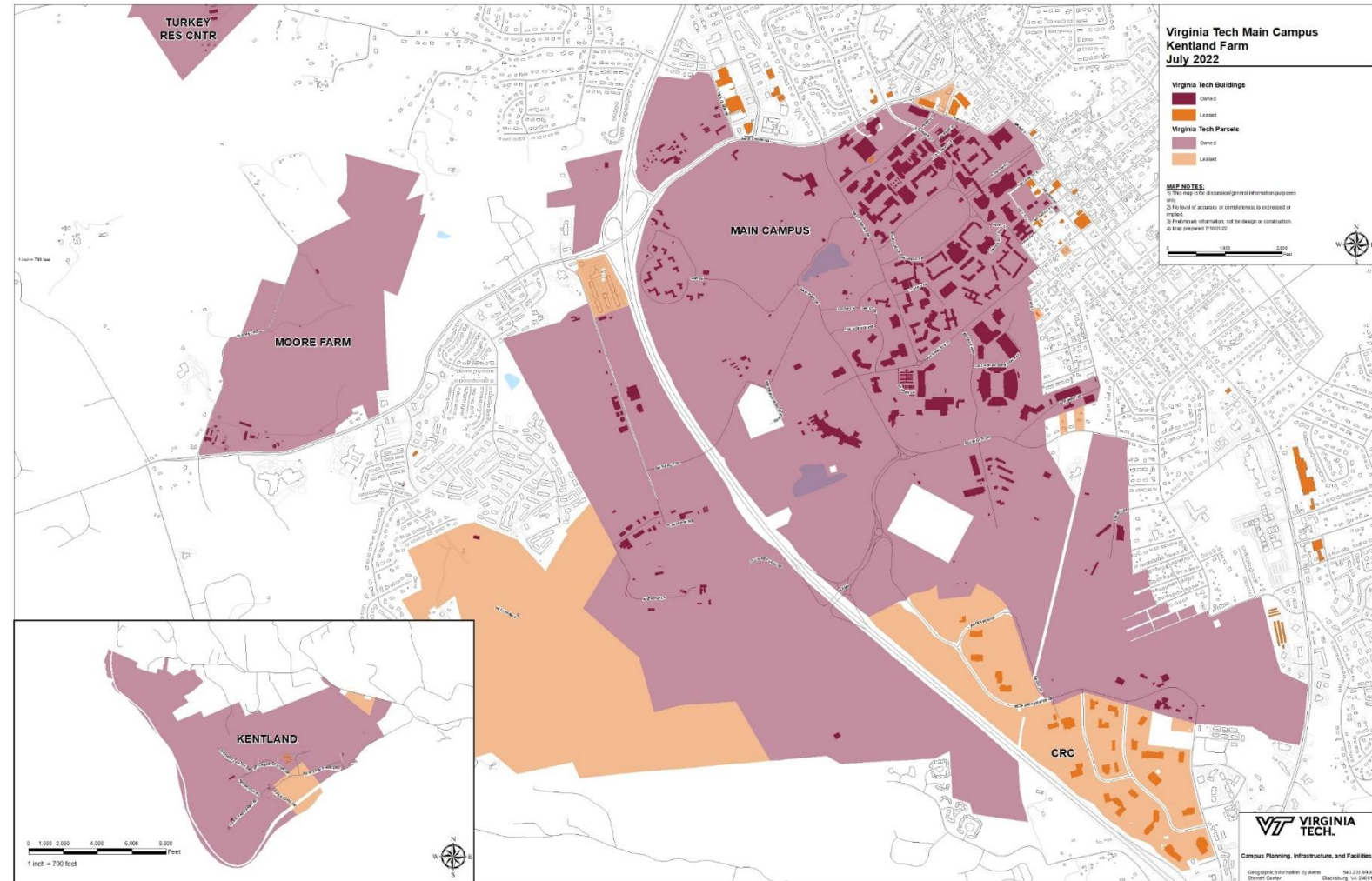


Leased Land & Facilities

Generally, the leasing of off-campus space by the university is an **interim solution** to space challenges. Off-campus leases are intended to continue only if appropriate university-owned space does not become available, except for those buildings owned by the VTF for long-term use by the university.

Overall, the university leases **approximately 2.3 million square feet** of space (offices, labs, classrooms, residential units, and warehouses) throughout various areas in Virginia, other states, and internationally in Switzerland.

There are **70 leased buildings** containing approximately **1.8 million GSF** that support the main Blacksburg campus.



FACILITIES MANAGEMENT APPROACH



The Division of Campus Planning, Infrastructure, and Facilities provides safe, inclusive, accessible, sustainable, mission-centric, partner-focused, and cost-effective spaces that preserve, foster, complement, and advance Virginia Tech's distinct senses of place and service.

In accordance with university policy, the Vice President for Campus Planning, Infrastructure, and Facilities is charged with the responsibility for the design, construction, and maintenance of the university's buildings and grounds.

To achieve this, the following objectives must be met:

- University facilities must be designed, constructed, renovated, and maintained in accordance with the Virginia Uniform Statewide Building Code, and acceptable accessibility, currently the ADA Accessibility Guideline.
- The university must comply with building permitting procedures developed and enforced by the Office of the University Building Official.
- The design, construction, renovation, maintenance, and repair of university facilities must be accomplished in a manner consistent with the university's master plan, historic preservation concerns, university standards of quality and aesthetics, and environmental health and safety standards.
- The public and private investment in the university's facilities must be protected by providing appropriate control over the manner in which they are maintained and renovated.
- The university's records of its facilities must be kept current.
- The work performed on university facilities must be done by qualified personnel in accordance with legal requirements.

Southern Association of Colleges and Schools Commission on Colleges (SACSCOC)

13.7 PHYSICAL RESOURCES

The institution ensures adequate physical facilities and resources, both on and off campus, that appropriately serve the needs of the institution's educational programs, support services, and other mission-related activities.

FACILITIES INVESTMENT APPROACH



OVERVIEW OF THE UNIVERSITY'S PHYSICAL ASSETS AND INVESTMENT APPROACH

Summary

Virginia Tech is committed to providing a safe, inclusive, accessible, sustainable, mission-centric, partner-focused, and cost-effective infrastructure that preserves, fosters, complements, and advances the university's distinct senses of place and service.

Extensive land holdings, effectively maintained and growing facilities, and a modern inventory of equipment and systems provide a sound foundation for current programs and future initiatives.



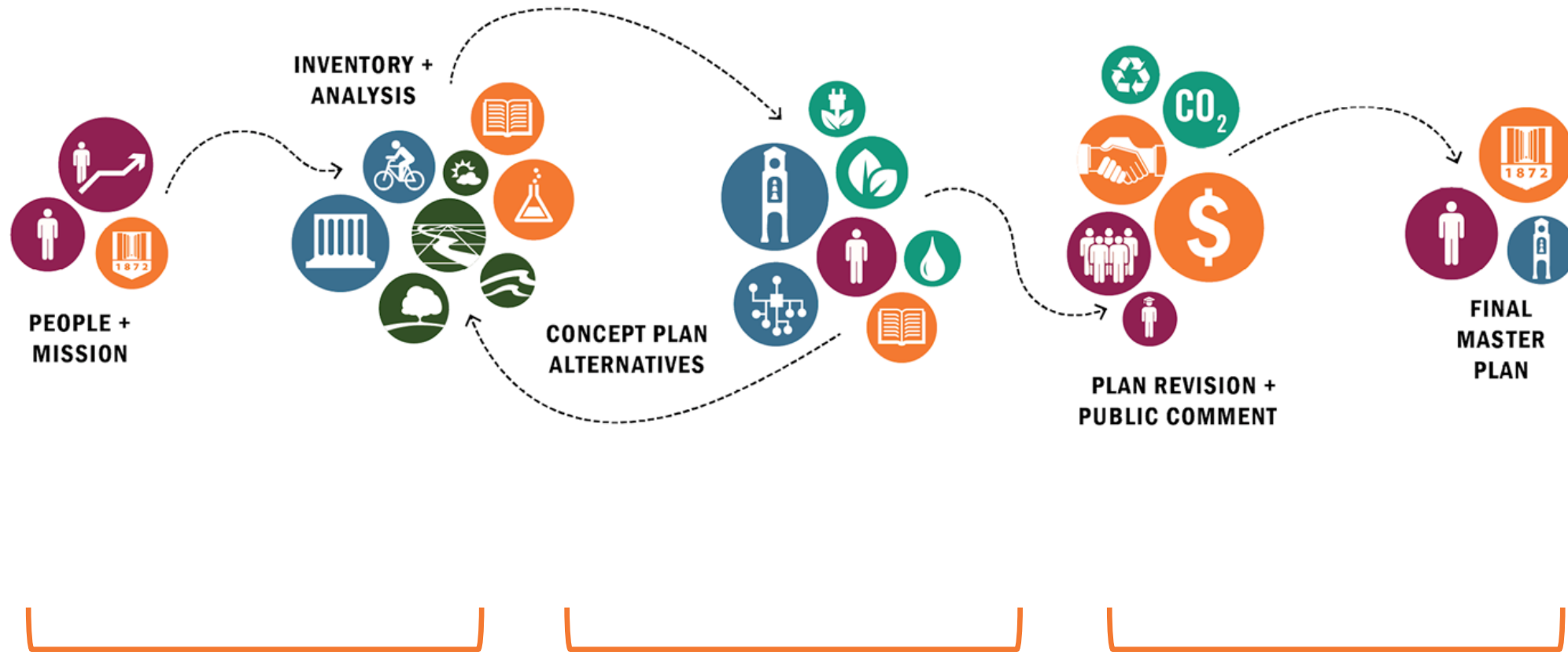
OVERVIEW of the **CAMPUS MASTER PLAN**

LIZA MORRIS

ASSISTANT VICE PRESIDENT FOR PLANNING AND UNIVERSITY ARCHITECT

August 29, 2023

PLANNING PROCESS

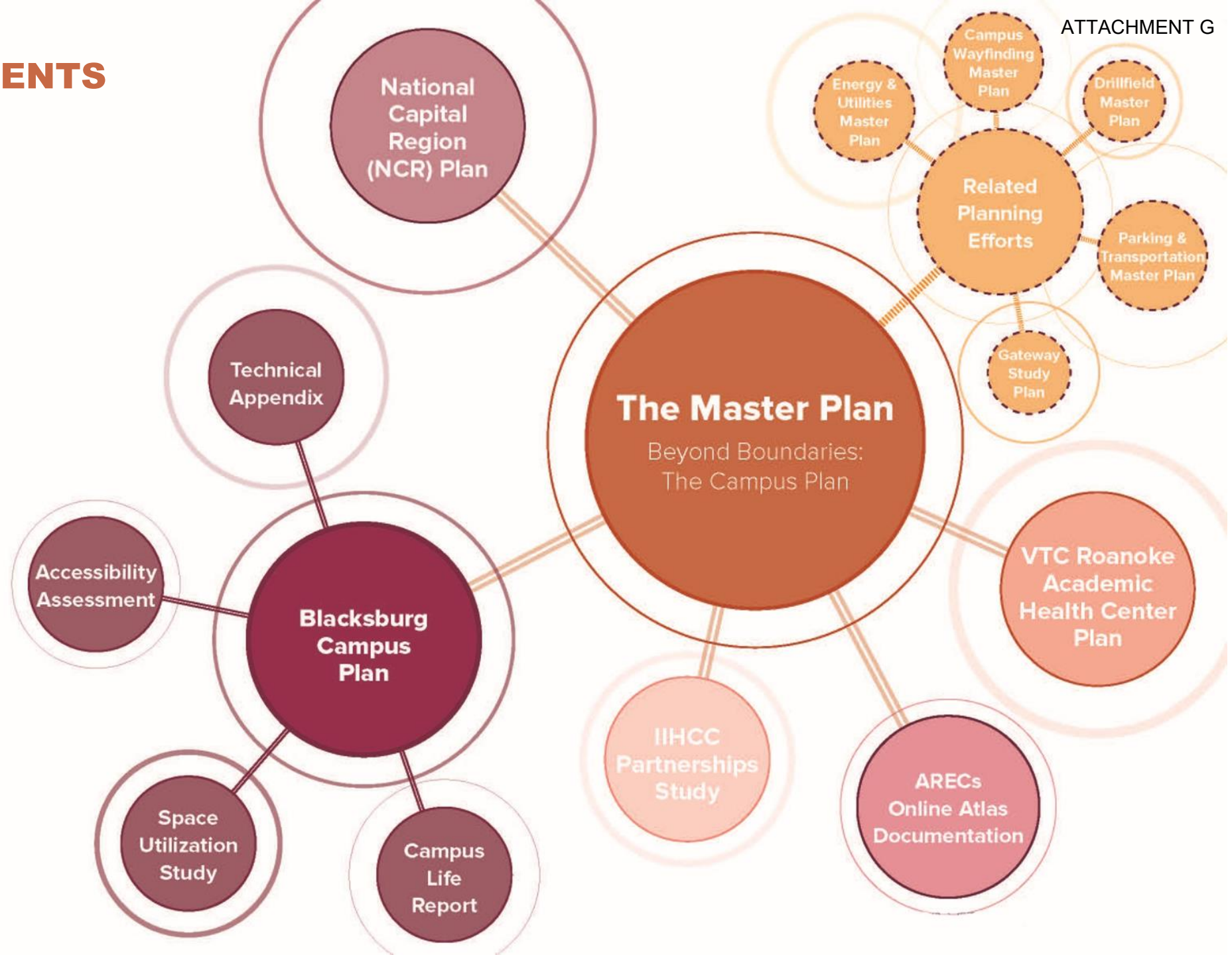


VT-Shaped Discovery

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

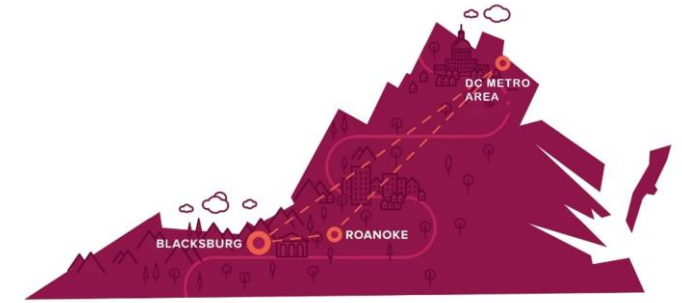
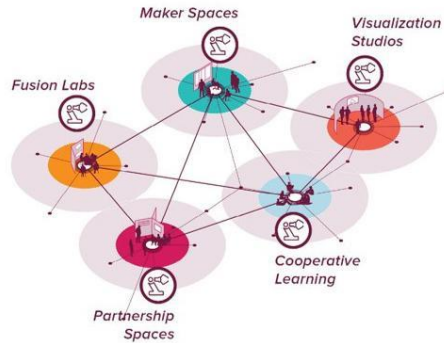
The VT student of 2047 learns by doing, creating, and engaging, service to humanity, and does so not in isolation or as an academic exercise but rather with the support of a community.

PLAN COMPONENTS



| | | | |
|-----------------|----|-------------------------|-----|
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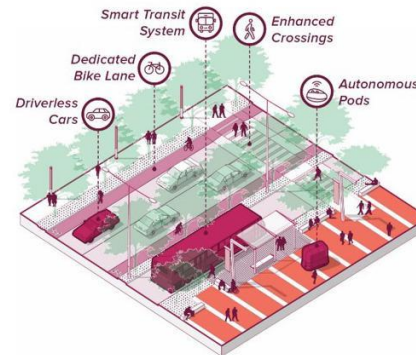
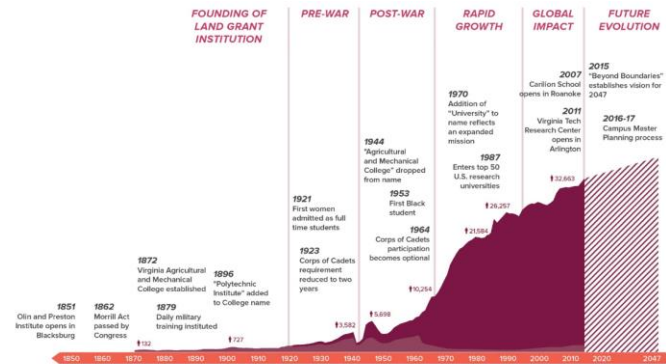
PLAN DRIVERS



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



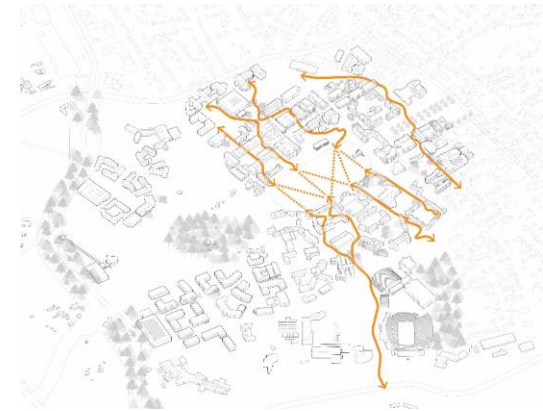
03 The Campus Districts



04 Tech + Town

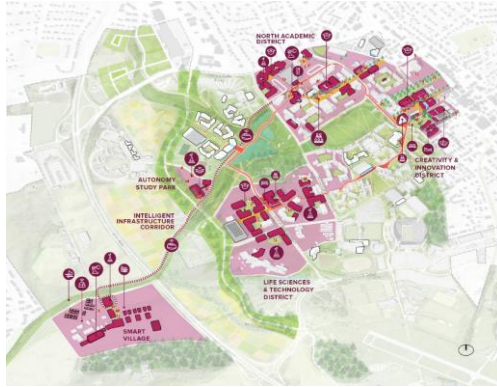


05 The Infinite Loop

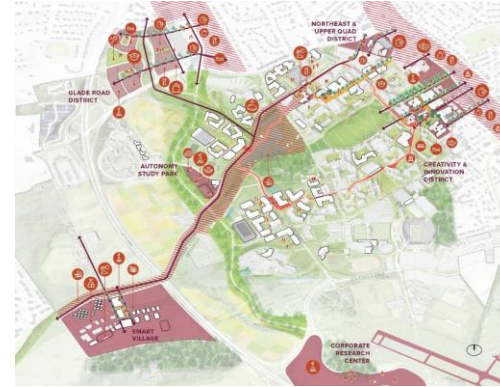


06 The Green Links

FRAMEWORKS



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
- PERIPHERAL DISTRICTS
- 08 ATHLETICS AND RECREATION DISTRICT
- 09 GLADE ROAD
- 10 OAK LANE

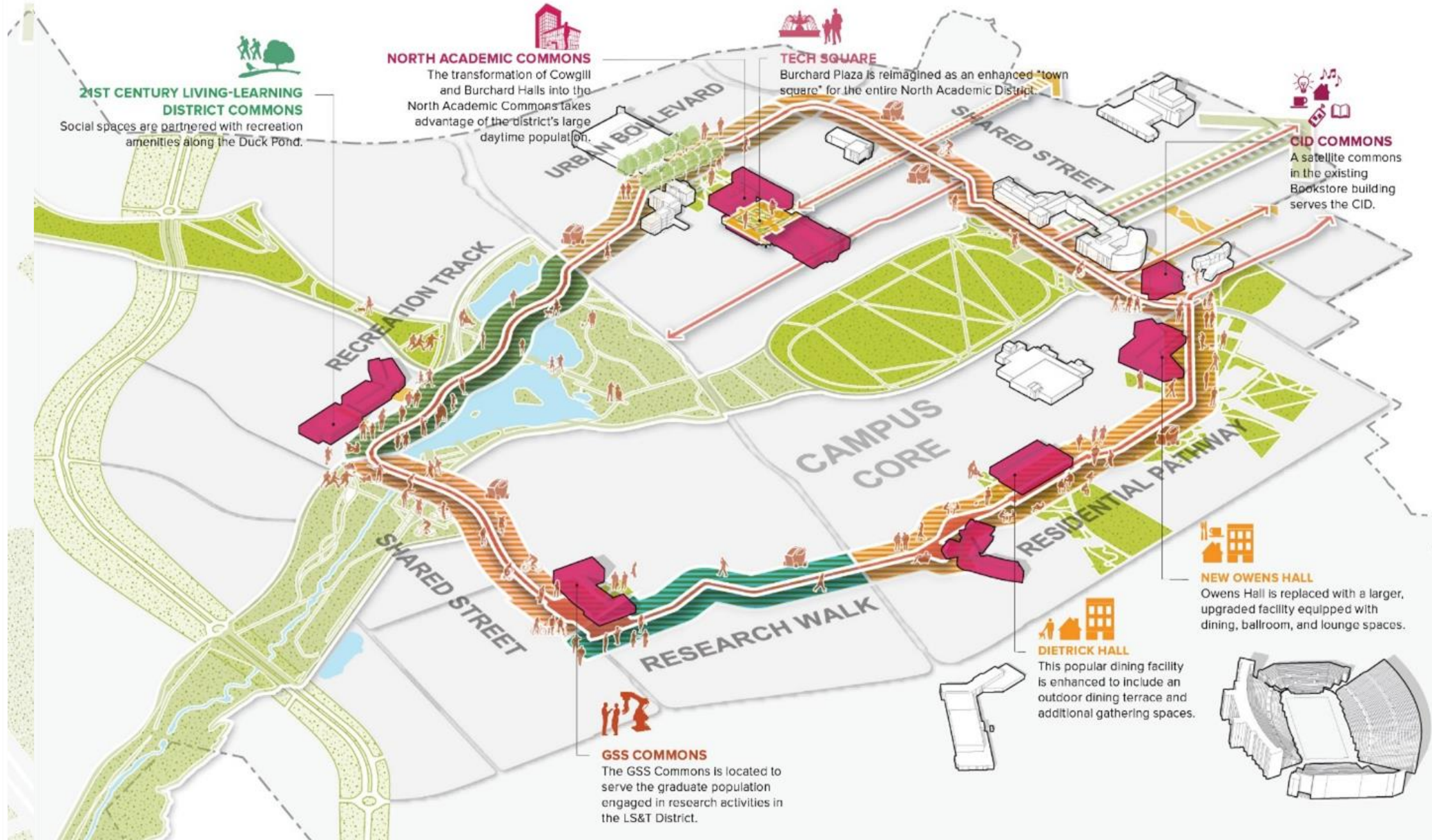


MAJOR OUTCOMES

Infinite Loop

Green Links

North Academic Commons



ILLUSTRATIVE PLAN



DISCUSSION

OVERVIEW OF THE CAPITAL CONSTRUCTION PROGRAM

BOB BROYDEN
ASSOCIATE VICE PRESIDENT FOR CAMPUS PLANNING AND CAPITAL FINANCING

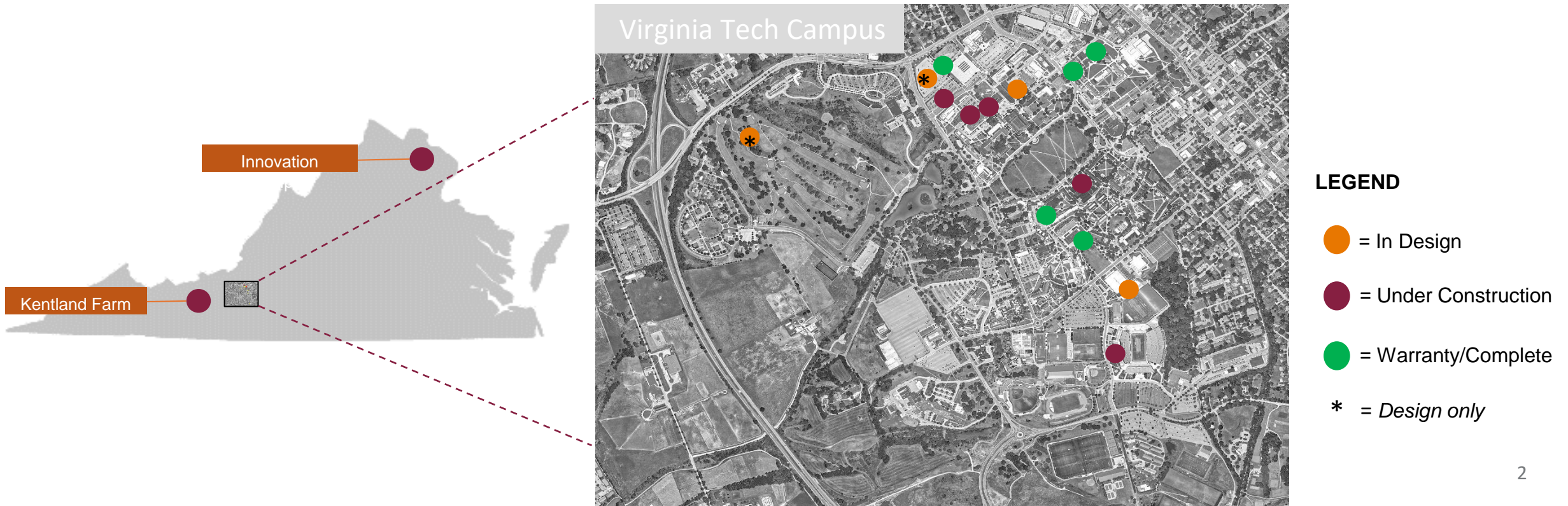
DWYN TAYLOR
ASSISTANT VICE PRESIDENT FOR CAPITAL CONSTRUCTION

AUGUST 29, 2023

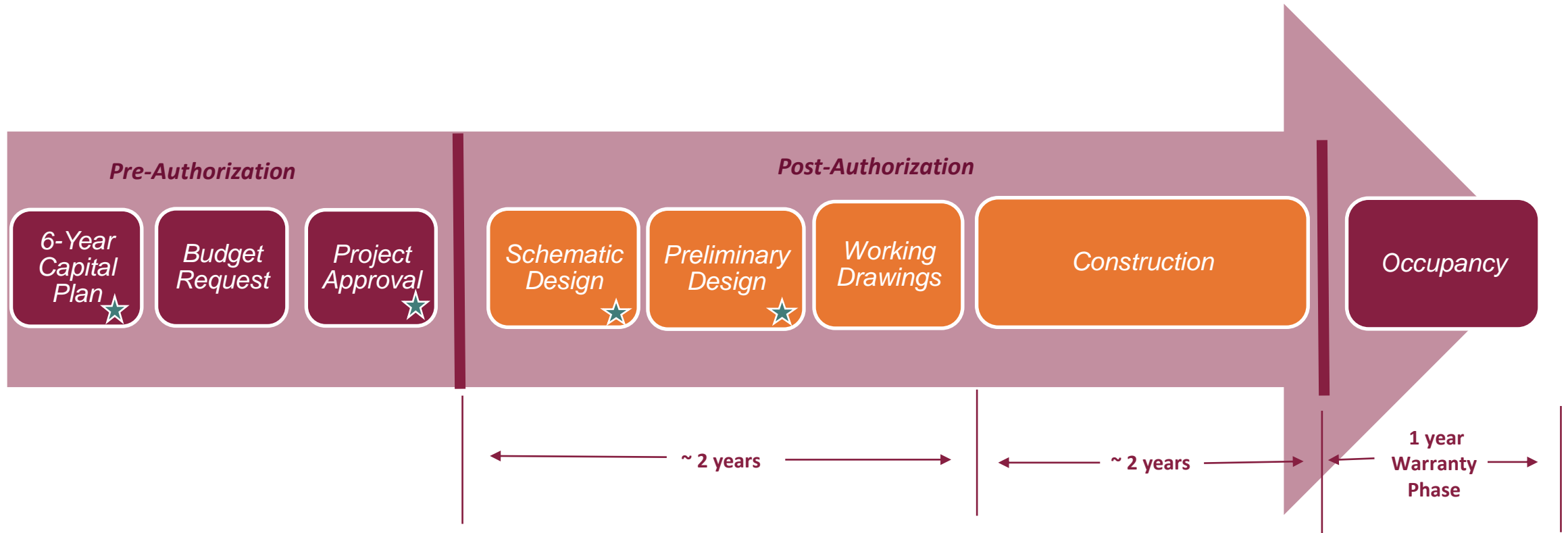
PROGRAM

Current portfolio:

- 16 authorized projects -- active and complete (w/in 1-year warranty phase)
- Total value of ~\$1.1B
- Adds ~1.3M gross square feet (GSF) of new construction
- Renovates nearly 300K GSF of existing space



OVERALL PROCESS



★ - Buildings and Grounds review & approval

OUR PROJECT MANAGERS-- THE "HUB"



ENSURING DESIGN EXCELLENCE



*Control Measures
at each
Phase of Design*



*Broad
Stakeholder Input*



*Emphasize
Partnership*

Schematic Design - Preliminary Design - Working Drawings - Market Analysis - Construction Contract Awarded

ENSURING CONSTRUCTION EXCELLENCE



***Competitive Sealed Bids
“Design-Bid-Build”***



***Construction Manager
at Risk***



Design - Build

(Progressive) Capital Construction Executive Summary

Date Prepared: 24 Jul 2023

| Project Title | Total Project Budget (\$M) | Construction Budget (\$M) (Construction contract value) | New Const (GSF) | Renovation (GSF) | CY 2023 | | | | CY 2024 | | | | CY 2025 | | | |
|--|----------------------------|--|------------------|------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|------------------------|---------------|---------------|
| | | | | | FY23 | | FY24 | | FY25 | | FY26 | | | | | |
| | | | | | Q3 Jan-Mar | Q4 Apr-Jun | Q1 Jul-Sep | Q2 Oct-Dec | Q3 Jan-Mar | Q4 Apr-Jun | Q1 Jul-Sep | Q2 Oct-Dec | Q3 Jan-Mar | Q4 Apr-Jun | Q1 Jul-Sep | Q2 Oct-Dec |
| Dietrick Renovation | \$9.1 | \$6.8 | 6,298 | 11,960 | | | WARRANTY | | | | | | | | | |
| Data & Decision Sciences Building (D&DS) | \$79.0 | \$58.9 | 120,000 | | | | WARRANTY | | | | | | | | | |
| Corps Leadership & Military Science Building | \$52.0 | \$37.9 | 65,428 | 8,449 | | | | WARRANTY | | | | | | | | |
| New Upper Quad Residence Hall | \$42.0 | \$32.0 | 56,650 | | | | | | WARRANTY | | | | | | | |
| Slusher Hall Repairs | \$7.5 | \$5.6 | | 38,000 | | | | | WARRANTY | | | | | | | |
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- NOTE 5** Estimated construction completion of Mitchell Hall is December 2027

INNOVATION CAMPUS – ACADEMIC BUILDING

CM at Risk – State Authorized

Status

- Construction 60% complete



Next Actions

- Anticipated completion in summer 2024



| Project Title | Total Project Budget (\$M) | Construction Budget (\$M) (Construction contract value) | New Const (GSF) | Renovation (GSF) | CY 2023 | | | | CY 2024 | | | | CY 2025 | | | |
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Designer: Smith Group

Builder: Whiting-Turner
8

MITCHELL HALL

(Replace Randolph Hall)

CM at Risk – State Authorized



Status

- Project fully authorized for construction by General Assembly
- Working Drawings underway
- CMAr pre-construction services contract is underway

Next Actions

- Begin development of early enablement package

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DISCUSSION

CAPITAL PROJECT STATUS REPORT

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

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Assistant Vice President for Capital Construction

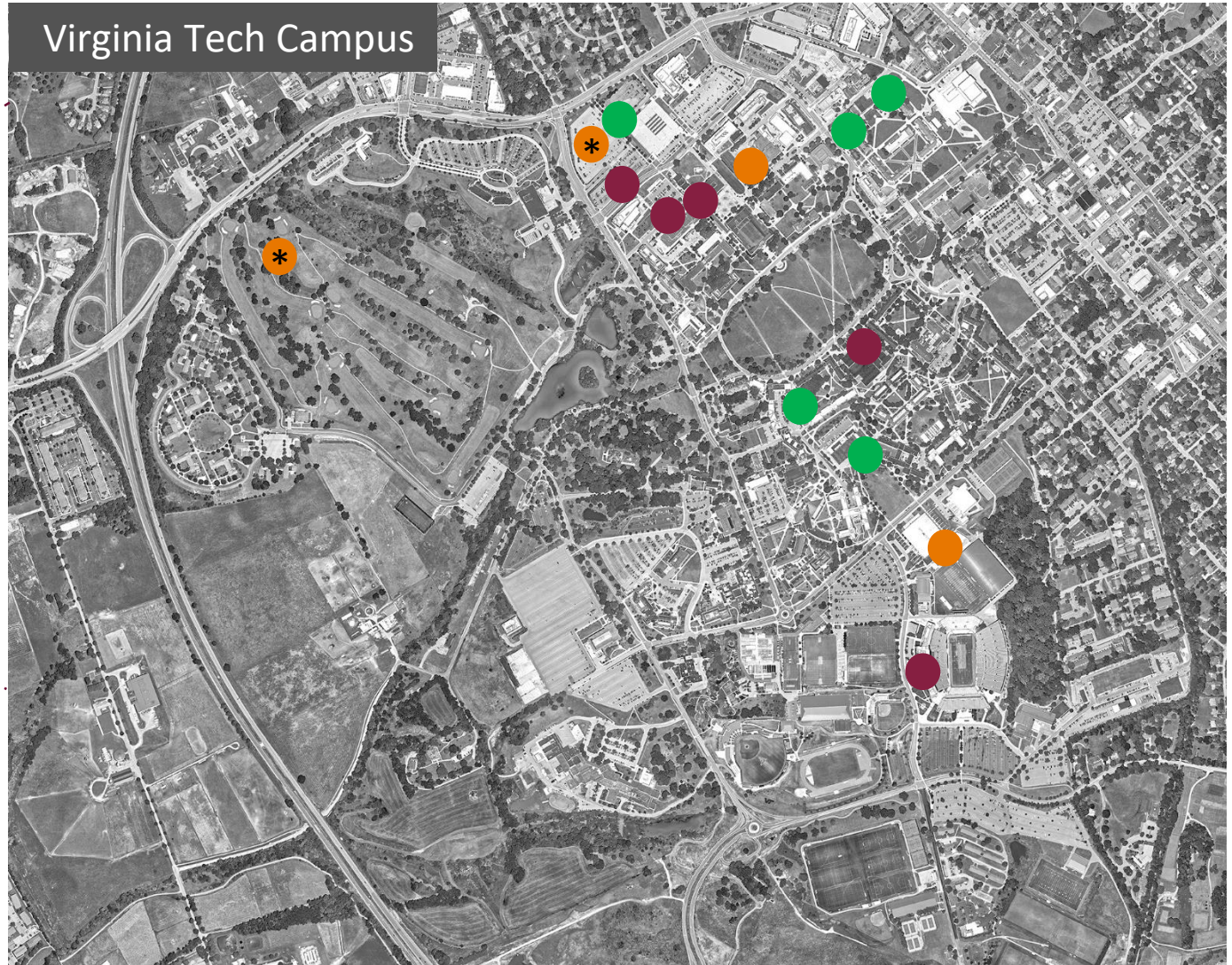
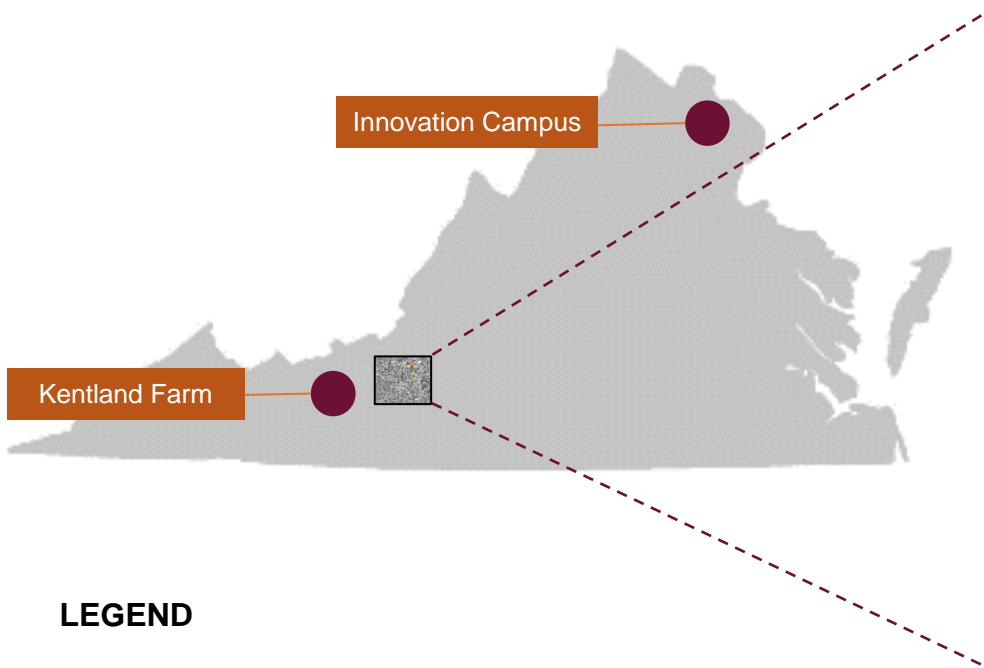
AUGUST 29, 2023

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- Total value of ~\$1.1B
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CAPITAL PROJECT PORTFOLIO



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(Progressive) Capital Construction Executive Summary

Date Prepared: 24 Jul 2023

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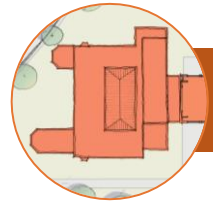
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IN DESIGN



PROJECTS IN DESIGN



New Business Building



Student Life Village (Phase I)*

*A/E services in procurement



Mitchell Hall



Football Locker Room

MITCHELL HALL

(Replace Randolph Hall)

CM at Risk – State Authorized



Status

- Project fully authorized for construction by General Assembly
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Next Actions

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UNDER CONSTRUCTION



ACTIVE CONSTRUCTION PROJECTS



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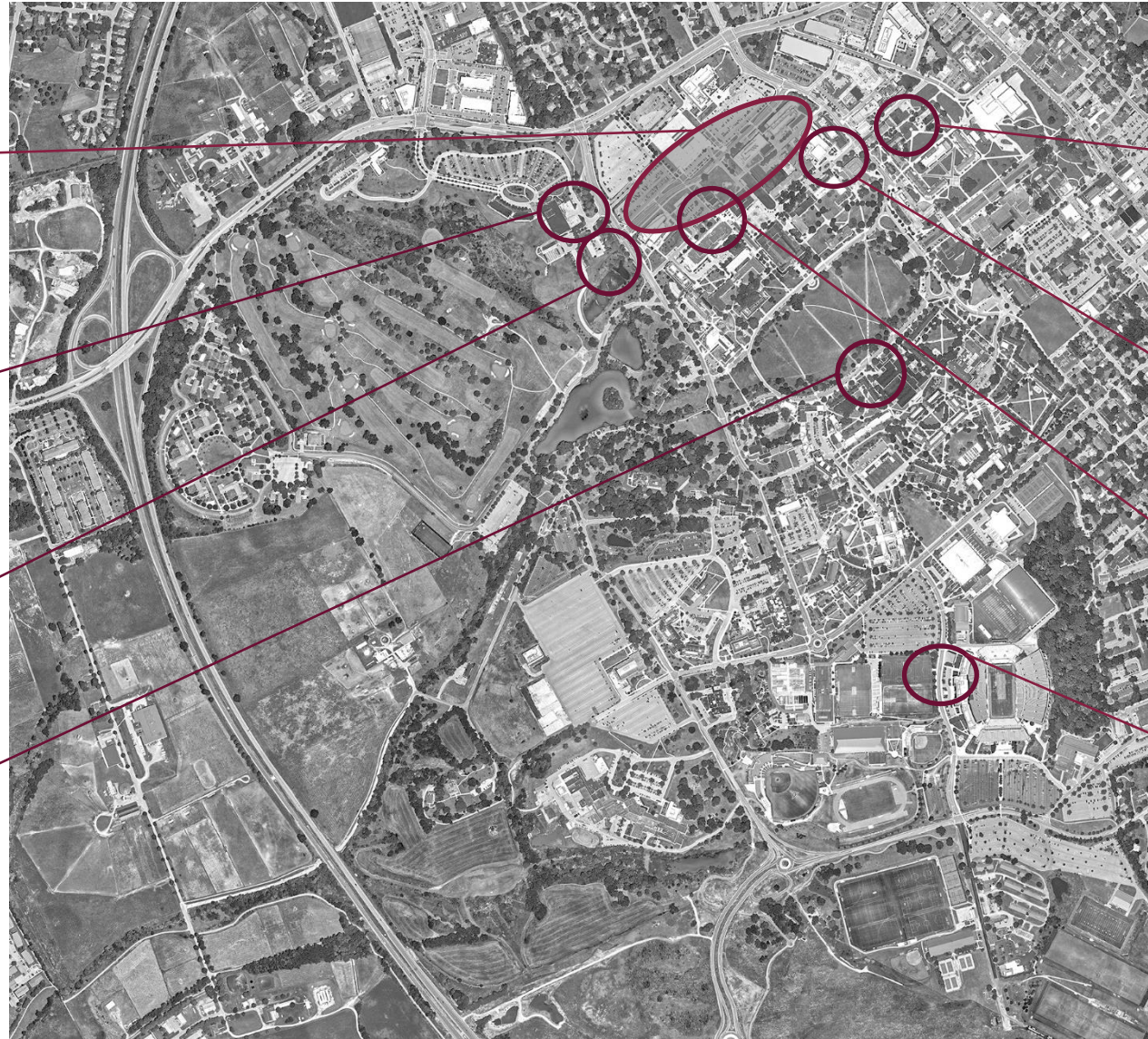
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Life, Health, Safety, Accessibility



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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
- Prospective CMaR's compete for project during early stage of design
- CMaR selected based upon "best value" 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

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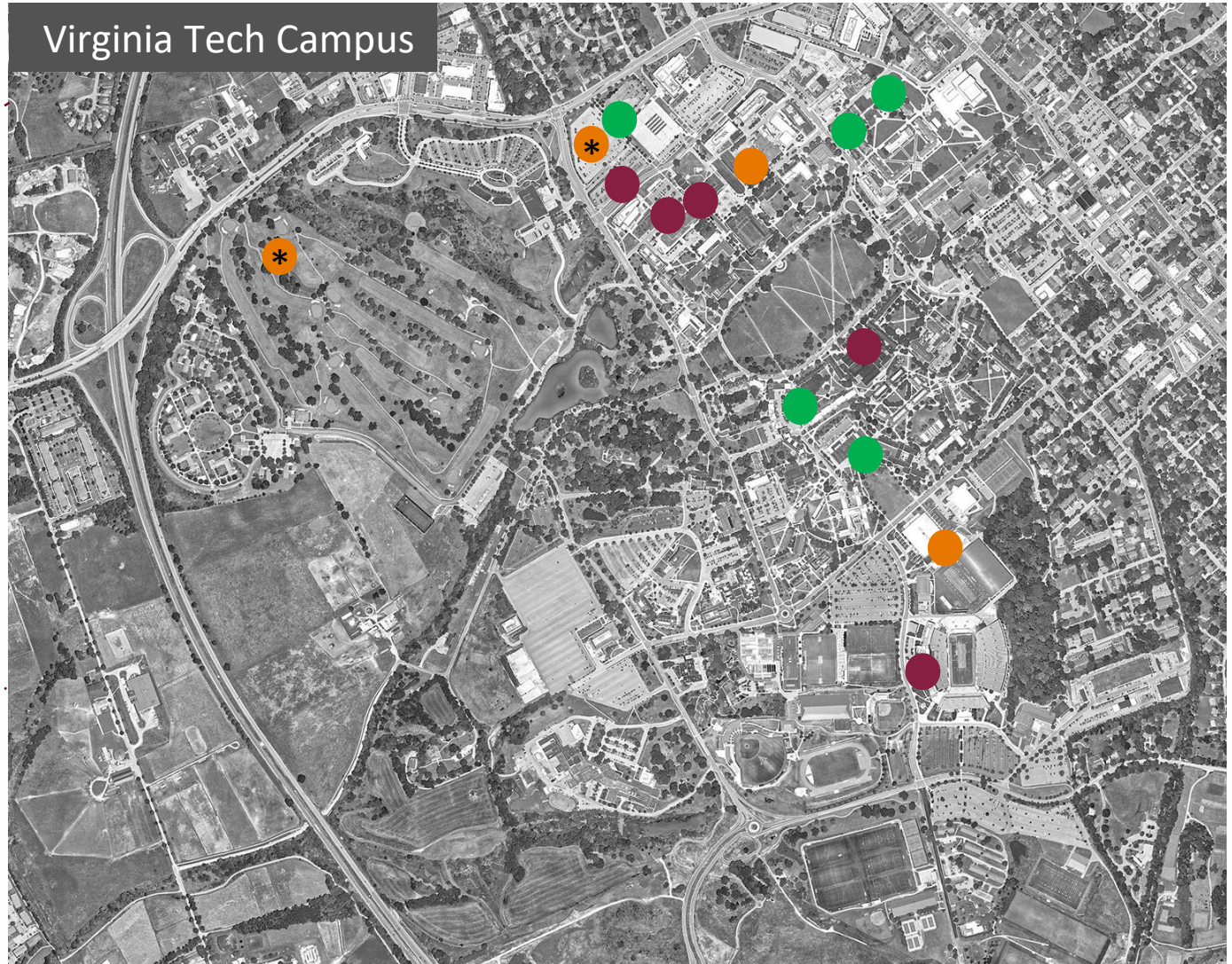
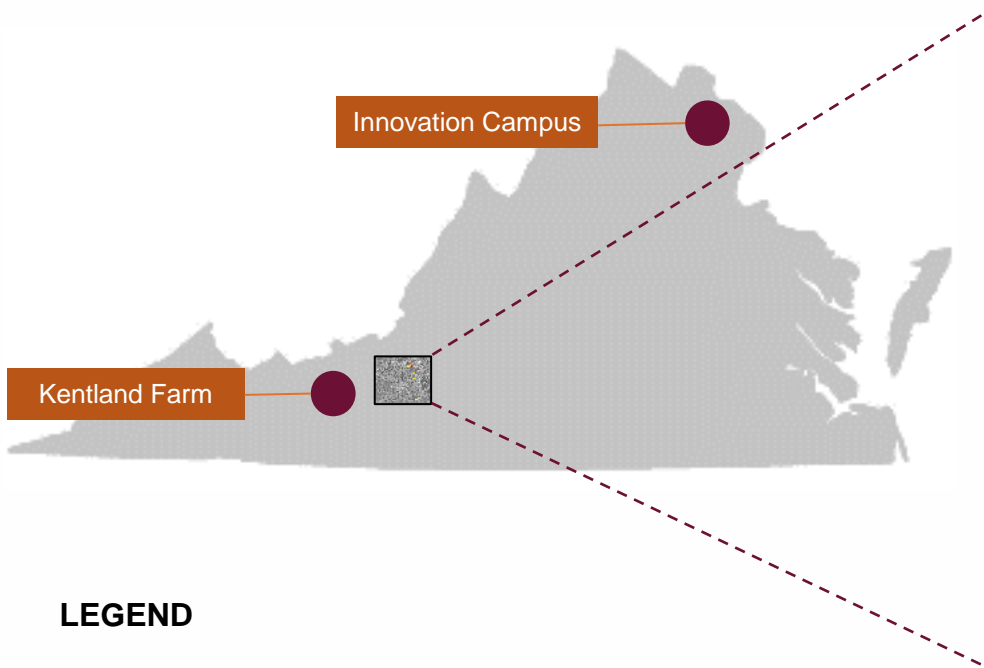
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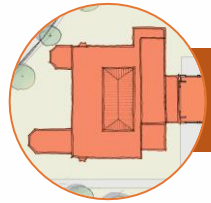
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IN DESIGN



PROJECTS IN DESIGN



New Business Building



Student Life Village (Phase I)*

*A/E services in procurement



Mitchell Hall



Football Locker Room

MITCHELL HALL

(Replace Randolph Hall)

CM at Risk – State Authorized



Status

- Project fully authorized for construction by General Assembly
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- CMAr pre-construction services contract is underway

Next Actions

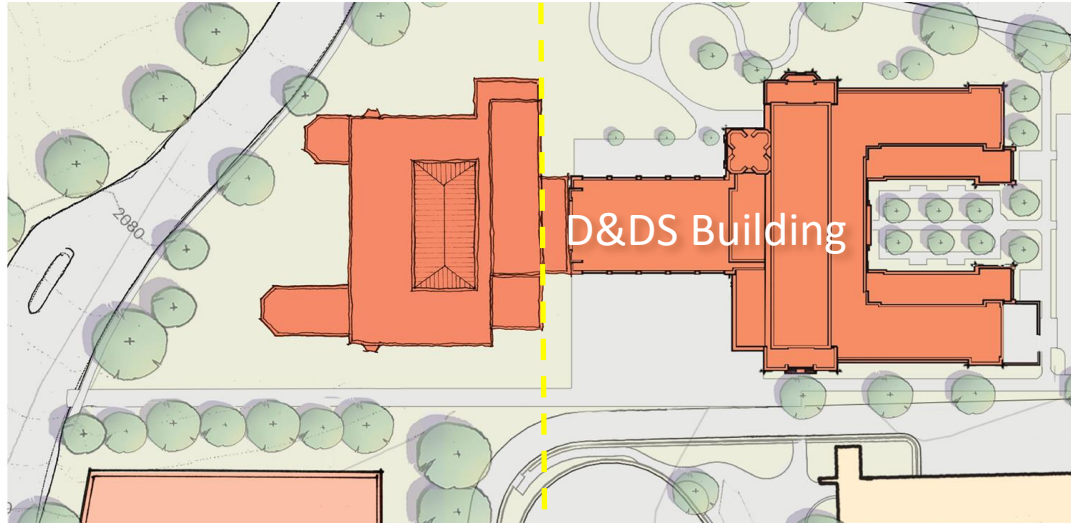
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PLANNING: NEW BUSINESS BUILDING

CM at Risk – BOV Authorized



Status

- Transitioning to Preliminary Design phase
- Standardized value management procedures underway
- CMaR preconstruction services contract is underway

Next Actions:

- Targeting BOV Construction Authorization in early 2024

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Designer: Moseley

Builder: Skanska

FOOTBALL LOCKER ROOM RENOVATIONS

Design-Bid-Build – BOV Authorized



Status

- Working Drawings underway

Next Actions

- Complete designs and initiate construction procurement

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Builder: SKTBD

STUDENT LIFE VILLAGE – PHASE I

(Planning - Design Only)

TBD – BOV Authorized



Status

- Procurement of A/E for design services underway

Next Actions

- Finalize procurement of A/E and begin initial design

| Project Title | Total Project Budget (\$M) | Construction Budget (\$M) (Construction contract value) | New Const (GSF) | Renovation (GSF) | CY 2023 | | | | CY 2024 | | | | CY 2025 | | | |
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UNDER CONSTRUCTION



ACTIVE CONSTRUCTION PROJECTS



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Undergraduate Science Lab Building



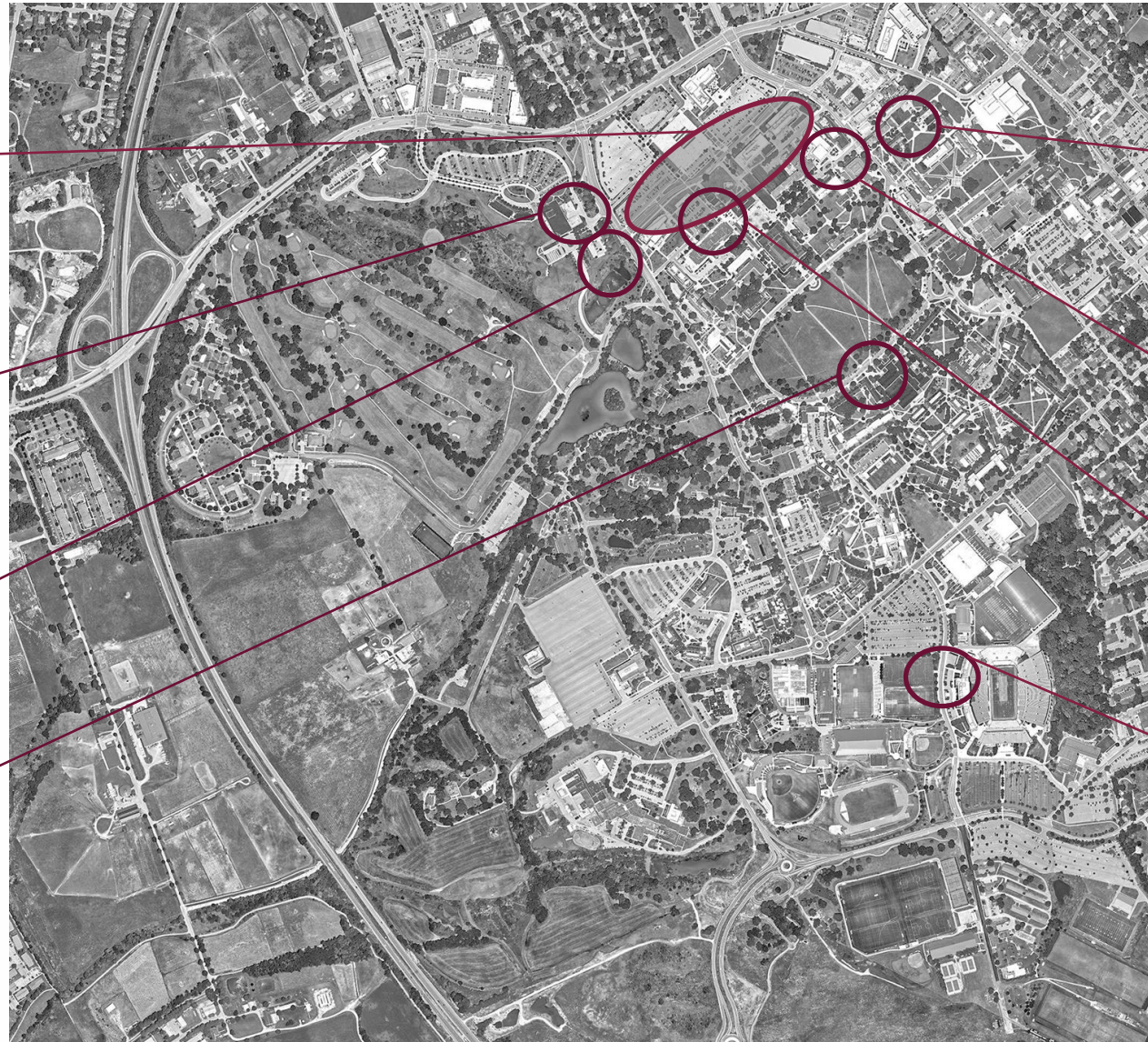
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Life, Health, Safety, Accessibility



Building Envelope Improvements



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INNOVATION CAMPUS—ACADEMIC BUILDING

CM at Risk – State Authorized

Status

- Construction 60% complete



Next Actions

- Anticipated completion in summer 2024



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LIFE, HEALTH, SAFETY, ACCESSIBILITY, & CODE COMPLIANCE

Design-Bid-Build – State Authorized

Status

- Note: Multi-phase execution
- Phase 1: (Derring Steps Elevators) construction 15% complete
- Phase 2 & 3 (Green Links) under design



Next Actions

- Anticipated completion in spring 2024



| Project Title | Total Project Budget (\$M) | Construction Budget (\$M) (Construction contract value) | New Const (GSF) | Renovation (GSF) | CY 2023 | | CY 2024 | | | | CY 2025 | | | | |
|---|----------------------------|--|-----------------|------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | | | | | FY23 | | FY24 | | FY25 | | FY26 | | | | |
| | | | | | Q3 Jan-Mar | Q4 Apr-Jun | Q1 Jul-Sep | Q2 Oct-Dec | Q3 Jan-Mar | Q4 Apr-Jun | Q1 Jul-Sep | Q2 Oct-Dec | Q3 Jan-Mar | Q4 Apr-Jun | Q1 Jul-Sep |
| Life, Health, Safety, Accessibility, & Code Compliance (Note 4) | \$10.4 | \$3.9 | N/A | | | WD | | | | | | | | | |

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

Designer: Quinn Evans

Builder: WM Jordan

BUILDING ENVELOPE IMPROVEMENTS

Design-Bid-Build – BOV Authorized

Status

- Envelope improvements planned for four buildings
- Construction on first building 30% complete



Next Actions

- First building targeted for completion winter/spring 2024



| Project Title | Total Project Budget (\$M) | Construction Budget (\$M) (Construction contract value) | New Const (GSF) | Renovation (GSF) | CY 2023 | | CY 2024 | | | | CY 2025 | | | | |
|--------------------------------|----------------------------|--|-----------------|------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | | | | | FY23 | | FY24 | | FY25 | | FY26 | | | | |
| | | | | | Q3 Jan-Mar | Q4 Apr-Jun | Q1 Jul-Sep | Q2 Oct-Dec | Q3 Jan-Mar | Q4 Apr-Jun | Q1 Jul-Sep | Q2 Oct-Dec | Q3 Jan-Mar | Q4 Apr-Jun | Q1 Jul-Sep |
| Building Envelope Improvements | (Note 3) \$47.2 | \$41.9 | N/A | | | | | | | | | | | | |

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

Designer: WJE

Builder: Carolina Restoration

STUDENT WELLNESS IMPROVEMENTS

CM at Risk – BOV Authorized

Status

- Construction 42% complete



Next Actions

- Anticipated completion in July 2024



| Project Title | Total Project Budget (\$M) | Construction Budget (\$M) (Construction contract value) | New Const (GSF) | Renovation (GSF) | CY 2023 | | CY 2024 | | | | CY 2025 | | | | |
|-------------------------------|----------------------------|--|-----------------|------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | | | | | FY23 | | FY24 | | FY25 | | FY26 | | | | |
| | | | | | Q3 Jan-Mar | Q4 Apr-Jun | Q1 Jul-Sep | Q2 Oct-Dec | Q3 Jan-Mar | Q4 Apr-Jun | Q1 Jul-Sep | Q2 Oct-Dec | Q3 Jan-Mar | Q4 Apr-Jun | Q1 Jul-Sep |
| Student Wellness Improvements | \$70.0 | \$56.3 | | 204,000 | | | | | | | | | | | |

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

Designer: Cannon Design

Builder: Whiting-Turner

UNDERGRADUATE SCIENCE LAB BUILDING

CM at Risk – State Authorized

Status

- Construction 40% complete



Next Actions

- Anticipated completion in June 2024



| Project Title | Total Project Budget (\$M) | Construction Budget (\$M) (Construction contract value) | New Const (GSF) | Renovation (GSF) | CY 2023 | | CY 2024 | | | | CY 2025 | | | | |
|---|----------------------------|--|-----------------|------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | | | | | FY23 | | FY24 | | FY25 | | FY26 | | | | |
| | | | | | Q3 Jan-Mar | Q4 Apr-Jun | Q1 Jul-Sep | Q2 Oct-Dec | Q3 Jan-Mar | Q4 Apr-Jun | Q1 Jul-Sep | Q2 Oct-Dec | Q3 Jan-Mar | Q4 Apr-Jun | Q1 Jul-Sep |
| Undergraduate Science Laboratory Building | \$90.4 | \$69.5 | 102,746 | | | | | | | | | | | | |

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

Designer: ZGF

Builder: Skanska

HITT HALL

CM at Risk – BOV Authorized

Status

- Construction 58% complete

Next Actions

- Anticipated completion in March 2024



| Project Title | Total Project Budget (\$M) | Construction Budget (\$M) (Construction contract value) | New Const (GSF) | Renovation (GSF) | CY 2023 | | CY 2024 | | | | CY 2025 | | | | | | | | | |
|---------------|----------------------------|--|-----------------|------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--|--|--|--|
| | | | | | FY23 | | FY24 | | FY25 | | FY26 | | | | | | | | | |
| | | | | | Q3 Jan-Mar | Q4 Apr-Jun | Q1 Jul-Sep | Q2 Oct-Dec | Q3 Jan-Mar | Q4 Apr-Jun | Q1 Jul-Sep | Q2 Oct-Dec | Q3 Jan-Mar | Q4 Apr-Jun | Q1 Jul-Sep | Q2 Oct-Dec | | | | |
| Hitt Hall | <i>(Note 2)</i> | \$85.0 | \$65.5 | 101,000 | | | | | | | | | | | | | | | | |

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

Designer: Cooper Cary

Builder: WM Jordan

DATA & DECISIONS SCIENCE BUILDING

CM at Risk – State Authorized
COMPLETE

Status

- Project complete



Next Actions

- Close out project



| Project Title | Total Project Budget (\$M) | Construction Budget (\$M) (Construction contract value) | New Const (GSF) | Renovation (GSF) | CY 2023 | | CY 2024 | | | | CY 2025 | | | | |
|---------------------|----------------------------|--|-----------------|------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | | | | | FY23 | | FY24 | | FY25 | | FY26 | | | | |
| | | | | | Q3 Jan-Mar | Q4 Apr-Jun | Q1 Jul-Sep | Q2 Oct-Dec | Q3 Jan-Mar | Q4 Apr-Jun | Q1 Jul-Sep | Q2 Oct-Dec | Q3 Jan-Mar | Q4 Apr-Jun | Q1 Jul-Sep |
| Dietrick Renovation | \$9.1 | \$6.8 | 6,298 | 11,960 | | | WARRANTY | | | | | | | | |

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

Designer: Moseley

Builder: Kjellstrom & Lee

DIETRICK RENOVATION

(And Quillen Spirit Plaza)
 Design-Bid-Build- BOV Authorized
COMPLETE

Status

- Project complete



Next Actions

- Close out project



| Project Title | Total Project Budget (\$M) | Construction Budget (\$M) (Construction contract value) | New Const (GSF) | Renovation (GSF) | CY 2023 | | CY 2024 | | | | CY 2025 | | | | |
|---------------------|----------------------------|--|-----------------|------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | | | | | FY23 | | FY24 | | FY25 | | FY26 | | | | |
| | | | | | Q3 Jan-Mar | Q4 Apr-Jun | Q1 Jul-Sep | Q2 Oct-Dec | Q3 Jan-Mar | Q4 Apr-Jun | Q1 Jul-Sep | Q2 Oct-Dec | Q3 Jan-Mar | Q4 Apr-Jun | Q1 Jul-Sep |
| Dietrick Renovation | \$9.1 | \$6.8 | 6,298 | 11,960 | | | WARRANTY | | | | | | | | |

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

CORPS LEADERSHIP & MILITARY SCIENCE BUILDING

CM at Risk – BOV Authorized
COMPLETE

Status

- Project substantially complete and occupied



Next Actions

- Complete site work and close out project



| Project Title | Total Project Budget (\$M) | Construction Budget (\$M) (Construction contract value) | New Const (GSF) | Renovation (GSF) | CY 2023 | | CY 2024 | | | | CY 2025 | | | | | | | |
|--|----------------------------|--|-----------------|------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--|--|
| | | | | | FY23 | | FY24 | | FY25 | | FY26 | | | | | | | |
| | | | | | Q3 Jan-Mar | Q4 Apr-Jun | Q1 Jul-Sep | Q2 Oct-Dec | Q3 Jan-Mar | Q4 Apr-Jun | Q1 Jul-Sep | Q2 Oct-Dec | Q3 Jan-Mar | Q4 Apr-Jun | Q1 Jul-Sep | Q2 Oct-Dec | | |
| Corps Leadership & Military Science Building | \$52.0 | \$37.9 | 65,428 | 8,449 | | | | | | | | | | | | | | |

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

NEW UPPER QUAD RESIDENCE HALL

CM at Risk – BOV Authorized
COMPLETE

Status

- Project substantially complete and occupied



Next Actions

- Finish site work and close out project



| Project Title | Total Project Budget (\$M) | Construction Budget (\$M) <small>(Construction contract value)</small> | New Const (GSF) | Renovation (GSF) | CY 2023 | | | | CY 2024 | | | | CY 2025 | | | | |
|--------------------------|----------------------------|---|-----------------|------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--|
| | | | | | FY23 | | FY24 | | FY25 | | FY26 | | | | | | |
| | | | | | Q3 Jan-Mar | Q4 Apr-Jun | Q1 Jul-Sep | Q2 Oct-Dec | Q3 Jan-Mar | Q4 Apr-Jun | Q1 Jul-Sep | Q2 Oct-Dec | Q3 Jan-Mar | Q4 Apr-Jun | Q1 Jul-Sep | Q2 Oct-Dec | |
| New Upper Residence Hall | \$42.0 | \$32.0 | 56,650 | | | | | | | | | | | | | | |

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

Designer: Clark-Nexen

Builder: Vannoy

LIVESTOCK & POULTRY RESEARCH FACILITIES (PHASE I)

Design-Bid-Build – State Authorized

COMPLETE: EQUINE FACILITY & SWINE FACILITY



Poultry Facility



Equine Facility



Beef Facility



Swine Facility

Status

- Construction complete on bid packages #1 through #4
- Bid package #5 (3 new hay barns at various locations and demo of existing swine facility) in procurement

Next Actions

- Award bid package #5 and begin construction

| Project Title | Total Project Budget (\$M) | Construction Budget (\$M) (Construction contract value) | New Const (GSF) | Renovation (GSF) | CY 2023 | | | | CY 2024 | | | | CY 2025 | | | |
|--|----------------------------|--|-----------------|------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | | | | | FY23 | | FY24 | | FY25 | | FY26 | | | | | |
| | | | | | Q3 Jan-Mar | Q4 Apr-Jun | Q1 Jul-Sep | Q2 Oct-Dec | Q3 Jan-Mar | Q4 Apr-Jun | Q1 Jul-Sep | Q2 Oct-Dec | Q3 Jan-Mar | Q4 Apr-Jun | Q1 Jul-Sep | Q2 Oct-Dec |
| Livestock & Poultry Research Facilities (Ph I) – Various Locations | \$85.0 | \$65.5 | 101,000 | | | | | | | | | | | | | |

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

Designer: Spectrum Design

Builder: (Various)

MULTI-MODAL TRANSIT FACILITY

Design-Bid-Build – Town of Blacksburg (ToB)

Status

- Construction 67% complete



Next Actions

- Anticipated completion in fall 2023



| Project Title | Total Project Budget (\$M) | Construction Budget (\$M) (Construction contract value) | New Const (GSF) | Renovation (GSF) | CY 2023 | | | | CY 2024 | | | | CY 2025 | | | |
|------------------------------|----------------------------|--|-----------------|------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | | | | | FY23 | | FY24 | | FY25 | | FY26 | | | | | |
| | | | | | Q3 Jan-Mar | Q4 Apr-Jun | Q1 Jul-Sep | Q2 Oct-Dec | Q3 Jan-Mar | Q4 Apr-Jun | Q1 Jul-Sep | Q2 Oct-Dec | Q3 Jan-Mar | Q4 Apr-Jun | Q1 Jul-Sep | Q2 Oct-Dec |
| Multi-Modal Transit Facility | (Note 1) | N/A | 13,606 | | | | | | | | | | | | | |

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

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
- Prospective CMaR's compete for project during early stage of design
- CMaR selected based upon "best value" 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

UPDATE ON **AGRICULTURAL FACILITIES**

ALAN L. GRANT, PH.D.

DEAN OF THE COLLEGE OF AGRICULTURE AND LIFE SCIENCES

August 29, 2023

WHERE ARE VIRGINIA TECH'S AGRICULTURAL FACILITIES?

Agricultural Research And Extension Centers (ARECs) Virginia Agricultural Experiment Station

11 ARECs

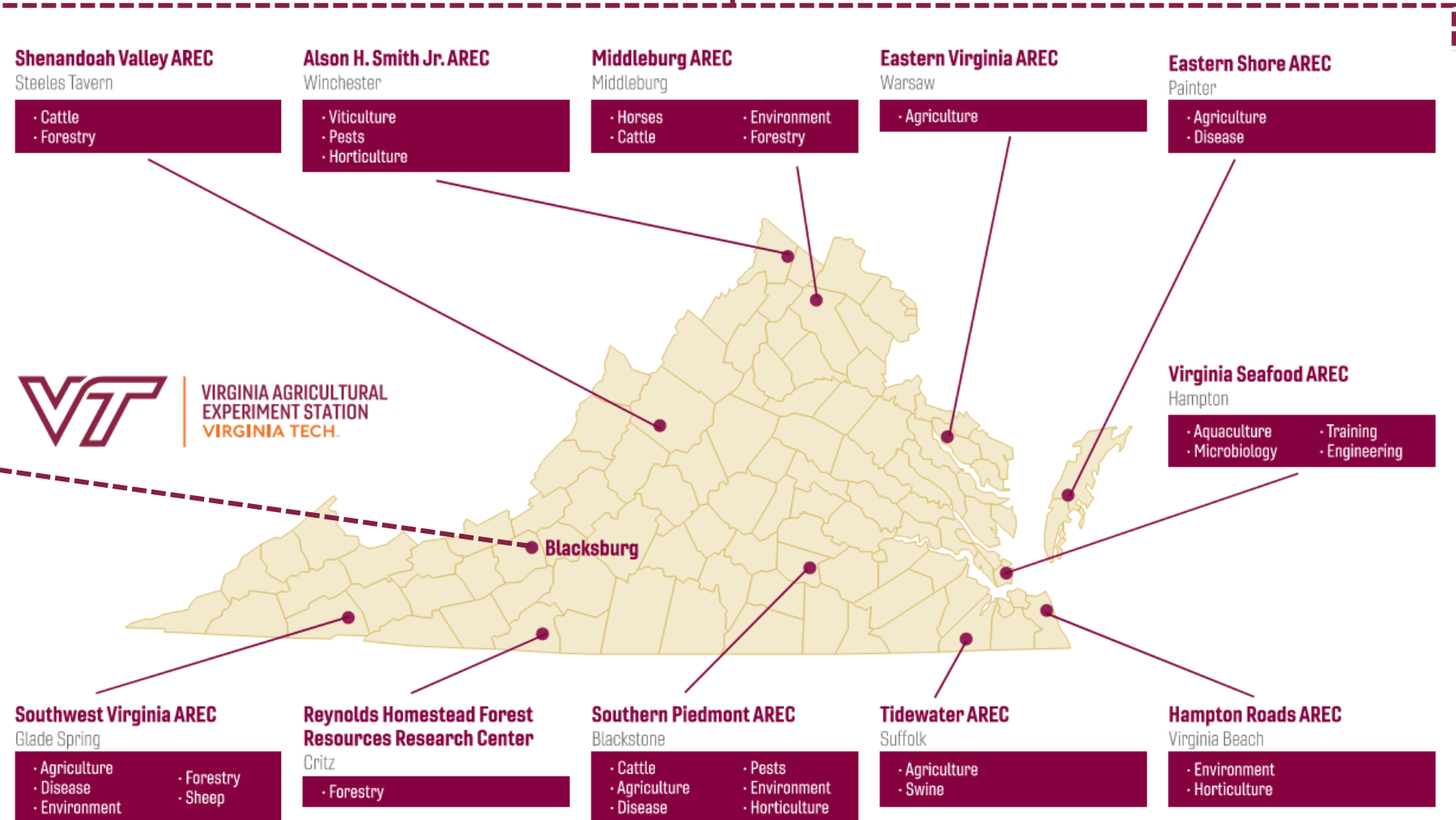
- 227 active ag buildings
- Approx. 600,000 GSF
- 4,626 acres

Montgomery County

- 140 active ag buildings
- Approx. 650,000 GSF
- 3,379 acres

TOTAL AG FACILITIES

- **367** active buildings
- **Approx. 1,250,000** GSF
- **8,005** acres



NON-CAPITAL PROJECT PROGRESS - COMPLETED



Tidewater AREC Entomology Lab Heat Pump Replacement



Middleburg AREC Employee House 816 Heat Pump Replacement



Hampton Roads AREC Chiller Replacement



Eastern Shore AREC Signage



Southern Piedmont AREC Road and Parking lot Repaving



Alphin-Stuart Livestock Arena Parking Lot Paving

NON-CAPITAL PROJECT PROGRESS

Key Projects In Progress

- Hampton Roads AREC Exterior Signage installation (5 signs)
- Removal of 7 unneeded structures from Southern Piedmont AREC
- Eastern Shore AREC Lab 08B Renovation - Design
- Southern Piedmont AREC Lab Freezer Backup Generator; Packhouse Restroom Air Conditioning; Greenhouse cooling system experiment
- Sheep Barn and Beef Barn Structural Repairs

17 projects in CONSTRUCTION

16 projects in DESIGN

16 projects in PLANNING



ESAREC Lab 08B – Future Entomology Lab



SPAREC Building removal



Beef Barn Structural Repairs

CAPITAL PROJECT PROGRESS - CONSTRUCTION

LIVESTOCK AND POULTRY RESEARCH FACILITIES, Phase 1, Bid Package Updates:

- BP 1 Swine: Complete. Animals planned to arrive in early October.
- BP 2 Beef Nutrition (99%) and Kentland Hay Shed (100%): Concrete repair and squeeze chute motor pending completion.
- BP 3 Turkey and Broiler Grow-out Facilities: Nearly complete. Equipment purchase ongoing.
- BP 4 Equine and Equipment Storage: Complete. Animals moved in July!
- BP 5 Three Hay Sheds and Final Demolition: Bidding in progress. 18+ month project duration.

OCCUPIED NEW FACILITIES



BP4 Equitation Barn



BP4 Equipment Shed

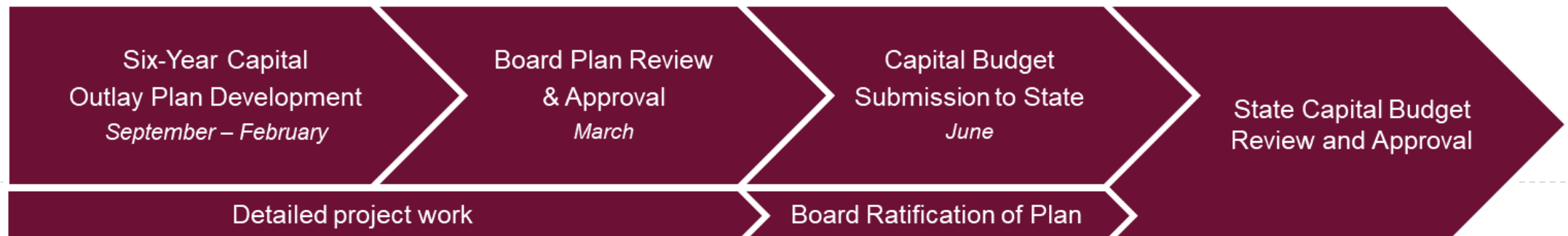


BP2 Kentland Hay Shed

CAPITAL PROJECT PROGRESS - PLANNING

| Agency 229 Six-year Capital Outlay Plan for 2024-2030 | 352,300 GSF | \$205.9 M |
|---|-------------|-----------|
| 1. Improve Center Woods Complex (CNRE)* New research labs, research support spaces, equipment storage and offices for the Department of Fish and Wildlife Conservation. Demolish 12 existing structures. | 25,900 GSF | \$14.7 M |
| 2. AREC Improvements, Phase 1* Renovation of three existing facilities and addition of eight new facilities at Eastern Shore and Southern Piedmont ARECs. Project will increase laboratory research capacity, field research capacity, research greenhouse space, housing capacity, and improve overall condition. | 65,600 GSF | \$25.2 M |
| 3. Replace Plant and Animal Facilities at Glade Road | 64,200 GSF | \$41 M |
| 4. HABB-II Plant and Environmental Sciences Research Facility | 94,000 GSF | \$91 M |
| 5. Renew Animal and Livestock Facilities, Phase 2 | 102,600 GSF | \$34 M |

*Capital Budget Request submitted to State, June 2023



Technology and Connectivity

- AREC and VCE Network Equipment Upgrade and Expansion Project
 - Installations have started and will continue for much of the year
 - Five ARECs already upgraded with a total of 20 new switches and 80 new wireless access points
 - Over 85 percent of the VCE offices have been completed
- AREC audiovisual upgrades
 - Phase I (larger ARECs) complete
 - Phase II is now complete. This phase focused on improving capabilities at some smaller ARECs (Eastern Shore, Eastern Virginia, Middleburg, and Shenandoah Valley) and continued enhancements to larger offices



New AREC Router, Switch, and Cabling Installed



Eastern Shore AREC Audiovisual Upgraded

INTRODUCTION



Mary Burrows, Ph.D.

**Director of Virginia Agricultural
Experiment Station**

CALS Associate Dean for Research

- Former Assoc. Dir. of Montana AES and Research Development
- 17 years as Extension Plant Pathologist, Montana State Univ.
- Dir. of Schutter Diagnostic Lab, Regional Pulse Crop Diagnostic Lab, IPM Program
- Montana State University
- Ph.D. Plant Pathology, Univ. of Wisconsin-Madison
- B.A. Biology, Minnesota State University - Moorhead

College of Agriculture Life Sciences (CALs) Projects Status Report
 BUILDINGS AND GROUNDS COMMITTEE
 August 29, 2023

| PROJECT NAME | PROJECT DESCRIPTION | ESTIMATED TOTAL PROJECT COST | FUND SOURCE | PROJECT TEAMS | CONTRACT COMPLETION DATE | PROJECT STATUS |
|--------------|---------------------|------------------------------|-------------|---------------|--------------------------|----------------|
|--------------|---------------------|------------------------------|-------------|---------------|--------------------------|----------------|

CAPITAL PROJECTS

Updates through August 15, 2023

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 building 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 | Fall 2020 | All projects have reached substantial completion and have certificate of occupancy. Minor corrective work at the Metabolic Research Lab is ongoing. |
| | | | | Snyder, CPPI | | |
| New Virginia Seafood AREC Building | 21,698 SF, 3-story building 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 | April 2022 | Certificate of Occupancy has been received. Remaining punch list and change order items are complete. Primary commissioning complete. Installation of final specialty equipment in progress. City has demolished old facility. |
| | | | | E.T. Gresham | | |
| Livestock and Poultry Research Facilities, Phase I | Pkg 1: New Swine Center at Kentland Farm. Pkg 2: New Beef Nutrition Facility & Hay Shed at Kentland Farm Pkg 3: New Broiler & Turkey Grow-out facilities at the Turkey Research Center (Glade Rd.) Pkg 4: New Equitation Barn & Equipment Storage Building at Livestock Center (Plantation Rd.) Pkg 5: 3 New Hay Sheds at Smithfield Horse Center, Fields west of US 460, and Heth Farm plus demolition of existing swine center | \$31,074,000 | Capital Outlay | Spectrum | Packages 1-4: Summer 2023 | Packages 1-3 are nearly complete. Package 4 is 100% complete. Priority 1 Equipment buy-out is complete. Occupancy to occur over summer and fall. Packages 5: Package 5 bidding is in progress. |
| | | | | Pkg 1: SIMCON Pkg 2: CPPI Pkg 3: CPPI Pkg 4: Clark Nexsen Pkg 5: TBD | Packages 5: TBD | |

PROJECTS IN DESIGN

| | | | | | | |
|--------|--|--|--|--|--|--|
| (none) | | | | | | |
|--------|--|--|--|--|--|--|

PROJECT INITIATION / PLANNING STAGE

| | | | | | | |
|---|--|---------------|----------------|-----|-----|--|
| 2024-2030 6-Year Capital Outlay Plan | Capital budget requests for five projects: CNRE Center Woods Improvements, System-Wide AREC Improvements Phase I, Glade Road Relocation, Human and Agricultural Biosciences Building II, and Livestock and Poultry Research Facilities, Phase II | \$213,000,000 | Capital Outlay | TBD | TBD | Following approval of the 2024-2030 Capital Outlay Plan by the Board of Visitors, program and cost validation is underway for selected projects. Two submitted for state funding consideration summer 2023. Others held for future requests. |
| | | | | TBD | | |
| System-Wide AREC Improvements, Phase I | Renew and expand aging and deteriorating AREC facilities. Phase 1 project to address entirety of capital renewal needs at Eastern Shore and Southern Piedmont ARECs. | \$25,200,000 | Capital Outlay | TBD | TBD | Phase 1 capital budget request submitted June 2023. |
| | | | | TBD | | |
| Replace Plant and Animal Facilities at Glade Road | Relocate existing facilities away from the Glade Road Research Facility. | \$41,000,000 | Capital Outlay | TBD | TBD | Reviewing program and budget with CPIX for future budget submission |
| | | | | TBD | | |
| Plant & Animal Environmental Sciences Research Facility (HABB-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. | \$91,000,000 | Capital Outlay | EYP | TBD | Re-programming effort completed with a \$53.5 M construction target. Draft Feasibility report is under review. |
| | | | | TBD | | |

NON-CAPITAL PROJECTS

Updates through August 15, 2023

PROJECTS COMPLETED SINCE LAST REPORT

| | | | | | | |
|---|--|-----------|-------------|------------|-------------|----------|
| Minor Projects (<\$25,000 each): Employee Housing Outbuilding Repairs Middleburg AREC House 816 Heat Pump Replacement | Repairs and painting exterior storage sheds at employee housing on Plantation Road. Replace failed heat pump. | \$31,000 | CALs / VAES | - | Summer 2023 | Complete |
| | | | | - | | |
| Alphin-Stuart parking lot paving | Paving over existing gravel parking area to reduce annual maintenance, solve drainage problems, expand number of spaces, and provide all-weather parking surface. Heavy-duty asphalt section to be installed for possible future bus turnaround. | \$241,000 | CALs | - | May 2023 | Complete |
| | | | | Blackstone | | |

College of Agriculture Life Sciences (CALs) Projects Status Report
BUILDINGS AND GROUNDS COMMITTEE
August 29, 2023

| PROJECT NAME | PROJECT DESCRIPTION | ESTIMATED TOTAL PROJECT COST | FUND SOURCE | PROJECT TEAMS | CONTRACT COMPLETION DATE | PROJECT STATUS |
|--|--|------------------------------|----------------------------|--|--------------------------|---|
| Tidewater AREC Entomology Lab Heat Pump Replacement | Existing heat pump is failing and must be replaced. | \$11,000 | Maintenance Reserve | - Comfort Systems | June 2023 | Complete |
| Hampton Roads AREC Chiller Replacement | Existing chiller failed and must be replaced before cooling season. | \$116,000 | Maintenance Reserve | Virginia A&E JRC Services | Summer 2023 | Complete |
| Southern Piedmont AREC Roadway and Parking Lot Repaving | 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. | \$147,000 | CALS / VAES | - Finley Asphalt and Concrete | Summer 2023 | Complete |
| PROJECTS IN CONSTRUCTION | | | | | | |
| <u>Minor Projects (<\$25,000 each):</u> Reynolds Homestead FRRC Exterior Repairs Shenandoah Valley AREC Working Pens Middleburg AREC Laundry Hookup Middleburg AREC Freeze Damage Repairs Hampton Roads AREC Water Heater Installation Southwest Va. AREC Ram Barn Shed Extension | Repair deteriorating eaves and trim on main AREC building. Installation of new working pens and open shed. Washer and dryer connections for one building. Repairs in 812 Annex due to frozen pipes bursting during holiday break. Add supplemental water heater to meet usage demands. Extend existing lean-to shed for additional feed pens, bunk space, holding pens and loadout. | \$111,000 | CALS / VAES | - 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 | - Westview, Gropen | TBD | Signage installation complete at Tidewater, Southwest Virginia, Alson H. Smith Jr., Eastern Virginia, Middleburg, Southern Piedmont, Shenandoah Valley, and Eastern Shore ARECs. Final design and fabrication pending at Hampton Roads and Reynolds Homestead. |
| 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 Thor, SRC, Lilly | Summer 2023 | Construction in progress. Roofing and lighting replacement complete. Hay loft flooring replacement complete. Initial post and beam replacements complete. Additional structural deterioration discovered during construction requiring additional analysis and extension of project schedule. |
| 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 2-inch water line, add backflow preventer, and re-connect non-potable water line to well for irrigation purposes. | \$94,000 | Maintenance Reserve / CALS | - Lewis Construction | Fall 2023 | City water line is complete to new meter. New water line from meter to building installed. Backflow Preventer and new non-potable irrigation line to be installed fall 2023. |
| 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 Davis H. Elliott | Summer 2023 | Generator has been received and installation is in progress. |
| Prices Fork Quarantine Lab Autoclave installation | Installation of new 3-phase electric service and new autoclave for more reliable sterilization process. | \$165,000 | CALS | 5 Design Kesler | Fall 2023 | Work is scheduled to begin in August. |
| Turfgrass Research Center Equipment Shed | New 1,440 square foot open-front pole shed at the Turfgrass Research Center for weather-protected storage of equipment. | \$65,000 | CALS | - Superior | TBD | Site has been prepared. New shed is being fabricated for installation in the fall. |
| Alson H. Smith Jr. AREC 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. | \$438,000 | Maintenance Reserve | - Blauch Brothers | Summer 2024 | Temporary chiller installed mid-May. 1 year +/- lead time for permanent unit. |

College of Agriculture Life Sciences (CALs) Projects Status Report
BUILDINGS AND GROUNDS COMMITTEE
August 29, 2023

| PROJECT NAME | PROJECT DESCRIPTION | ESTIMATED TOTAL PROJECT COST | FUND SOURCE | PROJECT TEAMS | CONTRACT COMPLETION DATE | PROJECT STATUS |
|---|---|------------------------------|---------------------------|-----------------------------------|--------------------------|---|
| PROJECTS IN DESIGN / PERMITTING | | | | | | |
| <u>Minor Projects (<\$25,000) each:</u> Tidewater AREC Peanut Storage Shed Eastern Virginia AREC RTK Tower Installation Tidewater AREC RTK Tower Installation Southern Piedmont Lab Freezer Generator Installation Middleburg AREC House 815 and 818 HVAC Repl. Shenandoah Valley AREC Security Camera Installation Eastern Shore AREC Fume Hood Replacement Hampton Roads AREC Fume Hood Replacement Southern Piedmont AREC Fume Hood Replacement Tidewater AREC Security System Installation | 960 square foot prefabricated structure for field storage of harvested peanuts. Power and data connections for new GPS and Wi-Fi tower. Power and data connections for new GPS and Wi-Fi tower. Add backup power generator to serve circuits for critical lab freezers. Replace aging HVAC in two employee houses. Addition of security cameras to monitor historic area. Replace an aging fume hood in Soils Wet Lab. Replace an aging fume hood in Horticulture Lab. Replace an aging fume hood in Lab 104. Install security cameras to monitor parking areas. | \$128,000 | CALS / VAES | - Multiple | Various | In Progress |
| Heth Farm Shed and Silo Demolition | Demolish two structures that are currently unsafe and operationally unnecessary | TBD | CALS | TBD TBD | TBD | Lead and asbestos study complete. Obtaining quotes and permits for demolition. |
| 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 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 research and extension activities. | \$93,000 | Maintenance Reserve, CALS | Hughes TBD | TBD | A/E Proposal development underway. |
| Middleburg AREC Stable exterior repairs | Existing roof and windows are leaking. Several stalls are unusable due to leaks. Several windows are rotten. | \$100,000 | Maintenance Reserve | 5 Design TBD | TBD | Drawings approved. Bidding in progress. |
| Middleburg AREC Clinic/Admin Building HVAC repairs | Two existing heat pump systems have failed during critical and ongoing research projects. | \$40,000 | Maintenance Reserve | 5 Design TBD | TBD | Drawings approved. Awaiting final funding approval to proceed with bidding. |
| 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 | HDH TBD | TBD | Drawings approved. Awaiting final funding approval to proceed with bidding. |
| Southern Piedmont AREC - Curing 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 | Thompson & Litton TBD | TBD | Drawings approved. Awaiting final funding approval to proceed with bidding. |
| Southern Piedmont AREC Greenhouse Controls Upgrade | Minor project to make power connections for new Smart Greenhouse controls in two greenhouse ranges. | TBD | CALS | - Pucket Greenhouses, Growlink | TBD | New controls equipment received. Seeking installation quotes. |
| Sheep Barn Structural Repairs | Additional structure required to support weight of hay in loft above. | TBD | Maintenance Reserve | Prosim TBD | TBD | Drawings approved. Bidding in progress. |
| NI&S Communication antennae installation | New antennae to be installed at the Beef Barn and HABB1 for enhanced coverage along Stroubles Creek research bed. | TBD | TBD | - TBD | TBD | Permitting and equipment procurement in progress. |
| Eastern Shore AREC Lab 08B Renovation | Upfit of existing space to accommodate new research lab. | \$100,000 | CALS | TBD TBD | TBD | A/E procurement underway. |

College of Agriculture Life Sciences (CALs) Projects Status Report
 BUILDINGS AND GROUNDS COMMITTEE
 August 29, 2023

| PROJECT NAME | PROJECT DESCRIPTION | ESTIMATED TOTAL PROJECT COST | FUND SOURCE | PROJECT TEAMS | CONTRACT COMPLETION DATE | PROJECT STATUS |
|---|--|------------------------------|---------------------|--|--------------------------|--|
| PROJECT INITIATION / PLANNING STAGE | | | | | | |
| Southern Piedmeont AREC Irrigation Pond Dam Repairs | Discharge pipe through existing embankment has failed due to corrosion of bottom of the barrel. Pipe needs to be replaced and dam reconstructed in between growing seasons. | TBD | CALS / VAES | TBD | TBD | Dam is stable and showing no signs of seepage around pipe. Temporary measures are in place, approved by Va. Dept. of Conservation and Recreation (DCR) Dam Safety Engineer. Weekly inspections being conducted and reports filed with DCR via VT Site and Infrastructure Development. Scope of full repair project under review. |
| 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, Reduction in Motion | TBD | Zero Waste consultant team updating plan, assessing current waste stream, and evaluating alternate composting methods. |
| | | | | TBD | | |
| 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 | 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 | TBD | Scope and budget development. |
| | | | | TBD | | |
| 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 | TBD | Scope and budget development. |
| | | | | TBD | | |
| 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 | TBD | Scope and budget development. Construction funds requested for FY 2024. |
| | | | | TBD | | |
| Tidewater AREC - Repair paving and parking | Existing asphalt parking lot and drives are deteriorating and in need of repaving. | \$150,000 | Maintenance Reserve | TBD | TBD | Scope and budget development. Construction funds requested for FY 2024. |
| | | | | TBD | | |
| Southern Piedmeont AREC Modular Housing | Addition of a new 4-bedroom modular employee housing unit at Southern Piedmont AREC. | TBD | CALS / VAES | TBD | TBD | Scope and budget development. |
| | | | | TBD | | |
| 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 of structural repairs. Basement of Annex (0812) floods and needs drainage corrections. | \$158,000 | Maintenance Reserve | TBD | TBD | Scope and budget development. |
| | | | | TBD | | |
| 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 | TBD | Scope and budget development. |
| | | | | TBD | | |
| 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 | TBD | Scope and budget development underway. Study will be necessary to address development within historic property for Department of Historic Resources. |
| | | | | TBD | | |
| 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 | TBD | Scope and budget development. |
| | | | | TBD | | |
| Southern Piedmont AREC New Storage Shed | Erection of a new 20'x50' metal storage building on an existing concrete slab. | \$12,000 | CALS | TBD | TBD | Space request and design review being initiated. |
| | | | | TBD | | |

College of Agriculture Life Sciences (CALs) Projects Status Report
 BUILDINGS AND GROUNDS COMMITTEE
 August 29, 2023

| PROJECT NAME | PROJECT DESCRIPTION | ESTIMATED TOTAL PROJECT COST | FUND SOURCE | PROJECT TEAMS | CONTRACT COMPLETION DATE | PROJECT STATUS |
|--|--|------------------------------|---------------------------|--|--------------------------|---|
| Smithfield Equine Classroom Renovations, Phase 2 | Completion of building envelope repairs, restroom repairs, accessibility improvements. | \$110,000 | Maintenance Reserve, CALS | TBD TBD | TBD | Scope and budget development. |
| INFORMATION TECHNOLOGY (IT) PROJECTS | | | | | | |
| Updates through August 15, 2023. New information is in bold. | | | | | | |
| PROJECTS COMPLETED | | | | | | |
| Eastern Virginia AREC Field-level Wireless (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. | \$53,000 | CALS / VAES | CALS IT Dell JMA Pierson Wireless | Cancelled | After further analysis and discussions it was agreed to cancel this project. The projected wireless capability was not expected to be worth the cost and labor required. As a side note, a commercial cellular vendor is now providing 5G that looks like it covers much of the site. So, there are opportunities to explore that a bit more. |
| AREC Audiovisual (A/V) Upgrades - Phase 2 | Installation of new audio and video equipment for ARECs to provide enhanced conferencing abilities in classrooms. Much of this second phase is focused on some of the smaller AREC offices. | \$60,000 | CALS / VAES | CALS IT Vendor: Lee Harman and Sons | Complete | This phase follows the upgrades to the larger AREC sites (Phase I) and provides updated A/V equipment to the following locations: Eastern Virginia, Eastern Shore, Middleburg, and Shenandoah Valley offices. All equipment has been installed and this project is complete. |
| PROJECTS IN PROGRESS | | | | | | |
| Bandwidth and Internet Connectivity Improvements | Identify and implement bandwidth upgrade opportunities across campus locations to enhance research and address emerging requirements. | Various | CALS / VAES | CALS IT Division of IT | Ongoing | 1) Kentland Dark Fiber: Complete. Upgraded from 200MB to 10GB. 2) Kentland Swine Center Connection: Complete. 3) Kentland Hay Shed: In planning. 4) Turkey Farm (Glade Rd.): Complete. 5) Turfgrass Center: Complete . |
| AREC Voice-Over Internet Protocol (VOIP) Conversion | Convert legacy telephone systems at all ARECs to unified Voice Over Internet Protocol (VOIP) systems to match the voice service on campus. | \$75,000 | CALS / VAES | CALS IT Division of IT | On Hold | VOIP conversion projects have been completed at 8 of the 11 ARECs. Remaining locations include Hampton Roads, Reynolds Homestead, and Southwest Virginia ARECs where the existing telephone service has been adequate. The existing service contract expires in two years and the Division of IT has announced that a new Zoom phone contract has been awarded to replace the existing system. It does not make sense to migrate any additional offices to the legacy system, and instead wait to migrate these to the new Zoom offering once it becomes available. |
| Network Equipment Upgrades and Expansion | This project replaces or upgrades aging Local Area Network (LAN) equipment as well as expand in-building wireless and some external wireless capabilities. This effort also includes the procurement and installation of new "backend" equipment that will be installed on campus to manage and operate the networks at the ARECs and other extension offices. | \$1,140,000 | CALS / VAES | CALS IT | Ongoing | Equipment is being configured, shipped, and installed. These network installations at the ARECs and VCE locations will take much of the year to complete. Installations have been completed at 5 of the ARECs and work included the installation of 20 new switches, 80 wireless access points, and various other network equipment and cabling. Over 85% of the VCE offices have been upgraded with new wireless access points and new internet protocol (10-Net) addressing upgrades. |
| PROJECT INITIATION / PLANNING STAGE | | | | | | |
| N/A | | | | | | |

DESIGN PREVIEW & REVIEW for **LIFE, HEALTH, SAFETY, ACCESSIBILITY & CODE COMPLIANCE – PRIORITY 2**

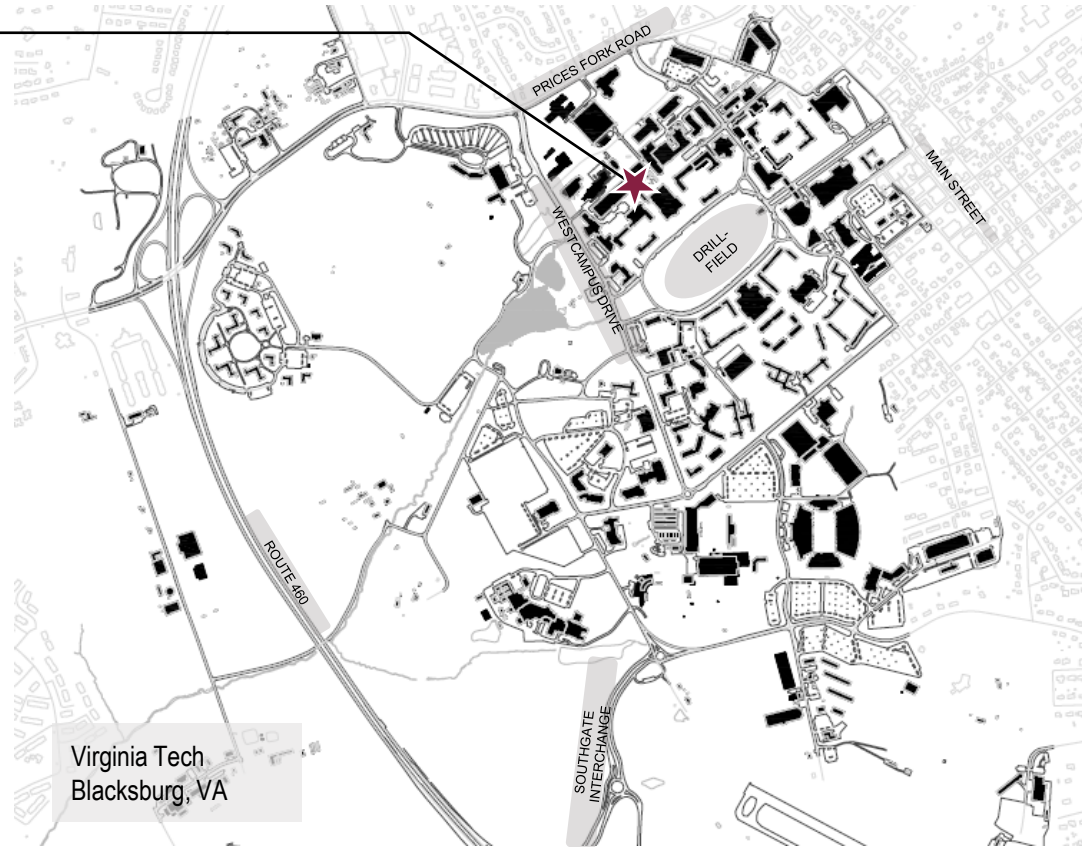
LIZA MORRIS

ASSISTANT VICE PRESIDENT FOR PLANNING
AND UNIVERSITY ARCHITECT

August 29, 2023

PROJECT LOCATION

SITE



Virginia Tech
Blacksburg, VA

PROJECT INFORMATION

SCOPE **LHSACC - PRIORITY 2 (GREENLINK)**

DELIVERY METHOD **DESIGN BID BUILD**

TOTAL PROJECT BUDGET **\$3,900,000* FOR PRIORITY 2**

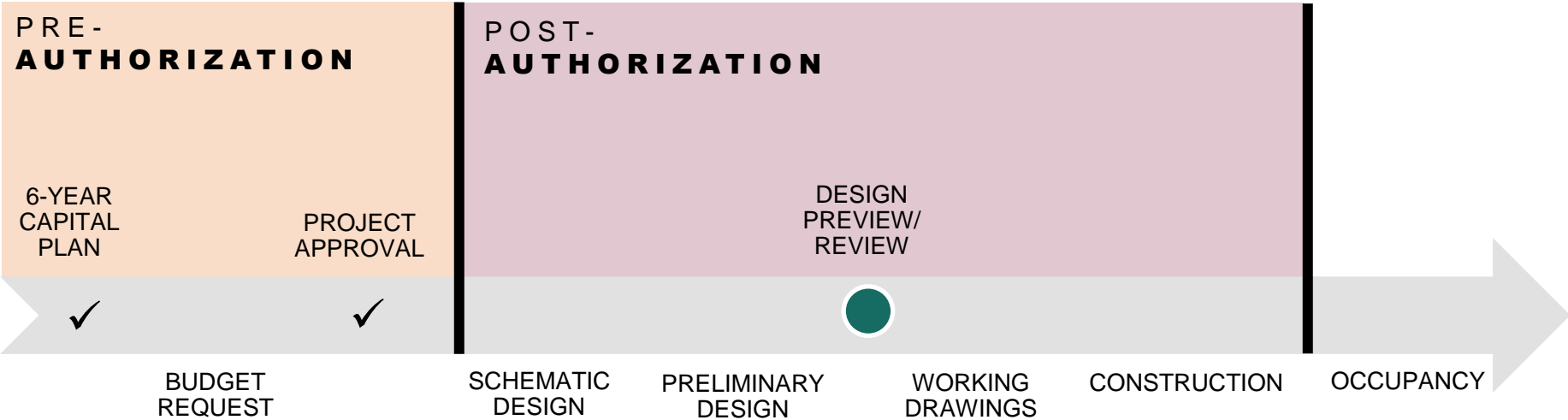
DESIGN PHASE **WORKING DRAWINGS**

ESTIMATED CONSTRUCTION START **LATE FALL 2023**

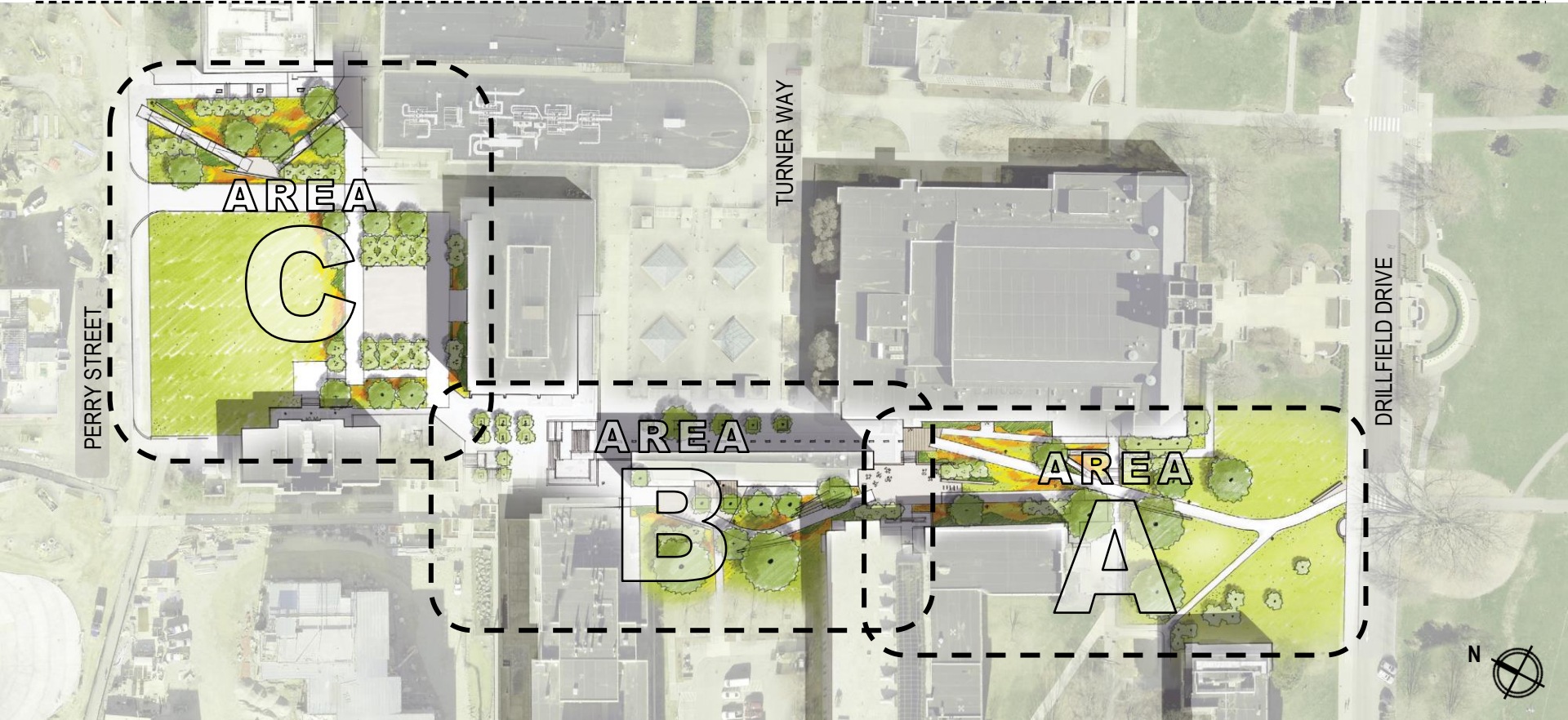
ESTIMATED CONSTRUCTION COMPLETION **LATE FALL 2024**

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

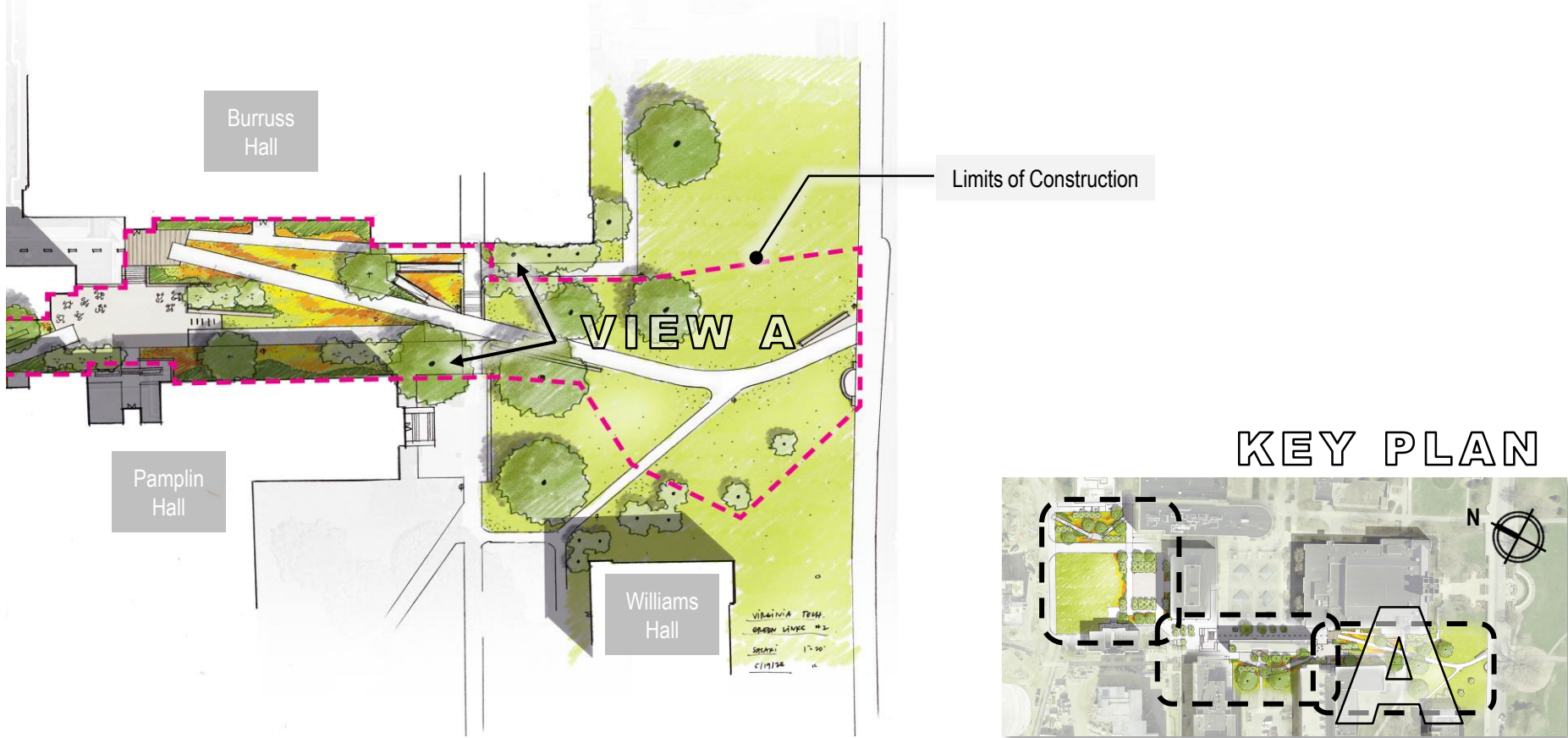
PROJECT MILESTONES



SITE PLAN - OVERALL



SITE PLAN - AREA A



IMAGES - VIEW A

PROPOSED

Pamplin Hall

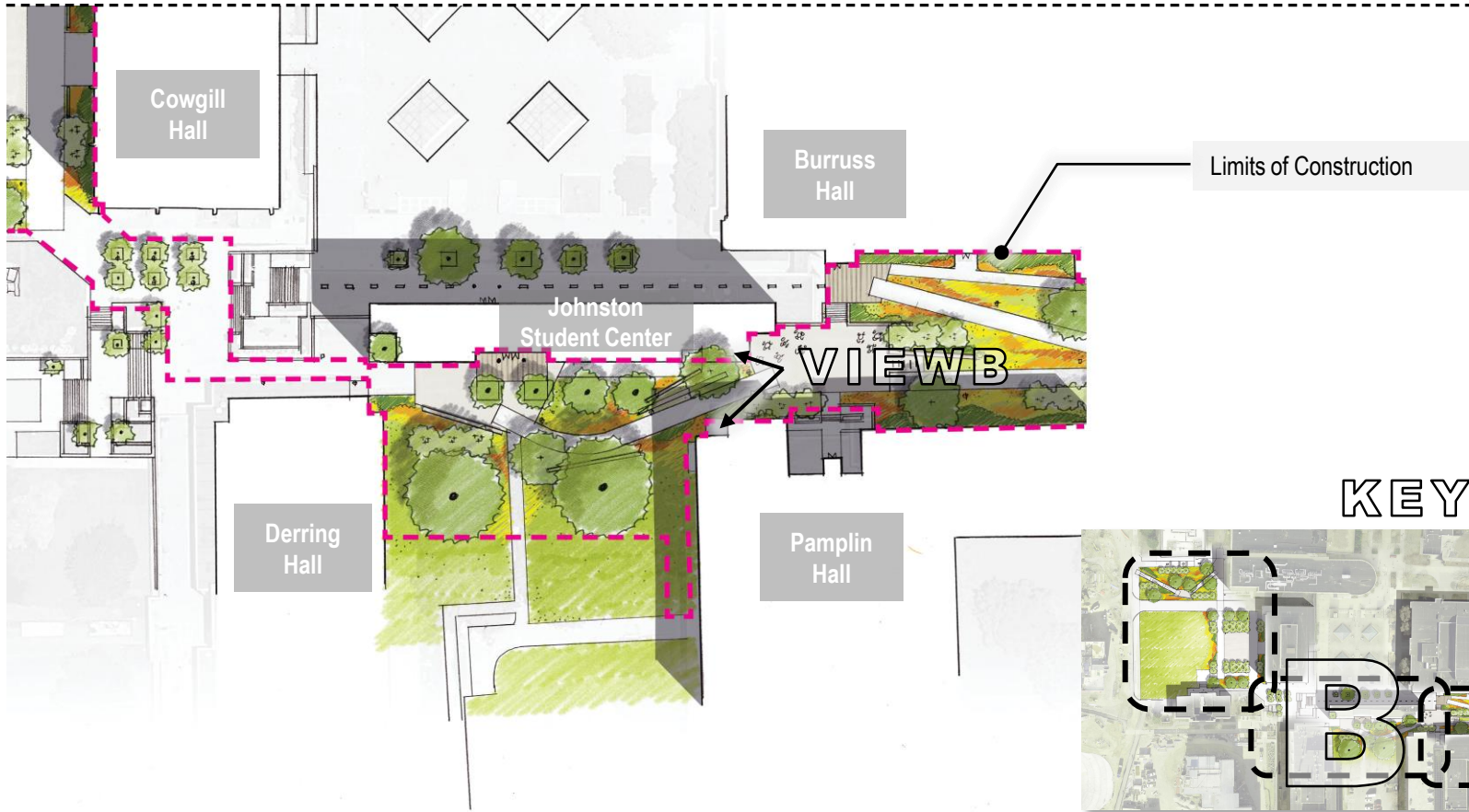
Johnston
Student
Center

Burruss Hall

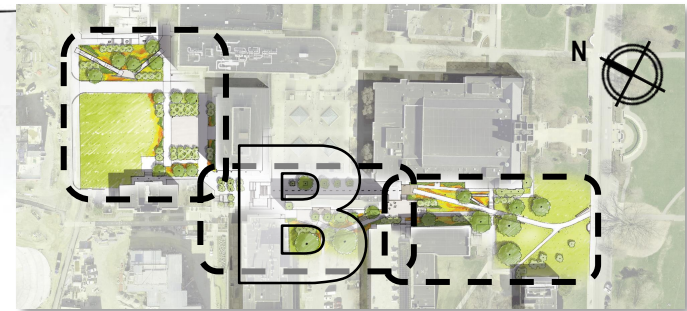
EXISTING



SITE PLAN - AREA B



KEY PLAN



IMAGES - VIEW B

PROPOSED



Pamplin Hall

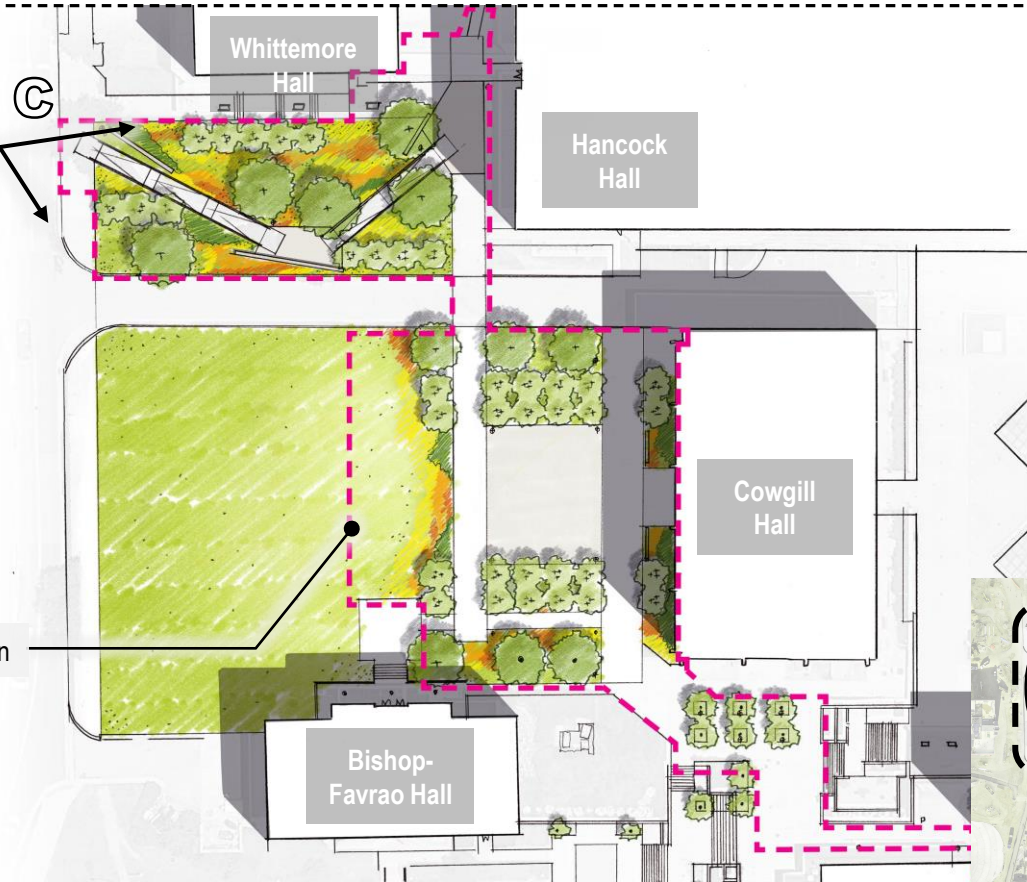
Johnston Student Center

EXISTING

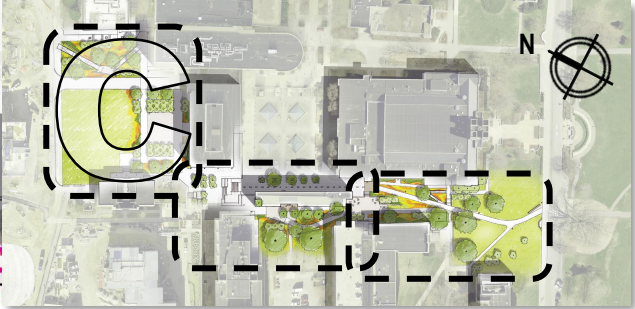


SITE PLAN - ZONE C

VIEW C



KEY PLAN



IMAGES - VIEW C

PROPOSED



EXISTING



RECOMMENDATION

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

**DESIGN PREVIEW & REVIEW FOR LIFE, HEALTH, SAFETY,
ACCESSIBILITY & CODE COMPLIANCE – PRIORITY 2**

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 second 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 late fall of 2023 and to attain substantial completion late fall of 2024. The university received total project funding of \$10.4 million in Life, Health, Safety, Accessibility & Compliance funds from the state for three priority projects, \$3.9 million of which will be applied to the second priority project.

Capital Project Information Summary – Life, Health, Safety, Accessibility & Code Compliance: Priority 2 – Design Preview & Review

BUILDINGS AND GROUNDS COMMITTEE

August 29, 2023

Title of Project:

Life, Health, Safety, Accessibility & Code Compliance – Priority 2

Location:

The project is sited within the North Academic District, on an existing primary pedestrian route that connects the Drillfield to a transportation intensive portion of the district. This route connects Drillfield Drive to Perry Street and intersects with the first priority project adjacent to Cowgill Hall and Johnston Student Center, as well as a future Green Link project adjacent to Mitchell Hall and Hancock Hall, creating a network of intuitive accessible routes serving the academic enterprise.

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 late fall of 2023 with substantial completion anticipated late fall of 2024.

Project Description:

The project will revise a currently non-accessible pedestrian route between Drillfield Drive and Perry Street which begins to the east of Burruss Hall and directly connects Burruss Hall, Pamplin Hall, Johnston Student Center, Derring Hall, Cowgill Hall, Bishop-Favrao Hall, Hancock Hall, and Whittemore Hall with the Perry Street Garage and the Multi-Modal Transit Facility. The future Mitchell Hall project will intersect this route to further extend the accessible route network providing additional benefits.

The route was identified as a Green Link in *Beyond Boundaries 2047: the Campus Plan* and the subsequent planning document *the Green Links Concept Design & Design Guidelines* and significantly advances the university's long-range plans for improving access for all. Additional benefits of Green Links projects include the integration of accessible social interaction spaces and landscape attributes to provide shade and wind protection along these lengthy routes while traversing the challenging topography of campus.

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 second 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 only directly accessible via non-accessible pathways.

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

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, \$3.9 million of which will be applied to the second priority project.

Architect/Engineer:

Sasaki

Contractor:

TBD

DESIGN REVIEW for **MITCHELL HALL**

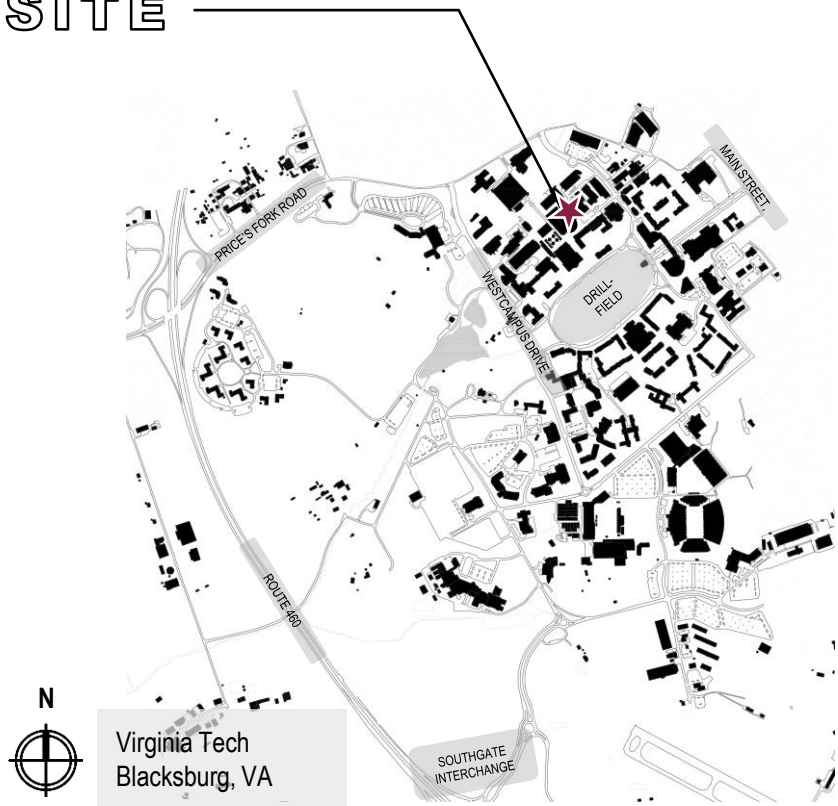
LIZA MORRIS

ASSISTANT VICE PRESIDENT FOR PLANNING
AND UNIVERSITY ARCHITECT

August 29, 2023

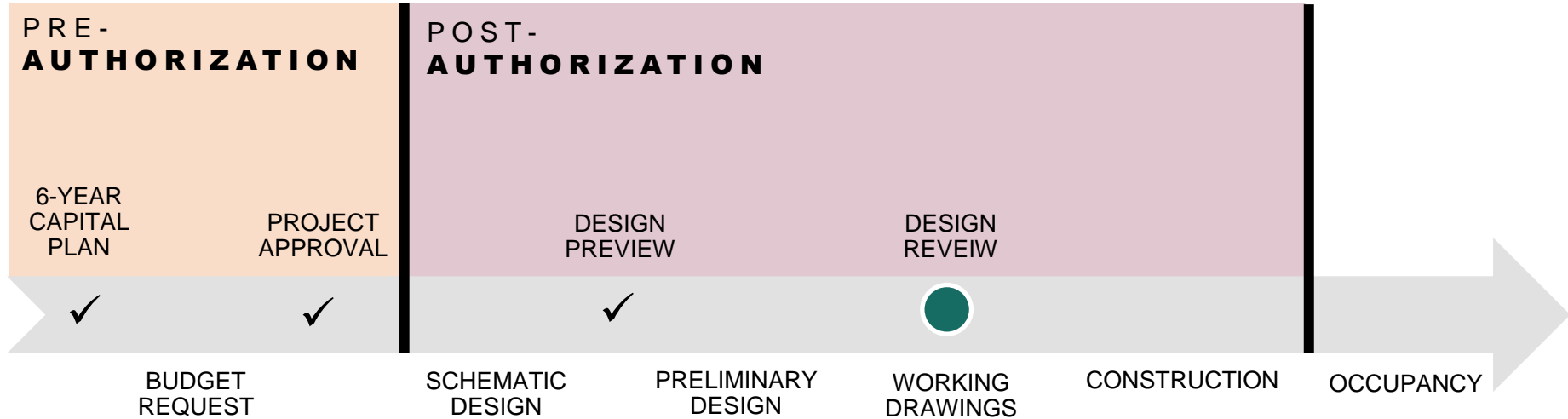
PROJECT LOCATION & INFORMATION

SITE



| | |
|-----------------------------------|-------------------------------------|
| SCOPE | 285,500 GSF |
| DELIVERY METHOD | CONSTRUCTION MANAGER AT RISK |
| TOTAL PROJECT BUDGET | \$292,000,000 |
| DESIGN PHASE | WORKING DRAWINGS |
| ESTIMATED CONSTRUCTION START | WINTER 2023 |
| ESTIMATED CONSTRUCTION COMPLETION | SUMMER 2027 |

PROJECT MILESTONES



EXISTING CONDITIONS

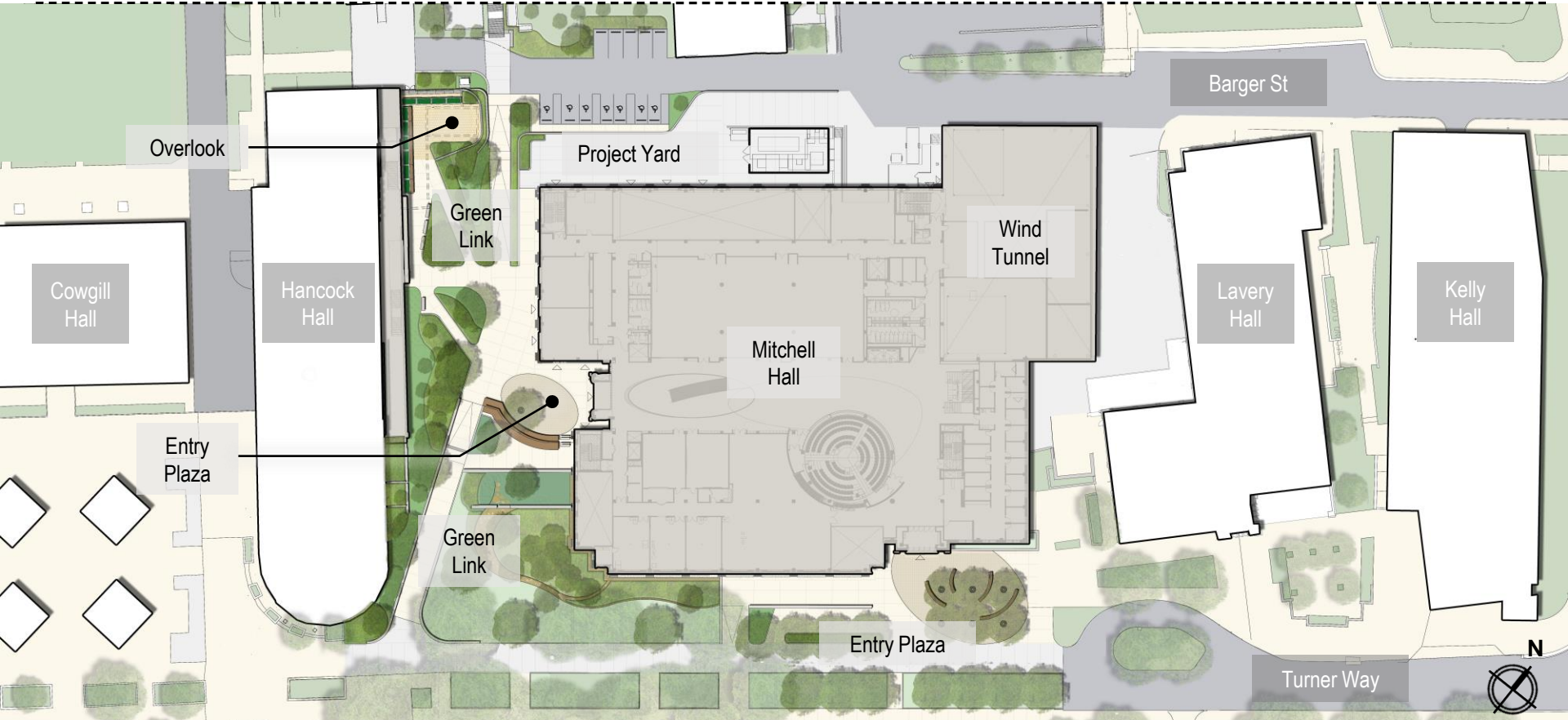


VIEW - NORTH



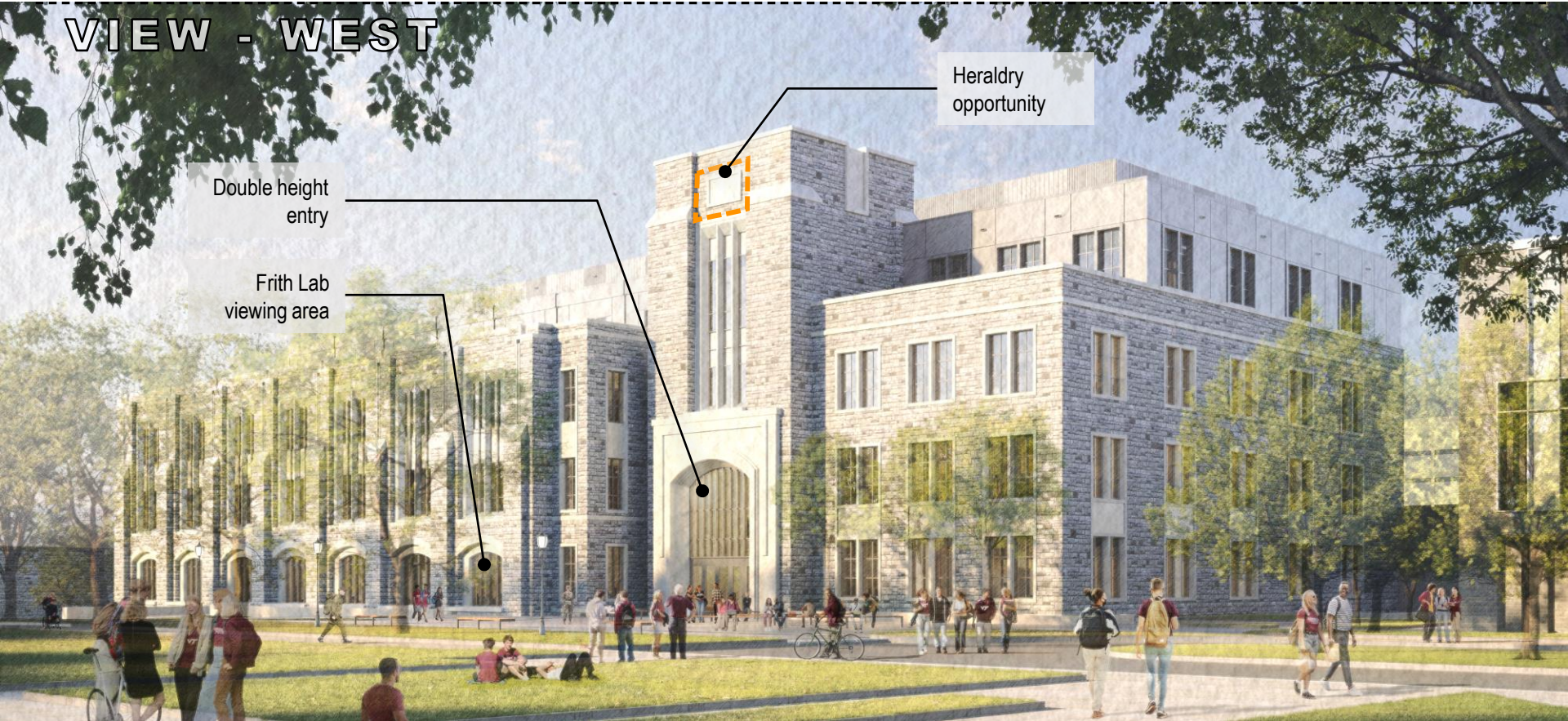
VIEW - WEST

SITE PLAN



EXTERIOR RENDERING

VIEW - WEST



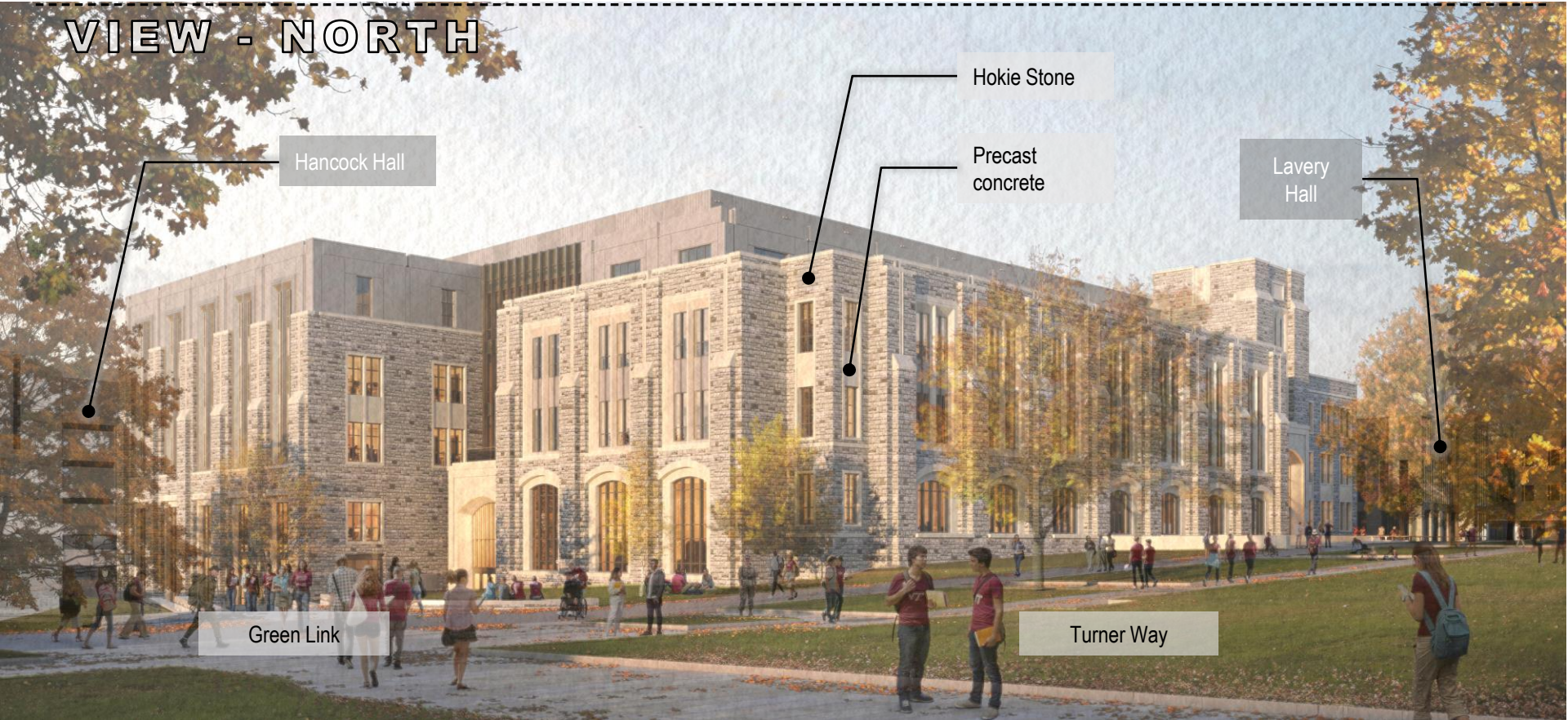
Double height entry

Frith Lab viewing area

Heraldry opportunity

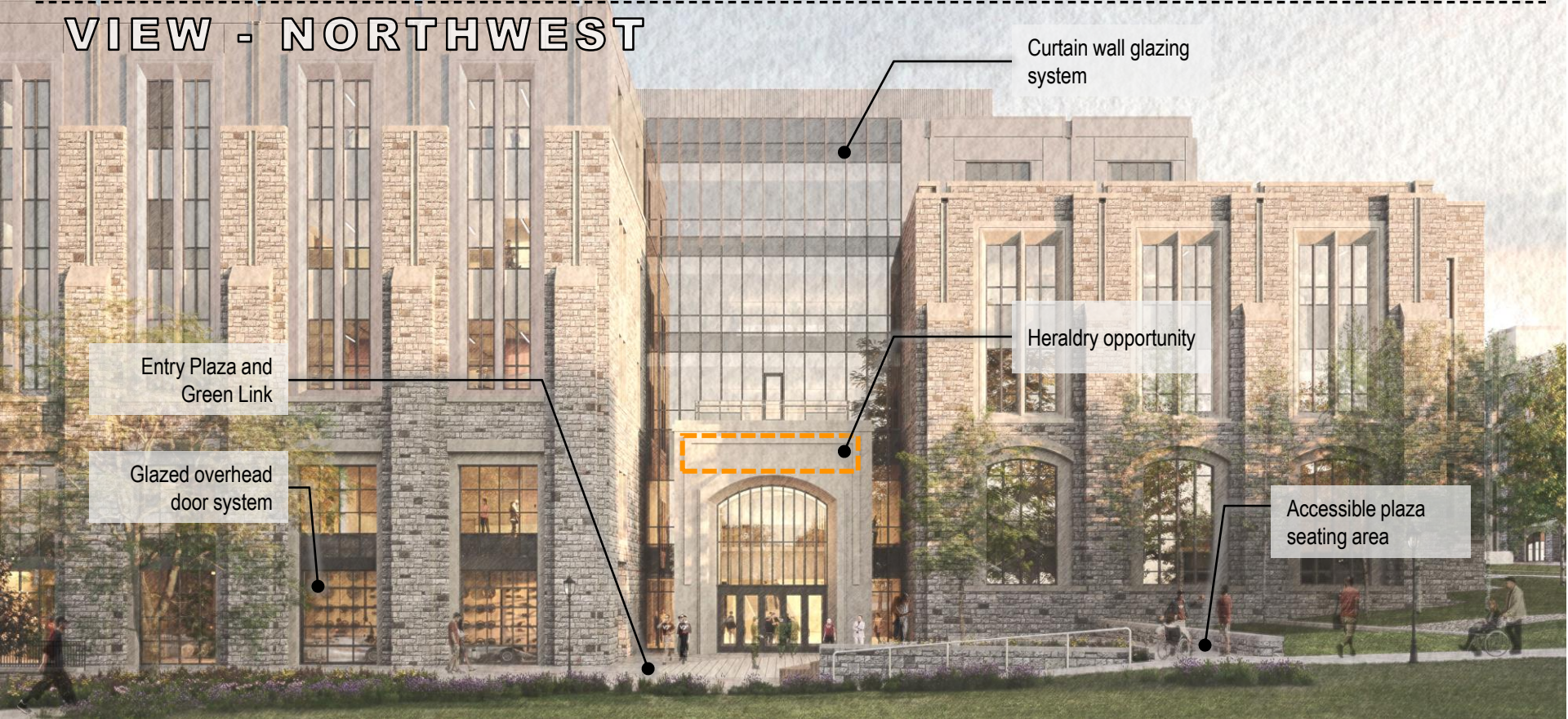
EXTERIOR RENDERING

VIEW - NORTH



EXTERIOR RENDERING

VIEW - NORTHWEST



Curtain wall glazing system

Heraldry opportunity

Accessible plaza seating area

Entry Plaza and Green Link

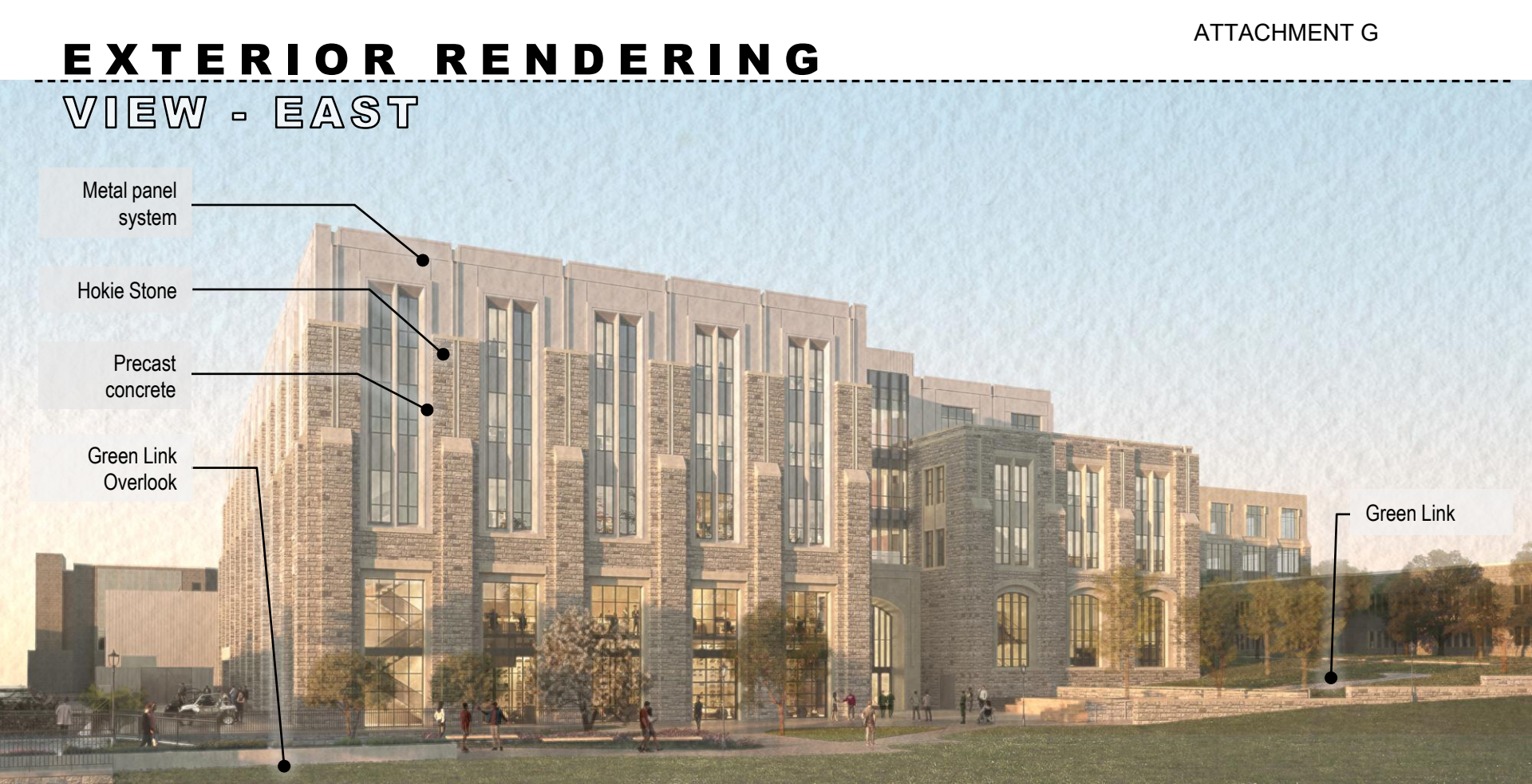
Glazed overhead door system

EXTERIOR RENDERING

VIEW - EAST

- Metal panel system
- Hokie Stone
- Precast concrete
- Green Link Overlook

Green Link



EXTERIOR RENDERING

VIEW - SOUTH



Metal panel system

Hokie Stone

Metal panel system at wind tunnel enclosure

Double height project bays

Hancock Hall

Project Yard

Loading Dock

INTERIOR RENDERING

VIEW - EAST



Skylight

Student
collaboration
zones
at each level

200 person
classroom

Frith Lab

FLOOR PLANS



1



2



3

Space Type Legend

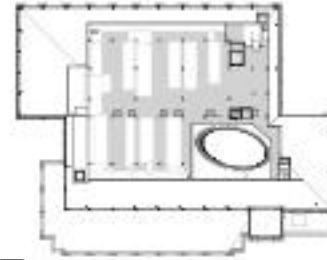
-  Classrooms and Instructional Labs
-  General Building Support
-  Offices and Administration
-  Other Building Support
-  Research Labs and Lab Support
-  Student Project Space/ Advance Manufacturing
-  Team Collaboration Spaces
-  Team Collaboration Spaces - Open



4



5



P



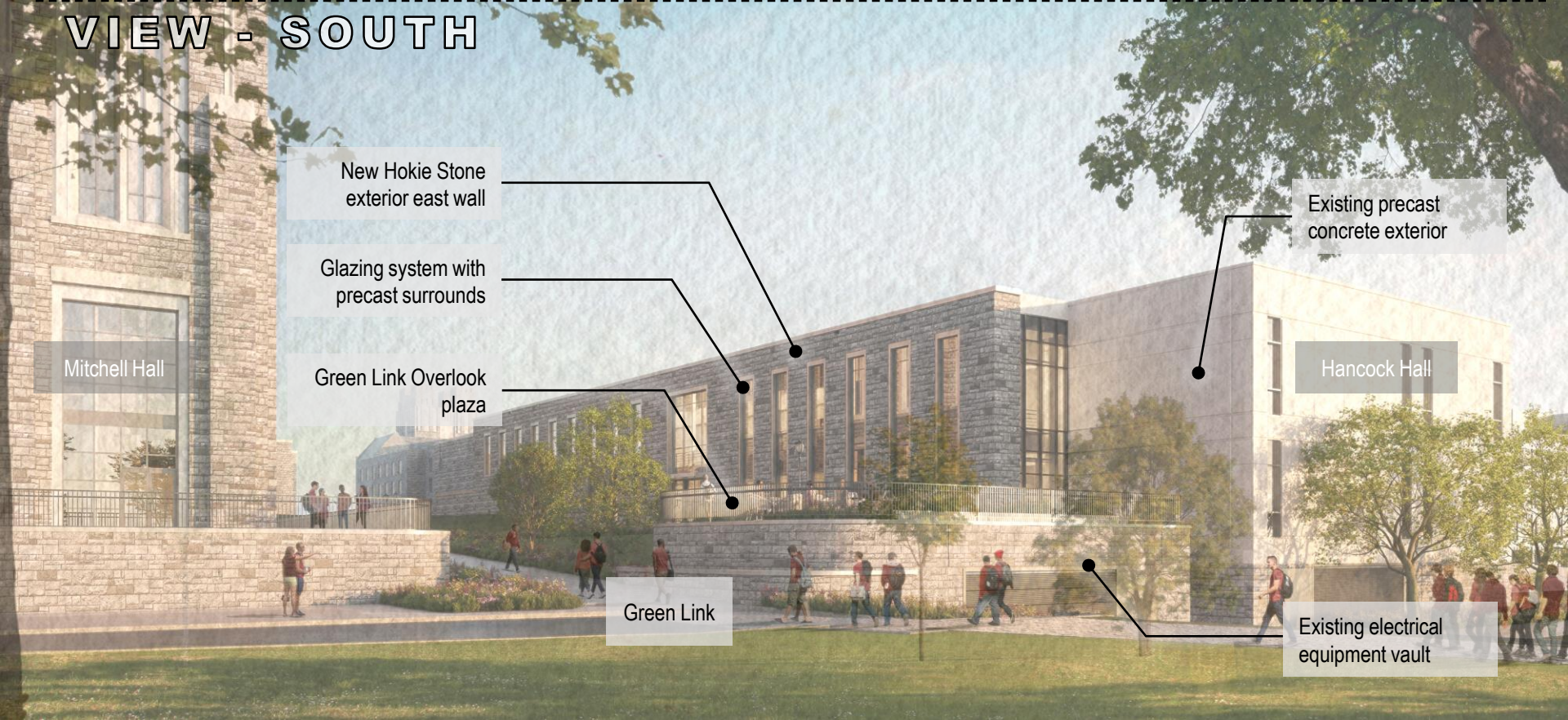
EXISTING CONDITIONS



VIEW - SOUTH

EXTERIOR RENDERING - HANCOCK HALL

VIEW - SOUTH



New Hokie Stone exterior east wall

Glazing system with precast surrounds

Mitchell Hall

Green Link Overlook plaza

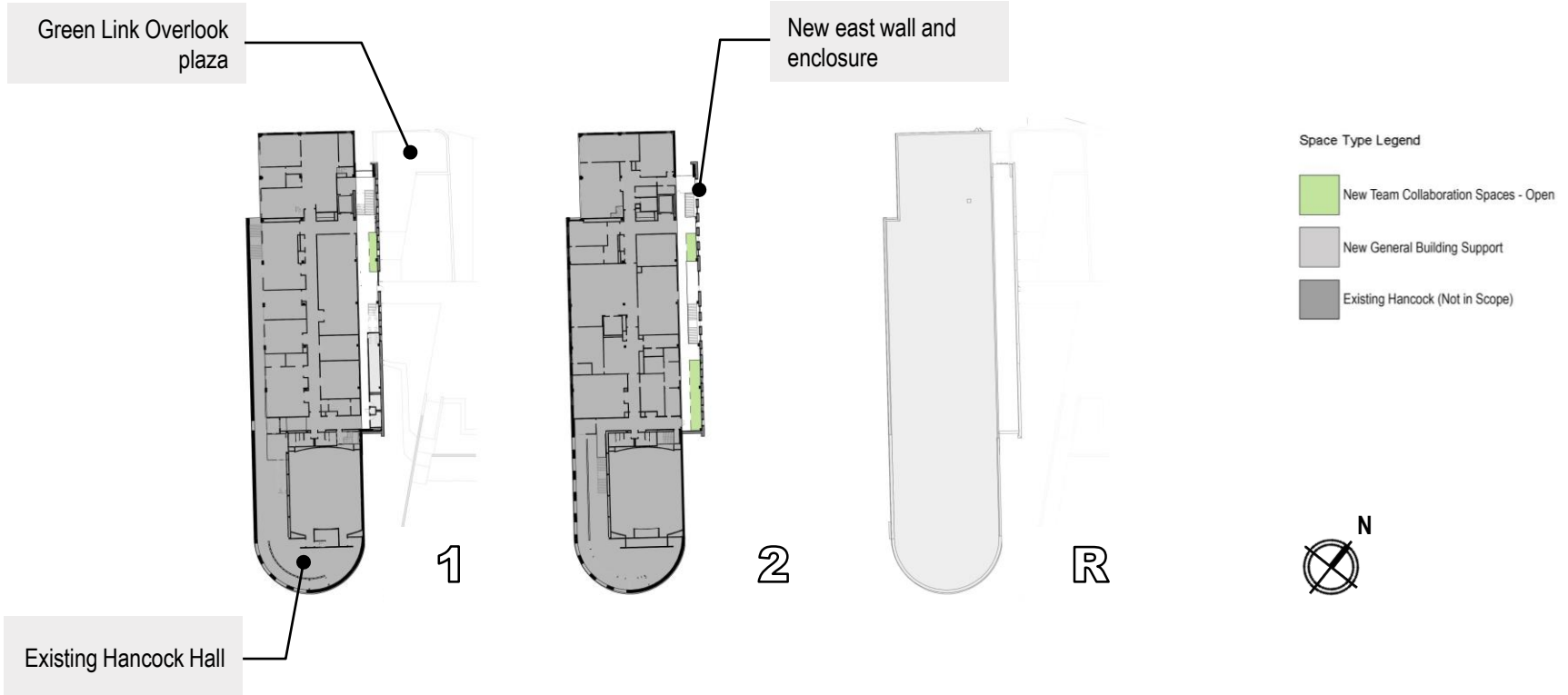
Existing precast concrete exterior

Hancock Hall

Green Link

Existing electrical equipment vault

FLOOR PLANS - HANCOCK HALL



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 MITCHELL HALL

Virginia Tech's top ranked College of Engineering has grown 68 percent since the fall of 2006. As of 2022-2023 the number of Bachelors, Masters and Doctorate represents 39 percent degree production at the institution. To address this growth and aging facilities, as well as accommodate changing pedagogies, a new Mitchell Hall facility will replace undersized and outdated Randolph Hall with a state-of-the-art engineering hub. The facility will primarily house Aerospace and Ocean Engineering, Mechanical Engineering, and Engineering Education departments; it will provide project space for student teams, supporting national team-based research and development competitions. The project also provides student collaboration and general assignment classroom spaces serving the entire campus community.

The project received \$11 million of authorization for design funding in the 2020 Acts of Assembly, full project funding in the 2022 Acts of Assembly with a total budget of \$292 million, and is in the working drawing phase. Construction activities are anticipated to begin in the winter of 2023 with substantial completion planned for the summer of 2027.

Capital Project Information Summary – Mitchell Hall Design Review

BUILDINGS AND GROUNDS COMMITTEE

August 29, 2023

Title of Project:

Mitchell Hall

Location:

Located in the North Academic District, the project encompasses the existing Randolph Hall site and a portion of Hancock Hall, fronts Turner Way pedestrian mall to the south, Lavery Hall to the east, and Whittemore Hall to the north. The project will share a new accessible Green Link with Hancock Hall.

Current Project Status and Schedule:

The project will be delivered under construction manager at risk method of construction delivery and is currently in the working design phase. Construction activities are anticipated to begin the winter of 2023 with substantial completion planned for summer of 2027.

Project Description:

Totaling approximately 285,500 gross square feet, the new facility will add substantial square footage to the College of Engineering's portfolio within the core of campus. The project accommodates the demolition of existing Randolph Hall and partial demolition of Hancock Hall.

The existing Stability Wind Tunnel, one of the largest university-owned wind tunnels in the country, located to the east of the building, will remain and be enclosed with the new facility.

Brief Program Description:

To address the College of Engineering's significant growth, this project will replace the aging, outdated and undersized Randolph Hall with a new state of the art engineering hub. The facility will primarily house Aerospace and Ocean Engineering, Mechanical Engineering, and Engineering Education departments; it will provide additional project space for student team-based research projects, including supporting national team-based research and development competitions.

Supporting the College's innovative pedagogies, the undergraduate Frith Lab will receive a much needed increase in space and will be visible from the interior and exterior of the facility. Other key improvements include double height, highly visible spaces such as the advanced manufacturing spine. Student collaboration and

general assignment classroom spaces are located throughout the facility, intended to serve the entire campus community, including a 200-person innovative in-the-round classroom.

Contextual Issues and Design Intent:

Project plans are consistent with the adopted *Beyond Boundaries 2047, The Campus Plan* and include demolition of the existing brick, international style Randolph Hall and a precast concrete portion of Hancock Hall. An electrical vault beneath the demolished portion of Hancock Hall will remain and be incorporated beneath a site plaza feature.

Proposed architecture is consistent with the *Campus Design Principles*, including Hokie Stone clad exteriors rendered in collegiate gothic with precast details and select glazing systems. Metal panel systems clad the penthouse, 5th floor elevations, and the wind tunnel surround.

The proposed facility maximizes the existing site while meeting the objectives of the master plan, including the provision of a new accessible Green Link between Mitchell Hall and modified Hancock Hall which connects Turner Way with the Barger Street elevation of campus.

Funding:

The total project budget is \$292 million including \$264.2 million of General Fund and \$27.8 million of nongeneral fund.

Architect/Engineer:

Perkins + Will Inc.

Contractor:

Skanska