

ENGINEERING & PHYSICAL SCIENCES BUILDING

Program Plan

May 20, 2015



University of Colorado **Denver**

EXECUTIVE SUMMARY





A . EXECUTIVE SUMMARY

OVERVIEW

The Engineering and Physical Sciences Building (EPSB) project will address a pressing need of the University of Colorado Denver (CU Denver) for state-of-the-art instructional laboratories for engineering and physical science. The new building will be a vibrant learning environment made up of a mix of different laboratories and specialized classrooms to meet the growing academic space needs of the College of Engineering and Applied Sciences (CEAS).

Although the college has benefited from the increasing interest in engineering and applied science careers, CEAS has had to constrain program growth due to inadequate space resources. Currently, the college is dispersed across the campus in over six facilities, and much of its instructional laboratory spaces are outdated and have utilization rates well above acceptable targets, which limits student access to these specialized spaces outside of scheduled classes.

In response, CU Denver is requesting funding for a project that will include a 60,000 gross square foot (GSF) new academic building and an associated 38,368 GSF of renovations in the North Classroom Building. The project will allow for growth and consolidation of CEAS in a new facility and create opportunities to backfill vacated North Classroom space for some College of Liberal Arts and Sciences (CLAS) departments. The total project cost is \$60,114,407 million.





BACKGROUND

In 1912, the University of Colorado established an extension division in Denver, which was renamed the University of Colorado Denver Center in 1964. The University of Colorado Board of Regents (BOR) established the University of Colorado System in 1973, comprised of four distinct campuses, one of which was the University of Colorado at Denver. After more than 60 years as an extension of the University of Colorado Boulder, the Denver Center had become an independent accredited institution, which was subsequently renamed the University of Colorado Denver (CU Denver) in 2007.

After over 40 years as an independent public institution of higher education, CU Denver is now home to seven schools and colleges, and confers more master's degrees than any other Colorado public institution of higher education.

In the Fall of 2013 CU Denver offered over 96 degree programs and served more than 14,000 students on campus (9,7736 undergraduate and 4,287 graduate students) and employs over 1,500 faculty members.



MISSION and VISION

In 2007, CU Denver undertook a strategic planning effort, the result of which was titled the *Strategic Plan of 2008-2020 University of Colorado Denver*. The new mission for the university and the supporting narrative that were developed in the plan are below.

Mission

University of Colorado Denver is a diverse teaching and learning community that creates, discovers and applies knowledge to improve the health and well-being of Colorado and the world.

The mission statement frames our commitment not just to teach our students but also to build a diverse community of learners that is essential in today's knowledge-based global society. It emphasizes the educational richness that comes from diversity of experience and thought, and recognizes that knowledge must, where appropriate, be applied to the needs of communities, societies and the world.

The strategic plan also offered a vision of what the university might look like in 2020 and the values that will help us achieve our vision.

Vision

By 2020, University of Colorado Denver will be a leading public university with a global reputation for excellence in learning, research and creativity, community engagement and clinical care.

Values

To be a university greater than the sum of its parts, University of Colorado Denver | Anschutz Medical Campus embraces excellence in:

- *Learning and Scholarship*
- *Discovery and Innovation*
- *Health and Care of Mind, Body and Community*
- *Diversity, Respect and Inclusiveness*
- *Citizenship and Leadership*



PROGRAM

College of Engineering and Applied Sciences

CEAS produces professionally oriented graduates who are interested in solving real-world problems. In fall of 2013, the college had a total full-time enrollment of 1,148 students that included 725 undergraduates and 423 graduates. CEAS offers undergraduate and graduate programs in bioengineering, civil, electrical and mechanical engineering, and in computer science and engineering, and the programs are well-suited to full-time students as well as practicing professionals.

The four-year undergraduate program stresses fundamental concepts of all aspects of engineering, with quality faculty-student relationships, small classes and access to ample research opportunities. The graduate programs lead to the master of science (MS), master of engineering (MEng) and doctor of philosophy (PhD). CEAS also offer continuing education classes on current engineering topics and professional training.

Department Narratives

Bioengineering

The Department of Bioengineering is the first of its kind in Colorado and is a collaborative partnership between medicine and engineering. Its mission is to improve human health through the application of engineering principles, ideas, methods, and inventions in order to solve important clinical problems.

Civil Engineering

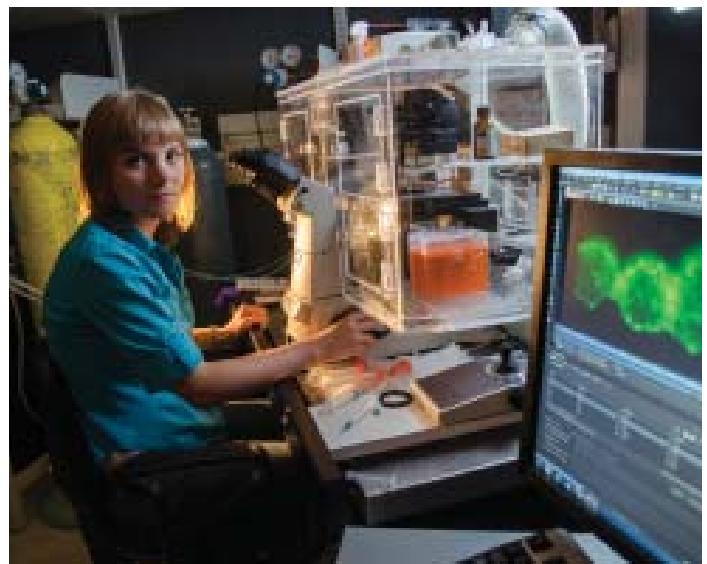
The Department of Civil Engineering provides students with high-quality programs in civil engineering education, and offers several degrees supported by our faculty and staff and enriched with information gained from extensive laboratory and research work. Civil engineering offers careers in the planning, design, construction and management of the built environment.

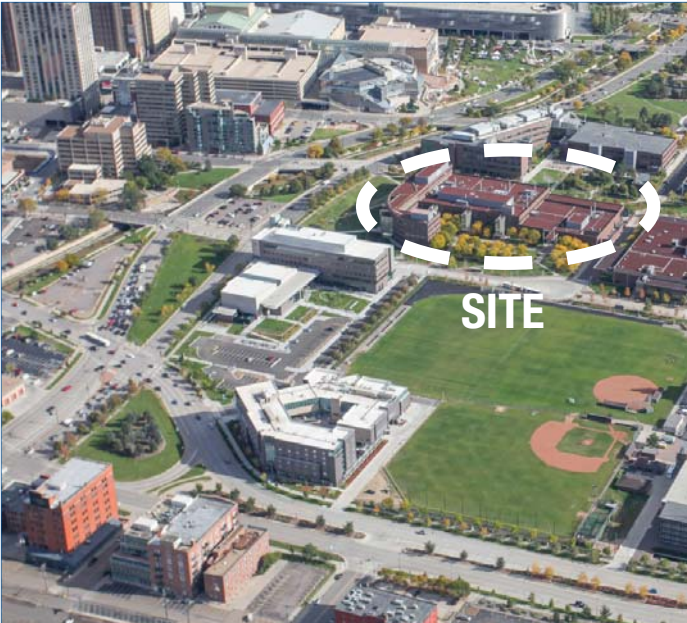
Computer Science and Engineering

Computer science has become an enabling science for nearly all disciplines: engineering, sciences, business, health, and government. The future promises even more innovative advances. Teaching and research covers a broad spectrum of the core fundamentals of computer science as well as applied and interdisciplinary aspects.

Electrical Engineering

The Department of Electrical Engineering provides an undergraduate and graduate education in electrical engineering to a diverse group of students. The department strives to continually





Site Location

update its program of study to qualify graduates for technical positions in the Denver metropolitan area and beyond, while also providing sufficient breadth and depth to assure graduates success in their chosen profession.

Mechanical Engineering

Mechanical engineering offers interesting and challenging career opportunities in research, design, development, manufacturing, testing and marketing for either private industry or government. Mechanical engineers work on products such as engines, transmissions, compressors, pumps, computer disk drives, CAD/CAE software, oil field drilling rigs, missiles, space satellites, earth moving equipment, container manufacturing machines and medical equipment.

Engineering and Applied Science Doctor of Philosophy (EASPhD)

The Engineering and Applied Science Doctor of Philosophy program consists of studies in engineering and engineering-related disciplines. It is a multidisciplinary program in keeping with the interdisciplinary nature of modern research.

Research

Research is an integral part of the CEAS curriculum, which provides students with real-life experiences in discovery and applied knowledge. College faculty pursue research in a wide-range of areas, from sustainability engineering and bioengineering to systems and controls and artificial intelligence.

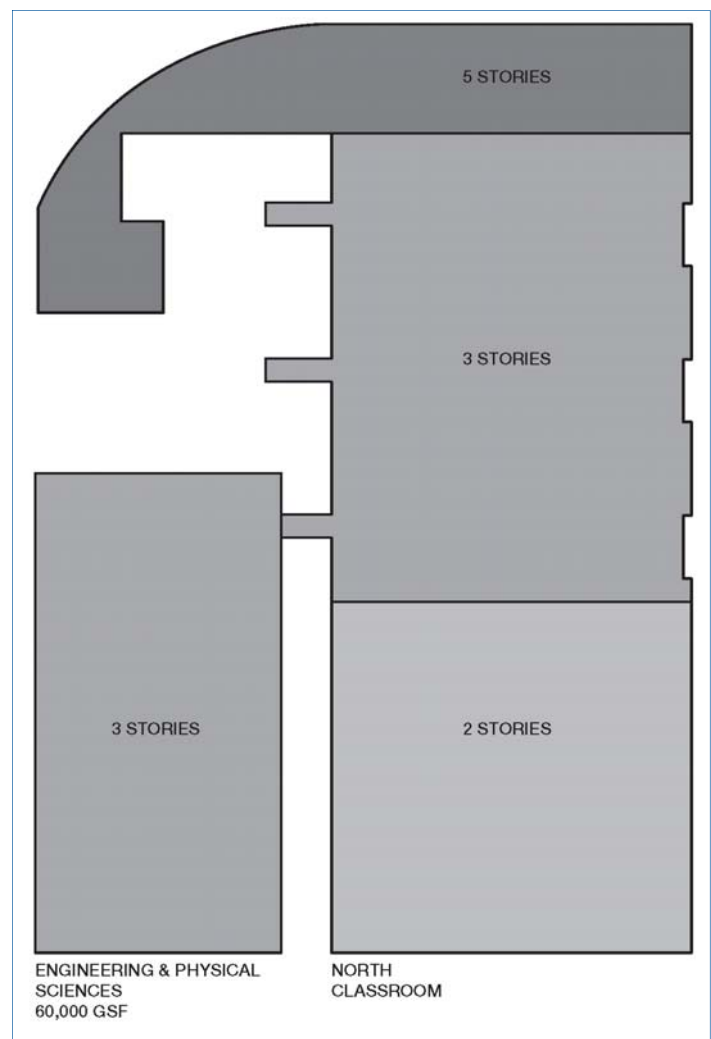
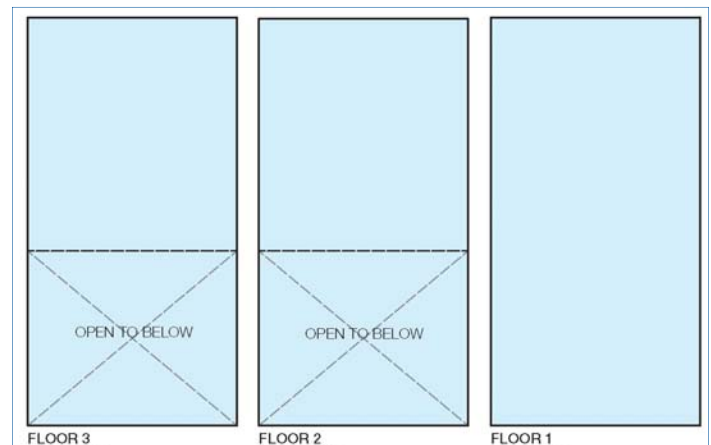
College of Liberal Arts and Sciences

CLAS provides a diversity of academic pursuits in 22 departments and interdisciplinary units. Each program is unique, but all share in the common the goal of providing excellence in teaching, service, research and creative work. The wide range of programs span four categories:

- *Humanities*
- *Natural and physical sciences*
- *Social sciences*
- *Integrated sciences*

Total full-time student enrollment for the college in fall 2013 was 6,650, which included 6,099 undergraduate and 551 graduate students. CEAS offers over 20 baccalaureate degrees, 17 master's degrees, 3 Ph.D. programs, 10 undergraduate and 9 graduate certificate programs, 14 undergraduate minors and 7 interdisciplinary Signature Areas.

The majority of CLAS departments are housed in the North Classroom Building and the new Student Commons, which are both located within the heart of CU Denver's neighborhood on



Building Form and Floor Plates

the Auraria campus. However, four departments—economics, english, philosophy and sociology—remain in facilities outside the CU Denver neighborhood. A goal of this project is to relocate all four department into North Classroom Building in the renovated space identified in this program plan.

PROGRAM JUSTIFICATION

CEAS

Civil Engineering

EPSB will consolidate civil engineering labs and classrooms presently located in the North Classroom Building and Boulder Creek. Currently, CEAS space within Boulder Creek and the Administration Building is seen as unusable. These spaces are scattered across the Auraria campus and do not support a cohesive college with functional adjacencies. In addition, the labs and classrooms do not meet modern teaching and research needs.

Department of Civil Engineering

North Classroom Building:	ASF
Classrooms	681
Class Laboratories / Class Lab Service	3,771
Research Lab / Research Lab Service	63
Total	4,515
Boulder Creek:	ASF
Classrooms	0
Class Laboratories / Class Lab Service	2,089
Research Lab / Research Lab Service	1,751
Total	3,840

Grand Total 8,355

Electrical Engineering

The proposed new facility will replace the aging and inadequate instructional and research labs within the North Classroom Building as well as the research laboratory space across the Auraria Campus in Boulder Creek.

Department of Electrical Engineering

North Classroom Building:	ASF
Classrooms	0
Class Laboratories / Class Lab Service	3,607
Open Labs / Open Lab Service	903
Research Labs / Research Lab Service	1,334
Total	5,844



<u>Boulder Creek:</u>	ASF
Classrooms	0
Class Laboratories / Class Lab Service	0
<u>Research Lab / Research Lab Service</u>	1,604
Total	1,604

Grand Total **7,448**

Mechanical Engineering

EPSB will replace the inadequate and dispersed laboratories presently located in the Administration Building, Boulder Creek, and North Classroom Building. Laboratories located at the 5th Street Hub that support the motorsports program will remain in their current location.

Department of Mechanical Engineering

<u>Administration Building:</u>	ASF
Classrooms	0
Class Laboratories / Class Lab Service	552
Open Labs / Open Lab Service	0
<u>Research Labs / Research Lab Service</u>	0
Total	552

<u>Boulder Creek:</u>	ASF
Classrooms	0
Class Laboratories / Class Lab Service	1,942
Open Labs / Open Lab Service	0
<u>Research Labs / Research Lab Service</u>	358
Total	2,300

<u>North Classroom Building:</u>	ASF
Classrooms	0
Class Laboratories / Class Lab Service	1,912
Open Labs / Open Lab Service	0
<u>Research Labs / Research Lab Service</u>	1,811
Total	3,723

Grand Total of Spaces to be included in Engineering & Physical Sciences Building: **6,575**

Not included in new facility program:	
<u>5th Street Hub (Labs to remain in place)</u>	ASF
Classrooms	0
Class Laboratories / Class Lab Service	3,890
Open Labs / Open Lab Service	0
<u>Research Labs / Research Lab Service</u>	0
Total	3,890



Other College / Departmental Space

Although the proposed facility will primarily serve civil, electrical, and mechanical engineering laboratories, the Engineering and Physical Sciences Building will also consolidate those remaining class labs and open labs controlled by the college and those used by the Department of Bioengineering or the sustainability program.

Dean of Engineering & Applied Sciences

Administration Building:	ASF
Classrooms	0
Class Laboratories / Class Lab Service	50
Open Labs / Open Lab Service	0
Research Labs / Research Lab Service	0
Total	50

North Classroom Building:	ASF
Classrooms	0
Class Laboratories / Class Lab Service	1,306
Open Labs / Open Lab Service	461
Research Labs / Research Lab Service	0
Total	1,767

1156 7th Street:	ASF
Classrooms	0
Class Laboratories / Class Lab Service	160
Open Labs / Open Lab Service	0
Research Labs / Research Lab Service	0
Total	160

CEAS, Sustainability

North Classroom Building:	ASF
Classrooms	0
Class Laboratories / Class Lab Service	0
Open Labs / Open Lab Service	413
Research Labs / Research Lab Service	0
Total	413

Bioengineering

North Classroom Building:	ASF
Classrooms	0
Class Laboratories / Class Lab Service	480
Open Labs / Open Lab Service	0
Research Labs / Research Lab Service	0
Total	480

Grand Total	2,870
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In total, 25,248 assignable square feet of laboratory space will be consolidated within the new facility. Additionally, 2,097 assignable square feet of shop and shop service space will be relocated from the North Classroom Building.

By Building

<u>North Classroom Building:</u>	<u>ASF</u>
Classrooms	681
Class Laboratories / Class Lab Service	11,076
Open Labs / Open Lab Service	1,777
Research Labs / Research Lab Service	3,208
Total	16,742

<u>Administration Building:</u>	<u>ASF</u>
Classrooms	0
Class Laboratories / Class Lab Service	602
Open Labs / Open Lab Service	0
Research Labs / Research Lab Service	0
Total	602

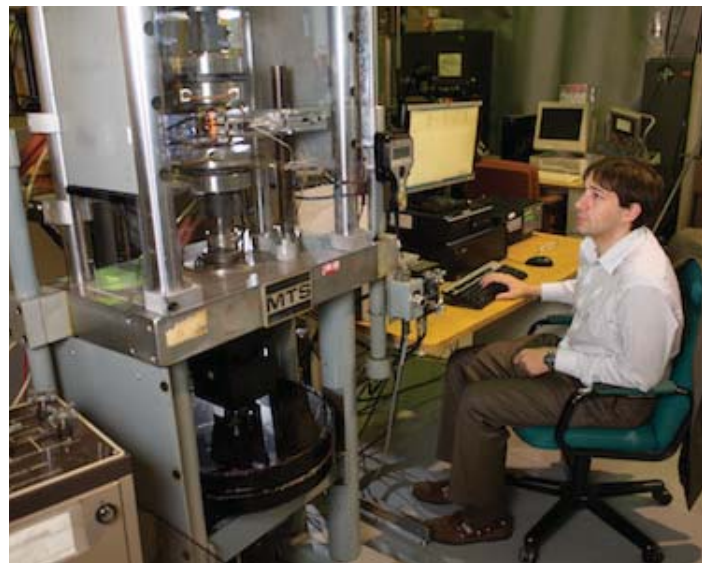
<u>Boulder Creek:</u>	<u>ASF</u>
Classrooms	0
Class Laboratories / Class Lab Service	4,031
Open Labs / Open Lab Service	0
Research Labs / Research Lab Service	3,713
Total	7,744

<u>1156 7th Street:</u>	<u>ASF</u>
Classrooms	0
Class Laboratories / Class Lab Service	160
Open Labs / Open Lab Service	0
Research Labs / Research Lab Service	0
Total	160

Grand Total	25,248
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By Space Type

<u>All Buildings:</u>	<u>ASF</u>
Classrooms	681
Class Laboratories / Class Lab Service	15,869
Open Labs / Open Lab Service	1,777
Research Labs / Research Lab Service	6,921
Total	25,248



The EPSB project satisfies three areas of immediate university need; new instructional space for the CEAS, additional space for CLAS departments, and consolidation of the remaining satellite locations of these two colleges into the CU Denver neighborhood on the AHEC campus.

Approximately 80% of assignable area within the new building will be developed for instructional uses, such as high-bay laboratories, while the remaining 20% will be devoted to academic support and service functions. Many of the proposed labs would be difficult to accommodate in existing campus facilities due to size, access, and high power and data demands. The new instructional spaces will represent a vast improvement to current CEAS laboratories, some which have been largely untouched in the last 20 years.

Although the proposed facility will serve all of CEAS, and the university, the specialized instructional spaces will especially support individual departments, such as civil engineering, mechanical engineering, and electrical engineering. In addition to specialized laboratories, the building will also have open laboratories that are meant to support unscheduled activity and encourage interdisciplinary collaboration and discovery.

The proposed North Classroom renovations will enable several CLAS departments, such as Health and Behavioral Sciences, to relocate from various buildings across campus into new space adjacent to peers. Moving these departments has the dual advantage of consolidating faculty within CU Denver's neighborhood, and providing opportunities to trade space with the other AHEC institutions for space more desirable to the university.

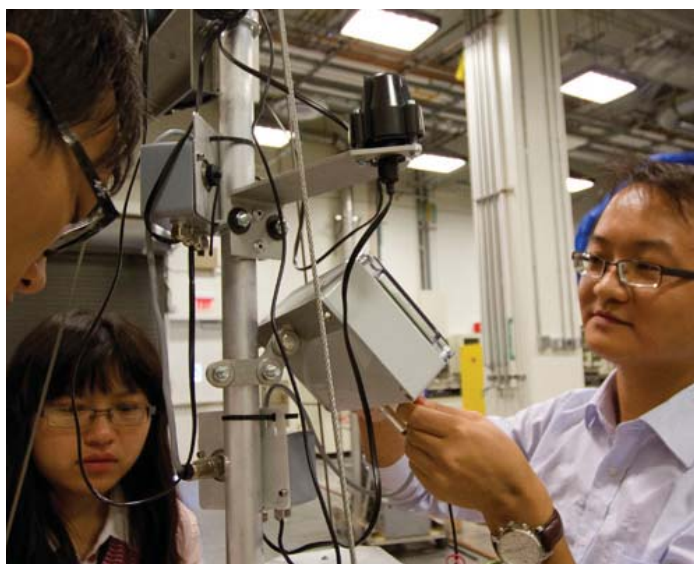
Class Laboratory Utilization

The CDHE publication “Department of Higher Education Space Utilization Planning Guidelines” dated April 5, 2007 outlines guidelines for class laboratory utilization. The guideline for class laboratory utilization is 20 to 30 hours per week. The guideline for the percentage of seats filled is 80%. The assignable square feet per station is not defined as it varies by laboratory discipline. Utilization for the class laboratories within CEAS is only 15 average weekly room hours which is below the minimum guideline according to CDHE. This is most likely a result of many of the labs being deemed ‘unusable’. In many cases, existing class laboratories assigned to CEAS are in poor condition and poorly configured to support current curricula. As a result, several class laboratories experience utilization in excess of CDHE standards. For example, rooms 2207, 2408, and 2413 in the North Classroom Building exceed target utilization. Likewise, each of these class labs exceed the occupancy standard of 80%.

Instructional Space Condition / Adequacy

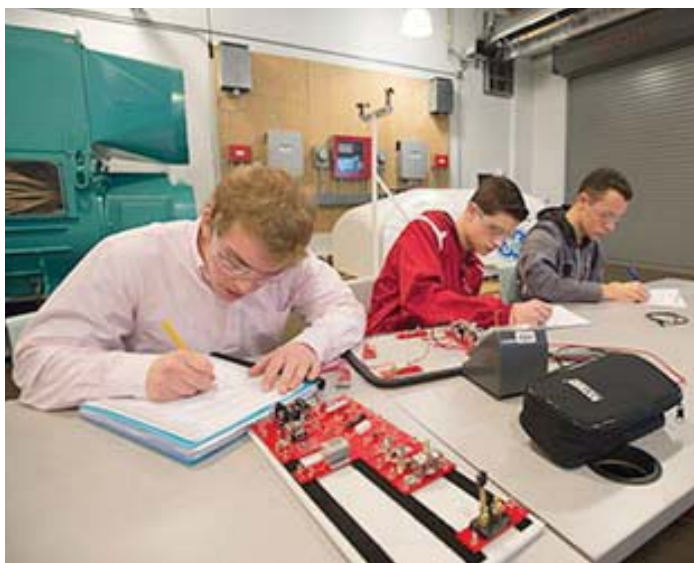
A recent interview of CEAS leadership indicated that many of the class laboratories are substandard and are in need of significant repair or replacement. The following comments describe the current condition and adequacy of class labs used by civil, electrical, and mechanical engineering:

- Approximately 1,500 square feet of shared space is needed for each of the six tracks of study (environmental/sustainability, hydrology/hydraulics, geotechnical, structural, transportation, and GIS) in civil engineering. The shared space is for laboratory teaching and for equipment and services (e.g., pressure reactors, analytical instruments, refrigerators, freezers, centrifuges, autoclaves, incubators).
- CEAS is currently holding several class lab sessions in TE-102 (CE3401, 5401, 5402, 5801, 3313, 3323, 5334). Due to the space and time limitation, even though these labs are scheduled very carefully, CEAS is currently not able to provide enough hands-on experience for the students.
- The engineering machine shop is “dangerously crowded.” It could easily be twice as large.
- AHEC staff have informed CEAS that the Mechanical Engineering (ME) department’s measurements lab (NC-2207) is “breaking a number of fire codes” with the cabling and power cords dropping from the ceiling.
- The CE department needs 2,500 square feet of floor space for concrete mixture batching, testing, material storage, etc. for Concrete Materials research. They also need a 5,000



square foot staging area outside (partially covered) with a 50 square foot concrete washout area (similar to ready-mixed plants). This space would also be used to park City and County of Denver research trucks, store beams/joists prior to testing on the strong floor, perform outside research on specimens, etc.

- CE needs dedicated wet lab research space to host equipment for conducting experiments on 1) biofuel process development: thermo-chemical treatment processes for renewable diesel, pre-treatment process for cellulosic ethanol; and 2) ionic liquid processes: CO₂ sequestration & industrial separations. (500 square feet) Currently part of this work is being carried out in TEC-102. However, the space available and lab infrastructure is very inadequate. Because of this some experiments and analyses are being (or planned to be) conducted in off-campus locations.
- CE needs dedicated dry lab space for the computational modeling students (250 square feet).
- CE needs wet lab research space to host pressure reactors - CSTR & tubular reactor, absorption column, flash pyrolysis reactor, and analytical instruments such as TGA, HPLC, GC, microbalance etc. (1,000 square feet).
- EE is planning to grow the number of hybrid classes that they offer in the near future as part of their plan in developing graduate and certificate degree programs aimed at local high-tech industry. The program would benefit from at least 2 or 3 more instructional rooms like NC 2013 to support these activities and the modernization of instructional facilities.
- EE would also greatly benefit from an active learning center that would service flipped classes. Such a facility would allow CEAS to modernize the classroom experience for students and greatly enhance the education provided.



Future Instructional Laboratory Space Needs

CEAS leadership indicates that the college has reached maximum capacity and are not adequately resourced to sustain the level of growth witnessed over the past five years. The addition of instructional labs as proposed within this program plan will facilitate future growth of the college within civil, mechanical, and electrical engineering. Assuming a conservative 2.2% growth over the next ten years, the overall enrollment within CEAS will grow from the 1,351 students seen in 2014 to 1,648 by 2024. To accommodate this growth there must be a comparable increase in the amount of square footage dedicated to instructional space. . . . More information to be developed later. . .

SITE

The new building will be located adjacent to the North Classroom Building, and occupy the existing open-space directly north of the Building and fronting Larimer Street. EPSB will be joined to North Classroom at multiple points on all three levels to increase opportunities for connectivity and collaboration.

The structure continues the built edge along Larimer Street set by the adjacent Recreation Center, which is consistent with the AHEC Master Plan, and the University's desire to extend the urban feel and character of Larimer Square into the AHEC campus.

BUILDING I RENOVATION

The project includes the design and development of a new 3-story, 60,000 GSF bar-shaped building, and a 38,368 GSF renovation of CEAS vacated space within the North Classroom building. The 3-story height of EPSB is consistent with that of North Classroom Building and other nearby campus buildings. The new building will be constructed as an addition to the North Classroom Building on the Auraria Campus. Immediately adjacent to the northwest of North Classroom, this addition will connect on all three floors of the proposed facility.

The areas to be renovated are located throughout the North Classroom Building and are interspersed with other schools and colleges. The vacated laboratories will be repurposed into CLAS instructional classrooms and labs, and the former support and service spaces will be adapted to meet CLAS needs.

IMPLEMENTATION SCHEDULE

The implementation of EPSB will be determined by the availability and timing of state and university funding. Once funded, the implementation process is projected to take approximately 36 months; from design development through site remediation through interior finishes and commissioning.

Currently, the project includes a state capital construction funding request in FY 2016-2017 of \$45,114,407 (75%) of the total project cost of \$60,114,407. Each year that the requested state funds are not allocated delays the project start up date. However, if funding is awarded as requested, the preliminary schedule would be as follows:

7/2016 – 7/2017	Design (12 Months)
8/2017 – 8/2019	Construction (24 Months)
9/2019	Building Occupied



CC-C: CAPITAL CONSTRUCTION REQUEST FOR FY 2016-17

Agency or Institution:	University of Colorado Denver	Signature	
Project Title	Engineering & Physical Sciences Building	Department or Institution Approval:	Date
Project Year(s):	FY 2016 - 17	Signature	Date
Agency or Institution Priority Number:	2	CCHE Approval:	Date
		OSP B Approval:	Date
		Name and e-mail address of preparer:	Cary Weatherford cary.weatherford@ucdenver.edu

Revision? Yes <input type="checkbox"/> No <input type="checkbox"/>	Total Project Costs	Total Prior Year Appropriations	Current Request FY 2016-17	Year 2 Request	Year 3 Request	Year 4 Request	Year 5 Request
If yes, last submission date: _____							

A. Land Acquisition

(1) Land /Building Acquisition	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
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B. Professional Services

(1) Master Plan/PP	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
(2) Site Surveys, Investigations, Reports	\$ 539,507	\$ -	\$ 539,507	\$ -	\$ -	\$ -	\$ -
(3) Architectural/Engineering/ Basic Services	\$ 5,840,071	\$ -	\$ 5,840,071	\$ -	\$ -	\$ -	\$ -
(4) Code Review/Inspection	\$ 60,000	\$ -	\$ 60,000	\$ -	\$ -	\$ -	\$ -
(5) Construction Management	\$ 1,880,000	\$ -	\$ 1,880,000	\$ -	\$ -	\$ -	\$ -
(6) Advertisements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
(7a) Inflation for Professional Services	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
(7b) Inflation Percentage Applied		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
(8) Other LEED Consultant	\$ 100,000	\$ -	\$ 100,000	\$ -	\$ -	\$ -	\$ -
(9) Total Professional Services	\$ 8,419,578	\$ -	\$ 8,419,578	\$ -	\$ -	\$ -	\$ -

C. Construction or Improvement

(1) Infrastructure	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
(a) Service/Utilities	\$ 1,050,000	\$ -	\$ 1,050,000	\$ -	\$ -	\$ -	\$ -
(b) Site Improvements	\$ 1,263,938	\$ -	\$ 1,263,938	\$ -	\$ -	\$ -	\$ -
(2) Structure/Systems/ Components							
(a) New (GSF): 60,000	\$ 28,300,000	\$ -	\$ 28,300,000	\$ -	\$ -	\$ -	\$ -
New \$ 472 /GSF							
(b) Renovate GSF: 38,368	\$ 9,261,263	\$ -	\$ 9,261,263	\$ -	\$ -	\$ -	\$ -
Renovate \$ 241 /GSF							
(3) Other (Specify)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
(4) High Performance Certification Program	\$ 300,000	\$ -	\$ 300,000	\$ -	\$ -	\$ -	\$ -
(5a) Inflation for Construction	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
(5b) Inflation Percentage Applied		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
(6) Total Construction Costs	\$ 40,175,201	\$ -	\$ 40,175,201	\$ -	\$ -	\$ -	\$ -

D. Equipment and Furnishings

(1) Equipment	\$ 3,575,520	\$ -	\$ 3,575,520	\$ -	\$ -	\$ -	\$ -
(2) Furnishings	\$ 1,907,160	\$ -	\$ 1,907,160	\$ -	\$ -	\$ -	\$ -
(3) Communications	\$ 1,551,047	\$ -	\$ 1,551,047	\$ -	\$ -	\$ -	\$ -
(4a) Inflation on Equipment and Furnishings	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
(4b) Inflation Percentage Applied		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
(5) Total Equipment and Furnishings Cost	\$ 7,033,727	\$ -	\$ 7,033,727	\$ -	\$ -	\$ -	\$ -

E. Miscellaneous

(1) Art in Public Places=1% of State Total Construction Costs (see SB 10-94)	\$ -	\$ -	\$ 200,876	\$ -	\$ -	\$ -	\$ -
(2) Annual Payment for Certificates of Participation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
(3) Relocation Costs	\$ 401,752	\$ -	\$ 401,752	\$ -	\$ -	\$ -	\$ -
(4) Tap Fees	\$ 400,000	\$ -	\$ 400,000	\$ -	\$ -	\$ -	\$ -
(5) Other Costs [specify]	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
(6) Other Costs [specify]	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
(7) Other Costs [specify]	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
(8) Total Misc. Costs	\$ 1,002,628	\$ -	\$ 1,002,628	\$ -	\$ -	\$ -	\$ -
F. Total Project Costs	\$ 56,631,134	\$ -	\$ 56,631,134	\$ -	\$ -	\$ -	\$ -

G. Project Contingency

(1) 5% for New	\$ 2,179,836	\$ -	\$ 2,179,836	\$ -	\$ -	\$ -	\$ -
(2) 10% for Renovation	\$ 1,303,437	\$ -	\$ 1,303,437	\$ -	\$ -	\$ -	\$ -
(3) Total Contingency	\$ 3,483,273	\$ -	\$ 3,483,273	\$ -	\$ -	\$ -	\$ -
H. Total Budget Request [F+G(3)]	\$ 60,114,407	\$ -	\$ 60,114,407	\$ -	\$ -	\$ -	\$ -

I. Source of Funds

CCF	\$ -	\$ -	\$ 45,114,407	\$ -	\$ -	\$ -	\$ -
CF	\$ -	\$ -	\$ 15,000,000	\$ -	\$ -	\$ -	\$ -
RF	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
FF	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

THIRD-PARTY REVIEW:

The university has enlisted the third party review of construction experts for initial validation of cost estimates and program plan for the Engineering & Physical Sciences Building. Additionally, the university will seek further analysis of the Engineering & Physical Sciences Building needs following the renovations of North Classroom at the Denver campus to account for any discovery of building construction opportunities that may benefit the designated student educational programs.

PREPARED BY THE OFFICE OF INSTITUTIONAL PLANNING

<http://www.ucdenver.edu/about/departments/InstitutionalPlanning/Pages/AboutUs.aspx>

