
Chapter 7.2: Facilities¹

Background

The College of Engineering at Colorado State University currently occupies approximately 500,000 square feet in over 30 buildings and also manages over 100 acres of open space for outdoor research in and around Christman Field and the Simons Building (Engineering Research Center). At present, the space is primarily assigned to and managed by departments or programs, with some space managed directly by the college. With this much space in view, it is often unclear as to who is responsible for regular upkeep and maintenance, renovations, and improvements, whether it be CSU Facilities Management, the college, or a department. And the space just keeps growing. Within just the past few years, the college has built several new buildings, and is currently constructing Engineering II.

Objectives & Goals

Our objective is to: *Develop a comprehensive strategic plan for the oversight and management of all college facilities, both to support existing programs and prepare for future growth.* Our goals are to:

- Establish a college space database that reads from and updates the university space database,
- Establish a space allocation policy,
- Establish a space utilization policy,
- Develop a College of Engineering facilities master plan,
- Establish a small construction group within the college, and
- Develop a staff plan to oversee and manage the above policies, data, and plans.

Strategies

Goal 1: Establish a college space database that both reads from and updates the university space database

The university database for space information is called Facilities Asset Management Information System, or FAMIS. Although FAMIS is the database of record for all official university business (such as space audits), it often does not contain the information the college needs in order to make informed decisions about space. Unfortunately, FAMIS

¹ Author: Mark Ritschard, Assistant Dean. This chapter of the college strategic plan: “Chapter 7D: Facilities” was finalized at the Engineering Executive Committee meeting of October 5, 2011.

sometimes contains inaccurate information, generally because changes at the college level do not get changed in FAMIS.

In order to address the shortcomings of FAMIS data, staff in the college have created a database for information about each physical room, or space, utilized by the college. Included in the database are fields for:

Building Name	Alternate Room Name (a.k.a)
Room Number	Carpeted Square Feet
Departmental Assignment	Room use percentage
Responsible Authority	Department in room percentage
Contact(s)	Account associated with room
Occupant(s)	Lead PI name
Room Use (per FAMIS)	Floor plans
Room description (per FAMIS)	Capital equipment, key access

The staff at the ERC have also created a space database that includes other significant information such as utilities in the room, available power, and equipment.

Our strategies are to:

- Regard FAMIS as the authoritative space database for the College of Engineering.
- In cooperation with Facilities Management, establish a college space database that both reads from and updates FAMIS.
- Develop a list of fields for the college database and, where possible, add missing fields to FAMIS.
- Develop an interactive web interface for the college space database

Goal 2: Establish a college space allocation policy

The College of Engineering is an engaging and dynamic player within the university environment, both as a result of a hands-on teaching philosophy and a very active research enterprise. Accommodating the space needs of a constantly changing environment is difficult. Historically, space allocated to departments, research programs, or even individuals has been treated as if the allocation was granted ad infinitum. As a result, the use of space has not been as optimal as it could be within the total college environment. Granted, most space is well utilized and well managed. However, to accommodate the increasing pace of change in the research arena, in particular, the college needs to adopt a more encompassing view of its space.

Our strategies are to:

- Establish a college space allocation policy, and

- “Reset” college space assignments by initially allocating all space per the space policy. In almost all cases, this will result in formally assigning space to the existing user and for the existing purpose.

Our policy is as follows:

- All space allocated to the college by the university (see Appendix A) will be managed and allocated at the college level. The Dean has the ultimate responsibility for space allocation, and the Executive Committee will review space allocations as needed.
- Space will be allocated to a “user”, be it a department, a program, or an individual.
- The user to whom the space was allocated will not further allocate the space to or for the responsibility of another user outside of the allocated user’s chain of authority.
- The college will allocate space to a user for a predetermined amount of time, based on the known needs of the space and the long-term needs of the program. The space will automatically revert back to the college at the end of the determined time, unless the space is re-allocated to the user within 2 months prior to the end of the allocation time.
- The allocation time period will be included in the college space database.
- Management, upkeep, and improvements to the space will be the responsibility of the user, in cooperation with the college when renovations are required.
- Work with other colleges to manage and allocate space in non-engineering buildings.

Goal 3: Establish a college space utilization policy.

The “need” for space will always be subjective. However, in order to allocate space effectively, the college needs to establish metrics for determining both the value of how space is currently used and the potential value for new space requests.

Our strategy is to:

Strategy: Establish a college utilization policy that addresses the value of space, including:

- Instruction, e.g., classrooms, computer laboratories, etc.
- Undergraduate Projects
- Office adjacencies for faculty, staff, and graduate students
- Research adjacencies, e.g., the Engineering II “pod” concept
- Research productivity
- Administrative and research support
- Public Visibility
- ...others as identified...

Policy:

- Space in the College of Engineering will be utilized based on its best use to the college as a whole. “Best use” will be determined by the space utilization evaluation metrics that are established by the college.

- The college will maintain a spreadsheet that objectively measures the value of space based on the metrics listed above (in the Strategy section), and others as needed.
- When space is requested, the value of the requested space will be compared to the value of existing space; existing space will be evaluated only if it fits within the category of space being requested.

Goal 4: Develop a College of Engineering facilities master plan.

The primary focus of the college facilities master plan is to develop strategies that will ensure adequate and equitable facilities to support and enhance both the instructional and research missions of the college.

Strategy: Develop a College of Engineering Facilities Master Plan to include:

- Future buildings, e.g., Engineering II, a building for the EUV ERC
- Plans for existing university space or facilities, e.g., Allison Hall
- Building Renovations, e.g., ERC, Glover, Engineering
- Facilities maintenance and support, in particular for the Foothills Campus
- Facilities oversight and maintenance

Goal 5: Establish a small construction group within the college

According to Facilities Management, the College of Engineering is a major customer of small project and renovation services. Unfortunately, from the college perspective, the services provided are often not cost competitive, nor are they timely. In order to provide construction services to the college, in particular the research enterprise, the college met with Facilities Management staff in 2010 and early 2011 to establish a partnership for a small facilities construction group within the college. The early efforts have gone reasonably well, but now need to be finalized.

Strategies:

- Establish a productive partnership with the new CSU Facilities Management
- Permanently establish a small construction group within the college to provide oversight and support for small construction projects, with the goal that outside contractors may be hired directly by the engineering small construction team.
- Create a business plan for the small construction group, with the goal that the group be self-supporting.
- Formalize the staff position to oversee the group.
- Hire a licensed professional electrician as part of the small construction group.
- Determine the need for machine shop(s), the best location(s), and their role within the small construction group. Professional management and the safety of machine shops must be considered.
- Establish management plans for all machine shops.

Goal 6: Develop a staff plan to oversee and manage college facilities.

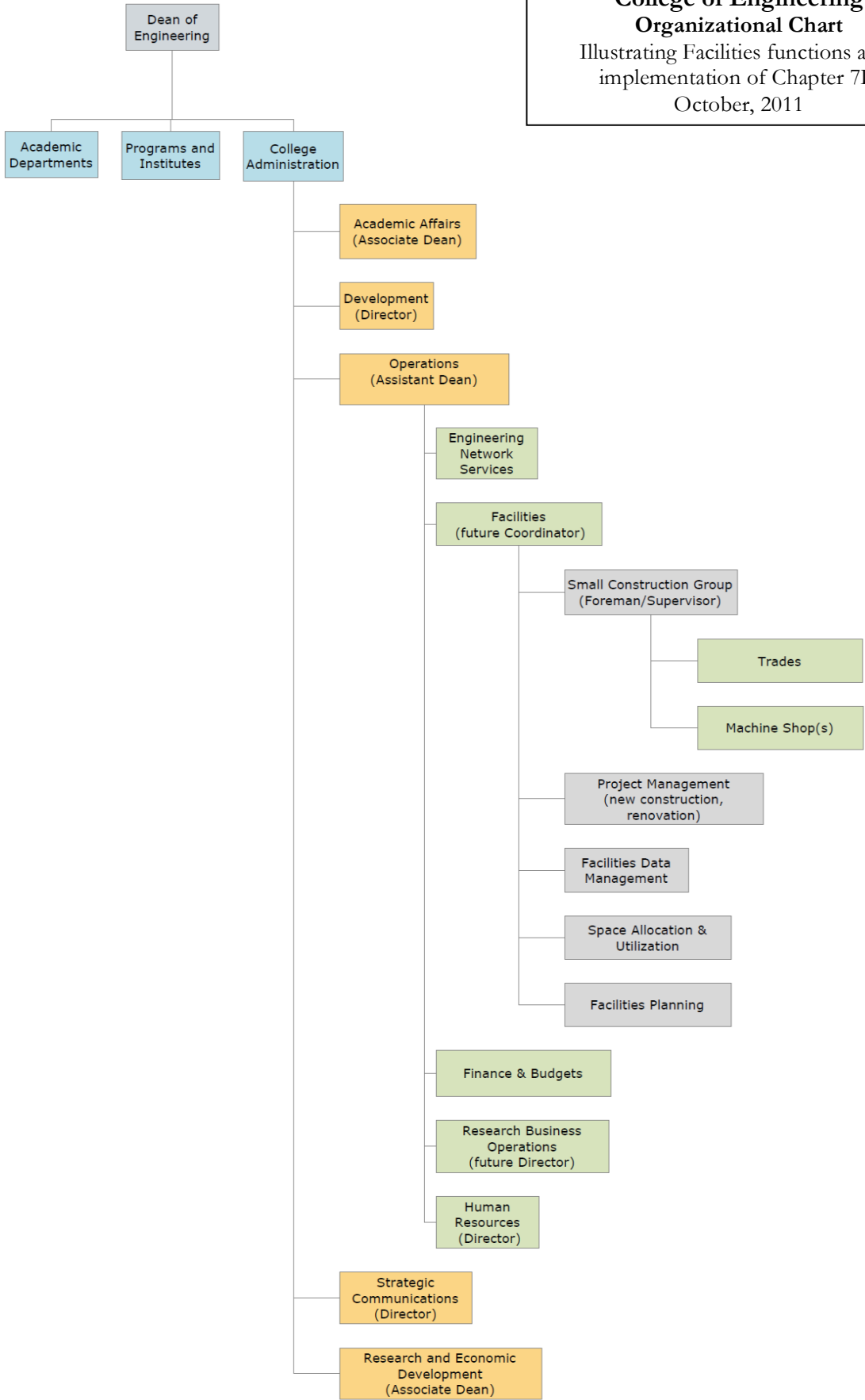
To realize success in the goals expressed in this document, the college will need to establish adequate staffing levels to oversee the above policies, data, and plans.

Strategies:

- Create the position of “Facilities Coordinator” as a two-year temporary administrative professional position to begin implementation of the strategic plan strategies.
- Re-evaluate the Facilities Coordinator position in two years to determine a long-term staff plan.
- Create a staff position to oversee the small construction group, reporting to the Facilities Coordinator
- Create a position for a licensed professional electrician in the small construction group.

An organizational chart follows.

**College of Engineering
Organizational Chart**
 Illustrating Facilities functions after
 implementation of Chapter 7D
 October, 2011



Appendix: CSU buildings utilized by the College of Engineering, whether in whole or in part.

Building Name (partial occupancy)	Assignable ft ² (asf)	Current Manager*
Academic Village C (academic program space on first floor)	5,417	College
Atmospheric Chemistry	8,496	ATS
Atmospheric Science	20,303	ATS, CIRA
Atmospheric Science and CIRA Research Center (ACRC)	8,284	ATS, CIRA
Atmospheric Science Annex	2,801	ATS, CCC, CoCoRAHS
Atmospheric Science West	7,466	ATS
Atmospheric Simulation Lab	7,235	ATS
CHILL Radar facility	8,060	ATS
Christman Field (LIDAR sheds, etc.)	~ 50 acres	ATS
Cooperative Institute for Research in the Atmosphere (CIRA)	11,769	CIRA
Dam Foundation Erosion Facility	1,650	ERC
Engineering (Physics portion excepted)	77,014	College, CEE, ECE, ME
Engineering II (under construction)	68,259	College
Engineering Renewal and Growth (ERG)	750	ATS
Engines & Energy Conversion Laboratory	25,305	ME
Equine Orthopaedic Research Center (Orthopaedic Bioengineering Research Laboratory)	1,637	ME
General Services Building (Integrated Decision Support Group)	1,326	CEE
Glover	25,172	CBE, CEE, College
Hangar, Main	4,977	ATS
Hangar, West	4,782	ATS
Hydraulics Testing Facility	4,641	ERC
Hydromachinery Laboratory	14,863	ERC
Large Model Laboratory	4,800	ERC
MERC Annex	3,990	ME
MERC sheds	6,023	CBE
Motorsport Engineering Research Center (MERC)	13,085	ME
Overtopping Flume & Wave Facility	1,000	ERC
Overtopping Flume Facility	2,000	ERC
Physiology	543	CBE
Rainfall Erosion Facility	2,736	ERC
Simons Building (Engineering Research Center, or ERC)	121,180	ERC
Solar House 1 (R.E.P.E.A.T)	2,619	ME
Solar House 3 (vacant)	2,797	ATS
Student Services (Systems Engineering)	696	College
Turbine Pumphouse	516	ERC
University Services Center (graduate student area)	3,216	College
Valve Houses (3)	907	ERC
Weather Station	290	ATS
...outbuildings, trailers, sheds, etc.	9,973	
TOTAL	486,578 ft²	

*Current Manager abbreviations:

ATS: Dept. of Atmospheric Science
 CBE: Dept. of Chemical and Biological Engineering
 CCC: Colorado Climate Center
 CEE: Dept. of Civil and Environmental Engineering
 CIRA: Cooperative Institute for Research in the Atmosphere

CoCoRAHS: Community Collaborative Rain Hail and Snow Network
 ECE: Department of Electrical and Engineering
 ERC: Engineering Research Center
 ME: Department of Mechanical Engineering