From: Mark Wagenhauser <markw@creol.ucf.edu>
Sent: Wednesday, April 13, 2016 3:29 PM
To: Bahaa Saleh
Cc: James Ross
Subject: RE: Exceptional Funding request - CREOL expansion
Attachments: FW: CREOL Third Floor Build-Out; FW: COSTS; RLF Robins & Morton UCF CREOL presentation.pdf

Importance: High

Bahaa,

I've been told that the contract negotiations will begin soon for Phase 2 with RLF/Robbin & Morton and it would be good to know how much is available for the project. Because of this, I don't know if you want to push sooner for the meeting with Tracy and the group or not.

****

Here's some information regarding how we came up with the original plan for the $4M.

8/21/14 – email from Ernie Gerber (Project Manager with UCF Facilities since retired) showing the cost of 2012 College Laboratory construction in Major Cities. We compared ourselves to Miami, which was listed at $174.94 per sq ft. The most expensive was New York City at $258.12 per sq ft.

10/07/14 – email from Peter Newman (at the time was the Architectural Consultant to Facilities) that says $250 per sq ft is a reasonable number for Bio Labs.

9/22/14 – based on verbal communication with personnel in facilities, we came up with a cost of $250 per sq ft and the following plan:

`5,500 sq ft per floor for a total of ~16,500 sq ft = ~$4.125M

Option 1 (no auditorium)
1st floor
10 offices - ~1100 sq ft
Hallway, utilities, elevator, bathrooms: ~2,000 sq ft
6 labs at ~400 sq ft each (~2400 sq ft)

2nd & 3rd floor
10 offices - ~1100 sq ft
Hallway, utilities, elevator, bathrooms: ~1,600 sq ft
7 labs at ~400 sq ft each (~2800 sq ft)

Option 2 (includes auditorium)
1st and 2nd floors
6 offices - ~660 sq ft
Hallway, utilities, elevator, bathrooms: ~2,000 sq ft
Auditorium - ~2840 sq ft

3rd floor
10 offices - ~1100 sq ft
Hallway, utilities, elevator, bathrooms: ~1,600 sq ft
7 labs at ~400 sq ft each (~2800 sq ft)

On March 28th, we had the short list of design/build teams present their proposals to build the extension for Phase 2. RLF/Robbin & Morton was selected to enter contract negotiations for the project. Their design plan (is not set in stone) shows the first floor as a shelled space and the second built out with 4 labs and 9 offices. It was conclusive from all of the presentations, that $4M was not going to build-out 2 floors completely. A floor would have to be shelled space. (please see pdf of a rendering of the 2 floors. Bill Martin is working to make a 3rd floor for me)

Of the $4M that is available, ~$2.79M is available for construction. The balance goes to the design and management.

It has also been determined, that the sq ft cost is ~$450, not the $250 we were advised back in 2014.

An additional $2M, could get the second floor built out and a possibly a third floor shelled. This will need to be investigated. Conditions of an elevator and connecting to the Phase 1 extension need to be studied. An elevator costs ~$150K.

Please let me know if you need anything else or want to discuss this further.

Mark

From: Tracy Clark
Sent: Friday, April 8, 2016 4:42 PM
To: Bahaa Saleh
Cc: Mark Wagenhauser; Debra Copertino; Lee Kernek; Joel Hartman
Subject: Exceptional Funding request - CREOL expansion

Bahaa,

We are in the process of evaluating AA's exceptional funding requests. CREOL submitted one for an additional $1.5 million for the CREOL expansion. Dale would like to meet (Dale, you, Joel, me and Lee) for you to give a presentation on this request since it is over the $4 million that was funded last year (see email attached concerning last year's award). We would like to understand why the cost is more than the original amount requested, as well as the need for the expansion to include the 2,500 sq. ft. auditorium vs. 1,200 research labs and 800 office space sq. ft.

Debra Copertino will be sending out an outlook appointment. Let me know if you have any questions.

Tracy Clark, CPA
Associate Provost for Budget, Planning and Administration and Associate Vice President for Finance
UCF Finance and Accounting
12424 Research Parkway, Ste 300
Orlando, Florida 32826
Phone: 407-882-1006
Fax: 407-882-1102
Tracy.Clark@ucf.edu

From: Mark Wagenhauser <markw@creol.ucf.edu>
Sent: Tuesday, April 12, 2016 4:18 PM
To: James Ross
Subject: FW: CREOL Third Floor Build-Out

-----Original Message-----
From: James Ross
Sent: Tuesday, October 7, 2014 4:31 PM
To: Franklin Newman
Cc: Mark Wagenhauser
Subject: RE: CREOL Third Floor Build-Out

Again thanks. The offices already exist thanks to help from your group in 2009. Only the lab spaces are still just in shell form.
Jim

-----Original Message-----
From: Franklin Newman
Sent: Tuesday, October 07, 2014 4:17 PM
To: James Ross
Subject: Re: CREOL Third Floor Build-Out

Jim,

I would reduce offices to $150.00 per sq. ft. and I believe that $250.00 per sq. ft. is still reasonable for Bio Labs. However, I will ask one of the Construction Managers working on campus for their opinion. Once I hear back from them I will let you know about any further budget revisions.

I have attached a concept budget for your review.

Hope this helps.

Pete

Peter Newman,
Architectural Consultant
Facilities and Safety
University of Central Florida
(407) 616-2609 (Cell)
franklin.newman@ucf.edu

On 10/7/14, 9:52 AM, "James Ross" <jross@creol.ucf.edu> wrote:

>Pete
>Thanks a lot.
>Jim
>
>-----Original Message-----
>From: Franklin Newman
>Sent: Tuesday, October 07, 2014 9:29 AM
>To: James Ross
>Subject: Re: CREOL Third Floor Build-Out
>
>Jim,
>
>I will run the numbers and get back to you today with a revised budget.
>I am still working for Lee Kernek part time (3) days a week.
>
>Pete
>
>
>
>
>Peter Newman,
>Architectural Consultant
>Facilities and Safety
>University of Central Florida
>(407) 616-2609 (Cell)
>franklin.newman@ucf.edu
>
>
>
>
>
>
>
>
>On 10/2/14, 3:55 PM, "James Ross" <jross@creol.ucf.edu> wrote:
>
>>
>>Pete
>>Back in 2009, Thomas Bruno put the numbers and together to help us get
>>a grant for building out the CREOL 3rd floor in the addition. The
>>number work to get us partial funding for the offices but we did not
>>get enough for the labs. We are getting ready to try again but we
>>would like to know how valid the numbers ($) from 2009 are now in 2014.
>>Thomas is no longer with the University and we are hoping that you
>>might be able to help.
>>Thanks
>>Jim Ross

>>
>>James Ross
>>College of Optics and Photonics
>>CREOL & FPCE
>>University of Central Florida
>>4000 Central Florida Blvd, Bldg 53
>>Orlando, Florida 32816-2700, USA
>>Phone: (407) 823 6919
>>
>>>>> Thomas Bruno 8/13/2009 2:41 PM >>>
>>All,
>>
>>Attached are several files which I believe cover the section of the
>>grant that we were able to provide information for.
>>
>>Once again, all of the information provided can be altered to fit the
>>grant that you are applying to.
>>
>>If you need anything else, please feel free to contact me.
>>
>>-Thomas O'Connor Bruno
>>
>>
>>Attached you will find these following files:
>>
>> 1. CREOL Work Breakdown - This is a summary of the work we were to
>>complete. It explains which files can are associated with each portion.
>>
>> 2. CREOL Construction Management Team Bios - Biographies of the
>>principal players.
>>
>> 3. CREOL Project Execution Plan - A mixture of information.
>>
>> 4. CREOL Organizational Chart - A chart which depicts the
>>organization of the Construction Management Team.
>>
>> 5. CREOL Design Process Explanation - A mixture of information on
>>the design process.
>>
>> 6. CREOL Schedule - A schedule of the project.
>>
>> 7. CREOL LEED and Sustainability Information - Covers LEED and
>>Sustainability.
>>
>> 8. CREOL Budget - Budget spreadsheet of the project.
>>
>> 9. BOG - Construction Costs - For reference in order to justify our
>>price per square foot.
>>
>>10. CREOL Build-Out Space Breakdown from Drawings - The room and space
>>allocation of the project.
>>

>>11. CREOL Budget Breakdown - A spreadsheet to explain how CREOL Budget
>>Form 424C is completed.
>>
>>12. CREOL Budget Form 424C - The requested form.
>>
>>13. CREOL Budget Justification - An explanation on how we reached the
>>budget costs.
>>
>>14. CREOL Floorplan - Present - This is the current state of the third
>>floor.
>>
>>15. CREOL Floorplan - Future - This is the proposed Build-Out.
>>
>>
>>
>

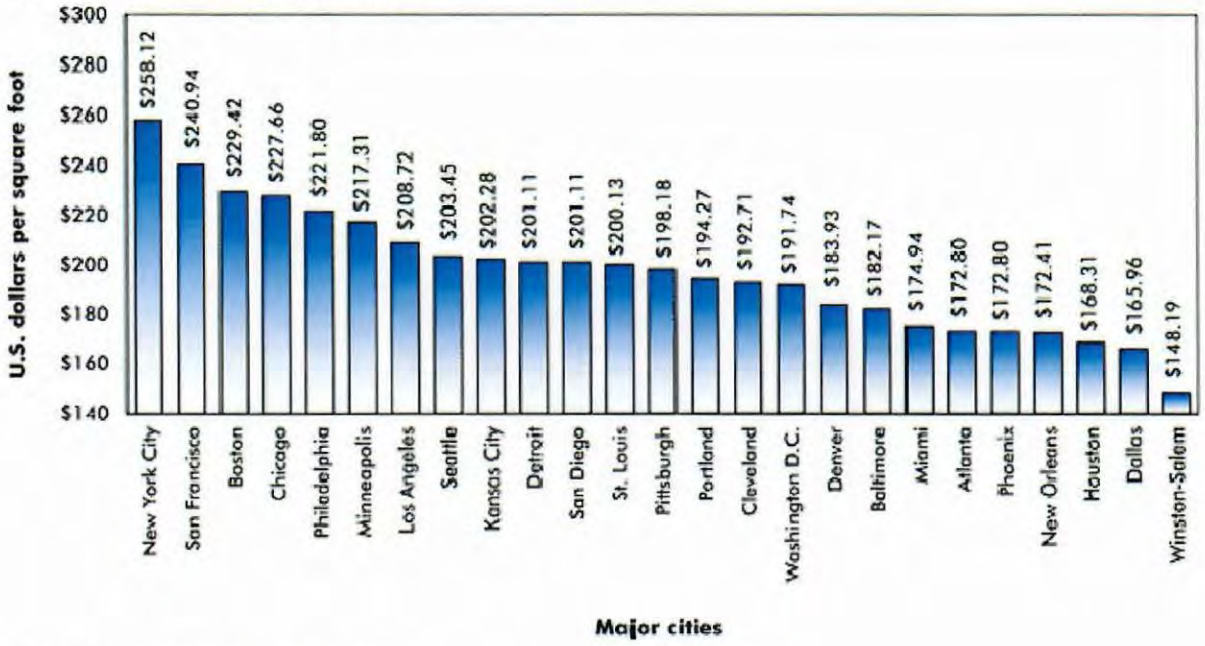
From: James Ross <jross@creol.ucf.edu>
Sent: Thursday, August 21, 2014 10:00 AM
To: Mark Wagenhauser
Subject: FW: COSTS

This is from Ernie:

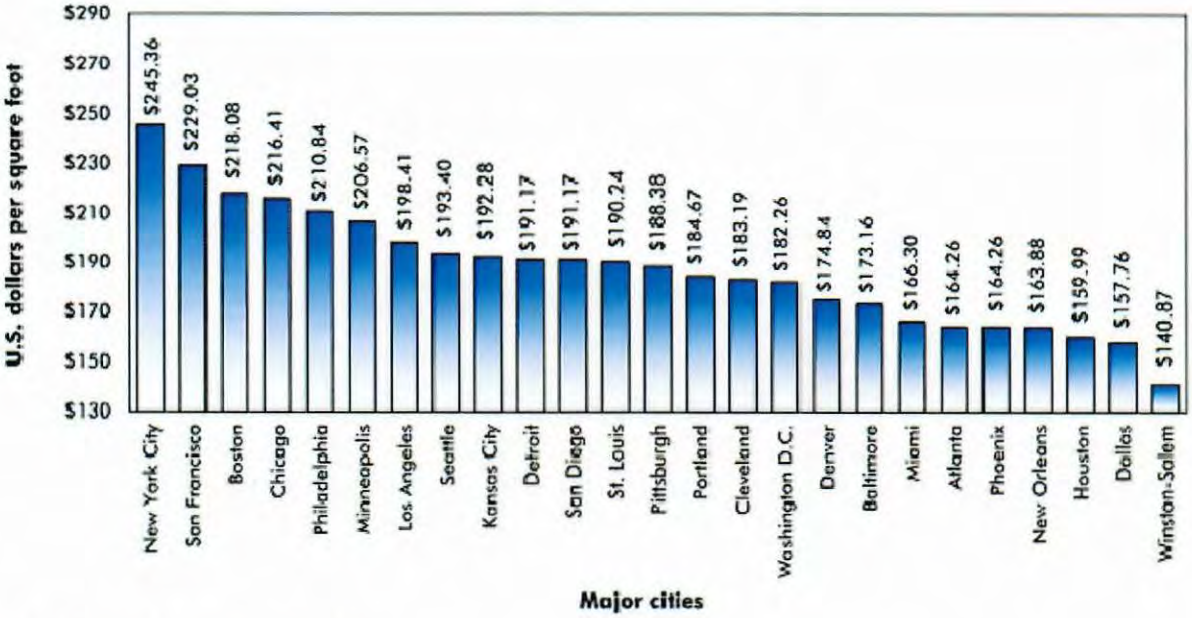
From: Ernest Gerber
Sent: Thursday, August 21, 2014 9:57 AM
To: James Ross; Mark Wagenhauser
Subject: COSTS

WHAT I HAVE FROM MY LAST RSMEANS:

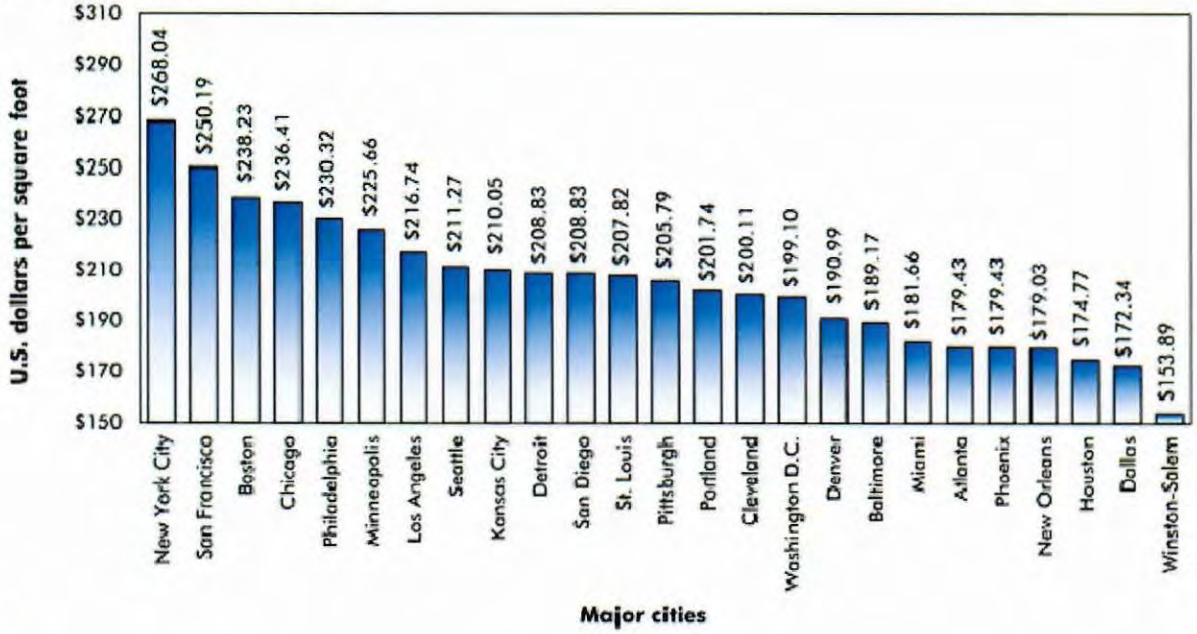
College laboratory construction cost:
April 2012 ranking of major U.S. cities



College classroom construction cost:
April 2012 ranking of major U.S. cities



College dormitory construction cost:
April 2012 ranking of major U.S. cities

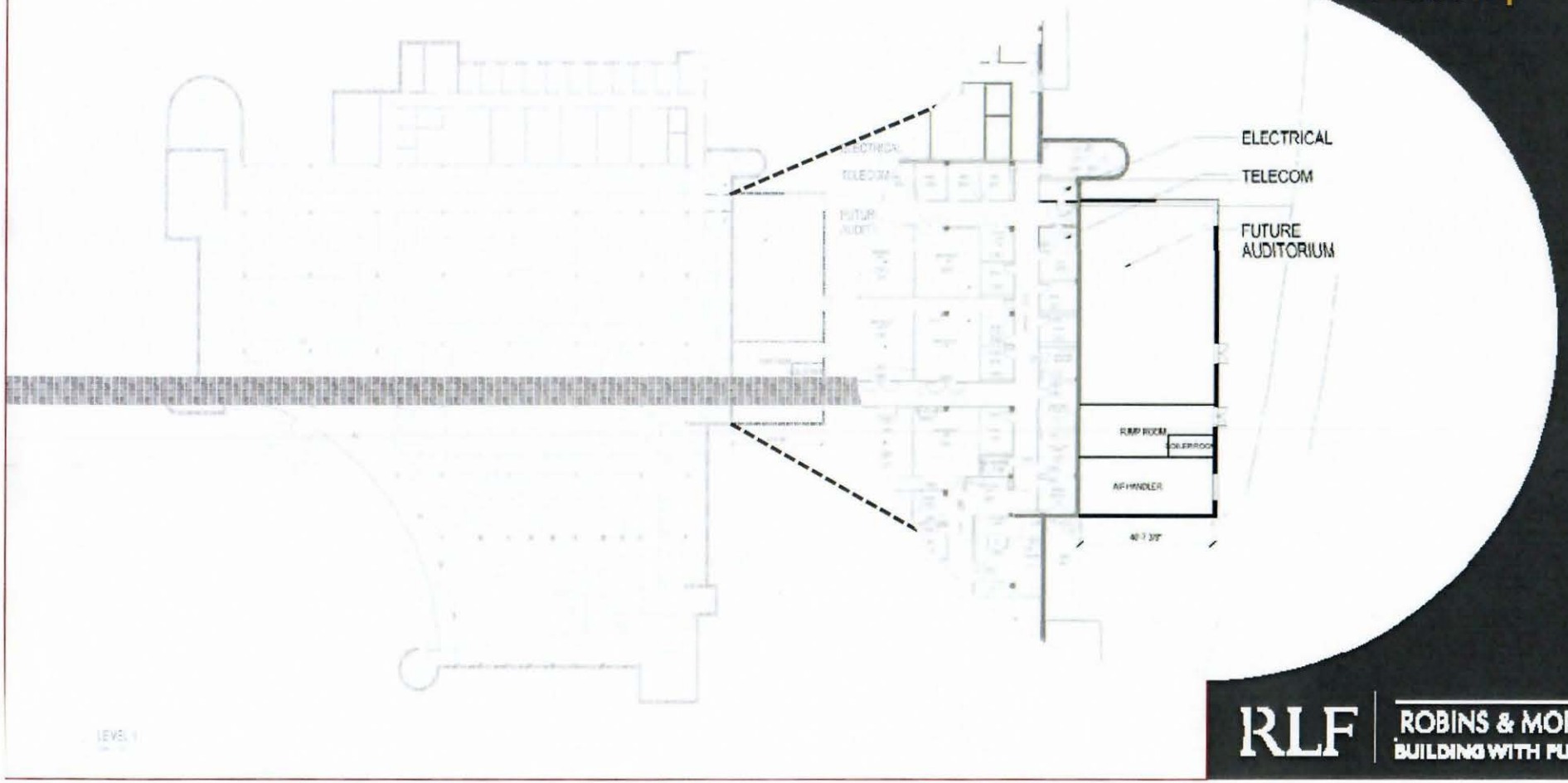


College student union building construction cost:
April 2012 ranking of major U.S. cities


U.S. dollars per square foot
$120
$140
$160
$180
$200
$220
$240
$260
Major cities
New York City $219.39
San Francisco $204.78
Boston $194.99
Chicago $193.50
Philadelphia $188.52
Minneapolis $184.70
Los Angeles $177.40
Seattle $172.92
Kansas City $171.92
Detroit $170.93
San Diego $170.93
St. Louis $170.10
Pittsburgh $168.44
Portland $165.12
Cleveland $163.79
Washington D.C. $162.96
Denver $156.32
Baltimore $154.83
Miami $148.69
Atlanta $146.87
Phoenix $146.87
New Orleans $146.53
Houston $143.05
Dallas $141.06
Winston-Salem $125.96

FLOOR PLANS | LEVEL 1

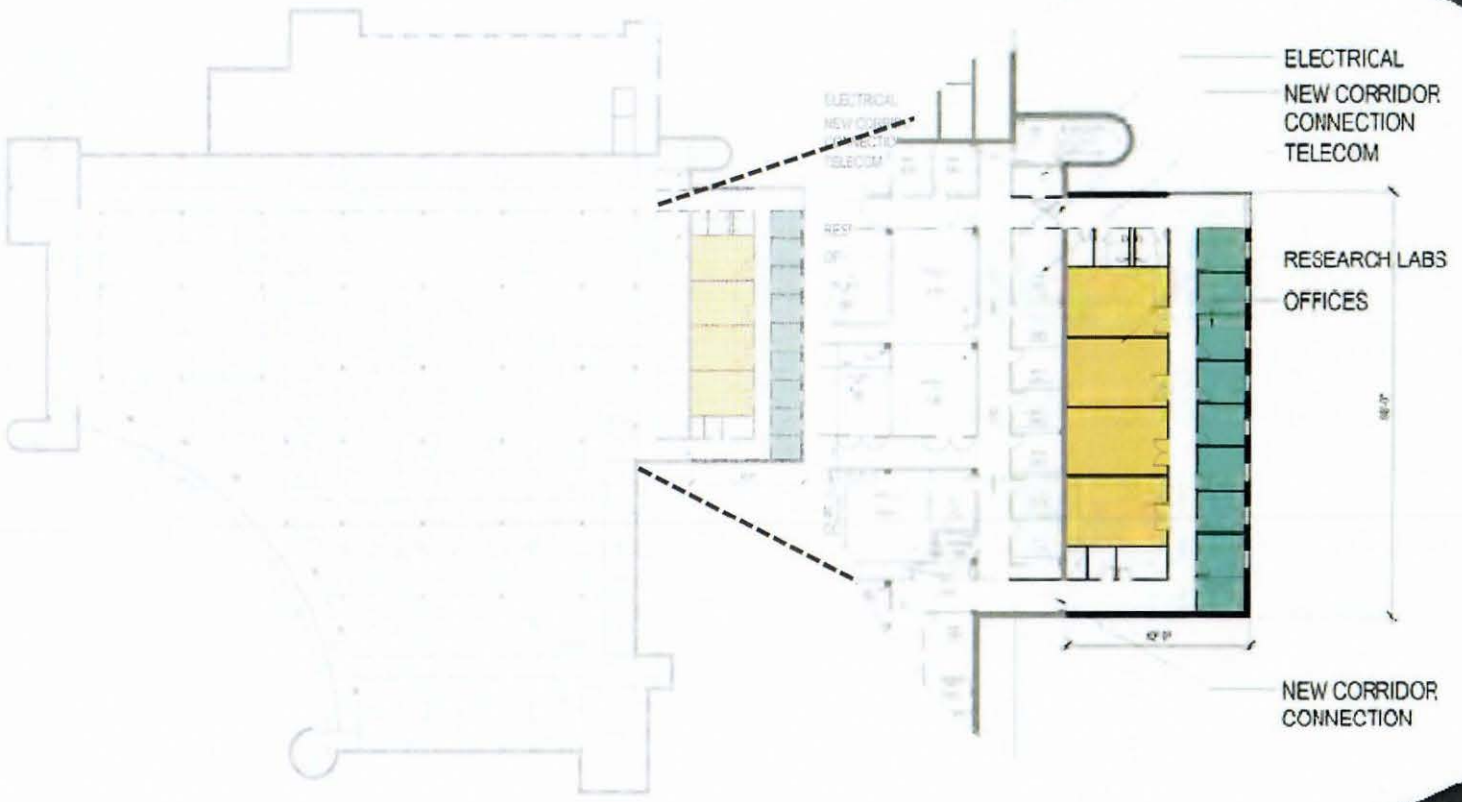
CREOL
Expansion
Phase II



RLF | ROBINS & MORTON
BUILDING WITH PURPOSE.

FLOOR PLANS | LEVEL 2

CREOL
Expansion
Phase II



RLF | ROBINS & MORTON
BUILDING WITH PURPOSE.

AGENCY University of Central Florida
BUDGET ENTITY SUS
PROJECT TITLE CREOL Expansion Phase II

AGENCY PRIORITY 22
DATE BLDG PROGRAM APPROVED

PURPOSE, NEED, SCOPE, RELATIONSHIP OF PROJECT TO AGENCY OBJECTIVES

The College of Optics and Photonics and the Center for Research & Education in Optics and Lasers (CREOL) have grown in size and in stature. A new undergraduate program offering a Bachelor of Science degree in Photonic Science and Engineering began in Fall 2013, and has already attracted more than 100 new students. Five new faculty have been added since 2014. External research funding increased from an annual average of $11.3M in FY2011– FY2015 to $17M in FY2016. The College contributes about 13% of UCF's total research funding. Additional growth in the areas of medical optics, biophotonics, and laser-based manufacturing is anticipated. The college has outgrown its building, which has already been expanded once (Phase I) with a 3-story addition built onto the original 2-story structure. The proposed Phase II project is another 3-story addition to the east side of the building. The project will add 13,900 additional square feet of space to the existing 103,532 square feet building. The new space will house additional labs and offices, which are necessary for the growing educational and research programs, as well as the shell of a new auditorium that will be completed later.

SUSTAINABILITY AND LEED

The University of Central Florida is committed to sustainability and continued reduction of energy consumption in new construction projects. As energy costs and demands continue to escalate, achieving higher levels of efficiency has become increasingly important to the university's mission. Since 2007, UCF has mandated LEED certification, with most projects achieving Gold. UCF requires specific individual LEED credits that contribute to UCF's core principles including energy efficiency, water conservation, and indoor air quality for all projects. The Facilities Planning & Construction and Utilities & Energy Services departments provide oversight for all new construction and major renovation projects, and expedite the commissioning process with the latest industry standards to ensure that the university's sustainability goals are met and design parameters achieved.

Research/Laboratory

The space classification is predominately laboratory type, with office type minimized. The project will achieve LEED Gold certification with the U.S. Green Building Council (USGBC). Energy consumption will be at least 30% less than the energy standards cited in ASHRAE 90.1-2010, and water consumption will be at least 30% less than that of a comparable building. Laboratories will have continuous variable air flow valves with air flow reset capabilities. Domestic and laboratory hot water needs will be provided primarily by solar thermal energy. The project will utilize the district cooling loop for space cooling needs and look at alternative measures to provide dehumidification with the classifications of lab spaces and related energy use. All heating and reheating will be hydronic.

EDUCATIONAL PLANT SURVEY

The Educational Plant Survey has not been addressed for this project. As the planning year approaches, this project will be addressed.

STATE UNIVERSITY SYSTEM
CIP-3 SHORT TERM PROJECT EXPLANATION

Page ___of ___

GEOGRAPHIC LOCATION: University of Central Florida, Orlando
COUNTY: Orange
PROJECT DESCRIPTION/TITLE: CREOL Expansion Phase II
PROJECT BR No. (if assigned):___

Facility/Space Type	Net Area (NASF)	Net to Gross Conversion	Gross Area (GSF)	Unit Cost (Cost/GSF)*	Construction Cost	Assumed Bid Date	Occupancy Date
Classrooms		1.5	0	287	0		
Teaching Labs		1.5	0	306	0		
Research Labs	3,500	1.5	5,250	366	1,921,500		
Study	0	1.4	0	290	0		
Instructional Media	0	1.5	0	216	0		
Auditorium/Exhibition	4,708	1.2	5,650	320	1,807,872		
Gymnasiums	0	1.2	0	225	0		
Offices	2,000	1.5	3,000	299	897,000		
Campus Support Services		1.4	0	274	0		
Totals	10,208		13,900		4,626,372		

*Apply Unit Cost to total GSF based on primary space type

Space Detail for Remodeling Projects

	BEFORE		AFTER	
	Space Type	Net Area (NASF)	Space Type	Net Area (NASF)
Remodeling/Renovation				
Total Construction - New & Rem./Renov.	Total	0	Total	0

SCHEDULE OF PROJECT COMPONENTS — ESTIMATED COSTS

Basic Construction Cost	Funded to Date	2017-18	2018-19	2019-20	2020-21	2021-22	Funded & In CIP
1. a.Construction Cost (from above)		4,626,372					4,626,372
Add'l/Extraordinary Const. Costs							-
b.Environmental Impacts/Mitigation							-
c.Site Preparation		410,699					410,699
d.Landscape/Irrigaiton							-
e.Plaza/Walks							-
f.Roadway Improvements							-
g.Parking ___ spaces							-
h.Telecommunication		51,100					51,100
I.Electrical Service							-
j.Water Distribution							-
k.Sanitary Sewer System							-
l.Chilled Water System							-
m.Storm Water System							-
n.Energy Efficient Equipment		-					-
Total Construction Costs	0	5,088,171	0	0	0	0	5,088,171
2. Other Project Costs							
a.Land/existing facility acquisition							-
b.Professional Fees		535,291					535,291
c.Fire Marshall Fees		13,867					13,867
d.Inspection Services		104,198					104,198
e.Insurance Consultant		2,934					2,934
f.Surveys & Tests		1,500					1,500
g.Permit/Impact/Environmental Fees		48,186					48,186
h.Artwork		-					-
i.Moveable Furnishings & Equipment		418,858					418,858
j.Project Contingency		571,223					571,223
Total - Other Project Costs	-	1,696,057	-	-		-	1,696,057
ALL COSTS 1+2	0	6,784,228	0	0		0	6,784,228

Appropriations to Date Source	Fiscal Year	Amount	Project Costs Beyond CIP Period Source	Fiscal Year	Amount	Total Project in CIP & Beyond
		0	PECO	2020-21		6,784,228
TOTAL		-	TOTAL		-	6,784,228

From: Dale Whittaker <Dale.Whittaker@ucf.edu>
Sent: Monday, July 27, 2015 12:28 PM
To: Abraham Pizam; Alvin Wang; Bahaa Saleh; Deborah German; Jose Fernandez; Mary Lou Sole; Michael Frumkin; Michael Georgiopoulos; Michael Johnson; Mubarak Shah; Paul Jarley; Ross Hinkle; Daniel Holsenbeck; Sissi Carroll; Deborah German; Grant Heston; Helen Donegan; Maribeth Ehasz; Michael Morsberger; MJ Soileau; Rick Schell; Scott Cole; William Merck; Elizabeth Dooley; Mubarak Shah; Catherine Gholson; Cathy Radzai; Christina Tant; Donna DuBuc; Megan Diehl; Tracy Clark; Rebeca Richards; David Noel; Steven Omli; Dennis Reussow; Foard Jones; Jessica X. Dong; Heather Simeon; John Pittman; Karen Cobbs; Kelli Marini; Kerry Gajewski; Lesanne Brunswick; Lisa Filzer; Mark Wagenhauser; Melanie Warren; Norma Suarez; Sharon Ekern; Richard Payne; Seresa Cruz; Stefanie DelGiudice; Sunny Heyl; Tammy Forrester; Christopher Hale; Joe Schofield; Kimberley Cole; Jason Kennedy; Nataly Chandia Viano; Ronnie Korosec
Cc: William Merck; Tracy Clark; Dania Suarez; Debra Copertino
Subject: College and Unit 2015-16 Funding Requests

Importance: High

Follow Up Flag: Follow up
Flag Status: Flagged

Please share with the appropriate leaders in your college/division

Dear Colleagues,

For many years, UCF had a budget committee made up of faculty, administrators, staff, and students who developed plans for allocating the university's funds. That committee ceased to meet several years ago during the recession and years of state budget cuts. This past fall, the President asked me to reconstitute the University Budget Committee and charge its membership with developing a plan that supports colleges' needs and advances university priorities.

For the past several months, the budget committee has been working diligently to do just that, and they have developed a new plan that involves carry-forward allocations to colleges and divisions. This plan protects 3-year carry-forward commitments identified by colleges and divisions, including money for new faculty, startup packages, and other restricted uses.

Now, those carry-forward funds identified **in excess** of units' 3-year plans are being reallocated to fund university priorities recommended by the budget committee.

What does that mean for this year? About $10 million in carry-forward was collected from across the university to be reallocated for several university-wide priorities. After careful consideration, the budget committee – once again representing faculty, administrators, staff, and students – made recommendations on how to spend the reallocated carry-forward funding.

These carry-forward funding recommendations include:

- supporting student success initiatives, such as financial aid for low-income students ($4 million);
- growing graduate and research programs ($5 million); and
- strengthening our university-wide infrastructure and information technology ($1 million).

Earlier this year, the budget committee accepted applications from colleges and divisions for spending proposals. We received more than 50 proposals for a total request of approximately $47 million. Of those proposals, 15 were approved for full or partial funding, totaling the $10 million identified above. Departments that submitted requests will be notified individually within the next two weeks about the status of their requests.

This is a change from past budgeting practices and encourages mindful fiscal planning for colleges and divisions, with an opportunity to request additional funding for university priorities for which they do not have existing resources. UCF has been fortunate in the past two years to receive performance funding from the state, which we have primarily allocated to hire additional faculty members across all colleges to support the university's academic mission. These carry-forward reallocations allow the colleges and units to devote their other resources toward strengthening programs and student success initiatives.

As we look toward next year's fiscal planning, I expect we will undergo a similar process, asking colleges and divisions to develop 3-year budgets and carry-forward plans with each contributing a percentage of their excess, non-restricted carry-forward funding toward university-wide priorities.

As with any new plan, though, we are committed to a detailed evaluation and analysis of this year's process and the opportunity to make changes that will improve our fiscal management and coordination moving forward.

I encourage you to share this information with those who manage your units' budgets. If you have suggestions or questions regarding the carry-forward reallocation process, please contact Tracy Clark. Further details about this coming year's process and timelines will be provided this fall.

Thank you for your support of this new financing model that will help us advance our academic mission and best serve our students, faculty, and staff.

Sincerely,
Dale

A. Dale Whittaker, Ph.D.
Provost and Executive Vice President
University of Central Florida

From: Tracy Clark <Tracy.Clark@ucf.edu>
Sent: Friday, May 01, 2015 4:20 PM
To: MJ Soileau; Debra Copertino; Grant Heston; Keith Koons; Maribeth Ehasz; Sydney Alexander; William Merck; Dale Whittaker
Cc: Angie Carloss; Carolyn Standner; Dodie Hajra; Laura Stylianou; Christina Tant
Subject: RE: University Budget Committee Meeting - 5/5 @ 2:00-3:00

MJ

I met with each budget director the past two weeks to review their request list. During those meetings we loosely discussed how they would prioritize the requests. I could go back out to each of the directors and confirm my interpretation/opinion, but I expect I would get a lot of "increases" in priority. They are definitely "marks" that need input or review by those on the committee with pertinent information. A good example is the CREOL addition for $4 million. Mark Wagenhauser was asked specifically about the critical need for this in FY16 and he expressed that this is a high priority with the new faculty coming. I would like your input on that given the size of the commitment, and the 4th floor CREOL lab work currently under way.

If the committee wants, prior to Tuesday's meeting I can try to get confirmation or input on the priority from the Budget Directors and ask them to check with their senior leadership? Or we can do this after Tuesday's meeting?

Tracy Clark, CPA
Associate Provost for Budget, Planning and Administration and Vice President for Finance
UCF Finance and Accounting
12424 Research Parkway, Ste 300
Orlando, Florida 32826
Phone: 407-882-1006
Fax: 407-882-1102
Tracy.Clark@ucf.edu

From: MJ Soileau
Sent: Friday, May 01, 2015 3:58 PM
To: Tracy Clark; Debra Copertino; Grant Heston; Keith Koons; Maribeth Ehasz; Sydney Alexander; William Merck; Dale Whittaker
Cc: Angie Carloss; Carolyn Standner; Dodie Hajra; Laura Stylianou; Christina Tant
Subject: RE: University Budget Committee Meeting - 5/5 @ 2:00-3:00

I do not understand the priority setting process, e.g., "The priority (High, Medium, Low) of each request is loosely based on conversations with the budget directors." What discussions and who set these priorities? mjs

From: Tracy Clark
Sent: Friday, May 01, 2015 3:21 PM
To: Debra Copertino; Grant Heston; Keith Koons; Maribeth Ehasz; MJ Soileau; Sydney Alexander; William Merck; Dale Whittaker
Cc: Angie Carloss; Carolyn Standner; Dodie Hajra; Laura Stylianou; Christina Tant
Subject: RE: University Budget Committee Meeting - 5/5 @ 2:00-3:00

Dear Committee Member,

Attached please find an agenda and materials to be presented at the May 5, 2015 University Budget Committee. Please review these materials prior to the meeting with these questions in mind:

1. Attachment A – In our last meeting we tentatively decided to reserve funds for Tier I and Tier II initiatives, (namely the hiring of 200 faculty, 50 academic support staff, 10 administrative support staff and to propose a 3% merit increase).

    a. 1st Question: Since attachment A shows recurring funds declining to $1,325,000 (yellow highlighted cell) if we fund all Tier I and Tier II initiatives should we:
        i. Reduce the merit increase from 3% to 2%,
        ii. cut in half the number of academic and administrative staff hired to support the new faculty,
        iii. reduce the number of new faculty being hired?

2. Attachment B – We have compiled a list of Tier III request from all units. The list of those requests is organized by strategic initiative (page 1) and by size of the request (page 2-3). The priority (High, Medium, Low) of each request is loosely based on conversations with the budget directors.

    a. 2nd Question: Familiarize yourself with the list of requests and recommend any changes in priority status based on your pertinent knowledge, in advance or at the meeting.

3. Attachment C is a historic view of carryforward by organizational unit and FY15 projected carryforward as a % of each units' base budget.

    a. We have prepared a recommendation for the reallocation of carryforward to be used to strategically fund selected Attachment B requests and/or to build a central pool to be distributed by this committee mid-year, as critical needs are identified. The reallocation would provide a contribution from units of approximately $13M.

    b. The calculation protects startup funds, certain designated line items, FY16-FY18 carryforward plans, and a reserve per area that, for the most part, ranges from 3%-7%.

    c. 3rd Question: Should we reallocate carryforward and if so, home much?

4. 4th Question: What requests should we fund?

Thank you.

Tracy Clark, CPA
Associate Provost for Budget, Planning and Administration and Vice President for Finance
UCF Finance and Accounting
12424 Research Parkway, Ste 300
Orlando, Florida 32826
Phone: 407-882-1006
Fax: 407-882-1102
Tracy.Clark@ucf.edu

From: Debra Copertino
Sent: Thursday, April 30, 2015 2:53 PM
To: Grant Heston; Keith Koons; Maribeth Ehasz; MJ Soileau; Sydney Alexander; Tracy Clark; William Merck

Cc: Angie Carloss; Carolyn Standner; Dodie Hajra; Laura Stylianou
Subject: University Budget Committee Meeting - 5/5 @ 2:00-3:00

Greetings,

Confirming your attendance at the University Budget Committee on 5/5 @ 2:00-3:00.

Thank you,
Debbie

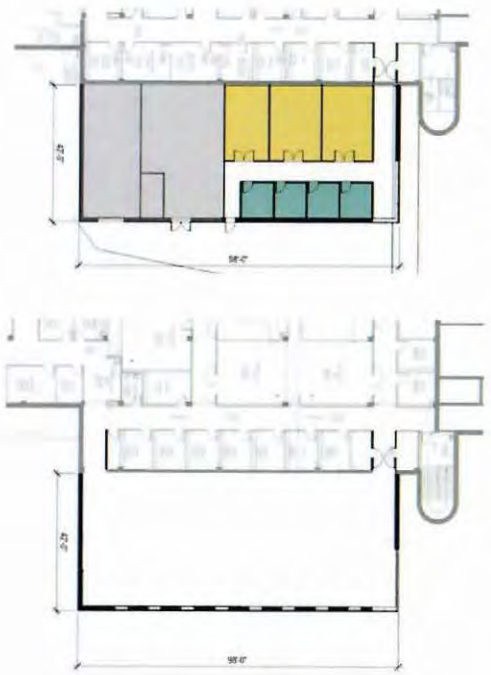
Debbie Copertino
Senior Administrative Assistant - Confidential
Office of the Provost and Vice President for Academic Affairs
University of Central Florida
(407) 823-2698
Debbie.Copertino@ucf.edu

From: Lee Kernek <Lee.Kernek@ucf.edu>
Sent: Thursday, April 28, 2016 5:51 PM
To: Bahaa Saleh; Mark Wagenhauser; Joel Hartman; Tracy Clark; Dale Whittaker
Cc: Bill Martin
Subject: FW: CREOL options
Attachments: CREOL - Expansion Options.pptx

All:
Bill Martin and his team worked with an architect and CM to put together the attached options for the CREOL expansion. They ended up developing six options vs. four, for more flexibility in decision-making. All options reflect space, construction and total project costs projected out to time of project bids (given the limited information available on specific research requirements), and schedule. Feel free to send us any questions you may have, or, if you would like to meet, we will make ourselves available.

CREOL EXPANSION OPTIONS

4/28/16



1st Floor

- Labs
- Offices
- Mechanical /Pump

2nd Floor

- Shell, no build-out

Space

- 1,000 nsf built-out labs (3)
- 450 nsf offices
- Second floor shell space
- 8,500 gsf total (2 stories)

Project Cost

- Construction Cost $2,484,291
- Project Cost $3,312,388

Schedule

- AE Contract – 1 month
- Design – 6 months
- Bid – 2 months
- CM Contract – 1 month
- Construction - 9 months
- TOTAL – 19 months (Dec 2017)

OPTION

A

RLF | ROBINS & MORTON BUILDING WITH PURPOSE

CREOL Expansion Phase II UCF - 581

1st Floor

- Labs
- Offices
- Mechanical /Pump

2nd Floor

- Shell Labs- no build out
- Offices

Space

- 1,000 nsf built-out labs (3)
- 1,500 nsf shell labs (4)
- 1,000 nsf offices (9)
- 500 nsf GTA space
- 8,500 gsf total (2 stories)

Project Cost

- Construction Cost $3,420,211
- Project Cost $4,560,281

Schedule

- AE Contract – 1 month
- Design – 6 months
- Bid – 2 months
- CM Contract – 1 month
- Construction – 10 months
- TOTAL – 20 months (Jan 2018)

OPTION

B

RLF | ROBINS & MORTON BUILDING WITH PURPOSE

CREOL Expansion Phase II UCF - 581

1st Floor
- Labs
- Offices
- Mechanical /Pump

2nd Floor
- Labs
- Offices

Space
- 2,500 nsf built-out labs (7)
- 1,000 nsf offices (9)
- 500 nsf GTA space
- 8,500 gsf total (2 stories)

Project Cost
- Construction Cost $3,694,911
- Project Cost $4,926,548

Schedule
- AE Contract – 1 month
- Design – 6 months
- Bid – 2 months
- CM Contract – 1 month
- Construction – 11 months
- TOTAL – 21 months (Feb 2018)

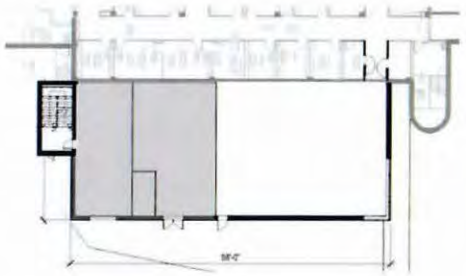
OPTION
C

RLF | ROBINS & MORTON BUILDING WITH PURPOSE

CREOL Expansion Phase II UCF - 581

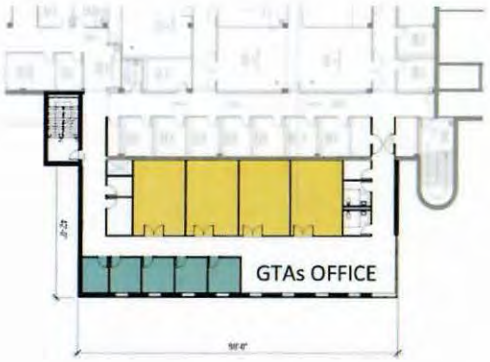
OPTION

D



1st Floor

- Shell Auditorium
- Mechanical /Pump



2nd Floor

- Labs
- Offices

3rd Floor

- Shell – no build out

RLF | ROBINS & MORTON BUILDING WITH PURPOSE

CREOL Expansion Phase II UCF - 581

Space

- 1,500 nsf built-out labs (4)
- 500 nsf offices (5)
- 500 nsf GTA space
- Auditorium (shell)
- Third floor shell space
- 13,900 gsf total (3 stories)

Project Cost

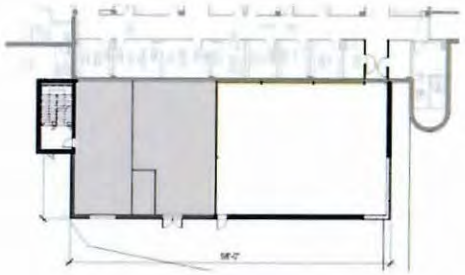
- Construction Cost $3,701,531
- Project Cost $4,935,374

Schedule

- AE Contract – 1 month
- Design – 6 months
- Bid – 2 months
- CM Contract – 1 month
- Construction – 12 months
- TOTAL – 22 months (Mar 2018)

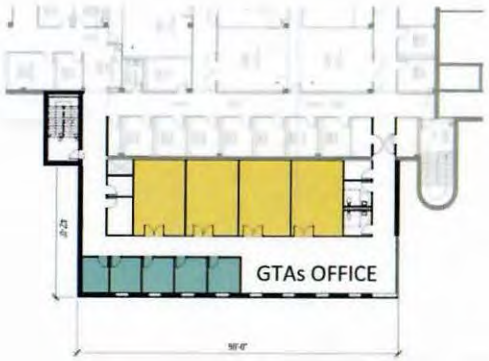
OPTION

E



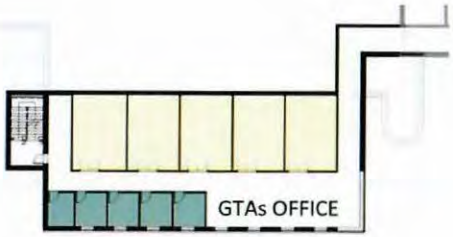
1st Floor

- Shell Auditorium
- Mechanical /Pump



2nd Floor

- Labs
- Offices



3rd Floor

- Shell Labs- no build out
- Offices

RLF | ROBINS & MORTON BUILDING WITH PURPOSE

CREOL Expansion Phase II UCF - 581

Space

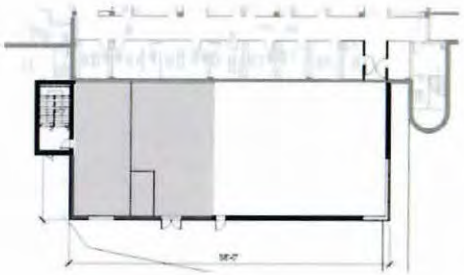
- 1,500 nsf built-out labs (4)
- 2,000 nsf shell labs (5)
- 1,000 nsf offices (10)
- 1,000 nsf GTA space
- Auditorium (shell)
- 13,900 gsf total (3 stories)

Project Cost

- Construction Cost $4,628,971
- Project Cost $6,171,961

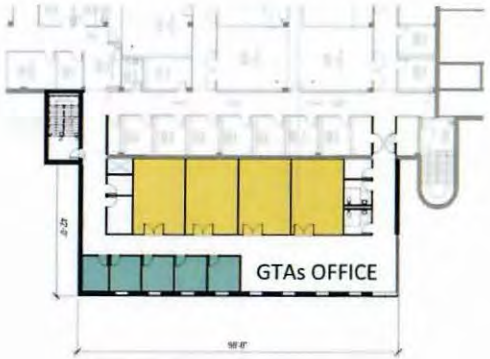
Schedule

- AE Contract – 1 month
- Design – 6 months
- Bid – 2 months
- CM Contract – 1 month
- Construction – 13 months
- TOTAL – 23 months (Apr 2018)



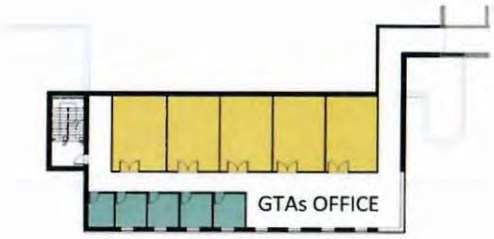
1st Floor

- Shell Auditorium
- Mechanical /Pump



2nd Floor

- Labs
- Offices



3rd Floor

- Labs
- Offices

OPTION

F

Space

- 3,500 nsf built-out labs (9)
- 1,000 nsf offices (10)
- 1,000 nsf GTA space
- Auditorium (shell)
- 13,900 gsf total (3 stories)

Project Cost

- Construction Cost $5,088,171
- Project Cost $6,784,228

Schedule

- AE Contract – 1 month
- Design – 6 months
- Bid – 2 months
- CM Contract – 1 month
- Construction – 14 months
- TOTAL – 24 months (May 2018)

RLF | ROBINS & MORTON BUILDING WITH PURPOSE

CREOL Expansion Phase II UCF - 581

University of Central Florida

CREOL Renovation Program

Renovation Policy

The primary purpose of this renovation is for an addition to the existing CREOL building. The available land allows this expansion to the northeast or east of the building. The intent of the project is to add laboratory and office spaces to the existing building. A shelled out ground floor auditorium is also being considered as part of the design. Due to budget constraints the addition will be roughly 8,000 gsf and two stories tall.

All renovation projects are to adhere to the LEED guidelines.

October, 2015

Renovation Program Preliminary Approval Signatures

_____

Committee Chair

_____

Director of Instructional Resources

_____

Director of Computer Services & Technology

_____

Director of Utilities and Energy Services

_____

Director of Facilities Operations

_____

Director of Environmental Health and Safety

_____

Director of Facilities Planning and Construction

_____

Director of Landscape and Natural Resources

_____

Space Planning Analysis and Administration (SPAA)

_____

Director of Resource Management

_____

Director of Emergency Management

_____

Assistant Vice President, Security and Safety and Chief of Police

_____

Assistant Vice President, Sustainability

Renovation Program Final Approval Signatures

_____

Associate Vice President for Administration and Finance
(Facilities and Safety)

_____

Vice President for Administration and Finance

_____

Provost

_____

President

Table of Contents

Denotes links to other documents

Introduction

Project Overview and/or Mission Statement: *Address the general plan for the project, as well as any specific information.*

This project is an addition to the existing CREOL building. The available land allows this expansion to the northeast or east of the building. The intent of the project is to add research laboratory and office spaces to the existing building. A shelled out ground floor auditorium is also being considered as part of the design. Due to budget constraints the addition will be approximately 8,000 GSF and two stories tall.

The project is to consist of the following:

- Investigate which design will allow for the greater use of funds that will provide current usable space and detailed drawings for future expansion

Project History: *Provide a description of the project history. Include an explanation of the needs this project will address. (The goals and objectives should address those needs.)*

The CREOL Building at the University of Central Florida is located at the intersection of Apollo Circle and Gemini Loop. Originally built in 1996, this cast concrete, two-story structure received a small three-story extension on the north elevation in 2008. The enlarged building contains research laboratories, teaching laboratories, office space, and associated support facilities for the College of Optics. This facility is now reported to comprise 103,532 gross square feet.

Project Description: *Provide a general description and any information that relates to other current or future projects.*

- This project will mimic existing office and research space that currently exists in the CREOL building and will connect to both the existing CREOL building and the addition.

Project Goals and Objectives: *Write a brief outline of specific project goals and objectives.*

1. To get as much design and infrastructure work completed with current allotment of funds that will allow for future completion of the auditorium, second floor and addition of a third floor.

2. To provide much needed relief of overcrowding and research lab space needs for

recent hires and future expanded research.

Design Objectives: *Write a brief outline of the desired design objectives*

The main objective is to be able to provide the much needed space for faculty to continue their teaching and research capabilities.

The addition must fit aesthetically with the existing structure.

Academic Plan

Academic Program Identification: *Identify any proposed academic programs that will be housed within the facility.*

This program is meant to support expansion of research by the College and its Townes Laser Institute in areas including fiber optics, lasers in manufacturing, and lasers in medicine. We are also competing for a number of national initiatives, including ERCs and an IMI, which will require additional space. These expansions will affect our academic programs inasmuch as they will support graduate students doing research in these areas.

Academic Program Reviews, date and program numbers: *Give the date and program numbers of all relevant academic program reviews. Explain how the proposed facilities program meets the recommendations of the last academic program review.*

This renovation-building program is not meant to affect academic programs.

Recommendations of Review Consultants: *List the recommendations of any review consultants.*

No review consultants were involved in in reviewing academic programs for this renovation program.

Recommendations, Justification and Variation: *Explain how the proposed facility meets the recommendations or justify any variations.*

No recommendations regarding academic programs were made as part of this renovation-building program.

Need/Justification for New Academic Programs: *If the facility is not part of an approved academic plan, provide information to explain the need and justify the establishment of academic programs.*

This renovation-building program is systems-based. Spaces are not being reconfigured for new academic programs.

Space Needs Assessment

Facilities Problem Statement: *Describe the facilities problem in terms of current and future facilities deficiencies.*

The college is out of space. This project will provide a few labs and offices, but by design, will allow for future expansion of research labs, offices and an auditorium to match the growth of the college.

Proposed Solution: *Describe the proposed solution.*

The proposed solution is to expand the existing CREOL building.

Alternative Solutions: *Explain what alternative solutions were considered, such as rescheduling of classes, remodeling of existing space, leasing of space, or sharing facilities on or off campus.*

An alternative location was considered in the Multidisciplinary Building that will be built to the north of CREOL in the Faculty/Staff parking lot, but research at CREOL has been inherently collaborative, with multiple faculty working jointly on funded research projects. This type of collaborative research, which has helped us garner large funding, requires proximity of labs and sharing of equipment and facilities. The fact that all faculty have their offices and labs in the same building has facilitated discussions and exchanges of idea, which have resulted in many inventions and innovations. This has been the hallmark of CREOL. Adding new space to the current building will maintain this culture, while splitting the faculty between the two buildings will certainly hinder collaboration.

New Facility Justification: *Provide reasons as to why a new facility is the best solution, and why other alternatives were not chosen.*

Not applicable to this is an expansion to and existing building.

Space Analysis: *The Educational Plant Survey recommendations will be listed in this section or a statement noting that a survey is needed for the project. UCF requires a statement that describes any differences between the project and Survey recommendations for the project.*

Renovations do **not** require Educational Plant Surveys.

Proposed Method of Renovation

Based on a review of the needs of this project, the following delivery type was determined to best for this renovation project.

Construction Management

- The size of the project is sufficiently large and/or complex to require major emphasis on the qualification of the contractor to have specific expertise in performing highly specialized cost estimating, value engineering, and scheduling during the design process with continuity of construction management through both the design and construction phases.

- The project is an alteration of an occupied facility, which requires working around or relocating occupants while keeping the facility fully operational.

Analysis of Impact on Master Plan and Strategic Plan

The Campus Master Plan is an officially adopted document that governs on-campus growth and addresses the impacts to the surrounding community. The Plan is governed by state statute that requires all building and other capital improvement projects be referenced in the Plan. The document contains data and analysis for impacts generated by existing and proposed capital improvements on the local transportation system, environmentally sensitive areas, student housing, storm water management, intergovernmental coordination efforts, utilities, architectural design and many other planning elements. Goals, objectives and policies in the document express the University's philosophy regarding on, and off-campus growth and impacts to the surrounding community. The Plan attempts to strike a balance between projected new construction with the need to preserve and mitigate impacts on environmentally sensitive areas and local infrastructure.

The primary purpose of the Campus Master Plan is to provide a logical, functional and aesthetically pleasing academic environment for students, faculty, staff and visitors. The main campus is developed in a concentric ring pattern with administration facilities in the center and academic buildings situated among three concentric rings. Pedestrian activity has been optimized throughout the academic core by locating parking garages on the outermost ring. At present, there appears to be sufficient space on campus to allow for all projected new construction. It should be noted that the University is committed to conserving environmentally sensitive areas on campus and will work closely with all applicable state and local agencies to mitigate the impacts of future construction on these areas.

This is a renovation of an existing building. The Campus Master Plan **will not** be impacted.

Environmental Impact:

This renovation project will not have an effect on environmentally sensitive areas.

Master Plan Compliance:

This project is not listed in the Land Use Element and the Capital Improvement Element.

Campus Development Agreement (CDA) Compliance: This project is not part of the Campus Development Agreement since it does not add space to the campus.

Site Analysis

Site Information Checklist,

Location: University of Central Florida Main Campus

Campus Map: A Campus Map with the proposed site identified is furnished in the Appendix. A boundary survey of the university is available upon request from Landscape and Natural Resources.

Campus Topography, Drainage Patterns and Permitting: The topography of the UCF campus varies from elevation 88 at the western border to elevation 45 at the northeast corner. The campus can be divided into four general drainage areas. See the (Campus Drainage Map, in the Appendix). Campus drainage from the western border follows:

- Area A - northerly toward Lake Claire
- Area B - northeasterly toward a stream
- Area C - southwesterly toward Lake Lee
- Area D - southeasterly toward a wetland area which drains into the Bonneville Canal

Sinkholes: The University has encountered sinkholes on other construction projects. Special care should be taken to insure that sinkholes, if any, are identified during the soil-boring phase.

St. Johns River Water Management Review Requirements: SJRWMD Rule 40C-4 governing the management and storage of surface waters regulates hydrologically sensitive areas (HSA). Criteria used for defining HSA are hydric soils types, presence of wetland indicator species, and hydrologic connections to off-site water bodies or wetland systems. Storm water permitting with St. Johns will be the responsibility of the architect/engineer, in coordination with Landscape and Natural Resources.

(Source: Permit Coordination Policy)

Storm Water Basin Identification: (Source: Revised Storm Water Master Plan Map)

This project is located in basin 4-R, which is 115.84 acres in size. There is 13.15 acres of available impervious area left for future development.

Does the basin have enough impervious area (square footage) for construction of the proposed project?

Basin 4-R does have impervious capacity remaining for the construction of this project.

Will the proposed project require an amendment to the Storm Water Master Plan?

The Master Storm Water permit will need to be modified, but it will only require staff approval and will not need to go to St. Johns River Water Management Board.

Will the proposed project require a modification to the Storm Water Master Plan?

A minor modification to the Storm Water Master Permit will be required.

Conceptual Storm Water Management Plan: The Conceptual Campus Storm Water Management Plan has been developed to provide the university and state agencies with a long-term approach to storm water management for our campus. It contains the conceptual design and engineering for water management to meet our long-term construction program on campus. Each facility constructed on campus will be required to fund its portion of the overall costs of the plan related to the storm water generated by the facility of project. This plan has been approved by the St. Johns Water Management District and will be a vehicle for this campus to meet its requirements. The architect/engineer must work within the framework on this plan.

Department of Environmental Regulations Review and Requirements: The DER requires permitting of the extension of a water system or sanitary sewer system, along with required water sample testing on any new potable water system. Also, it requires water sample testing after any work done on an existing system. It is a requirement of the architect/engineer to submit permits and coordinate all permits with Landscape and Natural Resources through the approval process.

Vehicular and Pedestrian Circulation: The approved Conceptual Campus Master Plan calls for the current Aquarius Agora Drive to become a vendor and service access to the center core of campus. This action occurred after the completion of the Gemini Boulevard ring road, which has opened up access around the campus.

Known Endangered or Threatened Plant or Animal Species: There are no known endangered or threatened animals or plants at the proposed site.

The Landscape and Natural Resources Department will survey the proposed site and will coordinate the relocation of any endangered or threatened plants or animals prior to construction, if necessary.

Archaeological History of the Site: During the development of our Campus Land Management Plan, the Division of Archives, History, and Records Management was contacted and noted that no archaeological or historic sites are recorded in the Florida Master Site File. The agency noted, however, that there is a high likelihood of presently unrecorded, potentially significant archaeological resources being located on the nearly level areas overlooking the wetlands on the property; these sites are likely to be less than one acre in size.

Archaeological Factors: There are no known archaeological factors at this site.

Location of Existing Utilities: The approximate location and proximity of utilities to the site are to be found in the Appendix. The following utilities needed for this project and site are identified in the Utilities Impact Analysis section. **All utilities for this project need to be field verified by the Architect or Engineer of Record in the early stages of the design process.**

- Water Supply System
- Fire Protection
- Chilled Water
- Storm water
- Sanitary Sewer System
- Gas Service
- Electrical Service
- Telephone Service
- Street Lighting

Architectural Significant Structures: There are significant academic structures surrounding the proposed site since the site is within the academic core.

Unusual Site Conditions: There are no known unusual site conditions on the proposed site.

Direction of Prevailing Winds: Prevailing winds are generally northwesterly in the winter and spring and southwesterly in the summer and fall.

Paved Access Streets: The concept adopted by the University is to eliminate general vehicular access inside the 1200' radius sidewalk. The only vehicular access permitted inside the 1200' radius sidewalk system is for emergency vehicles, vendors, and maintenance vehicles.

Parking: The plan for University buildings is to have mass structured parking in several locations on campus, instead of local parking for each facility or college.

Requirement for Vendor/Maintenance/Service Site Vehicular Access: Vendor and service accessibility should be designed to allow access to the building without interrupting the campus pedestrian circulation system (sidewalks). Service/maintenance areas should have a minimum of six (6) parking spaces. These parking spaces should be in the vicinity of a service entrance to the facility. Consideration shall be given to fire department and emergency access to the building site. Throughways to existing hydrants and fire protection equipment, including those of neighboring facilities will be maintained.

Relationship to Adjacent Facilities: The expansion should be carefully sited. Relationships to adjacent buildings, convenience, operational efficiency, physical security, and future growth and development should be considered. The building exterior must be compatible. The site location should allow for future expansion.

Relationship/Access to Primary and Secondary Sidewalks: Facades of buildings within the academic core must be designed to be viewed from multiple sides. Entrances and exits must be designed with consideration for the existing sidewalk system.

Relationship to Existing/Planned Topography: This building should be designed in harmony with the site topography for construction economy and site preservation.

Existing Natural Resources: Natural resource values should be considered carefully because of the possible soil conditions on the campus. Soils and foundation conditions must be investigated to ensure suitability for economical excavation, site preparation, building foundations, utility lines, grading, and planting.

Landscape and Irrigation: Landscaping design shall conform to the UCF Design, Construction, and Renovation Standards. Irrigation shall cover the entire site unless otherwise directed. The landscape contractor will maintain the site for the warranty period, which will be one (1) year.

The Department of Landscape & Natural Resources (LNR), in conjunction with the project design team, coordinates landscape design for projects. Contracts for landscape services, including landscape architects and installers, will be placed under the architect for each project, with preference given to service providers recommended by LNR. In some cases, LNR will design the landscape, in which case they will contract directly with a landscape installation company. Landscape and irrigation design will be incorporated into the building design process, and landscapes will typically be installed after the building

construction is completed. The building contractor will be responsible for removing any construction debris from areas to be landscaped. The Landscapes Standards, which are part of the UCF Design, Construction, and Renovation Standards, define the species, infrastructure, arbor care, and other important information for project managers to consider. See LNR's website, www.green.ucf.edu, for updated standards and information.

Exterior/Interior Signage: Exterior/interior signage shall conform to the UCF Design, Construction, and Renovation Standards. This facility should include, as a minimum, a building identification sign for all public entrances and campus directory signs along new sidewalks, directing pedestrians to other areas of the campus. Signage must comply with the latest ADA requirements.

Exterior Lighting: Exterior lighting fixtures shall conform to the UCF Design and Construction and Renovation Standards with illumination levels designed in accordance to the fundamentals of the IES Lighting Handbook, published by the Illuminating Engineering Society (IES).

Exterior Mechanical, Electrical, Service Equipment and Structures: All mechanical and electrical equipment shall be located and screened by permanent structures to give an attractive appearance to the building and campus. Structures provided for service, such as trash dumpsters shall be screened by permanent structures, in keeping with the architecture of the building.

Services Available to Campus:

Police Protection: The University Police Department provides 24-hour service, seven days a week. When necessary, University Police may request assistance from the Orange County Sheriff's Department or other outside law enforcement agencies.

Fire Protection: The campus police coordinate all fire emergency responses via the '911' network. All fire protection devices must comply with current state codes.

Trash Removal: Campus trash removal is handled by a yearly contract with a local vendor. The Facilities Operations custodial personnel deliver to their specific locations and the vendor removes the trash from these locations at least twice weekly. The architect is responsible to insure that appropriate exterior facilities are available for dumpsters and service of dumpsters.

Program Area

The architect and his consultants should be aware that these project requirements are specific to this facility and that general University of Central Florida requirements must be met. These requirements can be found in UCF Design, Construction, and Renovation Standards, and the UCF Professional Services Guide. If a discrepancy is found in this program, the UCF Design, Construction, and Renovation Standards take precedence over any information provided in this document. Any deviation to the UCF Standards must be reviewed during design and approved by the UCF Standards Committee and the Associate Vice President, Administration and Finance (Facilities and Safety).

Program Area and Design Requirements Summary

The Program Area Table (see Appendix) is a summary list of the space requirements for this project. Currently, there is not an approved educational plant survey for this project since PECO funds are not being used.

Definition/Description of Space

The basic square footage identified must be in accordance with State Regulations for Educational Facilities, 1997, (SREF) as prepared by the Florida Department of Education, Educational Facilities and Educational Facilities Budgeting Office. Space criteria are based on typical campus and historical data and should be met if at all possible. It is the architect's responsibility to review these space requirements during design and to identify specialized conditions that would warrant a space change. When space criteria are not available, accepted design and experience factors should be used to determine space allocations for the various functional components of the facility.

Specific Program Space Categories

The required space categories are depicted in the Appendix of this building program.

The Project Budget Summary provides specific space category details and is to be found in the Appendix of this building program.

Facility General Spatial Relationships

A bubble diagram, which denotes the preliminary spatial relationships of the facility, can be found in the Appendix of this program.

Emergency Shelter Space

State statute requires the University to designate new shelter space as campuses are developed. All major new buildings should have designated shelter space that is reasonably protected, structurally. Such areas shall be located away from laboratories with hazardous materials, away from atria or other open-span areas, and away from large, unprotected glazed surfaces. Please refer to the UCF Design, Construction, and Renovation Standards. It is not anticipated that this building will be fully hardened, but a sheltering area within the facility must be identified.

Facility General Considerations

Building Organization: The design of this facility should allow for continuous flexibility and future expansion. The architect/engineer should become familiar with the functional operation of the facility (through thorough review of the Building Program, and consultation with the university Project Manager and Building Committee Chair) in order to determine areas that vary in function and are subject to frequent change.

Structural System: In selection of the type of structural system, the total facility should be considered, since the choice will influence the cost of such features as heating, ventilation or air-conditioning, as well as architectural, lighting, and utility requirements. When choosing structural materials, consideration should be given to availability of labor and materials, design life of the facility and maintenance costs over this period, experience and skill of local contractors, feasibility of pre-assembling or pre-casting major structural elements, and site environment.

Handicapped Access: UCF is very active in its application of the Americans with Disabilities Act (ADA) - Accessibility Guidelines for Buildings and Facilities. The architect/engineer must address all of the ADA requirements for this facility. Handicapped Student Services will provide guidance and support in this area.

Internal Circulation: Stairways should be used for general circulation from floor to floor. Number and capacity of elevators for this facility shall be determined using criteria set forth in UCF Design, Construction, and Renovation Standards.

Mail Distribution and Vending Machines: Areas should be designed for mail and vending machines. These areas should be accessible to the service entrance of the facility. The mail area must be secured from public access. Mailboxes shall be installed in the Mail Distribution area.

Vending areas should be 300-400 square feet per building and located on the first floor close to elevators. Where possible, vending areas should be combined with break-rooms. All vending areas must have water lines provided and include a floor drain. The floor should be quarry tile.

Recycling Storage Room: A room should be designed and designated for short-term storage of recycled material, on the first floor, close to the loading dock or service entrance. Recycling room sizes are defined in the UCF Design, Construction, and Renovation Standards and are to be sprinkled per fire code requirements.

Requirements for Custodial Services Facilities: Access to custodial and service rooms must be from hallways. All doors should be designed off the main corridors or recessed in order to eliminate the protrusion of open doors into the corridor and pedestrian circulation. Custodial room sizes and shelving requirements are defined in the UCF Design, Construction, and Renovation Standards.

Custodial rooms are to be in close proximity to an elevator. Custodial rooms must have a minimum of 50 linear feet of shelving.

Facility Maintenance: The Architect must work closely with Facilities Operations department to insure that the most cost effective design and materials will be provided.

Exterior Building Surfaces and Roof Styles: Specific roof requirements are found in the UCF Design, Construction, and Renovation Standards. No roofing material shall contain asbestos. Building exterior should be of brick to complement the existing campus environment. All flashing and expansion joints need to be "bat" proofed.

Special Hardware: No special requirements are foreseen for this facility. For typical requirements see the UCF Design, Construction, and Renovation Standards.

Quality of Finish Materials: Installed finish materials must be low maintenance and have a good life cycle. For typical requirements reference the UCF Design, Construction, and Renovation Standards. The selection of finish materials must be coordinated with Facilities Operations.

Preferences for Color Schemes: No special requirements for color schemes are identified at this time. Color should reflect an academic community for higher education, not the typical Florida commercial color schemes. The UCF Standards Review Committee and the Associate Vice President, Administration and Finance, Facilities and Safety must approve all colors.

Acoustical Treatment: Acoustical treatment must be provided in all areas where noise level is high, particularly in conference rooms, assembly rooms, mechanical rooms, and the Library.

Building Directories, and Identification Signs: No special requirements are foreseen for this facility, for typical requirements see the UCF Design, Construction, and Renovation Standards.

Restroom Equipment/Materials: The University has specific requirements pertaining to

the design of restrooms. Reference the UCF Design, Construction, and Renovation Standards and ADA requirements. Provide nonslip ceramic tile on floors and glazed ceramic wall tile. Floor drains are required for all restrooms.

Water Supply and Plumbing Systems: The campus has its own water and sewage plant and this building will be supported by these systems. Outdoor faucets shall be designated on all sides of the building with reduced pressure principle back flow prevention. Building potable water supply must contain a reduced pressure principle backflow preventer. A separate water meter must individually meter all water supply to the facility. Floor drains that are piped to sewer must have wet type deep seal P traps, or trap primers.

Drinking Fountains: Fountains must be available on each floor and comply with EPA copper and lead regulations, with applicable ADA requirements.

Mechanical System: The building's primary Heating, Ventilating, and Air Conditioning (HVAC) design consideration should be a Variable Air Volume (VAV) System, except for special labs, clean rooms, etc. All VAV boxes should be designed with their location in corridors for ease of accessibility. UCF prefers variable frequency drives on air handling unit motors. No air handling units or condenser units shall be installed above the ceiling.

Energy Conservation - Air conditioning, dehumidification, evaporative cooling, heating, mechanical ventilation, and refrigeration should be selected, designed, and installed according to the requirements for State of Florida Model Energy Efficiency Code for Building Construction.

No electrical, mechanical, custodial, or service room shall open into a stairwell.

Electrical, mechanical, custodial, service, and communications rooms will be separate and independent of one another.

Door opening recess should be of appropriate size to accommodate total width of the door. Door openings should accommodate equipment removal. Mechanical rooms that exit into hallways should have doors that swing in and flat against the wall.

Electrical Systems: The design of interior and exterior lighting should be in accordance with the IES Lighting Handbook, published by the Illuminating Engineering Society (IES). Energy watt-miser light bulbs are required. The architect must coordinate the selection and location of lighting fixtures with the Department of Sustainability and Energy Management.

Interior Electrical Systems - system characteristics should provide for the most economical and efficient distribution of energy.

Cable Tray and Raceway System - overhead cable tray system for data transmission audio/visual, and telephone wiring and conduit shall be provided as a telecommunication

distribution system throughout the facility. This tray system shall be an open tray system designed for ease of access.

Fire and Security Alarm Systems: UCF has a campus-wide standard, found in the UCF Design, Construction, and Renovation Standards, for Fire Alarm Systems for buildings. Security Alarms Systems are identified for each specific application and the design and materials will be identified to fit that application. Fire and security shall be separate systems reporting to the UCF Police Department.

Lightning Protection System: A Lightning Protection System shall be provided and installed in this facility.

Telecommunications: Communication wiring, telephone, audio-visual, data communications, etc., shall be included in the design and construction cost of this project. At the completion of the project all systems must be operational.

Refer to the UCF Design, Construction, and Renovation Standards for information on manhole and duct bank requirements.

Standard electrical service to radio, television, video and film facilities should provide shielded service to avoid electrical interference.

All classrooms, conference rooms, and labs shall have the capability of being darkened and shall be equipped with appropriately sized projection screens.

All classrooms, conference rooms, and laboratories, which will seat in excess of 30 persons, must provide for sound reinforcement that is appropriate for voice.

Emergency telephones will be provided on every floor in an accessible location.

Codes and Standards

Typical Codes and Standards

The design of this project shall conform to all applicable sections (most recent versions) of the *Standard Building Code* as administered by the Southern Building Code Congress, NFPA *Life Safety Code* 101 (most recent state adopted addition), Americans with Disabilities Act (ADA) - *Accessibility Guidelines for Buildings and Facilities,* ANSI *A117.1*-1986, *Florida Statute* 553.45-553.48, all codes referred to in the UCF Professional Services Guide and the UCF Design, Construction, and Renovation Standards.

UCF Design, Construction, and Renovation Standards

These Standards are concerned with all aspects of design and construction for the University. These documents along with the UCF Professional Services Guide must be adhered to during the design of this facility. These Standards can be found on the UCF Facilities Planning Web Site at: www.fp.ucf.edu.

Considerations to be Included in the Design

The following items may represent a significant component of the overall budget for the project, particularly for renovation work. Indicate in the spaces provided any potential life safety and accessibility requirements that can be identified in the affected area.

Asbestos assessments and abatement, fire code corrections, handicapped accessibility upgrades, environmental assessments, air permits, and SJRWM permits may be required for renovations and remodeling projects. It is **important** to determine what is required before beginning the design of the project, whether the project is a renovation, a remodeling, or new a construction.

The total cost of these items is part of the budget for the project. Please note that asbestos assessments may be required where existing utility lines and pipe insulation will be effected by the site construction. Older HVAC utility line insulation has been found to be asbestos containing.

All new construction must adhere to the guidelines for LEED. All new University buildings must meet the design criteria required to achieve **LEED Silver**. It is understood that all UCF buildings must be energy efficient, easy to maintain, and incorporate materials that reduce life cycle cost.

Information / Communications Resources Requirements

This proposed facility must have dedicated multiplex audio and video channels, interconnected with the Office of Instructional Resources. Two way-communications are required between Instructional Resources and this facility. This facility will be a source of program output.

This facility should also have dedicated connectivity to the University's telecommunication node, which will provide services like registration, SAMAS, Outlook, Microcomputer LANs, phone, IP fire alarm, and access to BITNET and SURANET, etc. Please refer to the UCF Design, Construction, and Renovation Standards under Telecommunications Design Standards for additional information regarding telecommunications and audio-visual (multimedia) information. It is the responsibility of the architect/engineer to design a fully functioning external (nearest manhole) and internal telecommunications system for this project. Computer Services and Telecommunications **(C, S and T)** working with the Facilities Planning Project Manager are responsible for Information/Telecommunications Resources Requirements. For further information refer to http://www.division17.net

All telecommunications work will be provided employing an Owner provided subcontractor with the exception of the cabling distribution system and the conduit runs as noted below.

Cabling Distribution System: Cable tray- conduit to cable tray **(Contractor's responsibility)**

Conduit Size: 1-inch Minimum **(Contractor's responsibility)**

Data/Voice Cabling Type: Category 5 Enhanced Cable Plenum (Mohawk, Berk - Tech and Hubble brand only)

Video Cabling Type: RG 6 Plenum (Belden Only)

Fiber Optic: Fusion spliced LC connectors

Fiber Optic Interduct: 1-inch corrugated smooth wall inter ducts

Fiber Optic Cable: Draka/ Corning

Cabling Faceplate Terminations: Hubbell

Cabling Panel Terminations: Hubbell patch panels

Telecommunications Rooms: One per floor (stacked vertically)

Telecommunications Room Size: 10' x 15' or 150 sq. ft.

Cabling Distribution System: Concrete encased duct bank

Type of Ducts: Four-inch (4") DB Pipe TC-8 Spec. (Concrete encased)

Duct Bank Cabling Type: PE-89 DB 22 AWG telecommunications cable

Termination: Lucent, Porta Systems, or circa brand 188 Protector w/ 4C1S lighting protection modules

Cabling Pull box Description: To be designed by C, S and T

Network electronics and Multimedia Systems: (To be funded by Furnishings & Equipment)

Distributed Antenna System: To be designed and installed by C, S and T

Note: The costs of these items to be part of the construction budget for the project.

Utilities Impact Analysis

Existing and Required Utility: The architects and engineers selected for this project are required to design utility connections to the nearest utility manhole or as directed by the University. **All existing utilities must be field verified and documented by the Engineer of Record during the early stages of design.**

Utilities which provide efficient operation and are adequately sized to serve future needs should be considered during the early planning stages. This will avoid conflicts in the design and layout of the various utility lines, and permit the early recognition of the need for additional production and/or supply capacity. This project should address the adequacy of existing utilities support and any additional needs. The planning of utility lines should minimize utility capital investment and operational cost for maintenance and repair.

Utility Planning Considerations

Appearance: Meters, light poles, transformers, vaults, pressure reducing stations piping and valves, and other utility items should be located discretely, not detracting from the building's appearance. Design of the facility should also reduce the negative visual impact of utility items and communication lines in accordance with the design standards.

Underground Utility Lines: The location and depth of many of the existing underground utility lines are questionable at best. The accuracy of the University utility as-builts should be determined very early in the project. The University will require a detailed utility survey of the proposed site using our continuing services consultant.

Underground distribution lines should be located to minimize cost. All underground utility lines, mains, and conduits should be located at the minimum depth of (3 feet) and in common corridors to allow for ready access and maintenance. As-built drawings must be provided for all interior and exterior utilities.

Central Chilled Water

A central chilled water plant supplies the campus. It is equipped to provide chilled water to the HVAC systems for all major buildings on campus. Utilities and Energy Services must be contacted to determine the current capacity of the central chilled water plant.

General Campus and Building Utilities

The main campus consists of 1,415 acres and includes a library, classroom buildings, laboratories, residence halls and student facilities. The Main and Satellite Cooling Plants provide the campus cooling needs. Direct Digital Controls (DDC) will control all campus

buildings. The architects and engineers selected for this project are required to design utility connections to the nearest utility manhole or as directed by the university.

Campus Chilled Water

Chilled water is distributed through a circulation loop, at a design supply temperature of 42 degrees F, to the buildings HVAC systems.

Source of Supply: Central Chilled Water Plant and Satellite Chilled Water System

Pipe Material: Schedule 40 Steel Pre-insulated Pipes

Campus Electrical Power

Duke Energy provides primary electrical service to the campus. The university's responsibility starts on the secondary side of the buildings' transformers.

Campus Potable Water

Potable water is supplied to the campus via an underground piping systems. Reduced pressure principle backflow preventers and meters are required on all water supplies to the buildings.

Campus Sewage/Wastewater

Sewage/Wastewater: University effluent is connected to Seminole County. The permitting process should be directed to the appropriate Seminole County agency responsible for wastewater treatment.

Campus Irrigation Water

The irrigation system is supplied with reclaimed water from the Iron Bridge Waste Water Treatment Facility in Seminole County.

Campus Gas Service

Source of Supply: TECO Gas (Local distribution Company)

Estimated Building Telecommunications Requirements

UCF operates and maintains IP Telephony with remote shelves that will provide service to this building. Conduit and wiring systems should include inside and outside cables, terminal cabinets, backboards, lightning protection and outlets. These items shall be furnished and installed in the base construction.

Source of Supply: Campus Telephone Distribution System (Fiber and Copper)

Location of Source: Building Network Equipment

Estimated Building Data Transmission Requirements

Network Service: UCF operates and maintains a redundant multi-tiered network architecture, which is connected by fiber to the Computer Science Building. The building's interior operation for data transmission should consist of minimum 1000 Base T Ethernet cabling. The data transmission system, from this building to the closest telecommunication node, should consist of fiber optic cabling through the campus underground communication distribution system.

Source of Supply: Campus Data Network

Location of Source: Computer Science Building

Estimated Audio Visual Requirements

Audio-Visual Service: Internal wiring for CATV is to be RG-6 plenum coaxial cable. Outside plant CATV cabling will be provided and installed by the Campus CATV provider (Bright House Networks). All instructional spaces need to have appropriate electrical and connectivity from an Instructor Console to the ceiling. Recommend a duplex outlet under each console with an empty 2-inch conduit from under the Console, up through the nearby wall and "stubbed-out" above the ceiling. All instructional spaces will also need a ceiling-mounted duplex electrical outlet for a data/video projector.

Estimated Terminations Required: To be determined

Source of Supply: Campus Communications System

Cable Type and Cable Size: To be determined

Duct Bank or Conduit Requirement: Duct Bank size to be determined

Equipment required for Coax Cable: Building amplifiers, riser design, taps, and equalizers are designed and maintained by UCF CS&T. All CATV equipment shall be installed in the MDF and IDF CATV lock boxes. All head in equipment shall be located at a node or the Library Switch Room.

Campus Exterior Lighting: The campus, circulation, parking lots, and recreation areas are illuminated during the dark hours by pole mounted area lighting. All exterior lighting fixtures must match existing fixtures and be powered from the building.

The current outdoor lighting system is defined in the UCF Design, Construction, and Renovation Standards. All exterior lighting fixtures must match existing fixtures and be powered from the building.

University of Central Florida

CREOL Expansion

Renovation Program Appendix

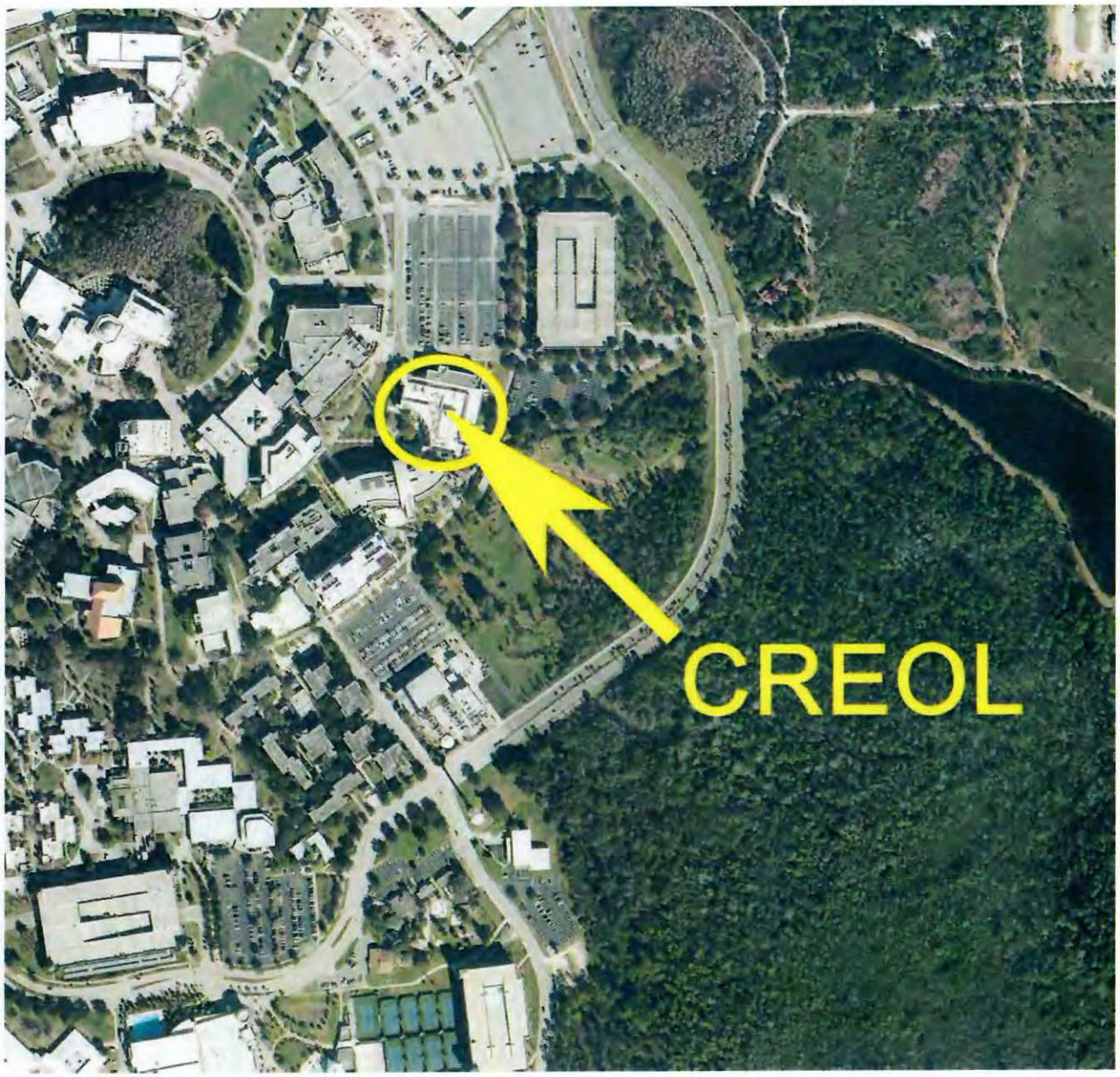
Building Information Source:

Year Built, 1996, Expansion 2008

Building Use, Labs, Offices

Square Footag 103,532

Table of Contents CREOL Expansion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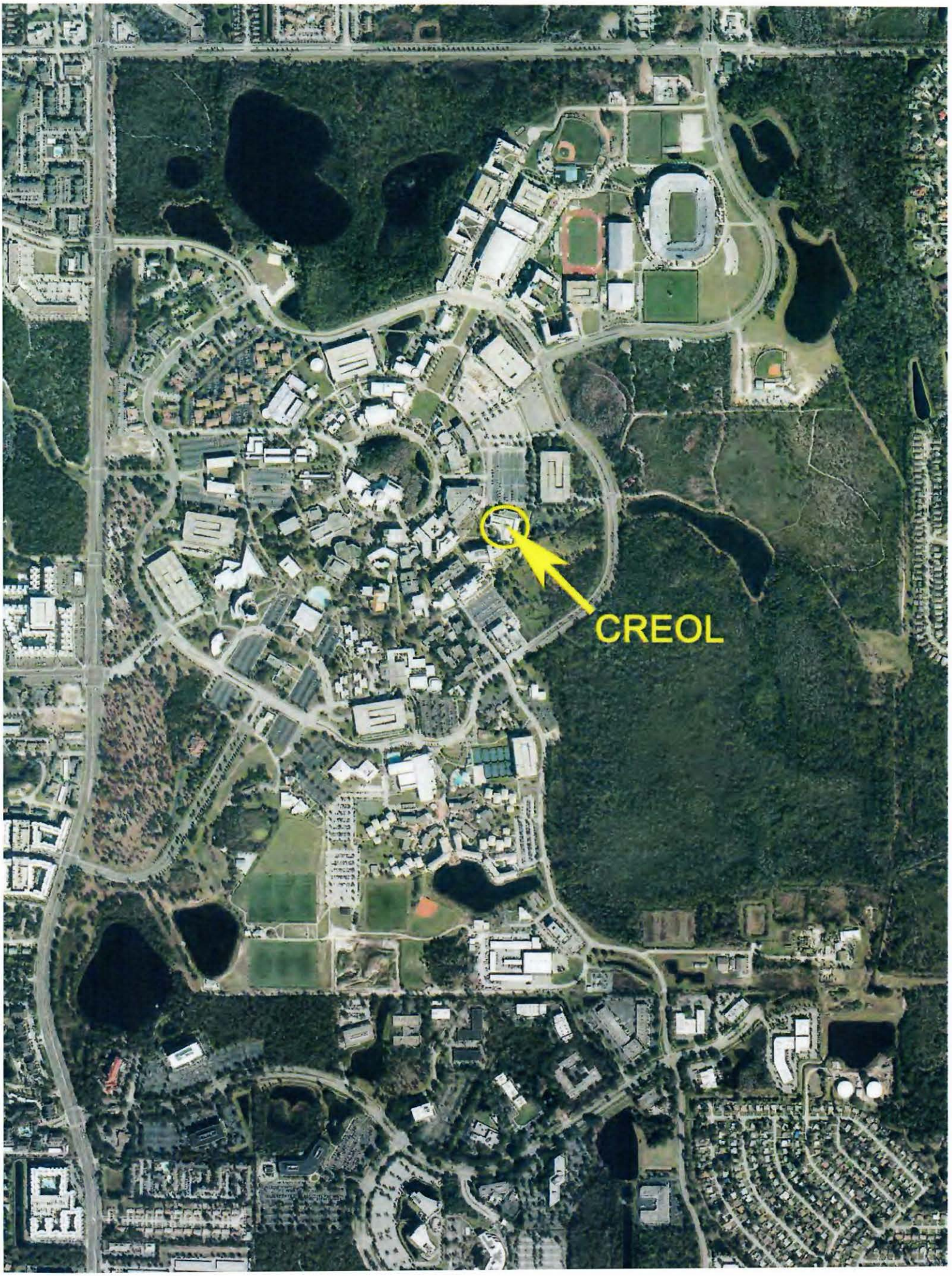

CREOL

Project Schedule for: CREOL Expansion

All durations shown are approximate	Dates	Months
Conceptual Design Presentation	May-2016	1
Schematic Submittal to UCF		
Design Development (DD) Phase		
50% DD Workshop	June-16	2
100% DD Submittal to UCF	July-16	
Contract Documents (CD) Phase		
50% CD Workshop	Aug-2016	2
100% CD Submittal to UCF	Sep-2016	
Bidding Phase		
Advertisement for Construction Bids	October - December, 2016	3
Bids for Construction Received		
Evaluate and Award Construction Contract		
Construction Phase		
Notice to Proceed	Jan-17	8
Final Completion	August 1, 2017	
Warranty Phase		24
Warranty Period		
Warranty Period Completion		
Total Project Time	16 Months (Program thru Construction)	

Program Area Tab CREOL Expansion

Space Category	Square Footages
Classrooms	0
Teaching Labs	0
Study	0
Research Labs	1,200
Offices	880
Auditorium/Exhibit	2,500
Instructional Media	0
Student Academic Support	0
Gymnasium	0
Campus Support Services	0
Total Net Square feet (NA	**4,580**
Total Gross Square Feet (G	**8,244**

Note: Carefully review the space files with the space diagrams. The space files supersede the space diagrams.

Program Funds for: CREOL Expansion

(All inputs must be made manually)

Funding Sources

Public Education Capital Outlay (PECO)	$0
Capital Improvement Trust Fund (CITF)	$0
Courtelis Facility Enhancement Challeng	$0
Private Matching Funds	$0
Optional Funding	$4,077,029
Total Funding Sources	$4,077,029

Program Budget Summary for:

CREOL Expansion

(Insert figures from the Concept Budget Sheet)

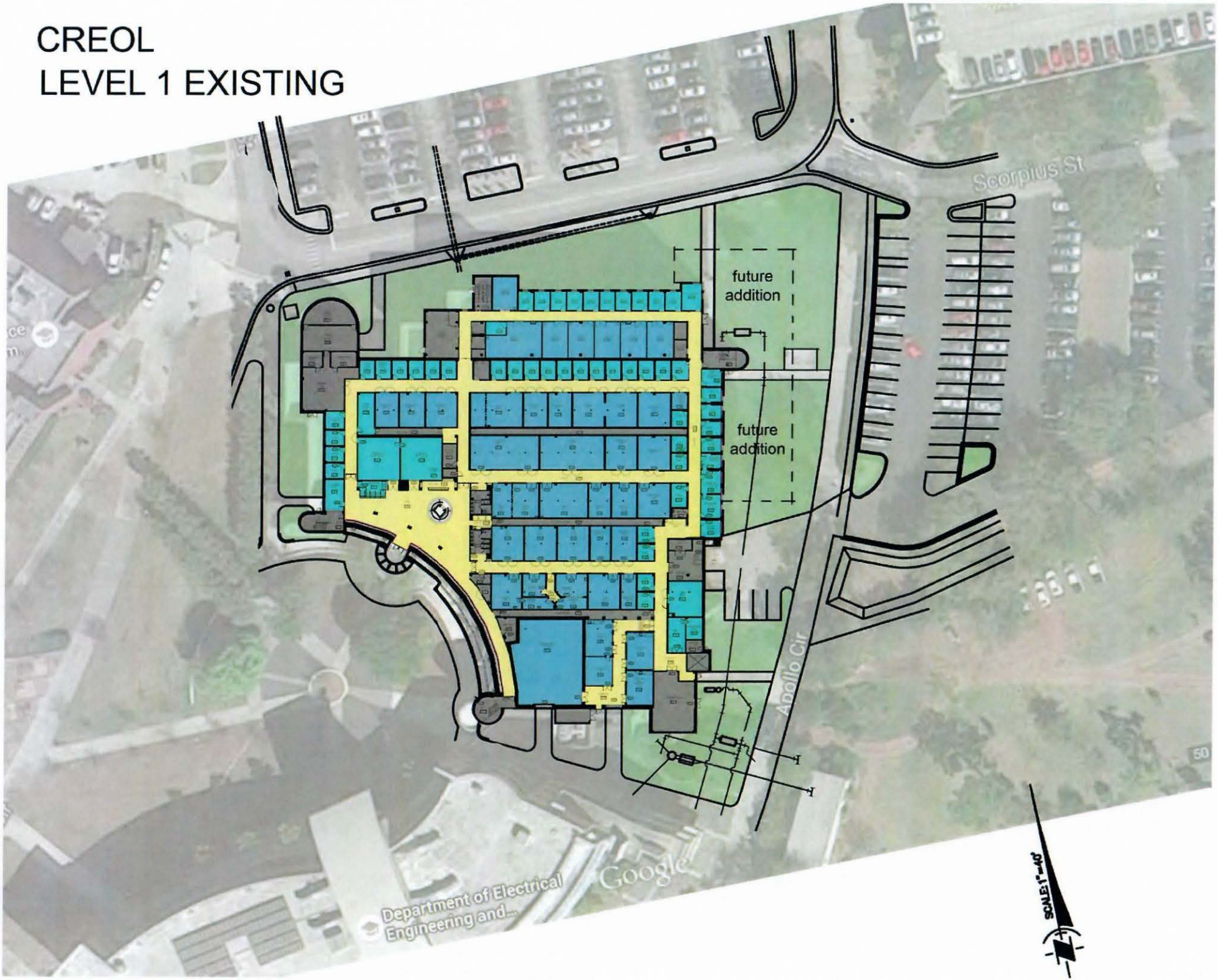
Budget Categories

Planning (P) *Includes design fees, permitting expenses, and contingency*	$521,045
Construction (C) *Includes utilities/infrastructure, Art-in State, landscape and irrigation, and contingency*	$3,356,210
Furniture and Equipment (F and E)	$199,774
Total Project Budget	**$4,077,029**
Construction contract amount, *set aside for construction*	**$2,915,927**

Important Note for Renovations and Remodelings:

Deferred Maintenance, Asbestos Abatement, Fire Code Corrections, and ADA Requirements are to be considered a priority over all other considerations.

CREOL
LEVEL 1 EXISTING



CREOL
LEVEL 2 EXISTING