THE RAAD-TANNOUS ENGINEERING GROUP, INC.

On-Site Structural Assessment of Existing Building (Exterior Facades) for the Colbourn Hall University of Central Florida Orange County

Attention: Mr. Jack Price

214 N. Goldenrod Road, Suite A-5, Orlando, FL 32807
Phone No. 407 382-2415 Fax No. 407 382-9625

THE RAAD-TANNOUS ENGINEERING GROUP, INC.

214 N. Goldenrod Road, Suite A-5
Orlando, Florida 32807

Phone No. 407 382-2415 *Fax No. 407 382-9625*

University of Central Florida
Office of Facilities Planning
PO Box 163020
Orlando, Florida 32816

Date: June 29, 2012
Project No.: 212-1005

Attention: Mr. Jack Price

RE: ***VISUAL STRUCTURAL ASSESSMENT / BUILDING ENVELOPE (EXTERIOR FACADES)***
COLBOURN HALL AT THE UNIVERSITY OF CENTRAL FLORIDA

Dear Mr. Price:

The Raad-Tannous Engineering Group, Inc. performed a limited, visual inspection of the exterior facades, stairs and walkways of the existing Colbourn Hall building located at the University of Central Florida. Our visual assessment was performed in the presence of Robert Scroggins of SC&D and William Gabriel of DBYBS. This report provides a summary of the findings, observations, and recommendations consisting of the following: RTEG's Structural Assessment as presented in Appendix I along with the Building Envelope by DBYBS as presented in Appendix II.

It has been a pleasure to provide our services to you on this project and trust that the information presented herein is satisfactory. Should you have any questions concerning the contents of this report, please do not hesitate to contact the undersigned.

Very truly yours,
THE RAAD-TANNOUS ENGINEERING GROUP, INC.

Raad H. Raad, P.E.
Florida Registration No. 45354

APPENDIX I

RTEG, INC.

VISUAL STRUCTURAL ASSESSMENT
(EXTERIOR FACADES)
FOR THE COLBOURN HALL
AT THE UNIVERSITY OF CENTRAL FLORIDA

THE RAAD-TANNOUS ENGINEERING GROUP, INC.

214 N. Goldenrod Road, Suite A-5
Orlando, Florida 32807

Phone No. 407 382-2415 *Fax No. 407 382-9625*

VISUAL STRUCTURAL ASSESSMENT (EXTERIOR FACADES) FOR THE COLBOURN HALL AT THE UNIVERSITY OF CENTRAL FLORIDA

RTEG'S PROJECT NO.: 212-1005

EXECUTIVE SUMMARY:

The following summarizes our key opinions and recommendations presented in this document:

1. The exterior brick façade, brick cap, and secondary concrete curb pour are separating from the primary concrete slab at the 2nd and 3rd floor levels around the entire perimeter of the building. These areas should be repaired to provide positive drainage away from the building.

2. The structural steel handrail and supporting vertical posts are rusting due to weather exposure and/or ponding water at the 2nd and 3rd floor exterior walkways. These elements should be removed and replaced to meet current building codes.

3. The structural steel shelf angles supporting the exterior brick façade at the 4th floor, 5th floor, and roof levels are rusting due to weather exposure which could potentially lead to failures in the future. These supports should be investigated further to determine the extent of damage above the soffit level and repaired/replaced as required.

4. All repairs should comply with the latest edition of the Florida Building Code and be performed by a licensed contractor.

DESCRIPTION OF THE STRUCTURE:

The existing structure can be described as a 5 story educational building located on the main campus of the University of Central Florida. Based on information from the original Architectural drawings issued by Paras Associates, the original 84,000 SF building was constructed in 1973.

The original building structure is built-up roofing on metal roof deck over steel joist roof framing, concrete slab on conform metal floor deck over steel joist floor framing, with structural steel columns and bracing, typically. The exterior façade of the building is brick over reinforced non-load bearing concrete masonry units (CMU) or cold-formed metal framing (CFMF).

The 2nd and 3rd floors have open exterior corridors around the perimeter of the building which are constructed of concrete slab sloped away from the building towards a concrete curb with weep holes periodically along the exterior edge and structural steel handrails. The main access stairs from the 1st to 2nd floors are cast in place concrete with brick façade and structural steel handrails, typically.

VISUAL OBSERVATIONS:

· The brick spandrel panels between vertical brick piers on the 2nd and 3rd floors have cracked and along with the secondary concrete curbs have separated from the primary concrete slab at the floor level (see Pictures #1, #2, #3, & #4). This damage is consistent for the entire perimeter of the exterior walkway at the 2nd and 3rd floors.

· The cast-in place access stairs from the 1st floor to the 2nd floor on the east and west sides of the building exhibit delamination of the brick cap and secondary concrete pour from the main concrete stair (see Pictures #5 & #6).

· The structural steel handrail is rusting from exposure to weather and the structural steel posts supporting the handrail are rusting at the base (see Pictures #7 & #8). Some vertical posts have base plates and some do not exist. This damage is consistent for the entire perimeter of the exterior walkway at the 2nd and 3rd floors.

· The brick façade at the 4th floor, 5th floor, and roof levels appeared to be in good condition with minimal cracking of the mortar joints. The structural steel shelf angle however is rusting from exposure to weather (see Pictures #9, #10, #11, and #12). It is not clear from the exterior whether this damage is limited to the exposed steel shelf angle or if there is further damage behind the wall and above the soffit.

· No additional structural damage was observed to the brick facade, concrete slabs, or foundations.

COMMENTS & RECOMMENDATIONS:

Based on the observations at the time of the site visit, the following are comments and recommendations offered by RTEG, INC.

· The existing brick spandrels and concrete curbs in their damaged state do not appear to present a potentially dangerous or unsafe condition, but these areas should be investigated further to determine the

actual extent of damage. Until the full extent of the structural damage in these areas is determined, we recommend that access to the areas be limited to construction personnel.

· The referenced damage to the brick cap and curb on the concrete access stairs does not appear to present a potentially dangerous or unsafe condition. These areas should be repaired per the architectural and specifications requirements of the University of Central Florida.

· The structural steel handrail system does appear to present a potentially dangerous condition as the rusted bases of the vertical posts will most likely not withstand the 50lb./ft. or 200 lb. concentrated load required by the Florida Building Code. These areas should be investigated further to determine the extent of the damage to the posts and should be repaired or replaced as required.

· The referenced damage to the brick shelf support angles may potentially present a dangerous or unsafe condition. These areas should be investigated further to determine the actual extent of damage. Until the full extent of the structural damage in these areas is determined, we recommend that access to the areas under these building soffits be limited to construction personnel.

GENERAL RECOMMENDATIONS:

· All structural and non-structural repairs should comply with the current edition of the Florida Building Code (2010 edition) and all referenced standards.

· All work should be performed by a licensed contractor in accordance with the applicable codes, ordinances, and standard building practices.

· RTEG, INC. should be notified in writing upon discovery of any additional structural damage.

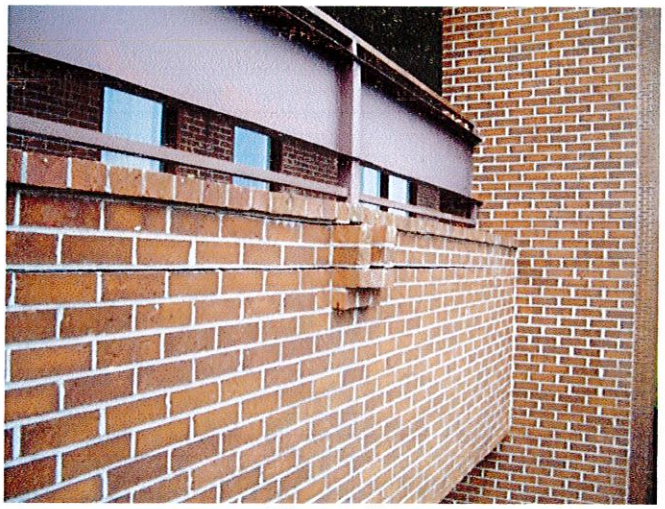
LIMITS OF STUDY:

This document was prepared for the exclusive use of the University of Central Florida and was not intended for any other purpose. The observations, comments, and/or recommendations contained herein are based upon information provided to us at the time of this document's preparation. The evaluation performed on the above date was a limited, visual assessment. Areas hidden from view such as within walls, floors, or otherwise not accessible, were not examined. No structural analysis has been performed on any portion of this structure to determine the load carrying capacity of the structural systems or elements. This document does not address any subsurface, architectural, mechanical, electrical, or plumbing issues. Please note that RTEG, INC. reserves the right to revise the observations, comments, and/or recommendations above as we become aware of changed conditions or additional information. This document was prepared for our client's use and RTEG, INC. disavows any liability for use by others.

The Raad-Tannous Engineering Group, Inc. appreciates the opportunity to have assisted you with this investigation. Please contact us if there should be any questions regarding the information outlined above, or if we may be of further assistance.

Sincerely,
THE RAAD-TANNOUS ENGINEERING GROUP, INC.

Raad H. Raad, P.E.
Florida Registration No. 45354



Picture #1
Damage to Exterior Brick Spandrel along 3rd Floor Walkway

Picture #2
Damage to Exterior Brick Spandrel along 3rd Floor Walkway

Picture #3
Damage to Exterior Brick Spandrel along 2nd Floor Walkway

Picture #4
Damage to Exterior Brick Spandrel along 2nd Floor Walkway

Picture #5
Damage to Exterior Brick Cap at West Access Stair 2nd Floor

Picture #6
Damage to Exterior Brick Cap at West Access Stair 2nd Floor

Picture #7
Structural Steel Handrail & Post at 2nd Floor Exterior Walkway

Picture #8
Structural Steel Handrail & Post at 2nd Floor Exterior Walkway

Picture #9
Structural Steel Brick Shelf Angle
Supporting Soffit at Roof Level

Picture #10
Enlarged View of Structural Steel Shelf Angle
at Roof Level Soffit Framing

Picture #11
Structural Steel Brick Shelf Angle
at 4th Floor Soffit Level

Picture #12
Enlarged View of Structural Steel Shelf Angle
at 4th Floor Soffit Framing

APPENDIX II

DBY BUILDING SCIENCES

BUILDING ENVELOPE
(EXTERIOR FACADES)
FOR THE COLBOURN HALL
AT THE UNIVERSITY OF CENTRAL FLORIDA

DBY BUILDING SCIENCES, LLC
1214 East Concord Street, Orlando, Florida 32803
Phone 407.286.2957 - Fax 407.286.2959

June 27, 2012 12-108

Raad-Tannous Engineering Group, Inc
214 N. Goldenrod Road, Suite A-5
Orlando, Florida 32807

Re: UCF Colburn Building

Raad,

Following is a summary of our observations during our June 20, 2012 inspection of the UCF Colburn Hall building.

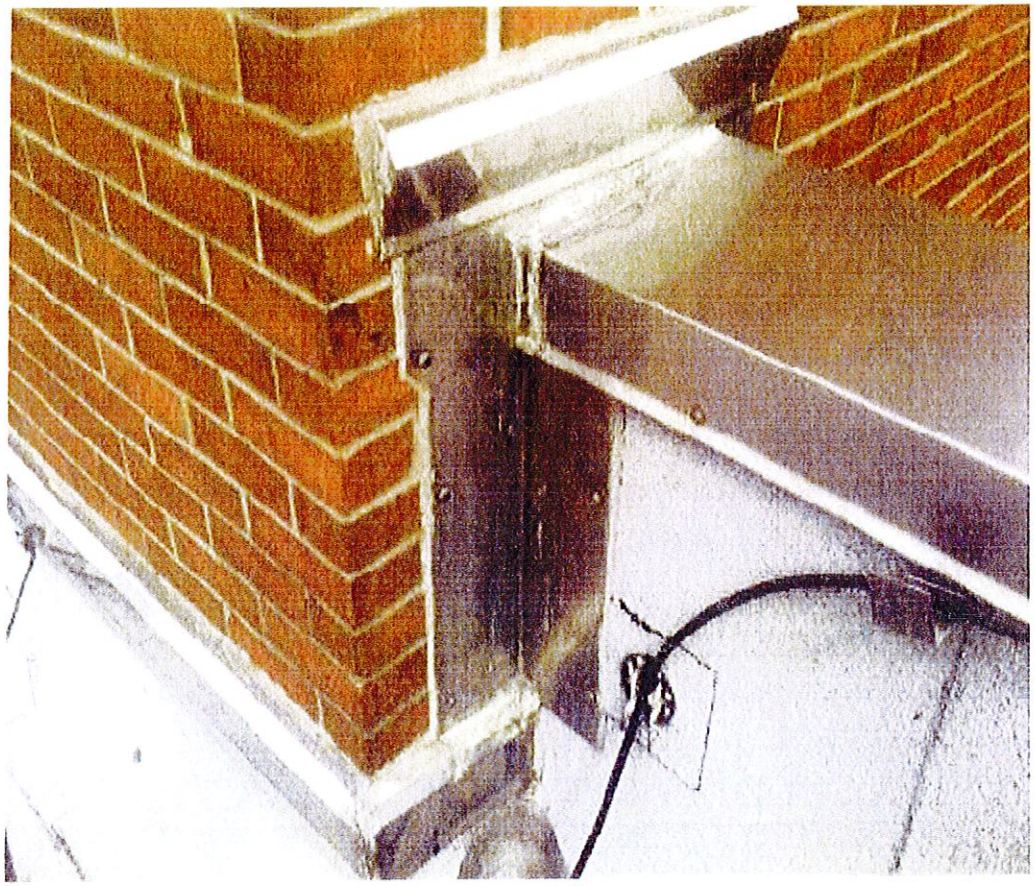
Roof Inspection:

1. Roofing system appears to be recently installed.
2. Coping cap installation in a few areas does not allow for building expansion/contraction. (Photo #1)
3. VTR's and lightening protection are correctly installed.
4. Mechanical unit raised pads are intact.
5. Roof top internal drains appear to be watertight, but DBY was unable to verify below deck connection.
6. (2) low roof areas were discovered, but no residual water observed.
7. Roof Hatch appears to be from original construction. Seals and internal curbing were not verified, numerous patches. (Photo #3)
8. Corners appear to be reworked (overlayed patch). (Photo #2)
9. Parapet top connection to elevator brick face relies on sealant, which is starting to crack.

Openings:

1. Window joints appear to be water tight. Section cut detail of windows installation has been requested.
2. No drip edges were observed.
3. Windows appear to have internal drainage system. (Photo #4)
4. West face openings have more UV /Weather damage to joint material.

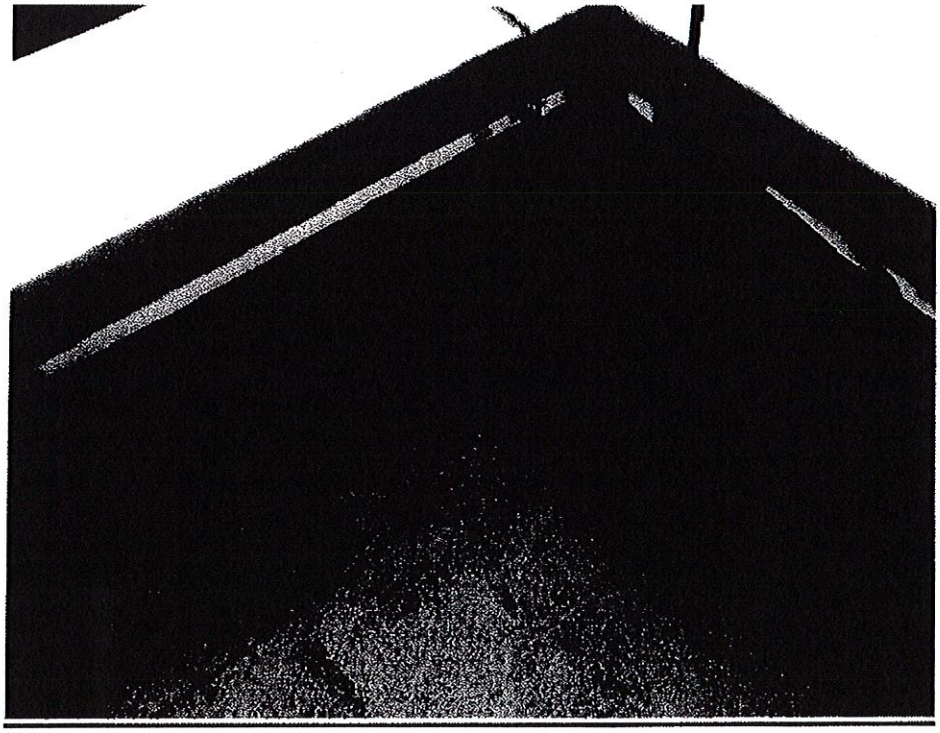
UCF Colburn Hall Photo #1



Coping Cover Minus Expansion Joint

DBY

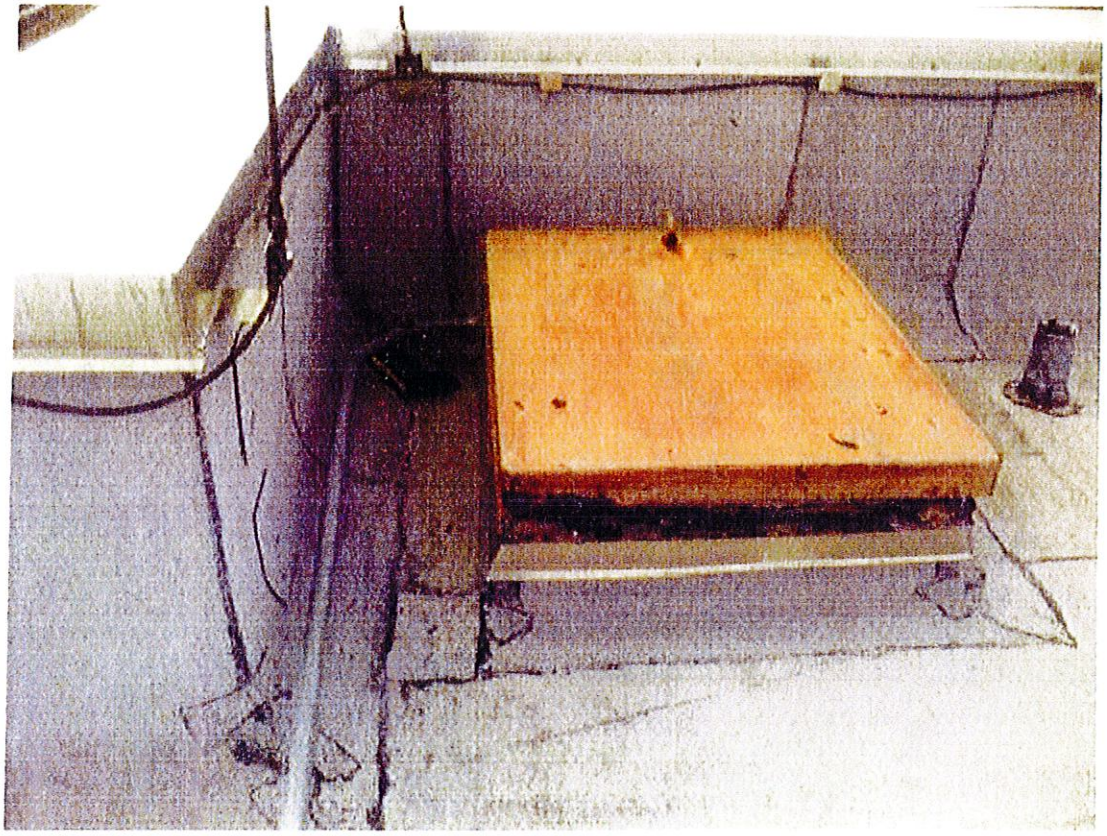
UCF Colburn Hall Photo #2



Roof Cover Overlay Patch

DBY

UCF Colburn Hall Photo #3



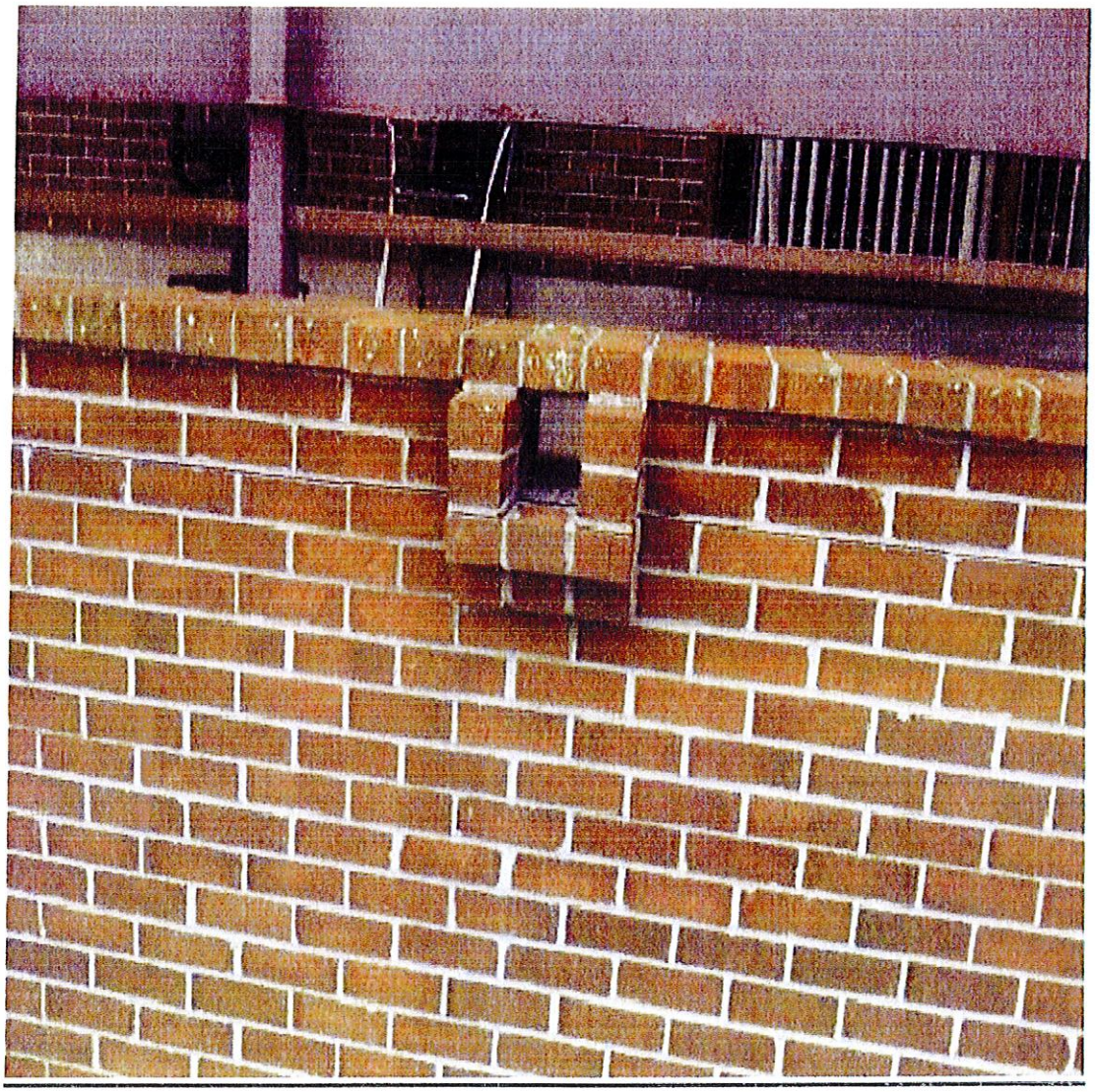
Roof Hatch & Roof Patches

UCF Colburn Hall Photo #4

Window Drainage System at Sill

DBY

UCF Colburn Hall Photo #5



Deteriorated Mortar Joint at Slab Elevation

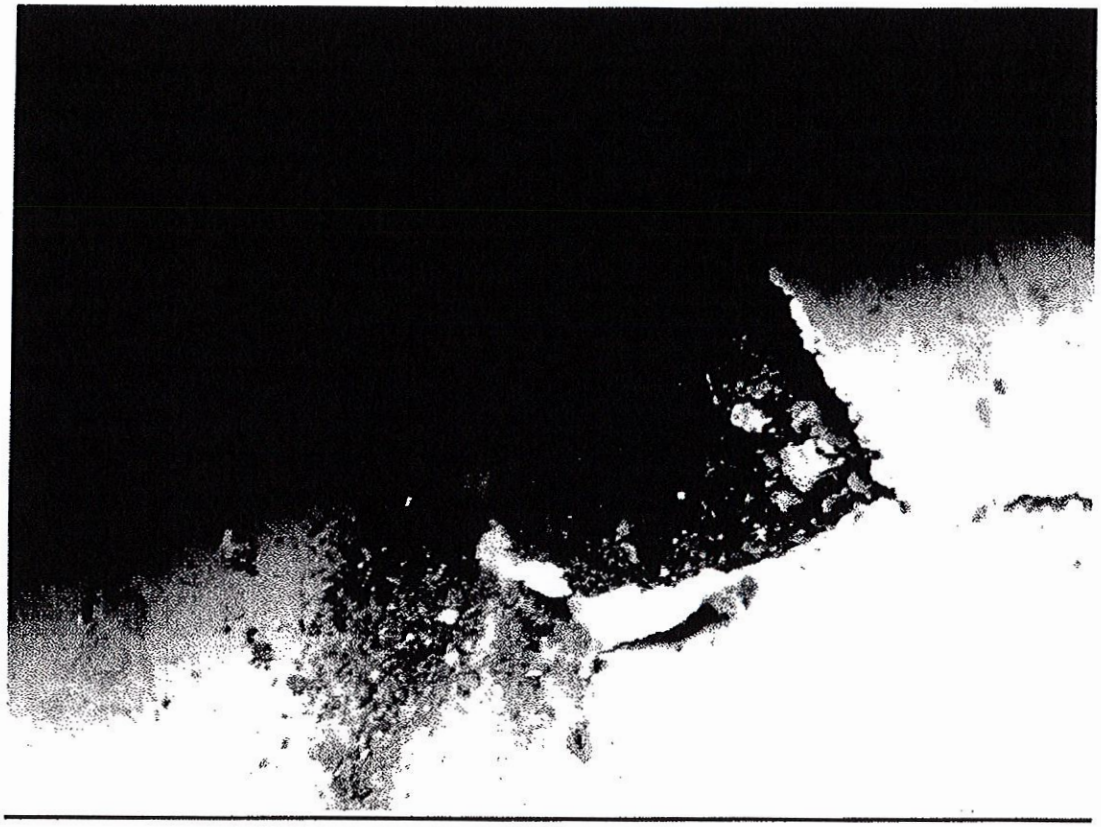
DBY

UCF Colburn Hall Photo #6

Rusted Rail Support

DBY

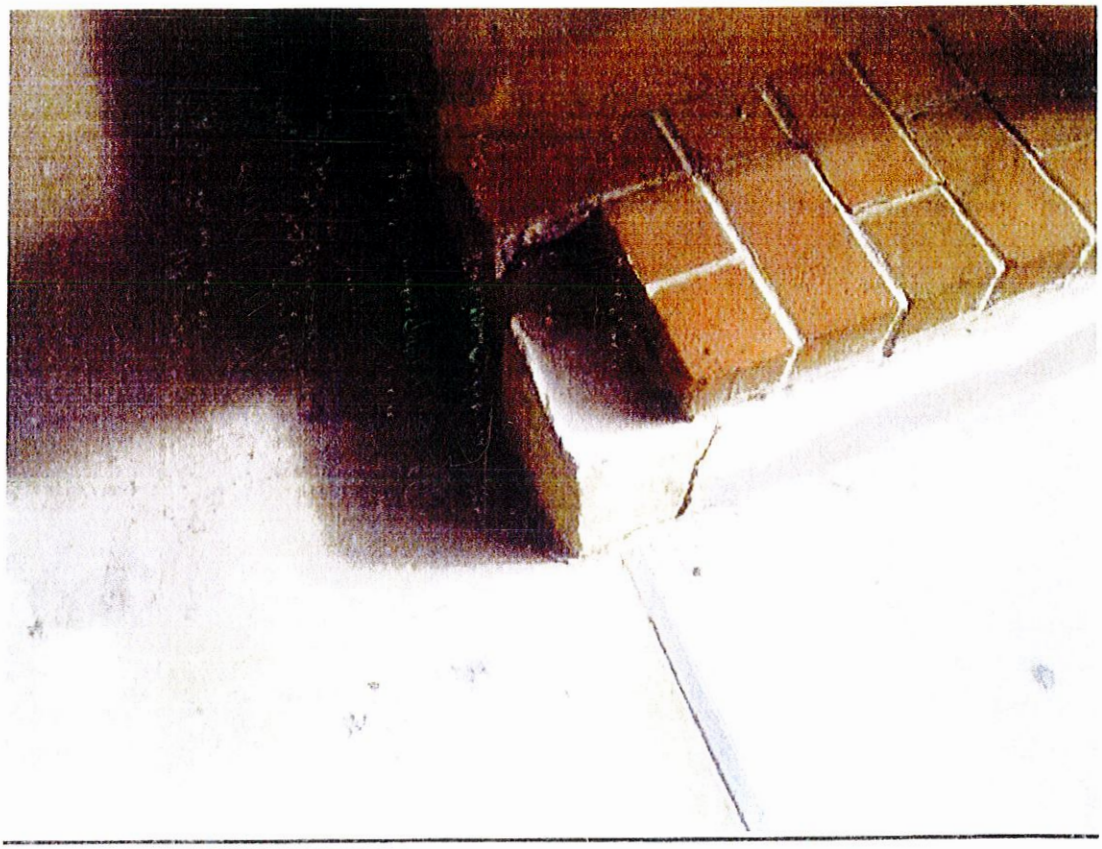
UCF Colburn Hall Photo #7



Rusted, Failed Rail Support

DBY

UCF Colburn Hall Photo #8



Loose, Missing Brick

DBY

UCF Colburn Hall Photo #9

Back Pitched Open Walkways

DBY

ITEM: FF-5

University of Central Florida
Board of Trustees

SUBJECT: Five-year capital improvement plan

DATE: July 26, 2012

PROPOSED BOARD ACTION

Approval of the capital improvement plan for 2013-2014 through 2017-2018.

BACKGROUND INFORMATION

Each year, the university must submit an updated capital improvement plan to the Board of Governors. This plan identifies projects that will be included in the three-year Public Education Capital Outlay (PECO) list, and provides information to the State Board of Education for its request for capital project funding for 2013-2014.

The capital improvement plan must be submitted to the Board of Governors' staff by August 1, 2012. The attached schedules include the following:

- projects that are proposed for inclusion in the five-year capital improvement plan
- items to be included in the 2013-2014 Appropriations Authorization Bill, including projects funded by bonds, direct support organization projects, and projects requiring general revenue to operate

We request approval to submit the 2013-2014 Capital Improvement Plan with the projects listed in the attached schedules.

Supporting documentation:

2013 Five-Year Plan List (DCU) (Attachment A)
2013-2014 Fixed Capital Outlay Projects Requiring Legislative Approval to be Constructed, Acquired and Financed by a University or a University Direct Support Organization with Approved Debt (Attachment B)
2013-2014 Fixed Capital Outlay Projects Requiring Legislative Authorization and General Revenue Funds to Operate and Maintain (Attachment C)

Prepared by: Lee Kernek, Associate Vice President, Administration and Finance

Submitted by: William F. Merck II, Vice President, Administration and Finance
And Chief Financial Officer

UNIVERSITY OF CENTRAL FLORIDA FUTURE PROJECT PROJECTIONS FOR 2013-2018
DRAFT 2013 **FIVE** YEAR FIXED CAPITAL IMPROVEMENTS **PLAN**

PECO PROJECTS REVISED 05-29-2012	2013-14 YR #1	2014-15 YR #2	2015-16 YR #3	2016-17 YR #4	2017-18 YR #5	TOTALS	RANK
CLASSROOM BUILDING II (E)	$1,317,262					$1,317,262	1
ENGINEERING BUILDING I RENOVATION (C,E)	$13,954,277	$925,000				$14,879,277	2
MATH AND PHYSICS BUILDING REMODELING AND RENOVATION (C,E)	$9,422,105	$700,000				$10,122,105	3
UTILITIES, INFRASTRUCTURE, CAPITAL RENEWAL AND ROOFS (P,C)	$11,994,197	$14,000,000	$14,000,000	$14,000,000	$14,000,000	$67,994,197	4
LIBRARY RENOVATION PHASE II (P,C,E)	$3,500,000	$29,500,000	$3,500,000			$36,500,000	5
INTERDISCIPLINARY RESEARCH AND INCUBATOR FACILITY (C,E)	$5,924,183	$33,852,470	$5,924,183			$39,776,653	6
UCF VC CLASSROOM BUILDING (C,E)	$7,500,000					$7,500,000	7
ARTS COMPLEX PHASE II (PERFORMANCE) (P,C,E)	$5,000,000	$40,000,000	$5,000,000			$50,000,000	8
MILLICAN HALL RENOVATION (P,C,E)		$349,418	$6,363,058	$349,418		$7,061,894	9
BUSINESS ADMINISTRATION RENOVATION (P,C,E)		$9,475,843	$494,001			$9,969,844	10
CHEMISTRY RENOVATION (P,C,E)		$539,843	$9,815,338	$539,843		$10,895,024	11
FACILITIES & SAFETY COMPLEX RENOVATION (P,C,E)			$4,856,238			$4,856,238	12
VISUAL ARTS RENOVATION AND EXPANSION (P,C,E)			$3,000,000	$24,000,000	$3,000,000	$30,000,000	13
MULTI-PURPOSE RESEARCH AND EDUCATION BUILDING (P,C,E)		$2,779,189	$22,233,512	$2,779,189		$27,791,890	14
TOTAL	$33,918,380	$130,496,763	$75,186,330	$41,668,450	$17,000,000	$298,269,923	

CITF PROJECT REQUESTS	2013-14 YR #1	2014-15 YR #2	2015-16 YR #3	2016-17 YR #4	2017-18 YR #5	TOTALS	RANK
UCF LIBRARY PHASE I (P,C,E)	$23,968,850					$23,968,850	1
RECREATION AND WELLNESS CENTER - OUTDOOR IMPROVEMENTS (P,C)	$5,000,000					$5,000,000	2
CREATIVE SCHOOL FOR CHILDREN (P,C,E)	$6,000,000					$6,000,000	3
STUDENT UNION II (P,C,E)	$14,000,000					$14,000,000	4
TOTAL	$48,968,850	$0	$0	$0	$0	$48,968,850	

REQUESTS FROM OTHER STATE SOURCES	2013-14 YR #1	2014-15 YR #2	2015-16 YR #3	2016-17 YR #4	2017-18 YR #5	TOTALS	RANK
COLLEGE OF NURSING (P,C,E)		$4,464,964	$35,719,710	$4,464,964		$44,649,638	1
HOWARD PHILLIPS HALL RENOVATION (P,C,E)			$6,564,966	$642,249		$7,207,215	2
COLBOURN HALL RENOVATION (P,C,E)			$7,865,978	$410,075		$8,276,053	3
FERRELL COMMONS (E AND G SPACE) RENOVATION (P,C,E)			$5,704,054			$5,704,054	4
TECHNOLOGY COMMONS I RENOVATION (P,C,E)			$739,968			$739,968	5
TECHNOLOGY COMMONS II RENOVATION (P,C,E)			$147,348	$2,679,049	$147,348	$2,973,745	6
COLLEGE OF SCIENCES BUILDING RENOVATION (P,C,E)			$151,897	$2,913,663	$151,897	$3,217,457	7
REHEARSAL HALL RENOVATION (P,C,E)			$61,650	$1,120,910	$61,650	$1,244,210	8
THEATER BUILDING RENOVATION (P, C,E)			$169,037	$3,073,406	$169,037	$3,411,480	9
SOUTH CAMPUS RENOVATION (P,C,E)			$1,476,648			$1,476,648	12
CLASSROOM BUILDING III (P,C,E)			$2,400,000	$19,200,000	$2,400,000	$24,000,000	11
FACILITIES BUILDING AT LAKE NONA (P,C,E)			$600,000	$4,800,000	$600,000	$6,000,000	10
RECYCLING CENTER (P,C)			$2,300,000	$18,400,000	$2,300,000	$23,000,000	13
HUMANITIES AND FINE ARTS II (P,C,E)			$2,772,353	$17,060,631	$2,772,353	$22,605,337	14
SIMULATION AND TRAINING BUILDING (P,C,E)				$2,370,336	$18,410,374	$20,780,710	16
BUSINESS ADMINISTRATION III BUILDING (P,C,E)				$1,584,527	$12,307,012	$13,891,539	17
EDUCATION BUILDING II (P,C,E)				$2,062,348	$15,594,083	$17,656,431	18
BAND BUILDING (P,C,E)				$455,045	$2,800,279	$3,255,324	19
ARTS COMPLEX III (P,C,E)				$1,210,857	$7,627,447	$8,838,304	20
PARTERSHIP IV (P,C,E)				$2,450,000	$19,600,000	$22,050,000	21
INTERDISCIPLINARY RESEARCH BUILDING II (P,C,E)				$2,370,336	$17,330,596	$19,700,932	22
SUSTAINABILITY CENTER				$5,000,000		$5,000,000	23
CENTER FOR EMERGING MEDIA BUILD-OUT (P,C,E)				$6,360,339		$6,360,339	24
TOTAL	$0	$0	$30,953,899	$94,163,771	$102,272,076	$227,389,746	

REQUESTS FROM NON-STATE SOURCES, INCLUDING DEBT	2013-14 YR #1	2014-15 YR #2	2015-16 YR #3	2016-17 YR #4	2017-18 YR #5	TOTALS	RANK
ATHLETIC ACADEMIC PERFORMANCE CENTER (P,C,E)	$14,000,000					$14,000,000	
CREATIVE VILLAGE GARAGE (P,C,E)	$15,000,000					$15,000,000	
CIVIL AND ENVIRONMENTAL ENGINEERING (P,C,E)		$1,160,667	$14,508,333	$1,741,000		$17,410,000	
CREATIVE SCHOOL (P,C,E)			$1,500,000			$1,500,000	
PARKING GARAGE VII (P,C,E)			$20,000,000			$20,000,000	
SUSTAINABILITY CENTER (P,C,E)			$250,000	$2,000,000	$250,000	$2,500,000	
SPECIAL PURPOSE HOUSING AND PARKING GARAGE I (P,C,E)	$25,000,000					$25,000,000	
SPECIAL PURPOSE HOUSING II (P,C,E)	$8,000,000					$8,000,000	
PARKING GARAGE VII (P,C,E)	$20,000,000					$20,000,000	
PARKING DECKS (P,C,E)	$17,000,000					$17,000,000	
GRADUATE HOUSING (P,C,E)	$50,000,000					$50,000,000	
REFINANCE UCF FOUNDATION PROPERTIES	$37,410,000					$37,410,000	
STUDENT HOUSING (P,C,E)	$50,000,000					$50,000,000	
GARAGE EXPANSION (P,C,E)	$5,000,000					$5,000,000	
CLASSROOM AND LAB BUILDING, LAKE NONA (P,C,E)	$23,475,601					$23,475,601	
FACILITIES BUILDING, LAKE NONA (P,C,E)	$6,000,000					$6,000,000	
EXPO CENTER HOUSING (P,C,E)	$16,000,000					$16,000,000	
REGIONAL CAMPUSES MULTI-PURPOSE BUIDLINGS (P,C,E)	$28,000,000					$28,000,000	
PARTNERSHIP GARAGE (P,C,E)	$7,000,000					$7,000,000	
PARKING DECK (ATHLETIC COMPLEX)	$5,000,000					$5,000,000	
BASEBALL STADIUM EXPANSION PHASE II (P,C,E)	$1,700,000					$1,700,000	
BASEBALL CLUBHOUSE EXPANSION/RENOVATION	$1,000,000					$1,000,000	
BRIGHT HOUSE NETWORKS STADIUM EXPANSION PHASE I (P,C,E)	$11,000,000					$11,000,000	
WAYNE DENSCH SPORTS CENTER EXPANSION/RENOVATION (P,C,E)	$1,000,000					$1,000,000	
TENNIS COMPLEX - PHASE I (P,C,E)	$1,400,000					$1,400,000	
TENNIS COMPLEX - PHASE II (P,C,E)	$1,000,000					$1,000,000	
TENNIS COMPLEX - PHASE III (P,C,E)	$2,000,000					$2,000,000	
MULTI-PURPOSE MEDICAL RESEARCH AND INCUBATOR FACILITY (P,C,E)	$112,863,923					$112,863,923	
HEALTH SCIENCES CAMPUS PARKING GARAGE I (P,C,E)	$15,000,000					$15,000,000	
BIO-MEDICAL ANNEX RENOVATION AND EXPANSION (P,C,E)	$12,800,000					$12,800,000	
OUTPATIENT CENTER (P,C,E)	$75,000,000					$75,000,000	
DENTAL SCHOOL (P,C,E)		$73,000,000				$73,000,000	
UTILITY INFRASTRUCTURE AND SITE WORK LAKE NONA CLINICAL FACILITIES (P,C)			$10,000,000			$10,000,000	
PEGASUS HEALTH EXPANSION (P,C,E)			$10,000,000			$10,000,000	
TOTAL	$561,649,524	$74,160,667	$56,258,333	$3,741,000	$250,000	$696,059,524	
GRAND TOTAL	$644,536,754	$204,657,430	$162,398,562	$139,573,221	$119,522,076	$1,270,688,043	

Projects to be programmed
Projects with approved building programs

Remodeling denotes **change** in space usage.
Renovation denotes **no change** space usage.

Attachment A

STATE UNIVERSITY SYSTEM
Fixed Capital Outlay Projects Requiring Board of Governors Approval
to be Constructed, Acquired and Financed by a University or
a University Direct Support Organization with Approved Debt
BOB-1

Univ.	Project Title	GSF	Brief Description of Project	Project Location		Project Amount	Funding Source	Estimated Month Of Board Approval Request	Estimated Annual Amount For Operational & Maintenance Costs Amount	Source
UCF	Special Purpose Housing and Parking Garage I	160,000	425 beds and 500 parking spaces	UCF, Orlando	$	25,000,000	Rental income	July	$2,400,000	General Revenue
UCF	Special Purpose Housing II	32,000	Fraternity, sorority, and organization housing	UCF, Orlando	$	8,000,000	Rental income	July	$480,000	General Revenue
UCF	Parking Garage VII	447,000	1,600 spaces	UCF, Orlando	$	20,000,000	Decal fees, traffic fines, and Transportation Access Fee	July	$6,705,000	General Revenue
UCF	Parking decks	168,000	1,800 spaces	UCF, Orlando	$	17,000,000	Decal fees, traffic fines, and Transportation Access Fee	July	$2,520,000	General Revenue
UCF	Graduate housing	150,000	Land and 600 beds	UCF, Orlando	$	50,000,000	Rental and retail income	July	$2,250,000	General Revenue
UCF	Refinance UCF Foundation properties	432,250	Consolidation and refinancing of existing UCF foundation properties	UCF, Orlando	$	37,410,000	Rental and retail income	July	$6,483,750	General Revenue
UCF	Student housing	224,000	800 beds	UCF, Orlando	$	50,000,000	Rental income	July	$3,360,000	General Revenue
UCF	Garage expansion	50,837	400 additional spaces	UCF, Orlando	$	5,000,000	Decal fees, traffic fines, and Transportation Access Fee	July	$762,555	General Revenue
UCF	Classroom and lab building, Lake Nona	91,464	Classrooms, labs, and offices	UCF, Orlando	$	23,475,601	Rental and retail income	July	$1,371,960	General Revenue
UCF	Facilities Building, Lake Nona	20,799	Offices, storage, and support space	UCF, Orlando	$	6,000,000	Rental and retail income	July	$311,985	General Revenue
UCF	Expo Center housing	103,000	400 Beds	UCF, Orlando	$	16,000,000	Rental and retail income	July	$1,545,000	General Revenue
UCF	Regional Campuses multi-purpose buildings	60,000	Classrooms, labs, and offices	UCF, Orlando	$	28,000,000	Rental and retail income	July	$900,000	General Revenue
UCF	Partnership Garage	60,000	600 Spaces	UCF, Orlando	$	7,000,000	Rental and retail income	July	$900,000	General Revenue
UCF	Parking deck (Athletic Complex)	168,000	600 parking spaces	UCF, Orlando	$	5,000,000	Decal and traffic fines	July	$2,520,000	General Revenue
UCF	Creative Village Garage	402,000	1300 spaces	UCF, Orlando	$	15,000,000	Decal and traffic fines	July	$6,030,000	General Revenue
UCF	Baseball Stadium Expansion/Renovation	5,700	200 Seats, new press box	UCF, Orlando	$	1,700,000	Donations and debt	July	$85,500	General Revenue
UCF	Baseball Clubhouse Expansion/Renovation		New playing field, chair backs, audio and lighting upgrade	UCF, Orlando	$	1,000,000	Donations and debt	July	$0	General Revenue
UCF	Bright House Networks Stadium Expansion Phase I	21,337	Additional club seating, suites and operational booths	UCF, Orlando	$	11,000,000	Donations and debt	July	$320,055	General Revenue
UCF	Wayne Densch Sports Center Expansion/Renovation	18,000	Renovate and expand football facilities, larger locker room, weight room, equipment room	UCF, Orlando	$	1,000,000	Donations and debt	July	$270,000	General Revenue
UCF	Tennis Complex - Phase I	7,470	12 championship caliber outdoor courts, 864 grand stand seats	UCF, Orlando	$	1,400,000	Donations and debt	July	$112,050	General Revenue
UCF	Tennis Complex - Phase II	2,500	Club house with locker room for men and women's programs, offices, conference room	UCF, Orlando	$	1,000,000	Donations and debt	July	$37,500	General Revenue
UCF	Tennis Complex - Phase III		6 covered courts	UCF, Orlando	$	2,000,000	Donations and debt	July	$0	General Revenue
UCF	Multi-Purpose Medical Research and Incubator Facility	200,000	Classrooms, labs, and offices	UCF, Orlando	$	112,863,923	Donations, debt, Partnerships	July	$3,000,000	General Revenue
UCF	Health Sciences Campus Parking Garage	402,000	1300 Spaces	UCF, Orlando	$	15,000,000	Decal and traffic fines	July	$6,030,000	General Revenue
UCF	Bio-Medical Annex Renovation and Expansion	32,000	Classrooms, labs, and offices	UCF, Orlando	$	12,800,000	Donations, debt, Partnerships	July	$480,000	General Revenue
UCF	Outpatient Center	119,750	Health care facilities, offices, 38 beds	UCF, Orlando	$	75,000,000	Donations, debt, Partnerships	July	$1,796,250	General Revenue
UCF	Dental School	166,750	Classrooms, labs, auditorium, health care facilities, offices	UCF, Orlando	$	73,000,000	Donations, debt, Partnerships	July	$2,501,250	General Revenue
UCF	Utility Infrastructure and Site Work Lake Nona Clinical Facilities		3080 Spaces	UCF, Orlando	$	10,000,000	Decal and traffic fines	July		General Revenue
UCF	Pegasus Health Expansion	20,000	Labs, offices	UCF, Orlando	$	10,000,000	Donations, debt, Partnerships	July	$300,000	General Revenue

STATE UNIVERSITY SYSTEM
Fixed Capital Outlay Projects that may Require Legislative Authorization and General Revenue Funds to Operate and Maintain
BOB-2

Univ.	Project Title	GSF	Brief Description of Project	Project Location	Project Amount	Funding Source	Estimated Annual Amount For Operational & Maintenance Costs Amount	Source
UCF	Classroom Building II	91,464	Classroom, office	UCF	$23,475,601	PECO	$1,371,960	General Revenue
UCF	Morgridge International Reading Center	16,726	Classroom, office, auditorium	UCF	$5,200,000	Match and private	$250,890	General Revenue
UCF	Innovative Center	13,896	Offices	UCF		E&G	$208,440	General Revenue
UCF	University Tech Center	(24,416)	Offices	UCF		E&G	($366,240)	General Revenue
UCF	University Tower	(2,924)	Offices	UCF	$7,550,000	E&G	($43,860)	General Revenue
UCF	Research Pavillion	1,164	Offices	UCF	$7,450,000	E&G	$17,460	General Revenue
UCF	Orlando Tech Center	25,925	Offices	UCF	$16,830,000	E&G	$388,875	General Revenue

Minutes
Board of Trustees Teleconference
University of Central Florida
July 26, 2012

Chair Michael J. Grindstaff called the meeting of the Board of Trustees to order at 10:21 a.m. in the President's Board Room, Millican Hall, on the UCF Orlando campus.

In addition to Chair Grindstaff, Vice Chair Olga Calvet attended the meeting.

The following board members attended the meeting via teleconferencing: Trustees Jim Atchison, Ida Cook, Alan Florez, Ray Gilley, Marcos Marchena, Harris Rosen, John Sprouls, and Cortez Whatley.

WELCOME

Grindstaff welcomed the board members and requested that the roll be called. A quorum was present.

Grindstaff called for approval of the May 24 and June 25, 2012, board meeting minutes, which were approved as written.

Grindstaff reminded the board that the meeting was covered by the Florida Sunshine Law and that the public and press were invited to attend.

REMARKS

President John C. Hitt announced that UCF has been preparing for a fall student enrollment estimated to be between 59,000 and 60,000.

Hitt remarked that the UCF football team had the highest annual grade point average in Conference USA this past year. The football team has also dominated the preseason media poll in Conference USA.

CONSENT AGENDA

Grindstaff read the consent agenda items into the record. A motion was made to accept the consent agenda, and members of the board unanimously approved the following actions.

- **CL-1 Memorandum of Understanding for Instructor and Lecturer Promotion Path between the University of Central Florida Board of Trustees and the United Faculty of Florida –** Ratification of the memorandum of understanding between the University of Central Florida Board of Trustees and the United Faculty of Florida.

- **CL-2 Memorandum of Understanding on Article 14: Promotion and Article 15: Tenure between the University of Central Florida Board of Trustees and the United Faculty of Florida –** Ratification of the memorandum of understanding between the University of Central Florida Board of Trustees and the United Faculty of Florida.

- **EP-1 Conferral of Degrees –** Concurrence with the conferral of degrees at the Summer 2012 commencement ceremonies on August 4.

  2,950 baccalaureate degrees
  534 master's degrees
  104 doctoral and specialist degrees
  3,588 total

- **FF-1 Amended Payment Schedule for UCFAA Loans to the University –** Approval of amended payment schedule for UCFAA loans to the university.

- **FF-2 Increased Line of Credit for UCFAA Operations –** Approval to increase the operating line of credit for UCFAA from $1.2 million to $2 million.

- **FF-3 2012-13 Direct Support Organizations' Budgets –** Approval of the 2012-13 operating budgets for the following DSOs: Golden Knights Corporation, UCF Athletics Association, UCF Convocation Corporation, UCF Finance Corporation, UCF Foundation, and UCF Research Foundation.

- **FF-4 Renaming of Math and Physics Building –** Approval to change the name of the Math and Physics Building to the Mathematical Sciences Building.

INFORMATION

- **INFO-1 2013-14 UCF Board of Trustees Meeting Dates** – Grindstaff made a motion that was seconded and passed by the board approving the list of the 2013-14 UCF Board of Trustees' meetings as provided.

ADVANCEMENT COMMITTEE REPORT

Alan Florez, Vice Chair of the Advancement Committee, announced that there was no report for the committee.

AUDIT, OPERATIONS REVIEW, COMPLIANCE, AND ETHICS COMMITTEE REPORT

Jim Atchison, Chair of the Audit, Operations Review, Compliance, and Ethics Committee, reported the highlights from the committee meeting earlier in the day.

- Amy Voelker, Director, University Audit, reported on the College of Medicine Self-insurance Program Financial Statement audit and the 2012-13 University Audit Work Plan.
- Rhonda L. Bishop, Chief Compliance and Ethics Officer, gave a University Compliance, Ethics, and Risk Management Program update.

COMPENSATION AND LABOR AD HOC COMMITTEE REPORT

John Sprouls, Chair of the Compensation and Labor Ad Hoc Committee, reported that the committee met on June 27, 2012. Sprouls noted the items approved in the consent agenda and presented the following item for board consideration.

- **CL-3 Memorandum of Understanding for a Domestic Partner Health Care Stipend Benefit Between the University of Central Florida Board of Trustees and the United Faculty of Florida –** A motion was made and passed by the board approving the committee's recommendation to not approve the memorandum of understanding for a domestic partner health care stipend benefit between the University of Central Florida Board of Trustees and the United Faculty of Florida.

EDUCATIONAL PROGRAMS COMMITTEE REPORT

Ida Cook, Chair of the Educational Programs Committee, noted the item approved in the consent agenda.

FINANCE AND FACILITIES COMMITTEE REPORT

Olga Calvet, Chair of the Finance and Facilities Committee, noted the items approved in the consent agenda and presented the following item for board approval.

- **FF-5 Five-year Capital Improvement Plan** – A motion was made and passed by the board approving the capital improvement plan for 2013-14 through 2017-18.

Calvet presented the following item for board approval.

- **FF-6 Authorization to Proceed with a Request for Proposals to Develop an On-Campus Site for an Organic or Natural Foods Grocery –** A motion was made and passed by the board authorizing William F. Merck II, Vice President for Administration and Finance and Chief Financial Officer, to proceed with a request for proposals to develop an 11-acre parcel of land on campus fronting on Alafaya Trail for an organic or natural foods grocery and adjacent retail operation.

Calvet congratulated Brad Stricklin, Senior Associate Athletic Director of Business and Chief Financial Officer, on receiving the *Orlando Business Journal* Nonprofit Chief Financial Officer of the Year award.

NOMINATING AND GOVERNANCE COMMITTEE REPORT

Ray Gilley, Chair of the Nominating and Governance Committee, announced that there was no report for the committee.

STRATEGIC PLANNING COMMITTEE REPORT

Alan Florez, Chair of the Strategic Planning Committee, announced that there was no report for the committee.

NEW BUSINESS

Hitt clarified an article in the *Orlando Sentinel* dated July 26, 2012, relating to payment of exit fees from Conference USA.

ANNOUNCEMENTS AND ADJOURNMENT

Chair Grindstaff announced the following upcoming meetings:

Board of Governors meeting	September 12-13, 2012 (Florida Gulf Coast University)
Board of Trustees meeting	September 27, 2012 (Live Oak Center)

Grindstaff adjourned the board meeting at 10:48 a.m.

Respectfully submitted: _____Date: _____

John C. Hitt
Corporate Secretary

THE RAAD-TANNOUS ENGINEERING GROUP, INC.

214 N. Goldenrod Road, Suite A5
Orlando, Florida 32807

Phone No. 407 382-2415 *Fax No. 407 382-9625*

December 3, 2012

University of Central Florida
Colbourn Hall
4000 Central Florida Boulevard
Orlando, Florida 32816

Attention: Mr. James Davis, Director of Facilities Planning & Construction

Subject: ***Visual Structural Assessment & Analysis of Existing Building at Colbourn Hall located at the University of Central Florida***

Dear Mr. Davis:

As requested, RTEG, INC. has conducted a limited, visual assessment and analysis of the existing structural framing systems and exterior façade on the existing 5 story Colbourn Hall building located at the University of Central Florida in Orlando, Florida. This visual assessment is based on site visits performed on June 20, 2012 by Raad H. Raad, P.E., Chris Scroggins, P.E. and representatives from Clancy & Theys Construction Company, on October 3, 2012 by Raad Raad, P.E., Chris Scroggins, P.E. and representatives from Clancy & Theys Construction Company, on October 24, 2012 by Raad Raad, P.E. and representatives from Clancy & Theys Construction Company, and on October 29, 2012 by Raad Raad, P.E., Chris Scroggins, P.E. and representatives from Clancy & Theys Construction Company. The purpose of this investigation was to observe and identify the existing gravity and lateral structural framing systems relative to the existing design drawings, to determine the structural adequacy of the existing construction, and to provide recommendations regarding the existing structure relative to compliance with the current 2010 Florida Building Code. This document provides a summary of the findings, observations, and recommendations of the repairs performed at the property.

Executive Summary

The following summarizes our key opinions and recommendations that are presented in the remainder of this document:

- The existing CMU walls must be reinforced vertically and a continuous bond beam should be provided at the top of the wall, bracing back to the structure.
- The existing brick façade should be removed and properly anchored to the reinforced masonry walls.
- The existing exterior doors and windows should be removed and replaced with new products properly anchored into solid grouted masonry cells and braced back to the building structure.
- The damaged structural steel should be cleaned and supplemented or removed and replaced as

required. All welded connections should be reviewed by an independent testing agency and replaced/supplemented as necessary.

- Additional lateral bracing should be designed and installed between existing columns to resist the additional lateral loads imposed on the building structure in accordance with the current building code.
- The existing steel handrails at the 2nd and 3rd floor exterior walkways should be removed and replaced and the exterior concrete stair from the ground level to the 2nd floor should be repaired.
- All supplemental design, construction, and repairs to the structure should comply with the 2010 Florida Building Code and be performed by a licensed general contractor under the supervision of a licensed Threshold Inspector as required by the Florida Statutes.

Description of the Structure

The existing structure can be described as a 5 story commercial office building located centrally on the main campus of the University of Central Florida. Based on information from the original Architectural drawings issued by Paras Associates, the original 84,000 SF building was designed in accordance with the Southern Standard Building Code (no year/version noted) and began construction in 1973.

The original building structure is built-up roofing on metal roof deck over steel joist and joist girder roof framing, concrete slab on conform metal floor deck over steel joist and joist girder floor framing, with structural steel columns and bracing, typically. The exterior façade of the building is 4" brick with a 2" air space over reinforced 4" and 6" non-load bearing concrete masonry units (CMU), typically.

The 2nd and 3rd floors have open exterior corridors around the perimeter of the building which are constructed of concrete slab sloped away from the building towards a concrete curb with weep holes periodically along the exterior edge and structural steel handrails. The main access stairs from the 1st to 2nd floors are cast in place concrete with brick façade and structural steel handrails, typically.

The 4th floor, 5th floor, and the roof project out over the exterior walkway of the 3rd floor. Additional corbelled brick column elements begin at the 4th floor and extend up to the soffit at the roof level.

Background Information

During our investigations of the existing building, the following information was acquired:

- Construction of the original building began in 1973 and was reportedly completed in phases by several different general contractors. The exact time frame of construction could not be provided to our team at the time of this report.
- The building has reportedly undergone several minor renovations over the years but minimal documentation was available to our firm at the time of our visual assessment and report.
- The existing building drawings show minimal structural information and typically refer to structural "systems" for the structural floor framing and columns as shown on sheets A-19 and A-21. No information on the specific member sizes or connections for these "systems" can be found within the existing drawings provided.
- The foundation plan on sheet S-1 shows minimal structural information other than the concrete slab-ongrade thickness and reinforcing. The foundation details on sheet S-2 of the existing drawings show thickened slabs under all non-bearing CMU walls, but also show new columns supported on existing concrete footings with existing anchor bolts. No information is provided on these existing

foundations that support the existing 5 story building.

- A structural investigation of the existing brick façade was performed by Carl W. Jenne, P.E. of Allan and Conrad, Inc. and his summary report was issued on October 6, 2011.
- Supplemental architectural and structural details were issued by C.T. Hsu + Associates, P.A. on November 10, 2011 to address the observed deficiencies at the 1st floor level as part of an interior renovation project on Colbourn Hall.

Visual Observations

1. Horizontal ladder reinforcing connecting the brick to the CMU wall is not flat. The wire appears to have been too long so the contractor bent the wire up to the next brick coarse and set in mortar (see Pictures #1 & #2).
2. The CMU walls do not appear to have vertical reinforcing in solid grouted cells as required by the original Architectural drawings. Without proper reinforcing, the exterior walls are not sufficient to resist the lateral wind loads (see Pictures #3 & #4).
3. There is not a continuous solid grouted masonry course at the top of the CMU walls as required by the original Architectural drawings. Consequently, the ½" diameter anchor bolts at 2'-6" on center bracing the CMU wall back to the steel joist are not connected to anything creating an un-braced condition at the top of the non-bearing CMU wall (see Picture #5).
4. There are no cold-formed metal framed (CFMF) studs within the joist depth to support the ½" asphalt treated gyp-sheathing behind the brick façade as required by the original Architectural drawings (see Picture #6).
5. The joist bridging at floor joists and roof joists is not continuous across all joists as required by the Steel Joist Institute (SJI).
6. Areas where continuous brick-ledge angles are shown on the drawings are discontinuous in the field with no additional vertical supports (see Picture #7).
7. Welded connections appear to be inadequate in various locations (see Picture #8).
8. Steel king posts and masonry walls at the high roof projection areas at the corners of the building are supported by steel roof joists with minimal connections. These areas also appear to have water intrusion issues due to the condition of the supporting structural steel (see Pictures #9 & #10).
9. There appears to be inadequate lateral support at the top of the windows, typically. In some locations there is structural steel framed down from the bottom of the joists but there does not appear to be a continuous member at the top of the window nor is there any diagonal bracing from the top of the window back to the joist or deck (see Pictures #11 & #12).
10. The door and window frames along the exterior corridors on the 2nd and 3rd floors are anchored into brick that has inadequate anchorage to the CMU wall to resolve the wind loads. The CMU wall in turn is unsupported at the top as there is no solid grouted bond beam and connection to the steel joist above (see item #3 above and Pictures #13 & #14).
11. Water intrusion from the 2nd and 3rd floor exterior corridors has damaged the structural steel floor framing and column supports below (see Pictures #15 to #20).
12. The corbelled brick column elements that start at the 4th floor and extend up to the roof level appear to be supported by a cantilevered steel angle at the top of the floor joist (see Picture #21). It is unknown if this condition repeats at the 5th floor as well to aid in support of the additional weight of this element. The two locations that these corbelled columns were accessible were constructed differently.
13. No braced frames were evident in the areas of the building that were accessible during our site visits. The only main wind frame resisting system (MWFRS) appeared to be a moment connection from the joist/joist girder to each 10"x10" steel tube column. A quick analysis of a typical column line under lateral loading based on the 2010 Florida Building Code with moment connections between

the joists and columns resulted in overstressing of all structural members along with a considerable lateral displacement.

14. The exterior stairs and handrails on the 2nd and 3rd floors show extensive damage as noted in our previous report regarding the exterior brick façade dated June 29, 2012 and could potentially impact the life safety of the building.

Comments & Recommendations

Based on the visual observations at the time of our site visits, the following are comments and recommendations offered by RTEG, INC. These comments and/or recommendations are conceptual in nature and are based on a reasonable degree of professional certainty.

- The existing connection between the brick façade and the exterior CMU wall does not appear to be adequate to resist the wind loads mandated by the 2010 Florida Building Code and transfer the loads to the main building structure. The brick façade should be removed and properly anchored to the exterior masonry wall and structural steel structure.
- Vertical reinforcing steel should be added to the existing CMU walls. An analysis of the wind loading for this 5 story building using ASCE/SEI 7-10 as referenced by the 2010 Florida Building Code results in 34 PSF loading at Zone 4 (the typical exterior walls) and 63 PSF loading at Zone 5 (the end zones which occur within 12'-0" of the building corners), typically. Under these lateral loading conditions and the current masonry code, the required reinforcing for a 6" CMU wall is #5 bars spaced at 32" on center in solid grouted cells for the typical exterior walls (Zone 4) and #5 bars spaced at 16" on center in solid grouted cells for the corner conditions (Zone 5).
- The existing exterior doors and windows should be removed and replaced with new products that meet the current Florida Product Approvals. The new exterior windows and doors should be properly anchored into solid grouted masonry cells and braced back to the building structure.
- The visible damage to the structural steel joists and columns, specifically below the 2nd and 3rd floor exterior corridors, appears to be significant. These members should be cleaned and supplemented or replaced depending on the severity of the damage. The exterior walkways at the 2nd and 3rd floors should be reviewed with an Architect and/or waterproofing consultant to remediate the existing water intrusion issues and prevent any further damage. One possible solution is to enclose these exterior walkways and keep the building envelope at the vertical exterior face of the building.
- The exterior corbelled brick column elements that start at the 4th floor should be removed and designed/reconstructed to distribute the weight evenly at each floor.
- Additional lateral bracing such as X-bracing constructed of tube steel members should be designed and installed between existing columns at each column line to resolve all lateral loads and transfer these forces to the foundations. In addition, the existing foundations should be excavated and field verified in order to confirm that the existing footings and subgrade are not overstressed.
- The existing steel handrails at the 2nd and 3rd floor exterior walkways should be removed and replaced immediately.
- The existing concrete stairs from the ground level to the 2nd floor should be removed and replaced.

General Recommendations

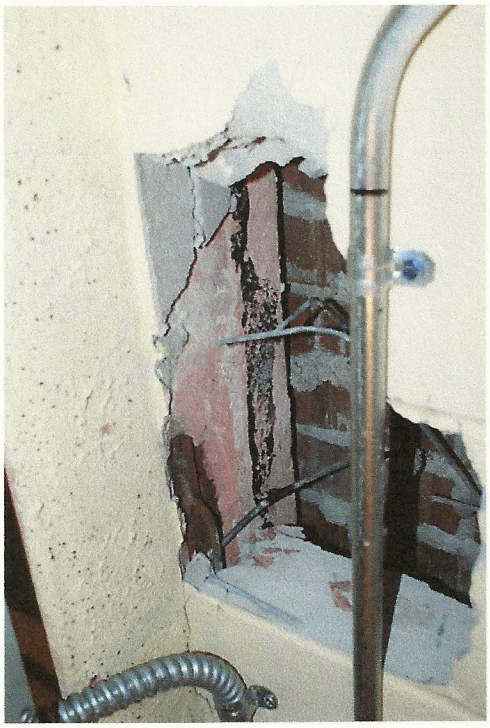
- The 2010 Florida Building Code requires that all buildings undergoing renovations that exceed 50% of the building value must be brought up to the current building code. If renovation of the existing building is to proceed and the building is to be brought up to the current Code, substantial remediation will be required for the entire building envelope. Additional bracing between columns to create lateral frames may be required for support against the wind in both directions, and the existing foundations will need to be verified in the field.
- All structural and non-structural repairs should comply with ASCE/SEI 7-10: Minimum Design Loads for Buildings and Other Structures as referenced by the 2010 Florida Building Code and all other referenced standards.
- All work should be performed by a licensed contractor in accordance with the applicable codes, ordinances, and standard building practices under the supervision of a licensed Threshold Inspector as required by the Florida Statutes for this size building.
- RTEG, INC. should be notified in writing upon discovery of any additional structural damage.

Limits of Study

This document was prepared for the exclusive use of the University of Central Florida, and was not intended for any other purpose. The observations, comments, and/or recommendations contained herein are based upon information provided to us at the time of this document's preparation. The evaluation performed on the above dates was a limited visual assessment and the structural analysis was assumptive in nature. Areas hidden from view such as within walls, floors, or otherwise not accessible, were not examined. Additional structural analysis need to be performed on this building in order to determine the magnitude of revisions estimated to be required by updating the structure to the current Building Code. This document does not address any subsurface, architectural, mechanical, electrical, or plumbing issues. Please note that RTEG, INC. reserves the right to revise the observations, comments, and/or recommendations above as we become aware of changed conditions or additional information. This document was prepared for the sole use of the University of Central Florida Facilities Planning & Construction Department and RTEG, INC. disavows any liability for use by others.

Our firm appreciates the opportunity to have assisted you with this investigation. Please call if there are any questions regarding the information outlined above, or if we may be of further assistance.

THE RAAD-TANNOUS ENGINEERING GROUP, INC.
Raad H. Raad, P.E.
Florida Registration No. 45354
Special Inspector No. 989



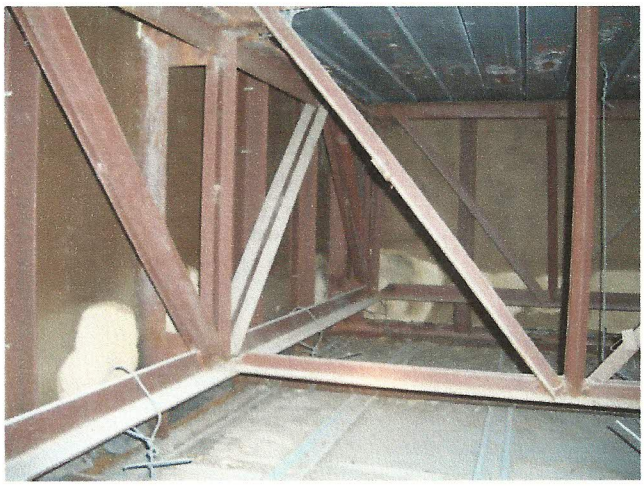
Picture #1:
Horizontal Ladder Reinforcing at Brick/CMU Wall

Picture #2
Horizontal Ladder Reinforcing at Brick/CMU Wall

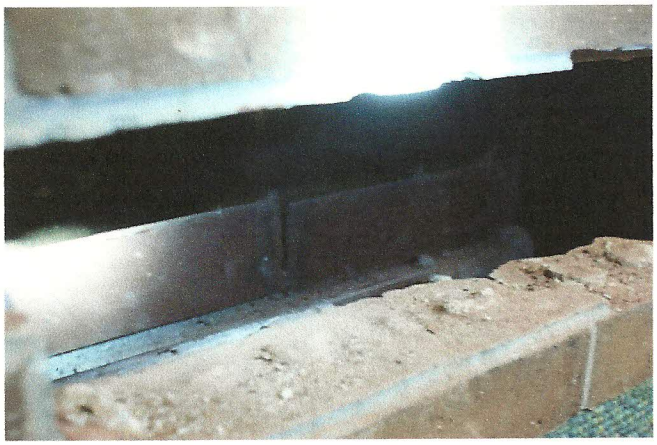
Picture #3:
Void Cells in Exterior CMU Wall

Picture #4:
Void Cells in CMU Exterior Wall

Picture #5:
Top of CMU Wall is not Grouted Solid



Picture #6
No Metal Studs behind Sheathing at Joists/Brick

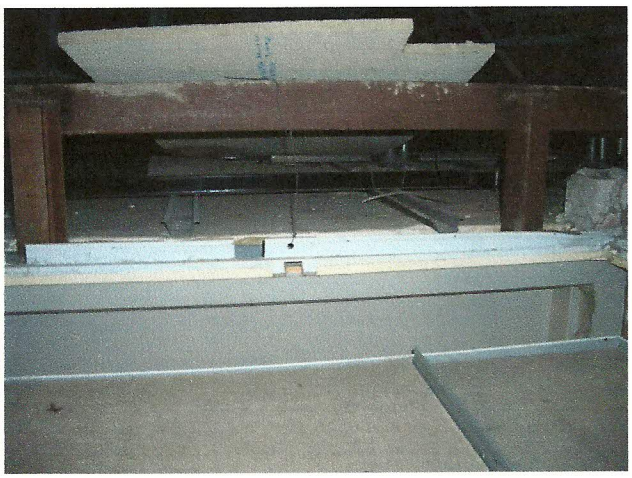


Picture #7:
Dis-continuous Steel Angle

Picture #8:
Typical Joist/Joist Girder Welds to Steel Column

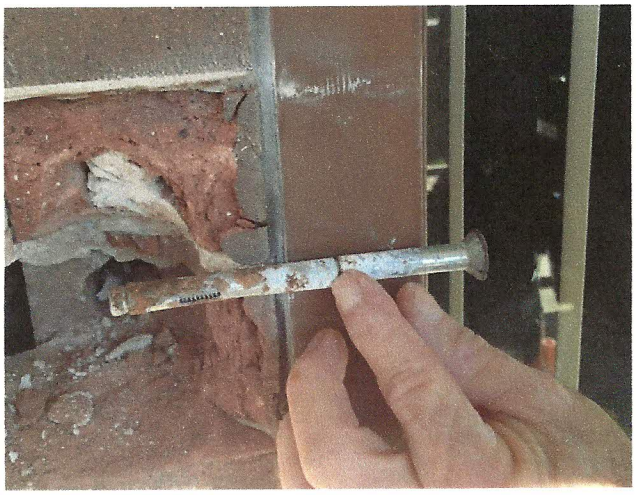
Picture #9:
Steel King Post & CMU Wall on Joist @ High Roof

Picture #10
Steel King Post & CMU Wall on Joist @ High Roof



Picture #11:
Steel Support at Top of Window Frame

Picture #12
Steel Support at Top of Window Frame



Picture #13:
Exterior Door Frames Anchored into Hollow Brick

Picture #14:
Exterior Door Frames Anchored into Hollow Brick

Picture #15:
Steel Floor Framing Damaged from Water Intrusion

Picture #16
Steel Floor Framing Damaged from Water Intrusion

Picture #17:
Steel Floor Framing Damaged from Water Intrusion

Picture #18
Steel Floor Framing Damaged from Water Intrusion

Picture #19:
Steel Floor Framing Damaged from Water Intrusion

Picture #20:
Steel Floor Framing Damaged from Water Intrusion

Picture #21:
Corbeled Brick Column Construction Starting @ 4th Floor