August 14, 2014

MEMORANDUM

TO: Dr. Mark A. Hussey  
Interim President, Texas A&M University

SUBJECT: CBE Recommendation: CARC AFDL Riverside Expansion

At its August 12, 2014 meeting, the Council for the Built Environment (CBE) discussed a request from the College of Architecture to expand the Automated Fabrication and Design Lab (AFDL) which is located on Riverside Campus. The current facility was originally constructed about a decade ago, and such expansion was contemplated, and is consistent with the original proposal advocated by CARC and approved by the Campus Facilities Planning Commission (CFPC) in 2004.

The expansion consists of four smaller buildings containing two 24'x24' compartments, two 40'x60' buildings, a small restroom facility, and the potential for a large covered area down the spine to provide shelter for outdoor projects. The design team is still determining the appropriate distance between buildings based on code requirements and intended use. The pre-engineered metal buildings will be sited on a new concrete slab, and the exterior aesthetics will match in color and materials of the existing building.

Additional parking spaces will be added at the rear of the site as currently there are only (3) three parking spaces. Each building will be conditioned through the use of a window unit that is designed to provide heating and cooling. Due to the varied building sizes, the roof heights will not be consistent. As a result of the expansion, the project team is still studying how to handle run-off and drainage issues.

Recommendations from the Sub-Councils:

Design Review Sub-Council (DRsc) – The DRsc recommends approval of the request for the expansion of the Automated Fabrication and Design Lab as proposed, with the following caveats:

- Further review of the design shall be presented to the Design Review sub-council at 100% Schematic Design stage, in accordance with DRsc procedures. Of particular interest to the sub-council will be the development of a landscape plan and details on the potential shade structure(s) and their connection(s) to the existing and new buildings.

Facilities Utilization Review Sub-Council (FURsc) - The FURsc recommends approval of the request for the College of Architecture to expand their Automated Fabrication Facility at the Riverside Campus. The FURsc believes the proposed use and additional space to be justified and is consistent with the original land assignment made to the College in 2004. To address existing parking issues associated with the use of the site, the FURsc recommendation assumes that the parking associated with the expanded use will be accommodated within the original land assignment.
Technical Review Sub-Council (TRsc) - The TRsc supports the proposed Expansion of the College of Architecture Automated Fabrication and Design Lab- Riverside Campus and recommends approval, provided the following issues/concerns are addressed and funded.

- Facilities Services:
  The project team should ensure that the facility is designed in accordance with all applicable laws, regulations and codes, including the Life Safety Code and the Americans with Disabilities Act. The design team needs to ensure that the project does not increase the rate of storm runoff into local creeks.

  The project team should coordinate with Grounds Management for landscaping and irrigation concerns. The project team should ensure that the facility is designed to minimize, as much as practical, the effort needed for future maintenance. It is preferred that items requiring maintenance be easy to service, be easily accessible from ground or floor level, have generous clearances and be easy to isolate from energy sources with minimal impact to the rest of the facility. Elevated items requiring maintenance that are difficult to service by ladder or lift should have permanent maintenance access platforms with permanent stairs or ladders, built-in fall prevention, and davits for hoisting parts and tools.

- EHS and SASE:
  - Fire detection systems must be installed in the additional buildings.
  - Fire suppression systems must be installed in the additional buildings.

The CBE voted unanimously to recommend the President’s approval, with noted caveats, the request from the College of Architecture to expand the Automated Fabrication and Design Lab (AFDL) on Riverside Campus.

Karan L. Watson  
 Provost and Executive Vice President for Academic Affairs  
 Co-Chair, Council for the Built Environment  
 8-18-14  

B. J. Cain  
 Vice President for Finance and Administration  
 Co-Chair, Council for the Built Environment  
 8-15-14  

Concur or not concur with CBE’s recommendation:

Mark A. Hussey  
 Interim President  
 8-21-2014  

cc: Sub-Council Chairs, Council for the Built Environment
Memo

Date: June 2, 2014

To: CBE Subcommittee on Facilities Utilization

Through: Dr. Karan Watson, Provost and Executive Vice President
         Ms. B.J. Crain, Vice President for Finance and Administration

From: Jorge A. Vanegas, Dean
       College of Architecture

Subject: Request for Approval of the Expansion of the College of Architecture Automated Fabrication and Design Lab – Riverside Campus

To all:

Howdy! The intent of this memorandum is to formally request permission to expand the Automated Fabrication and Design Lab (AFDL) of the College of Architecture (CARC), which is located on the Riverside Campus. The current facility was originally constructed about a decade ago, and such expansion was contemplated, and is consistent with, the original proposal advocated by CARC and approved by the Campus Facilities Planning Commission (CFPC) in 2004 (see Appendix A).

Our currently proposal (see Appendix B) relies heavily on the use of multiple pre-engineered buildings placed on a single concrete slab to make the most efficient use of our available resources. The proposed design is completely consistent with the original building. The use of multiple secure small buildings will create assignable “assembly” spaces for projects fabricated in the main building, thus allowing multiple clients, whether students, faculty, or staff, to work on their individual projects independently of the formal hours of the AFDL.
Appendix A

Original Proposal
Area with concrete slab and roof:

- $40 \times 120 = 4,800 \text{sf}$
- $20 \times 60 = 1,200 \text{sf}$
- $60 \times 40 \times 120 = 28,800 \text{sf}$

Total: $15,000 \text{sf}$
($333.33 \$/\text{sf}$)

Interior for Classroom/Lab/Office:

- $30 \times 110 = 3,300 \text{sf}$

Interior for Shop (1F):

- $60 \times 100 = 6,000 \text{sf}$

Interior for Shop (2F):

- $15 \times 100 = 1,500 \text{sf}$

Interior Floor Area Total: $14,800 \text{sf}$
There will be doors and windows to Classroom/Lab Offices.

Courtyard view
September 06, 2pm

Northwest view
Appendix B

Current Expansion Proposal
Automated Fabrication and Design Lab at Texas A&M University

3100 HWY 47, Building 7007
Bryan, Texas
77807

Proposed Expansion
Perspective Bird's Eye View from the North
Materials and Building Overview

Each Kit Includes:
- Bolt together frame
- Coldform end walls
- 26 gauge Galvalume roof with 20-year limited warranty
- 26 gauge Colored walls with 30-year limited warranty (White, Tan, Light Stone, Light Gray)
- Basic trim package
- Anchor Bolt plans, and erection drawings
- Framed opening centered in one end wall

26 gauge Colored Siding

26 gauge Galvalume roof

Color Options For Siding

Rolled insulation for the inside of the Buildings
MEMORANDUM

TO: Dr. Karan Watson  
Co-Chair, Council for the Built Environment

Ms. B.J. Crain  
Co-Chair, Council for the Built Environment

FROM: Ms. Lilia Gonzales, AIA  
University Architect and Chair, Design Review Sub-Council

DATE: July 1, 2014

RE: Design Review Sub-Council (DRsc) Report  
Expansion of College of Architecture Automated Fabrication and Design Lab – Riverside Campus

On June 11, 2014 the Design Review sub-council reviewed a request from the College of Architecture for expansion of its Automated Fabrication and Design Lab (AFDL) at Riverside Campus. The expansion of the AFDL, also known as Architecture Ranch, was originally approved in 2004 but was not constructed at the time due to a lack of funding.

The expansion consists of four smaller buildings containing two 24’x24’ compartments, two 40’x60’ buildings, a small restroom facility, and the potential for a large covered area down the spine to provide shelter for outdoor projects. The design team is still determining the appropriate distance between buildings based on code requirements and intended use. The pre-engineered metal buildings will be sited on a new concrete slab, and the exterior aesthetics will match in color and materials of the existing building.

Additional parking spaces will be added at the rear of the site as currently there are only (3) three parking spaces. Each building will be conditioned through the use of a window unit that is designed to provide heating and cooling. Due to the varied building sizes, the roof heights will not be consistent. As a result of the expansion, the project team is still studying how to handle run-off and drainage issues.

Recommendation
The DRsc recommends approval of the request for the expansion of the Automated Fabrication and Design Lab as proposed, with the following caveats:

- Further review of the design shall be presented to the Design Review sub-council at 100% Schematic Design stage, in accordance with DRsc procedures. Of particular interest to the sub-council will be the development of a landscape plan and details on the potential shade structure(s) and their connection(s) to the existing and new buildings.

Please let me know if you need additional information. Selected images are attached for your review.

cc: Lou Tassinany  
DRsc Members  
Bettyann Zito
There are several contemporary architectural examples such as the 2006 'Architectural Ranch' (2007), a facility for full-scale construction and digital fabrication, which shows how a new structure can embrace the cultural heritage values of the Riverside campus while meeting contemporary research needs. The design of the building reflects the sensibilities of the industrial architecture of WWII, mimicking the earlier wooden structures by its metal frame and exterior siding. In addition, the building maintains a similar mass and height to earlier buildings.

Riverside Campus Plan (p. 18)
The Problem
MEMORANDUM

To: Dr. Karan Watson  
Chair, Council for the Built Environment  
Ms. B.J. Crain  
Chair, Council for the Built Environment

Subject: Expansion of Architecture’s Automated Fabrication & Design Lab – Riverside Campus

RECOMMENDATION

The Council for the Built Environment’s (CBE) Facilities Utilization Review sub-committee (FURsc) recommends that the CBE support the request by the College of Architecture to expand their Automated Fabrication Facility at the Riverside Campus. The FURsc believes the proposed use and additional space to be justified and is consistent with the original land assignment made to the College in 2004. To address existing parking issues associated with the use of the site, the FURsc recommendation assumes that the parking associated with the expanded use will be accommodated within the original land assignment.

SCOPE

The FURsc met this morning to consider the request by the College of Architecture to enlarge their current facilities at the Riverside Campus. The specific proposal is to construct additional space to support student and faculty research projects as part of the Automated Fabrication & Design Laboratory. The original development of this site was approved in 2004, known then as the “Architecture Ranch” as a place to provide a facility for students and faculty to fabricate and explore project design options. The College was assigned a site of approximately 15 acres; to-date they are regularly using about a quarter of that area.

The current proposal is to construct a series of pre-engineered buildings with open access to serve as assembly spaces for projects fabricated within the existing main building, allowing the students, faculty and others to better utilize the site, which is intended to enhance their practical learning experience. Pending the final project design, the new construction would add about 10,000 square feet to the site, including a men and women’s restroom building. Currently, due to the lack of spaces, the Architecture patrons are parking randomly off-site, creating issues for other Riverside Campus users. It is hoped that the new development will provide sufficient on-site parking for users. The budget for the entire project is $1 million.

We are pleased to offer this recommendation and welcome further inquiries related to this analysis.

Sincerely,

James Massey  
Chairman, CBE-Facilities Utilization Review sub-council  
Interim Associate Vice President for Facilities

Attachments

CC: CBE-FURsc members
Memo

Date: June 2, 2014

To: CBE Subcommittee on Facilities Utilization

Through: Dr. Karan Watson, Provost and Executive Vice President
        Ms. B.J. Crain, Vice President for Finance and Administration

From: Jorge A. Vanegas, Dean
       College of Architecture

Subject: Request for Approval of the Expansion of the College of Architecture Automated Fabrication and Design Lab – Riverside Campus

To all:

Howdy! The intent of this memorandum is to formally request permission to expand the Automated Fabrication and Design Lab (AFDL) of the College of Architecture (CARC), which is located on the Riverside Campus. The current facility was originally constructed about a decade ago, and such expansion was contemplated, and is consistent with, the original proposal advocated by CARC and approved by the Campus Facilities Planning Commission (CFPC) in 2004 (see Appendix A).

Our currently proposal (see Appendix B) relies heavily on the use of multiple pre-engineered buildings placed on a single concrete slab to make the most efficient use of our available resources. The proposed design is completely consistent with the original building. The use of multiple secure small buildings will create assignable "assembly" spaces for projects fabricated in the main building, thus allowing multiple clients, whether students, faculty, or staff, to work on their individual projects independently of the formal hours of the AFDL.
Appendix A

Original Proposal
ARCHITECTURE RANCH – RIVERSIDE CAMPUS

College of Architecture
Texas A&M University

July 26, 2004
Dean Tom Regan
Prof. Tsug Nishimoto
Area with concrete slab and roof:

- \(40 \times 20 = 800 \text{sf}\)
- \(20 \times 30 = 600 \text{sf}\)
- \((50 + 40) \times 120 = 12,000 \text{sf}\)

Total: 18,000sf

\(\$95/\text{sf}\)

Interior for Classroom/Lab/Office:
\(30 \times 110 = 3,300 \text{sf}\)

Interior for Shop (1F):
\(60 \times 100 = 6,000 \text{sf}\)

Interior for Shop (2F):
\(15 \times 100 = 1,500 \text{sf}\)

Interior Floor Area Total: 10,800sf
Appendix B

Current Expansion Proposal
Automated Fabrication and Design Lab at Texas A&M University

3100 HWY 47, Building 7007
Bryan, Texas
77807

Proposed Expansion
Materials and Building Overview

Each Kit Includes:
- Bolt together frame
- Coldform end walls
- 26 gauge Galvalume roof with 20-year limited warranty
- 26 gauge Colored walls with 30-year limited warranty (White, Tan, Light Stone, Light Gray)
- Basic trim package
- Anchor Bolt plans, and erection drawings
- Framed opening centered in one end wall

26 gauge Colored Siding

26 gauge Galvalume roof

Color Options For Siding

Rolled insulation for the inside of the Buildings
MEMORANDUM

TO: Dr. Karan Watson
Co-chair, Council on the Built Environment

Ms. B. J. Crain
Co-chair, Council on the Built Environment

FROM: Tom Reber
Chair, CBE Technical Review Sub-council

DATE: June 30, 2014

SUBJECT: CBE TRsc Recommendation: Expansion of the College of Architecture Automated Fabrication and Design Lab – Riverside Campus

On June 30, 2014 Dr. Luo Tassinari, Executive Associate Dean presented to the CBE’s Technical Review Sub-council on the proposed Expansion of the College of Architecture Automated Fabrication and Design Lab – Riverside Campus. The proposal relies heavily on the use of multiple pre-engineered buildings placed on a single concrete slab to make the most efficient use of available resources.

Recommendation
The Technical Review Sub-council supports the proposed Expansion of the College of Architecture Automated Fabrication and Design Lab – Riverside Campus and recommends approval, provided the following issues/concerns are addressed and funded.

Facilities Services:
The project team should ensure that the facility is designed in accordance with all applicable laws, regulations and codes, including the Life Safety Code and the Americans with Disabilities Act. The design team needs to ensure that the project does not increase the rate of storm runoff into local creeks.

The project team should coordinate with Grounds Management for landscaping and irrigation concerns. The project team should ensure that the facility is designed to minimize, as much as practical, the effort needed for future maintenance. It is preferred that items requiring maintenance be easy to service, be easily accessible from ground or floor level, have generous clearances and be easy to isolate from energy sources with minimal impact to the rest of the facility. Elevated items requiring maintenance
that are difficult to service by ladder or lift should have permanent maintenance access platforms with permanent stairs or ladders, built-in fall prevention, and davits for hoisting parts and tools.

**EHS and SASE:**
EHS comments on the CARC AFDL Riverside Expansion proposal:
1. Fire detection systems must be installed in the additional buildings.
2. Fire suppression systems must be installed in the additional buildings.

**Transportation Services:**
No concerns with this project.

**CIS:**
No concerns with this project.

**FCOR/GIS:**
No concerns with this project.

**Telecommunications:**
No concerns with this project.

**Utility & Energy Services:**
No concerns with this project.

**University Police:**
No concerns with this project.

**Procurement Services:**
No concerns with this project.

**Cc:**
- CBE Technical Review Sub-council
- CBE Support Staff