UNIVERSITY of HOUSTON

Facilities Contract Training
Date: 11/18/2016

Goal

To increase training of FPC staff to include formal and informal opportunities for professional and technical training and certification as well as training specific for FPC processes

Agenda

1. November Birthdays – 5 minutes
2. Past Meeting Takeaways – 5 minutes
3. Tradeline Conference - 15 minutes
4. APPA Conference – 15 minutes
5. TCUF Conference – 15 minutes
6. Future Topics, Questions & Answers – 5 minutes

BARRY SIMMONS

November 1

JIM NORCOM

November 12

CHRISTA RIECK

November 16

KENNETH TOLBERT

November 26

CESAR VILLAGRAN

November 27

Past Meeting Takeaways

Funding Sources

1. CCB/TRB – Capital Construction Bonds/Tuition Revenue Bonds
    a. Debt issued with the purpose of being used for Capital Construction or Major Renovation on Campus
2. HEAF – Higher Education Assistance Funds
    a. Funds received from the state or statutory tuition
1. Designated
    a. Designated - Collected locally for sales and services, designated tuition, student course/class fees, facilities and administrative charges
3. Auxiliary Funds
    a. Collected locally for auxiliary operations (student affairs fees, housing, parking, athletics)
4. Restricted Funds (Gifts & Research)

Funding Codes

1. Business Unit – Normally 00730. For system projects will be 00783. We do not handle funding of Downtown, Victoria or Clear Lake
2. Department Code – H0184 is FPC, H0183 is FM
3. Program Code – Helps denote whether funds are local or state. However the Fund Code now used for this function
4. Project Number – Project cost centers will have a Pxxxxxx, Sxxxxxx or Mxxxxxx. The department cost centers do not use this convention and instead uses NA

College and University Science and Engineering Facilities 2016

Interdisciplinary Spaces • Mixed Teaching and Research • Modernization • Entrepreneurship and Maker Space

October 27-28 – Boston, Massachusetts FALL

Tradeline Overview — Shannon Jones
Lab Design Workshop — Ken Oliver

Tradeline

Tradelineinc.com

- Tradeline manages a no-cost membership of planning and management professionals who design, build and operate Science and Engineering facilities.
- Architects, engineers, builders, equipment vendors and consultants that provide products and services to the facilities planning and management industry use Tradeline to deliver their message to thousands of current facilities planners and managers from the nation's leading corporations, institutions, military and government agencies.
- They collect and maintain a free searchable online portal used by thousands of facilities management professionals to capture the most up-to-date information.
  - Provides information on: project case studies, lab recognized standards, certifications, reports, breaking industry news, capital project data, resources, project tools, academic research, newly released publications, professional development courses, CES units, jobs and networking opportunities.
- Tradeline's presents a series of annual conferences that focuses on highly technical facilities on corporate and institutional campuses.

Annual Conferences

- Strategic facilities planning
- Planning, design, and construction for Science and Engineering facilities renovations, expansions and new construction
- Space planning and management
- Management and operations of real estate and facilities

Science and Engineering Facilities Conference

Boston 26-29 Oct

- 26 Oct — Laboratory Planning & Design Workshop (K. Oliver)
- 27 - 28 Oct — STEM Project Successes (Oliver/Jones)
- 29 Oct (Lab Facility Tours) — The Interdisciplinary Science and Engineering Complex (ISEC), Northeastern University
  The Center for Integrated Life Sciences and Engineering (CILSE), Boston University (K. Oliver)

- Interdisciplinary Spaces:
- New innovation for adding multiple research groups with similar programs that combines two or more disciplines into one activity.
- It is about creating something new by crossing boundaries.
- It will involve creating a lab space that will allow Researchers , students and teachers to interact in a laboratory environment.

Mixed Teaching and Research:

- The Class room is no longer just a class room. The Design intent would be to transform that same room into a Research lab (within) the same space, using mobile lab equipment and mobile fume hoods. These new ideals will increase the ability to provide true multipurpose research facility and interdisciplinary locations within your building.

•Entrepreneurship and Maker Space:

The "We Can" Makerspace will be a place that enables kids to build their ideas with real tools and materials.

- The vision behind this concept is to provide graduate students a space to develop what the students have learned in the classroom.
- An Example of this would be an engineering class of graduate students learning specifics in drone technolog and using the knowledge and building those drones in the "Maker Space" setting.
- Once the product is tested excreta, the students would collaborate with an Entrepreneur Class and market and sale the products.

Modernization:

This concept is to take a look at the existing “Neighborhood” as it relates to the existing building to be renovated. Do we simulate newer buildings concepts or do we facilitate a complete transformation to the existing building for a more modern look, (exterior and interior).

Concept here is make sure we need understand that what is happening in the building tomorrow will be different from what is happening today.

Fume Hood Density(usage) always increases over time
The amount of heat generated equipment will increase over time.

Plan for Flexibility and Future Growth.
Plan for extra growth in mechanical rooms to add additional equipment
Allow for additional shaft and ceiling spaces.

Size ducts and pipe for space capacity(inexpensive if done initially)

THANK YOU!

APPA
LEADERSHIP IN EDUCATIONAL FACILITIES

What is APPA's Purpose?

With one eye on providing excellence in today's educational environment, and one always trained on adapting, enhancing, and transforming the facilities of the future, APPA seeks to create positive impact in educational facilities on three important levels:

- APPA transforms individual facilities professionals into higher performing managers and leaders, which…
- Helps transform member institutions into more inviting and supportive learning environments, which…
- Elevates the recognition and value of educational facilities and their direct impact on the recruitment and retention of students, faculty and staff.

What Does "APPA" Stand For?

As you can see from the list below, APPA has had several names over its 100 years of existence.

APPA used to stand for the Association of Physical Plant Administrators in the late 1960's through the early 1990's. Today, the association is known as APPA: Leadership in Educational Facilities, and is most easily recognized and referred to as simply "APPA."

1914 | Association of Superintendents of Buildings and Grounds of Universities and Colleges
1948 | Association of Physical Plant Administrators of Universities and Colleges
1954 | National Association of Physical Plant Administrators of Universities and Colleges (NAPPA)
1969 | Association of Physical Plant Administrators (APPA)
1991 | APPA: The Association of Higher Education Facilities Officers
2007 | APPA: Leadership in Educational Facilities

APPA / SRAPPA/TNAPPA 2016
Partnering for Historical Success

CFaR | Center for Facilities Research
Supervisor's Toolkit
Nuts and Bolts of Facilities Supervision
EFP
Educational Facilities Professional
CEFP
Certified Educational Facilities Professional
APPA U
FMP
Evaluate. Execute. Excel.
APPA
LEADERSHIP ACADEMY
FPI
BOK
Body of Knowledge
APPA DRIVE-IN WORKSHOPS
SEO SUMMIT
JOB express
FACILITIES manager

- Over 500 facilities Officers, Directors, and Managers
- Unites States, Canada, Mexico, and the World

LEADERSHIP IN EDUCATIONAL FACILITIES

APPA / SRAPPA/TNAPPA 2016
Partnering for Historical Success

CFaR | Center for Facilities Research

FMEP Evaluate. Execute. Excel.

BOK Body of Knowledge

Supervisor's Toolkit
Nuts and Bolts of Facilities Supervision

APPA Drive-In Workshops

EFP Educational Facilities Professional

SEO Summit

CEFP Certified Educational Facilities Professional

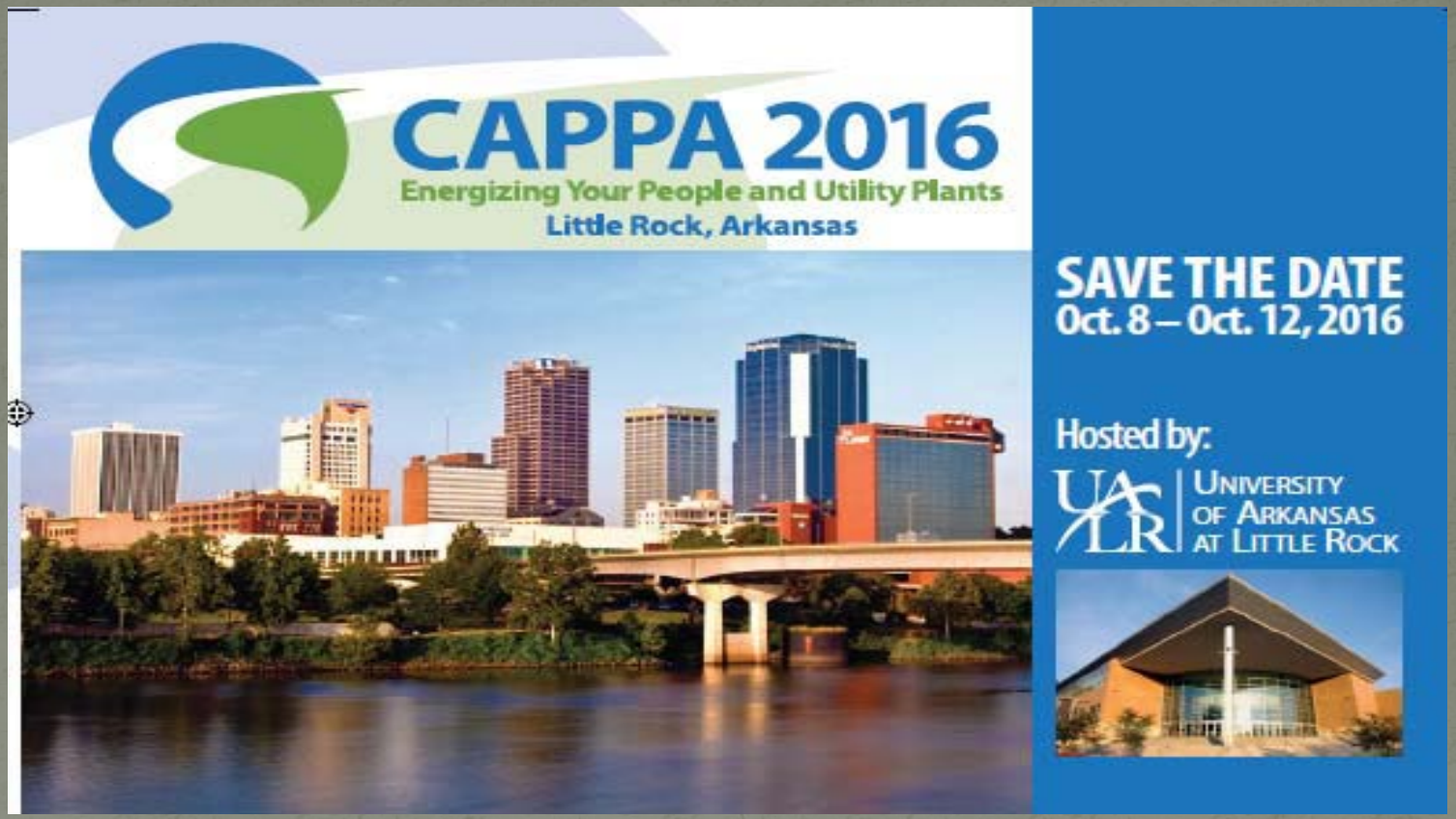
APPA U

FPI

Facilities Manager

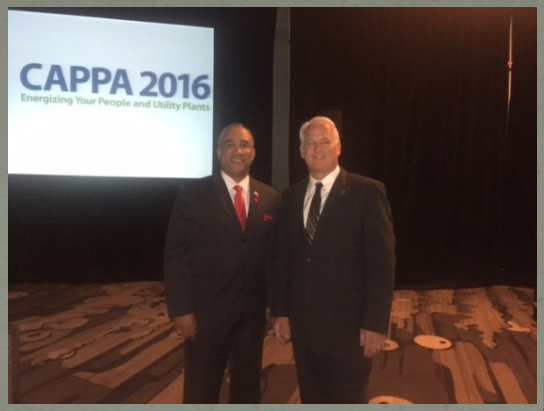
Leadership in Educational Facilities

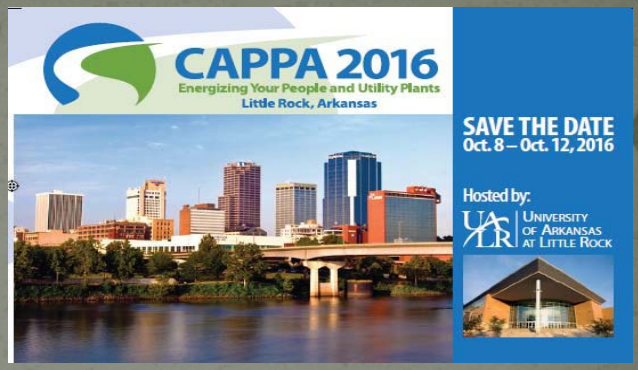
CAPPA 2016 Energizing Your People and Utility Plants

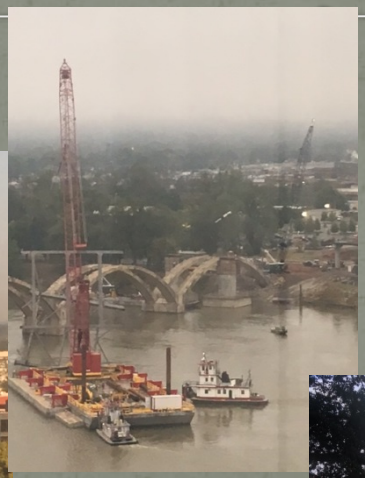


CAPPA
APPA Central Region
Since 1953

CAPPA 2016 Energizing Your People and Utility Plants







CAPPA
APPA Central Region
Since 1953

TAPPA 2017

TAPPA

Texas Association of Physical Plant Administrators

Founded in 1979

What is TAPPA?

TAPPA is a non-profit organization representing Texas educational facilities professionals. We facilitate industry knowledge, education and networking to enhance campus leadership, development, maintenance and operations. TAPPA's mission is to foster professional development and best practices among Texas facilities members.

Save the date! April 8-11, 2017

Hosted by TCU at the Hilton Hotel in Fort Worth.

A Quest For Knowledge

TCU

TAPPA 2017 Conference

TAPPA 2017

Why Attend a TAPPA Conference?

As facilities professionals we continually strive to enhance professional development and find innovative solutions for constantly changing and challenging operational issues and objectives in support of our institutional goals.

In order to support you, as the facilities professional, here are some of the reasons attending a TAPPA conference is beneficial:

- **Take advantage of quality educational sessions**
- **Pick up continuing educational credits (CEU's)**
- **Enhance employee moral**
- **Campus tour – see how they do it**
- **Source new vendors and products**
- **See product demos**
- **Get up to date information on trends and issues**
- **See many vendors at one time**
- **See existing vendors and provide feedback**
- **Develop industry partnerships**
- **Network with peers and industry professionals**

Use TAPPA as another tool to motivate and enhance staff performance and encourage and develop our new professionals in the field of Facilities Management.

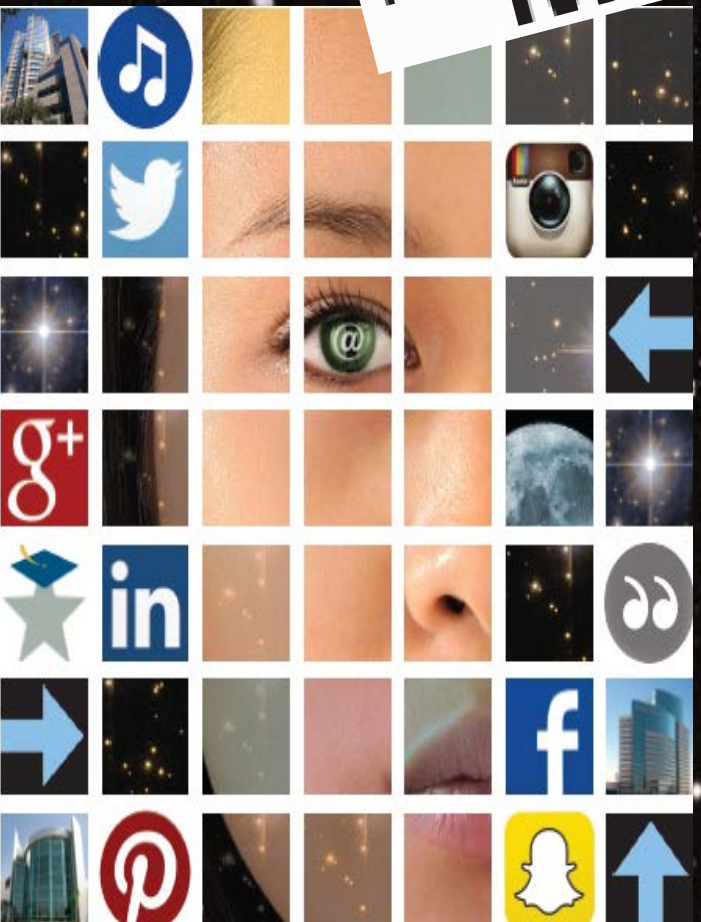
A Quest For Knowledge

TCU

TAPPA 2017 Conference

ASSOCIATION OF
Texas College & University Facilities
PROFESSIONALS

The Millennials have landed.



Session: 092908

Date: Thursday, September 29, 2016

Time: 11:15am – 12:15pm

LUKE VOILAND

Principal
Shepley Bulfinch

Luke Voiland, AIA, LEED AP is a leading designer in Shepley Bulfinch's healthcare and higher education practices. In addition to his current work with institutional clients, he has international experience with tall buildings and commercial design, leading the winning design effort for a 2009 Unbuilt Architecture Award from the Boston Society of Architects.

JAMES WOFFORD

Executive Director
Facilities Planning and Construction
University of Houston

With 35 years of experience managing projects in the commercial environment, James has been involved with over 2.5 million square feet of project management services and several hundreds of millions of dollars spent on data centers, labs, call centers, corporate office interiors and ground-up construction in the USA and Canada as well as developing markets in Costa Rica and Panama.

TERRY HARGUS

Project Executive
Tellepsen Builders

Terry has over 13 years of construction management experience specializing in higher education facilities. As Project Executive, Terry is responsible for ensuring project success from capture to preconstruction through construction to the occupancy of the building. He has successfully completed multiple projects at each of the major institutions in the greater Houston area.


Millennial or not?

MILLENNIALS

MISCONCEPTIONS

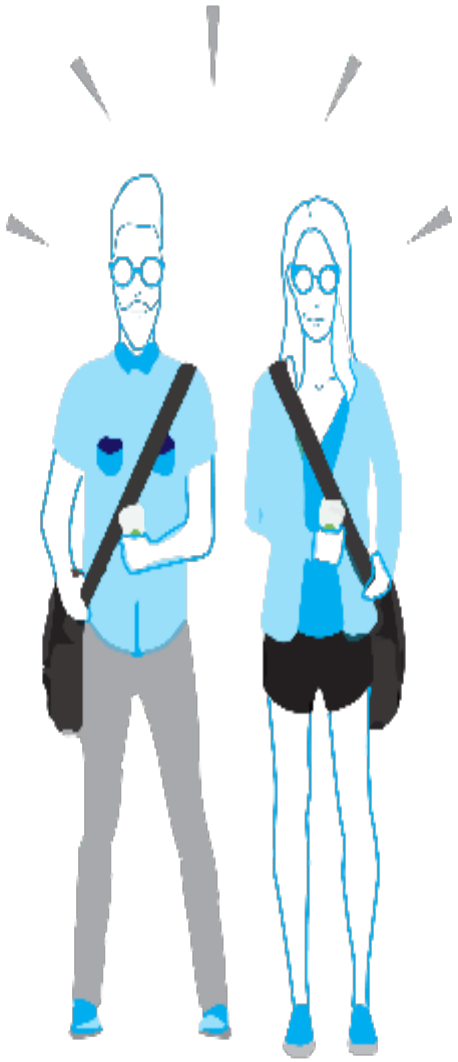
THEY'RE ALL **BROKE**

SPOILED &**LAZY**

THEY HAVE **OVERINFLATED, UNREALISTIC** EXPECTATIONS

WE WE WE WE

THEY DON'T **CARE**



REALITY

80 MILLION MILLENNIALS IN THE **U.S.**

SPEND ROUGHLY $ $600B $ ANNUALLY

DEMAND AN **INTEGRATED, SEAMLESS EXPERIENCE** REGARDLESS OF CHANNEL

FROM SMARTPHONE

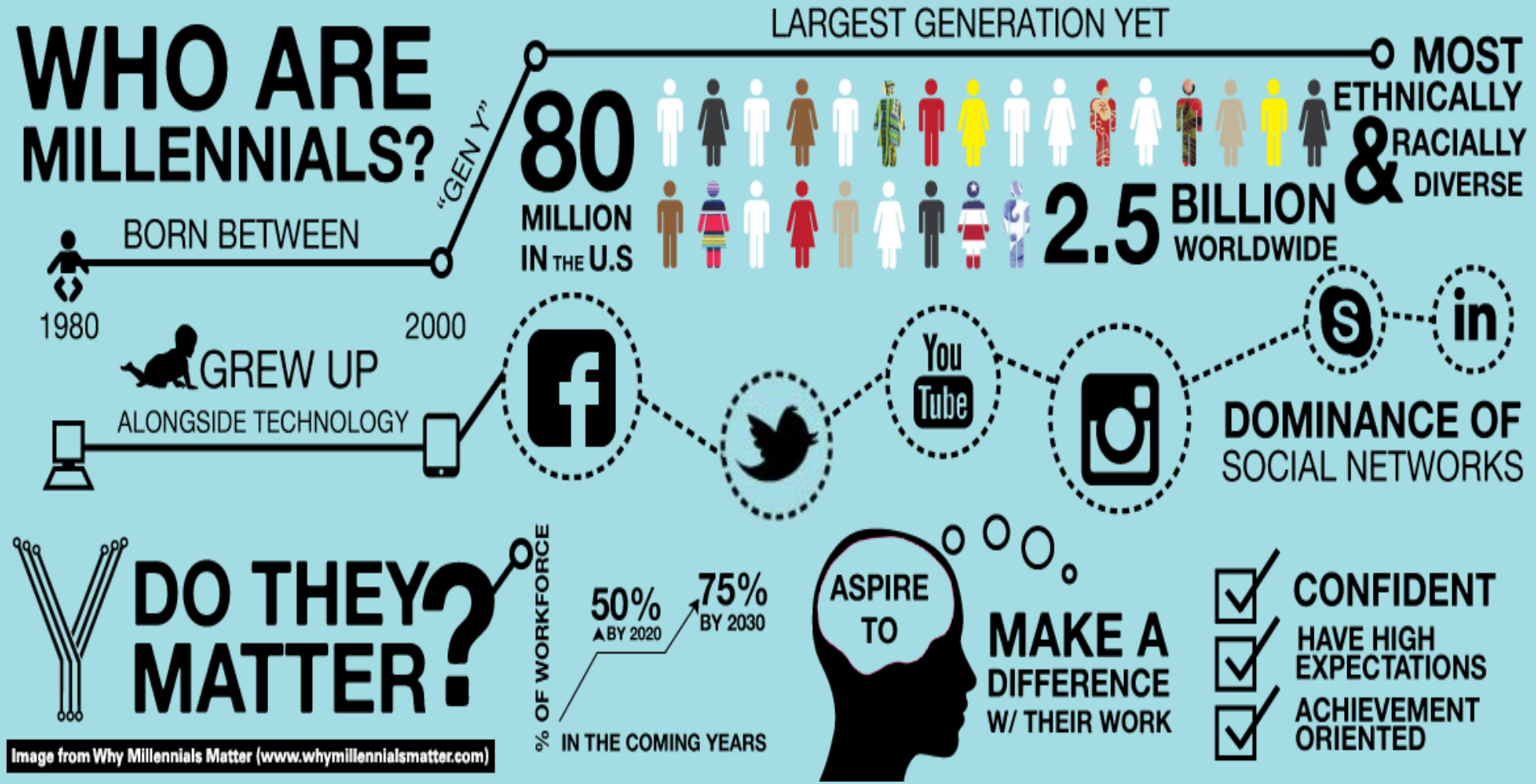
TO COMPUTER

TO PHYSICAL STORE

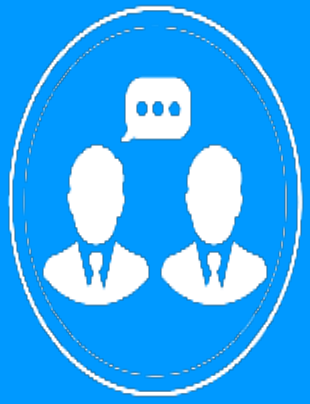
84% OF MILLENNIALS WOULD RATHER WORK FOR A GOOD **CAUSE** THAN FOR MORE **MONEY**

82% OF MILLENNIALS SAY THEY'D STAY **LOYAL TO** THEIR EMPLOYERS

Shepley Bulfinch


WHO ARE MILLENNIALS?
"GEN Y"
BORN BETWEEN
1980
2000
GREW UP
ALONGSIDE TECHNOLOGY
LARGEST GENERATION YET
80 MILLION IN THE U.S
2.5 BILLION WORLDWIDE
MOST ETHNICALLY & RACIALLY DIVERSE
DOMINANCE OF SOCIAL NETWORKS
DO THEY MATTER?
% OF WORKFORCE
50% BY 2020
75% BY 2030
IN THE COMING YEARS
ASPIRE TO MAKE A DIFFERENCE W/ THEIR WORK
CONFIDENT
HAVE HIGH EXPECTATIONS
ACHIEVEMENT ORIENTED
Image from Why Millennials Matter (www.whymillennialsmatter.com)

ATTRIBUTES



ENTREPRENEURSHIP

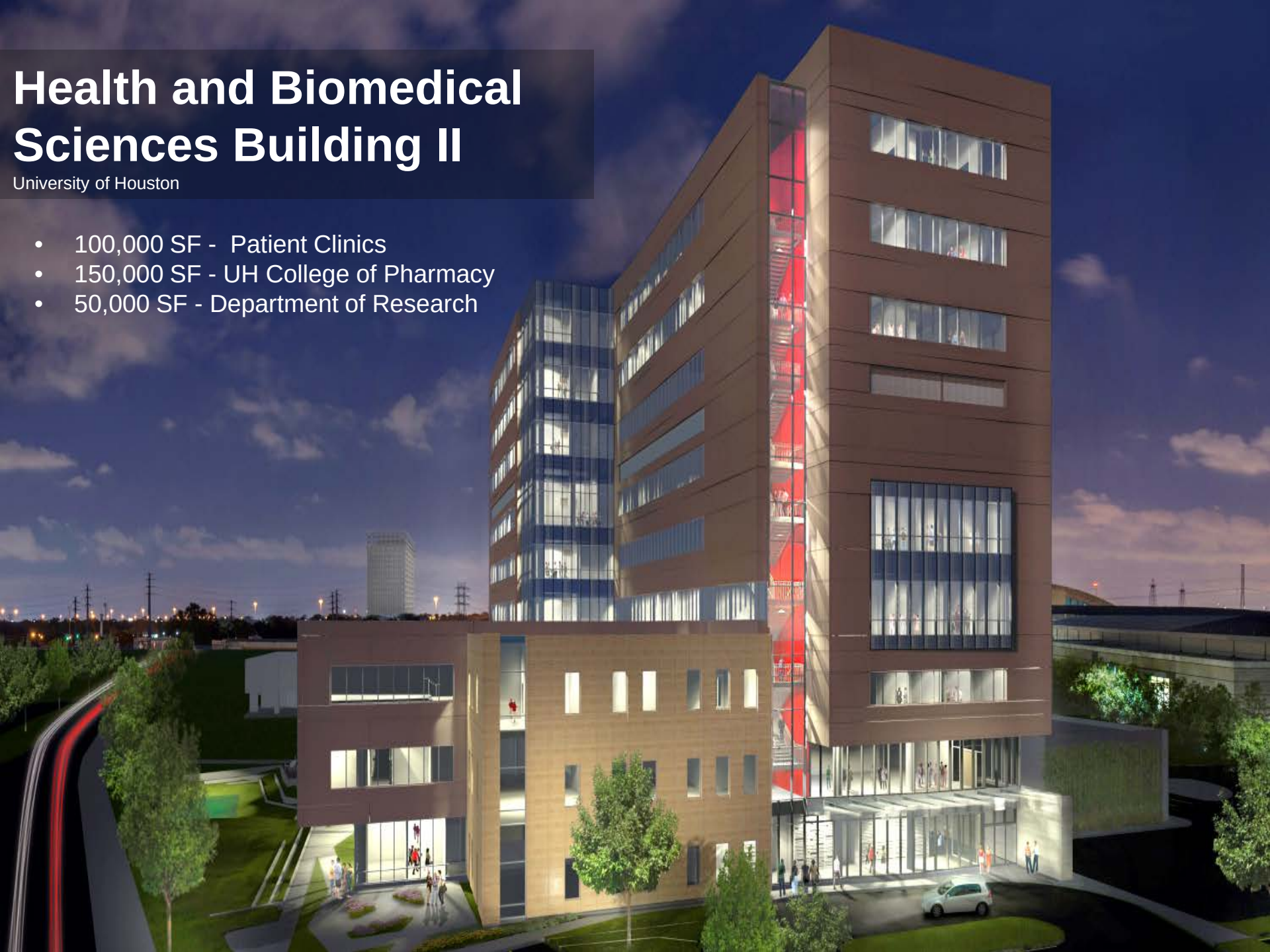
COLLABORATION

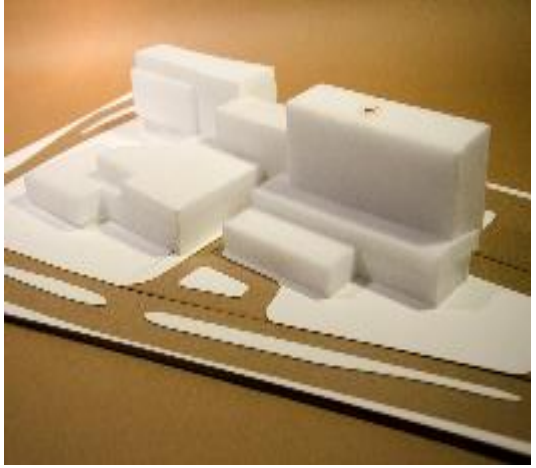
TECHNOLOGICAL INNOVATION

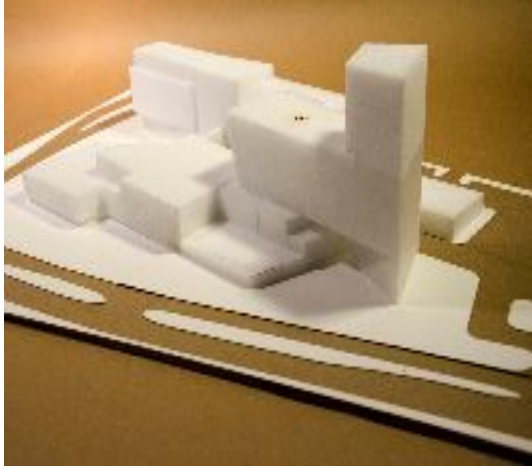
Health and Biomedical Sciences Building II

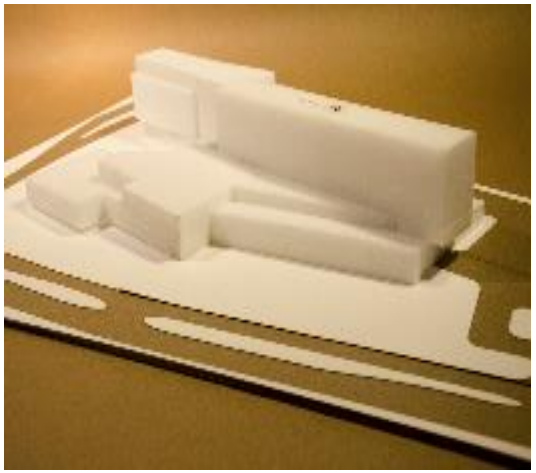
University of Houston

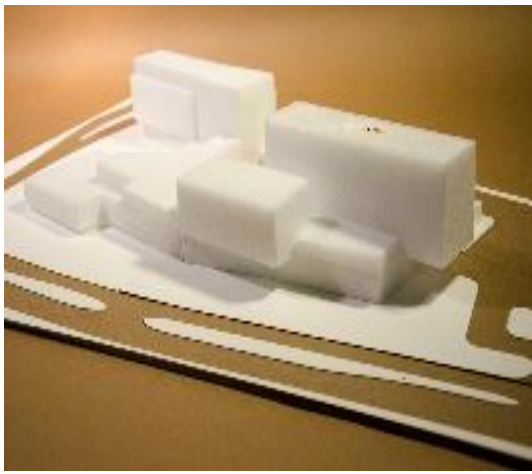
- 100,000 SF - Patient Clinics
- 150,000 SF - UH College of Pharmacy
- 50,000 SF - Department of Research

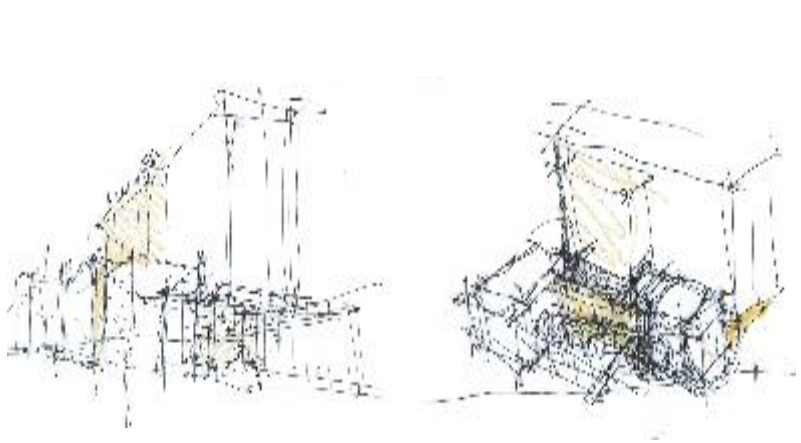


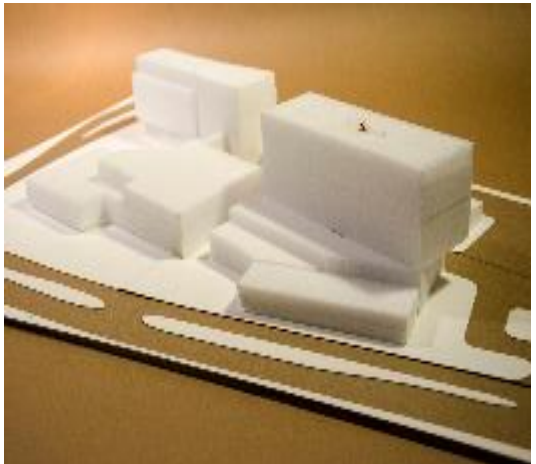


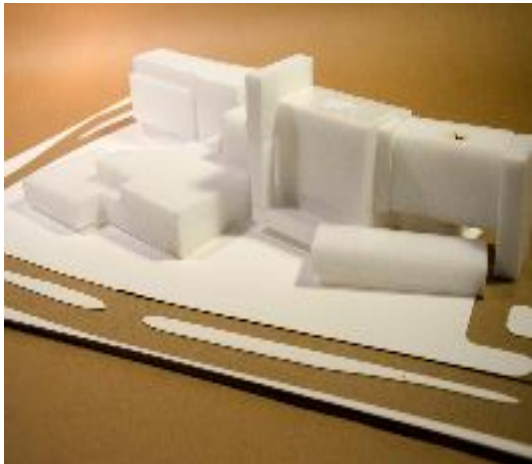


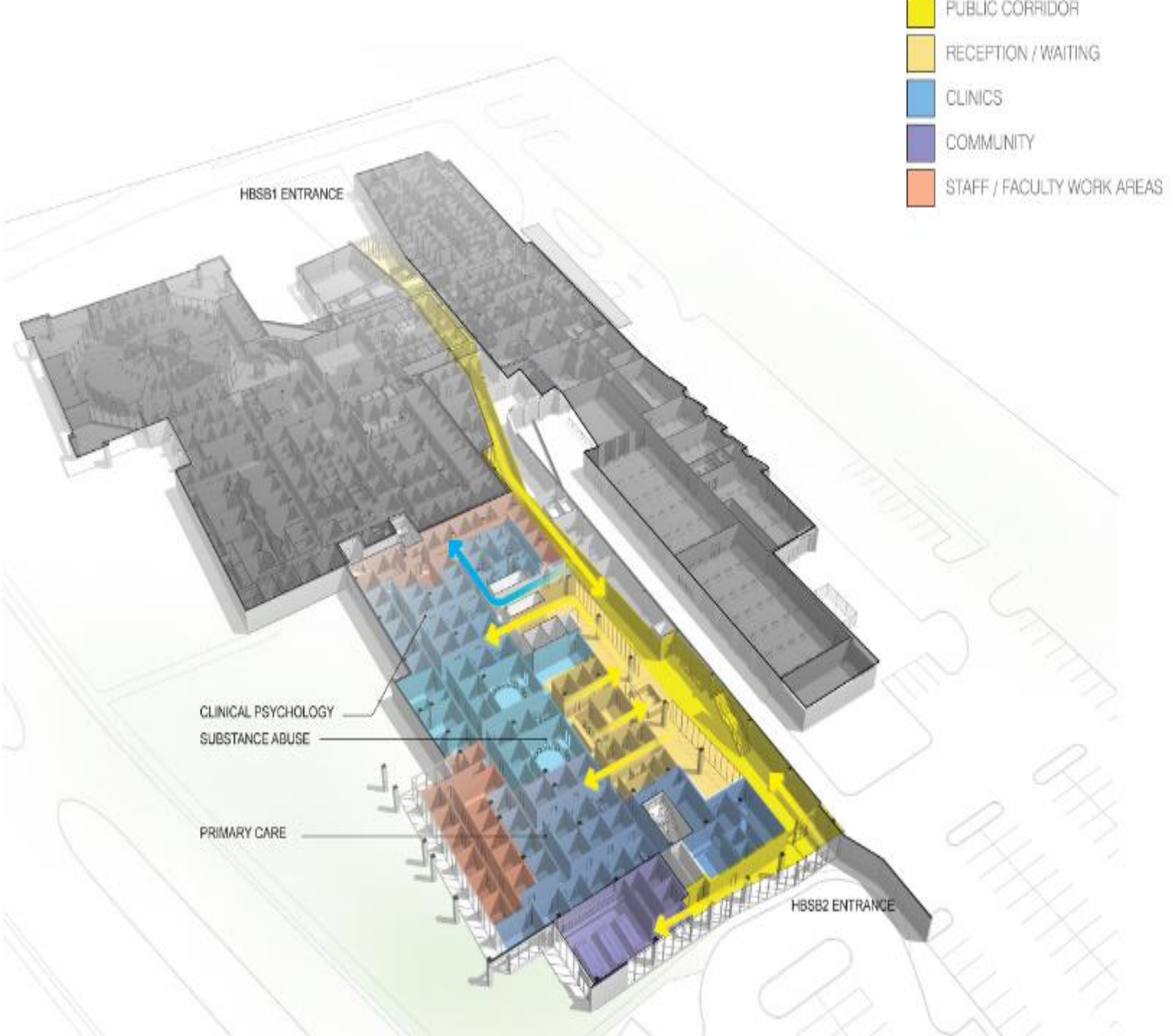




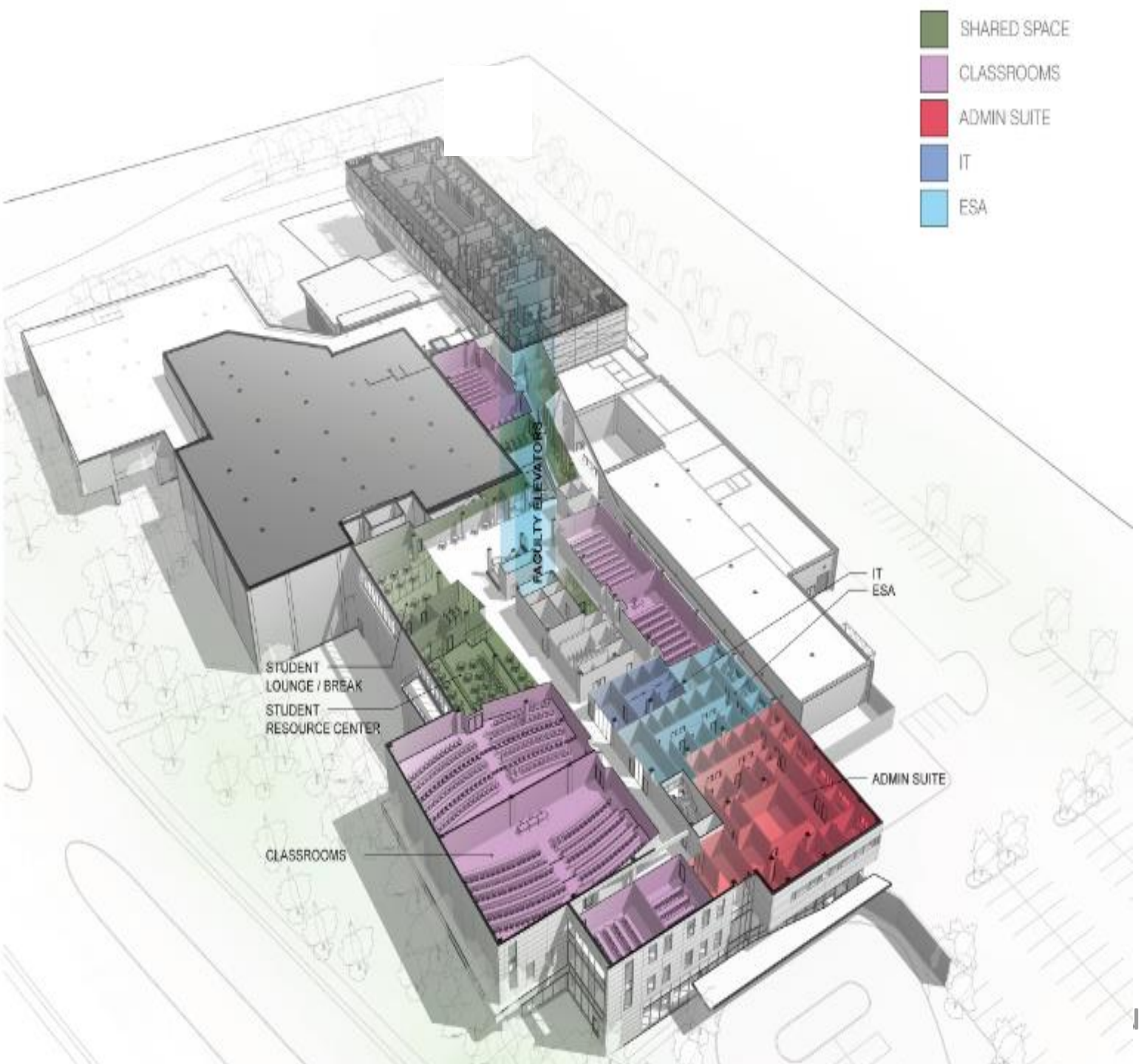







PUBLIC CORRIDOR
RECEPTION / WAITING
CLINICS
COMMUNITY
STAFF / FACULTY WORK AREAS
HBSB1 ENTRANCE
CLINICAL PSYCHOLOGY
SUBSTANCE ABUSE
PRIMARY CARE
HBSB2 ENTRANCE


PUBLIC CORRIDOR
RECEPTION / WAITING
CLINICS
HHP
CLASSROOMS
COMMUNITY
STAFF / FACULTY WORK AREAS
LIBRARY
CLASSROOM
NURSING
HHP
PHYSICAL ACTIVITY STUDIO
PHYSICAL THERAPY
COMMUNICATION
DISORDERS
+
EDUCATIONAL
PSYCHOLOGY


SHARED SPACE
CLASSROOMS
ADMIN SUITE
IT
ESA
FACULTY ELEVATORS
IT
ESA
STUDENT
LOUNGE / BREAK
STUDENT
RESOURCE CENTER
ADMIN SUITE
CLASSROOMS

CASE STUDIES

PRECAST CONCRETE OPTIMIZATION

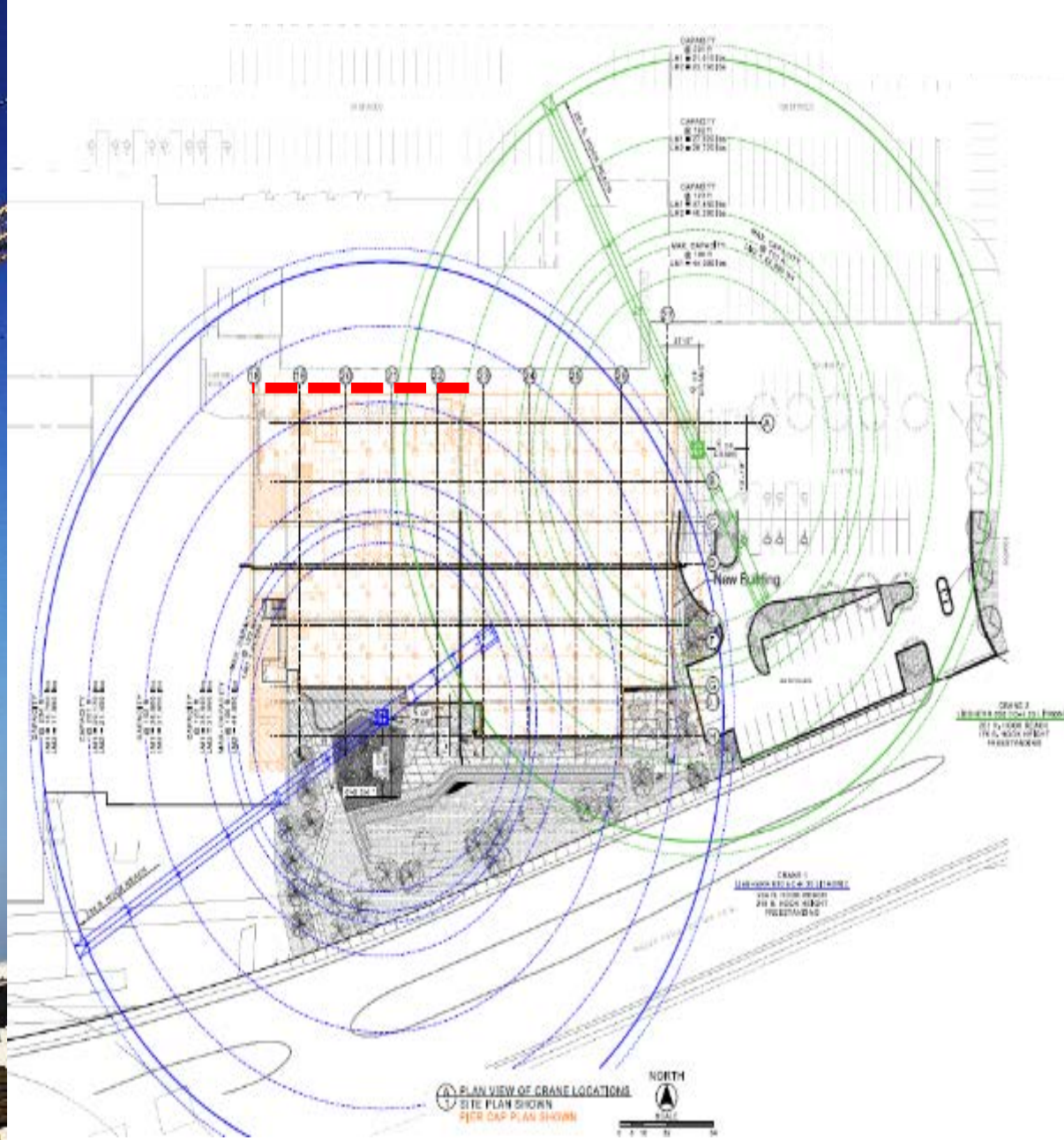
PROGRAM “CHIPS EXERCISE”

HEALTH SCIENCE LIBRARY DESIGN

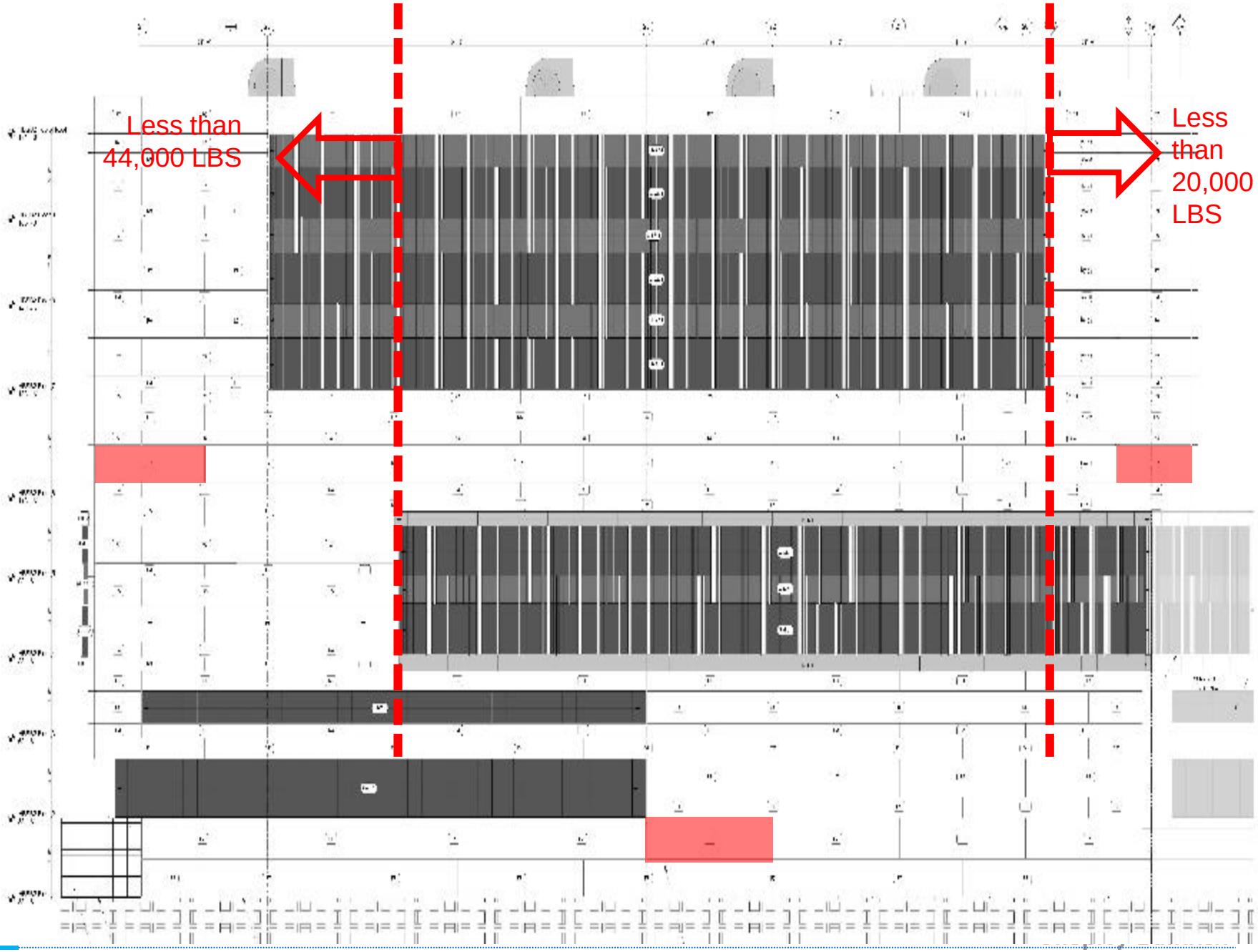
PREFABRICATED MEP SYSTEMS

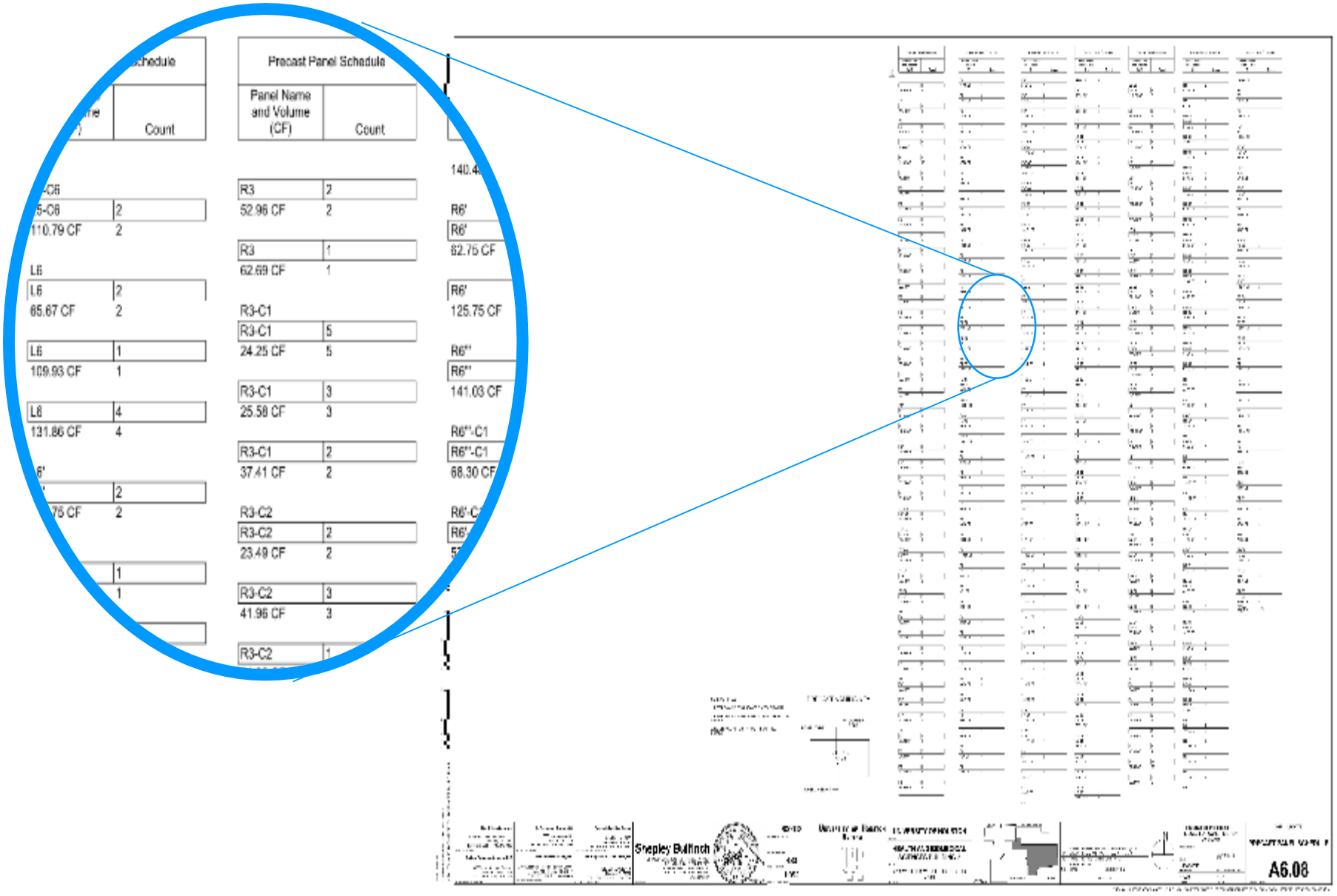
PRECAST OPTIMIZATION

HBSB 1
2013



Shepley Bulfinch

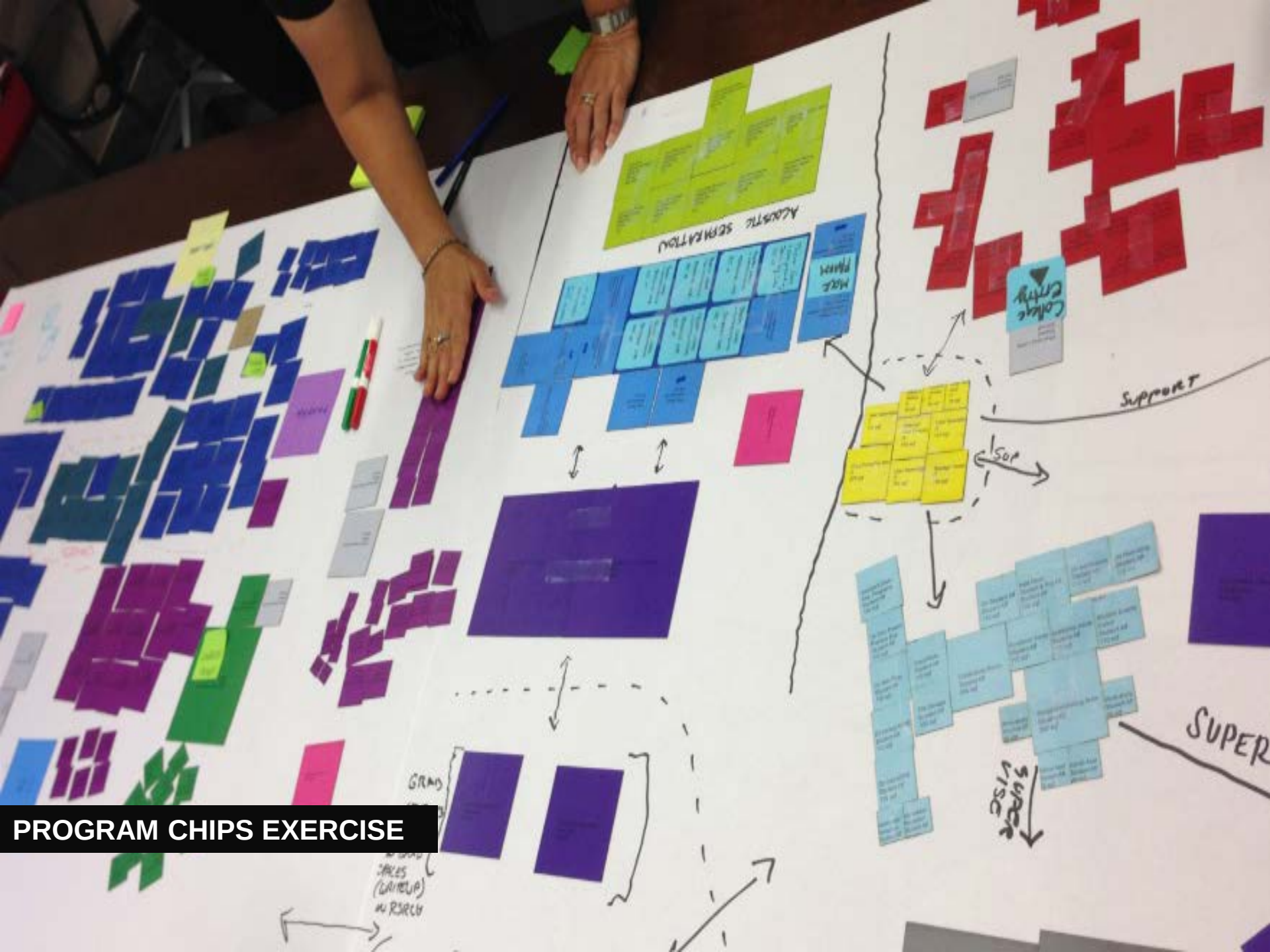

Less than
44,000 LBS
Less
than
20,000
LBS

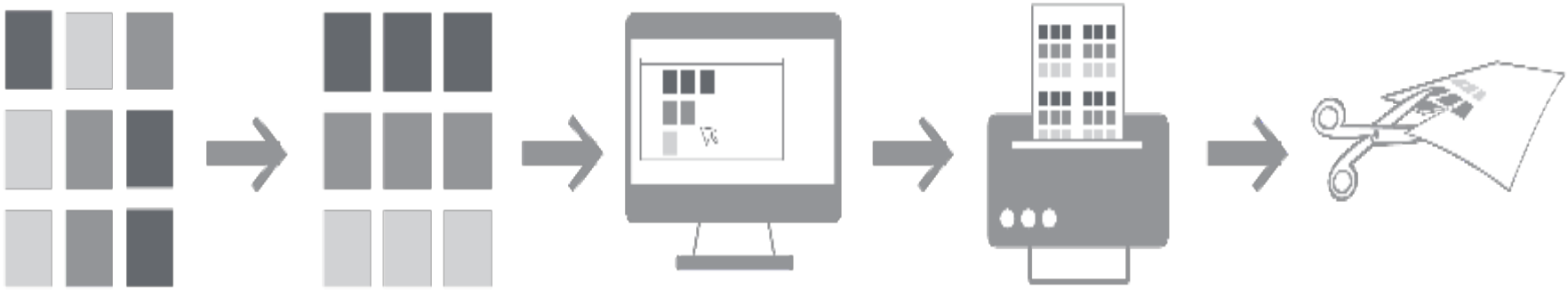


Precast Panel Schedule

Panel Name and Volume (CF)	Count
R3	2
52.96 CF	2
R3	1
62.69 CF	1
R3-C1	
R3-C1	5
24.25 CF	5
R3-C1	3
25.58 CF	3
R3-C1	2
37.41 CF	2
R3-C2	
R3-C2	2
23.49 CF	2
R3-C2	3
41.96 CF	3
R3-C2	1

140.4	
R6'	
R6'	
82.75 CF	
R6'	
125.75 CF	
R6''	
R6''	
141.03 CF	
R6''-C1	
R6''-C1	
68.30 CF	
R6'-C	
R6'	
57	


PROGRAM CHIPS EXERCISE



Programs by Dept.
0 HRS

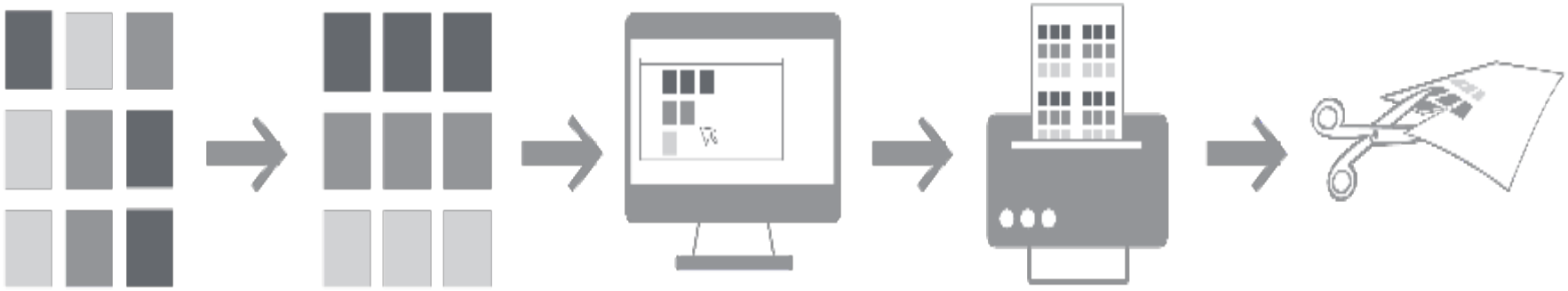
Organize Rooms by Dept.
12 HRS

Draw Rooms Manually
20 HRS

Print to Scale
1 HR

Manually Cut
3 HRS

Shepley Bulfinch



Programs by Dept.
0 HRS

Organize Rooms by Dept.
12 HRS

Draw Rooms Manually
20 HRS

Print to Scale
1 HR

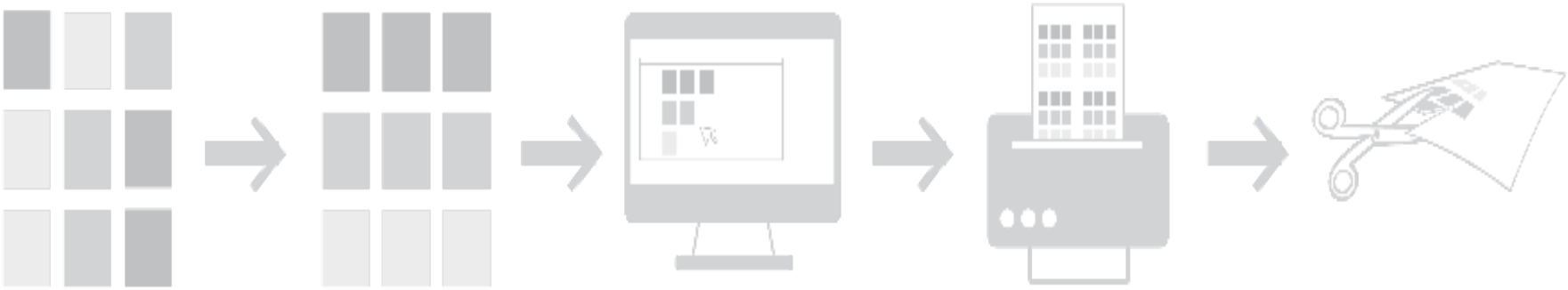
Manually Cut
3 HRS

Program Database (Excel)
1 HR

Automated Draw to Scale (Rhino)
2 HRS

Automated Cut (Laser)
2 HRS

Shepley Bulfinch



Programs by Dept.
0 HRS

Organize Rooms by Dept.
12 HRS

Draw Rooms Manually
20 HRS

Print to Scale
1 HR

Manually Cut
3 HRS

(36 HRS)

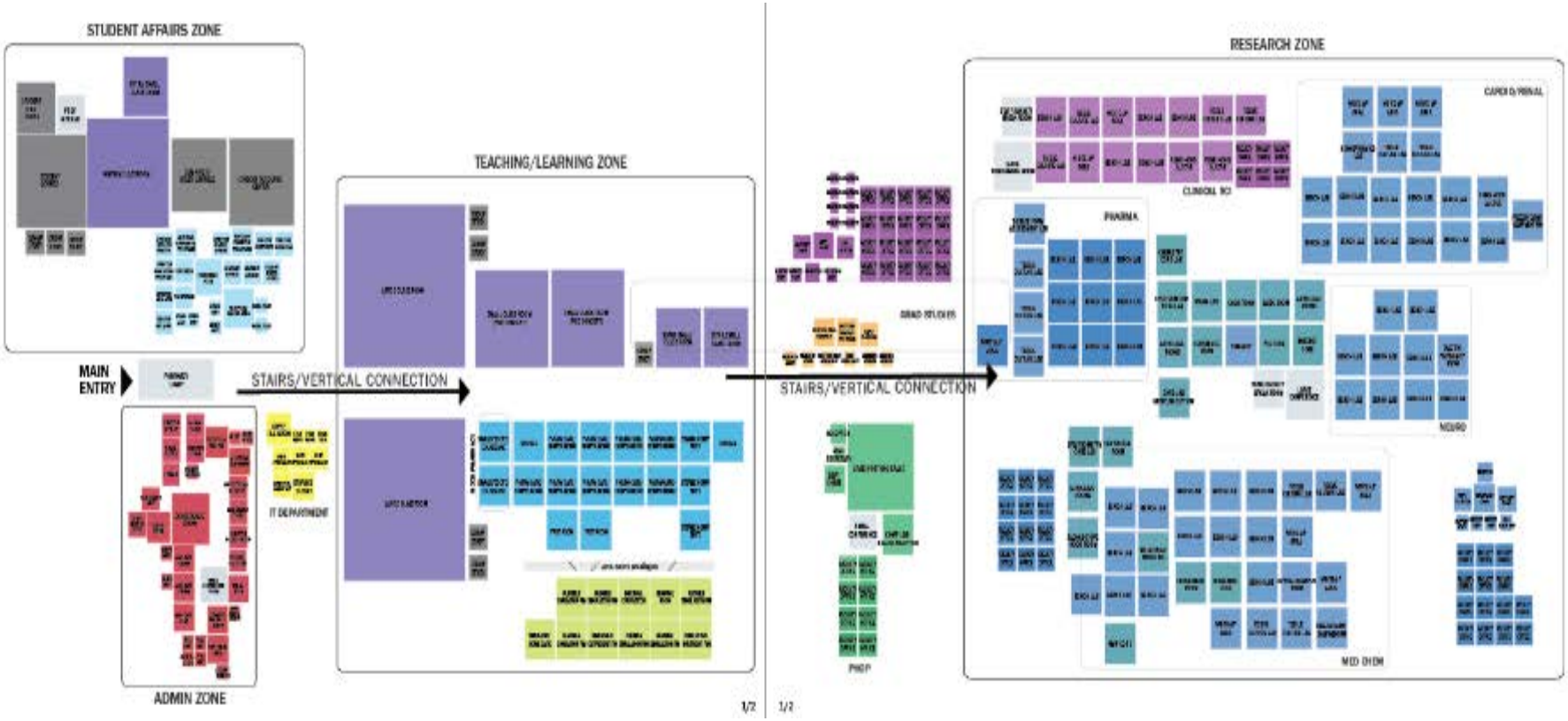
Program Database (Excel)
1 HR

Automated Draw to Scale (Rhino)
2 HRS

Automated Cut (Laser)
2 HRS

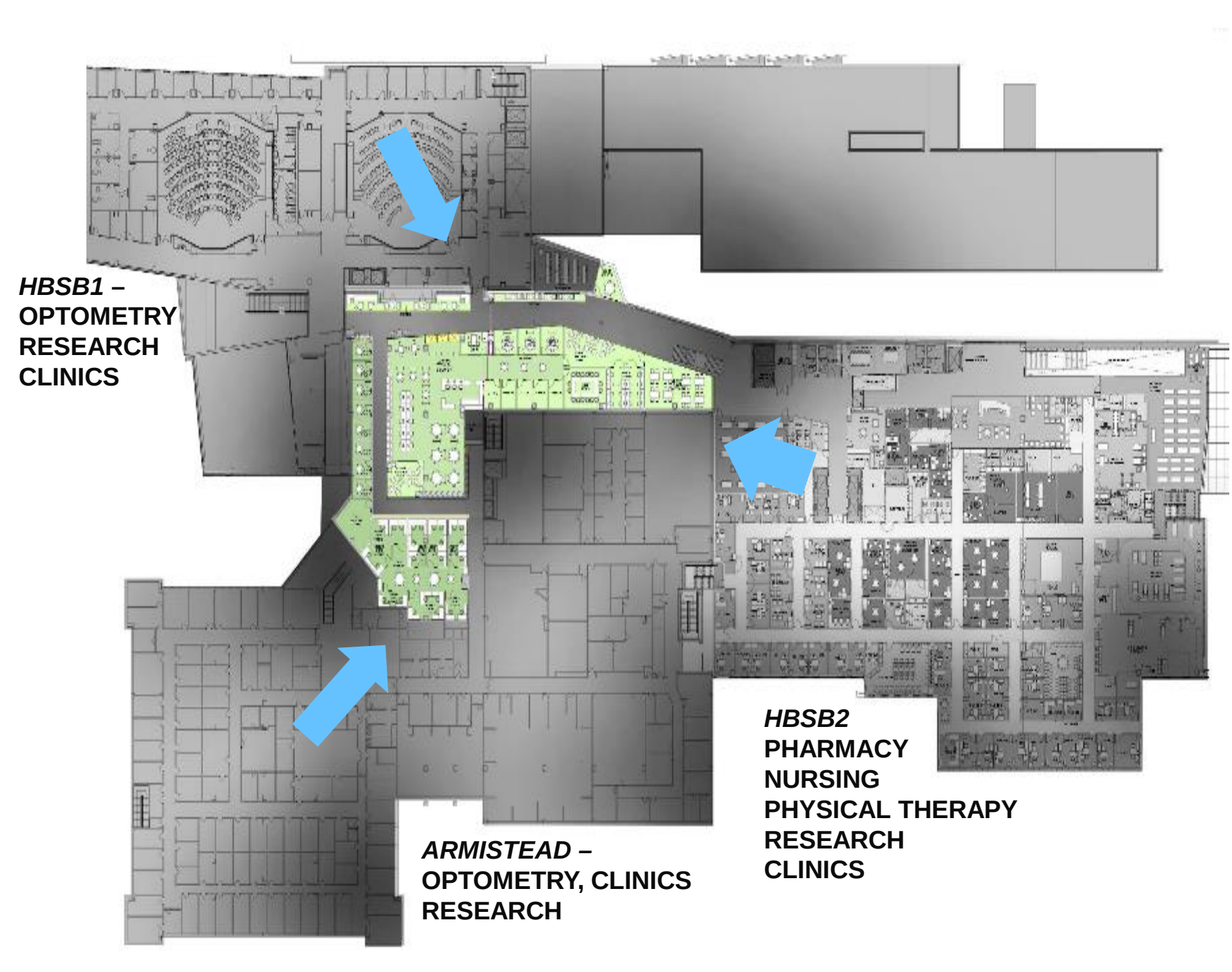
(5 HRS)

Shepley Bulfinch



Shepley Bulfinch


HEALTH SCIENCE LIBRARY


HBSB1 –
OPTOMETRY
RESEARCH
CLINICS
HBSB2
PHARMACY
NURSING
PHYSICAL THERAPY
RESEARCH
CLINICS
ARMISTEAD –
OPTOMETRY, CLINICS
RESEARCH

- INFORMAL “STARBUCKS” SPACE
- SEE AND BE SEEN

- GROUP WORK
- SHARING

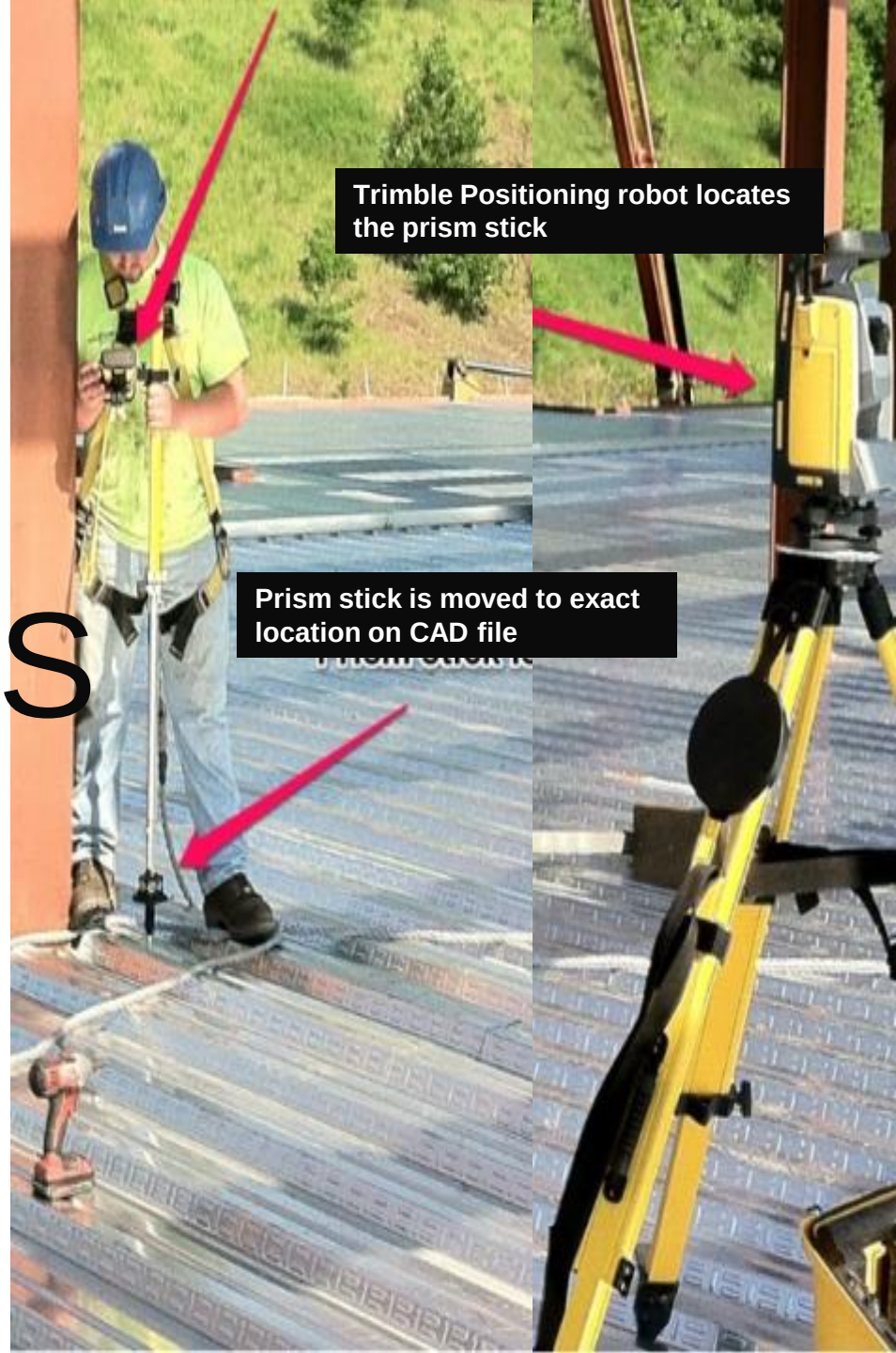
- “PITCH” ROOMS
- PRACTICE AND PRESENT

- VARIETY OF GROUP STUDY ROOMS\
- OPEN AND CLOSED

- TECHNOLOGY WORK SPACE
- FLEXIBLE WHITEBOARDS AND DISPLAY

PREFAB MEP SYSTEMS

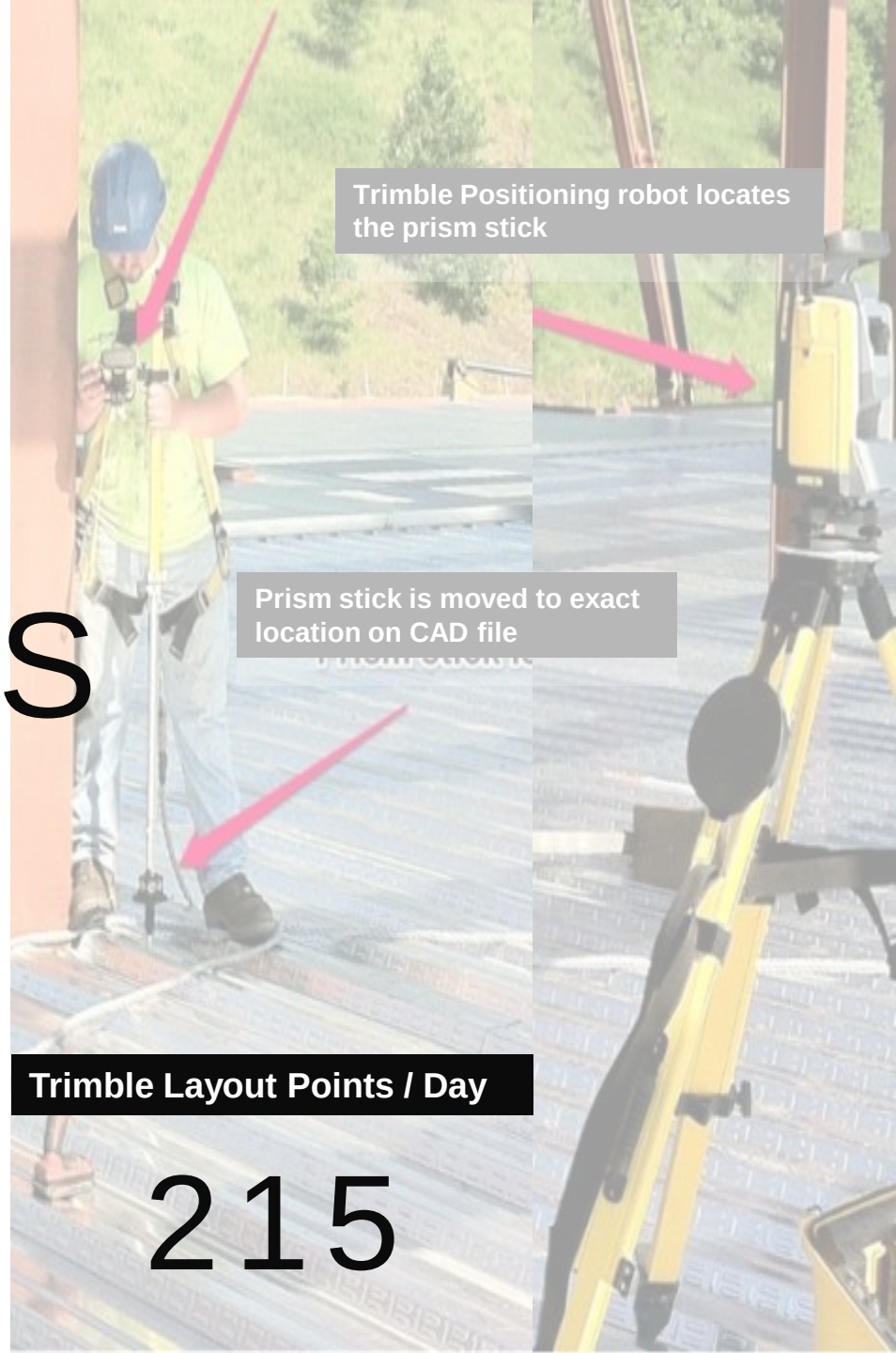
VS


Trimble Positioning robot locates the prism stick
Prism stick is moved to exact location on CAD file

Hand Layout Points / Day

70

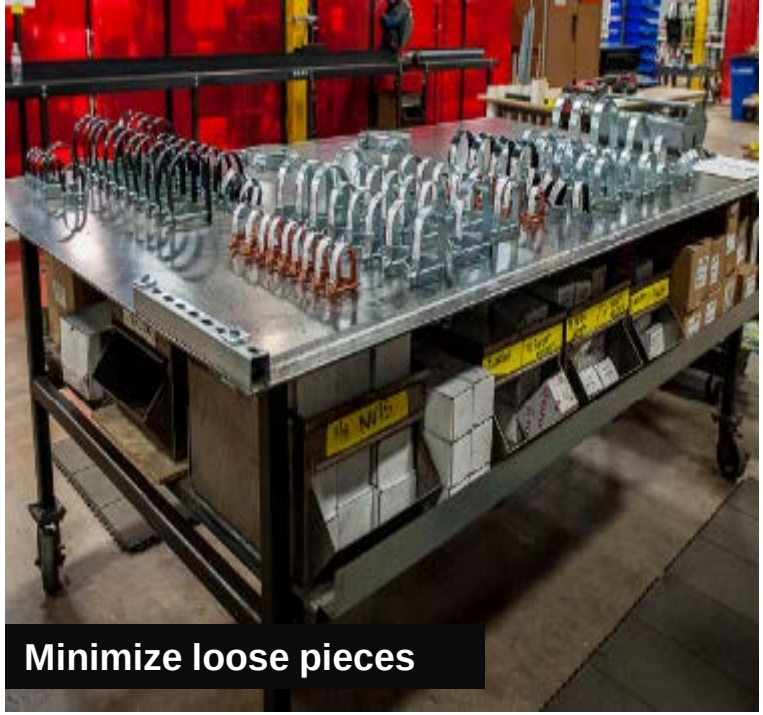
VS



Trimble Layout Points / Day

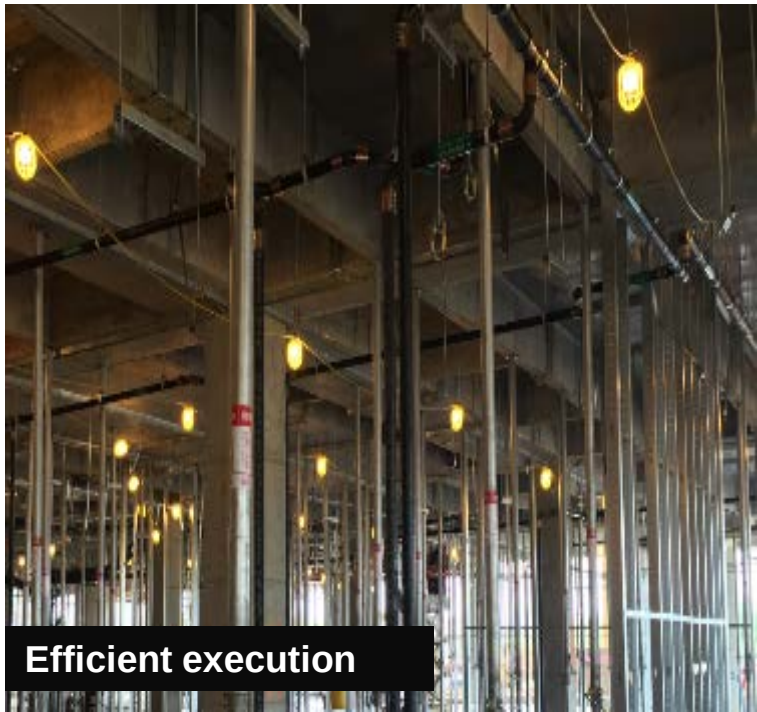
215

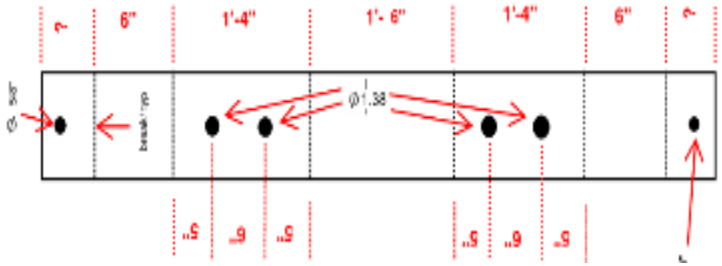
Benefits of Hanger Fabrication

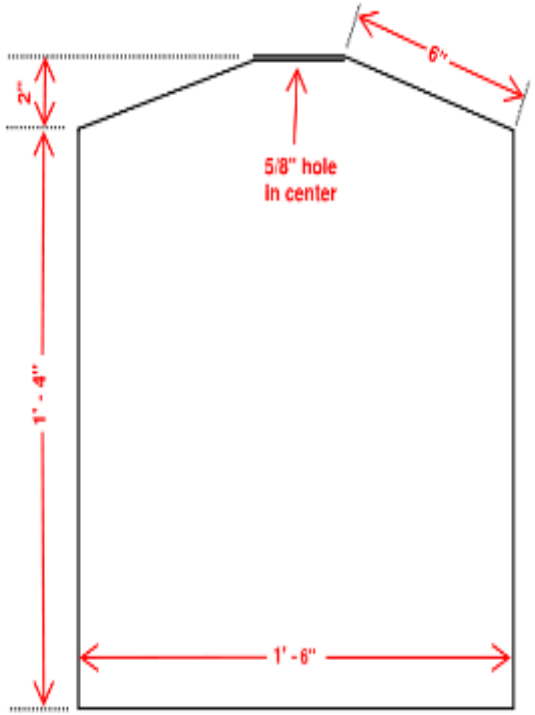

Minimize loose pieces

Streamline material handling

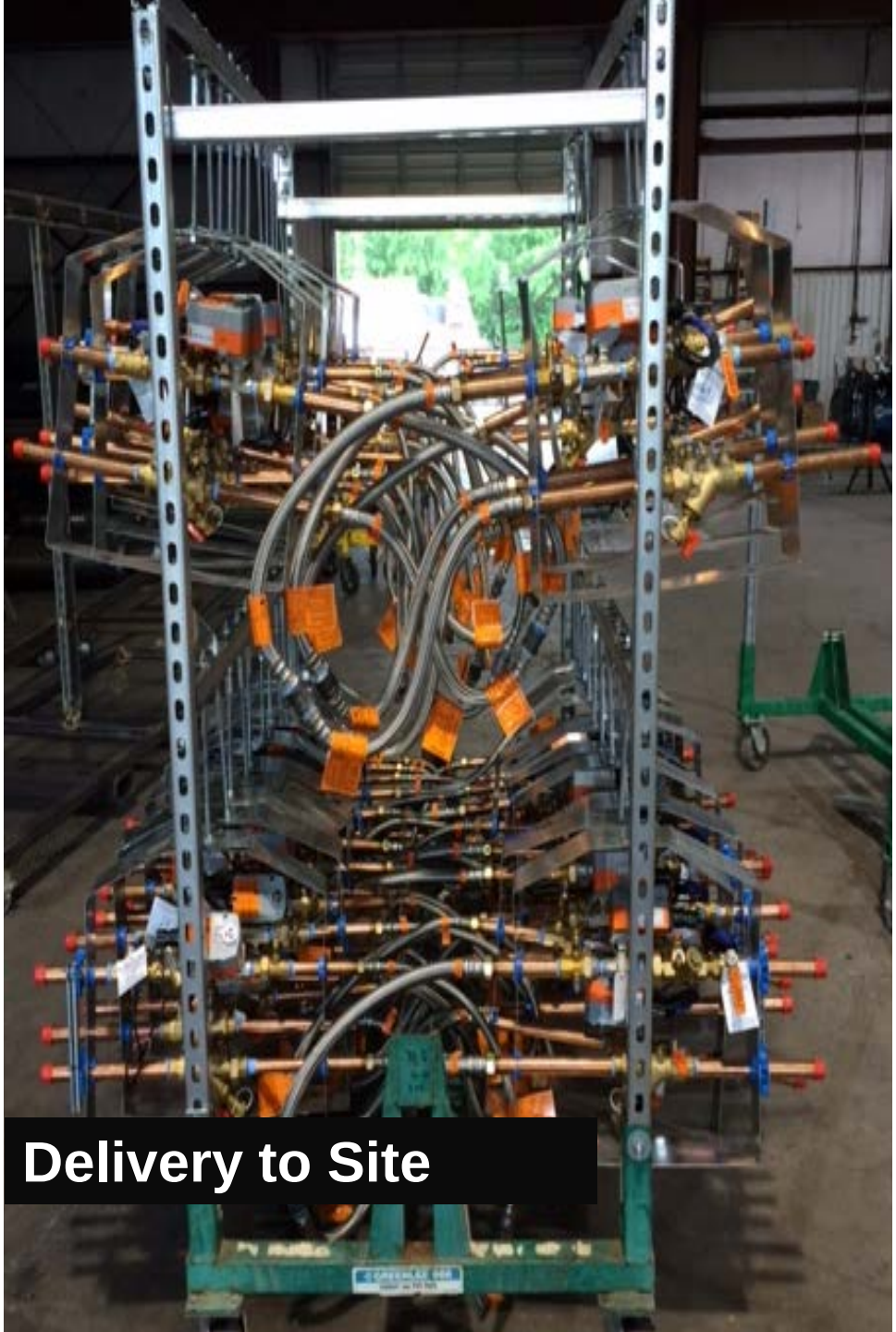

Less scrap at jobsite


Efficient execution





Concept to Reality



Delivery to Site

Execution

ENTREPRENEURSHIP

COLLABORATION

TECHNOLOGICAL INNOVATION

Training

1. Leadership
2. Negotiations
3. Communication
4. Professional

Future Topics

1. Mission Statements
    a. UH
    b. FPC
2. Contracts
    a. Does and Don’ts
    b. Types
        i. CMAR/GMP (Construction Manager at Risk)
        ii. DB (Design Build)
3. Invoice Processing
4. General Conditions
    a. CO/CO Management
    b. Risk Management
        i. CCIP (Contractor’s Controlled Insurance Program)
        ii. SDI (Subcontractor Default Insurance)
        iii. BRI (Builders Risk Insurance)
    c. LDs
    d. E&Os
5. 179D - Energy Efficiency Commercial Buildings Tax Deduction
6. December 2016 BOR Agenda
7. Invoice Processing
8. December BOR Presentation and Comments