Request for Qualifications (Architect / Engineer)
State of Ohio Standard Forms and Documents

Administration of Project: Local Higher Education

Project Name	BISON GEAR & ENGINEERING CORP. INNOPRENEURSHIP LABORATORY	Response Deadline	12/07/2015 2:00pm local time
Project Location	Dayton Campus	Project Number	WSU-150063
City / County	Dayton / Montgomery	Project Manager	Christopher Haring
Owner	Wright State University	Contracting Authority	Local Higher Education
Delivery Method	General Contracting	Prevailing Wages	State
No. of paper copies requested (stapled, not bound)	3	No. of electronic copies requested (PDF)	1

Submit the requested number of Statements of Qualifications (Form F110-330) directly to Christopher Haring at Wright State University Planning and Architecture, 2455 Presidential Drive, Suite 11M, Dayton, Ohio 45435. See Section H of this RFQ for additional submittal instructions.

Submit all questions regarding this RFQ in writing to Christopher Haring at christopher.haring@wright.edu with the project number included in the subject line (no phone calls please). Questions will be answered and posted to the Opportunities page on the OFCC website at http://ofcc.ohio.gov on a regular basis until one week before the response deadline. The name of the party submitting a question will not be included on the Q&A document.

Project Overview

A. Project Description

The purpose of the project is to develop a program of requirements, project budget, and preliminary concept imagery for Bison Gear & Engineering Design Innopreneurship facility to be constructed in the existing Russ Engineering basement where there is presently a machine shop and workshop spaces in 15,563 net square feet of basement space available. Per the attached program document the facility will include the following types of spaces as indicated below:

Entry/Reception and Conference, Lounge, General lab space, Storage, Classroom, Automation, Crafts Area, Electrical Area, Metal, Wood working area, 3D Printing space, Laser Cutter Area. The overall space is anticipated to be as open and flexible as possible. The existing ceiling and all walls are planned to be removed within the center 9,380 square foot area. The purpose is to allow activities to flow from one equipment zone to another.

B. Scope of Services

Upon award of the Agreement, commence with Design based on the following program document:
https://www.dropbox.com/s/wn9mi15shmietl1/110515-WSUPRESENTATION.pdf?dl=0

The selected Architect/Engineer (A/E), as a portion of its required Scope of Services and prior to submitting its proposals, will discuss and clarify with the Owner and/or the Contracting Authority, the cost breakdown of the Architect/Engineer Agreement detailed cost components to address the Owner's project requirements. Participate in the Encouraging Growth, Diversity & Equity (EDGE) Program as required by statute and the Agreement.

As required by the Agreement, and as properly authorized, provide the following categories of services: Program Verification, Schematic Design, Design Development, Construction Document Preparation, Bid and Award Support, Conformed Documents, Construction Administration, Post-Construction, and Additional Services of all types.

Refer to the *Ohio Facilities Construction Manual* for additional information about the type and extent of services required for each. A copy of the standard Agreement can be obtained at the OFCC website at http://ofcc.ohio.gov.

During the construction period, provide not less than 8 hours (excluding travel time) on-site construction administration services each week, including (1) attendance at progress meetings, (2) a written field report of each site visit, (3) on-site representation comprised of the A/E and its consultant staff involved in the primary design of the project, all having relevant and appropriate types of construction administration experience.

For purposes of completing the Relevant Project Experience Matrix in Section F of the Statement of Qualifications (Form F110-330), below is a list of relevant scope of work requirements for this RFQ:

1. Lab/Collaboration Design
2. Maker Spaces
3. Industrial Tech Design
4. Classroom Design
5. Office Design
6. Interior Design
7. Structural Design
8. PME Design
9. Previous experience working with Higher Education in State of Ohio
10. Previous experience working with AE's consultants

C. Funding / Estimated Budget

Total Project Cost	$2,000,000	State Funding	$0
Construction Cost	$1,200,000	Other Funding	$2,000,000
Estimated A/E Fee	10.0% to 12.0%		

NOTE: The A/E fee percentage for this project includes all professional design services, and consultant services necessary for proper completion of the Basic Services for the successful completion of the project, including but not limited to: review and verification of the Program of Requirements provided by the Owner, validation of existing site conditions (but not subsurface or hidden conditions), preparation of cost estimates and design schedules for the project. Fees may be negotiated and allocated for Additional Services (e.g., creation of a Program of Requirements, extensive evaluation or validation of site conditions, extensive pre-design investigations, code-required special inspection and testing, Quality Assurance testing during the construction period, and testing due to unforeseen conditions).

D. Services Required (see note below)

Primary	Architectural Design(s)
Secondary	PME Engineering
	Structural Engineering
	Interior Design
Others	

E. Anticipated Schedule

Professional Services Start	01 / 16
Construction Notice to Proceed	05 / 16
Substantial Completion of all Work	08 / 16
Professional Services Completed	09 / 16

F. EDGE Participation Goal

Percent of *initial* TOTAL A/E Fee	5.0%

NOTE: The primary A/E shall be (1) a registered architect holding a license and certificate of authorization issued by the Ohio Architects Board pursuant to ORC Chapter 4703, (2) a landscape architect holding a license and certificate of authorization issued by the Ohio Landscape Architects Board pursuant to ORC Chapter 4703, or (3) a professional engineer or professional surveyor holding a license and certificate of authorization issued by the Ohio Engineers and Surveyors Board pursuant to ORC Chapter 4733.

G. Evaluation Criteria for Selection

- Demonstrated ability to meet Owner's programmed project vision, scope, budget, and schedule on previous projects.
- Previous experience compatible with the proposed project (e.g., type, size).
- Relevant past work of prospective firm's proposed consultants.
- Past performance of prospective firm and its proposed consultants.
- Qualifications and experience of individuals directly involved with the project.
- Proposer's previous experience (numbers of projects, sizes of projects) when working with its proposed consultants.
- Specification writing credentials and experience.
- Experience and capabilities of creating or using Critical Path Method (CPM) schedules and of using CPM schedules as a project management resource.
- Approach to and success of using partnering and Alternative Dispute Resolution.
- Proximity of prospective firms to the project site.
- Proposer's apparent resources and capacity to meet the needs of this project.

- The selected A/E and all its consultants must have the capability to use the Internet within their normal business location(s) during normal business hours.

Interested A/E firms are required to address how they will implement Building Information Modeling ("BIM") on the project, experience and level of training of staff related to BIM, incorporation of team partners that have previous BIM experience, and an understanding of collaborative BIM processes, including but not limited to the *State of Ohio BIM Protocol* available at the OFCC website at http://ofcc.ohio.gov.

Interested A/E firms are required to submit the Commitment to Participate in the EDGE Business Assistance Program form in its Statement of Qualifications (Form F110-330) submitted in response to the RFQ, to indicate its intent to contract with and use EDGE-certified Business Enterprise(s), as a part of the A/E's team. The Intent to Contract and to Perform and / or waiver request letter and Demonstration of Good Faith Effort form(s) with complete documentation must be attached to the A/E's Technical Proposal. Both forms can be accessed via the OFCC website at http://ofcc.ohio.gov. The Intent to Contract and to Perform form is again required at the Fee Proposal stage.

For all Statements of Qualifications, please identify the EDGE-certified Business Enterprises, by name, which will participate in the delivery of the proposed professional services solicited in the RFQ.

H. Submittal Instructions

Firms are required to submit the current version of Statement of Qualifications (Form F110-330) available via the OFCC website at http://ofcc.ohio.gov.

Electronic submittals should be combined into one PDF file named with the project number listed on the RFQ and your firm's name. Use the "print" feature of Adobe Acrobat or similar software for creating a PDF rather than using a scanner. If possible, please reduce the file size of the PDF. In Acrobat, go to Advanced, then PDF Optimizer. Also, please label the CD or DVD and the sleeve with the project number and firm name if applicable.

Paper copies of the Statement of Qualifications, if requested, should be stapled only. Do not use special bindings or coverings of any type. Cover letters and transmittals are not necessary.

Facsimile copies of the Statement of Qualifications will not be accepted.

Firms are requested to identify professional registrations, memberships and credentials including: LEED GA, LEED AP, LEED AP+, CCCA, CCM, CCS, CDT, CPE, DBIA, and any other appropriate design and construction industry credentials. Identify that information on the resume page for individual in Block 22, Section E of the F110-330 form.

Architect / Engineer Selection Rating Form
State of Ohio Standard Forms and Documents

Project Name BISON GEAR & ENGINEERING CORP. INNOPRENEURSHIP LABORATORY

Project Number WSU-150063

Proposer Firm _____

City, State, Zip _____

Selection Criteria		Value		Score
1. Primary Firm Location, Workload and Size (Maximum 10 points)				
a. Proximity of firm to project site	Less than 100 miles	5		
	100 miles to 200 miles	2		
	More than 200 miles	0		
b. Amount of fees awarded by Contracting Authority in previous 24 months	Less than $100,000	2		
	$100,000 to $500,000	1		
	More than $500,000	0		
c. Number of licensed professionals	Less than 5 professionals	3	Max = 3	
	5 to 10 professionals	2		
	More than 10 professionals	1		
2. Primary Firm Qualifications (Maximum 30 points)				
a. Project management lead	Experience / ability of project manager to manage scope / budget / schedule / quality	0 - 10		
b. Project design lead	Experience / creativity of project designer to achieve owner's vision and requirements	0 - 5	Max = 20	
c. Technical staff	Experience / ability of technical staff to create fully coordinated construction documents	0 - 5		
d. Construction administration staff	Experience / ability of field representative to identify and solve issues during construction	0 - 10		
3. Key Consultant Qualifications (Maximum 20 points)				
a. Key discipline leads	Experience / ability of key consultants to perform effectively and collaboratively	0 - 15		
b. Proposed EDGE-certified Consultant participation*	One point for every 2 percent increase in professional services over the EDGE participation goal	0 - 5		
4. Overall Team Qualifications (Maximum 10 points)				
a. Previous team collaboration	Less than 3 sample projects	1	Max = 3	
	3 to 6 sample projects	2		
	More than 6 sample projects	3		
b. LEED** Registered / Certified project experience	Registered projects	1	Max = 2	
	Certified projects	2		
c. BIM project experience	Training and knowledge	1	Max = 3	
	Direct project experience	3		
d. Team organization	Clarity of responsibility / communication demonstrated by table of organization	0 - 2		
5. Overall Team Experience (Maximum 30 points)				
a. Previous team performance	Past performance as indicated by evaluations and letters of reference	0 - 10		
b. Experience with similar projects / delivery methods	Less than 3 projects	0 - 3		
	3 to 6 projects	4 - 6		
	More than 6 projects	7 - 10		
c. Budget and schedule management	Performance in completing projects within original construction budget and schedule	0 - 5		
d. Knowledge of Ohio Capital Improvements process	Less than 3 projects	0 - 1		
	3 to 6 projects	2 - 3		
	More than 6 projects	4 - 5		
* Must be comprised of professional design services consulting firm(s) and NOT the lead firm ** Leadership in Energy & Environmental Design administered by the Green Building Certification Institute		**Subtotal**		

Notes:

Evaluator:

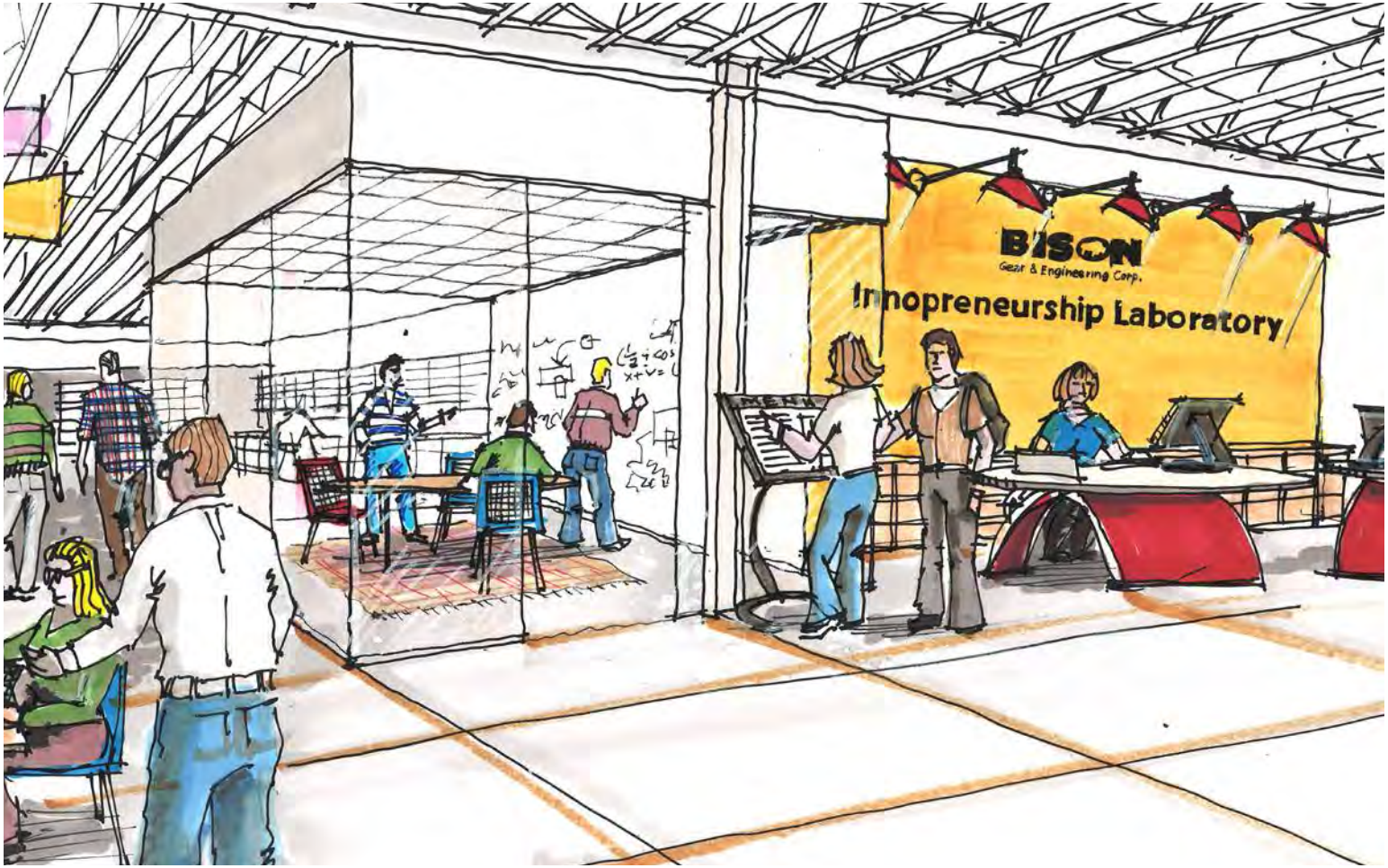
Name _____

Signature _____ Date _____

BISON GEAR & ENGINEERING CORPORATION

INNOPRENEURSHIP LABORATORY

Program of Requirements
for
WRIGHT STATE UNIVERSITY
College of Engineering & Computer Sciences
Russ Engineering Center



WRIGHT STATE *UNIVERSITY*
RUSS ENGINEERING CENTER
COLLEGE of ENGINEERING & COMPUTER SCIENCE

Prepared by:
McGILL SMITH PUNSHON Inc.
#05418.55
OCTOBER ***2015***

McGill Smith Punshon, Inc
www.mcgillsmithpunshon.com

BISON GEAR & ENGINEERING CORPORATION

INNOPRENEURSHIP LABORATORY

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I. CREDITS

The project was led by the College of Engineering and Computer Sciences, Russ Engineering Center Administration team, University Development and University Planning representatives. Faculty stakeholders also provided key input. Major input and support was provided by Bison Gear & Engineering Corporation project donor. The company leadership provided key input to establish the strategic expectation for the facility.

Project Donor:

Bison Gear & Engineering Corp.

Wright State University Client Team Members:

Dr. Nathan W. Klingbeil, Ph.D.	Professor and Dean
Thomas L. Bazzoli, M.S., M.B.A.	Assistant Dean for Fiscal Affairs
Mitch Heaton, NA, B.S.	University Development, Director of Major Gifts
Chris Haring, B.Arch,	Wright State University, Facilities Planner

Engineering Department:

Input was provided by over 10 faculty members

Programming & Concept Design

Craig Rambo A.I.A., LEED AP, Architect
McGill Smith Punshon Inc.
3700 Park 42 Drive, Suite 190B
Cincinnati OH 45241
513-759-0004
www.mspdesign.com

II. *PROJECT DESCRIPTION*

The purpose of the project is to develop a program of requirements, project budget, and preliminary concept imagery for Bison Gear& Engineering Design Innopreneurship facility to be constructed in the existing Russ Engineering basement where there is presently a machine shop and workshop spaces. The proposed project budget is $1 million construction cost for 15,563 net square feet of basement space available.

III. *PROCESS*

1. Due Diligence & Innovation Center Research

2. Input Session with Client team

3. Input session with faculty stakeholders

4. Program/Concept Draft - Review by University Client Team

5. Develop Preliminary program of requirements,(bubble diagrams, concepts and quick rough sketches)

6. Present concept to stakeholder group for review and recommended changes.

7. Site Visit at Xavier University Maker Space

8. Client Team visit with Donor for review of concept and input

9. Client team visit to other innovation space

10. Final Report

BISON GEAR & ENGINEERING CORPORATION
INNOPRENEURSHIP LABORATORY

IV. *PROGRAM of REQUIREMENTS*

Programmatic requirements that have evolved from Research, stakeholder input and University team input have developed into the following:

VISION:

The space is to be "designed to promote creative thinking and problem solving in various engineering disciplines".... " cutting–edge facility will bridge the gap between classroom theory and true engineering practice, providing students with both creative space and state-of-the-art technology required to take their ides from concept to market,"... "an opportunity for students to take innovative design ideas and then actually produce them in the lab",..."it will provide an incubator capability for new business and entrepreneurship" (Innopreneurship)

– Ron Bullock, CEO Bison Gear & Engineering Corp.

This space will not be so much as an incubator but as a space for students to create, design and learn through hands-on fabrication. The space will be used to fabricate components of overall projects. High bay space (elsewhere) will be used to assemble components

SPACE PLAN:

Openness: The overall space is anticipated to be as open and flexible as possible. The existing ceiling and all walls are planned to be removed within the center 9,380 square foot area. The purpose is to allow activities to flow from one equipment zone to another.

Access: Within the space, key perimeter and diagonal pathways are created to support the flow of people to fire exits and into the space without winding between desks. A separate entry for the classroom was created close to the stairwell where most students are anticipated to arrive. Outside the Innopreneurship space, a main perimeter has been created for emergency access to a fire exit when the center is closed. This is proposed as a glass wall with a clear view into the center. Amounts of glass may depend on budget limits. Lockable storage space is planned along the corridor projects in progress can be showcased from the outside. Use of glass or mesh screening to allow viewing but keep security.

Zones: Lab space "zones" are planned around like or similar equipment. All zones are flexible to accommodate potential changes in technology and education trends. As much as possible, all equipment and work surfaces are planned to be mobile. Openness and visibility are anticipated as a desirable environment, promoting interaction and creativity. Equipment will be phased in over time depending on budget, donations and the process of determining what works best in the lab.

BISON GEAR & ENGINEERING CORPORATION
INNOPRENEURSHIP LABORATORY

IV. *PROGRAM of REQUIREMENTS*

Programmatic requirements that have evolved from Research, stakeholder input and University team input have developed into the following:

ZONES INCLUDE:

• ***Entry/Reception and Conference:*** Glass wall / sliding doors at main entrance near existing elevator to create the opportunity to establish the "Lab brand" with opportunities for donor recognition. Entry is seen as grand entrance for donors, visitors, conference room users. The glass-wall conference room within the design/fabrication lab is to be "in the activity". Frost glazing, blinds, and/or sound control may be used to avoid distraction were suggested but openness is the primary requirement.

• ***General lab space:*** Class groups can utilize open tables for project assignments. The center identity for the space is provided by the mobile open conference in the center with the large colorful "innovate and create" signage.

• ***Automation:*** Specialized automation equipment related to cutting edge manufacturing. The donor will provide input on appropriate equipment for this area.

• ***Crafts Area:*** Equipment to support various crafts and small equipment such as sewing or portable scanners

• ***Electrical Area:*** Electrical equipment and space to perform projects typical in electrical manufacturing environments. A soldering hood is recommended. Possibilities to vent vertically through the shaft above the toilets or a vent-less hood area possible.

ZONES INCLUDE:

•***Laser Cutter Area:*** Space for large free standing and small table top laser equipment. Location should take into consideration venting requirements which can be connected to the woodworking or metalworking areas.

•***3D Printing space:*** large and small printers and a Quill cleaning station requiring water. (Existing sink is located on the opposite side of the wall). Project work surfaces and storage is also planned within this space. The number and type of printers is undetermined at this time.

•***Wood working area:*** The woodworking area will be placed in part of the present Metal Working lab space. Antiquated metal equipment will be removed. An exhaust system for sawdust removal will be required for this space. An existing office will be converted to a material storage room. The other office will remain.

•***Metal working area:*** Metal lab area will replace antiquated equipment over time as funds and donations become available. The space should be available to implement new equipment with adequate electric power and existing exhaust system available. Welding and paint booth will be located in the lab. Location to the back door for materials delivery is also a key factor for both the metal lab and woodworking lab

BISON GEAR & ENGINEERING CORPORATION
INNOPRENEURSHIP LABORATORY

IV. *PROGRAM of REQUIREMENTS*

Programmatic requirements that have evolved from Research, stakeholder input and University team input have developed into the following:

ZONES INCLUDE:

•***Lounge:*** The lounge with comfortable and durable furniture is planned as a break area for students to release energy but also an area for group meetings small or large in an environment other than the lab. A flat screen monitor is planned with internet connection for use.

•***Storage:*** Storage shelving in open zones for materials, resources and tool storage units are located throughout the open area and should be movable to accommodate change. Storage units need to be secured to prevent tipping if bumped. Large storage room with secure storage units is to be provided to allow for secure placement of projects to the point of patent protection.

•***Classroom:*** The classroom was relocated next to the stairwell. This is primarily a freshman classroom which will provide visual access (glass walls) and access into the corridor and the classroom without swipe card access into the lab. Other students using the Innopreneurship lab can gain access with a swipe card through this corridor.

•***Coffee/Vending:*** Plumbing for this area will be required to tap the sanitary, vent and water lines connected to the adjacent toilet rooms. This area will be accessible to anyone who comes to this floor without a swipe card.

EQUIPMENT:

New equipment can be phased. The list is not set at this time. In concept, where not-yet-purchased equipment is shown, table space will fill void until new equipment is purchased. The concept shows space for more than twenty-four (24) tables where five (5) tables are currently in-use in existing space will have plenty of table space.

FURNITURE:

Tables, chairs, stools, mobile writer boards and storage units need to be durable and mobile. Because the tables will be most often used for project development, heavy duty wood tables were recommended with retractable wheels to allow them to be stable but movable when needed.

TECHNOLOGY:

Technology infrastructure in the building is anticipated adequate to support the demand for equipment use. Cabling and connections will need to be improved. Smart boards or monitors, table top computers and mobile equipment will be by the University.

STAFFING:

Two Full-Time Equivalent (FTE) staff will manage the space. Teacher Aids will assist in the management. One FTE will be at the check-in and TA's will manage training and zones.

IV. *PROGRAM of REQUIREMENTS*

Programmatic requirements that have evolved from Research, stakeholder input and University team input have developed into the following:

ACCESS*:*

Users will be required to be certified on each machine, swipe access will be required to use machine with time-stamped access into the lab. Swipe access at the entrance near coffee will also be allowed

SCISSORS LIFT:

Delivery of materials through the back emergency exit door presently is difficult due to the location of the basement access. The option of utilizing a scissors lift to get materials to the basement needs to be investigated to determine the feasibility and potential budget as a project alternate.

BUDGET:

Keeping within the proposed project budget will require limiting the amount of area that is impacted by construction in the project. Alternates are recommended to maximize design but provide options to save cost and obtain the maximum positive solution for the space.

Total area of the space is 15,565 square feet. It is recommend the present metal working shop and the 28 foot bay along the full length of wall where the present classroom exists would require little modification to perimeter walls, ceiling, lighting and finish materials. The remainder of the space in the center of about 9,380 square feet would require demolition of all walls, ceiling and lighting.

V. *DESIGN CONCEPT*

AESTHETICS:

An open industrial look, with exposed structure, exposed mechanicals that are painted white to maximize brightness but color on walls, sound baffles and some accent features will create an exciting environment. Utilizing glass to maximize transparency, create writable surfaces and provide a secure separation but visual openness is also recommended. An iconic focal point in the general lab area is recommended to provide character to the large open space. The introduction of a vertical feature with color, used as an open area conference table in the center of the general lab area would create a design feature that can provide branding for the space.
Sound baffles to provide noise damping are recommended in the large open space. They would also create the opportunity to provide color within a white space.

COLOR:

Bright colors used sparingly on a white pallet can provide visual stimulation within a bright environment. It is highly likely students will use all surfaces available to write or post ideas and so the key location of bright but limited number of colors can contribute to keeping the space cohesive. It is recommended that floor tile be removed and exposed concrete either stained or painted be utilized to compliment the industrial aesthetic. Floor color can be implemented t identify circulations paths or equipment zones. Selected furniture can also add to the color pallet depending on the type.

FURNITURE:

Continuity of work surfaces of heavy durable materials will be important to provide a positive workplace tone which will hold up over time. Work tables with storage underneath included would be desirable features. Mobile writer boards can be used to temporarily divide or segregate space while creating brainstorming and communication surfaces. Lounge space furniture should be durable but soft and relaxing.

BISON GEAR & ENGINEERING CORPORATION

INNOPRENEURSHIP LABORATORY

V. DESIGN CONCEPT

EQUIPMENT ZONES:

PRINTING
- Large Format Printer
- Laminator

LASER CUTTERS
- Full Spectrum Laser Cutter
- Laser Cutter
- Vinyl Cutter
- Cold Chamber
- Vacuum Chamber

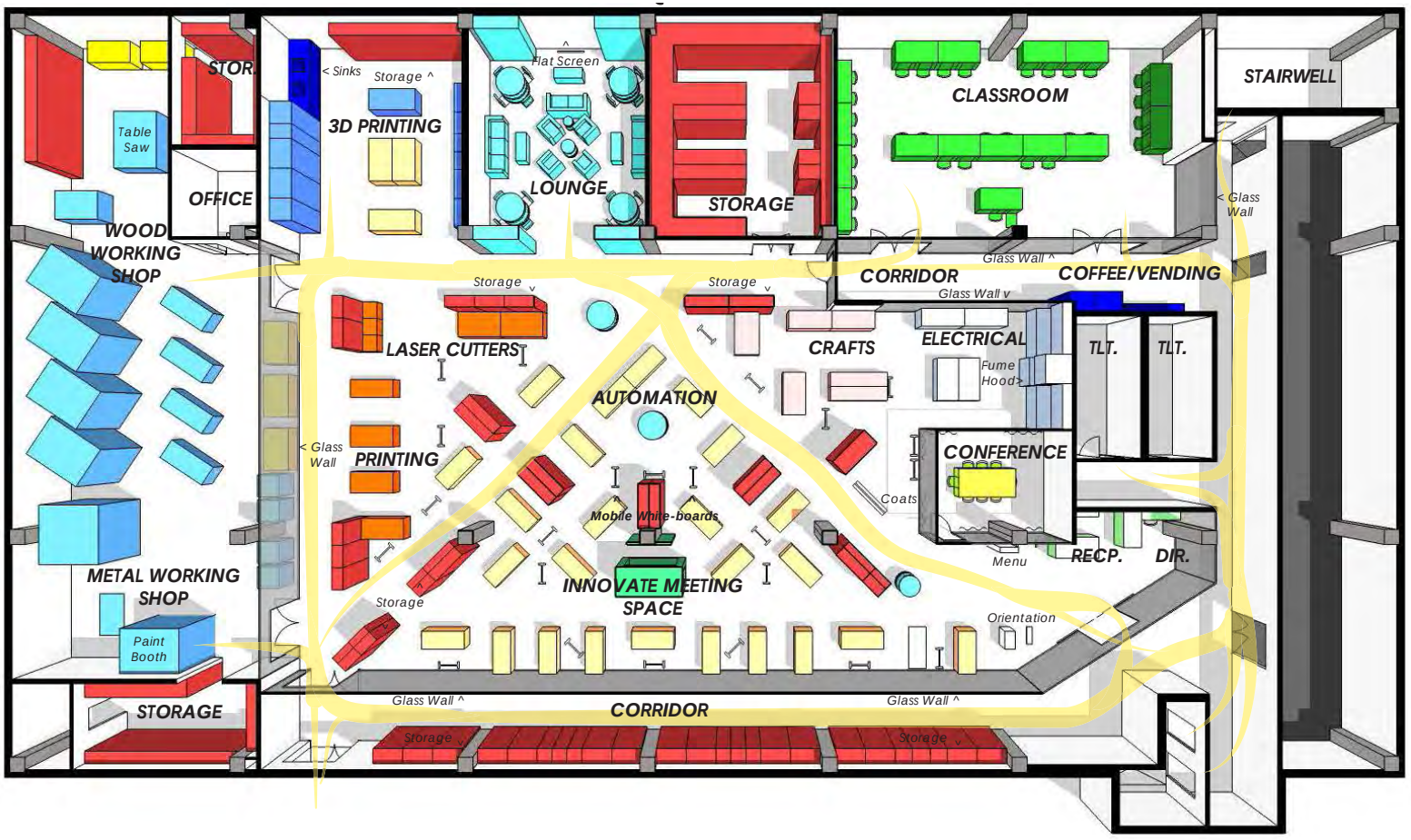
CRAFTS
- Sewing Center
- Portable Scanner
- Geomagic Scanner

ELECTRICAL
- Solder Station
- Fume Hood
- Soldering & Re-Work Station
- Circuit Milling Machine
- Small Scale Electric Devices
- Bench top Reflow Oven
- Oscilloscopes
- Motors
- Breadboards
- Antenna Cabling Network

3D PRINTING
- 3D Printers (Large)
- 3D Printers (Small)
- 3D Printers (Floor Model)
- Resin Printer
- Quill Cleaning Station for Materials

WOOD WORKING SHOP
- Table Saw
- Vertical Band Saw
- Drill Press
- Miter Saw
- Router Shop-bot

METAL WORKING SHOP
- Horizontal Band Saw
- Kern Metal Cutting Laser
- Drill Press
- Metal Milling Equipment (TBD)
- Paint Hood



WRIGHT STATE UNIVERSITY
RUSS ENGINEERING CENTER
COLLEGE of ENGINEERING & COMPUTER SCIENCE

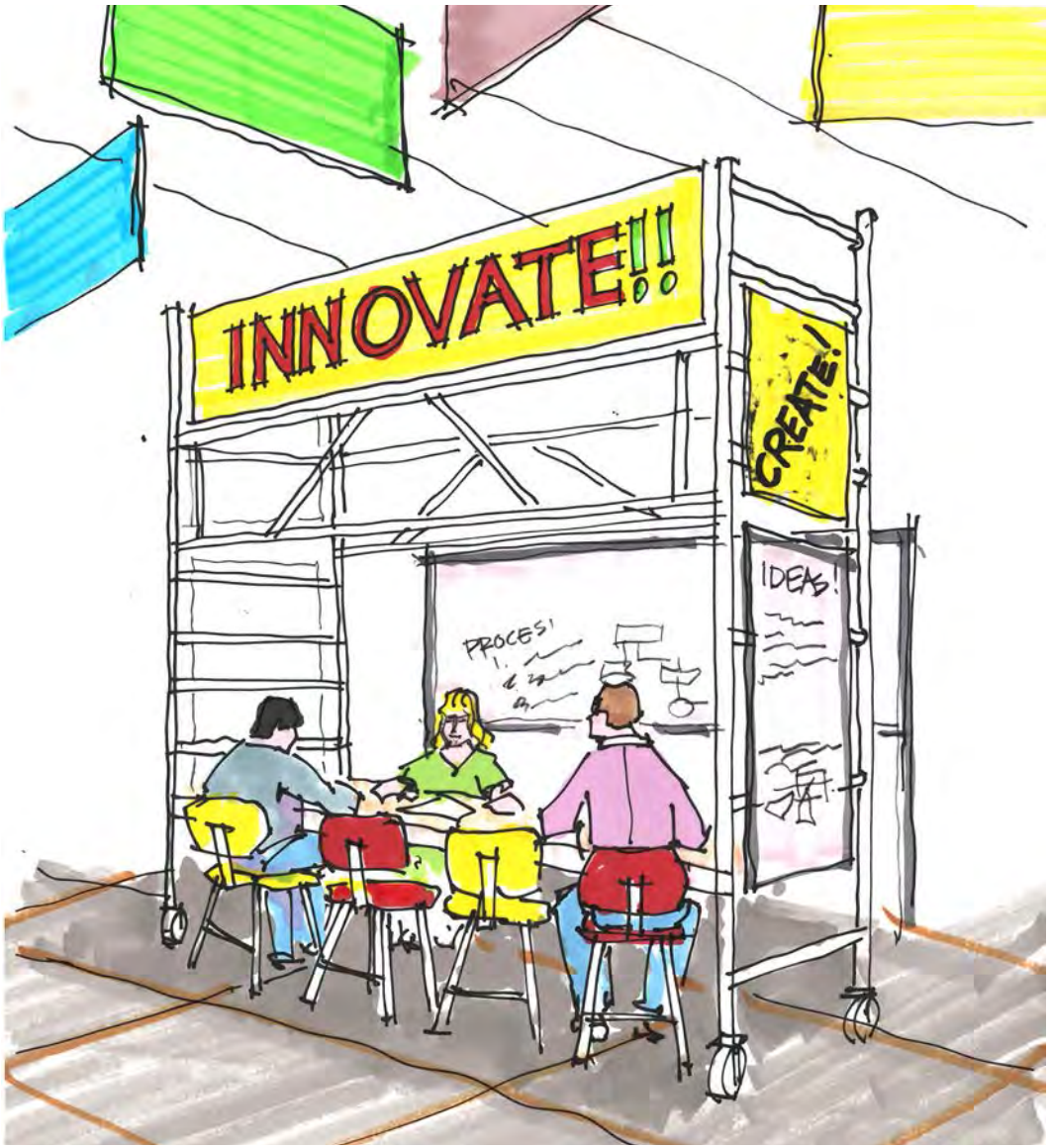
VA. CONCEPTUAL SPACE PLAN

McGill Smith Punshon, Inc
www.mcgillsmithpunshon.com

BISON GEAR & ENGINEERING CORPORATION
INNOPRENEURSHIP LABORATORY

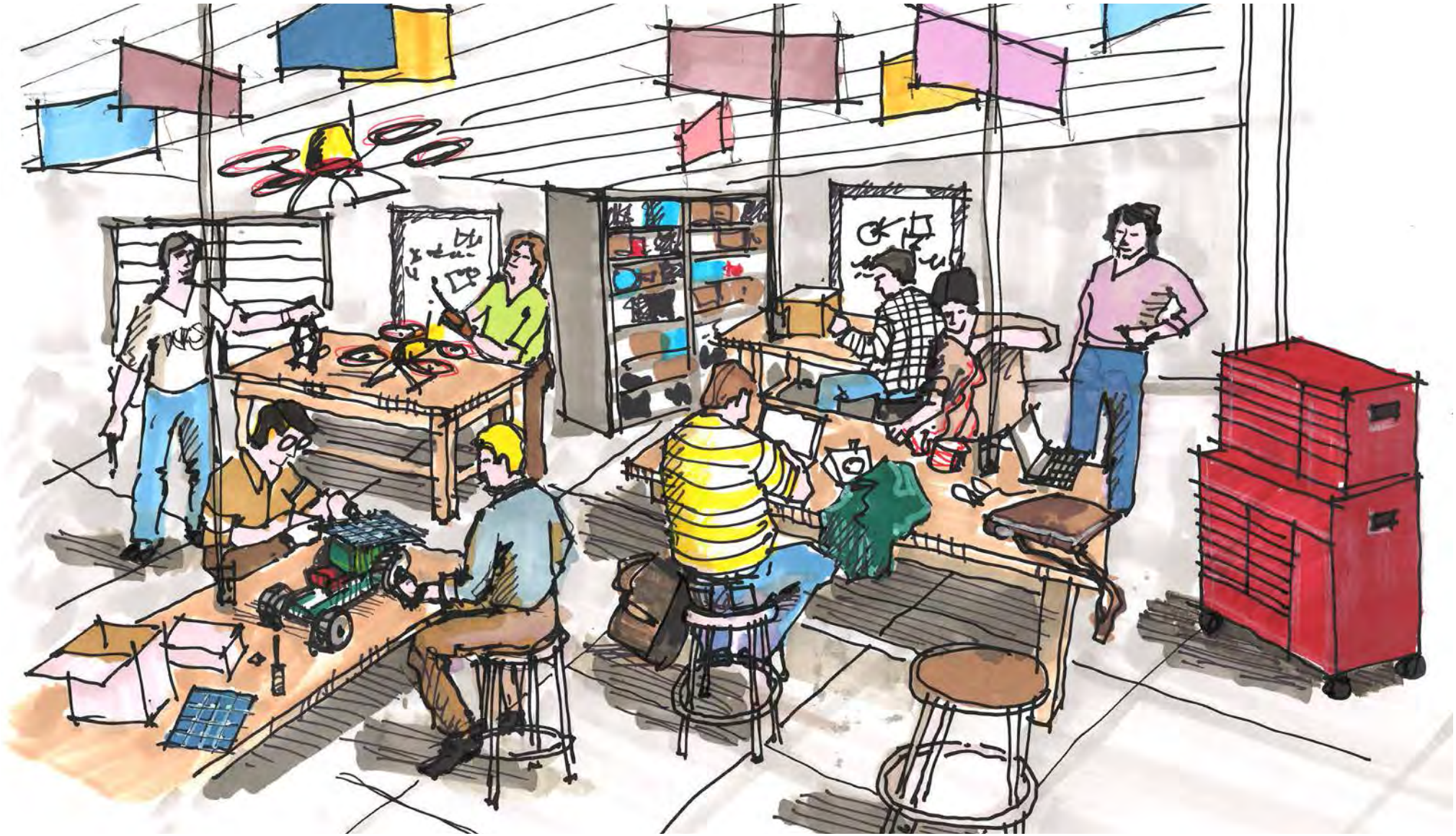
V. *DESIGN CONCEPT*

V. *DESIGN CONCEPT*



VC. OPEN CONFERENCE TABLE

V. *DESIGN CONCEPT*



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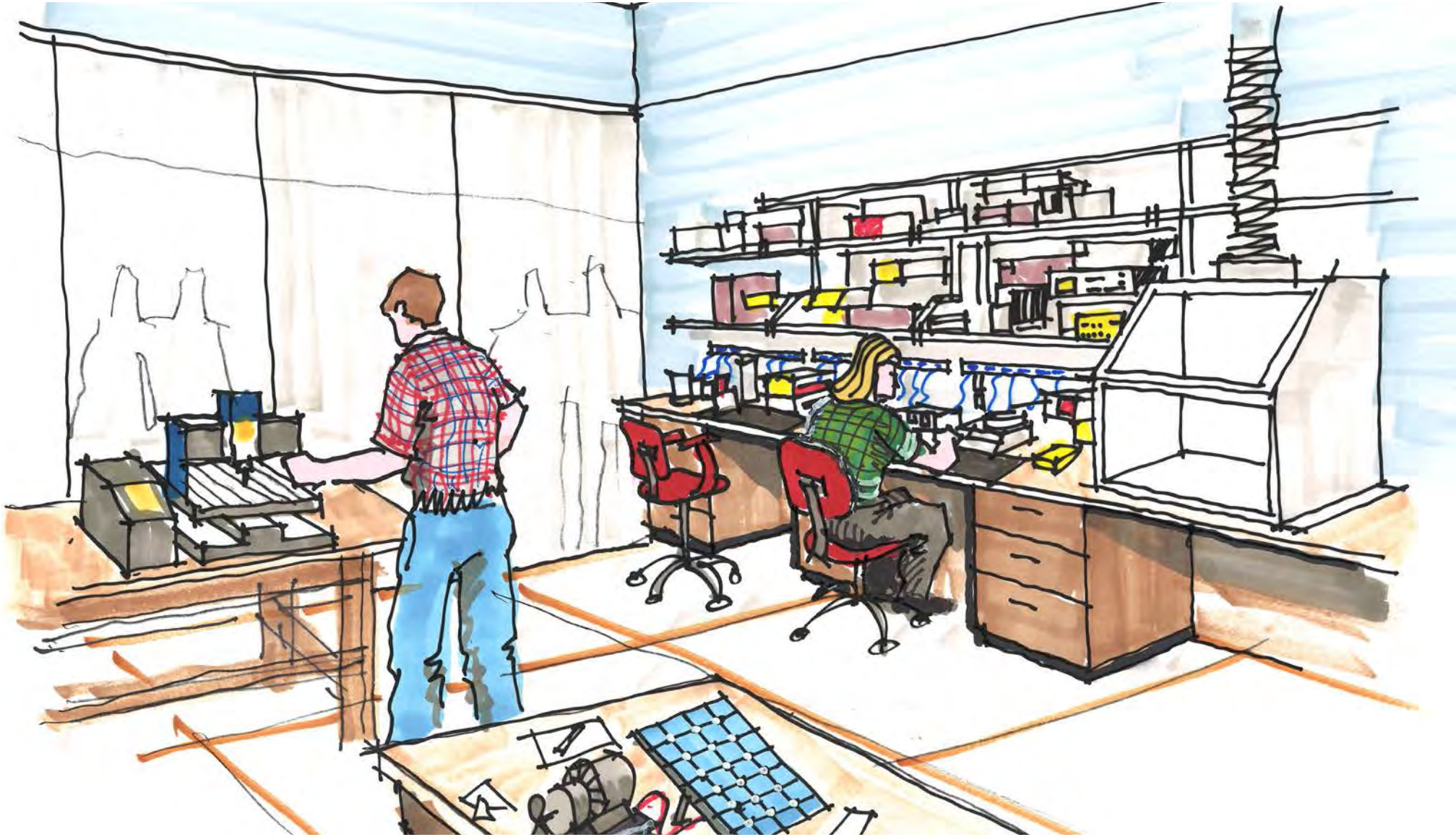

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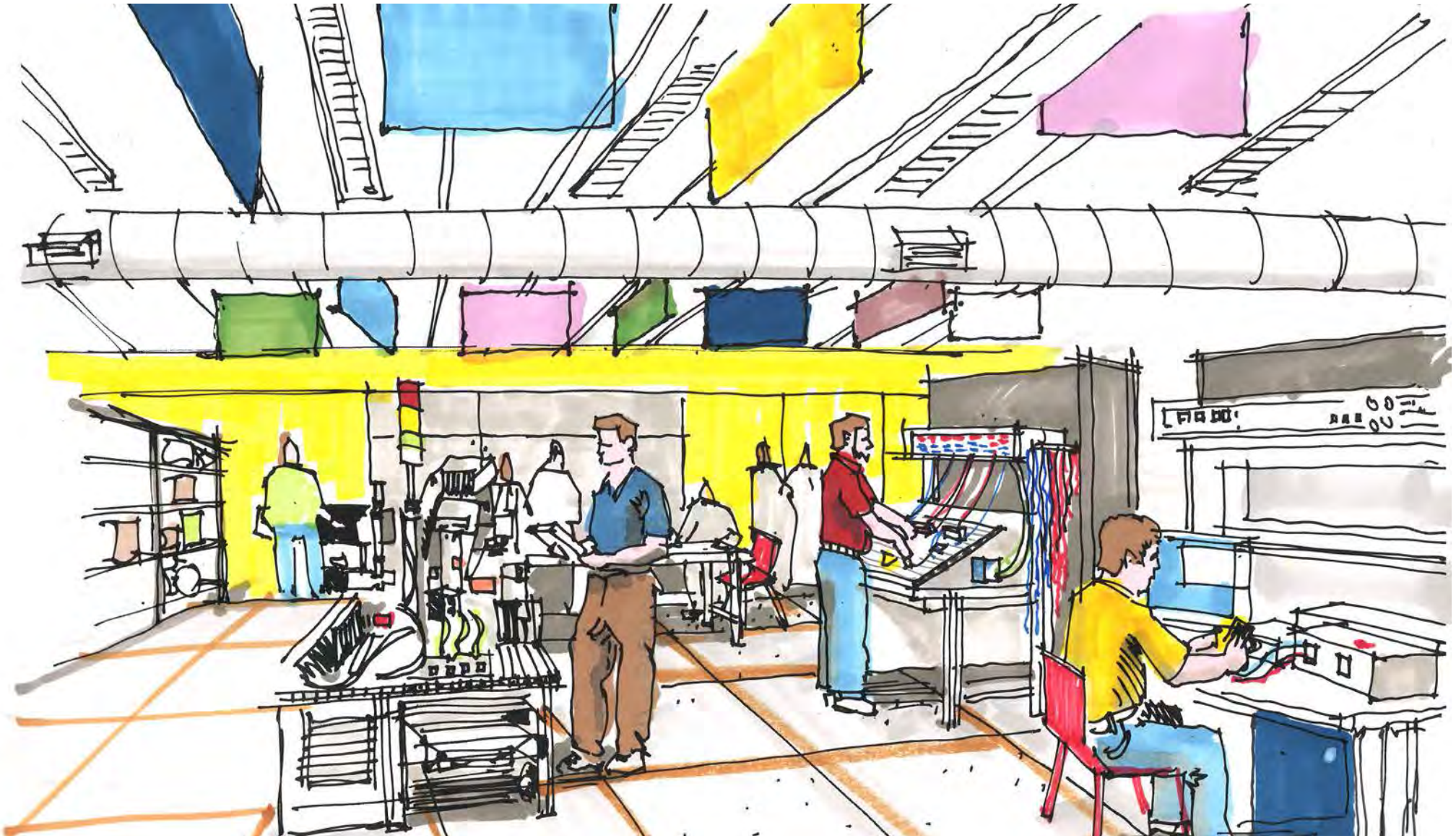
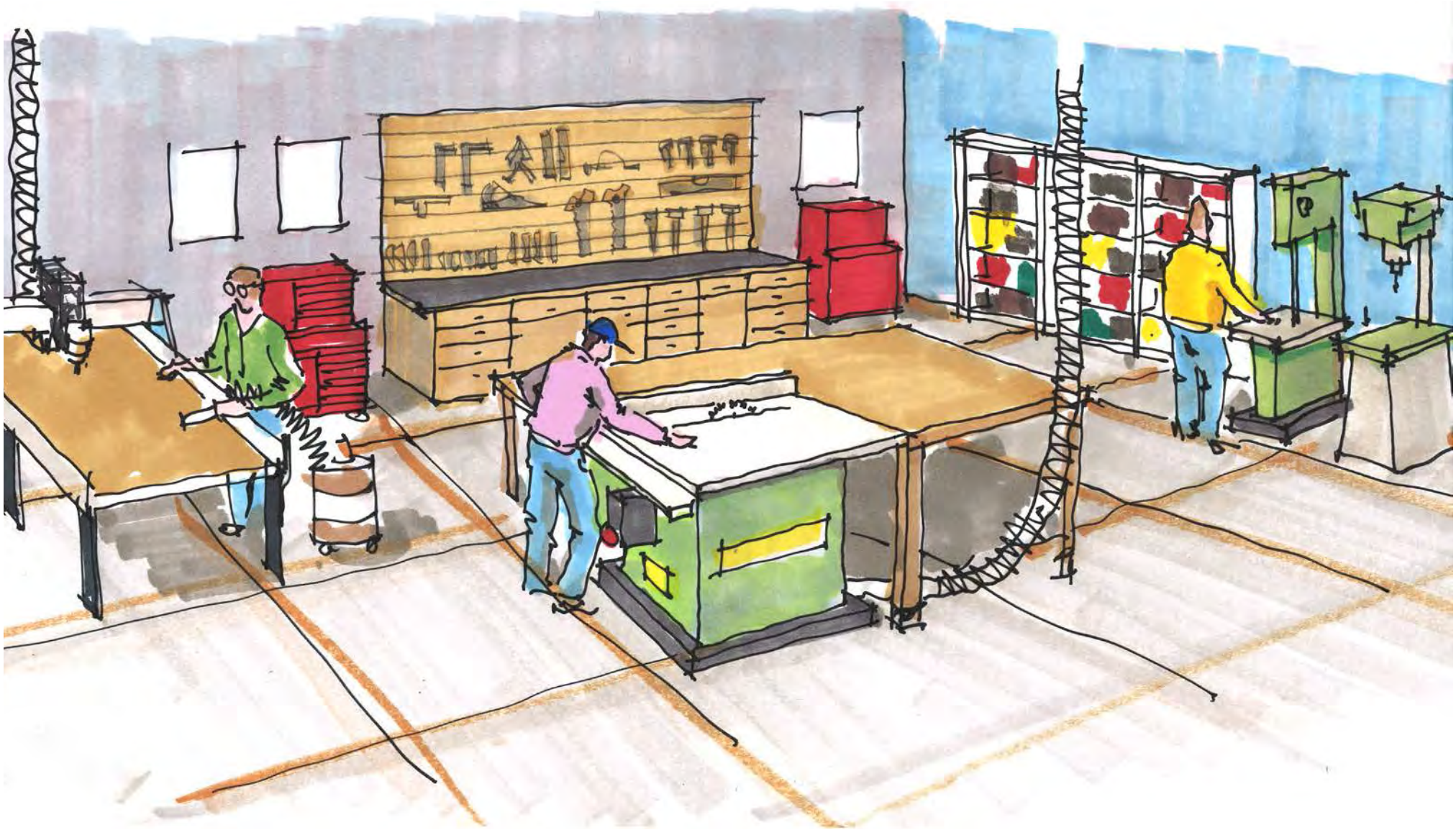


V. *DESIGN CONCEPT*

VG. 3D PRINTER LAB AREA

V. *DESIGN CONCEPT*



V. *DESIGN CONCEPT*

VI. *BUILDING SYSTEMS*

INTERIOR DEMOLITION:

The existing metal lab and proposed 3D printing, lounge, storage and classroom will remain with present exterior walls, ceiling, lighting and mechanicals. Approximately 9,400 square feet of existing space will require demolition of all walls, and ceilings. Ventilations systems, plumbing systems and electrical systems will be demolished either to meet code or to accommodate the proposed new facility design. The major ductwork and HVAC system are assumed to remain. Tile flooring in the total space will be removed.

INTERIOR WALLS:

The new constructed perimeter walls of the space will feature as much glass wall as the budget can afford. Gypsum stud headers braced to the structure will be required to support the glass storefront. Headers may need to only extend to the bottom of the steel structure as long as sections can be braced to the deck or beams. New gypsum stud walls are to be provided where shown as new walls. Where existing walls are to remain but openings enlarged, existing wall panels are to be removed and gypsum header members installed to support proposed glass or open area.

FLOORING:

All existing tile flooring will be removed with the concrete floor cleaned, patched and ground smooth to receive new finish. New finish depending on cost is recommended to be concrete stain or paint.

CEILINGS:

All existing ceiling grids within the present metal lab and proposed 3D printing, lounge, storage and classroom will remain with proposed re-padding. Lighting and sprinklers in those areas will also remain. All other ceiling areas shall be exposed painted structure and mechanical systems with sprinklers repositioned to meet code.

VI. *BUILDING SYSTEMS*

PAINTING:

All walls and exposed ceiling steel deck and steel structure surfaces shall be painted a light color to maximize lighting. Painted accent walls are recommended to maintain a lively aesthetic. Floor finish shall be either concrete stain or epoxy paint. Selection of the final finish is based on the condition of the concrete floor and cost. Existing Bathrooms are assumed to be repainted but existing floor finish to remain.

TECHNOLOGY:

Cable Trays presently located in the corridors will need to be relocated with support from the existing steel structure above. Wifi is to be provided by the University. A minimum of hard wire data connections are anticipated most likely at column locations.

ELECTRIC:

It is assumed electric service to the building is adequate to support the proposed functions for the space. The mobile aspect of furniture will require numerous electric drops than can be relocated or repositioned. Additionally, electric outlets will be provided at all sides of exposed columns and along new and existing walls where ever possible.

POWER:

It is assumed that modifications to the existing conduit and wiring will require upgrades and modifications to meet the new design requirements. Existing electric box locations will be moved or abandoned.

LIGHTING:

New lighting fixtures will also need to be more industrial, suspended from the structure and positioned to maximize lighting on work surfaces that are mobile. Specialty decorative fixtures at key locations should be chosen to support the industrial “look”.

VII. *PROJECT SCHEDULE*

The attached estimated project time frames are approximate and should be adjusted to accommodate the Wright State University and Russ Engineering Department Academic Schedule.

TASK	*DATES*	*CALENDAR DAYS*
ARCHITECT SELECTION	*01/08/16*	
PROGRAM REVIEW	*01/11/16 – 01/15/16*	*5* Days
SCHEMATIC DESIGN	*01/18/16 – 01/05/16*	*19* Days
DESIGN DEVELOPMENT	*02/08/16 – 02/26/16*	*19* Days
CONTRACT DOCUMENTS	*02/29/16 – 04/08/16*	*40* Days
PERMIT/BIDDING/CONTRACT	*04/11/16 – 05/13/16*	*33* Days
CONSTRUCTION	*05/16/16 – 07/15/16*	*61* Days
PROJECT CLOSEOUT	*07/18/16 – 07/29/16*	*12* Days
CLIENT MOVE IN	*08/01/16 – 08/26/16*	*26* Days
FALL CLASSES BEGIN	*08/29/16*	

VIII. *ORDER of MAGNITUDE BUDGET*

DIVISION OF WORK	UNIT	AREA/#	TOTAL $
DIVISION 02 – EXISTING CONDITIONS / DEMOLITION			30,822
DIVISION 05 – METALS STUDS			12,300
DIVISION 06 – WOOD, PLASTICS, AND CABINETRY			7,440
DIVISION 08 – OPENINGS, DOORS, GLASS WALL, GLASS DOORS, HARDWARE			255,520
DIVISION 09 – FINISHES – GYPSUM WALL BOARD, ACOUSTIC CEILINGS, PAINTING			117,203
DIVISION 10 – SPECIALTIES – SIGNAGE			4,000
DIVISION 11 – EQUIPMENT: SMART BOARDS,BENCHES, CABINETS, SHELVING (NO TOOLS)			155,900
DIVISION 22 – PLUMBING			56,400
DIVISION 23 – HEATING VENTILATING AND AIR CONDITIONING & CONTROLS			181,680
DIVISION 26 – ELECTRICAL, POWER, LIGHTING (ADD $2/SF FOR LED)			205,520
DIVISION 27 – COMMUNICATIONS, CABLING			47,000
		Order of Magnitude Construction Cost	***$1,073,785***
		5% Contigency	***$53,690***
Order of Magnitude Budget			***$1,127,475***

VIII. *ORDER of MAGNITUDE BUDGET*

BUDGET NOTES:

The budget estimate is based on several assumptions that might impact the overall project budget. Assumptions are as follows:
Fees and other soft costs are not included in the Order of Magnitude Budget.

TECHNOLOGY: The University will provide wifi service for the proposed renovation space as required and any specialized technology equipment that conform to the University standards.

MECHANICAL SYSTEMS: It is assumed the existing HVAC system is in quality condition and will not require a major replacement to the system. The budget numbers are based on minor modifications to branch ductwork and diffusers required to adapt the present system with the existing lay-in ceiling to an exposed structure ceiling.

NEW EXHAUST SYSTEMS: special exhaust systems for new equipment will be budgeted separately as part of each equipment piece cost.

PLUMBING SYSTEMS: It is assumed that access to the plumbing for the proposed coffee area and quill cleaning system can be accomplished by connecting to the existing adjacent plumbing system in the toilet rooms and adjacent sink in the metal lab with minimal demolition.

SPRINKLER SYSTEM: It is assumed that the piping above the ceiling will not be required to be replaced and only reorientation of the sprinkler heads in the exposed structure area will be required.

ELECTRIC: The power service to the proposed renovated space is adequate to carry the loads of proposed new equipment. The proposed budget provides an allowance for new local panel box replacement and re-wiring to serve new electric drops at work tables and equipment.

STORAGE UNITS: Lockable storage units in the corridor area that allow viewing of projects in progress will be provided as an add alternate in the proposed budget.

SOUND BAFFLES: Provide as an alternate depending on final project costs.