

Architectural Program

Welcome Center, New Student Services, and Career and Employment Services

East Memorial Stadium Renovation



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Prepared By



The Ebert Mayo Design Group
Architects & Planning Consultants

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Architectural Program

Welcome Center, New Student Services, and Career and Employment Services

East Memorial Stadium Renovation

Introduction

Kansas State University engaged The Ebert Mayo Design Group to conduct existing site conditions analyses and programming for construction of a new facility to meet the needs of New Student Services and Career and Employment Services. This work has extended from initial programming analyses in 2008 through concept analyses in 2014. The information in this program includes written descriptions of key considerations, numeric space requirements, conceptual plans, project budget, and supporting data.

The program documents the efforts of the University to renovate the historic east side of Memorial Stadium into a technologically sophisticated Welcome Center for admitting new students, and then providing continuing assistance during their academic career with employment assistance through Career and Employment Services. The 37,600 square foot facility will house administrative staff as well as provide an inviting place for the alumni and employers from the business community. The estimated cost of the project is \$18 million which will be raised from private donations.

Competitive Market

Students who are interested in K-State's programs frequently apply to other Big 12 schools as well as regional universities such as Wichita State University, University of Missouri, and the University of Nebraska. In general, the primary competition is in the Midwest. Many universities have various forms of a welcome center or are in the process of building a welcome center. State-of-the-art admissions facilities, coupled with excellent and innovative academic and professional career counseling, will enable the University to recruit and retain the best students, fulfill the University's land grant mission, and be responsive to the needs of the alumni, corporate partners, and the State of Kansas.

Existing Conditions

The existing stadium is constructed of structural concrete frame, concrete seating tiers, and exterior limestone walls. The limestone walls above the top seating level, have been exposed to significant freeze-thaw cycles and are in poor condition. This results in water penetration and affects the limestone wall below. Interior construction consists of masonry and frame partitions and various ceiling/roof configurations. Windows are steel frames with single glazing and are also in poor condition.

The concrete seating tiers, which also act as the primary weather barrier, appear to be in serviceable condition. Installation of a weather membrane (roofing) will protect the structure from further deterioration and make the building weather tight.

Repurposing Memorial Stadium

Memorial Stadium, a campus icon constructed in 1922, has begun a phased repair, renovation and restoration to extend its structural and serviceable life. The west side of the stadium is currently undergoing Phase 1 of the stadium improvements. The former occupants of the west side have been relocated to other locations on campus.

When Phase 1 is complete it will allow the Purple Masque Theatre to move from the east side, thereby allowing improvements to begin for the Welcome Center.

Occupancy Summary

The Concept Design has verified the new uses of the East Stadium building. Occupant Groups to be housed following the renovation include:

- Welcome Center
- New Student Services
- Career and Employment Services
- Exterior Stadium Seating (Approximately 1000 Persons and Interior Support Facilities)

Project Description

Proposed work/materials for construction include the following:

- Demolition: Will strip the building to the existing concrete frame, including concrete floors.
- Floors: New concrete floors will be installed at an elevation higher than the existing floors.
- Interior Walls: Glass, wood, stone in common spaces, tile in restrooms and metal stud/drywall in office areas.
- Ceilings: Office areas will be acoustical lay-in panels, restrooms will be gypsum board and exposed structure in common spaces.
- Interior Doors: Solid core wood with painted hollow metal frames.
- Interior Floors: Porcelain tile in common spaces and toilets, carpet in office areas.
- Exterior Walls: Limestone repair to match the existing walls.
- Exterior Doors: Aluminum, storefront or curtainwall frames with insulating glass.
- Exterior Windows: Aluminum frames with insulating glass.
- Common Spaces: Interactive displays and exhibits to tell the story of the tradition of the K-State experience.

Green Roof

A vegetated roof, mirroring that being constructed for the West Stadium renovation project, will be included in this project. The green roof will contribute to a reduction in heat gain and air conditioning costs during the cooling season, as well as extend roof life by protecting the roofing membrane from solar ultraviolet radiation.

Building Design

Architectural Design

The renovated building is located at a prominent campus entrance along 17th Street adjacent the K-State Student Union, the new parking structure, and the K-State Alumni Center. The vernacular of these buildings is varied, and represents the limestone image of the University.

A successful design for this new structure will respect the existing architectural language of the campus while simultaneously imparting the image of quality education and the tradition of the University within the renovated spaces.

Additional exterior construction materials should be selected which conform with University design standards and simultaneously complement the entire facility. It should be sensitive to adjacent buildings, the new materials at the West Stadium, as well as new development standards in accordance with the University Master Plan.

Although LEED certification is not a design requirement, the Architect should incorporate daylighting, energy recovery and other sustainable features which are readily achievable and have a sound financial basis within the construction budget.

Building Elements

The existing structural concrete system is anticipated to be reused throughout. New slabs on grade are required for level floors, and the new second floor will consist of concrete slabs on metal deck. The minimum floor load capacity must be dead load plus 80 pounds per square foot to provide flexibility in repurposing floor space for unknown future needs.

An elevator will be provided for access to the second floor. It should be 2,500 pound capacity, electric traction, passenger service. The cabs and controls are to be ADA compliant.

Applicable Codes and Regulations

The new facility must meet applicable codes and standards adopted by the State of Kansas. At the time of this program, it includes the following:

- International Building Codes
- Kansas Fire Prevention Code or NFPA 101, 2000 Addition
- Americans with Disabilities Act and Americans with Disabilities Act Architectural Guidelines
- Kansas Statutes
- Regulations from the Office of Facilities and Property Management
- Regulations from the Kansas State Fire Marshal
- Kansas State Boiler Code KSA 44-913
- ANSI/ASME A17.1 Elevator Code
- ASHRAE 90.1

Other Applicable Codes, Standards and References:

- 2002 NFPA 10 Portable Fire Extinguishers
- 2002 NFPA 13 Installation of Sprinkler Systems
- Code of Federal Regulations 29 CFR 1910 Occupational Safety and Health Standards
- State of Kansas, Office of Facilities and Property Management (OFPM) Building Design and Construction Manual

Building Code Highlights

General building requirements are indicated as follows:

- **Occupancy Classifications:** Type B Business (primary), with accessory support spaces of other occupancies such as storage; Type A-3 Assembly, with accessory support spaces.
- **Construction Type:** Type I-B construction is anticipated.
- **Automatic Sprinklers:** Required.
- **Exits Required:** Based on Use Group Classifications A and B.
- **Maximum Dead-End Corridor Distance:** 50 feet.
- **Minimum Corridor Width:** Not less than 44 inches (84 inches desired).
- **Travel Distances:** 200 feet maximum (in fully sprinklered building).
- **Common Path of Travel:** 100 feet maximum (in fully sprinklered building).
- **Minimum Plumbing Fixtures Required:** Based on Use Group Classifications A and B.
- **Accessibility:** An accessible route is required throughout the entire building except in mechanical spaces.
- **Emergency Egress Lighting:** Emergency lighting is required at one footcandle (minimum) along the exit path extending to the public way.
- **Fire Extinguishers:** Fire extinguishers as required per Section 906 of the International Fire Code, located so that the maximum travel distance does not exceed 75 feet. (Fire extinguishers provided by Owner.)

HVAC Systems

Heating and cooling will be provided by a combination of air handling units and fan coil units to provide individual room temperature control for all offices, interview rooms, and common public areas. Each unit will be equipped with a chilled water cooling coil and either steam or hot water heating coil.

Dedicated outside air systems will provide outside air conditioned to room-neutral conditions per ASHRAE 62. The fresh air quantity will be demand-limited in response to occupancy and/or space carbon dioxide levels for reduction in operating energy. Heat recovery from exhaust air streams will be included in the design of the outside air systems.

Toilet rooms will be exhausted per the International Mechanical Code requirements.

A Honeywell Direct Digital Control system will monitor all utility meters and control the operation of all HVAC systems. This system will communicate with the campus system in Dykstra Hall.

Chilled water supply, steam and condensate piping will be connected to the campus central plant distribution. Variable speed pumps will circulate chilled water to building loads. The University standard chilled water bridge and controls will be installed at the chilled water entrance to the building.

Electrical Systems

A connection to the campus 12,470 volt primary distribution loop will serve a pad-mounted transformer to provide 277/480 volt, 3-phase power to the building.

Electrical distribution equipment including switchboards, step-down transformers and branch panels will be strategically located in the building. This equipment will be manufactured by Square D per the University standard.

Lighting systems will utilize high efficiency fixtures meeting the University standards.

The lighting and lighting controls will be designed in accordance with the International Energy Code.

Exit signage and emergency egress lighting will meet the requirements of the International Building Code.

A Honeywell addressable fire alarm system will be installed in the building which will communicate with the central campus system in Dykstra Hall.

Plumbing Systems

New sanitary sewer, storm sewer and water services will be extended to the building from site mains.

The plumbing design will meet the requirements of the University standards and the International Plumbing Code.

Fire Protection System

A new fire protection service will be extended to the building from site mains.

A wet fire sprinkler system will be installed to serve all building areas per NFPA 13.

Wet standpipes will be located in stair towers per NFPA 14.

The fire protection systems will be designed to meet the requirements of the University Standards and the City of Manhattan.

Water Distribution Infrastructure

Water distribution improvements will be required to provide the necessary domestic and fire flow requirements of the new building. Water will be provided from nearby mains along 17th Street.

Sanitary Sewer Infrastructure

Building sanitary sewer will connection to nearby mains along 17th Street.

Streets and Drives

The concept designs are based on the University's master plan completing turnarounds for drop-off and pick-up at the K-State Student Union, as well as flow in and out of the new parking structure.

Exterior Plazas

The concept design provides significant exterior space for individual and group activities throughout the year when weather conditions are conducive to outside use. Spaces are to be designed for flexibility of uses, and provide opportunities of extending functions of interior spaces to the exterior.

The exterior plazas are to connect to the sidewalk along 17th Street for access to the center of the main campus.

Project Budget, Funding and Timeline

Budget

The estimated project costs for this new building totals \$18 million.

Demolition & Site Preparation	\$510,000	
Sitework	1,050,000	
Foundations, Substructure & Superstructure	500,000	
Exterior Envelope & Green Roof	2,800,000	
Interior Construction	2,970,000	
Mechanical & Plumbing Construction	2,640,000	
Electrical Construction	760,000	
Contractor General Conditions	<u>970,000</u>	
Construction Subtotal		\$12,200,000
Fixtures and Furnishings	\$1,200,000	
Audio Visual Equipment	1,200,000	
IT Cable and Hardware	110,000	
Security, Locks, Door and Key Card Installation	70,000	
Landscaping	80,000	
Pre-Construction Contractor Fee (CMaR)	140,000	
Architect/Engineer Design Fees & Miscellaneous	996,000	
OFPM and K-State Facilities Fees	384,000	
Third Party Commissioning	110,000	
Site Survey	12,000	
Geotechnical and Specialized Testing	78,000	
Facilities Managed and In-House Construction	200,000	
Project Contingency	<u>1,220,000</u>	
Other Costs Subtotal		<u>\$5,800,000</u>
Total Project Cost		\$18,000,000

Funding

The project will be funded by private gifts.

Maintenance and Operation

No additional funds will be requested for maintenance of this building. The funding for maintenance will be endowed through private gifts. Using the KBOR-FY 2007 formula with the FY 2015 revisions, this building will require 2.7 FTE for salaries of \$99,765. The utility rate is figured at \$131,600 (37,600 GSF @ \$3.50/SF), and other operating expenditures at \$21,432 (37,600 GSF @ \$0.57/SF). The total costs of maintenance and operation for this building are \$249,022.

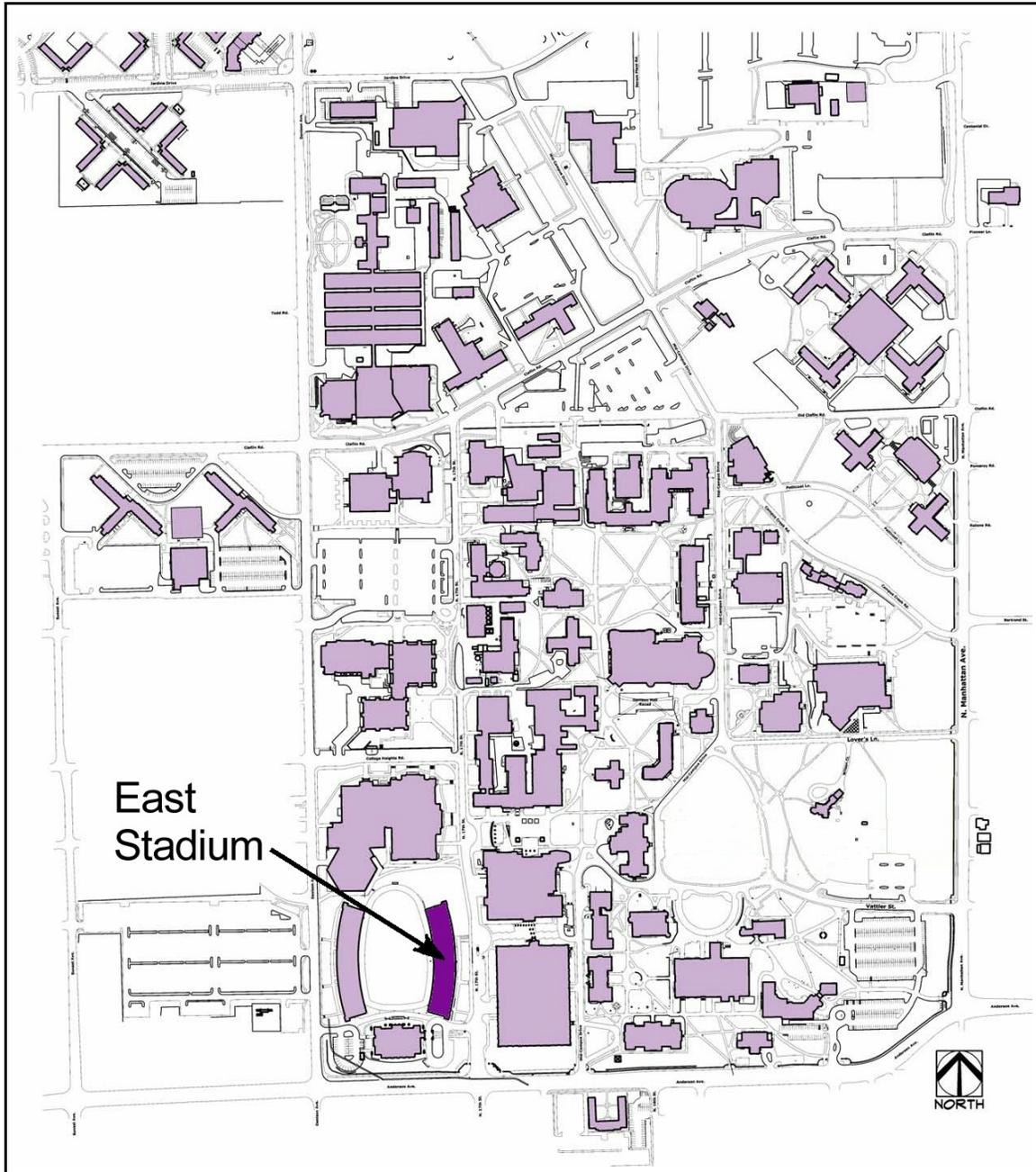
Timeline

Design/Construction Documents	June 2014 - December 2014
Construction	January 2015 - March 2016
Completion/Occupancy	April 2016

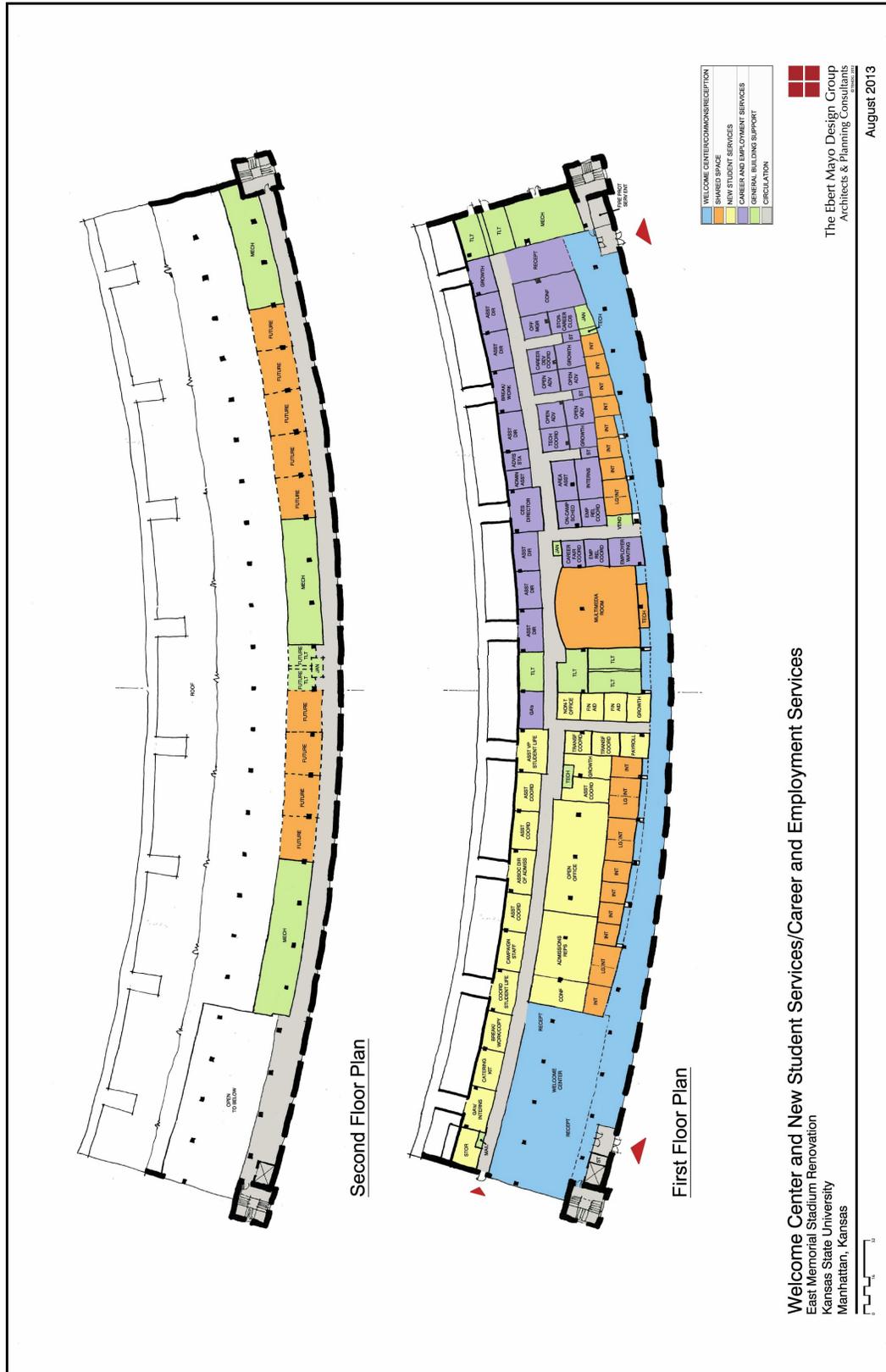
Programmatic Concept Design

The following plans and renderings illustrate the concept design for the new Welcome Center. The site plans and floor plans illustrate a functional layout for the programmed spaces, while the renderings provide quality model guidance for exterior and interior design.

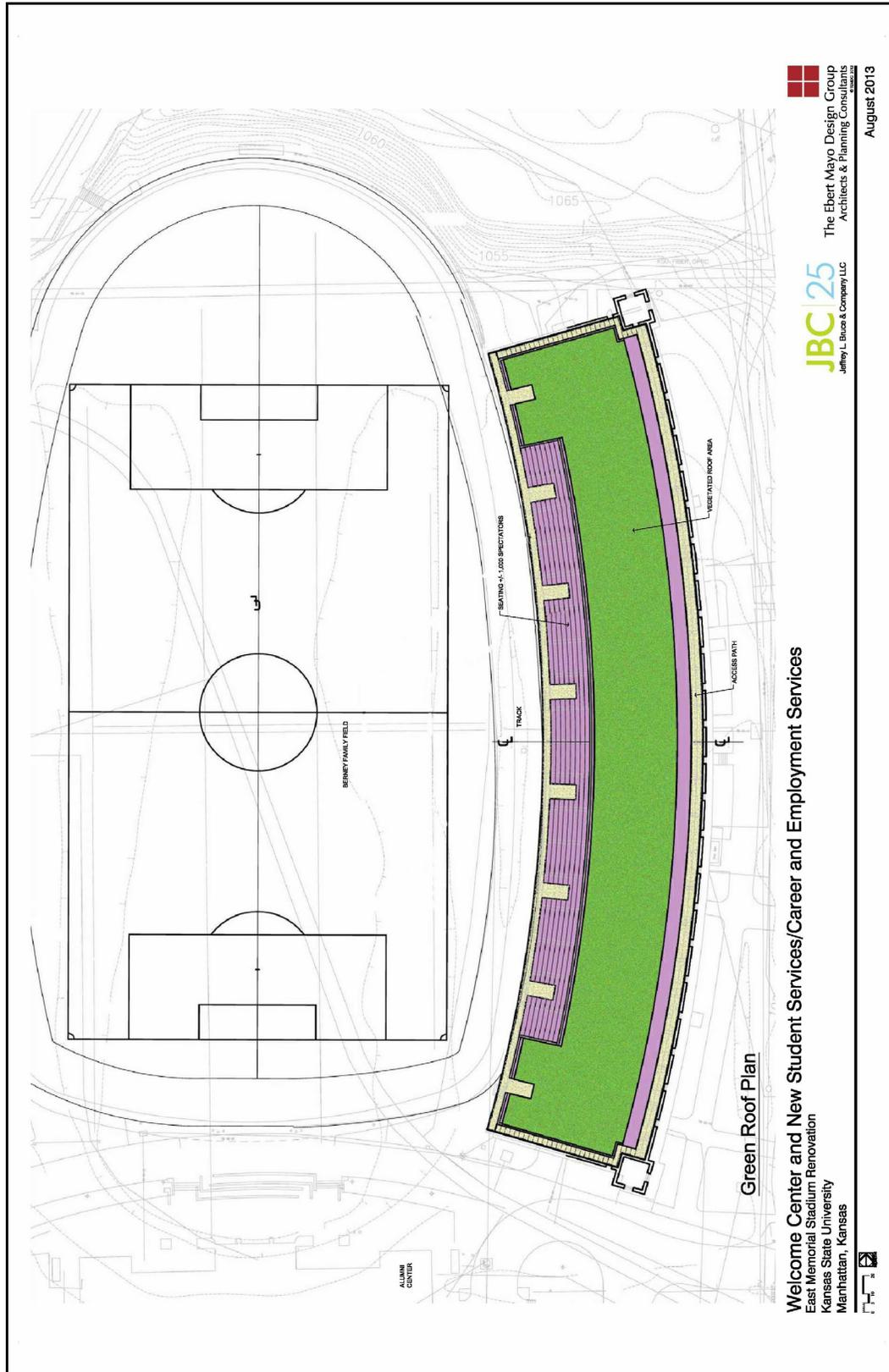
Building Location Map



Concept Design Floor Plans



Concept Design Green Roof Plan




The Ebert Mayo Design Group
Architects & Planning Consultants


Jeffrey L. Bruce & Company LLC

August 2013

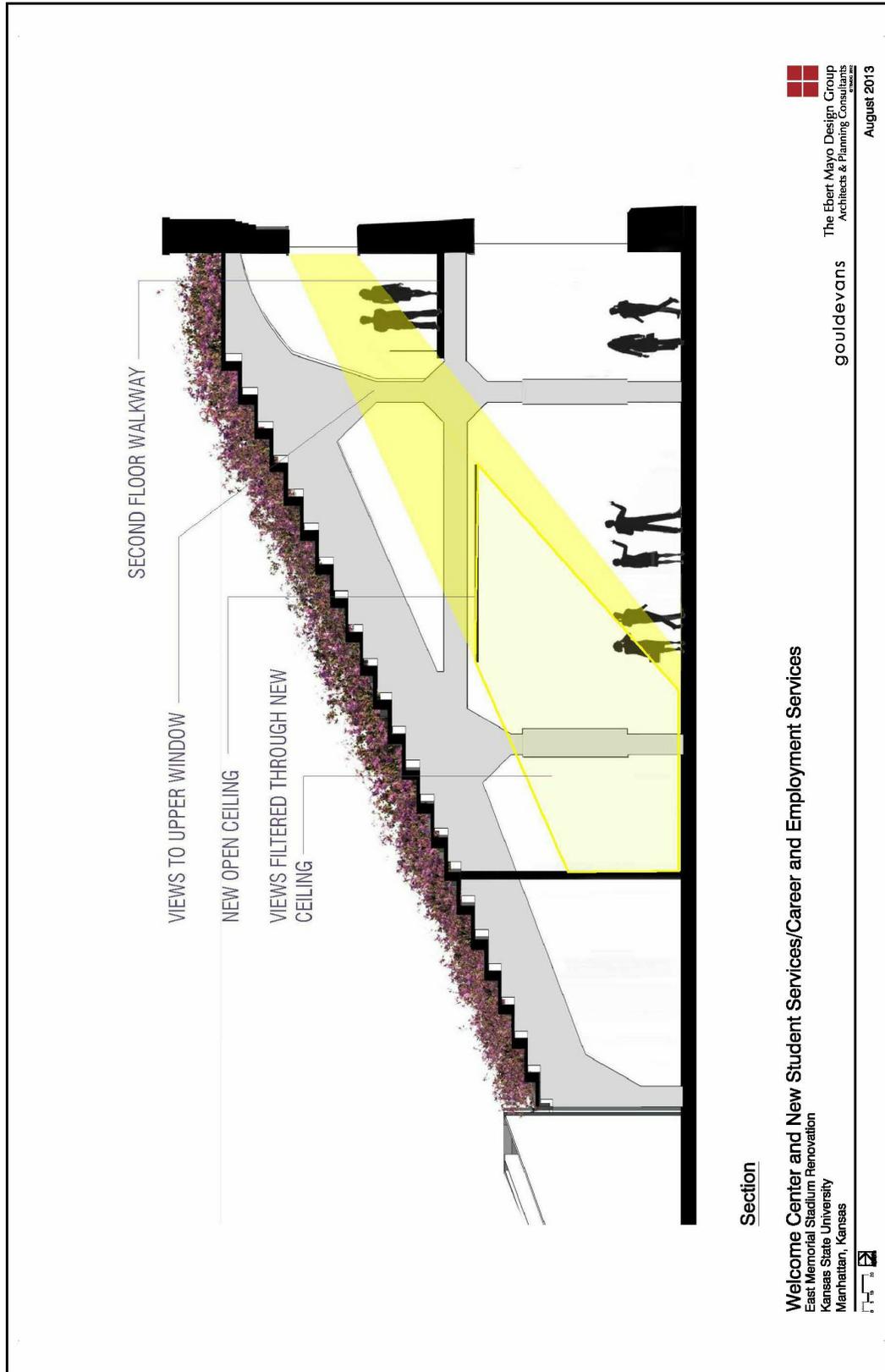
Green Roof Plan

Welcome Center and New Student Services/Career and Employment Services

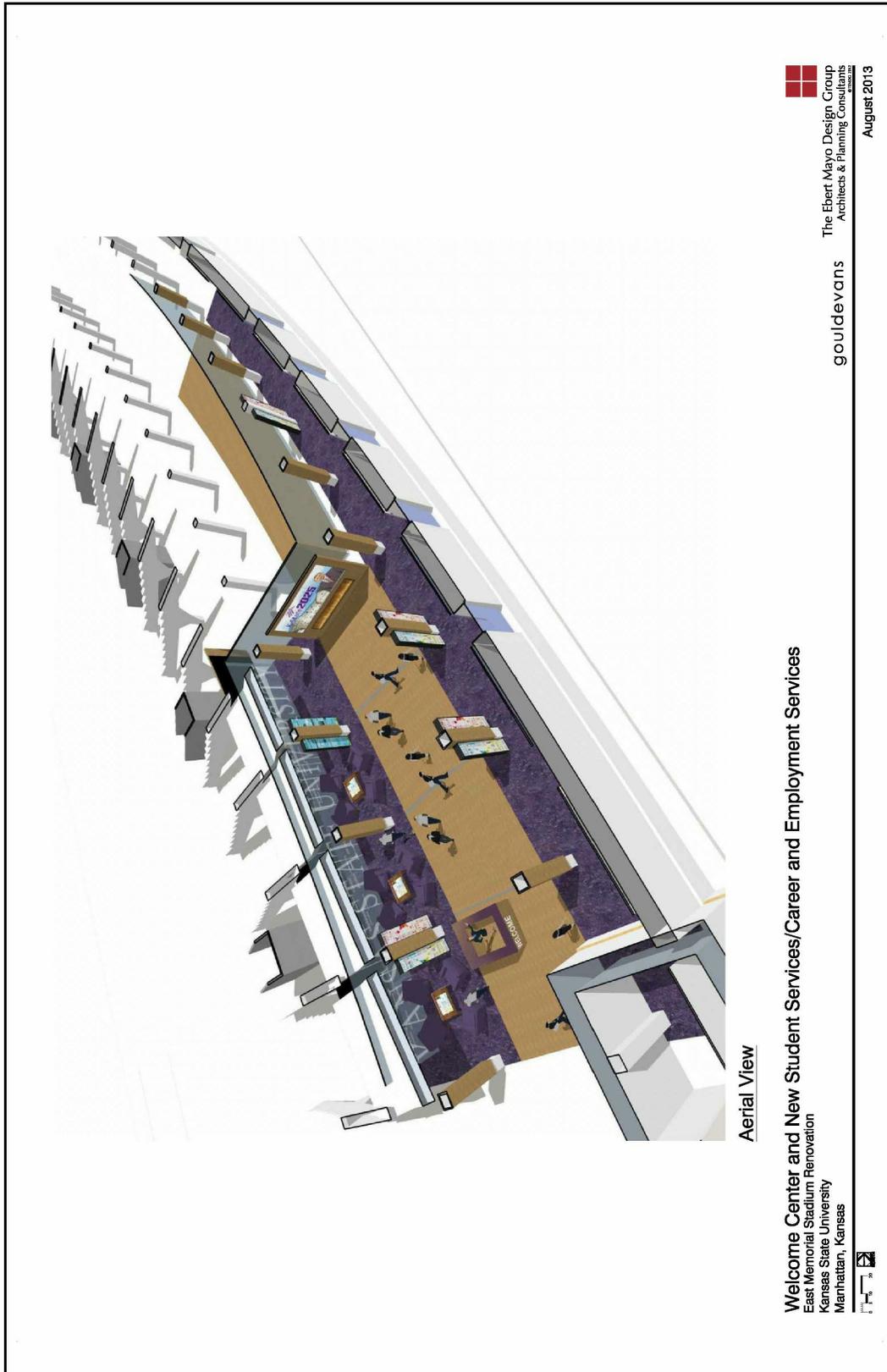
East Memorial Stadium Renovation
Kansas State University
Manhattan, Kansas



Concept Design Section



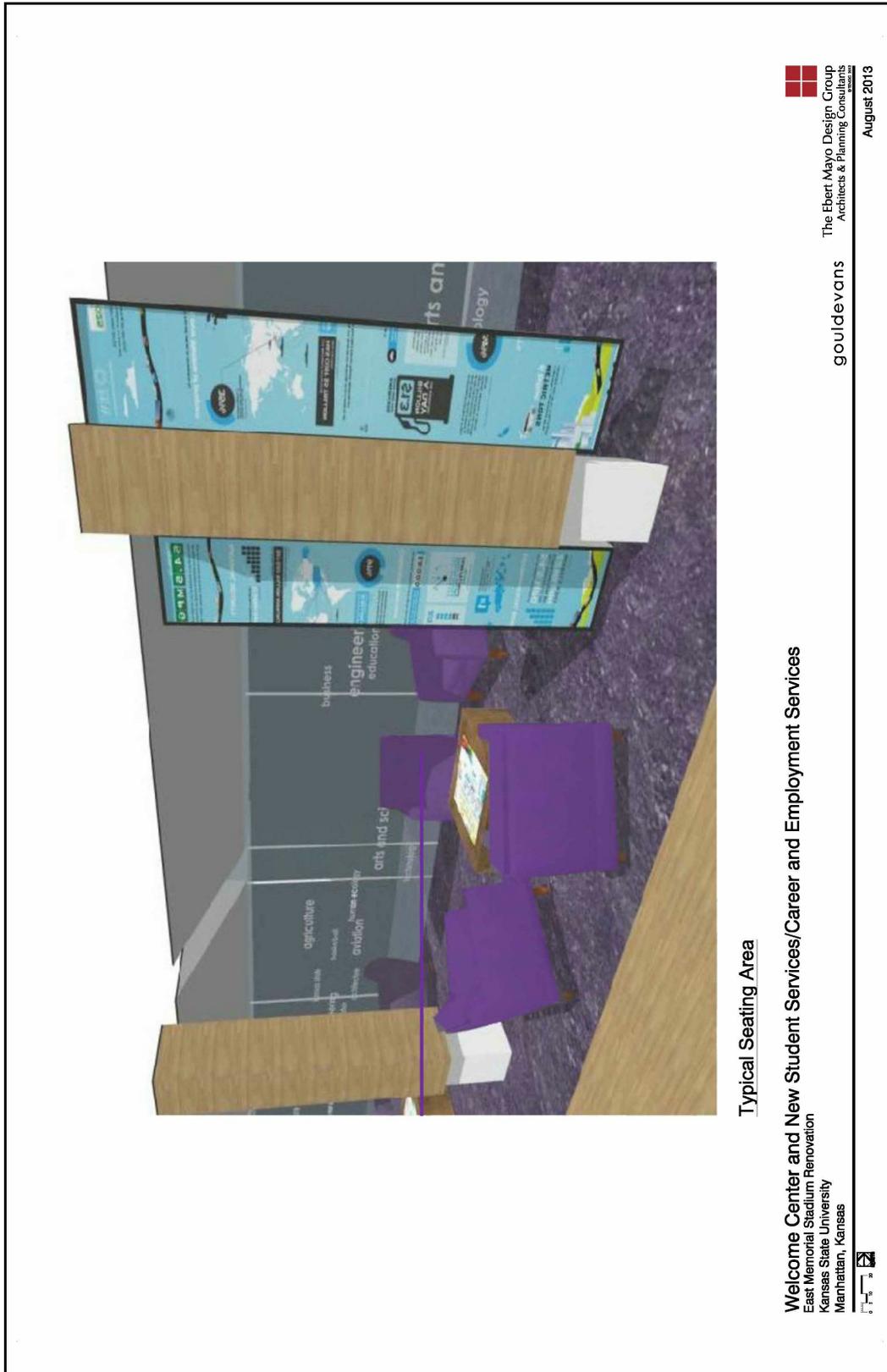
Concept Design Interior Aerial View



Concept Design Interior Perspective



Concept Design Seating Area



Typical Seating Area

Welcome Center and New Student Services/Career and Employment Services
East Memorial Stadium Renovation
Kansas State University
Manhattan, Kansas



goulddevans
The Ebert Mayo Design Group
Architects & Planning Consultants
August 2013

General Building Requirements

All interior spaces should be designed for adaptability to changing technology, comfort, safety and energy efficiency. Finishes, in general, should be durable, smooth, damage resistant and easily cleanable.

- **Floors:** Smooth, non-slip, with finish appropriate for use according to Kansas State University Standards.
- **Walls:** Scuff and impact resistant, easily cleanable, with wall protection provided where anticipated traffic flow or equipment may cause damage.
- **Ceilings:** Ceiling heights to be established during design.
- **Doors and Hardware:** Doors to be 36" wide by 84" high for most spaces. Storage and support spaces may require doors 42" or 48" wide. Doors to be heavy duty grade, full flush style, with vision panels where appropriate, and fire rated where required. All hardware to be ADA compliant and follow Kansas State University Standards.
- **Mechanical Systems:** All spaces are to be served by central heating and air conditioning systems which provide appropriate air changes and ventilation.
- **Convenience Outlets:** The continuing trend toward laptops, tablets, and other handheld devices requires all spaces to be evaluated for relative need for providing generous power outlets for user access. This includes informal gathering nodes. Electrical power outlets at key technology and administrative areas should be fed by conditioned power.
- **Information Technology:** The building will be served by a combination of wired and wireless network systems. Coordinate specific networking and security system needs with K-State Information Technology Services and Campus Planning and Facilities Management.
- **Lighting:** Lighting should be designed appropriate to individual space activities and needs, with multiple light level opportunities preferred.
- **Daylighting:** Natural daylight should be integrated as an important element throughout the building design.
- **Accessibility:** All floors and spaces should accommodate individuals with disabilities according to the Americans With Disabilities Act.

Programmed Space Requirements

Program
Concept Design Phase

The Ebert Mayo Design Group
Manhattan, Kansas
Gould Evans Associates
Lawrence, Kansas

Welcome Center and New Student Services/Career and Employment Services
East Memorial Stadium Renovation
Kansas State University
Manhattan, Kansas

August 2013
P1208

Space	Department	Quantity	SF	Total SF	Notes
WELCOME CENTER					
Lobby	Welcome Center	1	3250	3250	Reception, waiting, interactive information, moveable flexible display, "genius bar" for special services
Reception Area	Welcome Center	1	150	150	
TOTAL WELCOME CENTER:				3,400	
SHARED SPACE					
Interview Rooms	New Student Services / CES	13	120	1560	Shared between CES and new student services
Interview Rooms	New Student Services / CES	4	200	800	Shared between CES and new student services. Folding room dividers
Multimedia Room	New Student Services / CES	1	1350	1350	Fixed seating for 50 - Harvard Model. includes technology room
TOTAL SHARED SPACE:				3,710	
NEW STUDENT SERVICES					
Reception / Waiting	New Student Services	1	150	150	1 receptionist; 2 work-study stations
Conference	New Student Services	1	250	250	For up to 15 people
Assist VP Student Life	New Student Services	1	225	225	Conference table for 6-8
Coord. Student Life	New Student Services	1	175	175	Conference table for 4
Asst. Coordinator	New Student Services	4	175	700	One with visibility to open office- all with conference table for 4
Assoc Director of Admission	New Student Services	1	175	175	
Campaign Staff Office	New Student Services	1	175	175	2 workstations
Transfer Coordinators	New Student Services	2	120	240	Conference table for 4 in each
Financial Aid Office	New Student Services	2	120	240	Conference table for 4 in each
Non-Traditional Office	New Student Services	1	120	120	Serves military, non-traditional students
Payroll Office	New Student Services	1	120	120	
GA/Intern Office	New Student Services	1	175	175	2-4 workstations
Admissions Reps Office	New Student Services	1	670	670	14 student rep workstations
Open Office	New Student Services	1	1200	1200	22 student workstations, project station, publications, printers, folder storage
Break/Work/Copy	New Student Services	1	175	175	Large volume printing
Catering Kitchen	New Student Services	1	175	175	Near Welcome Center
Storage	New Student Services	1	150	150	Near south entrance
Growth office space	New Student Services	2	120	240	For future growth of program
TOTAL NEW STUDENT SERVICES:				5,355	
CAREER AND EMPLOYMENT SERVICES					
Reception / Waiting	Career and Employment Services	1	400	400	Waiting for up to 12 people
Conference	Career and Employment Services	1	400	400	For up to 25 people, assess dividing for flexibility
Director Office	Career and Employment Services	1	225	225	
Admin Assistant	Career and Employment Services	1	100	100	Next to Director
Asst. Director Offices	Career and Employment Services	6	175	1050	
Career Dev. Coordinator	Career and Employment Services	1	120	120	
Office Manager	Career and Employment Services	1	120	120	
Technology Coordinator	Career and Employment Services	1	120	120	
On Campus Scheduler	Career and Employment Services	1	120	120	
Career Fair Coordinator	Career and Employment Services	1	120	120	
Open Advising Offices	Career and Employment Services	4	120	480	
Employer Relations Coord	Career and Employment Services	2	120	240	Near Employer Waiting
GA's	Career and Employment Services	1	175	175	Open workstations for 3-4
Interns	Career and Employment Services	1	175	175	Open workstations for 3-4
Advisors	Career and Employment Services	1	100	100	trickling station
Area Assistants	Career and Employment Services	1	180	180	4 workstations
Employer Waiting	Career and Employment Services	1	200	200	
Break/Work	Career and Employment Services	1	175	175	Near conference room
Storage	Career and Employment Services	3	40	120	
Storage - Career Closet	Career and Employment Services	1	150	150	
Growth office space	Career and Employment Services	2	120	240	For future growth of program
TOTAL CAREER & EMPLOYMENT SERVICES:				5,010	
BUILDING SUPPORT AREA					
Restrooms for stadium events		2	200	400	Exterior entrance
Welcome Center Restrooms		2	220	440	
Office Restrooms		2	220	440	
Janitor		2	50	100	
Mail		1	20	20	Near south entrance
Technology Rooms		2	80	160	Locale centrally in each end
Vending		1	40	40	
Mechanical Spaces		1	360	360	Service entrances from north, AHU's located on second floor
TOTAL BUILDING SUPPORT AREA				1,960	
PROGRAM SUMMARY					
TOTAL FIRST FLOOR PROGRAMMED AREA				19,435	
Circulation				8,965	Commons, stairs, corridors, future elevator
TOTAL FIRST FLOOR USABLE AREA				28,400	Approx. area based on min. headroom height - additional low headroom area is available for storage
TOTAL SECOND FLOOR USABLE AREA				9,200	Mechanical rooms and unfinished space for future use.