

# 1 General Requirements

## GENERAL

Designers shall verify that all applicable portions of these standards are incorporated into the project's design, drawings, specifications and final construction. Requests for variances from these standards shall be submitted in writing to the DCM Project Manager, using the KU Standards Variance Request Form found in [Appendix A1.1](#), for review and written approval or rejection as indicated on the form.

## DEFINITIONS

"Designer", "Project Designer", "Consultant", "Project Architect", "Project Engineer" and "A-E" or "A/E" shall all mean the prime consulting firm and its sub-consultants that have been hired to provide professional services to the University of Kansas.

- These terms may be used interchangeably in referring to the firm that has been retained as the prime consultant on any project, regardless of whether that project is primarily architectural or engineering in nature, or of a specialty discipline.
- The prime consultant on a project, whether an Architect or an Engineer, shall have the same obligation to meet all of the University's standards, regardless of the terminology used to describe the consultant.
- Each Consultant shall be responsible for verifying that their sub-consultants also comply with the requirements of these standards.
- For projects that are designed and/or constructed by the University of Kansas personnel, these terms shall refer to KU's staff, whether DCM, FO, NTS or other personnel.

"Owner", "KU" and "University" shall generally refer to the University of Kansas, and its representatives. "Owner" may also refer to the State of Kansas team in general, and to the KU Endowment Association.

"DCM" shall refer to KU's Office of Design and Construction Management.

"DFM" shall refer to the Department of Facilities Management, State of Kansas (the old State Architect's office).

"KBOR" or "BOR" shall refer to the Kansas Board of Regents.

"SFM" or "KSFMO" shall refer to the Kansas State Fire Marshal's office.

"CO" shall refer to the KU Chancellor's Office.

"KUEA" shall refer to the Kansas University Endowment Association.

"FO" shall refer to KU's Department of Facility Operations.

"NTS" or KU-IT shall refer to KU's Department of Information Technologies.

"EHS" shall refer to KU's Department of Environment, Health and Safety.

"Contractor" or "GC" shall refer to the prime contractor who holds the construction contract with the state and/or KU. Each Contractor shall be responsible for verifying that their subcontractors and suppliers also comply with the requirements of these standards.

"Authority with Jurisdiction", as it relates to code issues, shall refer both the DFM and SFM offices.

## RELATED DOCUMENTS & REQUIREMENTS

**General:** The University of Kansas (KU) Design and Construction Standards have been developed by the Office of Design and Construction Management (DCM), in cooperation with other KU departments, to establish standard guidelines and minimum requirements for all University of Kansas facility improvement projects.

- These standards apply to both discretionary projects, which typically cost less \$500,000, and to capital projects, which typically have construction costs greater than \$500,000.
- These standards apply to design services and construction work provided by both outside consultants and contractors, as well as to State personnel, such as DCM, FO, KU-IT & DFM.
- These standards apply to projects completed for the KU Lawrence campus, as well as other offsite University of Kansas campuses, such as the Edwards Campus in Overland Park and the Kansas Law Enforcement Training Center (KLETC) in Hutchinson. They do NOT apply to projects at the KU Medical Center facilities in Kansas City or Wichita, which operate as separate entities.
- Refer to other Divisions of these standards for more detailed information that supplement the information included in these Division One provisions.

**Related Standards:** These Standards supplement the requirements of the Owner-Consultant Agreement, as well as the current editions of the following documents:

- DFM Policy and Procedures Manual:** Also called the "P&P Manual" or "Red Book", this document establishes the procedures to be used on all projects completed for the State of Kansas. Copies are available to qualified firms from DOAS.
- KU Capital Project User's Guide:** This document includes additional background information and details, such as Project Checklists, regarding the processes for initiating, developing and implementing capital improvements at KU. These documents can be viewed online at the DCM website at: <http://www.ku.edu/home/fmku/>
- KU Computer-Aided Drafting (CAD) Standards:** This document may be viewed online at the DCM website. Current web address: <http://www.ku.edu/home/fmku/>
- KU Campus Master Plan:** This document may be viewed online at the DCM website, as noted above.
- KU Campus Landscape Master Plan:** This document may be viewed online at the DCM website, as noted above.
- KU Graphics Program Manual:** Copies of this manual can be made available for review by DCM or applicable portions of the manual will be provided to the Designer.

- ❑ **MasterSpec:** The State of Kansas and KU require the use of AIA's MasterSpec specifications as the basis for all project specifications.
  - ❑ These standards are intended to supplement those specifications. Items that are typically covered within the MasterSpec text are not repeated herein.
  - ❑ *Each project's designer shall edit MasterSpec's specifications to reflect all applicable information from these standards, and to delete all Masterspec text that is not pertinent or conflicts with these standards. Questionable items shall be referred to KU's project manager for direction.*

**Privately-Funded Projects:** The University requires that ALL privately-funded projects shall also comply with the *DFM Building Design and Construction Manual* requirements, except as specifically modified herein, as well as with these KU Design and Construction Standards.

- ❑ This includes projects funded by the KU Endowment Association and other non-State funding sources, such as projects for the KU Athletics Corporation (KUAC), the KU Center for Research (KUCR), the Student Unions (Memorial Corporation) or the Department of Student Housing (DSH).

## POLICIES & PROCEDURES

Refer to the *KU Capital Project User's Guide* for a detailed explanation of the roles of the various project team members, the design and construction process, the phases and key target dates of the process, and details to be covered during each phase of the project.

## PROJECT PROGRAM STATEMENT

The University's programming approach applies to all concerns in design, from structure to materials, building systems and costs. Objectives are:

- ❑ To ensure that no major decision is overlooked.
- ❑ To identify and analyze unalterable conditions affecting the solution.
- ❑ To allow more time for the A/E to concentrate on solving problems versus identifying problems.
- ❑ To allow the A/E and his consultants to get the project under complete control early.
- ❑ To permit decisions made in one phase to serve as boundaries or parameters for those to be made in subsequent phases.
- ❑ To assure that commitment to a specific solution is made at all points along the way and not reserved until the very end.
- ❑ To avoid the constant redesign which occurs when new information is introduced late in the design process.

The project's Building Committee, appointed to represent the users of the facility, will be available for program elaboration and to assist with the design reviews of the project during the preliminary design phases.

## CAMPUS INFRASTRUCTURE AND FUTURE DEVELOPMENT

**General:** The Project Designer shall discuss with the University such items as utilities, long-range planning and information that relates to the approach toward construction on the University campus.

**Campus Plan:** Under direction from the Kansas Board of Regents, long-range physical development planning workbooks were produced for each of the six state colleges and universities, assuring timely and orderly growth. The Campus Plan for the University of Kansas includes information on goals, facts, concepts, needs, and overall plans.

At the initial project meeting, the Office of Design and Construction Management will introduce pertinent material from the Campus Plan to the Project Designer.

**Campus Utility Studies:** The University has developed studies of most of the existing utility systems on the Lawrence campus.

- The Project Designer should review these studies and long-range plans to coordinate development of utility systems for any proposed new facility or renovation project.

**Infrastructure Extensions:** Each project will be required to extend existing campus infrastructure to the project site as part of the project work and as part of the overall project budget, unless the Program Statement and Program Budget indicate those required infrastructure improvements are being funded and constructed by other means.

- These infrastructure improvements may include the construction of elements not within the immediate project site limits, such as site utilities, underground utility tunnels, site lighting, walks and roadways.

**Future Expansion:** The design of each project shall consider the potential need for future expansion and shall indicate how or where this could occur. The project shall be designed to accommodate this as easily as possible in the future.

- Construction documents shall clearly note all provisions for future needs.
- Expansion capabilities, such as empty conduits, extra electrical capacity, oversized structural components, future building addition footprints and similar features, shall be clearly indicated on the design *and* construction drawings for future information and implementation.

## COORDINATION WITH CITY OF LAWRENCE & UTILITY PROVIDERS

**General Coordination:** DCM shall coordinate with the City of Lawrence and the University's utility providers, and shall arrange to meet with them when required to discuss issues of joint concern. Consultants shall be invited to attend these meetings, at their option.

**Building Permits:** KU is required to secure building permits for projects that occur on state property from University Fire Marshal Authority after DFM has approved projects for construction.

- Projects that occur on privately owned property, such as property owned by the KU Endowment Association; do require City and UFMA building permits. Contractors are to be instructed accordingly in the bid documents for those projects.

**City of Lawrence Building Regulations:** Projects on privately-owned property, such as property owned by the KU Endowment Association, must comply with all applicable building codes and regulations of the City of Lawrence.

## HISTORIC STRUCTURES & RELATED DESIGN CONSIDERATIONS

Projects directly affecting or within 500' of facilities and properties listed on the National Register of Historic Places will require special attention to comply with applicable historic preservation guidelines. The Project Designer shall work jointly with the Office of Design and Construction Management in coordinating and working with representatives of KU's Campus Historic Preservation Board (CHPB) and when required, the City of Lawrence Historic Resources Commission (LHRC) and the Kansas State Historical Society (KSHS).

The Kansas State Historical Society has delegated authority for historic resource reviews to KU's Campus Historic Preservation Board, by a written agreement that requires KU to follow the same guidelines and standards which would govern the KSHS. The CHPB will be given the opportunity to review design documents at the Preliminary Design phases and at appropriate phases of the Construction Documents, as requested.

- DCM will coordinate reviews with the Campus Historic Preservation Board, at appropriate stages of the project's development and design.
- DCM will prepare staff reports analyzing the project's compliance with applicable historic preservation standards, with recommendations to the Board regarding approval of the project design as submitted.
  - The Designer shall be required to assist DCM in preparing a staff report, by providing appropriate drawings and other graphics that can be used as attachments to DCM's report, or as larger visual displays at the Board's review.
- DCM will meet with the Campus Historic Preservation Board to review plans of projects affecting or within 500' of listed historic sites, and shall advise the Project Designer of their comments.

- The Project Designer will typically be given the option of attending these reviews if DCM is presenting the project to the Board, or he may be asked to present the project, explain the design concepts to the Board and take questions from the Board.
- The Project Designer will be required to comply with the standards and guidelines enforced by the Kansas State Historical Society, whether the project is an alteration or addition to a listed property, or is within 500 feet of a listed property and hence subject to environs standards.

## CAMPUS AESTHETIC GUIDELINES

The University of Kansas is dedicated to academic excellence and the construction of facilities that will provide all the physical requirements for academic excellence. The University believes in the importance of aesthetics, and it recognizes the obligation to create and preserve beauty in all its various forms.

The opportunity exists to combine the functional and the beautiful in architectural and landscape design, to achieve a unity which will suggest the character and philosophy of the University as a whole, and to provide a source of pleasure and inspiration for all who come to the campus.

Traditional, significant features on main campus include buildings that incorporate the following exterior features:

- Red roofs; constructed with tile, metal or slate materials; often sloped rather than flat.
- Buff or natural colored building materials; in stone, brick or precast concrete.
- Medium bronze finishes on metal window, door frames, railings and trim.
- Standardized street lighting.

The design of spaces and forms should consider the relationship of all campus structures with the specific character of the surrounding topography. KU building designs should strive for harmony in relation to the immediate site, adjacent structures, and overall campus massing and context by considering:

- scale, form, massing and shapes
- color, texture and character of materials
- points of access, openness, degree of transparency and fenestration
- careful design of the spaces between buildings, and distance from streets.

## SITE DESIGN CONSIDERATIONS

**General:** Buildings should respond to opportunities afforded by the site. Throughout its history, the University has endeavored to preserve panoramic views and to establish clear circulation corridors across campus.

- The University is a pedestrian-oriented area. It is important that parking and vehicular circulation do not interfere with dedicated pedestrian corridors.

- ❑ Spaces between buildings and other facilities should be designed as functional areas for activities. There is a need for outdoor gathering places with spaces designed for benches and other furnishings.
- ❑ Each project should provide for parking adjacent to the facility to help alleviate the shortage of parking spaces on campus, as well as supporting any additional demands the facility may create by adding employees to the campus.

**Bicycle Parking:** The University has considerable bicycle traffic. Areas heavily used as bicycle routes should be identified for development of bicycle parking with each project. Refer to **Division Two - Sitework** design standards for typical details and other related information.

**Service Areas:** Most new facilities will require areas planned for service functions, such as trash and recycling pickup, and delivery of supplies and materials.

- ❑ Service areas may contain loading dock facilities, some ground-mounted mechanical and electrical utility equipment, and trash boxes.
- ❑ Service areas should be designed to be an unobtrusive part of the facility.
- ❑ Architectural or landscape screening is to be provided.
- ❑ Service areas should typically provide no less than two parking stalls for University maintenance vehicles. KU Parking will provide appropriate signage for these stalls.

**Equipment Screening:** Placement of electrical and/or mechanical equipment should be an unobtrusive part of the facility. Architectural or landscape screening should be provided. Screening should take into consideration equipment maintenance and operational clearances, and provide a buffer for noise generated by the equipment.

- ❑ Screen walls should be constructed of masonry or architectural concrete materials, or prefinished / naturally weather-resistant metal materials. The use of wood materials for screening is discouraged due to high maintenance demands and lower durability.

**Trash Removal:** Much of the campus is serviced by the City of Lawrence Solid Waste Division, Department of Public Works. The city has two types of trash trucks; one is a front-loader, the other is a back-loader.

- ❑ A "Liftainer" trash system is used to handle the removal of trash from select buildings on the University campus. If it becomes necessary to consider this form of trash collection and removal, KU's FO department can provide additional information about this equipment, vehicular requirements and accessibility issues.

## MATERIAL SELECTIONS

**General:** Appropriations for state building projects are funded with a certain degree of finality. It is expected that new facilities will not have need for major repairs or modifications

for a considerable period of time. This concern should be reflected in the selection of interior and exterior materials that require a minimal amount of maintenance.

- Maintenance shall be a prime consideration in the selection of all finishes.
- Buildings should include technological progress only where there is a proven performance history.
- Lecture halls, classrooms, seminar rooms, and rooms requiring privacy will need special acoustical treatment.

**Maintenance Criteria:** The University maintains an inventory of repair parts, which requires a certain amount of product standardization. See individual technical sections of this document for standard product requirements.

- The Department of Facilities Operations will provide additional information on product standardization.

**"New" Products:** Any materials, products or systems that are not broadly recognized as normal, industry-standard, proven practices or components shall NOT be used on KU projects, unless specifically reviewed and approved in advance by DCM.

## COLOR SCHEDULES

Project Designers shall prepare a color schedule for review and approval by the University user group, the University Architect and DCM personnel.

- Conduct a preliminary review of proposed materials at the time of Design Development review.
- Conduct a more detailed review of the materials and proposed colors at the time of Final Construction Documents review.
- Conduct a final review of the materials and proposed colors during the early stages of Construction Administration

## ACCESSIBILITY

Persons with physical disabilities should be able to share the total campus environment equally with those without disabilities. It is imperative that all facilities be able to accommodate and serve not only students but also University staff and visitors with permanent or temporary disabilities.

- Buildings shall be designed to be universally-accessible. Individual features of facilities shall be designed in such a way as to allow all users a similar method of access.
  - "Separate but equal" as a design concept is not acceptable.

- ❑ It is the responsibility of the Project Designer and Contractor to meet all requirements of the ADA, in the design and construction of facility improvements for KU.
- ❑ The University's Architectural Barriers Committee will be given the opportunity to review construction documents at the Preliminary Design stage and at appropriate phases of the Construction Document stage which delineates accessibility. The Office of Design and Construction Management will coordinate reviews with the committee, and advise the Project Designer of their comments and requested revisions.

## HAZARDOUS MATERIALS

**General:** Special care and attention must be given to hazardous materials. It is the University's policy to remove all hazardous materials encountered within existing buildings or sites, and that the removal of these materials be done in compliance with all applicable codes and regulations.

- ❑ The Project Designer and DCM Project Manager shall review existing hazmat surveys of the areas affected by the project with KU's EHS Department during the earliest possible stages of the project's development.
- ❑ If an existing hazmat survey is not available, DCM shall make arrangements for the areas affected by the project to be surveyed, which will then be jointly reviewed.
- ❑ EHS will determine for each project if they feel it is necessary to abate the identified hazardous materials in any way that exceeds the current codes and regulations.
- ❑ The Project Designer must contact the Office of Design and Construction Management regarding identification of suspect hazardous materials, such as asbestos, lead, chemical, or radioactive materials.
- ❑ Refer to [Appendix A1.4 – HazMat Matrix](#) for additional information regarding the tasks, timing and responsibilities of the project team regarding the identification and abatement of hazardous materials.

**Hazardous Materials:** The project's construction documents shall specifically require that the work be completed without incorporating any asbestos or PCB-containing materials, or lead-based coatings into the work.

- ❑ At the time of project closeout and prior to final payment, the Contractor shall be required to submit a letter to DCM and EHS, which certifies that the work has been completed without incorporating any asbestos or PCB-containing materials or lead-based coatings into the work.

**Abatement Design:** The Office of Design and Construction Management has on-call consultants to perform hazardous materials surveys and write abatement specifications. These consultants will be assigned the project and shall be used for such work.

- ❑ The abatement design consultant shall prescribe all abatement, containment and handling procedures. If required by KU-EHS, the same consultant will provide monitoring, testing and final clearance verification services.

**Abatement Project Costs:** These services are a part of the project budget and are accounted for in the overall Project Budget.

- All projects shall include hazardous material surveys as part of the construction documents, unless this has already been done. This shall be true whether the test results come back as positive or negative.

**Project Closeout Requirements:** Refer to [Appendix A1.2](#) for additional information regarding the provision of Material Safety Data Sheets and other related requirements at the time of Substantial Completion.

### CODE ANALYSIS, COMPLIANCE AND BUILDING PERMITS

- General:** Refer to [Appendix A1.6](#) -Code Compliance, Code Analysis and Building Permits.

### SEISMIC REQUIREMENTS:

- The University of Kansas Main Campus in Lawrence, Kansas and the Edwards Campus in Overland Park, Kansas are in UBC Seismic Zone 2A.
- The Kansas Law Enforcement Training Center in Hutchinson, Kansas and KU facilities in Wichita, Kansas are in UBC Seismic Zone 1.

### FIRESTOPPING

**General:** All openings in or penetrations through fire-resistive assemblies shall be protected in accordance with the Uniform Building Code.

- Firestopping materials and assemblies shall be UL-listed for the application and required fire rating.

**Responsibility:** Each trade which creates the opening or penetration through the fire-resistive assembly shall be responsible for the associated firestopping. The General Contractor is responsible for overall compliance and provision of firestopping on the project.

## CONSTRUCTION SCHEDULING

Work on any construction project must accommodate the University's calendar of classes and special events. University classes and special events may limit normal working hours by the contractor.

- The Project Designer must communicate with the Office of Design and Construction Management to identify specific requirements for timing of the construction work to be included in the construction documents.
- Specific requirements for time frames or staging of the construction activities must be reviewed in detail with the University and outlined in detail in the construction documents.

## GEOTECHNICAL SERVICES

The University will make arrangements to provide geotechnical services for the design process. These services will include soil borings required to evaluate site characteristics to ensure overall site development potential and to establish sitework costs early in the design process.

- Geotechnical services during the construction process will be paid for and contracted by the University. These services are a part of the project budget and are accounted for in the overall Project Budget managed by DCM.
- The Project Designer shall assist DCM and DFM in preparing a request for proposal, outlining the scope of geotechnical and soil boring information required. Designers shall provide a site drawing which dimensionally locates the proposed building outline and the specific boring locations desired.
- Project Designers shall submit applicable portions of the contract documents to the geotechnical consultant at appropriate stages of the project's development, and shall submit final construction documents for review and comment prior to the printing of bid documents. Documents to be reviewed shall include drawings and specifications related to earthwork and foundations, which the Geotechnical Engineer shall review for compliance with their geotechnical report and recommendations.

## SITE SURVEY SERVICES

The University will make arrangements and separately contract to have site surveys completed of the project site, in consultation with the Project Designer, at an appropriate stage of preliminary design.

- The Project Designer shall assist DCM and DFM in preparing a request for proposal, outlining the scope of the site survey required. Designers shall provide a site drawing which dimensionally locates the proposed building outline and the specific boring locations desired. Designers shall also review a preliminary site survey drawing and advise DCM when it is satisfactory for the project's needs.
- Refer to [Division Two – Sitework](#) for additional, specific requirements.

## ACOUSTICAL DESIGN SERVICES

The Designer's Basic Services for any capital improvement project at KU shall include the provision of an Acoustical Consultant's services in advising the design team. The acoustical consultant shall review the design at not less than the Design Development and Final Construction Document submittal stages. This review shall analyze the project to ensure that proper control, distribution or isolation of sound has been provided throughout the facility, so that the project's spaces may be used without disruption or diminishment for their intended purposes. The acoustical consultant shall submit a written report of his findings to the Designer, DCM and DFM.

These acoustical reviews shall specifically address the potential for sound problems from the following sources, and shall include recommendations to address those potential problems.

- Mechanical equipment, cooling towers, condensing units, chillers, pumps, transformers and other mechanical or electrical equipment. Refer to Division 15 – Mechanical section re: [Mechanical Equipment Sound Control – Design Guidelines](#) for related requirements.
- Air noise from HVAC systems, such as diffusers, grilles, registers, VAV boxes and similar equipment or air delivery devices
- Echoes or other acoustical conditions disruptive to normal speech and other activities in classrooms, meeting rooms, conference rooms, seminar rooms and public spaces

Acoustical design services that would typically be considered an additional service, unless otherwise required as part of the Architectural Program, or as agreed upon during fee and contract negotiations, would include the following:

- Audio-video projection and sound amplification systems
- Audio-video equipment selection and system design
- Special sound reinforcement systems, such as those in performing arts areas

## CLASSROOM & LECTURE ROOM FACILITIES

**General:** Refer to [Appendix A1.5](#) for detailed requirements related to KU's standard classroom designs.

Effective classroom design is increasingly important to the University of Kansas. Objectives stated in the Architectural Program will require the Project Designer to develop enough detail to ensure that design criteria are met.

Requirements for fixed equipment, demonstration tables, etc., may be identified in the Architectural Program and will be discussed in detail with the Office of Design and Construction Management and the Building Committee.

**Noise:** Effective classroom design depends on attention to detail, as well as to a clear understanding of overall objectives. An understanding of the design factors that affect auditory and visual performance can result in effective classrooms. For the classroom

listener, most noise takes the form of high background noise. The most common sources of background noise are:

- noisy HVAC systems
- lighting ballasts
- projector fans
- external noise via windows and exterior walls
- Operable windows are necessary; therefore, the design should consider external exposure to traffic, cooling towers, exhaust fans, and other equipment.
- Certain room surfaces must be hard and properly angled to provide required reflections. Other room finishes must be soft in order to prevent late reflections or delayed rear wall reflections.
- The ability to see in a classroom enhances the ability to hear. Hearing is enhanced by clear line-of-sight, by good illumination and visual contrast.

**A-V & Multimedia Classrooms:** Special attention should be considered in classrooms that require sound-reinforcement systems. These audio/visual systems shall be reviewed by and coordinated with the KU Media Committee and the Office of Instructional Development Services. All sound reinforcement shall comply with ADAAG Guidelines.

**Standard Area Allowances:** The University typically uses the following square footage guidelines in developing programs for the following space needs:

- 15 NSF per occupant: Undergraduate classrooms
- 18 - 20 NSF per occupant: Graduate classrooms
- 25 NSF per occupant: Seminar classrooms
- 30 NSF per occupant: Laboratory classrooms

## SUPPORT SPACES - DESIGN GUIDELINES

**Custodial Closets:** Locate one on each level, with a minimum area of 300 SF in the main custodial closet and with a minimum area of 100 SF in the custodial closets on the other floors. No dimension shall be less than 7 feet in any direction. Include the following in each:

- A floor-mounted sink, located near a door.
- Hangers for wet mops over the sink and for dry mops and brooms on other walls.
- Doors shall be 36" wide and open out.
- Walls with appropriate coatings to protect from moisture and physical abuse.
- Shelves to accommodate supplies in case lots and allow for storage of liquids in 5 or 6 gallon containers.
- A location for a six-foot ladder.

- Three (3) grounded duplex receptacles on an open wall; not behind shelves.
- Floor space for large machines, such as floor polishers.
- Do not locate telephones or electrical equipment in these closets.
- Closets shall have exhaust fans, vented to the building exterior.

**Telecommunication Equipment Rooms (KU-IT Closets):** These rooms should be stacked vertically where possible.

- Refer to **Division 17 - Telecommunications Systems** standards for additional, detailed requirements.

**Mail Rooms:** A mail room or custom-built delivery and pickup box may be required. Mail delivery will need to be discussed with the Director of Printing Services, who administers campus mail, and the departments to determine exact requirements.

**Vending Areas:** A vending machine area shall be provided in each building. Verify number of vending machines and locations with DCM and KU Administration.

- Location of this area should be carefully considered to avoid noise and light contamination of adjacent spaces.
- Area should receive low-maintenance finishes.
- Trash and recycling receptacles will need to be strategically placed so that those who leave the area after refreshment can properly dispose of waste materials.
- Typically hot foods will NOT be vended unless specifically identified in the Architectural Program.

**Mechanical Rooms:** Doors should open directly to the outside of buildings where practical.

- The Project Designer shall incorporate knockout panels and or louvers to facilitate replacement of large items of mechanical equipment.

**Electrical Rooms:** Electrical distribution shall be provided within mechanical rooms or in dedicated electrical equipment closets accessible to corridors or other public space. Equipment closets should be stacked vertically where possible.

## ROOM NUMBERING

A room numbering system has been established by the University to assure that the numbering of spaces in a building will facilitate management control, be consistent from building to building, and guide people to their destinations.

- ❑ The Project Designer shall submit drawings to the KU Office of Design and Construction Management for room numbering by the KU Office of Institutional Research and Planning (OIRP) prior to commencing with construction documents.
- ❑ The room and door numbers identified on the construction documents shall be the same as the numbers used in the building upon completion of the project.
- ❑ Plans for change orders that affect the layout of rooms should be submitted to the Office of Design and Construction Management for room re-numbering by OIRP.

## SIGNAGE AND GRAPHICS

**Building Name and Street Number:** There should be at least one location for exterior building letters to identify the building and street number. The University policy is to use the name that has been approved by the Kansas Board of Regents, with the name of the major activity or function in smaller letters beneath it. The Street number should be at or near the main entrance.

- ❑ Ground lighting may be required for nighttime identification.
- ❑ Other exterior directional signage is the responsibility of the University but may be discussed as it relates to site considerations.
- ❑ Refer to [Division 10 Specialties, Appendix A10.2- Signage](#) for the design standards for specific requirements.

**Interior Signage:** The Project Designer should include interior signage/graphics as a part of the construction documents. All signage shall comply with ADAAG guidelines.

- ❑ Refer to [Division 10 Specialties, Appendix A10.2- Signage](#) for the design standards for specific requirements.

## EXISTING SITE CONDITIONS

**Existing Site Plans:** The University has AutoCAD drawings covering most of the main campus in a central database. Most of this data was developed from an aerial survey of the campus that was completed around 1990. These drawings are therefore subject to the normal variations in accuracy common to that type of survey. FO updates the underground utility information as work is done on those systems, and adds information from projects as they are completed.

- ❑ These CAD files can be made available to Project Designers working on University projects. By accepting them, Project Designer s acknowledge their understanding that these drawings are reasonably accurate, but may not exactly represent the current site conditions.
- ❑ University personnel can also review existing conditions onsite with Project Designers and can provide copies of printed drawings of the site, when available.

**Project Designer Obligations:** All critical information applicable to the project must be verified onsite by the Project Designer, either with their own forces or by a licensed surveyor that they retain at no additional cost to the University, unless otherwise agreed as part of their contract negotiations with the University.

- Refer to KU's **Division Two - Sitework** design standards for additional requirements regarding existing site conditions, surveys and site plans.

## EXISTING BUILDING CONDITIONS

**Existing Drawings:** The University can furnish floor plans of existing buildings to the A/E in the form of AutoCAD files or, if older projects, in raster-format scans of the original drawings.

**Project Designer Obligations:** Design work in existing buildings will require Project Designers to perform a detailed review of available contract documents and existing constraints. The Project Designer must field-verify critical as-built building conditions in sufficient detail to fully document and coordinate them with the proposed improvements, at no additional cost to the University.

The Project Designer is specifically required to measure and field-verify all critical dimensions affecting:

- exit widths, at both existing door openings and corridors
- clearances within remodeled toilet rooms for accessibility and fixtures
- clearances generally required to meet the ADA accessibility requirements
- actual dimensions required for the installation or maintenance of new equipment or proposed dimension-critical construction within existing spaces. This should include clearances required by codes or recommended by manufacturers, or required for maintenance, such as space to pull coils from installed equipment.

## PROJECT NAME AND NUMBERS

**Project Name:** All correspondence, construction documents, cost estimates, schedules, invoices, pay requests, submittals, shop drawings and other project-related documents shall bear the official project name approved as part of the CCR request and/or as entered in the KU Project Masterlist Database.

**KU Project Number:** All University projects will be assigned a KU Project Number, consisting of a three digit building number, followed by a dash and a unique four digit number. EX: KU #201-5308.

- This number shall also be included on ALL project-related documents, as noted above.

**State Project Number:** All projects will be assigned a State project number or A number issued by DFM, which shall be included on all project-related documents, in addition to the KU project number.

**Other Project Numbers:** On-call construction projects and other projects bid through KU or State Purchasing may have other project numbers assigned, such as Tender or PR numbers. These shall also be included on all project-related contract documents.

- A-E Project Numbers: These may be appended after the KU and state project numbers, but may not be used in lieu of them.

## DESIGN REVIEW SUBMITTALS

**Quantity Required:** For capital improvement projects exceeding \$500,000 in value, the Project Designer shall submit not less than six (6) copies of all review submittals to the University, unless otherwise agreed.

- Designers shall verify the number of submittals required by the KU user group and the overall number of submittals to be provided for each design review with the Owner, prior to finalizing the fee negotiations.
- ADDITIONAL SUBMITTAL FOR FIRE ALARM AND FIRE SPRINKLER SHOP DRAWINGS SHALL BE ISSUED TO THE: University Fire Marshal Authority.

An additional three (3) copies of submittals are typically required for DFM and KBOR use. Therefore, a total of nine (9) submittals are typically required for each design review. These shall be distributed as follows:

1 - User Group Representative or Building Committee Chair

1 - University Architect

1 - Facility Operations (FO)

1 - Networking & Telecommunications Services (NTS)

2 - DCM; one to Architectural Manager & one to Engineering Manager

2 - DFM; one to Architectural Manager & one to Engineering Manager

1 - KBOR

9 - TOTAL (Verify)

## PROJECT COST

During design, the Designer will be required to furnish periodic construction cost estimates that will help determine whether available funds are sufficient to allow design to proceed, or whether further study and design modifications are necessary.

The University will develop and periodically update the Project Budget, which will itemize the costs for work other than the project's construction, including work by separate contracts, A/E

fees, printing of bid documents, the project's contingency funds and other miscellaneous costs.

## PROJECT DATA

**Cost Estimate Data:** The Project Designer shall include total area and unit cost data as part of each cost estimate submittal. This information shall include, as appropriate for each phase:

- the total gross area (GSF) of new construction or remodeled areas;
- the total net assignable area (NASF) of new construction or remodeled areas;
- the total area (in SF and acres) of site to be developed, not including the building footprint;
- key unit quantities, such as the number of seats, beds or parking stalls.

**Building Data Form:** After bids have been received and contracts awarded, the Project Designer will be required to complete a Building Data form, using either an American Institute of Architect's standard Building Data form, or one furnished by the University. This form will provide historical information about the project, including square footage, cost breakdowns, unit costs and general mechanical/electrical system information.

## CONSULTANT FEE PAYMENT SCHEDULE

Consultants shall be paid for KU projects in accordance with the following. Consultants shall format their invoices to include each of the following line items & percentages, unless otherwise agreed. Fee retainages for electronic document submissions shall not be revised, regardless of modifications to the other phases.

### Percent of Fee    Phase / Submittal

15%                      Program Review & Concept/Schematic Design

20%                      Design Development

12%                      30% Construction Documents

12%                      60% Construction Documents

12%                      Final Construction Documents & Bidding

*(Note: If other than three CD reviews, evenly reallocate 36% total among them.)*

3%                      Submission of Bid Set Electronic Docs. to KU & DFM

*(Note: Includes addenda; CA fees will be held until received.)*

5%                      Contract Award & Notice to Proceed

18%                      Construction Administration

*(Note: May be billed monthly, typically matching the Contractor's percent complete.)*

3% Submission of As-Built Electronic Docs to KU & DFM

## **BUILDING COMMISSIONING**

All KU capital projects shall typically be commissioned by a consultant specializing in these services, to ensure the proper operation of building components and systems. This consultant will be retained independently by the University, and the costs for these services will be managed by the University as part of the overall project budget.

- Refer to **Division 15 - Mechanical** design standards for more detailed information about this.

## **DIVISION ONE FRONT-END DOCUMENTS**

The front-end documents for all KU project specifications shall be modified to be consistent with the information included in **Appendix A1.2**.

## **PRESS RELEASES & MEDIA RELATIONS**

Relationships with the press and publicity agencies regarding progress reports and graphic representations of the building shall be the prerogative of the University, not of the Consultant. The University will release all pertinent information about the project, or must be given the opportunity to approve materials developed by the Consultant prior to their release.

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