

1 General Requirements

NOTE: Significant revisions or additions to the previous standards are in italics.

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GENERAL PROCEDURES & GUIDELINES

GENERAL

Project 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 FPD 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

"Architect", "Engineer", "A-E", "A/E", "Designer", "Project Designer", "Consultant", "Project Architect", and "Project Engineer" shall all mean the prime architectural and/or engineering professional, as well as the A/E professional's firm and sub-consultants, who have been retained to provide professional services to design, bid and administer construction of capital improvement projects for 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 confirming that their sub-consultants also comply with the requirements of these standards.
- ☐ For projects that are designed and/or constructed by University of Kansas personnel, these terms shall refer to KU's staff when they fill the Project Designer role.

"Authority Having Jurisdiction" or "AHJ", as it relates to code issues refers to the OFPM and KSFMO offices for projects on state property, and to the local code authority such as the City of Lawrence, as well as KSFMO, for projects on non-state property. *When delegated, AHJ may refer to Facilities Planning & Development Code Compliance Coordinator.*

"Campus Operations" refers to the KU department to which FPD reports.

"Contractor", "General Contractor", "GC", "Construction Manager" or "CM" shall mean the prime contractor who holds a construction contract with the State of Kansas, the University of Kansas, or KU Endowment. Each Contractor will be responsible for confirming that their subcontractors and suppliers also comply with the requirements of these standards.

"FPD" refers to KU's Office of Facilities Planning & Development.

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

"FS" refers to KU's Department of Facilities Services (formerly known as FO, or Facilities Operations).

"IT" or "KU-IT" refers to KU's Department of Information Technologies (formerly known as NTS, or Networking and Telecommunication Services).

"KBOR" or "BOR" refers to the Kansas Board of Regents.

"KUEA" refers to the Kansas University Endowment Association.

"KUPD" refers to the KU Police Department.

"KUPS" refers to the KU Procurement Services

"KUTS" refers to the KU Transportation Services; which includes parking.

"OFPM" refers to the Design, Construction and Compliance Division (DCC) of the Office of Facilities and Property Management, in the Department of Administration, for the State of Kansas (formerly known as DFM, DOAS and the State Architect's office).

"Owner", "KU" and "University" all refer to the University of Kansas, and its representatives. "Owner" may also refer to the State of Kansas team in general, and to affiliated corporations such as the Kansas University Endowment Association (KUEA), KU Center for Research (KUCR), Kansas Athletics Inc. (KA) and the Memorial Unions.

"Owner's Representative" shall refer to KU's Office of Facilities Planning & Development (FPD), and the FPD staff designated to serve as the Owner's Representatives and Project Managers, who manage all capital improvement projects on behalf of the University of Kansas and KU Endowment. *In some instances, FPD may hire an outside Owner's Representative upon FPD and campus leadership approval to supplement owner rep services.*

"OSFM" or "KSFMO" refers to the Kansas State Fire Marshal's office.

"Standards" refers to the KU Design and Construction Standards.

RELATED DOCUMENTS & REQUIREMENTS

General: The University of Kansas (KU) Design and Construction Standards have been developed by the Office of Facilities Planning & Development (FPD), in cooperation with other KU departments, to establish standard guidelines and minimum requirements for all University of Kansas capital improvement projects.

- ☐ These standards apply to both small capital improvement projects and to large capital improvement projects.
- ☐ These standards shall apply to both design services and to construction work provided by outside consultants and contractors, as well as to State or University personnel when they provide those same services.
- ☐ These standards shall apply to all projects completed for the KU Lawrence campuses, as well as to other offsite University of Kansas campuses, such as the Edwards Campus in Overland Park and the Kansas Law Enforcement Training Center (KLETC) in Hutchinson.
- ☐ These standards shall also apply to all KU projects regardless of their funding type, including projects funded with State of Kansas, University, student fee, private/gift, research or affiliated corporation monies, as well as pro-bono or donated work or projects.
- ☐ These standards shall apply to KU projects for all clients, whether they are State of Kansas entities such as academic, support or affiliated departments; private entities such as the KU Endowment Association; research entities such as KU Center for Research or Research and Graduate Studies; affiliated corporations such as the Memorial Unions or Kansas Athletics; and to other similar KU-related entities as designated.

- ❑ Refer to other Divisions of these standards for more detailed information that supplement the information included in these Division One provisions, and which shall be incorporated on all KU projects.

Referenced Standards: The following standards, guidelines and documents are hereby incorporated by reference, and supplement the KU Design and Construction Standards:

KU-FPD "Project Management Manual": *Section removed.*

OFPM "Building Design and Construction Manual": This document establishes the procedures to be used on all projects completed for the State of Kansas. This document can be viewed [here](#), at the OFPM website.

- ❑ The OFPM / State of Kansas standards shall be used as the baseline requirements for procedures, services or items not covered otherwise in the KU Design and Construction Standards, or in KU's policies, procedures and contract requirements.

Kansas Board of Regents Policy Manual: Section E - Facilities, in Chapter II: Governance - State Universities, of the KBOR Policy Manual establishes certain policies that govern KU's design and construction practices for capital improvement projects. Project Designers shall comply with applicable policies, which can be viewed [here](#), at the Kansas Board of Regents website.

Kansas Board of Regents (KBOR) Project Delivery Process: This document summarizes the procedures for implementing and delivering projects in accordance with the State Educational Institution Project Delivery Construction Procurement Act. This document can be viewed [here](#), at the KBOR website.

KU Policy Library: The University of Kansas Policy Library, which can be viewed [here](#), is the repository for all policies and policy-related documents at the University of Kansas. Project Designers shall comply with applicable policies and shall pay particular attention to the policies related to "Facilities", which can be viewed under the "Operational" category, "Facilities" heading.

KU Space Policy Manual: *This document can be viewed [here](#), at the KU Policy Library website, under the "Operational" category, "Facilities" heading.*

KU Campus Master Plan: *KU completed an update of the campus master plan in 2024. This document includes extensive analysis and reports on space and classroom utilization, historic patterns and resources, land use, program accommodation, sustainability, coordination with the local community, and other areas. This document can be found at the FPD website*

KU Campus Landscape Master Plan: KU completed a campus landscape master plan in 2002. It provides an overall vision for preserving and enhancing the campus landscape and outlines the accepted framework for campus renewal and future physical development. *This document can be viewed upon request and granted when project applicable.*

KU Campus Heritage Plan: KU finalized this plan in 2008. It provides the campus and University community with a broad, comprehensive understanding of the historic development of the campus. *This document can be viewed upon request and granted when project applicable.*

MasterSpec: The State of Kansas and KU require the use of AIA's MasterSpec specifications, as published by ARCOM, 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 Designer shall edit the MasterSpec project 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 the FPD Project Manager for direction.

MEDIA RELATIONS & PRESS RELEASES

Communications with the media regarding press releases, progress reports, proposed renderings and graphic images of proposed building projects shall be the prerogative of and shall be managed by the University, not by Consultants, Contractors or others outside the University. The University of Kansas will release all pertinent information about a project, or must approve in advance all materials developed by a Consultant or Contractor, prior to their release to the media.

- ❑ All media contacts shall be referred to the KU Office of Public Affairs, via the FPD Project Manager, for response or for directions to the project team on how to respond to media inquiries.
- ❑ Media requests for access to KU Facilities, particularly roofs and other normally secure areas, shall also be referred to the KU Public Affairs office for approval and directions.

COMMUNICATIONS & CLIENT RELATIONSHIPS

General: The FPD Project Manager shall serve as KU's liaison between Consultants, Contractors and KU personnel. Consultants and Contractors shall only communicate to KU administrators, faculty, staff and students, or to City / code officials, or to similar outside entities through the FPD Project Manager, or with FPD's consent to direct communications.

- ❑ If direct communications to KU personnel or others are approved by the FPD PM, any relevant information, directions, requests or questions that come out of those discussions will be shared with the FPD PM. If directions are required from the University, they must be made by or confirmed with the FPD PM.
- ❑ Decisions made without FPD involvement may not represent KU's official directions, and Consultants or Contractors who proceed based on those non-FPD decisions may do so at their own risk, and may not be compensated if additional fees or costs are involved.
- ❑ Consultants and Contractors shall be mindful of the fact that the work we do is for the benefit of the students, faculty and staff at the University, and shall at all times be respectful in any communications they have with persons associated with KU.
 - If addressing complaints, concerns or requests voiced by KU personnel, Consultants and Contractors shall respond in a professional, respectful, solutions-oriented manner, while also understanding that FPD is the officially designated "Owner's Representative" who shall provide direction to the project team.

Private Donors: Consultants and Contractors are not to engage any of KU's private donors in discussions or decisions related to KU projects without including appropriate KU representation in those discussions, even if a pre-existing relationship existed.

- ☐ All private donor communications are to be managed by the KU Endowment Association on KU's behalf, in consultation with the Chancellor, the Provost and KU Public Affairs.

PROJECT NAME & PROJECT 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 KU project name and number as assigned by FPD.

KU Project Number: All University projects will be assigned a KU Project Number, typically consisting of a three digit building number or landscape zone, followed by a dash and a unique five digit number. EX: KU #201-5308; #LzU-10715.

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

State Project Numbers: Most projects will be assigned an OFPM/State of Kansas project number, or "A" number. When applicable, this number shall be included on all construction documents, code footprint submittals and inspection requests or meeting invitations that involve OFPM, in addition to the KU project number.

- ☐ The Request for Review forms shall also list the KIDS number assigned by KSFMO to all State of Kansas buildings. A list of the KIDS numbers for existing KU buildings is included as [Appendix A1.4](#). If the project is a new building, FPD will request a new KIDS number from KSFMO.
- ☐ The Consultant's or Contractor's project numbers may also be included, but shall be listed after the KU and state project numbers, and may not be used in lieu of the KU or OFPM project numbers.

Invoices: All invoices from consultants, contractors and other vendors on KU projects shall always list the KU project name and number. If they do not, they may be returned as unpaid until properly identified.

PLANNING & PROGRAMMING

ARCHITECTURAL PROGRAM

The University's architectural program development process attempts to address all significant design concerns, and defines the project's proposed scope, construction costs, overall project budget, funding sources, timeline for key activities, project schedule, key milestone dates, proposed activities, space needs, the University's goals and processes, and the site and infrastructure requirements of the project, in sufficient detail to support later design and construction phases. Objectives include the following:

- ☐ To ensure that no major decisions or needs are overlooked.
- ☐ To identify and analyze existing conditions or parameters that may affect the solution.
- ☐ To allow more time for the A/E to focus on solving problems and developing options.
- ☐ To allow the A/E team to understand the project parameters early in the design phase.
- ☐ To permit decisions made in one phase to be built upon and serve as boundaries or parameters for decisions to be made in subsequent phases.

- ❑ To avoid redesign and lost time which occurs when new information is introduced late in the design process.

Project Designers shall meet with the project's Building Committee, appointed to represent the users of the facility, and with other KU stakeholders at the onset of the project's design in order to review and verify the users' programmatic needs and the project scope that can be delivered to address them within the available funding and consistent with the program's original goals and parameters, as directed by KU.

CAMPUS INFRASTRUCTURE & FUTURE DEVELOPMENT

General: The Project Designer shall discuss with the University items such as utility systems, long-range planning, and similar information that relates to all proposed construction on the University campus.

Campus Plan: As directed by the Kansas Board of Regents, long-range physical development master plans were produced for each of the 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 development plans.

- ❑ At the project's design kickoff meeting, the Office of Facilities Planning & Development will review pertinent material from the Campus Plan with 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 including life cycle cost analysis.

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, or by separate projects.

- ❑ 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 expansion 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: FPD 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 may be invited to attend these meetings, at their option. Consultants should not contact or communicate directly with those entities unless specifically approved to do so by FPD.

Building Permits: KU is required to secure building permits for projects that occur on state property from OFPM, after both OFPM and KSFMO have approved the project for construction.

- ☐ Contractors are not required to pay for building permits on KU or State property.
- ☐ Projects that occur on privately-owned property, such as property owned by the KU Endowment Association, do require City building permits. FPD Code Compliance should be provided with drawings for internal review. Contractors will be required to purchase building permits from City municipalities and are to be instructed accordingly in the bid documents for those projects.

City 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 or County municipality in which they are located, as well as with other code-related requirements of the FPD Compliance Coordinator.

KU / City Cooperation Agreement: In 2005, KU and the City of Lawrence entered into a Cooperation Agreement that strived to address numerous issues of joint concern and define how they can be addressed in ways that are mutually beneficial to both KU and the City. It affects all projects that are within a 150' wide "compatibility buffer" that extends into KU's property along the KU-owned property boundary. This document can be viewed upon request to the FPD PM.

- ☐ Project Designers shall comply with the requirements of this cooperation agreement, when projects occur within the compatibility buffer, and shall assist KU in reviewing, preparing and presenting information to address each relevant requirement.

HISTORIC PRESERVATION

Projects directly affecting or within historic properties and historic districts 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 Facilities Planning & Development in coordinating and working with the State Historical Preservation Society (SHPO), and when required City of Lawrence Historic Resources Commission (LHRC).

- ☐ The Project Designer shall assist FPD in preparing a report, as requested, by providing appropriate drawings and other graphics that can be used as attachments to FPD's report, or by preparing larger visual displays for review.
- ☐ The Project Designer may be asked to present the project, explain the design concepts and take questions.
- ☐ The Project Designer will be required to comply with the standards and guidelines enforced by the SHPO, whether the project is an alteration or addition to a listed

property, or is within a listed historic district and is subject to environs compliance criteria.

DESIGN & CONSULTANT SERVICES

CAMPUS AESTHETIC GUIDELINES

The University of Kansas is dedicated to academic excellence and the construction of facilities that will meet 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 sloped roofs, constructed with tile, metal or slate materials.
- ☐ Buff or natural colored building materials; in stone, brick, precast concrete or terracotta.
- ☐ Medium bronze finish detailing
- ☐ Bronze or neutral tint exterior glazing (clear glazing that has a green appearance is not acceptable).
- ☐ Standardized street, parking lot and sidewalk 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.
- ❑ If a project removes parking, 1:1 replacement parking in similar vicinity should be included in project as part of the project budget.

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 32 - Exterior Improvements** design standards for typical details and other related information.

Service Areas: Most new or renovated 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 dumpsters.
- ❑ 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 shall be provided on all projects, to conceal exterior MEP equipment from public view. Screening shall take into consideration equipment maintenance and operational clearances and shall provide a buffer for noise generated by the equipment.

- ❑ Screen walls around MEP equipment which is visible from non-KU properties outside of KU's property boundary, even if the KU project is not within the 150' compatibility buffer zone, shall fully comply with City of Lawrence code, article 20-1006(b) which reads:

Exterior ground-mounted or building-mounted equipment including, but not limited to, mechanical equipment, utilities boxes and meters, shall be fully screened from view of adjacent properties and from street rights-of-way (as measured 6 feet above ground level). Screening shall be in the form of landscape plantings or an architectural treatment compatible with the architecture of the principal building.

- ❑ 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 low durability.
- ❑ Metal louvers or panels on screen walls or gates shall be detailed or protected so they are not damaged by service vehicles or persons maneuvering out of parking stalls.

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.

- ❑ *If it becomes necessary to consider trash collection and removal, KU's FS department can provide additional information about this equipment, vehicular requirements and accessibility.*

Trees, Shrubs and Plantings: Designers shall include a rich and varied landscape design, appropriate to each building and campus zone, and consistent with the KU Landscape Master Plan and the Campus Heritage Plan, for all projects on KU's campuses.

- ☐ Landscaping should be considered an integral component of all KU projects, and each project is expected to maintain, expand and enhance the beauty of KU's campuses.
- ☐ KU's preference is to install sod in turf areas that have been disturbed or are being established, particularly on the main campus, rather than seeding.
- ☐ Trees, shrubs and other plantings shall be specified as directed by KU, and shall be verified and selected in the nursery, at appropriate seasonal dates relative to the overall project schedule.

Site Furnishings: Designers shall utilize KU's standard site furnishings as described elsewhere in KU's Design Standards, and shall show the locations of each item on project site plans, including KU's standard waste & recycling units, benches, tables and chairs, bike racks and similar items.

- ☐ "Street furniture" such as with seat-height walls or planters, and seat walls or benches constructed of materials matching a new building may be an option that could be considered in lieu of or in addition to KU's standard benches, if approved by FPD and the University Architect.

Transit Stops & Bus Shelters: Project Designers shall show proposed or potential bus shelter locations at transit stops, and shall locate utility infrastructure to avoid those future locations as much as possible. Bus shelters shall be in accordance with KU's Design Standards.

Site Lighting: KU's standard light poles and fixtures shall be used for all site lighting on the KU campuses. Non-standard fixtures will not be considered.

MATERIAL SELECTIONS & GENERAL DESIGN CONSIDERATIONS

General: State and University 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.
- ☐ 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.

- ☐ FPD and FS will provide additional information on product standardization.

New or Cutting-Edge Materials and Technologies: Any materials, products, equipment or systems that are not broadly recognized as normal, proven, industry-standard materials, practices, systems or components shall not be used on KU projects, unless specifically reviewed and approved in advance by FPD, FS and the University Architect.

'Form vs. Function': Designers are encouraged and expected to deliver creative, aesthetically-pleasing design solutions on KU projects, but at the same time, they must also deliver designs that meet KU's program requirements and which are practical, reasonable, cost-effective, easily maintained, durable, constructible and efficient. Functional considerations should be balanced with aesthetic considerations, but if both can't be met due to budget or other considerations, functional considerations will be given priority over design considerations.

'Big Steps': Oversized steps which are intended to provide interior or exterior seating are generally discouraged. If considered, they shall include railings, benches or other barriers along their top edges to prevent walk-off accidents, and other provisions as required by the FPD Code Compliance Coordinator.

Full-Height Glass / Window Walls: Designers shall be selective about where full-height glass walls are provided, for both interior and exterior applications, and shall balance practical, functional and/or cost considerations with aesthetic considerations.

- ☐ Offices: Full-height glass walls are discouraged into offices, due to the furniture and stored items that are typically placed against them, the undesirable aesthetics created by that real-world usage, the need for HVAC and electrical/data outlets on those walls and the need to control heat gain and glare from excessive natural light.
 - ☐ Designers shall also avoid creating "goldfish bowls" into offices that have an excessive amount of glass. KU's real-world experience has been that office occupants are rarely comfortable in those spaces and will add or utilize shades or blinds that are left down most of the time to create the desired privacy, or will install translucent films or similar makeshift screening on those window walls.
 - ☐ Sidelights, transom or clerestory windows are generally preferred over other window systems into office.
- ☐ Conference & Meeting Rooms: Full-height glass walls may be appropriate, particularly adjacent to entrances, but shall also take into consideration the need for overflow seating and for presentation or buffet/food service tables along walls.
- ☐ Reception Areas & Lobbies: Full-height glass is often appropriate in these spaces.
- ☐ Shading Devices: Designers shall include appropriate solar shading devices, overhangs, light shelves or screening elements to control heat gain and glare issues.

ROOM ENTRANCES

General: All interior room entrances shall be designed with a solid wall adjacent to the strike side of each door frame, which is at least 12" wide and full-height. If a door is within a window wall or has adjacent view windows, this 12" wide solid wall shall still be provided. These walls are intended to provide consistent mounting locations for the following items.

- ☐ Exception: Glass sidelights may be used if no more than an 18" clear width.

Exterior (Corridor) Side of Wall:

- ☐ Room Identification Signage: A room number is required adjacent to each interior door. This sign may also include optional paper inserts for changeable information, such as room occupant's name, or it may include permanent lettering if it is a public-type permanent room. Refer to Div 10- Signage standards.

- ☐ Donor Recognition or Room Sponsor Signage: Optional, and typically installed immediately below the room number sign.
- ☐ Room Information Holder: Part of KU's signage system, this is an insert holder for 8.5" x 11" sheets of paper in portrait orientation, which is required for all laboratory or shop-type spaces for EHS safety instructions. It is optional for other rooms, where the occupants may wish to post room schedules or other information.
- ☐ Room Scheduling System: Electronic room scheduling devices, often iPads or similar, mounted above or below the room number sign.

Interior (Room) Side of Wall:

- ☐ Light Switch: Locate immediately adjacent to jamb, with a 6" standard clearance to jamb.
- ☐ Thermostat: Locate within ADA reach ranges.
- ☐ Fire Alarm Devices: This avoids locating them within wall areas where cabinets, shelving or art may be located by occupants in future (also applies to T-stats and light switches).
- ☐ Room Occupancy Sign: Mounted with top of sign aligned with top of door frame, in all assembly occupancies.
- ☐ Fire Extinguisher: These are required in labs, wall-mounted adjacent to the main entry/exit door(s).

CLASSROOM & LECTURE ROOM FACILITIES

General: Refer to [Appendix A1.5 - Classroom Standards](#) for detailed requirements related to KU's standard classroom designs, *and to the Classroom Technology information developed by the KU Department of Information Technology.*

Effective classroom design has always been 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 Facilities Planning & Development, the Office of Space Management, KU Operations personnel, and the campus review committees.

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
- ☐ external noise via windows, exterior walls, and/or corridors
- ☐ Operable windows, which are *sometimes desired*; therefore, the design should consider external exposure to traffic, cooling towers, exhaust fans, *idling service vehicles* 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 or flutter echoes.
- ☐ 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 designated KU Information Technology and media support staff.

- ☐ Sound reinforcement shall be provided in compliance with ADAAG Guidelines.

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

- ☐ 22-25 NSF per occupant: Tablet arm chair classrooms
- ☐ 30-35 NSF per occupant: Table and chairs classrooms
- ☐ 30-35 NSF per occupant: Seminar classrooms
- ☐ 25-65 NSF per occupant: Laboratory classrooms; dependent on type (theatre/dance, architectural studios, wet labs, computer labs, etc.)

SUPPORT SPACES - DESIGN GUIDELINES

General: The following spaces and needs shall be provided or addressed in all KU buildings, whether specifically called out in the Architectural Program or not.

Custodial Closets / Dens: Locate one on each level, with a minimum area of 300 SF in the main custodial closet and a minimum area of 100 SF in the custodial closets on 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 swing 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 step 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.
- ☐ Custodial closets shall have exhaust fans, vented to the building exterior.

Mechanical Rooms: Doors should open directly to the outside of buildings whenever possible.

- ☐ Project Designers shall incorporate over-sized doors, roof hatches, knockout panels and/or louvers to facilitate replacement of large pieces of mechanical equipment.

Equipment in these rooms should not require destructive construction methods to service or replace.

General Storage Rooms: Each building shall include appropriately sized storage rooms for FS custodial and building maintenance supplies and materials.

- ☐ *The consultant should coordinate scenarios of flexible furniture arrangements to provide adequate storage for that furniture, as applicable.*

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 wherever possible.

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

- ☐ Refer to the **Division 27 - Telecommunications** standards for additional, detailed requirements.

Operating, Maintenance & Inspection Access: Project Designers shall include provisions for inspection and maintenance access to all operable devices, components and equipment that will need to be inspected for building acceptance and/or during routine maintenance of the MEP systems.

- ☐ This includes the provision of built-in ladders, stairs, landings, catwalks, access doors, roof hatches and similar components to provide a safe and reliable means of access for inspection or maintenance personnel.
- ☐ Built-in ladders, with OSHA-compliant cages and protective elements, shall be provided to all roofs for access to any rooftop-mounted MEP equipment, roof drains and roofing maintenance.
- ☐ Include steps and platforms to cross piping, ductwork, copings or curbs that are in an expected path of travel to inspect or maintain MEP equipment.
- ☐ It is NOT acceptable for inspectors or maintenance personnel to be required to climb on or over ductwork, piping, or sloped metal roofs that may pose a fall hazard.
- ☐ The design and construction of these access components shall be included in the project scope and all costs shall be included in the project budget.

Leak Protection: Project Designers shall include sleeves and equipment/pipe curbs that extend not less than 1-1/2" (4" preferred) above the finish floor at all penetrations through elevated floors. All floor penetrations, including those in sleeves or curbs, shall be sealed or firestopped to eliminate the potential for spilled or flooding water or other liquids to leak into finished spaces, equipment or furnishings below.

Vending Areas: A vending machine area shall be provided in each building. Verify the number, type and size of vending machines and locations with FPD and KU's vending contract manager.

- ☐ Location of this area should be carefully considered to avoid noise and light contamination of adjacent spaces, while also being easily accessible.
- ☐ This area should be designed using low-maintenance finishes that are easily cleaned.

- ☐ Trash and recycling receptacles will need to be strategically placed so that those who leave the area after refreshment can properly dispose of waste or recyclable materials.
- ☐ Typically hot foods will not be vended, unless specifically identified in the Architectural Program.

Waste & Recycling Containers: Project Designers must consider and indicate the locations of waste and recycling containers, or built-in stations housing those containers, inside or outside the entrances to all publicly-used spaces such as classrooms, auditoriums, lecture halls, labs, vending or dining areas, and each exterior entrance to a building.

Single-User Restrooms: In addition to the code-required restrooms in each building, Project Designers shall provide not less than one publicly accessible single user restroom per building, and preferably one per floor. Refer to **Division 10 - Specialties** for additional requirements.

Mother's Room (Lactation Room): Project Designers shall provide not less than one dedicated, ADA-compliant room per building which has been designed and is reserved to accommodate the needs of nursing mothers, in accordance with the Affordable Care Act (ACA), Section 7(r) of the Fair Labor Standards Act – Break Time for Nursing Mothers Provision, which can be viewed [here](#) at the U.S. Dept. of Labor's Wage and Hour Division website. Each Mother's Room shall include the following:

- ☐ Sink or lavatory, paper towel dispenser, soap dispenser (no toilet shall be included; these rooms must be separate from the restrooms). Motion-activated faucet and towel dispenser.
- ☐ Countertop or table with GFCI electrical outlets for power nearby.
- ☐ Comfortable lounge chair, with low padded arms, near table/countertop and electrical outlets.
- ☐ Wifi connectivity.
- ☐ Sound-isolated walls and door with lockable (privacy restroom-type) lockset.
- ☐ Carpeted floor and acoustical lay-in ceiling.

Mail Rooms: Mail delivery will need to be discussed with administrative staff in each department served to determine exact requirements.

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 easily guide people to their destinations.

- ☐ The Project Designer shall develop a proposed room numbering scheme as soon as the floor plan layouts are essentially finalized, typically at the start of the Design Development phase.
- ☐ Project Designer shall submit floor plan drawings to the FPD Project Manager showing all proposed room numbering, for review and approval by FPD and KU Space Management, prior to commencing with construction documents.

- ❑ The room numbers identified on the construction documents shall be the same as the numbers that will be used for interior signage and space/asset management in the building upon completion of the project. Once approved by KU, they shall not be changed or expanded upon without further review and approval by KU.
- ❑ Plans for change orders during construction that affect the layout and potential numbering of rooms shall be reviewed with FPD and with the KU Space Management Office.

Room Numbering Guidelines:

- ❑ Rooms shall be numbered starting at the main entrance and moving through the building in a logical manner, typically from one end to the other, or from left to right from main entrance.
 - ❑ All floors shall be numbered in a similar horizontal sequence, so lower and higher numbers are in the same relative location on each floor.
- ❑ Rooms shall be numbered using even numbers on one side of corridors and odd numbers on the other side of corridors; EX: 200, 202, 204, 208 on one side; 201, 203, etc. on other side.
- ❑ Typically use three-digit room numbers, with the first digit indicating the floor number in all cases; EX: 100, 101, 128, 245, 312, etc.
 - ❑ If the size of the facility requires it, or if a site consists of several buildings that create a unified complex (EX: the School of Engineering complex at Learned, Eaton, Spahr, LEEP2, M2SEC), Designers shall use a four digit room numbering scheme.
 - ❑ The first digit would typically indicate the floor number in a single large building, or the building identifier in a complex, in which case the second digit indicates the floor number.
 - ❑ For basements or ground floors, the room number would typically start with a “B” or “G”; EX: B10, G45, etc.
- ❑ **Interior rooms**, entered through another room, are typically numbered with an alphabetic identifier added to the end of the room serving as the means of access. This most often occurs in an office suite or library space, where a central open area has smaller office or conference/study rooms around it. EX: if you pass through Room 321, the rooms off it would typically be numbered in a clockwise manner as 321A, 321B, 321C, etc., or from entry point of suite to rear of suite.
- ❑ **Second-level interior rooms**, often storage closets, are typically numbered with a numeric identifier added to the alpha identifier on the first level interior room number; EX: 321A1, 321C1, etc.
- ❑ **Entry vestibules** typically receive a standard room number, with the main entry vestibule typically room number 100, the main entry lobby room number 101.
- ❑ **Corridors** utilize a “C” as the second digit; EX: 1C1, 2C7, etc.
- ❑ **Stairways** utilize an “S” as the second digit; EX: 1S1, 4S8, etc.
- ❑ **Elevators** utilize an “E” as the second digit; EX: 1E1, 3E4, etc.
- ❑ **Future Room Numbers**: when large rooms are across a hallway from smaller rooms, or when it is possible a larger room could be sub-divided into smaller rooms in the future,

skip room numbers to reserve them for that future use. EX: rooms 105, 107, 109, 111 on one side of a hallway may have larger rooms 104 and 112 on the other side.

SIGNAGE & 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.

- ☐ Street address number shall be installed near the main entrance.
- ☐ Designers should consider site lighting and location of building information. Designers should consider site lighting through site pole standards unless deviation request is submitted and approved.
- ☐ 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 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 specific requirements.

Graphics: Painted, silk-screened or similar graphics and banners may not be installed on the exterior of KU buildings. Graphics that are proposed as art installations are not allowed unless approved by the University Architect and then by the Public Art on Campus Committee.

- ☐ Refer to KU Policy Library: <http://policy.ku.edu/provost/public-art-on-campus>

Electronic, Illuminated or Message Board Signage: These types of signs are not allowed on the exterior walls or the sites around KU buildings.

COLOR SCHEDULES

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

- ☐ Refer to **Division 9 - Finishes** for more information about the selection of materials and finishes for KU facilities, and the requirements Designers must follow regarding their review and approval, and their documentation in preliminary and final color schedules.

ACCESSIBILITY & ADA COMPLIANCE

The University of Kansas desires to not just meet, but to exceed the minimum requirements of the Americans with Disabilities Act (ADA) in order to provide meaningful access to programs and facilities for all persons, on all KU campuses, and supports the design principle of universal accessibility in all KU facilities. Refer to **Appendix A1.2 – Accessibility** for detailed requirements and guidelines.

SUSTAINABILITY & LEED COMPLIANCE

KU Operations promotes a culture of sustainability at the University of Kansas, empowering students, faculty and staff to make decisions that help protect natural ecosystems, create economic prosperity and treat all people with equality and respect.

While KU supports and encourages all forms of sustainable design and facilities, the University has determined that rather than invest in the cost of certifying buildings as LEED compliant, it would rather invest that money in other features in new facilities. As such, while formal LEED certification is not anticipated for KU facilities, Project Designers shall still design new facilities to meet the equivalent of LEED Silver certification compliance, at a minimum. *In addition, Designers must meet the University's requirement of ASHRAE 90.1 2016 Edition+ 30% better than baseline for new construction and major renovations as an additional step to ensure facilities more efficient and sustainable.*

- ☐ **LEED Project Checklist:** *Can be found from USGBC website.*
 - ☐ A final version shall be submitted during construction, indicating how the new facility is believed to have met LEED criteria and to what equivalent level of compliance.
- ☐ **Sustainability Construction Data:** Project Designers shall require each Contractor to compile a report summarizing the quantities of construction waste disposed, reused and recycled during each project's construction. Estimated quantities are acceptable if actual hauling tickets are not available.

CODE ANALYSIS, COMPLIANCE AND BUILDING PERMITS

Refer to [Appendix A1.3 - Code Compliance, Code Analysis and Building Permits](#) for detailed requirements and guidelines.

SEISMIC REQUIREMENTS:

- ☐ *Designed per IBC location of work*

ACOUSTICAL DESIGN SERVICES

Basic 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 and to the FPD Project Manager.

These acoustical reviews shall specifically address the potential for sound problems from the following sources, but not limited to, 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 23 – HVAC, Mechanical Equipment Sound Control – Design Guidelines** for detailed, 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.

Additional Services: Acoustical design services that would typically be considered an additional service to the A/E Designer, unless otherwise required as part of the A/E's Basic Services in the Architectural Program or as otherwise agreed upon during fee and contract negotiations, include the following:

- ☐ Audio-video projection and sound amplification systems.
- ☐ Audio-video equipment selection and system design.
- ☐ Special sound reinforcement systems, such as in performing arts or athletic facilities.

DESIGN REVIEWS & SUBMITTALS

Quantity Required: Project Designers shall provide *digital* submittals to the FPD Project Manager, unless otherwise agreed, *and shall deliver PDF copies only if requested*.

- ☐ Additional *digital* submittals are required for code footprint, fire alarm and fire sprinkler submittals, as outlined elsewhere in these standards.

Design Review Meetings or Work Sessions: The FPD PM shall coordinate with the Building Committee, FPD support staff and other KU stakeholders to schedule the review meetings on each project. Meetings will be held at KU, at the convenience of the KU stakeholders and team members. Project Designers will be required to attend these review meetings, along with appropriate sub-consultants, which are generally organized to focus the discussions and attendees in separate work sessions.

These work sessions may be spread out over the course of a single day, or may occur over the course of several days, depending on KU stakeholder availability. Consultants and Contractors shall cooperate with and if necessary, will be required to arrange their schedules around KU's availability.

Separate review meetings and/or work sessions may include, but are not limited to:

- ☐ Negotiating/Steering Committee - Budget, Schedule & Key Issues
- ☐ Architectural & Building Occupants' Needs
- ☐ Site, Civil, Landscape, and Parking & Transit
- ☐ Mechanical, Plumbing & Fire Sprinkler Systems
- ☐ Electrical & Fire Alarm
- ☐ Telecommunications & AV/Classroom Technology
- ☐ Code, Accessibility, Life Safety
- ☐ Door Hardware, Keying, Access Control & Security

CAD, REVIT & OTHER ELECTRONIC DOCUMENT REQUIREMENTS

General: Project Designers shall utilize AutoCAD or REVIT software to produce all construction drawings for KU projects. These standards are intended to provide consistency, usability, and integration across end deliverables on FPD projects.

Word shall be used to produce all project specifications.

- ☐ **Fonts:** Shall be limited to those commonly available in the native software packages.
- ☐ **Layer Naming:** Designers shall follow the National CAD Standard conventions for layer naming.
- ☐ **KU Title Block Templates:** The FPD can provide KU's current title block drawing sheet upon request.
- ☐ **Code Footprint Templates:** The FPD can provide KU's current code footprint template drawing sheet upon request. If a template does not exist for a particular KU building, FPD Compliance Coordinator will work with the Consultant to generate one.

REVIT and 3D Models/Renderings: If 3D models are created by an A/E or Contractor as part of a KU project, those 3D model files shall also be submitted to FPD, in addition to the required AutoCAD .DWG files of each drawing.

General Requirements

- ☐ Files shall be 2022 software versions or later.
- ☐ Worksharing must be enabled with consistent project browser organization.
- ☐ Coordinate system must align with University of Kansas campus survey control and must be set to NAD83/Kansas North (ftUS) EPGS Code: 26851
- ☐ No solid or hatched wall, floor, or materials patterns may appear in exported plans.

Visibility Graphics

- ☐ to ensure consistency across views, follow these category-level standards:

Model Element	Visibility/Graphics Category	Notes
Walls (Exterior)	Walls -> Exterior	use object styles and filters properly
Walls (Interior)	Walls -> Interior	
Floors	Floors	Do not override by element
Ceilings	Ceilings	Not to appear in export plan
Furniture	Furniture	Group loose vs. fixed where appropriate
Casework	Casework	
Mech. Equip.	Mechanical Equipment	Shown in plan excluding items above 5'
Elect. Fixtures	Electrical Fixtures	Ceiling fixtures to be excluded

Site Elements Topography, Site, etc. Must be modeled in context

Avoid using Generic models unless explicitly approved. If used, they must be reassigned to the correct category prior to submission.

Detail level of export model plan is left to consultant's discretion but must be consistently applied.

Linework Discipline

- ☐ All linework must be assigned to descriptive subcategories and layers.
 - Do not leave 2D details elements or linework on default categories, A-DETL of A-GENM, but rather use appropriately descriptive layer naming, following National CAD standard.
 - Examples:
 - Expansion Joint should be A-JOINT-EXP
 - Plumbing linework should be P-PIPE-DETL
 - Electrical Diagram should be E-DIAG-CIRC
- ☐ Floor and flatwork slab edges of adjoining but coplanar slabs must be hidden with invisible linework or otherwise defined to not display in export plan.
- ☐ Wall/partition linework in export plan must show either:
 - Multiple lines for individual core or finish material layers are not permitted.
- ☐ Wall sweeps, wall joins, and stacked walls must be modeled with accurate miters/butts, of their joins must be clean linework to export properly.
- ☐ Stairs and ramps must show linework only to the break line.
- ☐ Ceiling elements should be on their own RCP, not the export plans used for small scales.
- ☐ Structural elements below cut plane must show full member thickness accurately.
- ☐ View range cut plane must be set at a height practical to show doors, windows, and other key features.
- ☐ Significant mechanical, plumbing, and electrical should be shown in plan, but exclude all ductwork, conduit, and piping above 5' AFF.

Export Layer Translation

- ☐ Provide a .txt or .dwg export setup using Revit Export Layers – DWG/DXF Mapping Table
 - This file must include KU Standard layer translation .txt as a basis
 - Map each Revit category/subcategory to a KU approved AutoCad Layer.
 - Avoid default export of generic layers
 - Maintain proper lineweight and linetype mapping per KU plot standards.
- ☐ Each submission must include
 - A sample exported DWG
 - A list of any custom subcategories or deviations from layer translation or other KU standards listed herein.
- ☐ Submittal Checklist
 - Model purged and compacted
 - Project base point and survey point correctly aligned
 - Linework reassigned to descriptive layers
 - Export mapping file

- *No generic models remain*
- *Worksets are clean and named correctly*
- *View templates and graphics compliant with KU Standards*

❑ **AutoCad:** Project Designers shall perform cleanup and compression of each CAD file prior to each formal submission to KU-FPD. These tasks will include the following, at a minimum:

- Binding of xrefs and embedded files, fonts, etc.
- Purging of un-used blocks, layers, linework, etc.
- Submission of file plotting information.

Final Bidding & Construction Documents: Project Designers shall submit a complete set of both PDF and native file format documents (AutoCAD .DWG files and Word .DOC files, REVIT or SketchUp 3D files, etc.) for the entire set of final bid documents.

❑ Electronic submittals shall include all disciplines, including all engineering and specialty consultant documents, and shall include all drawings and specifications/project manuals distributed to Contractors.

- *Architect of Record is responsible for overseeing delegated design scopes.*

As-Built Record Documents: Project Designers shall review the Contractor's as-built drawings and shall update the bidding and construction documents to reflect all significant changes that occurred during construction.

- ❑ Designers shall submit a complete set of all electronic documents, including all disciplines and all addenda issued during the bidding phase.
- ❑ Designers are encouraged to maintain a dedicated set of as-built documents in their office files during the bidding and construction phase of each project, and to create any necessary supplemental or revised drawings within that file, to expedite creating the as-built set for KU following substantial completion, and to ensure its completeness.
 - *Final As-Built documents should include all project RFIs and Submittals.*

COST ESTIMATES & KU PROJECT BUDGET

During design, the Project Designer and/or Construction Manager (if a CM at-Risk project) 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 of options and design modifications are necessary.

The GC or CM may be asked for monthly cost projection information and should provide that information at no additional cost.

FPD will develop and periodically update the Project Budget, which will itemize the costs for all work beyond just the project's construction, including work by separate contracts, A/E fees, KU and state agency fees, the project's contingency funds and other miscellaneous costs.

FPD is solely responsible for managing and updating the overall KU Project Budget on behalf of the University and KU Endowment on privately-funded projects. FPD is required to

confirm at each stage of the project's development that the overall project costs are within the available funding, and are consistent with the approved project scope as outlined in the architectural program, or as otherwise approved by the Negotiating Committee, and if required, by KU Administration, the Board of Regents and the Kansas Legislature.

FPD staff and the Building Committee may not increase or exceed the approved project funding limits, nor modify or expand the approved project scope, as these are decisions requiring approval from Negotiating Committee for each project.

FPD staff will make the necessary decisions and provide direction to the Consultant and Contractor teams on each project on all issues related to project cost, for items that are within budget and original scope, while also supporting the needs and desires of the building occupants and the University as a whole. All decisions related to issues that are beyond the immediate interests of the building occupants, and which affect KU's broader interests, shall be made by FPD staff in consultation with the University Architect and when appropriate, with the Negotiating Committee, KU Administration, KBOR and/or OFPM.

FPD will make all decisions during the construction phase regarding the use of the project's contingency funds, related to change orders and other KU needs, and shall direct the design and construction team accordingly.

ASSET MANAGEMENT

General: *Project Designers and Contractors shall assist FPD in developing a breakdown of the project costs and assets by location that are being created by project. This information is used for the KU Comptroller's and KU Operations asset inventory and should be provided at time of construction document submittal.*

The following are examples of the asset types that are typically tracked by KU:

- ☐ **Buildings or Structures** (if the project includes separate buildings or structures, each will be tracked separately)
- ☐ **Utility Tunnels & Site Utilities** ('piping' is the listed KU asset category)
- ☐ **Parking, Sidewalks and Roads**
- ☐ **Other New Facilities** (such as site amenities; EX: bus shelters, tennis courts, pavilions)
- ☐ **Other building elements** (*Generators, Air Handlers Units, VFD, VAV, Access Control, etc.*)

PROJECT DATA

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

- ☐ total gross area (GSF) of new construction or remodeled areas;
- ☐ total net assignable area (NASF) of new construction or remodeled areas;
- ☐ total area (in SF and acres) of site to be developed, not including the building footprint;
 - ☐ key unit quantities and cost per unit, including but not limited to number of seats, beds or parking stalls; acres of site; and similar units/costs.

Project Data - Building & Site: After bids have been received and contracts awarded, the Project Designer will prepare and submit to the FPD Project Manager a summary of Building Data, in a one or two page summary. This data shall include all relevant information about the project, including but not limited to the following:

- ☐ Total gross and net assignable area (in SF), with separate totals and unit costs for new construction and remodeled areas.
- ☐ Total area (in SF & acres) of site developed, not including the building footprint.
- ☐ Cost breakdowns & unit costs for the building and site development.
- ☐ Description of key or unique building features, including sustainable features.
- ☐ General mechanical/electrical system information, including energy efficiency features..
- ☐ Key unit quantities & cost per unit, including but not limited to the following examples:
 - ☐ Number of seats (lecture halls, auditoria or dining facilities), beds (residence halls) or parking stalls (separately for surface lots or parking structures).
 - ☐ LF of utility tunnels or roads.
 - ☐ Number of labs and average cost per lab.

SMALL-SCALE FLOOR PLANS

Small-Scale Floor Plans & Site Plan Drawings: After the project design and floor plan layouts have been finalized, the Project Designer shall prepare simplified floor plan drawings for the Owner's use, which clearly show all walls, doors, windows, fixed lecture or fixed seating, room names, room numbers, sidewalks, service drives, roads, parking stalls (with universal symbol on the accessible stalls) and similar basic information about the project site and floor plans.

- ☐ Designers shall submit draft copies of these drawings to the FPD PM for review and comment, and shall make any requested edits to them.
- ☐ Designers shall deliver electronic copies of the approved drawings to the FPD PM in both PDF and AutoCAD .DWG format.

Files should be clean, without redundant or unassigned layers, per section "CAD, Revit, and Other electronic documents" outlined in this document.

BIDDING & CONSTRUCTION

BIDDING

Refer to **Division 00 - Procurement & Contracting** of these standards for guidelines and requirements related to the procurement of services, bidding of construction and contracting with those entities.

CONSTRUCTION ADMINISTRATION

General: FPD will serve as the Owner's Representative and shall provide directions to the design and construction team on KU's behalf. The A/E Consultant is responsible for

administering construction, and for conducting onsite inspections and observations at intervals appropriate to the progress of the work, in order to confirm that the work is being completed in accordance with the construction documents and with KU's requirements.

Pre-Construction Conference: The Project Designer shall chair a Pre-Construction Conference for each project, prior to the start of onsite work. The FPD PM will provide KU's standard agenda template for this meeting to the A/E, and the A/E shall update it as appropriate for that particular project. KU's standard agenda covers the key issues that must be understood and followed for all projects being built for the University, several of which are recapped in these Standards.

- ❑ The A/E shall update this agenda to create meeting minutes that reflect any other items discussed, contact information, etc. and distribute them to all attendees.

Pre-Installation Conferences: The Architect/Engineer of Record shall chair a Pre-Installation Conference for each major category of work prior to the start of that onsite work, to discuss key issues, concerns, details, coordination issues, etc. with FPD, the Contractor, Sub-Contractor and other stakeholders.

Progress Meetings: Owner-Architect-Contractor (OAC) meetings shall be held at regular intervals, typically biweekly, during the construction duration as agreed upon by this team. Discussions will cover key issues, recent and planned progress of the work, adherence to schedule, requested or required changes in the work, problems that need to be resolved, etc.

Budget Management: FPD will manage the project budget and communicate KU decisions on change orders and other cost matters to the project team, as outlined elsewhere in this section of the Standards.

Utility Locates and Underground As-Built Surveys: *This process does not relieve Contractor requirement to call Dig safe/ KS One call as part of their duties for jobsite safety. Contractors should also reference [Div- 33 Utilities](#).*

- ❑ **Procedures for KU Engineering Technician to record as-built location and depth**
 - *Section under construction.*
- ❑ **Procedures for Contractor to record as-built location and depth** *Contractors should provide project site as-built survey of the site utility structures and underground pipelines prior to backfilling of trenches of the related utility as deliverable to KU. Consultants must have this included in bid documents. Please note, final payment may be held until this information is provided.*
 - *Basic horizontal and vertical control points are provided in contract documents*
 - *Contractor is responsible for providing as-built survey of utilities and consistent with KU CAD standards*
 - *All as-built information shall be done in AutoCad and shall match the project coordinate system and vertical datum.*
 - *Contractor shall obtain list of AutoCad file layer names from the project civil engineer and shall draw the features in the appropriate layers.*
 - *Use of Land Surveyor shall be defined as professional land surveyor who is legally qualified to practice in the State of Kansas and who is experienced in providing land-surveying services as indicated below in submittals.*

Utility As-Built Submittals provided by Contractor

❑ *Water Lines*

- *Contractor to provide as-builts in AutoCAD with X, Y and Z coordinates, prepared by Registered Land Surveyor, at 25-foot intervals of installed water line, as well as all valves, fittings, and appurtenances prior to backfill of the water line.*
- *Contractor's as-built AutoCAD file shall include the centerline of the water line and indicate size and type of material.*
- *Contractor is also responsible for providing as-built plans per City requirements if applicable.*

❑ *Sanitary Sewer Lines:*

- *Contractor to provide as-built survey in AutoCAD, prepared by Registered Land Surveyor, that indicates the exact location, top elevations, flow lines and pipe sizes at all structures as well as any bends, cleanouts, etc. prior to backfill of installed sanitary sewer line.*
- *Contractor's as-built AutoCAD file shall include the centerline of the sanitary line and indicate size and type of material.*
- *Contractor is also responsible for providing as-built plans per City requirements if applicable.*

❑ *Storm Sewer Lines:*

- *Contractor to provide as-built survey in AutoCAD, prepared by Registered Land Surveyor, that indicates the exact location, top elevations, flow lines and pipe sizes at all structures as well as any bends, cleanouts, etc. prior to backfill of installed storm sewer line.*
- *Contractor's as-built AutoCAD file shall include the centerline of the storm line and indicate size and type of material.*
- *Contractor is also responsible for providing as-built plans per City requirements if applicable.*

❑ *Foundation drainage and/or sub-drainage Lines:*

- *Contractor to provide as-built survey in AutoCAD, prepared by Registered Land Surveyor, that indicates the exact location, top elevations, flow lines and pipe sizes of all structures prior to backfill of installed foundation drainage and/or sub-drainage pipe.*
- *Contractor's as-built AutoCAD file shall include the centerline of the drain line and indicate size and type of material.*
- *Contractor is also responsible for providing as-built plans per City requirements if applicable.*

❑ *Underground Telecom Lines:*

- *Contractor to provide as-built survey in AutoCAD, prepared by Registered Land Surveyor, that indicates the exact location, size, type, number of conduits, top elevations of handholes / manholes, and top elevation of telecom lines or encasement at every 25- foot interval of installed telecom line prior to backfill of the telecom line. Also include centerline, width, and depth of any concrete encasement if applicable.*
- *Contractor is also responsible for providing as-built plans per City requirements if applicable.*

❑ *Underground Electric Power Lines:*

- Contractor to provide as-built survey in AutoCAD, prepared by Registered Land Surveyor, that indicates the exact location, size, type, number of conduits, top elevations of electric junction boxes, and top elevation of underground electric line or encasement at every 25-foot interval of installed underground electric line prior to backfill of the electric line. Also include centerline, width, and depth of any concrete encasement if applicable.
 - Contractor is also responsible for providing as-built plans per City requirements if applicable.
- ❑ **Gas Lines:**
- Contractor to provide as-built survey in AutoCAD with X, Y and Z coordinates, prepared by Registered Land Surveyor, at 25-foot interval of installed gas line, as well as all valves, fittings, and appurtenances prior to backfill of the gas line.
 - Contractor's as-built AutoCAD file shall include the centerline of the gas line and indicate size and type of material.
 - Contractor is also responsible for providing as-built plans per City requirements if applicable.
- ❑ **All Other Utilities:**
- Contractor to provide as-built survey in AutoCAD, prepared by Registered Land Surveyor, that indicates the exact location, top elevations, flow lines and pipe sizes at all structures prior to backfill of installed utility line. Include centerline of utility line, every bend, clean-out, handholes, etc. and top elevation of utility line at 25' intervals.
 - Contractor's as-built AutoCAD file shall include the centerline of the utility line and indicate size and type of material.
 - Contractor is also responsible for providing as-built plans per City requirements if applicable.

Hot Work Permits: Contractors shall be required to complete and submit a KU Hot Work Permit for each project and each trade, prior to beginning that work. All temporary operations involving open flames or producing heat and/or sparks require a Hot Work Permit. This includes, but is not limited to, Brazing, Cutting, Grinding, Soldering, Thawing, and Welding.

- ❑ This form is available at the FPD website [here](#).

Fire-stopping: All openings in or penetrations through fire-resistive assemblies shall be protected in accordance with the International Building Code.

- ❑ Fire-stopping 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 fire-stopping. The General Contractor is responsible for overall compliance and provision of fire-stopping on the project.

Jobsite Safety: Contractors are solely responsible for the means and methods of construction, and for jobsite safety, and for securing the perimeter of sites or buildings under construction, and for tools and equipment housed therein. KU personnel shall comply with

the Contractor's normal safety protocols, established for all contractors and jobsite personnel.

- ☐ Contractors shall ensure that the streets and sidewalks adjacent to the project site are kept clean, safe and free of debris or mud at all times.
- ☐ FPD may occasionally request that Contractors take special steps to ensure that no attractive or accidental hazards exist on the jobsite that might tempt young persons to undertake dangerous behavior.

Jobsite Behavior: Contractors shall advise all onsite personnel that KU has a no-tolerance policy for unacceptable behavior, including derogatory or threatening remarks or behavior, sexual harassment, demeaning or insulting comments related to race, gender, sexual orientation, nationality and other discriminatory behavior. If unacceptable behavior is observed or reported, Contractors shall take immediate and appropriate steps to address and correct that behavior, as requested or required by KU.

- ☐ Graffiti, particularly if vulgar or derogatory in nature, shall be immediately removed or covered if visible on KU jobsites, and the responsible parties shall be addressed in an appropriate manner.
- ☐ It is not permissible to blatantly display the school logos of rival universities on KU jobsites, by displaying flags, license plates, banners, or decals intended to provoke contentious behavior.

SUBCONTRACTOR & SUPPLIER LISTS

Project Designers shall specify and require Contractors on KU projects to prepare Subcontractor and Supplier Lists that identify the work performed or materials provided by each firm, and which includes detailed contact information that includes the following:

- ☐ Company name, address, phone number; internet website address, if any.
- ☐ Project manager or primary contact person, email address, business and mobile phone numbers.

CONSTRUCTION SCHEDULING

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

- ☐ Project Designers shall include provisions in the construction documents which require Contractors to perform disruptively noisy work, such as demolition, during off-hours (evenings or weekends) as required to avoid disrupting academic or research activities near the project site.
 - ☐ Project Designers and FPD PMs shall review the proposed work schedule and activities with building occupants who will continue to use spaces near the project site, during the design phase, to confirm any special provisions and to coordinate and avoid disrupting ongoing activities near the site, with particular attention paid to times when tests or final exams will be underway.

- ❑ The Project Designer must review specific requirements for time frames or staging of the construction activities in detail with the University and outline them in detail in the construction documents.

UTILITY OUTAGES

General: Project Designers shall identify during the design phase all anticipated utility outages that will be required and shall include provisions for temporary measures in the construction documents, such as temporary heating, cooling or power, as well as the relevant restrictions that the Contractor must factor into his bid, such as off-hours work.

- ❑ *The FPD PM shall coordinate with Work Management to send out Outage Notification to all affected campus units, with an appropriate number of days of advance notice given the impacts. Designers and Contractors shall assist FPD with confirmation of impacts of the outage, such as exactly what services will be disrupted and for how long, anticipated restoration, etc.*

HVAC & BUILDING COMMISSIONING

All KU capital projects will 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 the **Division 23 - Mechanical** design standards for detailed requirements.

PROJECT COMPLETION & ACCEPTANCE

General: The FPD Compliance Coordinator will coordinate, assist and manage all required life-safety inspections on KU's behalf, which are to be conducted with the Project Designers, Contractors and the AHJ's inspectors and officials.

- ❑ Refer to **Appendix A1.3 - Code Compliance** for detailed requirements and guidelines.
- ❑ Utility Metering: All utility metering must be completed, tested, and accepted prior to Substantial Completion.
- ❑ BAS Controls: All building controls must be operational and ready for commissioning prior to Substantial Completion.

Substantial Completion Notification: The FPD PM will prepare and issue a FPD standard notification memo that will be sent to all key University stakeholders, notifying them of the project's substantial completion date and the commencement of related duties on KU's part, such as responsibility for locking and unlocking the new facilities, custodial services, insurance coverage, warranty and service calls, and similar activities and issues.

Operating & Maintenance (O&M) Training: Contractors shall coordinate with the FPD PM and FS personnel to schedule O&M training at times convenient to the daily work schedules of KU personnel and scheduled with adequate advance notice to all parties.

- ❑ O&M training shall occur only after systems have already had their start-ups completed and are functioning properly, and after the O&M manuals have been compiled, reviewed by A/E and commissioning agent, and delivered to the FPD PM.

- ❑ It is also recommended that training sessions are video recorded by the Contractor and shared in close out documents to Owner.

PROJECT CLOSEOUT

General: FPD and Campus Operations have adopted the following policies related to project closeout, the completion of all work related to a project and the re-allocation of any unspent project funding so that all activities are completed in a timely manner.

For a one year period following the Substantial Completion of each project, the following activities shall occur within the indicated time periods:

- ❑ **3 Month Deadline:** Requests for additional work or changes to the project, consistent with and necessary to support the original project scope, must be made to FPD within 3 months after the date of Substantial Completion.
- ❑ **6 Month Deadline:** All additional work or project-related expenses shall be designed, procured, contracted and either completed or underway within 6 months after the Substantial Completion date.
- ❑ **12 Month Deadline:** All work shall be completed, all invoices shall be paid and the project will be closed out, and all funding balances will be reallocated within 12 months after the date of Substantial Completion.