2 Existing Conditions

NOTE: This is a new section, with content imported from other sections of the previous version of the KU Design Standards. Key revisions or additions to the earlier standards are highlighted in an italic font.

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.

RELATED DOCUMENTS & REQUIREMENTS

Refer to the following for requirements that also apply to work of this section.

- **Division 1 - General Requirements**: Refer to sections regarding construction testing and field quality control requirements.
  - Quality Control Testing: Unless directed otherwise, the Owner shall separately contract for quality control testing during construction.
  - On smaller projects, concrete and geotechnical testing may be included as part of the Contractor’s work, if approved by DCM.
- **Division 31 – Earthwork**: Includes sections regarding site clearing, excavation and backfill, and concrete piles or drilled concrete pier foundations.
- **Division 32 – Exterior Improvements**: Includes sections regarding concrete and asphalt paving, curbs and gutters.
- **Division 33 – Utilities**: Includes sections regarding utility tunnels and site utility systems.

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. FS updates the underground utility information as work is done on those systems, and adds information from projects as they are completed.

The University also has a site plan drawing which shows most of the recent soil borings done on the KU main campus, and which includes links to the soil boring logs for each location.
These CAD files can be made available to Project Designers working on University projects. By accepting them, Project Designers acknowledge 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.

**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 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 in preparing a Request for Proposal, outlining the scope of the site survey required for each project.
  - Designers shall provide a site drawing which dimensionally locates the proposed building outline and the specific soil boring locations desired, as applicable.
  - Designers shall also review the preliminary site survey drawing from the surveying consultant and shall advise DCM when it is satisfactory for the project's needs.
- KU Surveying will provide benchmarks, with coordinate point locations and elevation information, per the University's established campus-wide coordinate system.
A qualified land surveyor or civil engineer must layout all work. KU Surveying will not layout projects for consultants or contractors.

- Survey Drawings: Comply with all applicable requirements for Site Plan Drawings, as noted below.

**SITE PLAN DRAWINGS**

All site surveys and site plan drawings shall comply with the following, unless otherwise directed or approved by the University.

- **Scale**: 1” = 20'-0” (preferred)
- Optional Scales: 1” = 30'-0”, 40'-0”, 50'-0” or 100'-0”, as approved by KU.

**Campus Coordinate System**: Show KU’s campus-wide coordinate grid on all site plans, including surveys.

- Grid Interval: 100’ in both directions, 50’ when appropriate, or as approved by KU.
- DCM Surveying will locate campus coordinate system onsite for site surveyors. DCM can provide copies of existing site plans in AutoCAD files which include this information, for designers to use during preliminary design.

**Topographic Contours**:

- Planning or Preliminary Design Drawings: Two-foot intervals, or as approved by KU.
- Surveys & Construction Drawings: One-foot intervals.

**Survey Drawings**:

- The unedited survey drawing shall be included in the contract documents, with an annotation: This sheet is included for reference and information only.
- Include the surveyor’s seal and firm information on each survey drawing, in addition to the primary project consultant’s project title block.

**Existing Underground Utility Lines**: Add the following text to the bid documents. Typically, include these notes on each site plan drawing which contains information about new &/or existing site utilities:

- Contractor shall call both Kansas One Call (1-800 DIG-SAFE; 1-800-344-7233) to request a utility locate ticket and the DCM Surveying (785-864-5620; cell: 785-393-4235) prior to beginning any excavation work, for onsite assistance in locating known underground utilities in the area of work.
- Contractor shall contact DCM Surveying (785-864-5620; cell: 785-393-4235), prior to backfilling any underground utility lines and shall allow adequate time during normal business hours for DCM Surveying personnel to survey and establish location and depths of all lines.

**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.

Selective Demolition: If the Project Designer feels that it is critical to know existing conditions or confirm the clear dimensions of chase or plenum spaces that are behind inaccessible finished walls or ceilings, the Designer shall submit a written request and drawings to the DCM Project Manager for KU assistance in conducting selective demolition and, if necessary, temporary repairs, patching or covers over those areas.

- The DCM PM shall confirm the most appropriate option for assisting with that selective demolition and repairs/covers, utilizing one of KU’s on-call construction vendors or in-house personnel.

Temporary Keys: Designers and Contractors may request keys to existing buildings or spaces that they need to access from the DCM Project Manager, who will approve and forward their request to the KU Lockshop.

- Keys will only be provided upon receipt of a $500 refundable deposit from the party requesting the keys. Payment of the deposit shall be in the form of a check made payable to "The University of Kansas". The deposit check will be returned when the loaner keys are returned to the KU Lockshop.

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 DCM regarding identification of suspect hazardous materials, such as asbestos, lead, chemical, or radioactive materials.

Refer to Appendix A2.1 – Hazardous Materials 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 to be accounted for in the overall Project Budget.

All projects shall include hazardous material surveys as part of the construction documents, unless already done, and whether test results were positive or negative.

Project Closeout Requirements: Refer to Appendix A1.2 - Front-End Spec Requirements for additional information regarding the provision of Material Safety Data Sheets and other related requirements at the time of Substantial Completion.

DEMOLITION - GENERAL GUIDELINES

Approvals: Prior to proceeding with the demolition of any buildings on KU property, Designers shall verify that all necessary approvals to do so have been secured from KU Administration and the Board of Regents.

Salvage: Designers shall confirm and clearly indicate on drawings all materials to be salvaged by the Owner, and shall require the Contractor to package and deliver them to the Owner's designated storage area. Any salvageable materials not taken by KU shall be the Contractor's property and obligation to remove from the site, and dispose at his discretion.

Particular attention shall be paid to materials that might be re-purposed by KU departments, or sold as surplus. DCM shall consult with appropriate department representatives and provide directions to the A/E and Contractor.

Each project will support reasonable, incidental costs for removing and transporting the salvaged trees or materials to designated locations approved by DCM and Campus Operations. Departments will not be allowed to create a public eyesore on KU property, and must agree upon a visually appropriate storage location and/or a reasonably short timeframe to dispose of or process them, and store them.
Trees: KU's Visual Arts department shall be given first right of refusal to salvage trees that are to be cleared from KU project sites, for either firewood for kilns or for milling for art projects.

Building Materials: KU's School of Architecture, primarily for the Studio 804 program, shall be given first right of refusal to salvage usable building materials, or excess materials leftover from construction which are KU property.

KU Surplus: Other salvageable or excess materials of value shall be offered to KU Surplus for possible sale on behalf of KU. If so, those proceeds shall be deposited into accounts as determined by Campus Operations.

STRUCTURE DEMOLITION - 024116

General: Special care and attention must be given to the demolition and removal of existing buildings and other built structures on KU property. It is the University's policy to completely remove all existing materials, structures, piping and similar facility elements that have been approved and designated for demolition or removal. All demolition shall be completed in compliance with all applicable codes and regulations.

Existing elements that are no longer functional or which have been abandoned are to be removed, and shall not be left abandoned in-place, unless there are unique conditions that make this be in KU’s best interests to do.

Project Designers shall request specific approval by the DCM and FS Directors for any existing elements, structures or utilities that are proposed to be abandoned in-place. If approved, existing utilities and underground structures shall be capped or filled. The policy extends to components within buildings, as well as to site components. Any piping, conduit or similar elements within buildings and which are no longer in use or would be considered abandoned shall be removed.

SELECTIVE DEMOLITION - 024119

General: Project Designers shall carefully assess existing site conditions, structures and utilities, and shall include appropriate design and construction document provisions to:

- clearly indicate those portions of all existing elements that shall remain undisturbed and in-place, following the selective, partial demolition of them.

- show and note exactly where existing items are to be sawcut, with consideration for the entire physical nature of each component, such as footings and below-grade components, sub-grade bearing or fill materials, depth of cuts required, etc.

- include provisions for supplemental framing or support systems that will be needed to structurally stabilize those elements that will remain in-place, such as new structural framing, lintels, shelf angles, shoring, etc.

- note adjacent structures and site components that are to remain in-place and need to be protected, and to indicate the minimum required provisions for protection.