GENERAL:
To provide minimum standards for Conveying Systems.

DESIGN GUIDELINES:

1. All elevators shall be inspected by state certified inspectors and certified by the State of Missouri before final acceptance.
2. For each installation, designer will evaluate expected usage of elevator to determine the need for vandalism-resistant construction. At MU, controls shall always be vandalism-resistant.
3. Installing vendor will be responsible for all maintenance and service during the warranty period. Response to non-emergency service calls will be within four hours of the call. Response to emergency service calls will be within one-half hour of the call. Vendor will be financially responsible for these calls except those caused by power outages, acts of God, vandalism, and false reports.
4. All hydraulic elevators will be equipped with PVC containment piping encasing the cylinder ram and casing. Containment will be sealed at the bottom. Provide a means of testing the bottom seal and a means of evacuating any material that may enter the containment. Prevent any materials from entering the top of the containment.
5. Specification should state that the inspection and testing procedure outlined in ANSI A17.1 be conducted in the presence of the contractor, architect, Owner’s representative, and elevator consultant retained by the Owner.
6. Provide a sump hole and pump in all elevator pits. Provide an electrical outlet by the sump hole. Sump pumps shall be connected to either the storm water or sanitary sewer lines. The Owner will make final determination based on ground water conditions. Sump pumps shall be equal to Stancor elevator Pit Oil-minder control system. Size of control and pump system to be determined based on ground water conditions.
7. Hydraulic piping shall not be installed underground.
8. Elevator Pit Subdrainage:
   8.1. All buildings: Install waterproofing on sides and bottom of elevator pits. Waterstop all concrete joints.
   8.2. Buildings without an underslab drainage system regardless whether footing drains are used: Install a groundwater collection sump pit in room close to elevator pit and with the bottom of the sump pit at least 2 feet below the bottom of the elevator sump pit.
   8.3. Buildings with an underslab drainage system: Install the Subdrainage at an elevation below the elevator sump pit elevation.
9. Controls
   9.1. All elevator control systems will be such that any elevator repair company is able to troubleshoot, repair, maintain, or adjust the control system. No proprietary software or repair tools will be allowed. If an elevator control system has such software or repair tools; complete codes, tools, or other necessary means for monitoring or repairing the control system will be supplied to the Owner at time of installation. If updates or changes are required, these will also be supplied to the University at no additional cost.
9.2. The car control station panel shall incorporate the fireman's phase II key switch and associated fire operation fixtures inside a locked cabinet located at the upper portion of the panel. The fireman’s keyswitch shall be of a tubular, 7 pin, style 137 construction and shall have a bitting code of 6143521. The key shall be coded “FEO-K1.” The phase II key switch, instructions, call cancelbutton, fire jewel, door open and door close buttons, and stop switch shall all be located within this locked panel. The front of the cabinet shall be engraved with the label “Firefighters Operation”. The cover to the cabinet shall be openable with the same key that is used to operate the phase II key switch. The phase II instructions shall be provided inside the cabinet. This cabinet shall meet Elevator Code requirements.

9.3. Proximity type detectors will be used on elevator doors.

9.5. Car Door Restrictors: The new door operating mechanism shall be arranged so that the car and hoistway doors cannot be opened by hand more than four inches from within the elevator car when the car is outside the unlocking zone. Design of door restricting mechanism shall permit opening of car doors from outside of the elevator car without the use of special tools. Only mechanical type door restrictors are permitted.

9.4. All elevator controls and indicators shall use a vandalism-resistant design.

10. Accessories

10.1. Two-Way Communication System: Provide a two-way communication system per the following requirements:

10.1.1. A speakerphone shall be located in each elevator's car control station and shall be of the automatic dialing type and have the capability to automatically identify its location upon receipt of the call to the party answering the call.

10.1.2. Provide an activation button for the car speakerphone, with integral legend, and identification plate adjacent to the button. Illuminate button to indicate call registration. Provide means to cause indicator light to flash when call is answered. Provide engraved legend below indicator light explaining phone instruction. The speakerphone shall meet the requirements of ADA/Accessibility guidelines.

10.2. Connect to phone line in elevator machine room. All elevator telephone equipment provided by the contractor will be compatible with the Owner's telecommunications system.

11. Finishes

11.1. Designer will evaluate expected use of the elevator when choosing floor covering. In areas with high student use, preferred covering is vinyl tile. If carpet is used, carpet tiles are preferred for ease of replacement.

11.2. All elevator lighting will be fluorescent or LED.