

SECTION 26 00 00 - ELECTRICAL

PART 1 - GENERAL

1.1 DESIGN REQUIREMENTS

A. Branch Circuit Requirements:

1. Corridor receptacle circuits shall not be combined with office or laboratory receptacle circuits.
2. Housekeeping receptacle circuits shall not be combined with office or laboratory receptacle circuits. Provide separate housekeeping receptacles in laboratory Linear Equipment Rooms, clearly identified by an Orange duplex receptacle.
3. Offices shall have individual dedicated circuits as required for specific equipment. A maximum of 6 general purpose receptacles per 20A circuit is allowed.
4. Connect Laboratory receptacles in "Multi Outlet Assembly" (MOA) to alternating circuits (i.e. A, B, C, A, B, C). A maximum of 4 receptacles per 20A circuit is allowed.
5. Provide countertop receptacles in Laboratories with maximum two (2) foot on center spacing. Each outlet within 6 feet of a sink edge or water source shall be GFCI type. Protection via feed-thru GFI or GFCI breaker is not allowed.
6. Provide general receptacles in corridors no further than 50' apart.
7. Laboratory freezers such as -80 degree Celsius or similar equipment shall be provide at minimum with a dedicated 120V, 20A single 5-20 receptacle or as required per equipment. All receptacles shall be RED and connected to an emergency circuit.
8. Provide dedicated neutral conductors for all circuits.

B. Design Charette:

1. Design team shall schedule a Design Charette with the University Project Manager and facilities group at 100% Design Development phase and 50% Construction Document phase.
2. Charette shall include the following:
 - a. Electrical power distribution, including service entrance, standby system, riser closet locations and layouts.
 - b. Lighting design, including fixture layouts, egress lighting, fixture types, samples of specialty fixtures, accessibility for fixture maintenance and lighting controls.
 - c. Fire alarm design, including occupancy type, sequence of operations and interface with security systems.

C. Surge Suppression:

1. Provide integral Transient Voltage Surge Suppressors at the following locations:
 - a. Main Service Switchboards and Switchgear
 - b. Computer Laboratory Panel Boards
 - c. Information Services Panel Boards.
 - d. NMR Panelboards

D. Exterior Electrical Equipment:

1. Provide 15' minimum clearance around generators for maintenance access.
2. Provide ventilation for primary switching and exterior substations. Maintain positive elevation for exterior electrical equipment to protect against wet weather.
3. Provide exterior connections to a portable 500 kW generator for each building not provided with an emergency generator system. Provide kirk-key interlock for operation of generator system.

E. Provide a complete Lightning Protection System for each building.

F. Demolition:

1. Demolish all devices, conduit, wiring and associated equipment which do not remain in a remodel.
2. Completely remove all conduit, wiring, boxes, hangers, etc. back to the source.

3. Abandoned devices and equipment are not acceptable.
4. Recycle or dispose of all demolished items at a licensed facility.

G. Animal Facilities:

1. Provide redundant feeders to all distribution boards serving animal care facilities.
2. Provide 100% generator backup power for all systems serving the animal care facilities.
3. Provide all power and communication devices with weather proof covers. Mount devices at 42" AFF. Mount all devices in office areas at standard height without weather proof covers.
4. Provide cord reel centered in the ceiling between each row of cages.
5. Sharing power circuits between holding rooms is not acceptable.
6. Silicone seal all conduit wall penetrations. Internally seal all conduits after wiring has been pulled.
7. Provide emergency power off (EPO) capabilities for all branch feeders serving sterilizers. Locate EPO switch near the exit door, away from sterilizer.

H. Routing of electrical busway through chemical storage rooms is not acceptable.

I. Refer to Section 01 31 00 – Project Management and Coordination for additional details.

PART 2 - PRODUCTS

A. Not Applicable

PART 3 - EXECUTION

A. Not Applicable

END OF SECTION 26 00 00