ELECTRICAL SYSTEMS ASSESSMENT
Curtis School

ELECTRICAL DISTRIBUTION SYSTEM:

?? The existing electrical service consists of an overhead primary service originating at a utility pole on Main Street. The primary service enters the building overhead.

?? The secondary service consists of a 200A, 120/240V, 1? , 3 w. The 200A switchboard consisting of a main panel manufactured by Westinghouse and does have mounting space for minimal additional breakers.

?? The facility is master metered on the secondary side. The meter is located on the building exterior.

GENERAL WIRING:

?? General building wiring consists of mainly Romex wire for power and lighting. Security wiring and other low tension wiring is not installed in conduit. Above ceiling wiring ranges from Romex, armored cable a/c and low tension wiring.

EXTERIOR LIGHTING:

?? Exterior lighting is minimal and consists of mainly (3) high pressure sodium fixtures mounted on building.

INTERIOR LIGHTING:

?? Interior lighting consists mainly of continuous 1’ x 4’ (2) lamp T8 fluorescent wraparound fixtures. Fixtures are generally locally switched. The fixtures appear to be in good condition.

?? Pendant 1’ x 4’ (2) T8 lamp fixtures in corridor.

?? Incandescent lighting is in use in the electric room and other smaller areas.

EMERGENCY LIGHTING SYSTEM:

?? The existing emergency lighting system is via emergency battery packs and LED exit lights.

?? These units appear to be newly installed and all exposed wiring is run in conduit.

FIRE ALARM SYSTEM:

?? The existing system consists of Gamewell Zans 400 System with an auto dialer to a central station, in the main entrance area.

?? Manual pull stations and horn/strobes are new and up to code.

?? A knox box (key box) was not observed.

?? Ceiling smoke and heat detectors were observed.

?? Fire alarm wiring in general appears to be in EMT (conduit) were exposed and FAMC cable were concealed.

?? The system appears to be newly installed.

SECURITY SYSTEM:

?? The security system consists mainly of motion detectors in corridors with the control panel in the electric room.

?? Magnetic door contacts exist at frequently used exterior doors.

?? The security key pad is located in the main entrance area.

GENERAL POWER:

?? Receptacles are sparingly located throughout the facility and generally flush mounted on the interior walls.

GENERAL ASSESSMENT:

?? Except for the lighting fire alarm system and emergency lighting system , most of the electrical systems are generally in poor condition. These systems, although generally functioning, have run their course and range from obsolete to approximating the end of their useful life span. We recommend the replacement of all systems.

RECOMMENDATIONS

ELECTRICAL DISTRIBUTION SYSTEM:

?? The existing service is rated at 200 amperes at 120/240V, 1? , 3 wire or 48 kva total. Based on 6,150 s.f., 7.8 watts per s.f. are available.

?? Today's school, with heavy computer usage and depending on how much space becomes air conditioned, generally would be sized for 10 watts/s.f. demand.

?? This school would probably benefit from a 120/208 V, 3? , 4 wire service.

GENERAL WIRING:

?? The existing Romex wiring would not be suitable for reuse.

?? We recommend all new wiring and conduits and complete removal of the existing system wiring. The new wiring method would be pipe and wire with metal clad, MC cable, where concealed. A system of surface raceways equal to wiremold is recommended when exposed in finished spaces.

INTERIOR LIGHTING SYSTEM:

?? The existing lighting is in fairly good condition, with the exception of any incandescent lighting still in use.

?? We recommend changing.

EXTERIOR LIGHTING SYSTEM:

?? New pole mounted cut-off luminaries of the Metal Halide source are recommended for parking areas and roadways/walkways. Building mounted perimeter fixtures should also be installed for security and illuminating entrances, etc..

EMERGENCY SYSTEM AND EXIT SIGNS:

?? The existing emergency systems are in compliance of today's codes.

SECURITY SYSTEM:

?? An addressable perimeter security system with a control panel with dialer and battery backup and keypads strategically located throughout the facility should be provided. All exterior doors should be monitored. All grade level rooms with windows and corridors would have motion sensors. System should interface with lighting system to automatically turn on corridor lights upon alarm.

SOUND/PAGING, TELEPHONE/DATA, CLOCK AND CATV:

?? Refer to technology consultants report.

CLOSED CIRCUIT TV (CCTV) SYSTEM:

?? The closed circuit TV system should consist of a matrix switcher with inputs as required. Cameras should be provided on interior at main entrances and exterior as required within weatherproof enclosures. The head end equipment should consist of monitors and digital video recorders.

GENERAL POWER:

?? A system of computer grade panelboards with surge attenuators should be provided for the technology and other sensitive systems.

?? Receptacles will be provided to adequately support a modern day school facility.