# Electrical Checklist Plan Review Checklist

## GENERAL

- ☐ Identify installations or parts of installations that are covered by the NEC
- ☐ Check listing and labeling of materials and equipment
- ☐ Identify installations and equipment requiring special approval or investigation
- ☐ Verify that interrupting ratings are adequate for the conditions of the installations
- ☐ Check for proper use and rating of splices and terminations
- ☐ Check temperature ratings of terminations
- ☐ Check adequate working clearances, dedicated spaces, and headroom around equipment
- ☐ Check that working space and dedicated space are not used for storage
- ☐ Check adequacy of entrance to and exit from working space in general and verify that spaces containing large equipment have at least two entrances/exits
- ☐ Check for identification of disconnecting means and circuit directories for panelboards, switchboards, and similar equipment

## SERVICE/FEEDERS

- ☐ Check underground conductors for adequate burial depth and protection
- ☐ Verify that wiring methods are proper for service entrance equipment
- ☐ Verify that each building or structure has only one service or, if more that one, that additional services are justified
- ☐ Verify that each service drop or lateral supplies only one set of service entrance conductors or, if more than one, that the additional sets are justified
- ☐ Check service conductors for adequate size and rating
- ☐ Verify that service equipment is identified as suitable for the use
- ☐ Verify that a service disconnecting means is provided, suitable and located outside or inside nearest the point of entrance of the service conductors
- ☐ Verify that service overcurrrent protection is provided, properly sized, and part of or adjacent to the disconnecting means.
- ☐ Verify that service disconnects are grouped together and limited to six in any one location, also feed from which transformer
- ☐ Check ratings of service disconnecting means
- ☐ Check for equipment connected to supply side of the service disconnecting means and over current protection
- ☐ Verify that ground-fault protection is supplied where required
- ☐ Verify that feeder conductors, including any neutral conductors, are adequate for the load
- ☐ Verify over current device and feeder conductor sizing for continuous and non-continuous loads
- ☐ Check wiring methods for suitability
- ☐ Check feeders with disconnecting means rated at 1000 amps or greater for ground fault protection for equipment if required
- ☐ Check that disconnects are provided at separate structures for feeders running between structure
- ☐ Verify that disconnects at separate structures are properly rated
- ☐ Check that disconnects at separate structures are properly located, grouped, and identified
- ☐ Verify that feeder tapped from transformers are properly protected by over current devices
- ☐ Verify panelboards supplying or supplied by feeders for over current protection, grounding, and proper enclosures

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- ☐ Check that wiring methods used are appropriate for conditions and occupancy
- ☐ Verify panelboards for proper over current protection
- ☐ Check individual and multioutlet branch circuits for proper ratings
- ☐ Verify conductors and over current protection for consideration of continuous and noncontinuous loads, multioutlet loads, and minimum ampacity and size

## BRANCH CIRCUITS

- ☐ Check branch circuits supplying receptacles and other outlet devices for permitted ratings of circuits and receptacles
- ☐ Verify branch circuit loads do not exceed maximum permitted loads
- ☐ Verify that branch circuits supplying motors are sized according to ART. 430 or 440
- ☐ Verify that branch circuits supplying inductive lighting loads are based on ballast ratings
- ☐ Verify that branch circuits are used to supply only permissible loads based on their ratings
- ☐ Verify for compliance with branch circuit voltage limitations
- ☐ Check that all conductors of a circuit are grouped together
- ☐ Check insulation values where conductors of different systems share common enclosures

- ☐ Check cover, fill, protection, and allowances for ground movement on underground conductors and raceways
- ☐ Check that electrical raceways and cable trays are used exclusively for electrical conductors
- ☐ Verify conductor fill in raceways
- ☐ Verify that fire ratings have been restored at electrical penetrations

- ☐ Check installations of wiring in ducts, plenums, and other air handling spaces for proper method and materials
- ☐ Verify that switches are located not over 6ft 7in (2m) high and that they can be operated from readily accessible places unless otherwise permitted
- ☐ Check that the voltage between adjacent grouped or ganged devices is not over 300 volts or that barriers are installed
- ☐ Check that switches and receptacles are used within their ratings
- ☐ Check that receptacle ratings and branch circuit ratings are compatible

## GROUNDING AND BONDING

- ☐ Determine what grounding electrodes are available on the premises
- ☐ Determine which other electrode are required or used
- ☐ Verify that the grounding electrode conductor or conductors are properly sized
- ☐ Check that water pipe is bonded
- ☐ Verify the size, type, and installation of the main bonding jumper
- ☐ Verify the size of service equipment bonding jumper
- ☐ Verify that the grounded service conductor size is adequate
- ☐ Check separately derived systems for proper grounding electrodes, grounding electrode conductors , and bonding jumpers
- ☐ Check that water pipe and structural metal building frames in the area served by each separately derived systems are bonded

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# Electrical Checklist Plan Review Checklist

- ☐ Identify equipment that is required to be grounded
- ☐ Check appropriate grounding methods for equipment fastened in place or connected by permanent wiring methods
- ☐ Check appropriate types of equipment grounding conductors
- ☐ Check separate equipment grounding conductors for proper sizing and identification
- ☐ Check proper grounding at separate buildings or structures
- ☐ Check bonding of raceways and cables sheaths containing circuits operating at over 250 volts to ground
- ☐ Check for occupancies or equipment with special grounding or bonding requirements

## MOTORS

- ☐ Verify that ampacities and sizing of components other than overload devices are based on tables values rather than nameplate values
- ☐ Verify that conductors ampacities for individual motors are at least 125 percent of table FLC
- ☐ Verify conductors supplying multiple motors for ampacities equal to at least the sum of FLC plus 125 percent of largest motor
- ☐ Verify that motor overload protection does not exceed permitted values
- ☐ Verify that short circuit and ground fault protection for motor branch circuits does not exceed permitted values
- ☐ Verify that short circuit and ground fault protection for motor feeders does not exceed permitted values
- ☐ Verify motor control circuits for proper over current protection
- ☐ Verify that motor controllers are provided for motors and that they are of the proper type and have adequate ratings, including short circuit current ratings
- ☐ Check MMC's for proper ratings, protection, workspace, and dedicated space
- ☐ Check that motor disconnects are of the proper type and rating
- ☐ Check that controller disconnects are in sight of controllers, are readily accessible, and adequate workspace
- ☐ Check that motor disconnects are in sight of motors, are readily accessible, and have adequate workspace

## AIR CONDITIONING AND REFRIGERATING EQUIPMENT

- ☐ Identify equipment subject to Article 440. Equipment containing hermetic refrigerant motor compressors
- ☐ Verify the applicable nameplate information for the equipment
- ☐ Verify that branch circuits conductor sizes are adequate on the basis of the applicable nameplate information
- ☐ Verify that conductors supplying several units are adequately sizes
- ☐ Verify that branch circuit overloads protection is provided and properly sized
- ☐ Verify that branch circuit short circuit and ground fault protection is provided and properly sized
- ☐ Verify that feeder short circuit and ground fault protection is provided and properly sized where applicable
- ☐ Verify that controllers have adequate ratings, including short circuit current rating, where they are not part of listed multimotor or combination load equipment

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# Electrical Checklist Plan Review Checklist

- ☐ Check that disconnecting means have rating adequate for the equipment
- ☐ Check that disconnecting means are within sight and readily accessible from the equipment and that working spaces are adequate
- ☐ Check that conductors, receptacles, and over current devices for room air conditioners are properly sized and that LCDI or AFCI protection is provided for cords
- ☐ Check for receptacles and adequate lighting for servicing mechanical equipment

## TRANSFORMERS

- ☐ Identify transformers that are covered by Article 450
- ☐ Verify that over current protection for transformers over 600 V is provided and properly sized
- ☐ Verify that over current protection for transformers or less 600 V is provided and properly sized
- ☐ Verify that over current protection is provided for transformers primary conductors
- ☐ Verify that over current protection is provided for transformers secondary conductors
- ☐ Check transformer installations for adequate ventilation and spacing from walls and obstructions
- ☐ Check transformers for ready access or proper installation in the open or in hollow spaces
- ☐ Check indoor dry type transformers for separation from combustibles or, based on rating, installation in fire resistant rooms or vaults
- ☐ Check outdoor dry type transformers for weatherproof enclosures
- ☐ Verify that liquid insulated transformers are installed in accordance with the requirements for location and type of insulating liquid
- ☐ Verify transformer vaults for adequate construction, access, ventilation, and drainage for foreign systems in vault

## CAPACITORS

- ☐ Check capacitors for proper enclosures and guards
- ☐ Verify that conductors are properly sized on the basis of the current rating of the capacitor(s)
- ☐ Verify that capacitors other than those connected to the load side of motor overload devices have disconnects and proper over current protection
- ☐ Verify that overload devices ratings have been corrected where capacitors are connected to the load side of motor overload devices
- ☐ Check capacitors over 600 V for proper switching, over current protection, identification, and grounding
- ☐ Check that a proper means for discharge has been provided for capacitors

## ELEVATORS, DUMBWAITERS, ESCALATORS, WHEELCHAIR LIFTS AND STAIRWAY LIGHTING

- ☐ Check required working clearances around elevator electrical equipment
- ☐ Verify conductors for proper insulation type and minimum size
- ☐ Verify ampacity of branch circuit and feeder conductors
- ☐ Check proper wiring methods
- ☐ Check the required branch circuits for car lighting, receptacles, ventilation and air conditioning
- ☐ Verify the required branch circuit for machine room, lighting and receptacle
- ☐ Verify required branch circuit for hoist way pit lighting and receptacle
- ☐ Verify for required receptacle and light switch provisions in machine rooms and pits

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# Electrical Checklist Plan Review Checklist

- ☐ Verify that only elevator associated wiring is installed in hoist ways and machine rooms
- ☐ Check elevator machine disconnecting means for type, operation, and location
- ☐ Check disconnecting means for car lighting, receptacles and ventilation
- ☐ Verify disconnecting means for car heating and air conditioning
- ☐ Verify over current protection for proper rating and coordination
- ☐ Verify that only permitted equipment is located in machine rooms
- ☐ Verify GFCI receptacles on car tops and pits and GFCI protection for receptacles in machine rooms
- ☐ Check operation of elevator machine disconnecting means where emergency or standby power is provided

## ELECTRIC VEHICLE CHARGING SYSTEMS

- ☐ Verify that all associated equipment, materials, devices and fittings are listed or labeled
- ☐ Verify the rating of branch circuit and feeder over current devices
- ☐ Check that a personal protection system has been provided
- ☐ Check the location of disconnecting means rated 60 amp or 150 v to ground
- ☐ Verify the necessity and amount of ventilation for indoor charging locations

## EMERGENCY SYSTEMS

- ☐ Determine the applicability of Article 700
- ☐ Verify equipment for suitability for approval
- ☐ Verify load calculations, that system capacity is adequate
- ☐ Verify that systems capacity is adequate for any nonemergency loads it feeds or that automatic selective load pickup and load shedding and provided
- ☐ Verify that power sources are suitable and capable of supplying the load within 10 seconds and maintaining the load for at least 1 1/2 hours
- ☐ Verify that generator, if used, have on site fuel adequate for at least 2 hours of operation and that fuel pumps, if any, are supplied by emergency power
- ☐ Verify that unit equipment, if used, is fixed in place and connected to the same circuit that supplies normal lighting to the area, ahead of any local switches
- ☐ Verify that transfer equipment is automatic, identified for emergency use, equipped with means for bypass electrically operated, and mechanically held
- ☐ Verify that transfer equipment supplies only emergency loads
- ☐ Verify that emergency wiring is entirely independent of other wiring, except as specifically permitted for common enclosures, fixtures, and boxes
- ☐ Verify that emergency feeder circuits and equipment in high rise buildings and assembly occupancies of over 1000 persons have suitable fire protection
- ☐ Verify that emergency branch circuits supply only emergency loads
- ☐ Verify that power to emergency lighting in areas served by HID fixtures is maintained until normal illumination is restored
- ☐ Verify that emergency lighting equipment is arranged so that an area will not be left in total darkness by the failure of a single lighting element
- ☐ Verify that emergency lighting is supplied automatically on failure of the normal lighting element
- ☐ Verify that all emergency systems over current devices are selectively coordinated

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# Electrical Checklist Plan Review Checklist

- ☐ Check for compliance with NCSBC, NFPA 110 and other applicable building codes

## LEGALLY REQUIRED STANDBY SYSTEMS

- ☐ Determine the applicability of Article 701
- ☐ Check equipment for suitability for approval
- ☐ Verify load calculations, that system capacity is adequate
- ☐ Verify that systems capacity is adequate for any optional standby loads it feeds or that automatic selective load pickup and load shedding and provided
- ☐ Verify that power sources are suitable and capable of supplying the load within 60 seconds and maintaining the load for at least 1 1/2 hours
- ☐ Verify that generator, if used, have on site fuel adequate for at least 2 hours of operation
- ☐ Verify that unit equipment, if used, is fixed in place and connected to the same circuit that supplies normal lighting to the area, ahead of any local switches
- ☐ Verify that transfer equipment is automatic, identified for standby use, equipped with means for bypass electrically operated, and mechanically held
- ☐ Check wiring for compliance with the general requirements of Chapters 1 through 4 of NEC (Separation of standby wiring from other general wiring is not required)
- ☐ Verify that all legally required standby system over current devices are selectively coordinated

## OPTIONAL STANDBY SYSTEMS

- ☐ Determine the applicability of Article 702
- ☐ Check equipment for suitability for approval
- ☐ Verify that transfer equipment is suitable for the intended use and capacity
- ☐ Check wiring for compliance with the general requirements of Chapters 1 through 4 of NEC (Separation of standby wiring from other general wiring is not required)

## FIRE PUMPS

- ☐ Determine the applicability of Article 695
- ☐ Check equipment for listing
- ☐ Verify that a reliable source of power is provided
- ☐ Verify that continuity of power is ensured and supervised
- ☐ Verify that transformers, other than utility or service transformers, are properly sized and protected
- ☐ Verify that supply wiring is routed outside of building or is otherwise protected against damage and is independent of other wiring
- ☐ Verify that appropriate wiring methods are used for power and control wiring
- ☐ Check equipment for appropriate locations and mounting

## CLASS I LOCATIONS

- ☐ Confirm the classification of areas, including class, division or zone and group
- ☐ Verify the suitability of the wiring methods being used
- ☐ Verify that seals are located as required
- ☐ Check material used for flexible connections, such as explosion proof flex and flexible cords for suitability

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- ☐ Check flexible cord connections and receptacles for suitability
- ☐ Verify that equipment temperature markings are not greater than the ignition temperature of the gases or vapors involved
- ☐ Verify equipment such as motors, transformers, concurrent devices, switches and controllers, luminaries, heaters, and appliances for proper ratings
- ☐ Verify for adequate grounding and bonding paths to the point of grounding for the supply disconnecting means of the building or applicable separately derived systems
- ☐ Check for multiwire branch circuits in the classified area

## CLASS II LOCATIONS

- ☐ Confirm the classification of areas, including class, division or zone and group
- ☐ Verify the suitability of the wiring methods being used
- ☐ Verify that seals are located where required, unless raceway arrangements preclude the requirement for seals
- ☐ Verify that equipment temperature markings are not greater than the ignition temperature of the dusts involved
- ☐ Verify materials used for flexible connections, including flexible cords for suitability
- ☐ Verify flexible cord connectors and receptacles for suitability
- ☐ Verify that equipment such as motors, transformers, overcurrent devices, switches and controllers, luminaries, heaters and appliances for proper ratings
- ☐ Verify adequate grounding and bonding paths to the point of grounding for the supply disconnecting means of the building or applicable separately derived system
- ☐ Check for multiwire branch circuits in the classified area

## CLASS III LOCATIONS

- ☐ Confirm the classification of area, including class and division
- ☐ Verify the suitability of the wiring methods being used
- ☐ Verify materials used for flexible connections for suitability
- ☐ Verify flexible cord connections and receptacles for suitability
- ☐ Verify that equipment operating temperatures are acceptable for the conditions
- ☐ Verify equipment such as motors, transformers, overcurrent devices, switches and controllers, luminaries, heater and appliances for proper ratings
- ☐ Verify for adequate grounding and bonding paths to the point of grounding for supply disconnecting means of the building of applicable derived system
- ☐ Verify installations of crane, hoists, and battery chargers for appropriate location and installation

## COMMERCIAL GARAGES

- ☐ Confirm the applicability of Article 511
- ☐ Identify the extent and division of the Class I areas
- ☐ Verify that suitable wiring methods are used within Class I areas
- ☐ Verify that seals are located, installed, and sealed as required in 501.15
- ☐ Verify that suitable wiring methods and equipment are used where installed above Class I areas
- ☐ Verify that receptacles have GFCI protection where required

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- ☐ Verify that battery chargers are not located in classified areas

- ☐ Verify that connectors for ELECTRIC VEHICLE CHARGING equipment are not located in Class I locations

## AIRCRAFT HANGERS

- ☐ Confirm the applicability of Article 513
- ☐ Identify the extent and division of the Class I areas
- ☐ Verify that suitable wiring methods are used within and below Class I areas
- ☐ Verify that suitable wiring methods and equipment are used in classified areas of the hangar
- ☐ Verify that seals are located in accordance with 501.15
- ☐ Verify battery chargers are not located within the Class I Locations

## MOTOR FUEL DISPENSING FACILITIES

- ☐ Confirm the applicability of Article 514
- ☐ Identify the extent and division of Class I areas
- ☐ Verify that suitable wiring methods and equipment are used within and below Class I areas
- ☐ Verify that suitable wiring methods and equipment are used above classified areas
- ☐ Verify that seals are located at dispensers and in accordance with 501.15
- ☐ Verify that circuits and emergency disconnecting means are provided and that they disconnect all circuit conductors, including any grounded conductors
- ☐ Verify that means to disconnect all voltage sources, including feedback voltages are provided

## BULK STORAGE PLANTS

- ☐ Confirm that applicability of Article 515
- ☐ Identify the extent and division of the Class I areas
- ☐ Verify that suitable wiring methods and equipment are used within and below Class I areas
- ☐ Verify that suitable wiring methods and equipment are used above Class I areas
- ☐ Verify that seals are located in accordance with 501.15
- ☐ Verify that dispensing areas comply with Article 514

## SPRAY APPLICATION, DIPPING AND COATING PROCESSES

- ☐ Confirm the applicability of Article 516
- ☐ Identify the extent and division of the Class I and Class II areas
- ☐ Identify the extent of any areas that are unclassified due to interlocks and ventilation
- ☐ Verify that suitable wiring methods and equipment are used within the Class I areas
- ☐ Verify that suitable wiring methods and equipment are used above and below classified areas
- ☐ Verify that seals are located in accordance with 501.15

## ASSEMBLY OCCUPANCIES

- ☐ Determine the applicability of Article 518
- ☐ Verify that wiring methods are suitable for the occupancy and fire rating of the area
- ☐ THEATRES AND AUDIENCE AREAS OF MOTION PICTURE STUDIOS
- ☐ Review definitions and determine the applicability of Article 520.

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- ☐ Verify that wiring methods are suitable for the occupancy and fire rating of the area
- ☐ Check for compliance with raceway fill requirements
- ☐ Check fixed stage switchboards for suitability
- ☐ Check stage switchboard feeders for type and capacity
- ☐ Check fixed stage equipment other than switchboards for suitability and compliance with specific requirements for the equipment type
- ☐ Check portable switchboards on stage for proper supply, overcurrent protection, construction, and feeders
- ☐ Check portable stage equipment other than switchboards for appropriate construction, conductors, protection, and appropriate listings
- ☐ Verify that dressing rooms are equipped with switches and pilot lights for lights and receptacles adjacent to mirrors
- ☐ Verify that all metal raceways, metal sheathed cables, and metal frames of equipment are grounded

## AGRICULTURAL BUILDINGS

- ☐ Determine the applicability of Article 547
- ☐ Check wiring methods for suitability for the occupancy and conditions for protection from physical damage
- ☐ Verify that equipment that is required to be grounded is grounded by copper equipment grounding conductors.
- ☐ Verify that any equipment grounding conductors installed underground are insulated or covered copper
- ☐ Check switches, circuit breakers, controllers and the like for enclosures suitable for the conditions
- ☐ Verify that lighting fixtures are installed to minimize the entry of dust and water and that fixtures exposed to damage are supplied with guards
- ☐ Verify that the arrangement of service equipment, distribution equipment, overcurrent protection, and grounding complies with requirements
- ☐ Verify that an equipotential plane has been provided in concrete floors of livestock containment areas and bonded to electrodes and conductive elements
- ☐ Verify that GFCI protection has been provided where required

## RECREATIONAL VEHICLE PARKS

- ☐ Review definitions and determine the applicability of Article 551 and Part VI
- ☐ Verify that all sites have 20 amp, 125 volt receptacles; at least 20% have 50 amp, 125/250 volt receptacles; and at least have 30 amp, 125 volt receptacles
- ☐ Verify that the voltages of distribution systems are appropriate for sites supplied
- ☐ Review load calculations, and check sizing of ratings of transformers, panelboards and feeders
- ☐ Verify that grounded feeder conductors have the same ampacity as ungrounded conductors.
- ☐ Verify that separate equipment grounding conductors extending from a service or secondary distribution system are run to equipment requiring grounding
- ☐ Check RV site supply equipment for proper location relative to the vehicle parking stand
- ☐ Check site supply equipment and disconnecting means for proper access, mounting height, working space and marking

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## MARINAS AND BOAT YARDS

- ☐ Determine the applicability of Article 555
- ☐ Verify feeder and service calculations for compliance with requirements
- ☐ Verify that wiring methods are suitable for wet locations and that portable power cables, where used, are extra-hard-usage type listed for wet locations and sunlight
- ☐ Verify that service equipment for floating docks or marinas is located adjacent to, but not on or in, the floating structure
- ☐ Verify that equipment requiring grounding is connected to an insulated copper equipment grounding conductor included with feeders and branch circuits
- ☐ Verify that shore power receptacles are of an appropriate grounding type and have appropriate ampere rating
- ☐ Verify that receptacles used for shore power are supplied by individual branch circuits with voltage and current ratings corresponding to the receptacles
- ☐ Verify that general use receptacles not used for shore power are GFCI protected
- ☐ Check wiring in motor fuel dispensing stations for compliance with Article 514

## PERMANENTLY INSTALLED SWIMMING POOLS

- ☐ Review definitions and determine the applicability of Article 680
- ☐ Check overhead conductors clearances for conformance with requirements
- ☐ Check underground wiring for suitability, clearances from pool, and minimum cover requirements
- ☐ Verify that water, metal parts of pool and other nearby electrical equipment and metal parts are bonded to an appropriate equipotential bonding grid, using appropriate methods
- ☐ Verify that general user receptacles are not located within 6ft (1.83m) of pool walls and all receptacles within 20ft (6m) of pool walls are GFCI protected
- ☐ Verify that any receptacles closer than 6ft (1.83m) of pool walls are used for equipment, are single, grounded, locking type, and are GFCI protected
- ☐ Verify that luminaries and ceiling fans are located so that required clearances are maintained
- ☐ Verify that luminaries and ceiling fans are GFCI protected where GFCI is required
- ☐ Verify that switches are located at least 5ft (1.5m) from pool walls or separated from pool by a permanent barrier
- ☐ Verify that metal parts of pools, water and nearby equipment and metal parts are bonded to an appropriate equipotential bonding grid, using appropriate methods
- ☐ Verify that all equipment required to be grounded is grounded by insulated copper equipment grounding conductor of the proper size
- ☐ Verify that a disconnecting means is provided accessible, located within sight of pool equipment, and not located within 5ft (1.5m) of pool walls

## SPAS AND HOT TUBS: ALL INSTALLATIONS

- ☐ Check spa and hot tub equipment for suitability for approval
- ☐ Review the checklist for permanent pools for compliance with the applicable provisions of part I or II of Article 680 (modified for indoor instalations)
- ☐ Verify outlets supplying a self contained spa or hot tub or a packaged spa or hot tub assembly for integal or separately provided GFCI proction
- ☐ Verify compliance with requirements for disconnecting means

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# Electrical Checklist Plan Review Checklist

## SPAS AND HOT TUBS: INDOOR INSTALLATIONS ONLY

- ☐ Verify that at least one GFCI protected receptacle on a general purpose branch circuit is located between 5ft and 10ft (1.5m and 3.0m) of the walls of the spa or hot tub
- ☐ Verify that any receptacles used to supply power to a spa or hot tub are GFCI proctected
- ☐ Verify that luminaries and paddle fans are spaced as required from spa or hot tub walls and above maximum water level and that GFCI proctection is provided, as required
- ☐ Verify that wall switchesnare located at least 5ft (1.5m) from the inside walls of the spa or hot tub
- ☐ Verify that all parts are required to be grounded or bonded are grounded or bonded using appropriate methods

## FOUNTAINS

- ☐ Review definitions and determine the applicability of Part V of Article 680
- ☐ Verify fountain equipment for suitability for approval
- ☐ Verify that fountain equipment has GFCI protection unless supplied through a suitable transformer at 15 volts or less
- ☐ Verify that all parts that are required to be grounded or bonded are grounded or bonded using appropriate methods
- ☐ Verify that signs installed in fountains are GFCI protected, located more than 5ft (1.5m) from fountain walls, not portable, and otherwise comply with Articals 600 and 250

## THERAPEUTIC POOLS AND TUBS

- ☐ Verify that outlets for therapeutic tubs are GFCI protected (separate or integral) unless supplying field assembled tubs rated three phase or over 250 volts
- ☐ Verify that all parts of mtherapeutic tubs that are required to be grounded or bonded are grounded or bonded using appropriate methods
- ☐ Verify that all receptacles within 5ft (1.5m) of a therapeutic tub are GFCI proctected
- ☐ Verify that all luminaries used in areas of therapeutic tubs are of the totally enclosed type

## HYDRO MASSAGE BATHTUBS

- ☐ Verify hydro massage bathtub equipment for GFCI protection
- ☐ Verify that metal parts required to be bonded are connected together with a minimum 8 AWG solid copper bonding jumper

## HEALTH CARE FACILITIES

- ☐ Review definitions and determine the proper classification of the areas
- ☐ Verify that insulated copper conductors in metal raceways or equivalent cables are used to provide equipment grounding for branch circuits in patient care areas
- ☐ Check for bonding between normal and essential branch circuit panelboards serving any single patient care area
- ☐ Verify that each general care area patient bed location has at least two (2) branch circuits, one from the normal system and one from the emergency system
- ☐ Verify that each general care area patient bed location is provided with a minimum of four (4) receptacles
- ☐ Check for temper resistant receptacles or covers in the pediatric location of general care areas
- ☐ Verify that each critical care area patient bed location has at least two (2) branch circuits, one from the normal system and one from the emergency system

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- ☐ Verify that each critical care area patient bed location has at least one receptacle supplied by an emergency circuit dedicated to that bed location
- ☐ Verify that each critical care area patient bed location has at least six (6) receptacles
- ☐ Verify that at least one receptacle in a critical care area bed location is connected to a branch circuit from a separate normal or emergency source
- ☐ Verify that all patient bed location receptacles are hospital grade and that all emergency receptacles are identified
- ☐ Check wet locations for protection by GFCI devices or, where interruption cannot be tolerated, use of isolated power systems

## THESE NEXT CHECK LIST ITEMS APPLY TO HOSPITALS & AMBULATORY CARE FACILITIES WITH CRITICAL CARE AREAS

- ☐ Review the essential electrical systems, and verify that emergency and equipment systems are provided
- ☐ Review the emergency system, and verify that life safety and critical branches are provided
- ☐ Verify load calculations for the essential system, and verify that capacity of power sources and feeders is adequate
- ☐ Verify that the emergency system wiring (life safety and critical branches) is independent of, and separated from, other wiring and equipment
- ☐ Verify that mechanical protection for emergency system wiring is provided by non-flexible metallic raceways or Type MI cable
- ☐ Verify that only those loads that are intended for connection to the life safety branch are supplied by the life safety branch
- ☐ Determine whether hazardous (classified) anesthetizing locations exist in the facility
- ☐ Verify that appropriate wiring methods and equipment are used in and above hazardous (classified) anesthetizing locations
- ☐ Verify that two (2) independent sources are provided for essential electrical system and that the alternative source is suitable
- ☐ Verify that power circuits in flammable anesthetizing locations are isolated from other power distribution systems
- ☐ Verify that one or more battery powered emergency lighting units are provided in anesthetizing locations
- ☐ Verify that supply circuits to X-ray equipment are adequate and supplied through appropriate wiring methods and connections
- ☐ Check location, capacity, and type of disconnecting means of X-ray equipment
- ☐ Verify that supply circuits to X-ray equipment meet minimum ampacity and overcurrent rating requirements
- ☐ Verify that enclosures for high voltage parts and non-current carrying metal parts of X-ray equipment are grounded
- ☐ Verify that low voltage systems in patient care areas have insulation and isolation equivalent to power distributions systems
- ☐ Check isolated power systems (where installed) for proper installation, features, and conductor identification
- ☐ Verify second level of GFPE where applicable in hospital and other health care facilities

## THESE NEXT CHECK LIST ITEMS APPLY ONLY TO NURSING HOMES AND LIMITED CARE

*Note: This checklist provides a guideline of topics that may be reviewed during plan review. Plan review is not limited to the topics on this list.*

# Electrical Checklist Plan Review Checklist

## FACILITIES WHERE LIFE SUPPORT EQUIPMENT OR GENERAL ANESTHESIA IS USED

- ☐ Verify the essential electrical system, and verify that life safety and critical branches are provided
- ☐ Verify load calculations for the essential system, and verify that capacity of power sources and feeders is adequate
- ☐ Verify that the emergency system wiring (life safety and critical branches) is independent of, and separated from, other wiring and equipment (Separation of the critical branch is not required)
- ☐ Verify that only those loads that are intended for connection to the life safety branch are supplied by the life safety branch
- ☐ Verify that two (2) independent sources are provided for essential electrical system and that the alternative source is suitable
- ☐

THESE NEXT CHECK LIST ITEMS APPLY ONLY TO OTHER HEALTH CARE FACILITIES, INCLUDING CLINICS, MEDICAL

- ☐ AND DENTAL OFFICES, AND AMBULATORY HEALTH CARE FACILITIES WITHOUT CRITICAL CARE AREAS
- ☐ Verify that an essential electrical system is provided where required
- ☐ Verify that an alternative power source is provided that is adequate and designed specifically for the purpose
- ☐ Determine whether hazardous (classified) anesthetizing locations exist in the facility
- ☐ Verify that appropriate wiring methods and equipment are used in and above hazardous (classified) anesthetizing locations
- ☐ Verify that power circuits in flammable anesthetizing locations are isolated from other power distribution systems
- ☐ Verify that one or more battery powered emergency lighting units are provided in anesthetizing locations
- ☐ Verify that supply circuits to X-ray equipment are adequate and supplied through appropriate wiring methods and connections
- ☐ Check location, capacity, and type of disconnecting means of X-ray equipment
- ☐ Verify that supply circuits to X-ray equipment meet minimum ampacity and overcurrent rating requirements
- ☐ Verify that enclosures for high voltage parts and non-current carrying metal parts of X-ray equipment are grounded
- ☐ Verify that low voltage systems in patient care areas have insulation and isolation equivalent to power distributions systems
- ☐ Check isolated power systems (where installed) for proper installation, features, and conductor identification
- ☐ Verify second level of GFPE where applicable in hospital and other health care facilities

*Note: This checklist provides a guideline of topics that may be reviewed during plan review. Plan review is not limited to the topics on this list.*