# **ELECTRICAL SPECIFICATIONS**

## <u> PART I — GENERAL</u>

# A. CONDITIONS

. PROVIDE FIRE STOP ON ALL PIPING THAT PENETRATES RATED WALLS. METHOD OF FIRE STOP SHALL MEET WALL RATING. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION OF FIRE RATED WALLS. THIS CONTRACTOR SHALL PROVIDE FIRE RATED ENCLOSURES AROUND ALL ROUGH-IN BOXES, PANELS, ETC. THAT ARE LOCATED IN FIRE RATED WALLS AND SHALL FIRE CAULK ALL OPENINGS IN RATED ASSEMBLIES.

# C. CODES, REGULATIONS, AND STANDARDS

THE INSTALLATION SHALL COMPLY WITH APPLICABLE LOCAL AND STATE CODES AND ORDINANCES, WITH THE REGULATIONS OF THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE AND WITH THE REQUIREMENTS OF THE POWER, TELEPHONE, AND CATV COMPANIES FURNISHING SERVICES TO THIS

INSTALLATION. THE LATEST EDITIONS OF THE FOLLOWING INDUSTRY STANDARDS, SPECIFICATIONS, AND CODES ARE

- MINIMUM REQUIREMENTS: A. THE NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION STANDARDS.
- B. THE NATIONAL ELECTRICAL CODE, INCLUDING LOCAL AMENDMENTS.
- C. UNDERWRITER LABORATORIES INCORPORATED STANDARDS.
- D. AMERICAN NATIONAL STANDARDS INSTITUTE. E. INTERNATIONAL BUILDING CODE.

THE DRAWINGS INDICATE THE GENERAL ARRANGEMENT AND LOCATIONS OF THE ELECTRICAL WORK DATA PRESENTED ON THESE DRAWINGS ARE AS ACCURATE AS PLANNING CAN DETERMINE, BUT FIELD VERIFICATION OF ALL DIMENSIONS, LOCATIONS, LEVELS, ETC., TO SUIT FIELD CONDITIONS IS REQUIRED. REVIEW ALL ARCHITECTURAL, STRUCTURAL, AND MECHANICAL DRAWINGS AND ADJUST ALL WORK TO MEET THE REQUIREMENTS OF CONDITIONS SHOWN. THE ARCHITECTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER ALL OTHER DRAWINGS. DISCREPANCIES BETWEEN DIFFERENT PLANS, OR BETWEEN DRAWINGS AND SPECIFICATIONS, OR REGULATIONS AND CODES GOVERNING THE INSTALLATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IN WRITING BEFORE THE DATE OF BID OPENING. IF DISCREPANCIES ARE NOT REPORTED, THE CONTRACTOR SHALL BID THE GREATER QUANTITY OR BETTER QUALITY, AND APPROPRIATE ADJUSTMENTS WILL BE MADE AFTER CONTRACT AWARD. CONTRACTOR SHALL BE RESPONSIBLE TO FIELD MEASURE AND CONFIRM MOUNTING HEIGHTS AND LOCATION OF ELECTRICAL EQUIPMENT WITH RESPECT TO COUNTERS, RADIATION, ETC. DO NOT SCALE DISTANCES OFF THE ELECTRICAL DRAWINGS, USE ACTUAL BUILDING DIMENSIONS.

### COOPERATION WITH OTHER CONTRACTORS COORDINATE HVAC AND PLUMBING EQUIPMENT CONNECTION REQUIREMENTS WITH HVAC AND PLUMBING CONTRACTORS.

## PART II - PRODUCTS AND EXECUTION

ALL MATERIALS SHALL BE NEW AND OF QUALITY AS SPECIFIED ON THE PLANS OR SPECIFICATIONS AND MUST CARRY THE UNDERWRITER'S LABORATORIES APPROVAL COVERING THE PURPOSE FOR WHICH THEY ARE USED, IN ADDITION TO MEETING ALL REQUIREMENTS OF THE CURRENT APPLICABLE CODES AND REGULATIONS.

### CONDUCTOR SIZES SHOWN ON THE DRAWINGS ARE BASED ON COPPER WIRE. UNLESS OTHERWISE SPECIFIED, ALL WIRE SHALL BE TYPE XHHW OR SE FOR FEEDERS OR BRANCH CIRCUITS LARGER THAN 4 AWG, TYPE THHN/THWN INSULATION FOR FEEDERS AND BRANCH CIRCUITS 4 AWG AND SMALLER. ALL BRANCH CIRCUIT WIRING SHALL BE COPPER.

2. MC CABLE WITH COPPER CONDUCTORS AND GROUND WIRE MAY BE USED WHERE PERMITTED.

ALL WIRING SHALL BE INSTALLED IN LISTED METALLIC CONDUIT EXCEPT AS PERMITTED IN OTHER SECTIONS. RGS, WITH A 20 MIL PVC COATING WILL BE USED WHEN IN CONTACT WITH EARTH. IMC MAY BE USED IN INDOOR LOCATIONS NOT IN CONTACT WITH THE EARTH. EMT MAY BE USED IN INDOOR LOCATIONS NOT IN CONTACT WITH EARTH, NOT IN CONCRETE SLABS OR WALLS AND NOT SUBJECT TO DAMAGE. PVC MAY BE USED IN OR BELOW CONCRETE AND DIRECT BURIED IN EARTH. FLEXIBLE STEEL CONDUIT SHALL BE USED FOR INDOOR FINAL CONNECTIONS TO EQUIPMENT IN LENGTHS NOT TO EXCEED 72". LIQUID-TIGHT FLEXIBLE STEEL CONDUIT SHALL BE FOR OUTDOOR FINAL CONNECTIONS TO EQUIPMENT NOT TO EXCEED 48".

FITTINGS AND CONDUIT BODIES SHALL BE STEEL. DIECAST FITTINGS ARE NOT ACCEPTABLE. CONDUIT SIZES SHALL BE AS REQUIRED BY CODE AND AS INDICATED OR SPECIFIED.

- ALL EMPTY CONDUIT SYSTEMS SHALL HAVE A 200 LB. TEST NYLON PULL STRING TO FACILITATE
- INSTALLATION OF FUTURE WIRE. WIRING, CONDUITS, AND OUTLETS SHALL BE CONCEALED WITH THE BUILDING STRUCTURE, EXCEPT THAT
- CERTAIN MOTOR AND LIGHTING FEEDER CONDUITS MAY BE RUN EXPOSED IN CERTAIN AREAS AS INDICATED ON THE DRAWINGS.
- CONDUIT PENETRATION THROUGH ROOF SHALL HAVE ROOF FLASHING WITH CAULK TYPE COUNTER FLASHING SLEEVE. INSTALLATION SHALL BE WATERTIGHT.
- 7. CONDUITS SHALL BE ROUTED PARALLEL AND PERPENDICULAR TO THE STRUCTURE.

# **G WIRING DEVICES**

- WALL SWITCHES SHALL BE SPECIFICATION GRADE AC SILENT TYPE SWITCHES, 20A 120/277 VOLT. RECEPTACLES SHALL BE SPECIFICATION GRADE, DUPLEX TYPE. NEMA5-20R, 20 AMPERE, 120VOLT GROUNDED TYPE. SPECIAL APPLICATION RECEPTACLES SHALL BE INDICATED ON PLANS. MOUNT WITH
- 3. DEVICE PLATES SHALL BE EQUAL TO SIERRA SMOOTH-LINE PLASTIC WALL PLATES. COLOR SHALL BE
- WHITE, UNLESS OTHERWISE NOTED. 4. RECEPTACLES IN OUTDOOR AND WET LOCATIONS SHALL BE INSTALLED WITH A HINGED OUTLET COVER/ENCLOSURE CLEARLY MARKED AND U.L. LISTED SUITABLE FOR WET LOCATIONS WHILE IN USE,

GUARANTEE ALL MATERIAL FURNISHED AND ALL WORKMANSHIP PERFORMED FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE OF WORK. ANY DEFECTS DEVELOPING WITHIN THIS PERIOD, TRACEABLE TO MATERIAL FURNISHED AS A PART OF THIS SECTION OR WORKMANSHIP PERFORMED HEREUNDER, SHALL BE MADE GOOD AT NO EXPENSE TO THE OWNER.

# SYMBOLS LEGEND

NOTE: THIS IS A MASTER LEGEND AND NOT ALL SYMBOLS, ETC, ARE NECESSARILY USED ON THE DRAWINGS.

# POWER DISTRIBUTION

120/208V, 3 PHASE, 4 WIRE PANELBOARD, UNO

# POWER DEVICES

GFI DUPLEX RECEPTACLE WITH WEATHERPROOF COVERPLATE

☐☐☐ DISCONNECT SWITCH — SIZE AND TYPE NOTED

# **AUXILIARY SYSTEMS**



MECHANICAL EQUIP. CONNECTION, SEE SCHED. ON MECH. PLAN

———— CONDUIT RUN CONCEALED IN WALL OR ABOVE CEILING

— — — CONDUIT RUN BELOW FLOOR OR GRADE

HOMERUN TO PANELBOARD, INFORMATION AT ARROWS ARE CIRCUIT NUMBERS AND PANELBOARD FOR TERMINATION. REFER TO ASSOCIATED NOTE FOR BRANCH CIRCUIT CONDUCTOR SIZES.

S INDICATES 1/2" CONDUIT CONCEALED IN CEILING OR WALL WITH (3) CONDUCTORS. (1) PHASE, (1) NEUTRAL AND (1) GROUND WIRE. ALL ARE #12 AWG UNLESS NOTED OTHERWISE.

(E) OR ETR: DENOTES EXISTING ITEM/EQUIPMENT TO REMAIN



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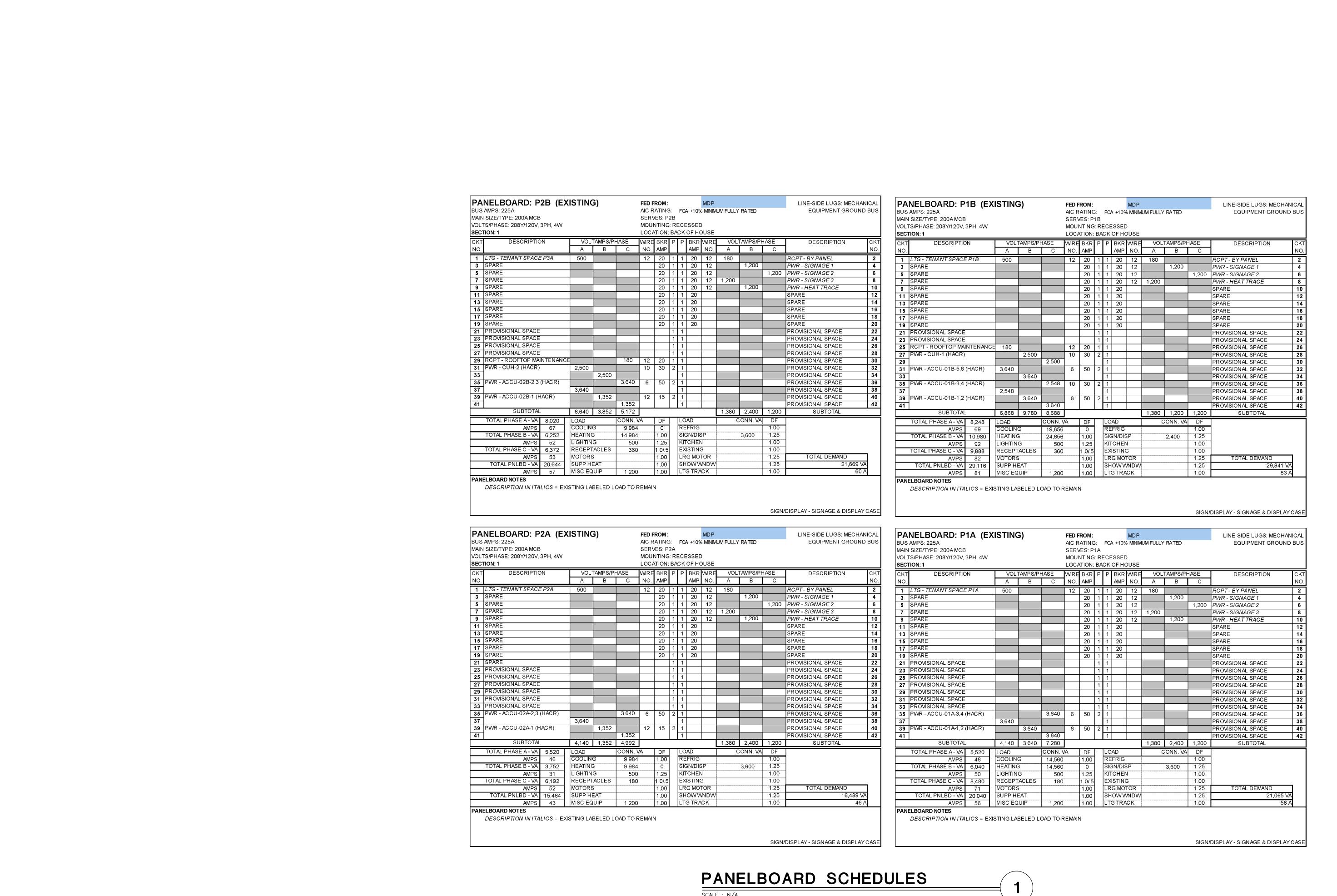
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