

ELECTRICAL SPECIFICATIONS

DIVISION 16 - ELECTRICAL SPECIFICATIONS

PART I. GENERAL PROVISIONS

1. SCOPE: PROVIDE ALL LABOR, MATERIAL, AND EQUIPMENT IN ACCORDANCE WITH THESE SPECIFICATIONS, AND THE ACCOMPANYING DRAWINGS TO PROVIDE A COMPLETE AND PROPERLY OPERATING ELECTRICAL SYSTEM FOR THE BUILDING.

A. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL OF THE FOLLOWING MATERIAL AND EQUIPMENTS UNDER THIS DIVISION OF THE SPECIFICATIONS, UNLESS NOTED OTHERWISE: PANELBOARDS, LIGHTING FIXTURES, LAMPS, RACEWAYS, 600 VOLT WIRE AND CABLE, WIRING DEVICES, DEVICE PLATES, DEVICE, PULL, AND JUNCTION BOXES, SAFETY SWITCHES, MOTOR STARTERS, LIGHTING CONTROLS, CIRCUIT BREAKERS, FUSES, TIME CLOCKS, EQUIPMENT IDENTIFICATION (NAMEPLATES AND DIRECTORIES), WIRE AND CABLE TERMINATIONS, CONNECTIONS TO INDIVIDUAL UNITS OF EQUIPMENT FOR THE WALK-IN FREEZERS AND COOLERS, AND TEMPORARY POWER.

B. THE FOLLOWING MATERIAL AND EQUIPMENT SHALL BE FURNISHED AND/OR INSTALLED BY OTHERS, OR UNDER OTHER DIVISIONS OF THE SPECIFICATIONS, UNLESS NOTED OTHERWISE: LOW VOLTAGE (24 VOLT) WIRE AND CABLE, COMMUNICATION DEVICES, SECURITY EQUIPMENT, POINT OF SALE (POS) EQUIPMENT, SIGNAGE, CONCRETE BASES FOR SITE LIGHTING POLES.

C. THE FOLLOWING MATERIAL AND EQUIPMENT WILL BE FURNISHED BY OTHERS, OR UNDER OTHER DIVISIONS OF THE SPECIFICATIONS, AND INSTALLED BY THE CONTRACTOR, UNLESS NOTED OTHERWISE: SITE LIGHTING FIXTURES AND POLES.

2. GENERAL REQUIREMENTS: ALL WORK SHALL BE PERFORMED BY SKILLED LICENSED ELECTRICIANS IN ACCORDANCE WITH THE BEST PRACTICES OF THE TRADE, MEETING THE REQUIREMENTS OF THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE, APPLICABLE FEDERAL, STATE AND LOCAL CODES, AND THE REQUIREMENTS OF THE ELECTRICAL UTILITY COMPANY FURNISHING THE SERVICES. ALL NECESSARY CONSTRUCTION PERMITS AND CERTIFICATES OF INSPECTION SHALL BE PURCHASED AND OBTAINED UNDER THIS CONTRACT.

A. COORDINATION: ALL OUTLETS MUST BE ACCURATELY LOCATED, PARTICULARLY APPLIANCE OUTLETS WHICH SHALL BE LOCATED FROM THE DIMENSIONS GIVEN ON THE DRAWING AND FIELD VERIFIED. REVIEW THE ARCHITECTURAL, PLUMBING AND HEATING AND VENTILATING PLANS IN ORDER TO COORDINATE THIS WORK WITH OTHER TRADES, AND COOPERATE WITH THEM IN THE ENTIRE INSTALLATION.

3. SERVICE VOLTAGE: THESE DRAWINGS ARE FOR A METERED UNDERGROUND BUILDING SERVICE OF 120/208 VOLT, THREE PHASE, FOUR WIRE, 60 HERTZ. ALL KITCHEN AND AIR CONDITIONING EQUIPMENT HAS BEEN DESIGNED AND PURCHASED FOR USE ON THIS ELECTRICAL SYSTEM. THE CONTRACTOR SHALL CONTACT THE ELECTRICAL UTILITY AND VERIFY ALL OF THE ABOVE SERVICE CHARACTERISTICS, AND THE AVAILABLE FAULT CURRENT.

4. SERVICE EQUIPMENT: THE SERVICE SHALL BE LOCATED AS SHOWN ON THE SITE PLAN, OR AS INDICATED IN THE INSTRUCTIONS TO BIDDERS. UTILITY POLES, PADS FOR UTILITY TRANSFORMERS, CURRENT TRANSFORMER ENCLOSURES, METERING EQUIPMENT, SERVICE MASTS, AND OTHER RELATED MATERIALS AND EQUIPMENT SHALL BE APPROVED, FURNISHED, AND INSTALLED AS REQUIRED. INCLUDE THE COST OF ALL THE ABOVE ITEMS, SERVICE CONNECTIONS, AND METER CHARGES IN THE BASE BID. MAIN SERVICE SWITCHES AND CURRENT TRANSFORMER CABINETS SHALL BE INCLUDED IN THE BASE BID. UNLESS NOTED OTHERWISE, A MAIN SERVICE SWITCH WITH CURRENT LIMITING FUSES MAY BE USED WHEN THE AVAILABLE FAULT CURRENT (AFC) IS EXCESSIVE, IN ORDER TO USE STOCK PANELBOARDS, WITH 10K OR 22K AFC RATINGS.

PART II. MATERIALS

1. MATERIALS: ALL MATERIALS SHALL BE NEW AND OF THE QUALITY INDICATED BY THE SPECIFIED BRAND NAMES. SUBSTITUTIONS OF MATERIAL OF EQUAL QUALITY BY OTHER MAJOR MANUFACTURERS OF COMMERCIAL EQUIPMENT MAY BE ACCEPTABLE, PROVIDED A LIST OF SUCH SUBSTITUTIONS IS APPROVED IN WRITING BY THE POPEYES DESIGN MANAGER, AND THE POPEYES CONSTRUCTION MANAGER. THE CONTRACTOR SHALL SUBMIT A SUBSTITUTION LIST IN TRIPPLICATE AT LEAST FIVE DAYS PRIOR TO THE BID OPENING.

MOUNTING HEIGHTS

(DISTANCE FROM FINISHED FLOOR TO CENTER OF DEVICE UNLESS OTHERWISE NOTED)

RECEPTACLE	18" AFF. (UNLESS OTHERWISE NOTED)
GENERAL	48" AFF. (UNLESS OTHERWISE NOTED)
ABOVE COUNTER TOP	48" AFF. (UNLESS OTHERWISE NOTED)
LIGHT SWITCH	48" AFF. (UNLESS OTHERWISE NOTED)
TELECOMMUNICATIONS	
GENERAL	18" AFF. (UNLESS OTHERWISE NOTED)
ABOVE COUNTER TOP	48" AFF. (UNLESS OTHERWISE NOTED)
WALL	48" AFF.
TELEVISION	84" AFF. (UNLESS OTHERWISE NOTED)
FIRE ALARM	
PULL STATION	48" AFF.
AUDIBLE/STROBE COMBINATION OR STROBE DEVICE ONLY	THE BOTTOM OF THE APPLIANCE SHALL BE: 80" ABOVE THE FINISHED FLOOR.

A. PANELBOARDS: PANELBOARDS SHALL BE BOLT-IN CIRCUIT BREAKER TYPE, AS SHOWN ON THE PLANS. PANELS SHALL BE OF PANELBOARD CONSTRUCTION, 20 INCHES WIDE (MINIMUM), 5-3/4" TO 6-1/2" DEEP, UL LISTED, AND MEET UL 67, UL 50, AND FEDERAL SPECIFICATION W-P-1181B AS TYPE 1, CLASS 1, WITH BOLT-ON CIRCUIT BREAKERS, COPPER BUS BARS, NEUTRAL BUS, GROUND BUS, AND A HINGED LOCKABLE DOOR. CABINETS SHALL BE CODE GAUGE, GALVANIZED STEEL, MOUNTED AS SHOWN. PROVIDE TYPEWRITTEN CIRCUIT DIRECTORIES WITH CLEAR PLASTIC PROTECTORS IN ALL PANELS. ALL WIRES SHALL BE TAGGED WITH PANEL AND CIRCUIT NUMBERS. PANEL "MP" SHALL BE UL LISTED AND LABELED AS SUITABLE FOR USE AS SERVICE ENTRANCE EQUIPMENT. APPROVED MANUFACTURERS OF PANELS ARE SQUARE D/TELEMECHANIQUE, CUTLER-HAMMER, GENERAL ELECTRIC, WESTINGHOUSE, AND SIEMENS (I-T-E).

B. LIGHTING FIXTURES: LIGHTING SHALL BE PURCHASED FROM THE POPEYES APPROVED NATIONAL ACCOUNT PARTNER - HERMITAGE LIGHTING. CONTACT HERMITAGE LIGHTING FOR SPECIAL PACKAGE PRICING. IF PRODUCT IS NOT PURCHASED FROM HERMITAGE LIGHTING, THEN THE PRODUCT IS SUBJECT TO POSSIBLE REMOVAL BY CONTRACTOR AND CORRECT PRODUCT INSTALLED AT THE CONTRACTOR'S EXPENSE, AND ALL SUBSTITUTIONS NEED TO BE APPROVED IN WRITING BY A PLK DESIGN MANAGER.

C. WIRING DEVICES: ALL WIRING DEVICES SHALL BE UL LISTED. COMMERCIAL SPECIFICATION GRADE. SWITCHES SHALL BE RATED 20 AMPS AT 120/277 VOLTS AC. STANDARD RECEPTACLES SHALL BE 20 AMP, DUPLEX, GROUNDING TYPE, IN NEMA CONFIGURATIONS, UNLESS NOTED OTHERWISE. SWITCHES IN THE SAME LOCATION SHALL BE GANGED BEHIND A SINGLE PLATE. DEVICE PLATES IN THE KITCHEN AREA SHALL BE METAL. ALUMINUM OR STAINLESS STEEL. DEVICE PLATES IN THE DINING AREA SHALL BE TAMPER RESISTANT AND THERMOPLASTIC PLASTIC (NYLON) OR METAL. COLOR AS APPROVED BY POPEYES DESIGN. APPROVED MANUFACTURERS OF SWITCHES AND RECEPTACLES ARE HUBBELL, ARROW HART, BRYANT, LEVITON, PASS & SEYMOUR, GENERAL ELECTRIC, SLATER, OR EQUAL.

- SWITCHES:
 - SINGLE POLE: HUBBELL HBL12214, OR EQUAL
 - THREE WAY: HUBBELL HBL12234, OR EQUAL
- RECEPTACLES:
 - NEMA 5-20R: HUBBELL 53621, OR EQUAL
 - NEMA 5-20R-1: HUBBELL 1G-5362, OR EQUAL
 - NEMA 5-20R-1G-SS: HUBBELL 1G-5362, OREQUAL
 - NEMA 5-20R-GFCI: HUBBELL GF53621, OR EQUAL
 - NEMA 6-20R: HUBBELL 54621, OR EQUAL
 - OTHERS: COMMERCIAL OR INDUSTRIAL GRADE, UL LISTED, FEDERAL SPECIFICATION WC596F.

3. WP PLATES: WEATHERPROOF COVERS ARE PERMITTED UNDER NEC ARTICLE 406.8(B)(1).

4. NATIONAL ACCOUNT: REFER TO THE NATIONAL ACCOUNT DIRECTORY. THE FOLLOWING EQUIPMENT MAY BE AVAILABLE: MAIN SERVICE PANELBOARD WITH BREAKERS INSTALLED, LIGHTING AND DISTRIBUTION PANELBOARDS WITH BREAKERS INSTALLED, ROOF-TOP DISCONNECTS FOR HVAC UNITS AND KITCHEN HOOD FANS, LIGHTING CONTACTOR PANEL, AND SHUNT TRIP SYSTEMS (IF REQUIRED PER LOCAL CODE).

5. EXCAVATIONS: PERFORM ALL NECESSARY EXCAVATING AND BACK-FILLING REQUIRED FOR THIS INSTALLATION. ALL EXCAVATIONS BELOW THE BOTTOM OF FOOTINGS SHALL BE BACKFILLED WITH 3000 PSI CONCRETE. WHERE DITCHES ARE CUT FOR OUTSIDE RUNS OF CONDUIT, REPLACE AND TAMP THE EARTH IN 12" LAYERS AND LEAVE THE GROUND LEVEL AND EQUAL TO ITS ORIGINAL CONDITION.

6. CONDUIT AND FITTINGS: CONDUIT PERMITTED: (A) RIGID GALVANIZED STEEL (RGS), (B) EMT, (C) PVC, AND (D) ENT. TYPES UTILIZED SHALL BE RUN ONLY AS PERMITTED PER CODE. ALL WIRING SHALL BE RUN IN CONDUIT. CONDUIT PLACED IN CONCRETE OR RUN UNDERGROUND SHALL BE RIGID GALVANIZED CONDUIT OR PVC. IF PVC IS USED, ALL ELBOWS, SWEEPS AND STUB-UPS SHALL BE RGS. CONDUIT EXPOSED OR RUN IN MASONRY WALLS ABOVE GRADE MAY BE PVC OR EMT WHERE ALLOWED BY LOCAL CODES. IF EMT IS NOT PERMITTED, RIGID SCREWED GALVANIZED PIPE CONDUIT AND FITTINGS SHALL BE USED. IF SHIELDED CABLE IS REQUIRED FOR CONTROL CIRCUITRY, IT SHALL BE TAN, GREY OR ANY NEUTRAL COLOR OTHER THAN THAT AS SPECIFIED FOR POWER DISTRIBUTION. NO CONDUIT SMALLER THAN 3/4" SHALL BE INSTALLED EXCEPT FOR TWO-WIRE SWITCH LEGS. ALL CONDUIT SHALL BE FREE FROM DENTS AND KINKS. CONDUIT SHUNT ELECTRICAL TRIPS CONTINUOUS FROM THE SERVICE EQUIPMENT. ALL TRIPS, AND SHALL BE SECURED TO METAL BOXES WITH ONE LOCK NUT OUTSIDE, AND ONE INSIDE THE BOX WITH A RIGID FORCED BAKELITE BUSHING. IF PVC OR ENT IS USED, THEN APPROPRIATE SIZED, ELECTRICAL GROUND BOND WIRES SHALL BE RUN FROM THE SERVICE EQUIPMENT TO ALL OUTLETS, AND SHALL BE SECURED TO EACH WIRING DEVICE. THE NATIONAL ELECTRICAL CODE, WHERE CONNECTIONS ARE TO BE MADE.

BETWEEN CONDUIT TERMINATIONS AND MOTORS, EQUIPMENT, OR APPARATUS NECESSITATING FLEXIBLE CONNECTIONS, APPROVED FLEXIBLE CONDUIT SHALL BE USED. OUTDOOR CONNECTIONS TO FANS, HVAC UNITS, OR ROTATING EQUIPMENT SHALL BE MADE WITH HELICAL WOUND, LIQUIDTIGHT, FLEXIBLE STEEL CONDUIT. EXPOSED CONDUIT SHALL BE SUITABLY SUPPORTED AT INTERVALS NOT TO EXCEED FIVE (5) FEET. DURING CONSTRUCTION, CONDUIT SHALL BE KEPT FREE OF ALL FOREIGN MATTER BY USE OF CAPPED BUSHINGS ON ALL TURNED UP ENDS. PAPER OR WOOD PLUGS ARE NOT ACCEPTABLE FOR THIS PURPOSE.

7. WIRE AND CABLES: ALL WIRE AND CABLES SHALL BE UNDERWRITERS LABORATORIES' LISTED, AND LABELED, AND CONFORM WITH APPLICABLE STANDARDS OF UL (44, AND 83), NEMA (WC-5, AND WC-7), IPCEA (S-61-402, AND S-66-524), FEDERAL SPECIFICATIONS (I-C-30A(1), AND HH-1595C), ANSI, AND OTHER APPLICABLE INDUSTRY STANDARDS. CONNECTORS AND LUGS SHALL MEET UL PUBLICATION 486. ALL BRANCH CIRCUIT WIRING SHALL BE 600 VOLT, COPPER, 75 DEGREE C (MIN), TYPE THHN/THWN WITH A MINIMUM SIZE OF #12 AWG, UNLESS NOTED OTHERWISE. WIRE SIZES OF #8 AWG AND LARGER SHALL BE STRANDED. SERVICE AND FEEDER CABLES SHALL BE 600 VOLT, STRANDED COPPER, 75 DEGREE C (MIN), TYPE XHHW, ALL CIRCUITS SHALL HAVE A SEPARATE GROUND CONDUCTOR. PROVIDE GREEN-INSULATED GROUND WIRE IN ALL RACEWAYS, CABLE ASSEMBLIES, AND WHERE NOTED. SIZE EQUIPMENT GROUNDS PER TABLE 250-122 OF THE NATIONAL ELECTRICAL CODE. INSULATION COLOR CODES SHALL BE BLACK, RED, AND BLUE (PHASE), WHITE (NEUTRAL), AND GREEN (GROUND).

A. ALL WIRING SHALL BE INSTALLED IN CONDUIT, EXCEPT WHERE SPECIFICALLY SHOWN ON THE DRAWINGS. NON-METALLIC SHEATHED (TYPE NM) CABLE IS NOT PERMITTED.

B. ALL BRANCH CIRCUIT, COMMUNICATION, SIGNALING, AND CONTROL WIRING TO KITCHEN, FIRE PROTECTION, AND OTHER EQUIPMENT SHALL BE ROUTED ABOVE THE CEILING. VERIFY WHETHER OR NOT THE SPACE ABOVE THE CEILING IS USED AS A SPACE FOR RETURN AIR FOR THE ENVIRONMENTAL AIR SYSTEM. IF IT IS USED FOR RETURN AIR, PROVIDE APPROVED RACEWAYS FOR ALL OVERHEAD WIRING PER NEC ARTICLE 300-22(B). IF IT IS NOT "OTHER SPACE USED FOR ENVIRONMENTAL AIR," APPROVED LOW VOLTAGE CABLES MEETING THE REQUIREMENTS OF NEC ARTICLES 725 AND 760 MAY BE RUN WITHOUT RACEWAYS. UNO, ALL SAFETY CONTROL WIRING FOR FIRE PROTECTION SYSTEMS, SHUNT TRIPS, ETC. SHALL BE RUN IN A RACEWAY IN ACCORDANCE WITH NEC ARTICLES 725.25 AND 725.28.

8. SITE LIGHTING: THE NATIONAL ACCOUNT VENDOR SHALL FURNISH THE SITE LIGHTING PACKAGE AS REQUIRED FOR THE SPECIFIC LOCATION. UNDER THIS SPECIFICATION SECTION, PROVIDED ARE 1" RIGID GALVANIZED STEEL ELECTRICAL CONDUIT, AND THE REQUIRED WIRING FROM THE PANEL TO THE POLE. SET FIXTURES AND POLES ON CONCRETE BASES, AS PROVIDED UNDER SPECIFICATION SECTION 3A. CONCRETE GROUND/BOND ALL SITE LIGHTING FIXTURES/POLES PER THE NEC. THE BRANCH CIRCUIT CONDUCTORS SHALL BE INCREASED FROM #10 AWG TO #8 AWG IF THE HORIZONTAL DISTANCE FROM THE PANEL TO THE POLE IS GREATER THAN EIGHTY (80) FEET. ALL SITE LIGHTING SHALL BE CONTROLLED THROUGH THE LIGHTING CONTROL SYSTEM SHOWN ON THE DRAWINGS. REFER TO THE SITE PLAN FOR LIGHTING FIXTURES/POLES AND LOCATION OF ALL LIGHTING. FIXTURES AS SPECIFIED, AND AIM AFTER DARK FOR UNIFORM LIGHT DISTRIBUTION. THE NATIONAL ACCOUNT VENDOR SHALL PROVIDE A SITE PHOTOMETRIC AT NO COST WHICH MAY BE A PART OF THE CONSTRUCTION DOCUMENTS SET, BUT SHALL BE SUBMITTED TO POPEYES DESIGN FOR THEIR RECORDS.

9. SIGNAGE LIGHTING: PROVIDE A 1" RIGID GALVANIZED STEEL ELECTRICAL CONDUIT, AND WIRING FROM THE PANEL TO ALL ILLUMINATED SIGNS AS SHOWN ON THE LIGHTING AND SITE PLANS. GROUND/BOND EACH SIGN SIGNAGE WHERE FURNISHED AND INSTALLED BY THE SIGN CONTRACTOR BY THE GC, OR UNDER A SEPARATE CONTRACT WITH THE OWNER. POWER AND WIRING SHALL BE FURNISHED AND INSTALLED UNDER THIS SECTION OF THE SPECIFICATIONS.

10. POWER WIRING: PROVIDE AND INSTALL ALL POWER WIRING AND CONDUIT AS INDICATED ON THE DRAWINGS FOR ROOF-TOP HVAC EQUIPMENT, KITCHEN HOOD FANS, AND WALK-IN FREEZER AND COOLER EQUIPMENT. DISCONNECT SWITCHES, AVAILABLE FROM THE NATIONAL ACCOUNT, SHALL BE FURNISHED AND INSTALLED FOR EACH UNIT OF HVAC EQUIPMENT, AND FOR KITCHEN EQUIPMENT WITHOUT A CORD AND PLUG. BEFORE ENERGIZING ANY EQUIPMENT, VERIFY THAT THE CORRECT POWER SUPPLY VOLTAGE, AMPACITY, AND PHASING HAS BEEN PROVIDED AT THE LOAD SIDE OF THE DISCONNECT.

B. FURNISH AND INSTALL THE LIGHTING CONTACTOR PANEL, AND ALL ASSOCIATED POWER WIRING, AS INDICATED. THE LIGHTING CONTACTOR PANEL IS CUSTOM BUILT, AND AVAILABLE FROM THE NATIONAL ACCOUNT.

10. EMPTY CONDUIT: LEAVE A #12 AWG PULL WIRE IN ALL EMPTY CONDUITS.

11. BOXES AND WIREWAYS: ALL JUNCTION BOXES, PULL BOXES, WIREWAYS, ETC. SHALL BE SIZED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.

12. EQUIPMENT IDENTIFICATION: PROVIDE NAMEPLATES FOR ALL PANELBOARDS, CONTROLS, AND OTHER ELECTRICAL EQUIPMENT. EQUIPMENT VISIBLE TO THE PUBLIC SHALL BE IDENTIFIED WITH ENGRAVED LAMINATED NAMEPLATES ATTACHED WITH STAINLESS STEEL FASTENERS. ELECTRICAL EQUIPMENT NOT VISIBLE TO THE PUBLIC MAY BE NEATLY IDENTIFIED WITH BLACK PERMANENT MARKERS.

PART III. EXECUTION

1. TESTS: MAKE ALL TESTS NECESSARY TO ENSURE THAT THE ENTIRE INSTALLATION IS FREE FROM IMPROPER GROUNDS, AND FROM SHORTED AND/OR OPEN CONDUCTORS. VOLTAGE, CURRENT, AND ROTATION TESTS SHALL BE MADE BEFORE ANY MOTORS ARE PLACED IN OPERATION. ALL LOADS SHALL BE BALANCED ACROSS PHASES. CHECK TO SEE THAT ALL LIGHTS WORK, AND ARE CONTROLLED BY SWITCHES INDICATED ON DRAWINGS, OR CIRCUIT BREAKERS SO INDICATED ON PANEL SCHEDULE.

2. GUARANTEE: FURNISH A GUARANTEE IN WRITING TO THE OWNER THAT ALL WORK EXECUTED UNDER THIS SECTION IS FREE FROM DEFECTS OF MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM DATE OF FINAL ACCEPTANCE. IN ADDITION, DURING THE TERM OF THIS GUARANTEE, THE REPAIR AND/OR REPLACEMENT OF ANY DEFECTIVE WORK, AND ALL RESULTING DAMAGES SHALL BE MADE AT NO ADDITIONAL EXPENSE TO THE OWNER.

3. TEMPORARY POWER: AT THE PROJECT SITE, PROVIDE A 100 AMP, 120/240 VOLT, SINGLE PHASE, SERVICE WITH POWER OUTLETS ADEQUATE FOR TEMPORARY CONSTRUCTION POWER. TEMPORARY LIGHTING SHALL BE MAINTAINED IN ALL AREAS OF THE BUILDING UNTIL PERMANENT POWER SOURCES HAVE BEEN ENERGIZED. TEMPORARY SERVICE SHALL BE PROVIDED UNDER SECTION 1A OF THESE SPECIFICATIONS.

4. CLEAN-UP: LEAVE THE ELECTRICAL PORTION OF THE WORK IN A CLEAN AND FINISHED CONDITION.

5. AS-BUILT DRAWINGS: MAINTAIN AS-BUILT DRAWINGS, UPDATED DAILY DURING CONSTRUCTION, AND PRESENT THE OWNER WITH ONE SET UPON COMPLETION. PROVIDE THE OWNER'S PERSONNEL WITH ON-SITE INSTRUCTION IN THE OPERATION & MAINTENANCE OF THE COMPLETED ELECTRICAL SYSTEM.

LISTING AND LABELING
ALL ELECTRICAL MATERIALS, DEVICES, APPLIANCE AND EQUIPMENT SHALL BE LISTED BY A NORTH CAROLINA APPROVED THIRD PARTY TESTING AGENCY (NECKLEBURG COUNTY CODE ENFORCEMENT)

ABBREVIATIONS

A	AMPERES	FPN	FUSE PER NAMEPLATE
AFC	ABOVE FINISHED CEILING	KW	KILOWATTS
AFF	ABOVE FINISHED FLOOR	LFNC	LIQUIDTIGHT FLEXIBLE NON-METALLIC CONDUIT
AFG	ABOVE FINISHED GRADE	LFMC	LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT
ANN	FIRE ALARM ANNUNCIATOR CABINET	LVC	LOW VOLTAGE CONTROL CABINET
C	CONDUIT	MCB	MAIN CIRCUIT BREAKER
CB	CIRCUIT BREAKER	MCC	METAL CLAD CABLE
CKT	CIRCUIT	MLO	MAIN LUGS ONLY
CLG	CEILING	MTD	MOUNTED
DN	DOWN	NMC	NON-METALLIC CLAD CABLE
DW	DISHWASHER	PB	PULLBOX
EC	EMPTY CONDUIT	PNL	PANELBOARD
EMT	ELECTRICAL METALLIC TUBING	PS	PROGRAM START
ENT	ELECTRICAL NON-METALLIC TUBING	PWR	POWER
EWC	ELECTRIC WATER COOLER	REC	RECEPTACLE
FACP	FIRE ALARM CONTROL PANEL	RM	RIGID METAL CONDUIT
FBC	FURNISHED BY CONTRACTOR	RS	RAPID START
FMC	FLEXIBLE METAL CONDUIT	SW	SWITCH
G	GROUND	SWBD	SWITCHBOARD
GFI	GROUND FAULT INTERRUPTER	TIB	TERMINAL BOARD
HOA	HAND OFF AUTOMATIC	TEL	TELEPHONE
HP	HORSEPOWER	TV	TELEVISION
HPF	HIGH POWER FACTOR	TYP	TYPICAL
HX	HIGH REACTANCE	V	VOLTS
IG	ISOLATED GROUND	VPR	VAPOR PROOF
IMC	INTERMEDIATE METAL CONDUIT	W	WALL MOUNTED
IS	INSTANT START	WP	WEATHER PROOF
JB	JUNCTION BOX	XFMR	TRANSFORMER
KVA	KILOVOLT-AMPERES		

SYMBOL SCHEDULE	
GENERAL SYMBOLS	
SYMBOL	DESCRIPTION
—	CONDUIT RUN CONCEALED ABOVE CEILINGS OR IN WALLS.
----	CONDUIT RUN CONCEALED IN OR BELOW FLOORS OR UNDERGROUND.
- - - -	CONDUIT RUN EXPOSED.
—○—	CONDUIT TURNING UP
—○—	CONDUIT TURNING DOWN
—○—	SQUARE ON CONDUIT SYMBOL INDICATES THAT CIRCUIT CONTINUES BUT NOT SWITCH/LEG.
—○—	HOMERUN TO PANEL AND CIRCUIT(S) DESIGNATED. ARROW(S) INDICATE QUANTITY OF CIRCUITS.
◇	SPECIAL NOTE, NUMERALS IDENTIFY, SEE SCHEDULE.
○	SPECIAL CONNECTION TO A SPECIFIC ITEM OF EQUIPMENT. SEE CONNECTION SCHEDULE.
LIGHTING	
SYMBOL	DESCRIPTION
○	LED OR FLUORESCENT LIGHTING FIXTURE, DRAWN TO SCALE.
▨	LED OR FLUORESCENT LIGHTING FIXTURE UTILIZED AS A NIGHT-LIGHT. CONNECT TO THE UNSWITCHED LEG OF THE CIRCUIT.
○	PENDANT LIGHT FIXTURE.
○	16" PENDANT LIGHT FIXTURE.
○	LED TRACK LIGHTING FIXTURE. QUANTITY OF HEADS AND TRACK LENGTH AS SHOWN ON PLANS.
○	6" LED LIGHTING DOWNLIGHT FIXTURE, CEILING MOUNTED.
○	ADJUSTABLE LED LIGHTING DOWNLIGHT FIXTURE, CEILING MOUNTED.
▨	LED LIGHTING FIXTURE. UTILIZED AS A NIGHT-LIGHT. CONNECT TO THE UNSWITCHED LEG OF THE CIRCUIT.
○	LED LIGHTING FIXTURE, WALL MOUNTED.
○	EXIT SIGN, CEILING MOUNTED. SHADING INDICATES FACE ORIENTATION. CONNECT TO THE UNSWITCHED LEG OF THE CIRCUIT.
○	EXIT SIGN, WALL MOUNTED. SHADING INDICATES FACE ORIENTATION. CONNECT TO THE UNSWITCHED LEG OF THE CIRCUIT.
○	SINGLE FACE EXIT LIGHT W/EMERGENCY BATTERY PACK AND TWO (2) EMERGENCY LIGHT HEADS. SEE FIXTURE SCHEDULE.
○	POLE-MOUNTED, PARKING AREA LIGHTING FIXTURE.
○	PHOTOCELL CONTROL DEVICE. MOUNT ON ROOF FACING NORTH.
DISTRIBUTION	
SYMBOL	DESCRIPTION
▨	ELECTRICAL PANELBOARD, FLUSH MOUNTED.
▨	ELECTRICAL PANELBOARD, SURFACE MOUNTED.
▨	CONTROL CABINET, FLUSH OR SURFACE MOUNTED.
□	DISCONNECT SWITCH, NON-SURFACE.
□	DISCONNECT SWITCH, FLUSH.
□	DISCONNECT SWITCH PROVIDED WITH EQUIPMENT.
→	GROUND CONNECTION.
WIRING DEVICES	
SYMBOL	DESCRIPTION
○	DUPLEX RECEPTACLE, 125V, 3-WIRE GROUNDING TYPE; NUMBER SUBSCRIPT INDICATES MOUNTING HEIGHT AFF IF DIFFERENT THAN SPECIFIED. HUBBELL #5362-1
○	DUPLEX RECEPTACLE, 125V, GROUND FAULT CIRCUIT INTERRUPTING, 3-WIRE GROUNDING TYPE. LOCATE WITHIN OR BEHIND AN ELECTRIC WATER COOLER. COORDINATE WITH PLUMBER FOR EXACT LOCATION.
○	DUPLEX RECEPTACLE, GROUND FAULT CIRCUIT INTERRUPTING.
○	DUPLEX GFCI RECEPTACLE. PROVIDE WITH OPERABLE, IN-USE WEATHERPROOF COVER.
○	DUPLEX RECEPTACLE, 125V, 3-WIRE GROUNDING TYPE. CEILING MOUNTED.
○	DUPLEX RECEPTACLE, 125V, 3-WIRE GROUNDING TYPE. ISOLATED GROUND SURGE PROTECTED; MOUNTED IN CEILING. HUBBELL #6-5362-OSP FOR MONITORS
○	DUPLEX RECEPTACLE, 125V, 3-WIRE GROUNDING TYPE. ISOLATED GROUND SURGE PROTECTED. FOR EACH RECEPTACLE CIRCUIT USE A DEDICATED NEUTRAL AND AN ISOLATED GROUND CONDUCTOR. NEUTRAL AND ISOLATED GROUND CONDUCTOR SHALL BE EQUAL IN SIZE TO THE PHASE CONDUCTORS. IN ADDITION AN EQUIPMENT GROUND, SIZED EQUAL TO THE LARGEST PHASE CONDUCTORS, SHALL BE INSTALLED IN EACH RUN OF THE CIRCUIT. HUBBELL #6-5362-OSP FOR POS EQUIP. & PRINTERS
○	TWO DUPLEX RECEPTACLES, 125V, 3-WIRE GROUNDING TYPE, IN A TWO-GANG BOX WITH TWO-GANG FACEPLATE.
○	SPECIAL PURPOSE RECEPTACLE, WITH SPECIAL NEMA CONFIGURATION AS NOTED.
○	HEAVY-WALL METAL CONDUIT STUB-UP FROM FLOOR, AT HEIGHT INDICATED, WITH CAST FS-TYPE BOX AND WIRING DEVICE AS INDICATED.
○	EXHAUST FAN.
○	SUPPLY FAN.
○	JUNCTION OR OUTLET BOX.
○	JUNCTION BOX FOR SIGN-MOUNT SWITCH NEAR SIGN. MAKE ALL CONNECTIONS REQ'D. VERIFY ALL ASPECTS WITH SIGNAGE VENDOR. SEE ARCHITECTURAL ELEVATIONS FOR HEIGHT AND LOCATION AS SHOWN.
○	JUNCTION BOX FOR SMOKE DETECTOR (F.B.C.) 120v wiring BY THIS CONTRACTOR.
○	COMBINATION DUAL DATA OUTLET AND TELEPHONE OUTLET HEIGHT AS NOTED ON PLANS WITH 3/4" EMPTY CONDUIT TO ABOVE CEILING. PROVIDE PULL WIRE.
○	TELEPHONE OUTLET, WALL TYPE, 24" AFF U.L.O. ON PLANS WITH 3/4" EMPTY CONDUIT TO ABOVE CEILING. PROVIDE PULL WIRE.
○	DATA OUTLET, HEIGHT AS NOTED ON PLANS WITH 3/4" EMPTY CONDUIT TO ABOVE CEILING. PROVIDE PULL WIRE.
○	PROVIDE "ON/OFF" SELECTOR SWITCH AND PILOT LIGHT IN NEMA 4 STAINLESS STEEL ENCLOSURE MOUNTED ON THE FACE OF THE HOOD. PROVIDED BY HOOD MANUFACTURER.
○	DOT ABOVE OUTLETS INDICATES THAT THE DEVICE IS TO BE INSTALLED ABOVE CASEWORK OR OTHER OBSTACLE. COORDINATE.
○	LIGHT SWITCH, SINGLE-POLE, - HUBBELL #HBL1221.
○	ELECTRIC DOOR PUSHBUTTON: EDWARDS #590 48" MOUNTING HEIGHT
○	DOOR SWITCH MOUNTED IN DOOR FRAME (F.B.C.)
○	OCCUPANCY SENSOR, CEILING MOUNTED, PROVIDE WITH 10 FEET WHP TO ALLOW FIELD ADJUSTMENT OF LOCATION. COORDINATE EXACT LOCATION WITH MANUFACTURERS RECOMMENDATION.
○	SOLENOID VALVE.
○	EMERGENCY POWER OFF SWITCH WITH MUSHROOM HEAD. REFER TO CONTROL DIAGRAM.
SOUND/COMMUNICATIONS SYSTEM	
SYMBOL	DESCRIPTION
○	COMMUNICATIONS SYSTEM SPEAKER, RECESSED FLUSH IN CEILING.
○	COMMUNICATIONS SYSTEM SPEAKER, WALL MOUNTED.
○	ELECTRIC DOOR BUZZER; 8" BELOW CEILING.

ARCHITECTURE ENGINEERING, P.C. SHALL RETAIN ALL COMMON LAW, STATUTORY AND OTHER RESERVED RIGHTS, INCLUDING THE COPYRIGHT THEREIN. SHALL RETAIN ALL COMMON LAW, STATUTORY AND OTHER RESERVED RIGHTS, INCLUDING THE COPYRIGHT THEREIN.

Order Plans

PROGRESSIVE ARCHITECTURE ENGINEERING, P.C.
330 South Tryon Street Suite 500 | Charlotte, NC 28202 | 704.731.8880 | www.progressiveae.com

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LEBLON FRANCHISING HOLDINGS, LLC.
POPEYE'S
LOUISIANA KITCHEN
921 CONCORD PARKWAY SOUTH
CONCORD, NC, 28027

08-14-2020
FOR CONSTRUCTION

ISSUANCE PERMIT SUBMITTAL 08/14/2020

NO. DATE DESCRIPTION

FILE NUMBER 86560010

PROJECT MANAGER RM

PROFESSIONAL MPA

DRAWN BY TLW

CHECKED BY RM

ELECTRICAL SPECIFICATIONS, NOTES & LEGEND

E1