PRCOM20204900

LIGHTING SYMBOLS

F1 a RP5-7	TYPICAL LUMINAIRE DESIGNATIONS (F1) INDICATES LUMINAIRE TYPE. REFER TO LUMINAIRE SCHEDULE FOR DESCRIPTION. (RP5) INDICATES PANEL DESIGNATION, (7) INDICATES CIRCUIT BREAKER NUMBER. (a) INDICATES SWITCHING CIRCUIT ID.
	2'X4' LUMINAIRE
	WALL MOUNTED LUMINAIRE
	CEILING MOUNTED LUMINAIRE
	INDUSTRIAL TYPE LUMINAIRE
	PENDANT MOUNTED LUMINAIRE
	LUMINAIRE POWERED BY EMERGENCY SOURCE (TYPICAL)
	LUMINAIRE, POLE MOUNTED
	LUMINAIRE, BALLARD
	LUMINAIRE, FLOOD LIGHT
	WALL MOUNTED EXIT SIGN, SHADED AREAS INDICATE NUMBER OF FACES, DIRECTION ARROWS AS INDICATED
	CEILING MTD. EXIT SIGN, SHADED AREAS INDICATE NUMBER OF FACES, DIRECTION ARROWS AS INDICATED
	EMERGENCY BATTERY UNIT LUMINAIRE
C	CONTROL COIL
P	PHOTO CELL

SWITCH SYMBOLS

$	SINGLE POLE, LOW VOLTAGE SWITCH, 20A, 120-277VAC
$ X	"X" REFER TO SWITCH NOTES

SWITCH NOTES:

"a" = LOWER CASE LETTER INDICATES SWITCHING CIRCUIT ID
"3" = THREE-WAY SWITCH 20A, 120-277VAC
"4" = FOUR-WAY SWITCH 20A, 120-277VAC
"M" = MANUAL MOTOR STARTER SWITCH
"MOL" = MANUAL MOTOR STARTER WITH THERMAL OVERLOADS
"D" = DIMMER CONTROL
"D3" = THREE-WAY DIMMING SWITCH
"D4" = FOUR-WAY DIMMING SWITCH
"P" = SINGLE POLE SWITCH WITH PILOT LIGHT
"K" = SINGLE POLE SWITCH (KEY-OPERATED)
"T" = SINGLE POLE SWITCH WITH TIMER
"3P" = THREE-POSITION SWITCH, CENTER-OFF, MOMENTARY CONTACT
"OS" = OCCUPANCY/VACANCY SENSOR WALL SWITCH(IR) WITH MANUAL OVERRIDE

OS	OCCUPANCY SENSOR MOUNTED IN CEILING

OCCUPANCY SENSOR NOTES:

1. PLACE ULTRASONIC SENSORS 6'-0" AWAY FROM SUPPLY AND RETURN VENTS.

RECEPTACLE SYMBOLS

RP5:7	TYPICAL RECEPTACLE CIRCUIT DESIGNATION (RP5) INDICATES PANEL DESIGNATION, (7) INDICATES CIRCUIT BREAKER NUMBER. PROVIDE 20A/1P AND 2#12 FOR EACH CIRCUIT NUMBER & 1#12G, IN 3/4 " CONDUIT, UNLESS OTHERWISE NOTED OR SCHEDULED.
	DUPLEX RECEPTACLE, 125V, 20A, 2P, 3W, NEMA 5-20R
UC	UNDER COUNTER, DUPLEX RECEPTACLE, 125V, 20A, 2P, 3W, NEMA 5-20R
GFCI	DUPLEX RECEPTACLE, 125V, 20A, 2P, 3W, NEMA 5-20R, (GROUND FAULT CIRCUIT INTERRUPTER)
GFCI WP	DUPLEX RECEPTACLE, 125V, 20A, 2P, 3W, NEMA 5-20R, (GROUND FAULT CIRCUIT INTERRUPTER WITH IN USE COVER)
	SINGLE RECEPTACLE, 125V, 20A, 2P, 3W, NEMA 5-20R
L	SINGLE RECEPTACLE, 125V, 20A, 2P, 3W, NEMA 5-15R
	QUADRAPLEX RECEPTACLE, 125V, 20A, 2P, 3W NEMA 5-20R
UC	UNDER COUNTER, ISOLATED GROUND RECEPTACLE, 125V, 20A, 2P, 3W, NEMA 5-20R
	DUPLEX RECEPTACLE, MOUNTED 6" (0.15m) ABOVE COUNTER OR BACKSPLASH,125V, 20A, 2P, 3W, NEMA 5-20R
FPD	DUPLEX RECEPTACLE, MOUNTED FOR FLAT PANEL DISPLAY; MOUNT AT APPROXIMATELY 66"; COORDINATE EXACT HEIGHT DISPLAY
	SPECIAL PURPOSE RECEPTACLE, COORDINATE NEMA CONFIGURATION WITH EQUPMENT
	CEILING MOUNTED DUPLEX RECEPTACLE, 120V, 20A, 2P, 3W, NEMA 5-20R
PRJ	CEILING MOUNTED DUPLEX RECEPTACLE, 120V, 20A, FOR PROJECTOR. COORDINATE WITH EQUPMENT
	BENCH TOP PEDESTAL OUTLET, SINGLE FACE, RECEPTACLE TYPE AS INDICATED
	BENCH TOP PEDESTAL OUTLET, DOUBLE FACE, RECEPTACLE TYPE AS INDICATED
P	FLUSH POKE-THROUGH FOR POWER FEEDS. POWER FEEDS TO BE HARDWIRED TO FURNITURE WIRING SYSTEM.
T	FLUSH POKE-THROUGH FOR COMMUNICATION FEEDS. COMMUNICATION FEEDS TO BE HARDWIRED TO FURNITURE WIRING SYSTEM.
AV	FLUSH POKE-THROUGH FOR AUDIO/VISUAL FEEDS. AUDIO/VIDEO FEEDS TO BE HARDWIRED TO FURNITURE WIRING SYSTEM.
PT	FLUSH POKE-THROUGH FOR POWER AND COMMUNICATION FEEDS. POWER AND COMMUNICATION FEEDS TO BE HARDWIRED TO FURNITURE WIRING SYSTEM.
PT AV	FLUSH POKE-THROUGH FOR POWER, COMMUNICATION AND AUDIO/VISUAL FEEDS. POWER, COMMUNICATION AND AUDIO/VISUAL FEEDS TO BE HARDWIRED TO FURNITURE WIRING SYSTEM.
P	FLUSH POKE-THROUGH WITH POWER RECEPTACLES.
T	FLUSH POKE-THROUGH WITH COMMUNICATION RECEPTACLES.
AV	FLUSH POKE-THROUGH WITH AUDIO/VISUAL RECEPTACLES.
PT	FLUSH POKE-THROUGH WITH POWER AND COMMUNICATION RECEPTACLES.
PT AV	FLUSH POKE-THROUGH WITH POWER, COMMUNICATION AND AUDIO/VISUAL RECEPTACLES.
P	RECESSED FLOOR BOX FOR POWER FEEDS. POWER FEEDS TO BE HARDWIRED TO FURNITURE WIRING SYSTEM.
T	RECESSED FLOOR BOX FOR COMMUNICATION FEEDS. COMMUNICATION FEEDS TO BE HARDWIRED TO FURNITURE WIRING SYSTEM.
AV	RECESSED FLOOR BOX FOR AUDIO/VISUAL FEEDS. AUDIO/VISUAL FEEDS TO BE HARDWIRED TO FURNITURE WIRING SYSTEM.
PT	RECESSED FLOOR BOX FOR POWER AND COMMUNICATION FEEDS. POWER AND COMMUNICATION FEEDS TO BE HARDWIRED TO FURNITURE WIRING SYSTEM.
PT AV	RECESSED FLOOR BOX FOR POWER, COMMUNICATION AND AUDIO/VISUAL FEEDS. POWER, COMMUNICATION AND AUDIO/VISUAL FEEDS TO BE HARDWIRED TO FURNITURE WIRING SYSTEM.
	RECESSED FLOOR BOX WITH POWER RECEPTACLES.
	RECESSED FLOOR BOX WITH COMMUNICATION RECEPTACLES.

ELECTRICAL SYMBOLS

AV	RECESSED WALL BOX WITH AUDIO/VISUAL / DATA / POWER RECEPTACLES.
	RECESSED FLOOR BOX WITH POWER AND COMMUNICATION RECEPTACLES.
AV	RECESSED FLOOR BOX WITH POWER, COMMUNICATION AND AUDIO/VISUAL RECEPTACLES.
	HARD-WIRED CONNECTION
	JUNCTION BOX; WHIP TO BE HARDWIRED TO FURNITURE WIRING SYSTEM
	PANELBOARD
	DISTRIBUTION/POWER PANEL
	MOTOR CONNECTION
$	SINGLE POLE SWITCH, 20A, 120-277VAC
$ X	"X" REFER TO SWITCH NOTES
	DISCONNECT SWITCH
	FUSED DISCONNECT SWITCH
	COMBINATION MAGNETIC MOTOR STARTER
CB	ENCLOSED CIRCUIT BREAKER
VFD	VARIABLE FREQUENCY DRIVE
	EMERGENCY POWER OFF
T1	TRANSFORMER, (SEE TRANSFORMER SCHEDULE ON COVER SHEET 2)
	ONE PUSHBUTTON STATION
	START STOP PUSHBUTTON
	RAISE-LOWER PUSHBUTTON WITH CENTER STOP
	PUSH-PLATE FOR AUTOMATIC DOOR
PP PP	POWER POLE; WHIP TO BE HARDWIRED TO FURNITURE WIRING SYSTEM
	GROUND ROD
	GROUND BUS
	LIGHTNING PROTECTION THROUGH ROOF DOWN CONDUCTOR
	LIGHTNING PROTECTION AIR TERMINAL
	MULTI-OUTLET RACEWAY WITH RECEPTACLES EVERY 2 FT ON CENTER AND DATA OUTLETS EVERY 6 FT ON CENTER. TYPE AND CIRCUIT DESIGNATION AS INDICATED
	WIRE/CONDUIT EXPOSED
	WIRE/CONDUIT CONCEALED
	WIRE/CONDUIT CONCRETE ENCASED OR DIRECT BURIED
G	GROUNDING CONDUCTOR, SIZE AS INDICATED.
2W20 (20/2) RP5:7,9	HOME RUN INDICATION WITH PANEL DESIGNATION (RP5), CIRCUIT No.(7)&(9), OVERCURRENT PROTECTION "AMPS AND POLES" (20/2) AND WIRE/CONDUIT DESIGNATION (2W20). SEE WIRE AND CONDUIT SIZE SCHEDULE. PROVIDE 20A/1P AND 2 #12 FOR EACH HOMERUN ARROW & 1 #12G IN 3/4 " CONDUIT, UNLESS OTHERWISE INDICATED. SEE GENERAL NOTE 1.
E	UNDERGROUND DUCT BANK - ELECTRIC
TC	UNDERGROUND DUCT BANK - COMMUNICATION/DATA/TELEPHONE
M	MANHOLE
H	HANDHOLE
1 MI CABLE,1/C	(1) MI CABLE, SINGLE CONDUCTOR
1 MI CABLE,3/C	(1) MI CABLE, THREE CONDUCTOR
3 MI CABLES,1/C	(3) MI CABLES, SINGLE CONDUCTOR EACH
[XX]	EQUIPMENT IDENTIFICATION TAGS

SINGLE LINE DIAGRAM SYMBOLS

	DRAWOUT CIRCUIT BREAKER OVER 600V
	DRAWOUT CIRCUIT BREAKER
	DRAWOUT FUSES
	CIRCUIT BREAKER
	FUSED DISCONNECT SWITCH
	DISCONNECT SWITCH
	FUSED DRAWOUT CIRCUIT BREAKER
	FUSE
	CONTACT
50N 51N	RELAY SEE RELAY SCHEDULE ON COVER SHEET 2.
	POWER TRANSFORMER WITH VOLTAGES AS INDICATED
	SHIELDED K RATED POWER TRANSFORMER WITH VOLTAGES AS INDICATED
EO	DRAWOUT CIRCUIT BREAKER, ELECTRIC OPERATED.
ED	CIRCUIT BREAKER, ELECTRIC OPERATED.
E0	FUSED DISCONNECT SWITCH, ELECTRIC OPERATED.
4005 3	CURRENT TRANSFORMER, QUANTITY AND RATIO AS INDICATED.
50/5	GROUND CURRENT, ZERO SEQUENCE TYPE TRANSFORMER. RATIO AS INDICATED.
1	POTENTIAL TRANSFORMER, QUANTITY AS INDICATED.
1	DRAWOUT POTENTIAL TRANSFORMER, QUANTITY AS INDICATED.
L.A.	LIGHTNING ARRESTOR
	TRANSFORMER CONNECTION DELTA-RESISTANCE GROUNDED WYE
	TRANSFORMER CONNECTION DELTA-GROUNDED WYE
	STATIC BYPASS SWITCH
GEN	GENERATOR
N E L	AUTOMATIC TRANSFER SWITCH
N L E	AUTOMATIC TRANSFER AND BYPASS ISOLATION SWITCH
	PANELBOARD
	POWER FACTOR CORRECTION CAPACITOR

	GROUND CONNECTION
	THERMAL OVERLOADS
K	KEY INTERLOCK
E	ELECTRIC INTERLOCK
SPD	SURGE PROTECTION DEVICE
AM	AMMETER
AS	AMMETER SWITCH
VM	VOLTMETER
VS	VOLTMETER SWITCH
WM	WATTMETER
KWH	KILOWATT-HOUR METER WITH 15 MIN. DEMAND REGISTER
KVH	KILOVAR HOUR METER
PF	POWER FACTOR METER
TB	TERMINAL BLOCK
CS	CONTROL SWITCH
M	MULTIFUNCTION METER AS SPECIFIED.
	BATTERY
A	FEEDER CONNECTION REFERENCE

COMMUNICATION SYMBOLS

2(4)(6)	DATA OUTLET BOX WITH (TWO) (FOUR) (SIX) JACKS DOUBLE GANG BOX WITH SINGLE GANG REDUCER AND 1"C TO ACCESSIBLE CEILING AREA
	COMBINATION VOICE/DATA OUTLET DOUBLE GANG BOX WITH SINGLE GANG REDUCER AND 1"C TO ACCESSIBLE CEILING AREA
W	SINGLE GANG BOX WITH WALL PHONE PLATE AND 3/4 "C TO ACCESSIBLE CEILING AREA.
TP TP	TELECOMM POLE; WHIP TO BE HARDWIRED TO FURNITURE WIRING SYSTEM

SECURITY SYMBOLS

	CARD READER
DPS	DOOR POSTION SWITCH
REX	REQUEST TO EXIT
	FIXED CCTV POE CAMERA
PTZ	PAN, TILT, ZOOM CCTV POE CAMERA
180	180 OR 360 DEGREE CCTV POE CAMERA

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
12/13/2021

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WHATABURGER

STATE OF MISSOURI
JASON E. CHRISTOFF
NUMBER PE-2012002143
PROFESSIONAL ENGINEER

12/22/20
PROFESSIONAL OF RECORD:
JASON E. CHRISTOFF No. 20012002143
EXP. DATE: 12/31/20

REV	DESCRIPTION	DATE

Project No.: 62-40497-01
Client Project No.:
Drawing Title:

ELECTRICAL SYMBOLS

Date: 12/22/20 Phase: PERMIT SET
Designed: DCU
Drawn : DCU
Checked : KFF
Drawing No.: E0.1

C:_Backup\Revit\WB-Lees Summit-MO_V16_ELECT_200921_dulm.rvt
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ABBREVIATIONS

A,AMP	AMPERE(S)
AC	ALTERNATING CURRENT
AF	AMPERE FRAME (CIRCUIT BREAKER)
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AFU	AMPERE FUSE
AHU	AIR HANDLING UNIT
AIC	AMPERE INTERRUPTING CAPACITY
AL	ALUMINUM
AS	AMMETER SWITCH
AM	AMMETER
AT	AMPERE TRIP (CIRCUIT BREAKER)
ATS	AUTOMATIC TRANSFER SWITCH
AUX	AUXILIARY
A/V	AUDIO VISUAL
AWG	AMERICAN WIRE GAUGE
BAS	BUILDING AUTOMATION SYSTEM
BKR	BREAKER
BLDG	BUILDING
BP	BYPASS
BSC	BIOLOGICAL SAFETY CABINET
C	CONDUCTOR
C/ CDT	CONDUIT
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CKT	CIRCUIT
CLG	CEILING
CO	CONDUIT ONLY
COAX	COAXIAL CABLE
COL	COLUMN
COMM	COMMUNICATIONS
CP	CONTROL PANEL
CPT	CONTROL POWER TRANSFORMER
CPU	CENTRAL PROCESSING UNIT
CR	CARD READER
CRT	CATHODE RAY TUBE MONITOR
CS	CONTROL SWITCH
CU	COPPER
CUH	CABINET UNIT HEATER
CT	CURRENT TRANSFORMER
D	DEPTH
DC	DIRECT CURRENT
DDC	DIRECT DIGITAL CONTROL
DEMO	DEMOLITION
DIA	DIAMETER
DN	DOWN
DISC	DISCONNECT
DIST	DISTRIBUTION
DWG	DRAWING
E	ELECTRIC / EMERGENCY
EC	ELECTRICAL CONTRACTOR, EMPTY CONDUIT
EF	EXHAUST FAN
EL	ELEVATION
ELECT,ELEC	ELECTRICAL
ELEV	ELEVATOR
EMT	ELECTRICAL METALLIC TUBING
EO	ELECTRICALLY OPERATED
EOL	END OF LINE DEVICE
EPO	EMERGENCY POWER OFF
EQ	EQUAL
EQUIP	EQUIPMENT
ER	EXISTING TO BE RELOCATED
EWC	ELECTRIC WATER COOLER
EX	EXISTING TO REMAIN
F	FLUSH
FA	FIRE ALARM
FCC	FIRE COMMAND CENTER
FCU	FAN COIL UNIT
FDDI	FIBER DISTRIBUTED DATA INTERFACE
FDR	FEEDER
FH	FUME HOOD
FIP	FIELD INTERFACE PANEL
FIXT	FIXTURE
FLA	FULL LOAD AMPERES
FLR,FL	FLOOR
FLUOR	FLUORESCENT
FO	FIBER OPTIC
FPB	FAN POWERED BOX
FSD	FIRE SMOKE DAMPER
FU	FUSE
FUT	FUTURE
FVR	FULL VOLTAGE REVERSIBLE
FVNR	FULL VOLTAGE NON REVERSIBLE
G	GROUND (CONDUCTOR)
GA	GAUGE
GEN	GENERATOR
GF	GROUND FAULT
GFI	GROUND FAULT CIRCUIT INTERRUPTER
GND,GRD	GROUND
GPS	GENERATOR PARALLELING SWITCHGEAR
GRC	GALVANIZED RIGID STEEL CONDUIT
HH	HAND HOLE
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTOMATIC SWITCH
HP	HORSEPOWER
HT	HEIGHT
HWP	HOT WATER PUMP
HV	HIGH VOLTAGE
HZ	HERTZ
I/INST	INSTANTANEOUS
ICM	INTERCOM MASTER
ICR	INTERCOM REMOTE
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
INSTR	INSTRUMENT/INSTRUMENTATION
JB,JBOX	JUNCTION BOX
K	KEY LOCK (KEY INTERLOCK SCHEME)
KA	KILOAMPERES
KCM	THOUSAND CIRCULAR MILS
KEF	KITCHEN EXHAUST FAN
KW	KILOWATTS
KWH	KILOWATT HOUR
KV	KILOVOLTS
KVA	KILO VOLT-AMPERES
KVAR	KVA REACTIVE
L	LOCKING TYPE/LOAD
LA	LIGHTNING SURGE ARRESTER
LAB	LABORATORY
LAN	LOCAL AREA NETWORK

ABBREVIATIONS

LT	LONG TIME
LTG	LIGHTING
LP	LIGHTING PANEL
M	METER
mm	MILLIMETER
mm2	MILLIMETERS SQUARED
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCCB	MOLDED CASE CIRCUIT BREAKER
MDF	MAIN DISTRIBUTION FRAME
MECH	MECHANICAL
MFR	MANUFACTURER
MH	MANHOLE
MI	MINERAL-INSULATED
MIN	MINIMUM
MIC	MEDIA INTERFACE CONNECTOR
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MPS	MANUAL PULL STATION
MTD	MOUNTED
MTG	MOUNTING
MTS	MANUAL TRANSFER SWITCH
MV	MEDIUM VOLTAGE
N	NEUTRAL/NORMAL
NEC	NATIONAL ELECTRICAL CODE
NC	NORMALLY-CLOSED
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY-OPEN / NUMBER
NORM	NORMAL
NTS	NOT TO SCALE
NWP	NETWORK PROTECTOR
OCB	OIL CIRCUIT BREAKER
OL	OVERLOAD(S)
OC	ON-CENTER
OS	OCCUPANCY SENSOR
P	POLE
PA	PUBLIC ADDRESS SYSTEM
PB	PUSHBUTTON/PULLBOX
PBX	PRIVATE BRANCH EXCHANGE
PC	PHOTOCELL
PDU	POWER DISTRIBUTION UNIT
PF	POWER FACTOR
PFCC	POWER FACTOR CORRECTION CAPACITORS
PH,ϕ	PHASE
PNL	PANEL
PP	POWER PANEL
PR	PAIR
PRI	PRIMARY
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYLCHLORIDE
PWR	POWER
QTY	QUANTITY
RE	REMOVE EXISTING
REC,RECPT	RECEPTACLE
REPO	REMOTE E.P.O.
REQ,REQD	REQUIRED
RF	RETURN FAN
RIM	READER INTERFACE MODULE
RM	ROOM
RO	REVERSE-OSMOSIS
RP	RECEPTACLE PANEL
RVAT	REDUCED VOLTAGE AUTOTRANSFORMER
RTU	REMOTE TERMINAL UNIT
RUPS	ROTARY UPS
SCA	SHORT CIRCUIT AMPERES
SD	SMOKE DETECTOR
SEC	SECONDARY
SF	SUPPLY FAN
SF6	SULFERHEXAFLORIDE
SPD	SURGE PROTECTIVE DEVICE
SPEC	SPECIFICATION
SPKR	SPEAKER
SS	STAINLESS STEEL/SOLID STATE
ST	SHUNT TRIP/SHORT TIME
STD	STANDARD
STP	SHIELDED TWISTED PAIR
STS	STATIC TRANSFER SWITCH
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
SYM	SYMMETRICAL
SYS	SYSTEM
T	TRANSFORMER
TB	TERMINAL BLOCK
TELECOM	TELECOMMUNICATIONS
TDR	TIME DOMAIN REFLECTOMETER
TEF	TOILET EXHAUST FAN
TEL,TELE	TELEPHONE
TR	TELEPHONE ROOM
TV	TELEVISION
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
TYP	TYPICAL
UC	UNDER-COUNTER
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORY
UNO	UNLESS NOTED OTHERWISE
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
UTP	UNSHIELDED TWISTED PAIR
V	VOLT(S)
VA	VOLT-AMPERES
VAV	VARIABLE AIR VOLUME BOX
VFD	VARIABLE FREQUENCY DRIVE
VM	VOLTMETER
VS	VOLTMETER SWITCH
W/	WITH
W	WIRE/WATT/ WIDTH
WCR	WITHSTAND CURRENT RATING
WM	WATTMETER
WP	WEATHERPROOF
WT	WATERTIGHT
XFMR	TRANSFORMER
XP	EXPLOSION-PROOF
ZI	ZONE INTERLOCKING
△Y	DELTA-WYE
2S2W	TWO SPEED TWO WINDING
2SR2W	TWO SPEED REVERSING TWO WINDING

MOUNTING HEIGHTS:

UNLESS OTHERWISE INDICATED, OUTLET BOXES IN WALLS SHALL BE LOCATED WITH CENTERLINE AT THE FOLLOWING ELEVATIONS ABOVE THE FINISHED FLOOR LINE. VERIFY ALL HEIGHTS PRIOR TO ACTUAL LAYOUT OF WORK WITH THE GENERAL CONSTRUCTION CONTRACTOR.

1.	SWITCH OUTLETS	4 FEET
2.	BRACKET OUTLETS (OTHER)	6 FEET-6 INCHES
3.	RECEPTACLE OUTLETS (U.O.N.)	1 FOOT-6 INCHES
4.	RECEPTACLE OUTLETS, MECHANICAL ROOMS	3 FEET
5.	RECEPTACLE OUTLETS MOUNTED, ABOVE CASEWORK/CABINETS	4 INCHES ABOVE BACKSPLASH
6.	CLOCK OUTLETS	12 INCHES BELOW CEILING
7.	MOTOR STARTERS AND SAFETY SWITCHES	4 FEET-6 INCHES
8.	PANELBOARDS (TOP)	6 FEET-6 INCHES

MOUNTING HEIGHT NOTES:

1. THE ABOVE MOUNTING HEIGHTS SHALL BE ADHERED TO UNLESS OTHERWISE NOTED ON PLANS OR SPECIFICATIONS.

GENERAL NOTES:

1. PROVIDE EACH 120V, 20A BRANCH CIRCUIT FROM LIGHTING AND APPLIANCE PANELBOARDS WITH A SEPARATE NEUTRAL FOR EACH PHASE CONDUCTOR. NO SHARED NEUTRALS ARE PERMITTED UNLESS OTHERWISE INDICATED. BRANCH CIRCUIT HOME RUN WIRING MAY BE COMBINED UP TO MAXIMUM OF (6) CURRENT CARRYING CONDUCTORS IN A CONDUIT SIZED PER NFPA 70.
2. THESE ARE STANDARD COVER SHEET ABBREVIATION LISTS AND SYMBOLS. DISREGARD UNUSED ABBREVIATIONS AND SYMBOLS.
3. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR LUMINAIRE LOCATIONS.
4. ELECTRICAL CONTRACTOR SHALL COORDINATE LOCATION OF LUMINAIRES WITH OTHER TRADES.
5. FOR LOCATION OF MECHANICAL EQUIPMENT, REFER TO MECHANICAL PLANS.
6. A '+' BESIDE A DEVICE INDICATES MOUNTED ABOVE CASEWORK OR COUNTER. A 'UC' BESIDE A DEVICE INDICATES MOUNTED UNDER COUNTER.
7. PROVIDE # 10 AWG PHASE, NEUTRAL, AND GROUND CONDUCTORS FOR 120 VOLT, 20 AMPERE BRANCH CIRCUITS EXCEEDING 100 FEET.

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WHATABURGER

STATE OF MISSOURI
JASON E. CHRISTOFF
NUMBER PE-2012002143
PROFESSIONAL ENGINEER

12/22/20
PROFESSIONAL OF RECORD:
JASON E. CHRISTOFF No. 20012002143
EXP. DATE: 12/31/20

REV	DESCRIPTION	DATE

Project No.: 62-40497-01

Client Project No.:

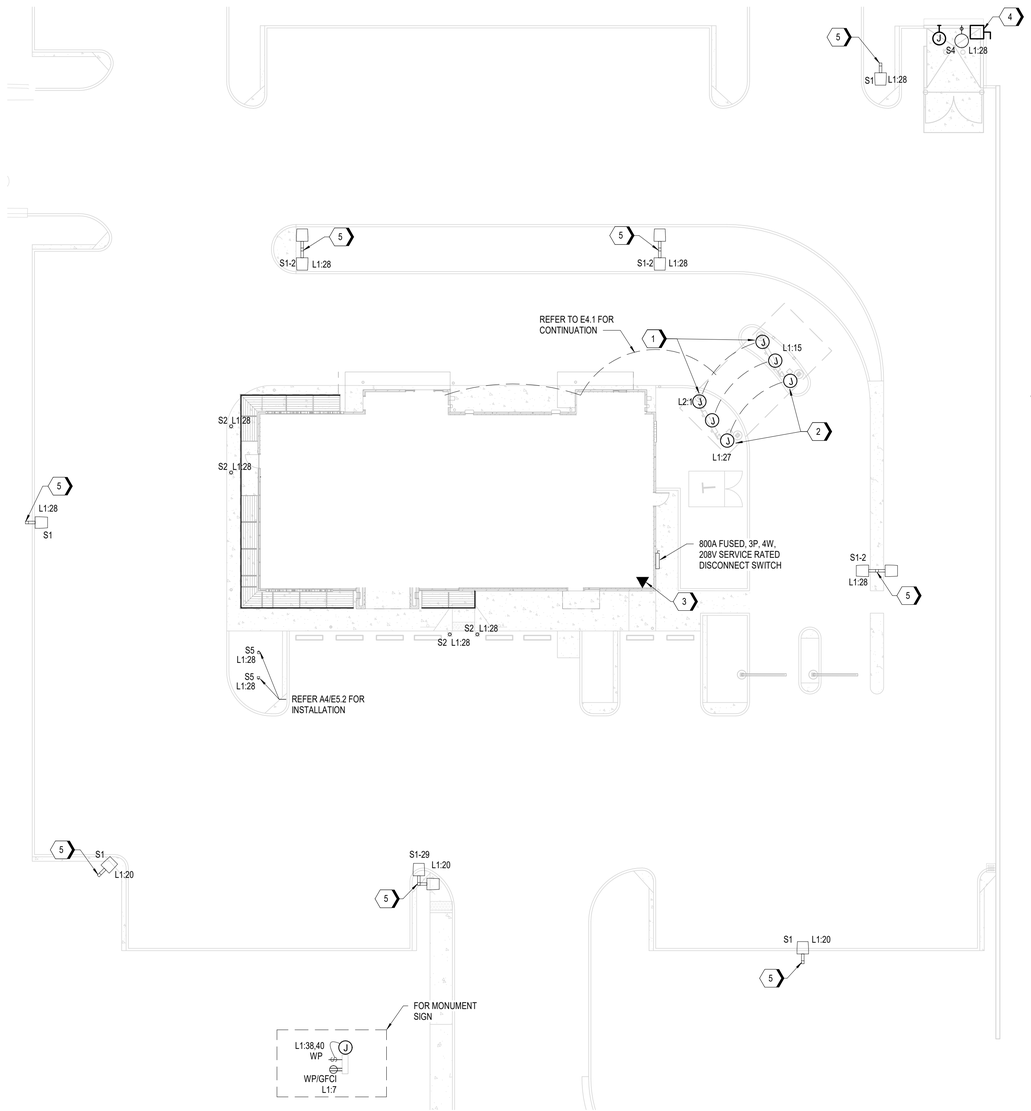
Drawing Title:

ELECTRICAL ABBREVIATIONS AND SCHEDULES

Date: 12/22/20 *Phase:* PERMIT SET

Designed: DCU
Drawn : DCU
Checked : KFF

Drawing No.:
E0.2



A1 ELECTRICAL SITE PLAN

1/16" = 1'-0"

GENERAL NOTES

A. REFER TO SHEET E0.1 AND E0.2 FOR ELECTRICAL SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES.

B. CIRCUIT SIGNAGE TO NEW BUILDING AS SHOWN.

C. ELECTRICAL CONTRACTOR SHALL VERIFY UNDERGROUND SERVICE REQUIREMENTS WITH POWER COMPANY.

D. SIGNAGE TO BE INSTALLED BY SIGN CONTRACTOR. VERIFY EXACT LOCATIONS, LOADS, AND WIRING REQUIREMENTS PRIOR TO INSTALLATION.

E. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL CONDUIT, WIRING, AND CONNECTIONS FOR SIGNAGE AND PARKING LOT LIGHTS. COORDINATE EXACT LOCATIONS.

F. ELECTRICAL CONTRACTOR SHALL VERIFY ALL REQUIREMENTS WITH SITE CONTRACTOR.

G. UNDERGROUND CONDUIT INSTALLATIONS SHALL COMPLY WITH NEC ARTICLE 300.5. UNLESS OTHERWISE NOTED, MINIMUM SIZE FOR CONDUIT SHALL BE 1".

H. EXTERIOR LIGHTING AND SIGN LIGHTING SHALL BE CONTROLLED VIA TIME CLOCK AND PHOTOCELL. REFER TO SHEET E5.1 FOR LIGHTING CONTROL WIRING DIAGRAM.

KEYNOTES

1	EXTERIOR MENU BOARD. PROVIDE 1"C FROM MENU BOARD TO PANEL 'L2' AND PROVIDE 1" SPARE CONDUIT.
2	1" CABLE ELECTRIC SERVICE FOR VEHICLE DETECTOR, AUDIO, AND VIDEO TO BACK OF DRIVE THRU WINDOW SPEAKER POST.
3	TELEPHONE SERVICE IN 2" UNDERGROUND CONDUIT. ROUTE LINE TO BUILDING AT THIS LOCATION. COORDINATE TELEPHONE SERVICE WITH UTILITY.
4	TRASH COMPACTOR. PROVIDE 30A/240V/3P/NF/NEMA 3R DISCONNECT SWITCH WITH 3#10, #10 GND, IN 1"C TO PANEL 'MDP'. STUB UP AGAINST SERVICE YARD WALL.
5	PROVIDE 3/4" CONDUIT WITH PULL STRING FROM LIGHT POLE BACK TO BUILDING FOR CAMERAS AND ACCESS POINTS. COORDINATE WITH OWNER REPRESENTATIVE FOR ADDITIONAL REQUIREMENTS.

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STATE OF MISSOURI
JASON E. CHRISTOFF
NUMBER
PE-2012002143
PROFESSIONAL ENGINEER

12/22/20
PROFESSIONAL OF RECORD:
JASON E. CHRISTOFF No. 20012002143
EXP. DATE: 12/31/20

REV	DESCRIPTION	DATE

Project No.: 62-40497-01

Client Project No.:

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ELECTRICAL SITE PLAN

Date: 12/22/20 *Phase:* PERMIT SET

Designed: DCU
Drawn : DCU
Checked : KFF

Drawing No.:

E1.1

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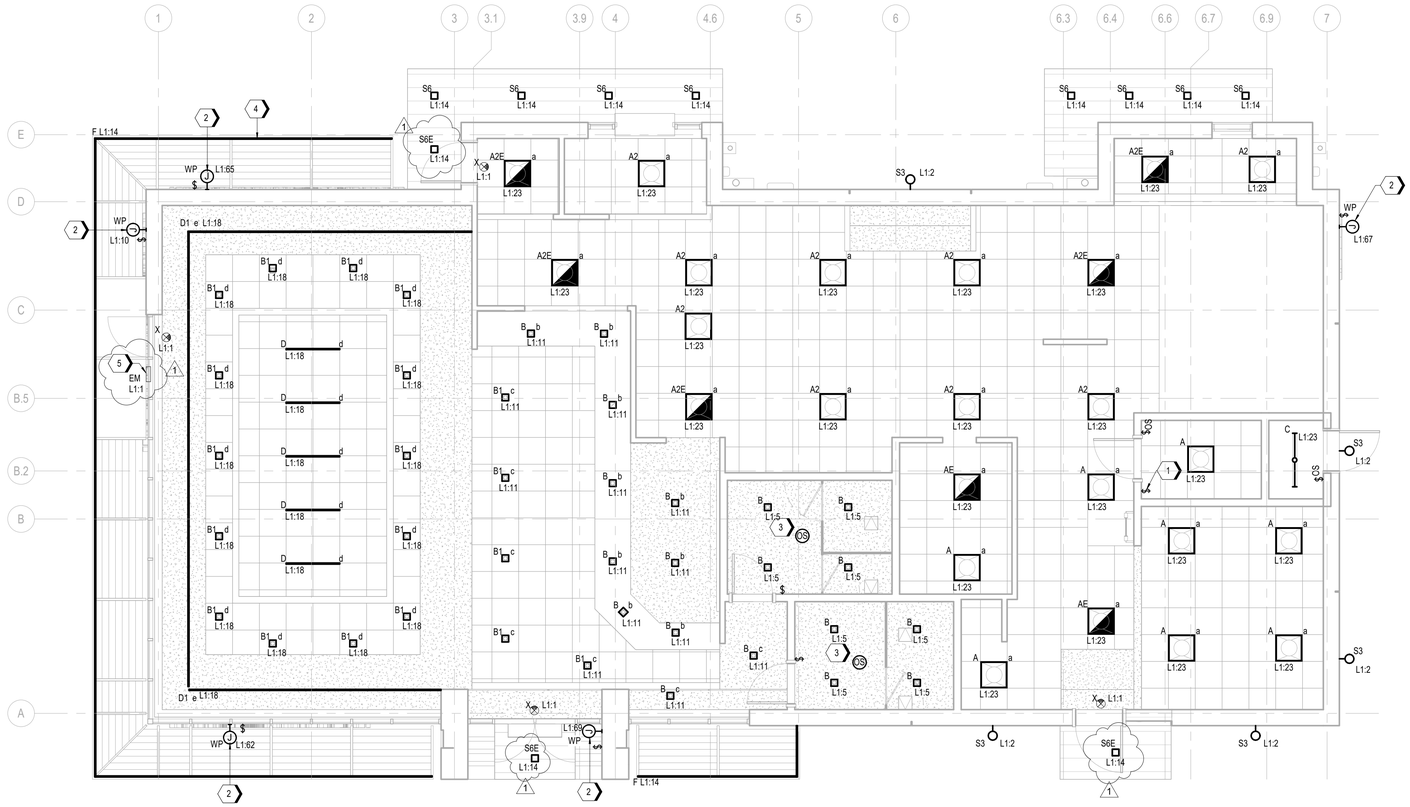

A1 ELECTRICAL LIGHTING PLAN

3/16" = 1'-0"

GENERAL NOTES

A. REFER TO SHEET E0.1 AND E0.2 FOR ELECTRICAL SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES.

B. DINING ROOM LIGHTING PLAN CORRESPONDS TO REFLECTED CEILING PLAN, SHEET A1.3. ELECTRICAL CONTRACTOR SHALL REFER TO THE PLANS PROVIDED BY INTERIOR DECOR.

C. ALL LIGHTING FIXTURES SHALL BE SWITCHED LOCALLY, CONTROLLED BY OCCUPANCY SENSOR OR BMS CONTROLLED UNLESS OTHERWISE NOTED.

D. SPECIAL SWITCHES SHALL BE INSTALLED AS NOTED.

E. REFER TO ARCHITECTURAL CEILING PLAN, SHEET A1.3 FOR EXACT LOCATIONS OF ALL LIGHT FIXTURES AND HVAC DIFFUSER LOCATIONS PRIOR TO ANY ELECTRICAL ROUGH-IN.

F. COORDINATE EXACT LOCATION OF J-BOXES WITH ACTUAL LOCATION OF RESPECTIVE SIGNAGE OR LIGHTING. ALL EXTERIOR SIGNAGE AND LIGHTING SHALL BE CONTROLLED THROUGH A LIGHTING CONTROL PANEL. LIGHTING CONTROL PANEL SHALL HAVE AN 8-POLE, NORMALLY OPEN CONTACTOR. ALL WHATABURGER LOGO BUILDING SIGNS CONNECTED TO OUTDOOR SIGNAGE TERMINALS, SOFFIT RECESSED FIXTURES, AND BACK DOOR LIGHTING ARE CONNECTED TO OUTDOOR LIGHTING TERMINALS.

G. REFER TO SHEET E1.1 FOR LOCATIONS OF SIGNAGE, PARKING LOT LIGHTING, DRIVE THRU CONDUITS AND SERVICE LOCATION.

H. ELECTRICAL CONTRACTOR SHALL DETERMINE FINAL CONDUCTOR LENGTHS AND SIZES AS PER N.E.C. SIZE OF CONDUCTORS SHALL BE ADJUSTED FOR VOLTAGE DROP AS REQUIRED BY N.E.C.

I. ALL PENETRATIONS THROUGH THE WALK IN COOLER/FREEZER ARE TO BE SEALED WITH SILICONE AROUND THE INTERIOR AND EXTERIOR OF THE CONDUITS TO PREVENT CONDENSATION.

J. ELECTRICAL CONTRACTOR SHALL FEED SIGNAGE AND SECURITY LIGHTING WITH SEPERATE CIRCUITS ON ANY COMMON CONDUIT RUN. FOR EXAMPLE, DO NOT FEED A POLE TOP SECURITY LIGHT IN THE SAME CIRCUIT WITH THE LARGE SIGN. SEPERATE ALL SIGNAGE AND SECURITY LIGHTING.

K. REFER TO ARCHITECTURAL ELEVATIONS FOR BUILDING SIGN LOCATIONS. COORDINATE ALL J-BOX LOCATIONS WITH SIGN LOCATIONS PRIOR TO INSTALLATION.

L. REFER TO SHEET E6.1 FOR LIGHT FIXTURE SCHEDULE.

KEYNOTES

1	PROVIDE GRAPHIC LIGHTING CONTROL SCENE SELECTOR SWITCH TO CONTROL SWITCH LEGS "a-e".
2	COORDINATE EXACT LOCATION OF JUNCTION BOX FOR EXTERIOR SIGNAGE WITH ACTUAL LOCATION OF EXTERIOR SIGNAGE. PROVIDE SWITCH FOR SIGNAGE IN WEATHER PROOF ENCLOSURE.
3	CEILING/WALL MOUNTED OCCUPANCY SENSOR TO CONTROL LIGHTING WITHIN THIS SPACE WITH A MAXIMUM DELAY SETTING OF 30 MINUTES.
4	REFER TO VIEW C1 ON SHEET A6.8 FOR TYPE F DETAIL.
5	EM STEP LIGHT SHALL BE WIRED ONLY AS AN EMERGENCY LIGHT TO BE ENERGIZED UPON POWER FAILURE. MOUNT FIXTURE A MINIMUM OF 8" ABOVE FINISHED GRADE AND 8" FROM DOOR.

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12/22/20
PROFESSIONAL OF RECORD:
JASON E. CHRISTOFF No. 20012002143
EXP. DATE: 12/31/20

REV	DESCRIPTION	DATE
1	REV-1 Plan Review	01/27/21

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ELECTRICAL LIGHTING PLAN - FIRST FLOOR

Date: 12/22/20 *Phase:* PERMIT SET

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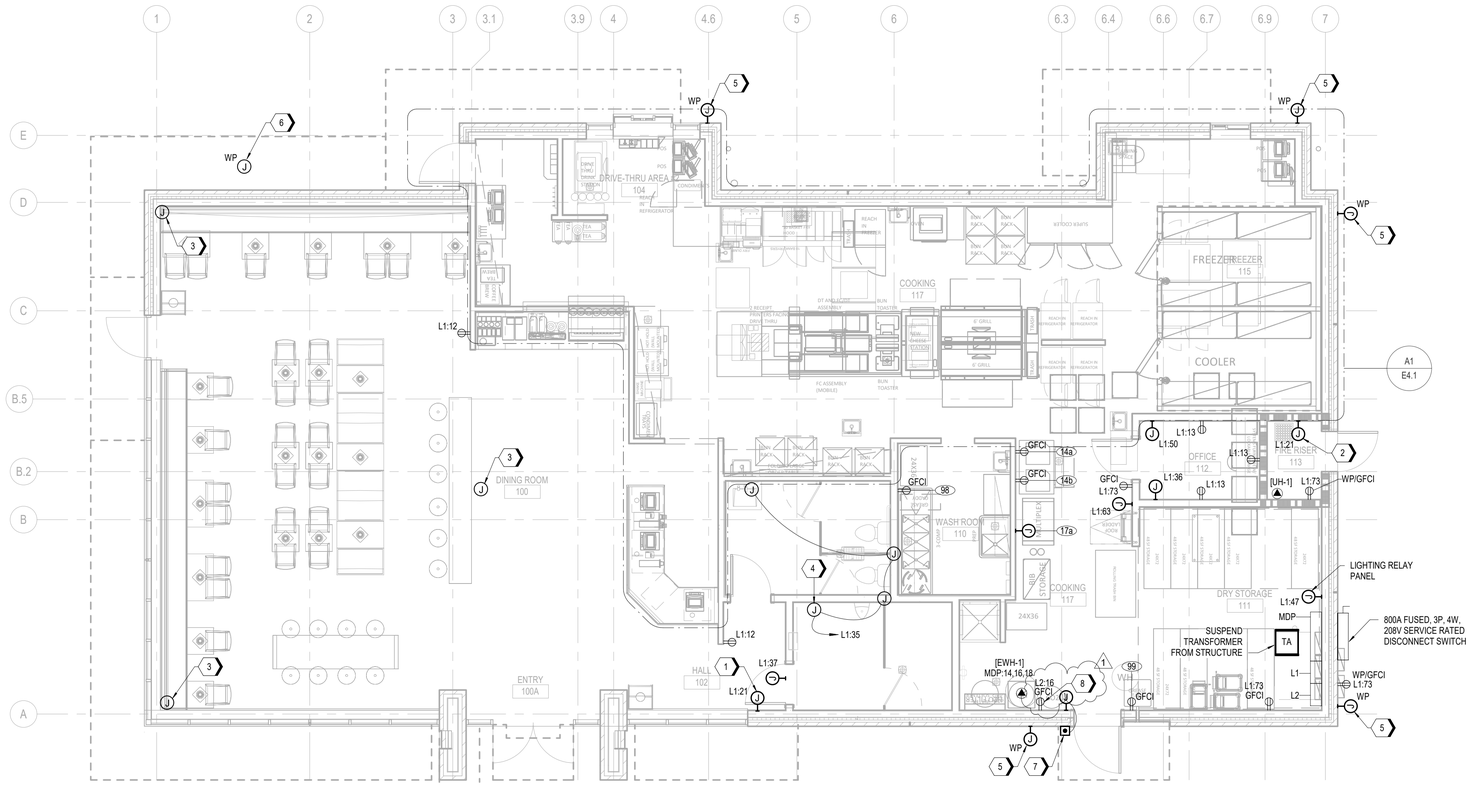

A1 ELECTRICAL POWER PLAN

3/16" = 1'-0"

GENERAL NOTES

A. REFER TO SHEET E0.1 AND E0.2 FOR ELECTRICAL SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES.

B. VERIFY ALL POWER AND TELEPHONE COMPANY REQUIREMENTS PRIOR TO ALL INSTALLATIONS.

C. LEAVE A PULL WIRE IN ALL EMPTY CONDUITS.

D. ELECTRICAL CONTRACTOR SHALL ROUTE UNDERFLOOR POWER WIRING IN CONDUITS TO KITCHEN PANELS AS REQUIRED.

E. ELECTRICAL KITCHEN EQUIPMENT SCHEDULE IS ONLY SHOWN FOR REFERENCE. COORDINATE ALL KITCHEN RECEPTACLES, EQUIPMENT CONNECTIONS, AND INSTALLATION WITH KITCHEN DRAWINGS AND EQUIPMENT SUPPLIER. REFER TO EQUIPMENT SUPPLIER DRAWINGS FOR PRE-WIRED KITCHEN PANELS AND FOR ADDITIONAL EQUIPMENT LISTING AND REQUIREMENTS.

F. PANELS SHALL NOT TAKE MORE SPACE THAN ALLOCATIED ON PLANS. ONLY SPACES FOR BREAKERS SHALL HAVE KNOCKOUTS IN PANELS. BREAKER CLOSURE PLATES SHALL BE KEPT TO A MINIMUM.

G. ELECTRICAL CONTRACTOR SHALL CONNECT ALL INTERNAL WIRING (CORD SETS) BETWEEN VENTILATION STAND AND PASS-THROUGH STAND. CONNECTIONS SHALL BE COMPLETE AND TESTED BEFORE ACCEPTANCE.

H. CENTER ISLAND KITCHEN EQUIPMENT IS PROVIDED PREWIRED TO EQUIPMENT CONTRACTORS.

I. ALL JUNCTION BOXES SERVING ISOLATED GROUND RECEPTACLES, SHALL BE LABELED "REGISTER."

J. ALL ISOLATED GROUND SPLICES SHALL BE MADE WITH CRIMP TYPE CONNECTORS. WIRE NUTS ARE NOT ACCEPTABLE.

K. REFER TO KITCHEN EQUIPMENT PLANS FOR EXACT LOCATION OF ELEC. CONDUIT STUB-UPS AT COOK LINES.

L. ALL KITCHEN 115 AND 120 VAC RECEPTACLES SHALL BE GFCI PROTECTED PER NEC AND LOCAL AHJ.

M. REFER TO SHEET E6.1 FOR KITCHEN EQUIPMENT SCHEDULE.

KEYNOTES

1	FIRE ALARM ANNUNCIATOR PANEL. REFER TO FIRE ALARM DRAWINGS FOR FURTHER INFORMATION.
2	FIRE ALARM CONTROL PANEL. REFER TO FIRE ALARM DRAWINGS FOR FURTHER INFORMATION.
3	PROVIDE CEILING MOUNTED JUNCTION BOX FOR SECURITY. PROVIDE 3/4" CONDUIT WITH NYLON PULL STRING FROM ELECTRICAL PANEL AREA TO JUNCTION BOX.
4	PROVIDE STEP-DOWN TRANSFORMER FOR FLUSH VALVES.
5	PROVIDE WALL MOUNTED, GASKETED JUNCTION BOX MOUNTED 9'-0" ABOVE GRADE FOR SECURITY. PROVIDE 3/4" CONDUIT WITH NYLON PULL STRING FROM ELECTRICAL PANEL AREA TO JUNCTION BOX.
6	PROVIDE CEILING MOUNTED, GASKETED JUNCTION BOX FOR SECURITY. PROVIDE 3/4" CONDUIT WITH NYLON PULL STRING FROM ELECTRICAL PANEL AREA TO JUNCTION BOX.
7	PROVIDE BELL AND BUZZER WITH STAINLESS STEEL COVER PLATE. PROVIDE 120/24V CONTROL TRANSFORMER. EDWARDS #156G-3G5/592/630.
8	PROVIDE CO2 DETECTION SYSTEM (EQUAL TO LOGICO2, CO2 MK9 DETECTOR SET 4 A) AND ASSOCIATED GFI RECEPTACLE. INSTALL SYSTEM PER MANUFACTURER RECOMMENDATIONS, AND LOCAL AND FEDERAL CODE REQUIREMENTS.

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PROFESSIONAL ENGINEER

12/22/20
PROFESSIONAL OF RECORD:
JASON E. CHRISTOFF No. 20012002143
EXP. DATE: 12/31/20

REV	DESCRIPTION	DATE
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ELECTRICAL POWER PLAN

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E3.1

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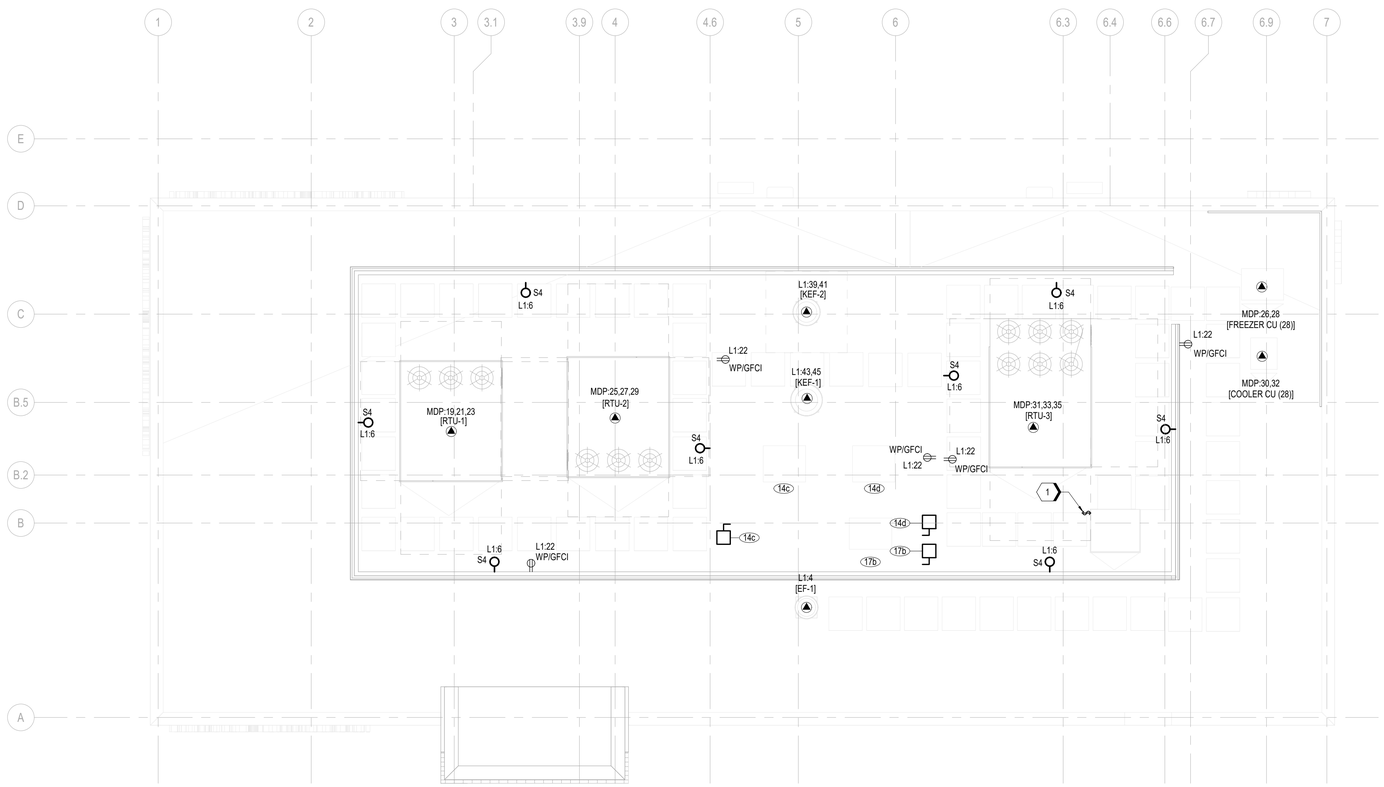

A1 ELECTRICAL POWER PLAN - ROOF

3/16" = 1'-0"

GENERAL NOTES

A. REFER TO SHEET E0.1 AND E0.2 FOR ELECTRICAL SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES.

B. VERIFY ALL POWER AND TELEPHONE COMPANY REQUIREMENTS PRIOR TO ALL INSTALLATIONS.

C. LEAVE A PULL WIRE IN ALL EMPTY CONDUITS.

D. ELECTRICAL CONTRACTOR SHALL ROUTE UNDERFLOOR POWER WIRING IN CONDUITS TO KITCHEN PANELS AS REQUIRED.

E. ELECTRICAL KITCHEN EQUIPMENT SCHEDULE IS ONLY SHOWN FOR REFERENCE. COORDINATE ALL KITCHEN RECEPTACLES, EQUIPMENT CONNECTIONS, AND INSTALLATION WITH KITCHEN DRAWINGS AND EQUIPMENT SUPPLIER. REFER TO EQUIPMENT SUPPLIER DRAWINGS FOR PRE-WIRED KITCHEN PANELS AND FOR ADDITIONAL EQUIPMENT LISTING AND REQUIREMENTS.

F. PANELS SHALL NOT TAKE MORE SPACE THAN ALLOCATIED ON PLANS. ONLY SPACES FOR BREAKERS SHALL HAVE KNOCKOUTS IN PANELS. BREAKER CLOSURE PLATES SHALL BE KEPT TO A MINIMUM.

G. ELECTRICAL CONTRACTOR SHALL CONNECT ALL INTERNAL WIRING (CORD SETS) BETWEEN VENTILATION STAND AND PASS-THROUGH STAND. CONNECTIONS SHALL BE COMPLETE AND TESTED BEFORE ACCEPTANCE.

H. CENTER ISLAND KITCHEN EQUIPMENT IS PROVIDED PREWIRED TO EQUIPMENT CONTRACTORS.

I. ALL JUNCTION BOXES SERVING ISOLATED GROUND RECEPTACLES, SHALL BE LABELED "REGISTER."

J. ALL ISOLATED GROUND SPLICES SHALL BE MADE WITH CRIMP TYPE CONNECTORS. WIRE NUTS ARE NOT ACCEPTABLE.

K. REFER TO KITCHEN EQUIPMENT PLANS FOR EXACT LOCATION OF ELEC. CONDUIT STUB-UPS AT COOK LINES.

L. ALL KITCHEN 115 AND 120 VAC RECEPTACLES SHALL BE GFCI PROTECTED PER NEC AND LOCAL AHJ.

M. REFER TO SHEET E6.1 FOR KITCHEN EQUIPMENT SCHEDULE.

KEYNOTES

1	PROVIDE WEATHER PROOF ENCLOSURE FOR ROOF LIGHTING AND SWITCH.

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PROFESSIONAL OF RECORD:
JASON E. CHRISTOFF No. 20012002143
EXP. DATE: 12/31/20

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Project No.: 62-40497-01

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ELECTRICAL POWER PLAN - ROOF

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E3.2

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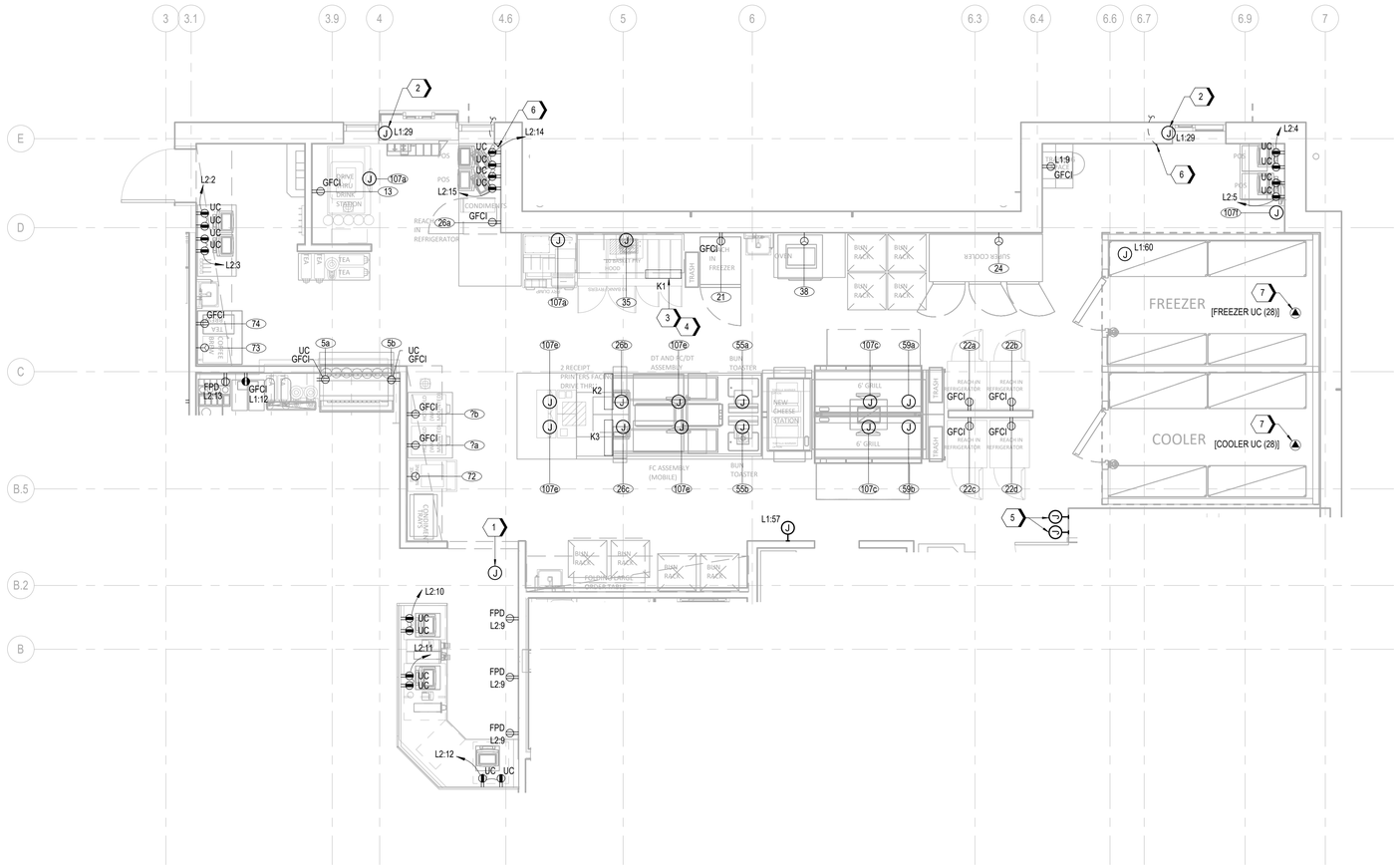

A1 ENLARGED FLOOR PLAN - KITCHEN

1/4" = 1'-0"

GENERAL NOTES

A. REFER TO SHEET E0.1 AND E0.2 FOR ELECTRICAL SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES.

B. VERIFY ALL POWER AND TELEPHONE COMPANY REQUIREMENTS PRIOR TO ALL INSTALLATIONS.

C. LEAVE A PULL WIRE IN ALL EMPTY CONDUITS.

D. ELECTRICAL CONTRACTOR SHALL ROUTE UNDERFLOOR POWER WIRING IN CONDUITS TO KITCHEN PANELS AS REQUIRED.

E. ELECTRICAL KITCHEN EQUIPMENT SCHEDULE IS ONLY SHOWN FOR REFERENCE. COORDINATE ALL KITCHEN RECEPTACLES, EQUIPMENT CONNECTIONS, AND INSTALLATION WITH KITCHEN DRAWINGS AND EQUIPMENT SUPPLIER. REFER TO EQUIPMENT SUPPLIER DRAWINGS FOR PRE-WIRED KITCHEN PANELS AND FOR ADDITIONAL EQUIPMENT LISTING AND REQUIREMENTS.

F. PANELS SHALL NOT TAKE MORE SPACE THAN ALLOCATIED ON PLANS. ONLY SPACES FOR BREAKERS SHALL HAVE KNOCKOUTS IN PANELS. BREAKER CLOSURE PLATES SHALL BE KEPT TO A MINIMUM.

G. ELECTRICAL CONTRACTOR SHALL CONNECT ALL INTERNAL WIRING (CORD SETS) BETWEEN VENTILATION STAND AND PASS-THROUGH STAND. CONNECTIONS SHALL BE COMPLETE AND TESTED BEFORE ACCEPTANCE.

H. CENTER ISLAND KITCHEN EQUIPMENT IS PROVIDED PREWIRED TO EQUIPMENT CONTRACTORS.

I. ALL JUNCTION BOXES SERVING ISOLATED GROUND RECEPTACLES, SHALL BE LABELED "REGISTER."

J. ALL ISOLATED GROUND SPLICES SHALL BE MADE WITH CRIMP TYPE CONNECTORS. WIRE NUTS ARE NOT ACCEPTABLE.

K. REFER TO KITCHEN EQUIPMENT PLANS FOR EXACT LOCATION OF ELEC. CONDUIT STUB-UPS AT COOK LINES.

L. ALL KITCHEN 115 AND 120 VAC RECEPTACLES SHALL BE GFCI PROTECTED PER NEC AND LOCAL AHJ.

M. REFER TO SHEET E6.1 FOR KITCHEN EQUIPMENT SCHEDULE.

KEYNOTES

1	PROVIDE CEILING MOUNTED JUNCTION BOX FOR SECURITY. PROVIDE 3/4" CONDUIT WITH NYLON PULL STRING FROM ELECTRICAL PANEL AREA TO JUNCTION BOX.
2	PROVIDE JUNCTION BOX FOR POWER CONNECTION TO DRIVE-THRU WINDOW. COORDINATE WITH KITCHEN EQUIPMENT DRAWINGS FOR EXACT LOCATION AND CONNECTION REQUIREMNETS.
3	PROVIDE 3/4" UNDERGROUND CONDUIT FOR POWER TO ANSUL FIRE SUPRESSION SYSTEM.
4	PRE-WIRED KITCHEN ELECTRICAL PANELS FURNISHED BY EQUIPMENT SUPPLIER. ACTUAL LOCATION DETERMINED BY EQUIPMENT SUPPLIER AND SHOWN FOR REFERENCE ONLY. REFER TO KITCHEN EQUIPMENT SUPPLIER FOR ALL INSTALLATION/CONNECTION REQUIREMENTS.
5	INSTALL RACO #294 4" OCTAGON BOX MOUNTED FLUSH IN WALL 48" ABOVE FINISHED FLOOR WITH 1/2" CONDUIT ROUTED TO ABOVE CEILING WITH PULLWIRE FOR ANSUL PULLSTATION.
6	STUB UP 3/4" PVC 88" ABOVE FINISHED FLOOR FOR LOW VOLTAGE FOR DRIVE-THRU SENSOR. REFER TO SHEET E1.1 FOR CONTINUATION.
7	REFER TO KITCHEN EQUIPMENT SUPPLIER FOR TIME CLOCK AND LOCAL DISCONNECTING MEANS IN FREEZER/COOLER.

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PROFESSIONAL ENGINEER

12/22/20
PROFESSIONAL OF RECORD:
JASON E. CHRISTOFF No. 20012002143
EXP. DATE: 12/31/20

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Project No.: 62-40497-01

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ELECTRICAL ENLARGED PLANS

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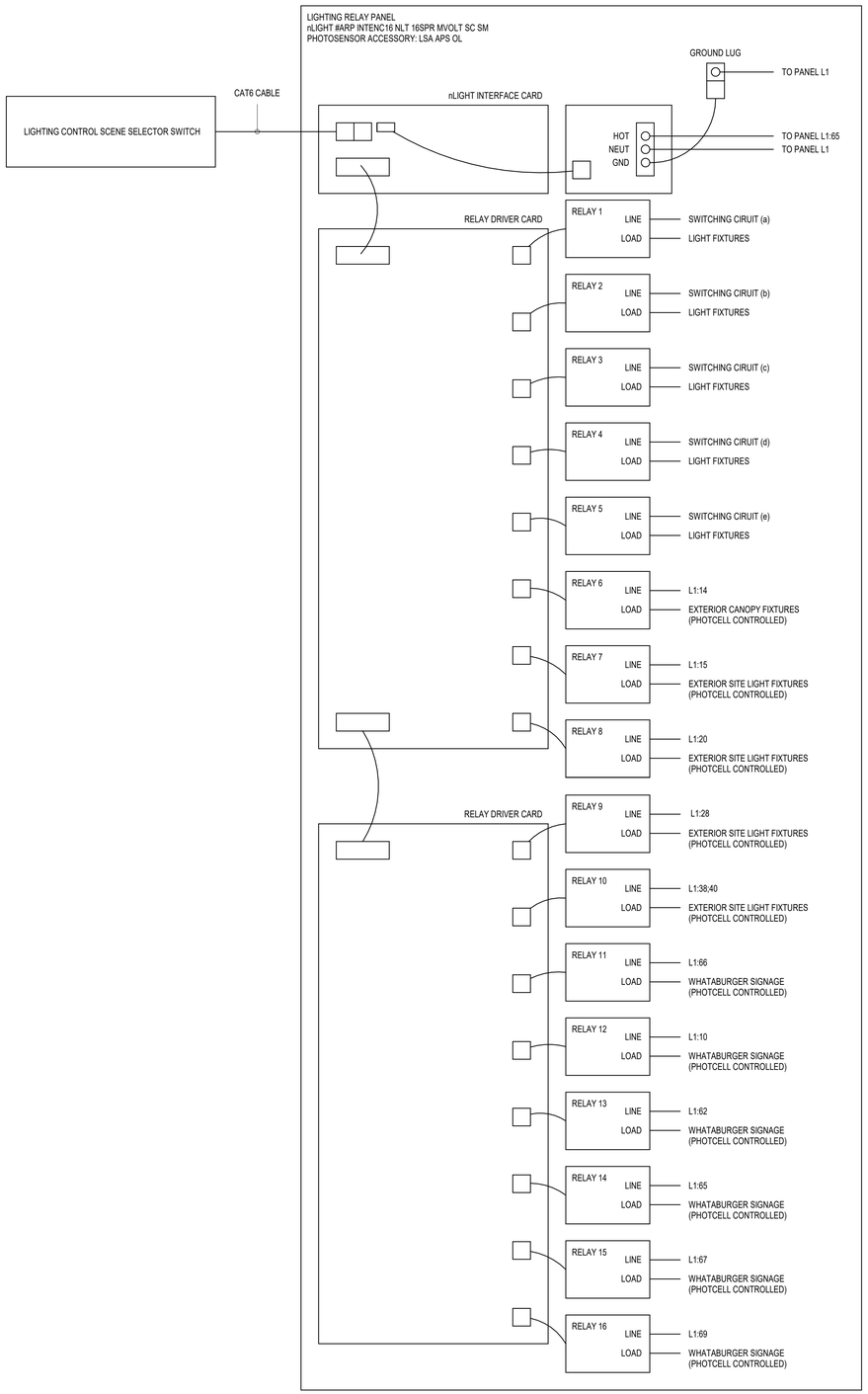


A1 LIGHTING RELAY PANEL DIAGRAM
N.T.S.

KEYNOTES

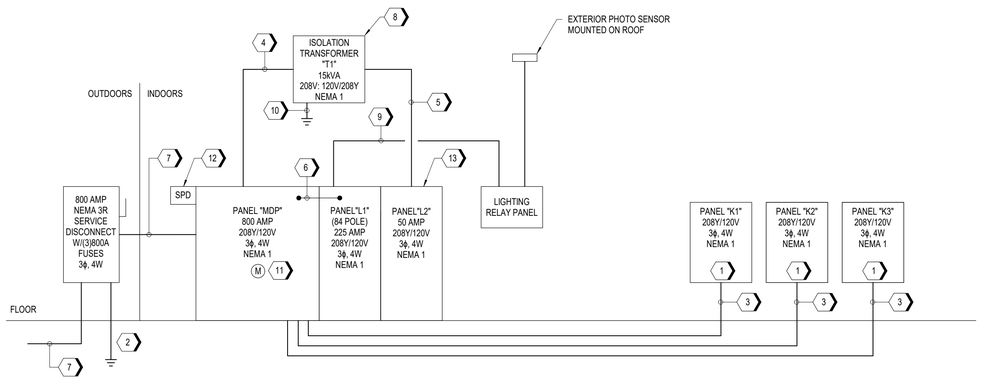
1	FURNISED BY KITCHEN EQUIPMENT SUPPLIER, COORDINATE WITH SUPPLIER FOR FINAL LOCATIONS. CIRCUITS ARE PREWIRED TO EQUIPMENT, FEEDERS BY CONTRACTOR, COORDINATE AND RESIZE WHERE REQUIRED.
2	GROUNDING SHALL BE PER NEC. FURNISH AND INSTALL 3/4"X10'-0" GROUND ROD AT A CONCRETE ENCASED ELECTRODE. CONNECT THE BUILDING SERVICE GROUND TO THE GROUND ROD, ENCASED ELECTRODE AND DOMESTIC COLD WATER PIPING WITH BARE #3/0 COPPER CONDUCTOR. BONDING SHALL BE PER NEC. REFER TO C3/E5.2.
3	4#1/0, #6 GND, IN 2"C.
4	3#6, #10 GND, IN 1"C.
5	4#6, #10 GND, IN 1"C.
6	4#4/0, #4 GND, IN 2-1/2"C.
7	(2 SETS) 4-600 kCMIL, #1/0 GND, IN EACH 3-1/2"C.
8	PROVIDE ISOLATION TRANSFORMER. SUSPEND TRANSFORMER FROM STRUCTURE. REFER TO DETAIL B1/E5.2.
9	2#12, #12 GND, IN 3/4"C.
10	#6 GROUNDING ELECTRODE CONDUCTOR.
11	PROVIDE DIGITAL LCD kWh DEMAND METER.
12	PROVIDE 240 kA SURGE PROTECTIVE DEVICE.
13	PROVIDE MODULAR PANELBOARD SYSTEM (SQUARE D CATALOG: MPS) FOR PANELS MDP, L1, AND L2.

ELECTRICAL SERVICE DEMAND LOAD ANALYSIS
NEC 220.88 - NEW RESTURANT LOAD CALCULATION
TOTAL CONNECTED: 385.5 KVA
SYSTEM VOLTAGE: 208Y/120V, 3-PHASE, 4-WIRE+GND

TABLE 220.88 (ALL ELECTRIC LOADS)
326 KVA - 800 KVA: 50% * (TOTAL CONNECTED - 325 KVA) + 172.5 KVA

50%*(418.7-325)+172.5 = 219.3 KVA

202.7 KVA @ 208V, 3-PHASE = 608.8 A DEMAND



NOTICE TO CONTRACTOR:
PROVIDE COORDINATION AND ARCFLASH LABELS IN ACCORDANCE WITH NEC 240.87.

A3 SINGLE LINE DIAGRAM
N.T.S.

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12/22/20
PROFESSIONAL OF RECORD:
JASON E. CHRISTOFF No. 20012002143
EXP. DATE: 12/31/20

REV	DESCRIPTION	DATE

Project No.: 62-40497-01
Client Project No.:
Drawing Title:

ELECTRICAL DIAGRAMS

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Designed: DCU
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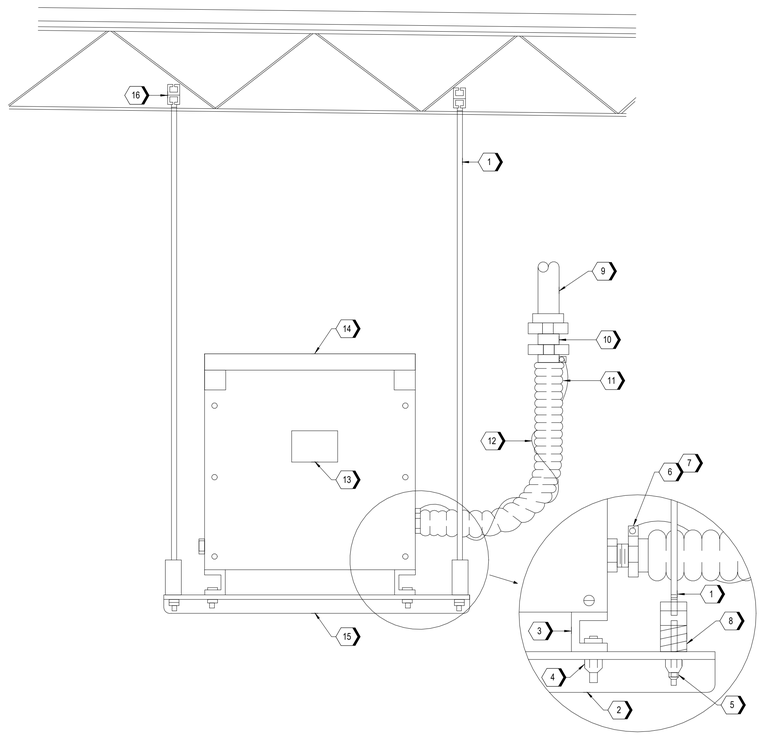
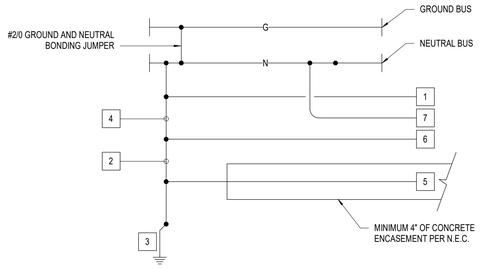


B1 TRANSFORMER SUSPENSION DETAIL
N.T.S.

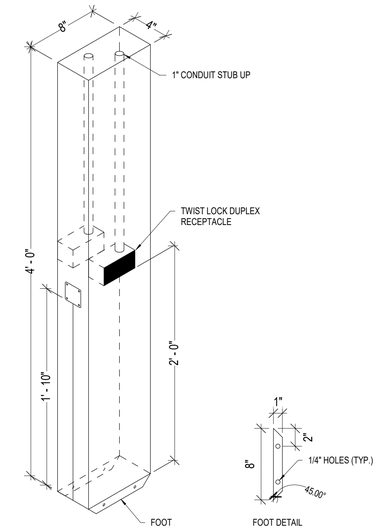


C3 SERVICE ENTRANCE GROUNDING DETAIL
N.T.S.

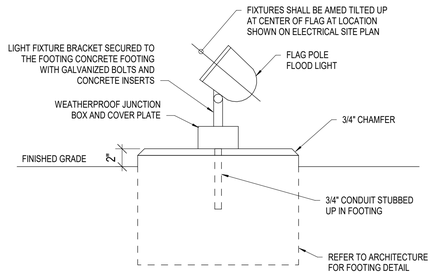
KEYNOTES

1	1/2" DIAMETER THREADED STEEL ROD SUPPORT FROM STRUCTURE ABOVE.
2	ANGLE IRON SUPPORT 3" x 3" TO REQ'D. LENGTH TO SUIT.
3	TRANSFORMER BASE CHANNEL.
4	1/2" DIAMETER NUT, BOLT & WASHER 4 REQUIRED.
5	1/2" DIAMETER NUT, LOCKNUT & LOCKWASHER 4 REQUIRED.
6	SECONDARY CONNECTION DETAIL, PRIMARY - SIMILAR.
7	GROUND CONNECTOR.
8	VIBRATION ELIMINATOR 4 REQUIRED.
9	RIGID CONDUIT.
10	COMBINATION COUPLING.
11	LIQUID TIGHT FLEXIBLE METAL CONDUIT 18" MIN.
12	EXTERNAL COPPER BONDING WIRE.
13	NAMEPLATE-CONNECTION DIAGRAM.
14	TRANSFORMER.
15	BOTTOM OF SUPPORT OR ANY DEVICE SHALL NOT BE LESS THAN 7'-0" ABOVE FINISHED FLOOR.
16	PROVIDE MISCELLANEOUS STEEL SPAN TO THE NEXT JOIST AS REQ'D. TO CONN. TO STRUCTURE. SUBMIT DETAIL FOR STRUCTURAL ENGINEER APPROVAL.

SERVICE GROUNDING NOTES:	
1	PROVIDE 1#3/0 GROUNDING ELECTRODE CONDUCTOR IN 1" CONDUIT, CONNECTED TO BUILDING STRUCTURAL STEEL.
2	PROVIDE 1#3/0 GROUNDING ELECTRODE CONDUCTOR IN 1" CONDUIT, CONNECTED TO COPPER CLAD STEEL GROUND ROD
3	PROVIDE A 3/4" DIAMETER X 10'-0" LONG COPPER CLAD STEEL GROUND ROD AND CONNECT TO COLD WATER LINE FOR SERVICE ENTRANCE
4	PROVIDE 1#3/0 GROUNDING ELECTRODE CONDUCTOR IN 1" CONDUIT
5	PROVIDE 1#3/0 CONCRETE ENCASED GROUNDING ELECTRODE WITH A MINIMUM LENGTH OF 20'-0".
6	PROVIDE 1#3/0 GROUNDING ELECTRODE CONDUCTOR TO COLD WATER METAL PIPE GROUND CLAMP.
7	1#6 EQUIPMENT GROUND CONDUCTOR IN 3/4" CONDUIT, CONNECTED TO TELEPHONE TERMINAL BACKBOARD.



A3 MONITOR CHASE DETAIL
1 1/2" = 1'-0"



A4 FLAG POLE FLOOD LIGHT
N.T.S.

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
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01/13/2021

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STATE OF MISSOURI
JASON E. CHRISTOFF
NUMBER PE-2012002143
PROFESSIONAL ENGINEER

12/22/20
PROFESSIONAL OF RECORD:
JASON E. CHRISTOFF No. 20012002143
EXP. DATE: 12/31/20

REV	DESCRIPTION	DATE

Project No.: 62-40497-01
Client Project No.:
Drawing Title:

ELECTRICAL DETAILS

Date: 12/22/20 *Phase:* PERMIT SET
Designed: DCU
Drawn : DCU
Checked : R. ORTIZ
Drawing No.: E5.2

LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER	MODEL	DESCRIPTION	LAMP	VOLTAGE	LUMENS	WATTS	MOUNTING	COMMENTS
A	LITHONIA	2GTL 2 20L GZ10 LP840	2'X2' RECESSED TROFFER (4000K COLOR TEMPERATURE, 80 CRI)	LED	120 V	2366	18	CEILING	
A2	LITHONIA	2GTL 2 48L GZ10 LP840 ABC	GASKETED 2'X2' RECESSED TROFFER (4000K COLOR TEMPERATURE, 80 CRI)	LED	120 V	5112	42	CEILING	
A2E	LITHONIA	2GTL 2 48L GZ10 LP840 E10WLCP ABC	GASKETED 2'X2' RECESSED TROFFER WITH EMERGENCY BATTERY PACK (4000K COLOR TEMPERATURE, 80 CRI)	LED	120 V	5112	42	CEILING	
AE	LITHONIA	2GTL 2 20L GZ10 LP840 E10WLCP	2'X2' RECESSED TROFFER WITH EMERGENCY BATTERY PACK (4000K COLOR TEMPERATURE, 80 CRI)	LED	120 V	2366	18	CEILING	
B	LITHONIA	LDN4SQ 40/10 LS4AR LSS MVOLT GZ10	4" RECESSED SQUARE LED DOWNLIGHT CLEAR, SEMI-SPECULAR REFLECTOR (4000K COLOR TEMPERATURE, 80 CRI)	LED	120 V	877	11	CEILING	
B1	LITHONIA	LDN4SQ 40/15 LS4AR LSS MVOLT GZ10	4" RECESSED SQUARE LED DOWNLIGHT CLEAR, SEMI-SPECULAR REFLECTOR (4000K COLOR TEMPERATURE, 80 CRI)	LED	120 V	1268	18	CEILING	
C	LITHONIA	CLX L36 2250LM SEF FDL MVOLT GZ10 40K 80CRI	36" INDUSTRIAL STRIP (4000K COLOR TEMPERATURE, 80 CRI)	LED	120 V	2101	16	SURFACE	
D	MARK	SL4L LOP 4FT FLP [TRIM] 80CRI 40K 600LMF MIN1 120 ZT	4' LINEAR RECESSED SLOT (4000K COLOR TEMPERATURE, 80 CRI)	LED	120 V	2227	23	CEILING	
D1	MARK	SL4L LOP [LENGTH] FLP [TRIM] 80CRI 40K 600LMF MIN1 120 ZT (90DEG CORNERS)	LINEAR RECESSED SLOT, LENGTH AS INDICATED ON DRAWINGS (4000K COLOR TEMPERATURE, 80 CRI)	LED	120 V	600/FT		CEILING	6 WATTS PER LINEAR FOOT
EM	COLE	L2156W-HO-2-J-B-EM	EMERGENCY STEP LIGHT WITH 90 MIN BATTERY BACKUP	LED	120 V		22	WALL	WIRE AS EM LIGHT ONLY
F	TARGETTI	DURATAPE IP66 PRAP-W	FLEXIBLE LINEAR LIGHT STRIP FOR CONTINUOUS CONSTANT COLOR.	LED	120 V	111/FT		CEILING	4 WATTS PER LINEAR FOOT
S1	TECHLIGHT	CTL-N-35L-T3-1	POLE MOUNTED SINGLE HEAD LED TYPE 3 AREA FIXTURE (4000K COLOR TEMPERATURE).	LED	120 V	34781	249	POLE	FIXTURE MOUNTED AT 25'-0"
S1-2	TECHLIGHT	CTL-N-20L-T3-1	POLE MOUNTED DOUBLE HEAD 180 DEGREES LED TYPE 5 AREA FIXTURE (4000K COLOR TEMPERATURE).	LED	120 V	69484	442	POLE	2 FIXTURES AT 180 DEGREE ORIENTATION MOUNTED AT 25'-0"
S1-29	TECHLIGHT	CTL-N-35L-T5W-1	POLE MOUNTED DOUBLE HEAD 90 DEGREES LED TYPE 3 AREA FIXTURE (4000K COLOR TEMPERATURE).	LED	120 V	39950	294	POLE	2 FIXTURES AT 90 DEGREE ORIENTATION MOUNTED AT 25'-0"
S2	BEGA	99 777 SLV / 84/623 SLV	LED BOLLARD (4000K COLOR TEMPERATURE).	LED	120 V	768	34	BOLLARD	
S3	LITHONIA	DSCW1 10C 530 40K T3M MVOLT PE DDBXD	FAÇADE EXTERIOR WALL PACK.	LED	120 V	2010	19	WALL	WALL MOUNTED 12'-0" ABOVE GRADE
S4	LITHONIA	TWS LED P1 50K MVOLT PE DDB	EXTERIOR WALL PACK.	LED	120 V	2010	18	WALL	TOP OF FIXTURE, WALL MOUNTED 1'-0" BELOW SCREEN WALL
S5	LITHONIA	OLBF 8 30K DDB	LED FLAG POLE BULLET FLOOD LIGHT	LED	120 V	592	11	FLOOD	
S6	LITHONIA	LDN4 40/15 LO4AR LSS MVOLT GZ10	4" RECESSED SQUARE LED DOWNLIGHT CLEAR, SEMI-SPECULAR REFLECTOR (4000K COLOR TEMPERATURE, 80 CRI)	LED	120 V	1516	18	CEILING	
S6E	LITHONIA	LDN4 40/15 LO4AR LSS MVOLT GZ10 EL	4" RECESSED SQUARE LED DOWNLIGHT CLEAR, SEMI-SPECULAR REFLECTOR WITH 90 MINUTE REMOTE BATTERY PACK (4000K COLOR TEMPERATURE, 80 CRI)	LED	120 V	1516	18	CEILING	REMOTE BATTERY PACK PS1055CPFMC
X	LITHONIA	LRP 1 RC 120/277 EL N	EXIT SIGN	LED	120 V	5	2	CEILING	

1

1

LIGHTING SCHEDULE NOTE:

ELECTRICAL CONTRACTOR BIDDERS MUST CONTACT DAVID GALVIN WITH ARCHITECTURAL LIGHTING ALLIANCE (ALA) FOR ALL LIGHTING AND LIGHTING CONTROLS BIDS AT 214-658-9000, CORPORATEACCOUNTS@ALATX.COM WHATABURGER IS A REGISTERED NATIONAL ACCOUNT (NA) VIA ARCHITECTURAL LIGHTING ALLIANCE (ALA) AND HORTON CONTROLS GROUP (HCG).

EQUIPMENT CONNECTION SCHEDULE

TAG	DISCONNECT RATING (AMP/VOLTAGE/POLE/FUSE/NEMA RAITING)	HP	kW	FLA	STARTER TYPE	VOLTAGE/POLES	LOAD	CIRCUIT NUMBER	WIRE & CONDUIT	COMMENTS
COOLER CU (28)	30/240/2/NF/NEMA 3R	1	-	12	-	208 V/2	2496 VA	MDP-30,32	2#12, #12 GND IN 3/4"C	REFER TO EQUIPMENT MANUFACTURER FOR ALL INSTALLATION/CONNECTION REQUIREMENTS.
COOLER UC (28)	30/240/2/NF/NEMA 3R	-	-	2	-	208 V/2	2767 VA	L1-46,48	2#12, #12 GND IN 3/4"C	REFER TO EQUIPMENT MANUFACTURER FOR ALL INSTALLATION/CONNECTION REQUIREMENTS.
EF-1	-	1/20	-	-	-	120 V/1	150 VA	L1-4	2#12, #12 GND IN 3/4"C	INTEGRAL DISCONNECT PROVIDED BY EQUIPMENT MANUFACTURER
EWH-1	60/240/3/NF/NEMA 1		10			208 V/3	10000 VA	MDP-14,16,18	3#8, #10 GND IN 3/4"C	
FREEZER CU (28)	60/240/2/NF/NEMA 3R	3	-	30	-	208 V/2	6240 VA	MDP-26,28	2#8, #10 GND IN 3/4"C	REFER TO EQUIPMENT MANUFACTURER FOR ALL INSTALLATION/CONNECTION REQUIREMENTS.
FREEZER UC (28)	30/240/2/NF/NEMA 3R	-	-	13.3	-	208 V/2	2767 VA	L1-53,55	2#12, #12 GND IN 3/4"C	REFER TO EQUIPMENT MANUFACTURER FOR ALL INSTALLATION/CONNECTION REQUIREMENTS.
KEF-1	-	3/4	-	-	-	208 V/2	1435 VA	L1-43,45	2#12, #12 GND IN 3/4"C	INTEGRAL DISCONNECT PROVIDED BY EQUIPMENT MANUFACTURER
KEF-2	-	1/4	-	-	-	208 V/2	696 VA	L1-39,41	2#12, #12 GND IN 3/4"C	INTEGRAL DISCONNECT PROVIDED BY EQUIPMENT MANUFACTURER
RTU-1	200/240/3/NF/NEMA 3R	3	-	116.8	VFD	208 V/3	50077 VA	MDP-19,21,23	3#1/0, #6 GND IN 2"C	VFD PROVIDED BY EQUIPMENT MANUFACTURER
RTU-2	200/240/3/NF/NEMA 3R	3	-	116.8	VFD	208 V/3	50077 VA	MDP-25,27,29	3#1/0, #6 GND IN 2"C	VFD PROVIDED BY EQUIPMENT MANUFACTURER
RTU-3	200/240/3/NF/NEMA 3R	5	-	116.8	VFD	208 V/3	75296 VA	MDP-31,33,35	3#1/0, #6 GND IN 2"C	VFD PROVIDED BY EQUIPMENT MANUFACTURER
UH-1	30/240/2/NF/NEMA 1	-	1.5	-	-	208 V/2	1500 VA	MDP-34,36	2#12, #12 GND IN 3/4"C	

KITCHEN EQUIPMENT CONNECTION SCHEDULE

TAG	DESCRIPTION	DISC. MEAN / MOUNTING HEIGHT	HP	kW	FLA	VOLTAGE/POLES	LOAD	CIRCUIT NUMBER	WIRE & CONDUIT	COMMENTS
5a	DUAL SIDED DRINK DISPENSER	5-20R / -	-	-	-	120 V/1	960 VA	L1-25	2#12, #12 GND IN 3/4"C	HOSPITAL GRADE RECEPTACLE, UNDER COUNTER
5b	DUAL SIDED DRINK DISPENSER	5-20R / -	-	-	-	120 V/1	960 VA	L1-24	2#12, #12 GND IN 3/4"C	HOSPITAL GRADE RECEPTACLE, UNDER COUNTER
13	DRIVE THRU DRINK DISPENSER	5-20R / 24"	-	-	-	120 V/1	624 VA	L1-17	2#12, #12 GND IN 3/4"C	
14a	ICE MAKER EVAPORATOR UNIT	5-20R / 66"	-	-	6	120 V/1	720 VA	L1-71	2#12, #12 GND IN 3/4"C	HOSPITAL GRADE RECEPTACLE
14b	ICE MAKER EVAPORATOR UNIT	5-20R / 66"	-	-	6	120 V/1	720 VA	L1-75	2#12, #12 GND IN 3/4"C	HOSPITAL GRADE RECEPTACLE
14c	ICE MAKER CONDENSING UNIT	30A/240V/2P/NF / -	-	-	17.6	208 V/2	3661 VA	L1-52,54	2#10, #10 GND IN 3/4"C	
14d	ICE MAKER CONDENSING UNIT	30A/240V/2P/NF / -	-	-	17.6	208 V/2	3661 VA	L1-59,61	2#10, #10 GND IN 3/4"C	
17a	MULTIPLEX REFRIGERATION UNIT	30A/600V/3P/NF/- / -	-	-	25.2	208 V/3	9079 VA	L1-77,79,81	3#10, #10 GND IN 3/4"C	
17b	MULTIPLEX CONDENSER UNIT	30A/240V/2P/NF / -	-	-	1.3	208 V/2	270 VA	L1-32,34	2#12, #12 GND IN 3/4"C	
21	REACH IN FREEZER	5-20R / 76"	1/2	-	11.3	120 V/1	1040 VA	L1-26	2#12, #12 GND IN 3/4"C	
22a	REACH IN REFRIGERATOR	5-20R / 76"	1/3	-	8.5	120 V/1	644 VA	L1-70	2#12, #12 GND IN 3/4"C	
22b	REACH IN REFRIGERATOR	5-20R / 76"	1/3	-	8.5	120 V/1	644 VA	L1-16	2#12, #12 GND IN 3/4"C	
22c	REACH IN REFRIGERATOR	5-20R / 76"	1/3	-	8.5	120 V/1	644 VA	L1-66	2#12, #12 GND IN 3/4"C	
22d	REACH IN REFRIGERATOR	5-20R / 76"	1/3	-	8.5	120 V/1	644 VA	L1-68	2#12, #12 GND IN 3/4"C	
24	SUPER COOLER	L14-20R / 76"	1	-	11	208 V/2	1830 VA	L1-42,44	2#12, #12 GND IN 3/4"C	
26a	UNDER COUNTER REFRIGERATOR	5-20R / -	1/6	-	-	120 V/1	420 VA	L1-8	2#12, #12 GND IN 3/4"C	
26b	UNDER COUNTER REFRIGERATOR	- / -	1/6	-	-	208 V/2	420 VA	K2-1,3	-	PREWIRED BY KITCHEN EQUIPMENT MANUFACTURER.
26c	UNDER COUNTER REFRIGERATOR	- / -	1/6	-	-	208 V/2	420 VA	K3-1,3	-	PREWIRED BY KITCHEN EQUIPMENT MANUFACTURER.
35	PITCO FRYER	6-50R / -	-	8.3	-	208 V/2	8258 VA	K1-1,3	-	PREWIRED BY KITCHEN EQUIPMENT MANUFACTURER.
35	PITCO FRYER	6-50R / -	-	8.3	-	208 V/2	8258 VA	K1-4,6	-	PREWIRED BY KITCHEN EQUIPMENT MANUFACTURER.
35	PITCO FRYER	15-60R / -	-	17	-	208 V/3	19671 VA	K1-14,16,18	-	PREWIRED BY KITCHEN EQUIPMENT MANUFACTURER.
35	PITCO FRYER	15-60R / -	-	19.7	-	208 V/3	17005 VA	K1-20,22,24	-	PREWIRED BY KITCHEN EQUIPMENT MANUFACTURER.
38	HALF-SIZED CONVECTION OVEN	15-30R / -	-	7.8	22.1	208 V/3	7800 VA	L1-72,74,76	3#10, #10 GND IN 3/4"C	
55a	BUN TOASTER	- / -	-	3.3	-	208 V/2	3300 VA	K2-2,4	-	PREWIRED BY KITCHEN EQUIPMENT MANUFACTURER.
55b	BUN TOASTER	- / -	-	3.3	-	208 V/2	3300 VA	K3-2,4	-	PREWIRED BY KITCHEN EQUIPMENT MANUFACTURER.
59a	6' GRILL	- / -	-	36	-	208 V/3	36000 VA	K2-5,7,9	-	PREWIRED BY KITCHEN EQUIPMENT MANUFACTURER.
59b	6' GRILL	- / -	-	36	-	208 V/3	36000 VA	K3-5,7,9	-	PREWIRED BY KITCHEN EQUIPMENT MANUFACTURER.
72	SHAKE MACHINE	6-20R / 24"	-	-	13	208 V/2	2704 VA	L1-49,51	2#12, #12 GND IN 3/4"C	
73	COFFEE BREWER	L14-30R / 24"	-	5.1	-	208 V/2	5100 VA	L1-56,58	3#10, #10 GND IN 3/4"C	
74	TEA BREWER	5-20R / 24"	-	1.65	-	120 V/1	1650 VA	L1-33	2#12, #12 GND IN 3/4"C	
98	MOBILE GREASE CADDY	5-20R / -	1/4		5.8	120 V/1	696 VA	L1-19	2#12, #12 GND IN 3/4"C	
99	GREASE TANK	5-20R / 66"	-	-	-	120 V/1	500 VA	L1-64	2#12, #12 GND IN 3/4"C	
107a	FLAT SCREEN MONITOR	L5-20R / -	-	-	-	120 V/1	360 VA	L2-7	2#12, #12 GND IN 3/4"C	
107a	FLAT SCREEN MONITOR	L5-20R / -	-	-	-	120 V/1	360 VA	L2-7	2#12, #12 GND IN 3/4"C	
107c	FLAT SCREEN MONITOR	L5-20R / -	-	-	-	120 V/1	360 VA	K2-8	2#12, #12 GND IN 3/4"C	
107c	FLAT SCREEN MONITOR	L5-20R / -	-	-	-	120 V/1	360 VA	K3-8	2#12, #12 GND IN 3/4"C	
107e	FLAT SCREEN MONITOR	L5-20R / -	-	-	-	120 V/1	360 VA	L2-8	2#12, #12 GND IN 3/4"C	
107e	FLAT SCREEN MONITOR	L5-20R / -	-	-	-	120 V/1	360 VA	L2-8	2#12, #12 GND IN 3/4"C	
107e	FLAT SCREEN MONITOR	L5-20R / -	-	-	-	120 V/1	360 VA	L2-8	2#12, #12 GND IN 3/4"C	
107e	FLAT SCREEN MONITOR	L5-20R / -	-	-	-	120 V/1	360 VA	L2-8	2#12, #12 GND IN 3/4"C	
107f	FLAT SCREEN MONITOR	L5-20R / -	-	-	-	120 V/1	360 VA	L2-6	2#12, #12 GND IN 3/4"C	
?a	WALL MOUNTED HOT HOLD	5-20R / 24"	-	-	13	120 V/1	1500 VA	L1-30	2#12, #12 GND IN 3/4"C	
?b	WALL MOUNTED HOT HOLD	5-20R / 24"	-	-	13	120 V/1	1500 VA	L1-31	2#12, #12 GND IN 3/4"C	

C:_Backup\Revit\WB-Lees Summit-MO_V18_ELECT_200921_dulm.rvt

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JASON E. CHRISTOFF
NUMBER
PE-2012002143

12/22/20
PROFESSIONAL OF RECORD:
JASON E. CHRISTOFF No. 20012002143
EXP. DATE: 12/31/20

REV	DESCRIPTION	DATE
1	REV-1 Plan Review	01/27/21

Project No.: 62-40497-01

Client Project No.:

Drawing Title:

ELECTRICAL SCHEDULES

Date: 12/22/20
Phase: PERMIT SET
Designed: DCU
Drawn : DCU
Checked : KFF
Drawing No.:

E6.1

Panel: MDP

Location: DRY STORAGE 111 **Volts:** 120/208 Wye **Mains Type:** MLO **A.I.C. Rating:** 22,000
Supply From: SERVICE DISCONNECT **Phases:** 3 **Bus Rating:** 800 A
Mounting: SURFACE **Wires:** 4

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	PANEL 'L1'	225 A	3	24911 VA	4780 VA					3	60 A	PANEL 'L2'	2
3	--	--	--			25512...	3600 VA			--	--	--	4
5	--	--	--					23137 VA	2520 VA	--	--	--	6
7	PANEL 'K1'	150 A	3	19354 VA	14220 VA					3	150 A	PANEL 'K2'	8
9	--	--	--			20483...	13860...			--	--	--	10
11	--	--	--					18394 VA	12180 VA	--	--	--	12
13	PANEL 'K3'	150 A	3	14220 VA	3333 VA					3	40 A	EWH-1	14
15	--	--	--			13860...	3333 VA			--	--	--	16
17	--	--	--					12180 VA	3333 VA	--	--	--	18
19	RTU-1	150 A	3	16692 VA	0 VA					3	30 A	(FUTURE) TRASH COMPACTOR	20
21	--	--	--			16692...	0 VA			--	--	--	22
23	--	--	--					16692 VA	0 VA	--	--	--	24
25	RTU-2	150 A	3	16692 VA	3120 VA					2	50 A	FREEZER CONDENSER	26
27	--	--	--			16692...	3120 VA			--	--	--	28
29	--	--	--					16692 VA	1248 VA	2	15 A	COOLER CONDENSER	30
31	RTU-3	225 A	3	25099 VA	1248 VA					--	--	--	32
33	--	--	--			25099...	750 VA			2	15 A	UH-1	34
35	--	--	--					25099 VA	750 VA	--	--	--	36
37	BUSSED SPACE	--	--	0 VA	0 VA					--	--	BUSSED SPACE	38
39	BUSSED SPACE	--	--			0 VA	0 VA			--	--	BUSSED SPACE	40
41	BUSSED SPACE	--	--					0 VA	0 VA	--	--	BUSSED SPACE	42
		Total Load:		143668 VA		142992 VA		132226 VA					

Load Classification	Connected Load	Design Factor	Estimated Demand	Panel Totals	
HVAC	189720 VA	100.00%	189720 VA		
Heating	1500 VA	100.00%	1500 VA	**Total Conn. Load:**	418884 VA
Kitchen Equipment	191083 VA	65.00%	124204 VA	**Total Est. Demand:**	349415 VA
Lighting	9170 VA	100.00%	9170 VA	**Total Conn. Current:**	1163 A
Motor	2281 VA	115.73%	2640 VA	**Total Est. Demand Current:**	970 A
Other	6960 VA	100.00%	6960 VA		
Receptacle	10440 VA	97.89%	10220 VA		

Notes:
REFER TO SHEET E5.1 FOR LOAD ANALYSIS.

Panel: L2

Location: DRY STORAGE 111 **Volts:** 120/208 Wye **Mains Type:** MCB **A.I.C. Rating:** 10,000
Supply From: MDP **Phases:** 3 **Bus Rating:** 100 A
Mounting: SURFACE **Wires:** 4 **MCB Rating** 50 A

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	EXTERIOR MENU BOARDS	20 A	1	1000 VA	720 VA					1	20 A	POINT OF SALE	2
3	POINT OF SALE	20 A	1			720 VA	720 VA			1	20 A	POINT OF SALE (DRIVE THRU 1)	4
5	POINT OF SALE (DRIVE THRU 1)	20 A	1					720 VA	360 VA	1	20 A	ORDER SCREEN	6
7	ORDER SCREENS	20 A	1	720 VA	1440 VA					1	20 A	ORDER SCREENS	8
9	MENU BOARD	20 A	1			540 VA	720 VA			1	20 A	POINT OF SALE (DINING)	10
11	POINT OF SALE (DINING)	20 A	1					720 VA	720 VA	1	20 A	POINT OF SALE (DINING)	12
13	FLAT PANEL DISPLAY	20 A	1	180 VA	720 VA					1	20 A	POINT OF SALE (DRIVE THRU 2)	14
15	POINT OF SALE (DRIVE THRU 2)	20 A	1			720 VA	180 VA			1	20 A	RCPT - CO2 DETECT SYSTEM	16
17	SPARE	20 A	1					0 VA	0 VA	1	20 A	SPARE	18
19	SPARE	20 A	1	0 VA	0 VA					1	20 A	SPARE	20
21	SPARE	20 A	1			0 VA	0 VA			1	20 A	SPARE	22
23	SPARE	20 A	1					0 VA	0 VA	1	20 A	SPARE	24
25	SPARE	20 A	1	0 VA	0 VA					1	20 A	SPARE	26
27	SPARE	20 A	1			0 VA	0 VA			1	20 A	SPARE	28
29	SPARE	20 A	1					0 VA	0 VA	1	20 A	SPARE	30
31	BUSSED SPACE	--	--	0 VA	0 VA					--	--	BUSSED SPACE	32
33	BUSSED SPACE	--	--			0 VA	0 VA			--	--	BUSSED SPACE	34
35	BUSSED SPACE	--	--					0 VA	0 VA	--	--	BUSSED SPACE	36
37	BUSSED SPACE	--	--	0 VA	0 VA					--	--	BUSSED SPACE	38
39	BUSSED SPACE	--	--			0 VA	0 VA			--	--	BUSSED SPACE	40
41	BUSSED SPACE	--	--					0 VA	0 VA	--	--	BUSSED SPACE	42
		Total Load:		4780 VA		3600 VA		2520 VA					

Load Classification	Connected Load	Design Factor	Estimated Demand	Panel Totals	
Kitchen Equipment	2520 VA	65.00%	1638 VA		
Other	1000 VA	100.00%	1000 VA	**Total Conn. Load:**	10900 VA
Receptacle	7380 VA	100.00%	7380 VA	**Total Est. Demand:**	10018 VA
				Total Conn. Current:	30 A
				Total Est. Demand Current:	28 A

Notes:

Panel: L1

Location: DRY STORAGE 111 **Volts:** 120/208 Wye **Mains Type:** MLO **A.I.C. Rating:** 10,000
Supply From: MDP **Phases:** 3 **Bus Rating:** 225 A
Mounting: SURFACE **Wires:** 4

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	EXIT LIGHTING	20 A	1	30 VA	95 VA					1	20 A	EXTERIOR LIGHTING	2
3	BELL AND BUZZER	20 A	1			20 VA	150 VA			1	15 A	EF-1	4
5	LIGHTING BATHROOM	20 A	1					85 VA	144 VA	1	20 A	ROOF LIGHTING	6
7	MONUMENT RECEPTACLE	20 A	1	180 VA	420 VA					1	20 A	UNDER COUNTER REFRIGERATOR	8
9	TRAINING SPACE	20 A	1			180 VA	500 VA			1	20 A	"W" SIGNAGE	10
11	LIGHTING SERVER AREA	20 A	1					204 VA	540 VA	1	20 A	GENERAL PURPOSE RECEPTACLE	12
13	OFFICE RECEPTACLES	20 A	1	540 VA	641 VA					1	20 A	EXTERIOR CANOPY LIGHTING	14
15	MENU BOARD LIGHTING	20 A	1			392 VA	644 VA			1	20 A	REACH IN REFRIGERATOR	16
17	DRIVE THRU DRINK DISPENSER	20 A	1					624 VA	692 VA	1	20 A	LIGHTING DINING	18
19	MOBILE GREASE CADDY	20 A	1	696 VA	792 VA					1	20 A	EXTERIOR SITE LIGHTING	20
21	FIRE ALARM CONTROL PANEL	20 A	1			720 VA	900 VA			1	20 A	ROOFTOP RECEPTACLES	22
23	LIGHTING KITCHEN	20 A	1					788 VA	960 VA	1	20 A	DUAL SIDED DRINK DISPENSER	24
25	DUAL SIDED DRINK DISPENSER	20 A	1	960 VA	1040 VA					1	20 A	REACH IN FREEZER	26
27	DRIVE THRU AUDIO RECEPTACLES	20 A	1			1000 VA	1983 VA			1	20 A	EXTERIOR SITE LIGHTING	28
29	DRIVE THRU WINDOW	20 A	1					1000 VA	1500 VA	1	20 A	HOT HOLD	30
31	HOT HOLD	20 A	1	1500 VA	135 VA					2	20 A	MULTIPLEX CONDENSER UNIT	32
33	TEA BREWER	20 A	1			1650 VA	135 VA			--	--	--	34
35	FLUSH VALVES	20 A	1					200 VA	360 VA	1	20 A	RTU-3 CONTROL PANEL	36
37	RTU-1 CONTROL PANEL	20 A	1	360 VA	500 VA					2	20 A	"WHATABURGER" MONUMENT SIGN	38
39	KEF-2	15 A	2			348 VA	500 VA			--	--	--	40
41	--	--	--					348 VA	915 VA	2	20 A	SUPER COOLER	42
43	KEF-1	15 A	2	718 VA	915 VA					--	--	--	44
45	--	--	--			718 VA	1384 VA			2	20 A	COOLER UNIT COOLER	46
47	LIGHTING RELAY PANEL	20 A	1					360 VA	1384 VA	--	--	--	48
49	SHAKE MACHINE	20 A	2	1352 VA	360 VA					1	20 A	EMERSON SITE SUPERVISOR	50
51	--	--	--			1352 VA	1831 VA			2	30 A	ICE MAKER CONDENSER UNIT	52
53	FREEZER UNIT COOLER	20 A	2					1384 VA	1831 VA	--	--	--	54
55	--	--	--	1384 VA	2550 VA					2	30 A	COFFEE BREWER	56
57	RTU-2 CONTROL PANEL	20 A	1			360 VA	2550 VA			--	--	--	58
59	ICE MAKER CONDENSING UNIT	30 A	2					1831 VA	500 VA	1	20 A	HEAT TRACE (CLASS 2 30mA GFCI)	60
61	--	--	--	1831 VA	500 VA					1	20 A	"WHATABURGER" SIGNAGE	62
63	IRRIGATION CONTROLLER	20 A	1			360 VA	500 VA			1	20 A	GREASE TANK	64
65	"WHATABURGER" SIGNAGE	20 A	1					500 VA	644 VA	1	20 A	REACH IN REFRIGERATOR	66
67	"W" SIGNAGE	20 A	1	500 VA	644 VA					1	20 A	REACH IN REFRIGERATOR	68
69	"W" SIGNAGE	20 A	1			500 VA	644 VA			1	20 A	REACH IN REFRIGERATOR	70
71	ICE MAKER EVAPORATOR UNIT	20 A	1					720 VA	2600 VA	3	30 A	OVEN	72
73	GENERAL PURPOSE RECEPTACLE	20 A	1	720 VA	2600 VA					--	--	--	74
75	ICE MAKER EVAPORATOR UNIT	20 A	1			720 VA	2600 VA			--	--	--	76
77	MULTIPLEX REFRIGERATION UNIT	30 A	3					3026 VA	0 VA	--	--	BUSSED SPACE	78
79	--	--	--	3026 VA	0 VA					--	--	BUSSED SPACE	80
81	--	--	--			3026 VA	0 VA			--	--	BUSSED SPACE	82
83	BUSSED SPACE	--	--					0 VA	0 VA	--	--	BUSSED SPACE	84
		Total Load:		24911 VA		25512 VA		23137 VA					

Load Classification	Connected Load	Design Factor	Estimated Demand	Panel Totals	
HVAC	5534 VA	100.00%	5534 VA		
Kitchen Equipment	40171 VA	65.00%	26111 VA	**Total Conn. Load:**	73554 VA
Lighting	9170 VA	100.00%	9170 VA	**Total Est. Demand:**	57125 VA
Motor	2281 VA	115.73%	2640 VA	**Total Conn. Current:**	204 A
Other	5600 VA	100.00%	5600 VA	**Total Est. Demand Current:**	159 A
Receptacle	3060 VA	100.00%	3060 VA		

Notes:

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01/13/2021

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WHATABURGER 20-M
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1460 NE DOUGLAS ST
LEE'S SUMMIT, MO

WHATABURGER

STATE OF MISSOURI
JASON E. CHRISTOFF
NUMBER PE-2012002143
PROFESSIONAL ENGINEER

12/22/20
PROFESSIONAL OF RECORD:
JASON E. CHRISTOFF No. 2001200143
EXP. DATE: 12/31/20

REV	DESCRIPTION	DATE
1	REV-1 Plan Review	01/27/21

Project No.: 62-40497-01
Client Project No.:
Drawing Title:

ELECTRICAL PANEL SCHEDULES

Date: 12/22/20 *Phase:* PERMIT SET
Designed: DCU *Drawing No.:*
Drawn : DCU E7.1
Checked : KFF

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1/27/2021 3:40:58 PM

Panel: K1

Location: COOKING 117 **Supply From:** MDP | **Volts:** 208Y/120V **Phases:** 3 **Wires:** 4 | **Mains Type:** MLO **Bus Rating:** 225 A | **A.I.C. Rating:** 10,000

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	PICTO FRYER SE14TE	50 A	2	4129 VA	0 VA					1	20 A	SPARE	2
3	--	--	--			4129 VA	4129 VA			2	50 A	PICTO FRYER SE14TE	4
5									4129 VA	--	--	--	6
7	FOOD WARMER	20 A	1	1440 VA	1080 VA					1	15 A	FOIL HEATER	8
9	SPARE	20 A	1			0 VA	0 VA			1	20 A	SPARE	10
11	FOOD WARMER	20 A	1					1080 VA	0 VA	1	20 A	SPARE	12
13	SPARE	20 A	1	0 VA	6557 VA					3	70 A	PICTO FRYER SE14	14
15	SPARE	20 A	1			0 VA	6557 VA			--	--	--	16
17	COMPACT FREEZER	20 A	1					960 VA	6557 VA	--	--	--	18
19	SPARE	20 A	1	0 VA	5668 VA					3	70 A	PICTO FRYER SE184	20
21	SPARE	20 A	1			0 VA	5668 VA			--	--	--	22
23	SPARE	20 A	1					0 VA	5668 VA	--	--	--	24
25	REFRIGERATOR	20 A	1	480 VA	0 VA					1	20 A	SPARE	26
27	SPARE	20 A	1			0 VA	0 VA			1	20 A	SPARE	28
29	SPARE	20 A	1					0 VA	0 VA	1	20 A	SPARE	30
			Total Load:	19354 VA		20483 VA		18394 VA					

Load Classification	Connected Load	Design Factor	Estimated Demand	Panel Totals	
Kitchen Equipment	58232 VA	65.00%	37851 VA		
				Total Conn. Load:	58232 VA
				Total Est. Demand:	37851 VA
				Total Conn. Current:	162 A
				Total Est. Demand Current:	105 A

Notes:
PROVIDED AND PREWIRED BY KITCHEN EQUIPMENT SUPPLIER.

Panel: K2

Location: COOKING 117 **Supply From:** MDP | **Volts:** 208Y/120V **Phases:** 3 **Wires:** 4 | **Mains Type:** MLO **Bus Rating:** 225 A | **A.I.C. Rating:** 10,000

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	UNDERCOUNTER REFRIGERATOR	20 A	2	210 VA	1650 VA					2	20 A	BUN TOASTER	2
3	--	--	--			210 VA	1650 VA			--	--	--	4
5	72" GRIDDLE	125 A	3					12000 VA	180 VA	1	15 A	ANSUL FIRE SUPPRESSION	6
7	--	--	--	12000 VA	360 VA					1	20 A	ORDER SCREEN	8
9	--	--	--			12000...	0 VA			1	20 A	SPARE	10
11	SPARE	20 A	1					0 VA	0 VA	1	20 A	SPARE	12
13	SPARE	20 A	1	0 VA	0 VA					1	20 A	SPARE	14
15	SPARE	20 A	1			0 VA	0 VA			1	20 A	SPARE	16
17	SPARE	20 A	1					0 VA	0 VA	1	20 A	SPARE	18
19	SPARE	20 A	1	0 VA	0 VA					1	20 A	SPARE	20
21	SPARE	20 A	1			0 VA	0 VA			1	20 A	SPARE	22
23	SPARE	20 A	1					0 VA	0 VA	1	20 A	SPARE	24
25	SPARE	20 A	1	0 VA	0 VA					1	20 A	SPARE	26
27	SPARE	20 A	1			0 VA	0 VA			1	20 A	SPARE	28
29	SPARE	20 A	1					0 VA	0 VA	1	20 A	SPARE	30
			Total Load:	14220 VA		13860 VA		12180 VA					

Load Classification	Connected Load	Design Factor	Estimated Demand	Panel Totals	
Kitchen Equipment	40080 VA	80.00%	32064 VA		
Other	180 VA	100.00%	180 VA	**Total Conn. Load:**	40260 VA
				Total Est. Demand:	32244 VA
				Total Conn. Current:	112 A
				Total Est. Demand Current:	90 A

Notes:
PROVIDED AND PREWIRED BY KITCHEN EQUIPMENT SUPPLIER.

Panel: K3

Location: COOKING 117 **Supply From:** MDP | **Volts:** 208Y/120V **Phases:** 3 **Wires:** 4 | **Mains Type:** MLO **Bus Rating:** 225 A | **A.I.C. Rating:** 10,000

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	UNDERCOUNTER REFRIGERATOR	20 A	2	210 VA	1650 VA					2	20 A	BUN TOASTER	2
3	--	--	--			210 VA	1650 VA			--	--	--	4
5	72" GRIDDLE	125 A	3					12000 VA	180 VA	1	15 A	ANSUL FIRE SUPPRESSION	6
7	--	--	--	12000 VA	360 VA					1	20 A	ORDER SCREEN	8
9	--	--	--			12000...	0 VA			1	20 A	SPARE	10
11	SPARE	20 A	1					0 VA	0 VA	1	20 A	SPARE	12
13	SPARE	20 A	1	0 VA	0 VA					1	20 A	SPARE	14
15	SPARE	20 A	1			0 VA	0 VA			1	20 A	SPARE	16
17	SPARE	20 A	1					0 VA	0 VA	1	20 A	SPARE	18
19	SPARE	20 A	1	0 VA	0 VA					1	20 A	SPARE	20
21	SPARE	20 A	1			0 VA	0 VA			1	20 A	SPARE	22
23	SPARE	20 A	1					0 VA	0 VA	1	20 A	SPARE	24
25	SPARE	20 A	1	0 VA	0 VA					1	20 A	SPARE	26
27	SPARE	20 A	1			0 VA	0 VA			1	20 A	SPARE	28
29									0 VA	1	20 A	SPARE	30
			Total Load:	14220 VA		13860 VA		12180 VA					

Load Classification	Connected Load	Design Factor	Estimated Demand	Panel Totals	
Kitchen Equipment	40080 VA	80.00%	32064 VA		
Other	180 VA	100.00%	180 VA	**Total Conn. Load:**	40260 VA
				Total Est. Demand:	32244 VA
				Total Conn. Current:	112 A
				Total Est. Demand Current:	90 A

Notes:
PROVIDED AND PREWIRED BY KITCHEN EQUIPMENT SUPPLIER.

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STATE OF MISSOURI
JASON E CHRISTOFF
NUMBER
PE-2012002143
PROFESSIONAL ENGINEER

12/22/20
PROFESSIONAL OF RECORD:
JASON E. CHRISTOFF No. 20012002143
EXP. DATE: 12/31/20

REV	DESCRIPTION	DATE

Project No.: 62-40497-01
Client Project No.:

Drawing Title:
ELECTRICAL PANEL SCHEDULES

Date: 12/22/20 *Phase:* PERMIT SET
Designed: DCU
Drawn : DCU
Checked : KFF
Drawing No.: E7.2