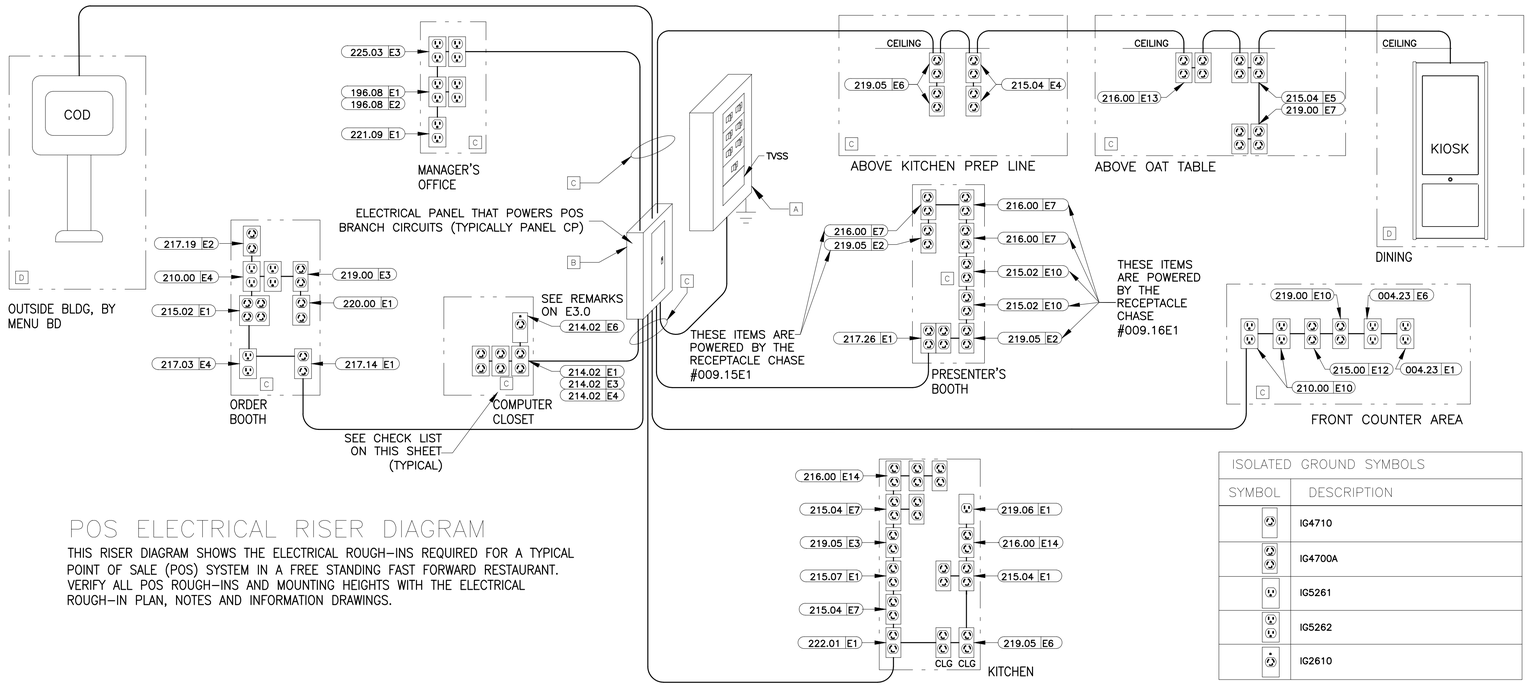
THE PURPOSE OF THIS SHEET IS TO PROVIDE A CHECKLIST AND VISUAL GUIDE SO THE INSTALLING EC CAN VERIFY THE WORK IS IN COMPLIANCE WITH MCDONALD'S SPECIFICATIONS THAT ARE CRITICAL TO THE PROPER FUNCTIONING OF OUR POINT OF SALE (POS) COMPUTER SYSTEMS.



POS ELECTRICAL RISER DIAGRAM

THIS RISER DIAGRAM SHOWS THE ELECTRICAL ROUGH-INS REQUIRED FOR A TYPICAL POINT OF SALE (POS) SYSTEM IN A FREE STANDING FAST FORWARD RESTAURANT. VERIFY ALL POS ROUGH-INS AND MOUNTING HEIGHTS WITH THE ELECTRICAL ROUGH-IN PLAN, NOTES AND INFORMATION DRAWINGS.

ISOLATED GROUND SYMBOLS	
SYMBOL	DESCRIPTION
	IG4710
	IG4700A
	IG5261
	IG5262
	IG2610

LOW VOLTAGE CABLE MANAGEMENT SPECIFICATION

GENERAL/MATERIALS

1. THE GC OR EC SHALL FURNISH AND INSTALL A COMPLETE LOW VOLTAGE CABLE MANAGEMENT SYSTEM UTILIZING CADDY-ERICO TYPE CAT-32 J-HOOK SUPPORTS (2-INCH DIAMETER LOOP MINIMUM). ALL J-HOOKS SHALL:
   - HAVE A MINIMUM BEARING SURFACE OF 1¾",
   - HAVE FLARED EDGES TO PREVENT DAMAGE TO HIGH PERFORMANCE CABLES,
   - HAVE AN ELECTRO-GALVANIZED FINISH,
   - HAVE 3/8" WIDE CABLE RETAINING STRAPS,
   - BE UL LISTED AND LABELED,
   - BEAR THE UL SYMBOL MARKING ON THE PART FOR IDENTIFICATION
   - BE INSTALLED PER THE MANUFACTURERS INSTALLATION INSTRUCTIONS.
2. THE ENTIRE INSTALLATION SHALL BE IN COMPLIANCE WITH THE NATIONAL ELECTRICAL CODE (NEC), NEC SECTION 800, BICSI STANDARDS 568 & 569, ALL APPLICABLE NATIONAL, STATE, LOCAL, AND SAFETY CODES, AND McDONALD'S SPECIFICATIONS.

INSTALLATION

1. LOW VOLTAGE J-HOOK CABLE PATHWAY (FOR POS CABLING SYSTEM) SHALL BE PROVIDED FROM THE MANAGERS OFFICE (OR COMPUTER CLOSET) DATA CONDUIT STUB-UP LOCATION TO THE FOLLOWING DATA CONDUIT STUB-UP LOCATIONS (AS APPLICABLE):
   - FRONT COUNTER.
   - PRESENTERS BOOTH.
   - CASHIERS BOOTH.
   - THIRD DRIVE-THRU WINDOW(IF PRESENT).
   - CREW ROOM.
   - VALENCE WALL.
   - REMOTE ORDERING STATIONS.
   - NETPOP TELEPHONE PANEL LOCATION.
   - KIOSK
   - DIGITAL MERCHANDISER

   CABLE SUPPORTS SHALL BE PROVIDED WITHIN 24 INCHES OF THESE STUB-UP LOCATIONS. ALL STUB-UP CONDUITS SHALL BE PROVIDED WITH AN INSULATED BUSHING TO PROTECT CABLES DURING INSTALLATION.
2. THE LOCATION AND ROUTING OF THE LOW VOLTAGE CABLE MANAGEMENT SYSTEM SHALL BE COORDINATED WITH ALL OTHER CONSTRUCTION TRADES PRIOR TO INSTALLATION TO AVOID CONFLICTS WITH THE OTHER TRADES FINAL INSTALLATIONS, BOTH BEFORE AND AFTER THE CABLE MANAGEMENT SYSTEM AND THE POS CABLING ARE INSTALLED. FINAL INSTALLATION LOCATION SHALL BE READILY ACCESSIBLE TO ALLOW FOR EASE IN INSTALLATION OF THE POS CABLING BY THE POS VENDOR'S INSTALLER.
3. LOW VOLTAGE J-HOOK CABLE SUPPORTS AND APPURTENANCES SHALL BE FASTENED TO THE BUILDING STRUCTURAL AND/OR FRAMING MEMBERS. LOW VOLTAGE J-HOOK CABLE SUPPORTS SHALL NOT BE FASTENED OR UTILIZE THE CEILING GRID SUSPENSION WIRES OR T-BAR GRID FOR INSTALLATION. CONTRACTOR SHALL PROVIDE ALL NECESSARY BRACKETS, HANGERS, RODS, CLAMPS, FLANGES, SUPPORTS, ETC. FOR A COMPLETE AND FULLY FUNCTIONAL SYSTEM. THE INSTALLATION OF THE LOW-VOLTAGE CABLE MANAGEMENT SYSTEM SHALL BE DONE SO THAT THE ROUTING OF THE CABLES IS PARALLEL TO AND/OR PERPENDICULAR TO FRAMING AND STRUCTURAL BUILDING MEMBERS.
4. LOW VOLTAGE J-HOOK **CABLE SUPPORTS** SHALL BE INSTALLED A MAXIMUM OF 36 INCHES APART. AT TRANSITION LOCATIONS, THE CONTRACTOR SHALL PROVIDE ADDITIONAL J-HOOKS TO ALLOW FOR A MINIMUM ONE-FOOT RADIUS BEND AND FOR ADDITIONAL CABLE SUPPORT AT THESE TRANSITION POINTS.
5. TO AVOID **ELECTROMAGNETIC INTERFERENCE** (EMI), ALL PATHWAYS SHALL PROVIDE A MINIMUM CLEARANCE OF 4 FEET (1.2 METERS) FROM MOTORS AND TRANSFORMERS AND A MINIMUM CLEARANCE OF 1 FOOT (0.3 METERS) FROM CONDUIT AND CABLES UTILIZED FOR ELECTRICAL POWER DISTRIBUTION, AND OTHER NON-POS LOW VOLTAGE CONDUCTORS.
6. ANY **CEILING TILES** IN THE AREA WHERE THE LOW-VOLTAGE CABLE MANAGEMENT SYSTEM IS LOCATED SHALL NOT BE INSTALLED UNTIL THE POS VENDOR'S CONTRACTOR COMPLETES THE INSTALLATION OF ALL POS CABLING.
7. ALL NON-POS LOW VOLTAGE CABLING SHALL BE INSTALLED IN A SEPARATE CABLE MANAGEMENT SYSTEM INDEPENDENT OF THE LOW-VOLTAGE CABLE MANAGEMENT SYSTEM UTILIZED FOR THE POS CABLING.
8. THE POS INSTALLER SHALL BE RESPONSIBLE TO FURNISH AND INSTALL ALL LOW VOLTAGE CABLING REQUIRED FOR THE COMPLETE AND FULLY FUNCTIONAL OPERATION OF THE POS SYSTEM. ALL POS CABLING SHALL BE INSTALLED WITHIN THE LOW-VOLTAGE CABLE MANAGEMENT SYSTEM.
9. GENERAL CONTRACTOR TO COORDINATE WITH POS INSTALLER. INSTALLER TO PERFORM POS CABLE INSTALLATION PRIOR TO CLOSING OF WALLS AND CEILING.

ELECTRICAL POS CERTIFICATION

AS OF THE DATE BELOW, I HEREBY CERTIFY THAT ALL ELECTRICAL WORK, ELECTRICAL SERVICE AND ELECTRICAL SYSTEMS, MATERIALS AND LABOR RELATED TO THE POS ELECTRICAL INSTALLATION IN WHICH THE UNDERSIGNED ARE DIRECTLY OR INDIRECTLY RESPONSIBLE HAVE BEEN PROPERLY INSTALLED IN FULL COMPLIANCE WITH ALL CONSTRUCTION DOCUMENTS AND ALL NFPA, BUILDING, ELECTRICAL AND OTHER APPLICABLE CODES, ALONG WITH ALL OF THE REQUIREMENTS OUTLINED ON THIS DRAWING. I FURTHER CERTIFY THAT THE ELECTRIC SERVICE POWERING THE POS SYSTEM HAS BEEN PROPERLY INSTALLED BY A QUALIFIED ELECTRICIAN. SKILLED, KNOWLEDGEABLE AND TRAINED TO INSTALL ALL THE REQUIRED ELECTRICAL DISTRIBUTION COMPONENTS NECESSARY TO POWER THE POINT OF SALE (POS) SYSTEM.

GENERAL CONTRACTOR: _____

BY: _____

DATE: _____

ELECTRICAL CONTRACTOR: _____

BY: _____

DATE: _____

IF YOU HAVE ANY QUESTIONS REGARDING THE PLANS, PLEASE CALL THE DESIGNER.

DESIGNER: Wendy Wenborg
PHONE: 952-540-4047
EMAIL: wwenborg@epinc.com

START HERE

A VISUALLY INSPECT THE MAIN ELECTRICAL PANEL (MDP)

YES	NO	N/A	
☐	☐	☐	1. IS AN **EQUIPMENT GROUND BAR** INSTALLED SUCH THAT IT IS ELECTRICALLY **CONNECTED** TO THE PANEL?
☐	☐	☐	2. DO ALL NEUTRAL CONDUCTORS TERMINATE ONLY TO THE NEUTRAL BAR?
☐	☐	☐	3. DO ALL EQUIPMENT GROUND CONDUCTORS TERMINATE ONLY TO THE EQUIPMENT GROUND BAR?
☐	☐	☐	4. DOES THE ISOLATED GROUND CONDUCTOR (GREEN W/YELLOW STRIPE) TERMINATE ON THE EQUIPMENT GROUND BAR?
☐	☐	☐	5. IS THERE AN APPROPRIATE ELECTRICAL CONNECTION (BOND) BETWEEN THE NEUTRAL BAR AND THE EQUIPMENT GROUND BAR?
☐	☐	☐	6. DOES THE GROUNDING SYSTEM COMPLY WITH MCDONALD'S "BUILDING ELECTRICAL GROUNDING DETAIL"?
☐	☐	☐	7. IS A SURGE PROTECTOR INSTALLED THAT COMPLIES WITH MCDONALD'S "TVSS INSTALLATION GUIDE" OR DETAIL?
☐	☐	☐	8. ARE ALL ELECTRICAL CONNECTIONS (WIRING & BUSING) PROPERLY TIGHTENED?
☐	☐	☐	9. ARE ALL CIRCUIT BREAKERS CLEARLY LABELED?

B VISUALLY INSPECT THE PANEL "CP" THAT POWERS POS

YES	NO	N/A	
☐	☐	☐	1. IS AN **EQUIPMENT GROUND BAR** INSTALLED SUCH THAT IT IS ELECTRICALLY **CONNECTED** TO THE PANEL?
☐	☐	☐	2. IS AN **ISOLATED GROUND BAR** INSTALLED SUCH THAT IT IS ELECTRICALLY **INSULATED** FROM THE PANEL?
☐	☐	☐	3. DO ALL NEUTRAL CONDUCTORS TERMINATE ONLY TO THE NEUTRAL BAR?
☐	☐	☐	4. DO ALL EQUIPMENT GROUND CONDUCTORS TERMINATE ONLY TO THE EQUIPMENT GROUND BAR?
☐	☐	☐	5. DO ALL ISOLATED GROUND CONDUCTORS (GREEN W/YELLOW STRIPE) TERMINATE ONLY TO THE ISOLATED GROUND BAR?
☐	☐	☐	6. ARE ALL ELECTRICAL CONNECTIONS (WIRING & BUSING) PROPERLY TIGHTENED?
☐	☐	☐	7. ARE ALL POS AND COD CIRCUIT BREAKERS ON THE SAME PANEL?
☐	☐	☐	8. ARE ALL CIRCUIT BREAKERS CLEARLY LABELED?
☐	☐	☐	9. DO ALL POS & COD CIRCUIT BREAKERS HAVE A LOCKING MECHANISM ON THEIR HANDLES TO PREVENT THEM FROM BEING SHUT OFF BY MISTAKE?
☐	☐	☐	10. DOES THE FEEDER CIRCUIT FOR THIS SUBPANEL CONTAIN PHASE, NEUTRAL ONE EQUIPMENT GROUND AND ONE ISOLATED GROUND CONDUCTORS THAT ARE PROPERLY TERMINATED (SEE POS & COD ISO GND/DED CKT DETAIL)?

VISUALLY INSPECT ALL REMAINING ELECTRICAL SUBPANELS

YES	NO	N/A	
☐	☐	☐	1. IS AN **EQUIPMENT GROUND BAR** INSTALLED SUCH THAT IT IS ELECTRICALLY **CONNECTED** TO THE PANEL?
☐	☐	☐	2. DO ALL NEUTRAL CONDUCTORS TERMINATE ONLY TO THE NEUTRAL BAR?
☐	☐	☐	3. DO ALL EQUIPMENT GROUND CONDUCTORS TERMINATE ONLY TO THE EQUIPMENT GROUND BAR?
☐	☐	☐	4. ARE ALL ELECTRICAL CONNECTIONS (WIRING & BUSING) PROPERLY TIGHTENED?
☐	☐	☐	5. ARE ALL CIRCUIT BREAKERS CLEARLY LABELED?
☐	☐	☐	6. DOES THE FEEDER CIRCUIT FOR THIS SUBPANEL CONTAIN PHASE, NEUTRAL AND ONE EQUIPMENT GROUND CONDUCTORS THAT ARE PROPERLY TERMINATED? (SEE BUILDING ELECTRICAL GROUNDING DETAIL)

C VISUALLY INSPECT THE POS BRANCH CIRCUITS

YES	NO	N/A	
☐	☐	☐	1. ARE THE POS BRANCH CIRCUITS ROUTED IN THEIR OWN CONDUIT BY THEMSELVES?
☐	☐	☐	2. IF THE POS BRANCH CIRCUIT IS ROUTED ABOVE GRADE, IS IT IN A METALLIC CONDUIT?
☐	☐	☐	3. DOES EACH POS BRANCH CIRCUIT CONTAIN: ONE PHASE (BLACK COLORED INSULATION) ONE NEUTRAL (WHITE COLORED INSULATION) ONE EQUIPMENT GROUND (GREEN COLORED INSULATION) ONE ISOLATED GROUND (GREEN W/YELLOW STRIPE COLORED INSULATION).
☐	☐	☐	4. DO ALL POS BRANCH CIRCUITS TERMINATE AT EITHER AN IG4700, IG4710, IG5261, IG5262 RECEPTACLES OR ANY COMBINATION OF THESE?
☐	☐	☐	5. ARE ALL ELECTRICAL TERMINATIONS TO IG RECEPTACLES MADE WITH SOLID #12 AWG WIRE CAPTURED AROUND THE SCREW BARREL AND SUITABLY TIGHTENED?
☐	☐	☐	6. ARE ALL BRANCH CIRCUIT CONNECTIONS PROPERLY TIGHTENED?
☐	☐	☐	7. ARE THE CORRECT AMOUNT AND TYPE OF IG RECEPTACLES PROVIDED AS SHOWN IN THE ELECTRICAL ROUGH-IN PLAN, NOTES AND INFORMATION?
☐	☐	☐	8. DO ALL POS RECEPTACLES HAVE ORANGE "COMPUTER ONLY" COVERPLATES?
☐	☐	☐	9. DO ALL POS BRANCH CIRCUITS COMPLY WITH THE "POS & COD ISOLATED GROUND/DEDICATED CIRCUIT DETAIL?

D VISUALLY INSPECT THE POS BRANCH CIRCUIT FOR THE COD & KIOSK

YES	NO	N/A	
☐	☐	☐	1. ARE THE COD AND KIOSK BRANCH CIRCUITS ROUTED IN THEIR OWN CONDUIT BY THEMSELVES?
☐	☐	☐	2. DOES EACH COD AND KIOSK BRANCH CIRCUIT CONTAIN; – ONE PHASE (BLACK COLORED INSULATION), – ONE NEUTRAL (WHITE COLORED INSULATION), – ONE EQUIPMENT GROUND (GREEN COLORED INSULATION), – ONE ISOLATED GROUND (GREEN W/YELLOW STRIPE COLORED INSULATION).
☐	☐	☐	3. ARE THE COD(S) AND KIOSK(S) POWERED FROM THE SAME PANEL AS THE POS?
☐	☐	☐	4. DO THE BREAKERS FOR THE COD(S) AND KIOSK(S) HAVE A LOCKING MECHANISM ON THEIR HANDLES THAT WILL PREVENT IT FROM BEING SHUT OFF?
☐	☐	☐	5. DO THE COD BRANCH CIRCUIT(S) COMPLY WITH THE "POS & COD ISOLATED GROUND/DEDICATED CIRCUIT DETAIL?

ARE **ALL** BOXES CHECKED "YES"?

NO

REWORK ELECTRICAL SYSTEM TO BRING INTO COMPLIANCE WITH MCDONALD'S SPECIFICATIONS

YES

ALL WORK IS NOT CONSIDERED TO MEET MCDONALD'S SPECIFICATIONS UNTIL THE INSTALLED ELECTRICAL SYSTEM SUPPORTS A "YES" ANSWER FOR ALL QUESTIONS ASKED.

AS PART OF THIS PROCESS, THE EC AND THE GC WILL BE REQUIRED TO SIGN THE ELECTRICAL CERTIFICATION DOCUMENT INDICATING THAT THE INSTALLED ELECTRICAL SYSTEM MEETS MCDONALD'S SPECIFICATIONS.

FINISHED

NOTICE:

CHANGES SHALL NOT BE MADE TO THE POS ELECTRICAL SYSTEM AFTER THE POS EQUIPMENT HAS BEEN INSTALLED WITHOUT FIRST NOTIFYING THE POS VENDOR.

IF CHANGES ARE MADE TO THE POS ELECTRICAL SYSTEM **AFTER** THE CERTIFICATION PROCESS HAS BEEN COMPLETED, THEN A SYSTEM RE-CERTIFICATION SHALL BE REQUIRED.

REV	DATE	DESCRIPTION	BY
	08/14/25	PERMIT SET	WLW
	06/26/25	USRD PROGRESS SET REVIEW	WLW

emanuelson-podas
consulting engineers
Emanuelson-Podas, Inc.
705 Bush Lake Road
Eden Prairie, MN 55439
(952) 930-0050 | www.epinc.com

3801.0083

STATE OF MISSOURI
MATTHEW FULTS
NUMBER PE-2004005388
PROFESSIONAL ENGINEER

PREPARED BY: 08/14/25

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PREPARED FOR: McDonald's USA, LLC

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DRAWN BY	REVIEWED BY	DATE ISSUED
MJW	WLW	08 14 2025
STD ISSUE DATE 2024 11		

RDJ 22252

TITLE: 2024 STANDARD BUILDING - BB20
45114-WOOD/WOOD

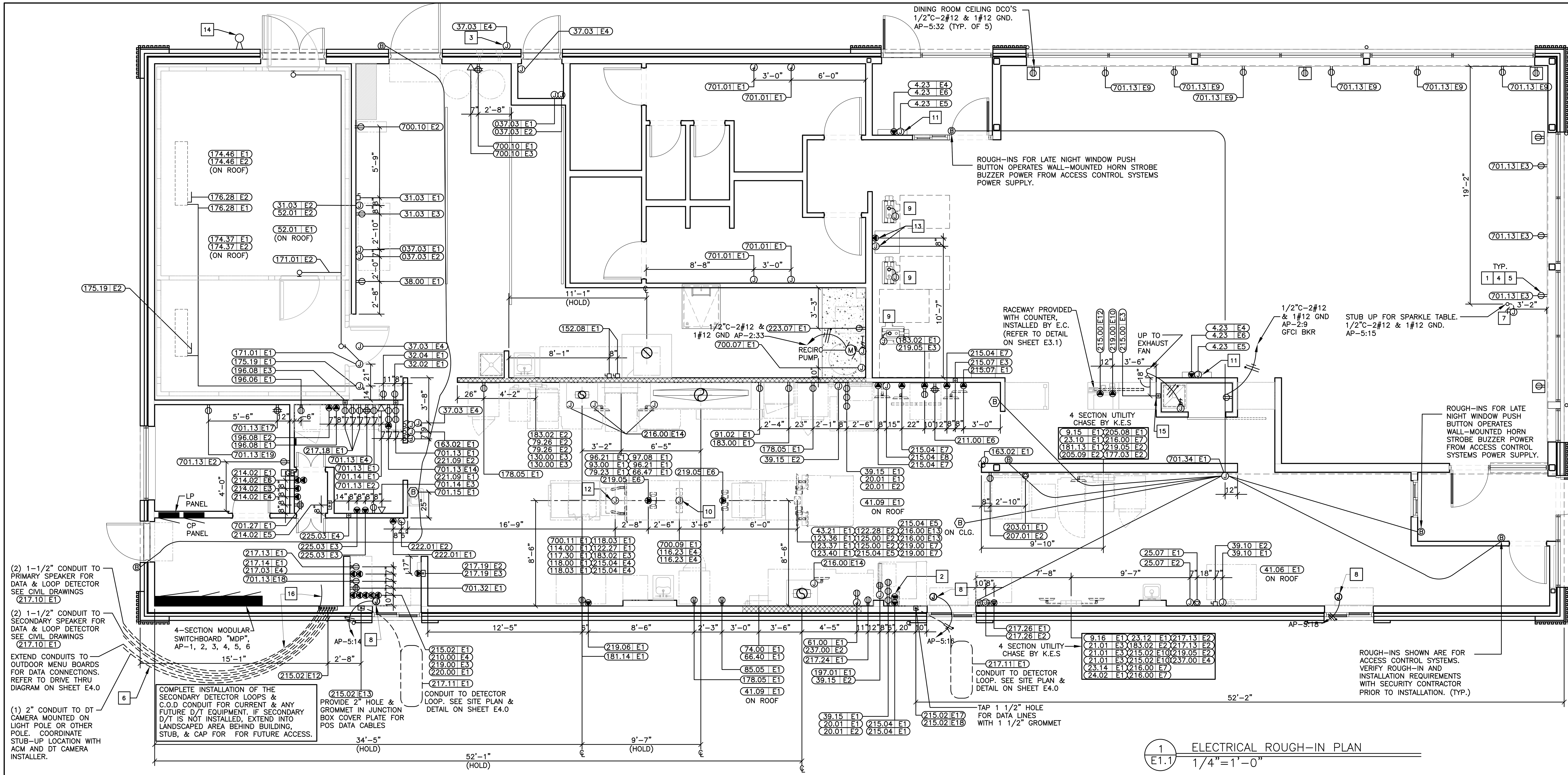
DESCRIPTION
WOOD BEARING WALLS W/BRICK EXTERIOR FINISH & GI
WOOD TRUSS ROOF FRAMING
BATTEN/BRICK EXTERIOR FINISH

NSN: 7321

SITE ADDRESS: 3255 Main Street, Kansas City, MO 64111

L/C: 024-0244

SHEET NO.: 024-0244.01.0
E1.0
POS RISER DIAGRAM



1 E1.1 ELECTRICAL ROUGH-IN PLAN
1/4"=1'-0"

SYMBOLS AND ABBREVIATIONS

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
$	SINGLE POLE SWITCH, 3W=THREE WAY SWITCH, K=KEYED SWITCHED, VS=VACANCY SENSOR	⟨B⟩	BUZZER
$T	MANUAL SWITCH (T=THERMAL OVERLOADS)	(B)	BUTTON FOR BUZZER
[T]	TRANSFORMER	[o o]	PULLBOX
☐	JB WITH DUPLEX CONVENIENCE OUTLET (FLUSH WITH CEILING)		PANELBOARD
	JB WITH SINGLE CONVENIENCE OUTLET		CIRCUIT BREAKER
	JB WITH DUPLEX CONVENIENCE OUTLET	A	AMPERES
	JB WITH TWO DUPLEX CONVENIENCE OUTLETS	ACM	AREA CONSTRUCTION MANAGER
	JB WITH SPECIAL PURPOSE OUTLET	AFF	ABOVE FINISHED FLOOR
	JB WITH ISOLATED GROUND OUTLET = IG4710, =IG5261, =IG4700A, =IG5262	C	CONDUIT
		CCT	CIRCUIT
	INTERCOM STATION W/ 3/4"C- TO MAIN STATION	EC	ELECTRICAL CONTRACTOR
	TELEPHONE JACK	GC	GENERAL CONTRACTOR
(J)	JUNCTION BOX - WALL OR CEILING MOUNTED	GFI/GFCI	GROUND FAULT CIRCUIT INTERRUPTER
	DISCONNECT SWITCH	GND	GROUND
(S)	STUB UP THRU ROOF	IG	ISOLATED GROUND
(T)	THERMOSTAT SENSOR W/ 1/2"C- UP TO CEILING SPACE	JB	JUNCTION BOX
(M)	MOTOR CONNECTION	KES	KITCHEN EQUIPMENT SUPPLIER
	CONDUIT RUN CONCEALED IN CEILING OR WALLS	MLO	MAIN LUGS ONLY
	CONDUIT RUN IN FLOOR SLAB	WP	WEATHERPROOF
	HOT (SHORT), NEUTRAL (LONG), EQUIP GRD (LONG WITH DOT), & 'X' DENOTES ISOLATED GRD	(CO)	CARBON MONOXIDE SENSOR
	J-BOX WITH FINAL EQUIPMENT CONNECTION	[GB]	GROUND BUS TERMINAL
(OS)	CEILING MOUNTED OCCUPANCY SENSOR	(DS)	DAYLIGHT SENSOR

ADT ROUGH-IN NOTES

1. COORDINATE EXACT INSTALLATION REQUIREMENTS WITH ADT PRIOR TO INSTALLATION TEL. 800-417-8238
2. EC SHALL PROVIDE A 2 GANG 3 25/32" X 3 25/32" X 3 ½"D JUNCTION BOX AT DOOR FOR INSTALLATION OF DOOR ALARM UNIT. STUB 1/2"C ABOVE CEILING FROM JUNCTION BOX. PROVIDE ½"C FROM J-BOX TO DOOR MAGNETIC SWITCH LOCATION.
3. EC SHALL PROVIDE 4" X 4" JUNCTION BOX ABOVE CEILING FOR INSTALLATION OF LOW VOLTAGE TRANSFORMER. VERIFY EXACT LOCATION WITH ADT PRIOR TO INSTALLATION. PROVIDE ½"C-2#12 TO LOCKOUT TYPE CB IN PANEL LP-1.

GENERAL NOTES

1. SEE SHEET E3.0 FOR PANEL & CIRCUIT BREAKER ASSIGNMENT, VOLT/PH, FLA, BREAKER SIZE, COND/WIRE, RECEPTACLE TYPE, HEIGHT ABOVE FINISHED FLOOR, REQUIREMENTS & REMARKS FOR ALL ELECTRICAL EQUIPMENT.
2. SEE LOW VOLTAGE CABLE MANAGEMENT SPECIFICATION ON SHEET E1.0 FOR POS, DATA, AND SOUND SYSTEM REQUIREMENTS.
3. GC/EC SHALL COORDINATE LOCATION AND ALL REQUIREMENTS OF CT& METER CABINET WITH LOCAL UTILITY COMPANY. CT & METER CABINET SHALL NOT BE INSTALLED ON D/T SIDE OF BUILDING. GC SHALL PAINT TO MATCH BUILDING COLOR.

KEY NOTES

[1] TAMPER RESISTANT GFCI DUPLEX RECEPTACLE IN PUBLIC AREAS. EC SHALL PROVIDE HUBBELL GFTRST* ("*": AL=ALMOND, BK=BLACK, -=BROWN, GY=GRAY, I=IVORY, LA=LIGHT ALMOND, R=RED, W=WHITE). SPECIFIED RECEPTACLE BECOMES DE-ENERGIZED UPON FAILURE OF GFCI DEVICE. NO SUBSTITUTIONS.(TYPICAL)

[2] SEE POS ELECTRICAL RISER DIAGRAM ON SHEET E1.0. (TYPICAL)

[3] EC TO FURNISH AND INSTALL A FLUSH MOUNTED JUNCTION BOX WITH WEATHERPROOF GASKET AND OUTDOOR WEATHERPROOF, 24 VOLT CO2 HORN/STROBE UNIT COMPATIBLE WITH CO2 ALARM SYSTEM - EDWARDS GENESIS WGAVRN OR APPROVED EQUAL. STROBE SHALL HAVE AN AMBER COVER AND MEET ALL LOCAL REGULATORY REQUIREMENTS FOR SPECIFICATIONS AND INSTALLATION. PROVIDE A ¾" CONDUIT STUB-IN INTO BUILDING WITH THERMOPLASTIC BUSHING FROM WEATHERPROOF BACKBOX. PROVIDE FINAL WIRING TERMINATIONS AT HORN/STROBE UNIT AND THEN PROVIDE 36 INCHES OF PIGTAIL WIRING FROM HORN/STROBE INTO THE BUILDING AND NEATLY COIL FOR FINAL CONNECTION. FINAL WIRING CONNECTION FROM OUTDOOR HORN/STROBE PIGTAILS TO THE CO2 ALARM SYSTEM INSTALLATION TO BE PROVIDED BY BEVERAGE INSTALLER.

[4] PER THE AMERICAN WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG), A MINIMUM OF ONE (1) ADA COMPLIANT ELECTRICAL RECEPTACLE SHALL BE INSTALLED AT AN ACCESSIBLE TABLE. GC/EC SHALL REFERENCE FINAL DECOR PLANS AND PROVIDE RECEPTACLES AS NECESSARY FOR COMPLIANCE. (TYPICAL)

[5] COORDINATE LOCATION OF RECEPTACLES SO THAT RECEPTACLES ARE LOCATED ON FULL HEIGHT WALLS PER THE DECOR PLAN. STUB UP AND CIRCUIT IN HALF WALL FOR RECEPTACLES NOT ON FULL HEIGHT WALLS, CONFIRM FINAL LOCATIONS WITH DECOR DRAWINGS PRIOR TO ROUGH-IN.

[6] IF MOUNTED TO A LIGHTING POLE, DT CAMERA SHALL ONLY BE INSTALLED ON A POLE WITH MAXIMUM OF (2) LIGHTING HEADS. PROVIDE ISOLATION OF DT CAMERA MOUNTING HARDWARE AND POLE TO PREVENT BI-METALLIC OR GALVANIC CORROSION.

[7] E.C. TO PROVIDE AN ALLOWANCE IN BID TO PROVIDE TWO(2) FLEXIBLE POWER CONNECTIONS FOR POWER TO FURNITURE/ FAMILY EXPERIENCE ELEMENTS AS PART OF THE DECOR PACKAGE. E.C. SHALL VERIFY EXACT LOCATIONS IN FIELD AND WITH DECOR DRAWINGS. PROVIDE ALL NECESSARY MATERIALS AND LABOR FOR A COMPLETE AND FULLY NEC CODE COMPLIANT INSTALLATION. ALL COMPONENTS SHALL BE FED FROM A GFCI TYPE CIRCUIT BREAKER AND BRANCH CIRCUIT SHALL CONTAIN TWO PATHS OF GROUNDING (CONDUIT BODY AND AN INSULATED GROUNDING CONDUCTOR) TO COMPLY WITH McDONALD'S GROUNDING STANDARDS.

[8] DRIVE THRU WINDOW POWER, CONFIRM REQUIREMENTS WITH MANUFACTURER DRAWINGS.

[9] PROVIDE POWER FOR CONNECTION TO SELF ORDER KIOSKS. COORDINATE EXACT LOCATION OF KIOSKS WITH DECOR DRAWINGS. PROVIDE 2#12, 1#12 GRD., & 1#12 ISOLATED GROUND ON A 20A DEDICATED CIRCUIT FED FROM THE CP PANEL FOR EVERY KIOSK.

[10] VERIFY DROP CORDS AND RECEPTACLES DO NOT FALL BELOW HEIGHTS LISTED ON E3.0 ELECTRICAL SCHEDULE. RECEPTACLES SHOULD BE LOCATED AT HEIGHTS TO AVOID CONTACT WITH HOT APPLIANCES.

[11] PROVIDE POWER AND DATA ROUGH-INS FOR DIGITAL MERCHANDISER. EXTEND CIRCUIT TO THIS LOCATION FROM FRONT COUNTER MERCHANDISER IN SERVICE AREA. EXTEND J-HOOKS FROM SERVICE AREA FOR DATA CABLES. REFER TO 3/E3.1.

[12] EC TO INSTALL DROP CORDS JUSTIFIED TO THE DRIVE THRU SIDE OF THE BUILDING

[13] PROVIDE POWER AND DATA ROUGH-INS FOR CASH HANDLERS REFER TO 4/E3.1 FOR MORE INFORMATION. COORDINATE EXACT LOCATION WITH DECOR DRAWINGS.

[14] AT&T TO PROVIDE #8 GRD CONDUCTOR FROM BUILDING EXTERIOR WIRELESS ACCESS POINT TO ABOVE INTERIOR CEILING. EC TO EXEND CONDUCTOR TO BUILDING GROUNDING SYSTEM. COORDINATE EXACT LOCATION OF ACCESS POINT IN FIELD WITH AT&T.

[15] CONTRACTOR TO PUNCH HOLES IN SERVICE POD FOR CABLE AND CONDUIT ROUTING. UTILIZE BUSHINGS PROVIDE WITH SERVICE POD TO PROTECT CABLES

[16] PROVIDE 2" CONDUITS WITH CAPPED ENDS RUN ONE TO ATTIC SPACE AND ONE TO LAST PARKING SPACE. LABEL CONDUITS FOR FUTURE ELECTRIC VEHICLE CHARGING.

THE LATE NIGHT WINDOW AND DOOR ACCESS SYSTEM.
3 EACH PUSH BUTTON 621-BK-DA HDP 626 SCHLAGE
1 EACH PUSH BUTTON 621-RD-DA HDP 626 SCHLAGE
1 EACH HORN WITH STROBE 1910S SCHLAGE
REFER TO ARCH DOOR SCHEDULE FOR MORE INFORMATION

REV	DATE	DESCRIPTION	BY
	08/14/25	PERMIT SET	WLW
	06/26/25	USRD PROGRESS SET REVIEW	WLW

PREPARED BY:
emanuelson-podas
consulting engineers
Emanuelson-Podas, Inc.
7705 Bush Lake Road
Edina, MN 55439
(952) 930-0050 | www.epinc.com
3801.0083
STATE OF MISSOURI MATTHEW FULTS NUMBER PE-2004005366 PROFESSIONAL ENGINEER
08/14/25

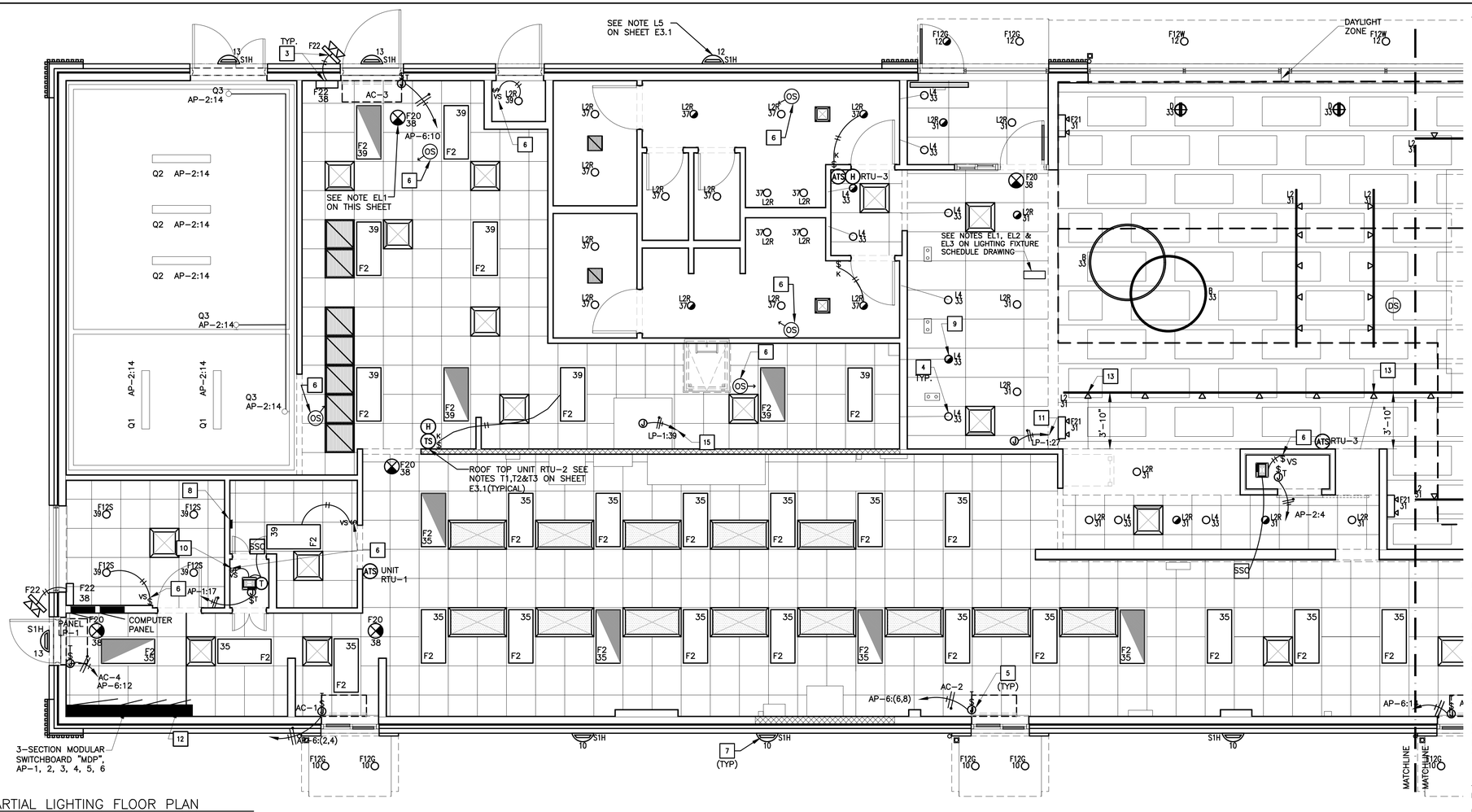
PREPARED FOR:
McDonald's USA, LLC

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DRAWN BY MJW
STD ISSUE DATE 2024 11
REVIEWED BY WLW
DATE ISSUED 08 14 2025
RD# 22252

TITLE
2024 STANDARD BUILDING - BB20
45114-WOOD/WOOD
DESCRIPTION
WOOD BEARING WALLS W/BRICK EXTERIOR FINISH & Ci
WOOD TRUSS ROOF FRAMING
BATTEN/BRICK EXTERIOR FINISH
NSN: 7321
L/C: 024-0244
SITE ADDRESS
3255 Main Street, Kansas City, MO 64111

SHEET NO. 024-0244.01.0
E1.1
ROUGH-IN PLAN



1 E2.0 PARTIAL LIGHTING FLOOR PLAN
1/4"=1'-0"

KEY NOTES

1. CENTER PENDANT LIGHTS OVER TABLES (TYPICAL)
2. ALL SOFFIT LOCATIONS, LIGHTING, & SUPPLY GRILLS SHALL BE COORDINATED WITH DECOR COMPANY DRAWING PRIOR TO INSTALLATION.
3. EC SHALL INSTALL AND CONFIGURE REMOTE EMERGENCY LIGHTING AT ALL EGRESS EXTERIOR DOORS FOR MAXIMUM ILLUMINATION AT POINTS OF EGRESS. INSTALL WP J-BOX WITHIN SOFFIT TO ALLOW A FLUSH INSTALLATION OF ANY EXTERIOR EMERGENCY EGRESS LIGHTING (TYPICAL).
4. OPTIONAL ADJUSTABLE WALL WASH FIXTURE TO ILLUMINATE LOGO OR GRAPHICS. EC SHALL VERIFY EXACT LOCATION SO AS TO ADEQUATELY ILLUMINATE McDONALD'S ARCH LOGO SIGN AND GRAPHICS.
5. AIR CURTAIN UNIT. NON HEATED VERSION TO USE 1/2"C. 2#12, 1#12GRD. HEATED VERSION TO USE 1"C. 2#6, 1#10 GRD. (TYPICAL).
6. PROVIDE DUAL TECHNOLOGY CEILING MOUNTED OCCUPANCY SENSOR OR WALL MOUNTED VACANCY SENSOR AS SHOWN. ORDER ALL SENSORS FROM SECURITY LIGHTING SYSTEMS, INC.
7. RADIAL WALL SCONCE. SEE NOTE L2 ON SHEET E3.1 AND ARCHITECTURAL ELEVATIONS ON SHEETS A2.0 & A2.1. (TYPICAL)
8. BUILDING AUTOMATION SYSTEM LOCATION. SEE LIGHTING CONTROL DETAILS ON SHEET E4.1.
9. PROVIDE LIGHTING INVERTER FOR USE WITH FIXTURES SHOWN SHADED OR SLASHED, MODEL #LG125T SHOULD BE USED FOR L2R, L4 & F12G WITH NOT MORE THAN SEVEN DOWNLIGHTS CONNECTED TO EACH INVERTER. AND NOT MORE THAN TWO F2 FIXTURES. IF DECOR USES ALTERNATE FIXTURES, COORDINATE INVERTER TO BE USED WITH LIGHTING SUPPLIER. E.C. SHALL VERIFY THE QUANTITY OF FIXTURES THAT CAN BE CONNECTED WITHOUT EXCEEDING OPERATING CAPACITY OF UNIT AND PROVIDE ADDITIONAL CIRCUITS AND INVERTERS AS REQUIRED. (TYPICAL)
10. CENTER VACANCY SENSOR SWITCH OPPOSITE COMPUTER RACK IN A LOCATION ACCESSIBLE FROM BOTH DOORS FOR CONTROL OF CEILING MOUNTED LIGHT, IN DATA ROOM. FAN CONTROLLED BY LOCAL THERMOSTAT.
11. PROVIDE POWER FOR LIGHT WITHIN TOY DISPLAY. COORDINATE EXACT LOCATION WITH DECOR DRAWINGS.
12. LIGHTING CONTACTORS IN NEMA 1 ENCLOSURE JUST BELOW CEILING. EC SHALL PROVIDE 120 VOLT CONTROL CIRCUIT TO CONTACTOR PANEL. VERIFY EXACT LOCATION IN FIELD AND REFER TO DRAWING E4.1 FOR ADDITIONAL DETAILS.
13. ADJUST FIXTURE TO ILLUMINATE DELIVERY POD SHELVING.
14. NEW DAYLIGHT SENSOR TO BE INSTALLED TO CONTROL DAYLIGHT AREAS IN THE DINNING AREAS. ORDER ALL DAYLIGHT SENSORS FROM; SECURITY LIGHTING SYSTEMS, INC.
15. PROVIDE POWER FOR LIGHT WITHIN EXHAUST HOOD. INTEGRATE INTO LOCAL LIGHTING CONTROLS.

EMERGENCY LIGHTING NOTES

EL1. EC SHALL VERIFY ALL REQUIREMENTS AND FINAL EMERGENCY LIGHTING LOCATIONS WITH LOCAL AUTHORITIES. INCLUDE ALL COSTS IN BASE BID.

EL2. IF NOT INSTALLED BY MANUFACTURER, EC SHALL BE RESPONSIBLE FOR THE COMPLETE INSTALLATION OF THE EMERGENCY INVERTER BALLAST IN NIGHT LIGHTING FIXTURES SHOWN ON THIS SHEET.

EL3. LED FIXTURES DENOTED AS NIGHT LIGHTING OR SWITCHED EMERGENCY SHALL BE CONNECTED TO AN INVERTER. INVERTER SHALL BE CAPABLE OF ILLUMINATING FIXTURE FOR 1.5 HOURS TO COMPLY WITH NEC SECTION 700 AND UL924.

EL4. EMERGENCY BATTERY LIGHTING WALL PACKS IN PLAYPLACE SHALL BE LOCATED SO AS TO PROVIDE FOR MAXIMUM ILLUMINATION OF AREA. EC SHALL VERIFY EXACT PLACEMENT IN THE FIELD WITH McDONALD'S ACM. (IF APPLICABLE)

EL5. EMERGENCY LIGHTING HAS BEEN DESIGNED PER NFPA 101 TO MAINTAIN 1 FC IN PATH OF EGRESS. IF FIELD CONDITIONS REQUIRE ANY CHANGES TO LIGHTING DESIGN, EMERGENCY LIGHTING, SHALL BE INSTALLED TO MEET THE ABOVE REQUIREMENTS.

McDONALD'S SITE SIGNAGE:

EC SHALL PROVIDE:

ELECTRICAL CONTRACTOR SHALL COORDINATE POWER REQUIRED FOR ROAD SIGN. MOST SIGNS REQUIRE (1) 20 AMP 120V CIRCUIT. IF USED A 90–200 SIGN REQUIRES (4) 20 AMP 120V CIRCUITS OR ONE 1–PHASE 60 AMP 120/208V CIRCUIT. COORDINATE WITH SUPPLIERS DRAWINGS.
(1) 20 AMP 208 VOLT CIRCUIT, EC TO WIRE 2#12 TO 208 VOLT FLAG FLOODLIGHTS.
(1) 20 AMP 120 VOLT CIRCUIT TO D.C.O. IN ROAD SIGN BASE IF REQUIRED.
(2) 20 AMP 120 VOLT CIRCUITS FOR INGRESS/EGRESS DIRECTIONAL SIGNS (IF APPLICABLE).

*VERIFY EXACT LOCATIONS/TYPES/QUANTITIES OF ALL THE ABOVE WITH SITE/CIVIL PLANS
AND MCD ACM.

KEY

DENOTES FIXTURE TYPE — F2
DENOTES CIRCUIT NUMBER — 41

LIGHTING FIXTURES SHOWN HALF HATCHED SHALL BE WIRED TO AN EMERGENCY INVERTER AND CIRCUITED AS SWITCHED EMERGENCY FIXTURES SO THE FIXTURE IS CONTROLLED VIA TIMECLOCK BUT TURNS ON UPON LOSS OF POWER. SEE NOTE EL3 ON THIS SHEET. COORDINATE LOCATION WITH DECOR.

LIGHTING FIXTURES SHOWN WITH ARROW DENOTES GENERAL DIRECTION TO AIM ADJUSTABLE FIXTURES. VERIFY IN FIELD.

SEE SHEET E3.1 FOR GENERAL LIGHTING NOTES AND "ROOF PLAN" (SHEET E2.1) FOR ADDITIONAL ELECTRICAL ROUGH-IN & LIGHTING REQUIREMENTS.

PROVIDE PHOTOCELL TO CONTROL ONLY LUMINAIRES IN EACH DAYLIGHT AREA AND CONTROL AT LEAST 50% OF LAMPS PER ENERGY CODE.

PROVIDE CURRENT LIMITER ON TRACKS TO ONLY ALLOW THE AMOUNT OF HEADS SHOWN.

LIGHTING FIXTURE SCHEDULE:

MARK	SYMBOL	DESCRIPTION	DIFFUSER	LAMPS WATTS	LAMPS TYPE	BALLAST	MOUNTING	MANUFACTURER AND CATALOG NUMBER
B		RING PENDANT	–	96W EA	LED	–	SUSPENDED	SECURITY LIGHTING # MPLN–63R–400–LM–30–DGCDS
D		ORBIT PENDANT	–	15W	LED	–	SUSPENDED	CS ILLUMINATION #16484–TL915–30–U–375–R–R
F2		2' X 4' GRID TROFFER	PRISMATIC ACRYLIC	44W	LED	–	RECESSED	SECURITY LIGHTING: # CBT24–A–LSCS–EDD–HIGH, EMERGENCY FIXTURE # CBT24–A–LSCS–EDD–ELL14–HIGH
F7		1' X 4' GRID TROFFER	PRISMATIC ACRYLIC	44W	LED	–	RECESSED	SECURITY LIGHTING # CBT14–A–LSCS–EDD–HIGH
L2		TRACK LIGHT	–	15W	LED	–	SUSPENDED	CS ILLUMINATION #4658–XD20–25C–30H–1100–BK–J
L2R		4" LED DOWN LIGHT	–	16W	LED	–	RECESSED	SECURITY LIGHTING # RDA–136LM–30–FL–S/RDA–136–H VERIFY DOWNLIGHT TO BE USED WITH PHOTOMETRIC
L4		3" LED ADJUSTABLE DOWN LIGHT	–	7W	LED	–	RECESSED	SECURITY LIGHTING # RDA–60LM–30–NF–S/RDA–60–H VERIFY DOWNLIGHT TO BE USED WITH PHOTOMETRIC
F12S F12G		6" LED DOWN LIGHT–SHALLOW HOUSING S SILVER G GOLD	–	12.5W	LED	–	RECESSED	SECURITY LIGHTING # 8542–5CCT COLOR WH WHITE, BL BLACK SA SILVER GL GOLD
Q1		REFRIGERATION LIGHTING	INTERNAL PRISMATIC LENS VAPOR TIGHT	81.1W	LED	–	SURFACE FREEZER/COOLER	METALUX 4VT2–LD4–8–DR–UNV–L835–CD1–WL–U
Q2		REFRIGERATION LIGHTING	INTERNAL PRISMATIC LENS VAPOR TIGHT	38W	LED	–	SURFACE FREEZER/COOLER	METALUX 4VT2–LD4–4–DR–UNV–L835–CD1–WL–U

MECHANICAL DIFFUSERS, TRANSFERS, AND RETURNS.

Q3		REFRIGERATION LIGHTING	VAPOR PROOF	11W	LED	–	SURFACE TO WALL FREEZER AND COOLER	KASON REFRIGERATION LIGHTING: LED 1802CA0E26, WITH WIRE GUARD.
F20		EXIT SIGN WITH BATTERY BACKUP	–	1.8W	LED	–	SURFACE	SECURITY LIGHTING: EVEURWE. SEE NOTE LS2 ON THIS SHEET.
F21		2 HEADED EMERGENCY BATTERY LIGHT	–	–	LED	–	SURFACE TO WALL OR CEILING	SECURITY LTG. #EV4D
F22		EMERG BATTERY & 2 REMOTE HEADS	–	–	LED	–	SURFACE TO WALL OR SOFFIT	SECURITY LTG. #EV4D–02L–0/EVODB
F23		2 HEADED EMERG LIGHT & 2 REMOTE HEAD IF REQ'D	–	–	LED	–	SURFACE TO WALL OR SOFFIT	SECURITY LTG. #EV4D/EVODB
S1H		**"DOWN ONLY"** RADIAL WALL SCONCE – SILVER	TEMPERED GLASS	(1)–14W	LED	–	SURFACE TO WALL	SECURITY LIGHTING: #RWSC–36L–5K–DO–U–PS
S1W		**"DOWN ONLY"** RADIAL WALL SCONCE – WHITE	TEMPERED GLASS	(1)–14W	LED	–	SURFACE TO WALL	SECURITY LIGHTING: #RWSC–36L–5K–DO–U–WH

LIGHTING SCHEDULE NOTES:

LS1. ORDER LED EXIT SIGNS WITH LETTER COLORS THAT COMPLY WITH LOCAL CODES.
– FOR RED LETTERS USE #EVE–U–R (UNIVERSAL),
– FOR GREEN LETTERS USE #EVE–U–G (UNIVERSAL), OR
IF THE ABOVE EXIT SIGNS DO NOT COMPLY WITH LOCAL CODES USE: LED SIGN WITH BATTERY BACKUP, LETTER SIZE, COLOR, TYPE & DIRECTIONAL ARROWS AS REQUIRED BY THE LOCAL AUTHORITIES.

LS2. ALL INTERIOR LIGHT FIXTURES SHALL BE 120 VOLT UNLESS NOTED OTHERWISE.

LS3. LIGHTING FIXTURES HAVE BEEN CHOSEN TO ACHIEVE MAXIMUM ENERGY CONSERVATION WHILE MAINTAINING ADEQUATE LEVEL OF ILLUMINATION. SPECIFICATIONS SHALL BE STRICTLY FOLLOWED. ANY DEVIATION FROM THE SPECIFICATIONS SHALL BE APPROVED IN WRITING BY McDONALD'S CORPORATION.

ORDER ALL LIGHT FIXTURES FROM:

SECURITY LIGHTING SYSTEMS, INC.
PHONE: 1–800–LIGHT–IT (800–544–4848)
EMAIL: SLORDERS@CURRENTLIGHTING.COM

CS ILLUMINATIONS
PHONE: 760–477–1244
EMAILS: MCD@CSILLUMINATIONS.COM
WWW.CSILLUMINATIONS.COM/MCD

REV	DATE	DESCRIPTION	BY
	08/14/25	PERMIT SET	WLW
	06/26/25	USRD PROGRESS SET REVIEW	WLW

emanuelson-podas
consulting engineers
Emanuelson-Podas, Inc.
705 Bush Lake Road
Eden Prairie, MN 55439
(952) 930-0050 | www.epinc.com

3801.0083

STATE OF MISSOURI
MATTHEW FULTS
NUMBER PE-2004005388
PROFESSIONAL ENGINEER

PREPARED BY: 08/14/25

PREPARED FOR: McDonald's USA, LLC

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DRAWN BY	MJW
STD ISSUE DATE	2024 11
REVIEWED BY	WLW
DATE ISSUED	08 14 2025
RQ#	22252

TITLE: 2024 STANDARD BUILDING – BB20
45114–WOOD/WOOD

DESCRIPTION	
WOOD BEARING WALLS W/BRICK EXTERIOR FINISH & CI	
WOOD TRUSS ROOF FRAMING	
BATTEN/BRICK EXTERIOR FINISH	
NSN: 7321	SITE ADDRESS: 3255 Main Street, Kansas City, MO 64111
J/C: 024–0244	

SHEET NO. 024–0244.01.0
E2.0
LIGHTING PLAN

1 E2.1 PARTIAL LIGHTING FLOOR PLAN
1/4"=1'-0"

REFER TO E2.0 FOR NOTES. SEE SHEET E3.1 FOR GENERAL LIGHTING NOTES AND "ROOF PLAN" (SHEET E2.2) FOR ADDITIONAL ELECTRICAL ROUGH-IN & LIGHTING REQUIREMENTS.

REV	DATE	DESCRIPTION	BY
	08/14/25	PERMIT SET	WLW
	06/26/25	USRD PROGRESS SET REVIEW	WLW

emanuelson-podas
consulting engineers
Emanuelson-Podas, Inc.
705 Bush Lake Road
Eden Prairie, MN 55439
(952) 930-0050 | www.epinc.com

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STATE OF MISSOURI
MATTHEW FULTS
NUMBER PE-2004005368
PROFESSIONAL ENGINEER

PREPARED BY:

08/14/25

PREPARED FOR:
McDonald's USA, LLC

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TITLE
2024 STANDARD BUILDING - BB20
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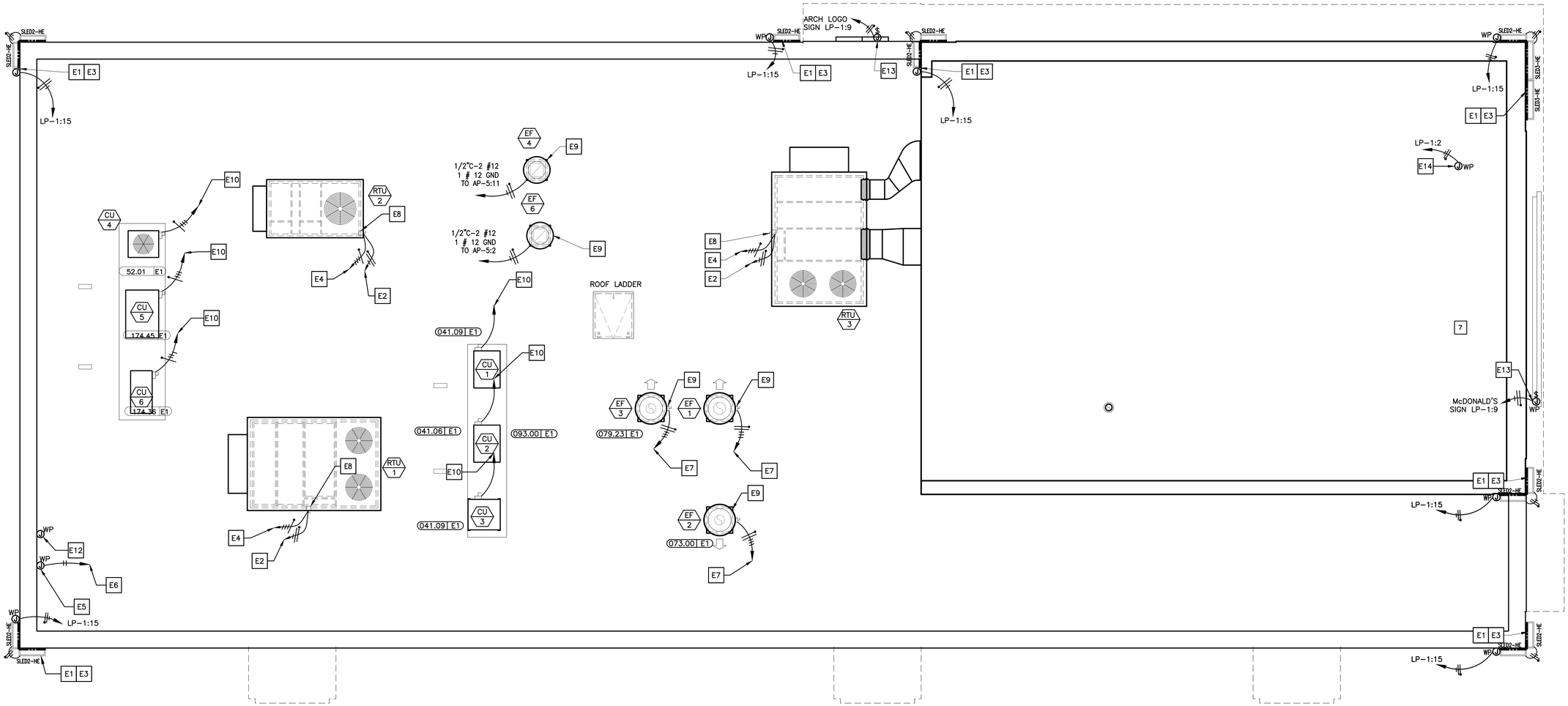
DESCRIPTION
WOOD BEARING WALLS W/BRICK EXTERIOR FINISH & CI
WOOD TRUSS ROOF FRAMING
BATTEN/BRICK EXTERIOR FINISH

NSN: 7321

SITE ADDRESS
3255 Main Street, Kansas City, MO 64111

L/C: 024-0244

SHEET NO.
024-0244.01.0
E2.1
LIGHTING PLAN



1 E2.2 ROOF PLAN 1/4"=1'-0"

KEYED NOTES

E1 EVERY LINEAR RUN OF SLED FIXTURES REQUIRES A DEDICATED WHIP KIT PROVIDED WITH FIXTURE. CONTRACTOR TO FIELD VERIFY FIXTURE MOUNTING HEIGHT, LOCATION, QUANTITY, FIXTURE LENGTHS, AND ALL ELECTRICAL CONNECTION REQUIREMENTS WITH SECURITY LIGHTING PRIOR TO ORDERING AND INSTALLATION (TYPICAL).

E2 WEATHER PROOF RECEPTACLES WITH GFCI PROTECTION ARE PROVIDED AND MOUNTED WITHIN MOTOR HOUSING LOCATIONS PER NEC ARTICLE 210.63. CIRCUIT SHALL EMANATE FROM PANEL AP-5, CCT.#13.(TYPICAL).

E3 SMOOTH BRACING IS REQUIRED FOR LED FIXTURE INSTALLATION UNDER COPING/FLASHING.(TYPICAL)

E4 REFER TO SHEET E4.0 FOR CONDUIT AND WIRE SIZE.(TYPICAL)

E5 E.C SHALL PROVIDE A WEATHER-PROOF J-BOX ON INSIDE FACE OF PARAPET, MOUNTED 6" BELOW TOP OF PARAPET FOR LIGHTING CONTROL PANEL PHOTOCELL. (PHOTOCELL FURNISHED BY OTHERS AND INSTALLED BY EC). REFER TO LIGHTING CONTROL DETAILS ON E4.1

E6 TO LIGHTING ENCLOSURE W/ TIMER. COORDINATE WITH LIGHTING CONTROL DETAILS ON SHEET E4.1

E7 COOKING EQUIPMENT EXHAUST FANS. SEE SHEET E3.0 FOR ELECTRICAL REQUIREMENTS. SEE SHEET E3.2 FOR EXHAUST FAN INTERLOCK WIRING DIAGRAMS. (TYPICAL)

E8 PROVIDE NEMA 3R DISCONNECT WITH CURRENT LIMITING FUSES TO COMPLY WITH NEC 110 AND 440. ELECTRICAL CONTRACTOR SHALL STUB UP THRU RACEWAY IN CURB TO ELIMINATE CONDUIT PENETRATION OF ROOFING. (TYPICAL)

E9 EXTERNAL NEMA 3R MOUNTED ON SIDE OF FAN BY MANUFACTURER. ELECTRICAL CONTRACTOR SHALL STUB-UP THRU ROOF AND PROVIDE FLEXIBLE WEATHERPROOF CONDUIT FROM ROOF PENETRATION TO DISCONNECT (TYPICAL).

E10 REMOTE CONDENSING UNITS. SEE SHEET E3.0 FOR WIRING AND CIRCUITRY REQUIREMENTS.

E11 NOT USED

E12 E.C. SHALL PROVIDE A WEATHER-PROOF JUNCTION BOX WITH ¾"C STUB DOWN TO CEILING SPACE WITH BUSHING FOR ROOF-TOP CAMERA OR SATELLITE. VERIFY EXACT LOCATION(S) WITH MCD AREA CONSTRUCTION MANAGER PRIOR TO INSTALLATION.

E13 E.C. SHALL PROVIDE A JUNCTION BOX FOR ARCH LOGO / McDONALD'S FASCIA / PLAY-PLACE SIGN. SEE NOTE L1 ON SHEET E3.1. COORDINATE EXACT LOCATION IN FIELD WITH ACM. ALL SIGNS PROVIDED WITH INTEGRAL DISCONNECT SWITCH FROM MANUFACTURER.(TYPICAL)

E14 E.C. SHALL PROVIDE A JUNCTION BOX FOR ROOF-TOP FLAG POLE LIGHTING. VERIFY LOCATION(S) WITH MCD PROJECT MANAGER PRIOR TO INSTALLATION.

DRAWING NOTES

1. SEE DRAWING M-4.0 FOR GENERAL MECHANICAL NOTES.
2. SEE DRAWINGS M-3.0 AND M-4.1 FOR MECHANICAL EQUIPMENT SCHEDULES AND DETAILS.
3. SEE DRAWING M-4.0 FOR MECHANICAL LEGEND.
4. SEE DRAWING K-2.1 FOR REMOTE CONDENSER AND MAC UNIT INFORMATION.
5. SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.

LED GENERAL NOTES

1. PLACE LED FIXTURE AT DESIRED LOCATION AND ATTACH POWER SUPPLY AND MOUNTING BRACKET AS RECOMMENDED BY MANUFACTURER.

   EC SHALL CONNECT NEW FIXTURES TO A 120V CIRCUIT AND MAKE ALL ELECTRICAL CONNECTIONS AS REQUIRED FOR A COMPLETE OPERATING SYSTEM.

   POWER SUPPLY SHALL ALWAYS BE INSTALLED TO THE LEFT SIDE OF FIXTURE WHEN FACING BRAND WALL.

LED FIXTURE SCHEDULE:

MARK	SYMBOL	DESCRIPTION	DIFFUSER	LAMPS WATTS	LAMPS TYPE	BALLAST	MOUNTING	MANUFACTURER AND CATALOG NUMBER
SLED2-HE		DOWN ONLY ACCENT LIGHTING (SEE PLAN)	TEMPERED GLASS	1-10W PER FIXTURE	LED	–	SURFACE	SECURITY LIGHTING: SLED-HE-24-DO-U-IO CUSTOM BUILT FOR EXTERIOR ACCENT CHANNELS.
SLED3-HE		DOWN ONLY ACCENT LIGHTING (SEE PLAN)	TEMPERED GLASS	1-14W PER FIXTURE	LED	–	SURFACE	SECURITY LIGHTING: SLED-HE-36-DO-U-IO CUSTOM BUILT FOR EXTERIOR ACCENT CHANNELS.
SLED4-HE		DOWN ONLY ACCENT LIGHTING (SEE PLAN)	TEMPERED GLASS	1-19W PER FIXTURE	LED	–	SURFACE	SECURITY LIGHTING: SLED-HE-48-DO-U-IO CUSTOM BUILT FOR EXTERIOR ACCENT CHANNELS.

REV	DATE	DESCRIPTION	BY
	08/14/25	PERMIT SET	WLW
	06/26/25	USRD PROGRESS SET REVIEW	WLW

emanuelson-podas
consulting engineers
Emanuelson-Podas, Inc.
705 Bush Lake Road
Eden Prairie, MN 55439
(952) 930-0050 | www.epinc.com

3801.0083

STATE OF MINNESOTA MATTHEW FULTS NUMBER PE-20040056388 PROFESSIONAL ENGINEER

PREPARED BY: 08/14/25

PREPARED FOR: McDonald's USA, LLC

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RD# 22252

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45114-WOOD/WOOD

DESCRIPTION
WOOD BEARING WALLS W/BRICK EXTERIOR FINISH & CI
WOOD TRUSS ROOF FRAMING
BATTEN/BRICK EXTERIOR FINISH

NSN: 7321
L/C: 024-0244

SITE ADDRESS
3255 Main Street, Kansas City, MO 64111

SHEET NO. 024-0244.01.0
E2.2
ELEC. ROOF PLAN

PB = Pullbox
JB = Junction Box
EC = Electrical Contractor
VIF = Verify in Field

ELECTRICAL SCHEDULE

TAG #	QTY	DESCRIPTION	VOLT/PH	FLA	BRK SIZE	COND/WIRE	PNL/CCT	RECEP TYPE	HGT AFF	REQUIREMENTS & REMARKS
004.23E4	2	DIGITAL MERCHANDISER	120/1	2.6	20A	1/2"C-2#12IG	CP:6	IG5262	6'-5"	–
004.23E5	2	DIGITAL MERCHANDISER – MEDIA PLAYER	120/1	1.0	20A	1/2"C-2#12IG	CP:6	IG5262	6'-5"	USE SAME RECEPTACLE AS 4.20E6
004.23E6	2	DIGITAL MERCHANDISER – MEDIA PLAYER	DATA CABLE	–	–	–	–	JB	6'-5"	JB W/ 1" C. TO FULL HEIGHT WALL AND TO ABOVE CEILING
009.15E1	1	UTILITY CHASE – FFDT INTERIOR WALL	–	–	–	–	–	–	SEE RMKS	UTILITY CHASE AND RECEPTACLES PROVIDED BY K.E.S.
009.16E1	1	UTILITY CHASE – FFDT EXTERIOR WALL	–	–	–	–	–	–	SEE RMKS	UTILITY CHASE AND RECEPTACLES PROVIDED BY K.E.S.
020.01E1	2	AUTOMATED BEVERAGE SYSTEM 2.0	120/1	5.0	20A	1/2"C-2#12	AP-1:12, AP-2:24	5-20R	2'-0"	–
020.01E2	2	AUTOMATED BEVERAGE SYSTEM 2.0	120/1	14.9	20A	1/2"C-2#12	AP-1:6, AP-2:26	5-20R	3'-10"	FOR PRE-COOLER
021.01E3	3	COFFEE BREWER (THERMAL POTS)	120-208/1	15.5	20A	1/2"C-3#12	AP-1:(2,4)(14,16), AP-6:(11,13)	BY KES	SEE RMKS	EC TO EXTEND CIRCUIT TO L14-20R RECEPTACLE IN CHASE
023.10E1	1	ESPRESSO BREWER	208/1	21.6	30A	1/2"C-2#10	AP-1:(19,21)	BY KES	SEE RMKS	EC TO EXTEND CIRCUIT TO L6-30R RECEPTACLE IN CHASE
023.12E1	1	COFFEE CREAM DISPENSER	120/1	1.0	20A	1/2"C-2#12	AP-1:8	BY KES	SEE RMKS	EC TO EXTEND CIRCUIT TO 5-20R RECEPTACLE IN CHASE
023.14E1	1	SUGAR/SWEETENER DISPENSER	120/1	1.5	20A	1/2"C-2#12	AP-1:8	BY KES	SEE RMKS	EC TO EXTEND CIRCUIT TO 5-20R RECEPTACLE IN CHASE
024.02E1	1	JUICE DISPENSER	120/1	4.5	20A	1/2"C-2#12	AP-1:8	5-20R	SEE RMKS	EC TO EXTEND CIRCUIT TO 5-20R RECEPTACLE IN CHASE
025.07E1	1	INFUSION TEA BREWER – MIS	120-208/1	13.0	20A	1/2"C-3#12	AP-2:(32,34)	L14-20R	2'-3"	–
025.07E2	1	INFUSION TEA BREWER – MIS	–	–	–	–	–	JB	2'-3"	FOR WATER LINE TO ICED TEA BREWER IF CHASE IS NOT SPECIFIED. (SEE P1.6)
031.03E1	1	SODA SYSTEM PACKAGE – B.I.B. (RECIRCULATING- 3 TOWERS)	208/3	26.0	30A	3/4"C-3#10	AP-2:(37,39,41)	SEE RMKS	3'-0" SEE RMKS	EC SUPPLIES 30A-3P NF DISC SW MTD 9" BELOW CEILING PER NEC SECT. 404.8(A)
031.03E2	1	SODA SYSTEM PACKAGE – B.I.B. (RECIRCULATING- 3 TOWERS)	–	–	–	–	–	JB	4'-0"	FOR CONTROL WIRES FROM REMOTE CONDENSING UNIT
031.03E3	1	SODA SYSTEM PACKAGE – B.I.B. (RECIRCULATING- 3 TOWERS)	120/1	(2) 6.8	20A	1/2"C-2#12	AP-2:35	5-20R	6'-6"	FOR WATER BOOSTER SYSTEM AND OPTIONAL AIR COMPRESSOR
032.02E1	1	REVERSE OSMOSIS WATER FILTRATION SYSTEM – TANKLESS	120/1	4.0	20A	1/2"C-2#12 EA.	AP-2:23	5-20R	6'-0"	–
032.04E1	1	WATER FILTRATION SYSTEM	120/1	0.08	20A	1/2"C-2#12 EA.	AP-2:23	5-20R	6'-0"	–
037.03E1	2	CO2 SAFETY SYSTEM – DETECTOR	120/1	1.0	20A	1/2"C-2#12	AP-1:10	JB	SEE RMKS	PROVIDE LOCKOUT CB. SEE MECHANICAL DRAWINGS
037.03E2	2	CO2 SAFETY SYSTEM	–	–	–	–	–	JB	SEE RMKS	FOR LV WIRES. STUB 3/4"C. ABV. CLG. SEE MECHANICAL DRAWINGS
037.03E4	4	CO2 SAFETY SYSTEM – CO2 DETECTOR AV ALARM	–	–	–	–	–	JB	7'-0" MINIMUM	STUB 3/4"C. ABOVE CLG. FOR LV COND. TO 037.03E2. SEE MECHANICAL DRAWINGS
038.00E1	1	CLEAN IN PLACE PANEL	120/1	1.0	20A	1/2"C-2#12	AP-2:21	5-20R	5'-6"	–
039.10E1	1	ICE MACHINE – 1400 LB.	208/3	13.4	20A	1/2"C-3#12	AP-2:(1,3,5)	SEE RMKS	SEE RMKS	EC SUPPLIES 30A-3P NF DISC SW MTD9"BELOW CEILING PER NEC 404.8(A) EX.2 VERIFY W/ AHJ
039.10E2	1	ICE MACHINE – 1400 LB.	–	–	–	–	–	JB	4'-6" SEE RMKS	CONTROL WIRES TO REMOTE CONDENSER
039.15E1	2	ICE MACHINE – 1000 LB.	120/1	1.1	15A	1/2"C-2#12	AP-1:37,39	5-20R	SEE RMKS	MOUNT 9" BELOW CEILING – CIRCUIT BREAKERS SHALL BE HACR TYPE
039.15E2	2	ICE MACHINE – 1000 LB.	–	–	–	1/2"C	–	JB	SEE RMKS	MOUNT 9" BELOW CEILING – CONTROL WIRES TO REMOTE CONDENSER
041.06E1	1	ICE MACHINE REMOTE CONDENSER – 1400 LB.	208/1	1.0	20A SEE RMKS	1/2"C-3#12	AP-1:(26,28)	SEE RMKS	SEE RMKS	EC TO PROVIDE WP 30A-2P NF DISC AT UNIT ON ROOF – CIRCUIT BREAKERS SHALL BE HACR TYPE
041.09E1	2	ICE MACHINE REMOTE CONDENSER – 1000 LB.	208/3	11.1	15A SEE RMKS	1/2"C-3#12 SEE RMKS	AP-1:(32,34,36)(38,40,42)	SEE RMKS	SEE RMKS	EC TO PROVIDE WP 30A-3P NF DISC AT UNIT ON ROOF – CIRCUIT BREAKERS SHALL BE HACR TYPE
043.21E1	1	OPTIMIZED ORDER ASSEMBLY TABLE	120/1	5.4	20A	SEE RMKS	KES BREAKER PANEL	SEE RMKS	SEE RMKS	PLUGS INTO KES OUTLET CHASE FOR HLA
052.01E1	1	SODA SYSTEM PACKAGE REMOTE CONDENSER – 3-TOWER	208/1	2.5	20A SEE RMKS	SEE RMKS	SEE RMKS	SEE RMKS	SEE RMKS	EC TO PROVIDE 30A-2P DISC SW W/15A FUSE – POWERED BY 31.03 – LOCATION BY ACM
052.01E2	1	SODA SYSTEM PACKAGE REMOTE CONDENSER – 3-TOWER	–	–	–	–	–	–	SEE RMKS	CONTROL WIRES TO SODA SYSTEM – LOCATION BY ACM
061.00E1	1	FRY BAGGING STATION 36"	120/1	12.5	20A	1/2"C-2#12	AP-1:31	JB	4'-0"	–
066.40E1	1	4-VAT LOV FRYER – ELECTRIC – F/F/F/F	208/3	38.9 EA. VAT	(4) 50A	1"C-3#6 EA. VAT	AP-3:(1,3,5)(7,9,11) (2,4,6)(8,10,12)	BY KES	SEE RMKS	PLUGS INTO RACEWAY RECEP WITH(1)L21-20P INTERLOCK PLUG &(4) 15-60P POWER PLUG BY KES
066.47E1	1	4-VAT LOV FRYER – ELECTRIC – S/S/S/S	208/3	38.9 EA. VAT	(4) 50A	1"C-3#6 EA. VAT	AP-3:(1,3,5)(7,9,11) (2,4,6)(8,10,12)	BY KES	SEE RMKS	PLUGS INTO RACEWAY RECEP WITH(1)L21-20P INTERLOCK PLUG &(4) 15-60P POWER PLUG BY KES
074.00E1	1	UNIVERSAL EXHAUST HOOD 4-VAT FRYER	120/1	13.5, 9.8	(2)20A-1P	1/2"C-2#12EA	AP-2:37,39	BY KES	SEE RMKS	EC TO CONN POWER TO RACEWAY FLA = 13.0 FRYER CONTROLS, 0.5 CAPTURE JET & 9.8 INDIVID. EXHAUST FAN INTERLOCK
079.23E1	1	UNIVERSAL EXHAUST HOOD FULL-CLAM/4-VAT FRYER	120/1	17.6, 13.8	(2)20A-1P	1/2"C-2#12EA	AP-1:29,41	BY KES	SEE RMKS	EC TO CONN POWER TO RACEWAY FLA=3.6 GRILL,13.0 FRYER CONTROLS, 1.0 CAPTURE JET & 13.8 INDIVID EXHAUST FAN INTERLOCK
079.26E2	2	VENTLESS HOOD COMBI OVEN	120/1	8.0	15A	1/2"C-2#12	AP-4:14,16	BY KES	SEE RMKS	EC TO EXTEND DEDICATED CIRCUIT TO 5-15R RECEPTACLE IN CHASE
085.05E1	1	FROZEN FRY DISPENSER	120/1	9.0	20A	1/2"C-2#12	AP-1:27	5-20R	4'-0"	–
091.02E1	1	WALL MOUNT FREEZER UNIT-SINGLE WIDE-HIGH CAPACITY	120/1	5.0	20A	1/2"C-2#12	AP-5:23	5-20R	7'-6"	–
093.00E1	1	UNIVERSAL EXHAUST HOOD FULL-CLAM GRILL	120/1	13.9	20A	1/2"C-2#12	AP-2:17	BY KES	SEE RMKS	EC TO CONN. POWER TO RACEWAY FLA = 3.6 GRILL CONTROLS, 0.5 CAPTURE JET & 9.8 INDIVID. EXHAUST FAN INTERLOCK
096.21E1	2	36" NEXT GEN 3-PLATEN CLAMSHELL GRILL – ELECTRIC	208/3	21.7, 43.3	(2)50A	1-1/2"C- 6#4	AP-3:(14,16,18)(20,22,24) AP-4:(1,3,5)(7,9,11)	BY KES	SEE RMKS	PLUGS IN RACEWAY RECEP WITH(1)L21-20P INTERLOCK& (2) 15-50P POWER PLUG EA GRILL
097.08E1	1	MEAT FREEZER – DOUBLE WIDE – HIGH CAPACITY – RIGHT HAND	120/1	7.0	20A	1/2"C-2#12	AP-2:19	5-15R	SEE RMKS	UNIT PLUGS INTO RACEWAY RECEPTACLE
114.00E1	1	HUMIDIFIED HOLDING CABINET	208/1	9.1	20A	1/2"C-2#12	AP-5:(34,36)	SEE RMKS	5'-6"	PLUGS INTO OVERHEAD RECEPTACLE # 320C6W(B) PROVIDED BY KES – HEIGHT TO BOTTOM OF RECEPTCLE
116.23E4	2	UNIVERSAL HOLDING CABINET – HIGH DENSITY – 2-SIDED – PIN & SLEEVE	208/1	15.2	20A	1/2"C-2#12	AP-5:(4,6)(8,10)	BY KES	5'-6"	PLUGS INTO OVERHEAD RECEPTACLE # 320C6W(B) PROVIDED BY KES – HEIGHT TO BOTTOM OF RECEPTCLE
117.30E1	1	UHC TABLE COPL – 2 SIDED – 51"D x 34"W – PIN&SLEEVE	120/1	2.0	20A	1/2"C-2#12	AP-5:12	BY KES	5'-6"	PLUGS INTO OVERHEAD RECEPTACLE # 320C4W(Y) PROVIDED BY KES- HEIGHT TO BOTTOM OF RECEPTACLE
118.00E1	1	Q'ING OVEN – PIN & SLEEVE	208/1	15.4	20A	1/2"C-2#12	AP-2:(38,40)	SEE RMKS	5'-6"	PLUGS INTO OVERHEAD RECEPTACLE # 320C6W(B) PROVIDED BY KES- HEIGHT TO BOTTOM OF RECEPTACLE
118.03E1	2	Q'ING OVEN – PIN & SLEEVE	208/1	14.9	20A	1/2"C-2#12	AP-2:(18,20)(28,30)	SEE RMKS	5'-6"	PLUGS INTO OVERHEAD RECEPTACLE # 320C6W(B) PROVIDED BY KES- HEIGHT TO BOTTOM OF RECEPTACLE
122.27E1	1	NEXT GEN. UNIVERSAL RADIANT TOASTER – PIN & SLEEVE	208/1	25.2	30A	1/2"C-2#10	AP-5:(27,29)	SEE RMKS	5'-6"	PLUGS INTO OVERHEAD RECEPTACLE # 330C6W(B) PROVIDED BY KES- HEIGHT TO BOTTOM OF RECEPTACLE
122.28E2	1	NEXT GEN. UNIVERSAL CONTACT TOASTER – PIN & SLEEVE	208/1	25.2	30A	1/2"C-2#10	KES BREAKER PANEL	SEE RMKS	SEE RMKS	PLUGS INTO KES RACEWAY RECEPTACLE
123.36E1	1	ECU TABLE – COPL	208/1	4.9	15A	SEE RMKS	KES BREAKER PANEL	SEE RMKS	SEE RMKS	PLUGS INTO KES OUTLET CHASE.
123.37E1	1	BREAKER PANEL- 125 AMP – 1 PHASE – EQUIPMENT MOUNTED	120-208/1	SEE RMKS	125A	1-1/2C"-3#1	MDP:11	–		EC TO EXTEND AND CONNECT ELECTRICAL SERVICE. HARDWIRE TO KES BREAKER PANEL.
123.40E1	1	PREP TABLE – HD – 2-SIDED COPL – 38"D x 83 1/2" – PIN & SLEEVE W/ REF.	120/1	10.0	20A	SEE RMKS	KES BREAKER PANEL	SEE RMKS	SEE RMKS	PLUGS INTO KES OUTLET CHASE.
125.00E2	2	RAPID BUN STEAMER	208/1	14.3	30A	1/2"C-2#10	KES BREAKER PANEL	SEE RMKS	SEE RMKS	PLUGS INTO KES RACEWAY RECEPTACLE
130.00E3	2	COMBI OVEN	208/3	15.1	30A	1/2"C-3#10	AP-4:(2,4,6)(8,10,12)	BY KES	SEE RMKS	EC TO EXTEND CIRCUIT TO L430R9 RECEPTACLE IN CHASE
152.08E1	1	WAREWASHER – HIGH TEMP	208/3	26.9 EA.	(2)30A	1/2"C-3#10	AP-5(31,33,35)(37,39,41)	SEE RMKS	SEE RMKS	EC TO SUPPLY 30A-3P NF DISC SW HANDLE HGT. MTD @ 6'-7" AFF FOR EA. CCT PER NEC 404.8(A). LABEL "WAREWASHER (# OF 2)"
163.02E1	4	REMOTE ANSUL PULL	–	–	–	–	–	JB	SEE DETAILS	4" OCTAGONAL, RACO #165 OR EQUAL MUST BE USED.
171.01E1	1	WALK-IN COOLER / FREEZER FLOORLESS	120/1	10.0	20A	1/2"C-2#12	AP-2:14,16	JB	FLUSH ON CLG	JB FOR LIGHTS &]DOOR HEATER- UNSWITCHED LIGHT TO BE IN BOTH COOLER & FREEZER,EC TO CONNECT POWER
171.01E2	1	WALK-IN COOLER / FREEZER FLOORLESS	–	–	–	–	–	–	VIF	EC TO FURNISH & INSTALL CONDUIT,WIRE & LIGHT FIXTURES& OTHER DEVICES INSIDE COOLER/FREEZER BOX
174.37E1	1	REMOTE CONDENSING UNIT	208/1	10.8	25A	1/2"C-2#10	AP-5:(38,40)	JB	VIF	EC TO PROVIDE 30A-2P NF DISC AT UNIT ON ROOF. CIRCUIT BREAKERS TO BE HARC RATED.
174.37E2	1	REMOTE CONDENSING UNIT	LOW VOLT WIRES	–	–	–	–	–	VIF	–
174.46E1	1	REMOTE CONDENSING UNIT	208/3	30.3	50A	1"C-3#6	MDP:15	JB	VIF	EC TO PROVIDE 60A-3P NF DISC AT UNIT ON ROOF. CIRCUIT BREAKERS TO BE HARC RATED.
174.46E2	1	REMOTE CONDENSING UNIT	LOW VOLT WIRES	–	–	–	–	–	VIF	–
175.19E1	1	COOLER EVAPORATOR	208/1	1.0	20A	1/2"C-2#12	AP-6:(9,11)	JB	FLUSH ON CLG	–
175.19E2	1	COOLER EVAPORATOR	LOW VOLT WIRES	–	–	–	–	–	FLUSH ON CLG	L V WIRES CONN UNIT TO EVAPS & SHALL BE ROUTED SEPARATELY FROM POWER CONDUCTORS
176.28E1	1	FREEZER EVAPORATOR	208/1	20.3	30A	1/2"C-2#10	AP-6:(13,15)	JB	FLUSH ON CLG	–
176.28E2	1	FREEZER EVAPORATOR	LOW VOLT WIRES	–	–	–	–	–	FLUSH ON CLG	L V WIRES CONN UNIT TO EVAPS & SHALL BE ROUTED SEPARATELY FROM POWER CONDUCTORS
177.03E2	1	REACH-IN REFRIGERATOR-SINGLE WIDE	120/1	2.7	20A	1/2"C-2#12	AP-2:31	SEE RMKS	SEE RMKS	EC TO EXTEND CIRCUIT TO 5-20R RECEPTACLE IN CHASE
178.05E1	3	REACH-IN FREEZER-SINGLE WIDE	120/1	11.0	20A	1/2"C-2#12	AP-1:25,30,35	5-20R	7'-6"	–
181.13E1	1	REFRIGERATOR – SPECIALTY COFFEE- 27" WIDE	120/1	3.9	20A	1/2"C-2#12	AP-2:22	BY KES	SEE RMKS	EC TO EXTEND CIRCUIT TO 5-20R RECEPTACLE IN CHASE
181.14E1	1	REFRIGERATOR – WORK TOP – 48" WIDE	120/1	5.0	20A	1/2"C-2#12	AP-2:8	5-20R	2'-0"	–
183.00E1	1	REFRIGERATOR/FREEZER – 2 DRAWER BASE – 30" W X 33" H	120/1	5.0	20A	1/2"C-2#12	AP-5:1	5-20R	2'-0"	–
183.02E1	1	REFRIGERATOR/FREEZER – 2 DRAWER BASE – 30" W X 30" H	120/1	5.0	20A	1/2"C-2#12	AP-5:3	5-20R	2'-0"	–
183.02E2	2	REFRIGERATOR/FREEZER – 2 DRAWER BASE – 30" W X 30" H	120/1	5.0	20A	1/2"C-2#12	AP-5:5,7	BY KES	SEE RMKS	EC TO EXTEND CIRCUIT TO 5-20R RECEPTACLE IN CHASE
183.02E3	1	REFRIGERATOR/FREEZER – 2 DRAWER BASE – 30" W X 30" H	120/1	5.0	20A	1/2"C-2#12	AP-5:9	BY KES	5'-6"	PLUGS INTO OVERHEAD RECEPTACLE # 320C4W(Y) PROVIDED BY KES- HEIGHT TO BOTTOM OF RECEPTACLE
196.06E1	1	SAFE – STANDARD BLDG.	120/1	1.0	20A	1/2"C-2#12	AP-1:7	5-20R	2'-0"	PROVIDE LOCKOUT TYPE CB
196.08E1	1	BOCA	120/1 ISOLATED	8.2	20A	1/2"C-2#12IG	CP:33	IG5262	2'-0"	–
196.08E2	1	BOCA	120/1 ISOLATED	1.8	20A	1/2"C-2#12IG	CP:33	IG5262	2'-0"	–
196.08E3	1	BOCA	DATA CABLE	–	–	2" C	–	4x4x4 PB	2'-0"	EXTEND 2" CONDUIT ABOVE CLG. W/ BUSHING FOR DATA CABLES
197.01E1	1	HAND WASH TIMER	120/1	0.1	20A	1/2"C-2#12	AP-1:33	5-20R	4'-6"	–

1. REFER TO FINAL FACILITIES DRAWINGS FOR EQUIPMENT REQUIREMENTS PRIOR TO INSTALLATION. 2. PROVIDE ALL CODE REQUIRED DISCONNECTS FOR EQUIPMENT THAT IS NOT ALREADY PROVIDED BY KES.

PB = Pullbox
JB = Junction Box
EC = Electrical Contractor
VIF = Verify in Field

ELECTRICAL SCHEDULE

TAG #	QTY	DESCRIPTION	VOLT/PH	FLA	BRK SIZE	COND/WIRE	PNL/CCT	RECEP TYPE	HGT AFF	REQUIREMENTS & REMARKS
203.01E1	1	HEAT TREAT COMBINATION SHAKE/SUNDAE MACHINE	208/3	13.0	30A	3/4"C-3#8	AP-1:(18,20,22)	4x4x4 PB	1'-0"	RECEP #A460R9 BY KES, IF TAYLOR C602 IS ORDERED USE A 40A BRKR & #6 CONDUCTORS -EC MAKES FINAL CONN
205.08E1	1	BIC MACHINE	120/1	8.6	20A	1/2"C-2#12	AP-2:29	BY KES	SEE RMKS	EC TO EXTEND DEDICATED CIRCUIT TO 5-20R RECEPTACLE IN CHASE
205.09E2	1	FROZEN BEVERAGE DISPENSER	208/1	20.0	30A	1/2"C-2#10	AP-5:(17,19)	SEE RMKS	SEE RMKS	RECEP L6-30R IN CHASE BY KES, EC MAKES FINAL CONN
207.01E2	1	BLENDER – MCFLURRY – RAIL MOUNT	120/1	1.2	20A	1/2"C-2#12	AP-2:7	5-20R	4'-0"	
210.00E4	1	CASH RECYCLER	120/1 ISOLATED	4.4	20A	1/2"C-2#12IG	CP:24	(2) IG5262	2'-10"	–
211.00E6	1	DELIVERY TABLETS	120/1	3.0	20A	1/2"C-2#12	AP-5:21	(2) 5-20R	5'-6"	–
214.02E1	1	82" 44U STATIONARY RACK	120/1 ISOLATED	5.0	20A	1/2"C-2#12IG	CP:11	IG4700	7'-6"	FOR SWITCHES, HUBS AND RADIUS
214.02E3	1	82" 44U STATIONARY RACK	120/1 ISOLATED	10.0	20A	1/2"C-2#12IG	CP:15	IG4700	3'-0"	FOR CASHLESS DEVICE UPS
214.02E4	1	82" 44U STATIONARY RACK	120/1 ISOLATED	12.0	20A	1/2"C-2#12IG	CP:17	IG4700	3'-0"	FOR POS SYSTEM UPS AND ORB CONTROLLER
214.02E5	1	82" 44U STATIONARY RACK	DATA CABLE	–	–	–	–	8x6x4 PB	7'-6"	EXTEND (2) 2 1/2" CONDUIT ABOVE CLG. W/BUSHING FOR DATA CABLES
214.02E6	1	82" 44U STATIONARY RACK	120/1 ISOLATED	14.0	30A	1/2"C-2#10IG	CP:12	L5-30R IG	3'-0"	FOR POS SYSTEM UPS
215.00E12	1	POS REGISTER – FRONT COUNTER	120/1 ISOLATED	3.0 EA.	–	3/4"C-2#12IG	CP:19	IG4700	SEE RMKS	PROVIDE IG RECEP. IN COUNTER-MOUNTED RACEWAY
215.00E3	1	POS REGISTER – FRONT COUNTER	DATA CABLE	–	–	–	–	4x4x4 PB	10"	EXTEND 2" CONDUIT TO ABOVE CEILING FOR POS DATA CABLES
215.02E1	1	POS REGISTER – 2 WINDOW D/T	120/1 ISOLATED	3.0 EA.	SEE RMKS	1/2"C-2#12IG	SEE REMARKS	(2)IG4700	2'-5"	IN ORDER BOOTH, CONNECT TO CP:7 – IF INCLUDED IN PRESENTERS BOOTH, CONNECT TO CP:8
215.02E10	2	POS REGISTER – 2 WINDOW D/T	120/1 ISOLATED	3.0 EA.	20A	1/2"C-2#12IG	CP:1	BY KES	SEE RMKS	EC TO EXTEND CIRCUIT TO IG4700 RECEPTACLE IN CHASE
215.02E12	1	POS REGISTER – 2 WINDOW D/T	–	–	–	–	–	18x12x4 PB	10"	REFER TO D/T LOW VOLTAGE CONDUIT DIAGRAM FOR CONDUITS UNDER SLAB AND EXTEND (2) 2 1/2"C. TO ABOVE CLG.
215.02E13	1	POS REGISTER – 2 WINDOW D/T	–	–	–	–	–	4x4x4 PB	10"	EXTEND 1 1/2"C. UNDER SLAB TO 217.11E1 AND 2 1/2" C. TO ABOVE CEILING FOR POS DATA CABLES
215.02E17	1	POS REGISTER – 2 WINDOW D/T	–	–	–	–	–	4x4x4 PB	10"	EXTEND 1 1/2"C. UNDER SLAB TO 217.11E1 AND 2 1/2" C. ABOVE TO 215.02E18
215.02E18	1	POS REGISTER – 2 WINDOW D/T	–	–	–	–	–	4x4x4 PB	5'-0"	EXTEND 2 1/2" C. BELOW TO 215.02E17 AND 2 1/2" C. TO ABOVE CEILING FOR POS DATA CABLES
215.04E1	2	POS – KVS MONITOR	120/1 ISOLATED	1.5 EA.	20A	1/2"C-2#12IG	CP:8	IG4700	FLUSH ON CLG	–
215.04E4	2	POS – KVS MONITOR	120/1 ISOLATED	1.5	20A	1/2"C-2#12IG	CP:26	SEE RMKS	SEE RMKS	EC TO EXTEND CIRCUIT TO IG4700 RECEPTACLE IN OEP
215.04E5	2	POS – KVS MONITOR	120/1 ISOLATED	1.5 EA.	20A	1/2"C-2#12IG	CP:3	SEE RMKS	SEE RMKS	EC TO EXTEND CIRCUIT TO IG4700 RECEPTACLE IN CHASE
215.04E7	3	POS – KVS MONITOR	120/1 ISOLATED	1.5 EA.	20A	1/2"C-2#12IG	CP:23	IG4700	5'-6"	–
215.04E8	1	POS – KVS MONITOR	DATA CABLE	–	–	–	–	4x4x4 PB	4'-0"	EXTEND 2" CONDUIT ABOVE CEILING. CABLE FURNISHED AND INSTALLED BY POS SYSTEM SUPPLIER
215.07E1	1	POS REGISTER – DELIVERY	120/1 ISOLATED	3.0	20A	1/2"C-2#12IG	CP:23	IG4700	3'-6"	
215.07E3	1	POS REGISTER – DELIVERY	DATA CABLE	–	–	–	–	4x4x4 PB	3'-6"	EXTEND 2" CONDUIT TO ABOVE CEILING FOR POS DATA CABLES
216.00E13	2	POS – VIDEO MONITOR	120/1 ISOLATED	1.5 EA.	20A	1/2"C-2#12IG	CP:3	SEE RMKS	SEE RMKS	EC TO EXTEND CIRCUIT TO IG4700 RECEPTACLE IN CHASE
216.00E14	4	POS – VIDEO MONITOR	120/1 ISOLATED	1.5 EA.	20A	1/2"C-2#12IG	CP:9	IG4700	SEE RMKS	EXTEND CONDUIT DOWN GRILL HOOD SHROUD AND PROVIDE IG4700 RECEPTACLE
216.00E7	3	POS – VIDEO MONITOR	120/1 ISOLATED	1.5 EA.	20A	1/2"C-2#12IG	CP:1	BY KES	SEE RMKS	EC TO EXTEND CIRCUIT TO IG4700 RECEPTACLE IN CHASE
217.03E4	1	POS – COD OPTICAL ISOLATOR	120/1 ISOLATED	1.0	20A	1/2"C-2#12IG	CP:14	IG5262	7'-6"	–
217.10E1	2	REMOTE DETECTOR LOOP	–	–	–	–	–	–	–	1 1/2"CONDUIT-CONN TO PULLBOX#215.03E5,215.01E4, OR 215.02E12 PER DRIVE-THRU CONFIG-SEE SITE PLAN
217.11E1	2	DETECTOR LOOP	–	–	–	–	–	–	–	1 1/2"CONDUIT-CONN TO PULLBOX#215.02E5,215.02E13, OR 215.02E4 PER DRIVE-THRU CONFIG-SEE SITE PLAN
217.13E1	1	MERGE POINT MONITOR (DOUBLE DRIVE THRU)	120/1	2.0	20A	1/2"C-2#12	AP-1:11	5-20R	3'-6"	DO NOT POWER FROM POS CIRCUIT
217.13E2	2	MERGE POINT MONITOR (DOUBLE DRIVE THRU)	120/1	2.0	20A	1/2"C-2#12	AP-1:11	BY KES	SEE RMKS	EC TO EXTEND CIRCUIT TO 5-20R RECEPTACLE IN CHASE
217.14E1	1	POS- VIDEO MONITOR (DOUBLE DRIVE THRU)	120/1 ISOLATED	1.5	SEE RMKS	1/2"C-2#12IG	CP:7	IG4700	3'-6"	–
217.18E1	3	HAND HELD ORDER TAKER AND MANAGEMENT OF SHIFT EQUIPMENT	120/1	5.0	20A	1/2"C-2#12	AP-1:15	5-20R	4'-6"	–
217.19E2	1	WIRELESS HEADSET BASE STATION	120/1 ISOLATED	1.9	20a	1/2"C-2#12IG	CP:1	IG4700	4'-6"	
217.19E3	1	WIRELESS HEADSET BASE STATION	DATA CABLE	–	–	–	–	4x4x4 PB	5'-0"	
217.24E1	1	DANGER POINT MONITOR (DOUBLE DRIVE-THRU)	120/1	2.0	20A	1/2"C-2#12	AP-1:11	5-20R	8'-0"	DO NOT POWER FROM POS CIRCUIT
217.26E1	1	ZOOM TIMER	120/1 ISOLATED	6.0	20A	1/2"C-2#12IG	CP:10	(2) IG4700	7'-6"	–
217.26E2	1	ZOOM TIMER	DATA CABLE	–	–	–	–	JB	7'-6"	JB W/ 1-1/2" C. TO TERMINATE ABOVE CEILING W/BUSHINGS. FOR DATA CABLES. SUPPLY W/ GROMMETED OPENING IN COVER PLATE
219.00E10	1	POS – RECEIPT PRINTER	120/1 ISOLATED	0.7	20A	3/4"C-2#12IG	SEE RMKS	IG4700	SEE RMKS	PROVIDE IG RECEP. IN COUNTER-MOUNTED RACEWAY, POWER FROM SAME CIRCUIT AS 215.00E12
219.00E3	1	POS – RECEIPT PRINTER/CASHLESS	120/1 ISOLATED	0.7	20A	1/2"C-2#12IG	CP:4	IG4700	2'-0"	–
219.00E7	2	POS – RECEIPT PRINTER	120/1 ISOLATED	0.7	20A	1/2"C-2#12IG	CP:3	BY KES	SEE RMKS	EC TO EXTEND IG CIRCUIT TO IG4700 RECEPTACLE IN KES OUTLET CHASE.
219.05E2	2	STICKY LABEL PRINTER	120/1 ISOLATED	0.7	20A	1/2"C-2#12IG	CP:1	BY KES	SEE RMKS	EC TO EXTEND IG CIRCUIT TO IG4700 RECEPTACLE IN CHASE
219.05E3	1	STICKY LABEL PRINTER	120/1 ISOLATED	0.7	20A	1/2"C-2#12IG	CP:3	IG4700	3'-2"	–
219.05E6	2	STICKY LABEL PRINTER	120/1 ISOLATED	0.7	20A	1/2"C-2#12IG	CP:3	IG4700	FLUSH ON CLG	–
219.06E1	1	LABELING SYSTEM	120/1 ISOLATED	2.0	20A	1/2"C-2#12IG	CP:8	IG5261	2'-0"	–
220.00E1	1	POS – COIN DISPENSER	120/1 ISOLATED	0.75	20A	1/2"C-2#12IG	CP:7	IG4700	2'-0"	–
221.09E1	1	O/O EQUIPMENT RACK	120/1 ISOLATED	4.0	20A	1/2"C-2#12IG	CP:31	IG5262	8'-0"	–
221.09E2	1	O/O EQUIPMENT RACK	DATA CABLE	–	–	2" C	–	4x4x4 PB	8'-0"	EXTEND 2" CONDUIT ABOVE CLG. W/ BUSHING FOR DATA CABLES
222.01E1	1	TIME CLOCK	120/1 ISOLATED	0.5	20A	1/2"C-2#12IG	CP:28	IG4700	4'-0"	–
222.01E2	1	TIME CLOCK	DATA CABLE	–	–	–	–	JB	4'-0"	EXTEND 1" CONDUIT ABOVE CEILING
223.07E1	1	WASHER	120/1	8.0	15A	1/2"C-2#12	AP-1:13	5-15R	3'-6"	–
225.03E3	2	OFFICE PACKAGE/DESK UNIT	120/1 ISOLATED	10.0	20A	1/2"C-2#12IG	CP:20,22	IG5262	4'-6"	FOR MONITOR, PRINTER AND THIN CLIENT
225.03E4	1	OFFICE PACKAGE/DESK UNIT	DATA CABLE	–	–	–	–	4x4x4 PB	4'-6"	EXTEND 2 1/2" CONDUIT ABOVE CLG. W/BUSHING FOR DATA CABLE
237.00E2	1	PIE DISPLAY	120/1	4.7	20A	1/2"C-2#12	AP-5:24	5-20R	5'-5"	–
237.00E4	1	PIE DISPLAY	120/1	4.7	20A	1/2"C-2#12	AP-5:26	BY KES	SEE RMKS	EC TO EXTEND CIRCUIT TO KES OUTLET IN CHASE
700.07E1	1	WATER HEATER – GAS	120/1	4.0	20A	1/2"C-2#12	AP-2:11	JB	SEE RMKS	EC TO VERIFY JB HEIGHT IN FIELD – EC TO PROVIDE PADLOCKABLE DEVICE AT CCT BRKR PER NEC 422.31
700.09E1	1	ECONOMY OEP BOX W/MOUNTING HARDWARE	–	–	–	–	–	BY KES	SEE RMKS	CEILING MOUNTED
700.10E1	1	BULK OIL SYSTEM	120/1	7.2, 10.0	(2) 20A	1/2"C- 2#12	AP-2:15,27	(2)5-20R	8'-0"	PROVIDE DOUBLE DUPLEX WALL PLATE. FOR OIL PUMP AND RECIRCULATION HEATING SYSTEM
700.10E2	1	BULK OIL SYSTEM	120/1	6.9	20A	1/2"C-2#12	AP-5:25	5-20R	1'-6"	FOR GRILL GREASE PUMP
700.10E3	1	BULK OIL SYSTEM	PHONE BOX	–	–	–	–	RJ-11C JACK	8'-0"	TELEPHONE LINE FOR TELEMETRY SYSTEM
700.11E1	1	OEP UTILITY PANEL W/ MOUNTING HARDWARE – STATIC BOX	–	–	–	–	–	–	SEE RMKS	SUPPLIED WITH RECEPTACLES,ITEM MOUNTS ON CEILING
701.01E1	4	HAND DRYER	120/1	9.1	20A	1/2"C-2#12	AP-6:2,4,6,8	JB	SEE RMKS	INSTALL JB AT A MOUNTING HGT. THAT RESULTS IN DRYER BOTTOM EDGE TO BE AT 44" AFF.
701.13E1	3	DCO – GENERAL PURPOSE	120/1	1.5	20A	1/2"C-2#12	AP-1:1	5-20R	4'-6"	CONTROL VIA CONTACTOR PANEL. PERMANENTLY MARK RECEP.
701.13E14	2	DCO – GENERAL PURPOSE	120/1	1.7	20A	1/2"C-2#12	AP-1:1	5-20R	4'-6"	CONTROL VIA CONTACTOR PANEL. PERMANENTLY MARK RECEP. PROVIDE USB CHARGER RECEP., HUBBELL USB20X2* AND DEEP BOX AS REQ.
701.13E17	1									
701.13E18	1	DCO – GENERAL PURPOSE	120/1	1.5	20A	1/2"C-2#12	AP-1:3	5-20R	4'-6"	–
701.13E19	1	DCO – GENERAL PURPOSE	120/1	1.7	20A	1/2"C-2#12	AP-1:1	5-20R	1'-6"	CONTROL VIA CONTACTOR PANEL. PERMANENTLY MARK RECEP. PROVIDE USB CHARGER RECEP., HUBBELL USB20X2* AND DEEP BOX AS REQ.
701.13E2	2	DCO – GENERAL PURPOSE	120/1	1.7	20A	1/2"C-2#12	AP-1:1	5-20R	3'-6"	CONTROL VIA CONTACTOR PANEL. PERMANENTLY MARK RECEP. PROVIDE USB CHARGER RECEP., HUBBELL USB20X2* AND DEEP BOX AS REQ.
701.13E3	4	DCO – GENERAL PURPOSE	120/1	1.5	20A	1/2"C-2#12	AP-2:6	5-20R	1'-6"	–
701.13E4	2	DCO – GENERAL PURPOSE	120/1	3.0	20A	1/2"C-2#12	AP-1:3	(2) 5-20R	FLUSH ON CLG	PROVIDE DOUBLE DUPLEX WALL PLATE
701.13E9	5	DCO – GENERAL PURPOSE	120/1	1.5	20A	1/2"C-2#12	AP-2:42	5-20R	1'-6"	–
701.14E1	1	TELEPHONE	PHONE BOX	–	–	–	–	RJ-11C JACK	4'-6"	–
701.14E3	1	TELEPHONE	PHONE BOX	–	–	–	–	RJ-11C JACK	3'-6"	–
701.15E1	1	DOOR BUZZER	120/1	.5	20A	1/2"C-2#12	LP-1:16	–	8'-0"	CONNECT TRANSFORMER TO POWER & ROUTE LOW VOLTAGE WIRES OVERHEAD TO DOOR BUTTON
701.27E1	1	DCO-SATELLITE MUSIC SYSTEM	120/1	1.0	20A	1/2"C-2#12	AP-5:30	(2) 5-20R	3'-0"	PROVIDE DOUBLE DUPLEX WALL PLATE
701.32E1	1	REMOTE ORDER TAKER BATTERY PACK	120/1	2.0	20A	1/2"C-2#12	AP-1:9	(2) 5-20R	4'-6"	PROVIDE DOUBLE DUPLEX WALL PLATE. FIELD VERIFY HEIGHT AND LOCATION WITH ACM
701.34E1	1	ACCESS CONTROL PANEL	120/1	2.0	20A	1/2"C-2#12	LP-1:16	JB	8'-0"	ROUTE LOW VOLTAGE WIRES TO DOOR BUTTON, HORN AND DOOR STRIKE AS REQUIRED. SUPPLY WITH 4 RELAY CONTROL BOARD.

REV	DATE	DESCRIPTION	BY
	08/14/25	PERMIT SET	WLW
	06/26/25	USRD PROGRESS SET REVIEW	WLW

emanuelson-podas
consulting engineers
Emanuelson-Podas, Inc.
7705 Bush Lake Road
Edina, MN 55439
(952) 930-0050 | www.epinc.com

3801.0083

STATE OF MISSOURI
MATTHEW FULTS
NUMBER PE-2004005366
PROFESSIONAL ENGINEER

PREPARED BY:
08/14/25

PREPARED FOR:
McDonald's USA, LLC

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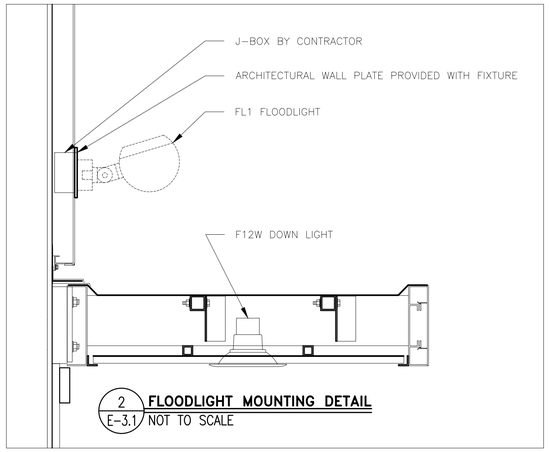
DRAWN BY: MJW
STD ISSUE DATE: 2024 11
REVIEWED BY: WLW
DATE ISSUED: 08 14 2025
RD# 22252

TITLE
2024 STANDARD BUILDING – BB20
45114-WOOD/WOOD

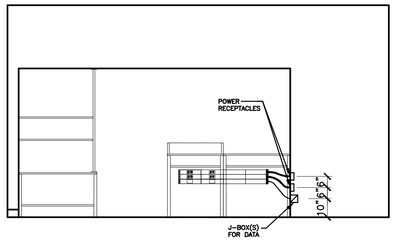
DESCRIPTION
WOOD BEARING WALLS W/BRICK EXTERIOR FINISH & Ci
WOOD TRUSS ROOF FRAMING
BATTEN/BRICK EXTERIOR FINISH

NSN: 7321
L/C: 024-0244
SITE ADDRESS
3255 Main Street, Kansas City, MO 64111

SHEET NO.
024-0244.01.0
E3.0
ROUGH-IN SCHEDULE



2 FLOODLIGHT MOUNTING DETAIL
E-3.1 NOT TO SCALE



SYMBOL	CATALOG #	DESCRIPTION
	HBLAU570R & IG4700	RECEPTACLE COVERPLATE WITH ORANGE, INSERT LOGO, ISOLATED GROUND DUPLEX RECEPTACLE
	HBLAU570R & 5-20R FOR BAKED GOODS AND IG5262 FOR CASH	RECEPTACLE COVERPLATE WITH STRAIGHT BLADE RECEPTACLE
	HBLAU57LPB	COMMUNICATIONS COVERPLATE
	HBLAU762080N2W	2" SECTION OF RACEWAY, INCLUDES COUPLERS
	HBLAU762080N3W	3" SECTION OF RACEWAY, INCLUDES COUPLERS
	HBLAU761082M2	SEMICOL ENTRANCE FITTING & BUSHING FOR DATA CABLES
	HBLAU76108	BLANK END FITTING
N/A	HBLAU5701	COUPLER (INCLUDED WITH RACEWAY SECTION)
N/A	HBLAU5709	GROUND ADAPTER

NOTES:
1. REFER TO SERVICE POD MANUFACTURER INSTRUCTIONS FOR EXACT PLACEMENT OF RACEWAY

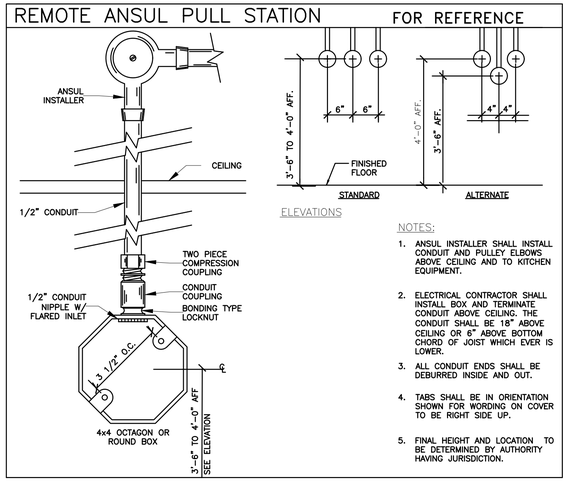
2. RACEWAY AND RECEPTACLES TO BE PROVIDED WITH SERVICE POD, INSTALLED BY CONTRACTOR.

3. DETAIL SHOWN IS A TYPICAL CONFIGURATION ONLY. SITE SPECIFICS MIGHT CAUSE DEVIATIONS.

4. PART NUMBERS SHOWN REFLECT HUBBELL, SOME SUPPIERS MAY USE WIREMOLE EQUIVALENT.

1 SERVICE POD RACEWAY DETAIL
E-3.1 NOT TO SCALE

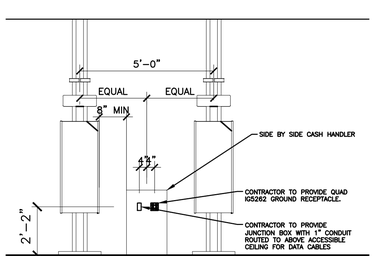
REMOTE ANSUL PULL STATION FOR REFERENCE



ELEVATIONS

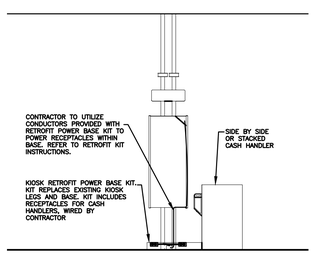
NOTES:

1. ANSUL INSTALLER SHALL INSTALL CONDUIT AND PULLEY ELBOWS ABOVE CEILING AND TO KITCHEN EQUIPMENT.
2. ELECTRICAL CONTRACTOR SHALL INSTALL BOX AND TERMINATE CONDUIT ABOVE CEILING. THE CONDUIT SHALL BE 18" ABOVE CEILING OR 6" ABOVE BOTTOM CHORD OF JOIST WHICH EVER IS LOWER.
3. ALL CONDUIT ENDS SHALL BE DEBURRED INSIDE AND OUT.
4. TABS SHALL BE IN ORIENTATION SHOWN FOR WORDING ON COVER TO BE RIGHT SIDE UP.
5. FINAL HEIGHT AND LOCATION TO BE DETERMINED BY AUTHORITY HAVING JURISDICTION.



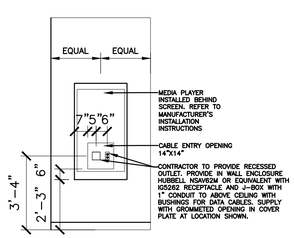
NOTES:
1. THIS EXAMPLE IS FOR A SIDE BY SIDE CASH HANDLER WITH THE REAR OF THE UNIT FACING A FULL HEIGHT GC BUILT WALL.
2. EACH SIDE BY SIDE CASH HANDLER UTILIZES 3 PLUGS AND ADDS 4.4 AMPS OF LOAD.

4 CASH HANDLER POWER DETAIL W/REAR TO WALL
E-3.1 NOT TO SCALE



NOTES:
1. THIS EXAMPLE IS FOR A SIDE BY SIDE CASH HANDLER THAT DOES NOT HAVE A GC WALL BEHIND IT AND IS NEXT TO A KIOSK. IT IS ALSO INTENDED FOR ALL STACKED CASH HANDLERS.
2. EACH SIDE BY SIDE CASH HANDLER UTILIZES 3 PLUGS AND ADDS 4.4 AMPS OF LOAD TO THE KIOSK CIRCUIT.
3. EACH STACKED CASH HANDLER UTILIZED 2 PLUGS AND ADDS 3.6 AMPS OF LOAD TO THE KIOSK CIRCUIT.
4. ONLY 1 SIDE BY SIDE CAN BE CONNECTED TO A KIOSK, HOWEVER TWO STACKED UNITS CAN BE CONNECTED. REFER TO DECOR PLANS FOR EXACT CONFIGURATIONS.

5 TYP. CASH HANDLER POWER DETAIL
E-3.1 NOT TO SCALE



NOTES:
1. THIS EXAMPLE IS FOR A WALL MOUNTED DIGITAL MERCHANDISER.

3 DIGITAL MERCHANDISER POWER DETAIL
E-3.1 NOT TO SCALE

GENERAL ELECTRICAL NOTES:

INSTALLATION METHODS:

M1. ALL ELECTRICAL MATERIAL USED ON THIS PROJECT SHALL BE "UL" LISTED AND LABELED.

M2. ALL DIMENSIONS SHOWN ARE TAKEN FROM FACE OF GYP BOARD/PLYWOOD. THE EC SHALL MAKE NECESSARY DIMENSIONAL ALLOWANCES. ALL DIMENSIONS SHOWN ARE TO CENTER LINE OF OUTLET BOX AND/OR RECEPTACLE UNLESS NOTED OTHERWISE.

M3. ALL J-BOXES, DCOs, AND OTHER ELECTRICAL DEVICES SHOWN SHALL BE RECESSED INTO A WALL, FLOOR OR CEILING UNLESS SPECIFICALLY NOTED OTHERWISE.

M4. ALL RECEPTACLES (EXCEPT SPECIFIED HUBBELL PIN & SLEEVE TYPES) SHALL BE FURNISHED BY THE EC. THE RECEPTACLES INCLUDING PIN AND SLEEVE TYPE SHALL BE INSTALLED BY THE EC.

M5. EC SHALL PROVIDE STAINLESS STEEL COVER PLATES ON ALL RECEPTACLES AND J-BOXES. ADDITIONALLY, EC SHALL PROVIDE ORANGE NYLON COVER PLATES MARKED "COMPUTER ONLY" ON ALL ISOLATED GROUND/DEDICATED CIRCUIT RECEPTACLES. PURCHASE PJ8CO (ONE DUPLEX) OR PJ82CO (TWO DUPLEX) FROM HUBBELL.

M6. ROUGH-INS FOR OPTIONAL EQUIPMENT ARE SHOWN ON THESE SHEETS. EC SHALL VERIFY WITH McDONALD'S PROJECT MANAGER WHICH OPTIONAL EQUIPMENT IS TO BE INCLUDED AND INSTALL OPTIONAL ROUGH-INS AS REQUIRED. PRICING FOR OPTIONAL ROUGH-INS SHALL BE INCLUDED IN BID AND CALLED OUT AS OPTIONAL.

M7. EC SHALL COORDINATE WITH KITCHEN EQUIPMENT SUPPLIER, MECHANICAL CONTRACTOR AND GC FOR FINAL LOCATIONS AND CONNECTION REQUIREMENTS OF ALL EQUIPMENT PRIOR TO INSTALLATION OF ANY CONDUIT AND/OR STUB-UP LOCATIONS.

M8. CEILING MOUNTED ECONOMY OEP BOX IS FURNISHED BY McDONALD'S, AND INSTALLED BY THE GC. CORD AND PLUG SET FURNISHED BY KES AND INSTALLED BY THE EC.

M9. FOR GRILLS, FRYERS, AND ANSUL SYSTEMS, EC SHALL EXTEND CONDUIT AND CONDUCTORS DOWN CHASE OR WALL TO TERMINAL BLOCK MOUNTED ON EQUIPMENT AND MAKE FINAL CONNECTIONS TO TERMINAL BLOCKS.

M10. ALL HOLES IN THE FRONT COUNTER FOR THE POS CORDS AND CABLES SHALL BE LOCATED BY OWNER AND DRILLED BY GC.

M11. ALL ELECTRICAL CONDUCTORS SHALL BE CONNECTED TO RECEPTACLES USING ONLY THE TERMINAL SCREWS. RECEPTACLE BACK WIRE/QUICK CONNECTIONS SHALL NOT BE USED. HUBBELL EDGE CONNECT IS APPROVED ALTERNATIVE.

M12. EC SHALL PROVIDE 208V HEAT TRACE ON THE FREEZER EVAPORATOR CONDENSATE DRAIN LINE. HEAT TRACE SHALL OPERATE CONTINUOUSLY. EC SHALL WIRE HEAT TRACE TO FREEZER EVAPORATOR POWER SUPPLY. A SEPARATE CIRCUIT FOR HEAT TRACE IS NOT REQUIRED. VERIFY HEAT TRACE REQUIREMENTS WITH EVAPORATOR MANUFACTURER

M13. POWER AND CONTROL CORDS ARE FURNISHED WITH KITCHEN APPLIANCES. THE EC SHALL CONNECT CORD SETS TO APPLIANCES AS REQUIRED.

M14. GC SHALL NOT INSTALL CEILING TILE IN AREAS OF THE BEVERAGE BAR REFRIGERATION LINES AND EQUIPMENT PENETRATION LOCATIONS UNTIL THE LINES HAVE BEEN INSTALLED. THE CEILING TILE INSTALLER SHALL RETURN AND INSTALL THE TILES AFTER THE REFRIGERATION LINES HAVE BEEN INSTALLED AND TESTED.

UTILITIES:

U1. INCOMING SERVICE SHALL BE 208Y/120V, 3 PHASE, 4 WIRE. ANY DEVIATIONS TO THIS SERVICE TYPE SHALL NOT BE PERMITTED UNLESS APPROVED IN WRITING BY McDONALD'S.

U2. THE EC SHALL ARRANGE WITH THE ELECTRIC, TELEPHONE, AND OTHER UTILITY COMPANIES FOR INCOMING SERVICE REQUIREMENTS AND SHALL INCLUDE ALL COSTS IN BASE BID.

U3. THE EC SHALL VERIFY EXACT METHODS AND REQUIREMENTS FOR ELECTRICAL SERVICE WITH LOCAL UTILITY COMPANY. CURRENT TRANSFORMERS SHALL BE INSTALLED OUTSIDE RESTAURANT, LOCATE INSIDE ONLY IF REQUIRED BY UTILITY COMPANY OR LOCAL AUTHORITIES.

U4. PROVIDE CONCRETE PAD IF TRANSFORMER IS LOCATED ON GRADE AND PROVIDE SECONDARY SERVICE FEEDER AND CONDUITS TO PANEL MDP AS PER LOCAL UTILITY REQUIREMENTS.

U5. THE EC/GC/ACM SHALL OBTAIN AVAILABLE SHORT CIRCUIT CURRENT FROM THE LOCAL UTILITY COMPANY. THE EC/GC/ACM SHALL ADVISE IN WRITING (FAX SUPPLIER THE UTILITY LETTER) THE AVAILABLE AMOUNT OF FAULT CURRENT. THE PANELBOARD SUPPLIER SHALL BE RESPONSIBLE TO VERIFY THAT THE ELECTRICAL EQUIPMENT SHIPPED HAS APPROPRIATE ELECTRICAL RATINGS WHICH ARE EQUAL TO OR GREATER THAN THE AVAILABLE AMOUNT OF FAULT CURRENT AT THE SITE.

U6. EC AND ACM OR OWNER/OPERATOR AND ACM SHALL COORDINATE WITH LOCAL PHONE COMPANY TO PROVIDE A 10 PAIR (OR MORE) COPPER TELEPHONE CABLE FROM THE TELEPHONE UTILITY EASEMENT TO THE RESTAURANT TELEPHONE DEMARCATION POINT. IF THE TELEPHONE PANEL/BOX IS LOCATED INSIDE THE RESTAURANT, EC SHALL PROVIDE (2) EMPTY 3/4" CONDUITS FROM THE TELEPHONE PANEL/BOX UP TO ABOVE THE CEILING FOR FUTURE TELEPHONE CABLE INSTALLATION. ADDITIONALLY, THE EC SHALL PROVIDE AN EMPTY 3/4" CONDUIT FROM THE TELEPHONE PANEL/BOX TO THE LOCATION OF THE FUTURE INTERNET SERVER (VERIFY LOCATION WITH PM). EC SHALL CONNECT, INSTALL AND INCORPORATE ALL OTHER REQUIREMENTS NECESSARY FOR COMPLETE AND OPERATIONAL TELEPHONE SYSTEM(S) FOR THIS SITE. THE REMAINING UNUSED TELEPHONE CONDUCTOR PAIRS SHALL BE CAPPED AND LEFT IN PLACE FOR FUTURE USE. THE TELEPHONE PANEL/BOX SHALL BE GROUNDED AS SHOWN IN THE "BUILDING ELECTRICAL GROUNDING DETAIL."

U7. EC SHALL PROVIDE A 4" SCHEDULE 40/80 PVC CONDUIT THAT IS SUITABLE FOR DIRECT BURIAL FROM BUILDING TO UTILITY EASEMENT/ROW IN UTILITY CABLING/CONDUIT TRENCH PROVIDED BY GC. CONDUIT SHALL RUN FREE AND INCOMING TELCO LOCATION AT BUILDING TO TELECOM PEDESTAL LOCATION IN UTILITY EASEMENT/ROW. VERIFY EXACT LOCATIONS IN FIELD WITH AREA CONSTRUCTION MANAGER AND TELECOM UTILITY PROVIDER PRIOR TO INSTALLATION.

INSTALLATION NOTES:

1. IF TELCOM CONDUIT IS TERMINATED WITHIN BUILDING, PVC SHALL TRANSITION TO HWG/RMC TYPE CONDUIT PRIOR TO RISING ABOVE FINISHED SLAB.
2. PROVIDE THERMOPLASTIC BUSHINGS AT BOTH ENDS OF CONDUIT FOR CABLING PROTECTION.
3. IF 90 DEGREE BENDS ARE REQUIRED, CONTRACTOR SHALL PROVIDE WIDE SWEEPING BENDS TO PREVENT BENDING/DAMAGE TO CABLE
4. ALL COMMUNICATIONS CABLING SHALL BE PULLED VIA THIS CONDUIT.
5. INSTALL A MINIMUM OF 6 PULL WIRES IN CONDUIT TO ALLOW FOR THE INSTALLATION OF FUTURE CABLING. USE NON-DEGRADING POLYPROPYLENE OR MONOFILAMENT PLASTIC LINE OR #12 AWGT SOLID COPPER CONDUCTORS WITH NOT LESS THAN 200 LBF TENSILE STRENGTH. PROVIDE AT LEAST 12 INCHES OF SLACK AT EACH END OF PULL WIRE.
6. AFTER INSTALLATION OF COMMUNICATIONS CABLING AND PULLSTRINGS/WIRES, CONTRACTOR SHALL SEAL BOTH ENDS OF CONDUIT TO PREVENT INTRUSION FROM WEATHER, RODENTS, DEBRIS, ETC. SEAL SHALL BE OF TYPE TO ALLOW FOR REMOVAL FOR INSTALLATION OF FUTURE CABLING

CONDUIT AND WIRE:

W1. THE FOLLOWING WIRING METHODS SHALL NOT BE USED: NON-METALLIC SHEATHED CABLE (ROMEX, NM, NMC, & NMS), ARMORED CABLE TYPE AC (BX), ELECTRICAL NON-METALLIC TUBING, TYPE ENT (SMURF-TUBE).

W2. CONDUIT RUNS MAY BE COMBINED EXCEPT WHERE ISOLATED GROUNDS ARE USED. IG CIRCUITS SHALL BE RUN IN SEPARATE CONDUITS. ALL HOME RUNS SHALL BE SIZED BASED ON DERATED CONDUCTOR AMPACITIES AND INCREASE CONDUIT AND WIRE SIZE AS REQUIRED BY NEC SECTION 310 REQUIREMENTS.

W3. CONDUIT SHALL HAVE A MAXIMUM OF 4 BENDS WITHOUT A JUNCTION BOX TO PREVENT DAMAGE TO CABLE DURING PULLING. THE EC SHALL PIGTAIL #12 PULL WIRE AT EACH END FOR INSTALLER TO PULL CABLE. ALL LOW VOLTAGE CONDUIT STUB-UPS SHALL BE PROVIDED WITH A BUSHING.

W4. MINIMUM WIRE SIZE SHALL BE #12 AWG COPPER UNLESS NOTED OTHERWISE. MINIMUM CONDUIT SIZE SHALL BE 1/2" UNLESS NOTED OTHERWISE. WIRES INSTALLED UNDERGROUND OR OUTDOORS SHALL BE THW.

W5. CONDUCTORS #10 AWG AND SMALLER SHALL BE SOLID COPPER. CONDUCTORS #8 AND LARGER SHALL BE STRANDED COPPER. ALUMINUM CONDUCTORS SHALL NOT BE UTILIZED FOR FEEDER OR BRANCH CIRCUIT DISTRIBUTION.

W6. RACEWAYS SHALL BE ANY OF THE FOLLOWING MATERIALS, INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES:

OUTDOORS: (FOR SPECIFIC APPLICATIONS AND APPROPRIATE FITTINGS, SEE TABLE W6)

1. EXPOSED: RMC, IMC.
2. CONCEALED: RMC, IMC.
3. BELOW GRADE, SINGLE RUN: RNC, RMC.
4. BELOW GRADE, GROUPED: RNC, RMC.
5. CONNECTION TO VIBRATING EQUIPMENT (INCLUDING TRANSFORMERS AND HYDRAULIC, PNEUMATIC, ELECTRIC SOLENOID, OR MOTOR-DRIVEN EQUIPMENT): LFMC.
6. BOXES AND ENCLOSURES: NEMA 250, TYPE 3R OR 4.

INDOORS: (FOR SPECIFIC APPLICATIONS AND APPROPRIATE FITTINGS, SEE TABLE W6)

1. EXPOSED: EMT, IMC.
2. CONCEALED: EMT, IMC.

(CONTINUED ON TOP)

3. CONNECTION TO VIBRATING EQUIPMENT (INCLUDING TRANSFORMERS AND HYDRAULIC, PNEUMATIC, ELECTRIC SOLENOID, OR MOTOR-DRIVEN EQUIPMENT): FMC; EXCEPT USE LFMC IN DAMP OR WET LOCATIONS.
4. DAMP OR WET LOCATIONS: RIGID STEEL CONDUIT.
5. BOXES AND ENCLOSURES: NEMA 250, TYPE 1, EXCEPT AS FOLLOWS: A. DAMP, WET OR KITCHEN LOCATIONS: NEMA 250, TYPE 4, STAINLESS STEEL.

TABLE W6:

LOCATION	208V.	480V.	LOW ENERGY*
EXPOSED			
INDOORS	< 1" EMT COMPRESS. FTGS >1.25" IMC THREADED FTGS	IMC THREADED FTGS	EMT COMPR. FTGS
OUTDOORS	RMC OR IMC THREADED FTGS	RMC OR IMC THREADED FTGS	RMC OR IMC THREADED FTGS
CONCEALED			
WALLS	<2" EMT SET SCREW FTGS >2.5" IMC THREADED FTGS	<2" EMT SET SCREW. FTGS >2.5" IMC THREADED FTGS	EMT 1/2"- 2" SET SCREW FTGS 2.5" – 4" COMPR. FTGS
AIR HANDLING CEILING/SPACE	<2" EMT COMPR. FTGS >2.5" IMC THREADED. FTGS	2" EMT COMPR. FTGS < >2.5" IMC THREADED. FTGS	EMT COMPR. FTGS
NON AIR HANDLING CEILING/SPACE	<2" EMT SET SCREW FTGS >2.5" IMC THREADED. FTGS	<2" EMT COMPR. FTGS >2.5" IMC THREADED. FTGS	EMT 1/2" – 2" SET SCREW FTGS 2.5"- 4" COMPR. FTGS
BELOW GRADE			
INTERIOR	IMC THREADED FTGS OR SCHEDULE 40 OR 80 PVC	IMC THREADED FTGS	IMC THREADED FTGS SCHEDULE 40 OR 80 PVC
EXTERIOR	SCHEDULE 40 OR 80 PVC OR RMC THREADED FTGS	SCHEDULE 40 OR 80 PVC OR RMC THREADED FTGS	SCHEDULE 40 OR 80 PVC OR RMC THREADED FTGS

W7. ALL CONDUITS PENETRATING THE FREEZER/COOLER BOX SHALL BE SEALED IN COMPLIANCE NEC SECTION 300 AND THE FREEZER/COOLER BOX MANUFACTURERS REQUIREMENTS.

W8. PROVIDE THREE (3) 3/4" EMPTY CONDUITS FROM PANEL LP-1 UP TO THE CEILING SPACE AND CAP FOR FUTURE USE.

GROUNDING:

G1. ALL BRANCH AND FEEDER CIRCUITS SHALL BE GROUNDED BY TWO METHODS. THE FIRST METHOD SHALL INCLUDE AN INSULATED COPPER EQUIPMENT GROUNDING CONDUCTOR CONTAINED WITHIN THE SAME CONDUIT AS THE PHASE CIRCUIT CONDUCTORS AND SIZED PER NEC SECTION 250 REQUIREMENTS. THIS INSULATED EQUIPMENT GROUNDING CONDUCTOR SHALL HAVE ONE END PROPERLY TERMINATED AT THE EQUIPMENT GROUND BUS IN THE CORRESPONDING CIRCUIT BREAKER PANEL, AND THE OTHER END TERMINATED AT THE GROUNDING CONTACT OF A GROUNDING RECEPTACLE AND TO THE JUNCTION BOX OR TO AN EQUIPMENT CABINET, AS APPLICABLE. THE SECOND METHOD PROVIDES EQUIPMENT GROUNDING VIA METALLIC CONDUIT THAT IS CONNECTED AND TERMINATED IN FITTINGS LISTED FOR GROUNDING PER NEC SECTION 250 REQUIREMENTS. BOTH GROUNDING METHODS ARE REQUIRED IN A MCDONALD'S RESTAURANT. ISOLATED GROUND SHALL BE INSTALLED WHERE INDICATED ON PLAN AND AS SHOWN IN POS ISOLATED GROUND/DEDICATED CIRCUIT DETAIL ON SHEET E4.2.

G2. THE BUILDING GROUNDING SYSTEM SHALL COMPLY WITH NEC ARTICLE 250, MCDONALD'S SPECIFICATIONS, AND SHEET E4.2. CAUTION: IT IS A SAFETY HAZARD AND AN NEC VIOLATION TO HAVE ANY NEUTRAL TO GROUND CONNECTIONS BEYOND THE MAIN ELECTRICAL DISCONNECT MEANS. MCDONALD'S GROUNDING STANDARDS PURPOSELY EXCEED THOSE GIVEN BY THE NEC. THE EC SHALL PROVIDE A BUILDING GROUNDING SYSTEM MEETING NEC SECTION 250 REQUIREMENTS AS WELL AS MCDONALD'S STANDARDS.

G3. EC SHALL REFER TO "POS ISOLATED GROUND/DEDICATED CIRCUIT DETAIL, SHEET E4.2, FOR REQUIRED WIRING REQUIREMENTS OF COMPUTER PANEL CP.

G4. METAL RACEWAYS CONTAINING A GROUNDING ELECTRODE CONDUCTOR SHALL BE BONDED AT BOTH ENDS AS REQUIRED BY NEC SECTION 250 REQUIREMENTS.

TEMPERATURE CONTROLS:

T1. REMOTE TEMPERATURE SENSORS: EC SHALL PROVIDE 1/2" CONDUIT FROM JUNCTION BOX ABOVE CEILING DOWN TO SENSOR MOUNTED AT 4'-0" TO 4'-6" AFF.

T2. SEE DETAIL ON SHEET M3.0. FOR SENSOR MOUNTING DETAIL. LOCATION OF WALL MOUNTED TEMPERATURE SENSORS ARE SHOWN ON SHEET M1.2 AND E2.0.

T3. WHEN WIRING FOR PROGRAMMABLE THERMOSTATS AND REMOTE SENSORS IS NOT IN A CONDUIT, THE WIRING SHALL BE RUN TO THE UNDERSIDE OF THE ROOF DECK. NONE OF THE WIRING SHALL BE ROUTED OVER FLUORESCENT BALLASTS, POWER BOXES OR IN A CONDUIT WITH LINE VOLTAGE WIRING AS ELECTRICAL INTERFERENCE (NOISE) WILL CAUSE ERRATIC CONTROL OPERATION. ALL THERMOSTATS SHALL BE MOUNTED 4'-0" AFF.

FLAT PANEL TELEVISIONS:

TV1. EC SHALL PROVIDE A DUPLEX RECEPTACLE AND A LOW VOLTAGE BROADBAND CONNECTION FOR THE INSTALLATION OF FLAT PANEL TELEVISIONS. COORDINATE EXACT LOCATIONS WITH DECOR COMPANY. FOR BROADBAND CONNECTION, EC SHALL PROVIDE A 4 X 4 BOX WITH A 3/4" CONDUIT STUB-UP WITH A BUSHING INTO ACCESSIBLE CEILING SPACE.

ELECTRICAL PANELS:

E1. THE EC SHALL BE RESPONSIBLE FOR BALANCING THE LOADS ON ALL PANELS.

E2. THE EC SHALL PROVIDE ELECTRICAL SERVICE TO THE EQUIPMENT MOUNTED BREAKER PANEL. SEE ELECTRICAL ROUGH-IN PLAN AND SCHEDULE FOR ALL REQUIREMENTS.

E3. THE EC SHALL BE RESPONSIBLE FOR THE PROPER IDENTIFICATION AND LABELING OF ALL CIRCUIT BREAKERS. EACH PANEL SHALL BE PROVIDED WITH AN ACCURATE TYPEWRITTEN CIRCUIT DIRECTORY AT THE CONCLUSION OF THE PROJECT AND PRIOR TO RESTAURANT OPENING.

SECURITY AND DRIVE-THRU CAMERAS:

S1. EC TO PROVIDE ELECTRICAL POWER AND COMMUNICATION CONDUITS FOR BUILDING MOUNTED SECURITY AND DRIVE THRU CAMERAS. COORDINATE FINAL LOCATIONS WITH SECURITY AND DRIVE THRU CAMERA INSTALLERS.

LIGHTING:

L1. PROVIDE A WEATHERPROOF JUNCTION BOX IN PARAPET FOR FASCIA SIGN. FINAL CONNECTION BY OTHERS.

L2. COORDINATE THE LOCATION OF JUNCTION BOX (IN THE WALL) WITH THE OPENING IN TRELLIS (FOR THE LIGHT FIXTURE WIRES). THE LOCATION OF THE JUNCTION BOX AND THE OPENING IN THE TRELLIS SHALL BE ALIGNED FOR THE LIGHT FIXTURE TO BE INSTALLED PROPERLY. COORDINATE INSTALLATION OF JUNCTION BOX AND ANY NECESSARY OPENINGS IN TRELLIS WITH GC AND TRELLIS/CANOPY MANUFACTURER. SEE LIGHT FIXTURE INSTALLATION INSTRUCTIONS FOR REQUIREMENTS REGARDING MOUNTING BRACKETS FOR USE IN C-CHANNEL TRELLISES.

L3. EC SHALL FIELD VERIFY THAT LIGHT FIXTURES DO NOT OBSTRUCT OR CONFLICT WITH THE WORK OF OTHER TRADES. IF A DISCREPANCY IS FOUND, THE EC SHALL IMMEDIATELY NOTIFY THE GC BEFORE THE THE INSTALLATION OF SUCH FIXTURE(S). EC SHALL COORDINATE LOCATIONS OF ALL LIGHT FIXTURES IN DINING AREA WITH FINAL SEATING AND DECOR PLANS.

L4. IF PC-POS CASH REGISTER SYSTEM IS INSTALLED, EC SHALL RELOCATE FIXTURES ABOVE FRONT COUNTER TO AVOID GLARE ON THE CASH REGISTER SCREENS. EC SHALL INSTALL CABLE WHIP TO FIXTURES SO THAT FIXTURE MAY BE RELOCATED FOUR FEET WITHOUT DISCONNECTING CABLE WHIP.

L5. EC SHALL COORDINATE LOCATION OF ALL EXTERIOR LIGHTS TO AVOID INTERFERENCE WITH ANY CORBELS, TRUSSES, BEAMS OR OTHER SPECIAL EXTERIOR TREATMENTS. INSTALL LIGHT FIXTURES WITH CORRECT ORIENTATION PER MANUFACTURER'S INSTRUCTIONS

L6. THE USE OF INTERLOCK TYPE "MC" CABLE IN LENGTHS OF 6 FEET OR LESS (WHERE PERMITTED BY LOCAL CODES) SHALL BE ALLOWED FOR WIRING TO INTERIOR LIGHTING FIXTURES. "ROMEX" OR "BX" SHALL NOT BE USED.

L7. EC SHALL VERIFY THAT NOT MORE THAN 3% VOLTAGE DROP EXISTS FROM THE LIGHTING PANEL TO ANY EXTERIOR LIGHTING FIXTURE OR SIGNAGE BALLAST.

L8. WHERE MCDONALD'S RESTAURANT HAS A PLAYPLACE, THE EC SHALL COORDINATE EXACT LOCATION OF PLAYPLACE LIGHTING WITH PLAYPLACE TOY VENDOR FOR MAXIMUM ILLUMINATION AND SAFETY PER THE FINAL LOCATION OF THE PLAYPLACE TOY. LIGHTING FIXTURES SHALL NOT BE MOUNTED TO THE TOY OR ANY PART OF THE TOY STRUCTURE.

L9. EC SHALL VERIFY ALL TAP SETTINGS FOR H.I.D. LIGHTING FIXTURES AND MAKE ANY NECESSARY CORRECTIONS PRIOR TO INSTALLATION.

REV	DATE	DESCRIPTION	BY
			WLW
	08/14/25	PERMIT SET	WLW
	06/26/25	USRD PROGRESS SET REVIEW	

emanuelson-podas
consulting engineers
Emanuelson-Podas, Inc.
705 Bush Lake Road
Eden Prairie, MN 55439
(952) 930-0050 | www.epinc.com

3801.0083

STATE OF MISSOURI
MATTHEW J FULTS
NUMBER PE-2004005388
PROFESSIONAL ENGINEER

PREPARED BY: 08/14/25

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PREPARED FOR: McDonald's USA, LLC

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DRAWN BY	MJW
STD ISSUE DATE	2024 11
REVIEWED BY	WLW
DATE ISSUED	08 14 2025
RG#	22252

TITLE: 2024 STANDARD BUILDING - BB20
45114-WOOD/WOOD

DESCRIPTION: WOOD BEARING WALLS W/BRICK EXTERIOR FINISH & CI
WOOD TRUSS ROOF FRAMING
BATTEN/BRICK EXTERIOR FINISH

NSN: 7321

SITE ADDRESS: 3255 Main Street, Kansas City, MO 64111

L/C: 024-0244

SHEET NO.: 024-0244.01.0
E3.1
NOTES & DETAILS

SEQUENCE OF OPERATION:

1. TURNING "ON" ANY PIECE OF COOKING EQUIPMENT UNDER A HOOD WILL TURN ON THE EXHAUST FAN AND ASSOCIATED RTU PROVIDING MAKEUP AIR FOR THAT HOOD.
2. TURNING "OFF" THE LAST PIECE OF COOKING EQUIPMENT UNDER A HOOD WILL TURN OFF THE EXHAUST FAN FOR THAT HOOD.
3. IF THE ANSUL SYSTEM SHOULD DISCHARGE WHILE THE COOKING EQUIPMENT AND EXHAUST FAN ARE OPERATING, THE COOKING EQUIPMENT WILL BE SHUT OFF, BUT THE EXHAUST FAN WILL CONTINUE TO RUN AND WILL FORCE THE ROOFTOP UNITS INTO A "SCHEDULED" MODE
4. THE ANSUL SYSTEM MUST BE RECHARGED AND MANUALLY RESET BEFORE THE COOKING EQUIPMENT WILL AGAIN BE ABLE TO OPERATE.
5. THE ON/OFF SWITCH ON THE EXHAUST FAN IS NORMALLY KEPT IN THE "ON" POSITION. IF IT IS TURNED OFF FOR SERVICE, THE COOKING EQUIPMENT WILL TURN OFF AND NOT BE ABLE TO OPERATE UNTIL THE EXHAUST FAN ON/OFF SWITCH IS AGAIN TURNED ON.

INTERLOCK DIAGRAM LEGEND

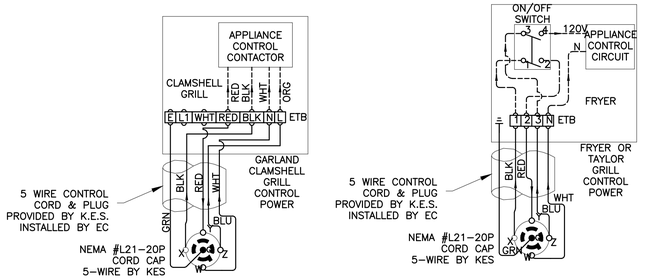
- ● TERMINAL BLOCK IN CHASE
- CTB – CHASE TERMINAL BLOCK. PROVIDED AND INSTALLED BY KITCHEN EQUIPMENT SUPPLIER
- ETB – EQUIPMENT TERMINAL BLOCK
- EFCR – EXHAUST FAN CONTROL RELAY. PROVIDED BY CONTRACTOR.
- IGR – INTERNAL GRILL RELAY PROVIDED WITHIN GARLAND GRILLS
- MS – ANSUL MICROSWITCH PROVIDED BY KITCHEN EQUIPMENT SUPPLIER
- ›› CONTROL CORD PLUG & RECEPTACLE
- —— FIELD WIRING
- —— CONTROL CORD/INTERNAL WIRING
- - - - FACTORY WIRING
- —— EQUIPMENT OR ENCLOSURE

COOKING EQUIPMENT EXHAUST FAN	MAKE UP PROVIDED BY
EF/1	RTU–3
EF/2	RTU–1
EF/3	RTU–2

NOTE
RTU # ASSOCIATED WITH EACH EXHAUST FAN BASED ON PROTOTYPICAL VALUES ONLY. VERIFY THAT EXHAUST FAN ACTIVATES THE CORRESPONDING RTU TO PROVIDE AN ADEQUATE AMOUNT OF MAKEUP AIR.

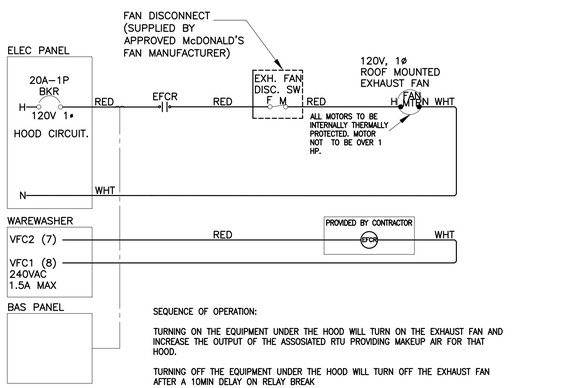
1 E-3.2 **TYPICAL MAKEUP AIR RTU EXHAUST FAN SCHEDULE**
FOR REFERENCE ONLY

REVISED: 6/18



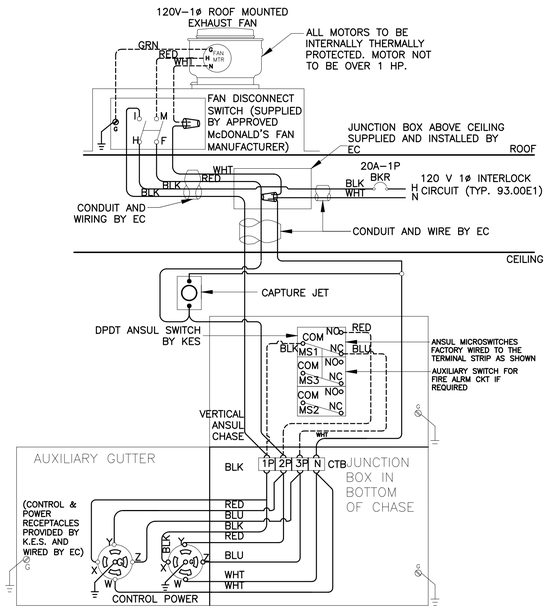
4 E-3.2 **CONTROL CORD CONNECTION**
FOR REFERENCE ONLY

REVISED: 6/18



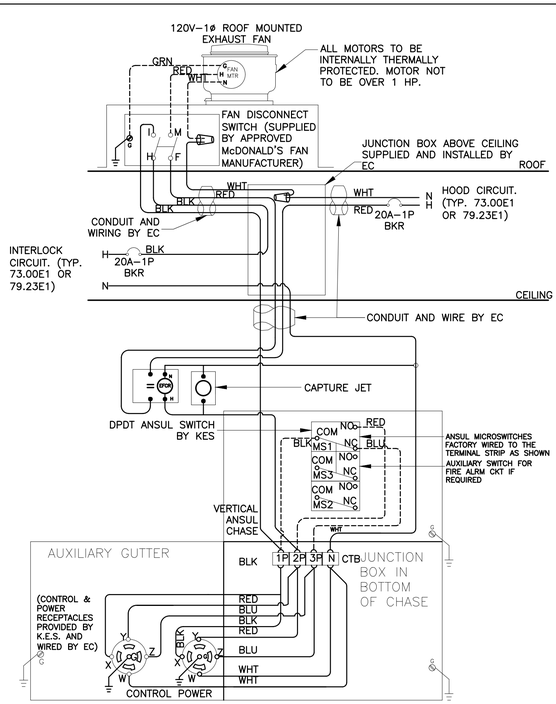
7 E-3.2 **INTERLOCK LADDER DIAGRAM FOR EXHAUST FAN AND WAREWASHER**
FOR REFERENCE ONLY

REVISED: 02/24



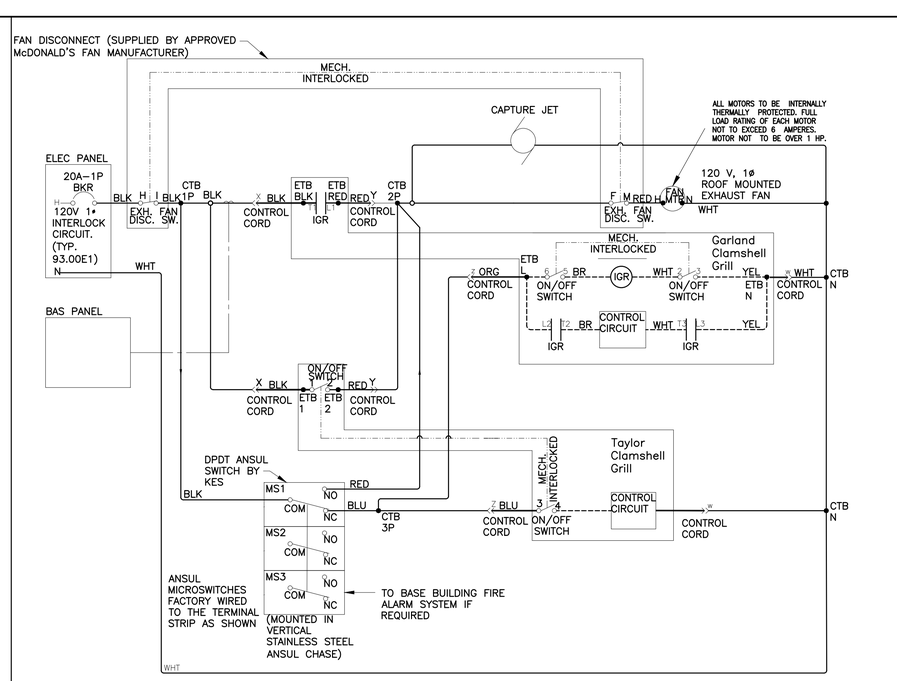
2 E-3.2 **INTERLOCK WIRING DIAGRAM FOR EXHAUST FAN AND COOKING EQUIPMENT**
FOR REFERENCE ONLY

REVISED: 6/18



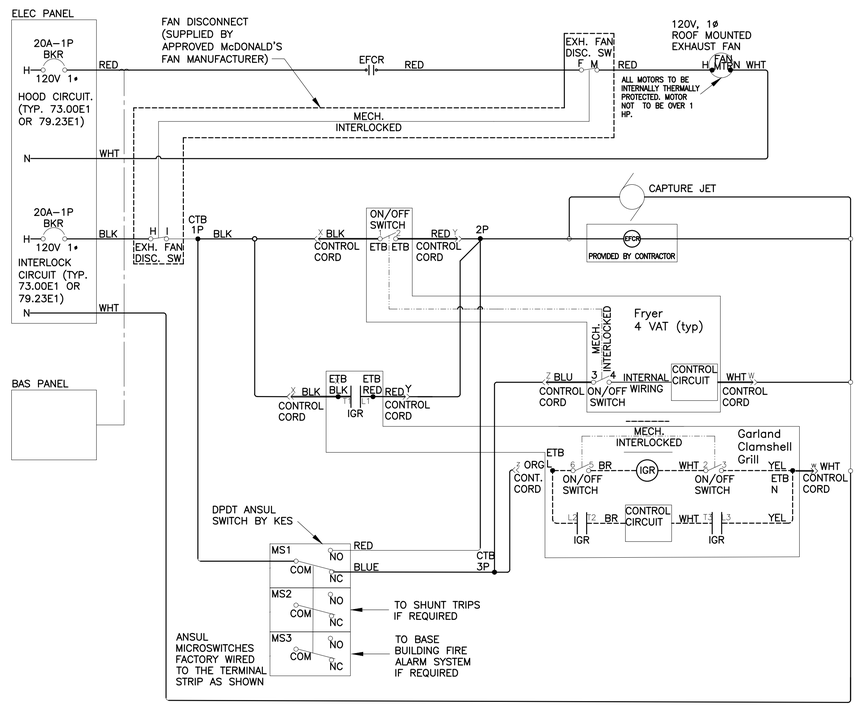
5 E-3.2 **INTERLOCK WIRING DIAGRAM FOR EXHAUST FAN AND COOKING EQUIPMENT**
FOR REFERENCE ONLY

REVISED: 6/18



3 E-3.2 **INTERLOCK LADDER DIAGRAM**
FOR REFERENCE ONLY

REVISED: 6/18



6 E-3.2 **INTERLOCK LADDER DIAGRAM**
FOR REFERENCE ONLY

REVISED: 6/18

BY	DESCRIPTION	DATE	REV
WLW	PERMIT SET	08/14/25	
WLW	USRD PROGRESS SET REVIEW	06/26/25	

emanuelson-podas
consulting engineers
Emanuelson-Podas, Inc.
705 Bush Lake Road
Eden Prairie, MN 55439
(952) 930-0050 | www.epinc.com

3801.0083

STATE OF MINNESOTA
MATTHEW FULTS
NUMBER PE-20040058
PROFESSIONAL ENGINEER

PREPARED BY: 08/14/25

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PREPARED FOR: McDonald's USA, LLC

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DRAWN BY	REVIEWED BY	DATE ISSUED
MJW	WLW	08 14 2025
STD ISSUE DATE 2024 11		

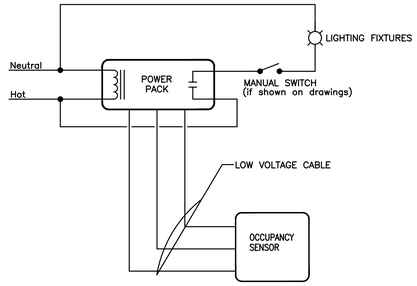
TITLE
2024 STANDARD BUILDING – BB20
45114–WOOD/WOOD
DESCRIPTION
WOOD BEARING WALLS W/BRICK EXTERIOR FINISH & CI
WOOD TRUSS ROOF FRAMING
BATTEN/BRICK EXTERIOR FINISH
MSN: 7321

SITE ADDRESS
3255 Main Street, Kansas City, MO 64111

R0# 22252

L/C: 024–0244

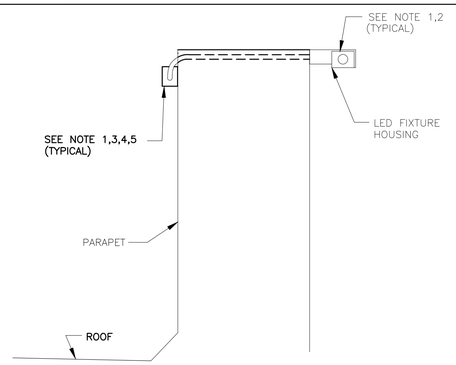
SHEET NO.
024–0244.01.0
E3.2
WIRING DETAILS



NOTES:

1. REFER TO LIGHTING PLAN FOR OCCUPANCY SENSOR LOCATIONS AND QUANTITIES.

1 / E-4.0 **OCCUPANCY SENSOR CONTROL DETAIL**
NOT TO SCALE



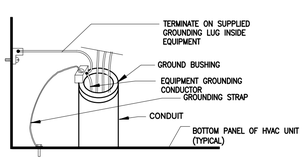
3 / E-4.0 **BRAND WALL LIGHTING DETAIL**
NOT TO SCALE

GENERAL NOTES

1. PLACE LED FIXTURE AT DESIRED LOCATION AND INSTALL FIXTURE FROM LEFT TO RIGHT WHEN FACING ARCADE AND ATTACH POWER SUPPLY AND MOUNTING BRACKET AS RECOMMENDED BY MANUFACTURER.
2. EC SHALL CONNECT NEW FIXTURES TO THE NEXT AVAILABLE SPARE 120V CIRCUIT AND MAKE ALL ELECTRICAL CONNECTIONS AS REQUIRED FOR A COMPLETE OPERATING SYSTEM.
3. POWER SUPPLY SHALL ALWAYS BE INSTALLED TO THE LEFT SIDE OF FIXTURE WHEN FACING ARCADE.
4. OVERALL FIXTURE RUN TO BE CENTERED ON OVERALL LENGTH OF WALL.
5. CONNECT NEW LED FIXTURES TO EXISTING LIGHTING CIRCUIT(S) AS REQUIRED. ENSURE THAT CIRCUIT BREAKER AND CONDUCTOR SIZES DO NOT EXCEED 1200 WATTS ON A 15A CIRCUIT AND 1600 WATTS ON A 20A CIRCUIT. VERIFY EXISTING CONDITIONS AND REQUIREMENTS IN FIELD. PROVIDE ADDITIONAL CIRCUITS (C.B.,WIRING,CONDUITS) AS REQUIRED.

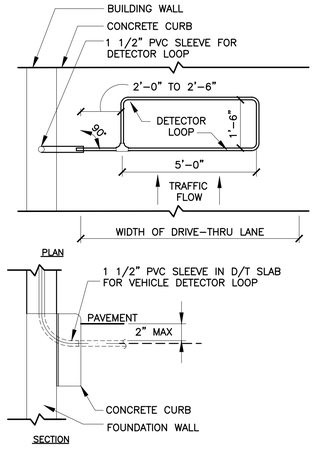
CONDUIT, WIRE SIZE AND GROUNDING FOR HVAC UNITS

HACR BRKR SIZE	CONDUIT & WIRE SIZE
40A	1"C–3#8
45A	1"C–3#6
50A	1"C–3#6
60A	1"C–3#6
70A	1–1/4"C–3#4
80A	1–1/4"C–3#3
90A	1–1/4"C–3#3
100A	1–1/4"C–3#2
125A	1–1/2"C–3#1
150A	1–1/2"C–3#1/0
175A	2"C–3#2/0
200A	2"C–3#3/0
225A	2"C–3#4/0
250A	2–1/2"C–3#250

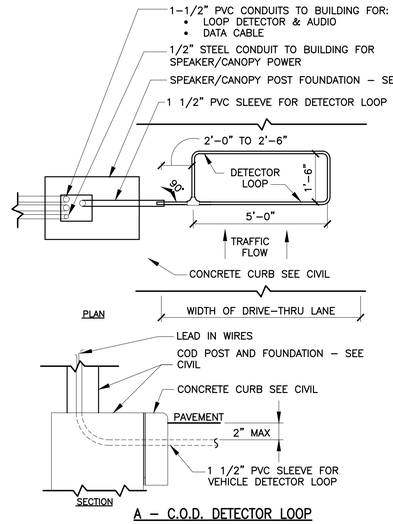


4 / E-4.0 **HVAC GROUNDING DETAIL**
NOT TO SCALE

THE CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL COORDINATION OF ALL ELECTRICAL FEEDERS AND CIRCUIT BREAKERS WITH THE MANUFACTURER'S WRITTEN DATA FOR EACH MECHANICAL DEVICE PRIOR TO SUBMITTAL OF ANY ELECTRICAL EQUIPMENT FOR REVIEW. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR ANY CHANGES TO ELECTRICAL FEEDERS OR CIRCUIT BREAKERS REQUIRED FOR ANY MECHANICAL DEVICES.



B – DT WINDOW DETECTOR LOOP

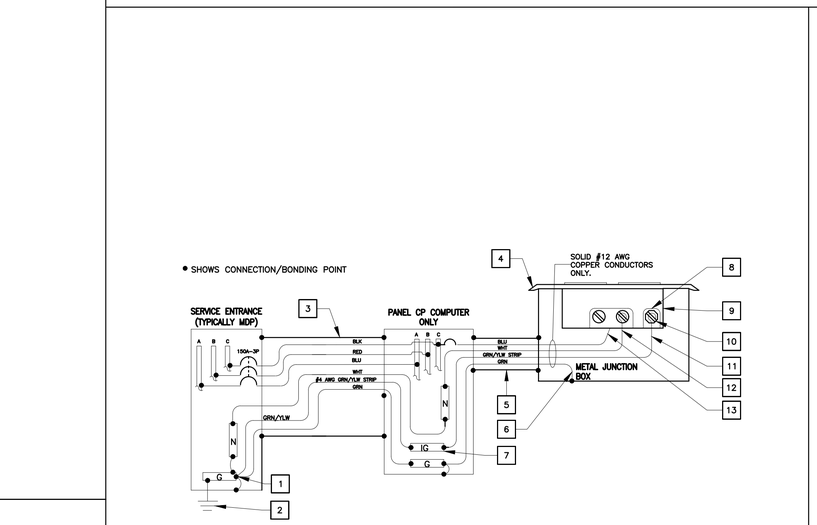


A – C.O.D. DETECTOR LOOP

2 / E-4.0 **DETECTOR LOOP DETAILS**
NOT TO SCALE

NOTES

1. VERIFY CONDUIT SIZES AND LAYOUT WITH DETECTOR LOOP MANUFACTURER.
2. CENTER VEHICLE DETECTOR LOOP (ITEM # 217.11E1) IN DRIVE THRU LANE. INSTALL PER MFR. RECOMMENDATIONS.
3. SEE CIVIL FOR DIMENSIONS OF DRIVE–THRU LANE CONCRETE PAD FOR DETECTOR LOOP.
4. NO STEEL (REBAR OR ELECTRICAL WIRE) SHALL BE USED WITHIN 2' OF LOOP.
5. DETECTOR LOOP MANUFACTURERS:
   DETECTOR LOOPS MAY BE BY ONE OF THE FOLLOWINGS COMPANIES OR EQUAL.
   3M: 1–800–328–0033
   HME: 1–800–848–4468
6. DETECTOR LOOP MATERIAL:
   PVC TUBING 1/2" I.D. 100 PSI LOOP MADE FROM ONE LENGTH OF THIN FOURTEEN GAUGE STRANDED WIRE. LEAD–IN IS PRE–TWISTED AT FACTORY.
7. DETECTOR LOOP CONSTRUCTION:
   FORMED WITH ONE CONTINUOUS LENGTH OF PVC WITH NO SHARP CORNERS AS DETAILED. WIRE LOOPED, FORMED, & PIGTAILED AS DETAILED.



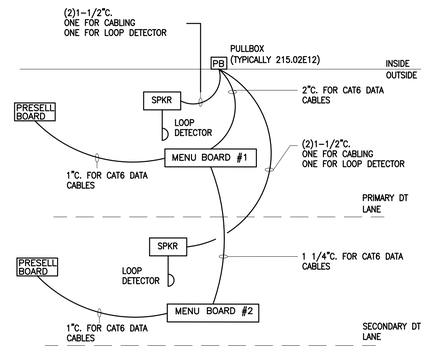
NOTES

1. ALL P.O.S. EQUIPMENT (COMPUTERS,PRINTERS,MONITORS KVS, MODEM, HUB & COD) SHALL BE POWERED FROM THE COMPUTER PANEL.
   ALL OTHER COMPUTER/DIGITAL EQUIPMENT SHALL BE POWERED FROM PHASE "A" IN THE COMPUTER PANEL.
2. ISOLATED GROUND INSTALLATION SHALL COMPLY WITH THE REQUIREMENTS OF NEC SECTION 250 .
3. EACH 20 AMP CIRCUIT SHALL HAVE IT'S OWN ISOLATED EQUIPMENT GROUNDING CONDUCTOR.
4. ENTIRE GROUNDING SYSTEM SHALL COMPLY WITH NEC ARTICLE 250 AND MCDONALD'S BUILDING GROUNDING DETAIL.
5. EC SHALL VERIFY CORRECT POLARITY AT RECEPTACLE.
6. EC SHALL VERIFY THAT SUBPANEL CP DOES NOT CONTAIN ANY ILLEGAL NEUTRAL TO GROUND BONDS.
7. PANEL CP SHALL ONLY BE USED TO POWER SENSITIVE ELECTRONIC EQUIPMENT, AS OUTLINED IN NOTE #1. IT SHALL NOT BE USED TO POWER ANY OTHER LOADS.
8. IT IS A SAFETY HAZARD AND AN NEC VIOLATION FOR THE POS SYSTEM TO HAVE ITS OWN INDEPENDENT GROUNDING ROD. IF AN INDEPENDENT GROUND ROD IS FOUND FOR THE POS SYSTEM, IT SHALL BE BONDED TO THE BUILDING GROUNDING SYSTEM.

KEY NOTES

1. THIS IS THE ONLY POINT WHERE THE ISOLATED EQUIPMENT GROUNDING CONDUCTOR SHALL BE CONNECTED TO THE BUILDING'S GROUNDING SYSTEM.
2. SEE BUILDING GROUNDING DETAIL SHEET E4.2.
3. 1 1/2" METAL CONDUIT: 4–#1/0 CU + 1–#6 CU EQUIP GND + 1–#4 CU ISOLATED GND.
4. ALL ISOLATED GROUND/ DEDICATED CIRCUIT RECEPTACLE COVER PLATES SHALL BE ORANGE HUBBELL PJ7CO (SINGLE), PJ8CO (ONE DUPLEX) OR PJ82CO (TWO DUPLEX) MARKED "COMPUTER ONLY".
5. METAL CONDUIT SHALL CONTAIN ONLY P.O.S. CIRCUIT CONDUCTORS (DEDICATED CIRCUIT). ONLY USE RIGID NON–METALLIC CONDUIT BELOW GRADE WHEN REQUIRED BY LOCAL CODE.
6. EQUIPMENT GROUNDING BONDING CONDUCTOR (TYPICAL)
7. ISOLATED GROUND BUS, ELECTRICALLY INSULATED FROM PANEL ENCLOSURE USED TO TERMINATE ONLY ISOLATED EQUIPMENT GROUNDING CONDUCTORS.
8. ALL CONDUCTORS SHALL BE SOLID COPPER AND TERMINATED TO THEIR APPROPRIATE TERMINAL SCREWS BY WRAPPING THE CONDUCTOR COMPLETELY AROUND THE SCREW BARREL AND TIGHTENING THE SCREW PER MANUFACTURER'S TORQUE SPECIFICATIONS.
9. ISOLATED GROUND RECEPTACLE HUBBELL–IG4700,IG4710,IG5262 OR IG5261. SEE ROUGH IN SCHEDULE FOR THE APPROPRIATE RECEPTACLE TO USE.
10. ISOLATED GREEN GROUND SCREW.
11. ISOLATED EQUIPMENT GROUNDING CONDUCTOR (GRN W/YLW STRIP)
12. NEUTRAL CONDUCTOR TERMINATED ON SILVER SCREW.
13. PHASE CONDUCTOR TERMINATED ON BRASS SCREW

5 / E-4.0 **POS & COD ISOLATED GROUND/DEDICATED CIRCUIT**
NOT TO SCALE

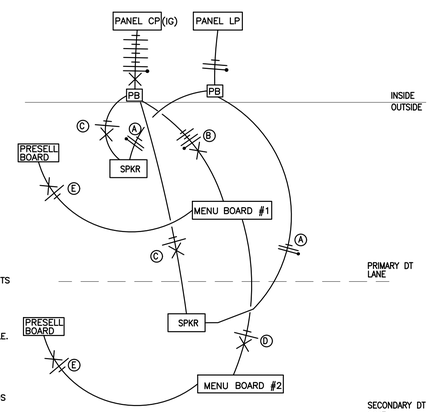


DT LOW VOLTAGE CONDUIT DIAGRAM
NOT TO SCALE

NOTE:

* VERIFY EXACT CIRCUITS & QUANTITIES OF CIRCUITS WITH PANEL SCHEDULES AND MANUFACTURERS INSTALLATION INSTRUCTIONS.
* VERIFY LOW VOLTAGE CABLE COUNT WITH POS INSTALLER. LOW VOLTAGE CABLE SUPPLIED AND TERMINATED BY POS INSTALLER. EC TO PULL CABLE.

(A) 2#12 & 1#12 GND. TO LP–1 FOR COD CANOPY LIGHTING.
(B) 4#12 & 1#12 GND & 1#12 ISOLATED GND., TO CP FOR ISOLATED GROUND POWER TO MENUBOARDS AND MEDIA PLAYERS.
(C) 2#12 & 1#12 GND & 1#12 ISOLATED GND., TO CP FOR ISOLATED GROUND POWER TO SPEAKER CANOPY/STAND. EACH CANOPY/STAND SHALL BE ON ITS OWN SEPARATE CIRCUIT.
(D) 2#12 & 1#12 GND & 1#12 ISOLATED GND., TO CP FOR ISOLATED GROUND POWER TO MENUBOARDS AND MEDIA PLAYERS.
(E) 2#12 & 1#12 GND & 1#12 ISOLATED GND., TO CP FOR ISOLATED GROUND POWER TO FOR PRESELL BOARDS AND MEDIA PLAYER.



DRIVE THRU POWER DIAGRAM
NOT TO SCALE

REV	DATE	DESCRIPTION	BY
	08/14/25	PERMIT SET	WLW
	06/26/25	USRD PROGRESS SET REVIEW	WLW

emanuelson-podas
consulting engineers
Emanuelson-Podas, Inc.
705 Bush Lake Road
Eden Prairie, MN 55439
(952) 930-0050 | www.epinc.com

3801.0083

STATE OF MISSOURI
MATTHEW FULTS
NUMBER PE-2004005388
PROFESSIONAL ENGINEER

PREPARED BY: 08/14/25

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PREPARED FOR: McDonald's USA, LLC

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DRAWN BY	MJW
STD. ISSUE DATE	2024 11
REVIEWED BY	WLW
DATE ISSUED	08 14 2025
RD#	22252

TITLE: 2024 STANDARD BUILDING – BB20
45114–WOOD/WOOD

DESCRIPTION
WOOD BEARING WALLS W/BRICK EXTERIOR FINISH & CI
WOOD TRUSS ROOF FRAMING
BATTEN/BRICK EXTERIOR FINISH

NSN: 7321
L/C: 024–0244

SITE ADDRESS
3255 Main Street, Kansas City, MO 64111

SHEET NO. 024–0244.01.0
E4.0
WIRING DETAILS

LIGHTING CONTROL SYSTEM

INTERIOR CUSTOMER LIGHTING

C1

SPARE	1	SPARE
SPARE	2	SPARE
SPARE	3	SPARE
SPARE	4	SPARE
SPARE	5	SPARE
LP-1:27	6	TOY DISPLAY
LP-1:31	7	DINING ROOM
LP-1:33	8	DINING ROOM DECORATIVE LIGHT

INTERIOR CREW LIGHTING

C2

LP-1:35	1	KITCHEN
AP-2:4	2	EXHAUST FAN-JANITORS
AP-2:33	3	RECIRCULATING PUMP
AP-5:11	4	EXHAUST FAN-RESTROOM
AP-1:1	5	CONTROLLED RECEPTACLES
LP-1:5	6	TRASH CORRAL
SPARE	7	SPARE
SPARE	8	SPARE

BUILDING FACADE

C3

SPARE	1	SPARE
LP-1:10	2	D.T. WALL/SOFFIT LIGHTS
LP-1:12	3	WALL/SOFFIT LIGHTS
LP-1:15	4	LINEAR LED FACADE LIGHTING
SPARE	5	SPARE
LP-1:11	6	CANOPY LIGHTING
LP-1:2	7	FLAGPOLE LIGHTING
SPARE	8	SPARE

EXTERIOR LIGHTING

C4

LP-1:18	1	PARKING LOT LIGHTING
LP-1:20	2	
LP-1:26	3	PARKING LOT LIGHTING
LP-1:28	4	

EXTERIOR LIGHTING

C5

LP-1:22	1	PARKING LOT LIGHTING
LP-1:24	2	
LP-1:13	3	SCONCES (DELIVERY & REAR DOORS)
SPARE	4	SPARE

EXTERIOR SIGNAGE

C6

LP-1:6	1	McDONALD'S EXTERIOR SIGNAGE
LP-1:9	2	McDONALD'S EXTERIOR SIGNAGE
SPARE	3	SPARE
SPARE	4	SPARE
SPARE	5	SPARE
LP-1:23	6	OUTDOOR MENU BOARD
SPARE	7	SPARE
LP-1:19	8	DIRECTIONAL SIGNAGE
LP-1:21	9	DIRECTIONAL SIGNAGE
SPARE	10	SPARE
LP-1:40	11	McDONALD'S ROAD SIGN
LP-1:42	12	McDONALD'S ROAD SIGN

INTERIOR LIGHTING CONTROL SCHEDULE							
	LOCAL CONTROL	MANUAL ON	PARTIAL ON	MULTI LEVEL	DAYLIGHTING	AUTO OFF	SCHEDULE OFF
DINING	MANAGERS OFFICE		X		X		X
KITCHEN	MANAGERS OFFICE		X				X
SUPPORT/STOCK	X					X	
CREW	X	X		X		X	
MANAGER	X	X		X		X	
BATHROOM						X	
SMALL STORAGE	X	X				X	
ENTRY VESTIBULE							X

NOTES:
1. LOCAL CONTROL: MANUAL LIGHTING CONTROL THAT PROVIDES ON AND OFF CONTROL IN SPACE. REMOTE LOCATION CONTROL DEVICE MUST BE LABELED TO IDENTIFY CONTROLLED LIGHTING.
2. MANUAL ON: NONE OF THE LIGHTING SHALL BE AUTOMATICALLY TURNED ON.
3. PARTIAL ON: 50% OF THE GENERAL LIGHTING SHALL BE AUTOMATICALLY TURNED ON.
4. MULTI LEVEL: GENERAL LIGHTING SHALL BE FITTED WITH A MANUAL CONTROLLED CONTINUOUS DIMMER.
5. DAYLIGHTING: REQUIRED WHEN PRIMARY AND SECONDARY ZONES CONTAIN 150W OF GENERAL LIGHTING. PHOTOCONTROL SHALL REDUCE LIGHTING IN RESPONSE TO AVAILABLE DAYLIGHT USING CONTINUOUS DIMMING TO 20% AND OFF.
6. AUTO OFF: ALL LIGHTING INCLUDING LIGHTING CONNECTED TO EMERGENCY CIRCUITS SHALL BE AUTOMATICALLY SHUT OFF WITHIN 20 MINUTES OF OCCUPANTS LEAVING THE SPACE.
7. SCHEDULE OFF: ALL LIGHTING, INCLUDING LIGHTING CONNECTED TO EMERGENCY CIRCUITS, SHALL BE AUTOMATICALLY SHUT OFF DURING PERIODS WHEN THE SPACE IS SCHEDULED TO BE UNOCCUPIED.
8. 0.02W PER SQUARE FT OF BUILDING ALLOWED TO BE CONTINUOUSLY LIT.

EXTERIOR LIGHTING CONTROL SCHEDULE			
	TIME CLOCK	PHOTCELL	OCCUPANCY SENSOR
POLE LIGHTING	X	X	X
BUILDING MOUNT LIGHTING	X	X	
SIGNAGE	X	X	

NOTES:
1. TIME CLOCK: LIGHTING SHALL BE AUTOMATICALLY SHUT OFF BETWEEN BUSINESS CLOSING (OR MIDNIGHT) AND BUSINESS OPENING (OR 6AM) WHICHEVER PROVIDES THE SHORTEST OFF DURATION.
2. PHOTOCELL: LIGHTING SHALL BE AUTOMATICALLY TURNED OFF WHEN SUFFICIENT DAYLIGHT IS AVAILABLE.
3. OCCUPANCY SENSOR: LIGHTING SHALL AUTOMATICALLY REDUCE THE CONNECTED LIGHTING POWER BY 50% WHEN NO ACTIVITY HAS BEEN DETECTED IN AREA IN 15 MINUTES. NO MORE THAN 1500W OF LIGHTING PER CONTROL ZONE.

LIGHTING CONTROL NOTES:

LIGHTING CONTROL NOTES

LC1. CONTACTOR DETAILS ARE DIAGRAMMATIC ONLY AND ARE SHOWN WITH TYPICAL LOADS AND CIRCUIT ASSIGNMENTS. LOADS, CIRCUIT ASSIGNMENTS AND NUMBER OF CONTACTORS MAY VARY BY RESTAURANT LOCATION AND PER BAS SUPPLIERS SYSTEMS. VERIFY EXACT REQUIREMENTS WITH BAS INSTALLATION DETAILS, SITE PLANS, ELECTRICAL PANEL SCHEDULES AND ACM. EC SHALL MAKE ALL MODIFICATIONS AS REQUIRED. FINAL INSTALLATION SHALL BE FULLY NEC AND ENERGY CODE COMPLIANT.

LC2. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL WIRING, CONNECTIONS, TERMINATIONS, ETC. THAT ARE NOT PROVIDED BY THE BAS SUPPLIER FOR A COMPLETE, FULLY OPERATIONAL AND CODE COMPLIANT LIGHTING CONTROL SYSTEM.

LC3.

LC4. ALL COMPONENTS SHALL BE UL LISTED AND LABELED AND THE SYSTEM SHALL COMPLY WITH ALL LOCAL, STATE AND FEDERAL ENERGY CODE REQUIREMENTS.

LC5. ALL CONTACTORS SHALL BE LOCATED IN A NEMA 1 ENCLOSURE WITH SCREW TYPE COVER MOUNTED DIRECTLY ABOVE LIGHTING PANEL OR SWITCHGEAR SO AS TO BE ACCESSIBLE.

LC6. ALL CONTACTORS SHALL BE RATED FOR 30 AMP LOADS UNLESS NOTED OTHERWISE AND SHALL BE HID RATED WHERE REQUIRED.

LC7. COIL VOLTAGES FOR ALL CONTACTORS SHALL BE 120 VOLT UNLESS NOTED OTHERWISE.

LC8. CONTACTOR C5 IS INTENDED TO CONTROL PARKING LOT LIGHTS NEAR TRASH CORRAL, DELIVERY DOORS, AND EMPLOYEE PARKING, THUS ALLOWING A DIFFERENT LIGHTING SCHEDULE TO BE USED IN THOSE AREAS.

LIGHTING CONTROL INSTALLATION OPTIONS

OPTION 1 (STANDARD) CONTACTORS AND CONTACTOR ENCLOSURE FOR THIS LIGHTING CONTROL SYSTEM SHALL BE FURNISHED BY THE BAS SUPPLIER AND INSTALLED BY THE ELECTRICAL CONTRACTOR ON SITE FOR A COMPLETE AND FULLY FUNCTIONAL SYSTEM.

OPTION 2 (OPTIONAL) LIGHTING CONTROL CAN BE ACCOMPLISHED VIA UTILIZATION OF A SMART TYPE BREAKER PANEL REPLACING STANDARD PANEL LP-1. PANEL SHALL UTILIZE AN INTEGRAL MOTOR OPERATED CIRCUIT BREAKERS OR AN INTEGRAL CIRCUIT BREAKER/CONTACTOR TYPE COMBINATION DEVICE WITH AN INTEGRAL PROGRAMMING CONTROL MODULE AND SHALL BE ORDERED THROUGH OUR ELECTRICAL EQUIPMENT NATIONAL ACCOUNT PROGRAM (SQUARE-D) THROUGH OUR CONSTRUCTION PURCHASING TEAM.

BUILDING AUTOMATION SYSTEM NOTES

BAS1. THE DIAGRAM SHOWN ABOVE IS SCHEMATIC IN NATURE AND SHOWS THE GENERAL REQUIREMENTS FOR THE INSTALLATION OF THE BUILDING AUTOMATION SYSTEM. EXACT EQUIPMENT REQUIREMENTS AND QUANTITIES WILL VARY PER SITE. G.C., M.C., T.C.C. AND E.C. SHALL COORDINATE ALL EXACT EQUIPMENT AND INSTALLATION REQUIREMENTS WITH SUPPLIER PRIOR TO SUBMITTING BID FOR A COMPLETE AND FULLY FUNCTIONAL SYSTEM.

BAS2. THE BUILDING AUTOMATION SYSTEM ALSO HAS ADDITIONAL OPTIONS AVAILABLE SUCH AS MONITORING DOOR CONTACTS (RESTROOM & COOLER FREEZER), ENERGY METER, COOLER/FREEZER TEMP. ADDITIONAL OPTIONS MAY BE SELECTED ON CENTRAL PURCHASING PROJECT DETAIL FORM. G.C., M.C., T.C.C. AND E.C. SHALL COORDINATE ALL EXACT INSTALLATION REQUIREMENTS WITH SUPPLIER PRIOR TO SUBMITTING BID FOR A COMPLETE AND FULLY FUNCTIONAL SYSTEM.

BAS3. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL LINE AND LOW VOLTAGE WIRING AND CONNECTIONS, INCLUDING BUT NOT LIMITED TO CONTROL POWER TO ALL BAS COMPONENTS AND POWER CIRCUITRY WIRING OF ALL LIGHTING CONTACTORS. COORDINATE INSTALLATION WITH SITE SPECIFIC BAS INSTALLATION DETAILS PROVIDED BY SUPPLIER.

IECC COMMISSIONING COMPLIANCE CHECKLIST

PERMIT NUMBER: _____ DATE: _____ PROJECT NAME: _____ PROJECT ADDRESS: _____ COMMISSIONING AUTHORITY: _____

COMMISSIONING PLAN (SECTION C408.2.1)

☐ COMMISSIONING PLAN WAS USED DURING CONSTRUCTING AND INCLUDES ALL ITEMS REQUIRED BY §C408.2.1.

☐ LIGHTING CONTROLS FUNCTIONAL TESTING HAS BEEN EXECUTED. IF APPLICABLE, DEFERRED AND FOLLOW-UP TESTING IS SCHEDULED TO BE PROVIDED ON ___.

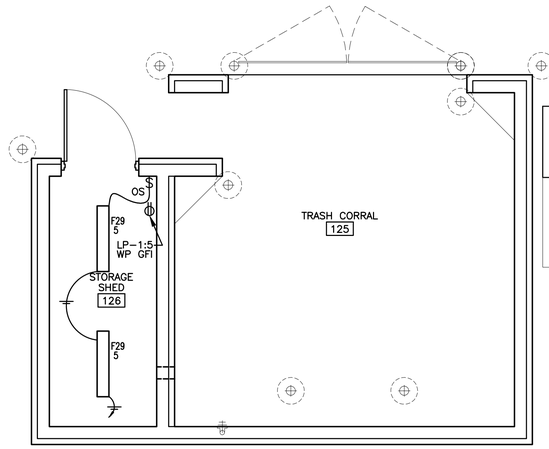
☐ MANUAL, RECORD DOCUMENTS AND TRAINING HAVE BEEN COMPLETED AND SCHEDULED.

☐ PRELIMINARY COMMISSIONING REPORT SUBMITTED TO OWNER AND REPORT INCLUDES ALL ITEMS REQUIRED BY §C408.2.4.

I HEREBY CERTIFY THE COMMISSIONING PROVIDER HAS PROVIDED ME WITH EVIDENCE OF MECHANICAL, SERVICE WATER HEATING, AND LIGHTING SYSTEMS COMMISSIONING, WHERE APPLICABLE, IN ACCORDANCE WITH THE CURRENT ADOPTED INTERNATIONAL ENERGY CONSERVATION CODE.

_____ _____

SIGNATURE OF BUILDING OWNER OR OWNER'S REPRESENTATIVE DATE



TRASH CORRAL LIGHTING:
1/2"C-2#12 & 1#12 GND TO LP-1:5. VERIFY EXACT LOCATION AND ALL REQUIREMENTS OF TRASH CORRAL IN FIELD. REFER TO SHEET TC1.0-1 FOR MORE INFO.

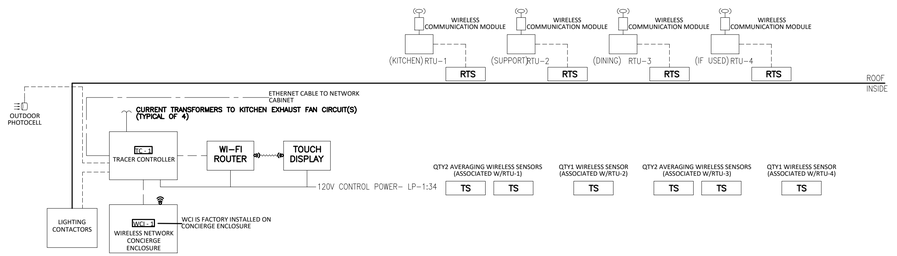
TRASH CORRAL POWER:
3/4"C-4#10 & 1#10 GND TO A 30A-2P AND A 20A-1P CB IN PANEL AP-2 FOR TRASH COMPACTOR AND WP GFCI DCO. PROVIDE 30A-2P NF DISCONNECT FOR TRASH COMPACTOR. VERIFY EXACT LOCATION AND ALL REQUIREMENTS OF TRASH CORRAL IN FIELD.

LIGHTING FIXTURE SCHEDULE:

MARK	SYMBOL	DESCRIPTION	DIFFUSER	WATTS	TYPE	BALLAST	MOUNTING	MANUFACTURER AND CATALOG NUMBER
F29		INDUSTRIAL STRIP	ACRYLIC	25W	LED	–	VARIES	COLUMBIA – LCL4-40LW-EDU

1 / E4.1 TRASH CORRAL PLAN W/ SHED
1/4"=1'-0"

INSTALLATION & TECHNICAL ASSISTANCE INFORMATION:
TRANE BAS: McDcontrols@Trane.com



PROVIDE AND INSTALL DATA OUTLET NEXT TO BAS PANEL. REMOTE COMMISSIONING IS NOT POSSIBLE WITHOUT DATA CONNECTION.

INSTALLATION NOTES:
1. PROVIDE, INSTALL AND SECURE ALL NECESSARY CABLE & CONDUIT PER BAS DRAWINGS AND SPECIFICATIONS.
2. MOUNT ALL BAS CONTROL ENCLOSURES.
3. PERFORM ALL LOW VOLTAGE TERMINATIONS.
4. ROUGH-IN, INSTALLATION AND WIRING FOR TEMPERATURE SENSORS AND TOUCHSCREEN PER PLAN LOCATIONS.
5. PROVIDE POWER CIRCUITS INTO CONTROL CANS PER BAS DETAILS.
6. COORDINATE WITH SUPPLIER TO SCHEDULE REMOTE COMMISSIONING.
7. CORRECT ALL PUNCH LIST ITEMS FOUND DURING REMOTE COMMISSIONING.

CONTROLS SCHEDULE

MARK	DESCRIPTION	MANUFACTURER MODEL
TS	WIRELESS SPACE TEMPERATURE SENSOR	*PROVIDED WITH BAS
RTS	RETURN TEMPERATURE SENSOR	*PROVIDED WITH BAS
HS	OUTDOOR TEMP/HUMIDITY SENSOR	FACTORY FURNISHED AND INSTALLED W/EACH RTU

NOTES:
1. FOR TS LOCATIONS, REFER TO M1.2
2. RTS TO BE MOUNTED IN RETURN AIR DUCT OF RTU

WIRE LEGEND

MARK	WIRE/CABLE TYPE
——— – ———	CAT 5E
– – – – – – – – –	18 AWG CONDUCTORS

REV	DATE	DESCRIPTION	BY
	08/14/25	PERMIT SET	WLW
	06/26/25	USRD PROGRESS SET REVIEW	WLW

emanuelson-podas
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Emanuelson-Podas, Inc.
705 Bush Lake Road
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3801.0083

STATE OF MISSOURI
MATTHEW FULTS
NUMBER PE-2004005366
PROFESSIONAL ENGINEER

PREPARED BY: 08/14/25

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PREPARED FOR: McDonald's USA, LLC

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DRAWN BY	REVIEWED BY	DATE ISSUED	ROJ# 22252
MJW STD ISSUE DATE 2024 11	WLW	08 14 2025	

TITLE: 2024 STANDARD BUILDING – BB20
45114-WOOD/WOOD

DESCRIPTION	SITE ADDRESS
WOOD BEARING WALLS W/BRICK EXTERIOR FINISH & CI	3255 Main Street, Kansas City, MO 64111
WOOD TRUSS ROOF FRAMING	
BATTEN/BRICK EXTERIOR FINISH	
NSN: 7321	L/C: 024-0244

SHEET NO. 024-0244.01.0
E4.1
LIGHTING CONTROLS

PANEL LP-1

MLO, AIC: NOTES D6,D7,&D8, Mounting: flush, NEMA 1				PANEL LP-1						225A, 208Y/120 VAC, 3PH, 4W, CB TYPE: BL or BLH			
WATTS				BRKR	TRIP	CCT	CCT	TRIP	BRKR		WATTS		
A	B	C		REQ	POLES	NO.	NO.	POLES	REQ	DESCRIPTION	A	B	C
0			Spare		20A-1	1	2	20A-1	S	Flag Pole	220		
	0		Spare		20A-1	3	4	20A-1		Spare		0	
		400	Trash Corral Lighting		20A-1	5	6	20A-1	S	Front Signage			294
0			Spare		20A-1	7	8	20A-1	S	Spare	0		
	294		Back, DT & Non DT Signage	S	20A-1	9	10	20A-1	S	Exterior Wall/Soffit Lights DT		114	
		193	Flood Lights & Canopy lights	S	20A-1	11	12	20A-1	S	Exterior Wall/Soffit Lights		.	114
42			Back of House Sconces	S,L	20A-1	13	14	20A-1		DCO In Road Sign Base	180		
	126		Linear LED Façade Lighting	S	20A-1	15	16	20A-1	L	Dr Alarm\CO2\Access Control panel		524	
		0	Spare		20A-1	17	18	30A-2		Lot Lights			480
96			Directional Sign	S	20A-1	19	20	I		I	480		
	96		Directional Sign	S	20A-1	21	22	30A-2		Lot Lights		240	
		120	COD Lighting	S	20A-1	23	24	I		I			240
0			Spare		20A-1	25	26	30A-2		Lot Lights	480		
	30		Toy Display	S	20A-1	27	28	I		I		480	
		0	Spare	S	20A-1	29	30	30A-2		Spare			0
1041			Dining Area Lighting	S	20A-1	31	32	I		I	0		
	315		Pendants/cove lights	S	15A-1	33	34	20A-1	L	BAS Controller		300	
		792	Kitchen Lighting	S	20A-1	35	36	20A-1	L	Lighting Control Panel			180
176			Restroom Lighting	S	20A-1	37	38	20A-1	S,L	Night/Ltg./Emerg. LED Lighting	80		
	488		Support Area Lighting	S	20A-1	39	40	60A-2	S	Mcd'S Road Sign		2496	
			Spare		20A-1	41	42	I	I	I			2496
										Total Connect	2795	5503	5309
										Connect Amps		38	Amps
										Demand Amps		47	Amps

PANEL AP-1

MLO, AIC: NOTES D6, D7, & D8, Mounting: MDP, NEMA				PANEL AP-1						225A, 208Y/120 VAC, 3PH, 4W, CB TYPE: BL or BLH			
WATTS				BRKR	TRP	CCT	CCT	TRIP	BRKR		WATTS		
A	B	C	DESCRIPTION	REQ	PLS	NO.	NO.	PLS	REQ	DESCRIPTION	A	B	C
1620			DCO-Manager office/Crew room		20A-1	1	2	20A-2	G	Coffee brewer (presenter's booth)	1612		
	900		DCO - General Purpose	G	20A-1	3	4	I	I	I		1612	
		0	Spare		20A-1	5	6	20A-1	G	ABS (phase c, presenter's booth)			1788
120			Safe - (mo) DCO Gen Purp	L	20A-1	7	8	20A-1	G	Oj dispenser/ coffee cream disp	840		
	240		Remote Order Battery		20A-1	9	10	20A-1	G	CO2 Detector		120	
		960	Merge/audio sys/drv mon(sa)	G	20A-1	11	12	20A-1	G	Automated beverage sys (abs,pb)			600
960			Washer		15A-1	13	14	20A-2	G	Coffee Brewer (front counter)	1612		
	1800		Hand held Order		20A-1	15	16	I	I	I		1612	
		120	Computer Room (TF/1)		20A-1	17	18	30A-3	G	Heat treat combo shake (frnt cntr)			1560
2246			Espresso Brewer	G	30A-2	19	20	I	I	I	1560		
	2246		I	I	I	21	22	I	I	I		1560	
		1500	3-Vat fryer exhst hd interlock		20A-1	23	24	20A-1		3-Vat fryer exhst hd interlock			1176
1320			Reach in Freezer-SW	G	20A-1	25	26	20A-2	H	Ice Machine Remote Cond 1400lb	104		
	1080		Frozen fry dispenser (fry wall)	G	20A-1	27	28	I	I	I		104	
		2112	4-Vat fryer exhst hd interlock		20A-1	29	30	20A-1	G	Reach in Freezer-SW			1320
1500			Fry bagging station	L,G	20A-1	31	32	15A-3	H	Ice Machine Remote Cond 1000lb	1332		
	60		Hand Wash Timer	G	20A-1	33	34	I	I	I		1332	
		1320	Reach in Freezer-SW	G	20A-1	35	36	I	I	I			1332
132			Ice machine - 1000 lb		15A-1	37	38	15A-3	H	Ice Machine Remote Cond 1000lb	1332		
	132		Ice machine - 1000 lb		15A-1	39	40	I	I	I		1332	
		1656	4-Vat fryer hd interlock		20A-1	41	42	I	I	I			1332
										Total Connect	16290	14130	16776
										Connect Amps		131	Amps
										Demand Amps		91	Amps

PANEL AP-2

MLO, AIC: NOTES D6,D7,&D8, Mounting: MDP, NEMA 1				PANEL AP-2						225A, 208Y/120 VAC, 3PH, 4W, CB TYPE: BL or BLH			
WATTS				BRKR	TRP	CCT	CCT	TRIP	BRKR		WATTS		
A	B	C	DESCRIPTION	REQ	PLS	NO.	NO.	PLS	REQ	DESCRIPTION	A	B	C
1536			Ice machine 1400LB	H	20A-3	1	2	20A-1		Spare			
	1536		I	I	I	3	4	20A-1		Janitor EF		100	
		1536	I	I	I	5	6	20A-1	G	DCO - General Purpose			540
144			Blender McFlurry	G	20A-1	7	8	20A-1	G	Refrig-wt-48"	600		
	180		Janitor's closet	G	20A-1	9	10	30A-2	H	Trash Compactor		2496	
		480	Water Heater - Gas Igniter Cntrl	L	20A-1	11	12	I	I	I			2496
0			Spare	G	20A-1	13	14	20A-1		Walk in cooler / freezer	600		
	864		Bulk oil system (sup area)	G	20A-1	15	16	20A-1		Walk in cooler / freezer		600	
		1668	Clm grill exhaust hd interlock		20A-1	17	18	20A-2	G	Q'ing oven - P& S			1550
840			Meat freezer DW (grill side)	G	20A-1	19	20	I	I	I	1550		
	120		Clean in place panel	G	20A-1	21	22	20A-1	G	Specialty Coffee Refrigerator 27"		468	
		490	Reverse Osmosis, Filtration	G	20A-1	23	24	20A-1	G	Automated beverage sys			600
180			DCO in Trash Corral	G	20A-1	25	26	20A-1	G	ABS (presenter's booth)	1788		
	1200		Bulk oil sys - support area (sa)	G	20A-1	27	28	20A-2	G	Q'ing oven - P& S		1550	
		1032	BIC Machine	G	20A-1	29	30	I	I	I			1550
324			Reach In SW fridge	G	20A-1	31	32	20A-2	G	Infusion Tea Brewer	1352		
	120		Recirc pump		20A-1	33	34	I	I	I		1352	
		1632	Soda syst pack (support area)		20A-1	35	36	20A-1		Spare			0
3120			Soda syst pack (support area)		30A-3	37	38	20A-2	G	Q'ing oven - P& S	1602		
	3120		I		I	39	40	I	I	I		1602	
		3120	I		I	41	42	20A-1	G	Dco-General Purpose			540
										Total Connect	13636	15308	17233
										Connect Amps		128	Amps
										Demand Amps		85	Amps

PANEL AP-3

MLO, AIC: NOTES D6,D7,&D8, Mounting: MDP, NEMA 1				PANEL AP-3						225A, 208Y/120 VAC, 3PH, 4W, CB TYPE: BL or BLH			
WATTS				BRKR	TRP	CCT	CCT	TRIP-	BRKR		WATTS		
A	B	C	DESCRIPTION	REQ	PLS	NO.	NO.	PLS	REQ	DESCRIPTION	A	B	C
4668			4-Vat-Fryer-Electric-S/S/S/S	G	50A-3	1	2	50A-3	G	4-Vat-Fryer-Electric-S/S/S/S	4668		
	4668		I	I	I	3	4	I	I	I		4668	
		4668	I	I	I	5	6	I	I	I			4668
4668			4-Vat-Fryer-Electric-S/S/S/S	G	50A-3	7	8	50A-3	G	4-Vat-Fryer-Electric-S/S/S/S	4668		
	4668		I	I	I	9	10	I	I	I		4668	
		4668	I	I	I	11	12	I	I	I			4668
0			Space			13	14	50A-3	G	Clamshell Grill	2604		
	0		Space			15	16	I	I	I		2604	
		0	Space			17	18	I	I	I			2604
0			Space			19	20	50A-3	G	Clamshell Grill	5196		
	0		Space			21	22	I	I	I		5196	
		0	Space			23	24	I	I	I			5196
0			Space			25	26			Space	0		
	0		Space			27	28			Space		0	
		0	Space			29	30			Space			0
0			Space			31	32			Space	0		
	0		Space			33	34			Space		0	
		0	Space			35	36			Space			0
0			Space			37	38			Space	0		
	0		Space			39	40			Space		0	
		0	Space			41	42			Space			0
										Total Connect	26472	26472	26472
										Connect Amps		220	Amps
										Demand Amps		143	Amps

PANEL AP-4

MLO, AIC: NOTES D6,D7,&D8, Mounting: MDP, NEMA 1				PANEL AP-4						225A, 208Y/120 VAC, 3PH, 4W, CB TYPE: BL or BLH			
WATTS				BRKR	TRP	CCT	CCT	TRIP-	BRKR		WATTS		
A	B	C	DESCRIPTION	REQ	PLS	NO.	NO.	PLS	REQ	DESCRIPTION	A	B	C
2604			Clamshell Grill	G	50A-3	1	2	30A-3	G	Combi Oven	1812		
	2604		I	I	I	3	4	I	I	I		1812	
		2604	I	I	I	5	6	I	I	I			1812
5196			Clamshell Grill	G	50A-3	7	8	30A-3	G	Combi Oven	1812		
	5196		I	I	I	9	10	I	I	I		1812	
		5196	I	I	I	11	12	I	I	I			1812
4668			3-Vat-Fryer-Electric-F/F/F	G	50A-3	13	14	15A-1		Combi Oven Hood	960		
	4668		I	I	I	15	16	15A-1		Combi Oven Hood		960	
		4668	I	I	I	17	18			Space			0
4668			3-Vat-Fryer-Electric-F/F/F	G	50A-3	19	20			Space	0		
	4668		I	I	I	21	22			Space		0	
		4668	I	I	I	23	24			Space			0
4668			3-Vat-Fryer-Electric-F/F/F	G	50A-3	25	26			Space	0		
	4668		I	I	I	27	28			Space		0	
		4668	I	I	I	29	30			Space			0
0			Spare			31	32			Space	0		
	0		Spare			33	34			Space		0	
		0	Spare			35	36			Space			0
0			Space			37	38			Space	0		
	0		Space			39	40			Space		0	
		0	Space			41	42			Space			0
										Total Connect	26387	26387	25427
										Connect Amps		217	Amps
										Demand Amps		141	Amps

PANEL AP-5

MLO, AIC: NOTES D6,D7,&D8, Mounting: MDP, NEMA 1				PANEL AP-5						225A, 208Y/120 VAC, 3PH, 4W, CB TYPE: BL or BLH			
WATTS				BRKR	TRP	CCT	CCT	TRIP-	BRKR		WATTS		
A	B	C	DESCRIPTION	REQ	PLS	NO.	NO.	PLS	REQ	DESCRIPTION	A	B	C
600			Fridge/Freezer 2Dr Base	G	20A-1	1	2	20A-1		Warewasher Exhaust Fan	864		
	600		Fridge/Freezer 2Dr Base	G	20A-1	3	4	20A-2	G	Universal Holding Cabinet P&S		1581	
		600	Fridge/Freezer 2Dr Base	G	20A-1	5	6	I	I	I			1581
600			Fridge/Freezer 2Dr Base	G	20A-1	7	8	20A-2	G	Universal Holding Cabinet P&S	1581		
	600		Fridge/Freezer 2Dr Base	G	20A-1	9	10	I	I	I		1581	
		864	Toilet Exhaust Fan	G	20A-1	11	12	20A-1	G	Universal Holding Cabinet Table			240
540			Roof Receptacles	G	20A-1	13	14	20A-1		DT Power Window	120		
	132		Sparkle Table or spare		20A-1	15	16	20A-1		DT Power Window		120	
		2080	Frozen Carbonated Beverage	G	30A-2	17	18	20A-1		DT Power Window			120
2080			I	I	I	19	20	20A-2	G	Coffee Brewer (front counter)	1612		
	360		Delivery Tablets	G	20A-1	21	22	I	I	I		1612	
		600	Wall Mount Frz Unit SW HC	G	20A-1	23	24	20A-1	G	Pie Display			564
828			Bulk Oil System	G	20A-1	25	26	20A-1	G	Pie Display	564		
	2620		Universal Radiant Toaster	G	30A-2	27	28	20A-1		Spare		0	
		2620	I	I	I	29	30	20A-1		DCO-Muzak satellite system			120
3230			Warewasher 1of2	G	30A-3	31	32	20A-1		Clg. Mt window recepts	540		
	3230		I	I	I	33	34	20A-2	G	Humidified Holding Cabinet		947	
		3230	I	I	I	35	36	I	I	I			947
3230			Warewasher 2of2	G	30A-3	37	38	25A-2	H	Remote Condensing Unit	1560		
	3230		I	I	I	39	40	I	I	I		1560	
		3230	I	I	I	41	42	20A-1		Spare			0
										Total Connect	17949	18173	16796
										Connect Amps		147	Amps
										Demand Amps		96	Amps

PANEL AP-6

MLO, AIC: NOTES D6,D7,&D8, Mounting: MDP, NEMA 1				PANEL AP-6						225A, 208Y/120 VAC, 3PH, 4W, CB TYPE: BL or BLH			
WATTS				BRKR	TRP	CCT	CCT	TRIP	BRKR		WATTS		
A	B	C	DESCRIPTION	REQ	PLS	NO.	NO.	PLS	REQ	DESCRIPTION	A	B	C
1092			Hand Dryer	L,G	20A-1	1	2	50A-2P		Unit AC-1	4000		
	1092		Hand Dryer	L,G	20A-1	3	4	I		I		4000	
		1092	Hand Dryer	L,G	20A-1	5	6	50A-2P		Unit AC-2			4000
1092			Hand Dryer	L,G	20A-1	7	8	I		I	4000		
	104		Cooler Evap	H	20A-2	9	10	20A-1		Unit AC-3		1200	
		104	I	I	I	11	12	20A-1		Unit AC-4			1200
2111			Freezer Evap	H	30A-2P	13	14	20A-1		Unit AC-5	600		
	2111		I	I	I	15	16	20A-1		Spare		0	
		0	Spare		20A-1	17	18	20A-1		Spare			0
0			Spare		20A-1	19	20	20A-1		Spare	0		
	0		Space			21	22			Space		0	
		0	Space			23	24			Space			0
0			Space			25	26			Space	0		
	0		Space			27	28			Space		0	
		0	Space			29	30			Space			0
0			Space			31	32			Space	0		
	0		Space			33	34			Space		0	
		0	Space			35	36			Space			0
0			Space			37	38			Space	0		
	0		Space			39	40			Space		0	
		0	Space			41	42			Space			0
										Total Connect	12895	8507	6396
										Connect Amps		77	Amps
										Demand Amps		54	Amps

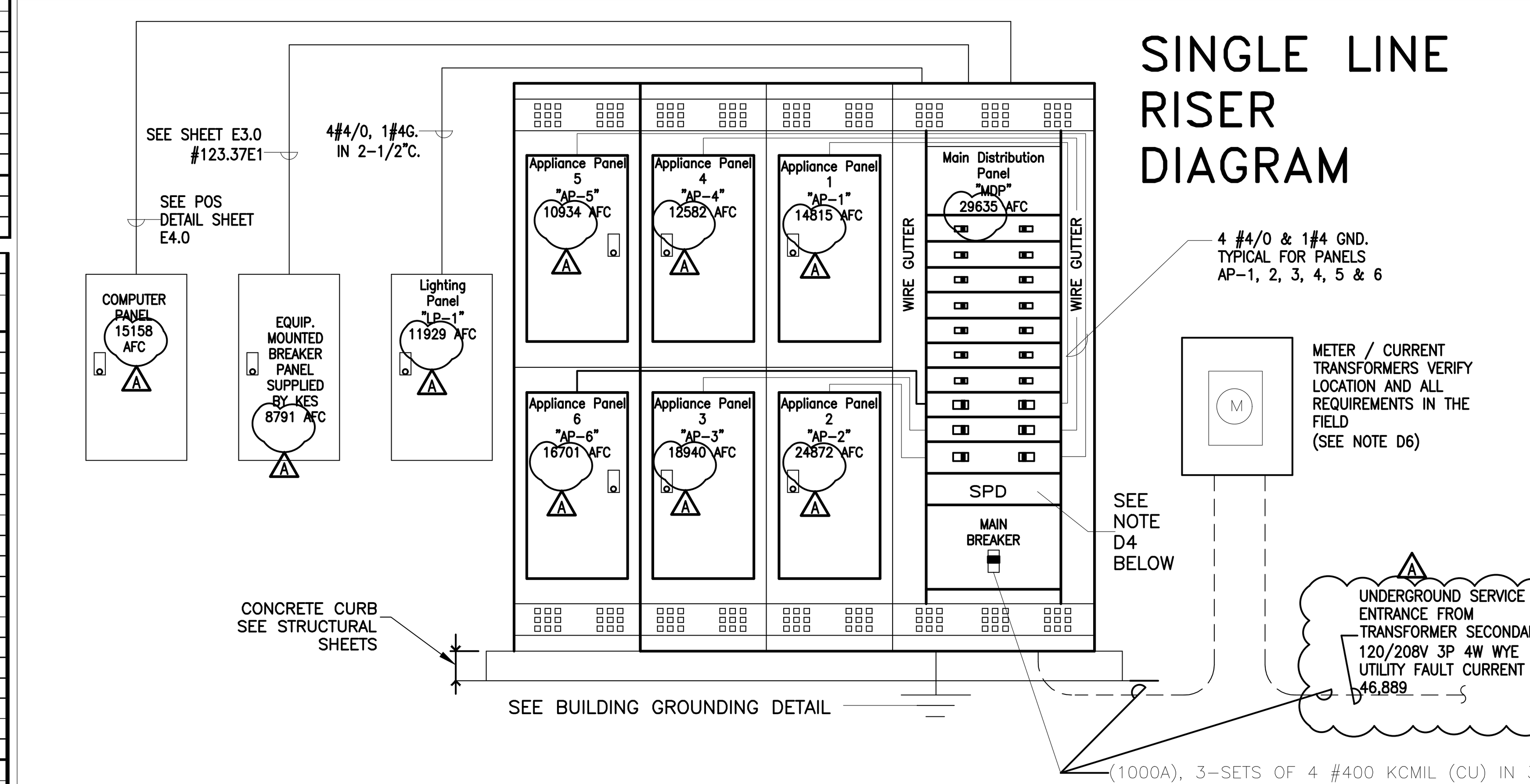
PANEL MDP

1000A MCB, NOTES D6, D7, & D8, Mounting: Free Standing, NEMA 1 100% FULLY RATED				PANEL MDP								208Y/120 VAC, 3PH, 4W			
WATTS				BRKR		TRP	CCT	CCT	TRP	BRKR			WATTS		
A	B	C	DESCRIPTION	REQ	REQ	PLS	NO.	NO.	PLS	REQ	TYPE	DESCRIPTION	A	B	C
2795	5503	5309	Lighting Panel 1; LP-1			225A-3	1	2	225A-3			Appliance Panel; AP-1	16290	14130	16776
13636	15308	17233	Appliance Panel; AP-2			225A-3	3	4	225A-3		SHT	Appliance Panel; AP-3	26472	26472	26472
12960	12960	12960	*Roof Top Unit 1	H		150A-3	5	6	150A-3		L	CP Panel	8430	8112	12288
			Space			125A-3	7	8	110A-3		H	*Roof Top Unit 3	9480	9480	9480
17949	18173	16796	Appliance Panel; AP-5			225A-3	9	10	225A-3		SHT	Appliance Panel; AP-4	26387	26387	25427
7450	7402	0	KEC Breaker Panel			125A-2	11	12	70A-3		H	*Roof top unit 2	6360	6360	6360
			Space				13	14	225A-3			Appliance Panel; AP-6	12895	8507	6396
4056	4056	4056	Remote Condensing Unit	H		50A-3	15	16				Space			
			Space				17	18				SPD			
			Space				19	20				SPD			
* SEE ELECT SHTS FOR CONDUIT AND WIRE SIZE												Total Connect	165160	162850	159553
												Connect Amps		1353	Amps

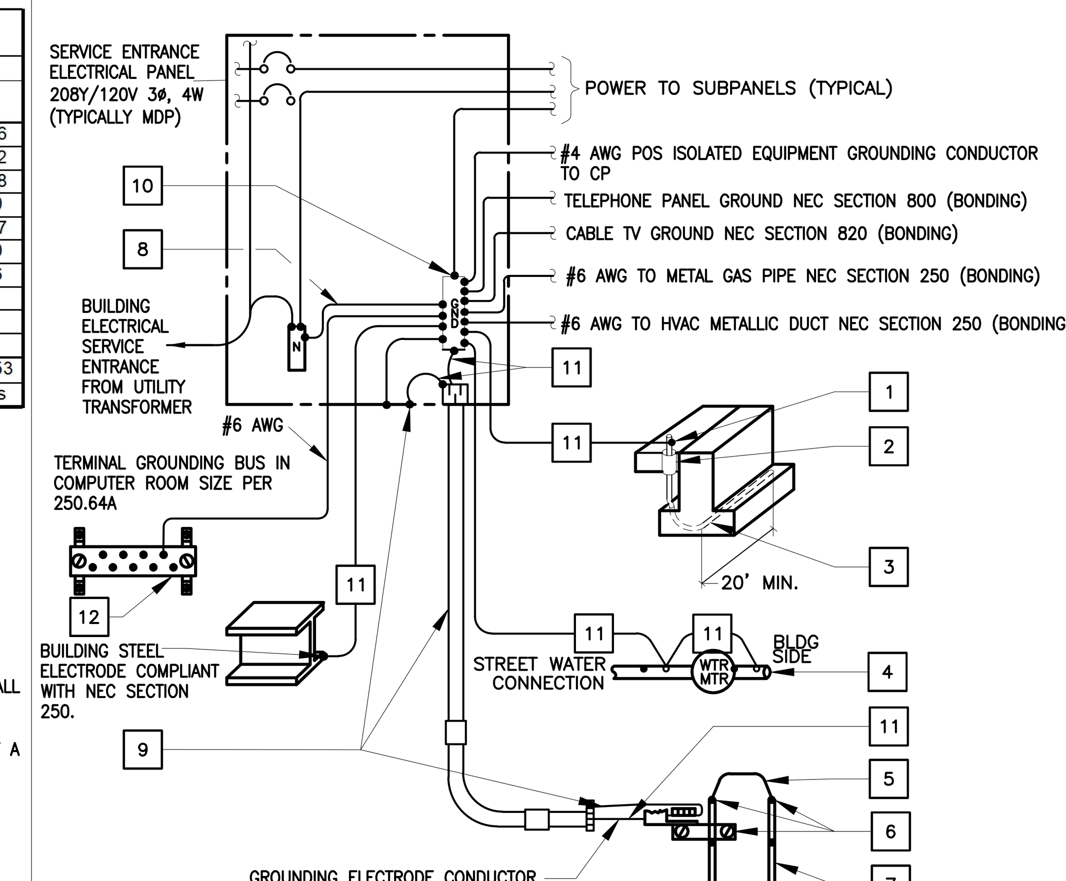
COMPUTER PANEL

150 MLO AIC:SEE NOTES D6, D7, & D8, Mounting: Flush				COMPUTER PANEL						100A, 208Y/120 VAC, 3PH, 4W, CB TYPE: BL or BLH			
WATTS				BRKR	TRP	CCT	CCT	TRIP-	BRKR		WATTS		
A	B	C	DESCRIPTION	REQ	PLS	NO.	NO.	PLS	REQ	DESCRIPTION	A	B	C
1656			POS/Reg/Mon/Printer/Headset	L	20A-1	1	2	20A-1	L	Spare	0		
	1200		Kvs Mon OAT/Vid/Rec/label	G, L	20A-1	3	4	20A-1	L	Rec		84	
		120	Cctv/Timer	L	20A-1	5	6	20A-1	L	Digital Merch/Media Player			432
630			Order Pos Reg/vid mon Coin Dispenser	L	20A-1	7	8	20A-1	G,L	Kvs Mon Kit/Labeling system	600		
	720		Video Monitor	G, L	20A-1	9	10	20A-1		Zoom Timer		720	
		600	Tech Rack	L	20A-1	11	12	20A-1	L	Tech Rack UPS			1680
0			Spare	L	20A-1	13	14	20A-1	L	Cod Optical Isolator	120		
	1200		Tech Rack	L	20A-1	15	16	20A-1	L	Speaker Canopy #1		120	
		1440	Tech Rack	L	20A-1	17	18	20A-1	L	Speaker Canopy #2,			120
444			Counter Pos Reg Rec	L	20A-1	19	20	20A-1	L	Office desk	1200		
	0		Spare	L	20A-1	21	22	20A-1	L	Office desk		1200	
		900	KVS Mon/KIT/Del. Pos Reg	G, L	20A-1	23	24	20A-1	L	Order Cash Recycler			528
1860			Exterior Menu Boards/Media Player	L	20A-1	25	26	20A-1	G, L	Kvs mon Prep	360		
	528		Counter Cash Recycler	L	20A-1	27	28	20A-1	G, L	Time Clock		60	
		1860	Exterior Menu Boards/Media player	L	20A-1	29	30	20A-1	L	Kiosks Cash Handler			528
480			DO Equipment Rack	L	20A-1	31	32	20A-1	L	Kiosks	1080		
	1200		BOCA	L	20A-1	33	34	20A-1	L	Kiosks		1080	
		3000	Tech Rack	L	30A-1	35	36	20A-1	L	Kiosks			1080
0			Space			37	38			Space			
	0		Space			39	40			Space			
		0	Space			41	42			Space			
										Total Connect	8430	8112	12288
										Connect Amps		80	Amps
										Demand Amps		54	Amps

SINGLE LINE RISER DIAGRAM



BUILDING ELECTRICAL GROUNDING DETAIL



KEY NOTES

1. PROVIDE ENOUGH LENGTH TO TERMINATE DIRECTLY TO GROUND BUS OR USE BOLTED-TYPE CONNECTION DEVICE OR EXOTHERMIC WELD.
2. NON-METALLIC PROTECTIVE SLEEVE. LOCATE SLEEVE DIRECTLY UNDER THE ELECTRICAL SERVICE ENTRANCE PANEL. EC TO PROVIDE PLIABLE SEALANT BETWEEN COPPER WIRE AND SLEEVE.
3. FOR NEW CONSTRUCTION WHEN A SPREAD FOOTING OR DOWN TURNED SLAB IS USED, EC SHALL INSTALL A CONCRETE ENCASED ELECTRODE, COMPLIANT WITH NEC SECTION 250, CONSISTING OF AT LEAST 20 FEET OF BARE #4 AWG COPPER ENCASED IN 2 INCHES OF CONCRETE NEAR THE BOTTOM OF THE FOOTING OR FOUNDATION (BELOW GRADE) THAT IS IN DIRECT CONTACT WITH EARTH.
4. METAL UNDERGROUND WATER PIPE ELECTRODE COMPLIANT WITH NEC SECTION 250. THE GROUNDING CONNECTION TO THE INTERIOR METAL WATER PIPE SHALL BE MADE WITHIN THE FIRST FIVE FEET OF THE WATER PIPE ENTRANCE TO THE BUILDING.
5. IF MULTIPLE GROUNDING RODS ARE BEING USED OR NEED TO BE USED, THEY SHALL ALL BE BONDED TOGETHER PER NEC SECTION 250.
6. CLAMPS SUITABLE FOR DIRECT BURIAL OR EXOTHERMIC WELD.
7. 8'-0" X 5/8" CU ROD GROUNDING ELECTRODE COMPLIANT WITH NEC SECTION 250.
8. CU BONDING JUMPER SIZED PER NEC SECTION 250 OR FACTORY PROVIDED NEUTRAL TO GROUND BAR LINK. (THIS IS THE ONLY PLACE IN THE BUILDING WHERE N-G SHALL BE BONDED TOGETHER)
9. ALL METAL RACEWAYS CONTAINING GROUNDING ELECTRODE CONDUCTORS SHALL BE BONDED AT BOTH ENDS AS REQUIRED BY NEC SECTION 250. PROVIDE GROUNDING TYPE BUSHINGS & FITTINGS.
10. MCDONALD'S GROUNDING STANDARDS PURPOSELY EXCEED THOSE GIVEN BY THE NEC. THE ELECTRICAL CONTRACTOR SHALL PROVIDE A BUILDING GROUNDING SYSTEM MEETING NEC AND MCDONALD'S STANDARDS AS SHOWN ON THIS DRAWING.
11. CU GROUNDING ELECTRODE CONDUCTORS AND BONDING JUMPERS SHALL BE SIZED BASED UPON ELECTRICAL SERVICE SIZE PER NEC SECTION 250

800A	1000A	1200A
3/0 CU	3/0 CU	4/0 CU

• SHOWS CONNECTION/BONDING POINT

12. TERMINAL GROUNDING BUS AT 90"AFF. HARGER #GBI14212D.

DISTRIBUTION EQUIPMENT NOTES:

D1. ALL ELECTRICAL MATERIAL USED ON THIS PROJECT SHALL BE "UL" LISTED AND LABELED.

D2. THE EC/GC/AREA CONSTRUCTION MANAGER WHEN ORDERING PANELBOARDS, SHALL DETERMINE THE NUMBER OF SERVICE ENTRANCE CONDUCTORS, SIZE AND MATERIAL TYPE, AND SHALL PROVIDE THIS INFORMATION TO THE PANELBOARD SUPPLIER SO THAT THE APPROPRIATE LUGS CAN BE PROVIDED FROM THE FACTORY.

D3. ALUMINUM SERVICE ENTRANCE CONDUCTORS SHALL ONLY BE USED WHEN THEY ARE TERMINATED DIRECTLY TO THE LINE LUGS ON A C/T AND METERING CABINET, THE LINE LUGS OF A FUSIBLE DISCONNECT SWITCH OR TO THE LINE LUGS OF A MAIN LUG ONLY (6 HANDLE RULE) SERVICE ENTRANCE PANEL. ALUMINUM SERVICE ENTRANCE CONDUCTORS SHALL NOT BE TERMINATED TO THE LINE LUGS OF ANY MAIN BREAKER SINCE DOING SO WILL VIOLATE IT'S 100% UL RATING. IF ALUMINUM CONDUCTORS ARE USED AS PREVIOUSLY INDICATED THEY SHALL BE TERMINATED AS FOLLOWS, AND THE WIRE SIZE INCREASED DUE TO LOWER AMPACITY OF ALUMINUM. EXPOSED ALUMINUM CONDUCTOR STRANDS SHALL BE COATED WITH AN ANTI-OXIDANT IMMEDIATELY AFTER INSULATION IS STRIPPED AWAY. A COMPRESSION LUG SHALL BE PROPERLY INSTALLED ONTO THE EXPOSED ALUMINUM CONDUCTOR STRANDS, AND THAT COMPRESSION LUG SHALL THEN BE BOLTED TO THE TRANSFORMER TAPS AND SWITCHBOARD BUSS USING PROPERLY SIZED BOLTS, NUTS AND WASHERS. MERELY INSERTING ALUMINUM STRANDS UNDER A SCREW LUG SHALL NOT BE ACCEPTABLE.

D4. THE SURGE PROTECTIVE DEVICE (SPD) UNIT SHALL BE AN INTEGRAL UNIT PROVIDED AND INSTALLED BY THE SWITCHBOARD MANUFACTURER. ORDER APPROVED UNITS AS SHOWN IN D5.

D5. APPROVED SWITCHBOARDS, PANEL, & SPD SUPPLIER (IN ADDITION TO ORDERING SWITCHBOARD & PANELS ALSO ORDER SPD) SUPPLIERS:

SQUARE D VIA GRAYBAR
900 REGENCY DRIVE
GLENDALE HEIGHTS, IL 60139
TEL: (800)784-6059 OR (630) 671.6304

SPD INTEGRAL: I-LINE SERIES,
(208Y/120V, 3Ø)

D6. MAIN INCOMING METER / CURRENT TRANSFORMER CABINET, MAIN DISTRIBUTION PANEL MDP, SERVICE CABINET AND SWITCH SHALL BE BRACED FOR THE HIGHEST AVAILABLE FAULT CURRENT BUT NOT LESS THAN NEMA SYMMETRICAL RMS OF 65,000 AMPERES. CONTACT UTILITY/PM/GC/EC AS REQUIRED.

D7. BRANCH BREAKERS IN ALL LP, AP AND (CP IF USED) PANELS SHALL HAVE A NEMA SYMMETRICAL RMS RATING OF 10,000 AMPS. ALL CIRCUIT BREAKERS IN AP, LP AND CP PANELS SHALL BE SERIES RATED WITH THE CIRCUIT BREAKERS IN PANEL MDP SO THAT ALL CIRCUIT BREAKERS IN ALL BRANCH PANELBOARDS ARE PROTECTED AGAINST THE MAXIMUM FAULT CURRENT AVAILABLE AT THE MAIN SERVICE DISCONNECT. NO DESIGN CHANGES SHALL BE MADE TO THE DISTRIBUTION SYSTEM WITHOUT THE WRITTEN APPROVAL OF THE PROFESSIONAL ELECTRICAL ENGINEER OF RECORD. FOR A SERIES RATED SYSTEM USING PANEL BOARDS MANUFACTURED BY SQUARE-D USE A FULLY RATED MAIN BREAKER (SM-RGC) AS WELL AS OTHER FULLY RATED BREAKERS IN THE MDP (QG, FH, RGC) AND SERIES RATED BREAKERS (QO (B), QO (B) VH) IN THE SUB-BREAKERS.

D8. PANELBOARD SUPPLIER SHALL MARK CLEARLY & LEGIBLY ON THE DOORS OF ALL PANELS. DOORS OF ALL PANELS "CAUTION - SERIES RATED SYSTEM ______A AVAILABLE. IDENTIFIED REPLACEMENT COMPONENTS REQUIRED."

D9. ALL BREAKERS SHALL BE THE BOLT-ON TYPE. ALL CIRCUIT BREAKERS SHALL BE CAPABLE OF BEING LOCKED OUT TO COMPLY WITH OSHA REGULATION 1910.147 LOCKOUT/TAGOUT PROCEDURES.

D10. BRANCH BREAKERS OF 2P AND 3P CONFIGURATION SHALL HAVE A COMMON TRIP.

D11. ALL CIRCUIT BREAKERS USED TO SWITCH LIGHT FIXTURES SHALL BE APPROVED FOR THE PURPOSE AND MARKED "SWD".

D12. ALL HVAC CIRCUIT BREAKERS SHALL BE HACR TYPE. SEE TABLE ON SHEET E4.0 FOR CONDUIT AND WIRE SIZE REQUIREMENTS.

D13. PANELBOARD SUPPLIER SHALL PROVIDE ENGRAVED PLASTIC LAMINATED LABELS TO IDENTIFY ALL PANELS. LABEL FOR COMPUTER PANEL SHALL READ "COMPUTER ONLY PANEL".

D14. ALL PANELS SHALL BE PROVIDED WITH A KEY LOCK AND LATCH. EACH PANEL SHALL HAVE TWO KEYS WITH ALL PANELS KEYED ALIKE.

D15. PANELBOARD MANUFACTURER SHALL PROVIDE ARC-FLASH WARNING LABELS FOR MDP AND ALL BRANCH PANELBOARDS IN ACCORDANCE WITH NEC110.

D16. ALL RECEPTACLES IN THE KITCHEN AREA MUST HAVE GROUND FAULT CIRCUIT-INTERRUPTER PROTECTION PER NEC 210.8 (B) (2).

D17. ON PROJECTS RATED 1200 AMPS OR MORE, AND FOLLOWING NEC 2017 OR NEWER, ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR DATA COLLECTION INCLUDING BUT NOT LIMITED TO UTILITY TRANSFORMER DATA, CABLE LENGTHS, ETC AND COORDINATING WITH THE SWITCHBOARD SUPPLIER OR ELECTRICAL ENGINEER SO THAT AN ARC FLASH STUDY CAN BE PREFORMED. SUPPLIER SHALL SHARE THE RESULTS OF THE STUDY WITH THE ENGINEER OF RECORD SO THAT THE APPROPRIATE ARC ENERGY REDUCTION METHOD MEETING THE REQUIREMENTS ON NEC 240.87 CAN BE APPLIED. CONTRACTOR SHALL ALSO BE RESPONSIBLE TO AFFIX THE LABELS ON THE DESIGNATED EQUIPMENT PROVIDED BY THE SUPPLIER.

SEE SHEET E3.1 FOR GENERAL ELECTRICAL NOTES

BREAKER MODIFICATIONS:

G - GFCI PERSONNEL PROTECTION (5MA)
HID - HID & SWD RATED
L - HANDLE LOCK
H - HACR RATED
S - SWITCH DUTY RATED
SHT - SHUNT TRIP

TOTAL BUILDING 208Y/120V, 3 PHASE, 4-WIRE GENERAL SERVICE POWER BASED **ON NEC 220.88 FOR A "NOT ALL ELECTRIC"** NEW RESTAURANT.

SPLIT UTILITIES CALC

NEC Optional Method	(kW)	(A)
1. Continuous Loads:	47	130
2. Kitchen Loads:	334	927
3. HVAC Loads:	107	297
4. Cooling:	0	0
5. Total (1+2+3+4):	488	1353
6. Base Value (See 220.88):	325	902
7. Amount Over Base Value (5-6):	163	451
8. Demand Factor:	.45	
9. Adjusted Value (8*7):	73	203
10. Adjusted Base Value (220.88):	262.5	729
11. Demand (9+10):	336	**932**

REV	DATE	DESCRIPTION	BY
	06/26/25	USRD PROGRESS SET REVIEW	WLW
	08/14/25	PERMIT SET	WLW
A	09/24/25	CITY CMNTS.	WLW

emanuelson-podas
consulting engineers
Emanuelson-Podas, Inc.
7705 Bush Lake Road
Edina, MN 55439
(952) 930-0050 | www.epinc.com
3801.0083
STATE OF MISSOURI MATTHEW FULTS NUMBER PE-2004005366 PROFESSIONAL ENGINEER
PREPARED BY: 09/24/25

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PREPARED FOR: McDonald's USA, LLC

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DRAWN BY: MJW | STD ISSUE DATE: 2024 11 | REVIEWED BY: WLW | DATE ISSUED: 08 14 2025 | RD# 22252

TITLE: 2024 STANDARD BUILDING - BB20 45114-WOOD/WOOD

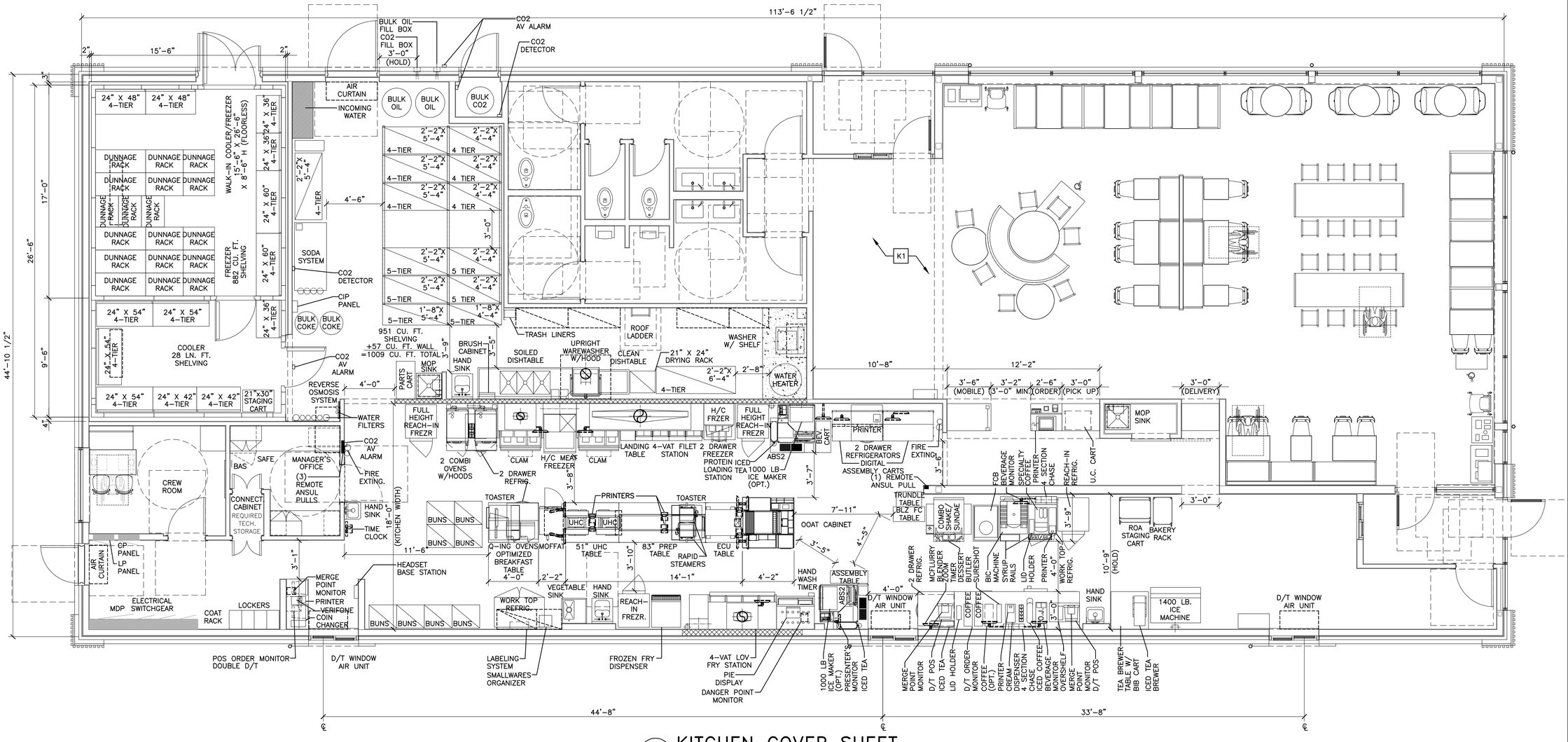
DESCRIPTION: WOOD BEARING WALLS W/BRICK EXTERIOR FINISH & Ci, WOOD TRUSS ROOF FRAMING, BATTEN/BRICK EXTERIOR FINISH

NSN: 7321 | L/C: 024-0244 | SITE ADDRESS: 3255 Main Street, Kansas City, MO 64111

SHEET NO. 024-0244.01.A

E4.2

SPLIT UTIL. DIST.



1 K1.0 KITCHEN COVER SHEET

1/4" = 1'-0"

KEYED NOTES

K1 CUSTOMER KIOSK & DECOR LAYOUT FOR REFERENCE ONLY. VERIFY KIOSK PLACEMENT PER USRD APPROVED KIOSK REVIEW

REV	DATE	DESCRIPTION	BY

PREPARED BY:

PREPARED FOR: McDonald's USA, LLC

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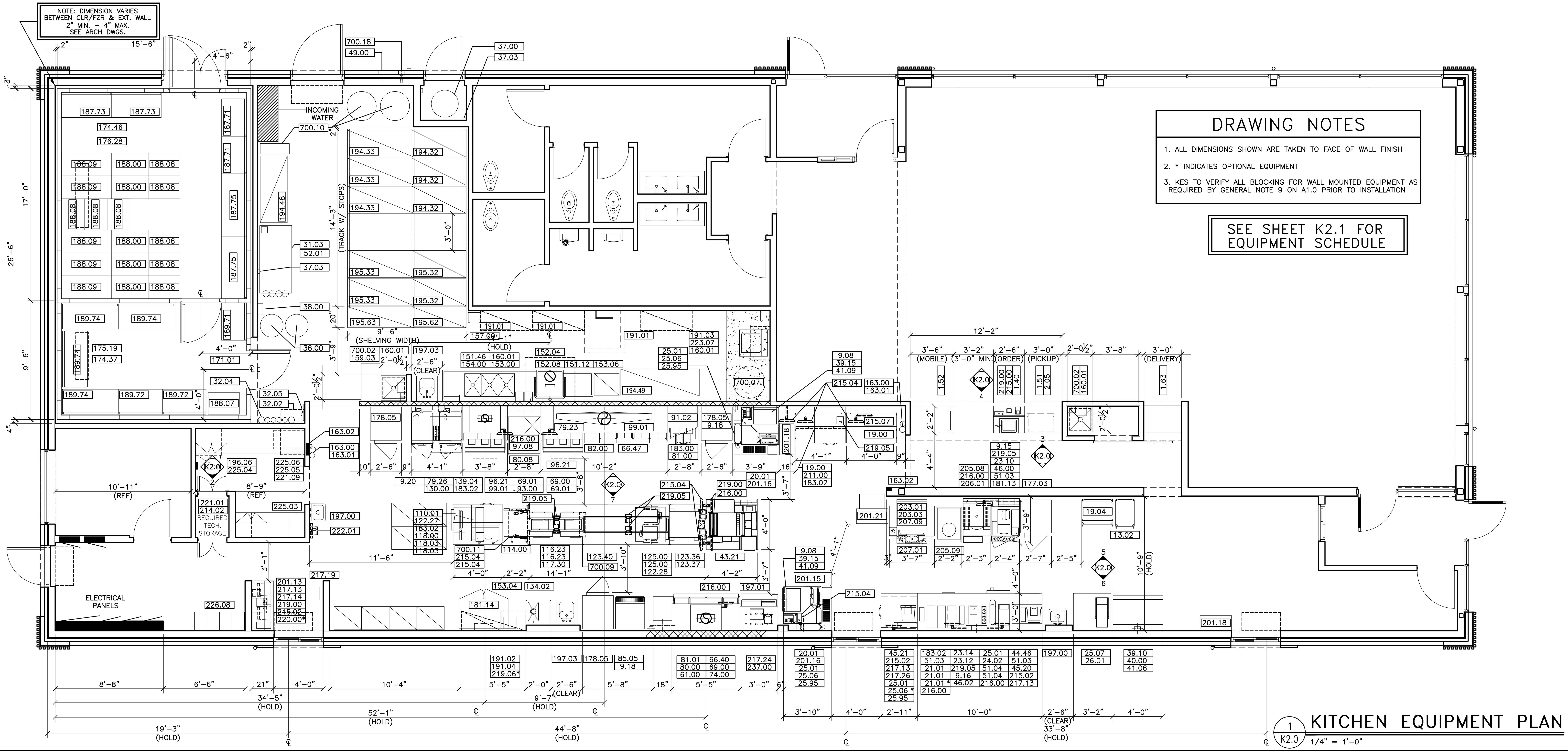
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DRAWN BY	MZ
STD ISSUE DATE	2024 05
REVIEWED BY	–
DATE ISSUED	06 11 2025

TITLE: 2024 STANDARD BUILDING – BB20 45114–WOOD/WOOD

DESCRIPTION	
WOOD BEARING WALLS W/HARDIE BOARD EXTERIOR FINISH & CI	
WOOD TRUSS ROOF FRAMING	
E.I.F.S./BATTEN/LAP SIDING EXTERIOR FINISH	
NSN: XXXXX	SITE ADDRESS: 3255 Main Street Kansas City, MO. 65111
L/C: 024–0244	

SHEET NO. 024–0244.00.0 K1.0 KITCHEN COVER SHT

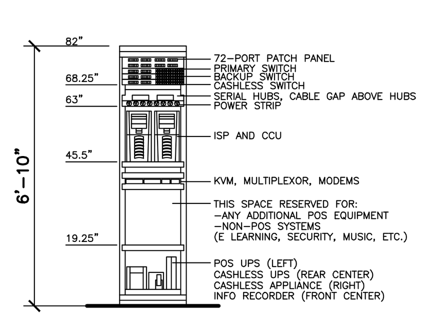


DRAWING NOTES

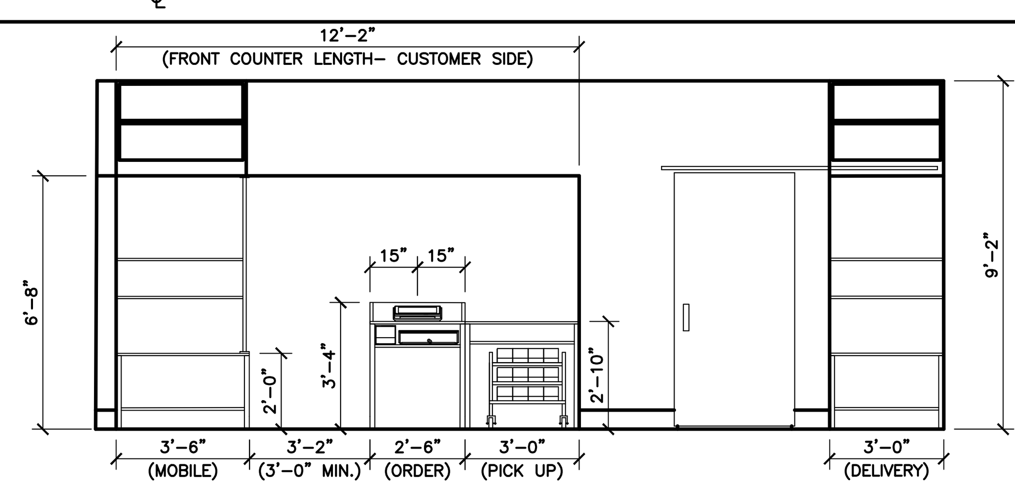
1. ALL DIMENSIONS SHOWN ARE TAKEN TO FACE OF WALL FINISH
2. * INDICATES OPTIONAL EQUIPMENT
3. KES TO VERIFY ALL BLOCKING FOR WALL MOUNTED EQUIPMENT AS REQUIRED BY GENERAL NOTE 9 ON A1.0 PRIOR TO INSTALLATION

SEE SHEET K2.1 FOR EQUIPMENT SCHEDULE

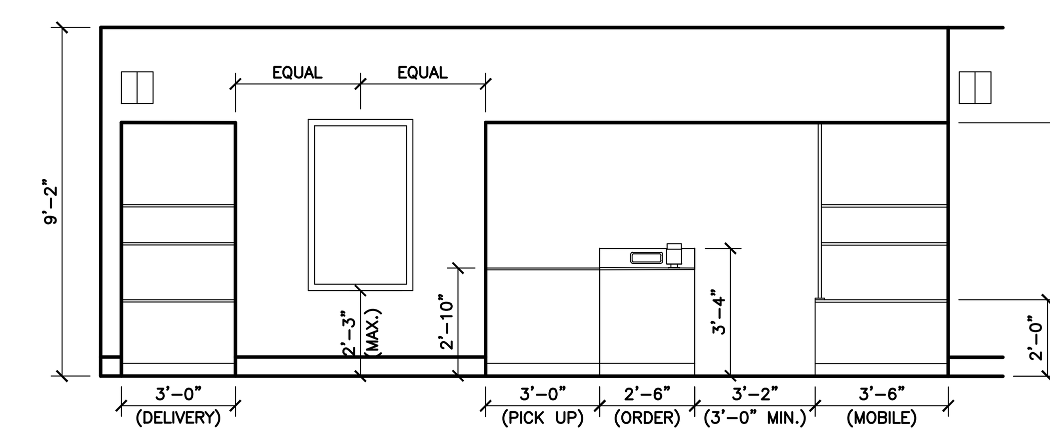
1 K2.0 KITCHEN EQUIPMENT PLAN
1/4" = 1'–0"



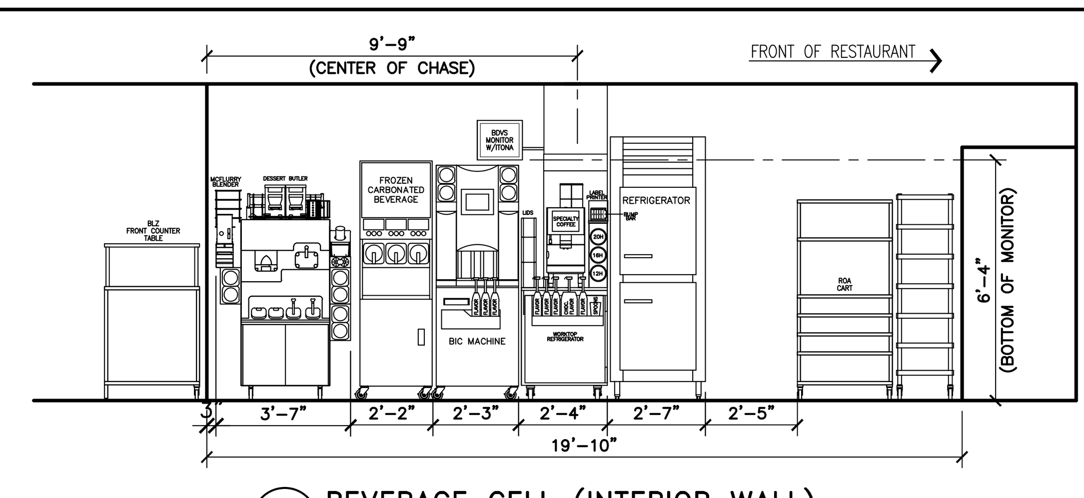
2 K2.0 COMPUTER CLOSET RACK
1/4" = 1'–0"



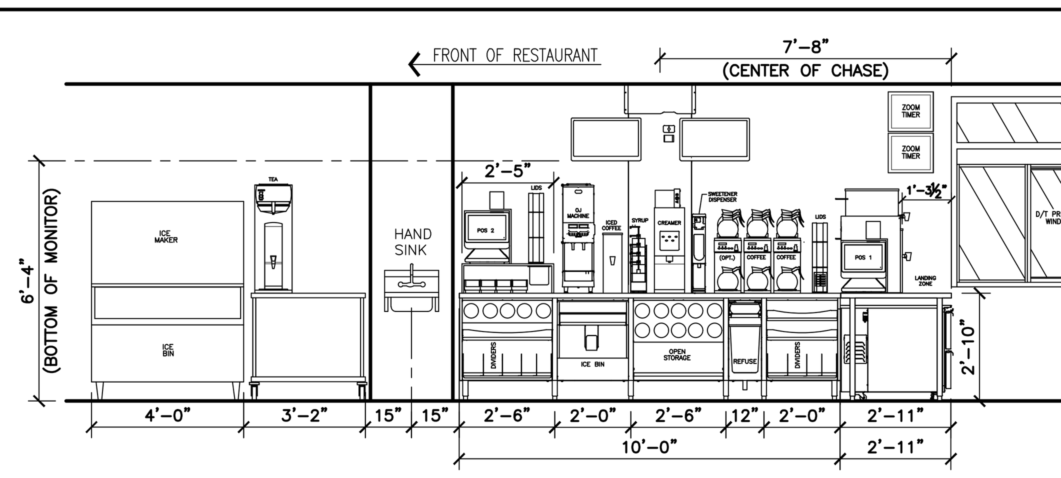
3 K2.0 FRONT COUNTER
1/4" = 1'–0"



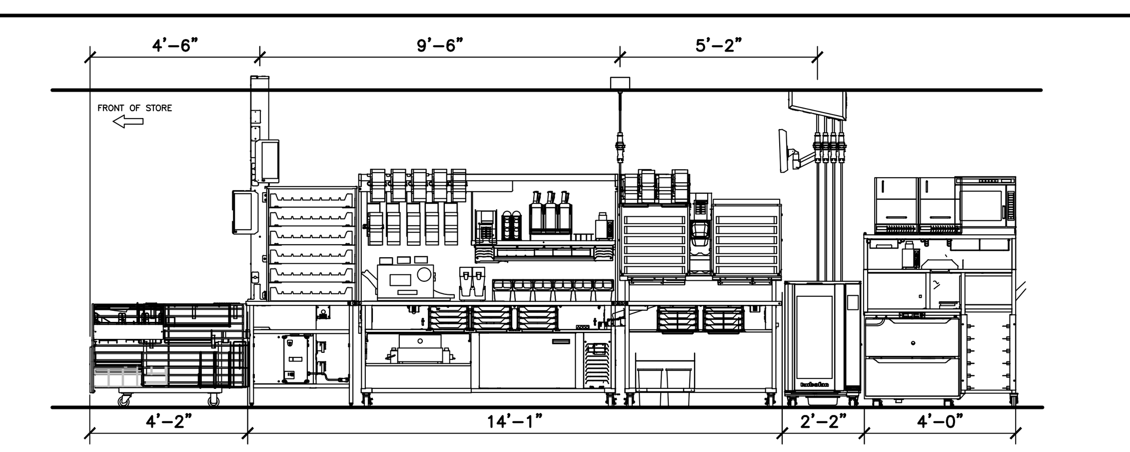
4 K2.0 FRONT COUNTER ELEVATION
1/4" = 1'–0"



5 K2.0 BEVERAGE CELL (INTERIOR WALL)
1/4" = 1'–0"



6 K2.0 BEVERAGE CELL (EXTERIOR WALL)
1/4" = 1'–0"



7 K2.0 COMPACT OPTIMIZED PREP LINE
1/4" = 1'–0"

REV	DATE	DESCRIPTION	BY

PREPARED BY:

PREPARED FOR:

McDonald's USA, LLC

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TITLE: 2024 STANDARD BUILDING – BB20
45114–WOOD/WOOD

DESCRIPTION:
WOOD BEARING WALLS W/HARDIE BOARD EXTERIOR FINISH & Ci
WOOD TRUSS ROOF FRAMING
E.I.F.S./BATTEN/LAP SIDING EXTERIOR FINISH

NSN: XXXXX
L/C: 024–0244
SITE ADDRESS: 3255 Main Street Kansas Ciy, MO. 65111

SHEET NO.: 024–0244.00.0
K2.0
KITCHEN PLAN

x = Optional Equipment VIF = Verify in Field
GC = General Contractor
R = Relocated Equipment

EQUIPMENT SCHEDULE

ITEM	O	QTY	DESCRIPTION	MANUFACTURER	MODEL #	UL	NSF	FURNISHED	GENERAL REMARKS	SPECIAL REQUIREMENTS
1.40		1	SERVICE POD – 30"	DECOR	SEE PLAN	–	2	GC	–	
1.51		1	PICKUP POD – 36"	DECOR	SEE PLAN	–	2	GC	–	
1.52		1	PICKUP POD – 42"	DECOR	SEE PLAN	–	2	GC	–	
1.63		1	McDELIVERY PICKUP COUNTER	DECOR	SEE PLAN	–	2	GC	–	
2.05		1	UNDER COUNTER CART – 24"W x 18"D FRONT COUNTER	INTERMETRO	UC18–DMS	–	2	KES	–	
9.08		2	UTILITY CHASE – ICE MAKER ON ABS VERSION	KES	5"x8"x23"	–	2	KES	CONCEALS WATER AND CONDENSING UNIT LINES	
9.15		1	UTILITY CHASE – FFDT INTERIOR WALL	KES	20"x5"x76"	–	2	KES	4 SECTION CHASE FOR BUYOUT RECEPTACLES, POS, CO2 AND WATER	
9.16		1	UTILITY CHASE – FFDT EXTERIOR WALL	KES	20"x5"x76"	–	2	KES	4 SECTION CHASE FOR BUYOUT RECEPTACLES, POS AND WATER	
9.18		2	UTILITY CHASE – WALL VERSION	KES	4"x4"x82"	–	2	KES	CHASE FOR BULK OIL LINES, MOUNT AT 2'–0"	
9.20		1	UTILITY CHASE – COMBI CELL	KES	4"x8"x84"	–	2	KES	CHASE FOR BUYOUT RECEPTACLES AND WATER	
13.02		1	BAKERY RACK	KRISPY KREME	18"x26"x65"	–	2	SUPPLIER	–	
19.00		2	DIGITAL ASSEMBLY CART – 48"	INTERMETRO	MCDDAC–48	–	2	KES	–	
19.04		1	ROA STAGING CART – 24"X 30"	INTERMETRO	MCDROA–2430	–	2	KES	–	
20.01		2	AUTOMATED BEVERAGE SYSTEM 2.0	IMI CORNELIUS	621058590LON	–	–	KES	INSTALLATION KIT INCLUDES STAINLESS STEEL CHASE & DATA LINE	
21.01		3	COFFEE BREWER (THERMAL POTS)	BUNN–O– MATIC	AXIOM–DV–3	E32066	4	KES	W/ELECTRONIC CONTROLLER FOR CONVERSION TO LOW OR HIGH VOLTAGE	
23.10		1	ESPRESSO BREWER	FRANKE	FM850	–	4	KES	–	
23.12		1	COFFEE CREAM DISPENSER	SURESHOT	AC110–PC–51	E217698	20	KES	–	
23.14		1	SUGAR/SWEETENER DISPENSER	SURESHOT	AC2–GP–1–G38	E217698	18	KES	–	
24.02		1	JUICE DISPENSER	BUNN–O– MATIC	JDF–2S	–	18	KES	–	
25.01		4	SLIMLINE ICED BEVERAGE DISPENSER	BUNN–O– MATIC	TDO–N	E32066	4	KES	KES TO VERIFY EXACT QUANTITY PER MARKET	
25.06		3	SLIMLINE ICED BEVERAGE DISPENSER – SHORT	BUNN–O– MATIC	TDO–N LP	E32066	4	KES	KES TO VERIFY EXACT QUANTITY PER MARKET	
25.07		1	INFUSION TEA BREWER – MIS	BUNN–O– MATIC	ITCB–DV	E32066	4	KES	PROVIDED WITH BREWER, INSTALLATION KIT AND TDO–N BOOSTER	
25.95		3	SLIMLINE ICED BEVERAGE DISPENSER – 2 TIER STAND	KES	–	–	2	KES	–	
26.01		1	TEA BREWER TABLE – 36"X36"	ISS SHELVING	WST1758C	–	2	KES	–	
31.03		1	SODA SYSTEM PACKAGE B.I.B.(RECIRCULATING– 3 TOWERS) – REMOTE	MULTIPLEX	50MR04	SA4632	18	KES	–	
32.02		1	REVERSE OSMOSIS WATER FILTRATION SYSTEM – TANKLESS	EVERPURE	MRS–600HE	–	–	KES	FOR COFFEE MAKER, ESPRESSO MACHINE, AND RAPID BUN STEAMER	
32.04		1	WATER FILTRATION SYSTEM	EVERPURE	EV9337–26	–	–	KES	–	
32.05		1	WATER FILTRATION SYSTEM	EVERPURE	EV9272–24	–	–	KES	FOR COMBI OVENS AND STAGING CABINET	
36.00		2	BULK COKE	CHART INDUSTRIES	10667511	–	18	MANU–FACTURER	SYRUP LINES BY CHART INDUSTRIES	
37.00		1	BULK CO2 – 750 LB.	CHART INDUSTRIES	CARBO–MAX 750	–	–	MANU–FACTURER	–	
37.03		2	CO2 SAFETY SYSTEM	SEE RMKS	–	–	–	KES	SEE MECHANICAL DRAWINGS	INCLUDES DETECTOR, PWER MONITOR W/ TROUBLE SIGNAL AND (4) AV ALARMS
38.00		1	CLEAN IN PLACE PANEL	CHART INDUSTRIES	10667431	–	18	MANU–FACTURER	MOUNT 6"W x 7"H. BOX @ 6'–0" AFF TO BOX CENTER LINE	
39.10		1	ICE MACHINE – 1400 LB.	MANITOWOC	IYT1500N3/ D970	SA4027	12	KES	USE HEADMASTER KIT K00221	
39.15		2	ICE MACHINE – 1000 LB.	MANITOWOC	IBT1020C–161	SA4027	12	KES	CONDENSER: CVDT1200	
40.00		1	ICE MACHINE CHASE	KES	4"x6"x48"	–	2	KES	CONCEALS WATER AND CONDENSING UNIT LINES	
41.06		1	ICE MACHINE REMOTE CONDENSER – 1400 LB.	MANITOWOC	JCT–1500	SA4027	12	KES	–	
41.09		2	ICE MACHINE REMOTE CONDENSER – 1000 LB.	MANITOWOC	CVDT1200–263A	SA4027	12	KES	–	
43.21		1	OPTIMIZED ORDER ASSEMBLY TABLE	KES	90001	E152097	2	KES	–	
44.46		1	SMALL RISER SHELF – 18" TO 30"	FRANKE	18006010	–	2	KES	–	
45.20		1	MODULAR BEVERAGE CABINET – 10'–0"	KES	–	–	2	KES	–	
45.21		1	BEVERAGE CABINET – DRIVE–THRU TABLE 35"	KES	–	–	2	KES	–	
46.00		1	CUP DISPENSER VERTICAL 3 CUP	KES	–	–	2	KES	–	
46.02		1	SYRUP BOTTLE RACK – (5) SYRUP PUMPS	PRONTO	–	–	2	KES	–	
49.00		1	CO2 FILL BOX – 6 1/2"W x 18"H	CHART INDUSTRIES	8512629	–	–	MANU–FACTURER	SEE EXTERIOR ELEVATIONS FOR MOUNTING HEIGHT. INSTALLED BY GC	
51.03		3	CUP LID HOLDER 3 HIGH S/S	KES	–	–	2	KES	–	
51.04		2	CUP LID HOLDER SINGLE STACK 8" HIGH	KES	–	–	2	KES	–	
52.01		1	REMOTE CONDENSING UNIT – 50MR04	MULTIPLEX	TS–0895	SA2298	–	KES	ORDER PRE–CHARGE LINE #204017 – VIF LENGTH FROM UNIT TO SODA SYST.	
61.00		1	FRY BAGGING STATION 36"	KES	FB25A	E99018	2	KES	–	
66.40		1	4–VAT LOV FRYER – ELECTRIC – F/F/F/F	HENNY PENNY	LVE–204	E30993	4	KES	–	IDLE ENERGY RATE=0.73kW, ENERGY EFFICIENCY=87%
66.47		1	4–VAT LOV FRYER – ELECTRIC – S/S/S/S	HENNY PENNY	LVE–204	E30993	4	KES	–	IDLE ENERGY RATE=0.73kW, ENERGY EFFICIENCY=87%
69.00		2	CAPTURE JET PLENUM – FRYER	HALTON	CJP–F	MH27607	2	KES	ATTACH TO UNIVERSAL EXHAUST HOOD	
69.01		2	CAPTURE JET PLENUM – GRILL	HALTON	CJP–G	MH27607	2	KES	ATTACH TO UNIVERSAL EXHAUST HOOD	
74.00		1	UNIVERSAL EXHAUST HOOD 4–VAT FRYER	KES	UH–65	MH12755	2	KES	–	
79.23		1	UNIVERSAL EXHAUST HOOD FULL–CLAM/4–VAT FRYER	KES	UH–122	MH12755	2	KES	–	
79.26		2	VENTLESS HOOD FOR COMBI OVEN	CONVOTHERM	CONOVENT MINI 6.10	E325060	2	KES	–	
80.00		1	MECHANICAL CHASE	KES	9"x18" SGCL.	E163328	2	KES	–	
80.08		1	MECHANICAL CHASE	KES	9"x32" SGCL.	E163328	2	KES	–	
81.00		1	PROTEIN LOADING STATION KIT	KES	272436	–	2	KES	–	
81.01		1	PRODUCT LANDING SHELF – SOLID TOP	KES	–	–	2	KES	–	
82.00		1	LANDING TABLE	INTERMETRO	TLDP–S	–	2	KES	–	
85.05		1	FROZEN FRY DISPENSER	RAM	280–FP	E140753	4	KES	–	
91.02		1	WALL MOUNT FREEZER UNIT–SINGLE WIDE–HIGH CAPACITY	KES	HCWF1	SA7329	7	KES	AIR–COOLED, SELF–CONTAINED – MOUNT BOTTOM AT 51" AFF	HCWF1.99A INSTALL HARDWARE KIT REQUIRED
93.00		1	UNIVERSAL EXHAUST HOOD FULL–CLAM GRILL	KES	UH–43	MH12755	2	KES	–	
96.21		2	36" NEXT GEN 3–PLATEN CLAMSHELL GRILL – ELECTRIC	GARLAND	ME–3PX	E28898	4	KES	–	
97.08		1	MEAT FREEZER – DOUBLE WIDE – HIGH CAPACITY – RIGHT HAND	KES	HCMF30B–RH	SA6032 S	2	KES	AIR–COOLED, SELF–CONTAINED	
99.01		2	GRILL TOOL ORGANIZER – 43" HOOD	KES	–	–	2	KES	–	
110.01		1	OPTIMIZED BREAKFAST TABLE	KES	OBT	–	2	KES	–	
114.00		1	HUMIDIFIED HOLDING CABINET	MOFFAT	HP10T–LMD	197	4	KES	–	
116.23		2	UNIVERSAL HOLDING CABINET – HIGH DENSITY – 2–SIDED – PIN & SLEEVE	FRYMASTER	UHCHD6T	E44571	4	KES	–	
117.30		1	UHC TABLE COPL – 2 SIDED – 51"D x 34"W – PIN&SLEEVE	KES	91011	–	2	KES	–	
118.00		1	Q'ING OVEN – PIN & SLEEVE	AMANA	MC23MPW2	E40456	4	KES	–	
118.03		2	Q'ING OVEN – PIN & SLEEVE	ACP	MCMOC24	–	4	KES	–	
122.27		1	NEXT GEN. UNIVERSAL RADIANT TOASTER – PIN & SLEEVE	ANTUNES	HRT–5H	–	4	KES	–	
122.28		1	NEXT GEN. UNIVERSAL CONTACT TOASTER – PIN & SLEEVE	ANTUNES	HCT–5H	–	4	KES	–	
123.36		1	ECU TABLE – COPL	KES	90165	–	2	KES	–	
123.37		1	BREAKER PANEL– 125 AMP – 1 PHASE – EQUIPMENT MOUNTED	KES	–	–	–	KES	–	
123.40		1	PREP TABLE – HD – 2–SIDED COPL – 38"D x 83 1/2" – PIN & SLEEVE W/REF.	KES	91010	–	2	KES	–	
125.00		2	RAPID BUN STEAMER	PRINCE CASTLE	625–MFY	–	4	KES	–	
130.00		2	COMBI OVEN	CONVOTHERM	MS6102083LCMD1	E360598	4	KES	–	0.89kW, 69% STEAM MODE, 0.61kW, 81% CONVECTION MODE
134.02		1	VEGETABLE SINK	KES	SK04–4	–	2	KES	–	
139.04		1	COMBI OVEN STAND – DOUBLE WIDE	KES	–	–	2	KES	–	
151.12		1	CLEAN DISHTABLE – LEFT HAND – 28.23"	KES	SK–SPL	–	2	KES	–	
151.46		1	SOILED DISHTABLE – RIGHT HAND – 90.5" WIDE	KES	SK–SPL	–	2	KES	–	
152.04		1	WAREWASHER HOOD	KES	–		3		TYPE 2 HOOD FOR NON GREASE APPLICATION – REQUIRED PER CODE	
152.08		1	WAREWASHER – HIGH TEMP	HOBART	AM16SVLT–1		3	MANU–FACTURER	–	
153.00		1	SCULLERY SHELVING KIT – 3 TIER – 14" x 36"	INTERMETRO	SHSS–4	–	2	KES	–	
153.04		1	SMALLWARE WALL ORGANIZER	INTERMETRO	SW1812–MPS	–	2	KES	–	
153.06		1	REUSABLE DRYING RACK	INTERMETRO	MCD2124–DRY6	–	2	KES	–	
154.00		1	BRUSH CABINET	KES	8047	–	4	KES	–	
157.00		1	TRASH LINER DISPENSER SHELF	KES	A0053	–	2	KES	–	
159.03		1	UNIVERSAL PARTS CART – 36" W	INTERMETRO	MCD–1836UPC	–	2	KES	–	
160.01		4	CHEMICAL SYSTEM	ECOLAB	–	–	–	MANU–FACTURER	–	
163.00		2	FIRE EXTINGUISHER – 5 LB. – ABC	ANSUL	SEE RMKS	–	–	SEE RMKS	LOCAL ANSUL AGENT SPECIFIES, SUPPLIES & LOCATES PER LOCAL CODE	
163.01		2	FIRE EXTINGUISHER – 6 L. – K GUARD	ANSUL	SEE RMKS	–	–	SEE RMKS	LOCAL ANSUL AGENT SPECIFIES, SUPPLIES & LOCATES PER LOCAL CODE	
163.02		4	REMOTE ANSUL PULL	ANSUL	4835	EX3470	–	SEE RMKS	CODE MAY REQUIRE LOCAL ANSUL AGENT TO SUPPLY	
171.01		1	WALK–IN COOLER / FREEZER FLOORLESS	NORLAKE	–	E42763	7	KES	–	
174.37		1	REMOTE CONDENSING UNIT	BOHN	BCH0015MBACZC0225	SA4272	–	KES	BEACON II/INTELLIGEN SYSTEM	
174.46		1	REMOTE CONDENSING UNIT	BOHN	BCH0060LCACZC0225	SA4272	–	KES	BEACON II/INTELLIGEN SYSTEM	
175.19		1	COOLER EVAPORATOR	BOHN	BEL0105BS6AMAD0096	SA1525	–	KES	INTELLIGEN EVAPORATOR	
176.28		1	FREEZER EVAPORATOR	BOHN	BEL0205BS6EEAD0096	SA1525	–	KES	INTELLIGEN EVAPORATOR	
177.03		1	REACH–IN REFRIGERATOR–SINGLE WIDE	BEVERAGE AIR	HR1HC–1HS	SA2651	7	KES	–	
178.05		3	REACH–IN FREEZER – SINGLE WIDE	BEVERAGE AIR	HF1HC–1HS	SA2651	7	KES	–	

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EQUIPMENT SCHEDULE

ITEM	O	QTY	DESCRIPTION	MANUFACTURER	MODEL #	UL	NSF	FURNISHED	GENERAL REMARKS	SPECIAL REQUIREMENTS
181.13		1	REFRIGERATOR – SPECIALTY COFFEE– 27" WIDE	TRUE	TUC–27 MCDCF1	SA33040	7	KES	RIGHT–HAND HINGED	
181.14		1	REFRIGERATOR – WORKTOP – 48" WIDE	TRUE	TWT–48 MCD1	SA4065	7	KES	–	
183.00		1	REFRIGERATOR/FREEZER – 2 DRAWER BASE – 30" W X 33" H	KES	18012498	SA4044	7	KES	–	
183.02		4	REFRIGERATOR/FREEZER – 2 DRAWER BASE – 30" W X 30" H	KES	18021304	SA4044	7	KES	–	
187.71		2	FREEZER SHELVING 24" x 36" x 74" H. – 4–TIER	ISS SHELVING	FSMS/FSMA742436E	–	2	KES	–	
187.73		2	FREEZER SHELVING 24" x 48" x 74" H. – 4–TIER	ISS SHELVING	FSMS/FSMA74248BE	–	2	KES	–	
187.75		2	FREEZER SHELVING 24" x 60" x 74" H. – 4–TIER	ISS SHELVING	FSMS/FSMA742460E	–	2	KES	–	
188.00		5	DUNNAGE RACK 22" x 36"	INTERMETRO	HP2236PD	–	2	KES	–	
188.07		1	UNIVERSAL STAGING CART	ISS SHELVING	WST1384Y	–	2	KES	–	
188.08		8	DUNNAGE RACK 22" x 30"	INTERMETRO	HP2230PD	–	2	KES	–	
188.09		5	DUNNAGE RACK 22" x 48"	INTERMETRO	HP2248PD	–	2	KES	–	
189.71		1	COOLER SHELVING 24" x 36" x 74" H. – 4–TIER	ISS SHELVING	FSMS/FSMA742436E	–	2	KES	–	
189.72		2	COOLER SHELVING 24" x 42" x 74" H. – 4–TIER	ISS SHELVING	FSMS/FSMA742442E	–	2	KES	–	
189.74		4	COOLER SHELVING 24" x 54" x 74" H. – 4–TIER	ISS SHELVING	FSMS/FSMA742454E	–	2	KES	–	
191.00		1	VALANCE SHELVING – 18" x 36"	INTERMETRO	M1836C–MP	–	2	KES	MOUNT AT 6'–8"AFF TO SHELF BOTTOM UNLESS OTHERWISE NOTED	
191.01		3	VALANCE SHELVING – 18" x 48"	INTERMETRO	M1848C–MP	–	2	KES	MOUNT AT 6'–8"AFF TO SHELF BOTTOM UNLESS OTHERWISE NOTED	
191.02		1	VALANCE SHELVING – 18" x 60"	INTERMETRO	M1860C–MP	–	2	KES	MOUNT AT 6'–8"AFF TO SHELF BOTTOM UNLESS OTHERWISE NOTED	
191.03		1	VALANCE SHELVING – 18" x 30"	INTERMETRO	M1830C–MP	–	2	KES	MOUNT AT 5'–0"AFF TO SHELF BOTTOM FOR ABOVE WASHER APPLICATION	
191.04		1	VALANCE SHELVING – 18" x 36"	INTERMETRO	M1836C–MP	–	2	KES	MOUNT AT 5'–0"AFF TO SHELF BOTTOM –W/ST STL LINER FOR SALAD EQUIP	
194.32		3	DRY SHELVING 26" x 52" x 84" H.– 4–TIER – MOBILE	DENSTOR	–	–	2	KES	–	
194.33		3	DRY SHELVING 26" x 64" x 84" H.– 4–TIER – MOBILE	DENSTOR	–	–	2	KES	–	
194.48		1	DRY SHELVING 26" x 64" x 84" H.– 4–TIER – FIXED	DENSTOR	–	–	2	KES	–	
194.49		1	DRY SHELVING 26" x 76" x 84" H.– 4–TIER – FIXED	DENSTOR	–	–	2	KES	–	
195.32		2	DRY SHELVING 26" x 52" x 84" H.– 5–TIER – MOBILE	DENSTOR	–	–	2	KES	–	
195.33		2	DRY SHELVING 26" x 64" x 84" H.– 5–TIER – MOBILE	DENSTOR	–	–	2	KES	–	
195.62		1	DRY SHELVING 20" x 52" x 84" H.– 5–TIER – FIXED	DENSTOR	–	–	2	KES	–	
195.63		1	DRY SHELVING 20" x 64" x 84" H.– 5–TIER – FIXED	DENSTOR	–	–	2	KES	–	
196.06		1	SAFE – STANDARD BLDG. – LEFT HINGE	NKL	BSD4125FGXL–MC	–	–	OWNER	–	
197.00		2	STAINLESS STEEL HAND SINK	ADVANCE TABCO	7–PS–61	–	2	GC	REFER TO PLUMB. DWGS. FOR DETAILS, SOAP & TOWEL DISP. BY OTHERS	PROVIDE SIDE SPLASHES (7–PS–11) WHEN REQUIRED BY LOCAL CODE
197.01		1	HAND WASH TIMER	NATIONAL CONTROLS	TMD–T1715–120	E53595	–	KES	–	
197.03		2	STAINLESS STEEL HAND SINK – ADA	ADVANCE TABCO	7–PS–26	–	2	GC	REFER TO PLUMB. DWGS. FOR DETAILS, SOAP & TOWEL DISP. BY OTHERS	PROVIDE SIDE SPLASHES (7–PS–11D) WHEN REQUIRED BY LOCAL CODE
201.13		1	DRIVE–THRU CASH STAND – 21" D x 48" W	INTERMETRO	DT48–8	–	2	KES	SOLID WORK TOP, WIRE SHELVES	
201.15		1	READY NEXT DRIVE–THRU ASSEMBLY CART – 12" D x 36" W	INTERMETRO	DTPC–36	–	2	KES	–	
201.16		2	DRIVE–THRU ABS CART – LEFT HAND	KES	–	–	2	KES	ABS DRINK STAGING CART WITH TROUGH	
201.18		2	CBB STAGING CART	INTERMETRO	MCD–CBB	–	2	KES	–	
201.21		1	BLZ FRONT COUNTER TABLE – 30" D x 14" W	INTERMETRO	MCD1430–BLZM	–	2	KES	W/ CASTERS AND OVERSHELF	
203.01		1	HEAT TREAT COMBINATION SHAKE/SUNDAE MACHINE	CARPIGIANNI	K3	SA4203	6	KES	SUPPLIED WITH CONE DISPENSER AND 7'–6" LONG CORD	
203.03		2	CUP/CONE DISPENSER	KES	–	–	2	KES	–	
205.08		1	BIC MACHINE	MULTPLEX	MA–8–2	SA12070	6	KES	–	
205.09		1	FROZEN BEVERAGE DISPENSER	IMI CORNELIUS	VIPER 3	SA2128	6	KES	–	
206.01		1	SPECIALTY BEVERAGE STANDOFF SHELF	KES	KES	–	2	KES	MOUNT SHELF @ 2'–6" AFF	
207.01		1	BLENDER – RAIL MOUNT – MCFLURRY	VITAMIX	056385	–	8	KES	SUPPLIED MOUNTING BRACKETS	
207.09		1	DESSERT BUTLER	KES	–	–	2	KES	–	–
211.00		1	DELIVERY TABLET	APPLE	IPAD	–	–	DELIVERY PARTNER	QUANTITY DEPENDENT UPON NUMBER OF DELIVERY PARTNERS	
214.02		1	82" 44U STATIONARY RACK	BY OWNER	BY OWNER	OEM	–	OWNER	–	
215.00		1	POS REGISTER – FRONT COUNTER	BY OWNER	BY OWNER	OEM	–	OWNER	INCLUDES MONITOR AND CPU	
215.02		4	POS REGISTER – 2 WINDOW D/T	BY OWNER	BY OWNER	OEM	–	OWNER	INCLUDES MONITOR AND CPU	
215.04		8	POS – KVS MONITOR	BY OWNER	BY OWNER	OEM	–	OWNER	–	
215.07		1	POS REGISTER – DELIVERY	BY OWNER	BY OWNER	OEM	–	OWNER	–	
216.00		8	POS – VIDEO MONITOR	BY OWNER	BY OWNER	E106786	–	OWNER	SUPPORTS INSTALLED BY GC IF REQUIRED – MOUNT @ 5'–8" AFF	FOR APPLICATIONS ABOVE ABS, MOUNT AT 6'–6" AFF
217.13		3	MERGE POINT MONITOR (DOUBLE DRIVE–THRU)	BY OWNER	BY OWNER	–	–	OWNER	MONITORS ARE REQUIRED FOR SIDE BY SIDE DRIVE THRU SYSTEM	–
217.14		1	POS – ORDER MONITOR (DOUBLE DRIVE THRU)	BY OWNER	BY OWNER	E106786	–	OWNER	SUPPORTS INSTALLED BY GC IF REQUIRED – MOUNT @ 5'–8" AFF	
217.19		1	WIRELESS HEADSET BASE STATION	HME	NEXEO HDX	–	–	OWNER	–	
217.24		1	DANGER POINT MONITOR (DOUBLE DRIVE–THRU)	BY OWNER	BY OWNER	–	–	OWNER	MONITORS ARE REQUIRED FOR SIDE BY SIDE DRIVE THRU SYSTEM	
217.26		1	ZOOM TIMER	HME	ZOOM NITRO	–	–	OWNER	–	
219.00		4	POS – RECEIPT PRINTER	BY OWNER	BY OWNER	OEM	–	OWNER	–	
219.05		7	STICKY LABEL PRINTER	BY OWNER	BY OWNER	OEM	–	OWNER	–	–
219.06		1	LABELING SYSTEM	TRANSACT	9700	–	–	KES	–	
220.00		1	POS – COIN DISPENSER	BY OWNER	BY OWNER	OEM	–	OWNER	–	
221.01		1	77" 38U ROLLING RACK	PARAGON	PRMCD77CA	OEM	–	OWNER	–	
221.09		1	O/O EQUIPMENT RACK	TRIPP–LITE	SRW12USDP	–	–	OWNER	AVAILABLE THROUGH POS SUPPLIER	
222.01		1	TIME CLOCK	BY OWNER	BY OWNER	OEM	–	OWNER	–	
223.07		1	WASHER – ELECTRIC	WHIRLPOOL	CAE2793BQ	–	–	KES	–	
225.03		1	OFFICE PACKAGE/DESK UNIT	DENSTOR	2000–0100	–	–	KES	WORK SURFACE 75", (1) DESK PEDESTAL W/ 2 DRAWERS AND (1) PEDESTAL W/ 3 DRAWERS	
225.04		1	OFFICE PACKAGE/ 2–WALL CABINETS	DENSTOR	2000–0200	–	–	KES	–	
225.05		1	OFFICE PACKAGE/HIGH WORK SURFACE	DENSTOR	2000–0300	–	–	KES	W/ (6) L–BRACKETS – WORK SURFACE IS 75" W. – CUT IN FIELD IF REQUIRED	
225.06		1	OFFICE PACKAGE W/3 DRAWER LATERAL FILE	DENSTOR	2000–0400	–	–	KES	–	
226.08		4	CREW LOCKERS –12" x 12" x 18" (6 HIGH)	DENSTOR	3–121278	–	2	KES	–	
237.00		1	PIE DISPLAY	PRINCE CASTLE	524–MCDC	E341354	4	KES	PROVIDE WITH S/S PANEL	
700.02		2	MOP SINK	GC	–	–	2	GC	–	
700.07		1	WATER HEATER – GAS	GC	SEE RMKS	–	2	GC	REFER TO PLUMB. DWGS. FOR DETAILS	
700.09		1	ECONOMY OEP BOX W/MOUNTING HARDWARE	ACS	OEP–6	E71309	–	KES	6" W. x 24" D.	
700.10	X	1	BULK OIL SYSTEM	RTI	BI–3F	SEE RMKS	4	MANU–FACTURER	IF AVAILABLE IN MARKET – ETL ELECTRICAL RATING: 9900762	
700.11		1	OEP UTILITY PANEL W/ MOUNTING HARDWARE – STATIC BOX	H&K DALLAS	–	–	–	H&K DALLAS	2'–4"x2'–4" x4" HIGH BOX	
700.18	X	1	BULK OIL FILL BOX – 8"Wx10"H	RTI	–	–	–	MANU–FACTURER	SEE EXTERIOR ELEVATIONS FOR MOUNTING HEIGHT, INSTALLED BY GC	

SEE SHEET K2.0 FOR EQUIPMENT LAYOUT AND TAG IDENTIFICATION

1 / K2.1 KITCHEN SCHEDULE

BY	DESCRIPTION	DATE	REV

PREPARED BY:

PREPARED FOR: McDonald's USA, LLC

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DRAWN BY	STD ISSUE DATE	REVIEWED BY	DATE ISSUED
MZ	2024 05	–	06 11 2025

TITLE: 2024 STANDARD BUILDING – BB20
45114–WOOD/WOOD

DESCRIPTION: WOOD BEARING WALLS W/HARDIE BOARD EXTERIOR FINISH & Ci
WOOD TRUSS ROOF FRAMING
E.I.F.S./BATTEN/LAP SIDING EXTERIOR FINISH

MSN: XXXXX | SITE ADDRESS: 3255 Main Street Kansas City, MO. 65111
L/C: 024–0244

SHEET NO. 024–0244.00.0
K2.1
KITCHEN SCHEDULE

COM*check* Software Version COMcheckWeb
Envelope Compliance Certificate

Project Information

Energy Code:	2021 IECC
Project Title:	MCD Kansas City, MO - 33rd and Main - 45114
Location:	Kansas City, Missouri
Climate Zone:	4a
Project Type:	New Construction
Vertical Glazing / Wall Area:	24%

Construction Site:	Owner/Agent:	Designer/Contractor:
3255 Main Street Kansas City, Missouri 64111	Carter Mann McDonald's USA LLC 110 N. Carpenter St. Chicago, Illinois 60607 952-300-5504 carter.mann@us.mcd.com	Corey Englund Reprise Design, Inc. 12400 Portland Avenue South Suite 100 Burnsville, Minnesota 55337 763-244-4752 kdonahue@reprisedesign.com

Additional Efficiency Package(s)

Credits: 10.0 Required 11.0 Proposed
- Efficient fossil fuel water heater, 0.0 credit
- Enhanced envelope performance, 0.0 credit
- Reduced air infiltration, 6.0 credit
- Reduced lighting power, 0.0 credit
- Enhanced digital lighting controls, 2.0 credit
- Energy monitoring, 3.0 credit

Building Area	Floor Area
1-Dining: Cafeteria/Fast Food : Nonresidential	5283

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor(a)
Roof 1: Insulation Entirely Above Deck, [Bldg. Use 1 - Dining: Cafeteria/Fast Food]	4905	---	30.0	0.032	0.032
Floor 1: Unheated Slab-On-Grade, Vertical 2 ft., [Bldg. Use 1 - Dining: Cafeteria/Fast Food] (c)	312	---	15.0	0.520	0.520
NORTH					
DT Wall: Wood-Framed, 16" o.c., [Bldg. Use 1 - Dining: Cafeteria/Fast Food]	1570	20.0	3.8	0.050	0.064
Window 6: Metal Frame with Thermal Break: Operable, Perf. Specs.: Product ID NA, SHGC 0.40, PF 0.50, [Bldg. Use 1 - Dining: Cafeteria/Fast Food] (b)	20	---	---	0.360	0.450
Window 7: Metal Frame with Thermal Break: Operable, Perf. Specs.: Product ID NA, SHGC 0.40, PF 0.50, [Bldg. Use 1 - Dining: Cafeteria/Fast Food] (b)	20	---	---	0.360	0.450
Window 8: Metal Frame with Thermal Break: Operable, Perf. Specs.: Product ID NA, SHGC 0.40, PF 0.50, [Bldg. Use 1 - Dining: Cafeteria/Fast Food] (b)	20	---	---	0.360	0.450
EAST					
Rear Wall: Wood-Framed, 16" o.c., [Bldg. Use 1 - Dining: Cafeteria/Fast Food]	632	20.0	3.8	0.050	0.064

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor(a)
Window - W1: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID NA, SHGC 0.36, [Bldg. Use 1 - Dining: Cafeteria/Fast Food] (b)	30	---	---	0.360	0.360
Door 6 - BOH: Insulated Metal, Swinging, [Bldg. Use 1 - Dining: Cafeteria/Fast Food]	24	---	---	0.370	0.370
SOUTH					
Non DT Wall: Wood-Framed, 16" o.c., [Bldg. Use 1 - Dining: Cafeteria/Fast Food]	1875	20.0	3.8	0.050	0.064
Door - Delivery: Insulated Metal, Swinging, [Bldg. Use 1 - Dining: Cafeteria/Fast Food]	32	---	---	0.370	0.370
Door - Vestibule: Glass (over 50% glazing): Metal Frame, Entrance Door, Perf. Specs.: Product ID NA, SHGC 0.40, PF 0.27, [Bldg. Use 1 - Dining: Cafeteria/Fast Food] (b)	24	---	---	0.630	0.630
Door - F/C: Insulated Metal, Swinging, [Bldg. Use 1 - Dining: Cafeteria/Fast Food]	40	---	---	0.370	0.370
Door - CO2: Insulated Metal, Swinging, [Bldg. Use 1 - Dining: Cafeteria/Fast Food]	24	---	---	0.370	0.370
Window - W7: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID N/A, SHGC 0.40, PF 0.27, [Bldg. Use 1 - Dining: Cafeteria/Fast Food] (b)	60	---	---	0.360	0.360
Window - W6: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID N/A, SHGC 0.40, PF 0.33, [Bldg. Use 1 - Dining: Cafeteria/Fast Food] (b)	301	---	---	0.360	0.360
Window - W6A: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID NA, SHGC 0.36, [Bldg. Use 1 - Dining: Cafeteria/Fast Food] (b)	260	---	---	0.360	0.360
WEST					
Front Wall: Wood-Framed, 16" o.c., [Bldg. Use 1 - Dining: Cafeteria/Fast Food]	860	20.0	3.8	0.050	0.064
Window - W3: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID NA, SHGC 0.40, PF 0.27, [Bldg. Use 1 - Dining: Cafeteria/Fast Food] (b)	60	---	---	0.360	0.360
Window - W4+W5: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID NA, SHGC 0.40, PF 0.33, [Bldg. Use 1 - Dining: Cafeteria/Fast Food] (b)	184	---	---	0.360	0.360
Window - W4A+W5A: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID N/A, SHGC 0.36, [Bldg. Use 1 - Dining: Cafeteria/Fast Food] (b)	156	---	---	0.360	0.360
Door 1: Glass (over 50% glazing): Metal Frame, Entrance Door, Perf. Specs.: Product ID NA, SHGC 0.40, PF 0.27, [Bldg. Use 1 - Dining: Cafeteria/Fast Food] (b)	24	---	---	0.630	0.630

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.
(b) Fenestration product performance must be certified in accordance with NFRC and requires supporting documentation.
(c) Slab-On-Grade proposed and budget U-factors shown in table are F-factors.

Envelope PASSES: Design 6% better than code

Envelope Compliance Statement

Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 2021 IECC requirements in COM*check* Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Corey Englund — Corey Englund — 8-14-25
Name - Title — Signature — Date

COM*check* Software Version COMcheckWeb
Inspection Checklist

Energy Code: 2021 IECC

Requirements: 7.0% were addressed directly in the COM*check* software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR1][1]	Plans and/or specifications provide all information with which compliance can be determined for the building envelope and document where exceptions to the standard are claimed.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.4.1 [PR10][1]	The vertical fenestration area <= 30 percent of the gross above-grade wall area.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.4.1 [PR11][1]	The skylight area <= 3 percent of the gross roof area.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.4.2 [PR14][1]	In enclosed spaces > 2,500 ft2 directly under a roof with ceiling heights >15 ft. and used as an office, lobby, atrium, concourse, corridor, storage, gymnasium/exercise center, convention center, automotive service, manufacturing, non-refrigerated warehouse, retail store, distribution/sorting area, transportation, or workshop, the following requirements apply: (a) the daylight zone under skylights is >= half the floor area; (b) the skylight area to daylight zone is >= 3 percent with a skylight VT >= 0.40; or a minimum skylight effective aperture >= 1 percent.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C406 [PR9][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Footing / Foundation Inspection	Complies?	Comments/Assumptions
C303.2 [FO4][2]	Slab edge insulation installed per manufacturer's instructions.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C303.2.1 [FO6][1]	Exterior insulation protected against damage, sunlight, moisture, wind, landscaping and equipment maintenance activities.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C105 [FO3][2]	Installed slab-on-grade insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.2.4 [FO7][2]	Slab edge insulation depth/length. Slab insulation extending away from building is covered by pavement or >= 10 inches of soil.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Framing / Rough-In Inspection	Complies?	Comments/Assumptions
C303.1.3 [FR12][2]	Fenestration products rated in accordance with NFRC certified and as to performance labels or certificates provided.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.4.3 [FR10][1]	Vertical fenestration SHGC value.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.4.3, C402.4.3.4 [FR8][1]	Installed vertical fenestration U-factor and SHGC consistent with label specifications and as reported in plans and COMcheck reports.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.4.5 [FR14][2]	U-factor of opaque swinging and nonswinging doors associated with the building thermal envelope meets requirements.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.5.1.3 [FR19][1]	The building envelope contains a continuous air barrier that is sealed in an approved manner and material permeability <= 0.004 dfm/ft2. Air barrier penetrations are sealed in an approved manner.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.5.4 [FR18][3]	Factory-built fenestration and doors are labeled as meeting air leakage requirements.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C403.7.7 [ME58][3]	Outdoor air and exhaust systems have motorized dampers that automatically shut when not in use and meet maximum leakage rates. Check gravity dampers where allowed. Reference section language for operational details.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

REV | DATE | DESCRIPTION | BY

STATE OF MISSOURI — COREY ALLAN ENGLUND — NUMBER A-2023032608 — ARCHITECT

08/14/2025
Reprise Design, Inc.
Missouri Registered Architectural Firm
2007030603

PREPARED BY:
reprise DESIGN
Architecture, Inc.
12400 Portland Avenue South
Suite 100, Portland Corporate Center
Burnsville, MN 55337
Office: (952) 252-4042
Fax: (952) 252-4043

PREPARED FOR:
McDonald's USA, LLC ®

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DRAWN BY: AL
STD ISSUE DATE: 2024 11
REVIEWED BY: KD
DATE ISSUED: 08 14 2025
RD# 22252

TITLE: 2024 STANDARD BUILDING — BB20
45114—WOOD/WOOD

DESCRIPTION:
WOOD BEARING WALLS W/BRICK EXTERIOR FINISH & Ci
WOOD TRUSS ROOF FRAMING
BATTEN/BRICK EXTERIOR FINISH

NSN: 7321
L/C: 024-0244
SITE ADDRESS: 3255 Main Street, Kansas City, MO 64111

024-0244.01.0
SHEET NO. ECA-1.0
THERMAL ENVELOPE

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.7 [EL26][2]	Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.8 [EL27][2]	Electric motors meet the minimum efficiency requirements of Tables C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.9.1, C405.9.2 [EL28][2]	Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.10 [EL29][2]	Total voltage drop across the combination of feeders and branch circuits <= 5%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.1.1 [EL30][2]	At least 90% of dwelling unit permanently installed lighting shall have lamp efficacy >= 65 lm/W or luminaires with efficacy >= 45 lm/W or comply with C405.2.4 or C405.3.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.11, C405.11.1 [EL31][2]	50% of 15/20 amp receptacles installed in enclosed offices, conference rooms, copy rooms, break rooms, classrooms and workstations and > 25% of branch circuit feeders for modular furniture will have automatic receptacle control in accordance with C405.11.1.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Insulation Inspection	Complies?	Comments/Assumptions
C303.1 [IN3][1]	Roof insulation installed per manufacturer's instructions and is labeled with R-value or insulation certificate providing R-value and other relevant data. Blown or poured loose-fill insulation is installed only where the roof slope is <=3 in 12.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.2.1 [IN20][1]	Roof assembly meets minimal thermal resistance installed between roof framing or in a continuous fashion on the roof assembly as stipulated in Table C402.1.3. Requirements for above deck insulation, minimum thickness, suspended ceilings, staggered joints and skylight curbs will be met.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C303.2 [IN7][1]	Above-grade wall insulation installed per manufacturer's instructions.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C105 [IN6][1]	Installed above-grade wall insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.2.3 [IN8][2]	Installed floor insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.2.6 [IN18][3]	Radiant panels and associated components, designed for heat transfer from the panel surfaces to the occupants or indoor space are insulated with a minimum of R-3.5.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C105 [IN2][1]	Installed roof insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports. For some ceiling systems, verification may need to occur during Framing Inspection.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.5.1.1 [IN1][1]	All sources of air leakage in the building thermal envelope are sealed, caulked, gasketed, weather stripped or wrapped with moisture vapor-permeable wrapping material to minimize air leakage.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C401.3 [FI58][1]	A thermal envelope certificate will be supplied and completed by an approved third party.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.5.10 [FI26][3]	Recessed luminaires in thermal envelope to limit infiltration and be IC rated and labeled. Seal between interior finish and luminaire housing.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.5.8 [FI37][1]	Weatherseals installed on all loading dock cargo door openings and provide direct contact along the top and sides of vehicles parked in the doorway.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C406.3 [FI67][1]	Reduced lighting power - this credit specifies that the connected lighting power is >= 10% more efficient than 2021 IECC requirements.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C406.4 [FI54][1]	Enhanced Digital Lighting Controls - Interior lighting has the following enhanced lighting controls in accordance with Sections C405.2.1 through C405.2.3, Luminaires capable of continuous dimming and being addressed individually, at least 8 luminaires controlled in combination in a daylight zone, digital control system for fixtures with load shedding or occupancy sensors, Sequence of Operations documentation, and functional testing per Section C408.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C406.7.3 [FI53][1]	Reduced energy use in service water heating - the hot water heating system shall have a capacity weighted average fossil fuel water heating efficiency at least 95 thermal efficiency or 0.95 EF.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C406.8 [FI68][1]	Enhanced envelope performance - the building thermal envelope UA value is >= 15% better than the total UA of the envelope specified by Section C402.1.5.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C406.9 [FI56][1]	Reduced air infiltration energy - the measured air-leakage rate of the building envelope is lower than 0.25 cfm/ft2. Comprehensive report documentation will be submitted to the code official and the building owner.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C406.10 [FI63][1]	Energy Monitoring - the building is equipped with an energy management system to monitor, record, and report energy consumption for electrical energy, by end-use category, contain meters, a data acquisition system and employ graphical reports.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C408.1.1 [FI57][1]	Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

REV	DATE	DESCRIPTION	BY

STATE OF MISSOURI
COREY ALLAN ENGLUND
NUMBER A-2023032688
ARCHITECT

08/14/2025
Reprise Design, Inc.
Missouri Registered Architectural Firm
2007030603

PREPARED BY:
reprise DESIGN
Architecture, Inc.
12400 Portland Avenue South
Suite 100, Portland Corporate Center
Burnsville, MN 55337
Office: (952) 252-4042
Fax: (952) 252-4043

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DRAWN BY	STD ISSUE DATE
AL	2024 11
REVIEWED BY:	DATE ISSUED
KD	08 14 2025

RD# 22252

TITLE: 2024 STANDARD BUILDING – BB20
45114–WOOD/WOOD

DESCRIPTION
WOOD BEARING WALLS W/BRICK EXTERIOR FINISH & CI
WOOD TRUSS ROOF FRAMING
BATTEN/BRICK EXTERIOR FINISH

NSN: 7321

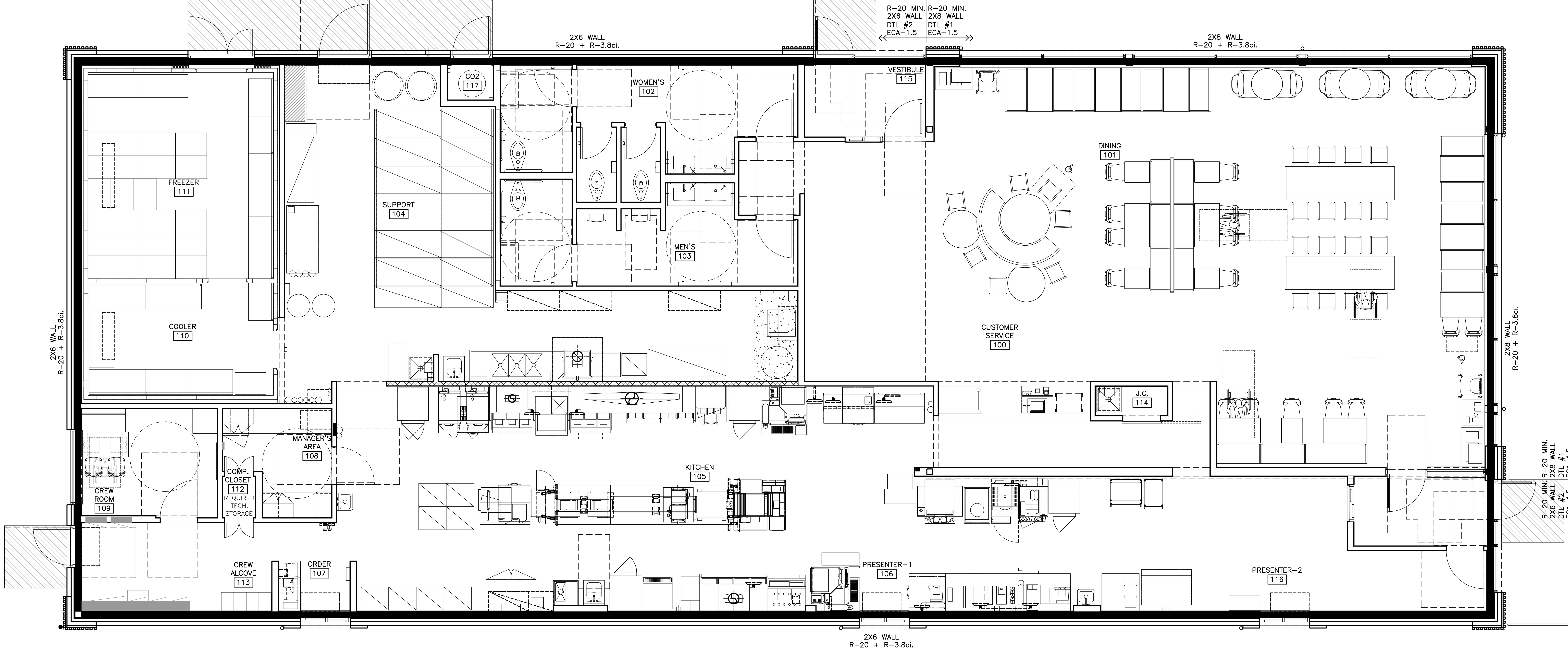
SITE ADDRESS
3255 Main Street, Kansas City, MO 64111

L/C: 024–0244

SHEET NO.
024–0244.01.0
ECA–1.1
THERMAL ENVELOPE

COMPLIANCE PATH

PRESCRIPTIVE COMPLIANCE PATH IS USED
TO SHOW COMPLIANCE WITH THE 2021 IECC



BUILDING THERMAL ENVELOPE = ▬▬▬
SEE PAGE ECA-1.5 FOR INSULATION DETAILS

1 — THERMAL ENVELOPE PLAN
1/4"=1'-0"

REV	DATE	DESCRIPTION	BY
A	09/24/25	CITY CMNTS.	AL
	08/14/25	PERMIT SET	AL
.	06/26/25	USRD PROGRESS SET REVIEW	AL

STATE OF MISSOURI
COREY ALLAN ENGLUND
NUMBER A-2023032608
ARCHITECT

09/24/2025
Reprise Design, Inc.
Missouri Registered
Architectural Firm
2007030603

PREPARED BY:
reprise DESIGN
Architecture, Inc.
12400 Portland Avenue South
Suite 100, Portland Corporate Center
Burnsville, MN 55337
Office: (952) 252-4042
Fax: (952) 252-4043

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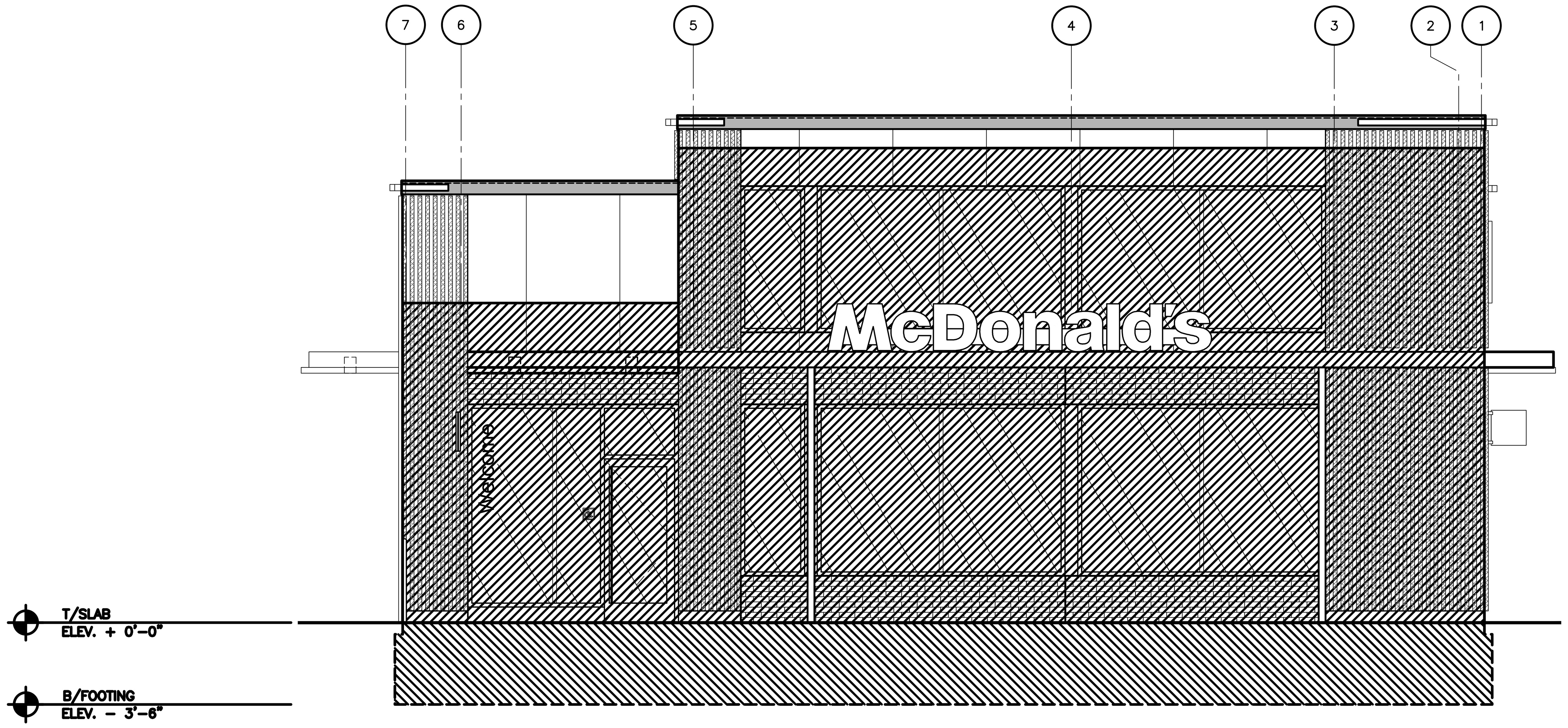
DRAWN BY: AL
STD ISSUE DATE: 2024 11
REVIEWED BY: KD
DATE ISSUED: 08 14 2025
RD# 22252

TITLE
2024 STANDARD BUILDING – BB20
45114-WOOD/WOOD

DESCRIPTION
WOOD BEARING WALLS W/BRICK EXTERIOR FINISH & Ci
WOOD TRUSS ROOF FRAMING
BATTEN/BRICK EXTERIOR FINISH

NSN: 7321
L/C: 024-0244
SITE ADDRESS
3255 Main Street, Kansas City, MO 64111

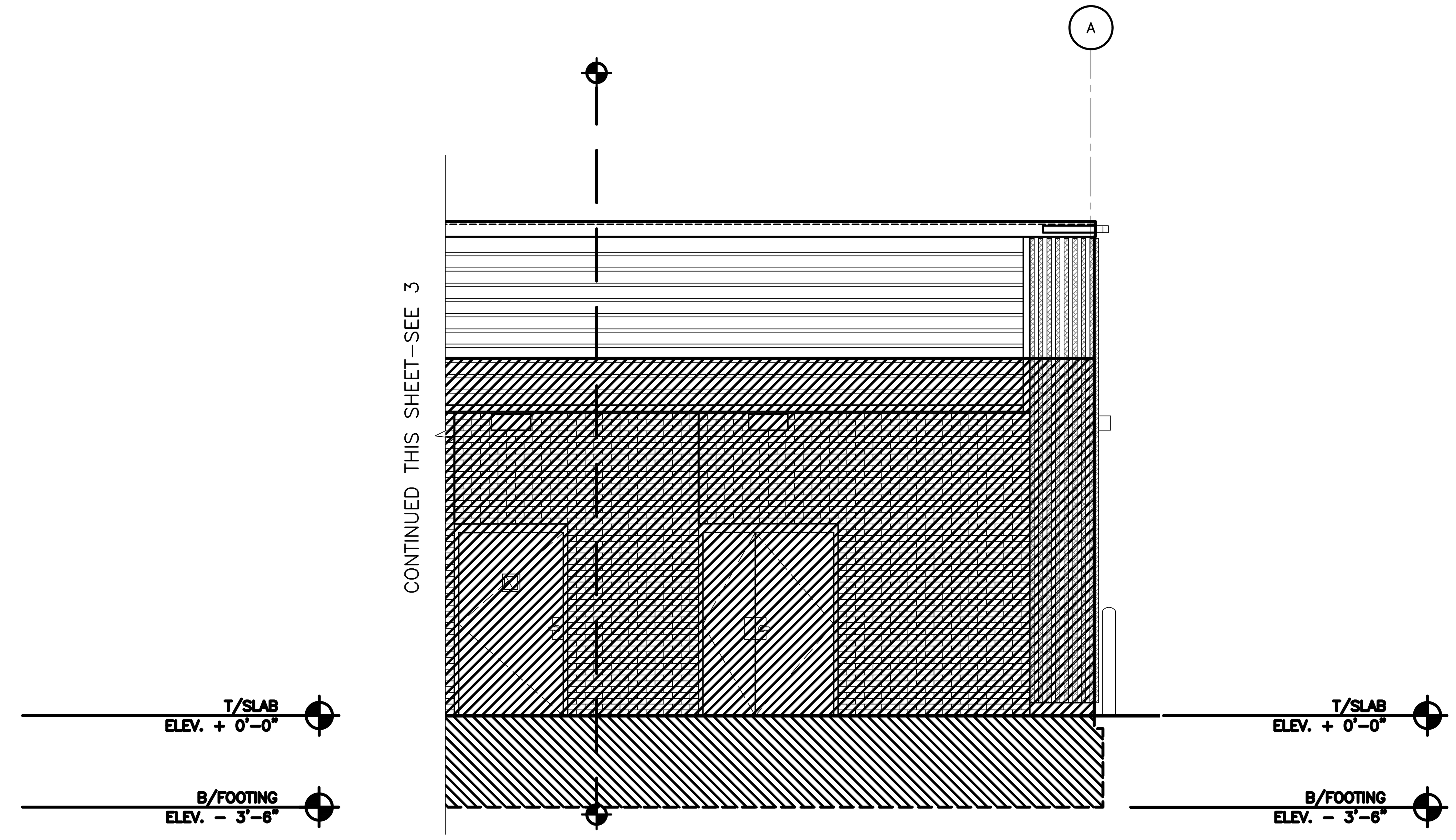
SHEET NO.
024-0244.01.A
ECA-1.2
THERMAL ENVELOPE



BUILDING THERMAL ENVELOPE – ABOVE GRADE: R–20 + R–3.8ci =

FOUNDATION THERMAL ENVELOPE BELOW GRADE: R–15 =

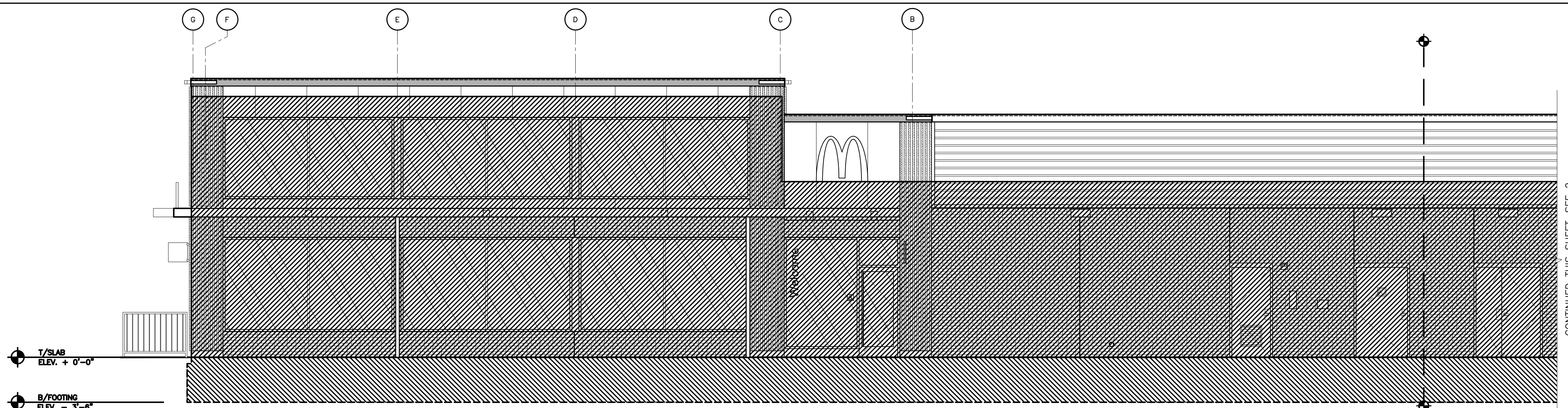
1 – FRONT ELEVATION
1/4" = 1'-0"



2 – NON–DRIVE–THRU ELEVATION
1/4" = 1'-0"

BUILDING THERMAL ENVELOPE – ABOVE GRADE: R–20 + R–3.8ci =

FOUNDATION THERMAL ENVELOPE BELOW GRADE: R–15 =



3 – NON–DRIVE–THRU ELEVATION
1/4" = 1'-0"

BUILDING THERMAL ENVELOPE – ABOVE GRADE: R–20 + R–3.8ci =

FOUNDATION THERMAL ENVELOPE BELOW GRADE: R–15 =

COMPLIANCE PATH

PRESCRIPTIVE COMPLIANCE PATH IS USED TO SHOW COMPLIANCE WITH THE 2021 IECC

REV	DATE	DESCRIPTION	BY
A	09/24/25	CITY CMNTS.	AL
	08/14/25	PERMIT SET	AL
.	06/26/25	USRD PROGRESS SET REVIEW	AL

STATE OF MISSOURI – COREY ALLAN ENGLUND – NUMBER A-2023032608 – ARCHITECT

09/24/2025
Reprise Design, Inc.
Missouri Registered
Architectural Firm
2007030603

PREPARED BY:
reprise DESIGN
Architecture, Inc.
12400 Portland Avenue South
Suite 100, Portland Corporate Center
Burnsville, MN 55337
Office: (952) 252-4042
Fax: (952) 252-4043

PREPARED FOR:
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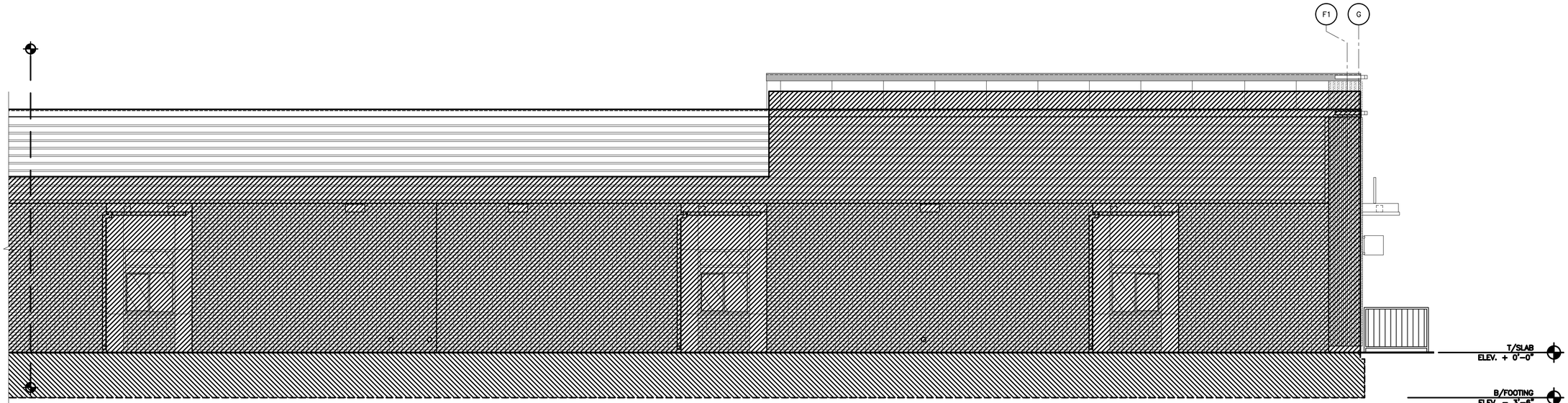
DRAWN BY: AL
STD ISSUE DATE: 2024 11
REVIEWED BY: KD
DATE ISSUED: 08 14 2025
RD# 22252

TITLE: 2024 STANDARD BUILDING – BB20
45114–WOOD/WOOD

DESCRIPTION:
WOOD BEARING WALLS W/BRICK EXTERIOR FINISH & Ci
WOOD TRUSS ROOF FRAMING
BATTEN/BRICK EXTERIOR FINISH

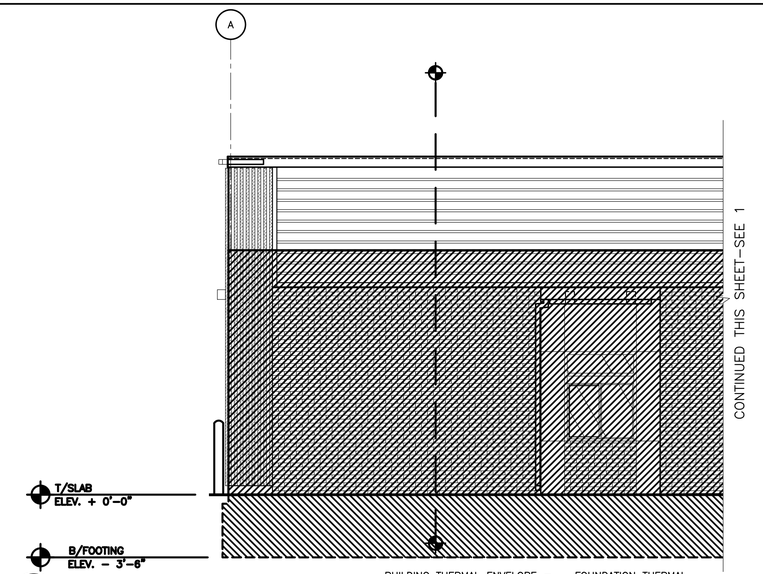
NSN: 7321
L/C: 024–0244
SITE ADDRESS: 3255 Main Street, Kansas City, MO 64111

SHEET NO. 024–0244.01.A
ECA–1.3
ELEVATIONS



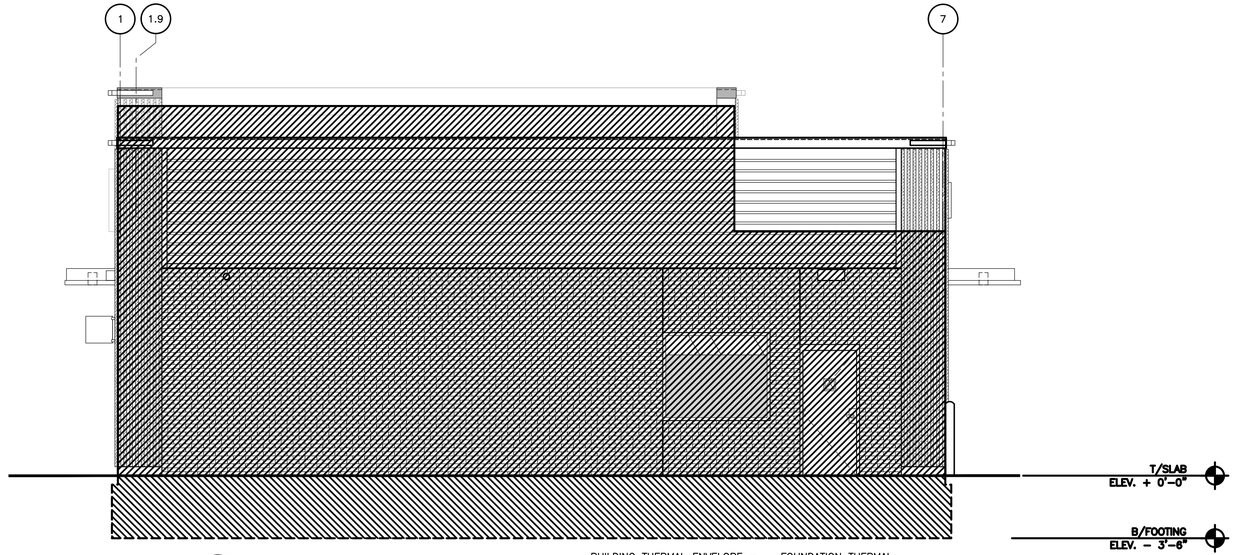
1 — DRIVE THRU ELEVATION
1/4" = 1'–0"

BUILDING THERMAL ENVELOPE – ABOVE GRADE: R–20 + R–3.8ci =
FOUNDATION THERMAL ENVELOPE BELOW GRADE: R–15 =



3 — DRIVE THRU ELEVATION
1/4" = 1'–0"

BUILDING THERMAL ENVELOPE – ABOVE GRADE: R–20 + R–3.8ci =
FOUNDATION THERMAL ENVELOPE BELOW GRADE: R–15 =



2 — REAR ELEVATION
1/4" = 1'–0"

BUILDING THERMAL ENVELOPE – ABOVE GRADE: R–20 + R–3.8ci =
FOUNDATION THERMAL ENVELOPE BELOW GRADE: R–15 =

COMPLIANCE PATH

PRESCRIPTIVE COMPLIANCE PATH IS USED TO SHOW COMPLIANCE WITH THE 2021 IECC

REV	DATE	DESCRIPTION	BY
A	09/24/25	CITY CMNTS.	AL
.	06/26/25	PERMIT SET	AL
		USRD PROGRESS SET REVIEW	AL

STATE OF MISSOURI
COREY ALLAN ENGLUND
NUMBER A-2023032688
ARCHITECT

09/24/2025
Reprise Design, Inc.
Missouri Registered
Architectural Firm
2007030603

Reprise Design Architecture, Inc.
12450 Portland Avenue South
Suite 100, Portland Corporate Center
Burnsville, MN 55337
Office: (952) 252-4042
Fax: (952) 252-4043

PREPARED BY: DESIGN

PREPARED FOR: McDonald's USA, LLC

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AL	2024 11

REVIEWED BY	DATE ISSUED
KD	08 14 2025

ROJ# 22252

TITLE: 2024 STANDARD BUILDING – BB20
45114–WOOD/WOOD

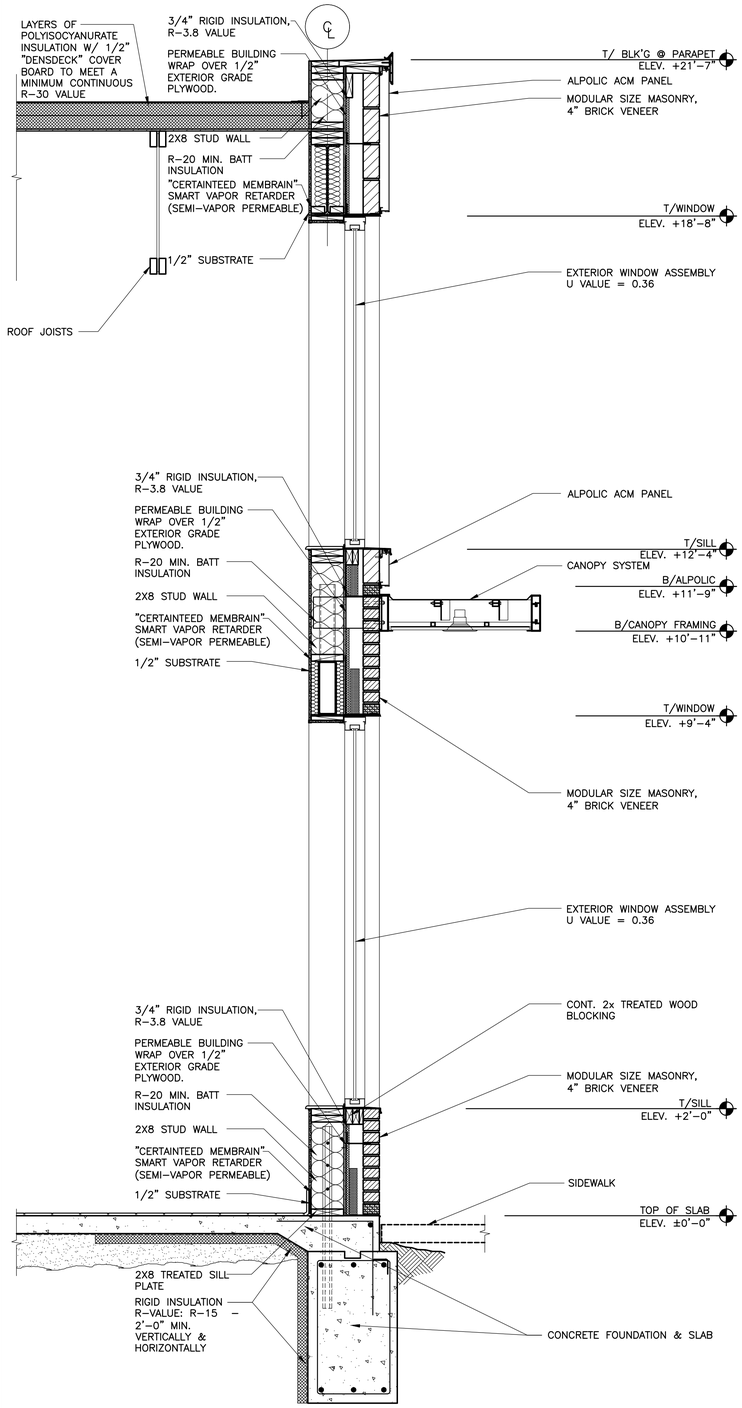
DESCRIPTION
WOOD BEARING WALLS W/BRICK EXTERIOR FINISH & CI
WOOD TRUSS ROOF FRAMING
BATTEN/BRICK EXTERIOR FINISH

MSN: 7321
SITE ADDRESS
I/C: 024–0244
3255 Main Street, Kansas City, MO 64111

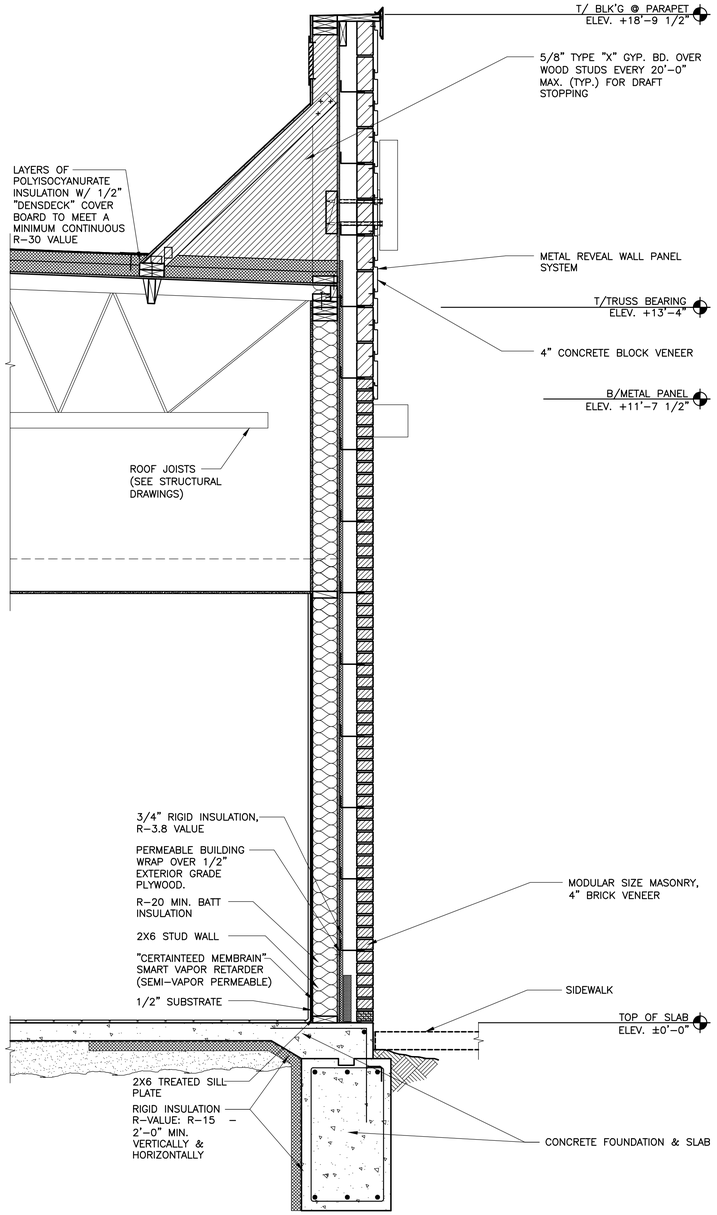
SHEET NO.
024–0244.01.A
ECA–1.4
ELEVATIONS

COMPLIANCE PATH

PRESCRIPTIVE COMPLIANCE PATH IS USED
TO SHOW COMPLIANCE WITH THE 2021 IECC



1 — WALL SECTION – DINING ROOM (HIGH WALL)
3/4" = 1'-0"



2 — GENERAL WALL SECTION
3/4" = 1'-0"

REV	DATE	DESCRIPTION	BY
A	09/24/25	CITY CMNTS.	AL
.	08/14/25	PERMIT SET	AL
.	06/26/25	USRD PROGRESS SET REVIEW	AL

STATE OF MISSOURI
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2007030603

reprise DESIGN
Architecture, Inc.
12450 Portland Avenue South
Suite 100, Portland Corporate Center
Burnsville, MN 55337
Office: (952) 252-4042
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PREPARED FOR: McDonald's USA, LLC

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DRAWN BY	REVIEWED BY:	DATE ISSUED
AL	KD	08 14 2025
STD ISSUE DATE 2024 11		

TITLE: 2024 STANDARD BUILDING – BB20 45114–WOOD/WOOD

DESCRIPTION: WOOD BEARING WALLS W/BRICK EXTERIOR FINISH & CI WOOD TRUSS ROOF FRAMING BATTEN/BRICK EXTERIOR FINISH

NSN: 7321 | SITE ADDRESS: 3255 Main Street, Kansas City, MO 64111

L/C: 024–0244 | RD# 22252

SHEET NO.: ECA-1.5
THERMAL ENVELOPE

024–0244.01.A

COM*check* Software Version COMcheckWeb

Mechanical Compliance Certificate

Project Information

Energy Code: 2021 IECC
Project Title: 3801.0083 MCD Kansas City, MO - 33rd and Main - 24-0244 - 22252
Location: Kansas City, Missouri
Climate Zone: 4a
Project Type: New Construction

Construction Site:
3255 Main Street
Kansas City, Missouri 64111

Owner/Agent:
Carter Mann
McDonald's USA LLC
110 N. Carpenter ST
Chicago, Illinois 60607
952-300-5504
carter.mann@us.mcd.com

Designer/Contractor:
Corey Englund
Reprise Design, Inc.
12400 Portland Avenue South
Suite 100
Burnsville, Minnesota 55337
763-244-4752
kdonahue@reprisedesign.com

Additional Efficiency Package(s)

Credits: 10.0 Required 0.0 Proposed

Mechanical Systems List

Quantity	System Type & Description
1	RTU-1 (Single Zone w/ PerimeterSystem): Heating: 1 each - Unit Heater, Gas, Capacity = 250 kBtu/h Proposed Efficiency = 81.00% Ec, Required Efficiency: 80.00 % Ec Cooling: 1 each - Single Package DX Unit, Capacity = 224 kBtu/h, Air-Cooled Condenser, Air Economizer Proposed Efficiency = 11.00 EER, Required Efficiency = 10.80 EER Proposed Part Load Efficiency = 15.80 IEER, Required Part Load Efficiency = 14.00 IEER
1	RTU-2 (Single Zone w/ PerimeterSystem): Heating: 1 each - Unit Heater, Gas, Capacity = 120 kBtu/h Proposed Efficiency = 81.00% Ec, Required Efficiency: 80.00 % Ec Cooling: 1 each - Single Package DX Unit, Capacity = 104 kBtu/h, Air-Cooled Condenser, Air Economizer Proposed Efficiency = 11.00 EER, Required Efficiency = 11.00 EER Proposed Part Load Efficiency = 14.60 IEER, Required Part Load Efficiency = 14.60 IEER
1	RTU-3 (Single Zone w/ PerimeterSystem): Heating: 1 each - Unit Heater, Gas, Capacity = 250 kBtu/h Proposed Efficiency = 81.00% Ec, Required Efficiency: 80.00 % Ec Cooling: 1 each - Single Package DX Unit, Capacity = 170 kBtu/h, Air-Cooled Condenser, Air Economizer Proposed Efficiency = 10.80 EER, Required Efficiency = 10.80 EER Proposed Part Load Efficiency = 14.00 IEER, Required Part Load Efficiency = 14.00 IEER

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2021 IECC requirements in COM*check* Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Michael Webert, PE — Name - Title
Signature
08/14/25 — Date

COM*check* Software Version COMcheckWeb

Inspection Checklist

Energy Code: 2021 IECC

Requirements: 100.0% were addressed directly in the COM*check* software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR2][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the mechanical and service water heating systems and document where exceptions to the standard are claimed. Load calculations per acceptable engineering standards and handbooks. Hot water system sized per manufacturer's sizing guide.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** P1.0
C406 [PR9][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Plumbing Rough-In Inspection	Complies?	Comments/Assumptions
C404.5, C404.5.1, C404.5.2 [PL6][3]	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** P1.0

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C402.2.6 [ME41][3]	Thermally ineffective panel surfaces of sensible heating panels have insulation >= R-3.5.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.12.3 [ME61][2]	HVAC piping insulation insulated in accordance with Table C403.11.3. Insulation exposed to weather is protected from damage and is provided with shielding from solar radiation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.8.1 [ME65][3]	HVAC fan systems at design conditions do not exceed allowable fan system motor nameplate hp or fan system bhp.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** M4.1 *See the Mechanical Systems list for values.*
C403.8.3 [ME117][2]	Fans have a fan energy index (FEI) >= 1.00. Variable volume fans will have an FEI >= 0.95.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** M4.1
C403.8.3 [ME117][2]	Fans have a fan energy index (FEI) >= 1.00. Variable volume fans will have an FEI >= 0.95.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Fans integral to equipment listed under Section C403.3.2.
C403.8.3 [ME117][2]	Fans have a fan energy index (FEI) >= 1.00. Variable volume fans will have an FEI >= 0.95.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** M4.1
C403.9 [ME144][2]	Large diameter fans where installed shall be tested and labeled in accordance with AMCA 230.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.13.1 [ME71][2]	Systems that heat outside the building envelope are radiant heat systems controlled by an occupancy sensing device or timer switch.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.3 [ME55][2]	HVAC equipment efficiency verified.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Mechanical Systems list for values.*
C403.5.5 [ME113][2]	Fault detection and diagnostics installed with air-cooled unitary DX units or VRF units having economizers.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.2.2 [ME59][1]	Natural or mechanical ventilation is provided in accordance with International Mechanical Code Chapter 4. Mechanical ventilation has capability to reduce outdoor air supply to minimum per IMC Chapter 4.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.7.1 [ME59][1]	Demand control ventilation provided for spaces >500 ft2 and >15 people/1000 ft2 occupant density and served by systems with air side economizer, auto modulating outside air damper control, or design airflow >3,000 cfm.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C403.7.2 [ME115][3]	Enclosed parking garage ventilation has automatic contaminant detection and capacity to stage or modulate fans to 50% or less of design capacity.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.7.6 [ME141][3]	HVAC systems serving guestrooms in Group R-1 buildings with > 50 guestrooms: Each guestroom is provided with controls that automatically manage temperature setpoint and ventilation (see sections C403.7.6.1 and C403.7.6.2).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.7.4 [ME57][1]	Exhaust air energy recovery on systems meeting Table C403.7.4(1) and C403.7.4(2).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.7.5 [ME116][3]	Kitchen exhaust systems comply with replacement air and conditioned supply air limitations, and satisfy hood rating requirements and maximum exhaust rate criteria.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** M1.2
C403.12.1 C403.12.2 [ME60][2]	HVAC ducts and plenums insulated in accordance with C403.11.1 and constructed in accordance with C403.11.2, verification may need to occur during Foundation Inspection.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.5, C403.5.1, C403.5.2 [ME62][1]	Air economizers provided where required, meet the requirements for design capacity, control signal, ventilation controls, high-limit shut-off, integrated economizer control, and provide a means to relieve excess outside air during operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** M4.1
C403.5.2 [ME16][1]	Economizer operation will not increase heating energy use during normal operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** M4.1
C403.5.3.3 [ME124][1]	Air economizers automatically reduce outdoor air intake to the design minimum outdoor air quantity when outdoor air intake will not reduce cooling energy usage. See Table C403.5.3.3 for applicable device types and climate zones.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** M4.2
C403.5.3.4 [ME125][1]	System capable of relieving excess outdoor air during air economizer operation to prevent over pressurizing the building. The relief air outlet located to avoid recirculation into the building.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** M1.2
C403.5.3.5 [ME126][1]	Return, exhaust/relief and outdoor air dampers used in economizers have motorized dampers that automatically shut when not in use and meet maximum leakage rates. Reference section C403.7.7 for details.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** M1.2

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C403.4.1.4 [ME63][2]	Heating for vestibules and air curtains with integral heating include automatic controls that shut off the heating system when outdoor air temperatures > 45F. Vestibule heating and cooling systems controlled by a thermostat in the vestibule with heating setpoint <= 60F and cooling setpoint >= 80F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** M1.2
C403.3.3 [ME35][1]	Hot gas bypass limited to: <=240 kBtu/h - 50% >240 kBtu/h - 25%	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** M4.1
C408.2.2.1 [ME53][3]	Air outlets and zone terminal devices have means for air balancing.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.11.3.1, C403.11.3.2 [ME123][3]	Refrigerated display cases, walk-in coolers or walk-in freezers served by remote compressors and remote condensers not located in a condensing unit, have fan-powered condensers that comply with Sections C403.11.3.1 and refrigeration compressor systems that comply with C403.11.3.2..	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** M1.0

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

REV	DATE	DESCRIPTION	BY
	08/14/25	PERMIT SET	WLW
	06/26/25	USRD PROGRESS SET REVIEW	WLW

emanuelson-podas
consulting engineers
Emanuelson-Podas, Inc.
705 Bush Lake Road
Eden Prairie, MN 55439
(952) 930-0050 | www.epinc.com

3801.0083

STATE OF MISSOURI
MICHAEL WEBERT
NUMBER PE-2004000077
PROFESSIONAL ENGINEER

PREPARED BY: 08/14/25

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PREPARED FOR: McDonald's USA, LLC

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DRAWN BY	REVIEWED BY	DATE ISSUED
HB	WLW	08 14 2025
STD ISSUE DATE 2024 11		

RQ# 22252

TITLE: 2024 STANDARD BUILDING – BB20
45114–WOOD/WOOD

DESCRIPTION	SITE ADDRESS
WOOD BEARING WALLS W/BRICK EXTERIOR FINISH & CI	3255 Main Street, Kansas City, MO 64111
WOOD TRUSS ROOF FRAMING	
BATTEN/BRICK EXTERIOR FINISH	
NSN: 7321	
L/C: 024–0244	

SHEET NO. 024–0244.01.0
ECA–2
COM CHECK

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.7 [EL26][2]	Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.8 [EL27][2]	Electric motors meet the minimum efficiency requirements of Tables C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.9.1, C405.9.2 [EL28][2]	Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.10 [EL29][2]	Total voltage drop across the combination of feeders and branch circuits <= 5%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.11.1 [EL30][2]	At least 90% of dwelling unit permanently installed lighting shall have lamp efficacy >= 65 lm/W or luminaires with efficacy >= 45 lm/W or comply with C405.2.4 or C405.3.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.11, C405.11.1 [EL31][2]	50% of 15/20 amp receptacles installed in enclosed offices, conference rooms, copy rooms, break rooms, classrooms and workstations and > 25% of branch circuit feeders for modular furniture will have automatic receptacle control in accordance with C405.11.1.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C303.3, C408.2.5.3 [FI8][3]	Furnished O&M manuals for HVAC systems within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.1.1 [FI50][3]	HVAC systems and equipment design loads calculated in accorcance with ANSI/ASHRAE/ACCA Standard 183 or by an approved equivalent computational procedure	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** CHVAC
C403.3.1 [FI27][3]	HVAC systems and equipment capacity does not exceed calculated loads.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** M4.1
C403.4.1 [FI47][3]	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** M4.1
C403.4.1.2 [FI38][3]	Thermostatic controls have a 5 °F deadband.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** M4.1
C403.4.1.3 [FI20][3]	Temperature controls have setpoint overlap restrictions.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.4.2 [FI39][3]	Each zone equipped with setback controls using automatic time clock or programmable control system.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** M1.2
C403.4.2.1, C403.4.2.2 [FI40][3]	Automatic Controls: Setback to 55°F (heat) and 85°F (cool); 7-day clock, 2-hour occupant override, 10-hour backup	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C408.1.1 [FI57][1]	Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.1 [FI28][1]	Commissioning plan developed by registered design professional or approved agency.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** ECA 2.1
C408.2.3.1 [FI31][1]	HVAC equipment, systems and system-to-system relationships have been tested to ensure proper operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** ECA 2.1

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C408.2.3.2 [FI10][1]	HVAC and service water heating control systems have been tested to ensure proper operation, calibration and adjustment of controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** P4.0
C408.2.3.3 [FI32][1]	Economizers have been tested to ensure proper operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** M4.1
C408.2.4 [FI29][1]	Preliminary commissioning report completed and certified by registered design professional or approved agency.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** ECA 2.1
C408.2.5 [FI7][3]	Furnished HVAC as-built drawings submitted within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.5.1 [FI43][1]	An air and/or hydronic system balancing report is provided for HVAC systems.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** M4.1
C408.2.5.2 [FI30][1]	Final commissioning report due to building owner within 90 days of receipt of certificate of occupancy.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** ECA 2.1

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

BY	DESCRIPTION	DATE
WLW	PERMIT SET	08/14/25
WLW	USRD PROGRESS SET REVIEW	06/26/25

emanuelson-podas
consulting engineers
Emanuelson-Podas, Inc.
705 Bush Lake Road
Eden Prairie, MN 55439
(952) 930-0000 | www.epinc.com

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STATE OF MISSOURI
MICHAEL WEBERT
NUMBER PE-2004000077
PROFESSIONAL ENGINEER

PREPARED BY: 08/14/25

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PREPARED FOR: **McDonald's USA, LLC**

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DRAWN BY: HB
STD ISSUE DATE 2024 11
REVIEWED BY WLW
DATE ISSUED 08 14 2025
RQ# 22252

TITLE: 2024 STANDARD BUILDING - BB20 45114-WOOD/WOOD

DESCRIPTION
WOOD BEARING WALLS W/BRICK EXTERIOR FINISH & CI
WOOD TRUSS ROOF FRAMING
BATTEN/BRICK EXTERIOR FINISH

NSN: 7321
SITE ADDRESS: 3255 Main Street, Kansas City, MO 64111
L/C: 024-0244

SHEET NO. ECA 2.1
024-0244.01.0
COM CHECK

COMcheck Software Version COMcheckWeb

Interior Lighting Compliance Certificate

Project Information

Energy Code: 2021 IECC
Project Title: 3801.0083 MCD Kansas City, MO - 33rd and Main - 24-0244 - 22252
Project Type: New Construction

Construction Site:
3255 Main Street
Kansas City, Missouri 64111

Owner/Agent:
Carter Mann
McDonald's USA LLC
110 N. Carpenter ST
Chicago, Illinois 60607
952-300-5504
carter.mann@us.mcd.com

Designer/Contractor:
Corey Englund
Reprise Design, Inc.
12400 Portland Avenue South
Suite 100
Burnsville, Minnesota 55337
763-244-4752
kdonahue@reprisedesign.com

Additional Efficiency Package(s)

Credits: 10.0 Required 0.0 Proposed

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts
1-OFFICE (Common Space Types:Office - Enclosed)	97	0.74	72
2-KITCHEN (Common Space Types:Food Preparation)	1432	1.09	1561
3-DINING ROOM (Common Space Types:Dining Area - Cafeteria/Fast Food)	1874	0.40	750
4-RESTROOMS (Common Space Types:Restrooms)	365	0.63	230
5-STORAGE (Common Space Types:Storage >=50 - <=1000 sq.ft.)	836	0.38	318
6-BREAKROOM (Common Space Types:Lounge/Breakroom)	100	0.59	59
7-VESTIBULES (Common Space Types:Lobby - General)	190	0.84	160
		Total Allowed Watts =	3148

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
1-OFFICE (Common Space Types:Office - Enclosed)				
LED F2: F2: LED 2x4 Troffer: LED Panel 54W:	1	1	44	44
2-KITCHEN (Common Space Types:Food Preparation)				
LED F2: F2: LED 2x4 Troffer: LED Panel 54W:	1	20	44	880
3-DINING ROOM (Common Space Types:Dining Area - Cafeteria/Fast Food)				
LED E3: D: LED Sconce: LED Other Fixture Unit 16W:	1	2	19	38
LED L2R: L2R: LED Downlight: LED PAR 12W:	1	16	16	256
LED L4: L4: LED Downlight: LED PAR 7W:	1	9	7	63
LED C: C: COVE LIGHT: LED Other Fixture Unit 13W:	1	1	12	12
LED A5: A5: WALL ARTWORK: LED Other Fixture Unit 13W:	1	4	10	40
4-RESTROOMS (Common Space Types:Restrooms)				
LED L2R: L2R: LED Downlight: LED PAR 12W:	1	16	16	256

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
5-STORAGE (Common Space Types:Storage >=50 - <=1000 sq.ft.)				
LED F2: F2: LED 2x4 Troffer: LED Panel 54W:	1	9	44	396
LED Q1: Q1: LED Strip - Cooler: LED Panel 80W:	1	2	81	162
LED Q2: Q2: LED Strip - Freezer: LED Panel 38W:	1	3	38	114
Incandescent 1: Q3: Freezer: Incandescent 100W:	1	3	100	300
6-BREAKROOM (Common Space Types:Lounge/Breakroom)				
LED L2R: L2R: LED Downlight: LED PAR 12W:	1	4	16	64
7-VESTIBULES (Common Space Types:Lobby - General)				
LED L2R: L2R: LED Downlight: LED PAR 12W:	1	4	16	64
			Total Proposed Watts =	2690

Interior Lighting PASSES: Design 15% better than code

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2021 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Matthew Fults, PE, LC — Name - Title
Signature
08/14/25 — Date

COMcheck Software Version COMcheckWeb

Inspection Checklist

Energy Code: 2021 IECC

Requirements: 100.0% were addressed directly in the COMcheck software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR4][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C406 [PR9][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.3.1 [EL22][1]	Spaces required to have light-reduction controls have a manual control that allows the occupant to reduce the connected lighting load in a reasonably uniform illumination pattern >= 50 percent.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.2.1, C405.2.1.1 [EL18][1]	Occupancy sensors installed in classrooms/lecture/training rooms, conference/meeting/multipurpose rooms, copy/print rooms, lounges/breakrooms, enclosed offices, open plan office areas, restrooms, storage rooms, locker rooms, corridors, warehouse storage areas, and other spaces <= 300 sqft that are enclosed by floor-to-ceiling height partitions. Reference section language C405.2.1.2 for control function in warehouses and section C405.2.1.3 for open plan office spaces.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.2.1.2 [EL19][1]	Occupancy sensors control function in warehouses: In warehouses, the lighting in aisleways and open areas is controlled with occupant sensors that automatically reduce lighting power by 50% or more within 20 minutes of when the areas are unoccupied. The occupant sensors control lighting in each aisleway independently and do not control lighting beyond the aisleway being controlled by the sensor. Lights not turned off by occupant sensors is done so by time-switch.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.2.1.3 [EL20][1]	Occupant sensor control function in open plan office areas: Occupant sensor controls in open office spaces >= 300 sq.ft. have controls 1) configured so that general lighting can be controlled separately in control zones with floor areas <= 600 sq.ft. within the space, 2) general lighting in each zone permitted to turn on upon occupancy in control zone, 3) automatically turn off general lighting in all control zones within 20 minutes after all occupants have left the space, 4) are configured so that general lighting power in each control zone is reduced by >= 80% of the full zone general lighting power within 20 minutes of all occupants leaving that control zone.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.2.2, C405.2.2.1 [EL21][2]	Each area not served by occupancy sensors (per C405.2.1.1) have time-switch controls and functions detailed in sections C405.2.2.1.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.4, C405.2.4.1, C405.2.4.2 [EL23][2]	Daylight zones provided with individual controls that control the lights independent of general area lighting. See code section C405.2.3 Daylight-responsive controls for applicable spaces. C405.2.3.1 Daylight responsive control function and section C405.2.3.2 Sidelit zone.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.2.5 [EL27][1]	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.7 [EL26][2]	Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.8 [EL27][2]	Electric motors meet the minimum efficiency requirements of Tables C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.9.1, C405.9.2 [EL28][2]	Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.10 [EL29][2]	Total voltage drop across the combination of feeders and branch circuits <= 5%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.1.1 [EL30][2]	At least 90% of dwelling unit permanently installed lighting shall have lamp efficacy >= 65 lm/W or luminaires with efficacy >= 45 lm/W or comply with C405.2.4 or C405.3.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.11, C405.11.1 [EL31][2]	50% of 15/20 amp receptacles installed in enclosed offices, conference rooms, copy rooms, break rooms, classrooms and workstations and > 25% of branch circuit feeders for modular furniture will have automatic receptacle control in accordance with C405.11.1.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C303.3, C408.2.5.2 [FI17][3]	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.1.1 [FI57][3]	Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.5 [FI16][3]	Furnished as-built drawings for electric power systems within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.3 [FI33][1]	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

BY	DESCRIPTION	DATE	REV
WLW	PERMIT SET	08/14/25	
WLW	USRD PROGRESS SET REVIEW	06/26/25	

emanuelson-podas
consulting engineers
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Eden Prairie, MN 55439
(952) 930-0000 | www.epinc.com

3801.0083

STATE OF MISSOURI
MATTHEW J FULTS
NUMBER PE-2004005388
PROFESSIONAL ENGINEER

PREPARED BY: 08/14/25

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PREPARED FOR: McDonald's USA, LLC

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MJW	
STD ISSUE DATE 2024 11	
REVIEWED BY WLW	
DATE ISSUED 08 14 2025	
RQ# 22252	

TITLE: 2024 STANDARD BUILDING – BB20 45114–WOOD/WOOD

DESCRIPTION
WOOD BEARING WALLS W/BRICK EXTERIOR FINISH & CI
WOOD TRUSS ROOF FRAMING
BATTEN/BRICK EXTERIOR FINISH

NSN: 7321
L/C: 024–0244

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