

CIRCUIT HOMERUN SYMBOL SCHEDULE

A-1 ← ONE CIRCUIT HOMERUN TO PANEL "A", CIRCUIT #1.
 A-1,3 ← TWO CIRCUIT HOMERUN TO PANEL "A", CIRCUITS #1, 3, & 5. (REQUIRES MULTI-POLE CIRCUIT BREAKER.)
 A-1,3,5 ← THREE CIRCUIT HOMERUN TO PANEL "A", CIRCUITS #1, 3, & 5. (REQUIRES MULTI-POLE CIRCUIT BREAKER.)
 A-(1,3) ← ONE CIRCUIT HOMERUN TO PANEL "A", 208 VOLT OR 480 VOLT-1 PHASE CIRCUIT TO POLES #1 & 3.
 A-(1,3,5) ← ONE CIRCUIT HOMERUN TO PANEL "A", 208 VOLT OR 480 VOLT-3 PHASE CIRCUIT TO POLES #1, 3, & 5.
 SLASH MARKS INDICATE QUANTITY OF CONDUCTORS OTHER THAN TWO; — INDICATES NEUTRAL, — INDICATES HOT, NOTE: TWO WIRE CIRCUITS DO NOT SHOW SLASH MARKS.
 SLASH MARK INDICATES EQUIPMENT GROUNDING CONDUCTOR SIZED IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE 250-122.

EQUIPMENT DISCONNECT SCHEDULE

Ⓜ MANUAL MOTOR STARTING SWITCH WITH OVERLOAD PROTECTION EQUAL TO SQUARE-D CLASS 2510 TYPE KG-1 SERIES.
 3P/30A/208V □ HEAVY DUTY SAFETY SWITCH; 3 POLE, 30 AMP, 208 VOLT. FIRST NUMERAL INDICATES QUANTITY OF POLES SECOND NUMERAL INDICATES AMPERE RATING, THIRD NUMERAL INDICATES VOLTAGE. IE: 3P/30A/208V INDICATES 3 POLE, 30 AMP, 208 VOLT, ETC.
 3P/30A/208V □ FUSED HEAVY DUTY SAFETY SWITCH SAME AS ABOVE EXCEPT WITH FUSES. ACTUAL SIZE AND TYPE SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. FUSES SHALL BE "RK-5" FUSETRONS.
 3P/30A/208V/3R □ NEMA 3R CONSTRUCTION HEAVY DUTY SAFETY SWITCHES. NO-FUSE AND FUSED SWITCHES RESPECTIVELY AS SPECIFIED ABOVE. /3R INDICATES NEMA 3R CONSTRUCTION. NOTE: PROVIDE NEUTRAL BARS, GROUNDING BARS, REJECTION CLIPS, SERVICE ENTRANCE LABELS, FUSES AND ALL OTHER ACCESSORIES REQUIRED FOR THE APPLICATION.

CONDUCTOR SIZING TABLE
FOR 120V-20A BRANCH CIRCUITS ONLY, UNLESS OTHERWISE NOTED

IF DISTANCE A + B IN FEET IS: (SEE DIAGRAM AT RIGHT)	USE COPPER WIRE IN METALLIC CONDUIT, AWG SIZE AS FOLLOWS ON ENTIRE CIRCUIT AND SIZE CONDUIT ACCORDINGLY:
0' TO 100'	#12 (MIN.)
100' TO 175'	#10
175' TO 300'	#8
300' TO 450'	#6 (MAX.)

FOR 277V-20A BRANCH CIRCUITS ONLY, UNLESS OTHERWISE NOTED

IF DISTANCE A + B IN FEET IS: (SEE DIAGRAM AT RIGHT)	USE COPPER WIRE IN METALLIC CONDUIT, AWG SIZE AS FOLLOWS ON ENTIRE CIRCUIT AND SIZE CONDUIT ACCORDINGLY:
0' TO 250'	#12 (MIN.)
250' TO 400'	#10
400' TO 700'	#8
700' TO 1000'	#6 (MAX.)

THESE TABLES ARE BASED ON AN EVENLY DISTRIBUTED LOAD ALLOWING A 3% VOLTAGE DROP AT LAST OUTLET: APPLY ACCORDINGLY.

GENERAL SYMBOLS

← HOMERUN TO PANELBOARD. SEE "CIRCUIT HOMERUN AND CONDUCTOR LOGIC".
 — CONDUIT RUN CONCEALED OVERHEAD ABOVE CEILING AND IN WALLS OR MC CABLE WHERE PERMITTED. USE SURFACE RACEWAY SYSTEM EXPOSED ON INACCESSIBLE EXISTING CONSTRUCTION.
 - - CONDUIT RUN EXPOSED.
 - - - CONDUIT RUN CONCEALED BELOW FLOOR.
 □ FLEXIBLE CONDUIT WITH CONNECTION TO EQUIPMENT SERVED.
 □ GROUND SIZED PER NEC 250.
 □ 120/208 VOLT PANELBOARD. SEE PANEL SCHEDULE.
 □ 277/480 VOLT PANELBOARD. SEE PANEL SCHEDULE.
 □ MONITORING PANEL. SEE PLANS FOR DESCRIPTION.

SWITCHES

Ⓢ SWITCH RATED 120/277 VOLTS AND 20 AMPERES. SUBSCRIPTS FOR BASIC SYMBOL.
 BLANK- SINGLE POLE
 2- DOUBLE POLE
 3- THREE WAY
 4- FOUR WAY
 D- DIMMER WITH SILICON CONTROLLED RECTIFIER
 P- PILOT LIGHT

ⓈⓈ TWO SWITCHES IN COMMON OUTLET BOX AT 48" AFF.
 ⓈⓈⓈ SWITCH RATED 120/277 VOLTS AND 20 AMPERES WITH OCCUPANT SENSOR FOR MANUAL ON AND AUTO OFF AFTER PRESET TIME.
 ⓈⓈⓈⓈ AREA LIGHTING CONTROL PHOTOELECTRIC SWITCH.
 ⓈⓈⓈⓈⓈ TIME CLOCK - ELECTRONIC 24 HOUR-7 DAY
 ⓈⓈⓈⓈⓈ LIGHTING CONTROL LIGHTING CONTACTOR.
 ⓈⓈⓈⓈⓈ DAYLIGHT SENSOR CONTROL
 ⓈⓈⓈⓈⓈ DUAL TECHNOLOGY CEILING MOUNTED OCCUPANT SENSOR, PROVIDE 120V VOLTAGE WIRING PER MANUFACTURER'S RECOMMENDATIONS.
 ⓈⓈⓈⓈⓈ HIGH BAY CEILING MOUNTED OCCUPANT SENSOR, SUSPEND DEVICE TO JUST BELOW LAMP OF SURROUNDING LIGHT FIXTURES.

WIRING DEVICES

Ⓢ 120V, 20A DUPLEX RECEPTACLE WALL MOUNTED AT 18" AFF UNLESS OTHERWISE NOTED
 EWC- GFCI TYPE RECEPTACLE SERVING ELECTRIC WATER COOLER. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT WITH PLUMBING CONTRACTOR AND INSTALL RECEPTACLE SO THAT IT IS CONCEALED FROM VIEW.
 R- REFRIGERATOR SERVING REFRIGERATOR. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT WITH EQUIPMENT CONTRACTOR AND INSTALL RECEPTACLE SO THAT IT IS CONCEALED FROM VIEW AND DOES NOT IMPEDE THE INSTALLATION OF THE REFRIGERATOR.
 GF- DUPLEX RECEPTACLE WITH BUILT-IN GROUND FAULT INTERRUPTING MECHANISM.
 S- SAFETY TYPE RECEPTACLE.
 WP- WEATHERPROOF COVER.
 Ⓢ 120V, 20A DUPLEX RECEPTACLE WITH BOTTOM OF BOX 2" ABOVE COUNTER BACKSLASH OR AT COUNTER HEIGHT
 ⓈⓈ TWO 120V, 20A DUPLEX RECEPTACLES UNDER COMMON COVER
 ⓈⓈⓈ TWO 120V, 20A DUPLEX RECEPTACLE UNDER COMMON COVER MOUNTED AT COUNTER HEIGHT
 ⓈⓈⓈⓈ 120V, 20A DUPLEX RECEPTACLE WITH ISOLATED GROUND TERMINAL-COLORED ORANGE
 ⓈⓈⓈⓈ 120V, 20A DUPLEX RECEPTACLE FLUSH MOUNTED IN CEILING
 ⓈⓈⓈⓈ SPECIAL EQUIPMENT RECEPTACLE. (SEE NOTES)
 ⓈⓈⓈⓈⓈ SPECIAL EQUIPMENT RECEPTACLE, 30A, 250V, NEMA 14-30R.
 ⓈⓈⓈⓈⓈ SPECIAL EQUIPMENT RECEPTACLE, 50A, 250V, NEMA 14-50R.

SYMBOL SCHEDULE

LIGHTING (SEE LIGHTING FIXTURE SCHEDULE)

EQUIPMENT CONNECTIONS

* Ⓢ CONNECTION TO 120 VOLT MOTOR.
 * Ⓢ CONNECTION TO 3-PHASE MOTOR.
 □ HEAVY DUTY SAFETY SWITCH. (NON-FUSED) SEE "EQUIPMENT DISCONNECT SCHEDULE".
 □ HEAVY DUTY SAFETY SWITCH. (FUSED) SEE "EQUIPMENT DISCONNECT SCHEDULE".
 * ⓈⓈ JUNCTION BOX WITH CONNECTION TO EQUIPMENT SERVED.
 * Ⓢ CONNECTION TO HVAC, PLUMBING OR OTHER EQUIPMENT AS NOTED.
 * Ⓢ CONNECTION TO WATER HEATER.
 * Ⓢ CONNECTION TO OVERHEAD DOOR. PROVIDE SAFETY SWITCH AND CONNECTION POINT. RUN POWER WIRING THROUGH DOOR CONTROLLER. CONTACT ALL DOOR CONTROLS (UP/DOWN CONTROL STATION, LIMIT SWITCHES, OBSTRUCTION SAFETY SWITCHES, ETC.)
 Ⓢ MOTOR CONTROLLER
 * NOTE: PROVIDE A DISCONNECT ON ALL FAN UNIT HEADERS, FAN COILS, PUMPS, MOTOR HANDLERS, UNIT VENTILATORS, ETC.

COMMUNICATIONS SYMBOLS

Ⓢ COMBINATION DATA/TELEPHONE CABLEING OUTLET 18" AFF. EXTEND 1" TO AN ACCESSIBLE LOCATION ABOVE THE CEILING. OUTLET BOX TO BE 4 x 2 1/4" DEEP.
 Ⓢ COMBINATION DATA/TELEPHONE OUTLET WITH BOTTOM OF BOX 2" ABOVE THE COUNTER BACKSLASH OR AT COUNTER HEIGHT. EXTEND 1" TO AN ACCESSIBLE LOCATION ABOVE THE CEILING. OUTLET BOX TO BE 4 x 2 1/4" DEEP.
 Ⓢ PUSH BUTTON DOOR BELL OUTLET 48" AFF OR AT COUNTER HEIGHT. EXTEND 3/4" TO AN ACCESSIBLE LOCATION ABOVE THE CEILING OR INTO BUILDING.
 Ⓢ CHIME OR BELL MOUNTED ABOVE DOOR FRAME. EXTEND 3/4" TO AN ACCESSIBLE LOCATION ABOVE THE CEILING OR INTO BUILDING STRUCTURE.
 Ⓢ TV OUTLET BOX WITH DUPLEX RECEPTACLE.
 Ⓢ FLUSH MOUNTED SPEAKER IN REMOUNTED ATLAS SOUND ENCLOSURE BACK BOX OR SURFACE MOUNTED BOX. RUN 1" EMT DAISY CHAINED FROM BACK BOXES TO AV RACK.
 Ⓢ OUTLET BOX FOR CAMERA. MOUNT ALL CAMERA BRACKETS. RUN 1 1/2" CONDUIT TO MDF ROOM.
 Ⓢ OUTLET BOX FOR CARD READER. MOUNT OUTLET BOX AT 48" AFF AND RUN 1/2" CONDUIT TO 4" SQUARE J-BOX ABOVE CEILING. (SEE DETAIL)
 Ⓢ 4-COMPARTMENT RECESSED FLOOR BOX, WITH TWO DUPLEX RECEPTACLES AND TWO SECTIONS FOR OWNERS COMMUNICATIONS REQUIREMENTS. (SEE DETAIL)
 Ⓢ 2-COMPARTMENT RECESSED FLOOR BOX, WITH ONE DUPLEX RECEPTACLE AND ONE SECTION FOR OWNERS COMMUNICATIONS REQUIREMENTS.
 Ⓢ 3-COMPARTMENT RECESSED FLOOR BOX, WITH ONE DUPLEX RECEPTACLE, ONE IG DUPLEX RECEPTACLE AND ONE SECTION FOR OWNERS COMMUNICATIONS REQUIREMENTS.
 Ⓢ FIRE RATED FLUSH STYLE POKE THRU DEVICE

NOTES:

- PROVIDE A BLANK COVERPLATE ON TELEPHONE OUTLETS.
- THE DEVICE ADDRESS NUMBER IS SHOWN NEXT TO EACH DETECTION/SENSING DEVICE ON THE SPECIAL SYSTEMS FLOOR PLANS.
- SEE DETAILS FOR ELEVATION REPRESENTATION OF ALL DEVICE MOUNTING HEIGHTS. ALL QUESTIONS ABOUT MOUNTING HEIGHTS SHALL BE DIRECTED TO THE ARCHITECT AND ENGINEER PRIOR TO ROUGH-IN.
- THESE ARE STANDARD SYMBOLS AND ALL MAY NOT APPEAR ON PROJECT DRAWINGS. WHEREVER THE SYMBOL ON THE PROJECT OCCURS, THE ITEM SHALL BE PROVIDED AND INSTALLED.

FIRE ALARM SYMBOLS

Ⓢ DUCT MOUNT SMOKE DETECTOR WITH REJECTOR BASE IN DUCT.
 Ⓢ REMOTE TEST SWITCH WITH INDICATOR LAMP FOR DUCT MOUNTED SMOKE DETECTOR

ABBREVIATIONS

ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION
AMP	AMPERE	JB	JUNCTION BOX
ADA	AMERICAN WITH DISABILITIES ACT	LC	LIGHTING CONTACTOR
ADA	ABOVE FINISHED FLOOR ABOVE FINISHED GRADE	LED	LIGHT EMITTING DIODE
AF	AIR HANDLING UNIT	LT	LIGHT
AH	ALUMINUM	LTG	LIGHTING
AK	AMPERE	MIN	MINIMUM
ATS	AUTOMATIC TRANSFER SWITCH	MAX	MAXIMUM
AWG	AMERICAN WIRE GAUGE	MCA	MINIMUM CIRCUIT AMPERES
BB	BACKBOARD	MCB	MAIN CIRCUIT BREAKER
CB	CIRCUIT BREAKER	MFS	MAXIMUM FUSE SIZE
CU	CONDENSING UNIT	MLO	MAIN LUGS ONLY
DPT	DOUBLE POLE DOUBLE THROW	MOOP	MAXIMUM OVER-CURRENT PROTECTION
EG	EMPTY CONDUIT	NEC	NATIONAL ELECTRICAL CODE
EF	EXHAUST FAN	NEMA	NATIONAL ELECTRICAL MFRS ASSOC.
EGG	EQUIPMENT GROUNDING CONDUCTOR	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
EM	EMERGENCY ELECTRICAL METALLIC TUBING	NIC	NOT IN CONTRACT
EMT	EXISTING	P	POLE
E OR EX	EXISTING TO BE REMOVED	PB	PULL BOX
ETR	EXISTING TO REMAIN	PE	PHOTO-ELECTRIC SWITCH
FACP	FIRE ALARM CONTROL PANEL	PVC	POLYVINYL CHLORIDE CONDUIT
FLA	FULL LOAD AMPERES	PNL	PANEL
FPN	FUSE PER NAMEPLATE	RMC	RIGID METAL CONDUIT
FT	FEET	RTU	ROOF TOP UNIT
GC	GENERAL CONTRACTOR	SP	SUPPLY FAN
GND	GROUND	SPD	SURGE PROTECTIVE DEVICE
GF	GAS FURNACE	SPT	SINGLE POLE DOUBLE THROW
GF	GROUND FAULT INTERRUPTER	SPST	SINGLE POLE SINGLE THROW
GND	GROUND	SQ	SQUARE
GR	GALVANIZED RIGID STEEL CONDUIT	SW	SWITCH
GW	GYPSON WALLBOARD	SMBD	SWITCHBOARD
HP	HORSEPOWER	TIB	TELEPHONE TERMINAL
HVAC	HEATING-VENTILATING- AIR COND.	UH	UNIT HEATER
IG	ISOLATED GROUND	UL	UNDERWRITER'S LABORATORIES
IMC	INTERMEDIATE METAL CONDUIT	UNO	UNLESS NOTED OTHERWISE
KW	KILOWATT	UN	UNLESS OTHERWISE NOTED
KVA	KILOVOLT-AMPERE	UPS	UNINTERRUPTIBLE POWER SUPPLY
		V	VOLT
		W	WATT
		VA	VOLT-AMPERE
		WP	WEATHER PROOF
		XFMR	TRANSFORMER
		XP	EXPLOSION PROOF

Order Plans

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ISSUANCE

ISSUED FOR CONSTRUCTION
 2019/11/13

REVISIONS

NO. DATE DESCRIPTION

FILE NUMBER	19199
PROJECT MANAGER	CAD
PROFESSIONAL	CAD
DRAWN BY	CLE
CHECKED BY	BOW