

- THROUGH - PENETRATION FIRE STOP SYSTEMS
SYSTEM NO. C-AJ-1238
1" RATING 2HR
1" RATING 1/4HR
- FLOOR OR WALL ASSEMBLY - MIN 5" THICK NORMAL WEIGHT (150 PCF) CONCRETE. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS*. MAX DIAM OF OPENING IS 14".
 - THROUGH PENETRATES - ONE METALLIC PIPE, CONDUIT OR TUBING TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRE STOP SYSTEM. THE ANNULAR SPACE BETWEEN PIPE, CONDUIT OR TUBING AND EDGE OF THROUGH OPENING SHALL BE MIN 1/4" TO MAX 1". PIPE, CONDUIT OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES, CONDUITS OR TUBING MAY BE USED:
 - STEEL PIPE - NOM 12" (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
 - CONDUIT - NOM 6" (OR SMALLER) RIGID STEEL CONDUIT.
 - CONDUIT - NOM 4" (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING.
 - IRON PIPE - NOM 12" (OR SMALLER) CAST OR DUCTILE IRON PIPE.
 - COPPER TUBING - 4" (OR SMALLER) TYPE "L" (OR HEAVIER) COPPER PIPE.
 - COPPER PIPE - NOM 4" (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.
 - FIRE STOP SYSTEM - THE FIRE STOP SYSTEM SHALL CONSIST OF THE FOLLOWING:
 - PACKING MATERIAL - MIN 3 1/2" THICKNESS OF TIGHTLY-PACKED MINERAL - WOOL BATT MATERIAL USED AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM TOP SURFACE OF FLOOR OR FROM BOTH SURFACES OF WALL AS REQUIRED TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL (ITEM 3B).
 - FILL, VOID OR CAVITY MATERIAL* - SEALANT - MIN 1/4" THICKNESS OF FILL MATERIAL APPLIED WITHIN ANNULUS, FLUSH WITH TOP SURFACE OF FLOOR OR BOTH SURFACES OF WALL.
- *FIRE STOP SYSTEMS INC. 4100 NS. 4100SL, 4800DW.
*BEARING THE UL CLASSIFICATION MARKING UNDERWRITERS LABORATORIES INC.

1 PIPE PENETRATION FOR FIRE RATED WALLS
SCALE: N.T.S.

COMPLETION DOCUMENTS

- DEMOS**
WITHIN 30 DAYS AFTER THE DATE OF SYSTEM ACCEPTANCE BY THE CONTRACTOR, 3 COPIES OF RECORD AS-BUILT DRAWINGS OF THE ACTUAL INSTALLATION SHALL BE PROVIDED TO THE BUILDING OWNER, INCLUDING THE FOLLOWING:
- A SINGLE-LINE DIAGRAM OF THE BUILDING ELECTRICAL DISTRIBUTION SYSTEM.
 - FLOOR PLANS INDICATING LOCATION AND AREA SERVED FOR ALL DISTRIBUTION.
- MANUALS**
WITHIN 30 DAYS AFTER THE DATE OF SYSTEM ACCEPTANCE, 3 COPIES OF OPERATING AND MAINTENANCE MANUALS SHALL BE PROVIDED TO THE BUILDING OWNER BY THE CONTRACTOR. THE MANUALS SHALL INCLUDE, AT A MINIMUM, THE FOLLOWING:
- SUBMITTAL DATA STATING EQUIPMENT RATING AND SELECTED OPTIONS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE.
 - OPERATIONS MANUALS AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE. REQUIRED ROUTINE MAINTENANCE ACTIONS SHALL BE CLEARLY IDENTIFIED.
 - NAMES AND ADDRESSES OF AT LEAST ONE QUALIFIED SERVICE AGENCY.
 - A COMPLETE NARRATIVE OF HOW EACH SYSTEM IS INTENDED TO OPERATE.

ELECTRICAL DEMOLITION NOTES

- MAINTAIN ALL BRANCH RECEPTACLE AND HVAC CIRCUITING THAT IS TO REMAIN. EXISTING RECEPTACLES ARE NOT INDICATED ON PLANS.
- CONTRACTOR SHALL REMOVE AND/OR RELOCATE AS DIRECTED ALL ELECTRICAL APPURTENANCES ASSOCIATED WITH NEW CONSTRUCTION. SWITCH, EXTEND, RE-ROUTE, REPLACE, RECONNECT, OR OTHERWISE MAKE GOOD AND LEAVE IN SAFE WORKING ORDER ALL PORTIONS OF THE EXISTING ELECTRICAL INSTALLATION REQUIRED TO REMAIN IN USE DURING AND/OR AFTER THE COMPLETION OF WORK. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER THE REMOVAL AND DISPOSAL OF ALL EXISTING ELECTRICAL MATERIAL WHICH IS NOT TO BE REUSED ON THE PROJECT. CONTRACTOR SHALL REMOVE AND STORE ANY ELECTRICAL MATERIAL IF SO DIRECTED BY OWNER. PATCH AND PAINT WALLS AND CEILING AS REQUIRED BY REMOVALS OF APPURTENANCES. COORDINATE WITH ARCHITECT.
- WORK IS TO BE CARRIED OUT WITHOUT UNNECESSARY INTERFERENCE WITH OWNER'S EXISTING FACILITIES AND OPERATIONS. POWER INTERRUPTIONS SHALL BE SCHEDULED WITH OWNER AND SHALL BE TAKEN ONLY DURING THOSE PERIODS WHICH HE HAS APPROVED IN WRITING. COORDINATE EXACT PHASING OF CONSTRUCTION WITH ARCHITECT. MINIMUM 10 DAYS ADVANCE NOTICE.
- THE CONTRACTOR SHALL COORDINATE WITH THE OWNER THE REMOVAL AND DISPOSAL OF ALL EXISTING ELECTRICAL MATERIAL WHICH IS NOT TO BE REUSED ON THE PROJECT. CONTRACTOR SHALL REMOVE AND STORE ANY ELECTRICAL MATERIAL IF SO DIRECTED BY OWNER. PATCH AND PAINT WALLS AND CEILING AS REQUIRED BY REMOVALS OF APPURTENANCES. COORDINATE WITH ARCHITECT.
- DEMOLITION OF EXISTING ELECTRICAL MATERIAL SHALL BE INCLUDED IN CONTRACTOR'S BID. REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR DEMOLITION.
- EXISTING WALLS THAT ARE TO BE DEMOLISHED. REMOVE CIRCUITS BACK TO NEAREST DEVICE ON SAME CIRCUIT THAT SHALL REMAIN IN USE OR COMPLETELY BACK TO PANELBOARDS. RECONNECT NEW WIRING TO EXISTING DEVICES ON SAME CIRCUIT "DOWNSTREAM" IN ORDER THAT THEY OPERATE IN SAME MANNER AS BEFORE RENOVATION.
- ELECTRICAL EQUIPMENT REMOVED AS PART OF REQUIRED DEMOLITION SHALL BE TURNED OVER TO OWNER UNLESS DIRECTED OTHERWISE BY OWNER (OWNNET COUNTY SCHOOL SYSTEM ELECTRICAL MAINTENANCE DEPARTMENT).

ELECTRICAL GENERAL NOTES

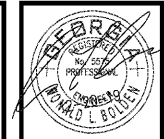
- ALL WORK SHALL BE IN ACCORDANCE WITH 2012 INTERNATIONAL BUILDING CODES WITH GEORGIA AMENDMENTS AND THE 2017 NATIONAL ELECTRICAL CODE.
- THE CONTRACTOR SHALL VISIT THE SITE OF THE PROPOSED PROJECT TO INSPECT THE EXISTING CONDITIONS AND DETERMINE THE SCOPE OF HIS WORK AND THE EXTENT OF DEMOLITION AND RENOVATION WORK. THE SITE INSPECTION SHALL BE MADE PRIOR TO SUBMITTING BID FOR THE PROPOSED PROJECT. NO COMPENSATION WILL BE ALLOWED FOR FAILURE TO INSPECT THE SITE. CONTRACTOR SHALL INFORM ARCHITECT PRIOR TO BINDING OF DISCREPANCIES WHICH EXIST BETWEEN DRAWINGS AND ACTUAL FIELD CONDITIONS.
- REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF ALL LIGHT FIXTURES. ALL LIGHT FIXTURES ARE EXISTING AND ARE TO BE REMOVED AND REINSTALLED.
- REFER TO RISER DIAGRAM AND RISER DIAGRAM NOTES FOR FEEDER SIZES FOR PANELBOARDS.
- OVERCURRENT PROTECTION, WIRE SIZE AND NUMBER OF CONNECTION POINTS FOR MECHANICAL HVAC EQUIPMENT IS FOR ITEMS AS SPECIFIED. COORDINATE WITH MECHANICAL CONTRACTOR AND MAKE NECESSARY CHANGES PRIOR TO INSTALLATION FOR ACTUAL EQUIPMENT FURNISHED AT NO COST TO OWNER. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION OF MECHANICAL EQUIPMENT.
- REFER TO HVAC/ELECTRICAL SCHEDULE FOR FEEDER SIZES FOR HVAC EQUIPMENT. UNLESS OTHERWISE NOTED ON PLANS OR SCHEDULE.
- PROVIDE FINISHED COVER PLATES FOR ALL JUNCTION BOXES. ALL JUNCTION BOXES AND COVER PLATES SHALL BE PAINTED AND LABELED. REFER TO DETAIL 2/E4.1.
- ALL RECEPTACLES WITHIN (8) FEET OF PLUMBING FIXTURES SHALL BE PROVIDED WITH 5 MILLAMP GROUND FAULT INTERRUPTERS.
- EDGE OF LIGHT SWITCH WALL PLATE SHALL NOT BE MORE THAN 4" AWAY FROM METAL/WOOD DOOR FRAME. TYPICAL FOR SINGLE OR MULTIPLE WALL SWITCHES.
- PROVIDE SEAL FOR PENETRATION OF FIRE RATED WALLS BY CONDUIT. REFER TO DETAIL 2/E1.0.
- ALL WIRING SHALL BE IN METAL CONDUIT, EXCEPT FOR LOW VOLTAGE SYSTEMS IN PLENUM SPACES.
- REFER TO ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHTS OF ALL EXTERIOR LIGHTING WALL PACKS.
- CONTRACTOR SHALL COORDINATE INSTALLATION OF NEW LIGHTING FIXTURES, RECEPTACLES, PANELBOARDS, ETC. WITH EXISTING STRUCTURE, PIPING, ETC. AND MAKE ADJUSTMENTS AS REQUIRED.
- PROVIDE SCALED DRAWINGS OF ALL ELECTRICAL ROOMS TO ELECTRICAL ENGINEERS FOR APPROVAL PRIOR TO ORDERING EQUIPMENT. DRAWINGS MUST INSURE PROPER CLEARANCES ARE BEING MAINTAINED PER THE N.E.C. WITH ACTUAL EQUIPMENT BEING INSTALLED. TYPICAL FOR ALL NEW AND EXISTING ELECTRICAL ROOMS.
- PROVIDE ARC FLASH LABELING FOR ALL ELECTRICAL EQUIPMENT PER N.E.C. AND N.F.P.A. 70E.
- ALL NEW BRANCH CIRCUITING BEING INSTALLED ON EXISTING WALLS TO BE TWO PIECE SURFACE MOUNTED. WIREMOLD V700 SERIES WITH ALL ACCESSORIES FOR COMPLETE SYSTEM. ALL VERTICAL WIRING INTO CEILING TO BE INSTALLED IN ROOM CORNERS WHERE POSSIBLE. ALL WIREMOLD INSTALLATIONS MUST BE APPROVED BY ARCHITECT AND ENGINEER PRIOR TO ROUGH-IN. PAINT AS REQUIRED.
- TERMINATIONS (LUGS, TERMINAL BLOCKS, ETC.) IN CIRCUIT BREAKERS, DISCONNECT SWITCHES, LIGHTING CONTRACTORS, RELAYS, PANEL BOARDS, THE SWITCHES, ETC. SHALL BE PROVIDED WITH 750 IN. TEMPERATURE. IF TERMINATIONS IN EQUIPMENT SUCH AS EXHAUST FANS, WATER HEATERS, AIR CONDITIONING UNITS, ETC. ARE RATED FOR 80°C ONLY, THE CONDUCTORS MUST BE RATED FOR 80°C AND USED IN COMPLIANCE WITH TABLE 310-18 OF CURRENT CODE AND SIZED FOR THE ENTIRE CIRCUIT.
- BRANCH CIRCUIT CONDUCTORS SHALL NOT BE SMALLER THAN 12 AWG AND WHERE BRANCH CIRCUIT CONDUCTOR RUNS FROM SOURCE (PANEL) TO THE LAST DEVICE, THE CIRCUIT EXCEEDS 100 FT. IN LENGTH, THE CONDUCTORS SHALL BE 10 AWG MINIMUM AND FOR THE ENTIRE LENGTH OF THE CIRCUIT. FOR RUNS OVER 200 FT. IN LENGTH, THE CONDUCTOR SHALL BE 10 AWG MINIMUM AND FOR THE ENTIRE LENGTH OF THE CIRCUIT. THE ABOVE APPLIES TO 120 VOLT CIRCUITS ONLY.
- ELECTRICAL CONTRACTOR SHALL VERIFY THE EXACT ELECTRICAL REQUIREMENTS OF ALL MECHANICAL AND PLUMBING EQUIPMENT WITH THE MECHANICAL AND PLUMBING CONTRACTORS PRIOR TO PURCHASING EQUIPMENT. VERIFY THE ELECTRICAL REQUIREMENTS WITH THE EQUIPMENT FURNISHER (NAME PLATE INFORMATION) AND MAKE CORRECTIONS AS REQUIRED AT INSTALLATIONAL COST TO THE OWNER. COORDINATE EQUIPMENT LOCATIONS WITH MECHANICAL ENGINEERING DRAWINGS AND CONTRACTORS PRIOR TO PURCHASE.
- CONTRACTOR SHALL ASSURE THAT ALL WORK CLEARANCES PER THE N.E.C. ARE MET OR EXCEEDED WITH EQUIPMENT. REPORT PRIOR TO ROUGH-IN. NOTIFY ARCHITECT OF ANY DISCREPANCIES WITH THE ELECTRICAL PLANS.
- BRANCH CIRCUITING WIRING SHALL NOT PASS THROUGH ELECTRICAL DEVICES (PANELS, DISCONNECT SWITCHES, CONTRACTORS, ETC.) OTHER THAN THOSE DESIGNED FOR THE USE AS A JUNCTION BOX.
- WIRE NUTS ARE NOT PERMITTED WITHIN THE ELECTRICAL PANEL OR ELECTRICAL DEVICES. ALL WIRING SHALL BE PULLED AT REQUIRED LENGTHS WITH OTHER SPACING WITHIN ELECTRICAL PANELS AND OTHER ELECTRICAL DEVICES.
- ALL EXISTING PANELS THAT ARE BEING PROVIDED WITH NEW HVAC UNIT CIRCUITS SHALL HAVE PANEL DIRECTORIES UPDATED AND TYPED.
- REFER TO MECHANICAL DRAWINGS FOR ALL MOTION SENSOR AND RELAY LOCATIONS AND QUANTITIES. RELAYS PROVIDED AND INSTALLED BY FRANKER. ELECTRICAL CONTRACTOR SHALL RE-CIRCUIT EXISTING HIGH VOLTAGE LIGHTING CIRCUIT THROUGH NEW RELAYS. EXTEND AND RECONNECT EXISTING CIRCUITING. INSTALL RELAYS, RELAYS TO BE PROVIDED BY OTHERS.

ELECTRICAL LEGEND

	HOMERUN TO PANELBOARD. LETTER INDICATES PANEL DESIGNATION, NUMBER INDICATES CIRCUIT NUMBER. SLASH MARK INDICATES NUMBER OF CONDUCTORS IN SIZE CONDUIT AS REQUIRED BY THE N.E.C. NO NEUTRAL FOR EACH CIRCUIT.
	CONDUIT CONCEALED IN CEILING OR WALL.
	CONDUIT CONCEALED IN SLAB OR BELOW GRADE.
	PANELBOARD, 277/480 VOLT, 3 PHASE, 4 WIRE. NEW OR EXISTING AS INDICATED.
	PANELBOARD, 120/208 VOLT, 3 PHASE, 4 WIRE. NEW OR EXISTING AS INDICATED.
	DRY-TYPE TRANSFORMER
	CONTROLLER/VRD, PROVIDED BY OTHERS.
	HEAVY DUTY DISCONNECT SWITCH, "F" INDICATES FUSED, "NF" INDICATES NEMA 3R ENCLOSURE.
	MOTOR, HORSEPOWER INDICATED.
	TOGGLE SWITCH, "2" INDICATES 2 POLE, "3" INDICATES 3 WAY, "4" INDICATES 4 WAY, "P" INDICATES PLUG LIGHT, "M" INDICATES MANUAL MOTOR CONTROLLER.
	LIGHT FIXTURE, TYPE INDICATED. "DB" INDICATES EXISTING FIXTURE TO BE REINSTALLED.
	DUPLEX RECEPTACLE, MOUNT AT 18" AFF UNLESS NOTED OTHERWISE.
	DUPLEX RECEPTACLE, GROUND FAULT INTERRUPTER, MOUNT AT 18" AFF UNLESS NOTED OTHERWISE.
	DATA/TELECOMMUNICATIONS OUTLET. PROVIDE 4"x4"x3" DEEP JUNCTION BOX WITH SINGLE GANG PASTER RING. STUB UP 1/2" E.G. TO PULLWIRE AND ACCESSIBLE CEILING SPACE.
	JUNCTION BOX
	FIRE ALARM DUCT MOUNTED SMOKE DETECTOR WITH SAMPLING TUBE AND RELAY. REFER TO SPECIFICATIONS.

ELECTRICAL FIRE ALARM NOTES

- FIRE ALARM SYSTEM AND ALL ASSOCIATED OPERATIONS SHALL BE IN ACCORDANCE WITH THE FOLLOWING:
- GEORGIA ACCESSIBILITY CODE
 - NFPA 72, NATIONAL FIRE ALARM CODE (2012) WITH GEORGIA AMENDMENTS (2014)
 - NFPA 70, NATIONAL ELECTRICAL CODE (2017)
 - NFPA 101, LIFE SAFETY CODE (2012) WITH GEORGIA AMENDMENTS (2013)
 - NFPA 96, STANDARDS FOR THE INSTALLATION OF AIR CONDITIONING AND VENTILATION SYSTEMS
 - OTHER APPLICABLE NFPA STANDARDS
- ALL HVAC DUCT MOUNTED SMOKE DETECTORS TO BE LOCATED ON THE EXTERIOR OF ASSOCIATED DUCT WORK AND WITH EASY ACCESS PROVIDED FOR SERVICING AND TESTING.
 - FIRE ALARM VENDOR SHALL SUBMIT TO LOCAL FIRE MARSHALL FOR FIRE ALARM PERMIT.
 - EXTEND EXISTING FIRE ALARM CONTROL PANEL FOR THE INSTALLATION OF NEW DUCT DETECTORS. MODIFY EXISTING PANEL AS NEEDED. PROVIDE UPDATED PROGRAMMING AS REQUIRED.
 - EXISTING MAIN FIRE ALARM CONTROL PANEL IS SIMPLEX.



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Revisions:

No.	Description

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