

FIRE ALARM GENERAL NOTES

1. THE CONTRACTOR SHALL SUBMIT FIRE MARSHAL APPROVED SHOP DRAWINGS OF THE PROPOSED FIRE ALARM SYSTEM, INCLUDING ALL DEVICES AND WIRING LAYOUTS TO ENGINEER FOR REVIEW. ANY REVISIONS AND/OR ADDITIONS REQUIRED BY THE LOCAL JURISDICTION PRIOR TO OBTAINING CERTIFICATE OF OCCUPANCY ARE THE RESPONSIBILITY OF THE CONTRACTOR AND WILL NOT BE REASON FOR ADDITIONAL COMPENSATION TO THE CONTRACTOR.
2. CONTRACTOR SHALL PROVIDE A FIRE ALARM SYSTEM COMPLIANT WITH ALL NATIONAL, STATE AND LOCAL CODES.
3. VERIFY LOCATION OF THE FIRE ALARM CONTROL PANEL AND (WHERE REQUIRED) ANNUNCIATOR PANEL WITH THE LOCAL AUTHORITY HAVING JURISDICTION PRIOR TO RING-IN.
4. INSTALL A SMOKE DETECTOR ABOVE THE FIRE ALARM CONTROL PANEL, AND POWER EXPANDER PANELS. WHERE REQUIRED BY THE AHJ (OR WHERE LOSS OF PANEL OR DEVICE WOULD AFFECT FIRE ALARM OPERATION), INSTALL SMOKE DETECTOR ABOVE FIRE ALARM ANNUNCIATOR PANELS AND OTHER PANELS OR DEVICES.
5. ALL ANNUNCIATOR AND INITIATING CIRCUITS AND THE BATTERY SHALL HAVE 30% SPARE CAPACITY.
6. REFERENCE MECHANICAL DRAWINGS FOR EXACT LOCATION OF ALL DUCTWORK FOR DETECTORS, FIRE/SMOKE DAMPERS AND CONTROL DAMPERS.
7. COORDINATE ALL WORK ON THE EXISTING SYSTEMS WITH THE OWNER. THE OWNER SHALL BE NOTIFIED IN WRITING FIVE (5) BUSINESS DAYS PRIOR TO ANY SCHEDULED SHUT DOWNS FOR ANY PORTION OF THE EXISTING FIRE ALARM SYSTEM, OR FIRE DETECTION SYSTEM. LIFE SAFETY SYSTEMS SUCH AS FIRE ALARM, FIRE DETECTION AND EMERGENCY LIGHTING MUST REMAIN ACTIVE AT ALL TIMES WHEN THE SPACE IS OCCUPIED.
8. ALL FIRE ALARM SYSTEM WIRING SHALL BE ROUTED WITH METALLIC CONDUITS, ALL JUNCTION BOXES, AND COVER PLATES TO EMERGENCY SYSTEM SHALL BE PAINTED RED.

REGARDLESS OF THE SIZE OR TYPE OF FIRE ALARM SYSTEM BEING INSTALLED, THERE IS A MINIMUM AMOUNT OF INFORMATION THAT SHALL BE PROVIDED. THE FOLLOWING IS A LISTING OF GENERAL INFORMATION REQUIRED.

THE DRAWINGS SHALL BE SCALED TO 1/8 OR 1/4 INCH TO THE FOOT. TO INSURE ACCURACY OF THE SCALE AFTER THE SHOP DRAWINGS HAVE BEEN REDUCED AND/OR COPIED, A GRAPHIC REPRESENTATION OF THE SCALE IS TO BE PROVIDED ON THE PLANS.

THE ADDRESS OF THE PROJECT, INCLUDING SUITE NUMBER AND THE BUSINESS NAME IS TO BE SHOWN WITHIN THE TITLE BLOCK.

A DETAILED PARAGRAPH DESCRIBING THE SCOPE OF WORK SHALL BE PLACED ON THE FRONT SHEET OF THE PLANS. THE SCOPE OF WORK SHOULD DESCRIBE IF THE PROJECT IS EITHER NEW CONSTRUCTION, TENANT FINISH, REMODEL, NEW ADDITION, FIRE ALARM PANEL UPGRADE, ETC. THE MORE DETAIL PROVIDED IN THE SCOPE OF WORK, THE LESS MARGIN FOR REJECTION. A LIST OF THE CODES, INCLUDING THE EDITION DATES THAT WERE USED TO DESIGN THE FIRE ALARM SYSTEM.

PROVIDE THE INFORMATION AS TO THE TYPE OF COMMUNICATION SYSTEM BEING UTILIZED. PROVIDE THE NAME, ADDRESS AND TYPE (CENTRAL, REMOTE, ETC.) OF THE MONITORING AGENCY.

SHOP DRAWINGS SHALL BE APPROVED BY THE FIRE MARSHAL BEFORE SUBMISSION TO ENGINEER AND SHALL INCLUDE FIRE MARSHAL APPROVAL INFORMATION REGARDING THE DESIGNER AND INSTALLER IS TO BE PROVIDED. THE COMPANY(S) INFORMATION IS TO INCLUDE:

- a. THE COMPANY NAME.
- b. THE STREET ADDRESS.
- c. THE TELEPHONE NUMBER.
- d. THE FAX NUMBER.
- e. THE CONTACT PERSON WITHIN THE COMPANY.

8. THE SUBMITTAL SHALL INCLUDE:

- 8.1 CUTSHEETS OF COMPONENTS WITH SUFFICIENT INFORMATION TO VERIFY CALCULATIONS.
- 8.2 VOLTAGE DROP CALCULATIONS FOR ALL PORTIONS OF THE SYSTEM BEING MODIFIED OR NEW.
- 8.3 BATTERY CALCULATIONS SHOWING REQUIREMENTS AND REQUIREMENTS MET BY THE PROPOSED INSTALLATION.
- 8.4 WIRING ONE LINE AND/OR RISER DIAGRAM OF ALL PORTIONS OF THE SYSTEM AFFECTED BY THE WORK OF THIS PROJECT.

1. THE SYSTEM SHALL IDENTIFY ANY OFF NORMAL CONDITION AND LOG EACH CONDITION INTO THE SYSTEM DATABASE AS AN EVENT.
 - a. THE SYSTEM SHALL AUTOMATICALLY DISPLAY ON THE CONTROL PANEL (AND ANY ANNUNCIATOR PANELS) THE FIRST EVENT OF THE HIGHEST PRIORITY BY TYPE WITH CORRESPONDING COLOR LIGHT ENERGIZED ON THE PANEL. THE PRIORITIES OF TYPES SHALL BE ALARM (RED), SUPERVISORY (YELLOW), TROUBLE (YELLOW) AND MONITOR (OR NORMAL) (GREEN).
2. GENERAL ALARM: WITH THE ACTIVATION ANY COMMON AREA FIRE DETECTORS (SMOKE OR HEAT), MANUAL PULL STATIONS, SPECIAL FIRE SUPPRESSION SYSTEM OR SPRINKLER SYSTEM, THE FOLLOWING SHALL OCCUR:
 - a. THE FIRE ALARM SYSTEM SHALL AUTOMATICALLY GO INTO ALARM. ALLHORN SHALL SOUND AND STROBES SHALL FLASH. (EMERGENCY VOICE/ALARM COMMANDS SHALL BE ANNOUNCED ON SPEAKERS.) RED LIGHT ON THE CONTROL PANEL SHALL ENERGIZE INDICATING ALARM.
 - b. INITIATE TRANSMISSION OF THE ALARM TO THE CENTRAL STATION.
 - c. SHUT DOWN ALL HVAC UNITS MEETING BUILDING CODE REQUIREMENTS ON THE AFFECTED FLOOR.

1. DUCT MOUNTED SMOKE DETECTORS SHALL BE MOUNTED ON THE FAR SIDE OF AIR FANS FROM ACCESS PANELS (DOWNSTREAM FROM SUPPLY FANS, UPSTREAM FROM RETURN UNITS) TO PREVENT POTENTIALLY DAMAGING HIGH AIR FLOWS AT THE DETECTOR WHEN THE ACCESS DOOR IS OPEN.

PROJECT GENERAL NOTES

1. ALL WORK SHALL COMPLY WITH CURRENT FEDERAL, STATE, AND LOCAL CODES AND ORDINANCES AS WELL AS THE CONSTRUCTION DOCUMENTS. CONTRACTOR SHALL REPORT ANY CONFLICTS TO THE ENGINEER AS SOON AS THEY ARE DISCOVERED.
2. THE COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE A.D.A.A.G. (AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES).
3. THE CONTRACTOR SHALL REVIEW THE DRAWINGS AND SPECIFICATIONS PRIOR TO BIDDING JOB AND DURING CONSTRUCTION. EXCEPT AS OTHERWISE NOTED, THE CONTRACTOR SHALL PROVIDE ALL EQUIPMENT, MATERIALS, AND LABOR FOR A COMPLETE PROJECT AS SHOWN IN THE DRAWINGS AND SPECIFICATIONS. DRAWINGS AND SPECIFICATIONS CARRY EQUAL IMPORTANCE AND ITEMS LISTED IN EITHER SHALL BE FURNISHED AS IF LISTED IN BOTH. ALSO REVIEW DETAILS AND RISER DIAGRAMS FOR ADDITIONAL ITEMS/INSTRUCTIONS WHETHER SPECIFICALLY REFERRED TO ON PLANS OR NOT.
4. THE CONTRACTOR MUST VISIT THE SITE TO FAMILIARIZE HIMSELF WITH THE EXISTING SITE CONDITIONS WHICH WILL BE AFFECTED DURING CONSTRUCTION PRIOR TO SUBMITTING HIS BID PROPOSAL, INCLUDING THE EXTENT OF DEMOLITION AND CONFLICTS WITH PLANS.
5. DRAWINGS ARE DIAGRAMMATIC IN NATURE AND SHOW THE GENERAL INSTALLATION OF EQUIPMENT AND MATERIALS IN RELATIONSHIP TO STRUCTURE AND OTHER TRADES. THEY MAY NOT SHOW EVERY REQUIRED OFFSET, FITTING, ETC. CONTRACTOR SHALL FIELD VERIFY ACTUAL JOB CONDITIONS AND COORDINATE WORK WITH OTHER TRADES PRIOR TO BIDDING JOB AND PRIOR TO ORDERING EQUIPMENT, FABRICATION OF MATERIALS, OR STARTING WORK. CONTRACTOR SHALL NOT SCALE THE DRAWINGS.
6. REFER TO ARCHITECTURAL PLANS/SPECIFICATIONS FOR A DETAILED DESCRIPTION OF ALL ALTERNATES AND PHASES.
7. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ALL ITEMS THAT AFFECT OTHER DISCIPLINES WITH THE CORRESPONDING CONTRACTOR AND THE GENERAL CONTRACTOR IF EQUIPMENT, MATERIALS, ETC. OTHER THAN THOSE SCHEDULED AND SPECIFIED (PENDING PRE-APPROVAL) ARE FURNISHED.
8. CHANGE ORDERS WILL NOT BE GRANTED DUE TO LACK OF COORDINATION WITH JOB CONDITIONS AND/OR OTHER CONTRACTORS.
9. EXISTING EQUIPMENT, DEVICE, AND FIXTURE LOCATIONS ARE SHOWN FOR REFERENCE ONLY. ADJUST EXACT INSTALLATION AND CONNECTION OF NEW ITEMS ACCORDING TO ACTUAL CONDITIONS.
10. G.C. SHALL CUT AND PATCH FLOOR, WALLS, AND ROOFS AS REQUIRED FOR INSTALLATION/DEMOLITION OF ELECTRICAL SYSTEMS.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR STORAGE OF RELOCATED EQUIPMENT AND MATERIALS DURING CONSTRUCTION. ITEMS DAMAGED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
12. UPON COMPLETION OF THE PROJECT THE CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS TO THE OWNER, ARCHITECT, AND ENGINEER SHOWING EQUIPMENT, DEVICES, FIXTURES, CIRCUITS, ETC. THAT DIFFERS FROM CONSTRUCTION DOCUMENTS AS THEY ARE ACTUALLY INSTALLED.
13. THE RESPONSIBILITY OF EACH CONTRACTOR IS NOT LIMITED TO THEIR SPECIFIC DISCIPLINE'S DRAWING SHEETS. REFER TO OTHER DISCIPLINE'S DRAWING SHEETS AS REQUIRED FOR ADDITIONAL INFORMATION/INSTRUCTIONS.
14. FIRE STOP ALL PENETRATIONS THROUGH RATED WALLS. SLEEVE IN ENTIRETY WITH APPROPRIATE SLEEVE MATERIAL.

ELECTRICAL GENERAL NOTES

- A. GENERAL:**
1. THE BUILDING SECURITY SYSTEM IS NOT PART OF THE WORK. BUILDING SECURITY SYSTEM BY OTHERS.
 2. TELEPHONE AND DATA SYSTEM AND WIRING IS NOT PART OF THE WORK. NOTED RACEWAYS ARE PART OF THE WORK.
- B. COORDINATION WITH OTHER TRADES:**
1. CONTRACTOR SHALL VERIFY ALL FURNITURE, MODULAR FURNITURE AND EQUIPMENT LOCATIONS WITH ARCHITECTURAL PLANS, ELEVATIONS AND REVIEWED SHOP DRAWINGS PRIOR TO MAKING THE ACTUAL ELECTRICAL INSTALLATION.
 2. ELECTRICAL CONTRACTOR SHALL VERIFY TOTAL CONNECT LOAD/HP WITH MECHANICAL AND ALL OTHER CONTRACTORS PRIOR TO WIRING OF ALL EQUIPMENT. MAKE ANY CHANGES TO OVERCURRENT DEVICES OR FEED SIZE PER THE NATIONAL ELECTRICAL CODE, APPLICABLE VERSION.
 3. ALL TEMPERATURE CONTROL WIRING SHALL BE FURNISHED AND INSTALLED BY OTHERS. INSTALL CONDUIT FOR CABLE IN EXPOSED AREAS. REFER TO MECHANICAL PLANS AND SPECIFICATIONS AND THE TEMPERATURE CONTROLS CONTRACTOR FOR EXACT LOCATION OF MECHANICAL EQUIPMENT AND THERMOSTAT LOCATIONS.
- C. CONDUIT AND WIRE:**
1. ALL POWER WIRING OF ALL SYSTEMS SHALL BE COPPER WITH INSULATED GROUND WIRE IN STEEL CONDUIT AND STEEL BOXES UNLESS SPECIFICALLY NOTED OTHERWISE.
 2. RACEWAYS SHALL BE ROUTED OVERHEAD UNLESS OTHERWISE NOTED ON THE DRAWINGS. UNDERSLAB RACEWAYS ARE ALLOWED FOR PANEL FEEDERS ONLY UNLESS OTHERWISE NOTED ON THE DRAWINGS. ALL PANELBOARD BRANCH CIRCUITS SHALL BE ROUTED OVERHEAD WHERE POSSIBLE.
 3. ALL CONNECTIONS TO EQUIPMENT SUBJECT TO MOVEMENT OR VIBRATIONS SHALL BE LIQUID TIGHT FLEXIBLE METAL CONDUIT, NOT LESS THAN 12" IN LENGTH, NOR GREATER THAN 36" IN LENGTH.
 4. ALL CABLES INSTALLED IN AIR HANDLING PLENUMS SHALL BE PLENUM RATED CABLE.
 5. MULTIPLE CIRCUITS ON THE SAME PHASE SHALL NOT BE COMBINED IN A SINGLE RACEWAY UNLESS OTHERWISE SHOWN ON THE CONTRACT DRAWINGS. SINGLE PHASE BRANCH CIRCUIT HOME RUNS MAY BE COMBINED AT THE CONTRACTOR'S DISCRETION NOT GREATER THAN THREE CIRCUITS CONSISTING OF (3) PHASE CONDUCTORS, (3) NEUTRAL CONDUCTORS, AND GROUNDING CONDUCTOR.
 6. THE MINIMUM WIRE SIZE SHALL BE #12 FOR ALL POWER CIRCUITS. EACH CIRCUIT SHALL HAVE A SEPARATE AND DESIGNATED NEUTRAL FROM THE PANEL. SEE BRANCH CIRCUIT VOLTAGE DROP TABLE FOR SIZING OF CONDUCTORS.
 7. THE MINIMUM CONDUIT SIZE IS 0.5".
 8. REFER TO THE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF BUILDING EXPANSION JOINTS. ALL CONDUITS CROSSING EXPANSION JOINTS SHALL BE INSTALLED WITH EXPANSION FITTINGS, UNLESS THE CONDUIT IS BELOW SLAB IN THE DENSE GRADE AGGREGATE. EXPANSION FITTINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE NEC AND MANUFACTURER'S WRITTEN RECOMMENDATIONS.
 9. ALL EXPOSED CONDUIT SHALL BE INSTALLED PARALLEL OR PERPENDICULAR, AND SHALL BE RIGID GALVANIZED UNLESS OTHERWISE NOTED.
 10. EXTERIOR EXPOSED CONDUIT RUNS WILL NOT BE PERMITTED, (EXCEPT FOR NEW SERVICE ENTRANCES FOR POWER OR TELEPHONE, OR NOTED OTHERWISE ON PLAN.)
 11. UNDER-SLAB CONDUIT SHALL NOT BE IN THE SLAB, BUT BELOW IT IN THE DENSE GRADE AGGREGATE, AND PARALLEL TO THE SLAB.
 12. ALL CONDUIT UNDER GROUND SHALL BE A MINIMUM OF 1". THIS APPLIES FOR BOTH LINE VOLTAGE AND DATA COMMUNICATIONS. ALL BENDS UNDERGROUND, HORIZONTAL OR VERTICAL, SHALL BE RIGID GALVANIZED STEEL, NO EXCEPTION.
 13. EACH DATA, TELEPHONE, AND CABLE TV OUTLET REQUIRES 0.75" CONDUIT, WITH PULL ROPE (LABELED AT EACH END FOR LOCATION AND PURPOSE) STUBBED 6" ABOVE NEAREST ACCESSIBLE CEILING UNLESS OTHERWISE NOTED ON PLANS. CONDUITS STUBBED UP ABOVE CEILING SHALL BE TURNED OUT 90°, PROVIDE INSULATED BUSHINGS ON ALL CONDUIT. LABEL CONDUIT TO IDENTIFY ITS INTENDED USE (IE: TELEPHONE, DATA, ETC.). EACH DATA/PHONE BOX SHALL BE A 4" SQUARE BOX WITH SINGLE GANG MUD RING.
 14. MAINTAIN MAXIMUM SPACE BETWEEN LOW VOLTAGE CABLES WITH METAL CONDUCTORS AND SOURCES OF INTERFERENCE INCLUDING: POWER WIRING, ALL LIGHT FIXTURES, AND ESPECIALLY MOTORS AND TRANSFORMERS. ELECTRICAL INTERFERENCE IS REDUCED BY DISTANCE FROM SOURCES.
 15. FEEDER ROUTING INDICATED ON THE DRAWINGS DOES NOT INDICATE NEC CODE REQUIRED PULL BOXES. E.C. SHALL BE RESPONSIBLE FOR LOCATING AND INSTALLING REQUIRED PULL BOXES FOR EACH FEEDER.
 16. ALL CONDUIT, HANGERS, SUPPORTS, AND ACCESSORIES SHALL BE INSTALLED AS HIGH AS POSSIBLE TO MAINTAIN MAXIMUM CLEARANCE ABOVE THE CEILING.
 17. E.C. SHALL COORDINATE WITH ARCHITECT AND G.C. FOR ANY TRENCING REQUIRED FOR FLOOR OUTLETS AND REPAIR FLOOR AFTER INSTALLATION.
 18. TERMINATE CONDUCTORS PER EQUIPMENT MANUFACTURER'S RECOMMENDED TORQUE VALUES. IN THE ABSENCE OF MANUFACTURER'S RECOMMENDED TORQUE VALUES, SEE NEC 2017 ARTICLE 110.14 AND "INFORMATIVE ANNEX I TIGHTENING TORQUE TABLES" (TABLE I.1, TABLE I.2, AND TABLE I.3) FOR TIGHTEN SCREW-TYPE CONNECTIONS FOR POWER AND LIGHTING CIRCUITS.
- D. DEVICES AND BOXES:**
1. WHERE SEVERAL DEVICES ARE GANGED TOGETHER, THE COVERPLATE SHALL BE OF THE GANGED STYLE FOR THE NUMBER OF DEVICES USED.
 2. RECEPTACLES SHALL NOT BE WIRED TO THE LOAD SIDE OF A GFCI RECEPTACLE.
 3. REFER TO THE ARCHITECTURAL DETAILS AND ELEVATIONS FOR MOUNTING HEIGHTS OF SWITCHES, RECEPTACLES, COUNTER TOP DEVICES, TELEPHONE OUTLETS, AND TELEVISION OUTLETS, ETC. ARCHITECTURAL DETAILS OVERRIDE ELECTRICAL SYMBOLS LIST.
 4. WEATHERPROOF WHILE IN USE RECEPTACLE COVERS SHALL BE METAL, AND PAINTABLE UNLESS OTHERWISE NOTED.
- E. ELECTRICAL OTHER:**
1. ALL PANELS SHALL BE PANELBOARD CONSTRUCTION WITH BOLT ON BREAKERS. TANDEM BREAKERS SHALL NOT BE USED.
 2. UPON COMPLETION OF PROJECT, E.C. SHALL PROVIDE A FULL TYPED AND UPDATED PANEL DIRECTORY FOR EACH PANELBOARD AFFECTED BY THE SCOPE OF THIS PROJECT.

ELECTRICAL SYMBOL LIST

ABBR.	DESCRIPTION	MOUNTING OR AS INDICATED
	LIGHT FIXTURE W/ LETTER DESIGNATION	SURFACE OR RECESSED
	LIGHT FIXTURE W/ EM POWER W/ LETTER DESIGNATION	SURFACE OR RECESSED
	LIGHT FIXTURE W/ LETTER DESIGNATION	WALL, SURFACE, OR SUSPENDED
	LIGHT FIXTURE W/ EMERGENCY POWER W/ LETTER DESIGNATION	WALL, SURFACE, OR SUSPENDED
	LIGHT FIXTURE W/ LETTER DESIGNATION	SURFACE OR RECESSED
	LIGHT FIXTURE W/ EMERGENCY POWER W/ LETTER DESIGNATION	SURFACE OR RECESSED
	LIGHT FIXTURE W/ LETTER DESIGNATION	WALL
	LIGHT FIXTURE W/ EMERGENCY POWER W/ LETTER DESIGNATION	WALL
	EXIT LIGHT W/ LETTER DESIG. (SHADE INDICATES FACE DIRECTION)	CEILING
	EXIT LIGHT W/ LETTER DESIG. (SHADE INDICATES FACE DIRECTION)	WALL - 6" ABOVE DOOR
	EMERGENCY LIGHT FIXTURE W/ LETTER DESIGNATION	WALL - 12" BFC
	SINGLE POLE SWITCH	WALL - 44" AFF
	THREE-WAY SWITCH	WALL - 44" AFF
	FOUR-WAY SWITCH	WALL - 44" AFF
	SWITCH WITH PILOT LIGHT	WALL - 44" AFF
	KEY SWITCH	WALL - 44" AFF
	TIME SWITCH (SET FOR 30 MIN.)	WALL - 44" AFF
	HORSE POWER RATED TOGGLE SWITCH	--
	DIMMER SWITCH	WALL - 44" AFF
	SWITCHING SCHEME	--
	MOTION DETECTOR (TYPE #)	WALL - 44" AFF
	PIR OCCUPANCY DETECTOR W/POWER PACK (TYPE #)	CEILING
	ULTRA SONIC SENSOR (TYPE #)	CEILING
	SINGLE RECEPTACLE (SAME RATING AS CIRCUIT)	WALL - 18" AFF
	ISOLATED GROUND DUPLEX RECEPTACLE	WALL - 18" AFF
	DUPLEX RECEPTACLE (20 AMP)	WALL - 18" AFF
	CEILING MOUNTED RECEPTACLE	CEILING
	TAMPER-RESISTANT DUPLEX RECEPTACLE (20 AMP)	WALL - 18" AFF
	QUAD-PLEX RECEPTACLE	WALL - 18" AFF
	QUAD DUPLEX RECEPTACLE	WALL - 18" AFF
	GFI DUPLEX RECEPTACLE (20 AMP)	WALL - 18" AFF
	GFI QUAD RECEPTACLE	WALL - 18" AFF
	SPECIAL OUTLET (SEE SCHEDULE)	WALL, FLOOR
	TELEPHONE OUTLET	WALL, FLOOR
	DATA OUTLET	WALL - 18" AFF
	COMBINATION DATA AND DATA OUTLET	WALL - 18" AFF
	CLOCK OUTLET	WALL
	CABLE T.V. OUTLET	AS NOTED
	CONTROLLER	WALL - 48" AFF
	THERMOSTAT	48" AFF (SEE MECH. DWGS.)
	JUNCTION BOX	AS NOTED
	PULL BOX	WALL - 48" AFF
	SAFETY SWITCH (NON-FUSED)	6'-0" AFF TO TOP
	SAFETY SWITCH (FUSED)	6'-0" AFF TO TOP
	TOGGLE DISCONNECT SWITCH	WALL
	COMBINATION STARTER	WALL
	EMERGENCY STOP-MUSHROOM HEAD MAINTAINED PUSH BUTTON	44" AFF OR AFG
	MOTOR	AS NOTED
	ELECTRICAL PANELBOARD (SURFACE MTD.)	48" AFF TO CENTER
	ELECTRICAL PANELBOARD (FLUSH MTD.)	48" AFF TO CENTER
	TELEPHONE TERMINAL BOARD (SURFACE MTD.)	NOTE 4

FIRE ALARM	
	FIRE ALARM REMOTE ANNUNCIATOR
	FIRE ALARM CONTROL PANEL
	SPEAKER/STROBE
	STROBE
	SMOKE DETECTOR
	HEAT DETECTOR
	FIRE/SMOKE DAMPER
	SMOKE DAMPER
	MANUAL PULL STATION
	HORN/SPEAKER
	DUCT MOUNTED SMOKE DETECTOR
	FIRE ALARM TEST SWITCH
	RELAY
	TAMPER SWITCH
	FLOW SWITCH
	FIRE ALARM BELL

SYMBOLS LIST NOTES:

1. SOME MAY NOT BE USED IN THIS SET OF PLANS.
2. ABBREVIATIONS MAY BE WITH OR WITHOUT PERIODS.
3. ALL MOUNTINGS APPLY UNLESS OTHERWISE NOTED.
4. TTB SHALL BE MINIMUM VOID FREE. AC 3/4" PLYWOOD WITH A FACE SHOWING, KILN DRIED WITH MAXIMUM 15% MOISTURE CONTENT, SECURELY ATTACHED TO WALL FRAMING MEMBERS, WITH FIRE RETARDANT COATING, OR INTUMESCENT WHITE PAINT. COVER WALL WITH TTB PLYWOOD FROM FLOOR TO 8' AFF.
5. LIGHT FIXTURE CAPITAL LETTER DESIGNATIONS KEY TO MATCHING ENTRIES IN THE LIGHTING FIXTURE SCHEDULE.
6. LIGHT FIXTURE SMALL CASE LETTER DESIGNATIONS (IF SHOWN) REPRESENT SWITCHING REQUIREMENTS.
7. ALL MOUNTING HEIGHTS SHALL BE TO CENTERLINE OF DEVICE U.O.N.

ELECTRICAL CONTACTS

POWER DESIGN:	UTILITY COMPANY:
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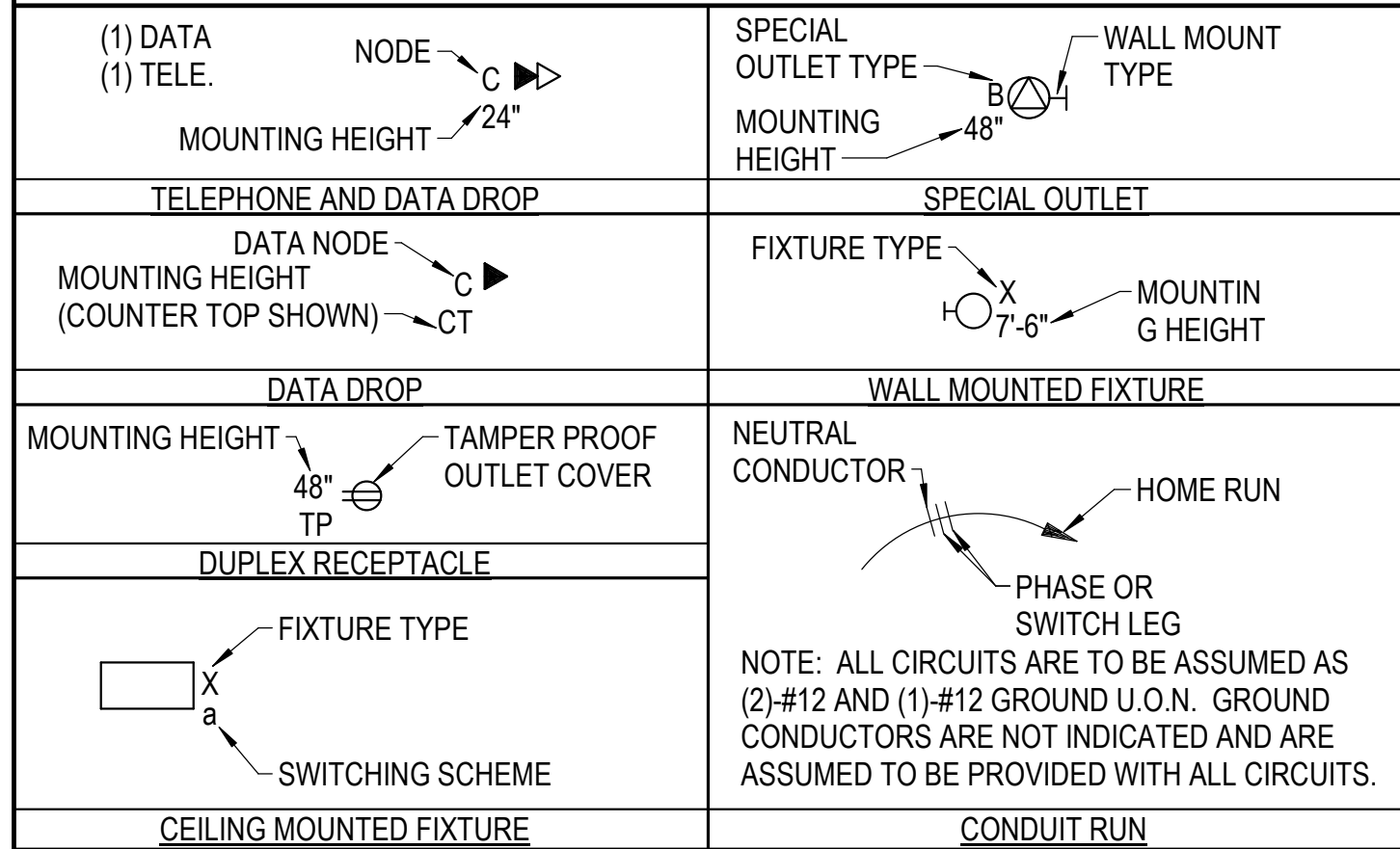
ABBREVIATIONS

ABBREVIATIONS	DESCRIPTION		
A	AMPERES	IG	ISOLATED GROUND
AV	AUDIOVISUAL	IP	INTERNET PROTOCOL
AFB	ABOVE FINISHED FLOOR	J-BOX	JUNCTION BOX
AFG	ABOVE FINISHED GRADE	LTS	LIGHTING
AHJ	AUTHORITIES HAVING JURISDICTION	MAX	MAXIMUM
ATS	AUTOMATIC TRANSFER SWITCH	MC	MECHANICAL CONTRACTOR
BFC	BELOW FINISHED CEILING	MCA	MINIMUM CIRCUIT AMPACITY
BFG	BELOW FINISHED GRADE	MIN	MINIMUM
C	CONDUIT	MOCP	MAXIMUM OVERCURRENT PROTECTION
CB	CIRCUIT BREAKER	(N)	NEW
CLG	CEILING	NL	NIGHT LIGHT
CT	MOUNTED 6" ABOVE COUNTER TOP	NO	NORMALLY OPEN
DN	DOWN	NTS	NOT TO SCALE
(E)	EXISTING TO REMAIN	P	POLE
EC	ELECTRICAL CONTRACTOR	(R)	RELOCATE/RELOCATED
EM	INDICATES DEVICE ON EMERGENCY CIRCUIT OR W/ AN EMERGENCY BATTERY	SPD	SURGE PROTECTIVE DEVICE
FLA	FULL LOAD AMPS	TC	TEMPERATURE CONTROL CONTRACTOR
FVNR	FULL VOLTAGE NON-REVERSING	TP	TAMPER PROOF OUTLET COVERS
FVR	FULL VOLTAGE REVERSING	TR	TAMPER RESISTANT DEVICE
FWD	FORWARD	TYP	TYPICAL
GC	GENERAL CONTRACTOR	UCT	MOUNTED UNDER COUNTER TOP
GFC	GROUNDING ELECTRODE CONDUCTOR	UON	UNLESS OTHERWISE NOTED
GFI/GFCI	GROUND FAULT INTERRUPTER	V	VOLTS
G/GND	GROUND	WP	WEATHER PROOF
HP	HORSE POWER	WPI	WP IN SERVICE (WITH PLUG IN SERVICE)
		WR	WEATHER RESISTANT TYPE DEVICE

ABBREVIATION SCHEDULE NOTES:

1. SOME MAY NOT BE USED IN THIS SET OF PLANS.
2. ABBREVIATIONS MAY BE WITH OR WITHOUT PERIODS.

CIRCUITING LEGEND



BRANCH VOLT DROP TABLE

FOR COPPER SINGLE PHASE 3% VOLTAGE DROP, 20 A CIRCUIT BREAKER			
MAXIMUM DISTANCE	PHASE & NEUTRAL SIZE	EQUIPMENT GROUND SIZE	
120V	277V	#12	#12
100'	250'	#10	#10
175'	400'	#8	#8
275'	600'	#6	#6
475'	1000'	#6	#6

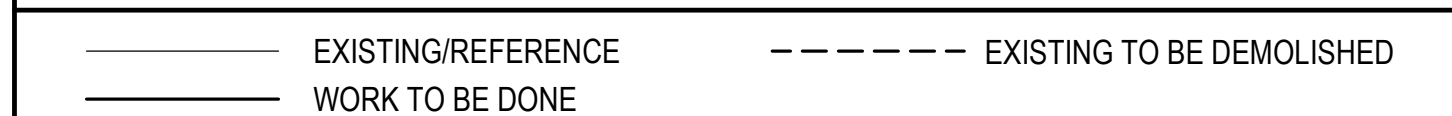
VOLTAGE DROP TABLE NOTES:

1. DISTANCE GIVEN IS THE MAXIMUM FOR THE LONGEST RUN FOR ANY BRANCH, PANEL TO LOAD.
2. THE DISTANCES ARE FOR THE ENTIRE RUN IN THE GIVEN WIRE SIZE.
3. WIRE REDUCTIONS (WHERE REQUIRED BY DEVICE CONSTRUCTION) SHALL BE MADE WITHIN 3 FEET OF THE SOURCE OR LOAD, AND SHALL BE ONLY DOWN TO THE LARGEST WIRE SIZE THE DEVICE ALLOWS.
4. OTHER NEC DERATING FACTORS ARE NOT INCLUDED IN THE WIRE SIZES IN THIS TABLE.

CODE INFORMATION

2020 NATIONAL ELECTRICAL CODE WITH MABCD AMENDMENTS

LINETYPES LEGEND



SHEET LIST TABLE

SEQ.1	ELECTRICAL COVERSHEET
SEQ.1	STADIUM ELECTRICAL DEMO PLANS
SEQ.1	NORTH LOCKER ROOM - ELEC. IMPROVEMENT PLANS
SEQ.2	PRESSBOX - ELECTRICAL IMPROVEMENT PLANS
FE.1	SOUTH LOCKER ROOM - ELECTRICAL PLANS
SEQ.3	ELECTRICAL DETAILS
SEQ.1	ELECTRICAL SCHEDULES



ELECTRICAL COVERSHEET

PROJECT NO.	1701010567	
DATE	11-24-2021	
SCALE	AS NOTED	
DESIGNED	DRAWN	CHECKED
GAKH	GAKH	JRBW

0	ISSUED FOR CONSTRUCTION	11-24-21
NO.	REVISION	DATE
SHEET NO.		
SEQ.1		