

1 ELECTRICAL RISER DIAGRAM  
SCALE: NOT TO SCALE

MARK	SETS	FEEDER	AMPS	NOTE
1	2	4#600KCMIL, 4°C.	800A	-
2	1	1#1/0(G), 1-1/2°C.	GND	-
3	1	4#1, 1#6(G), 1-1/4°C.	100A	-
4	1	4#3/0, 1#6(G), 2°C.	200A	-
5	1	NOT USED	-	-
6	1	4#600 KCMIL, 1#3(G), 4°C.	400A	-
7	1	4#1/0, 1#6(G), 2°C.	150A	-
8	-	-	-	-

**EMERGENCY SYSTEM NOTES:**

- ALL ELECTRICAL WORK SHALL BE COMPLETED WITH STRICT ACCORDANCE TO ARTICLE 708 OF THE NEC. FOR CRITICAL OPERATIONS POWER SYSTEMS.
- GEAR FOR EMERGENCY OPERATION TO BE LEGIBLY MARKED AS SUCH. ANY RECEPTACLES TIED TO EMERGENCY PANELS SHALL BE RED AND SHALL HAVE RED FACEPLATES, DISTINGUISHING THEM FROM NORMAL OUTLETS, AND ARE TO BE LABELED AS EMERGENCY.
- ALL FEEDER AND BRANCH WIRING TO BE INSTALLED WITH STRICT ACCORDANCE TO 708.10(C) OF THE NEC. ADDITIONALLY, ANY WIRING ROUTED BETWEEN THE EMERGENCY BUNKER SECTION AND THE REST OF THE BUILDING SHALL BE INSTALLED UNDERGROUND. FINALLY, ALL WIRING BELOW ACCESS FLOOR SYSTEM WITHIN BUNKER IS TO BE PLENUM RATED.
- A 3RD PARTY TESTING AGENCY SHALL TEST THE SYSTEM AND REPORT ANY MALFUNCTIONS. THE CONTRACTOR SHALL BE AVAILABLE DURING TESTING, AND ANY MALFUNCTIONS SHALL BE RESOLVED AT THE CONTRACTOR'S EXPENSE. SEE BOOK SPECS FOR ADDITIONAL NOTES ON TESTING SYSTEM DURING COMMISSIONING.

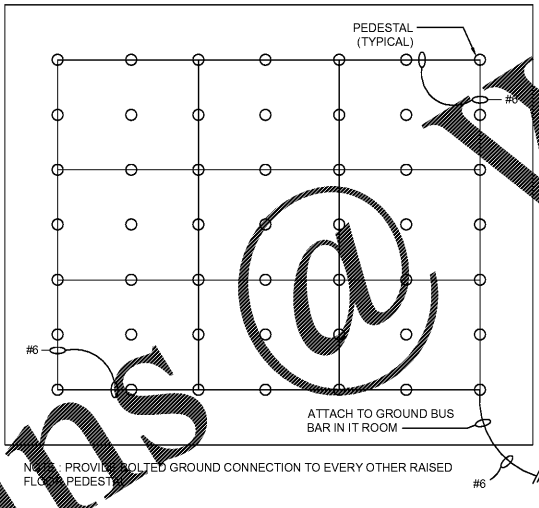
**GENERAL NOTES:**

- IF ALTERNATES ARE SUBMITTED FOR GEAR, PANELS, ATS, GENERATOR, AND GENERATOR'S ACCESSORIES SPECIFIED ON THIS OR ANY OTHER SHEET, CONTRACTOR MUST DEMONSTRATE THAT ALTERNATES WILL PROVIDE THE SAME FORM AND FUNCTION, AND MEET THE OWNER'S NEEDS. SUBMITTAL MUST INCLUDE CUT SHEETS, DIMENSIONS, WIRING DIAGRAMS, AND A NARRATIVE DESCRIBING THE DIFFERENCES BETWEEN SPECIFIED AND SUBMITTED ITEMS. NARRATIVE MUST ALSO DETAIL HOW AND WHY EQUIPMENT WILL MEET THE SAME FORM AND FUNCTION AS THE OWNER'S NEEDS, AND SHOW THAT THE EQUIPMENT WILL BE COMPATIBLE WITH OTHER EQUIPMENT SPECIFIED. FINALLY, CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND PROVIDING COORDINATION WITH ALL OTHER DISCIPLINES INCLUDING BUT NOT LIMITED TO ARCHITECTURAL, STRUCTURAL, AND MECHANICAL. THIS INCLUDES VERIFYING AND IMPLEMENTING DIMENSIONS, CLEARANCES, AND MOUNTING REQUIREMENTS. ALTERNATES FOR PANELS AND BREAKERS MUST BE SUBMITTED WITH THE SHORT CIRCUIT COORDINATION STUDY.
- PROVIDE LIGHTNING PROTECTION SYSTEM THROUGHOUT BUILDING. SEE BOOK SPECS FOR DETAIL.

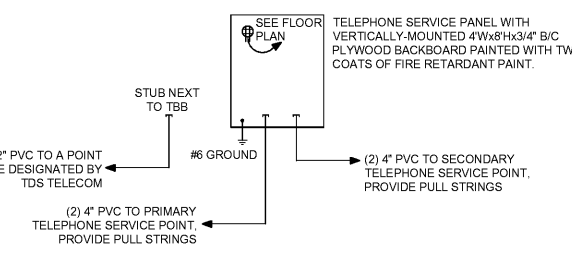
**LEGEND NOTES:**

- CURRENT TECHNOLOGIES SURGE SUPPRESSOR MODEL SL3-200-208-3Y-MD.
- ATS-1 FOR BUNKER EMERGENCY POWER. KOHLER 400A KBS WITH BYPASS ISOLATION FOR MAINTENANCE PURPOSES. TO BE EOMH AND LISTED FOR EMERGENCY USE. UPON LOSS OF NORMAL POWER, ATS TO SEND START SIGNAL TO GENERATOR TO INITIATE EMERGENCY POWER.
- ATS-2 FOR LIFE SAFETY DEVICES. KOHLER 150A KBS WITH BYPASS ISOLATION FOR MAINTENANCE PURPOSES. TO BE EOMH AND LISTED FOR EMERGENCY USE.
- PANELS TO BE SPECIFIED FOR SHORT CIRCUIT COORDINATION. SEE NOTES ON PANEL SCHEDULES FOR MANUFACTURER AND MODEL NUMBERS. COORDINATE REQUIREMENTS WITH MANUFACTURER.
- PUSH BUTTON IN KNOX BOX MOUNTED ON EXTERIOR OF BUILDING FOR SHUTTING OFF GENERATOR EMERGENCY POWER. TIE TO SHUNT TRIP GENERATOR DISCONNECT IN REMOTE BUNKER.
- PUSH BUTTON IN KNOX BOX MOUNTED ON EXTERIOR OF BUILDING FOR SHUTTING OFF NORMAL POWER. TIE TO SHUNT TRIP MAIN CIRCUIT BREAKER ON MDP.
- CURRENT TECHNOLOGIES SURGE SUPPRESSOR MODEL CG-200-120/208-3GY.
- TIE TO BOTH GENERATOR BREAKERS WITHIN REMOTE BUNKER FOR SHUNT TRIP ACTIVATION. SEE KEYNOTES 9 AND 10.
- 400/3/3R SHUNT TRIP BREAKER. EATON TYPE KD THERMAL MAGNETIC.
- 100/3/3R SHUNT TRIP BREAKER. EATON TYPE GHB OR FD THERMAL MAGNETIC.
- PHOTOCELL ON ROOF FACING TRUE NORTH TORX MODEL 2101.
- CONTACTORS AS SCHEDULED.
- ECLYPSE DEVICE WITH INTEGRAL TIMECLOCK. SEE E-1.2 FOR DETAILS.
- ATS-3 FOR GEN TO GEN CONNECTION. KOHLER 400A KCS WITH MPAC 1500 CONTROLLER AND EXTERNAL BATTERY MODULE CIRCUITED TO EB2-16.18 VERIFY WIRING REQUIREMENTS WITH MANUFACTURER. TO BE EOMH AND LISTED FOR EMERGENCY USE. PREFERRED SOURCE TO BE SET TO PORTABLE GENERATOR CONNECTION TO ENABLE THE FOLLOWING CONDITIONS:
  - IF BOTH GENERATORS ARE OFF, ATS TO SIT IDLE ON PORTABLE GENERATOR.
  - IF ONLY PERMANENT GENERATOR IS ON, ATS TO SWITCH TO PERMANENT GENERATOR.
  - IF ONLY PORTABLE GENERATOR IS ON OR BOTH GENERATORS ARE ON, ATS TO SWITCH TO PORTABLE GENERATOR.
- GENERATOR CONNECTION BOX. TRYSTRAN GDS-004W-SM, 400A, NEMA 3R, PAD LOCKABLE.
- 400A MLO, NEMA 3R, 12 CIRCUITS, 3 PHASE, 4 WIRE PANEL WITH BREAKERS AS SHOWN.
- METER TO BE PEDESTAL MOUNTED BESIDE TRANSFORMER. PROVIDE CONDUIT BETWEEN TRANSFORMER AND PEDESTAL.

3 ACCESS FLOOR GROUNDING SYSTEM  
SCALE: NOT TO SCALE



2 SERVICE ENTRANCE GROUNDING SYSTEM  
SCALE: NOT TO SCALE



3 TELECOMMUNICATION RISER DIAGRAM  
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**ELECTRICAL LEGEND**

HA-1.3.5 ADJACENT TO ARROW INDICATES HOMERUN OF CIRCUIT 1.3.5 TO PANEL HA. SLASH MARKS INDICATE THE NUMBER OF #12 CONDUCTORS. EQUIPMENT GROUNDING CONDUCTORS ARE REQUIRED BUT ARE NOT SHOWN. NO MARKS INDICATE TWO #12 CONDUCTORS AND ONE #12 GROUND. NUMBERS AND LOWER CASE LETTERS INDICATE CIRCUIT AND SWITCH LEG DESIGNATION, RESPECTIVELY. CAPITAL LETTERS DESIGNATE FIXTURE TYPE.

- NOTES:
- ALL MOUNTING HEIGHTS ARE TO CENTERLINE OF DEVICES UNO, AND SHALL BE THE MOUNTING HEIGHT USED, UNLESS SPECIFICALLY INDICATED OTHERWISE ON THE DRAWINGS.
  - ALL SYMBOLS INDICATED IN THIS LEGEND MAY NOT NECESSARILY BE USED ON THE PLANS. REFER TO SPECIFICATIONS FOR DEVICE AND EQUIPMENT SPECIFICATIONS.
  - REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF LIGHTING FIXTURES.
  - MOUNTING HEIGHTS FOR LIGHT SWITCHES, RECEPTACLE, FIRE ALARM DEVICES, AND ETC., COMPLY WITH A.D.A. DO NOT VARY THESE DIMENSIONS.
  - REFER TO ARCHITECTURAL PLANS FOR EXACT DEVICE LOCATIONS AND DIMENSIONS.

RECESSED OR SURFACE MOUNTED FLUORESCENT FIXTURE, SHADING INDICATES EMERGENCY FIXTURE

FLUORESCENT STRIP FIXTURE - MOUNTING AS INDICATED, SHADING INDICATES EMERGENCY FIXTURE

RECESSED OR SURFACE MOUNTED DOWNLIGHT, SHADING INDICATES EMERGENCY FIXTURE

WALL MOUNTED FIXTURE, SHADING INDICATES EMERGENCY FIXTURE

SURFACE OR RECESSED DIRECTIONAL FIXTURE

CEILING OR WALL MOUNTED EXIT SIGN, ARROWS DENOTE DIRECTION OF EGRESS, DARKENED QUADRANT INDICATES FACE

TRACK LIGHTING, TRACK LENGTH AS INDICATED

REMOTE BATTERY UNIT HEADS, SEE FIXTURE SCHEDULE FOR ADDITIONAL INFORMATION

WALL MOUNTED EMERGENCY LIGHTING UNIT AND BATTERY HEADS

DIRECTIONAL LANDSCAPE FIXTURE

CEILING OR WALL MOUNTED SECTION BOX, HEIGHT AS INDICATED

COAXIAL CABLE CONNECTION, MOUNTING HEIGHT PER ARCHITECTURAL DRAWINGS UNO

WALL MOUNTED EMERGENCY OR PANIC SENSOR WITH LOW VOLTAGE SWITCH, SEE LIGHTING CONTROLS NOTES ON E-2.1

SINGLE POLE TOGGLE SWITCH, LOW VOLTAGE UNO, 48" AFF UNO

THREE-WAY TOGGLE SWITCH - 48" AFF

SWITCH - 48" AFF, SEE LIGHTING CONTROL NOTES ON E-2.1

4-CHANNEL DIMM SWITCH - 48" AFF, SEE LIGHTING CONTROL NOTES ON E-2.1

TIMER OPERATED SWITCH, MOUNTED 18" AFF

SINGLE POLE TOGGLE SWITCH WITH PILOT LIGHT IN TOGGLE MOUNT 48" AFF

CEILING MOUNTED OCCUPANCY SENSOR, SEE LIGHTING CONTROL NOTES ON E-2.1

CEILING MOUNTED OCCUPANCY SENSOR, SEE LIGHTING CONTROL NOTES ON E-2.1

MOTION SENSOR MOUNTED IN TOP CORNER OF WALL AND CEILING, SEE LIGHTING CONTROL NOTES ON E-2.1

FLUSH RECEPTACLE - 18" AFF OR AT HEIGHT INDICATED, NEMA 5-20R

FLUSH RECEPTACLE - 18" AFF OR AT HEIGHT INDICATED, NEMA 5-20R

FLUSH RECEPTACLE - ISOLATED GROUND - 18" AFF NEMA 5-20R

DUPLEX RECEPTACLE, TOP RECEPTACLE SWITCH - 18" AFF UNLESS NOTED, NEMA 5-20R

SINGLE RECEPTACLE STRAIGHT BLADE - HEIGHT AS INDICATED

SPECIAL PURPOSE RECEPTACLE - TYPE AND MOUNTING AS INDICATED

SURFACE MOUNTED MULTI-OUTLET RACEWAY SYSTEM FOR CONDUCTORS AND DEVICES AS SPECIFIED, LENGTH AS INDICATED

POWER AND TELEPHONE POLE

WALL MOUNTED JUNCTION BOX FOR CARD READER - 48" AFF

EQUIPMENT AS NOTED

FLUSH FLOOR BOX WITH DOUBLE DUPLEX RECEPTACLE, NEMA 5-20R

FLUSH FLOOR BOX WITH DUPLEX RECEPTACLE, NEMA 5-20R

FLUSH FLOOR BOX WITH COMBINATION TELEPHONE/DATA OUTLET

FLUSH FLOOR BOX WITH TELEPHONE OUTLET

FLUSH FLOOR BOX WITH DATA OUTLET

FLUSH CEILING BOX WITH COMBINATION TELEPHONE/DATA OUTLET

FLUSH CEILING BOX WITH TELEPHONE OUTLET

FLUSH CEILING BOX WITH DATA OUTLET

DATA SYSTEM OUTLET MOUNT 18" AFF

TELEPHONE OUTLET MOUNT 18" AFF

COMBINATION DATA/TELEPHONE OUTLET, MOUNT 18" AFF

FIRE ALARM CONTROL PANEL - SURFACE / FLUSH

FIRE ALARM PULL STATION - 48" AFF

FIRE ALARM SYSTEM AUDIO/VISUAL SIGNAL, ADA APPROVED, BOTTOM MOUNTED 80" AFF 75 CANDELA UNO

FIRE ALARM VISUAL SIGNAL (STROBE), ADA APPROVED, BOTTOM MOUNTED 80" AFF 75 CANDELA UNO

CEILING OR WALL MOUNTED SMOKE DETECTOR

FIRE ALARM HEAT DETECTOR

FIRE ALARM DUCT MOUNTED SMOKE DETECTOR

FLOW AND TAMPER SWITCHES

CARBON MONOXIDE DETECTOR

CONDUIT INSTALLED CONCEALED IN WALLS AND/OR ABOVE CEILING

CONDUIT INSTALLED CONCEALED IN/OR BELOW FLOOR SLAB OR BELOW GRADE

CONDUIT INSTALLED EXPOSED

ISOLATED GROUND CONDUCTOR

FLEXIBLE METALLIC CONDUIT 6' MAXIMUM LENGTH

SYSTEMS GROUND

CONDUIT TURNING UP/CONDUIT TURNING DOWN

CONDUIT TERMINATION, STUB-OUT WITH THREADED OR SET SCREW CAP

EQUIPMENT BACKBOARD - 3/4" X 4" X 8" PLYWOOD, UNLESS NOTED

PANEL BOARD - SURFACE OR FLUSH MOUNTED

NON-FUSED DISCONNECT SWITCH - RATING/POLES/ENCLOSURE AS INDICATED (ie.: 30/3/3R)

FUSED DISCONNECT SWITCH - RATING/POLES/ENCLOSURE/USE AS INDICATED (ie.: 60/3/3R/40)

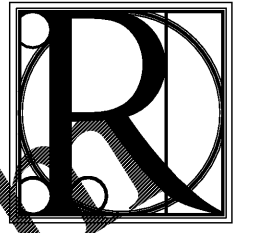
MOTOR, HORSEPOWER AS INDICATED, "F" INDICATES FRACTIONAL HORSEPOWER

MOTOR RATED SWITCH WITH THERMAL OVERLOAD PROTECTION

TRANSFORMER - VOLTAGE/PHASE/KVA AS INDICATED OR SCHEDULED

ABBREVIATIONS:

ACC	ABOVE ACCESSIBLE CEILING	FACP	FIRE ALARM CONTROL PANEL
ACT	ABOVE COUNTER TOP	FTR	FUTURE
AFB	ABOVE FINISHED FLOOR	GFCI	GROUND FAULT CIRCUIT INTERRUPTER
AIC	AVAILABLE INTERRUPTING CURRENT	KEF	KITCHEN EXHAUST FAN
ATS	AUTOMATIC TRANSFER SWITCH	KFCC	KITCHEN FAN CONTROL CENTER
BOH	BACK OF HOUSE	LV	LOW VOLTAGE
C	CONDUIT	MRS	MOTOR-RATED SWITCH
CL	CENTERLINE	MTS	MANUAL TRANSFER SWITCH
COMP	COMPRESSOR	N	NEW
COND	CONDENSER	NL	NIGHT LIGHT, UNSWITCHED, "ON" 24/7
EC	ELECTRICAL CONTRACTOR	POS	POINT OF SALE
EDF	ELECTRIC DRINKING FOUNTAIN	RTU	ROOF TOP UNIT
EF	EXHAUST FAN	SER	SERVICE ENTRANCE RATED
EM	EMERGENCY	UH	UNIT HEATER
EQ	EQUAL	UNO	UNLESS NOTED OTHERWISE
EXD	EXISTING TO BE DEMOLISHED	USB	RECEPTACLE WITH HUBBEL USB15X2W
EXR	EXISTING TO BE RELOCATED	WH	WATER HEATER
EXT	EXISTING TO REMAIN	WP	WEATHER PROOF
FAAP	FIRE ALARM ANNUCIATOR PANEL		



**DESIGN WORKS**

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LEGENDS AND DETAILS - ELECTRICAL

FANNIN CO. PUBLIC SAFETY COMPLEX  
964 WINDY RIDGE ROAD  
BLUE RIDGE, GA 30513

TITLE: \_\_\_\_\_ PROJECT: \_\_\_\_\_

ISSUE:	REVISIONS:

SEAL



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IJC/SWL	4.19.2017
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Order Plans