TRANSFORMER  DISCONNECT SWITCH  FUSIBLE DISCONNECT SWITCH  CIRCUIT BREAKER  THERMAL MAGNETIC CIRCUIT BREAKER  THERMAL MAGNETIC CIRCUIT BREAKER  FUSE  TRANSIENT VOLTAGE SURGE SUPPRESSOR OR SURGE PROTECTOR DEVICE  GROUND — GROUND ROD, GROUNDING ELECTRODE, OR AT EARTH POTENTIAL.  NOTOR  LOAD, MOTOR. # = HORSEPOWER  DIAD, MOTOR # = HORSEPOWER  COULDED TO BOX WITH SPLICE  XXX EQUIPMENT, XXX = DEVICE DESCRIPTION  GND GROUND BUS OR TERMINAL  S/N NEUTRAL BUS  PANELBOARD WITH MAIN LUGS  PANELBOARD WITH MAIN BREAKER  DUPLEX RECEPTACLE 120V SINGLE PHASE GROUNDING TYPE  CONTROL STATION	ELEC	CTRICAL LEGEND - ONE-LINE DIAGRAM
DISCONNECT SWITCH  FUSIBLE DISCONNECT SWITCH  CIRCUIT BREAKER  THERMAL MAGNETIC CIRCUIT BREAKER  FUSE  TRANSIENT VOLTAGE SURGE SUPPRESSOR OR SURGE PROTECTOR DEVICE  GROUND — GROUND ROD, GROUNDING ELECTRODE, OR AT EARTH POTENTIAL  MOTOR  LOAD, MOTOR # = HORSEPOWER  LOAD, MOTOR # = HORSEPOWER  LOAD, MOTOR # = HORSEPOWER  DINCTION BOX WITH SPLICE  XXX EQUIPMENT, XXX = DEVICE DESCRIPTION  GND GROUND BUS OR TERMINAL  S/N NEUTRAL BUS  PANELBOARD WITH MAIN LUGS  PANELBOARD WITH MAIN BREAKER  FUSE PANEL WITH MAIN FUSE PULLOUT  DUPLEX RECEPTACLE 120V SINGLE PHASE GROUNDING TYPE	<b>—</b>	CABLE TERMINATOR/LUG
FUSIBLE DISCONNECT SWITCH  CIRCUIT BREAKER  THERMAL MAGNETIC CIRCUIT BREAKER  FUSE  TRANSIENT VOLTAGE SURGE SUPPRESSOR OR SURGE PROTECTOR DEVICE  GROUND — GROUND ROD, GROUNDING ELECTRODE, OR AT EARTH POTENTIAL  MOTOR  LOAD, MOTOR  LOAD, MOTOR, # = HORSEPOWER  ELECTRIC UTILITY METER BASE  JUNCTION BOX WITH SPLICE  XXX  EQUIPMENT, XXX = DEVICE DESCRIPTION  GND  GND  GROUND BUS OR TERMINAL  S/N  NEUTRAL BUS  PANELBOARD WITH MAIN LUGS  PANELBOARD WITH MAIN BREAKER  FUSE PANEL WITH MAIN FUSE PULLOUT  DUPLEX RECEPTACLE 120V SINGLE PHASE GROUNDING TYPE	**	TRANSFORMER
CIRCUIT BREAKER  THERMAL MAGNETIC CIRCUIT BREAKER  FUSE  TRANSIENT VOLTAGE SURGE SUPPRESSOR OR SURGE PROTECTOR DEVICE  GROUND — GROUND ROD, GROUNDING ELECTRODE, OR AT EARTH POTENTIAL  INDICATING LIGHT  MOTOR  LOAD, MOTOR, # = HORSEPOWER  ELECTRIC UTILITY METER BASE  JUNCTION BOX WITH SPLICE  XXX  EQUIPMENT, XXX = DEVICE DESCRIPTION  GND  GROUND BUS OR TERMINAL  S/N  NEUTRAL BUS  PANELBOARD WITH MAIN LUGS  PANELBOARD WITH MAIN BREAKER  FUSE PANEL WITH MAIN FUSE PULLOUT  DUPLEX RECEPTACLE 120V SINGLE PHASE GROUNDING TYPE	_\_	DISCONNECT SWITCH
THERMAL MAGNETIC CIRCUIT BREAKER  FUSE  TRANSIENT VOLTAGE SURGE SUPPRESSOR OR SURGE PROTECTOR DEVICE  GROUND — GROUND ROD, GROUNDING ELECTRODE, OR AT EARTH POTENTIAL  INDICATING LIGHT  MOTOR  LOAD, MOTOR # = HORSEPOWER  ELECTRIC UTILITY METER BASE  JUNCTION BOX WITH SPLICE  XXX EQUIPMENT, XXX = DEVICE DESCRIPTION  GND GROUND BUS OR TERMINAL  S/N NEUTRAL BUS  PANELBOARD WITH MAIN LUGS  PANELBOARD WITH MAIN BREAKER  FUSE PANEL WITH MAIN FUSE PULLOUT  DUPLEX RECEPTACLE 120V SINGLE PHASE GROUNDING TYPE	<u> </u>	FUSIBLE DISCONNECT SWITCH
FUSE  TRANSIENT VOLTAGE SURGE SUPPRESSOR OR SURGE PROTECTOR DEVICE  ROBOUND — GROUND ROD, GROUNDING ELECTRODE, OR AT EARTH POTENTIAL  INDICATING LIGHT  LOAD, MOTOR  LOAD, MOTOR  ELECTRIC UTILITY METER BASE  JUNCTION BOX WITH SPLICE  XXX  EQUIPMENT, XXX = DEVICE DESCRIPTION  GND  GROUND BUS OR TERMINAL  S/N  NEUTRAL BUS  PANELBOARD WITH MAIN LUGS  PANELBOARD WITH MAIN BREAKER  FUSE PANEL WITH MAIN FUSE PULLOUT  DUPLEX RECEPTACLE 120V SINGLE PHASE GROUNDING TYPE	  -	CIRCUIT BREAKER
TRANSIENT VOLTAGE SURGE SUPPRESSOR OR SURGE PROTECTOR DEVICE  ROUND - GROUND ROD, GROUNDING ELECTRODE, OR AT EARTH POTENTIAL  INDICATING LIGHT  MOTOR  LOAD, MOTOR, # = HORSEPOWER  ELECTRIC UTILITY METER BASE  JUNCTION BOX WITH SPLICE  XXX EQUIPMENT, XXX = DEVICE DESCRIPTION  GND GROUND BUS OR TERMINAL  S/N NEUTRAL BUS  PANELBOARD WITH MAIN LUGS  PANELBOARD WITH MAIN BREAKER  FUSE PANEL WITH MAIN FUSE PULLOUT  DUPLEX RECEPTACLE 120V SINGLE PHASE GROUNDING TYPE	<u></u>	THERMAL MAGNETIC CIRCUIT BREAKER
SURGE PROTECTOR DEVICE  GROUND — GROUND ROD, GROUNDING ELECTRODE, OR AT EARTH POTENTIAL  INDICATING LIGHT  MOTOR  LOAD, MOTOR # = HORSEPOWER  ELECTRIC UTILITY METER BASE  JUNCTION BOX WITH SPLICE  XXX EQUIPMENT, XXX = DEVICE DESCRIPTION  GND GROUND BUS OR TERMINAL  S/N NEUTRAL BUS  PANELBOARD WITH MAIN LUGS  PANELBOARD WITH MAIN BREAKER  FUSE PANEL WITH MAIN FUSE PULLOUT  DUPLEX RECEPTACLE 120V SINGLE PHASE GROUNDING TYPE		FUSE
OR AT EARTH POTENTIAL  INDICATING LIGHT  MOTOR  LOAD, MOTOR, # = HORSEPOWER  ELECTRIC UTILITY METER BASE  JUNCTION BOX WITH SPLICE  XXX  EQUIPMENT, XXX = DEVICE DESCRIPTION  GND  GROUND BUS OR TERMINAL  S/N  NEUTRAL BUS  PANELBOARD WITH MAIN LUGS  PANELBOARD WITH MAIN BREAKER  FUSE PANEL WITH MAIN FUSE PULLOUT  DUPLEX RECEPTACLE 120V SINGLE PHASE GROUNDING TYPE		TRANSIENT VOLTAGE SURGE SUPPRESSOR OR SURGE PROTECTOR DEVICE
MOTOR  LOAD, MOTOR # = HORSEPOWER  ELECTRIC UTILITY METER BASE  JUNCTION BOX WITH SPLICE  XXX	<b>#</b>	GROUND — GROUND ROD, GROUNDING ELECTRODE, OR AT EARTH POTENTIAL
LOAD, MOTOR, # = HORSEPOWER  ELECTRIC UTILITY METER BASE  JUNCTION BOX WITH SPLICE  XXX EQUIPMENT, XXX = DEVICE DESCRIPTION  GND GROUND BUS OR TERMINAL  S/N NEUTRAL BUS  PANELBOARD WITH MAIN LUGS  PANELBOARD WITH MAIN BREAKER  FUSE PANEL WITH MAIN FUSE PULLOUT  DUPLEX RECEPTACLE 120V SINGLE PHASE GROUNDING TYPE	a	INDICATING LIGHT
ELECTRIC UTILITY METER BASE  JUNCTION BOX WITH SPLICE  XXX EQUIPMENT, XXX = DEVICE DESCRIPTION  GND GROUND BUS OR TERMINAL  S/N NEUTRAL BUS  PANELBOARD WITH MAIN LUGS  PANELBOARD WITH MAIN BREAKER  FUSE PANEL WITH MAIN FUSE PULLOUT  DUPLEX RECEPTACLE 120V SINGLE PHASE GROUNDING TYPE	(M)	MOTOR
JUNCTION BOX WITH SPLICE   XXX  EQUIPMENT, XXX = DEVICE DESCRIPTION  GND  GROUND BUS OR TERMINAL  S/N  NEUTRAL BUS  PANELBOARD WITH MAIN LUGS  PANELBOARD WITH MAIN BREAKER  FUSE PANEL WITH MAIN FUSE PULLOUT  DUPLEX RECEPTACLE 120V SINGLE PHASE GROUNDING TYPE	#	LOAD, MOTOR, # = HORSEPOWER
EQUIPMENT, XXX = DEVICE DESCRIPTION  GND GROUND BUS OR TERMINAL  S/N NEUTRAL BUS  PANELBOARD WITH MAIN LUGS  PANELBOARD WITH MAIN BREAKER  FUSE PANEL WITH MAIN FUSE PULLOUT  DUPLEX RECEPTACLE 120V SINGLE PHASE GROUNDING TYPE		ELECTRIC UTILITY METER BASE
GND CROUND BUS OR TERMINAL  S/N NEUTRAL BUS  PANELBOARD WITH MAIN LUGS  PANELBOARD WITH MAIN BREAKER  FUSE PANEL WITH MAIN FUSE PULLOUT  DUPLEX RECEPTACLE 120V SINGLE PHASE GROUNDING TYPE	•	JUNCTION BOX WITH SPLICE
S/N NEUTRAL BUS  PANELBOARD WITH MAIN LUGS  PANELBOARD WITH MAIN BREAKER  FUSE PANEL WITH MAIN FUSE PULLOUT  DUPLEX RECEPTACLE 120V SINGLE PHASE GROUNDING TYPE	xxx	EQUIPMENT, XXX = DEVICE DESCRIPTION
PANELBOARD WITH MAIN LUGS  PANELBOARD WITH MAIN BREAKER  FUSE PANEL WITH MAIN FUSE PULLOUT  DUPLEX RECEPTACLE 120V SINGLE PHASE GROUNDING TYPE	GND	GROUND BUS OR TERMINAL
PANELBOARD WITH MAIN BREAKER  FUSE PANEL WITH MAIN FUSE PULLOUT  DUPLEX RECEPTACLE 120V SINGLE PHASE GROUNDING TYPE	S/N	NEUTRAL BUS
FUSE PANEL WITH MAIN FUSE PULLOUT  DUPLEX RECEPTACLE 120V SINGLE PHASE GROUNDING TYPE	#	PANELBOARD WITH MAIN LUGS
DUPLEX RECEPTACLE 120V SINGLE PHASE GROUNDING TYPE		PANELBOARD WITH MAIN BREAKER
	·«□»##	FUSE PANEL WITH MAIN FUSE PULLOUT
		DUPLEX RECEPTACLE 120V SINGLE PHASE GROUNDING TYPE
<del>_</del>		CONTROL STATION
N EM TRANSFER SWIICH	9	TRANSFER SWTICH
ENGINE GENERATOR SET	G	ENGINE GENERATOR SET

	ELECTRICAL LEGEND — SCHEMATIC
<b>⊣⊢</b>	NORMALLY OPEN (N.O.) CONTACT
<b>→</b> / <del>-</del>	NORMALLY CLOSED (N.C.) CONTACT
<b>⑤</b> *	STARTER COIL, * = STARTER NUMBER
OL OL	OVERLOAD RELAY CONTACT
(CR*)	CONTROL RELAY, * = CONTROL RELAY NUMBER
R*	RELAY, * = RELAY NUMBER
· ~ °	TOGGLE SWITCH / 2 POSITION SWITCH
OFF_AUTO OX	2-POSITION SELECTOR SWITCH
HAND AUTO  NOO  OO  OO  OO  OO  OO  OO  OO  OO	3-POSITION SELECTOR SWITCH (H-O-A SHOWN)
	2 POLE DISCONNECT SWITCH
	3 POLE DISCONNECT SWITCH
<del></del>	PHOTOCELL
	TERMINAL BLOCK, * = TERMINAL NUMBER
	DEVICE TERMINAL, * = DEVICE TERMINAL NUMBER
	INTERNAL PANEL WIRING
	FIELD WIRING
	FUSE
GND	GROUND BUS OR TERMINAL
S/N	NEUTRAL BUS
#	GROUND, GROUND ROD, GROUND BUS
0 0 0	INDUSTRIAL CONTROL RELAY OR LIGHTING CONTACTOR
	S1 CUTOUT HANDLE REMOVED
	S1 CUTOUT HANDLE INSERTED
°Д-	N.O. THERMAL SWITCH
~ <u>T</u> °	N.C. THERMAL SWITCH
(m)	L-830 SERIES ISOLATION TRANSFORMER

	ELECTRICAL ABBREVIATIONS
A.F.F.	ABOVE FINSHED FLOOR
A, AMP	AMPERES
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BKR	BREAKER
С	CONDUIT
СВ	CIRCUIT BREAKER
СКТ	CIRCUIT
CR	CONTROL RELAY
CU	COPPER
DPDT	DOUBLE POLE DOUBLE THROW
DPST	DOUBLE POLE SINGLE THROW
ЕМ	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENCL	ENCLOSURE
EP	EXPLOSION PROOF
ES	EMERGENCY STOP
ETL	INTERTEK - ELECTRICAL TESTING LABS
ETM	ELAPSE TIME METER
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
GRSC	GALVANIZED RIGID STEEL CONDUIT
HID	HIGH INTENSITY DISCHARGE
НОА	HAND OFF AUTOMATIC
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
J	JUNCTION BOX
KVA	KILOVOLT AMPERE(S)
кw	KILOWATTS
LC	LIGHTING CONTACTOR
LTFMC	LIQUID TIGHT FLEXIBLE METAL CONDUIT (UL LISTED)
LTG	LIGHTING
LP	LIGHTING PANEL
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
МСМ	THOUSAND CIRCLUAR MIL
MDP	MAIN DISTRIBUTION PANEL
MFR	MANUFACTURER
МН	METAL HALIDE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
NEC	NATIONAL ELECTRICAL CODE (NFPA 70)
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OHE	OVERHEAD ELECTRIC
1	1

OVERLOAD

EL	ECTRICAL ABBREVIATIONS (CONTINUED)
PB	PULL BOX
PC	PHOTO CELL
PDB	POWER DISTRIBUTION BLOCK
PNL	PANEL
RCPT	RECEPTACLE
R	RELAY
S	STARTER
SPD	SURGE PROTECTION DEVICE
SPST	SINGLE POLE SINGLE THROW
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
TYP	TYPICAL
UG	UNDERGROUND
UGE	UNDERGROUND ELECTRIC
UL	UNDERWRITER'S LABORATORIES
٧	VOLTS
W/	WITH
<b>W</b> /0	WITHOUT
WP	WEATHER PROOF
XFER	TRANSFER
XFMR	TRANSFORMER

TOWER OTHER					
AIRPORT EQUIPMENT/FACILITY ABBREVIATIONS					
AUTOMATED SURFACE OBSERVING SYSTEM					
AIR TRAFFIC CONTROL TOWER					
AUTOMATED WEATHER OBSERVING SYSTEM					
CONSTANT CURRENT REGULATOR					
DISTANCE MEASURING EQUIPMENT					
FEDERAL AVIATION REGULATION					
GLIDE SLOPE FACILITY					
HIGH INTENSITY RUNWAY LIGHT					
INSTRUMENT LANDING SYSTEM					
INNER MARKER					
LOW IMPACT-RESISTANT					
LOCALIZER FACILITY					
MEDIUM INTENSITY APPROACH LIGHTING SYSTEM					
MEDIUM INTENSITY APPROACH LIGHTING SYSTEM WITH RUNWAY ALIGNMENT INDICATING LIGHTS					
MEDIUM INTENSITY RUNWAY LIGHT					
MEDIUM INTENSITY TAXIWAY LIGHT					
NON-DIRECTIONAL BEACON					
PRECISION APPROACH PATH INDICATOR					
PULSE LIGHT APPROACH SLOPE INDICATOR					
RUNWAY ALIGNMENT INDICATING LIGHTS					
RUNWAY END IDENTIFIER LIGHT					
RUNWAY VISUAL RANGE					
VISUAL APPROACH DESCENT INDICATOR					
VISUAL APPROACH SLOPE INDICATOR					
VERY HIGH FREQUENCY OMNIDIRECTIONAL RANGE FACILITY					
WIND CONE					

## NOTES:

- ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 NATIONAL ELECTRICAL CODE (NEC) MOST CURRENT ISSUE IN FORCE, THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES, AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE U.L. LISTING, ETL LISTING (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.
- ALL VAULT WORK, POWER OUTAGES, AND/OR SHUT DOWN OF EXISTING SYSTEMS SHALL BE COORDINATED WITH THE AIRPORT MANAGER. ONCE SHUT DOWN, THE CIRCUITS SHALL BE LABELED AS SUCH TO PREVENT ACCIDENTAL ENERGIZING OF THE RESPECTIVE CIRCUITS. ALL PERSONNEL SHALL FOLLOW U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) 29 CFR PART 1910 OCCUPATIONAL SAFETY & HEALTH STANDARDS FOR ELECTRICAL SAFETY AND LOCKOUT/TAGOUT PROCEDURES INCLUDING, BUT NOT LIMITED TO, 29 CFR SECTION 1910.147 THE CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT).
- COLOR CODE PHASE AND NEUTRAL CONDUCTOR INSULATION FOR NO. 6 AWG OR SMALLER. PROVIDE COLORED INSULATION OR COLORED MARKING TAPE FOR PHASE AND NEUTRAL CONDUCTORS FOR NO. 4 AWG AND LARGER. INSULATED GROUND CONDUCTORS SHALL HAVE GREEN COLORED INSULATION FOR ALL CONDUCTOR AWG AND/OR KCMIL TO COMPLY WITH NEC 250.119. NEUTRAL CONDUCTORS SHALL HAVE WHITE COLORED INSULATION FOR NO. 6 AWG AND SMALLER TO MEET THE REQUIREMENTS OF NEC 200.6. STANDARD COLORS FOR POWER WIRING AND BRANCH CIRCUITS SHALL BE AS FOLLOWS:

120/240 VAC.	1 PHASE, 3 WI
PHASE A	BLACK
PHASE B	RED
NEUTRAL	WHITE
GROUND	GREEN

- 4. SEE RESPECTIVE SITE PLANS FOR SITE LEGEND INFORMATION.
- LITIMO DENOTES LIQUID TIGHT FLEXIBLE METAL CONDUIT ULLISTED, SUNLIGHT RESISTANT, & SUITABLE FOR GROUNDING. LIQUID TIGHT FLEXIBLE METAL CONDUIT AND ASSOCIATED FITTINGS SHALL BE U.L. LISTED TO MEET THE REQUIREMENTS OF NEC 350.6. LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS USED FOR FLEXIBILITY (INCLUDING CONNECTIONS TO CCR'S & TRANSFORMERS) SHALL REQUIRE AN EXTERNAL BONDING JUMPER OR INTERNAL EQUIPMENT GROUNDING CONDUCTOR PER NEC 350.60. EXTERNAL BONDING JUMPERS USED WITH CCR INSTALLATIONS SHALL BE #6 AWG COPPER (MINIMUM). DO NOT INSTALL LITEMC THAT IS NOT UL LISTED. CONFIRM LTFMC BEARS THE UL LABEL PRIOR TO INSTALLATION.
- 6. ALL ENCLOSURES RATED NEMA 4, 4X SHALL HAVE WATERTIGHT HUBS AT CONDUIT ENTRANCES U.L. LISTED NEMA 4, 4X FOR THE RESPECTIVE ENCLOSURE, TO MAINTAIN THE NEMA 4, 4X RATING.
- HIGH VOLTAGE & LOW VOLTAGE CIRCUITS SHALL NOT BE INSTALLED IN THE SAME WIREWAY, CONDUIT, DUCT, OR HANDHOLE.

REVISION					
DATE					
					-

SHELBY COUNTY AIRPORT SHELBYVILLE, ILLINOIS

HANSON

ELECTRICAL LEGEND AND ABBREVIATIONS

CONSTRUCT VAULT, LIGHT TAXIWAY & INSTALL NAVAIDS

23