

SCOPE OF WORK

THE PROPOSED IMPROVEMENTS INCLUDE THE CONSTRUCTION OF A NEW ELECTRICAL VAULT, REMOVAL OF THE EXISTING ELECTRICAL VAULT, GROUNDING UPGRADES TO AND REFURBISHMENT OF AIRFIELD EQUIPMENT, REMOVAL AND REPLACEMENT OF PRIMARY WIND CONE, AND MODIFICATIONS TO THE ROTATING BEACON.

CONTRACTOR'S RESPONSIBILITIES

GENERAL :
THE CONTRACTOR MUST FOLLOW PROCEDURES ON THIS SHEET THAT ASSURES SAFE OPERATING CONDITIONS FOR AIRCRAFT AS WELL AS HIS PERSONNEL AND EQUIPMENT. THE AIRPORT MANAGER WILL AT ALL TIMES HAVE JURISDICTION OVER THE SAFETY OF AIR TRAFFIC DURING CONSTRUCTION.

IDENTIFICATION - THE CONTRACTOR IS REQUIRED TO MARK ALL VEHICLES AND EQUIPMENT USED FOR CONSTRUCTION WITH 3 FT. SQUARE, INTERNATIONAL ORANGE AND WHITE CHECKERED FLAGS ANYTIME THEY ARE ON AIRPORT PROPERTY.

ALL CONTRACTOR PERSONNEL SHALL HAVE IDENTIFICATION MAKING IT OBVIOUS THAT THEY ARE A PART OF THE CONSTRUCTION CREW.

THE CONTRACTOR, HIS EMPLOYEES, AND EQUIPMENT SHALL BE RESTRICTED TO THE PROJECT WORK AREA.

RADIO CONTROL - THE CONTRACTOR IS REQUIRED TO BE IN TWO-WAY RADIO CONTACT WITH THE KEWANEE MUNICIPAL AIRPORT UNICOM (122.80 MHZ) WHENEVER HIS PERSONNEL ARE ON THE AIRPORT PROPERTY.

EQUIPMENT PARKING AND STORAGE - THE CONTRACTOR'S EQUIPMENT PARKING, MATERIAL STORAGE, AND EMPLOYEE PARKING WILL BE AT THE LOCATION SHOWN ON THIS DRAWING. ONLY VEHICLES AND EQUIPMENT NECESSARY FOR CONSTRUCTION WILL BE PERMITTED TO LEAVE THESE AREAS.

THE CONTRACTOR IS REQUIRED TO LIMIT THE USE OF CONSTRUCTION EQUIPMENT ON THE EXISTING PAVEMENTS. ONLY EQUIPMENT NEEDED TO COMPLETE THE SPECIFIC WORK ON THE EXISTING PAVEMENT WILL BE PERMITTED. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO EXISTING PAVEMENTS CAUSED BY HIS PERSONNEL OR EQUIPMENT.

NO OPEN HOLES OR TRENCHES WILL BE ALLOWED WITHIN 200' OF AN ACTIVE RUNWAY, WITHIN 40' OF AN ACTIVE TAXIWAY OR TAXILANE, NOR WILL EITHER HOLES OR OPEN TRENCHES BE ALLOWED TO REMAIN EXPOSED OR OPEN OVER NIGHT.

TRAFFIC CONES

TRAFFIC CONES WILL BE USED ON A CLOSED RUNWAY FOR TRAFFIC CONTROL IN LIEU OF BARRICADES.

AIRCRAFT OPERATION LINE

THE CONTRACTOR WILL ESTABLISH THE AIRCRAFT OPERATIONAL AREA FOR EACH OF THE AIRPORT RUNWAYS, IN THE PROPOSED WORK AREAS, BY PLACING A ROW OF LATH, 200 FT. FROM EACH OF THE CENTERLINES. NO PERSONNEL OR EQUIPMENT WILL CROSS THE LATH ROW WITHOUT CLOSING THE RESPECTIVE RUNWAY. THE COST OF PLACING THE LATH WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

HORIZONTAL AND VERTICAL DATA				
NO.	DESCRIPTION	NORTHING	EASTING	ELEV.
1	KEWPORT AZ (NGS) MARKER, ALUM. ROD	1,652,491.649	2,349,792.846	850.62
2	CHISELED "□" ON INSPECTION HOLE	-	-	848.87
3	KEWPORT (NGS) MARKER, ALUM. ROD	1,652,431.715	2,352,728.103	854.13
4	CHISELED "□" ON EAST END OF CONC. SIGN BASE	-	-	854.76
5	CHISELED "□" ON WEST END OF CONC. SIGN BASE	-	-	851.21

THE LOCATION, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ON THE PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

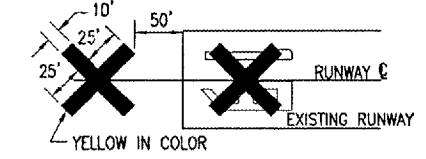
CALL J.U.L.I.E. FOR UTILITY INFORMATION AT 1-800-892-0123.

150-ENGINEER'S FIELD OFFICE NOTES

AN ENGINEER'S FIELD OFFICE WILL NOT BE REQUIRED FOR THIS PROJECT.

TEMPORARY RUNWAY CLOSURE NOTE

COST OF CONSTRUCTING, PLACING, MAINTAINING AND REMOVING CROSSES WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED. THE CROSSES WILL BE YELLOW IN COLOR AND SHALL BE MADE OF A SUITABLE MATERIAL AS APPROVED BY THE RESIDENT ENGINEER. THE CROSSES WILL BE PLACED AS SHOWN ON THIS SHEET AND SECURED IN A MANNER APPROVED BY THE RESIDENT ENGINEER. THE PROPOSED CROSSES WILL BE PLACED EACH DAY THE RUNWAY IS CLOSED AND REMOVED WHEN THE RUNWAY IS RE-OPENED. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE PLACEMENT AND REMOVAL OF THE CROSSES. NO ADDITIONAL COMPENSATION TO THE CONTRACT WILL BE ALLOWED.



CROSSES MAY BE PLACED OVER THE NUMERALS OR OFF THE RUNWAY END AS DETAILED.

DETAIL OF CROSS FOR CLOSED RUNWAY

"NOT TO SCALE"

- RUNWAY CLOSURE PROCEDURES:**
- * CONTACT THE AIRPORT MANAGER OR HIS ASSIGNED REPRESENTATIVE.
 - * ISSUANCE OF NOTAM BY THE AIRPORT MANAGER OR HIS ASSIGNED REPRESENTATIVE.
 - * PLACEMENT OF CROSSES (SEE DETAIL THIS SHEET).
 - * PLACEMENT OF LIGHTED BARRICADES. ONLY AT THE TIME THAT ALL OF THE ABOVE ARE COMPLETED MAY ANY CONSTRUCTION OPERATIONS WITHIN 200 FT. OF THE AFFECTED RUNWAY CENTERLINE BEGIN.

- RUNWAY RE-OPENING PROCEDURES:**
- * REMOVE CROSSES.
 - * REMOVE LIGHTED BARRICADES.
 - * NOTIFY THE AIRPORT MANAGER OR HIS REPRESENTATIVE TO CANCEL THE NOTAM.
 - * CANCELLATION OF THE NOTAM. A CLOSED RUNWAY WILL NOT BE RE-OPENED UNTIL ALL EQUIPMENT AND WORK ARE FURTHER THAN 200 FT. FROM THE AFFECTED RUNWAY CENTERLINE.

RUNWAY AND TAXIWAY CLOSURE NOTE:

RUNWAY 9-27 AND 1-19 WILL BE CLOSED ANY TIME CONSTRUCTION ACTIVITIES ARE REQUIRED WITHIN 200' OF THE RESPECTIVE RUNWAY CENTERLINE, IN ACCORDANCE WITH THE PROCEDURES SHOWN ON THIS PROPOSED SAFETY PLAN. HOWEVER, ONE RUNWAY WILL REMAIN OPEN AT ALL TIMES. TAXIWAY "B" AND "C", AS WELL AS THE PORTION OF THE RAMP AFFECTED BY THE PROJECT, WILL BE CLOSED ANY TIME CONSTRUCTION ACTIVITIES ARE WITHIN 40' OF THE TAXILANE OR TAXIWAY CENTERLINE.

HEIGHT OF CONSTRUCTION EQUIPMENT

THE MAXIMUM ANTICIPATED HEIGHT OF THE CONSTRUCTION EQUIPMENT WILL BE 25 FT. THE TALLEST EQUIPMENT IS EXPECTED TO BE A CRANE OR BUCKET TRUCK USED TO WORK ON THE AIRPORT PRIMARY WIND CONE.

HAUL ROUTE AND EQUIPMENT PARKING

THE CONTRACTOR IS REQUIRED TO CONSTRUCT A TEMPORARY HAUL ROUTE AND EQUIPMENT PARKING AREA IN ACCORDANCE WITH THE SPECIAL PROVISIONS AND AT THE LOCATION SHOWN ON THIS SHEET. THE HAUL ROUTE AND EQUIPMENT PARKING AREA SHALL BE ESTABLISHED AS FAR SOUTH AND EAST OF RUNWAY 1-19 AS IS PRACTICAL.

THE DESIGNATED HAUL ROUTE SHALL BE THE ONLY ACCESS USED BY THE CONTRACTOR OR HIS EMPLOYEES.

THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS TO USE STATE, CITY, COUNTY, OR TOWNSHIP ROADS.

THE CONTRACTOR AND HIS PERSONNEL SHALL ACCESS THE AIRPORT THROUGH AN EXISTING GATE LOCATED OFF MIDLAND ROAD. THE CONTRACTOR WILL ENSURE THE GATE IS CLOSED AND LOCKED AT THE END OF EACH DAY.

THE INSTALLATION OF THE PROPOSED LIGHTING HOMERUN CABLES THROUGH OR ACROSS THE HAUL ROUTE WILL REQUIRE COORDINATION BETWEEN CONTRACTORS AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR LABOR OR MATERIAL ASSOCIATED WITH THE COORDINATION OR INSTALLATION FOR WORK BEYOND THAT IS SPECIFIED.

ALL WORK ASSOCIATED WITH THE PROPOSED HAUL ROUTE SHALL BE CONSIDERED INCIDENTAL TO AR150540 - HAUL ROUTE.

EROSION CONTROL

THE PROPOSED CONSTRUCTION WILL DISTURB LESS THAN 1 ACRES OF LAND, THEREFORE AN EROSION CONTROL PLAN AND AN NPDES PERMIT ARE NOT REQUIRED.

OPERATIONAL LIGHTING

ALL EXISTING AIRFIELD CIRCUITS SHALL BE OPERABLE DURING NIGHTFALL. CONTRACTOR SHALL PROVIDE ALL TEMPORARY WORK, AS NECESSARY, TO MAINTAIN OPERATION OF THE AIRFIELD LIGHTING SYSTEMS AT NIGHTFALL. ALL WORK SHALL BE COORDINATED WITH THE AIRPORT MANAGER AND SHALL BE COORDINATED TO MINIMIZE DOWN TIME TO THE RESPECTIVE LIGHTING SYSTEMS.

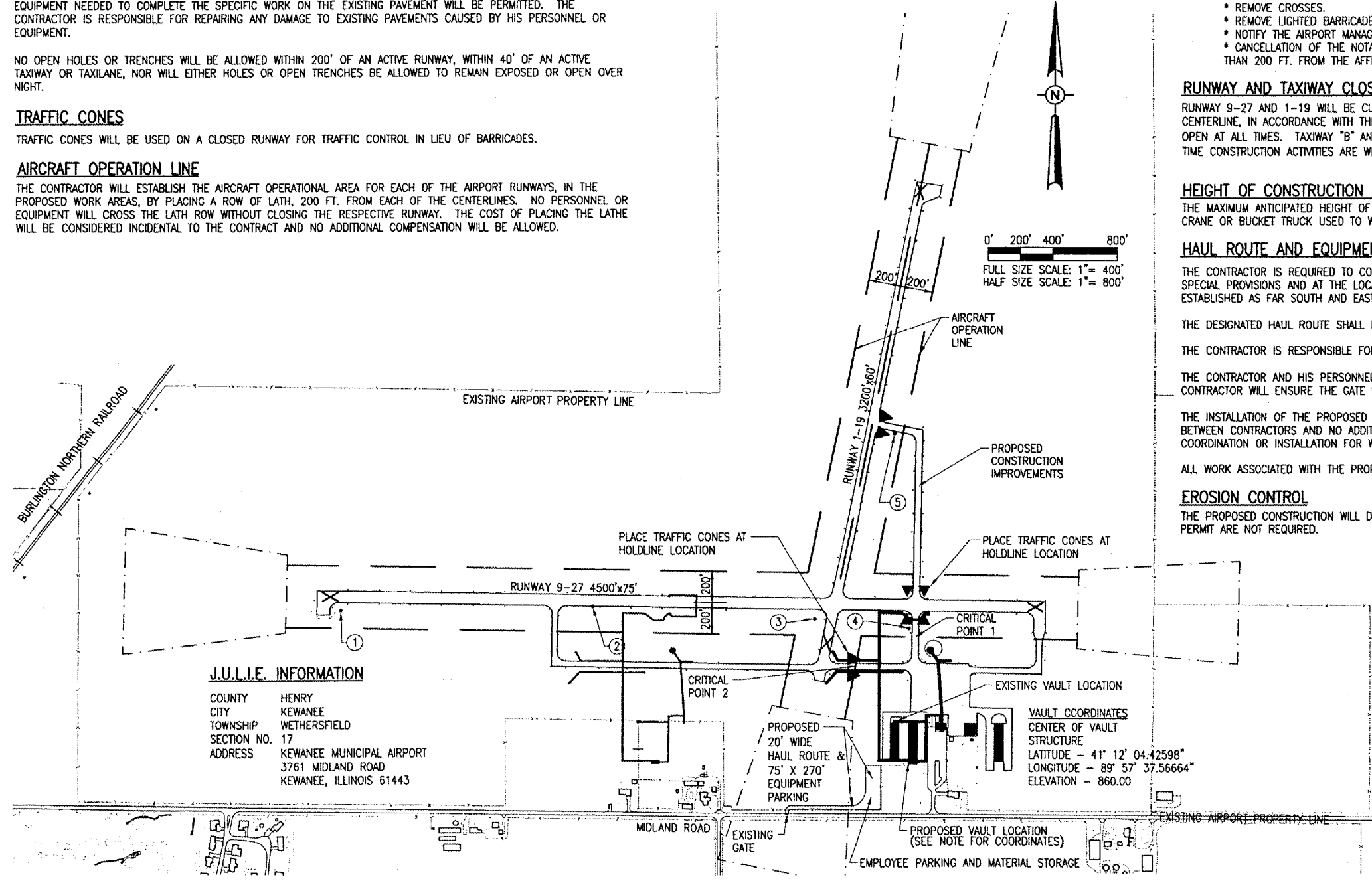
LEGEND

- EXISTING IMPROVEMENTS
- PROPOSED IMPROVEMENTS
- EXISTING BUILDINGS
- PROPOSED EQUIPMENT/VEHICLE PARKING AREA & HAUL ROUTE
- EXISTING AIRPORT PROPERTY LINE
- LIGHTED BARRICADES
- HORIZONTAL/VERTICAL CONTROL

CRITICAL POINT DATA

CRITICAL POINT 1
 LATITUDE - 41° 12' 12.08227"
 LONGITUDE - 89° 57' 37.36973"
 ELEVATION - 854.90

CRITICAL POINT 2
 LATITUDE - 41° 12' 10.29760"
 LONGITUDE - 89° 57' 42.21939"
 ELEVATION - 855.10



J.U.L.I.E. INFORMATION

COUNTY HENRY
 CITY KEWANEE
 TOWNSHIP WETHERSFIELD
 SECTION NO. 17
 ADDRESS KEWANEE MUNICIPAL AIRPORT
 3761 MIDLAND ROAD
 KEWANEE, ILLINOIS 61443

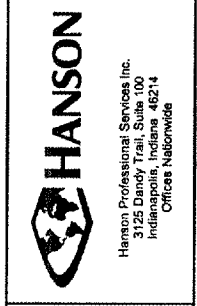
APR 01, 2008 11:50 AM V00RH00805 I:\AIRPORTS\KEWANEE\810-06VLTD\ELECTRICAL\810-06VLTD - Safety Plan

KE008

DATE	REVISION	BY

KEWANEE MUNICIPAL AIRPORT
 KEWANEE, HENRY COUNTY, ILLINOIS
 I.L. PROJ.: E71-3586 A.I.P. PROJ.: 3-17-0058-B12

PROJECT NO.	DATE	BY
810-06VLTD	08/01/05	
R-101SAF.DWG	08/01/05	
Scale 1"=400'	04/01/08	
DATE		
LAYOUT	RA.W.	08/01/05
DRAWN	BA.K.	08/01/05
REVIEWED	CA.H.	04/27/06



CONSTRUCT VAULT
 PROPOSED SAFETY PLAN

ELECTRICAL LEGEND - ONE-LINE DIAGRAM	
	CABLE TERMINATOR/LUG
	TRANSFORMER
	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
	INDICATING LIGHT
	MOTOR
	LOAD, MOTOR, # = HORSEPOWER
	ELECTRIC UTILITY METER BASE
	JUNCTION BOX WITH SPLICE
	EQUIPMENT, XXX = DEVICE DESCRIPTION
	GROUND BUS OR TERMINAL
	NEUTRAL BUS
	PANELBOARD WITH MAIN LUGS
	PANELBOARD WITH MAIN BREAKER
	FUSE PANEL WITH MAIN FUSE PULLOUT
	DUPLEX RECEPTACLE 120V SINGLE PHASE GROUNDING TYPE
	CONTROL STATION
	TRANSFER SWITCH
	ENGINE GENERATOR SET

ELECTRICAL LEGEND - SCHEMATIC	
	NORMALLY OPEN (N.O.) CONTACT
	NORMALLY CLOSED (N.C.) CONTACT
	STARTER COIL, * = STARTER NUMBER
	OVERLOAD RELAY CONTACT
	CONTROL RELAY, * = CONTROL RELAY NUMBER
	RELAY, * = RELAY NUMBER
	TOGGLE SWITCH / 2 POSITION SWITCH
	2-POSITION SELECTOR SWITCH
	3-POSITION SELECTOR SWITCH (H-O-A SHOWN)
	2 POLE DISCONNECT SWITCH
	3 POLE DISCONNECT SWITCH
	PHOTOCELL
	TERMINAL BLOCK, * = TERMINAL NUMBER
	DEVICE TERMINAL, * = DEVICE TERMINAL NUMBER
	INTERNAL PANEL WIRING
	FIELD WIRING
	FUSE
	GROUND BUS OR TERMINAL
	NEUTRAL BUS
	GROUND, GROUND ROD
	INDUSTRIAL CONTROL RELAY OR LIGHTING CONTACTOR
	S1 CUTOUT HANDLE REMOVED
	S1 CUTOUT HANDLE INSERTED
	N.O. THERMAL SWITCH
	N.C. THERMAL SWITCH

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

ELECTRICAL 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
V	VOLTS
W/	WITH
W/O	WITHOUT
WP	WEATHER PROOF
XFER	TRANSFER
XFMR	TRANSFORMER

AIRPORT EQUIPMENT ABBREVIATIONS	
CCR	CONSTANT CURRENT REGULATOR
MRL	MEDIUM INTENSITY RUNWAY LIGHT
MTL	MEDIUM INTENSITY TAXIWAY LIGHT
NOB	NON-DIRECTIONAL BEACON
PAPI	PRECISION APPROACH PATH INDICATOR
PLASI	PULSE LIGHT APPROACH SLOPE INDICATOR
REL	RUNWAY END IDENTIFIER LIGHT
VADI	VISUAL APPROACH DESCENT INDICATOR
VASI	VISUAL APPROACH SLOPE INDICATOR
WC	WIND CONE

ELECTRICAL LEGEND - PLANS	
	CONDUIT (EXPOSED)
	CONDUIT OR UNIT DUCT (CONCEALED OR BURIED)
	DUCT
	BURIED/UNDERGROUND ELECTRIC
	UNDERGROUND ELECTRIC
	OVERHEAD ELECTRIC
	POLE MOUNTED HID FIXTURE
	DUPLEX CONVENIENCE RECEPTACLE, 120V, SINGLE PHASE, GROUNDING TYPE, 48" A.F.F. EXCEPT AS NOTED
	WALL OR CEILING MTD. JUNCTION BOX, CONFIGURATION VARIES WITH USE
	SINGLE THROW DISCONNECT SWITCH
	SINGLE THROW, FUSIBLE DISCONNECT SWITCH
	ENCLOSED CIRCUIT BREAKER
	CONTROL PANEL
	MOTOR, ESTIMATED H.P. AS INDICATED.
	MOTOR
	TRANSFORMER
	ELECTRIC UTILITY METER
	ENCLOSURE
	CIRCUIT BREAKER PANEL-SEE SCHEDULES
	GROUND ROD
	LONG SLASHES INDICATE NEUTRAL, SHORT SLASHES INDICATE HOT OR SWITCHED LEG. G = SEPARATE GROUND WIRE.
	HOMERUN TO PANEL PNL A INDICATES PANEL 1,3,5 INDICATES CIRCUIT NUMBERS
	SINGLE POLE SWITCH
	FRACTIONAL HP STARTER
	CONTACTOR
	SURFACE MOUNTED OR CHAIN HUNG FLUORESCENT FIXTURE
	WALL OR CEILING MTD. INCANDESCENT OR HID FIXTURE.

NOTES:

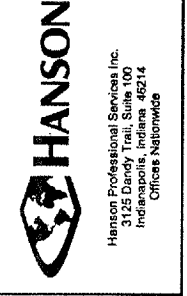
- ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 - NATIONAL ELECTRICAL CODE (NEC) MOST CURRENT ISSUE IN FORCE, THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES, AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE U.L. LISTING, ETL LISTING (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.
- CONTRACTOR SHALL COORDINATE WORK AND ANY POWER OUTAGES WITH THE RESPECTIVE FACILITY OWNER PERSONNEL AND THE AIRPORT MANAGER.
- 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 WIRE
 PHASE A BLACK
 PHASE B RED
 NEUTRAL WHITE
 GROUND GREEN

DATE	
REVISION	

KEWANEEN MUNICIPAL AIRPORT
 KEWANEEN, HENRY COUNTY, ILLINOIS
 I.L. PROJ.: E21-3586 A.I.P. PROJ.: 3-17-0058-B12

HEL Project No.	B10-06VLD
Drawing	E-001.DWG
Scale	NONE
Date	04/01/08
LAYOUT	KRL 04/13/08
DRAWN	MV 04/19/08
REVIEWED	LDP 01/17/08

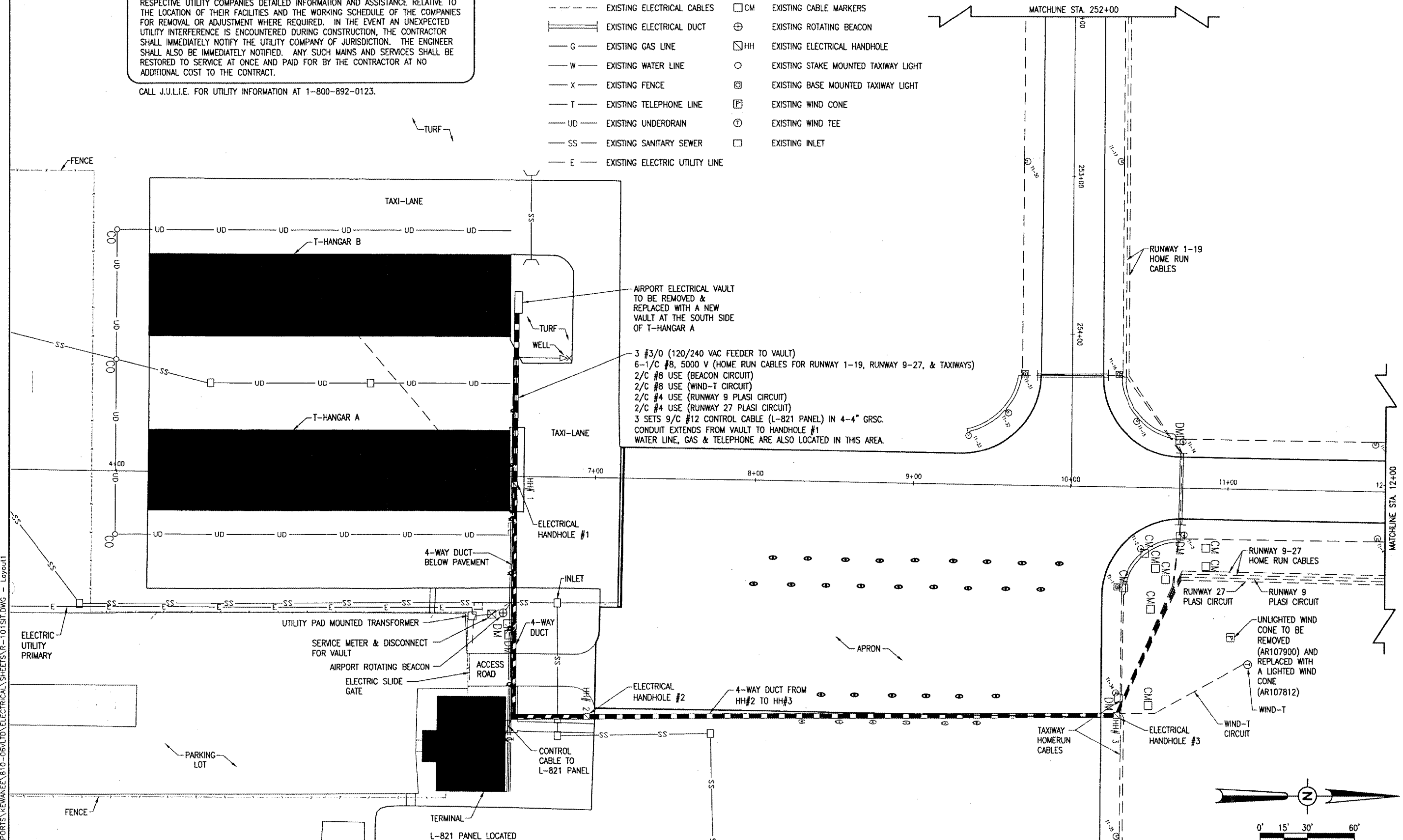


CONSTRUCT VAULT
 ELECTRICAL LEGEND
 AND ABBREVIATIONS

THE LOCATION, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ON THE PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

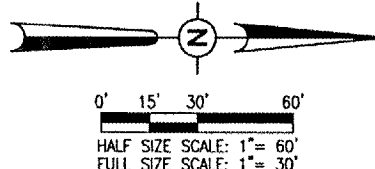
CALL J.U.L.I.E. FOR UTILITY INFORMATION AT 1-800-892-0123.

- LEGEND**
- EXISTING PAVEMENT
 - EXISTING BUILDINGS
 - PROPOSED IMPROVEMENTS
 - EXISTING ELECTRICAL CABLES
 - EXISTING ELECTRICAL DUCT
 - EXISTING GAS LINE
 - EXISTING WATER LINE
 - EXISTING FENCE
 - EXISTING TELEPHONE LINE
 - EXISTING UNDERDRAIN
 - EXISTING SANITARY SEWER
 - EXISTING ELECTRIC UTILITY LINE
 - EXISTING ELECTRICAL TRANSFORMER
 - EXISTING ELECTRICAL PEDESTAL
 - EXISTING DUCT MARKERS
 - EXISTING CABLE MARKERS
 - EXISTING ROTATING BEACON
 - EXISTING ELECTRICAL HANDHOLE
 - EXISTING STAKE MOUNTED TAXIWAY LIGHT
 - EXISTING BASE MOUNTED TAXIWAY LIGHT
 - EXISTING WIND CONE
 - EXISTING WIND TEE
 - EXISTING INLET



AIRPORT ELECTRICAL VAULT TO BE REMOVED & REPLACED WITH A NEW VAULT AT THE SOUTH SIDE OF T-HANGAR A

3 #3/0 (120/240 VAC FEEDER TO VAULT)
 6-1/C #8, 5000 V (HOME RUN CABLES FOR RUNWAY 1-19, RUNWAY 9-27, & TAXIWAYS)
 2/C #8 USE (BEACON CIRCUIT)
 2/C #8 USE (WIND-T CIRCUIT)
 2/C #4 USE (RUNWAY 9 PLASI CIRCUIT)
 2/C #4 USE (RUNWAY 27 PLASI CIRCUIT)
 3 SETS 9/C #12 CONTROL CABLE (L-821 PANEL) IN 4-4" GRSC. CONDUIT EXTENDS FROM VAULT TO HANDHOLE #1
 WATER LINE, GAS & TELEPHONE ARE ALSO LOCATED IN THIS AREA.



REVISION	DATE	BY

Kewanee Municipal Airport
 Kewanee, Henry County, Illinois

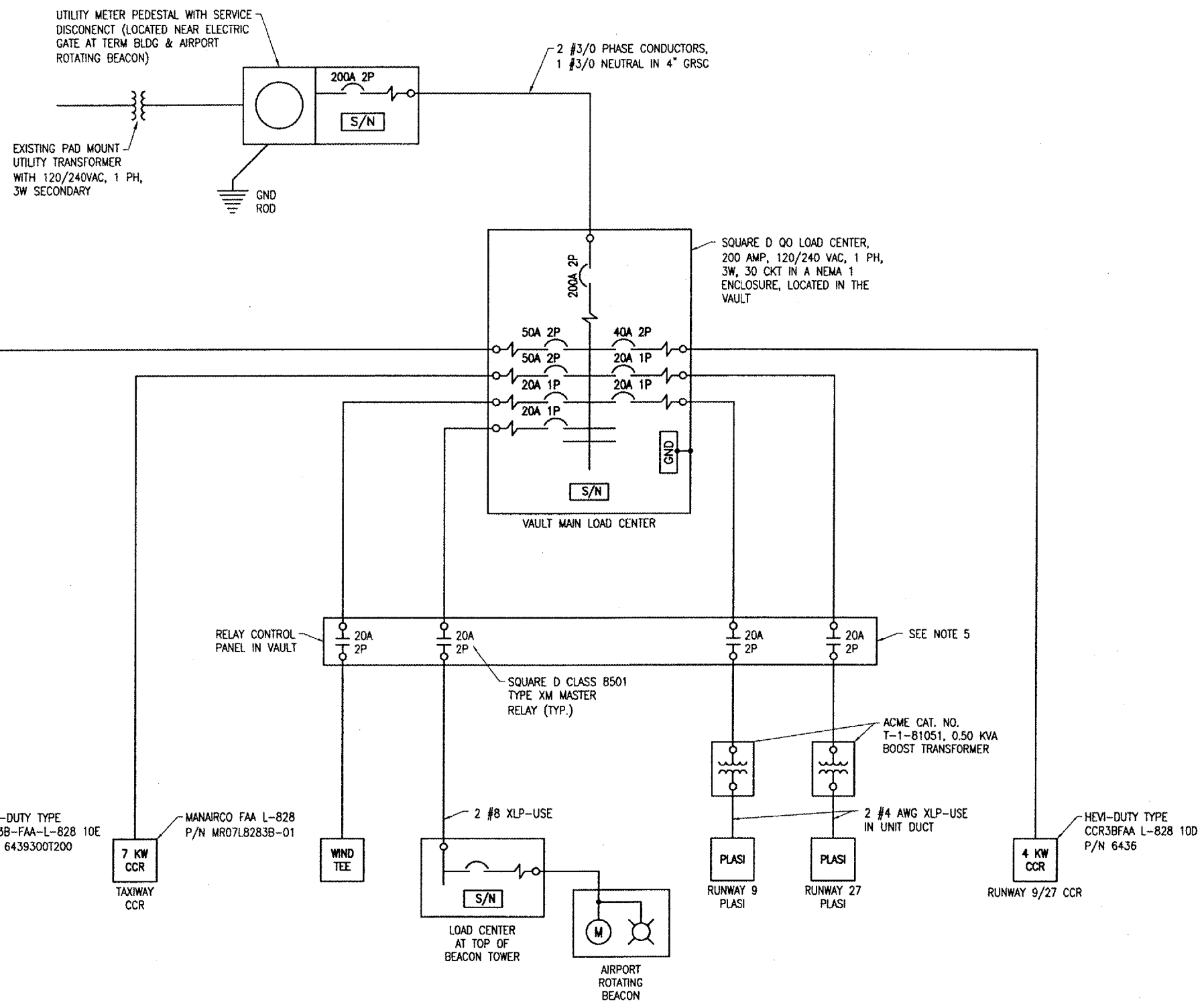
IL PROJ.: E21-3586 A.I.P. PROJ.: 3-17-0058-B12

HE Drawing No. 810-08V11D	DATE 04/01/08
Frame No. R-101SLD1WG	LAYOUT R.A.W. 08/15/05
Scale 1"=30'	DRAWN B.A.K. 08/15/05
	REVIEWED LDP 07/17/06



CONSTRUCT VAULT
 EXISTING VAULT
 SITE PLAN

APR 01, 2008 11:50 AM V00RH0805 I:\AIRPORTS\KEWANEE\810-08V11D\ELECTRICAL\SHEETS\R-101SLD1WG - Layout1



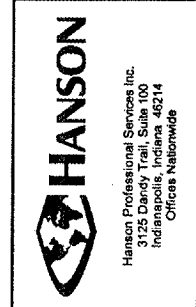
NOTES

1. ALL VAULT WORK AND/OR POWER OUTAGES SHALL BE COORDINATED WITH THE AIRPORT MANAGER.
2. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS TO CONFIRM POWER & CONTROL CIRCUITS.
3. EXISTING AIRFIELD CIRCUITS SHALL BE LOCATED, IDENTIFIED, DISCONNECTED, REROUTED & RECONNECTED TO THE NEW VAULT AS DETAILED HEREIN. ALL EXISTING AIRFIELD LIGHTING SYSTEMS SHALL BE OPERABLE DURING NIGHTFALL. CONTRACTOR SHALL PROVIDE ALL TEMPORARY WORK AS NECESSARY TO MAINTAIN OPERATION OF THE AIRFIELD LIGHTING SYSTEMS AT NIGHTFALL. CONTRACTOR SHALL COORDINATE TRANSFER OF EXISTING AIRFIELD CIRCUITS TO MINIMIZE DOWN TIME.
4. CCR DENOTES CONSTANT CURRENT REGULATOR.
5. PLASI'S ARE WIRED FOR CONTINUOUS OPERATION 24 HOURS A DAY. RELAY CONTACTS MIGHT BE BYPASSED. FIELD VERIFY AS NECESSARY.

DATE	REVISION	BY

Kewanee Municipal Airport
 Kewanee, Henry County, Illinois
 I.L. PROJ.: E2I-3586 A.I.P. PROJ.: 3-17-0058-B12

REV. PROJECT NO.	B10-06VLD
FIGURE	E-601.DWG
SCALE	NO SCALE
DATE	04/01/08
LAYOUT	KNL 04/13/06
DRAWN	HW 04/19-06
REVIEWED	LDP 01/17/06



CONSTRUCT VAULT
 EXSITING VAULT
 ELECTRICAL ONE-LINE
 DIAGRAM

EXISTING VAULT ELECTRICAL ONE-LINE DIAGRAM

APR 01, 2008 11:49 AM V00R00805
 I:\AIRPORTS\KEWANEE\810-06VLD\ELECTRICAL\SHEETS\E-601.DWG - E-4

FOR CONTINUATION OF HOMERUN CABLES SEE SHEET NO. 25.

RUNWAY 1-19 LTG HOMERUN CABLES

PROPOSED 2-4" DIRECTIONAL BORE DUCT, 100 L.F. (AR110014). LEAVE ONE DUCT EMPTY FOR SPARE.

NOTE: ABANDONMENT AND/OR REMOVAL OF EXISTING CABLES SHALL BE INCIDENTAL TO THE RESPECTIVE REPLACEMENT CABLE PAY ITEM.

EXISTING VAULT TO BE REMOVED (AR109901)

TAXIWAY LTG HOMERUN CABLES

EXISTING RUNWAY 1-19 HOMERUN CABLES TO BE ABANDONED IN PLACE UP TO HH#3 & REMOVED THEREAFTER TO EXISTING VAULT.

INSTALL CABLES IN TURF AREA
EXISTING SERVICE METER PEDESTAL FOR EXIST. VAULT TO BE REMOVED (AR109901)

EXISTING RWY 9-27 HOMERUN CABLES TO BE ABANDONED IN PLACE UP TO HANDHOLE #3, AND REMOVED THEREAFTER TO EXISTING VAULT.

2/C #4 XLP-USE 600V UG CABLE IN UD FOR PLASI'S, 920 L.F. (AR108554). SPLICE NEW CABLE TO EXISTING HOMERUN CABLES IN EXIST. HH #2

REPLACE EXISTING CABLE WITH NEW CABLE BETWEEN TAXIWAY LTS T1-1 & T1-34.

PROPOSED LOW VOLTAGE HANDHOLE (AR110610)
PROPOSED 4-4" DIRECTIONAL BORE DUCT, 200 L.F. TERMINATE IN EACH ELECTRICAL HANDHOLE. (AR110014)

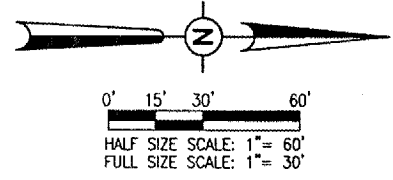
EXIST. HH #2 (LOW VOLTAGE). ALL HIGH VOLTAGE HOMERUN CKTS SHALL BE REMOVED FROM LOW VOLTAGE DUCT SYSTEM & REROUTED THRU HIGH VOLTAGE HANDHOLE TO VAULT. REMOVE EXISTING WIND-TEE CIRCUIT CABLES UPON INSTALLATION OF REPLACEMENT CABLES.

EXISTING 4-WAY DUCT BANK

PROPOSED 1-4" DIRECTIONAL BORE DUCT UNDER SIDEWALK, 10 L.F. (AR110014)
37/C #12 600V CONTROL CABLE IN UD TO L-821 PANEL, 560 L.F. (AR108800)

THE LOCATION, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ON THE PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

CALL J.U.L.I.E. FOR UTILITY INFORMATION AT 1-800-892-0123.



PROPOSED HIGH VOLTAGE HANDHOLE (AR110610)
HOMERUN CABLES FOR RUNWAY 9-27, RUNWAY 1-19, & TAXIWAY LIGHTING (AR108158)

NOTE UNIT DUCT MAY BE OMITTED FOR HOMERUN CABLES INSTALLED IN DUCT

PROPOSED 3-WAY 4" CONCRETE ENCASED DUCT, 216 L.F. (AR110503)

PROPOSED 4-WAY 4" CONCRETE ENCASED DUCT, 66 L.F. (AR110504) INSTALL BELOW UNDER DRAIN AT CROSSING

PROPOSED 3-4" DIRECTIONAL BORE DUCT UNDER EXISTING WALK, 30 L.F. (AR110014)

4/C #6 XLP-USE 600V UG CABLE IN UD TO AIRPORT ROTATING BEACON, 310 L.F. (AR800590)

LEGEND

- | | | | |
|--|---------------------------------|--|--------------------------------------|
| | EXISTING PAVEMENT | | EXISTING DUCT MARKERS |
| | EXISTING BUILDINGS | | EXISTING CABLE MARKERS |
| | EXISTING ELECTRICAL CABLES | | EXISTING ROTATING BEACON |
| | EXISTING ELECTRICAL DUCT | | EXISTING ELECTRICAL HANDHOLE |
| | EXISTING GAS LINE | | EXISTING STAKE MOUNTED TAXIWAY LIGHT |
| | EXISTING WATER LINE | | EXISTING BASE MOUNTED TAXIWAY LIGHT |
| | EXISTING FENCE | | PROPOSED WIND CONE |
| | EXISTING TELEPHONE LINE | | EXISTING WIND TEE |
| | EXISTING UNDERDRAIN | | EXISTING INLET |
| | EXISTING SANITARY SEWER | | PROPOSED ELECTRICAL VAULT |
| | PROPOSED IMPROVEMENTS | | PROPOSED ELECTRICAL HANDHOLE |
| | PROPOSED ELECTRICAL DUCT | | PROPOSED ELECTRICAL TRANSFORMER |
| | EXISTING ELECTRICAL TRANSFORMER | | |
| | EXISTING ELECTRICAL PEDESTAL | | |

- PROPOSED 1/C #8 5KV UG CABLE IN UD
- PROPOSED 37/C #12 600V CONTROL CABLE IN UD
- PROPOSED 2/C #4 XLP-USE 600V UG CABLE IN UD
- PROPOSED 3/C #6 XLP-USE 600V UG CABLE IN UD
- PROPOSED 4/C #6 XLP-USE 600V UG CABLE IN UD

APR 01, 2008 11:50 AM VOORH008005 I:\AIRPORTS\KEWANEEMUNICIPAL\810-06VALD\ELECTRICAL\810-06VALD\ELECTRICAL SHEETS\810-06VALD\102SIT.DWG - PROPOSED VAULT SITE

NO.	DATE	REVISION	BY

KEWANEEMUNICIPAL AIRPORT
KEWANEEMUNICIPALITY, ILLINOIS
A.I.P. PROJ.: 3-17-0058-B12
I.L. PROJ.: E21-3586

Project No.	810-06VALD
Drawn	R-102SIT.DWG
Scale	1" = 30'
Date	04/01/08
LAYOUT	R.A.W. 08/15/05
DRAWN	B.A.K. 08/15/05
REVIEWED	L.D.P. 01/17/06

HANSON
Hanson Professional Services Inc.
3125 Dandy Trail, Suite 100
Indianapolis, Indiana 46214
Office Nationwide











CONSTRUCT VAULT
PROPOSED VAULT SITE PLAN
7
7 of 27 sheets

THE LOCATION, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ON THE PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

CALL J.U.L.I.E. FOR UTILITY INFORMATION AT 1-800-892-0123.

NOTE

ABANDONMENT AND/OR REMOVAL OF EXISTING RUNWAY OR TAXIWAY LIGHTING CABLES SHALL BE INCIDENTAL TO ITEM AR108158 1/C NO. 8, 5KV, U.G. CABLE IN U.D.

- LEGEND**
-  EXISTING PAVEMENT
 -  EXISTING ELECTRICAL CABLES
 -  EXISTING ELECTRICAL DUCT
 -  PROPOSED 1/C NO. 8, 5KV, U.G. CABLE IN U.D.
 -  EXISTING STAKE MOUNTED TAXIWAY LIGHT
 -  EXISTING BASE MOUNTED TAXIWAY LIGHT
 -  EXISTING STAKE MOUNTED RUNWAY THRESHOLD LIGHT
 -  EXISTING STAKE MOUNTED RUNWAY LIGHT
 -  EXISTING BASE MOUNTED RUNWAY LIGHT
 -  EXISTING TAXI GUIDANCE SIGN

APR 01, 2008 11:50 AM VOORH00805
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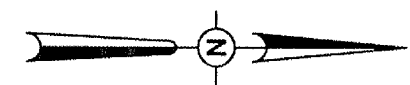
CONNECT NEW HOMERUN CABLE AT EXISTING THRESHOLD LIGHT

RUNWAY 1-19

CONNECT NEW HOMERUN CABLE AT EXISTING BASE MOUNTED RUNWAY LIGHT.


EXISTING HOMERUN CABLES FOR RUNWAY 1-19 SHALL BE DISCONNECTED FROM THE RESPECTIVE RUNWAY LIGHTS & ABANDONED IN-PLACE OR REMOVED AT CONTRACTORS OPTION.

PROPOSED 1/C NO. 8, 5KV, FAA L-824, TYPE C U.G. CABLE IN U.D. (NEW HOMERUN CABLES FOR RUNWAY 1-19) (AR108158)



0' 15' 30' 60'
 HALF SIZE SCALE: 1" = 60'
 FULL SIZE SCALE: 1" = 30'



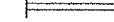









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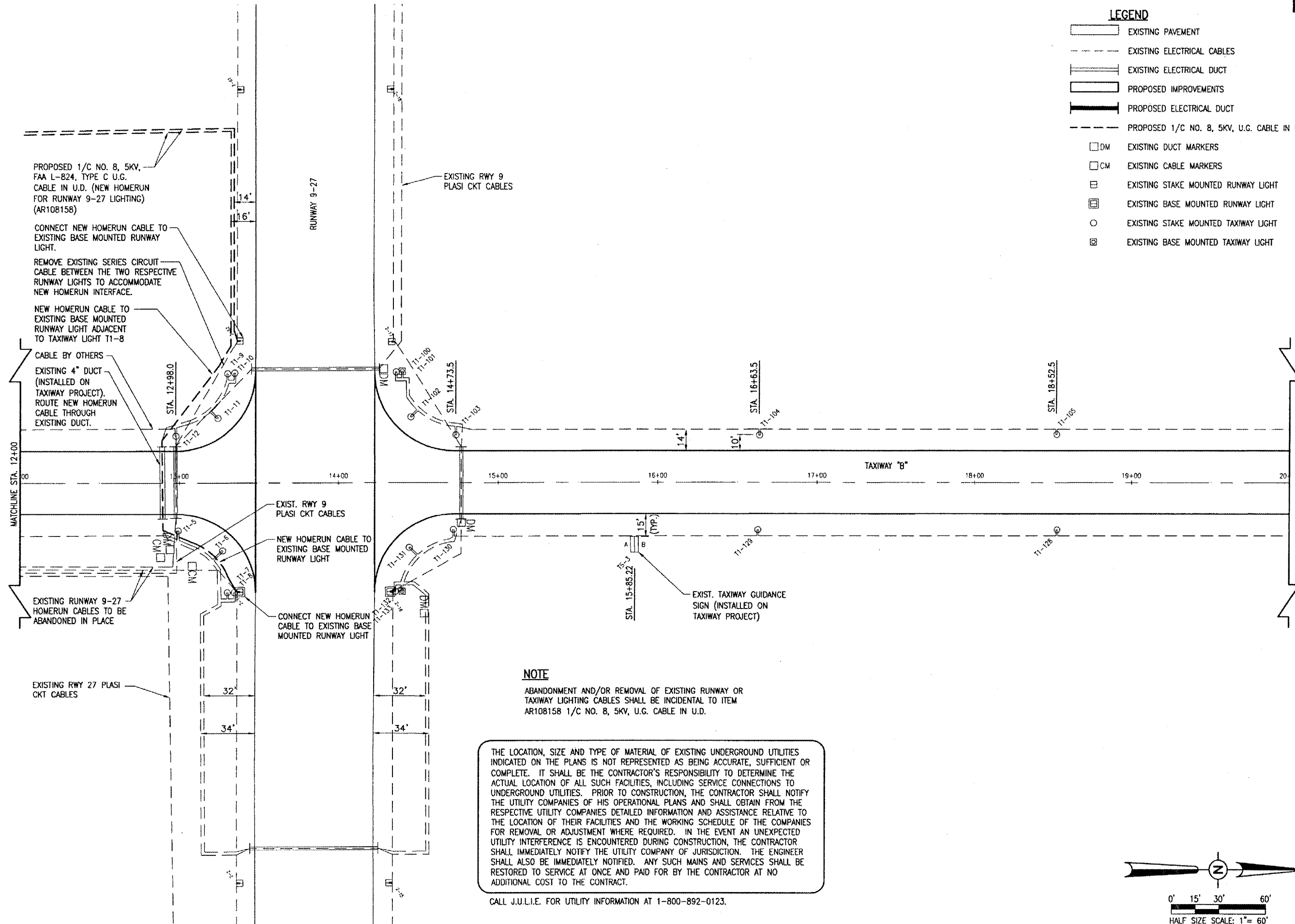
BY		REVISION		DATE	
<p>KEWANEE MUNICIPAL AIRPORT KEWANEE, HENRY COUNTY, ILLINOIS</p> <p>IL. PROJ.: EZI-3586 A.I.P. PROJ.: J-17-0058-B12</p>					
H&E Project No. 810-06VLT Drawing No. R-142ELE.DWG Scale 1" = 30' Date 04/01/08	LAYOUT R.A.W. 08/02/05 DRAWN B.A.K. 08/02/05 REVIEWED C.A.H. 04/27/06	 <p>Hanson Professional Services Inc. 5125 Danby Trail, Suite 100 Indianapolis, Indiana 46214 Offices Nationwide</p>			
<p>CONSTRUCT VAULT</p> <p>PROPOSED ELECTRICAL PLAN TAXIWAY "A"</p>					
<p style="font-size: 2em; font-weight: bold;">8</p> <p>8 of 27 sheets</p>					

APR 01, 2008 11:50 AM V00R00805
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KE008

LEGEND

-  EXISTING PAVEMENT
-  EXISTING ELECTRICAL CABLES
-  EXISTING ELECTRICAL DUCT
-  PROPOSED IMPROVEMENTS
-  PROPOSED ELECTRICAL DUCT
-  PROPOSED 1/C NO. 8, 5KV, U.G. CABLE IN U.D.
-  DM EXISTING DUCT MARKERS
-  CM EXISTING CABLE MARKERS
-  EXISTING STAKE MOUNTED RUNWAY LIGHT
-  EXISTING BASE MOUNTED RUNWAY LIGHT
-  EXISTING STAKE MOUNTED TAXIWAY LIGHT
-  EXISTING BASE MOUNTED TAXIWAY LIGHT

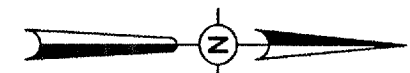


NOTE

ABANDONMENT AND/OR REMOVAL OF EXISTING RUNWAY OR TAXIWAY LIGHTING CABLES SHALL BE INCIDENTAL TO ITEM AR108158 1/C NO. 8, 5KV, U.G. CABLE IN U.D.

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0' 15' 30' 60'
 HALF SIZE SCALE: 1" = 60'
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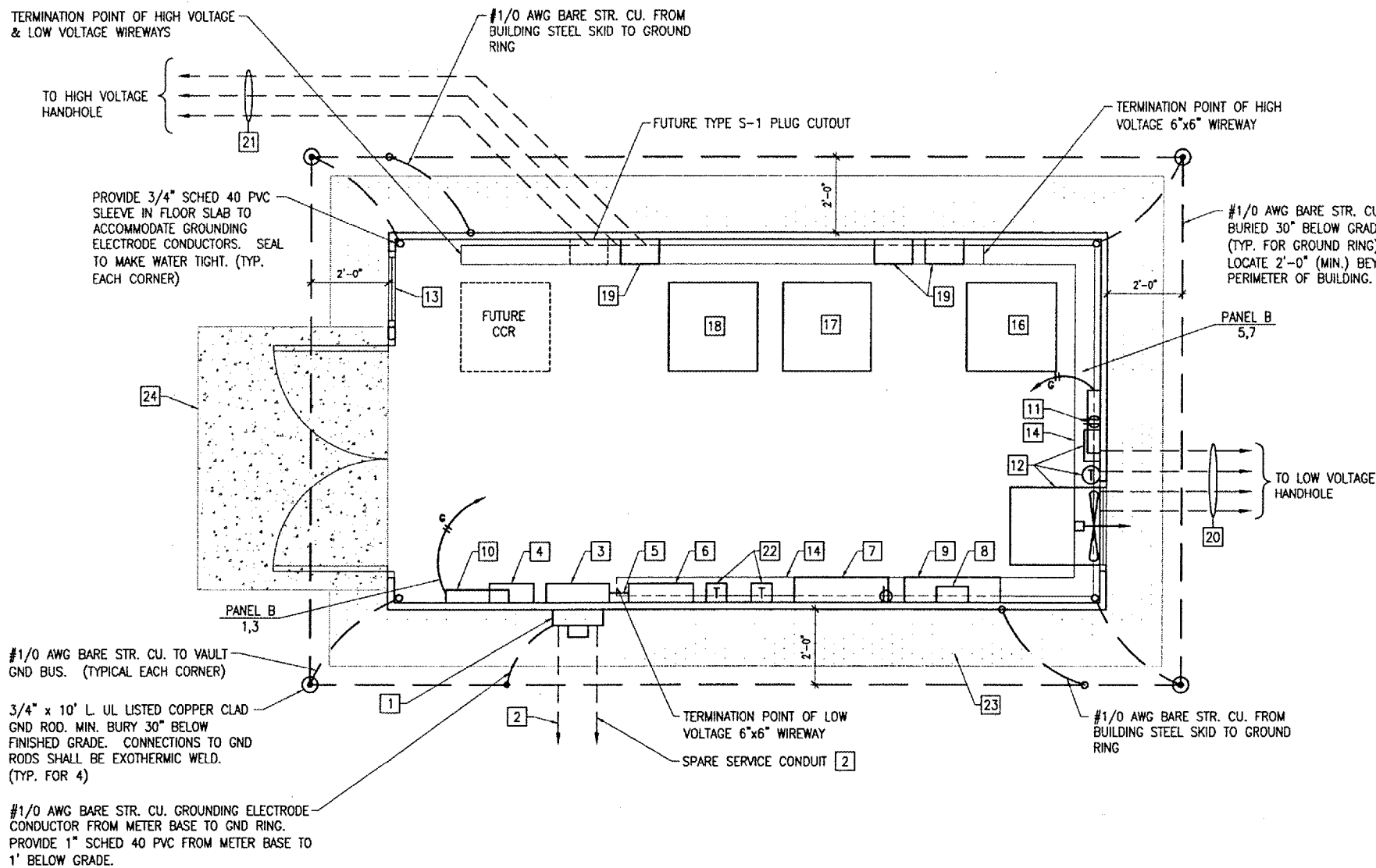
DATE	REVISION	BY

KEWANEE MUNICIPAL AIRPORT
 KEWANEE, HENRY COUNTY, ILLINOIS
 I.L. PROJ.: E21-3586 A.I.P. PROJ.: 3-17-0058-B12

FILE PROJECT NO. 810-06V\TD	FILE NAME R-142ELE.DWG	SCALE 1"=30'	DATE 04/01/08
LAYOUT	R.A.W.	08/02/05	
DRAWN	B.A.K.	08/02/05	
REVIEWED	C.A.H.	04/27/06	



CONSTRUCT VAULT
 PROPOSED ELECTRICAL PLAN
 STA. 12+00 TO STA. 20+00



Vault Electrical Equipment Plan
 SCALE 1/2"=1'-0"
 1 0 2 4 FEET

KEYED NOTES

- 1 ELECTRIC UTILITY METER WITH SUPPORT HARDWARE PER SERVING ELECTRIC UTILITY COMPANY REQUIREMENTS.
- 2 UTILITY SERVICE CONDUCTORS (BY UTILITY) IN 4" GRSC (BY CONTRACTOR) FROM UTILITY TRANSFORMER TO METER BASE. INCLUDE SPARE 4" GRSC PER UTILITY CO. REQUIREMENTS. CONTRACTOR SHALL FURNISH & INSTALL SERVICE CONDUCTORS & CONDUIT FROM METER BASE TO SERVICE PANEL. SEE "NEW VAULT ELECTRICAL ONE LINE DIAGRAM".
- 3 SERVICE PANEL A, SEE PANEL A SCHEDULE.
- 4 AC SURGE PROTECTOR/TVSS, SEE "NEW VAULT ELECTRICAL ONE LINE DIAGRAM."
- 5 2 #1/0 THWN, 1 #1/0 THWN NEUTRAL, 1 #4 GND IN 2" GRSC FROM SERVICE PANEL A TO PANEL B.
- 6 PANEL B, SEE PANEL B SCHEDULE.
- 7 LIGHTING CONTACTOR PANEL. SEE AIRFIELD LIGHTING WIRING SCHEMATIC AND LIGHTING CONTACTOR PANEL DETAIL.
- 8 L-854 RADIO CONTROL UNIT. EXTEND RADIO ANTENNA CABLE AND MOUNT ANTENNA ON THE ROOF FOR PROPER OPERATION.
- 9 RADIO RELAY INTERFACE PANEL WITH PHOTOCELL BYPASS SWITCH FOR RUNWAY 1-19 CCR, TAXIWAY CCR, AND RUNWAY 18-36 CCR. SEE AIRFIELD LIGHTING WIRING SCHEMATIC FOR WIRING REQUIREMENTS. MOUNT PHOTOCELL ON ROOF. FIELD VERIFY LOCATION FOR PROPER CONTROL AND OPERATION.
- 10 ELECTRIC WALL HEATER EH-1, 3000 WATT, 240 VAC, 1 PHASE, SUITABLE FOR SURFACE MOUNTING WITH INTEGRAL THERMOSTAT, Q-MARK MODEL CWH3407, OR APPROVED EQUAL. BOTTOM OF HEATER SHALL BE 3" (MIN.) ABOVE THE UPPER ELECTRICAL WIREWAY.
- 11 ELECTRIC WALL HEATER EH-2, 2000 WATT, 240 VAC, 1 PHASE, SUITABLE FOR SURFACE MOUNTING WITH INTEGRAL THERMOSTAT, Q-MARK MODEL CWH3404, OR APPROVED EQUAL. BOTTOM OF HEATER SHALL BE 3" (MIN.) ABOVE THE UPPER ELECTRICAL WIREWAY. COORDINATE WITH CCR INSTALLATION & FAN INSTALLATION. LOCATE HEATER ON WALL SUCH THAT IT IS NOT DIRECTLY BEHIND CCR.
- 12 EXHAUST FAN EF-1, 2000 CFM AT .25" STATIC PRESSURE WITH 1/2 HP, 120 VAC MOTOR, COOK MODEL 20S10D, OR APPROVED EQUAL. INCLUDE WALL HOUSING WITH GUARD, GRAVITY BACK DRAFT DAMPER, ALUMINUM WEATHER-HOOD PAINTED TO MATCH BUILDING EXTERIOR, STAINLESS STEEL INSECT SCREEN, AND FRACTIONAL HP ELECTRICAL DISCONNECT. INSTALL FAN AS HIGH AS POSSIBLE. PROVIDE 120 VAC THERMOSTAT WITH CONTACTOR AND AUTO-OFF-MANUAL CONTROL SWITCH AT 48" AFF. MOUNT THERMOSTAT ON 2" THICK INSULATED BASE. SEE EXHAUST FAN CONTROL SCHEMATIC FOR WIRING REQUIREMENTS.
- 13 INTAKE LOUVER L-1, 24" WIDE BY 48" HIGH INTAKE LOUVER WITH STAINLESS STEEL INSECT SCREEN, 120 VAC MOTORIZED DAMPER WITH LIMIT SWITCH, KYNAR FINISH MATCHING BUILDING EXTERIOR, RUSKIN MODEL ELF375DX, OR APPROVED EQUAL. SEE EXHAUST FAN CONTROL SCHEMATIC FOR WIRING REQUIREMENTS.
- 14 6" BY 6" LOW VOLTAGE WIREWAY. LABEL "LOW VOLTAGE" EVERY 4 FEET. INSTALL ABOVE HIGH VOLTAGE WIREWAY.
- 15 6" BY 6" HIGH VOLTAGE WIREWAY. LABEL "HIGH VOLTAGE" EVERY 4 FEET. INSTALL BELOW LOW VOLTAGE WIREWAY.
- 16 RUNWAY 1-19 CONSTANT CURRENT REGULATOR. SEE GENERAL NOTE 1.
- 17 RUNWAY 9-27 CONSTANT CURRENT REGULATOR. SEE GENERAL NOTE 1.
- 18 TAXIWAY CONSTANT CURRENT REGULATOR. SEE GENERAL NOTE 1.
- 19 SERIES PLUG CUTOOUT TYPE S-1 WITH ENCLOSURE. SEE GENERAL NOTES 1 AND 2.
- 20 4-4" GRSC FROM LOW VOLTAGE WIREWAY TO LOW VOLTAGE HANDHOLE.
- 21 3-4" GRSC FROM HIGH VOLTAGE WIREWAY TO HIGH VOLTAGE HANDHOLE.
- 22 BOOST TRANSFORMERS. SEE ELEVATION VIEW.
- 23 VEGETATION BARRIER CONSISTING OF A MIN. 3" PEA GRAVEL SURFACE OVER FILTER OR LANDSCAPING FABRIC. PROPOSED SURFACE TREATMENT WILL COVER ENTIRE AREA BENEATH VAULT STRUCTURE AS WELL AS 18" AROUND THE PERIMETER OF THE BUILDING EDGE. THE STONE AND FABRIC AS WELL AS ANY EQUIPMENT AND LABOR REQUIRED TO COMPLETE THIS TASK WILL BE CONSIDERED INCIDENTAL TO THE INSTALLATION OF THE PROPOSED ELECTRICAL VAULT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- 24 ENTRANCE PAD CONSTRUCTED OF 6" CONCRETE SLAB W/6X6-W5XW5 WELDED WIRE FABRIC ON A COMPACTED SUBGRADE. MINIMUM DIMENSIONS OF PAD WILL BE 7'Wx5'Dx6"H, SLOPED AT A MIN. OF 0.5"/FT AWAY FROM THE VAULT ENTRANCE. PCC USED TO CONSTRUCT THE PAD WILL CONFORM TO ITEM 610. ALL MATERIALS, LABOR AND EQUIPMENT USED TO CONSTRUCT THE PAD INCLUDING ANY GRADING REQUIRED WILL BE CONSIDERED INCIDENTAL TO THE CONSTRUCTION OF THE PROPOSED ELECTRICAL VAULT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

GENERAL NOTES

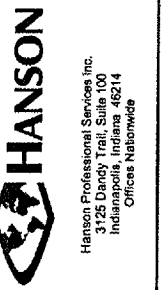
1. SEE "NEW VAULT ELECTRICAL ONE LINE DIAGRAM" FOR LOW VOLTAGE INPUT POWER WIRING REQUIREMENTS TO CCR'S (CONSTANT CURRENT REGULATORS). SEE "HIGH VOLTAGE WIRING SCHEMATIC" FOR CCR OUTPUT WIRING REQUIREMENTS. SEE "AIRFIELD LIGHTING WIRING SCHEMATIC" FOR CCR CONTROL WIRING REQUIREMENTS. PROVIDE 5 FEET MINIMUM CLEAR WORKING SPACE IN FRONT OF EACH CCR AND EACH SERIES PLUG CUTOOUT.
2. CONSTANT CURRENT REGULATORS AND THEIR RESPECTIVE SERIES PLUG CUTOOUTS SHALL BE CLEARLY LABELED TO IDENTIFY THE RESPECTIVE REGULATOR DESIGNATION, RUNWAY OR TAXIWAY SERVED, POWER SOURCE OR CIRCUIT, AND VOLTAGE SYSTEM.
3. SEE ELEVATION VIEWS FOR ADDITIONAL INFORMATION ON PROPOSED EQUIPMENT LAYOUTS.
4. COORDINATE CONDUIT & SLEEVE ENTRANCES THROUGH FLOOR SLAB AND WALLS.

DATE	REVISION	BY

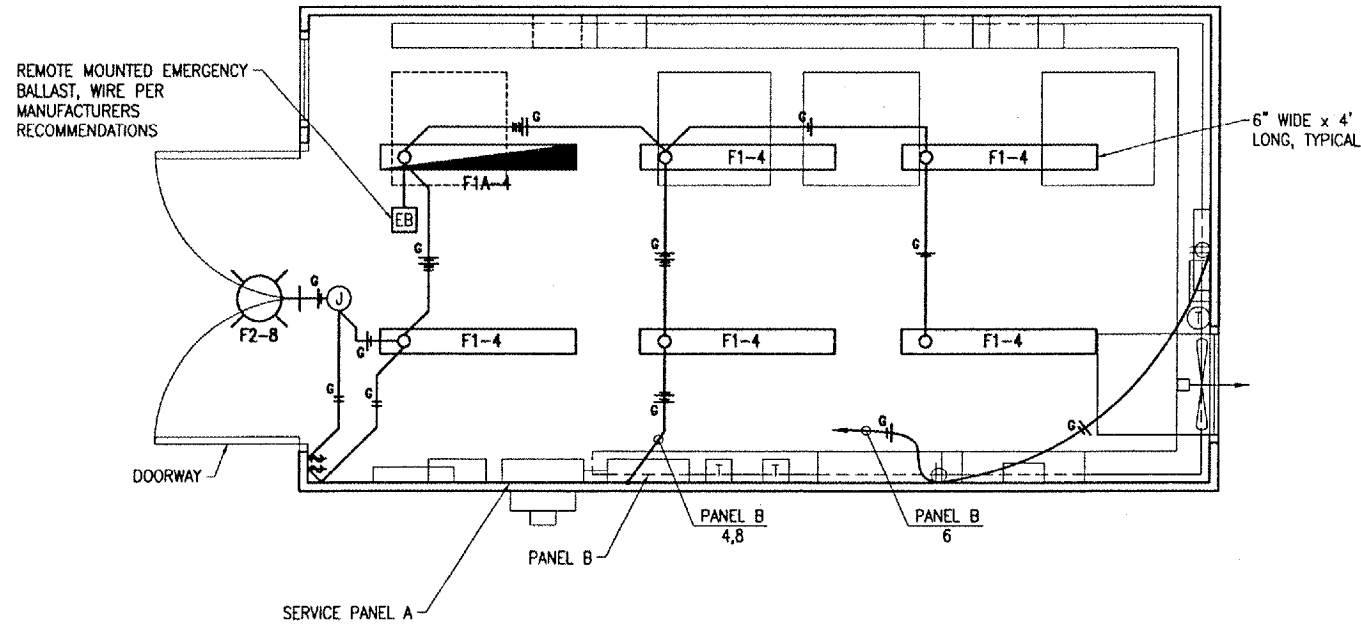
KEWANEE MUNICIPAL AIRPORT
 KEWANEE, HENRY COUNTY, ILLINOIS

A.I.P. PROJ.: 3-17-0058-812
 I.L. PROJ.: EZI-3586

Project No.	810-08A1D
File Name	EP-101.DWG
Scale	1/2"=1'-0"
Date	04/01/08
LAYOUT	KNL 04/13/06
DRAWN	MV 04/19/06
REVIEWED	LDP 01/17/06



CONSTRUCT VAULT
 PROPOSED
 AIRPORT ELECTRICAL VAULT
 EQUIPMENT PLAN



VAULT LIGHTING & RECEPTACLE PLAN
 SCALE 1/2"=1'-0"
 1 0 2 4 FEET

LIGHTING FIXTURE SCHEDULE						
FIXT. TYPE	DESCRIPTION	MANUFACTURER & CATALOG NO.	LAMPS/WATTS	VOLTS	MOUNTING	REMARKS
F1	4 FT. WET LOCATION LISTED ENCLOSED AND GASKETED INDUSTRIAL FLUORESCENT LIGHT FIXTURE, IMPACT RESISTANT, UV RESISTANT REINFORCED POLYESTER FIBERGLASS HOUSING, HIGH IMPACT ACRYLIC DIFFUSER, RAPID START COLD WEATHER 0 DEG. F. ELECTRONIC BALLAST WITH LESS THAN OR EQUAL TO 10% THD.	LITHONIA: DMW-2-32-AR-120-CW-GE810RS-WLF	2-32W T8 4100K 59 TOTAL INPUT WATTS	120	SURFACE TO HARD CEILING	PROVIDE WET LOCATION FITTINGS INSTALLED IN TOP OF FIXTURE.
F1A	SAME AS F1 EXCEPT PROVIDE AN EMERGENCY BALLAST CAPABLE OF OPERATING 2 LAMPS FOR 90 MINUTES AT 1100-1400 TOTAL LUMENS, BODINE #B50ST. NOTE BALLAST WILL HAVE TO BE REMOTE MOUNTED NEAR FIXTURE AS INDICATED ON THE PLANS.	LITHONIA: DMW-2-32-AR-120-CW-GE810RS-WLF	2-32W T8 4100K 59 TOTAL INPUT WATTS	120	SURFACE TO HARD CEILING	PROVIDE WET LOCATION FITTINGS INSTALLED IN TOP OF FIXTURE.
F2	COMPACT FLUORESCENT WALL-PAK, ONE PIECE INJECTION MOLDED UV STABILIZED POLYCARBONATE HOUSING, HIGH PERFORMANCE SPECULAR ANODIZED SEGMENTED REFLECTOR, ONE PIECE HIGH TEMPERATURE SILICONE GASKET, MEDIUM BRONZE FINISH, HIGH POWERFACTOR ELECTRONIC BALLAST WITH LESS THAN OR EQUAL TO 10% THD, UL LISTED FOR WET LOCATIONS, FUSED.	LITHONIA: TWA-42TRT-120-SF-CR-DMB-LP1	1-42W TRT 4100K 47 TOTAL INPUT WATTS	120	SURFACE TO WALL ABOVE EXTERIOR DOOR APPROXIMATELY 4 INCHES ABOVE TOP OF DOOR FRAME.	CONNECT TO WALL SWITCH LOCATED ON THE INSIDE OF THE BUILDING.

NOTE
 15 AMP & 20 AMP BRANCH CIRCUITS FOR LIGHTING & RECEPTACLES SHALL USE #12 AWG THWN (MIN.).

REVISION	DATE	BY

KEWANEE MUNICIPAL AIRPORT
 KEWANEE, HENRY COUNTY, ILLINOIS
 I.L. PROJ.: E21-3586 A.I.P. PROJ.: 3-17-0058-B12

Proj. No. 810-06VLD	EL-101.DWG	Scale 1/2"=1'-0"	Date 04/01/08
LAYOUT	KNL	08/25/05	09/26/05
DRAWN	MV	09/26/05	01/17/06
REVIEWED	LDP	01/17/06	



CONSTRUCT VAULT
 VAULT LIGHTING AND RECEPTACLE PLAN

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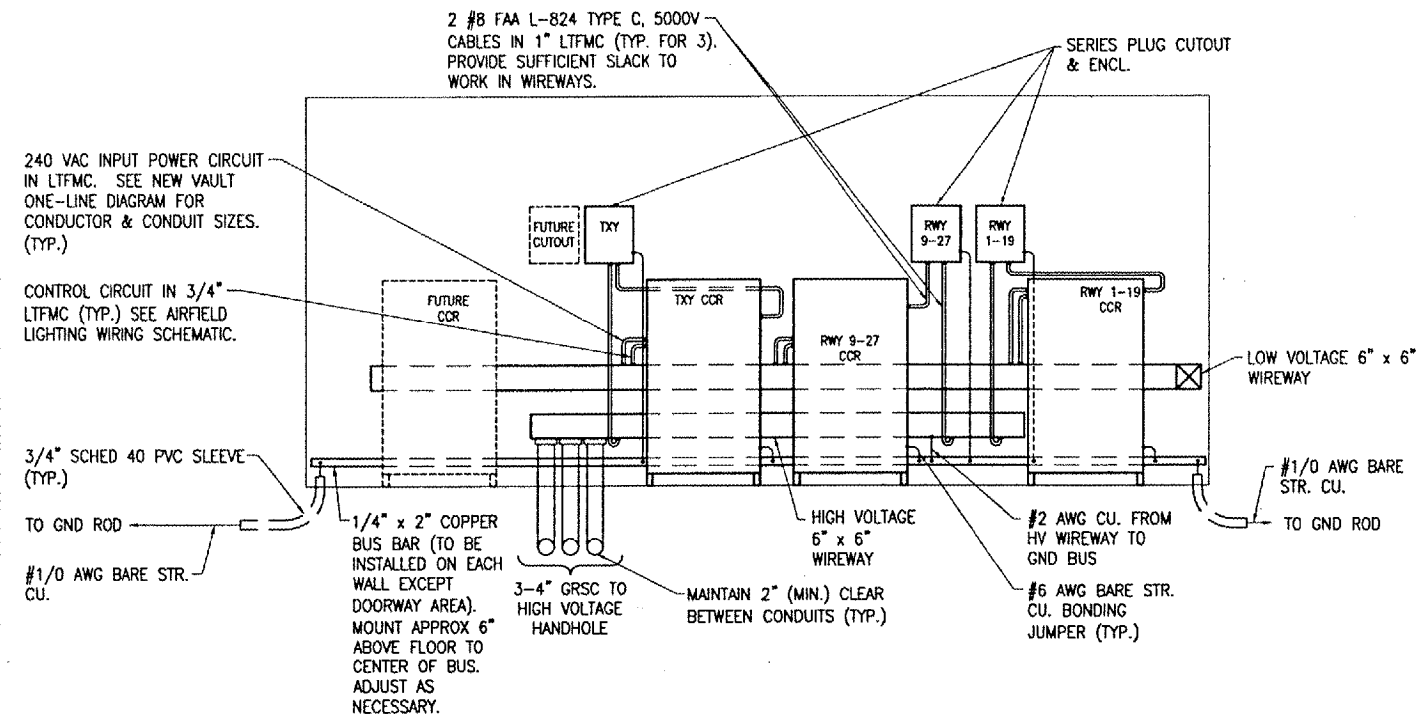
BY	
REVISION	
DATE	

KEWANEE MUNICIPAL AIRPORT
 KEWANEE, HENRY COUNTY, ILLINOIS
 I.L. PROJ.: E2I-3586 A.I.P. PROJ.: 3-17-0058-B12

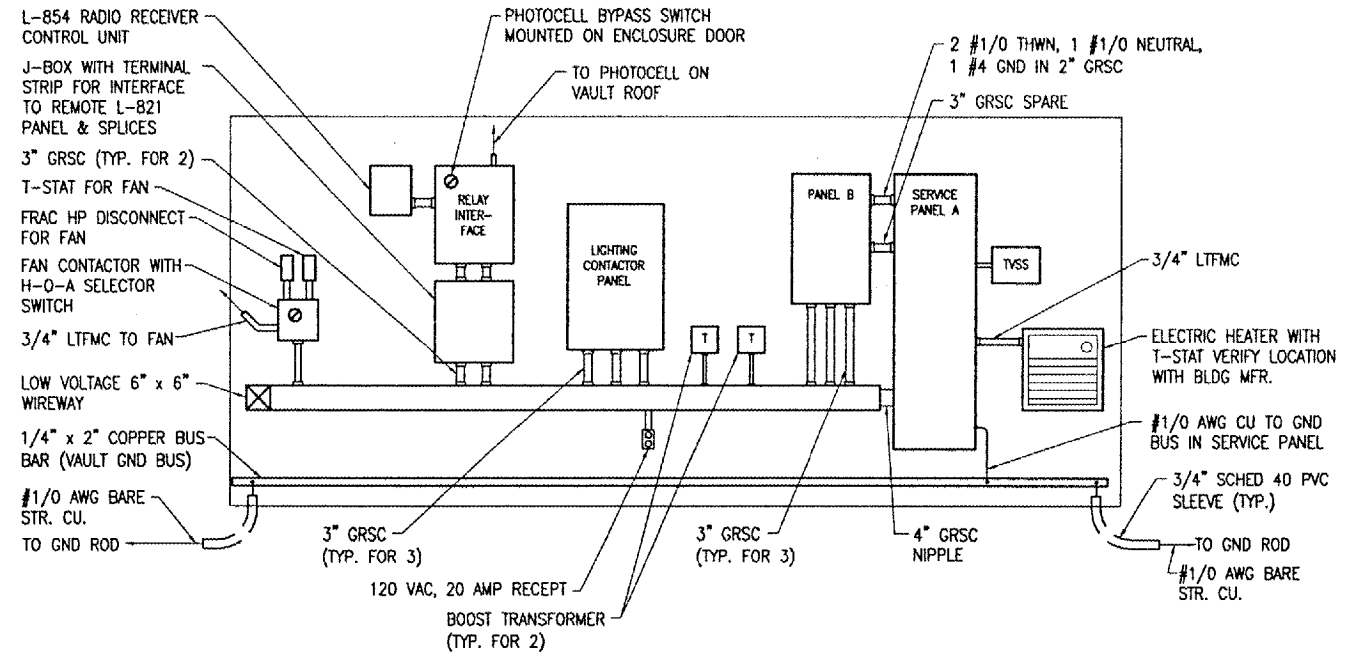
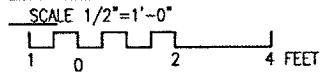
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Filename	F-201.DWG
Scale	1/2"=1'-0"
Date	04/01/08
LAYOUT	KNL 09/26/05
DRAWN	AV 09/26/05
REVIEWED	LDP 01/17/06



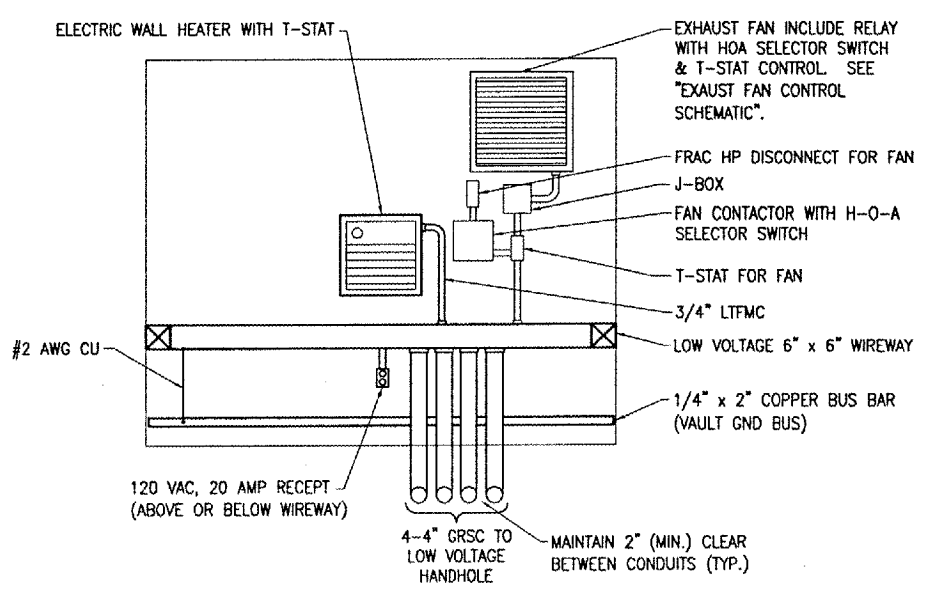
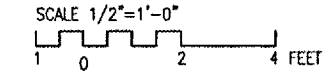
CONSTRUCT VAULT
 PROPOSED
 AIRPORT ELECTRICAL VAULT
 WALL ELEVATIONS



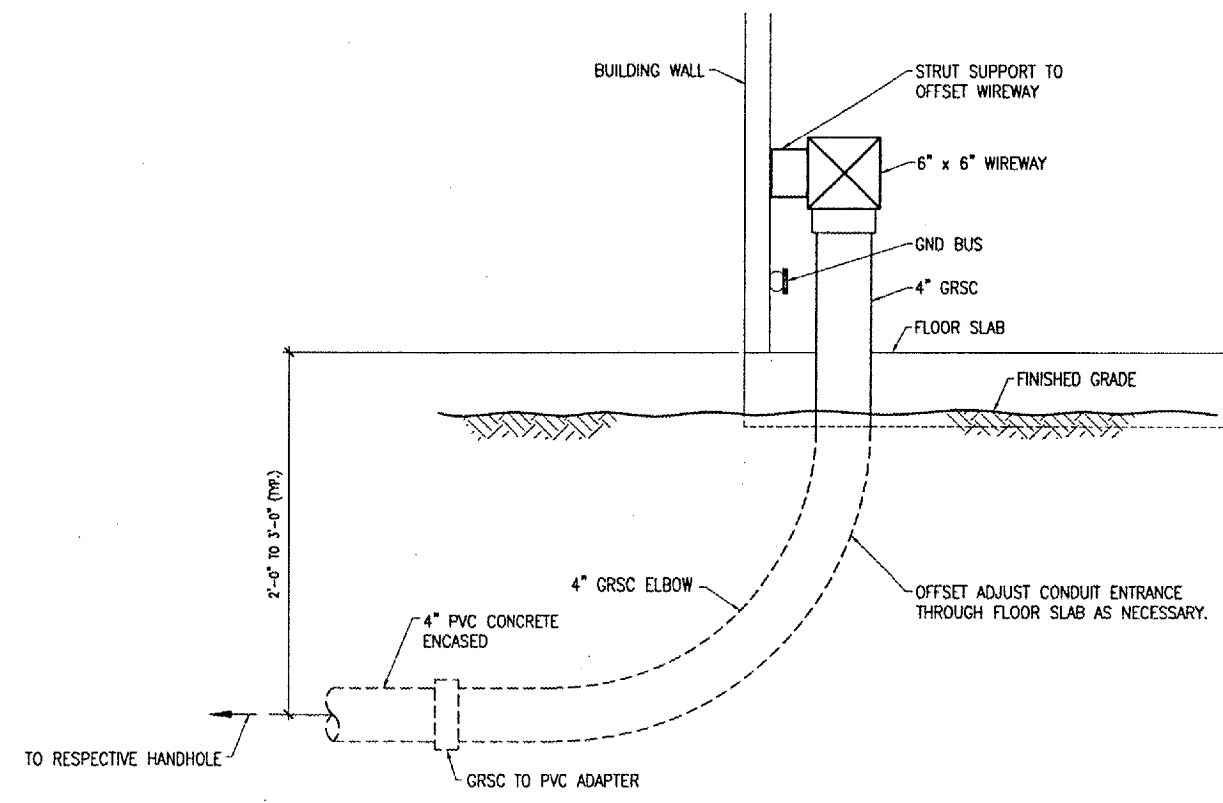
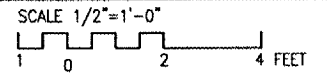
VAULT NORTH WALL ELEVATION



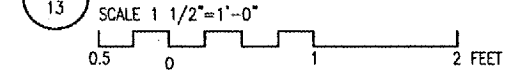
VAULT SOUTH WALL ELEVATION



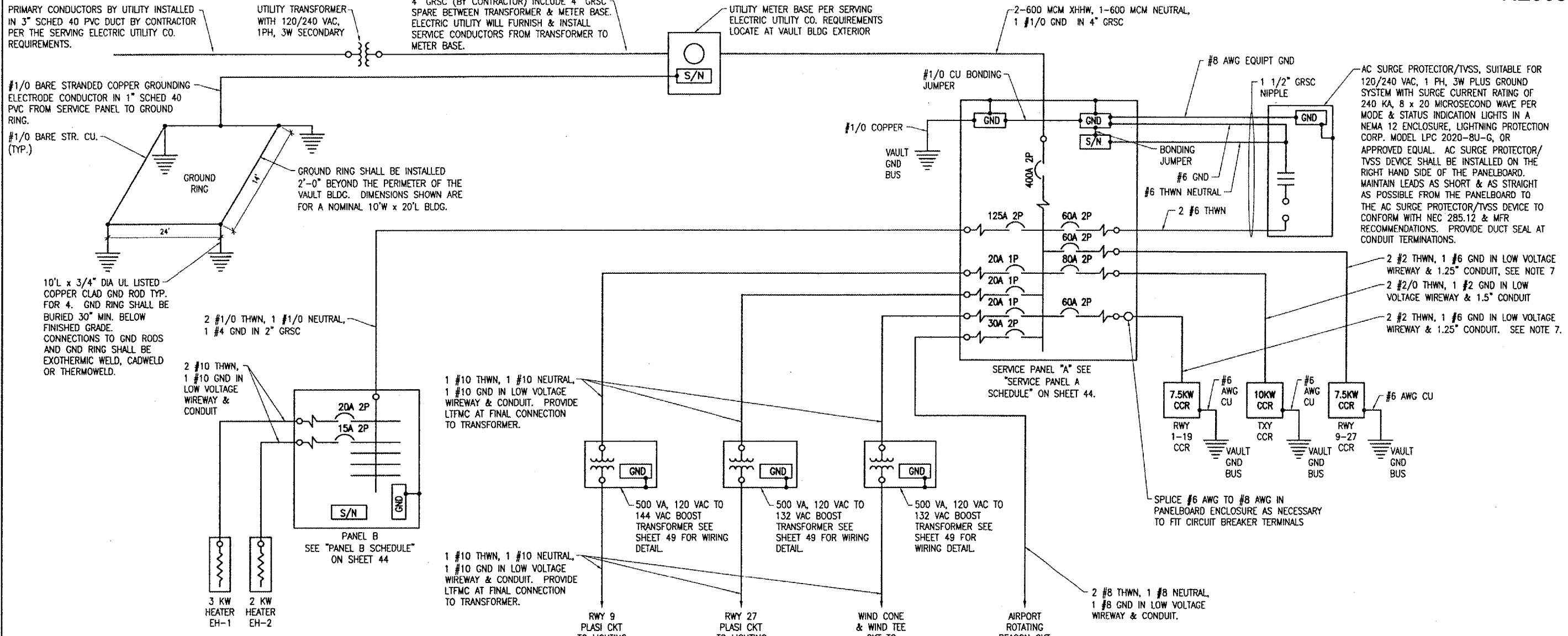
VAULT EAST WALL ELEVATION



CONDUIT ENTRANCE DETAIL



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HIGH VOLTAGE & LOW VOLTAGE CIRCUITS SHALL NOT BE INSTALLED IN THE SAME RACEWAY

FURNISH & INSTALL A WEATHERPROOF WARNING LABEL FOR EACH METER SOCKET, PANELBOARD, LOAD CENTER, DISCONNECT & CONTROL PANEL TO WARN PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS, PER THE REQUIREMENTS OF NEC 110.16 "FLASH PROTECTION".

- NOTES
1. ALL VAULT WORK, AIRFIELD WORK, AND/OR POWER OUTAGES SHALL BE COORDINATED WITH THE AIRPORT MANAGER.
 2. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 (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 SHALL NOT BE PERMITTED.
 3. ALL EQUIPMENT SHOWN IS NEW UNLESS NOTED OTHERWISE.
 4. COORDINATE ELECTRIC SERVICE WORK WITH THE SERVING ELECTRIC UTILITY COMPANY:
AMEREN IP
ATTN, MS. KATHY CROWELL
1824 KNOX HIGHWAY 9
GALESBURG, IL 61401
PHONE: 309-852-2963
FAX: 309-852-2946
CELL PHONE: 309-368-6684
 5. CONTRACTOR SHALL CONFIRM POWER REQUIREMENTS WITH THE ACTUAL NAMEPLATE ON EACH CONSTANT CURRENT REGULATOR AND ADJUST CIRCUIT BREAKER, WIRE SIZES & CONDUIT SIZES TO CONFORM WITH NEC & MANUFACTURER'S RECOMMENDATIONS WHERE APPLICABLE. WIRE SIZES SHOWN ON THE PLANS ARE MINIMUM.
 6. SEE PANELBOARD SCHEDULES FOR ADDITIONAL REQUIREMENTS FOR EACH RESPECTIVE PANEL.
 7. BRANCH CIRCUITS TO REGULATORS SHALL BE INSTALLED IN THE RESPECTIVE LOW VOLTAGE WIREWAY/DUCT, WITH GRSC AT TRANSITIONS AND UL LISTED LIQUID TIGHT FLEXIBLE METAL CONDUIT AT FINAL CONNECTIONS TO THE REGULATORS. CONDUITS SHALL BE SIZED IN ACCORDANCE WITH NEC.
 8. BOND ALL REGULATORS TO THE RESPECTIVE VAULT GROUND BUS WITH A DEDICATED #6 AWG BONDING JUMPER FOR EACH REGULATOR.
 9. LTFMC DENOTES LIQUID TIGHT FLEXIBLE METAL CONDUIT UL LISTED, SUNLIGHT RESISTANT, & SUITABLE FOR GROUNDING.

NEW VAULT ELECTRICAL ONE-LINE DIAGRAM

BY	
REVISION	
DATE	
KEWANEЕ MUNICIPAL AIRPORT KEWANEЕ, HENRY COUNTY, ILLINOIS	
PROJECT NO.	3-17-0058-812
PROJ. NO.	EZL-3586
DATE	04/01/06
DRAWN	KNL
REVIEWED	LDP
DATE	09/23/05
DATE	09/23/05
DATE	01/17/06

Hanson Professional Services Inc.
3125 Grandy Trail, Suite 100
Indianapolis, IN 46214
Offices Nationwide

CONSTRUCT VAULT

PROPOSED VAULT ELECTRICAL ONE-LINE DIAGRAM SHEET 1

13

13 of 27 sheets

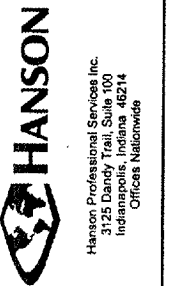
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BY	
REVISION	
DATE	

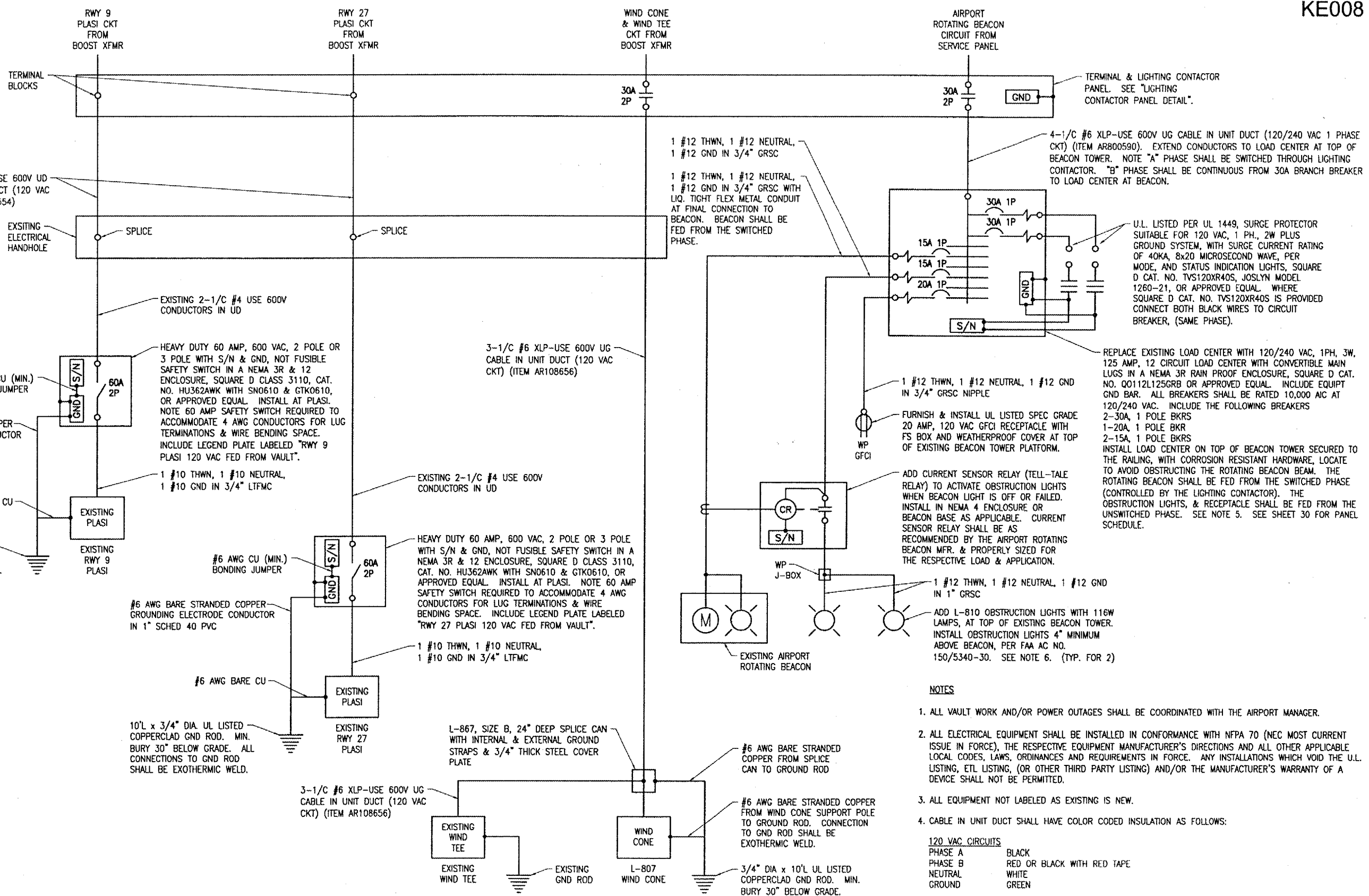
KEWANEE MUNICIPAL AIRPORT
KEWANEE, HENRY COUNTY, ILLINOIS

PROJECT: 3-17-0558-B12
E.L. PROJ.: E21-3586

NO. Project No.	810-08VLD
File Name	E-607.DWG
Scale	NONE
Date	08/01/08
LAYOUT	KNL 09/23/05
DRAWN	MV 09/23/05
REVIEWED	LDP 01/17/06



CONSTRUCT VAULT
PROPOSED VAULT
ELECTRICAL ONE-LINE
DIAGRAM SHEET 2



NEW VAULT ELECTRICAL ONE-LINE DIAGRAM (CONTINUED)

- NOTES**
- ALL VAULT WORK AND/OR POWER OUTAGES SHALL BE COORDINATED WITH THE AIRPORT MANAGER.
 - ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 (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 SHALL NOT BE PERMITTED.
 - ALL EQUIPMENT NOT LABELED AS EXISTING IS NEW.
 - CABLE IN UNIT DUCT SHALL HAVE COLOR CODED INSULATION AS FOLLOWS:

120 VAC CIRCUITS	BLACK
PHASE A	BLACK
PHASE B	RED OR BLACK WITH RED TAPE
NEUTRAL	WHITE
GROUND	GREEN
 - PROVIDE NEMA 4 HUBS FOR ALL CONDUIT ENTRIES INTO NEMA 4 RATED ENCLOSURES. PROVIDE NEMA 4 HUBS FOR ALL CONDUIT ENTRIES INTO THE NEMA 3R LOAD CENTER ENCLOSURE.
 - INSTALL OBSTRUCTION LIGHTING ON AIRPORT ROTATING BEACON TOWER IN CONFORMANCE WITH FAA AC NO. 150/5340-30 AND FAA AC NO. 150/5370-10, ITEM L-101, INSTALLATION OF AIRPORT ROTATING BEACONS.
 - ALL CONDUCTORS/WIRING SHALL BE COPPER.

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SERVICE PANEL "A" SCHEDULE			
CKT #	DUTY	SIZE	CKT #
1	PANELBOARD B	125A 2P	2
3			4
5	RADIO CONTROL & PHOTOCCELL	15A 1P	6
7	RUNWAY 9 PLASI	20A 1P	8
9	RUNWAY 27 PLASI	20A 1P	10
11	WINDCONE & WIND TEE	20A 1P	12
13	AIRPORT ROTATING BEACON	30A 2P	14
15			16
17	SPARE	20A 1P	18
19	SPARE	20A 1P	20
21	BLANK		22
23			24
25			26
27			28
29			30
31			32
33			34
35			36
37			38
39			40
41			42

SIZE	DUTY	CKT #
60A 2P	SURGE PROTECTOR/TVSS	4
60A 2P	RUNWAY 9/27 CCR	6
80A 2P	TAXIWAY CCR	10
60A 2P	RUNWAY 1/19 CCR	14
60A 2P	SPARE	18
80A 2P	SPARE	22
30A 2P	SPARE	26
	BLANK	30

400 AMP, 120/240 VAC, 1 PHASE, 3 WIRE, 42 CIRCUIT PANELBOARD WITH 400 AMP, 2 POLE MAIN BREAKER WITH 22,000 AIC AT 240 VAC IN A NEMA 1 ENCLOSURE. INCLUDE SEPARATE GROUND BAR KITS. ALL BRANCH BREAKERS SHALL BE BOLT-ON TYPE WITH 22,000 AIC AT 120/240 VAC. PANELBOARD SHALL BE SQUARE D CAT. NO. NQ0D42L400CU WITH NQ0D4 MAIN BREAKER KIT AND Q4L2400 MAIN BREAKER IN A NEMA 1 ENCLOSURE, OR APPROVED EQUAL.

NOTES

- PANELBOARD BUS SHALL BE COPPER. NEUTRAL BUS SHALL BE COPPER. EQUIPMENT GROUND BARS SHALL BE COPPER. NOTE ONE OF THE EQUIPMENT GROUND BARS SHALL ACCOMMODATE LINE & TAP GROUND WIRES UP TO #1/0 AWG. THE OTHER GROUND BAR SHALL ACCOMMODATE A #1/0 AWG LINE/BONDING JUMPER & TAP GROUND CONDUCTORS FROM #14 AWG TO #6 AWG.
- INCLUDE ENGRAVED PHENOLIC LEGEND PLATE LABELED "SERVICE PANEL A, 120/240 VAC, 1 PHASE, 3 WIRE". INCLUDE ADDITIONAL LEGEND PLATE FOR THE MAIN BREAKER LABELED "SERVICE BREAKER".

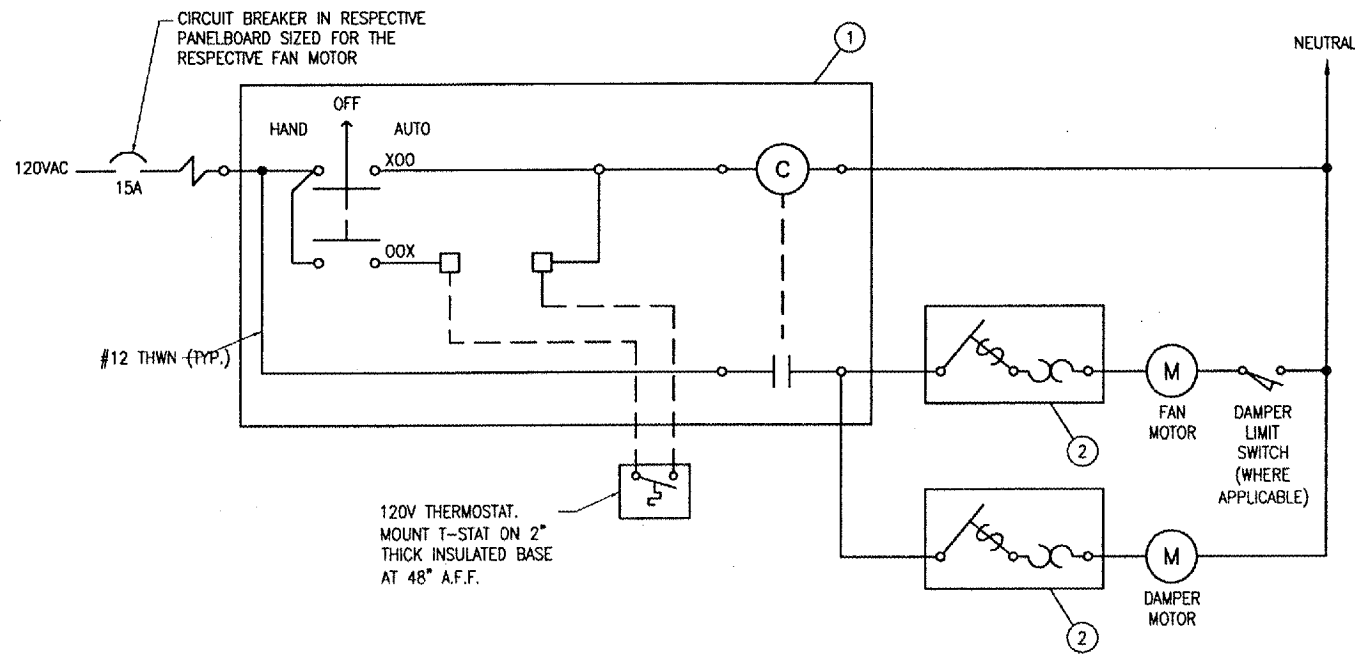
PANEL B SCHEDULE			
CKT #	DUTY	SIZE	CKT #
1	VAULT HEATER EH-1	20A 2P	2
3			4
5	VAULT HEATER EH-2	15A 2P	6
7			8
9	SPARE	15A 1P	10
11	SPARE	15A 1P	12
13	SPARE	20A 1P	14
15	SPARE	20A 1P	16
17	BLANK		18
19	BLANK		20
21	BLANK		22
23	BLANK		24
25	BLANK		26
27	BLANK		28
29	BLANK		30

SIZE	DUTY	CKT #
15A 1P	VAULT FAN	2
15A 1P	VAULT INTERIOR LIGHTING	4
20A 1P	VAULT RECEPTACLES	6
15A 1P	VAULT EXTERIOR LIGHTING	8
	BLANK	10
	BLANK	12
	BLANK	14
	BLANK	16
	BLANK	18
	BLANK	20
	BLANK	22
	BLANK	24
	BLANK	26
	BLANK	28
	BLANK	30

225 AMP, 120/240 VAC, 1 PHASE, 3 WIRE, 30 CIRCUIT PANELBOARD WITH MAIN LUGS IN A NEMA 1 ENCLOSURE. INCLUDE SEPARATE GROUND BAR KITS. ALL BRANCH BREAKERS SHALL BE BOLT-ON TYPE WITH 22,000 AIC AT 120/240 VAC. PANELBOARD SHALL BE SQUARE D CAT. NO. NQ0D30L225CU OR APPROVED EQUAL.

NOTES

- PANELBOARD BUS SHALL BE COPPER. NEUTRAL BUS SHALL BE COPPER. EQUIPMENT GROUND BARS SHALL BE COPPER.
- INCLUDE ENGRAVED PHENOLIC LEGEND PLATE LABELED "PANEL B, 120/240 VAC, 1 PHASE, 3 WIRE, FED FROM SERVICE PANEL A".



NOTES FOR FAN CONTROL SCHEMATIC

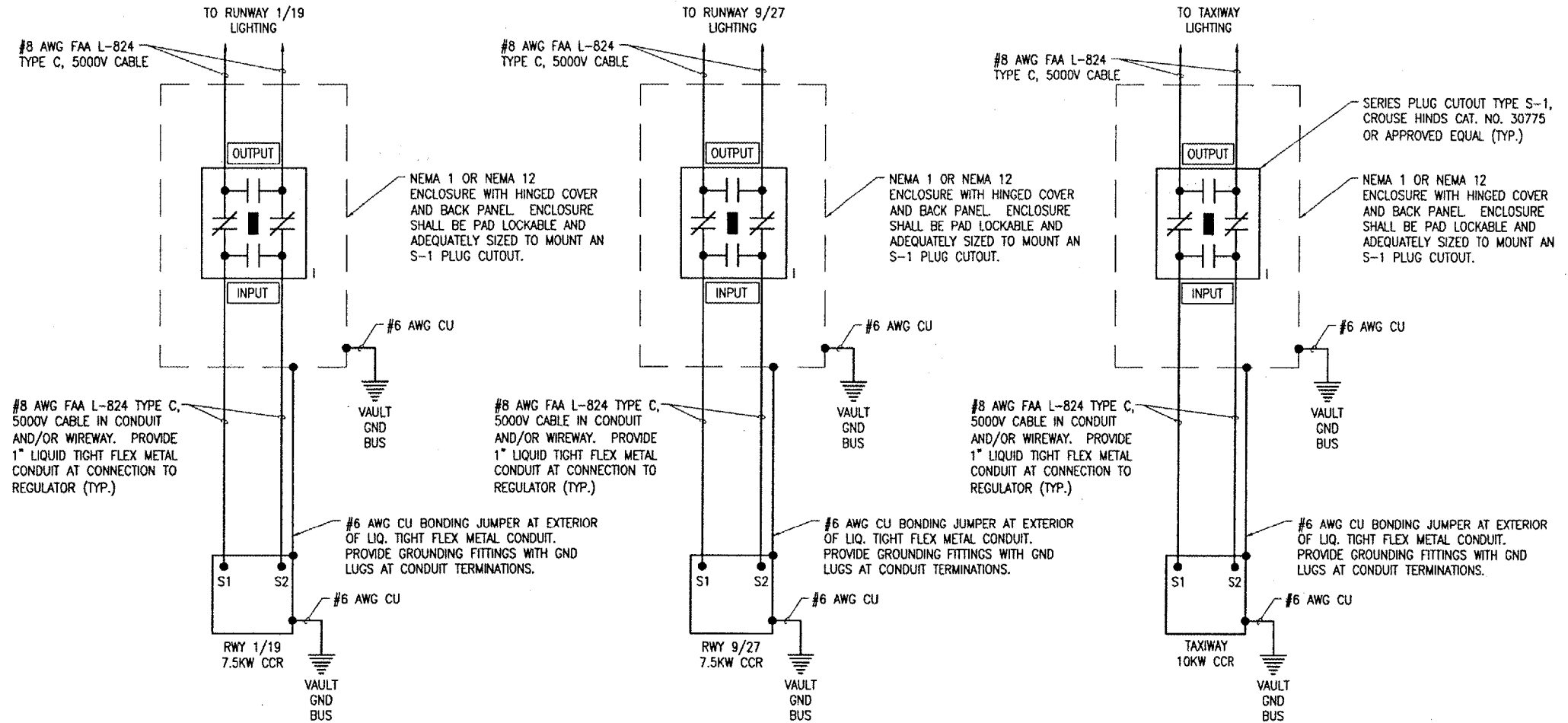
- GROUND WIRES REQUIRED BUT NOT SHOWN FOR CLARITY.
- ALL WIRING SHALL BE #12 THWN MINIMUM.
- PROVIDE A NEMA 1 ENCLOSURE SIZED TO INSTALL THE CONTACTOR, HOA SELECTOR SWITCH & TERMINALS.
- PROVIDE LEGEND PLATE FOR THE CONTACTOR AND FRACTIONAL HP MOTOR STARTER IDENTIFYING THE LOAD SERVED AND THE POWER SOURCE.
- VERIFY MOTOR HORSEPOWERS AND FULL LOAD AMPS WITH THE RESPECTIVE MANUFACTURER. CONTRACTOR SHALL COORDINATE MOTOR CIRCUIT BREAKER, CONTACTOR, FRACTIONAL HP STARTER, OVERLOADS, WIRE SIZES, CONDUIT SIZES, ETC. FOR THE RESPECTIVE EQUIPMENT FURNISHED, PER NEC & MANUFACTURER'S RECOMMENDATIONS. COORDINATE FAN & LOUVER INSTALLATION WITH BUILDING MFR.
- INTAKE LOUVERS SHALL OPEN AND EXHAUST FAN SHALL OPERATE WHEN SPACE TEMP EXCEEDS 85°F (ADJUSTABLE). EXHAUST FAN SHALL OPERATE ONLY WHEN DAMPER HAS PROVIDED "OPEN". IN MANUAL MODE DAMPER SHALL REMAIN OPEN AND FAN SHALL RUN CONTINUOUSLY.

LEGEND

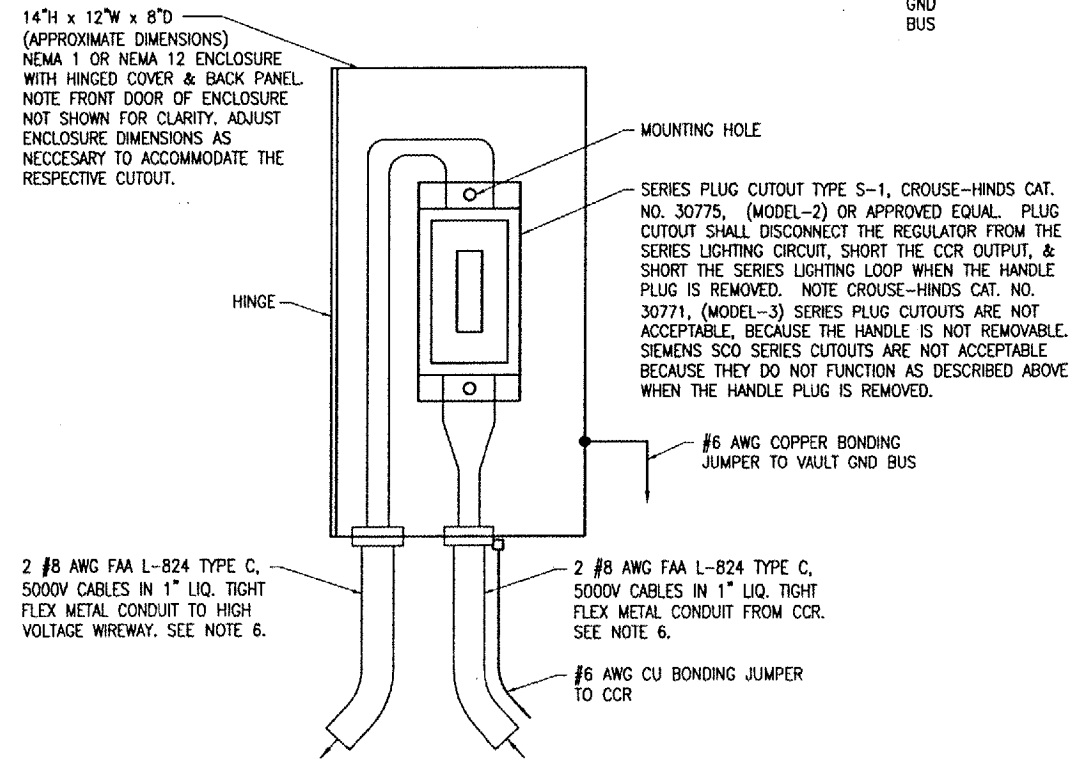
- 120VAC, NEMA SIZE 0 (MINIMUM), 1 POLE, FULL VOLTAGE CONTACTOR IN A NEMA 1 ENCLOSURE, SQUARE D CLASS 8502, TYPE SBG5V02 OR APPROVED EQUAL. INCLUDE H-O-A SELECTOR SWITCH WITH EACH CONTACTOR.
- FRACTIONAL HORSEPOWER MOTOR MANUAL STARTER, SQUARE D MANUAL STARTER WITH HANDLE/GUARD/LOCK OFF, IN NEMA 1 ENCLOSURE CLASS 2510, TYPE FG5 OR APPROVED EQUAL. INCLUDE MELTING ALLOY TYPE THERMAL OVERLOADS SIZED AS REQUIRED TO PROTECT THE RESPECTIVE MOTOR. 120VAC MOTORS SHALL HAVE SINGLE POLE STARTERS.

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BY	
REVISION	
DATE	
KEWANE MUNICIPAL AIRPORT KEWANE, HENRY COUNTY, ILLINOIS	
I.L. PROJ.: E21-3586 A.I.P. PROJ.: 3-17-0058-B12	
HEL Project No. B10-06V1D E-608.DWG Scale NONE Date 04/01/08	LAYOUT KNL 09/23/05 DRAWN MV 09/27/05 REVIEWED LDP 01/17/06
Hanson Professional Services Inc. 3125 Dancy Trail, Suite 100 Indianapolis, Indiana 46214 Offices Nationwide	
CONSTRUCT VAULT PANEL SCHEDULES & DETAILS	
15 15 of 27 sheets	



HIGH VOLTAGE WIRING SCHEMATIC



SERIES PLUG CUTOUT MOUNTING DETAIL
(TYPICAL FOR 3)

- NOTES**
1. PROVIDE PHENOLIC ENGRAVED LEGEND PLATES FOR EACH CONSTANT CURRENT REGULATOR NOTING THE REGULATOR DESIGNATION, THE RUNWAY OR TAXIWAY SERVED AND THE POWER SOURCE AND CIRCUIT NUMBER.
 2. EACH PLUG CUTOUT CABINET SHALL BE FURNISHED WITH A PHENOLIC ENGRAVED LEGEND PLATE THAT IDENTIFIES THE RESPECTIVE CIRCUIT OR REGULATOR.
 3. PROVIDE PHENOLIC ENGRAVED LEGEND PLATES FOR EACH CUTOUT TO IDENTIFY THE RESPECTIVE CUTOUT INPUT CONNECTION AND THE RESPECTIVE CUTOUT OUTPUT CONNECTION.
 4. PROVIDE ADEQUATE WORKING SPACE IN FRONT OF EACH CUTOUT ENCLOSURE TO MEET NEC CLEARANCE REQUIREMENTS.
 5. PROVIDE WARNING SIGN ON VAULT DOOR LABELED "DANGER - HIGH VOLTAGE - KEEP OUT" PER THE REQUIREMENTS OF NEC 110.34 (C).
 6. LIQUID TIGHT FLEXIBLE METAL CONDUIT AND ASSOCIATED FITTINGS SHALL BE U.L. LISTED TO MEET THE REQUIREMENTS OF NEC 350.6, SUITABLE FOR GROUNDING AND SUNLIGHT RESISTANT. 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 LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS NOT UL LISTED.

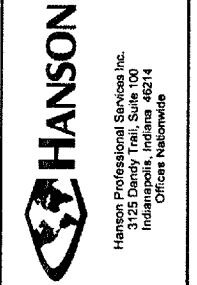
- LEGEND**
- * DENOTES PLUG CUTOUT WITH PLUG INSERTED
 - P DENOTES PLUG CUTOUT WITH PLUG PULLED
 - CCR DENOTES CONSTANT CURRENT REGULATOR

BY	
REVISION	
DATE	

KEWANEE MUNICIPAL AIRPORT
KEWANEE, HENRY COUNTY, ILLINOIS

IL. PROJ.: E21-3586 A.I.P. PROJ.: 3-17-0058-B12

NO. Project No.	810-06VLD
Estimate	E-604.DWG
Scale	NO SCALE
Date	04/01/08
LAYOUT	KNL
DRAWN	MY
REVIEWED	LDP
	07/12/05
	07/12/05
	01/17/06



CONSTRUCT VAULT
HIGH VOLTAGE
WIRING SCHEMATIC

APR 01, 2008 11:49 AM VOORHOOBOS
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BY	
REVISION	
DATE	

KEWANEE MUNICIPAL AIRPORT
 KEWANEE, HENRY COUNTY, ILLINOIS
 A.I.P. PROJ.: 3-17-0058-B12
 I.L. PROJ.: E21-3586

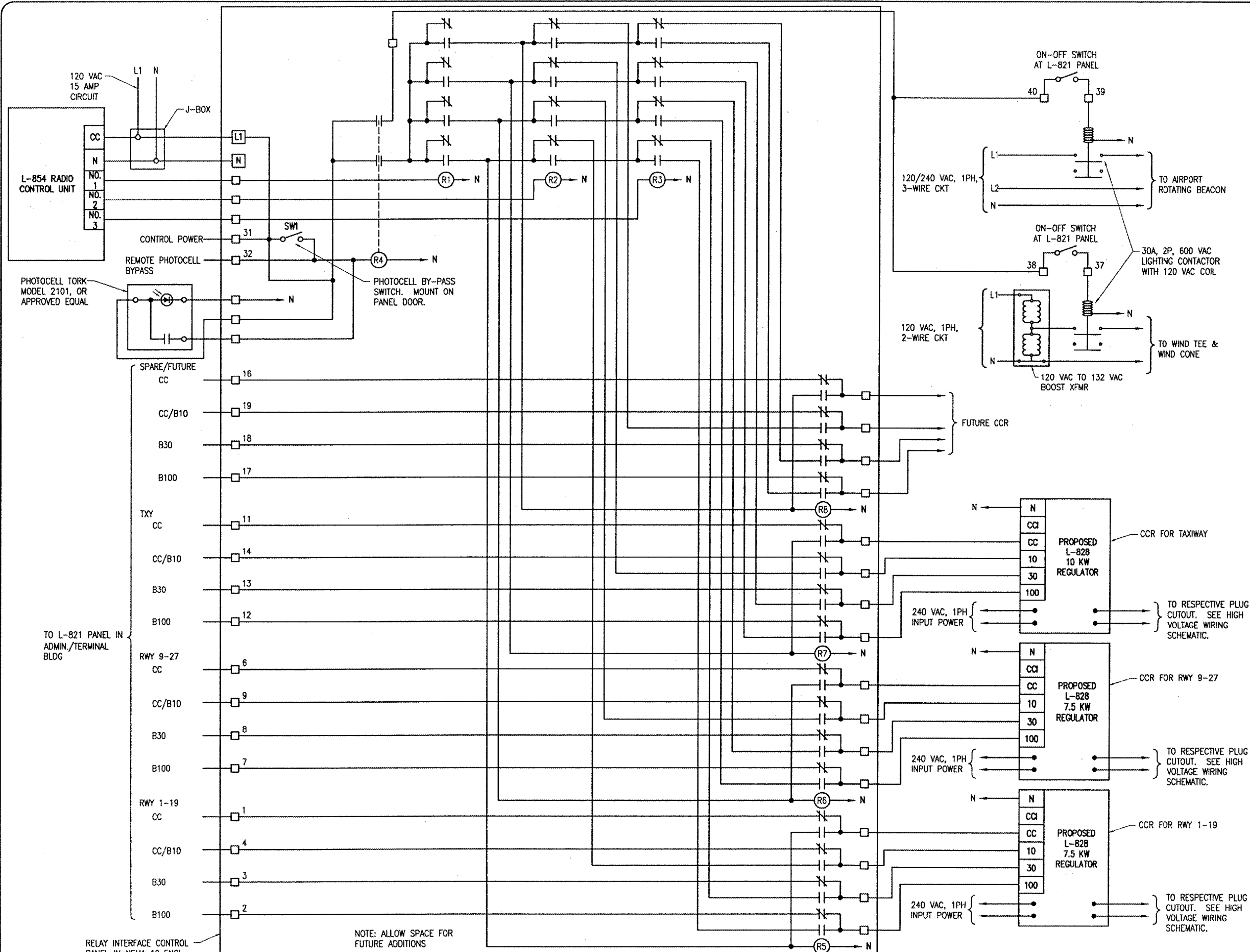
REV. PROJECT NO.	B10-06/10
ENGINEER	E-611.DWG
SCALE	NONE
DATE	04/01/08
LAYOUT	KNL 09/23/05
DRAWN	MV 09/27/05
REVIEWED	LDP 01/17/06



CONSTRUCT VAULT
 AIRFIELD LIGHTING
 CONTROL SCHEMATIC

NOTES

1. RELAY INTERFACE CONTROL PANEL SHALL BE MANUFACTURED BY UNIVERSE INC., 1833 W. HOVEY AVENUE, NORMAL, IL 61761, PHONE: 309-452-5313, FAX: 309-452-2521, OR AN APPROVED EQUIVALENT MANUFACTURER.
2. RELAY INTERFACE CONTROL PANEL WIRING SHALL BE #16 AWG (MINIMUM) COPPER 600 VOLT CABLE. ALL EXTERNAL CONTROL CABLE SHALL BE #12 AWG, COPPER 600 VOLT CABLE.
3. THE RUNWAY/TAXIWAY CIRCUITS WILL BE CONTROLLED BY PHOTOCELL & THE L-854 RADIO CONTROL UNIT IN THE FOLLOWING MANNER: PHOTOCELL OR PHOTOCELL BYPASS SHALL ACTIVATE RADIO CONTROL OR MANUAL CONTROL. REMOTE MANUAL CONTROL FOR INDIVIDUAL CCR'S SHALL BE ACTIVATED BY THE L-821 PANEL AT THE TERMINAL BUILDING. MANUAL CONTROL SHALL ALLOW PRE-SET LIGHTING LEVELS AT 10%, 30%, OR 100% BRIGHTNESS. RADIO CONTROL SHALL OVER-RIDE MANUAL CONTROL SETTINGS. RADIO CONTROL SETTINGS SHALL BE AS FOLLOWS:
 3 CLICKS - 10% BRIGHTNESS
 5 CLICKS - 30% BRIGHTNESS
 7 CLICKS - 100% BRIGHTNESS
4. EQUIPMENT GROUND WIRES SHALL BE INCLUDED WITH EACH BRANCH CIRCUIT & EACH CONTROL CIRCUIT.
5. "N" DENOTES NEUTRAL FOR RESPECTIVE BRANCH CIRCUIT OR CONTROL CIRCUIT.
6. SEE PANELBOARD SCHEDULES & "NEW VAULT ELECTRICAL ONE-LINE DIAGRAM" FOR INFORMATION ON BRANCH CIRCUIT REQUIREMENTS.
7. PROVIDE 2 SPARE CONTROL RELAYS FOR EACH TYPE USED IN THE INTERFACE CONTROL PANEL.

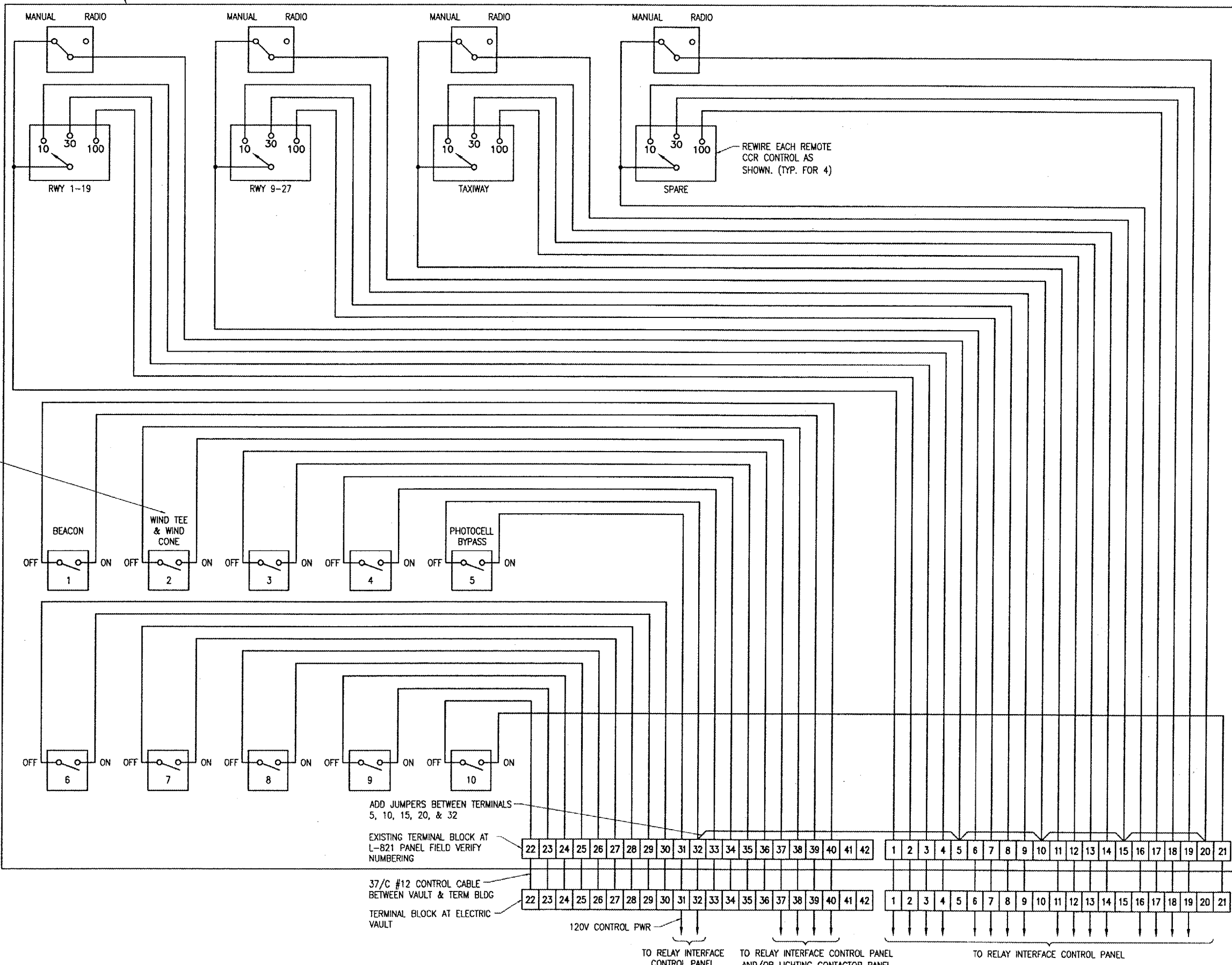


NOTE: ALLOW SPACE FOR FUTURE ADDITIONS

RUNWAY & TAXIWAY LIGHTING CONTROL SCHEMATIC WIRING DIAGRAM

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EXISTING L-821 PANEL AT TERMINAL BUILDING



NOTES

1. THE EXISTING L-821 PANEL LOCATED AT THE TERMINAL BUILDING SHALL BE RECONNECTED AS SHOWN. THE REMOTE CCR CONTROL WIRING WILL REQUIRE MODIFICATIONS TO ACCOMMODATE THE NEW RADIO RELAY INTERFACE PANEL. COORDINATE INTERFACE BETWEEN THE EXISTING L-821 PANEL & THE NEW RADIO RELAY INTERFACE PANEL. THE NEW RADIO RELAY INTERFACE CONTROL PANEL SHALL BE MANUFACTURED BY UNIVERSE INC., 1833 W. HOVEY AVENUE, NORMAL, IL 61761, PHONE: 309-452-5313, FAX: 309-452-2521, OR AN APPROVED EQUIVALENT MANUFACTURER.
2. COORDINATE ALL WORK & POWER OUTAGES WITH THE AIRPORT MANAGER.
3. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS & PROVIDE THE APPROPRIATE CONTROL CIRCUIT MODIFICATIONS TO ACCOMPLISH CONTROL AS DESCRIBED BELOW. THE RUNWAY/TAXIWAY CIRCUITS WILL BE CONTROLLED BY PHOTOCELL & THE L-854 RADIO CONTROL UNIT IN THE FOLLOWING MANNER: PHOTOCELL OR PHOTOCELL BYPASS SHALL ACTIVATE RADIO CONTROL OR REMOTE MANUAL CONTROL. REMOTE MANUAL CONTROL FOR INDIVIDUAL CCR'S SHALL BE ACTIVATED BY THE L-821 PANEL AT THE TERMINAL BUILDING. MANUAL CONTROL SHALL ALLOW PRE-SET LIGHTING LEVELS AT 10%, 30%, OR 100% BRIGHTNESS. RADIO CONTROL SHALL OVER-RIDE MANUAL CONTROL SETTINGS. RADIO CONTROL SETTINGS SHALL BE AS FOLLOWS:
 3 CLICKS - 10% BRIGHTNESS
 5 CLICKS - 30% BRIGHTNESS
 7 CLICKS - 100% BRIGHTNESS

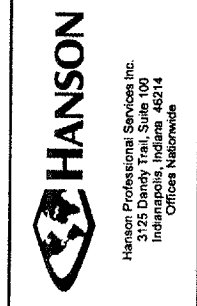
PROVIDE NEW LEGEND PLATE FOR WIND TEE & WIND CONE

APR 01 2008 11:50 AM V00RH00805
 I:\AIRPORTS\KEWANEE\810-06\10\ELECTRICAL\SHEETS\E-612.DWG - Work-FLR

DATE	REVISION	BY

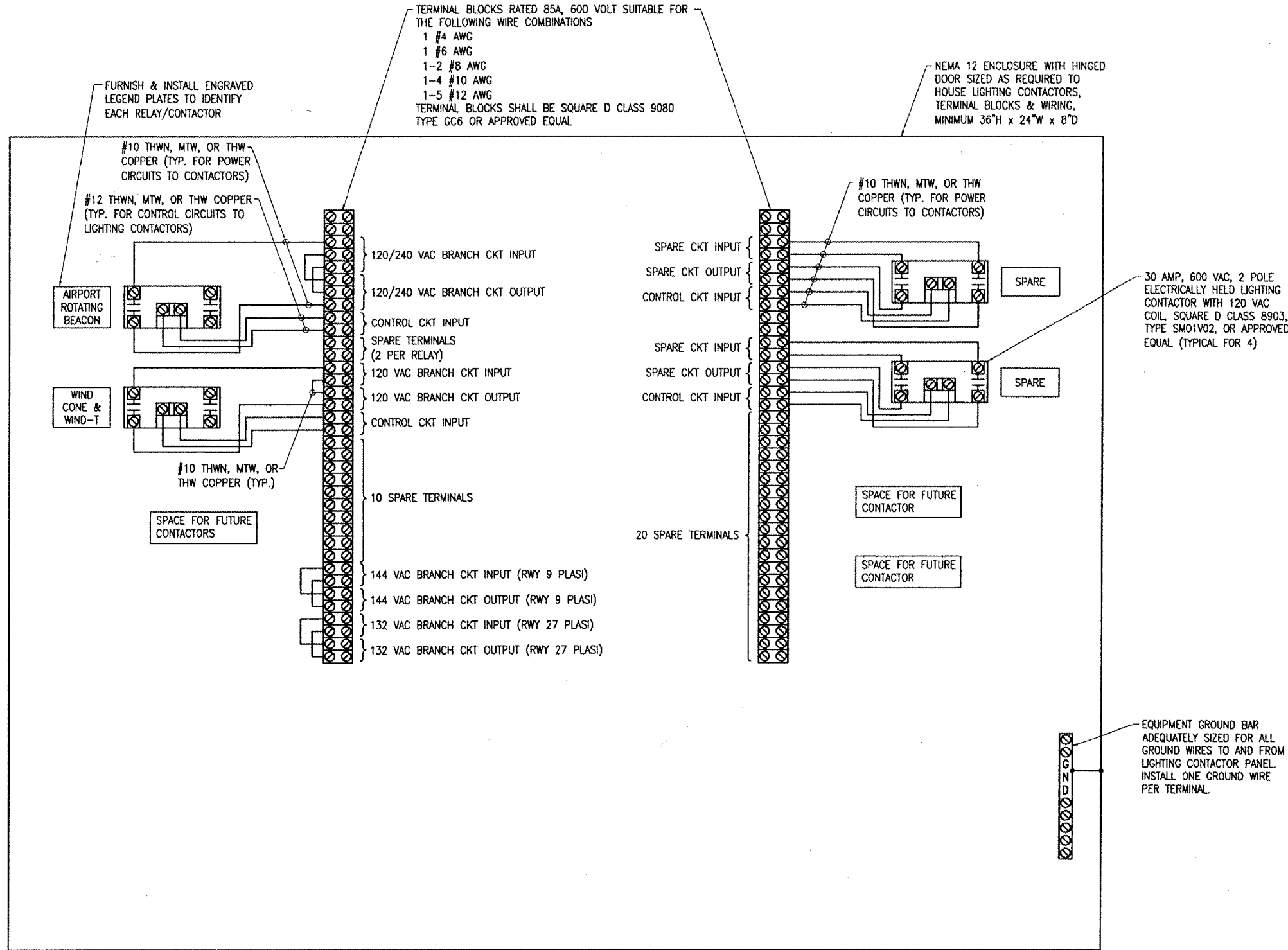
KEWANEE MUNICIPAL AIRPORT
 KEWANEE, HENRY COUNTY, ILLINOIS
 A.I.P. PROJ.: 3-17-0058-612
 I.L. PROJ.: E21-3586

ILL. Project No.	810-06/11D
Filename	E-612.DWG
Scale	NONE
Date	04/01/08
LAYOUT	KNL 09/23/05
DRAWN	MV 09/27/05
REVIEWED	LDP 01/17/06



CONSTRUCT VAULT
 AIRFIELD LIGHTING CONTROL SCHEMATIC
 CONTINUED

RUNWAY & TAXIWAY LIGHTING CONTROL SCHEMATIC WIRING DIAGRAM



NOTES

- 15 AMP & 20 AMP INPUT POWER/BRANCH CIRCUITS SHALL BE #10 AWG COPPER THWN FROM THE RESPECTIVE POWER SOURCE TO THE LIGHTING CONTACTOR PANEL. 30 AMP INPUT POWER/BRANCH CIRCUITS SHALL BE #8 AWG COPPER THWN (MIN.) FROM THE RESPECTIVE POWER SOURCE TO THE LIGHTING CONTACTOR PANEL.
- INPUT CONTROL CIRCUITS SHALL BE #12 AWG COPPER THWN.
- FOR 120 VAC BRANCH CIRCUITS THE NEUTRAL CONDUCTOR SHALL NOT BE SWITCHED THROUGH THE RELAY CONTACTS. USE TERMINAL BLOCKS TO TRANSITION FROM VAULT BRANCH CIRCUIT WIRING TO FIELD WIRING.
- THE AIRPORT ROTATING BEACON CIRCUIT SHALL HAVE PHASE "A" SWITCHED THROUGH THE LIGHTING CONTACTOR. PHASE "B" SHALL BE UNSWITCHED FROM THE POWER SOURCE TO THE LOAD CENTER AT THE BEACON.
- PROVIDE #10 AWG COPPER BONDING JUMPER FROM PANEL ENCLOSURE FRAME TO ENCLOSURE DOOR.

BY	
REVISION	
DATE	

KEWANEE MUNICIPAL AIRPORT
 KEWANEE, HENRY COUNTY, ILLINOIS
 I.L. PROJ.: EZI-3586 A.I.P. PROJ.: 3-17-0058-B12

REL. Project No.	810-06/LTD
Revision	E-609.DWG
Scale	NONE
Date	04/01/08
LAYOUT	KNL 09/23/05
DRAWN	MY 09/27/05
REVIEWED	LDP 01/17/06

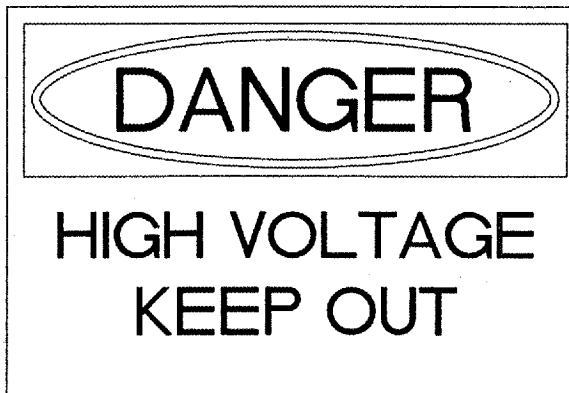
HANSON
 Hanson Professional Services Inc.
 3125 Dandy Trail, Suite 100
 Indianapolis, Indiana 46214
 Offices Nationwide

CONSTRUCT VAULT
 LIGHTING CONTACTOR
 PANEL DETAIL

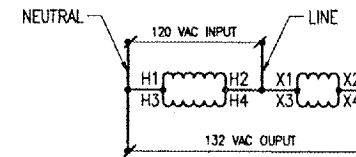
VAULT LEGEND PLATE SCHEDULE	
DEVICE	LABEL
SERVICE PANELBOARD "A"	SERVICE PANEL "A" 120/240 VAC, 1 PH, 3 W
MAIN BREAKER IN SERVICE PANEL "A"	SERVICE DISCONNECT
PANELBOARD "B"	PANEL "B" 120/240 VAC, 1 PH, 3 W
RUNWAY 1-19 CCR	RUNWAY 1-19
TAXIWAY CCR	TAXIWAY
RUNWAY 9-27 CCR	RUNWAY 9-27
CUTOUT ENCLOSURE FOR RUNWAY 1-19	RUNWAY 1-19 CUTOUT
CUTOUT ENCLOSURE FOR TAXIWAY	TAXIWAY CUTOUT
CUTOUT ENCLOSURE FOR RUNWAY 9-27	RUNWAY 9-27 CUTOUT
EACH CUTOUT INPUT SIDE CONNECTION	INPUT
EACH CUTOUT OUTPUT SIDE CONNECTION	OUTPUT
EACH CUTOUT ENCLOSURE	CAUTION OPERATE CUTOUT WITH CCR SHUT OFF
CONTACTOR FOR EXHAUST FAN	EXHAUST FAN CONTACTOR
RADIO INTERFACE PANEL FOR RUNWAYS & TAXIWAY	RADIO RELAY INTERFACE CONTROL PANEL
LIGHTING CONTACTOR PANEL	LIGHTING CONTACTOR PANEL FOR AIRFIELD LIGHTING EQUIPMENT
BOOST TRANSFORMER FOR RUNWAY 9 PLASI	RWY 9 PLASI
BOOST TRANSFORMER FOR RUNWAY 27 PLASI	RWY 27 PLASI
BOOST TRANSFORMER FOR WIND CONE	WIND CONE & WIND TEE
LOW VOLTAGE WIREWAY (PROVIDE 4 LEGEND PLATES 1/2" HIGH BLACK LETTERS WHITE BACKGROUND)	LOW VOLTAGE
HIGH VOLTAGE WIREWAY (PROVIDE 4 LEGEND PLATES 1/2" HIGH BLACK LETTERS WHITE BACKGROUND)	HIGH VOLTAGE
VAULT GROUND BUS (PROVIDE 4 LEGEND PLATES 1/2" HIGH WHITE LETTERS GREEN BACKGROUND)	VAULT GROUND BUS

NOTE: LEGEND PLATES SHALL BE WEATHERPROOF ENGRAVED PLASTIC OR PHENOLIC MATERIAL, 1/4" HIGH BLACK LETTERS ON A WHITE BACKGROUND UNLESS NOTED OTHERWISE. SECURE WITH WEATHERPROOF ADHESIVE AND MACHINE SCREWS. FURNISH ADDITIONAL LEGEND PLATES WHERE REQUIRED BY CODE, FOR ADDITIONAL EQUIPMENT, AS DETAILED HEREIN ON THE PLANS, AND AS NOTED IN THE SPECIAL PROVISION SPECIFICATIONS.

FURNISH & INSTALL A WEATHERPROOF WARNING LABEL FOR EACH SAFETY SWITCH, PANELBOARD, LOAD CENTER, CUTOUT, & CONTROL PANEL TO WARN PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS, PER THE REQUIREMENTS OF NEC 110.16 "FLASH PROTECTION". LABELS SHALL BE HAZARD COMMUNICATION SYSTEMS, LLC (190 OLD MILFORD RD., BOX 1174, MILFORD, PA 18337, PHONE: 1-877-748-0244) PART NO. H6010-9VWHBJ OR APPROVED EQUAL.

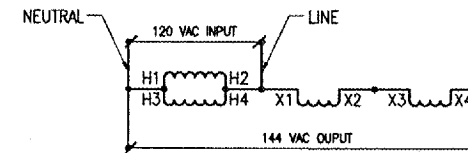


PROVIDE WARNING SIGN ON VAULT EXTERIOR DOORS LABELED "DANGER - HIGH VOLTAGE - KEEP OUT" PER THE REQUIREMENTS OF NEC 110.34 (C).



NOTE:
CONFIRM WIRING WITH RESPECTIVE
TRANSFORMER MFR.

120 VAC TO 132 VAC BOOST TRANSFORMER
CONNECTION DIAGRAM FOR SQUARE D
CAT. NO. 250SV43B OR CAT. NO. 500SV43B TRANSFORMER



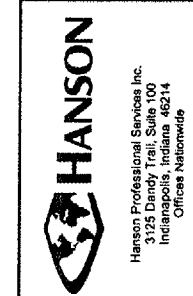
NOTE:
CONFIRM WIRING WITH RESPECTIVE
TRANSFORMER MFR.

120 VAC TO 144 VAC BOOST TRANSFORMER
CONNECTION DIAGRAM FOR SQUARE D
CAT. NO. 500SV43B TRANSFORMER

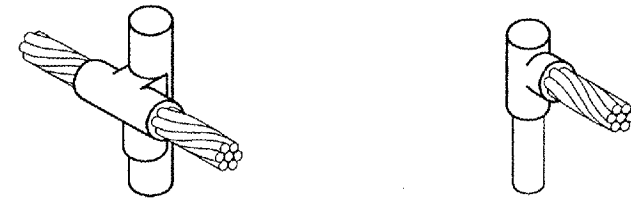
BY	REVISION	DATE

KEWANEE MUNICIPAL AIRPORT
KEWANEE, HENRY COUNTY, ILLINOIS
A.I.P. PROJ.: 3-17-0058-B12
IL. PROJ.: E2-3586

Project No. 810-06\1TD	Engineer E-603.DWG	Scale NONE	Date 04/01/08
LAYOUT	KNL	07/12/05	08/27/05
DRAWN	MY	08/27/05	01/17/06
REVIEWED	LDP	01/17/06	

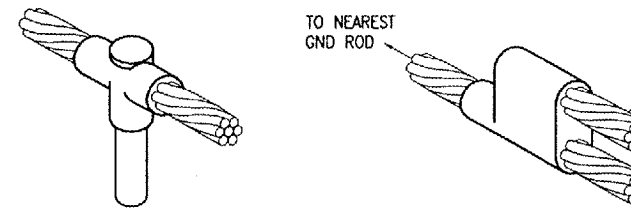


CONSTRUCT VAULT
LEGEND PLATE SCHEDULE
AND TRANSFORMER
WIRING DIAGRAMS



CABLE TO GROUND ROD

CABLE TO GROUND ROD



CABLE TO GROUND ROD

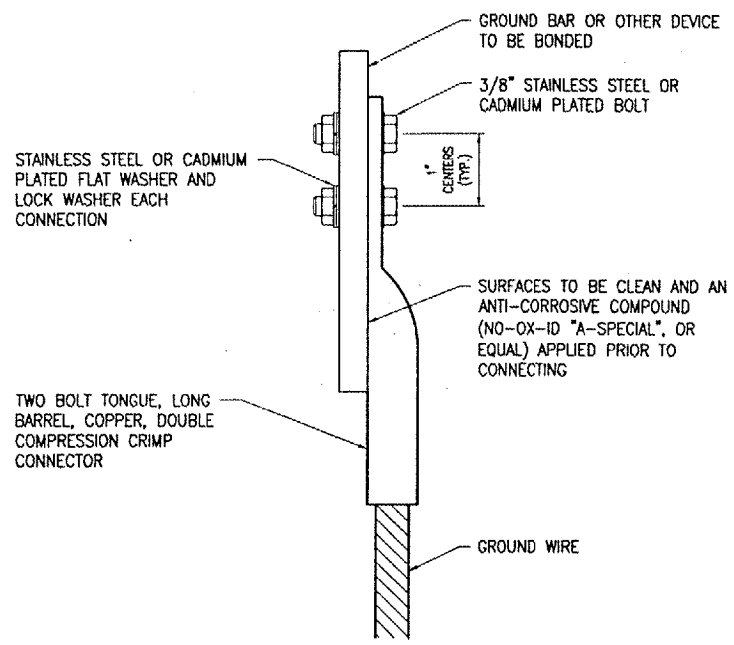
CABLE TO CABLE HORIZONTAL PARALLEL TAP

TO NEAREST GND ROD
TAP CONDUCTOR SHALL BE ROUTED IN THE DIRECTION TOWARDS THE NEAREST GROUND ROD

DETAIL NOTES

- EXOTHERMIC WELDS SHALL BE CADWELD AS MANUFACTURED BY ERICO PRODUCTS, SOLON, OHIO OR THERMOWELD AS MANUFACTURED BY CONTINENTAL INDUSTRIES, TULSA, OKLAHOMA. VERIFY PROPER SIZES, TYPES, AND REQUIREMENTS FOR THE RESPECTIVE APPLICATION WITH THE MANUFACTURER, AND INSTALL PER THEIR DIRECTIONS.
- FOR APPLICATIONS TO METAL SURFACES THAT ARE LESS THAN 3/16" THICK CONTACT THE EXOTHERMIC WELD MANUFACTURER FOR DIRECTION AND INSTRUCTION ON EXOTHERMIC WELD INSTALLATION TO THE RESPECTIVE SURFACE.
- FOR APPLICATIONS TO GALVANIZED STEEL OR PAINTED STEEL, REMOVE GALVANIZING AND/OR PAINT & CLEAN THE SURFACE TO EXPOSE BARE STEEL BEFORE MAKING EXOTHERMIC WELD CONNECTION.
- INDIVIDUAL GROUNDING ELECTRODE CONDUCTORS SHALL NOT BE INSTALLED IN METAL CONDUIT. INSTALL GROUNDING ELECTRODE CONDUCTORS IN SCHED 40 PVC CONDUIT AS REQUIRED IN FOUNDATIONS, FOR PROTECTION, WHERE ENTERING ENCLOSURES, ETC.

EXOTHERMIC WELD DETAILS



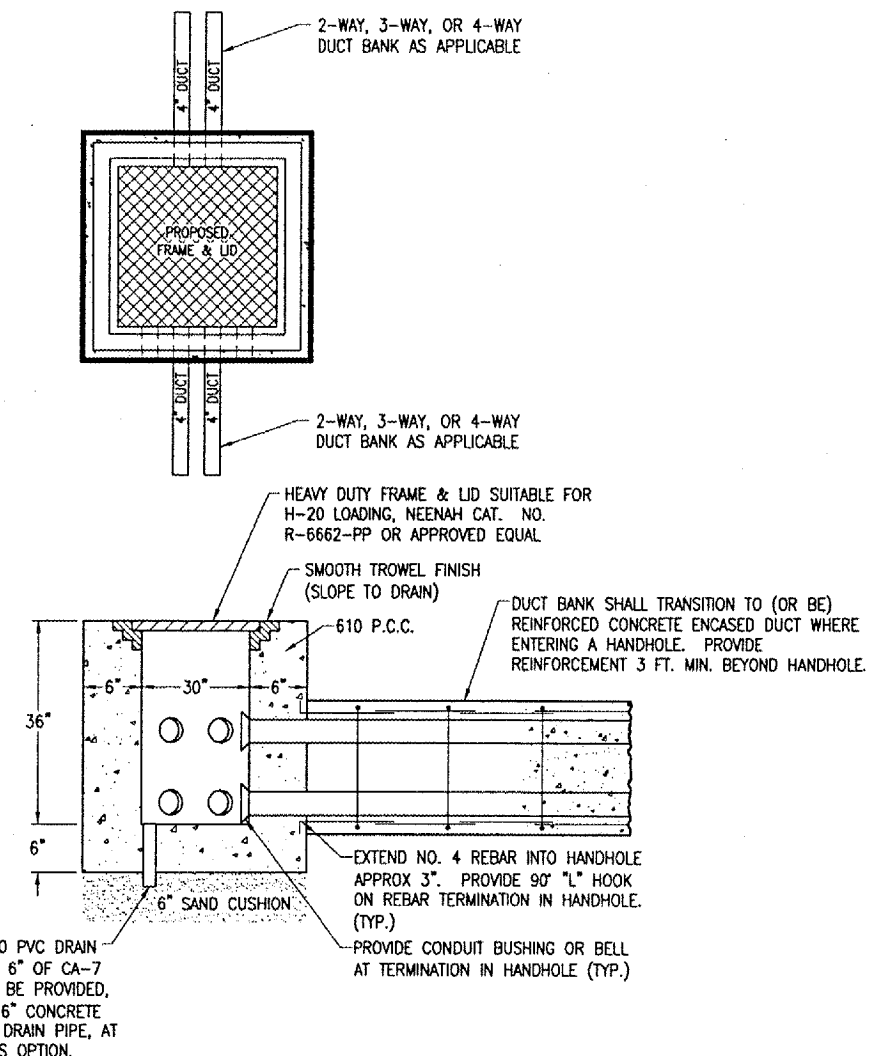
2 HOLE LONG BARREL COMPRESSION LUG TABLE

WIRE SIZE	BURNDY CAT. NO.	THOMAS & BETTS CAT. NO.
#6 AWG STRANDED	YA6C-2TC38	256-30695-1158
#4 AWG STRANDED	YA4C-2TC38	256-30695-1159
#2 AWG STRANDED	YA2C-2TC38	256-30695-1160
#2 AWG SOLID	YA3C-2TC38	256-30695-1160
#1/0 AWG STRANDED	YA25-2TC38	256-30695-1162
#2/0 AWG STRANDED	YA26-2TC38	256-30695-1116
#3/0 AWG STRANDED	YA27-2TC38	54816BE

NOTES

- ALL CONNECTIONS TO GROUND BUS BAR SHALL BE WITH 2 HOLE TONGUE LONG BARREL COMPRESSION LUGS BOLTED TO THE BUS BAR.
- GROUND WIRE CONNECTIONS TO EQUIPMENT SHALL BE WITH 2 HOLE TONGUE LONG BARREL COMPRESSION LUGS BOLTED TO THE DEVICE OR WITH THE RESPECTIVE EQUIPT MANUFACTURER'S LUG OR TERMINAL WHERE APPLICABLE.
- GROUNDING ELECTRODE CONDUCTORS, BONDING JUMPERS, & INDIVIDUAL GROUND WIRES SHALL NOT BE INSTALLED IN METAL CONDUIT. WHERE PLASTIC CONDUIT IS USED FOR INDIVIDUAL GROUND WIRES, DO NOT COMPLETELY ENCIRCLE THE CONDUIT WITH FERROUS AND/OR MAGNETIC MATERIALS. WHERE METAL CLAMPS ARE INSTALLED USE NYLON BOLTS, NUTS, WASHERS, & SPACERS TO INTERRUPT A COMPLETE METALLIC APTH FROM ENCIRCLING THE CONDUIT.
- ALL CONNECTIONS SHALL BE COATED WITH A CORROSION PREVENTATIVE COMPOUND (SANCHEM INC. NO-OX-ID "A-SPECIAL", BURNDY PENETROX E, OR EQUAL) BEFORE JOINING. ALL COPPER BUS BARS SHALL BE CLEANED PRIOR TO MAKING CONNECTIONS TO REMOVE SURFACE OXIDATION. CLEAN SURFACES, OF RESPECTIVE DEVICES TO BE BONDED, TO BARE METAL, PER NEC 250-12.

GROUNDING LUG CONNECTION DETAIL

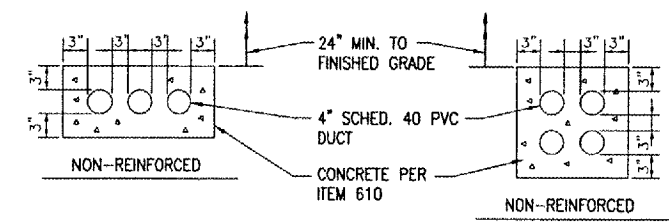


2" SCHED 40 PVC DRAIN PIPE. NOTE 6" OF CA-7 GRAVEL MAY BE PROVIDED, INSTEAD OF 6" CONCRETE FLOOR WITH DRAIN PIPE, AT CONTRACTORS OPTION.

NOTE:

LIDS FOR LOW VOLTAGE HANDHOLES SHALL BE LABELED "LOW VOLTAGE". LIDS FOR HIGH VOLTAGE HANDHOLES SHALL BE LABELED "HIGH VOLTAGE". COORDINATE LETTERING WITH MFR.

ELECTRICAL HANDHOLE DETAIL



NOTES:

- ALL DIMENSIONS ARE MINIMUM.
- INCLUDE DUCT SPACERS AS MANUFACTURED BY UNDERGROUND DEVICES INC., TO MAINTAIN PROPER SEPARATION OF CONDUITS.

CONCRETE ENCASED DUCT DETAIL

(3-WAY & 4-WAY SHOWN)

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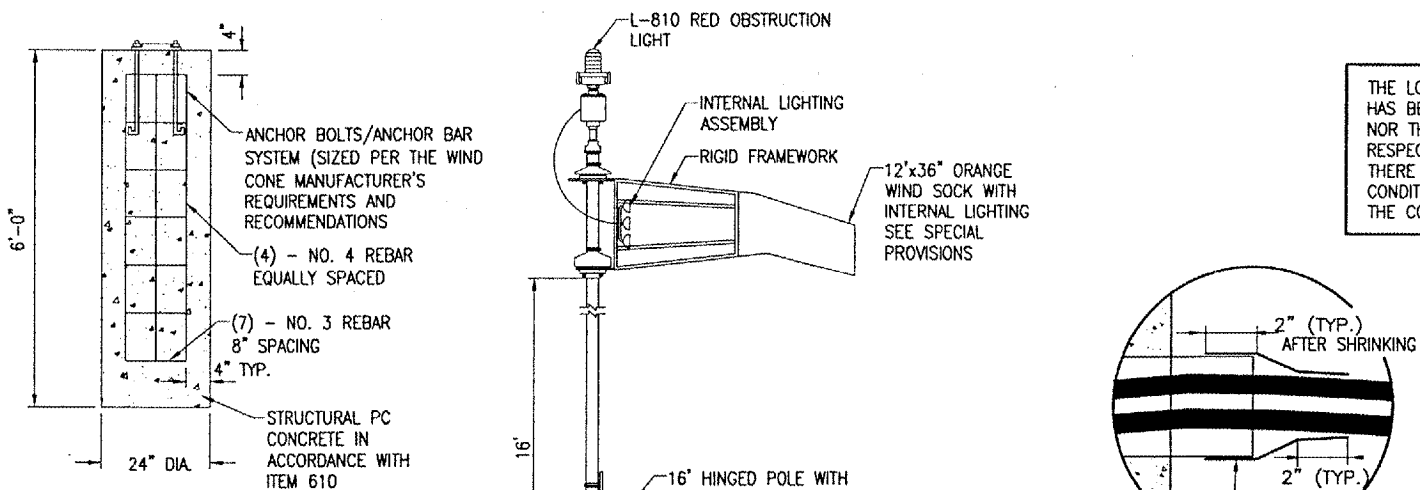
DATE	REVISION	BY

KEMANE MUNICIPAL AIRPORT
KEMANE, HENRY COUNTY, ILLINOIS
A.I.P. PROJ.: 3-17-0058-B12
I.L. PROJ.: E21-3586

HEL Project No. B10-08VLD	NO SCALE	04/01/08
Engineer E-501.DWG	NO SCALE	04/01/08
Scale	NO SCALE	04/01/08
Date	NO SCALE	04/01/08
LAYOUT	KNL	07/12/05
DRAWN	MV	07/12/05
REVIEWED	LDP	01/17/06

HANSON
Hanson Professional Services Inc.
3125 Dandy Trail, Suite 100
Indianapolis, Indiana 46214
Offices Nationwide

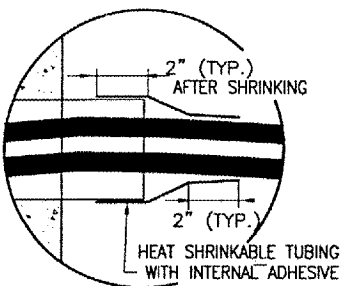
CONSTRUCT VAULT
ELECTRICAL AND
GROUNDING DETAILS



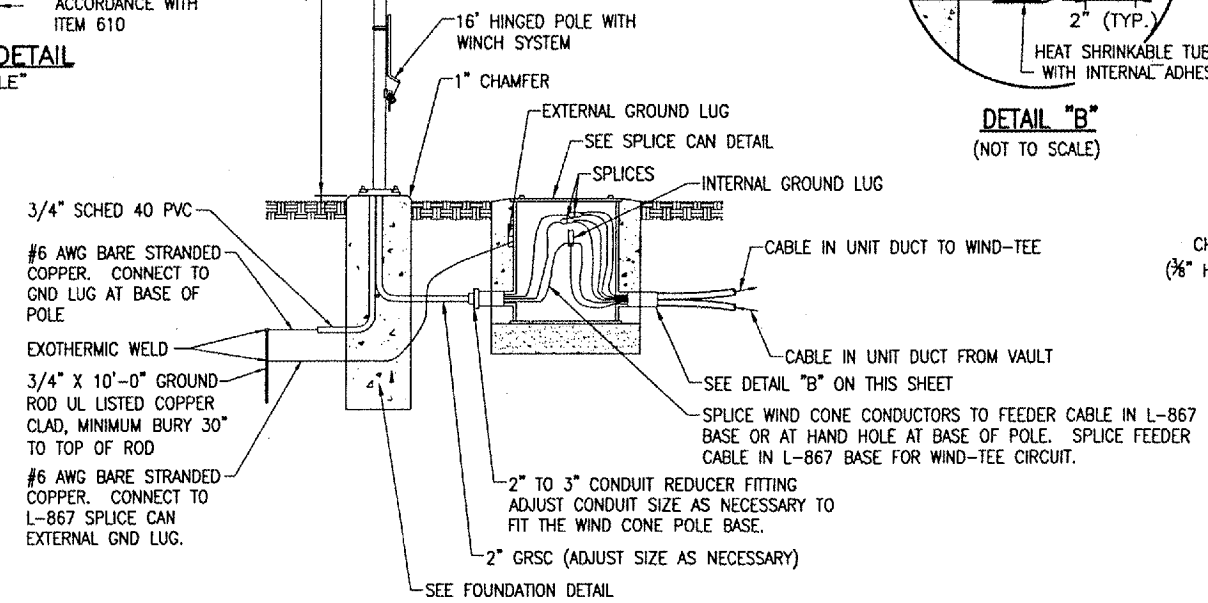
FOUNDATION DETAIL
"NOT TO SCALE"

THE LOCATION OF UNDERGROUND UTILITIES AS INDICATED ON THE PLANS HAS BEEN OBTAINED FROM EXISTING RECORDS. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY WHATSOEVER, IN RESPECT TO THE ACCURACY OR SUFFICIENCY OF THE INFORMATION AND THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, THAT THE CONDITIONS ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED IN THE CONSTRUCTION.

- NOTE:**
1. THE COST OF ALL TURF AND PAVEMENT DUCT MARKERS SHALL BE INCIDENTAL TO THE DUCT. THE COST OF ALL CABLE MARKERS SHALL BE INCIDENTAL TO THE CABLE.
 2. BITUMINOUS PAVEMENT DUCT MARKER AND CONCRETE DUCT MARKER TO BE PROVIDED AT EACH END OF EACH DUCT AS SHOWN ON THE LOCATION PLAN. FOR CONCRETE PAVEMENT, THE LETTER "D" SHALL BE IMPRESSED IN THE PAVEMENT INSTEAD OF THE MARKER. THE LETTER SHALL BE IMPRESSED AS DESCRIBED IN NOTE 4.
 3. CABLE MARKERS SHALL BE PLACED AT CHANGES OF DIRECTION AND APPROXIMATELY EVERY 200' ALONG CABLE RUNS.
 4. LETTERS 4" HIGH, 3" WIDE WITH WIDTH OF STROKE 1/2" AND 1/4" DEEP. ALL LETTERS, NUMBERS AND ARROWS TO BE IMPRESSED.

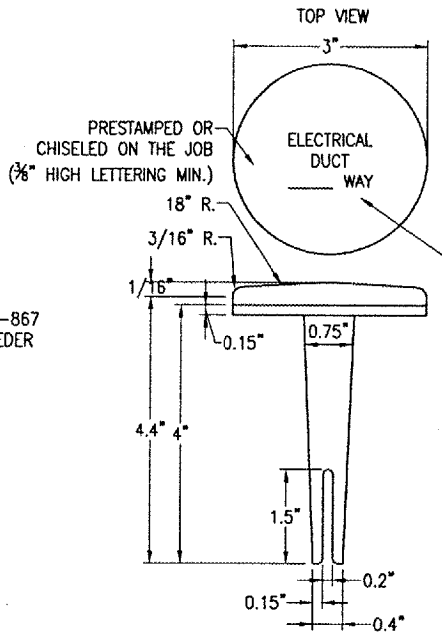


DETAIL "B"
(NOT TO SCALE)



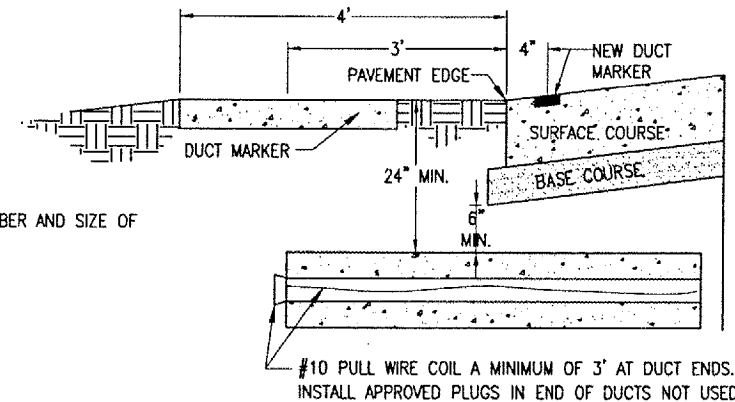
INTERNALLY LIGHTED L-807 WIND CONE
"NOT TO SCALE"

- NOTES**
1. WIND CONE SHALL BE FAA APPROVED L-807, STYLE 1B INTERNALLY LIGHTED, SIZE 2 WITH ORANGE WIND SOCK, 120 VAC, & WITH L-810 OBSTRUCTION LIGHT, SEE SPECIAL PROVISION SPECS.
 2. L-807 WIND CONE 12' INTERNALLY LIT SHALL BE PAID FOR UNDER ITEM AR107812.
 3. SEE SHEETS 7, 13, 14, 17, 19, & 20 FOR ADDITIONAL INFORMATION REGARDING WIND CONE CIRCUIT WIRING.

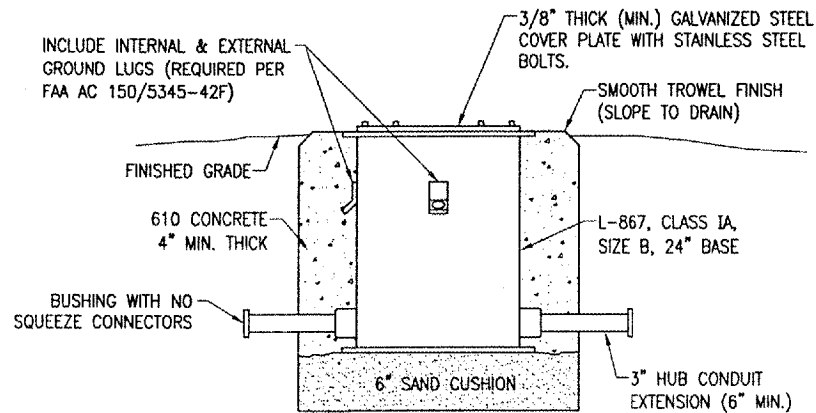


BITUMINOUS PAVEMENT DUCT MARKERS
"NOT TO SCALE"

NOTE:
TOP OF MARKER SHALL BE FLUSH WITH FINISHED PAVEMENT SURFACE. MARKER WILL BE INSTALLED IN A DRILLED HOLE AND SECURED WITH EPOXY GLUE.

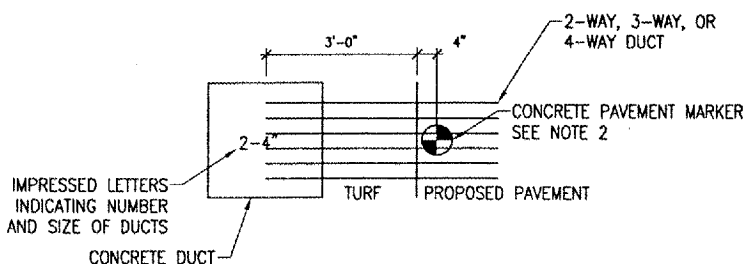


UNDERGROUND ELECTRICAL DUCT
(NOT TO SCALE)

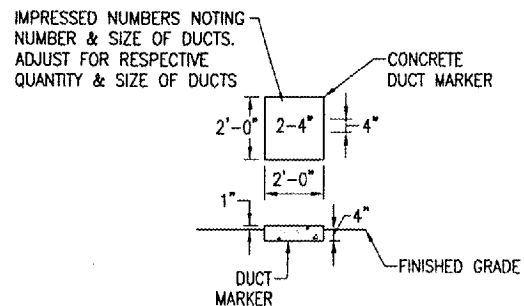


SPLICE CAN DETAIL
(NOT TO SCALE)

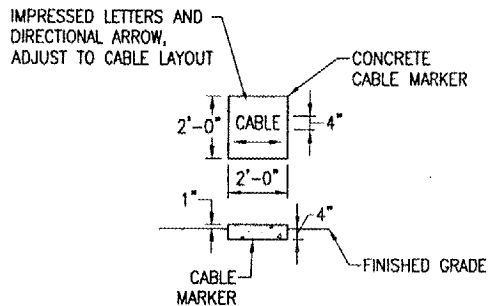
INCLUDE INTERNAL AND EXTERNAL GROUND LUGS



DUCT MARKER DETAIL
"NOT TO SCALE"



TURF DUCT MARKERS
"NOT TO SCALE"



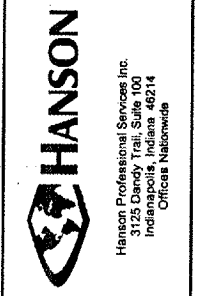
TURF CABLE MARKERS
"NOT TO SCALE"

APR 01, 2008 11:49 AM VOORHOBOS I:\AIRPORTS\KEWANE\810-06VALTD\ELECTRICAL\SHEETS\E-503.DWG - ELECTRICAL DETAILS

BY	
REVISION	
DATE	

KEWANE MUNICIPAL AIRPORT
KEWANE, HENRY COUNTY, ILLINOIS
A.I.P. PROJ.: 3-17-0058-B12
IL. PROJ.: E21-3586

HEC Project No.	810-06VALTD
Drawings	E-503.DWG
Scale	NONE
Date	04/01/08
LAYOUT	KNL 11/11/05
DRAWN	MV 11/15/05
REVIEWED	LDP 01/17/06

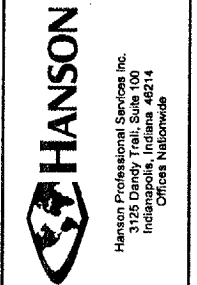


CONSTRUCT VAULT
WIND CONE
ELEVATION DETAIL

BY	
REVISION	
DATE	

Kewanee Municipal Airport
 Kewanee, Henry County, Illinois
 I.L. PROJ.: E2I-3586 A.I.P. PROJ.: 3-17-0058-812

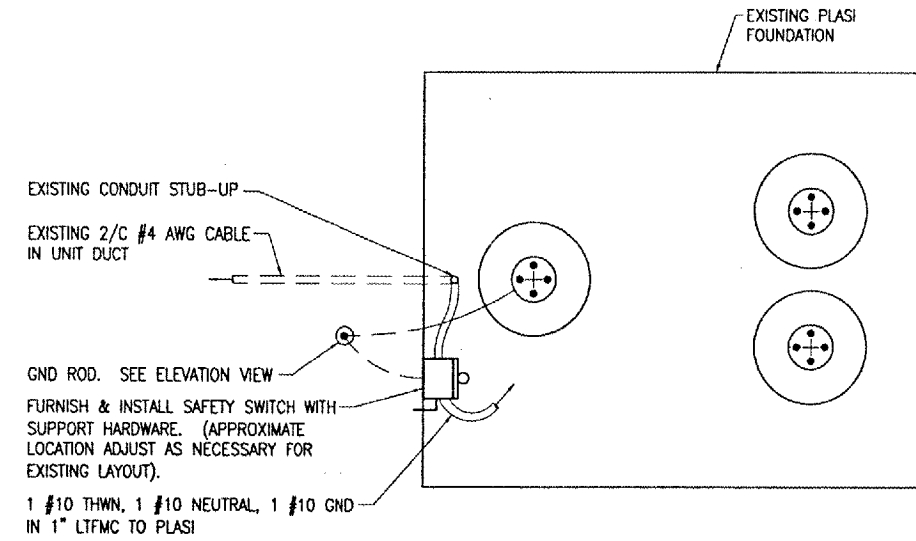
HEL Project No.	810-08VLT0
Filename	E-610.DWG
Scale	NONE
Date	04/01/08
LAYOUT	KNL 09/23/05
DRAWN	MV 09/27/05
REVIEWED	LDP 01/17/06



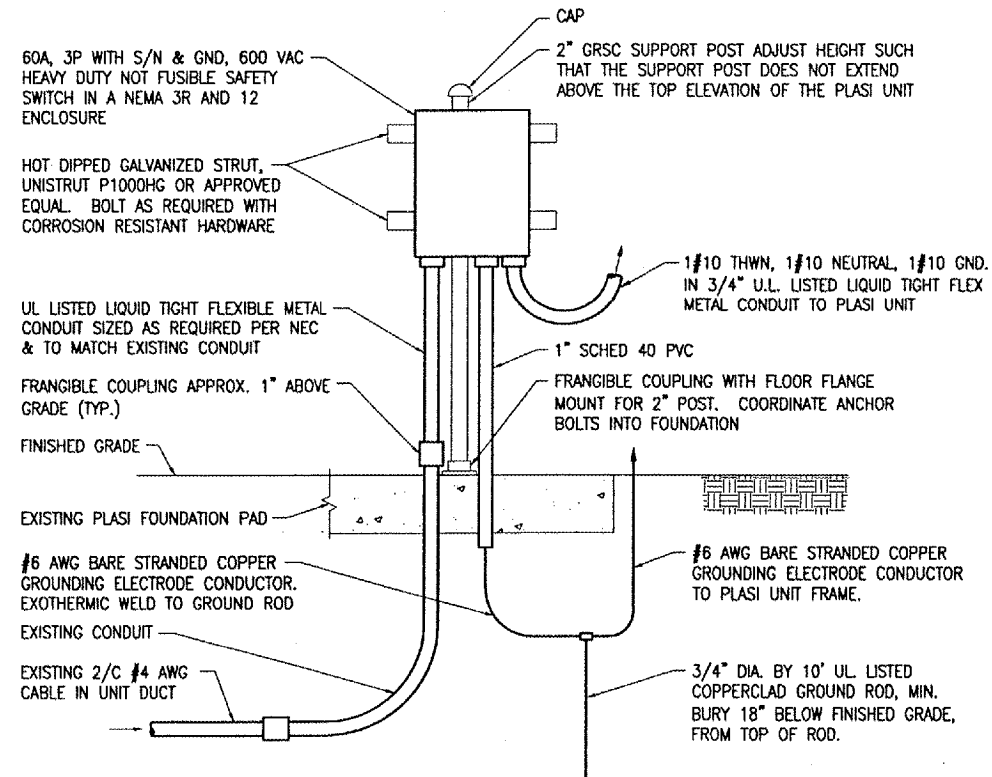
CONSTRUCT VAULT
 PROPOSED
 PLASI WIRING DETAILS
 & NOTES

NOTES

1. PLASI UNITS LOCATED ON RUNWAY 9-27 ARE EXISTING. A HEAVY DUTY 60 AMP, 2 POLE OR 3 POLE WITH SOLID NEUTRAL & GND, 600 VAC NOT FUSIBLE SAFETY SWITCH IN A NEMA 3R AND 12 ENCLOSURE SHALL BE FURNISHED & INSTALLED AT EACH PLASI. 60 AMP SAFETY SWITCH IS REQUIRED TO ACCOMMODATE #4 AWG OR #2 AWG CONDUCTORS FOR LUG TERMINATIONS & WIRE BENDING SPACE. NEUTRAL SHALL BE BONDED TO GROUND IN SAFETY SWITCH & GND ROD SHALL BE INSTALLED TO CONFORM WITH NEC 250.32
2. LTFMC DENOTES LIQUID TIGHT FLEXIBLE METAL CONDUIT UL LISTED, SUITABLE FOR GROUNDING, AND SUNLIGHT RESISTANT. NEC 350.6 NOTES LIQUID TIGHT FLEXIBLE METAL CONDUIT AND ASSOCIATED FITTINGS SHALL BE LISTED. DO NOT INSTALL LTFMC THAT IS NOT UL LISTED.
3. CONTRACTOR SHALL FURNISH & INSTALL BOOST TRANSFORMERS FOR PLASI UNITS IN THE VAULT. BOOST TRANSFORMERS SHALL BE SIZED & CONNECTED TO PROVIDE THE PROPER VOLTAGE AT THE RESPECTIVE PLASI UNIT AS RECOMMENDED BY THE PLASI MANUFACTURER (DEVORE AVIATION CORPORATION, 6104 JEFFERSON BLVD, N.E., ALBUQUERQUE, NEW MEXICO 87109-3410, PHONE: 505-345-8713, FAX: 505-344-3835).
4. INSTALLATION OF THE SAFETY SWITCH AND ASSOCIATED CONDUIT, WIRING, FITTINGS, GROUNDING, & ACCESSORIES FOR EACH PLASI UNIT SHALL BE PAID FOR UNDER ITEM AR125989 REFURBISH PLASI PER EACH.
5. SEE SHEETS 38, 42, 43, & 49 FOR ADDITIONAL INFORMATION REGARDING PLASI CIRCUIT WIRING.

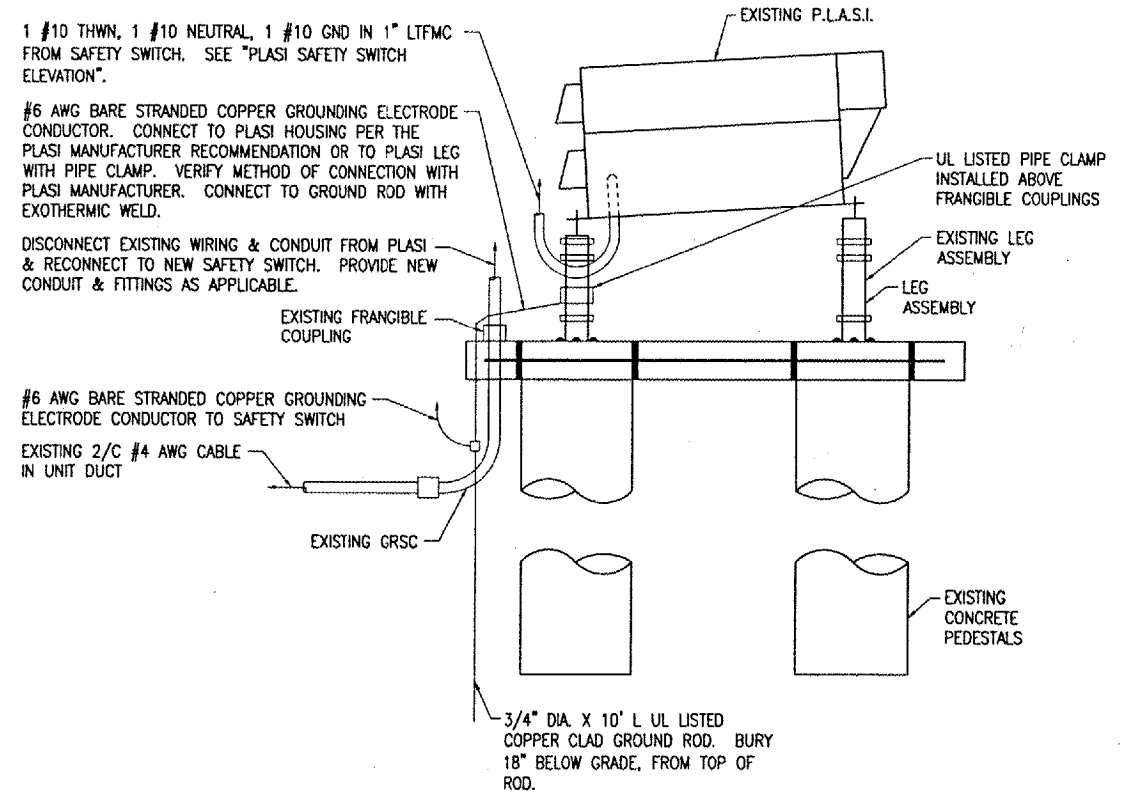


PLASI FOUNDATION PLAN VIEW



NOTE: SEE NEW ELECTRICAL ONE LINE DIAGRAM FOR VAULT AND PLASI FOR ADDITIONAL INFORMATION ON EQUIPMENT AND WIRING.

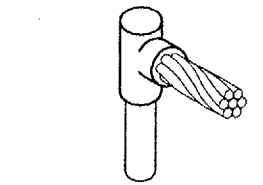
PLASI SAFETY SWITCH ELEVATION
 "NOT TO SCALE"



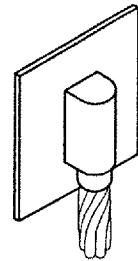
PLASI ELEVATION

ALL WORK SHOWN ON THIS SHEET SHALL BE PAID FOR UNDER ITEM AR125989 - REFURBISH PLASI - PER EA.

APR 01, 2008 11:49 AM V00R:00805 I:\AIRPORTS\KEWANEE\810-08VLT0\ELECTRICAL\SHEETS\E-610.DWG - Layout1



CABLE TO GROUND ROD

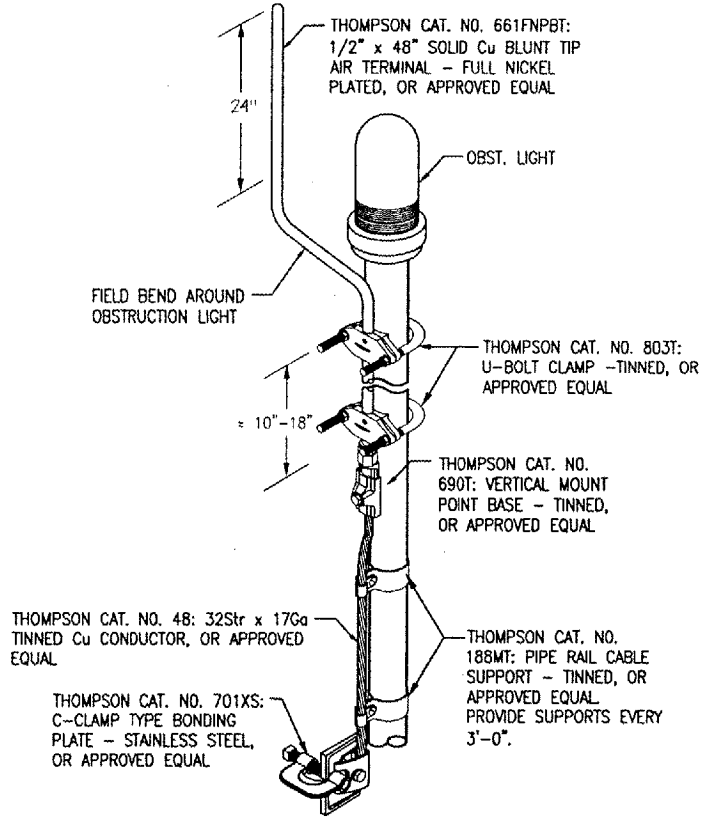


CABLE TO SURFACE

DETAIL NOTES

- EXOTHERMIC WELDS SHALL BE CADWELD AS MANUFACTURED BY ERICO PRODUCTS, SOLON, OHIO, ULTRAWELD AS MANUFACTURED BY HARGER LIGHTNING PROTECTION & GROUNDING EQUIPMENT, GRAYSLAKE, IL, OR THERMOWELD AS MANUFACTURED BY CONTINENTAL INDUSTRIES, TULSA, OKLAHOMA. VERIFY PROPER SIZES, MOLDS, TYPES, AND REQUIREMENTS FOR THE RESPECTIVE APPLICATION WITH THE MANUFACTURER, AND INSTALL PER THEIR DIRECTIONS.
- FOR APPLICATIONS TO GALVANIZED STEEL OR PAINTED STEEL, REMOVE GALVANIZING AND/OR PAINT & CLEAN THE SURFACE TO EXPOSE BARE STEEL BEFORE MAKING EXOTHERMIC WELD CONNECTION.
- VERIFY EXOTHERMIC MOLDS ARE SUITABLE FOR USE WITH THE RESPECTIVE TYPE (SOLID OR STRANDED) & SIZE CONDUCTOR.

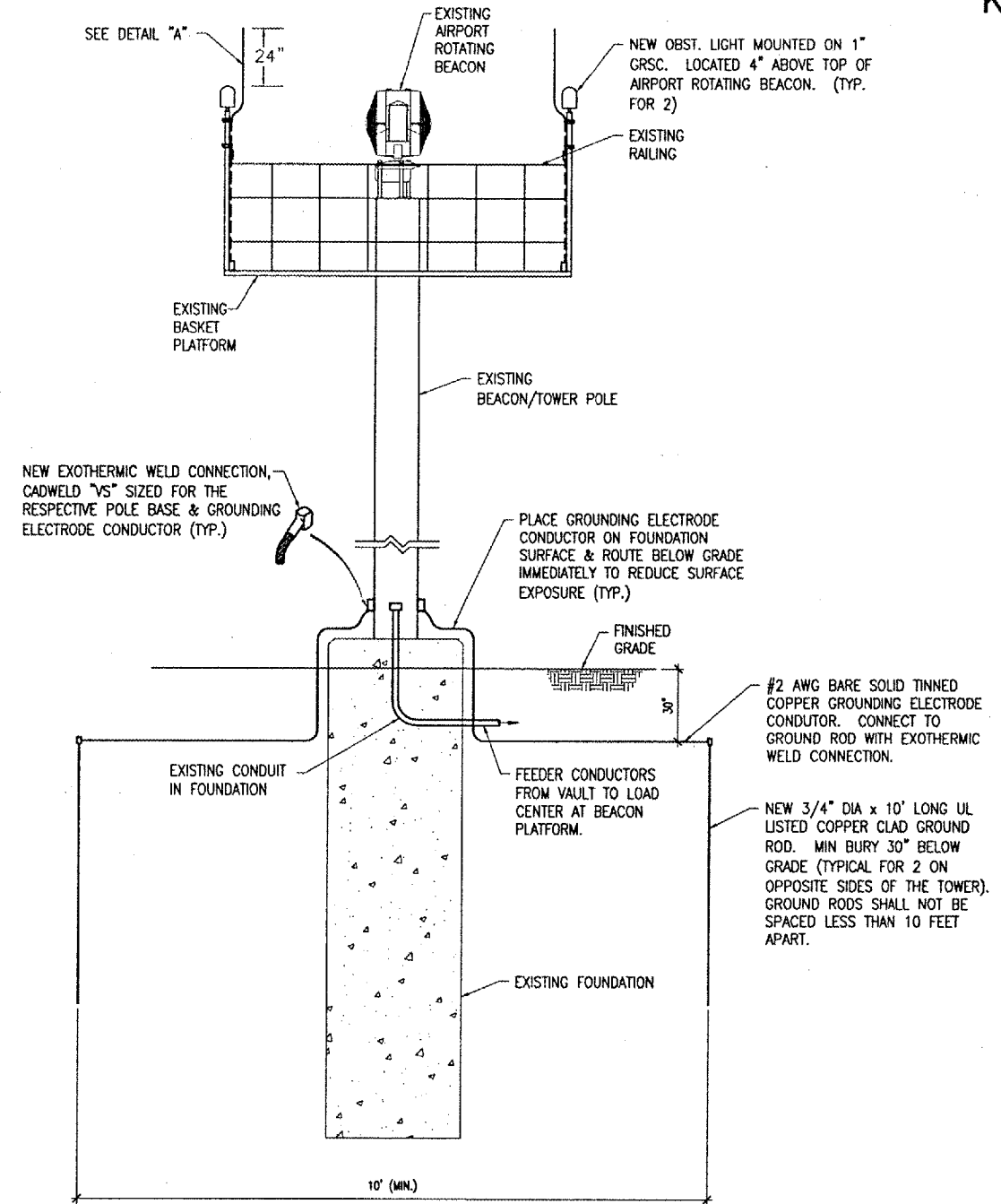
EXOTHERMIC WELD DETAILS



DETAIL A
NTS

NOTES

- REFERENCES TO THOMPSON ARE THOMPSON LIGHTNING PROTECTION INC., 901 SIBLEY MEMORIAL HWY, ST. PAUL, MN 55188, PHONE: 651-455-7661, 800-777-1230, FAX: 651-455-2545.
- VERIFY LIGHTNING PROTECTION COMPONENTS AND CATALOG NUMBERS WITH THE RESPECTIVE LIGHTNING PROTECTION EQUIPMENT MANUFACTURER.



LIGHTNING PROTECTION DETAIL
FOR AIRPORT ROTATING BEACON
NTS

AIRPORT ROTATING BEACON PANEL						
CKT #	DUTY	SIZE		SIZE	DUTY	CKT #
1	AIRPORT ROTATING BEACON	15A 1P	~	30A 1P	SURGE PROTECTOR	2
3	OBSTRUCTION LIGHTS	15A 1P		30A 1P	SURGE PROTECTOR	4
5	BLANK		~		BLANK	6
7	GFCI RECEPTACLE	20A 1P			BLANK	8
9	BLANK			BLANK	10	
11	BLANK			BLANK	12	

GND S/N

125 AMP, 120/240 VAC, 1 PHASE, 3 WIRE, 12 CIRCUIT LOAD CENTER WITH CONVERTIBLE MAIN LUGS IN A NEMA 3R RAIN PROOF ENCLOSURE, SQUARE D CAT. NO. Q0112L125GRB OR APPROVED EQUAL.

NOTES

- INCLUDE EQUIPT GROUND BAR KIT.
- ALL BREAKERS SHALL HAVE 10,000 AIC RATING AT 120/240 VAC.
- PHASE "A" SHALL BE SWITCHED THROUGH A LIGHTING CONTACTOR AT THE VAULT. PHASE "B" SHALL BE UNSWITCHED.
- INCLUDE ENGRAVED PHENOLIC LEGEND PLATE LABELED ARB PANEL, 120/240 VAC, 1PH, 3W, FED FROM VAULT.

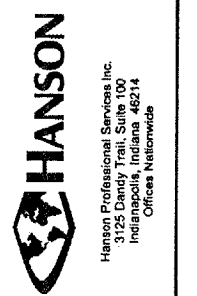
NOTE: SEE SHEETS 38, 42, 43, & 46 FOR ADDITIONAL INFORMATION REGARDING WIRING FOR THE AIRPORT ROTATING BEACON CIRCUIT.

ALL WORK SHOWN ON THIS SHEET SHALL BE PAID FOR UNDER ITEM AR800591 - UPGRADE AIRPORT ROTATING BEACON - PER L.S.

DATE	REVISION	BY

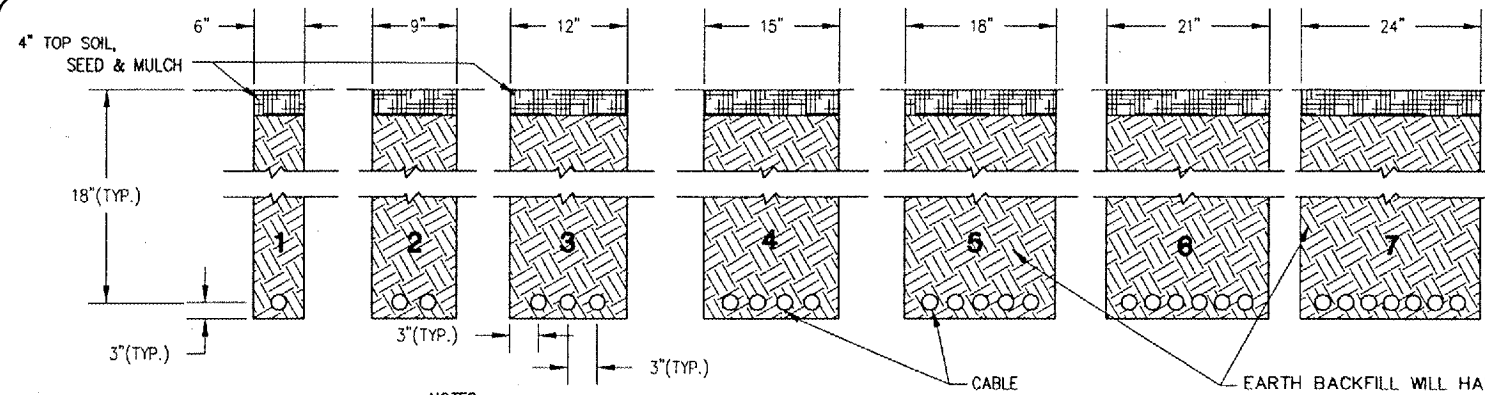
Kewanee Municipal Airport
Kewanee, Henry County, Illinois
I.L. PROJ.: E2I-3586
A.I.P. PROJ.: 3-17-0038-B12

Proj. No.	810-06VLD
Revision	E-502.DWG
Scale	NONE
Date	04/01/08
LAYOUT	KNL 09/23/05
DRAWN	MV 09/27/05
REVIEWED	LDP 01/17/06



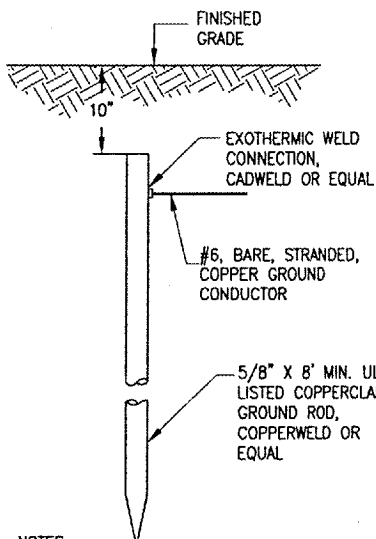
CONSTRUCT VAULT
LIGHTNING PROTECTION
DETAILS FOR BEACON

APR 01, 2008 11:49 AM V00R00805 E:\AIRPORTS\KEWANEE\810-06VLD\ELECTRICAL\SHEETS\E-502.DWG - Work-FLR



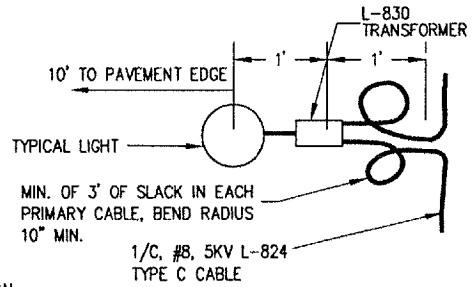
- NOTES:**
1. DETAIL NUMBERS INDICATE NO. OF CABLES.
 2. TRENCHES WITH MORE THAN SEVEN CABLES SHALL BE INCREASED 3" IN WIDTH FOR EACH ADDITIONAL CABLE; IF SPECIFIED ON PLANS TWO PARALLEL TRENCHES MAY BE CONSTRUCTED.
 3. DEPTH OF TRENCHES SHALL BE AS SHOWN ABOVE UNLESS OTHERWISE SPECIFIED ON THE PLANS.
 4. ALL DISTURBED SURFACES SHALL BE RESTORED TO THEIR ORIGINAL CONDITION. COST IS INCIDENTAL TO TRENCH. RETURNING MATERIALS AND RATES MAY BE SHOWN ON THE PLANS.

CABLE TRENCHES
(NOT TO SCALE)

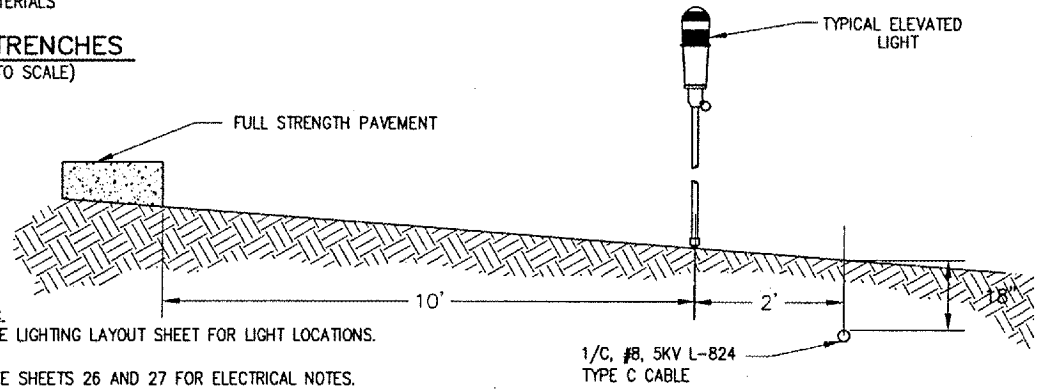


- NOTES:**
1. TYPE AND MINIMUM NUMBER OF GROUND RODS SHALL BE AS SPECIFIED ON THE PLAN.
 2. THE RESISTANCE TO GROUND OF THE GROUNDING SYSTEM SHALL NOT EXCEED 25 OHMS.
 3. COST OF GROUND RODS IS INCIDENTAL TO THE ASSOCIATED ITEMS REQUIRING GROUNDING UNLESS OTHERWISE SPECIFIED.
 4. GROUND RODS SHALL NOT BE SPACED LESS THAN ONE ROD LENGTH APART.

GROUND ROD
(NOT TO SCALE)

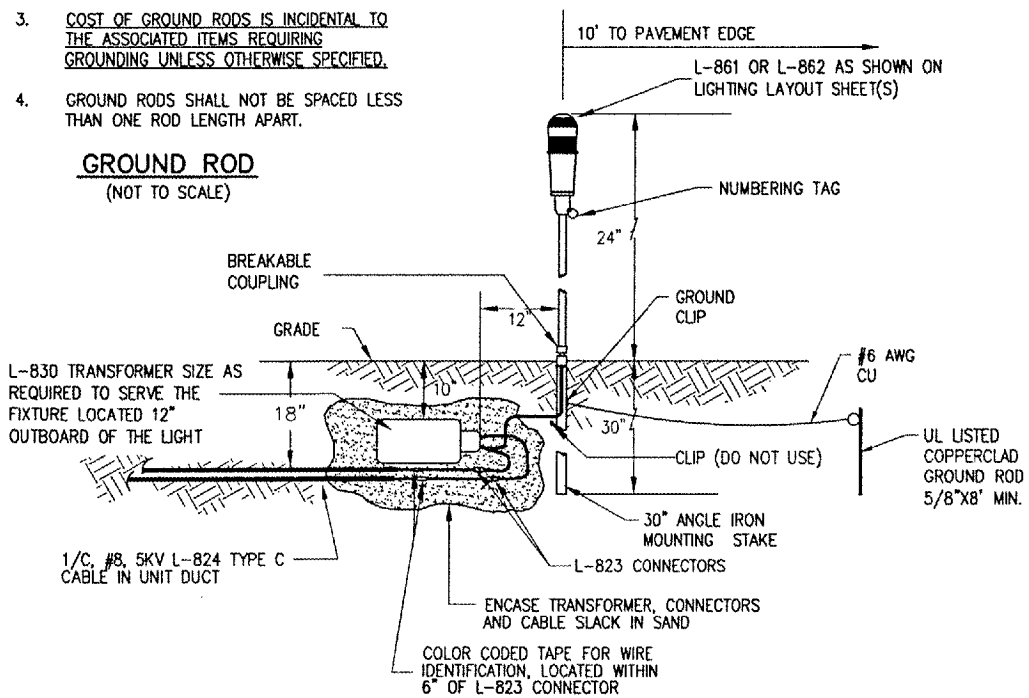


PLAN VIEW

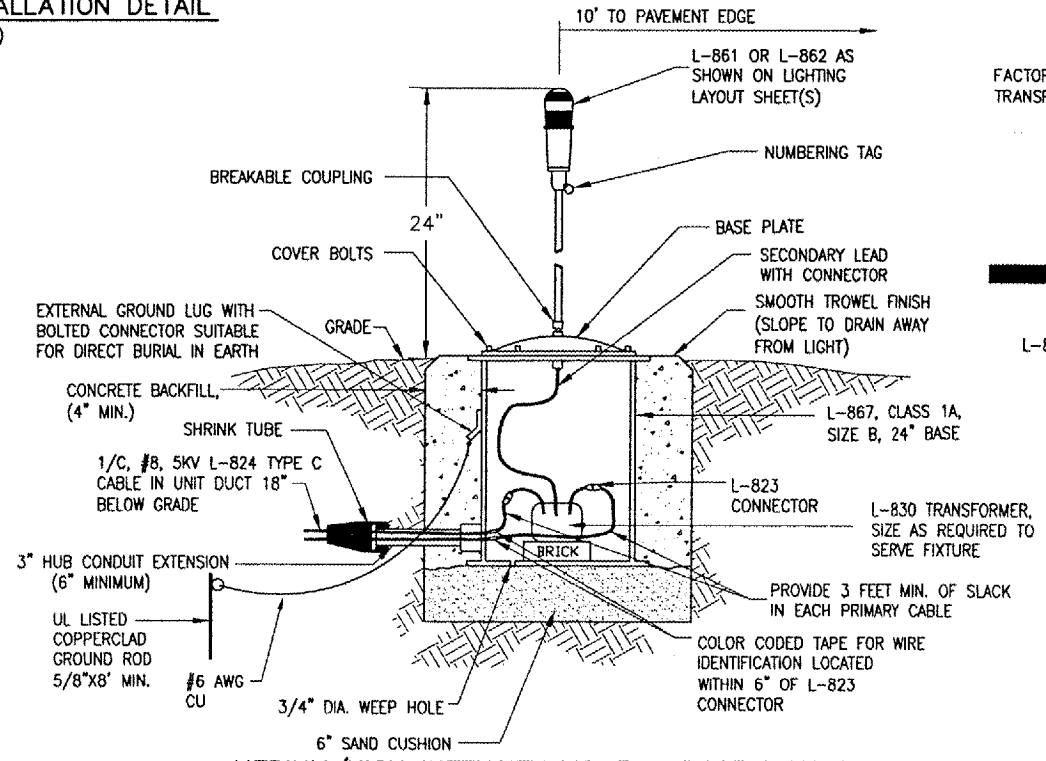


PROFILE VIEW

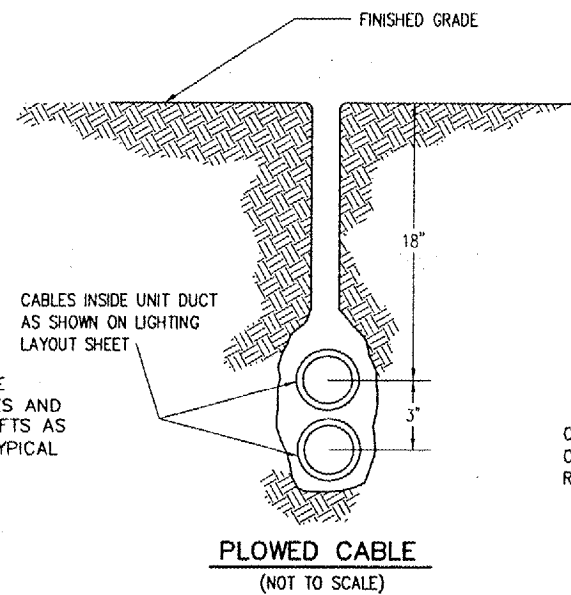
LIGHT AND CABLE INSTALLATION DETAIL
(NOT TO SCALE)



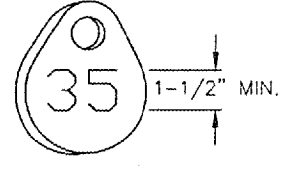
MEDIUM INTENSITY LIGHT - STAKE MOUNTED
(NOT TO SCALE)



MEDIUM/HIGH INTENSITY LIGHT - BASE MOUNTED
(NOT TO SCALE)

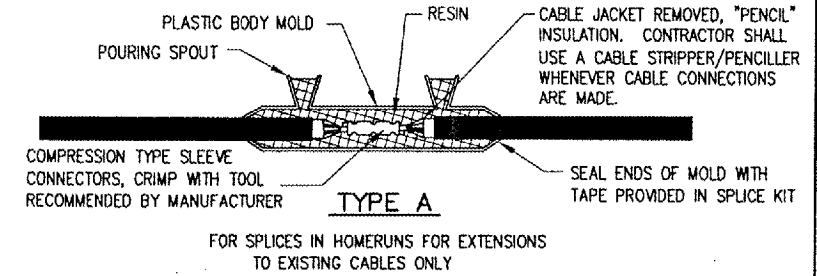


PLOWED CABLE
(NOT TO SCALE)



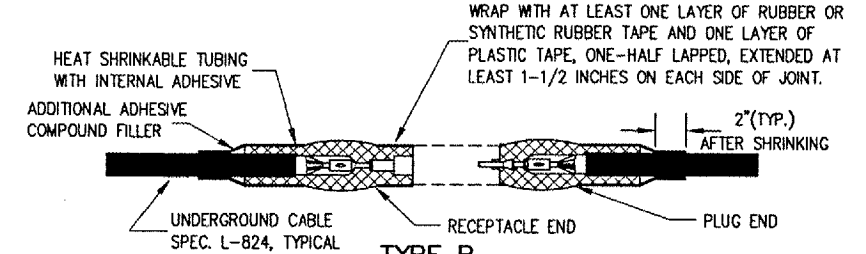
TAG DETAIL
(NOT TO SCALE)

NOTE:
AFFIX NON-CORROSIVE TAG TO FIXTURE FACING RUNWAY WITH SET SCREW, WIRE TIE, OR METAL BAND. NUMERALS SHALL BE ENGRAVED FOR PERMANENT READABILITY.



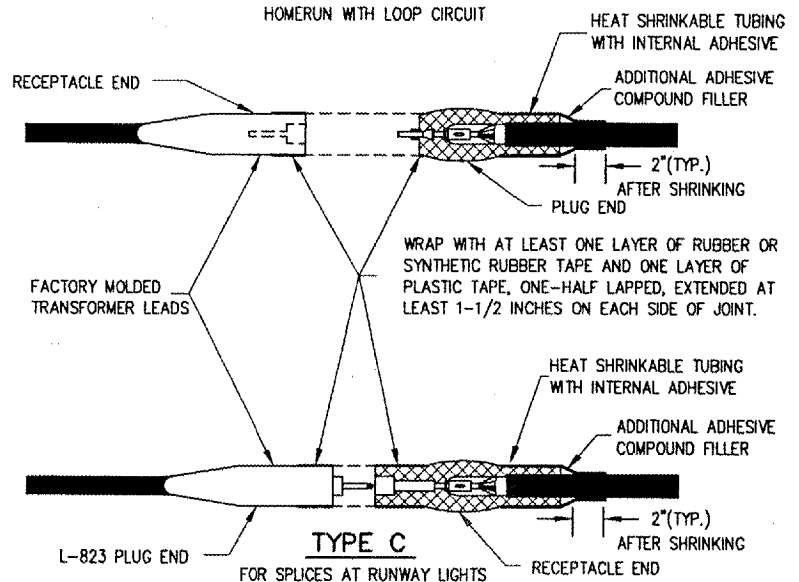
TYPE A

FOR SPLICES IN HOMERUNS FOR EXTENSIONS TO EXISTING CABLES ONLY



TYPE B

FOR SPLICES AT JUNCTION OF HOMERUN WITH LOOP CIRCUIT



TYPE C

FOR SPLICES AT RUNWAY LIGHTS

- NOTES:**
1. SEE LIGHTING LAYOUT SHEET(S) FOR SPLICE TYPE.
 2. INSIDE DIAMETER OF CONNECTOR SHALL PROPERLY MATCH THE OUTSIDE DIAMETER OF CABLE.

CABLE SPLICES
(NOT TO SCALE)

DATE	REVISION	BY

KEWANEEN MUNICIPAL AIRPORT
KEWANEEN, HENRY COUNTY, ILLINOIS
A.I.P. PROJ.: 3-17-0058-B12
I.L. PROJ.: E21-3586

REV. Project No.	810-06VLD	DATE	04/01/08
Drawn	R-502LDET.DWG	Scale	N/A
LAYOUT	RA.W.	DATE	09/02/05
DRAWN	B.A.K.	DATE	09/02/05
REVIEWED	C.A.H.	DATE	04/27/06

HANSON
Hanson Professional Services Inc.
3125 Dandy Trail, Suite 100
Indianapolis, Indiana 46214
Offices Nationwide

CONSTRUCT VAULT
ELECTRICAL DETAILS

APR 01, 2008 11:50 AM V00RHO0805
C:\AIRPORTS\KEMANEEN\810-06VLD\ELECTRICAL\SHEETS\R-502LDET.DWG - ELEC. DETAILS

GENERAL NOTES


1. 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.
2. CONTRACTOR SHALL KEEP A COPY OF THE LATEST NEC IN FORCE ON SITE AT ALL TIMES DURING CONSTRUCTION FOR USE AS A REFERENCE.
3. CONTRACTOR SHALL COORDINATE WORK AND ANY POWER OUTAGES WITH THE RESPECTIVE FACILITY OWNER PERSONNEL AND THE AIRPORT MANAGER.
4. THE CONTRACTOR SHALL ASCERTAIN THAT ALL LIGHTING SYSTEM COMPONENTS FURNISHED BY HIM, INCLUDING FAA APPROVED EQUIPMENT, ARE COMPATIBLE IN ALL RESPECTS WITH EACH OTHER AND THE REMAINDER OF THE NEW/EXISTING SYSTEM. ANY NONCOMPATIBLE COMPONENTS FURNISHED BY THIS CONTRACTOR SHALL BE REPLACED BY HIM AT NO ADDITIONAL COST TO THE AIRPORT SPONSOR WITH A SIMILAR UNIT, APPROVED BY THE ENGINEER (DIFFERENT MODEL OR DIFFERENT MANUFACTURER) THAT IS COMPATIBLE WITH THE REMAINDER OF THE AIRPORT LIGHTING SYSTEM.
5. IN CASE THE CONTRACTOR ELECTS TO FURNISH AND INSTALL AIRPORT LIGHTING EQUIPMENT REQUIRING ADDITIONAL WIRING, TRANSFORMERS, ADAPTORS, MOUNTINGS, ETC., TO THOSE SHOWN ON THE DRAWINGS AND/OR LISTED IN THE SPECIFICATION, ANY COST FOR THESE ITEMS SHALL BE INCIDENTAL TO THE EQUIPMENT COST.
6. THE CONTRACTOR INSTALLED EQUIPMENT (INCLUDING FAA APPROVED) SHALL NOT GENERATE ANY ELECTROMAGNETIC INTERFERENCE IN THE EXISTING AND/OR NEW COMMUNICATIONS, WEATHER, AIR NAVIGATION, AND AIR TRAFFIC CONTROL EQUIPMENT. ANY EQUIPMENT GENERATING SUCH INTERFERENCE SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST WITH THE EQUIPMENT MEETING THE APPLICABLE SPECIFICATIONS AND NOT GENERATING ANY INTERFERENCE.
7. WHEN A SPECIFIC TYPE, STYLE, CLASS, ETC. OF FAA APPROVED EQUIPMENT IS SPECIFIED ONLY THAT TYPE, STYLE, CLASS, WILL BE ACCEPTABLE, EVEN THOUGH EQUIPMENT OF OTHER TYPES STYLES, CLASSES, ETC. MAY BE APPROVED.
8. ANY AND ALL INSTRUCTIONS FROM THE ENGINEER TO THE CONTRACTOR REGARDING CHANGES IN OR DEVIATIONS FROM THE PLANS AND SPECIFICATIONS SHALL BE IN WRITING WITH COPIES SENT TO THE AIRPORT SPONSOR AND THE FAA FIELD OFFICE (ADO/AFO). THE CONTRACTOR SHALL NOT ACCEPT ANY VERBAL INSTRUCTIONS FROM THE RESIDENT ENGINEER REGARDING ANY CHANGES FROM THE PLANS AND SPECIFICATIONS.
9. A MINIMUM OF THREE COPIES OF THE INSTRUCTION BOOK SHALL BE SUPPLIED WITH EACH DIFFERENT TYPE OF EQUIPMENT. THE BOOKS DESCRIBING A MORE SOPHISTICATED TYPE OF EQUIPMENT, SUCH AS REGULATORS, PAPI, REIL, ETC. AS A MINIMUM SHALL CONTAIN THE FOLLOWING:
 - A. A DETAILED DESCRIPTION OF THE OVERALL EQUIPMENT AND ITS INDIVIDUAL COMPONENTS.
 - B. THEORY OF OPERATION INCLUDING THE FUNCTION OF EACH COMPONENT.
 - C. INSTALLATION INSTRUCTION.
 - D. START-UP INSTRUCTIONS.
 - E. PREVENTATIVE MAINTENANCE REQUIREMENTS.
 - F. CHART FOR TROUBLE-SHOOTING.
 - G. COMPLETE POWER AND CONTROL DETAILED WIRING DIAGRAM(S), SHOWING EACH CONDUCTOR/CONNECTION/COMPONENT - "BLACK" BOXES ARE NOT ACCEPTABLE. THE DIAGRAM OF THE NARRATIVE SHALL SHOW VOLTAGE/CURRENTS/WAVE SHAPES AT STRATEGIC LOCATIONS TO BE USED WHEN CHECKING AND/OR TROUBLE-SHOOTING THE EQUIPMENT. WHEN THE EQUIPMENT HAS SEVERAL MODES OF OPERATION, SUCH AS SEVERAL BRIGHTNESS STEPS, THESE PARAMETERS SHALL BE INDICATED FOR ALL DIFFERENT MODES.
 - H. PARTS LIST WHICH WILL INCLUDE ALL MAJOR AND MINOR COMPONENTS SUCH AS RESISTORS, DIODES, ETC. IT SHALL INCLUDE A COMPLETE NOMENCLATURE OF EACH COMPONENT AND, IF APPLICABLE, THE NAME OF ITS MANUFACTURER AND THE CATALOG NUMBER.
 - I. SAFETY INSTRUCTIONS.

POWER AND CONTROL NOTES

1. PROVIDE LEGEND PLATES FOR ALL ELECTRICAL EQUIPMENT TO IDENTIFY FUNCTION, CIRCUIT VOLTAGE AND PHASE. WHERE THE EQUIPMENT CONTAINS FUSES, ALSO IDENTIFY THE FUSE OR FUSE LINK AMPERE RATING. WHERE THE EQUIPMENT DOES NOT HAVE SUFFICIENT AREA TO INSTALL LEGEND PLATES, THE LEGEND PLATES SHALL BE INSTALLED ON THE WALL NEXT TO THE UNIT. LEGEND PLATES SHALL BE WEATHERPROOF ENGRAVED PLASTIC OR PHENOLIC MATERIAL, 1/4" HIGH BLACK LETTERS ON A WHITE BACKGROUND UNLESS NOTED OTHERWISE. SECURE WITH WEATHERPROOF ADHESIVE AND MACHINE SCREWS. FURNISH ADDITIONAL LEGEND PLATES WHERE REQUIRED BY CODE, FOR ADDITIONAL EQUIPMENT, AS DETAILED HEREIN ON THE PLANS, AND AS NOTED IN THE SPECIAL PROVISION SPECIFICATIONS.
2. COLOR CODE ALL PHASE WIRING BY THE USE OF COLORED WIRE INSULATION AND/OR COLORED TAPE. WHERE TAPE IS USED, THE WIRE INSULATION SHALL BE BLACK. BLACK AND RED SHALL BE USED FOR SINGLE-PHASE, THREE WIRE SYSTEMS AND BLACK, RED AND BLUE SHALL BE USED FOR THREE-PHASE SYSTEMS. NEUTRAL CONDUCTORS, SIZE NO. 6 AWG OR SMALLER, SHALL BE IDENTIFIED BY A CONTINUOUS WHITE OR NATURAL GRAY OUTER FINISH ALONG ITS ENTIRE LENGTH. NEUTRAL CONDUCTORS LARGER THAN NO. 6 AWG SHALL BE IDENTIFIED EITHER BY A CONTINUOUS WHITE OR NATURAL GRAY OUTER FINISH ALONG ITS ENTIRE LENGTH OR BY THE USE OF WHITE TAPE AT ITS TERMINATIONS AND INSIDE ACCESSIBLE WIREWAYS. INSULATED GROUND CONDUCTORS SHALL HAVE GREEN COLORED INSULATION FOR ALL CONDUCTOR SIZES (AWG OR KCMIL).
3. ALL BRANCH CIRCUIT CONDUCTORS CONNECTED TO A PARTICULAR PHASE SHALL BE IDENTIFIED WITH THE SAME COLOR. THE COLOR CODING SHALL BE EXTENDED TO THE POINT OF UTILIZATION.
4. IN CONTROL WIRING THE SAME COLOR SHALL BE USED THROUGHOUT THE SYSTEM FOR THE SAME FUNCTION, SUCH AS 10%, 30%, 100% BRIGHTNESS CONTROL, ETC.
5. LOW VOLTAGE (600 V.) AND HIGH VOLTAGE (5000 V.) CONDUCTORS SHALL BE INSTALLED IN SEPARATE WIREWAYS.
6. NEATLY LACE WIRING IN DISTRIBUTION PANELS, WIREWAYS, SWITCHES AND JUNCTION/PULL BOXES.
7. THE MINIMUM SIZE OF PULL/JUNCTION BOXES, REGARDLESS OF THE QUANTITY AND SIZE OF THE CONDUCTORS SHOWN, SHALL BE AS FOLLOWS:
 - A. IN STRAIGHT PULLS THE LENGTH OF THE BOX SHALL NOT BE LESS THAN EIGHT TIMES THE TRADE DIAMETER OF THE LARGER CONDUIT. THE TOTAL AREA (INCLUDING THE CONDUIT CROSS-SECTIONAL AREA) OF A BOX END SHALL BE AT LEAST 3 TIMES GREATER THAN THE TOTAL TRADE CROSS-SECTIONAL AREA OF THE CONDUITS TERMINATING AT THE END.
 - B. IN ANGLE PULLS OR 'U' PULLS THE DISTANCE BETWEEN EACH CONDUIT ENTRY INSIDE THE BOX AND THE OPPOSITE WALL OF THE BOX SHALL NOT BE LESS THAN SIX (6) TIMES THE TRADE DIAMETER OF THE LARGEST CONDUIT. THIS DISTANCE SHALL BE INCREASED FOR ADDITIONAL ENTRIES BY THE AMOUNT OF THE SUM OF THE DIAMETERS OF ALL OTHER CONDUIT ENTRIES ON THE SAME WALL AS THE BOX. THE DISTANCE BETWEEN CONDUIT ENTRIES ENCLOSING THE SAME CONDUCTOR SHALL NOT BE LESS THAN SIX TIMES THE TRADE DIAMETER OF THE LARGEST CONDUIT.
8. A RUN OF CONDUIT BETWEEN TERMINATIONS AT EQUIPMENT ENCLOSURES, SQUARE DUCTS AND PULL/JUNCTION BOXES, SHALL NOT CONTAIN MORE THAN THE EQUIVALENT OF FOUR QUARTER BENDS (360 DEGREES TOTAL), INCLUDING THOSE BENDS LOCATED IMMEDIATELY AT THE TERMINATIONS, CAST, CONDUIT TYPE OUTLETS SHALL NOT BE TREATED AS PULL/JUNCTION BOXES.
9. EQUIPMENT CABINETS SHALL NOT BE USED AS PULL/JUNCTION BOXES. ONLY WIRING TERMINATING AT THE EQUIPMENT SHALL BE BROUGHT INTO THESE ENCLOSURES.
10. SPLICES AND JUNCTION POINTS SHALL BE PERMITTED ONLY IN JUNCTION BOXES, DUCTS EQUIPPED WITH REMOVABLE COVERS, AND AT EASILY ACCESSIBLE LOCATIONS.
11. CIRCUIT BREAKERS IN POWER DISTRIBUTION PANEL(S) SHALL BE THERMAL-MAGNETIC MOLDED CASE, PERMANENT TRIP WITH 100 AMPERE, MINIMUM FRAME.
12. DUAL LUGS SHALL BE USED WHERE TWO (2) WIRES, SIZE NO. 6 OR LARGER, ARE TO BE CONNECTED TO THE SAME TERMINAL.
13. ALL INTERIOR WALL MOUNTED EQUIPMENT ENCLOSURES SHALL BE MOUNTED ON HOT DIPPED GALVANIZED STEEL STRUT SUPPORT, OR STAINLESS STEEL STRUT SUPPORT, WITH CORROSION RESISTANT HARDWARE.
14. SUPPORT FOR EXTERIOR MOUNTED EQUIPMENT SHALL USE HOT DIPPED GALVANIZED STEEL STRUT SUPPORT OR STAINLESS STEEL STRUT SUPPORT WITH STAINLESS STEEL HARDWARE. PROVIDE ZINC RICH PAINT APPLIED TO FIELD CUTS OF GALVANIZED STEEL SUPPORT TO MINIMIZE THE POTENTIAL FOR CORROSION PER THE RESPECTIVE STRUT SUPPORT MANUFACTURER'S RECOMMENDATIONS.

15. CONDUITS FOR ELECTRIC SERVICE ENTRANCE AND FEEDERS SHALL BE AS DETAILED HEREIN ON THE PLANS. WHERE GALVANIZED RIGID STEEL CONDUIT IS SPECIFIED IT SHALL HAVE THREADED FITTINGS. SET SCREW TYPE FITTINGS WILL NOT BE ACCEPTABLE. CONDUITS FOR UNDERGROUND APPLICATIONS SHALL BE AS DETAILED HEREIN. CONDUITS FOR GROUNDING ELECTRODE CONDUCTORS OR INDIVIDUAL GROUNDING CONDUCTORS SHALL BE SCHEDULE 40 OR SCHEDULE 80 PVC.
16. PROVIDE LIQUID TIGHT FLEXIBLE METAL CONDUIT AT CONNECTIONS TO EQUIPMENT SUBJECT TO VIBRATION OR WHERE FLEXIBILITY IS REQUIRED. LIQUID TIGHT FLEXIBLE METAL CONDUIT AND ASSOCIATED FITTINGS SHALL BE U.L. LISTED TO MEET THE REQUIREMENTS OF NEC 350.6, SUITABLE FOR GROUNDING, SUNLIGHT RESISTANT, AND RESISTANT TO OIL, GASOLINE, AND GREASE. LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS USED FOR FLEXIBILITY (INCLUDING CONNECTIONS TO MOTORS, TRANSFORMERS, & CONSTANT CURRENT REGULATORS) SHALL REQUIRE AN EXTERNAL BONDING JUMPER OR INTERNAL EQUIPMENT GROUNDING CONDUCTOR PER NEC 350.60. DO NOT INSTALL LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS NOT UL LISTED.
17. UNLESS OTHERWISE SHOWN, ALL EXPOSED CONDUITS SHALL BE RUN PARALLEL TO OR AT RIGHT ANGLES WITH THE LINES OF THE STRUCTURE.
18. ALL STEEL CONDUITS, FITTINGS, NUTS, BOLTS, ETC. SHALL BE GALVANIZED.
19. USE CONDUIT BUSHINGS AT EACH CONDUIT TERMINATION. WHERE NO. 4 AWG OR LARGER UNDERGROUND WIRE IS INSTALLED, USE INSULATED BUSHINGS.
20. USE DOUBLE LOCK NUTS AT EACH CONDUIT TERMINATION.
21. WRAP ALL PRIMARY AND SECONDARY POWER TRANSFORMER CONNECTIONS WITH SUFFICIENT LAYERS OF INSULATING TAPE (3M SCOTCH 23 ALL-VOLTAGE SPLICING TAPE, 3M SCOTCH 130C LINERLESS RUBBER SPLICING TAPE, OR APPROVED EQUAL) AND COVER WITH VINYL ELECTRICAL TAPE (3M SCOTCH 88 VINYL ELECTRICAL TAPE OR APPROVED EQUAL) FOR FULL VALUE OF CABLE INSULATION VOLTAGE.
22. UNLESS OTHERWISE NOTED, ALL SINGLE CONDUCTOR CONTROL WIRING SHALL BE NO. 12 AWG. COPPER MINIMUM.
23. THE FOLLOWING SHALL APPLY TO RELAY/CONTACTOR PANELS/ENCLOSURES:
 - A. FOR INTERIOR LOCATIONS ALL COMPONENTS SHALL BE MOUNTED IN NEMA 12 (DUST TIGHT) ENCLOSURE(S) WITH VERTICALLY HINGED COVERS. FOR EXTERIOR/OUTDOOR LOCATIONS ALL COMPONENTS SHALL BE MOUNTED IN NEMA 4X STAINLESS STEEL ENCLOSURE(S) WITH VERTICALLY HINGED COVERS. ALL CONDUIT ENTRIES INTO NEMA 4, 4X ENCLOSURES SHALL HAVE NEMA 4 HUBS LISTED SUITABLE FOR THE RESPECTIVE ENCLOSURE TO MAINTAIN THE NEMA 4, 4X RATING OF THE ENCLOSURE.
 - B. THE ENCLOSURE(S) SHALL HAVE AMPLE SPACE FOR THE CIRCUIT COMPONENTS, TERMINAL BLOCKS AND INCOMING AND INTERNAL WIRING.
 - C. ALL CONTROL CONDUCTOR TERMINATIONS SHALL BE OF THE OPEN-EYE CONNECTOR/SCREW TYPE. SOLDERED CLOSED-EYE TERMINATIONS, OR TERMINATIONS WITHOUT CONNECTORS ARE NOT ACCEPTABLE.
 - D. WHEN THE ENCLOSURE COVER IS OPENED, ALL CIRCUIT COMPONENTS, WIRING AND TERMINALS SHALL BE EXPOSED AND ACCESSIBLE WITHOUT REMOVAL OF ANY PANELS, COVERS, ETC., EXCEPT THOSE COVERING HIGH VOLTAGE COMPONENTS.
 - E. ACCESS TO, OR REMOVAL OF A CIRCUIT COMPONENT OR TERMINAL BLOCK WILL NOT REQUIRE THE REMOVAL OF ANY OTHER CIRCUIT COMPONENT OR TERMINAL BLOCK.
 - F. EACH CIRCUIT COMPONENT SHALL BE CLEARLY IDENTIFIED INDICATING ITS CORRESPONDING NUMBER SHOWN ON THE DRAWINGS AND ITS FUNCTION.
 - G. A COMPLETE WIRING DIAGRAM SHALL BE MOUNTED ON THE INSIDE OF THE COVER. THE DIAGRAM SHALL REPRESENT EACH CONDUCTOR BY A SEPARATE LINE.
 - H. THE DIAGRAM SHALL IDENTIFY EACH CIRCUIT COMPONENT AN NUMBERING AND COLOR OF EACH TERMINAL CONDUCTOR AND TERMINAL.
 - I. ALL WIRING SHALL BE NEATLY TRAINED AND LACED.
 - J. MINIMUM WIRE SIZE SHALL BE NO. 12 AWG.
24. FURNISH & INSTALL A WEATHERPROOF WARNING LABEL FOR EACH METER SOCKET, SERVICE DISCONNECT, SAFETY SWITCH, CUTOUT, PANELBOARD, & CONTROL PANEL TO WARN PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS, PER THE REQUIREMENTS OF NEC 110.16 "FLASH PROTECTION".

APR 01, 2008 11:50 AM VOORHO0805 I:\AIRPORTS\KEWANEE\B10-06VLD\ELECTRICAL\SHEETS\R-503-ELEC.DWG - ELEC. NOTES

BY		REVISION		DATE	
<p>KEWANEE MUNICIPAL AIRPORT KEWANEE, HENRY COUNTY, ILLINOIS</p>					
<p>IL. PROJ.: E21-3586 A.I.P. PROJ.: 3-17-0058-812</p>					
<p>FILE/Project No.: B10-06VLD Release: R-503-ELEC.DWG</p>		<p>Scale: N/A Date: 04/01/08</p>		<p>LAYOUT: 09/02/05 DRAWN: B.A.K. 09/02/05 REVIEWED: C.A.H. 04/27/06</p>	
 <p>HANSON Hanson Professional Services Inc. 8125 Danco Trail, Suite 100 Indianapolis, Indiana 46214 Offices Nationwide</p>					
<p>CONSTRUCT VAULT</p>			<p>ELECTRICAL NOTES SHEET 1</p>		
<p>26</p>					
<p>26 of 27 sheets</p>					

AIRFIELD LIGHTING NOTES

1. UNLESS OTHERWISE NOTED, ALL UNDERGROUND AIRFIELD LIGHTING SERIES CIRCUIT CONDUCTORS WHETHER DEB OR IN DUCT/CONDUIT SHALL BE FAA APPROVED 5000 VOLT L-824 TYPE. ALL UNDERGROUND FIELD POWER LOW VOLTAGE (600 VOLT & BELOW) CIRCUIT CONDUCTORS WHETHER DEB OR IN DUCT/CONDUIT SHALL BE UL LISTED 600 VOLT, TYPE XLP-USE-2 COPPER CONDUCTORS. CONDUCTOR SIZES SHALL BE AS SPECIFIED, HEREIN.
2. NO COMPONENTS OF PRIMARY CIRCUIT SUCH AS CABLE, CONNECTORS AND TRANSFORMERS SHALL BE BROUGHT ABOVE GROUND AT EDGE LIGHTS, SIGNS, REIL, PAPI, ETC.
3. THERE SHALL BE NO EXPOSED POWER/CONTROL CABLES BETWEEN THE POINT WHERE THEY LEAVE THE UNDERGROUND (DEB OR L-867 BASES) AND WHERE THEY ENTER THE EQUIPMENT (SUCH AS TAXIWAY SIGNS, PAPI, REIL, ETC.) ENCLOSURES. THESE CABLES SHALL BE ENCLOSED IN RIGID CONDUIT OR IN FLEXIBLE, WATERTIGHT CONDUIT WITH BREAKABLE COUPLING(S) AT THE GRADE OR THE HOUSING COVER, AS SHOWN IN APPLICABLE DETAILS.
4. THE JOINTS OF THE L-823 PRIMARY CONNECTORS SHALL BE WRAPPED WITH AT LEAST ONE LAYER OF RUBBER OR SYNTHETIC RUBBER TAPE AND ONE LAYER OF PLASTIC TAPE, ONE-HALF LAPPED, EXTENDING AT LEAST 1-1/2 INCHES ON EACH SIDE OF THE JOINT, AS SHOWN ON SHEET NO. 25.
5. THE CABLE ENTRANCE INTO THE FIELD-ATTACHED L-823 CONNECTORS SHALL BE ENCLOSED BY A HEAT-SHRINKABLE TUBING WITH CONTINUOUS INTERNAL ADHESIVE, AS SHOWN ON SHEET NO. 25.
6. L-823 TYPE II, TWO-CONDUCTOR SECONDARY CONNECTORS SHALL BE CLASS 'A' (FACTORY MOLDED).
7. THERE SHALL BE NO SPLICES IN THE SECONDARY CABLE(S) WITHIN THE STEMS OF A RUNWAY/TAXIWAY EDGE/THRESHOLD LIGHTING FIXTURE AND THE WIREWAYS LEADING TO TAXIWAY SIGNS AND PAPI/REIL EQUIPMENT.
8. ELECTRICAL INSULATING GREASE SHALL BE APPLIED WITHIN THE L-823, SECONDARY, TWO CONDUCTOR CONNECTORS TO PREVENT WATER ENTRANCE. THESE CONNECTORS SHALL NOT BE TAPED.
9. DEB ISOLATION TRANSFORMERS SHALL BE BURIED AT A DEPTH OF TEN (10") INCHES ON A LINE CROSSING THE LIGHT AND PERPENDICULAR TO THE RUNWAY/TAXIWAY CENTERLINE AT A LOCATION TWELVE (12") INCHES FROM THE LIGHT OPPOSITE FROM THE RUNWAY/TAXIWAY.
10. A SLACK OF THREE (3') FEET, MINIMUM, SHALL BE PROVIDED IN THE PRIMARY CABLE AT EACH TRANSFORMER/CONNECTOR TERMINATION. AT STAKE-MOUNTED LIGHTS, THE SLACK SHALL BE LOOSELY COILED IMMEDIATELY BELOW THE ISOLATION TRANSFORMER.
11. DIRECTION OF PRIMARY CABLES SHALL BE IDENTIFIED BY COLOR CODING AS FOLLOWS: WHEN FACING LIGHT WITH BACK TO PAVEMENT, CABLE TO THE LEFT IS CODED RED AND CABLE TO RIGHT IS CODED BLUE. THIS APPLIES TO STAKE MOUNTED LIGHTS AND BASE MOUNTED LIGHTS WHERE THE BASE HAS ONLY ONE ENTRANCE.
12. L-867 BASES SHALL BE SIZE B, 24" DEEP, CLASS I, UNLESS OTHERWISE NOTED.
13. BASE MOUNTED BREAKABLE COUPLINGS SHALL NOT HAVE WEEP HOLES TO THE OUTSIDE. PLUGGED UP HOLES SHALL NOT BE ACCEPTABLE. IT SHALL BE A 1/4" DIAMETER, MINIMUM, OR EQUIVALENT OPENING FOR DRAINAGE FROM THE SPACE AROUND THE SECONDARY CONNECTOR INTO THE L-867 BASE.
14. THE ELEVATION OF THE BREAKABLE COUPLING GROOVE SHALL NOT EXCEED 1-1/2" ABOVE THE EDGE OF THE COVER IN CASE OF BASE MOUNTED COUPLINGS, OR THE TOP OF THE STAKE IN CASE OF STAKE MOUNTED COUPLINGS.
15. WHERE THE BREAKABLE COUPLING IS NOT AN INTEGRAL PART OF THE LIGHT FIXTURE STEM OR MOUNTING LEG, A BEAD OF SILICON SEAL SHALL BE APPLIED COMPLETELY AROUND LIGHT STEM OR WIREWAY AT BREAKABLE COUPLING TO PROVIDE A WATERTIGHT SEAL.
16. TOPS OF THE STAKES SUPPORTING LIGHT FIXTURES SHALL BE FLUSH WITH THE SURROUNDING GRADE.
17. PLASTIC LIGHTING FIXTURE COMPONENTS, SUCH AS LAMP HEADS, STEMS, BREAKABLE COUPLINGS, BASE COVERS, BRACKETS, STAKES, SHALL NOT BE ACCEPTABLE.
18. THE TOLERANCE FOR THE HEIGHT OF RUNWAY/TAXIWAY EDGE LIGHTS SHALL BE: ONE (1) INCH. IN CASE OF STAKE MOUNTED LIGHTS, THE SPECIFIED LIGHTING FIXTURE HEIGHT SHALL BE MEASURED BETWEEN THE TOP OF THE STAKE AND THE TOP OF THE LENS. IN CASE OF BASE MOUNTED LIGHTS, THE SPECIFIED LIGHTING FIXTURE HEIGHT SHALL BE MEASURED BETWEEN THE TOP OF THE BASE FLANGE AND THE TOP OF THE LENS, THUS INCLUDING THE BASE COVER, THE FRANGIBLE COUPLING, THE STEM, THE LAMP HOUSING AND THE LENS.

19. THE TOLERANCE FOR THE LATERAL SPACING (LIGHT LANE TO RUNWAY/TAXIWAY CENTERLINE) OF RUNWAY/TAXIWAY EDGE LIGHTS SHALL BE ONE (1) INCH. THIS ALSO APPLIES AT INTERSECTIONS TO LATERAL SPACING BETWEEN LIGHTS OF A RUNWAY/TAXIWAY AND THE INTERSECTING RUNWAY/TAXIWAY.
20. ENTRANCES INTO L-867 BASES SHALL HAVE CONDUIT COUPLINGS OR REDUCERS TO INTERFACE UNIT DUCT/CONDUIT TO L-867 BASE HUBS, OR SHALL BE SEALED WITH HEAT SHRINK AS SHOWN ON SHEET NO. 25.
21. GALVANIZED/PAINTED EQUIPMENT/COMPONENT SURFACES SHALL NOT BE DAMAGED BY DRILLING, FILING, ETC. DRAIN HOLES IN METAL TRANSFORMER HOUSINGS SHALL BE MADE BEFORE GALVANIZING.
22. EDGE LIGHT NUMBERING TAGS SHALL BE FACING THE PAVEMENT.
23. CABLE/SPLICE/DUCT MARKERS SHALL BE PRECAST CONCRETE OF THE SIZE SHOWN. LETTERS/NUMBERS/ARROWS FOR THE LEGEND TO BE IMPRESSED INTO THE TOPS OF THE MARKERS SHALL BE PRE-ASSEMBLED AND SECURED IN THE MOLD BEFORE THE CONCRETE IS POURED. LEGEND INSCRIBED BY HAND IN WET CONCRETE SHALL NOT BE ACCEPTABLE.
24. ALL UNDERGROUND CABLE RUNS SHALL BE IDENTIFIED BY CABLE MARKERS AT 200 FEET MAXIMUM SPACING, WITH AN ADDITIONAL MARKER AT EACH CHANGE OF DIRECTION OF THE CABLE RUN. CABLE MARKERS SHALL BE INSTALLED IMMEDIATELY ABOVE THE CABLES.
25. THERE SHALL BE NO SPLICES BETWEEN THE ISOLATION TRANSFORMERS. L-823 CONNECTORS ARE ALLOWED AT TRANSFORMER CONNECTIONS ONLY, UNLESS OTHERWISE SHOWN.
26. APPLY AN OXIDE INHIBITING, ANTI-SEIZING COMPOUND TO ALL SCREWS, NUTS AND BREAKAGE COUPLING THREADS.
27. LOCATIONS OF ENDS OF ALL UNDERGROUND DUCTS SHALL BE IDENTIFIED BY DUCT MARKERS.
28. WHERE A PARALLEL, CONSTANT VOLTAGE PAPI SYSTEM IS PROVIDED, THE "T" SPLICES SHALL BE OF THE CAST TYPE.
29. CONCRETE USED FOR SLABS, FOOTINGS, BACKFILL AROUND TRANSFORMER HOUSINGS, MARKINGS, ETC. SHALL BE 3000 PSI, AIR-ENTRAINED.
30. ALL POWER AND CONTROL CABLES IN MAN/HAND HOLES SHALL BE TAGGED. USE EMBOSSED COPPER STRIPS TO BE ATTACHED AT BOTH ENDS TO THE CABLE BY THE USE OF PLASTIC STRAPS. MINIMUM OF TWO TAGS SHALL BE PROVIDED ON EACH CABLE IN A MAN/HAND HOLE--ONE AT THE CABLE ENTRANCE AND ONE AT THE CABLE EXIT.
31. THE LOCATION, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ON THE PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT. CALL J.U.L.I.E. FOR UTILITY INFORMATION AT 1-800-892-0123. ALSO CONTACT AIRPORT MANAGER AND/OR RESPECTIVE AIRPORT PERSONNEL FOR ASSISTANCE IN LOCATING UNDERGROUND AIRPORT CABLES AND/OR UTILITIES. CONTACT FAA FOR ASSISTANCE IN LOCATING THEIR CABLES.
32. WHEN PREPARING CABLE FOR SPLICES, THE CONTRACTOR SHALL USE A CABLE STRIPPER/PENCILLER WHENEVER CABLE CONNECTIONS ARE MADE.

GROUNDING NOTES FOR AIRFIELD LIGHTING

1. GROUNDING FOR RUNWAY LIGHTS, TAXIWAY LIGHTS, AND LIGHTED TAXI GUIDANCE SIGNS SHALL BE AS DETAILED ON THE PLANS AND AS SPECIFIED HEREIN. PER FAA AC 150/5340-30C DESIGN AND INSTALLATION DETAILS FOR AIRPORT VISUAL AIDS, CHAPTER 12, PART 12.6; A SAFETY GROUND MUST BE INSTALLED AT EACH LIGHT FIXTURE. THE PURPOSE OF THE SAFETY GROUND IS TO PROTECT PERSONNEL FROM POSSIBLE CONTACT WITH AN ENERGIZED LIGHT BASE OR MOUNTING STAKE AS THE RESULT OF A SHORTED CABLE OR ISOLATION TRANSFORMER. A SAFETY GROUND SHALL BE INSTALLED AT EACH TRANSFORMER BASE/LIGHT CAN ASSOCIATED WITH RUNWAY LIGHTS, TAXIWAY LIGHTS, AND LIGHTED TAXI GUIDANCE SIGNS. A SAFETY GROUND SHALL ALSO BE INSTALLED AT EACH STAKE MOUNTED LIGHT FIXTURE. THE SAFETY GROUND SHALL BE A #6 AWG BARE COPPER CONDUCTOR CONNECTED TO THE GROUND LUG ON THE RESPECTIVE L-867 TRANSFORMER BASE/LIGHT CAN OR MOUNTING STAKE AND A 5/8-INCH DIAMETER BY 8-FOOT LONG (MINIMUM) UL LISTED COPPER CLAD GROUND ROD. CONNECTIONS TO GROUND LUGS ON THE L-867 TRANSFORMER BASE/LIGHT CAN OR MOUNTING STAKE SHALL BE WITH A UL LISTED GROUNDING CONNECTOR. CONNECTIONS TO GROUND RODS SHALL BE MADE WITH EXOTHERMIC WELD TYPE CONNECTORS, CADWELD BY ERICO PRODUCTS, INC., SOLON, OHIO, (PHONE: 800-248-9353), THERMOWELD BY CONTINENTAL INDUSTRIES, INC., TULSA, OKLAHOMA (PHONE: 918-663-1440) OR ULTRAWELD BY HARGER, GRAYSLAKE, ILLINOIS (PHONE: 800-842-7437). EXOTHERMIC WELD CONNECTIONS SHALL BE INSTALLED IN CONFORMANCE WITH THE RESPECTIVE MANUFACTURER'S DIRECTIONS USING MOLDS AS REQUIRED FOR EACH RESPECTIVE APPLICATION. BOLTED CONNECTIONS WILL NOT BE PERMITTED AT GROUND RODS. TOP OF GROUND RODS SHALL BE BURIED 12 INCHES MINIMUM BELOW GRADE, UNLESS SPECIFIED OTHERWISE HEREIN, FOR RESPECTIVE APPLICATIONS.
2. CLEAN ALL METAL SURFACES BEFORE MAKING GROUND CONNECTIONS. METALLIC SURFACES TO BE JOINED SHALL BE PREPARED BY THE REMOVAL OF ALL NON-CONDUCTIVE MATERIAL PER 2008 NATIONAL ELECTRICAL CODE ARTICLE 250-12.
3. PER FAA 150/5340-30C THE RESISTANCE TO GROUND OF THE RESPECTIVE MOUNTING STAKE OR LIGHT BASE (WITH GROUND ROD CONNECTED) MUST BE 25 OHMS OR LESS.
4. GROUNDING FOR PLASI. GROUNDING FOR PLASI SHALL CONFORM TO THE RESPECTIVE PLASI MANUFACTURER'S INSTALLATION INSTRUCTIONS, AS DETAILED ON THE PLANS, AND AS SPECIFIED HEREIN. THE POWER CIRCUIT TO THE PLASI UNIT SHALL INCLUDE AN EQUIPMENT GROUND WIRE. THE EXISTING POWER FEEDER CIRCUIT IS A 120 VAC, 2-WIRE CIRCUIT WITHOUT AN EQUIPMENT GROUND WIRE. TO COMPLY WITH THE REQUIREMENTS OF NATIONAL ELECTRICAL CODE AND THE PLASI MANUFACTURER'S INSTALLATION INSTRUCTIONS A SAFETY SWITCH/DISCONNECT SHALL BE INSTALLED AT THE PLASI. THE 120 VAC FEEDER CONDUCTORS FROM THE VAULT SHALL TERMINATE ON THIS SAFETY SWITCH/DISCONNECT. FURNISH AND INSTALL A 3/4-INCH DIAMETER BY 10-FOOT LONG COPPER CLAD GROUND ROD AT THE SITE OF THE PLASI UNIT. TOP OF GROUND ROD SHALL BE BURIED 30 INCHES BELOW GRADE. ALL CONNECTIONS TO THE GROUND ROD SHALL BE EXOTHERMIC WELD AS MANUFACTURED BY CADWELD, THERMOWELD, OR ULTRAWELD. CONNECT THE SAFETY SWITCH ENCLOSURE FRAME/GROUND BAR TO THE GROUND ROD WITH A #6 AWG STRANDED COPPER GROUNDING ELECTRODE CONDUCTOR. BOND THE NEUTRAL TO GROUND IN THIS SAFETY WITH A #6 AWG (MINIMUM) STRANDED COPPER BONDING JUMPER. FROM THE LOAD SIDE OF THE SAFETY SWITCH INSTALL 1 #10 THWN, 1 #10 THWN NEUTRAL, AND 1 #10 EQUIPMENT GROUND IN 3/4-INCH LIQUID TIGHT FLEXIBLE METAL CONDUIT TO THE PLASI UNIT. TERMINATE THE EQUIPMENT GROUND WIRE ON THE RESPECTIVE GROUND LUG INSIDE THE PLASI UNIT OR ON THE PLASI UNIT METAL FRAME.

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DATE	

**KEWANEEN MUNICIPAL AIRPORT
KEWANEEN, HENRY COUNTY, ILLINOIS**

ILL. PROJ.: E2I-3586
A.I.P. PROJ.: 3-17-0058-B12

REL. Project No.	810-06V.DWG
Filename	R-502-ELEC.DWG
Scale	N/A
Date	04/01/08
LAYOUT	R.A.W. 09/02/05
DRAWN	B.A.K. 09/02/05
REVIEWED	C.A.H. 04/27/06



CONSTRUCT VAULT

ELECTRICAL NOTES

SHEET 2