LETTING ITEM NUMBER
1A

LETTING CONTRACT NUMBER
W1053

TOTAL SHEETS: 15

GENERAL ELECTRICAL NOTES

1. THE ELECTRICAL INSTALLATION, AS A MINIMUM, SHALL MEET THE NATIONAL ELECTRICAL CODE AND LOCAL REGULATIONS.
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 SIZE LARGER THAN NO. 6 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 ENCLOSURES.
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. NEATLY LACE WIRING IN DISTRIBUTION PANELS, SWITCHES AND JUNCTION/PULL BOXES.
5. SCHEDULE 40 RIGID STEEL CONDUIT (RMC) SHALL BE USED THROUGHOUT THE INSTALLATION UNLESS OTHERWISE SPECIFIED.
6. ALL STEEL CONDUITS, FITTINGS, NUTS, BOLTS, ETC., SHALL BE GALVANIZED.
7. USE INSULATED CONDUIT BUSHINGS AT EACH CONDUIT TERMINATION.
8. USE DOUBLE LOCK NUTS AT EACH CONDUIT TERMINATION.
9. UNLESS OTHERWISE NOTED, ALL UNDERGROUND FIELD POWER MULTIPLE AND SERIES CIRCUIT CONDUCTORS SHALL BE FAA APPROVED L-824, TYPE, INSULATION, VOLTAGE AND SIZE SHALL BE AS SPECIFIED.
10. THE JOINT OF THE PRIMARY 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. HEAT-SHRINK TUBING SHALL BE APPLIED WHERE CABLE ENTERS BACK OF CONNECTOR, SEE DETAIL DWG., SHEET 14.
11. THE ID OF THE PRIMARY L-823 FIELD ATTACHED CONNECTORS SHALL MATCH THE CABLE OD TO PROVIDE A WATERTIGHT CABLE ENTRANCE.
12. ALL POWER CIRCUIT CONDUCTORS SHALL BE COPPER, ALUMINUM SHALL NOT BE ACCEPTED. THIS INCLUDES WIRE, CABLE, BUSSES, TERMINALS, SWITCH/PANEL COMPONENTS, ETC.
13. CABLE/SPLICE/DUCT MARKERS SHALL BE PRECAST CONCRETE OF SIZE SHOWN. LETTERS/NUMBERS FOR THE LEGEND TO BE IMPRESSED INTO TOPS OF THE MARKERS SHALL BE PREASSEMBLED AND SECURED IN MOLD BEFORE CONCRETE IS POURED. LEGEND INSCRIBED BY HAND IN WET CONCRETE SHALL NOT BE ACCEPTABLE.
14. 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 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 OF DIFFERENT MANUFACTURER) THAT IS COMPATIBLE WITH THE REMAINDER OF THE AIRPORT LIGHTING SYSTEM.
15. IN CASE THE CONTRACTOR SELECTS TO FURNISH AND INSTALL AIRPORT LIGHTING EQUIPMENT REQUIRING ADDITIONAL WIRING, TRANSFORMERS, ADAPTERS, MOUNTINGS, ETC., TO THOSE SHOWN ON THE DRAWINGS AND/OR LISTED IN THE SPECIFICATIONS, ANY COST FOR THESE ITEMS SHALL BE INCIDENTAL TO THE EQUIPMENT COST.
16. THE CONTRACTOR INSTALLED EQUIPMENT (INCLUDING FAA APPROVED) SHALL NOT GENERATE ANY ELECTRO-MAGNETIC INTERFERENCE IN THE EXISTING AND/OR NEW COMMUNICATIONS, WEATHER, AND AIR TRAFFIC CONTROL EQUIPMENT. ANY EQUIPMENT GENERATING SUCH INTERFERENCE SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST BY EQUIPMENT MEETING THE APPLICABLE SPECIFICATIONS AND NOT GENERATING ANY INTERFERENCE.
17. WHERE EXISTING FIELD LIGHTS ARE TO BE REMOVED, THE AREA SHALL BE BACKFILLED WITH EARTH TO THE ORIGINAL GRADE, COMPACTED AND SEEDED. CONCRETE BASES SHALL BECOME CONTRACTOR SALVAGE AND SHALL BE REMOVED FROM THE PREMISES ENTIRELY. LIGHTS SHALL BE DELIVERED TO OWNER.
18. WHERE PROPOSED LIGHTS OR SIGNS ARE SHOWN IN THE SAME LOCATION AS EXISTING LIGHTS OR SIGNS, CONTRACTOR SHALL REMOVE THE EXISTING WIRING TO AT LEAST ONE FOOT AWAY FROM PROPOSED WIRING.
19. CONTRACTOR SHALL LOCATE EXISTING UNDERGROUND CIRCUITS WITH A PORTABLE CABLE LOCATOR WHERE POSSIBLE TO AVOID DAMAGE TO EXISTING CIRCUITS TO BE RETAINED. EXCAVATION REQUIRED IN CONGESTED AREAS CONTAINING OTHER CIRCUITS SHALL BE DONE BY HAND. ANY SUCH WIRING DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED IMMEDIATELY AFTER DISCOVERY AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED. ALL UNDERGROUND SPLICES SHALL BE INSPECTED BY THE ENGINEER PRIOR TO BACKFILLING TRENCHES.
20. SHOP DRAWINGS SHALL BE REQUIRED FOR THE FOLLOWING ITEMS:
CABLE IN UNIT DUCT, FIELD LIGHTS, LAMPS, SPLICE CANS, FIELD LIGHT MODIFICATIONS, AND CABLE CONNECTORS.
21. A MINIMUM OF FOUR HOURS SHALL BE PROVIDED FOR TRAINING AIRPORT MAINTENANCE PERSONNEL ON THE PROPOSED AIRFIELD LIGHTING SYSTEMS.

ADDITIONAL ITEM 108 SPECIAL PROVISION:

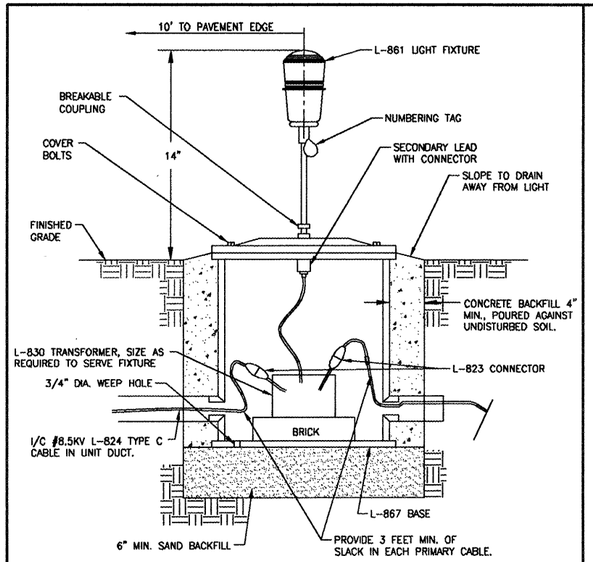
1. CABLE TESTING SHALL BE PERFORMED WITH A 5000 VOLT DC MEGOHM METER.
2. A WRITTEN REPORT OF THE CABLE TESTING RESULTS LISTING THE SEGMENTS TESTED AND THE VALUES MEASURED SHALL BE SUBMITTED TO THE ENGINEER WITHIN 24 HOURS OF THE TEST.

ADDITIONAL ITEM 125 SPECIAL PROVISIONS:

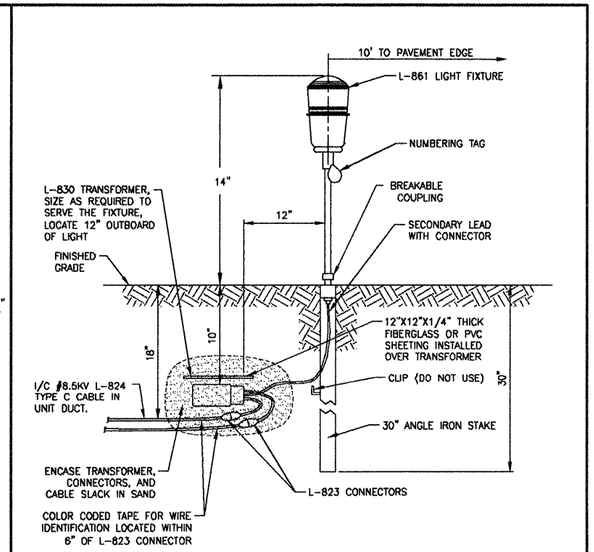
1. TAXIWAY EDGE LIGHTS SHALL BE FAA TYPE L-861T, OMNIDIRECTIONAL BLUE LENS, MEDIUM INTENSITY WITH 30 WATT LAMPS, BASE MOUNTED WITH AN OVERALL HEIGHT NOT TO EXCEED 14", AND CONNECTED FOR 6.6 AMPERES APPLICATION.
2. PROPOSED TAXIWAY GUIDANCE, INTERSECTION, LOCATION, AND DESTINATION SIGNS; AND MODIFICATIONS TO EXISTING SIGNS SHALL CONFORM TO THE FOLLOWING:
   (A) PROPOSED GUIDANCE, HOLDING, LOCATION, OR DESTINATION SIGNS SHALL BE SIZE 1, 18 INCH SIGN FACE WITH 12 INCH LEGEND, STYLE 2, POWERED FROM 4.8 TO 6.6 AMP SERIES LIGHTING CIRCUIT; CLASS 1, FOR OPERATION TO -20 DEGREE C., MEDIUM INTENSITY, BASE MOUNTED WITH LEGENDS AS SHOWN ON THE PLANS. SIGNS SHALL BE DOUBLE FACE WITH ALL OR A PORTION OF ONE FACE BLANKED OUT. HOLDING SIGNS SHALL DISPLAY LOCATION LEGENDS ON THE BACK SIDE. SIGNS ARE ORIENTED ON THE PLANS AS THEY SHOULD BE INSTALLED.
   (B) FOR SIZE 1, STYLE 2 OPERATION, SIGNS SHALL BE LIGHTED WITH QUARTZ LAMPS. MAXIMUM VOLT/AMPERE LOADING, AND MINIMUM POWER FACTOR FOR THESE SIGNS, INCLUDING ISOLATION TRANSFORMERS, SHALL BE AS FOLLOWS. DOCUMENTATION VERIFYING THESE VALUES SHALL BE PROVIDED ALONG WITH ORIGINAL PRODUCT SHOP DRAWINGS.

MAXIMUM SIGN LENGTH	VA LOAD	POWER FACTOR
2.5'	68	.88
5.0'	77	.98
7.5'	114	.88
10.0'	140	.87

   (C) PROPOSED TAXIWAY GUIDANCE LEGENDS SHALL BE TYPE L-858Y, INFORMATION SIGNS WITH BLACK LEGEND ON A YELLOW BACKGROUND.
   (D) PROPOSED TAXIWAY LOCATION LEGENDS SHALL BE TYPE L-858L WITH YELLOW LEGEND ON BLACK BACKGROUND.
   (E) PROPOSED HOLDING LEGENDS SHALL BE TYPE L-858R WITH WHITE LEGEND ON RED BACKGROUND.
3. REMOVE CERTAIN EXISTING TAXIWAY LIGHTS, GUIDANCE SIGNS, BASES, AND TRANSFORMERS WHERE SHOWN ON THE PLANS. BACKFILLING AND RESTORATION OF EXISTING LOCATIONS SHALL BE INCLUDED IN THIS ITEM.
4. PRIOR TO INSTALLING THE PROPOSED LIGHT FIXTURES, THE CONTRACTOR WILL APPLY AN OXIDE INHIBITING, ANTI-SEIZING COMPOUND TO ALL SCREWS, NUTS, BREAKABLE COUPLING AND ALL PLACES WHERE METAL COMES INTO CONTACT WITH METAL. THE ANTI-SEIZE COMPOUND WILL BE AS MANUFACTURED BY I.T.T. BRAND NAME "CONTAX" OR AN APPROVED EQUAL.
5. ALL L-867 BASE PLATE MOUNTING BOLTS AND STAKE MOUNTING BOLTS SHALL BE STAINLESS STEEL.



MEDIUM INTENSITY LIGHT - BASE MOUNTED
NOT TO SCALE



MEDIUM INTENSITY LIGHT - STAKE MOUNTED
NOT TO SCALE

ILLINOIS PROJECT NO. MWA-3562
PROJECT NO. 3-17-0065-

STATE OF ILLINOIS PROFESSIONAL DESIGN FIRM LICENSE NO. 184-004515

REVISIONS	
DATE	NO.

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ELECTRICAL NOTES
CONSTRUCTION OF TAXIWAY E & E1 PHASE I
WILLIAMSON COUNTY REGIONAL AIRPORT
MARION - HERRIN, ILLINOIS

Date 3/12/08 | DR. By TDE | CK'D By CM
Scale N.T.S. | Job No. 07141 | Sheet No. 15 of 15

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