LETTING ITEM NO. 3A

LETTING DATE: 6/13/2014

SUMMARY OF QUANTITIES

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTIT
•			
ASE BID			
AR108158	1/C #8 5KV UG CABLE IN UD	LF	12255
AR108258	2/C #8 5KV UG CABLE IN UD	LF	395
AR800321	2-1/C #2 USE, 1 #8 GND IN 1-1/4" UD	LF	3040
AR800322	2-1/C #4 USE, 1 #8 GND IN 1" UD	LF	1355
AR109100	CONSTRUCT ELECTRICAL VAULT	LS	1
AR109311	7.5 KW REGULATOR, STYLE 1	EA	1
AR109600	L-821 CONTROL PANEL	EA	1
AR109610	L-854 PCAL SYSTEM	LS	1
AR109963	RELOCATE REGULATOR	EA	2
AR109901	REMOVE ELECTRICAL VAULT	LS	1
AR110014	4" DIRECTIONAL BORE	LF	60
AR125444	TAXI GUIDANCE SIGN, 4 CHARACTER	EA	4
AR125447	TAXI GUIDANCE SIGN, 7 CHARACTER	EA	2
AR125545	MI THRESHOLD LIGHT BASE MTD	EA	16
AR125550	MIRL, STAKE MOUNTED	EA	33
AR125551	MIRL, BASE MOUNTED	EA	14
AR125565	SPLICE CAN	EA	2
AR125610	REILS	PAIR	2
AR125620	ABBREVIATED PAPI (L-881 SYSTEM)	EA	2
AR125901	REMOVE STAKE MOUNTED LIGHT	EA	42
AR125902	REMOVE BASE MOUNTED LIGHT	EA	22
AR125904	REMOVE TAXI GUIDANCE SIGN	EA	5
AR125907	REMOVE REILS	PAIR	2
AR125909	REMOVE VASI	EA	2
AR901510	SEEDING	ACRE	0.1
AR908510	MULCHING	ACRE	0.1
DDITIVE ALT	EDNATE #4		
AS125511	MIRL LED UPGRADE	EA	47
AS125546	MI THRESHOLD LIGHT LED UPGRADE	EA	16

DESIGN INFORMATION

RUNWAY 18/36
AIRPLANE DESIGN GROUP II

RINHAME APPROACH CATEGORY B

RUNAY SAFETY AREA (RSA) WIDTH = 150'
RUNWAY OBJECT FREE ZONE (ROFZ) WIDTH = 400'
RUNWAY OBJECT FREE AREA (ROFA) WIDTH = 500'

RUNWAY 9/27
AIRPLANE DESIGN GROUP I
AIRPLANE APPROACH CATEGORY A

RUNAY SAFETY AREA (RSA) WIDTH = 120' RUNWAY OBJECT FREE ZONE (ROFZ) WIDTH = 250' RUNWAY OBJECT FREE AREA (ROFA) WIDTH = 400'

TAXIWAY A

AIRPLANE DESIGN GROUP II

TAXIWAY SAFETY AREA (TSA) WIDTH = 79'
TAXIWAY OBJECT FREE AREA (TOFA) WIDTH = 131'

Know what's below. Call before you d

COMMON GROUND ALLIANCE www.call811.com or

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 DISTRIPATION 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 NOTIFED. ANY SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR BY

CALL 911 IN THE EVENT IN WHICH DAMAGE RESULTS IN THE RELEASE OF NATURAL GAS.

> CALL J.U.L.I.E. BEFORE EXCAVATING 1-800-892-0123

TOWNSHIP: T. 1 N.
RANGE: R. 1 E.
SECTION: 16 & 21
COUNTY: MARION
CIVIL TOWNSHIP: CENTRALIA

CONSTRUCTION PLANS FOR

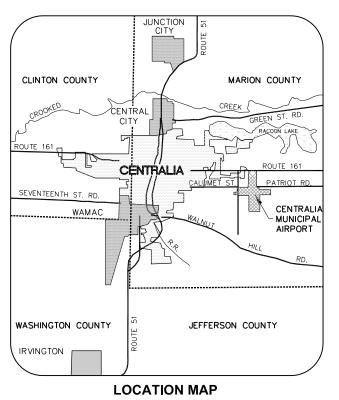
CENTRALIA MUNICIPAL AIRPORT

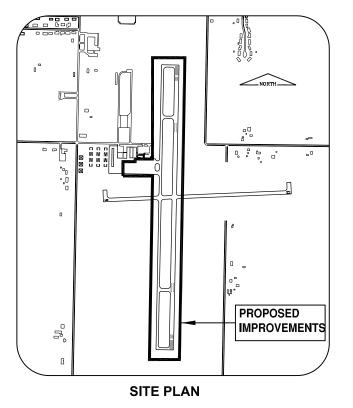
CITY OF CENTRALIA, ILLINOIS CENTRALIA, ILLINOIS

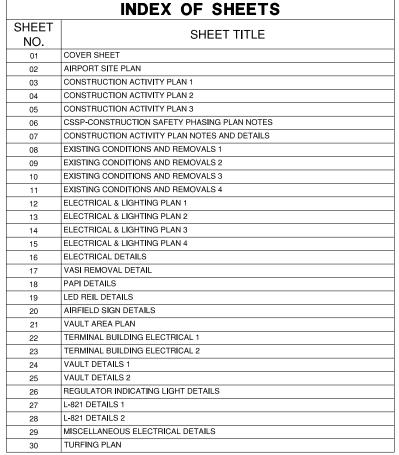
ILLINOIS PROJECT NO. ENL-4230 PROJ. NO. 3-17-SBGP-XX

CONSTRUCT NEW ELECTRICAL VAULT; REHABILITATE MIRLS, PAPI & REILS ON RUNWAY18/36

MAY 2, 2014









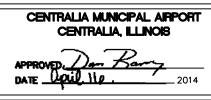


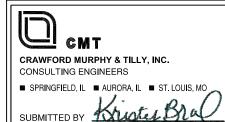
Expires: 30 NOV 2015

MAX EQUIPMENT HEIGHT IS 25' CENTRALIA UNICOM FREQUENCY IS 122.8 MHz

TOTAL SHEETS: 30

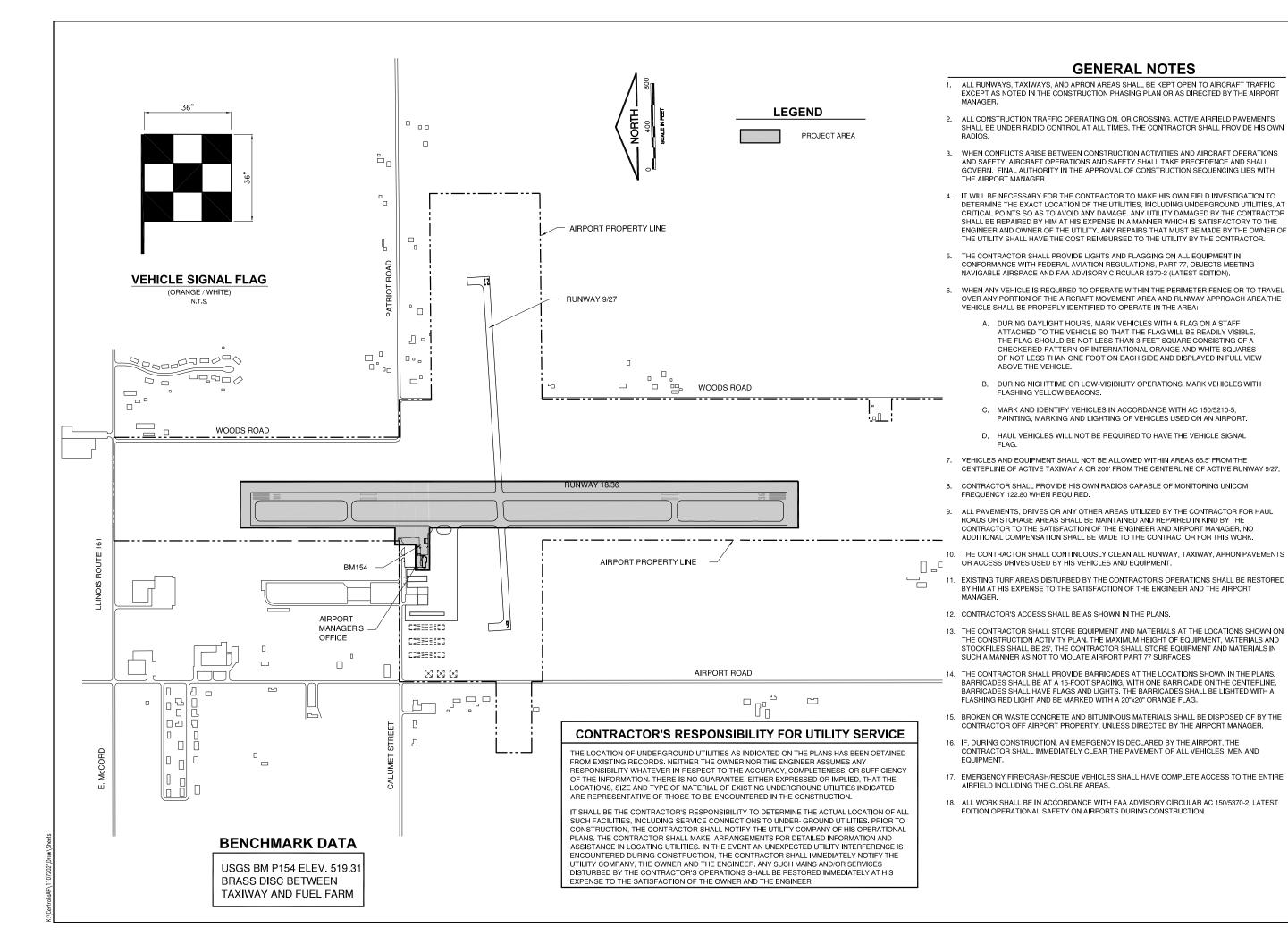
CE032





DATE MAY 2, 2014

CMT JOB NUMBER: 11072-02-00



ILE: AIRPORT SITE PLAN.dwg IPDATE BY: Dale Draughar PLOT DATE: 5/8/2014 11:49 AM

CE032

REVISIONS								
NUMBER	BY	DATE						

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CITY OF CENTRALIA, ILLINOIS ENTRALIA MUNICIPAL AIRPOR CENTRALIA, ILLINOIS

VAULT; REHABILITATE RUNWAY 18/36 SITE

CONSTRUCT NEW ELECTRICAL MIRLS, PAPI & REILS ON

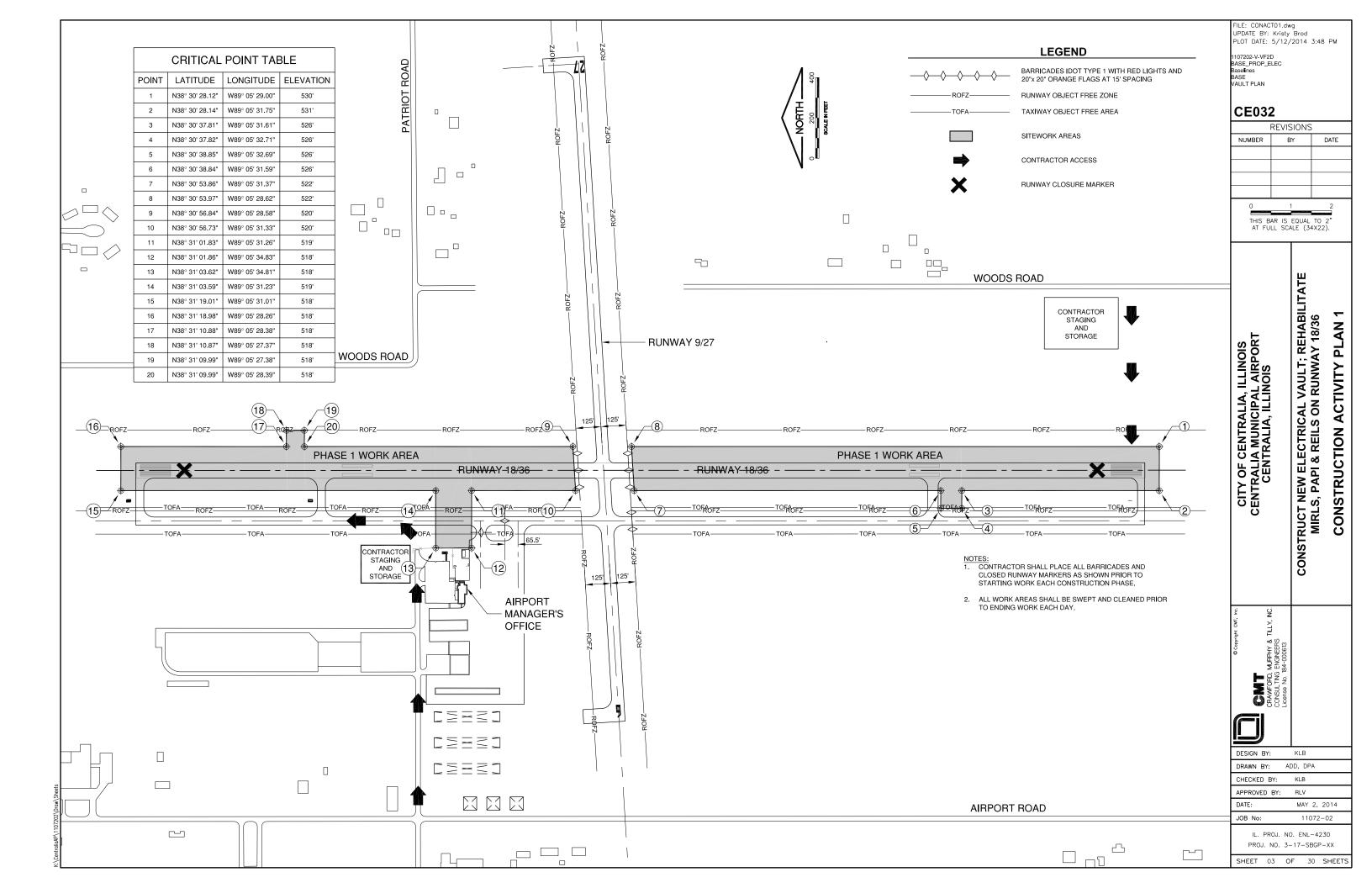
DESIGN BY KLB ADD, DPA

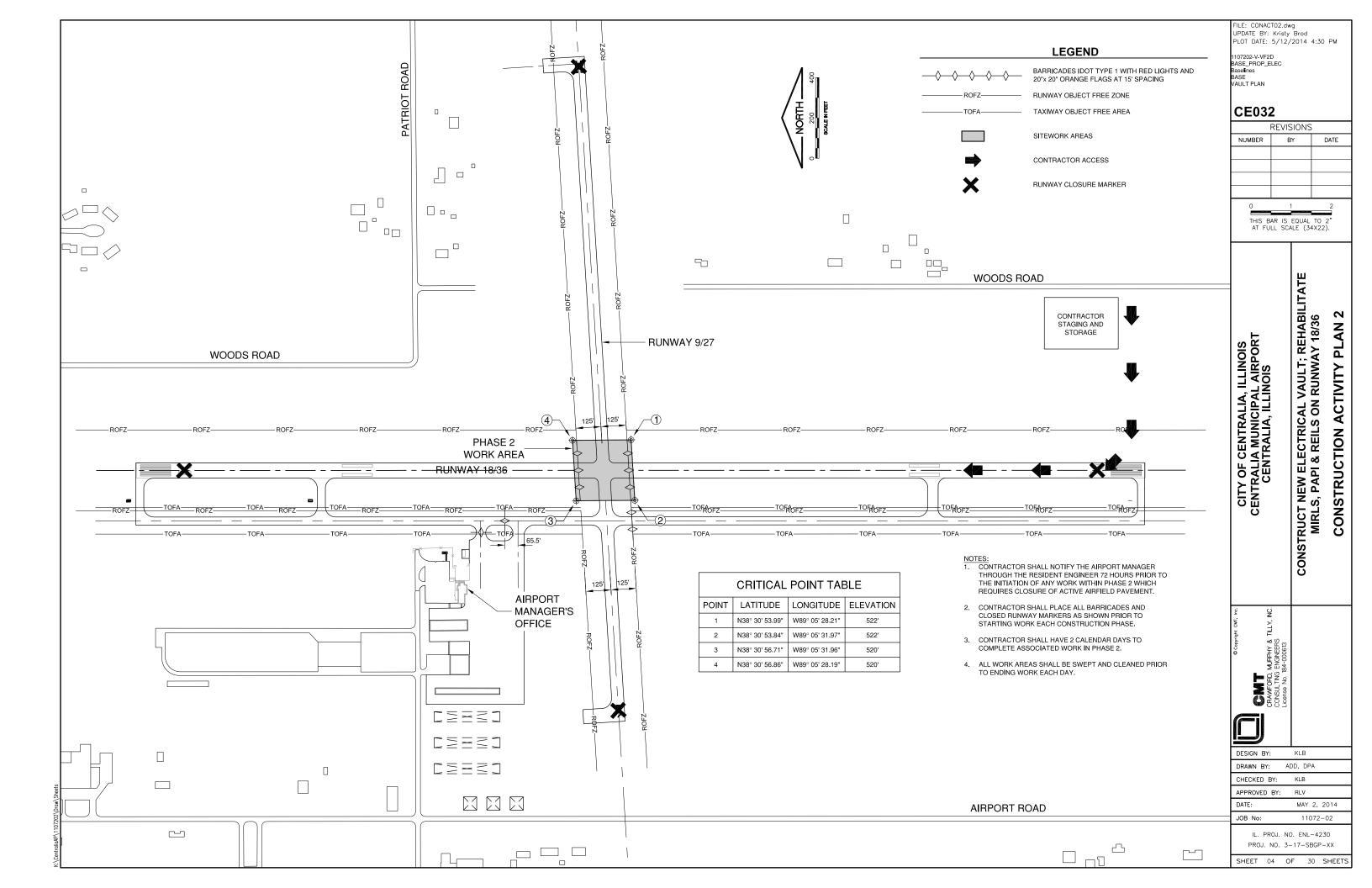
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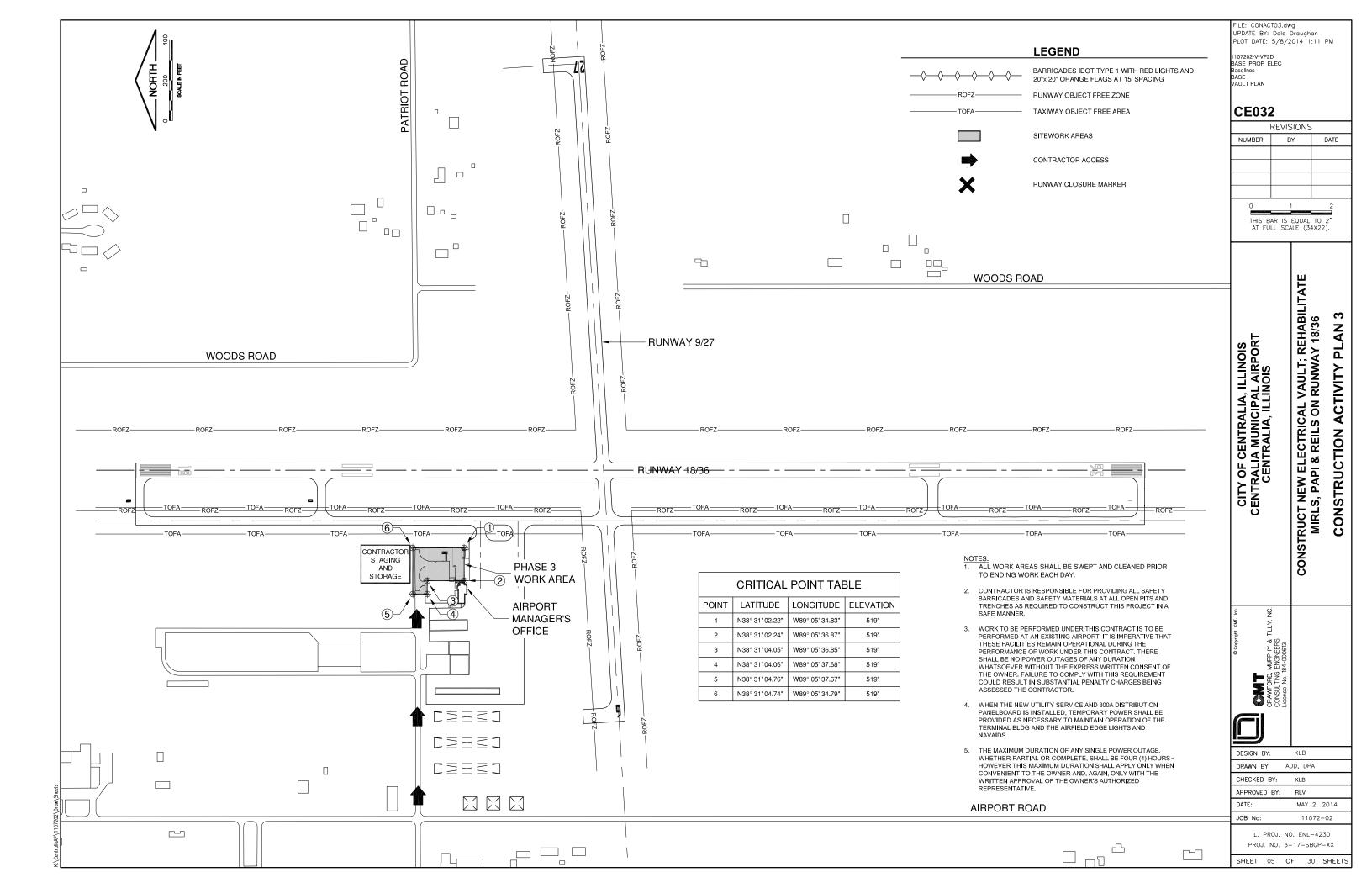
JOB No: 11072-02 IL. PROJ. NO. ENL-4230

PROJ. NO. 3-17-SBGP-XX

SHEET 02 OF 30 SHEETS







1. GENERAL

- THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL FOLLOW THE REQUIREMENTS OF THE AIRPORT'S APPROVED CONSTRUCTION SAFETY AND PHASING PLAN (CSPP), FAA AC 150/5370-2 (LATEST EDITION) AND ALL AIRPORT SAFETY AND SECURITY REQUIREMENTS
- PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL SUBMIT TO THE AIRPORT FOR APPROVAL A SAFETY PLAN. COMPLIANCE DOCUMENT (SPCD) IN ACCORDANCE WITH FAA AC 150/5370-2F. NO CONSTRUCTION ACTIVITY SHALL BEGIN UNTIL THE AIRPORT HAS APPROVED THE SPCD
- THE CSPP COVERS OPERATIONAL SAFETY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INDIVIDUAL SAFETY OF HIS/HER
- A MINIMUM OF 10 DAYS PRIOR TO THE NOTICE TO PROCEED. THE CONTRACTOR SHALL PROVIDE A LIST OF SUBCONTRACTORS AND MATERIAL SUPPLIERS.
- PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL SIGN THE SWPPP CERTIFICATION STATEMENT
- ALL CONTRACTOR COSTS ASSOCIATED WITH THE REQUIREMENTS. LISTED ON THIS SHEET SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT UNLESS A SPECIFIC PAY ITEM IS PROVIDED.

2. COORDINATION

- PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL ATTEND A PRECONSTRUCTION CONFERENCE WITH THE AIRPORT, RESIDENT ENGINEER, AND ILLINOIS DIVISION OF AERONAUTICS (IDA). THE COST OF PREPARING FOR AND ATTENDING THE PRECONSTRUCTION CONFERENCE SHALL BE INCIDENTAL TO THE CONTRACT.
- ON OR BEFORE THE PRECONSTRUCTION CONFERENCE. THE CONTRACTOR SHALL SUBMIT A PROPOSED SCHEDULE FOR THE PROJECT. THE SCHEDULE SHALL INCLUDE A START AND COMPLETION DATE FOR EACH ITEM OF WORK. THE SCHEDULE SHALL BE UPDATED ON A WEEKLY BASIS. ALL COSTS ASSOCIATED WITH THE SCHEDULE SHALL BE INCIDENTAL TO THE CONTRACT.
- DURING CONSTRUCTION THE CONTRACTOR SHALL ATTEND A WEEKLY COORDINATION MEETING WITH THE AIRPORT STAFF AND BESIDENT ENGINEER ALL COSTS ASSOCIATED WITH ATTENDING THE WEEKLY MEETING SHALL BE INCIDENTAL TO THE CONTRACT

3. PHASING

- 1. TOTAL CONTRACT TIME SHALL BE 70 CALENDAR DAYS.
- NO ADDITIONAL CONTRACT TIME SHALL BE AWARDED FOR ADDITIVE ALTERNATE #1.
- PHASING SHALL BE AS NOTED BELOW AND AS SHOWN ON THE CONSTRUCTION ACTIVITY PLAN (CAP) SHEETS.

4. AREAS AND OPERATIONS AFFECTED BY CONSTRUCTION ACTIVITY

- ALL RUNWAYS, TAXIWAYS AND APRONS SHALL BE KEPT OPEN TO AIRCRAFT TRAFFIC DURING CONSTRUCTION EXCEPT AS NOTED ON THE PHASING PLAN
- WHEN CONFLICTS ARISE BETWEEN CONSTRUCTION ACTIVITIES AND AIRCRAFT OPERATIONS AND SAFETY, AIRCRAFT OPERATIONS AND SAFETY SHALL TAKE PRECEDENCE AND SHALL GOVERN. FINAL AUTHORITY IN THE APPROVAL OF CONSTRUCTION SEQUENCING LIES WITH THE AIRPORT
- ALL CONSTRUCTION TRAFFIC SHALL IMMEDIATELY YIELD TO ONCOMING AIRCRAFT AT ALL TIMES

5. CONTRACTOR ACCESS

- CONTRACTOR ACCESS SHALL BE AS NOTED BELOW AND AS SHOWN ON THE SITE PLAN AND CONSTRUCTION ACTIVITY PLAN
- THE CONTRACTOR IS TO ACCESS THE SITE USING THE GATES
- CONTRACTOR EMPLOYEES MAY BE REQUIRED TO OBTAIN AN AIRPORT IDENTIFICATION BADGE. THIS CONSISTS OF FILLING OUT ALL NECESSARY PAPERWORK, FINGERPRINTING, ATTENDING AND PASSING A TRAINING CLASS CONCERNING SAFETY AND SECURITY AT THE AIRPORT. CONTRACTOR EMPLOYEES MUST MEET CERTAIN BACKGROUND CHECK CRITERIA AND THE CONTRACTOR MUST MAKE CERTAIN CERTIFICATION ABOUT EACH EMPLOYEE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FINGERPRINTING COSTS, ALL COSTS ASSOCIATED WITH OBTAINING THE IDENTIFICATION BADGE SHALL BE BORNE BY THE CONTRACTOR.
- DRIVERS OF TRUCKS CONTAINING MATERIAL DELIVERIES (AGGREGATE, ASPHALT, ETC.) NEED NOT OBTAIN AN AIRPORT ID BADGE BUT SHALL BE BEQUIRED TO SUBMIT THEIR NAME DRIVER'S LICENSE NUMBER, TRUCK LICENSE PLATE NUMBER AND NAME OF TRUCKING COMPANY TO THE PRIME CONTRACTOR PRIOR TO ENTERING THE JOBSITE.
- CONTRACTOR WORK CREWS MUST MONITOR THE GROUND CONTROL FREQUENCY AT AT ALL TIMES. THE CONTRACTOR SHALL SUPPLY ALL APPROPRIATE RADIOS NEEDED FOR COMMUNICATIONS. BE AWARE OF TENANT AIRCRAFT MOVEMENT
- THE CONTRACTORS STORAGE AND STAGING AREA WILL BE AS SHOWN IN THE SITE PLAN
- THE CONTRACTOR SHALL KEEP A RECORD OF THE NAMES OF ALL EMPLOYEES ENTERING THE JOB SITE ON A DAILY BASIS. A RECORD OF EACH SUBCONTRACTOR ENTERING THE JOB SITE SHALL ALSO BE KEPT BY THE CONTRACTOR.
- WHEN THE CONTRACTOR IS NOT WORKING, EQUIPMENT SHALL BE STORED AT THE STAGING AREA.
- THE CONTRACTOR WILL BE PERMITTED TO STORE EQUIPMENT AND MATERIALS ONLY AT THE LOCATIONS SHOWN. PARKED EQUIPMENT AND MATERIAL STOCKPILES SHALL NOT PENETRATE SURFACES DEFINED BY F.A.B. TITLE 14 PART 77 - OBJECTS AFFECTING NAVIGABLE AIRSPACE.
- THE CONTRACTOR SHALL THOROUGHLY CLEAN ALL CONSTRUCTION AREAS AND HAUL ROUTES WHICH WILL BE OPENED TO AIR TRAFFIC TO THE SATISFACTION OF AIRPORT OPERATIONS OR THE RESIDENT ENGINEER. A POWER BROOM AND OPERATOR SHALL BE ON SITE AT ALL TIMES WHEN ACTIVE PAVEMENTS ARE UTILIZED FOR CONSTRUCTION TRAFFIC.
- ALL PAVEMENTS, DRIVES OR ANY OTHER AREAS LITTLIZED BY THE CONTRACTOR FOR HAUL ROADS OR STORAGE AREAS SHALL BE MAINTAINED AND REPAIRED TO THE SAME CONDITION OR BETTER THAN THEY WERE PRIOR TO BEGINNING CONSTRUCTION. NO ADDITIONAL COMPENSATION WILL BE MADE TO THE CONTRACTOR FOR THIS WORK
- ALL VEHICLE AND EQUIPMENT OPERATORS USED BY THE CONTRACTOR SHALL BE PROPERLY TRAINED BY THE

6. WILDLIFE MANAGEMENT

- THE CONTRACTOR SHALL NOTIFY AIRPORT OPERATIONS OR THE RESIDENT ENGINEER IF ANY WILDLIFE IS SEEN ENTERING THE
- CONTRACTOR ACCESS GATES SHALL REMAIN CLOSED WHEN THE CONTRACTOR IS NOT WORKING
- THE CONTRACTOR SHALL DISPOSE OF ALL TRASH INCLUDING FOOD SCRAPS IN APPROVED CONTRACTOR PROVIDED CONTAINERS.

7. FOREIGN OBJECT DEBRIS (FOD) MANAGEMENT

- THE CONTRACTOR SHALL PICK UP ANY FOREIGN OBJECT DEBRIS (FOD) SEEN ON THE AIRFIELD PAVEMENTS
- THE CONTRACTOR SHALL SECURE ALL LOOSE ITEMS FROM VEHICLES PRIOR TO DRIVING ON AIRFIELD PAVEMENTS.

8. HAZARDOUS MATERIALS (HAZMAT) MANAGEMENT

THE CONTRACTOR SHALL DEVELOP A HAZMAT MANAGEMENT PLAN AND KEEP COPIES ON THE JOBSITE OF MATERIAL SAFETY DATA SHEETS (MSDS) FOR ALL MATERIALS HANDLED ON THE JOBSITE.

9. NOTIFICATION OF CONSTRUCTION ACTIVITIES

- THE CONTRACTOR SHALL PROVIDE A 24 HOUR EMERGENCY CONTACT PERSON AND PHONE NUMBER.
- THE CONTRACTOR SHALL GIVE A MINIMUM OF 72 HOURS NOTICE TO AIRPORT OPERATIONS PRIOR TO CLOSING ANY PAVEMENTS SO THAT PROPER NOTAMS MAY BE ISSUED BY THE AIRPORT.
- THE CONTRACTOR SHALL NOTIFY THE AIRPORT 7 DAYS BEFORE STARTING WORK IN EACH PHASE. THIS WILL ENSURE THAT THE AIRPORT CAN CONTACT TENANTS ABOUT MOVING AIRCRAFT
- FOR ANY EQUIPMENT USED BY THE CONTRACTOR WITH A HEIGHT GREATER THAN 25', THE CONTRACTOR SHALL PROVIDE TO THE AIRPORT THE TYPE OF EQUIPMENT, TOTAL HEIGHT, AND LOCATION WHERE THE EQUIPMENT WILL BE USED. THE AIRPORT WILL SUBMIT FAA FORM 7460-1 TO THE FAA FOR AN AIRSPACE STUDY NO EQUIPMENT WITH A HEIGHT GREATER THAN 25' SHALL BE USED UNTIL A DETERMINATION FROM FAA IS RECEIVED.
- IN THE EVENT OF AN EMERGENCY, THE CONTRACTOR SHALL CALL
- CONTACTS FOR THIS PROJECT ARE AS DISCUSSED IN THE PRE-CONSTRUCTION MEETING

10. INSPECTION REQUIREMENTS

- THE CONTRACTOR SHALL INSPECT THE JOBSITE DAILY TO ENSURE COMPLIANCE WITH THE CSPP. THE CHECKLIST FOUND IN APPENDIX 3 OF FAA AC 150/5370-2F MAY BE USED TO AID IN THE
- THE CONTRACTOR AND AIRPORT SHALL ATTEND AN INSPECTION OF EACH PHASE WORK AREA PRIOR TO OPENING THE AREA TO AIRPORT OPERATIONS

11. UNDERGROUND UTILITIES

- IT WILL BE NECESSARY FOR THE CONTRACTOR TO MAKE HIS OWN FIELD INVESTIGATION TO DETERMINE THE EXACT LOCATION OF THE UNDERGROUND UTILITIES AT CRITICAL POINTS. 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 IN RESPECT TO THE ACCURACY, COMPLETENESS OR SUFFICIENCY OF THE INFORMATION
- BEFORE INITIATING ANY DIGGING, DRILLING OR EXCAVATING ON THE AIRPORT PROPERTY. THE CONTRACTOR SHALL CALL JULI LE AND CONTACT THE LOCAL FAA OFFICE TO ARRANGE FOR UTILITY LOCATES. SEE SECTION 70-17 OF THE SPECIAL PROVISIONS FOR UTILITY CONTACT INFORMATION.

12. PENALTIES

NONCOMPLIANCE BY THE CONTRACTOR WITH AIRPORT RULES AND REGULATIONS OR FAILURE TO COMPLY WITH THE AIRPORT'S APPROVED CSPP AND THE CONTRACTOR'S APPROVED SPCD MAY RESULT IN FINES AS ALLOWED BY LAW.

13. SPECIAL CONDITIONS

ADJACENT CONSTRUCTION MAY IMPACT THE OPERATIONS OF THE CONTRACTOR. SEE THE COORDINATION NOTES FOR ADDITIONAL

14. HAZARD MARKING AND LIGHTING

- THE CONTRACTOR SHALL FURNISH, ERECT, AND MAINTAIN MARKINGS AND ASSOCIATED LIGHTING OF OPEN TRENCHES EXCAVATIONS, TEMPORARY STOCKPILES, AND HIS/HER CONSTRUCTION EQUIPMENT.
- ALL CONSTRUCTION EQUIPMENT SHALL BE FLAGGED AND/OR LIGHTED IN ACCORDANCE WITH FAA ADVISORY CIRCULAR 150/5370-2F AND 150/5210-5C AT ALL TIMES WHILE OPERATING ON AIRPORT PROPERTY. THE MAXIMUM EQUIPMENT HEIGHT IS 25'.
- BARRICADES SHALL BE PLACED AT THE LOCATIONS SHOWN ON THE CONSTRUCTION ACTIVITY PLAN SHEET OR AS DIRECTED BY THE RESIDENT ENGINEER.
- THE CONTRACTOR SHALL INSPECT THE BARRICADES ONCE DURING EACH WORK DAY TO INSURE PROPER PLACEMENT AND PROPER OPERATION OF THE RED LIGHTS AND FLAG PLACEMENT.

15. PROTECTION

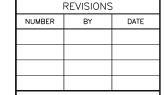
- ALL WORK REQUIRED ON AN ACTIVE RUNWAY 9/27 OR INSIDE OF AN ACTIVE RUNWAY 9/27 OBJECT FREE ZONE (ROFZ), WHICH EXTENDS 125' FROM THE RUNWAY CENTERLINE, WILL REQUIRE THE RUNWAY TO BE CLOSED.
- ALL WORK REQUIRED ON AN ACTIVE TAXIWAY OR INSIDE OF AN ACTIVE TAXIWAY OBJECT FREE AREA (TOFA), WHICH EXTENDS 65.5' FROM THE TAXIWAY CENTERLINE, WILL REQUIRE THE TAXIWAY TO
- THE CONTRACTOR SHALL COORDINATE WITH THE AIRPORT A MINIMUM OF 72 HOURS PRIOR TO THE REQUESTED CLOSURE TIME

16. OTHER LIMITATIONS ON CONSTRUCTION

- 1 IF DUBING CONSTRUCTION, AN EMERGENCY IS DECLARED BY THE AIRPORT, THE CONTRACTOR SHALL IMMEDIATELY CLEAR THE PAVEMENT OF ALL VEHICLES, PERSONNEL AND EQUIPMENT.
- BROKEN CONCRETE, BROKEN ASPHALT, AND OTHER MISCELLANEOUS DEBRIS SHALL BE DISPOSED OF OFF AIRPORT PROPERTY, UNLESS OTHERWISE SPECIFIED.

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PLAN NOT

VAULT; REHABILITATE RUNWAY 18/36

PHASING ECTRICAL V SAFETY CONSTRUCT NEW ELE MIRLS, PAPI & I SP-CONSTRUCTION

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CITY OF CENTRALIA, ILLINOIS ENTRALIA MUNICIPAL AIRPORT CENTRALIA, ILLINOIS

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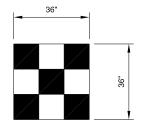
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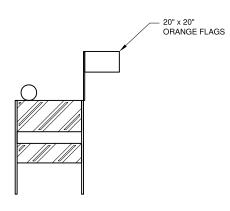
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SHEET 06 OF 30 SHEETS

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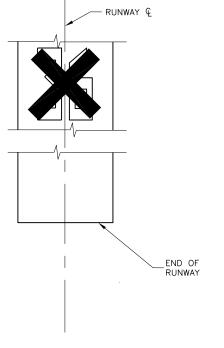
CONSTRUCTION EQUIPMENT AND TRUCK SIGNAL FLAG



FLASHER BARRICADE DETAIL-IDOT TYPE 1

FLASHER BARRICADE NOTES

- 1. FLASHERS TO BE BATTERY OPERATED. LENS TO BE RED AND BE ABLE TO ROTATE 90 DEGREES.
- 2. SANDBAGS TO BE PLACED ON EACH SUPPORT BRACE AS REQUIRED TO PREVENT DISPLACEMENT BY WIND, JET OR PROP BLAST,
- 3. NO SEPARATE PAYMENT WILL BE MADE FOR THIS ITEM. COSTS SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.
- 4. PLACE AT 15' INTERVALS.



CLOSED RUNWAY MARKER DETAIL

NOTES

- 1. MARKERS SHALL BE SOLID YELLOW.
- 2. MARKERS SHALL BE PAINTED BURLAP, PLYWOOD OR OTHER APPROVED SOLID MATERIALS.
- 3. CONTRACTOR SHALL MAINTAIN MARKERS.
- COST OF FURNISHING, INSTALLING, MAINTAINING, RELOCATING AND REMOVING MARKERS SHALL BE INCIDENTAL TO THE CONTRACT.
- MARKERS SHALL BE PLACED OVER EXISTING RUNWAY NUMERALS.

SECURITY NOTES

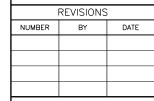
- MAINTAINING THE SECURITY REQUIREMENTS OF THE AIRPORT SHALL BE A PRIMARY CONCERN FOR THE CONTRACTOR.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTAINING AIRPORT SECURITY BY SUPERVISING OPENINGS OR MAINTAINING THE AIRPORT PERIMETER FENCE LINE AT ALL TIMES DURING THE COURSE OF THE WORK.
- 3. FINES CAN BE LEVIED AGAINST THE CONTRACTOR BY THE TRANSPORTATION SECURITY ADMINISTRATION (TSA) FOR NEGLIGENCE IF THE AIRPORT SECURITY IS COMPROMISED AND THE AIRPORT PERIMETER FENCE LINE IS NOT MAINTAINED AS SPECIFIED ABOVE. FINES CAN ALSO BE LEVIED AGAINST THE CONTRACTOR FOR FAILURE TO COOPERATE WITH THE AIRPORT MANAGEMENT AS REQUIRED TO MAINTAIN AIRPORT SECURITY.

CONSTRUCTION ACTIVITY GENERAL NOTES

- CONSTRUCTION PHASING IS OF CRITICAL IMPORTANCE TO THE AIRPORT FOR
- THE CONTRACTOR SHALL PLAN AND CONDUCT HIS WORK SO AS TO NOT INTERFERE OR HINDER THE PROGRESS OR WORK BEING PERFORMED BY OTHER CONTRACTORS.
- 3. THE TIMELY PROSECUTION OF THE OVERALL PROJECT IS DEPENDENT UPON
- 4. IT SHALL BE FULLY UNDERSTOOD BY THE CONTRACTOR THAT THE PROSECUTION OF THE OVERALL PROJECT ARE THE GOVERNING CRITERIA FOR RESOLVING CONFLICTS WHICH MAY ARISE BETWEEN HIS SCHEDULE AND THE SCHEDULE OF OTHER CONTRACTORS.
- WHEN CONFLICTS ARISE, RESOLUTION OF SUCH CONFLICTS WILL BE MADE BY THE AIRPORT THROUGH THE RESIDENT ENGINEER IN THE BEST INTEREST OF
- 6. DELAYS, CHANGES IN SCHEDULING, OR THE EXPEDITION OF WORK UNDER THIS CONTRACT TO PROVIDE FOR THE TIMELY PROSECUTION OF THE PROJECT WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- CONTRACTOR'S STAGING, STORAGE, AND PARKING WILL BE AS SHOWN ON THE CONSTRUCTION ACTIVITY PLANS.
- THE CONTRACTOR SHALL PLACE ALL BARRICADES AND EROSION CONTROL ITEMS AS SHOWN IN THE PLANS PRIOR TO INITIATING WORK IN EACH PHASE.
 ALL COSTS TO FURNISH, INSTALL, AND MAINTAIN THESE ITEMS SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.
- 9. CONSTRUCTION RELATED ITEMS REQUIRING THE CLOSURE OF RUNWAYS AND TAXIWAYS SHALL REQUIRE CLOSE COORDINATION WITH THE AIRPORT. NO EXTENSION TO CONTRACT TIME WILL BE GIVEN FOR DELAYS CAUSED BY LACK OF ADEQUATE COORDINATION. THE AIRPORT SHALL REQUIRE72 HOURS NOTIFICATION PRIOR TO THE CLOSURE OF RUNWAYS.
- 10. CONSTRUCTION BARRICADES SHALL BE SET AT THE LIMITS OF THE WORK AREA OF EACH PHASE. OFFSETTING BARRICADES TO ANY LOCATION DIFFERENT THAN SHOWN IN THE PLANS WILL COORDINATED WITH THE AIRPORT IN ADVANCE. IN THE EVENT OF A CONFLICT BETWEEN CONSTRUCTION OPERATIONS AND TAXIING AIRCRAFT, THE CONTRACTOR SHALL CEASE OPERATIONS AND RETURN THE BARRICADES TO THE EDGE OF THE WORKING LIMITS. ALL BARRICADES SHALL BE REMOVED AT THE END OF

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DETAILS

CONSTRUCT NEW ELECTRICAL VAULT; REHABILITATE MIRLS, PAPI & REILS ON RUNWAY 18/36 AND CITY OF CENTRALIA, ILLINOIS CENTRALIA MUNICIPAL AIRPORT CENTRALIA, ILLINOIS PLAN NOTES ACTIVITY CONSTRUCTION

2

CRAWFORD.



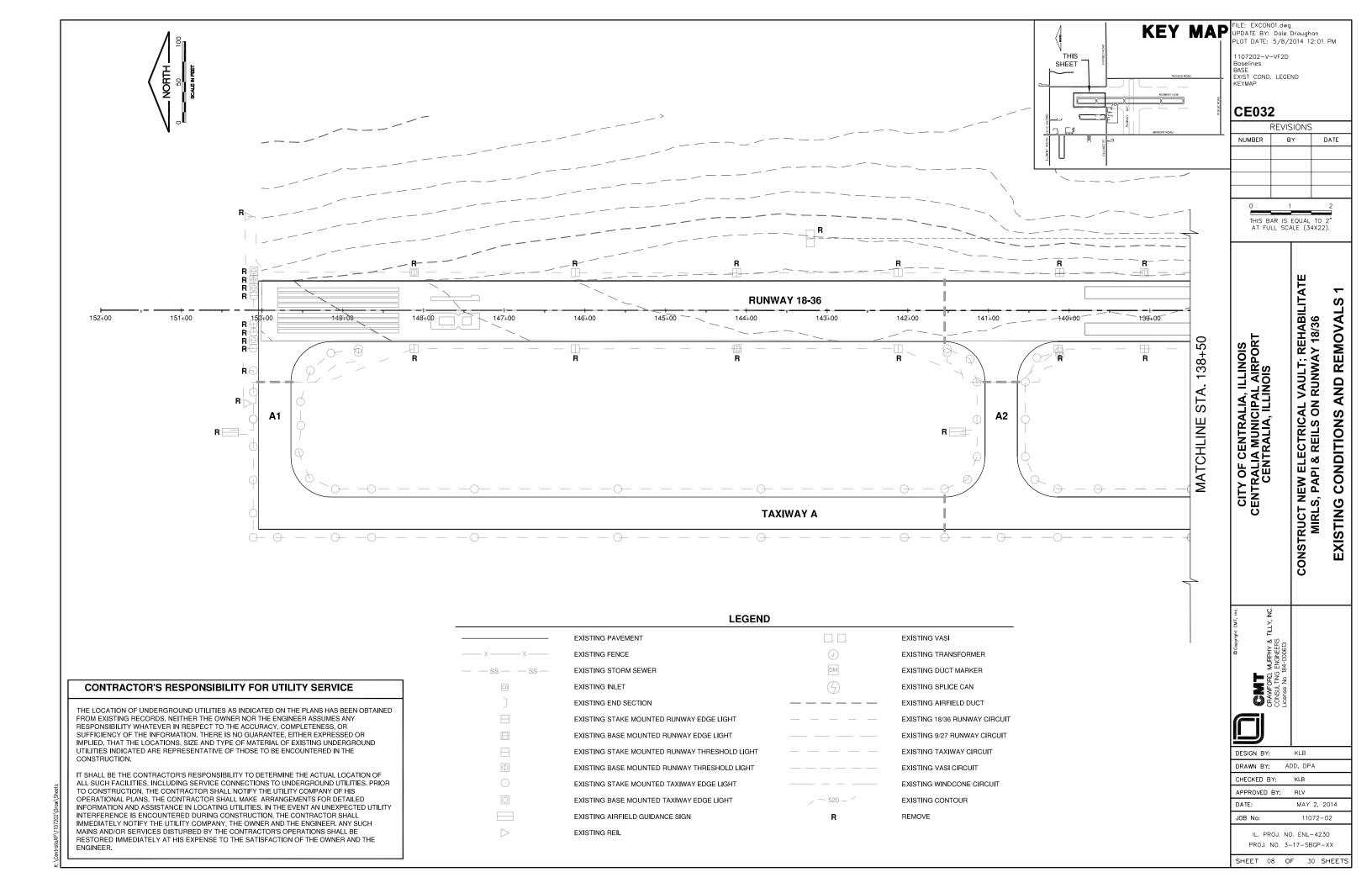
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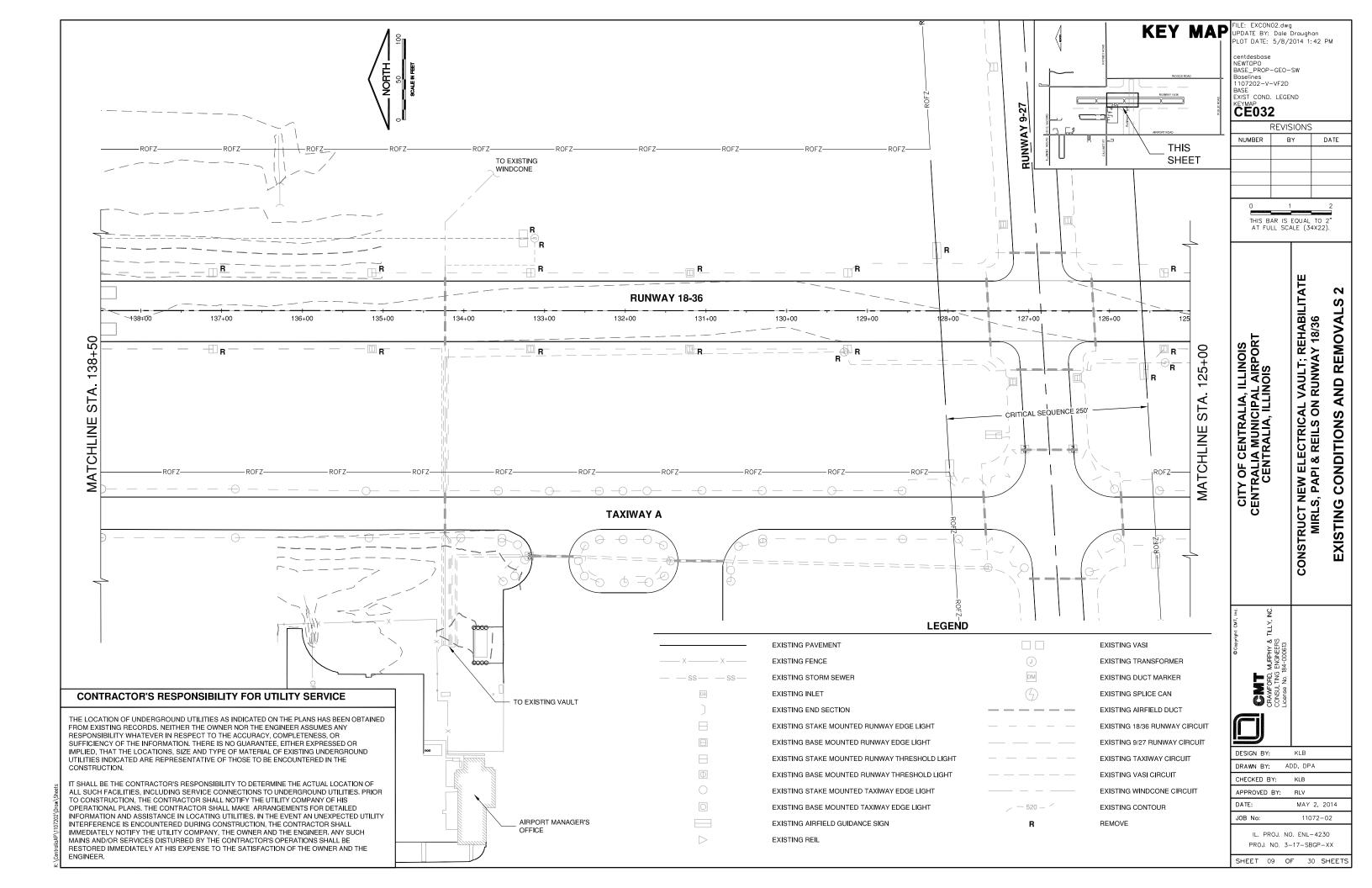
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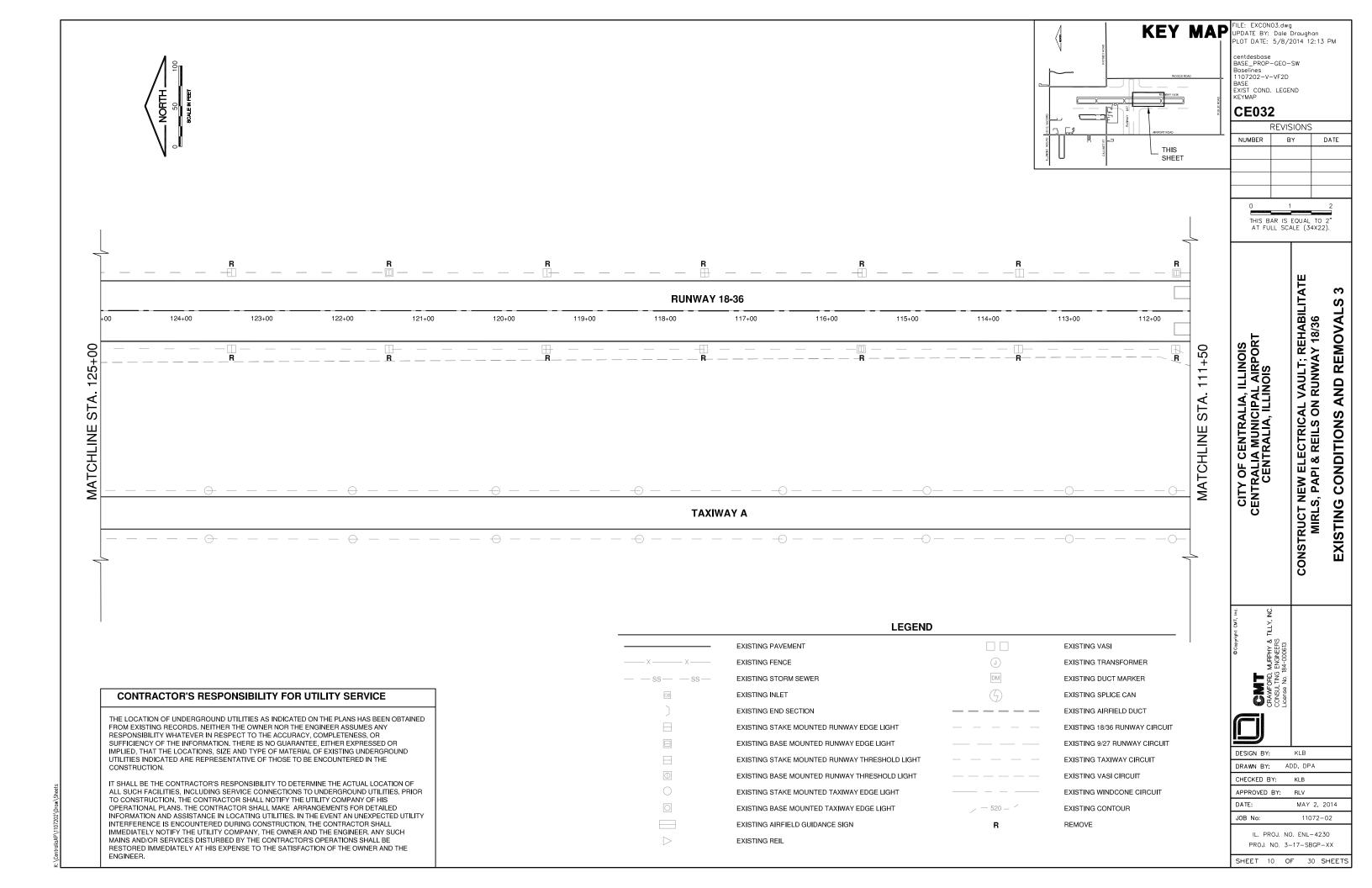
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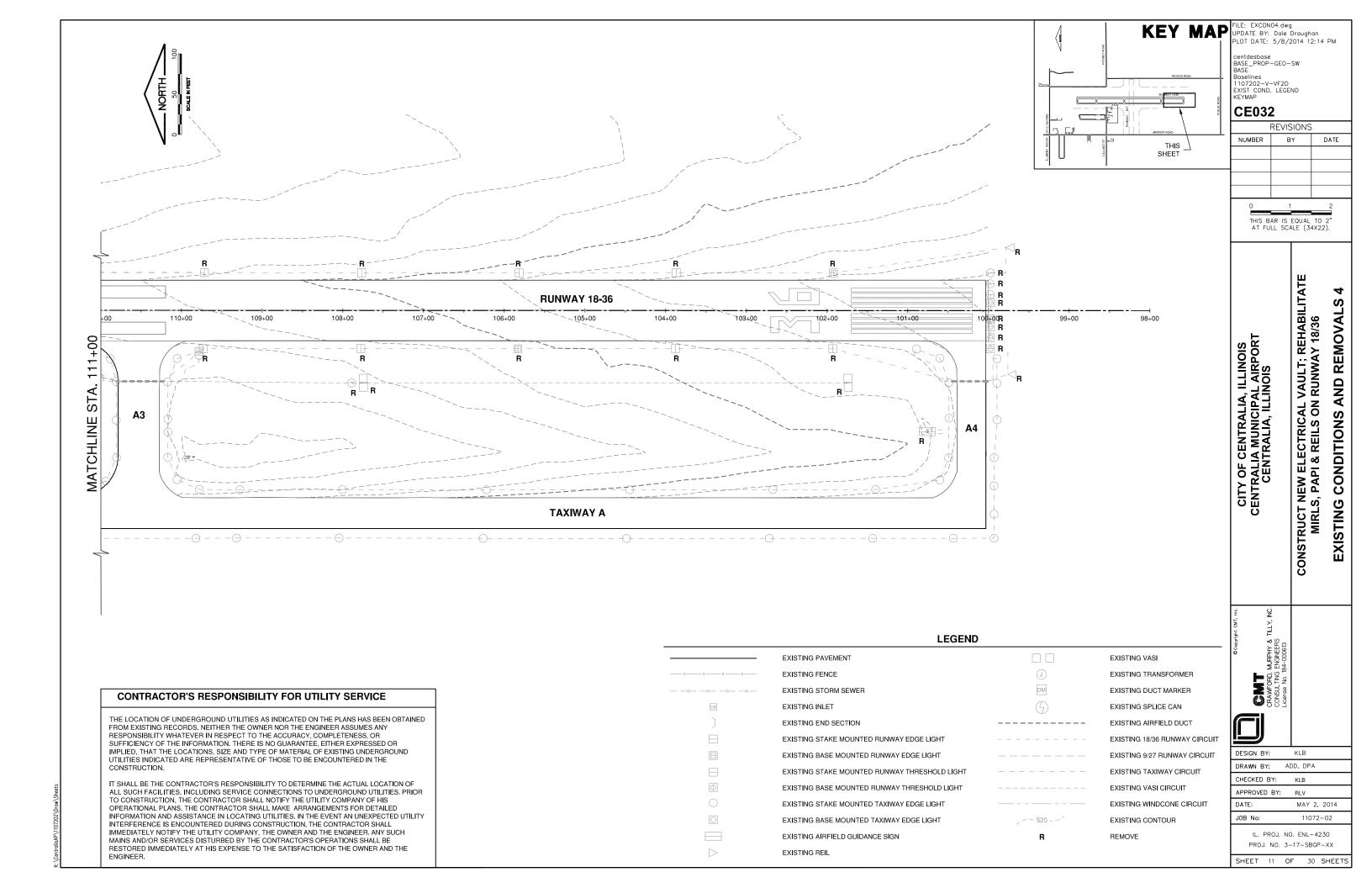
SHEET 07 OF 30 SHEETS

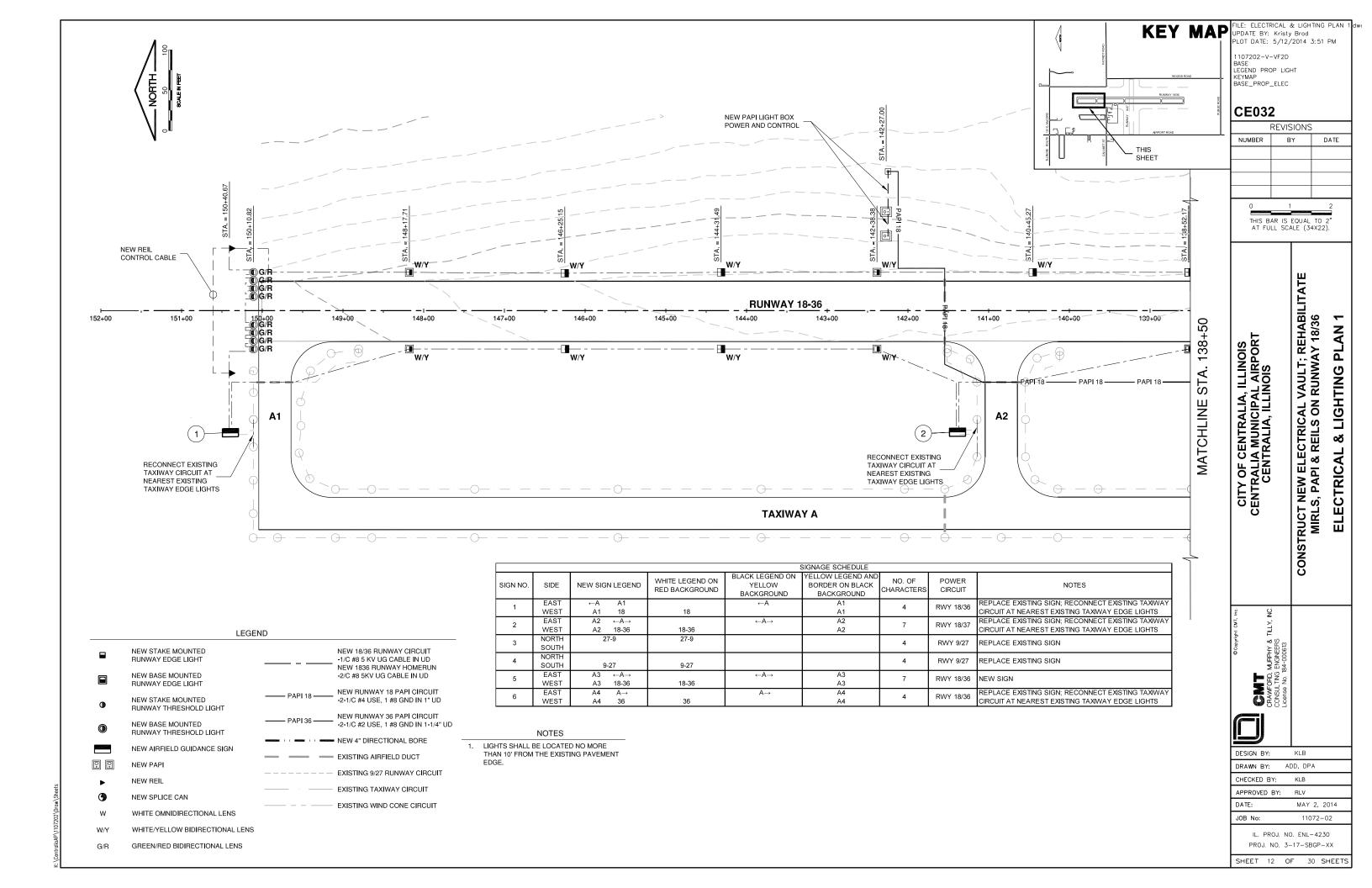
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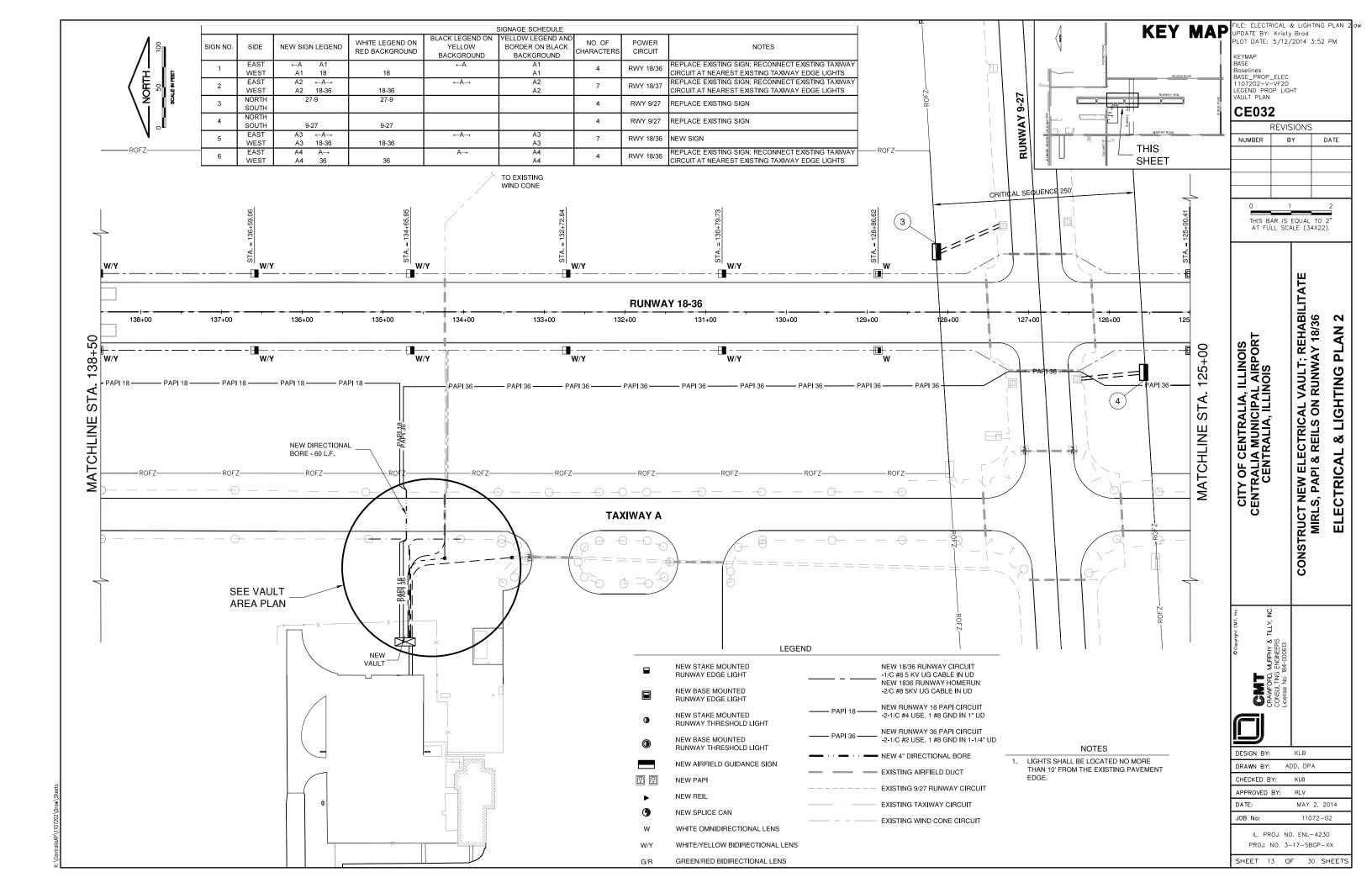


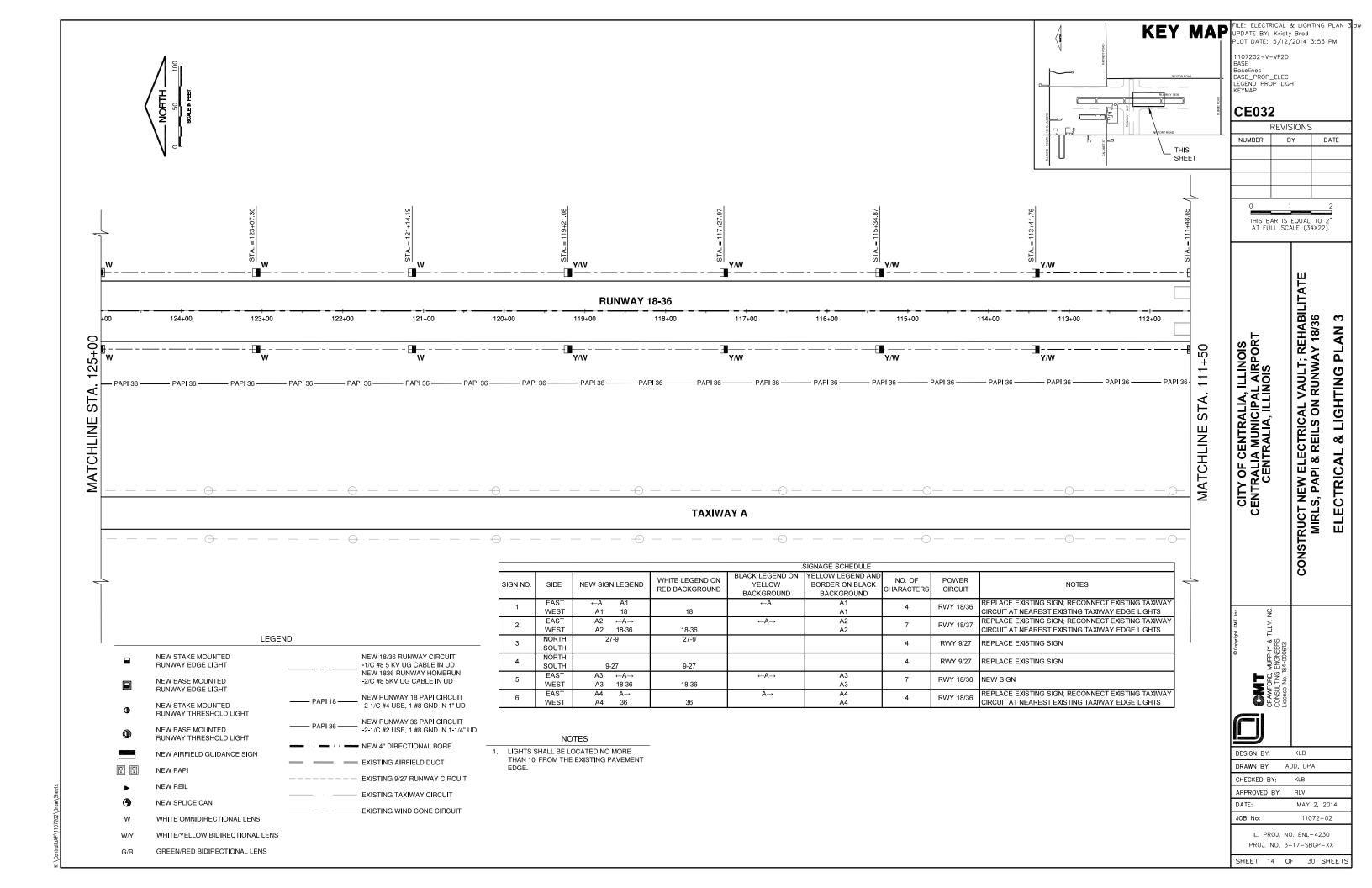


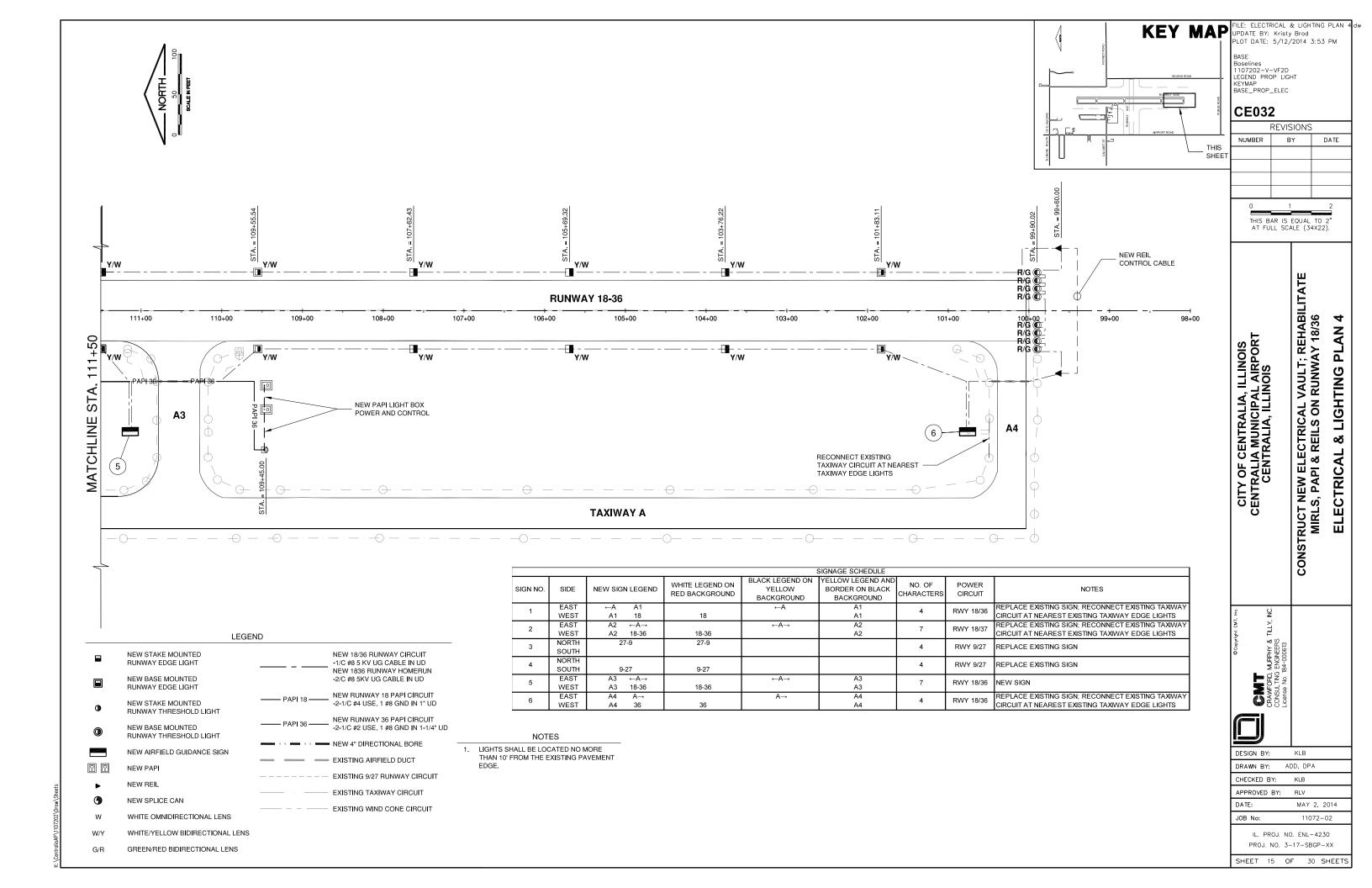


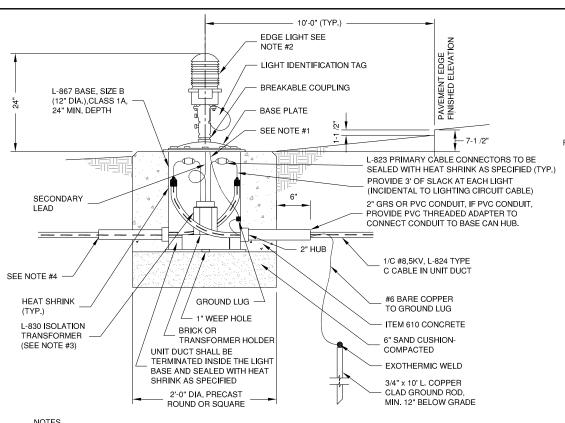








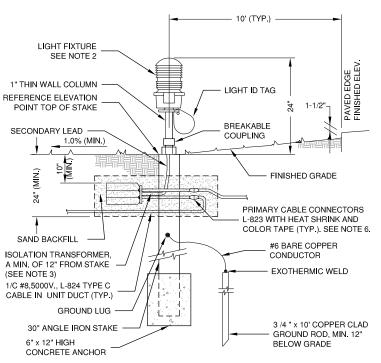




- THE LIGHT FIXTURE SHALL BE BONDED TO THE LIGHT BASE INTERNAL GROUND LUG VIA A #6 AWG STRANDED COPPER WIRE RATED FOR 600 VOLTS WITH GREEN XHHW INSULATION. THE GROUND WIRE LENGTH SHALL BE SUFFICIENT TO ALLOW THE REMOVAL OF THE LIGHT FIXTURE FROM THE LIGHT BASE FOR ROUTINE MAINTENANCE. SEE THE LIGHT FIXTURE MANUFACTURER'S INSTRUCTIONS FOR PROPER METHODS OF ATTACHING THIS BONDING WIRE
- 2. LIGHT FIXTURES SHALL BE AS INDICATED IN NOTE 2 OF STAKE MOUNTED LIGHT DETAIL
- 3. L-830 ISOLATION TRANSFORMERS SHALL BE AS INDICATED IN NOTE 3 OF STAKE MOUNTED LIGHT DETAIL
- 4. AFTER INSTALLATION OF CABLE IN UNIT DUCT, SEAL END OF CONDUIT TO MAKE WATERTIGHT.
- THE TOLERANCE FOR THE HEIGHT OF RUNWAY/TAXIWAY EDGE LIGHTS MUST BE $\pm\,1$ INCH. THE TOLERANCE FOR THE LATERAL SPACING (LIGHT LANE TO RUNWAY/TAXIWAY CENTERLINE) OF RUNWAY/TAXIWAY EDGE
- DIRECTION OF PRIMARY CABLES MUST BE IDENTIFIED BY COLOR CODING AS FOLLOWS: WHEN FACING LIGHT WITH BACK FACING PAVEMENT., CABLE TO THE LEFT IS CODED RED AND CABLE TO THE RIGHT IS CODED
- APPLY A CORROSION INHIBITING, ANTI-SEIZE COMPOUND TO ALL SCREWS, NUTS AND FRANGIBLE COUPLING THREADS. IF COATED BOLTS ARE USED PER ENGINEERING BRIEF #83, DO NOT APPLY ANTI-SEIZE
- 8. ELECTRICAL INSULATING GREASE MUST BE APPLIED WITHIN THE L-830 ISOLATION TRANSFORMER SECONDARY TWO CONDUCTOR CONNECTORS TO PREVENT WATER ENTRANCE. THE CONNECTORS MUST NOT BE TAPED.

BASE MOUNTED EDGE LIGHT

N.T.S.



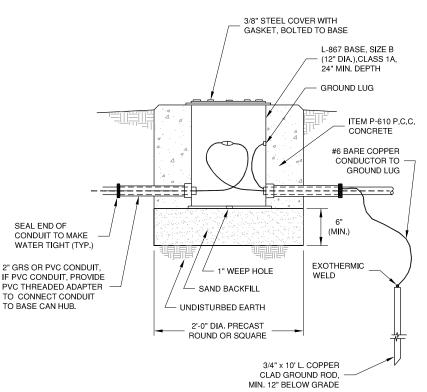
- CABLES SHALL NOT BE LESS THAN 24" DEEP, ENCASE ISOLATION TRANSFORMER, L-823 CONNECTORS, AND 2 FOOT MINIMUM OF L-824 CABLE SLACK IN SAND BACKFILL.
- LIGHT FIXTURES SHALL BE L-861, L-861E, AS INDICATED ON THE PLANS AND SPECIFICATIONS. LED
 EDGE LIGHTS SHALL BE INDICATED WITH THE SUFFIX (L). WHERE INDICATED TO BE QUARTZ, LAMPS SHALL BE 30W OR 45W AS REQUIRED BY LIGHT FIXTURE MANUFACTURER TO MEET MINIMUM DISTRIBUTION AND OUTPUT REQUIREMENTS OF AC 150/5345-46(LATEST EDITION)
- 3. L-830 ISOLATION TRANSFORMERS FOR QUARTZ EDGE LIGHTS AND LED EDGE LIGHTS WITH HEATERS SHALL BE L-830-1, 30/45 WATT. LED EDGE LIGHTS WITHOUT HEATERS SHALL BE L-830-16, 10/15 WATT OR L-830-17, 20/25 WATT, AS RECOMMENDED BY LIGHT FIXTURE MANUFACTURER.
- 4. UNIT DUCT, WHERE INSTALLED, SHALL BE TERMINATED AT L-823 CONNECTORS AND SEALED TO MAKE
- DO NOT INSTALL ANGLE IRON STAKE BY DRIVING. MAKE ELECTRICAL CONNECTIONS AND BACKFILL AROUND THE STAKE WITH EARTH PASSING THE 1-INCH SIEVE. COMPACT AS REQUIRED TO PROVIDE FIRM SUPPORT FOR STAKE, AND TO THE SATISFACTION OF THE RESIDENT ENGINEER.
- DIRECTION OF PRIMARY CABLES MUST BE IDENTIFIED BY COLOR CODING AS FOLLOWS WHEN FACING LIGHT WITH BACK FACING PAVEMENT: CABLE TO THE LEFT IS CODED RED AND CABLE TO THE RIGHT
- THE TOLERANCE FOR THE HEIGHT OF RUNWAY/TAXIWAY EDGE LIGHTS MUST BE \pm 1 INCH. THE TOLERANCE FOR THE LATERAL SPACING (LIGHT LANE TO RUNWAY/TAXIWAY CENTERLINE) OF RUNWAY/TAXIWAY EDGE LIGHTS MUST BE ± 1 INCH

STAKE MOUNTED MEDIUM INTENSITY LIGHTS

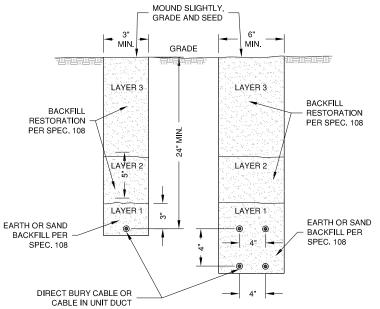
3 /16" DIAMETER CIRCUIT DESIGNATION (AIRPORT WILL PROVIDE CIRCUIT NUMBER) LIGHT DESIGNATION 5-366

LIGHT IDENTIFICATION TAG DETAIL

- INSTALL A NONCORROSIVE DISC OF 2" MINIMUM DIAMETER WITH THE NUMBER PERMANENTLY STAMPED, CUT OUT, OR ENGRAVED UNDER THE HEAD OF THE BASE PLATE BOLT OR ATTACHED TO LIGHT FLANGE WITH
- 2. NUMERALS SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY, AND SHALL BE AS DIRECTED BY THE RESIDENT ENGINEER.
- 3. AIRFIELD SIGNS SHALL BE TAGGED AND NUMBERED.
- 4. THE CONTRACTOR SHALL NUMBER THE EXISTING AND PROPOSED LIGHTS AND SIGNS IN EACH CIRCUIT, STARTING AT THE HOMERUN AND CONTINUING AROUND THE ENTIRE CIRCUIT, BACK TO THE HOMERUN.

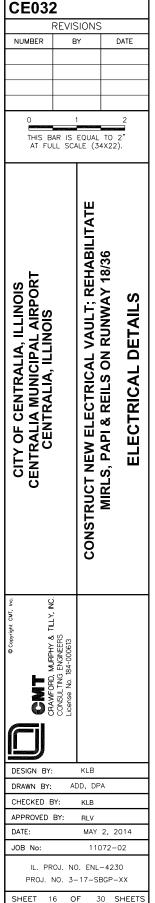


SPLICE CAN DETAIL



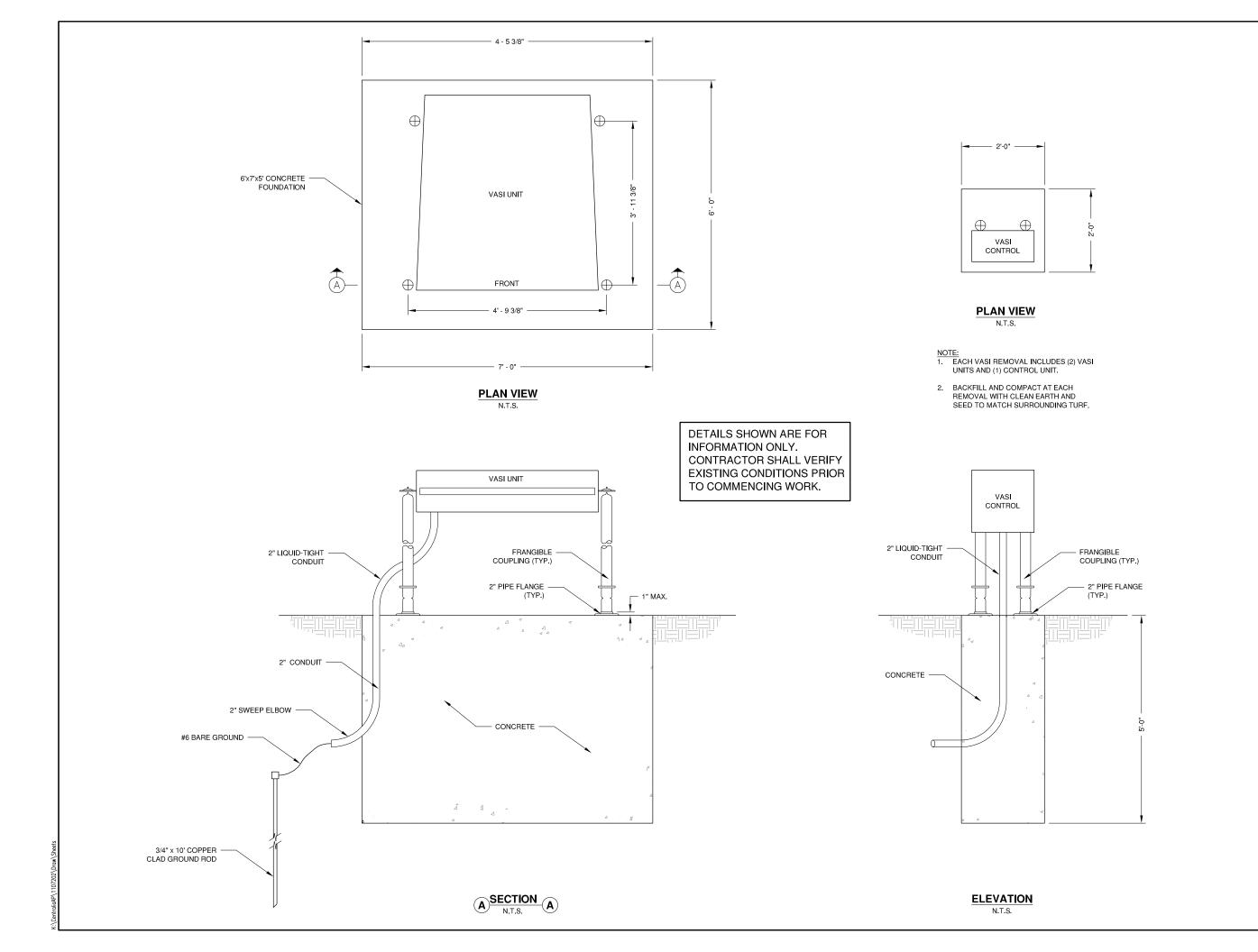
- CABLES SHALL NOT BE PLACED LESS THAN 24" DEEP IN ANY ONE TRENCH UNLESS PERMITTED BY ENGINEER.
- 2. WHERE PERMITTED, CONTRACTOR MAY INSTALL CABLE IN UNIT DUCT BY PLOWING METHOD.

CABLE TRENCH DETAIL



ILE: ELECTRICAL DETAILS 1.dwg

IPDATE BY: Dale Draughar PLOT DATE: 5/8/2014 12:21 PM



FILE: VASI REMOVAL DETAIL.dwg UPDATE BY: Dale Draughan PLOT DATE: 5/8/2014 12:22 PM

CE032

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AT FULL SCALE (34X22).

CONSTRUCT NEW ELECTRICAL VAULT; REHABILITATE MIRLS, PAPI & REILS ON RUNWAY 18/36

CITY OF CENTRALIA, ILLINOIS CENTRALIA MUNICIPAL AIRPORT CENTRALIA, ILLINOIS

VASI REMOVAL DETAIL

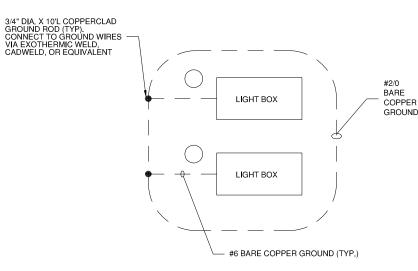




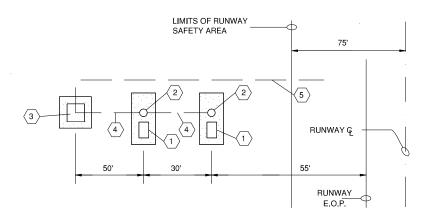
DESIGN BY: KLB ADD, DPA DRAWN BY: CHECKED BY: APPROVED BY: MAY 2, 2014 DATE: JOB No: 11072-02

IL. PROJ. NO. ENL-4230 PROJ. NO. 3-17-SBGP-XX

SHEET 17 OF 30 SHEETS



PAPI GROUND RING DETAIL



- 1 PAPI LIGHT BOX. SEE DETAIL, THIS SHEET.
- $\langle 2 \rangle$ L-867 CAN WITH SOLID LID. SEE DETAIL, THIS SHEET.
- (3) PAPI PCU. SEE DETAIL, THIS SHEET.
- 4 PAPI LIGHT BOX POWER & TILT SWITCH WIRING. SEE DETAIL, THIS SHEET.
- $\left\langle \mathbf{5} \right
 angle$ papi power wiring from vault. See detail, this sheet.

RWY. 18 PAPI PLAN (RWY. 36 MIRROR IMAGE)

AIMING OF TYPE L-881 (2-BOX) PAPI RELATIVE TO PRESELECTED GLIDE PATH (3°00')

	AIMING ANGLE (IN MINUTES OF ARC)
LIGHT UNIT	STANDARD INSTALLATION
UNIT NEAREST RUNWAY	15' ABOVE GLIDE PATH
UNIT FARTHEST FROM RUNWAY	15' BELOW GLIDE PATH

18	36
1	1
150+00.82	100+00.00
519.25	534.14
40'	40'
142+27.00	109+45.00
3°	3°
522.46	529.09
520.80	526.86
519.68	526.62
	1 150+00.82 519.25 40' 142+27.00 3° 522.46 520.80

* THE VISUAL GLIDE PATH ANGLE IS THE CENTER OF THE ON COURSE ZONE AND IS MEASURED FROM THE HORIZONTAL

PAPI PCU PLAN AND ELEVATION NOTES

1 HEAVY DUTY FUSIBLE DISCONNECT, 600VAC, 30A, NEMA 3R. SQUARE D H361AWK OR EQUAL, WITH TWO 15A FUSES.

PAPI PCU DETAILS

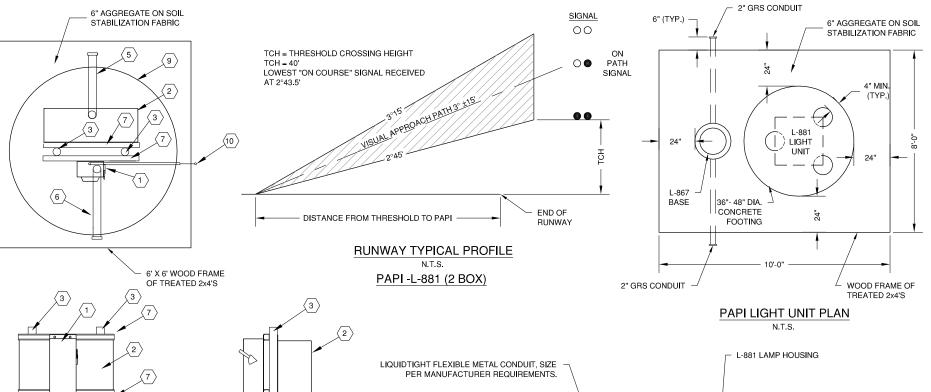
 $\langle 6 \rangle$

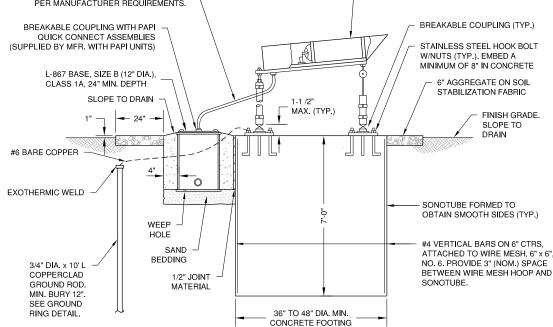
- $\left\langle 2\right\rangle$ 208V PAPI POWER & CONTROL UNIT, WITH PHOTOCELL.
- 3 2" GALVANIZED EMT LEGS WITH TOPS CAPPED.
- 4 FRANGIBLE COUPLINGS & FLOOR FLANGES. ANCHOR TO CONCRETE FOUNDATION.
- 2" GRS CONDUIT WITH PAPI LIGHT HOUSING POWER & PAPI TILT CONTROL CABLES, PER PAPI MANUFACTURER.
- 6 CONDUIT AND WIRING TO VAULT AS FOLLOWS:
 PAPI 18: TWO #4 TYPE USE, ONE #8 GND IN 1" UNIT DUCT
 PAPI 36: TWO #2 TYPE USE, ONE #8 GND IN 1-1/4" UNIT DUCT
- 7 1 5/8 X 1 5/8 GALVANIZED STRUT.

 $\langle 9 \rangle$

(8)

- $\fbox{8}$ TWO #12 THWN, ONE #12 GND IN 3/4" CONDUIT, TO PAPI POWER & CONTROL UNIT.
- © CONCRETE FOOTING, 36" DIAMETER X 48" DEEP (MIN.). SEE PAPI INSTALLATION FOR REBAR AND WIRE MESH INFO.
- (10) 3/4" DIA. BY 10 FT. LONG COPPER CLAD GROUND ROD WITH #6 SOLID BARE COPPER GROUND CABLE ATTACHED BY EXOTHERMIC WELDING. OTHER END OF CABLE TERMINATES ON GROUND LUG IN DISCONNECT.





PAPI LIGHT UNIT ELEVATION N.T.S.

FOUNDATION:

FOUNDATIONS FOR MOUNTING LIGHT BOXES SHALL BE MADE OF ITEM 610 CONCRETE. ALL LIGHT BOXES SHALL BE FRANGIBLY MOUNTED TO THE FOUNDATION.

AZIMUTHAL AIMING:

EACH LIGHT UNIT SHALL BE AIMED OUTWARD INTO THE APPROACH ZONE ON A LINE PARALLEL TO THE RUNWAY CENTERLINE WITHIN A TOLERANCE OF ±1/2 DEGREE.

MOUNTING HEIGHT TOLERANCES:

THE BEAM CENTERS OF ALL LIGHT UNITS SHALL BE WITHIN ± 1 INCH OF A HORIZONTAL PLANE AT THE ELEVATION GIVEN IN THE TABLE.

TOLERANCE ALONG LINE PERPENDICULAR TO RUNWAY:

THE FRONT FACE OF EACH LIGHT UNIT IN A BAR SHALL BE LOCATED ON A LINE PERPENDICULAR TO THE RUNWAY CENTERLINE WITHIN ±6 INCHES.

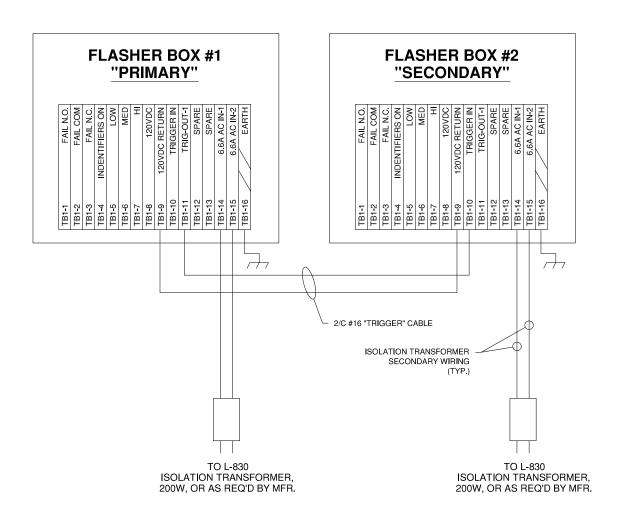
LATERAL SPACING:

THE DIFFERENCE IN LATERAL SPACING BETWEEN LIGHT UNITS SHALL NOT EXCEED 1'-0".

PDATE BY: Dale Draughan LOT DATE: 5/8/2014 12:22 PM **CE032 REVISIONS** NUMBER BY DATE THIS BAR IS EQUAL TO 2' AT FULL SCALE (34X22). CONSTRUCT NEW ELECTRICAL VAULT; REHABILITATE MIRLS, PAPI & REILS ON RUNWAY 18/36 CITY OF CENTRALIA, ILLINOIS CENTRALIA MUNICIPAL AIRPOR CENTRALIA, ILLINOIS **DETAIL** CRAWFORD. KLB DESIGN BY: DRAWN BY: ADD, DPA CHECKED BY APPROVED BY: MAY 2, 2014 JOB No: 11072-02 IL. PROJ. NO. ENL-4230 PROJ. NO. 3-17-SBGP-XX

SHEET 18 OF 30 SHEETS

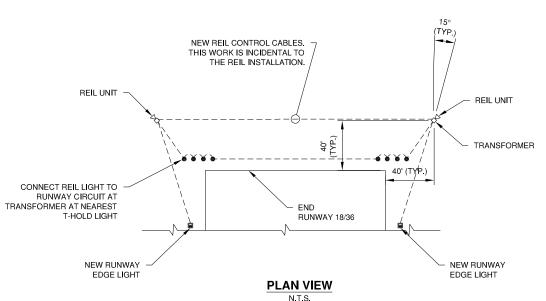
ILE: ELECTRICAL DETAILS 4.dwg

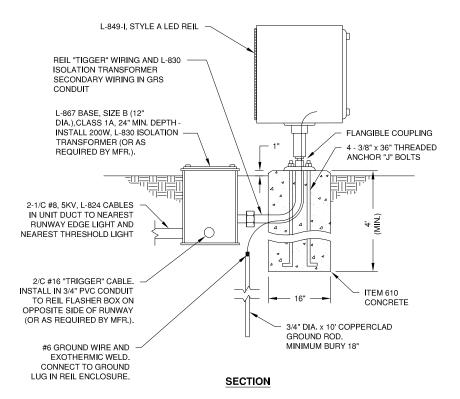


REIL WIRING NOTE

REIL WIRING SHOWN IS BASED ON ONE MANUFACTURER. REQUIRED REIL WIRING FROM ANOTHER REIL MANUFACTURER MAY VARY FROM WIRING SHOWN, CONTRACTOR SHALL OBTAIN REIL WIRING DIAGRAM FROM MANUFACTURER OF REIL TO BE INSTALLED AND VERIFY REIL WIRING PRIOR TO INSTALLATION OF WIRING. INCLUDE WIRING DIAGRAM WITH REIL SUBMITTAL.

REIL EXTERNAL WIRING DIAGRAM N.T.S.





REIL DETAILS

NOTES

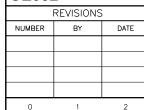
ORIENT THE BEAM AXIS OF AN UN-BAFFLED REIL UNIT 15 DEGREES OUTWARD FROM A LINE PARALLEL TO THE RUNWAY AND INCLINED AT AN ANGLE 10 DEGREES ABOVE THE HORIZONTAL (AS SHOWN)

IF THIS STANDARD SETTING IS OPERATIONALLY OBJECTIONABLE. PROVIDE OPTICAL BAFFLES (PER THE MANUFACTURER'S INSTRUCTIONS) AND ORIENT THE BEAM AXIS OF THE UNIT 10 DEGREES OUTWARD FROM A LINE PARALLEL TO THE RUNWAY CENTERLINE AND INCLINED AT AN ANGLE OF 3 DEGREES ABOVE THE HORIZONTAL. THIS SHALL BE INCIDENTAL TO THE PROJECT WORK.

- THE OPTIMUM LOCATION OF THE LIGHTS IS 40 FT. FROM THE RUNWAY EDGE AND IN LINE WITH THE EXISTING RUNWAY THRESHOLD LIGHTS
- 3. STENCIL HORIZONTAL AND VERTICAL AIMING ANGLES ON EACH REIL FLASH HEAD OR EQUIPMENT ENCLOSURE. THE NUMERALS MUST BE BLACK AND ONE INCH (1") MINIMUM HEIGHT.

FILE: LED REIL DETAILS.dwg JPDATE BY: Dale Draughar PLOT DATE: 5/8/2014 12:23 PM

CE032



THIS BAR IS EQUAL TO 2' AT FULL SCALE (34X22).

CITY OF CENTRALIA, ILLINOIS CENTRALIA MUNICIPAL AIRPORT CENTRALIA, ILLINOIS

CONSTRUCT NEW ELECTRICAL VAULT; REHABILITATE MIRLS, PAPI & REILS ON RUNWAY 18/36 LED REIL DETAIL

2 CRAWFORD, CONSULTING

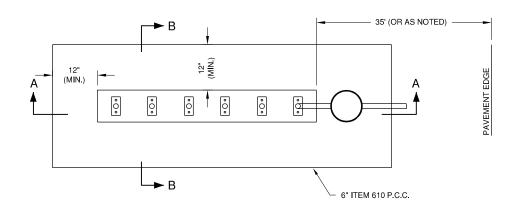


DESIGN BY: KLB ADD, DPA DRAWN BY:

CHECKED BY: KLB APPROVED BY: RLV DATE: MAY 2, 2014 JOB No: 11072-02

> IL. PROJ. NO. ENL-4230 PROJ. NO. 3-17-SBGP-XX

SHEET 19 OF 30 SHEETS





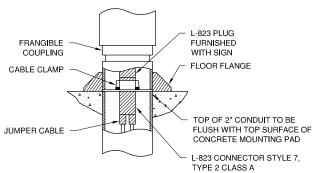
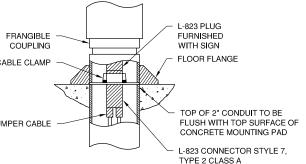
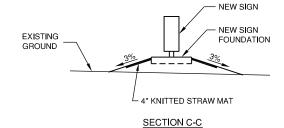


FIGURE 1 - ELECTRICAL CONNECTION DETAIL N.T.S.





ESTIMATED 1 C.Y. OF EMBANKMENT

MAY BE REQUIRED TO CONSTRUCT SIGN BASE FOUNDATION, COSTS TO

CONSTRUCT SHALL BE INCIDENTAL

PLACED AROUND THE PROTECTION

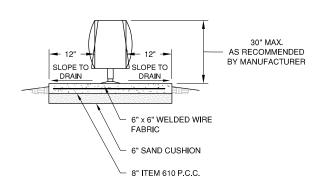
APRON. COST FOR MAT SHALL BE INCIDENTAL TO SIGN PAY ITEM.

2. 4" OF KNITTED STRAW MAT SHALL BE

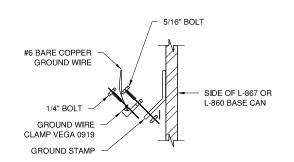
TO SIGN PAY ITEM.

NOTES:

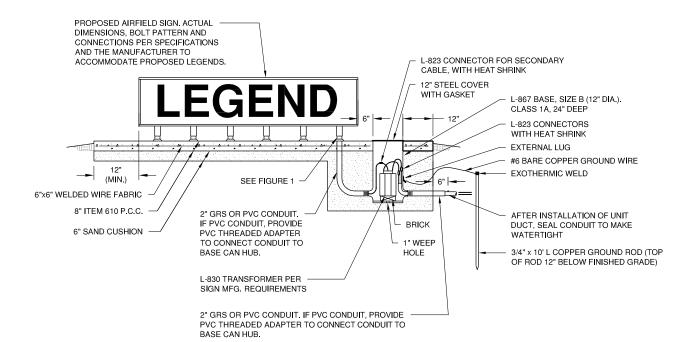
L-858 AIRFIELD SIGN EMBANKMENT DETAILS N.T.S.



SECTION B-B N.T.S.



FACTORY GROUND LUG DETAIL N.T.S.

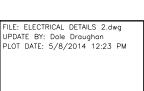


SECTION A-A N.T.S.

L-858Y GUIDANCE - BLACK LEGEND ON YELLOW BACKGROUND L-858L LOCATION - YELLOW LEGEND AND BORDER ON A BLACK BACKGROUND L-858R MANDATORY - WHITE LEGEND ON A RED BACKGROUND

AIRFIELD SIGN NOTES

- TRANSFORMER WATTAGE SHALL BE AS REQUIRED BY SIGN MANUFACTURER.
- 2. SIGN LEGEND SHALL BE AS SHOWN IN THE PLANS.
- 3. SIGNS SHALL BE SIZE 2, STYLE 2, CLASS 2.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS WITH NEW LEGENDS FOR APPROVAL PRIOR TO MANUFACTURING SIGN.
- 5. PROVIDE 3 FEET OF CABLE SLACK IN BASE CAN.



CE032



CONSTRUCT NEW ELECTRICAL VAULT; REHABILITATE MIRLS, PAPI & REILS ON RUNWAY 18/36 CITY OF CENTRALIA, ILLINOIS CENTRALIA MUNICIPAL AIRPORT CENTRALIA, ILLINOIS **DETAILS** SIGN AIRFIELD

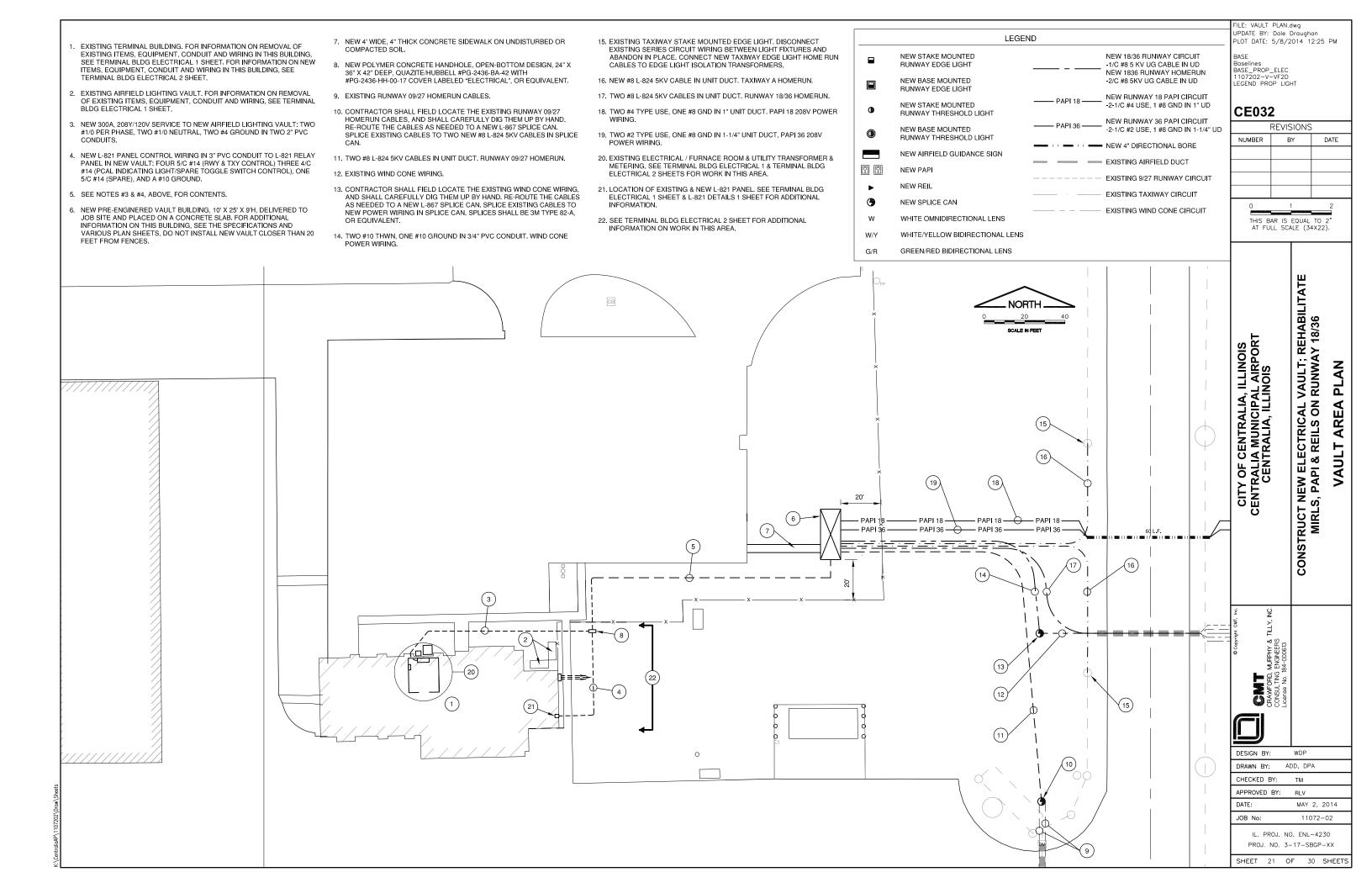
CRAWFORD, CONSULTING

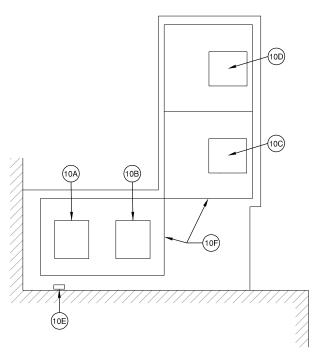
DESIGN BY: KLB ADD, DPA DRAWN BY: CHECKED BY: KLB APPROVED BY: RLV DATE: MAY 2, 2014

JOB No:

IL. PROJ. NO. ENL-4230 PROJ. NO. 3-17-SBGP-XX SHEET 20 OF 30 SHEETS

11072-02





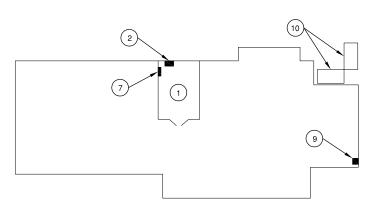
EXISTING AIRFIELD LIGHTING VAULT PLAN VIEW

NOTE: ALL INFORMATION ON THIS SHEET IS FROM BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL THOROUGHLY INVESTIGATE EXISTING CONDITIONS, EXISTING WIRING AND THE EQUIPMENT POWERED AND CONTROLLED. EXCEPT AS NOTED HEREIN, ALL EXISTING EQUIPMENT SHALL REMAIN POWERED IN TERMINAL BUILDING AT COMPLETION OF WORK.

- 1. TERMINAL BUILDING ELECTRICAL/FURNACE ROOM.
- 2. TERMINAL BLDG MAIN DISTRIBUTION PANELBOARD, FEDERAL PACIFIC, 400A, 208Y/120V, MAIN LUGS ONLY. TO BE DISCONNECTED AND REMOVED. TO BE REPLACED WITH NEW 800A MAIN DISTRIBUTION PANELBOARD.

THIS PANELBOARD CONTAINS THE FOLLOWING FUSED DISCONNECTS, FEEDING THE FOLLOWING CIRCUITS:

- 2A. TO AVIATION GAS FUEL SYSTEM LOAD CENTER MOUNTED ON EXTERIOR EAST WALL OF TERMINAL BLDG. EXISTING CIRCUIT WIRING TO BE RECONNECTED TO NEW 800A MAIN DISTRIBUTION PANELBOARD.
- 2B. TO TERMINAL BLDG LIGHTING PANEL ON WEST WALL OF ELECTRIC ROOM (SEE BELOW).
- 2C. TO BOTH TAXIWAY REGULATOR CIRCUIT BREAKER AND RWY 09/27 REGULATOR CIRCUIT BREAKER, MOUNTED ON LEFT SIDE OF THIS
- 2D. TO TERMINAL BLDG AIR CONDITIONER ON ROOF, EXISTING CIRCUIT WIRING TO BE RECONNECTED TO NEW 800A MAIN DISTRIBUTION PANELBOARD.
- 2E. TO PARKING LOT LIGHTING CONTACTOR MOUNTED ON RIGHT SIDE OF THIS PANELBOARD (SEE BELOW).
- 2F. TO EXISTING RWY 18/36 REGULATOR IN EXISTING AIRFIELD LIGHTING VAULT AT NORTHEAST CORNER OF TERMINAL BLDG. REGULATOR TO BE RELOCATED TO NEW AIRFIELD LIGHTING VAULT. EXISTING WIRING TO REGULATOR AND EXPOSED CONDUIT SHALL BE REMOVED (SEE BELOW)
- 3. TAXIWAY REGULATOR CIRCUIT BREAKER. TO BE DISCONNECTED AND REMOVED. EXISTING WIRING TO REGULATOR AND EXPOSED CONDUIT SHALL BE
- 4. RWY 09/27 REGULATOR CIRCUIT BREAKER. TO BE DISCONNECTED AND REMOVED. EXISTING WIRING TO REGULATOR AND EXPOSED CONDUIT SHALL BE
- 5. PARKING LOT LIGHTING CONTACTOR. TO REMAIN AND BE RECONNECTED TO NEW 800A MAIN DISTRIBUTION PANELBOARD
- 6. PARKING LOT LIGHTS LOAD CENTER. TO REMAIN UNDISTURBED.
- 7. TERMINAL BLDG LIGHTING PANEL. TO REMAIN AND BE RECONNECTED TO NEW



TERMINAL BUILDING

7 (2C) (2D) (2E) (2F) (8G)

EXISTING POWER PANEL DETAIL

N.T.S

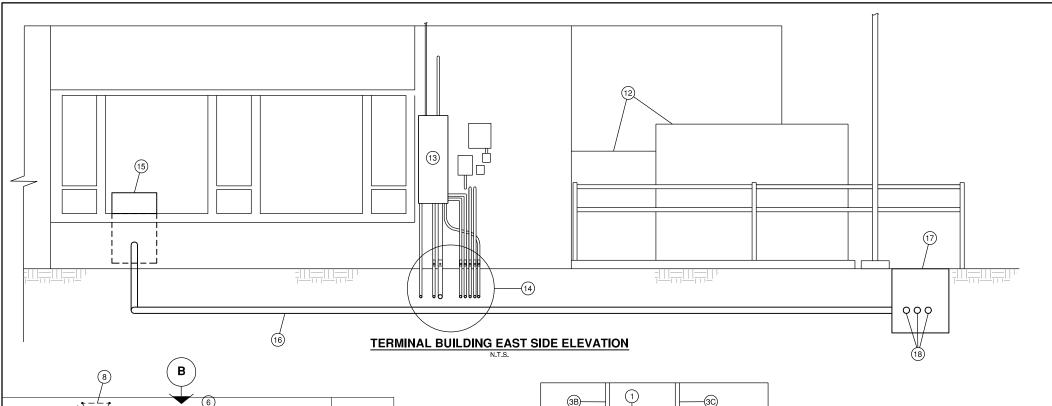
- 800A MAIN DISTRIBUTION PANELBOARD. DISCONNECT AND REMOVE EXISTING
- EXISTING WIND CONE
- B. EXISTING VAULT LIGHTING
- EXISTING VAULT RECEPTACLES
- EXISTING L-821 PANEL (IF ANY)
- EXISTING REGULATOR CONTROL WIRING F. ADDITIONAL CIRCUITS WIRING AS NEEDED AS PART OF THE
 - REMOVAL OF THE EXISTING VAULT AND EXISTING L-821 PANEL.
 - NOTE: CONTRACTOR SHALL THOROUGHLY INVESTIGATE THE EXISTING CIRCUITS POWERED FROM THIS PANELBOARD. AT JOB COMPLETION, THE CONTRACTOR SHALL PROVIDE A NEW, TYPED (HANDWRITTEN IS NOT ACCEPTABLE) PANELBOARD SCHEDULE, LISTING ALL THE ITEMS AND LOCATIONS POWERED FROM THIS PANELBOARD.
- 8. EXISTING CONDUITS:
 - 8A. INCOMING SERVICE WIRING FROM UTILITY TRANSFORMER. REMOVE WIRING. REMOVE EXPOSED CONDUIT TO FLOOR AND SEAL OPENING WITH
 - 8B WIRING TO TERMINAL BLDG LIGHTING PANEL. TO BE RECONNECTED TO CIRCUIT BREAKER IN NEW 800A MAIN DISTRIBUTION PANELBOARD.
 - 8C WIRING TO AVIATION GAS FUEL SYSTEM LOAD CENTER MOUNTED ON EXTERIOR EAST WALL OF TERMINAL BLDG. TO BE RECONNECTED TO CIRCUIT BREAKER IN NEW 800A MAIN DISTRIBUTION PANELBOARD.
 - 8D 120V AND 208V WIRING TO EXISTING AIRFIELD LIGHTING VAULT EQUIPMENT IN VAULT AT NORTHEAST CORNER OF TERMINAL BLDG. REMOVE WIRING. REMOVE EXPOSED CONDUIT AND SEAL OPENING WITH NON-SHRINK
 - 8E WIRING TO AIR CONDITIONER ON ROOF. TO BE RECONNECTED TO CIRCUIT BREAKER IN NEW 800A MAIN DISTRIBUTION PANELBOARD.
- 8F THIS WIRING IS BELIEVED TO GO TO TERMINAL BUILDING BATTERY POWERED EXIT SIGNS AT DOORS. CONTRACTOR SHALL CONFIRM, AND IF SO, THIS WIRING SHALL BE RECONNECTED TO A SPARE 15A OR 20A CIRCUIT BREAKER IN TERMINAL BUILDING LIGHTING PANEL, WITH NEW CONDUIT AND WIRING AS NEEDED.
- 8G THIS WIRING IS BELIEVED TO BE ABANDONED WIRING TO A DEMOLISHED T-HANGAR. IF SO, REMOVE WIRING AND REMOVE EXPOSED CONDUIT. NOTE: ALSO REMOVE EXPOSED CONDUIT ON OUTSIDE OF BUILDING TO BELOW GRADE.
- 8H 120V POWER AND CONTROL WIRING FROM LIGHTING PANEL TO EXISTING AIRFIELD LIGHTING EQUIPMENT IN VAULT AT NORTHEAST CORNER OF TERMINAL BLDG. REMOVE WIRING AND CONDUIT. RELABELED UNUSED CIRCUIT BREAKERS IN LIGHTING PANEL AS "SPARE"
- 8I EXISTING WIRING AND CONDUIT TO REMAIN UNDISTURBED.

- 9. L-821 CONTROL PANEL. TO BE REMOVED, INCLUDING CABINET. REMOVE ALL
- 10. EXISTING AIRFIELD LIGHTING VAULT. DISCONNECT THE FOLLOWING:
 - 10A EXISTING ABANDONED 4KW REGULATOR THE REGULATOR SHALL BE DISPOSED OF OFFSITE UNLESS REQUESTED OTHERWISE BY THE OWNER.
 - 10B. EXISTING RUNWAY 18/36 REGULATOR. THE REGULATOR SHALL BE DISPOSED OF OFFSITE UNLESS REQUESTED OTHERWISE BY THE OWNER.
 - 10C. EXISTING TAXIWAY REGULATOR. THIS REGULATOR SHALL BE RELOCATED
 - 10D EXISTING RUNWAY 09/27 REGULATOR. THIS REGULATOR SHALL BE RELOCATED TO THE NEW VAULT.
- 10E EXISTING PHOTOCELL AND CONTROLS ON TERMINAL BUILDING WALL. ITEMS NOT REQUESTED TO BE TURNED OVER TO THE OWNER SHALL BE
- 10F. AFTER THE REGULATORS HAVE BEEN REMOVED, ALL REMAINING EQUIPMENT, MATERIALS, CONDUITS AND WIRING INSIDE THE METAL TRANSCLOSURES SHALL BE REMOVED AND DISPOSED OF OFFSITE. ANY CONDUIT PENETRATIONS SHALL BE REMOVED TO FLUSH WITH THE CONCRETE PAD FLOORS, AND SHALL BE FILLED WITH NON-SHRINK GROUT, FLUSH WITH FLOOR.

AS REQUESTED BY THE OWNER, THE TRANSCLOSURES SHALL CLEANED AND LEFT EMPTY, FOR USE BY THE OWNER. THIS WORK SHALL BE AS DIRECTED BY THE OWNER AND THE R.E. CONTRACTOR SHALL COORDINATE THIS WORK.

CE032 REVISIONS BY DATE THIS BAR IS EQUAL TO 2 AT FULL SCALE (34X22) VAULT; REHABILITATE RUNWAY 18/36 ELECTRICAL CITY OF CENTRALIA, ILLINOIS CENTRALIA MUNICIPAL AIRPORT CENTRALIA, ILLINOIS CONSTRUCT NEW ELECTRICAL ' MIRLS, PAPI & REILS ON BUILDING **TERMINAL** WDP DESIGN BY: ADD, DPA DRAWN BY: CHECKED BY APPROVED BY: MAY 2, 2014 JOB No: 11072-02 IL. PROJ. NO. ENL-4230 PROJ. NO. 3-17-SBGP-XX SHEET 22 OF 30 SHEETS

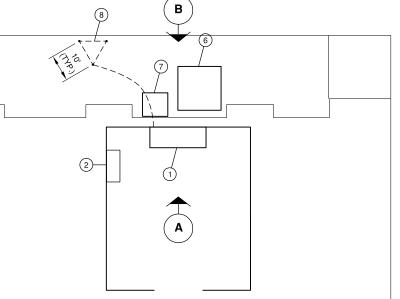
ILE: EXISTING VAULT DETAILS.dwg IPDATE BY: Dale Draugho PLOT DATE: 5/8/2014 12:26 PM



WARNING

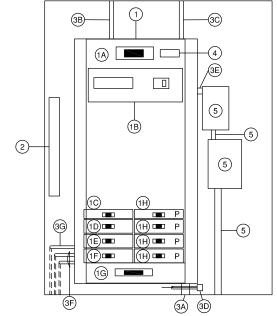
Maximum available fault current: 23,260 Symmetrical RMS Amperes Date: 04/25/14

MAXIMUM FAULT CURRENT WARNING LABEL



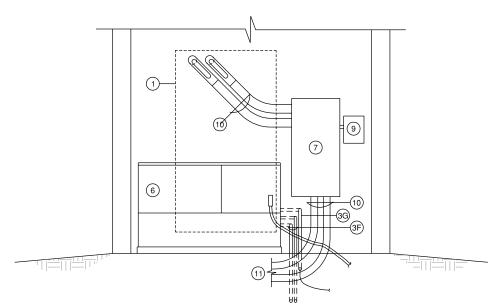
ELECTRICAL / FURNANCE ROOM

- NEW MAIN DISTRIBUTION PANELBOARD, 800A, 208Y/120V, 3 PHASE, 4 WIRE, EATON, CUTLER-HAMMER, OR EQUIVALENT, PANELBOARD SHALL BE UIL LISTED AND LABELED AS SUITABLE FOR USE AS SERVICE ENTRANCE EQUIPMENT. PROVIDE AN ENGRAVED NAMEPLATE READING: 800A MAIN PANEL, 208Y/120V, 3P, 4WY. PROVIDE THE FOLLOWING AS A MINIMUM:
- 1A 800A, 3P MAIN CIRCUIT BREAKER. PROVIDE NAMEPLATE READING "MAIN BREAKER".
- 1B SURGE PROTECTIVE DEVICE, MINIMUM 240 KA PER PHASE, 120 KA PER MODE, WITH SURGE COUNTER.
- 1C 60A, 2P CIRCUIT BREAKER. PROVIDE NAMEPLATE READING "PARKING LOT LIGHTS".
- 1D 100A, 3P CIRCUIT BREAKER. PROVIDE NAMEPLATE READING "TERMINAL BLDG LIGHTING PANEL".
- 1E 100A, 3P CIRCUIT BREAKER TO FUEL DISPENSER PANELBOARD ON EAST WALL OF TERMINAL BLDG. PROVIDE NAMEPLATE READING "FUEL DISPENSER PANELBOARD".
- 1F 100A, 3P CIRCUIT BREAKER. PROVIDE NAMEPLATE READING "TERMINAL BLDG AIR CONDITIONER".
- 1G 300A, 3P CIRCUIT BREAKER. PROVIDE NAMEPLATE READING "AIRFIELD LIGHTING VAULT".
- 1H SPACE FOR FUTURE CIRCUIT BREAKER.
- 2. EXISTING TERMINAL BLDG LIGHTING PANEL. CONNECT TO NEW MAIN PANEL AS INDICATED BELOW. PROVIDE NEW TYPED PANELBOARD SCHEDULE.
- 3. EXISTING AND PROPOSED CONDUITS AND WIRING AS FOLLOWS:
- 3A EXISTING WIRING TO TERMINAL BLDG LIGHTING PANEL. RECONNECT TO CIRCUIT BREAKER 1D IN NEW 800A MAIN DISTRIBUTION PANELBOARD.
- 3B EXISTING WIRING TO AVIATION GAS FUEL SYSTEM LOAD CENTER MOUNTED ON EXTERIOR EAST WALL OF TERMINAL BLDG. RECONNECT TO CIRCUIT BREAKER 1E IN NEW 800A MAIN DISTRIBUTION PANELBOARD.
- 3C EXISTING WIRING TO AIR CONDITIONER ON ROOF, RECONNECT TO CIRCUIT BREAKER 1F IN NEW 800A MAIN DISTRIBUTION PANELBOARD.



A ELECTRICAL / FURNACE ROOM ELEVATION

- 3D THIS WIRING IS BELIEVED TO GO TO TERMINAL BUILDING BATTERY POWERED EXIT SIGNS AT DOORS, CONTRACTOR SHALL CONFIRM, AND IF SO, THIS WIRING SHALL BE RECONNECTED TO A SPARE 15A OR 20A CIRCUIT BREAKER IN TERMINAL BUILDING LIGHTING PANEL. INSTALL NEW NEMA 1 JUNCTION BOX AND NEW CONDUIT AND #12 THWN POWER AND GROUND WIRING AS NEEDED. REUSE LIGHTING PANEL SCHEDULE TO READ "EXIT SIGNS".
- 3E INSTALL NEW TWO #6 THWN, ONE #8 GROUND FROM PARKING LOT CONTACTOR TO CIRCUIT BREAKER 1C IN NEW 800A MAIN DISTRIBUTION PANELBOARD.
- 3F TWO 2" CONDUITS, EACH WITH THREE #1/0 THWN, ONE #1/0 NEUTRAL, ONE #4 GROUND, TO NEW AIRFIELD LIGHTING VAULT.
- 3G 1" PVC CONDUIT WITH #2/0 BARE COPPER GROUND TO TRIANGULAR GROUND FIELD.
- 4. MAXIMUM FAULT CURRENT WARNING LABEL. SEE DETAIL, THIS SHEET.
- ${\bf 5.} \quad {\sf PARKING\ LOT\ LIGHTING\ CONTACTOR,\ LOAD\ CENTER,\ CONDUIT\ AND\ WIRING\ TO\ REMAIN\ UNDISTURBED.}$
- 6. EXISTING PAD MOUNT UTILITY TRANSFORMER, 150 KVA, 208Y/120V, 3 PHASE, 4 WIRE.
- NEW CONTRACTOR FURNISHED AND INSTALLED, UTILITY-APPROVED C.T. CABINET (AMEREN CT-84-AMR, ERICKSON 283-2, CONTRACTOR TO VERIFY), 24 W X 48"H X 8"D. MOUNT TO EXTERIOR WALL IN COMPLIANCE WITH UTILITY REQUIREMENTS.
- 8. #2/0 BARE COPPER TRIANGULAR GROUND FIELD, 10' MINIMUM EACH SIDE, MINIMUM BURY 12". EACH CORNER SHALL TERMINATE IN 3/4" DIAMETER BY 10' LONG COPERCLAD GROUND ROD. CONNECT ONE CORNER OF GROUND FIELD TO NEUTRAL BAR IN NEW MAIN DISTRIBUTION PANELBOARD WITH #2/0 BARE COPPER WIRE IN 1" PVC CONDUIT.
- 9. NEW CONTRACTOR FURNISHED AND INSTALLED, UTILITY-APPROVED METER BASE.
- 10. SERVICE ENTRANCE, TWO 4" CONDUITS, EACH WITH THREE 600 MCM THWN, ONE 600 MCM THWN NEUTRAL CORE DRILL THROUGH BRICK WALL OF TERMINAL BLDG AND SEAL OPENINGS AFTER CONDUIT INSTALLATION TO MAKE WATER TIGHT



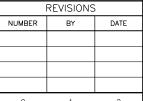
B UTILITY SERVICE ELEVATION

- 11. CONTRACTOR WORK AS FOLLOWS, ALL WORK SHALL BE IN COMPLIANCE WITH UTILITY COMPANY REQUIREMENTS.
 - 11A IF UTILITY TRANSFORMER IS ON A PAD, THE CONTRACTOR SHALL HAND DIG AND INSTALL 4" CONDUITS UNDER PAD AND UP INTO LOW VOLTAGE OPENING OF PAD. TERMINATE CONDUCTORS AND TAG FOR CONNECTION TO TRANSFORMER BY UTILITY.
 - 11B IF UTILITY TRANSFORMER IN ON A TRANSFORMER VAULT THE CONTRACTOR SHALL CORE DRILL THROUGH WALLS FOR CONDUITS. TERMINATE CONDUCTORS AND TAG FOR CONNECTION TO TRANSFORMER BY UTILITY.
- 12. EXISTING AIRFIELD LIGHTING VAULT TRANSCLOSURES. SEE TERMINAL BLDG ELECTRICAL 1 SHEET FOR ADDITIONAL INFORMATION.
- 13. EXISTING FUEL DISPENSER PANELBOARD
- 14. EXISTING CONDUITS TO FUEL DISPENSING EQUIPMENT. NOTE THAT THIS WIRING WAS INSTALLED IN COMPLIANCE WITH NEC REQUIREMENTS FOR CLASS 1, DIVISION 1 & 2 CONDITIONS. THIS WIRING SHALL NOT BE DISTURBED. THE CONTRACTOR SHALL HAND DIG IN THIS AREA FOR INSTALLATION OF 3" CONDUIT FOR L-821 CONTROL PANEL WIRING. ANY DAMAGE TO THESE EXISTING CONDUITS SHALL BE REPAIRED AT THE CONTRACTOR'S COST AS DIRECTED BY THE R.E.
- 15. LOCATION OF BOTH THE EXISTING L-821 CONTROL PANEL AND CABINET AND THE NEW L-821 CONTROL PANEL AND CABINET. REMOVE OLD L-821 PANEL AND INSTALL NEW L-821 PANEL.
- 16. NEW L-821 PANEL CONTROL WIRING IN 3" PVC CONDUIT TO L-821 RELAY PANEL IN NEW VAULT: FOUR 5/C #14 (RWY & TXY CONTROL), THREE 4/C #14 (PCAL INDICATING LIGHT/SPARE TOGGLE SWITCH CONTROL), ONE 5/C #14 (SPARE), 600V, BELDEN, OR EQUIVALENT. CORE DRILL THROUGH BUILDING WALL AND SEAL OPENINGS AFTER CONDUIT INSTALLATION TO MAKE WATER TIGHT.
- 17. NEW POLYMER CONCRETE HANDHOLE, OPEN-BOTTOM DESIGN, 24" X 36" X 42" DEEP, QUAZITE/HUBBELL #PG-2436-BA-42 WITH #PG-2436-HH-00-17 COVER LABELED "ELECTRICAL", OR EQUIVALENT.
- 18. CONDUIT AND WIRING TO NEW AIRFIELD LIGHTING VAULT. SEE VAULT AREA PLAN FOR ADDITIONAL INFORMATION.

FILE: TERMINAL BUILDING ELECTRICAL 2.
UPDATE BY: Dale Draughan
PLOT DATE: 5/8/2014 12:27 PM

BASE
BASE_PROP_ELEC

CE032



THIS BAR IS EQUAL TO 2 AT FULL SCALE (34X22).

CITY OF CENTRALIA, ILLINOIS
CENTRALIA MUNICIPAL AIRPORT
CENTRALIA, ILLINOIS
T NEW ELECTRICAL VAULT; REHABILITAT
LLS. PAPI & REILS ON RUNWAY 18/36

CONSTRUCT NEW ELECTRICAL VAULT; REHABILITATE MIRLS, PAPI & REILS ON RUNWAY 18/36 TERMINAL BUILDING ELECTRICAL 2

CRAWFORD, MARPHY & TLLY, NC.
CONSULTING ENGMEERS
LICENSE NO. 184-000613

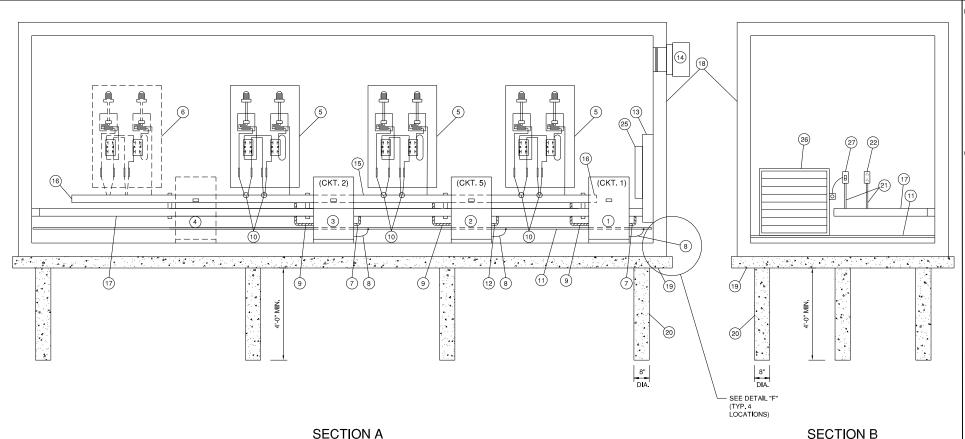


DESIGN BY: WDP
DRAWN BY: ADD, DPA
CHECKED BY: TM
APPROVED BY: RLV
DATE: MAY 2, 2014
JOB No: 11072-02

IL. PROJ. NO. ENL-4230 PROJ. NO. 3-17-SBGP-XX

SHEET 23 OF 30 SHEETS

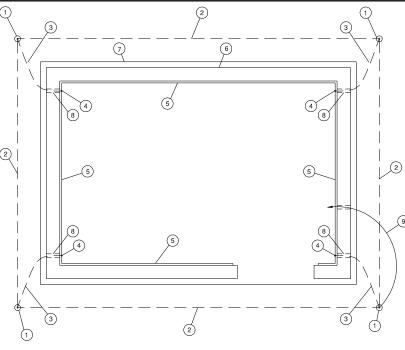
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O VAULT DETAILS 1 NOTES

- NEW 7.5 KW REGULATOR, 208V INPUT, 3-STEP 6.6A OUTPUT. PROVIDE ENGRAVED NAMEPLATE READING "RUNWAY 18/36".
- RELOCATED 10 KW REGULATOR, 208V INPUT, 3-STEP 6.6A OUTPUT. PROVIDE ENGRAVED NAMEPLATE READING "TAXIWAY A".
- 3. RELOCATED 7.5 KW REGULATOR, 208V INPUT, 3-STEP 6.6A OUTPUT. PROVIDE ENGRAVED NAMEPLATE READING "RUNWAY 09/27".
- 4. SPACE FOR FUTURE 10 KW REGULATOR.
- REGULATOR INDICATING LIGHTS ASSEMBLY. FOR ADDITIONAL INFORMATION, SEE REGULATOR INDICATING LIGHT DETAILS SHEET.
- 6. SPACE FOR FUTURE REGULATOR INDICATING LIGHTS ASSEMBLY.
- 7. TWO #4 THWN (208V TO REGULATOR), ONE 8 GND IN 1" FLEXIBLE METALLIC CONDUIT.
- 8. #6 INSULATED GROUND WIRE FROM REGULATOR. CLAMP TO GROUND BUS.
- 9. 2-1/C #8, L-824, TYPE C, 5 KV CABLES IN 1" FLEXIBLE METALLIC CONDUIT. ROUTE TO INDICATING LIGHT EQUIPMENT.
- 10. 2-1/C #8, L-824, TYPE C, 5 KV CABLES (ONE SET TO REGULATOR, ONE SET TO EDGE LIGHTS). WHERE CABLES ENTER TOP OF HIGH VOLTAGE WIREWAY, CONTRACTOR SHALL INSTALL GROMMETS TO SEAL AROUND CABLES.
- 11. 1/8" x 3/4" COPPER GROUND BUS, ALL AROUND INSIDE OF VAULT. STAND-OFF MOUNT A MINIMUM OF 1/4" FROM WALL.
- 12. TWO #2 THWN (208V TO REGULATOR), ONE 8 GND IN 1" FLEXIBLE METALLIC CONDUIT.
- 13. POWER DISTRIBUTION PANELBOARD, 30-POLE, 400A, 208Y/120V, 3-PHASE, 4-WIRE, WITH 300A, 3P MAIN CIRCUIT BREAKER, SQUARE D NQ, OR EQUIVALENT.
- EXHAUST FAN, GREENHECK MODEL CWB-300-7, 120V, 3/4 HP, 6,200 CFM, WITH MOTORIZED BACKDRAFT DAMPER AND MOTOR STARTER MS1P-1, OR EQUIVALENT.
- 15. 4"x4" NEMA 1 HIGH VOLTAGE WIREWAY. INSTALL A MINIMUM OF TWO ADHESIVE WARNING LABELS ON HINGED DOOR, READING "CAUTION: HIGH VOLTAGE".
- 16. END OF HIGH VOLTAGE WIREWAY.

- 17. 4"x4" LOW VOLTAGE WIREWAY.
- 18. PRE-FABRICATED CONCRETE EQUIPMENT SHELTER, 25 x 10 x 9 H. SEE SPECIFICATIONS. PROVIDE WARNING SIGN ON DOOR READING "CAUTION: HIGH VOLTAGE".
- 19. STEEL REINFORCED CONCRETE VAULT PAD.
- 20. REINFORCED CONCRETE VAULT PAD FOOTINGS, TYPICAL OF 10.
- 21. TWO #12 THWN, ONE #12 GROUND IN 3/4" CONDUIT.
- 22. GFCI RECEPTACLE.
- 23. EXHAUST FAN THERMOSTAT, LINE VOLTAGE, HONEYWELL T6051A WITH HONEYWELL Q651A1009 AUTO-OFF-ON SUBBASE. PROVIDE ENGRAVED NAMEPLATE READING "FXHALIST FAN"
- 24. 1/2" PVC CONDUIT NIPPLE THROUGH SHELTER WALL (BY SHELTER MFR.) AFTER INSTALLATION OF #2 INSULATED GROUND WIRE, SEAL OPENING TO MAKE WATER TIGHT.
- 25. L-821 RELAY CABINET.
- 26. INTAKE LOUVER, RUSKIN ELF375DXH, 48"WX42"H, MIN. FREE AREA 7.10 SQ.FT. WITH EXTENDED SILL, BIRD SCREEN, KYNAR FINISH TO MATCH SHELTER COLOR (OR AS DIRECTED BY OWNER), CD 35 MOTORIZED DAMPER (POWER-OPEN/SPRING-CLOSE), OR EQUIVALENT. NOTE: CONTRACTOR SHALL PROVIDE AN INTERIOR FILTER RACK WITH A REPLACEABLE FILTER.
- 27. FRACTIONAL HORSEPOWER STARTER WITH OVERLOADS SIZED FOR LOUVER MOTOR. CONTRACTOR SHALL COORDINATE WITH MANUFACTURER.



VAULT GROUND RING KEYED PLAN

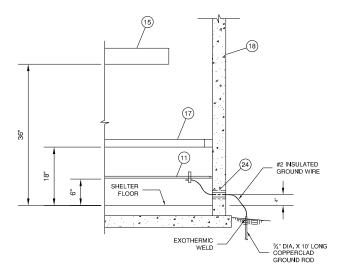
NTS

- VAULT GROUNDING & BONDING NOTES

 3/4" DIAMETER × 10' LONG COPPERCLAD GROUND ROD. BOND GROUND WIRES TO GROUND ROD USING EXOTHERMIC WELD, CADWELD, OR EQUIVALENT. CLAMPED
- 2. #2/0 BARE COPPER GROUND WIRE.

CONNECTIONS SHALL NOT BE ACCEPTABLE.

- 3. #2 INSULATED GROUND WIRE.
- 4. CLAMP #2 INSULATED GROUND WIRE TO VAULT GROUND BUS.
- 5. VAULT GROUND BUS, 1/8"x3/4" COPPER BUS BAR. STAND-OFF MOUNT, 6" MINIMUM ABOVE VAULT FLOOR ON ALL SIDES.
- 6. PRE-FABRICATED EQUIPMENT SHELTER.
- 7. 6" THICK REINFORCED CONCRETE VAULT PAD.
- 8. PRE-FABRICATED EQUIPMENT SHELTER TO BE DELIVERED WITH 1/2" HOLES AT EACH CORNER AS SHOWN.
- 9. #2/0 BARE COPPER GROUND WIRE TO GROUND BAR OF POWER DISTRIBUTION PANEL BOARD, DELIVER WITH PROVIDED 1/2" HOLE IN EQUIPMENT SHELTER.



DETAIL "F"

FILE: VAULT DETAILS 1.dwg UPDATE BY: Dale Draughan PLOT DATE: 5/8/2014 12:28 PM

CE032

REVISIONS

NUMBER BY DATE

0 1 2

THIS BAR IS EQUAL TO 2"
AT FULL SCALE (34X22).

CITY OF CENTRALIA, ILLINOIS
ENTRALIA MUNICIPAL AIRPORT
CENTRALIA, ILLINOIS
NEW EI ECTRICAL VAULT: REHABILITATE

ELECTRICAL VAULT; REHABILITATE PI & REILS ON RUNWAY 18/36

VAULT DETAILS

CONSTRUCT NEW ELECTRICAL MIRLS, PAPI & REILS ON

CAMT CORPYIGHT CMT. INC. CONSUL ING ENGINEERS LICENSE No. 184-000613

DESIGN BY: WDP

DRAWN BY: ADD, DPA

CHECKED BY: TM

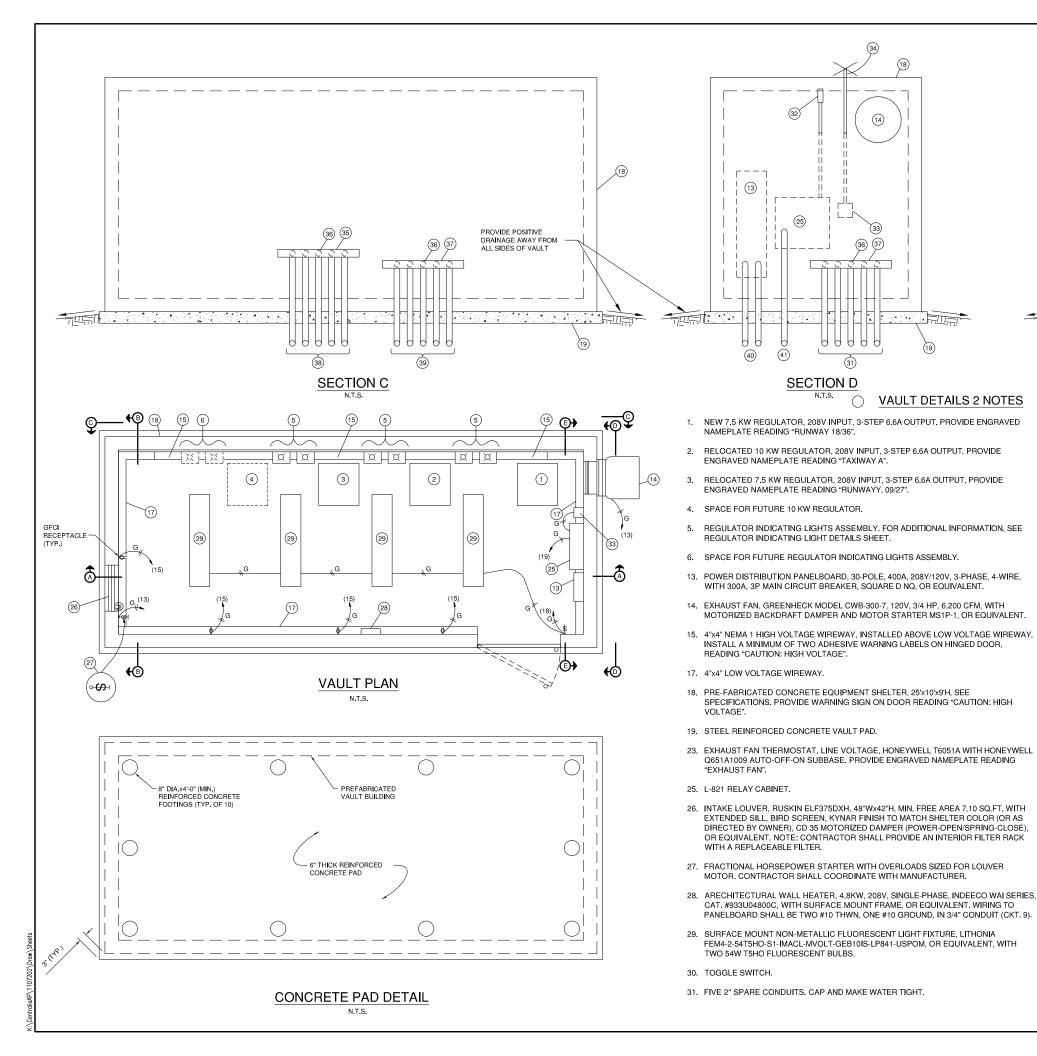
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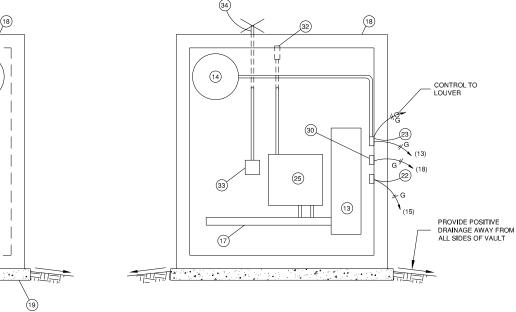
DATE: MAY 2, 2014

JOB No: 11072-02

IL. PROJ. NO. ENL-4230

PROJ. NO. 3-17-SBGP-XX
SHEET 24 OF 30 SHEETS





(32)

25)

(41)

SECTION D

14)

VAULT DETAILS 2 NOTES

SECTION E

- 32. PHOTOCELL TORK 2100, OR EQUIVALENT
- 33. L-854 RADIO CONTROLLER. PROVIDE ENGRAVED NAMEPLATE READING "L-854 RADIO CONTROLLER (PILOT CONTROL)".
- 34. L-854 RADIO CONTROLLER ANTENNA. MOUNT TO VAULT WALL, AS NEEDED FOR PROPER RECEPTION FROM ALL AIRPLANES IN THE AIR (CONTRACTOR SHALL FIELD VERIFY). THE COAXIAL CABLE SHALL EXIT THROUGH WALL THROUGH SEALED OPENING. PROVIDE DRIP LOOP IN EXTERIOR SIGNAL CABLE.
- 35. 6"x6" NEMA 3R HIGH VOLTAGE WIREWAY. MOUNT AT SAME HEIGHT AS INTERIOR HIGH VOLTAGE WIREWAY. INSTALL A WEATHERPROOF ADHESIVE WARNING LABEL ON HINGED DOOR READING "CAUTION: HIGH VOLTAGE".
- 36 2" GRS CONDUIT NIPPLES AS NEEDED BETWEEN INTERIOR AND EXTERIOR
- 37 6"x6" NEMA 3R LOW VOLTAGE WIREWAY. MOUNT AT SAME HEIGHT AS INTERIOR LOW VOLTAGE WIREWAY.
- 38 3" GRS CONDUITS TO MIN. 24" BELOW GRADE AND MIN. OF 5 FEET FROM BUILDING. INSTALL THE FOLLOWING CIRCUITS:
 - TWO 1/C #8, L-824, 5KV CABLES IN UNIT DUCT (RUNWAY 18/36 EDGE LIGHTS)
- 1/C #8, L-824, 5KV CABLE IN UNIT DUCT (RWY 18/36 TAXIWAY EDGE LIGHTS)
- 1/C #8, L-824, 5KV CABLE IN UNIT DUCT (RWY 18/36 TAXIWAY EDGE LIGHTS)
- TWO 1/C #8, L-824, 5KV CABLES IN UNIT DUCT (RUNWAY 09/27 EDGE LIGHTS)

UNUSED 3" CONDUITS SHALL BE CAPPED AND MADE WATERTIGHT.

- 39 3" GRS CONDUITS TO MIN. 24" BELOW GRADE AND MIN. OF 5 FEET FROM BUILDING. INSTALL THE FOLLOWING CIRCUITS:
 - TWO #4 TYPE USE, ONE #8 GND IN 1" UNIT DUCT (CKT.6). PAPI 18 208V POWER WIRING
- TWO #2 TYPE USE, ONE #8 GND IN 1-1/4" UNIT DUCT (CKT. 14). PAPI 36 208V POWER WIRING
- TWO #10 USE (120V, CKT. 17), ONE #10 GROUND IN UNIT DUCT TO PRIMARY WIND

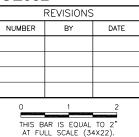
UNUSED 3" GRS CONDUITS SHALL BE CAPPED AND MADE WATERTIGHT.

WHEN MAKING TRANSITIONS FROM UNIT DUCT TO 3" GRS CONDUIT, THE CONTRACTOR SHALL SEAL AROUND CABLES AT ENDS OF CONDUIT AND UNIT DUCT TO MAKE WATERTIGHT, USING "HYDROBLOCK" BY WATERGUARD TECHNOLOGY PRODUCTS, POLYWATER DUCT SEALANT FST-250 SERIES, O-Z/GEDNEY TYPE DUX WATER SEALING COMPOUND, OR EQUIVALENT.

- 40 TWO #1/0 THWN PER PHASE, TWO #1/0 NEUTRAL, ONE #4 GROUND IN TWO 2" PVC CONDUITS TO TERMINAL BLDG
- 41 FOUR 5/C #14 (RWY & TXY CONTROL), THREE 4/C #14 (PCAL INDICATING LIGHT/SPARE TOGGLE SWITCH CONTROL), ONE 5/C #14 (SPARE), 600V, BELDEN, OR EQUIVALENT, ONE #10 GROUND, TO L-821 PANEL IN TERMINAL BLDG.

ILE: VAULT DETAILS 2.dwg JPDATE BY: Dale Draughar PLOT DATE: 5/8/2014 12:28 PM

CE032



EHABI 7 18/36

VAULT; RE RUNWAY

EW ELECTRICAL 'PAPI & REILS ON

TRUCT NE MIRLS, I

DETAIL

CITY OF CENTRALIA, ILLINOIS ENTRALIA MUNICIPAL AIRPOR CENTRALIA, ILLINOIS

CONS

WDP DESIGN BY: ADD, DPA CHECKED BY APPROVED BY: MAY 2, 2014 JOB No: 11072-02 IL. PROJ. NO. ENL-4230

PROJ. NO. 3-17-SBGP-XX

SHEET 25 OF 30 SHEETS



- 1. TO TEST FOR A GROUND FAULT ON EDGE LIGHT SERIES CIRCUIT:
- A. TURN OFF REGULATOR
 B. REMOVE "IGS" S1 CUTOUT FROM SOCKET
 C. TURN REGULATOR ON
- D. VERIFY THAT REGULATOR OUTPUT INDICATION LAMP IS ILLUMINATED AND INDICATES REGULATOR BRIGHTNESS
- E. GROUND FAULT INDICATION LAMP WILL ILLUMINATE IF A GROUND FAULT EXISTS ON THE LIGHTING CIRCUIT
- 2.TO ISOLATE REGULATOR FROM EDGE LIGHT SERIES CIRCUIT HOMERUN AND GROUND FAULT INDICATION CIRCUIT FOR TESTING JUST THE REGULATOR:
- A. TURN OFF REGULATOR
- B. REMOVE "CCR" S1 CUTOUT FROM SOCKET.
- C. TURN REGULATOR ON

"CCR" PLUG CUTOUT IS OUT

"IGS" CUTOUT IS IN

D. THE CCR OUTPUT INDICATION LAMP AT MOUNTING PANEL WILL STILL ILLUMINATE FOR TESTING REGULATOR

GROUND BUS TO REG

INDICATES REGULATOR BRIGHTNESS STEP

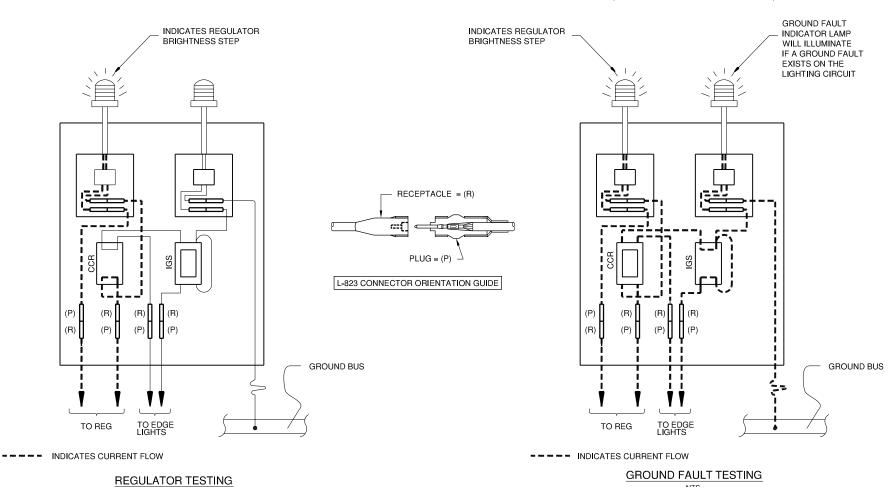
---- INDICATES CURRENT FLOW

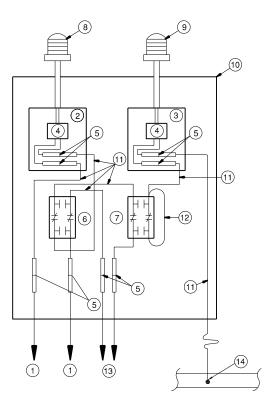
NORMAL OPERATION

(BOTH PLUG CUTOUTS ARE IN)

"CCR" PLUG CUTOUT IS IN

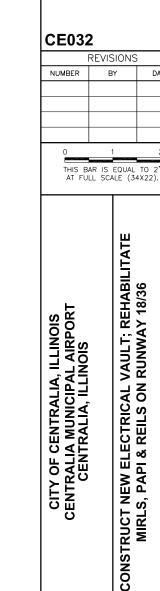
"IGS" PLUG CUTOUT IS OUT





REGULATOR INDICATING LIGHT NOTES

- 5KV L-824 CABLES TO REGULATOR.
- HINGED COVER NEMA 1 ENCLOSURE SIZED AS REQUIRED TO HOUSE EQUIPMENT, WITH ENGRAVED NAMEPLATE READING: "CIRCUIT INDICATOR".
- 3 HINGED COVER NEMA 1 ENCLOSURE SIZED AS REQUIRED TO HOUSE EQUIPMENT, WITH ENGRAVED NAMEPLATE READING: "GROUND INDICATOR"
- L-830 ISOLATION TRANSFORMER.
- L-823 CONNECTOR. (SEE CONNECTOR ORIENTATION GUIDE)
- "CCR" TYPE S-1 PLUG CUTOUT FOR ISOLATING REGULATOR OUTPUT TO TEST REGULATOR.
- "IGS" TYPE S-1 PLUG CUTOUT FOR INTENTIONAL GROUNDING OF SERIES CIRCUIT TO TEST FOR GROUND FAULTS.
- REGULATOR OUTPUT INDICATION EDGE LIGHT (RUNWAY OR TAXIWAY EDGE LIGHT).
- GROUND FAULT INDICATION EDGE LIGHT WITH WHITE GLOBE.
- 10 EQUIPMENT MOUNTING PANEL.
- 11 5KV L-824 CABLE.
- 12 5KV L-824 CABLE USED AS A JUMPER.
- 13 REGULATOR SERIES CIRCUIT HOMERUN CABLES TO EDGE LIGHTS.
- 14 CLAMP TO GROUND BUS.



FILE: VAULT DETAILS 4.dwg UPDATE BY: Dale Draughan

PLOT DATE: 5/8/2014 12:29 PM

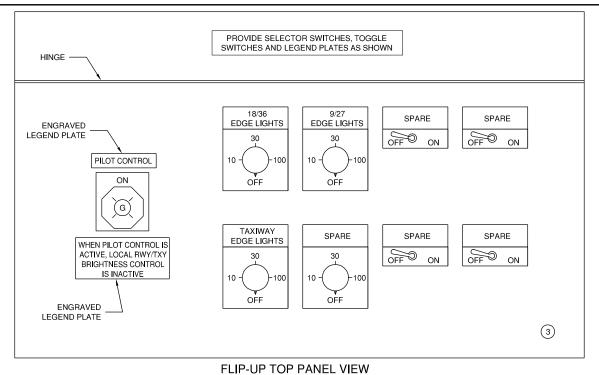
CITY OF CENTRALIA, ILLINOIS CENTRALIA MUNICIPAL AIRPORT CENTRALIA, ILLINOIS

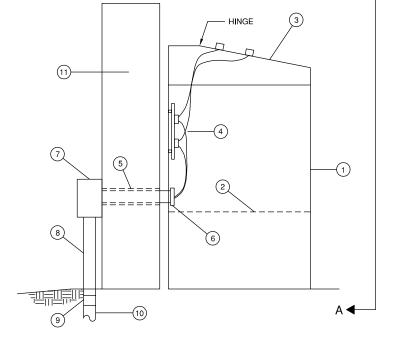
REGULATOR INDICATING LIGHT DETAILS

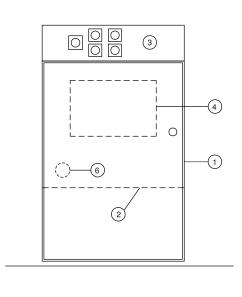
CRAWFORD, CONSULTING

DESIGN BY: WDP ADD, DPA CHECKED BY APPROVED BY: MAY 2, 2014 JOB No: 11072-02 IL. PROJ. NO. ENL-4230 PROJ. NO. 3-17-SBGP-XX

SHEET 26 OF 30 SHEETS







ELEVATION

SECTION A-A

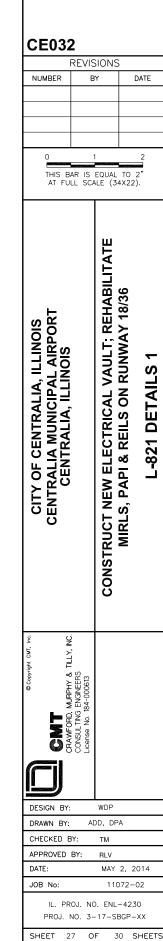


- L-821 STEEL CABINET SIZED AS REQUIRED (NOM. 24" SQ. X 36"H), WITH HINGED DOOR, BAKED ENAMEL CHARCOAL FINISH. PROVIDE OPEN TOP FOR MOUNTING L-821 PANEL ENCLOSURE.
- 2. ADJUSTABLE INTERIOR SHELF.
- 3. L-821 PANEL AND STEEL ENCLOSURE WITH BAKED ENAMEL CHARCOAL FINISH, MOUNTED ON TOP OF CABINET. PROVIDE HINGE AS NOTED AT TOP OF L-821 PANEL.
- 4. 600V TERMINAL STRIPS ON MOUNTING PANEL, STAND-OFF MOUNTED TO BACK OF ENCLOSURE.
- 5. CORE DRILL THROUGH TERMINAL BUILDING WALL AND INSTALL 3" GRS CONDUIT NIPPLE. SEAL AROUND CONDUIT AFTER INSTALLATION WITH NON-SHRINK GROUT.
- 6. INSULATED BUSHING.
- 7. NEMA 4 JUNCTION BOX, SIZED AS REQUIRED.
- 8. 3" GRS CONDUIT.
- 9. 3" GRS TO PVC ADAPTER.
- 10. 3" SCHEDULE 40 PVC CONDUIT, DIRECT BURY, TO NEW VAULT.

A ◀

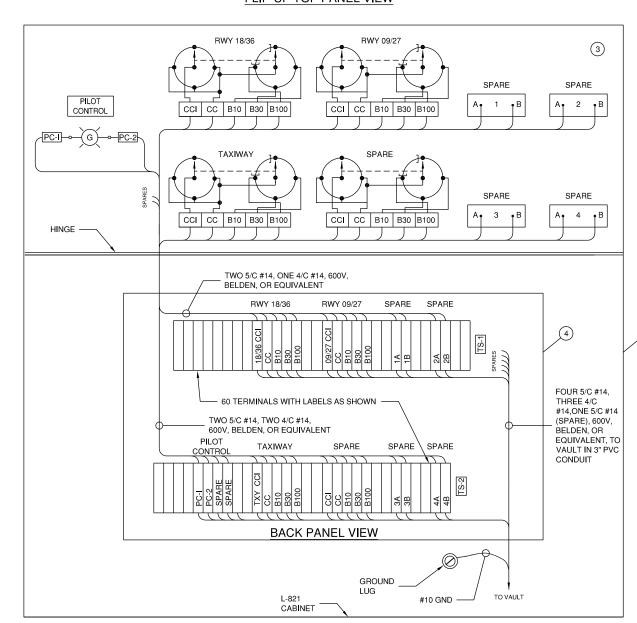
11. TERMINAL BUILDING WALL.

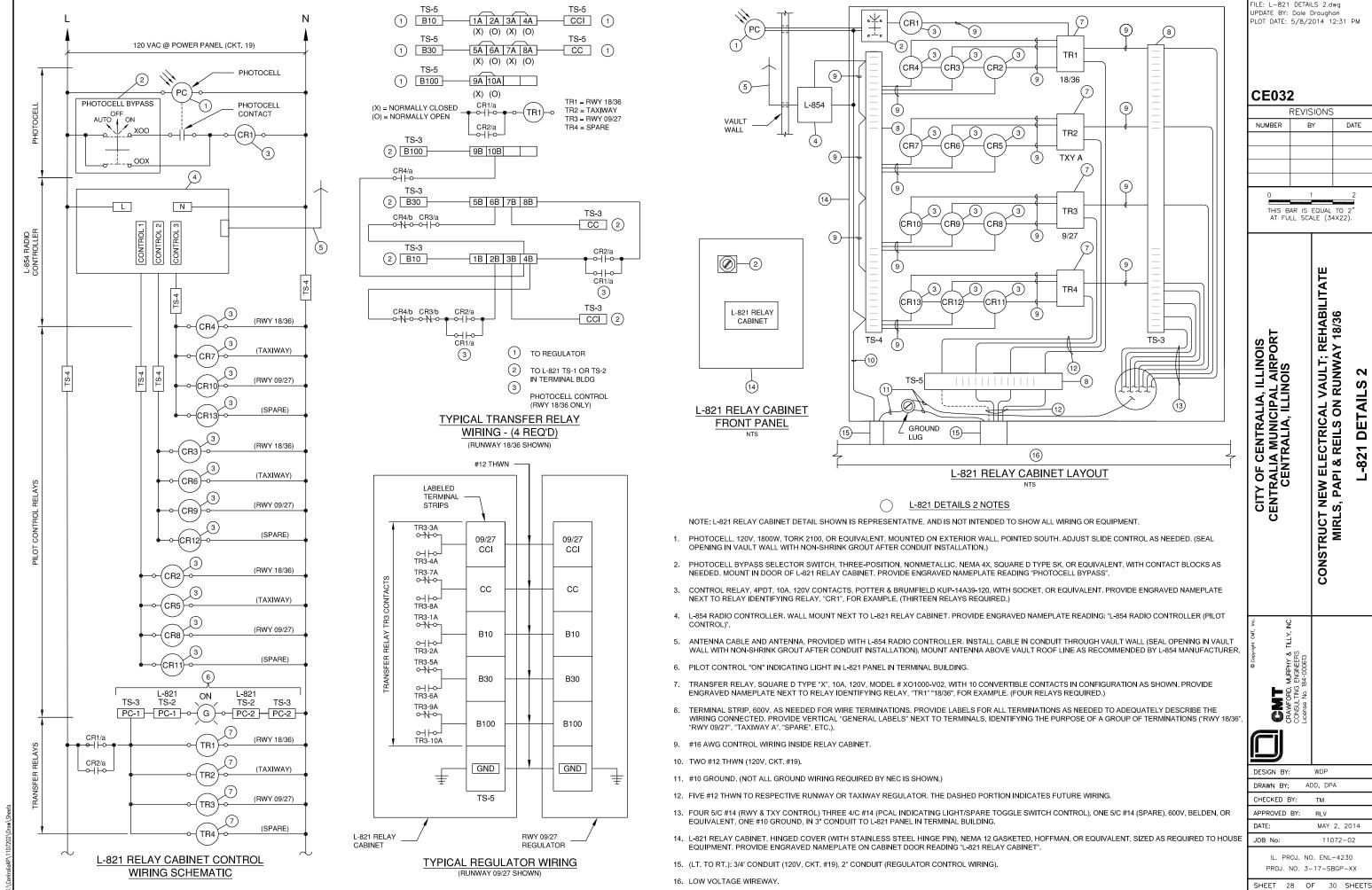
L-821 CABINET IN TERMINAL

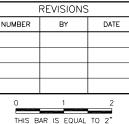


L-821 DETAILS

FILE: L-821 DETAILS 1.dwg UPDATE BY: Dale Draughan PLOT DATE: 5/8/2014 12:30 PM



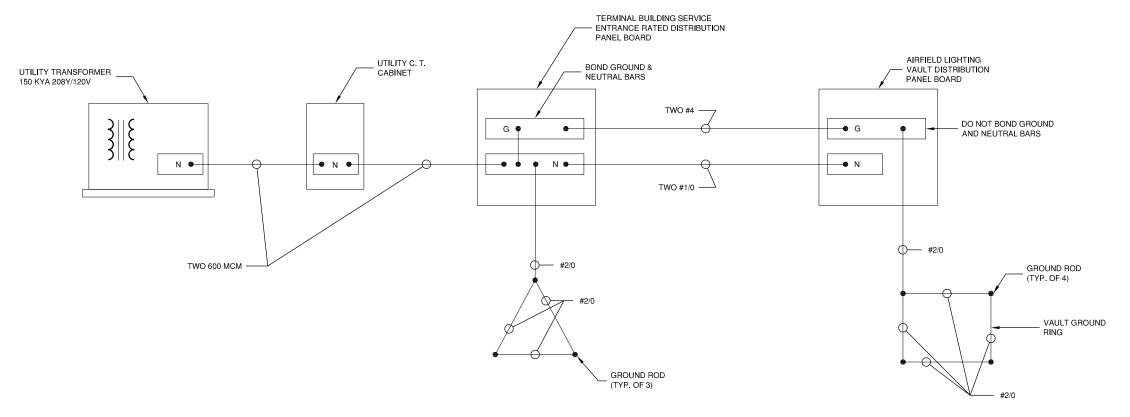




						PA	NELBC	ARI	SC	HEDU	LE						
PANEL DESIGNATION: VAULT LOCATION: VAULT VOLTS: 208Y/120V PHASE: 3 WIRE: 4					BOND NEUTRAL AND GROUND BAR: NO NEUTRAL BUS RATING: 100% SERVICE ENTRANCE RATED: NO							POLE: 30 SHORT CIRCUIT RATING: 30KA SERIES OR FULLY RATED: SERIES SPD & DISCONNECT REQUIRED: YES					
					MOUNTING: SURFACE ENCL RATING: NEMA 1 MAIN						MAIN	BUS RATING (AMPS): 400 BUS: COPPER; SILVER OR TIN PLATED IN CIRCUIT BREAKER: AMP/POLE 300/3					
CKT		BREAKER	LOAD	USAGE	PHASE	E AMPS (I	JSAGE)	PC	LE	PHASE	AMPS (L	JSAGE)	USAGE	LOAD	BREAKER		CKT
NO.	LOAD	SIZE	AMPS	FACTOR	Α	В	С	N	O.	Α	В	С	FACTOR	AMPS	SIZE	LOAD	NO.
1	RUNWAY 18/36 REGULATOR 7.5 KW	70/2	51	0.8	40.8			1	2	40.8			0.8	51	70/2	RUNWAY 09/27 REGULATOR 7.5 KW	2
			51	0.8		40.8		3	4		40.8		0.8	51			
5	TAXIWAY REGULATOR 10 KW	90/2	68	0.8			54.4	5	6			7	1	7	20/2	PAPI 18	6
			68	0.8	54.4			7	8	7			1	7			
9	WALL HEATER 4.8 KW	30/2	24	1		24		9	10		54.4		0.8	68	90/2	FUTURE TAXIWAY REGULATOR 10 KW	10
			24	1			24	11	12			54.4	0.8	68			
13	EXHAUST FAN	20/1	4	1	4			13	14	7			1	7	20/2	PAPI 36	14
15	RECEPTACLES	20/1	16	0.5		8		15	16		7		1	7			
17	PRIMARY WIND CONE	20/1	5	1			5	17	18			4	1	4	20/1	LIGHTS	18
19	L-854 PILOT CONTROL & L-821 RELAY CAB.	20/1	1.5	1	1.5			19	20	0					20/1		20
21		20/1				0		21	22		0				20/1		22
23		20/1					0	23	24			0			20/1		24
25	SURGE PROTECTIVE DEVICE	15/3			0			25	26	0					20/1		26
						0		27	28		0				20/1		28
							0	29	30			0			20/1		30
	SECTION TOTAL:				100.7	72.8	83.4			54.8	102.2	65.4			_		
										A	В	С				TOTAL USAGE LOAD:	
	MINIMUM MAIN CIRCUIT BREAKER AMPS:	249				PHAS	E TOTAL A	MPS:		155.5	175	148.8				5751	6 VA
										A	В	С	-			MIN. XFMR VA:	
						PH	ASE TOTA	L VA:		18660	21000	17856				7189	5 VA

ALL PHASES, MOVING CIRCUITS AS NEEDED.

3.) PROVIDE A TYPED PANELBOARD SCHEDULE (HANDWRITTEN SCHEDULES ARE NOT ACCEPTABLE).



FILE: VAULT DETAILS 3.dwg UPDATE BY: Dale Draughan PLOT DATE: 5/8/2014 12:31 PM CE032 REVISIONS NUMBER BY DATE THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22). CONSTRUCT NEW ELECTRICAL VAULT; REHABILITATE MIRLS, PAPI & REILS ON RUNWAY 18/36 MISCELLANEOUS ELECTRICAL DETAILS CITY OF CENTRALIA, ILLINOIS CENTRALIA MUNICIPAL AIRPORT CENTRALIA, ILLINOIS MURPHY & TILLY, INC. SENGINEERS CRAWFORD, N CONSULTING E License No. 18 WDP DESIGN BY: ADD, DPA DRAWN BY: CHECKED BY: APPROVED BY: RLV MAY 2, 2014 DATE: JOB No: 11072-02 IL. PROJ. NO. ENL-4230

PROJ. NO. 3-17-SBGP-XX

SHEET 29 OF 30 SHEETS

SYSTEM BONDING AND EARTHING

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