

# CITY OF AURORA AURORA, ILLINOIS

## CONSTRUCTION PLANS FOR AURORA MUNICIPAL AIRPORT

INSTALL AIRFIELD LIGHTING CONTROL AND MONITORING  
 SYSTEM (ALCMS) INCLUDING REMOVING EXISTING SYSTEM

ILLINOIS PROJECT: ARR-4522  
 S.B.G. PROJECT: 3-17-SBGP-139

MARCH 2, 2018

### SUMMARY OF QUANTITIES

ITEM NUMBER	DESCRIPTION	UNIT	ESTIMATED QUANTITY	RECORD QUANTITY
AR800032	ATCT ALCMS MODIFICATIONS	LS	1	
AR800049	VAULT ALCMS MODIFICATIONS	LS	1	
AR800178	FIBER OPTIC CABLE	LF	1,860	
AR800192	INSTALL ALCMS L-890	LS	1	

### INDEX TO SHEETS

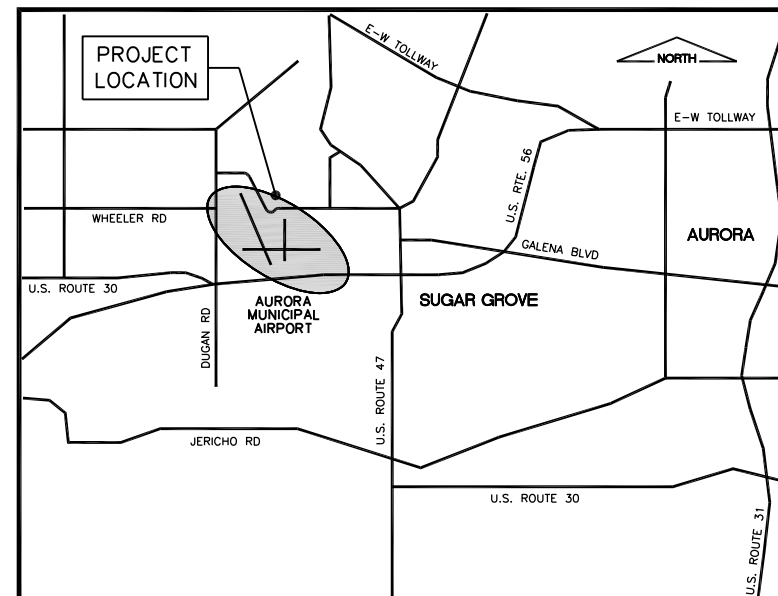
- COVER SHEET
- SEQUENCE OF CONSTRUCTION AND GENERAL NOTES/DETAILS
- ELECTRICAL SITE PLAN
- AIRFIELD LIGHTING VAULT PLAN
- AIR TRAFFIC CONTROL TOWER (ATCT) PLAN
- ALCMS BLOCK DIAGRAM
- ELECTRICAL DETAILS



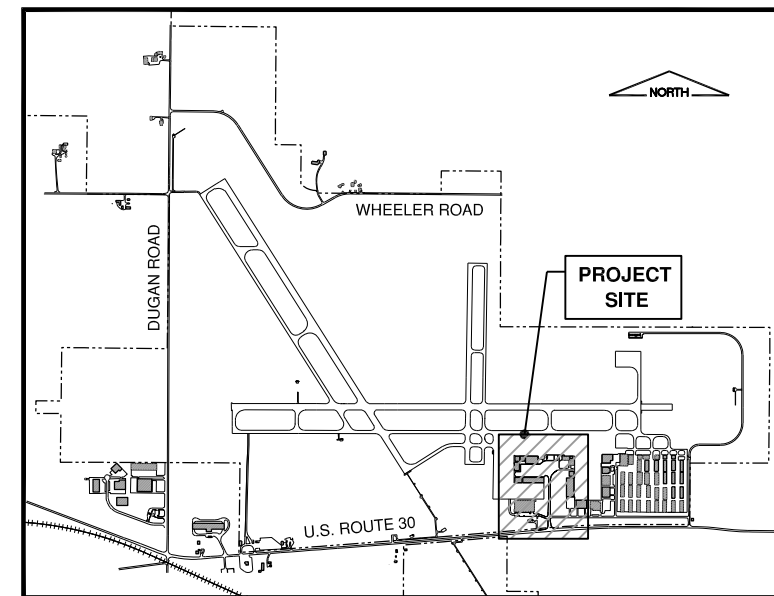
**811** Know what's below. Call before you dig. [www.illinois1call.com](http://www.illinois1call.com)

J.U.L.I.E. JOINT UTILITY LOCATING INFORMATION FOR EXCAVATORS

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 ACTUAL LOCATIONS OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY UTILITY COMPANIES OF HIS OPERATIONAL PLANS, OBTAIN FROM 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 AND THE ONE-CALL NOTICE SYSTEM. THE ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY SUCH UTILITY OR SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.



LOCATION MAP



SITE PLAN

AURORA ILLINOIS CITY OF LIGHTS  
 AURORA MUNICIPAL AIRPORT

CITY OF AURORA, ILLINOIS

APPROVED BY *Richard C. Irvin* MAYOR  
 RICHARD C. IRVIN

DATE MARCH 2 2018

APPROVED BY *Stephen K. Andras* AIRPORT MANAGER  
 STEPHEN K. ANDRAS, P.E.

DATE 3-1- 2018

**CMT** 17285-02  
 CRAWFORD MURPHY & TILLY, INC.  
 CONSULTING ENGINEERS

SUBMITTED BY *Asad Bajwa*  
 ASAD BAJWA, P.E.

DATE March 02, 2018

CALL J.U.L.I.E BEFORE EXCAVATING  
 AT 811

AURORA MUNICIPAL AIRPORT

SECTION: 17 AND 18 COUNTY: KANE  
 RANGE: 7 EAST U.S. ROUTE 30  
 TOWNSHIP: 38 NORTH SUGAR GROVE TOWNSHIP

**GENERAL NOTES**

- THE SUGGESTED SEQUENCE OF CONSTRUCTION SHOWN IS INTENDED TO ALLOW FOR THE ORDERLY CONSTRUCTION OF THE PROPOSED IMPROVEMENTS WHILE MAINTAINING VEHICLE ACCESS AT ALL TIMES. THE PHASING SHOWN IS A SUGGESTED SEQUENCE OF CONSTRUCTION ONLY. THIS SEQUENCE MAY BE MODIFIED HOWEVER, ALTERNATE STAGING PLANS MUST MAINTAIN AIRPORT OPERATIONS TO THE SATISFACTION OF THE AIRPORT MANAGER AND RESIDENT ENGINEER AND BE APPROVED BY IDOT AERONAUTICS AND FEDERAL AVIATION ADMINISTRATION.
- ALL OPERATIONS SHALL BE IN CONFORMANCE WITH AC 150/5370 (LATEST EDITION) "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION".
- CONTRACTOR'S EQUIPMENT SHALL BE STORED IN THE EQUIPMENT AND MATERIAL STORAGE/STAGING AREA WHEN CONSTRUCTION IS NOT IN PROGRESS. NO EXCEPTIONS FOR SLOW MOVING EQUIPMENT SHALL BE ALLOWED
- THE AIRPORT MANAGER SHALL HAVE FINAL SAY IN THE APPROVAL OF THE CONSTRUCTION OPERATING PHASING AND SEQUENCE AS IT RELATES TO PEDESTRIAN AND VEHICULAR SAFETY.
- ALL EXISTING PAVEMENTS, DRIVES OR ANY OTHER AREAS USED AS A HAUL ROAD OR STORAGE AREA BY THE CONTRACTOR SHALL BE RESTORED IN KIND TO THEIR PRE-CONSTRUCTION CONDITION OR TO THE SATISFACTION OF THE RESIDENT ENGINEER AND AIRPORT MANAGER. THE COST OF MAINTAINING, REPAIRING OR CONSTRUCTING THESE PAVEMENTS AND AREAS SHALL BE INCIDENTAL TO THE CONTRACT. EXISTING AREAS OUTSIDE THE PROJECT LIMITS WHICH ARE DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY HIM AT HIS EXPENSE TO THE SATISFACTION OF THE RESIDENT ENGINEER AND THE AIRPORT MANAGER.
- THE CONTRACTOR SHALL KEEP ALL TRUCKS, EQUIPMENT AND MATERIALS OFF OF THE TENANT PARKING LOTS AND DRIVEWAYS OUTSIDE OF THE PROJECT LIMITS EXCEPT AS SHOWN OR WITH THE PRIOR PERMISSION OF THE ENGINEER AND AIRPORT.
- WORK PERFORMED BY THE CONTRACTOR OUTSIDE OF DAYLIGHT HOURS SHALL BE DONE UNDER SUFFICIENT ARTIFICIAL LIGHTING TO ALLOW FOR PROPER CONSTRUCTION METHODS AND INSPECTIONS. LIGHT SHALL CONSIST OF MOVABLE POLE MOUNTED FLOODLIGHTS AND/OR SPOTLIGHTS OF SUFFICIENT NUMBER TO ILLUMINATE THE WORK AREA. VEHICLE HEADLIGHTS WILL BE ALLOWED ONLY IN ADDITION TO OTHER LIGHTS MENTIONED ABOVE. LIGHTING SHALL BE AS APPROVED BY THE ENGINEER AND SHALL NOT BE USED IF THEY AFFECT FLIGHT SAFETY. CONTRACTOR'S WORK HOURS SHALL BE IN ACCORDANCE WITH LOCAL ORDINANCES.
- THE CONTRACTOR WILL BE REQUIRED TO HAVE A SWEEPER AVAILABLE FOR USE AT ALL TIMES. MATERIAL TRACKED ON TO THE PAVEMENT SHALL BE CONTINUALLY REMOVED WITH SAID SWEEPER. THIS SWEEPING SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
- MATERIALS REMOVED FROM THE PROJECT WILL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OFF AIRPORT PROPERTY, UNLESS NOTED OTHERWISE.
- PAYMENT FOR TRAFFIC CONTROL INCLUDING, BUT NOT LIMITED TO BARRICADES, CONSTRUCTION FENCE, SIGNING, , ETC. SHALL NOT BE PAID SEPARATELY, BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. BARRICADES SHALL HAVE FLASHING RED LIGHT(S) AND CONFORM TO IDOT STANDARD 701901-02, TYPE II. SIGNS SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
- THE CONTRACTOR SHALL CONTACT THE AIRPORT MANAGER THROUGH THE RESIDENT ENGINEER TEN (10) WORKING DAYS IN ADVANCE OF THE START OF CONSTRUCTION SO THAT THE APPROPRIATE NOTAMS MAY BE ISSUED.
- IN THE CASE OF AN EMERGENCY, CONTRACTOR SHALL NOTIFY AIRPORT MANAGER AND THE RESIDENT ENGINEER IMMEDIATELY.
- DURING ADVERSE WEATHER, THE CONTRACTOR SHALL MAKE PROVISIONS FOR ACCESS TO THE WORK AT NO ADDITIONAL COST TO THE CONTRACT. NO EXTENSION OF CONTRACT TIME WILL BE CONSIDERED FOR DELAYS DUE TO LACK OF ADEQUATE ACCESS TO THE WORK.
- AURORA MUNICIPAL AIRPORT WILL BE IN OPERATION DURING THE CONSTRUCTION OF THIS PROJECT. COORDINATION OF WORK WITH THE AIRPORT IS MANDATORY SO AS TO MINIMIZE IMPACTS ON AIRPORT OPERATIONS.
- APPROXIMATE LOCATION OF HAUL ROUTES ON THE AIRPORT SITE ARE SHOWN ON THE GENERAL PROJECT LAYOUT AND THE PHASING PLANS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE OFF-SITE HAUL ROUTES (STATE HIGHWAYS, COUNTY ROADS OR CITY STREETS) WITH THE APPROPRIATE OWNER WHO HAS JURISDICTION OVER THE AFFECTED ROUTE. ON-SITE ROADS USED AS HAUL ROUTES SHALL BE MAINTAINED BY THE CONTRACTOR AND SHALL BE RESTORED AT THE CONTRACTOR'S EXPENSE TO THEIR ORIGINAL CONDITION UPON COMPLETION OF BEING USED AS A HAUL ROUTE. THE BEFORE AND AFTER CONDITION OF ON-SITE HAUL ROUTES SHALL BE JOINTLY INSPECTED AND DETERMINED BY THE CONTRACTOR AND THE ENGINEER. FENCING, DRAINAGE, GRADING AND OTHER MISCELLANEOUS CONSTRUCTION REQUIRED TO CONSTRUCT TEMPORARY HAUL ROUTES OR ACCESS POINTS ON THE AIRPORT WILL BE THE CONTRACTOR'S TOTAL RESPONSIBILITY AND SHALL BE APPROVED BY THE ENGINEER PRIOR TO THE WORK. ALL ON-SITE ACCESS ROADS TO AIRPORT FACILITIES SHALL REMAIN OPEN AND MAINTAINED AT ALL TIMES.
- MOBILIZATION/EQUIPMENT STORAGE AREA WILL BE MADE AVAILABLE FOR CONTRACTOR'S MOBILIZATION AND STORAGE AS SHOWN ON THE PLANS. THIS AREA SHALL BE RESTORED TO THE ORIGINAL CONDITION UPON COMPLETION OF THE PROJECT AT THE CONTRACTOR'S EXPENSE.
- LOCATION OF KNOWN EXISTING AIRPORT UNDERGROUND CABLES ARE SHOWN ON THE PLANS AND MUST BE VERIFIED BY THE CONTRACTOR. REPAIR OF DAMAGED CABLE MUST BE STARTED IMMEDIATELY AND CONTINUED UNTIL COMPLETED. ALL SUCH REPAIRS SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS, OR AS DIRECTED BY THE OWNER OF THE CABLE OR FACILITY, AND SHALL BE AT THE CONTRACTOR'S EXPENSE. IF FAA CABLES ARE DAMAGED, REPAIRS SHALL BE DONE FROM PREVIOUS EXISTING TERMINATION POINT TO PREVIOUS EXISTING TERMINATION POINT IN ACCORDANCE WITH FAA REQUIREMENTS AND IN THE PRESENCE OF A FAA REPRESENTATIVE. THE OWNER MAY ELECT TO HAVE THE REPAIR PERFORMED BY OTHERS IN WHICH CASE THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYING THE INCURRED COSTS OF REPAIRS.
- COORDINATION MEETINGS - THE CONTRACTOR SHALL CONDUCT WEEKLY COORDINATION MEETINGS TO DISCUSS WORK AREAS AND SCHEDULING, ETC. WITH THE ENGINEER, AIRPORT OPERATIONS, FAA, AND OTHER APPROPRIATE OFFICIALS. MINUTES FROM THE WEEKLY MEETINGS SHALL BE PREPARED BY THE CONTRACTOR, FURNISHED TO ALL ATTENDEES PRIOR TO THE SUBSEQUENT MEETING, AND KEPT ON FILE AT THE FIELD OFFICE. THE COORDINATION MEETING COSTS SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.
- THE CONTRACTOR SHALL PROVIDE THE PHONE NUMBERS OF THREE PERSONNEL, INCLUDING THE PROJECT SUPERINTENDENT, WHO MAY BE CONTACTED IN AN EMERGENCY. PERSONNEL SHALL BE ON CALL 24 HOURS PER DAY FOR MAINTAINING AIRPORT HAZARD LIGHTING AND BARRICADES.
- ALL EXISTING TAXIWAY AND RUNWAY AIRFIELD LIGHTING CIRCUITS, FAA CABLES AND OTHER ELECTRICAL CABLES SHALL REMAIN IN SERVICE AT ALL TIMES. ALL EXISTING LIGHTING AND VAULT EQUIPMENT SHALL REMAIN IN SERVICE UNTIL PROPOSED IMPROVEMENTS ARE INSTALLED AND OPERATIONAL, UNLESS OTHERWISE APPROVED BY THE ENGINEER. ANY CABLES DAMAGED BY THE CONTRACTOR SHALL BE IMMEDIATELY REPAIRED AT HIS EXPENSE. ANY NECESSARY TEMPORARY JUMPER CABLES SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
- COORDINATION BY THE CONTRACTOR WITH THE EXISTING UTILITIES SHALL BE COMPLETED BEFORE CONSTRUCTION IS STARTED. CONTRACTOR IS REFERRED TO SECTION 50-17 OF THE SPECIAL PROVISIONS FOR SPECIFIC REQUIREMENTS. THE LOCATION OF UNDERGROUND UTILITIES AS INDICATED ON THE PLANS HAS BEEN OBTAINED FROM EXISTING RECORDS. NEITHER THE OWNER OR THE DESIGN ENGINEER ASSUME ANY RESPONSIBILITY WHATSOEVER IN RESPECT TO THE ACCURACY, COMPLETENESS OR SUFFICIENCY OF THE INFORMATION. THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED THAT THE LOCATIONS, SIZE AND TYPE MATERIAL OF EXISTING UNDERGROUND UTILITIES AS INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED DURING CONSTRUCTION. 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 COMPANY OF HIS OPERATIONAL PLANS. THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR DETAILED INFORMATION AND ASSISTANCE IN LOCATING UTILITIES. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY, THE RESIDENT ENGINEER AND THE AIRPORT MANAGER. ANY SUCH MAINS AND/OR SERVICES DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED IMMEDIATELY AT HIS EXPENSE TO THE SATISFACTION OF THE RESIDENT ENGINEER AND AIRPORT MANAGER.

- CONTRACTOR WILL BE REQUIRED TO PUT AIRPORT FLAGS OR A WORKING BEACON LIGHT ON ALL EQUIPMENT AT ALL TIMES DURING CONSTRUCTION. SEE FLAG DETAIL.
- ALL AIRFIELD LIGHTING AND LIGHTING GUIDANCE SYSTEMS (NAVAIDS) LOCATED WITHIN AND IMMEDIATELY ADJACENT TO THE CONTRACTORS WORK ZONE SHALL BE CHECKED FOR OPERATIONAL CONDITION PRIOR TO THE DEPARTURE FROM THE AIRPORT WITH THE AIRPORT MANAGER. ANY DEFICIENCIES IN THESE SYSTEMS DUE TO THE ACTS OF CONTRACTOR OR HIS SUBCONTRACTORS, SUPPLIERS OR CONSULTANTS SHALL BE REPAIRED IMMEDIATELY.
- PREPARE A SAFETY PLAN COMPLIANCE DOCUMENT. THE SAFETY PLAN COMPLIANCE DOCUMENT (SPCD) DETAILS HOW THE CONTRACTOR WILL COMPLY WITH THE CSPP. ALSO, IT WILL NOT BE POSSIBLE TO DETERMINE ALL SAFETY PLAN DETAILS (FOR EXAMPLE SPECIFIC HAZARD EQUIPMENT AND LIGHTING, CONTRACTOR'S POINTS OF CONTACT, CONSTRUCTION EQUIPMENT HEIGHTS) DURING THE DEVELOPMENT OF THE CSPP. THE SUCCESSFUL CONTRACTOR MUST DEFINE SUCH DETAILS BY PREPARING AND SPCD THAT THE AIRPORT OPERATOR REVIEWS FOR APPROVAL PRIOR TO ISSUANCE OF A NOTICE-TO-PROCEED. THE SPCD IS A SUBSET OF THE CSPP, SIMILAR TO HOW A SHOP DRAWING REVIEW IS A SUBSET TO THE TECHNICAL SPECIFICATIONS.

CONTRACTOR SHALL PLAN AND PERFORM HIS WORK SO AS NOT TO INTERFERE OR HINDER THE PROGRESS, WORK OR HAUL ROAD ACCESS OF OTHER CONTRACTORS. THE PRIME CONTRACTOR WILL BE RESPONSIBLE TO COORDINATE CONSTRUCTION ACTIVITIES AND ACCESS BETWEEN ALL ON-SITE CONTRACTORS SUBCONTRACTORS. IT IS ANTICIPATED THE FOLLOWING PROJECTS MAY BE UNDER CONSTRUCTION CONCURRENTLY WITH THIS PROJECT. NO ADDITIONAL COMPENSATION SHALL BE CONSIDERED FOR ANY EFFORTS TO COORDINATE AND ACCESS THE SITE DUE TO ADJACENT CONSTRUCTION

- OVERLAY SOUTHEAST QUADRANT PERIMETER ROADWAYS.

**SUGGESTED SEQUENCE OF CONSTRUCTION**

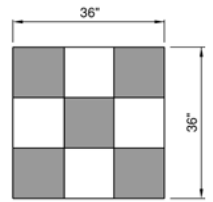
- SUBMIT MATERIAL SOURCES AND SHOP DRAWINGS (ALL MATERIALS SHALL BE AVAILABLE AND ON HAND BEFORE NOTICE TO PROCEED IS ISSUED).
- CONSTRUCT ELECTRICAL ITEMS NOT REQUIRING AIRFIELD LIGHTING DISCONNECTIONS.
- COORDINATE DECOMMISSIONING OF EXISTING ALCMS WITH AIRPORT AND RESIDENT ENGINEER.
- CONSTRUCT REMAINING ELECTRICAL ITEMS.
- COMMISSION NEW ALCMS.

**TABLE 1 - CRITICAL POINTS**

POINT	APPROXIMATE ELEVATION OF GROUND (NGVD 88)	ANTICIPATED EQUIPMENT AND HEIGHT	APPROXIMATE ELEVATION OF EQUIPMENT (NGVD 88)	LATITUDE (NAD 83)	LONGITUDE (NAD 83)
CP1	709.0	SEMI-DUMP TRUCK - 25'	734.0	41°46'05.59"	88°28'00.90"
CP2	701.0	SEMI-DUMP TRUCK - 25'	726.0	41°45'55.22"	88°28'04.83"

**LEGEND**

- WORK AREA LIMITS
- CRITICAL POINT AND NUMBER
- CONTRACTOR'S HAUL ROUTE
- AIRCRAFT MOVEMENT AREA
- CONTRACTOR'S EMPLOYEE PARKING, EQUIPMENT AND MATERIAL STORAGE LOCATION



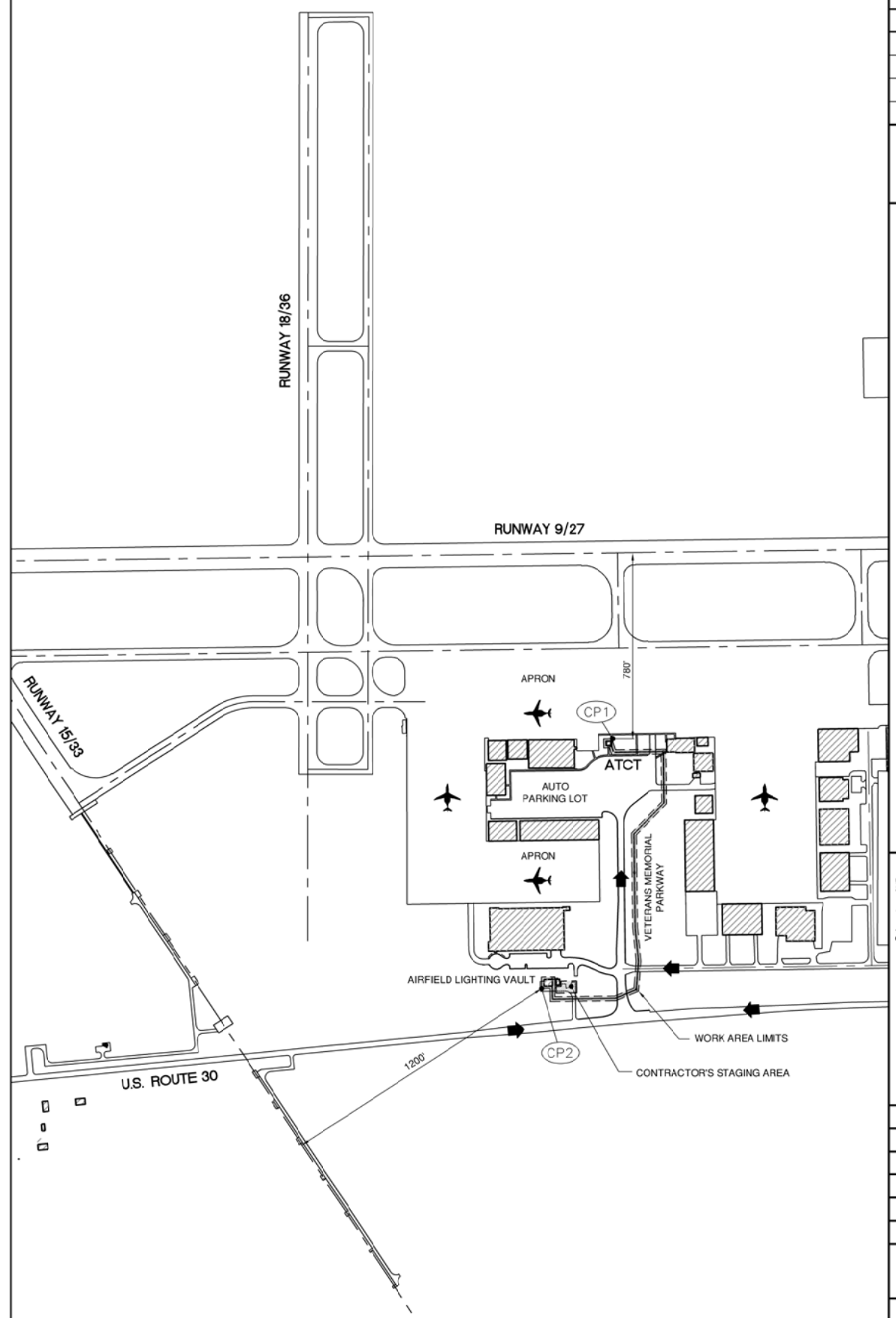
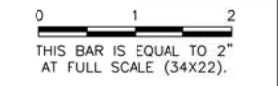
**CONSTRUCTION EQUIPMENT AND TRUCK SIGNAL FLAG**  
NOT TO SCALE



IL CONTRACT: **AU067**  
IL LETTING ITEM: **05A**  
IL PROJECT: **ARR-4522**  
S.B.G. PROJECT: **3-17-SBGP-139**

SURVEY BOOK #

REVISIONS		
NUMBER	BY	DATE



**AURORA MUNICIPAL AIRPORT**  
**AURORA, ILLINOIS**  
**INSTALL AIRFIELD LIGHTING CONTROL AND MONITORING SYSTEM**  
**SEQUENCE OF CONSTRUCTION AND GENERAL NOTES/DETAILS**

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DESIGN BY:	DKP
DRAWN BY:	JRO
CHECKED BY:	DKP
APPROVED BY:	DKP
DATE:	3/2/2018
JOB No:	17285-02-00

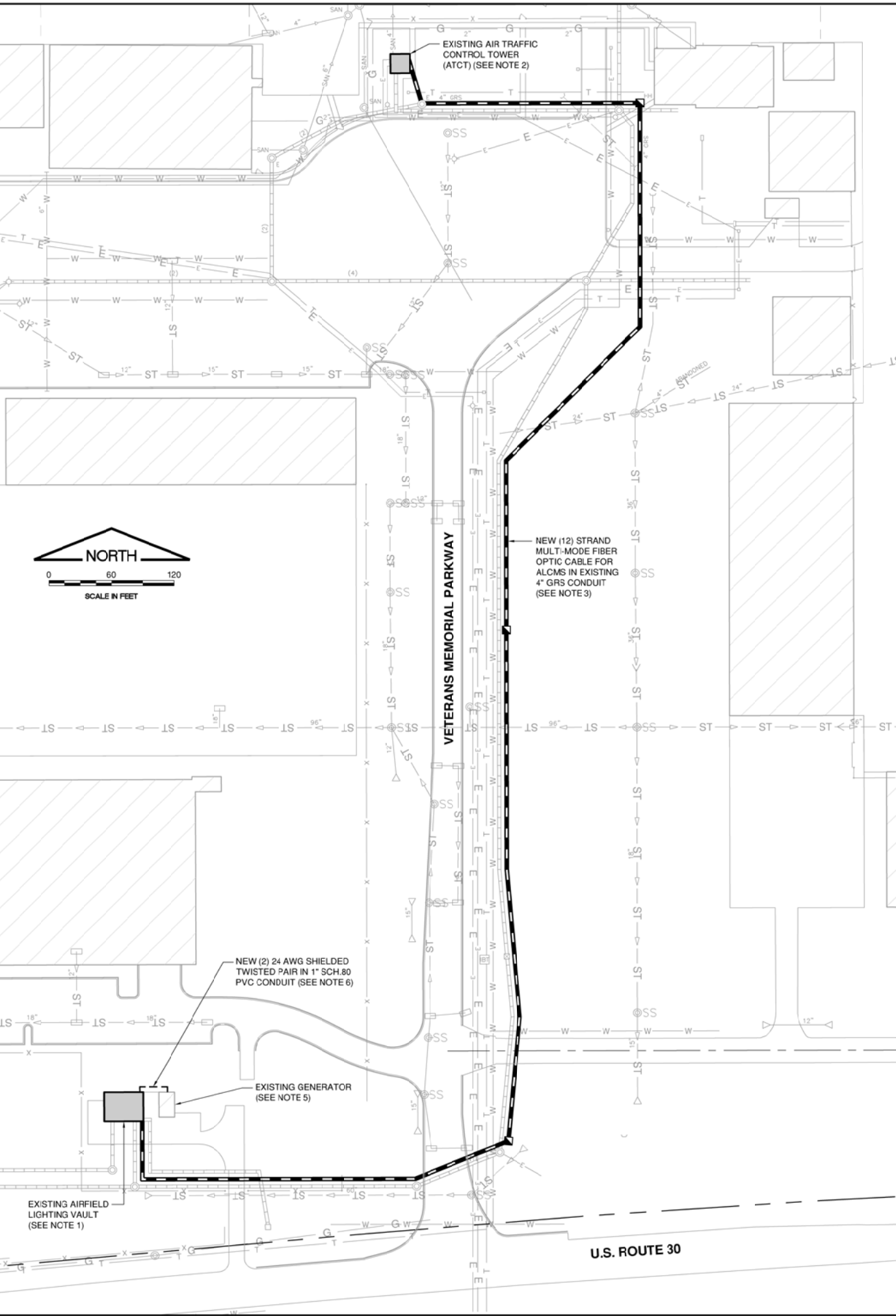
REF: DWG: 17285-02-ALCMS Draw Sheet - Sequence.dwg  
 IMAGE FILE: Aurora Municipal Airport Logo FINAL PMS.png  
 UPDATE BY: Jim Choe  
 LAYOUT: 17285-02-ALCMS Draw Sheet - Sequence.dwg  
 DATE: Friday, March 2, 2018 10:55:02 AM  
 FILE: K:\aurodrag\17285-02-ALCMS Draw Sheet - Sequence.dwg

XREF DWG: recent air.dwg  
AAE:electrical base.dwg

IMAGE FILE: Aurora Municipal Airport Logo FINAL.PMS.png

UPDATE BY: Jim Chase  
LAYOUT: TAOYAT

DATE: Friday, March 2, 2018 10:55:42 AM  
FILE: K:\Aurora\17285-02 ALCMS Draw\Sheet\elec Site Plan.dwg



### LEGEND

- EXISTING 4" GRS CONDUIT, DIRECT BURY  
NEW (12) STRAND MULTI-MODE FIBER OPTIC CABLE
- NEW (2) 24 AWG SHIELDED TWISTED PAIR IN  
1" GRS CONDUIT
- EXISTING HANDHOLE
- EXISTING MANHOLE

### NOTES

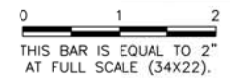
1. REFER TO AIRFIELD LIGHTING VAULT PLAN FOR ALCMS EQUIPMENT AND FIBER ROUTING INSIDE THE VAULT.
2. REFER TO AIR TRAFFIC CONTROL TOWER (ATCT) PLAN FOR ALCMS EQUIPMENT AND FIBER OPTIC ROUTING INSIDE ATCT.
3. REMOVE EXISTING ALCMS FIBER OPTIC CABLE FROM CONDUIT AFTER NEW (12) STRAND MULTI-MODE FIBER OPTIC CABLE IN EXISTING CONDUIT HAS BEEN INSTALLED. PROVIDE MINIMUM OF (10) FEET SLACK IN EACH HANDHOLE/MANHOLE (COST INCIDENTAL).
4. CONTRACTOR SHALL USE SAME EXISTING CONDUIT FOR INSTALLATION OF NEW FIBER OPTIC CABLE. LABEL AND TAG NEW FIBER OPTIC CABLE IN EACH HANDHOLE AND MANHOLE.
5. EXISTING ATS IS LOCATED INSIDE THE GENERATOR ENCLOSURE. INSTALL INTERFACE UNIT INSIDE GENERATOR ENCLOSURE. INSTALL NEW (2) 24 AWG SHIELDED TWISTED PAIR IN 1" CONDUIT TO ALCMS.
6. INSTALL NEW ALCMS COMMUNICATION CABLE IN 1" CONDUIT FROM VAULT TO NEW ALCMS INTERFACE MODULE IN GENERATOR ENCLOSURE. INSTALL "LB" AS REQUIRED. COST SHALL BE INCLUDED IN PAY ITEM "AR800049".

IL CONTRACT: **AU067**  
 IL LETTING ITEM: **05A**  
 IL PROJECT: **ARR-4522**  
 S.B.G. PROJECT: **3-17-SBGP-139**

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 AURORA, ILLINOIS

INSTALL AIRFIELD LIGHTING CONTROL AND MONITORING SYSTEM

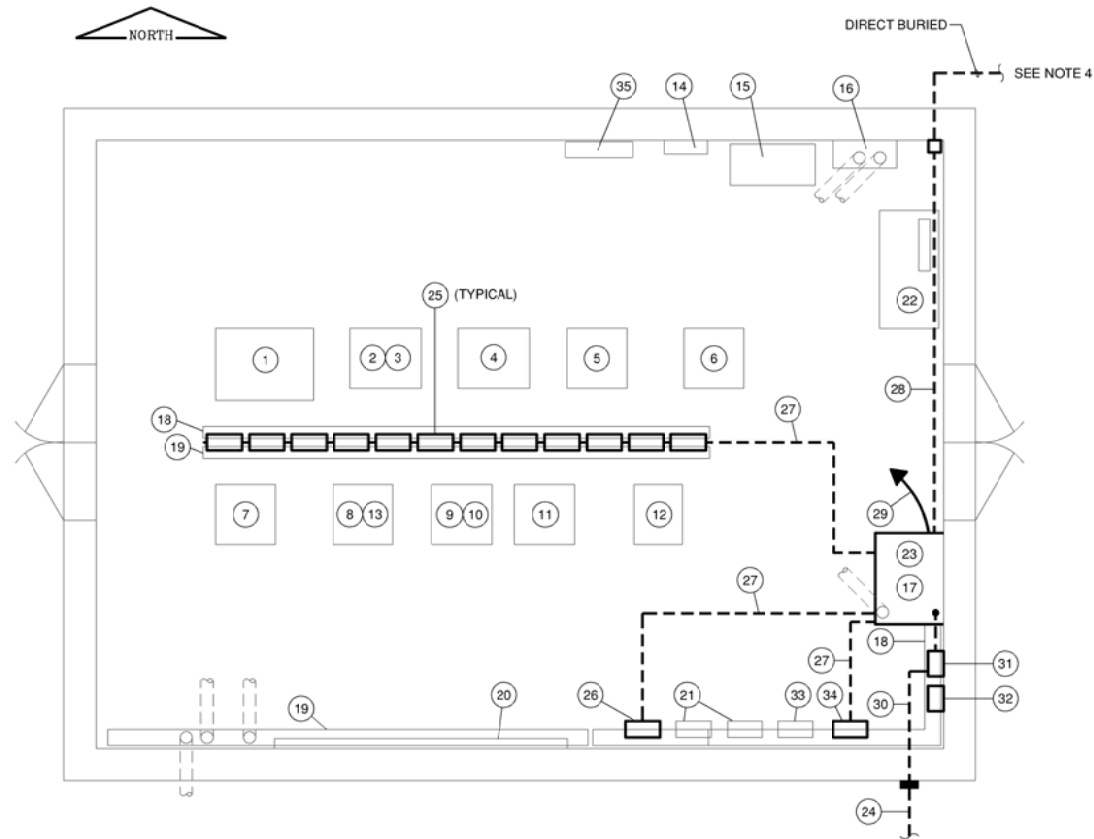
ELECTRICAL SITE PLAN

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**AURORA**  
MUNICIPAL AIRPORT

DESIGN BY:	AB
DRAWN BY:	JRO
CHECKED BY:	AB
APPROVED BY:	AB
DATE:	3/2/2018
JOB No:	17285-02-00

FINAL



**AIRFIELD ELECTRICAL VAULT PLAN VIEW**  
NOT TO SCALE

**NOTES**

1. ALL NEW WORK OR ITEMS BEING MODIFIED ARE SHOWN IN BOLD. ALL OTHER ITEMS SHOWN ARE FOR INFORMATIONAL PURPOSE ONLY.
2. NEW ALCMS RACK SHALL BE SUPPLIED WITH WHEELS. NEW ALCMS SHALL BE OPERATIONAL AND TESTED PRIOR TO THE REMOVAL OF EXISTING PLC CABINET. PROVIDE SUFFICIENT CABLE SLACK REQUIRED FOR ALCMS RACK TO BE OPERATIONAL.
3. INSTALL NEW 1-20A, 1-POLE CIRCUIT BREAKER IN EXISTING LOW VOLTAGE LIGHTING PANEL FOR NEW ALCMS. INSTALL 2 #12, 1 #12 GND. IN 3/4" CONDUIT.
4. EXISTING ATS IS LOCATED INSIDE THE GENERATOR ENCLOSURE. INSTALL INTERFACE UNIT INSIDE GENERATOR ENCLOSURE. INSTALL NEW (2) 24 AWG SHIELDED TWISTED PAIR IN 1" GRS CONDUIT TO ALCMS.
5. INSTALL NEW INTERFACE CONTROL PANEL AND INSULATION RESISTANCE MEASURING SYSTEM ON UNISTRUT FRAME NEXT TO EACH REGULATOR. SEE DETAIL ON SHEET 7.
6. EXISTING ALCMS, ALCMS COMPONENTS AND CONTROL WIRES TO EACH REGULATORS SHALL BE COMPLETELY REMOVED AND DISPOSED OF OFF SITE.
7. ALL WORK ASSOCIATED WITH ALCMS IN VAULT SHALL BE INCLUDED IN LUMP SUM PAY ITEM "AR 800049".
8. REMOVE OR RE-USE EXISTING PATCH PANEL TO TERMINATE NEW FIBER OPTIC CABLE FOR ALCMS.
9. INSTALL NEW INTERFACE CONTROL PANELS TO CONTROL LAHSO, RADIO CONTROL, WINDTEE AND REILS.

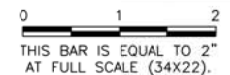
**AURORA MUNICIPAL AIRPORT VAULT NOMENCLATURE**

- 1 EXISTING 20 KW REGULATOR SPARE (HEVI-DUTY).
- 2 EXISTING 15 KW REGULATOR FOR TAXIWAY A (WEST)(HONEYWELL).
- 3 EXISTING 15 KW REGULATOR FOR TAXIWAY D (HONEYWELL).
- 4 EXISTING 15 KW REGULATOR FOR TAXIWAY C (HEVI-DUTY).
- 5 EXISTING 10 KW REGULATOR FOR TAXIWAY P (HEVI-DUTY).
- 6 EXISTING 20 KW REGULATOR FOR TAXIWAY A (EAST)(HEVI-DUTY).
- 7 EXISTING 30 KW REGULATOR FOR RUNWAY 9/27 (HONEYWELL).
- 8 EXISTING 30 KW REGULATOR (SPARE).
- 8 EXISTING 30 KW REGULATOR FOR RUNWAY 9/27 (HONEYWELL).
- 9 EXISTING 20 KW REGULATOR FOR TAXIWAY B (HONEYWELL).
- 10 EXISTING 30 KW REGULATOR FOR RUNWAY 18/36 (HONEYWELL).
- 11 EXISTING 30 KW FOR RUNWAY 15/33 (HONEYWELL).
- 12 EXISTING 10 KW REGULATOR FOR RUNWAY 9/27 RDR (MAINAIRCO).
- 13 EXISTING 30 KW REGULATOR SPARE (HONEYWELL).
- 14 EXISTING LOW VOLTAGE LIGHTING PANEL. 225A, 120/208Y, 3 PHASE, 4 WIRE.
- 15 EXISTING 150KVA 480-120/208Y, 3 PHASE LIGHTING TRANSFORMER.
- 16 EXISTING HIGH VOLTAGE LIGHTING PANEL. 600A, 480/277V, 3 PHASE.
- 17 EXISTING AIRFIELD LIGHTING CONTROL PLC CABINET TO BE REMOVED (SEE NOTE 6).
- 18 EXISTING 8" BY 8" LOW VOLTAGE WIREWAY.
- 19 EXISTING 8" BY 8" HIGH VOLTAGE WIREWAY.
- 20 EXISTING PLUG CUTOUT, GROUNDING SWITCH AND INDICATOR LIGHT FOR REGULATORS.
- 21 EXISTING (3) L 884 PCU CONTROLLERS FOR LAHSO CIRCUITS.
- 22 EXISTING DESK. REMOVE EXISTING ALCMS COMPUTER AND PRINTER.
- 23 NEW L-890 AIRFIELD LIGHTING CONTROL AND MONITORING SYSTEM (ALCMS) EQUIPMENT RACK WITH TOUCHSCREEN MONITOR AND PRINTER (SEE NOTE 2).
- 24 NEW (12) STRAND MULTI-MODE FIBER OPTIC CABLE IN EXISTING CONDUIT TO ATCT. SEE ELECTRICAL SITE PLAN FOR ROUTING.
- 25 NEW INTERFACE CONTROL PANEL AND INSULATION RESISTANCE MEASURING SYSTEM MOUNTED ON UNISTRUT FRAME (SEE NOTE 5).
- 26 NEW INTERFACE CONTROL PANEL FOR LOW VOLTAGE AIRFIELD CIRCUITS, BEACON, WINDTEE AND REILS.
- 27 NEW (2) 24 AWG SHIELDED TWISTED PAIR CABLE IN 1" CONDUIT FOR COMMUNICATION BETWEEN REGULATOR INTERFACE UNITS AND ALCMS.
- 28 NEW (2) 24 AWG SHIELDED TWISTED PAIR CABLE IN 1" CONDUIT FOR COMMUNICATION BETWEEN GENERATOR/ATS INTERFACE UNIT AND ALCMS.
- 29 NEW (2) #12, (1) #12 GND. IN 3/4" CONDUIT TO LOW VOLTAGE PANEL.
- 30 NEW (12) STRAND MULTIMODE FIBER OPTIC CABLE IN 1" CONDUIT.
- 31 EXISTING FIBER OPTIC PATCH PANEL (NOTE 8).
- 32 EXISTING L-854 RADIO CONTROLLER (NOTE 9).
- 33 EXISTING CONTACTORS FOR RUNWAY 27 REILS AND WINDTEE (NOTE 9)
- 34 NEW INTERFACE CONTROL PANEL FOR L-854 RADIO CONTROL AND LAHSO.
- 35 EXISTING APRON LIGHTING PANEL AND CONTACTOR.

IL CONTRACT: **AU067**  
IL LETTING ITEM: **05A**  
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**AURORA MUNICIPAL AIRPORT**  
**AURORA, ILLINOIS**

**INSTALL AIRFIELD LIGHTING CONTROL AND MONITORING SYSTEM**

**AIRFIELD LIGHTING VAULT PLAN**

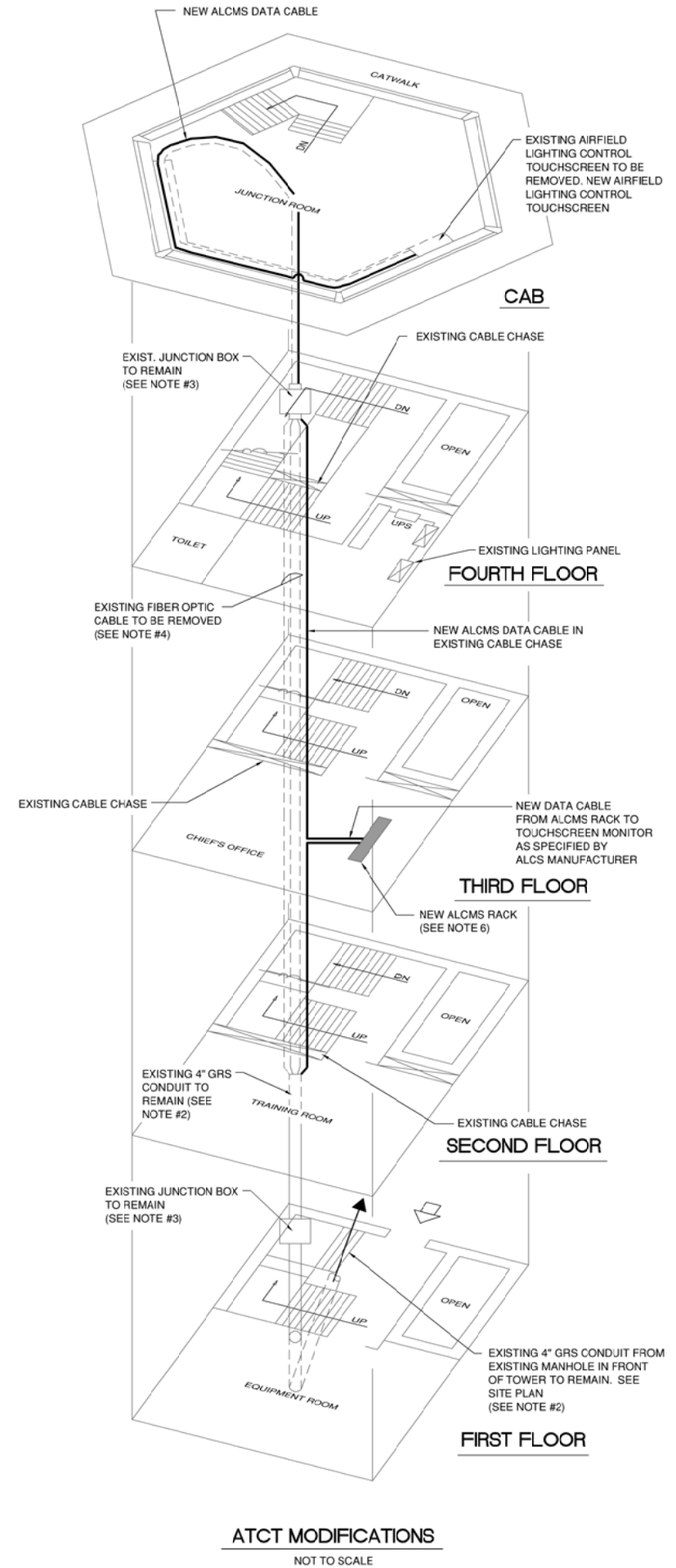
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**NOTES:**

1. CONTRACTOR SHALL COORDINATE ALL WORK IN THE EXISTING CONTROL TOWER WITH THE AIRWAYS FACILITIES AND THE RESIDENT ENGINEER. CONTRACTOR SHALL GIVE A MINIMUM OF 14 DAYS NOTICE PRIOR TO BEGINNING WORK IN THE EXISTING TOWER.
2. CONTRACTOR SHALL REMOVE EXISTING FIBER OPTIC CABLE FROM CONDUIT AFTER NEW FIBER OPTIC CABLES AND ALCMS HAVE BEEN INSTALLED AND OPERATIONAL.
3. CONTRACTOR SHALL PULL PROPOSED FIBER OPTIC CABLES THROUGH EXISTING JUNCTION BOX.
4. CONTRACTOR SHALL REMOVE EXISTING FIBER OPTIC CABLES IN TOWER FOR EXISTING AIRFIELD LIGHTING CONTROLS ONCE NEW AIRFIELD LIGHTING CONTROL SYSTEM IN TOWER IS COMPLETELY OPERATIONAL. CONTRACTOR SHALL ROUTE PROPOSED FIBER OPTIC CABLES IN EXISTING CABLE CHASE.
5. CONTRACTOR SHALL REMOVE EXISTING DATA CABLES AND FLEXIBLE CONDUIT FROM TOWER CAB AFTER NEW ALCMS HAS BEEN INSTALLED AND OPERATIONAL.
6. NEW ALCMS CABINET SHALL BE SUPPLIED WITH WHEELS. NEW ALCMS SHALL BE OPERATIONAL AND TESTED PRIOR TO THE REMOVAL OF EXISTING PLC CABINET. PROVIDE SUFFICIENT CABLE SLACK REQUIRED FOR ALCMS CABINET TO BE OPERATIONAL.
7. EXISTING ALCMS, ALCMS COMPONENTS AND CABLES SHALL BE COMPLETELY REMOVED AND DISPOSED OFF OF SITE.
8. RE-CONNECT EXISTING 120 VAC POWER FEED TO NEW ALCMS.
9. ALL WORK ASSOCIATED WITH ALCMS IN FAA ATCT SHALL BE INCLUDED IN LUMP SUM PAY ITEM "AR800032"



IL CONTRACT: **AU067**  
 IL LETTING ITEM: **05A**  
 IL PROJECT: **ARR-4522**  
 S.B.G. PROJECT: **3-17-SBGP-139**

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0 1 2  
 THIS BAR IS EQUAL TO 2"  
 AT FULL SCALE (34X22).

**AURORA MUNICIPAL AIRPORT**  
**AURORA, ILLINOIS**  
**INSTALL AIRFIELD LIGHTING CONTROL AND MONITORING SYSTEM**

**AIR TRAFFIC CONTROL TOWER (ATCT) PLAN**

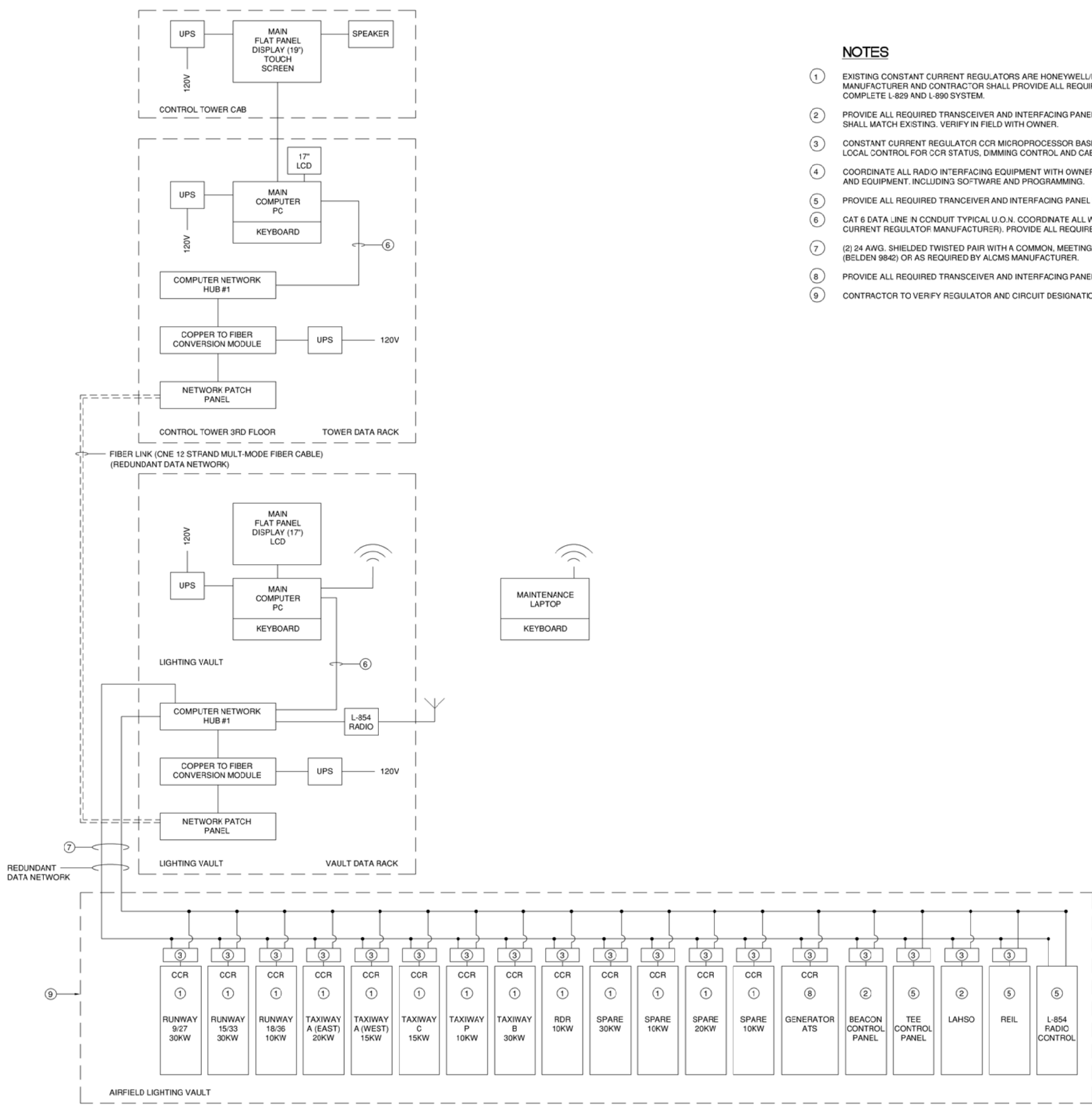
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**AIRFIELD LIGHTING AND EQUIPMENT CONTROL DIAGRAM**  
NOT TO SCALE

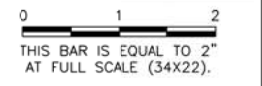
**NOTES**

- ① EXISTING CONSTANT CURRENT REGULATORS ARE HONEYWELL/LIBERTY, HEAVY DUTY AND CROUSE-HINDS.. ALCMS MANUFACTURER AND CONTRACTOR SHALL PROVIDE ALL REQUIRED CT'S AND INTERFACE MODULES FOR COMPLETE L-829 AND L-890 SYSTEM.
- ② PROVIDE ALL REQUIRED TRANSCIEVER AND INTERFACING PANEL FOR REMOTE BEACON CONTROL EQUIPMENT SHALL MATCH EXISTING. VERIFY IN FIELD WITH OWNER.
- ③ CONSTANT CURRENT REGULATCR CCR MICROPROCESSOR BASED CONTROL/MONITOR PANEL WITH REMOTE AND LOCAL CONTROL FOR CCR STATUS, DIMMING CONTROL AND CABLE INSULATION MONITOR.
- ④ COORDINATE ALL RADIO INTERFACING EQUIPMENT WITH OWNER. PROVIDE ALL NETWORK INTERFACING HARDWARE AND EQUIPMENT, INCLUDING SOFTWARE AND PROGRAMMING.
- ⑤ PROVIDE ALL REQUIRED TRANSCIEVER AND INTERFACING PANEL FOR PAPI/WIDCONE CONTROL PANEL.
- ⑥ CAT 6 DATA LINE IN CONDUIT TYPICAL U.O.N. COORDINATE ALL WORK WITH ALCMS MANUFACTURER (CONSTANT CURRENT REGULATOR MANUFACTURER). PROVIDE ALL REQUIRED DATA CONNECTION LINKS.
- ⑦ (2) 24 AWG. SHIELDED TWISTED PAIR WITH A COMMON, MEETING EIA RS-485 APPLICATIONS (BELDEN 9842) OR AS REQUIRED BY ALCMS MANUFACTURER.
- ⑧ PROVIDE ALL REQUIRED TRANSCIEVER AND INTERFACING PANEL FOR GENERATOR/ATS CONTROL AND MONITORING
- ⑨ CONTRACTOR TO VERIFY REGULATOR AND CIRCUIT DESIGNATIONS IN FIELD PRIOR TO PROGRAMMING OF ALCMS.

IL CONTRACT: **AU067**  
IL LETTING ITEM: **05A**  
IL PROJECT: **ARR-4522**  
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AURORA, ILLINOIS  
INSTALL AIRFIELD LIGHTING CONTROL AND MONITORING SYSTEM

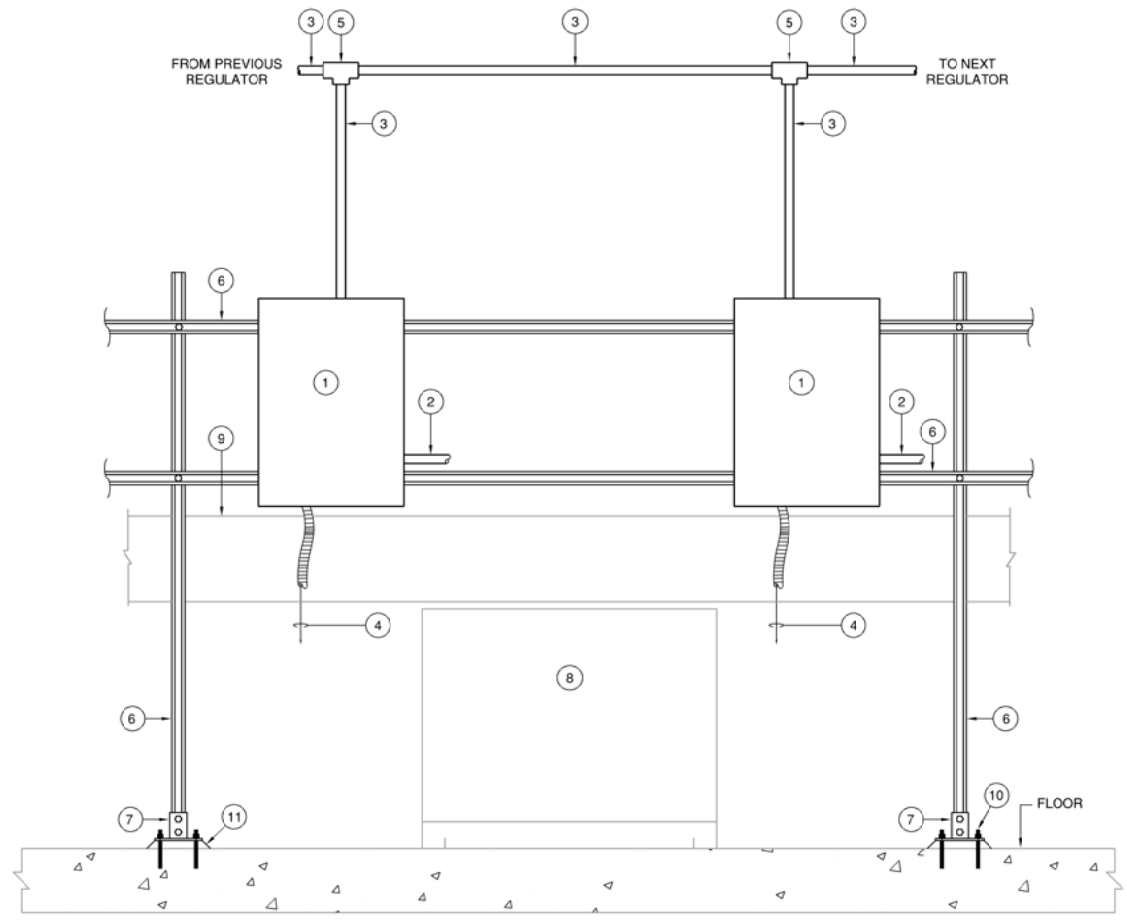
**ALCMS BLOCK DIAGRAM**

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**EQUIPMENT NOMENCLATURE**

- ① NEW INTERFACE CONTROL PANEL AND INSULATION RESISTANCE MEASURING SYSTEM COMBO (SEE NOTE 1)
- ② NEW (2) #8 5KV, L-824 TYPE C AIRFIELD LIGHTING CABLES IN 1" FLEX CONDUIT TO HIGH VOLTAGE WIREWAY
- ③ NEW (2) 24 AWG SHIELDED TWISTED PAIR CABLE IN 1" GRS CONDUIT
- ④ NEW DATA/CONTROL CABLES (AS REQUIRED BY ALCMS MANUFACTURER) IN 1" CONDUIT TO EXISTING REGULATOR
- ⑤ NEW 1" TX CONDUIT BODY WITH GASKET AND COVER
- ⑥ NEW 1-5/8" x 1-5/8" 12 GAUGE STAINLESS STEEL FRAMING CHANNEL
- ⑦ NEW STAINLESS STEEL 2-HOLE POST BASE WITH 6" SQUARE 4-HOLE BASE
- ⑧ EXISTING ONE OR TWO STACKABLE REGULATORS
- ⑨ EXISTING WIREWAY
- ⑩ NEW 5/8" CHEMICAL ADHESIVE STAINLESS STEEL ANCHORS
- ⑪ NEW 1" MINIMUM NON-SHRINK GROUT

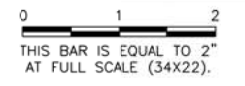
**NOTES**

- 1. ALL PROPOSED WORK OR ITEMS BEING MODIFIED ARE SHOWN IN BOLD. ALL OTHER ITEMS SHOWN ARE FOR INFORMATIONAL PURPOSES ONLY.
- 2. SEE AIRFIELD LIGHTING VAULT PLAN FOR LOCATION OF REGULATOR PANELS.
- 3. NEW UNISTRUT FRAMING SHALL BE INSTALLED BETWEEN EXISTING LOW VOLTAGE WIREWAY AND HIGH VOLTAGE WIREWAY. CONNECT TO EXISTING UNISTRUT FRAME AS REQUIRED.

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**ELECTRICAL DETAILS**

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