DANIEL FIELD AIRPORT (DNL)

AUGUSTA, GA

AIRFIELD ELECTRICAL SYSTEM UPGRADE

GDOT PROJECT NO APXXX-XXXX-XX(XXX) RICHMOND

GMC PROJECT NO TAUG220004

JANUARY 2023

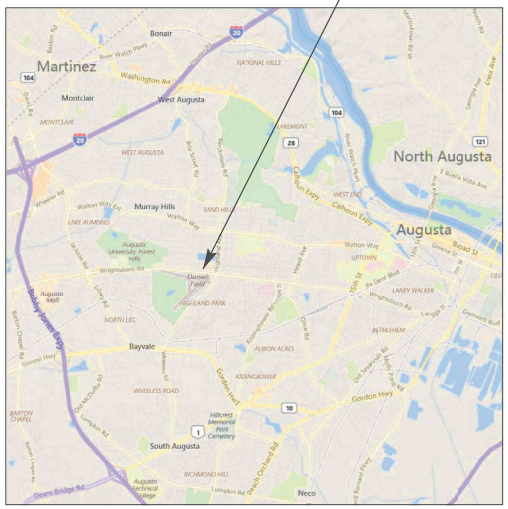
INDEX

STATE MAP
N.T.S.

DANIEL FIELD AIRPORT

VICINITY MAP
N.T.S.

DANIEL FIELD AIRPORT



LOCATION MAP
N.T.S.

PLANS PREPARED BY:

GEORGIA REGISTERED No. 32362 PROFESSIONAL 01.20.2023 ENGINEER JOHN AVERRETT

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REGISTERED ENGINEER JOHN AVERRETT
STATE OF GEORGIA LICENSE NO. 32362

DATE: 01/20/2023

BID	PHASE	WORK AREA	DURATION	DESCRIPTION
BASE BID	I	1	45	• THIS PHASE SHALL CONSIST OF REMOVAL OF EXISTING LIGHTS, SIGNS AND ELECTRICAL CIRCUITS AND THE INSTALLATION OF NEW LIGHTS, SIGNS, NAVAIDS AND ELECTRICAL CIRCUITS. • RUNWAY 5/23 CLOSED FOR DURATION OF WORK • UTILIZE STAGING AREA 1
	II	2	28	• THIS PHASE SHALL CONSIST OF REMOVAL OF EXISTING LIGHTS, SIGNS AND ELECTRICAL CIRCUITS AND THE INSTALLATION OF NEW LIGHTS, SIGNS, NAVAIDS AND ELECTRICAL CIRCUITS. • RUNWAY 5/23 CLOSED FOR DURATION OF WORK • UTILIZE STAGING AREA 2
	III	3	2	• THIS PHASE SHALL CONSIST OF REMOVAL OF EXISTING LIGHTS, SIGNS AND ELECTRICAL CIRCUITS AND THE INSTALLATION OF NEW LIGHTS, SIGNS, NAVAIDS AND ELECTRICAL CIRCUITS. • RUNWAY 5/23 AND 11/29 CLOSED FOR DURATION OF WORK • UTILIZE STAGING AREA 1 AND 2 • NIGHT WORK ONLY
ADD ALT #1	IV	4	25	• THIS PHASE SHALL CONSIST OF REMOVAL OF EXISTING LIGHTS, SIGNS AND ELECTRICAL CIRCUITS AND THE INSTALLATION OF NEW LIGHTS, SIGNS, NAVAIDS AND ELECTRICAL CIRCUITS. • RUNWAY 11/29 CLOSED FOR DURATION OF WORK • UTILIZE STAGING AREA 2
	V	3	2	• THIS PHASE SHALL CONSIST OF REMOVAL OF EXISTING LIGHTS, SIGNS AND ELECTRICAL CIRCUITS AND THE INSTALLATION OF NEW LIGHTS, SIGNS, NAVAIDS AND ELECTRICAL CIRCUITS. • RUNWAY 5/23 AND 11/29 CLOSED FOR DURATION OF WORK • UTILIZE STAGING AREA 1 AND 2 • NIGHT WORK ONLY
	IV	5	18	• THIS PHASE SHALL CONSIST OF REMOVAL OF EXISTING LIGHTS, SIGNS AND ELECTRICAL CIRCUITS AND THE INSTALLATION OF NEW LIGHTS, SIGNS, NAVAIDS AND ELECTRICAL CIRCUITS. • RUNWAY 11/29 CLOSED FOR DURATION OF WORK • UTILIZE STAGING AREA 1

LEGEND

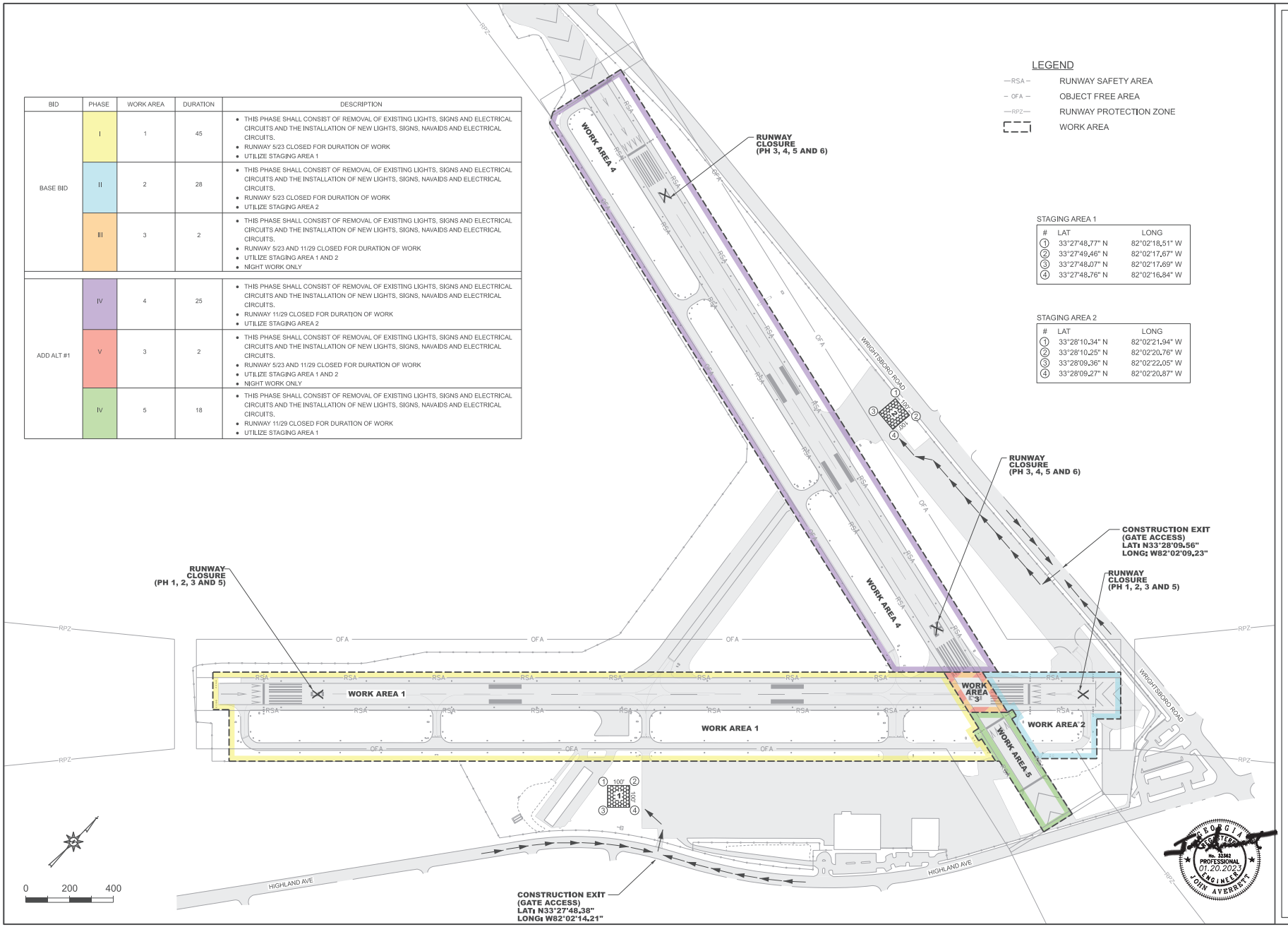
- RSA — RUNWAY SAFETY AREA
- OFA — OBJECT FREE AREA
- RPZ — RUNWAY PROTECTION ZONE
- WORK AREA

STAGING AREA 1

#	LAT	LONG
1	33°27'48.77" N	82°02'18.51" W
2	33°27'49.46" N	82°02'17.67" W
3	33°27'48.07" N	82°02'17.69" W
4	33°27'48.76" N	82°02'16.84" W

STAGING AREA 2

#	LAT	LONG
1	33°28'10.34" N	82°02'21.94" W
2	33°28'10.25" N	82°02'20.76" W
3	33°28'09.36" N	82°02'22.05" W
4	33°28'09.27" N	82°02'20.87" W



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drawn by: CAM
checked by: JEA

PROJECT LAYOUT AND CONSTRUCTION SAFETY PHASING PLAN (OVERALL)

AIRFIELD ELECTRICAL SYSTEM UPGRADE
DANIEL FIELD AIRPORT (DNL)
AUGUSTA, GEORGIA

AP019-XXXX-XX(245)
TAUG220004
SCALE: 1" = 200'

GEORGIA REGISTERED No. 33362 PROFESSIONAL 01.20.2023 ENGINEER JOHN AVERRETT

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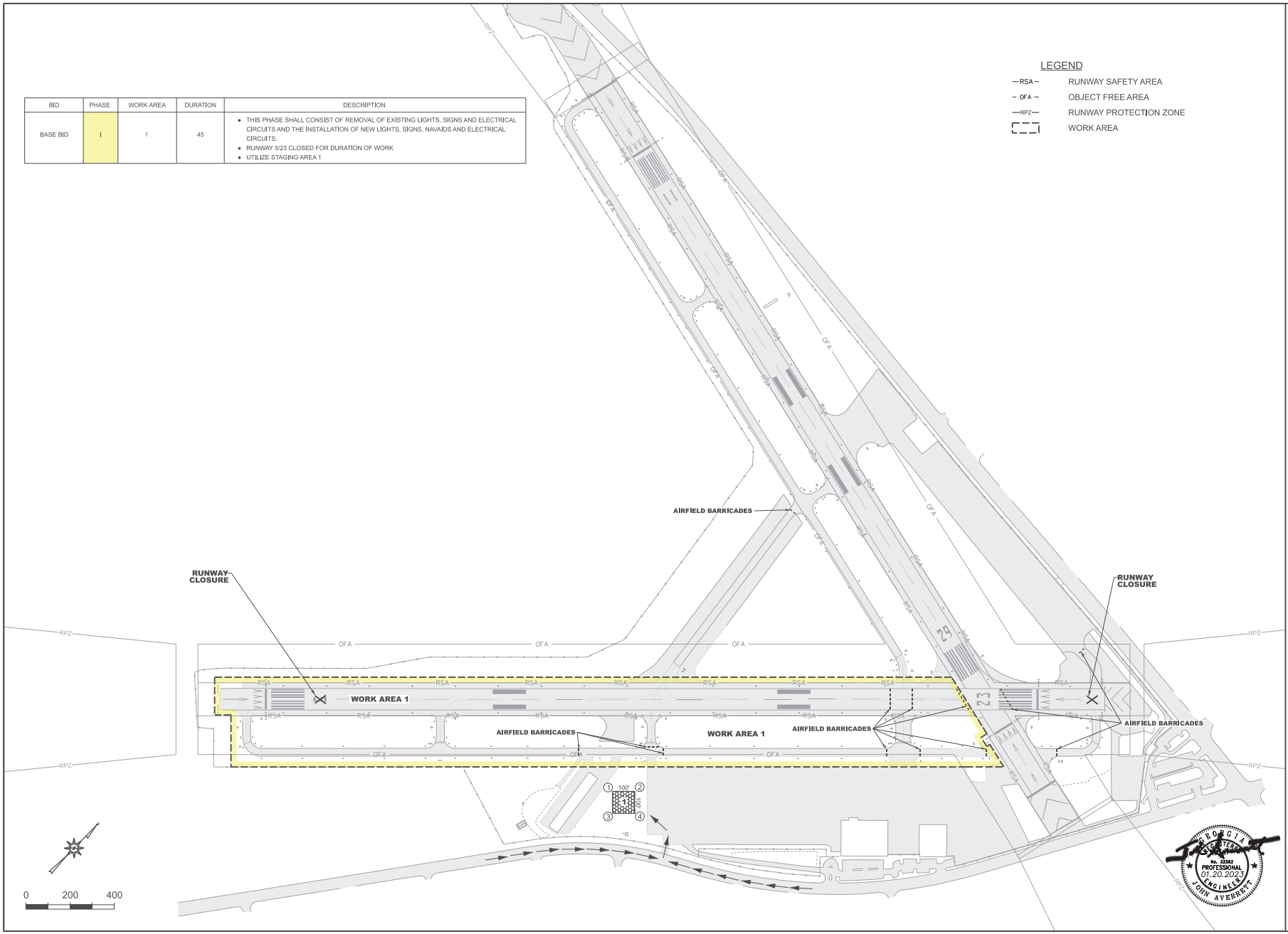
sheet 2 of 52

BID	PHASE	WORK AREA	DURATION	DESCRIPTION
BASE BID	I	1	45	• THIS PHASE SHALL CONSIST OF REMOVAL OF EXISTING LIGHTS, SIGNS AND ELECTRICAL CIRCUITS AND THE INSTALLATION OF NEW LIGHTS, SIGNS, NAVAIDS AND ELECTRICAL CIRCUITS. • RUNWAY 5/23 CLOSED FOR DURATION OF WORK • UTILIZE STAGING AREA 1



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PROJECT LAYOUT AND CONSTRUCTION SAFETY PHASING PLAN (PHASE I)

AIRFIELD ELECTRICAL SYSTEM UPGRADE
DANIEL FIELD AIRPORT (DNL)
AUGUSTA, GEORGIA

AP019-XXXX-XX(245)
TAUG220004
SCALE: 1" = 200'

GEORGIA REGISTERED No. 32382 PROFESSIONAL ENGINEER JOHN AVERRETT 01.20.2023

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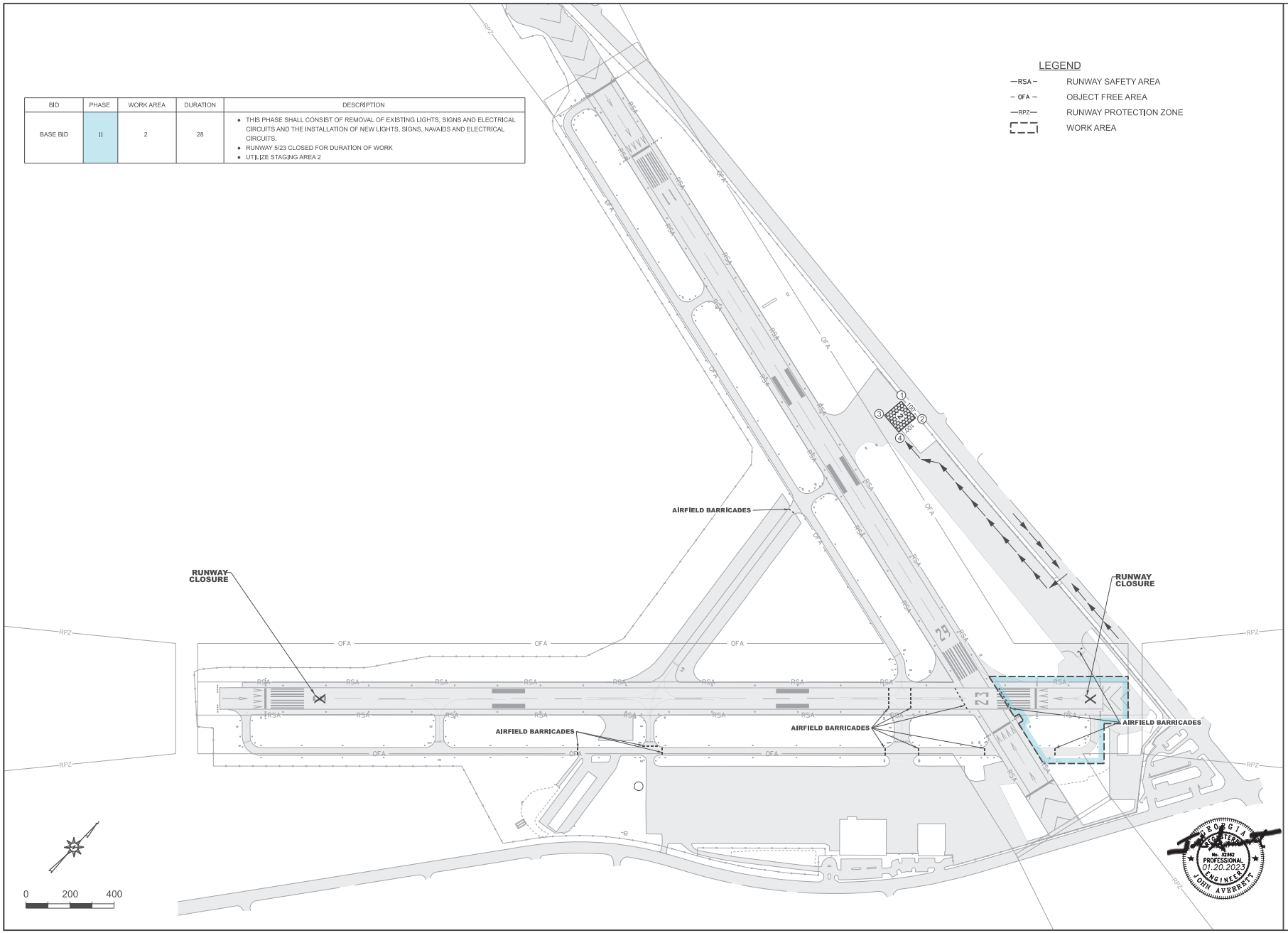
sheet 3 of 52

BID	PHASE	WORK AREA	DURATION	DESCRIPTION
BASE BID	II	2	28	• THIS PHASE SHALL CONSIST OF REMOVAL OF EXISTING LIGHTS, SIGNS AND ELECTRICAL CIRCUITS AND THE INSTALLATION OF NEW LIGHTS, SIGNS, NAVAIDS AND ELECTRICAL CIRCUITS. • RUNWAY 5/23 CLOSED FOR DURATION OF WORK • UTILIZE STAGING AREA 2



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No. 32362
PROFESSIONAL
01.20.2023
ENGINEER
JOHN AVERETT

AIRFIELD ELECTRICAL SYSTEM UPGRADE
DANIEL FIELD AIRPORT (DNL)
AUGUSTA, GEORGIA
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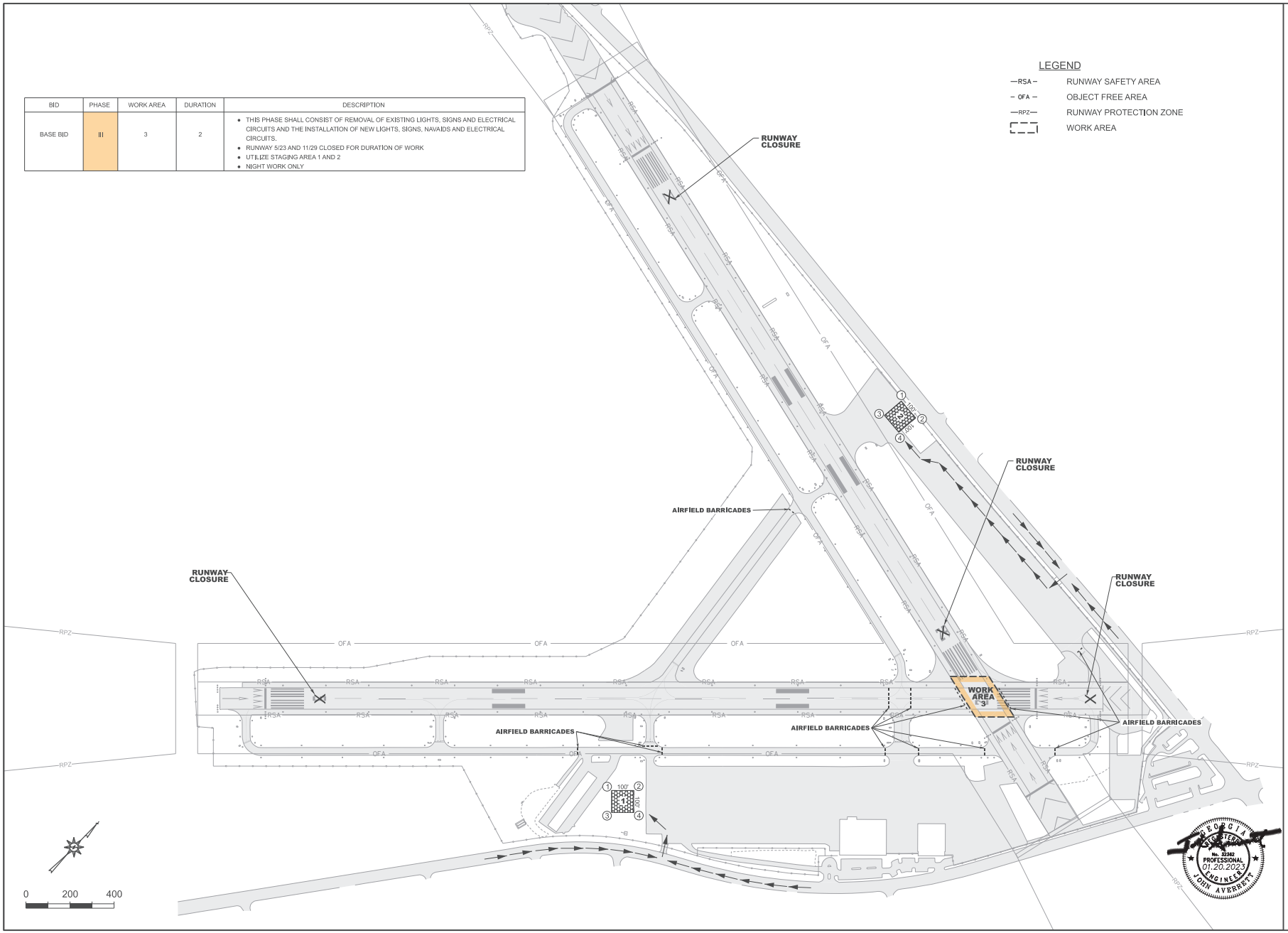
TAUG220004
SCALE: 1" = 200'

PROJECT LAYOUT AND
CONSTRUCTION SAFETY
PHASING PLAN (PHASE II)

C4

sheet 4 of 52

BID	PHASE	WORK AREA	DURATION	DESCRIPTION
BASE BID	III	3	2	• THIS PHASE SHALL CONSIST OF REMOVAL OF EXISTING LIGHTS, SIGNS AND ELECTRICAL CIRCUITS AND THE INSTALLATION OF NEW LIGHTS, SIGNS, NAVAIDS AND ELECTRICAL CIRCUITS. • RUNWAY 5/23 AND 11/29 CLOSED FOR DURATION OF WORK • UTILIZE STAGING AREA 1 AND 2 • NIGHT WORK ONLY



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PROJECT LAYOUT AND CONSTRUCTION SAFETY PHASING PLAN (PHASE III)

AIRFIELD ELECTRICAL SYSTEM UPGRADE
DANIEL FIELD AIRPORT (DNL)
AUGUSTA, GEORGIA

AP019-XXXX-XX(245)
TAUG220004
SCALE: 1" = 200'

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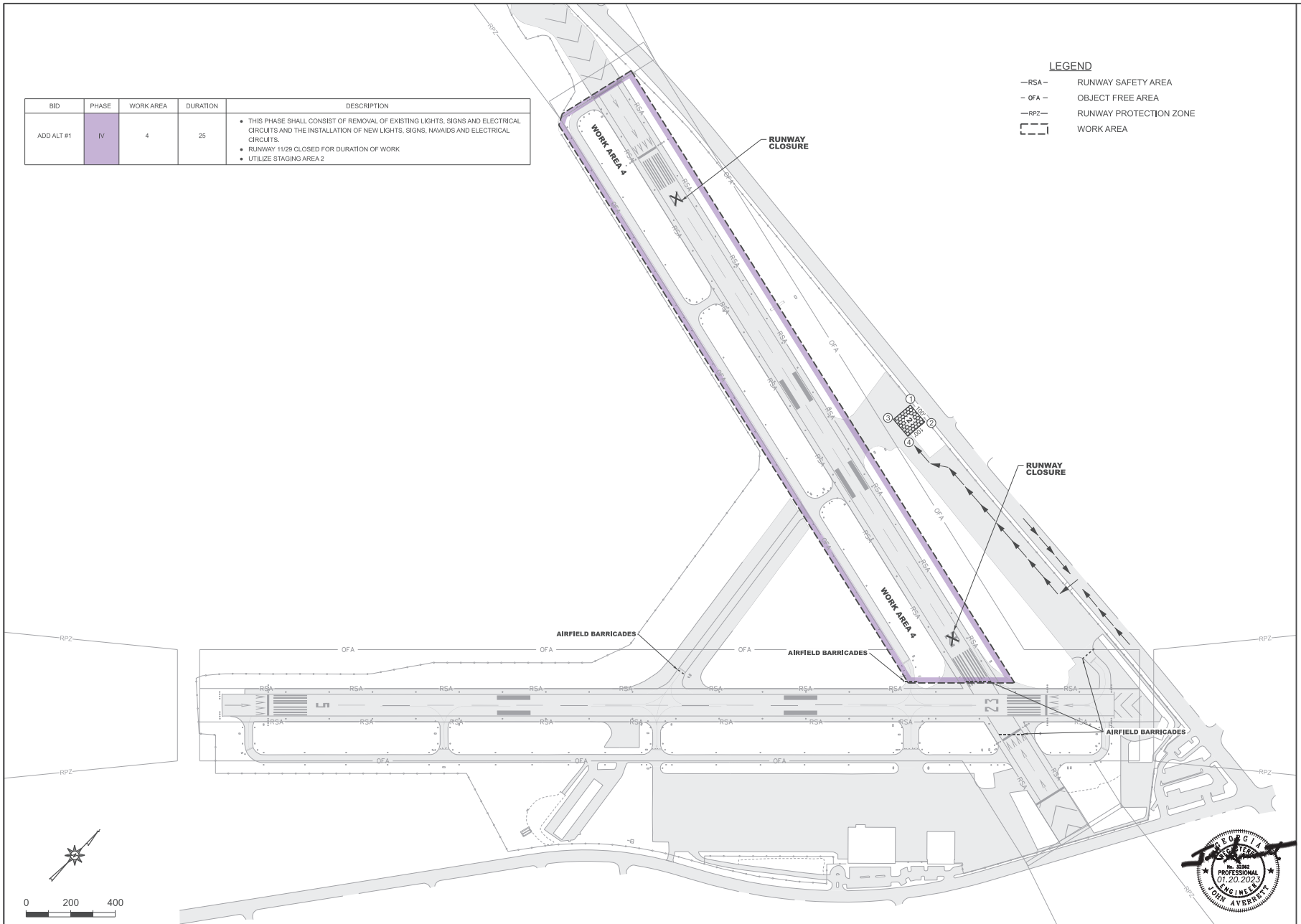
sheet 5 of 52

BID	PHASE	WORK AREA	DURATION	DESCRIPTION
ADD ALT #1	IV	4	25	• THIS PHASE SHALL CONSIST OF REMOVAL OF EXISTING LIGHTS, SIGNS AND ELECTRICAL CIRCUITS AND THE INSTALLATION OF NEW LIGHTS, SIGNS, NAVAIDS AND ELECTRICAL CIRCUITS. • RUNWAY 11/29 CLOSED FOR DURATION OF WORK • UTILIZE STAGING AREA 2



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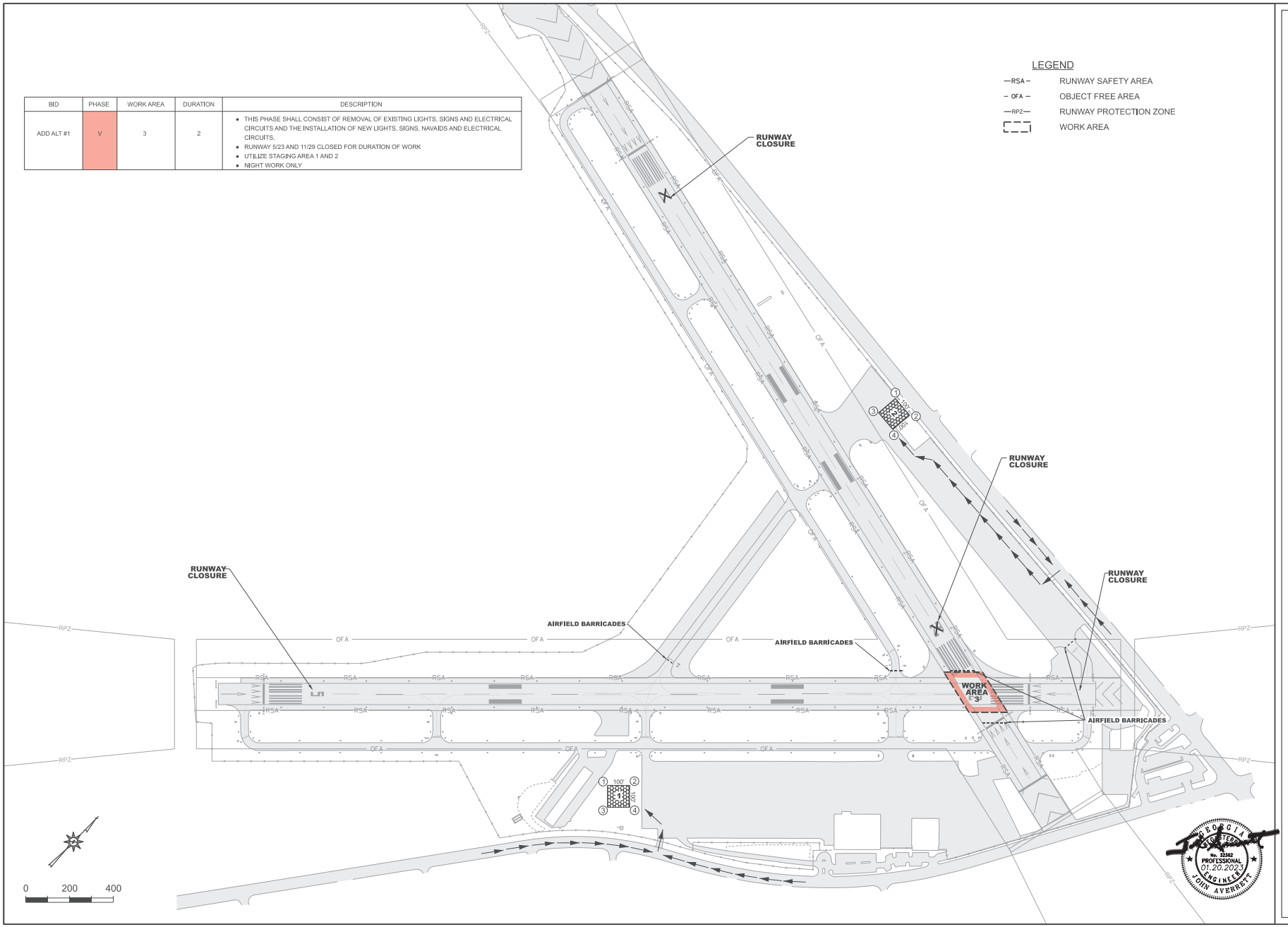
AUGUSTA, GEORGIA
AP019-XXXX-XX(245)
TAUG220004
SCALE: 1" = 200'

PROJECT LAYOUT AND CONSTRUCTION SAFETY PHASING PLAN (PHASE II)

C6
sheet 6 of 52

BID	PHASE	WORK AREA	DURATION	DESCRIPTION
ADD ALT #1	V	3	2	• THIS PHASE SHALL CONSIST OF REMOVAL OF EXISTING LIGHTS, SIGNS AND ELECTRICAL CIRCUITS AND THE INSTALLATION OF NEW LIGHTS, SIGNS, NAVAIDS AND ELECTRICAL CIRCUITS. • RUNWAY 5/23 AND 11/29 CLOSED FOR DURATION OF WORK • UTILIZE STAGING AREA 1 AND 2 • NIGHT WORK ONLY



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PROJECT LAYOUT AND CONSTRUCTION SAFETY PHASING PLAN (PHASE V)

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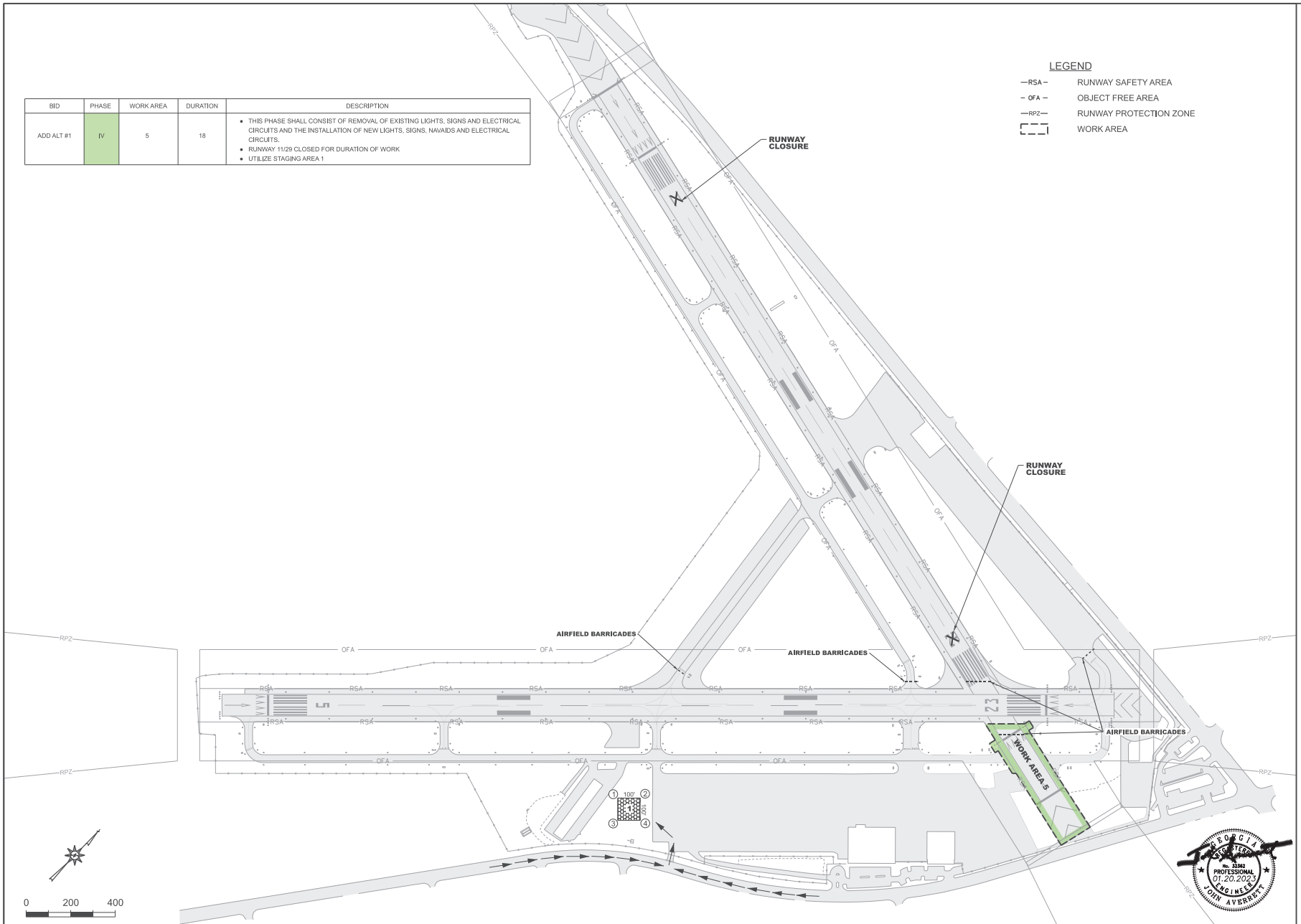
sheet 7 of 52

BID	PHASE	WORK AREA	DURATION	DESCRIPTION
ADD ALT #1	IV	5	18	• THIS PHASE SHALL CONSIST OF REMOVAL OF EXISTING LIGHTS, SIGNS AND ELECTRICAL CIRCUITS AND THE INSTALLATION OF NEW LIGHTS, SIGNS, NAVAIDS AND ELECTRICAL CIRCUITS. • RUNWAY 11/29 CLOSED FOR DURATION OF WORK • UTILIZE STAGING AREA 1



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PROJECT LAYOUT AND
CONSTRUCTION SAFETY
PHASING PLAN (PHASE VI)

AIRFIELD ELECTRICAL SYSTEM UPGRADE
DANIEL FIELD AIRPORT (DNL)
AUGUSTA, GEORGIA

AP019-XXXX-XX(245)
TAUG220004
SCALE: 1" = 200'

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SAFETY NOTES

1. ALL CONSTRUCTION VEHICLES AND EQUIPMENT OPERATING ON THE AIRPORT PROPERTY SHALL BE MARKED WITH STANDARD FAA WARNING FLAGS OR BEACONS. VEHICLES AND EQUIPMENT OPERATING DURING HOURS OF DARKNESS OR REDUCED VISIBILITY SHALL BE LIGHTED WITH A FLASHING CIRCULAR AMBER EMERGENCY WARNING LIGHT, ACCORDING TO FAA ADVISORY CIRCULAR 150/5370-2F.

2. ALL FOREMAN'S AND SUPERINTENDENT'S VEHICLES SHALL CONTAIN RADIOS CAPABLE OF TRANSMITTING AND RECEIVING THE UNICOM FREQUENCY OF 123.05 MHZ. NORMAL RADIO COMMUNICATIONS BETWEEN CONTRACTOR PERSONNEL WILL NOT BE ALLOWED ON THE UNICOM CONTROL OR ANY OTHER FAA FREQUENCY.

3. CONTRACTOR SHALL USE EXTREME CAUTION WHILE WORKING NEAR FUEL FARM FACILITY. FLAMMABLE FUEL TANKS EXIST IN THE FUEL FARM.

4. ALL OPEN EXCAVATIONS SHALL BE ADEQUATELY MARKED AND SIGNED.

5. THE CONTRACTOR SHALL NOT AT ANY TIME BE ON THE RUNWAY UNLESS THE ENGINEER OR AIRPORT PERSONNEL GIVES PRIOR APPROVAL.

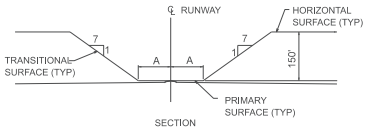
6. THE CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION, MAINTENANCE, REMOVAL AND CLEANUP OF ALL HAUL ROUTES (ON AND OFF AIRPORT PROPERTY).

7. ALL ACTIVE AIRPORT OPERATIONAL AREAS ADJACENT TO WORK AREAS SHALL BE SEPARATED BY BARRICADES.

8. RUNWAY WILL BE CLOSED AS NECESSARY FOR WORK PERFORMED IN THE OFA.

9. RUNWAY CLOSURE X'S MUST BE SECURED BY DOUBLE-BAGGED YELLOW SANDBAGS PLACED AT EVERY CORNER AND APPROXIMATLEY 10' SPACING BETWEEN EACH BAG. IF A BAG IS DAMAGED OR TARNISHED, CONTRACTOR IS REQUIRED TO CLEAN DEBRIS AND REPLACE APPROPRIATLY.

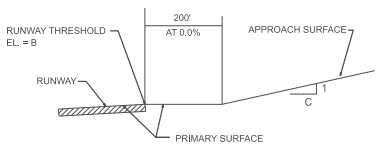
PART 77 DETAIL
Not to scale



SECTION

PAVEMENT	SAFETY AREA WIDTH
RUNWAY 5/23	150'
RUNWAY 11/29	150'

SAFETY AREA DIMENSIONS

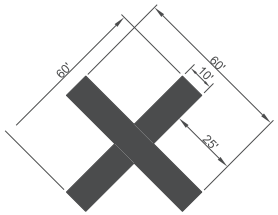


PROFILE

RUNWAY END	A	B	C
RUNWAY 5	250	373.9	20
RUNWAY 23	250	422.3	20
RUNWAY 11	250	421.4	34
RUNWAY 29	250	418.7	20

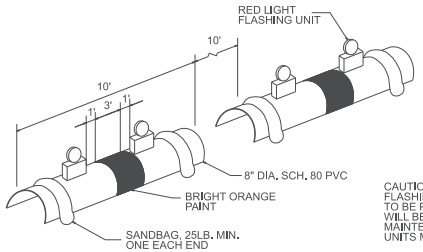
FAR PART 77 SURFACES

NOTE:
THE PART 77 SURFACE IS CENTERED ON THE RUNWAY AT THE CENTERLINE ELEVATION AND TO THE WIDTH INDICATED. THE PART 77 SURFACE IS LOCATED ON THE PROFILE OF THE EXTENDED RUNWAY CENTERLINE AT THE RUNWAY THRESHOLD ELEVATION TO A POINT 200' BEYOND EACH THRESHOLD. THE SECTION THEN RISES ALONG THE SLOPES INDICATED.



RUNWAY CLOSURE DETAIL
Not to scale

NOTE:
CONTRACTOR SHALL MAINTAIN ALL RUNWAY CLOSURES THROUGHOUT THE DURATION OF THE PROJECT.



AIRFIELD BARRICADE DETAIL
Not to scale

CAUTION LIGHTS TO BE RED IN COLOR AND FLASHING DURING HOURS OF DARKNESS. UNITS TO BE PLACED ADJACENT TO EACH OTHER. THERE WILL BE NO DIRECT PAYMENT FOR FURNISHING, MAINTENANCE, OR REMOVAL OF THIS BARRIER. UNITS MUST BE SECURED TO PVC.

ALL BARRICADES SHALL DELINEATE THE AREA TO BE PROTECTED AND THE BARRICADE LINE SHALL EXTEND TO 10' OFF THE EDGE OF EITHER SIDE OF ANY PAVEMENT.

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SCALE: NOT TO SCALE

CONSTRUCTION SAFETY NOTES AND DETAILS

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sheet 9 of 52

SWITCH LEGEND

$	WALL SWITCH SPST 42" AFF TO CENTER UNO 20A 120/277V.
$M	MOTOR RATED TOGGLE SWITCH 30A 120/277V 2HP MAX 120/240V.

AIRFIELD LIGHTING LEGEND

	MEDIUM INTENSITY TAXIWAY LIGHT (BLUE LENS), BASE MOUNTED.
	MEDIUM INTENSITY TAXIWAY LIGHT (BLUE LENS), STAKE MOUNTED.
X	MEDIUM INTENSITY RUNWAY LIGHT (COLOR AS INDICATED, G=GREEN, R=RED, W=WHITE, Y= YELLOW, O=OBSCURE), BASE MOUNTED.
X	MEDIUM INTENSITY RUNWAY LIGHT (COLOR AS INDICATED, G=GREEN, R=RED, W=WHITE, Y= YELLOW, O=OBSCURE), STAKE MOUNTED.
GS	GUIDANCE SIGN, SEE SIGN LAYOUT SHEETS E9, E10, E27, & E28.
P	PAPI LIGHT UNIT, "EX' INDICATES EXISTING TO REMAIN.
PCU	PAPI CONTROL UNIT.
	UNIDIRECTIONAL REIL, HEAD AND POWER CONTROL UNIT.
	OMNI DIRECTIONAL REIL, HEAD AND POWER CONTROL UNIT.
LA	FIELD LIGHTNING ARRESTOR.

AIRFIELD LIGHTING DEMOLITION LEGEND

	EXISTING AIRFIELD MEDIUM INTENSITY LIGHT TO BE REMOVED UNO.
	EXISTING RUNWAY 5KV CIRCUIT/WIRING TO BE REMOVED.
	EXISTING TAXIWAY 5KV CIRCUIT/WIRING TO BE REMOVED.
	EXISTING PAPI 5KV CIRCUIT/WIRING TO BE REMOVED.
	EXISTING DUCT BANK TO REMAIN.
J	EXISTING JUNCTION CAN / BOX TO REMAIN.
	EXISTING REIL LIGHT UNIT AND ALL ASSOCIATED COMPONENTS TO BE REMOVED.
P	EXISTING PAPI LIGHT UNIT AND ALL ASSOCIATED COMPONENTS TO BE REMOVED UNO.

POWER LEGEND

	PANELBOARD 208/120V, SURFACE MOUNTED.
	PANELBOARD, 480/277V, SURFACE MOUNTED.
X	DISCONNECT SWITCH, NEMA 1, NON-FUSED, SUBSCRIPT INDICATES DISCONNECT SWITCH AMP RATING - SEE DISCONNECT SWITCH SCHEDULE.
X	DISCONNECT SWITCH, NEMA 1, FUSED, SUBSCRIPT INDICATES DISCONNECT SWITCH AMP RATING - SEE DISCONNECT SWITCH SCHEDULE.
X	DISCONNECT SWITCH, NEMA 3R, FUSED, SUBSCRIPT INDICATES DISCONNECT SWITCH AMP RATING - SEE DISCONNECT SWITCH SCHEDULE.
X	COMBINATION MOTOR STARTER DISCONNECT SWITCH.
PC	PHOTOELECTRIC CELL AS SPECIFIED ON PLANS. MOUNT IN INCONSPICUOUS LOCATION ABOVE ROOF FACING NORTH.
T	NEW TRANSFORMER.
EF	EXHAUST FAN.
D	DAMPER MOTOR.
	EXISTING PANELBOARD, SURFACE MOUNTED.
J	JUNCTION BOX WALL MOUNTED AT HEIGHT REQUIRED WITH FLEXIBLE CONNECTION TO EQUIPMENT.
J	JUNCTION BOX CEILING/WALL MOUNTED. REFER TO SPECIFICATIONS FOR COLOR REQUIREMENTS FOR COVER.
SPD	SURGE PROTECTION DEVICE
	METER BASE
GB	GROUND BUS BAR
PP CCR X	PAPI CONSTANT CURRENT REGULATOR, "X" INDICATES PAPI NAME.
RW CCR X	RUNWAY CONSTANT CURRENT REGULATOR, "X" INDICATES RUNWAY NAME.
TW CCR X	TAXIWAY CONSTANT CURRENT REGULATOR, "X" INDICATES TAXIWAY NAME.
	DUPLEX RECEPTACLE WALL MOUNTED 18" A.F.F. TO CENTER UNO.
	SIMPLEX RECEPTACLE WALL MOUNTED 18" A.F.F. TO CENTER UNO.
WP	DUPLEX GROUND FAULT CIRCUIT INTERRUPTER (5mA) RECEPTACLE WALL MOUNTED 18" A.F.F. TO CENTER UNO. "WP" INDICATES WEATHERPROOF "IN-USE" HEAVY DUTY METAL COVER.
T	THERMOSTAT.
TC	TIME CLOCK.
RC	RADIO CONTROLLER.

CONDUIT & WIRING LEGEND

HH	ELECTRICAL HANDHOLE PULL OR JUNCTION BOX AS NOTED
	CONDUIT OR RACEWAY EXPOSED TO VIEW. RUN PARALLEL OR PERPENDICULAR TO STRUCTURE CONCEAL FROM VIEW AS MUCH AS POSSIBLE.
	CONDUIT OR RACEWAY CONCEALED IN CEILING CAVITY OR WALL.
	CONDUIT OR RACEWAY UNDERGROUND OR CONCEALED IN FLOOR SLAB.
—OE——OE—	OVERHEAD ELECTRICAL CABLE.
— — —UP— — —	UNDERGROUND PRIMARY.
— — —US— — —	UNDERGROUND SECONDARY.
— · — G — · —	GROUNDING CONDUCTOR. SEE PLANS & DETAILS FOR MORE INFORMATION.
— — —R— — —	EXISTING ELECTRICAL LINE TO BE REMOVED.
	CONDUIT STUB UP.
	CONDUIT STUB DOWN.
	CONDUIT STUB IN.
	PHASE CONDUCTOR, NEUTRAL CONDUCTOR AND ISOLATED GROUND CONDUCTOR.
	HOMERUN. TICKS INDICATES NUMBER OF CONDUCTORS NO TICKS INDICATES 1 PHASE, 1 NEUTRAL, 1 GROUND CONDUCTOR.
	UNDERGROUND HOMERUN. ARROW INDICATES NUMBER OF CIRCUITS. TICKS INDICATES NUMBER OF CONDUCTORS NO TICKS INDICATES 1 PHASE, 1 NEUTRAL, 1 GROUND CONDUCTOR.
	EXPOSED TO VIEW HOMERUN. ARROW INDICATES NUMBER OF CIRCUITS. TICKS INDICATES NUMBER OF CONDUCTORS NO TICKS INDICATES 1 PHASE, 1 NEUTRAL, 1 GROUND CONDUCTOR.
	GROUND ROD AS SPECIFIED, 3/4"X10'. SEE DETAIL 7/E20.
MH	ELECTRICAL MANHOLE. SEE DETAIL 4&5/E20.
C	CONDUIT MARKER IN-GRADE. SEE DETAIL 4/E14.
D	DUCT MARKER IN-GRADE. SEE DETAIL 4/E14.
	PROPOSED RUNWAY 5-23 (R1) 5KV CIRCUIT (BASE BID) (DASHES/TICKS INDICATES NUMBER OF CABLES).
	PROPOSED TAXIWAY 'D' (T1) 5KV CIRCUIT, TAXIWAY 'A/D' (T2) 5kV CIRCUIT (BASE BID) AND TAXIWAY 'A' (T3) 5KV CIRCUIT (ALTERNATE) (DASHES/TICKS INDICATES NUMBER OF CABLES).
	PROPOSED PAPI 5-23 5KV CIRCUIT (BASE BID) (DASHES/TICKS INDICATES NUMBER OF CABLES).
	PROPOSED RUNWAY 11-29 (R2) 5KV CIRCUIT (ALTERNATE) (DASHES/TICKS INDICATES NUMBER OF CABLES).
	PROPOSED 120V WINDCONE CIRCUIT (BASE BID).

LIGHTING LEGEND

XE	1' x 4' SURFACE TROFFER, WRAPAROUND OR ENCLOSED STRIP FIXTURE - SURFACE MOUNTED OR CHAINHUNG. LETTER "X" INDICATES FIXTURE TYPE, SEE LUMINAIRE SCHEDULE. THE LETTER "E" INDICATES THAT THE FIXTURE IS EQUIPPED WITH EMERGENCY BATTERY.
XE	WALL MOUNTED LIGHT FIXTURE. LETTER "X" INDICATES FIXTURE TYPE, SEE LUMINAIRE SCHEDULE. THE LETTER "E" INDICATES THAT THE FIXTURE IS EQUIPPED WITH EMERGENCY BATTERY.
X	EMERGENCY LIGHT WITH BATTERY POWER, CONNECTED TO UNSWITCHED HOTLEG. LETTER "X" INDICATES FIXTURE TYPE, SEE LUMINAIRE SCHEDULE.

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drawn by: JRA, JDZ
checked by: JEA

AIRFIELD ELECTRICAL UPGRADE
DANIEL FIELD AIRPORT (DNL)
AUGUSTA, GEORGIA
AP019-XXX-XX(245)
GMC NUMBER : TAUG220004
SCALE: NOT TO SCALE

ELECTRICAL LEGENDS & NOTES

GE0
Sheet 10 of 52

GENERAL ELECTRICAL NOTES

1. THE CONTRACTOR IS RESPONSIBLE TO FURNISH ALL LABOR, EQUIPMENT, MATERIALS, AND SUPPLIES AS NECESSARY FOR A NEAT, COMPLETE, AND SATISFACTORY OPERATING ELECTRICAL SYSTEMS WHICH CONFORMS TO ALL LOCAL CODES, PLANS, AND SPECIFICATIONS.

2. ELECTRICAL CONTRACTOR SHALL REVIEW ENTIRE SET OF CONTRACT DOCUMENTS INCLUDING BUT NOT NECESSARILY LIMITED TO ALL CIVIL, ELECTRICAL AND ENTIRE PROJECT MANUAL. ELECTRICAL CONTRACTOR SHALL ACKNOWLEDGE AND INCLUDE IN THE SCOPE OF WORK (CONTRACT) ALL CONDITIONS PERTINENT TO THE COMPLETION OF THE ELECTRICAL WORK. ELECTRICAL CONTRACTOR SHALL FULLY COORDINATE ELECTRICAL WORK WITH THE INSTALLATION OF WORK BY ALL OTHER TRADES AND MAKE NECESSARY FIELD ADJUSTMENTS AS REQUIRED TO ACCOMMODATE THE INSTALLATION. ALL OF THE ABOVE SHALL BE INCLUDED IN THE SCOPE OF WORK AT NO ADDITIONAL COST TO THE OWNER.

3. ELECTRICAL DRAWINGS ARE DIAGRAMMATIC IN NATURE, IT SHALL NOT BE THE INTENT OF ISSUED PLANS AND/OR SPECIFICATIONS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. THE ELECTRICAL CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL NECESSARY ITEMS FOR A COMPLETE AND OPERATING SYSTEM.

4. ALL INSTALLATIONS SHALL CONFORM TO THE LATEST EDITION OF ALL ENFORCED INTERNATIONAL BUILDING CODE AND ALL FAA CIRCULAR ADVISORIES AT THE TIME OF PERMIT.

5. EACH BIDDER SHALL VISIT THE JOB SITE PRIOR TO BIDDING TO FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS AND TO ASCERTAIN THE EXTENT OF WORK REQUIRED. FAILURE TO VISIT SITE SHALL NOT EXCUSE CONTRACTOR FROM PERFORMING REQUIRED WORK NOR SHALL IT BE AN ACCEPTABLE REASON FOR REQUESTING ADDITIONS TO THE CONTRACT.

6. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL BE LISTED BY AN AGENCY SUCH AS UNDERWRITER'S LABORATORIES (UL), ELECTRICAL TESTING LABORATORY (ETL), ETC AND ACCEPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION. FOR THE USE INTENDED WHERE A STANDARD FOR SUCH MATERIALS AND USE EXISTS. ALL ITEMS OF THE SAME TYPE AND RATING SHALL BE IDENTICAL AND OF THE SAME MANUFACTURER.

7. THE WORD "PROVIDE" MEANS THAT THIS CONTRACTOR SHALL FURNISH, FABRICATE, ERECT, CONNECT, AND COMPLETELY INSTALL SYSTEMS IN PROPER OPERATING CONDITION. ALL LABOR, PRODUCT OPTIONS, ACCESSORIES AND INCIDENTAL MATERIALS REQUIRED SHALL BE INCLUDED AS PART OF THIS WORK TO COMPLETE THE INSTALLATION.

8. ALL ELECTRICAL CONNECTIONS WILL BE CODE COMPLIANT WITH N.E.C.

9. WIRING SYSTEMS SHALL CONSIST OF COPPER WIRING INSTALLED IN CONDUIT, MINIMUM WIRE SIZE SHALL BE #12AWG, MINIMUM CONDUIT SIZE SHALL BE 3/4".

10. CONDUCTORS SHALL BE 99% COPPER (NO ALUMINUM CONDUCTORS WILL BE ACCEPTED). MINIMUM SIZE #12 AWG-3/4" C.

11. SUBSURFACE CONDUIT SHALL BE SCHEDULE 40 PVC UNO. FOR RUNS GREATER THAN 50 FEET IN LENGTH, VERTICAL TURN UPS SHALL BE GRS SWEEP 90S WITH A BITUMASTIC COATING UNO.

12. CONTRACTOR SHALL REPAIR ANY DISTURBED AREA TO SAME COMPACTION, GRADE, SLOPE, ETC. AS ORIGINAL AREA INCLUDING REPLACEMENT OF SOD, GRASS, ROCK, GRAVEL, RIP-RAP, ETC. TO THE SATISFACTION OF THE OWNER AND ENGINEER.

13. ANY AREA OF CONSTRUCTION DAMAGED DURING THIS CONTRACT SHALL BE REPAIRED TO MATCH ADJACENT SURFACES.

14. WITHIN ALL AREAS OF WORK, ALL UNUSED OR ABANDONED ELECTRICAL CONDUIT, CONDUCTORS, FITTINGS AND SUPPORTS SHALL BE REMOVED.

15. CLEAN UP ALL DEBRIS AROUND CONSTRUCTION SITE DAILY.

16. PROVIDE COMPLETE AIRFIELD LIGHTING SYSTEMS AS INDICATED ON THE CONTRACT DRAWINGS AND SPECIFIED, INCLUDING BUT NOT LIMITED TO, RUNWAY AND TAXIWAY LIGHTS, THRESHOLD LIGHTS, SIGNS, PAPI'S, REIL'S, LIGHTING CONTROL PANEL, RADIO CONTROLLER, TRANSFORMERS, CCRs, BASE-CANS, GROUNDING, AND ASSOCIATED WIRING AND CONCRETE PADS AS INDICATED.

17. PROVIDE ELECTRICAL SERVICE AND POWER DISTRIBUTION AS INDICATED ON THE CONTRACT DRAWINGS AND SPECIFIED, INCLUDING BUT NOT LIMITED TO, VAULT BUILDING PANELBOARDS, TRANSFER SWITCH, GROUNDING, AND ASSOCIATED WIRING.

18. MAINTAIN A MINIMUM 4" CLEARANCE BETWEEN 5kV AND 600 VOLT NONMETALLIC CONDUITS AS INDICATED IN THE CABLE TRENCH DETAIL, INCLUDING WITHIN EQUIPMENT ENCLOSURES, SUCH AS WITHIN CCR'S. MAINTAIN A MINIMUM 6" CLEARANCE BETWEEN CONTROL CABLES AND ALL POWER CABLES AS INDICATED IN THE CABLE TRENCH DETAIL, INCLUDING WITHIN EQUIPMENT ENCLOSURES.

19. DO NOT INSTALL 5kV CABLES IN SAME RACEWAY WITH 600 VOLT CABLES.

20. TERMINATION OF PHASE, NEUTRAL AND GROUNDING CONDUCTORS SHALL BE MADE TO INDIVIDUAL TERMINALS / LUGS AT PANELS, DISCONNECTS, DEVICES, ETC.

21. PROVIDE WARNING TAPE FOR UNDERGROUND CONDUITS AS SPECIFIED IN SPECIFICATION L-110 AND AS INDICATED ON DETAILS. INSTALL WARNING TAPE ABOVE THE FULL LENGTH OF THE CONDUIT RUNS AND AT A MAXIMUM OF 4" BELOW GRADE.

22. WHERE STEAL CONDUIT OR COPPER CONDUCTORS EMERGE FROM CONCRETE INTO SOIL, APPLY DIRECT BURIAL TAPE WRAP THE THE CONDUIT OR CONDUCTORS TO PREVENT CORROSION AS SPECIFIED IN SPECIFICATION SECTION L-109. TAPE WRAP SHALL BE EQUAL TO 3M TEMFLEX 1700 VINYL ELECTRICAL TAPE. INSTALL PER THE MANUFACTURER'S INSTRUCTIONS.

23. ALL WORK OF THIS CONTRACT REQUIRING POWER INTERRUPTIONS TO EQUIPMENT SHALL BE COORDINATED WITH THE OWNER. THE OWNER WILL NEED AT LEAST A 48 HOUR NOTIFICATION. WORK REQUIRING INTERRUPTIONS SHALL BE CONDUCTED DURING THE TIMES AND DAYS STIPULATED BY THE OWNER.

24. CONSTANT CURRENT REGULATORS SHALL BE CALIBRATED AND TESTED IN ACCORDANCE WITH SPECIFICATION L-109.

25. AT SUBMITTAL COMPLETION, REMOVE STANDING WATER AND DEBRIS FROM ALL BASE-CANS.

ELECTRICAL DEMOLITION NOTES

1. PARTIAL AND TOTAL DEMOLITION OF PORTIONS SHALL BE PERFORMED ALONG WITH ALL NECESSARY MODIFICATIONS TO THAT PORTION OF THE EXISTING BUILDING WHICH SHALL REMAIN SO THAT IT CONTINUES TO FUNCTION UNAFFECTED BY THE DEMOLITION AND ASSOCIATED NEW CONSTRUCTION.

2. WHERE INCLUDED AS PART OF THE CONTRACT DOCUMENTS, THE DRAWINGS INDICATE THE GENERAL AREAS OF WORK INVOLVED. HOWEVER, THE ELECTRICAL CONTRACTOR SHALL PERFORM WORK OUTSIDE THOSE AREAS SHOWN AS IS NECESSARY TO COMPLY WITH THE INTENT OF THIS SECTION.

3. THE ELECTRICAL CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THE EXISTING SITE WITH THE WORK OF ALL OTHER TRADES AND INCLUDE ALL WORK NECESSARY TO COMPLY WITH THE INTENT OF THE DEMOLITION.

4. IT SHALL BE UNDERSTOOD THAT FIELD CONDITIONS MAY BE ENCOUNTERED DURING THE EXECUTION OF THIS CONTRACT WHICH WILL REQUIRE EXTENSION OR RELOCATION OF EXISTING SYSTEMS OR EQUIPMENT WHICH ARE NOT SPECIFICALLY SHOWN ON THE DRAWINGS, BUT WHICH ARE REQUIRED TO MEET THE STATED INTENT THAT THE BUILDING CONTINUE TO FUNCTION UNAFFECTED BY THE DEMOLITION AND ASSOCIATED NEW CONSTRUCTION. THE ELECTRICAL CONTRACTOR SHALL INCLUDE SUCH WORK AS WOULD NORMALLY BE EXPECTED IN AN EXISTING ELECTRICAL SYSTEM TYPE.

5. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL TOOLS, EQUIPMENT, LABOR, ETC. IN ORDER TO ACCOMPLISH THE DEMOLITION PORTION OF THE PROJECT.

6. THE ELECTRICAL CONTRACTOR SHALL INCLUDE COORDINATION WITH THE GENERAL CONTRACTOR AND SUCH DEMOLITION OF THE EXISTING ELECTRICAL SYSTEMS AS IS NECESSARY SO THAT THE DEMOLITION WORK OF THE GENERAL CONTRACTOR SHALL NOT DAMAGE THOSE PORTIONS OF THE ELECTRICAL SYSTEMS WHICH ARE TO REMAIN IN SERVICE, ARE TO BE REUSED, OR ARE TO BECOME THE PROPERTY OF THE OWNER.

7. TURN OVER ALL SALVAGEABLE MATERIALS AS NOTED, ITEMS SHOWN AS BEING REMOVED AND NOT REINSTALLED. ITEMS NOT DIRECTED OR REQUESTED TO BE TURNED OVER TO THE OWNER SHALL BE DISPOSED OF BY THE ELECTRICAL CONTRACTOR.

8. EQUIPMENT OR MATERIALS WHICH ARE TO BE REUSED OR TURNED OVER TO THE OWNER SHALL BE CAREFULLY REMOVED, CLEANED, AND STORED IN A CLEAN AND DRY AREA. SHOULD THE ELECTRICAL CONTRACTOR ENCOUNTER SUCH EQUIPMENT WHICH IS NOT IN SATISFACTORY CONDITION FOR REUSE AND NOT IN WORKING ORDER, THE ELECTRICAL CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER IMMEDIATELY.

9. WHERE EXISTING BRANCH CIRCUITS AND SYSTEMS ARE INTERRUPTED BY NEW WORK OR SYSTEMS (ELECTRICAL, COMMUNICATIONS, ETC.), EXTEND AND RECONNECT THOSE CIRCUITS AND SYSTEMS. WHERE THOSE CIRCUITS OR SYSTEMS MUST REMAIN IN SERVICE DURING THE EXECUTION OF THIS CONTRACT, PROVIDE TEMPORARY CONNECTIONS UNTIL FINAL CONNECTIONS ARE COMPLETE.

10. THE INFORMATION CONTAINED IN THE DEMOLITION PLANS IS NOT CONSIDERED FULLY ACCURATE AS IT PERTAINS TO THE EXACT QUANTITY AND LOCATION IN THE FIELD. THE INFORMATION WAS OBTAINED FROM ASBUILTS AND LIMITED SITE VISITS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATIONS, SERVICE, AND QUANTITY OF ALL EXISTING ELECTRICAL COMPONENTS PRIOR TO BEGINNING DEMOLITION WORK. THE INFORMATION ON THE DEMOLITION PLANS IS TO BE USED AS A GUIDE TO THE CONTRACTOR TO COMPLETE THE DESIGN INTENT SHOWN. EXISTING ITEMS TO BE RE-USED CAN BE FOUND ON THE NEW WORK PLANS.

11. BEFORE COMMENCEMENT OF DEMOLITION WORK ALL CIRCUITS THAT ARE BEING WORKED ON AT THE TIME SHALL BE SHUT DOWN AND PROVIDE A LOCKOUT/TAGOUT PROCEDURE AT THE ELECTRICAL VAULT. THE ASSOCIATED CIRCUIT BEING WORKED ON AT THAT TIME SHALL HAVE ITS EXISTING SAFETY CUTOUT REMOVED. DO NOT WORK ON ANY LIVE CIRCUITS!

ELECTRICAL ABBREVIATIONS

A, AMP	AMPERE
ACSR	ALUMINUM CONDUCTOR STEEL-REINFORCED
AF	AIRFIELD
AFG	ABOVE FINISHED GRADE
AFF	ABOVE FINISHED FLOOR
AIC	AMPS INTERRUPTING CAPACITY (SYM RMS)
ALT	ALTERNATE
AWG	AMERICAN WIRE GAUGE
BSDC	BARE SOFT DRAWN COPPER
C	CONDUIT
CCR	CONSTANT CURRENT REGULATOR
CKT	CIRCUIT
CU	COPPER
DETD	DUAL ELEMENT TIME DELAY
EC	EMPTY CONDUIT
ELEC	ELECTRIC OR ELECTRICAL
EPR	ETHYLENE-PROPYLENE RUBBER INSULATION
EX	EXISTING TO REMAIN
EXIST	EXISTING
FAA	FEDERAL AVIATION ADMINISTRATION
GFI	GROUND FAULT INTERRUPTER
G	GROUND
GRS	GALVANIZED RIGID STEEL
IN-PL	IN PLACE
KV	KILOVOLT
KVA	KILOVOLT AMPERES
KW	KILOWATT
MIN	MINIMUM
N12	NEMA 12 RATED FOR DUST ENCLOSURE
N3R	NEMA 3R RATED FOR EXTERIOR USE
NIC	NOT IN THIS CONTRACT
NEC	NATIONAL ELECTRIC CODE
PNL	PANEL
P	POLE
PH	PHASE
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
RE	REPLACE EXISTING
RECPT	RECEPTACLE
REQD	REQUIRED
RL	EXISTING ITEM TO BE RELOCATED
RM	EXISTING ITEM TO BE REMOVED
RU	RACK UNIT
RW	RUNWAY
SPD	SURGE PROTECTIVE DEVICE
SPEC	SPECIFICATIONS
SWBD	SWITCHBOARD
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
TW	TAXIWAY
TYP	TYPICAL
UG	UNDERGROUND
UNO	UNLESS NOTED OTHERWISE
V	VOLT
VA	VOLT AMPERE
W	WATT
WP	WEATHERPROOF
XFMR	TRANSFORMER
#	NUMBER

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ELECTRICAL LEGENDS & NOTES

GE1
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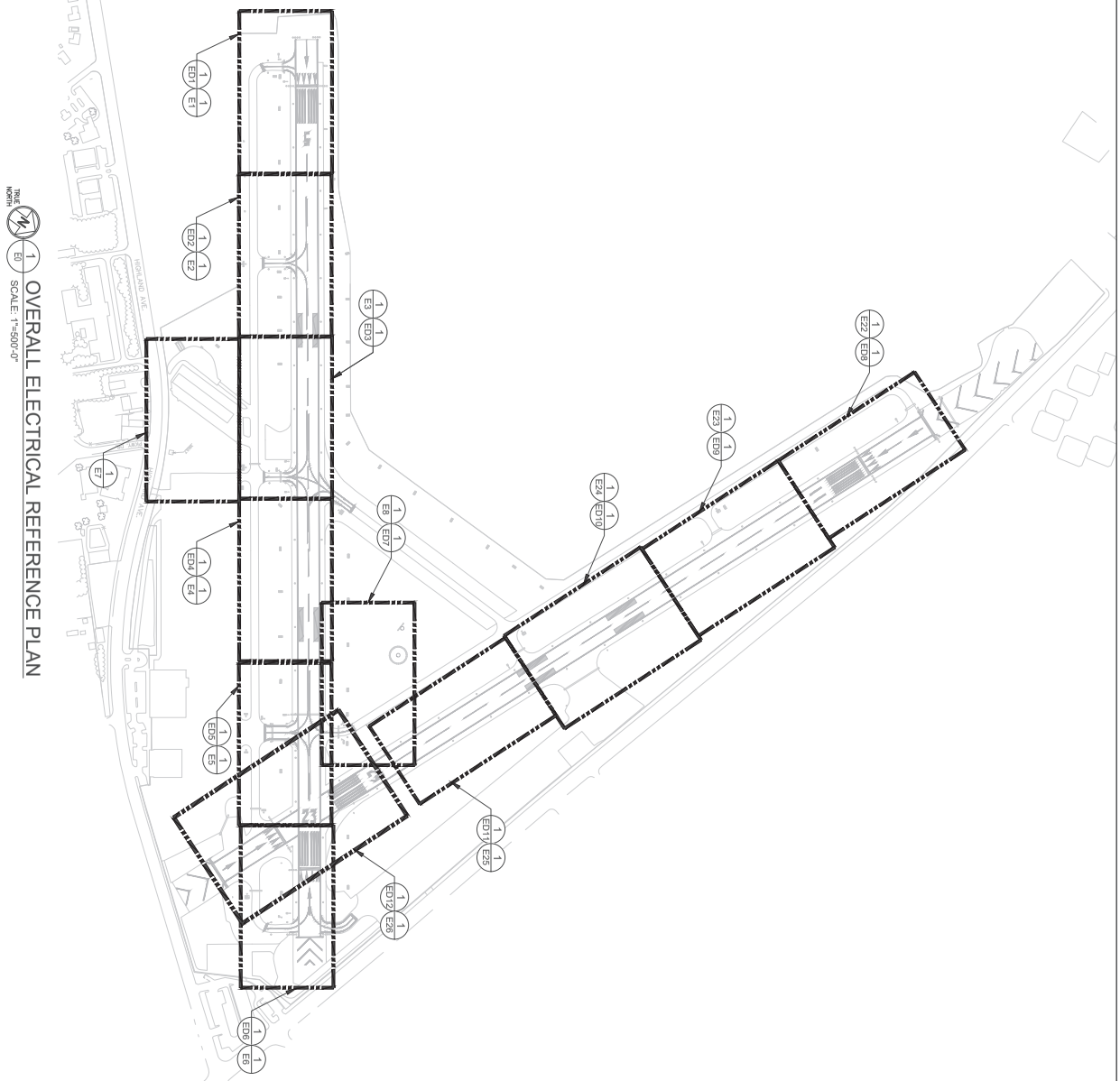

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OVERALL ELECTRICAL REFERENCE PLAN

E0

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GEORGIA REGISTERED No. 32362 PROFESSIONAL ENGINEER JOHN AVERBEIT

AIRFIELD ELECTRICAL UPGRADE
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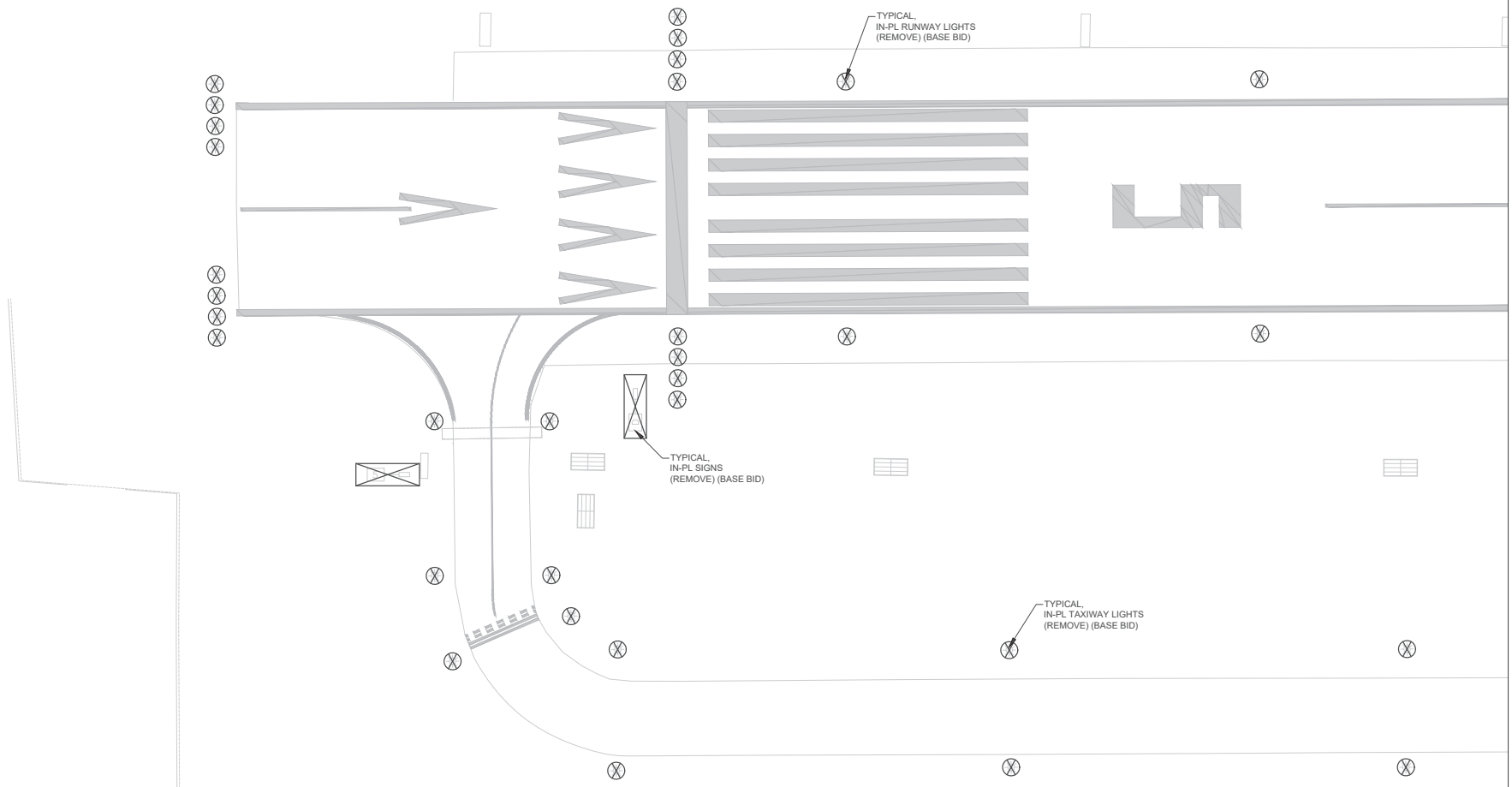

GENERAL NOTES:

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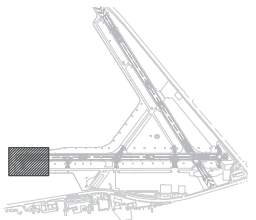
4. COORDINATE WITH OWNER ON DOWNTIME OF EXISTING SYSTEMS. ONE(1) RUNWAY SHALL REMAIN OPERATIONAL DURING THE DURATION OF OTHER RUNWAY BEING IN CONSTRUCTION.

PLAN NORTH — 1 ED1

AIRFIELD LIGHTING DEMOLITION PLAN - RUNWAY 5/23 - PART 1

SCALE: 1"=50'-0"



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AIRFIELD LIGHTING DEMOLITION PLAN RUNWAY 5/23 - PART1

ED1

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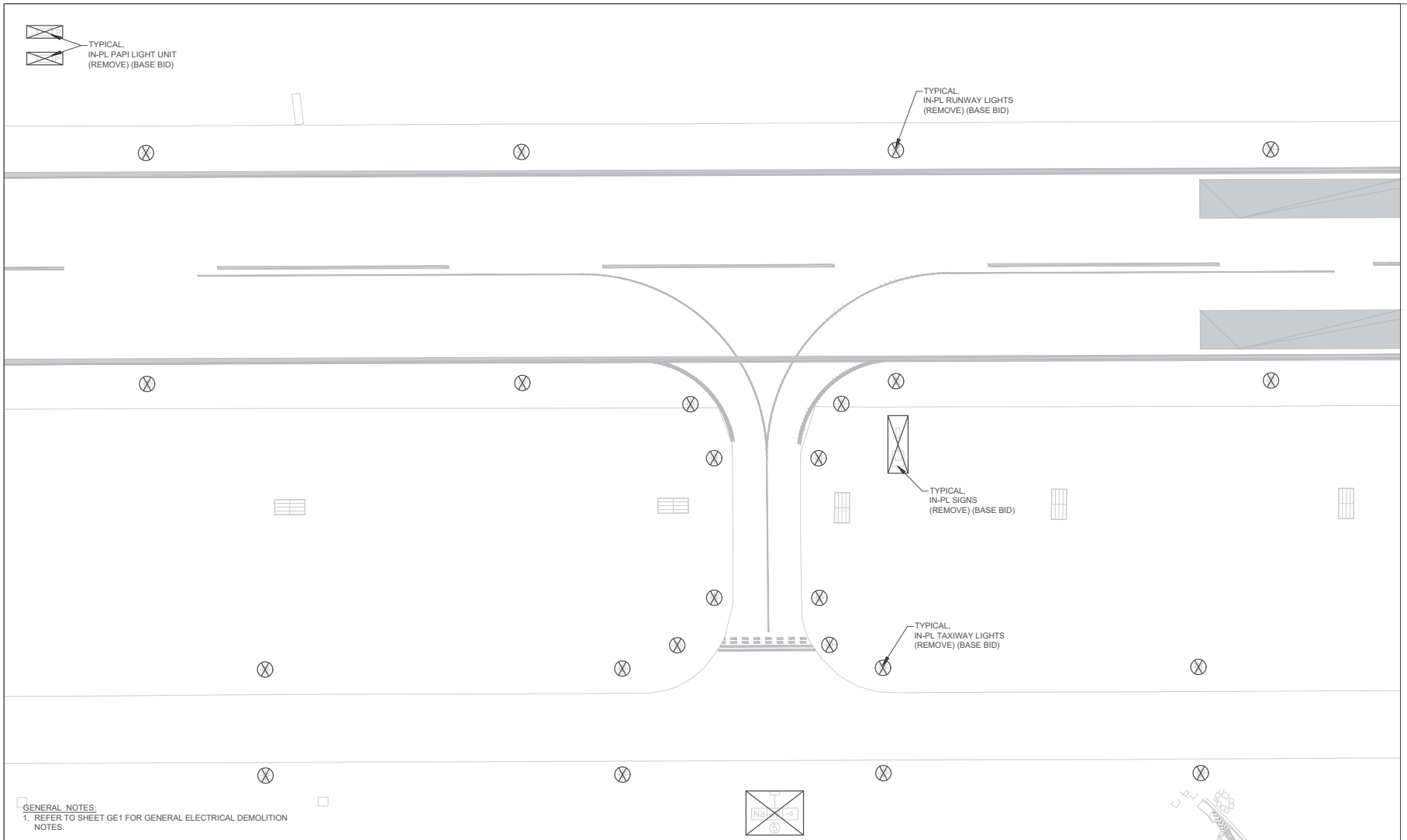

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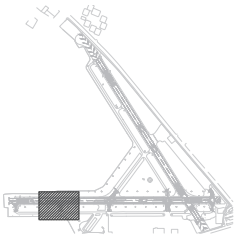
PLAN NORTH — 1 / ED2

AIRFIELD LIGHTING DEMOLITION PLAN - RUNWAY 5/23 - PART 2

SCALE: 1"=50'-0"



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AIRFIELD LIGHTING DEMOLITION PLAN RUNWAY 5/23 - PART 2

ED2

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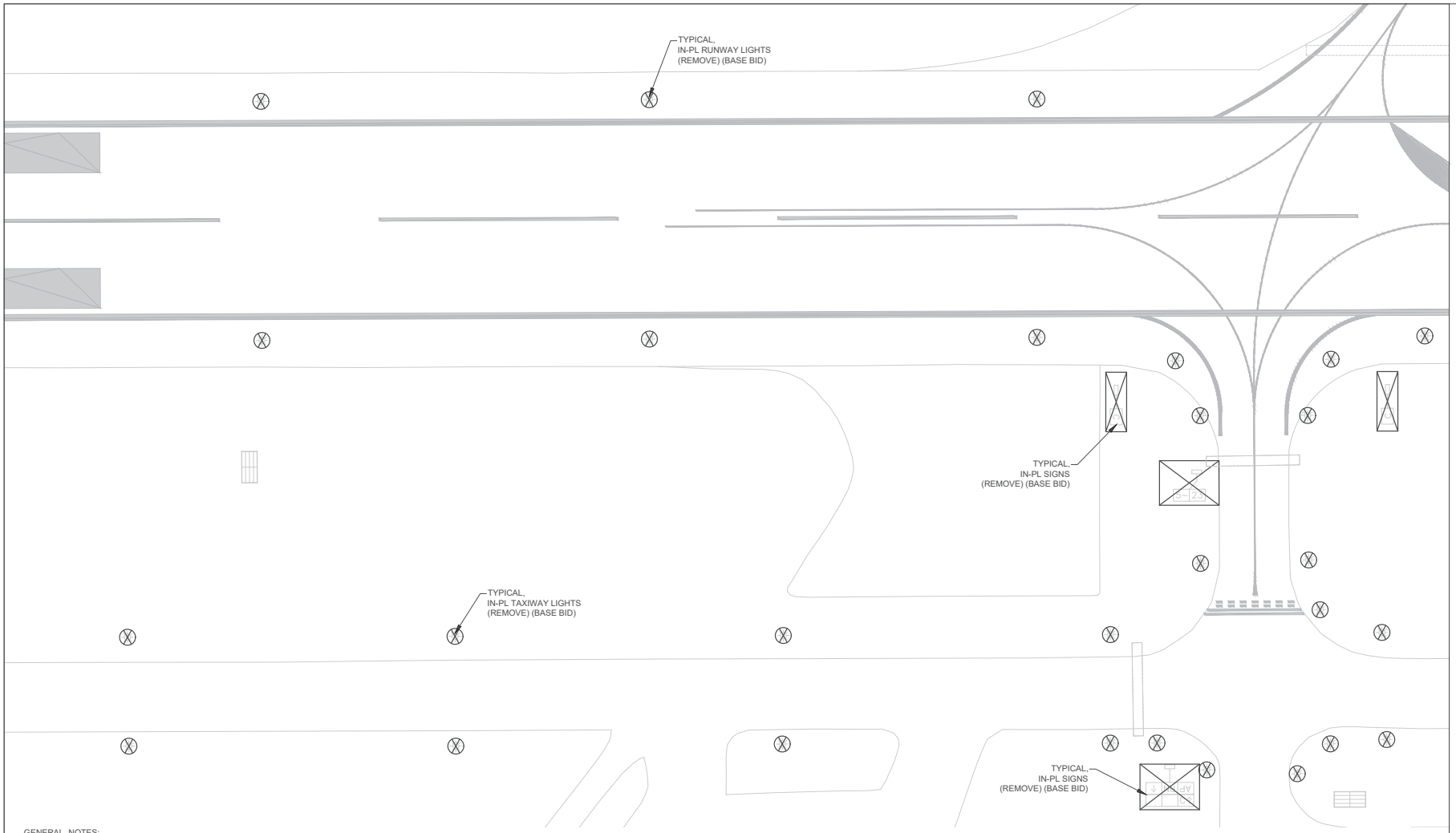

PLAN NORTH (1 / ED3) AIRFIELD LIGHTING DEMOLITION PLAN - RUNWAY 5/23 - PART 3

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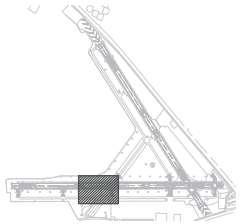

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AIRFIELD LIGHTING DEMOLITION PLAN RUNWAY 5/23 - PART 3

ED3

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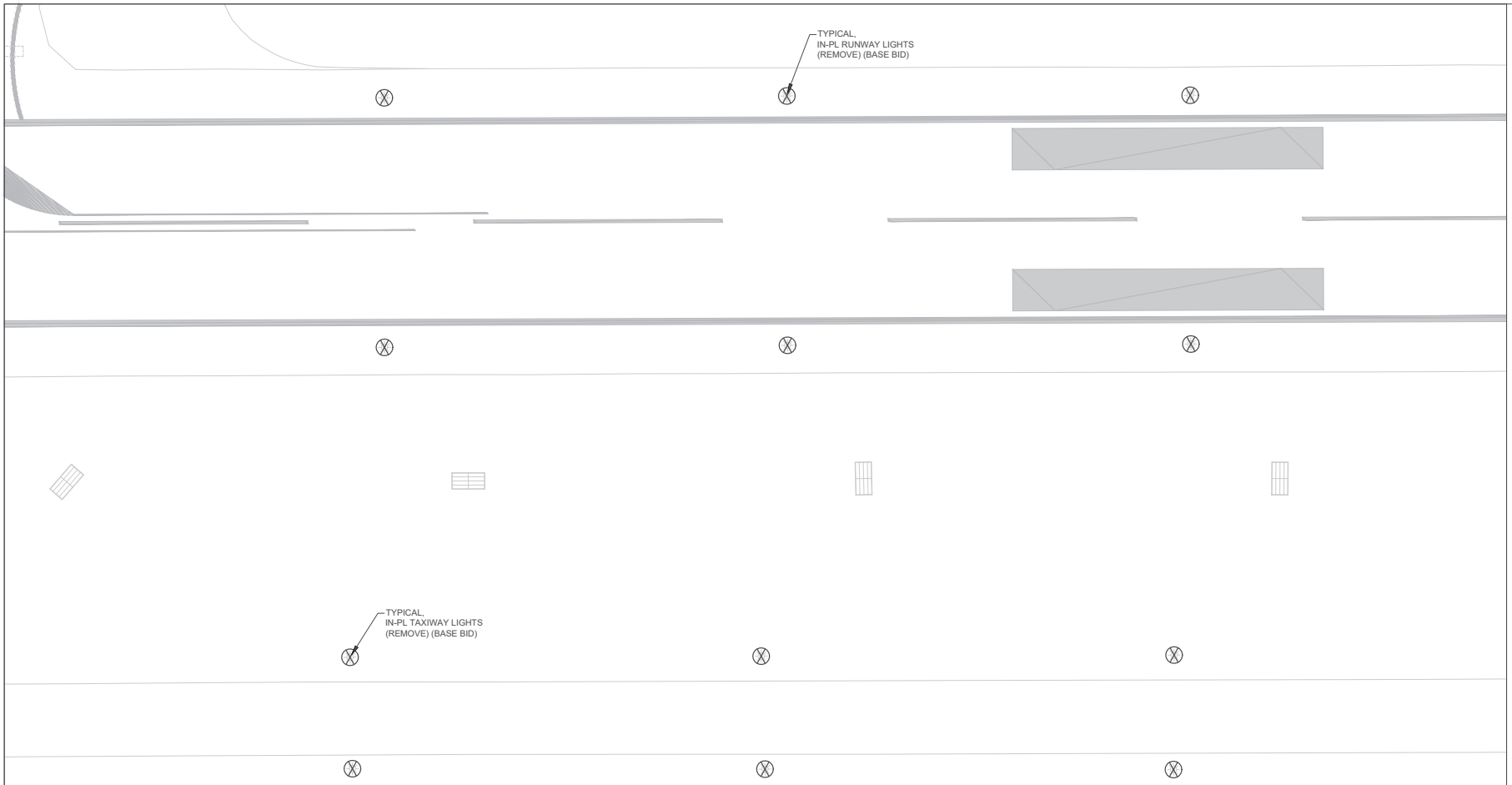

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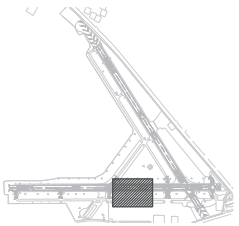
PLAN NORTH — 1 ED4

AIRFIELD LIGHTING DEMOLITION PLAN - RUNWAY 5/23 - PART 4

SCALE: 1"=50'-0"



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AIRFIELD LIGHTING DEMOLITION PLAN RUNWAY 5/23 - PART 4

ED4

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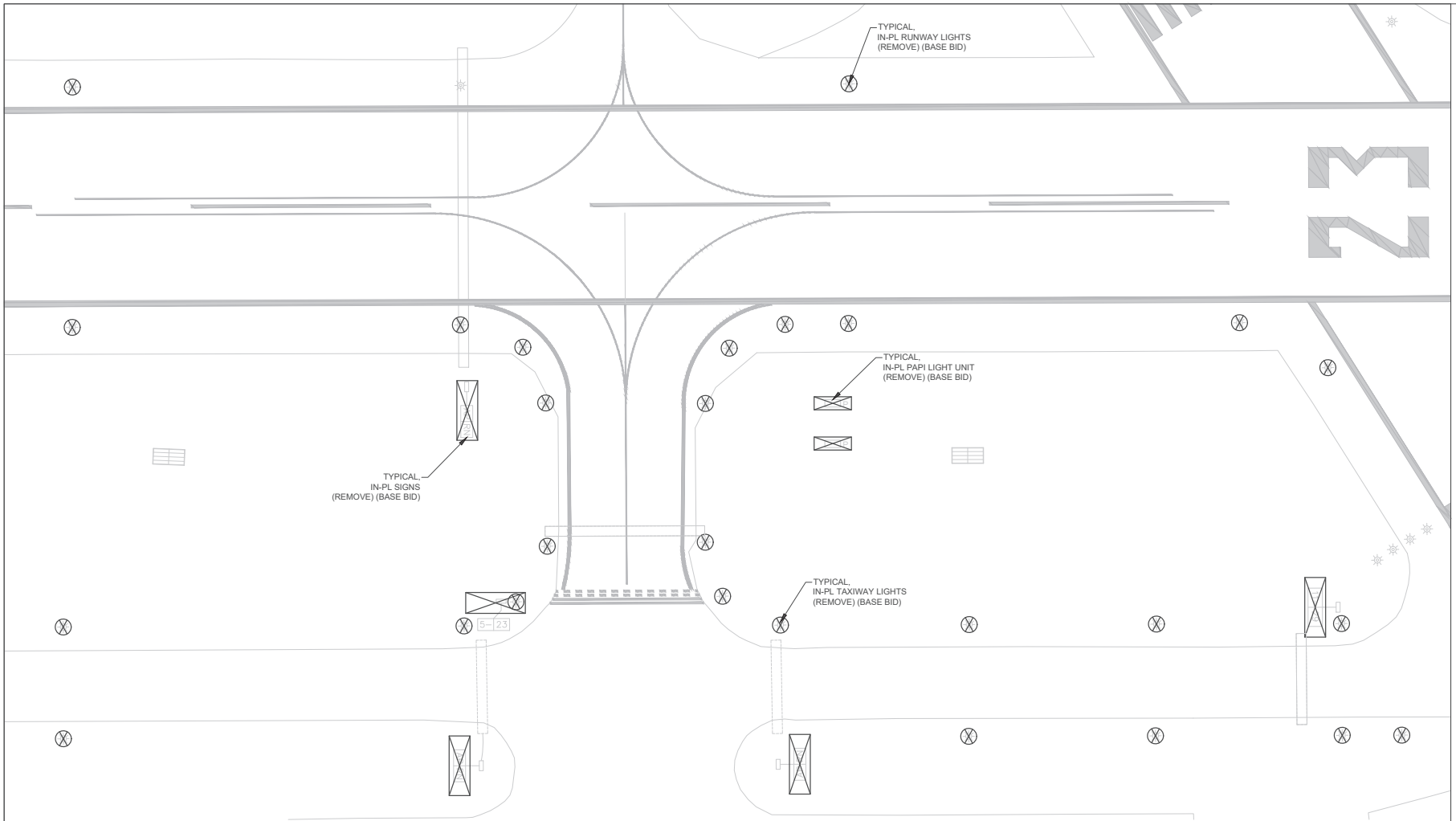

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PLAN NORTH — 1 ED5

AIRFIELD LIGHTING DEMOLITION PLAN - RUNWAY 5/23 - PART 5

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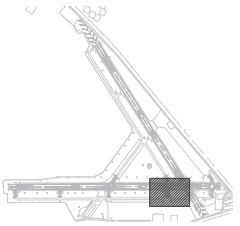

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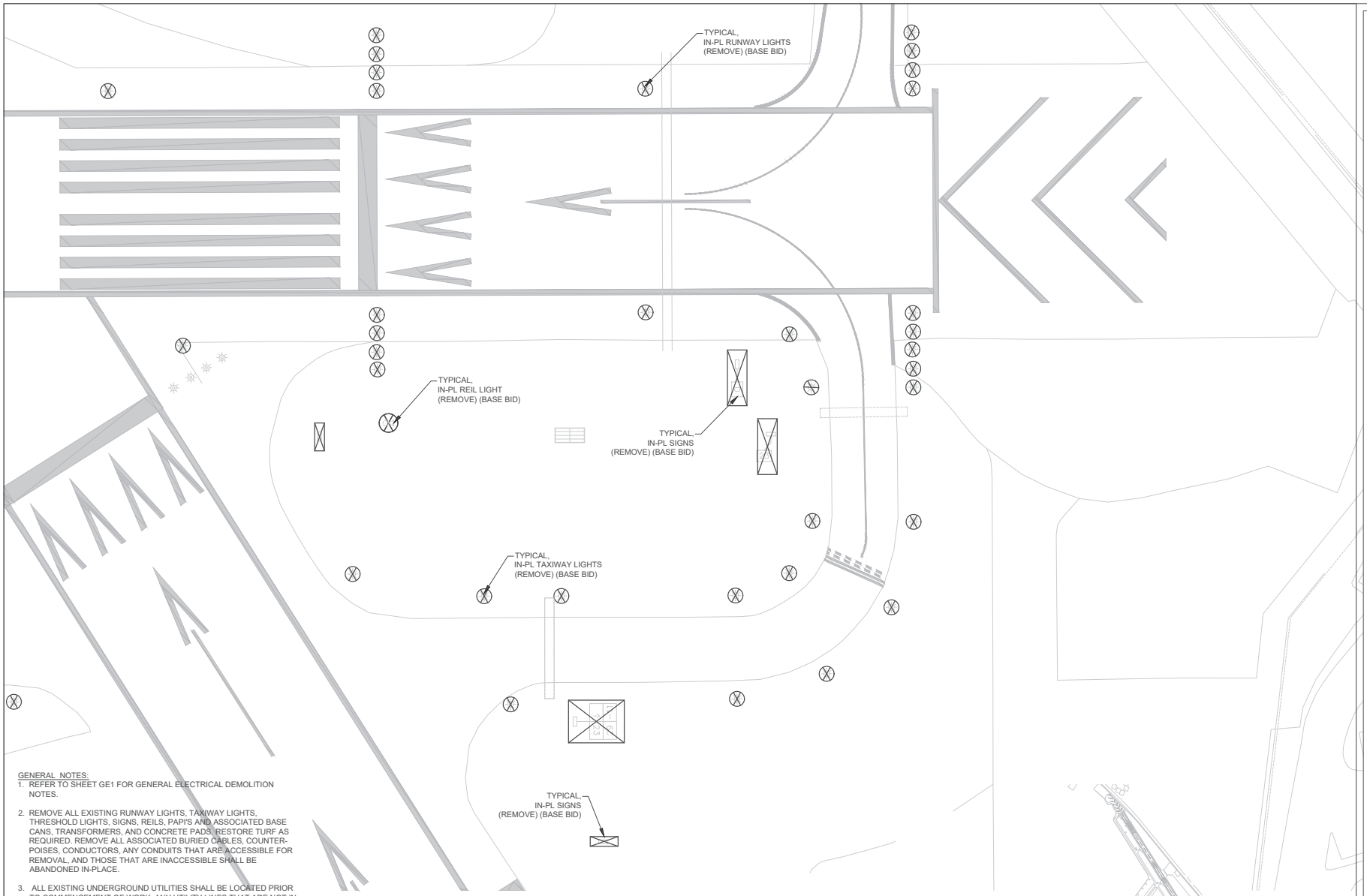
GMC NUMBER : TAUG220004
SCALE: 1"=50'

AIRFIELD LIGHTING DEMOLITION PLAN RUNWAY 5/23 - PART 5

ED5

Sheet 17 of 52



GENERAL NOTES:

1. REFER TO SHEET GE1 FOR GENERAL ELECTRICAL DEMOLITION NOTES.
2. REMOVE ALL EXISTING RUNWAY LIGHTS, TAXIWAY LIGHTS, THRESHOLD LIGHTS, SIGNS, REILS, PAPI'S AND ASSOCIATED BASE CANS, TRANSFORMERS, AND CONCRETE PADS. RESTORE TURF AS REQUIRED. REMOVE ALL ASSOCIATED BURIED CABLES, COUNTER-POISES, CONDUCTORS, ANY CONDUITS THAT ARE ACCESSIBLE FOR REMOVAL, AND THOSE THAT ARE INACCESSIBLE SHALL BE ABANDONED IN-PLACE.
3. ALL EXISTING UNDERGROUND UTILITIES SHALL BE LOCATED PRIOR TO COMMENCEMENT OF WORK. ANY UTILITY LINES THAT ARE NOT IN THE SCOPE OF THIS PROJECT THAT GETS DAMAGED AS OF RESULT OF THIS WORK SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE.
4. COORDINATE WITH OWNER ON DOWNTIME OF EXISTING SYSTEMS. ONE(1) RUNWAY SHALL REMAIN OPERATIONAL DURING THE DURATION OF OTHER RUNWAY BEING IN CONSTRUCTION.

PLAN NORTH

1 ED6

AIRFIELD LIGHTING DEMOLITION PLAN - RUNWAY 5/23 - PART 6

SCALE: 1"=50'-0"

TRUE NORTH

KEY PLAN

NOT TO SCALE

VAUG220003

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designed by: JDZ
drawn by: JRA, JDZ
checked by: JEA

AIRFIELD ELECTRICAL UPGRADE
DANIEL FIELD AIRPORT (DNL)

AUGUSTA, GEORGIA

AP019-XXX-XX(245)
GMC NUMBER : TAUG220004
SCALE: 1"=50'

AIRFIELD LIGHTING DEMOLITION PLAN RUNWAY 5/23 - PART 6

ED6

Sheet 18 of 52

GENERAL NOTES:

1. REFER TO SHEET GE1 FOR GENERAL ELECTRICAL DEMOLITION NOTES.
2. REMOVE ALL EXISTING RUNWAY LIGHTS, TAXIWAY LIGHTS, THRESHOLD LIGHTS, SIGNS, REILS, PAPI'S AND ASSOCIATED BASE CANS, TRANSFORMERS, AND CONCRETE PADS. RESTORE TURF AS REQUIRED. REMOVE ALL ASSOCIATED BURIED CABLES, COUNTER-POISES, CONDUCTORS, ANY CONDUITS THAT ARE ACCESSIBLE FOR REMOVAL, AND THOSE THAT ARE INACCESSIBLE SHALL BE ABANDONED IN-PLACE.
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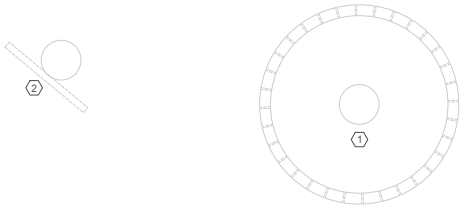
4. COORDINATE WITH OWNER ON DOWNTIME OF EXISTING SYSTEMS. ONE(1) RUNWAY SHALL REMAIN OPERATIONAL DURING THE DURATION OF OTHER RUNWAY BEING IN CONSTRUCTION.

KEYED NOTES (#):

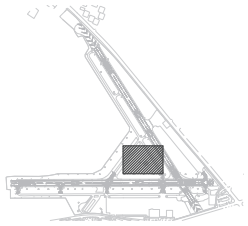
1. EXISTING ELECTRICAL CONNECTION TO WIND CONE TO BE REPLACED WITH NEW. DISCONNECT AND REMOVE ALL ELECTRICAL WIRING AND ELECTRICAL COMPONENTS ASSOCIATED WITH THE WIND CONE.
2. EXISTING AWOS SYSTEM TO REMAIN IN SERVICE - NO WORK REQUIRED.



PLAN NORTH

1 / ED7 AIRFIELD LIGHTING DEMOLITION PLAN - EXISTING AWOS SYSTEM & WINDCONE

SCALE: 1"=50'-0"



TRUE NORTH

KEY PLAN

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AIRFIELD ELECTRICAL UPGRADE
DANIEL FIELD AIRPORT (DNL)

AUGUSTA, GEORGIA

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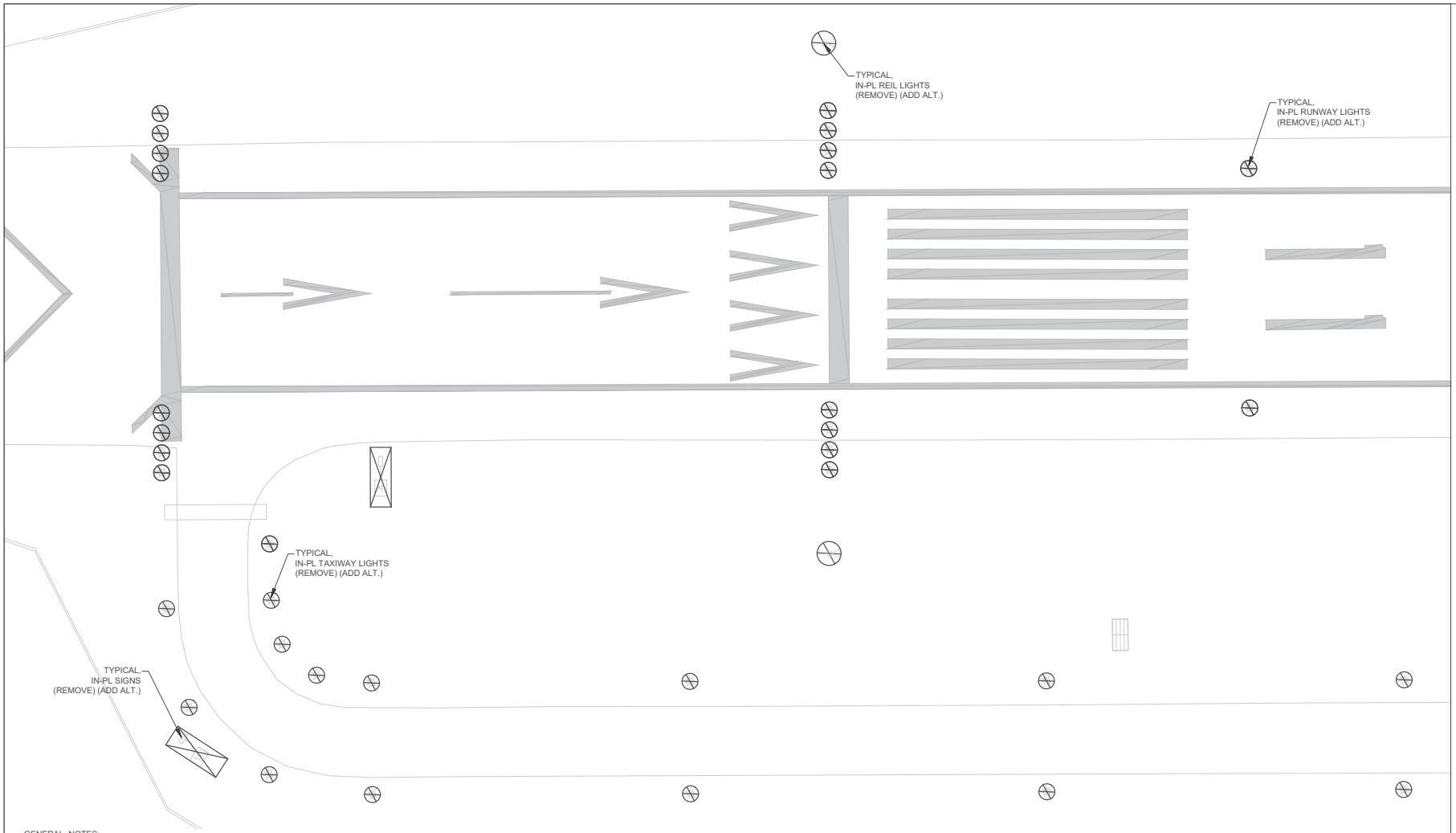
AIRFIELD LIGHTING
DEMOLITION PLAN
EXISTING AWOS &
WINDCONE

ED7

Sheet 19 of 52



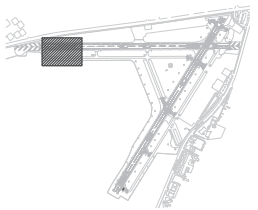
GENERAL NOTES:

1. REFER TO SHEET GE1 FOR GENERAL ELECTRICAL DEMOLITION NOTES.
2. REMOVE ALL EXISTING RUNWAY LIGHTS, TAXIWAY LIGHTS, THRESHOLD LIGHTS, SIGNS, REILS, PAPI'S AND ASSOCIATED BASE CANS, TRANSFORMERS, AND CONCRETE PADS. RESTORE TURF AS REQUIRED. REMOVE ALL ASSOCIATED BURIED CABLES, COUNTER-POISES, CONDUCTORS, ANY CONDUITS THAT ARE ACCESSIBLE FOR REMOVAL, AND THOSE THAT ARE INACCESSIBLE SHALL BE ABANDONED IN-PLACE.
3. ALL EXISTING UNDERGROUND UTILITIES SHALL BE LOCATED PRIOR TO COMMENCEMENT OF WORK. ANY UTILITY LINES THAT ARE NOT IN THE SCOPE OF THIS PROJECT THAT GETS DAMAGED AS OF RESULT OF THIS WORK SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE.
4. COORDINATE WITH OWNER ON DOWNTIME OF EXISTING SYSTEMS. ONE(1) RUNWAY SHALL REMAIN OPERATIONAL DURING THE DURATION OF OTHER RUNWAY BEING IN CONSTRUCTION.

PLAN NORTH — 1 ED8

AIRFIELD LIGHTING DEMOLITION PLAN - RUNWAY 11/29 - PART 1 - ALTERNATE

SCALE: 1"=50'-0"



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AIRFIELD ELECTRICAL UPGRADE
DANIEL FIELD AIRPORT (DNL)

AUGUSTA, GEORGIA

AP019-XXX-XX(245)
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AIRFIELD LIGHTING DEMOLITION PLAN RUNWAY 11-29 - PART 1 (ALT)

ED8

Sheet 20 of 52

GENERAL NOTES:

1. REFER TO SHEET GE1 FOR GENERAL ELECTRICAL DEMOLITION NOTES.
2. REMOVE ALL EXISTING RUNWAY LIGHTS, TAXIWAY LIGHTS, THRESHOLD LIGHTS, SIGNS, REILS, PAPI'S AND ASSOCIATED BASE CANS, TRANSFORMERS, AND CONCRETE PADS. RESTORE TURF AS REQUIRED. REMOVE ALL ASSOCIATED BURIED CABLES, COUNTER-POISES, CONDUCTORS, ANY CONDUITS THAT ARE ACCESSIBLE FOR REMOVAL, AND THOSE THAT ARE INACCESSIBLE SHALL BE ABANDONED IN-PLACE.
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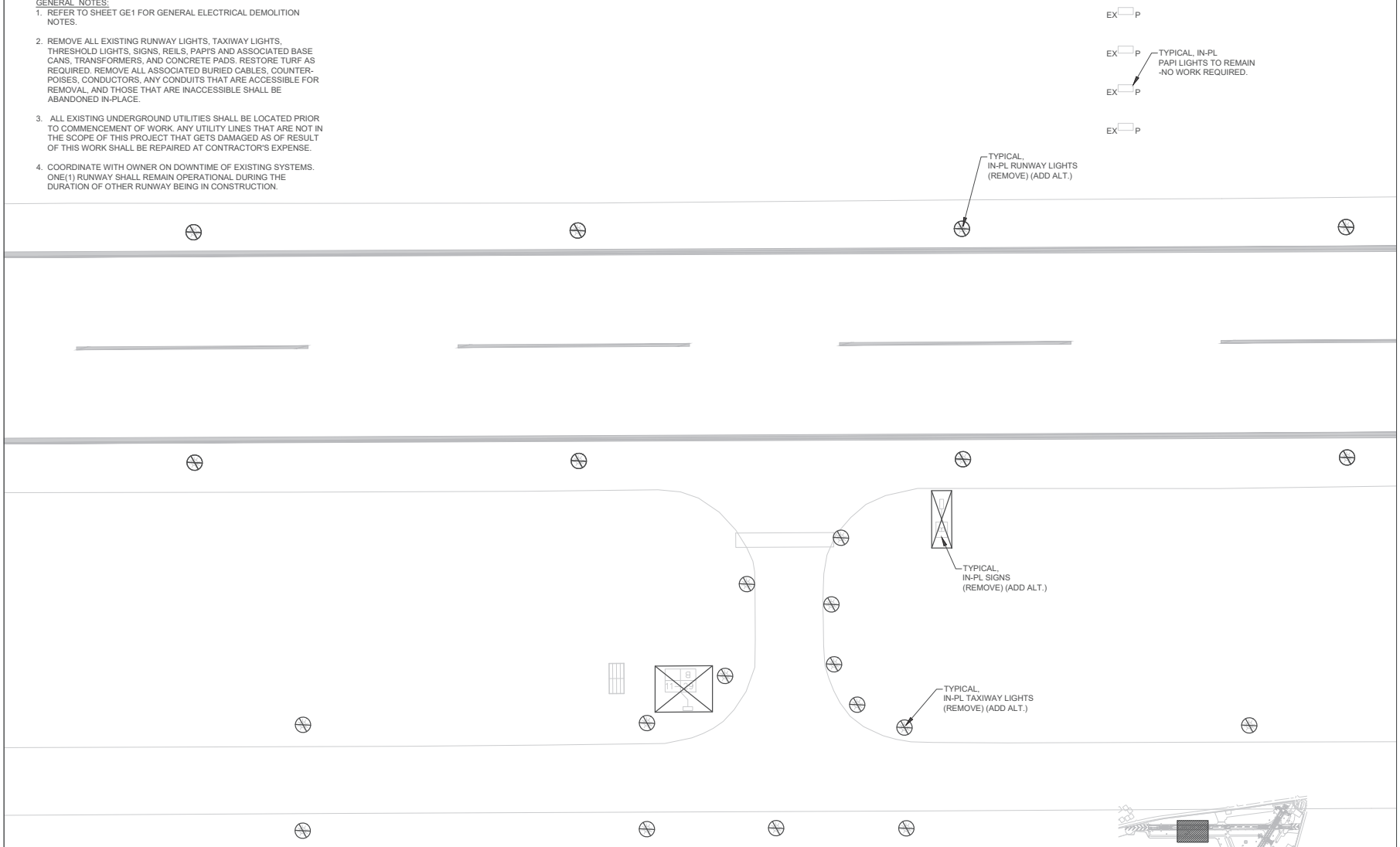
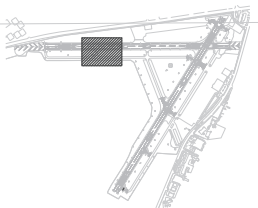
4. COORDINATE WITH OWNER ON DOWNTIME OF EXISTING SYSTEMS. ONE(1) RUNWAY SHALL REMAIN OPERATIONAL DURING THE DURATION OF OTHER RUNWAY BEING IN CONSTRUCTION.



PLAN NORTH — 1 / ED9

AIRFIELD LIGHTING DEMOLITION PLAN - RUNWAY 11/29 - PART 2 - ALTERNATE

SCALE: 1"=50'-0"



TRUE NORTH

KEY PLAN

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AIRFIELD ELECTRICAL UPGRADE
DANIEL FIELD AIRPORT (DNL)

AUGUSTA, GEORGIA

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AIRFIELD LIGHTING DEMOLITION PLAN RUNWAY 11-29 - PART 2 (ALT)

ED9

Sheet 21 of 52

GENERAL NOTES:

1. REFER TO SHEET GE1 FOR GENERAL ELECTRICAL DEMOLITION NOTES.
2. REMOVE ALL EXISTING RUNWAY LIGHTS, TAXIWAY LIGHTS, THRESHOLD LIGHTS, SIGNS, REILS, PAPI'S AND ASSOCIATED BASE CANS, TRANSFORMERS, AND CONCRETE PADS. RESTORE TURF AS REQUIRED. REMOVE ALL ASSOCIATED BURIED CABLES, COUNTER-POISES, CONDUCTORS, ANY CONDUITS THAT ARE ACCESSIBLE FOR REMOVAL, AND THOSE THAT ARE INACCESSIBLE SHALL BE ABANDONED IN-PLACE.
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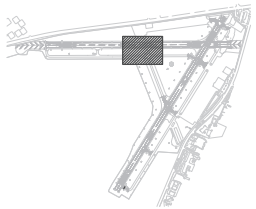
4. COORDINATE WITH OWNER ON DOWNTIME OF EXISTING SYSTEMS. ONE(1) RUNWAY SHALL REMAIN OPERATIONAL DURING THE DURATION OF OTHER RUNWAY BEING IN CONSTRUCTION.



KEY PLAN
NOT TO SCALE

TYPICAL, IN-PL SIGNS (REMOVE) (ADD ALT.)

TYPICAL, IN-PL SIGNS (REMOVE) (ADD ALT.)

TYPICAL, IN-PL RUNWAY LIGHTS (REMOVE) (ADD ALT.)

TYPICAL, IN-PL TAXIWAY LIGHTS (REMOVE) (ADD ALT.)

TYPICAL, IN-PL SIGNS (REMOVE) (ADD ALT.)

AIRFIELD LIGHTING DEMOLITION PLAN - RUNWAY 11/29 - PART 3 - ALTERNATE
SCALE: 1"=50'-0"

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AIRFIELD ELECTRICAL UPGRADE
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AUGUSTA, GEORGIA
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AIRFIELD LIGHTING DEMOLITION PLAN RUNWAY 11-29 - PART 3 (ALT)

ED10

Sheet 22 of 52

GENERAL NOTES:

1. REFER TO SHEET GE1 FOR GENERAL ELECTRICAL DEMOLITION NOTES.
2. REMOVE ALL EXISTING RUNWAY LIGHTS, TAXIWAY LIGHTS, THRESHOLD LIGHTS, SIGNS, REILS, PAPI'S AND ASSOCIATED BASE CANS, TRANSFORMERS, AND CONCRETE PADS. RESTORE TURF AS REQUIRED. REMOVE ALL ASSOCIATED BURIED CABLES, COUNTER-POISES, CONDUCTORS, ANY CONDUITS THAT ARE ACCESSIBLE FOR REMOVAL, AND THOSE THAT ARE INACCESSIBLE SHALL BE ABANDONED IN-PLACE.
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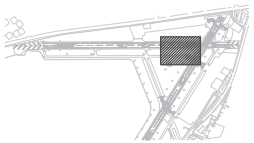
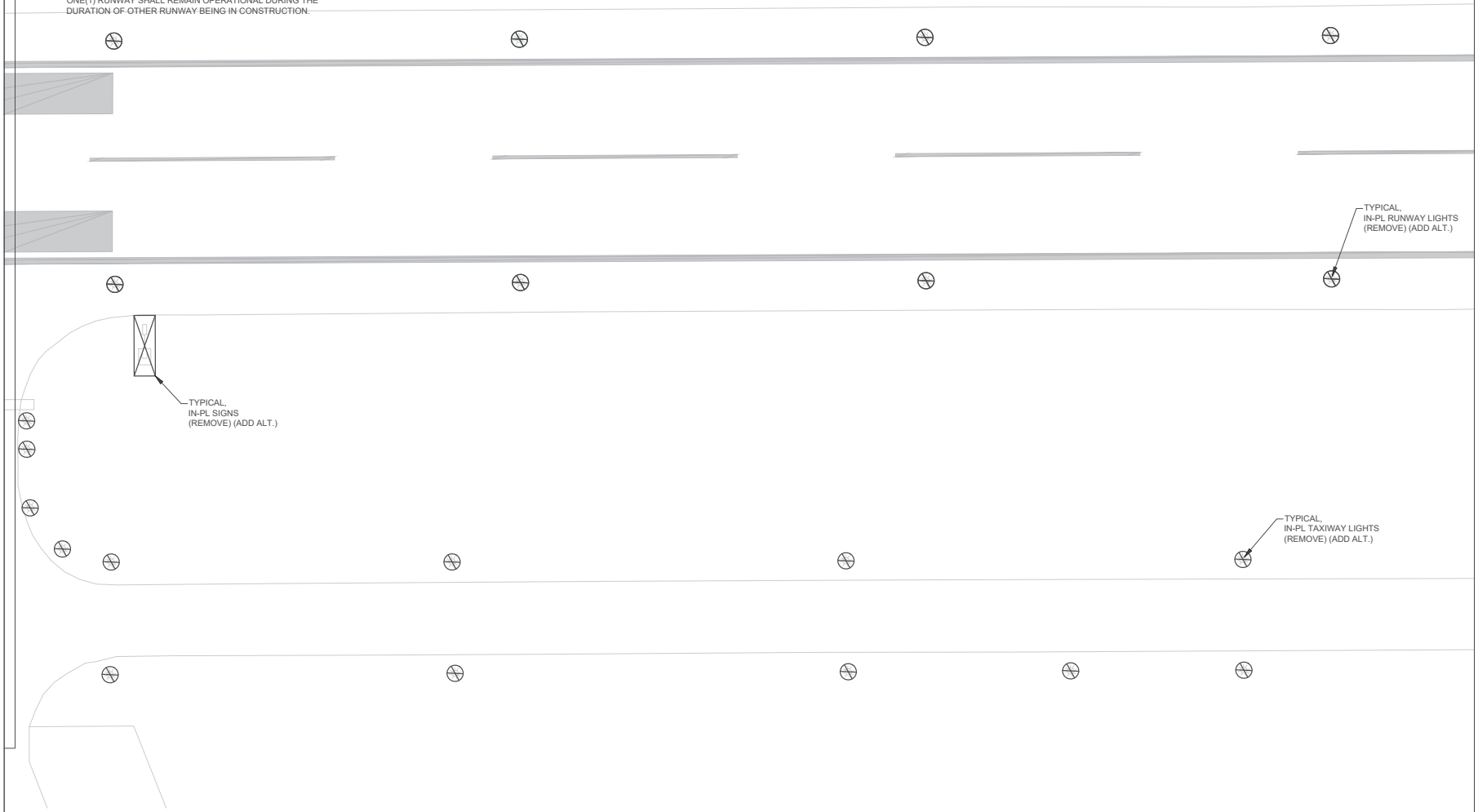
4. COORDINATE WITH OWNER ON DOWNTIME OF EXISTING SYSTEMS. ONE(1) RUNWAY SHALL REMAIN OPERATIONAL DURING THE DURATION OF OTHER RUNWAY BEING IN CONSTRUCTION.



KEY PLAN
NOT TO SCALE



PLAN NORTH 1 ED11
AIRFIELD LIGHTING DEMOLITION PLAN - RUNWAY 11/29 - PART 4 - ALTERNATE
SCALE: 1"=50'-0"

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AIRFIELD ELECTRICAL UPGRADE
DANIEL FIELD AIRPORT (DNL)
AUGUSTA, GEORGIA
AP019-XXX-XX(245)
GMC NUMBER : TAUG220004
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AIRFIELD LIGHTING DEMOLITION PLAN RUNWAY 11-29 - PART 4 (ALT)

ED11
Sheet 23 of 52

GENERAL NOTES:

1. REFER TO SHEET GE1 FOR GENERAL ELECTRICAL DEMOLITION NOTES.
2. REMOVE ALL EXISTING RUNWAY LIGHTS, TAXIWAY LIGHTS, THRESHOLD LIGHTS, SIGNS, REILS, PAPI'S AND ASSOCIATED BASE CANS, TRANSFORMERS, AND CONCRETE PADS. RESTORE TURF AS REQUIRED. REMOVE ALL ASSOCIATED BURIED CABLES, COUNTER-POISES, CONDUCTORS, ANY CONDUITS THAT ARE ACCESSIBLE FOR REMOVAL, AND THOSE THAT ARE INACCESSIBLE SHALL BE ABANDONED IN-PLACE.
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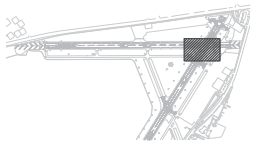
4. COORDINATE WITH OWNER ON DOWNTIME OF EXISTING SYSTEMS. ONE(1) RUNWAY SHALL REMAIN OPERATIONAL DURING THE DURATION OF OTHER RUNWAY BEING IN CONSTRUCTION.



KEY PLAN
NOT TO SCALE

TYPICAL, IN-PL SIGNS (REMOVE) (BASE BID.)

TYPICAL, IN-PL RUNWAY LIGHTS (REMOVE) (ADD ALT.)

TYPICAL, IN-PL SIGNS (REMOVE) (BASE BID)

TYPICAL, IN-PL SIGNS (REMOVE) (BASE BID.)

TYPICAL, IN-PL TAXIWAY LIGHTS (REMOVE) (BASE BID.)

TYPICAL, IN-PL TAXIWAY LIGHTS (REMOVE) (BASE BID)

TYPICAL, IN-PL SIGNS (REMOVE) (BASE BID.)

TYPICAL, IN-PL TAXIWAY LIGHTS (REMOVE) (BASE BID.)

1 ED12 AIRFIELD LIGHTING DEMOLITION PLAN - RUNWAY 11/29 - PART 5 - ALTERNATE
SCALE: 1"=50'-0"

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AIRFIELD ELECTRICAL UPGRADE
DANIEL FIELD AIRPORT (DNL)
AUGUSTA, GEORGIA
AP019-XXX-XX(245)
GMC NUMBER : TAUG220004
SCALE: 1"=50'

AIRFIELD LIGHTING DEMOLITION PLAN RUNWAY 11-29 - PART 5 (ALT)

ED12

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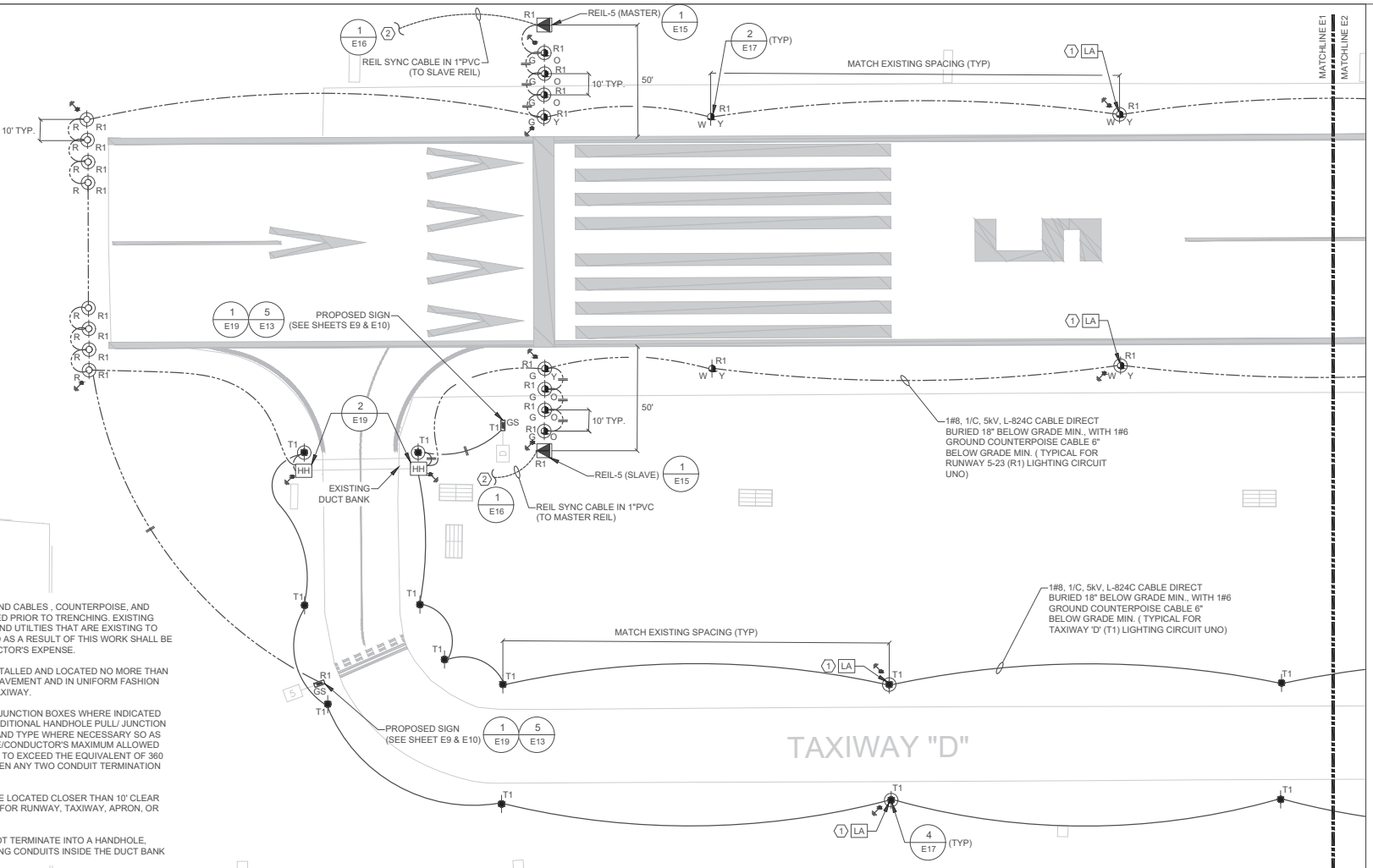


GENERAL NOTES:

1. ALL EXISTING UNDERGROUND CABLES , COUNTERPOISE, AND UTILITIES SHALL BE LOCATED PRIOR TO TRENCHING. EXISTING CABLES, COUNTERPOISE, AND UTILTIES THAT ARE EXISTING TO REMAIN AND ARE DAMAGED AS A RESULT OF THIS WORK SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
2. EDGE LIGHTS SHALL BE INSTALLED AND LOCATED NO MORE THAN 10'-0" FROM THE EDGE OF PAVEMENT AND IN UNIFORM FASHION ALONG THE RUNWAY OR TAXIWAY.
3. PROVIDE HANDHOLE PULL/ JUNCTION BOXES WHERE INDICATED AS A MINIMUM. PROVIDE ADDITIONAL HANDHOLE PULL/ JUNCTION BOXES OF THE SAME SIZE AND TYPE WHERE NECESSARY SO AS NOT TO EXCEED THE CABLE/CONDUCTOR'S MAXIMUM ALLOWED PULLING TENSION AND NOT TO EXCEED THE EQUIVALENT OF 360 DEGREES IN BENDS BETWEEN ANY TWO CONDUIT TERMINATION POINTS.
4. HANDHOLE BOXES SHALL BE LOCATED CLOSER THAN 10' CLEAR FROM EDGE OF PAVEMENT FOR RUNWAY, TAXIWAY, APRON, OR ROADWAYS.
5. WHERE DUCT BANKS DO NOT TERMINATE INTO A HANDHOLE, INSTALL THE AIRFIELD WIRING CONDUITS INSIDE THE DUCT BANK CONDUITS.

KEYED NOTES (#)

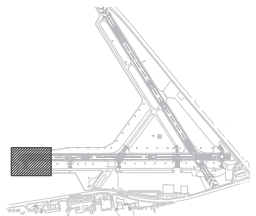
1. PROVIDE FIELD LIGHTNING ARRESTOR FOR SERIES CIRCUIT AS SPECIFIED. LIGHTING ARRESTOR TO BE ADB #FLA44A6102 OR APPROVED EQUAL. INSTALL ARRESTOR IN THE BASE CAN INDICATED AND CONNECT TO THE SERIES LIGHTING CIRCUIT PER MANUFACTURER'S REQUIREMENTS. GROUND PER NEC AND FAA REGULATIONS. GROUND ARRESTOR TO BASE CAN GROUND LUG USING A #4 COOPER GROUND CONDUCTOR. PROVIDE A RED TAG WITH WHITE "LA" LETTERS ON FIXTURE STEM. TAG SHALL MATCH DETAIL 3/E13 EXCEPT FOR THE COLOR.
2. PROVIDE 12"x12"x12" HANDHOLES PER HANDHOLE DETAIL 2/E19. FOR REIL SYNC CABLE CONDUIT AS REQUIRED SO AS NOT TO EXCEED THE CABLE'S MAXIMUM ALLOWED PULLING TENSION AND NOT TO EXCEED THE EQUIVALENT OF 360 DEGREES IN BENDS BETWEEN ANY TWO CONDUIT TERMINATION POINTS.

AIRFIELD LIGHTING & WIRING PLAN - RUNWAY 5/23 - PART 1

SCALE: 1"=50'-0"

NOTE:

1. LOCATE ALL EXISTING UNDERGROUND UTILITIES, ELECTRICAL WIRING, IRRIGATION LINES, AND PIPING BEFORE DIGGING AND EXCAVATION FOR UNDERGROUND CONDUITS, BOXES, PAD EXCAVATION, GROUNDING, ETC. IN ADDITION, CONTACT LOCAL UTILITY COMPANY PROVIDER AND COORDINATE WITH OWNER 3-DAYS BEFORE DIGGING FOR MARKING THE UNDERGROUND UTILITIES. ANY EXISTING UTILITIES, PIPING, AND CABLES/CONDUITS SHOWN ON THESE PLANS ARE FOR GENERAL REFERENCE ONLY AND MAY NOT BE ACCURATE AS TO WHAT IS EXISTING ON SITE.



KEY PLAN
NOT TO SCALE

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drawn by: JRA, JDZ
checked by: JEA

AIRFIELD ELECTRICAL UPGRADE
DANIEL FIELD AIRPORT (DNL)

AUGUSTA, GEORGIA

AP019-XXX-XX(245)
GMC NUMBER : TAUG220004
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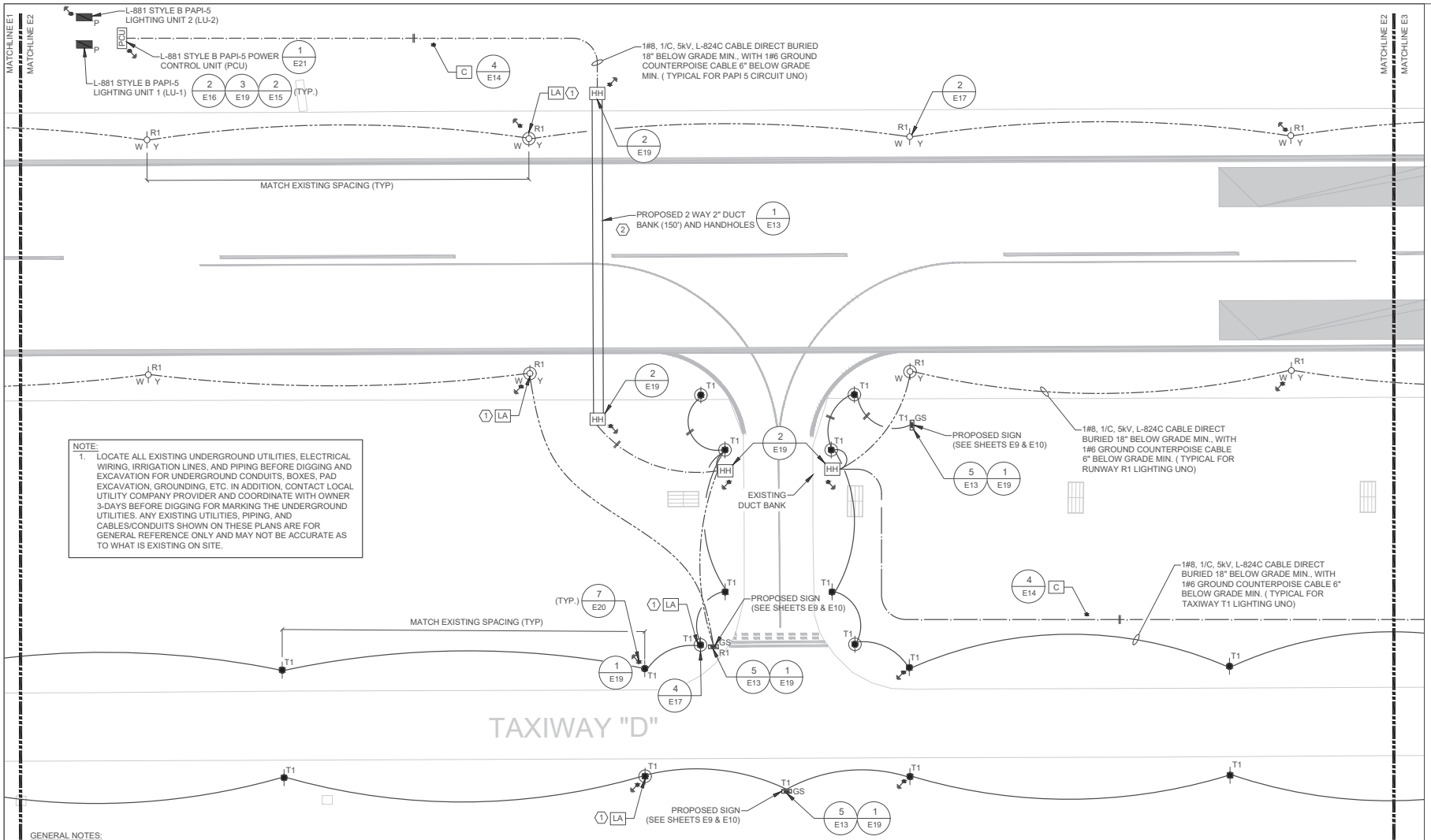
AIRFIELD LIGHTING & WIRING PLAN - RUNWAY 5/23 -PART 1

E1

Sheet 25 of 52



NOTE:
1. LOCATE ALL EXISTING UNDERGROUND UTILITIES, ELECTRICAL WIRING, IRRIGATION LINES, AND PIPING BEFORE DIGGING AND EXCAVATION FOR UNDERGROUND CONDUITS, BOXES, PAD EXCAVATION, GROUNDING, ETC. IN ADDITION, CONTACT LOCAL UTILITY COMPANY PROVIDER AND COORDINATE WITH OWNER 3-DAYS BEFORE DIGGING FOR MARKING THE UNDERGROUND UTILITIES. ANY EXISTING UTILITIES, PIPING, AND CABLES/CONDUITS SHOWN ON THESE PLANS ARE FOR GENERAL REFERENCE ONLY AND MAY NOT BE ACCURATE AS TO WHAT IS EXISTING ON SITE.

GENERAL NOTES:
1. ALL EXISTING UNDERGROUND CABLES , COUNTERPOISE, AND UTILITIES SHALL BE LOCATED PRIOR TO TRENCHING. EXISTING CABLES, COUNTERPOISE, AND UTILTIES THAT ARE EXISTING TO REMAIN AND ARE DAMAGED AS A RESULT OF THIS WORK SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
2. EDGE LIGHTS SHALL BE INSTALLED AND LOCATED NO MORE THAN 10'-0" FROM THE EDGE OF PAVEMENT AND IN UNIFORM FASHION ALONG THE RUNWAY OR TAXIWAY.
3. PROVIDE HANDHOLE PULL/ JUNCTION BOXES WHERE INDICATED AS A MINIMUM. PROVIDE ADDITIONAL HANDHOLE PULL/ JUNCTION BOXES OF THE SAME SIZE AND TYPE WHERE NECESSARY SO AS NOT TO EXCEED THE CABLE/CONDUCTOR'S MAXIMUM ALLOWED PULLING TENSION AND NOT TO EXCEED THE EQUIVALENT OF 360 DEGREES IN BENDS BETWEEN ANY TWO CONDUIT TERMINATION POINTS.
4. HANDHOLE BOXES SHALL BE LOCATED CLOSER THAN 10' CLEAR FROM EDGE OF PAVEMENT FOR RUNWAY, TAXIWAY, APRON, OR ROADWAYS.
5. WHERE DUCT BANKS DO NOT TERMINATE INTO A HANDHOLE, INSTALL THE AIRFIELD WIRING CONDUITS INSIDE THE DUCT BANK CONDUITS.

AIRFIELD LIGHTING & WIRING PLAN - RUNWAY 5/23 - PART 2

SCALE: 1"=50'-0"

KEYED NOTES (#)
1. PROVIDE FIELD LIGHTNING ARRESTOR FOR SERIES CIRCUIT AS SPECIFIED. LIGHTING ARRESTOR TO BE ADB #FLA44A6102 OR APPROVED EQUAL. INSTALL ARRESTOR IN THE BASE CAN INDICATED AND CONNECT TO THE SERIES LIGHTING CIRCUIT PER MANUFACTURER'S REQUIREMENTS. GROUND PER NEC AND FAA REGULATIONS. GROUND ARRESTOR TO BASE CAN GROUND LUG USING A #4 COOPER GROUND CONDUCTOR. PROVIDE A RED TAG WITH WHITE "LA" LETTERS ON FIXTURE STEM. TAG SHALL MATCH DETAIL 3/E13 EXCEPT FOR THE COLOR.
2. CONTRACTOR TO FIELD VERIFY ANY EXISTING DUCT BANKS THAT CAN BE UTILIZED IN THE AREA FOR THE NEW PAPI-5 CIRCUIT. IF ONE DOES EXIST, CONTRACTOR SHALL SEND IN INFORMATION THROUGH RFI TO ENGINEER FOR APPROVAL. IF NEW DUCT BANK HAS TO BE INSTALLED. BORE UNDER EXISTING RUNWAY AS REQUIRED. COORDINATE WITH OWNER/PROJECT MANAGER PRIOR TO BEGINNING WORK.

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AIRFIELD ELECTRICAL UPGRADE
DANIEL FIELD AIRPORT (DNL)
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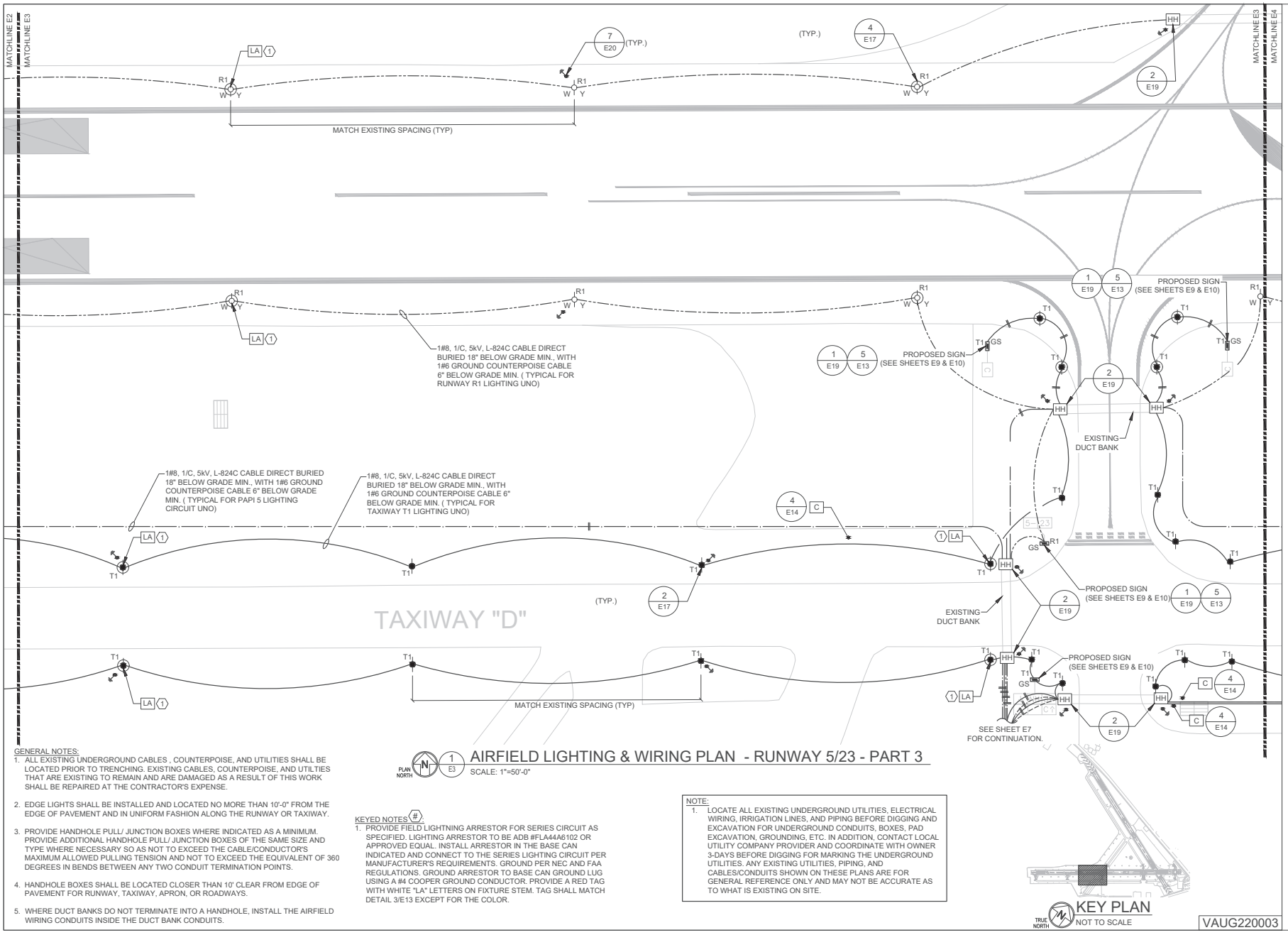
SCALE: 1"=50'

AIRFIELD LIGHTING & WIRING PLAN - RUNWAY 5/23 -PART 2

E2
Sheet 26 of 52



AIRFIELD LIGHTING & WIRING PLAN - RUNWAY 5/23 - PART 3

PLAN NORTH — 1 / E3 — SCALE: 1"=50'-0"

GENERAL NOTES:

1. ALL EXISTING UNDERGROUND CABLES , COUNTERPOISE, AND UTILITIES SHALL BE LOCATED PRIOR TO TRENCHING. EXISTING CABLES, COUNTERPOISE, AND UTILTIES THAT ARE EXISTING TO REMAIN AND ARE DAMAGED AS A RESULT OF THIS WORK SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
2. EDGE LIGHTS SHALL BE INSTALLED AND LOCATED NO MORE THAN 10'-0" FROM THE EDGE OF PAVEMENT AND IN UNIFORM FASHION ALONG THE RUNWAY OR TAXIWAY.
3. PROVIDE HANDHOLE PULL/ JUNCTION BOXES WHERE INDICATED AS A MINIMUM. PROVIDE ADDITIONAL HANDHOLE PULL/ JUNCTION BOXES OF THE SAME SIZE AND TYPE WHERE NECESSARY SO AS NOT TO EXCEED THE CABLE/CONDUCTOR'S MAXIMUM ALLOWED PULLING TENSION AND NOT TO EXCEED THE EQUIVALENT OF 360 DEGREES IN BENDS BETWEEN ANY TWO CONDUIT TERMINATION POINTS.
4. HANDHOLE BOXES SHALL BE LOCATED CLOSER THAN 10' CLEAR FROM EDGE OF PAVEMENT FOR RUNWAY, TAXIWAY, APRON, OR ROADWAYS.
5. WHERE DUCT BANKS DO NOT TERMINATE INTO A HANDHOLE, INSTALL THE AIRFIELD WIRING CONDUITS INSIDE THE DUCT BANK CONDUITS.

KEYED NOTES (#):

1. PROVIDE FIELD LIGHTNING ARRESTOR FOR SERIES CIRCUIT AS SPECIFIED. LIGHTING ARRESTOR TO BE ADB #FLA44A6102 OR APPROVED EQUAL. INSTALL ARRESTOR IN THE BASE CAN INDICATED AND CONNECT TO THE SERIES LIGHTING CIRCUIT PER MANUFACTURER'S REQUIREMENTS. GROUND PER NEC AND FAA REGULATIONS. GROUND ARRESTOR TO BASE CAN GROUND LUG USING A #4 COOPER GROUND CONDUCTOR. PROVIDE A RED TAG WITH WHITE "LA" LETTERS ON FIXTURE STEM. TAG SHALL MATCH DETAIL 3/E13 EXCEPT FOR THE COLOR.

NOTE:

1. LOCATE ALL EXISTING UNDERGROUND UTILITIES, ELECTRICAL WIRING, IRRIGATION LINES, AND PIPING BEFORE DIGGING AND EXCAVATION FOR UNDERGROUND CONDUITS, BOXES, PAD EXCAVATION, GROUNDING, ETC. IN ADDITION, CONTACT LOCAL UTILITY COMPANY PROVIDER AND COORDINATE WITH OWNER 3-DAYS BEFORE DIGGING FOR MARKING THE UNDERGROUND UTILITIES. ANY EXISTING UTILITIES, PIPING, AND CABLES/CONDUITS SHOWN ON THESE PLANS ARE FOR GENERAL REFERENCE ONLY AND MAY NOT BE ACCURATE AS TO WHAT IS EXISTING ON SITE.

KEY PLAN — TRUE NORTH — NOT TO SCALE

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ISSUE | DATE
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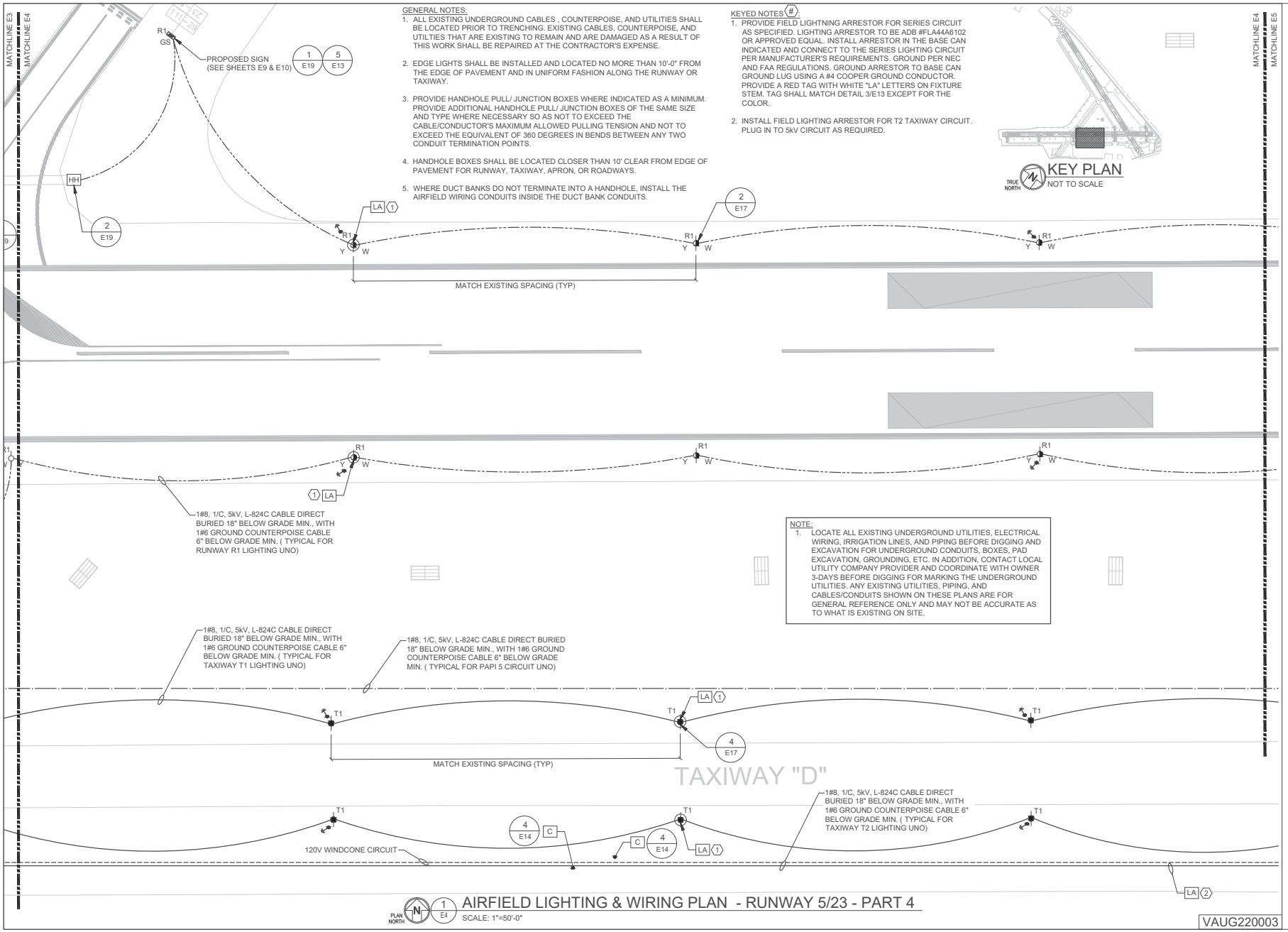
designed by: JDZ
drawn by: JRA, JDZ
checked by: JEA

AIRFIELD ELECTRICAL UPGRADE
DANIEL FIELD AIRPORT (DNL)
AUGUSTA, GEORGIA
AP019-XXX-XX(245)
GMC NUMBER : TAUG220004
SCALE: 1"=50'

AIRFIELD LIGHTING & WIRING PLAN - RUNWAY 5/23 -PART 3

E3

Sheet 27 of 52



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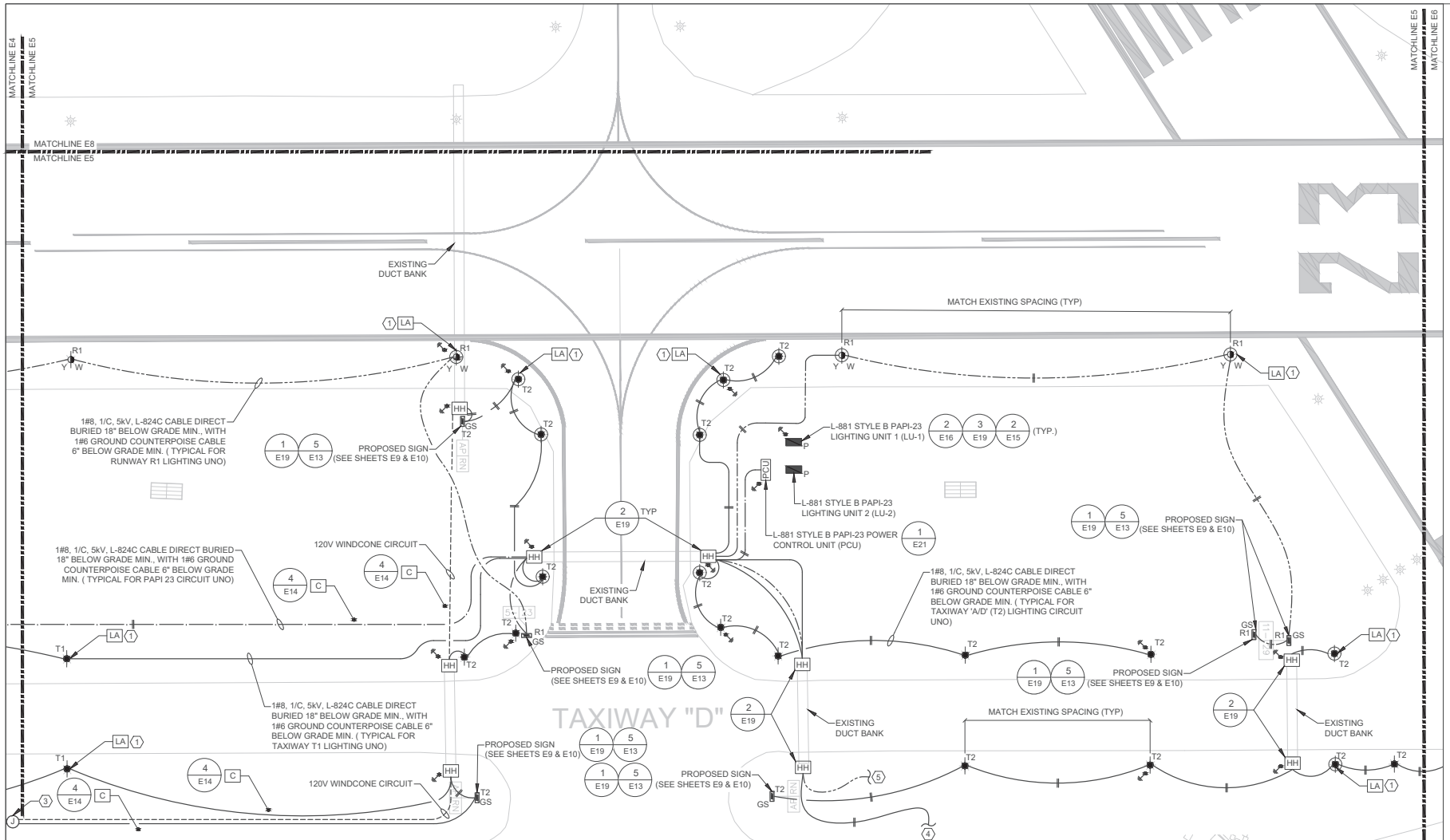
SCALE: 1"=50'

AIRFIELD LIGHTING & WIRING PLAN - RUNWAY 5/23 -PART 4

E4

Sheet 28 of 52



AIRFIELD LIGHTING & WIRING PLAN - RUNWAY 5/23 - PART 5

PLAN NORTH — SCALE: 1"=50'-0"

GENERAL NOTES:

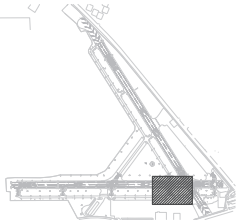
1. ALL EXISTING UNDERGROUND CABLES , COUNTERPOISE, AND UTILITIES SHALL BE LOCATED PRIOR TO TRENCHING. EXISTING CABLES, COUNTERPOISE, AND UTILTIES THAT ARE EXISTING TO REMAIN AND ARE DAMAGED AS A RESULT OF THIS WORK SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
2. EDGE LIGHTS SHALL BE INSTALLED AND LOCATED NO MORE THAN 10'-0" FROM THE EDGE OF PAVEMENT AND IN UNIFORM FASHION ALONG THE RUNWAY OR TAXIWAY.
3. PROVIDE HANDHOLE PULL/ JUNCTION BOXES WHERE INDICATED AS A MINIMUM. PROVIDE ADDITIONAL HANDHOLE PULL/ JUNCTION BOXES OF THE SAME SIZE AND TYPE WHERE NECESSARY SO AS NOT TO EXCEED THE CABLE/CONDUCTOR'S MAXIMUM ALLOWED PULLING TENSION AND NOT TO EXCEED THE EQUIVALENT OF 360 DEGREES IN BENDS BETWEEN ANY TWO CONDUIT TERMINATION POINTS.
4. HANDHOLE BOXES SHALL BE LOCATED CLOSER THAN 10' CLEAR FROM EDGE OF PAVEMENT FOR RUNWAY, TAXIWAY, APRON, OR ROADWAYS.
5. WHERE DUCT BANKS DO NOT TERMINATE INTO A HANDHOLE, INSTALL THE AIRFIELD WIRING CONDUITS INSIDE THE DUCT BANK CONDUITS.

KEYED NOTES (#):

1. PROVIDE FIELD LIGHTNING ARRESTOR FOR SERIES CIRCUIT AS SPECIFIED. LIGHTING ARRESTOR TO BE ADB #FLA44A6102 OR APPROVED EQUAL. INSTALL ARRESTOR IN THE BASE CAN INDICATED AND CONNECT TO THE SERIES LIGHTING CIRCUIT PER MANUFACTURER'S REQUIREMENTS. GROUND PER NEC AND FAA REGULATIONS. GROUND ARRESTOR TO BASE CAN GROUND LUG USING A #4 COOPER GROUND CONDUCTOR. PROVIDE A RED TAG WITH WHITE "LA" LETTERS ON FIXTURE STEM. TAG SHALL MATCH DETAIL 3/E13 EXCEPT FOR THE COLOR.
2. SEE SHEET E8 FOR CONTINUATION OF 120V WIND CONE CIRCUIT.
3. EXISTING JUNCTION BOX/CAN TO REMAIN.
4. SEE SHEET E6 FOR TAXIWAY T1 CIRCUIT CONTINUATION. MATCH EXISTING ROUTE.
5. SEE SHEET E6 FOR RUNWAY R1 CIRCUIT CONTINUATION. MATCH EXISTING ROUTE.

NOTE:

1. LOCATE ALL EXISTING UNDERGROUND UTILITIES, ELECTRICAL WIRING, IRRIGATION LINES, AND PIPING BEFORE DIGGING AND EXCAVATION FOR UNDERGROUND CONDUITS, BOXES, PAD EXCAVATION, GROUNDING, ETC. IN ADDITION, CONTACT LOCAL UTILITY COMPANY PROVIDER AND COORDINATE WITH OWNER 3-DAYS BEFORE DIGGING FOR MARKING THE UNDERGROUND UTILITIES. ANY EXISTING UTILITIES, PIPING, AND CABLES/CONDUITS SHOWN ON THESE PLANS ARE FOR GENERAL REFERENCE ONLY AND MAY NOT BE ACCURATE AS TO WHAT IS EXISTING ON SITE.



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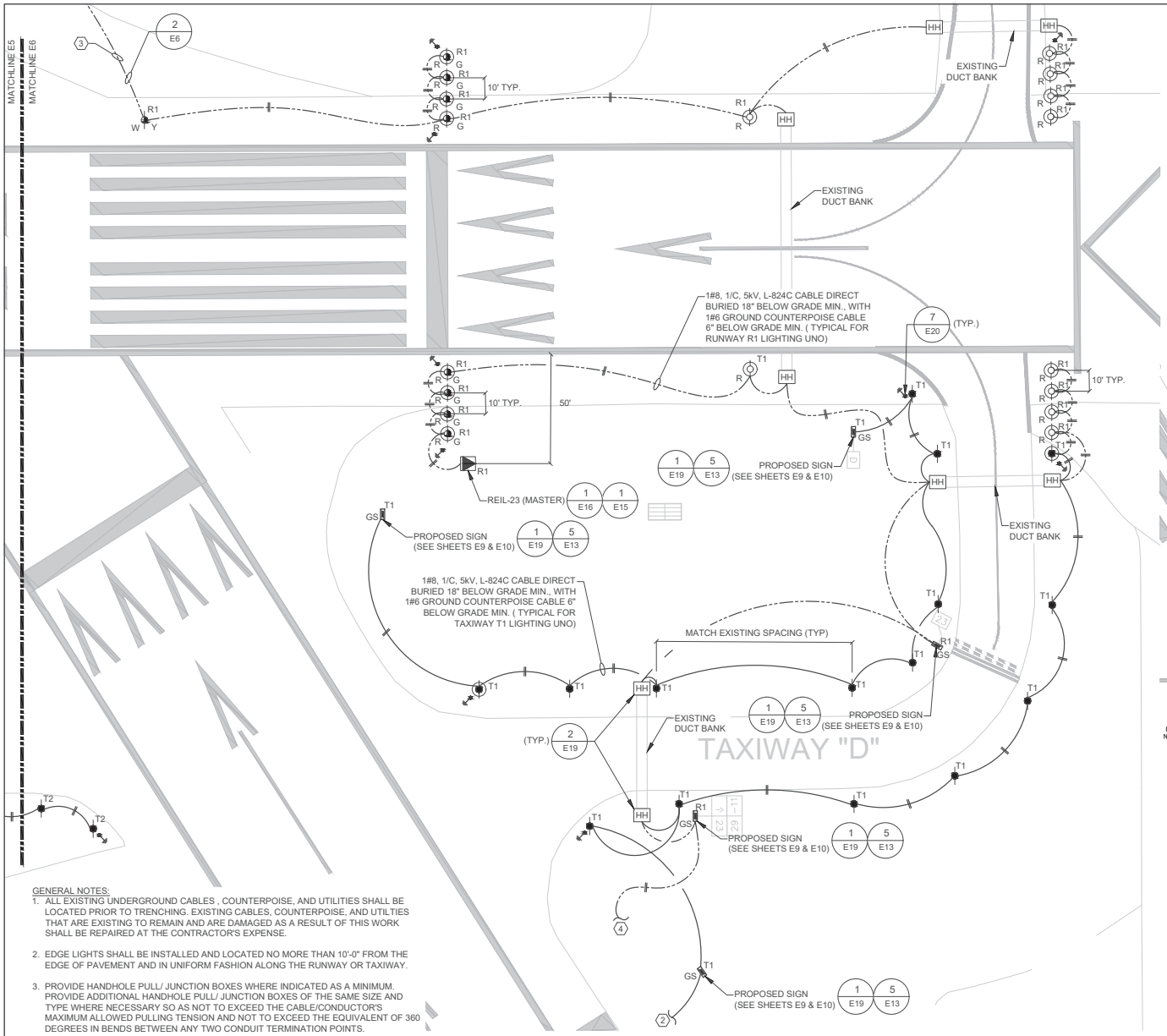
drawn by:	JRA, JDZ
checked by:	JEA

AIRFIELD ELECTRICAL UPGRADE
DANIEL FIELD AIRPORT (DNL)
AUGUSTA, GEORGIA
AP019-XXX-XX(245)
GMC NUMBER : TAUG220004
SCALE: 1"=50'

AIRFIELD LIGHTING & WIRING PLAN - RUNWAY 5/23 -PART 5

E5
Sheet 29 of 52



GENERAL NOTES:

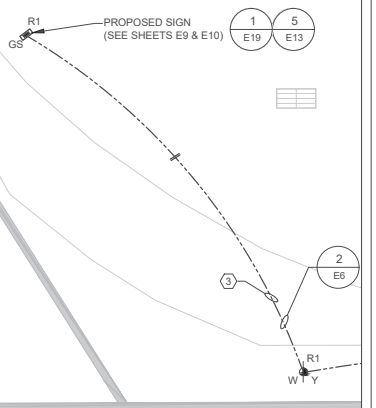
1. ALL EXISTING UNDERGROUND CABLES , COUNTERPOISE, AND UTILITIES SHALL BE LOCATED PRIOR TO TRENCHING. EXISTING CABLES, COUNTERPOISE, AND UTILTIES THAT ARE EXISTING TO REMAIN AND ARE DAMAGED AS A RESULT OF THIS WORK SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
2. EDGE LIGHTS SHALL BE INSTALLED AND LOCATED NO MORE THAN 10'-0" FROM THE EDGE OF PAVEMENT AND IN UNIFORM FASHION ALONG THE RUNWAY OR TAXIWAY.
3. PROVIDE HANDHOLE PULL/ JUNCTION BOXES WHERE INDICATED AS A MINIMUM. PROVIDE ADDITIONAL HANDHOLE PULL/ JUNCTION BOXES OF THE SAME SIZE AND TYPE WHERE NECESSARY SO AS NOT TO EXCEED THE CABLE/CONDUCTOR'S MAXIMUM ALLOWED PULLING TENSION AND NOT TO EXCEED THE EQUIVALENT OF 360 DEGREES IN BENDS BETWEEN ANY TWO CONDUIT TERMINATION POINTS.
4. HANDHOLE BOXES SHALL BE LOCATED CLOSER THAN 10' CLEAR FROM EDGE OF PAVEMENT FOR RUNWAY, TAXIWAY, APRON, OR ROADWAYS.
5. WHERE DUCT BANKS DO NOT TERMINATE INTO A HANDHOLE, INSTALL THE AIRFIELD WIRING CONDUITS INSIDE THE DUCT BANK CONDUITS.

AIRFIELD LIGHTING & WIRING PLAN - RUNWAY 5/23 - PART 6

PLAN NORTH — SCALE: 1"=50'-0"

KEYED NOTES (#)

1. PROVIDE FIELD LIGHTNING ARRESTOR FOR SERIES CIRCUIT AS SPECIFIED. LIGHTING ARRESTOR TO BE ADB #FLA44A6102 OR APPROVED EQUAL. INSTALL ARRESTOR IN THE BASE CAN INDICATED AND CONNECT TO THE SERIES LIGHTING CIRCUIT PER MANUFACTURER'S REQUIREMENTS. GROUND PER NEC AND FAA REGULATIONS. GROUND ARRESTOR TO BASE CAN GROUND LUG USING A #4 COOPER GROUND CONDUCTOR. PROVIDE A RED TAG WITH WHITE "LA" LETTERS ON FIXTURE STEM. TAG SHALL MATCH DETAIL 3/E17 EXCEPT FOR THE COLOR.
2. SEE SHEET E5 FOR CONTINUATION OF TAXIWAY 'D' (T1) CIRCUIT. ROUTE CIRCUIT AROUND RUNWAY 11/29 THRESHOLD AS REQUIRED. MATCH EXISTING ROUTE.
3. SEE DETAIL 2/E6 (THIS SHEET) FOR CONTINUATION OF RUNWAY 5-23 (R1) CIRCUIT. MATCH EXISTING ROUTE.
4. SEE SHEET E5 FOR CONTINUATION OF RUNWAY R1 CIRCUIT. ROUTE CIRCUIT AROUND RUNWAY 11/29 THRESHOLD AS REQUIRED. MATCH EXISTING ROUTE.

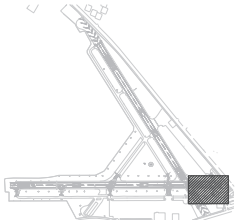


AIRFIELD LIGHTING & WIRING PLAN - RUNWAY 5/23 - PART 6

PLAN NORTH — SCALE: 1"=50'-0"

NOTE:

1. LOCATE ALL EXISTING UNDERGROUND UTILITIES, ELECTRICAL WIRING, IRRIGATION LINES, AND PIPING BEFORE DIGGING AND EXCAVATION FOR UNDERGROUND CONDUITS, BOXES, PAD EXCAVATION, GROUNDING, ETC. IN ADDITION, CONTACT LOCAL UTILITY COMPANY PROVIDER AND COORDINATE WITH OWNER 3-DAYS BEFORE DIGGING FOR MARKING THE UNDERGROUND UTILITIES. ANY EXISTING UTILITIES, PIPING, AND CABLES/CONDUITS SHOWN ON THESE PLANS ARE FOR GENERAL REFERENCE ONLY AND MAY NOT BE ACCURATE AS TO WHAT IS EXISTING ON SITE.



KEY PLAN — NOT TO SCALE

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drawn by: JRA, JDZ
checked by: JEA

AIRFIELD ELECTRICAL UPGRADE
DANIEL FIELD AIRPORT (DNL)
AUGUSTA, GEORGIA
AP019-XXX-XX(245)
GMC NUMBER : TAUG220004
SCALE: 1"=50'

AIRFIELD LIGHTING & WIRING PLAN - RUNWAY 5/23 -PART 6

E6

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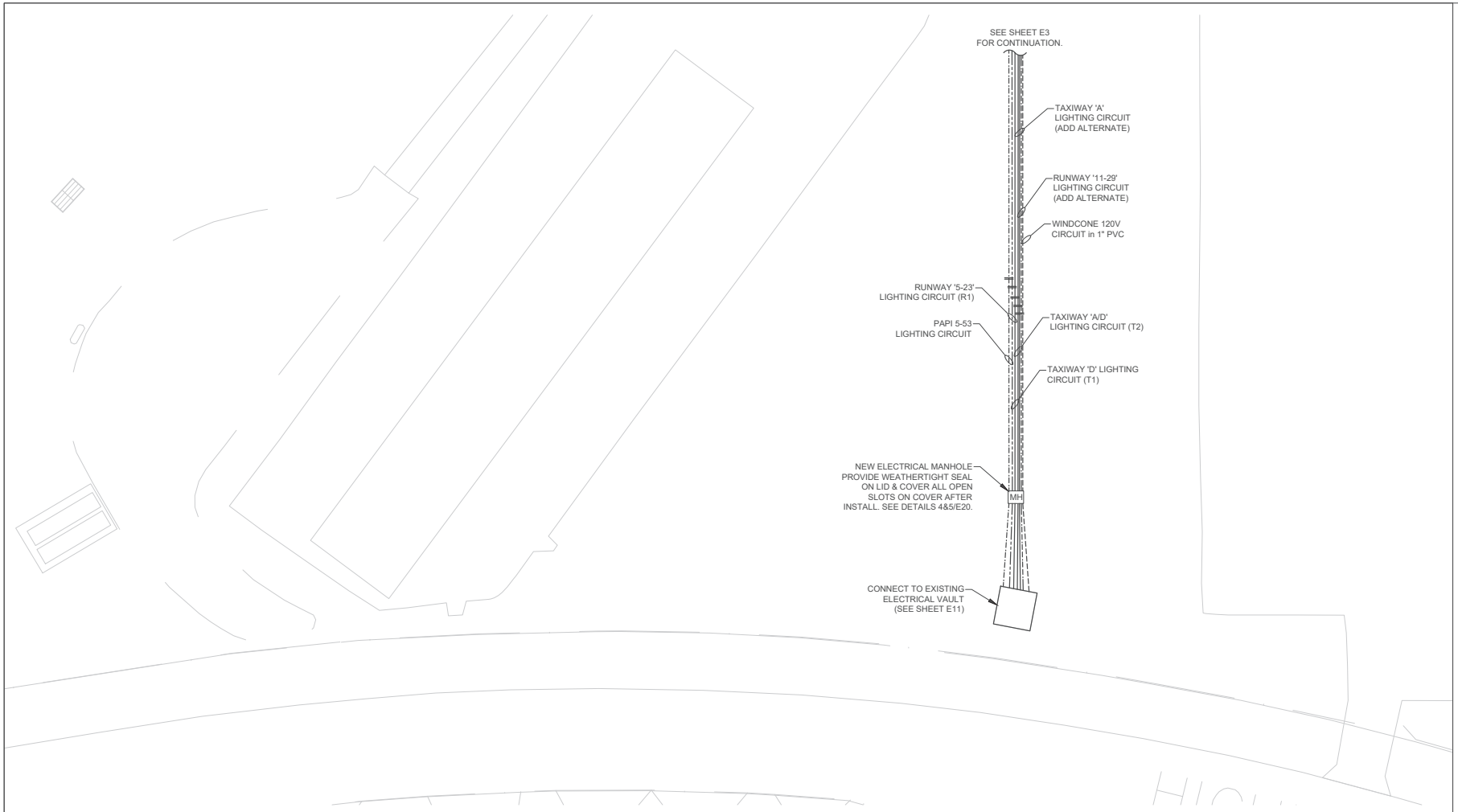

GENERAL NOTES:

1. ALL EXISTING UNDERGROUND CABLES , COUNTERPOISE, AND UTILITIES SHALL BE LOCATED PRIOR TO TRENCHING. EXISTING CABLES, COUNTERPOISE, AND UTILTIES THAT ARE EXISTING TO REMAIN AND ARE DAMAGED AS A RESULT OF THIS WORK SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
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3. PROVIDE HANDHOLE PULL/ JUNCTION BOXES WHERE INDICATED AS A MINIMUM. PROVIDE ADDITIONAL HANDHOLE PULL/ JUNCTION BOXES OF THE SAME SIZE AND TYPE WHERE NECESSARY SO AS NOT TO EXCEED THE CABLE/CONDUCTOR'S MAXIMUM ALLOWED PULLING TENSION AND NOT TO EXCEED THE EQUIVALENT OF 360 DEGREES IN BENDS BETWEEN ANY TWO CONDUIT TERMINATION POINTS.
4. HANDHOLE BOXES SHALL BE LOCATED CLOSER THAN 10' CLEAR FROM EDGE OF PAVEMENT FOR RUNWAY, TAXIWAY, APRON, OR ROADWAYS.
5. WHERE DUCT BANKS DO NOT TERMINATE INTO A HANDHOLE, INSTALL THE AIRFIELD WIRING CONDUITS INSIDE THE DUCT BANK CONDUITS.

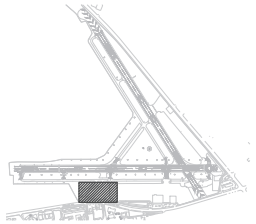
PLAN NORTH — 1 / E7

AIRFIELD LIGHTING & WIRING PLAN - RUNWAY 5/23 - PART 7

SCALE: 1"=50'-0"

NOTE:

1. LOCATE ALL EXISTING UNDERGROUND UTILITIES, ELECTRICAL WIRING, IRRIGATION LINES, AND PIPING BEFORE DIGGING AND EXCAVATION FOR UNDERGROUND CONDUITS, BOXES, PAD EXCAVATION, GROUNDING, ETC. IN ADDITION, CONTACT LOCAL UTILITY COMPANY PROVIDER AND COORDINATE WITH OWNER 3-DAYS BEFORE DIGGING FOR MARKING THE UNDERGROUND UTILITIES. ANY EXISTING UTILITIES, PIPING, AND CABLES/CONDUITS SHOWN ON THESE PLANS ARE FOR GENERAL REFERENCE ONLY AND MAY NOT BE ACCURATE AS TO WHAT IS EXISTING ON SITE.



TRUE NORTH — KEY PLAN — NOT TO SCALE

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drawn by: JRA, JDZ
checked by: JEA

AIRFIELD ELECTRICAL UPGRADE
DANIEL FIELD AIRPORT (DNL)

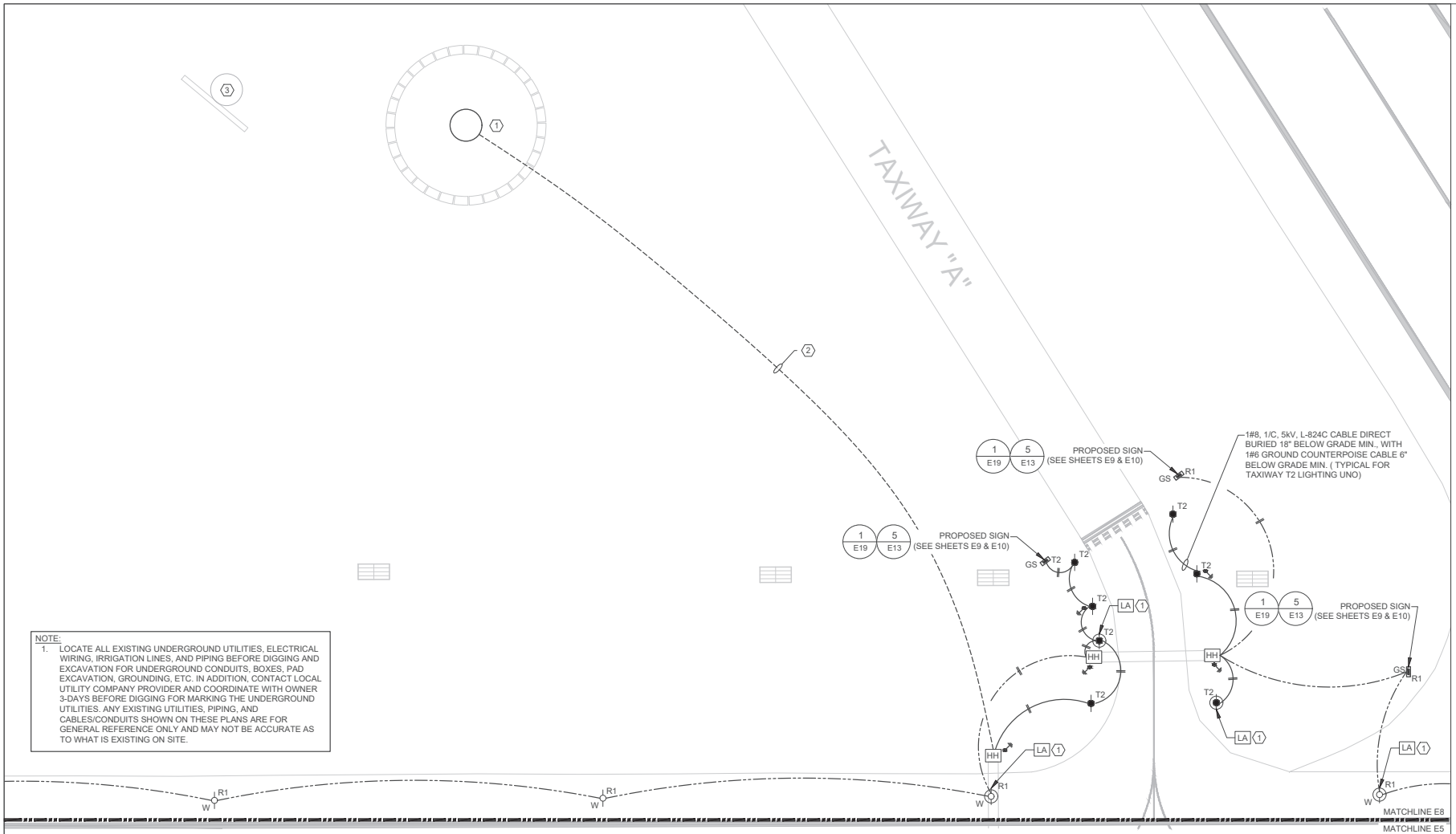
AUGUSTA, GEORGIA

AP019-XXX-XX(245)
GMC NUMBER : TAUG220004
SCALE: 1"=50'

AIRFIELD LIGHTING & WIRING PLAN - RUNWAY 5/23 - PART 7

E7

Sheet 31 of 52



NOTE:
1. LOCATE ALL EXISTING UNDERGROUND UTILITIES, ELECTRICAL WIRING, IRRIGATION LINES, AND PIPING BEFORE DIGGING AND EXCAVATION FOR UNDERGROUND CONDUITS, BOXES, PAD EXCAVATION, GROUNDING, ETC. IN ADDITION, CONTACT LOCAL UTILITY COMPANY PROVIDER AND COORDINATE WITH OWNER 3-DAYS BEFORE DIGGING FOR MARKING THE UNDERGROUND UTILITIES. ANY EXISTING UTILITIES, PIPING, AND CABLES/CONDUITS SHOWN ON THESE PLANS ARE FOR GENERAL REFERENCE ONLY AND MAY NOT BE ACCURATE AS TO WHAT IS EXISTING ON SITE.

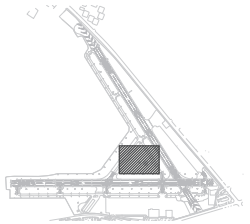
AIRFIELD LIGHTING & WIRING PLAN - EXISTING AWOS SYSTEM & WINDCONE

PLAN NORTH — 1/E8

SCALE: 1"=50'-0"

GENERAL NOTES:
1. ALL EXISTING UNDERGROUND CABLES , COUNTERPOISE, AND UTILITIES SHALL BE LOCATED PRIOR TO TRENCHING. EXISTING CABLES, COUNTERPOISE, AND UTILTIES THAT ARE EXISTING TO REMAIN AND ARE DAMAGED AS A RESULT OF THIS WORK SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
2. EDGE LIGHTS SHALL BE INSTALLED AND LOCATED NO MORE THAN 10'-0" FROM THE EDGE OF PAVEMENT AND IN UNIFORM FASHION ALONG THE RUNWAY OR TAXIWAY.
3. PROVIDE HANDHOLE PULL/ JUNCTION BOXES WHERE INDICATED AS A MINIMUM. PROVIDE ADDITIONAL HANDHOLE PULL/ JUNCTION BOXES OF THE SAME SIZE AND TYPE WHERE NECESSARY SO AS NOT TO EXCEED THE CABLE/CONDUCTOR'S MAXIMUM ALLOWED PULLING TENSION AND NOT TO EXCEED THE EQUIVALENT OF 360 DEGREES IN BENDS BETWEEN ANY TWO CONDUIT TERMINATION POINTS.
4. HANDHOLE BOXES SHALL BE LOCATED CLOSER THAN 10' CLEAR FROM EDGE OF PAVEMENT FOR RUNWAY, TAXIWAY, APRON, OR ROADWAYS.
5. WHERE DUCT BANKS DO NOT TERMINATE INTO A HANDHOLE, INSTALL THE AIRFIELD WIRING CONDUITS INSIDE THE DUCT BANK CONDUITS.

KEYED NOTES (#)
1. EXISTING 120V CIRCUIT TO WIND CONE TO BE REPLACED WITH NEW. MAKE NEW ELECTRICAL CONNECTION AS PER MANUFACTURER'S REQUIREMENTS. EXISTING WINDCONE IS A HALI-BRITE INC. #L807-S2-IN-120-ON-5. UTILIZE 4/0 WIRE IN 2" CONDUIT TO ACHIEVE <3% VOLTAGE DROP.
2. 2#4/0, 1#4/0(G) - 2"C TO PANEL 'EVP' IN ELECTRICAL VAULT.
3. EXISTING AWOS SYSTEM TO REMAIN IN SERVICE - NO WORK REQUIRED.
4. PROVIDE FIELD LIGHTNING ARRESTOR FOR SERIES CIRCUIT AS SPECIFIED. LIGHTING ARRESTOR TO BE ADB #FLA44A6102 OR APPROVED EQUAL. INSTALL ARRESTOR IN THE BASE CAN INDICATED AND CONNECT TO THE SERIES LIGHTING CIRCUIT PER MANUFACTURER'S REQUIREMENTS. GROUND PER NEC AND FAA REGULATIONS. GROUND ARRESTOR TO BASE CAN GROUND LUG USING A #4 COOPER GROUND CONDUCTOR. PROVIDE A RED TAG WITH WHITE "LA" LETTERS ON FIXTURE STEM. TAG SHALL MATCH DETAIL 3/E13 EXCEPT FOR THE COLOR.



KEY PLAN
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AIRFIELD ELECTRICAL UPGRADE
DANIEL FIELD AIRPORT (DNL)
AUGUSTA, GEORGIA
AP019-XXX-XX(245)
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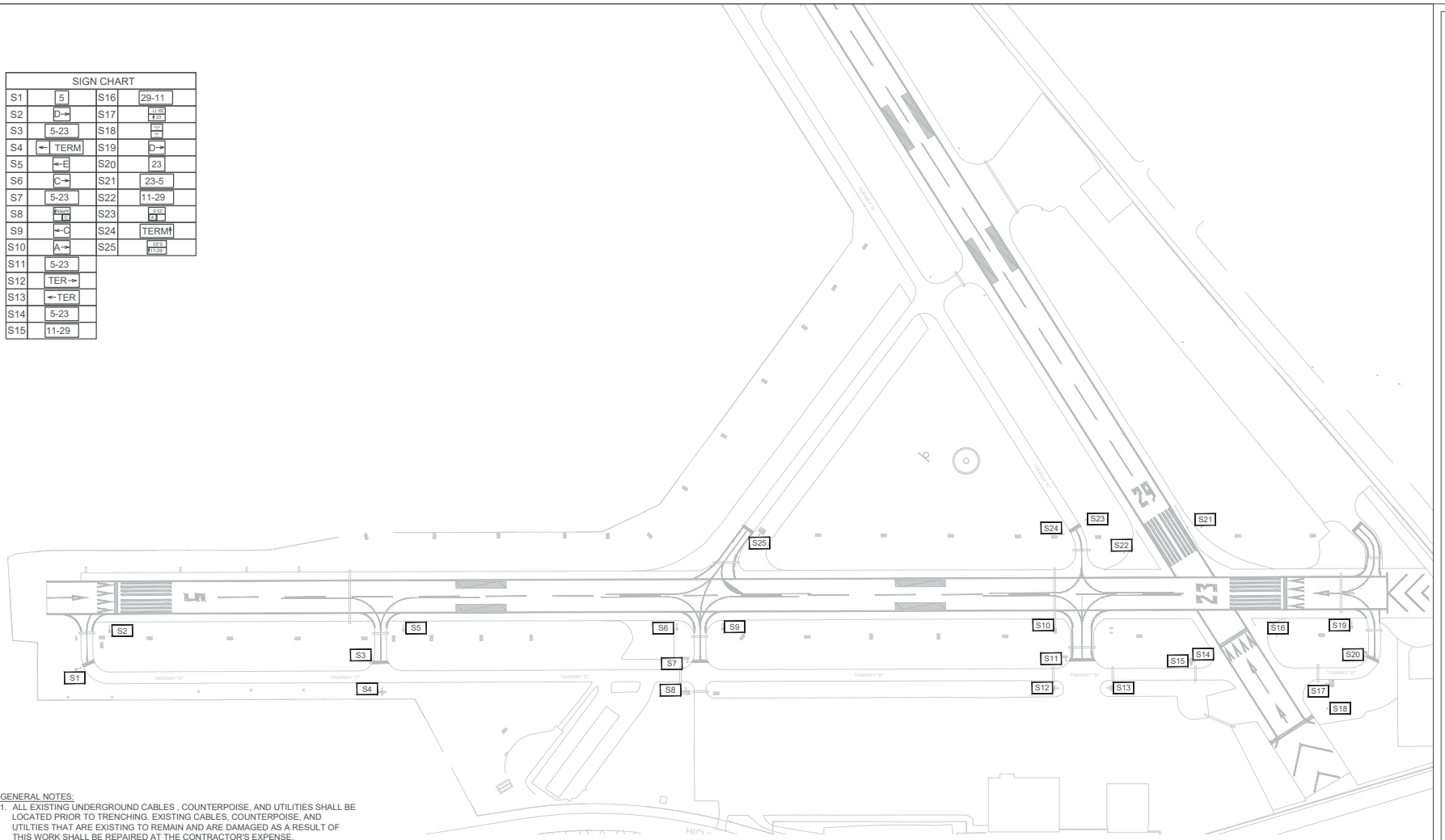
SCALE: 1"=50'

AIRFIELD LIGHTING & WIRING PLAN - EXISTING AWOS SYSTEM

E8

Sheet 32 of 52

SIGN CHART			
S1	5	S16	29-11
S2	D→	S17	11-29 / 5-23
S3	5-23	S18	TERM / C
S4	← TERM	S19	D→
S5	←E	S20	23
S6	C→	S21	23-5
S7	5-23	S22	11-29
S8	Airport / D	S23	5-23 / A
S9	←C	S24	TERM
S10	A→	S25	TERM / 11-29
S11	5-23		
S12	TER→		
S13	←TER		
S14	5-23		
S15	11-29		



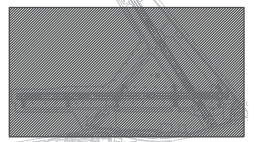
PLAN NORTH

1 / E9 AIRFIELD SIGN CHART PLAN - RUNWAY 5-23

SCALE: 1"=300'-0"

GENERAL NOTES:

1. ALL EXISTING UNDERGROUND CABLES , COUNTERPOISE, AND UTILITIES SHALL BE LOCATED PRIOR TO TRENCHING. EXISTING CABLES, COUNTERPOISE, AND UTILTIES THAT ARE EXISTING TO REMAIN AND ARE DAMAGED AS A RESULT OF THIS WORK SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
2. ALL AIRPORT SIGNS SHALL CONFORM TO THE FOLLOWING FAA ADVISORY CIRCULARS:
   150/5340-18F STANDARDS FOR AIRPORT SIGN SYSTEMS
   150/5340-30J DESIGN AND INSTALLATION DETAILS FOR AIRPORT VISUAL AIDS
   150/5345-44J SPECIFICATION FOR RUNWAY & TAXIWAY SIGNS.
3. ALL SIGNS SHALL BE SIZE 1, STYLE 2, CLASS 2, MODE 2, UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
4. CONTRACTOR SHALL STAKE THE LOCATION OF ALL PROPOSED SIGNS FOR REVIEW BY THE RPR PRIOR TO INSTALLATION.
5. TYPICAL, SEE SHEET E10 FOR SIGN LAYOUTS.



TRUE NORTH

KEY PLAN

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AIRFIELD ELECTRICAL UPGRADE
DANIEL FIELD AIRPORT (DNL)

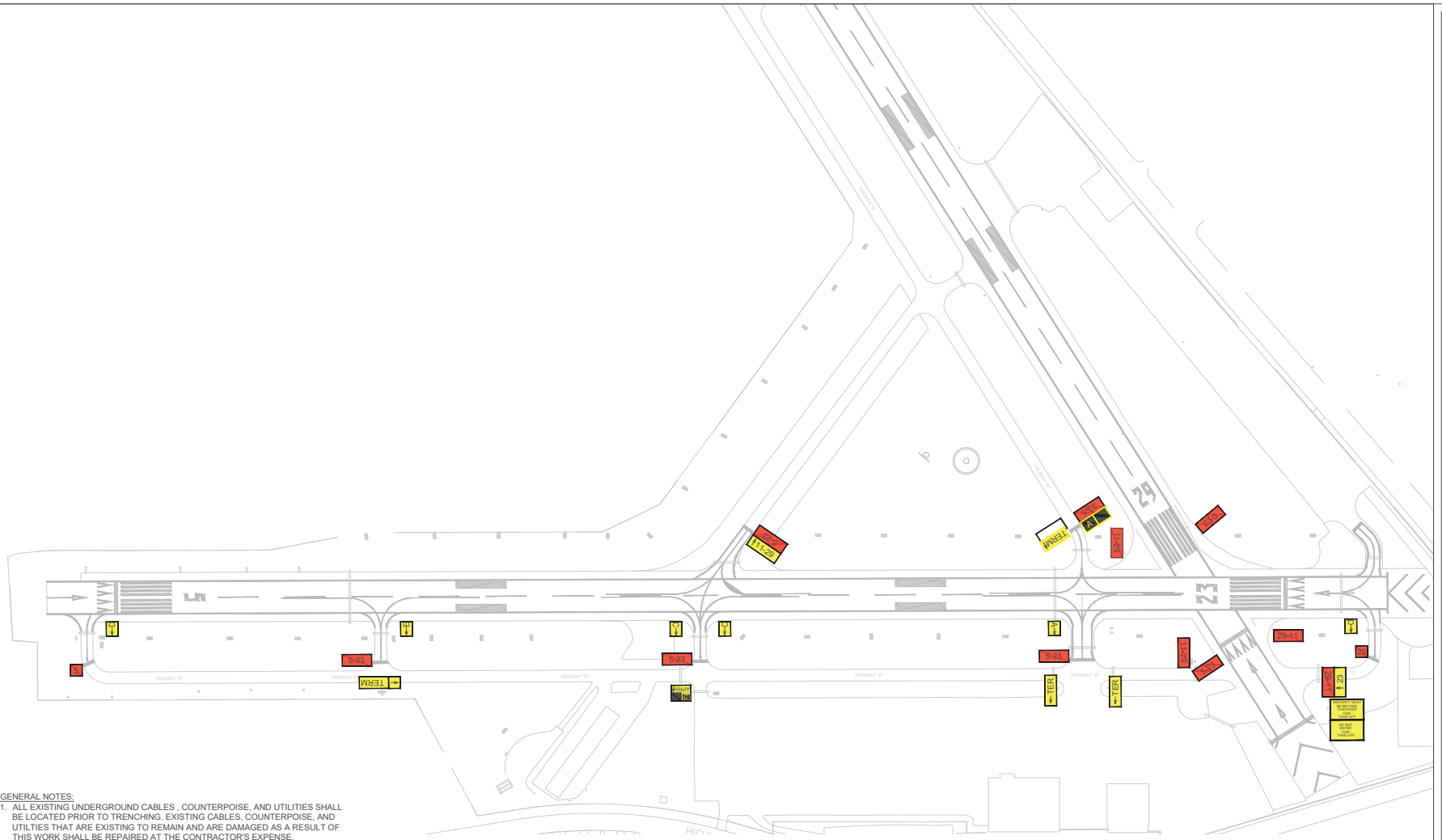
AUGUSTA, GEORGIA

AP019-XXX-XX(245)
GMC NUMBER : TAUG220004
SCALE: 1": 300'

AIRFIELD SIGN CHART PLAN - RUNWAY 5-23

E9

Sheet 33 of 52



PLAN NORTH

1 E10

AIRFIELD SIGN LAYOUT PLAN RUNWAY 5-23

SCALE: 1"=300'-0"

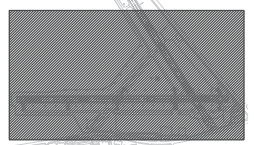
GENERAL NOTES:

1. ALL EXISTING UNDERGROUND CABLES , COUNTERPOISE, AND UTILITIES SHALL BE LOCATED PRIOR TO TRENCHING. EXISTING CABLES, COUNTERPOISE, AND UTILTIES THAT ARE EXISTING TO REMAIN AND ARE DAMAGED AS A RESULT OF THIS WORK SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

2. ALL AIRPORT SIGNS SHALL CONFORM TO THE FOLLOWING FAA ADVISORY CIRCULARS:
   150/5340-18F STANDARDS FOR AIRPORT SIGN SYSTEMS
   150/5340-30J DESIGN AND INSTALLATION DETAILS FOR AIRPORT VISUAL AIDS
   150/5345-44J SPECIFICATION FOR RUNWAY & TAXIWAY SIGNS.

3. ALL SIGNS SHALL BE SIZE 1, STYLE 2, CLASS 2, MODE 2, UNLESS DIRECTED OTHERWISE BY THE ENGINEER.

4. CONTRACTOR SHALL STAKE THE LOCATION OF ALL PROPOSED SIGNS FOR REVIEW BY THE RPR PRIOR TO INSTALLATION.



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KEY PLAN
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designed by: JDZ
drawn by: JRA, JDZ
checked by: JEA

AIRFIELD ELECTRICAL UPGRADE
DANIEL FIELD AIRPORT (DNL)

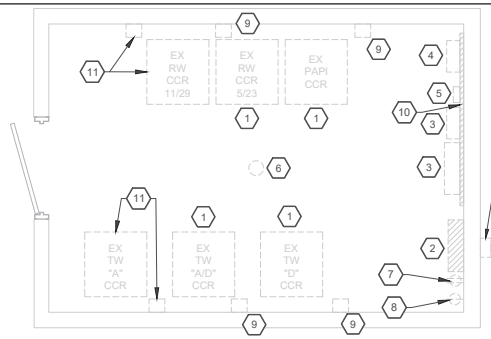
AUGUSTA, GEORGIA

AP019-XXX-XX(245)
GMC NUMBER : TAUG220004
SCALE: 1": 300'

AIRFIELD SIGN LAYOUT PLAN - RUNWAY 5-23

E10

Sheet 34 of 52



1 E11 ELECTRICAL VAULT DEMOLITION PLAN

SCALE: 1/2"=1'-0"

DEMOLITION KEYED NOTES (#):

1. EXISTING REGULATOR TO BE REPLACED WITH NEW. DISCONNECT AND REMOVE REGULATOR WITH ALL ASSOCIATED COMPONENTS AND TURN IT OVER TO OWNER. CONTRACTOR TO REPLACE ALL UPSTREAM WIRING BACK TO PANEL 'EVP' WITH NEW. DISCONNECT FEEDER WIRING & CONDUIT AND TURN IT OVER TO OWNER. CONTRACTOR HAS OPTION TO REUSE EXISTING CONDUIT IF IT MEETS DESIGN INTENT AND IS CODE COMPLIANT WITH THE NEC.
2. EXISTING 240/120V 1PH 200AMP PANELBOARD TO BE REPLACED WITH NEW. SEE NEW PANEL SCHEDULE 'EVP'. COORDINATE WITH OWNER ON SCHEDULING DOWN TIME OF AIRFIELD LIGHTING SYSTEM DURING CONSTRUCTION.
3. EXISTING LIGHTING CONTROL JUNCTION AND CONTROL BOX TO BE DEMOLISHED AND BE REPLACED WITH NEW.
4. EXISTING RADIO CONTROLLER TO BE REPLACED WITH NEW.
5. EXISTING TIMECLOCK TO BE DEMOLISHED AND BE REPLACED WITH NEW.
6. EXISTING LIGHT FIXTURE TO BE DEMOLISHED. REMOVE ALL ASSOCIATED WIRING, CONDUIT, SWITCHES, AND BOXES.
7. EXISTING RECEPTACLE TO BE DEMOLISHED, REMOVE ALL ASSOCIATED WIRING, CONDUIT, & BOXES.
8. EXISTING 30AMP 120V OUTLET TO REMAIN AND BE RECONNECTED TO NEW PANEL 'EVP'.
9. EXISTING ADB SAFETY CUTOUT TO BE DEMOLISHED, REMOVE ALL ASSOCIATED WIRING & CONDUIT.
10. EXISTING BACKBOARD FOR CONTROLS TO REMAIN.
11. IF 11/29 ALTERNATE IS NOT ACCEPTED, EXISTING REGULATOR & SAFETY CUTOUT TO REMAIN IN SERVICE. CONNECT NEW INCOMING POWER (WIRING & CONDUIT) TO NEW PANEL 'EVP' IN VAULT AS REQUIRED.

PANELBOARD EVP SCHEDULE

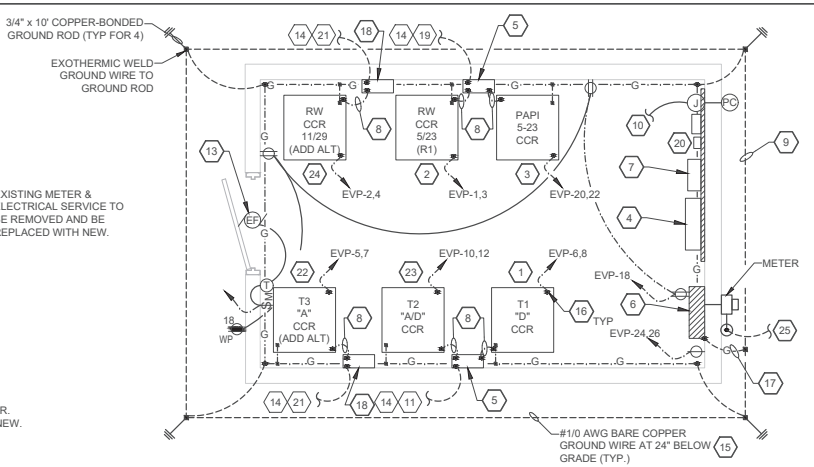
LOCATION ELECTRICAL VAULT		MAIN: 400A MCB							SERVICE ENTRANCE RATED		
VOLTAGE 120/240		SYSTEM: 1ø, 3 WIRE									
TRIM SURFACE		INTERRUPTING RATING: 22k AIC									
CKT #	LOAD DESCRIPTION	BREAKER P	BREAKER TRIP	PHASE (KW) A	PHASE (KW) B	PHASE (KW) A	PHASE (KW) B	BREAKER TRIP	BREAKER P	LOAD DESCRIPTION	CKT #
1	RUNWAY 5/23 CCR (R1)	2	125	7.50		3.75		60	2	RUNWAY 11/29 CCR (ALT)	2
3					7.50		3.75				4
5	TAXIWAY A CCR (ALT) (T3)	2	60	3.75		5.00		80	2	TAXIWAY D CCR (T1)	6
7					3.75		5.00				8
9	WIND CONE	1	20	0.10		2.00		30	2	TAXIWAY A/D CCR (T2)	10
11	LIGHTING CONTROL CAB	1	20		0.20		2.00				12
13	**GATE***	1	20	1.50		0.50		20	1	VAULT FAN	14
15	RADIO CONTROLLER	1	20		0.50		0.50	20	1	VAULT LIGHTING	16
17	SPARE	1	20			1.00		20	1	VAULT RECEPTACLES	18
19	SPARE	1	20				2.00	30	2	PAPI 5-23	20
21	SPARE	1	20			2.00					22
23	SPARE	1	20				2.20	30	2	RV OUTLET	24
25	AVAILABLE BUSSED SPACE					2.20				AVAILABLE BUSSED SPACE	26
27	AVAILABLE BUSSED SPACE									AVAILABLE BUSSED SPACE	28
29	AVAILABLE BUSSED SPACE									AVAILABLE BUSSED SPACE	30
31	AVAILABLE BUSSED SPACE									AVAILABLE BUSSED SPACE	32
33	AVAILABLE BUSSED SPACE									AVAILABLE BUSSED SPACE	34
35	AVAILABLE BUSSED SPACE									AVAILABLE BUSSED SPACE	36
37	AVAILABLE BUSSED SPACE									AVAILABLE BUSSED SPACE	38
39	SPD	2	30		0.10					AVAILABLE BUSSED SPACE	40
41				0.10						AVAILABLE BUSSED SPACE	42

NOTES:
BOLD, * TEXT INDICATES EXISTING LOAD TO BE RECONNECTED TO NEW PANEL.

12.9 12.0 16.5 15.5

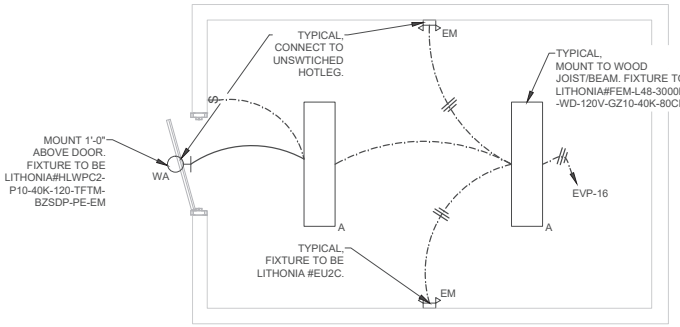
TOTAL (kVA) øA 29.3 øB 27.4
TOTAL CONNECTED LOAD (kVA) 56.7 TOTAL LOAD (AMPS) 236.3

PANELBOARD NOTES:
1. PROVIDE A BUS MOUNTED SPD, SQUARE D, EATON, OR APPROVED EQUAL. MATCH MANUFACTURER OF SUPPLIED PANEL.



2 E11 ELECTRICAL VAULT PLAN

SCALE: 1/2"=1'-0"



3 E11 VAULT LIGHTING PLAN

SCALE: 1/2"=1'-0"

NOTE:
IF PRICE OR QUOTE FROM GEORGIA POWER IS NOT RECEIVED SUCCESSFULLY PRIOR TO THE BID. CONTRACTOR SHALL PROVIDE AN ALLOWANCE IN BASE BID OF $15,000.00 TO COVER ANY ASSOCIATED UTILITY COSTS FOR NEW ELECTRICAL SERVICE TO THE VAULT BUILDING.

KEYED NOTES (#):

1. NEW 10KW 3-STEP REGULATOR FOR TAXIWAY T1 CIRCUIT. DIMENSIONS OF REGULATOR ARE BASED ON MANUFACTURER. CONTRACTOR SHALL ADJUST LAYOUT DUE TO REGULATORS OF DIFFERENT SIZES. ROUTE TO NEW L-821 CONTROL PANEL AS REQUIRED. THYRISTOR OR SCR CCR SHALL HAVE TAP SETTING OF 60%.
2. NEW 15KW 3-STEP REGULATOR FOR RUNWAY 5/23 (R1) CIRCUIT. DIMENSIONS OF REGULATOR ARE BASED ON MANUFACTURER. CONTRACTOR SHALL ADJUST LAYOUT DUE TO REGULATORS OF DIFFERENT SIZES. ROUTE TO NEW L-821 CONTROL PANEL AS REQUIRED. THYRISTOR OR SCR CCR SHALL HAVE TAP SETTING OF 60%.
3. NEW 4KW 3-STEP REGULATOR FOR PAPI 5-23 CIRCUIT. DIMENSIONS OF REGULATOR ARE BASED ON MANUFACTURER. CONTRACTOR SHALL ADJUST LAYOUT DUE TO REGULATORS OF DIFFERENT SIZES. THYRISTOR OR SCR CCR SHALL HAVE TAP SETTING OF 50%.
4. NEW L-821 LIGHTING RELAY CABINET. PROVIDE RELAYS AND SWITCHES AS REQUIRED FOR AIRPORT LIGHTING CONTROL SYSTEM AS INDICATED ON DETAIL 2/E12.
5. TYPICAL, PROVIDE HINGED ENCLOSURE WITH TWO CUT-OUTS, EQUAL TO ADB ALCS OR APPROVED EQUAL.
6. NEW PANELBOARD 'EVP'. SEE PANEL SCHEDULE FOR DETAILS. CONTRACTOR TO PROVIDE ALL NEW BREAKERS AS SHOWN IN PANEL SCHEDULE 'EVP'. PANEL TO BE SQUARE D NQOD OR APPROVED EQUAL.
7. NEW L-854 RADIO CONTROLLER. VERIFY FINAL LOCATION AND CONTROLS WITH OWNER PRIOR TO INSTALL. PROVIDE RELAYS AND SWITCHES AS REQUIRED FOR AIRPORT LIGHTING CONTROL SYSTEM. SEE WIRING DIAGRAM 2/E12.
8. 2#8, 5kV, L-824C CABLES IN 2" FLEXIBLE METAL CONDUIT.
9. #1/0 AWG GROUND LOOP AROUND VAULT. BOND REGULATORS, CONTACTORS, AND RELAY ENCLOSURES TO GROUND WITH #4 AWG. EXTEND #1/0 AWG GROUND AND CONNECT TO NEW GROUND LOOP.
10. NEW PHOTOCELL. EXTEND 3#12, 1#12(G), 1"C AND CONNECT TO RELAY PANEL. SEE DETAILS 2/E12 & 2/E13.
11. PROVIDE 2#8, 5KV L-324C CABLES (TAXIWAY T1) AND 2#8, 5KV L-824C CABLES (TAXIWAY T2) IN 4-1/2"C TO NEW MANHOLE. SEE PLAN SHEET E7 FOR LOCATION.
12. NOT USED.
13. WALL MOUNTED EXHAUST FAN TO MATCH EXISTING WITH AUTOMATIC SHUTTER . MOUNT AT EXISTING LOCATION ABOVE ENTRY DOOR.
14. EXTEND CONDUITS AND COUNTERPOISE CABLE TO NEW MANHOLE IN COMMON TRENCH, COUNTERPOISE CABLE FROM SEPARATE TRENCHES SHALL BE BONDED TOGETHER THROUGH AN EXOTHERMIC WELD WHERE TRENCHES MEET. A SINGLE COUNTERPOISE CABLE SHALL PROCEED FROM THERE. PROVIDE SEALING COMPOUND ON ALL CONDUITS BETWEEN MANHOLE AND CUT OUT ENCLOSURES.
15. CONTRACTOR TO LOCATE ALL UNDERGROUND UTILITIES PRIOR TO COMMENCEMENT OF TRENCHING. ANY DAMAGED EXISTING UTILITY LINES WILL BE REPAIR AT THE CONTRACTOR'S EXPENSE.
16. MAKE ELECTRICAL CONNECTION TO NEW REGULATOR AS PER MANUFACTURER'S REQUIREMENTS. CONTRACTOR IS TO BE SURE A ON SITE PRE-COMMISSIONING MEETING WITH THE MANUFACTURER TO ENSURE INSTALLATIONS OF ALL SYSTEMS ARE FULLY FUNCTIONAL AND MEET DESIGN INTENT SHOWN IS COMPLETED PRIOR TO COMMENCEMENT OF WORK.
17. EXTEND #2 AWG GROUND IN 1"C FROM PANEL 'EVP' AND CONNECT TO NEW GROUND LOOP.
18. IF RUNWAY 11-29 IS ACCEPTED, PROVIDE HINGED ENCLOSURE WITH ONE CUT-OUT, EQUAL TO ADB ALCS OR APPROVED EQUAL.
19. PROVIDE 2#8, 5kV, L-824C CABLES (RUNWAY 5-23 (R1)) AND 2#8, 5kV, L-824C CABLES (PAPI 5-23) IN 4 1/2"C TO NEW MANHOLE. SEE PLAN SHEET E7 FOR LOCATION.
20. NEW TIMECLOCK. CONNECT TO LIGHTING RELAY CABINET AS REQUIRED. COORDINATE WITH OWNER PRIOR TO INSTALL. SEE WIRING DIAGRAM 2/E12.
21. IF RUNWAY 11-29 ALTERNATE IS ACCEPTED, PROVIDE 2#8, 5KV L-324C CABLES (RUNWAY R1) AND 2#8, 5KV L-824C CABLES (TAXIWAY T3) IN 4-1/2"C TO NEW MANHOLE. SEE PLAN SHEET E7 FOR LOCATION.
22. NEW 7.5KW 3-STEP REGULATOR FOR TAXIWAY T3 CIRCUIT UNDER ALTERNATE. DIMENSIONS OF REGULATOR ARE BASED ON MANUFACTURER. CONTRACTOR SHALL ADJUST LAYOUT DUE TO REGULATORS OF DIFFERENT SIZES. ROUTE TO NEW L-821 CONTROL PANEL AS REQUIRED. THYRISTOR OR SCR CCR SHALL HAVE TAP SETTING OF 50%.
23. NEW 4KW 3-STEP REGULATOR FOR TAXIWAY T2 CIRCUIT UNDER BASE BID. DIMENSIONS OF REGULATOR ARE BASED ON MANUFACTURER. CONTRACTOR SHALL ADJUST LAYOUT DUE TO REGULATORS OF DIFFERENT SIZES. ROUTE TO NEW L-821 CONTROL PANEL AS REQUIRED. THYRISTOR OR SCR CCR SHALL HAVE TAP SETTING OF 70%.
24. NEW 7.5KW 3-STEP REGULATOR FOR RUNWAY 11/29 (R2) CIRCUIT UNDER ALTERNATE. DIMENSIONS OF REGULATOR ARE BASED ON MANUFACTURER. CONTRACTOR SHALL ADJUST LAYOUT DUE TO REGULATORS OF DIFFERENT SIZES. ROUTE TO NEW L-821 CONTROL PANEL AS REQUIRED. THYRISTOR OR SCR CCR SHALL HAVE TAP SETTING OF 70%.
25. PROVIDE 3#600 MCM - 3-1/2"C FROM NEW PANEL 'EVP' THROUGH METER AND STUBBED UP ABOVE THE ROOF FOR CONNECTION BY UTILITY COMPANY. PROVIDE WEATHER-HEAD AND SUFFICIENT SLACK AS NEEDED. CONTRACTOR IS RESPONSIBLE FOR ANY COORDINATION AND FEES ASSOCIATED WITH THE NEW ELECTRICAL SERVICE. COORDINATE WITH LOCAL GEORGIA POWER COMPANY PRIOR TO BID.

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checked by: JEA

AIRFIELD ELECTRICAL UPGRADE
DANIEL FIELD AIRPORT (DNL)
AUGUSTA, GEORGIA
AP019-XXX-XX(245)
GMC NUMBER : TAUG220004
SCALE: NOT TO SCALE

ELECTRICAL VAULT PLAN

E11
Sheet 35 of 52

AIRPORT LIGHTING CONTROL SYSTEM NOTES:

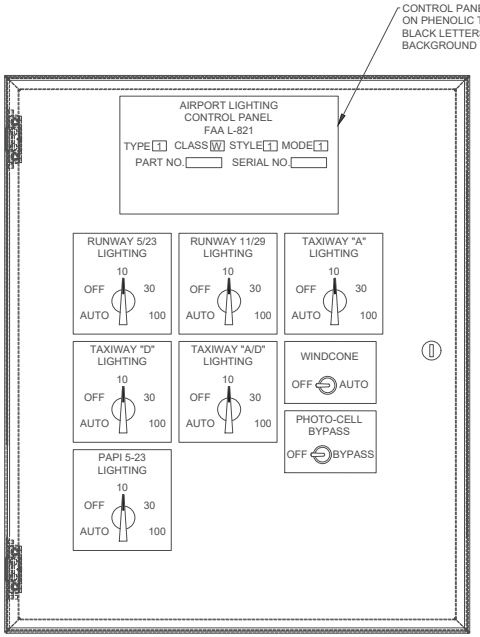
1. BETWEEN DUSK TO DAWN, THE NEW PHOTOCELL LOCATED IN THE NEW VAULT BUILDING SHALL AUTOMATICALLY SET THE RUNWAY 5/23 PAPI TO IT'S LOW SETTING.
2. BETWEEN DAWN TO DUSK, THE NEW PHOTOCELL LOCATED IN THE NEW VAULT BUILDING SHALL AUTOMATICALLY SET THE RUNWAY 5/23 PAPI TO IT'S HIGH SETTING.
3. THE NEW RADIO CONTROL UNIT LOCATED IN THE VAULT BUILDING SHALL OVERRIDE ALL RUNWAY, TAXIWAY AND PAPI SETTINGS IN "AUTOMATIC" MODE AND SHALL:

(A) AT 3 PULSES: 1) TURN THE TAXIWAY REGULATOR ON AT 30%.
2) TURN THE PAPI REGULATOR ON.
3) TURN THE RUNWAY REGULATOR ON AT 10%.

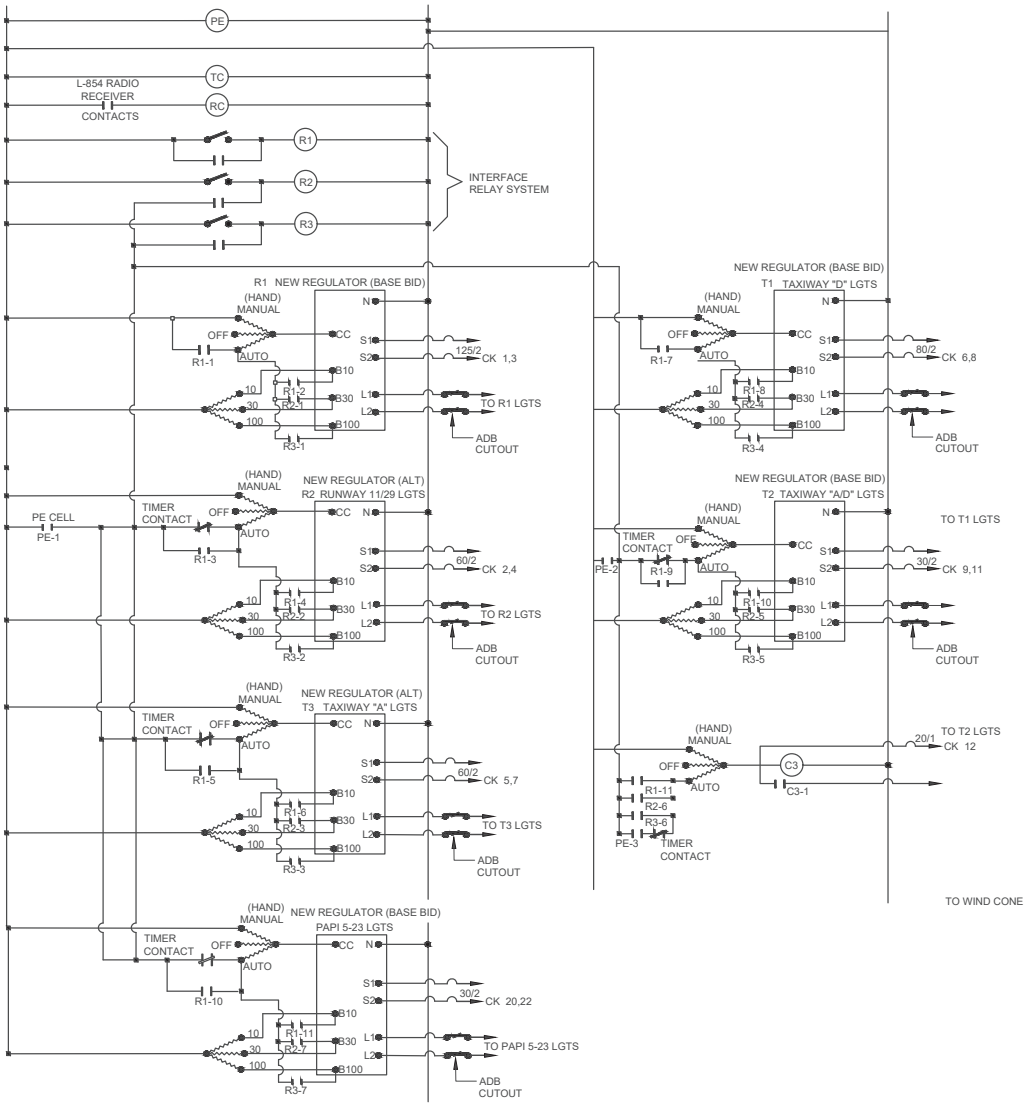
(B) AT 5 PULSES: 1) LEAVE THE TAXIWAY REGULATOR AT 30%.
2) LEAVE THE PAPI REGULATOR ON.
3) TURN THE RUNWAY REGULATOR ON AT 30%.

(C) AT 7 PULSES: 1) LEAVE THE TAXIWAY REGULATOR ON AT 30%.
2) LEAVE THE PAPI REGULATOR ON.
3) TURN THE RUNWAY REGULATOR ON AT 100%.

4. THE NEW L-821 LIGHTING CONTROL PANEL SHALL PROVIDE MANUAL CONTROL OF THE RUNWAY, TAXIWAY AND PAPI REGULATORS.
5. THE CONTROL CONTRACTOR SHALL PROVIDE AND SUBMIT FOR APPROVAL THE TERMINATION OF DETAILS OF THE L-821 CONTROL PANEL, AND REGULATORS TO MATCH DESCRIBED CONTROL SCHEME.



1 E12 CONTROL PANEL L-821
NOT TO SCALE



2 E12 WIRING DIAGRAM
NOT TO SCALE

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ELECTRICAL POWER & CONTROL DIAGRAMS

E12
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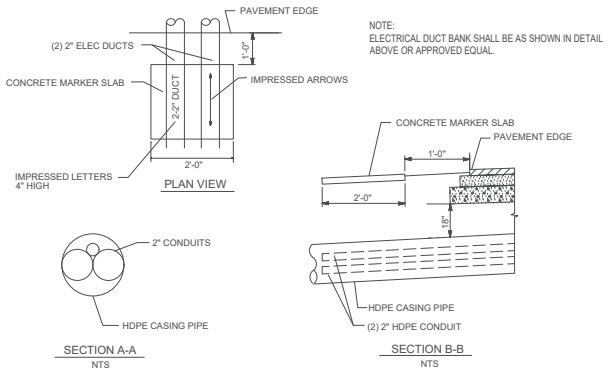
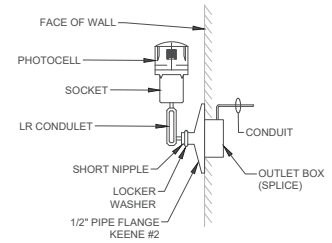


2-WAY UNDERGROUND ELECTRICAL DUCT & CONCRETE DUCT MARKER SLAB

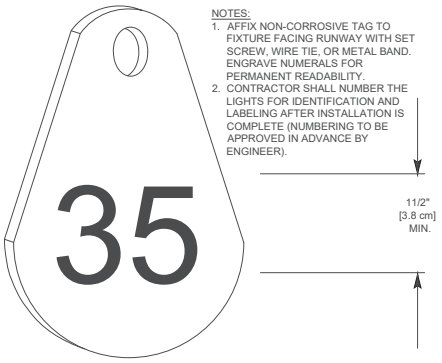
1 / E13 NOT TO SCALE



NOTES:
1. PAINT CONDUIT NIPPLE, SOCKET, AND PIPE FLANGE WITH TWO COATS OF ENAMEL.
2. COMPLETE ASSEMBLY TO BE UL LISTED FOR WET LOCATIONS.
3. PHOTOCELL TO BE MOUNTED FACING NORTH FREE FROM ALL SHADOWS WHICH MIGHT CAUSE PHOTOCELL TO TURN LIGHTS ON EARLY. CONTRACTOR SHALL COORDINATE PROPER MOUNTING LOCATION PRIOR TO INSTALLATION.

INSTALLATION OF PHOTO CELL

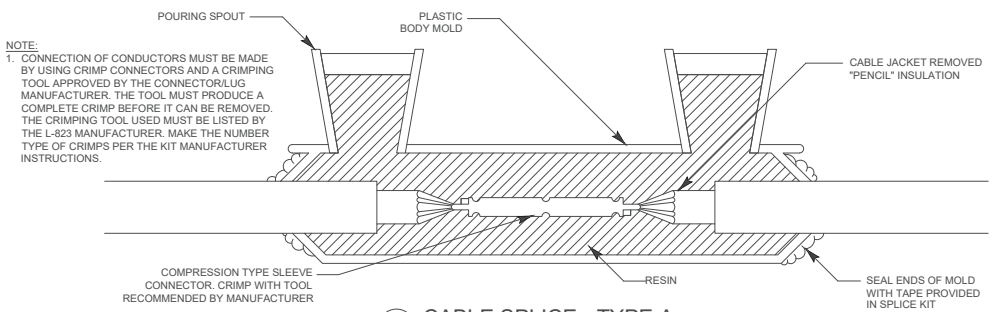
2 / E13 DIAGRAMMATIC



NOTES:
1. AFFIX NON-CORROSIVE TAG TO FIXTURE FACING RUNWAY WITH SET SCREW, WIRE TIE, OR METAL BAND. ENGRAVE NUMERALS FOR PERMANENT READABILITY.
2. CONTRACTOR SHALL NUMBER THE LIGHTS FOR IDENTIFICATION AND LABELING AFTER INSTALLATION IS COMPLETE (NUMBERING TO BE APPROVED IN ADVANCE BY ENGINEER).

TYPICAL LIGHT TAG DETAIL

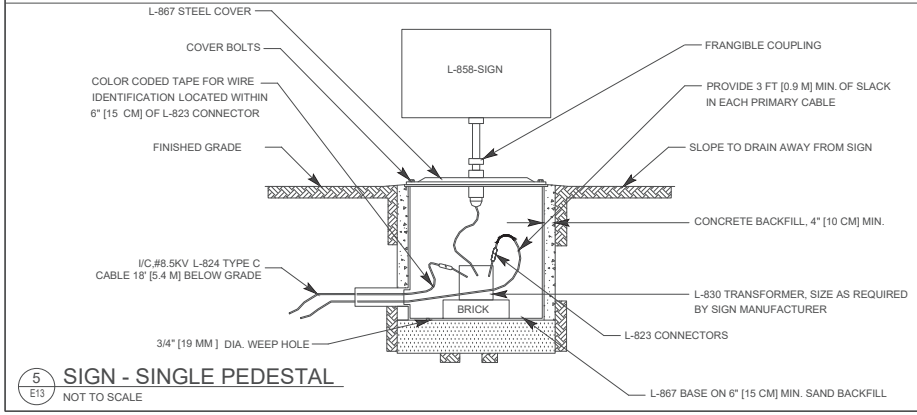
3 / E13 NOT TO SCALE



NOTE:
1. CONNECTION OF CONDUCTORS MUST BE MADE BY USING CRIMP CONNECTORS AND A CRIMPING TOOL APPROVED BY THE CONNECTOR/LUG MANUFACTURER. THE TOOL MUST PRODUCE A COMPLETE CRIMP BEFORE IT CAN BE REMOVED. THE CRIMPING TOOL USED MUST BE LISTED BY THE L-823 MANUFACTURER. MAKE THE NUMBER TYPE OF CRIMPS PER THE KIT MANUFACTURER INSTRUCTIONS.

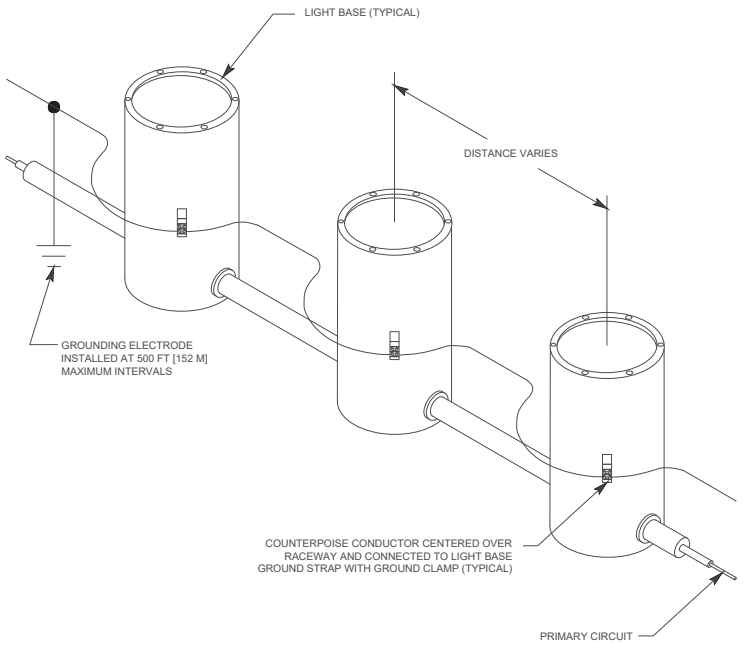
CABLE SPLICE - TYPE A

4 / E13 NOT TO SCALE



SIGN - SINGLE PEDESTAL

5 / E13 NOT TO SCALE



EQUIPOTENTIAL COUNTERPOISE INSTALLATION MANUAL

6 / E13 NOT TO SCALE

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E13
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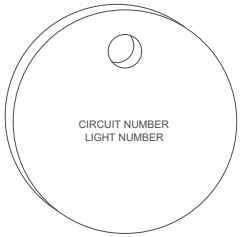


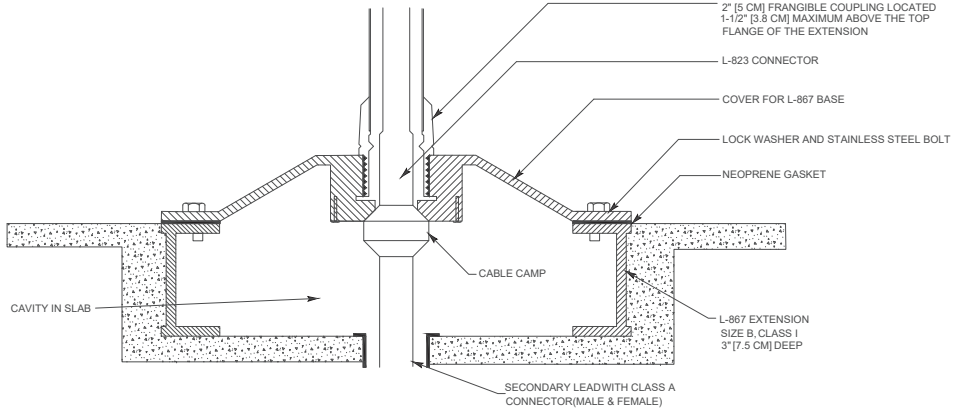
NOTES:

1. ALL CABLE ENTERING OR LEAVING A JUNCTION BOX SHALL BE IDENTIFIED WITH AN INDIVIDUAL IDENTIFICATION TAG INDICATING EACH LIGHTING OR POWER CIRCUIT. WHERE A SPLICE IS IN THE BOX, IDENTIFY THE CABLE ON BOTH SIDES OF THE SPLICE.

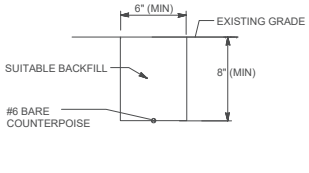
2. PAYMENT FOR CABLE AND FIXTURE TAGS AND CABLE SPLICES SHALL BE INCLUDED IN THE PRICE OF THE PARTICULAR FIXTURE, JUNCTION BOX OR CABLE RUN AND NO SEPARATE PAY ITEM INCLUDED FOR THESE ITEMS.

3. AN IDENTIFYING NUMBER SHALL BE ASSIGNED TO EACH LIGHT FIXTURE IN ACCORDANCE WITH THE DRAWINGS. THE PLACING OF THESE NUMBERS SHALL BE ACCOMPLISHED BY USE OF 1-1/2" DIAMETER NON-FERROUS METAL TAGS, WITH THE NUMBER APPROXIMATELY 1/4" IN HEIGHT, STAMPED IN, AND FASTENED TO THECONDUIT RISER WITH A 3/32" STAINLESS STEEL AIRCRAFT CABLE AND GRIPPLE TO THEFIXTURE SO EACH FACES THE RUNWAY.

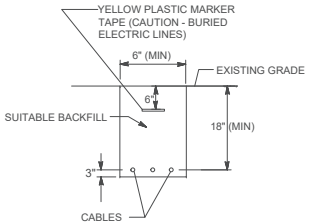
1 E14 SERIES CABLE TAG DETAIL
NOT TO SCALE



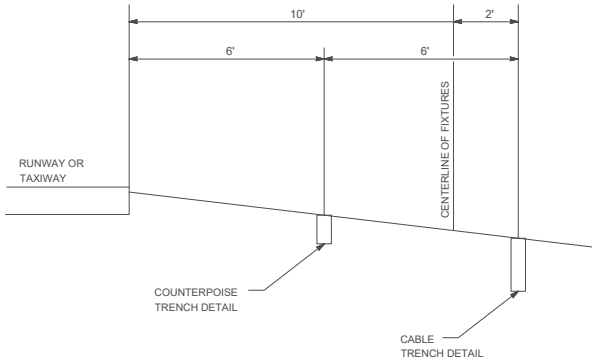
2 E14 TYPICAL DETAIL FOR TAXIWAY HOLD & GUIDANCE SIGN
NOT TO SCALE



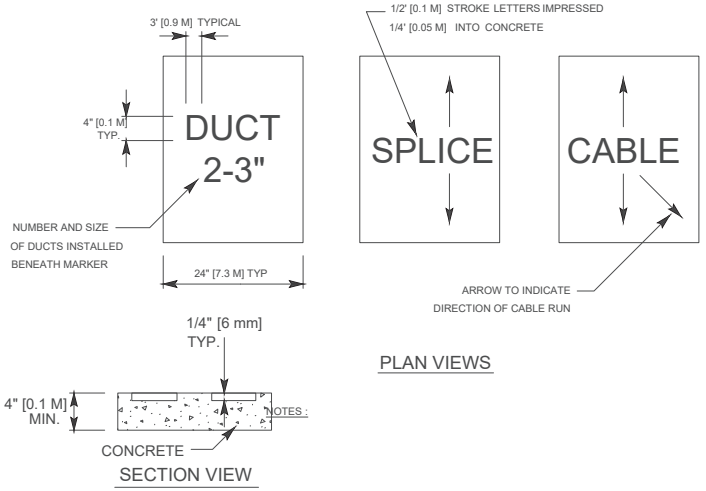
COUNTERPOISE TRENCH DETAIL
NTS



CABLE TRENCH DETAIL
NTS



3 E14 CABLE TRENCH DETAIL
NOT TO SCALE



1. PLACE MARKERS WHERE SHOWN ON PLANS AS DISCUSSED IN APPENDIX E, PARAGRAPH E.1, ELECTRICAL NOTES.
2. COST OF CONCRETE MARKERS IS INCIDENTAL TO THE ASSOCIATED ITEMS OF DUCT OR CABLE.
3. EDGE EXPOSED CONCRETE WITH A 1/4" [6 mm] RADIUS TOOL.
4. EMPLOY THE FOLLOWING METHODS WHERE ADDITIONAL SPACE TO FIT THE LEGEND IS REQUIRED:
   A. REDUCE LETTER SIZE TO 3" HIGH, 2" WIDE [76 mm HIGH, 51 mm WIDE]
   B. INCREASE THE MARKER SIZE TO 30" X 30" [0.9 M X 0.9 M] MAX.
   C. PROVIDE ADDITIONAL MARKERS PLACED SIDE BY SIDE.

4 E14 CABLE AND DUCT MARKER DETAIL
NOT TO SCALE

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checked by: JEA

AIRFIELD ELECTRICAL UPGRADE
DANIEL FIELD AIRPORT (DNL)
AUGUSTA, GEORGIA
AP019-XXX-XX(245)
GMC NUMBER : TAUG220004
SCALE: NOT TO SCALE

ELECTRICAL DETAILS

E14
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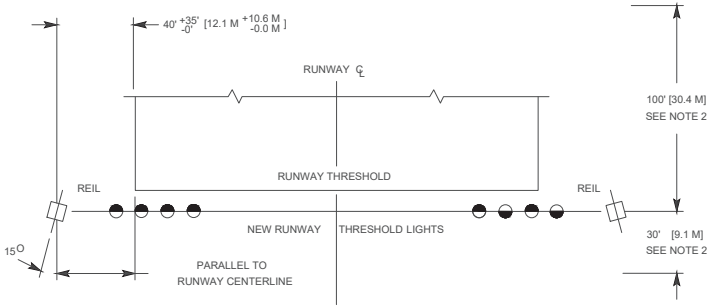


NOTES

1. THE OPTIMUM LOCATION FOR EACH LIGHT UNIT IS IN LINE WITH THE RUNWAY THRESHOLD LIGHTS 40 FT [12.1 M] LATERALLY FROM THE RUNWAY EDGE.
2. A 100 FT [30.4 M] UPWIND AND A 30 FT [9.1 M] DOWNWIND LONGITUDINAL TOLERANCE IS PERMITTED FROM THE RUNWAY THRESHOLD LIGHTS IN LOCATING THE LIGHT UNITS.
3. SPACE THE LIGHT UNITS EQUALLY FROM THE RUNWAY CENTERLINE. WHEN ADJUSTMENTS ARE NECESSARY THE DIFFERENCE IN THE DISTANCE OF THE UNITS FROM THE RUNWAY CENTERLINE MUST NOT EXCEED 10 FT [3 M].
4. THE BEAM CENTERLINE (AIMING ANGLE) OF EACH LIGHT UNIT IS AIMED 15 DEGREES OUTWARD FROM A LINE PARALLEL TO THE RUNWAY CENTERLINE AND INCLINED AT AN ANGLE 10 DEGREES ABOVE THE HORIZONTAL. IF ANGLE ADJUSTMENTS ARE NECESSARY, PROVIDE AN OPTICAL BAFFLE AND CHANGE THE ANGLE TO 10 DEGREES HORIZONTAL AND 20 DEGREES VERTICAL.
5. LOCATE THE REIL EQUIPMENT A MINIMUM DISTANCE OF 40 FT [12.1 M] FROM OTHER RUNWAYS AND TAXIWAYS.
6. IF REILS ARE USED WITH VASI, INSTALL REILS 75 FT [22.8 M] FROM THE RUNWAY EDGE. WHEN INSTALLED WITH OTHER GLIDE SLOPES INDICATORS, INSTALL REILS 40 FT [12.1 M] FROM THE RUNWAY EDGE IF THERE ARE CONCERNS WITH JET BLAST AND WIND VORTICES. SEE FAA ORDER JO 6850.2 FOR ADDITIONAL INFORMATION.
7. BOTH REIL UNITS MUST BE AT THE SAME ELEVATION AND WITHIN 3 FT [0.9 M] OF THE HORIZONTAL PLANE THROUGH THE RUNWAY CENTERLINE.

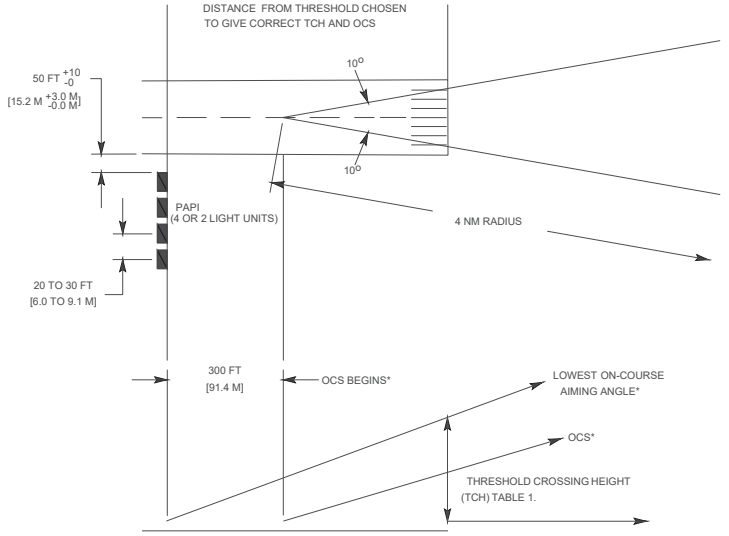
SYMBOL:

STEADY BURNING LIGHT, RED

STEADY BURNING LIGHT, GREEN

1 E15 TYPICAL LAYOUT FOR REIL INSTALLATION

NOT TO SCALE



PAPI OCS ANGLE = LOWEST ON-COURSE AIMING ANGLE - 1 DEGREE

NOTES:

1. THE VISUAL GLIDE PATH ANGLE IS THE CENTER OF THE ON-COURSE ZONE, AND IS A NORMAL 3 DEGREES WHEN MEASURED FROM THE HORIZONTAL SURFACE OF THE RUNWAY.
   A. FOR NON-JET RUNWAYS, THE GLIDE PATH MAY BE RAISED TO 4 DEGREES MAXIMUM TO PROVIDE OBSTACLE CLEARANCE.
   B. IF THE PAPI GLIDE PATH IS CHANGED TO A HIGHER ANGLE FROM THE NOMINAL 3 DEGREES, IT MUST BE COMMUNICATED IN A NOTICE TO AIRMAN (NOTAM) AND PUBLISHED IN THE AIRPORT FACILITY DIRECTORY.
2. PAPI OCS.
   A. THE PAPI OCS PROVIDES THE PILOT WITH A MINIMUM APPROACH CLEARANCE.
   B. THE PAPI MUST BE POSITIONED AND AIMED SO NO OBSTACLES PENETRATE ITS SURFACE.
      (1) THE OCS BEGINS 300 FEET [90 M] IN FRONT OF THE PAPI SYSTEM.
      (2) THE OCS IS PROJECTED INTO THE APPROACH ZONE ONE DEGREE LESS THAN AIMING ANGLE OF THE THIRD LIGHT UNIT FROM THE RUNWAY FOR AN L-880 SYSTEM, OR THE OUTSIDE LIGHT UNIT FOR AN L-881 SYSTEM.

2 E15 PAPI OBSTACLE CLEARANCE SURFACE

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ELECTRICAL DETAILS

E15

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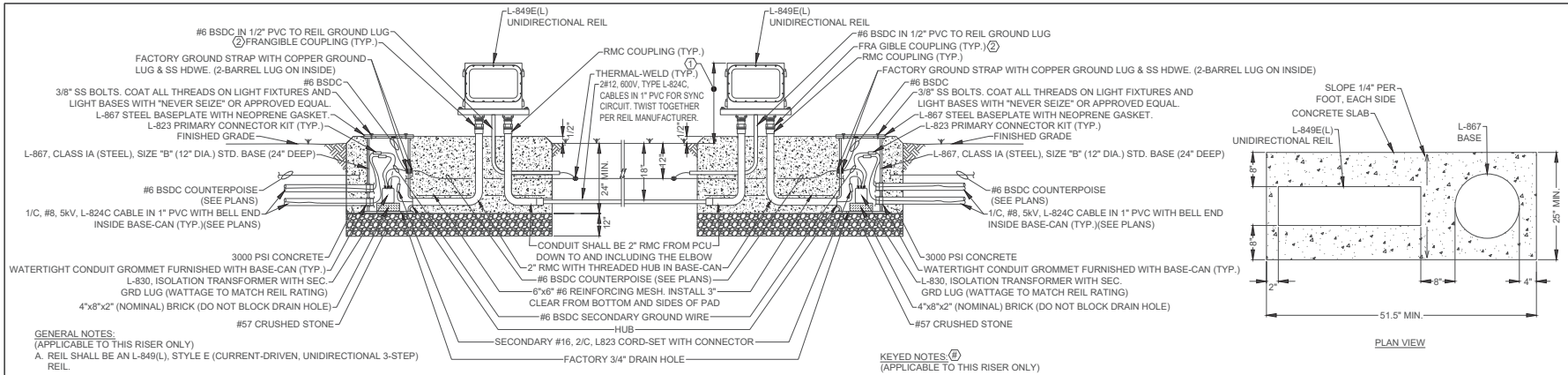


GENERAL NOTES:
(APPLICABLE TO THIS RISER ONLY)

A. REIL SHALL BE AN L-849(L), STYLE E (CURRENT-DRIVEN, UNIDIRECTIONAL 3-STEP) REIL.

B. THIS DETAIL IS BASED ON A TYPICAL L-849(L), STYLE E REIL. INSTALLATION REQUIREMENTS MAY VARY BETWEEN MANUFACTURERS. FINAL DETAIL SHALL BE APPROVED BY ENGINEER.

C. PROVIDE 3' OF SLACK IN EACH PRIMARY CABLE AND 2' FOR GROUNDING CONDUCTORS.

D. TAG ALL THRU CABLES ON BOTH SIDES OF SPLICE.

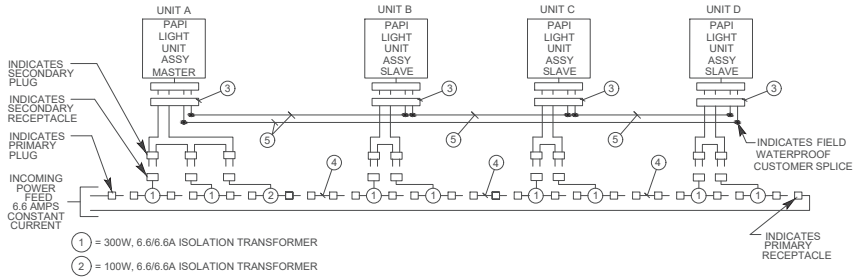
KEYED NOTES: (#)
(APPLICABLE TO THIS RISER ONLY)

1. THE TOP ELEVATION OF BOTH FLASHHEADS SHALL BE WITHIN 3' OF A HORIZONTAL PLANE THROUGH THE RUNWAY CENTERLINE, WITH THE MAXIMUM HEIGHT LIMITED TO 3' ABOVE FINISHED GRADE AT THE FLASHHEAD.

2. BREAKING POINT ON FRANGIBLE COUPLING SHALL NOT BE HIGHER THAN 3" ABOVE FINISHED GRADE.

1 E16 UNIDIRECTIONAL REIL SYSTEM DETAIL

NOT TO SCALE



(1) = 300W, 6.6/6.6A ISOLATION TRANSFORMER

(2) = 100W, 6.6/6.6A ISOLATION TRANSFORMER

(3) = CONSOLIDATION HARNESS, TILT SWITCH WIRE ENDS (BLACK & GREEN LEADS) ARE #14 AWG

(4) = POWER LEADS WITH APPROPRIATE L-823 CONNECTORS, USE L-824 TYPE C #8 AWG (L-823 CONNECTOR KITS)

(5) = TILT SWITCH LEADS, USE #14 AWG MIN

3 LAMPS PER LIGHT UNIT
(CONSTANT CURRENT) SYSEM WIRING DIAGRAM
NOTE: Delete units C & D for 2-box system

2 E16 FAA L-880 STYLE "B" SYSTEM(WITH TILT SWITCHES)

NOT TO SCALE

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ELECTRICAL DETAILS

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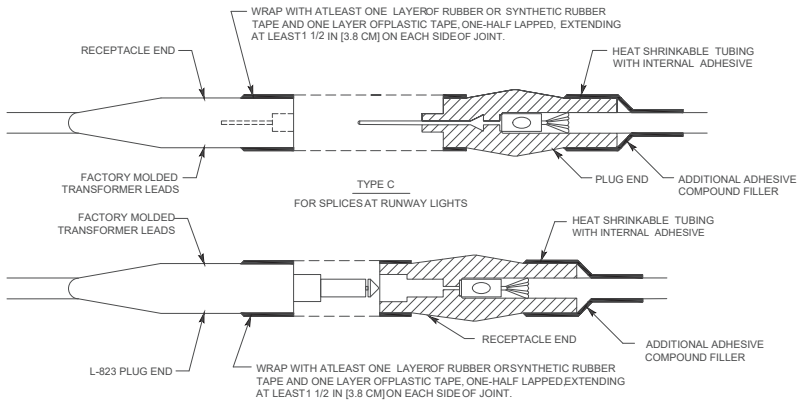
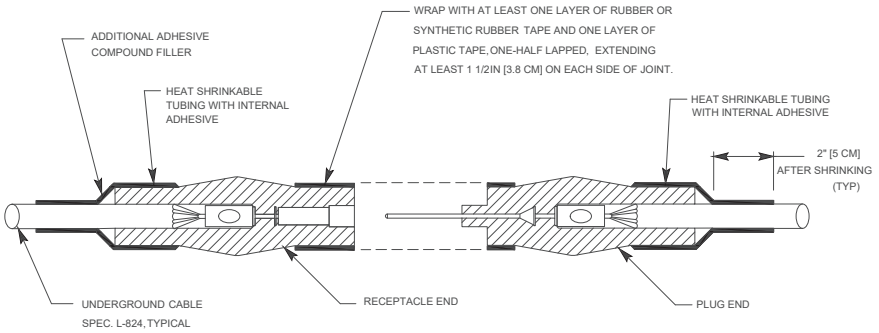


NOTES:

1. SEE LIGHTING LAYOUT SHEET(S) FOR SPLICE TYPE
2. PROPERLY MATCH THE INSIDE DIAMETER OF CONNECTOR TO THE OUTSIDE DIAMETER OF CABLE.
3. CONNECTION OF CONDUCTORS MUST BE MADE BY USING CRIMP CONNECTORS AND A CRIMPING TOOL APPROVED BY THE CONNECTOR/LUG MANUFACTURER. THE TOOL MUST PRODUCE A COMPLETE CRIMP BEFORE IT CAN BE REMOVED. THE CRIMPING TOOL USED MUST BE LISTED BY THE L-823 KIT MANUFACTURER. MAKE THE NUMBER AND TYPE OF CRIMPS PER THE KIT MANUFACTURER'S INSTRUCTIONS.

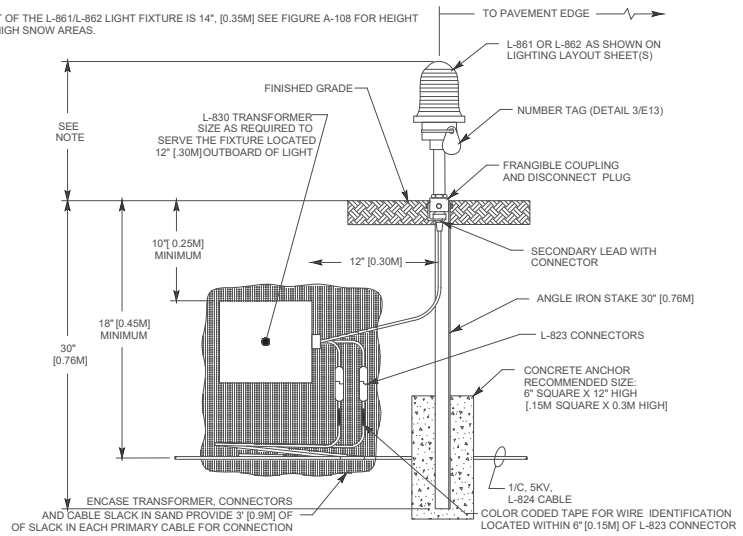
1 E17 CABLE SPLICES
NOT TO SCALE



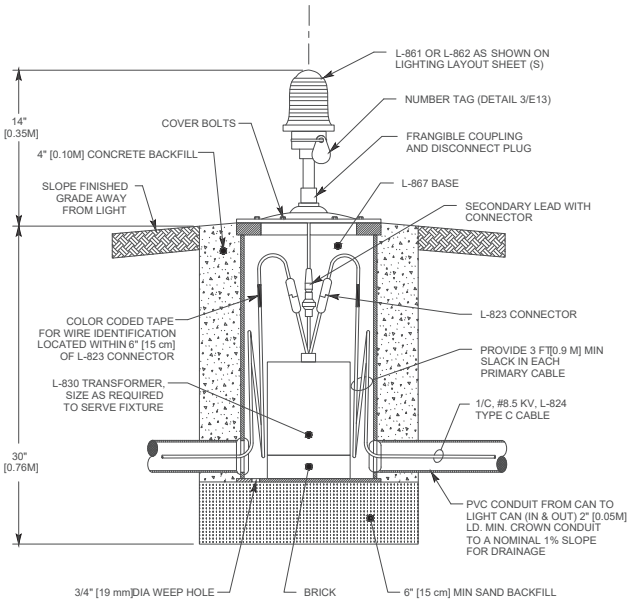
NOTE: FOR SPLICES FOR USE AT JUNCTION OF CONNECTION OF CONDUCTORS MUST BE MADE BY USING CRIMP CONNECTORS AND A CRIMPING TOOL APPROVED BY THE CONNECTOR/LUG MANUFACTURER. THE TOOL MUST PRODUCE A COMPLETE CRIMP BEFORE IT CAN BE REMOVED. THE CRIMPING TOOL USED MUST BE LISTED BY THE L-823 KIT MANUFACTURER. MAKE THE NUMBER AND TYPE OF CRIMPS PER THE KIT MANUFACTURER'S INSTRUCTIONS.
HOMERUN WITH LOOP CIRCUIT

3 E17 TYPE 'B'
NOT TO SCALE

NOTE: STANDARD HEIGHT OF THE L-861/L-862 LIGHT FIXTURE IS 14", [0.35M] SEE FIGURE A-108 FOR HEIGHT ADJUSTMENTS IN HIGH SNOW AREAS.



2 E17 MEDIUM/HIGH INTENSITY SERIES CIRCUIT LIGHT - STAKE MOUNTED
NOT TO SCALE



VIEW IS PARALLEL TO RUNWAY EDGE

4 E17 MEDIUM/HIGH INTENSITY SERIES CIRCUIT LIGHT - BASE MOUNTED
NOT TO SCALE

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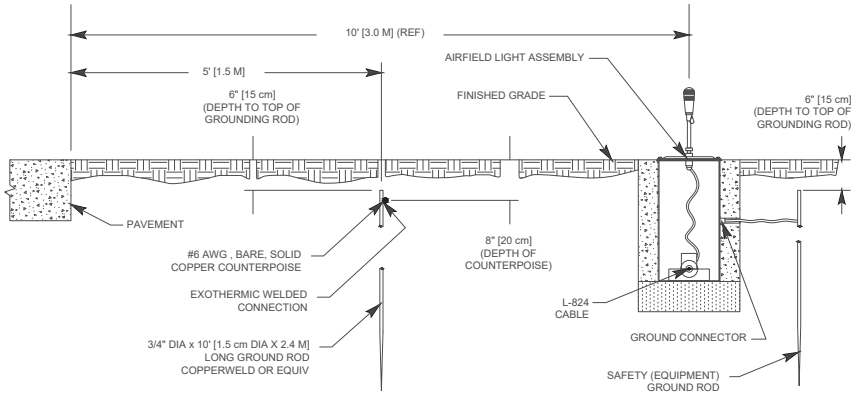
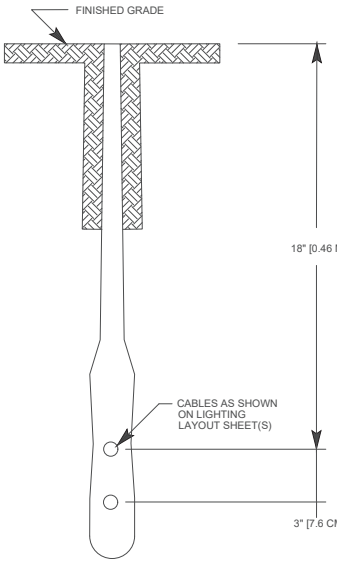


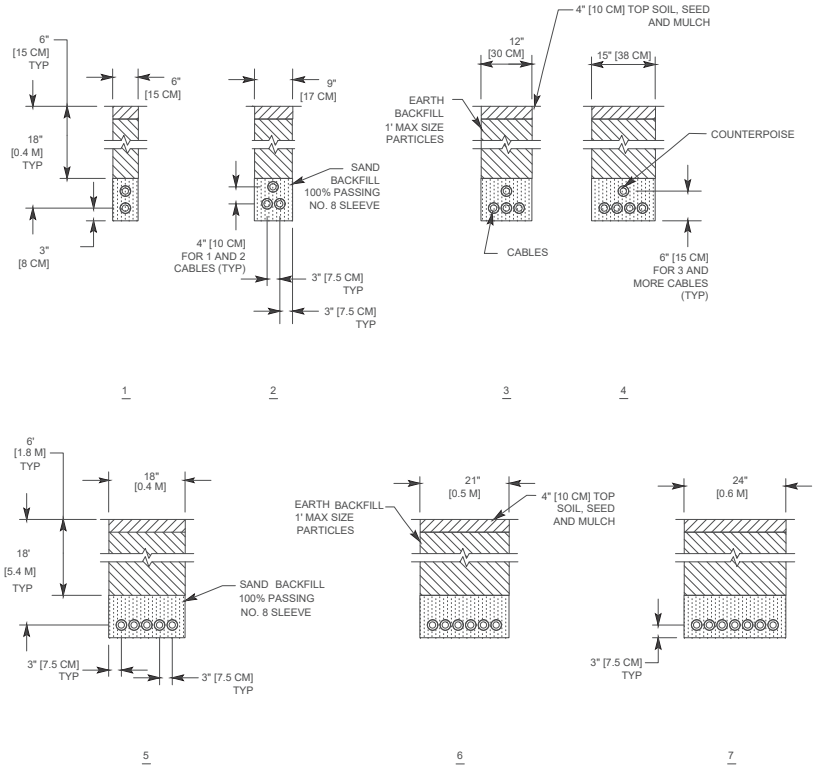
NOTES

1. TYPE AND MINIMUM NUMBER OF GROUND RODS ARE AS SPECIFIED ON THE PLAN.
2. INSTALL GROUND ROD AT MAXIMUM 500' [152.4 M] SPACING. USE GROUND ROD TO TERMINATE THE COUNTERPOISE AT BOTH ENDS OF DUCT.
3. COST OF GROUND RODS IS INCIDENTAL TO THE ASSOCIATED ITEMS REQUIRING GROUNDING UNLESS OTHERWISE SPECIFIED.
4. THE NUMBER OF GROUND RODS IS SITE SPECIFIC AND MAY DEPEND ON SOIL RESISTIVITY.

1 E18 AIRFIELD GROUNDING
NOT TO SCALE



2 E18 TYPICAL DETAIL FOR UNDERGROUND CABLE INSTALLATION - PLOWED CABLE
NOT TO SCALE



1. DETAIL NUMBERS INDICATE NO. OF CABLES.
2. INCREASE TRENCHES WITH MORE THAN 7 CABLES 3" [7.5 CM] IN WIDTH FOR EACH ADDITIONAL CABLE. IF SPECIFIED ON PLANS. TWO PARALLEL TRENCHES MAY BE CONSTRUCTED.
3. SHOW DEPTH OF TRENCHES ABOVE UNLESS OTHERWISE SPECIFIED ON THE PLANS.
4. SAND BACKFILL MAY BE WAIVED BY THE ENGINEER IF THE EXISTING SOIL MEETS THE BACKFILL REQUIREMENTS.
5. RESTORE ALL DISTURBED SURFACESTO THEIR ORIGINAL CONDITION, COST IS INCIDENTAL TO TRENCH RETURFING MATERIALS AND RATES MAY BE SHOWN ON THE PLAN.
6. SEE PARAGRAPH 12.5 FOR ADDITIONAL INFORMATION ABOUT COUNTERPOISE INSTALLATION.

3 E18 TYPICAL DETAIL FOR UNDERGROUND CABLE INSTALLATION - PLOWED CABLE
NOT TO SCALE

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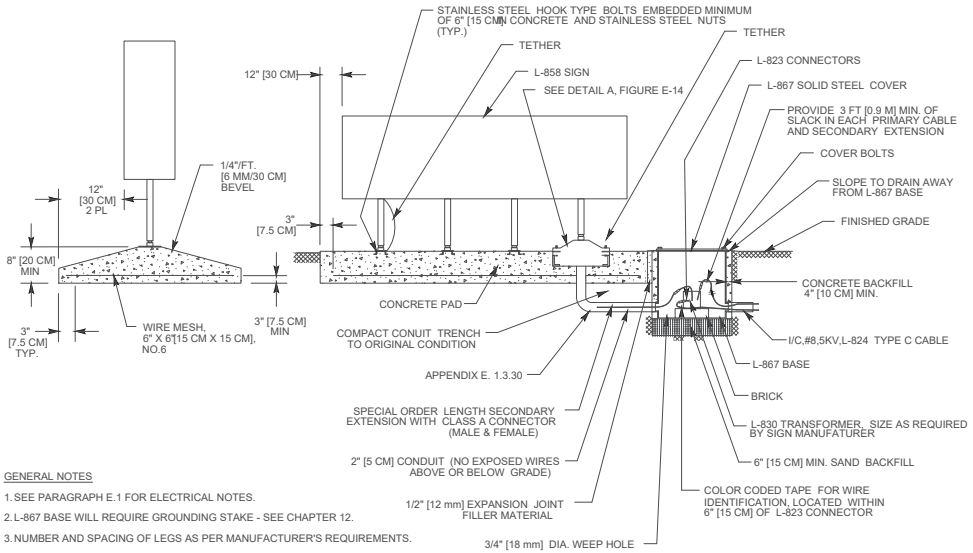
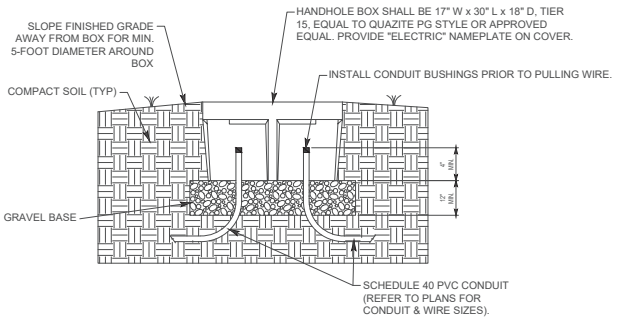


GENERAL NOTES

1. SEE PARAGRAPH E.1 FOR ELECTRICAL NOTES.
2. L-867 BASE WILL REQUIRE GROUNDING STAKE - SEE CHAPTER 12.
3. NUMBER AND SPACING OF LEGS AS PER MANUFACTURER'S REQUIREMENTS.

1 E19 TYPICAL MULTIPLE PEDESTAL SIGN INSTALLATION

NOT TO SCALE



GENERAL NOTES:

A. INSTALL BOX PER THE MANUFACTURER'S INSTRUCTIONS, AS FOLLOWS:

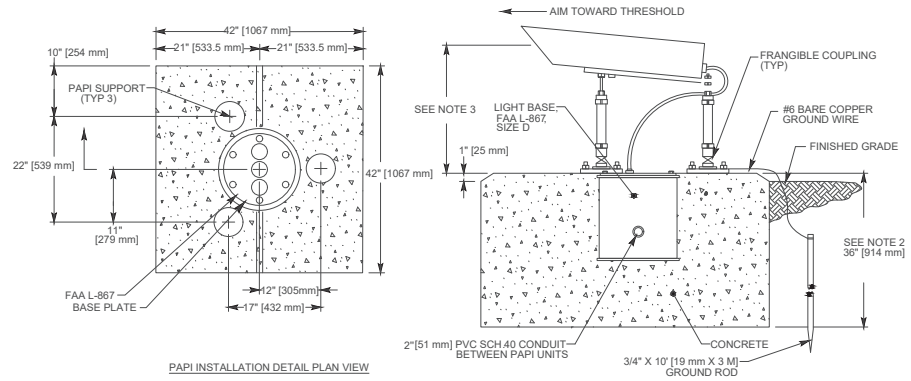
a. PREPARE THE EXCAVATION APPROXIMATELY 12-INCHES DEEPER THAN THE DEPTH OF THE BOX, THEN ADD 12-INCHES OF GRAVEL OR CRUSHED ROCK FOR DRAINAGE.

b. PLACE BOX IN EXCAVATION WITH COVER FLUSH WITH FINISHED GRADE AND LEVEL.

c. FILL AND COMPACT SOIL IN THE AREA OF EXCAVATION TO THE LIP OF BOX. SLOPE GRADE AWAY FROM BOX. 5-FOOT DIAMETER AROUND THE PERIMETER OF THE BOX TO MINIMZE THE ENTRY OF DIRT/SEDIMENT.

2 E19 ELECTRICAL HANDHOLE BOX IN EARTH DETAIL

NOT TO SCALE



PAPI INSTALLATION DETAIL PLAN VIEW

SECTIONAL UNIT VIEW - TYPICAL

PAPI LIGHT HOUSING UNIT (LHU) INSTALLATION DETAIL

NOTES:

1. DIMENSIONS SHOWN ARE TYPICAL AND MAY NOT APPLY TO ALL PAPI MANUFACTURERS. OBTAIN AND CONFIRM DIMENSIONS FROM MANUFACTURER PRIOR TO INSTALLATION.
2. DEPTH OF THE FOUNDATION ARE MIN. 36" (914mm) OR 12" (305mm) BELOW FROST LINE WHICHEVER IS GREATER.
3. AIMING ANGLE AND LOCATION OR UNITS ARE AS INDICATED ON CONTRACT DOCUMENTS.
4. LOCATION ON L-867 LIGHT BASE MAY BE BEHIND UNIT AS AN TERNATE LOCATION TO ALLOW EASIER ACCESS TO TRANSFORMERS OR WIRE SPLICES.

3 E19 PAPI LIGHTING HOUSE UNIT (LHU) INSTALLATION DETAIL

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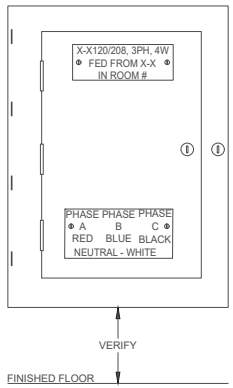
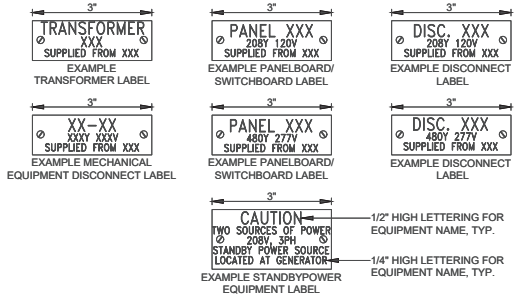


277/480, 3PH, 4W
PHASE A - BROWN
PHASE B - ORANGE
PHASE C - YELLOW
NEUTRAL - GRAY

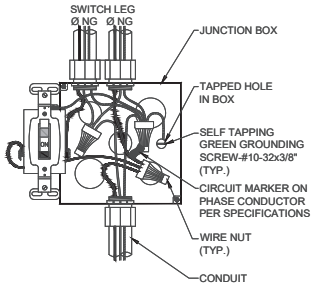
NOTES:
1. ADJUST AS REQUIRED FOR PROJECT VOLTAGE.

1 E20 PANELBOARD INSTALLATION & NAME PLATE DETAIL
DIAGRAMMATIC

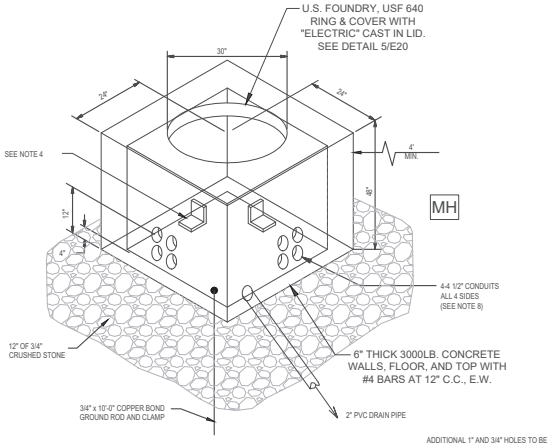


2 E20 TYPICAL EQUIPMENT LABELING DETAIL
DIAGRAMMATIC

NOTES:
1. ENGRAVED PLASTIC TAG WITH WHITE LETTERS ON BLACK BACKGROUND (RED BACKGROUND FOR EMERGENCY EQUIPMENT). TAG SHALL HAVE ALL EDGES BEVELED AND SMOOTH. SECURE TAG WITH 2 CHROME (STAINLESS STEEL FOR WET OR DAMP LOCATIONS) SCREWS.
2. MINIMUM EQUIPMENT LABEL SIZE MUST BE LARGE ENOUGH TO ACCOMMODATE ALL TEXT.

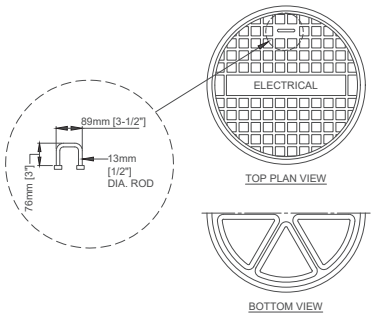


3 E20 TYPICAL SWITCH WIRING DETAIL
DIAGRAMMATIC

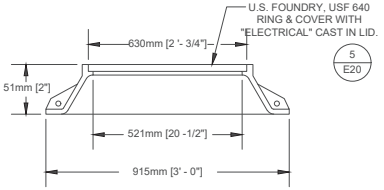


4 E20 ELECTRICAL MANHOLE DETAIL (AT VAULT)
DIAGRAMMATIC

MANHOLE NOTES:
1. CONCRETE SHALL BE 3,000 PSI.
2. CAST IRON MANHOLE COVER SHALL READ "ELECTRICAL".
3. CONCRETE SHALL BE COMPACTED WITH VIBRATOR.
4. GALVANIZED STEEL OR FIBERGLASS CABLE RACKS/SUPPORTS - ALL 4 SIDES.
5. HANDHOLE SHALL BE CONSTRUCTED FOR WHEEL-LOADING AS NOTED.
6. HANDHOLE COVERS AND FRAMES SHALL NOT EXTEND MORE THEN 1 INCH ABOVE GRADE. USE BRICKS TO ELEVATE COVER AS NECESSARY.
7. STANDARD HANDHOLE IS CAST WITH NO BOTTOM.
8. UNUSED DUCT HOLES SHALL BE SEALED WITH REMOVABLE, WATERTIGHT PLUG.
9. SHOWN FOR REFERENCE ELECTRICAL CONTRACTOR VERIFY ACTUAL FIELD CONDITIONS.
10. MANHOLE WILL BE MODIFIED AS REQUIRED FOR NEW GRADE, THIS MAY INCLUDE RELOCATION OF CABLING.
11. PENTRATIONS SHOWN FOR REFERENCE ONLY. SIZE, NUMBER, POINT OF ENTRY AND DEPTH OF EXISTING CONDUITS VARY. ELECTRICAL CONTRACTOR TO FIELD VERIFY PRIOR TO BID.
12. GALVANIZED PULL IRONS SHALL BE PROVIDED ON 2 SIDES OPPOSITE OF EACH OTHER DIRECTLY BELOW THE DUCTS.

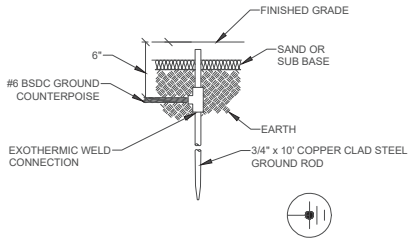


5 E20 MANHOLE/HANDHOLE COVER
DIAGRAMMATIC

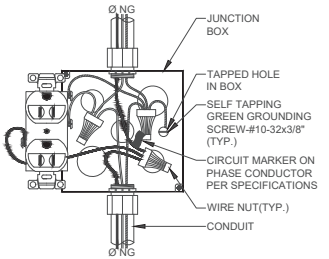


NOTE:
1. PROVIDE 1#2/0 BARE COPPER GROUND FROM MANHOLE FRAME TO GROUND ROD IN MANHOLE.

6 E20 MANHOLE FRAME AND COVER
DIAGRAMMATIC



7 E20 COUNTERPOISE GROUNDING ROD
DIAGRAMMATIC



8 E20 TYPICAL RECEPTACLE WIRING DETAIL
DIAGRAMMATIC

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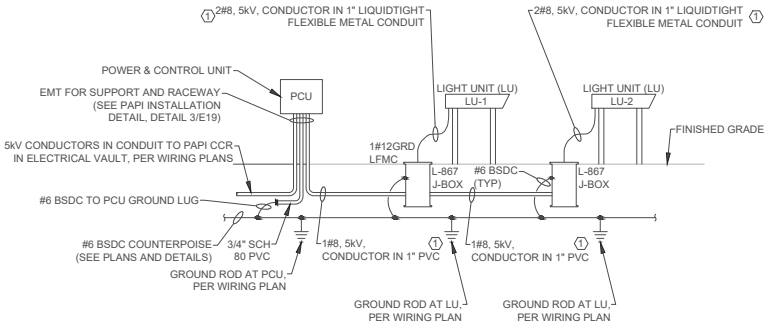

GENERAL NOTES:
(APPLICABLE TO THIS RISER ONLY)

A. THIS DETAIL IS BASED ON AN L-881 (2 LIGHT UNIT), STYLE B (6.6A CURRENT DRIVEN), CLASS I (-31 TO 131 DEG. F) PAPI AS MANUFACTURED BY ADB. REQUIREMENTS MAY VARY BETWEEN MANUFACTURERS. FINAL DETAIL SHALL BE APPROVED BY ENGINEER.

B. PERFORM INITIAL PCU SETUP AND CALIBRATION IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

C. SETUP NIGHTTIME INTENSITY FOR 5% OR 20%, BASED ON THE OWNER'S PREFERENCE. COORDINATE WITH OWNER.

KEYED NOTES: (#)
(APPLICABLE TO THIS RISER ONLY)

1. CABLE CONNECTORS FOR WIRING BETWEEN PCU AND LU'S ARE TYPICALLY FURNISHED WITH PAPI.

1 / E21 PAPI SYSTEM RISER DIAGRAM

NOT TO SCALE

VAUG220003

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ISSUE	DATE
100% SUBMITTAL	1/20/2023

designed by: JDZ
drawn by: JRA, JDZ
checked by: JEA

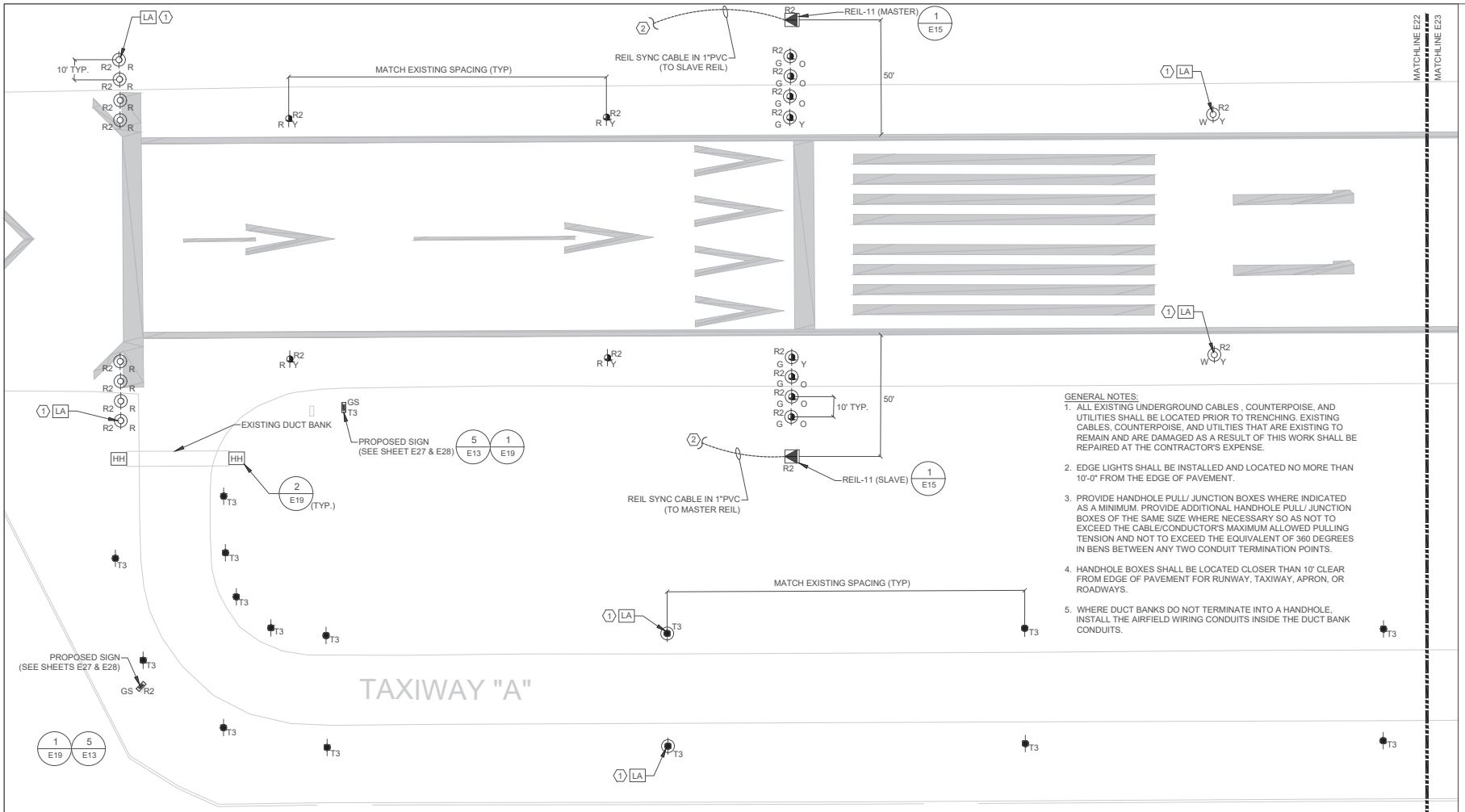
AIRFIELD ELECTRICAL UPGRADE
DANIEL FIELD AIRPORT (DNL)

AUGUSTA, GEORGIA

AP019-XXX-XX(245)
GMC NUMBER : TAUG220004
SCALE: NOT TO SCALE

ELECTRICAL DETAILS

E21
Sheet 45 of 52



GENERAL NOTES:

1. ALL EXISTING UNDERGROUND CABLES , COUNTERPOISE, AND UTILITIES SHALL BE LOCATED PRIOR TO TRENCHING. EXISTING CABLES, COUNTERPOISE, AND UTILTIES THAT ARE EXISTING TO REMAIN AND ARE DAMAGED AS A RESULT OF THIS WORK SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
2. EDGE LIGHTS SHALL BE INSTALLED AND LOCATED NO MORE THAN 10'-0" FROM THE EDGE OF PAVEMENT.
3. PROVIDE HANDHOLE PULL/ JUNCTION BOXES WHERE INDICATED AS A MINIMUM. PROVIDE ADDITIONAL HANDHOLE PULL/ JUNCTION BOXES OF THE SAME SIZE WHERE NECESSARY SO AS NOT TO EXCEED THE CABLE/CONDUCTOR'S MAXIMUM ALLOWED PULLING TENSION AND NOT TO EXCEED THE EQUIVALENT OF 360 DEGREES IN BENS BETWEEN ANY TWO CONDUIT TERMINATION POINTS.
4. HANDHOLE BOXES SHALL BE LOCATED CLOSER THAN 10' CLEAR FROM EDGE OF PAVEMENT FOR RUNWAY, TAXIWAY, APRON, OR ROADWAYS.
5. WHERE DUCT BANKS DO NOT TERMINATE INTO A HANDHOLE, INSTALL THE AIRFIELD WIRING CONDUITS INSIDE THE DUCT BANK CONDUITS.

KEYED NOTES (#):

1. PROVIDE FIELD LIGHTNING ARRESTOR FOR SERIES CIRCUIT AS SPECIFIED. LIGHTING ARRESTOR TO BE ADB #FLA44A6102 OR APPROVED EQUAL. INSTALL ARRESTOR IN THE BASE CAN INDICATED AND CONNECT TO THE SERIES LIGHTING CIRCUIT PER MANUFACTURER'S REQUIREMENTS. GROUND PER NEC AND FAA REGULATIONS. GROUND ARRESTOR TO BASE CAN GROUND LUG USING A #4 COOPER GROUND CONDUCTOR. PROVIDE A RED TAG WITH WHITE "LA" LETTERS ON FIXTURE STEM. TAG SHALL MATCH DETAIL 3/E13 EXCEPT FOR THE COLOR.
2. PROVIDE 12"x12"x12" HANDHOLES PER HANDHOLE DETAIL 2/E19. FOR REIL SYNC CABLE CONDUIT AS REQUIRED SO AS NOT TO EXCEED THE CABLE'S MAXIMUM ALLOWED PULLING TENSION AND NOT TO EXCEED THE EQUIVALENT OF 360 DEGREES IN BENDS BETWEEN ANY TWO CONDUIT TERMINATION POINTS.

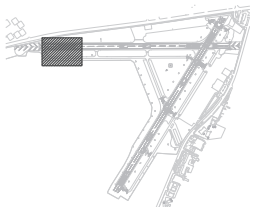
AIRFIELD LIGHTING & WIRING PLAN - RUNWAY 11/29 - PART 1 (ALTERNATE)

PLAN NORTH — 1 E22

SCALE: 1"=50'-0"

NOTE:

1. CONTRACTOR TO MATCH EXISTING ROUTES AND ROUTE ALL NEW CABLES IN EXISTING TRENCHES, DUCT BANKS, ETC. TO ELECTRICAL VAULT. NEW CABLING CONSIST OF:
   1#8, 1/C, 5kV, L-824C CABLE IN 1" PVC 18" BELOW GRADE MIN., WITH 1#6 BSDC COUNTERPOISE CABLE 6" BELOW GRADE MIN. (TYPICAL FOR ONE (1) RUNWAY (R2) LIGHTING CIRCUIT AND ONE (1) TAXIWAY 'A' (T3) LIGHTING CIRCUIT UNO)



KEY PLAN

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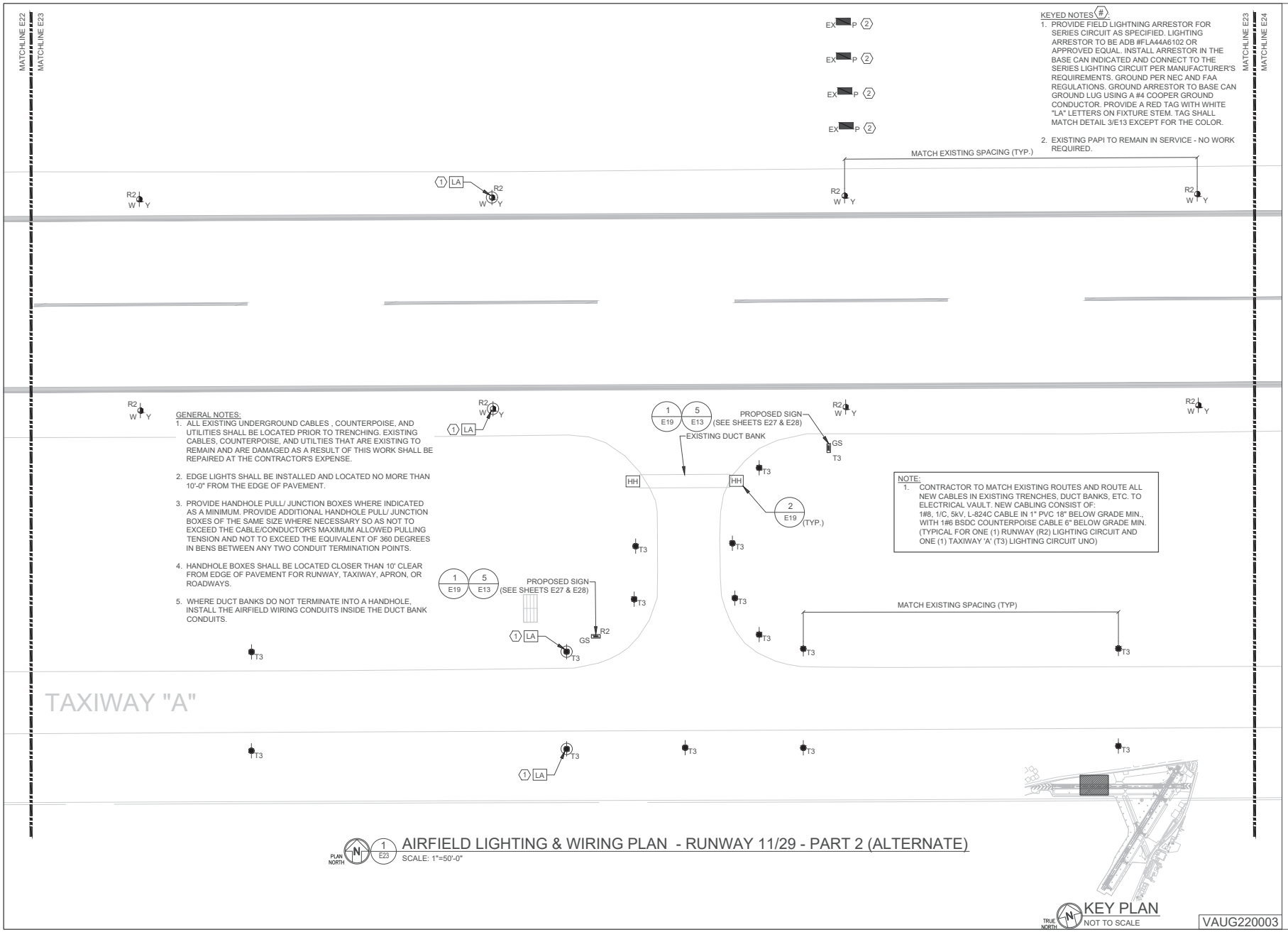
AIRFIELD ELECTRICAL UPGRADE
DANIEL FIELD AIRPORT (DNL)
AUGUSTA, GEORGIA
AP019-XXX-XX(245)
GMC NUMBER : TAUG220004
SCALE: 1"=50'

AIRFIELD LIGHTING & WIRING PLAN - RUNWAY 11/29 - PART 1 (ALT)

E22

Sheet 46 of 52



PLAN NORTH 1 E23 AIRFIELD LIGHTING & WIRING PLAN - RUNWAY 11/29 - PART 2 (ALTERNATE)
SCALE: 1"=50'-0"

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DANIEL FIELD AIRPORT (DNL)
AUGUSTA, GEORGIA
AP019-XXX-XX(245)
GMC NUMBER : TAUG220004
SCALE: 1"=50'

AIRFIELD LIGHTING & WIRING PLAN - RUNWAY 11/29 -PART 2 (ALT)

E23
Sheet 47 of 52

MATCHLINE E23
MATCHLINE E24

GENERAL NOTES:

1. ALL EXISTING UNDERGROUND CABLES , COUNTERPOISE, AND UTILITIES SHALL BE LOCATED PRIOR TO TRENCHING. EXISTING CABLES, COUNTERPOISE, AND UTILITIES THAT ARE EXISTING TO REMAIN AND ARE DAMAGED AS A RESULT OF THIS WORK SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
2. EDGE LIGHTS SHALL BE INSTALLED AND LOCATED NO MORE THAN 10'-0" FROM THE EDGE OF PAVEMENT.
3. PROVIDE HANDHOLE PULL/ JUNCTION BOXES WHERE INDICATED AS A MINIMUM. PROVIDE ADDITIONAL HANDHOLE PULL/ JUNCTION BOXES OF THE SAME SIZE WHERE NECESSARY SO AS NOT TO EXCEED THE CABLE/CONDUCTOR'S MAXIMUM ALLOWED PULLING TENSION AND NOT TO EXCEED THE EQUIVALENT OF 360 DEGREES IN BENS BETWEEN ANY TWO CONDUIT TERMINATION POINTS.
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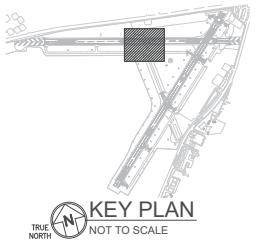

KEY PLAN
NOT TO SCALE

KEYED NOTES (#)

1. PROVIDE FIELD LIGHTNING ARRESTOR FOR SERIES CIRCUIT AS SPECIFIED. LIGHTING ARRESTOR TO BE ADB #FLA44A6102 OR APPROVED EQUAL. INSTALL ARRESTOR IN THE BASE CAN INDICATED AND CONNECT TO THE SERIES LIGHTING CIRCUIT PER MANUFACTURER'S REQUIREMENTS. GROUND PER NEC AND FAA REGULATIONS. GROUND ARRESTOR TO BASE CAN GROUND LUG USING A #4 COOPER GROUND CONDUCTOR. PROVIDE A RED TAG WITH WHITE "LA" LETTERS ON FIXTURE STEM. TAG SHALL MATCH DETAIL 3/E13 EXCEPT FOR THE COLOR.

MATCHLINE E24
MATCHLINE E25

1/E19 5/E13 PROPOSED SIGN (SEE SHEETS E27 & E28)
R2 GS
EXISTING DUCT BANK
HH
2/E19 (TYP.)
T3 GS
1 LA
R2 W Y
MATCH EXISTING SPACING (TYP)
NOTE:
1. CONTRACTOR TO MATCH EXISTING ROUTES AND ROUTE ALL NEW CABLES IN EXISTING TRENCHES, DUCT BANKS, ETC. TO ELECTRICAL VAULT. NEW CABLING CONSIST OF: 1#8, 1/C, 5kV, L-824C CABLE IN 1" PVC 18" BELOW GRADE MIN., WITH 1#6 BSDC COUNTERPOISE CABLE 6" BELOW GRADE MIN. (TYPICAL FOR ONE (1) RUNWAY (R2) LIGHTING CIRCUIT AND ONE (1) TAXIWAY 'A' (T3) LIGHTING CIRCUIT UNO)
T3
TAXIWAY "A"

AIRFIELD LIGHTING & WIRING PLAN - RUNWAY 11/29 - PART 3 (ALTERNATE)
PLAN NORTH
1/E24
SCALE: 1"=50'-0"

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AUGUSTA, GEORGIA
AP019-XXX-XX(245)
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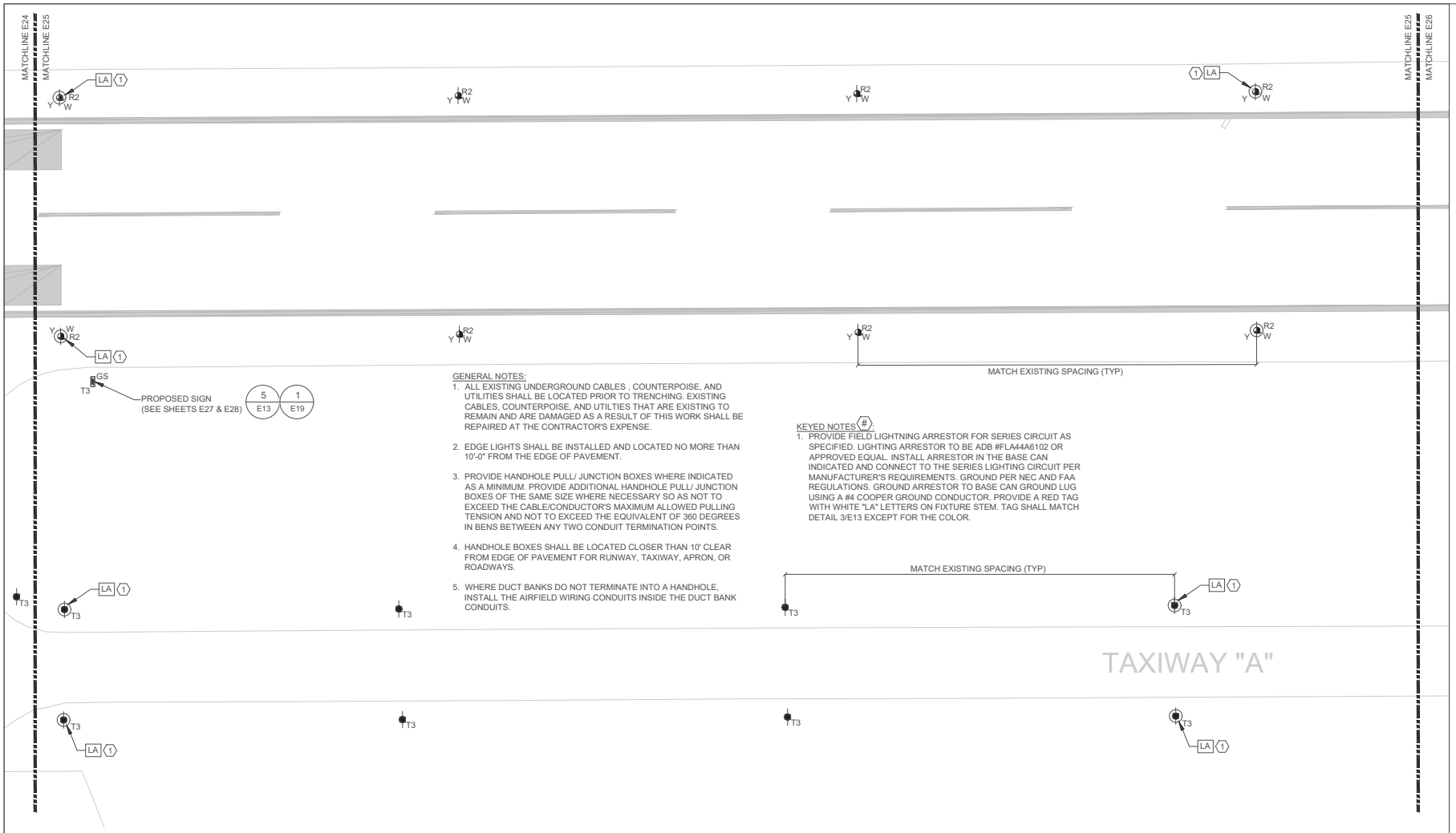
SCALE: 1"=50'

AIRFIELD LIGHTING & WIRING PLAN - RUNWAY 11/29 - PART 3 (ALT)

E24
Sheet 48 of 52



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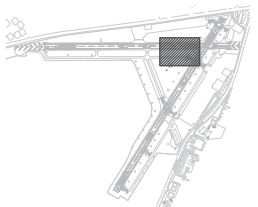
PLAN NORTH — 1 / E25

AIRFIELD LIGHTING & WIRING PLAN - RUNWAY 11/29 - PART 4 (ALTERNATE)

SCALE: 1"=50'-0"

NOTE:

1. CONTRACTOR TO MATCH EXISTING ROUTES AND ROUTE ALL NEW CABLES IN EXISTING TRENCHES, DUCT BANKS, ETC. TO ELECTRICAL VAULT. NEW CABLING CONSIST OF: 1#8, 1/C, 5kV, L-824C CABLE IN 1" PVC 18" BELOW GRADE MIN., WITH 1#6 BSDC COUNTERPOISE CABLE 6" BELOW GRADE MIN. (TYPICAL FOR ONE (1) RUNWAY (R2) LIGHTING CIRCUIT AND ONE (1) TAXIWAY 'A' (T3) LIGHTING CIRCUIT UNO)



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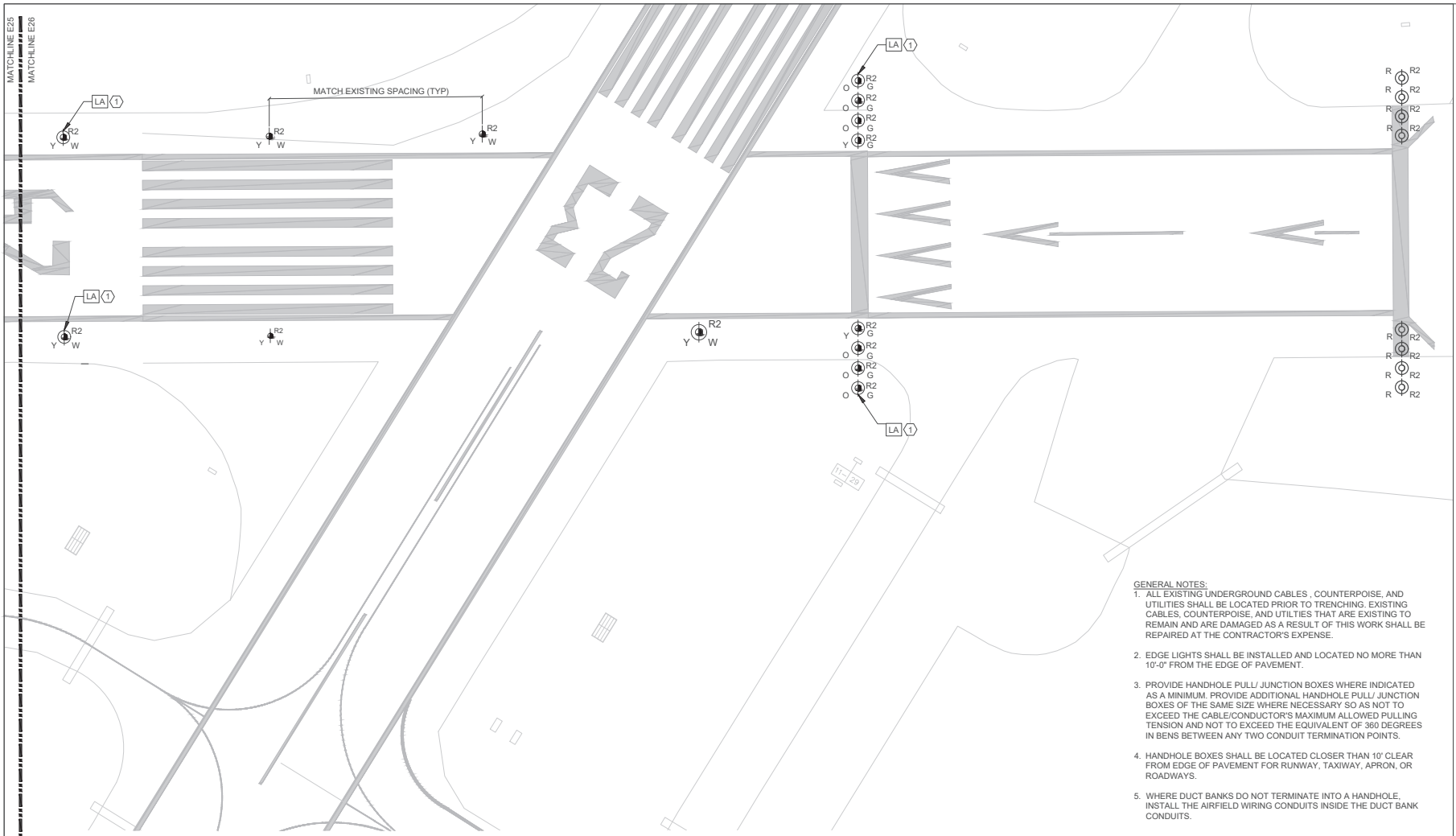
AIRFIELD LIGHTING & WIRING PLAN - RUNWAY 11/29 -PART 4 (ALT)

E25
Sheet 49 of 52



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AIRFIELD LIGHTING & WIRING PLAN - RUNWAY 11/29 - PART 5 (ALTERNATE)

PLAN NORTH — 1 / E26

SCALE: 1"=60'-0"

NOTE:

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GENERAL NOTES:

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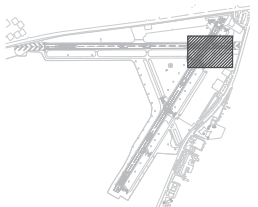

KEY PLAN

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AIRFIELD ELECTRICAL UPGRADE
DANIEL FIELD AIRPORT (DNL)

AUGUSTA, GEORGIA

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AIRFIELD LIGHTING & WIRING PLAN - RUNWAY 11/29 - PART 5 (ALT)

E26

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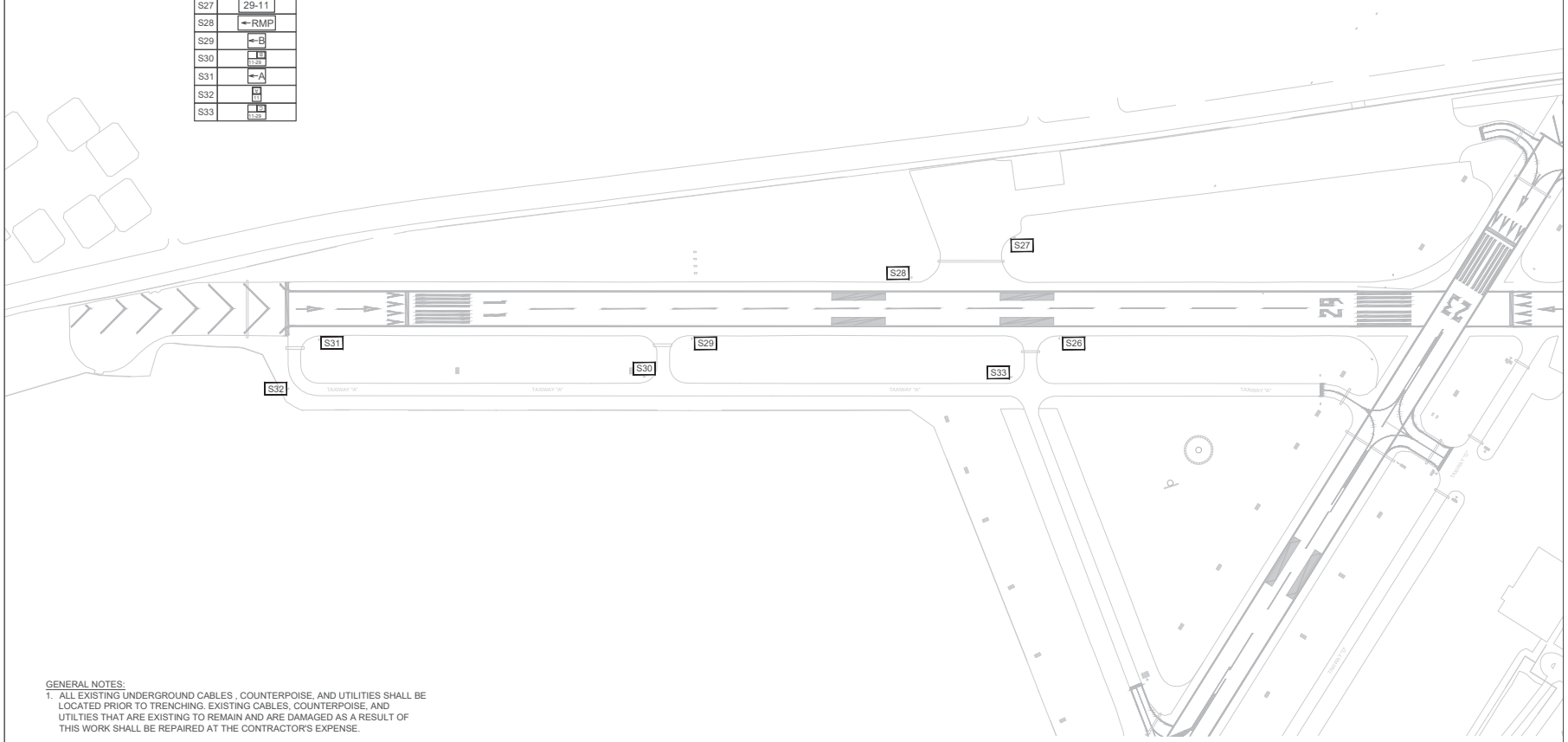
SIGN CHART	
S26	←C
S27	29-11
S28	←RMP
S29	←B
S30	B 11-29
S31	←A
S32	11
S33	B 11-29



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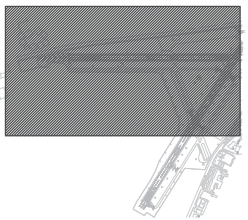
2. ALL AIRPORT SIGNS SHALL CONFORM TO THE FOLLOWING FAA ADVISORY CIRCULARS:
   150/5340-18F STANDARDS FOR AIRPORT SIGN SYSTEMS
   150/5340-30J DESIGN AND INSTALLATION DETAILS FOR AIRPORT VISUAL AIDS
   150/5345-44J SPECIFICATION FOR RUNWAY & TAXIWAY SIGNS.
3. ALL SIGNS SHALL BE SIZE 1, STYLE 2, CLASS 2, MODE 2, UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
4. CONTRACTOR SHALL STAKE THE LOCATION OF ALL PROPOSED SIGNS FOR REVIEW BY THE RPR PRIOR TO INSTALLATION.
5. TYPICAL, SEE SHEET E10 FOR SIGN LAYOUTS.

PLAN NORTH — 1 / E27

AIRFIELD SIGN CHART PLAN - RUNWAY 11-29 (ALTERNATE)

SCALE: 1"=300'-0"



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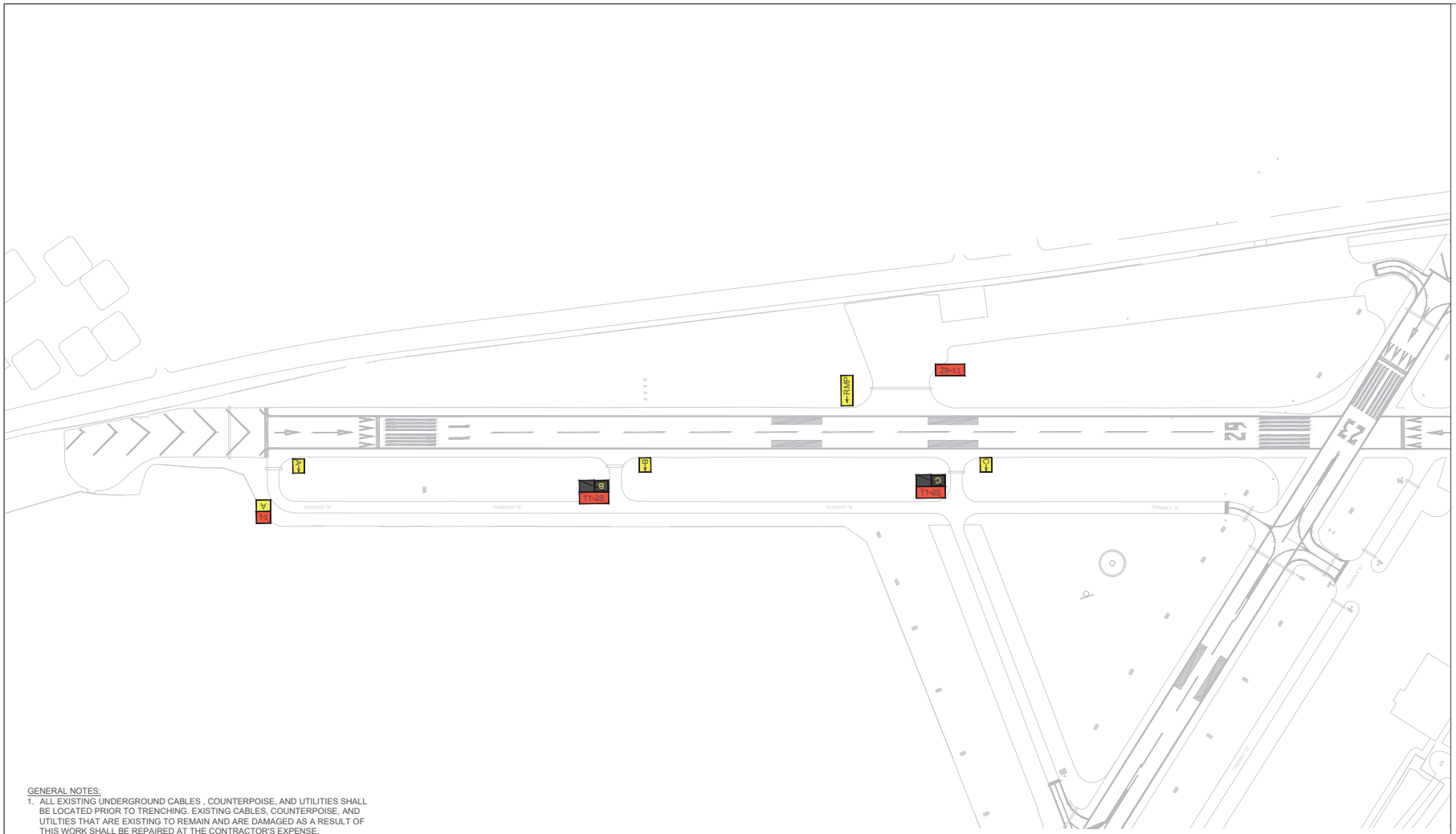
SCALE: 1" = 300'

AIRFIELD SIGN CHART PLAN - RUNWAY 11-29 ALTERNATE

E27

Sheet 51 of 52



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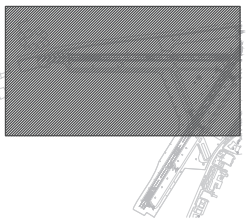
3. ALL SIGNS SHALL BE SIZE 1, STYLE 2, CLASS 2, MODE 2, UNLESS DIRECTED OTHERWISE BY THE ENGINEER.

4. CONTRACTOR SHALL STAKE THE LOCATION OF ALL PROPOSED SIGNS FOR REVIEW BY THE RPR PRIOR TO INSTALLATION.

PLAN NORTH — 1 / E28

AIRFIELD SIGN LAYOUT PLAN - RUNWAY 11-29 (ALTERNATE)

SCALE: 1"=300'-0"



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GMC NUMBER : TAUG220004
SCALE: 1": 300'

REGISTERED PROFESSIONAL ENGINEER — No. 32302 — JOHN AVERETT

AIRFIELD SIGN LAYOUT PLAN - RUNWAY 11-29 ALTERNATE

E28

Sheet 52 of 52