EXISTING AIRFIELD ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
	EXISTING CONDUIT IN PAVEMENT OR TURF
	EXISTING POWER DUCTBANK
	EXISTING POWER MANHOLE
H	EXISTING HANDHOLE
	EXISTING JUNCTION CAN
	EXISTING AIRFIELD LIGHT CAN
	EXISTING AIRFIELD SIGN

AIRFIELD ELECTRICAL DEMOLITION LEGEND

SYMBOL	DESCRIPTION
	EXISTING CONDUIT TO BE REMOVED
	EXISTING TAXIWAY EDGE LIGHT AND BASE CAN TO BE REMOVED
	EXISTING RUNWAY EDGE LIGHT, IN-PVMT HOLD LIGHT AND BASE CAN TO BE REMOVED
S	INSTALL NEW STEEL COVER ON EXISTING LIGHT CAN
S_P	INSTALL NEW STEEL COVER ON EXISTING LIGHT CAN TO RETAIN CIRCUIT
185	EXISTING AIRFIELD SIGN AND FOUNDATION TO BE REMOVED
	EXISTING RUNWAY END LIGHTS AND BASE CAN TO BE REMOVED
H	EXISTING HANDHOLE TO BE REMOVED
	EXISTING MANHOLE TO BE REMOVED
	INSTALL CONDUIT END CAP AND PULL STRING
	PAVEMENT DEMOLITION

AIRFIELD ELECTRICAL LEGEND

SPECIFICATION SECTION	SYMBOL	DESCRIPTION
L-125	C/Y Y/C	INSTALL L-850C(L), BI-DIRECTIONAL, CLEAR/CLEAR OR CLEAR/AMBER, LED IN-PAVEMENT R/W EDGE LIGHT WITHOUT HEATER KIT AND PROPERLY SIZED ISOLATION TRANSFORMER AND L-823 CONNECTOR KIT. MOUNTED ON A NEW L-868, SIZE B BASE CAN. C = CLEAR, Y = YELLOW. NO DESIGNATION INDICATES CLEAR/CLEAR.
L-125	C/Y Y/C	INSTALL L-861, BI-DIRECTIONAL, CLEAR/AMBER, R/W EDGE LIGHT WITHOUT HEATER KIT AND PROPERLY SIZED ISOLATION TRANSFORMER AND L-823 CONNECTOR KIT. MOUNTED ON A NEW L-868, SIZE B BASE CAN. C = CLEAR, Y = YELLOW. NO DESIGNATION INDICATES CLEAR/CLEAR.
L-125	C/Y Y/C	INSTALL L-862(L), ELEVATED LED R/W EDGE LIGHT WITHOUT HEATER KIT AND PROPERLY SIZED ISOLATION TRANSFORMER AND L-823 CONNECTOR KIT. MOUNTED ON A NEW ADJUSTABLE DEPTH L-867, SIZE B BASE CAN. C = CLEAR, Y = YELLOW. NO DESIGNATION INDICATES CLEAR/CLEAR.
L-125		INSTALL L-862E(L), BI-DIRECTIONAL, GREEN/RED, ELEVATED LED R/W THRESHOLD/END LIGHT WITHOUT HEATER KIT AND PROPERLY SIZED ISOLATION TRANSFORMER AND L-823 CONNECTOR KIT. MOUNTED ON A NEW ADJUSTABLE DEPTH L-867, SIZE B BASE CAN.
L-125		INSTALL L-862E, BI-DIRECTIONAL, RED/RED, ELEVATED R/W THRESHOLD/END LIGHT WITHOUT HEATER KIT AND PROPERLY SIZED ISOLATION TRANSFORMER AND L-823 CONNECTOR KIT. MOUNTED ON A NEW ADJUSTABLE DEPTH L-867, SIZE B BASE CAN.
L-125		INSTALL L-852C/D(L), IN-PAVEMENT BI-DIRECTIONAL, GREEN/GREEN LED T/W CENTERLINE LIGHT WITHOUT HEATER KIT AND PROPERLY SIZED ISOLATION TRANSFORMER AND L-823 CONNECTOR KIT. MOUNTED ON A NEW L-868, SIZE B BASE CAN. SMALL SOLID AREA DENOTES DIRECTION OF LIGHT BEAM.
L-125		INSTALL L-804, LED ELEVATED R/W GUARD LIGHT WITHOUT HEATER KIT AND PROPERLY SIZED ISOLATION TRANSFORMER AND L-867 CONNECTOR KIT. MOUNTED ON A NEW L-868, SIZE B BASE CAN.
L-125		INSTALL L-852G(L), LED R/W IN-PAVEMENT GUARD LIGHT WITHOUT HEATER KIT AND PROPERLY SIZED ISOLATION TRANSFORMER AND L-823 CONNECTOR KIT. MOUNTED ON A NEW L-868, SIZE B BASE CAN.
L-125		INSTALL L-852S(L), LED R/W IN-PAVEMENT STOP BAR LIGHT WITHOUT HEATER KIT AND PROPERLY SIZED ISOLATION TRANSFORMER AND L-823 CONNECTOR KIT. MOUNTED ON A NEW L-868, SIZE B BASE CAN.
L-125		INSTALL L-861T(L), ELEVATED LED T/W EDGE LIGHT, OVERALL HEIGHT 14", WITHOUT HEATER KIT AND PROPERLY SIZED ISOLATION TRANSFORMER AND L-823 CONNECTOR KIT. MOUNTED ON A NEW L-867, SIZE B BASE CAN.
L-125		INSTALL L-852T(L), IN-PAVEMENT LED T/W EDGE LIGHT WITHOUT HEATER KIT AND PROPERLY SIZED ISOLATION TRANSFORMER ON A NEW L-868B BASE CAN IN EXISTING SHOULDER PAVEMENT.
L-125	SN01 185	SIGN ID NUMBER, SEE SHEET EL501 FOR SIGN TABLE. INSTALL L-858(L) LED, AIRFIELD GUIDANCE SIGN, MOUNTED ON A CONCRETE FOUNDATION WITH AN L-867 SIZE B, 24" DEEP BASE CAN. WITH PROPERLY SIZED ISOLATION TRANSFORMER AND L-823 CONNECTOR KIT. SN01 REPRESENTS SIGN NUMBER. RE-PURPOSED HOU SIGN NUMBER, SEE SHEET EL501 FOR SIGN TABLE.
L-125	M→ D 13R-31L	TYPICAL SIGN LEGENDS
L-108	SIGNS NW(2) 1	CIRCUIT DESIGNATIONS AS SHOWN ON PLANS
L-110	1	INSTALL ONE-WAY, TWO-INCH PVC SCHEDULE 40, UNLESS NOTED OTHERWISE, CONCRETE ENCASED UNDER PAVEMENT AND EXTERNAL 1/C #6 AWG SOLID TINNED SOFT DRAWN COPPER COUNTERPOISE WIRE. NUMBER SHOWN INDICATES NUMBER OF CONDUITS IN DUCTBANK.
L-110	FAA	INSTALL TWO-WAY, FOUR-INCH PVC SCHEDULE 40, UNLESS NOTED OTHERWISE, CONCRETE ENCASED UNDER PAVEMENT AND EXTERNAL 1/C #1/0 AWG BARE GUARD WIRE.
L-110	D	INSTALL 2" PVC DRAIN LINE FOR ELECTRICAL STRUCTURES
L-115	Ⓑ	INSTALL L-867 BASE CAN IN TURF, SHOULDER PAVEMENT OR L-868 BASE CAN IN FULL STRENGTH PAVEMENT AS NOTED ON THE PLANS.
L-115		INSTALL AIRCRAFT-RATED ELECTRICAL MANHOLE.
L-115	H	INSTALL AIRCRAFT-RATED ELECTRICAL OR COMMUNICATION HANDHOLE.

CIRCUIT TABLE

CIRCUIT ABBREVIATION ON PLANS	CIRCUIT COVERAGE	REGULATOR LOCATION
TW D/E	TAXIWAY D AND E EDGE LIGHTS	NORTH VAULT
TW G/F	TAXIWAY G, G1, G2, G3, AND F EDGE LIGHTS	NORTH VAULT
TW K CL	TAXIWAY K CENTERLINE LIGHTS	SOUTH VAULT
TW K CL (SMGCS)	TAXIWAY K CENTERLINE SMGCS LIGHTS	SOUTH VAULT
TW K	TAXIWAY K, K1, K2, R EDGE LIGHTS	SOUTH VAULT
TW M	TAXIWAY M, M1, M3 EDGE LIGHTS	NORTH VAULT
SC-NW	SIGN CIRCUIT - NORTHWEST QUADRANT	NORTH VAULT
SC-SW	SIGN CIRCUIT - SOUTHWEST QUADRANT	SOUTH VAULT
RGL-NW	RUNWAY GUARD LIGHTS - NORTHWEST QUADRANT	NORTH VAULT
RGL-SW	RUNWAY GUARD LIGHTS - SOUTHWEST QUADRANT	SOUTH VAULT
RW 13R-31L EDGE	RUNWAY 13R-31L EDGE LIGHTS	NORTH VAULT
RW 13L-31R EDGE	RUNWAY 13L-31R EDGE LIGHTS	NORTH VAULT
RW 4-22 EDGE	RUNWAY 4-22 EDGE LIGHTS	SOUTH VAULT

GENERAL NOTES:

1. ALL WORK, EQUIPMENT AND MATERIALS MUST COMPLY WITH FAA REQUIREMENTS, NFPA 70, ANSI C2, HOUSTON AIRPORT SYSTEM, AND THE CITY OF HOUSTON BUILDING CODE.
2. PROVIDE ALL LABOR, PARTS AND MATERIAL REQUIRED FOR A COMPLETE, PROPERLY WORKING ELECTRICAL LIGHTING AND SIGNAGE SYSTEM AS DESCRIBED AND INDICATED.
3. ALL WORK SHALL BE PERFORMED DURING AIRPORT OPERATING CONDITIONS AND AS SCHEDULED BY HOUSTON AIRPORT SYSTEMS OPERATIONS. UNLESS OTHERWISE INDICATED, ALL SIGNS AND LIGHTING SYSTEMS SHALL BE READY FOR USE EVERY NIGHT AND FOR EVERY LOW VISIBILITY PERIOD EXCEPT AS SHOWN AS CLOSED IN THE PHASING DRAWINGS.
4. NOTIFY ENGINEER OF ANY SIGNIFICANT DIFFERENCES BETWEEN DRAWINGS AND FIELD CONDITIONS.DEVIATIONS, PARTICULARLY REGARDING CIRCUIT ROUTING, ARE ANTICIPATED AND WILL REQUIRE COORDINATION WITH THE RESIDENT PROJECT REPRESENTATIVE.
5. PROVIDE REINFORCING FOR CONCRETE ENCASED DUCT BANKS UNDER RUNWAY AND TAXIWAY PAVEMENT. EXTEND REINFORCEMENT 5' BEYOND OUTSIDE EDGE OF SHOULDER.
6. ALL REMOVED/DEMOLISHED ITEMS SHALL HAVE THEIR ASSOCIATED BASE CANS AND/OR FOUNDATIONS REMOVED AS WELL, BACKFILL OF THE VOID CREATED TO GRADE IS INCIDENTAL TO THE DEMOLITION ITEM.
7. COORDINATE WITH H.A.S. STAFF TO LOCK OUT/TAG OUT APPROPRIATE C.C.R. PRIOR TO WORKING ON AIRFIELD CIRCUITING.
8. UNLESS OTHERWISE NOTED, ALL MATERIALS INSTALLED AS A PART OF THE PROJECT SHALL BE NEW.

LEGEND NOTE:

1. ANY FIXTURE WITH AN ASTERISK AFTER IT REQUIRES A CONCRETE BOXOUT. COORDINATE WITH CIVIL FOR THIS INSTALLATION.

LEGEND:

4XXX 16XXX

CIRCUIT NO. FIXTURE NO. CIRCUIT NO. FIXTURE NO.

NORTH VAULT CIRCUIT LEGEND:

1 13R-31L TDZ1(2)
2 13R-31L TDZ2(2)
3 13R-31L CENTERLINE(2)
4 13R-31L EDGE(2)
5 TW M/M1/M3 EDGE(2)
6 TW G/F EDGE(2)
7 TW D/E EDGE(2)
8 TW M1/M3 CENTERLINE(2)
9 TW H CENTERLINE(2)
10 TW H CENTERLINE SMGCS(2)
11 TW H EDGE(2)
12 TW Z CENTERLINE1(2)
13 TW Z CENTERLINE2(2)
14 TW Y/Z CENTERLINE SMGCS(2)
15 TW Y CENTERLINE(2)
16 RGL NW(2)
17 RGL NE(2)
18 SIGNS NW(2)
19 SIGNS NE(2)

HOUSTON AIRPORT SYSTEM
WILLIAM P. HOBBY AIRPORT
HOUSTON TEXAS

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TEXAS P.E. FIRM F-2966

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

REVISIONS

NO.	DESCRIPTION	DATE	BY
0	ISSUED FOR BID	02/24/2023	SC

FAA NON-STANDARD TAXIWAYS PROJECT

AIRFIELD ELECTRICAL NOTES AND LEGENDS

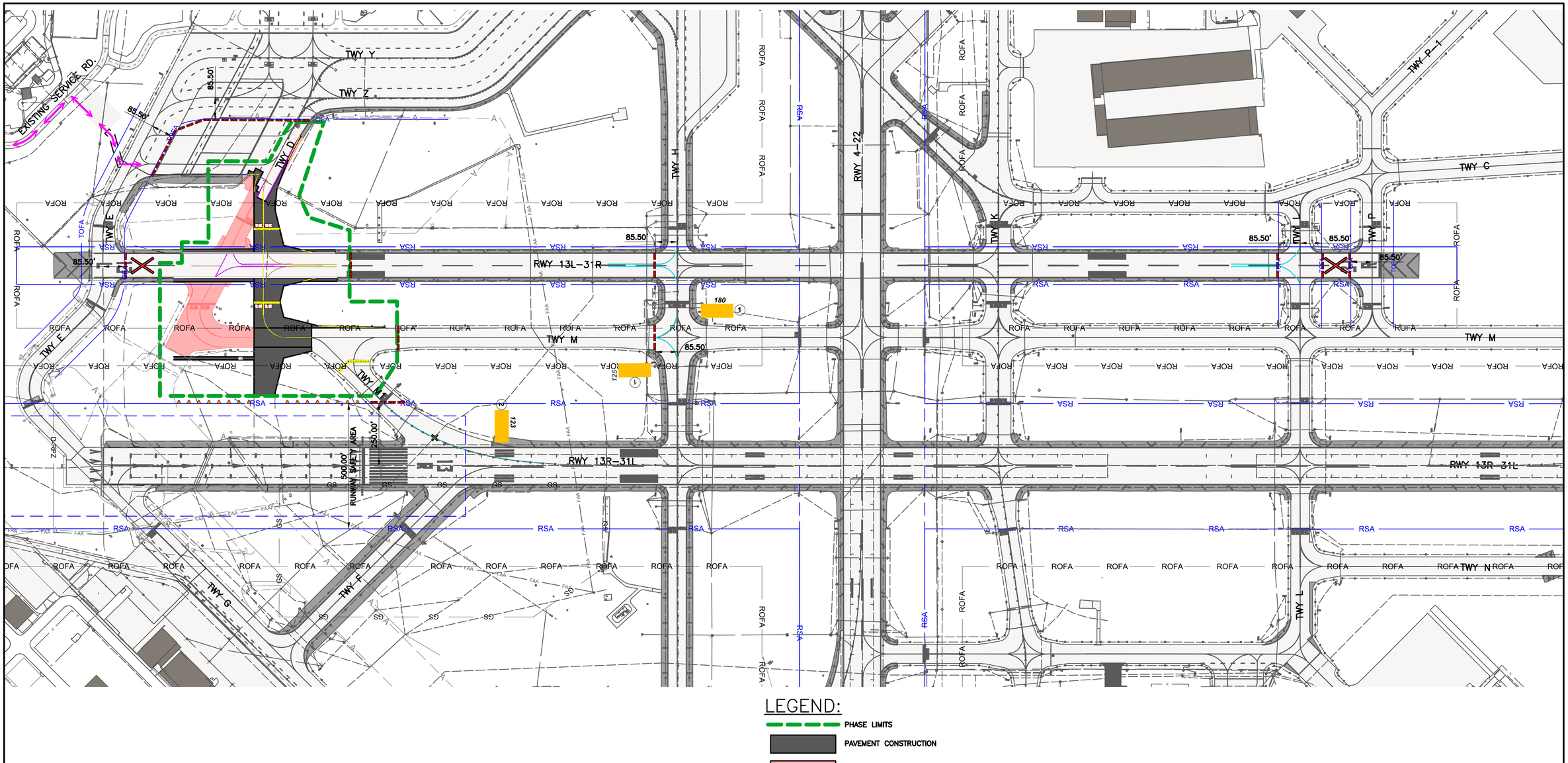
PROJECT MGR:
DESIGNER: N. DERES
DRAWN BY: K. ALMOND
CHECKED BY:
SCALE: AS SHOWN
DATE: 02/24/2023

STATE OF TEXAS
JAMES A. McDONALD
119579
REGISTERED PROFESSIONAL ENGINEER
2.24.23

APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO: 770
C.I.P. NO: 3-48-0110-044
H.A.S. NO: N/A
SHEET NO: E-001
of



LEGEND:

- PHASE LIMITS
- PAVEMENT CONSTRUCTION
- PAVEMENT DEMOLITION
- PAVEMENT MARKING OBLITERATION
- BLACKOUT EXISTING MARKING
- RSA — RUNWAY SAFETY AREA
- ROFA — RUNWAY OBJECT FREE AREA
- TOFA — TAXIWAY OBJECT FREE AREA
- LOCALIZER CRITICAL AREA
- GS — GLIDESLOPE CRITICAL AREA
- D-RPZ — DEPARTURE RUNWAY PROTECTION ZONE
- LOW-PROFILE BARRICADES
- SIGNS REQUIRING MODIFICATION; NUMBER IN CIRCLE INDICATES NUMBER OF BLANK, SIZE 2 LUMACURVE PANELS REQUIRED. XXX INDICATES SIGN NUMBER (XXX)
- TAXIWAY CLOSURE MARKER
- LIGHTED CLOSED RUNWAY MARKER SIGN

GRAPHIC SCALE
200' 0 200' 600'
SCALE: 1" = 200'

HOUSTON AIRPORT SYSTEM
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HOUSTON TEXAS

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REVISIONS

NO.	DESCRIPTION	DATE	BY
0	ISSUED FOR BID	02/24/2023	SC

FAA NON-STANDARD TAXIWAYS PROJECT

AIRFIELD ELECTRICAL PHASING PLAN – PHASE 1

PROJECT MGR:
DESIGNER: N. DERES
DRAWN BY: K. ALMOND
CHECKED BY:
SCALE: AS SHOWN
DATE: 02/24/2023

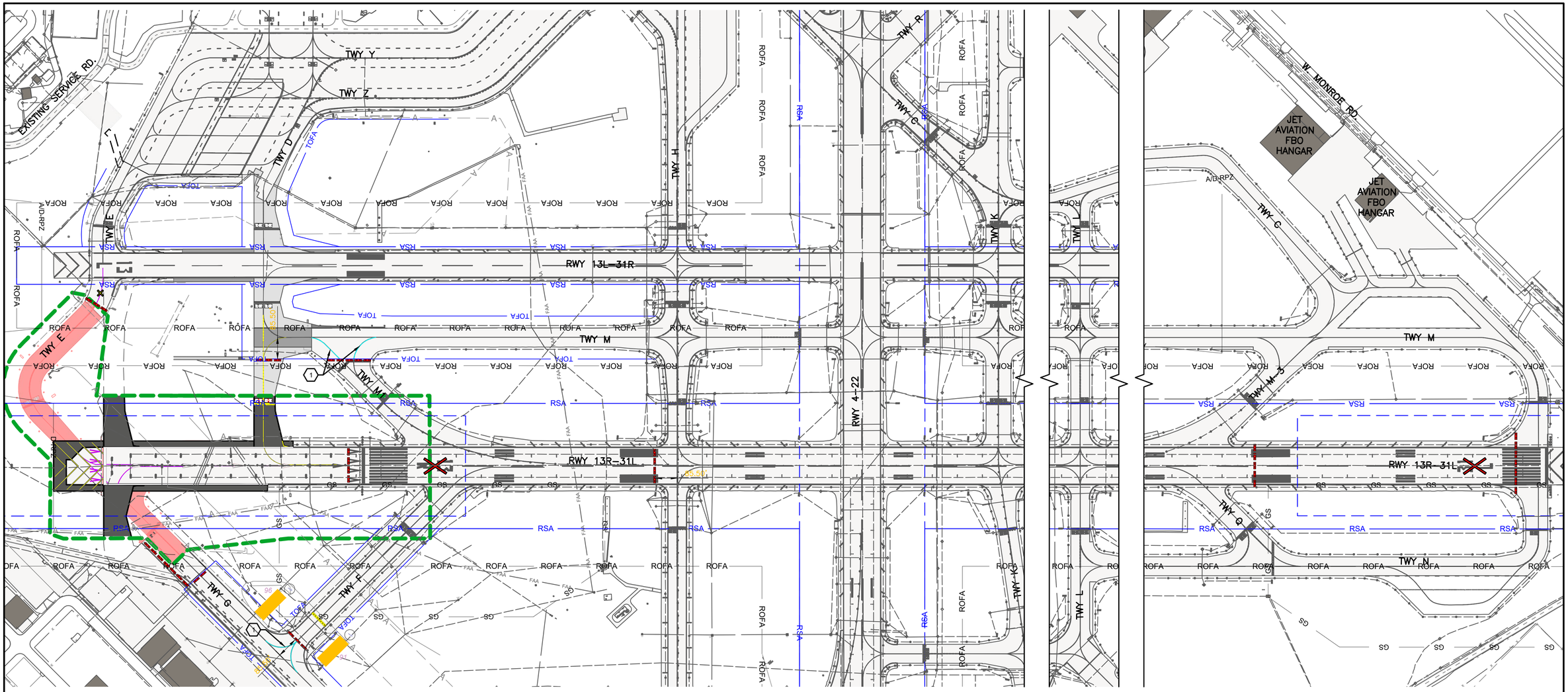
STATE OF TEXAS
JAMES A. McDONALD
119579
LICENSED PROFESSIONAL ENGINEER
2.24.23

APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO: 770
C.I.P. NO: 3-48-0110-044
H.A.S. NO: N/A
SHEET NO: E-101-P1
of

FILENAME: H22C770A-E-101-P1.DWG PLOT DATE: 2023/02/17 PLOT TIME: 2:18:03 PM



LEGEND:

- PHASE LIMITS
- PAVEMENT CONSTRUCTION
- PAVEMENT DEMOLITION
- PAVEMENT MARKING OBLITERATION
- BLACKOUT EXISTING MARKING
- RSA — RUNWAY SAFETY AREA
- ROFA — RUNWAY OBJECT FREE AREA
- TOFA — TAXIWAY OBJECT FREE AREA
- LOCALIZER CRITICAL AREA
- GS — GLIDESLOPE CRITICAL AREA
- D-RPZ — DEPARTURE RUNWAY PROTECTION ZONE
- LOW-PROFILE BARRICADES
- XXX — SIGNS REQUIRING MODIFICATION; NUMBER IN CIRCLE INDICATES NUMBER OF BLANK, SIZE 2 LUMACURVE PANELS REQUIRED. XXX INDICATES SIGN NUMBER
- TAXIWAY CLOSURE MARKER
- LIGHTED CLOSED RUNWAY MARKER SIGN

GRAPHIC SCALE
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SCALE: 1" = 200'

HOUSTON AIRPORT SYSTEM
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REVISIONS

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0	ISSUED FOR BID	02/24/2023	SC

FAA NON-STANDARD TAXIWAYS PROJECT
AIRFIELD ELECTRICAL PHASING PLAN – PHASE 2

PROJECT MGR:
DESIGNER: N. DERES
DRAWN BY: K. ALMOND
CHECKED BY:
SCALE: AS SHOWN
DATE: 02/24/2023

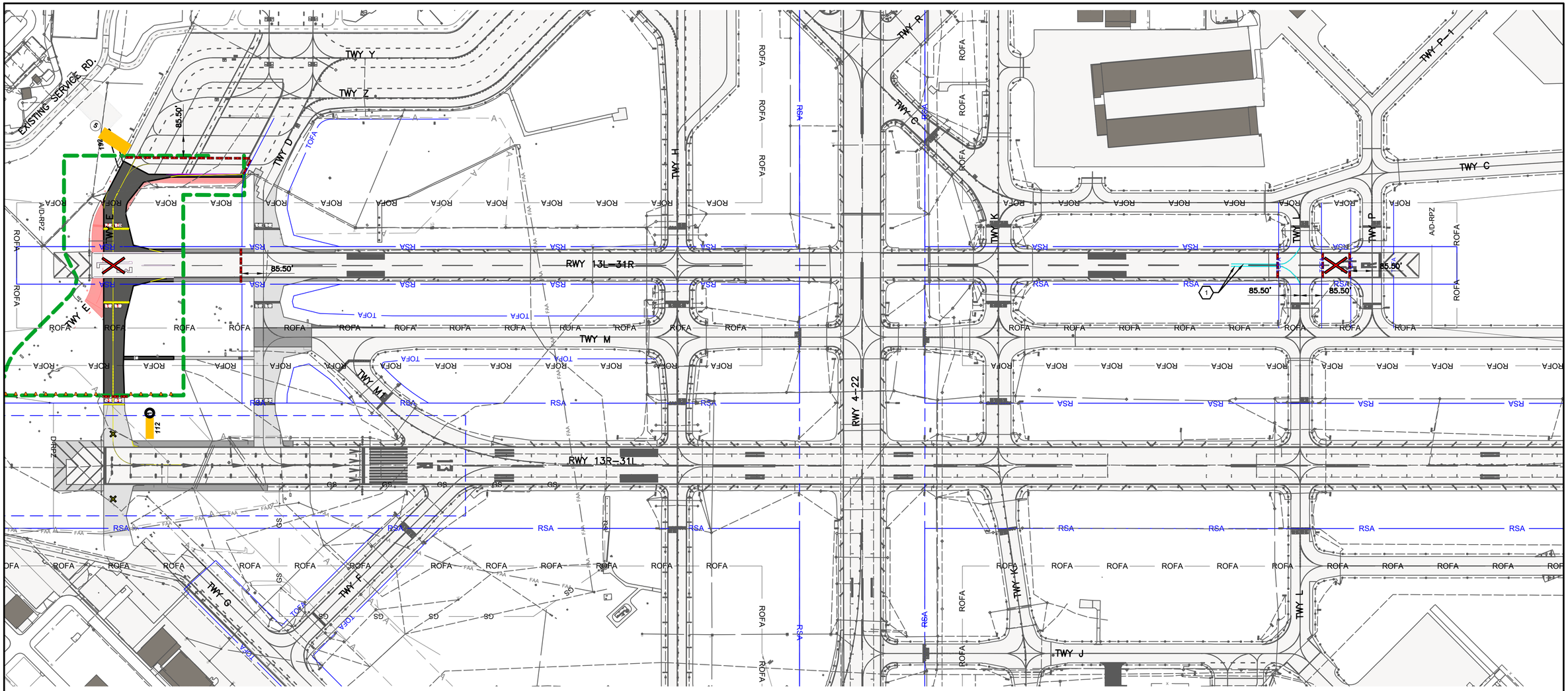
STATE OF TEXAS
JAMES A. McDONALD
119579
REGISTERED
PROFESSIONAL ENGINEER
2.24.23

APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO: 770
C.I.P. NO: 3-48-0110-044
H.A.S. NO: N/A
SHEET NO: E-201-P2
of

FILENAME: H22C770A-E-201-P2.DWG PLOT DATE: 2023/02/17 PLOT TIME: 1:38:04 PM



LEGEND:

- PHASE LIMITS
- PAVEMENT CONSTRUCTION
- PAVEMENT DEMOLITION
- PAVEMENT MARKING OBLITERATION
- BLACKOUT EXISTING MARKING
- RSA — RUNWAY SAFETY AREA
- ROFA — RUNWAY OBJECT FREE AREA
- TOFA — TAXIWAY OBJECT FREE AREA
- LOCALIZER CRITICAL AREA
- GS — GLIDESLOPE CRITICAL AREA
- D-RPZ — DEPARTURE RUNWAY PROTECTION ZONE
- LOW-PROFILE BARRICADES
- XXX — SIGNS REQUIRING MODIFICATION; NUMBER IN CIRCLE INDICATES NUMBER OF BLANK, SIZE 2 LUMACURVE PANELS REQUIRED. XXX INDICATES SIGN NUMBER
- TAXIWAY CLOSURE MARKER
- LIGHTED CLOSED RUNWAY MARKER SIGN

GRAPHIC SCALE
200' 0 200' 600'
SCALE: 1" = 200'

HOUSTON AIRPORT SYSTEM
WILLIAM P. HOBBY AIRPORT
HOUSTON TEXAS

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0	ISSUED FOR BID	02/24/2023	SC

FAA NON-STANDARD TAXIWAYS PROJECT

AIRFILED ELECTRICAL PHASING PLAN – PHASE 3

PROJECT MGR:	
DESIGNER:	N. DERES
DRAWN BY:	K. ALMOND
CHECKED BY:	
SCALE:	AS SHOWN
DATE:	02/24/2023

STATE OF TEXAS
JAMES A. McDONALD
119579
REGISTERED
PROFESSIONAL ENGINEER
2.24.23

APPROVED BY:	DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO:	770
C.I.P. NO:	3-48-0110-044
H.A.S. NO:	N/A
SHEET NO:	E-301-P3

of

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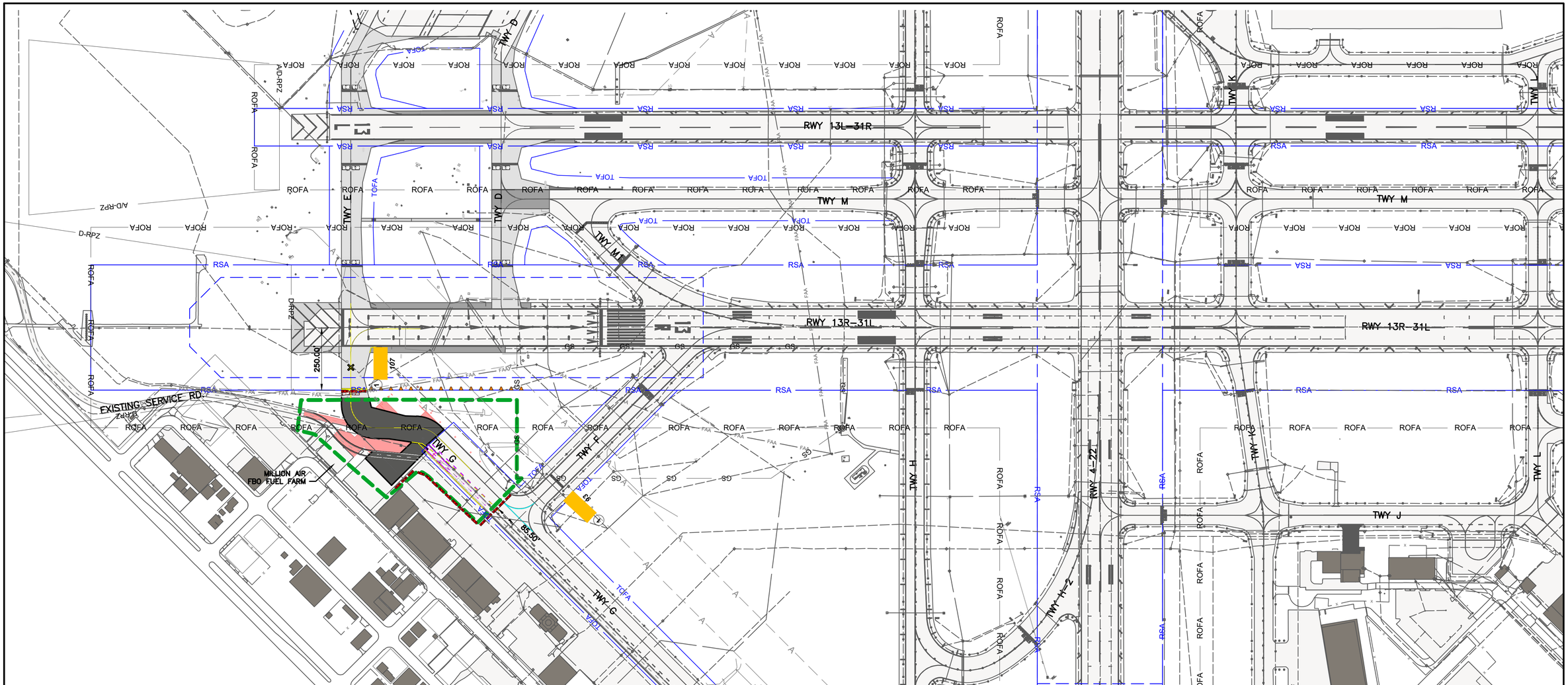

LEGEND:

- PHASE LIMITS
- PAVEMENT CONSTRUCTION
- PAVEMENT DEMOLITION
- PAVEMENT MARKING OBLITERATION
- BLACKOUT EXISTING MARKING
- RSA — RUNWAY SAFETY AREA
- ROFA — RUNWAY OBJECT FREE AREA
- TOFA — TAXIWAY OBJECT FREE AREA
- LOCALIZER CRITICAL AREA
- GS — GLIDESLOPE CRITICAL AREA
- D-RPZ — DEPARTURE RUNWAY PROTECTION ZONE
- LOW–PROFILE BARRICADES
- (X) SIGNS REQUIRING MODIFICATION; NUMBER IN CIRCLE INDICATES NUMBER OF BLANK, SIZE 2 LUMACURVE PANELS REQUIRED. XXX INDICATES SIGN NUMBER (XXX)
- TAXIWAY CLOSURE MARKER
- LIGHTED CLOSED RUNWAY MARKER SIGN

GRAPHIC SCALE
200' 0 200' 600'
SCALE: 1" = 200'

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0 1"

REVISIONS

NO.	DESCRIPTION	DATE	BY
0	ISSUED FOR BID	02/24/2023	SC

FAA NON-STANDARD TAXIWAYS PROJECT

AIRFIELD ELECTRICAL PHASING PLAN – PHASE 4

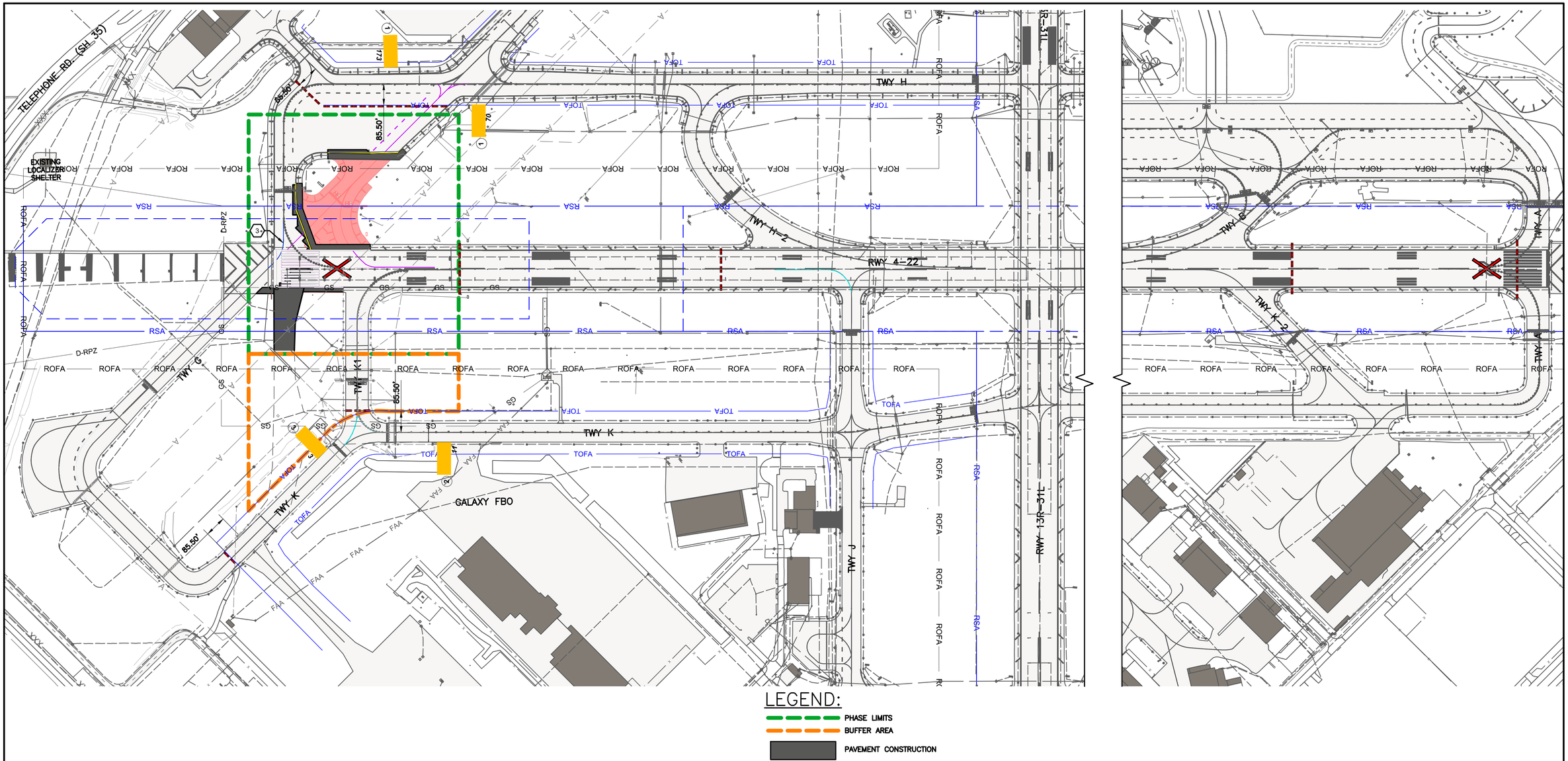
PROJECT MGR:
DESIGNER: N. DERES
DRAWN BY: K. ALMOND
CHECKED BY:
SCALE: AS SHOWN
DATE: 02/24/2023

STATE OF TEXAS
JAMES A. McDONALD
119579
LICENSED PROFESSIONAL ENGINEER
2.24.23

APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO: 770
C.I.P. NO: 3-48-0110-044
H.A.S. NO: N/A
SHEET NO: E-401-P4
of



LEGEND:

- PHASE LIMITS
- BUFFER AREA
- PAVEMENT CONSTRUCTION
- PAVEMENT DEMOLITION
- PAVEMENT MARKING OBLITERATION
- BLACKOUT EXISTING MARKING
- RSA — RUNWAY SAFETY AREA
- ROFA — RUNWAY OBJECT FREE AREA
- TOFA — TAXIWAY OBJECT FREE AREA
- LOCALIZER CRITICAL AREA
- GS — GLIDESLOPE CRITICAL AREA
- D-RPZ — DEPARTURE RUNWAY PROTECTION ZONE
- LOW-PROFILE BARRICADES
- (X) SIGNS REQUIRING MODIFICATION; NUMBER IN CIRCLE INDICATES NUMBER OF BLANK, SIZE 2 LUMACURVE PANELS REQUIRED. XXX INDICATES SIGN NUMBER (XXX)
- TAXIWAY CLOSURE MARKER
- LIGHTED CLOSED RUNWAY MARKER SIGN

GRAPHIC SCALE
200' 0 200' 600'
SCALE: 1" = 200'

HOUSTON AIRPORT SYSTEM
WILLIAM P. HOBBY AIRPORT
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REVISIONS

NO.	DESCRIPTION	DATE	BY
0	ISSUED FOR BID	02/24/2023	SC

FAA NON-STANDARD TAXIWAYS PROJECT
AIRFIELD ELECTRICAL PHASING PLAN – PHASE 5

PROJECT MGR:
DESIGNER: N. DERES
DRAWN BY: K. ALMOND
CHECKED BY:
SCALE: AS SHOWN
DATE: 02/24/2023

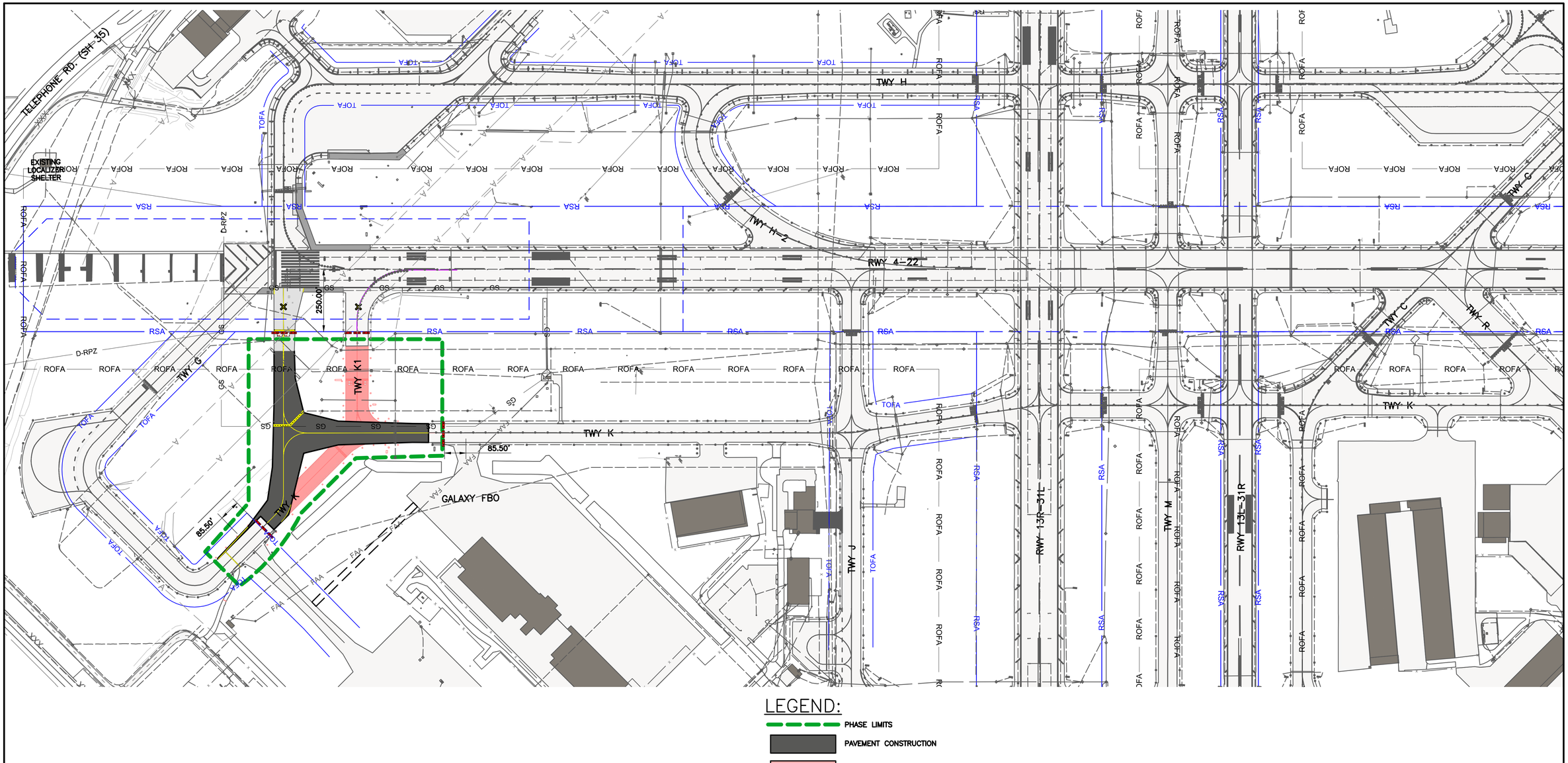
STATE OF TEXAS
JAMES A. McDONALD
119579
LICENSED PROFESSIONAL ENGINEER
2.24.23

APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO: 770
C.I.P. NO: 3-48-0110-044
H.A.S. NO: N/A
SHEET NO: E-501-P5
of

FILENAME: H22C770A-E-501-P5.DWG PLOT DATE: 2023/02/17 PLOT TIME: 2:05:50 PM



LEGEND:

- PHASE LIMITS
- PAVEMENT CONSTRUCTION
- PAVEMENT DEMOLITION
- PAVEMENT MARKING OBLITERATION
- BLACKOUT EXISTING MARKING
- RSA — RUNWAY SAFETY AREA
- ROFA — RUNWAY OBJECT FREE AREA
- TOFA — TAXIWAY OBJECT FREE AREA
- LOCALIZER CRITICAL AREA
- GS — GLIDESLOPE CRITICAL AREA
- D-RPZ — DEPARTURE RUNWAY PROTECTION ZONE
- LOW-PROFILE BARRICADES
- SIGNS REQUIRING MODIFICATION; NUMBER IN CIRCLE INDICATES NUMBER OF BLANK, SIZE 2 LUMACURVE PANELS REQUIRED. XXX INDICATES SIGN NUMBER (XXX)
- TAXIWAY CLOSURE MARKER
- LIGHTED CLOSED RUNWAY MARKER SIGN

GRAPHIC SCALE
200' 0 200' 600'
SCALE: 1" = 200'

HOUSTON AIRPORT SYSTEM
WILLIAM P. HOBBY AIRPORT
HOUSTON TEXAS

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TEXAS P.E. FIRM F-2966

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

REVISIONS

NO.	DESCRIPTION	DATE	BY
0	ISSUED FOR BID	02/24/2023	SC

FAA NON-STANDARD TAXIWAYS PROJECT
AIRFIELD ELECTRICAL PHASING PLAN – PHASE 6A

PROJECT MGR:	
DESIGNER:	N. DERES
DRAWN BY:	K. ALMOND
CHECKED BY:	
SCALE:	AS SHOWN
DATE:	02/24/2023

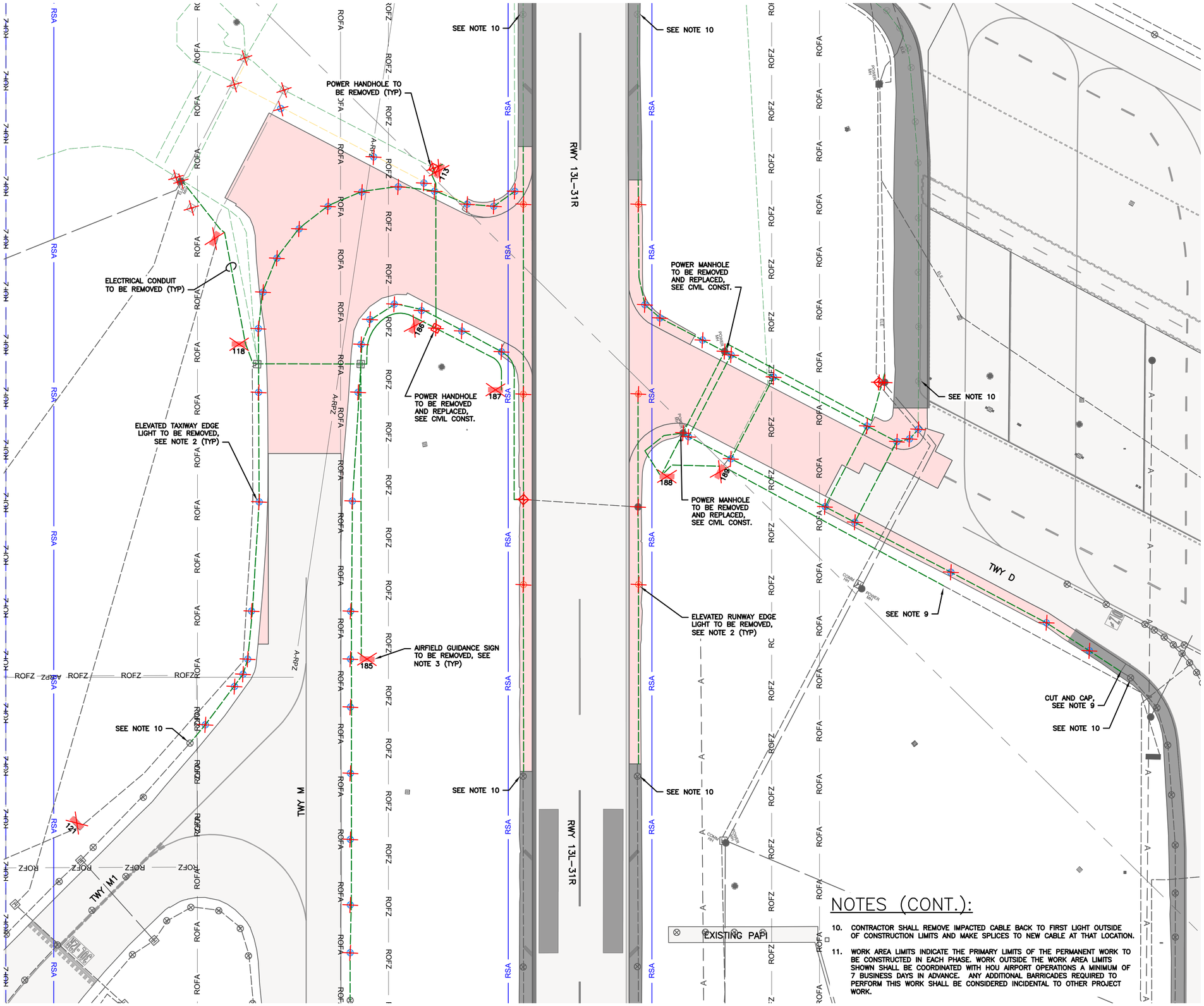
STATE OF TEXAS
JAMES A. McDONALD
119579
LICENSED PROFESSIONAL ENGINEER
2.24.23

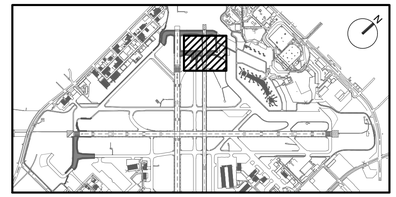
APPROVED BY:	DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO:	770
C.I.P. NO:	3-48-0110-044
H.A.S. NO:	N/A
SHEET NO:	E-601-P6A

of





KEY MAP

NTS

GENERAL NOTES

1. PRIOR TO THE START OF DEMOLITION, THE DEMOLITION CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR TO DETERMINE A METHOD TO PROTECT THE EXISTING COUNTERPOISE TO REMAIN AND TO MAKE THE COUNTERPOISE AVAILABLE FOR CONNECTION AFTER DEMOLITION IS COMPLETE.
2. PRIOR TO DEMOLITION, THE CONTRACTOR SHALL MEASURE COUNTERPOISE RESISTANCE BETWEEN ADJACENT CANS AT THE LIMITS OF DEMOLITION USING AN APPROVED METER. THE DATA SHALL BE RECORDED AND RESULTS SUBMITTED TO THE RPR. WHERE CONTINUITY IS NOT FOUND, THE RPR SHALL BE NOTIFIED.
3. PRIOR TO DEMOLITION, THE CONTRACTOR SHALL MEGGER ALL EXISTING CIRCUITS AND PROVIDE READINGS IN WRITING TO THE RPR.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF EXISTING FIXTURES TO BE REMOVED AND FIXTURES TO REMAIN. ANY FIXTURES TO REMAIN THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL HAVE ENOUGH FIXTURES ON SITE SO THE SYSTEM CAN BE FULLY OPERATIONAL AT THE TIME OF SUBSTANTIAL COMPLETION.
5. WHERE FIXTURES ARE REMOVED AND FOUNDATIONS ARE TO REMAIN, THE CONTRACTOR SHALL INSTALL A 3/4" PIECE OF PLYWOOD SECURED WITH SIX BOLTS TO PREVENT DEBRIS FROM COLLECTING IN THE CAN PRIOR TO A NEW FIXTURE OR STEEL PLATE BEING INSTALLED PERMANENTLY.
6. REMOVAL OF BASE CANS SHALL INCLUDE REMOVAL OF CONCRETE ANCHOR, CONDUIT, AND COUNTERPOISE WITHIN THE CONCRETE ANCHOR. CUT AND CAP CONDUIT AS REQUIRED. METHOD OF REMOVAL SHALL BE DETERMINED BY CONTRACTOR. WHERE REQUIRED BY THE RPR, CONDUIT AND/OR COUNTERPOISE SHALL BE CONNECTED AND EXTENDED AS NEEDED TO ENSURE FUNCTIONALITY OF THE SYSTEM.
7. AFTER DEMOLITION IS COMPLETE, CONTRACTOR SHALL RETEST THE REMAINING COUNTERPOISE. ANY COUNTERPOISE FOUND NOT TO BE CONTINUOUS OR LOWER THAN 25 OHMS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL VERIFY COUNTERPOISE AND CONDUIT TO REMAIN HAS NOT BEEN DAMAGED ANYWHERE CONSTRUCTION TAKES PLACE. THE DATA SHALL BE RECORDED AND THE RESULTS SUBMITTED TO THE RPR.
8. CONTRACTOR SHALL TURN OVER REMOVED LIGHTS, SIGNS, AND FIXTURES TO HAS MAINTENANCE FOR THEIR REVIEW. IF DIRECTED BY MAINTENANCE, ITEMS SHALL BE DISPOSED OF OFFSITE BY THE CONTRACTOR IN A TIMELY MANNER. THE AIRPORT RESERVES THE RIGHT TO RETAIN ANY AND ALL SIGNS AND LIGHT FIXTURES REMOVED AS A PART OF THIS PROJECT.

NOTES:

1. CONTRACTOR TO CONFIRM CIRCUIT ROUTING OF IMPACTED CIRCUITS PRIOR TO DEMOLITION PAID UNDER L–120. PROVIDE TEMPORARY CABLE JUMPERS AS REQUIRED TO MAINTAIN CIRCUIT INTEGRITY. SEE PHASING DRAWINGS FOR INFORMATION.
2. ALL DEMOLITION OF RUNWAY, TAXIWAY AND GUIDANCE SIGNS SHALL INCLUDE REMOVAL OF LIGHT BASES, CABLE AND CONDUIT. CONTRACTOR SHALL COLLECT ALL ELEVATED AND IN–PAVEMENT LIGHTS, RGL CONTROL UNITS AND SIGN PANELS WHEN REMOVED, HAS SHALL SELECT EQUIPMENT TO BE TURNED OVER TO THE AIRPORT FOR STORAGE. CONTRACTOR TO DISPOSE OF ALL REMOVED EQUIPMENT NOT TURNED OVER TO THE AIRPORT FOR STORAGE.
3. CONTRACTOR TO REMOVE EXISTING AIRFIELD GUIDANCE SIGN AND RELATED EQUIPMENT. DEMOLISH SIGN FOUNDATION AND BACKFILL TO FINAL GRADE. IF THE SIGN BEING REMOVED IS USED AS A PASS THROUGH FOR THE CIRCUIT, THE CONTRACTOR IS TO INSTALL A NEW L–867 JUNCTION CAN IN ITS PLACE AND REPLACE THE CIRCUIT BACK TO THE NEAREST JUNCTION POINT ON EITHER SIDE OF THE JUNCTION BOX.
4. ABANDONED L–868 LIGHT BASES IN PAVEMENT TO REMAIN SHALL BE PLATED BY THE CONTRACTOR WITH 3/4"STEEL COVER.
5. CONTRACTOR SHALL CAP ABANDONED IN PLACE DUCTBANK AT EDGE OF DEMOLISHED PAVEMENT AND INSTALL PULL STRING AND DUCT MARKER.
6. L–867 BASE CANS THAT NEED TO REMAIN IN ORDER TO PRESERVE THE CIRCUIT SHALL BE PLATED BY THE CONTRACTOR WITH A 3/8" STEEL COVER.
7. COORDINATE WITH FAA TO TURN OFF AFFECTED EQUIPMENT WHEN WORKING WITHIN ILS CRITICAL AREAS.
8. SEE SHEET E–001 FOR AIRFIELD ELECTRICAL DEMOLITION LEGEND.
9. CUT EXISTING CONDUIT; AND CONNECT TO NEW, OR INSTALL PULL STRING FOR FUTURE USE.

NOTES (CONT.):

10. CONTRACTOR SHALL REMOVE IMPACTED CABLE BACK TO FIRST LIGHT OUTSIDE OF CONSTRUCTION LIMITS AND MAKE SPLICES TO NEW CABLE AT THAT LOCATION.
11. WORK AREA LIMITS INDICATE THE PRIMARY LIMITS OF THE PERMANENT WORK TO BE CONSTRUCTED IN EACH PHASE. WORK OUTSIDE THE WORK AREA LIMITS SHOWN SHALL BE COORDINATED WITH HOU AIRPORT OPERATIONS A MINIMUM OF 7 BUSINESS DAYS IN ADVANCE. ANY ADDITIONAL BARRICADES REQUIRED TO PERFORM THIS WORK SHALL BE CONSIDERED INCIDENTAL TO OTHER PROJECT WORK.

GRAPHIC SCALE

50' 0 50' 150'

SCALE: 1" = 50'

HOUSTON AIRPORT SYSTEM
WILLIAM P. HOBBY AIRPORT
HOUSTON TEXAS

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WWW.JACOBS.COM
TEXAS P.E. FIRM F-2966

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

REVISIONS

NO.	DESCRIPTION	DATE	BY
0	ISSUED FOR BID	02/24/2023	SC

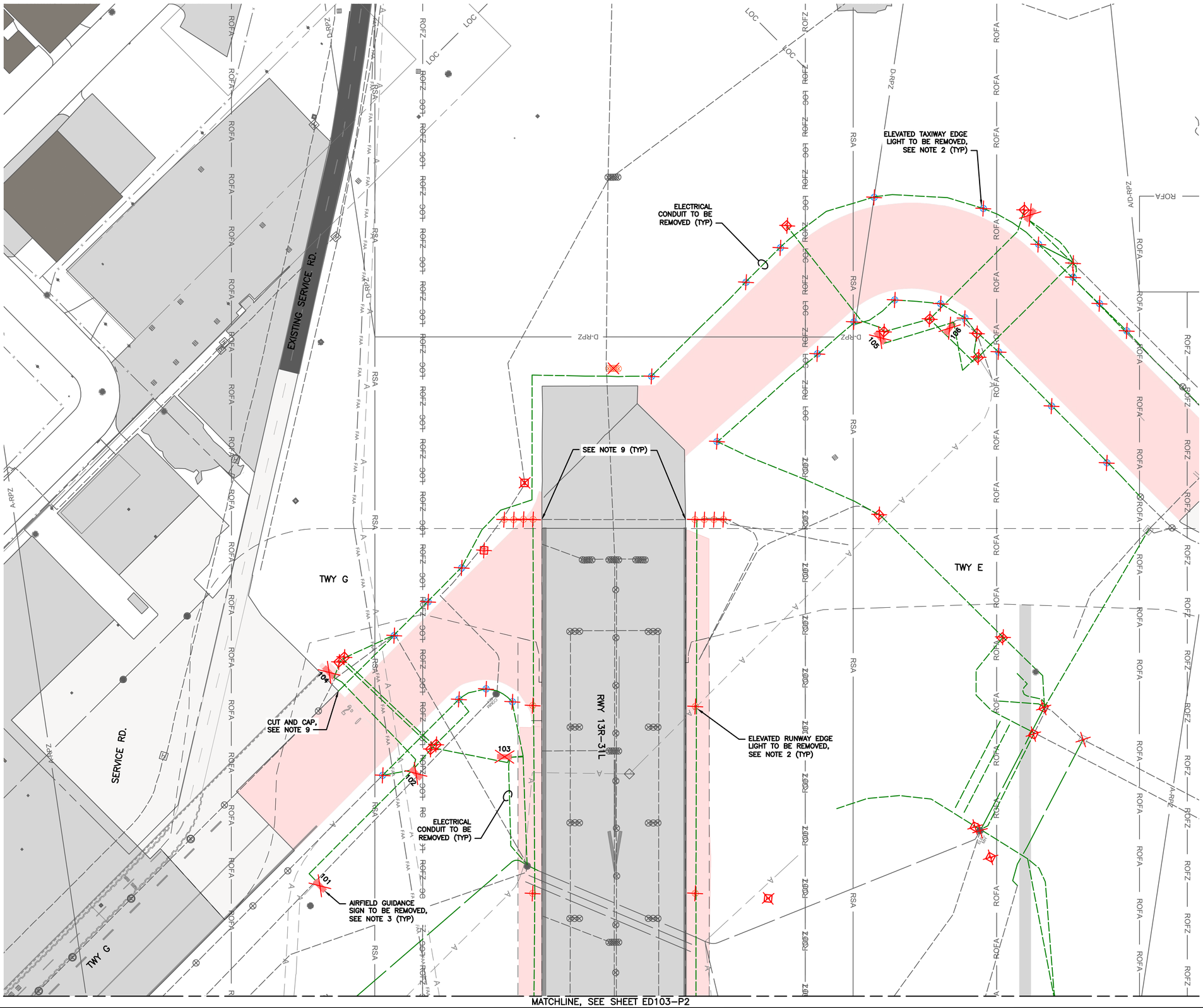
FAA NON-STANDARD TAXIWAYS PROJECT

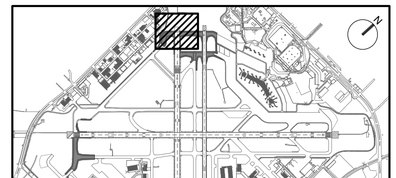
AIRFIELD ELECTRICAL DEMOLITION PLAN – PHASE 1

PROJECT MGR:	
DESIGNER:	N. DERES
DRAWN BY:	K. ALMOND
CHECKED BY:	
SCALE:	AS SHOWN
DATE:	02/24/2023

STATE OF TEXAS
JAMES A. McDONALD
119579
LICENSED PROFESSIONAL ENGINEER
2.24.23

APPROVED BY:	DATE:
DIRECTOR HOUSTON AIRPORT SYSTEM	
PROJECT NO:	770
C.I.P. NO:	3-48-0110-044
H.A.S. NO:	N/A
SHEET NO:	ED101–P1
	of





KEY MAP
NTS

ELECTRICAL DEMOLITION NOTES:

1. CONTRACTOR TO CONFIRM CIRCUIT ROUTING PRIOR TO DEMOLITION. PROVIDE TEMPORARY CABLE JUMPERS AS REQUIRED TO MAINTAIN CIRCUIT INTEGRITY.
2. ALL DEMOLITION OF RUNWAY, TAXIWAY AND GUIDANCE SIGNS SHALL INCLUDE REMOVAL OF LIGHT BASES, CABLE AND CONDUIT. CONTRACTOR SHALL COLLECT ALL ELEVATED AND IN–PAVEMENT LIGHTS, RGL CONTROL UNITS AND SIGN PANELS WHEN REMOVED, HAS SHALL SELECT EQUIPMENT TO BE TURNED OVER TO THE AIRPORT FOR STORAGE. CONTRACTOR TO DISPOSE OF ALL REMOVED EQUIPMENT NOT TURNED OVER TO THE AIRPORT FOR STORAGE.
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7. COORDINATE WITH FAA TO TURN OFF AFFECTED EQUIPMENT WHEN WORKING WITHIN ILS CRITICAL AREAS.
8. SEE SHEET EL001 FOR AIRFIELD ELECTRICAL DEMOLITION LEGEND.
9. CUT EXISTING CONDUIT; AND CONNECT TO NEW, OR INSTALL PULL STRING FOR FUTURE USE.

GRAPHIC SCALE
50' 0 50' 150'
SCALE: 1" = 50'

HOUSTON AIRPORT SYSTEM
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HOUSTON TEXAS

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REVISIONS

NO.	DESCRIPTION	DATE	BY
0	ISSUED FOR BID	02/24/2023	SC

FAA NON-STANDARD TAXIWAYS PROJECT

AIRFIELD ELECTRICAL DEMOLITION PLAN – PHASE 2

PROJECT MGR:
DESIGNER: N. DERES
DRAWN BY: K. ALMOND
CHECKED BY:
SCALE: AS SHOWN
DATE: 02/24/2023

STATE OF TEXAS
JAMES A. McDONALD
119579
REGISTERED PROFESSIONAL ENGINEER
2.24.23

APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO: 770
C.I.P. NO: 3-48-0110-044
H.A.S. NO: N/A
SHEET NO: ED102–P2
of

MATCHLINE, SEE SHEET EL102-P2

AIRFIELD GUIDANCE SIGN TO BE REMOVED, SEE NOTE 3 (TYP)

ELEVATED RUNWAY EDGE LIGHT TO BE REMOVED, SEE NOTE 2 (TYP)

CUT AND CAP, SEE NOTE 9

PROTECT EXISTING RUNWAY 13R HOME RUN STRUCTURE.

ELECTRICAL CONDUIT TO BE REMOVED (TYP)

CUT AND CAP, SEE NOTE 9.

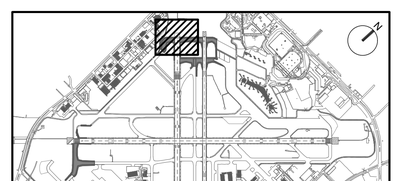
RWY 13R-31L

TWY D

TWY F

TWY M

TWY M1



KEY MAP
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GRAPHIC SCALE
50' 0 50' 150'
SCALE: 1" = 50'

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0 1"

REVISIONS

NO.	DESCRIPTION	DATE	BY
0	ISSUED FOR BID	02/24/2023	SC

FAA NON-STANDARD TAXIWAYS PROJECT

AIRFIELD ELECTRICAL DEMOLITION PLAN – PHASE 2

PROJECT MGR:	
DESIGNER:	N. DERES
DRAWN BY:	K. ALMOND
CHECKED BY:	
SCALE:	AS SHOWN
DATE:	02/24/2023

STATE OF TEXAS
JAMES A. McDONALD
119579
REGISTERED
PROFESSIONAL ENGINEER
2.24.23

APPROVED BY:	DATE:
DIRECTOR HOUSTON AIRPORT SYSTEM	
PROJECT NO:	770
C.I.P. NO:	3-48-0110-044
H.A.S. NO:	N/A
SHEET NO:	ED103-P2
	of

CIRCUITS:
13R–31L TDZ1(2)
13R–31L TDZ2(2)
13R–31L CENTERLINE(2)
13R–31L EDGE(2)
TW M/M1/M3 EDGE(2)
TW G/F EDGE(2)
TW D/E EDGE(2)
TW M1/M3 CENTERLINE(2)
TW H CENTERLINE(2)
TW H CENTERLINE SMGCS(2)
TW H EDGE(2)
TW Z CENTERLINE1(2)
TW Z CENTERLINE2(2)
TW Y/Z CENTERLINE SMGCS(2)
TW Y CENTERLINE(2)
RGL NW(2)
RGL NE(2)
SIGNS NW(2)
SIGNS NE(2)

TO NORTH AIRFIELD LIGHTING VAULT

EXISTING SERVICE RD.

TWY E

RWY 31R–13L

TWY D

ELECTRICAL CONDUIT TO BE REMOVED (TYP)

CUT AND CAP, SEE NOTE 9.

ELECTRICAL CONDUIT TO BE REMOVED (TYP)

ELEVATED RUNWAY EDGE LIGHT TO BE REMOVED, SEE NOTE 2 (TYP)

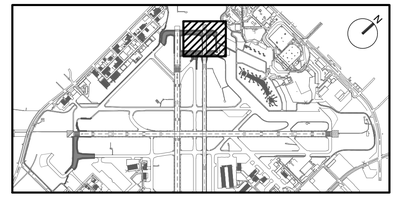
AIRFIELD GUIDANCE SIGN TO BE REMOVED, SEE NOTE 3 (TYP)

1621
1622
1623

CUT AND CAP, SEE NOTE 9

CUT AND CAP, SEE NOTE 9.

ELEVATED TAXIWAY EDGE LIGHT TO BE REMOVED, SEE NOTE 2 (TYP)



KEY MAP
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9. CUT EXISTING CONDUIT; AND CONNECT TO NEW, OR INSTALL PULL STRING FOR FUTURE USE.

GRAPHIC SCALE
50' 0 50' 150'
SCALE: 1" = 50'

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REVISIONS

NO.	DESCRIPTION	DATE	BY
0	ISSUED FOR BID	02/24/2023	SC

FAA NON-STANDARD TAXIWAYS PROJECT

AIRFIELD ELECTRICAL DEMOLITION PLAN – PHASE 3

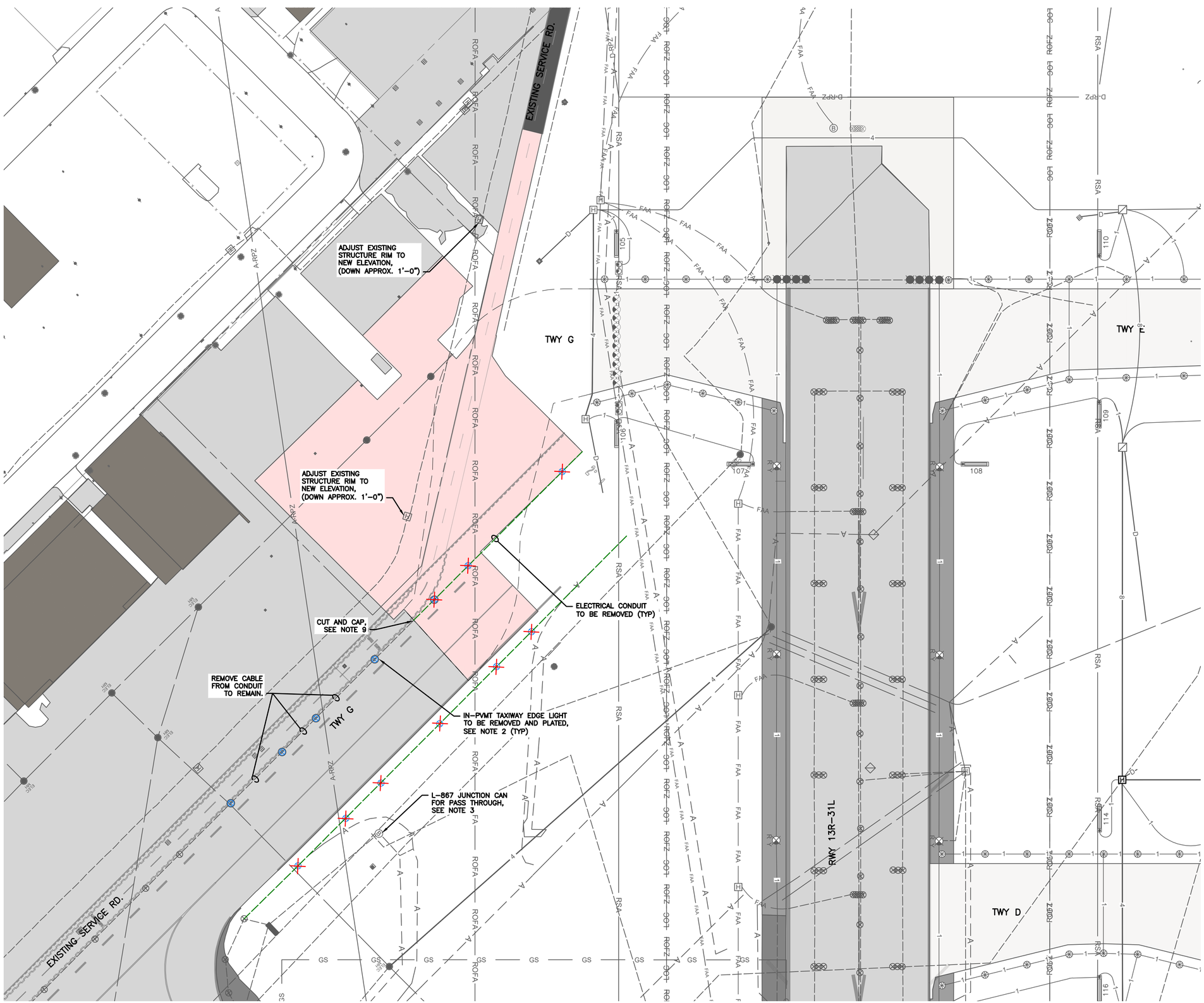
PROJECT MGR:
DESIGNER: N. DERES
DRAWN BY: K. ALMOND
CHECKED BY:
SCALE: AS SHOWN
DATE: 02/24/2023

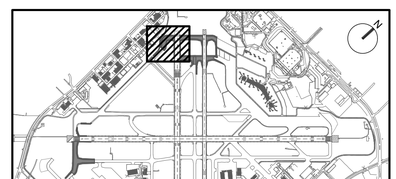
STATE OF TEXAS
JAMES A. McDONALD
119579
LICENSED PROFESSIONAL ENGINEER
2.24.23

APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO: 770
C.I.P. NO: 3-48-0110-044
H.A.S. NO: N/A
SHEET NO: ED104–P3
of





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REVISIONS

NO.	DESCRIPTION	DATE	BY
0	ISSUED FOR BID	02/24/2023	SC

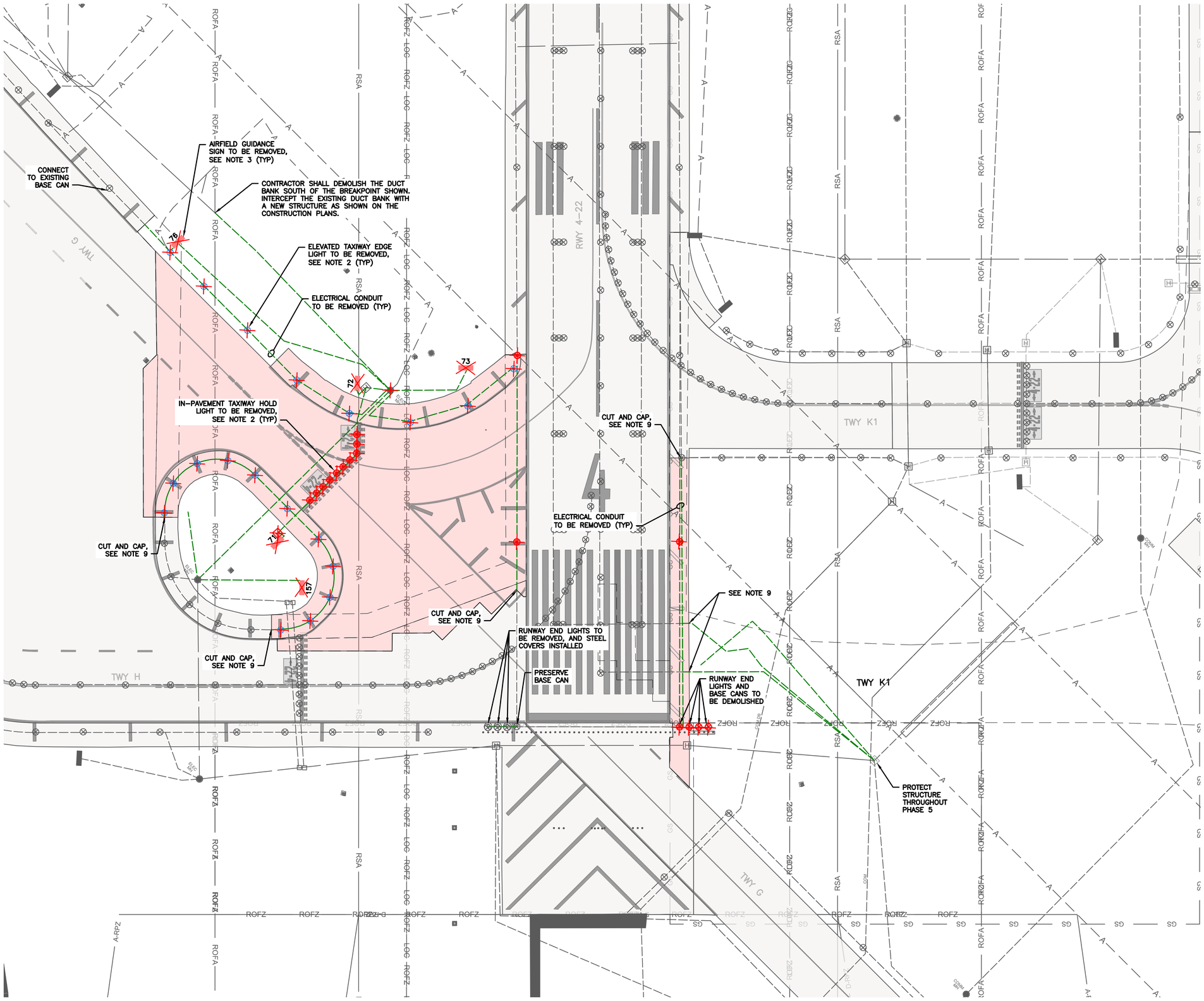
FAA NON-STANDARD TAXIWAYS PROJECT

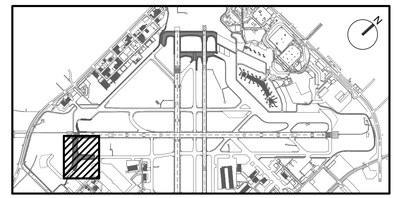
AIRFIELD ELECTRICAL DEMOLITION PLAN – PHASE 4

PROJECT MGR:	
DESIGNER:	N. DERES
DRAWN BY:	K. ALMOND
CHECKED BY:	
SCALE:	AS SHOWN
DATE:	02/24/2023

STATE OF TEXAS
JAMES A. McDONALD
119579
LICENSED PROFESSIONAL ENGINEER
2.24.23

APPROVED BY:	DATE:
DIRECTOR HOUSTON AIRPORT SYSTEM	
PROJECT NO:	770
C.I.P. NO:	3-48-0110-044
H.A.S. NO:	N/A
SHEET NO:	ED105-P4
	of





KEY MAP
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REVISIONS

NO.	DESCRIPTION	DATE	BY
0	ISSUED FOR BID	02/24/2023	SC

FAA NON-STANDARD TAXIWAYS PROJECT

AIRFIELD ELECTRICAL DEMOLITION PLAN – PHASE 5

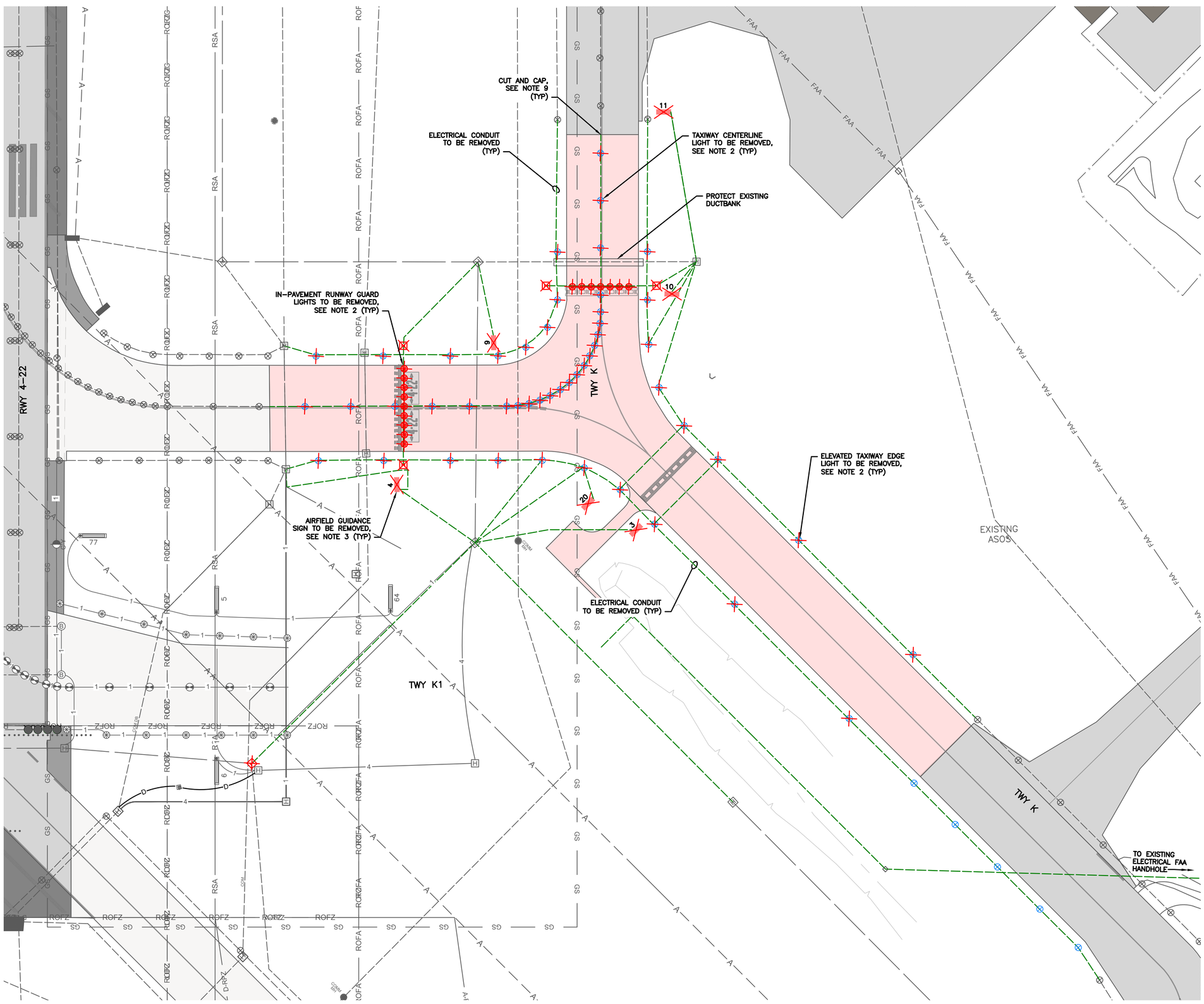
PROJECT MGR:	
DESIGNER:	N. DERES
DRAWN BY:	K. ALMOND
CHECKED BY:	
SCALE:	AS SHOWN
DATE:	02/24/2023

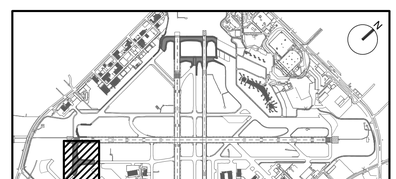
STATE OF TEXAS
JAMES A. McDONALD
119579
REGISTERED
PROFESSIONAL ENGINEER
2.24.23

APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO: 770
C.I.P. NO: 3-48-0110-044
H.A.S. NO: N/A
SHEET NO: ED106-P5
of





KEY MAP
NTS

NOTES:

1. CONTRACTOR TO CONFIRM CIRCUIT ROUTING PRIOR TO DEMOLITION. PROVIDE TEMPORARY CABLE JUMPERS AS REQUIRED TO MAINTAIN CIRCUIT INTEGRITY.
2. ALL DEMOLITION OF RUNWAY, TAXIWAY AND GUIDANCE SIGNS SHALL INCLUDE REMOVAL OF LIGHT BASES, CABLE AND CONDUIT. CONTRACTOR SHALL COLLECT ALL ELEVATED AND IN-PAVEMENT LIGHTS, RGL CONTROL UNITS AND SIGN PANELS WHEN REMOVED, HAS SHALL SELECT EQUIPMENT TO BE TURNED OVER TO THE AIRPORT FOR STORAGE. CONTRACTOR TO DISPOSE OF ALL REMOVED EQUIPMENT NOT TURNED OVER TO THE AIRPORT FOR STORAGE.
3. CONTRACTOR TO REMOVE EXISTING AIRFIELD GUIDANCE SIGN AND RELATED EQUIPMENT. DEMOLISH SIGN FOUNDATION AND BACKFILL TO EXISTING OR PROPOSED GRADE. IF THE SIGN BEING REMOVED IS USED AS A PASS THROUGH FOR THE CIRCUIT, THE CONTRACTOR IS TO INSTALL A NEW L-867 JUNCTION CAN IN ITS PLACE AND REPLACE THE CIRCUIT BACK TO THE NEAREST JUNCTION POINT ON EITHER SIDE OF THE JUNCTION BOX.
4. ABANDONED L-868 LIGHT BASES IN PAVEMENT TO REMAIN SHALL BE PLATED BY THE CONTRACTOR WITH 3/4"STEEL COVER.
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7. COORDINATE WITH FAA TO TURN OFF AFFECTED EQUIPMENT WHEN WORKING WITHIN ILS CRITICAL AREAS.
8. SEE SHEET E-001 FOR AIRFIELD ELECTRICAL DEMOLITION LEGEND.
9. CUT EXISTING CONDUIT; AND CONNECT TO NEW, OR INSTALL PULL STRING FOR FUTURE USE.

GRAPHIC SCALE
50' 0 50' 150'
SCALE: 1" = 50'

HOUSTON AIRPORT SYSTEM
WILLIAM P. HOBBY AIRPORT
HOUSTON TEXAS

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JACOBS ENGINEERING GROUP INC.
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WWW.JACOBS.COM
TEXAS P.E. FIRM F-2966

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

REVISIONS

NO.	DESCRIPTION	DATE	BY
0	ISSUED FOR BID	02/24/2023	SC

FAA NON-STANDARD TAXIWAYS PROJECT

AIRFIELD ELECTRICAL DEMOLITION PLAN – PHASE 6A

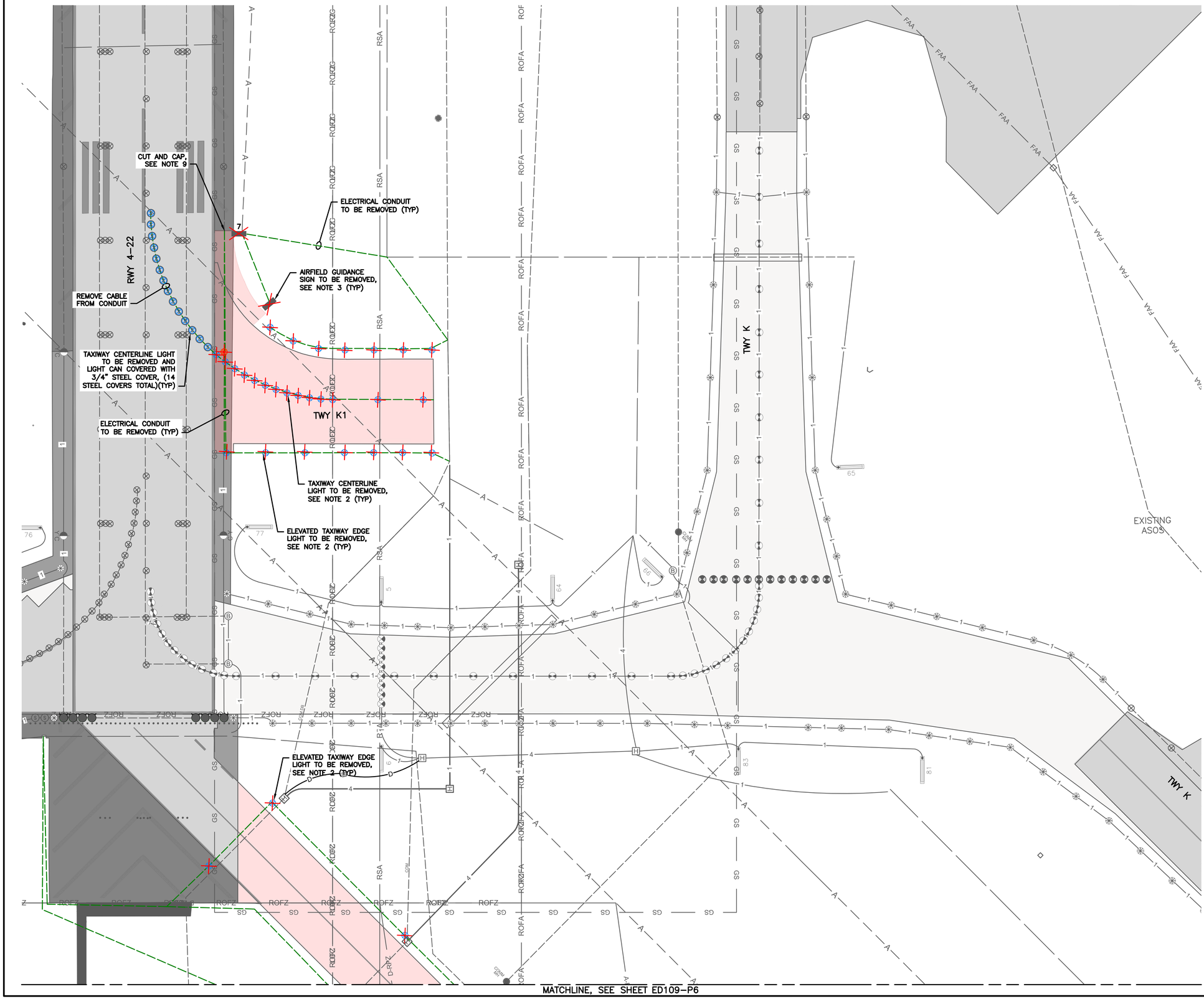
PROJECT MGR:
DESIGNER: N. DERES
DRAWN BY: K. ALMOND
CHECKED BY:
SCALE: AS SHOWN
DATE: 02/24/2023

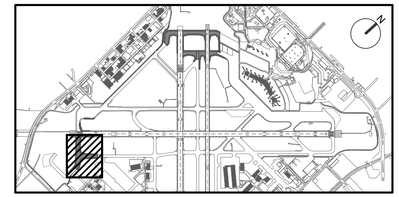
STATE OF TEXAS
JAMES A. McDONALD
119579
REGISTERED
PROFESSIONAL ENGINEER
2.24.23

APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO: 770
C.I.P. NO: 3-48-0110-044
H.A.S. NO: N/A
SHEET NO: ED107-P6
of





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REVISIONS

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FAA NON-STANDARD TAXIWAYS PROJECT

AIRFIELD ELECTRICAL DEMOLITION PLAN – PHASE 6B

PROJECT MGR:
DESIGNER: N. DERES
DRAWN BY: K. ALMOND
CHECKED BY:
SCALE: AS SHOWN
DATE: 02/24/2023

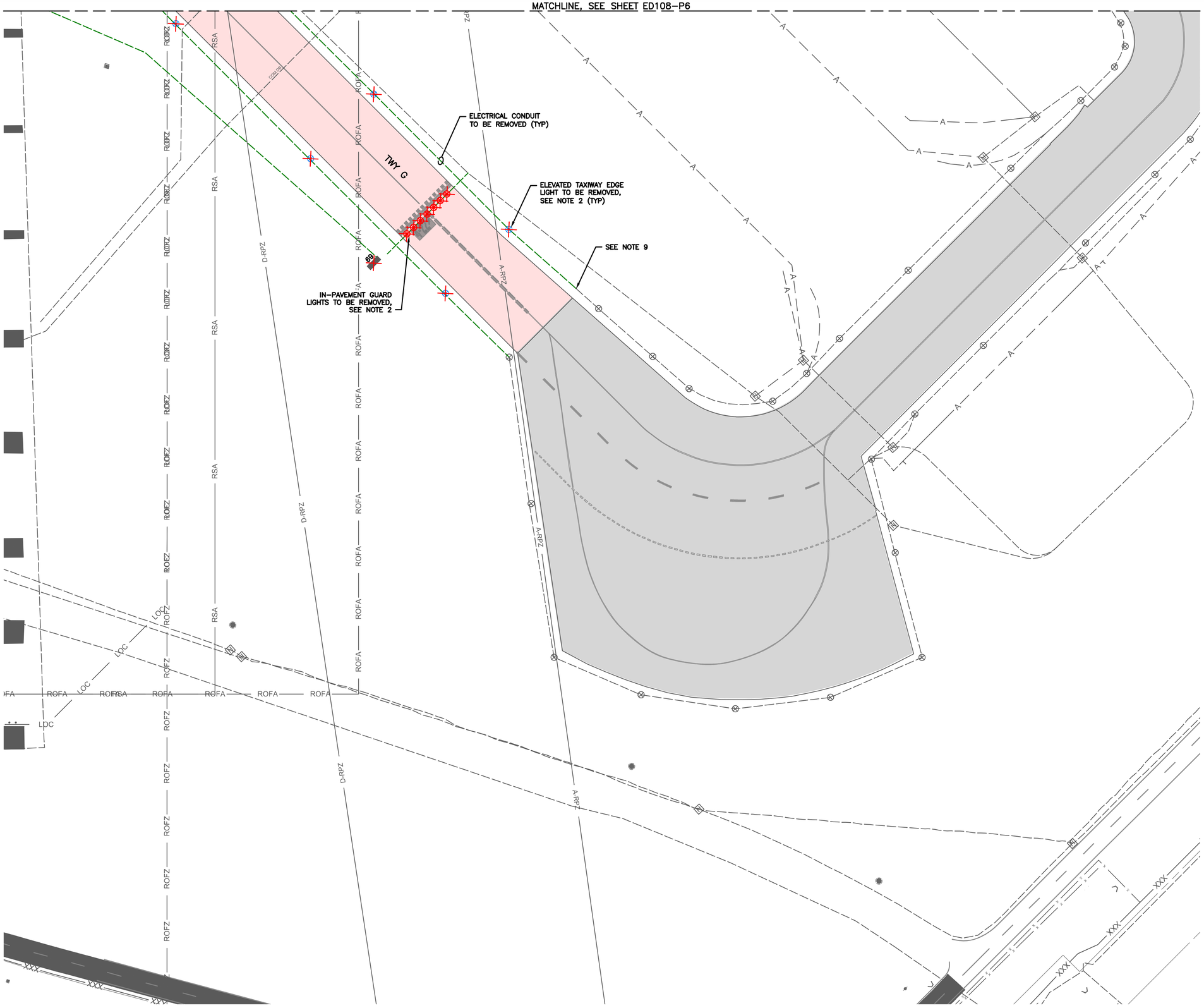
STATE OF TEXAS
JAMES A. McDONALD
119579
2.24.23

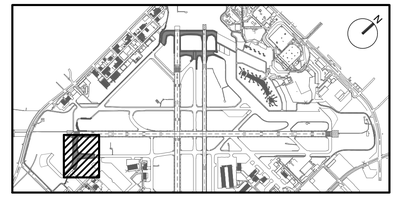
APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO: 770
C.I.P. NO: 3–48–0110–044
H.A.S. NO: N/A
SHEET NO: ED108–P6
of

MATCHLINE, SEE SHEET ED108-P6





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REVISIONS

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0	ISSUED FOR BID	02/24/2023	SC

FAA NON-STANDARD TAXIWAYS PROJECT

AIRFIELD ELECTRICAL DEMOLITION PLAN – PHASE 6B

PROJECT MGR:	
DESIGNER:	N. DERES
DRAWN BY:	K. ALMOND
CHECKED BY:	
SCALE:	AS SHOWN
DATE:	02/24/2023

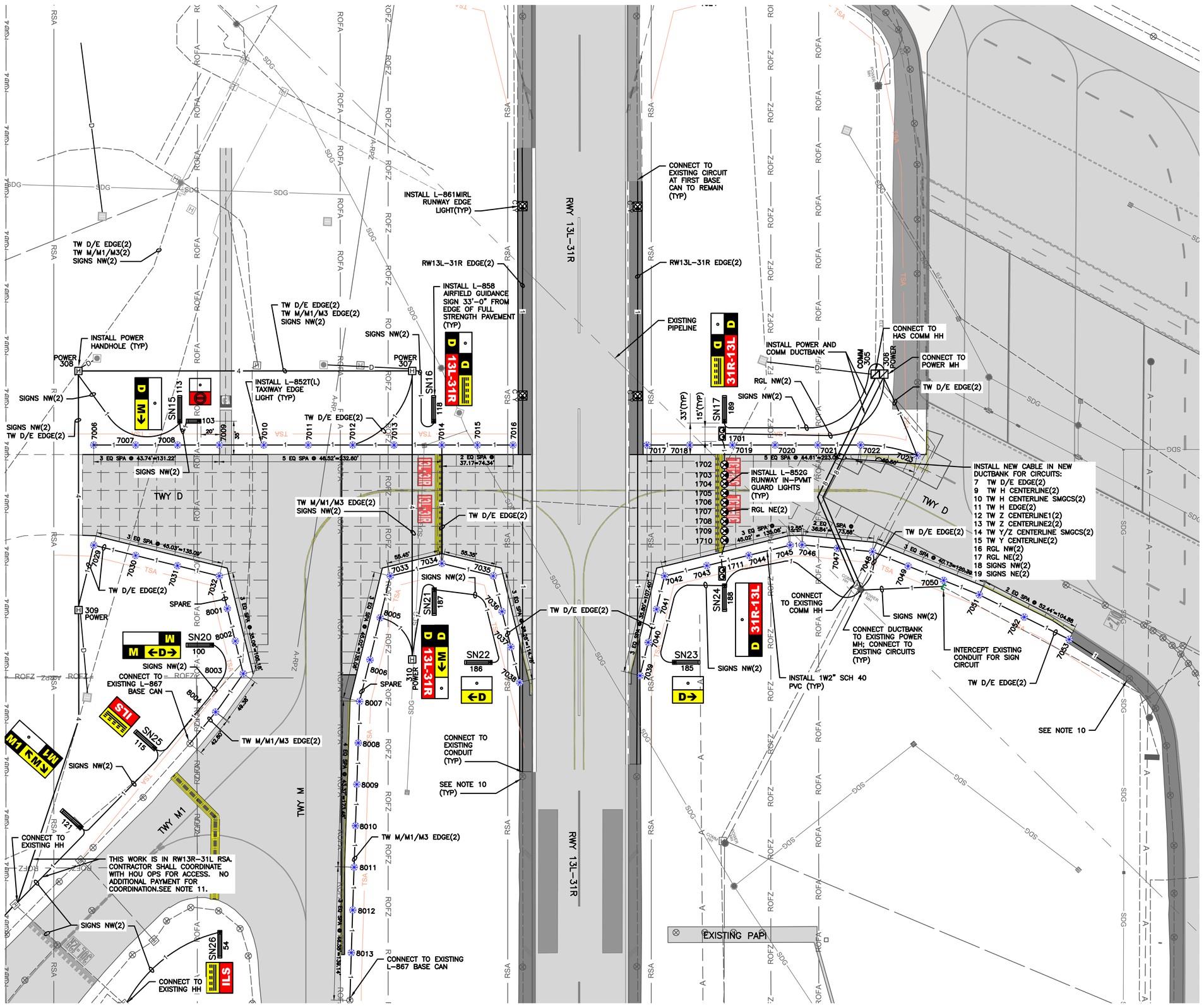
STATE OF TEXAS
JAMES A. McDONALD
119579
LICENSED PROFESSIONAL ENGINEER
2.24.23

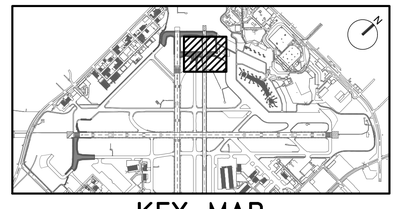
APPROVED BY:	DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO:	770
C.I.P. NO:	3-48-0110-044
H.A.S. NO:	N/A
SHEET NO:	ED109-P6

of





KEY MAP
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2. FOR REPANELING SIGN TABLE, SEE SHEET EL501.
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4. IF A SIGN BEING REMOVED IN DEMOLITION IS PART OF A 'PASS THROUGH' FOR THE CIRCUIT, THE CONTRACTOR SHALL INSTALL A NEW L–867 JUNCTION CAN IN ITS PLACE AND REPLACE THE CIRCUIT BACK TO THE NEAREST JUNCTION POINT ON EITHER SIDE OF THE JUNCTION CAN.
5. EXTEND EXISTING CONDUIT INTO NEW L–867B BASE.
6. CONNECT TO EXISTING L–867 BASE CAN.
7. CONTRACTOR SHALL ENLIST MANUFACTURERS OF EXISTING AIRFIELD LIGHTING CONTROL AND MONITORING SYSTEM (ALCMS) TO PERFORM GRAPHICAL CHANGES AS REQUIRED. SEE SPECIFICATIONS FOR DETAILS.
8. ALL NEW POWER AND COMMUNICATION MANHOLES AND HANDHOLES SHALL BE DRAINED BY A 4" MINIMUM PVC PIPE TO THE NEAREST STORM WATER CATCH BASIN. DRAIN PIPES SHALL BE EQUIPPED WITH A BACKFLOW FLAP DEVICE AS SHOWN IN THE DETAILS.
9. CONTRACTOR SHALL COVER ANY PART OF A SIGN LEADING TO A CLOSED AREA IN A METHOD APPROVED BY HOU OPERATIONS.
10. CONTRACTOR SHALL CONNECT CIRCUIT IN CLOSEST EXISTING BASECAN TO REMAIN (TYP).
11. WORK AREA LIMITS INDICATE THE PRIMARY LIMITS OF THE PERMANENT WORK TO BE CONSTRUCTED IN EACH PHASE. ADDITIONAL PERMANENT AND TEMPORARY WORK OUTSIDE OF THE WORK AREA LIMITS IS REQUIRED IN SOME CASES/PHASES. WORK OUTSIDE THE WORK AREA LIMITS SHOWN SHALL BE COORDINATED WITH HOU AIRPORT OPERATIONS A MINIMUM OF 7 BUSINESS DAYS IN ADVANCE. ANY ADDITIONAL BARRICADES REQUIRED TO PERFORM THIS WORK SHALL BE CONSIDERED INCIDENTAL TO OTHER PROJECT WORK.

GRAPHIC SCALE
50' 0 50' 150'
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HOUSTON AIRPORT SYSTEM
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REVISIONS

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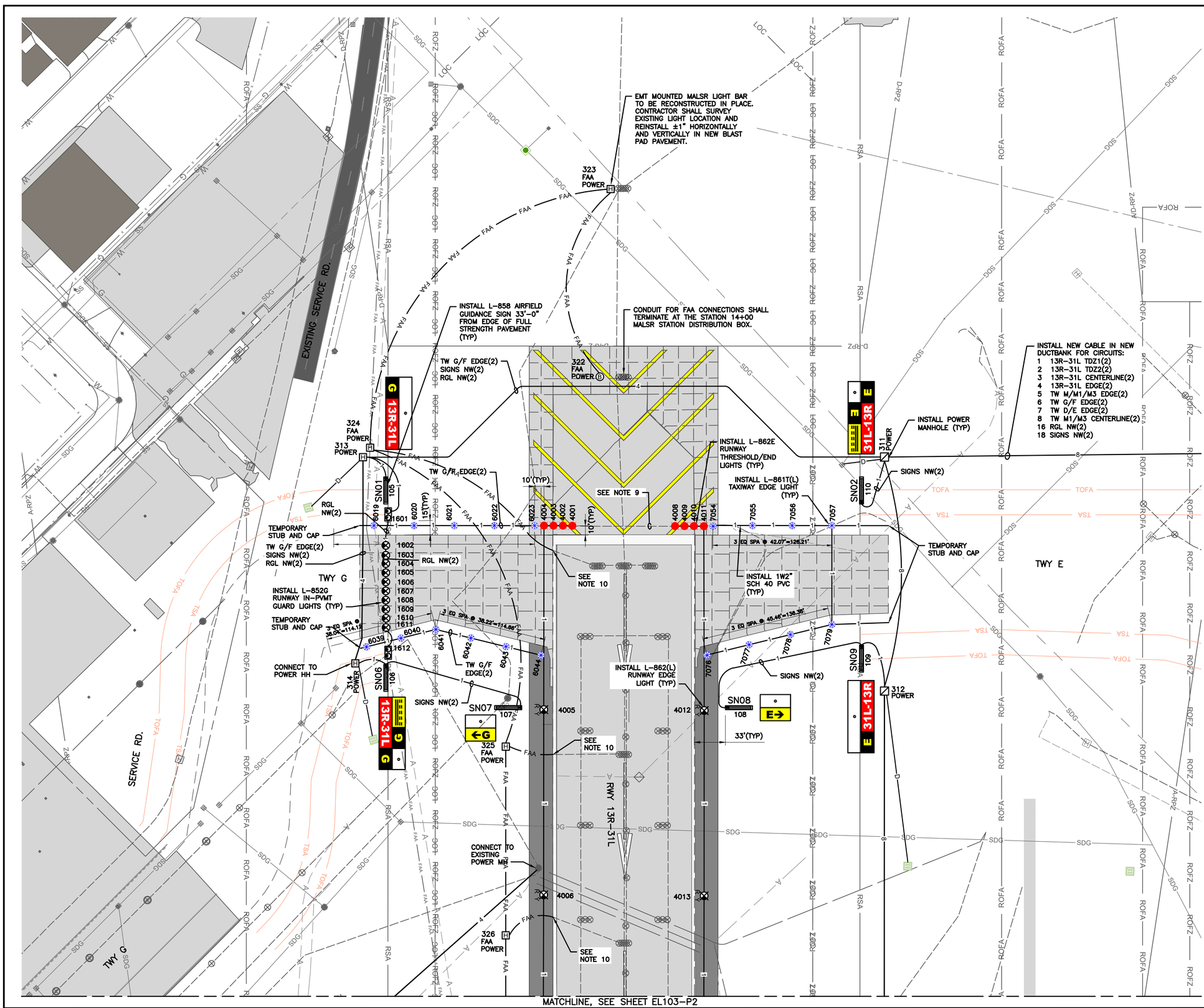
0	ISSUED FOR BID	02/24/2023	SC

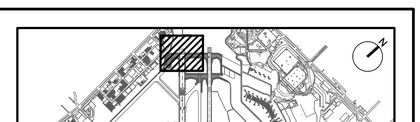
FAA NON-STANDARD TAXIWAYS PROJECT
AIRFIELD ELECTRICAL LIGHTING & SIGNAGE PLAN – PHASE 1

PROJECT MGR:	
DESIGNER:	N. DERES
DRAWN BY:	K. ALMOND
CHECKED BY:	
SCALE:	AS SHOWN
DATE:	02/24/2023

STATE OF TEXAS
JAMES A. McDONALD
119579
LICENSED PROFESSIONAL ENGINEER
2.24.23

APPROVED BY:	DATE:
DIRECTOR HOUSTON AIRPORT SYSTEM	
PROJECT NO:	770
C.I.P. NO:	3–48–0110–044
H.A.S. NO:	N/A
SHEET NO:	EL101–P1
	of





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8. CONTRACTOR SHALL CONNECT CIRCUIT IN CLOSEST EXISTING BASECAN TO REMAIN (TYP).
9. INSTALL RW13R-31L EDGE(2) IN EXISTING CONDUIT BETWEEN LIGHTS 4003 AND 4010. LIGHTS 4001, 4002, 4003, 4008, 4009 AND 4010 SHALL BE INSTALLED ON NEW BASECANS CORED TO INTERCEPT EXISTING CONDUIT.
10. CONTRACTOR SHALL FIELD LOCATE EXISTING CONDUIT EXITING THE FULL STRENGTH PAVEMENT FOR APPROACH LIGHTING SYSTEM CONDUIT TIE-IN. LOCATION MAY VARY FROM WHAT IS SHOWN ON THE PLANS, CONTRACTOR WILL BE PAID FOR LENGTH INSTALLED.

GRAPHIC SCALE
50' 0 50' 150'
SCALE: 1" = 50'

HOUSTON AIRPORT SYSTEM
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FAA NON-STANDARD TAXIWAYS PROJECT
AIRFIELD ELECTRICAL LIGHTING & SIGNAGE PLAN – PHASE 2

PROJECT MGR:	
DESIGNER:	N. DERES
DRAWN BY:	K. ALMOND
CHECKED BY:	
SCALE:	AS SHOWN
DATE:	02/24/2023

STATE OF TEXAS
JAMES A. McDONALD
119579
LICENSED PROFESSIONAL ENGINEER
2.24.23

APPROVED BY:	DATE:
DIRECTOR HOUSTON AIRPORT SYSTEM	
PROJECT NO:	770
C.I.P. NO:	3-48-0110-044
H.A.S. NO:	N/A
SHEET NO:	EL102-P2
of	

INSTALL L-867 BASE CAN TO RETAIN CIRCUIT, SEE SHEET EL501 (TYP)

POWER

CONNECT TO EXISTING POWER MH

FOR ILS SIGN LOCATION, SEE DETAIL 1, THIS SHEET

INSTALL L-862(L) RUNWAY EDGE LIGHT (TYP)

INSTALL L-861T(L) TAXIWAY EDGE LIGHT (TYP)

TW D/E EDGE(2)

4007

4014

7001

7002

7003

7004

7005

33' (TYP)

SN14

114

31L-13R

3 EQ SPA @ 44.29'=132.87'

2 EQ SPA @ 35.74' =71.48'

CONNECT TO EXISTING POWER MANHOLE

SIGNS NW(2)

SN15

113

103

TOFA

TSA

ROFA

ROFZ

327 FAA POWER

SEE NOTE 10, SHEET EL102-P2

TW D/E EDGE(2)

CONNECT TO EXISTING AIRFIELD LIGHT CAN AND CABLE

INSTALL 1W2" SCH 40 PVC (TYP)

2 EQ SPA @ 35.74' =71.48'

3 EQ SPA @ 45.99'=136.77'

7024

7025

7026

7027

7028

SN19

116

TW D/E EDGE(2)

CONNECT TO EXISTING POWER MANHOLE

RWY 13R-31L

CONNECT TO EXISTING CIRCUIT (TYP)

SIGNS NW(2)

SN18

119

328 FAA POWER

INSTALL L-858 AIRFIELD GUIDANCE SIGN 33'-0" FROM EDGE OF FULL STRENGTH PAVEMENT (TYP)

TWY F

TWY M

TWY M1

329 FAA POWER

SN26

54

CONNECT TO EXISTING L-867 BASE CAN

RSA

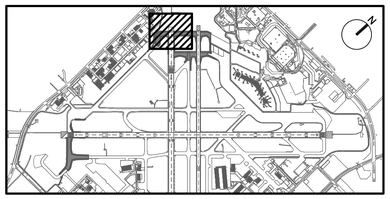
ROFZ

LOC

SDG

FAA

TO WIND CONE



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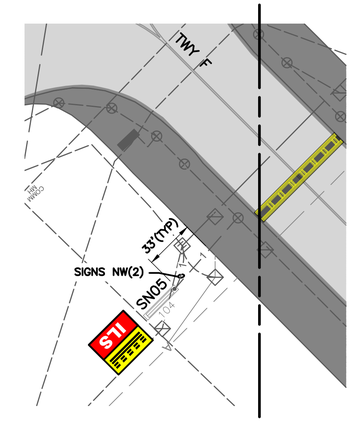

1 ILS SIGN LOCATION
NTS

GRAPHIC SCALE
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FAA NON-STANDARD TAXIWAYS PROJECT
AIRFIELD ELECTRICAL LIGHTING & SIGNAGE PLAN – PHASE 2

PROJECT MGR:	
DESIGNER:	N. DERES
DRAWN BY:	K. ALMOND
CHECKED BY:	
SCALE:	AS SHOWN
DATE:	02/24/2023

STATE OF TEXAS
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DIRECTOR HOUSTON AIRPORT SYSTEM	
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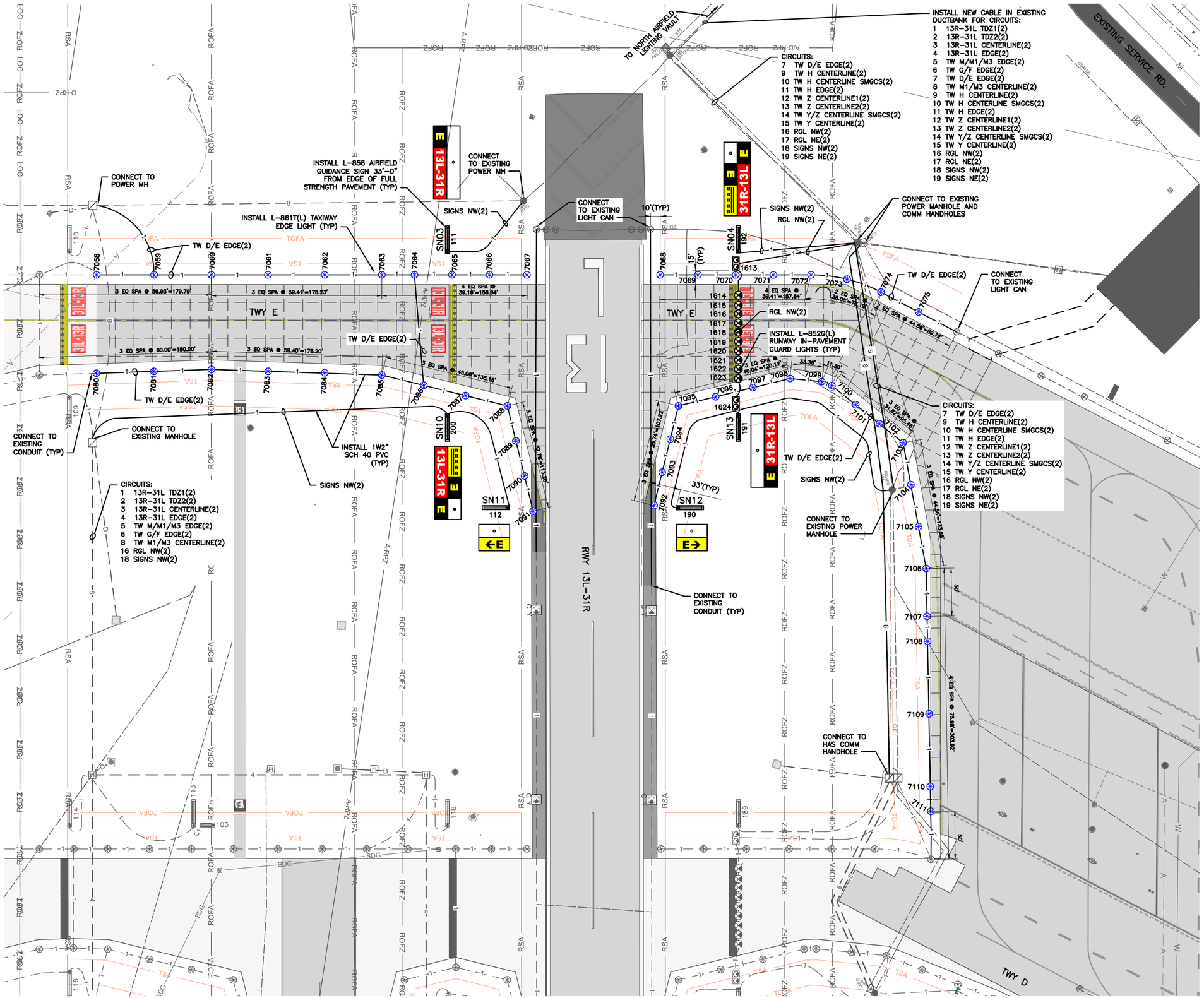

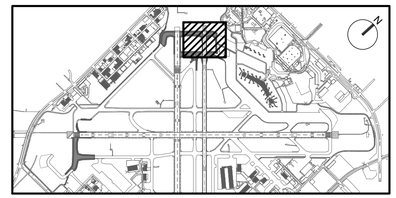

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8. CONTRACTOR SHALL CONNECT CIRCUIT IN CLOSEST EXISTING BASECAN TO REMAIN (TYP).

GRAPHIC SCALE
50' 0 50' 150'
SCALE: 1" = 50'

HOUSTON AIRPORT SYSTEM
WILLIAM P. HOBBY AIRPORT
HOUSTON TEXAS

Jacobs
JACOBS ENGINEERING GROUP INC.
5995 ROGERDALE ROAD
HOUSTON, TEXAS 77072
+1-832-351-6000
WWW.JACOBS.COM
TEXAS P.E. FIRM F-2966

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

REVISIONS

NO.	DESCRIPTION	DATE	BY
0	ISSUED FOR BID	02/24/2023	SC

FAA NON-STANDARD TAXIWAYS PROJECT

AIRFIELD ELECTRICAL LIGHTING & SIGNAGE PLAN – PHASE 3

PROJECT MGR:
DESIGNER: N. DERES
DRAWN BY: K. ALMOND
CHECKED BY:
SCALE: AS SHOWN
DATE: 02/24/2023

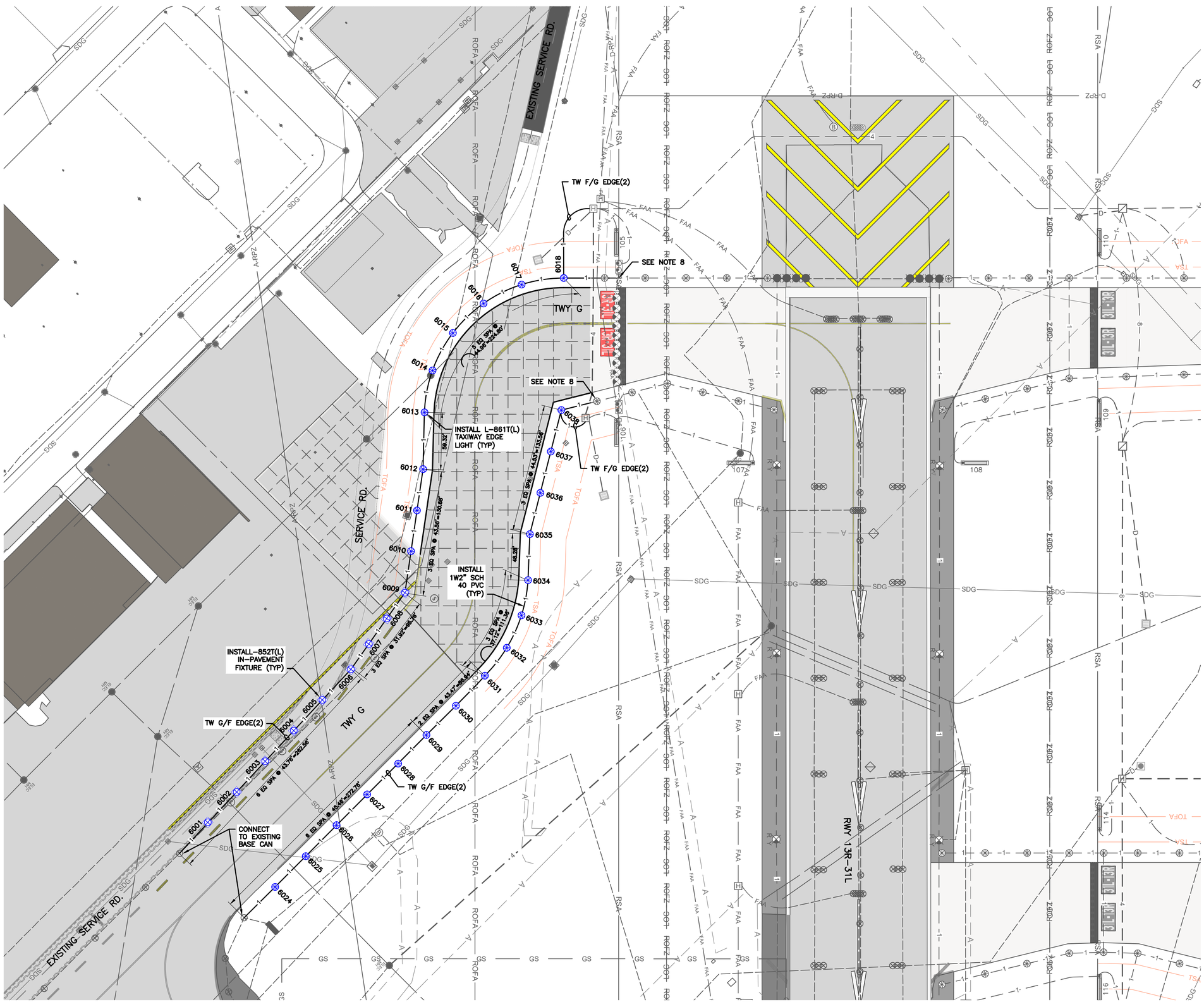
STATE OF TEXAS
JAMES A. McDONALD
119579
LICENSED PROFESSIONAL ENGINEER
2.24.23

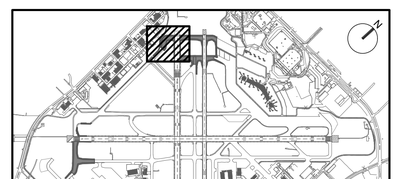
APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO: 770
C.I.P. NO: 3-48-0110-044
H.A.S. NO: N/A
SHEET NO: EL104-P3
of

FILENAME: H22C770A-EL104-P3.DWG PLOT DATE: 2023/02/17 PLOT TIME: 11:33:31 AM





KEY MAP
NTS

NOTES:

1. FOR AIRFIELD ELECTRICAL LEGEND, SEE SHEET E-001.
2. FOR REPANELING SIGN TABLE, SEE SHEET EL501.
3. CONTRACTOR TO INSTALL CURVED FACE, LED AIRFIELD SIGNS, SIZE 2. NEW SIGNS SHALL HAVE POWER LEG WHERE CABLES ENTER SIGN, EXTERNAL ON/OFF SWITCH AND SIGN NUMBER AFFIXED TO SHORT END OF SIGN FACING TAXIWAY.
4. IF A SIGN BEING REMOVED IN DEMOLITION IS PART OF A 'PASS THROUGH' FOR THE CIRCUIT, THE CONTRACTOR SHALL INSTALL A NEW L-867 JUNCTION CAN IN ITS PLACE AND REPLACE THE CIRCUIT BACK TO THE NEAREST JUNCTION POINT ON EITHER SIDE OF THE JUNCTION CAN.
5. EXTEND EXISTING CONDUIT INTO NEW L-867B BASE.
6. CONNECT TO EXISTING L-867 BASE CAN.
7. CONTRACTOR SHALL ENLIST MANUFACTURERS OF EXISTING AIRFIELD LIGHTING CONTROL AND MONITORING SYSTEM (ALCMS) TO PERFORM GRAPHICAL CHANGES AS REQUIRED. SEE SPECIFICATIONS FOR DETAILS.
8. CONTRACTOR SHALL CONNECT CIRCUIT IN CLOSEST EXISTING BASECAN TO REMAIN (TYP).

GRAPHIC SCALE
50' 0 50' 150'
SCALE: 1" = 50'

HOUSTON AIRPORT SYSTEM
WILLIAM P. HOBBY AIRPORT
HOUSTON TEXAS

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TEXAS P.E. FIRM F-2966

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0 1"

REVISIONS

NO.	DESCRIPTION	DATE	BY
0	ISSUED FOR BID	02/24/2023	SC

FAA NON-STANDARD TAXIWAYS PROJECT

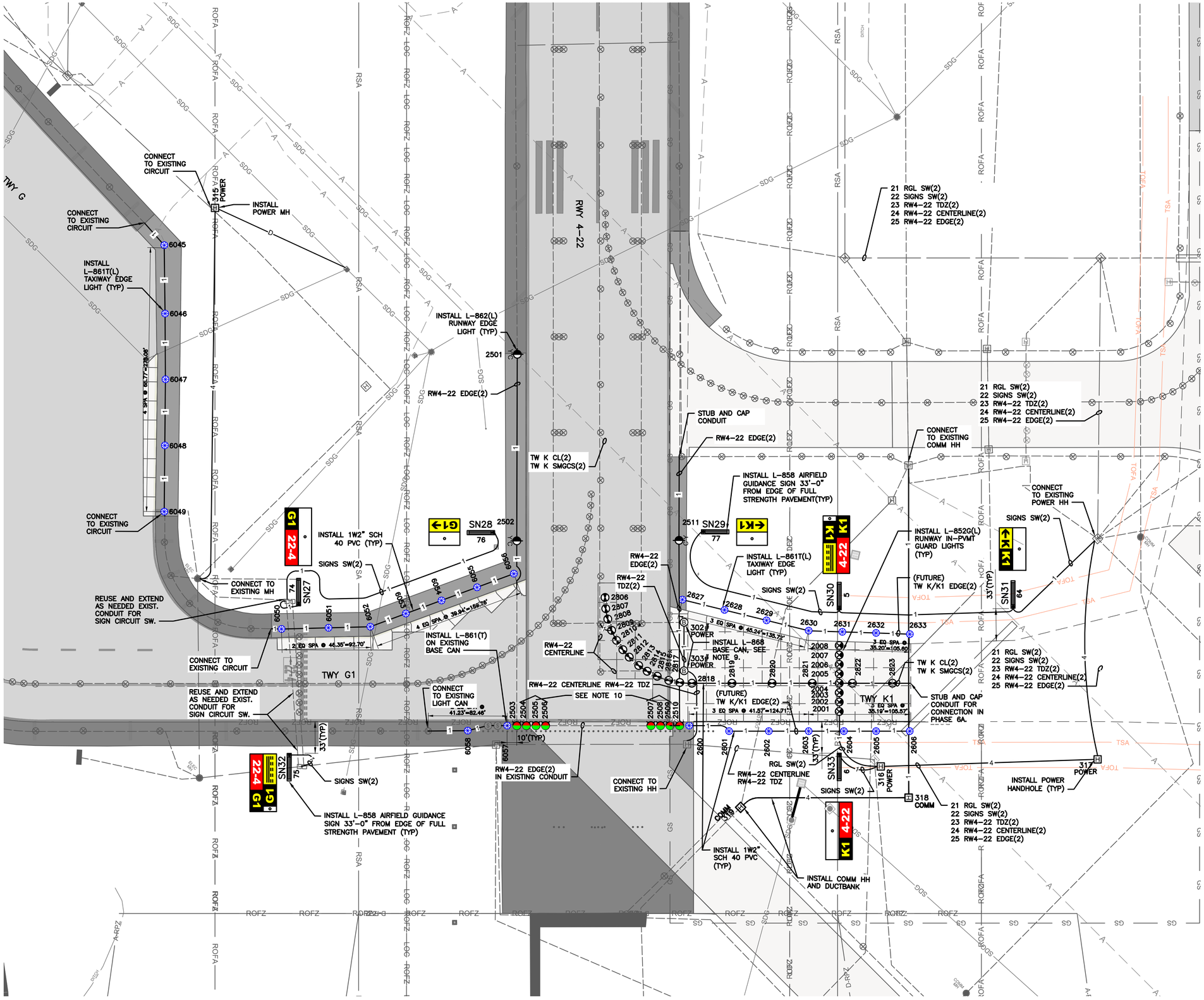
AIRFIELD ELECTRICAL LIGHTING & SIGNAGE PLAN – PHASE 4

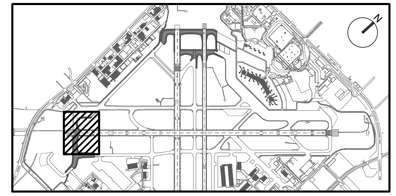
PROJECT MGR:	
DESIGNER:	N. DERES
DRAWN BY:	K. ALMOND
CHECKED BY:	
SCALE:	AS SHOWN
DATE:	02/24/2023

STATE OF TEXAS
JAMES A. McDONALD
119579
LICENSED PROFESSIONAL ENGINEER
2.24.23

APPROVED BY:	DATE:
DIRECTOR HOUSTON AIRPORT SYSTEM	
PROJECT NO:	770
C.I.P. NO:	3-48-0110-044
H.A.S. NO:	N/A
SHEET NO:	EL105-P4
of	

FILENAME: H22C770A-EL105-P4.DWG PLOT DATE: 2023/02/17 PLOT TIME: 11:42:34 AM





KEY MAP
NTS

NOTES:

1. FOR AIRFIELD ELECTRICAL LEGEND, SEE SHEET E-001.
2. FOR REPANELING SIGN TABLE, SEE SHEET EL501.
3. CONTRACTOR TO INSTALL CURVED FACE, LED AIRFIELD SIGNS, SIZE 2. NEW SIGNS SHALL HAVE POWER LEG WHERE CABLES ENTER SIGN, EXTERNAL ON/OFF SWITCH AND SIGN NUMBER AFFIXED TO SHORT END OF SIGN FACING TAXIWAY.
4. IF A SIGN BEING REMOVED IN DEMOLITION IS PART OF A 'PASS THROUGH' FOR THE CIRCUIT, THE CONTRACTOR SHALL INSTALL A NEW L-867 JUNCTION CAN IN ITS PLACE AND REPLACE THE CIRCUIT BACK TO THE NEAREST JUNCTION POINT ON EITHER SIDE OF THE JUNCTION CAN.
5. EXTEND EXISTING CONDUIT INTO NEW L-867B BASE.
6. CONNECT TO EXISTING L-867 BASE CAN.
7. CONTRACTOR SHALL ENLIST MANUFACTURERS OF EXISTING AIRFIELD LIGHTING CONTROL AND MONITORING SYSTEM (ALCMS) TO PERFORM GRAPHICAL CHANGES AS REQUIRED. SEE SPECIFICATIONS FOR DETAILS.
8. CONTRACTOR SHALL CONNECT CIRCUIT IN CLOSEST EXISTING BASECAN TO REMAIN (TYP).
9. CONTRACTOR SHALL FIELD LOCATE EXISTING CONDUIT AND INTERCEPT FOR ACCESS TO RUNWAY CIRCUITS. STRUCTURES 302 AND 303 MUST BE PLACED TO INTERCEPT THE EXISTING RUNWAY TOUCHDOWN ZONE AND CENTERLINE LIGHTING CONDUITS RESPECTIVELY. STRUCTURE COORDINATES ARE PROVIDED FOR THIS EFFORT ON EL511, BUT SHOULD BE FIELD VERIFIED AND SUPERSEDED AS NEEDED TO CONNECT THE CONDUIT.. CONTRACTOR SHALL ENSURE ELEVATION OF BASECAN MATCHES FINAL FINISHED PAVEMENT GRADE.
10. LIGHTS 2504 TO 2509 WILL BE INSTALLED ON NEW BASE CANS CORED INTO EXISTING EXISTING PAVEMENT.

GRAPHIC SCALE
50' 0 50' 150'
SCALE: 1" = 50'

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HOUSTON TEXAS

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TEXAS P.E. FIRM F-2966

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0 1"

REVISIONS

NO.	DESCRIPTION	DATE	BY
0	ISSUED FOR BID	02/24/2023	SC

FAA NON-STANDARD TAXIWAYS PROJECT
AIRFIELD ELECTRICAL LIGHTING & SIGNAGE PLAN – PHASE 5

PROJECT MGR:	
DESIGNER:	N. DERES
DRAWN BY:	K. ALMOND
CHECKED BY:	
SCALE:	AS SHOWN
DATE:	02/24/2023

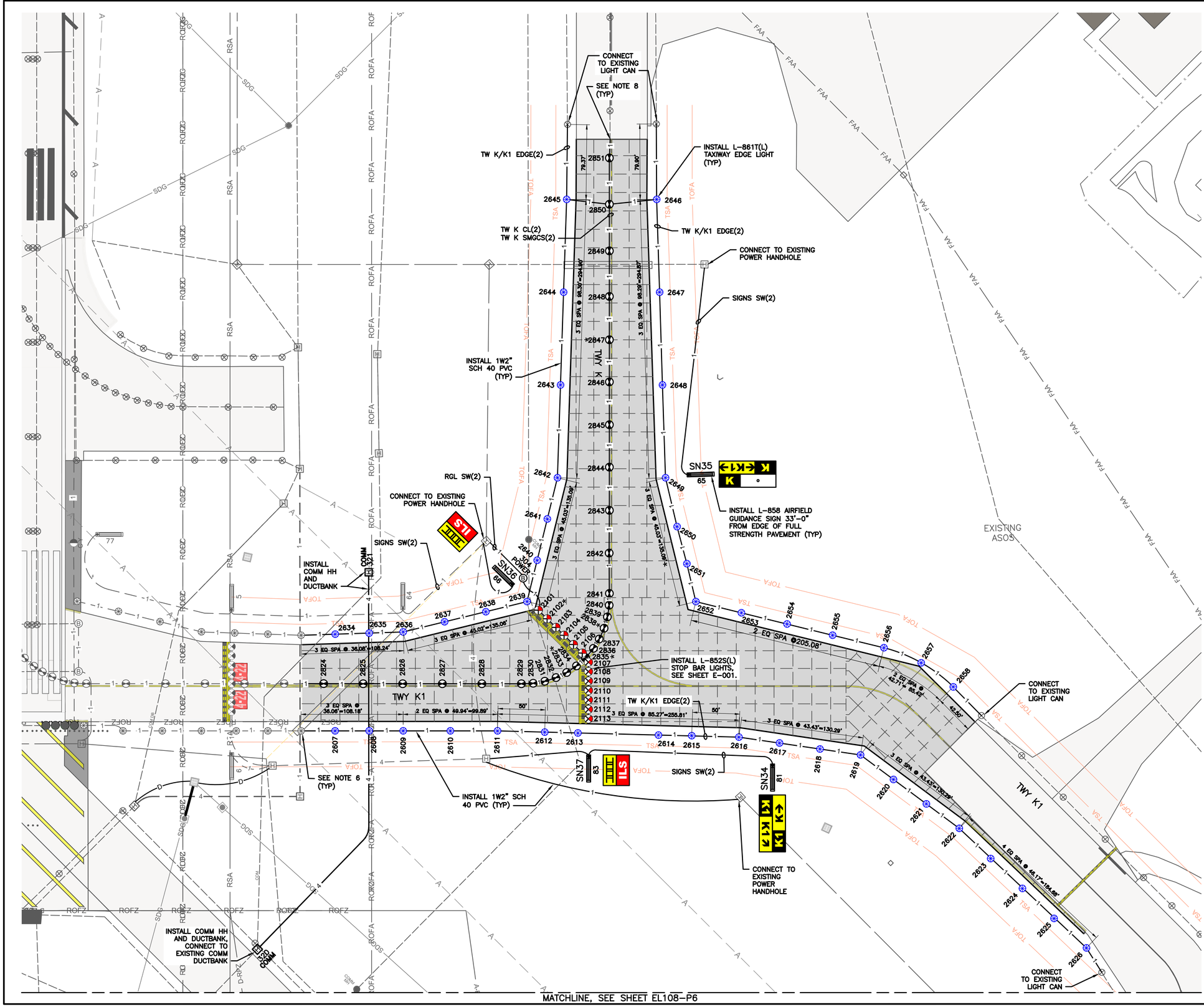
STATE OF TEXAS
JAMES A. MCDONALD
119579
REGISTERED PROFESSIONAL ENGINEER
2.24.23

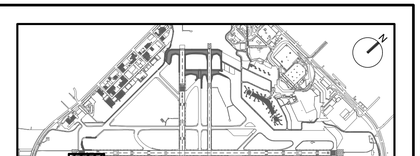
APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO:	770
C.I.P. NO:	3-48-0110-044
H.A.S. NO:	N/A
SHEET NO:	EL106-P5

of





KEY MAP
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1. FOR AIRFIELD ELECTRICAL LEGEND, SEE SHEET E-001.
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8. CONTRACTOR SHALL CONNECT CIRCUIT IN CLOSEST EXISTING BASECAN TO REMAIN (TYP).

GRAPHIC SCALE
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SCALE: 1" = 50'

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TEXAS P.E. FIRM F-2966

VERIFY SCALE
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0 1"

REVISIONS

NO.	DESCRIPTION	DATE	BY
0	ISSUED FOR BID	02/24/2023	SC

FAA NON-STANDARD TAXIWAYS PROJECT

AIRFIELD ELECTRICAL LIGHTING & SIGNAGE PLAN – PHASE 6A

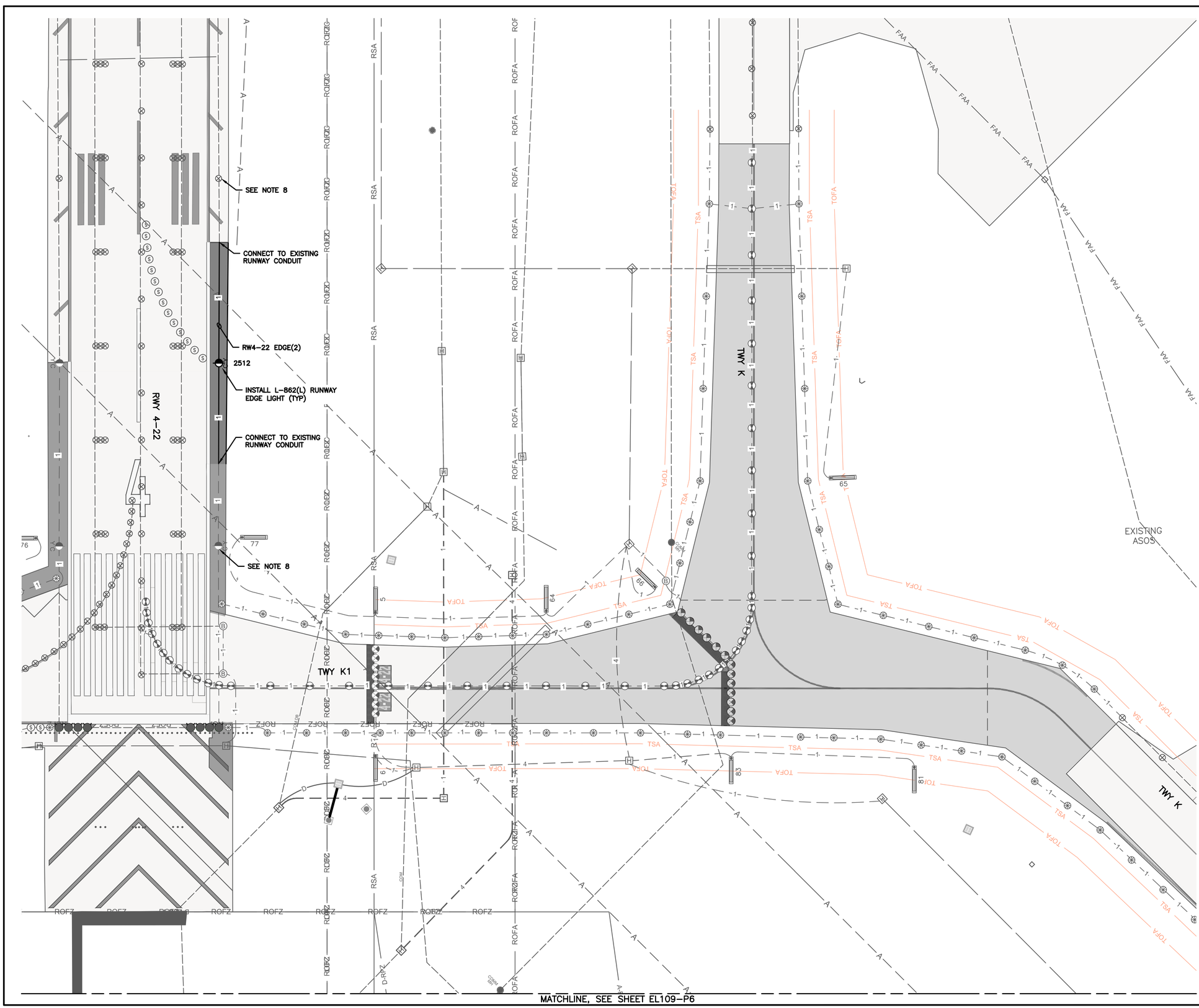
PROJECT MGR:
DESIGNER: N. DERES
DRAWN BY: K. ALMOND
CHECKED BY:
SCALE: AS SHOWN
DATE: 02/24/2023

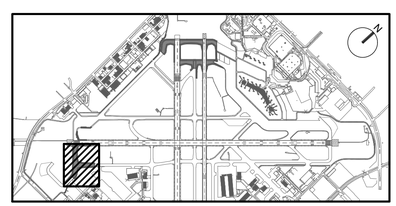
STATE OF TEXAS
JAMES A. McDONALD
119579
LICENSED PROFESSIONAL ENGINEER
2.24.23

APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO: 770
C.I.P. NO: 3-48-0110-044
H.A.S. NO: N/A
SHEET NO: EL107-P6
of





KEY MAP
NTS

NOTES:

1. FOR AIRFIELD ELECTRICAL LEGEND, SEE SHEET E–001.
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HOUSTON AIRPORT SYSTEM
WILLIAM P. HOBBY AIRPORT
HOUSTON TEXAS

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TEXAS P.E. FIRM F-2966

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REVISIONS

NO.	DESCRIPTION	DATE	BY
0	ISSUED FOR BID	02/24/2023	SC

FAA NON-STANDARD TAXIWAYS PROJECT
AIRFIELD ELECTRICAL LIGHTING & SIGNAGE PLAN – PHASE 6B

PROJECT MGR:
DESIGNER: N. DERES
DRAWN BY: K. ALMOND
CHECKED BY:
SCALE: AS SHOWN
DATE: 02/24/2023

STATE OF TEXAS
JAMES A. McDONALD
119579
2.24.23

APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO: 770
C.I.P. NO: 3–48–0110–044
H.A.S. NO: N/A
SHEET NO: EL108–P6
of

FILENAME: H22C770A–EL108–109–P6.DWG PLOT DATE: 2023/02/17 PLOT TIME: 11:58:40 AM

MATCHLINE, SEE SHEET EL108–P6

INSTALL L–861T TAXIWAY EDGE LIGHT (TYP)

INSTALL 1W2" SCH 40 PVC (TYP)

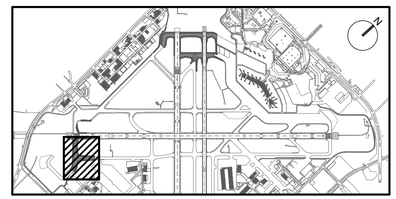
TW K/K1 EDGE(2)

2859

2860

2861

CONNECT TO EXISTING BASE CAN



KEY MAP
NTS

NOTES:

1. FOR AIRFIELD ELECTRICAL LEGEND, SEE SHEET E–001.
2. FOR REPANELING SIGN TABLE, SEE SHEET EL501.
3. CONTRACTOR TO INSTALL CURVED FACE, LED AIRFIELD SIGNS, SIZE 2. NEW SIGNS SHALL HAVE POWER LEG WHERE CABLES ENTER SIGN, EXTERNAL ON/OFF SWITCH AND SIGN NUMBER AFFIXED TO SHORT END OF SIGN FACING TAXIWAY.
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SCALE: 1" = 50'

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VERIFY SCALE
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0 1"

REVISIONS

NO.	DESCRIPTION	DATE	BY
0	ISSUED FOR BID	02/24/2023	SC

FAA NON-STANDARD TAXIWAYS PROJECT

AIRFIELD ELECTRICAL LIGHTING & SIGNAGE PLAN – PHASE 6B

PROJECT MGR:
DESIGNER: N. DERES
DRAWN BY: K. ALMOND
CHECKED BY:
SCALE: AS SHOWN
DATE: 02/24/2023

STATE OF TEXAS
JAMES A. McDONALD
119579
LICENSED PROFESSIONAL ENGINEER
2.24.23

APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO: 770
C.I.P. NO: 3-48-0110-044
H.A.S. NO: N/A
SHEET NO: EL109–P6
of

FILENAME: H22C770A–EL108–109–P6.DWG PLOT DATE: 2023/02/17 PLOT TIME: 12:01:24 PM

SIGN TABLE

SIGN ID	SIGN LEGEND SIDE A	SIGN LEGEND SIDE B	SIGN TYPE SIDE A	SIGN TYPE SIDE B	MODULES	ISOLATION TRANSFORMER SIZE	ARROW ORIENTATION	COMMENTS	REPURPOSED HOU SIGN #	SHEET REFERENCE	NORTHING	EASTING
SN01	G 13R-31L	∘	L/R	X	4	100W	–	AIRFIELD SIGN, LED, SIZE 2, STYLE 5	105	EL102–P2	13,804,584.720	3,148,308.767
SN02	∘ E ▬	31L-13R E	X/L/Y	R/L	4	100W	–	AIRFIELD SIGN, LED, SIZE 2, STYLE 5	110	EL102–P2	13,804,958.596	3,148,646.817
SN03	E 13L-31R	∘	L/R	X	4	100W	–	AIRFIELD SIGN, LED, SIZE 2, STYLE 5	111	EL104–P3	13,805,251.375	3,148,912.188
SN04	∘ E ▬	31R-13L E	X/L/Y	R/L	4	100W	–	AIRFIELD SIGN, LED, SIZE 2, STYLE 5	192	EL104–P3	13,805,477.067	3,149,115.864
SN05	▬	ILS	R	Y	2	100W	–	AIRFIELD SIGN, LED, SIZE 2, STYLE 5	104	EL103–P2	13,803,610.959	3,148,728.338
SN06	∘ G ▬	13R-31L G	X/L/Y	R/L	4	100W	–	AIRFIELD SIGN, LED, SIZE 2, STYLE 5	106	EL102–P2	13,804,470.799	3,148,434.926
SN07	←G	∘	Y	X	1	100W	270° LT	AIRFIELD SIGN, LED, SIZE 2, STYLE 5	107	EL102–P2	13,804,546.746	3,148,565.415
SN08	∘	E→	X	Y	1	100W	90°RT	AIRFIELD SIGN, LED, SIZE 2, STYLE 5	108	EL102–P2	13,804,706.838	3,148,710.262
SN09	E 31L-13R	∘	L/R	X	4	100W	–	AIRFIELD SIGN, LED, SIZE 2, STYLE 5	109	EL102–P2	13,804,858.173	3,148,757.855
SN10	∘ E ▬	13L-31R E	X/L/Y	R/L	4	100W	–	AIRFIELD SIGN, LED, SIZE 2, STYLE 5	200	EL104–P3	13,805,138.818	3,149,036.638
SN11	←E	∘	Y	X	1	100W	270° LT	AIRFIELD SIGN, LED, SIZE 2, STYLE 5	112	EL104–P3	13,805,121.631	3,149,152.533
SN12	∘	E→	X	Y	1	100W	90° RT	AIRFIELD SIGN, LED, SIZE 2, STYLE 5	190	EL104–P3	13,805,250.314	3,149,269.698
SN13	E 31R-13L	∘	L/R	X	4	100W	–	AIRFIELD SIGN, LED, SIZE 2, STYLE 5	191	EL104–P3	13,805,364.301	3,149,240.600
SN14	∘ D ▬	31L-13R D	X/L/Y	R/L	4	100W	–	AIRFIELD SIGN, LED, SIZE 2, STYLE 5	114	EL103–P2	13,804,556.328	3,149,091.997
SN15	D M→	∘	L/Y	X	2	100W	90° RT	AIRFIELD SIGN, LED, SIZE 2, STYLE 5	113	EL101–P1	13,804,652.495	3,149,178.975
SN16	D 13L-31R	▬ D ∘	L/R	R/L/Y	4	100W	–	AIRFIELD SIGN, LED, SIZE 2, STYLE 5	118	EL101–P1	13,804,849.334	3,149,357.003
SN17	∘ D ▬	31R-13L D	X/L/Y	R/L	4	100W	–	AIRFIELD SIGN, LED, SIZE 2, STYLE 5	189	EL101–P1	13,805,074.760	3,149,560.892
SN18	∘	D→	X	Y	1	100W	90° RT	AIRFIELD SIGN, LED, SIZE 2, STYLE 5	119	EL103–P2	13,804,308.277	3,149,153.097
SN19	D 31L-13R	▬ D ∘	L/R	Y/L/X	4	100W	–	AIRFIELD SIGN, LED, SIZE 2, STYLE 5	116	EL103–P2	13,804,455.818	3,149,202.948
SN20	M ←D→	M M1↗	L/Y	L/Y	3	100W	270°LT:90°RT/45°RT	AIRFIELD SIGN, LED, SIZE 2, STYLE 5	100	EL101–P1	13,804,523.010	3,149,374.835
SN21	∘ ←M D	D 13L-31R	X/Y/L	R/L	4	100W	270° LT	AIRFIELD SIGN, LED, SIZE 2, STYLE 5	187	EL101–P1	13,804,734.118	3,149,485.189
SN22	←D	∘	Y	X	1	100W	270° LT	AIRFIELD SIGN, LED, SIZE 2, STYLE 5	186	EL101–P1	13,804,726.768	3,149,583.584
SN23	∘	D→	X	Y	1	100W	90° RT	AIRFIELD SIGN, LED, SIZE 2, STYLE 5	185	EL101–P1	13,804,866.735	3,149,710.023
SN24	D 31R-13L	∘	L/R	X	4	100W	–	AIRFIELD SIGN, LED, SIZE 2, STYLE 5	188	EL101–P1	13,804,961.977	3,149,685.702
SN25	▥	ILS	Y	R	2	100W	–	AIRFIELD SIGN, LED, SIZE 2, STYLE 5	115	EL101–P1	13,804,404.919	3,149,414.947
SN26	ILS	▥	R	Y	2	100W	–	AIRFIELD SIGN, LED, SIZE 2, STYLE 5	54	EL101–P1	13,804,327.681	3,149,600.610
SN27	G1 22-4	∘	L/R	X	3	100W	–	AIRFIELD SIGN, LED, SIZE 2, STYLE 5	74	EL106–P5	13,800,753.367	3,148,548.044
SN28	∘	G1→	X	Y	2	100W	90° RT	AIRFIELD SIGN, LED, SIZE 2, STYLE 5	76	EL106–P5	13,800,672.715	3,148,751.116
SN29	←K1	∘	Y	X	2	100W	270° LT	AIRFIELD SIGN, LED, SIZE 2, STYLE 5	77	EL106–P5	13,800,528.478	3,148,911.893
SN30	K1 ▬	4-22 K1	X/L/Y	R/L	3	100W	–	AIRFIELD SIGN, LED, SIZE 2, STYLE 5	5	EL106–P5	13,800,371.702	3,148,963.945
SN31	←K K1	∘	Y/L	X	2	100W	270° LT	AIRFIELD SIGN, LED, SIZE 2, STYLE 5	64	EL107–P6	13,800,251.178	3,149,099.626
SN32	G1 ▬	22-4 G1	X/L/Y	R/L	3	100W	–	AIRFIELD SIGN, LED, SIZE 2, STYLE 5	75	EL106–P5	13,800,645.719	3,148,437.446
SN33	K1 4-22	∘	L/R	X	3	100W	–	AIRFIELD SIGN, LED, SIZE 2, STYLE 5	6	EL107–P6	13,800,260.678	3,148,863.511
SN34	K1 K→	K1 K1↗	L/Y	L/Y	3	100W	90° LT : 45° RT	AIRFIELD SIGN, LED, SIZE 2, STYLE 5	81	EL107–P6	13,799,867.269	3,149,280.447
SN35	K ←K1→	K ∘	L/Y	L/X	3	100W	270° LT : 90° RT	AIRFIELD SIGN, LED, SIZE 2, STYLE 5	65	EL107–P6	13,800,155.061	3,149,418.718
SN36	ILS	▥	R	Y	2	100W	–	AIRFIELD SIGN, LED, SIZE 2, STYLE 5	80	EL107–P6	13,800,192.023	3,149,203.532
SN37	ILS	▥	R	Y	2	100W	–	AIRFIELD SIGN, LED, SIZE 2, STYLE 5	83	EL107–P6	13,800,005.052	3,149,142.372
SN38	M1 ↖M↘	M1 ∘	L/Y	L/X	3	100W	315° LT : 135° RT	AIRFIELD SIGN, LED, SIZE 2, STYLE 5	100	EL101–P1	13,804,292.452	3,149,424.579
SN39	⊖	∘	R	X	1	100W	–	AIRFIELD SIGN, LED, SIZE 2, STYLE 5	103	EL101–P1	13,804,670.259	3,149,192.345

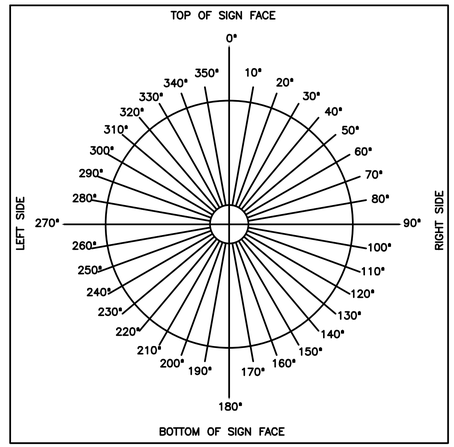
1 NEW SIGN TABLE
NTS

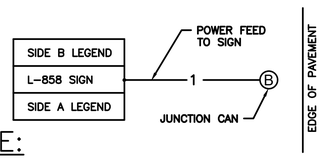
SIGN TABLE NOTES:

1. ALL SIGNS SHALL CONFORM TO FAA AC 150/5345–44K.
   A. STYLE 5 – 1 STEP, 5.5A
   B. CLASS 1
   C. MODE 2
2. ALL SIGNS SHALL BE INTERNALLY LIGHTED LED SIGNS.
3. THE SIDE A LEGEND REFERS TO A SIGN FACE ON THE LEFT SIDE OF THE SIGN CABINET WHEN VIEWED FROM THE ASSOCIATED RUNWAY OR TAXIWAY CENTERLINE.
4. LAYOUT OF SIGN LEGENDS BY MANUFACTURER SHALL BE APPROVED BY THE ENGINEER PRIOR TO FABRICATION.
5. ALL LOCATIONS ARE SUBJECT TO FIELD VERIFICATION BY THE CONTRACTOR AND APPROVAL BY THE ENGINEER.
6. ALL SIGN FACES SHALL BE RETRO–REFLECTIVE.
7. SIGNS SHALL BE ORDERED WITH ONE TETHER PER LEG,
8. SEE SHEET EL505 FOR SIGN DETAILS.
9. SEE SPECIFICATION L–125 FOR ADDITIONAL SIGN REQUIREMENTS.

SIGN TABLE LEGEND:

Y INFORMATION SIGN – BLACK CHARACTERS ON A YELLOW BACKGROUND.
R MANDATORY SIGN – WHITE CHARACTERS ON A RED BACKGROUND.
L LOCATION SIGN – YELLOW CHARACTERS ON A BLACK BACKGROUND.
X BLANK PANEL





NOTE:
1. SEE SHEET EL505, DETAIL 3 FOR AIRFIELD SIGN REFERENCE POINT.

2 SIGN LEGEND DETAIL
NTS

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VERIFY SCALE
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0 1"

REVISIONS

NO.	DESCRIPTION	DATE	BY
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FAA NON-STANDARD TAXIWAYS PROJECT

AIRFIELD ELECTRICAL DETAILS

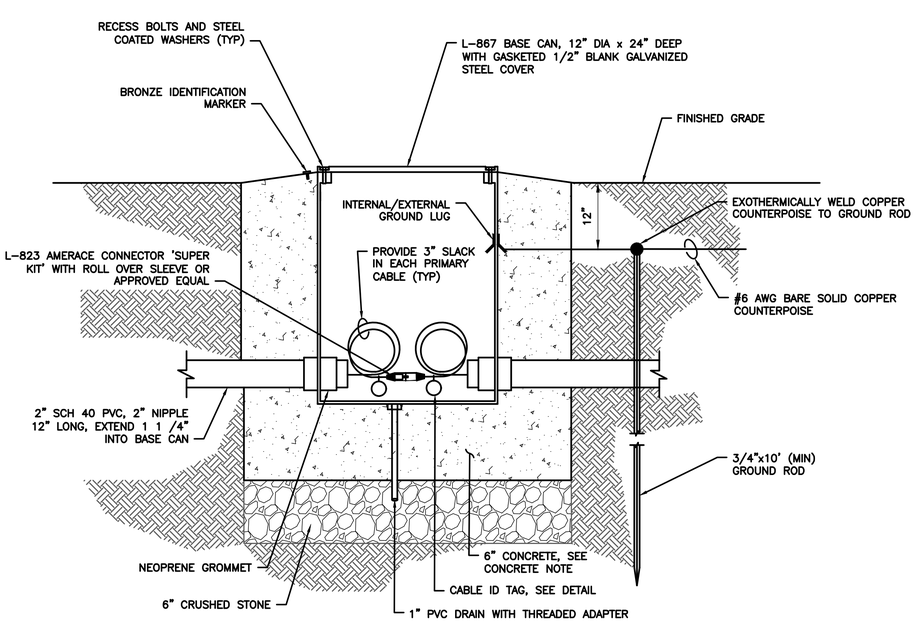
PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
SCALE: AS SHOWN
DATE: 02/24/2023

STATE OF TEXAS
JAMES A. McDONALD
119579
LICENSED PROFESSIONAL ENGINEER
2.24.23

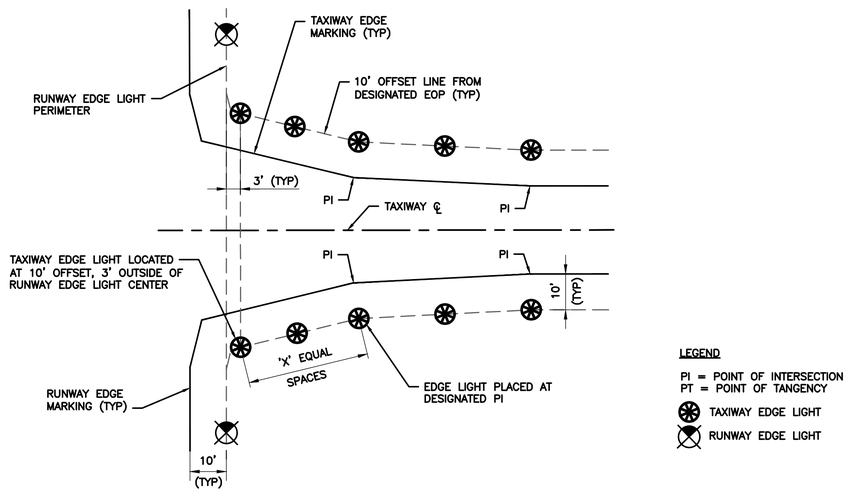
APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO: 770
C.I.P. NO: 3–48–0110–044
H.A.S. NO: N/A
SHEET NO: EL501
of

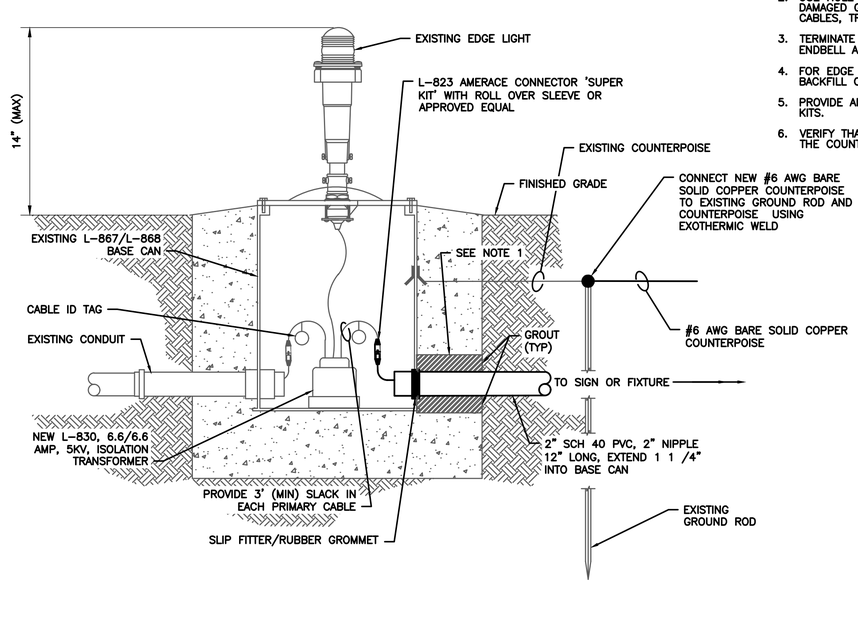


1 L-867 JUNCTION BOX DETAIL
NTS



2 TYPICAL TAXIWAY EDGE LIGHTING AT RUNWAY INTERSECTION
NTS

CONCRETE NOTE:
CONCRETE FOR BACKFILL, SIGN PADS AND BASE CANS IN THE RUNWAY/TAXIWAY SAFETY AREAS, IN EXISTING PAVEMENT OR IN AREAS OTHERWISE INDICATED IN THE DETAILS AND DRAWINGS SHALL CONFORM TO THE REQUIREMENTS OF FAA SPECIFICATION P-610. A CONCRETE MIX DESIGN SHALL BE SUBMITTED AND APPROVED BEFORE COMMENCEMENT OF WORK.



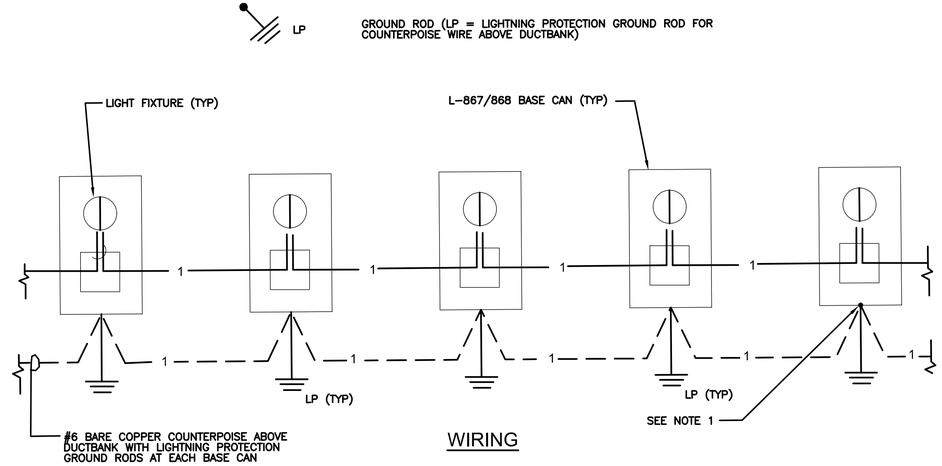
3 EXTENDING DUCT/CONDUIT FROM EXISTING L-867 BASE CAN
NTS

NOTES:
1. USE CORE DRILL TO PENETRATE BASE CAN ANCHOR.
2. USE HOLE SAW TO CUT HOLE IN BASE CAN. REPAIR DAMAGED GALVANIZED SURFACES. PROTECT EXISTING CABLES, TRANSFORMERS, ETC FROM DAMAGE.
3. TERMINATE CONDUIT IN BASE CAN UTILIZING AN ENDBELL AND SLIP FITTER/RUBBER GROMMET.
4. FOR EDGE LIGHT LOCATED IN SHOULDER PAVEMENT, BACKFILL CONDUIT TRENCH WITH P-610.
5. PROVIDE AND INSTALL TRANSFORMER AND CONNECTOR KITS.
6. VERIFY THAT EXISTING LIGHT BASE CAN IS BONDED TO THE COUNTERPOISE SYSTEM.

LEGEND:
1 — 1 #8 AWG, 5KV, PER CIRCUIT. EDGE LIGHTING CABLES, CONTINUES FOR LENGTH OF CIRCUIT (TYP)

1 — 1 #6 BARE COPPER COUNTERPOISE WIRE ABOVE DUCTBANK WITH LIGHTNING PROTECTION GROUND RODS AT EACH BASE CAN

LP — GROUND ROD (LP = LIGHTNING PROTECTION GROUND ROD FOR COUNTERPOISE WIRE ABOVE DUCTBANK)



WIRING

NOTE:
1. BOND EACH BASE CAN TO COUNTERPOISE CABLE/GUARD WIRE VIA EXTERNAL GROUND LUG. THIS APPLIES TO ALL BASE CANS,

4 LIGHTING CONDUIT/WIRING CONFIGURATION
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FAA NON-STANDARD TAXIWAYS PROJECT

AIRFIELD ELECTRICAL DETAILS

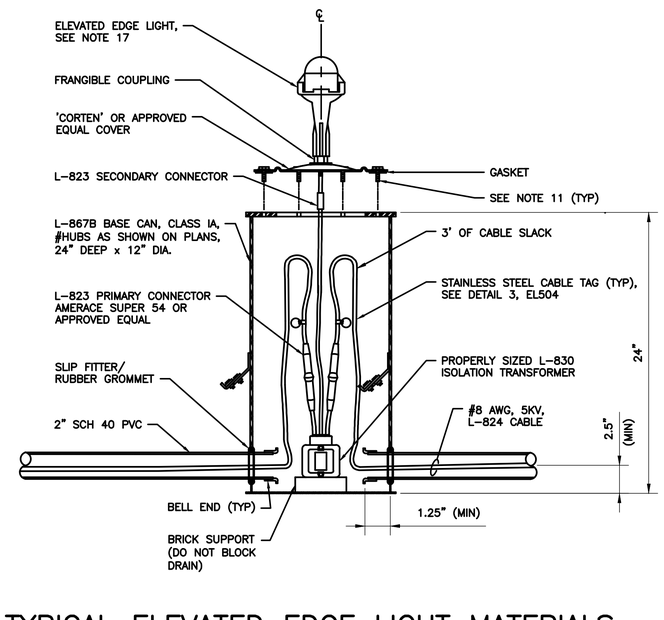
PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
SCALE: AS SHOWN
DATE: 02/24/2023

STATE OF TEXAS
JAMES A. MCDONALD
119579
LICENSED PROFESSIONAL ENGINEER
2.24.23

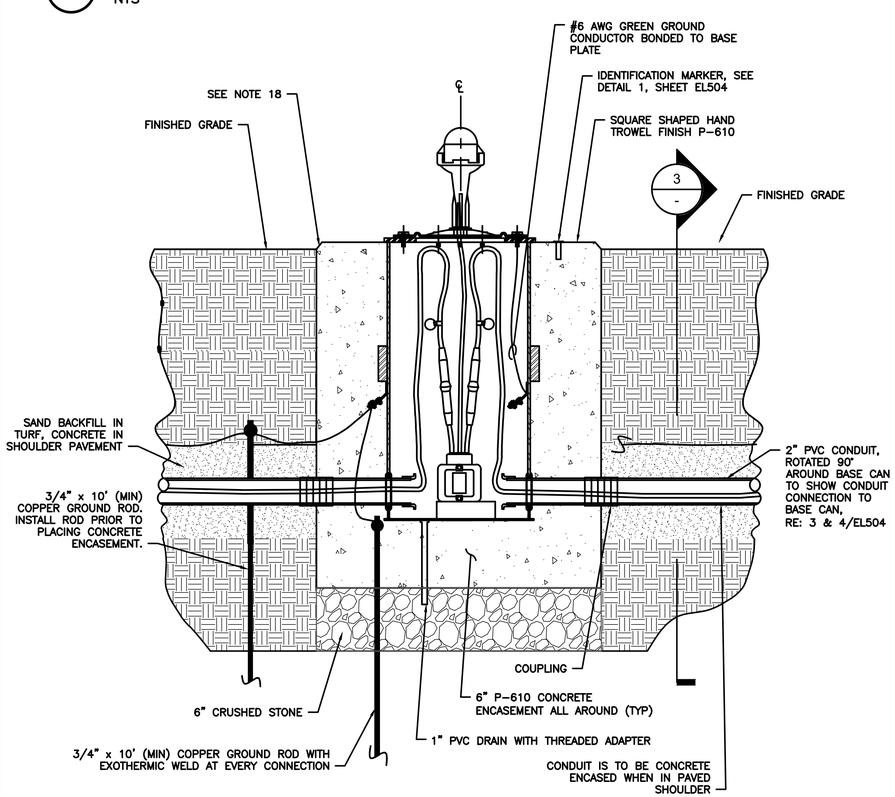
APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO: 770
C.I.P. NO: 3-48-0110-044
H.A.S. NO: N/A
SHEET NO: EL502
of



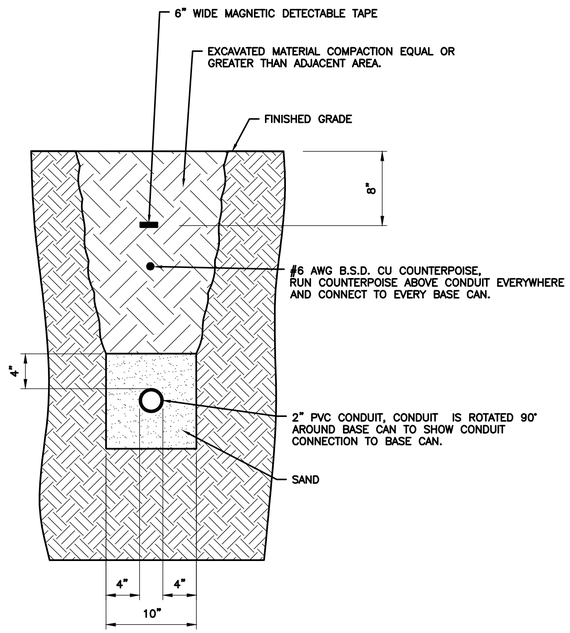
1 TYPICAL ELEVATED EDGE LIGHT MATERIALS
NTS



2 ELEVATED EDGE LIGHT INSTALLED IN TURF
NTS

ELEVATED FIXTURE NOTES:

1. THE ELEVATED EDGE LIGHTS SHALL BE 14" HIGH UNLESS NOTED OTHERWISE IN THE CONTRACT DOCUMENTS.
2. ALL BASE CAN INSTALLATION TECHNIQUES, METHODS, MATERIALS, ETC., SHALL BE SUBMITTED TO THE RESIDENT ENGINEER FOR REVIEW AND APPROVAL PRIOR TO THE START OF WORK.
3. EACH GROUND ROD SHALL MEASURE 25 OHMS OR LESS, PRIOR TO CONNECTION TO THE GROUND SYSTEM. ADDITIONAL GROUND ROD SECTIONS SHALL BE ADDED TO OBTAIN THE 25 OHM VALUE.
4. WHENEVER MORE THAN TWO CONDUITS ENTER OR EXIT A L-867B BASE CAN, A L-867D BASE CAN SHALL BE USED. CONDUITS USED EXCLUSIVELY FOR DRAINS, THE 5' STUBOUT AND THE CONDUIT FROM THE L-867B BASE TO THE SIGN SHALL BE EXCLUDED FROM THE COUNT. THE INSTALLATION DETAIL FOR THE L-867B BASE CAN SHALL BE USED AS A GUIDE FOR THE INSTALLATION OF THE L-867D BASE CAN WITH THE APPROPRIATE DIMENSIONS INCREASED TO ACCOMMODATE THE LARGER BASE CAN.
5. EDGE LIGHTS SHALL BE INSTALLED 10.0' FROM THE THEORETICAL EDGE OF THE FULL STRENGTH PAVEMENT.
6. THE FINISHED PAVEMENT SURFACE SHALL BE PROTECTED FROM FOREIGN SUBSTANCES WHICH COULD CAUSE STAINING, IE. CONCRETE, OIL, ETC. THE CONTRACTOR SHALL IMMEDIATELY CLEAN ALL SPILLS AND CORRECT/CLEAN ANY STAINED SURFACES AT THE CONTRACTOR'S EXPENSE.
7. THE P-606 SEALER SHALL FILL THE VOID TO WITHIN 0.125" OF THE TOP EDGE OF THE CONCRETE RING AT THE LOWEST POINT OF THE CONCRETE RING. ANY OVER POURS SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
8. ALL AIRFIELD LIGHTING MATERIALS SHALL COMPLY WITH FAA SPECIFICATIONS AND REQUIREMENTS.
9. IMMEDIATELY AFTER THE HOLES ARE CORED, THE BASE CANS SHALL BE INSTALLED AND THE P-610 PLACED SO AS TO PREVENT WATER FROM ENTERING THE STABILIZED SUBGRADE.
10. BEFORE PAVING MAY PROCEED THE CONTRACTOR SHALL DEMONSTRATE TO THE RESIDENT ENGINEER THAT THE BASE CANS ARE AT THE CORRECT ELEVATION AND THAT THE PROPER CLEARANCE EXISTS BETWEEN THE BASE CAN AND THE PAVING TRAIN.
11. THE FIXTURE MOUNTING BOLTS SHALL EXTEND THRU THE BASE CAN MOUNTING FLANGE INTO THE BASE CAN A MIN. OF 0.5". THE BOLTS SHALL HAVE ENOUGH THREAD LENGTH SO THEY DO NOT SHOULDER OUT BEFORE THE FIXTURE IS SECURELY TIGHTENED. ANTI-SEIZE SHALL BE USED ON BOLTS (NOALOX OR APPROVED EQUAL). CONTRACTOR SHALL PROVIDE STAINLESS STEEL HARDWARE AND TWO-PIECE LOCK WASHERS FOR ELEVATED AND IN-PAVEMENT FIXTURES.
12. ALL HUBS SHALL BE FACTORY DRILLED PRIOR TO GALVANIZING.
13. TYPICAL SECTIONS FOR PAVEMENT AND THICKNESSES SHALL BE PER CIVIL PLANS.
14. P-610 CONCRETE AROUND BASE CANS AND DUCT/CONDUIT SHALL BE COMPLETELY CONSOLIDATED BY MECHANICAL MEANS AND SHALL BE FREE OF ANY VOIDS.
15. ALL L-824 CABLES SHALL BE IDENTIFIED WITH AN 18 GAUGE STAINLESS STEEL TAG WITH ITS RESPECTIVE CIRCUIT/LOOP NUMBER AT ALL ACCESSIBLE LOCATIONS. ATTACH ID TAG 12" FROM THE L-823 CONNECTORS OR MID LOOP, IF NO CONNECTORS ARE REQUIRED. THE CONDUCTORS SHALL BE IDENTIFIED ON EACH SIDE OF THE CONNECTORS OR LOOP.
16. L-823 CONNECTORS SHALL BE INSTALLED ON ALL CABLES, IN EACH MANHOLE, BASE CAN, OR OTHER ACCESSIBLE LOCATIONS.
17. FOR BLANK CANS IN TURF, DELETE LIGHT FIXTURE AND INSTALL 3/8" STEEL COVER.
18. FOR BLANK CANS INSTALLED IN TURF, PROVIDE A 1" CHAMFER ON THE EDGE OF THE CONCRETE COLLAR WITH THE CONCRETE COLLAR PROTRUDING 1" ABOVE FINISHED GRADE.
19. WHEN ADJUSTING THE ELEVATION OF AN EXISTING BASE CAN IN TURF, CONTRACTOR SHALL DOWEL THE TOP OF THE EXISTING CONCRETE COLLAR WITH #5 REBAR (5 EQUALLY SPACED) AND EPOXY THE REBAR TO THE CONCRETE COLLAR TO EXTEND 10" MINIMUM INTO THE CONCRETE COLLAR. THE CONTRACTOR SHALL ORDER A BASE CAN SPACER RING AND/OR BASE CAN EXTENSION TO THE HEIGHT REQUIRED TO INSTALL AND POUR A CONCRETE COLLAR EXTENSION TO THE PROPOSED NEW FINISHED GRADE (SEE NOTE 18). THE NEW CONCRETE COLLAR AROUND THE NEW SPACER RING AND/OR EXTENSION RING SHALL BE THE SAME DIMENSIONS AS THE EXISTING COLLAR. CONTRACTOR SHALL PROVIDE A MINIMUM OF 1" COVER FROM THE TOP OF THE VERTICAL REBAR TO THE TOP OF THE NEW CONCRETE COLLAR EXTENSION.



3 CONDUIT SECTION A
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0 1"

REVISIONS

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FAA NON-STANDARD TAXIWAYS PROJECT

AIRFIELD ELECTRICAL DETAILS

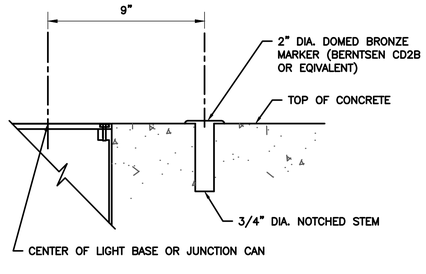
PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
SCALE: AS SHOWN
DATE: 02/24/2023

STATE OF TEXAS
JAMES A. MCDONALD
119579
LICENSED PROFESSIONAL ENGINEER
2.24.23

APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

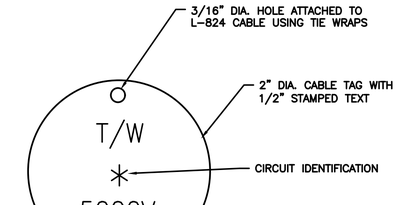
PROJECT NO: 770
C.I.P. NO: 3-48-0110-044
H.A.S. NO: N/A
SHEET NO: EL503
of



NOTES FOR IDENTIFICATION MARKER:

1. IDENTIFICATION SHALL BE STAMPED USING 1/4" FIGURES AND LETTERS UNIFORMLY SPACED ON THE BRONZE MARKER.
2. IDENTIFICATION MARKERS SHALL BE UNIFORMLY INSTALLED ADJACENT TO TAXIWAY AND RUNWAY ELEVATED EDGE LIGHTS. PREFERRED LOCATION IS ON A LINE PERPENDICULAR TO RUNWAY OR TAXIWAY CENTERLINE, INBOARD OF LIGHT FIXTURE.

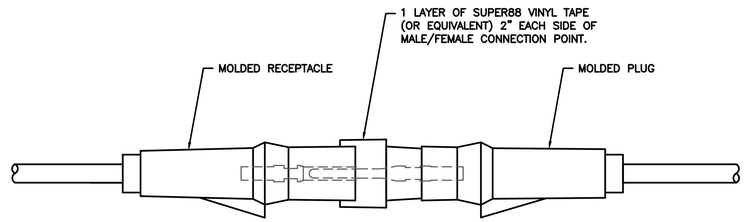
1 BASE CAN IDENTIFICATION MARKER
NTS



NOTES:

1. ENGRAVE EACH TAG WITH THE CIRCUIT ID AS ORDERED BY THE ENGINEER.
2. ATTACH EACH TAG WITH A #16 BRASS JACK CHAIN.

3 STAINLESS STEEL CABLE ID TAG
NTS



SPLICE KIT SPECIFICATIONS:

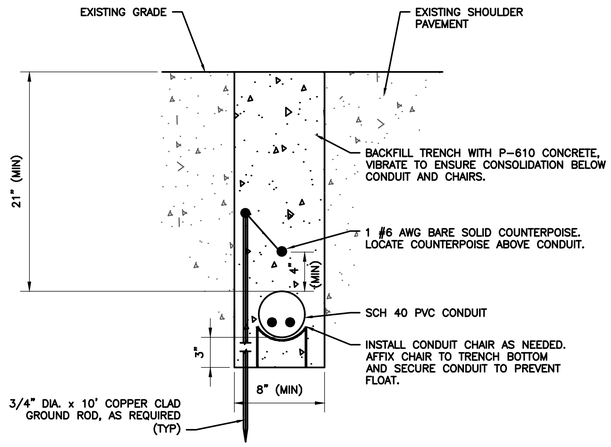
1. WORKERS PERFORMING SPLICING WORK MUST BE TRAINED AND CERTIFIED BY THE CONNECTOR KIT MANUFACTURER TO POSSES THE PROPER SPLICING ABILITIES. CERTIFICATION DOCUMENTATION SHALL BE SUBMITTED TO THE ENGINEER.
2. VERIFY THAT ALL SPLICERS DISPLAY A VISIBLE BADGE TO INDICATE SPLICING CERTIFICATION AND HAVE AT LEAST THREE YEARS OF HIGH VOLTAGE SPLICING EXPERIENCE AND HAVE BEEN TRAINED BY THE KIT MANUFACTURER.
3. CONNECTORS SHALL BE PLUG AND RECEPTACLE TYPE IN ACCORDANCE WITH FAA SPECIFICATIONS, AND SHALL BE APPLIED IN ACCORDANCE WITH SERIES LIGHTING CABLE MANUFACTURER INSTRUCTIONS.

NOTE: CONNECTOR SHALL BE PLUG AND RECEPTACLE TYPE, AMERACE 54 SUPER SERIES, INTEGRO KIT, OR APPROVED EQUAL, IN ACCORDANCE WITH FAA SPECIFICATION. SUBMIT CATALOG CUT SHEET AND PRODUCT SAMPLE FOR APPROVAL AND TESTING. CONNECTOR KIT SHALL BE APPLIED IN ACCORDANCE WITH SERIES LIGHTING CABLE MANUFACTURERS WRITTEN INSTRUCTIONS. ACTUAL OUTSIDE DIAMETER (OVER JACKET) OF SERIES LIGHTING CABLE SHALL BE USED TO DETERMINE CONNECTOR KIT SIZE REQUIREMENT.

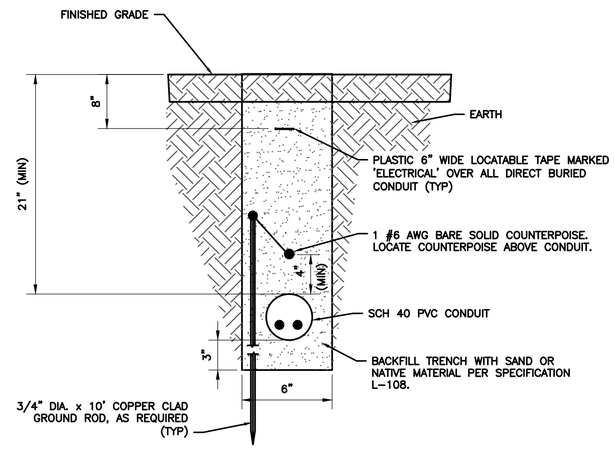
CABLE DIAMETER MIN.	CABLE DIAMETER MAX.	AMERACE SIZE SYMBOL	AMERACE SIZE NUMBER
0.320	0.430	D	54 SUPER-D4-D4

CABLE DIAMETER MIN.	CABLE DIAMETER MAX.	INTEGRO SIZE SYMBOL	INTEGRO SIZE NUMBER
0.320	0.430	11805-01 OR 11805-05	INTEGRO COMPLETE KIT

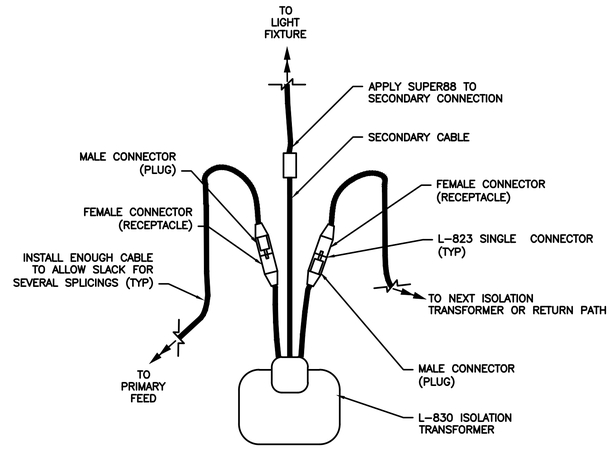
5 FOR SPLICING OF 1/C #8, 5KV SERIES CABLE VIA L-823 CONNECTOR KIT (TYP) (FOR LIGHTING BASES, HH AND MH)
NTS



2 TYPICAL CONDUIT INSTALLATION IN EXISTING SHOULDER PAVEMENT
NTS



4 TYPICAL CONDUIT INSTALLATION IN EARTH
NTS



NOTES:

1. INSTALL ISOLATION TRANSFORMER IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
2. PROVIDE ISOLATION TRANSFORMER WITH L-823 COMPATIBLE WITH AMERACE SUPERKIT.

6 TYPICAL ISOLATION TRANSFORMER CONNECTION DETAIL
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APPROVED BY: DATE:

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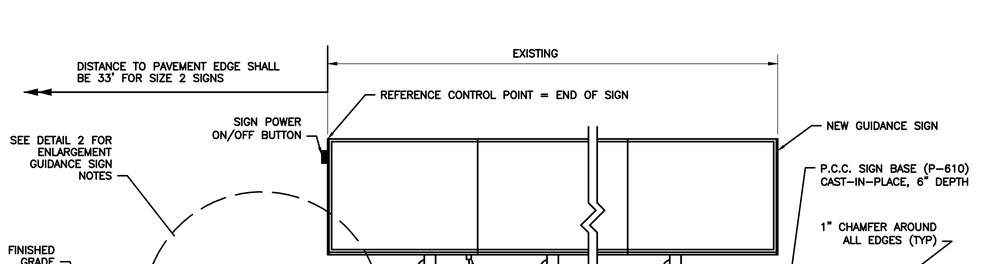
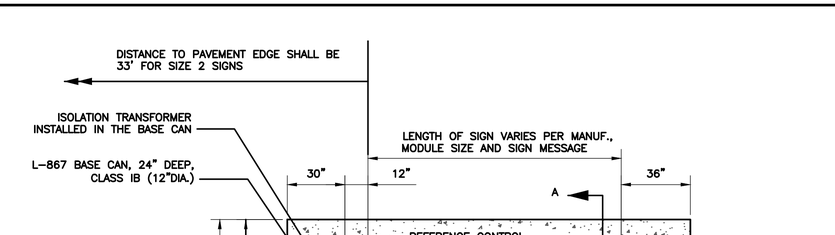
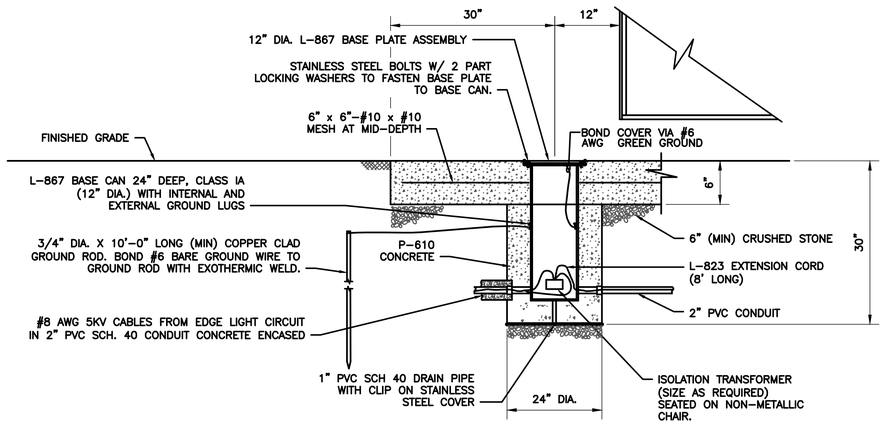
PROJECT NO: 770
C.I.P. NO: 3-48-0110-044
H.A.S. NO: N/A
SHEET NO: EL504
of



1 AIRFIELD GUIDANCE SIGN BASE PLAN–FRONT VIEW (UP TO 4 MODULES)
NTS



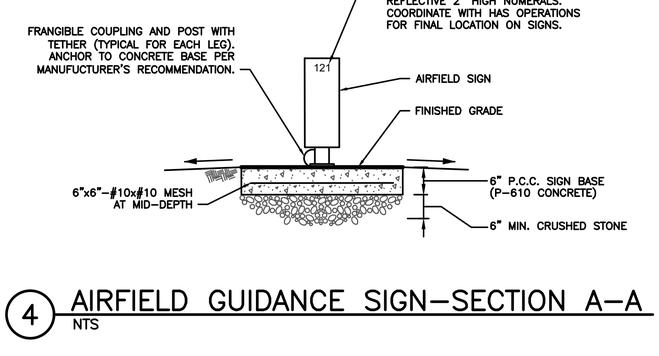
3 AIRFIELD GUIDANCE SIGN BASE–TOP VIEW
NTS



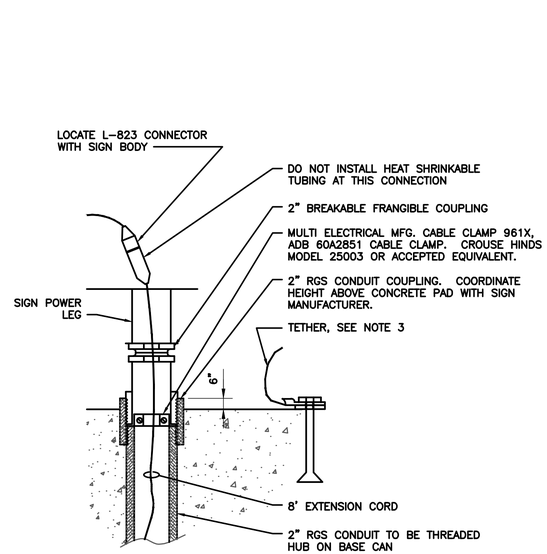
GUIDANCE SIGN NOTES

1. FINISHED GRADE AROUND FOUNDATION SHALL SLOPE TO DRAIN AWAY FROM SIGN.
2. PCC SIGN BASE SHALL HAVE A 28 DAY STRENGTH OF 4000 PSI.
3. CRUSHED AGGREGATE BASE COURSE SHALL BE COMPACTED TO 90% MAXIMUM DENSITY PER ASTM D 1557.
4. SIGNS SHALL BE ANCHORED TO CONCRETE BASE WITH BOLTS, NUTS, WASHERS AND CONCRETE ANCHORS. ALL MATERIAL SHALL BE MADE OF STAINLESS STEEL.
5. COORDINATE INSTALLATION WORK WITH THE SIGNS MANUFACTURER AND COMPLY WITH THEIR REQUIREMENTS AND RECOMMENDATIONS.
6. ALL SIGN LAMPS MUST BE CAPABLE OF BEING SERVICED WITHOUT THE USE OF TOOLS.
7. SOME SIGN MANUFACTURERS REQUIRE SEPARATE GROUNDING FOR THE SIGN ITSELF. REFER TO THE MANUFACTURER'S CATALOG.
8. POWER TO THE SIGN MUST BE PROVIDED THROUGH BREAKAWAY CABLE CONNECTORS INSTALLED AT THE L-867 SIGN JUNCTION CAN.
9. THERE MUST BE NO ABOVE GROUND ELECTRICAL CONNECTION BETWEEN SIGNS IN A SIGN ARRAY.
10. RUNWAY HOLD POSITION SIGNS MUST BE INSTALLED NO CLOSER TO THE RUNWAY THAN IN-LINE WITH THE OUTBOARD LINE OF THE HOLD POSITION MARKING, AND NO FURTHER THAN 10' FROM THAT MARKING.

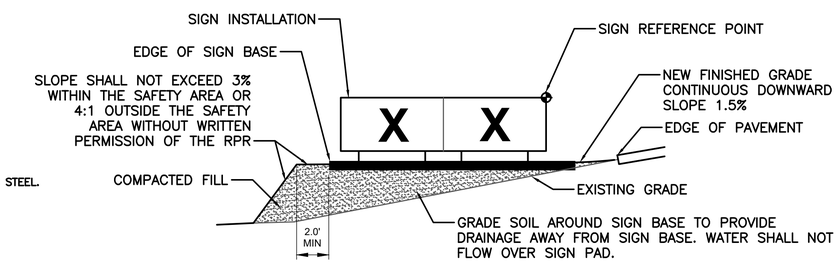
2 AIRFIELD GUIDANCE SIGN BASE PLAN – DETAIL A
NTS



4 AIRFIELD GUIDANCE SIGN–SECTION A–A
NTS



6 SIGN POWER LEG
NTS



NOTE:
EXCAVATION, GRADING, SITE PREPARATION, FILL, SOD, ETC. FOR SIGNS IS INCIDENTAL TO THE SIGN PAY ITEM.

5 GRADING AND FILL DETAIL
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VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

REVISIONS

NO.	DESCRIPTION	DATE	BY
0	ISSUED FOR BID	02/24/2023	SC

FAA NON-STANDARD TAXIWAYS PROJECT

AIRFIELD ELECTRICAL DETAILS

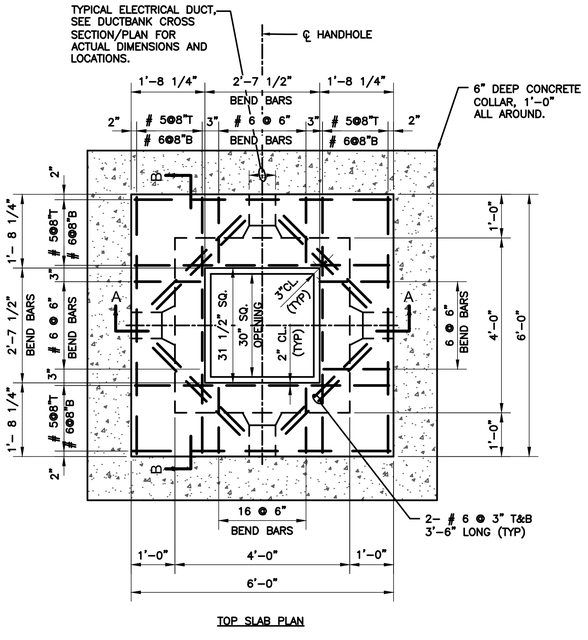
PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
SCALE: AS SHOWN
DATE: 02/24/2023

STATE OF TEXAS
JAMES A. McDONALD
119579
LICENSED PROFESSIONAL ENGINEER
2.24.23

APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

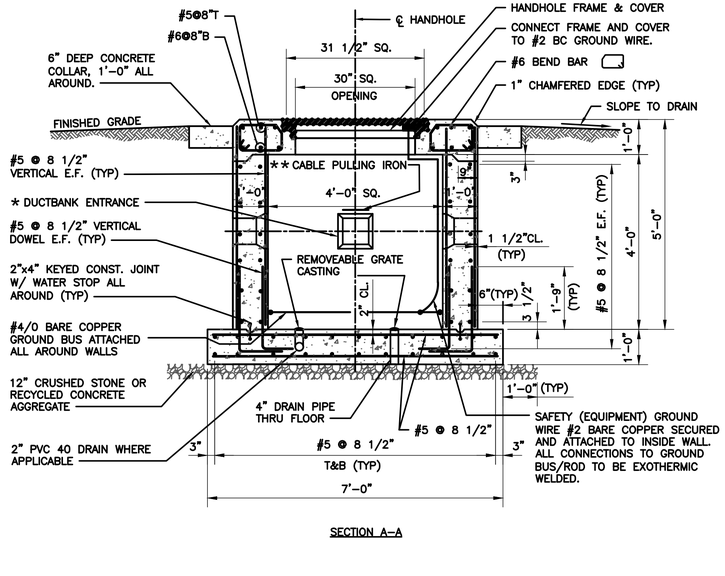
PROJECT NO: 770
C.I.P. NO: 3-48-0110-044
H.A.S. NO: N/A
SHEET NO: EL505
of



TOP SLAB PLAN

1 TYPICAL HANDHOLE REINFORCEMENT AIRCRAFT LOADING

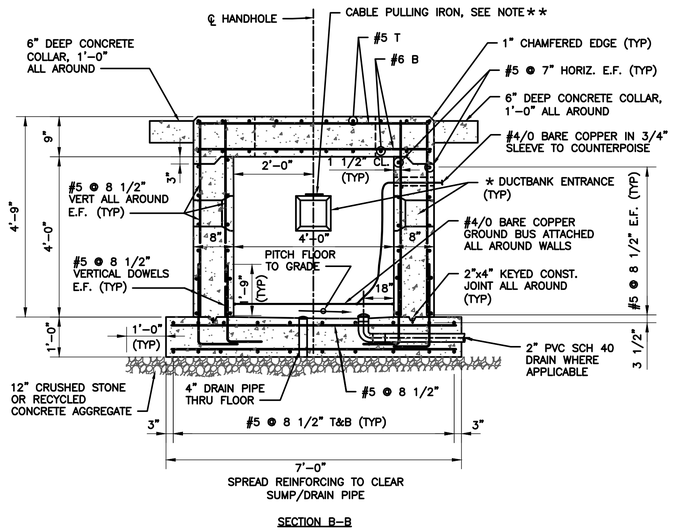
NTS



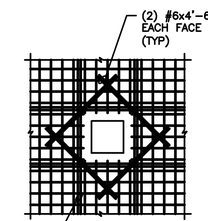
SECTION A–A

2 TYPICAL HANDHOLE REINFORCEMENT AIRCRAFT LOADING

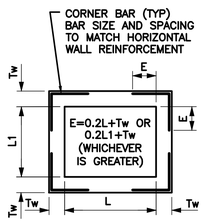
NTS



SECTION B–B



ADDITIONAL REINFORCEMENT AROUND DUCTBANK ENTRANCE FOR HS20 LOADING



** PLAN CORNER REINFORCEMENT FOR AIRCRAFT LOADING

3 TYPICAL HANDHOLE REINFORCEMENT AIRCRAFT LOADING

NTS

REFERENCE:

AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 2002 THROUGH CURRENT INTERIMS.

LOADING:

LIVE LOAD HS20

DESIGN CRITERIA:

1. EXCEPT AS NOTED, MINIMUM COMPRESSIVE STRENGTH FOR ELECTRICAL MANHOLE AND HANDHOLE f'c=4,000 psi @ 28 DAYS.
2. REINFORCEMENT: fy=60,000 psi (ASTM A615).
3. IF SOIL BORING DATA ARE NOT AVAILABLE, ASSUME ALLOWABLE SOIL BEARING CAPACITY = 2 ksf.

ABBREVIATIONS:

AASHTO	–	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
A/E	–	A/E = ARCHITECT/ ENGINEER
B	–	BOTTOM
CED	–	COMMON ELECTRICAL DUCTBANK
CL	–	CLEARANCE
E.F	–	EACH FACE
E.W.	–	EACH WAY
f'c	–	COMPRESSIVE FORCE
FAA	–	FEDERAL AVIATION ADMINISTRATION
HH	–	HANDHOLE
MH	–	MANHOLE
N.T.S.	–	NOT TO SCALE
RSA	–	RUNWAY SAFETY AREA
SCH.	–	SCHEDULE
SQ	–	SQUARE
T	–	TOP
TSA	–	TAXIWAY SAFETY AREA
TYP	–	TYPICAL
W, L, H	–	WIDTH, LENGTH, HEIGHT

NOTES:

1. THE TYPICAL INSIDE CLEAR DIMENSIONS FOR HH AND MH SHALL BE AS FOLLOWS:
   HH: 4'W x 4'L X 4'H
   MH: 6'W x 8'L x 6'–6"H
2. STRUCTURES INCLUDED IN THIS PROJECT MUST BE ABLE TO SUPPORT AIRCRAFT LOADING (DEFINED AS 100,000 LBS).
3. IF THE CONTRACTOR OPTS TO USE PRECAST MANHOLES AND HANDHOLES, THE CONTRACTOR MUST SUBMIT STRUCTURAL DESIGN CALCULATIONS, SIGNED AND SEALED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF TEXAS, TO VERIFY THAT THE STRUCTURES CAN SUPPORT THE ABOVE AIRCRAFT LOADING. THE CONTRACTOR MUST SUBMIT SHOP DRAWINGS DETAILING ALL CONNECTIONS AND INSERTS TO BE CAST IN THE STRUCTURE TO INCLUDE AMONG OTHERS, DRAIN PIPE, MH/HH FRAME AND COVER, GROUND ROD SLEEVE, PULL IRON, KNOCK–OUTS FOR DUCT BANKS, ETC.
3. MANHOLE/HANDHOLE FRAME AND COVER TO BE SQUARE, SPRING ASSIST, DUCTILE IRON, HINGED WITH A CLEAR OPENING OF 30" X 30". SPRING ASSIST MECHANISM MUST NOT OBSTRUCT THE OPENING. PROVIDE LID WITH ONE LIFT HANDLE AND TWO STAINLESS STEEL LOCKING BOLTS. THE FRAME MUST BE CAST INTO THE TOP SLAB WITHIN THE AIRCRAFT OPERATION AREA (AOA) USE 100,000 LB. RATED FRAME AND COVER LID WITH 2" HIGH LETTERS. SEE SPECIFICATION L–115 AND CONTRACT DRAWINGS FOR THE CAST LETTERING REQUIRED FOR EACH LID.
4. FOR CABLE SUPPORT RACK DETAIL AND NOTES, SEE SHEET EA–202.
5. TOP SLAB DIAGONAL BARS NOT SHOWN FOR CLARITY, FOR PLACEMENT, SEE TOP SLAB PLAN, DETAIL NO. 1.
6. FOR SPACING OF THE TOP SLAB REINFORCEMENT, SEE TOP SLAB PLAN, DETAIL NO. 1.
7. SUBGRADE BENEATH HANDHOLE FOOTING MUST BE PREPARED TO MEET A MINIMUM BEARING CAPACITY OF 2 KSF. CONTRACTOR TO VERIFY BEARING TO 3 FEET (MIN). COST OF VERIFYING AND PROVIDING THE REQUIRED MINIMUM BEARING IS INCIDENTAL TO AND INCLUDED IN THE PRICE OF THE HANDHOLE.
8. * ACTUAL SIZE, LOCATION AND NUMBER OF DUCTBANK ENTRANCE DEPENDS ON DESIGN REQUIREMENT. REFER TO DUCTBANK LAYOUT AND SECTIONS. MAXIMUM OPENING 2'–51#2"x2'–51#2" (9 WAY–4"O SCH. 40 PVC CONDUIT).
9. ** LOCATION OF PULLING IRON DEPENDS ON DUCTBANK LOCATIONS. IT MUST BE APPROXIMATELY LOCATED ALONG THE AXIS OF THE OPPOSITE DUCTBANK TO BE PULLED.
10. STRUCTURE GROUNDING SHALL MEET REQUIREMENTS SET FORTH IN FAA ORDER FAA–C–1391e, FIGURE 5.11.3–1.

4 GENERAL NOTES AND DESIGN ASSUMPTIONS FOR HH AND MH SUBJECT TO AIRCRAFT LOADING

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REVISIONS

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FAA NON-STANDARD TAXIWAYS PROJECT

AIRFIELD ELECTRICAL DETAILS

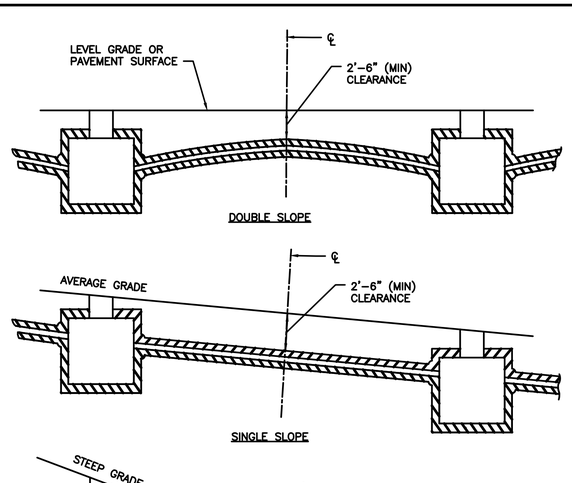
PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
SCALE: AS SHOWN
DATE: 02/24/2023

STATE OF TEXAS
JAMES A. McDONALD
119579
LICENSED PROFESSIONAL ENGINEER
2.24.23

APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO: 770
C.I.P. NO: 3–48–0110–044
H.A.S. NO: N/A
SHEET NO: EL506
of



NOTES:

1. ALL DUCTBANKS SHALL BE PITCHED TO DRAIN INTO HANDHOLES / MANHOLES.
2. MINIMUM DEPTH FOR ALL DUCT RUNS SHALL BE MEASURED AT C.L. OF RUNS.
3. WHERE DUCT SAG IS UNAVOIDABLE, DUCT MUST BE INSTALLED MIN. 42" BELOW FINISH GRADE.

1 TYPICAL MANHOLD/HANDHOLE DUCTBANK RELATION

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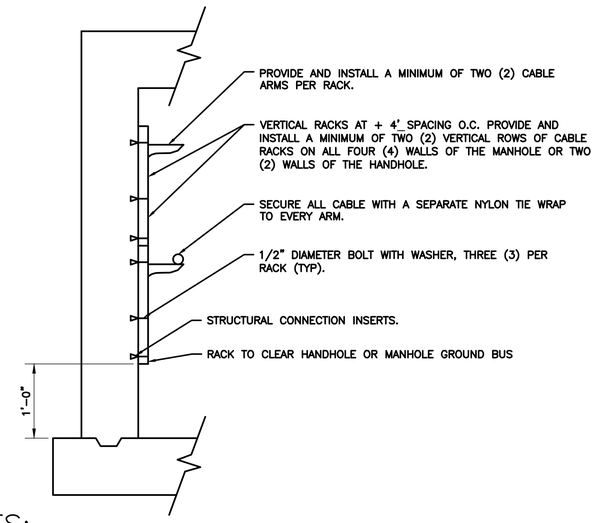

NOTES:

1. CABLE RACKS MUST BE HEAVY DUTY, STANDARD YELLOW FIBERGLASS REINFORCED NYLON WITH ADJUSTABLE BASE.
2. HANDHOLE RACK SHALL BE 3" SADDLE RACKS UNDERGROUND DEVICES # 35R2 OR EQUAL.
3. MANHOLE RACK SHALL BE 14" HEAVY DUTY RACK, UNDERGROUND DEVICES # CR16-B OR EQUAL.

3 TYPICAL NON-METALLIC CABLE SUPPORT RACKS

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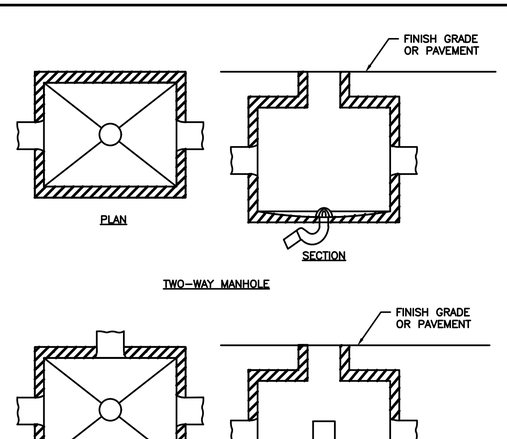

NOTE:

1. DRAIN ALL MANHOLES / HANDHOLES WITH 4" PVC 80 DRAIN WHERE APPLICABLE.

2 TYPICAL MANHOLE/HANDHOLE DETAILS

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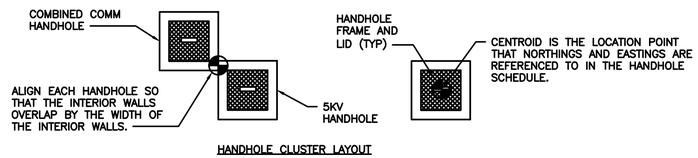

HANDHOLE CLUSTER LAYOUT

LEGEND:

= HANDHOLE CLUSTER CENTROID. CONCRETE ENCASED DUCTBANK WILL BE MEASURED FROM THE CENTROID OF ONE HANDHOLE CLUSTER TO THE NEXT. NO SEPARATE PAYMENT WILL BE MADE FOR THE INDIVIDUAL DUCTBANK FINGERS THAT ENTER INTO EACH HANDHOLE.

NOTES:

1. FOR STRUCTURAL NOTES AND REINFORCEMENT, SEE HANDHOLE AND MANHOLE DETALS.
2. PROVIDE AND INSTALL TWO (2) CABLE RACKS ON ALL FOUR (4) WALLS – 36" BELOW HANDHOLE INTERIOR TOP SLAB AS REQUIRED BY THE CONTRACT DOCUMENTS. PROVIDE AND INSTALL A MINIMUM OF TWO (2) RACK ARMS PER RACK.
3. PROVIDE AND INSTALL BELL ENDS ON EACH DUCT AND GROUT AROUND CONDUIT.
4. PROVIDE KNOCK-OUTS FOR DUCTBANKS ON ALL FOUR SIDES, 12" (MIN) ABOVE FLOOR AS REQUIRED TO CLEAR GROUND BUS. NEATLY GROUT ALL DUCTS IN PLACE WITH AN APPROVED NON-SHRINK GROUT.
5. GRADING AT HANDHOLE CLUSTERS MUST BE SLOPED TO MEET EXISTING GRADE.

4 AIRFIELD ELECTRICAL HANDHOLE DETAILS

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AIRFIELD ELECTRICAL DETAILS

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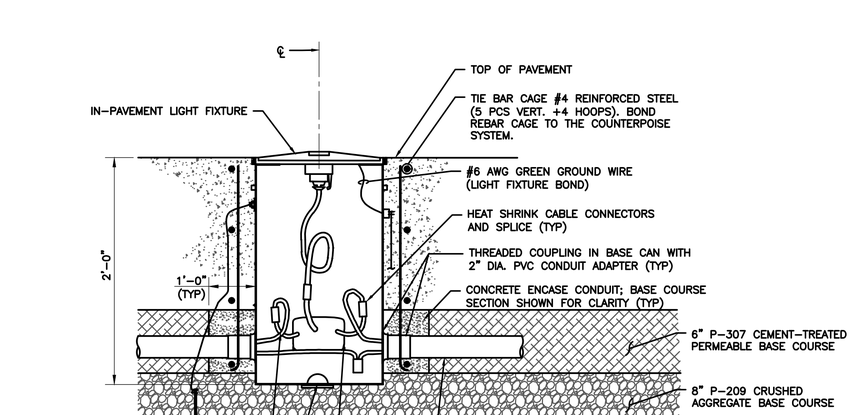
DESIGNER:
DRAWN BY:
CHECKED BY:
SCALE: AS SHOWN
DATE: 02/24/2023

STATE OF TEXAS
JAMES A. MCDONALD
119579
REGISTERED
PROFESSIONAL ENGINEER
2.24.23

APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

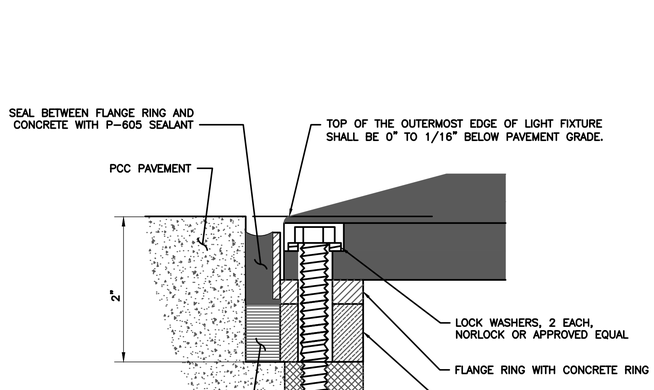
PROJECT NO: 770
C.I.P. NO: 3-48-0110-044
H.A.S. NO: N/A
SHEET NO: EL507
of



NOTE: BASE CAN SHALL BE A CLASS I, L–868B, 24" DEEP BASE WITH AN 11.25" BOLT CIRCLE.

1 SEMIFLUSH IN–PAVEMENT LIGHT DETAIL IN NEW PCC PAVEMENT (ITEM TO BE VERIFIED WITH PAVEMENT SECTIONS ON CIVIL PLANS)

NTS



2 FIXTURE MOUNTING DETAIL

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NOTES FOR INSTALLATION OF NEW IN–PAVEMENT LIGHT:

1. USE MANUFACTURER'S SETTING JIG FOR PROPERLY ALIGNING NEW L–868 BASES. SECURE SETTING JIG TO PREVENT MOVEMENT DURING CONCRETE ENCASEMENT.
2. ALL LIGHT BASES SHALL BE PROPERLY POSITIONED, ALIGNED, AND INSPECTED PRIOR TO PLACING CONCRETE. ANY BASE INSTALLED INCORRECTLY SHALL BE REMOVED AND REINSTALLED ACCORDING TO DESIGN CRITERIA. ALL CONDUIT SHALL BE PROPERLY SECURED IN PLACE BEFORE PLACING CONCRETE. TIGHT CONNECTIONS MUST BE ASSURED TO PREVENT CONCRETE FROM ENTERING BASE OR CONDUIT.
3. DO NOT USE SHIPPING BOLTS. USE STAINLESS STEEL BOLTS INTENDED FOR LIGHT FIXTURE INSTALLATION. USE TWO PIECE LOCK WASHERS AND TORQUE PER MANUFACTURER'S INSTRUCTIONS. ANTI–SEIZE COMPOUND SHALL BE APPLIED.
4. BOLTS FOR USE ON IN–PAVEMENT RUNWAY LIGHTS SHALL BE COATED STEEL BOLTS.
5. LIGHT POSITION TOLERANCES:

   LONGITUDINAL: +/–2' FROM STATIONING OR EXISTING LIGHT BASE BEING REPLACED.

   TRANSVERSE: +/–1/4" TRANSVERSE FROM LINE OF R/W EDGE LIGHTS.

   BASE ORIENTATION: PARALLEL TO R/W CENTERLINE +/–1/2 DEGREE.
6. THE CAN SHALL BE INSTALLED SUCH THAT THE LIGHT BEAM (CENTER OF LIGHT BASE) IS ALIGNED AS DESCRIBED PER AC 150/5340–30, PARAGRAPH 11.1. THE LIGHT BEAM MUST BE ALIGNED AS DESCRIBED IN THE LIGHTING SYSTEM MANUAL WITH A TOLERANCE OF 1/2 DEGREE. THE LIGHTING FIXTURE MUST BE LEVEL, AND THE TOP OF THE FIXTURE EDGE MUST BE BETWEEN +0 INCH AND –1/16 INCH FROM THE PAVEMENT TOP.
7. THE CAN SHALL BE INSTALLED IN SUCH A MANNER THAT THE MOUNTING HEIGHT SHALL BE IN ACCORDANCE WITH THE AC 150/5340–30, PARAGRAPH 11.2. ELEVATION OF THE BASE WITH RESPECT TO THE RUNWAY SURFACE AND AZIMUTH WITH RESPECT TO THE CENTERLINE ARE TWO PARAMETERS THAT MUST BE MET. IT IS ABSOLUTELY NECESSARY THAT THE ELEVATION OF THE LIGHT BASE TOP FLANGE BE AT LEAST THE THICKNESS OF THE LIGHT FITTING PLUS THE THICKNESS OF TYPICAL PAVING TOLERANCES OF 1 1/2 INCH BELOW THE PAVEMENT FINISHED SURFACE. IF LESS THAN THAT REMAINS AFTER PAVING, THE LIGHT FIXTURE WILL BE UNACCEPTABLY HIGH. IF MORE THAN 3/4 INCH IS LEFT, FLAT SPACER RINGS CAN BE USED TO BRING THE LIGHTING FIXTURES UP TO THE CORRECT ELEVATION. IN ORDER TO PRESERVE THE BASE INTEGRITY AND PROPER BOLT TORQUE, A MAXIMUM OF THREE SPACER RINGS MAY BE STACKED TOGETHER.

4 GENERAL NOTES AND DESIGN ASSUMPTIONS FOR HH AND MH SUBJECT TO AIRCRAFT LOADING

NTS

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JAMES A. MCDONALD
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2.24.23

APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO: 770
C.I.P. NO: 3–48–0110–044
H.A.S. NO: N/A
SHEET NO: EL508
of

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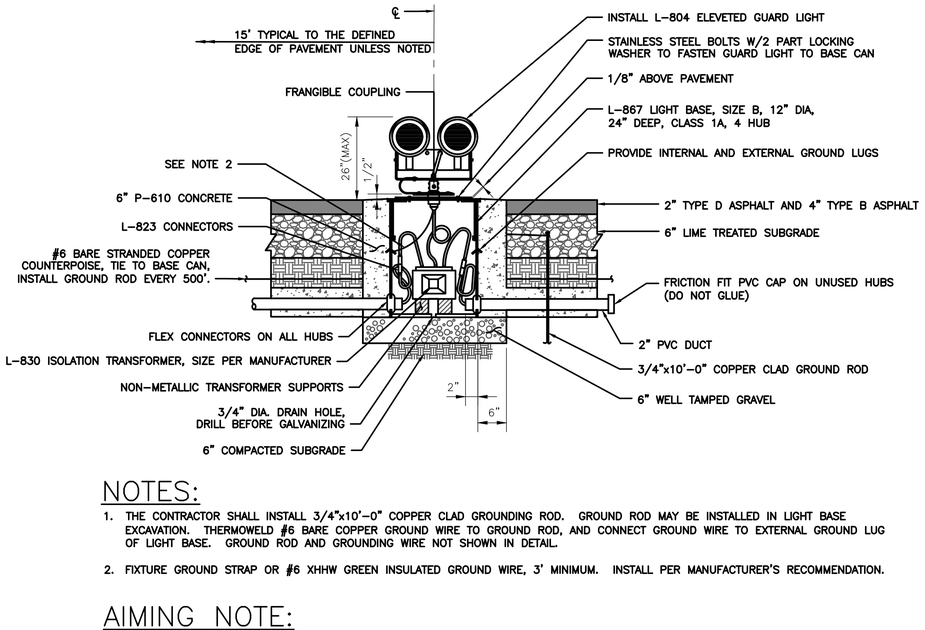


NOTES:

1. THE CONTRACTOR SHALL INSTALL 3/4"x10'-0" COPPER CLAD GROUNDING ROD. GROUND ROD MAY BE INSTALLED IN LIGHT BASE EXCAVATION. THERMOWELD #6 BARE COPPER GROUND WIRE TO GROUND ROD, AND CONNECT GROUND WIRE TO EXTERNAL GROUND LUG OF LIGHT BASE. GROUND ROD AND GROUNDING WIRE NOT SHOWN IN DETAIL.
2. FIXTURE GROUND STRAP OR #6 XHHW GREEN INSULATED GROUND WIRE, 3' MINIMUM. INSTALL PER MANUFACTURER'S RECOMMENDATION.

AIMING NOTE:

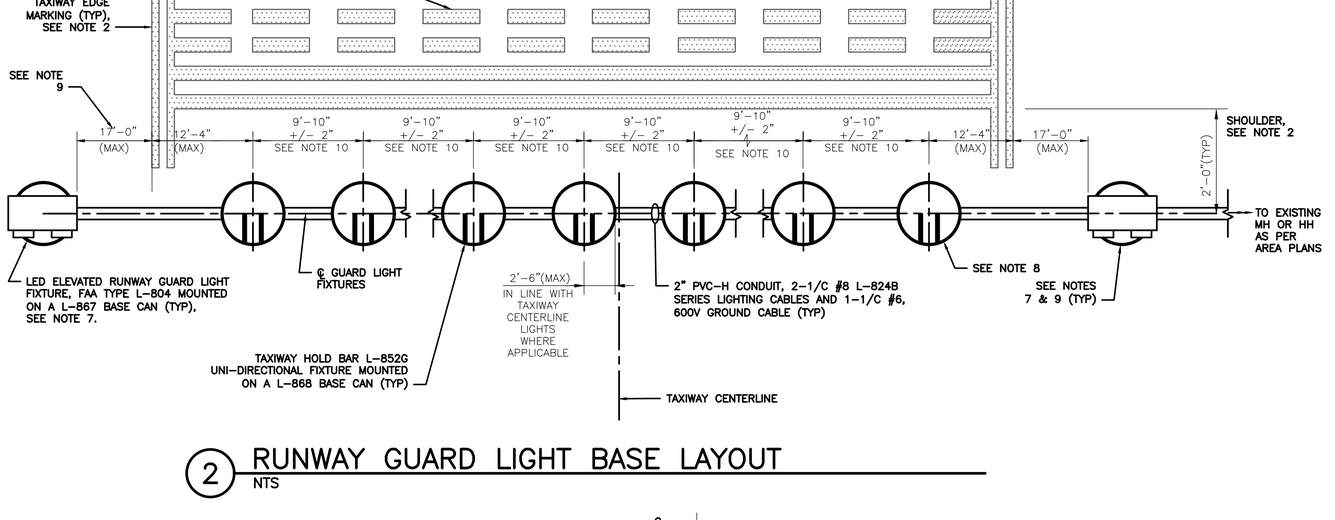
CONTRACTOR SHALL POSITION ALL NEW ELEVATED RUNWAY GUARD LIGHT FIXTURES 5 TO 10 DEGREES ABOVE THE HORIZONTAL AND POINTED TOWARDS CENTERLINE 150' – 200' FROM THE RUNWAY HOLDING POSITION. THE FINAL AIMING POSITION SHALL BE APPROVED BY THE ENGINEER.

1 BASE MOUNTED ELEVATED RUNWAY GUARD LIGHT DETAIL

NTS

NOTES:

1. FOR LEGEND, ABBREVIATIONS AND ELECTRICAL GENERAL NOTES, REFER TO E-001.
2. FOR RUNWAY AND TAXIWAY MARKING LOCATIONS, SEE CIVIL CONTRACT DRAWINGS.
3. FOR LIGHT FIXTURE LOCATION COORDINATES, SEE CIVIL CONTRACT DRAWINGS.
4. FOR LIGHT FIXTURES WITH LESS THAN 24" SEPARATION FROM JOINT TO NEAR EDGE OF LIGHT BASE, COORDINATE LOCATIONS WITH ENGINEER PRIOR TO CORING.
5. FOR EXACT NUMBER OF TAXIWAY HOLD BAR FIXTURES TO BE INSTALLED, SEE EL SERIES DRAWINGS.
6. FOR TOLERANCE REQUIREMENTS AND ALTERNATE SPACING METHODS, REFER TO FAA AC 150/5340-30, LATEST EDITION AND THE APPLICABLE FIGURE.
7. CANT THE L-804 RUNWAY GUARD LIGHTS TOWARD THE TAXIWAY CENTERLINE. THE LIGHTS SHALL BE INSTALLED SO THE LIGHT BEAM IS TILTED TO THE COCKPIT.
8. SURVEY USING THESE DIMENSIONS BEFORE INSTALLING RUNWAY GUARD LIGHT FIXTURES.
9. ELEVATED FIXTURE PAIR MAY BE MOVED ANYWHERE BETWEEN 10'-17' FROM THE EDGE OF DEFINED TAXIWAY. FIXTURES MAY ALSO BE SHIFTED UP TO 10' FURTHER FROM THE OUTBOARD EDGE OF YELLOW HOLDING POSITION STRIPE TO AVOID UNDESIRABLE SPOTS.
10. CONTRACTOR SHALL UTILIZE COORDINATES FOR LAYOUT OF IN-PAVEMENT LIGHTS AND VERIFY IN FIELD THAT LIGHT SPACING MEETS THIS DETAIL. IN SOME ARRAYS, ONE LIGHT HAS BEEN SHIFTED 1' TO AVOID A PAVEMENT JOINT, WHICH IS ACCEPTABLE WHERE DESIGNED ONLY.



2 RUNWAY GUARD LIGHT BASE LAYOUT

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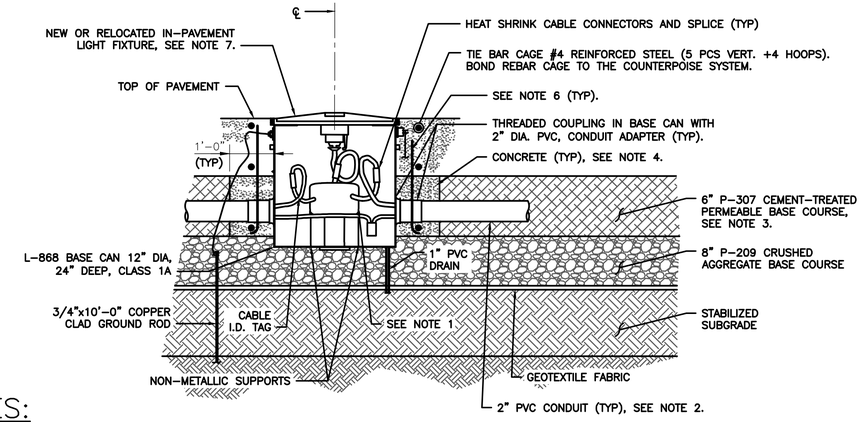
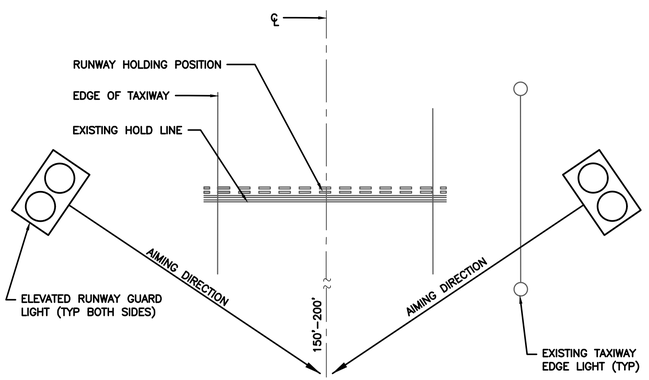


NOTES:

1. L-830 ISOLATION TRANSFORMER – NEW OR RELOCATED.
2. CONCRETE ENCASEMENT FOR ELECTRICAL CONDUIT MAY VARY WITHIN THE BITUMINOUS BASE COURSE AND SHALL HAVE A 3" MINIMUM COVER (TYP).
3. CONDUIT OPENINGS IN BASE CANS SHALL BE LOCATED SUCH THAT THE CONDUIT IS PLACED WITHIN THE 6"BITUMINOUS CONCRETE BASE COURSE LAYER. TO PROTECT THE ATPB (PERMEABLE) LAYER. CONDUIT & BASE AND SHALL BE INSTALLED AFTER BITUMINOUS CONCRETE BASE COURSE HAS BEEN PLACED. POSITION BASE CAN AS REQUIRED TO PLACE 2" DIA. HUB FOR DRAINAGE WITHIN THE 6" ATPB (PERMEABLE) LAYER.
4. CONCRETE AROUND BASE CAN AND CONDUIT. PLACE CONCRETE ANCHOR USING CARE THAT NEITHER JIG NOR LIGHT BASE ALIGNMENT IS DISTURBED (TYP.). FOR EXPEDIENCY, CONTRACTOR MAY USE EPOXY CONCRETE.
5. USE S.S. BOLTS WITH 2 PART LOCKING WASHERS TO ATTACH THE FIXTURE TO BASE CAN WITH ANTI-SEIZE.
6. #6 AWG BARE COPPER COUNTERPOISE WIRE EXOTHERMICALLY BONDED TO THE EXTERNAL CAN LUG CONTINUOUS FROM CAN TO CAN. REFER TO DETAIL NO. 3/ES-120 FOR COUNTERPOISE AND GROUND ROD CIRCUIT DIAGRAMS.
7. THE EDGE RIM OF THE IN-PAVEMENT FIXTURE MUST BE FLUSH AND LEVEL WITH THE TOP OF PAVEMENT IN ALL DIRECTIONS.
8. THE CONTRACTOR MUST DETERMINE BASE CANS AND EXTENSION RINGS OF APPROPRIATE DEPTHS TO MEET THE PAVING METHOD ADOPTED BY THE CONTRACTOR. THE TOTAL DEPTH OF BASE CAN AND EXTENSION RING MUST BE 24 INCHES.
9. RELOCATION OF IN PAVEMENT RUNWAY GUARD LIGHTS INCLUDES INDIVIDUAL LIGHT FIXTURE, ISOLATION TRANSFORMER, LIGHT FIXTURE REMOTE BRITENESS UNITS AND IN PAVEMENT RGL LIGHT BAR SYNCRONIZTION UNIT.
10. RELOCATION OF IN ELEVATED RUNWAY GUARD LIGHTS INCLUDES INDIVIDUAL LIGHT FIXTURE, ISOLATION TRANSFORMER AND LIGHT FIXTURE DUAL REMOTE BRITENESS UNITS.

4 SEMIFLUSH IN-PAVEMENT RUNWAY GUARD LIGHT ON NEW BASE DETAIL

NTS



AIMING NOTE:

CONTRACTOR SHALL POSITION ALL NEW ELEVATED RUNWAY GUARD LIGHT FIXTURES 5 TO 10 DEGREES ABOVE THE HORIZONTAL AND POINTED TOWARDS CENTERLINE 150' – 200' FROM THE RUNWAY HOLDING POSITION. THE FINAL AIMING POSITION SHALL BE APPROVED BY THE ENGINEER.

* NOTE:

THE PROPOSED OFFSET OF THE ELEVATED RUNWAY GUARD LIGHT BASE HAS A TOLERENCE OF –5', +2'. THE LOCATION OF THE ELEVATED RUNWAY GUARD LIGHT BASE MUST BE LOCATED SO AS TO NOT INTERFERE WITH THE READABILITY OF THE RUNWAY HOLDING POSITION SIGNS. THE FINAL LOCATION OF THE ELEVATED RUNWAY GUARD LIGHT BASE SHALL BE APPROVED BY THE ENGINEER BEFORE THE CONTRACTOR COMMENCES ANY WORK.

3 ELEVATED RUNWAY GUARD LIGHT AIMING DIAGRAM

NTS

HOUSTON AIRPORT SYSTEM
WILLIAM P. HOBBY AIRPORT
HOUSTON TEXAS

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TEXAS P.E. FIRM F-2966

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

REVISIONS

NO.	DESCRIPTION	DATE	BY
0	ISSUED FOR BID	02/24/2023	SC

FAA NON-STANDARD TAXIWAYS PROJECT

AIRFIELD ELECTRICAL DETAILS

PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
SCALE: AS SHOWN
DATE: 02/24/2023

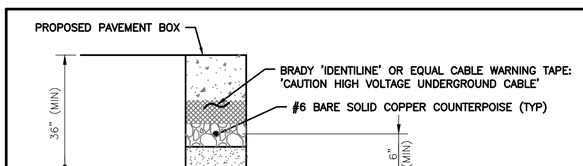
STATE OF TEXAS
JAMES A. McDONALD
119579
LICENSED PROFESSIONAL ENGINEER
2.24.23

APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

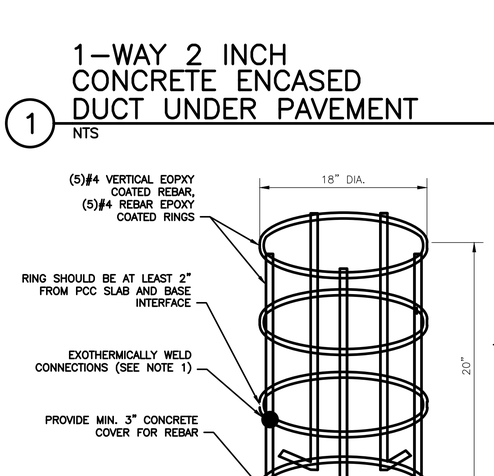
PROJECT NO: 770
C.I.P. NO: 3-48-0110-044
H.A.S. NO: N/A
SHEET NO: EL509
of

FILENAME: H22C770A-EL509.DWG PLOT DATE: 2023/02/17 PLOT TIME: 1:09:05 PM



1-WAY 2 INCH CONCRETE ENCASED DUCT UNDER PAVEMENT

1 NTS

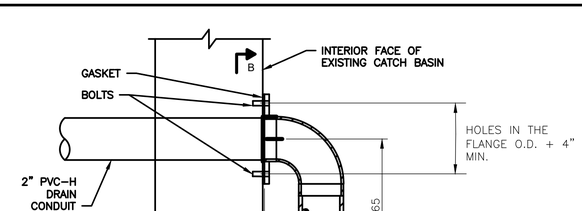


NOTE:

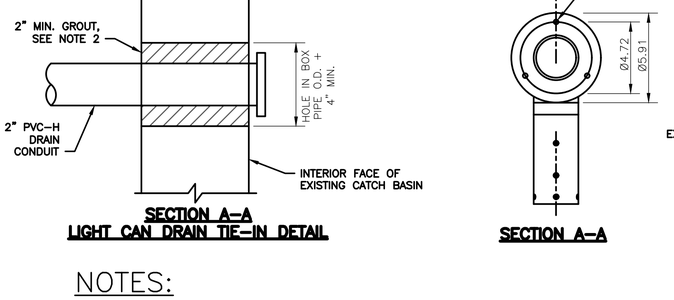
1. FOLLOWING EXOTHERMICALLY WELDING CONNECTIONS, PATCH WELDED AREAS WITH EPOXY.

TYPICAL LIBHT BASE REBAR CAGE DETAIL

2 NTS



INSTALLATION OF WATER BACKFLOW PREVENTION DEVICE IN THE CATCH BASIN



SECTION A-A LIGHT CAN DRAIN TIE-IN DETAIL

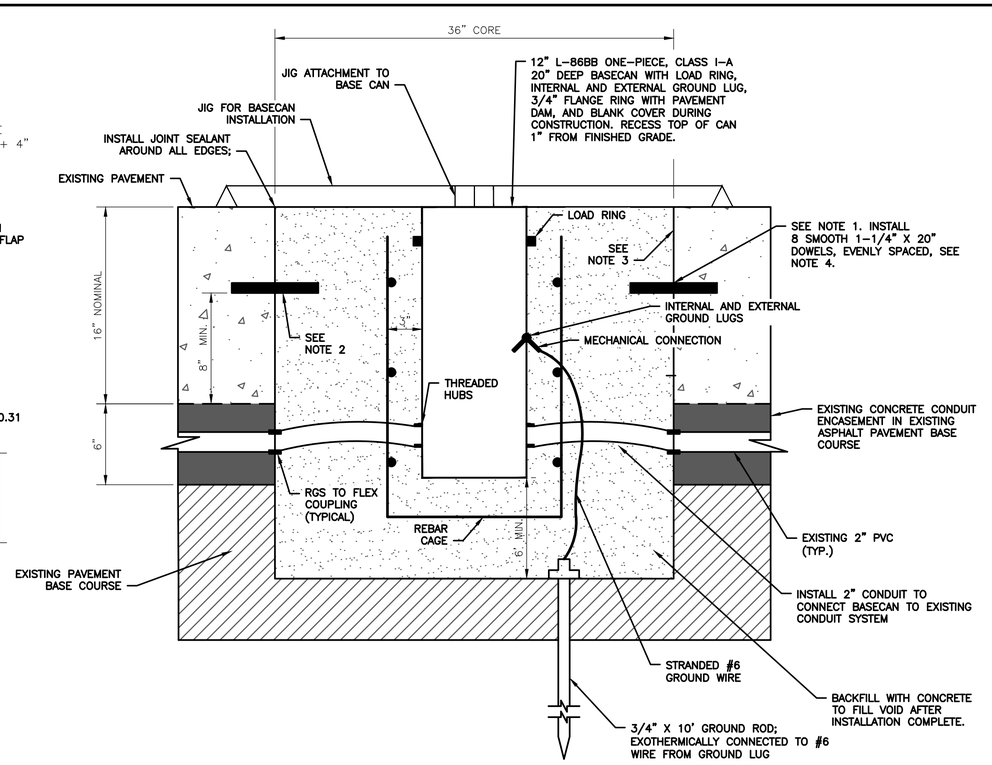
SECTION A-A

NOTES:

1. FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE ELECTRICAL LEGEND SHEET.
2. GROUT, IF NEEDED, SHALL BE NON-SHRINK, NON-METALLIC GROUT IN CONFORMANCE WITH ASTM C1107.
3. FURNISH AND INSTALL BACKFLOW PREVENTION DEVICE AT DRAINAGE CONDUIT ENTRANCE. MATCH DRAINAGE CONDUIT DIAMETER SIZE.
4. CONTRACTOR SHALL WIRE BRUSH THE WALLS AND REMOVE ALL WATER AND ANY DEBRIS/SAND FROM ALL DRAINAGE CATCH BASINS WHICH HAVE AN ELECTRICAL CONDUIT DRAIN ENTERING INTO IT.

STORMWATER BACKFLOW PREVENTION DEVICE INSTALLATION

3 NTS



NOTES:

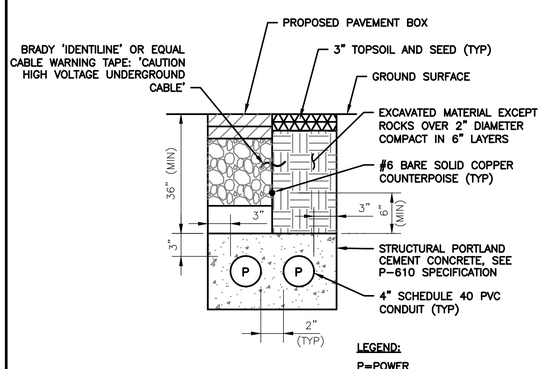
1. INSTALL 8 EVENLY SPACED, SMOOTH 1 1/4" X 20" DOWELS. PAINT AND OIL EXPOSED HALF OF DOWEL ONLY.
2. EPOXY DOWEL INTO DRILLED SOCKET IN PAVEMENT SLAB.
3. COAT HORIZONTAL AND VERTICAL FACES WITH DOUBLE APPLICATION OF MEMBRANE FORMING CURING COMPOUND PRIOR TO PLACING NEW PCC, PROTECT DOWEL BARS FROM CURE MATERIAL.
4. ADJUST DOWEL INSTALLATION TO PROVIDE CLEARANCE FROM BASE CAN. MAY BE INSTALLED WITH 12" EMBEDDED IF NEEDED FOR CLEARANCE.

INSTALLATION OF NEW BASE CAN IN EXISTING PAVEMENT BY 36" CORE

4 NTS

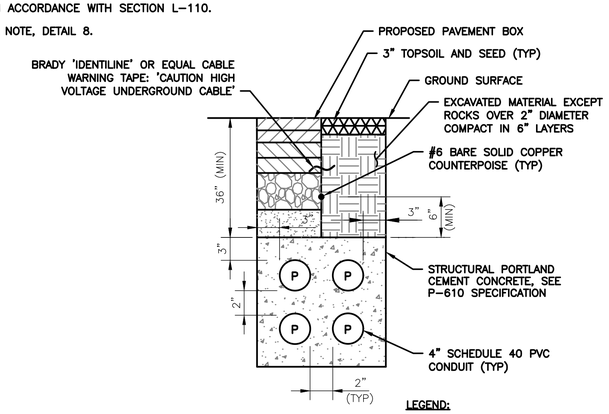
GENERAL NOTES & ASSUMPTIONS-CONCRETE ENCASED DUCTBANK:

1. CONTRACTOR TO REFER TO PLAN AND PROFILE SHEETS FOR INFORMATION ON POSSIBLE UTILITY CONFLICTS WITHIN THE IMMEDIATE VICINITY OF THE PROPOSED DUCTBANKS.
2. CONTRACTOR MUST PROVIDE COUNTERPOISE AND WARNING TAPE OVER CENTERLINE OF DUCTBANK AS SHOWN FOR EVERY LINEAR FOOT OF DUCTBANK.
   CONTRACTOR MUST PROVIDE PULL CORD IN ALL EMPTY CONDUITS OF DUCTBANKS IN ACCORDANCE WITH SECTION L-110.
3. ALL DUCTBANKS CONSTRUCTED UNDER PAVEMENT SHALL BE REINFORCED. SEE GENERAL NOTE, DETAIL 8.



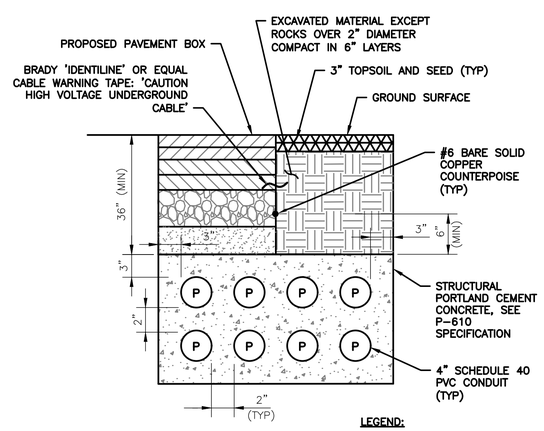
2-WAY 4-INCH CONCRETE ENCASED DUCTBANK

5 NTS



4-WAY 4-INCH CONCRETE ENCASED DUCTBANK

6 NTS

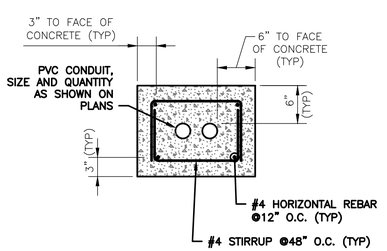


8-WAY 4-INCH CONCRETE ENCASED DUCTBANK

9 NTS

GENERAL NOTE:

1. THE DIMENSIONS SHOWN ON THIS DETAIL 8 SHALL BE EXTRAPOLATED FOR ANY CONCRETE ENCASED DUCTBANK REQUIRING REINFORCEMENT PER NOTE 8.



PVC CONCRETE ENCASED DUCTBANK TYPICAL REINFORCEMENT

8 NTS

HOUSTON AIRPORT SYSTEM
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BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

REVISIONS

NO.	DESCRIPTION	DATE	BY
0	ISSUED FOR BID	02/24/2023	SC

FAA NON-STANDARD TAXIWAYS PROJECT

AIRFIELD ELECTRICAL DETAILS

PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
SCALE: AS SHOWN
DATE: 02/24/2023

STATE OF TEXAS
JAMES A. McDONALD
119579
LICENSED PROFESSIONAL ENGINEER
2.24.23

APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO: 770
C.I.P. NO: 3-48-0110-044
H.A.S. NO: N/A
SHEET NO: EL510
of

LIGHT FIXTURE LOCATION TABLE			
FIXTURE ID	NORTHING	EASTING	LENS COLOR
1601	13804574.57	3148323.75	AMBER
1602	13804555.28	3148341.36	YELLOW
1603	13804548.20	3148349.19	YELLOW
1604	13804542.31	3148355.71	YELLOW
1605	13804535.82	3148362.86	YELLOW
1606	13804529.34	3148370.06	YELLOW
1607	13804522.87	3148377.22	YELLOW
1608	13804516.38	3148384.39	YELLOW
1609	13804509.90	3148391.56	YELLOW
1610	13804503.55	3148398.85	YELLOW
1611	13804497.07	3148406.02	YELLOW
1612	13804485.55	3148422.22	AMBER
1613	13805463.20	3149127.45	AMBER
1614	13805447.43	3149148.62	YELLOW
1615	13805440.38	3149156.42	YELLOW
1616	13805434.45	3149162.96	YELLOW
1617	13805427.98	3149170.14	YELLOW
1618	13805421.51	3149177.30	YELLOW
1619	13805415.02	3149184.48	YELLOW
1620	13805408.54	3149191.65	YELLOW
1621	13805402.05	3149198.82	YELLOW
1622	13805395.57	3149205.99	YELLOW
1623	13805389.09	3149213.16	YELLOW
1624	13805362.74	3149217.06	AMBER
1701	13805060.82	3149572.56	AMBER
1702	13805045.45	3149593.28	YELLOW
1703	13805038.19	3149601.32	YELLOW
1704	13805032.24	3149607.90	YELLOW
1705	13805025.63	3149615.21	YELLOW
1706	13805018.98	3149622.56	YELLOW
1707	13805012.37	3149629.87	YELLOW
1708	13805005.76	3149637.20	YELLOW
1709	13804999.13	3149644.53	YELLOW
1710	13804992.51	3149651.86	YELLOW
1711	13804972.06	3149670.72	AMBER
2001	13800292.93	3148892.66	YELLOW
2002	13800300.22	3148899.26	YELLOW
2003	13800307.51	3148905.85	YELLOW
2004	13800314.81	3148912.45	YELLOW
2005	13800322.09	3148919.05	YELLOW
2006	13800329.39	3148925.64	YELLOW
2007	13800336.68	3148932.24	YELLOW
2008	13800343.97	3148938.84	YELLOW
2101	13800154.46	3149205.71	RED
2102	13800141.49	3149206.53	RED
2103	13800128.51	3149207.34	RED
2104	13800116.54	3149208.09	RED
2105	13800102.56	3149208.97	RED
2106	13800089.59	3149209.79	RED
2107	13800078.08	3149208.13	RED
2108	13800070.66	3149201.42	RED
2109	13800063.24	3149194.72	RED
2110	13800055.83	3149188.01	RED
2111	13800048.41	3149181.30	RED
2112	13800041.00	3149174.59	RED
2113	13800033.58	3149167.88	RED
2501	13800795.52	3148893.92	CLEAR/YELLOW
2502	13800657.22	3148767.91	CLEAR/YELLOW
2503	13800509.69	3148634.79	GREEN/RED
2504	13800501.12	3148640.52	GREEN/RED
2505	13800494.41	3148647.94	GREEN/RED
2506	13800487.66	3148655.37	GREEN/RED
2507	13800413.91	3148736.93	GREEN/RED
2508	13800407.21	3148744.35	GREEN/RED
2509	13800400.50	3148751.76	GREEN/RED
2510	13800393.79	3148759.18	GREEN/RED
2511	13800537.53	3148888.42	CLEAR/YELLOW
2512	13800681.30	3149019.20	CLEAR/YELLOW

LIGHT FIXTURE LOCATION TABLE			
FIXTURE ID	NORTHING	EASTING	LENS COLOR
2600	13800387.10	3148766.61	BLUE
2601	13800358.14	3148790.10	BLUE
2602	13800328.52	3148822.82	BLUE
2603	13800299.19	3148855.25	BLUE
2604	13800275.64	3148881.28	BLUE
2605	13800251.97	3148907.44	BLUE
2606	13800228.37	3148933.53	BLUE
2607	13800204.18	3148960.27	BLUE
2608	13800179.98	3148987.02	BLUE
2609	13800155.78	3149013.75	BLUE
2610	13800122.27	3149050.79	BLUE
2611	13800088.77	3149087.82	BLUE
2612	13800054.20	3149124.03	BLUE
2613	13800029.96	3149149.48	BLUE
2614	13799971.15	3149211.31	BLUE
2615	13799946.99	3149237.04	BLUE
2616	13799912.33	3149273.07	BLUE
2617	13799878.84	3149300.72	BLUE
2618	13799845.35	3149328.37	BLUE
2619	13799811.85	3149356.02	BLUE
2620	13799769.25	3149364.47	BLUE
2621	13799726.65	3149372.92	BLUE
2622	13799684.05	3149381.37	BLUE
2623	13799638.00	3149384.70	BLUE
2624	13799591.97	3149388.36	BLUE
2625	13799545.94	3149391.90	BLUE
2626	13799499.75	3149396.35	BLUE
2627	13800489.37	3148849.58	BLUE
2628	13800451.91	3148874.94	BLUE
2629	13800414.65	3148900.12	BLUE
2630	13800376.95	3148925.59	BLUE
2631	13800352.40	3148950.82	BLUE
2632	13800327.93	3148976.13	BLUE
2633	13800303.45	3149001.46	BLUE
2634	13800280.08	3149028.95	BLUE
2635	13800256.77	3149056.49	BLUE
2636	13800233.47	3149084.01	BLUE
2637	13800212.05	3149123.69	BLUE
2638	13800190.65	3149163.32	BLUE
2639	13800169.28	3149202.91	BLUE
2640	13800194.51	3149240.19	BLUE
2641	13800219.75	3149277.48	BLUE
2642	13800244.99	3149314.78	BLUE
2643	13800315.66	3149383.10	BLUE
2644	13800386.33	3149451.43	BLUE
2645	13800457.02	3149519.75	BLUE
2646	13800392.98	3149590.40	BLUE
2647	13800318.13	3149526.81	BLUE
2648	13800243.21	3149463.17	BLUE
2649	13800168.18	3149399.67	BLUE
2650	13800121.58	3149374.03	BLUE
2651	13800085.84	3149355.21	BLUE
2652	13800049.31	3149335.49	BLUE
2653	13800008.14	3149363.39	BLUE
2654	13799966.97	3149391.28	BLUE
2655	13799925.76	3149419.11	BLUE
2656	13799879.43	3149450.46	BLUE
2657	13799841.16	3149469.06	BLUE
2658	13799799.43	3149477.23	BLUE
2659	13799605.13	3148777.19	BLUE
2660	13799603.45	3148743.70	BLUE
2661	13799601.77	3148710.22	BLUE
2806	13800545.23	3148791.20	YELLOW
2807	13800536.04	3148783.92	GREEN (C)
2808	13800526.61	3148778.23	YELLOW (C)
2809	13800515.22	3148773.26	GREEN (C)
2810	13800503.95	3148770.06	YELLOW (C)
2811	13800492.35	3148768.36	GREEN (C)

LIGHT FIXTURE LOCATION TABLE			
FIXTURE ID	NORTHING	EASTING	LENS COLOR
2812	13800482.09	3148768.12	YELLOW (D)
2813	13800468.98	3148769.55	GREEN (D)
2814	13800458.57	3148772.12	YELLOW (D)
2815	13800447.63	3148776.33	GREEN (D)
2816	13800436.50	3148782.47	YELLOW (D)
2817	13800427.10	3148789.47	GREEN (D)
2818	13800418.06	3148798.31	YELLOW (D)
2819	13800389.97	3148829.40	GREEN (D)
2820	13800361.85	3148860.46	YELLOW (D)
2821	13800333.74	3148891.53	GREEN (D)
2822	13800305.63	3148922.60	YELLOW (D)
2823	13800277.51	3148953.67	GREEN (D)
2824	13800249.40	3148984.74	YELLOW (D)
2825	13800221.29	3149015.81	GREEN (C)
2826	13800193.19	3149046.89	YELLOW (C)
2827	13800165.08	3149077.96	GREEN (C)
2828	13800136.97	3149109.03	YELLOW (C)
2829	13800100.80	3149149.66	GREEN (C)
2830	13800100.80	3149149.66	YELLOW (C)
2831	13800094.14	3149160.24	GREEN (C)
2832	13800089.01	3149171.64	YELLOW (C)
2833	13800085.51	3149183.63	GREEN (C)
2834	13800083.70	3149196.00	YELLOW (C)
2835	13800083.67	3149209.02	GREEN (D)
2836	13800085.49	3149221.87	YELLOW (D)
2837	13800088.63	3149232.94	GREEN (D)
2838	13800093.63	3149244.41	YELLOW (D)
2839	13800100.16	3149255.09	GREEN (D)
2840	13800108.12	3149264.75	YELLOW (D)
2841	13800117.24	3149273.33	GREEN (D)
2842	13800149.05	3149301.85	GREEN/YELLOW (D)
2843	13800182.50	3149332.42	GREEN (D)
2844	13800216.40	3149363.08	GREEN (D)
2845	13800249.70	3149393.22	GREEN (D)
2846	13800283.30	3149423.62	GREEN (D)
2847	13800316.45	3149453.61	GREEN (D)
2848	13800350.47	3149484.39	GREEN (C)
2849	13800386.17	3149516.69	GREEN (C)
2850	13800422.86	3149549.89	GREEN (C)
2851	13800459.20	3149582.76	GREEN (C)
4001	13804715.85	3148458.46	RED/RED (C)
4002	13804708.46	3148451.72	RED/RED (C)
4003	13804701.07	3148444.99	RED/RED (C)
4004	13804693.70	3148438.25	RED/RED (C)
4005	13804562.60	3148582.68	RED/YELLOW (C)
4006	13804430.85	3148728.28	RED/YELLOW (C)
4007	13804300.24	3148872.06	RED/YELLOW
4008	13804796.27	3148531.66	RED/RED
4009	13804803.66	3148538.41	RED/RED
4010	13804811.05	3148545.16	RED/RED
4011	13804818.84	3148552.27	RED/RED
4012	13804688.04	3148697.39	RED/YELLOW
4013	13804556.28	3148842.87	RED/YELLOW
4014	13804425.56	3148986.77	RED/YELLOW
6001	13803871.80	3148460.90	BLUE
6002	13803915.43	3148457.44	BLUE
6003	13803959.03	3148453.69	BLUE
6004	13804002.64	3148450.06	BLUE
6005	13804046.24	3148446.31	BLUE
6006	13804089.82	3148442.56	BLUE
6007	13804121.40	3148435.48	BLUE
6008	13804153.06	3148428.38	BLUE
6009	13804185.27	3148421.15	BLUE
6010	13804218.97	3148393.31	BLUE
6011	13804252.12	3148365.94	BLUE
6012	13804285.72	3148338.19	BLUE
6013	13804326.63	3148295.24	BLUE
6014	13804362.19	3148268.47	BLUE

LIGHT FIXTURE LOCATION TABLE			
FIXTURE ID	NORTHING	EASTING	LENS COLOR
6015	13804404.17	3148253.68	BLUE
6016	13804448.56	3148252.30	BLUE
6017	13804491.31	3148264.37	BLUE
6018	13804528.50	3148288.79	BLUE
6019	13804560.06	3148317.35	BLUE
6020	13804591.64	3148345.91	BLUE
6021	13804623.19	3148374.45	BLUE
6022	13804654.75	3148403.00	BLUE
6023	13804686.29	3148431.53	BLUE
6024	13803878.71	3148557.95	BLUE
6025	13803924.06	3148555.63	BLUE
6026	13803969.47	3148553.16	BLUE
6027	13804014.75	3148550.83	BLUE
6028	13804060.34	3148548.65	BLUE
6029	13804102.19	3148546.34	BLUE
6030	13804145.61	3148544.34	BLUE
6031	13804188.93	3148541.41	BLUE
6032	13804225.56	3148535.12	BLUE
6033	13804259.60	3148520.32	BLUE
6034	13804289.32	3148497.66	BLUE
6035	13804322.94	3148463.36	BLUE
6036	13804360.01	3148438.68	BLUE
6037	13804397.07	3148414.02	BLUE
6038	13804434.13	3148389.35	BLUE
6039	13804468.00	3148407.38	BLUE
6040	13804501.24	3148425.07	BLUE
6041	13804534.88	3148442.97	BLUE
6042	13804556.31	3148474.62	BLUE
6043	13804577.75	3148506.30	BLUE
6044	13804599.17	3148537.93	BLUE
6045	13801126.58	3148696.47	BLUE
6046	13801073.07	3148649.29	BLUE
6047	13801021.94	3148603.45	BLUE
6048	13800971.22	3148556.74	BLUE
6049	13800920.41	3148509.96	BLUE
6050	13800747.42	3148518.60	BLUE
6051	13800715.47	3148555.78	BLUE
6052	13800687.00	3148588.92	BLUE
6053	13800672.24	3148625.67	BLUE
6054	13800657.49	3148662.41	BLUE
6055	13800642.73	3148699.16	BLUE
6056	13800627.47	3148737.17	BLUE
6057	13800514.57	3148625.72	BLUE
6058	13800538.33	3148591.62	BLUE
7001	13804418.80	3148998.62	BLUE
7002	13804452.30	3149028.92	BLUE
7003	13804484.85	3149058.36	BLUE
7004	13804517.39	3149087.79	BLUE
7005	13804544.17	3149112.01	BLUE
7006	13804570.41	3149135.75	BLUE
7007	13804602.86	3149165.09	BLUE
7008	13804635.33	3149194.46	BLUE
7009	13804667.73	3149223.76	BLUE
7010	13804702.06	3149254.98	BLUE
7011	13804736.65	3149286.09	BLUE
7012	13804771.02	3149317.43	BLUE
7013	13804803.14	3149346.24	BLUE
7014	13804840.23	3149379.78	BLUE
7015	13804867.79	3149404.71	BLUE
7016	13804895.36	3149429.65	BLUE
7017	13804999.33	3149523.68	BLUE
7018	13805032.37	3149553.56	BLUE
7019	13805065.44	3149583.47	BLUE
7020	13805098.56	3149613.38	BLUE
7021	13805131.60	3149643.35	BLUE
7022	13805164.89	3149673.41	BLUE
7023	13805201.26	3149720.93	BLUE
7024	13804326.78	3149100.53	BLUE

LIGHT FIXTURE LOCATION TABLE			
FIXTURE ID	NORTHING	EASTING	LENS COLOR
7025	13804367.45	3149122.48	BLUE
7026	13804407.07	3149143.86	BLUE
7027	13804447.14	3149165.48	BLUE
7028	13804474.51	3149188.64	BLUE
7029	13804500.16	3149213.42	BLUE
7030	13804525.39	3149250.70	BLUE
7031	13804550.63	3149287.99	BLUE
7032	13804575.88	3149325.29	BLUE
7033	13804708.50	3149445.23	BLUE
7034	13804757.29	3149471.56	BLUE
7035	13804788.31	3149517.33	BLUE
7036	13804770.18	3149551.07	BLUE
7037	13804752.09	3149584.79	BLUE
7038	13804734.06	3149618.49	BLUE
7039	13804832.09	3149697.55	BLUE
7040	13804861.77	3149677.53	BLUE
7041	13804891.43	3149657.61	BLUE
7042	13804921.09	3149637.51	BLUE
7043	13804960.99	3149659.04	BLUE
7044	13805000.84	3149680.54	BLUE
7045	13805039.98	3149701.65	BLUE
7046	13805049.56	3149709.75	BLUE
7047	13805074.43	3149737.10	BLUE
7048	13805099.30	3149764.47	BLUE
7049	13805116.79	3149800.52	BLUE
7050	13805134.29	3149836.58	BLUE
7051	13805151.85	3149872.78	BLUE
7052	13805171.06	3149921.55	BLUE
7053	13805190.27	3149970.31	BLUE
7054	13804826.09	3148558.88	BLUE
7055	13804857.48	3148586.37	BLUE
7056	13804888.68	3148614.59	BLUE
7057	13804919.88	3148642.82	BLUE
7058	13804964.29	3148682.98	BLUE
7059	13805008.77	3148723.17	BLUE
7060	13805053.19	3148763.38	BLUE
7061	13805097.08	3148803.08	BLUE
7062	13805141.16	3148842.79	BLUE
7063	13805185.37	3148882.94	BLUE
7064	13805210.68	3148905.75	BLUE
7065	13805239.73	3148932.10	BLUE
7066	13805268.77	3148958.36	BLUE
7067	13805297.84	3148984.65	BLUE
7068	13805401.12	3149078.07	BLUE
7069	13805430.33	3149104.49	BLUE
7070	13805459.54	3149130.96	BLUE
7071	13805488.80	3149157.37	BLUE
7072	13805518.03	3149183.81	BLUE
7073	13805542.92	3149212.49	BLUE
7074	13805560.21	3149246.28	BLUE
7075	13805575.51	3149287.91	BLUE
7076	13804729.65	3148655.86	BLUE
7077	13804770.14	3148677.60	BLUE
7078	13804809.83	3148699.02	BLUE
7079	13804849.62	3148720.49	BLUE
7080	13804895.15	3148759.01	BLUE
7081	13804941.10	3148797.89	BLUE
7082	13804986.99	3148836.72	BLUE
7083	13805029.69	3148878.00	BLUE
7084	13805072.43	3148918.78	BLUE
7085	13805115.13	3148960.60	BLUE
7086	13805140.39	3148997.93	BLUE
7087	13805165.58	3149035.15	BLUE
7088	13805190.83	3149072.46	BLUE
7089	13805172.89	3149105.68	BLUE
7090	13805154.98	3149138.90	BLUE
7091	13805137.01	3149172.20	BLUE
7092	13805234.68	3149252.54	BLUE

LIGHT FIXTURE LOCATION TABLE			
FIXTURE ID	NORTHING	EASTING	LENS COLOR
7093	13805264.28	3149232.47	BLUE
7094	13805293.83	3149212.44	BLUE
7095	13805323.45	3149192.42	BLUE
7096	13805358.69	3149211.44	BLUE
7097	13805393.93	3149230.45	BLUE
7098	13805429.17	3149249.47	BLUE
7099	13805451.60	3149274.14	BLUE
7100	13805456.51	3149284.32	BLUE
7101	13805461.60	3149315.73	BLUE
7102	13805478.25	3149351.76	BLUE
7103	13805448.32	3149416.45	BLUE
7104	13805448.33	3149416.45	BLUE
7105	13805424.87	3149454.34	BLUE
7106	13805401.41	3149492.22	BLUE
7107	13805368.58	3149529.93	BLUE
7108	13805351.55	3149549.48	BLUE
7109	13805301.69	3149606.74	BLUE
7110	13805251.81	3149664.02	BLUE
7111	13805234.81	3149683.57	BLUE
8001	13804559.23	3149356.14	BLUE
8002	13804542.58	3149387.00	BLUE
8003	13804525.93	3149417.86	BLUE
8004	13804477.64	3149428.22	BLUE
8005	13804671.22	3149470.47	BLUE
8006	13804633.92	3149495.93	BLUE
8007	13804596.66	3149520.94	BLUE
8008	13804566.50	3149552.12	BLUE
8009	13804536.36	3149583.31	BLUE
8010	13804506.22	3149614.49	BLUE
8011	13804476.10	3149645.67	BLUE
8012	13804445.04	3149677.84	BLUE
8013	13804413.97	3149709.99	BLUE

BASE CAN, MANHOLE, HANDHOLE LOCATION TABLE				
STRUCTURE ID	NORTHING	EASTING	ELEVATION	STRUCT. TYPE
301	13803997.25	3148588.46	42.56	POWER
302#	13800470.73	3148834.98	41.47	POWER
303#	13800433.16	3148800.99	41.45	POWER
304	13800190.48	3149216.39	40.50	POWER
305	13805225.92	3149628.68	42.80	COMM
306	13805232.64	3149634.70	42.77	POWER
307	13804869.27	3149301.55	41.93	POWER
308	13804610.50	3149067.51	40.37	POWER
309	13804442.97	3149253.07	40.02	POWER
310	13804666.94	3149525.25	40.49	POWER
311	13805010.02	3148626.28	40.68	POWER
312	13804843.60	3148810.25	40.72	POWER
313	13804600.09	3148255.84	42.31	POWER
314	13804447.54	3148412.40	40.94	POWER
315	13801119.93	3148761.97	43.41	POWER
316	13800221.33	3148886.47	40.37	POWER
317	13800074.90	3149059.23	40.76	POWER
318	13800177.57	3148886.13	40.61	COMM
319	13800287.82	3148749.23	41.12	COMM
320	13800087.94	3148744.12	41.77	COMM
321	13800304.87	3149099.32	40.36	COMM
322	13804843.19	3148360.92	43.58	POWER
323	13804985.28	3148221.04	41.90	POWER
324	13804612.47	3148253.25	42.28	POWER
325	13804506.58	3148584.73	42.35	POWER
326	13804372.41	3148733.05	43.46	POWER
327	13804238.14	3148881.58	43.57	POWER
328	13804103.95	3149029.58	43.44	POWER
329	13803969.79	3149178.22	43.68	POWER

SEE NOTE 9, SHEET EL106–P5.

1 FIXTURE AND STRUCTURE LOCATION TABLES
NTS

HOUSTON AIRPORT SYSTEM
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TEXAS P.E. FIRM F-2966

VERIFY SCALE
BAR IS ONE INCH ON
ORIGINAL DRAWING.
0 1"

REVISIONS

NO.	DESCRIPTION	DATE	BY
0	ISSUED FOR BID	02/24/2023	SC

FAA NON-STANDARD TAXIWAYS PROJECT

AIRFIELD ELECTRICAL DETAILS

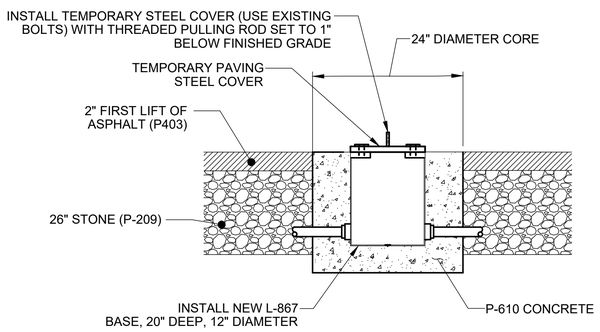
PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
SCALE: AS SHOWN
DATE: 02/24/2023

STATE OF TEXAS
JAMES A. MCDONALD
119579
LICENSED PROFESSIONAL ENGINEER
2.24.23

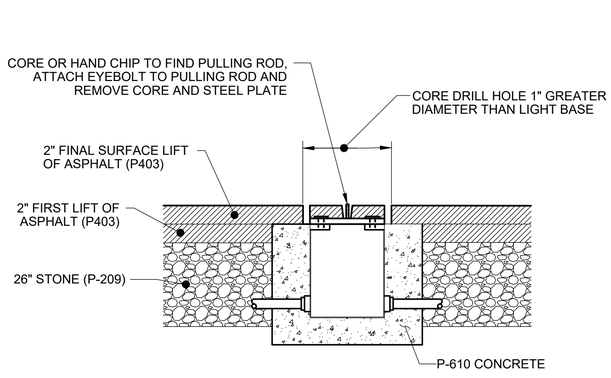
APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

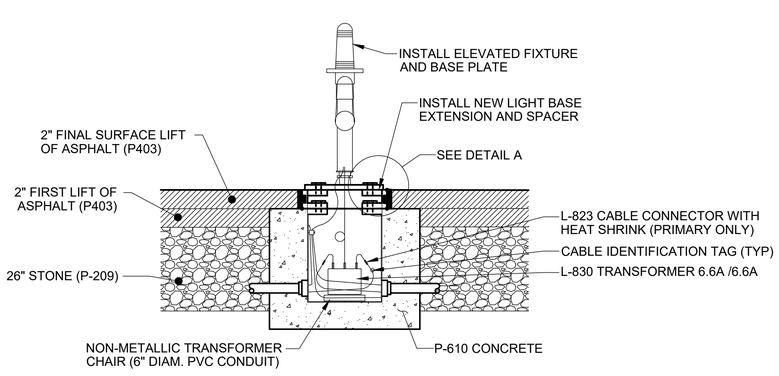
PROJECT NO: 770
C.I.P. NO: 3-48-0110-044
H.A.S. NO: N/A
SHEET NO: EL511
of



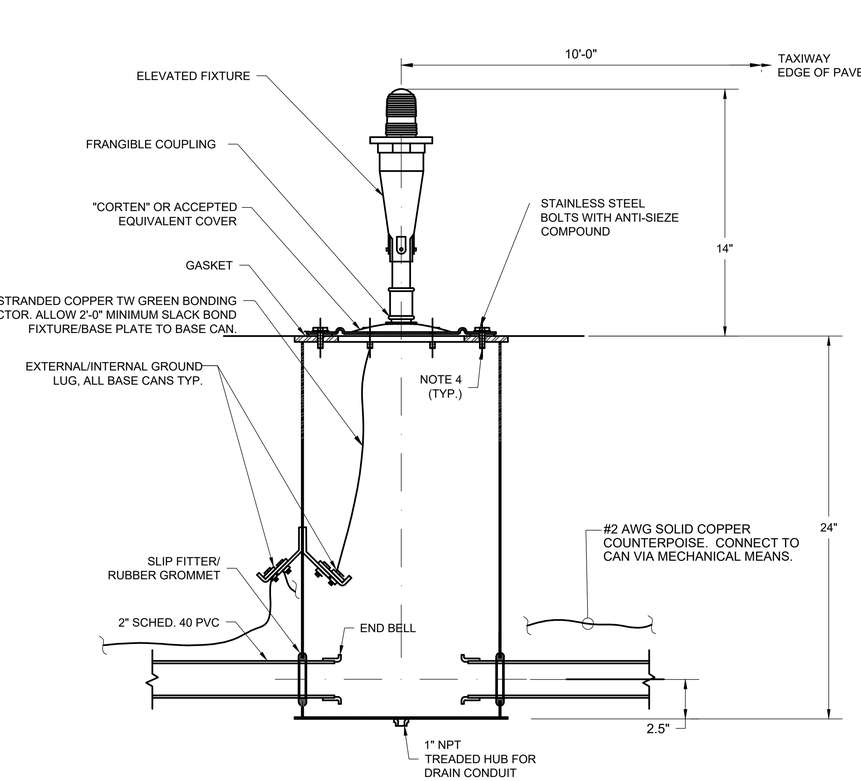
STEP 1



STEP 2



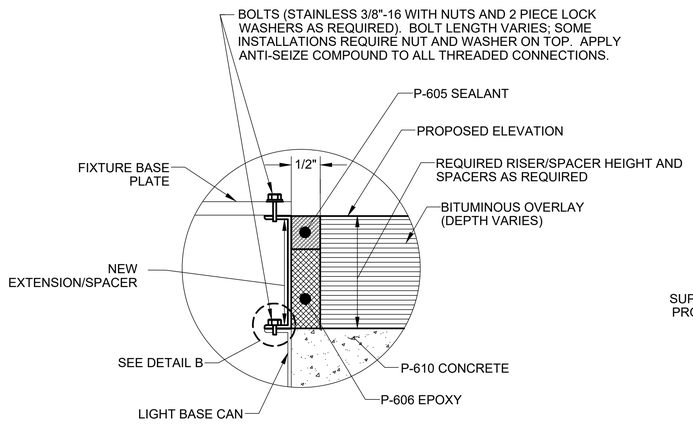
STEP 3



TYPICAL L-867B BASE CAN

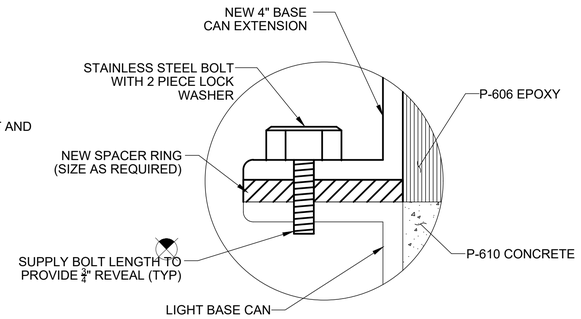
1 NEW ELEVATED LIGHT FIXTURE INSTALLATION METHOD IN ASPHALT SHOULDER DETAIL

NTS



DETAIL A

NTS



DETAIL B NEW 4" BASE CAN EXTENSION

NTS

ELEVATED FIXTURE NOTES:

1. TAXIWAY LIGHTS SHALL BE 14" HIGH UNLESS NOTED OTHERWISE IN THE CONTRACT DOCUMENTS.
2. ALL BASE CAN INSTALLATION TECHNIQUES, METHODS, MATERIALS, ETC. SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO THE START OF WORK.
3. THE FINISHED PAVEMENT SURFACE SHALL BE PROTECTED FROM FOREIGN SUBSTANCES WHICH COULD CAUSE STAINING, (IE. CONCRETE, OIL, ETC.) THE CONTRACTOR SHALL IMMEDIATELY CLEAN ALL SPILLS AND CORRECT/CLEAN ANY STAINED SURFACES AT THE CONTRACTOR'S EXPENSE.
4. THE BASE CAN COVER MOUNTING BOLTS SHALL EXTEND THRU THE BASE CAN MOUNTING FLANGE INTO THE BASE CAN A MIN. OF 0.5". THE BOLTS SHALL HAVE ENOUGH THREAD LENGTH SO THEY DO NOT SHOULDER OUT BEFORE THE FIXTURE IS SECURELY TIGHTENED. ALL BOLTING HARDWARE SHALL BE STAINLESS STEEL AND INSTALLED WITH ANTI-SIEZE COMPOUND.
5. P-610 CONCRETE AROUND BASE CANS SHALL BE COMPLETELY CONSOLIDATED BY MECHANICAL MEANS AND SHALL BE FREE OF ANY VOIDS.
6. BASE CANS SHALL BE LEVEL WITHIN ONE DEGREE. CONTRACTOR SHALL BE RESPONSIBLE TO LEVEL (WITHIN ONE DEGREE) ANY BASE CANS WHICH SETTLE DURING CONSTRUCTION OR THROUGHOUT THE WARRANTY PERIOD.
7. BEFORE PLACING CONCRETE THE CONTRACTOR SHALL DEMONSTRATE TO THE ENGINEER THAT THE BASE CANS ARE LEVEL AND AT THE CORRECT LOCATION, ELEVATION AND AZIMUTH.
8. THE P-610 CONCRETE, FOR USE IN EXISTING PAVEMENTS, SHALL BE PER THE SPECIFICATIONS. NO CORROSIVE ADDITIVES (SUCH AS CALCIUM CHLORIDE) OR CORROSIVE MIXTURES WILL BE PERMITTED.
9. CONDUIT OPENINGS SHALL BE COVERED WITH DUCT TAPE DURING CASTING PROCESS TO PREVENT DEBRIS FROM COLLECTING IN OPENINGS.
10. FOR CLARITY PURPOSES DETAILS DO NOT INCLUDE ALL OF THE REQUIRED RISERS, SPACERS AND EXTENSIONS TO PERFORM NECESSARY ADJUSTMENTS.

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2.24.23

APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO: 770
C.I.P. NO: 3-48-0110-044
H.A.S. NO: N/A
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