April 14, 2023

SUBJECT: Quincy Regional Airport

Quincy, Illinois Adams County

Illinois Project Number: UIN-5051 AIP Project Number: 3-17-0085-TBD

Contract No. QI066

Item No. 06A, April 28, 2023 Letting

Addendum A

NOTICE TO PROSPECTIVE BIDDERS

Attached is an addendum to the plans or proposal. This addendum involves revised and/or added material.

Reason for Addendum:

Revisions to the Plans, Specifications, and Schedule of Prices.

To All Plan Holders:

The following changes to the bid documents dated March 8, 2023, are included in Addendum A:

- 1. Add Pay Item AX110504, 4-WAY CONCRETE ENCASED DUCT
- 2. Revise Units of Measure
- 3. Add note to Sheet CG102
- 4. Change position of Taxiway Guidance Sign GS-15.
- 5. Clarify pay item AW125964, Relocate Taxi Guidance Sign.
- 6. Clarify section 701-3.5-2 Placement of Embedment Material
- 7. Provide style for Distance Remaining Sign
- 8. Clarify location and placement of Runway Safety Area Delineator

Plan Changes:

- Sheet Gl003
 - o ADD: Pay Item AX110504, 4-Way Concrete Encased Duct
 - o REVISE: Units of Measure to agree with Schedule of Prices
 - o ADD: Recorded Quantities column
- Sheet GC004
 - REVISE: Note 2 to read "PLACE ALONG THE RUNWAY 13/31 SAFETY AREA AS SHOWN ON SHEET GC101."
- Sheet GC101
 - o ADD: Location of Runway Safety Area Delineator
- Sheet CG102
 - o ADD: The following note:

The Contractor may bury rubblized materials below existing grade between stations 119+50 and 121+50 prior to constructing the embankment.

- Sheet EL101
 - o Add style column to the Distance Remaining Sign Schedule
- Sheet EL109
 - Move Taxi Guidance Sign GS-15 to the opposite side of Taxiway A1.
- Sheet EL601
 - Revise the offset for sign GS-15.

Specification Changes:

- Section 125-1.1, Description
 - o ADD: the following paragraph:

The Relocate Taxi Guidance Sign pay item shall include the removal of the existing sign and sign base, backfilling and restoration of the ground surface, construction of new sign bases at the location indicated on the plans, reinstallation of the existing signs and transformers on the new bases, and reconnecting the signs to the existing cabling.

- Section 125-4.1, Method of Measurement
 - ADD: the following paragraph:

Relocate taxi guidance sign will be measured by the number of guidance signs relocated as completed units, in place, ready for operation, and accepted by the RPR. Sign removals, backfill and restoration, and cabling shall be considered incidental and will not be measured for payment.

- Section 125-5.1, Basis of payment
 - ADD: the following paragraph:

Payment for Relocate Taxi Guidance Sign will be made at the Contract unit price for each guidance sign relocated and accepted by the RPR. This payment will be full compensation for furnishing all materials and for all preparation, assembly, and installation of these materials, and for all labor, equipment, tools, and incidentals necessary to complete this item.

- Section 701-3.5-2, Placement off Embedment Material
 - o REPLACE: the first sentence with:

The embedment material shall be compacted in layers not exceeding 6 inches on each side of the pipe and shall be brought up as shown in the plans.

Schedule of Prices Changes:

- Additive Alternate 1
 - o ADD: Pay Item AX110504, 4-WAY CONCRETE ENCASED DUCT, Qty 65 If
 - o REVISE: Units of measure

Prime contractors must utilize the enclosed material when preparing their bid and must include any changes to the Schedule of Prices in their bid.

Questions on this addendum may be directed to Wes loerger of CMT at 217-787-8050 or by email wioerger@cmtengr.com.

Attachments

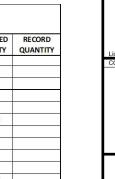
- Revised Plan Sheet Gl003
- Revised Plan Sheet GC004
- Revised Plan Sheet GC101
- Revised Plan Sheet CG102
- Revised Plan Sheet EL101

- Revised Plan Sheet EL109
- Revised Plan Sheet EL601
- Revised Specification Item L-125
- Revised Specification Section 701-3.5-2

	BASE BID - BASE BID - RECONSTRUCT RUNWAY 4/22			
ITEM NO.	ITEM DESCRIPTION	UNITS	ESTIMATED QUANTITY	RECORD QUANTITY
AW 108108	1/C #8 5 KV UG CABLE	FOOT	90.0	
AW 108158	1/C #8 5 KV UG CABLE IN UD	FOOT	3720.0	
AW 108208	2/C #8 5 KV UG CABLE	FOOT	1530.0	
	2/C #8 5 KV UG CABLE IN UD	FOOT	480.0	
AW 108706 AW 109210	1/C #6 COUNTERPOISE VAULT MODIFICATIONS	FOOT L SUM	3390.0 1.0	
AW 109332	15 KW REGULATOR, STYLE 2	EACH	1.0	
AW 110102	DUCT MARKER - IN PAVEMENT	EACH	4.0	
AW 110504	4-WAY CONCRETE ENCASED DUCT	FOOT	940.0	
AW 115610	ELECTRICAL HANDHOLE	EACH	3.0	
AW 125401	REPLACE LIGHT FIXTURE	EACH	54.0	
AW 125442 AW 125515	TAXI GUIDANCE SIGN, 2 CHARACTER HIRL, BASE MOUNTED	EACH	1.0	
AW 125515 AW 125551	HI THRESHOLD LIGHT BASE MTD-LED	EACH EACH	8.0	
AW 125561	RUNWAY DISTANCE REMAINING SIGN-LED	EACH	6.0	
AW 125565	SPLICE CAN	EACH	1.0	
AW 125901	REMOVE STAKE MOUNTED LIGHT	EACH	31.0	
AW 125902	REMOVE BASE MOUNTED LIGHT	EACH	26.0	
	REMOVE INPAVEMENT LIGHT	EACH	3.0	
AW 125904 AW 125964	REMOVE TAXI GUIDANCE SIGN RELOCATE TAXI GUIDANCE SIGN	EACH	2.0	
AW 125964 AW 127905	REMOVE MALSR	L SUM	13.0	
	1	L SUM	1.0	
	MOBILIZATION	L SUM	1.0	
AW 150530	TRAFFIC MAINTENANCE	L SUM	1.0	
AW 150550	CONSTRUCTION ACCESS	L SUM	1.0	
AW 150552	RESTORE CONSTRUCTION ACCESS	L SUM	1.0	
AW 152419	UNCLASSIFIED DISPOSAL OFFSITE	CU YD	2000.0	
AW 152455 AW 152461	EMBANKMENT IN PLACE TOPSOIL STRIPPING	CU YD ACRE	68800.0 41.0	
AW 154506	GRANULAR SUBBASE - 6"	SQ YD	19700.0	
AW 156510	SILT FENCE	FOOT	4000.0	
AW 156514	DITCH CHECK	FOOT	4000.0	
AW 156520	INLET PROTECTION	EACH	19.0	
AW 209606	CRUSHED AGG. BASE COURSE - 6"	SQ YD	20125.0	
AW 401010	CONTRACTOR QUALITY CONTROL PROGRAM	L SUM	1.0	
AW 401610 AW 401630	BITUMINOUS SURFACE COURSE BITUMINOUS SURFACE TEST SECTION	TON EACH	6325.0 1.0	
AW 401640	BITUMINOUS PAVEMENT GROOVING	SQ YD	23775.0	
AW 401650	BITUMINOUS PAVEMENT MILLING	SQ YD	36825.0	
AW 403610	BITUMINOUS BASE COURSE	TON	4575.0	
AW 403630	BITUMINOUS BASE TEST SECTION	EACH	1.0	
AW 501120	RUBBLIZE PAVEMENT	SQ YD	29975.0	
AW 501905	REMOVE PAVEMENT	SQ YD GALLON	9375.0	
	PAVEMENT MARKING - WATERBORNE	SQ FT	7100.0 36875.0	
1111	PAVEMENT MARKING - BLACK BORDER	SQ FT	6950.0	
	18" RCP, CLASS IV	FOOT	2100.0	
AW 701524	24" RCP, CLASS IV	FOOT	660.0	
	30" RCP, CLASS IV	FOOT	620.0	
AW 701536	36" RCP, CLASS IV	FOOT	30.0	
AW 701900	REMOVE PIPE 4" PERFORATED UNDERDRAIN W/SOCK	FOOT	1650.0	
AW 705524 AW 705544	4" NON PERFORATED UNDERDRAIN	FOOT	3210.0 360.0	
AW 705635	UNDERDRAIN COLLECTION STRUCTURE	EACH	2.0	
AW 705640	UNDERDRAIN CLEANOUT	EACH	6.0	
AW 705645	UNDERDRAIN CONNECTION	EACH	1.0	
AW 751410	INLET	EACH	6.0	
AW 751540		EACH	3.0	
	MANUOLE 6	EACH	2.0	
AW 751560 AW 751580	MANHOLE - 6' MAHHOLE - 8'	EACH EACH	2.0 1.0	
AW 751900	REMOVE INLET	EACH	9.0	
		EACH	1.0	
AW 801501	SIGN BASE	EACH	1.0	
AW 801502	18" RCP, CLASS IV - UNDER PAVEMENT	FOOT	110.0	
AW 801503	24" RCP, CLASS IV - UNDER PAVEMENT	FOOT	160.0	
AW 801517	ADJUST PAPI	L SUM	1.0	
AW 801518 AW 901510	STEEL ENCASED DUCT BANK	FOOT	70.0	
AW 901510 AW 904510	SEEDING SODDING	ACRE SQ YD	41.0 1500.0	
AW 904515	HEAVY-DUTY HYDRAULIC MULCH	ACRE	41.0	

	SUMMARY OF QUANTITIES				
	ALTERNATE 1 - RECONSTRUCT	TAXIWAY	B ESTIMATED	RECORD	
ITEM NO	. ITEM DESCRIPTION	UNITS	QUANTITY	QUANTITY	
AV 10910	3 1/C #8 5 KV UG CABLE	FOOT	210.0		
	3 1/C #8 5 KV UG CABLE IN UD	FOOT	2480.0		
	B 2/C #8 5 KV UG CABLE	FOOT	790.0		
200 0000	B 2/C #8 5 KV UG CABLE IN UD	FOOT	400.0		
	5 1/C #6 COUNTERPOISE	FOOT	2890.0		
	2 DUCT MARKER IN RAVEMENT	EACH	20		
	4 4-WAY CONCRETE ENCASED DUCT	FOOT	65.0	• • • •	
	5 MITC - BASE MODINTED	-EACH	33.0		
	2 TAXI GUIDANCE SIGN, 2 CHARACTER	EACH	1.0		
	5 SPLICE CAN	EACH	1.0		
AX 15450	GRANULAR SUBBASE - 6"	SQ YD	5900.0		
AX 20960	CRUSHED AGG. BASE COURSE - 6"	SQ YD	6225.0		
AX 40161	BITUMINOUS SURFACE COURSE	TON	1375.0		
AX 40361	BITUMINOUS BASE COURSE	TON	1375.0		
AX 60351	BITUMINOUS TACK COAT	GALLON	1825.0		
AX 62052	PAVEMENT MARKING - WATERBORNE	SQ FT	1500.0		
AX 62052	PAVEMENT MARKING - BLACK BORDER	SQ FT	1575.0		
AX 70552	4 4" PERFORATED UNDERDRAIN W/SOCK	FOOT	1810.0		
AX 70554	4 4" NON PERFORATED UNDERDRAIN	FOOT	130.0		
AX 70563	UNDERDRAIN COLLECTION STRUCTURE	EACH	2.0		
AX 70564	UNDERDRAIN CLEANOUT	EACH	4.0		
AX 70564	UNDERDRAIN CONNECTION	EACH	1.0		
AX 90451	SODDING	SQ YD	825.0		

	ALTERNATE 2 - INSTALL MALSR				
ITEM NO.	ITEM DESCRIPTION	UNITS	ESTIMATED QUANTITY	RECORD QUANTIT	
	HILIETION DOV	51611			
AY 110810	JUNCTION BOX	EACH	4.0		
AY 127450	MALSR INSTALLATION	L SUM	1.0		
AY 800335	MALSR THRESHOLD LIGHT BAR	L SUM	1.0		
AY 801504	SHELTER INSTALLATION	L SUM	1.0		
AY 801505	CRUSHED ROCK PLOT	SQ YD	4475.0		
AY 801506	2-1/C #4 USE, 1/C #6 BARE COPPER GROUND IN 2" PVC CONDUIT	FOOT	600.0		
AY 801507	4-1/C #4 USE, 1/C #6 BARE COPPER GROUND IN 2" PVC CONDUIT	FOOT	660.0		
AY 801508	2-1/C #6 USE, 1/C #6 BARE COPPER GROUND IN 2" PVC CONDUIT	FOOT	450.0		
AY 801509	2-1/C #8 USE, 1/C #6 BARE COPPER GROUND IN 2" PVC CONDUIT	FOOT	530.0		
AY 801510	4-1/C #4/0 USE, 1/C #2 BARE COPPER GROUND IN 3" PVC CONDUIT	FOOT	1110.0		
AY 801511	3-1/C #2/0 USE, 1/C #2 BARE COPPER GROUND IN 2-1/2" PVC COND	FOOT	590.0		
AY 801512	3-1/C #2 USE, 1/C #6 BARE COPPER GROUND IN 2" PVC CONDUIT	FOOT	1370.0		
AY 801513	3-1/C #4 USE, 1/C #6 BARE COPPER GROUND IN 2" PVC CONDUIT	FOOT	770.0		
AY 801514	#1/0 BARE COPPER GUARD WIRE	FOOT	4270.0		
AY 801515	6 PAIR FLASHER CONTROL CABLE IN 2" PVC CONDUIT	FOOT	2130.0		
AY 801516	MALSR HANDHOLE	EACH	6.0		



NCMT

BID ISSUE MARCH 08, 2023

RECONSTRUCT RUNWAY 4/22 PHASE 4



CITY OF QUINCY QUINCY REGIONAL AIRPORT QUINCY, IL

Α	4/14/23	ADDENDUM A		
MARK	DATE	DESCRIPTION		
AIP PROJ. NO: 3-17-0085-XX				
IL. PROJ. NO: UIN-5051				

CMT PROJECT NO: 18002001 CAD DWG FILE: 180020-01 PH4 GI002.DWG DESIGNED BY: DRAWN BY:

CHECKED BY: MJD APPROVED BY: RLV COPYRIGHT:

SUMMARY OF QUANTITIES

GI003 оғ 143 sheet **3**

NOTES TO BIDDERS

THE BASE BID SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING MAJOR WORK ITEMS:

1. ALL PAVEMENT REMOVALS.

- ALL ELECTRICAL REMOVALS INCLUDING MALSR.
 ALL EMBANKMENT CONSTRUCTION AND TURFING.
 RUNWAY 4/22 PAVEMENT, LIGHTING AND SIGNAGE.
- RUNWAY 4/22 HOME RUN.
- RUNWAY 4/22 REGULATOR AND VAULT IMPROVEMENTS. RUNWAY 4/22 PAPI ADJUSTMENT. ALL STORM SEWER IMPROVEMENTS.

- RUNWAY 4/22 UNDERDRAINS.

ADDITIVE ALTERNATE 1 SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING MAJOR WORK ITEMS:

1. TAXIWAY B PAVING AND ELECTRICAL IMPROVEMENTS.

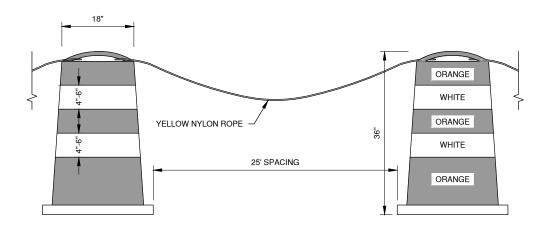
- TAXIWAY B UNDERDRAIN CONSTRUCTION, TURFING, MARKING, & EROSION CONTROL

ADDITIVE ALTERNATE 2 SHALL INCLUDE, BUT NOT BE LIMITED TO, THE

FOLLOWING MAJOR WORK ITEMS:

1. MALSR INSTALLATION, INCLUDING FOUNDATIONS, CABLING, LIGHT STATION, & CRUSHED ROCK PLOT

- 1. REVISE UNITS OF MEASURE
- ADD PAY ITEM AX110504, 4-WAY CONCRETE ENCASED DUCT





RUNWAY SAFETY AREA DELINEATOR



RSA DELINEATOR NOTES

- NO SEPARATE PAYMENT WILL BE MADE FOR THIS ITEM. COSTS SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.
- -2. PLACE ALONG RUNWAY 11/29 SAFETY AREA (RSA) AS SHOWN ON THE CONSTRUCTION ACTIVITY PLANS..
- 3. PLACE AND MAINTAIN UNTIL REMOVAL ACCORDING TO CSPP.
- 4. BARRELS SHALL BE WEIGHTED SUFFICIENTLY TO PREVENT DISPLACEMENT.
- 2. PLACE ALONG THE RUNWAY 13/31 SAFETY AREA AS SHOWN ON SHEET GC101.



License No. 184-00061

BID ISSUE MARCH 08, 2023

RECONSTRUCT RUNWAY 4/22 PHASE 4

OWNER



CITY OF QUINCY QUINCY REGIONAL AIRPORT QUINCY, IL

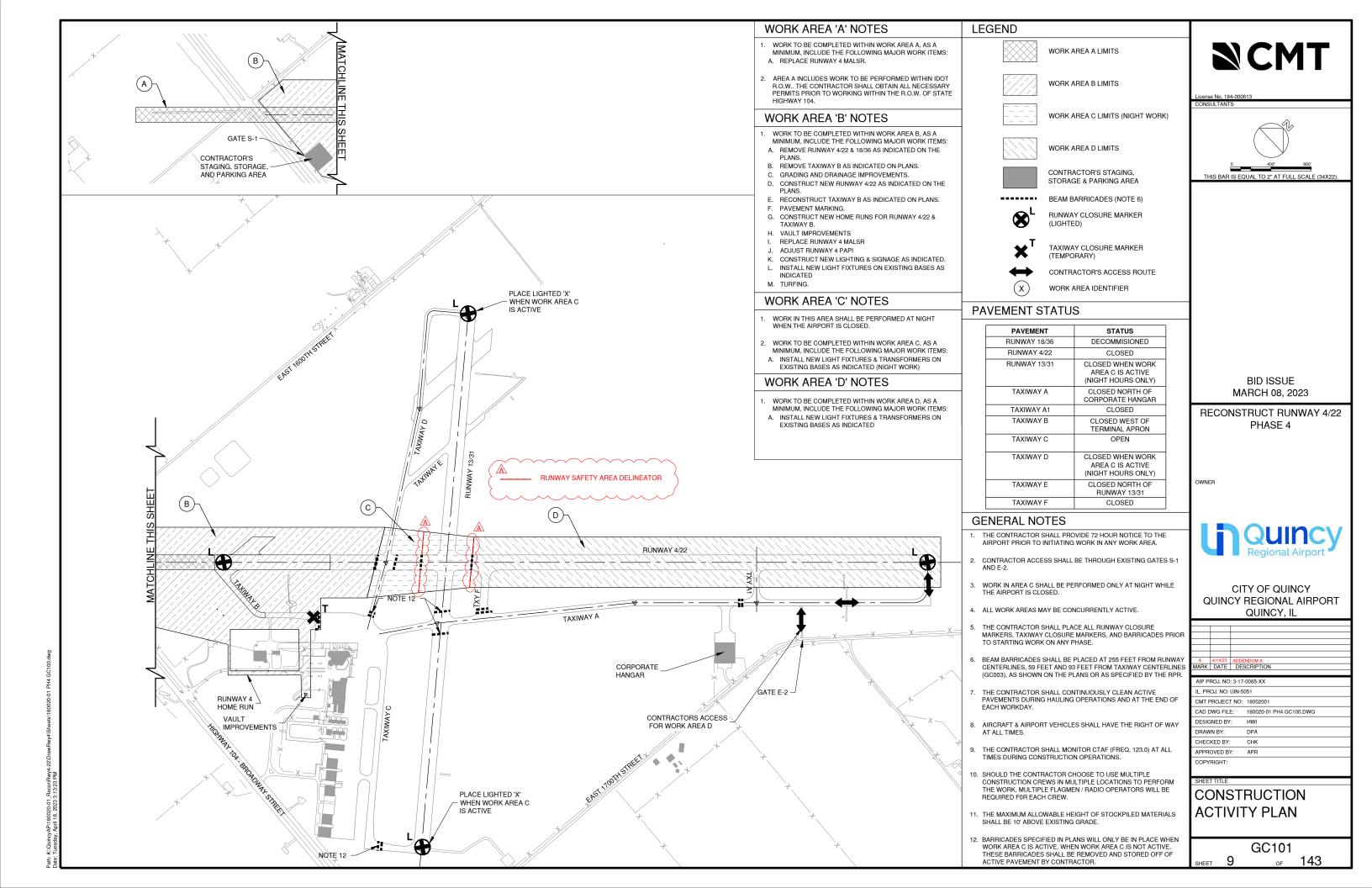
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MARK	DATE	DESCRIPTION	
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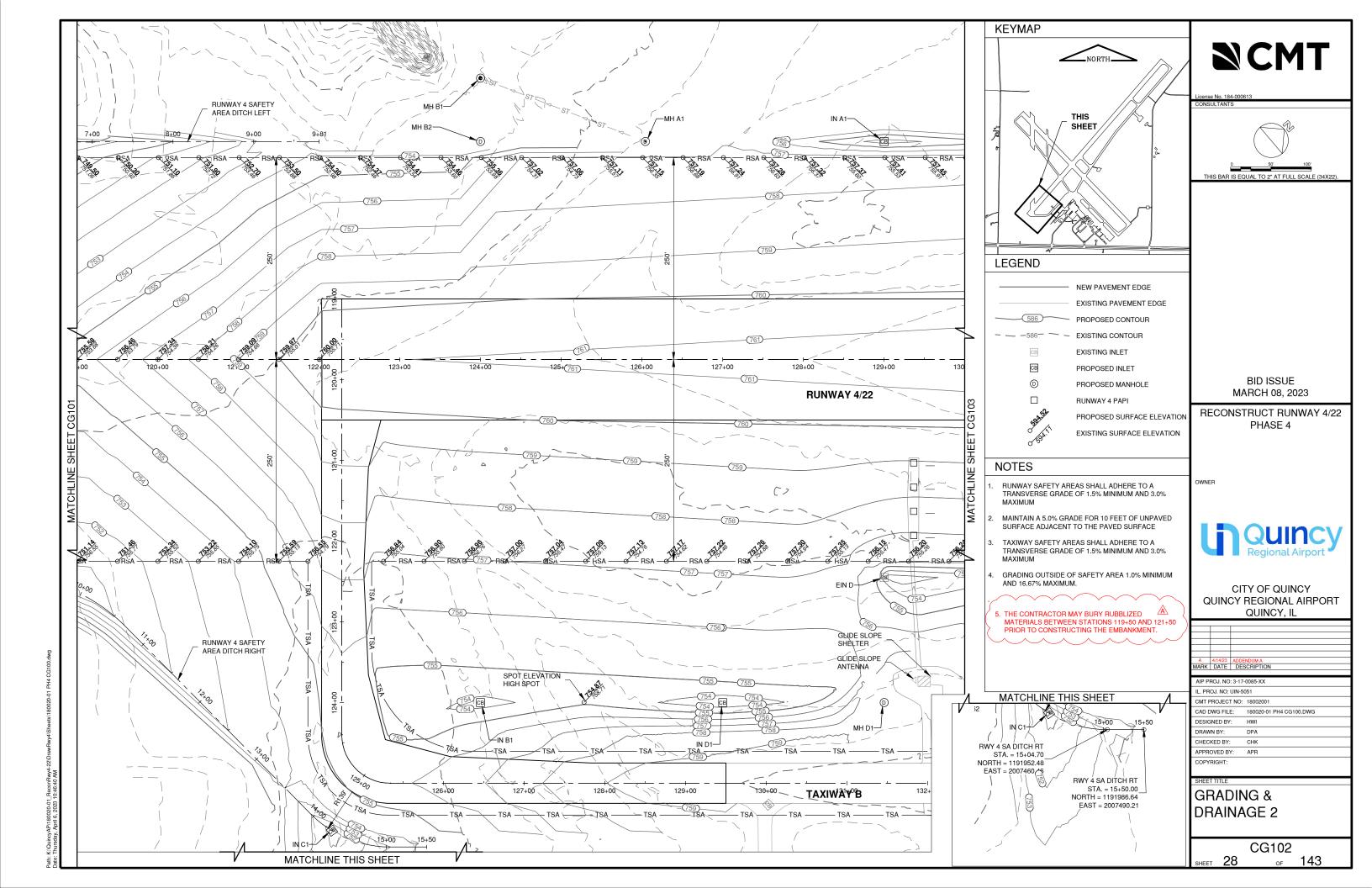
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IL. PROJ. NO: UIN-5051		
CMT PROJECT NO:	18002001	
CAD DWG FILE:	180020-01 PH4 GC001.DWG	
DESIGNED BY:	HWI	
DRAWN BY:	DPA	
CHECKED BY:	MJD	
APPROVED BY:	RLV	
COPYRIGHT:		

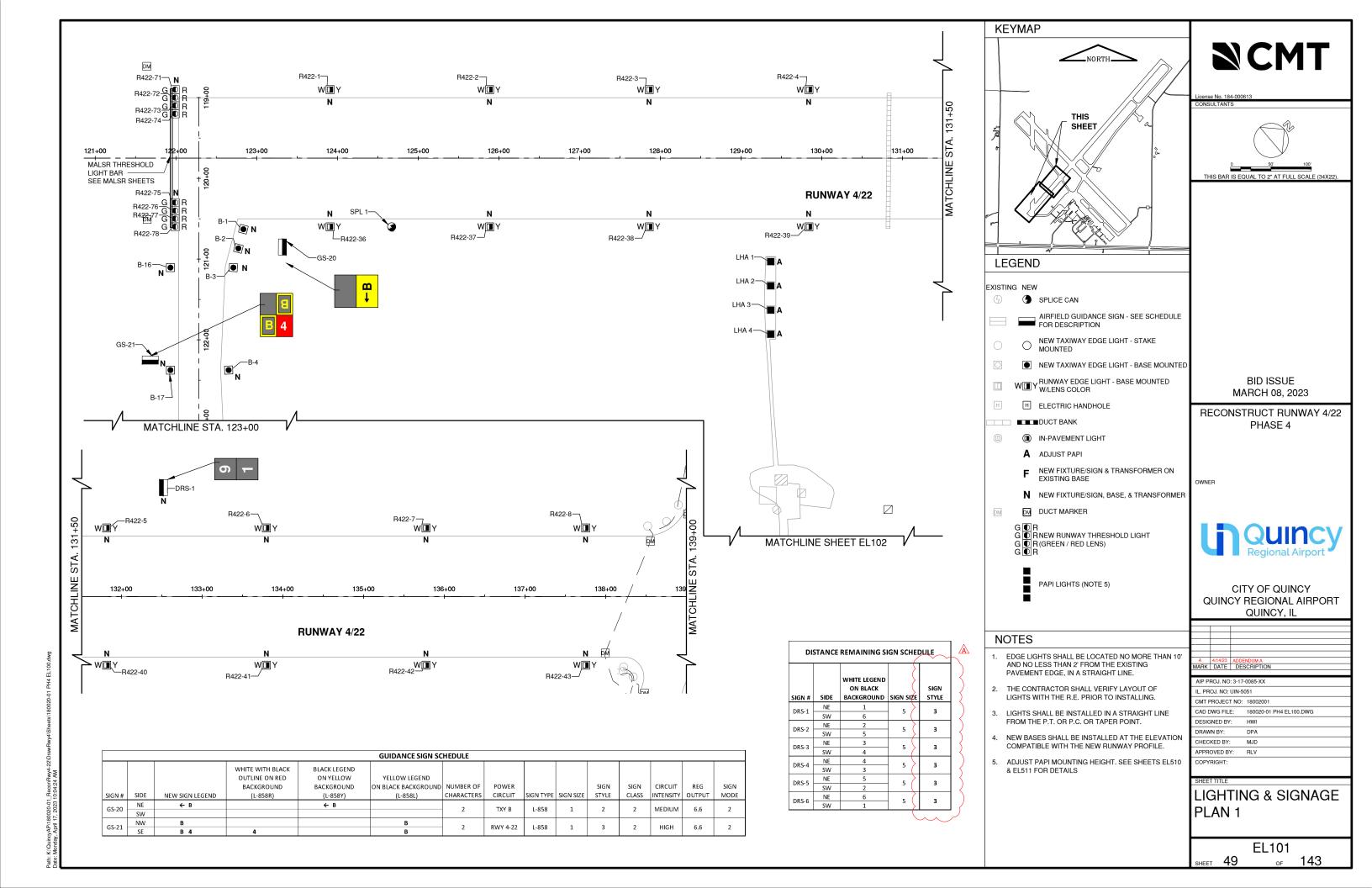
HEET TITLE

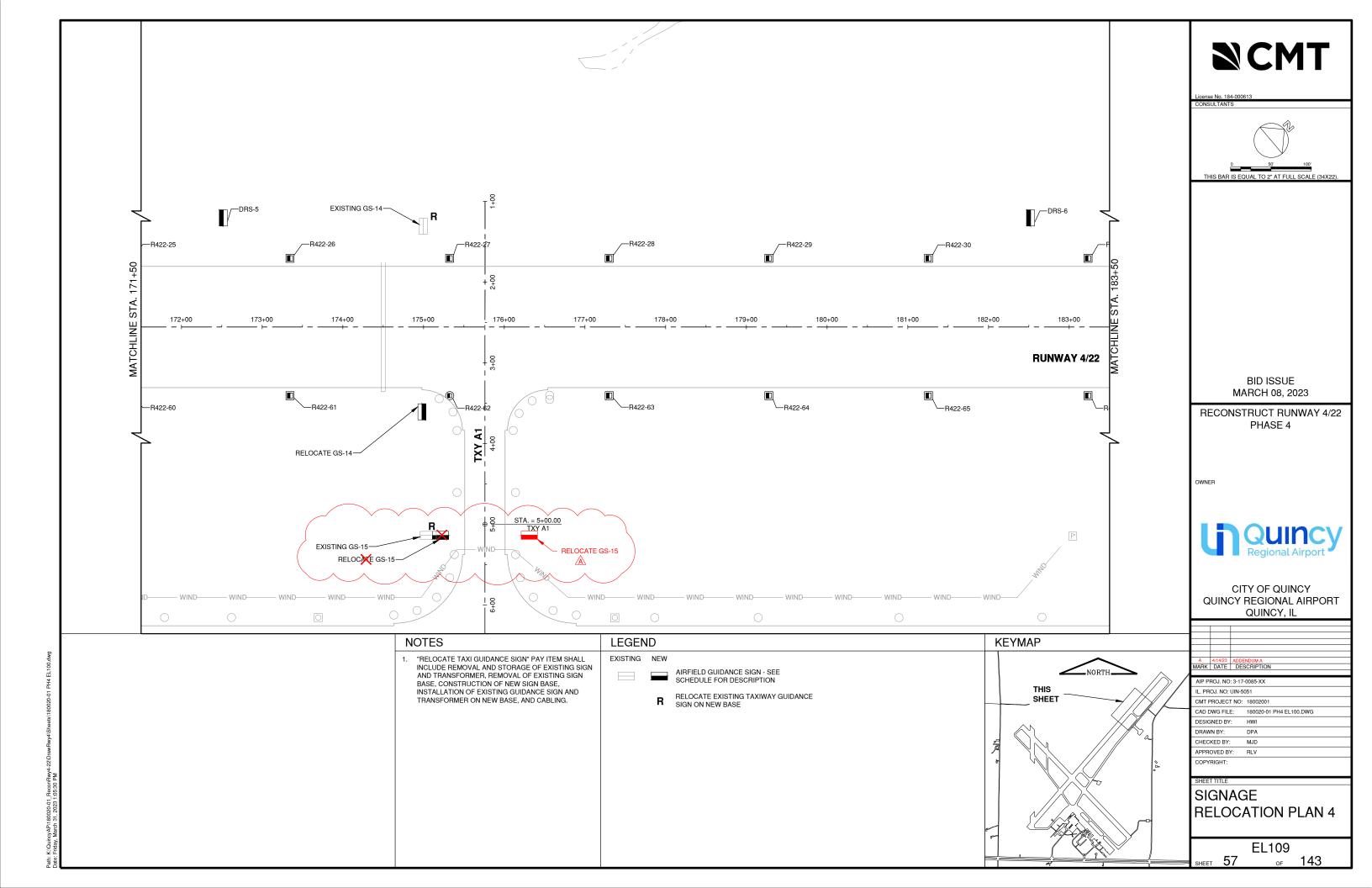
CONSTRUCTION ACTIVITY DETAILS 2

GC004 SHEET 8 OF 143









FIXTURE TABLE PH4 RWY 422 REPLACE FIXTURES ON EXISTING BASE

PH4 KW	7Y 422 REPLACE FIX TURES C	IN EXISTING BASE
FIXTURE #	FIXTURE TYPE	HORIZONTAL CONTROL
R422-9	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 139+72.83 OFFSET -85.00 L
R422-10	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 141+70.58 OFFSET -85.00 L
R422-11	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 143+68.33 OFFSET -85.00 L
R422-12	NEW FMRL (LED) ON EXISTING BASE	RWY 422 STA 145+66.08 OFFSET -85.00 L
R422-13	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 147+63.83 OFFSET -85.00 L
R422-14	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 149+61.58 OFFSET -85.00 L
R422-15	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 151+59.33 OFFSET -85.00 L
R422-16	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 153+57.08 OFFSET -85.00 L
R422-17	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 155+54.83 OFFSET -85.00 L
R422-18	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 157+52.58 OFFSET -85.00 L
R422-19	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 159+50.33 OFFSET -85.00 L
R422-20	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 161+48.08 OFFSET -85.00 L
R422-21	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 163+45.83 OFFSET -85.00 L
R422-22	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 165+43.58 OFFSET -85.00 L
R422-23	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 167+41.33 OFFSET -85.00 L
R422-24	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 169+39.08 OFFSET -85.00 L
R422-25	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 171+36.83 OFFSET -85.00 L
R422-26	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 173+34.58 OFFSET -85.00 L
R422-27	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 175+32.33 OFFSET -85.00 L
R422-28	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 177+30.08 OFFSET -85.00 L
R422-29	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 179+27.83 OFFSET -85.00 L
R422-30	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 181+25.58 OFFSET -85.00 L
R422-31	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 183+23.33 OFFSET -85.00 L
R422-32	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 185+21.08 OFFSET -85.00 L
R422-33	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 187+18.83 OFFSET -85.00 L
R422-34	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 189+16.58 OFFSET -85.00 L
R422-35	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 191+14.33 OFFSET -85.00 L
R422-44	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 139+72.83 OFFSET 85.00 R
R422-45	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 141+70.58 OFFSET 85.00 R
R422-46	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 143+68.33 OFFSET 85.00 R
R422-47	NEW FMRL (LED) ON EXISTING BASE	RWY 422 STA 145+66.08 OFFSET 85.00 R
R422-48	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 147+63.83 OFFSET 85.00 R
R422-49	NEW FMRL (LED) ON EXISTING BASE	RWY 422 STA 149+61.58 OFFSET 85.00 R
R422-50	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 151+59.33 OFFSET 85.00 R
R422-51	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 153+57.08 OFFSET 85.00 R
R422-52	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 155+54.83 OFFSET 85.00 R
R422-53	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 157+52.58 OFFSET 85.00 R
R422-54	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 159+50.33 OFFSET 85.00 R
R422-55	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 161+48.08 OFFSET 85.00 R
R422-56	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 163+45.83 OFFSET 85.00 R
		3113E1 03.00 h

FIXTURE TABLE PH4 RWY 422 REPLACE FIXTURES ON EXISTING BASE

FIXTURE #	FIXTURE TYPE	HORIZONTAL CONTROL
R422-57	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 165+43.58 OFFSET 85.00 R
R422-58	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 167+41.33 OFFSET 85.00 R
R422-59	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 169+39.08 OFFSET 85.00 R
R422-60	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 171+36.83 OFFSET 85.00 R
R422-61	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 173+34.58 OFFSET 85.00 R
R422-62	NEW FMRL (LED) ON EXISTING BASE	RWY 422 STA 175+32.33 OFFSET 85.00 R
R422-63	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 177+30.08 OFFSET 85.00 R
R422-64	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 179+27.83 OFFSET 85.00 R
R422-65	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 181+25.58 OFFSET 85.00 R
R422-66	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 183+23.33 OFFSET 85.00 R
R422-67	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 185+21.08 OFFSET 85.00 R
R422-68	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 187+18.83 OFFSET 85.00 R
R422-69	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 189+16.58 OFFSET 85.00 R
R422-70	NEW HIRL (LED) ON EXISTING BASE	RWY 422 STA 191+14.33 OFFSET 85.00 R

FIXTURE TABLE RELOCATE TAXI GUIDE SIGNS

FIXTURE #	FIXTURE TYPE	HORIZONTAL CONTROL
RELOCATE GS-1	RELOCATE TAXI GUIDANCE SIGN	RWY 422 STA 139+74.85 OFFSET -100.00 L
RELOCATE GS-2	RELOCATE TAXI GUIDANCE SIGN	RWY 422 STA 140+11.18 OFFSET -290.06 L
RELOCATE GS-3	RELOCATE TAXI GUIDANCE SIGN	RWY 422 STA 142+41.61 OFFSET -95.00 L
RELOCATE GS-4	RELOCATE TAXI GUIDANCE SIGN	RWY 422 STA 146+20.20 OFFSET -258.00 L
RELOCATE GS-5	RELOCATE TAXI GUIDANCE SIGN	RWY 422 STA 147+62.82 OFFSET -95.00 L
RELOCATE GS-6	RELOCATE TAXI GUIDANCE SIGN	RWY 422 STA 137+76.25 OFFSET 283.92 R
RELOCATE GS-7	RELOCATE TAXI GUIDANCE SIGN	RWY 422 STA 139+48.77 OFFSET 95.00 R
RELOCATE GS-8	RELOCATE TAXI GUIDANCE SIGN	RWY 422 STA 142+41.61 OFFSET 95.00 R
RELOCATE GS-9	RELOCATE TAXI GUIDANCE SIGN	RWY 422 STA 143+84.24 OFFSET 258.00 R
RELOCATE GS-12	RELOCATE TAXI GUIDANCE SIGN	RWY 422 STA 148+24.10 OFFSET 258.00 R
RELOCATE GS-13	RELOCATE TAXI GUIDANCE SIGN	RWY 422 STA 150+16.37 OFFSET 95.00 R
RELOCATE GS-14	RELOCATE TAXI GUIDANCE SIGN	RWY 422 STA 174+98.07 OFFSET 95.00 R
RELOCATE GS-15	RELOCATE TAXI GUIDANCE SIGN	RWY 422 STA 175+31.05 OFFSET 258:00 R
RELOCATE GS-16	RELOCATE TAXI GUIDANCE SIGN	RWY 422 STA 191+38.09 OFFSET 95.00 R
RELOCATE GS-17	RELOCATE TAXI GUIDANCE SIGN	RWY 422 STA 192+21.03 OFFSET 258.00 R

176+21.05

FIXTURE TABLE PH4 HOMERUN

	1 114 110 WIL	_11011
FIXTURE #	FIXTURE TYPE	HORIZONTAL CONTROL
HH 1	NEW HANDHOLE	TXY B STA 127+13.11 OFFSET -58.23 L
HH 2	NEW HANDHOLE	TXY B STA 127+13.11 OFFSET 55.00 R
HH 3	NEW HANDHOLE	TXY B STA 127+13.11 OFFSET 493.51 R
HH 4	NEW HANDHOLE	TXY B STA 127+13.11 OFFSET 570.00 R
SPL 1	NEW SPLICE CAN	TXY B STA 120+60.00 OFFSET -238.96 L

FIXTURE TABLE PH4 RWY 422 NEW LIGHTS & BASES

	W I ILL ITEM LIGI	110 a <i>B</i> 7 (020
FIXTURE #	FIXTURE TYPE	HORIZONTAL CONTROL
R422-1	NEW HIRL (LED) ON NEW BASE	RWY 422 STA 123+90.83 OFFSET -85.00 L
R422-2	NEW HIRL (LED) ON NEW BASE	RWY 422 STA 125+88.58 OFFSET -85.00 L
R422-3	NEW HIRL (LED) ON NEW BASE	RWY 422 STA 127+86.33 OFFSET -85.00 L
R422-4	NEW HIRL (LED) ON NEW BASE	RWY 422 STA 129+84.08 OFFSET -85.00 L
R422-5	NEW HIRL (LED) ON NEW BASE	RWY 422 STA 131+81.83 OFFSET -85.00 L
R422-6	NEW HIRL (LED) ON NEW BASE	RWY 422 STA 133+79.58 OFFSET -85.00 L
R422-7	NEW HIRL (LED) ON NEW BASE	RWY 422 STA 135+77.33 OFFSET -85.00 L
R422-8	NEW HIRL (LED) ON NEW BASE	RWY 422 STA 137+75.08 OFFSET -85.00 L
R422-36	NEW HIRL (LED) ON NEW BASE	RWY 422 STA 123+90.83 OFFSET 85.00 R
R422-37	NEW HIRL (LED) ON NEW BASE	RWY 422 STA 125+88.58 OFFSET 85.00 R
R422-38	NEW HIRL (LED) ON NEW BASE	RWY 422 STA 127+86.33 OFFSET 85.00 R
R422-39	NEW HIRL (LED) ON NEW BASE	RWY 422 STA 129+84.08 OFFSET 85.00 R
R422-40	NEW HIRL (LED) ON NEW BASE	RWY 422 STA 131+81.83 OFFSET 85.00 R
R422-41	NEW HIRL (LED) ON NEW BASE	RWY 422 STA 133+79.58 OFFSET 85.00 R
R422-42	NEW HIRL (LED) ON NEW BASE	RWY 422 STA 135+77.33 OFFSET 85.00 R
R422-43	NEW HIRL (LED) ON NEW BASE	RWY 422 STA 137+75.08 OFFSET 85.00 R
R422-71	NEW THRESHOLD (LED)	RWY 422 STA 121+99.13 OFFSET -85.00 L
R422-72	NEW THRESHOLD (LED)	RWY 422 STA 121+99.13 OFFSET -75.00 L
R422-73	NEW THRESHOLD (LED)	RWY 422 STA 121+99.13 OFFSET -65.00 L
R422-74	NEW THRESHOLD (LED)	RWY 422 STA 121+99.13 OFFSET -55.00 L
R422-75	NEW THRESHOLD (LED)	RWY 422 STA 121+99.13 OFFSET 55.00 R
R422-76	NEW THRESHOLD (LED)	RWY 422 STA 121+99.13 OFFSET 65.00 R
R422-77	NEW THRESHOLD (LED)	RWY 422 STA 121+99.13 OFFSET 75.00 R
R422-78	NEW THRESHOLD (LED)	RWY 422 STA 121+99.13 OFFSET 85.00 R

FIXTURE TABLE

PH4 RWY 4 PAPI		
FIXTURE #	FIXTURE TYPE	HORIZONTAL CONTROL
LHA 1	ADJUST PAPI LENS ELEV = 761.54'	RWY 422 STA 129+36.7 OFFSET 128.00 R
LHA 2	ADJUST PAPI LENS ELEV = 761.54'	RWY 422 STA 129+36.7 OFFSET 158.00 R
LHA 3	ADJUST PAPI LENS ELEV = 761.54'	RWY 422 STA 129+36.7 OFFSET 188.00 R
LHA 4	ADJUST PAPI LENS ELEV = 761.54'	RWY 422 STA 129+36.7 OFFSET 218.00 R

FIXTURE TABLE PH4 DISTANCE REMAINING SIGNS

FIXTURE #	FIXTURE TYPE	HORIZONTAL CONTROL
DRS-1	NEW SIGN AND BASE	RWY 422 STA 132+52.11 OFFSET -125.00 L
DRS-2	NEW SIGN ON EXISTING BASE	RWY 422 STA 142+52.11 OFFSET -125.00 L
DRS-3	NEW SIGN ON EXISTING BASE	RWY 422 STA 152+52.11 OFFSET -125.00 L
DRS-4	NEW SIGN ON EXISTING BASE	RWY 422 STA 162+52.11 OFFSET -125.00 L
DRS-5	NEW SIGN ON EXISTING BASE	RWY 422 STA 172+52.11 OFFSET -125.00 L
DRS-6	NEW SIGN ON EXISTING BASE	RWY 422 STA 182+52.11 OFFSET -125.00 L

FIXTURE TABLE PH4 TXY B LIGHTS

FIXTURE #	FIXTURE TYPE	HORIZONTAL CONTROL
B-1	MITL (QUARTZ)	TXY B STA 120+63.00 OFFSET -55.41 L
B-2	MITL (QUARTZ)	TXY B STA 120+86.76 OFFSET -49.18 L
B-3	MITL (QUARTZ)	TXY B STA 121+10.51 OFFSET -42.94 L
B-4	MITL (QUARTZ)	TXY B STA 122+37.43 OFFSET -37.14 L
B-5	MITL (QUARTZ)	TXY B STA 123+64.35 OFFSET -42.94 L
B-6	MITL (QUARTZ)	TXY B STA 124+01.02 OFFSET -52.57 L
B-7	MITL (QUARTZ)	TXY B STA 124+37.68 OFFSET -62.19 L
B-8	MITL (QUARTZ)	TXY B STA 125+72.97 OFFSET -52.57 L
B-9	MITL (QUARTZ)	TXY B STA 126+09.63 OFFSET -42.94 L
B-10	MITL (QUARTZ)	TXY B STA 127+66.63 OFFSET -35.76 L
B-11	MITL (QUARTZ)	TXY B STA 129+23.63 OFFSET -35.00 L
B-12	MITL (QUARTZ)	TXY B STA 130+80.63 OFFSET -35.00 L
B-13	MITL (QUARTZ)	TXY B STA 132+37.63 OFFSET -35.00 L
B-14	MITL (QUARTZ)	TXY B STA 133+90.98 OFFSET -35.00 L
B-15	MITL (QUARTZ)	TXY B STA 134+41.60 OFFSET -34.07 L
B-16	MITL (QUARTZ)	TXY B STA 121+10.51 OFFSET 35.00 R
B-17	MITL (QUARTZ)	TXY B STA 122+37.43 OFFSET 35.00 R
B-18	MITL (QUARTZ)	TXY B STA 123+64.35 OFFSET 35.00 R
B-19	MITL (QUARTZ)	TXY B STA 123+89.87 OFFSET 35.00 R
B-20	MITL (QUARTZ)	TXY B STA 124+39.87 OFFSET 35.00 R
B-21	MITL (QUARTZ)	TXY B STA 124+71.28 OFFSET 35.00 R
B-22	MITL (QUARTZ)	TXY B STA 125+02.70 OFFSET 35.00 R
B-23	MITL (QUARTZ)	TXY B STA 125+34.12 OFFSET 35.00 R
B-24	MITL (QUARTZ)	TXY B STA 125+84.12 OFFSET 35.00 R
B-25	MITL (QUARTZ)	TXY B STA 126+09.63 OFFSET 35.00 R
B-26	MITL (QUARTZ)	TXY B STA 127+66.63 OFFSET 35.00 R
B-27	MITL (QUARTZ)	TXY B STA 129+23.63 OFFSET 35.00 R
B-28	MITL (QUARTZ)	TXY B STA 130+80.63 OFFSET 35.00 R
B-29	MITL (QUARTZ)	TXY B STA 132+37.63 OFFSET 35.00 R
B-30	MITL (QUARTZ)	TXY B STA 133+90.98 OFFSET 49.14 R
B-31	MITL (QUARTZ)	TXY B STA 134+15.09 OFFSET 57.79 R
B-32	MITL (QUARTZ)	TXY B STA 134+32.39 OFFSET 77.18 R

FIXTURE TABLE PH4 NEW GUIDANCE SIGNS

MITL (QUARTZ) TXY B STA 134+38.56 OFFSET 100.96 R

	FIXTURE #	FIXTURE TYPE	HORIZONTAL CONTROL
	GS-20	L-858 (LED)	RWY 422 STA 123+31.83 OFFSET 100.00 R
	GS-21	L-858 (LED)	RWY 422 STA 121+78.13 OFFSET 250.00 R
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NCMT RECONSTRUCT RUNWAY 4/22 QUINCY REGIONAL AIRPORT MARK DATE DESCRIPTION

> AIP PROJ. NO: 3-17-0085-XX IL. PROJ. NO: UIN-5051 CMT PROJECT NO: 18002001 CAD DWG FILE: 180020-01 PH4 EL600.DWG DESIGNED BY:

DRAWN BY: CHK CHECKED BY: APPROVED BY: APR

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LIGHTING & SIGNAGE SCHEDULES

BID ISSUE MARCH 08, 2023

PHASE 4

CITY OF QUINCY

QUINCY, IL

EL601 SHEET **75**

of 143

Item L-125 Installation of Airport Lighting Systems

DESCRIPTION

125-1.1 This item shall consist of airport lighting systems furnished and installed in accordance with this specification, the referenced specifications, and the applicable advisory circulars (ACs). The systems shall be installed at the locations and in accordance with the dimensions, design, and details shown in the plans. This item shall include the furnishing of all equipment, materials, services, and incidentals necessary to place the systems in operation as completed units to the satisfaction of the RPR.

The Sign Base item shall consist of the construction of the sign base and primary cabling only.

The Runway Distance Remaining Sign item shall consist of installing a new sign on an existing base. Modifications to the existing base to fit the signs shall be considered incidental to the Runway Distance Remaining Sign pay item.

The Remove Base Mounted Light item shall consist of the removal of existing base mounted lights.

The Replace Light Fixture Item shall consist of replacing existing elevated and in-pavement light fixtures and transformers on existing bases.

The HIRL, Base Mounted item shall consist of the installation of a new base mounted fixture with a new transformer on a new precast light base.

The MITL – Base Mounted item shall consist of the installation of a new base mounted fixture with a new transformer on a new precast light base.

The Relocate Taxi Guidance Sign pay item shall include the removal of the existing sign and sign base, backfilling and restoration of the ground surface, construction of new sign bases at the location indicated on the plans, reinstallation of the existing signs and transformers on the new bases, and reconnecting the signs to the existing cabling.

EQUIPMENT AND MATERIALS

125-2.0 PROOF OF BUY AMERICAN NOTICE: All tier contractors and subcontractors shall provide proof of Buy American compliance for all manufactured products in accordance with statutes established under Title 49 U.S.C. Section 50101. The AIP Buy American preference does not recognize US trade agreements such as NAFTA or the American Recovery and Reinvestment Act. If, upon submittal sufficient information to confirm compliance is not included, the submittal will be returned with no action.

125-2.1 General.

a. Airport lighting equipment and materials covered by Federal Aviation Administration (FAA) specifications shall be certified under the Airport Lighting Equipment Certification Program in accordance with AC 150/5345-53, current version. FAA certified airfield lighting shall be compatible with each other to perform in compliance with FAA criteria and the intended operation. If the Contractor provides equipment that does not performs as intended because of incompatibility with the system, the Contractor assumes all costs to correct the system for to operate properly.

- **b.** Manufacturer's certifications shall not relieve the Contractor of their responsibility to provide materials in accordance with these specifications and acceptable to the RPR. Materials supplied and/or installed that do not comply with these specifications shall be removed, when directed by the RPR and replaced with materials, which do comply with these specifications, at the sole cost of the Contractor.
- c. All materials and equipment used shall be submitted to the RPR for approval prior to ordering the equipment. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Clearly mark each copy to identify pertinent products or models applicable to this project. Indicate all optional equipment and delete non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment for which they apply on each submittal sheet. Markings shall be clearly made with arrows or circles (highlighting is not acceptable). The Contractor shall be responsible for delays in the project accruing directly or indirectly from late submissions or resubmissions of submittals.
- **d.** The data submitted shall be sufficient, in the opinion of the RPR, to determine compliance with the plans and specifications. The Contractor's submittals shall be submitted in electronic PDF format, tabbed by specification section. The RPR reserves the right to reject any or all equipment, materials or procedures, which, in the RPR's opinion, does not meet the system design and the standards and codes, specified herein.
- e. LED light fixtures shall be warranted by the manufacturer for a minimum of 4 years after date of installation. All other equipment and materials furnished and installed under this section shall be guaranteed against defects in materials and workmanship for a period of at least twelve (12) months from final acceptance by the Owner. The defective materials and/or equipment shall be repaired or replaced, at the Owner's discretion, with no additional cost to the Owner.

EQUIPMENT AND MATERIALS

- **125-2.2 Conduit/Duct.** Conduit shall conform to Specification Item L-110 Airport Underground Electrical Duct Banks and Conduits.
- **125-2.3 Cable and Counterpoise.** Cable and Counterpoise shall conform to Item L-108 Underground Power Cable for Airports.
- **125-2.4 Tape.** Rubber and plastic electrical tapes shall be Scotch Electrical Tape Numbers 23 and 88 respectively, as manufactured by 3M Company or an approved equal.
- **125-2.5 Cable Connections.** Cable Connections shall conform to Item L-108 Installation of Underground Cable for Airports.
- 125-2.6 Retroreflective Markers. Not required.
- **125-2.7 Runway and Taxiway Lights.** Runway and taxiway lights shall conform to the requirements of AC 150/5345-46. Lamps shall be of size and type indicated, or as required by fixture manufacturer for each lighting fixture required under this contract. Filters shall be of colors conforming to the specification for the light concerned or to the standard referenced.

Runway and taxiway lights shall be of size and type as shown in the plans. Light transformers shall be compatible with the circuits and regulators serving the runway and/or taxiway. All new Runway edge and Threshold lights shall be LED and all new Taxiway edge lights shall be quartz.

125-2.8 Runway and Taxiway Signs. Runway, Runway Distance Remaining and Taxiway Guidance Signs should conform to the requirements of AC 150/5345-44.

Runway, Runway Distance Remaining and taxiway signs shall be of the size and type as shown in the plans. Sign transformers shall be compatible with the circuits and regulators serving the runway and/or taxiway. All new signs shall be LED.

- 125-2.9 Runway End Identifier Light (REIL). Not required.
- 125-2.10 Precision Approach Path Indicator (PAPI). Not required.
- 125-2.11 Circuit Selector Cabinet. Not required.
- **125-2.12 Light Base and Transformer Housings.** Light Base and Transformer Housings should conform to the requirements of AC 150/5345-42. Light bases shall be as noted in the plans and shall be provided as indicated or as required to accommodate the fixture or device installed thereon. Base plates, cover plates, and adapter plates shall be provided to accommodate various sizes of fixtures.
- **125-2.13 Isolation Transformers**. Isolation Transformers shall be Type L-830, size as required for each installation. Transformer shall conform to AC 150/5345-47.
- **125-2.14 Distance Remaining Signs**. Runway Distance Remaining signs shall be LED, size 4 as shown in the plans. Sign transformers shall be compatible with the circuits and regulators serving the runway.
- **125-2.15 Bolting Hardware**. All airfield bolting hardware shall be stainless steel and meet FAA requirements. All bolts 1/4 inch and larger shall be hex head type. All bolts smaller than 1/4 inch trade size shall be recessed Allen type. All bolted connections shall utilize an anti-rotational locking type device. Anti-Seize compound shall be used on all bolt hardware installation.

INSTALLATION

125-3.1 Installation. The Contractor shall furnish, install, connect and test all equipment, accessories, conduit, cables, wires, buses, grounds and support items necessary to ensure a complete and operable airport lighting system as specified here and shown in the plans.

The equipment installation and mounting shall comply with the requirements of the National Electrical Code and state and local code agencies having jurisdiction.

The Contractor shall install the specified equipment in accordance with the applicable advisory circulars and the details shown on the plans.

- **125-3.2 Testing.** All lights shall be fully tested by continuous operation for not less than 24 hours as a completed system prior to acceptance. The test shall include operating the constant current regulator in each step not less than 10 times at the beginning and end of the 24-hour test. The fixtures shall illuminate properly during each portion of the test.
- **125-3.3 Shipping and Storage.** Equipment shall be shipped in suitable packing material to prevent damage during shipping. Store and maintain equipment and materials in areas protected from weather and physical damage. Any equipment and materials, in the opinion of the RPR, damaged during construction or storage shall be replaced by the Contractor at no additional cost to the owner. Painted or galvanized surfaces that are damaged shall be repaired in accordance with the manufacturer's recommendations.
- **125-3.4 Elevated and In-pavement Lights.** Water, debris, and other foreign substances shall be removed prior to installing fixture base and light.

A jig or holding device shall be used when installing each light fixture to ensure positioning to the proper elevation, alignment, level control, and azimuth control. Light fixtures shall be oriented with the light beams parallel to the runway or taxiway centerline and facing in the required direction. The outermost edge of fixture shall be level with the surrounding pavement. Surplus sealant or flexible embedding

material shall be removed. The holding device shall remain in place until sealant has reached its initial set.

- **125-3.5 Removals.** Removed light fixtures and signs not to be reinstalled in this project shall be offered to the airport. If the airport declines, the material shall become the property of the Contractor, removed from the site and disposed of offsite at a commercial disposal facility. Prior to removal the Contractor and engineer shall verify the light fixtures and/or signs the airport elects to keep are in good physical and operable condition.
- **a.** Existing light cans, splice cans, concrete duct bank, and guidance signs noted to be removed shall become the property of the Contractor, removed from airport property and disposed of offsite at a commercial disposal facility. The removal shall consist of the complete light or sign unit including base cans and foundations. Conduits entering into the lights or signs shall be cut. The void shall be backfilled and compacted to the approval of the Engineer. Restoration shall be incidental and in accordance with Sections T-901, 905 and 908. The Contractor shall be responsible to disconnect the fixture, transformers and all existing wiring from the light can prior to removal. If conduits are present, assure adequate access to the conduit is maintained for the construction phase of the project until the conduit is connected into the new system.
 - **b.** Edge light removal shall include the removal and backfilling of the light base.
- 125-3.6 Temporary Connections. This item shall include all temporary electrical items necessary to maintain the existing airport light and sign circuits on adjacent airfield pavements operational at all times during the course of the project. To maintain the existing airfield electrical systems, the Contractor will need to provide temporary circuiting/ cable/ connections / lighting and temporary conduits. This work shall be closely coordinated with the Airport and the FAA for the duration of the project. This item shall also include temporarily covering and uncovering existing lights on active circuits within a closure area on a nightly or an extended basis as necessary. The covering method shall be reviewed and approved by airport operation. Unsatisfactory methods shall be replaced at the discretion of Airport Operations. This work shall be included in the cost the project and not measured for payment separately.

Temporary Covers used within active Runway/Taxiway Safety Areas and blank covers for use on L-868 light bases shall be certified or designed to withstand aircraft and other heavy vehicular loadings.

- **125-3.7 New Lighting Installations.** New fixtures shall meet current FAA requirements and be listed on the FAA Advisory Circular list of equipment approved for use on an airport. The new lights shall utilize transformers of the size recommended by the manufacturer to provide the luminance standards according to AC 150/5345-46 (latest edition) and Engineering Brief 67C (LED's).
 - 1. New base mounted light fixtures installed on new bases shall include the concrete encased light can, transformer, support, light fixture, protective apron, stems, frangible coupling, grounding system, base plate(s) and L-823 connectors and shall be installed at the location as shown on the plans.
 - 2. New base mounted light fixtures installed on existing bases shall include new transformer, support, light fixture, stems, frangible coupling, base plate(s) and L-823 connectors and shall be installed at the location as shown on the plans.
 - 3. New flush/semi-flush mounted light fixtures installed on existing bases shall include the new light fixture, transformer, and L-823 connectors and shall be installed at the location as shown on the plans.
- 125-3.7 New Sign Installations. This item shall consist of new airfield guidance signs and new runway distance remaining signs and shall meet current FAA requirements and be listed on the FAA Advisory Circular list of equipment approved for use on an airport. The new signs shall utilize transformers of the

size recommended by the manufacturer to provide the luminance standards according to AC 150/5345-46 (latest edition) and Engineering Brief 67C (LED's).

- 1. New airfield guidance signs and runway distance remaining signs installed on new concrete bases including the concrete encased light can, transformer, light fixture, stems, protective apron, frangible coupling, grounding system, base plate(s) and L-823 connectors and shall be installed at the location as shown on the plans.
- 2. New distance remaining signs installed on existing concrete bases shall include modifications to the existing base, transformer, sign, and L-823 connectors.
- **c.** Items requiring the installation of new L-867 splice cans in turf installed at locations as shown on the plans and per the details presented in the plans. L-867 splice cans shall be used for new installations in turf. The Contractor shall provide a reinforced concrete ring or pad around spice cans installed in turf as detailed in the plans. New in-pavement splice cans installed in PCC pavement or within Taxiway/Runway Object Free Areas shall be L-868 cans.

METHOD OF MEASUREMENT

125-4.1 Runway and taxiway lights will be measured by the number of each type installed as completed units in place, ready for operation, and accepted by the RPR. Guidance signs will be measured by the number of each type and size installed as completed units, in place, ready for operation, and accepted by the RPR.

Light removals shall be measured by the number of lights removed, backfilled and accepted by the RPR.

Relocate taxi guidance sign will be measured by the number of guidance signs relocated as completed units, in place, ready for operation, and accepted by the RPR. Sign removals, backfill and restoration, and cabling shall be considered incidental and will not be measured for payment.

BASIS OF PAYMENT

125-5.1 Payment will be made at the Contract unit price for each complete runway or taxiway light, guidance sign, reflective marker, runway end identification light, precision approach path indicator, or abbreviated precision approach path indicator installed by the Contractor and accepted by the RPR. This payment will be full compensation for furnishing all materials and for all preparation, assembly, and installation of these materials, and for all labor, equipment, tools and incidentals necessary to complete this item.

Payment for Relocate Taxi Guidance Sign will be made at the Contract unit price for each guidance sign relocated and accepted by the RPR. This payment will be full compensation for furnishing all materials and for all preparation, assembly, and installation of these materials, and for all labor, equipment, tools, and incidentals necessary to complete this item.

Payment will be made under:

Item AW125401 Replace Light Fixture – per each

Item AW125442 Taxi Guidance Sign, 2 Character – per each

Item AW125515 HIRL, Base Mounted – per each

Item AW125551 HI Threshold Light Base MTD-LED – per each

Item AW125561	Runway Distance Remaining Sign-LED – per each
Item AW125565	Splice Can – per each
Item AW125901	Remove Stake Mounted Light – per each
Item AW125902	Remove Base Mounted Light – per each
Item AW125903	Remove Inpavement Light – per each
Item AW125904	Remove Taxi Guidance Sign – per each
Item AW125964	Relocate Taxi Guidance Sign – per each
Item AW801501	Sign Base – per each
Item AX125415	MITL – Base Mounted – per each
Item AX125442	Taxi Guidance Sign, 2 Character – per each
Item AX125565	Splice Can – per each

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circulars (AC)

AC 150/5340-18	Standards for Airport Sign Systems
AC 150/5340-26	Maintenance of Airport Visual Aid Facilities
AC 150/5340-30	Design and Installation Details for Airport Visual Aids
AC 150/5345-5	Circuit Selector Switch
AC 150/5345-7	Specification for L-824 Underground Electrical Cable for Airport Lighting Circuits
AC 150/5345-26	Specification for L-823 Plug and Receptacle, Cable Connectors
AC 150/5345-28	Precision Approach Path Indicator (PAPI) Systems
AC 150/5345-39	Specification for L-853, Runway and Taxiway Retroreflective Markers
AC 150/5345-42	Specification for Airport Light Bases, Transformer Housings, Junction Boxes, and Accessories
AC 150/5345-44	Specification for Runway and Taxiway Signs
AC 150/5345-46	Specification for Runway and Taxiway Light Fixtures
AC 150/5345-47	Specification for Series to Series Isolation Transformers for Airport Lighting Systems
AC 150/5345-51	Specification for Discharge-Type Flashing Light Equipment
AC 150/5345-53	Airport Lighting Equipment Certification Program
Engineering Brief (EB)	

END OF ITEM L-125

12/21/2018 AC 150/5370-10H

Paved or partially lined pipe shall be placed so that the longitudinal center line of the paved segment coincides with the flow line.

Elliptical and elliptically reinforced concrete pipes shall be placed with the manufacturer's reference lines designating the top of the pipe within five degrees of a vertical plane through the longitudinal axis of the pipe.

701-3.4 Joining pipe. Joints shall be made with rubber gaskets,.

Mortar joints shall be made with an excess of mortar to form a continuous bead around the outside of the pipe and shall be finished smooth on the inside. Molds or runners shall be used for grouted joints to retain the poured grout. Rubber ring gaskets shall be installed to form a flexible watertight seal.

- **a. Concrete pipe.** Concrete pipe may be either bell and spigot or tongue and groove. Pipe sections at joints shall be fully seated and the inner surfaces flush and even.
- **b. Metal pipe.** Metal pipe shall be firmly joined by form-fitting bands conforming to the requirements of ASTM A760 for steel pipe and AASHTO M196 for aluminum pipe.
 - c. PVC, Polyethylene, or Polypropylene pipe. Not used.
 - d. Fiberglass pipe. Not used.

701-3.5 Embedment and Overfill. Pipes shall be inspected before any fill material is placed; any pipes found to be out of alignment, unduly settled, or damaged shall be removed and re-laid or replaced at the Contractor's expense.

701-3.5-1 Embedment Material Requirements

- **a.** Concrete Pipe. Embedment material and compaction requirements shall be in accordance with the applicable Type of Standard Installation (Type 1) per ASTM C1479. If a concrete cradle or CLSM embedment material is used, it shall conform to the plan details.
 - b. Plastic and fiberglass Pipe. Not used.
 - c. Metal Pipe. Not used.

701-3.5-2 Placement of Embedment Material

The embedment material shall be compacted in layers not exceeding 6 inches on each side of the pipe and shall be brought up as shown in the plans.

The embedment material shall be compacted in layers not exceeding 6 inches on each side of the pipe and shall be brought up one foot above the top of the pipe or to natural ground level, whichever is greater. Thoroughly compact the embedment material under the haunches of the pipe without displacing the pipe. Material shall be brought up evenly on each side of the pipe for the full length of the pipe.

When the top of the pipe is above the top of the trench, the embedment material shall be compacted in layers not exceeding 6 inches and shall be brought up evenly on each side of the pipe to one foot above the top of the pipe. All embedment material shall be compacted to a density required under Item P-152.

Concrete cradles and flowable fills, such as controlled low strength material (CLSM) or controlled density fill (CDF), may be used for embedment provided adequate flotation resistance can be achieved by restraints, weighing, or placement technique.

It shall be the Contractor's responsibility to protect installed pipes and culverts from damage due to construction equipment operations. The Contractor shall be responsible for installation of any extra strutting or backfill required to protect pipes from the construction equipment.