

Change Order No. 2


Oklahoma City Airport Trust
Oklahoma City, Oklahoma

TRB Cooling Tower Replacement Mike Monroney Aeronautical Center

Project No. OCAT WRWA 2120

\$13,410.47 and 60 Calendar Days

APPROVAL RECOMMENDED:



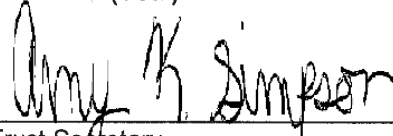
Director of Airports



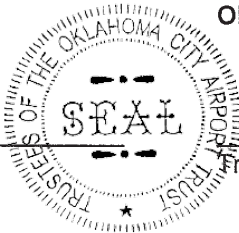
Aaron Campbell – Associate Principal
Frankfurt Short Bruza & Associates

APPROVED:

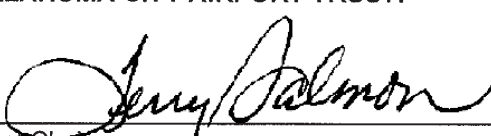
ATTEST: (Seal)



Trust Secretary

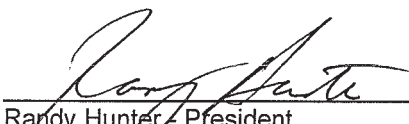


OKLAHOMA CITY AIRPORT TRUST:



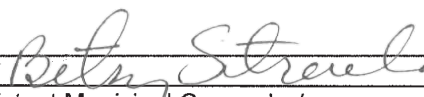
Trust Chairman

CONTRACTOR:



Randy Hunter - President
Hunter Mechanical and Controls, Inc.

REVIEWED for form and legality:



Assistant Municipal Counselor/
Attorney for the Trust

February 23, 2023

TRB COOLING TOWER REPLACEMENT OKLAHOMA CITY AIRPORT TRUST PROJECT NO. OCAT WRWA 2120	
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ITEM NO. 1 Add (+) \$13,410.47 & Add (+) 0 calendar days

Description

- a) delete control by-pass that is no longer needed
- b) add a 2" drain valve
- c) demo a light on a screen wall to be removed
- d) relocate electric outlets serving cooling tower
- e) add lightning protection terminal on top cooling tower
- f) add heat trace between tower sump and drain valve
- g) enlarge concrete housekeeping pad.

Add (+) \$13,410.47 & Add (+) 0 calendar days

Justification

- a) A by-pass valve by cooling tower is no longer needed, because an existing control by-pass valve in basement is sufficient
- b) Adding drain valve will improve freeze protection
- c) A light must be removed from a screen wall which is to be demolished
- d) Electric out and control circuit needs to reconfigure to accommodate new cooling tower orientation.
- e) Lightning detection was added, due to height above roof surface.
- f) Heat trace tape will improve freeze protection
- g) New side stream filter unit is larger than existing; therefore pad must enlarge.

ITEM NO. 2 Add (+) \$0.00 & Add (+) 60 calendar days

Description

Cooling tower arrived 60 days behind scheduled delivery date.

Add (+) \$0.00 & Add (+) 60 calendar days

Justification

Cooling tower delivery was subject to continued supply chain issues. The cooling tower deliver is a critical path schedule item.

In consideration of this change, Hunter Mechanical and Controls, Inc., contract is altered as follows:

Original Contract Amount	\$984,000.00
Change Order No. 1	(+) \$ 6,980.56
Change Order No. 2	(+) \$13,410.47

<u>New Contract Amount</u>	<u>\$1,004,391.03</u>
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Original Contract Duration	240 calendar days
Change Order No. 1	0 calendar days
Change Order No. 2	(+) 60 calendar days

<u>New Contract Duration</u>	<u>300 calendar days</u>
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<u>New Completion Date</u>	<u>June 4, 2023</u>
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END OF CHANGE ORDER NO. 2

CONTRACTOR'S
ITEMIZED BREAKDOWN
FOR
PROPOSED CHANGE ORDER REQUEST NO.: 2

PROJECT TITLE & LOCATION: TRB Cooling Tower Replacement - Mike Monroney Aeronautical Center

CONTRACTOR: Hunter Mechanical

ADDRESS: 5305 N. Santa Fe Ave.

TELEPHONE: (405)525-2110

1. DESCRIPTION OF REQUESTED CHANGE:	1) Delete 10" 3-way bypass control valve - Johnson Controls
	2) Provide 2" drain control valve - Johnson Controls
	3) Remove screenwall light - Millsap Electric
	4) Remove/Reinstall receptacles and control circuits under cooling tower - Millsap Electric
	5) Remove/Reinstall cooling tower lightning protection - Millsap Electric
	6) Provide heat trace and insulate between cooling tower sump and manual drain valve - Hunter Mechanical
	7) Extend concrete pad for new cooling tower side stream filter unit - Hunter Mechanical
	8) Extend contract completion date 60 days
2. JUSTIFICATION:	1) Existing 10" 3-way bypass control valve in basement is sufficient
	2) 2" drain control valve will add freeze protection
	3) Screenwall light needs to be demolished for cooling tower replacement
	4) Receptacles and control circuits under cooling tower are needed for freeze protection
	5) Lightning protection helps protect equipment
	6) Heat trace adds freeze protection
	7) New side stream filter unit is larger than existing
	8) Unexpected delays in equipment deliveries

3. LABOR (No. of Hours/Days per Operation)		A		B		C		D		E		F	
CLASSIFICATION		Quantity	Units	BARE UNIT RATE	PAYROLL TAX (PRT)		FRINGES		FULL UNIT RATE		SUBTOTAL LABOR (minus PRT)		
					7.65%		13.61%		(B + C + D)		A(B+D)		
Heat Trace / Insulation - labor		8.00	hrs	50.00	3.83		6.81		60.64		454.48		
Concrete - labor		16.00	hrs	50.00	3.83		6.81		60.64		908.96		
Project Management - labor		8.00	hrs	60.00	4.59		8.17		72.76		545.36		
					-		-		-		-		
					-		-		-		-		
Total Payroll Tax (PRT) (A*C then Sum of C)					128.64		(3) TOTAL LABOR (minus PRT)					1,908.80	

4. MATERIALS								SUBTOTAL MATERIALS (A*B*E)	
	No	Units	Quantity	Unit		Unit Rate			
6' Heat Trace Cable with Thermostat	1.00		2.00			28.93		57.86	
2-5/8"x 6' Closed Cell Pipe Insulation	1.00		1.00			29.10		29.10	
2"x 4"x 8' Lumber	1.00		1.00			4.18		4.18	
3/8"x 10' Rebar	1.00		2.00			5.98		11.96	
80# Concrete Bags	1.00		4.00			5.79		23.16	
								-	
(4) TOTAL MATERIALS								126.26	

5. EQUIPMENT								SUBTOTAL EQUIPMENT (A*B*E)	
	No	Units	Quantity	Unit		Unit Rate			
								-	
								-	
								-	
								-	
(5) TOTAL EQUIPMENT								-	

6. SUBCONTRACTOR'S COSTS: (Provide itemized list for each)						SUBTOTAL SC COST Less PRT (B-C)	
NAMES		Total SC Cost		Total SC PRT			
Johnson Controls	(Negotiated)	(4,554.00)				(4,554.00)	
Millsap Electric		14,319.00		1,921.60		12,397.40	
						-	
						-	
Subtotal		9,765.00		1,921.60		(6) TOTAL SC (Less PRT)	
						7,843.40	

7. OVERHEAD & PROFIT (On Subtotal of 3 + 4 + 5 + 6)								(7) TOTAL PROFIT	
Subtotal: (3) + (4) + (5) + (6)		9,878.46							
Allowable Profit		15%							
								1,481.77	

8. PAYROLL TAX (Sum of: (3. column C total) and (6. column C total))		(8) PAYROLL TAX	2,050.24
		TOTAL CHANGE ORDER AMOUNT	13,410.47

Hunter Mechanical
Contractor
By: Jared Bowerman
Title: Project Manager

END OF CHANGE ORDER BREAKDOWN



Johnson Controls, Inc.
Controls Group
4730 SW 20th Street
Oklahoma City, OK 73128
Tel. 405-443-6918
Fax: 405-688-3788

Deduct Proposal

Date: January 3rd, 2022

Project: FAA OCAT TRB Cooling Tower Replacement Controls Deduct

Johnson Controls, Inc. (JCI) is pleased to offer the following budget proposal for the above-mentioned project. Pricing is based on the price below.

The Changes below are based on RFI05 dated 9-19-2022:

- Valve CV-1 will be reused. JCI will remove the purchase of new valve and wiring from scope of work.
- Provide (1) new 2" control valve. (Valve to be installed by others) for equalizer drain pipe in penthouse.
- Wire back to building automation system and modify sequences in accordance with RFI5

Breakdown:

Material Deduct: (\$5,754.00)
Material Add: \$540.00
Labor Deduct: (\$660)
Labor Add: \$1320
Subcontractor Deduct: (\$800)
Subcontractor Add: \$800

Total amount to be deducted from base price..... \$4,554.00



Replace Cooling Tower
TRB
Mike Monroney Aeronautical Center
WRWA 2120

Electrical Scope and Quotation

December 21, 2022

We are pleased to provide the following quotation for the electrical work required per the answers to RFI-2

Quotation

Our scope of work is as follows:

- We have not included applicable sales tax.
- We include cleanup of our own "identifiable" scraps to a centrally located Dumpster, provided by others. We do not accept back charges for clean up or dump fees.
- We assume all work to be performed during normal business hours, except for scheduled outages.
- Removal and reinstallation of receptacles under cooling tower.
- Removal and reinstallation of control conduits (control wiring is not included).
- Removal and reinstallation of existing light fixture is not included.
- Removal and reinstallation of lightning protection on new cooling tower only.
- Provide a UL Letter of Findings.
- Recertification of the entire lightning protection system is not included.
- All other work is excluded.

Our scope of work Excludes the following items:

- Performance bonds. If bonds are required, add 1.2% of our total price listed below.
- Hazardous waste testing, abatement, removal, haul-off, and disposal.
- Cathodic protection.
- Painting.
- Plywood backboards.
- Roof penetrations or any roofing work.
- Wall or ceiling removal, replacement, and repair.
- Design and engineering cost.
- Short circuit, fault current, and arc flash study.
- ATEP emergency shutdown controls.
- Trash dumpster.
- Control work, devices, and motor starters.
- Power and control of dampers.
- Electrical for temporary facilities.
- Overtime work (except for outages).



Replace Cooling Tower
TRB
Mike Monroney Aeronautical Center
WRWA 2120

Electrical Scope and Quotation

December 21, 2022

- Programming.
- Surveying.
- Commissioning.
- Lightning protection (except as noted above).
- Concrete/asphalt cutting, removal, replacement, & haul-off.
- Concrete encasement.
- Cutting, removal, and patching of floors, walls, & ceilings.
- Heat trace.
- Equipment pads.
- Sod replacement
- Variable frequency drives.
- Grounding of fences.
- Communications devices, cabling, & terminations.
- Security devices, locks, cabling, & terminations.
- Excavation, backfill, compaction, haul-off, & testing.
- Rock excavation.
- Repair or replacement of pre-existing conditions (unless noted on plans).
- Connection of systems furniture.
- Access control and security system.
- Fire alarm and mass notification system.
- Any work associated with 600 volts and higher.
- Access doors and panels.
- Any work not listed above.

PRICE

CE-001 Rev - \$ 14,319.00

This proposal is void if not accepted in writing within 30 calendar days.

Millsap Electric, Inc. is a small business.

Oklahoma Electrical Contractor License No. 3559.

If you have any questions or need further assistance, please contact the undersigned at 405.409.8456, or email at smillsap@millsapelectric.com

Thanks,



Replace Cooling Tower
TRB
Mike Monroney Aeronautical Center
WRWA 2120

Electrical Scope and Quotation

December 21, 2022

Steve Millsap
President
Millsap Electric Inc.

OCAT - TRB Cooling Tower Replacement

WRWA 2120

RS Means CostWorks 2022 - 4th Quarter
Oklahoma City - 731

Monday, November 14, 2022

ITEM		MATERIAL		LABOR			OTHER		TOTAL	NOTES			
CSI NUMBER	DESCRIPTION	UNIT	QUAN	UNIT COST	8.750% SALES TAX	SUBTOTAL	UNIT MAN- HOURS	47.10 UNIT COST			M / H SUBTOTAL	SUBTOTAL	UNIT COST
RFI-2 RFI Answers - Revised Oct. 19, 2022													
1	Any existing conduits that are not currently feeder the mechanical equipment that is to be demolished will need to be re-routed.												
a	Receptacles												
30	Remove Receptacles												
26050 535 3010	Circuit breaker, bolt-on or plug in, 15 A - 50 A, electrical demolition, remove	Ea.	1	-	-	0.00	0.400	18.84	0.40	18.84	-	0.00	18.84
26050 510 0100	Conduit, rigid galvanized steel, 1/2" to 1" diameter, electrical demolition, remove conduit to 15' high, including fittings & hangers	L.F.	90	-	-	0.00	0.033	1.55	2.97	139.88	-	0.00	139.88
26050 510 1720	Junction boxes, 4" square & octagon, electrical demolition, remove, including removal of supports and terminations	Ea.	3	-	-	0.00	0.100	4.71	0.30	14.13	-	0.00	14.13
26050 510 1840	Wire, THW-THWN-THHN, #12, electrical demolition, removed from in place conduit, to 15' high	C.L.F.	2.97	-	-	0.00	0.145	6.83	0.43	20.28	-	0.00	20.28
26050 510 1790	Receptacle & switches, 15 to 30 amp, electrical demolition, remove	Ea.	3	-	-	0.00	0.059	2.78	0.18	8.34	-	0.00	8.34
26050 510 1780	Receptacle & switch plates, electrical demolition, remove	Ea.	3	-	-	0.00	0.031	1.46	0.09	4.38	-	0.00	4.38
01543 340 0030	Rent aerial lift, scissor type, to 30' high, 1200 lb. capacity, electric	Month+	0.03	-	-	0.00	-	-	-	0.00	2,005.400	54.78	54.78
30	Install Receptacles												
26241 620 0100	Circuit breakers, bolt-on, 10 k A I.C., 1 pole, 120 volt, 15 to 50 amp	Ea.	1	-		0.00	0.800	37.68	0.80	37.68	-	0.00	37.68
26053 313 1770	Rigid galvanized steel conduit, 3/4" diameter, to 10' H, incl 2 terminations, 2 elbows, 11 beam clamps, and 11 couplings per 100 LF	L.F.	90	4.20	4.57	411.08	0.100	4.71	9.00	423.87	-	0.00	834.94
26053 313 2030	Rigid galvanized steel conduit elbows, 3/4" diameter, to 10' high	Ea.	6	5.25	5.71	34.26	0.286	13.47	1.72	80.82	-	0.00	115.07
26053 313 2270	Rigid galvanized steel conduit couplings, 3/4" diameter, to 10' high	Ea.	6	1.62	1.76	10.57	0.050	2.35	0.30	14.13	-	0.00	24.70
26053 316 1800	Outlet boxes, cast, FDC, 1 gang, 3/4" hub	Ea.	3	42.50	46.22	138.66	0.727	34.24	2.18	102.72	-	0.00	241.37
26051 990 1200	Wire, copper, stranded, 600 volt, #12, type THWN-THHN, in raceway	C.L.F.	2.97	42.00	45.68	135.65	0.727	34.24	2.16	101.69	-	0.00	237.34
26272 620 2482	Duplex receptacle, ground fault interrupting, 20 amp	Ea.	3	36.00	39.15	117.45	0.296	13.94	0.89	41.82	-	0.00	159.27
26053 316 1850	Outlet boxes, cast, weatherproof in-use cover, 1 gang	Ea.	3	41.00	44.59	133.76	0.125	5.89	0.38	17.66	-	0.00	151.42
01543 340 0030	Rent aerial lift, scissor type, to 30' high, 1200 lb. capacity, electric	Month+	0.11	-	-	0.00	-	-	-	0.00	2,005.400	218.33	218.33
									</				

b Controls																								
60	Remove Control Conduit & Wire										2													
26050 535 3010	Circuit breaker, bolt-on or plug in, 15 A - 50 A, electrical demolition, remove										Ea.	2	-	-	0.00	0.400	18.84	0.80	37.68	-	0.00	37.68		
26050 510 0100	Conduit, rigid galvanized steel, 1/2" to 1" diameter, electrical demolition, remove conduit to 15' high, including fittings & hangers										L.F.	120	-	-	0.00	0.033	1.55	3.96	186.50	-	0.00	186.50		
26050 510 1720	Junction boxes, 4" square & octagon, electrical demolition, remove, including removal of supports and terminations										Ea.	2	-	-	0.00	0.100	4.71	0.20	9.42	-	0.00	9.42		
26050 510 1840	Wire, THW-THWN-THHN, #12, electrical demolition, removed from in place conduit, to 15' high										C.L.F.	10.56	-	-	0.00	0.145	6.83	1.53	72.11	-	0.00	72.11		
26050 510 1100	Safety switches, 250 or 600 V, 30 amp, electrical demolition, remove, including disconnection of wire & conduit terminations										Ea.	2	-	-	0.00	0.650	30.61	1.30	61.22	-	0.00	61.22		
26050 520 6510	Equipment connection, to 15 to 30 HP, electrical demolition, remove										Ea.	2	-	-	0.00	0.444	20.91	0.89	41.82	-	0.00	41.82		
01543 340 0030	Rent aerial lift, scissor type, to 30' high, 1200 lb. capacity, electric										Month+	0.05	-	-	0.00	-	-	-	0.00	2,005.400	108.78	108.78		
60	Install Controls Conduit Only										2													
26053 313 1770	Rigid galvanized steel conduit, 3/4" diameter, to 10' H, incl 2 terminations, 2 elbows, 11 beam clamps, and 11 couplings per 100 LF										L.F.	120	4.20	4.57	548.10	0.100	4.71	12.00	565.15	-	0.00	1,113.25		
26053 313 2030	Rigid galvanized steel conduit elbows, 3/4" diameter, to 10' high										Ea.	4	5.25	5.71	22.84	0.286	13.47	1.14	53.88	-	0.00	76.72		
26053 313 2270	Rigid galvanized steel conduit couplings, 3/4" diameter, to 10' high										Ea.	4	1.62	1.76	7.05	0.050	2.35	0.20	9.42	-	0.00	16.47		
26053 316 1820	Outlet boxes, cast, FDC, 2 gang, 3/4" hub										Ea.	2	74.00	80.48	160.95	0.889	41.87	1.78	83.74	-	0.00	244.69		
26053 316 1544	Outlet boxes, cast, weatherproof blank cover, 2 gang										Ea.	2	1.53	1.66	3.33	0.151	7.11	0.30	14.22	-	0.00	17.55		
01543 340 0030	Rent aerial lift, scissor type, to 30' high, 1200 lb. capacity, electric										Month+	0.10	-	-	0.00	-	-	-	0.00	2,005.400	193.32	193.32		
Control wiring & connections by Others															-	-	-	0.00	-	-	0.00	-	0.00	0.00
Remove light fixture, conduit, and circuit to nearest junction box. Remove LPS conductors from demolished screen wall. LPS will need to be re-worked such that there are air terminals are located on top of the new mechanical equipment. Lightning protection system shall be reworked in the area of the screen wall removal. Additional Class I lightning protection conductors and air terminals will be required on the top of the cooling tower. These shall be tied into the existing lightning protection system for the building.																								
a	Wall-Pack Light										1													
40	Remove Lighting										1													
26050 535 3010	Circuit breaker, bolt-on or plug in, 15 A - 50 A, electrical demolition, remove										Ea.	1	-	-	0.00	0.400	18.84	0.40	18.84	-	0.00	18.84		
26050 510 0100	Conduit, rigid galvanized steel, 1/2" to 1" diameter, electrical demolition, remove conduit to 15' high, including fittings & hangers										L.F.	40	-	-	0.00	0.033	1.55	1.32	62.17	-	0.00	62.17		

26050 510 1720	Junction boxes, 4" square & octagon, electrical demolition, remove, including removal of supports and terminations	Ea.	1	-	-	0.00	0.100	4.71	0.10	4.71	-	0.00	4.71
26050 510 1840	Wire, THW-THWN-THHN, #12 electrical demolition, removed from in place conduit, to 15' high	C.L.F.	1.32	-	-	0.00	0.145	6.83	0.19	9.01	-	0.00	9.01
26050 510 2720	Mercury vapor wall pack, exterior, 250 Watt, electrical demolition, remove	Ea.	1	-	-	0.00	0.640	30.14	0.64	30.14	-	0.00	30.14
01543 340 0030	Rent aerial lift, scissor type, to 30' high, 1200 lb. capacity, electric	Month+	0.02	-	-	0.00	-	-	-	0.00	2,005.400	33.23	33.23
20	Install Lighting	0											
26241 620 0100	Circuit breakers, bolt-on, 10 k A I.C., 1 pole, 120 volt, 15 to 50 amp	Ea.	0	-		0.00	0.800	37.68	-	0.00	-	0.00	0.00
26053 313 1770	Rigid galvanized steel conduit, 3/4" diameter, to 10' H, incl 2 terminations, 2 elbows, 11 beam clamps, and 11 couplings per 100 LF	L.F.	0	4.20	4.57	0.00	0.100	4.71	-	0.00	-	0.00	0.00
26053 313 2030	Rigid galvanized steel conduit elbows, 3/4" diameter, to 10' high	Ea.	0	5.25	5.71	0.00	0.286	13.47	-	0.00	-	0.00	0.00
26053 313 2270	Rigid galvanized steel conduit couplings, 3/4" diameter, to 10' high	Ea.	0	1.62	1.76	0.00	0.050	2.35	-	0.00	-	0.00	0.00
26053 316 1800	Outlet boxes, cast, FDC, 1 gang, 3/4" hub	Ea.	0	42.50	46.22	0.00	0.727	34.24	-	0.00	-	0.00	0.00
26051 990 1200	Wire, copper, stranded, 600 volt, #12, type THWN-THHN, in raceway	C.L.F.	0.00	42.00	45.68	0.00	0.727	34.24	-	0.00	-	0.00	0.00
26562 310 1160	High pressure sodium fixture, exterior, wall pack, 70 watt, incl lamps	Ea.	0	136.00	147.90	0.00	2.000	94.19	-	0.00	-	0.00	0.00
01543 340 0030	Rent aerial lift, scissor type, to 30' high, 1200 lb. capacity, electric	Month+	0.00	-	-	0.00	-	-	-	0.00	2,005.400	0.00	0.00
b	Lighting Protection												
	Remove Lightning Protection												
	Lightning protection demolition included in Taylor Quote (See below)			-	-	0.00	-	-	-	0.00	-	0.00	0.00
	Install Lightning Protection												
	Lightning protection installation included in Taylor Quote (See below)			-	-	0.00	-	-	-	0.00	-	0.00	0.00
3	Re-certification of the system to UL Master Label will be required												
a	Lighting Protection Certification												
	Lighting Protection Quote only includes a UL Letter of Findings (See Taylor Email attached)			-	-	0.00	-	-	-	0.00	-	0.00	0.00
	Supervision												

FM	Electrician - Foreman	M.H.	24.27	-	-	0.00	1,000	49.45	24.27	1,200.28	-	0.00	1,200.28
Supt	Electrician - Superintendent	M.H.	12.14	-	-	0.00	1,000	51.81	12.14	628.72	-	0.00	628.72
Quoted Prices													
L/P	Lightning Protection for Cooling Tower - Taylor	L.S.	1	-	-	0.00	-	-	-	0.00	3,415.000	3,415.00	3,415.00
UL LOF	UL Letter of Findings - Taylor	L.S.	1	-	-	0.00	-	-	-	0.00	1,500.000	1,500.00	1,500.00
SUBTOTALS				1,723.69		4,115.26		84.95		5,523.44		11,362.39	

Add 14 days for this work

No other work included except for items listed above

This price is good for 14 days