

Canadian _____ County, Oklahoma
 COUNTY PURCHASING OFFICE
 Canadian _____ County Court House
 El Reno _____, Oklahoma
 Phone: (405) 295-6125

INVITATION TO BID

PLEASE REVIEW TERMS AND CONDITIONS ON REVERSE SIDE RELATING TO SUBMISSION OF THIS BID.
 Notarized Affidavit completions and signature required on reverse side.

DATE ISSUED
 February 27, 2017
 Page 1 of 2

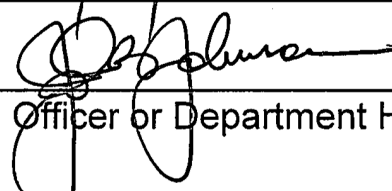
BID NUMBER HVAC Replacement / #2017-#10 County Commissioners	BID CLOSING DATE AND HOUR March 27, 2017 at 9:30am	REQUIRED DELIVERY DATE SEE SPECIFICATIONS ____ Days after award of Purchase Order
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TERMS Net, FOB Bids will be received beg. 9:30am Tuesday March 21, until March 27, 2017 @ 9:30am	DATE OF DELIVERY: SEE SPECIFICATIONS
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ITEM	QUANTITY	UNIT OF ISSUE	DESCRIPTION	UNIT PRICE	TOTAL
			<p>Canadian County Commissioners are seeking bids for a HVAC Replacement for the Canadian County Administrative Office Building.</p> <p>Specifications attached.</p> <p>The Board of Canadian County Commissioners reserve the right to reject any and all bids or to award all or any portion of the items bid. All data will be considered in the awarding of the bid including the delivery time.</p> <p><u>The terms & conditions of this document must be completed and returned or the bid will be rejected.</u></p> <p>Contact person: John Johnson, Chief of Staff 201 N Choctaw El Reno, OK 73036 (405) 295-6201</p>		<p>\$ _____ Base Bid</p>

APPROVED

Date 2/24/2017



 Officer or Department Head

STATE OF OKLAHOMA
 CANADIAN COUNTY
 FILED OR RECORDED

FEB 27 2017

SHERRY MURRAY
 COUNTY CLERK

170124

TERMS AND CONDITIONS

1. Sealed bids will be opened in the Commissioner's Conference Room, Canadian County Courthouse, 201 N. Choctaw Avenue, El Reno, Oklahoma, at the time and date shown on the invitation to bid form.
2. Late bids will not be considered. Bids must be received in sealed envelopes (one to an envelope) with bid number and closing date written on the outside of the envelope.
3. Unit prices will be guaranteed correct by the bidder.
4. Firm prices will be F.O.B. destination.
5. Purchases by Canadian County, Oklahoma, are not subject to state or federal taxes.
6. This bid is submitted as a legal offer and any bid when accepted by the County constitutes a firm contract.
7. Oklahoma laws require each bidder submitting a bid to a county for goods or services to furnish a notarized sworn statement of non-collusion. A form is supplied below.
8. Bids will be firm until 04/27/2017
(DATE)

AFFIDAVIT: I, the undersigned, of lawful age, being first duly sworn on oath say that he (she) is the agent authorized by the bidder to submit the above bid. Affiant further states that the bidder has not been a party to any collusion among bidders in restraint of freedom of competition by agreement to bid at a fixed price or to refrain from bidding; or with any state official or employee as to quantity; quality or price in the prospective contract or any other terms of said prospective contract; or in any discussions between bidders and any state official concerning exchange of money or other thing of value for special consideration in the letting of a contract; that the bidder/contractor has not paid, given or donated or agreed to pay, give or donate to any officer or employee of the State of Oklahoma (or other entity) any money or other thing of value, either directly or indirectly in the procuring of the award of a contract pursuant to this bid.

Subscribed and sworn before this _____ day

of _____, 20 _____

(SEAL)

Firm: _____

My commission expires _____

Signed by: _____ Title: _____
(Manual Signature of Undersigned)

NOTARY PUBLIC (CLERK OR JUDGE)

Address: _____ Phone: _____

City: _____ State: _____

Zip: _____

Please mail sealed bids to:
Canadian County Clerk's Office
Attn: Purchasing
PO Box 458
El Reno, OK 73036

Street Address:
201 N Choctaw Avenue
El Reno, OK 73036

STATE OF OKLAHOMA
CANADIAN COUNTY
CLERK'S OFFICE

NOTE: Other terms and conditions can be added at the discretion of the county officers.

APR 27 2017

CLERK'S OFFICE

EL RENO, OK



**Canadian County
Purchasing**

Bid Specifications

Date Issued: February 27, 2017
Bid Number: **2017-#10**
Closing Date: March 27, 2017 at 9:30am
PO Box 458, 201 N. Choctaw Ave., El Reno, OK 73036
Opening Date: March 27, 2017 at 9:30am
Commissioner's Meeting Room, 201 N. Choctaw Ave., El Reno, OK 73036

~ SPECIFICATIONS ~

HVAC Replacement / County Commissioners

Canadian County Commissioners are seeking bids for a HVAC Replacement for the Canadian County Administrative Building located at 201 N. Choctaw, El Reno, Oklahoma.

Bids will be received beginning at 9:30am on Tuesday, March 21 until 9:30am on Monday, March 27, 2017.

For an appointment to look at the building please call John Johnson @ 405-295-6201.

- Project will be completed ninety (90) days or less from time of notification of award and will be installed to state and local codes.
- Contractor will be responsible for all electrical and gas connections, all lifting devices, miscellaneous supplies, manpower and clean-up.
- Contractor will provide equipment brand names and model numbers when quoting for this bid.
- Any electrical work necessary to provide power to the HVAC System shall be considered incidental to the project and any cost shall be included in the bid.

Bids shall include:

- A certified check, cashier's check or bid bond equal to five percent (5%) of the bid, which shall be deposited with the awarding public agency as a guaranty; or

An irrevocable letter of credit terms the Construction and Properties Division of the Office of Management and Enterprise Services prescribes, issued by a financial institution insured by the Federal Deposit Insurance Corporation or the Federal Savings and Loan Insurance Corporation for the benefit of the state, on behalf of the awarding public agency, in an amount equal to five percent (5%) of the bid. The awarding public agency shall deposit the irrevocable letter of credit with Division.

- Non Collusion Affidavit
- Business Relationships Affidavit

Awarded vendor shall provide:

- Contract
- Payment/Performance Bond
- Insurance – Contractor must provide evidence of public liability and workers' compensation insurance during construction in reasonable amounts.

(Please review Title 61 O.S. § 101-138 for full disclosure)

Specifications:

- See Specifications Attached

Special Notation:

Brand names, specific detailed items or specific manufactures are for informational purposes only and you may offer any brand or use any manufacturer that meets or exceeds the specifications.

For Information Contact:

John Johnson, Chief of Staff

Phone: (405) 295-6201

Hours: Monday – Friday 8:00am to 4:30pm

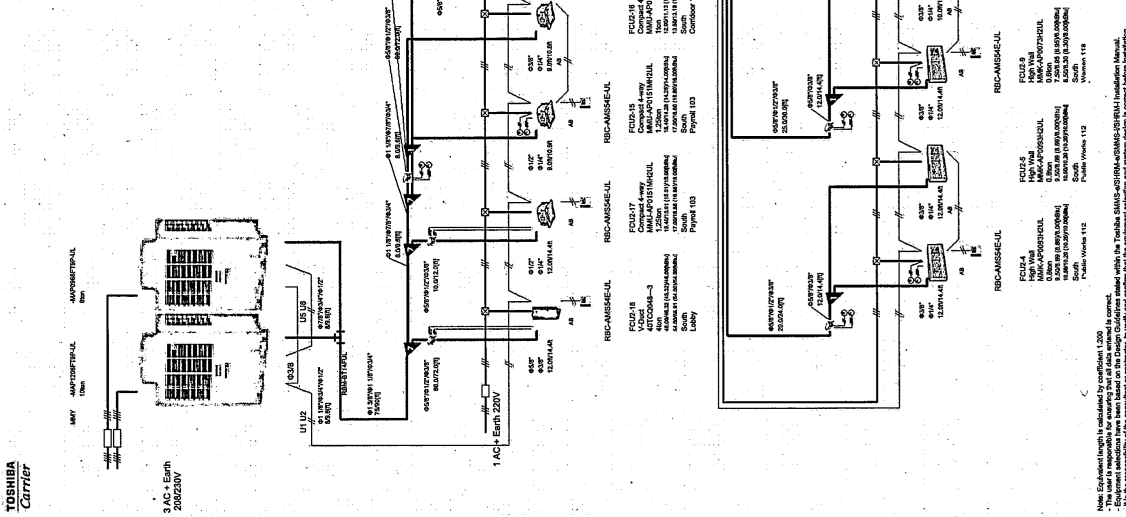
Address: 201 N. Choctaw, El Reno, OK 73036

TOSHIBA
Carrier

Control Wiring		Wiring Size and Length	
Name	Label	Wiring	
Outdoor - Indoor Control Wiring	U1 U2	2-core Non-polarity Shielded cable	AWG16: Up to 3280 ft (1000 m)
Central Control Wiring	U3 U4	2-core Non-polarity Shielded cable	AWG14: Up to 5580 ft (2000 m)
Outdoor Units Control Wiring	U5 U6	2-core Non-polarity Shielded cable	AWG18 to AWG14 (Up to 300 ft (100 m))
Remote Controller Wiring	AB	2-core	AWG20 to AWG14 - Up to 1640 ft (500 m) - Up to 560 ft (170 m) (total length of control wiring between indoor and outdoor units)

1 South Unit
 SRM-6
 RMY-AP2168719P-U/L
 216.008BU/188.448BU/243.008BU/234.798BU
 233.608BU/17.45 (217.53)BU/210.008BU
 281.508BU/258.53 (256.62)BU/251.008BU
 Above
 85.9FA3JF
 86.55Ba

Refrigerant Cycle No.
 Outdoor Name
 Outdoor Type
 Model Name
 Indoor Name
 Indoor Capacity
 Indoor Required Cooling Capacity
 Indoor Required Heating Capacity
 Unit Position
 Outdoor Temperature Cooling/Heating
 Additional Refrigerant



Product Name	Model Name	Qty
Outdoor (SRM)	RMY-AP2168719P-U/L	1
Indoor (SRM)	RHC-AMSHE-UL	1
Indoor (SRM)	RHC-AMSHE-UL	4
Indoor (SRM)	RHC-AMSHE-UL	4
Indoor (SRM)	RHC-AMSHE-UL	6
Indoor (SRM)	RHC-AMSHE-UL	2
Indoor (SRM)	RHC-AMSHE-UL	1
Indoor (SRM)	RHC-AMSHE-UL	8
Indoor (SRM)	RHC-AMSHE-UL	5
Indoor (SRM)	RHC-AMSHE-UL	4
Indoor (SRM)	RHC-AMSHE-UL	6
Indoor (SRM)	RHC-AMSHE-UL	1
Indoor (SRM)	RHC-AMSHE-UL	12

Product Name	Model Name	Qty
Indoor (SRM)	RHC-AMSHE-UL	1
Indoor (SRM)	RHC-AMSHE-UL	2
Indoor (SRM)	RHC-AMSHE-UL	3
Indoor (SRM)	RHC-AMSHE-UL	4
Indoor (SRM)	RHC-AMSHE-UL	5
Indoor (SRM)	RHC-AMSHE-UL	6
Indoor (SRM)	RHC-AMSHE-UL	7
Indoor (SRM)	RHC-AMSHE-UL	8
Indoor (SRM)	RHC-AMSHE-UL	9

Product Name	Model Name	Qty
Indoor (SRM)	RHC-AMSHE-UL	1
Indoor (SRM)	RHC-AMSHE-UL	2
Indoor (SRM)	RHC-AMSHE-UL	3
Indoor (SRM)	RHC-AMSHE-UL	4
Indoor (SRM)	RHC-AMSHE-UL	5
Indoor (SRM)	RHC-AMSHE-UL	6
Indoor (SRM)	RHC-AMSHE-UL	7
Indoor (SRM)	RHC-AMSHE-UL	8
Indoor (SRM)	RHC-AMSHE-UL	9

Product Name	Model Name	Qty
Indoor (SRM)	RHC-AMSHE-UL	1
Indoor (SRM)	RHC-AMSHE-UL	2
Indoor (SRM)	RHC-AMSHE-UL	3
Indoor (SRM)	RHC-AMSHE-UL	4
Indoor (SRM)	RHC-AMSHE-UL	5
Indoor (SRM)	RHC-AMSHE-UL	6
Indoor (SRM)	RHC-AMSHE-UL	7
Indoor (SRM)	RHC-AMSHE-UL	8
Indoor (SRM)	RHC-AMSHE-UL	9

Product Name	Model Name	Qty
Indoor (SRM)	RHC-AMSHE-UL	1
Indoor (SRM)	RHC-AMSHE-UL	2
Indoor (SRM)	RHC-AMSHE-UL	3
Indoor (SRM)	RHC-AMSHE-UL	4
Indoor (SRM)	RHC-AMSHE-UL	5
Indoor (SRM)	RHC-AMSHE-UL	6
Indoor (SRM)	RHC-AMSHE-UL	7
Indoor (SRM)	RHC-AMSHE-UL	8
Indoor (SRM)	RHC-AMSHE-UL	9

Product Name	Model Name	Qty
Indoor (SRM)	RHC-AMSHE-UL	1
Indoor (SRM)	RHC-AMSHE-UL	2
Indoor (SRM)	RHC-AMSHE-UL	3
Indoor (SRM)	RHC-AMSHE-UL	4
Indoor (SRM)	RHC-AMSHE-UL	5
Indoor (SRM)	RHC-AMSHE-UL	6
Indoor (SRM)	RHC-AMSHE-UL	7
Indoor (SRM)	RHC-AMSHE-UL	8
Indoor (SRM)	RHC-AMSHE-UL	9

Product Name	Model Name	Qty
Indoor (SRM)	RHC-AMSHE-UL	1
Indoor (SRM)	RHC-AMSHE-UL	2
Indoor (SRM)	RHC-AMSHE-UL	3
Indoor (SRM)	RHC-AMSHE-UL	4
Indoor (SRM)	RHC-AMSHE-UL	5
Indoor (SRM)	RHC-AMSHE-UL	6
Indoor (SRM)	RHC-AMSHE-UL	7
Indoor (SRM)	RHC-AMSHE-UL	8
Indoor (SRM)	RHC-AMSHE-UL	9

Product Name	Model Name	Qty
Indoor (SRM)	RHC-AMSHE-UL	1
Indoor (SRM)	RHC-AMSHE-UL	2
Indoor (SRM)	RHC-AMSHE-UL	3
Indoor (SRM)	RHC-AMSHE-UL	4
Indoor (SRM)	RHC-AMSHE-UL	5
Indoor (SRM)	RHC-AMSHE-UL	6
Indoor (SRM)	RHC-AMSHE-UL	7
Indoor (SRM)	RHC-AMSHE-UL	8
Indoor (SRM)	RHC-AMSHE-UL	9

Note: Equipment length is indicated by coefficient L/300.
 - Equipment selection has been based on the Design Conditions stated within the Toshiba SVAHS-APR(R)-SRM(R)-SRM(R)-SRM(R) Installation Manual.
 - The equipment length is based on the Design Conditions stated within the Toshiba SVAHS-APR(R)-SRM(R)-SRM(R)-SRM(R) Installation Manual.
 - Please note that in the event of future system expansion being allowed for, the system design for a change in cooling/heating requirements, & the re-evaluation of the air conditioning system must be made prior to final installation.

Software Version 2.6.5.0

Drawing No. 2016-11-01

Date 2016-11-01

Scale NonScale

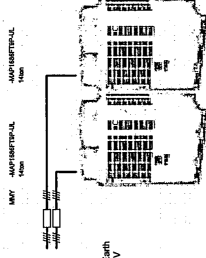
Building name Canadian County

Drawing name

1

TOSHIBA
Carrier

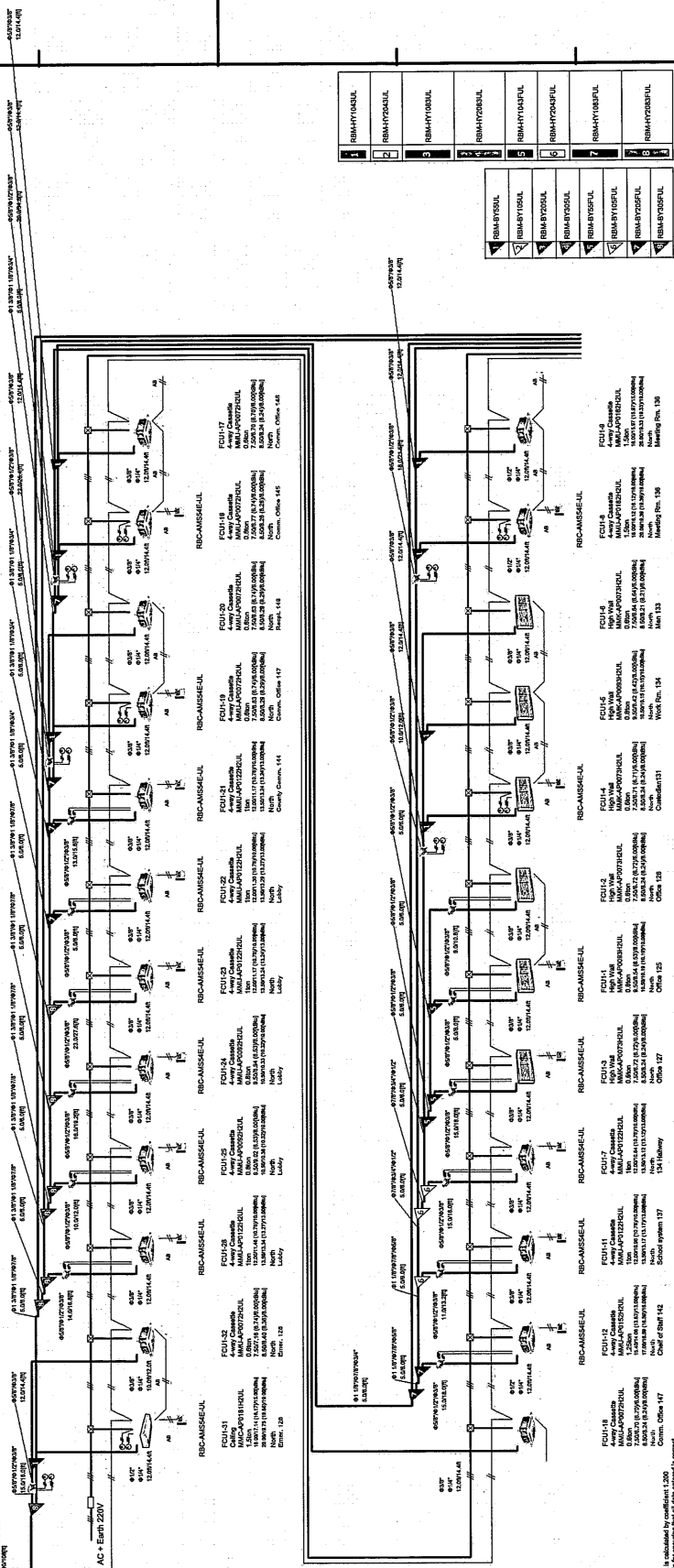
3/4" 15' with
20' @ 230V



Control Wiring	Name	Label	Wiring	Wiring Size and Length
Outdoor - Indoor Control Wiring	SR18-6-4-3368SF19-U-L	U1 U2	2-core Non-polarity Shielded cable	AWG18 to 350 ft (100 m)
Central Control Wiring	SR18-6-4-3368SF19-U-L	U3 U4	2-core Non-polarity Shielded cable	AWG14 to 350 ft (100 m)
Outdoor Units Control Wiring	SR18-6-4-3368SF19-U-L	U5 U6	2-core Non-polarity Shielded cable	AWG18 to AWG14 up to 350 ft (100 m)
Remote Controller Wiring	SR18-6-4-3368SF19-U-L	AB	2-core	- Up to 150 ft (50 m) - Up to 150 ft (50 m) total length of control wiring between indoor units

2
North Unit
SR18-6-4-3368SF19-U-L
200
331-40848003.30 (230.64)Mtu/274.00Kbu
338.00848027.65848476.00Kbu/85.22Kbu
371.50848392.52 (362.17)Mtu/53.00Kbu
Above
95.0F/43.0F
114.51lbs
Additional Refrigerant

Refrigerant Cycle No.
Outdoor Name
Outdoor Type
Model Name
Outdoor Capacity
Indoor Capacity
Indoor Required Cooling Capacity
Indoor Required Heating Capacity
Unit Position
Outdoor Temperature Cooling/Heating



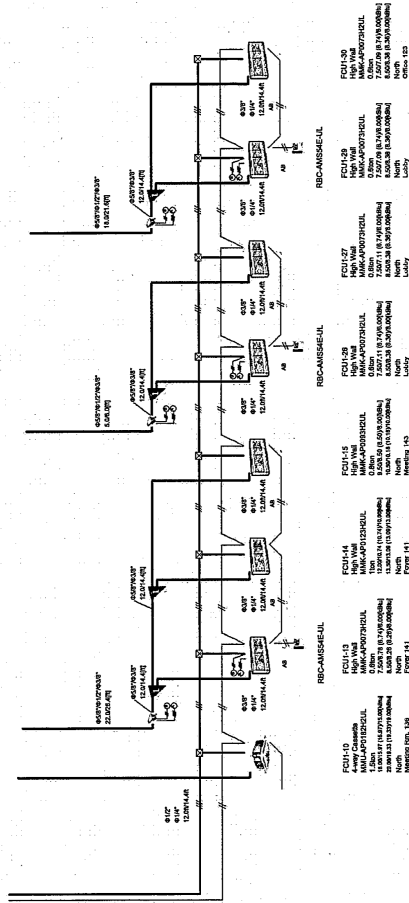
Software Version
2.6.5.0

1	RMAHYTSD-U1
2	RMAHYTSD-U2
3	RMAHYTSD-U3
4	RMAHYTSD-U4
5	RMAHYTSD-U5
6	RMAHYTSD-U6
7	RMAHYTSD-U7
8	RMAHYTSD-U8
9	RMAHYTSD-U9
10	RMAHYTSD-U10
11	RMAHYTSD-U11
12	RMAHYTSD-U12

Date	2016-11-01
Scale	NonScale

Building name	Canadian County
Drawing name	

Note: Equivalent length is calculated by coefficient of 1.30x.
- Equipment location has been based on the Design Consultant's floor plan. If the location of equipment changes, a representation of the air conditioning system must be made prior to final installation.
- Please note that in the event of future system expansions, a representation of the air conditioning system must be made prior to final installation.



1	REB-RT100UL
2	REB-RT200UL
3	REB-RT300UL
4	REB-RT400UL
5	REB-RT500UL
6	REB-RT600UL
7	REB-RT700UL
8	REB-RT800UL
9	REB-RT900UL
10	REB-RT1000UL

Software Version
2.6.5.0

Drawing No.
_3

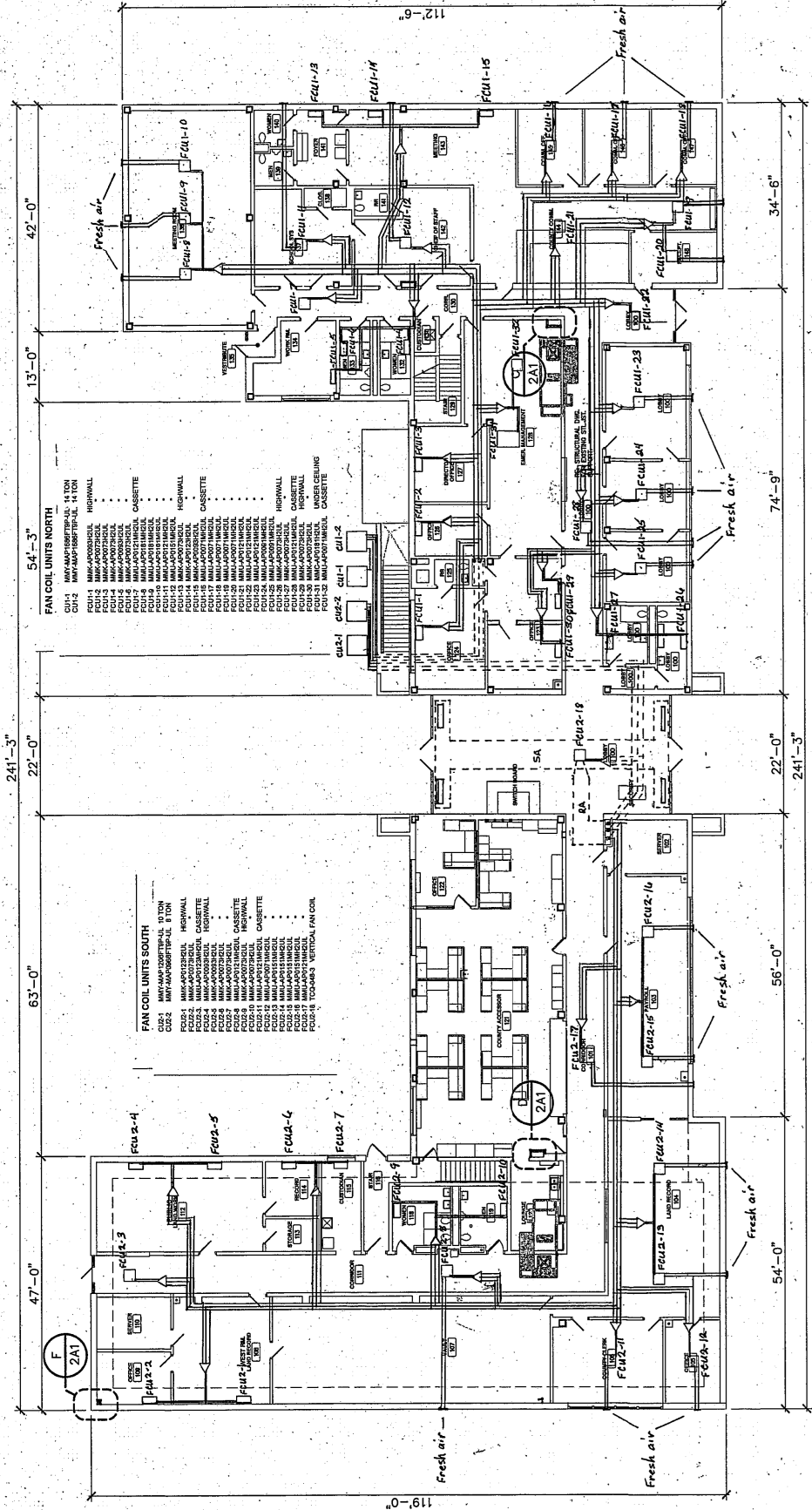
Date
2016-11-01

Scale
NonScale

Building name
Canadian County

Drawing name

Note: Equipment length is calculated by coefficient of 2.00.
 - The ground installation has been based on the Design Guidelines Manual.
 - The floor installation has been based on the Design Guidelines Manual.
 - Please note that in a case of future system expansion being allowed for, the system design or change in configuration requirements, a re-evaluation of the air conditioning system must be made prior to final installation.



A OVER ALL FLOOR PLAN
 2A1 SCALE: 1/16"=1'-0"



Project Information

Project Name	Canadian County
System Type	SHRM-e
Customer Name	Ezell's Refrigeration
Address	
Installer	unknown
Installation Date	1/23/2017
Commissioning Date	1/23/2017

Equipment List

Outdoor Units

Type	Model Name	Quantity
SHRM-e	MMY-AP33656FT9P-UL	1
SHRM-e	MMY-AP2166FT9P-UL	1

Indoor Units

Type	Model Name	Quantity
4-Way Cassette, 18k Btu	MMU-AP0182H2UL	3
4-Way Cassette, 15k Btu	MMU-AP0152H2UL	1
4-Way Cassette, 7k Btu	MMU-AP0072H2UL	6
4-Way Cassette, 9k Btu	MMU-AP0092H2UL	2
4-Way Cassette, 12k Btu	MMU-AP0122H2UL	6
Compact 4-Way Cassette, 12k Btu	MMU-AP0121MH2UL	4
Compact 4-Way Cassette, 15k Btu	MMU-AP0151MH2UL	4
High Wall, 7k Btu	MMK-AP0073H2UL	15
High Wall, 9k Btu	MMK-AP0093H2UL	5
High Wall, 12k Btu	MMK-AP0123H2UL	2
Vertical AHU, 48k Btu	40TCQ048---3	1
Underceiling, 18k Btu	MMC-AP0181H2UL	1

Outdoor Connection Kits

Type	Model Name	Quantity
Outdoor Heat Recovery Connection Kit (Connection kit for twined system with capacity less than 247KBtu/h)	RBM-BT14FUL	1
Outdoor Heat Recovery Connection Kit (Connection kit for twined system with capacity more than 247KBtu/h)	RBM-BT24FUL	1

Y-joints

Type	Model Name	Quantity
Y-Branch for Heat Recovery (below 61k BTU)	RBM-BY55FUL	5
Y-Branch for Heat Recovery (61-135k BTU)	RBM-BY105FUL	8
Y-Branch for Heat Recovery (136-238k BTU)	RBM-BY205FUL	10
Y-Branch for Heat Recovery (above 239k BTU)	RBM-BY305FUL	7
Y-Branch for Heat Pump (below 61k BTU)	RBM-BY55UL	18

Header

Type	Model Name	Quantity

Accessories

Type	Model Name	Quantity
Cassette Grille (Required)	RBC-UJ1PG(W)-UL	18
Compact Cassette Grille (Required)	RBC-UM11PG(W)-UL	8
Flow Selector (below 38k BTU)	RBM-Y0383FUL	30
Flow Selector (38-60k BTU)	RBM-Y0613FUL	2
Wired Remote Controller	RBC-AM554E-UL	31
Supports up to 8 ID Units		

Central Control Devices

Type	Model Name	Quantity								
Piping Length - Project Totals										
	(in)	φ1/4	φ3/8	φ1/2	φ5/8	φ3/4	φ7/8	φ1 1/8	φ1 3/8	φ1 5/8
Total (ft)		578	1393	863	938	194	229	274	215	
Gas side(Discharge/Suction) (ft)		-	473(0/473)	797(692/105)	920(0/920)	66(66/0)	109(51/58)	274(215/59)	215(0/215)	
Liquid side (ft)		578	920	66	18	128	120	-	-	

Refrigerant Change Amount(Additional Refrigerant Required) - Project Total	
Total (lbs)	180.96

Outdoor Design Temperature	
Cooling	95deg (F)
Heating	43deg (F)
	(Dry Bulb)
	(Wet Bulb)

System Information

Ref. Cycle Number	1
Ref. Cycle Name	South Unit
System Type	SHRM-e

Outdoor Unit

Model Name	Header Unit	Follower Unit1	Follower Unit2
MMY-MAP1206FT9P-UL		MMY-MAP0966FT9P-UL	

Capacity	Nominal Capacity (kBtu)	Corrected Capacity (kBtu)
Cooling	216	198.44
Heating	243	234.79

Diversity	109%
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Location	Above
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Indoor unit(s)

Model Name	Capacity Code	Rated Capacity (kBtu)		Sensible	Corrected Capacity (kBtu)		Required Capacity (kBtu)		Fan Speed	Quantity
		Sensible	Total		Sensible	Total	Sensible	Total		
MMK-AP0123H2UL	1	8.33	12	7.50	10.81 (10.81)	7	10	High	1	
MMK-AP0073H2UL	Heating 0.6	5.8	13.5	5.23	13.04 (13.04)	5	13	High	1	
MMU-AP0121MH2UL	Heating 1	8.33	7.5	7.67	6.78 (6.78)	7	8	High	1	
MMK-AP0093H2UL	Heating 0.8	6.79	8.5	6.21	8.21 (8.21)	6	11	High	1	
MMK-AP0093H2UL	Heating 0.8	6.79	12	6.21	11.05 (11.05)	6	13	High	1	
MMK-AP0073H2UL	Heating 0.6	5.8	13.5	5.24	13.15 (13.15)	5	10	High	1	
MMK-AP0073H2UL	Heating 0.6	5.8	9.5	5.37	8.69 (8.69)	5	8	High	1	
MMU-AP0121MH2UL	Heating 1	8.33	10.5	7.88	10.20 (10.20)	8	11	High	1	
MMK-AP0073H2UL	Heating 0.6	5.8	9.5	5.38	8.69 (8.69)	5	10	High	1	
MMK-AP0073H2UL	Heating 0.6	5.8	10.5	5.38	10.20 (10.20)	5	8	High	1	
MMU-AP0121MH2UL	Heating 1	8.33	7.5	7.88	6.78 (6.78)	8	11	High	1	
MMK-AP0073H2UL	Heating 0.6	5.8	8.5	9.87	8.23 (8.23)	9	13	High	1	
MMK-AP0073H2UL	Heating 0.6	5.8	7.5	9.87	6.78 (6.78)	9	14	High	1	
MMU-AP0121MH2UL	Heating 1	8.33	8.5	9.87	8.23 (8.23)	9	16	High	1	
MMU-AP0151MH2UL	Heating 1.25	10.61	12	9.87	11.21 (11.21)	9	14	High	1	
MMU-AP0151MH2UL	Heating 1.25	10.61	13.5	9.87	13.22 (13.22)	9	16	High	1	
MMU-AP0151MH2UL	Heating 1.25	10.61	15.4	9.87	14.32 (14.32)	9	17	High	1	
MMU-AP0151MH2UL	Heating 1.25	10.61	17	9.87	16.62 (16.62)	9	14	High	1	

MMU-AP0151MH2UL	Heating	1.25	10.61	17	15.4	9.84	16.62 (16.62)	9	16		
				17			14.28 (14.28)		14		
MMU-AP0121MH2UL	Heating	1	8.33	12		7.73	16.60 (16.60)	7	16	High	1
				13.5			11.13 (11.13)		11		
MMU-AP0151MH2UL	Heating	1.25	10.61	15.4		10.34	13.18 (13.18)	10	13	High	1
				17			15.01 (15.01)		15		
40TCQ048---3	Heating	4	32.06	17			16.88 (16.88)	30	16	High	1
				48			45.32 (45.32)		46		
MMK-AP0073H2UL	Heating	0.6	5.8	54			55.91 (54.00)	5	54	High	1
				7.5		5.51	7.12 (7.12)		7		
				8.5			8.37 (8.37)		8	High	1

Outdoor Connection Kits

Type	Model Name	Quantity
Outdoor Heat Recovery Connection Kit (Connection kit for twinned system with capacity less than 247Kbtu/h)	RBM-BT14FUL	1

Y-joints

Type	Model Name	Quantity
Y-Branch for Heat Recovery (below 61k BTU)	RBM-BY55FUL	2
Y-Branch for Heat Recovery (61-135k BTU)	RBM-BY105FUL	5
Y-Branch for Heat Recovery (136-238k BTU)	RBM-BY205FUL	4
Y-Branch for Heat Pump (below 61k BTU)	RBM-BY55UL	6

Header

Type	Model Name	Quantity
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Accessories

Type	Model Name	Quantity
Compact Cassette Grille (Required)	RBC-UM11PG(W)-UL	8
Flow Selector (below 38k BTU)	RBM-Y0383FUL	11
Flow Selector (38-60k BTU)	RBM-Y0613FUL	1
Wired Remote Controller	RBC-AMS54E-UL	12
Supports up to 8 ID Units		

Piping Length

(in)	φ1/4	φ3/8	φ1/2	φ5/8	φ3/4	φ7/8	φ1 1/8	φ1 3/8	φ1 5/8
Total (ft)	196	622	488	479	147	72	107	75	75
Gas side(Discharge/Suction) (ft)	-	151(0/151)	432(387/45)	471(0/471)	56(56/0)	72(24/48)	107(75/32)	75(0/75)	-
Liquid side (ft)	196	471	56	8	91	0	-	-	-

Refrigerant Charge Amount(Additional Refrigerant Required)

Total (lbs)	66.3531
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Electric Information(Outdoor Unit(s))

MCCP (A)	90.00(50.00 + 40.00)
MCA (A)	79.60(45.40 + 34.20)
Protection Device size (A)	90
Wire(Cable Size) (mm2 or AWG(#))	

Electric Information(Indoor Unit(s))

Total MCA (A)	12.9
Protection Device size (A)	270
Wire(Cable Size) (mm2 or AWG(#))	

System Information

Ref. Cycle Number	2
Ref. Cycle Name	North Unit
System Type	SHRM-e

Outdoor Unit

Model Name		
Header Unit	Follower Unit1	Follower Unit2

MMY-MAP1686FT9P-UL

MMY-MAP1686FT9P-UL

Capacity	Nominal Capacity (kBtu)	Corrected Capacity (kBtu)
Cooling	336	297.65
Heating	378	365.22
Diversity	99%	

Location Above

Indoor unit(s)

Model Name	Capacity Code	Rated Capacity (kBtu)		Corrected Capacity (kBtu)		Required Capacity (kBtu)		Fan Speed	Quantity
		Sensible	Total	Sensible	Total	Sensible	Total		
MMK-AP0093H2UL	0.8	6.79	9.5	6.10	8.54 (8.53)	5	8	High	1
MMK-AP0073H2UL	Heating 0.6	5.8	7.5	5.20	6.72 (6.72)	4	6	High	1
MMK-AP0073H2UL	Heating 0.6	5.8	7.5	5.20	6.72 (6.72)	4	6	High	1
MMK-AP0073H2UL	Heating 0.6	5.8	7.5	5.19	6.71 (6.71)	5	6	High	1
MMK-AP0073H2UL	Heating 0.6	5.8	7.5	5.13	6.64 (6.64)	5	6	High	1
MMK-AP0093H2UL	Heating 0.8	6.79	9.5	6.02	8.21 (8.21)	5	8	High	1
MMU-AP0122H2UL	Heating 1	8.67	10.5	7.83	10.15 (10.15)	7	10	High	1
MMU-AP0182H2UL	Heating 1.5	12.86	13.5	11.52	10.84 (10.78)	11	13	High	1
MMU-AP0182H2UL	Heating 1.5	12.86	18	11.41	16.12 (16.12)	11	19	High	1
MMU-AP0182H2UL	Heating 1.5	12.86	20	11.41	19.39 (19.39)	11	19	High	1
MMU-AP0122H2UL	Heating 1	8.67	12	7.92	15.97 (15.97)	7	10	High	1
MMU-AP0152H2UL	Heating 1.25	12.09	13.5	11.05	19.33 (19.33)	7	13	High	1
MMK-AP0073H2UL	Heating 0.6	5.8	7.5	5.24	14.08 (13.83)	10	13	High	1
MMK-AP0123H2UL	Heating 1	8.33	12	7.46	16.59 (16.59)	5	6	High	1
MMK-AP0093H2UL	Heating 0.8	6.79	9.5	6.08	6.78 (6.74)	5	6	High	1
MMU-AP0072H2UL	Heating 0.6	5.8	7.5	5.24	8.26 (8.26)	5	6	High	1
MMU-AP0072H2UL	Heating 0.6	5.8	7.5	5.18	10.74 (10.74)	5	6	High	1
MMU-AP0072H2UL	Heating 0.6	5.8	7.5	5.18	10.74 (10.74)	5	6	High	1
MMU-AP0072H2UL	Heating 0.6	5.8	7.5	5.18	13.09 (13.09)	5	6	High	1
MMU-AP0072H2UL	Heating 0.6	5.8	7.5	5.28	8.50 (8.50)	5	6	High	1
MMU-AP0072H2UL	Heating 0.6	5.8	7.5	5.28	10.18 (10.18)	5	6	High	1
MMU-AP0122H2UL	Heating 1	8.67	12	8.07	6.77 (6.74)	8	10	High	1
MMU-AP0122H2UL	Heating 1	8.67	12	8.16	8.26 (8.26)	8	10	High	1
MMU-AP0122H2UL	Heating 1	8.67	12	8.07	6.70 (6.70)	8	10	High	1
MMU-AP0092H2UL	Heating 0.8	7.13	9.5	6.71	8.24 (8.24)	6	8	High	1
MMU-AP0092H2UL	Heating 0.8	7.13	10.5	6.77	6.70 (6.70)	6	8	High	1
MMU-AP0092H2UL	Heating 0.8	7.13	9.5	6.77	8.24 (8.24)	6	8	High	1
MMU-AP0092H2UL	Heating 0.8	7.13	9.5	6.77	8.24 (8.24)	6	8	High	1
MMU-AP0092H2UL	Heating 0.8	7.13	9.5	6.77	8.94 (8.53)	6	8	High	1
MMU-AP0092H2UL	Heating 0.8	7.13	9.5	6.77	10.33 (10.32)	6	10	High	1
MMU-AP0092H2UL	Heating 0.8	7.13	9.5	6.77	9.02 (8.53)	6	8	High	1

MMK-AP0073H2UL	Heating	0.6	5.8	10.5	5.50	10.36 (10.32)	5	10		
				7.5		7.11 (6.74)		6		
				8.5		8.38 (8.36)		8	High	1
MMK-AP0073H2UL	Heating	0.6	5.8	7.5	5.50	7.11 (6.74)	5	6	High	1
				8.5		8.38 (8.36)		8		
MMK-AP0073H2UL	Heating	0.6	5.8	7.5	5.48	7.09 (6.74)	5	6	High	1
				8.5		8.38 (8.36)		8		
MMK-AP0073H2UL	Heating	0.6	5.8	7.5	5.48	7.09 (6.74)	5	6	High	1
				8.5		8.38 (8.36)		8		
MMU-AP0122H2UL	Heating	1	8.67	12	8.28	11.46 (10.78)	8	10	High	1
				13.5		13.34 (13.27)		13		
MMU-AP0072H2UL	Heating	0.6	5.8	7.5	5.54	7.16 (6.74)	5	6	High	1
				8.5		8.40 (8.36)		8		
MMC-AP0181H2UL	Heating	1.5	12.54	18	11.94	17.14 (16.17)	11	15	High	1
				20		19.75 (19.66)		19		

Outdoor Connection Kits

Type	Model Name	Quantity
Outdoor Heat Recovery Connection Kit (Connection kit for twinned system with capacity more than 247kbtu/h)	RBM-BT24FUL	1

Y-joints

Type	Model Name	Quantity
Y-Branch for Heat Recovery (below 61k BTU)	RBM-BY55FUL	3
Y-Branch for Heat Recovery (61-135k BTU)	RBM-BY105FUL	3
Y-Branch for Heat Recovery (136-238k BTU)	RBM-BY205FUL	6
Y-Branch for Heat Recovery (above 239k BTU)	RBM-BY305FUL	7
Y-Branch for Heat Pump (below 61k BTU)	RBM-BY55UL	12

Header

Type	Model Name	Quantity
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Accessories

Type	Model Name	Quantity
Cassette Grille (Required)	RBC-U31PG(W)-UL	18
Flow Selector (below 38k BTU)	RBM-Y0383FUL	19
Flow Selector (38-60k BTU)	RBM-Y0613FUL	1
Wired Remote Controller	RBC-AM554E-UL	19
Supports up to 8 ID Units		

Piping Length

(in)	φ1/4	φ3/8	φ1/2	φ5/8	φ3/4	φ7/8	φ1 1/8	φ1 3/8	φ1 5/8
Total (ft)	382	771	375	459	47	157	167	140	
Gas side(Discharge/Suction) (ft)	-	322(0/322)	365(305/60)	449(0/449)	10(10/0)	37(27/10)	167(140/27)	140(0/140)	
Liquid side (ft)	382	449	10	10	37	120	-	-	

Refrigerant Change Amount(Additional Refrigerant Required)

Total (lbs)	114.6069
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Electric Information(Outdoor Unit(s))

MCCP (A)	140.00(70.00 + 70.00)
MCA (A)	132.40(66.20 + 66.20)
Protection Device size (A)	140
Wire(Cable Size) (mm2 or AWG(#))	

Electric Information(Indoor Unit(s))

Total MCA (A)	18.8
Protection Device size (A)	480
Wire(Cable Size) (mm2 or AWG(#))	

Note: Equivalent length is calculated by coefficient 1.200

- The user is responsible for ensuring that all data entered is correct.
- Equipment selections have been based on the Design Guidelines stated within the Toshiba SMMS-e/SHRM-e/SMMS-l/SHRM-l Installation Manual.
- It is the responsibility of the consultant or contractor, to verify and confirm that the equipment selection and system design is correct before installation.
- Please note that in the event of future system expansion being allowed for in the system design or a change in cooling/heating requirements, a re-evaluation of the air conditioning system must be made prior to final installation.



Canadian County
Purchasing

Affidavit / Proof of Mailing

Date Issued: February 27, 2017
Bid Number: **2017-#10**
Closing Date: March 27, 2017 at 9:30am
PO Box 458, 201 N. Choctaw Ave., El Reno, OK 73036
Opening Date: March 27, 2017 at 9:30am
Commissioner's Meeting Room, 201 N. Choctaw Ave., El Reno, OK 73036

~ AFFIDAVIT ~

HVAC Replacement / County Commissioners

State of Oklahoma)
County of Canadian) §

I, Lindsey Garrett, Purchasing Agent, in and for said County and State, do hereby certify that "Invitations to Bid" was sent to the following:

Adams Heat and Air
1101 NW 99th
Oklahoma City, OK 73114

Air Flow Technologies
PO Box 851844
Yukon, OK 73085

All Hours Plumbing Services
PO Box 12726
Oklahoma City, OK 73157

Bailey Brothers PMG, HTG & A/C Inc
800 Industrial Drive
Yukon, OK 73099-2833

Barry Sell Mechanical Tech.
3221 SW 18th Street
Oklahoma City, OK 73108

Bid Clerk
projects@bidclerk.com

Bid News
projects@isqft.com

Brewers Heat and Air
5956 NW 34th
Oklahoma City, OK 73122

Capital Service
12900 Tracy Drive
Oklahoma City, OK 73165

Cheka Group LLC
1042 SE 25th Street
Oklahoma City, OK 73129

Central Mechanical Services Inc
1887 State Highway 92
Chickasha, OK 73018-7001

Central Mechanical Services Inc
2605 S Purdue
Oklahoma City, OK 73128

Central Oklahoma Winnelson
PO Box 2052
Oklahoma City, OK 73101

Central State Thermo King Inc
1401 Enterprise Avenue
PO Box 270543
Oklahoma City, OK 73127

Comfort Air
4917 SW 7th
Oklahoma City, OK 73128

Crick Air & Heat
PO Box 107
Hinton, OK 73047

Diversified Labor & Construction
3523 N Star Road
Stillwater, OK 74075

EDP Contract Services
Attn: Mike Modarelli
12128 Briarlake Ct
Oklahoma City, OK 73170

ePlan
4115 South Providence, Suite 105
Columbia, MO 65203

Ezell's Refrigeration
418 W Wade Street
El Reno, OK 73036

Francis Tuttle Vo-Tech Center
Attn: Bid Assistant – Judy Robbins
12777 N Rockwell
Oklahoma City, OK 73142

Gatz Mechanical Inc
PO Box 936
El Reno, OK 73036

Gentry Service & Repair Inc
12004 Southfork Road
Mustang, OK 73064

Gibbens Heating & Air
1107 Sunset Drive
El Reno, OK 73036

Harrison-Orr Air Conditioning Inc
4100 North Walnut
Oklahoma City, OK 73105-3798

Higgins Plumbing
404 Cherryvale Road
Edmond, OK 73103

Innovative Mechanical LLC
PO Box 721178
Oklahoma City, OK 73172

Integrity Restoration Specialists LLC
11532 NW 5th Street
Yukon, OK 73099

Johnson Controls Inc
4730 SW 20th Street
Oklahoma City, OK 73128

Lieber Mechanical LLC
1105 First Place Blvd
Yukon, OK 73099

Natkin
4730 SW 20th Street
Oklahoma City, OK 73128

Online Data Services
3295 River Exchange Drive, Suite 213
Norcross, GA 30092

Patrick's George Plumbing
401 SE 59th
Oklahoma City, OK 73129

Precision Plumbing Service
PO Box 734
Piedmont, OK 73078

Rainbow Heat & Air Inc
501 Cedar
Yukon, OK 73099

Reed Construction Data
30 Technology Pkwy South, Suite 100
Norcross, GA 30092

Ross Services LLC
11609 Footman's Court
Yukon, OK 73099

Smith Plumbing
12333 SW 6th Street
Yukon, OK 73099

Streets Inc
100 E Commerce
Oklahoma City, OK 73129

TA Miller Plumbing
2111 North Linn
Oklahoma City, OK 73107

Team Air
4001 North Walnut
Oklahoma City, OK 73105

Tipton's Plumbing & Sewer
708 NW 5th
Moore, OK 73160

Trane
PO Box 845053
Dallas, TX 75284-5053

Trane
305 Hudiburg Circle
Oklahoma City, OK 73108

Tuffcoat Inc
2896 Broce Drive
Norman, OK 73072

Waggoners Mechanical Services LLC
1351 E Indian Hills
Norman, OK 73071

West Central Heat & Air LLC
2616 Fields Road
El Reno, OK 73036

Dodge Data & Analytics
support@construction.com

Orcutt Mechanical Contractors
Attn: Matthew Weber
5940 NW 38th St
Oklahoma City, OK 73122

RB Akins Company
Attn: Rick Adams
4425 N. Santa Fe Ave
Oklahoma City, OK 73118

Witness my hand and seal this 27th day of February, 2017.


Lindsey Garrett, Purchasing Agent

(SEAL)



NON-COLLUSION BIDDING CERTIFICATION

_____ (PROJECT NAME)

STATE OF OKLAHOMA)

)SS

COUNTY _____)

A. For purposes of competitive bids, I certify:

1. I am the duly authorized agent of _____, the bidder submitting the competitive bid which is attached to this statement, for the purpose of certifying the facts pertaining to the existence of collusion among bidders and between bidders and state officials or employees, as well as facts pertaining to the giving or offering of things of value to government personnel in return for special consideration in the letting of any contract pursuant to the bid to which this statement is attached;
2. I am fully aware of the facts and circumstances surrounding the making of the bid to which this statement is attached and has been personally and directly involved in the proceedings leading to the submission of such bid; and
3. Neither the bidder nor anyone subject to the bidder's direction or control has been a party to the following:
 - a. Any collusion among bidders in restraint of freedom of competition by agreement to bid at a fixed price or to refrain from bidding;
 - b. Any collusion with any state official or employee as to quantity, quality or price in the prospective contract, or as to any other terms of such prospective contract; and
 - c. Any discussions between bidders and any state official concerning exchange of money or other thing of value for special consideration in the letting of a contract.

B. I certify, if awarded the contract, whether competitively bid or not, that neither the Contractors nor anyone subject to the Contractor's direction or control has paid, given, or donated or agreed to pay, give, or donate to any officer or employee of the State of Oklahoma any money or other thing of value, either directly or indirectly, in procuring the contract to which this statement is attached.

Certified this _____ day of _____, 20__.

(Signature)

(Print Name)

(Position in the Company)

BUSINESS RELATIONSHIPS AFFIDAVIT

_____ (PROJECT NAME)

STATE OF OKLAHOMA)
)SS
 COUNTY OF _____)

_____, of lawful age, being duly sworn, on oath says that he or she is the agent authorized by the bidder to submit the attached bid. Affiant further states that the nature of any partnership, or other business relationship presently in effect, of which existed within one (1) year prior to the date of this statement with the architect, engineer, or other party to the project is as follows:

Affiant further states that any such business relationship presently in effect of which existed within one (1) year prior to the date of this statement between any officer or director of the bidding company and any officer or director of the architectural or engineering firm or other party to the project is as follows:

Affiant further states that the names of all persons having any such business relationships and the positions they hold with their respective companies or firms are as follows:

(If none of the business relationships herein above mentioned exist, affiant should so state.)

 (Signature of Affiant)

Subscribed and sworn to before me this _____ day of _____, 20__

Notary Public _____

My Commission Expires _____



**Canadian County
Purchasing**

BID CHECKLIST

Date Issued: February 27, 2017
Bid Number: **2017-#10**
Closing Date: March 27, 2017 at 9:30am
 PO Box 458, 201 N. Choctaw Ave., El Reno, OK 73036
Opening Date: March 27, 2017 at 9:30am
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**TO HELP PREVENT BIDS FROM BEING REJECTED FOR LACK OF COMPLETION
PLEASE CHECK FOR THE FOLLOWING:**

Is the Invitation to Bid Signed and Notarized? _____

Are all applicable spaces filled in? _____

Are all necessary papers enclosed? _____

Is the Bid # and Opening Date on outside of return envelope? _____

Bids will be received beginning 9:30am Tuesday March 21 until 9:30am Monday March 27, 2017? _____
(Do not turn bid in before Tuesday March 21 @ 9:30am – bid will not be opened or considered)

Thank You,

Lindsey Garrett, Purchasing Agent