

GENERAL SUMMARY

Project Name: Clemson Edisto Research Laboratory, 64 Research St Blackville, SC
Project ID: 29817
Scope: 1014-02 HVAC



BUILDING GSF 6,275

DIVISION NO.	DESCRIPTION	TOTAL DIV. COST	TOTAL DIV. COST (PER SF)
1000	GENERAL REQUIREMENTS	\$ 28,025	\$ 4.47
3000	CONCRETE	\$ 2,654	\$ 0.42
23000	HVAC	\$ 393,328	\$ 62.68
28000	ELECTRONIC SAFETY AND SECURITY	\$ 5,433	\$ 0.87
TOTAL TRADE COST		\$ 429,439	\$ 68
OVERHEAD AND PROFIT		35%	\$ 150,304 \$ 23.95
INSURANCE		5%	\$ 21,472 \$ 3.42
CONTINGENCY		5%	\$ 21,472 \$ 3.42
TAX		8.5%	\$ 36,502 \$ 5.82
SUGGESTED BID		\$ 659,190	\$ 105.05

DETAILED BREAKDOWN OF ITEMS

Project Name:	Clemson Edisto Research Laboratory, 64 Research St Blackville, SC 29817
Project ID:	1014-02
Scope:	HVAC



Date: 14-May-25

SR #	Drawing #	Detail #	DESCRIPTION	UNIT	QUANTITY	WASTAGE	QUANTITY W/ WASTAGE	UNIT MANHOURL	HOURLY WAGE	LABOR COST	MAT. COST	UNIT COST	SUB COST
GENERAL REQUIREMENTS													
1			Permits	LS	1	0%	1	0.000	\$ 95.00	\$ -	\$ -	\$ -	\$ -
2			Supervision and Coordination	LS	1	0%	1	0.000	\$ 95.00	\$ -	\$ -	\$ -	\$ -
3			Submittals and Shop drawings	LS	1	0%	1	0.000	\$ 95.00	\$ -	\$ -	\$ -	\$ -
4			Final Cleaning	LS	1	0%	1	35.000	\$ 95.00	\$ 3,325.00	\$ -	\$ 3,325.00	\$ 3,325
5			Mobilization Costs	LS	1	0%	1	110.000	\$ 95.00	\$ 10,450.00	\$ -	\$ 10,450.00	\$ 10,450
6			Temporary Control & Facilities	LS	1	0%	1	150.000	\$ 95.00	\$ 14,250.00	\$ -	\$ 14,250.00	\$ 14,250
7			Scaffolding	LS	1	0%	1	0.000	\$ 95.00	\$ -	\$ -	\$ -	\$ -

		SUBTOTAL \$		28,025
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CONCRETE	
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			PAD										
8	M0.01-M7.01	Plan Notes	9'-6" x 17'-6" Concrete Pad, H: 4"	CFT	21	10%	2	2.500	\$ 95.00	\$ 237.50	\$ 260.00	\$ 497.50	\$ 1,122
9			#4 Longitudinal Bars @ 12" O.C	LBS	111.055	10%	122	0.015	\$ 95.00	\$ 1.43	\$ 1.10	\$ 2.53	\$ 308
10			#4 Short Bars @ 12" O.C	LBS	111.055	10%	122	0.015	\$ 95.00	\$ 1.43	\$ 1.10	\$ 2.53	\$ 308
11			Control Joints - Note: Spacing Assumed.	LF	208.375	10%	229	0.042	\$ 95.00	\$ 3.99	\$ -	\$ 3.99	\$ 915

	SUBTOTAL \$	2,654
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	HVAC
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ACE SERVICES

Date: 14-May-25

SR #	Drawing #	Detail #	DESCRIPTION	UNIT	QUANTITY	WASTAGE	QUANTITY W/ WASTAGE	UNIT MANHOOUR	HOURLY WAGE	LABOR COST	MAT. COST	UNIT COST	SUB COST
13			100 CFM, A1 Air Device - Duty: Supply - Type: A - Face/Module Size (IN): 24"x24" - Nominal Duct Size (IN): 6"Ã"□ - Blow: 4-Way - Max Total Air PD (In H2O): 0.1 - Max Noise Criteria Value: 25 - Material: Steel\ CFM - Min: 0 - Max: 150 BASIS OF DESIGN: - Manufacturer: TITUS - Model: TDC	EA	1	0%	1	0.996	\$ 95.00	\$ 94.62	\$ 76.00	\$ 170.62	\$ 171
14			100 CFM, A2 Air Device - Duty: Supply - Type: A - Face/Module Size (IN): 24"x24" - Nominal Duct Size (IN): 8"Ã"□ - Blow: 4-Way - Max Total Air PD (In H2O): 0.1 - Max Noise Criteria Value: 25 - Material: Steel CFM - Min: 151 - Max: 275 BASIS OF DESIGN: - Manufacturer: TITUS - Model: TDC	EA	1	0%	1	0.996	\$ 95.00	\$ 94.62	\$ 76.00	\$ 170.62	\$ 171
15			105 CFM, A2 Air Device - Duty: Supply - Type: A - Face/Module Size (IN): 24"x24" - Nominal Duct Size (IN): 8"Ã"□ - Blow: 4-Way - Max Total Air PD (In H2O): 0.1 - Max Noise Criteria Value: 25 - Material: Steel CFM - Min: 151 - Max: 275 BASIS OF DESIGN: - Manufacturer: TITUS - Model: TDC	EA	1	0%	1	0.996	\$ 95.00	\$ 94.62	\$ 76.00	\$ 170.62	\$ 171

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16			120 CFM, A2 Air Device - Duty: Supply - Type: A - Face/Module Size (IN): 24"x24" - Nominal Duct Size (IN): 8"Ã"□ - Blow: 4-Way - Max Total Air PD (In H2O): 0.1 - Max Noise Criteria Value: 25 - Material: Steel CFM - Min: 151 - Max: 275 BASIS OF DESIGN: - Manufacturer: TITUS - Model: TDC	EA	1	0%	1	0.996	\$ 95.00	\$ 94.62	\$ 76.00	\$ 170.62	\$ 171
17			130 CFM, A2 Air Device - Duty: Supply - Type: A - Face/Module Size (IN): 24"x24" - Nominal Duct Size (IN): 8"Ã"□ - Blow: 4-Way - Max Total Air PD (In H2O): 0.1 - Max Noise Criteria Value: 25 - Material: Steel CFM - Min: 151 - Max: 275 BASIS OF DESIGN: - Manufacturer: TITUS - Model: TDC	EA	1	0%	1	0.996	\$ 95.00	\$ 94.62	\$ 76.00	\$ 170.62	\$ 171
18			165 CFM, A2 Air Device - Duty: Supply - Type: A - Face/Module Size (IN): 24"x24" - Nominal Duct Size (IN): 8"Ã"□ - Blow: 4-Way - Max Total Air PD (In H2O): 0.1 - Max Noise Criteria Value: 25 - Material: Steel CFM - Min: 151 - Max: 275 BASIS OF DESIGN: - Manufacturer: TITUS - Model: TDC	EA	1	0%	1	0.996	\$ 95.00	\$ 94.62	\$ 76.00	\$ 170.62	\$ 171

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19			195 CFM, A2 Air Device - Duty: Supply - Type: A - Face/Module Size (IN): 24"x24" - Nominal Duct Size (IN): 8"Ã"□ - Blow: 4-Way - Max Total Air PD (In H2O): 0.1 - Max Noise Criteria Value: 25 - Material: Steel CFM - Min: 151 - Max: 275 BASIS OF DESIGN: - Manufacturer: TITUS - Model: TDC	EA	1	0%	1	0.996	\$ 95.00	\$ 94.62	\$ 76.00	\$ 170.62	\$ 171
20			225 CFM, A2 Air Device - Duty: Supply - Type: A - Face/Module Size (IN): 24"x24" - Nominal Duct Size (IN): 8"Ã"□ - Blow: 4-Way - Max Total Air PD (In H2O): 0.1 - Max Noise Criteria Value: 25 - Material: Steel CFM - Min: 151 - Max: 275 BASIS OF DESIGN: - Manufacturer: TITUS - Model: TDC	EA	1	0%	1	0.996	\$ 95.00	\$ 94.62	\$ 76.00	\$ 170.62	\$ 171
21			225 CFM, A2 Air Device - Duty: Supply - Type: A - Face/Module Size (IN): 24"x24" - Nominal Duct Size (IN): 8"Ã"□ - Blow: 4-Way - Max Total Air PD (In H2O): 0.1 - Max Noise Criteria Value: 25 - Material: Steel CFM - Min: 151 - Max: 275 BASIS OF DESIGN: - Manufacturer: TITUS - Model: TDC	EA	2	0%	2	0.996	\$ 95.00	\$ 94.62	\$ 76.00	\$ 170.62	\$ 341

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22			100 CFM, A3 Air Device - Duty: Supply - Type: A - Face/Module Size (IN): 24"x24" - Nominal Duct Size (IN): 10"Ã"□ - Blow: 4-Way - Max Total Air PD (In H2O): 0.1 - Max Noise Criteria Value: 25 - Material: Aluminum CFM - Min: 276 - Max: 275 BASIS OF DESIGN: - Manufacturer: TITUS - Model: TDCA-AA	EA	1	0%	1	0.996	\$ 95.00	\$ 94.62	\$ 76.00	\$ 170.62	\$ 171
23			240 CFM, A3 Air Device - Duty: Supply - Type: A - Face/Module Size (IN): 24"x24" - Nominal Duct Size (IN): 10"Ã"□ - Blow: 4-Way - Max Total Air PD (In H2O): 0.1 - Max Noise Criteria Value: 25 - Material: Aluminum CFM - Min: 276 - Max: 275 BASIS OF DESIGN: - Manufacturer: TITUS - Model: TDCA-AA	EA	1	0%	1	0.996	\$ 95.00	\$ 94.62	\$ 76.00	\$ 170.62	\$ 171
24			280 CFM, A3 Air Device - Duty: Supply - Type: A - Face/Module Size (IN): 24"x24" - Nominal Duct Size (IN): 10"Ã"□ - Blow: 4-Way - Max Total Air PD (In H2O): 0.1 - Max Noise Criteria Value: 25 - Material: Aluminum CFM - Min: 276 - Max: 275 BASIS OF DESIGN: - Manufacturer: TITUS - Model: TDCA-AA	EA	18	0%	18	0.996	\$ 95.00	\$ 94.62	\$ 76.00	\$ 170.62	\$ 3,071

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25			310 CFM, A3 Air Device - Duty: Supply - Type: A - Face/Module Size (IN): 24"x24" - Nominal Duct Size (IN): 10"Ã"□ - Blow: 4-Way - Max Total Air PD (In H2O): 0.1 - Max Noise Criteria Value: 25 - Material: Aluminum CFM - Min: 276 - Max: 275 BASIS OF DESIGN: - Manufacturer: TITUS - Model: TDCA-AA	EA	2	0%	2	0.996	\$ 95.00	\$ 94.62	\$ 76.00	\$ 170.62	\$ 341
26			330 CFM, A3 Air Device - Duty: Supply - Type: A - Face/Module Size (IN): 24"x24" - Nominal Duct Size (IN): 10"Ã"□ - Blow: 4-Way - Max Total Air PD (In H2O): 0.1 - Max Noise Criteria Value: 25 - Material: Aluminum CFM - Min: 276 - Max: 275 BASIS OF DESIGN: - Manufacturer: TITUS - Model: TDCA-AA	EA	4	0%	4	0.996	\$ 95.00	\$ 94.62	\$ 76.00	\$ 170.62	\$ 682
27			360 CFM, A3 Air Device - Duty: Supply - Type: A - Face/Module Size (IN): 24"x24" - Nominal Duct Size (IN): 10"Ã"□ - Blow: 4-Way - Max Total Air PD (In H2O): 0.1 - Max Noise Criteria Value: 25 - Material: Aluminum CFM - Min: 276 - Max: 275 BASIS OF DESIGN: - Manufacturer: TITUS - Model: TDCA-AA	EA	4	0%	4	0.996	\$ 95.00	\$ 94.62	\$ 76.00	\$ 170.62	\$ 682

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28			220 CFM, A5 Air Device - Duty: Supply - Type: B - Face/Module Size (IN): 100"x12" - Nominal Duct Size (IN): 10"Ã~ - Blow: 4-Way - Max Total Air PD (In H2O): 0.1 - Max Noise Criteria Value: 25 - Material: Steel CFM - Min: 215 - Max: 325 BASIS OF DESIGN: - Manufacturer: TITUS - Model: ML	EA	8	0%	8	1.120	\$ 95.00	\$ 106.40	\$ 138.86	\$ 245.26	\$ 1,962
			RETURN AIR DIFFUSER										
29			B1, Air Device - Duty: Return - Type: E - Face/Module Size (IN): 24"x24" - Nominal Duct Size (IN): 18"x18" - Blow: PERF - Max Total Air PD (In H2O): 0.1 - Max Noise Criteria Value: 20 - Material: Steel CFM - Min: 701 - Max: 1100 BASIS OF DESIGN: - Manufacturer: TITUS - Model: PAR	EA	6	0%	6	0.900	\$ 95.00	\$ 85.50	\$ 75.00	\$ 160.50	\$ 963
			EXHAUST REGISTER										
30			340 CFM, C1 Air Device - Duty: EXHAUST - Type: H - Face/Module Size (IN): 24"x24" - Nominal Duct Size (IN): 8"x8" - Blow: PERF - Max Total Air PD (In H2O): 0.1 - Max Noise Criteria Value: 20 - Material: Aluminum CFM - Min: 151 - Max: 250 BASIS OF DESIGN: - Manufacturer: TITUS - Model: TDCA-AA	EA	1	0%	1	1.153	\$ 95.00	\$ 109.54	\$ 131.00	\$ 240.54	\$ 241

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35			EF-1, Fan - Service: TLT 049 - 150 CFM - SP INCH H2O: 0.25 - 1000 Approx. RPM - Drive: Direct - Basis Of Design: GREENHECK/SP-A ELECTRICAL DATA - 115 V - 1 P - 60 Hertz	EA	1	0%	1	1.994	\$ 95.00	\$ 189.43	\$ 227.00	\$ 416.43	\$ 416
36			EF-2, Fan - Service: JANITOR 000 - 115 CFM - SP INCH H2O: 0.25 - 1000 Approx. RPM - Drive: Direct - Basis Of Design: GREENHECK/SP-A ELECTRICAL DATA - 115 V - 1 P - 60 Hertz	EA	1	0%	1	1.994	\$ 95.00	\$ 189.43	\$ 227.00	\$ 416.43	\$ 416
37			EF-3, Fan - Service: TLT 050 - 155 CFM - SP INCH H2O: 0.25 - 1000 Approx. RPM - Drive: Direct - Basis Of Design: GREENHECK/SP-A ELECTRICAL DATA - 115 V - 1 P - 60 Hertz	EA	1	0%	1	1.994	\$ 95.00	\$ 189.43	\$ 227.00	\$ 416.43	\$ 416
38			LEF-1, Fan - Service: LAB - 8500 CFM - SP INCH H2O: 6 - 2480 Approx. RPM - HP: 15 - Wheel Diameter: 20" - Drive: Belt - Basis Of Design: GREENHECK/VKTOR-CD ELECTRICAL DATA - 230 V - 3 P - 60 Hertz	EA	1	0%	1	15.000	\$ 95.00	\$ 1,425.00	\$ 7,591.00	\$ 9,016.00	\$ 9,016

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39			LEF-2, Fan - Service: LAB - 8500 CFM - SP INCH H2O: 6 - 2480 Approx. RPM - HP: 15 - Wheel Diameter: 20" - Drive: Belt - Basis Of Design: GREENHECK/VKTOR-CD ELECTRICAL DATA - 230 V - 3 P - 60 Hertz	EA	1	0%	1	15.000	\$ 95.00	\$ 1,425.00	\$ 7,591.00	\$ 9,016.00	\$ 9,016
			SUPPLY VAV UNIT										
40			VAV-1, Supply Vav Unit - Inlet Size: 16"Ã~ - Outlet Size: 24"x18" - Min Inlet SP (In H2O): 0.50 - Max NC: 30 - Maximum Air Pressure Drop (In H2O): 0.30 - Basis Of Design: TITUS DESV AIR FLOW (CFM) - Cooling Max: 2000 - Cooling Min: 1000 - Heating: 1000 - Unoccupied Minimum: 667 REHEAT COIL - EAT(Ã°F): 55 - LAT(Ã°F): 85 - Capacity (BTU/HR): 32443 - Heating KW: 18.2 ELECTRICAL DATA - 208 V - 3 P - 60 Hertz	EA	1	0%	1	4.485	\$ 95.00	\$ 426.08	\$ 590.00	\$ 1,016.08	\$ 1,016

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41			VAV-2, Supply Vav Unit - Inlet Size: 10"Ã"Ã" - Outlet Size: 14"x12" - Min Inlet SP (In H2O): 0.50 - Max NC: 30 - Maximum Air Pressure Drop (In H2O): 0.30 - Basis Of Design: TITUS DESV AIR FLOW (CFM) - Cooling Max: 450 - Cooling Min: 400 - Heating: 400 - Unoccupied Minimum: 267 REHEAT COIL - EAT(Ã°F): 55 - LAT(Ã°F): 85 - Capacity (BTU/HR): 12977 - Heating KW: 6.1 ELECTRICAL DATA - 208 V - 3 P - 60 Hertz	EA	1	0%	1	4.125	\$ 95.00	\$ 391.88	\$ 510.00	\$ 901.88	\$ 902
42			VAV-3, Supply Vav Unit - Inlet Size: 8"Ã"Ã" - Outlet Size: 12"x10" - Min Inlet SP (In H2O): 0.50 - Max NC: 30 - Maximum Air Pressure Drop (In H2O): 0.30 - Basis Of Design: TITUS DESV AIR FLOW (CFM) - Cooling Max: 500 - Cooling Min: 250 - Heating: 250 - Unoccupied Minimum: 167 REHEAT COIL - EAT(Ã°F): 55 - LAT(Ã°F): 85 - Capacity (BTU/HR): 8111 - Heating KW: 5.7 ELECTRICAL DATA - 208 V - 3 P - 60 Hertz	EA	1	0%	1	4.000	\$ 95.00	\$ 380.00	\$ 490.00	\$ 870.00	\$ 870

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43			VAV-4, Supply vav Unit - Inlet Size: 6"Ã~ - Outlet Size: 12"x8" - Min Inlet SP (In H2O): 0.50 - Max NC: 30 - Maximum Air Pressure Drop (In H2O): 0.30 - Basis Of Design: TITUS DESV AIR FLOW (CFM) - Cooling Max: 300 - Cooling Min: 150 - Heating: 150 - Unoccupied Minimum: 100 REHEAT COIL - EAT(Ã°F): 55 - LAT(Ã°F): 85 - Capacity (BTU/HR): 4866 - Heating KW: 2.5 ELECTRICAL DATA - 208 V - 3 P - 60 Hertz	EA	1	0%	1	3.876	\$ 95.00	\$ 368.22	\$ 461.00	\$ 829.22	\$ 829
EXHAUST AIR VALVE UNIT													
44			EAV-1, Exhaust Air Valve Unit - Inlet Size: 10"Ã~ - Outlet Size: 10"Ã~ - Maximum Inlet SP INCH WG: 0.5 - Maximum NC Valve @ 1.0 INCH WG Inlet SP: 30 - Basis Of Design: PHOENIX - Remarks: Fume Hood Valve AIR FLOW (CFM) - Max: 1000 - Min: 50	EA	1	0%	1	1.386	\$ 95.00	\$ 131.67	\$ 178.93	\$ 310.60	\$ 311
45			EAV-2, Exhaust Air Valve Unit - Inlet Size: 8"Ã~ - Outlet Size: 8"Ã~ - Maximum Inlet SP INCH WG: 0.5 - Maximum NC Valve @ 1.0 INCH WG Inlet SP: 30 - Basis Of Design: PHOENIX AIR FLOW (CFM) - Max: 700 - Min: 35	EA	1	0%	1	1.386	\$ 95.00	\$ 131.67	\$ 178.93	\$ 310.60	\$ 311
46			EAV-3, Exhaust Air Valve Unit - Inlet Size: 10"Ã~ - Outlet Size: 10"Ã~ - Maximum Inlet SP INCH WG: 0.5 - Maximum NC Valve @ 1.0 INCH WG Inlet SP: 30 - Basis Of Design: PHOENIX - Remarks: Fume Hood Valve AIR FLOW (CFM) - Max: 1000 - Min: 50	EA	1	0%	1	1.386	\$ 95.00	\$ 131.67	\$ 178.93	\$ 310.60	\$ 311

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47	M0.01-M7.01	Plan Notes	EAV-4, Exhaust Air Valve Unit - Inlet Size: 10"Ã"Ã" - Outlet Size: 10"Ã"Ã" - Maximum Inlet SP INCH WG: 0.5 - Maximum NC Valve @ 1.0 INCH WG Inlet SP: 30 - Basis Of Design: PHOENIX - Remarks: Fume Hood Valve AIR FLOW (CFM) - Max: 1000 - Min: 50	EA	1	0%	1	1.386	\$ 95.00	\$ 131.67	\$ 178.93	\$ 310.60	\$ 311
48			EAV-5, Exhaust Air Valve Unit - Inlet Size: 10"Ã"Ã" - Outlet Size: 10"Ã"Ã" - Maximum Inlet SP INCH WG: 0.5 - Maximum NC Valve @ 1.0 INCH WG Inlet SP: 30 - Basis Of Design: PHOENIX - Remarks: Fume Hood Valve AIR FLOW (CFM) - Max: 1000 - Min: 50	EA	1	0%	1	1.386	\$ 95.00	\$ 131.67	\$ 178.93	\$ 310.60	\$ 311
49			EAV-6, Exhaust Air Valve Unit - Inlet Size: 10"Ã"Ã" - Outlet Size: 10"Ã"Ã" - Maximum Inlet SP INCH WG: 0.5 - Maximum NC Valve @ 1.0 INCH WG Inlet SP: 30 - Basis Of Design: PHOENIX - Remarks: Fume Hood Valve AIR FLOW (CFM) - Max: 1000 - Min: 50	EA	1	0%	1	1.386	\$ 95.00	\$ 131.67	\$ 178.93	\$ 310.60	\$ 311
50			EAV-7, Exhaust Air Valve Unit - Inlet Size: 8"Ã"Ã" - Outlet Size: 8"Ã"Ã" - Maximum Inlet SP INCH WG: 0.5 - Maximum NC Valve @ 1.0 INCH WG Inlet SP: 30 - Basis Of Design: PHOENIX - Remarks: Snorkel Valve AIR FLOW (CFM) - Max: 700 - Min: 35	EA	1	0%	1	1.258	\$ 95.00	\$ 119.51	\$ 143.14	\$ 262.65	\$ 263
51			EAV-8, Exhaust Air Valve Unit - Inlet Size: 10"Ã"Ã" - Outlet Size: 10"Ã"Ã" - Maximum Inlet SP INCH WG: 0.5 - Maximum NC Valve @ 1.0 INCH WG Inlet SP: 30 - Basis Of Design: PHOENIX - Remarks: Fume Hood Valve AIR FLOW (CFM) - Max: 1000 - Min: 50	EA	1	0%	1	1.386	\$ 95.00	\$ 131.67	\$ 178.93	\$ 310.60	\$ 311

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SR #	Drawing #	Detail #	DESCRIPTION	UNIT	QUANTITY	WASTAGE	QUANTITY W/ WASTAGE	UNIT MANHOURL	HOURLY WAGE	LABOR COST	MAT. COST	UNIT COST	SUB COST
57			SAV-1, Supply Air Valve Unit - Inlet Size: 10"Âˆ - Outlet Size: 10"Âˆ - Min SP: 0.5 - Max NC: 30 - Basis Of Design: PHOENIX AIR FLOW (CFM) - Max: 1000 - Min: 50 BALANCED AIRFLOW - Occupied(CFM): 620 - Unoccupied(CFM): 475 REHEAT COIL - EAT(Â°F): 55 - LAT(Â°F): 85 - Capacity (BTU/HR): 20088 - Heating KW: 6.3 ELECTRICAL - 208 V - 3 P - 60 Hertz	EA	1	0%	1	2.487	\$ 95.00	\$ 236.27	\$ 287.00	\$ 523.27	\$ 523
58			SAV-2, Supply Air Valve Unit - Inlet Size: 8"Âˆ - Outlet Size: 8"Âˆ - Min SP: 0.5 - Max NC: 30 - Basis Of Design: PHOENIX AIR FLOW (CFM) - Max: 700 - Min: 35 BALANCED AIRFLOW - Occupied(CFM): 240 - Unoccupied(CFM): 135 REHEAT COIL - EAT(Â°F): 55 - LAT(Â°F): 85 - Capacity (BTU/HR): 7776 - Heating KW: 4.4 ELECTRICAL - 208 V - 3 P - 60 Hertz	EA	1	0%	1	2.400	\$ 95.00	\$ 228.00	\$ 279.90	\$ 507.90	\$ 508

DETAILED BREAKDOWN OF ITEMS

Project Name: Clemson Edisto Research Laboratory, 64 Research St Blackville, SC 29817
 Project ID: 1014-02
 Scope: HVAC



ACE SERVICES

Date: 14-May-25

SR #	Drawing #	Detail #	DESCRIPTION	UNIT	QUANTITY	WASTAGE	QUANTITY W/ WASTAGE	UNIT MANHOUR	HOURLY WAGE	LABOR COST	MAT. COST	UNIT COST	SUB COST
59			SAV-3, Supply Air Valve Unit - Inlet Size: 12"Ã"Ã" - Outlet Size: 12"Ã"Ã" - Min SP: 0.5 - Max NC: 30 - Basis Of Design: PHOENIX - Remarks: Dual AIR FLOW (CFM) - Max: 3000 - Min: 180 BALANCED AIRFLOW - Occupied(CFM): 2525 - Unoccupied(CFM): 1010 REHEAT COIL - EAT(Ã°F): 55 - LAT(Ã°F): 85 - Capacity (BTU/HR): 81810 - Heating KW: 18.9 ELECTRICAL - 208 V - 3 P - 60 Hertz	EA	1	0%	1	2.765	\$ 95.00	\$ 262.68	\$ 302.40	\$ 565.08	\$ 565
60			SAV-4, Supply Air Valve Unit - Inlet Size: 12"Ã"Ã" - Outlet Size: 12"Ã"Ã" - Min SP: 0.5 - Max NC: 30 - Basis Of Design: PHOENIX AIR FLOW (CFM) - Max: 1500 - Min: 90 BALANCED AIRFLOW - Occupied(CFM): 1415 - Unoccupied(CFM): 1101 REHEAT COIL - EAT(Ã°F): 55 - LAT(Ã°F): 85 - Capacity (BTU/HR): 45846 - Heating KW: 9.5 ELECTRICAL - 208 V - 3 P - 60 Hertz	EA	1	0%	1	2.765	\$ 95.00	\$ 262.68	\$ 302.40	\$ 565.08	\$ 565

DETAILED BREAKDOWN OF ITEMS

Project Name: Clemson Edisto Research Laboratory, 64 Research St Blackville, SC 29817
 Project ID: 1014-02
 Scope: HVAC



ACE SERVICES

Date: 14-May-25

SR #	Drawing #	Detail #	DESCRIPTION	UNIT	QUANTITY	WASTAGE	QUANTITY W/ WASTAGE	UNIT MANHOUR	HOURLY WAGE	LABOR COST	MAT. COST	UNIT COST	SUB COST
61			SAV-5, Supply Air Valve Unit - Inlet Size: 12"Â° - Outlet Size: 12"Â° - Min SP: 0.5 - Max NC: 30 - Basis Of Design: PHOENIX - Remarks: Dual AIR FLOW (CFM) - Max: 3000 - Min: 180 BALANCED AIRFLOW - Occupied(CFM): 2525 - Unoccupied(CFM): 1010 REHEAT COIL - EAT(Â°F): 55 - LAT(Â°F): 85 - Capacity (BTU/HR): 81810 - Heating KW: 18.9 ELECTRICAL - 208 V - 3 P - 60 Hertz	EA	1	0%	1	2.765	\$ 95.00	\$ 262.68	\$ 302.40	\$ 565.08	\$ 565
62			SAV-6, Supply Air Valve Unit - Inlet Size: 10"Â° - Outlet Size: 10"Â° - Min SP: 0.5 - Max NC: 30 - Basis Of Design: PHOENIX AIR FLOW (CFM) - Max: 1000 - Min: 50 BALANCED AIRFLOW - Occupied(CFM): 720 - Unoccupied(CFM): 475 REHEAT COIL - EAT(Â°F): 55 - LAT(Â°F): 85 - Capacity (BTU/HR): 23328 - Heating KW: 6.3 ELECTRICAL - 208 V - 3 P - 60 Hertz	EA	1	0%	1	2.487	\$ 95.00	\$ 236.27	\$ 287.00	\$ 523.27	\$ 523

DETAILED BREAKDOWN OF ITEMS

Project Name: Clemson Edisto Research Laboratory, 64 Research St Blackville, SC 29817
Project ID: 1014-02
Scope: HVAC



Date: 14-May-25

[illegible]

DETAILED BREAKDOWN OF ITEMS

Project Name: Clemson Edisto Research Laboratory, 64 Research St Blackville, SC 29817
 Project ID: 1014-02
 Scope: HVAC



ACE SERVICES

Date: 14-May-25

SR #	Drawing #	Detail #	DESCRIPTION	UNIT	QUANTITY	WASTAGE	QUANTITY W/ WASTAGE	UNIT MANHOUR	HOURLY WAGE	LABOR COST	MAT. COST	UNIT COST	SUB COST
64			SS-1, Indoor Unit Split System Air Conditioning Unit - Mounting: Wall - Basis Of Design: TRANE FAN - Nom Airflow: 425 - FLA: 0.65 COOLING - EAT(Δ°F) WB: 90 - EAT(Δ°F) DB: 73 - LAT(Δ°F) WB: 67 - LAT(Δ°F) DB: 57 - BTU/HR Sensible: 1375 - BTU/HR Total: 1661 ELECTRICAL DATA - 208 V - 1 P - 60 Hertz	EA	1	0%	1	6.481	\$ 95.00	\$ 615.72	\$ 1,620.31	\$ 2,236.03	\$ 2,236
65			SS-2, Indoor Unit Split System Air Conditioning Unit - Mounting: Wall - Basis Of Design: TRANE FAN - Nom Airflow: 425 - FLA: 0.65 COOLING - EAT(Δ°F) WB: 90 - EAT(Δ°F) DB: 73 - LAT(Δ°F) WB: 67 - LAT(Δ°F) DB: 57 - BTU/HR Sensible: 748 - BTU/HR Total: 963 ELECTRICAL DATA - 280 V - 1 P - 60 Hertz	EA	1	0%	1	6.481	\$ 95.00	\$ 615.72	\$ 1,620.31	\$ 2,236.03	\$ 2,236
66			HP-1, Outdoor Unit Split System Air Conditioning Unit - Mounting: Wall - Basis Of Design: TRANE FAN - Nom Airflow: 425 - FLA: 0.65 COOLING - EAT(Δ°F) WB: 90 - EAT(Δ°F) DB: 73 - LAT(Δ°F) WB: 67 - LAT(Δ°F) DB: 57 - BTU/HR Sensible: 1375 - BTU/HR Total: 1661 ELECTRICAL DATA - 208 V - 1 P - 60 Hertz	EA	1	0%	1	6.481	\$ 95.00	\$ 615.72	\$ 1,620.31	\$ 2,236.03	\$ 2,236

DETAILED BREAKDOWN OF ITEMS

Project Name: Clemson Edisto Research Laboratory, 64 Research St Blackville, SC 29817
Project ID: 1014-02
Scope: HVAC



ACE SERVICES

Date: 14-May-25

SR #	Drawing #	Detail #	DESCRIPTION	UNIT	QUANTITY	WASTAGE	QUANTITY W/ WASTAGE	UNIT MANHOUR	HOURLY WAGE	LABOR COST	MAT. COST	UNIT COST	SUB COST
67			HP-2, Outdoor Unit Split System Air Conditioning Unit - Mounting: Wall - Basis Of Design: TRANE FAN - Nom Airflow: 425 - FLA: 0.65 COOLING - EAT(Â°F) WB: 90 - EAT(Â°F) DB: 73 - LAT(Â°F) WB: 67 - LAT(Â°F) DB: 57 - BTU/HR Sensible: 748 - BTU/HR Total: 963 ELECTRICAL DATA - 280 V - 1 P - 60 Hertz	EA	1	0%	1	6.481	\$ 95.00	\$ 615.72	\$ 1,620.31	\$ 2,236.03	\$ 2,236

DETAILED BREAKDOWN OF ITEMS

Project Name: Clemson Edisto Research Laboratory, 64 Research St Blackville, SC 29817
 Project ID: 1014-02
 Scope: HVAC



Date: 14-May-25

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DETAILED BREAKDOWN OF ITEMS

Project Name: Clemson Edisto Research Laboratory, 64 Research St Blackville, SC 29817
Project ID: 1014-02
Scope: HVAC



ACE SERVICES

Date: 14-May-25

[illegible]

DETAILED BREAKDOWN OF ITEMS

Project Name: Clemson Edisto Research Laboratory, 64 Research St Blackville, SC 29817
 Project ID: 1014-02
 Scope: HVAC



ACE SERVICES

Date: 14-May-25

SR #	Drawing #	Detail #	DESCRIPTION	UNIT	QUANTITY	WASTAGE	QUANTITY W/ WASTAGE	UNIT MANHOUR	HOURLY WAGE	LABOR COST	MAT. COST	UNIT COST	SUB COST
74			CC-1, Cooling Coil Schedule - Service: AHU-1 - Maximum H2O PD (In H2O): 0.5 - Maximum Face Velocity (FPM): 500 - No. Of Coils: 1 - Maximum Air PD (In H2O): 0.5 - Max Number Of Rows: 6 - Fluid: R-4548 AIRFLOW - 3750 CFM - 820 OA CFM EAT(Â°F) - 80 DB - 67 WB LAT(Â°F) - 55 DB - 54 WB MBH - Sensible: 107.69 - Total: 134.74	EA	1	0%	1	4.561	\$ 95.00	\$ 433.30	\$ 698.76	\$ 1,132.06	\$ 1,132
75			CC-2, Cooling Coil Schedule - Service: DOAU-1 - Maximum H2O PD (In H2O): 0.5 - Maximum Face Velocity (FPM): 500 - No. Of Coils: 1 - Maximum Air PD (In H2O): 0.5 - Fluid: R-4548 AIRFLOW - 8665 CFM - 8665 OA CFM EAT(Â°F) - 94.6 DB - 75.2 WB LAT(Â°F) - 50.5 DB - 50 WB MBH - Sensible: 274 - Total: 780.1	EA	1	0%	1	4.561	\$ 95.00	\$ 433.30	\$ 698.76	\$ 1,132.06	\$ 1,132
			HEATING COIL										
76			HC-1, Heating Coil Schedule - Service: DOAU-1 - Maximum Face Velocity (FPM): 500 - Maximum Air PD (In H2O): 1.30 - Fluid: GAS - EAT(Â°F): 25 DB - LAT(Â°F): 76.7 DB - Input MBH: 600 - Output MBH: 486 AIRFLOW - 8665 CFM - 8665 OA CFM	EA	1	0%	1	4.312	\$ 95.00	\$ 409.64	\$ 658.64	\$ 1,068.28	\$ 1,068
			FILTERS										

DETAILED BREAKDOWN OF ITEMS

Project Name: Clemson Edisto Research Laboratory, 64 Research St Blackville, SC 29817
 Project ID: 1014-02
 Scope: HVAC



ACE SERVICES

Date: 14-May-25

SR #	Drawing #	Detail #	DESCRIPTION	UNIT	QUANTITY	WASTAGE	QUANTITY W/ WASTAGE	UNIT MANHOUR	HOURLY WAGE	LABOR COST	MAT. COST	UNIT COST	SUB COST
77			FF-1, Filter - Service: AHU-1 - Approximate Bank Dimensions In (WxHxD): 80"x96" - Number of Cartridges: 4 - Cartridge Size In (WxHxD): 20"x24"x2" - 3750CFM - Max Face Velocity (FPM): 500 - Media Area Per Cartridge (SQ FT): MERV 13 - Maximum Initial PD @ 500 FPM (In H2O): 0.5 - MERV Rating: 13	EA	1	0%	1	1.330	\$ 95.00	\$ 126.35	\$ 118.90	\$ 245.25	\$ 245
78			FF-2, Filter - Service: DOAU-1 - Approximate Bank Dimensions In (WxHxD): 160"x200" - Number of Cartridges: 8 - Cartridge Size In (WxHxD): 20"x25"x2" - 8665 CFM - Max Face Velocity (FPM): 500 - Media Area Per Cartridge (SQ FT): MERV 13 - Maximum Initial PD @ 500 FPM (In H2O): 0.5 - MERV Rating: 13	EA	1	0%	1	1.330	\$ 95.00	\$ 126.35	\$ 118.90	\$ 245.25	\$ 245
79			PF-1, Filter - Service: AHU-1 - Approximate Bank Dimensions In (WxHxD): 80"x96" - Number of Cartridges: 4 - Cartridge Size In (WxHxD): 20"x24"x2" - 3750CFM - Max Face Velocity (FPM): 500 - Media Area Per Cartridge (SQ FT): MERV 8 - Maximum Initial PD @ 500 FPM (In H2O): 0.5 - MERV Rating: 8	EA	1	0%	1	1.330	\$ 95.00	\$ 126.35	\$ 118.90	\$ 245.25	\$ 245
80			PF-2, Filter - Service: DOAU-1 - Approximate Bank Dimensions In (WxHxD): 160"x200" - Number of Cartridges: 8 - Cartridge Size In (WxHxD): 20"x25"x2" - 8665 CFM - Max Face Velocity (FPM): 500 - Media Area Per Cartridge (SQ FT): MERV 8 - Maximum Initial PD @ 500 FPM (In H2O): 0.5 - MERV Rating: 8	EA	1	0%	1	1.330	\$ 95.00	\$ 126.35	\$ 118.90	\$ 245.25	\$ 245
			DAMPER										
81			Air Damper	EA	4	0%	4	0.900	\$ 95.00	\$ 85.50	\$ 59.99	\$ 145.49	\$ 582
82			Outdoor Air Damper	EA	1	0%	1	1.050	\$ 95.00	\$ 99.75	\$ 75.99	\$ 175.74	\$ 176
83			Isolation Damper	EA	2	0%	2	1.050	\$ 95.00	\$ 99.75	\$ 86.50	\$ 186.25	\$ 373
84			Volume Damper	EA	52	0%	52	1.100	\$ 95.00	\$ 104.50	\$ 90.00	\$ 194.50	\$ 10,114
85			Mixed Air Damper	EA	1	0%	1	1.180	\$ 95.00	\$ 112.10	\$ 79.09	\$ 191.19	\$ 191
			VALVE										
86			Fume Hood Valve	EA	7	0%	7	1.198	\$ 95.00	\$ 113.81	\$ 142.45	\$ 256.26	\$ 1,794
87			Snorkel Valve	EA	2	0%	2	0.661	\$ 95.00	\$ 62.80	\$ 52.27	\$ 115.07	\$ 230
			MISC.										
88			Thermostat - Wall Mounted	EA	11	0%	11	1.450	\$ 95.00	\$ 137.75	\$ 164.92	\$ 302.67	\$ 3,329
89			VFD, Variable Frequency Drive	EA	3	0%	3	1.850	\$ 95.00	\$ 175.75	\$ 331.42	\$ 507.17	\$ 1,522
90			DPT	EA	4	0%	4	1.050	\$ 95.00	\$ 99.75	\$ 110.19	\$ 209.94	\$ 840

DETAILED BREAKDOWN OF ITEMS

Project Name: Clemson Edisto Research Laboratory, 64 Research St Blackville, SC 29817
Project ID: 1014-02
Scope: HVAC



ACE SERVICES

Date: 14-May-25

SR #	Drawing #	Detail #	DESCRIPTION	UNIT	QUANTITY	WASTAGE	QUANTITY W/ WASTAGE	UNIT MANHOURL	HOURLY WAGE	LABOR COST	MAT. COST	UNIT COST	SUB COST
91			AMD, Airflow Monitoring Device	EA	2	0%	2	2.350	\$ 95.00	\$ 223.25	\$ 555.00	\$ 778.25	\$ 1,557
92			Elastomeric Pad	EA	1	0%	1	0.990	\$ 95.00	\$ 94.05	\$ 81.50	\$ 175.55	\$ 176

SUBTOTAL \$ 169,547

ELECTRONIC SAFETY AND SECURITY MANUFACTURERS

93	M0.01-M7.01	Plan Notes	TS, Temperature Sensor	EA	9	0%	9	0.650	\$ 95.00	\$ 61.75	\$ 21.25	\$ 83.00	\$ 747
94			HS, Heat Sensor	EA	2	0%	2	0.894	\$ 95.00	\$ 84.93	\$ 72.95	\$ 157.88	\$ 316
95			SD-1, Smoke Detector	EA	1	0%	1	1.280	\$ 95.00	\$ 121.60	\$ 61.00	\$ 182.60	\$ 183
96			SPT-1, Static Pressure Sensor/Transmitter	EA	2	0%	2	1.300	\$ 95.00	\$ 123.50	\$ 126.31	\$ 249.81	\$ 500
97			Fume Hood Occupancy Sensor	EA	6	0%	6	1.210	\$ 95.00	\$ 114.95	\$ 52.20	\$ 167.15	\$ 1,003
98			Return Air Canopy - Factory Fabricated - w/ Integral Supports	EA	5	0%	5	1.980	\$ 95.00	\$ 188.10	\$ 349.00	\$ 537.10	\$ 2,686

SUBTOTAL \$ 5,433

PROJECTED COST		\$205,659
OVERHEAD AND PROFIT	35%	\$71,980
INSURANCE	2%	\$3,085
CONTINGENCY	0%	\$0
TAX	8.5%	\$17,481
SUGGESTED BID		\$298,205

DETAILED BREAKDOWN OF ITEMS

Project Name: Clemson Edisto Research Laboratory, 64 Research St Blackville, SC 29817
 Project ID: 1014-02
 Scope: HVAC



ACE SERVICES

Date: 14-May-25

SR #	Drawing #	Detail #	DESCRIPTION	UNIT	QUANTITY	WASTAGE	QUANTITY W/ WASTAGE	UNIT MANHOUR	HOURLY WAGE	LABOR COST	MAT. COST	UNIT COST	SUB COST
HVAC													
			DUCTS AND PIPING										
			RECTANGULAR SUPPLY AIR DUCTS										
1			8" x 10" Duct	LF	3.45	10%	4	0.223	\$ 95.00	\$ 21.18	\$ 13.38	\$ 34.55	\$ 131
2			10" x 10" Duct	LF	43.57	10%	48	0.295	\$ 95.00	\$ 28.03	\$ 17.70	\$ 45.73	\$ 2,192
3			10" x 12" Duct	LF	8.49	10%	9	0.325	\$ 95.00	\$ 30.91	\$ 19.52	\$ 50.44	\$ 471
4			12" x 10" Duct	LF	21.23	10%	23	0.321	\$ 95.00	\$ 30.50	\$ 19.26	\$ 49.77	\$ 1,162
5			12" x 12" Duct	LF	51.41	10%	57	0.344	\$ 95.00	\$ 32.68	\$ 20.64	\$ 53.31	\$ 3,015
6			14" x 10" Duct	LF	2.37	10%	3	0.370	\$ 95.00	\$ 35.20	\$ 22.23	\$ 57.43	\$ 150
7			14" x 12" Duct	LF	8.15	10%	9	0.376	\$ 95.00	\$ 35.70	\$ 22.55	\$ 58.25	\$ 522
8			14" x 14" Duct	LF	35.8	10%	39	0.394	\$ 95.00	\$ 37.40	\$ 23.62	\$ 61.03	\$ 2,403
9			14" x 16" Duct	LF	13.44	10%	15	0.422	\$ 95.00	\$ 40.10	\$ 25.32	\$ 65.42	\$ 967
10			16" x 14" Duct	LF	50.11	10%	55	0.418	\$ 95.00	\$ 39.68	\$ 25.06	\$ 64.74	\$ 3,569
11			18" x 16" Duct	LF	6.41	10%	7	0.479	\$ 95.00	\$ 45.51	\$ 28.74	\$ 74.25	\$ 524
12			18" x 18" Duct	LF	4.83	10%	5	0.509	\$ 95.00	\$ 48.36	\$ 30.54	\$ 78.90	\$ 419
13			20" x 16" Duct	LF	6.96	10%	8	0.503	\$ 95.00	\$ 47.79	\$ 30.18	\$ 77.97	\$ 597
14			20" x 18" Duct	LF	71.59	10%	79	0.515	\$ 95.00	\$ 48.96	\$ 30.92	\$ 79.88	\$ 6,291
15			20" x 20" Duct	LF	23.65	10%	26	0.543	\$ 95.00	\$ 51.57	\$ 32.57	\$ 84.14	\$ 2,189
16			24" x 20" Duct	LF	5.21	10%	6	0.609	\$ 95.00	\$ 57.87	\$ 36.55	\$ 94.42	\$ 541
17			24" x 24" Duct	LF	14.36	10%	16	0.645	\$ 95.00	\$ 61.27	\$ 38.69	\$ 99.96	\$ 1,579
18			30" x 15" Duct	LF	8.43	10%	9	0.613	\$ 95.00	\$ 58.27	\$ 36.80	\$ 95.07	\$ 882
19			30" x 16" Duct	LF	43.28	10%	48	0.615	\$ 95.00	\$ 58.39	\$ 36.88	\$ 95.27	\$ 4,535
20			30" x 24" Duct	LF	39.88	10%	44	0.713	\$ 95.00	\$ 67.76	\$ 42.79	\$ 110.55	\$ 4,850
21			30" x 40" Duct	LF	13.29	10%	15	1.127	\$ 95.00	\$ 107.03	\$ 67.59	\$ 174.62	\$ 2,553
22			44" x 20" Duct	LF	49.42	10%	54	1.200	\$ 95.00	\$ 113.98	\$ 71.99	\$ 185.96	\$ 10,109
			CIRCULAR SUPPLY AIR DUCTS										
23			6" Dia Duct	LF	108.9	10%	120	0.196	\$ 95.00	\$ 18.63	\$ 11.77	\$ 30.40	\$ 3,642
24			8" Dia Duct	LF	81.86	10%	90	0.245	\$ 95.00	\$ 23.31	\$ 14.72	\$ 38.03	\$ 3,424
25			10" Dia Duct	LF	246.84	10%	272	0.294	\$ 95.00	\$ 27.92	\$ 17.64	\$ 45.56	\$ 12,371
26			12" Dia Duct	LF	12.11	10%	13	0.348	\$ 95.00	\$ 33.07	\$ 20.89	\$ 53.96	\$ 719
27			16" Dia Duct	LF	10.1	10%	11	0.449	\$ 95.00	\$ 42.65	\$ 26.94	\$ 69.59	\$ 773
			FLEXIBLE SUPPLY AIR DUCTS										
28			6" Dia Flexible Duct	LF	6.11	10%	7	0.090	\$ 95.00	\$ 8.59	\$ 3.64	\$ 12.23	\$ 82
29			8" Dia Flexible Duct	LF	30.25	10%	33	0.121	\$ 95.00	\$ 11.45	\$ 4.85	\$ 16.31	\$ 543
30			10" Dia Flexible Duct	LF	70.45	10%	77	0.151	\$ 95.00	\$ 14.32	\$ 6.07	\$ 20.39	\$ 1,580
			RECTANGULAR RETURN AIR DUCTS										
31			20" x 20" Duct	LF	2	10%	2	0.590	\$ 95.00	\$ 56.08	\$ 35.42	\$ 91.50	\$ 201
32			20" x 26" Duct	LF	38	10%	42	0.615	\$ 95.00	\$ 58.43	\$ 36.90	\$ 95.33	\$ 3,985
33			20" x 30" Duct	LF	66.95	10%	74	0.663	\$ 95.00	\$ 62.96	\$ 39.77	\$ 102.73	\$ 7,565
34			30" x 40" Duct	LF	40.85	10%	45	1.110	\$ 95.00	\$ 105.49	\$ 66.63	\$ 172.12	\$ 7,734
			CIRCULAR EXHAUST DUCTS										
35			6" Dia Duct	LF	24.64	10%	27	0.197	\$ 95.00	\$ 18.75	\$ 11.84	\$ 30.59	\$ 829
36			8" Dia Duct	LF	16.52	10%	18	0.248	\$ 95.00	\$ 23.52	\$ 14.86	\$ 38.38	\$ 697
37			10" Dia Duct	LF	39.81	10%	44	0.295	\$ 95.00	\$ 28.04	\$ 17.71	\$ 45.75	\$ 2,003
			CONNECTIONS										
38			6" to 6" Dia 90-Degree Elbow	EA	7	0%	7	0.370	\$ 95.00	\$ 35.15	\$ 32.94	\$ 68.09	\$ 477
39			8" to 8" Dia 45-Degree Elbow	EA	2	0%	2	0.490	\$ 95.00	\$ 46.55	\$ 43.92	\$ 90.47	\$ 181
40			8" to 8" Dia 90-Degree Elbow	EA	7	0%	7	0.490	\$ 95.00	\$ 46.55	\$ 43.92	\$ 90.47	\$ 633

DETAILED BREAKDOWN OF ITEMS

Project Name: Clemson Edisto Research Laboratory, 64 Research St Blackville, SC 29817
Project ID: 1014-02
Scope: HVAC



Date: 14-May-25

SR #	Drawing #	Detail #	DESCRIPTION	UNIT	QUANTITY	WASTAGE	QUANTITY W/ WASTAGE	UNIT MANHOUR	HOURLY WAGE	LABOR COST	MAT. COST	UNIT COST	SUB COST
41	M0.01-M7.01	Plan Notes	10" to 10" Dia 90-Degree Elbow	EA	22	0%	22	0.580	\$ 95.00	\$ 55.10	\$ 54.90	\$ 110.00	\$ 2,420
42			12" to 12" Dia 90-Degree Elbow	EA	1	0%	1	0.700	\$ 95.00	\$ 66.50	\$ 65.88	\$ 132.38	\$ 132
43			16" to 16" Dia 45-Degree Elbow	EA	2	0%	2	0.930	\$ 95.00	\$ 88.35	\$ 87.84	\$ 176.19	\$ 352
44			10" x 10" to 10" x 10" 90-Degree Elbow	EA	4	0%	4	0.580	\$ 95.00	\$ 55.10	\$ 54.90	\$ 110.00	\$ 440
45			10" x 10" to 12" x 10" 90-Degree Elbow	EA	1	0%	1	0.610	\$ 95.00	\$ 57.95	\$ 57.65	\$ 115.60	\$ 116
46			12" x 10" to 12" x 10" 90-Degree Elbow	EA	2	0%	2	0.640	\$ 95.00	\$ 60.80	\$ 60.39	\$ 121.19	\$ 242
47			12" x 12" to 12" x 12" 90-Degree Elbow	EA	3	0%	3	0.700	\$ 95.00	\$ 66.50	\$ 65.88	\$ 132.38	\$ 397
48			14" x 14" to 14" x 14" 90-Degree Elbow	EA	1	0%	1	0.810	\$ 95.00	\$ 76.95	\$ 76.86	\$ 153.81	\$ 154
49			16" x 14" to 16" x 14" 90-Degree Elbow	EA	2	0%	2	0.870	\$ 95.00	\$ 82.65	\$ 82.35	\$ 165.00	\$ 330
50			20" x 18" to 20" x 18" 90-Degree Elbow	EA	1	0%	1	0.940	\$ 95.00	\$ 89.30	\$ 104.31	\$ 193.61	\$ 194
51			20" x 30" to 20" x 30" Double Thickness Turning Vane	EA	1	0%	1	1.240	\$ 95.00	\$ 117.80	\$ 137.25	\$ 255.05	\$ 255
52			30" x 24" to 30" x 40" 90-Degree Elbow	EA	1	0%	1	1.540	\$ 95.00	\$ 146.30	\$ 170.19	\$ 316.49	\$ 316
53			30" x 24" to 30" x 24" Double Thickness Turning Vane	EA	1	0%	1	1.340	\$ 95.00	\$ 127.30	\$ 148.23	\$ 275.53	\$ 276
54			44" x 20" to 40" x 20" 90-Degree Elbow	EA	1	0%	1	1.540	\$ 95.00	\$ 146.30	\$ 170.19	\$ 316.49	\$ 316
			TRANSITION										
55			6" Dia to 8" x 10" Transition	EA	1	0%	1	0.200	\$ 95.00	\$ 19.00	\$ 17.60	\$ 36.60	\$ 37
56			6" Dia to 18" x 16" Transition	EA	1	0%	1	0.330	\$ 95.00	\$ 31.35	\$ 29.33	\$ 60.68	\$ 61
57			6" Dia to 12" x 12" Transition	EA	2	0%	2	0.250	\$ 95.00	\$ 23.75	\$ 22.00	\$ 45.75	\$ 92
58			6" Dia to 14" x 14" Transition	EA	1	0%	1	0.280	\$ 95.00	\$ 26.60	\$ 24.93	\$ 51.53	\$ 52
59			6" Dia to 20" x 18" Transition	EA	1	0%	1	0.360	\$ 95.00	\$ 34.20	\$ 32.27	\$ 66.47	\$ 66
60			8" Dia to 10" Transition	EA	1	0%	1	0.220	\$ 95.00	\$ 20.90	\$ 19.80	\$ 40.70	\$ 41
61			8" Dia to 16" Transition	EA	1	0%	1	0.300	\$ 95.00	\$ 28.50	\$ 26.40	\$ 54.90	\$ 55
62			8" Dia to 8" x 10" Transition	EA	1	0%	1	0.320	\$ 95.00	\$ 30.40	\$ 28.60	\$ 59.00	\$ 59
63			8" Dia to 10" x 10" Transition	EA	2	0%	2	0.230	\$ 95.00	\$ 21.85	\$ 20.53	\$ 42.38	\$ 85
64			8" Dia to 10" x 12" Transition	EA	2	0%	2	0.250	\$ 95.00	\$ 23.75	\$ 22.00	\$ 45.75	\$ 92
65			8" Dia to 12" x 10" Transition	EA	2	0%	2	0.250	\$ 95.00	\$ 23.75	\$ 22.00	\$ 45.75	\$ 92
66			8" Dia to 12" x 12" Transition	EA	3	0%	3	0.260	\$ 95.00	\$ 24.70	\$ 23.47	\$ 48.17	\$ 145
67			8" Dia to 14" x 12" Transition	EA	1	0%	1	0.280	\$ 95.00	\$ 26.60	\$ 24.93	\$ 51.53	\$ 52
68			8" Dia to 14" x 14" Transition	EA	4	0%	4	0.300	\$ 95.00	\$ 28.50	\$ 26.40	\$ 54.90	\$ 220
69			8" Dia to 24" x 24" Transition	EA	1	0%	1	0.460	\$ 95.00	\$ 43.70	\$ 41.07	\$ 84.77	\$ 85
70			8" Dia to 44" x 20" Transition	EA	1	0%	1	0.590	\$ 95.00	\$ 56.05	\$ 52.80	\$ 108.85	\$ 109
71			10" Dia to 10" x 12" Transition	EA	2	0%	2	0.260	\$ 95.00	\$ 24.70	\$ 23.47	\$ 48.17	\$ 96
72			10" Dia to 12" x 10" Transition	EA	2	0%	2	0.260	\$ 95.00	\$ 24.70	\$ 23.47	\$ 48.17	\$ 96
73			10" Dia to 12" x 12" Transition	EA	13	0%	13	0.280	\$ 95.00	\$ 26.60	\$ 24.93	\$ 51.53	\$ 670
74			10" Dia to 14" x 12" Transition	EA	0	0%	0	0.300	\$ 95.00	\$ 28.50	\$ 26.40	\$ 54.90	\$ -
75			10" Dia to 14" x 14" Transition	EA	2	0%	2	0.310	\$ 95.00	\$ 29.45	\$ 27.87	\$ 57.32	\$ 115
76			10" Dia to 14" x 16" Transition	EA	5	0%	5	0.330	\$ 95.00	\$ 31.35	\$ 29.33	\$ 60.68	\$ 303
77			10" Dia to 16" x 14" Transition	EA	5	0%	5	0.330	\$ 95.00	\$ 31.35	\$ 29.33	\$ 60.68	\$ 303
78			10" Dia to 20" x 16" Transition	EA	1	0%	1	0.380	\$ 95.00	\$ 36.10	\$ 33.73	\$ 69.83	\$ 70
79			10" Dia to 20" x 18" Transition	EA	1	0%	1	0.390	\$ 95.00	\$ 37.05	\$ 35.20	\$ 72.25	\$ 72
80			10" Dia to 20" x 20" Transition	EA	3	0%	3	0.410	\$ 95.00	\$ 38.95	\$ 36.67	\$ 75.62	\$ 227
81			10" Dia to 30" x 16" Transition	EA	2	0%	2	0.460	\$ 95.00	\$ 43.70	\$ 41.07	\$ 84.77	\$ 170
82			10" Dia to 30" x 24" Transition	EA	2	0%	2	0.520	\$ 95.00	\$ 49.40	\$ 46.93	\$ 96.33	\$ 193
83			10" Dia to 44" x 20" Transition	EA	2	0%	2	0.600	\$ 95.00	\$ 57.00	\$ 54.27	\$ 111.27	\$ 223
84			12" Dia to 24" x 20" Transition	EA	1	0%	1	0.460	\$ 95.00	\$ 43.70	\$ 41.07	\$ 84.77	\$ 85
85			16" Dia to 20" x 18" Transition	EA	1	0%	1	0.440	\$ 95.00	\$ 41.80	\$ 39.60	\$ 81.40	\$ 81
86			10" x 10" to 16" x 14" Transition	EA	1	0%	1	0.310	\$ 95.00	\$ 29.45	\$ 27.50	\$ 56.95	\$ 57
87			10" x 12" to 14" x 12" Transition	EA	1	0%	1	0.300	\$ 95.00	\$ 28.50	\$ 26.40	\$ 54.90	\$ 55

DETAILED BREAKDOWN OF ITEMS

Project Name: Clemson Edisto Research Laboratory, 64 Research St Blackville, SC 29817
 Project ID: 1014-02
 Scope: HVAC



ACE SERVICES

Date: 14-May-25

SR #	Drawing #	Detail #	DESCRIPTION	UNIT	QUANTITY	WASTAGE	QUANTITY W/ WASTAGE	UNIT MANHOUR	HOURLY WAGE	LABOR COST	MAT. COST	UNIT COST	SUB COST
88			12" x 10" to 20" x 20" Transition	EA	1	0%	1	0.380	\$ 95.00	\$ 36.10	\$ 34.10	\$ 70.20	\$ 70
89			12" x 10" to 12" x 12" Transition	EA	1	0%	1	0.280	\$ 95.00	\$ 26.60	\$ 25.30	\$ 51.90	\$ 52
90			12" x 12" to 24" x 24" Transition	EA	1	0%	1	0.440	\$ 95.00	\$ 41.80	\$ 39.60	\$ 81.40	\$ 81
91			12" x 12" to 30" x 16" Transition	EA	1	0%	1	0.430	\$ 95.00	\$ 40.85	\$ 38.50	\$ 79.35	\$ 79
92			14" x 10" to 10" Dia Transition	EA	1	0%	1	0.280	\$ 95.00	\$ 26.60	\$ 24.93	\$ 51.53	\$ 52
93			14" x 10" to 20" x 18" Transition	EA	1	0%	1	0.380	\$ 95.00	\$ 36.10	\$ 34.10	\$ 70.20	\$ 70
94			14" x 14" to 12" x 12" Transition	EA	1	0%	1	0.320	\$ 95.00	\$ 30.40	\$ 28.60	\$ 59.00	\$ 59
95			14" x 12" to 14" x 14" Transition	EA	1	0%	1	0.330	\$ 95.00	\$ 31.35	\$ 29.70	\$ 61.05	\$ 61
96			14" x 14" to 18" x 18" Transition	EA	2	0%	2	0.390	\$ 95.00	\$ 37.05	\$ 35.20	\$ 72.25	\$ 145
97			14" x 16" to 12" x 12" Transition	EA	1	0%	1	0.330	\$ 95.00	\$ 31.35	\$ 29.70	\$ 61.05	\$ 61
98			14" x 16" to 20" x 16" Transition	EA	1	0%	1	0.400	\$ 95.00	\$ 38.00	\$ 36.30	\$ 74.30	\$ 74
99			14" x 16" to 30" x 16" Transition	EA	1	0%	1	0.460	\$ 95.00	\$ 43.70	\$ 41.80	\$ 85.50	\$ 86
100			16" x 14" to 10" x 10" Transition	EA	3	0%	3	0.310	\$ 95.00	\$ 29.45	\$ 27.50	\$ 56.95	\$ 171
101			16" x 14" to 20" x 20" Transition	EA	1	0%	1	0.430	\$ 95.00	\$ 40.85	\$ 38.50	\$ 79.35	\$ 79
102			16" x 14" to 30" x 16" Transition	EA	1	0%	1	0.460	\$ 95.00	\$ 43.70	\$ 41.80	\$ 85.50	\$ 86
103			18" x 16" to 12" x 12" Transition	EA	1	0%	1	0.360	\$ 95.00	\$ 34.20	\$ 31.90	\$ 66.10	\$ 66
104			18" x 16" to 20" x 18" Transition	EA	1	0%	1	0.440	\$ 95.00	\$ 41.80	\$ 39.60	\$ 81.40	\$ 81
105			20" x 16" to 30" x 16" Transition	EA	1	0%	1	0.500	\$ 95.00	\$ 47.50	\$ 45.10	\$ 92.60	\$ 93
106			20" x 18" to 24" x 20" Transition	EA	1	0%	1	0.500	\$ 95.00	\$ 47.50	\$ 45.10	\$ 92.60	\$ 93
107			20" x 20" to 24" x 24" Transition	EA	1	0%	1	0.540	\$ 95.00	\$ 51.30	\$ 48.40	\$ 99.70	\$ 100
108			24" x 20" to 44" x 20" Transition	EA	1	0%	1	0.660	\$ 95.00	\$ 62.70	\$ 59.40	\$ 122.10	\$ 122
109			24" x 24" to 30" x 24" Transition	EA	1	0%	1	0.620	\$ 95.00	\$ 58.90	\$ 56.10	\$ 115.00	\$ 115
110			30" x 15" to 44" x 20" Transition	EA	1	0%	1	0.660	\$ 95.00	\$ 62.70	\$ 59.95	\$ 122.65	\$ 123
111			30" x 24" to 44" x 20" Transition	EA	1	0%	1	0.720	\$ 95.00	\$ 68.40	\$ 64.90	\$ 133.30	\$ 133
			REFRIGERANT PIPING										
112			RL, Refrigerant Liquid	LF	52.19	10%	57	0.110	\$ 95.00	\$ 10.45	\$ 6.02	\$ 16.47	\$ 946
113			RS, Refrigerant Suction	LF	52.25	10%	57	0.110	\$ 95.00	\$ 10.45	\$ 6.02	\$ 16.47	\$ 947
114			1/2" Condensate Drain Line	LF	25.71	10%	28	0.105	\$ 95.00	\$ 9.98	\$ 3.46	\$ 13.44	\$ 380
115			FD-1, Floor Drain - 3" Dia	EA	1	0%	1	1.280	\$ 95.00	\$ 121.60	\$ 145.99	\$ 267.59	\$ 268
			DUCTS INSULATION										
116			Rigid Insulation @ Ducts	SF	22895	10%	25185	0.025	\$ 95.00	\$ 2.38	\$ 1.12	\$ 3.50	\$ 88,020
			DUCT SUSPENSION SYSTEMS										
			TRAPEZE HANGER SYSTEM										
117			Threaded Hanger Rod	EA	158	0%	158	0.125	\$ 95.00	\$ 11.88	\$ 11.32	\$ 23.20	\$ 3,658
118			Unistrut	EA	158	0%	158	0.650	\$ 95.00	\$ 61.75	\$ 51.48	\$ 113.23	\$ 17,858
			STRAP HANGER SYSTEM										
119			Hanger Strap	EA	57	0%	57	0.145	\$ 95.00	\$ 13.78	\$ 13.66	\$ 27.44	\$ 1,568
			SUPPORT RAIL										
120			Support Rail for Duct - 4'-8" Length	EA	5	0%	5	0.318	\$ 95.00	\$ 30.17	\$ 54.87	\$ 85.04	\$ 425
121			Support Rail for Duct - 3'-0" Length	EA	7	0%	7	0.195	\$ 95.00	\$ 18.53	\$ 35.25	\$ 53.78	\$ 376

SUBTOTAL \$ 223,781

PROJECTED COST			\$223,781
OVERHEAD AND PROFIT			35%
INSURANCE			5%
CONTINGENCY			5%

DETAILED BREAKDOWN OF ITEMS

Project Name: Clemson Edisto Research Laboratory, 64 Research St Blackville, SC 29817
 Project ID: 1014-02
 Scope: HVAC



ACE SERVICES

Date: 14-May-25

SR #	Drawing #	Detail #	DESCRIPTION	UNIT	QUANTITY	WASTAGE	QUANTITY W/ WASTAGE	UNIT MANHOUR	HOURLY WAGE	LABOR COST	MAT. COST	UNIT COST	SUB COST
TAX												8.5%	\$19,021
SUGGESTED BID													\$343,504

