



School District of Clayton

Request for Proposal

SMARTD Air Cooled Chillers

1/16/2020

Contact Person: Tim Wonish
Title: Director of Facility Services
Phone #: 314-854-6952
E-mail: timwonish@claytonschools.net

RETURN PROPOSAL NO LATER THAN: Thursday January 30, 2020 at 10:00 am

RETURN PROPOSAL TO:

School District of Clayton
Attn: Tim Wonish
Facility Services
305 N. Gay Ave
Clayton, Missouri 63105-1613

The Proposer hereby declares understanding, agreement and certification of compliance to provide the items and/or services, at the prices quoted, in accordance with all terms and conditions, requirements and specifications of the original Request for Proposal (RFP) and as modified by any addenda thereto.

OVERVIEW

Summary of Key Dates:

1/16/2020	RFP available to Company
January 30, 2020 at 10:00 a.m. CDT	Proposal due at 305 N. Gay Ave
February 5, 2020 (tentative)	Board of Education meeting (Approval)
March 16, 2020	Possible Installation Start Date

Documents to Include in Submission:

1. Proposal Submission Form (Attachment 1) or Decline to Submit Form (Attachment 2)
2. Company Proposal – Including:
 - a. Letter of Transmittal; and,
 - b. Executive Summary
3. Company Profile (Attachment 3)
4. Cost Proposal (Attachment 4)
5. Work Authorization (E-Verify) Addendum & Affidavit (Attachment 5)
6. W-9 (Attachment 6)

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INTRODUCTION

This document is a formal Request for Proposal (RFP) for the removal of existing chillers, as well as the supply and installation of SMARDT Air Cooled Chillers for the School District of Clayton (District) for Glenridge Elementary School, and Meramec Elementary School. **No Alternated Equipment will be accepted.**

The purpose of this RFP is to establish the requirements for the requested products and/or services, and to solicit proposals (Proposal) from firms (Company) for providing such products and/or services. The RFP requests a great amount of detail to avoid delays, misunderstandings, and to simplify the evaluation of the Proposal. The Company is requested to respond to each specification.

A. GENERAL INFORMATION:

1. District:

As a public school system dedicated to the education of all children who come to our schools, the School District of Clayton strives to inspire each student to love learning, and embrace challenge within a rich and rigorous academic culture. The District's 3.25 square miles include an early childhood center, three elementary schools, a middle school, and a high school that together serve a diverse student body of approximately 2,600.

2. Objective:

- 2.1. To remove the chillers currently installed at two schools (Glenridge Elementary and Meramec Elementary).
- 2.2. To supply and install new 130 ton SMARDT Air Cooled Chillers at the two schools.

NOTE: The Scope of Services exhibit attached hereto includes more detailed information on the objectives, products and/or services desired by the District.

B. PROPOSAL EVALUATION AND AWARD:

1. Evaluation

- 1.1. Proposals must be concise and in outline format. Pertinent supplemental information should be referenced and included as attachments. All Proposals must be organized and tabbed to allow for easy reference.
- 1.2. Elaborate and expensive copy is not required. Neat, legible, and clearly stated information is adequate and will be used in the evaluation process. Supplier brochures may be included, but may not be substituted for the information requested herein.
- 1.3. The Proposal should include a **Letter of Transmittal** that provides an introduction to the Company and includes an expression of the Company's ability and desire to meet the requirements of the RFP. The Letter of Transmittal must include an original signature by an authorized individual able to bind the Company to all items in the Proposal, including products, services, prices, etc. which are contained in the Proposal.
- 1.4. The Proposal should include an **Executive Summary** that briefly describes the Company's approach to meeting the District's requirements as outlined in the RFP; indicates any major requirements that cannot be met; and, highlights the major features of the Proposal. The reader should be able to determine generally how well the Proposal meets the District's requirements by reading the Executive Summary.
- 1.5. The Company **must** include the following elements in its cost proposal:

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- 1.5.1. A specific fee structure;
 - 1.5.2. Rates and prices that are a firm fixed rate, and not subject to change throughout the term of the negotiated contract;
 - 1.5.3. Each Proposal shall be submitted on the most favorable terms, from a cost and technical standpoint, which the Company can submit to the District. The Company may submit an alternate proposal on a group of line items on an “all or nothing” basis;
 - 1.5.4. The Company should address any out-of-pocket expenses the District may incur for any additional requirements not included by the Company in its Proposal; and,
 - 1.5.5. The Company shall provide the terms, conditions, and forms of payment accepted through the Company’s request for payment and whether there are discounts or fees, including any discounts for cash or early payment.
 - 1.6. The Company shall complete Attachment 3, “**Profile of the Company**” which includes a potential conflict of interest statement. The Company shall include a listing of all Missouri school districts for which the Company currently provides services. The references should include at least one contract for the installation of SMARDT Air Cooled Chillers. The Company shall additionally provide the District a listing of all public school clients that have discontinued service from the Company in the past five years due to poor performance or non-performance.
 - 1.7. The District may conduct interviews with selected Companies in connection with its evaluation of the Proposal. All costs associated with the interviews shall be at the expense of the Company.
 - 1.8. Proposals will be evaluated by the District’s designated staff. The following will serve as the basic criteria for the selection of the Company eventually chosen.
 - 1.8.1. The qualifications of the Company and the team assigned to the District;
 - 1.8.2. Total resources of the Company that can be applied to the advantage of the District;
 - 1.8.3. The scope of services offered and the extent to which they meet or exceed the requirements of the District;
 - 1.8.4. The extent to which the Proposal meets or exceeds specifications and function;
 - 1.8.5. The Company’s understanding of the work required of the Company as evidenced by its Proposal;
 - 1.8.6. The total cost of the services/products offered to the District;
 - 1.8.7. Value added services and rebates/incentives proposed;
 - 1.8.8. Delivery or completion times;
 - 1.8.9. Any prior experience or history between the District and the Company;
 - 1.8.10. References from, and experiences of other clients with the Company; and,
 - 1.8.11. Other factors deemed significant by District officials.
2. Award
- 2.1. The District intends to make a selection of the successful Company after a thorough

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evaluation of the proposals submitted. **The District reserves the right to negotiate with the successful Company, or to elect not to select any Company.**

- 2.2. The District may conduct interviews with the Company in connection with its evaluation of the Proposal.
- 2.3. The contract will be awarded to that Company whose proposal will be most advantageous to the District based on conformity to the RFP, reputation of the Company, cost, and the other factors listed above. The award will be subject to approval by the Board of Education.
- 2.4. The District shall not be obligated to explain the results of the evaluation process to any Company.
- 2.5. No verbal agreement or conversation with any administrator, agent, or employee of the District, either before or after the execution of the contract resulting from the RFP or follow-up negotiations, shall affect or modify any of the terms or obligations contained in the written contract resulting from the RFP.
- 2.6. The District reserves the right to reject any or all Proposals and to waive informalities and minor irregularities in Proposals received. The District, in its sole discretion, will determine whether an irregularity is minor.

C. NEGOTIATION

1. After selection, but prior to contract award, the District reserves the unilateral right to negotiate any aspect of the Proposal or proposed contract in any manner that best serves the needs of the District and is within the scope of the solicitation. Subject to successful negotiations and approval of the Board of Education, a contract or purchase order will be issued to the selected Company.
2. Negotiation of the final contract between the District and the Company will begin after the most qualified Company has been identified. If prices and compensation and final contract cannot be agreed to, then negotiations with the most qualified Company will be terminated and at the District's option, will then begin with the next most qualified Company.
3. The District may accept any Proposal as submitted whether or not negotiations have been conducted between the parties.
4. Neither the commencement nor cessation of negotiations shall constitute rejection of the Proposal or a counteroffer on the part of the District.

GENERAL CONDITIONS

1. The information presented in the RFP is not to be construed as a commitment of any kind on the part of the District. There is no expressed or implied obligation for the District to reimburse the Company for any expenses incurred in preparing a Proposal in response to this request.
2. No alternate Proposals that significantly deviate or modify the concept and ultimate objectives of this RFP will be considered. Companies submitting proposals with any minor deviations must identify and fully justify such deviations in order to be deemed in compliance with the RFP, and receive the District's consideration. Non-compliance with RFP specifications and/or requirements will, at the District's option, disqualify the Proposal from further consideration.
3. Any explanation or statement that the Company wishes to make must be contained with the Proposal, but shall be written separately and independently of the Proposal itself, and attached thereto. Unless the Company so indicates, it is understood that the Company has made its Proposal in strict accordance with the RFP terms.
4. The District reserves the right to reject any or all Proposals and to waive informalities and minor irregularities in Proposals received. The District, in its sole discretion, will determine whether an irregularity is minor.
5. The District reserves the right to decline any or all Proposal submissions, or to cancel the RFP, in whole or in part, at any time prior to making an award, for any reason, or no reason, without liability being incurred by the District to any Company for any expense, cost, loss or damage incurred or suffered by the Company as a result of such withdrawal.
6. All Proposals shall be deemed final, conclusive and irrevocable and no Proposal shall be subject to correction or amendment for any error or miscalculation. No Proposal shall be withdrawn without the consent of the District for 90 calendar days after the scheduled closing time for the receipt of Proposals.
7. While the District has used considerable efforts to ensure an accurate representation of information in this RFP document, the information contained herein is provided solely as a guideline for proposers. The information is not guaranteed or warranted to be accurate by the District, nor is it necessarily comprehensive or exhaustive. Nothing in this RFP document is intended to relieve proposers from forming their own opinions and conclusions in respect to the matters addressed in this RFP document.
8. The Company is responsible for its own verification of all information provided to it. **Mandatory site visit is required. Appointments must be scheduled with the Facility Services Office: 314-854-6950.** Any Proposal submitted without a site visit will be rejected. The Company must satisfy itself, upon examination of this RFP, as to the intent of the specifications. After the submission of the Proposal, no complaint or claim that there was any misunderstanding will be entertained. The Company agrees that it will make no claim for additional payment or seek an extension of time for completion of the work or seek any other concession because of any misinterpretation or misunderstanding of the RFP, or of any failure to fully acquaint itself with all conditions relating to the proposed work.
9. Any oral communication will be considered unofficial and non-binding on the District. All contact regarding this RFP must be directed to **Tim Wonish, Director of Facility Services or Jim Brennell, Assistant Director**. Unauthorized contact by the Company with other District employees or Board members regarding the RFP may result in disqualification.
10. Any information given to a Company concerning the RFP will be furnished to all Companies as an addendum to the RFP if, in the District's sole discretion, such information is deemed necessary to all Companies in submitting Proposals in response to the RFP, or if the lack of such

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information would be prejudicial to uninformed Companies. The Company should rely only on written statements issued by the District in the form of an addendum to the RFP.

11. The District reserves the right to modify the specifications prior to the Proposal submission deadline and will endeavor to notify all potential Companies that have received a copy of the specifications, but failure to notify shall impose no obligation or liability on the District.
12. Due regard will be given for the protection of proprietary information contained in all Proposals received. However, Companies should be aware that all materials associated with the procurement are subject to the terms of the Missouri Sunshine law and all rules, regulations and interpretations resulting there from. Proposals containing data that the Company does not want used or disclosed for any purpose other than evaluation of the Proposal may be restricted, provided the Company marks the cover sheet of the Proposal with the following: **“Technical data contained with the attachments is furnished in connection with the Request for Qualifications of the School District of Clayton shall not be used nor disclosed except for evaluation purposes, provided that, if the District and Company enter into an Agreement as a result of or in connection with the submission of this Proposal, the School District of Clayton shall have the right to use or disclose technical data to substantiate its decision to enter into an Agreement.”**
13. The above restriction does not limit the District’s rights to use or disclose without the Company’s permission any technical data obtained independently from another source. Proposals shall not contain any restrictive language other than the above. Proposals submitted with restrictive language or statements which differ from the above, will be treated under the terms of the above legend. The District assumes no liability for disclosure or use of unmarked technical data and may use or disclose the data for any purpose.
14. The Company shall not, under penalty of law and immediate disqualification of the Proposal, offer or give any gratuities, favors or anything of monetary value to an administrator, employee, agent, or Board of Education member of the District for the purpose of influencing favorable disposition toward a submitted Proposal or for any reason while a Proposal is pending or during the evaluation process.
15. No Company shall engage in any activity or practice, by itself or with other Companies, the result of which may be to restrict or eliminate competition or otherwise restrain trade. Violation of this instruction will result in immediate rejection of the Company’s Proposal.
16. The District will give preference to Missouri businesses, or businesses that maintain Missouri offices or places of business, when the quality of performance promised is equal to or better than and the price quoted is the same as or less than that of the other responsive providers.
17. The District will give preference to certified minority and women-owned businesses when the quality of performance promised is equal to or better than and the price quoted is the same as or less than that of the other responsive providers.
18. Purchases made by the District are not subject to state or local sales taxes or federal excise taxes. The official State Tax Exemption letter will be furnished on request.
19. The District may accept one part, aspect or phase, or any combination thereof, of any Proposal unless the Company specifically qualifies its offer by stating that the Proposal must be taken as a whole.
20. The District may award a contract based upon the initial Proposals received without discussion of

GENERAL CONDITIONS

such Proposals. Accordingly, each initial Proposal should be submitted with the most favorable price and service standpoint.

21. To facilitate consideration of the Proposals, the District may, at its option, conduct interviews after receipt of the Proposal. If this is necessary, the Company will be contacted to arrange an interview. The District, in its sole discretion, will determine which, if any, Company will be interviewed.
22. The District reserves the right to withdraw the award to a successful Company within 30 days of the award if, in the opinion of the District, the successful Company is unable or unwilling to enter into a form of Agreement satisfactory to the District. The District shall be entitled to do so without any liability being incurred by the District to the Company.
23. In the event of a conflict between the Proposal and the RFP, the District shall resolve any inconsistency in favor of the RFP. Additionally, the District shall in good faith decide all inconsistencies and/or disputes pertaining to the RFP and the Proposal. The Company agrees to abide by the decisions of the District. Any ambiguity in the Proposal because of omission, error, lack of clarity or noncompliance by the Company with specifications, instructions and all conditions of bidding shall be construed in the favor of the District.
24. All of the terms and conditions of this RFP are deemed to be accepted by the Company and incorporated into the Company's Proposal submission. The terms and conditions stated in this RFP and the successful Company's response to this RFP shall also be incorporated into a final Agreement between the District and the successful Company. Any conflict in the wording between the final Agreement and the wording of the terms and conditions of this RFP and the response of the Company shall be resolved in favor of the District and shall be deemed to be incorporated into the final Agreement.
25. The successful Company shall not at any time assign its Agreement with the District or any portion of the Agreement without the written permission of the District. The successful Company must not, at any time, change sub-consultants approved by the District without written permission of the District, other than as listed in the Proposal submission.
26. The District reserves the right to terminate the Agreement with the successful Company with 30 days written notice if, in its opinion, the successful Company fails to meet the terms and conditions of the RFP. Notwithstanding the termination of the Agreement, the successful Company shall remain responsible for its obligations under this contract up to the date of termination. The District reserves the right to commence an action in a court of competent jurisdiction against the successful Company for damages that result from the breach of the terms and conditions of the Agreement by the successful Company.
27. The District may terminate the Agreement immediately without further cost or liability in the event of the occurrence of any of the following: insolvency of successful Company; liquidation or dissolution of successful Company; the institution of any voluntary or involuntary bankruptcy proceeding by or against the successful Company; assignment by successful Company for the benefit of creditors; or, the appointment of a receiver or trustee to manage the property of the successful Company.
28. In the event the Board of Education of the District fails to approve the appropriation of funds sufficient to provide for the District's obligations under the Agreement, or if the funds are not appropriated due to federal, state, or local action, the District shall have the right to terminate the Agreement by providing written notice to the successful Company and the District will thereby be relieved from all further obligations under the Agreement.

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29. In the event the Agreement initially awarded by the District is terminated for any reason within 120 days of the due date for Proposals, the District reserves the right to negotiate and accept any other submitted Proposal.
30. The District shall not be responsible for any pre-Agreement expenses of any Company, including the successful Company, incurred prior to the commencement of the Agreement.
31. The Company agrees to not unlawfully discriminate against or harass any employee or applicant for employment because of race, religion, color, national origin, sex, gender, age or disability, or any other protected status or activity.
32. Contract Award is contingent upon the Company providing the District with a sworn affidavit and documentation affirming enrollment in E-Verify and stating that the provider does not knowingly employ any person who is not authorized to work in the United States.
33. The District has adopted a tobacco free policy. No tobacco products may be used in the facilities or on the grounds.
34. The District has adopted a firearms free site policy. No firearms may be brought in the facilities or on the grounds.
35. The Company will submit invoices directly to the School District of Clayton Business Office, #2 Mark Twain Circle, Clayton, MO 63105, or invoices@claytonschools.net. Each invoice must include the District purchase order number, ordering department, date of shipment, quantity, price and item(s) shipped. Invoices will not become due and payable until all items listed on the invoice are received.
36. All shipments must be accompanied by a packing list giving a complete description of items, total quantity of items, and total number of containers in the shipment. Packing list should also show District purchase order number, ordering department, date of shipment, quantity, price, and item(s) shipped.
37. Payments will be made in accordance with the District's payment cycle.
38. All equipment shall be delivered as specified on the District's purchase order.
39. All deliveries will be FOB Destination, freight allowed, School District of Clayton Receiving, 305 N. Gay Ave., Clayton, MO 63105.
40. The Company is responsible for knowing, designing, and working within any relevant building codes and ordinances approved by St. Louis County, each municipality, and fire district that the site is located.

SCOPE OF SERVICES
SMARTD Air Cooled Chillers

Remove the existing chillers at Glenridge Elementary School - 7447 Wellington Way, Clayton, MO & Meramec Elementary School - 400 S. Meramec Ave., Clayton, MO, and replace with one 130 ton SMARTD Air Cooled Chiller at each building.

1. Approved product: SMARTD, Air Cooled Chiller - AD040.1EG12.F4AKDA.A008AA.E10. **No alternatives will be accepted.**
2. Contractor will be required to follow manufacturer's recommendations for installing new piping from the exterior chiller location to the lower level mechanical room and tie into the existing HVAC water lines.
3. Contractor must include the installation of Building Automation Controls (AutoMatrix). Contact Brian Schumacher at IFS Automation Solutions Group, (636) 680-2200, brians@intfs.com. **No other control systems will be accepted.**
4. Contractor is responsible for all electrical connection necessary to properly install the chiller per manufacturer's recommendations.
5. Contractor must supply the District with copies of warranty, start up documents, and owner's manuals.

Informational drawings will be supplied at the mandatory site visit.

SCOPE OF SERVICES MISCELLANEOUS

Deviating from RFP Specifications

The District will reject any proposal that deviates significantly from the specifications of this RFP. Companies submitting proposals with any minor deviations must identify and fully justify such deviations for the District's consideration.

Additional Services

In the event additional services beyond the scope of the RFP appear to be required, requests of these services and cost thereof must first be approved by the District and specifically included in the Agreement before the additional services are performed or no payment will be due for such services.

Presentation of Supporting Evidence/Surety

The Company must be prepared to provide any evidence of experience, performance ability, and/or financial surety that the District deems necessary or appropriate to fully establish the performance capabilities represented in their proposals.

Registration with Missouri Secretary of State

Contract awards are contingent upon the Company providing the District, prior to the execution of the contract, a current Annual Registration Report from the Missouri Secretary of the State's Office, showing the Company is in good standing to conduct business in Missouri.

By submitting a proposal, the Company certifies that it is not currently debarred from submitting proposals for contracts with any political subdivision or agency of the State of Missouri, and is not an agent or a person of any entity that is currently debarred from submitting proposals for contracts issued by a political subdivision or agent of the State of Missouri.

Availability of Services

By submitting a Proposal, the Company acknowledges that it has the systems and resources to render the Proposal and all programs and services offered will be fully operational by the Start Date.

Joint Ventures

Proposals requesting joint ventures between vendors will not be accepted. The District will only enter into a contract with a prime vendor who will be required to assume full responsibility for the delivery/installation of equipment, wiring, software and related services identified in this RFP whether or not the equipment, products and/or services are manufactured, produced or provided by the prime vendor. The prime vendor may enter into written subcontract(s) for performance of certain of its functions under the contract only with written approval from the District prior to the effective date of any subcontract. The prime vendor shall be wholly responsible for the entire performance of the contract whether or not subcontractors are used.

Independent Price Determination

The Company must warrant, represent, and certify that in connection with this RFP the following requirements have been met:

1. The costs proposed have been arrived at independently, without consultation, communication, or agreement for the purpose of restricting competition as to any matter relating to such process with any other organization or with any competitor.
2. Unless otherwise required by law, the costs quoted have not been knowingly disclosed by the Company on a prior basis directly or indirectly to any other organization or to any competitor.
3. No attempt has been made or will be made by the Company to induce any other person or firm to submit or not to submit a proposal for the purpose of restricting competition.

SCOPE OF SERVICES MISCELLANEOUS

Indemnification

Company shall indemnify, defend and hold harmless the District, its Board of Education, and its officers, directors, employees and agents from and against any and all liabilities, losses, damages, costs and expenses of any kind (including reasonable attorneys fees) arising from the acts or omissions of Company and/or any party claiming by, through or under Company.

Background Checks

Any individual employed by the Company must agree to a security background check if requested by the District.

- The Company shall be responsible for obtaining and making available for inspection, all security background checks and for all cost associated with the security background checks.
- The Company agrees that all persons working for or on behalf of the Company whose duties bring them upon the District's premises shall obey the rules and regulations that are established by the District and shall comply with the reasonable directions of the District's administrators
- The Company shall be responsible for the acts of its employees and agents while on the District's premises. Accordingly, the Company agrees to take all necessary measures to prevent injury and loss to persons or property located on the District's premises. The Company shall be responsible for all damages to persons or property caused by the Company or any of its agents or employees
- The Company shall perform the services contemplated in this Agreement without interfering in any way with the activities of the District's faculty, students, staff or visitors.
- The Company's employees entering District buildings are expected to display a Company issued photo ID.
- School properties are considered drug free and smoke free zones. Company's employees violating the zones will not be allowed on District property.

Insurance

Company shall maintain as a direct cost of operation the following insurance coverage and will obtain and deliver to District certificates from its insurers evidencing said insurance coverage, while performing services hereunder:

- Workmen's compensation as required by law.
- General liability with limits of not less than \$2,000,000 for injury or death to any one person; \$2,000,000 for injury or deaths of two or more persons in any one occurrence; and property damage with a limit of not less than \$2,000,000 for each accident.
- Unemployment insurance and all other insurance required by Missouri law for the benefit of the Company.
- Failure to provide or maintain the insurance required shall constitute a breach of contract which allows the District to immediately terminate the contract without notice to the Company, or at District's option, District may procure such insurance and all premiums paid by the District shall be reimbursed to District by deducting such amounts from subsequent payments due Company for services rendered by Company.
- Additional insurance as required by District if attached by separate addendum to this RFP.

Construction Insurance

CONTRACTORS INSURANCE REQUIREMENTS THESE SPECIFICATIONS APPLY TO ALL CONTRACTORS WHO WILL BE ON THE JOBSITE, WHETHER A GENERAL CONTRACTOR OR ANY SUBCONTRACTOR.

SCOPE OF SERVICES
MISCELLANEOUS

INSURANCE: Contractor shall, at its expense, procure and maintain at a minimum for the duration of the Project and through the correction period stated in the agreement, except as otherwise set forth herein, the types and amounts of insurance described below or as otherwise required by law on all of its operations, in companies registered to do business in the State of Missouri and having an A.M. Best Rating of A- IX or higher:

A. Workers' Compensation and Employers Liability Insurance. Contractor shall carry statutory Workers' Compensation Insurance as required by any applicable law or regulation. Employers Liability Insurance shall be in amounts no less than \$1,000,000 each accident for bodily injury, \$1,000,000 for bodily injury by disease and \$1,000,000 each employee for bodily injury by disease. If there is an exposure of injury to Contractor's employees under the U.S. Longshoremen's and Harbor Workers Compensation act, the Jones Act or under laws, regulations or statutes applicable to maritime employees, coverage shall be included for such injuries or claims. If the contractor's Employers Liability limits are below those stated above an umbrella liability policy may be used to attain the requested limit.

B. Commercial General Liability Insurance Contractor shall carry Commercial General Liability Insurance written on ISO occurrence form CG 00 01 07 98 or later edition (or a substitute form providing equivalent coverage) and shall cover all operations by or on behalf of the Contractor, providing insurance for bodily injury liability and property damage liability for the limits indicated below and for the following coverage:

- Premises and Operations
- Products and Completed Operations
- Contractual Liability insuring the obligations assumed by the Contractor under this Contract.
- Personal Injury Liability and Advertising Injury Liability

Except with respect to bodily injury and property damage included within the products and completed operations hazards, the general aggregate limit shall apply separately to the Contractor's project under this Contract. Completed Operations coverage must be maintained for the correction period provided by the agreement.

Limit of Liability. The Commercial General Liability policy limits shall not be less than:

- \$1,000,000 Each Occurrence (Combined Single Limit for Bodily Injury and Property Damage)
- \$2,000,000 Aggregate for Products/Completed Operations
- \$1,000,000 Personal Injury/Advertising Injury
- \$2,000,000 General Aggregate (must provide endorsement ISO CG 25 03 or equivalent to apply the General Aggregate per project, if available. If not, see Umbrella Liability section.)

Additional Insured The Owner, all of its officers, directors and employees shall be named as Additional Insureds under the Commercial General Liability Insurance using ISO Additional Insured Endorsements CG 20 10 (2004 edition) or substitute providing equivalent coverage. If additional insured status is required for a correction period then CG 20 37 (2004 edition) or equivalent should also be used. These endorsements must be stated on the insurance certificate provided to the Owner and a copy of the endorsements confirming coverage should accompany the insurance certificate.

SCOPE OF SERVICES
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Primary Coverage The Contractor's Commercial General Liability Policy shall apply as primary insurance and any other insurance carried by the Architect or the Owner shall be excess only and will not contribute with Contractor's insurance. This must be stated on the insurance certificate and a copy of the endorsement confirming coverage should accompany the insurance certificate.

D. Business Automobile Liability Insurance The policy should be written on ISO form CA 0001, CA 0005, CA 0002, CA0020 or a substitute form providing equivalent coverage and shall provide coverage for all owned, hired and non-owned vehicles. The limit of liability should be at least \$1,000,000 Combined Single Limit for Bodily Injury and Property Damage each accident and should also cover Automobile Contractual Liability. The policy should name the Owner and all of its officers, directors and employees, and the Architect, as Additional Insureds. The policy shall be endorsed to be primary coverage and any other insurance carried by the Owner shall be excess only and will not contribute with Contractor's insurance. To confirm coverage, a copy of the Additional Insured Endorsement and the Primary Insurance Endorsement should accompany the insurance certificate.

E. Umbrella Excess Liability. The Contractor should provide an umbrella excess liability policy that will provide a minimum of \$1,000,000 per occurrence/\$1,000,000 aggregate over the employers' liability, commercial general liability and automobile liability coverages. This policy should "follow-form" of the underlying policies and comply with all insurance requirements of those policies. If the General Aggregate of the Commercial General Liability policy does not apply per project, the limits should be \$2,000,000 per occurrence/\$2,000,000 aggregate.

F Waiver of Subrogation The Commercial General Liability and Automobile Liability policies shall each contain a waiver of subrogation in favor of the Owner and its officers, directors and employees.

G. Certificates of Insurance As evidence of the insurance, limits and endorsements required, a standard ACORD or equivalent Certificate of Insurance executed by a duly authorized representative of each insurer shall be furnished by the Contractor to the Owner and Architect before any Work under the Contract is commenced by the Contractor. Owner shall have the right, but not the obligation, to prohibit Contractor or any Subcontractor from entering the Project site until such certificates are received and approved by the Owner. With respect to insurance to be maintained after final payment, an additional certificate(s) evidencing such coverage shall be promptly provided to Owner as a precondition to final payment. Copies of all additional insured and waiver of subrogation endorsements should accompany the certificate. Failure to maintain the insurance required herein may result in termination of the Contract at Owner's option. In the event the Contractor does not comply with the requirements of this section, the Owner shall have the right, but not the obligation, to provide insurance coverage to protect the Owner and Architect, and charge the Contractor for the cost of that insurance. The required insurance shall be subject to the approval of the Architect, but any acceptance of insurance certificates by the Architect or Owner shall in no way limit or relieve the Contractor of their duties and responsibilities in this Agreement.

H. Copies of Policies. Contractor shall furnish a certified copy of any and all insurance policies required under this Contract within ten (10) days of Owner's written request for said policies.

I. Subcontractors Contractor shall cause each Subcontractor to purchase and maintain insurance of the types and amounts specified herein. Limits of such coverage may be reduced only upon written agreement of Owner. Contractor shall provide to Owner copies of certificates evidencing coverage for each Subcontractor. Subcontractors' commercial general liability and business automobile liability insurance shall name Owner and Architect as Additional Insureds and have the Waiver of Subrogation endorsement added.

SCOPE OF SERVICES
MISCELLANEOUS

J. Other Insurance. The Owner may require insurance coverage in excess of the types and amounts required in this Exhibit. Contractor shall attempt in good faith to obtain quotes for such additional coverage and provide them to Owner for review. Contractor shall purchase any such additional insurance as may be requested by the Owner in writing. Owner shall pay any additional premium for such additional coverage.

K. Builders Risk Insurance – Builders risk insurance will be provided by the owner. Such Builders risk insurance will also cover both items in transit and off-site storage exposures. The deductible is \$1,000 for all covered perils, including earthquake and flood, and coverage is on a special perils, completed value form. There is NO coverage for equipment that is owned, rented or leased by the contractor.

Prevailing Wage

Company and subcontractors must comply with the requirements of RSMo § 290.220 which provides that “a wage of no less than the prevailing hourly rate of wages for work of a similar character in the locality in which the work is performed, shall be paid to all workers employed by or on behalf of any public body engaged in public works exclusive of maintenance work.

Company shall forfeit to the District the sum of \$100 for each worker employed, for each calendar day, or portion thereof such worker is paid less than the said stipulated rates for any work done under this Agreement, by the Company, or any subcontractor to the Company.

Company shall include provisions in all bonds to guarantee the faithful performance of the prevailing wage requirements specified herein.

Company shall post a clearly legible statement of all prevailing hourly wage rates to be paid to all workers employed in order to execute the Agreement and perform the work. The information should be posted in a prominent and easily accessible place at the site during the enter time that any Company shall be working on the site.

The District may request from time to time certified copies of Company’s payroll to ascertain if Company is in compliance. The Company and each subcontractor shall maintain accurate records pertaining to wages paid all workers employed on the project within the State of Missouri for a period of not less than 1 year following completion of the project, and final payment.

Company shall execute an affidavit stating compliance with the prevailing wage law upon completion of the project and before final payment request. With each application for payment, the Company shall submit certified payrolls for all site workers covered under the Prevailing Wage Law whether employed by the Company or a subcontractor.

Wage Rate Determination and Affidavit of Compliance for St. Louis County are available from the Missouri Department of Labor and Industrial Relations, Division of Labor Standards. The District will furnish a copy upon request.

Construction Safety Training Law

Company and subcontractors shall comply with the requirements of RSMo § 290.220 which provides that "any Contractor for any public body for purposes of construction of public works and any

SCOPE OF SERVICES
MISCELLANEOUS

Subcontractor to Contractor shall provide a ten-hour Occupational Safety and Health Administration (OSHA) construction safety program [the program] for their on- PSD Bid No: 15-91 17 March 2, 2015 site employees which includes a course in construction safety and health approved by OSHA or a similar program approved by the department [of labor] which is at least as stringent as an approved OSHA program, unless such employees have previously completed the required program."

Company and subcontractors shall require all site workers to complete the ten hour training program, or such employees must hold documentation of prior completion of the program.

- A. Company shall require every site worker to report to the Company's project leader and produce documentation of successful completion of the program upon the site worker's first day working on the District site.
- B. Company shall maintain a log of site workers that includes the worker's name, worker's signature, date worker began work on the site, company name employing worker, and training certification number.
- C. Company and subcontractors shall require all site workers to carry documentation of successful completion of the program at all times while working on the site and present the documentation to the District's representative when requested.

Company and subcontractors shall require all site workers who have not previously completed the program to complete the program within sixty calendar days of beginning work on the project.

- A. Any site worker who cannot produce documentation of successful completion of the program shall produce documentation of successful completion of the program within twenty calendar days of the initial request to present documentation.
- B. Any site worker who fails to present the documentation of successful completion of the program within twenty calendar days shall be removed from the project until such time as the site worker can present the documentation of successful completion of the program.

In the event a violation is found, Company shall forfeit as a penalty to the District \$2,500.00, as well as \$100.00 for each employee employed by the Contractor or subcontractor for each calendar day, or portion thereof, such employee is employed without the required training.

- A. The penalty will not begin to accrue until the grace period above has elapsed.
- B. The District will withhold and retain therefrom all sums and amounts due and owing as a result of any violation of RSMo § 292.675 when making payments to the Company under the Agreement.
- C. Company may withhold from any subcontractor sufficient sums to cover any penalties the District has withheld from the Company resulting from the subcontractor's failure to comply with these terms.
 - i. If the Company has made payment to the subcontractor without withholding, the Company may recover from the subcontractor the amount of the penalty resulting from the fault of the subcontractor in an action maintained in the circuit court in the county in which the project is located.

Company shall submit a copy of the log of site workers OSHA compliance prior to submitting Final Application for Payment or no later than 42 days from Substantial Completion, whichever comes first

Attachment 1 – Proposal Submission Form

If the Company desires to present its proposal, please submit three sealed copies of the proposal marked with the name “**SMARTD Air Cooled Chillers**” and three copies of the pricing information (in a separately sealed envelope) to the attention of: Tim Wonish, Director of Facility Services, School District of Clayton, 305 N. Gay Ave, Clayton, MO 63105 no later than 10:00 a.m., CDT, January 30, 2020. Proposals may be modified or withdrawn by written notice or in person by the Company or its authorized representative, provided its identity is disclosed on the envelope containing the Proposal and such person signs a receipt for the Proposal, but only if the withdrawal is made prior to the submission deadline. Electronic or facsimile offers will not be considered in response to this RFP, nor will modifications by electronic or facsimile notice be accepted. Qualified finalists must make equipment available for evaluation and inspection upon request. The District is not responsible for lateness or non-delivery by the US Postal Service or other carrier to the District. The time and date recorded by the District shall be the official time of receipt.

All proposals must be delivered to the School District of Clayton by specified submission date and time. Failure to comply will result in disqualification. Sealed submissions will be received at the above address. When submitting, you must:

1. Submit this form, the Profile of the Company (Attachment 3), the Federal Work Authorization Program (E-Verify Form in Attachment 5), a completed Form W-9 (Attachment 6), and the Cost Proposal (Attachment 4). Failure to respond to this proposal may result in your company’s name being removed from the School District of Clayton’s list.
2. Sign the proposal in all required places. **No facsimile signatures accepted.** Signature acknowledges full acceptance of all components of the Request for Proposal. The proposal must be completed in the name of the submitting vendor, corporate or other, and must be fully and properly executed by an authorized person.
3. Mail or deliver the submission promptly to the return location listed above. Late submissions will be unopened and discarded.
4. The undersigned hereby declares understanding, agreement and certification of compliance to provide the items and/or services, at the prices quoted, in accordance with all terms and conditions, requirements and specifications of the original Request for Proposal (RFP) proposes and agrees to furnish and make delivery to specified locations free of freight and other excess charges, for items listed on the attached sheets at the price set forth in your proposal.

Authorized Signature		Date
Printed Name		Title
Company Name		
Mailing Address		
City, State Zip		
Phone #:	Fax #:	E-Mail Address

Attachment 2 – Decline to Submit Form

If your company elects not to submit the enclosed REQUEST FOR PROPOSAL, please complete the information below and return to my attention. We are sincerely interested in determining why companies/individuals do not respond.

Thank you for your help and cooperation.

My company has elected not to submit a proposal for the following services:

SMARTD Air Cooled Chillers

Company Name:

Street Address:

City, State, Zip:

Phone Number:

My company has elected not to submit a proposal for this bid for the following reason or reasons:

- Did not have time to complete proposal
- Did not receive specification information in time.
- Cannot meet specifications of proposal requirements.
- Not interested in School District of Clayton business
- Cannot be competitive with other traditional sources.
- Please remove from list
- Other: Please indicate reasons(s) below:

Signature

Attachment 3: Profile of the Company

Designate one individual as the Company’s representative to the District during the term of the contract. The representative will be contacted to solve any and all problems that may arise concerning the Proposal during the evaluation period. The undersigned Company hereby agrees to be bound by the terms of the RFP and that the enclosed Proposal is submitted in accordance therewith. Once completed and returned, this Proposal becomes the primary basis for evaluation and selection of the Company to provide the services required by the District for the specified period. By signing this Company Identification Form, the Company certifies that there are no “PARTIES OF INTEREST” or “CONFLICTS OF INTEREST”, as defined by state and/or federal regulations, existing between the Company and the District or any of its employees, agents or Board of Education members.

Legal name	Representative’s Name	Title
------------	-----------------------	-------

Address	City/State/Zip	Telephone #	Fax #
---------	----------------	-------------	-------

E-mail Address

Years in Operation	Years under current structure and/or under previous structure
--------------------	---

2) Name and Title of Company’s Officers:

NAME

TITLE

_____	_____
_____	_____
_____	_____
_____	_____

3) The undersigned hereby acknowledges that the Company has read and agrees to the terms and conditions set forth in the RFP, and that the terms and conditions set forth in the Proposal will remain open for at least 120 days from the deadline for submission of Proposals

Company Officer’s Name

Signature Date

Attachment 3: Profile of the Company (Continued)

The following questions are to be completed by all bidders that are responding:

1. A listing of all Missouri school districts for which the Company currently provides services.
2. Provide 4 references, including contact names, phone numbers, and email addresses for current customers of the Company of services similar to those included in this RFP. Please include in these references at least one other school district, for whom the Company provides SMARDT Air Cooled Chillers, ideally a district which is similar in size and population to the District.
3. Provide a listing of all public school clients that have discontinued service from the Company in the past five years due to poor performance or non-performance.

Attachment 4: Cost Proposal

Rates must be for a firm fixed amount for completing all requirements outlined in the Scope of Services and not subject to change throughout the contract once negotiated. The fee shall be inclusive of all expenses and costs, including direct labor, indirect costs and profit.

Meramec Elementary School – 130 Ton Air Cooled Chiller \$ _____

Glenridge Elementary School – 130 Ton Air Cooled Chiller \$ _____

Comments: _____

Authorized Signature		Date
Printed Name		Title
Company Name		
Mailing Address		
City, State Zip		
Phone #:	Fax #:	E-Mail Address

Attachment 5: Work Authorization Form

FEDERAL WORK AUTHORIZATION PROGRAM (“E-VERIFY”) ADDENDUM

Pursuant to Missouri Revised Statute 285.530, all business entities awarded any contract in excess of five thousand dollars (\$5,000) with a Missouri public school district must, as a condition to the award of any such contract, be enrolled and participate in a federal work authorization program with respect to the employees working in connection with the contracted services being provided, or to be provided, to the District (to the extent allowed by E-Verify). In addition, the business entity must affirm the same through sworn affidavit and provision of documentation. In addition, the business entity must sign an affidavit that it does not knowingly employ any person who is an unauthorized alien in connection with the services being provided, or to be provided, to the District.

Accordingly, your company:

- a) Agrees to have an authorized person execute the attached “Federal Work Authorization Program Affidavit” attached hereto as Exhibit A and deliver the same to the District prior to or contemporaneously with the execution of its contract with the District;
- b) Affirms it is enrolled in the “E-Verify” (formerly known as “Basic Pilot”) work authorization program of the United States, and are participating in E-Verify with respect to your employees working in connection with the services being provided (to the extent allowed by E-Verify), or to be provided, by your company to the District;
- c) Affirms that it is not knowingly employing any person who is an unauthorized alien in connection with the services being provided, or to be provided, by your company to the District;
- d) Affirms you will notify the District if you cease participation in E-Verify, or if there is any action, claim or complaint made against you alleging any violation of Missouri Revised Statute 285.530, or any regulations issued thereto;
- e) Agrees to provide documentation of your participation in E-Verify to the District prior to or contemporaneously with the execution of its contract with the District (or at any time thereafter upon request by the District), by providing to the District an E-Verify screen print-out (or equivalent documentation) confirming your participation in E-Verify;
- f) Agrees to comply with any state or federal regulations or rules that may be issued subsequent to this addendum that relate to Missouri Revised Statute 285.530; and
- g) Agrees that any failure by your company to abide by the requirements a) through f) above will be considered a material breach of your contract with the District.

By: _____ (signature)

Printed Name and Title: _____

For and on behalf of: _____ (company name)

Attachment 5: Work Authorization Form (Continued)

EXHIBIT A
FEDERAL WORK AUTHORIZATION PROGRAM AFFIDAVIT

I, _____, being of legal age and having been duly sworn upon my oath, state the following facts are true:

1. I am more than twenty-one years of age; and have first-hand knowledge of the matters set forth herein.

2. I am employed by _____ (hereinafter "Company") and have authority to issue this affidavit on its behalf.

3. Company is enrolled in and participating in the United States E-Verify (formerly known as "Basic Pilot") federal work authorization program with respect to Company's employees working in connection with the services Company is providing to, or will provide to, the District, to the extent allowed by E-Verify.

4. Company does not knowingly employ any person who is an unauthorized alien in connection with the Services Company is providing to, or will provide to, the District.

FURTHER AFFIANT SAYETH NOT.

By: _____ (individual signature)

For _____ (company name)

Title: _____

Subscribed and sworn to before me on this ____ day of _____, 201__.

NOTARY PUBLIC

My commission expires:

Attachment 6: W-9

Form W-9 (Rev. January 2011) Department of the Treasury Internal Revenue Service	<h2 style="margin:0;">Request for Taxpayer Identification Number and Certification</h2>	Give Form to the requester. Do not send to the IRS.
Print or type See Specific Instructions on page 2.	Name (as shown on your income tax return)	
	Business name/disregarded entity name, if different from above	
	Check appropriate box for federal tax classification (required): <input type="checkbox"/> Individual/sole proprietor <input type="checkbox"/> C Corporation <input type="checkbox"/> S Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Trust/estate	
	<input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=partnership) ▶	
	<input type="checkbox"/> Other (see instructions) ▶	
Address (number, street, and apt. or suite no.)		Requester's name and address (optional)
City, state, and ZIP code		
List account number(s) here (optional)		

Part I Taxpayer Identification Number (TIN)																
Enter your TIN in the appropriate box. The TIN provided must match the name given on the "Name" line to avoid backup withholding. For individuals, this is your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see <i>How to get a TIN</i> on page 3.	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td colspan="2" style="text-align: center; font-size: small;">Social security number</td> </tr> <tr> <td style="width:40%; text-align: center;"> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:20%; border: 1px solid black; height: 20px;"></td> <td style="width:20%; border: 1px solid black; height: 20px;"></td> <td style="width:20%; border: 1px solid black; height: 20px;"></td> <td style="width:20%; border: 1px solid black; height: 20px;"></td> <td style="width:20%; border: 1px solid black; height: 20px;"></td> </tr> </table> </td> <td style="width:20%; text-align: center;">-</td> <td style="width:20%; border: 1px solid black; height: 20px;"></td> <td style="width:20%; text-align: center;">-</td> <td style="width:20%; border: 1px solid black; height: 20px;"></td> <td style="width:20%; border: 1px solid black; height: 20px;"></td> <td style="width:20%; border: 1px solid black; height: 20px;"></td> <td style="width:20%; border: 1px solid black; height: 20px;"></td> </tr> </table>	Social security number		<table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:20%; border: 1px solid black; height: 20px;"></td> <td style="width:20%; border: 1px solid black; height: 20px;"></td> <td style="width:20%; border: 1px solid black; height: 20px;"></td> <td style="width:20%; border: 1px solid black; height: 20px;"></td> <td style="width:20%; border: 1px solid black; height: 20px;"></td> </tr> </table>						-		-				
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Note. If the account is in more than one name, see the chart on page 4 for guidelines on whose number to enter.	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td colspan="2" style="text-align: center; font-size: small;">Employer identification number</td> </tr> <tr> <td style="width:40%; border: 1px solid black; height: 20px;"></td> <td style="width:20%; border: 1px solid black; height: 20px;"></td> <td style="width:20%; border: 1px solid black; height: 20px;"></td> <td style="width:20%; border: 1px solid black; height: 20px;"></td> <td style="width:20%; border: 1px solid black; height: 20px;"></td> <td style="width:20%; border: 1px solid black; height: 20px;"></td> <td style="width:20%; border: 1px solid black; height: 20px;"></td> <td style="width:20%; border: 1px solid black; height: 20px;"></td> <td style="width:20%; border: 1px solid black; height: 20px;"></td> <td style="width:20%; border: 1px solid black; height: 20px;"></td> </tr> </table>	Employer identification number														
Employer identification number																

Part II Certification	
Under penalties of perjury, I certify that:	
1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me), and	
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding, and	
3. I am a U.S. citizen or other U.S. person (defined below).	
Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions on page 4.	

Sign Here	Signature of U.S. person ▶	Date ▶
------------------	----------------------------	--------

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Purpose of Form

A person who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) to report, for example, income paid to you, real estate transactions, mortgage interest you paid, acquisition or abandonment of secured property, cancellation of debt, or contributions you made to an IRA.

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN to the person requesting it (the requester) and, when applicable, to:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
2. Certify that you are not subject to backup withholding, or
3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income.

Note. If a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien,
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States,
- An estate (other than a foreign estate), or
- A domestic trust (as defined in Regulations section 301.7701-7).

Special rules for partnerships. Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax on any foreign partners' share of income from such business. Further, in certain cases where a Form W-9 has not been received, a partnership is required to presume that a partner is a foreign person, and pay the withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid withholding on your share of partnership income.

TECHNICAL DOCUMENT



PART NUMBER	DESCRIPTION
AD040.1EG12.F4AKDA.A008AA.E10	Air Cooled Chiller

INCLUDED BY SMARTD:

- Oil-free centrifugal Danfoss Turbocor compressor(s)
- Compressor suction and discharge isolation valves
- Chiller(s) to be shipped Standard - Unit shipped fully assembled
- Chillers are ETL listed and certified to CSA C22.2 No.236
- Conforming to ANSI/UL 1995
- Power connection style: Single Point Power Connection
- Individual Breaker(s) or fused disconnect(s) per compressor(s)
- Nema 3R Control enclosures – outdoor use
- Mechanical HP/LP switch.
- ASME certified horizontal shell-and-tube heat exchangers.
- Supporting baffles inside Standard EVAP tubesheets
- High efficiency enhanced tubes
- Evaporator Insulation: Standard Thermal Insulation 3/4" (19mm)
- Evaporator water boxes rated to 145psig fitted with Grooved Pipe Connection
- High performance copper tube with aluminum fin condenser
- Fin surface treatment: Anticorrosive paint coating – 1000 hour salt spray test in accordance with ASTM B117
- Sheet metal and electrical panel coating rated to 1000 hour salt spray test in accordance with ASTM B117
- Chilled water : IFM – Thermal Dispersion Switch
- Electronic expansion valve(s)
- Dual pressure relief valves on evaporator mounted on changeover valve.
- Factory Startup: Certified Startup Agent
- SMARTD controller with touch panel and internet capability
- Connectivity: Modbus RTU (RS485)
- 12/18 month standard parts and labor warranty
- BPHE Economiser for each compressor

NOT INCLUDED BY SMARTD:

- Vibration isolation pad (not required by manufacturer)
- Rigging and providing access for equipment.
- Piping from refrigerant pressure relief valves to outside.
- Grooved flange couplings.
- Refrigerant monitor.
- Seismic certification.
- Performance test.
- Sound test.
- Harmonic or EMI Filters
- Extended warranties.
- Any other item not mentioned above.

PERFORMANCE INFORMATION

Description	Capacity	Model
Centrifugal liquid chiller	130.0 tonsR	AD040.1EG12.F4AKDA.A008AA.E10

Options
A136 E252 C8 (6 + 2) XXXXXXXXXXXXXXXXXXXX.XXX.XXXXXXXXXXXXX XXXXXXXXXX

Evaporator Data			
Fluid Type	Water	Fluid Concentration (%)	0%
Flow Rate	310.6 US gpm	Tube Material	Cu 0.025" Enhanced Surface
Entering Fluid Temp	54.00°F	Tube Wall Thickness	0.025Inch
Leaving Fluid Temp	44.00°F	Circuit number of passes	Four(4)
Fouling Factor	0.000100 h•ft ² •°F/Btu	Variable speed flow min (pressure drop at flow)	98.68 USGPM (1.22 PSI)
Pressure Drop	9.79 psi (22.6 ft. H2O)		

Condenser Data			
Type	Air	Min. Start and operating Temp	32.0F (20F with low ambient kit)
Air Flow	120077 CFM	Entering Air Temp	95.0°F
Fan Count	8 (6 + 2)	Total Fan kW	15.05 kW
Elevation	3.28 ft	Total Heat Rejected	2013 MBH

Equipment Details			
Capacity(TR)	130.0 tonsR	Type of compressor	TT350-G12-1-ST-F-O-NC
Unit Power(kW)	144.7 kW	Full load Efficiency	1.113 kW/tonsR
Number of compressors	1	Compressor Efficiency	0.9057 kW/tonsR
Compressor Power (kW) each	117.7 kW	R134A	

Unit power characteristics			
Supply Power	460V	MCA	222 A
Amps	183 A	MOCP	380 A

17.1.0.2

December 20, 2019

AHRI CERTIFIED PER 550/590

Program Scope

1.3.1 Program Scope Inclusions. For 60 Hz products sold in the intended market as defined by Section 1.4, the following are included in the certification program:

- Chillers rated with capacities <0 and ≤600 tons^a [2110kW]^b;
- Chillers selected for use within the range of Application Rating Conditions as per the Standard;
- Hermetic or open type, electric motor driven;
- Chillers with voltages ≤600 volts;
- All compressor types; and
- Chillers intended for use with glycol or other secondary coolant for freeze protection with a leaving chilled fluid temperature above 32°F [0°C] are certified when tested with water at standard AHRI rating conditions.

Notes:

- a. Capacity refers to the capacity of Packaged Units rated at full load AHRI Standard 550/590 (I-P) Rating Conditions and the capacity of Configurable Units rated at application full load operating conditions provided these conditions are within the scope of AHRI Standard 550/590 (I-P).

- b. kW conversions provided for reference only.

1.3.2 *Selective Program Scope Inclusions – optional items for certification. Participants may choose to certify 50 Hz and 60 Hz products that are sold outside of U.S. and Canada. The Certify-All Policy does not apply to these units.*

1.3.3 *Program Scope Exclusions. The following are excluded from the certification program:*

- Condenserless chillers;
- Remote Evaporator chillers;
- Evaporatively cooled chillers;
- Chillers rated with capacities >600 tons^a [2110 kW]^b;
- Chillers for use outside of Standard Application Rating Conditions;
- Chillers with voltages >600 volts;
- Chillers powered by other than electric motor drives, or open type compressors not supplied with motors by the manufacturer;
- Glycol and other secondary coolants are excluded; secondary coolants for freeze protection are included as per Section 1.3.1;
- Free cooling ratings;
- Heat recovery and heat pump ratings are not certified; however, Participants may elect to certify these chillers in the cooling mode with this option turned off;
- Custom Units as defined in Section 1.2.2;
- Field Trial Units as defined in Section 1.2.2.1; and
- 50 Hz and 60 Hz chillers sold outside of the Intended Market which Participants have chosen not to certify.
- Chillers with evaporators intended for use with glycol or other secondary coolants not included in Section 1.3.1.

Notes:

- a. Capacity refers to the capacity of Packaged Units rated at full load AHRI Standard 550/590 (I-P) Rating Conditions and the capacity of Configurable Units rated at application full load operating conditions provided these conditions are within the scope of AHRI Standard 550/590 (I-P).
- b. kW conversions provided for reference only.

Certified in accordance with the AHRI Air-Cooled Water Chilling Packages Using Vapor Compression Cycle Certification Program, which is based on AHRI Standard 550/590 (I-P) and AHRI Standard 551/591 (SI). Certified units may be found in the AHRI Directory at www.ahridirectory.org



AD040.1EG12.F4AKDA.A008AA.E10
17.1.0.2

IPLV : 0.5547 kW/tonsR (EER 21.63 (Btu/W*h))

% Load	Capacity	Perf	kW	Fan kW	Fan Speed	Chw Flow	Chw In	Chw Out	Ambient
100	130.0	1.113	144.7	15.05	100%	310.6	54.00	44.00	95.0
75	97.50	0.7372	71.88	7.700	79%	310.6	51.50	44.00	80.0
50	65.00	0.4974	32.33	3.580	61%	310.6	49.00	44.00	65.0
25	32.50	0.3760 *	12.22	1.370	44%	310.6	46.50	44.00	55.0

PPLV : 0.5547 kW/tonsR (EER 21.63 (Btu/W*h))

% Load	Capacity	Perf	kW	Fan kW	Fan Speed	Chw Flow	Chw In	Chw Out	Ambient
100	130.0	1.113	144.7	15.05	100%	310.6	54.00	44.00	95.0
75	97.50	0.7372	71.88	7.700	79%	310.6	51.50	44.00	80.0
50	65.00	0.4974	32.33	3.580	61%	310.6	49.00	44.00	65.0
25	32.50	0.3760 *	12.22	1.370	44%	310.6	46.50	44.00	55.0

Sound Data

Description	Global	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Lw dB	90.5	82.5	81.1	84.6	80.2	84.5	79.6	72.4	74.6
Lw dB(A)	87.3	56.3	65	76	77	84.5	80.8	73.4	73.5
Lp dB(A) at 3.3 ft.	69.6	38.6	47.3	58.3	59.3	66.8	63.1	55.7	55.8

AD040.1EG12.F4AKDA.A008AA.E10
17.1.0.2

SPECIFICATIONS – SMARTT AIR COOLED CHILLERS

GENERAL

1. SUMMARY This Section includes design, performance criteria, refrigerants, controls, and installation requirements for air cooled centrifugal chillers.

1.1 REFERENCES

1.2 Compliance is with the following codes and standards:
ARI 550/590 NEC ANSI/ASHRAE 15
ASME Section VIII ETL Listed
ANSI UL 1995
CSA C22.2 No. 236 (Canada) OSHA as adopted by the State

1.3 SUBMITTALS

Submittals shall include the following:

- A.** Electrical and water quality requirements during operation, standby and shutdown.
- B.** Control system diagram showing points for field interface and connection to external BMS systems. Drawings shall show field and factory wiring.
- C.** Installation and Operation Manuals.
- D.** Manufacturers certified performance data as per AHRI at full load and IPLV or NPLV.

QUALITY ASSURANCE

A. Regulatory Requirements: Compliance with the standards in Section 1.2.

DELIVERY AND HANDLING

A. Chillers shall be delivered to the job site completely assembled (unless otherwise specified).

B. Compliance shall be with the manufacturer's instructions for transportation and rigging.

1.4 WARRANTY and MAINTENANCE

A. The chiller manufacturer's warranty shall be for a period of one year from date of equipment start up or 18 months from the date of shipment, whichever occurs first.

B. The warranty shall include parts and labor costs for the repair or replacement of parts found to be defective in material or workmanship.

C. Maintenance of the chiller equipment while under warranty, is mandatory and shall be the responsibility of the purchaser, unless supplied by the manufacturer.

Optional:

- 1.** Extended chiller parts and labor warranty.
- 2.** 2-5-year compressor parts and labor.
- 3.** 2-5 year chiller parts and labor warranty.

PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Smardt Inc.
- B. No Approved Equal.

2.2 PRODUCT DESCRIPTION

- A. Provide and install as shown on the plans, a factory assembled air-cooled packaged chiller.
- B. Each unit shall include one or more Turbocor oil-free magnetic bearing and variable-speed centrifugal compressors. Integrated variable frequency drive shall operate with inlet guide vanes to optimize part load efficiency. Chillers shall operate with HCF-134a refrigerant - not subject to phase-out by the Montreal Protocol and the U.S. EPA clean air act.
- C. The evaporator, condenser, and expansion valve shall be configured to operate as a single refrigerant circuit unless otherwise specified. The chiller unit compressors shall be designed for mechanical and electrical isolation to facilitate service and removal.

2.3 DESIGN REQUIREMENTS

- A. Unit shall consist of one or more magnetic bearing oil-free centrifugal compressors with integrated variable frequency drive, refrigerant flooded evaporator, air cooled condenser, and operating controls with equipment protection.
- B. Performance: Refer to schedule for specific operating conditions. When utilizing Turbocor model TT300 compressors the chiller shall be capable of stable operation down to 20 tons. When utilizing Turbocor model TT350 compressors, the chiller shall be capable of stable operation down to 35 tons. All these ratings are measured at standard AHRI entering condenser water temperatures and without utilizing hot gas bypass.
- C. Acoustics: Sound pressure for the unit shall not exceed 83 dBA, measured at 1 meter (3.28 ft.). Sound data shall be measured according to AHRI Standard 370.

Global	63	125	250	500	1k	2k	4k	8k

- D. Chiller shall be equipped for single- point power connection.

2.4 CHILLER COMPONENTS

- A. Compressors:
 - 1. Compressors shall be of semi- hermetic centrifugal design and operate oil-free with two-stages of compression, magnetic bearings, movable inlet guide vanes and integrated variable frequency drive system.
 - 2. Automatically positioned and controlled inlet guide vanes shall operate with

compressor speed controls.

3. The compressor shall be capable of coming to a controlled stop in the event of a power failure. The unit shall be capable of initializing an automatic restart in the case of power failure.
4. Each compressor shall have integrated microprocessor control capable of capacity and safety control.
5. Each compressor shall be installed with individual suction, discharge and motor cooling refrigerant line isolation valves. Chillers without discharge line isolation valves that rely on non-return valves in the discharge line for compressor removal, shall not be accepted.
6. Each compressor shall have an individual disconnect switch. On chillers that are provided with more than one compressor, each compressor shall have mechanical and electrical isolation to allow the chiller to operate when a compressor is removed.

Optional:

1. EMI filters installed for each compressor.

B. Evaporator:

1. Evaporator shall be shell-and-tube type and shall be designed, constructed, tested and stamped according to the requirements of the ASME Code, Section VIII Code Case 1518-5. Refrigerant shall be in the shell and water inside the tubes. The water sides shall be designed for a minimum of 150 psig or as specified. Vents and drains shall be provided. The refrigerant side shall bear the ASME Code stamp. Vessels shall pass a test pressure of 1.1 times the working pressure but not less than 689 kPa (100 psig). Provide intermediate tube supports spaced to enable equal liquid and gas flow across multiple compressor suction ports. The evaporator water connections shall also be equipped with right-hand or left-hand connection, interchangeable.
2. A perforated plate designed for vapor disengagement shall be installed inside the evaporator above the tubing, to ensure effective liquid droplet removal, to prevent liquid damage to compressors, and to equalize suction pressure across evaporators with multiple compressors.
3. Tubes shall be individually replaceable and have internally and externally enhanced surfaces designed for refrigeration duty. Tubes shall have smooth full tube wall landings at the tube-sheet ends and at intermediate tube supports. Tubes shall be mechanically roller expanded into steel tube sheets containing a minimum of three concentric grooves.
4. Minimum evaporator exiting water temperature shall be 3.3°C (38°F). Minimum entering condenser air temperature shall be 0°C (32°F). Minimum inlet condenser air to outlet chilled water difference shall be -11.1°C (12°F).
5. The evaporator, including chilled water boxes, compressor suction line, compressor end bell, and all other components, subject to condensing moisture, shall be insulated with UL recognized ¾ inch closed cell insulation. All joints and seams shall be sealed to form a vapor barrier.

Optional:

1. Marine water boxes.

2. Epoxy-coating of inside surfaces of water boxes and tube sheets.
3. Water side vessel design for of 300 psi operation.
4. Double insulation, 1½ inch, on evaporator, water boxes, suction piping.

C. Air-Cooled Condenser:

1. Air cooled packaged chillers and controls shall be capable of reliable operation between 0°C (32°F) and 40.6°C (105°F) ambient air temperature.
2. Air-cooled condensers shall utilize mill-coated hydrophilic-blue aluminum fins with refrigeration duty copper tubes mechanically expanded into fin collars. Condenser coils shall be arranged in a W-configuration to reduce equipment footprint.
3. Condenser coils and fans shall be arranged such that one fan operates with one coil section so that the failure of a fan will not affect the CFM across any coil beyond that fan. The standard coating shall meet ASTM B117 2000hr salt spray test.
4. The condenser shall be equipped with an oversized liquid line and mechanical float to ensure liquid sub-cooling necessary for effective cooling of the compressor.
5. The condenser shall be equipped with packaged fixed or variable speed fans capable of delivering specified CFM of air according to ARI standard operating conditions. The fan motors shall be high efficiency, direct drive, 3-phase, insulation class “F”, current protected, Totally Enclosed Air Over (TEAO), double sealed and with permanently lubricated ball bearings.
6. The fans shall be low sound. They shall be balanced dynamically and statically and direct drive. Also, the blades shall be corrosion resistant designed for low noise, full airfoil cross section, providing vertical air discharge from extended orifices. The guards shall be constructed of heavy duty 14 gauge steel and painted.

Optional:

1. The coating system for HVAC coil corrosion resistance provides a lifetime protection against micro-organism contamination that causes unwanted odors, and shall pass a 10,000 hour salt spray test. Next to anti-corrosion protection and energy conservation of the total system, the coating shall prevent adhesion of dirt and growth of micro-organisms, and shall also prevent chemical, galvanic, and microbial corrosion.
2. Low ambient kit shall allow operation down to 9.4°C (15°F).

D. Refrigeration Components Liquid Level Controls:

1. Control of refrigerant flow shall utilize a single or multiple 6,000 step electronic expansion valve (EXV), to operate within the full range from full load to the lowest loading capacity for the chiller. Fixed orifice metering devices or float controls using hot gas bypass are not acceptable. The EXV liquid line shall have a sight glass with moisture indicator and temperature sensor connected to the control system for validation of sub-cooling.

2. The condenser shall be provided with a capacitive type liquid level transducer with a resolution of not less than 1024 discrete steps. The transducer shall be wired to the chiller control system. Condenser liquid level measurement shall be used in the electronic expansion valve control algorithm with a minimum level set point to ensure adequate liquid seal is maintained in the condenser, to provide compressor motor cooling during operation. Condenser liquid level shall be clearly displayed on the graphical operator interface in a minimum of two screens. Chillers without direct level measurement are prohibited, due to possible over heating damage that may occur in compressors when liquid seal is lost.

3. Each compressor shall be installed with individual suction, discharge, and motor cooling refrigerant line isolation valves. Chillers without discharge line isolation valves that rely on non-return valves in the discharge line for compressor removal, shall not be accepted.

4. To prevent unit operation with no water flow, factory mounted and wired thermal dispersion water flow switches shall be provided on the condenser.

5. The condenser shall be equipped with a mechanical stainless steel float for electronic actuation of the EXV, so as to provide a positive liquid seal to ensure effective cooling of the compressor.

6. The evaporator shall be provided with spring loaded reseating type pressure relief valves, in accordance with ASHRAE-15. Rupture discs are not acceptable.

7. Load balancing valves shall be provided for capacity control and additional temperature stability.

8. There shall be a backup superheat control on the inlet of the compressor, in order to control the EXV in the event of a failure of the primary level sensing device.

E. Prime Mover:

1. A permanent-magnet, synchronous hermetically sealed motor of sufficient size to effectively provide compressor horsepower requirements. The motor shall include soft-start capabilities with an in-rush current of no more than 2 amps (TT300 models) and 4 amps (TT400 models). The motor shall be liquid refrigerant cooled with internal thermal overload protection devices embedded in the winding of each phase.

2. The compressor motor and chiller unit shall include variable frequency speed controls to match cooling load demand to compressor speed and inlet guide vane position.

3. Each compressor shall be equipped with an AC line reactor and individual disconnect.

F. Chiller Frame & Housing

1. All components shall be mounted onto a unitized construction, having a galvanized welded steel frame suitable for outdoor installation.

2. Compressors and controls shall be contained within a sheet metal enclosure to protect critical components from the weather.

G. Chiller Controls

The controller fitted to the oil-free centrifugal chiller package shall be an embedded real time

microprocessor device that utilizes control software written specifically for chiller applications. User operation shall be accomplished using a panel mounted color touch-screen interface. The status of the compressors and all system parameters, including compressor alarms and temperature trends, shall be viewable.

G1. The chiller control system shall have the capability of storing one year of operational data. No less than 60 points of information shall be sampled at a maximum of 15 minute intervals.

G2. The chiller control system shall have full web based remote control capability; including the capability of remote operation and software updates.

Controller features must include the following:

1. Selectable control mode – leaving chilled water, entering chilled water, or suction pressure control.

2. 10.4-inch or 12.1-inch or 15-inch, 65,000 colors, touch panel operator interface operating windows XP embedded.

3. Chiller documentation shall be viewable via touch panel in pdf format.

4. Operator interface shall be capable of connecting directly to compressors via serial communication protocol and display compressor information using Turbocor compressor monitoring / commissioning software.

5. Chiller control panel shall contain a minimum of three processors; all control functionality shall be carried out on a dedicated real time processor and data served to a remote graphical user interface via an open Ethernet protocol. Proprietary protocols between any pc based or micro based processor are strictly prohibited.

6. Chiller controls shall be native BacNet capable via MSTP or IP. Addition of gateway devices or additional processors or pluggable PCBs to achieve BacNet communications to the BAS is strictly prohibited.

7. Complete configuration of native BAS communications via Modbus RTU, Modbus TCP/IP, BacNet MSTP and BacNet IP shall be made via standard chiller controller graphical user interface. Chiller controls that utilize external software configuration tools to configure these protocols are explicitly prohibited.

8. Chiller control shall be capable of controlling up to eight Turbocor compressors on up to eight individual refrigerant circuits serving the same chilled water stream.

9. Chiller control panel user interface shall be capable of remote control via an internet connection without the use of any third party gateway device or additional hardware or software. Chiller control shall be capable of operating in headless mode (no touch panel connected) and utilize standard windows XP or higher computer to display user interface via Ethernet connection.

10. Real time chiller control processor shall be capable of e-mailing a predefined list of recipients, should a fault occur. E-mail shall include details of fault, possible reason for fault, attachment of monthly data log of 195 or more compressor and chiller variables, and at a minimum interval of 30 seconds and with indication of severity of fault.

11. Ability to place all outputs in a manual state (hand, off, auto) via graphical user interface.

12. Alarm screen shall be capable of filtering faults into specific categories such as compressor, chiller and system faults in order to provide rapid diagnosis, and separation of failure

modes.

13. Variable speed cooling tower control.
14. Optional variable speed condenser water pumping control.
15. Optional ability to turn on/off duty standby chilled water pumps.
16. Optional ability to turn on/off duty standby condenser water pumps.
17. Optional ability to operate chiller isolation valves for both evaporator and condenser.
18. Multiple compressor staging algorithm shall operate at the optimized power curves of each compressor simultaneously, and shall reset automatically every second during operation. Compressor staging methods that operate using simple incremental percent of demand shall not be accepted.
19. Continuous data logging for operational trending and bin analysis shall be exportable to “CSV” format. (12 months data stored).
20. Embedded Web and FTP servers to enable remote encrypted control, log download, software version upload, and operational monitoring.
21. Built-in stepper motor controls for EXVs.
22. Controls lockup protection.
23. Ramp rate control - Peak energy demand limiting algorithms.
24. Three levels of alarm safety for minimum chiller down time.
25. Chiller control software shall employ an active fault avoidance algorithm to reduce chiller capacity and/or power level in the case of the chiller approaching within 10% of any trip limit value such as suction pressure, discharge pressure, chiller amp limit, leaving chilled water temperature limit, etc...
26. Store up to 32,000 alarm and fault events stored with date / time stamp.
27. Real time data trending viewable via touch panel.
28. Chiller load profile charts viewable via touch panel.
29. Chiller control graphical user interface shall be capable of displaying data in SI or I-P units without affecting control or BAS protocol units.

Optional:

1. BMS interface module for the interface with BacNET MSTP, BacNET IP or LonTalk FT10 is standard.

Data on Main Display Screen shall include:

- a) Entering and leaving chilled water temperatures.
- b) Entering and leaving condenser water temperatures.
- c) Current operating state of chiller.
- d) Active timers.
- e) Chiller enable status.
- f) Chiller water flow proof status.
- g) Condenser water flow proof status.
- h) Indication of compressor readiness.
- i) Indication of clearance to run.
- j) Chiller set point.
- k) Total chiller kW.
- l) Total chiller current input.
- m) Three pages of data trends with zoom functionality.
- n) Graphical dial indicators that clearly indicate safe and unsafe operating values.
- o) Graphical representation of evaporator and condenser showing gas movement when chiller is running.
- p) Current alarms (announce and manual reset provision).
- q) Compressor actual rpm, maximum rpm, minimum rpm.

- r) Compressor alarm description & fault description.
- s) Compressor percentage motor demand.
- t) Compressor safety interlock status.
- u) Compressor modbus communication health status.
- v) Compressor suction and discharge pressures.

- w) Compressor suction and discharge temperatures.
- x) Compressor internal cooling system temperatures and status.
- y) Compressor motor kW and amps.
- z) Compressor pressure ratio.

EXECUTION

3.1 INSTALLATION

- A. Install per manufacturer's IOM documentation, shop drawings, and submittal documents.
- B. Align chiller on foundations or mounting rails as specified on drawings.
- C. Arrange piping to enable dismantling and permit head removal for tube cleaning.
- D. Coordinate electrical installation with electrical contractor.
- E. Coordinate controls and BMS interface with controls contractor.
- F. Provide all material required for a fully operational and functional chiller.

3.2 START-UP

- A. Units shall be field charged with ant. HFC-134a refrigerant.
- B. Factory Start-Up Services:

Provide factory supervised start-up on-site for a minimum of two working days and ensure proper operation of the equipment. During the period of start-up, the factory authorized startup technician shall instruct the owner's representative and the installing contractor in proper care and operation of the equipment.