

State of Florida
Department of Transportation
Central Procurement Office
605 Suwannee Street, Mail Station 20
Tallahassee, Florida 32399-0450

REQUEST FOR PROPOSAL REGISTRATION

PLEASE COMPLETE AND RETURN THIS FORM ASAP

E-MAIL TO sherill.johnson@dot.state.fl.us

RFP Number: RFP-DOT-17/18-9032-SJ

Title: Chiller Replacement for the FDOT State Materials Office - Gainesville, Florida

Proposal Due Date & Time (On or Before): Tuesday, November 14, 2017 @ 3:00PM LOCAL TIME

Potential proposers should notify our office by returning this Registration Form as soon as possible after downloading. Complete the information below and email [this sheet only](#) to Sherill Johnson of the Florida Department of Transportation Procurement Office at sherill.johnson@dot.state.fl.us.

THE REQUEST FOR PROPOSAL DOCUMENT YOU RECEIVED IS SUBJECT TO CHANGE. Notice of changes (Addenda), will be posted on the Florida Vendor Bid System at www.myflorida.com , under this RFP number (click on "BUSINESS", click on "Doing Business with the State", under "Everything for Vendors and Customers", click on "Vendor Bid System (VBS)", then click on "Search Advertisements", click on the drop-down arrow beside the box under Advertisement Type, select Competitive Solicitation, click on the drop-down arrow beside the box under Agency, select DEPARTMENT OF TRANSPORTATION, then go to the bottom of the same page and click on Advertisement Search. It is the responsibility of all potential proposers to monitor this site for any changing information prior to submitting your proposal.

Company Name: _____

Address: _____

City, State, Zip: _____

Telephone: (____) _____ Fax Number: (____) _____

Contact Person: _____

Internet E-Mail Address: _____

For further information on this process, e-mail or telephone:

Sherill Johnson
sherill.johnson@dot.state.fl.us
(850) 414-4381

Exhibit "C"
PRICE PROPOSAL FORM

RFP Number: RFP-DOT-17/18-9032-SJ

FOB: Florida Dept. of Transportation
State Materials Office
5007 NE 39th Avenue
Gainesville, Florida 32609

RFP Title: Chiller Replacement for the FDOT State Materials Office - Gainesville, Florida
BID AS SPECIFIED

Furnish, Delivery and Install one (1) HVAC Chiller (CH2) Trane/Model #RTAC275

Item	Description	Total Price
1	Mobilization	\$ _____
2	Demolition	\$ _____
3	Concrete	\$ _____
4	Purchase of One (1) Chiller	\$ _____
5	Chiller Installation	\$ _____
6	Piping and Valves	\$ _____
7	Electric	\$ _____
8	Fencing	\$ _____
9	Programming to have new chiller work with existing HVAC Controls System (WebCTRL) and start-up of Chiller	\$ _____
10	Check and Balance	\$ _____
11	Completion and Final Clean-up	\$ _____
	PROJECT TOTAL PRICE (Items 1-11)	\$ _____

Exhibit "C"
PRICE PROPOSAL FORM

RFP Number: RFP-DOT-17/18-9032-SJ

FOB: Florida Dept. of Transportation
State Materials Office
5007 NE 39th Avenue
Gainesville, Florida 32609

RFP Title: Chiller Replacement for the FDOT State Materials Office - Gainesville, Florida

DELIVERY: Delivery will be made within _____ days after receipt of Purchase Order.

MFMP Transaction Fee: All payment(s) to the vendor resulting from this competitive solicitation **WILL** be subject to the MFMP Transaction Fee in accordance with the referenced Form PUR 1000 General Contract Condition #14. However, all vendors should be aware, that effective July 1, 2016 through June 30, 2017, in accordance with House Bill 5003 Sec.73, the Transaction Fee will be seven-tenths of one percent (.70%) of the payment issued. The Transaction Fees imposed shall be based upon the date of issuance of the payment.

NOTE: In submitting a response, the proposer acknowledges they have read and agree to the solicitation terms and conditions and their submission is made in conformance with those terms and conditions.

ACKNOWLEDGEMENT: I certify that I have read and agree to abide by all terms and conditions of this solicitation and that I am authorized to sign for the proposer. I certify that the response submitted is made in conformance with all requirements of the solicitation.

Proposer: _____ FEID # _____

Address: _____ City, State, Zip _____

Authorized Signature: _____ Date: _____

Printed / Typed: _____ Title: _____

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
DRUG-FREE WORKPLACE PROGRAM CERTIFICATION

375-040-18
PROCUREMENT
06/12

287.087 Preference to businesses with drug-free workplace programs. --Whenever two or more bids, proposals, or replies that are equal with respect to price, quality, and service are received by the state or by any political subdivision for the procurement of commodities or contractual services, a bid, proposal, or reply received from a business that certifies that it has implemented a drug-free workplace program shall be given preference in the award process. In order to have a drug-free workplace program, a business shall:

(1) Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.

(2) Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.

(3) Give each employee engaged in providing the commodities or contractual services that are under bid a copy of the statement specified in subsection (1).

(4) In the statement specified in subsection (1), notify the employees that, as a condition of working on the commodities or contractual services that are under bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than 5 days after such conviction.

(5) Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community by, any employee who is so convicted.

(6) Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

Does the individual responding to this solicitation certify that their firm has implemented a drug-free workplace program in accordance with the provision of Section 287.087, Florida Statutes, as stated above?

YES

NO

NAME OF BUSINESS: _____

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
PURCHASE ORDER TERMS & CONDITIONS

375-040-55
PROCUREMENT
OGC - 09/16
Page 1 of 7

Purchase Order No.: _____

Appropriation Bill Number(s) / Line Item Number(s) for 1st year of contract, pursuant to s. 216.313, F.S.: _____

(required for contracts in excess of \$5 million)

1. SERVICES AND PERFORMANCE

- A. The Department does hereby retain the Vendor to furnish, within the manner and at the location specified, certain services, information and items as specified in the competitive procurement documents, the completed purchase order form, and attached Exhibits which are integral parts of this purchase order contract (hereinafter called the Purchase Order). If additional terms and conditions of the Vendor are attached, only those provisions not in conflict with the State of Florida Purchase Order Conditions and Instructions and Purchase Order Terms and Conditions herein may be made a part of this Purchase Order. The Purchase Order Terms and Conditions, whether generic or specific, shall take precedence over and supersede any inconsistent or conflicting provision in the State of Florida Purchase Order Conditions and Instructions, and any attached terms and conditions of the Vendor.
- B. Before making any additions or deletions to the work described in this Purchase Order, and before undertaking any changes or revisions to such work, the parties shall negotiate any necessary cost changes and the Department shall issue a Change Order covering such work and compensation. Reference herein to this Purchase Order shall be considered to include any Change Orders.
- C. All tracings, plans, specifications, maps, computer files, and reports prepared or obtained under this Purchase Order, as well as all data collected, together with summaries and charts derived therefrom, shall be the exclusive property of the Department without restriction or limitation on their use and shall be made available, upon request, to the Department at any time during the performance of such services and/or upon completion or termination of this Purchase Order. Upon delivery to the Department of said document(s), the Department shall become the custodian thereof in accordance with Chapter 119, Florida Statutes. The Vendor shall not copyright any material and products or patent any invention developed under this Purchase Order. The Department shall have the right to visit the site for inspection of the work and the products of the Vendor at any time.
- D. All final plans, documents, reports, studies, and other data prepared by the Vendor shall bear the professional's seal/signature, in accordance with applicable Florida law that governs and Administrative Rules promulgated by the Department of Business and Professional Regulation, and guidelines published by the Department, in effect at the time of execution of this Purchase Order. In the event that changes in the statute or rules create a conflict with the requirements of the published guidelines, requirements of the statute and rules shall take precedence.
- E. The Vendor agrees to provide project schedule progress reports in a format acceptable to the Department and at intervals established by the Department. The Department shall be entitled at all times to be advised, at its request, as to the status of work being done by the Vendor and of the details thereof. Coordination shall be maintained by the Vendor with representatives of the Department, or of other agencies interested in the project on behalf of the Department. Either party to the Purchase Order may request and be granted a conference.
- F. All services shall be performed by the Vendor to the satisfaction of the Director who shall decide all questions, difficulties and disputes of any nature whatsoever that may arise under or by reason of this Purchase Order. The Director's decision upon all claims, questions, and disputes shall be final and binding upon all parties. Adjustments of compensation and contract time because of any major changes in the work that may become necessary or desirable shall be left to the absolute discretion of the Director.

Reference herein to the Director shall mean the Department's

Chief Engineer _____.

2. TERM

- A. Initial Term. Unless otherwise specified, this Purchase Order begins on the date of issuance.

Services to be rendered by the Vendor shall be completed by the date specified on the Purchase Order.

- B, EXTENSIONS. In the event that circumstances arise which make performance by the Vendor impracticable or impossible within the time allowed or which prevent a new contract from being executed, the Department, in its discretion, may grant an extension of this Purchase Order. Extension of this Purchase Order must be in writing for a period not to exceed six (6) months and is subject to the same terms and conditions set forth in this Purchase Order and any written amendments signed by the parties; provided the Department may, in its discretion, grant a proportional increase in the total dollar amount based on the method and rate established herein. There may be only one extension of this Purchase Order unless the failure to meet the criteria set forth in this Purchase Order for completion of this Purchase Order is due to events beyond the control of the Vendor.

It shall be the responsibility of the Vendor to ensure at all times that sufficient time remains in the Project Schedule within which to complete services on the project. In the event there have been delays which would affect the project completion date, the Vendor shall submit a written request to the Department which identifies the reason(s) for the delay and the amount of time related to each reason. The Department shall review the request and make a determination as to granting all or part of the requested extension.

3. COMPENSATION AND PAYMENT

- A. Payment shall be made only after receipt and approval of goods and services unless advance payments are authorized by the Chief Financial Officer of the State of Florida under Chapters 215 and 216, Florida Statutes. Deliverable(s) must be received and accepted in writing by the Contract Manager on the Department's invoice transmittal forms prior to payment. If the Department determines that the performance of the Vendor is unsatisfactory, the Department shall notify the Vendor of the deficiency to be corrected, which correction shall be made within a time-frame to be specified by the Department. The Vendor shall, within five days after notice from the Department, provide the Department with a corrective action plan describing how the Vendor will address all issues of contract non-performance, unacceptable performance, failure to meet the minimum performance levels, deliverable deficiencies, or contract non-compliance. If the corrective action plan is unacceptable to the Department, the Vendor shall be assessed a non-performance retainage equivalent to 10% of the total invoice amount. The retainage shall be applied to the invoice for the then-current billing period. The retainage shall be withheld until the vendor resolves the deficiency. If the deficiency is subsequently resolved, the Vendor may bill the Department for the retained amount during the next billing period. If the Vendor is unable to resolve the deficiency, the funds retained will be forfeited at the end of the agreement period.

- B. Vendors providing goods and services to the Department should be aware of the following time frames. Upon receipt, the Department has five (5) working days to inspect and approve the goods and services, unless the Purchase Order specifies otherwise. The Department has 20 days to deliver a request for payment (voucher) to the Department of Financial Services. The 20 days are measured from the latter of the date the invoice is received or the goods or services are received, inspected, and approved. Interest penalties of less than one (1) dollar shall not be enforced unless the Vendor requests payment. Invoices which have to be returned to a Vendor because of Vendor preparation errors shall result in a delay in the payment. The invoice payment requirements do not start until a properly completed invoice is provided to the Department.

- C. The State of Florida, through the Department of Management Services, has instituted MyFloridaMarketPlace, a statewide eProcurement system. Pursuant to Section 287.057(23), Florida Statutes, all payments shall be assessed a transaction fee of one percent (1%), which the Vendor shall pay to the State. For payments within the State accounting system (FLAIR or its successor), the transaction fee shall, when possible, be automatically deducted from payments to the Vendor. If automatic deduction is not possible, the Vendor shall pay the transaction fee pursuant to Rule 60A-1.031(2), Florida Administrative Code. By submission of these reports and

corresponding payments, Vendor certifies their correctness. All such reports and payments shall be subject to audit by the State or its designee. The Vendor shall receive a credit for any transaction fee paid by the Vendor for the purchase of any item(s) if such item(s) are returned to the Vendor through no fault, act, or omission of the Vendor. Notwithstanding the foregoing, a transaction fee is non-refundable when an item is rejected or returned, or declined, due to the Vendor's failure to perform or comply with specifications or requirements of the Purchase Order. Failure to comply with these requirements shall constitute grounds for declaring the Vendor in default and recovering procurement costs from the Vendor in addition to all outstanding fees. VENDORS DELINQUENT IN PAYING TRANSACTION FEES MAY BE EXCLUDED FROM CONDUCTING FUTURE BUSINESS WITH THE STATE.

- D. Records of costs incurred under terms of this Purchase Order shall be maintained and made available upon request to the Department at all times during the period of this Purchase Order and for three years after final payment for the work pursuant to this Purchase Order is made. Copies of these documents and records shall be furnished to the Department upon request. Records of costs incurred shall include the Vendor's general accounting records and the project records, together with supporting documents and records, of the Vendor and all subcontractors performing work on the project, and all other records of the Vendor and subcontractors considered necessary by the Department for a proper audit of project costs.
- E. The Department, during any fiscal year, shall not expend money, incur any liability, or enter into any contract which, by its terms, involves the expenditure of money in excess of the amounts budgeted as available for expenditure during such fiscal year. Any contract, verbal or written, made in violation of this subsection is null and void, and no money may be paid on such contract. The Department shall require a statement from the comptroller of the Department that funds are available prior to entering into any such contract or other binding commitment of funds. Nothing herein contained shall prevent the making of contracts for periods exceeding one year, but any contract so made shall be executory only for the value of the services to be rendered or agreed to be paid for in succeeding fiscal years. Accordingly, the State of Florida's performance and obligation to pay under this Contract is contingent upon an annual appropriation by the Legislature.
- F. The bills for any travel expenses, when authorized by terms of this Agreement and the Department, will be submitted in accordance with Section 112.061, Florida Statutes. In addition, if compensation for travel is authorized by terms of this Agreement and the Department, then the Department shall not compensate the Vendor for lodging/hotel expenses in excess of \$150.00 per day (excluding taxes and fees). The Vendor may expend their own funds to the extent the lodging/hotel expense exceeds \$150.00 per day. The Department, in its sole discretion and pursuant to its internal policies and procedures, may approve compensation to the Vendor for lodging/hotel expenses in excess of \$150.00 per day.

4. INDEMNITY AND PAYMENT FOR CLAIMS

- A. **INDEMNITY:** To the extent permitted by Florida Law, the Vendor shall indemnify and hold harmless the Department, and its officers and employees from liabilities, damages, losses, and costs, including, but not limited to, reasonable attorney's fees, to the extent caused by the negligence, recklessness, or intentional wrongful misconduct of the Vendor and persons employed or utilized by the Vendor in the performance of this Purchase Order.

It is specifically agreed between the parties executing this Purchase Order that it is not intended by any of the provisions of any part of the Purchase Order to create in the public or any member thereof, a third party beneficiary hereunder, or to authorize anyone not a party to this Purchase Order to maintain a suit for personal injuries or property damage pursuant to the terms or provisions of this Purchase Order.

PAYMENT FOR CLAIMS: The Vendor guaranties the payment of all just claims for materials, supplies, tools, or labor and other just claims against the Vendor or any subcontractor, in connection with the Purchase Order. The Department's final acceptance and payment does not release the Vendor's bond until all such claims are paid or released.

B. LIABILITY INSURANCE. (Select and complete as appropriate):

- No general liability insurance required.
- The Vendor shall carry and keep in force during the term of this Purchase Order a general liability insurance policy or policies with a company or companies authorized to do business in Florida, affording public liability insurance with combined bodily injury limits of at least \$ 200,000.00 per person and \$ 300,000.00 each occurrence, and property damage insurance of at least \$ 200,000.00 each occurrence, for the services to be rendered in accordance with this Purchase Order.
- The Vendor shall have and maintain during the term of this Purchase Order, a professional liability insurance policy or policies or an irrevocable letter of credit established pursuant to chapter 675 and section 337.106, Florida Statutes, with a company or companies authorized to do business in the State of Florida, affording liability coverage for the professional services to be rendered in accordance with this Purchase Order in the amount of \$ _____.

C. WORKERS' COMPENSATION. The Vendor shall also carry and keep in force Workers' Compensation insurance as required for the State of Florida under the Workers' Compensation Law.

D. PERFORMANCE AND PAYMENT BOND. (Select as appropriate):

- No Bond required.
- Prior to commencement of any services pursuant to this Purchase Order and at all times during the term hereof, including renewals and extensions, the Vendor will supply to the Department and keep in force a bond provided by a surety authorized to do business in the State of Florida, payable to the Department and conditioned for the prompt, faithful, and efficient performance of this Purchase Order according to the terms and conditions hereof and within the time periods specified herein, and for the prompt payment of all persons furnishing labor, materials, equipment, and supplies therefor.

E. CERTIFICATION. With respect to any general liability insurance policy required pursuant to this Purchase Order, all such policies shall be issued by companies licensed to do business in the State of Florida. The Vendor shall provide to the Department certificates showing the required coverage to be in effect with endorsements showing the Department to be an additional insured prior to commencing any work under this Contract. Policies that include Self Insured Retention (SIR) will not be accepted. The certificates and policies shall provide that in the event of any material change in or cancellation of the policies reflecting the required coverage, thirty days advance notice shall be given to the Department or as provided in accordance with Florida law.

5. COMPLIANCE WITH LAWS

- A. The Vendor agrees that it shall make no statements, press releases, or publicity releases concerning this Purchase Order or its subject matter or otherwise disclose or permit to be disclosed any of the data or other information obtained or furnished in compliance with this Purchase Order, or any particulars thereof, during the period of the Purchase Order, without first notifying the Department's Contract Manager and securing prior written consent.
- B. If the Vendor is licensed by the Department of Business and Professional Regulation to perform the services herein contracted, then section 337.162, Florida Statutes, applies as follows:
- (1) If the Department has knowledge or reason to believe that any person has violated the provisions of state professional licensing laws or rules, it shall submit a complaint regarding the violations to the Department of Business and Professional Regulation. The complaint shall be confidential.
 - (2) Any person who is employed by the Department and who is licensed by the Department of Business and Professional Regulation and who, through the course of the person's employment, has knowledge to believe that any person has violated the provisions of state

professional licensing laws or rules shall submit a complaint regarding the violations to the Department of Business and Professional Regulation. Failure to submit a complaint about the violations may be grounds for disciplinary action pursuant to chapter 455, Florida Statutes, and the state licensing law applicable to that licensee. The complaint shall be confidential.

(3) Any complaints submitted to the Department of Business and Professional Regulation are confidential and exempt from Section 119.07(1), Florida Statutes, pursuant to chapter 455, Florida Statutes, and applicable state law.

- C. The Vendor covenants and agrees that it and its employees and agents shall be bound by the standards of conduct provided in applicable Florida law and applicable rules of the Board of Business and Professional Regulation as they relate to work performed under this Purchase Order. The Vendor further covenants and agrees that when a former state employee is employed by the Vendor, the Vendor shall require that strict adherence by the former state employee to Sections 112.313 and 112.3185, Florida Statutes, is a condition of employment for said former state employee. These statutes will by reference be made a part of this Purchase Order as though set forth in full. The Vendor agrees to incorporate the provisions of this paragraph in any subcontract into which it might enter with reference to the work performed pursuant to this Purchase Order.
- D. The Vendor agrees to comply with the Title VI Nondiscrimination Contract Provisions, Appendices A and E, available at <http://www.fdot.gov/procurement/index.shtm>, incorporated herein by reference and made a part of this Agreement.
- E. Any intellectual property developed as a result of this Agreement will belong to and be the sole property of the State. This provision will survive the termination or expiration of the Agreement.
- F. The Vendor agrees to comply with s.20.055(5), Florida Statutes, and to incorporate in all subcontracts the obligation to comply with s.20.055(5), Florida Statutes.

6. TERMINATION AND DEFAULT

- A. This Purchase Order may be canceled by the Department in whole or in part at any time the interest of the Department requires such termination. The Department further reserves the right to terminate or cancel this Purchase Order in the event an assignment is made for the benefit of creditors.
- B. If the Department determines that the performance of the Vendor is not satisfactory, the Department shall have the option of (a) immediately terminating the Purchase Order, or (b) notifying the Vendor of the deficiency with a requirement that the deficiency be corrected within a specified time, otherwise the Purchase Order will be terminated at the end of such time, or (c) take whatever action is deemed appropriate by the Department.
- C. If the Department requires termination of the Purchase Order for reasons other than unsatisfactory performance of the Vendor, the Department shall notify the Vendor of such termination, with instructions as to the effective date of termination or specify the stage of work at which the Purchase Order is to be terminated.
- D. If the Purchase Order is terminated before performance is completed, the Vendor shall be paid only for that work satisfactorily performed for which costs can be substantiated. Such payment, however, may not exceed an amount which is the same percentage of the agreement price as the amount of work satisfactorily completed is a percentage of the total work called for by this Purchase Order. All work in progress shall become the property of the Department and shall be turned over promptly by the Vendor.
- E. For Contracts \$1,000,000 and greater, if the Department determines the Contractor submitted a false certification under Section 287.135(5) of the Florida Statutes, or if the Contractor has been placed on the Scrutinized Companies with Activities in the Sudan List, the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or the Scrutinized Companies that Boycott Israel List, the Department shall either terminate the Contract after it has given the Contractor notice and an opportunity to demonstrate the Department's determination of false certification was in error pursuant to Section 287.135(5)(a) of the Florida Statutes, or maintain the Contract if the conditions of Section 287.135(4) of the Florida Statutes are met.

7. ASSIGNMENT AND SUBCONTRACTS

A. The Vendor shall maintain an adequate and competent staff so as to enable Vendor to timely perform under this Purchase Order and must be authorized to do business within the State of Florida and may associate with it such subcontractors, for the purpose of its services hereunder, without additional cost to the Department, other than those costs within the limits and terms of this Purchase Order. The Vendor is fully responsible for satisfactory completion of all subcontracted work. The Vendor, however, shall not sublet, assign, or transfer any work under this Purchase Order to other than subcontractors specified in the proposal, bid and/or Purchase Order without the prior written consent of the Department.

B. Select the appropriate box:

The following provision is not applicable to this Purchase Order.

The following provision is hereby incorporated in and made a part of this Purchase Order:

It is expressly understood and agreed that any articles that are the subject of, or required to carry out this Purchase Order shall be purchased from a nonprofit agency for the blind or for the severely handicapped that is qualified pursuant to Chapter 413, Florida Statutes, in the same manner and under the same procedures set forth in Section 413.036(1) and (2), Florida Statutes; and for purposes of this Contract the person, firm, or other business entity carrying out the provisions of this Purchase Order shall be deemed to be substituted for the state agency insofar as dealings with such qualified nonprofit agency are concerned. RESPECT of Florida provides governmental agencies within the State of Florida with quality products and services produced by persons with disabilities. Available pricing, products, and delivery schedules may be obtained by contacting:

RESPECT
2475 Apalachee Pkwy
Tallahassee, Florida 32301-4946
Phone: (850) 487-1471

The following provision is hereby incorporated in and made a part of this Purchase Order:

It is expressly understood and agreed that any articles that are the subject of, or required to carry out this Purchase Order shall be purchased from the corporation identified under Chapter 946, Florida Statutes, in the same manner and under the procedures set forth in section 946.515(2) and (4), Florida Statutes; and for purposes of this Purchase Order, the person, firm, or other business entity (Vendor) carrying out the provisions of this Purchase Order shall be deemed to be substituted for this agency (Department) insofar as dealings with such corporation are concerned.

The "Corporation identified" is Prison Rehabilitative Industries and Diversified Enterprises, Inc. (PRIDE). Available pricing, products, and delivery schedules may be obtained by contacting:

PRIDE Enterprises
12425 - 28th Street, North
St. Petersburg, Florida 33716-1826
Telephone: (800) 643-8459

This Purchase Order involves the expenditure of Federal funds and hence, Section 946.515, as noted above, does not apply. However, Appendix I is applicable to all parties and is hereof made a part of this Purchase Order.

8. MISCELLANEOUS

A. The Vendor and its employees, agents, representatives, or subcontractors are not employees of the Department and are not entitled to the benefits of State of Florida employees. Except to the extent expressly authorized herein, Vendor and its employees, agents, representatives, or subcontractors are not agents of the Department or the State for any purpose or authority such as to bind or represent the interests thereof, and shall not represent that it is an agent or that it is acting on the behalf of the Department or the State. The Department shall not be bound by any unauthorized acts or conduct of the Vendor or its employees, agents, representatives, or subcontractors. Vendor agrees to include this provision in all its subcontracts under this Purchase Order.

- B. All words used herein in the singular form shall extend to and include the plural. All words used in the plural form shall extend to and include the singular. All words used in any gender shall extend to and include all genders.
- C. It is understood and agreed by the parties hereto that if any part, term or provision of this Purchase Order is by the courts held to be illegal or in conflict with any law of the State of Florida, the validity of the remaining portions or provisions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the Purchase Order did not contain the particular part, term or provision held to be invalid.
- D. This Purchase Order shall be governed by and construed in accordance with the laws of the State of Florida.
- E. In any legal action related to this Purchase Order, instituted by either party, the Vendor hereby waives any and all privileges and rights it may have under Chapter 47 and section 337.19, Florida Statutes, relating to venue, as it now exists or may hereafter be amended, and any and all such privileges and rights it may have under any other statute, rule, or case law, including, but not limited to those grounded on convenience. Any such legal action may be brought in the appropriate Court in the county chosen by the Department and in the event that any such legal action is filed by Vendor, Vendor hereby consents to the transfer of venue to the county chosen by the Department upon the Department filing a motion requesting the same.
- F. Time is of the essence as to each and every obligation under this Purchase Order.
- G. If this Purchase Order involves the purchase or maintenance of information technology as defined in Section 282.0041, Florida Statutes, the selected provisions of the attached Appendix II are made a part of this Purchase Order and shall take precedence over any inconsistent provisions in this Purchase Order.
- H. If this Purchase Order is the result of a formal solicitation (Invitation to Bid, Request for Proposal or Invitation to Negotiate), the Department of Management Services Forms PUR1000 and PUR1001, included in the solicitation, are incorporated herein by reference and made a part of this Purchase Order.
- I. This Purchase Order embodies the whole agreement of the parties. There are no promises, terms, conditions, or obligations other than those contained herein, and this Purchase Order shall supersede all previous communications, representations, or agreements, either verbal or written, between the parties hereto.
- J. The Department may grant the Vendor's employees or subconsultants access to the Department's secure networks as part of the project. In the event such employees' or subconsultants' participation in the project is terminated or will be terminated, the Vendor shall notify the Department's project manager no later than the employees' or subconsultants' separation date from participation in the project or immediately upon the Vendor acquiring knowledge of such termination of employees' or subconsultants' participation in the project, whichever occurs later.
- K. Vendor/Contractor:
 - 1. shall utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the Vendor/Contractor during the term of the contract; and
 - 2. shall expressly require any subcontractors performing work or providing services pursuant to the state contract to likewise utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the subcontractor during the contract term.

The provisions in the PURCHASE ORDER TERMS & CONDITIONS constitute an integral part of the Purchase Order contract. The Vendor acknowledges acceptance of the terms and conditions of this Purchase Order by providing the services described in this Purchase Order.

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
**PUBLIC RECORDS PROVISIONS FOR PURCHASE ORDERS
(CONTRACTUAL SERVICES)**

Purchase Requisition No.: _____

WHEREAS, the Parties have agreed to the terms and conditions set forth herein.

The Consultant/Contractor/Vendor shall comply with Chapter 119, Florida Statutes. Specifically, the Consultant/Contractor/Vendor shall:

- (1) Keep and maintain public records required by the Department to perform the service.
- (2) Upon request from the Department's custodian of public records, provide the Department with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes, or as otherwise provided by law.
- (3) Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the Agreement term and following completion of the Agreement if the Consultant/Contractor/Vendor does not transfer the records to the Department.
- (4) Upon completion of the Agreement, transfer, at no cost, to the Department, all public records in possession of the Consultant/Contractor/Vendor or keep and maintain public records required by the Department to perform the service. If the Consultant/Contractor/Vendor transfers all public records to the Department upon completion of the Agreement, the Consultant/Contractor/Vendor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Consultant/Contractor/Vendor keeps and maintains public records upon completion of the Agreement, the Consultant/Contractor/Vendor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the Department, upon request from the Department's custodian of public records, in a format that is compatible with the information technology systems of the Department.

Failure by the Consultant/Contractor/Vendor to comply with Chapter 119, Florida Statutes, shall be grounds for immediate unilateral cancellation of this Agreement by the Department.

IF THE CONSULTANT/CONTRACTOR/VENDOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONSULTANT'S/CONTRACTOR'S/VENDOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS AGREEMENT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT:

Central Office

850-414-5355

COprcustodian@ dot.State.fl.us

Office of the General Counsel

Florida Department of Transportation

605 Suwannee Street, MS 58

Tallahassee, Florida 32399-0458

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
MBE PLANNED UTILIZATION

375-040-24
PROCUREMENT
12/09

PROCUREMENT NO. _____ FINANCIAL PROJECT NO. _____
(DEPARTMENT USE ONLY)

DESCRIPTION: _____

I, _____ , _____
(name) (title)

of _____

plan to subcontract at least _____ % (percent) of the project costs on the above referenced project to Minority Business Enterprises.

If I have indicated above that a portion of the project costs will be subcontracted to MBE(s), the firms considered as proposed subconsultants/contractors and the types of services or commodities to be subcontracted are as follows:

MBE SUBCONSULTANTS/CONTRACTORS

TYPES OF SERVICES/COMMODITIES

I understand that I will need to submit Minority Business Enterprises (MBE) payment certification forms to the Department for reporting purposes only.

Signed: _____

Title: _____

Date: _____

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: That we, _____
(name)
_____ (hereinafter called Vendor) of _____
(address)

_____ and
_____ (hereinafter called Surety) of
(name)

(address)

duly authorized to do business in the State of Florida, are held and firmly bound unto the State of Florida in the full and just sum of _____ Dollars (\$ _____), lawful money of the United States of America, to be paid to the Florida Department of Transportation (hereinafter called the Department), to which payment will and truly to be made we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally and firmly by these presents;

WHEREAS, the above Vendor has subscribed to an agreement with the Department to bear the date of _____, for contractual services agreement in connection with _____

_____ in _____ County(ies), particularly known as _____

(hereinafter called the Agreement), upon certain terms and conditions in said Agreement more particularly mentioned; and

NOW, THEREFORE, The condition of this obligation is such that if the above Vendor in all respects will comply with the terms and conditions of said Agreement, and its obligations thereunder, including the Scope of Services, Specifications, General Conditions, Special Conditions, Bid Blank therein referred to and made a part thereof, and such alterations as may be made in said conditions and specifications, as therein provided for; and, further, if such Vendor will promptly make payment to all persons supplying labor, material, equipment and supplies, used directly or indirectly by the said Vendor or any subcontractor(s) in the prosecution of the work provided for in said Agreement, and promptly will pay all State Workers' Compensation and Unemployment Compensation taxes incurred in the performance of the said Agreement and will pay to the Department any amount in money or property, the Department may lose or be overcharged or otherwise defrauded of, by reason of any wrongful or criminal act of the Vendor, its agents, or employees, then this obligation is to be void; otherwise, to be and remain in full force and virtue in law.

WITNESS the signature of the Vendor and the signature of the Surety by _____ its

(Agent or Attorney-in-Fact, or otherwise)

with seals of said Vendor and Surety hereunto affixed this _____ day of _____.

Surety
BY: _____
Signature
TITLE: _____
Attorney-in-Fact/Agent
(Surety Seal)

Vendor
BY: _____
Authorized Signature(s)
TITLE: _____

ATTEST: _____
Secretary/Notary

Name/Telephone #: _____
Address: _____

BY: _____
Signature

Note: Attach Power of Attorney showing authority of Surety's Agent or Attorney-in-Fact. This bond is not for public works contracts required by Section 25.05, Florida Statutes.

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
**VENDOR CERTIFICATION REGARDING
SCRUTINIZED COMPANIES LISTS**

Respondent Vendor Name: _____
Vendor FEIN: _____
Vendor's Authorized Representative Name and Title: _____
Address: _____
City: _____ State: _____ Zip: _____
Phone Number: _____
Email Address: _____

Section 287.135, Florida Statutes, prohibits agencies from contracting with companies for goods or services of \$1,000,000 or more, that are on either the Scrutinized Companies with Activities in Sudan List, the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector Lists which are created pursuant to s. 215.473, F.S., or the Scrutinized Companies that Boycott Israel List, created pursuant to s. 215.4725, F.S., or companies that are engaged in a boycott of Israel.

As the person authorized to sign on behalf of Respondent, I hereby certify that the company identified above in the section entitled "Respondent Vendor Name" is not listed on either the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or the Scrutinized Companies that Boycott Israel List. I further certify that the company is not engaged in a boycott of Israel. I understand that pursuant to section 287.135, Florida Statutes, the submission of a false certification may subject company to civil penalties, attorney's fees, and/or costs.

Certified By: _____
who is authorized to sign on behalf of the above referenced company.
Authorized Signature Print Name and Title: _____
Date: _____

**State of Florida
Department of Transportation**



REQUEST FOR PROPOSAL
Chiller Replacement for FDOT State Materials Office
Gainesville, Florida

RFP-DOT-17/18-9032-SJ

CONTACT FOR QUESTIONS:

Sherill Johnson, Procurement Agent
605 Suwannee Street, Mail Station 20
Tallahassee, Florida 32399-0450
sherill.johnson@dot.state.fl.us
Phone: (850) 414.4381

INTRODUCTION SECTION

1) INVITATION

The State of Florida Department of Transportation, hereinafter referred to as the "Department", requests written proposals from qualified Proposers to provide **Chiller Replacement for the FDOT State Materials Office in Gainesville, Florida**. It is anticipated that the term of the contract will begin on the date the successful proposer is approved for award and be effective through fourteen months from that date.

The Department intends to award this contract to the responsive and responsible Proposer whose proposal is determined to be the most advantageous to the Department. After the award, said Proposer will be referred to as the "Vendor". For the purpose of this document, the term "Proposer" means the prime Vendor acting on its own behalf and those individuals, partnerships, firms, or corporations comprising the Proposer team. The term "proposal" means the complete response of the Proposer to the Request for Proposals (RFP), including properly completed forms and supporting documentation.

2) TIMELINE

Provided below is a list of critical dates and actions. These dates are subject to change. Notices of changes (Addenda) will be posted on the Florida Vendor Bid System at www.myflorida.com (click on "BUSINESS", click on "Doing Business with the State", under "Everything for Vendors and Customers", click on "Vendor Bid System (VBS)", click on "Search Advertisements") under this RFP number. It is the responsibility of all potential proposers to monitor this site for any changing information prior to submitting your proposal.

<u>ACTION / LOCATION</u>	<u>DATE</u>	<u>LOCAL TIME</u>
--------------------------	-------------	-------------------

MANDATORY PRE-PROPOSAL CONFERENCE/SITE VISIT	11-01-2017	10:30 AM
-----------------------------------------------------	-------------------	-----------------

The Florida Department of Transportation
State Materials Research Park
5007 N.E. 39th Avenue, Gainesville, FL 32609

All Vendors must sign in before the start time of the conference. No proposals will be accepted from any vendor(s) that shows up late for the Mandatory Pre-Proposal Conference/Site Visit.

DEADLINE FOR TECHNICAL QUESTIONS	11-03-2017	05:00 PM
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(There is no deadline for administrative questions)

PROPOSALS DUE, ON OR BEFORE	11-14-2017	03:00 PM
------------------------------------	-------------------	-----------------

(Technical and Price Proposal)
Florida Department of Transportation
Central Procurement Office
Attn: Sherill Johnson, Procurement Agent
605 Suwannee Street, Mail Station 20
Tallahassee, Florida 32399-0450
Phone: (850) 414.4381

PUBLIC OPENING (Technical Proposal)	11-14-2017	03:00 PM
--------------------------------------------	-------------------	-----------------

Florida Department of Transportation
Central Procurement Office
Attn: Sherill Johnson, Procurement Agent
605 Suwannee Street, Room 414
Tallahassee, Florida 32399-0450

PUBLIC OPENING / MEETING (Price Proposal)**12-05-2017****10:00 AM**

Florida Department of Transportation
Central Procurement Office
Attn: Sherill Johnson, Procurement Agent
605 Suwannee Street, Room 414
Tallahassee, Florida 32399-0450

POSTING OF INTENDED AWARD**12-05-2017****05:00 PM****3) AGENDA FOR PUBLIC MEETINGS****Agenda – Public Opening (Technical Proposals)**

Agenda for Public Opening of Technical Proposals for RFP-DOT-17/18-9032-SJ:

Starting Time: see “Timeline” in RFP solicitation

- Opening remarks of approx. 2 minutes by Department Procurement Office personnel.
- Public input period – To allow a maximum of 15 minutes total for public input related to the RFP solicitation.
- At conclusion of public input or 15 minutes, whichever occurs first, the Technical Proposals received timely will be opened, with proposer’s name read aloud and tabulated. Price proposals will be kept secured and unopened until the Price Proposal Opening.
- Adjourn meeting.

Agenda – Price Proposal Opening & Intended Award Meeting

Agenda for Price Proposal Opening and Intended Award meeting for RFP-DOT-17/18-9032-SJ:

Starting Time: see “Timeline” in RFP solicitation

- Opening remarks of approx. 2 minutes by Department Procurement Office personnel.
- Public input period – To allow a maximum of 15 minutes total for public input related to the RFP solicitation.
- At conclusion of public input or 15 minutes, whichever occurs first, the Technical evaluation scores will be summarized.
- Announce the firms that did not achieve the minimum technical score.
- Announce the firms that achieved the minimum technical score and their price(s) as price proposals are opened.
- Calculate price scores and add to technical scores to arrive at total scores.
- Announce Proposer with highest Total Score as Intended Award.
- Announce time and date the decision will be posted on the Vendor Bid System (VBS).
- Adjourn.

4) SPECIAL ACCOMMODATIONS

Any person with a qualified disability requiring special accommodations at a pre-proposal conference, public meeting, oral presentation and/or opening shall contact the contact person at the phone number, e-mail address or fax number provided on the title page at least five (5) working days prior to the event. If you are hearing or speech impaired, please contact this office by using the Florida Relay Services which can be reached at 1 (800) 955-8771 (TDD).

SPECIAL CONDITIONS

1) MyFloridaMarketPlace

PROPOSERS MUST BE REGISTERED IN THE STATE OF FLORIDA'S MYFLORIDAMARKETPLACE SYSTEM BY THE TIME AND DATE OF THE TECHNICAL PROPOSAL OPENING OR THEY MAY BE CONSIDERED NON-RESPONSIVE (see Special Condition 21). All prospective proposers that are not registered should go to <https://vendor.myfloridamarketplace.com/> to complete on-line registration, or call 1-866-352-3776 for assisted registration.

All payment(s) to the vendor resulting from this competitive solicitation **WILL** be subject to the MFMP Transaction Fee in accordance with the referenced Form PUR 1000 General Contract Condition #14. However, all vendors should be aware, that effective July 1, 2016 through June 30, 2018, in accordance with House Bill 5003 Sec.73 and Senate Bill 2502, the Transaction Fee will be seven-tenths of one percent (.70%) of the payment issued. The Transaction Fees imposed shall be based upon the date of issuance of the payment.

2) Florida Department of Financial Services (DFS) W-9 REQUIREMENT

The Florida Department of Financial Services (DFS) requires all vendors that do business with the state to submit an electronic Substitute Form W-9. Vendors must submit their W-9 forms electronically at <https://flvendor.myfloridacfo.com> to receive payments from the state. Contact the DFS Customer Service Desk at (850) 413-5519 or FLW9@myfloridacfo.com with any questions.

3) QUESTIONS & ANSWERS

In accordance with section 287.057(23), Florida Statutes, respondents to this solicitation or persons acting on their behalf may not contact, between the release of the solicitation and the end of the 72-hour period following the agency posting the notice of intended award, excluding Saturdays, Sundays, and state holidays, any employee or officer of the executive or legislative branch concerning any aspect of this solicitation, except in writing to the procurement officer or as provided in the solicitation documents. Violation of this provision may be grounds for rejecting a response.

Any technical questions arising from this Request for Proposal must be forwarded, in writing, to the procurement agent identified below. Questions must be received no later than the time and date reflected on the Timeline. The Department's written response to written inquiries submitted timely by proposers will be posted on the Florida Vendor Bid System at www.myflorida.com (click on "BUSINESS", click on "Doing Business with the State", under "Everything for Vendors and Customers", click on "Vendor Bid System (VBS)", click on "Search Advertisements"), under this RFP number. It is the responsibility of all potential proposers to monitor this site for any changing information prior to submitting their proposal.

WRITTEN TECHNICAL QUESTIONS should be submitted to:

FDOT Procurement Office

Attn: Sherill Johnson

605 Suwannee, Street, Mail Station 20, Tallahassee, Florida 32399-0450

Or sherill.johnson@dot.state.fl.us

Questions regarding administrative aspects of the proposal process should be directed to the Procurement Agent in writing at the address above or by phone: (850) 414-4381

4) ORAL INSTRUCTIONS / CHANGES TO THE REQUEST FOR PROPOSAL (ADDENDA)

No negotiations, decisions, or actions will be initiated or executed by a proposer as a result of any oral discussions with a State employee. Only those communications which are in writing from the Department will be considered as a duly authorized expression on behalf of the Department.

Notices of changes (Addenda) will be posted on the Florida Vendor Bid System at www.myflorida.com (click on "BUSINESS", click on "Doing Business with the State", under "Everything for Vendors and Customers", click on "Vendor Bid System (VBS)", click on "Search Advertisements") under this RFP number. It is the responsibility of all potential proposers to monitor this site for any changing information prior to submitting your proposal. All Addenda will be acknowledged by signature and subsequent submission of Addenda with proposal when so stated in the Addenda.

5) **DIVERSITY ACHIEVEMENT**

MINORITY BUSINESS ENTERPRISE (MBE) UTILIZATION

The Department, in accordance with *Title VI of the Civil Rights Act of 1964, 42 USC 2000d- 2000d-4, Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21*, Nondiscrimination in federally-assisted programs of the Department of Transportation issued pursuant to such Act, hereby notifies all bidders that the Department will affirmatively ensure that in any contract/agreement entered into pursuant to this advertisement, minority and disadvantaged business enterprises will be afforded the full opportunity to submit bids in response to this invitation and will not be discriminated on the basis of race, color, national origin, or sex in consideration for an award.

The Department encourages small, minority, women, and service-disabled veteran businesses to compete for Department contracts, both as "Vendor" and as subcontractors. The Department, its vendors, suppliers, and consultants should take all necessary and reasonable steps to ensure that small, minority, women, and service-disabled veteran businesses have the opportunity to compete for and perform contract work for the Department in a nondiscriminatory environment. Bidders are requested to indicate their intention regarding MBE participation on the MBE Planned Utilization form and to submit the completed form with their Price Proposal. The contract vendor will be asked to submit payment certification for MBE subcontractors used.

To request certification or to locate certified MBEs, call the Office of Supplier Diversity, Department of Management Services at (850) 487-0915, or access their MBE directory on the Internet at www.osd.dms.state.fl.us/.

6) **SCOPE OF SERVICES**

Details of the services, information and items to be furnished by the Vendor are described in Exhibit "A", Scope of Services, attached hereto and made a part hereof.

7) **INTENDED AWARD**

The Department intends to award a contract to the responsive and responsible vendor with the highest cumulative total points for the evaluation criteria specified herein (See Section 30, Proposal Evaluation). The Intended Award decision will be announced after final evaluation and totaling of scores at the Price Proposal opening specified in the Timeline (See Introduction Section 2 Timeline). If the Department is confronted with identical pricing or scoring from multiple vendors, the Department shall determine the order of award in accordance with section 295.187(4), Florida Statutes, and Rule 60A-1.011 Florida Administrative Code.

8) **MANDATORY PRE-PROPOSAL CONFERENCE/SITE VISIT**

A MANDATORY pre-proposal conference and site visit will be held at the date, time and location in the Timeline. The purpose of this meeting is to provide an open forum for the Department to review the Scope of Services and respond to questions from potential proposers regarding the scope of services, RFP requirements, contractual requirements, method of compensation, and other conditions or requirements that may, in any manner, effect the work to be performed. Any changes and/or resulting Addenda to the RFP will be the sole prerogative of the Department.

Each bidder must fully acquaint themselves with the conditions which may in any manner affect the work to be done or the equipment, materials and labor required to perform the services required under the conditions of this bid. This will require an on-site visit. Ignorance of the conditions or requirements will not relieve the Vendor from their liability and obligation under the contract.

Attendance at this pre-proposal conference/site visit is MANDATORY. Failure by a proposer to attend or be represented at this pre-proposal conference will constitute a non-responsive determination of their proposal package. Proposals found to be non-responsive will not be considered.

All Vendors must sign in before the start time of the conference. No proposals will be accepted from any vendor(s) that shows up late for the Mandatory Pre-Proposal Conference.

9) QUALIFICATIONS

9.1 General

The Department will determine whether the Proposer is qualified to perform the services being contracted based upon their proposal demonstrating satisfactory experience and capability in the work area. The Proposer shall identify necessary experienced personnel and facilities to support the activities associated with this proposal.

9.2 Qualifications of Key Personnel

Those individuals who will be directly involved in the project should have demonstrated experience in the areas delineated in the scope of work. Individuals whose qualifications are presented will be committed to the project for its duration unless otherwise excepted by the Department's Project Manager. Where State of Florida registration or certification is deemed appropriate, a copy of the registration or certificate should be included in the proposal package.

9.3 Authorized To Do Business in the State of Florida

In accordance with sections 607.1501, 605.0211(2)(b), and 620.9102, Florida Statutes, out-of-state corporations, out-of-state limited liability companies, and out-of-state limited partnerships must be authorized to do business in the State of Florida. Such authorization should be obtained by the proposal due date and time, but in any case, must be obtained prior to posting of the intended award of the contract. For authorization, contact:

Florida Department of State
Tallahassee, Florida 32399
(850) 245-6051

9.4 Licensed to Conduct Business in the State of Florida

If the business being provided requires that individuals be licensed by the Department of Business and Professional Regulation, such licenses should be obtained by the proposal due date and time, but in any case, must be obtained prior to posting of the intended award of the contract. For licensing, contact:

Florida Department of Business and Professional Regulation
Tallahassee, Florida 32399-0797
(850) 487-1395

10) WARRANTY/SUBSTITUTIONS

When performance of the services requires the supply of commodities, a warranty is required on all items provided against defective materials, workmanship, and failure to perform in accordance with required industry performance criteria.

All equipment, parts, materials, workmanship and labor shall have a minimum of 12 month warranty from the date of final acceptance of the entire project.

Replacement of all materials found defective within the warranty period shall be made without cost to the purchaser, including transportation if applicable. All fees associated with restocking cancelled orders shall be the responsibility of the vendor.

Replacement of all materials found defective within the warranty period shall be made without cost to the purchaser, including transportation if applicable. All fees associated with restocking cancelled orders shall be the responsibility of the vendor.

All items provided during the performance of the contract found to be poorly manufactured will not be accepted, but returned to the vendor, at their expense, for replacement. Replacement of all items found defective shall be made without cost to the Department, including transportation, if applicable. As it may be impossible for each facility to inspect all items upon arrival, a reasonable opportunity must be given to these facilities for inspection of the items, and returning those that are defective.

Proposers shall provide in their Technical Proposal a written statement on company letterhead that all equipment, parts, materials, workmanship and labor shall have a minimum of 12 month warranty from the date of final acceptance of the entire project.

Failure by the proposer to provide written statement with its proposal will constitute a non-responsive determination for its proposal. **Proposals found to be non-responsive will not be considered.**

11) LIABILITY INSURANCE

The Vendor shall not commence any work until they have obtained the following types of insurance, and certificates of such insurance have been received by the Department. Nor shall the Vendor allow any subcontractor to commence work on this project until all similar insurance required of the subcontractor has been so obtained. The Vendor shall submit the required Certificates of Insurance to the **Florida Department of Transportation, Procurement Office, Sherill Johnson, 605 Suwanee Street, MS 20, Tallahassee, Florida 32399-0450** within ten (10) days after the ending date of the period for posting the intended award decision.

The Vendor must carry and keep in force during the period of this contract a general liability insurance policy or policies with a company authorized to do business in the state of Florida, affording public liability insurance with combined bodily injury limits of at least \$200,000.00 minimum per person and \$300,000.00 minimum each occurrence, and property damage insurance of at least \$200,000.00 minimum each occurrence, for the services to be rendered in accordance with this contract.

With respect to any general liability insurance policy required pursuant to this Agreement, all such policies shall be issued by companies licensed to do business in the State of Florida. The Vendor shall provide to the Department certificates showing the required coverage to be in effect with endorsements showing the Department to be an additional insured prior to commencing any work under this Contract. The certificates and policies shall provide that in the event of any material change in or cancellation of the policies reflecting the required coverage, thirty days advance notice shall be given to the Department or as provided in accordance with Florida law.

The Department shall be exempt from, and in no way liable for, any sums of money which may represent a deductible in any insurance policy. The payment of such deductible shall be the sole responsibility of the Vendor or subcontractor providing such insurance. Policies that include Self Insured Retention (SIR) will not be accepted.

12) PERFORMANCE BOND

The intended award proposer shall provide the Department with a Performance Bond in the amount of \$200,000.00. The Performance Bond shall be provided by a surety company authorized to do business in the state of Florida. The Performance Bond shall be executed and furnished to the Department prior to contract execution and no later than ten (10) days after the ending date of the period for posting the intended award decision, unless the Department extends the time period in writing. **Failure to provide the required Performance Bond (Form 375-040-27) to the Department within the aforementioned timeframe will void the Intended Award's proposal and the Department will proceed in contracting with the next highest responsive proposer.**

The proposer must submit, with their Technical Proposal, a current letter from a surety company or bonding agent authorized to do business in the state of Florida and written on company letterhead, to document the proposer's present ability to obtain a Performance Bond in the amount of \$200,000.00. Failure by the proposer to provide this letter with its response will constitute a non-responsive determination for its proposal. **Proposals found to be non-responsive will not be considered.**

13) METHOD OF COMPENSATION

For the satisfactory performance of these services, the Vendor shall be paid up to a Maximum Amount to be determined by the Department. The Vendor shall submit an invoice upon completion of each Project Item(s) in a format acceptable to the Department. Payment shall be made for the satisfactory completion of each project Item(s) as approved by the Department.

FINANCIAL CONSEQUENCES: Payment shall be made only after receipt and approval of goods and services unless advance payments are authorized by the Chief Financial Officer of the State of Florida under Chapters 215 and 216, Florida Statutes. Deliverable(s) must be received and accepted in writing by the Contract Manager on the Department's invoice transmittal forms prior to payment. If the Department determines that the performance of the Vendor is unsatisfactory, the Department shall notify the Vendor of the deficiency to be corrected, which correction shall be made within a time-frame to be specified by the Department. The Vendor shall, within five days after notice from the Department, provide the Department with a corrective action plan describing how the Vendor will address all issues of contract non-performance, unacceptable performance, failure to meet the minimum performance levels, deliverable deficiencies, or contract non-compliance. If the corrective action plan is unacceptable to the Department, the Vendor shall be assessed a non-performance retainage equivalent to 10% of the total invoice amount. The retainage shall be applied to the invoice for the then-current billing period. The retainage shall be withheld until the vendor resolves the deficiency. If the deficiency is subsequently resolved, the Vendor may bill the Department for the retained amount during the next billing period. If the Vendor is unable to resolve the deficiency, the funds retained will be forfeited at the end of the agreement period.

14) CONTRACT DOCUMENT

PURCHASE ORDER

The MyFloridaMarketPlace "Purchase Order Terms and Conditions" and the Department's "Purchase Order Terms & Conditions" are attached hereto and made a part hereof. The terms and conditions contained therein will become an integral part of each Purchase Order issued for this solicitation. In submitting a proposal, the proposer agrees to be legally bound by these terms and conditions.

15) REVIEW OF PROPOSER'S FACILITIES & QUALIFICATIONS

After the proposal due date and prior to contract execution, the Department reserves the right to perform or have performed an on-site review of the Proposer's facilities and qualifications. This review will serve to verify data and representations submitted by the Proposer and may be used to determine whether the Proposer has an adequate, qualified, and experienced staff, and can provide overall management facilities. The review may also serve to verify whether the Proposer has financial capability adequate to meet the contract requirements.

Should the Department determine that the proposal has material misrepresentations or that the size or nature of the Proposer's facilities or the number of experienced personnel (including technical staff) are not adequate to ensure satisfactory contract performance, the Department has the right to reject the proposal.

16) PROTEST OF REQUEST FOR PROPOSAL SPECIFICATIONS

Any person who is adversely affected by the contents of this Request for Proposal must file the following with the Department of Transportation, Clerk of Agency Proceedings, Office of the General Counsel, 605 Suwannee Street, Mail Station 58, Tallahassee, Florida 32399-0450:

1. A written notice of protest within seventy-two (72) hours after the posting of the solicitation, (the notice of protest may be Faxed to 850-414-5264), and
2. A formal written protest in compliance with Section 120.57(3), Florida Statutes, within ten (10) days of the date on which the written notice of protest is filed.

Failure to file a protest within the time prescribed in section 120.57(3), Florida Statutes, or failure to post the bond or other security required by law within the time allowed for filing a bond shall constitute a waiver of proceedings under Chapter 120, Florida Statutes.

17) UNAUTHORIZED ALIENS

The employment of unauthorized aliens by any contractor is considered a violation of Section 274A(e) of the Immigration and Nationality Act. If the contractor knowingly employs unauthorized aliens, such violation shall be cause for unilateral cancellation of the contract.

18) SCRUTINIZED COMPANIES LISTS

RFP responses of \$1 million or more must include a completed [Vendor Certification Regarding Scrutinized Companies Lists](#) to certify the respondent is not on either of those lists. The Form should be submitted with the Price Proposal.

Section 287.135, Florida Statutes, requires that at the time a vendor submits a bid or proposal for a contract for goods or services of \$1,000,000 or greater, the vendor must certify that the company is not on Scrutinized Companies with Activities in the Sudan List, the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or the Scrutinized Companies that Boycott Israel List.

For Contracts \$1,000,000 and greater, if the Department determines the Vendor submitted a false certification under Section 287.135(5) of the Florida Statutes, or if the Vendor has been placed on the Scrutinized Companies with Activities in the Sudan List, the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or the Scrutinized Companies that Boycott Israel List, the Department shall either terminate the Contract after it has given the Vendor notice and an opportunity to demonstrate the Department's determination of false certification was in error pursuant to Section 287.135(5)(a) of the Florida Statutes, or maintain the Contract if the conditions of Section 287.135(4) of the Florida Statutes are met.

19) RESERVATIONS

The Department reserves the right to accept or reject any or all proposals received and reserves the right to make an award without further discussion of the proposals submitted. Therefore, the proposals should be submitted initially in the most favorable manner. It is understood that the proposal will become a part of the Department's official file, without obligation to the Department.

20) ADDITIONAL TERMS & CONDITIONS

No conditions may be applied to any aspect of the RFP by the proposer. Any conditions placed on any aspect of the proposal documents by the proposer may result in the proposal being rejected as a conditional proposal (see "RESPONSIVENESS OF PROPOSALS"). **DO NOT WRITE IN CHANGES ON ANY RFP SHEET.** The only recognized changes to the RFP prior to proposal opening will be a written Addenda issued by the Department.

21) RESPONSIVENESS OF PROPOSALS

21.1 Responsiveness of Proposals

Proposals will not be considered if not received by the Department **on or before** the date and time specified as the due date for submission. All proposals must be typed or printed in ink. A responsive proposal is an offer to perform the scope of services called for in this Request for Proposal in accordance with all requirements of this Request for Proposal and receiving seventy (70) points or more on the Technical Proposal. Proposals found to be non-responsive shall not be considered. Proposals may be rejected if found to be irregular or not in conformance with the requirements and instructions herein contained. A proposal may be found to be irregular or non-responsive by reasons that include, but are not limited to, failure to utilize or complete prescribed forms, conditional proposals, incomplete proposals, indefinite or ambiguous proposals, and improper and/or undated signatures.

21.2 Multiple Proposals

Proposals may be rejected if more than one proposal is received from a Proposer. Such duplicate interest may cause the rejection of all proposals in which such Proposer has participated. Subcontractors may appear in more than one proposal.

21.3 Other Conditions

Other conditions which may cause rejection of proposals include, but are not limited to, evidence of collusion among Proposers, obvious lack of experience or expertise to perform the required work, failure to perform or meet financial obligations on previous contracts, or in the event an individual, firm, partnership, or corporation is on the General Services Administration Excluded Parties List. Proposers whose proposals, past performance, or current status do not reflect the capability, integrity, or reliability to fully and in good faith perform the requirements of the Contract may be rejected as non-responsible. The Department reserves the right to determine which proposals meet the requirements of this solicitation, and which Proposers are responsive and responsible.

22) **PROPOSAL FORMAT INSTRUCTIONS**

22.1 General Information

This section contains instructions that describe the required format for the proposal. All proposals submitted shall contain two parts and be marked as follows:

PART I TECHNICAL PROPOSAL NUMBER RFP-DOT-17/18-9032-SJ
(One Separately Sealed Package for Technical)

PART II PRICE PROPOSAL NUMBER RFP-DOT-17/18-9032-SJ
(One Separately Sealed Package for Prices)

THE SEPARATELY SEALED PACKAGES MAY BE MAILED TOGETHER IN ONE ENVELOPE OR BOX.

22.2 Technical Proposal (Part I) (4 copies) (Do not include price information in Part I)

The Proposer must submit one (1) original and (3) copies of the technical proposal which are to be divided into the sections described below. Since the Department will expect all technical proposals to be in this format, failure of the Proposer to follow this outline may result in the rejection of the proposal. The technical proposal must be submitted in a separate sealed package marked "TECHNICAL PROPOSAL NUMBER RFP-DOT-FY/FY-9032-SJ".

1. EXECUTIVE SUMMARY

The Proposer shall provide an Executive Summary to be written in nontechnical language to summarize the Proposer's overall capabilities and approaches for accomplishing the services specified herein. The Proposer is encouraged to limit the summary to no more than ten (10) pages.

2. PROPOSER'S MANAGEMENT PLAN

The Proposer shall provide a management plan which describes administration, management and key personnel.

a. Administration and Management

The Proposer should include a description of the organizational structure and management style established and the methodology to be used to control costs, services reliability and to maintain schedules; as well as the means of coordination and communication between the organization and the Department.

3. PROPOSER'S TECHNICAL PLAN

The Proposer shall provide a technical plan which explains their technical approach, facility capabilities, and prior relevant experience.

a. Technical Approach

The Proposer should explain the approach, capabilities, and means to be used in accomplishing the tasks in the Scope of Services, and where significant development difficulties may be anticipated and resolved. Any specific techniques to be used should also be addressed.

b. Facility Capabilities

The Proposer should provide a description and location of the Proposer's facilities as they currently exist and as they will be employed for the purpose of this work.

c. Prior Relevant Experience

The Proposer should provide a summary, with description, date, and location of the prior relevant experience they have acquired in providing/performing this work.

4. WORK PLAN

The Proposer shall provide a Work Plan which sets forth on an average the estimated staff-hours for each skill classification that will be utilized to perform the work required.

22.3 Price Proposal (Part II) (2 copies)

The price proposal information is to be submitted in a separate sealed package marked "PRICE PROPOSAL NUMBER RFP-DOT-17/18-9032-SJ". The Price Proposal information shall be submitted on the forms provided in the Request for Proposal.

22.4 Presenting the Proposal

The proposal shall be limited to a page size of eight and one-half by eleven inches (8½" x 11"). Foldout pages may be used, where appropriate, but should not exceed five (5) percent of the total number of pages comprising the proposal. Type size shall not be less than 10 point font. The proposals should be indexed and all pages sequentially numbered. Bindings and covers will be at the Proposer's discretion.

Unnecessarily elaborate special brochures, art work, expensive paper and expensive visual and other presentation aids are neither necessary nor desired.

It is recognized that existing financial reports, documents, or brochures, such as those that delineate the Proposer's general capabilities and experience, may not comply with the prescribed format. It is not the intent to have these documents reformatted and they will be acceptable in their existing form.

23) **"DRUG-FREE WORK PLACE" PREFERENCE**

Whenever two or more bids which are equal with respect to price, quality, and service are received, the Department shall determine the order of award in accordance with section 295.187(4), Florida Statutes, and Rule 60A-1.011 Florida Administrative Code, which includes a preference for bid responses that certify the business has implemented a drug-free workplace program in accordance with Section 287.087, F.S. The "Drug-Free Workplace Program Certification" must be completed and submitted with the bid response to be eligible for this preference.

24) **COPYRIGHTED MATERIAL**

Copyrighted material will be accepted as part of a technical proposal only if accompanied by a waiver that will allow the Department to make paper and electronic copies necessary for the use of

Department staff and agents. It is noted that copyrighted material is not exempt from the Public Records Law, Chapter 119, Florida Statutes. Therefore, such material will be subject to viewing by the public, but copies of the material will not be provided to the public.

25) ATTACHMENT TO RFP SUBMITTAL - CONFIDENTIAL MATERIAL

The Proposer must include any materials it asserts to be exempted from public disclosure under Chapter 119, Florida Statutes, in a separate bound document labeled "Attachment to Request for Proposals, Number RFP-DOT-17/18-9032-SJ- Confidential Material". The Proposer must identify the specific Statute that authorizes exemption from the Public Records Law. Any claim of confidentiality on materials the Proposer asserts to be exempt from public disclosure and placed elsewhere in the proposal will be considered waived by the Proposer upon submission, effective after opening.

26) COSTS INCURRED IN RESPONDING

This Request for Proposal does not commit the Department or any other public agency to pay any costs incurred by an individual firm, partnership, or corporation in the submission of a proposal or to make necessary studies or designs for the preparation thereof, nor to procure or contract for any articles or services.

27) MAIL OR DELIVER PROPOSAL TO: (DO NOT FAX OR SEND BY E-MAIL)

**Florida Department of Transportation
Central Procurement Office
Attn: Sherill Johnson, Procurement Office
605 Suwannee Street, Mail Station 20
Tallahassee, Florida 32399-0450
Phone: (850) 414.4381**

It is the proposer's responsibility to assure that the proposal (Technical and Price proposal) is delivered to the proper place on or before the Proposal Due date and time (See Introduction Section 2 Timeline). Proposals which for any reason are not so delivered will not be considered.

By submitting a proposal, the Proposer represents that it understands and accepts the terms and conditions to be met and the character, quality and scope of services to be provided.

All proposals and associated forms shall be signed and dated in ink by a duly authorized representative of the Proposer.

Each Proposer shall fully acquaint itself with the conditions relating to the performance of the services under the conditions of this Request for Proposal. This may require an on-site observation.

28) MODIFICATIONS, RESUBMITTAL AND WITHDRAWAL

Proposers may modify submitted proposals at any time prior to the proposal due date. Requests for modification of a submitted proposal shall be in writing and must be signed by an authorized signatory of the proposer. Upon receipt and acceptance of such a request, the entire proposal will be returned to the proposer and not considered unless resubmitted by the due date and time. Proposers may also send a change in a sealed envelope to be opened at the same time as the proposal. The RFP number, due date and time should appear on the envelope of the modified proposal.

29) PROPOSAL OPENING

All proposal openings are open to the public. Technical Proposals will be opened by the Department at the date, time and location in the Timeline (See Introduction Section 2 Timeline). Price Proposals, which have a corresponding responsive Technical Proposal, will be opened by the Department at the date, time and location in the Timeline (See Introduction Section 2 Timeline).

30) PROPOSAL EVALUATION

30.1 Evaluation Process:

A Technical Review Committee (TRC) will be established to review and evaluate each proposal submitted in response to this Request for Proposal (RFP). The TRC will be composed of at least three (3) persons who collectively have experience and knowledge in the program areas and service requirements for which the commodities and/or contractual services are sought.

The Procurement Office will distribute to each member of the TRC a copy of each technical proposal. The TRC members will independently evaluate the proposals on the criteria and point system established in the section below entitled "Criteria for Evaluation" in order to assure that proposals are uniformly rated. Due to the complexity of certain procurements, the TRC members are authorized to consult with subject matter experts for the purpose of gathering information, if needed. The independent evaluations will be sent to the Procurement Office and averaged for each vendor. Proposing firms must attain an average score of seventy (70) points or higher on the Technical Proposal to be considered responsive. Should a Proposer receive fewer than seventy (70) points for their average Technical Proposal score, the Price Proposal will not be opened.

During the process of evaluation, the Procurement Office will conduct examinations of proposals for responsiveness to requirements of the RFP. Those determined to be non-responsive will be automatically rejected.

30.2 Price Proposal

The Proposer shall complete the Price Proposal form and submit as part of the Price Proposal Package. Any proposal in which this form is not used or in which the form is improperly executed may be considered non-responsive and the proposal will be subject to rejection. The vendor's completed form shall become a part of the contract upon award of the contract.

The Procurement Office will open Price Proposals in accordance with Section 29, Proposal Openings. The Procurement Office and/or the Project Manager/TRC will review and evaluate the price proposals and prepare a summary of its price evaluation. The Procurement Office and/or the Project Manager/TRC will assign points based on price evaluation criteria identified herein.

30.3 Criteria for Evaluation

Proposals will be evaluated and graded in accordance with the criteria detailed below.

a. Technical Proposal (100 Points)

Technical evaluation is the process of reviewing the Proposer's response to evaluate the experience, qualifications, and capabilities of the proposers to provide the desired services and assure a quality product.

The following point system is established for scoring the technical proposals:

	<u>Point Value</u>
1. Executive Summary	10
2. Management Plan	10
3. Technical Plan	40
4. Work Plan	40

b. Price Proposal (20 Points)

Price evaluation is the process of examining a prospective price without evaluation of the separate cost elements and proposed profit of the potential provider. Price analysis is conducted through the comparison of price quotations submitted.

The criteria for price evaluation shall be based upon the following formula:

(Low Price / Proposer's Price) x Price Points = Proposer's Awarded Points

31) **POSTING OF INTENDED DECISION/AWARD**

31.1 The Department's decision will be posted on the Florida Vendor Bid System, at www.myflorida.com, (click on "BUSINESS", click on "Doing Business with the State", under "Everything for Vendors and Customers", click on "Vendor Bid System (VBS)", on date and time in the Timeline, and will remain posted for a period of seventy-two (72) hours. Any proposer who is adversely affected by the Department's recommended award or intended decision must file the following with the Department of Transportation, Clerk of Agency Proceedings, Office of the General Counsel, 605 Suwannee Street, Mail Station 58, Tallahassee, Florida 32399-0450:

1. A written notice of protest within seventy-two (72) hours after posting of the Intended Award, (the notice of protest may be Faxed to 850-414-5264), and
2. A formal written protest and protest bond in compliance with Section 120.57(3), Florida Statutes, within ten (10) days of the date on which the written notice of protest is filed. At the time of filing the formal written protest, a bond (a cashier's check or money order may be accepted) payable to the Department must also be submitted in an amount equal to one percent (1%) of the estimated contract amount based on the contract price submitted by the protestor.

Failure to file a protest within the time prescribed in Section 120.57(3), Florida Statutes, or failure to post the bond or other security required by law within the time allowed for filing a bond shall constitute a waiver of proceedings under Chapter 120, Florida Statutes.

31.2 - Inability to Post:

If the Department is unable to post as defined above, the Department will notify all proposers by electronic notification on the Florida Vendor Bid System (see special condition 31.1, above) or by mail, fax, and/or telephone. The Department will provide notification of any future posting in a timely manner.

31.3 - Request to Withdraw Proposal:

Requests for withdrawal will be considered if received by the Department, in writing, within seventy-two (72) hours after the price proposal opening time and date. Requests received in accordance with this provision will be granted by the Department upon proof of the impossibility to perform based upon obvious error on the part of the proposer.

32) **AWARD OF THE CONTRACT**

Services will be authorized to begin when the Vendor receives a Purchase Order issued by the Department.

33) **ATTACHED FORMS**

Exhibit C - Price Proposal Form
Drug-Free Workplace Program Certification (Form 375-040-18)
MBE Planned Utilization (Form 375-040-24)
Vendor Certification Regarding Scrutinized Companies Lists (Form 375-030-60) (proposals of \$1 million or more)
Performance Bond Form 375-040-27

34) TERMS AND CONDITIONS

34.1 General Contract Conditions (PUR 1000)

The State of Florida's General Contract Conditions are outlined in form PUR 1000, which is a downloadable document incorporated into this RFP by reference. Any terms and conditions set forth in this RFP document take precedence over the PUR 1000 form where applicable.

<http://www.dms.myflorida.com/content/download/2933/11777/1000.pdf>

The following paragraphs do not apply to this solicitation:

Paragraph 31, Dispute Resolution - PUR 1000

Paragraph 40, PRIDE – PUR 1000, when federal funds are utilized.

34.2 General Instructions to Respondents (PUR 1001)

The State of Florida's General Instructions to Respondents are outlined in form PUR 1001, which is a downloadable document incorporated into this RFP by reference. Any terms and conditions set forth in this RFP document take precedence over the PUR 1001 form where applicable.

<http://www.dms.myflorida.com/content/download/2934/11780/1001.pdf>

The following paragraphs do not apply to this solicitation:

Paragraph 3, Electronic Submission – PUR 1001

Paragraph 4, Terms and Conditions – PUR 1001

Paragraph 5, Questions – PUR 1001

34.3 MFMP Purchase Order Terms and Conditions

All MFMP Purchase Order contracts resulting from this solicitation will include the terms and conditions of this solicitation and the State of Florida's standardized Purchase Order Terms and Conditions, which can be found at the Department of Management Services website at the following link:

http://www.dms.myflorida.com/content/download/117735/646919/Purchase_Order_Terms_Sept_1_2015_.pdf

Section 8(B), PRIDE, is not applicable when using federal funds.

35) ORDER OF PRECEDENCE

All responses are subject to the terms and conditions of this solicitation, which, in case of conflict, shall have the following order of precedence listed:

Special Conditions

Exhibit A, Scope of Services/Specifications

Exhibit C, Price Proposal

FDOT Purchase Order Terms and Conditions

MFMP Purchase Order Terms and Conditions

Instructions to Respondents (PUR1001)

General Conditions (PUR 1000)

Introduction Section

36) LIQUIDATED DAMAGES

The Vendor acknowledges that failure to complete the services by the completion date designated on the contract document may cause the Department to incur damages that, at present are, and upon the occurrence of the failure to timely complete the services may be, difficult to determine. Moreover, the Parties wish to avoid lengthy and expensive litigation relating to failure to complete the services on time. Therefore, in the event the Vendor fails to complete the authorized services by the completion date designated on the contract document, the Department shall exercise the remedy of liquidated

damages against the Vendor, in the amount of \$100.00 per day for each calendar day after the designated completion date that the Vendor fails to complete the services. The Parties agree that if the Department allows the Vendor to continue and finish the services, or any part of it, after the expiration of the time allowed, that the Department's action shall in no way act as a waiver on the part of the Department of the liquidated damages due under this contract. The Vendor shall pay said sum to the Department not as a penalty, but as liquidated damages.

37) ALTERNATES

ALTERNATE BRANDS WILL NOT BE CONSIDERED FOR THIS RFP. PROPOSE AS SPECIFIED.

38) REPLACEMENT/RESTOCKING

Replacement of all materials found defective within the warranty period shall be made without cost to the purchaser, including transportation if applicable. All fees associated with restocking cancelled orders shall be the responsibility of the vendor.

39) PRODUCT REQUIREMENTS/SPECIFICATIONS

Any deviation from specifications indicated herein must be clearly pointed out; otherwise, it will be considered that items offered are in strict compliance with these specifications, and successful proposer will be held responsible therefore. Deviations must be explained in detail on separate attached sheet(s).

40) BUDGETARY LIMITATION

The Department has a total maximum budgetary amount of \$220,000.00 for the contract resulting from this solicitation. Proposals received that exceed the total maximum budgetary amount will be considered non-responsive. See Special Condition 21, RESPONSIVENESS OF PROPOSALS.

Exhibit "A"
Scope of Services
Chiller Replacement for the FDOT State Materials Office
5007 N.W. 39th Avenue – Gainesville, Florida

Description of Work:

The Vendor shall provide all labor, parts, supervision, supplies, equipment, and materials to remove existing Air-Cooled Chiller, and replace and install one (1) new Trane HVAC Chiller (CH2), Model #RTAC275. Installation must be compatible to the current Automated Logic System and include all associated dedicated primary chilled water pumps and pump piping appurtenances. Substitutions and/or equipment which uses scroll compressors will not be allowed.

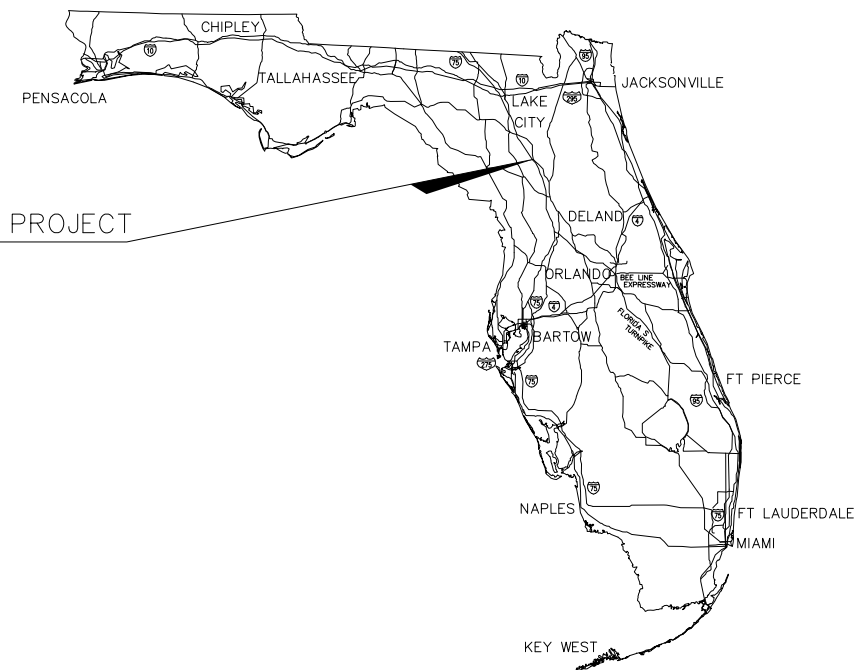
Services:

The Vendor will be responsible for obtaining all necessary and required permits, licenses, and related fees at no additional cost to the State. The Vendor must have and retain current Liability Insurance, Worker's Compensation, and Liability Insurance on vehicles and must provide proof in the same. Proof of Insurance must be provided prior to any work performed. In addition, the Scope of Services shall include, but not be limited to:

- Provide chilled water piping modifications to coordinate with new chiller configurations;
- Replace existing electrical switchgear, conduit and wiring as required to coordinate with chiller and pump replacements;
- Update existing controls and provide all required software, hardware and programming necessary to update the existing BMS controls system to coordinate with all new equipment;
- Perform start-up and evaluate for any mechanical and/or operational deficiencies that may interrupt or impede equipment operation;
- Comply with all local, state and federal regulations and standards; other applicable agencies with regards to environment, health, and safety during work; applicable codes and safety standards and requirements;
- Dispose of the old unit, and at completion of work; remove all equipment, clean-up worksite, and properly dispose of any excess materials or debris; restore project site to a condition at least equal to that existing prior to the commencement of work;
- Warrant all labor and equipment against defects in materials and workmanship for a period of at least two (2) years, unless otherwise noted from the date of final acceptance of work;

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

CONTRACT PLANS



LOCATION OF PROJECT

INDEX OF DRAWINGS

- AA-100 COVER SHEET
- AA-101 SIGNATURE SHEET
- M0.1 SYMBOL LEGEND MECHANICAL
- M0.2 GENERAL NOTES MECHANICAL
- MD1.0 CENTRAL PLANT DEMOLITION MECHANICAL
- M1.0 CENTRAL PLANT NEW MECHANICAL
- M4.0 DETAILS MECHANICAL
- M5.0 SCHEDULES MECHANICAL
- M6.0 CONTROLS MECHANICAL
- M7.1 SPECIFICATIONS MECHANICAL
- M7.2 SPECIFICATIONS MECHANICAL
- M7.3 SPECIFICATIONS MECHANICAL
- E0.1 SYMBOL LEGEND ELECTRICAL
- E0.2 GENERAL NOTES ELECTRICAL
- ED1.0 CENTRAL PLANT DEMOLITION ELECTRICAL
- E1.0 CENTRAL PLANT NEW ELECTRICAL
- E5.0 SCHEDULES ELECTRICAL
- E6.0 POWER RISER DIAGRAMS ELECTRICAL
- E7.0 SPECIFICATIONS ELECTRICAL

FINANCIAL PROJECT ID **427553-8-52-01**

CAPITAL PROJECTS:
MATERIALS RESEARCH PARK
CHILLER REPLACEMENT

ALACHUA COUNTY, FLORIDA

PLANS PREPARED BY:

SIMS WILKERSON CARTIER ENGINEERING, INC.
12124 HIGH TECH AVENUE, SUITE 200
ORLANDO, FL 32817
T. 407 380 0400 F. 407 380 5900
WWW.SWCENG.COM
FL. CERT. OF AUTH. NO.: 6106

NOTE: THE SCALE OF THESE PLANS MAY HAVE CHANGED
DUE TO REPRODUCTION.

NOTE:

MECHANICAL PLANS
ENGINEER OF RECORD: KYLE J. CARTIER, P.E.

P.E. NO.: 53269

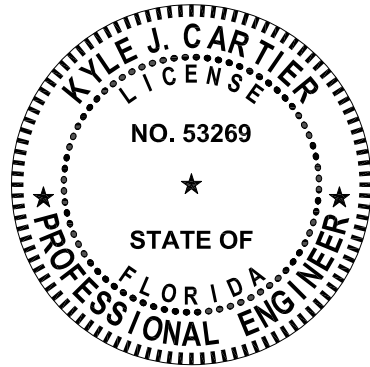
ELECTRICAL PLANS
ENGINEER OF RECORD: ADAM S. LEVINE, P.E.

P.E. NO.: 77010

FDOT PROJECT MANAGER: JOHN PETTY

REVISIONS				GARY KRANSTON, R.A. FLORIDA R.A. NO.: 11541 BENTLEY ARCHITECTS + ENGINEERS, INC. 651 WEST WARREN AVENUE, SUITE 200 LONGWOOD, FLORIDA 32750 BPE CA NO. 5898 BPA & ID CA NO. AAC002023	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET TITLE	REF. DWG. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	COVER	
					-	ALACHUA	427553-8-52-01	PROJECT NAME MATERIALS RESEARCH PARK CHILLER REPLACEMENT	SHEET NO. AA-100

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23-003, F.A.C.



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SIMS WILKERSON CARTIER ENGINEERING, INC.
12124 HIGH TECH AVE., SUITE 200
ORLANDO, FL 32817
CERTIFICATE OF AUTHORIZATION. 6106
KYLE J. CARTIER, P.E. NO. 53269

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH THE RULE 61G15-23.004, F.A.C.

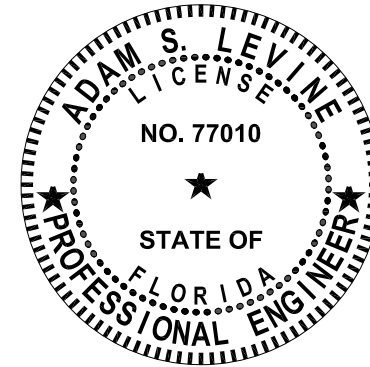
SHEET SHEET TITLE
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GENERAL SHEETS

AA-101 SIGNATURE SHEET

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HVAC ABBREVIATIONS			
ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION
AC	ALTERNATING CURRENT, AIR COMPRESSOR	ID	INNER DIAMETER
AF	AIRFOIL	IN	INCHES
AFF	ABOVE FINISHED FLOOR	IN.W.G.	INCHES OF WATER - GAUGE
AFMS	AIRFLOW MONITORING STATION	IPS	IRON PIPE SIZE
AH	AIR HANDLER	KEF	KITCHEN EXHAUST FAN
AHU	AIR HANDLING UNIT	KSF	KITCHEN SUPPLY FAN
AMP	AMPERE	KW	KILOWATT
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	L	LENGTH
AS	AIR SEPARATOR	LAT	LEAVING AIR TEMPERATURE
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR CONDITIONING ENGINEERS	LBS	POUNDS
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS	LF	LINEAR FEET
A/V	AUDIBLE/VISUAL	LV	LOUVER
AWG	AMERICAN WIRE GAUGE	LVG	LEAVING
B	BOILER	LWT	LEAVING WATER TEMPERATURE
BDD	BACKDRAFT DAMPER	MAX	MAXIMUM
BHP	BRAKE HORSEPOWER	MBH	THOUSAND BTU PER HOUR
BLDG	BUILDING	MCA	MINIMUM CIRCUIT AMPACITY
BMS	BUILDING MANAGEMENT SYSTEM	MIN	MINIMUM
BTU	BRITISH THERMAL UNITS	MOCP	MAXIMUM OVERCURRENT PROTECTION
CAC	COMPUTER ROOM AIR CONDITIONER	MSS	MANUFACTURERS STANDARDIZATION SOCIETY
CENT	CENTRIFUGAL	MVD	MANUAL VOLUME DAMPER
CFM	CUBIC FEET PER MINUTE	N	NORTH
CH	CHILLER	N/A	NOT APPLICABLE/NONE ASSOCIATED/NONE AVAILABLE
CHWR	CHILLED WATER RETURN	NC	NOISE CRITERIA OR NORMALLY CLOSED
CHWS	CHILLED WATER SUPPLY	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
CO	CLEAN OUT	NIC	NOT IN CONTRACT
CT	COOLING TOWER OR COMPRESSION TANK	NO	NUMBER OR NORMALLY OPEN
CU	CONDENSING UNIT	NTS	NOT TO SCALE
D	DEPTH	OA	OUTSIDE AIR
DB	DRY BULB	OAI	OUTSIDE AIR INTAKE
DC	DRY COOLER, DIRECT CURRENT	OD	OUTSIDE DIAMETER
DDC	DIRECT DIGITAL CONTROLS	OZ	OUNCE
DEG F	DEGREES FAHRENHEIT	P	PUMP
DG	DOOR GRILLE	PH	PHASE
DH	DUCT HEATER	PPH	POUNDS PER HOUR
DIA	DIAMETER	PPM	PARTS PER MILLION
DWV	DRAIN, WASTE, VENT	PROP	PROPELLER
E	EXISTING	PRV	PRESSURE REDUCING VALVE, PRESSURE REGULATING VALVE, OR POWER ROOF VENTILATOR
EA	EXHAUST AIR OR EACH	PSI	POUNDS PER SQUARE INCH - ABSOLUTE
EAT	ENTERING AIR TEMPERATURE	PSIG	POUNDS PER SQUARE INCH - GAUGE
EFF	EFFICIENCY	PVC	POLYVINYL CHLORIDE
EWT	ENTERING WATER TEMPERATURE	QTY	QUANTITY
EDH	ELECTRIC DUCT HEATER	RA	RETURN AIR
EER	ENERGY EFFICIENCY RATIO	RF	RETURN FAN
EF	EXHAUST FAN	RH	RELATIVE HUMIDITY
ENT	ENTERING	RLA	RUNNING LOAD AMPS
ERU	ENERGY RECOVERY UNIT	RM	ROOM
ESP	EXTERNAL STATIC PRESSURE	RPM	REVOLUTIONS PER MINUTE
ETC	ET CETERA	RPZ	REDUCED PRESSURE ZONE BACKFLOW PREVENTER
EXT	EXTERNAL	RTU	ROOFTOP UNIT
FA	FIRE ALARM	SA	SUPPLY AIR
FBC	FLORIDA BUILDING CODE	SD	SMOKE DAMPER, SMOKE DETECTOR
FCO	FLOOR CLEAN OUT	SEER	SEASONAL ENERGY EFFICIENCY RATIO
FCU	FAN COIL UNIT	SF	SQUARE FEET OR SUPPLY FAN
FD	FIRE DAMPER, FLOOR DRAIN	SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION
FLA	FULL LOAD AMPS	SP	STATIC PRESSURE
FPB	FAN POWERED BOX	SQ	SQUARE
FPM	FEET PER MINUTE	STD	STANDARD
FPS	FEET PER SECOND	T	TANK OR THERMOSTAT
FT	FEET	UH	TYPICAL
FEET-H2O	FEET OF WATER	UL	UNIT HEATER
GA	GAGE OR GAUGE	UNO	UNDERWRITERS LABORATORIES UNLESS OTHERWISE NOTED
GAL	GALLONS	V	VOLTAGE
GPD	GALLONS PER DAY	VA	VOLT AMPERE
GPH	GALLONS PER HOUR	VAV	VARIABLE AIR VOLUME
GPM	GALLONS PER MINUTE	VFD	VARIABLE FREQUENCY DRIVE
H	HEIGHT, HEATER, OR HUMIDIFIER	W	WATT OR WIDTH
HB	HOSE BIBB	WB	WET BULB
HD	HUB DRAIN	WWF	WELDED WIRE FABRIC
HOA	HAND-OFF-AUTOMATIC	YR	YEAR
HP	HORSEPOWER OR HEAT PUMP		
HR	HOUR		
HVAC	HEATING, VENTILATING, AND AIR CONDITIONING		
HX	HEAT EXCHANGER		
HZ	HERTZ		

HVAC LEGEND			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
GENERAL		PIPING CONT'D	
	REFERENCE NOTE		BALANCING VALVE
	DETAIL NUMBER SHEET DETAIL APPEARS		BALANCING VALVE WITH PRESSURE TAPS
	TYPE OF EQUIPMENT EQUIPMENT NUMBER		PRESSURE REDUCING VALVE
	SECTION NUMBER SHEET SECTION APPEARS		PRESSURE RELIEF VALVE
	POINT OF DISCONNECTION		MANUAL AIR RELIEF VENT
	POINT OF CONNECTION		AUTOMATIC AIR RELIEF VENT
PIPING			FLEXIBLE CONNECTION
	PIPE CONTINUATION		CHECK VALVE
	PIPE ELBOW DOWN		Y-STRAINER
	PIPE ELBOW UP		PRESSURE/TEMPERATURE TEST PORT
	BLIND FLANGE		PRESSURE GAUGE
	CAPPED LINE		DDC FLOW METER
	HOSE END CONNECTION		DDC TEMPERATURE SENSOR
	DIRECTION OF FLOW PIPE		PUMP
	PIPE TEE DOWN		BASKET STRAINER W/ CLAMPED COVER
	PIPE TEE UP		SUCTION DIFFUSER
	UNION		FLOW METER
	BALL VALVE		
	BUTTERFLY VALVE (MANUAL)		
	BUTTERFLY VALVE (MOTORIZED)		
	2-WAY DDC CONTROL VALVE		
<p>NOTES:</p> <ol style="list-style-type: none"> THIS IS A GENERAL COMPILATION OF SYMBOLS AND NOT ALL SYMBOLS SHOWN MAY BE USED ON THE CONTRACT DRAWINGS. SCREENED SYMBOLS OR TEXT (EXAMPLE: AHU) INDICATE EXISTING EQUIPMENT OR CONDITIONS. SCREENED AND DASHED AND LINES INDICATE LINES HIDDEN IN VIEW. 			

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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	PROJECT NAME		SHEET NO.
						-	ALACHUA	427553-8-52-01	MATERIALS RESEARCH PARK CHILLER REPLACEMENT	

GENERAL NOTES

1. PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE HEATING, VENTILATION, AND AIR CONDITIONING (HVAC) SYSTEMS.
2. REFER TO TYPICAL DETAILS FOR ADDITIONAL INFORMATION REGARDING THE INSTALLATION OF PIPING, AND EQUIPMENT.
3. THE CONTRACTOR IS EXPECTED TO ORDER MATERIALS IN SUFFICIENT TIME TO AVOID DELAYING THE COMPLETION OF THE PROJECT. DELAY IN DELIVERIES WILL NOT BE CONSIDERED A JUSTIFIABLE REASON FOR SUBSTITUTION OF MATERIALS.
4. THE CONTRACTOR SHALL COMPLY WITH THE 2014 FLORIDA BUILDING CODE AND ALL OTHER APPLICABLE CODES AND STANDARDS.
5. ALL REQUESTS FOR INFORMATION (RFI'S) SUBMITTED BY THE CONTRACTOR SHALL INCLUDE A PROPOSED SOLUTION.
6. INSTALLATION OF EQUIPMENT SHALL COMPLY WITH EQUIPMENT MANUFACTURER'S INSTALLATION AND CLEARANCE REQUIREMENTS. THE CONTRACTOR SHALL VERIFY INSTALLATION CLEARANCES WILL BE MAINTAINED AND DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER PRIOR TO THE ACQUISITION OF EQUIPMENT.
7. THE GENERAL CONTRACTOR SHALL COORDINATE THE WORK OF THE DIFFERENT TRADES SO THAT INTERFERENCE BETWEEN PIPING, EQUIPMENT, STRUCTURAL, AND ELECTRICAL WORK WILL BE AVOIDED. ALL NECESSARY OFFSETS IN FITTINGS REQUIRED TO INSTALL THE WORK PROPERLY SHALL BE PROVIDED COMPLETE IN PLACE AT NO ADDITIONAL COST TO THE OWNER.
8. THE CONTRACTOR IS RESPONSIBLE TO REPAIR, AT HIS COST, ANY DAMAGED ITEMS DUE TO WORK PERFORMED.
9. PIPING, AND EQUIPMENT LOCATIONS SHOWN ARE SCHEMATIC. PRIOR TO EXCAVATION, LAYOUT AND CONSTRUCTION OF THE MECHANICAL SYSTEMS, THE CONTRACTOR SHALL SUBMIT LAYOUT AND FABRICATION SHOP DRAWINGS FOR APPROVAL. CONTRACTOR SHALL NOT COMMENCE WORK WITHOUT APPROVED SHOP DRAWINGS ON THE CONSTRUCTION SITE.
10. INSULATE ALL SURFACES SUBJECT TO CONDENSATION.
11. PROVIDE COLD GALVANIZED PAINT ON ALL FIELD CUTS/WELDS OF GALVANIZED STEEL SUPPORTS AND THREADED RODS.
12. THE CONTRACTOR SHALL PERFORM A COMPLETE CERTIFIED TEST AND BALANCE OF EACH MECHANICAL SYSTEM IN ACCORDANCE WITH A NATIONAL STANDARD. SEE SPECIFICATIONS FOR DETAILS AND PROVIDE THREE (3) WRITTEN COPIES OF THE COMPLETED TEST AND BALANCE REPORT TO THE OWNER FOR REVIEW.
13. VERIFY ALL LABELS AND VALVE DESIGNATIONS WITH THE OWNER'S REPRESENTATIVE BEFORE FABRICATING NEW LABELS AND TAGS.

ELECTRICAL COORDINATION NOTES

1. ALL ELECTRICAL WORK SHALL CONFORM TO THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE (NFPA 70). THE EQUIPMENT INDICATED ON THE DRAWINGS HAS BEEN COORDINATED WITH THE ELECTRICAL SYSTEMS. IF THIS CONTRACTOR SELECTS TO USE ALTERNATE EQUIPMENT, HE SHALL BE RESPONSIBLE FOR ALL COORDINATION WITH THE ELECTRICAL ENGINEER AND SHALL BEAR ANY ADDED EXPENSE TO THE ELECTRICAL CONTRACTOR AND CONSULTANTS RESULTING FROM SUCH ALTERNATE SELECTION.
2. THE MECHANICAL CONTRACTOR SHALL FURNISH AND MOUNT ALL VFD'S, MOTOR STARTERS, RELAYS, AND LOW-VOLTAGE WIRING TO ALLOW THE MECHANICAL EQUIPMENT TO PERFORM AS REQUIRED BY THE SEQUENCE OF OPERATIONS.

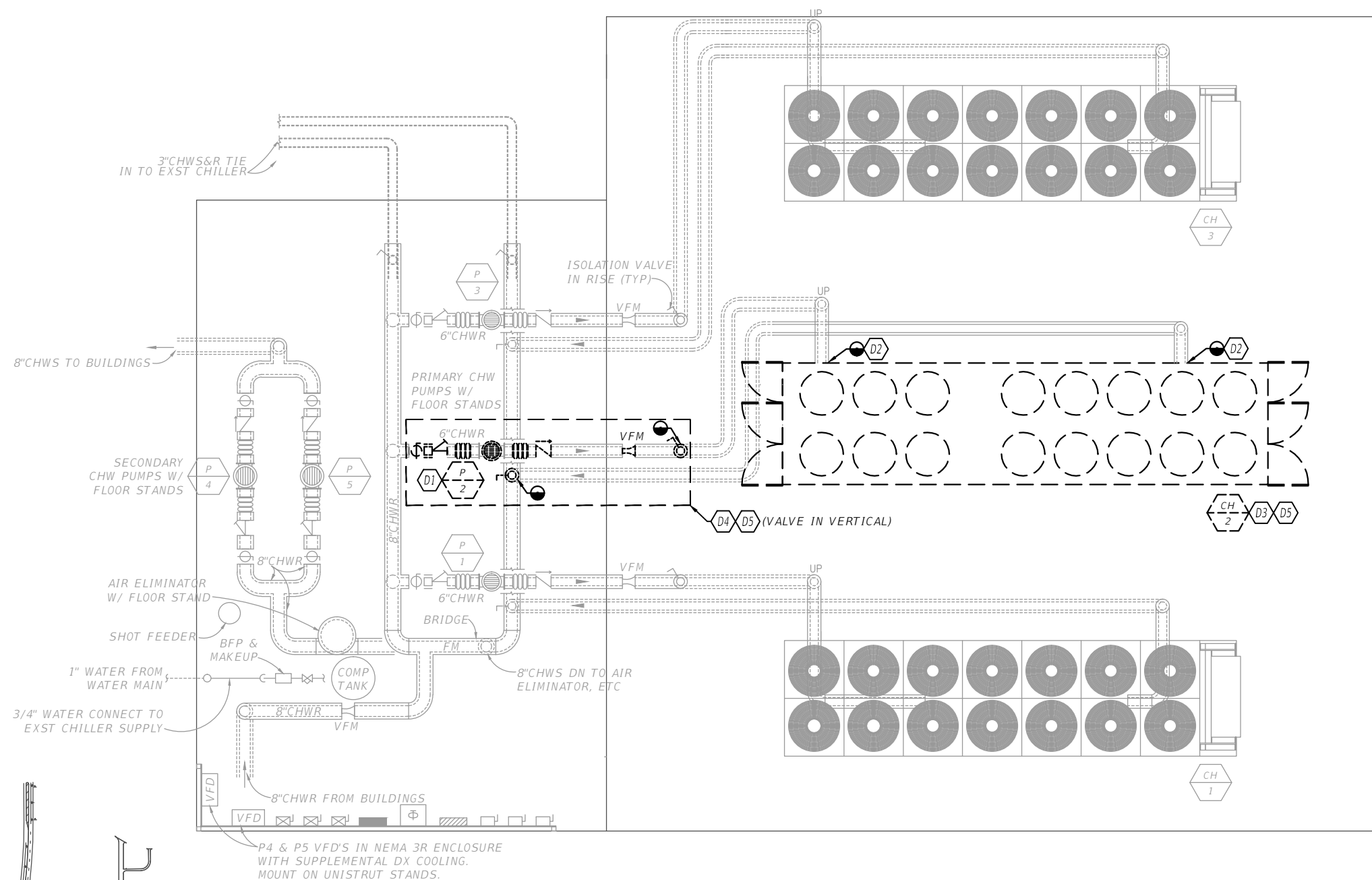
GENERAL DEMOLITION NOTES

1. EXISTING EQUIPMENT TO BE REPLACED SHALL BE EXAMINED AND TESTED BEFORE DEMOLITION BEGINS TO DETERMINE PRE-CONSTRUCTION OPERATING CONDITIONS AND CAPACITIES. ALL EQUIPMENT SERVING EXISTING TO REMAIN AREAS SHALL BE BALANCED TO MAINTAIN EXISTING CAPACITIES. ANY NEW BALANCING VALVES, CONTROL VALVES AND DAMPERS NEEDED TO BE REPLACED AND ANY APPURTENANCES THAT ARE DEFECTIVE AND WOULD INHIBIT PROPER BALANCING SHOULD BE NOTED AND PRESENTED AS AN ADD ALTERNATE ITEM FOR CONSIDERATION.
2. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE DEMOLITION OF EXISTING MECHANICAL SYSTEMS AS REQUIRED TO PERFORM NEW MECHANICAL WORK. NOTHING TAKEN OUT OF SERVICE UNDER THIS PROJECT SHALL BE ABANDONED IN PLACE. ALL DEBRIS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND BE REMOVED FROM THE SITE.
3. DAMAGED ITEMS SHALL BE REPLACED WITH NEW, SAME TYPE AND COLOR AS EXISTING.
4. WHERE THE CONTRACTOR IS REQUIRED TO REMOVE AND REINSTALL ANY EQUIPMENT, IT IS REQUIRED THAT THE CONTRACTOR RECORD THE EXISTING CONDITIONS WITH PHOTOGRAPHS AND/OR VIDEO.
5. WHEN PIPES, AND/OR CONDUITS ARE REMOVED, THE REMAINING OPENING SHALL BE PATCHED, SEALED, AND FINISHED TO MATCH THE ADJACENT SURFACES.
6. INTERRUPTION OF SERVICES SHALL BE MINIMAL AND SHALL BE COORDINATED WITH THE OWNER IN ADVANCE IN ORDER TO SCHEDULE ALL INTERRUPTIONS DURING NON-CRITICAL TIMES.
7. THE CONTRACTOR SHALL MAINTAIN AREAS NOT DIRECTLY IMPACTED BY THE WORK DUST-FREE DURING THE LIFE OF THE PROJECT. THE CONTRACTOR SHALL PROVIDE ALL DUST CONTROL/PREVENTION SYSTEMS AS REQUIRED TO COMPLETE DEMOLITION, CONSTRUCTION, AND INSTALLATION OF NEW SYSTEMS. THE CONTRACTOR SHALL CLEAN UP DAILY.

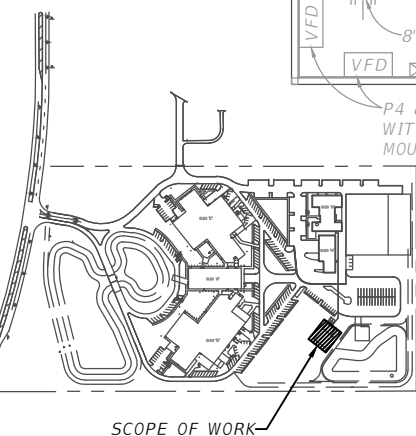
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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	PROJECT NAME	SHEET NO.
					-	ALACHUA	427553-8-52-01	GENERAL NOTES MECHANICAL MATERIALS RESEARCH PARK CHILLER REPLACEMENT	M0.2

REFERENCE NOTES - DEMO

- D1 PRIOR TO ANY DISCONNECTION MEASURE AND RECORD EXISTING WATER FLOW AND PUMP HEAD THROUGH EXISTING PUMP. PROVIDE REPORT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO THE START OF DEMOLITION.
- D2 REMOVE CHILLER AND PIPING AT EXISTING FLEXIBLE CONNECTOR.
- D3 DEMOLISH EXISTING CHILLER. RECOVER ALL REFRIGERANT IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL GUIDELINES AND STANDARDS. EXISTING CHILLER PAD TO BE CLEANED AND CLEARED OF DEBRIS, READY TO ACCEPT NEW CHILLER.
- D4 REPLACE EXISTING CHILLED WATER PUMP AND ALL ASSOCIATED APPURTENANCES. (ISOLATION VALVES, CHECK VALVES, FLEXIBLE CONNECTOR, FLOW METER, STRAINER, ETC.).
- D5 PRIOR TO DISCONNECTION, VERIFY OPERATION AND COMMUNICATION BACK TO BMS/DDC CONTROL PANELS OF ALL EXISTING BMS SENSORS AND MONITORING INSTRUMENTS. NOTIFY OWNER OF ANY CONTROL END DEVICES NOT OPERATING OR ANY DEVICE THAT IS NON-FUNCTIONAL. SAVE AND PROTECT ALL FUNCTIONAL END DEVICES FOR RE-INSTALLATION AND REUSE.



P4 & P5 VFD'S IN NEMA 3R ENCLOSURE WITH SUPPLEMENTAL DX COOLING. MOUNT ON UNISTRUT STANDS.



1 CENTRAL PLANT DEMOLITION - MECHANICAL
MD1.0 1/8" = 1'-0"



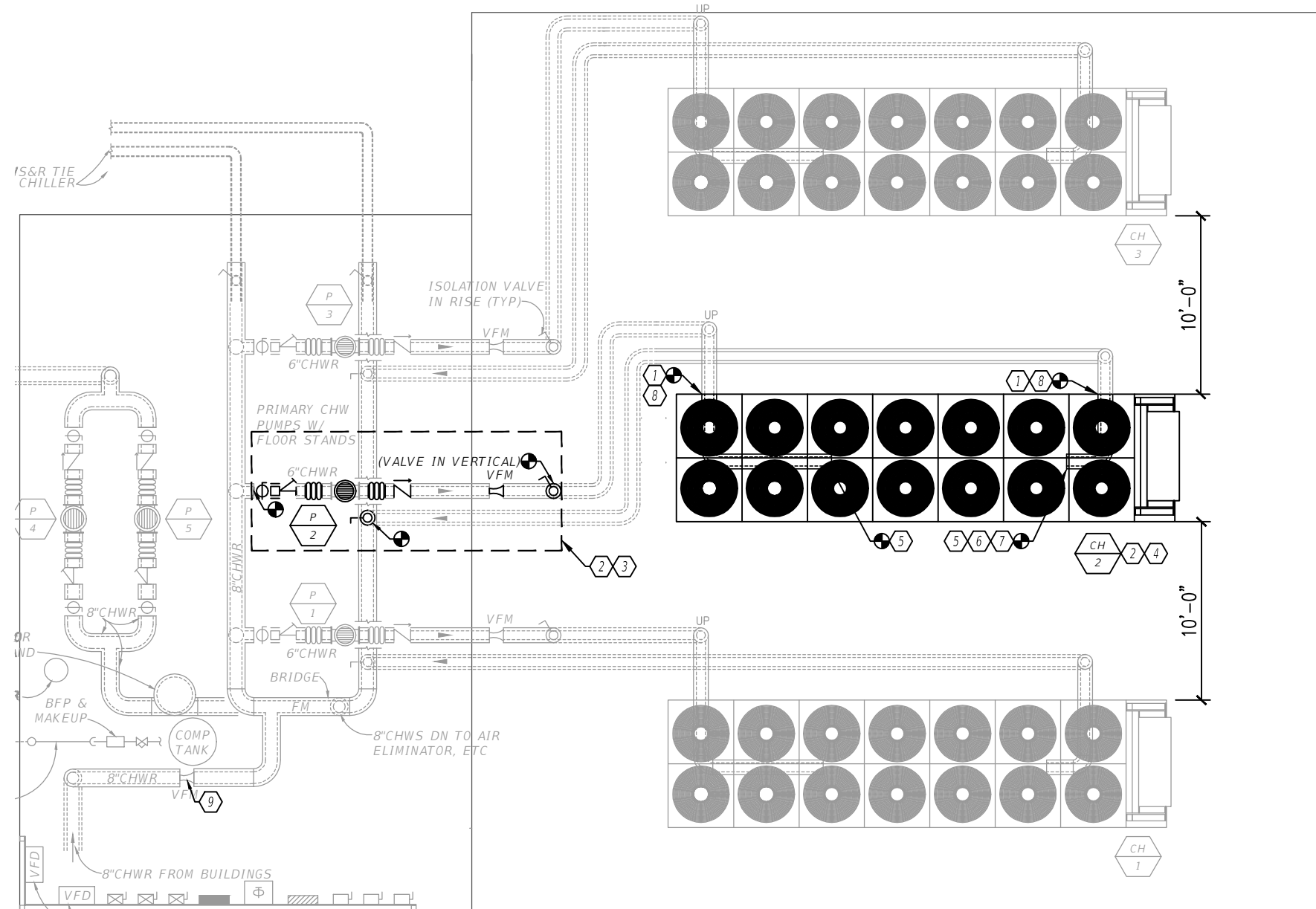
REVISIONS				STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET TITLE	REF. DWG. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	ROAD NO.	COUNTY	FINANCIAL PROJECT ID	CENTRAL PLANT DEMOLITION MECHANICAL	
				-	ALACHUA	427553-8-52-01	MATERIALS RESEARCH PARK CHILLER REPLACEMENT	SHEET NO. MD1.0

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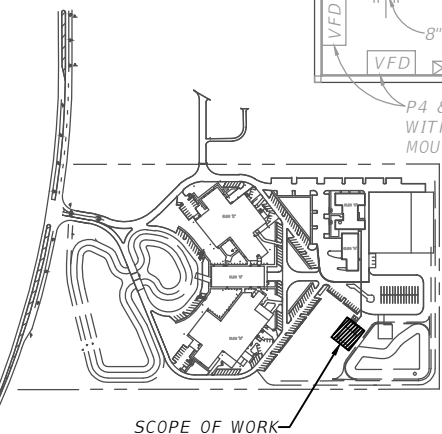
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REFERENCE NOTES - NEW

- 1 PROVIDE NEW FLEXIBLE CONNECTION. INSULATE AND JACKET TO MATCH EXISTING.
- 2 RE-INSTALL EXISTING BMS SENSORS INTO PIPING SYSTEM OR WITHIN CHILLER INTERNAL PIPING TO DUPLICATE PREVIOUS MONITORING AND CONTROL POINTS.
- 3 PROVIDE NEW PRIMARY CHILLED WATER PUMP AND ALL APPURTENANCES. (ISOLATION VALVES, CHECK VALVES, FLEXIBLE CONNECTOR, FLOW METER, ETC.) REFER TO PUMP SCHEDULE.
- 4 PROVIDE NEW CHILLER. REFER TO CHILLER SCHEDULE.
- 5 PROVIDE VICTAULIC-TYPE CONNECTION TO CHILLER BARREL.
- 6 FACTORY INSTALLED FLOW SWITCH ON CHILLER OUTLET PIPE.
- 7 MAINTAIN 5 PIPE DIAMETERS, MINIMUM, STRAIGHT PIPE LENGTH ON EITHER SIDE OF THE FLOW SWITCH FOR PROPER OPERATION.
- 8 PROVIDE NEW WELDED PIPING TO ACCOMMODATE CONNECTION TO NEW CHILLER INLET/OUTLET CONNECTION. INSULATE AND JACKET TO MATCH EXISTING. NEW PIPING SHALL BE ROUTED ABOVE GRADE. PROVIDE PIPE SUPPORT AT EACH ELBOW, EACH CHANGE IN DIRECTION, AND EVERY 5 FEET. REFER TO DETAIL 1/M4.0.
- 9 VERIFY FLOW DIRECTION OF EXISTING FLOW METER. IF DIRECTION IS INCORRECT, REMOVE AND RE-INSTALL SO FLOW IS MEASURED CORRECTLY.



P4 & P5 VFD'S IN NEMA 3R ENCLOSURE WITH SUPPLEMENTAL DX COOLING. MOUNT ON UNISTRUT STANDS.

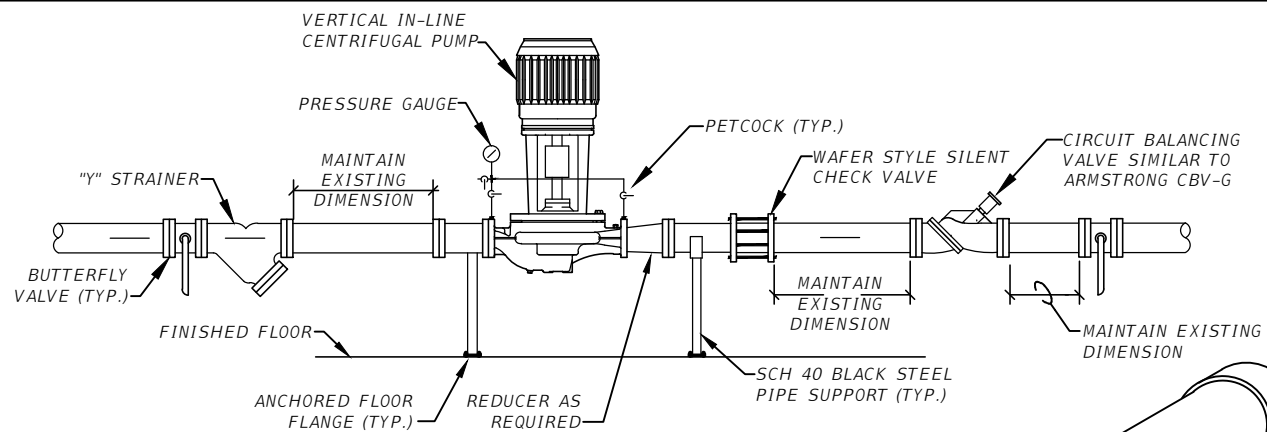


1 CENTRAL PLANT NEW - MECHANICAL
M1.0 1/8" = 1'-0"

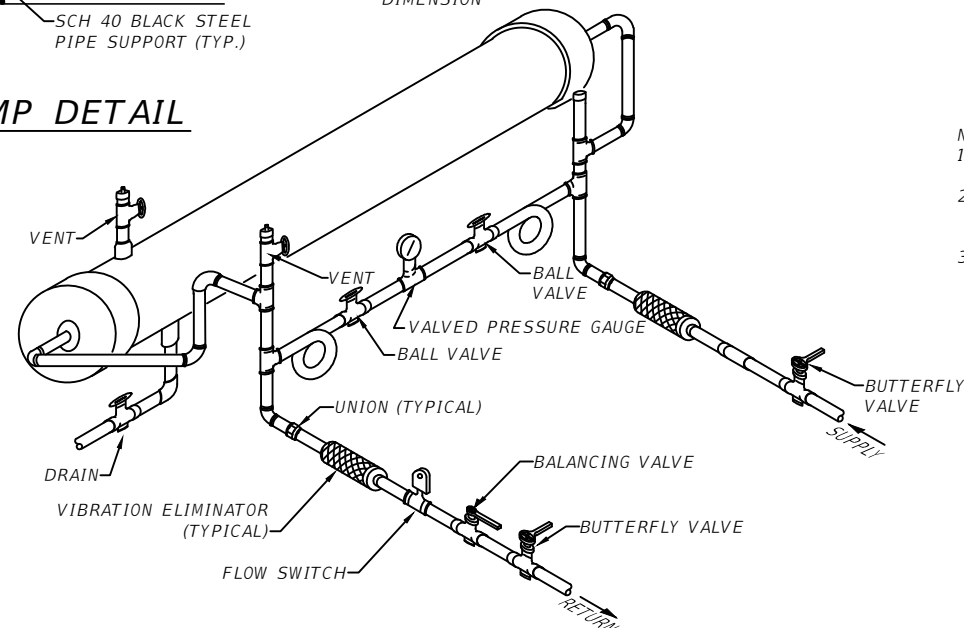


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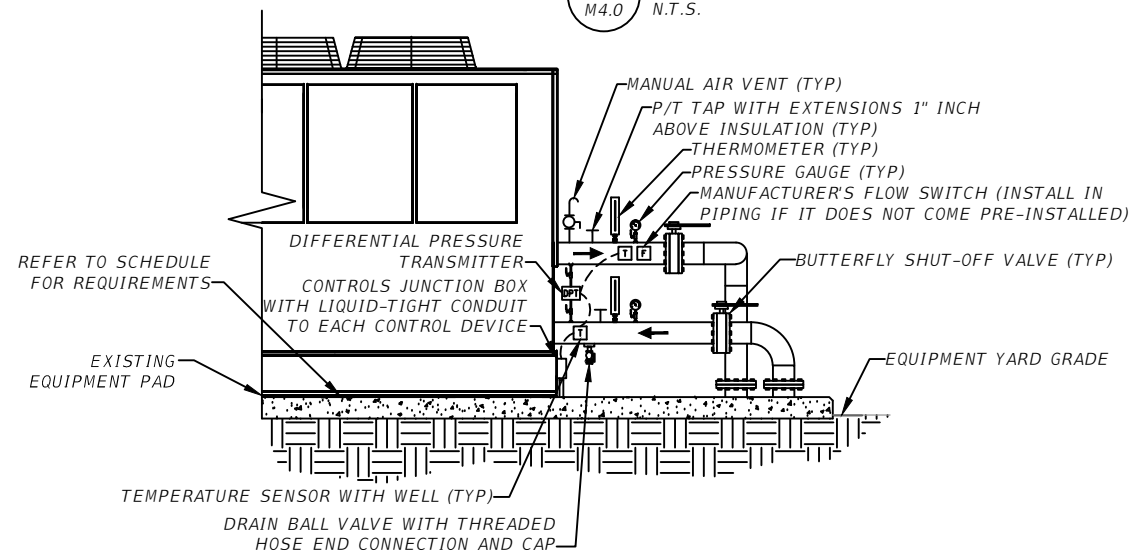
5 VERTICAL IN-LINE PUMP DETAIL
M4.0 N.T.S.



- NOTES:
1. ALL CHILLED WATER PIPE IS INSULATED AND JACKETED WITH ALUMINUM JACKET. INSULATION IS NOT SHOWN FOR CLARITY. PROVIDE EXTENDED NECK VALVE STEMS AND EXTENDED FITTINGS FOR INSULATED PIPES.
 2. ALL GAUGES SHALL BE MOUNTED IN THE VERTICAL POSITION. PROVIDE ELBOWS FOR PRESSURE GAUGES LOCATED IN VERTICAL PIPES AND ROTATE THERMOMETER STEMS AS REQUIRED SO THAT ALL GAUGES AND THERMOMETERS ARE INSTALLED VERTICALLY REGARDLESS OF THE ORIENTATION OF THE CHILLED WATER PIPE.
 3. PROVIDE ULTRAVIOLET PROTECTIVE PLASTIC WINDOW AND WEATHERPROOF CASE FOR ACCESSORIES IN EXTERIOR LOCATIONS.

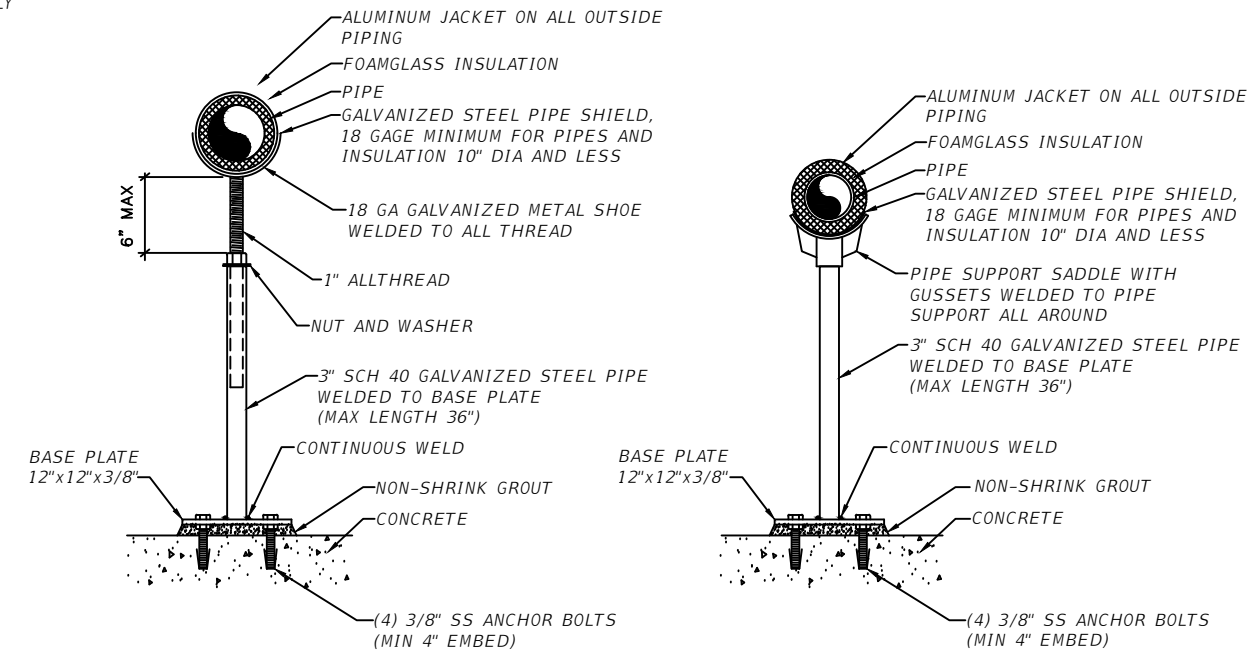
2 HYDRONICS - TYPICAL PIPE ACCESSORY INSTALLATIONS
M4.0 N.T.S.

3 AIR COOLED CHILLER PIPING DIAGRAM DETAIL
M4.0 N.T.S.



- NOTES
1. INSULATION IS NOT SHOWN ON THE DETAIL FOR CLARITY, PROVIDE INSULATION AND ALUMINUM JACKET ON ALL PIPING, PIPE APPURTENANCES, AND EQUIPMENT CONTAINING CHILLED WATER. PROVIDE ALUMINUM JACKET ON ALL INSULATION, REFER TO SPECIFICATIONS FOR MORE INFORMATION.
 2. ALL INSTRUMENT TUBING SHALL BE CONSTRUCTED OF RIGID COPPER PIPE WITH SOLDERED FITTINGS. INSULATE AND JACKET ALL INSTRUMENT PIPING.
 3. COORDINATE STRAINER BASKET AND MATERIAL WITH CHILLER MANUFACTURER.

4 AIR COOLED CHILLER - TYPICAL INSTALLATION
M4.0 N.T.S.



- NOTES
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND LOCATION OF ALL PIPING AND EQUIPMENT SUPPORTS AS REQUIRED TO PROVIDE A RIGID AND VIBRATION-FREE INSTALLATION.
 2. ALL STEEL COMPONENTS LOCATED OUTDOORS SHALL BE HOT-DIPPED GALVANIZED.
 3. CHILLED WATER PIPE SHALL BE INSULATED AND JACKETED WITH ALUMINUM.
 4. PROVIDE COLD GALVANIZED PAINT ON ALL FIELD CUTS/WELDS OF GALVANIZED STEEL SUPPORTS AND THREADED RODS.
 5. PRIME AND PAINT ALL SUPPORT ASSEMBLIES WITH TWO COATS OF GRAY RUST INHIBITING ENAMEL BEFORE ANY PIPE IS INSTALLED.

1 PIPE SUPPORT - PIPE STANDS
M4.0 N.T.S.

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						-	ALACHUA	427553-8-52-01	MATERIALS RESEARCH PARK CHILLER REPLACEMENT	

PUMP SCHEDULE

MARK	P-2
LOCATION	CHILLER YARD
MANUFACTURER	BELL & GOSSETT
MODEL	SERIES E-80 5x5x9.5B
TYPE	IN-LINE
PUMP	
IMPELLER SIZE (IN)	7.625
WATER FLOW RATE (GPM)	480
TOTAL HEAD (FT-H2O)	49
MINIMUM EFFICIENCY	75%
HP	10
RPM	1770
VOLTS/PHASE/HZ	480/3/60

GENERAL	
OPERATING WEIGHT (LBS)	375
ACCESSORIES	1-3
NOTES	1-3

ACCESSORIES (PROVIDE THE FOLLOWING)

1. NON-OVERLOADING, TEFC CONSTANT SPEED DUTY MOTOR.
2. DIFFERENTIAL PRESSURE GAUGE AND PIPING. REFER TO DETAIL 5/M4.0.
3. HOIST CONNECTION ON VERTICAL PUMP MOTOR.

NOTES

1. TRIM IMPELLER TO SYSTEM REQUIREMENTS.
2. MOUNT ON EXISTING CONCRETE PAD WITH PIPE SUPPORT. REFER TO DETAIL 5/M4.0. COORDINATE HEIGHT OF PAD WITH PIPING APPURTENANCE CLEARANCE AND ELEVATIONS.
3. PROVIDE PUMP BODY INSULATION WITH FOAMGLAS PRODUCT. SECURE INSULATION AND PROVIDE HINGE TO PERMIT REMOVAL FOR SERVICING.

AIR COOLED CHILLER SCHEDULE

MARK	CH-2
LOCATION	ON GRADE
MANUFACTURER	YORK
MODEL	YVAA0275E
ACTUAL CAPACITY (TONS)	275
EER	10.92

EVAPORATOR	
WATER FLOW (GPM)	480
ENT WATER TEMPERATURE (DEG F)	58
LVG WATER TEMPERATURE (DEG F)	44
NUMBER OF PASSES	3
MAXIMUM PRESSURE DROP (FT-H2O)	18.1

COMPRESSOR	
QUANTITY	1
TYPE	ROTARY SCREW

CONDENSER	
REFRIGERANT TYPE	HFC-134a
AMBIENT TEMPERATURE (DEG F)	95
NUMBER OF FANS	14

ELECTRICAL DATA	
COMPRESSOR 1 RLA	184
COMPRESSOR 2 RLA	183
SINGLE POINT POWER MCA	451
MAXIMUM FUSE AMPS	600
VOLTS/PHASE/HZ	460/3/60

UNIT REQUIREMENTS	
OPERATING WEIGHT (LBS)	20,000
ACCESSORIES	1-14
NOTES	1,2

ACCESSORIES (PROVIDE THE FOLLOWING)

1. SINGLE POINT POWER CONNECTION.
2. NEOPRENE ISOLATOR PADS.
3. BACNET CONTROL INTERFACE WITH BUILDING DDC CONTROLS. PROVIDE ALL REQUIRED PROGRAMMING FOR INTERFACE TO BUILDING CONTROL SYSTEM.
4. INTEGRAL DISCONNECT MOUNTED ON THE UNIT.
5. HAIL GUARDS.
6. COOLER FREEZE PROTECTION (EVAPORATOR HEATERS)
7. HIGH-EFFICIENCY VARIABLE SPEED CONDENSER FANS
8. CONDENSER COIL CORROSION PROTECTIVE COATING.
9. SUCTION LINE INSULATION
10. CONDENSER COIL TRIM PANELS AND SECURITY GRILLES
11. FULL END SCREEN
12. COMPRESSOR SUCTION SERVICE VALVE
13. SERVICE OPTION: THE SERVICE OPTION SHALL PROVIDE A REMOTE SERVICE PORT AND A FACTORY-INSTALLED CONVENIENCE OUTLET
14. UNIT SHALL BE EQUIPPED WITH FACTORY-INSTALLED OPTION LOW SOUND - COMPRESSOR SOUND REDUCTION BLANKET

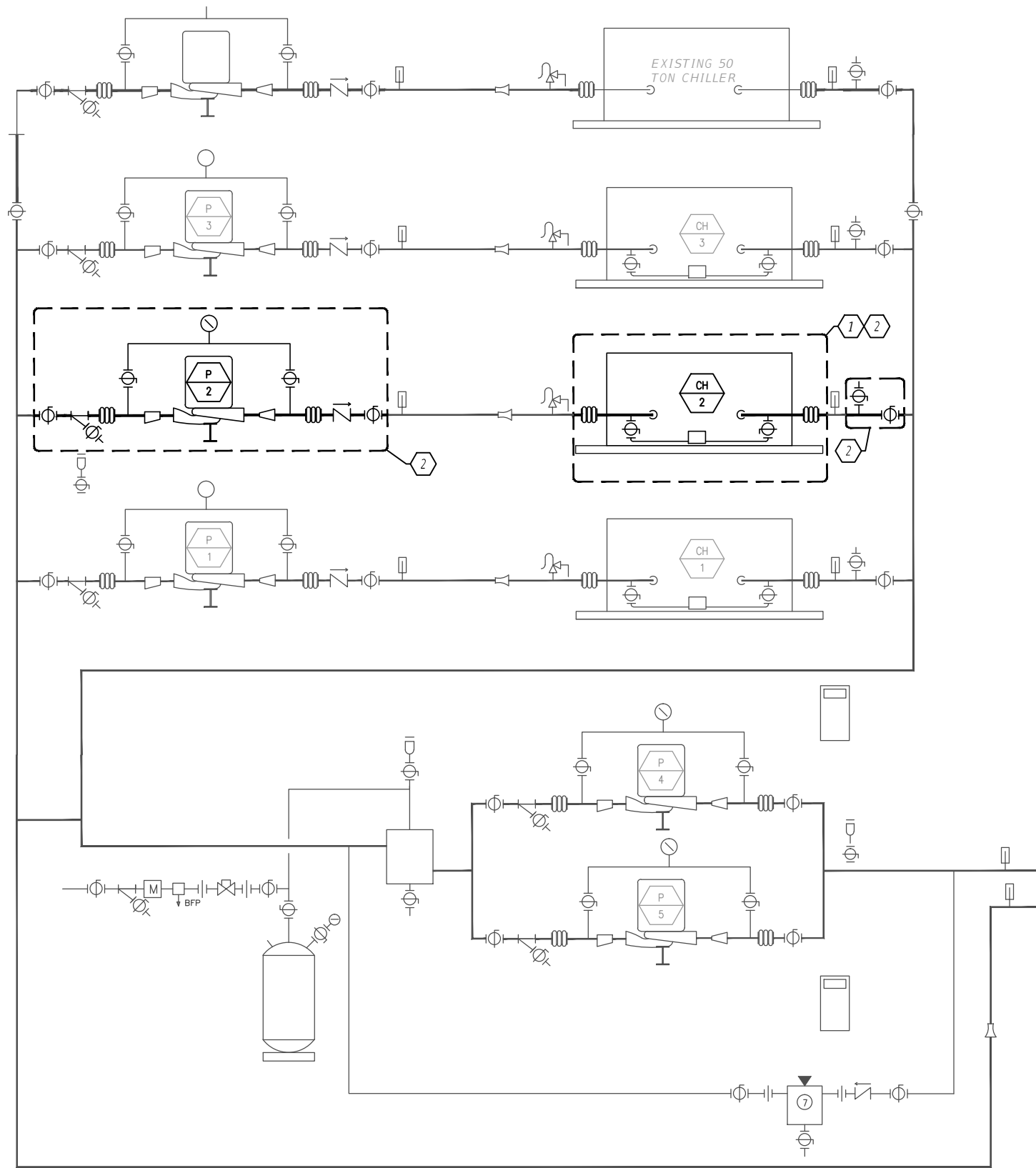
NOTES

1. SECURE CHILLER TO CONCRETE PAD.
2. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL COMPONENTS SHIPPED LOOSE WITH THE CHILLER.

THE BASIS OF DESIGN CHILLER REQUIRES THE RECOMMENDED MAINTENANCE CLEARANCE CURRENTLY SHOWN WITH EXISTING EQUIPMENT INSTALLED. THE CONTRACTOR IS FREE TO BID ALTERNATIVE MANUFACTURERS OTHER THAN THE BASIS OF DESIGN (CARRIER, DAIKIN, TRANE) BUT ANY PAD EXTENSIONS, EQUIPMENT ACCESS AND MAINTENANCE SPACING REQUIREMENTS OR OTHER MODIFICATIONS TO THE EXISTING PAD OR EQUIPMENT, PIPING, POWER OR CONTROLS NECESSITATED BY THE PROPOSED ALTERNATE CHILLER MANUFACTURER SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, INCLUDING ANY DESIGN RELATED FEES NEEDED TO MODIFY DRAWINGS OR SPECIFICATIONS.

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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	PROJECT NAME	
					-	ALACHUA	427553-8-52-01	MATERIALS RESEARCH PARK CHILLER REPLACEMENT	

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REFERENCE NOTES

- ① REPLACE EXISTING CHILLER AND CONNECTION PIPING WITHIN INDICATED BOX. REPLACE EXISTING FLEXIBLE CONNECTORS, INSULATE TO MATCH EXISTING.
- ② REPLACE EXISTING PRIMARY PUMP AND APPURTENANCES WITHIN INDICATED BOX. REPLACE EXISTING ISOLATION VALVES. REFER TO NEW MECHANICAL PLAN FOR DETAILS. RECALIBRATE ALL CONTROL AND MONITORING END DEVICES FOR NEW EQUIPMENT OPERATING PARAMETERS (FLOW METER NEW FLOW RATE, BALANCING VALVES ETC.)

1 CHILLED WATER PIPING DIAGRAM
M6.0 N.T.S.

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					-	ALACHUA	427553-8-52-01			

MECHANICAL SPECIFICATIONS

PART 1 GENERAL PROVISIONS

1.1 GENERAL

- A. THE CONTRACT DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED IN THE CONTRACT. DO NOT SCALE THE DRAWINGS.
- B. ALL WORK SHALL COMPLY WITH THE 2014 FLORIDA BUILDING CODES, FDOT STANDARDS, AND THE RECOMMENDATIONS OF NFPA AND UL.
- C. THE CONTRACTOR GUARANTEES BY HIS/HER ACCEPTANCE OF THE CONTRACT THAT ALL WORK SHALL BE GUARANTEED AGAINST DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE YEAR AFTER RECEIPT OF FINAL PAYMENT. ALL WORK DEEMED UNSATISFACTORY BY THE ENGINEER SHALL BE CORRECTED AT NO COST TO THE OWNER. THE CONTRACTOR SHALL SERVICE AND ADJUST ALL EQUIPMENT AS DIRECTED AND AS REQUIRED DURING THE ONE-YEAR GUARANTEE PERIOD AT NO CHARGE. NECESSARY PARTS SHALL BE PROVIDED AT NO CHARGE.
- D. AS A MINIMUM, ONE FIVE POUND CO2 EXTINGUISHER SHALL BE PROVIDED WITH EACH WORK CREW AT ALL TIMES WHEN WORKING WITHIN THE BUILDING.
- E. ALL MATERIALS SHALL BE NEW, THE BEST OF THEIR RESPECTIVE KINDS, SUITABLE FOR THE CONDITIONS AND DUTIES IMPOSED ON THEM AT THE BUILDING AND SHALL BE OF REPUTABLE MANUFACTURERS. THE DESCRIPTION, CHARACTERISTICS, AND REQUIREMENTS OF MATERIALS TO BE USED SHALL BE IN ACCORDANCE WITH QUALIFYING CONDITIONS ESTABLISHED IN THE FOLLOWING SECTIONS.
- F. THOROUGHLY CLEAN ALL EXPOSED SURFACES OF EQUIPMENT AND MATERIAL AND LEAVE IN A NEAT, CLEAN CONDITION READY FOR PAINTING. RESTORE AND TOUCH-UP FACTORY FINISHES WHICH WERE DAMAGED IN THE PERFORMANCE OF THE NEW WORK.
- G. LOCATE ALL EQUIPMENT WHICH MUST BE SERVICED, OPERATED OR MAINTAINED IN FULLY ACCESSIBLE POSITIONS. EQUIPMENT SHALL INCLUDE, BUT NOT BE LIMITED TO, VALVES, CLEANOUTS, MOTORS, CONTROLLERS, DRAINPOINTS, ETC.
- H. ALL ELECTRICAL WORK SHALL MEET THE REQUIREMENTS AS SET FORTH IN THE NATIONAL ELECTRICAL CODE AND ALL APPLICABLE LOCAL CODES.
- I. PROVIDE ALL CONTROL WIRING BOTH LINE AND LOW VOLTAGE. PROVIDE ALL CONTROL WIRING IN RIGID STEEL CONDUIT. COORDINATE WITH ELECTRICAL.

1.2 EXISTING CONDITIONS

- A. WHEN WORKING IN AND AROUND THE BUILDING, EXTREME CARE SHALL BE EXERCISED WITH REGARD TO PROTECTION OF THE EXISTING STRUCTURE AND MECHANICAL SYSTEMS. REPAIR OR REPLACE TO THE SATISFACTION OF THE ENGINEER ANY EXISTING WORK DAMAGED IN THE PERFORMANCE OF THE NEW WORK.
- B. THE CONTRACTOR SHALL THOROUGHLY EXAMINE PREMISES AND OBSERVE ALL CONDITIONS UNDER WHICH THE WORK WILL BE PERFORMED. NO ALLOWANCE WILL BE MADE FOR ERRORS OR NEGLIGENCE IN THIS RESPECT.
- C. PERFORM ALL CUTTING AND PATCHING ASSOCIATED WITH THE NEW WORK. STRUCTURAL MEMBERS SHALL NOT BE CUT. PATCHING SHALL MATCH EXISTING ADJACENT SURFACES AS TO MATERIAL, TEXTURE, QUALITY, AND FINISH.
- D. NOTIFY OWNER PRIOR TO ALL SERVICE OUTAGES AND OBTAIN APPROVAL BEFORE PROCEEDING.
- E. WHEN THE USE OR REUSE OF EXISTING SYSTEMS OR MATERIALS IS INDICATED, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR OR REPLACE THE SYSTEMS OR MATERIALS SUCH THAT THEY COMPLY WITH THE REQUIREMENTS OF THIS SPECIFICATION.

1.3 SUBMITTALS

- A. SUBMIT SHOP DRAWINGS ELECTRONICALLY.
- B. PROVIDE WELDING METHODS AND CERTIFICATES.
- C. PRODUCT DATA
 - 1. PROVIDE MANUFACTURER'S CATALOG SHEET FOR EQUIPMENT INDICATING DIMENSIONS, WEIGHTS, CAPACITIES, SPECIALTIES, ACCESSORIES, ELECTRICAL REQUIREMENTS, AND WIRING DIAGRAMS
 - a. CHILLERS
 - b. PIPING, PIPE FITTINGS, AND SPECIALTIES
 - c. PIPE AND EQUIPMENT INSULATION
 - d. VALVES - IF REQUIRED
 - e. VALVE ACTUATORS - IF REQUIRED
 - f. VARIABLE FREQUENCY DRIVES - IF REQUIRED
 - g. CONTROLS, CONTROL DIAGRAMS, AND SEQUENCE OF OPERATIONS - IF REQUIRED
 - h. CHILLED WATER PUMPS

D. OPERATION AND MAINTENANCE MANUALS

- 1. CONTRACTOR SHALL FURNISH TO THE ENGINEER TWO (2) COMPLETE BOUND SETS OF TYPEWRITTEN INSTRUCTIONS FOR OPERATING AND MAINTAINING ALL SYSTEMS AND EQUIPMENT INCLUDED IN THIS CONTRACT. EACH SET OF INSTRUCTIONS SHALL BE CONTAINED IN A HARD-BACK RING BINDER PROPERLY INDEXED AND LABELED. ALSO PROVIDE TWO (2) COMPLETE SETS OF APPROVED SHOP DRAWINGS FOR ALL ITEMS OF EQUIPMENT UTILIZED ON THE PROJECT. ALL INSTRUCTIONS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO FINAL ISSUE. MANUFACTURER'S ADVERTISING LITERATURE OR CATALOGS WILL NOT BE ACCEPTABLE FOR OPERATING AND MAINTENANCE INSTRUCTIONS.
- 2. PROVIDE ONE (1) COMPACT DISK OF ALL OPERATION AND MAINTENANCE INFORMATION IN PORTABLE DOCUMENT FORMAT (PDF) AND INCLUDE RECORD DRAWINGS.

E. RECORD DRAWINGS

- 1. CONTRACTOR SHALL KEEP ACCURATE RECORDS OF ALL DEVIATIONS IN WORK, AS ACTUALLY INSTALLED, FROM WORK INDICATED ON CONTRACT DOCUMENTS.
- 2. WHEN WORK IS COMPLETE, THE CONTRACTOR SHALL MINIMALLY PROVIDE TWO (2) COMPLETE "RECORD" SETS OF BONDS AND ONE (1) CD WITH ELECTRONIC COPIES OF THE RECORD DRAWINGS. CONTRACTOR MAY AT HIS/HER OPTION OBTAIN ELECTRONIC COPIES OF THE BACKGROUNDS THROUGH THE ENGINEER OF THE ORIGINAL CONTRACT DOCUMENTS FOR ALTERATION BY HIM/HER. CONTRACTOR SHALL PAY ALL FEES FOR THE DRAWING REPRODUCTION THERETO. CONTRACTOR SHALL CERTIFY THE ACCURACY OF EACH DRAWING BY ENDORSEMENT AND SIGNATURE THEREON. UPON COMPLETION OF THE RECORD DRAWINGS THE CONTRACTOR SHALL DELIVER THEM TO THE ENGINEER FOR REVIEW, PRIOR TO FORWARDING TO OWNER.

F. ONE YEAR GUARANTEE PERIOD

- 1. THE GUARANTEE PERIOD SHALL START UPON SUBSTANTIAL COMPLETION OF THE PROJECT. DURING THE GUARANTEE PERIOD, THE CONTRACTOR SHALL SERVICE ALL EQUIPMENT PROVIDED UNDER THIS CONTRACT. THIS SERVICE SHALL BE COORDINATED WITH THE OWNER'S REPRESENTATIVE AND SHALL INCLUDE YEARLY MAINTENANCE PROCEDURES AS RECOMMENDED BY THE CHILLER AND PUMP MANUFACTURERS. PRIOR TO THE START OF THE GUARANTEE PERIOD, THE CONTRACTOR SHALL PROVIDE THE OWNER WITH A SCHEDULE OF REQUIRED MAINTENANCE OPERATIONS FOR EACH SYSTEM AND ITEM OF EQUIPMENT. SUBMIT SCHEDULE TO THE ENGINEER FOR APPROVAL.

1.4 PROTECTION

- A. SPECIAL CARE SHALL BE TAKEN FOR THE PROTECTION OF EQUIPMENT FURNISHED. EQUIPMENT AND MATERIAL SHALL BE COMPLETELY PROTECTED FROM WEATHER ELEMENTS, PAINTING, PLASTER, ETC., UNTIL THE PROJECT IS COMPLETED. DAMAGE SUCH AS RUST, PAINT, SCRATCHES, ETC., SHALL BE REPAIRED AS REQUIRED TO RESTORE EQUIPMENT TO ORIGINAL INTEGRITY.
- B. PROVIDE GUARDS FOR BELT-DRIVEN EQUIPMENT AND AT CHAINS, GEARS, COUPLINGS, KEYS, PROJECTING SET SCREWS AND OTHER ROTATING OR MOVING PARTS. BELT GUARDS TO ENCLOSE BOTH PULLEYS AND BELTS ON EXPOSED SIDES. PROVIDE COUPLING GUARDS ON DIRECT CONNECTED EQUIPMENT. DESIGN AND MANUFACTURE GUARDS FOR EASY REMOVAL FOR SERVICE AND TO COMPLY WITH UL AND OSHA REQUIREMENTS. PROVIDE GUARDS SUPPLIED BY THE SAME MANUFACTURER OF THE SAID EQUIPMENT WHENEVER AVAILABLE.

1.5 TESTS AND ADJUSTMENTS

- A. THE CONTRACTOR SHALL FURNISH LABOR, INSTRUMENTS, EQUIPMENT, AND MATERIALS REQUIRED TO PERFORM TESTS PRESCRIBED IN THE SECTIONS DESCRIBING THE VARIOUS SYSTEMS.
- B. REPLACE OR REPAIR DEFECTS FOUND DURING INSPECTION OR TESTS WITH NEW MATERIALS. CAULKING OF SCREWED JOINTS, CRACKS, OR HOLES IS NOT ACCEPTABLE. CORRECT LEAKS IN SCREWED FITTINGS BY REMAKING JOINTS. REPEAT TESTS AFTER DEFECTS HAVE BEEN ELIMINATED.
- C. WHERE REASONABLE DOUBT EXISTS AS TO A SYSTEMS ABILITY TO COMPLY WITH CONTRACT REQUIREMENTS, PERFORM ANY REASONABLE TEST REQUIRED BY THE ENGINEER.
- D. USE TEST INSTRUMENTS TESTED FOR ACCURACY BY AN APPROVED LABORATORY OR BY THE INSTRUMENT MANUFACTURER AND FURNISH CERTIFICATES SHOWING DEGREE OF ACCURACY TO THE ENGINEER WHEN REQUESTED. MAKE CALIBRATION HISTORIES FOR EACH INSTRUMENT AVAILABLE FOR EXAMINATION.
- E. THE FOLLOWING TESTS SHALL BE CONDUCTED BY THE CONTRACTOR AND ALL PIPING SHALL BE PROVEN TIGHT IN THE PRESENCE OF THE OWNER. THESE TESTS SHALL BE CONDUCTED BEFORE ANY INSULATION IS INSTALLED AND ANY INSULATION INSTALLED PRIOR TO TESTS SHALL BE REMOVED. PROVIDE ALL EQUIPMENT AND LABOR REQUIRED. TESTS SHALL BE AT LEAST EIGHT HOURS (8 HOURS) IN DURATION, AFTER ALL PIPING HAS BEEN PROVED TIGHT. PIPING MAY BE TESTED IN SECTIONS AS APPROVED BY THE OWNER. TESTS SHALL BE AS SPECIFIED HEREIN.

- 1. NEW CHILLED WATER PIPING: PIPING SHALL BE CLEANED AND FLUSHED. PIPING SHALL BE PRESSURE TESTED. PRESSURE TESTING SHALL BE DONE IN ACCORDANCE WITH THE AUTHORITY HAVING JURISDICTION. DURING PRESSURE TESTING ANY NOTICEABLE REDUCTION IN PRESSURE SHALL REQUIRED RETESTING. CONTRACTOR SHALL PROVIDE ALL EQUIPMENT REQUIRED FOR PRESSURE TESTING. PROVIDE FINE MESH IN NEW AND EXISTING STRAINERS TO CATCH PARTICULATE DURING FLUSHING. AFTER FLUSH IS COMPLETED, REPLACE MESH WITH STANDARD MESH. TEST PRESSURE SHALL BE 1.5 TIMES SYSTEM OPERATING PRESSURE.

PART 2 BASIC MATERIALS AND METHODS

2.1 GENERAL

- A. THE GENERAL PROVISIONS OF THE CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND GENERAL REQUIREMENTS APPLY TO THE WORK SPECIFIED IN THIS SECTION.

2.2 IDENTIFICATION

- A. NAMEPLATES: LAMINATED THREE-LAYER PLASTIC WITH ENGRAVED WHITE LETTERS ON BLACK BACKGROUND COLOR. VERIFY WITH OWNER FOR EQUIPMENT NUMBERING STANDARD.
- B. PLASTIC TAGS: LAMINATED THREE-LAYER PLASTIC WITH ENGRAVED WHITE LETTERS ON BLACK BACKGROUND COLOR. TAG SIZE MINIMUM 1-1/2 INCH DIAMETER. VERIFY WITH OWNER FOR EQUIPMENT NUMBERING STANDARD.
- C. PLASTIC TAPE PIPE MARKERS: FLEXIBLE, VINYL FILM TAPE WITH PRESSURE SENSITIVE ADHESIVE BACKING AND PRINTED MARKINGS.
- D. PREPARATION AND INSTALLATION
 - 1. DEGREASE AND CLEAN SURFACES TO RECEIVE ADHESIVE FOR IDENTIFICATION MATERIALS.
 - 2. INSTALL PLASTIC NAMEPLATES WITH CORROSIVE-RESISTANT MECHANICAL FASTENERS, OR ADHESIVE. APPLY WITH SUFFICIENT ADHESIVE TO ENSURE PERMANENT ADHESION AND SEAL WITH CLEAR LACQUER.
 - 3. INSTALL TAGS WITH CORROSION RESISTANT CHAIN.
 - 4. INSTALL PLASTIC TAPE PIPE MARKERS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
 - 5. INSTALL PLASTIC TAPE PIPE MARKERS COMPLETE AROUND PIPE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
 - 6. IDENTIFY MECHANICAL EQUIPMENT WITH PLASTIC NAMEPLATES.
 - 7. IDENTIFY CONTROL PANELS AND MAJOR CONTROL COMPONENTS WITH PLASTIC NAMEPLATES.
 - 8. IDENTIFY CHILLED WATER CONTROL VALVES WITH TAGS.
 - 9. IDENTIFY PIPING WITH PLASTIC TAPE PIPE MARKERS. IDENTIFY SERVICE AND FLOW DIRECTION.

2.3 SUPPORTS AND HANGERS

- A. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE AN ADEQUATE PIPE SUPPORT SYSTEM IN ACCORDANCE WITH RECOGNIZED ENGINEERING PRACTICES, USING STANDARD, COMMERCIALY ACCEPTED PIPE HANGERS AND SUSPENSION EQUIPMENT. THE DESIGN OF ALL HANGERS AND SUPPORT SHALL BE IN ACCORDANCE WITH PROVISIONS OF THE CURRENT ISSUE OF MSS-SP-58 DOMESTIC DEVELOPED AS A STANDARD BY THE MANUFACTURER'S STANDARDIZATION SOCIETY.
- B. CONTRACTOR SHALL MATCH IN FORM, FUNCTION AND CONSTRUCTION EXISTING PIPE STANDS/SUPPORTS. THE CONTRACTOR SHALL CALCULATE LOADS AND DETERMINE THE NECESSARY TYPE, LOCATION, AND NUMBER AND SHALL DESIGN THE SUPPORTS AND HANGERS FOR THOSE LOADS.
- C. CONTRACTOR SHALL PAINT ALL METAL SUPPORTS WITH ONE COAT OF PRIMER AND TWO COATS OF EPOXY PAINT IN ACCORDANCE WITH FDOT STANDARDS. THE COLOR SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE.

REVISIONS				KYLE J. CARTIER, P.E. P.E. 53269 Sims Wilkerson Cartier Engineering, Inc. 12124 High Tech Avenue - Suite 200 Orlando, Florida 32817 FL. CERT. OF AUTH. NO. 6106	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET TITLE	REF. DWG. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	PROJECT NAME	SHEET NO.
						-	ALACHUA	427553-8-52-01	MATERIALS RESEARCH PARK CHILLER REPLACEMENT

2.4 PIPE, FITTINGS, AND JOINTS

A. GENERAL

1. WHERE MORE THAN ONE PIPING SYSTEM MATERIAL IS SPECIFIED, ENSURE SYSTEM COMPONENTS ARE COMPATIBLE AND JOINED TO ENSURE THE INTEGRITY OF THE SYSTEM IS NOT JEOPARDIZED. PROVIDE NECESSARY JOINING FITTINGS. ENSURE FLANGES, UNION, AND COUPLINGS FOR SERVICING ARE CONSISTENTLY PROVIDED.
2. USE UNIONS, FLANGES, AND COUPLINGS DOWNSTREAM OF VALVES AND AT EQUIPMENT OR APPARATUS CONNECTIONS. DO NOT USE DIRECT WELDED OR THREADED CONNECTIONS TO VALVES, EQUIPMENT, OR OTHER APPARATUS.
3. USE NON-CONDUCTING DIELECTRIC CONNECTIONS WHENEVER JOINING DISSIMILAR METALS IN OPEN SYSTEMS.
4. PROVIDE PIPE HANGERS AND SUPPORTS IN ACCORDANCE WITH ASTM B31.9 OR MSS SP69 UNLESS INDICATED OTHERWISE.
5. USE BALL OR BUTTERFLY VALVES FOR SHUT-OFF AND TO ISOLATE EQUIPMENT, PART OF SYSTEMS, OR VERTICAL RISERS.
6. USE VALVES FOR BYPASS SERVICES.
7. USE ONLY BUTTERFLY VALVES IN CHILLED WATER SYSTEMS FOR ISOLATION SERVICE.
8. USE LUG END BUTTERFLY VALVES WITH BLIND FLANGES TO ISOLATE PIPES.
9. USE 3/4 INCH BALL VALVES WITH HOSE BIBB AND CAP FOR DRAINS AT MAIN SHUT-OFF VALVES, LOW POINTS OF PIPING, BASES OF VERTICAL RISERS, AND AT EQUIPMENT.
10. ALL INSTRUMENT TUBING SHALL BE HARD DRAWN COPPER.

B. REGULATORY REQUIREMENTS

1. CONFORM TO ASME B31.9 CODE FOR INSTALLATION OF PIPING SYSTEM.
2. WELDING MATERIALS AND PROCEDURES: CONFORM TO ASME SEC 9.

C. DRAIN AND VENT PIPING

1. COPPER TUBING: ASTM B306, DWV.
 - a. FITTINGS: ASME B16.23, CAST BRONZE, OR ASME B16.29, WROUGHT COPPER.
 - b. JOINTS: ASTM B32, SOLDER, GRADE 50B.

D. INSTRUMENT PIPING/TUBING

1. COPPER PIPE: ASTM B88 TYPE L HARD DRAWN COPPER TUBING.
 - a. FITTINGS: WROUGHT COPPER FITTINGS.
 - b. JOINTS: SOLDERED JOINTS.

E. CHILLED WATER PIPE

1. STEEL PIPE: ASTMA53, BLACK STEEL WITH PLAIN ENDS.
 - a. FITTINGS: ASTM B16.3, MALLEABLE IRON OR ASTM A234, FORGED STEEL WELDING TYPE. ALL ELBOWS SHALL BE LONG RADIUS TYPE.
 - b. JOINTS: AWS D1.1 WELDED OR FLANGED JOINTS.

F. FLANGES, UNIONS, AND COUPLINGS

1. PIPE SIZE OVER 2 INCHES:
 - a. FERROUS PIPING: 150 PSIG FORGED STEEL, SLIP-ON.
 - b. GASKETS: 1/16 INCH THICK PREFORMED NEOPRENE.

G. PREPARATION

1. REAM PIPE AND TUBE ENDS. REMOVE BURRS. BEVEL PLAIN END FERROUS PIPE.
2. REMOVE SCALE AND DIRT ON INSIDE AND OUTSIDE BEFORE ASSEMBLY.
3. PREPARE PIPING CONNECTIONS TO EQUIPMENT WITH FLANGES OR UNIONS.
4. KEEP OPEN ENDS OF PIPE FREE FROM SCALE AND DIRT. PROTECT OPEN ENDS WITH TEMPORARY PLUGS OR CAPS.
5. AFTER COMPLETION, FILL, CLEAN, AND TREAT SYSTEMS.

H. INSTALLATION

1. INSTALL PIPING TO ALLOW FOR EXPANSION AND CONTRACTION WITHOUT STRESSING PIPE, JOINTS, OR CONNECTED EQUIPMENT.
2. PIPE SUPPORTS:
 - a. INSTALL IN ACCORDANCE WITH ASTM B31.9 AND MSS SP89.
 - b. PLACE HANGERS WITHIN 12 INCHES OF EACH HORIZONTAL ELBOW.
 - c. PRIME COAT EXPOSED STEEL HANGERS AND SUPPORTS.
3. PROVIDE CLEARANCE FROM STRUCTURE AND OTHER EQUIPMENT FOR INSTALLATION OF INSULATION AND ACCESS TO VALVES AND FITTINGS.
4. SLOPE PIPING AND ARRANGE SYSTEMS TO DRAIN AT LOW POINTS. USE ECCENTRIC REDUCERS TO MAINTAIN TOP OF PIPE LEVEL.
5. WHERE PIPE SUPPORT MEMBERS ARE WELDED TO EXISTING FRAMING, SCRAPE, BRUSH CLEAN, AND APPLY ONE COAT OF ZINC RICH PRIMER TO WELDING.
6. INSTALL VALVES WITH STEMS UPRIGHT OR HORIZONTAL, NOT INVERTED.
7. PROVIDE MANUAL AIR VENTS AT SYSTEM HIGH POINTS AND AS INDICATED.
8. ADJUST FACES OF METERS AND GAGES TO PROPER ANGLE FOR BEST VISIBILITY.

2.5 PIPING AND EQUIPMENT INSULATION

A. GENERAL:

1. QUALITY ASSURANCE
 - a. MATERIALS: FLAME SPREAD/SMOKE DEVELOPED RATING OF 25/50 OR LESS IN ACCORDANCE WITH ASTM E84, NFPA 255, AND UL 723.
2. QUALIFICATIONS
 - a. APPLICATOR: COMPANY SPECIALIZING IN PERFORMING THE WORK OF THIS SECTION WITH MINIMUM THREE YEARS EXPERIENCE.

3. DELIVERY, STORAGE, AND HANDLING

- a. DELIVER, STORE, PROTECT AND HANDLE PRODUCTS TO SITE UNDER PROVISIONS OF SECTION 1.4.
- b. DELIVER MATERIALS TO SITE IN ORIGINAL FACTORY PACKAGING, LABELED WITH MANUFACTURER'S DENSITY AND THICKNESS.
- c. STORE INSULATION IN ORIGINAL WRAPPING AND PROTECT FROM WEATHER AND CONSTRUCTION TRAFFIC.
- d. PROTECT INSULATION AGAINST DIRT, WATER, CHEMICAL, AND MECHANICAL DAMAGE.

4. ENVIRONMENTAL REQUIREMENTS

- a. MAINTAIN AMBIENT TEMPERATURES AND CONDITIONS REQUIRED BY MANUFACTURERS OF ADHESIVES, MASTICS, AND INSULATION CEMENTS.
- b. MAINTAIN TEMPERATURE DURING AND AFTER INSTALLATION FOR MINIMUM PERIOD OF 24 HOURS.

5. INSERTS AND SHIELDS:

- a. APPLICATION: PIPING 1 INCH DIAMETER OR LARGER.
- b. SHIELDS: GALVANIZED STEEL BETWEEN PIPE HANGERS OR PIPE HANGER ROLLS AND INSERTS.
- c. INSERT LOCATION: BETWEEN SUPPORT SHIELD AND PIPING AND UNDER THE FINISH JACKET.
- d. INSERT CONFIGURATION: MINIMUM 6 INCHES LONG, OF SAME THICKNESS AND CONTOUR AS ADJOINING INSULATION; MAY BE FACTORY FABRICATED.
- e. INSERT MATERIAL: ASTM C640 CORK

6. FINISH INSULATION AT SUPPORTS, PROTRUSIONS, AND INTERRUPTIONS.

- a. DO NOT INSULATE OVER NAMEPLATE OR ASME STAMPS. BEVEL AND SEAL INSULATION AROUND SUCH.
- b. INSTALL INSULATION FOR EQUIPMENT REQUIRING ACCESS FOR MAINTENANCE, REPAIR, OR CLEANING, IN SUCH A MANNER THAT IT CAN BE EASILY REMOVED AND REPLACED WITHOUT DAMAGE.
- c. IF CONDENSATION OCCURS ON ANY COLD SURFACE AT ANY TIME DURING THE WARRANTY PERIOD, OR BEFORE SUBSTANTIAL COMPLETION AFTER SYSTEMS ARE ACTIVATED, THE CONTRACTOR SHALL REWORK THE INSULATION UNTIL SATISFACTORY AT NO ADDITIONAL COST.
- d. IF CONDENSATION OCCURS ON THE OUTSIDE OF INSULATED PIPING DURING THE CONSTRUCTION PERIOD, THE CONTRACTOR SHALL MAKE THE OWNER AWARE IMMEDIATELY SO THAT THE DESIGN TEAM CAN DETERMINE THE REASONS AND INITIATE CORRECTIVE ACTION. SUBSTANTIAL COMPLETION SHALL NOT BE APPROVED UNTIL CORRECTIONS ARE AGREED TO IN WRITING, INCLUDING RESPONSIBILITY FOR COST.
- e. FINISH ALL FIELD-APPLIED INSULATION ON NEW CENTRIFUGAL CHILLER SURFACES AS REQUIRED IN ORDER TO APPLY TWO COATS OF THE CHILLER MANUFACTURER'S STANDARD PAINT. PAINT SHALL MATCH THE COLOR OF THE CHILLER.

B. FLEXIBLE CELLULAR ELASTOMERIC INSULATION:

1. INSULATION: CLOSED-CELL, EXPANDED-RUBBER MATERIAL MEETING THE REQUIREMENTS OF ASTM C534. APPLY A VAPOR BARRIER AT ALL SEAMS AND JOINTS. "K" VALUE SHALL MEET ASTM C177 OR C518 0.28 AT 75 DEG. F WITH A MAXIMUM SERVICE TEMPERATURE 220 DEG F. MAXIMUM MOISTURE ABSORPTION SHALL MEET ASTM D1056, 3.0% (PIPE) BY VOLUME. MOISTURE VAPOR TRANSMISSION SHALL MEET ASTM E96, 0.20 PERM INCHES. MAXIMUM FLAME SPREAD - 25; MAXIMUM SMOKE DEVELOPED - 50, AS MEASURED BY ASTM E84.
2. ADHESIVE: COMPLY WITH MIL-A-24179A, TYPE II, CLASS I.

C. CELLULAR GLASS INSULATION:

1. INORGANIC, INCOMBUSTIBLE, FOAMED OR CELLULATED GLASS WITH ANNEALED, RIGID, HERMETICALLY SEALED CELLS. APPLY A VAPOR BARRIER AT ALL SEAMS AND JOINTS. INSULATION SHALL MEET THE REQUIREMENTS OF ASTM C552. "K" VALUE: 0.29 AT 75 DEG F. MAXIMUM WATER VAPOR TRANSMISSION: 0.1 PERM. PREFORMED PIPE INSULATION SHALL HAVE A FACTORY-APPLIED ALL SERVICE JACKET (ASJ).
2. ADHESIVE: TWO-COMPONENT, THERMOSETTING URETHANE ADHESIVE CONTAINING NO FLAMMABLE SOLVENTS, WITH A SERVICE TEMPERATURE RANGE OF MINUS 100 TO PLUS 200 DEG F.

D. FIELD-APPLIED JACKETS:

1. ALUMINUM JACKET: JACKET SHALL BE ASTM B209 ALUMINUM, 0.020 INCH THICK WITH SMOOTH FINISH. JOINTS SHALL BE LONGITUDINAL SLIP JOINTS WITH 2 INCH LAPS. FITTINGS SHALL BE PRE-FORMED 2-PIECE OR GORE, 45- AND 90-DEGREE, SHORT- AND LONG-RADIUS ELBOWS, TEE COVERS, FLANGE AND UNION COVERS, END CAPS, BEVELED COLLARS, AND VALVE COVERS. FIELD FABRICATE FITTING COVERS ONLY IF FACTORY-FABRICATED FITTING COVERS ARE NOT AVAILABLE. JACKETS SHALL BE SECURED WITH ALUMINUM, ASTM B 209, ALLOY 3003, 3005, 3105, OR 5005, TEMPER H-14, 0.20 INCH THICK, 1/2 INCH WIDE BANDS WITH CLOSED SEALS.
2. ALUMINUM JACKET FOR PUMP BODIES: FABRICATE 0.050-INCH-THICK ALUMINUM BOXES LINED WITH INSULATION. INSTALL A VAPOR BARRIER AT SEAMS, JOINTS, AND PENETRATIONS. SEAL BETWEEN FLANGES WITH REPLACEABLE GASKET MATERIAL TO FORM A VAPOR BARRIER. FIT BOXES AROUND PUMPS AND COINCIDE BOX JOINTS WITH SPLITS IN PUMP CASINGS. FABRICATE JOINTS WITH OUTWARD BOLTED FLANGES. BOLT FLANGES ON 6 INCH CENTERS STARTING AT CORNERS. SECURE THE BOX SECTIONS TOGETHER USING LATCHING MECHANISMS.

E. INSULATION AND JACKET SCHEDULE:

1. FLEXIBLE ELASTOMERIC INSULATION (APPLIES TO CHILLER)
 - a. CHILLER SURFACES BELOW AMBIENT - MINIMUM 1 INCH THICK BUT OF SUFFICIENT THICKNESS TO PREVENT CONDENSATION.
 - b. ALL FLEXIBLE ELASTOMERIC INSULATION SHALL BE FINISHED WITH AN ALUMINUM JACKET (EXCEPT ON CHILLER)
2. CELLULAR GLASS INSULATION (APPLIES TO ALL PIPING AND APPURTENANCES)
 - a. CHILLED WATER PIPING LESS THAN 2 INCHES IN DIAMETER - MINIMUM 1 INCH THICK
 - b. CHILLED WATER PIPING 2 INCHES IN DIAMETER AND ABOVE - MINIMUM 1-1/2 INCHES THICK
 - c. PIPE APPURTENANCES AND EQUIPMENT (OTHER THAN PUMP BODIES) CONVEYING OR STORING WATER BELOW AMBIENT TEMPERATURE - MINIMUM 1 INCH THICK
 - d. CHILLED WATER PUMP BODIES - MINIMUM 2 INCHES THICK.
 - e. ALL CELLULAR GLASS INSULATION SHALL BE FINISHED WITH AN ALUMINUM JACKET

2.6 HYDRONIC SYSTEM VALVES AND SPECIALTIES

A. BALL VALVES

1. UP TO AND INCLUDING 2 INCHES: BRONZE, TWO-PIECE BODY, FULL PORT, STAINLESS STEEL BALL, TEFLON SEATS AND STUFFING BOX RING, LEVER HANDLE, THREADED ENDS WITH UNIONS.
2. OVER 2 INCHES: CAST STEEL BODY, CHROME PLATED STEEL BALL, TEFLON SEAT AND STUFFING BOX SEALS, LEVER HANDLE, FLANGED.

B. CHECK VALVE

1. GENERAL DESCRIPTION: CLASS125, IRON, COMPACT-WAFER, CENTER-GUIDED CHECK VALVE WITH RESILIENT SEAT.
2. STANDARD: MSSSP-125.
3. NPS2-1/2 TO NPS12, CWP RATING: 200 PSIG.
4. BODY MATERIAL: ASTMA126, GRAY IRON.
5. STYLE: COMPACT WAFER.
6. SEAT: ETHYLENE PROPYLENE COPOLYMER RUBBER (EPDM) OR BUNA-N (NBR).

C. BUTTERFLY VALVES: CAST OR DUCTILE IRON BODY WITH RESILIENT REPLACEABLE EPDM SEAT, LUG ENDS, EXTENDED NECK, STAINLESS STEEL STEM, AND STAINLESS STEEL DISC. PROVIDE OPERATOR AS SHOWN ON THE CONTRACT DRAWINGS.

1. MANUAL OPERATOR: LEVER HANDLE WITH MEMORY STOP.
2. MOTORIZED OPERATOR: REFER TO CONTROL SYSTEM SPECIFICATION.

D. AIR VENTS

1. AUTOMATIC TYPE: SHORT VERTICAL SECTIONS OF 2 INCH DIAMETER PIPE TO FORM AIR CHAMBER, WITH 1/8 INCH BRASS NEEDLE VALVE AT TOP OF CHAMBER.
2. FLOAT TYPE: BRASS OR SEMI-STEEL BODY, COPPER, POLYPROPYLENE, OR SOLID NON-METALLIC FLOAT, STAINLESS STEEL VALVE AND VALVE SEAT; SUITABLE FOR SYSTEM OPERATING TEMPERATURE AND PRESSURE; WITH ISOLATING VALVE.

E. PRESSURE GAUGES

1. VIBRATION RESISTANT LIQUID FILLED PRESSURE GAUGE WITH 4-1/2" DIAL. STAINLESS STEEL CASE, BRASS/BRONZE CONNECTIONS, LAMINATED SAFETY GLASS WINDOW, AND FILLED WITH GLYCERINE DESIGNED FOR WEATHERPROOF APPLICATION.
2. SCALE: 0 TO 100 PSI

F. THERMOMETERS

1. METAL-CASE, INDUSTRIAL-STYLE, LIQUID-IN-GLASS THERMOMETER. CAST ALUMINUM 9" CASE WITH ADJUSTABLE ANGLE. TUBE SHALL BE GLASS WITH MAGNIFYING LENS AND BLUE ORGANIC LIQUID WITH NONREFLECTIVE ALUMINUM BACKGROUND WITH PERMANENTLY ETCHED SCALE MARKINGS GRADUATED IN DEG F. THERMOMETER SHALL BE DESIGNED FOR THERMOWELL INSTALLATION AND WEATHERPROOF APPLICATION.
2. SCALE: 0 - 100 DEG F
3. ACCURACY: PLUS OR MINUS 1 PERCENT OF SCALE RANGE OR ONE SCALE DIVISION, TO A MAXIMUM OF 1.5 PERCENT OF SCALE RANGE.

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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	SPECIFICATIONS MECHANICAL	
					-	ALACHUA	427553-8-52-01	PROJECT NAME MATERIALS RESEARCH PARK CHILLER REPLACEMENT	SHEET NO. M7.2

2.7 AIR-COOLED WATER CHILLER

A. GENERAL

1. DELIVERY, STORAGE, AND HANDLING

- a. STORE AND PROTECT UNITS FROM PHYSICAL DAMAGE. LEAVE FACTORY SHIPPING COVERS IN PLACE UNTIL INSTALLATION.
- b. COMPLY WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR RIGGING, UNLOADING, AND TRANSPORTING UNITS.
- c. SHIP CHILLERS FROM THE FACTORY FULLY CHARGED WITH REFRIGERANT.
- d. SHIP EACH CHILLER WITH A FULL CHARGE OF REFRIGERANT. CHARGE EACH CHILLER WITH NITROGEN IF REFRIGERANT IS SHIPPED IN CONTAINERS SEPARATE FROM CHILLER.
- e. SHIP EACH OIL-LUBRICATED CHILLER WITH A FULL CHARGE OF OIL.

B. PRODUCTS

- 1. PROVIDE ANTI-CORROSION CONDENSER COATING PRODUCT.
 - a. "E-COAT" COIL COATING, FLEXIBLE MATERIAL.
 - b. APPLY UNIFORM COATING TO ALL CONDENSER COIL SURFACES INCLUDING, BUT NOT LIMITED TO:
 - 1. EDGES OF CONDENSER FINS
 - 2. COIL SURFACE
 - 3. COIL HEADER PIPING
 - 4. COIL FIN SURFACES
 - 5. COIL FRAMES
 - 6. 0.6-1.2 MIL LAYER THICKNESS
 - c. TESTED TO A 3,000 HOUR SALT SPRAY DURATION TEST.
 - d. PROTECTION OF COIL IN TEMPERATURE RANGE OF -40°F TO +325°F.

- 2. REFER TO EQUIPMENT SCHEDULE FOR OTHER PROVISIONS.

C. EXECUTION

- 1. INSTALLATION
 - a. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
 - b. PROVIDE FOR CONNECTION OF ELECTRICAL WIRING BETWEEN STARTER AND CHILLER CONTROL PANEL, OIL PUMP, AND PURGE UNIT.
 - c. ALIGN CHILLER ON CONCRETE FOUNDATIONS, SOLE PLATES, AND SUB-BASES. LEVEL, GROUT, AND BOLT IN PLACE.
 - d. INSTALL UNITS ON NEOPRENE VIBRATION ISOLATORS.
 - e. PROVIDE EVAPORATOR CONNECTIONS TO CHILLED WATER PIPING.
 - f. FURNISH AND INSTALL NECESSARY AUXILIARY WATER PIPING FOR OIL COOLING UNITS AND PURGE CONDENSERS.
 - g. INSULATE EVAPORATOR AND COLD SURFACES.
- 2. MANUFACTURER'S FIELD SERVICES
 - a. COORDINATE SERVICES OF FACTORY TRAINED REPRESENTATIVE TO LEAK TEST, REFRIGERANT PRESSURE TEST, EVACUATE, DEHYDRATE, CHARGE, START-UP, CALIBRATE CONTROLS, AND INSTRUCT OWNER ON OPERATION AND MAINTENANCE.

2.8 HYDRONIC PUMPS

A. GENERAL

- 1. QUALITY ASSURANCE
 - a. MANUFACTURER: COMPANY SPECIALIZING IN MANUFACTURE, ASSEMBLY, AND FIELD PERFORMANCE OF PUMPS WITH MINIMUM THREE YEARS EXPERIENCE.
 - b. ALIGNMENT: BASE MOUNTED PUMPS SHALL BE ALIGNED BY QUALIFIED MILLWRIGHT AND ALIGNMENT CERTIFIED.
- 2. GENERAL CONSTRUCTION REQUIREMENTS
 - a. BALANCE: ROTATING PARTS, STATICALLY AND DYNAMICALLY.
 - b. CONSTRUCTION: TO PERMIT SERVICING WITHOUT BREAKING PIPING OR MOTOR CONNECTIONS.
 - c. PUMP MOTORS: OPERATE AT 1150 RPM UNLESS SPECIFIED OTHERWISE.
 - d. PUMP CONNECTIONS: FLANGED.

B. PRODUCTS

1. VERTICAL IN-LINE PUMPS

- a. TYPE: VERTICAL, SINGLE STAGE, CLOSE COUPLED, HORIZONTALLY SPLIT CASING, FOR IN-LINE MOUNTING, FOR 175 PSIG WORKING PRESSURE.
- b. CASING: CAST IRON, WITH SUCTION AND DISCHARGE PORT, CASING WEAR RING, SEAL FLUSH CONNECTION, DRAIN PLUG, FLANGED SUCTION AND DISCHARGE.
- c. IMPELLER: BRONZE, FULLY ENCLOSED, KEYED DIRECTLY TO MOTOR SHAFT OR EXTENSION.
- d. SHAFT: STAINLESS STEEL.
- e. SEAL: CARBON ROTATING AGAINST A STATIONARY CERAMIC SEAT, VITON FITTED.
- f. MOTOR: TOTALLY ENCLOSED FAN COOLED (TEFC) MOTOR DESIGNED FOR CONTINUOUS OPERATION IN 105 DEG F ENVIRONMENT. VISIBLE NAMEPLATE INDICATING MOTOR HORSEPOWER, VOLTAGE, PHASE, CYCLES, RPM, FULL

LOAD AMPS, LOCKED ROTOR AMPS, FRAME SIZE, MANUFACTURER'S NAME AND MODEL NUMBER, SERVICE FACTOR, POWER FACTOR, AND EFFICIENCY.

- g. VFD APPLICATION: PROVIDE INVERTER-DUTY MOTOR WITH GROUNDED SHAFT.
- h. PERFORMANCE: REFER TO SCHEDULE.

C. EXECUTION

1. INSTALLATION

- a. INSTALL PUMPS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- b. PROVIDE ACCESS SPACE AROUND PUMPS FOR SERVICE. PROVIDE NO LESS THAN MINIMUM AS RECOMMENDED BY MANUFACTURER.
- c. ENSURE PUMPS OPERATE AT SPECIFIED SYSTEM FLUID TEMPERATURES WITHOUT VAPOR BINDING AND CAVITATION, ARE NON-OVERLOADING AND OPERATE WITHIN 25 PERCENT OF MIDPOINT OF PUBLISHED MAXIMUM EFFICIENCY CURVE.
- d. DECREASE FROM LINE SIZE WITH LONG RADIUS REDUCING ELBOWS OR REDUCERS. SUPPORT PIPING ADJACENT TO PUMP SUCH THAT NO WEIGHT IS CARRIED ON PUMP CASINGS. FOR CLOSE COUPLED OR BASE MOUNTED PUMPS, PROVIDE SUPPORTS UNDER ELBOWS ON PUMP SUCTION AND DISCHARGE LINE SIZES 4 INCHES AND OVER.
- e. PROVIDE AIR COCK AND DRAIN CONNECTION ON HORIZONTAL PUMP CASINGS.
- f. PROVIDE DRAINS FOR BASES AND SEALS, PIPED TO AND DISCHARGING INTO FLOOR DRAINS.
- g. LUBRICATE PUMPS BEFORE START-UP.
- h. INSULATE PUMP BODIES, REFER TO INSULATION SPECIFICATION FOR MORE INFORMATION.

2.9 CONTROL SYSTEM

- A. THE NEW CHILLER SHALL INCORPORATE EXISTING SENSORS AND MONITORING DEVICES INTO THE EXISTING CONTROL SYSTEM.
- B. IF EXISTING DEVICES NEED TO BE REPLACED, THEY SHALL BE A DIRECT REPLACEMENT OF THE ORIGINAL DEVICE. PROVIDE NEW CONTROL WIRING TO EXISTING TERMINATIONS, AS REQUIRED.
- C. COMMUNICATION WITH ENERGY MANAGEMENT SYSTEM.
 - 1. DESIGN INTENT IS TO MATCH EXISTING MONITORING AND CONTROL POINTS. CONTRACTOR TO COORDINATE WITH EXISTING CONTROLS SYSTEM.
- D. CONTROL WIRING:
 - 1. ALL CONDUCTORS SHALL BE OF STRANDED COPPER WIRE. PROVIDE RIGID STEEL CONDUIT FOR ALL CONTROL WIRING.
 - 2. ALL CONDUIT AND OUTLET BOXES SHALL CONFORM TO THE REQUIREMENTS SPECIFIED UNDER DIVISION 16, ELECTRICAL. ALL FLEXIBLE WIRING CONDUIT SHALL BE LIQUID-TIGHT. PROVIDE ALL CONTROL WIRING IN CONDUIT.
 - 3. ALL WIRING CABLES SHALL HAVE 300 VOLT INSULATION.

2.10 TEST AND BALANCE

- A. THE MECHANICAL CONTRACTOR SHALL TEST AND BALANCE THE SYSTEM. ALL INSTRUMENTS USED SHALL BE ACCURATELY CALIBRATED AND MAINTAINED IN GOOD WORKING ORDER.
- B. PREPARE A WRITTEN REPORT WHICH SHALL INCLUDE DIAGRAMS AND DESCRIPTION OF PROCEDURES TOGETHER WITH ALL RECORDED TEST DATA. SUBMIT THREE COPIES OF THE FINAL TEST DATA FOR APPROVAL.
- C. CONDUCT BALANCING AND TESTING IN ACCORDANCE WITH TECHNICAL PORTIONS OF THE ASSOCIATED AIR BALANCING COUNCIL -- "NATIONAL STANDARD FOR TOTAL SYSTEM BALANCE" - CURRENT EDITION. TEST PROCEDURES NOT IN ACCORDANCE OR NOT DESCRIBED IN THE STANDARDS SHALL BE APPROVED BY THE ENGINEER IN WRITING.

D. SHOULD THE BASIC SYSTEM OR ANY OF ITS COMPONENTS FAIL TO MEET CONTRACT REQUIREMENTS, AND THEREBY MAKE THE TESTING AND BALANCING WORK INVALID, NOTIFY THE ENGINEER AND STOP THE TESTS UNTIL SUCH TIME THAT THE FAILURE IS CORRECTED.

E. SPECIFIC TESTING AND BALANCING PROCEDURES SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:

1. CHILLERS:

- a. IDENTIFICATION/NUMBER
- b. MANUFACTURER
- c. CAPACITY, DESIGN AND ACTUAL
- d. MODEL
- e. AMBIENT AIR TEMPERATURE
- f. EVAPORATOR ENTERING WATER TEMPERATURE, DESIGN AND ACTUAL
- g. EVAPORATOR LEAVING WATER TEMPERATURE, DESIGN AND ACTUAL
- h. EVAPORATOR PRESSURE DROP, DESIGN AND ACTUAL
- i. EVAPORATOR WATER FLOW RATE, DESIGN AND ACTUAL
- j. VOLTS/PHASE/HERTZ

2. PRIMARY CHILLED WATER PUMPS:

- a. IDENTIFICATION/NUMBER
- b. MANUFACTURER
- c. SIZE/MODEL
- d. IMPELLER
- e. SERVICE
- f. DESIGN FLOW RATE, PRESSURE DROP, BHP
- g. ACTUAL FLOW RATE, PRESSURE DROP, BHP
- h. DISCHARGE PRESSURE
- i. SUCTION PRESSURE
- j. TOTAL OPERATING HEAD PRESSURE
- k. SHUT OFF, DISCHARGE AND SUCTION PRESSURES
- l. SHUT OFF, TOTAL HEAD PRESSURE
- m. VOLTS/PHASE/HERTZ

2.11 CERTIFICATION OF SYSTEMS

A. PRIOR TO COMPLETION OF THE CONTRACT AND FINAL ACCEPTANCE OF THE FACILITY, THE CONTRACTOR SHALL PRESENT TO THE OWNER A CERTIFICATE THAT ALL MECHANICAL AND OTHER SYSTEMS HAVE BEEN TESTED AND THAT THE INSTALLATION AND PERFORMANCE OF THESE SYSTEMS CONFORM TO THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS.

2.12 ELECTRICAL COORDINATION

A. THE EQUIPMENT INDICATED ON THE DRAWINGS HAS BEEN COORDINATED WITH THE ELECTRICAL SYSTEMS. IF THIS CONTRACTOR SELECTS TO USE ALTERNATE EQUIPMENT, THEY SHALL BE RESPONSIBLE FOR ALL COORDINATION WITH THE ELECTRICAL ENGINEER AND SHALL BEAR ANY ADDED EXPENSE TO THE ELECTRICAL CONTRACTOR RESULTING FROM SUCH ALTERNATE SELECTION.

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ABBREVIATIONS

A	AMP
AC	AIR CONDITIONING [UNIT]
AD	AIR DOOR
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISH GRADE
AHU	AIR HANDLING UNIT
BLDG.	BUILDING
C.	CONDUIT
C.B.	CIRCUIT BREAKER
CU	CONDENSING UNIT
DISC.	DISCONNECT
EF	EXHAUST FAN
ETC.	ET CETERA
FA	FIRE ALARM
HP	HEAT PUMP
JB	JUNCTION BOX
LP	LIGHTNING PROTECTION
LTG	LIGHTING
MIN.	MINIMUM
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
N.T.S	NOT TO SCALE.
P	POLE
SPD	SURGE PROTECTIVE DEVICE
UON	UNLESS OTHERWISE NOTED
V	VOLTS
WP	WEATHERPROOF
XFMR	TRANSFORMER

POWER

	SIMPLEX RECEPTACLE, 20 AMP, WITH FLUSH WALL OUTLET BOX.	a, f
	DUPLEX RECEPTACLE, 20 AMP, WITH FLUSH WALL OUTLET BOX.	a, f
	DOUBLE DUPLEX RECEPTACLE, 20 AMPS EACH, WITH TWO-GANG FLUSH WALL OUTLET BOX.	a, f
	GFI DUPLEX RECEPTACLE, 20 AMP, WITH FLUSH WALL OUTLET BOX.	a, f
	WEATHERPROOF GFI DUPLEX RECEPTACLE, 20 AMP, WITH CAST ALUMINUM SURFACE MOUNTED OUTLET BOX AND WEATHERPROOF "IN-USE" CAST ALUMINUM COVER.	a, f
	SPECIAL PURPOSE RECEPTACLE, AS NOTED ON PLANS, WITH FLUSH WALL OUTLET BOX.	a, f
	SURFACE MOUNTED JUNCTION BOX AND BLANK PLATE.	f, h, i
	SURFACE MOUNTED WEATHERPROOF JUNCTION BOX AND BLANK PLATE, WALL MTD. OR MTD. TO CEILING/STRUCTURE AS INDICATED.	f, h, i
	JUNCTION BOX AND BLANK PLATE, ABOVE CEILING.	e, f
	FLUSH CEILING JUNCTION BOX AND BLANK PLATE.	e, f
	MOTOR, AS NOTED.	j
	DISCONNECT SWITCH. REFER TO EQUIPMENT FEEDER SCHEDULE FOR REQUIREMENTS (I.E. SIZE, FUSED, NON-FUSED, ETC.)	h, j
	MAGNETIC MOTOR STARTER OR CONTACTOR, AS NOTED.	h, j
	COMBINATION DISCONNECT/MOTOR STARTER, AS NOTED.	h, j
	CONTROL AND/OR POWER EQUIPMENT CONNECTION.	j
	120/208V BRANCH CIRCUIT PANELBOARD, SURFACE MOUNTED	h, j
	277/480V BRANCH CIRCUIT PANELBOARD	h, j
	TRANSFORMER, PAD MOUNTED (PROVIDE 4" CONCRETE HOUSEKEEPING PAD FOR ALL INDOOR APPLICATIONS.)	j
	BRANCH CIRCUIT CONDUIT CONCEALED ABOVE CEILING OR IN WALL. MINIMUM TWO CONDUCTORS PLUS GROUND. REFER TO SPECIFICATIONS AND EQUIPMENT FEEDER SCHEDULE FOR CONDUCTOR REQUIREMENTS. ARROWS INDICATE CIRCUIT CONNECTIONS AND HOMERUNS TO PANEL AS INDICATED ON PLANS. TYPICAL FOR ALL RACEWAY TYPES, U.O.N.	
	BRANCH CIRCUIT CONDUIT CONCEALED BELOW SLAB OR UNDERGROUND	
	BRANCH CIRCUIT CONDUIT EXPOSED	
	CONDUIT CONTINUED	
	CONDUIT CAPPED OFF	
	CONDUIT RUN UP	
	CONDUIT RUN DOWN	

SYMBOL LEGEND NOTES

1. THE COLOR OF ALL DEVICES SHALL BE SELECTED BY THE OWNER'S REPRESENTATIVE. COVER PLATES SHALL BE #302 SMOOTH STAINLESS STEEL, UNLESS OTHERWISE NOTED.
2. SCREENED ELECTRICAL ITEM DENOTES EXISTING.
3. "R" BY DEVICE DENOTES EXISTING TO BE REMOVED COMPLETELY.
4. "H" BY DEVICE DENOTES DEVICE TO BE MOUNTED HORIZONTALLY.
5. ALL DIMENSIONS INDICATED ARE TO THE BOTTOM OF FIXTURE, OUTLET, OR EQUIPMENT AND SHALL BE THE DIMENSIONS USED UNLESS INDICATED OTHERWISE ON THE DRAWINGS. DIMENSIONS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATIONS ARE TO THE BOTTOM OF THE FIXTURE, OUTLET, OR EQUIPMENT UNLESS INDICATED OTHERWISE. ALL MOUNTING HEIGHTS SHALL COMPLY WITH ADA REQUIREMENTS. VERIFY AND COORDINATE THE EXACT HEIGHT AND LOCATION OF ALL FIXTURES, OUTLETS, AND EQUIPMENT WITH ALL DOCUMENTS AND DISCIPLINES (I.E., ARCHITECTURAL, STRUCTURAL, HVAC, PLUMBING, FIRE PROTECTION, KITCHEN EQUIPMENT, MILLWORK, ETC.) PRIOR TO ROUGH-IN; ADJUST TO MEET ALL REQUIREMENTS.
6. ALL SYMBOLS INDICATED IN THIS LEGEND MAY NOT BE USED ON THE PLANS.
7. ALL WIRING DEVICES SHALL BE PROVIDED WITH A GROUNDING TERMINAL SCREW.
8. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
9. U.O.N. = UNLESS OTHERWISE NOTED.
10. A.H.J. = AUTHORITY HAVING JURISDICTION.
11. A.F.F. = ABOVE FINISHED FLOOR
12. ELECTRICAL CONTRACTOR TO PROVIDE PULL STRINGS IN ALL CONDUIT(S).

REMARKS

- a. MOUNTED 16" ABOVE FINISHED FLOOR TO THE BOTTOM.
- b. MOUNTED 44" ABOVE FINISHED FLOOR TO THE BOTTOM.
- c. MOUNTED 50" ABOVE FINISHED FLOOR TO THE BOTTOM.
- d. OUTLET BOX SHALL BE SIZED PER SYSTEM INSTALLERS REQUIREMENTS.
- e. SUPPORT OUTLET BOX FROM STRUCTURE.
- f. JUNCTION/OUTLET BOX SHALL BE SIZED AS REQUIRED FOR CONDUCTOR/DEVICES FILL PER N.E.C.
- g. THREADED CONDUIT HUBS SHALL BE SIZED AND CONFIGURED AS REQUIRED FOR APPLICATION.
- h. PROVIDE 1-1/2"x1-1/2" STEEL CHANNEL MOUNTING RACK FOR FREE STANDING APPLICATIONS.
- i. WHEN SURFACE JUNCTION BOX SYMBOL IS COMBINED WITH DEVICE SYMBOL, PROVIDE APPROPRIATE SURFACE PLATE FOR OUTLET APPLICATION.
- j. MAINTAIN WORKING CLEARANCES IN STRICT ACCORDANCE WITH N.E.C. COORDINATE EXACT LOCATION OF EQUIPMENT WITH ALL DISCIPLINES (I.E. HVAC, PLUMBING, ETC.) PRIOR TO ROUGH-IN TO MAINTAIN CLEARANCES.

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GENERAL ELECTRICAL NOTES

1. ALL BRANCH CIRCUIT CONDUCTORS WILL BE SIZED PER NEC MINIMUM. THE MINIMUM ALLOWABLE BRANCH CIRCUIT CONDUCTOR SIZE IS #12 AWG COPPER. INCREASE CONDUCTOR SIZE FOR APPLICATION PER NEC AND AS NOTED ON THE PLANS.
2. CONDUCTOR SIZES INDICATED ON CIRCUIT HOMERUNS OR IN SCHEDULES SHALL BE INSTALLED OVER THE ENTIRE LENGTH OF THE CIRCUIT UNLESS OTHERWISE NOTED ON THE DRAWINGS.
3. UP TO THREE PHASE CONDUCTORS, CORRESPONDING SWITCHLEGS AND NEUTRALS ARE ALLOWED IN THE SAME RACEWAY UNLESS INDICATED OTHERWISE ON THE DRAWINGS. DO NOT COMBINE HOMERUNS.
4. PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR IN ALL FEEDERS AND BRANCH CIRCUITS.
5. VERIFY EXACT LOCATION OF ALL MECHANICAL EQUIPMENT WITH MECHANICAL INSTALLER PRIOR TO ROUGH-IN.
6. ALL EMPTY CONDUITS SHALL BE PROVIDED WITH PULL STRINGS IN THEM.
7. THE USE OF ANY PROCESS INVOLVING ASBESTOS OR PCB, AND THE INSTALLATION OF ANY PRODUCT, INSULATION, COMPOUND OF MATERIAL CONTAINING OR INCORPORATING ASBESTOS OR PCB, IS PROHIBITED. THE REQUIREMENTS OF THIS SPECIFICATION FOR A COMPLETE AND PROPERLY OPERATING ELECTRICAL SYSTEM SHALL BE MET WITHOUT THE USE OF ASBESTOS OR PCB.
8. VISIT THE EXISTING FACILITY AND CAREFULLY EXAMINE THOSE PORTIONS OF THE BUILDING AND SITE AFFECTED BY THIS WORK BEFORE SUBMITTING PROPOSALS, SO AS TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT EXECUTION OF THE WORK. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH EXAMINATION HAS BEEN MADE AND LATER CLAIMS FOR LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WILL NOT BE RECOGNIZED.
9. CONTRACTOR SHALL INCLUDE IN HIS BID THE TRANSPORT AND DISPOSAL OR RECYCLING OF ALL WASTE MATERIALS GENERATED BY THIS PROJECT IN ACCORDANCE WITH ALL RULES, REGULATIONS AND GUIDELINES APPLICABLE.
10. EXISTING CONDITIONS AND UTILITIES INDICATED ARE TAKEN FROM EXISTING CONSTRUCTION DOCUMENTS, VARIOUS SURVEYS AND FIELD INVESTIGATIONS. IT IS TO BE UNDERSTOOD THAT UNFORESEEN CONDITIONS PROBABLY EXIST AND NEW WORK MAY NOT BE FIELD LOCATED EXACTLY AS SHOWN ON THE DRAWINGS. COOPERATION WITH OTHER TRADES IN ROUTING AND/OR BURIAL DEPTHS AS DETERMINED DURING CONSTRUCTION AND AS DIRECTED BY THE ENGINEER MAY BE NECESSARY AND IT IS INTENDED THAT SUCH DEVIATIONS SHALL BE CONSIDERED A PART OF THIS CONTRACT. IT IS ALSO UNDERSTOOD THAT THE PLANS ARE NOT COMPLETELY TO SCALE. THIS CONTRACTOR IS TO FIELD VERIFY DIMENSIONS OF ALL SITE UTILITIES, ETC., PRIOR TO BID AND INCLUDE ANY DEVIATIONS IN THE CONTRACT.
11. LOCATE ALL EXISTING UTILITIES AND PROTECT THEM FROM DAMAGE.
12. REMOVE EXISTING POWER, LIGHTING, SYSTEMS MATERIALS AND EQUIPMENT WHICH ARE MADE OBSOLETE OR WHICH INTERFERE WITH THE CONSTRUCTION OF THE PROJECT. REINSTALL ANY SUCH POWER, LIGHTING, SYSTEMS, MATERIALS AND EQUIPMENT WHICH ARE REQUIRED TO REMAIN ACTIVE FOR THE FACILITY TO BE FULLY FUNCTIONAL.
13. ALL RECEPTACLES, DEVICES, LIGHTING, SYSTEMS AND EQUIPMENT NOT SHOWN, AND IN AREAS OUTSIDE OF REMODELING SHALL REMAIN ACTIVE UNLESS OTHERWISE NOTED. FURNISH AND INSTALL ACCESSIBLE JUNCTION BOXES AND REWORK EXISTING CIRCUITS AS REQUIRED TO MAINTAIN CIRCUIT CONTINUITY TO RECEPTACLES, DEVICES, LIGHTING, SYSTEMS AND EQUIPMENT.
14. ALL ITEMS REMOVED AND NOT REUSED SHALL BE TURNED OVER TO OWNER. DISCARD COMPLETE ITEMS WHICH OWNER ELECTS TO REFUSE.
15. PROVIDE TEMPORARY WIRING AND CONNECTIONS TO MAINTAIN EXISTING SYSTEMS IN SERVICE DURING CONSTRUCTION. WHEN WORK MUST BE PERFORMED ON ENERGIZED EQUIPMENT OR CIRCUITS, USE PERSONNEL EXPERIENCED IN SUCH OPERATIONS AND USE APPROPRIATE PERSONNEL PROTECTION EQUIPMENT. FOLLOW ALL SAFETY PROCEDURES INCLUDED IN NFPA 70E.
16. EXISTING ELECTRICAL SERVICE: MAINTAIN EXISTING SYSTEM IN SERVICE UNTIL NEW SYSTEM IS COMPLETE AND READY FOR SERVICE. DISABLE SYSTEM ONLY TO MAKE SWITCHOVERS AND CONNECTIONS. OBTAIN PERMISSION FROM OWNER AT LEAST 72 HOURS BEFORE PARTIALLY OR COMPLETELY DISABLING SYSTEM. MINIMIZE OUTAGE DURATION.
17. SCREENED ELECTRICAL INDICATES EXISTING TO REMAIN ACTIVE, UNLESS NOTED OTHERWISE.
18. EXISTING OUTLET BOXES AND CONDUIT WHICH ARE LOCATED PROPERLY FOR NEW WORK AND COMPLIES WITH SPECIFICATIONS MAY BE REUSED FOR NEW DEVICES AND WIRE.
19. ALL CONDUIT AND WIRE REMOVED SHALL BE TAKEN BACK TO THE SOURCE OF SUPPLY.
20. ALL NEW CIRCUIT BREAKERS WITHIN EACH EXISTING PANELBOARD SHALL BE THE SAME MANUFACTURER TYPE, STYLE AND A.I.C. RATING OF EXISTING PANELBOARD.

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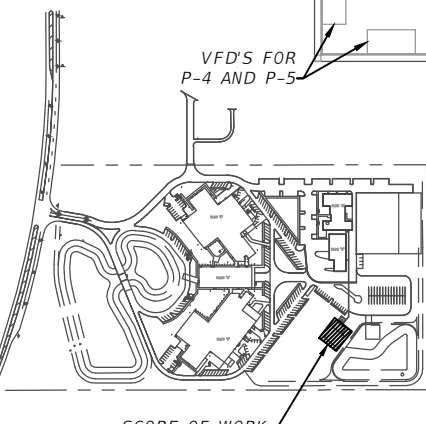
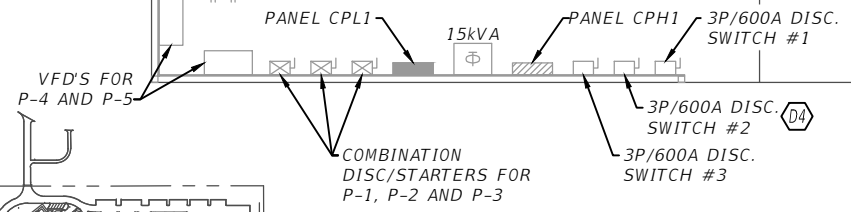
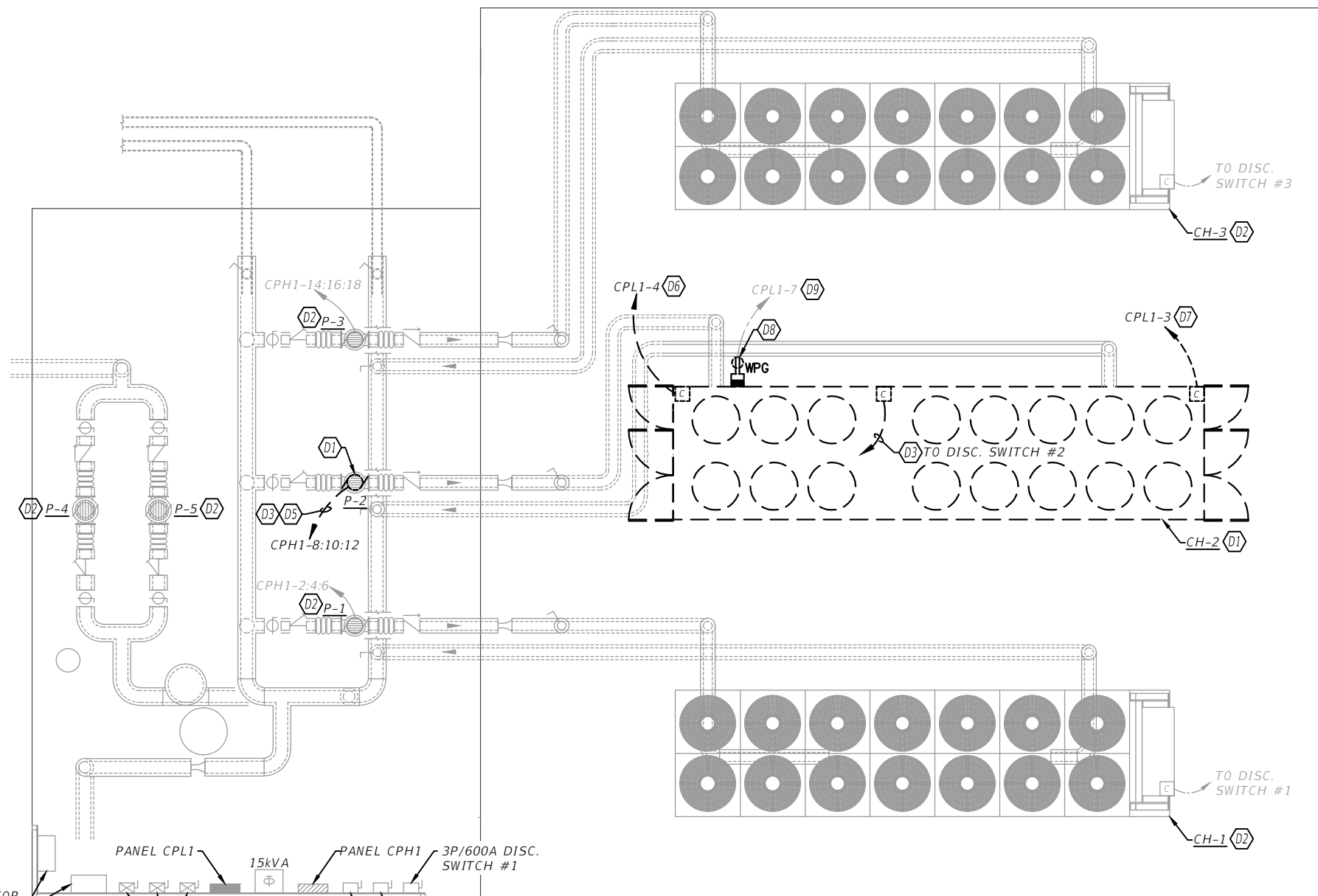
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GENERAL NOTES

1. REFER TO SYMBOL LEGEND ON DRAWING E0.1.
2. REFER TO GENERAL NOTES ON DRAWING E0.2.
3. REFER TO SPECIFICATIONS ON DRAWING E7.0.
4. SCREENED ITEM DENOTES EXISTING TO REMAIN.
5. COORDINATE ALL WORK WITH MECHANICAL CONTRACTOR.
6. REFER TO CENTRAL PLANT NEW - ELECTRICAL ON DRAWING E1.0.
7. REFER TO POWER RISER DIAGRAMS ON DRAWING E6.0.
8. FIELD VERIFY ALL EXISTING CIRCUITRY.

REFERENCE NOTES - DEMO

- D1 EXISTING MECHANICAL EQUIPMENT TO BE REMOVED AND REPLACED WITH NEW.
- D2 EXISTING MECHANICAL EQUIPMENT TO REMAIN ACTIVE.
- D3 DISCONNECT EXISTING EQUIPMENT AND REMOVE CONDUCTORS COMPLETE. EXISTING U.G. CONDUIT TO BE REUSED.
- D4 FUSED AT 600A.
- D5 CONNECTED VIA EXISTING COMBINATION DISCONNECT/STARTER.
- D6 120V CIRCUIT FOR CHILLER EVAP. HEATER. DISCONNECT CIRCUIT AND REMOVE CONDUCTORS BACK TO SOURCE. RELABEL CIRCUIT "SPARE" IN PANEL SCHEDULE. ALL OTHER 120V CIRCUITS STILL IN USE FOR EXISTING EQUIPMENT TO REMAIN ACTIVE.
- D7 120V CIRCUIT FOR CHILLER CONTROLS. DISCONNECT CIRCUIT AND REMOVE CONDUCTORS BACK TO SOURCE. REMOVE ALL VISIBLE PORTIONS OF RACEWAY. RELABEL CIRCUIT "SPARE" IN PANEL SCHEDULE.
- D8 REMOVE EXISTING 120V WPG RECEPTACLE AND BOX.
- D9 EXISTING CIRCUIT TO BE REUSED.



1 CENTRAL PLANT DEMOLITION - ELECTRICAL
ED1.0 1/8" = 1'-0"



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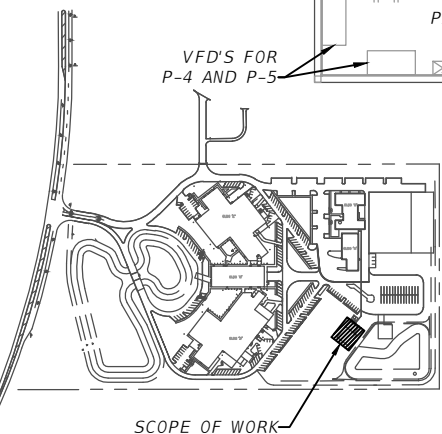
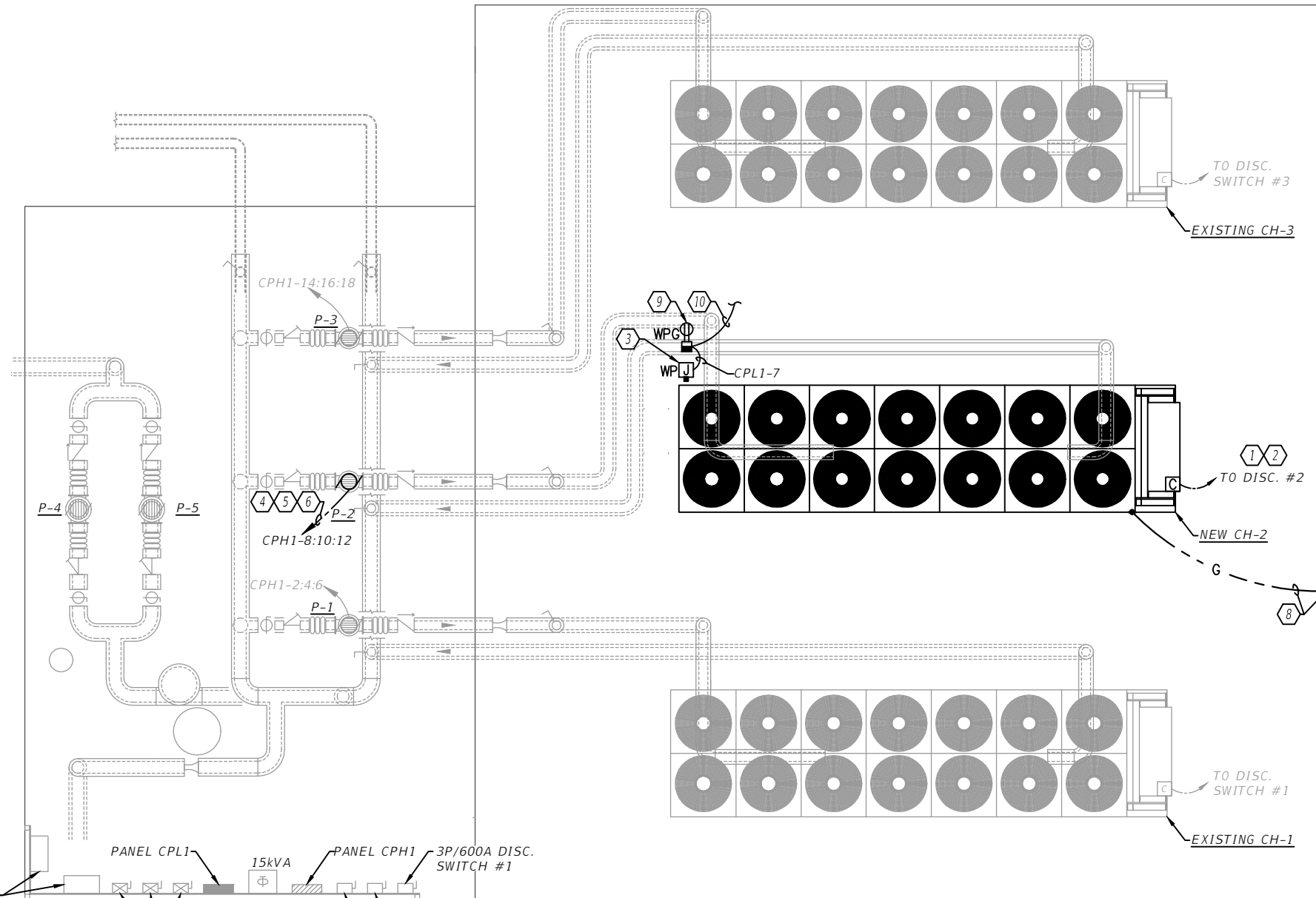
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1. REFER TO SYMBOL LEGEND ON DRAWING E0.1.
2. REFER TO GENERAL NOTES ON DRAWING E0.2.
3. REFER TO SPECIFICATIONS ON DRAWING E7.0.
4. SCREENED ITEM DENOTES EXISTING TO REMAIN.
5. COORDINATE ALL WORK WITH MECHANICAL CONTRACTOR.
6. REFER TO CENTRAL PLANT DEMOLITION - ELECTRICAL ON DRAWING ED1.0.
7. REFER TO EQUIPMENT FEEDER SCHEDULE ON DRAWING E5.0.
8. REFER TO POWER RISER DIAGRAMS ON DRAWING E6.0.

REFERENCE NOTES - NEW

- ① PROVIDE NEW CONDUCTORS IN EXISTING U.G. CONDUIT AND CONNECT NEW MECHANICAL EQUIPMENT AS INDICATED.
- ② CUT AND PATCH EXISTING CONCRETE SLAB AS REQUIRED TO INTERCEPT, CONNECT AND EXTEND EXISTING U.G. CONDUITS TO NEW LOCATION FOR CONNECTION TO CHILLER.
- ③ PROVIDE NEW WP J-BOX MOUNTED ON STEEL CHANNEL. INTERCEPT, CONNECT AND EXTEND EXISTING 120V CIRCUITS CURRENTLY UTILIZED AS REQUIRED TO MAINTAIN CIRCUIT CONTINUITY. PROVIDE NEW CONDUCTORS IN EXISTING RACEWAYS IF REQUIRED.
- ④ PROVIDE NEW CONDUCTORS IN EXISTING U.G. CONDUIT AND CONNECT NEW PUMP.
- ⑤ CONNECTED VIA EXISTING COMBINATION DISCONNECT/STARTER.
- ⑥ REMOVE EXISTING 3P/20A BREAKER IN 480V PANELBOARD AND REPLACE WITH NEW 3P/25A BREAKER.
- ⑦ VERIFY RATING OF EXISTING THERMAL UNITS IN P-2 STARTER AND REPLACE WITH NEW IF REQUIRED PER NAMEPLATE OF NEW PUMP. SIZE PER REQUIREMENTS OF NEC 430 SECTION III.
- ⑧ BOND CHILLER FRAME TO (1) #5/8 x 20'-0" COPPERCLAD GROUND ROD WITH #2/0 COPPER GROUND CONDUCTOR. PROVIDE EXOTHERMIC CONNECTION AT GROUND ROD. INSTALL GROUND CONDUCTOR IN PVC CONDUIT BELOW EXIST. CONCRETE PAD (CUT AND PATCH PAD AS REQUIRED TO FACILITATE INSTALLATION).
- ⑨ PROVIDE NEW 120V WPG RECEPTACLE WITH "IN-USE" COVER.
- ⑩ CONNECT EXISTING RECEPTACLE CIRCUIT TO NEW 120V/WPG OUTLET FURNISHED AND INSTALLED WITH NEW CHILLER.



1 **CENTRAL PLANT NEW - ELECTRICAL**
E1.0 1/8" = 1'-0"

REVISIONS				ADAM S. LEVINE, P.E. P.E. 77010 Sims Wilkerson Cartier Engineering, Inc. 12124 High Tech Avenue - Suite 200 Orlando, Florida 32817 FL. CERT. OF AUTH. NO. 6106	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET TITLE CENTRAL PLANT NEW ELECTRICAL		REF. DWG. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	PROJECT NAME		SHEET NO.
						-	ALACHUA	427553-8-52-01	MATERIALS RESEARCH PARK CHILLER REPLACEMENT	

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23-004, F.A.C.

EQUIPMENT FEEDER SCHEDULE

EQUIPMENT DESCRIPTION	VOLTS	PH	NEUT Y OR N	MOTOR (LARGEST)		ADDITIONAL MOTORS		HEATER OR LIGHTING LOAD		MISC AMPS	TOTAL AMPS	PNL C.B. SIZE AMPS	DISCONNECT		STARTER		VOLTAGE DROP	WIRE PER PHASE	NEUT WIRE	GND WIRE	# OF RUNS	CONDUIT SIZE	NOTES
				H.P.	FLA	H.P.	FLA	KW	AMPS				SIZE AMPS	FUSE SIZE AMPS	SIZE NEMA	TYPE							
NEW CH-2	480	3	N		184.00		216.60				401	600	600	600			0.63%	#300		#1	2	2-1/2"	
NEW P-2	480	3	N	10.00	12.40						12	25					0.83%	#10		#10	1	3/4"	

GENERAL NOTES:

- (1) - PROVIDE DISC. SW. AT ALL PIECES OF EQUIPMENT, UNLESS OTHERWISE NOTED ON THIS SCHEDULE.
- (2) - C.B., STARTER, DISC. & FUSE SIZES SHOWN FOR REFERENCE ONLY, SIZE AS RECOMMENDED BY EQUIPMENT MANUFACTURER. VERIFY REQUIREMENTS WITH APPROVED EQUIPMENT SHOP DRAWINGS.
- (3) - PROVIDE NEMA OUTDOOR RATED ENCLOSURES FOR ALL DISC. SWS MOUNTED OUTDOORS.
- (4) - COORDINATE STARTER TYPE WITH EQUIPMENT PROVIDER.
- (5) - E.C. TO VERIFY THAT C.B.'S FOR MOTORS ARE SUFFICIENT TO ALLOW STARTING OF MOTOR, IF REQUIRED FOR STARTING C.B. TO BE INCREASED TO A MAX OF 225% OF LARGEST MOTOR F.L.A.
- (6) - INCREASE CONDUCTOR SIZES AS REQUIRED TO MAINTAIN A MAXIMUM OF 3% VOLTAGE DROP BASED ON ACTUAL CIRCUIT LENGTHS AS INSTALLED.
- (7) - TOTAL AMPS SHOWN DO NOT INCLUDE NON-COINCIDENTAL LOADS

ABBREVIATIONS:

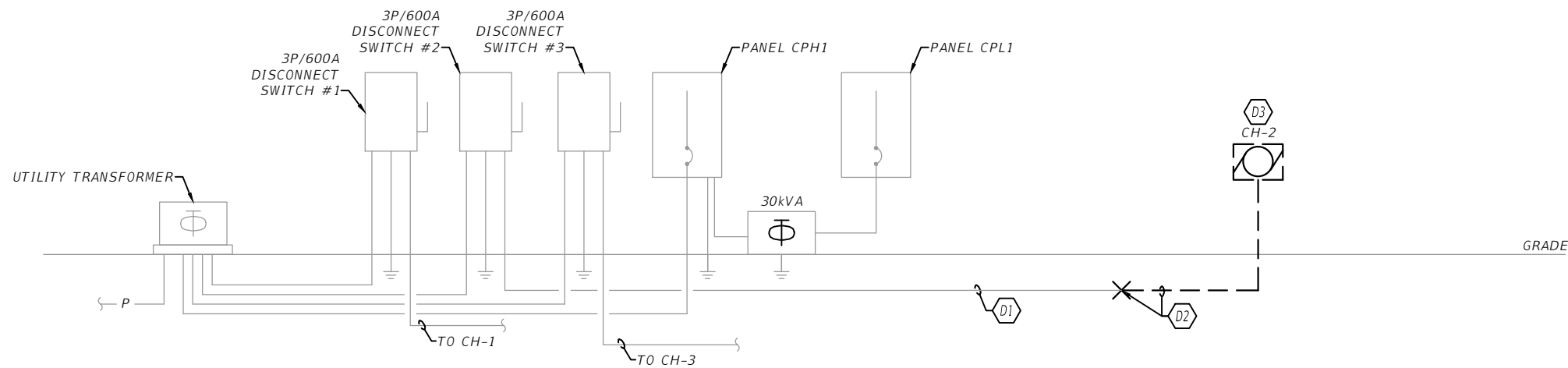
MCP = MOTOR CIRCUIT PROTECTOR C.B.	N.F. = NON-FUSED
MMS = MAN. MTR. STARTER 20A SW. WITH O.L. AND PILOT	O.L. = THERMAL OVER LOAD ELEMENT
MSS = MOTOR STARTING 20A SW. WITHOUT O.L.	I = NEMA I ENCLOSURE
VFD = VARIABLE FREQ. DRIVE UNIT.	3R = NEMA 3R ENCLOSURE
CBMC = COMB. DISC(MCP) AND MAG. MOTOR STARTER(MMC)	4SS = NEMA 4 W.P. STAINLESS STEEL ENCL.
MMC = MAGNETIC MOTOR CONTROLLER W/O.L.	

NOTES:

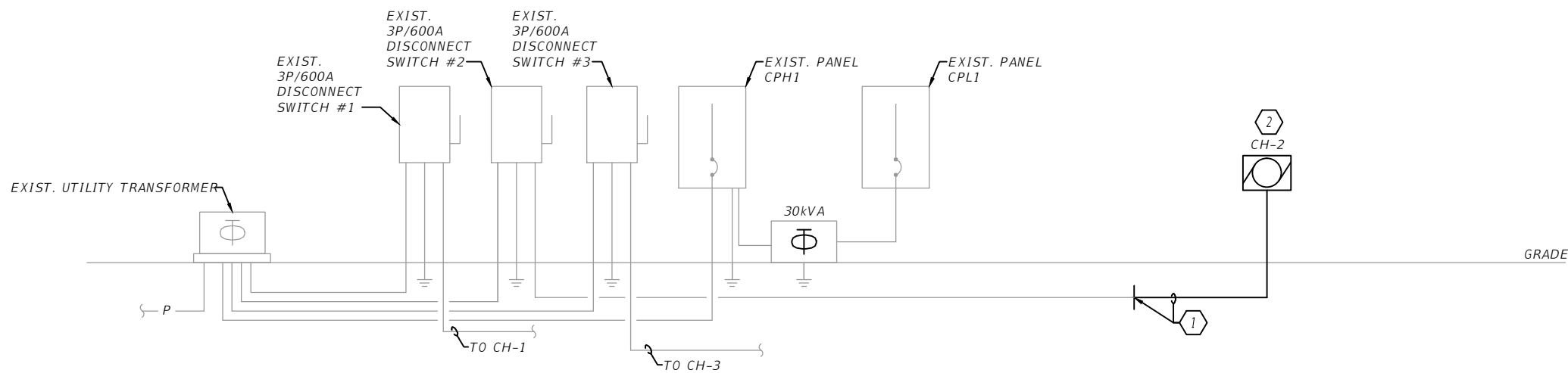
- (a) - CONNECT VIA LINE VOLTAGE T'STAT. FURNISHED BY DIV. 15 CONTRACTOR
- (b) - CONNECT VIA CONTROL DEVICES FURNISHED BY DIV. 15 CONTRACTOR.
- (c) - CONNECT VIA VFD FURNISHED BY DIV. 15 CONTRACTOR.
- (d) - CONNECT VIA STARTER FURNISHED BY DIV. 15 CONTRACTOR.
- (e) - CONNECT VIA UNIT MTD DISC. SW. FURNISHED BY DIV 15.
- (f) - CONNECT VIA STARTER FURNISHED WITH EQUIPMENT.
- (g) - INSTALL AND CONNECT CONTROLLERS & SWITCHES FURNISHED WITH EQUIP.

REVISIONS				ADAM S. LEVINE, P.E. P.E. 77010 Sims Wilkerson Cartier Engineering, Inc. 12124 High Tech Avenue - Suite 200 Orlando, Florida 32817 FL. CERT. OF AUTH. NO. 6106	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET TITLE	REF. DWG. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	PROJECT NAME	SHEET NO.
					ALACHUA	427553-8-52-01	MATERIALS RESEARCH PARK CHILLER REPLACEMENT	E5.0	

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2 POWER RISER DIAGRAM DEMOLITION - ELECTRICAL
E6.0 N.T.S.



1 POWER RISER DIAGRAM NEW - ELECTRICAL
E6.0 N.T.S.

GENERAL NOTES

1. REFER TO SYMBOL LEGEND ON DRAWING E0.1.
2. REFER TO GENERAL NOTES ON DRAWING E0.2.
3. REFER TO SPECIFICATIONS ON DRAWING E7.0.
4. SCREENED ITEM DENOTES EXISTING TO REMAIN.
5. REFER TO EQUIPMENT FEEDER SCHEDULE ON DRAWING E5.0.

REFERENCE NOTES - DEMO

- D1 REMOVE EXISTING CONDUCTORS (CONDUIT TO BE REUSED).
- D2 CUT AND PATCH EXISTING CONCRETE SLAB AS REQUIRED IN ORDER TO REMOVE EXISTING CONDUIT SECTIONS AS INDICATED (INCLUDING 90° ELBOW).
- D3 DISCONNECT EXISTING MECHANICAL EQUIPMENT.

REFERENCE NOTES - NEW

- 1 INTERCEPT, CONNECT AND EXTEND EXISTING CONDUIT TO NEW MECHANICAL EQUIPMENT.
- 2 PROVIDE NEW CONDUCTORS AND CONNECT MECHANICAL EQUIPMENT. UTILIZE LIQUID-TITE METALLIC FLEXIBLE CONDUIT AT CONNECTION.

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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
								PROJECT NAME MATERIALS RESEARCH PARK CHILLER REPLACEMENT	SHEET NO. E6.0

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DIVISION 26 - ELECTRICAL SPECS

260500 COMMON WORK RESULTS FOR ELECTRICAL

A) ALL WORK AND EQUIPMENT UNDER THIS DIVISION SHALL BE IN STRICT COMPLIANCE WITH THE APPLICABLE PROVISIONS OF THE FOLLOWING CODES AND STANDARDS:

1. LIFE SAFETY CODE - NFPA 101
2. UNDERWRITERS LABORATORIES, INC. PUBLICATIONS
3. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)
4. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
5. NATIONAL ELECTRICAL CODE - NFPA 70 - 2011 EDITION
6. INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE)
7. NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION (NEMA)
8. INTERNATIONAL POWER CABLE ENGINEER'S ASSOCIATION (IPECAC)
9. NATIONAL ELECTRICAL SAFETY CODE
10. AMERICANS WITH DISABILITIES ACT (ADA).
11. FLORIDA BUILDING CODE - 5th EDITION (2014)
12. LOCAL CITY AND COUNTY CODES

B) ALL MATERIALS SHALL BE NEW, FREE FROM DEFECTS AND SHALL BE EITHER UL LABELED, UL LISTED OR BEAR THE SEAL OF A NATIONALLY RECOGNIZED ELECTRICAL TESTING LABORATORY.

C) THE WORK REQUIRED UNDER THIS DIVISION SHALL INCLUDE ALL MATERIALS, LABOR AND AUXILIARIES REQUIRED TO INSTALL A COMPLETE AND PROPERLY OPERATING ELECTRICAL SYSTEM.

D) THE CONTRACTOR SHALL FURNISH, PERFORM, OR PROVIDE ALL LABOR INCLUDING PLANNING, PURCHASING, TRANSPORTING, STORING, INSTALLING, TESTING, CUTTING AND PATCHING, TRENCHING, EXCAVATING, BACKFILLING, COORDINATION, FIELD VERIFICATION, EQUIPMENT (INSTALLATION AND SAFETY), SUPPLIES, AND MATERIALS NECESSARY FOR THE CORRECT INSTALLATION OF COMPLETE ELECTRICAL SYSTEMS (AS DESCRIBED OR IMPLIED BY THESE SPECIFICATIONS AND THE APPLICABLE DRAWINGS) IN STRICT ACCORDANCE WITH APPLICABLE CODES, WHICH MAY NOT BE REPEATED IN THESE SPECIFICATIONS, BUT ARE EXPECTED TO BE COMMON KNOWLEDGE OF QUALIFIED BIDDERS.

E) THE SPECIFICATIONS (DIVISION 26) AND CONTRACT DOCUMENTS REFERS TO WORK REQUIRED IN ADDITION TO (OR ABOVE) THE MINIMUM REQUIREMENTS OF THE NEC AND APPLICABLE LOCAL CODES. ALL WORK SHALL COMPLY WITH ALL APPLICABLE CODES AS A MINIMUM AND WITH THE ADDITIONAL REQUIREMENTS CALLED FOR IN THESE CONTRACT DOCUMENTS (PLANS AND SPECS).

F) SPECIAL REQUIREMENTS: SUBMIT TECHNICAL INFORMATION ON ALL EQUIPMENT. MARK UP PRINTS OF THE DESIGN DRAWINGS WITH RED PENCIL SHOWING AN ACCURATE "AS-BUILT" RECORD OF THE ENTIRE SYSTEM.

260519 ELECTRICAL POWER CONDUCTORS AND CABLES

A) ALL BRANCH CIRCUITS SHALL BE COPPER WITH THWN INSULATION. MINIMUM SIZE #12 AWG.

B) FEEDERS AND SUBFEEDERS SHALL BE THWN COPPER.

C) COLOR CODING SHALL COMPLY WITH THE APPLICABLE NATIONAL ELECTRICAL CODE, EXCEPT PHASE CONDUCTORS OF EACH VOLTAGE SYSTEM MUST BE OF A DIFFERENT COLOR AND COLOR CODE SHALL COMPLY WITH THE 1975 EDITION OF THE NEC.

D) ALL FEEDERS AND BRANCH CIRCUITS SHALL BE PROVIDED WITH AN EQUIPMENT GROUNDING CONDUCTOR.

260533 RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS

A) ALL WIRING SHALL BE INSTALLED IN APPROPRIATE RACEWAY SYSTEMS OF RIGID GALVANIZED CONDUIT, SCHEDULE 40 PVC AND LIQUID-TITE FLEXIBLE METAL CONDUIT AS CONDITIONS AND CODE DICTATE. PVC SHALL BE USED BELOW GRADE ONLY.

B) ALL CONDUIT PENETRATING CONCRETE SLABS SHALL BE RIGID GALVANIZED TYPE AND BE COATED WITH PVC OR TWO COATS OF ASPHALTIC PAINT. ALL RIGID GALVANIZED CONDUIT INSTALLED UNDERGROUND SHALL BE COATED WITH PVC OR TWO COATS OF ASPHALTIC PAINT.

C) MINIMUM CONDUIT SIZE SHALL BE 3/4".

D) ALL CONDUIT SHALL HAVE AN INSULATED COPPER EQUIPMENT GROUNDING CONDUCTOR THROUGHOUT THE ENTIRE LENGTH OF CIRCUIT WITHIN CONDUIT.

262726 WIRING DEVICES

A) ALL RECEPTACLES SHALL BE 20 AMP, 125 VOLT GROUNDING TYPE, SPECIFICATION GRADE.

B) SWITCHES SHALL BE 20 AMP, 120/277V SILENT TYPE, SPECIFICATION GRADE.

C) RECEPTACLES LOCATED WHERE WATER OR WET CONDITIONS EXIST SHALL BE ON GROUND FAULT CIRCUITS OR BE GROUND FAULT INTERRUPTING TYPE.

260529 HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

A) ALL EQUIPMENT SHALL BE FIRMLY MOUNTED USING APPROVED HANGERS ATTACHED TO STRUCTURAL PORTIONS OF THE BUILDING.

B) SUPPORTING WITH TIE WIRE IS PROHIBITED.

REVISIONS				ADAM S. LEVINE, P.E. P.E. 77010 Sims Wilkerson Cartier Engineering, Inc. 12124 High Tech Avenue - Suite 200 Orlando, Florida 32817 FL. CERT. OF AUTH. NO. 6106	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET TITLE SPECIFICATIONS ELECTRICAL	REF. DWG. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	PROJECT NAME	SHEET NO.
					-	ALACHUA	427553-8-52-01	MATERIALS RESEARCH PARK CHILLER REPLACEMENT	E7.0

RFP CHECKLIST

(DOES NOT NEED TO BE RETURNED WITH YOUR PROPOSAL)

This Checklist is provided as a guideline, only, to assist Proposers in the preparation of their RFP response. Included are some important matters that the proposer should check. This checklist is just a guideline, and is not intended to include all matters required by the RFP. Proposers are responsible to read and comply with the RFP in its entirety.

Check off each the following:

- 1. The Price Proposal has been completed, as specified, and enclosed in the RFP response.
- 2. The Federal Employers Identification Number or Social Security Number has been entered in the space provided.
- 3. The “Drug-Free Workplace Program Certification” form has been read, signed, and enclosed in the RFP response, if applicable.
- 4. “Scrutinized Companies Lists” certification form has been read, signed, and enclosed in the RFP price proposal, if applicable (proposals of \$1 million or more).
- 5. The Scope of Services, Exhibit “A”, has been thoroughly reviewed for compliance to the RFP requirements.
- 6. The Technical Proposal (one (1) original and the specified number of copies) has been completed, as specified, and enclosed in the RFP response.
- 7. A letter from a surety company to document your ability to obtain the required Performance Bond, as per Section 12 of the Special Condition, is included in the Technical Proposal (if applicable).
- 8. The www.myflorida.com website has been checked and any Addendums posted have been completed, signed, and included in the RFP response.
- 9. The RFP response must be received, at the location specified, **on or before** the Opening Date and Time designated in the RFP.
- 10. On the Lower Left Hand Corner of the Envelope transmitting your RFP response, write in the following information:

RFP No.: RFP-DOT-17/18-9032-SJ

Title: Chiller Replacement for the FDOT State Materials Office – Gainesville, FL

Opening Date & Time: See “TIMELINE” in INTRODUCTION SECTION