ADDENDUM No. 3
Request for Competitive Sealed Proposals (CSP)
19CSP134 HVAC Services at Austin High School

June 24, 2019

Received by bidder:

Date:________________________________________

Name:________________________________________

Signature:____________________________________

Item 1: Questions and Answers

1. I’m reaching out in regards to the Austin High School – HVAC project to see if there are any union requirements, an estimated value, or an estimated start date.

   RESPONSE: There are no union requirements. An estimated value is provided in the bid documents as an Estimated Project Budget is $2,000,000. Also an estimated Start Date for Construction Phase according to Project Schedule in bid documents is February 4, 2020.

PART I COMMENTS

1. The completion dates for this project are published and understood.
   Please publish the anticipated dates for the:
   a) Notice of Award or the Notice to Proceed (whichever comes first) on this project.
   b) ‘Construction Start’ of the project (The first day when the contractor will be permitted to mobilize and, install temporary chillers and support systems).

   RESPONSE: Please refer to the attached Addendum No. 3 document prepared by the Engineer. Please refer to the section entitled “PROJECT SCHEDULE” under Article 1.01 “GENERAL CLARIFICATIONS”. Please note, the contract award period and construction kick-off date as currently noted on the Contract Documents are projected based on the information available to date and may be subject to change.
2. Please issue a drawing depicting where the temporary air-cooled chillers, relative to the mechanical room and the cooling towers, are to be set.

**RESPONSE:** Please refer to the attached Addendum No. 3 document prepared by the Engineer. Please refer to the section entitled “TEMPORARY CHILLER REQUIREMENTS” under Article 1.01 “GENERAL CLARIFICATIONS”.

3. 1M-FP-01 Mechanical (Chiller) Room: Please issue sectional drawings looking North, South, East and West.

**RESPONSE:** Please refer to the attached Addendum No. 3 document prepared by the Engineer. Please refer to the section entitled “MECHANICAL DRAWINGS” under Article 1.01 “GENERAL CLARIFICATIONS”. Plan drawings are included of the mechanical room area. The Contractor is required to develop shop drawings during Construction as part of the submittal process.

4. Demolition drawings, showing mechanical equipment/piping to be demolished, are not included in the bid package. As an alternative to publishing demolition drawings for this project; please publish As-Built drawings of the existing mechanical room, which depicts all ETR equipment and equipment (which will be demolished), along with all the ETR piping and piping (which be demolished).

**RESPONSE:** Please refer to the attached Addendum No. 3 document prepared by the Engineer. Please refer to the section entitled “MECHANICAL DRAWINGS” under Article 1.01 “GENERAL CLARIFICATIONS”.

5. Are there existing valves in place for the temporary chillers to tie onto, or will these tees/valves have to be cut in and welded as part of this project?

**RESPONSE:** Please refer to the attached Addendum No. 3 document prepared by the Engineer. Please refer to the section entitled “CONNECTION POINTS FOR RENTAL EQUIPMENT” under Article 1.01 “GENERAL CLARIFICATIONS”. New valves shall be provided as part of this Work.

6. TEMP COOLING REQUIREMENTS DURING TIMEFRAME THAT TEMP AIR COOLED CHILLERS ARE BEING BROUGHT ON-LINE & WHILE CHW SYSTEM IS OFF-LINE:
   
   If existing valves are not in place for the temporary chillers to tie-onto, what is the maximum down-time for which the CHW system can be taken off-line (for the new valves for the temporary chillers to be cut in place and welded)?
   
   Also, please identify any special cooling requirements (including but not limited to - size of equipment, placement of equipment, etc.) which will be required to be installed during
the installation of isolation valves/fittings for temporary cooling of spaces requiring this additional temporary cooling.

RESPONSE: Please refer to the attached Addendum No. 3 drawings prepared by the Engineer. Please refer to the notes under “TIME RESTRICTIONS” on drawing “G-GEN-02”. Please refer to Section 015000 “Temporary Facilities and Controls”. Please refer to the section entitled “TEMPORARY COOLING EQUIPMENT TO SERVE THE LIBRARY” under Article 1.01 “GENERAL CLARIFICATIONS”. The MDF room is served by a DX unit that is not connected to the cooling central plant. Please note, temporary cooling equipment to specific spaces in the building (i.e. the library) is not required if the chilled water system is out of service (i.e. to install chilled water loop temporary connection points) when the outdoor air temperature is 40-degrees Fahrenheit or lower.

7. Please verify that, once the change-over of the pre-existing CHW system to the temporary CHW is completed, the demolishing of the chiller, piping, and cooling towers, and the installation of all the new work can be performed during regular work hours.

RESPONSE: Please refer to the attached Addendum No. 3 drawings prepared by the Engineer. Not all types of activities required for this Work can occur during regular working hours. Please refer to the notes under “TIME RESTRICTIONS” on drawing “G-GEN-02”.

8. G-Gen-01: “Fire alarm system, security system, data/telephone, and PA system requirement notes” – requires that the general contractor shall obtain the services of these aforementioned subcontractors for work pertinent to this project.
So that AISD pre-qualified subcontractors, who are currently under contract by AISD to perform these services, will be no doubt the most qualified subcontractors to perform services required of this project:
   a) Please publish the contact information for the preferred vendor(s) for the Fire alarm system used by AISD/Austin High School.
   b) Please publish the contact information for the preferred vendor(s) for the security system used by AISD/Austin High School.
   c) Please publish the contact information for the preferred vendor(s) for the data/telephone system used by AISD/Austin High School.
   d) Please publish the contact information for the preferred vendor(s) for the PA system used by AISD/Austin High School.

RESPONSE: Please refer to the attached Addendum No. 3 document prepared by the Engineer. Please refer to the section entitled “DIVISION 27 AND 28 REQUIREMENTS” under Article 1.01 “GENERAL CLARIFICATIONS”.

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9. M-Gen-03 - “Draining, Filling, and water treatment of existing facility entire chilled water and hot water hydronic piping systems”.

It is hereby understood that cooling of the school will be maintained by the temporary air-cooled chillers; please clarify if this is NOT the case.

Certainly, it is hereby presumed that CHW from these temporary chillers are supplied to the (15) AHUs referenced herewith.

Given the requirement for flushing (and the presumption that cooling will need to be maintained during the construction period):

a) **When** will the Owner/PSP permit the contractor to perform the flushing required of the bid documents (NOTE – While flushing is occurring, system cooling will be de-energized), and how is cooling to be maintained while the CHW pipe system is being flushed?

b) Number of days within which the flushing must occur (NOTE – While flushing is occurring, system cooling will be de-energized).

c) If draining and filling/flushing of the CHW system is required while cooling is to be maintained, please issue a Method of Procedure (MOP) clearly stating how this is to be performed. **Please note that this is not a contractor Means/Methods issue.**

**RESPONSE:** Please refer to the attached Addendum No. 3 document prepared by the Engineer. Please refer to the section entitled “TEMPORARY CHILLER REQUIREMENTS” under Article 1.01 “GENERAL CLARIFICATIONS”. Please refer to the attached Addendum No. 3 drawings prepared by the Engineer. Please refer to the notes under “TIME RESTRICTIONS” on drawing “G-GEN-02” and the notes under “DRAINING & FILLING OF EXISTING CHILLED WATER AND WATER TREATMENT OF EXISTING CHILLED & HOT WATER HYDRONIC PIPING SYSTEMS” on drawing “M-GEN-03”. The temporary chillers shall serve the fifteen (15) existing air handling units. The Contractor, at their discretion, may maintain the hydronic system energized during flushing if complying with the schedule of Time Restricted Activities and the maximum fresh water flow rate requirements noted on drawing “M-GEN-03”.

10. M-Gen-03 - “Draining, Filling, and water treatment of existing facility entire chilled water and hot water hydronic piping systems”.

This Scope of Work (SOW) directive/Note (# 1) requires in part that the contractor shall drain and then fill the entire facility CHW piping systems at least once or multiple times as required for this work.

This SOW directive also states that there are minimal to no isolation valves in the CHW & HW systems to isolate the portions required for this work.

Further on in the same paragraph the SOW directive states, “the contractor shall include in the base contract price the need to drain and fill the CHW piping systems multiple
times during the course of this work as required to comply with the required phasing/completion of this work”.

a) Please verify that the HW system is NOT required to be flushed (there is mention of the HW system being drained and filled as a requirement, with emphasis on the CHW system being drained and flushed).
b) To avoid flushing of the entire CHW system will the Owner/PSP permit the provision of new isolation valves so that the flushing of the new CHW piping, only, can be accomplished?
c) Since the HW system is not being modified, and perhaps may not be required to be drained & filled/flushed – and valves are perhaps permitted to isolate the modified CHW from the pre-existing CHW systems – Would new isolation valves be required?
d) Please verify that the drain down and flush is intended to be a clear water flush of the systems, or if the flushing is to be performed with chemically treated water.
e) Please verify that the house pumps can be used for the flushing of the systems.
f) If the house pumps cannot be used for the flushing of the systems, please specify pump requirements for the flushing process.
g) The SOW required of Note #1 appears to be very subjective and costly, especially for bidding purposes, therefore:
   i. Will the Owner/PSP please publish the number of times the CHW systems and (HW systems) need to be drained down so that costs for the drain-downs and system fill are accurately proposed.
      OR
   ii. Respectfully - Will the Owner please consider/publish an allowance for this SOW which the contractors can include in their proposal cost? Depending on the final requirement (of drain to sanitary v/s capture in Frac tanks for disposal; and the number of drain-downs/refills; and if the HW system is also to be drained/flushed) – this cost allowance could be at least as much as $100,000.00 - $150,000.00.

RESPONSE: Please refer to the attached Addendum No. 3 drawings prepared by the Engineer. Please refer to the notes under “DRAINING & FILLING OF EXISTING CHILLED WATER AND WATER TREATMENT OF EXISTING CHILLED & HOT WATER HYDRONIC PIPING SYSTEMS” on drawing “M-GEN-03”. Renovations to the hot water system, including draining/filling/flushing, are not required for this Work. The existing chilled water system shall be flushed as noted on drawing “M-GEN-03”. Refer to the chilled water hydronic system valves shown on the mechanical drawings and piping schematic. Drain down and flushing activities of the closed loop system and sequences shall be as directed by the closed loop water treatment service provider, including the use or lack-ther eof of chemicals
to be used during flushing. Please refer to the notes on drawing “M-GEN-03” of when existing pumps may be used for flushing. The Contractor shall plan their work accordingly based on the information provided, any site visits attended, and allow for the number of drain-downs, fills, etc. as for the hydronic systems as required for a fully functional system and at no additional cost to the Owner.
PART II COMMENTS

1. Per the RFQ, all items requiring clarification are to be submitted by 6/18/19. Clarifications to these items requiring clarification will then be issued, via addendum, by 6/24/19. The bid date is maintained at 6/27/19.

Since answers to the 1st set of questions submitted by MPS has not been published at this time - and, it is presumed that the answers to the questions asked could tremendously impact the proposal pricing, and perhaps eventually cost AISD additional monies – which in turn will also require time (more than 3 days) for the contractors to accurately and responsibly incorporate and present in the respective bid tenders to the AISD:

Will the AISD respectfully postpone the bid date by the requisite (State mandated) 1 week from the issue of any addendum, to allow more time for contractors to properly assess costs for items which will be addressed in the addendum.

RESPONSE: Austin ISD is maintaining same bid due date and no change to bid date is expected as sufficient time has been provided for preparation of bids.

2. AISD Prevailing wages requires that the contractor shall pay the wages, as follows, to:

- Pipefitter – Base wage $29.5 with fringes at $12.82.
- Laborer – Pipe layer Base wage $12.45 with fringes at $0.00.

Please:

a) Verify that contractors will not be able to use pipe layers on this project (no UG piping to be installed), and that only pipe-fitters and pipe-fitting apprentices will be required to work on the piping SOW (scope of work) of this project.

This verification is required so that employees engaged in the service of pipe fitting for contractors would not be exploited under the classification ‘Pipe layers’

b) Verify that certified pay-roll is not required on this project.

c) Verify that any wages paid to artisans on this project CANNOT be less than the prevailing wages specified on this project.

RESPONSE: Please refer to Project Specifications in Bid documents regarding Wage Rate information and Contractor to select appropriate Wage Rate for the job function for employee. Certified Pay-roll may be requested in event there is a discrepancy with Wage Rates paid to employee or in evaluation of Change Orders.

3. ACM has been identified on this project, and it is understood that asbestos abatement is part of the contract.

Please verify that chillers, concrete pads, and other items to be removed do not contain lead, and that lead abatement is not a requirement of this project.
RESPONSE: Baer Engineering performed Asbestos and Lead survey in the work areas for this project and any abatement required is in the specifications provided by them and provided in the Project Specifications in Bid documents.

4. Specification 015000, 3.02 requires that the contractor shall provide temporary toilets, wash facilities, and drinking water for use by construction by construction personnel. Please verify that the toilets, wash facilities at the school cannot be used by the contractor personnel.

RESPONSE: Please refer to the attached Addendum No. 3 drawings prepared by the Engineer. Please refer to the additions to Section 015000 “TEMPORARY FACILITIES AND CONTROLS”.

5. Please clarify if the refrigerant recovered on this project is to be returned to the Owner. If the Owner is to retain custody of this refrigerant, please verify that the Owner will furnish the canisters for the recovered refrigerant.

RESPONSE: Please refer to the attached Addendum No. 3 document prepared by the Engineer. Please refer to the section entitled “REFRIGERANT RECOVERY” under Article 1.01 “GENERAL CLARIFICATIONS”.

6. Specification 099600, 3.05: Please verify that wherever the requirement to “…paint all division 23 pipes…” (for example), it is to only apply to all new material provided on the project, and not to materials that were on the project prior to the start of the project.

RESPONSE: Please refer to the attached Addendum No. 3 document prepared by the Engineer. Please refer to the section entitled “PAINTING OF PIPING SYSTEMS” under Article 1.01 “GENERAL CLARIFICATIONS”.

7. Specification 017600, 1.3B requires the contractor to have its Performance Bond for a period of 1 year after completion (acceptance) of work to cover contractor warranty. Since this is a potential cost to the project, please verify this requirement.

RESPONSE: Please refer to Project Specifications in the Bid documents related to Performance Bond and provide as defined.

8. Specification 220719, 3.02B.2, & B.3 requires that carbon steel and copper systems are to be painted with a 5 mil epoxy primer and a 5 mil epoxy topcoat for both types of piping. Please verify that:
a) Epoxy coats of paint are indeed required for ONLY the new CHW (and NOT the existing CHW piping) piping.

   b) Epoxy coats of paint are indeed required for new copper systems to be insulated

   RESPONSE: Please refer to the attached Addendum No. 3 document prepared by the Engineer. Please refer to the section entitled “PAINTING OF PIPING SYSTEMS” under Article 1.01 “GENERAL CLARIFICATIONS”.

9. Please verify if the new condenser water piping is to be painted; and if it is required to be painted, please specify the paint system with which the new condenser water piping is to be painted.

   RESPONSE: Please refer to the attached Addendum No. 3 document prepared by the Engineer. Please refer to the section entitled “PAINTING OF PIPING SYSTEMS” under Article 1.01 “GENERAL CLARIFICATIONS”.

10. Drawing M-EL-01 - Keyed notes 17 & 18 requires, in part, that the condenser water supply/return/bypass lines are to be heat traced. Consequently, it is presumed that these pipes will also be insulated.

    Please verify that these CW lines are to be insulated.

   RESPONSE: Please refer to the attached Addendum No. 3 document prepared by the Engineer. Please refer to the section entitled “INSULATION OF PIPING SYSTEMS” under Article 1.01 “GENERAL CLARIFICATIONS”.

11. Please verify that the 10” CPVC Sch.80 Equalization pipe is to be heat traced and insulated.

   RESPONSE: Please refer to the attached Addendum No. 3 document prepared by the Engineer. Please refer to the section entitled “PAINTING OF PIPING SYSTEMS” and “INSULATION OF PIPING SYSTEMS” under Article 1.01 “GENERAL CLARIFICATIONS”. As per the noted drawings and specifications, the equalization pipe between the cooling tower two (2) cells shall be insulated, but not heat traced.

12. Please verify that if the 10” CPVC Sch. 80 Equalization pipe is to be insulated, that this pipe is still required to be painted for UV protection (per General mechanical installation requirement #12, on M-GEN-03) prior to the application of any insulation.

   RESPONSE: Please refer to the attached Addendum No. 3 document prepared by the Engineer. Please refer to the section entitled “PAINTING OF PIPING SYSTEMS” under Article 1.01 “GENERAL CLARIFICATIONS”.
13. Is there a preferred BAS/Controls contractor which performs work at Austin High School? If yes, please publish the contact information for that contractor.

   RESPONSE: Please refer to the attached Addendum No. 3 document prepared by the Engineer. Please refer to the section entitled “FACILITY MANAGEMENT SYSTEM (FMS) HVAC CONTROLS” under Article 1.01 “GENERAL CLARIFICATIONS”.

14. Please verify that ANY rework of the CHW and the CW pumps, are not required on this project.

   RESPONSE: Please refer to the attached Addendum No. 3 document prepared by the Engineer. Please refer to the section entitled “EXISTING CHILLED WATER AND CONDENSER WATER PUMPS” under Article 1.01 “GENERAL CLARIFICATIONS”.

15. M-Gen-03 - “Draining, Filling, and water treatment of existing facility entire chilled water and hot water hydronic piping systems”.
   Since no work is being performed on the Hot water system, please verify if the Hot water system is required to be flushed.

   RESPONSE: Please refer to the attached Addendum No. 3 drawings prepared by the Engineer. Please refer to the notes under “DRAINING & FILLING OF EXISTING CHILLED WATER AND WATER TREATMENT OF EXISTING CHILLED & HOT WATER HYDRONIC PIPING SYSTEMS” on drawing “M-GEN-03”. Renovations to the hot water system, including draining/filling/flushing, are not required for this Work.

16. M-Gen-03 - “Draining, Filling, and water treatment of existing facility entire chilled water and hot water hydronic piping systems”.
   Please verify that the condenser water system is not required to be flushed.

   RESPONSE: Please refer to the attached Addendum No. 3 drawings prepared by the Engineer. Please refer to the notes under “DRAINING & FILLING OF EXISTING CHILLED WATER AND WATER TREATMENT OF EXISTING CHILLED & HOT WATER HYDRONIC PIPING SYSTEMS” on drawing “M-GEN-03”. Renovations to the condenser water system, including draining/filling/flushing, are required for this Work.

17. M-Gen-03 - “Draining, Filling, and water treatment of existing facility entire chilled water and hot water hydronic piping systems”.

   RESPONSE: Please refer to the attached Addendum No. 3 drawings prepared by the Engineer. Please refer to the notes under “DRAINING & FILLING OF EXISTING CHILLED WATER AND WATER TREATMENT OF EXISTING CHILLED & HOT WATER HYDRONIC PIPING SYSTEMS” on drawing “M-GEN-03”. Renovations to the condenser water system, including draining/filling/flushing, are required for this Work.
Given that the entire CHW & HW hydronic piping systems are required to be flushed while, in particular, the CHW system is being operated to maintain cooling for the school:

a) Please issue a detailed flushing sequence, to include but not limited to, the sequence indicating precisely how the contractor is to flush the system while maintaining cooling of the school – also stipulating the time-frames for each of the flushes which need to occur.

**PLEASE NOTE THAT THIS IS NOT A MEANS/METHODS IMPLEMENTATION OF THE CONTRACTOR.**

**RESPONSE:** Please refer to the attached Addendum No. 3 drawings prepared by the Engineer. Please refer to the notes under “DRAINING & FILLING OF EXISTING CHILLED WATER AND WATER TREATMENT OF EXISTING CHILLED & HOT WATER HYDRONIC PIPING SYSTEMS” on drawing “M-GEN-03”. Renovations to the hot water system, including draining/filling/flushing, are not required for this Work. The Contractor, at their discretion, may maintain the hydronic system energized during flushing if complying with the schedule of Time Restricted Activities and the maximum fresh water flow rate requirements noted on drawing “M-GEN-03”.

18. **M-Gen-03 - “Draining, Filling, and water treatment of existing facility entire chilled water and hot water hydronic piping systems”**.

Given the requirement for flushing of the entire CHW & HW piping systems, please issue a pipe flushing specification for this project, including but not limited to:

a) Will the House pumps be permitted for this flushing process?

b) Required flushing specifics as related to flow-rates, etc.

**RESPONSE:** Please refer to the attached Addendum No. 3 drawings prepared by the Engineer. Please refer to the notes under “DRAINING & FILLING OF EXISTING CHILLED WATER AND WATER TREATMENT OF EXISTING CHILLED & HOT WATER HYDRONIC PIPING SYSTEMS” on drawing “M-GEN-03”. Please refer to when the existing pumps may be used during flushing and the requirements with regard to the fresh water flow rate during flushing.

19. **Drawing M-FP-01 and Drawing M-PSC-01 appears to depict all new piping drawn in bold is piping that is to be replaced.**

**Please verify that all piping and valves, drawn in bold in the afore-referenced drawings, are indeed required to be new for both the CHW and the condenser water systems.**

**RESPONSE:** Please refer to the attached Addendum No. 3 document prepared by the Engineer. Please refer to the section entitled “NEW PROPOSED PIPING” under Article 1.01 “GENERAL CLARIFICATIONS”.

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ADDENDUM NO. 3

FOR

HVAC Improvements at
Austin High School

AISD PROJECT NO. 19-0041-AUSTN

Prepared for:

AUSTIN INDEPENDENT SCHOOL DISTRICT

Prepared by:

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Addendum Date: June 20, 2019

Total Number of Pages (including this sheet): 11

This Addendum forms a part of the Contract and clarifies, corrects or modifies original Contract Documents, dated May 17, 2019. Acknowledge receipt of this addendum in space provided in proposal form. Failure to do so may subject responder to disqualification.
ADDENDUM NO. 3

PART 1 - PROJECT MANUAL / SPECIFICATION REVISION ITEMS

1.01 GENERAL CLARIFICATIONS:

A. PROJECT SCHEDULE:
   1. Please refer to sheet G-GEN-02 for project scheduling requirements and critical dates under the “Sequence of Construction” notes.
   2. Please refer to Section 013200 “Construction Progress Documentation” for additional project scheduling requirements. Please refer to the project schedule at the end of Section 013200 for more specific schedule requirements.

B. REFRIGERANT RECOVERY:
   1. Please refer to Sheet M-GEN-02, under “GENERAL RENOVATION/DEMOLITION NOTES”, note #22 for requirement to remove all the refrigerant from the existing equipment and transfer to owner provided canisters and other requirements.

C. PAINTING OF PIPING SYSTEMS:
   1. Please refer to the requirements in Specification Section 099600 “High-Performance Coatings” and Specification Section 230719 “HVAC Piping and Equipment Insulation” for pipe cleaning, preparation and painting requirements.
      a. The requirements in Specification Section 230719 “HVAC Piping and Equipment Insulation” Article 3.01-B apply to stainless steel, carbon steel, and copper pipes as noted.
   2. Painting of pipes is intended to apply to new proposed pipes and proposed pipe insulation installations where required on existing pipes, unless noted otherwise or as required for patching existing conditions as related to the demolition/renovation elements associated with this Work.
   3. Painting of piping and elements for this Work includes, but it not limited to, chilled water piping, condenser water piping, drain piping, make-up water piping, domestic potable water piping, and other piping as shown on the Drawings.
   4. Per Specification Section 099600 “High-Performance Coatings” Article 3.05-A-2-b-4), painting is not required for plastic piping not exposed to outdoor ambient ultraviolet rays. Thus, if the plastic pipe is insulated, or otherwise not exposed to outdoor ambient ultraviolet rays, painting of the pipe is not required.

D. INSULATION OF PIPING SYSTEMS:
   1. Please refer to Section 230719 “HVAC Piping and Equipment Insulation” Article 3.12 “PIPING AND EQUIPMENT INSULATION SCHEDULE” for pipe sections that require insulation. Please note, per Article 3.12-D, condenser water piping, including the basin equalization piping, requires insulation.
E. TEMPORARY COOLING EQUIPMENT TO SERVE THE LIBRARY:
   1. Please refer to Drawing M-GEN-02, under “GENERAL RENOVATION/DEMOLITION NOTES”, note #26 for temporary cooling equipment requirements to serve the existing school library, and when such temporary cooling would be required.

F. HEAT TRACE OF PIPING SYSTEMS:
   1. Please refer to the Drawings, including, but not limited to, M-FP-02, M-EL-01, M-EL-02, M-SCH-01, E-FP-03, and E-SCH-01 and Specification Section 230533 “Heat Tracing for HVAC Piping” for heat trace requirements. The requirements are applicable to the make-up water supply piping, condenser drain and blow-down piping, and the condenser water supply, return and bypass piping. Please note, the equalization piping is not shown/scheduled to be heat traced.

G. TEMPORARY CHILLER REQUIREMENTS:
   1. Please refer to sheet M-GEN-02 for rental equipment requirements.
   2. Please refer to note #4 under “General Requirements for Rental Equipment” regarding the placement/location of the rental equipment.
   3. Please refer to Section 015000 “Temporary Facilities and Controls” for additional requirements, including the submission of a site plan for temporary facilities. Rental equipment are part of the temporary facilities to be provided by the Contractor for this Work.
   4. The temporary air-cooled chillers shall provide cooling for the chilled water system currently being served by the two (2) water-cooled chillers that are scheduled to be replaced.

H. MECHANICAL DRAWINGS:
   1. Demolition of elements is noted on the drawings. Please refer to the mechanical drawings for the demolition of mechanical elements.
   2. The Contractor shall prepare shop drawings of the proposed mechanical piping installations. Please refer to drawing sheet M-GEN-03 for shop drawing requirements and additional requirements in the respective specification sections.
   3. Please note the chillers and associated chilled water piping to be demolished in the main mechanical room will be replaced by the new chillers and piping. Please refer to the renovations drawings for demolition notes, including equipment that is to be demolished and will not be replaced (i.e. air compressors).
I. CONNECTION POINTS FOR RENTAL EQUIPMENT:

1. Please refer to the mechanical drawings for the installation of connections points in the chilled water piping near the chillers for the connection of temporary chillers. Please refer to sheet M-FP-01 Key Note #11 and M-PSC-01 Key Note #13.

2. The temporary chilled water system connection points shall require a shutdown of the chilled water system and therefore is a time restricted activity. Please refer to the attached revised Sheet G-GEN-02 for additional requirements of when time restricted activities may be performed.

J. EXISTING CHILLED WATER AND CONDENSER WATER PUMPS:

1. Please refer to the Drawings for the extent of scope and services for this Work. Please note, the Drawings do not show the replacement of the existing building chilled water condenser water pumps. The Work does include the balancing of the hydronic piping systems, control system renovations, strainer cleaning, etc. as related to the chilled water and condenser water hydronic piping/pumping elements.

K. NEW PROPOSED PIPING:

1. Please refer to the Drawings for the extent of piping renovations, including the provision of new chilled water hydronic piping and condenser water piping. Please note, as noted on Sheet M-GEN-02, under “GENERAL PROPOSED RENOVATION NOTES:”, per Note #2, on renovation drawings, shaded linework depicts existing conditions; dark linework depicts renovated conditions.

L. FACILITY MANAGEMENT SYSTEM (FMS) HVAC CONTROLS:

1. Please refer to Section 230926a “Direct Digital Controls for Local Building Systems (Tridium-BACnet)” for requirements related to the Facility Management System (FMS) HVAC Control System requirements, including, but not limited to, Article 1.4 “ACCEPTABLE CONTRACTORS”.

M. DIVISION 27 AND 28 REQUIREMENTS:

1. Please refer to the individual Division 27 and 28 specification sections, as applicable, for certifications/experience requirements for the individual providers of the subject systems.

1.02 SECTION 015000 “TEMPORARY FACILITIES AND CONTROLS”

Under 3.02 “TEMPORARY UTILITY INSTALLATION” Paragraph A, ADD the following sub-paragraphs:

1. Please note that unless allowed in advance by the Owner in writing, the presence of the Contractor at the existing facility shall be limited to the renovation work areas only and within the scheduled time periods as noted on the Drawings and as allowed in writing by the Owner.

2. Use of existing facility elements outside of the renovated areas for purposes beyond the intended Work, including, but not limited to, the use of existing
facility restrooms, janitorial closets, etc. are not allowed unless approved in advance in writing by the Owner.

1.03 SECTION 236514.14 “OPEN-CIRCUIT, INDUCED-DRAFT, CROSSFLOW COOLING TOWERS”

Under Article 1.12 “MAINTENANCE MATERIAL SUBMITTALS”, ADD the following sub-paragraphs:

B. Digital Protractor for Fan Blade Adjustment:

1. Furnish Two (2) Exact-A-Pitch Model 360 digital protractors as manufactured by the Hudson Products Corporation, or Engineer approved equal, to allow the Owner to measure and set each fan blade angle of the cooling tower cell. Furnish complete with required batteries for fully operating units.

   a. Note: Cooling tower blades shall be factory set to comply with unit scheduled performance requirements prior to their shipment from the factory. Setting by Owner is for future use as desired/required by Owner.

Under Article 3.07 “DEMONSTRATION AND TRAINING”, Paragraph A, ADD the following sub-paragraph:

5. Training shall include, at a minimum, how to address motor/belt issues, including, but not limited to, how to use the crane to remove/reinstall motors, how to remove/reinstall motors, how to remove/reinstall fan blades as required to remove motors, how to adjust the angle/pitch of fan blades to match the original factory set positions, how to use the fan blade protractor, how to replace belts, etc.

1.04 SECTION 312000 “EARTH MOVING”

In 1.09 “GENERAL REQUIREMENTS” REPLACE paragraph A with the following:

A. Work within the excavation areas is considered a Time Restricted Activity and shall occur only within the time periods allowed for Time Restricted Activities as noted on the Drawings. The Contractor shall coordinate a minimum of four (4) weeks in advance with the Owner, including local facility personnel, to determine what times are available to conduct all Work related activities, including, but not limited to, excavation, trenching, conduit duct bank construction, backfill, asphalt/concrete repairs, etc. required for this Work.

1.05 GENERAL PLANS

A. SHEET G-GEN-02: REPLACE with the attached sheet noted with “6/20/2019 ADDENDUM 3” in the Issues and Revisions portion of the title block.

1.06 MECHANICAL PLANS

A. SHEET M-GEN-02: REPLACE with the attached sheet noted with “6/20/2019 ADDENDUM 3” in the Issues and Revisions portion of the title block.
B. SHEET M-GEN-03: REPLACE with the attached sheet noted with “6/20/2019 ADDENDUM 3” in the Issues and Revisions portion of the title block.

C. SHEET M-FP-01: REPLACE with the attached sheet noted with “6/20/2019 ADDENDUM 3” in the Issues and Revisions portion of the title block.

D. SHEET M-PSC-01: REPLACE with the attached sheet noted with “6/20/2019 ADDENDUM 3” in the Issues and Revisions portion of the title block.

END OF ADDENDUM