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Fairfield, Connecticut

Cooling Tower Replacement

Prepared for:

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ENGINEERS

VAN ZELM ENGINEERS
VAN ZELM HEYWOOD & SHADFORD, INC.

TOWER REPLACEMENT PROJECT

HVAC Demolition

Remove (2) existing exterior cooling towers which presently serve the associated chillers. Remove all associated distribution piping as shown on contract drawings back to flanges and make safe. All open-ended piping shall be protected.

Remove existing cold water make-up line back to isolation valve.

Remove existing tower drain lines.

Note: The assumption has been taken that there is no asbestos or lead in the area of work. Remediation is not included in this scope of work.

HVAC New Work

Provide (2) two new cooling towers as scheduled on M101.

Provide new piping CWS&R lines, fittings, control valves etc. as indicated on M101.

Provide (2) new towers designed to meet existing steel structural support. Substitutions shall incur any added structural cost as part of the complete package.

Provide all necessary work to existing Alpha-Laval HX-2. Heat exchanger shall be provided with new plate pack replacement as described on drawing and specifications. Heat exchanger shall be completely refurbished.

Provide cleaning and painting of existing structure as specified.

ALTERNATE #1

Provide Alt#1 a detailed quote to replace the plate pack of the existing Alpha-Laval plate pack replacement on HX-1 cooling plate and frame heat exchanger.

Building Automation System

Temperature control and building management functions will be removed from old tower and reinstalled on new tower. Automated Logic Corporation shall provide direct digital control (DDC) system, existing sequences shall remain the same. The DDC system shall provide control and monitoring of all central and local terminal equipment. BAS contractor shall coordinate with mechanical contractor locations of any and all control valves, actuators, any new temperature monitoring wells as required for a complete operational system.

ELECTRICAL

Electrical Demolition

The electrical wire feeders in conduit serving existing cooling tower equipment to be removed.

The existing buried conduits serving the cooling tower to be abandoned in place.

Electrical New Scope

Provide new underground conduit and electrical feeders from each basement located VFD to each new cooling tower from associated power panel with proper voltage and capacity.

Provide junction boxes inside basement and new overhead conduits to each VFD, refer to E101 for additional information.

Provide new power and control conduit and feeders as required.

Provide 120V GFI duplex outlet at Tower for service.

Provide dedicated electrical circuit with local disconnects at each Tower fan.

The coordination arc fault study shall be updated for any new electrical panels should they be required.

PLUMBING

Existing Plumbing and Demolition

There is limited to no plumbing demolition in this scope of work.

New Plumbing Scope

New plumbing shall include new drain lines from cooling tower overflow as well as cooling tower sump water make-up to each tower electronic level controller. Line BFP in boiler room to remain.

Make up water line shall be provided with manual drain down for winter off season operation. Electrical breaker to be opened manually (SOP)

Coordinate insulation covering over heat traced cold water make-up line, coordinated with the electrical heat trace. Provide insulation with weatherproof jacket, typical

---End of M.E.P. Basis of Design Document ---