



**City of Kalamazoo-Crosstown Facility
Bid Package #1
Kalamazoo, MI
AVB-23-062**

FORM 00 24 00.1.4.23.100
(a.k.a. ATTACHMENT B - SCOPE OF WORK ALL TRADES)

Work Scope 23.100 Mechanical

Specification Sections Included:

AVB 00 0000 Bidders Instructions and Requirements
AVB 00 7200 General Workscope Requirements
AVB 01 0000 Subcontractor General Requirements
AVB 00 AVB Health & Safety Policy

Reference Specification Sections:

0.0 Special Bidding Requirements:	
1	Bids must be submitted to City for sealed opening per bidders instructions.
1.0 Work Scope Notes:	
1	Submittal of a proposal and acceptance of a contract assumes this subcontractor has included all scope of work relative to this bid category and has accepted all terms and conditions identified in the bid documentation.
3	Subcontractor shall provide adequate manpower and equipment at all times, as required to meet the project schedule. Subcontractor shall provide labor as required to preserve workplace harmony and prevent any jobsite disruption.
4	Include warranty per the Owner's listed requirements from the substantial completion date for the entire project, not from the substantial completion of this portion of work. Where special warranties are specified, those longer warranty periods shall commence from substantial completion date for the entire project.
5	Bidder will get formal acceptance on any warranty shorter than any specification requirement or shorter than subcontractor warranty of two years through RFI process, recorded and distributed, or will bid as specified with voluntary alternate for savings of reduced warranty term.

6	Furnish all necessary taxes, bonds and insurance as per the Owner's listed requirements. A Certificate of Insurance from the Subcontractor's Insurance Carrier must be in AVB Construction's possession prior to start of work. AVB Construction and the Project Owner and any other parties listed in the contract shall be named as additional insured. A sample with specific verbiage and owner entities for additional insured will be provided.
7	Subcontractor shall furnish all means, methods, labor, material, equipment, layout, field measurements, permits, licenses, etc. which may be required to complete their scope of work.
8	Subcontractor will identify any sub-tiered subs on proposal, in SOV and in workplan. 3rd tier subs will be managed on site by a direct employee of the awarded subcontractor. The onsite management will be developed and approved at the discretion of the AVB superintendent, and may be adjusted by the AVB superintendent when deemed necessary to manage labor, safety, schedule, quality and site cleanliness.
9	Any materials with longer than 4 week lead times should be called out with their respective lead time in the bid.
10	All materials shall meet the requirements of the specifications, and shall be installed per manufacturer recommendations and specifications.
11	Subcontractor is responsible for review and knowledge of all drawings as related to this project. Any discrepancies in the drawings that will affect this subcontractor's scope of work shall be brought to CM's attention immediately.
12	Subcontractor will review all specifications within their work scope and submit product data, shop drawings, samples and other required submittals in packages by spec section for approval electronically; PDF documents are preferred. Unless otherwise noted, contractor will receive notification of submittals required through PROCORE and submit through PROCORE to those specs. Contractor should notify AVB if there are discrepancies in the submittal log received.
13	Subcontractor shall have full time supervision on the jobsite at all times that is knowledgeable and competent in the detailed requirements of the work of this subsystem. This person shall not be removed from this project until the work is complete and shall not be removed or replaced without the approval of the AVB Project Manager. Subcontractors are responsible for assigning a designated English speaking foreman. It is the responsibility of the subcontractor to translate the site specific safety orientation, updates, and any other communications from AVB. Lack of understanding of the English language is NOT a valid reason for violating ANY safety rules or required AVB procedures.
14	Subcontractor to participate in pre-installation meetings.
15	Subcontractor will participate in on-site Progress Meetings starting 2 weeks prior to their trades work and continuing 2 weeks beyond completion of their trades work. Additional meetings may be required to coordinate trades and will be attended by trades at the AVB team discretion. AVB superintendent may grant requests to attend virtually or miss a meeting, if received at least 2 days prior to meeting.
16	Subcontractor must coordinate its work with the work of other subcontractors at the site to eliminate conflicts. No additional costs as a result of a lack of coordination will be allowed.
17	Subcontractor is to include all unloading and protection of materials delivered to site including all necessary machinery for material handling. This includes all staging and movement to final placing. This subcontractor to coordinate the location of stored materials with CM and provide relocation if necessary.
18	Subcontractor shall inspect the area of work to insure that surfaces are ready for installation. Subcontractor to bring to the attention of the AVB Construction Superintendent or Project Manager any problems with the surfaces. Proceeding with the work constitutes acceptance of a surface.

19	Clean up and removal of debris from construction area to appropriate project dumpster shall be performed by this subcontractor as it applies to their scope of work on a DAILY basis. Additional clean up may be required to maintain clear egress and a safe worksite, at the discretion of the AVB Construction Superintendent. Failure to clean up shall be cause for this work to be performed by others at the expense of this subcontractor.
20	Clean existing streets and parking areas of all dirt and debris as generated by your work force on a daily and as-needed basis, or as directed by the CM.
21	If, after prior written request, this subcontractor has not cleaned loose debris, materials, and general garbage to satisfaction of AVB Superintendent, AVB will perform the necessary cleaning at a rate of 10% higher than the subcontractors highest labor rate of the offending subcontractor. For example, if the foreman is listed at \$80/hr., AVBs hourly rate for cleanup will be \$88/hr.
22	Provide multiple mobilizations, at no additional cost, as required to maintain construction progress and as directed by AVB.
2.0 Safety:	
1	All work is to comply with all federal, state, and local codes and ordinances, including OSHA, MIOSHA and the AVB Safety Program. AVB Safety Program is included in bidding documents. AVB Supervisory Personnel may issue deviation tickets and impose monetary fines and/or withhold from the subcontractors next progress payment for non-compliance with safety and health requirements.
2	Notify Miss Dig and/or all appropriate utility companies before start of work and locate all existing utilities.
3	All scaffolding and temporary handrails are to comply with OSHA guidelines. Provide and install all necessary bracing, signage, and protection as directed by OSHA and/or AVB guidelines. Daily inspections/tagging are required for the entire duration of the erected scaffold.
4	Subcontractor to provide and comply with written silica dust control plan for all activities creating potential hazard.
5	Subcontractor will implement a project specific safety program and shall participate in site safety program including, but not limited to: site safety orientations, daily foreman review with superintendent and site specific trainings and meetings.
6	It is the responsibility of each trade to provide, maintain and train workers within that trade on Safety Data Sheets related to any materials used by this trade on site.
7	Jobsite safety per OSHA and AVB Safety plans is required. AVB can issue safety deviation tickets and fine the company of any employee not adhering to required safety measures.
8	Subcontractor shall have at least one first aid certified crew member on site at all times. Subcontractor will provide first aid certification cards at the onsite safety orientation as requested.
9	Subcontractor will submit subcontractor safety manual, field workers first aid certificates, other respective trainings, equipment certifications, and safety data sheets as PROCORE Submittals (01 3500-01 Safety Manual, 01 3500-02 Certifications, 01 3500-03 SDS)
3.0 Schedule:	
1	Please note that although the schedule defines the planned order of construction, Bidders should not assume any assurance is given or implied as to the calendar dates associated with completion of the work of a particular contract.

2	All Contractors and Subcontractor recognize and shall accept modifications to the schedule which are reasonable, in the opinion of the Construction Manager, for the general interest of the project as a result of allowable time extensions in any contract, and such modifications are inherent to the construction process and shall not qualify as a basis for extra compensation from the Construction Manager or Owner.
3	The Contractor, in submitting a proposal for the work of a particular work category, agrees to commit the necessary resources to complete the work activities of that work category, within a time span not greater than the duration given on the Bid Document Construction Schedule.
4	Bidder to provide detailed work plan, including amount of dedicated, on-site manpower for any tasks identified in Bid Schedule. Provide similar information with expected duration breakdown of any Subtasks not specifically identified in Bid Schedule but is required to complete scope of work. Additional information may be requested upon review by AVB Project Manager. This detailed work plan to be provided with Bid Form for review prior to bid opening.
5	Progress punch lists will be scheduled and performed. Contractors will attend and participate in any progress punch lists scheduled at least 4 weeks prior.
6	Any overrun of the duration for this Contractor given in the Bid Document Construction Schedule that will require overtime, unplanned measures, or other consequences of delay that must be instituted by subsequent Contractors to avoid extension of the scheduled end date and associated liquidated damages will be the financial burden of this Contractor.
7	AVB Construction reserves the right to retain additional labor forces to complete this scope of work if it is deemed the construction schedule is not being met. This additional manpower will be the financial responsibility of this Contractor.
4.0 Accounting:	
1	Costs associated with document printing and CAD files (or equivalent) are the Subcontractors responsibility.
2	Take note of Time, Material and Performance provisions as noted in the General Requirements.
3	Include in proposal: labor rates and mark-ups for add's/extras/change orders.
4	Provide Schedule of Values to Project Manager with proposal. Schedule of values should show labor and material costs for each item.
5.0 Closeout:	
1	All subcontractors will provide warranty per the Owner's listed requirements from substantial completion for their scope of work.
2	Payments may be hold at the 50% mark or beyond of billing completion until specification-required Operation and Maintenance information and other close-out information is provided up to as-built and final warranty documentation until all required closeout Operations and Maintenance Manuals and specification listed closeout requirements are met for approved materials, including submission of sample warranties for those items.
3	Operations and maintenance manuals, extra/maintenance materials and special warranties as required by the specifications are to be submitted in a timely manner. If at closeout time, special warranties do not meet the terms of the specification, the subcontractor will supply, on their own letterhead, a warranty that their company will cover the specification terms. Release of retention is contingent upon work completion, receipt of closeout documents, sworn statements and waivers.
4	Project will have progress and final punch performed by project team members, bidders are to plan to address these within 3 days to keep the project moving.
5	Formal cost requests for any field added work during punch time is to be submitted within 7 days of completion of the added work.

6	All subcontractors must provide a color electronic copy of their as-builts as part of closeout. Subcontractors who do not provide electronic copy can be backcharged for the documentation fees incurred.
6.0 Trade Specific:	
1	Include coordination with fire protection, electrical and plumbing trades. All interference / conflicts will be resolved as part of the base contract bid amount.
2	Perform all mechanical demolition per Demo Plans and in coordination with architectural and ceiling demo drawings.
3	Remove existing ductwork, terminal units (VAVs), and associated piping as indicated; cap mains or prep for reconnection per new layout.
4	Cap and seal existing ductwork serving areas to remain operational to ensure systems are safe, prevent dust migration, and maintain indoor air quality in occupied areas. Provide temporary protection measures as required.
5	Remove existing return air and exhaust grilles and Cabinet heaters prep for relocation or replacement per mechanical plans.
6	Remove radiant ceiling panels and associated piping back to the nearest main, and dispose of all materials off-site.
7	The contractor must stop work and notify AVB Construction immediately upon discovery of any hazardous, or contaminated material.
8	Furnish and install all HVAC equipment, units, piping, cabinet unit heaters, VAVs, reheat coils, ductwork, duct insulations, grilles, diffusers, accessories, etc., as & where specified by project documents.
9	Furnish and install all related control wiring, thermostats, smoke detectors (in HVAC units), and miscellaneous items necessary to complete the mechanical system.
10	Check, test, start-up, and re-balance mechanical system and equipment upon completion of the project. Upon completion provide balance report.
11	Furnish "As-Built" drawings and maintenance manuals including operating manuals.
12	Firestop all fire rated wall and floor penetrations which may occur as a result of work installed by this trade. Firestopping must be installed per UL listing for each respective product.
13	Include coring, cutting and patching as required for installations of materials by this trade. Proper finish of patched areas where coring or cutting has occurred will be the responsibility of this contractor.
14	Provide access panels for work of this bid category to be installed by others.
15	Furnish and install breeching & venting of water heaters, boilers, heaters, etc., and all other equipment requiring such conditions.
16	Furnish and install starters and disconnects for HVAC equipment unless specified to be furnished by the electrical subcontractor.
17	Furnish and install fire dampers as & where indicated & specified in project documents, or required by applicable code.
18	Provide all lifting and hoisting as required for installations of materials & equipment to be installed by this trade.
19	Contractor shall maintain all ductwork as sealed to prevent dust & debris from accumulating in duct work, until such time as duct work may be installed. Installed "open" duct work shall be maintained as filtered with minimum MERV 8 filtering media, with filter media replaced as needed throughout duration of construction activities, and until building is turned over to owner. Contractor shall furnish and install temporary thermostats, filters, etc..... as required to operate the HVAC equipment during construction.
20	Contractor is responsible for scheduling & attending all required inspections by applicable AHJ, as well as scheduling all final inspection & approvals of work as installed by this trade.

21	Furnish and install any duct or pipe insulation as required.
22	Furnish and install all louvers as indicated in any discipline of project documents.
23	Furnish and install Recirculation hood (H-01) with integrated fire suppression system as indicated in the project documents.
24	Furnish and install gas-powered heaters and any regulators needed. Gas piping by others.
25	Provide one (1) complete set of filters and complete change-out prior to final occupancy.
26	Provide shutdowns and valving as needed to tie-in to existing lines.
27	Subcontractor must coordinate its work with the work of other subcontractors at the site to eliminate conflicts. No additional costs as a result of a lack of coordination will be allowed.
28	Provide startup meetings on equipment with Owner and Architect for verification of system function and sequence of operations. Include equipment representatives as required. Cover all As Built drawings and operation and maintenance of entire mechanical system.
29	This subcontractor shall pay for all permit and inspection fees for the work in this subsystem. Schedule and attend all required city, county and state inspections. Coordinate all inspection with the Project Superintendent to maintain a continuous sequence of work.
30	Include measure as indicated in foundation notes on Sheet S100 for under structural slab piping and penetrations.
31	Include an allowance of \$5,000 for unforeseen existing conditions. This allowance shall be used only at the approval of the Construction Manager. Any portion of this allowance not authorized for use shall be credited back in full to the Owner at project closeout.
32	Subcontractor shall account for the project being completed in two phases: CPED first, followed by KDPS. Include multiple mobilizations, demobilizations, and remobilizations as required by the phasing plan and as directed by AVB.

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