



Addendum No. 1
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DATE: February 19, 2016

Joliet Junior College
1215 Houbolt Road
Joliet, IL 60431

TO: Prospective Bidders
SUBJECT: Addendum No. 1
PROJECT NAME: Renaissance Center Interior Renovations
JJC PROJECT NO.: B16008

This Addendum forms a part of the Bidding and Contract Documents and modifies the original bidding document as posted on the JJC website. Acknowledge receipt of this addendum in the space provided on the Bid Form. FAILURE TO DO SO MAY SUBJECT BIDDER TO DISQUALIFICATION.

Supplemental Information:

Attached to this addendum is Appendix A which includes the scope of work for the Joliet Junior College Renaissance Center Interior Renovations.

End of addendum #1

Joliet Junior College Renaissance Center Renovation

SCOPE OF WORK

1. **Inspections**

The General Contractor shall coordinate with his/her subs all required inspections by the State plumbing inspector and Fire Marshall.

2. **Documentation Control**

General Contractor to provide, maintain and administer Submittal Exchange for document control on this project.

3. **Description of Work Included:**

Except for those items (if any) specifically noted in the section below entitled "Work Excluded From This Bid", the work of this Bid Package shall INCLUDE, but is not necessarily limited to, all of the following:

- a. All items of work required by, and/or specified in, Specifications.
- b. All items of work related to the "Scope of Work", which are shown on the Drawings.
- c. The following "Specific Items to be Included" are related to those required by the above referenced documents and are to be provided under, and hereby form a part of, the Scope of Work of this Bid Package (Contract). Should any conflict exist between this written Scope of Work and any scope items implied by the above referenced documents, this Scope of Work shall govern.

Perform complete all work as required by and in accordance with the Conditions of Contract, Drawings, Specifications, and elaborations below. The Work shall include all labor, materials, equipment, and related items necessary to complete all of the work defined in the specifications.

The Project Schedule is aggressive and will require work to be performed simultaneously at different locations in the building. This Contractor will work in each zone simultaneously. The Contractor is cautioned that its work will control the schedule of all of the work of their Sub-Contractors. This Contractor agrees to estimate and perform the contract work necessary to achieve the completion dates as outlined in the **Construction Schedule Dates (as outlined in the bid documents)**;, including multiple mobilizations, overtime, multiple crews, supervision and multiple shifts as required, upon reward, this Contractor shall provide a schedule with milestones.

In general, the following clarifies the scope of work to be included. It is intended for clarification and convenience only and is not intended to limit any portion of the scope of this bid package.

4. **General Conditions:** Include the following work items listed below:

- a. Provide dumpsters.
- b. Provide temporary toilet service. Existing toilet facilities are not to be used.
- c. Owner will provide an office location within the premises. Contractor to provide furniture.

5. **Demolition:**

This contractor to provide all demolition and disposal of debris, and shall coordinate with his subs for the demolition of their work. Ultimately this contractor is responsible for all demolition work.

6. **Doors Frames & Hardware:** All Hollow metal doors, hollow metal frames, borrowed lites frames, astragals, and mullions, wood doors, including wood veneer doors, MDO doors including frames, lites, louvers, and hardware.

- a. All finish hardware for all hollow metal, steel, wood doors, including but not limited to, hinges, pivots, closers, stops, silencers, holders, push, pulls, kickplates, electric strikes, hold open devices, flushbolts, automatic flushbolts, coordinators, thresholds, exit devices, sound and fire seals, weather stripping, locksets, cylinders, keys, and other related items or accessories as required to properly complete the work.
 - b. Prep frames/doors as required to receive electric hardware and accessories. Make final connections to electric push button door operators.
 - c. Frame anchors shall conform with applicable codes. Provide anchors for all wall conditions as required or as indicated in the Contract Documents.
 - d. Contractor shall provide masterkey, grand masterkey, and construction masterkey system to be approved by the Architect and Owner. Provide all key cores and costs associated with installing the same. Installer to turn keys over to Owner directly.
 - e. Contractor to assist the Owner in developing a keying schedule. Two meetings will be required with attendance and participation by this Contractor. Coordination of meeting times and dates will be by JJC.
 - f. Provide reinforcing of frames as required to provide stability. Contractor shall provide temporary metal spreader bars tack-welded on all frames for masonry openings.
 - g. Provide plaster guards on hardware cutouts as required or as indicated in the Contract Documents.
 - h. Metal door louvers will be factory-installed in the doors. Hollow metal frames to receive cutouts for hardware.
 - i. Fire-rated doors and frames must bear a UL symbol. Any rated frames or doors not exhibiting this label will not be acceptable. Contractor shall submit manufacturer's information certifying the label construction on any doors and/or frames, which may be oversized and, therefore, not rated by UL. The final decision as to the conformance to applicable codes and regulations lies with the Architect and other applicable authorities.
 - j. Construction cores for all exterior doors plus 4 construction cores for interior doors.
7. **Visual Display Surfaces, (Tack Boards, Marker Boards):** Furnish and install all visual display surfaces and display cases as indicated in Contract Documents, including but not limited to:
- a. Custom glass display cases
 - b. Markerboards/ including trim, chalk trough, map rail with cork insert, flag holders, roller brackets, map hooks, music staff where indicated, marker pens, erasers.
 - c. Tackboards, frames and surface material.
 - d. Adhesives
 - e. Mechanical Fasteners
 - f. Temporary Protective Covers
 - g. If required, Contractor shall cut holes for thermostats, wall switches, electrical outlets and other devices.
 - h. Clean surfaces prior to installation and after installation.
 - i. Cover markerboard surfaces with protective cover and remove at date of substantial completion.
 - j. All layout and survey required to perform this Contractor's work is this Contractor's responsibility.
8. **Toilet Compartments:** All toilet compartments and accessories, including but not limited to the following: Panels, doors, urinal screens, hardware, coat hooks, door bumpers, door pulls, latches and keeper, brackets, bracing, anchorage and fasteners. Coordinate layout with ADA requirements and MEP Drawings.
9. **Toilet and Bath Accessories:** All toilet and bath accessories, child care accessories, custodial accessories, public use washroom accessories, locker room accessories, including but not limited to the following: Grab bars, mirrors, sanitary vending units, sanitary disposal units, , waste receptacles, , coat hooks, robe hooks, soap dish, electric hand dryers (warm air dryers), diaper changing stations. Include all brackets, anchorage and fasteners necessary for a complete job. Th e toilet tissue dispensers, paper towel dispensers & liquid soap dispensers shall be supplied by Owner and installed by this Contractor.

10. Perform complete all "**Cabinetry & Millwork**" and related work as required by and in accordance with the Conditions of Contract, Drawings, Specifications, and elaborations below. The Work shall include all labor, materials, equipment, and related items necessary to complete all of the work. Provide all casework and accessories, including but not limited to wood casework, plastic laminate casework, wall cabinets, base cabinets, tall cabinets, counter tops, FRP, back splashes, end splashes and side splashes, shelving, including general shelving and, closet rods and shelves, ornamental work, edge banding, cabinet liners, cabinet hardware, and miscellaneous plastic laminate surfaces, including filler panels, fasteners, adhesives, furring blocking and shims, including wood fillers.

This Contractor shall be responsible for protection of his or her own work during the duration of this Contractor's scope of work. This Contractor is also responsible for the covering his or her work.

Include cutting and fitting of cabinetry, countertops, etc., at permanent fixtures, built-in equipment, piping penetrations and ADA applications.

Include cleaning and protection of all completed work by this Contractor as specified in the Contract Documents.

This Contractor to furnish attic stock materials to Owner at substantial completion of the project as indicated in the Contract Documents.

Provide all wood finish and plastic laminate casework, millwork and custom woodwork including but not limited to (Provide with all applicable hardware, trim, fasteners, miscellaneous supports and joint sealants required for a complete installation):

- a) All solid surfaces and countertops complete – throughout
- b) All plastic laminate surfaces and countertops complete – throughout
- c) All plastic laminate base and wall cabinets – complete where shown per drawings, details, and specs.
- d) All wood casings and trim complete – throughout
- e) All veneered wood paneling systems - throughout
- f) All glass display cases complete with specified frames, hardware, accessories, etc.
- g) Operable partitions
- h) Provide complete all shelving.
- i) Provide all bases as shown on the contract documents.
- j) Provide and install all glazing and mirrors.
- k) Provide, pre-finished, all wood trim, wood veneers, whiteboards and accessories integral to the work provided.
- l) Provide all caulking required for materials and equipment installed by this Contractor and between equipment provided, or installed, by this Contractor and all adjacent surfaces.
- m) All wood all trim, wood veneers and wood accessories integral to the work shall be provided pre-finished.
- n) Provide all required field finishing and/or field touch-up necessary for the material provided by this Contractor.

- 14) Include "**Final Cleaning**" of all completed work by all Contractors as specified in the Contract Documents and as follows:

- a. Vacuum carpeted areas including entry mats
- b. Sweep and Mop all interior VCT floors
- c. Wipe down base board (rubber and wood)
- d. Wipe down railings at balconies, ramps and any other railing
- e. Wipe down all countertops, backsplashes, & wire mold including reception. Wipe down all shelving
- f. Wipe down door frames and doors

- g. Clean and sanitize all restrooms (toilets, urinals, sinks, ceramic tile walls, floors, toilet and urinal partitions, mirrors and other toilet accessories – All Floors
- h. Wipe down all hanging light fixtures in all areas.
- i. Wipe down all plumbing fixtures such as sinks, faucets, etc.
- j. Clean all stainless steel water fountains, emergency eyewashes and fire extinguisher cabinets
- k. Wipe down HVAC equipment in all areas
- l. Sweep & Mop all interior hard surface (concrete) floors in Corridors, Classrooms, etc.
- m. Clean & Sweep all stairwells including railing
- n. Wipe down elevator cabs and vacuum carpet
- o. Wipe down all wall panels

15) Provide complete all “**Painting Work**” and related work as required by and in accordance with the Conditions of Contract, Drawings, Specifications, and elaborations below. The Work shall include all labor, materials, equipment, and related items necessary to complete all of the work defined in the following specification sections, except for those noted exclusions or clarifications listed below.

- a) Comply with all ‘Finish Notes’ listed on the Finish Schedule.
- b) Include wall coverings as specified.
- c) Inspect walls prior to beginning work and notify the Owner immediately if area is rough and has unsuitable substrate. Installation of work shall be considered as an acceptance of substrate.
- d) It is the responsibility of this Contractor to store and/or dispose of any hazardous waste(s), as may be generated during the course of their painting activities, in accordance with all applicable federal, state, and local regulations and with the Safety Plan.
- e) Coordinate finishing of doors and frames with the door/hardware installer. Paint all hollow metal doors, frames borrowed lites etc.
- f) Prime and apply the first coat of paint prior to the installation of ceiling grid. Do not apply the final coat until directed by the Owner in writing. The final coat will be applied after the ceiling grid is installed. Protect the ceiling grid and any other finishes, including the floor that may be installed.
- g) Provide attic stock (extra material) as indicated in the contract documents. Deliver attic stock to the owner’s representative as directed by the Owner and obtain a signed receipt for each delivery.
- h) Clean and prepare all surfaces to be painted as recommended by the specifications and coating manufacturer. Provide finish sanding as required to provide a suitable surface for painting and de-gloss any factory-applied primers as required to provide a suitable surface for painting. Provide all filler and spackle for irregularities and minor cracks.
- i) Paint all exposed ceiling areas including areas to receive clouds and other openings in the ceiling system. See Reflected Ceiling Plans for additional requirements and locations. Paint all Mechanical and Electrical items, exposed in finished spaces, in accordance with the contract documents. Fire Protection is a design build contract and is not shown on the drawings, but shall be included in this painting work.
- j) Provide caulking around all door frames, borrowed lites, access doors, interior louvers & grilles, fire extinguisher cabinets, and toilet accessories, etc. prior to finish painting. Caulk the vertical joints where CMU masonry intersects with drywall partitions.
- k) Do not paint over any fire rating labels or equipment. If tape is used to protect labels during painting remove immediately after painting. Remove all factory-installed protection or tape over equipment and door/frame labels to expose after finish painting. Protect and remove protection of sprinkler heads, lights, etc. during the painting process.

- l) Provide all scaffolding and/or main lifts required for the work of this bid package.
 - m) Under no circumstances will “monitoring” be allowed as a means of providing fall protection.
- 16) Perform complete all "**Elevator Work**" and related work as required by and in accordance with the Conditions of Contract, Drawings, Specifications, and elaborations below. The Work shall include all labor, materials, equipment, and related items necessary to complete all of the work defined in the following specification sections, except for those noted exclusions or clarifications listed below.

In general, the following clarifies the scope of work to be included. It is intended for clarification and convenience only and is not intended to limit any portion of the scope of this bid package.

Provide labor, materials, equipment, services and expertise required to complete all elevator work as indicated in the contract documents.

- a. Check the plumbness of the shaft and submit a report to the Owner.
 - b. Temporary fall protection for the shaft will be by this contractor.
 - c. This Contractor must provide any additional steel beams, brackets, clip angles, plates, etc. required for this work which is not shown on the drawings and required for a complete elevator installation. All hoist beams, if required, and machine supports are by this Contractor.
 - d. This Contractor is to provide all necessary firestopping of wall penetrations for the elevator shaft and the Machine Room as a result of the scope of work for this package. This Contractor is to furnish all sleeves for penetrations through walls.
 - e. Include compliance with all current elevator codes. This Contractor shall include the cost for two (2) inspections by the elevator inspector. Any additional inspections resulting from the work of this Contractor will not be compensated for.
 - f. This Contractor is responsible for his own field engineering and shall field verify all existing conditions as required prior to commencing of work and make whatever modifications necessary to facilitate the installation of new work. Contractor shall immediately notify the Owner in writing of his findings, especially upon finding unsatisfactory conditions that may affect his work and the quality of the work of others.
 - g. Provide all shoring, bracing, staging and hoisting (including hoist beam), and rigging required to complete this work.
- 17) **Projection Screens:** All manually operated and electrically operated surface mounted and recessed mounted projection screens including but not limited to the following: Screens, case, all hardware for a complete installation, motor controls. Coordinate mounting locations.
- 18) **Curtains and Drapes:** All manual and electrically operated curtains and drapes and accessories as indicated in Contract Documents
- 19) **Roller Window Shades:** All manual and electrically operated roller window shades and accessories as indicated in Contract Documents, including but not limited to: roller shades, black out shades, rollers, mounting brackets, fascia, head boxes, recessed shade pockets, bottom bars, operating mechanisms, chains, clutch, operators, control switches, key switches etc. for a complete system and installation.
- 20) **Temporary Protection:** Provide temporary fire extinguishers with stands (Min. Rating 2A) 25 in all, and relocate as work progresses and as directed by the Owner. Obtain periodic inspections, as required, and recharge fire extinguishers as necessary and per OSHA (1926.150).
- 21) **Fire Extinguisher Cabinets & Extinguishers:** All fire extinguisher cabinets, fire extinguishers, and

accessories as indicated in Contract Documents. This Contractor must coordinate opening sizes for fire extinguisher cabinets with a template for Masonry and Framing Contractor.

General Requirements

1. Furnish and install perimeter protection around changes in elevation, of 18 inches or more, at any floor level. Furnish and install temporary ramps, using OSHA approved scaffold plank, at these locations.
2. Furnish, install, maintain and remove temporary, reinforced fire rated poly protection at all window and door openings in the building.
3. All work crews shall have on hand a first aid kit and a 20 pound fire extinguisher type A/B/C; inspect monthly and recharge extinguishers as necessary until completion of the project.
4. This Trade shall perform its work in the least disturbing fashion given that the location is an operational campus. Noise and vibration shall be kept to a minimum. Provide dust mitigation means to prevent the creation and travel of airborne dust particles. The travel of dust, dirt and debris into occupied spaces of the buildings is not acceptable. Clean up will be performed by this Trade on a daily basis. All roads traveled by the operations of this Trade shall be cleaned of dust, dirt, debris and mud (mechanically broom swept).
5. This Contractor shall be responsible for cleanup, debris removal and disposal, to be completed on a daily basis. The placement and location of any dumpster or other refuse removal device shall be approved by the JJC prior to commencement of the work. Dumpsters for the general will be provided by this Contractor. It shall be this Contractor's responsibility to ensure that its material has been properly sorted before disposal into the dumpsters.
6. THERE WILL BE NO STAGING, OR PARKING OF TRUCKS ON ANY PUBLIC ROADWAY. All trucks and deliveries must pull into the project staging areas. See Site Logistics Plan included in Project Manual. Staging areas are limited.
7. This Contractor shall protect all adjacent areas of work. Remove protection after completion of work of this project and repair all damaged areas as necessary and required.
8. Electronic Data and Documentation Submittal (e-Doc): Contractor shall provide construction documentation in an electronic format that can be incorporated into the Owner's computerized asset, maintenance and/ space management systems for: Equipment tagging, updated as-built drawings, Submittal of Construction Documents, Asset Data, etc. Updated monthly and all submittals shall be completed prior to substantial completion.
9. Should the Plans or Specifications disagree in themselves or with each other, the Contractor shall provide the better quality or greater quantity of work and/or materials unless otherwise directed by written addendum to the contract.
10. Where the Technical Specifications indicate that the Contractor will be "directed by" or "as indicated or designated by" the Architect all such directions, indications and/or designations etc., shall be through JJC. All work performed by a Contractor as directed by or as indicated or designated by the Owner, its consultants or the Architect which has not been communicated to the Contractor through JJC shall not be an added cost to the Contractor's contract with Joliet Junior College and may be subject to rework at the expense of the Contractor.
11. Provide a "long lead" item listing for the following, but not limited to: equipment and materials, which are required for early order to meet the project schedule. Provide this as a separate document on company letterhead and include within two weeks of receiving the contract from Joliet Junior College
12. Securely cover and tie down all materials nightly or when high winds are forecast to prevent damage and wind-blown debris.
13. This Contractor shall submit complete shop drawings for JJC and Architect's review prior to any fabrication.
14. All abatement of hazardous materials (if and where applicable) will be conducted by the owner. The

Contractor must notify JJC immediately about any suspect material.

15. It is the intent of this agreement that this Contractor will be responsible for all aspects of job safety for this project. This Contractor shall submit within two weeks of Notice to Proceed a detailed safety program/plan defining its intentions and procedures to be used on the project to comply with all requirements of OSHA, IDOL, and any state and local ordinances including work rules, fall protection, hoisting procedures, protection of other trades and finished materials, etc. At a minimum the General Trades Safety Coordinator shall oversee the following list of activities:
 - Audit activities of all Contractor's safety programs so that they conform to the Safety Plan on a daily basis.
 - Provide weekly, written site inspections of the job site, notify the Contractors of any unsafe practices and conditions for which they are responsible and will counsel them on the appropriate corrective actions when necessary. Site inspections shall be reviewed and discussed with the construction team. There will be regular meetings with the JJC Environmental, Health & Safety Manager, Campus police, local fire department and the construction team.
 - Collect and catalog SDS sheets provided from the Contractors/ subcontractors for the project. All SDS sheets will be kept in the main construction trailer.
 - Provide all necessary state and federal postings in the main construction trailer (OSHA, IDOL, EEOC etc.)
 - Maintain required records and accident prevention materials at the job site so that an adequate history is maintained for the project.
 - Every other month for the duration of the project this contractor shall provide a safety lunch for all workers on site.
 - Review injury and first aid records during the project to identify injury trends to take positive action to reduce or eliminate such injuries from continuing to occur on the project.
 - The General Contractor Safety Coordinator will examine and familiarize himself/herself with the job site and adjacent areas from the standpoint of access and facilities regarding safety. The job site should be explored with regard to installing and operating the construction plan, and evaluating any difficulties that might be encountered in complete execution of the work safely. Make daily inspections of the job site so as to initiate corrective measures to eliminate unsafe practices and conditions.
 - The General Trades Safety Coordinator shall immediately investigate all accidents or near miss accidents and take corrective actions to help prevent reoccurrence.
16. Include all costs necessary to address the requirements of the Safety Plan.
17. Investigate and mark all underground utilities and building utilities including, but not limited to, having the site marked by J-U-L-I-E. J-U-L-I-E will mark public utilities only. This site has private utilities as well, which J-U-L-I-E will not mark. It is this Contractor's (06A) responsibility to retain a private utility locate company to mark private utilities.
18. This Contractor shall provide their own vertical means of transporting materials, supplies, equipment, personnel, etc.
19. Contractor shall field verify all existing conditions as required prior to commencing of work and shall make whatever modifications necessary to facilitate the installation of new work. Contractor shall immediately notify JJC in writing of his findings, especially upon finding unsatisfactory conditions that may affect his work and the quality of the work of others.
20. This Contractor is reminded to refer to the Safety Plan for specific safety criteria affecting this scope of work. Under no circumstances will "monitoring" be allowed as a means of providing fall protection.

J. COST ALLOWANCES

The General Contractor bid shall include the following Cost Allowance in the total Lump Sum Amount of the Base Bid for this Bid Package. The Contractor must include costs of the allowance in the base bid. The base bid sum shall include all overhead and profit mark-up. All work completed through the

allowance will be completed at cost since overhead and profit is included in the base bid. Contractors are not entitled to any unspent balance. There will be no mark-up by the GC for any work their subs provide under this allowance.

Cost Allowances:

1	Miscellaneous Work Allowance: : Include in the Base Bid amount the sum of (\$150,000.00) for miscellaneous work to be completed at the direction of JJC	\$150,000.00
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HVAC WORK

1. Perform all necessary HVAC demolition and disposal as called for in the contract drawings and specifications.
2. Perform complete all HVAC Heating Ventilation and Air Conditioning Work, including but not limited to air handling equipment complete with dampers, filters, coils, fans, and motors. rooftop air handling equipment complete with curbs. Supply air ductwork systems including all fittings, insulation, and outlets. Return air ductwork systems including all fittings, insulation, and inlets. VAV's, Exhaust Fans, Terminal air boxes, etc. Terminal electric heating devices. Exhaust ductwork systems including all fittings, insulation, inlets, and fans. Gas flues, stacks, and breechings. Fire dampers. Firestopping systems for penetrations of fire-rated construction associated with this Contractor's work. All Hydronic piping and insulation, refrigerant piping and insulation, inline heating coils, Gas piping system including all meter requirements. Condensate drain piping from cooling related equipment such as air handlers and cooling coil drain pans, gas furnaces, insulation, accessories, testing, adjusting and balancing. It is the intent of this document for all work shown on the mechanical drawings or required for proper operation of the ventilation system to be included in this scope of work.
3. Perform complete all natural gas piping systems, gas regulator devices, venting, and connections to new plumbing, and mechanical equipment, and all appurtenances. Include all supports, required demolition, and all required isolation and shut off valves, coring and roof ballasts.
4. HVAC gas solenoid valves with the emergency shut off push button switch as specified in the Contract Documents.
5. All mechanical systems insulation, jacketing, and protection shields as required.
6. Contractor shall furnish and install all mechanical/architectural louvers, bird screens, blank off panels, grilles, etc., as required for HVAC systems, including miscellaneous unistrut support, flashing, and perimeter sealants.
7. All piping, gauges, thermostats, switches, filters, strainers, sensors, indicators, couplings, reducers, sleeves, unions, etc. as required for complete mechanical and gas systems.
8. Provide temporary closures at open ends of all incomplete ductwork and/or systems being installed by this Contractor to prevent the collection of dust or debris until permanent connections are made.
9. All new deck, wall, slab, and roof penetrations as required, including sleeves or coring. Contractor shall utilize coring methods to minimize the amount of patching and repair work required. Include patching, sealing, and firestopping as required.
10. Contractor shall provide all connection angles and miscellaneous attachments as required at the tie-ins to louver areas. Any additional safing off of fresh air intake and discharge louvers not

shown on the drawings which may be required to effect a tight building closure shall be furnished and installed by this Contractor. Contractor is to furnish and install minor blank off panels where small openings may be left after ductwork has been attached to louvers.

11. Contractor will provide frames for all diffusers, registers, and grilles that are installed in plaster, drywall, suspended ceilings, and masonry.
12. Include cost to repair any fireproofing damaged during the installation of the HVAC systems and hangers.
13. Contract includes testing, cleaning, adjusting and balancing as required for all HVAC air systems, hydronic systems, refrigeration, and gas systems. Contractor shall submit in writing to JJC a schedule for duration of testing and balancing work. It is the responsibility of this Contractor to substantially complete installation, start-up, and work with a commissioning agent to complete HVAC systems that will adequately allow a sufficient duration to complete testing and balancing work prior to Owner occupancy of the completed building. Completed testing and balancing reports, as prepared by an independent agency are to be submitted within two (2) weeks from completion of the testing and balancing. Comeback work required for testing and balancing is included as necessary.
14. Contract includes all rigging, hoisting, scaffolding, shoring, etc. needed to perform this scope of work.
15. Provide Coordination Drawings and Shop Drawings in accordance with the General Conditions and General Requirements. Include cost to send knowledgeable representative to fully participate in the project Contractor MEP/FP coordination meetings as required until fully coordinated shop drawings are approved by the A/E. Include costs to provide in-progress shop drawings to all participants. This Contractor shall submit complete shop drawings for JJC and Architect's review prior to any fabrication. Provide all coordination drawings and composite drawings as required by the bid documents. MEPFP Coordination drawings shall be produced in CAD format. Produce hard printed copies of the drawings from the CAD files. CAD files of background drawings may be made available by the architect/engineer. Any fee charged by the architect/engineer for these CAD files will be paid by this Contractor.
16. Provide qualified personnel as required to fully participate in MEP commissioning as directed by the AE. Commissioning may be held over several days at different times to accommodate the schedule.
17. Furnish and install all access doors through inaccessible ceilings or walls required for access to the Work of this package. Locate access doors on Shop Drawings and Coordination Drawings for review by Architect.
18. Provide layout of all HVAC work. Coordinate duct sizes with structural web openings in roof structure.
19. Provide complete as-built drawings, operating and maintenance manuals, and perform testing and training of owner's personnel. All O&M manuals are to be submitted no later than substantial completion, and must be in hand before any reduction in retainage is contemplated.
20. Furnish and install all motors for equipment furnished under this project. Furnish and install motor controllers, starters, and disconnect switches not provided under Division 16 but required for any equipment installed as part of this bid package. This Contractor shall provide all control conduit and wiring including, if necessary, conduit from starters to equipment if the starter is mounted apart from the equipment it serves. Provide any other interconnecting control conduit and wiring required for a complete installation for any equipment installed as part of this package.
21. Provide all backdraft (smoke) dampers, combination fire-smoke dampers, and fire dampers at locations indicated on the drawings and at other locations where dampers are required to ensure the integrity of rated walls and floors. Reference the architectural drawings to determine the fire rating

- of partitions.
22. Provide all piping, ductwork and equipment identification as required in the design documents for this Scope of Work.
 23. Provide all sleeves required for this Scope of Work.
 24. Provide all caulking and sealants associated with this work and between this work and adjacent work. This Trade Contract includes all sealants, angles, closures, etc., as required to provide weather tight and airtight installation.
 25. Provide firestopping as required at all penetrations through rated walls, floors and ceilings in accordance with the specifications.
 26. Provide all means of support and attachments to the structure for the HVAC Work, including any trapeze hangers to clear ductwork or other interference. Provide all miscellaneous steel supports which are not shown on the project drawings, but which are required to complete the work of this bid package; include primer and touch-up. This Contractor shall furnish all blocking (wood or other), supports and attachments for all HVAC devices, panels and fixtures back to the structure.
 27. This Contractor shall review all means of building access and make provisions to ensure that equipment will fit through permanent doorways and/or structure.
 28. Provide all escutcheons and sleeves for the HVAC work and provide all caulking and sealants where the work of this package abuts other work. Provide all sleeves or boxouts and perform all cutting and patching necessary to complete the Work.

Plumbing Work

1. Perform all necessary plumbing demolition and disposal as called for in the contract drawings and specifications.
2. Perform complete all plumbing work required for a complete and operable system, including domestic hot, and cold water systems, waste/sanitary systems, ventilation piping, storm piping, floor drains and cleanouts, grease interceptors, equipment and fixtures. Provide all insulation and pipe covering for the plumbing work and provide all pipe and valve identification.
3. Perform all Plumbing Work including but not limited to the following:
 - All plumbing piping supports, anchors, saddles, hangers, and suspension systems as required.
 - All plumbing systems insulation, jacketing, and protection shields as required.
 - Furnish, install, and certify all backflow preventers, if indicated.
4. Coordinate the location and elevation of floor drains, floor sinks, grease interceptors, and cleanouts.
5. Include cost to repair any fireproofing damaged during the installation of the plumbing systems and hangers.
6. All coring, sleeves, firestopping, and sealants as required for new and existing wall and floor penetrations.
7. Provide all plumbing equipment and fixtures complete, including isolation valves, mixing valves, balancing valves, water closets, urinals, lavatories, mop basins, water coolers, floor drains, roof drains, hose bibs, and related accessories for a complete installation.
8. Perform all testing, balancing and adjusting of plumbing work as required by the contract documents.

9. All firestopping material and insulation at all penetrations through floors or rated walls. Soundproof all sleeves and penetrations through walls and floors. Provide all vibration isolation. Provide all means of support and attachment to the structure for the Work including any trapeze hangers to clear interferences. Provide all sleeves or boxouts and perform all cutting and patching necessary to complete the Work. Provide all cores required for plumbing work.
10. All acoustical sealants for all pipes that penetrate through walls that are not fire rated.
11. All pipe identification and valve tagging in accordance with the contract documents.
12. Layout of all plumbing work.
13. Perform all touch-up painting of factory finished equipment.
14. Provide perimeter sealant at all interior and exterior fixtures, equipment, etc.
15. Provide complete as-built drawings, operating and maintenance manuals, spare parts, and tools and perform testing and training of owner's personnel. All O&M manuals are to be submitted no later than substantial completion and must be in hand before any reduction in retainage is contemplated.
16. Take note of building access and make provisions to ensure that material and equipment will fit through permanent doorways and/or structure.
17. All escutcheons and sleeves for the work and provide all caulking and sealants where the work of this package abuts other work. Provide all sleeves or boxouts and perform all cutting and patching necessary to complete the Work.
18. Provide temporary caps and closures at all incomplete and closures at all incomplete piping systems being installed by This Contractor to prevent collection of debris and also accidental opening of active line or valve.
19. Provide all factory testing as specified in the technical specifications. All test data shall be submitted to the JJC.
20. The Plumbing Contractor will include all means of support and attachment to this structure for the Plumbing Work including any trapeze hangers to clear interferences
21. Provide all shoring, bracing, and hoisting, and/or rigging required to complete your work.

Electrical Work

1. Perform all necessary electrical demolition and disposal as called for in the contract drawings and specifications.
2. Provide complete all Electrical Work and systems, including distribution and branch power, lighting, grounding, and special systems, fire alarm, intercom, low voltage systems and clock systems required for a complete and operational facility.
3. Rough in, including wiring, for door access control.
4. Rough in for Access points. Coil wiring above accessible ceiling space. Owner will install access points and brackets.
5. All building interior and exterior lighting and lighting distribution work, including conduits, wire, fixtures, fixture supports, and accessories switches, occupancy sensors, day light harvesting, and lamps/bulbs. Verify installation method and ceiling construction against fixture specifications to ensure fixtures are fabricated to coordinate with ceiling construction.
6. All telecommunications work, including but not limited to, all work shows on Telecommunication

Sheets, multi pair cable, optical fiber cable, racks, cable trays, cabinets, patch panels, patch cords, cover plates, dust covers, outlets boxes, related hardware, distribution, termination equipment, and other related items.

7. This Contractor is responsible for the proper placement of all cabling, racks, cabinets, trays, cover plates, outlet boxes, and related hardware. Include supports, mounts, brackets for a complete ceiling mounted speaker systems. Include all labeling and identification and as-builts.
8. Provide, install, maintain, and remove / dispose of all temporary power and lighting systems during construction including, but not limited to, the following:

Include adequate quantity of temp lighting to ensure safe light levels at all areas

Provide all temporary lighting as required by the General requirements of the Contract or otherwise required in the bid documents. Provide temporary 120v, receptacle power with a minimum of (3) 20 amp circuits in each of the 5 main areas of the building. In addition, provide two (2) 240V, 80 amp welding receptacles. All temporary electrical systems shall abide by the requirements set forth in the Project Safety Manual.

Include cost to provide adequate power and number of temporary power outlets. Must meet the criteria for a quad outlet to be placed every 100 ft. in all areas of work to ensure all trade needs are met.

9. All fire alarm system complete, including conduit, boxes, devices, duct smoke detectors, wiring, testing, and accessories. Connect to fire protection tamper/flow switches and equipment. Electrical contractor is responsible for shop drawings and submittals to local authorities to procure approval of fire alarm system. Provide fire alarm zone maps, framed and hung adjacent to each fire alarm control or annunciator panel, clearly indicating all devices and zones. Wall magnets for door holders will be furnished as part of the door hardware; receive, inventory, and install door magnets.
10. Provide all firestopping material and insulation at all penetrations through floors or rated walls. Soundproof all sleeves and penetrations through walls and floors. Provide all means of support and attachment to the structure for the Work including any trapeze hangers to clear interferences. Provide all caulking and sealants where the work of this package abuts other work. Provide all sleeves or boxouts and perform all cutting and patching necessary to complete the Work. Provide all cores required for this work.
11. Provide all sleeves required for this Scope of Work. Coordinate the size and location a penetration with the respective Contractor.
12. Include all caulking, fire safing and sealants associated with this work and between this work and adjacent work. Acoustical sealants around all conduits and penetrations through partitions that are not fire rated.
13. Include All motor starters, disconnects, and overcurrent protection for all mechanical, plumbing, and fire protection equipment. Verify equipment shown on electrical drawings against Mechanical, Plumbing, and Fire Protection drawings to ensure all equipment, disconnects, starters, and overcurrent protection is provided. Coordinate voltage/phasing of equipment prior to purchase of electrical equipment. Variable frequency drives (VFD's) will be furnished by others. Receive, unload, inventory, and install all VFD's not mounted integrally with the mechanical equipment.
14. Include layout of all Electrical Work.
15. All electrical and equipment identification. Include clear labels on ceiling grid where access point wiring is coiled. Exact wording to be determined by Owner.
16. Power wiring and conduit for all control panels that may be furnished by the Mechanical or Plumbing Contractors.

17. This Contractor is responsible for reviewing shop submittals for mechanical equipment and verifying motor size, starter size and location, power feed voltage and current for each piece of equipment. This Contractor shall advise JJC of any discrepancies between the electrical design documents and the approved submittal documents within 14 days of receiving the approved shop submittals.
18. All connections to equipment, including rough-in and final electrical connections to equipment furnished by other Trades, shall be completed by this Contractor.
19. Install electrical portion of door hold open devices.
20. Install all adjustable frequency drives, that are not indicated as factory installed.
21. Provide Coordination Drawings and Shop Drawings in accordance with the General Conditions and General Requirements. Provide all coordination drawings and composite drawings as required by the bid documents. MEP Coordination drawings shall be produced in CAD format. Produce hard printed copies of the drawings from the CAD files. CAD files of background drawings may be made available by the architect/engineer. Any fee charged by the architect/engineer for these CAD files will be paid by this Contractor.
22. Perform all touch-up painting of factory finished equipment.
23. Take note of building access and make provisions to ensure that equipment will fit through permanent doorway and/or structure.
24. Provide all shoring, bracing, staging and hoisting, and/or rigging required to complete your work.
25. Provide a "long lead" item listing for the following, but not limited to: equipment and materials, which are required for early order to meet the project schedule. Provide this as a separate document on company letter head and include in bid packet.
26. Provide all sleeves required for this Scope of Work. Coordinate the size and location of floor a penetration with the concrete contractor.
27. Provide all means of support and attachments to the structure for the mechanical piping work, including any trapeze hangers to clear ductwork or other interference. Provide all miscellaneous steel supports, which are not shown on the project drawings, but which are required to complete the work. Contractor shall furnish all blocking (wood or other) backing, supports and attachments for all your devices, panels, systems, cabinets and fixtures back to the structure.