

## **SECTION 00 23 00 WORK CATEGORIES**

With the intent of supplementing and clarifying the scope of work elsewhere defined, and without intending to limit and/or restrict the extent of work required by the Contract Documents, the work generally will consist of the following items and operations listed in each of the attached Work Category descriptions. Each bidder is responsible for insuring that their price is all inclusive of any requirements in related specification sections or contract drawings not included under a specific Work Category.

Each Work Category is identified by a Work Category Number and Work Category Description. These designations shall be placed on the Bid Form and the Work Category Description shall become the scope of work for the successful Contractor selected for each Work Category.

Each Contractor shall examine the Contract Documents of all disciplines to determine the extent of the proposed construction and shall perform the work to conform to construction called for in such manner as not to interfere with or delay work of other Contractors.

It is important that all Bidders review all of the Work Categories as items and statements contained in other Work Categories will clarify the interaction of each Contractor's work with others.

If there is a conflict on a specific item between the Contract Documents and the Work Category Description, the Bid Package Description will govern. However, if an item is covered in the Contract Documents but not reiterated in the Work Category Description, the Bidder shall still be responsible for that item of work.

The following sections apply to all Work Category Bidders:

- All Division 00 sections.
- All Division 01 sections.
- 00 23 00 Work Categories

### Definitions:

"Furnish and Install" means to provide all labor, materials, insurance, taxes, equipment, etc. to complete the described work, per plans and specifications.

"Install Only" means receive delivery on board, unload, uncrate and install, including all labor, miscellaneous materials, insurance, taxes, and equipment necessary for material supplied by others. This also includes removal of debris generated by materials supplied by others.

"Furnish Only" means deliver, tax and freight includes (FOB job site), materials to the Owner's facility for installation by others. Delivery shall be made during standard working hours and notification of delivery shall be given to Market & Johnson 72 hours in advance.

<b>WORK CATEGORY NUMBER</b>	<b>SPECIFICATION SECTION(S)</b>	<b>PORTION OF WORK</b>
<b>04</b>	04 20 00 – Unit Masonry ..... 04 72 00 – Cast Stone Masonry.....	Furnish and Install Furnish and Install
<b>06B</b>	06 10 00 – Rough Carpentry ..... 06 16 00 – Sheathing ..... 06 17 53 – Shop-Fabricated Wood Trusses ..... 08 54 13 – Fiberglass Windows .....	Install Only Install Only Install Only Install Only
<b>07D</b>	07 31 13 – Asphalt Shingles.....	Furnish and Install
<b>07E</b>	07 53 23 – Ethylene-Propylene-Diene-Monomer (EPDM) Roofing .. 07 62 00 – Sheet Metal Flashing and Trim ..... 07 72 00 – Roof Accessories .....	Furnish and Install Furnish and Install Furnish and Install
<b>07F</b>	07 46 19 – Steel Siding ..... 07 46 26 – Fiber Substrate Siding.....	Furnish and Install Furnish and Install
<b>07H</b>	07 84 13 – Penetration Firestopping ..... 07 84 46 – Fire-Resistive Joint Systems ..... 07 92 00 – Joint Systems .....	Furnish and Install Furnish and Install Furnish and Install
<b>09B</b>	09 30 13 – Ceramic Tiling .....	Furnish and Install
<b>11B</b>	11 73 00 – Ceiling Mounted Patient Lift System .....	Furnish and Install
<b>12</b>	12 35 30 – Residential Casework ..... 12 36 61.13 – Cultured Marble Countertops ..... 12 36 61.16 – Solid Surfacing Countertops .....	Furnish Only Furnish Only Furnish Only
<b>23B</b>	23 09 00 – Instrumentation and Control for HVAC ..... 23 09 93 – Sequence of Operations for HVAC Controls.....	Furnish and Install Furnish and Install

## **Work Category 4 – Masonry**

---

The following information is provided in order to define and describe the scope of work that will be required of the successful Bidder. The scope of work shall include all labor, materials, supervision, equipment, tools, insurance, bonding, taxes, and all other items required to perform this work.

The information is to be complimentary with the collective requirements of all the other Contract Documents. All the Contract Documents, including all disciplines of the specifications and drawings, are included as part of this scope of work.

The Document will become a part of the successful Bidder's Final Contract and outlines the specific scope of work for this Work Category.

**The following specification sections shall be completely furnished and installed under the scope of this Bid Package.**

Division 00	Procurement and Contracting Requirements
Division 01	General Requirements
Division 4	
04 20 00	Unit Masonry
04 72 00	Cast Stone Masonry
Division 7 (as applies)	
07 21 19	Thermal Insulation
07 25 00	Weather Barriers
07 62 00	Sheet Metal Flashing and Trim

### **Scope of Work – Additional Category Requirements**

1. Hoisting and equipment as required for the work of this Bid Package.
2. Winter Heat and snow removal for the duration of the masonry installation process is the responsibility of Package 4.
3. The construction Manager will provide temporary heating for the inside of the building after building enclosure. Building enclosure is defined as precast complete, roofing complete and exterior windows and curtain wall installed.
4. Concrete block staging and mixing areas locations shall be coordinated with the Construction Manager. Mixing locations shall provide for dust containment provisions and protection of all hard surfaces.
5. Package 4 will be responsible for providing a shelter and heat as required for mixing operations as interior mixing during the winter months cannot be guaranteed or expected
6. Concrete block deliveries shall be coordinated with the Construction Manager 24 hours in advance of delivery. Concrete block shall be brought to the site on an "as needed" basis as staging areas are limited at the downtown site.

7. Interior and Exterior layout shall be included in this package for installation of the work of this package.
8. All openings shall be provided in the masonry walls, including but not limited to, doors, windows, ducts, cable trays, and any other penetrations requiring a framed masonry opening. It is the responsibility of Package 4 to provide all of the openings and coordinate with the requirements of all other packages and the construction manager.
9. Installation of all embedded materials required by other packages including but not limited to, embedded plates, steel angles, strap anchors, anchors, and sleeves.
10. Coordination and cooperation with mechanical and electrical subcontractors for the rough in of piping, mechanical, and electrical components.
11. Cooperation and coordination with the owners testing agency. Any work failing to meet the specified testing requirements will be removed and replaced at the expense of bid package 4.
12. Hollow Metal frames will be set by Package 06. It is the responsibility of this Package to verify the frame for squareness, alignment, plumbness and damage. If no deficiencies are noted any corrections will be assumed to be the responsibility of package 4.
13. Horizontal and vertical reinforcement embedded within masonry walls will be furnished and installed by package 4.
14. Grouting all masonry components. Package 4 shall coordinate with other Bid Packages to ensure that the cores are grouted solid at locations for any component shown to be bolted / fastened to the wall.
15. Firesafing, firestopping, fire caulking, grouting, and sealant as required at the head of all masonry walls per the requirements of the Contract Documents.
16. Grouting of door frames as required.
17. Protection and cleaning of concrete, wall and ceiling surfaces surrounding the work of this Bid Package, including but not limited to, plywood protection under scaffolding and plastic, or other means of floor protection.
18. In addition to the daily clean up requirements listed in the Contract Documents, this Package is to provide 1 person for 2 hours per week to assist the Construction Manager in general clean up duties and relocation of materials as required. This requirement applies each week for which you have personnel on-site. This amount of labor shall be listed on the schedule of values and will be only paid when participation requirements are satisfied, otherwise the amount will be deducted from the contract.
19. Provide complete protection of existing features surrounding the project for the complete demo and installation of the work of package 4, including but not limited to, paving, curb & gutter, sidewalks, buildings, green space. The complete removal and replacement of the damaged site features shall be the responsibility of package 4.
20. The Site access route must be coordinated with the Construction Manager and adhered to at all times.
21. Includes exterior monument sign CMU and cast stone cap.

## **Work Category 6B – Rough Carpentry Erection**

---

The following information is provided in order to define and describe the scope of work that will be required of the successful Bidder. The scope of work shall include all labor, materials, supervision, equipment, tools, insurance, bonding, taxes, and all other items required to perform this work.

The information is to be complimentary with the collective requirements of all the other Contract Documents. All the Contract Documents, including all disciplines of the specifications and drawings, are included as part of this scope of work.

The Document will become a part of the successful Bidder's Final Contract and outlines the specific scope of work for this Work Category.

**The following specification sections shall be completely furnished and installed under the scope of this bid package.**

Division 00	Procurement and Contracting Requirements
Division 01	General Requirements
Division 6	
06 10 00	Rough Carpentry
06 16 00	Sheathing
06 17 53	Shop-Fabricated Wood Trusses
Division 7	
07 25 00	Weather Barriers
Division 8	
08 54 13	Fiberglass Windows
08 91 19	Fixed Louvers

### **Scope of Work – Additional Category Requirements**

1. Coordinate all deliveries with the construction manager. Material shall be provided FOB jobsite and a packing list shall be provided to the construction manager. In the event that a packing slip is not provided for delivery, package 6 is responsible.
2. Shall receive, unload, transport, inventory, store, protect, and install all of the components of this package.
3. Provide for off-loading and hoisting of all materials. Hoisting access to the second floor is not guaranteed, it may be necessary to hand carry materials through stairs. The elevators will not be used for material hoisting.
4. The Site access route must be coordinated with the Construction Manager and adhered to at all times.
5. All fasteners required for the work of this bid package.
6. Contractor is responsible for bracing structures, includes materials and labor.

## **Work Category 7D – Asphalt Roofing**

---

The following information is provided in order to define and describe the scope of work that will be required of the successful Bidder. The scope of work shall include all labor, materials, supervision, equipment, tools, insurance, bonding, taxes, and all other items required to perform this work.

The information is to be complimentary with the collective requirements of all the other Contract Documents. All the Contract Documents, including all disciplines of the specifications and drawings, are included as part of this scope of work.

The Document will become a part of the successful Bidder's Final Contract and outlines the specific scope of work for this Work Category.

**The following specification sections shall be completely furnished and installed under the scope of this bid package.**

Division 00	Procurement and Contracting Requirements
Division 01	General Requirements
Division 7	
07 31 13	Asphalt Shingles
07 62 00	Sheet Metal Flashing and Trim
07 72 00	Roof Accessories

### **Scope of Work – Additional Category Requirements**

1. Roofing systems complete, flashing and sheet metal, insulation, crickets, copings, edge metal, reglets, gravel stops, scuppers, downspouts, ballast and roof accessories as shown, required by manufacturer or specified.
2. Complete flashing and seal for all roof penetrations as shown or specified, including penetrations shown or required by the mechanical and electrical drawings.
3. Include a separate mobilization for sealing pipes/conduit penetrations after the initial installation of the roof.
4. This package shall be responsible for completely cleaning & blowing off the roof decks, plank and precast prior to installation of roof. Shall have construction manager inspect all roof areas prior to installation of the roof.
5. Complete flashing and seal for all roof curbs as shown or specified on the architectural, mechanical, and electrical drawings
6. Complete flashing and seal for all skylight openings as shown or specified, including temporary weather protection until skylights are installed.
7. Metal parapet caps, counter flashings, metal reglet flashings, scuppers, overflow scuppers, downspouts, flashings, and sealants as shown or specified.
8. Provide caulking and sealants as required for the work of this package, including all caulking recommended by the roofing manufacturer whether or not it is shown on the drawings.
9. Snow removal and cold weather protection.
10. Underlayment under the roofing membrane as shown or specified.

11. In addition to daily clean up requirements listed in the contract documents, this package is to assist the construction manager in general clean up duties and relocation of materials as required.
12. Provide complete protection of existing features surrounding the project for the complete demo and installation of the work of package 7D, including but not limited to, paving, curb & gutter, sidewalks, buildings, green space. The complete removal and replacement of the damaged site features shall be the responsibility of package 7D

## **Work Category 7E – EPDM Roofing**

---

The following information is provided in order to define and describe the scope of work that will be required of the successful Bidder. The scope of work shall include all labor, materials, supervision, equipment, tools, insurance, bonding, taxes, and all other items required to perform this work.

The information is to be complimentary with the collective requirements of all the other Contract Documents. All the Contract Documents, including all disciplines of the specifications and drawings, are included as part of this scope of work.

The Document will become a part of the successful Bidder's Final Contract and outlines the specific scope of work for this Work Category.

**The following specification sections shall be completely furnished and installed under the scope of this bid package.**

Division 00	Procurement and Contracting Requirements
Division 01	General Requirements
Division 7	
07 21 00	Thermal Insulation (as applies)
07 53 23	Ethylene-Propylene-Diene-Monomer (EPDM) Roofing
07 62 00	Sheet Metal Flashing and Trim
07 72 00	Roof Accessories

### **Scope of Work – Additional Category Requirements**

1. Roofing systems complete, flashing and sheet metal, insulation, crickets, copings, edge metal, reglets, gravel stops, scuppers, downspouts, ballast and roof accessories as shown, required by manufacturer or specified.
2. Complete flashing and seal for all roof penetrations as shown or specified, including penetrations shown or required by the mechanical and electrical drawings.
3. Include a separate mobilization for sealing pipes/conduit penetrations after the initial installation of the roof.
4. This package shall be responsible for completely cleaning & blowing off the roof decks, plank and precast prior to installation of roof. Shall have construction manager inspect all roof areas prior to installation of the roof.
5. Complete flashing and seal for all roof curbs as shown or specified on the architectural, mechanical, and electrical drawings
6. Complete flashing and seal for all skylight openings as shown or specified, including temporary weather protection until skylights are installed.
7. Roof walkway pads, pavers, splash blocks, and accessories as shown or specified.
8. Metal parapet caps, counter flashings, metal reglet flashings, scuppers, overflow scuppers, downspouts, flashings, and sealants as shown or specified.
9. Provide caulking and sealants as required for the work of this package, including all caulking recommended by the roofing manufacturer whether or not it is shown on the drawings.
10. Snow removal and cold weather protection.
11. Vapor barriers under the roofing membrane as shown or specified.

12. In addition to daily clean up requirements listed in the contract documents, this package is to assist the construction manager in general clean up duties and relocation of materials as required.
13. Provide complete protection of existing features surrounding the project for the complete demo and installation of the work of package 7E, including but not limited to, paving, curb & gutter, sidewalks, buildings, green space. The complete removal and replacement of the damaged site features shall be the responsibility of package 7E

## **Work Category 7F – Steel and Fiber Substrate Siding**

---

The following information is provided in order to define and describe the scope of work that will be required of the successful Bidder. The scope of work shall include all labor, materials, supervision, equipment, tools, insurance, bonding, taxes, and all other items required to perform this work.

The information is to be complimentary with the collective requirements of all the other Contract Documents. All the Contract Documents, including all disciplines of the specifications and drawings, are included as part of this scope of work.

The Document will become a part of the successful Bidder's Final Contract and outlines the specific scope of work for this Work Category.

**The following specification sections shall be completely furnished and installed under the scope of this bid package.**

Division 00	Procurement and Contracting Requirements
Division 01	General Requirements
Division 7	
07 46 19	Steel Siding
07 46 26	Fiber Substrate Siding

### **Scope of Work – Additional Category Requirements**

1. Systems complete, steel siding, aluminum soffit, and steel gutters / downspouts.
2. Weather barrier completed by others however responsibility to validate quality is the responsibility of this work category.
3. In addition to daily clean up requirements listed in the contract documents, this package is to assist the construction manager in general clean up duties and relocation of materials as required.

## **Work Category 7D – Caulking and Sealants**

---

The following information is provided in order to define and describe the scope of work that will be required of the successful Bidder. The scope of work shall include all labor, materials, supervision, equipment, tools, insurance, bonding, taxes, and all other items required to perform this work.

The information is to be complimentary with the collective requirements of all the other Contract Documents. All the Contract Documents, including all disciplines of the specifications and drawings, are included as part of this scope of work.

The Document will become a part of the successful Bidder's Final Contract and outlines the specific scope of work for this Work Category.

**The following specification sections shall be completely furnished and installed under the scope of this bid package.**

Division 00	Procurement and Contracting Requirements
Division 01	General Requirements
Division 7	
07 84 13	Penetration Firestopping
07 84 46	Fire-Resistive Joint Systems
07 92 00	Joint Sealants

### **Scope of Work – Additional Category Requirements**

1. Caulking of the following, but not limited to; all exterior concrete to pre-cast wall joints, concrete topping slab connection to precast and masonry, masonry control joints, masonry to masonry, masonry to precast, masonry to steel, and masonry to drywall, interior and exterior cast stone, drywall control joints, cabinetry and back splashes, perimeter of wood paneling, exterior door frames, interior frames, interior joints around windows, entrances, curtain walls, window stools, access doors, exterior overhead doors, louvers, tile control joints, shower compartments, toilet, bath and laundry accessories, fire extinguisher cabinets, food service equipment.
2. Caulking as required by division 21, 22, 23, 26, and 28, including but not limited to, all penetrations, perimeter of fixtures.
3. In addition to daily clean up requirements in the construction documents, this package is to provide assistance to the construction manager in general clean up and relocation of materials as necessary.

## Work Category 09B - Tile

---

The following information is provided in order to define and describe the scope of work that will be required of the successful Bidder. The scope of work shall include all labor, materials, supervision, equipment, tools, insurance, bonding, taxes, and all other items required to perform this work.

The information is to be complimentary with the collective requirements of all the other Contract Documents. All the Contract Documents, including all disciplines of the specifications and drawings, are included as part of this scope of work.

The Document will become a part of the successful Bidder's Final Contract and outlines the specific scope of work for this Work Category.

**The following specification sections shall be completely furnished and installed under the scope of this bid package.**

Division 00	Procurement and Contracting Requirements
Division 01	General Requirements

Division 7 (as applies)	
07 26 00	Vapor Retarders
07 92 00	Joint Sealants

Division 9	
09 30 13	Ceramic Tiling

### Scope of Work – Additional Category Requirements

1. Provide complete protection of existing features surrounding the project for the complete demo and installation of the work of package 9B.
2. Coordinate with package 3A Concrete, 22A Plumbing and the construction manager for any special tile requirements for the sloping floors.
3. Provide waterproofing membrane where shown or specified in the contract documents.
4. Provide crack isolation membrane at all construction joints, control joints, and shrinkage cracks greater than 1/8" in the concrete substrate.
5. Provide proper termination of the waterproofing membrane at the floor drain.
6. Provide protection of adjacent floor, wall and ceiling finishes.
7. Includes recessed porcelain shower shelves.
8. Provide all materials and labor necessary to clean and protect the work provided under this bid package until owner acceptance.
9. Provide temporary lighting as required.
10. Provide all material hoisting and off-loading of material.
11. Provide attic stock material with a written inventory list of the materials provided to the construction manager at the conclusion of the project.
12. In addition to daily clean up requirements in the construction documents, this package is to provide assistance to the construction manager in general clean up and relocation of materials as necessary.

13. Package 9B shall inspect and review all finished wall conditions as provided by package 9A Drywall prior to applying paint, and report and deficiencies to the Construction Manager. By applying paint to drywall surfaces, Packages 9B is accepting the substrate. In the event that painted wall surfaces are later rejected by Owner, Architect, or Construction Manager due to taping deficiencies or finish issues, Package (B will provide re-painting as required at no additional cost to the Owner.

## **Work Category 11B – Ceiling Mounted Patient Lift System**

---

The following information is provided in order to define and describe the scope of work that will be required of the successful Bidder. The scope of work shall include all labor, materials, supervision, equipment, tools, insurance, bonding, taxes, and all other items required to perform this work.

The information is to be complimentary with the collective requirements of all the other Contract Documents. All the Contract Documents, including all disciplines of the specifications and drawings, are included as part of this scope of work.

The Document will become a part of the successful Bidder's Final Contract and outlines the specific scope of work for this Work Category.

**The following specification sections shall be completely furnished and installed under the scope of this Bid Package.**

Division 00	Procurement and Contracting Requirements
Division 01	General Requirements
Division 11	
11 73 00	Ceiling Mounted Patient Lift System

### **Scope of Work – Additional Category Requirements**

1. Provide delivery, off-loading, and hoisting of all equipment provided by this Package. This includes any temporary provisions and/or rigging required to get the equipment from the delivery truck to the final installed location.
2. Package 11B shall furnish, receive, unload, transport, and install all of the components of this Bid Package. The components of this Bid Package shall be warehoused by Package 11B, until the scheduled date for installation. Upon arrival at the jobsite the protection, security, and storage of the material is the responsibility of the Package 11B.

## **Work Category 12 – Residential Casework**

---

The following information is provided in order to define and describe the scope of work that will be required of the successful Bidder. The scope of work shall include all labor, materials, supervision, equipment, tools, insurance, bonding, taxes, and all other items required to perform this work.

The information is to be complimentary with the collective requirements of all the other Contract Documents. All the Contract Documents, including all disciplines of the specifications and drawings, are included as part of this scope of work.

The Document will become a part of the successful Bidder's Final Contract and outlines the specific scope of work for this Work Category.

**The following specification sections shall be completely furnished and installed under the scope of this Bid Package.**

Division 00	Procurement and Contracting Requirements
Division 01	General Requirements
Division 11	
12 35 30	Residential Casework
12 36 61.13	Cultured Marble Countertops
12 36 61.16	Solid Surfacing Countertops

### **Scope of Work – Additional Category Requirements**

1. Provide delivery, off-loading, and hoisting of all equipment provided by this Package. This includes any temporary provisions and/or rigging required to get the equipment from the delivery truck to the final installed location.
2. Provide complete shop drawings and field dimensioning of countertops.
3. Includes all hardware, brackets, and other accessories associated with the product. Installation and fasteners by the Building Works package.

## **Work Category 23B – Temperature Controls**

---

The following information is provided in order to define and describe the scope of work that will be required of the successful Bidder. The scope of work shall include all labor, materials, supervision, equipment, tools, insurance, bonding, taxes, and all other items required to perform this work.

The information is to be complimentary with the collective requirements of all the other Contract Documents. All the Contract Documents, including all disciplines of the specifications and drawings, are included as part of this scope of work.

The Document will become a part of the successful Bidder's Final Contract and outlines the specific scope of work for this Work Category.

### **The following specification sections shall be completely furnished and installed under the scope of this Bid Package.**

Division 00	Procurement and Contracting Requirements
Division 01	General Requirements
Division 02	Existing Conditions
02 41 19	Selective Demolition
Division 23	
23 09 00	Instrumentation and Control for HVAC
23 09 93	Sequence of Operations for HVAC Controls

### **Scope of Work – Additional Category Requirements**

1. Provide a complete building management, integrated automation and control system as shown, required or specified; including all instruments, devices, panels, pneumatic tubing, control wiring, as specified and required for a complete and fully operational system.
2. Refer to other Bid Packages for coordination of work between Mechanical and Electrical systems.
3. Provide power connections for all panels or devices provided by this Bid Package that are not shown on the electrical drawings.
4. Coordinate all work with the contractors performing work under Bid Packages 22A Plumbing, 23A HVAC Sheetmetal, 23C Testing and Balancing and 26 Electrical
5. Provide all specified factory training for Owner's personnel, including travel, and lodging. In addition, all necessary on-site programming and hardware training shall be provided.
6. It is this Bid Packages responsibility to schedule and attend all local, state and/or federal inspections whether or not they occur during normal project working hours. Submit inspection reports from local, state and federal inspection agencies to the Construction Manager
7. All manufacturers' warranties shall be included. Warranties shall begin at Owners acceptance. Extended warranties, if specified, shall be provided. Where equipment is used for temporary, extended warranties shall be provided for the period of temporary usage.
8. Provide all fire/smokestopping systems of devices necessary to endure work installed by this Bid Package complies with the requirements of specification 07 84 00 and meets all code requirements. Coordinate the firestopping work required of this Bid Package with

the firestopping work of all other Bid Packages to ensure complete construction of all wall and firestopping assemblies.

9. Provide sprayed fireproofing patching at any fireproofed areas damaged by this scope of work.
10. Coordinate the installation of all work associated with this Bid Package, with the work of all Bid Packages, and existing work to ensure that all tolerances and clearances required for all Bid Packages are maintained.
11. Provide and coordinate all necessary tie-ins, demolition, relocation, and shutdowns with the Construction Manager and the Owner to ensure no disruption to the existing systems occurs. The necessity of performing the work of this Bid Package during non-regular or non-peak hours as directed by the Owner will not be compensable.
12. Provide labor, material, equipment, coordination, and supervision for connections and tie-ins to existing ductwork.
13. All demolition and sawcutting of floor openings is by individual Bid Packages requiring the opening.
14. All equipment pads will be provided and installed under this work category.
15. Provide all start up, testing, verification, corrective action, manuals, and training as required or specified, including separate demonstration tests to the Construction Manager, the Owner, and local authorities.
16. Provide all materials and labor necessary to clean and protect the work provided under this Bid Package until Owner acceptance.
17. Provide identification/labeling of piping, equipment, systems, ceiling markers, etc. as necessary to complete this scope.
18. Coordinate with Bid Packages 22 Plumbing, 23A HVAC, and 23C Test and Balance Contractors, and provide coordination in all aspects of the work. With the exception of the accrual labor of the Test and Balance Contractor, this Bid Package shall consider specification section 23 05 93 to be an inclusive part of their contract documents and shall assume necessary compliance therewith, especially substantial completion. This Bid Package shall execute their work in close coordination with the Test and Balance contractor, making every effort to provide complete test and balance systems, responding expeditiously to correct any deficiencies, inadequacies, imbalances, etc. that may be uncovered by the test of those systems. In that regard, cost and labor for the installation, addition, replacement or removal of any shims, sheaves, or other similar items necessary for incremental adjustment of systems demonstrated by the test and balance tests, will be considered to be part of the base scope of this Bid Package.
19. Owner Instruction/Training: Upon completion of systems operation test and acceptance, this Bid Package shall schedule instructional meetings as required for the Owner facility and operations personnel through the Construction Manager. The Construction Manager and Owner shall be contacted for acceptable time for said instructions and shall be provided with written confirmation of the actual scheduled date, time and location for the meeting, a minimum of fourteen (14) days prior for the meeting. Representatives of Bid Packages 22A, 23A, and 23B shall be present for the entire duration of the operating instructions. The Bid Packages shall instruct the Owner's personnel in the proper operation and maintenance of all mechanical systems and equipment. In particular, instruct the Owners personnel on the changeover period of all systems, control and adjustments, draining of systems that require draining, and chemical analysis of systems that require chemicals. The Bid Packages shall demonstrate each operational mode of systems and describe the system operational requirements. The Bid Packages shall

make any fine adjustments to systems or controls necessary to enable the systems to operate as designed. The owner's personnel shall be permitted to stop and/or start any piece of equipment in the system.

20. Provide all blocking, backing miscellaneous supports, sleeves, clock outs, core drilling, holes in walls, decks, precast, and concrete slabs. Provide all hangers, support framing, anchors, concrete embeds, hardware, etc. required for the scope of the Bid Package. Include final cutting of decking for block outs/openings/sleeves.
21. This bid Package is responsible for the removal, replacement, cutting, patching, etc. as needed for the installation of its work, including any walls, decks, floors, ceilings, etc.
22. Owner Training will occur in phases following the construction phases in the schedule.