

SECTION 011000 - SUMMARY

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Work covered by the Contract Documents.
 - 2. Type of the Contract.
 - 3. Work phases.
 - 4. Work under other contracts.
 - 5. Products ordered in advance.
 - 6. Owner-furnished products.
 - 7. Use of premises.
 - 8. Owner's occupancy requirements.
 - 9. Work restrictions.
 - 10. Specification formats and conventions.

1.3 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: Vigo County Security Center
 - 1. Project Location: 500 West Honey Creek Drive, Terre Haute, IN 47802
- B. Owner: Vigo County Commissioners
 - 1. Owner's Representative: Mike Peterson, Garmong Construction Services, 3050 Poplar Street, Terre Haute, IN 47803.
- C. Architect: Eric B. Ratts, AIA, DLZ Indiana, LLC, 157 East Maryland Street, Indianapolis, IN 46204
- D. Construction Manager: Garmong Construction Services.
 - 1. Construction Manager has been engaged for this Project to serve as an advisor to Owner and to aid in administering the Contract for Construction between Owner and each Contractor, according to a separate contract between Owner and Construction Manager.
 - 2. Construction Manager for this Project is Owner's Representative. In Divisions 1 through 33 Sections, the terms "Contractor" and "Prime Contractor" are synonymous.

1.4 TYPE OF CONTRACT

- A. Project will be constructed under multiple contracts. Multiple contracts are separate contracts representing significant construction activities between Owner and separate contractors. Each contract is performed concurrently and coordinated closely with construction activities of the Project under each contract.

1.5 USE OF PREMISES

- A. General: Each Contractor shall have full use of premises for construction operations, including use of Project site, during construction period. Each Contractor's use of premises is limited only by Owner's right to perform work or to retain other contractors on portions of Project.

1.6 WORK RESTRICTIONS

- A. On-Site Work Hours: Work shall be generally performed inside the existing building during normal business working hours of 7:30 a.m. to 4:00 p.m. (local time at Project site,) Monday through Friday, except otherwise indicated.
 - 1. Weekend Hours: With written permission of the Construction Manager.
 - 2. Early Morning Hours: With written permission of the Construction Manager.
 - 3. Hours for Utility Shutdowns: With written permission of the Construction Manager.
- B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
 - 1. Notify Construction Manager not less than two days in advance of proposed utility interruptions.
 - 2. Do not proceed with utility interruptions without Construction Manager's written permission.
 - 3. Follow Owner's mandatory orientation requirements.
- C. Work Restrictions:
 - 1. Construction personnel shall be fully clothed, and shirts shall not be removed at any time.
 - 2. Radios or other electronic devices which create music and/or loud noise are not allowed at any time.
 - 3. Construction personnel shall only enter and exit the Project site via the construction gate, where a construction gate is indicated.
 - 4. Construction personnel shall only park in the areas designated for construction parking. Violators shall be towed at vehicle owner's expense.
 - 5. Construction personnel shall not leave construction work areas and enter areas occupied or being used by the Owner or public without permission from the Owner.
 - 6. Smoking and smokeless tobacco is prohibited in any portion of the building or any portion of the Project site.
 - 7. Any construction personnel violating safety (OSHA) rules shall be immediately removed from the Project site.
 - 8. Any construction personnel creating a disturbance or litter other than that produced by the Work shall be immediately removed from the Project site.
 - 9. These work restrictions shall become a part of all subcontracts as a contractual requirement.

1.7 SPECIFICATION FORMATS AND CONVENTIONS

- A. Specification Format: The Specifications are organized into Divisions and Sections using the 33-division format and CSI/CSC's "Master Format" numbering system.
 - 1. Section Identification: The Specifications use Section numbers and titles to help cross-referencing in the Contract Documents. Sections in the Project Manual are in numeric sequence; however, the sequence is incomplete because all available Section numbers are not used. Consult the table of contents at the beginning of the Project Manual to determine numbers and names of Sections in the Contract Documents.
 - 2. Division 1: Sections in Division 1 govern the execution of the Work of all Sections in the Specifications.
- B. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
 - 1. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.
 - 2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.
 - a. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.

END OF SECTION 01 10 00

SECTION 011200 - MULTIPLE CONTRACT SUMMARY**PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. Section includes a summary of each contract, including responsibilities for coordination and temporary facilities and controls.
- B. Specific requirements for Work of each contract are also indicated in individual Specification Sections and on Drawings.
- C. The narrative description to follow is provided to assist the bidder in determining the various trade contracts/bid packages involved in the project. The term 'Contractor' and 'Prime Contractor' are used interchangeably throughout this document and have the same meaning.

1.03 INCLUDED SECTIONS PROVIDED BY CONSTRUCTION MANAGER

- A. General Construction Building Permit – Excludes MEP
- B. Material Testing and Inspection Services
- C. Temporary Toilets
- D. Dumpsters
- E. Temporary Utility Usage Charges
- F. Perimeter Job Site Fencing
- G. Temporary Project Signage

1.04 EXCLUDED SECTION BY CONSTRUCTION MANAGER

- A. MEP Permits
- B. Onsite Project Offices for Prime Contractors, utility hookups, or use charges
- C. All material deliveries, handling, hoisting, and unloading
- D. Copies of plans and specifications
- E. Progress cleaning
- F. All work corresponding and concrete and masonry winter conditions/protection i.e. concrete blankets, masonry tented structures, admixtures, etc.

2.01 COMMONS SCOPES OF WORK FOR ALL TRADES

- A. This project is Sales Tax Exempt. Reference Supplemental General Conditions for details
- B. All additional work must be approved in writing by the Project Manager. Project superintendent is limited to approval of \$500 of additional work on an emergency basis only.
- C. No additional work will be considered for approval without written and signed Construction Daily Extra Work Authorization sheets, detailing the scope of work and the materials,

labor and equipment used. Garmong's field superintendent must sign these forms on a daily basis; signed, completed sheets, including costs must be submitted to the Project Manager on a weekly basis.

- D. The Contractor shall employ a competent Foreman who shall be onsite fulltime during the progression of work. This Foreman shall have full authority to manage project labor, manage equipment deliveries, and maintain the CM's project schedule. The full time Foreman shall be the point of contact for the field operations and shall attend weekly progress meetings.
- E. All Contractor's shall comply with the Storm Water Pollution Prevention Plan (SWPPP). Soil Erosion Control will be installed by BP#1. Any Contractor that damages or removes silt fence or any type of erosion control measure, for any reason including to perform work, is responsible to replace or repair it the same business day that it was damaged. Failure to do so same day will result in the immediate completion of this work by others, as directed by the CM, and all associated costs will be back-charged to the removing Contractor.
- F. Keep all roads and traffic routes clean and free of mud and debris at all times. All Contractors are responsible for cleaning the streets of all mud and debris generated from their operations. Contractors violating this requirement are subject to fines.
- G. Construction Manager will obtain the overall building permit. Each trade is responsible to include and obtain the permits and coordinate inspections for their own individual scope of work. All work shall be completed in accordance with applicable local, state, and federal codes, rules and regulations. Contractors are required to notify CM prior to and after all inspections.
- H. Each trade is responsible for all layout and applicable engineering required to complete all work of their bid package to exact dimensions and locations including verification of preceding work performed by other trades prior to the Contractor's installation. Immediately report all discrepancies to CM.
- I. The construction schedule requires multiple crews to complete work. Contractors must expect overlap between their work and other trades that will complete work before and after. "Out of sequence" work shall be expected and considered when submitting bids. Contractors shall include multiple mobilizations to complete the scope of work, and coordinate delivery schedules with the project schedule and construction sequencing. Schedule must be maintained. If overtime is required to maintain schedule, Contractor shall include overtime in proposal. The project target schedule follows this section.
- J. Provide temporary power and additional lighting as necessary for proper installation during preparation and installation of work.
- K. Provide proof of identification of existing utilities (*public or private*) to CM prior to start of underground and sawcutting.
- L. Attendance at progress meetings is mandatory when a trade is mobilized to the site. Failure to attend, without prior notification, will result in a \$100 deduct Change Order.
- M. Each Contractor is responsible to receive, unload, store, handle, protect, and install all items respective to their responsibilities
- N. Each Contractor shall provide access panels for their scope of work.
- O. Protect all other trades work in place and properly staged materials from damage of any kind which could be caused while performing any preparation or installation of their own work. Any cleaning, repair or additional costs, will be the responsibility of the Contractor causing or responsible for the damage.
- P. Sawcutting and grinding shall be accomplished using either vacuum-assisted or with wet methods to conform to OSHA requirements.

- Q. Contractors are responsible for the removal or demolition and replacement/rerouting of existing items and systems required to perform their Scope of Work regardless of specific inclusion in the Contract Documents.
- R. Provide expansion compensation in all pipelines, conduit, ducts, etc., crossing building expansion joints at building column lines.
- S. Review finish schedule and locate all exposed concrete floor finishes. Contractors must protect these areas from stains and other damage while performing their work. Clean or repair as necessary.
- T. The CM is to be notified prior to any above ceiling work after ceiling tile installation. The Contractor performing work is responsible to remove and replace ceiling tile as required. All ceiling tile must be reinstalled at the end of the shift, unless approved by the CM. Contractor performing work will assume all responsibility for replacement of any damaged ceiling system.
- U. All equipment placed on finished floors must have protective material underneath to protect the floor.
- V. Repair to damaged roofing will be entirely at the risk of the responsible Contractor. If the damage cannot be definitively assigned, CM will unilaterally determine who the responsible parties are. All contractors are responsible for providing required supports for their equipment whether or not indicated on the drawings.
- W. Clean up, removal, & disposal from site to dumpster of all debris, including sweeping of the work areas, shall be performed on a DAILY basis. All packing and shipping crates and boxes will be removed offsite within 48 hours.
- X. A composite crew consisting of one person from each trade contractor present on site shall provide a person for the composite cleaning crew. The composite crew will perform Project cleanup under the direction of the Construction Manager on a weekly basis, with a day and time dictated by the Construction Manager.
- Y. Contractor shall include all necessary protection of their work until work is completed.
- Z. Items of work may be shown on drawings and/or listed in the specifications of the Contract Documents. If any item of work is shown on either the drawings or specifications but not the other, it is included in the contract and the better quality or greater quantity of work shall be provided in accordance with the architect/engineer's instructions. No change order or extra to the contract will be allowed for any inconsistency when any item of work either is shown on the drawings/specifications regardless of the location in the drawings/specifications.
- AA. Contractor must coordinate a meeting with the onsite superintendent to inspect all surfaces to receive materials, prior to commencement of work. Report in writing to the onsite superintendent, any condition that may potentially affect proper application. Do not commence until such defects have been corrected. **Commencement of work shall be construed, as acceptance** of the surfaces and therefore, the Contractor shall be fully responsible for satisfactory work as required herein. As such, after commencement of work Contractor cannot add changes orders to this contract.
- BB. Coordinate all work with other Contractors to ensure other scopes of work don't affect this scope of work.
- CC. It is recognized and understood by the Contractor at the time of contract award, that Contractor was selected for their expertise and knowledge of this specialized work and it was and is expected that the Contractor did and has included in their scope of work all items required to carry out the A/E's intent for a complete and functional system. The contract price will not be increased for any miscellaneous or incidental items required for the work

- to meet the intent of the Architect's design, the contract documents, plans, specifications and code requirements.
- DD. The drawings are diagrammatic and may not be complete in every detail. They reflect the intent of the Architect/Engineer to provide for a complete working system in compliance with all applicable codes. Contractors shall include any other equipment or devices necessary to provide a complete, functioning system. Contractors shall include, as part of their work, the cost of re-routing, etc., due to the coordination procedure as part of their contract price.
 - EE. Contractors shall submit their proposals based on the Work included under each Bid Package as listed herein. Include Work necessary for a complete project, as shown on the Drawings and called for in the Specifications.
 - FF. Questions concerning the "Multiple Contract Summary" should be directed to the Construction Manager, who will be the interpreter and be responsible for this Schedule of Contract Responsibilities and Contract Breakdown, prior to submitting proposals and during construction.
 - GG. All Contractors shall be responsible for field verification of materials and equipment installed in the Work of other Contractors.
 - HH. Certain Specification Sections describe Work to be performed under several contract areas. (Example: 079200, Joint Sealants). Provide Work of this nature as required for each contract area whether or not enumerated in the Schedule of Contract Responsibilities. The Contractor for each Bid Package shall be responsible for proper installation of sealant around and within his work. The Contractor who defines the joint (last Contractor there usually) shall be responsible for sealing the joint, if the Architect requires sealant to be installed after finish work is in-place, then the finish Contractor shall seal the joint. All joints at dissimilar material intersections shall be caulked.
 - II. All penetrations in rated partitions shall be sealed or firesafe in accordance with the Contract Documents by the Contractor making the penetration.
 - JJ. The following bid packages are broken down by Specifications Section conforming to the CSI format. Each bid package also contains a statement of intent for a general description of the work included. The Contractor is responsible for work assigned and described as part of their contract category without regard for where it is indicated in the Contract Documents.
 - KK. The Drawings and Specifications as furnished for each of the Contracts is for the convenience of the Contractor in preparing a proposal for this Project. However, each Contractor is responsible to review the complete set of Drawings and Specifications to assure that Work required to be installed to complete their phase of the Work is included in their proposal. This "Multiple Contract Summary" is a definition of the work as it is to be bid in separate contracts. Where a specific item of Work is not defined, but is normally inherent to a trade, or is included in the scope of the applicable technical section, it will be the responsibility of that Contractor to include the Work in his proposal.
 - LL. This "Multiple Contract Summary" is to aid each Contractor by defining the Scope of Work to be included in their proposal. However, an omission from this "Multiple Contract Summary" does not relieve the Contractor from including in their proposal that Work which will be required to complete their Contract. Each Contractor should read the "Multiple Contract Summary" completely to familiarize themselves with the

Work of other Contractors that may have Work in adjacent areas and to coordinate the interfacing problems that may occur as the Work is assembled and constructed.

- MM. Additional description of the work may be included in the specification sections listed.
- NN. The Contractors shall keep all excavations free of standing water. Each Prime Contractor shall be responsible for pumping water or otherwise removing water from any excavation or low area created because of his work. Each Contractor is to take containment measures to prevent the run-off of surface water into excavations and the bonding of water on-site. Any damage or additional cost incurred as the result of standing water or its penetration of the soils shall be borne, by the Prime Contractor allowing/creating the situation where water accumulated.
- OO. The Prime Contractors are responsible for coordinating their subcontractors. The Construction Manager and the Prime Contractors shall coordinate and schedule the work of the Prime Contracts. The Project Schedule attached to the end of this Specification Section is part of the Contract Documents. Each Prime Contractor will be required to meet the durations and dates shown in the schedule.
- PP. All Contractors are required to warranty their work for twelve (12) months from the date of Substantial Completion.

3.01 SPECIFIC SCOPES OF WORK FOR BID PACKAGES

BID CATEGORY BP. NO. 1 GENERAL TRADES SCOPE OF WORK

This Scope of Work is to include, but is not limited to, the following Specification Sections:

<u>Section</u>	<u>Description</u>
Division 00	Procurement and Contracting Requirements
Division 01	General Requirements
03 10 00	CONCRETE FORMING AND ACCESSORIES
03 20 00	CONCRETE REINFORCING
03 30 00	CAST-IN-PLACE CONCRETE
03 41 00	PRECAST STRUCTURAL CONCRETE
03 41 30	PRECAST PRESTRESSED HOLLOWCORE SLAB UNITS
06 10 53	MISCELLANEOUS ROUGH CARPENTRY
06 16 00	SHEATHING
07 13 26	SELF-ADHERING SHEET WATERPROOFING
07 21 00	THERMAL INSULATION
07 24 19	WATER DRAINAGE EXTERIO INSULATION AND FINISH SYSTEM (EIFS)
07 26 00	VAPOR RETARDERS
07 81 00	APPLIED FIREPROOFING
07 81 23	INTUMESCENT FIREPROOFING
07 84 13	PENETRATION FIRESTOPPING
07 84 43	JOINT FIRESTOPPING
07 91 00	PREFORMED JOINT SEALS
07 92 00	JOINT SEALANTS
08 11 13	HOLLOW METAL DOORS AND FRAMES
08 11 13	FLUSH WOOD DOORS
08 31 13	ACCESS DOORS AND FRAMES
08 31 19	SECURITY ACCESS DOORS AND FRAMES
08 33 23	OVERHEAD COILING DOORS
08 34 63	DETENTION DOORS AND FRAMES
08 36 13	SECTIONAL DOORS
08 41 13	ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS
08 44 13	GLAZED ALUMINUM CURTAIN WALLS
08 45 23	FIBERGLASS SANDWICH-PANEL ASSEMBLIES
08 56 63	DETENTION WINDOWS AND SKYLIGHTS
08 71 00	DOOR HARDWARE
08 71 63	DETENTION DOOR HARDWARE
08 71 63A	DETENTION DOOR HARDWARE SETS
08 80 00	GLAZING
08 88 53	SECURITY GLAZING
09 69 00	ACCESS FLOORING
09 84 10	FIXED SOUND ABSORBING PANELS
10 11 00	VISUAL DISPLAY UNITS
10 14 16	PLAQUES

10 14 19	DIMENSIONAL LETTER SIGNAGE
10 14 23	PANEL SIGNAGE
10 14 26	POST AND PANEL - PYLON SIGNAGE
10 21 13	TOILET COMPARTMENTS
10 21 31	WELDING CURTAINS
10 26 00	WALL PROTECTION
10 28 00	TOILET, BATH AND LAUNDRY ACCESSORIES
10 28 13.63	DETENTION TOILET ACCESSORIES
10 44 13	FIRE PROTECTION CABINETS
10 44 16	FIRE EXTINGUISHERS
10 51 13	METAL LOCKERS
10 51 14	EVIDENCE LOCKERS
10 56 26	MOBILE STORAGE SHELVING
10 57 00	RAPID ENTRY LOCKBOX
10 73 16	ALUMINUM CANOPIES
10 75 00	FLAGPOLES
11 17 36	PACKAGE TRANSFER UNITS
11 19 16	DETENTION GUN LOCKERS
11 29 23	INMATE PROPERTY PACKAGING EQUIPMENT
12 21 13	HORIZONTAL LOUVER BLINDS
12 32 16	MANUFACTURED PLASTIC-LAMINATE -FACED CASEWORK
12 36 16	METAL COUNTERTOPS
12 36 61	SOLID SURFACING COUNTERTOPS
12 52 83	FIXED BEAM SEATING
12 56 00	INSTITUTIONAL FURNITURE
12 93 00	SITE FURNISHINGS
31 10 00	SITE CLEARING
31 20 00	EARTH MOVING
31 23 19	DEWATERING
31 50 00	EXCAVATION SUPPORT AND PROTECTION
31 64 00	STONE COLUMNS
32 13 13	CONCRETE PAVING
32 13 73	CONCRETE PAVING JOINT SEALANTS
32 14 00	UNIT PAVING
32 17 13	PARKING BUMPERS
32 17 23	PAVEMENT MARKINGS
32 17 26	TACTILE WARNING SURFACING
32 31 13.53	HIGH-SECURITY CHAIN LINK FENCES AND GATES
32 31 19.53	DECORATIVE METAL SECURITY FENCES AND GATES
32 91 13	SOIL PREPARATION
32 92 00	TURF AND GRASSES
32 93 00	PLANTS
33 05 13	PRECAST CONCRETE MANHOLES AND STRUCTURES

33 41 00 STORM UTILITY DRAINAGE PIPING
33 46 00 SUBDRAINAGE

This Bid Category Scope of Work describes and assigns Work to this Bid Category as designated by the Construction Manager. Each Contractor shall cooperate and coordinate with all other Bid Category Contractors for proper and expedient completion of the Work in this Project. This summary should in no way be construed as being all inclusive. It is issued as a guide to aid in the assignment of Work and is intended to clarify and/or further define the Scope of Work included in the Bid Documents. They shall not be construed as the entire Scope of Work for this Bid Category. All work described or indicated in the respective Specifications Sections or Divisions listed above shall be included, except as specifically excluded herein.

- A. General items to be included in this scope of work
1. Provide all surveying and layout required to complete the work of this category. This shall include providing control layout points/lines for all other trades.
 2. Include an allowance for CM Directed Work in the amount of 1,750 manhours. This allowance will be used at the direction of the Construction Manager for coordination, safety, cleanup and any other item deemed necessary by the Construction Manager. All unused portions of this allowance shall be returned to the Owner via a deductive change order.
 3. Contractor shall provide and install all temporary roads, parking areas and laydown areas for the project. This will include the installation of stone roads and pathways throughout the duration of the project. All areas shall be installed and maintained such that they do not hold water, they do provide proper access for equipment and materials to the building and are removed upon the completion of the work. It is anticipated that all access roads will follow the paved areas and the grass paver areas currently shown on the construction documents. Additional access lanes are to be provided around the building as necessary for the construction of the project. This will include access for jail cells, cranes, trucks, etc. Maintenance of the roads shall include adding stone as necessary for road maintenance and the removal of accumulated mud and/or dirt.
 4. Provide all snow removal for the project site. Contractor shall remove snow so that all access and parking areas are accessible.
 5. This scope shall include all associated work for the entrance road from Honey Creek Drive to the project site as indicated in Areas "E" & "F" in the Site Development drawings
 6. Provide a telescoping boom fork truck lift on site starting with the commencement of concrete foundations and continuing until project completion as directed by CM. The fork lift is intended for general site usage (deliveries, group clean-ups, miscellaneous material laydown organization). Individuals using the lift will be responsible for providing their own operator. The general laborer time is intended for miscellaneous activities as requested by CM (clean-up, maintaining fall protection, etc.). Labor hours will be tracked using a log in the CM trailer that will require sign-off of all hours spent from the General Trades Contractor and CM superintendent.
 7. Provide the final clean for the entire project. This shall include all sweeping, vacuuming, dusting, waxing of floors, glass cleaning (inside and outside), cell cleaning, cleaning of showers, toilets, furniture, inside and outside of cabinets, walls moldings, etc. for complete clean of the entire project.

B. Demolition

1. Contractor will provide all labor, materials and equipment necessary to demolish complete, all materials indicated to be demolished in the Contract Documents.
2. All demolished materials shall be removed to a dumpster provided by the Construction Manager.
3. Sawcut all existing pavements prior to removal. Repair any damages that may occur to existing pavements to remain.

C. Erosion Control

1. Furnish and Install all erosion control turbidity barriers, silt fence, hay bales, etc. as needed to protect adjacent property and all utilities. This Contractor will maintain erosion control daily for the entire project during the performance of this scope of work and until completion of the project and will decommission and clean as required at completion.
2. If drainage systems are infiltrated with sedimentation, Contractor shall clean all effected pipes and structures of dirt.
3. It is the responsibility of this Contractor to protect all trees and vegetation designated to remain.
4. This Contractor is responsible for dust control and traffic control (including traffic control signage required) for the duration of the project. All mud, dirt. Sand or other material tracked or spilled onto existing public and / or private road shall be removed and cleaned by this Contractor daily or as directed by Garmong. Also, water trucks, hoses and any other necessary means will be utilized to minimize and control dust onsite.
5. Maintain all erosion control measures for the duration of this project.
6. Install all stone. This includes installation and maintenance of stone for construction entrances and drives for the life span of the project.
7. Provide all required temporary seeding that may be necessary due to inactivity.
8. This scope shall include the removal of all erosion control measures installed on the project and remediation of any disturbed grades due to this work. This shall include grading and seeding of the ditch line where the silt fence is removed.
9. Inspect and repair all erosion control measures weekly and following all rain events. Provide written report of these inspections to the authorities having jurisdiction.

D. Earthwork

1. This Contractor is responsible for locating all existing utilities prior to work operations. Furnish, install and coordinate all private utility locator's services as required prior to commencing this work. This Contractor agrees that any existing utilities that may be damaged during work shall be repaired at this Contractor's expense.
2. All dewatering as required for the performance of this bid package.
3. Wherever work encroaches on existing sod or paved areas, restore those areas to original condition after completion of the work. This includes all sod, new asphalt, new concrete, grading or other work required to complete the renovated area.
4. Include all tree removal/demolition required for the installation of work of this bid package. Regrade all areas where demolition occurs and utilities are installed, ready for final landscaping, and install temporary seeding.
5. All necessary traffic control and barricades for the proper and safe execution of the Work shall be furnished and maintained by this Contractor.
6. The Contractor shall dispose of any unsuitable materials off site.
7. This Contractor understands that there will be "out of sequence" work with respect to the work and has included such in this agreement.

8. The services of the soil engineer to perform soil testing, inspection services, and concrete testing will be provided by others. Contractor shall be responsible for coordinating with these services. The soil testing, concrete testing, and inspection does not in any way relieve the Contractor of its overall responsibility.
 9. Spoils generated by the stone column work will be removed and/or used.
 10. Contractor is responsible for all quantities of soil on site. This includes any import or export as needed for proper completion of this work.
 11. Site clearing including all grubbing and topsoil removal of the site.
 12. All excavation, cuts, fills and grading as required by the contract documents.
 13. All backfill and compaction as required. This shall include the backfill and compaction of all demolished structures and utilities and subsequent excavations left by their removal. All backfill shall be compacted to meet requirements set for in the geotechnical soils report.
 14. Proof roll the entire site once stripped of topsoil to determine locations of any unsuitable materials and remove.
 15. The site shall be maintained such that water will not be allowed to pond on the site or building pads.
 16. Construction of all building pads, with proper compaction, to within +/- one tenth of a foot of subgrade elevation.
 17. Establish, protect and maintain all excavations and slopes to provide a safe work area.
 18. Install a minimum of 6" of topsoil at all finished areas.
 19. Grade and construct all roads, sidewalks and curbs to subgrade elevation, +/- one tenth of a foot.
 20. Backfill and rough grade at all buildings, sidewalks, curbs, roadways, planters, and any other area that may be required.
 21. Coordinate location of spoil piles with other trades. All spoil piles are the responsibility of this Contractor.
 22. Provide and install all granular fill (aggregate base) at all areas receiving asphalt paving. Coordinate this work with the Asphalt Contractor. All asphalt aggregate base shall be installed to within +/- 0.1'.
 23. Provide and install all aggregate surface
- E. Division 3 Concrete
1. Provide and install all concrete required for the project. This shall include all labor, materials, equipment and supervision necessary to install a complete concrete package inclusive of building and site concrete. This work shall include, but not limited to, the following:
 2. Provide all surveying and layout required to complete the work of this category. This includes the establishment of a benchmark and control on site.
 3. Form, place, and finish all concrete footings, foundation walls, stoop turndowns, frost walls, column pads, retaining walls, and piers including all associated reinforcing steel as indicated or required. Provide all dowels required to anchor masonry walls to allow for lap lengths specified. Note vertical reinforcing requirements at security walls. Provide and maintain rebar caps on all dowels until fully embedded in masonry.
 4. Form, place and finish all interior and exterior concrete slabs, slabs on deck, precast concrete topping slabs, concrete stoops/turn-downs, and thickened slabs including all vapor barriers, expansion joint material, bond breaker material, control joints, associated dowels, wire mesh, and all other steel reinforcing. Assure curing method selected is

compatible with floor finishes specified and provide complete coordination with all floor finishes. FF/FL testing within 24 hours after finishing is to be provided by this contractor. Provide bonding agent between precast concrete plank and topping slabs. This contractor shall be responsible for preparing substrate to receive concrete (examples include vacuuming, sweeping, cleaning, or drying precast or metal substrate.) Recess concrete floor slabs at all tile locations to allow tile to flush out with adjacent flooring.

5. Provide all excavation, backfill, compaction, and grading associated with completion of this bid category including building and site concrete. Provide all granular base fill and fine grading under concrete provided as part of the work of this category. Provide final compaction of the exposed top surface of stone columns using hand operated mechanical equipment.
6. Provide all miscellaneous cast in place concrete items such as benches, beds, wall caps, concrete shower curbs, locker bases, etc.
7. Provide and install all hooked dowels at precast concrete.
8. Coordinate installation of all concrete wall/slab/grade beam penetrations with Earthwork, HVAC, Plumbing, Fire Protection, Security Electronics, and Electrical Contractors. Sleeves for penetrations will be furnished and laid out by others for installation in formwork by this contractor.
9. Provide all water stop, chamfers, and other concrete accessories as indicated, specified, or required for completion of this category.
10. Provide positive drainage on all floors with floors drains and provide slope from room perimeter where indicated. Coordinate with flooring trades and plumbing contractor.
11. Contractor will be responsible for removing and replacing any new concrete that is deemed to not meet the contract documents through independent testing as well as any concrete that fails due to improper protection from weather conditions.
12. Form, place and finish all exterior mechanical and electrical equipment pads (Generator and Chiller pads). Coordinate the work for the proper size and layout of the pads with the Mechanical & Electrical Contractors. All interior concrete equipment pads shall be installed by the Contractor associated with that work.
13. Provide all temporary weather general conditions associated with completion of this scope of work including snow removal within the building footprint, ground thawing, and all cold and hot weather concrete procedures and protection as well as rain protection.
14. Dewatering and mucking of excavations shall be the responsibility of this Contractor.
15. Layout and set all anchor bolts provided by Structural Steel Contractor. Grout all base plates after columns are set and elevations are finalized by Structural Steel Contractor. Provide asphalt-mastic paint on portions of columns below grade according to structural details.
16. Finish all concrete slabs to the required finish standards. This shall include meeting all levelness and flatness criteria and installing required sealers.
17. Include all hoisting and placement equipment necessary to install all concrete.
18. All underslab vapor barrier shall be included.
19. All precautions (blankets, admixtures, heat, etc.) for cold weather concrete according to ACI and/or industry practice shall be included.
20. Installation of all embedded plates, angles and other misc. steel shall be included. Embeds are provided by others
21. All exposed concrete shall be rub finished

22. Grouting of all base plates after steel erection shall be included.
23. Provide all concrete for pan fill stair treads and landings. This work will be completed as soon as possible as stairwells become erected. Provide all interior and exterior cast in place concrete stair systems complete.
24. Provide all site concrete and associated reinforcement as indicated per the documents. Site concrete includes, but not limited to all concrete paving, sidewalks, curb & gutter, mow strips, maintenance strips, screen walls, security walls; security bollards, signs and sign bases, stoops, curbs, pads, ramps, approaches flagpole bases, etc. Provide concrete encasement for bollards, pedestals, signage, etc. Provide all steel bollards for this work and install. Provide barrier free textured warning surfaces at ADA ramps where indicated.
25. Where building concrete is to remain exposed patch if needed to provide a uniform surface suitable for finished materials.
26. Provide recessed insulated floor system under walk-in cooler/freezer.
27. Concrete wash out area will be created and maintained by this contractor.
28. Provide and install all granular fill at cast-in-place benches. Reference detail 14/S-531 as an example.
29. Provide and install all concrete curbs at openings in precast planks.

F. Precast Concrete & Prestressed Hollow Core Slabs

1. Provide and install/erect all precast structural concrete and precast prestressed hollow core concrete. Include engineering, fabrication, shipment, delivery, equipment, grouting and all misc. steel required as part of a complete engineered system. Provide all reinforcing integral to precast. Provide all steel embeds for attachment of other building systems. Carefully review architectural and structural drawings for locations where embeds are required. Specifically note embeds associated with mezzanine, stair attachments, and steel pour stops. All reinforcing between precast and masonry above is to be provided by the contractor of this bid category.
2. Provide all engineering and design as required by the contract documents. Coordinate drawings with all other contractors for proper opening sizes and locations.
3. Accommodate all openings, structural elements, temporary access, etc. needed or required for the construction of this project.
4. Include knockout panels to allow access of all prefabricated cell units. Cell units are assumed to be double stacked in height. Coordinate this work with the DEC contractor for proper opening size and locations.
5. Coordinate all work with the Steel and Masonry Contractors to ensure proper bearing and locations for all work.
6. Provide all bearing pads for installation by others. This shall include detailed drawings indicating all embed locations.
7. Provide all miscellaneous precast accessories necessary to complete this scope of work including, but not limited to all bond break material, bearing pads, and slip pads, shims, hangers, clips, anchors, etc.
8. Prior to site mobilization, coordinate the installation of all work with the Construction Manager and other onsite contractors. Installation of precast will need to be coordinated with the Steel and Masonry contractors for proper installation of all work by each trade.
9. Provide and install all reinforcing extending from precast panels and/or hollow core planks. This shall include all reinforcing at knockouts of hollow core planks and the grouting in place of all reinforcing.

10. Provide all embeds for precast concrete and hollow core slabs at masonry and cast-in-place concrete for installation by others. Provide layout drawings for proper installation and location of each embed.
11. Provide and install all steel embeds in precast units for bearing of other work. This would include, but not limited to, embeds for structural steel, miscellaneous steel, metal joist, metal decking, stairs, etc.
12. At beam and/or joist pockets, construct the pocket large enough for the proper installation/welding of the support member.
13. Weld precast embeds to support steel where applicable.
14. Grout all gaps, keyways, cracks, voids, plank cores, and lifting openings as shown and as required for a complete system. Provide and remove all temporary grout stops and patch holes made by grout stops and/or remove excess spray foam to prepare for subsequent finishes.
15. Assume multiple mobilizations may be required due to differing areas of construction and coordination between trades.
16. Provide, install and remove all temporary bracing required for the proper installation of this work. All bracing shall be installed to fully support this work until such time as the remaining structure is complete. This includes providing and installing and removing any/all deadmen required for proper bracing. Following final connections, all shoring and bracing and deadmen shall be removed and any holes or damaged surfaces shall be repaired to match the surrounding finish. Coordinate all shoring installations to not inhibit the erection of precast concrete, structural steel or masonry walls.
17. Provide for any MEP rough-in in precast plank cores. Coordinate locations to leave cores open for rough-ins. Notch planks in the field during installation where rough-ins will extend beyond top of masonry walls at bearing locations.
18. Provide field verification prior to mobilization of all bearing wall locations, elevations, and conditions. Immediately notify CM of any unacceptable conditions.
19. Provide OSHA compliant hole covers for all openings in precast 2" and bigger and leave covers in place after each erection sequence. Hole covers will be maintained and removed by others.
20. Design additional capacity to support masonry as indicated on the structural framing details.
21. Provide field patching of all exposed precast surfaces. Include multiple mobilizations to provide field patching in addition to precast erection mobilizations required per this scope of work.
22. Provide winter conditions associated with erection of precast during the winter including heating substrate, snow and ice removal from bearing walls, and heating grout as well as all other winter conditions necessary.
23. This contractor will be responsible for providing temporary fall protection guard rails around the entire perimeter of all areas of precast concrete plank. Install temporary fall protection immediately after erection sequence to make safe for subsequent trades to avoid the need for tie-off. Fall protection is to comply with OSHA requirements. Provide removable sections to allow for movement of materials and removal of trash and debris to precast levels. Remove temporary fall protection when directed by CM and patch exposed substrate to prepare for finishes.

G. Storm Sewer System

1. Provide and install a complete and operational storm sewer system as defined by the

contract documents. This shall include all piping, drywells, castings, sealants, bedding, backfill, excavation, testing etc. for a complete and operational system.

2. Include all required excavation, backfill, bedding materials and compaction as required by the contract documents for storm sewers
3. Install all castings as indicated for the storm sewer system.
4. Provide all required State and Federal safety measures for this work. Should any unsafe work activity be observed, Garmong will halt all work until the unsafe condition is abated.
5. Provide all required testing of piping systems. Coordinate this with all local authorities having jurisdiction.
6. All piping shall be run to within 5'-0" of the building footing wall. Provide final connections.
7. Ensure all storm sewer installations maintain proper clearances from sanitary sewer piping and water mains.
8. Provide as-built drawings for all storm sewer installations.
9. Install all under drains, perimeter drains and foundation drains, as indicated.
10. Route storm piping to all downspout locations. Provide a "turn up" connection sized for the downspout specified for each location.

H. Stone Columns

1. Design, provide and install a complete stone column system. This shall include all labor, materials, equipment and supervision required for a complete system. This work shall include but is not limited to the following:
2. Engineer stone columns as required by the contract documents. Shall include a licensed engineer in the state of Indiana to approve and stamp the drawings.
3. Contractor will be responsible for all layout of this work.
4. All pier installations shall occur approximately 1'-0" above final grades.
5. Contractor shall work with the soils testing inspector to ensure all loading is achieved. Record documents of all installation shall be provided at the end of the project to verify a successful installation. This shall include as-built drawings indicating center of pile locations, and top/bottom elevations of all columns.
6. Any corrections needed due to incorrect placement, installation or design shall be the responsibility of this Contractor.
7. Storage and stockpiling of materials will be coordinated so to not affect ongoing work elsewhere on the site. Contractor shall include all necessary hauling of materials not only to the site, but on the site as well.

I. Landscaping

1. Provide and install all landscaping as indicated by the contract documents. This shall include all labor, materials, equipment and supervision for a complete and professional landscape installation.
2. This work shall include all seeding, mulch, plants, trees, bushes, flowers, site amenities, benches, trashcans, etc.
3. All topsoil shall be tested for soil nutrient characteristics and amended for the intended plant growth.
4. Provide and install all grass pavers. This shall include all stone subgrade, pavers, sand, etc. for a complete system.
5. Install all erosion control measures necessary to ensure proper growth of grass and eliminate soil erosion. Remove these protections upon establishment of seed growth.
6. Include watering of plantings until establishment.
7. Provide and install all chain link fencing, site fencing, security fencing, decorative metal

security fencing, gates, chain link overhead security barriers and barbed tape including all chain link fence fabric fence framing, tension wire, barbed wire, grout, concrete, fence grounding, fittings, and hardware complete. Provide all mow strips along security fencing as indicated on fencing details sheet C105.

8. Provide and install all security bollards and associate work including all concrete & excavation work.
9. Provide and install the louvered screen panel system alternate.
10. Provide and install the smoking shelter
11. Provide and install all outdoor furniture. This includes the tables, chairs, benches, etc.

J. Division 6 Work

1. Contractor shall provide all blocking, bracing and/or backing required to adequately support all wall hung fixtures and equipment (cabinets, lab casework, furniture, toilet accessories, tack boards, handrails, fire extinguisher cabinets etc.) specified on the contract documents. Comply with stud manufacturers recommendations and industry standards in each case considering weight or load resulting from item supported. This Contractor will meet with each related Contractor and the Construction Manager to coordinate blocking and backing work.
2. Contractor shall supply to Garmong coordinated blocking drawings indicating all in-wall blocking required for anchoring the work. However, this shall in no way relieve the Contractor of its responsibility to properly secure the work of this scope.
3. Contractor shall furnish and install all fasteners, anchors, and miscellaneous accessories as required for the complete installation of the work of this scope.
4. Provide and install all wood blocking at the roof. Coordinate blocking depth with Roofing Contractor for proper depth and anchorage requirements.
5. Include plywood backboards for equipment. All plywood shall be smooth finish and painted black prior to equipment install.
6. Include any reinforcing for doors & frames.
7. Include all blocking at exterior openings in the building.
8. Provide and install all building expansion joints. Roof expansion joints will be provided and installed by the roofing Contractor.
9. Provide interior trim and shelving including clothes rods, blocking, anchors, adhesives, joint sealants, putty, and accessories as indicated and required for a complete system. Provide prefinished hardware where indicated; include wire shelving if shown.
10. Provide and install all access flooring. Provide all cutouts for grilles, equipment and furniture that may be required.

K. Division 7 Work

1. Waterproofing, weather barriers, perimeter insulation, EIFS, vapor retarders, fireproofing, intumescent fireproofing, firestopping, preformed joint seals, and sealant per the Contract Documents.
2. Provide all reinforcing, mesh, surface preparation, etc. necessary for the proper adhesion of all fireproofing materials to the surfaces and/or structures they are being applied to.
3. Fire Protection Contractor, Mechanical Contractor, and Electrical Contractor are responsible for firestopping wall penetrations in rated walls and smoke tight partitions.
4. Prepping of substrates for application of fireproofing. Contractor shall notify Garmong in writing prior to application of fireproofing of any surface that is not acceptable. Start of work shall be acceptance of surfaces by this Contractor.

5. Provide and install all sealants as indicated or required herein. This shall include but not limited to the following:
 - a. Precast joints
 - b. Masonry control joints
 - c. Casework and millwork including countertops, backsplashes and trims to themselves or dissimilar materials.
 - d. Security caulking
 - e. EIFS control joints
 - f. Door frames (walls and floor).
 - g. Caulking of all storefront is included in this scope of work. This includes all interior and exterior caulking including floors.
 - h. Expansion joint caulking
 - i. Control joint caulking
 - j. Sidewalk joints
 - k. Caulking of plumbing fixtures
 - l. Caulking of tile to countertops
 - m. Caulking of lab casework.
 - n. Plumbing fixtures
 - o. Site concrete paving
 6. All sealants to match adjacent surfaces.
- L. Division 8 Work
1. Provide all non-detention hollow metal doors and frames including all anchors, glazing, and accessories. Any frames not on site in time for masonry will be left open and this category will pay mason's premium to tooth-in frame. The Masonry Contractor will grout frames.
 2. Provide installation only of all Security access doors and frames. Security doors will be furnished by the detention equipment contractor
 3. Provide all flush wood doors complete where indicated including all glazing and accessories. Provide protection to cover wood doors after installation.
 4. Provide door position indicator device compatible with security electronics system. Provide complete engineered system that meets performance criteria from the contract documents.
 5. Coordinate electrified controls with DEC and Electrical Contractors prior to ordering doors to ensure proper operation with electrical and security electronics systems.
 6. Provide all non-detention door hardware in openings provided as part of this bid category as well as all non-detention door hardware in security openings. Refer to all pages of the contract drawings for locations of automatic door operators and push pads provided as part of this scope of work (specifically electrical drawings). Electrified non-detention hardware is to be wired and terminated by the Electrical Contractor. Provide construction keying in exterior non-detention door openings. Provide all permanent keying in non-detention door openings provided as part of this scope of work coordinated with owner, CM, Architect, and lock supplier. Provide all key controls including key management system, key cabinet, and fire department lock box.
 7. Include all hoisting and transportation for the delivery and installation of doors, frames and hardware
 8. Contractor shall install all hollow metal frames under this scope. Care should be taken to insure that frames are installed in a true, level, square and plumb fashion. This Contractor shall remove hollow metal frame spreaders.

9. Ensure all frames are true, level, square and plumb following framing and drywall activities. Any repairs will be made by this Contractor
10. Install all Doors and Door Hardware complete and ready for operation. All access door hardware will be supplied and installed by this Contractor. This work shall be coordinated with the Electrical Contractor to interface with the security systems.
11. All required final hardware adjustments and punching out of the work as required for a properly functioning system at the time of Substantial Completion and Owner acceptance is included.
12. Contractor shall be responsible for protection of all hardware and wood doors until installed and accepted by the Construction Manager. Removal of shipping protection materials and depositing in the job site dumpsters is included in this scope of work.
13. Coordinate keying and installation of cores with the Owner and Garmong. Contractor will install all cores as per their direction.
14. Provide any/all access doors indicated on the reflected ceiling drawings. All access doors not shown but required for Mechanical, Plumbing or Electrical access will be provided and installed by the Contractor requiring the access door
15. Install only all detention door frames, tear gas ports, chase doors and security access doors furnished by Detention Equipment Contractor. DEC will provide on-site training before beginning this work. General Trades contractor is to receive, unload, inspect, maintain inventory, and protect detention frames prior to installation. Frames are to be delivered prior to the start of above grade masonry and stored by the General Trades Contractor until installed. Where frames are delivered in sections due to shipping limitations or where detention frames are to be installed tight to other frames and structural steel, this contractor will be responsible for welding frames together and installation of Bondo to provide a seamless installation. Coordinate with DSC. Frames will be grouted by the Masonry Contractor. The General Trades contractor will be required to Bondo over grout holes where required to grout frames under steel framing.
16. All non-detention doors and frames identified to receive detention glazing are to be provided with 1-1/4" glazing stops and rabbits that provide 1" of bite on detention glazing to maintain the warranty from the detention glazing manufacturer.
17. At non detention openings provided as part of this scope of work, provide all wiring pigtails within door panels.
18. Provide and maintain in base bid (4) temporary doors and framing for construction access into the building through the exterior skin of the building, approximately 12'x12'. Remove these doors and framing as directed by the CM. It is assumed that these temporary doors
19. Provide and install all Aluminum Framed Entrances and Storefront, Aluminum Curtain Walls, labor, material, equipment, supervision and services required for complete and operational, Glass & Aluminum Windows, Doors, Storefront, Fiberglass Sandwich Panel Assemblies and Glazing work, including but not limited to:
 - a. Provide all aluminum entrances and storefront systems. This shall include all interior and exterior aluminum systems.
 - b. Provide all aluminum headers, soffits, closures, and extensions of material within plane of window/storefront systems to close building envelope.
 - c. Automatic entrances as indicated. This includes automatic door operators and sliding doors.
 - d. Flashings, sill trim, weeps, etc. – All assemblies as required ensuring performance against water infiltration in accordance and in coordination with exterior wall consultant's recommendations.

- e. Provide and install all glass. This shall include all vision, mirrors, decorative, spandrel, interior and exterior glass.
- f. All skylights with fiberglass sandwich-panel assemblies
- 20. Provide temporary protection of window, glazing, frames, doors, and storefronts.
- 21. This Contractor shall remove all dirt, grease, stickers, glue, and markings when directed by the Garmong project superintendent prior to turnover.
- 22. All glass and glazing including glazing of wood and hollow metal doors, frames and windows is included in this scope. This includes filling nail holes in wood door stops.
- 23. Provide finish of aluminum as specified, including powdered coating systems.
- 24. Provide and install all door hardware as specified in the contract documents.
- 25. Contractor shall reinforce all door and frame components as required to receive and support the hardware application as specified.
- 26. Coordinate and assist with install of all electronic systems.
- 27. Contractor shall be responsible for providing any and all additional supports not shown on the drawings to meet requirements of the work.
- 28. It is the responsibility of this Contractor to coordinate all rough openings with other trades.
- 29. Shop drawings will show opening dimensions for preparation by the other trades. This Contractor shall include a system to accommodate the standard industry tolerances for these abutting trades.
- 30. Provide and install all overhead coiling doors and all sectional doors including manual and electric door operators.
- 31. Provide and install all electrical terminations to the equipment for overhead and sectional doors. This Contractor will be responsible for providing and installing all low voltage wiring and switches.
- 32. Coordinate work with Electrical Contractor for proper installations.
- 33. Contractor shall coordinate door opening sizes and verify opening size and equipment clearance requirements. Modifications to the structure due to incorrect clearance requirements shall be this Contractor's responsibility.

M. Division 10 Work

- 1. Provide and install miscellaneous specialties, including, but not limited to visual display units, signage, lettering, toilet compartments and accessories, welding curtains, fire extinguishers, lockers, evidence lockers, wall protection, shelving, mobile storage shelving, lockbox, canopies, and flagpoles. Work shall include all fasteners, adhesives, blocking, etc.
- 2. Signage per Contract Documents, including foundation for post and panel/pylon signage.
- 3. Coordinate structural support for welding curtains with Structural Steel Contractor.
- 4. Install furnished detention toilet and bath accessories where embedded in masonry.

N. Division 11 Work

- 1. Provide and install all package transfer units, gun lockers, and inmate property packaging equipment. Include anchorage devices and fasteners for complete installation.
- 2. Coordinate electrical requirements with Electrical Contractor.

O. Division 12 Work

- 1. Provide and install all manufactured laminate casework, solid surface materials, stainless steel cabinets & countertops, sills, backsplashes, end splashes, wall caps, undercounter knee protection, countertops, and closet and utility shelving as indicated and required including blocking, shims, wood stud framing, mounting hardware, countertop support

brackets, and accessories. Coordinate locations with flooring, plumbing, mechanical, and electrical contractor. Cut all openings in casework and countertops for electrical and data devices, plumbing fixtures, and piping located behind casework for electrical and data devices. Protect all casework and countertops, using cardboard protection, after installation and remove protection at project completion. Grommets in countertops to be located in the field and installed by this contractor following Owner equipment move-in.

2. Include integral bowls as indicated.
3. Contractor shall provide all additional stiffeners as may be required for the proper performance of the work.
4. Contractor shall field verify all dimensions.
5. Contractor shall include final adjustments of all drawers, doors, and other hardware as may be required by the Architect and/or Garmong.
6. Contractor shall remove, as part of this scope, all manufacturers' labels, stickers, etc. at the conclusion of the contract. Final cleaning of all work is included.
7. Provide and install all window stools.
8. All millwork details and returns shall be as per architectural details unless mutually agreed to and approved on shop drawing submissions.
9. Provide and install all window coverings.
10. Provide and install metal countertops.
11. Provide and install fixed beam seating and institutional furnishing including security fasteners for a complete installation.
12. Provide and install all site furnishings.

END BID CATEGORY BP NO. 1 GENERAL TRADES SCOPE OF WORK

BID CATEGORY BP NO. 2 ASPHALT PAVING SCOPE OF WORK

This Scope of Work is to include, but is not limited to, the following Specification Sections:

<u>Section</u>	<u>Description</u>
Division 00	Procurement and Contracting Requirements
Division 01	General Requirements
32 12 16	ASPHALT PAVING
32 17 13	PARKING BUMPERS
32 17 23	PAVEMENT MARKINGS

This Bid Category Scope of Work describes and assigns Work to this Bid Category as designated by the Construction Manager. Each Contractor shall cooperate and coordinate with all other Bid Category Contractors for proper and expedient completion of the Work in this Project. This summary should in no way be construed as being all inclusive. It is issued as a guide to aid in the assignment of Work and is intended to clarify and/or further define the Scope of Work included in the Bid Documents. They shall not be construed as the entire Scope of Work for this Bid Category. All work described or indicated in the respective Specifications Sections or Divisions listed above shall be included, except as specifically excluded herein.

1. Provide all labor, material, equipment and supervision to complete the ASPHALT PAVING scope of work.
2. This contract is to provide and install all asphalt in accordance with the plans and specifications including fine grading of stone.
3. This contract to provide and install asphalt in accordance with the plans and specifications including fine grading of stone placed by the Site Development Bid Package.
4. Provide and install all pavement marking all parking blocks and all parking ADA signs in accordance with the plans and specifications located on asphalt surface.
5. Contract is responsible to keep positive slope to drains. Any issues advise immediately for engineer review.
6. All work associated with entrance road from Honey Creek Drive to the project site as indicated in Areas "E" and "F" on the Site Development drawings

BID CATEGORY BP NO. 2 ASPHALT PAVING SCOPE OF WORK

BID CATEGORY BP NO. 3 MASONRY SCOPE OF WORK

This Scope of Work is to include, but is not limited to, the following Specification Sections:

<u>Section</u>	<u>Description</u>
Division 00	Procurement and Contracting Requirements
Division 01	General Requirements
04 21 13	BRICK MASONRY
04 22 00	CONCRETE UNIT MASONRY
04 72 00	CAST STONE MASONRY

This Bid Category Scope of Work describes and assigns Work to this Bid Category as designated by the Construction Manager. Each Contractor shall cooperate and coordinate with all other Bid Category Contractors for proper and expedient completion of the Work in this Project. This summary should in no way be construed as being all inclusive. It is issued as a guide to aid in the assignment of Work and is intended to clarify and/or further define the Scope of Work included in the Bid Documents. They shall not be construed as the entire Scope of Work for this Bid Category. All work described or indicated in the respective Specifications Sections or Divisions listed above shall be included, except as specifically excluded herein.

1. Provide all labor, material, equipment and supervision to complete the MASONRY scope of work.
2. The Scope of Work includes laying to all hollow metal frames in masonry wall construction. Material will be furnished by others. Grouting of hollow frames is included in this Scope of Work. This Contractor shall ensure frames are plumb, level, and square before, during and after installation of work.
3. Contractor will remove all mortar and grout from hollow metal frames upon completion of work.
4. Contractor shall protect the inside of all masonry hollow metal frames at the hinges and strikes to keep out mortar.
5. Grout and mortar testing will be by others. Testing shall be schedule with Garmong 24 hours in advance. All cost associated with a failed test will be the responsibility of this Contractor.
6. Provide in place mock-up as required by Garmong and the Owner. Mock-ups shall include the specified mortar and accessories.
7. This Contractor shall be responsible for any additives, heating of materials, and covering of work in place for cold weather conditions.
8. Clean up of mortar droppings and masonry debris from masonry operation shall be performed continuously and immediately following the laying of the work and the area shall be left broom clean.
9. This Contractor will employ a competent scaffold erector with OSHA certification, who will supervise and monitor all scaffolding work and will be onsite when all scaffolding work is in progress or being used. A tagging system must be used to identify out of service and in service scaffolding. The tagging system will be per OSHA requirements.
10. Contractor shall install rebar caps (OSHA Approved) on all reinforcing and maintain daily.
11. If the toilet accessories, fire extinguisher cabinets, valve cabinets, electrical panels, etc. are not delivered in time, provide block outs for these items as per submittal data.

12. Provide washout of excess concrete associated with masonry work to be performed on site at a location directed by Garmong project management. Clean up of this area will be performed by this Contractor weekly.
13. The Contractor shall coordinate with Garmong and other trades, and install sleeves and embedded items built into masonry walls, i.e. expansion joints, metal embeds, etc.
14. This Contractor is responsible to furnish, install, and remove any necessary temporary wall bracing to prevent failure due to wind, etc.

BID CATEGORY BP NO. 3 MASONRY SCOPE OF WORK

BID CATEGORY BP NO. 4 STRUCTURAL STEEL SCOPE OF WORK

This Scope of Work is to include, but is not limited to, the following Specification Sections:

<u>Section</u>	<u>Description</u>
Division 00	Procurement and Contracting Requirements
Division 01	General Requirements
05 05 53	SECURITY METAL FASTENINGS
05 12 00	STRUCTURAL STEEL FRAMING
05 12 13	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL FRAMING
05 21 00	STEEL JOIST FRAMING
05 31 00	STEEL DECKING
05 50 00	METAL FABRICATIONS
05 51 19	METAL GRATING STAIRS
05 52 13	PIPE AND TUBE RAILINGS
05 53 00	METAL GRATINGS

This Bid Category Scope of Work describes and assigns Work to this Bid Category as designated by the Construction Manager. Each Contractor shall cooperate and coordinate with all other Bid Category Contractors for proper and expedient completion of the Work in this Project. This summary should in no way be construed as being all inclusive. It is issued as a guide to aid in the assignment of Work and is intended to clarify and/or further define the Scope of Work included in the Bid Documents. They shall not be construed as the entire Scope of Work for this Bid Category. All work described or indicated in the respective Specifications Sections or Divisions listed above shall be included, except as specifically excluded herein.

1. Contractor agrees to furnish all scaffolding, associated rigging, hoisting (crane), unloading, handling, unpacking, and services necessary for erection and delivery into the premises of all necessary equipment and apparatus. Contractor agrees to remove it from premises when no longer required for the performance of this work required to perform the work of this Subcontract is included.
2. Temporary barricades as required per 01 56 23 – Barricades.
3. The Contractor will furnish F.O.B. jobsite all embeds for cast in place concrete and masonry anchor bolts for structural steel and special metal fabrications that are required or shown to be cast in concrete or masonry. All embeds will have holes drilled for attachment to formwork.
4. Provide all necessary fasteners, clips, inserts, embeds, templates, accessories, hanger rods, pre-punched holes, etc. to furnish and install all structural steel as required.
5. Provide certificates for all welders, prior to start of work.
6. Include touch up (chipping, grinding and prime painting) of all structural steel and field welds. All embeds are to be prime painted on all surfaces.
7. Furnish and install all temporary and permanent cross bracing, wind bracing and misc. bracing as required.

8. Furnish all steel lintels and brick relieving angles as required. Contractor shall provide all necessary anchors to attach these members
9. Provide all painting, touch-up painting, bituminous coatings and galvanizing as required.
10. In the event of mis-fabrication or design error, the supplier will submit, within 24 hours, an engineered solution. Upon acceptance, Contractor will immediately correct the problem as necessary not to interfere with the job progress.
11. No cutting or drilling of holes in structural members will be permitted unless written permission from the Design Team is obtained.
12. Special attention is to be made to all OSHA and Garmong Safety Requirements, especially to TYING OFF. Scaffolds, ladders, hard hats, safety glasses, fire extinguishers and flash arrestors will be used. Ladders must be tied off. All personnel setting "leading edge" work will be tied off, NO EXCEPTIONS. This Contractor shall design and install any necessary safety cable system required to achieve compliance. The company safety director prior to use will review all systems. 100% fall protection above 6' will be strictly enforced.
13. All welders are to be gas or diesel powered.
14. All welds in galvanized decks will be touched up with galvanized primer.
15. This Contractor is responsible for any lost or misplaced materials intended for this scope of work.
16. Provide all metal fabrications as indicated and specified including steel framing and supports for operable partitions, overhead doors and grilles, countertops, doors and windows, MEP equipment, shelf angles, miscellaneous steel trim and corner guards.
17. Provide all steel closure plates, beam enclosures, steel bulkheads, steel soffits, steel utility enclosures, steel plate supports above security mesh screens at mezzanines as indicated. These items are to be fabricated and installed with no gaps larger than 1/8". Provide removable access sections in all steel bulkheads, soffits, and ceilings per specification, but no less than every 12' and a minimum of one (1) per straight run enclosure. Provide all openings for MEP penetrations including HVAC grilles, fire suppression heads, as well as lights and steel mounted electrical and security devices. Coordinate framing members with MEP utilities above ceiling and within steel bulkheads, soffits, and beam enclosures.
18. Provide metallic putty sealants at items provided as part of this scope of work where the work remains exposed. This contractor will be required to seal all exposed joints in steel soffits, bulkheads, ceiling, beam enclosures, and mezzanine plates.
19. Provide angle and plates required for dock leveling equipment and enclosures.

BID CATEGORY BP NO. 4 STRUCTURAL STEEL METALS SCOPE OF WORK

BID CATEGORY BP NO. 5 ROOFINGSCOPE OF WORK

This Scope of Work is to include, but is not limited to, the following Specification Sections:

<u>Section</u>	<u>Description</u>
Division 00	Procurement and Contracting Requirements
Division 01	General Requirements
07 42 43	MODULAR METAL WALL, ROOF AND SOFFIT PANELS
07 54 23	THERMOPLASTIC POLYOLEFIN (TPO) ROOFING
07 62 00	SHEET METAL FLASHING AND TRIM
07 71 00	ROOF SPECIALTIES
07 72 00	ROOF ACCESSORIES
07 71 29	MANUFACTURED ACCESS CURBS AND COVERS
07 72 53	SNOW GUARDS

This Bid Category Scope of Work describes and assigns Work to this Bid Category as designated by the Construction Manager. Each Contractor shall cooperate and coordinate with all other Bid Category Contractors for proper and expedient completion of the Work in this Project. This summary should in no way be construed as being all inclusive. It is issued as a guide to aid in the assignment of Work and is intended to clarify and/or further define the Scope of Work included in the Bid Documents. They shall not be construed as the entire Scope of Work for this Bid Category. All work described or indicated in the respective Specifications Sections or Divisions listed above shall be included, except as specifically excluded herein.

1. Coordinate work with the work of all other bid packages.
2. Coordinate with mechanical and electrical bid packages for roof installation around roof top units and penetrations.
3. Furnish and install all joint sealants as it relates to roofing. These sealants should be utilized to ensure water tightness and included as part of the overall roofing system.
4. Coordinate roof penetrations with all bid packages and ensure that all penetrations conform with the roof systems installation requirements. Provide all material necessary to seal these penetrations.
5. All required roof vents complete with curbs, water seals, gaskets and hardware, flashing and accessories.

BID CATEGORY BP NO. 5 ROOFING TEMPLATE SCOPE OF WORK

BID CATEGORY BP NO. 6 METAL STUDS, DRYWALL & ACOUSTICAL CEILINGS SCOPE OF WORK

This Scope of Work is to include, but is not limited to, the following Specification Sections:

<u>Section</u>	<u>Description</u>
Division 00	Procurement and Contracting Requirements
Division 01	General Requirements
05 40 00	COLD-FORMED METAL FRAMING
06 10 53	MISC. ROUGH CARPENTRY
06 16 00	SHEATHING
07 21 00	THERMAL INSULATION
07 25 00	WEATHER BARRIERS
09 22 16	NON-STRUCTURAL METAL FRAMING
09 29 00	GYPSUM BOARD
09 51 13	ACOUSTICAL PANEL CEILINGS
09 57 53	SECURITY CEILING ASSEMBLIES

This Bid Category Scope of Work describes and assigns Work to this Bid Category as designated by the Construction Manager. Each Contractor shall cooperate and coordinate with all other Bid Category Contractors for proper and expedient completion of the Work in this Project. This summary should in no way be construed as being all inclusive. It is issued as a guide to aid in the assignment of Work and is intended to clarify and/or further define the Scope of Work included in the Bid Documents. They shall not be construed as the entire Scope of Work for this Bid Category. All work described or indicated in the respective Specifications Sections or Divisions listed above shall be included, except as specifically excluded herein.

1. Contractor shall provide additional bracing and/or backing required to adequately support all wall hung fixtures and equipment (cabinets, furniture, toilet accessories, tack boards, handrails, fire extinguisher cabinets etc.). Comply with stud manufacturers recommendations and industry standards in each case considering weight or load resulting from item supported. This Contractor will meet with each related Contractor to coordinate blocking and backing work.
2. Contractor shall furnish and install all acoustical sealants required.
3. Floors shall be scraped clean of drywall mud daily.
4. Contractor shall stencil and identify all fire rated and smoke partitions as required.
5. Contractor shall protect storefront, hollow metal work, aluminum work, glass etc. as required to prevent damage by Contractor's work.
6. Coordinate penetrations in drywall with appropriate trades. Ensure that drywall is cut ¼" to ½" between through wall penetrations. Seal joint with acoustical sealant as required. All penetrations shall be constructed in accordance with UL and NFPA requirements.
7. Other Contractors shall furnish all access panels. This Contractor is responsible for the complete installation of these access panels into partitions and walls constructed by this Contractor.
8. In the interest of a quality finished product and appearance, Garmong, along with the painting Contractor and this Contractor, will inspect all wallboard for surface defects after prime painting.

This Contractor will perform any patching of drywall for corrections required. The painting Contractor will perform any associated repriming work. This work, both by the painting Contractor and this Contractor, shall be completed prior to the application of the finish coats of paint at no additional cost.

9. All drywall is to be finished to the floor to allow for the proper installation of base.
10. Provide cut outs necessary for framing at all electrical outlets, switches, HVAC, fire sprinkler and plumbing openings and all other trades where required. Verify height with plans, specifications, codes.
11. Provide coordination with the work of other trades and specifically participate in the ongoing coordination of MEP trades.
12. Coordinate with electrical and mechanical trades, the location of, the suspension reinforcement for, fixtures and/or mechanical grilles, etc. to coordinate with the ceiling suspension pattern. Provide additional ceiling supports and cut outs where necessary to support light fixtures, speakers and other ceiling mounted equipment
13. Coordinate the location of hangers with other work. Ensure the layout of hangers and carrying channels are installed to accommodate fittings and units of equipment that are placed after the installation of the ceiling grid system.
14. Where ducts and or other equipment prevent the regular spacing of hangers, reinforce the nearest and adjacent hangers and related carrying channels as required to span the distance.
15. Contractor shall install and cut all ceiling tile required except for the fire sprinkler tile.
16. If ceiling height discrepancies exist, this Contractor shall notify Garmong immediately. This Contractor shall not make any ceiling height changes without approval.
17. Contractor shall provide all required caulking, sealants and acoustical sealants.

BID CATEGORY BP NO. 6 METAL STUDS, DRYWALL & ACOUSTICAL CEILINGS SCOPE OF WORK

BID CATEGORY BP NO. 7 PAINTING SCOPE OF WORK

This Scope of Work is to include, but is not limited to, the following Specification Sections:

<u>Section</u>	<u>Description</u>
Division 00	Procurement and Contracting Requirements
Division 01	General Requirements
05 12 13	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL FRAMING
09 67 23	RESINOUS FLOORING
09 67 25	SEAMLESS SHOWER COATINGS
09 72 00	WALL COVERINGS
09 91 13	EXTERIOR PAINTING
09 91 23	INTERIOR PAINTING
13 55 00	PREFABRICATED MODULAR STEEL CELLS
32 17 23	PAVEMENT MARKINGS (INT. STRIPING)

This Bid Category Scope of Work describes and assigns Work to this Bid Category as designated by the Construction Manager. Each Contractor shall cooperate and coordinate with all other Bid Category Contractors for proper and expedient completion of the Work in this Project. This summary should in no way be construed as being all inclusive. It is issued as a guide to aid in the assignment of Work and is intended to clarify and/or further define the Scope of Work included in the Bid Documents. They shall not be construed as the entire Scope of Work for this Bid Category. All work described or indicated in the respective Specifications Sections or Divisions listed above shall be included, except as specifically excluded herein.

1. Provide block fillers, metal fillers, primer, and finish coat material as required.
2. Contractor will be responsible for all surface preparation including, but not limited to, scraping, grinding, sanding, etc., prior to their application. Contractor shall notify Garmong in writing, prior to applying finish materials as to any surfaces that are not acceptable. Included is all required masking and protection of adjacent work including hardware, fixtures, millwork, flooring, sprinkler heads, etc. Start of work shall be acceptance of surfaces by this Contractor.
3. On any surface requiring more than one coat, Contractor shall not apply second or finish coat until it has received written acceptance of coating from Garmong.
4. Tint each undercoat a lighter shade when multiple coats of same material are applied. Tint undercoats in the same color range as the finish coat.
5. Provide samples of each color and material to be applied for approval by A/E on actual substrate prior to any production work, in strict accordance with contract specifications.
6. Come back work at the building exterior and interior is included at no additional cost.
7. The Contractor will clean adjacent surfaces that receive over spray.
8. Garmong will provide temporary lighting per OSHA standards only. Contractor shall provide all additional lighting required for the proper execution of work.
9. Finish exterior doors on tops, bottoms and side edges same as exterior faces.
10. Paint backsides of access panels, removable and hinged covers to match exposed surfaces.

11. Paint all cell module fronts and both sides of each cell door.
12. Paint mezzanine level walkways, hand-railing, and stairs, stair stringers, etc. The open grating of mezzanines and the open grate stair treads will remain galvanized and not painted. Paint all Kane Vantage wall materials.
13. Touch up primer on factory or shop primed metal surfaces required for application of finish painting.
14. The Contractor shall verify compatibility of materials applied to substrates field coated by this Contractor to not void the warranties of said materials. It is also the responsibility of the Contractor to verify compatibility of shop-applied coatings to topcoats applied in the field.
15. Contractor will not be allowed to clean tools and equipment in permanent plumbing fixtures.
16. All required cosmetic caulking, including caulking at casework, is included in this agreement.
17. Contractor shall be responsible for painting mechanical and electrical work exposed to view in interior occupied spaces and exterior walls and roof.
18. The Painting Contractor, Masonry Contractor and Metal Stud/Drywall Contractor will inspect all gypsum wallboard, plaster and block walls after prime painting for surface defects. Re-priming and/or subsequent patchwork if required shall be performed prior to finish painting at no additional cost.
19. The Painting Contractor is responsible for all sanding and cleaning of surfaces except block and drywall.

BID CATEGORY BP NO. 7 PAINTING SCOPE OF WORK

BID CATEGORY BP NO. 8 FLOORING AND CERAMIC TILE SCOPE OF WORK

This Scope of Work is to include, but is not limited to, the following Specification Sections:

<u>Section</u>	<u>Description</u>
Division 00	Procurement and Contracting Requirements
Division 01	General Requirements
09 30 00	TILING
09 65 13	RESILIENT BASE AND ACCESSORIES
09 65 19	RESILIENT TILE FLOORING
09 65 66	RESILIENT ATHLETIC FLOORING
09 66 23	RESINOUS MATRIX TERRAZO FLOORING
09 67 23	RESINOUS FLOORING
09 68 13	CARPETING

This Bid Category Scope of Work describes and assigns Work to this Bid Category as designated by the Construction Manager. Each Contractor shall cooperate and coordinate with all other Bid Category Contractors for proper and expedient completion of the Work in this Project. This summary should in no way be construed as being all inclusive. It is issued as a guide to aid in the assignment of Work and is intended to clarify and/or further define the Scope of Work included in the Bid Documents. They shall not be construed as the entire Scope of Work for this Bid Category. All work described or indicated in the respective Specifications Sections or Divisions listed above shall be included, except as specifically excluded herein.

1. Provide floor and wall floating as required to repair minor substrate defects to insure finish product is plumb and true. Repair work at cracks in concrete slab is included. Include all leveling and patching compounds as recommended and approved by the flooring manufacturer.
2. Final clean all material to remove all grout haze. Clean tile / stone in a manner acceptable to the tile / stone and grout manufacturer's recommendations.
3. Remove and clean-up all debris, packaging, etc. daily. Grout will not be disposed of in any drains.
4. Examine all walls, floors, surfaces and areas to receive tile material prior to starting work and notify contractor in writing of any unsatisfactory condition. Commencement of work shall constitute acceptance of subsurface by this Contractor.
5. Specific care needs to be given when working around other finished surfaces, Contractor shall remove grout immediately.
6. Cuts around fixtures and penetrations shall be neat. Where escutcheons are provided, tile cuts shall be smaller than the escutcheons.
7. Prior to installing floor system, this Contractor will be required to check moisture content of the concrete slabs to be sure they are within the limits.
8. Install and maintain floor protection of finished floors. Contractor shall dispose of paper as directed by Garmong.
9. This Contractor is responsible for broom cleaning prior to installation of the flooring system.
10. It is the flooring Contractor's responsibility to walk the building prior to the schedule installation of floor covering. Nicks, small holes, cracks, depressions, rough areas, control joints, column diamonds, etc. in floors caused by construction process are expected and are a part of this

Contractor's scope of work to repair with floor patch. Contractor may have to do some minor floor scraping. Contractor shall report any conditions in writing to the contractor that warrant excessive floor patch. Commencement of work without such notice shall constitute acceptance of subsurface by this Contractor. Excessive floor patch is defined as greater than 10% of the floor area per building.

11. Vinyl repairs and minor carpet repairs are inherent in the construction process and are the responsibility of the Contractor to correct.
12. Provide final cleaning of vinyl tile in accordance with the flooring manufacturer's instructions immediately prior to turnover to Owner.
13. Contractor shall caulk joint between flooring and hollow metal frame.

BID CATEGORY BP NO. 8 FLOORING AND CERAMIC TILE SITE DEVELOPMENT SCOPE OF WORK

BID CATEGORY BP NO. 9 FIRE PROTECTION SCOPE OF WORK

This Scope of Work is to include, but is not limited to, the following Specification Sections:

<u>Section</u>	<u>Description</u>
Division 00	Procurement and Contracting Requirements
Division 01	General Requirements
07 84 13	PENETRATION FIRESTOPPING
21 05 17	SLEEVES AND SLEEVE SEALS FOR FIRE-SUPPRESSION PIPING
21 05 18	ESCUTCHEONS FOR FIRE-SUPPRESSION PIPING
21 05 23	GENERAL-DUTY VALVES FOR FIRE PROTECTION PIPING
21 05 29	HANGERS AND SUPPORTS FOR FIRE SUPPRESSION PIPING AND EQUIPMENT
21 05 48	VIBRATION & SEISMIC CONTROLS FOR FIRE-SUPPRESSION PIPING AND EQUIPMENT
21 05 53	IDENTIFICATION FOR FIRE-SUPPRESSION PIPING AND EQUIPMENT
21 11 19	FIRE DEPARTMENT CONNECTIONS
21 13 13	WET-PIPE SPRINKLER SYSTEM
21 13 16	DRY-PIPE SPRINKLER SYSTEMS

This Bid Category Scope of Work describes and assigns Work to this Bid Category as designated by the Construction Manager. Each Contractor shall cooperate and coordinate with all other Bid Category Contractors for proper and expedient completion of the Work in this Project. This summary should in no way be construed as being all inclusive. It is issued as a guide to aid in the assignment of Work and is intended to clarify and/or further define the Scope of Work included in the Bid Documents. They shall not be construed as the entire Scope of Work for this Bid Category. All work described or indicated in the respective Specifications Sections or Divisions listed above shall be included, except as specifically excluded herein.

1. Provide fire hydrant flow test and reports.
2. Site fire water piping by others, piping from 1' above finished floor.
3. Contractor is responsible for pulling all trade permits, paying all fees, and scheduling all required inspections associated with this work.
4. Firestopping of sprinkler piping penetrations in rated walls.
5. Through wall pipe penetrations through secure walls will require coordination with the installing Contractor.
6. All sleeves in new masonry walls and precast shall be laid out and provided by this bid package. All required core drilling, should a sleeve be missed, shall be the responsibility of this bid package.
7. Provide all access doors and panels to access concealed items where not shown on Drawings but required by Code. Include all costs for installation by other Bid Package Contractors. (Masonry Contractor, Metal Stud/Drywall Contractor)
8. Provide detention rated fire suppression heads in secure areas. Locate piping such that piping is not accessible to inmates. Provide detention rated pipe enclosures where piping is installed within reach of inmates. Note locations of steel ceilings, soffits, bulkheads, beam wraps, and utility

enclosures. These items are to be utilized for routing of fire suppression piping but will be shared with other utilities.

9. A complete as-built drawing of the Fire Protection system shall be maintained through and turned over at the end of the project.
10. Variations of pipe routing to accommodate building conditions and/or other trades may exist. An above ceiling coordination meeting incorporating all trades with work in the space will be required prior to rough-in.

BID CATEGORY BP NO. 9 FIRE PROTECTION SCOPE OF WORK

BID CATEGORY BP NO. 10 MECHANICAL AND PLUMBINGSCOPE OF WORK

This Scope of Work is to include, but is not limited to, the following Specification Sections:

<u>Section</u>	<u>Description</u>
Division 00	Procurement and Contracting Requirements
Division 01	General Requirements
07 84 13	PENETRATION FIRESTOPPING
08 91 19	FIXED LOUVERS
22 05 13	COMMON MOTOR REQUIREMENTS FOR PLUMBING EQUIPMENT
22 05 16	EXPANSION FITTINGS AND LOOPS FOR PLUMBING PIPING
22 05 17	SLEEVES AND SLEEVE SEALS FOR PLUMBING PIPING
22 05 18	ESCUTCHEONS FOR PLUMBING PIPING
22 05 19	METERS AND GAGES FOR PLUMBING PIPING
22 05 23.12	BALL VALVES FOR PLUMBING PIPING
22 05 23.13	BUTTERFLY VALVES FOR PLUMBING PIPING
22 05 23.14	CHECK VALVES FOR PLUMBING PIPING
22 05 23.15	GATE VALVES FOR PLUMBING PIPING
22 05 29	HANGERS AND SUPPORTS FOR PLUMBING PIPING AND EQUIPMENT
22 05 48.13	VIBRATION CONTROLS FOR PLUMBING PIPING AND EQUIPMENT
22 05 53	IDENTIFICATION FOR PLUMBING PIPING AND EQUIPMENT
22 07 19	PLUMBING PIPING INSULATION
22 11 13	FACILITY WATER DISTRIBUTION PIPING
22 11 16	DOMESTIC WATER PIPING
22 11 19	DOMESTIC WATER PIPING SPECIALTIES
22 11 23.13	DOMESTIC WATER-PACKAGED BOOSTER PUMPS
22 11 23.21	INLINE, DOMESTIC WATER PUMPS
22 13 13	FACILITY SANITARY SEWERS
22 13 16	SANITARY WASTE AND VENT PIPING
22 13 19	SANITARY WASTE PIPING SPECIALTIES
22 13 19.13	SANITARY DRAINS
22 13 23	SANITARY WASTE INTERCEPTORS
22 13 29	SANITARY SEWERAGE PUMPS
22 14 13	FACILITY STORM DRAINAGE PIPING
22 14 23	STORM DRAINAGE PIPING SPECIALTIES
22 14 29	SUMP PUMPS
22 16 13	FACILITY NATURAL GAS PIPING
22 31 00	DOMESTIC WATER SOFTENERS
22 34 00	FUEL-FIRED DOMESTIC WATER HEATERS
22 41 00	RESIDENTIAL PLUMBING FIXTURES
22 42 13.13	COMMERCIAL WATER CLOSETS
22 42 13.16	COMMERCIAL URINALS

22 42 16.13	COMMERCIAL LAVATORIES
22 42 16.16	COMMERCIAL SINKS
22 42 23	COMMERCIAL SHOWERS
22 45 00	EMERGENCY PLUMBING FIXTURES
22 46 00	SECURITY PLUMBING FIXTURES
22 47 16	PRESSURE WATER COOLERS
23 05 13	COMMON MOTOR REQUIREMENTS FOR HVAC EQUIPMENT
23 05 16	EXPANSION FITTINGS AND LOOPS FOR HVAC PIPING
23 05 17	SLEEVES AND SLEEVE SEALS FOR HVAC PIPING
23 05 18	ESCUTCHEONS FOR HVAC PIPING
23 05 19	METERS AND GAGES FOR HVAC PIPING
23 05 23	GLOBE VALVES FOR HVAC PIPING
23 05 23.12	BALL VALVES FOR HVAC PIPING
23 05 23.13	BUTTERFLY VALVES FOR HVAC PIPING
23 05 23.14	CHECK VALVES FOR HVAC PIPING
23 05 23.15	GATE VALVES FOR HVAC PIPING
23 05 23.16	PLUG VALVES FOR HVAC PIPING
23 05 29	HANGERS AND SUPPORTS FOR HVAC PIPING AND EQUIPMENT
23 05 48	VIBRATION CONTROLS FOR HVAC PIPING AND EQUIPMENT
23 05 53	IDENTIFICATION FOR HVAC PIPING AND EQUIPMENT
23 05 93	TESTING, ADJUSTING, AND BALANCING FOR HVAC
23 07 13	DUCT INSULATION
23 07 16	HVAC EQUIPMENT INSULATION
23 07 19	HVAC PIPING INSULATION
23 09 23	DIRECT DIGITAL CONTROL (DDC) SYSTEM FOR HVAC
23 09 24	REFRIGERANT DETECTION AND ALARM
23 21 13	HYDRONIC PIPING
23 21 16	HYDRONIC PIPING SPECIALTIES
23 21 23	HYDRONIC PUMPS
23 23 00	REFRIGERANT PIPING
23 25 13	WATER TREATMENT FOR CLOSED-LOOP HYDRONIC SYSTEMS
23 31 13	METAL DUCTS
23 33 00	AIR DUCT ACCESSORIES
23 33 46	FLEXIBLE DUCTS
23 34 23	HVAC POWER VENTILATORS
23 34 33.13	COMMERCIAL AIR CURTAINS
23 36 00	AIR TERMINAL UNITS
23 37 13.13	AIR DIFFUSERS
23 37 13.23	REGISTERS AND GRILLES
23 37 13.14	SECURITY REGISTERS AND GRILLES
23 37 23	HVAC GRAVITY VENTILATORS
23 51 23	GAS VENTS
23 52 16	CONDENSING BOILERS
23 55 23.13	LOW-INTENSITY, GAS-FIRED, RADIANT HEATERS

23 64 26.13	AIR-COOLED, ROTARY-SCREW WATER CHILLERS
23 73 13.13	INDOOR, BASIC AIR-HANDLING UNITS
23 74 16.11	PACKAGED, SMALL-CAPACITY, ROOFTOP AIR-CONDITIONING UNITS
23 74 33	DEDICATED OUTDOOR-AIR UNITS
23 81 23.13	COMPUTER-ROOM AIR-CONDITIONERS, CEILING MOUNTED UNITS
23 81 26	SPLIT-SYSTEM AIR CONDITIONERS
23 82 13	VALANCE HEATING AND COOLING UNITS
23 82 19	FAN COIL UNITS
23 82 39.16	PROPELLER UNIT HEATERS
23 82 39.19	WALL AND CEILING UNIT HEATERS

This Bid Category Scope of Work describes and assigns Work to this Bid Category as designated by the Construction Manager. Each Contractor shall cooperate and coordinate with all other Bid Category Contractors for proper and expedient completion of the Work in this Project. This summary should in no way be construed as being all inclusive. It is issued as a guide to aid in the assignment of Work and is intended to clarify and/or further define the Scope of Work included in the Bid Documents. They shall not be construed as the entire Scope of Work for this Bid Category. All work described or indicated in the respective Specifications Sections or Divisions listed above shall be included, except as specifically excluded herein.

1. All items within this package are to be furnished and installed unless otherwise noted.
2. All material handling, rigging, unloading, staging, and storage of all materials.
3. Contractor is responsible for obtaining all trade permits, paying all fees and scheduling and attending all required inspections associated with this work.
4. Temporary HVAC per requirements of 01 51 23 – Temporary HVAC
5. Temporary water per requirements of 01 51 36 – Temporary Water
6. Provide all site underground sanitary piping and structures; domestic and fire water piping and vault; and gas piping from utility. Fire water piping shall be capped at 1' above finished floor.
7. All housekeeping pads.
8. All excavation, backfill, concrete, masonry, and concrete patching required to complete this scope of work.
9. Through wall penetrations through secure masonry walls will require coordination with the Masonry Bid Package. Layout and coordination between all other Bid Packages is required.
10. Any roof penetrations shall be coordinated with the Roofing Contractor. Provide all accessories for roof and slab penetrations including sleeves and roofing accessories.
11. All sleeves in new masonry walls and precast shall be laid out and provided by the bid package. Coordinate installation of sleeves with the Masonry Contractor. Cutting and patching of precast planks for this scope shall be by this contractor.
12. Variations of piping and duct routing to accommodate building conditions and/or other trades may exist. An above ceiling coordination meeting will be required prior to rough-in.
13. Provide all access doors and panels necessary to access concealed HVAC and plumbing accessories where required by Code but not shown on Drawings. Access doors and panels in secure areas are to be detention rated. Access doors and panels in rated walls and ceilings need to be fire rated. Include cost on installation by other Bid Packages (Masonry Contractor and Metal Stud Drywall Contractor)

14. All refrigerant piping for new HVAC equipment, excluding freezer/cooler work.
15. Provide all man bars at duct penetrations through security walls. Man bars shall be provided at all locations where ductwork penetrates walls within the security perimeter. Provide miscellaneous angles and support members as indicated. Where man bars of fire dampers are identified or required at the same location, provide UL rated out of wall style dampers. Provide retaining angles for mounting security grilles in metal ceilings, soffits, bulkheads, and utility enclosures and do not weld security GRD's to the face of these items.
16. Coordinate BAS network connections and interface with smoke control system with Electrical Contractor.
17. A certified lifting plan shall be presented to Garmong Construction general superintendent prior to any equipment lifts associated with this bid package.
18. Sheetmetal ductwork connections to detention cells may be either round or rectangular. Include provisions for either type.
19. Provide General Trades Contractor with templates to be used in cutting countertops. Coordinate rough-in information with various trades.
20. This Contractor is responsible for furnishing any temporary valves, pumps gauges etc. to complete the work as required and scheduled.
21. All detention grade plumbing fixture shall be furnished by others and installed by this scope of work.

BID CATEGORY BP NO. 10 MECHANICAL AND PLUMBING MECHANICAL SCOPE OF WORK

BID CATEGORY BP NO. 11 ELECTRICAL SYSTEM SCOPE OF WORK

This Scope of Work is to include, but is not limited to, the following Specification Sections:

<u>Section</u>	<u>Description</u>
Division 00	Procurement and Contracting Requirements
Division 01	General Requirements
07 84 13	PENETRATION FIRESTOPPING
26 05 19	LOW VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES
26 05 26	GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS
26 05 29	HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS
26 05 33	RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS
26 05 44	SLEEVES AND SLEEVE SEALS FOR ELECTRICAL RACEWAYS AND CABLING
26 05 48.16	SEISMIC CONTROLS FOR ELECTRICAL SYSTEMS
26 05 53	IDENTIFICATION FOR ELECTRICAL SYSTEMS
26 05 73.13	SHORT-CIRCUIT STUDIES
26 05 73.16	COORDINATION STUDIES
26 05 73.19	ARC-FLASH HAZARD ANALYSIS
26 09 23	LIGHTING CONTROL DEVICES
26 22 13	LOW-VOLTAGE DISTRIBUTION TRANSFORMERS
26 23 13	PARALLELING LOW-VOLTAGE SWITCHGEAR
26 24 13	SWITCHBOARDS
26 24 16	PANELBOARDS
26 25 00	ENCLOSED BUS ASSEMBLIES
26 27 26	WIRING DEVICES
26 28 13	FUSES
26 28 16	ENCLOSED SWITCHES AND CIRCUIT BREAKERS
26 29 13.03	MANUAL AND MAGNETIC MOTOR CONTROLLERS
26 29 23	VARIABLE FREQUENCY MOTOR CONTROLLERS
26 32 13	DIESEL ENGINE GENERATORS
26 33 53	STATIC UNINTERRUPTIBLE POWER SUPPLY
26 36 00	TRANSFER SWITCHES
26 43 13	SURGE PROTECTION FOR LOW-VOLTAGE ELECTRICAL POWER CIRCUITS
26 51 19	LED INTERIOR LIGHTING
26 56 13	LIGHTING POLES AND STANDARDS
26 56 19	LED EXTERIOR LIGHTING
27 05 26	GROUNDING AND BONDING FOR COMMUNICATIONS SYSTEMS
27 05 28	PATHWAYS FOR COMMUNICATIONS SYSTEMS
27 05 29	HANGERS AND SUPPORTS FOR COMMUNICATIONS SYSTEMS
27 05 36	CABLE TRAYS FOR COMMUNICATIONS SYSTEMS
27 05 44	SLEEVES AND SLEEVE SEALS FOR COMMUNICATIONS PATHWAYS AND CABLING
27 05 48.16	SEISMIC CONTROLS FOR COMMUNICATIONS SYSTEMS
27 05 53	IDENTIFICATION FOR COMMUNICATIONS SYSTEMS

27 11 00	COMMUNICATIONS EQUIPMENT ROOM FITTINGS
27 11 16	COMMUNICATIONS RACKS, FRAMES, AND ENCLOSURES
27 13 13	COMMUNICATIONS COPPER BACKBONE CABLING
27 13 23	COMMUNICATIONS OPTICAL FIBER BACKBONE CABLING
27 13 33	COMMUNICATIONS COAXIAL BACKBONE CABLING
27 15 13	COMMUNICATIONS COPPER HORIZONTAL CABLING
27 15 33	COMMUNICATIONS COAXIAL HORIZONTAL CABLING
27 41 33	MASTER ANTENNA TELEVISION SYSTEM
28 05 00	COMMON WORK RESULTS FOR ELECTRONIC SAFETY AND SECURITY
28 05 10	CABINETS AND ENCLOSURES
28 46 19	SECURITY AUTOMATION SYSTEM
28 46 20	VIDEO GRAPHIC USE INTERFACE
28 46 21.11	ADDRESSABLE FIRE-ALARM SYSTEMS
28 51 23	AUDIO COMMUNICATIONS SYSTEMS

This Bid Category Scope of Work describes and assigns Work to this Bid Category as designated by the Construction Manager. Each Contractor shall cooperate and coordinate with all other Bid Category Contractors for proper and expedient completion of the Work in this Project. This summary should in no way be construed as being all inclusive. It is issued as a guide to aid in the assignment of Work and is intended to clarify and/or further define the Scope of Work included in the Bid Documents. They shall not be construed as the entire Scope of Work for this Bid Category. All work described or indicated in the respective Specifications Sections or Divisions listed above shall be included, except as specifically excluded herein.

1. All items within this package are to be furnished and installed unless otherwise noted.
2. Contractor is responsible for obtaining all trade permits, paying all fees and scheduling and attending all required inspections associated with this work. This includes preparing and submitting all fire alarm drawings to state and local permitting and plan review authorities in a timely manner so as not to delay the start of work.
3. Temporary power and lighting as specified in 01 15 13 – Temporary Electricity.
4. Light pole bases.
5. All housekeeping and transformer pads.
6. Provide underground conduit rough-in for site primary feed from utility source to utility service provided primary transformer. Provide the CT metering cabinet and install the utility furnished meter socket. Coordinate with the utility provider, submit all applications and pay all required fees.
7. All underground conduit rough-in for telephone and fiber to utility service.
8. All excavation, backfill, concrete, masonry and concrete patching required to complete this scope of work.
9. Schedule of any required shutdowns shall be coordinated with Garmon.
10. All material handling, rigging, unloading, staging, and storage of all materials.
11. Through wall penetrations through secure masonry walls will require close coordination with the Masonry Bid Package. Layout and coordination between other Bid Packages is required.
12. Install all electrified door, overhead door, and coiling shutter hardware components furnished by General Trades Contractor and provide wiring terminations. This excludes electrified door controls provided by the Detention Equipment Contractor.

13. Any roof penetrations shall be coordinated with the Roofing Contractor. This package shall create the roof penetration to the acceptance of the Roofing Contractor. Provide all accessories for roof and slab penetrations including sleeves and roofing accessories.
14. All sleeves in new masonry walls and precast shall be laid out and provided by this bid package. Coordinate installation of sleeves with Masonry Contractor. Cutting and coring of precast planks for this scope of work shall be by this contractor.
15. Provide all access panels required to access conceal items as required for Code but not shown on Drawings. Include costs for installation by other Bid Packages. (Masonry Contractor and Metal Stud Contractor)
16. It shall be the responsibility of this bid package to provide start up assistance on equipment provided. The equipment manufacturer (when required) shall provide start up on all equipment.
17. All interconnecting wiring and devices as required for new kitchen equipment and kitchen fire protection as described in contract documents.
18. Variations of conduit routing to accommodate existing building conditions and/or other trades may exist. An above ceiling coordination meeting will be required prior to rough-in.
19. Provide and install all components of the telephone, data, communication and coaxial systems for complete an operational systems.
20. Provide all cable support systems, raceways, conduits, wall sleeves, rough-in boxes and cable trays for all low voltage systems installed by as part of this scope of work and for systems installed by others including data and communications, security electronics, electrified door hardware, kitchen and laundry equipment, and fire alarm. This is to exclude temporary controls /BAS systems which will be provided by the Mechanical & Plumbing Contractor except where specifically indicated on the Contract Documents. Cable trays not identified on the Drawings will be the responsibility of the contractor requiring the cable trays. Install only special back boxes, racks and cabinets furnished by the Detention Equipment Contractor. Layout and provide wall sleeves for these systems as necessary to provide complete raceways.
21. Provide all security electronics cabling, wire, and fiber optic complete and ready for termination at head end racks by the Detention Equipment Contractor. Install only all field devices and lock pigtails and wiring harnesses for security electronics systems. Terminations at head end equipment will be provided by the Detention Equipment Contractor, however, the Electrical Contractor will be responsible for receiving and installing head end equipment racks. Examples of field devices that are furnished by the Detention Equipment Contractor for installation by this contractor include intercoms, cameras, duress devices, watch tower devices, speakers, talk-thru devices, card readers, motion detectors, request to exit buttons, microphones, etc. Note locations where utility control is provided through the security electronics systems and lighting and power is fed through the utility control panels on the security electronics system. Central control computers and monitors are to be furnished and installed by the Detention Equipment Contractor.
22. All BAS and HVAC controls will be the responsibility of the Mechanical & Plumbing Contractor. The Mechanical & Plumbing Contractor will be responsible for furnishing all BAS equipment and controllers. The Electrical Contractor is responsible for line voltage power connections, relays, VFD terminations, fire alarm connections, power shut down (contactors), motor starters, or disconnects associated with the controls system, all of which are to be furnished and/or installed as detailed in this scope of work.

BID CATEGORY BP NO. 11 ELECTRICAL SYSTEM SCOPE OF WORK

BID CATEGORY BP NO. 12 KITCHEN EQUIPMENT SCOPE OF WORK

This Scope of Work is to include, but is not limited to, the following Specification Sections:

<u>Section</u>	<u>Description</u>
Division 00	Procurement and Contracting Requirements
Division 01	General Requirements
07 92 00	Joint Sealants
07 84 13	Penetration Firestopping
11 40 00	Food Service Equipment

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1. Provide coordination with mechanical and electrical contractors for connections to equipment. This contractor will be responsible for all interconnect wiring and controls wiring required for a complete operational system acceptable to owner, AE, and Construction Manager. Utility connections will be provided by others to the extent indicated on the plumbing, mechanical, and electrical drawings. This contractor will be required to coordinate utility connections with these drawings from the construction set and will bear any costs associated with modifications to these requirements as a result of not matching these drawings.
2. This contractor will be responsible for installation of refrigeration line sets and condensate drains associated with the cooler/freezer including roof curbs, equipment supports and penetrations.
3. Provide all anchor bolts, seismic restraints and anchoring of equipment. Where anchors are to be embedded in masonry or concrete, furnish only to the Masonry or General Trades contractors prior to installation of masonry or concrete. Not furnishing these items prior to the installation of these systems will require post installation by this contractor.
4. Furnish all light fixtures integral to items installed by this scope of work, installation of light fixtures by Electrical contractor.
5. Provide sealants as specified to seal abutting surfaces that produce airtight, watertight and sanitary joints.
6. Provide cardboard protection for all stainless-steel surfaces during construction, remove before final cleaning.
7. Provide the insulated floor system at the walk-in cooler/freezer.
8. Furnish only kitchen hood and dishwasher hood for installation by the Mechanical contractor. Furnish all closure pieces and trim necessary for a complete installation.

9. Provide hood fire suppression system. Furnish only gas shut off valve for installation by the plumbing contractor. Provide contactor/hood control panel to allow for interface to the fire alarm system (connection by others), BAS (connection by others), and shut down of electrical power to kitchen equipment where indicated. Provide kitchen temperature sensor for wire connections by others.
10. Provide all required plan review, permits and fees associated with work of this category, specifically coordination with the authorities having jurisdiction and health department.
11. Provide field start-up of all equipment furnished or installed under this scope of work.
12. This contractor shall be responsible for notifying CM prior the start of above grade masonry if there are any pieces of equipment that are not capable of fitting through planned door openings.

BID CATEGORY BP NO. 12 KITCHEN EQUIPMENT SCOPE OF WORK

BID CATEGORY BP NO. 13 DETENTION EQUIPMENT SCOPE OF WORK

This Scope of Work is to include, but is not limited to, the following Specification Sections:

<u>Section</u>	<u>Description</u>
Division 00	Procurement and Contracting Requirements
Division 01	General Requirements
05 05 53	SECURITY METAL FASTENINGS
08 31 19	SECURITY ACCESS DOORS AND FRAMES
08 34 63	DETENTION DOORS AND FRAMES
08 56 63	DETENTION WINDOWS AND SKYLIGHTS
08 71 63	DETENTION DOOR HARDWARE
08 71 63A	DETENTION DOOR HARDWARE SETS
08 88 53	SECURITY GLAZING
09 57 53	SECURITY CEILING ASSEMBLIES
09 78 63	SAFETY PADDING
10 2813.63	DETENTION TOILET ACCESSORIES
11 18 00	SECURITY EQUIPMENT
11 19 00	DETENTION EQUIPMENT CONTRACTOR
11 19 03	SECURITY SCREEN-WOVEN ROD
12 55 00	DETENTION FURNITURE
12 56 00	INSTITUTIONAL FURNITURE
13 55 00	PREFABRICATED MODULAR STEEL CELLS
28 05 00	COMMON WORK RESULTS FOR ELECTRONIC SAFETY AND SECURITY
28 05 10	CABINETS AND ENCLOSURES
28 46 19	SECURITY AUTOMATION SYSTEM
28 46 20	VIDEO GRAPHIC USE INTERFACE
28 4621.11	ADDRESSABLE FIRE-ALARM SYSTEMS
28 51 23	AUDIO COMMUNICATIONS SYSTEMS

This Bid Category Scope of Work describes and assigns Work to this Bid Category as designated by the Construction Manager. Each Contractor shall cooperate and coordinate with all other Bid Category Contractors for proper and expedient completion of the Work in this Project. This summary should in no way be construed as being all inclusive. It is issued as a guide to aid in the assignment of Work and is intended to clarify and/or further define the Scope of Work included in the Bid Documents. They shall not be construed as the entire Scope of Work for this Bid Category. All work described or indicated in the respective Specifications Sections or Divisions listed above shall be included, except as specifically excluded herein.

1. Furnish only all interior and exterior detention hollow metal door and window frames, security access panel frames, chase doors frames, and tear gas ports to be installed by General Trades Contractor. Provide on-site training and supervision during initial installation.
2. Furnish only detention and institutional furnishing to be installed by General Trades Contractor.

3. Frames to be furnished prior to the start of above slab masonry walls. Provide guarantee letter from manufacturers agreeing to this date and allow 4 weeks for submittal review. Frames that cannot be factory prepped for hardware in time to make these delivery dates shall be prepped in the field by this contractor. This Contractor is responsible for furnishing steel plate embeds at all locations where frames are not delivered in time for masonry wall construction and will be responsible for field installation of frames as part of this scope of work. If frames are delivered on time, plate embeds can be omitted.
4. Careful coordination will be required with the Security Electronics Contractor to prep frames to receive frame mounted security electronics devices such as intercoms, DPS devices, locks, push buttons, request to exit devices and all electrified hardware components. Junction boxes, conduit raceways, enclosures, and access plates for all items shall come factory installed.
5. Door, window, and access panel openings in rated wall or ceiling assemblies are to be rated regardless of whether correctly indicated on the door schedule.
6. This contractor will be responsible for furnishing frame anchor straps/masonry anchors to be installed by others.
7. This contractor will be responsible for furnishing and installing all plate steel frame closure pieces between frames and to close off gaps around frames and columns between frames. Closure pieces are to be field measured by this contractor.
8. Provide all conduit runs, junction boxes, enclosures, and access plates factory installed in detention doors and frames. At frames where access to junction boxes will be inaccessible, provide conduit runs through frame to either top or bottom of frame to be coordinated with the Electrical Contractor. Frame mounted conduit and junction boxes are to be factory sealed to avoid leaks during grouting of frames.
9. Furnish all detention hollow metal doors complete. This contractor will be responsible for storing doors until installed. On site storage will be permitted, however, this contractor will be responsible for receiving, unloading, and protecting until installed.
10. All openings as part of this scope of work in rated wall or ceiling assemblies are to be rated regardless of whether correctly indicated on the door schedule. Refer to fire rated assembly plans. Rated openings are to be complete rated assemblies (door, frame, glass, hardware) and shall bear UL label.
11. Coordinate with the Electrical Contractor to prep doors to receive hardware and security electronics devices such as concealed closures, DPS devices, locks, etc.
12. Provide all detention door hardware complete in detention openings provided under this scope of work as well as all detention hardware in non-detention openings.
13. Furnish only all pigtails and wire harnesses for all locks and electrified door hardware to be installed by the Electrical Contractor. Provide final adjustment and installation of cover plates and trim after installation of security electronics wiring at all door locations. Door mutes are to be field installed AFTER finish painting of doors and frames by this contractor.
14. Include all weather stripping, gaskets, sweeps, thresholds, etc at doors installed under this work category. Food pass and cuff port openings and shutters are to be factory installed in door openings provided by this contractor.
15. Provide all keying and key controls for locks installed by this work category. Attend keying coordination meetings in person.

16. Provide final adjustment of all detention doors after HVAC system is fully functional and building final enclosure including adjustment of hinges, closers, DPS, and LSS devices.
17. Provide all security glazing complete including security glazing in openings, non-detention doors and frames where indicated furnished and/or installed by the work of this category. Fire rated glazing is to be permanently etched with UL rating. Glazing is to fit tightly to frame and/or glazing stops without any gaps and with glazing tape or sealants cut below edge of glazing stops. Any gaps at these locations will be addressed by this contractor or will receive security joint sealants by others paid for by this contractor.
18. Provide all detention toilet and bath accessories, equipment, and furnishings complete. This includes but is not limited to all toilet paper holders (furnish only where embedded in masonry), security grab bars, security robe hooks, security shelves, security mirrors, security hook strips, security desks, stools, bunks, report writing shelves, dayroom tables, pistol lockers, key cabinets, package passes, sill passes, kitchen tool lockers, security tables, wall mounted swing stools, benches, security shower curtains, etc.
19. Provide detailed coordination drawings and furnish only all steel embeds for detention furnishings and accessories to Masonry Contractor. Embeds are to be delivered to the Masonry Contractor prior to the start of above grade masonry. Provide touchup of all factory primers, paints and finishes after installation to prepare for finish coat so that welding burns do not telegraph through finish paint. Finish coats to be provided by Painting Contractor. Remove all welding burns and slag from adjacent surfaces.
20. Provide all woven mesh security barriers. Coordinate sizes and location requirements for embedded anchors in precast and steel anchor structure above.
21. Provide complete and tested touchscreen control system including touchscreen stations, control panels, interface boards and PLCs with complete and operational function of the door control system, CCTV system, alarms, utility controls, and audio control systems, etc. accepted by Owner, A/E, and Construction Manager.
22. Provide complete and tested door control system including all interface board, relay cabinets, install only pig tails and wire harnesses at new detention locks, and system functionality indicated, specified, or required.
23. Provide complete and tested intercom and paging system including all PLC, software, programming, power supplies, amplifiers, microphones, intercom devices, speakers, intercom stations, interface boards and all other equipment indicated or required to achieve system functionality.
24. Provide complete and tested CCTV system including all cameras and mounting hardware, network video recorders, matrix switch input cards, DVRs capable of maintaining the specified level of storage, and camera power supplies as well as all other equipment indicated or required to achieve system functionality.
25. Furnish only all field devices, racks, relays, controllers, equipment, etc. factory assembled and tested to the furthest extent possible for field installation by the Electrical Contractor. Provide on-site training, assistance, and verification a minimum of once a month prior to the start of on-site start-up and testing.
26. Provide onsite start-up and testing of all devices and systems provided as part of this scope of work.
27. Provide all control panels and consoles required to achieve a complete functional system.
28. Provide detailed point to point wiring diagrams with required back box and conduit sizing and groupings for all new and existing devices. Cabling, conduit, raceways, back boxes (except specialty

back boxes indicated to be provided as part of this scope of work) required to complete this scope of work will be provided by the Electrical Contractor.

29. Furnish only all specialty back-boxes to the Electrical Contractor for installation.
30. Provide up to (4) 8-hour training sessions for general operation of the security electronics system in addition to separate maintenance and supervisor level training to accommodate continued operation of facility.
31. Develop and provide a quality assurance plan demonstrating that every aspect of the detention equipment and security electronics system by the DSC and ESS shall function properly at substantial completion. Include in that plan a detention lock and detention door commissioning plan cycling every door and lock from fully closed to fully open twenty (20) times before substantial completion. Document this effort for every door as witnessed by an independent commissioning agent engaged by the CM.
32. This contractor will be responsible of providing all services identified throughout the drawings and specifications of those parties identified as the Detention Systems Contractor (DSC), Electronics System Contractor (ESS), Electronic Security Systems Contractor (ESSS), Detention Hardware Contractor (DEC), Detention Electronics Contractor (DEC), Detention Hardware Sub-Contractor(DESC), Touchscreen Control System Vendor (TCSV) and Security Contractor Installer (SCI). Where scope delineation conflicts exist between this Scope of Work and any other section of the specifications or construction drawings, this Scope of Work shall govern.

BID CATEGORY BP NO. 13 DETENTION EQUIPMENT SCOPE OF WORK

SECTION 012300 - ALTERNATES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. Section includes administrative and procedural requirements for alternates.

1.03 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if the Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
 - 1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
 - 2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternates into the Work. No other adjustments are made to the Contract Sum.

1.04 PROCEDURES

- A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
 - 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.
- C. Execute accepted alternates under the same conditions as other work of the Contract.
- D. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.01 SCHEDULE OF ALTERNATES

A. ALTERNATE NO. 1 – SITE FENCING

1. Alternate Bid: Provide secure site fencing, gates and concrete mow strip as noted on drawing

B. ALTERNATE NO. 2 – PERIMETER DRIVE

1. Alternate Bid: Provide perimeter drive as noted on drawing

C. ALTERNATE NO. 3 – SITE SCREEN WALL

1. Alternate Bid: Provide site screen wall as noted on drawing

D. ALTERNATE NO. 4 –SALLYPORT BAYS

1. Alternate Bid: Omit two (2) sallyport bays as noted on drawing

E. ALTERNATE NO. 5 – SQUARE D ELECTRICAL PANELS

1. Alternate Bid: The cost difference to provide electrical panels manufactured by Square D as noted on the documents.

F. ALTERNATE NO. 6 –HONEYWELL FIRE ALARM SYSTEM

1. Alternate Bid: The cost difference to provide fire alarm system manufactured by Honeywell as noted on the documents.

SECTION 012600 – CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Proposal Request
- B. Request for Pricing
- C. Proceed Order
- D. Allowance Authorization
- E. Change Order
- F. Minor Changes in the Work
- G. Required Pricing Itemization and Allowable Mark Up
- H. Execution of Change Documents
- I. Correlation of Contractor Submittals
- J. Sample Forms

1.2 RELATED DOCUMENTS

- A. Section 007216 – Amended General Conditions

PART 2 – NOT USED

PART 3 – EXECUTION

3.1 PROPOSAL REQUESTS (PR)

- A. Proposal requests that require adjustment to the Contract Sum or Time if accepted will be issued by the Construction Manager, with detailed description of the proposed change and supplemental or revised Drawings and Specification as appropriate.

- B. Proposal Requests whether or not issued on AIA Documents G709 will be subsequently issued and tracked in the form of a Request for Proposal (RFP) by the Construction Manager.
- C. An issue number will be assigned by the Construction Manager to track the Architects Proposal Request and will be concurrent with the Architect's Proposal Request Number.

3.2 CONSTRUCTION MANAGER INITIATED REQUEST FOR PROPOSAL (RFP)

- A. An RFP is a document issued by the Construction Manager to obtain pricing from Contractors on an issue that may impact the Contractors' Work, including Contract Time or Contract Sum.
- B. The Contractor shall utilize and refer to the RFP tracking number, assigned by the Construction Manager, when responding, in writing, to the Construction Manager on all correspondence related to said RFP.
- C. The Contractor shall submit the name of the individual authorized to receive RFP documents, and be responsible for informing others in Contractor's employ or Contractors of to the work.
- D. The Contractor shall advise the Construction Manager, in writing, of the impact of the RFP, if any, upon the Contractors Work, including any adjustment in the Contract Time or the Contract Sum within the lesser of seven (7) days of receipt of the RFP or the timeframe defined in the RFP.
- E. Failure to advise the Construction Manager, in writing, within the lesser of seven (7) days of receipt of the RFP or the timeframe defined in the RFP shall constitute a waiver of the Contractors right to assert a claim relating to the RFP.

3.3 PROCEED ORDER (PRO)

- A. The Construction Manager with consent of the Owner may issue a document, instructing the Contractor to proceed with a change in the work, for subsequent inclusion in a change order. Proceed Orders are used on emergency items or work items that are critical in maintaining the construction schedule.
- B. The document will describe changes in the work, and will designate the method of determining any change in contract sum or contract time.
- C. The Contractor shall promptly execute the change in work.
- D. For time and material Proceed Order work:

1. Maintain detailed records of work done on a time and material basis. Provide full information required for evaluation of proposed changes, and to substantiate costs of changes in work.
 2. The Construction Manager's on-site representative must verify and sign the Contractor's daily timesheets, not as approval for payment, but for record that work was completed per the Proceed Order. Proceed Order authorization number must be indicated on all Daily Time Sheets.
 3. Submit itemized account and supporting data after completion of change within fifteen (15) days after completion.
- E. The Construction Manager will determine the change allowable in contract sum and contract time as provided in the contract documents.

3.4 ALLOWANCE AUTHORIZATION

- A. An allowance authorization will be issued based upon the Request for Proposal and/or the Proceed Order and the Contractor's price quotation as approved by the Construction Manager and Owner.

3.5 CHANGE ORDER

- A. A change order will be issued based upon the Request for Proposal and/or the Proceed Order, and Contractor's price quotation as approved by the Construction Manager, Architect and Owner.

3.6 MINOR CHANGES IN THE WORK

- A. The Architect will advise the Construction Manager of minor changes in the work not involving an adjustment to contract sum or contract time by issuing supplemental instructions as agreed upon by the Owner.
- B. The Construction Manager will issue the supplemental instructions in the form of a bulletin.
- C. The Contractor will have seven (7) days (in accordance with the General Conditions) to make a claim should they feel the instructions impact the Contractors Work including any adjustment in Contract Time or Contract Sum.

3.7 REQUIRED PRICING ITEMIZATION AND ALLOWABLE MARK UP

- A. For each change over \$500.00, the Contractor shall furnish a detailed, written proposal itemized according to the pricing guidelines set forth below as a condition precedent to

the Owner's consideration of a Change Order request. Any Contractor, subcontractor and supplier pricing shall also be itemized according to these guidelines. All proposals shall be prepared in the categories and in the order listed below.

1. Labor – All field labor shall be priced in compliance with the Schedule of Wages for this Project including all established payroll taxes, assessments and fringe benefits on the labor which may include, but is not limited to, FICA, Federal and State Unemployment, Health and Welfare, Pension Funds, Worker's Compensation and Apprentice Fund. The payroll is to be based on straight time only and is to include number of hours and rate of pay for each classification of work. If overtime is approved, the Contractor shall list only the straight time portion in this item.
 2. Equipment rentals – All charges for non-owned heavy or specialized equipment at up to 100% of the documented rental cost. No rental charges will be allowed for hand tools, minor equipment, scaffolds, etc. Downtime due to repairs, maintenance and weather delays will not be allowed.
 3. Owned equipment – All charges for owned, heavy or specialized equipment at up to 100% of the cost listed by the Associated Equipment Dealers Blue Book. No recovery will be allowed for hand tools, minor equipment, scaffolds, etc. Downtime due to repairs, maintenance and weather delays will not be allowed.
 4. Trucking – A reasonable delivery charge or per mile trucking charge for delivery of required materials or equipment. Charges for use of a pickup truck will not be allowed.
 5. Materials – All materials purchased by the Contractor and incorporated into the changed Work, showing costs, quantities, or Unit Prices of all items, as appropriate. Reimbursement for material costs shall only be allowed in the amount of the Contractor's actual cost including any and all discounts, rebates and related credits.
 6. Overhead – Includes telephone, telephone charges, facsimile, telegrams, postage, photos, photocopying, hand tools, scaffolds (one level high), tool breakage, tool repairs, tool replacement, tool blades, and bits, home office estimating, clerical and account support, home office labor, travel and parking expenses.
- B. The following items are allowable with no overhead and profit:
1. The cost of extending the Bond and the cost of extending commercial general liability, builder's risk and specialty coverage insurance.

2. The premium portion only for approved overtime (labor and labor burden). The straight time portion is included in clauses A.1 above.
 3. Fees for permits, licenses, inspections, tests, etc.
- C. Costs which shall not be reimbursed for changed Work include the following:
1. Employee Retirement and Profit-Sharing Plans, regardless of how defined or described.
 2. Voluntary Employee Deductions.
- D. The cost of the Contractors' overhead and profit on Change Orders shall be:
1. For extra Work completed by the Contractor with their own labor, ten (10%) percent shall be added to Items 1, 2, 3, 4 and 5 of Subparagraph 3.7 A. as an allowance for overhead and profit.
 2. For extra Work completed by Subcontractors of the Contractor, five (5%) percent shall be added to Items 1, 2, 3, 4 and 5 of Subparagraph 3.7 A. as an allowance for overhead and profit.

3.8 EXECUTION OF CHANGE DOCUMENTS

- A. Construction Manager will issue Change Orders and Allowance Authorizations for signature by all parties.
- B. Signed copies are to be returned to the Construction Manager within fourteen (14) days.

3.9 CORRELATION OF CONTRACTOR SUBMITTALS

- A. Promptly revise Schedule of Values and Application for Payment forms to record each authorized change order and/or allowance authorization as a separate line item and adjust the contract sum (for Change Orders).
- B. Promptly submit revisions to Construction Schedule to reflect any change in contract time.
- C. Promptly enter changes in project record documents.

END OF SECTION 012600

SECTION 012973 – SCHEDULE OF VALUES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Division 00 and 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements governing each Subcontractor's Schedule of Values.
 - 1. Coordinate the Schedule of Values with the Applications for Payment, Project Schedule, Submittal Schedule, and List of Subcontracts.
- B. Progress payments will not be processed without an approved Schedule of Values on file.

PART 2 – NOT USED

PART 3 – EXECUTION

3.1 SCHEDULE OF VALUES

- A. Coordination: Each Subcontractor shall coordinate preparation of its Schedule of Values for its part of the Work with the Construction Manager's Project Schedule.
 - 1. Correlate line items in the Schedule of Values with other required administrative schedules and forms, including:
 - a. Construction Manager's Project Schedule.
 - b. Application for Payment forms, including Continuation Sheets.
 - c. List of subcontractors.
 - d. Schedule of allowances.
 - e. Schedule of alternates.
 - f. List of products.
 - g. List of principal suppliers and fabricators.
 - h. Schedule of submittals.
 - 2. Within fifteen (15) days after the Pre-Construction Conference, each awarded Subcontractor shall submit to the Construction Manager a Schedule of Values,

for approval, showing accurate costs for the items of work assigned to the Subcontractor, defined under Section 002413 – Bid Category Scopes of Work.

3. Sub-schedules: Where Work is separated into phases requiring separately phased payments, provide sub-schedules showing values correlated with each phase of payment.
- B. Format and Content: Use the Project Manual table of contents as a guide to establish the format for the Schedule of Values. The Schedule of Values shall include at a minimum a line item for labor and material costs for each specification section assigned to the Subcontractor under Section 002413 – Bid Category Scopes of Work, and shall further divide the work into a sufficient number of individual work items to serve as an accurate basis for Subcontractor's Application for Payment. Each work item shall receive its prorated share of profit and overhead, including a line item for closeout. The Schedule of Values shall consist of a complete breakdown of the Subcontractor's contract sum showing the various items of work, divided so as to facilitate the approval of payments to the Subcontractor for Work completed. In addition to and conjunctive with the division of various items of work, the breakdown shall separate individual buildings within the project shall separate sitework from building(s) components, and shall separate remodeling/renovation work from new construction work. The Schedule of Values shall be prepared in a format as directed by the Construction Manager, showing the breakdown of items of Work and supported by such data to substantiate its correctness as the Construction Manager may require. The contract breakdown shall be the same form as that to be used in submitting request for payments. Each item of Work shall have indicated a separate cost of labor and material. This schedule when reviewed by the Construction Manager shall be used as the basis of approving payments along with establishing percentages of Work complete.
1. Identification: Include the following Project identification on the Schedule of Values:
 - a. Project name and location.
 - b. Name of the Architect.
 - c. Project number.
 - d. Subcontractor's name and address.
 - e. Date of submittal.
 2. Arrange the Schedule of Values in tabular form with separate columns to indicate the following for each item listed.
 - a. Related Specification Section or Division.
 - b. Description of Work.
 - c. Name of subcontractor.
 - d. Name of manufacturer or fabricator.
 - e. Name of supplier.
 - f. Change Orders (numbers) that affect value.

- g. Dollar value.
 - h. Percentage of Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.
3. In addition to the sections assigned to the Subcontractor as defined above, Subcontractors shall include the following line items on their Schedule of Values:
 - a. Bonds: Performance, Labor and Material (if required).
 - b. Mobilization.
 - c. Demobilization.
 - d. Submittals in the amount of 2 percent of the Contract; however, not less than \$1,000.00 nor more than \$15,000.00.
 - e. Daily cleanup in the amount of 1 percent of the total contract amount.
 - f. Closeout in an amount equal to 2 percent of the Contract amount; however, not less than \$2,000.00 nor more than \$20,000.00.
 4. Provide a breakdown of the Contract Sum in sufficient detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Break principal subcontract amounts down into several line items. Schedule of Values shall be coordinated with the Construction Schedules such that the percentages of Work completed closely relates to the values for the Work shown on the request for payments. At the beginning of the Project, the Subcontractor shall prepare a schedule of monthly progress payments showing the amount the Subcontractor may require for the Work proposed to be completed. The purpose of this schedule is to allow the Owner to determine what amounts of funds will be required to have available each month during the progress of construction for progress payments.
 5. Round amounts to nearest whole dollar; the total shall equal the Contract Sum.
 6. If approved by the Construction Manager, provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment, purchased or fabricated and stored, but not yet installed.
 - a. Differentiate between items stored on-site and items stored off-site. Include requirements for insurance and bonded warehousing, if required.
 7. Provide separate line items on the Schedule of Values for initial cost of the materials, for each subsequent stage of completion, and for total installed value of that part of the Work.

8. Unit-Cost Allowances: Show the line-item value of unit-cost allowances, as a product of the unit cost, multiplied by the measured quantity. Estimate quantities from the best indication in the Contract Documents.
 9. Margins of Cost: Show line items for indirect costs and margins on actual costs only when such items are listed individually in Applications for Payment. Each item in the Schedule of Values and Applications for Payment shall be complete. Include the total cost and proportionate share of general overhead and profit margin for each item.
 - a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the Schedule of Values or distributed as general overhead expense, at the Subcontractor's option.
 10. Schedule Updating: Update and resubmit the Schedule of Values prior to the next Application for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.
- C. Schedule of Values shall be typed or printed on AIA Documents G732 - 2009 and G703-1992.
 - D. Each Schedule of Values shall have the Subcontractor's name, Bid Category name and number, project name and number and shall be dated and signed.
 - E. Should the Schedule of Values be "rejected, resubmit", resubmittal is due within five (5) days of receipt of rejected schedule.

END OF SECTION 012973

SECTION 012983 – APPLICATION FOR PAYMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Division 00 and 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements governing each Contractor's Applications for Payment.
 - 1. Coordinate the Applications for Payment with the Schedule of Values, Project Schedule, Submittal Schedule, and List of Subcontracts.

PART 2 – NOT USED

PART 3 – EXECUTION

3.1 APPLICATIONS FOR PAYMENT

- A. The Contractor shall submit to the Construction Manager, an itemized Application for Payment, supported by such data, such invoices, substantiating the Contractor's right to payment as the Construction Manager may require. The form of Application for Payment shall be AIA Document G732 - 2009 - Application and Certification for Payment, support by AIA Document G703 - Continuation Sheet. Continuation Sheet (G703) shall be prepared the same as the Schedule of Values submitted by the Contractor and as approved.
 - 1. Contractors shall prepare a pencil copy of the Application for Payment to the Construction Manager at the site ten (10) days prior to date for submission of Application of Payment. After review by the Construction Manager a corrected copy will be returned to the Contractor within five (5) working days.
- B. Each Application for Payment shall be consistent with previous applications and payments as certified by the Construction Manager and paid for by the Construction Manager.

1. The initial Application for Payment, the Application for Payment at time of Substantial Completion, and the final Application for Payment involve additional requirements.
- C. Payment-Application Times: Each progress-payment date is indicated in the Agreement. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.
- D. Application Preparation: Complete every entry on the form. Include notarization and execution by a person authorized to sign legal documents on behalf of the Contractor. The Construction Manager will return incomplete applications without action.
1. Entries shall match data on the Schedule of Values and the Construction Manager's Project Schedule. Use updated schedules, if revisions were made.
 2. Include amounts of fully executed Change Orders issued prior to the last day of the construction period covered by the application.
- E. Transmittal: Submit Application for Payment to the Construction Manager by a method ensuring receipt within 24 hours. One copy shall be complete, including waivers of lien and similar attachments, when required.
1. Transmit each copy with a transmittal form listing attachments and recording appropriate information related to the application, in a manner acceptable to the Architect.
- F. Waivers of Mechanics Lien: With each Application for Payment, submit waivers of mechanics lien from every entity who is lawfully entitled to file a mechanics lien from previous application for payment.
1. Submit partial waivers on each item for the amount requested, less retention, on each item.
 2. When an application shows completion of an item, submit final or full waivers.
 3. Waiver Forms: Submit waivers of lien on forms, and executed in a manner, acceptable to the Construction Manager.
- G. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of the first Application for Payment include the following:
1. List of Sub-subcontractors.
 2. List of principal suppliers and fabricators.
 3. Schedule of Values.

4. Construction Manager's Project Schedule.
 5. Submittal Schedule.
 6. List of Subcontractor's staff assignments
 7. Copies of permits as applicable.
 8. Copies of authorizations and licenses from governing authorities for performance of the Work.
 9. Certificates of insurance and insurance policies.
 10. HAZCOM/Safety Programs
 11. Executed Escrow Agreement (if applicable).
- H. Application for Payment at Substantial Completion: Following issuance of the Certificate of Substantial Completion, submit an Application for Payment.
1. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
 2. Administrative actions and submittals that shall precede or coincide with this application include:
 - a. Occupancy permits and similar approvals. Occupancy permit shall be submitted by Construction Manager.
 - b. Warranties (guarantees) and maintenance agreements.
 - c. Test/adjust/balance records.
 - d. Maintenance instructions.
 - e. Meter readings.
 - f. Startup performance reports.
 - g. Changeover information related to Owner's occupancy, use, operation, and maintenance.
 - h. Final cleaning.
 - i. Advise on shifting insurance coverages.
 - j. List of incomplete Work, recognized as exceptions to Certificate of Substantial Completion.
- I. Final Payment Application: Administrative actions and submittals that must precede or coincide with submittal of the final Application for Payment include the following:
1. Completion of Project closeout requirements.
 2. Completion of items specified for completion after Substantial Completion.
 3. Ensure that unsettled claims will be settled.
 4. Ensure that incomplete Work is not accepted and will be completed without undue delay.
 5. Transmittal of required Project construction records to the Owner.
 6. Certified property survey.
 7. Proof that taxes, fees, and similar obligations were paid.

8. Removal of temporary facilities and services.
9. Removal of surplus materials, rubbish, and similar elements.
10. Change of door locks to Owner's access.

J. Release of Retainage: Documents to be submitted with the final Pay Application requesting release of retainage to include:

1. AIA G732 - 2009 – Application and Certification for Payment
2. AIA G703 – Continuation Sheet
3. Final Waiver of Lien
4. AIA G706 – Subcontractor's Affidavit of Payment of Debts and Claims
5. AIA G706a – Subcontractor's Affidavit of Release of Liens
6. AIA G707 – Consent of Surety to Final Payment
7. "No Asbestos" Letter
8. Approved Certificate of Substantial Completion

END OF SECTION 012983

SECTION 013119 – PROJECT MEETINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Division 00 and 01 Specification Sections, apply to this Section.
- B. The Work of this Section shall be included as a part of the Contract Documents of each Contractor on this Project. Where such Work applies to only one Contractor, it shall be defined as to which Contractor the Work belongs.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for project meetings, including, but not limited to, the following:
 - 1. Pre-construction/partnering conferences
 - 2. Pre-installation conferences
 - 3. Progress meetings
 - 4. Pre-closeout meetings
- B. Each Contractor or awardee shall be required to have present at each of the following project meetings a representative acceptable to the Construction Manager. The designated representative shall have sufficient authority and knowledge to make decisions for the Contractor he is representing on matters affecting this Project.
- C. Contractor or representative unable to attend a specified meeting shall have an acceptable alternate representative designated or shall notify the Construction Manager not less than three (3) days prior to date of meeting.

PART 2 – NOT USED

PART 3 – EXECUTION

3.1 PRE-CONSTRUCTION/PARTNERING CONFERENCE

- A. The purpose of this meeting is to develop a cohesive Project Team between the Contractors and Construction Manager out of what might potentially be an adversarial relationship. This facilitated conference is designed to establish common goals,

communication strategies, dispute resolution practices and problem-solving mechanisms within the context of the contract documents.

- B. Team Members should have their principal project personnel attend the conference, to include the Project Manager, Site Superintendent/Field Personnel and key office staff involved in payment applications and closeout documentation. Contractors shall require their principal sub-Contractors to attend.
- C. Agenda: Discuss items of significance that could affect progress, including the following:
 - 1. Discussion of construction schedule
 - 2. Critical work sequencing
 - 3. Designation of responsible personnel
 - 4. Processing of field decisions and Change Orders
 - 5. Procedures for processing Applications for Payment
 - 6. Distribution of Contract Documents
 - 7. Submittal of shop drawings, product data and samples
 - 8. Procedures for maintaining record documents
 - 9. Use of premises:
 - a. Office and storage areas.
 - b. Owner's requirements.
 - 10. Major equipment deliveries and priorities
 - 11. Safety and first-aid procedures
 - 12. Security procedures
 - 13. Housekeeping procedures
 - 14. Working hours
- D. Construction Manager shall prepare minutes and record significant discussions and agreements and disagreements of each conference, and the approved schedule. Construction Manager shall promptly distribute the record of the meeting to everyone concerned.

3.2 PRE-INSTALLATION CONFERENCES

- A. Conduct a pre-installation conference at the project site before each construction activity that requires coordination with other construction, and as outlined in the technical sections.
- B. Attendees: The Contractor, installing foreman, and representatives of manufacturers and fabricators involved in or affected by the installation, and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting.

- C. The Construction Manager shall schedule conferences and advise the Architect of scheduled meeting dates.
- D. Review the progress of other construction activities and preparations for the particular activity under consideration at each pre-installation conference, including requirements for the following:
 - 1. Scope of Activity
 - a. Contractor and Superintendent Responsible for activity
 - b. Contractor and foreman
 - c. Scope of work
 - d. Contract Documents
 - e. Related Change Orders, pending or potential changes
 - f. Purchases
 - g. Deliveries
 - h. Shop drawings, product data, and quality control samples
 - i. Review of mock up
 - 2. Activity Schedule
 - a. Duration
 - b. Proposed starting date
 - c. Required predecessors and successor activities
 - d. Required Manpower (crew size)
 - e. Does activity as planned meet schedule intent?
 - f. Overtime/Weekend considerations to maintain schedule.
 - 3. Special Conditions
 - a. Weather limitations
 - b. Manufacturer's recommendations
 - c. Warranty requirements
 - d. Compatibility of materials
 - e. Acceptability of substrates
 - f. Temporary facilities
 - g. Space and access limitations
 - h. Governing regulations
 - i. Protection
 - j. Possible conflicts
 - 4. Safety and Housekeeping
 - a. Review of Precautions related to activity
 - b. Competent Person
 - c. OSHA requirements
 - d. Housekeeping considerations and standards

5. Closeout Requirements
 - a. Inspecting and testing requirements
 - b. Required performance results
 - c. Recording requirements
 - d. Punch List Expectations (Zero Punch List)
 - e. Warranty
 - f. Extra Stock
 - g. Owner Training

- E. Do not proceed with the installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of Work and reconvene the conference at the earliest feasible date.

- F. Contractors shall review and comply with required pre-installation conferences outlined in the Contract Documents. (See individual Specification Sections.)

3.3 PROGRESS MEETINGS

- A. Progress meetings will be established on a biweekly basis, or more frequent as determined by the Construction Manager, to review the progress of construction, possible delays, problems, and projected construction activity. The Contractor is required to attend progress meetings. Contractors failing to be represented at project meetings, when specifically requested, will be taken into consideration when payment applications are being considered for approval by the Construction Manager. **Contractor shall be charged \$100.00 for each unexcused absence, from meetings in which they are requested to attend, as determined by the Construction Manager.** A deduct Change Order for these changes will be issued prior to contract closeout. This in no way relieves the Contractors for coordination due to lack of attendance.
 1. Notice of said meetings will originate in the office of the Construction Manager.
 2. Contractor shall require his principal Contractors to attend.
 3. The progress and schedule of each involved Contractor shall be coordinated at this meeting. The representatives of the Contractor present shall have the authority to change the Contractor's work schedule or authorize work with the consent of the Construction Manager. If the Contractor fails to attend this meeting, it shall be his responsibility to obtain the information discussed at the meeting. Meeting notes and the most current construction schedule will be in the office of the Construction Manager. Attendance at these meetings is required for Contractors' payments.
 4. Coordinate dates of meetings with preparation of payment requests.

- B. Minimum Agenda shall be as follows:

1. Review work progress since last meeting
2. Note field observations, problems, and decisions
3. Identify problems which impede planned progress
4. Review off-site fabrication problems
5. Develop corrective measure and procedures to regain planned schedule
6. Revise construction schedule as indicated
7. Plan progress during next work period
8. Review submittal schedules, expedite as required to maintain schedule
 - a. Tracking of material deliveries
9. Maintaining of quality and work standards.
10. Review changes proposed by Owner for effect on construction schedule and effect on completion schedule.
11. Complete other current business
12. Documentation of information for payment requests.

3.4 PRE-CLOSEOUT MEETING

- A. When the work or designated portion thereof is 70% substantially complete, by billing, the Construction Manager will conduct a Pre-Closeout Meeting.
- B. Minimum agenda will be to review Section 017700– Contract Closeout
 1. O & M Data – Required at 75% Completion
 2. Prerequisites to Substantial Completion
 3. Wrap-up all RFP's
 4. Punch Lists
 5. Record Drawings
 6. Start to Finalize Change Orders
 7. Extra Stock
 8. Owner's Training
 9. Final Payment Application
- C. Contractors are to attend this "Progress Meeting" for Pre-Closeout.

END OF SECTION 013119

SECTION 013123 – WEB-BASED PROJECT MANAGEMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Division 00 and 01 Specification Sections, apply to this Section.
- B. Section 01 26 00 - Contract Modification Procedures for administrative and procedural requirements for handling and processing Contract modifications.
- C. Section 01 29 83 – Application for Payment for administrative and procedural requirements necessary to prepare and process Applications for Payment.
- D. Section 01 33 00 – Submittal Procedures for administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other miscellaneous submittals.

1.2 SUMMARY

- A. The Work of this Section shall be included as a part of the Contract Documents of each Contractor on this Project.
- B. Contractor shall participate in the use of a web-based project management tool, Procore, providing collaboration between the Owner, Construction Manager and Architect/Engineer.

1.3 DEFINITIONS

- A. Procore: Web-based project management tool accessed by <https://www.procore.com/>
- B. Team Member: A representative of the Owner, Construction Manager, Architect/Engineer, or Contractor with a Procore user account.

1.4 WEB-BASED PROJECT MANAGEMENT TOOL

- A. Usage:
 - 1. Utilization of the Procore web-based project management tool shall be implemented and administered by the Construction Manager.

2. Participation of the Architect/Engineer and Contractor is mandatory; others as determined by the Construction Manager.
3. Construction Manager shall provide the Architect/Engineer and Contractor with access to the Procore Project website.
4. All participants are required to have access to the internet and the Microsoft Internet Explorer browser (version 6.0 or higher). Broadband connection to the internet (cable modem, ISDN, DSL, etc.) is recommended, but not required.
5. Contractor shall provide their field Supervisors with an internet capable device (laptop, iPad, tablet, etc.) to utilize during the Project.

B. Training:

1. Training sessions will be provided by the Construction Manager and are introductory in nature.
2. Procore offers a free, on-line certification training program to Project team members. <https://learn.procore.com/>
3. Contractors are responsible for becoming proficient with the detailed use of Procore.

C. Functions: Procore will be utilized for the following Project Management Function:

1. Posting Project notices
2. Correspondence logging
 - a. Letters between Owner, Architect/Engineer, Construction Manager and Contractors will be sent via Procore.
3. Messaging between team members
4. Email to contacts outside of team members
5. Meetings
 - a. Agendas
 - b. Documentation and minutes
 - c. Item Tracking
 - d. Scheduling

- 6. Discussions
- 7. Document Management
 - a. Architect Supplemental Instructions (ASI)
 - b. Change Items
 - c. Construction Reports
 - d. Daily Reports
 - e. Punch List
 - f. Request for Information (RFI)
 - g. Submittals
 - h. Transmittals

PART 2 – NOT USED

PART 3 – NOT USED

END OF SECTION 013123

SECTION 013200 – SCHEDULES AND REPORTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Division 00 and 01 Specification Sections, apply to this Section.
- B. The Work of this Section shall be included as a part of the Contract Documents of each Contractors on this Project. Where such Work applies to only one Contractors, it shall be defined as to which Contractors the Work belongs.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for schedules and reports required for proper performance of the Work, including:
 - 1. Construction schedule
 - 2. Submittal schedule
 - 3. Use of site plan

1.3 GUIDELINE SCHEDULE

- A. A guideline schedule is included in this Section showing milestone activities for the Project, as well as anticipated completion date.
 - 1. Prior to bidding Project, Contractors shall review the guideline schedule to determine if the intent of the schedule can be met.
 - 2. The guideline schedule is to be used for bidding reference only; however, the indicated completion date of all Work of the Project must be accomplished by all Contractors.
- B. Sequence of Work will be determined by the Preliminary Project Schedule.

PART 2 – NOT USED

PART 3 – EXECUTION

3.1 CONSTRUCTION SCHEDULES

- A. Within fifteen (15) days of the Pre-construction Meeting, each Contractor is to assemble all necessary information and dates concerning his activities, and those of his Subcontractors and Suppliers and submit such information in the form required by the Construction Manager. Each Contractor shall submit the following schedule information to the Construction Manager as a minimum:
1. A bar chart schedule of all activities contained in the Contractor's Scope of Work. This schedule shall include activity descriptions and durations for all activities in work days (as opposed to calendar day) for shop drawings, fabrication, delivery and installation of products, materials, and equipment. The activities on the schedule must be at a level of detail approved by the Construction Manager and agree with the terminology and building sequencing established by the Construction Manager.
 2. Identification of precedent relationships between the Contractor's activities and those of other Contractors based on a thorough review of the Contract Drawings and details showing interface between Contracts.
 3. Graphic diagrams indicating the proposed direction of work whenever applicable or if requested by the Construction Manager.
 4. Assumed crew size, equipment, production rates, and similar data used to arrive at adequate durations and sequences.
 5. If a Contractor cannot provide a complete schedule of all of his activities within fifteen (15) days after Pre-construction Meeting, the Contractor may, after Construction Manager's written approval, provide a work plan for the first forty five (45) days after award. The Contractor's final schedule shall be complete and submitted to the Construction Manager prior to the 30th day after the Pre-construction Meeting.
- B. In collaboration with the various Contractors associated with the Work, the Construction Manager will compile all Contractor schedules and develop a project master construction schedule, which integrates activities of Architect, Construction Manager, Contractors, Subcontractors, and Suppliers and meets the time requirements. The sequence of all work activities shall be determined by the Construction Manager and reviewed by all Contractors. This schedule will become the project plan for construction.
- C. Contractors' schedule activities may be re-sequenced and the schedule adjusted provided all Work is completed within the stated milestone dates and if the Construction Manager and affected Contractors are notified of the change within five (5) calendar days of receipt of the schedule; otherwise, the project master construction schedule shall be deemed accepted by all parties and becomes a contractual requirement for each Contractor.

- D. The project construction schedule will be provided by the Construction Manager, consistent with the guideline schedule and utilizing the Contractors' construction schedules provided by the separate Subcontractors.
1. Contractor shall provide the Construction Manager with information and data to prepare a working day construction schedule and sequence of events for each work activity included in his bid category within fifteen (15) days after the Pre-construction Meeting. The Contractor shall cooperate with the Construction Manager in establishing a final overall project schedule which meets the specified completion date.
 2. After the project schedule has been established, Contractors shall work overtime, nights, and weekends, if necessary, to maintain their portion of the schedule.
 - a. Overtime, night and weekend work will be at no additional cost to the Construction Manager.
 - b. Failure of the Contractor to maintain his portion of the schedule will be grounds for the Construction Manager to withhold all or part of any payments which may become due to the Contractor for work completed.
 3. The Contractor is responsible to expedite all approvals and deliveries of material so as not to delay job progress.
 4. The Contractor shall begin all phases of his work as quickly as physically possible, but not to impede or jeopardize the work of other Contractors.
 5. Phases of the work may be started prior to the scheduled start dates if coordinated with other Contractors, and, if approved through the Construction Manager.
 6. The Contractor shall cooperate fully with the Construction Manager in the coordination of the work with all other Contractors and the convenience of the Owner as indicated in the Specifications.
- E. Each Contractor's work shall be executed at such a rate as to ensure meeting the specified milestone dates for Substantial Completion. By execution of the Contract, a Contractor represents he has analyzed the Work, the materials and methods involved, the systems of the building, availability of qualified mechanics and unskilled labor, restrictions of the site, constraints imposed, his own work load and capacity to perform the Work and agrees that the specified dates are reasonable considering the existing conditions prevailing in the locality of the Work, including weather conditions, and other factors, with reasonable allowance for variations from average or ideal conditions.

- F. The Construction Manager will utilize the project master construction schedule to plan, coordinate, and manage all construction activities of Contractors, Subcontractors, and Suppliers. All Subcontractors are to complete all Work in accordance with this schedule.
- G. The Construction Manager will hold periodic progress meetings at the jobsite. Field supervisors from each Contractor working on the site are to attend all such meetings. Each Contractor is to provide services of responsible personnel to provide necessary scheduling and manpower information. Each Contractor shall be responsible to be familiar with the schedule, how it will affect or modify his operations including his coordination with the activities of other Subcontractors. Each Contractor shall prepare a short interval schedule generally covering a four-week period to coordinate with the activities of other Contractors. Each Subcontractor shall prepare a short interval schedule generally covering a four-week period to coordinate the detailed activities of subcontractors and suppliers. The short interval schedules shall be prepared and be submitted 24 hours prior to the job progress meetings, or as required by the Construction Manager. The Construction Manager will update the project master construction schedule monthly and display the current schedule at the jobsite and prepare progress reports accordingly.
- H. Whenever it becomes apparent that any activity completion date may not be met, the responsible Contractor(s) are to take some or all of the following actions at no additional cost to the Owner or Construction Manager.
 - 1. Increase construction manpower to put the project back on schedule.
 - 2. Increase number of working hours per shift, shifts per working day, working days per week, amount of construction equipment, or any combination, which will place the project back on schedule.
 - 3. Reschedule activities to achieve maximum practical concurrency and place the project back on schedule.
- I. If the Contractor fails to take any of the above actions, Construction Manager may take action to attempt to put the project back on schedule and deduct cost of such actions from monies due or to become due the Contractor.
- J. The Construction Manager will manage the project and will make every effort to complete the project within the schedule. Time extensions may be granted to various Subcontractors when delays that affect final completion date have been caused by inability of another Subcontractor to meet his time commitments; however, neither Owner nor Construction Manager will assume responsibility to any Contractor for compensation, damages, or other costs due to delays.

3.2 LIST OF SUBCONTRACTORS, SUPPLIERS, AND MANUFACTURERS

- A. Each Contractor shall submit, through the Construction Manager, a list of subcontractors and manufacturer's participating on this Project. List shall be submitted within 48 hours after receipt of bids. The list shall be complete with names, street addresses, city, state, and zip code.

3.3 SUBMITTAL SCHEDULE

- A. Within fifteen (15) days of the Pre-Construction Meeting, each Contractor shall submit their schedule of submittals.
 - 1. Coordinate Submittal Schedule with the list of subcontracts, Schedule of Values, and the list of products as well as the Construction Schedule.
 - 2. The contractor shall provide the following information:
 - a. Scheduled date for the first submittal (due date)
 - b. Name of the Subcontractor (under comments)
 - c. Fabrication time
- B. Distribution: Following response to the initial submittal, print and distribute copies to the Construction Manager and other parties required to comply with submittal dates indicated.
 - 1. When revisions are made, distribute to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in construction activities.
- C. Schedule Updating: Revise the schedule after each meeting or activity where revisions have been recognized or made. Issue the updated schedule concurrently with the report of each meeting.

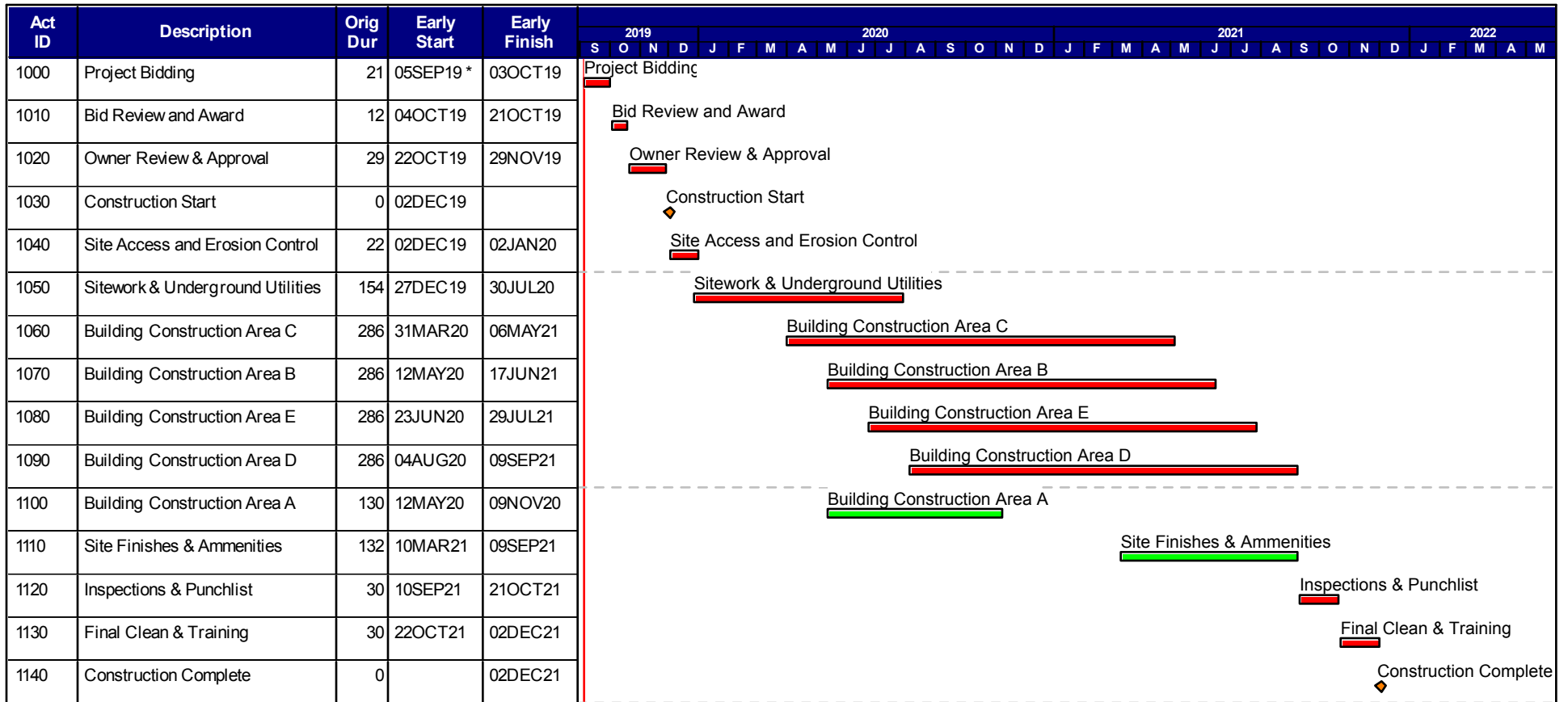
3.4 PROJECT USE SITE PLAN

- A. The Construction Manager, in cooperation with other Contractors on this Project, shall prepare a proposed project use site plan.
- B. Contractor shall confine operations at the site to areas within the areas indicated and as approved on the use of the site plan, and as permitted by law, ordinances, and permits. Site shall not be unreasonably encumbered with materials, products, or construction equipment.
- C. The Construction Manager in reviewing his use of the site shall include access to proposed building for construction purposes, storage of materials and products,

parking, where possible, for employees, temporary facilities including offices, storage, and workshop sheds or portable trailers, and unloading space.

- D. Where a temporary fence is to be provided, the Construction Manager shall show any additional area needed in the Contractor's use of the site beyond that which may be indicated on the Drawings.
- E. The Construction Manager will indicate to the other Contractors after award of Contract which portions of the existing parking lot and nonpaved areas can be used for construction activities. Damage to existing parking lot or unpaved areas shall be paid for by the Contractor responsible for damage.

END OF SECTION 013200



SECTION 013300 – SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Division 00 and 01 Specification Sections, apply to this Section.
- B. The Work of this Section shall be included as a part of the Contract Documents of each Contractor on this Project. Where such Work applies to only one Contractor, it shall be defined as to which Contractor the Work belongs.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for submittals required for performance of the Work, including the following:
 - 1. Shop drawings
 - 2. Product data
 - 3. Samples

PART 2 – NOT USED

PART 3 – EXECUTION

3.1 SUBMITTAL PROCEDURE

- A. Submittals, including those specified herein to be submitted to the Architect, excluding those directed to a specific individual, shall be submitted directly to the Construction Manager for review. Construction Manager will forward required submittals to the Architect for review. Prior to bidding Project, Contractor shall review the guideline schedule to determine if the intent of the schedule can be met.
- B. Contractors on this Project shall provide submittals in accordance with the requirements of this Section. Where a submittal is required by a Contractor, but assistance needed from others, Contractors shall participate and cooperate to expedite each submittal.
- C. Submittals will be processed using a web-based electronic system, Procore. All Contractors are required to utilize this system.
- D. Where submission of samples, shop drawings, or other items are required from suppliers or subcontractors, it shall be the responsibility of the Contractor for whom the

subcontractor is executing the Work to see that the submittal items required are complete and properly submitted and corrected and resubmitted at the time and in the order required so as not to delay the progress of the Work. Submittals shall be made through the Prime Subcontractor.

- E. The Contractor shall check shop drawings, product data, samples, and other submittals and submit them to the Construction Manager with a letter of transmittal giving their approval, comments, and suggestions.
- F. All shop drawings and product data are to be submitted electronically. Each electronic submittal transmittal shall include the following information:
 - 1. Date submitted
 - 2. Project title and number
 - 3. Contractor's name and address
 - 4. Identification by Specification Section and quantity submitted for each submittal including name of Contractors, manufacturer, or supplier
 - 5. Notification of deviations from the Contract Documents for each submittal
 - 6. Contractor's written approval marked on each submittal.
- G. The Contractor shall prepare, review, and stamp with his approval and submit, with reasonable promptness or within the specified time periods and in orderly sequence so as to cause no delay in the Work or in the Work of another Contractor, submittals required by these Contract Documents or subsequently required by modifications.
- H. All electronic image files are to be submitted electronically in PDF file format. Submittals sent in a manner different than described above will require prior approval from the Construction Manager.
- I. The Contractor is to limit each electronic submittal to the requirement designated on the submittal log. Compile all sheets of each submittal into a single electronic file.
- J. The Architect/Engineer will review electronic submittals, making any comments necessary, mark the submittal with the appropriate approval or rejection and return to the Contractor. Comments will consist of annotations applied electronically to the file or transmittal form. Re-submittals are processed using the same procedure as the original submittal.
- K. The Construction Manager and Architect shall review and take action on submittals with reasonable promptness, so as to cause no delay in the progress. A reasonable period of time in accordance with approved project schedule for review of and action taken on submittals shall be as specified herein, but in no case shall it be less than 10 calendar days from the time it is received by the Architect until the time the submittal is marked and

forwarded or returned. Shop drawings and product data will be returned to the contractor electronically. Contractors shall allow sufficient mailing time for submittal samples.

- L. A list of required shop drawings and product data will be provided to the Contractor, for use as a checklist, at the Pre-Construction Meeting. Color sample submittals are required within 45 days of the Pre-Construction Meeting. All shop drawings and product data submittals are to be completed within 120 days of the Pre-Construction Meeting or within a shorter, more immediate timeframe as required by the Project Schedule.
- M. Upon receipt of final approval of any submittal, the Contractor shall provide hard copies if required by the Construction Manager.

3.2 SHOP DRAWINGS

- A. The Contractor shall perform no portion of the Work requiring submittal and review of shop drawings, product data, samples or similar submittals until the respective submittal has been approved by the Architect. Such Work shall be in accordance with approved submittals.
- B. Submit newly prepared information drawn accurately to scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not a Shop Drawing.
 - 1. Architect will furnish Contractor digital data drawing files of the Contract Drawings for use in preparing Shop Drawings.
 - a. Architect makes no representation as to the accuracy or completeness of digital data drawing files as they relate to the Contract Drawings.
 - b. Digital Drawing Software Program: The Contract Drawings are available in Revit Version 2018. Drawings requested in any format will have a charge of \$200 per file payable to DLZ Indiana, LLC.
 - c. Contractor shall execute a data licensing agreement in the form of AIA Document C106, Digital Data Licensing Agreement
 - d. Drawings will be transferred by CD-R or electronic mailing.
- C. Shop drawings are drawings, diagrams, illustrations, schedules, performance charts, brochures, and other data which are prepared by the Contractor or subcontractor, manufacturer, supplier, or distributor to illustrate some portion of the Work.
 - 1. Advertising brochures will not be accepted as shop drawings.

2. Erection and setting drawings as referred to in these Specifications will be considered as shop drawings and shall be submitted along with detailed shop drawings.
 3. Where schedules are required to indicate locations, they shall be submitted as part of the shop drawings package for that item.
 4. Shop drawings and schedules shall repeat the identification shown on the Contract Drawings.
- D. The Contractor shall check all shop drawings, product data, samples and other submittals and submit them for approval to the office of the Construction Manager. Product Data and shop drawings are to be submitted electronically to the Construction Manager utilizing the electronic submittal process, provided by the Construction Manager, giving their approval and/or comments and suggestions. Samples and color selections are to be submitted by mail or delivery. Failure to use the Electronic or paper Submittal Transmittal Record will result in submittals being returned "without action". Include the following information:
1. Dimensions
 2. Identification of products and materials included by sheet and detail number
 3. Compliance with specified standards
 4. Notation of coordination requirements
 5. Notation of dimensions established by field measurements
- E. Preparation of Submittals: Provide permanent marking on each submittal to identify project, date, Subcontractor, submittal name, and similar information to distinguish it from other submittals. Show Contractor's executed review and approval marking and provide space for Architect's "action" marking. Submittals which are received from sources other than through the Construction Manager will be returned "without action".
- F. By approving and submitting shop drawings, the Contractor thereby represents that he has determined and verified field measurements, field construction criteria, materials, catalog numbers, and similar data, and that he has checked and coordinated each shop drawing with the requirements of the Work and of the Contract Documents prior to submitting to the Architect. Submittals which are received from sources other than through the Construction Manager will be returned without review, requiring re-submittal.
- G. The Contractor shall make corrections required by the Architect and shall resubmit the required shop drawings until appropriately marked. All resubmittals shall be resubmitted by the Contractor within 14 days of receipt. The Contractor shall direct

specific attention in writing or on resubmitted shop drawings to revisions other than the corrections requested by the Architect on previous submissions.

- H. The Architect will review shop drawings only for conformance with the design concept of the Project and with the information given in the Contract Documents. The Architect's review of a separate item shall not indicate review of an assembly in which the item functions.
- I. The Architect's review of shop drawings shall not relieve the Contractor of responsibility for any deviation from the requirements of the Contract Documents unless the Contractor has informed the Construction Manager in writing of such deviation at the time of submission and the Architect has given written approval to the specific deviation, nor shall the Architect's action relieve the Contractor from responsibility for errors or omissions in the shop drawings.
- J. The Architect's review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and qualities, or for substantiating instructions or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Architect, of any construction means, methods, techniques, sequences, or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which it is a component.
- K. Notations and remarks added to shop drawings by the Architect are to insure compliance to Drawings and Specifications and do not imply a requested or approved change to contract cost.
- L. Should deviations, discrepancies, or conflicts between shop and contract drawings and Specifications be discovered, either prior to or after review, Contract Documents shall control and be followed. If any discrepancies are discovered, the Construction Manager shall be notified immediately.
- M. The number of approved shop drawings and product data submittals shall be made on this Project for distribution purposes as directed by the Construction Manager.
- N. Shop drawings not requested by the Architect/Engineer shall be returned without action.

3.3 PRODUCT DATA

- A. Collect Product Data into a single submittal for each element of construction or system. Product data includes printed information, such as manufacturer's installation instructions,

catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams, and performance curves.

- B. Mark each copy to show applicable choices and options. Where printed Product Data includes information on several products that are not required, mark copies to indicate the applicable information. Include the following information:
 - 1. Manufacturer's printed recommendations
 - 2. Compliance with trade association standards
 - 3. Compliance with recognized testing agency standards
 - 4. Application of testing agency labels and seals
 - 5. Notation of dimensions verified by field measurement
 - 6. Notation of coordination requirements
- C. Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed.
 - 1. Preliminary Submittal: Submit a preliminary single copy of Product Data where selection of options is required.
 - 2. Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal.
- D. Distribution: Furnish copies of final submittal to installers, subcontractors, suppliers, manufacturers, fabricators, and others required for performance of construction activities.
 - 1. Do not proceed with installation until a copy of Product Data is in the Installer's possession.
 - 2. Do not permit use of unmarked copies of Product Data in connection with construction.

3.4 SAMPLES

- A. The Contractor shall submit to the Architect through Construction Manager triplicate samples to illustrate materials or workmanship, colors, and textures, and establish standards by which the Work will be judged.
- B. Submit full size, fully fabricated samples cured and finished as specified and physically identical with the material or product proposed. Samples include partial sections of manufactured or fabricated components, cuts or containers of materials, color range sets, and swatches showing color, texture, and pattern.

- C. Mount or display samples in the manner to facilitate review of qualities indicated. Prepare samples to match the Architect's sample. Include the following:
1. Specification Section number and reference
 2. Generic description of the sample
 3. Sample source
 4. Product name or name of the manufacturer
 5. Compliance with recognized standards
 6. Availability and delivery time
- D. Submit samples for review of size, kind, color, pattern, and texture. Submit samples for a final check of these characteristics with other elements and a comparison of these characteristics between the final submittal and the actual component as delivered and installed.
1. Where variation in color, pattern, texture, and other characteristic is inherent in the material or product represented, submit at least 3 multiple units that show approximate limits of the variations.
 2. Refer to other Specification Sections for requirements for samples that illustrate workmanship, fabrication techniques, details of assembly, connections, operation, and similar construction characteristics.
- E. By approving and submitting samples, the Contractor thereby represents that he has determined and verified materials, catalog numbers, and similar data, and that he has checked and coordinated each sample with the requirements of the Work and of the Contract Documents prior to submitting to the Architect.
- F. The Contractor shall resubmit the required number of correct or new samples until approved. All resubmittals shall be resubmitted by the Contractor within 14 days of receipt. The Contractor shall direct specific attention in writing or on resubmitted samples to revisions other than the changes requested by the Architect on previous submissions.
- G. The Architect will review samples but only for conformance with the design concept of the Project and with the information given in the Contract Documents. The Architect's review of a separate item shall not indicate approval of an assembly in which the item functions.
- H. The Architect's action shall not relieve the Contractor of responsibility for deviations from the requirements of the Contract Documents unless the Contractor has informed the Architect in writing of the deviation at the time of submission and the Architect has given written approval to the specific deviation, nor shall the Architect's action relieve the Contractor from responsibility for errors or omissions in the samples.

- I. Unless otherwise specified, samples shall be in triplicate and of adequate size to show function, equality, type, color, range, finish, and texture of material. When requested full technical information and certified test data shall be supplied.
 - 1. Each sample shall be labeled, bearing material name and quality, the Contractor's name, date, project name, and other pertinent data.
 - 2. Transportation charges to and from the Architect's office must be prepaid on samples forwarded.
- J. Materials shall not be ordered until final review is received in writing from the Construction Manager. Materials shall be furnished, equal in every respect to reviewed samples. Where color or shade cannot be guaranteed, the maximum deviation shall be indicated by the manufacturer. Work shall be in accordance with the final reviewed samples.

END OF SECTION 013300

SECTION 014000 – QUALITY REQUIREMENTS**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including Division 00 and 01 Specification Sections, apply to this Section.
- B. The Work of this Section shall be included as a part of the Contract Documents of each Contractor on this Project. Where such Work applies to only one Contractor, it shall be defined as to which Contractor the Work belongs.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specific quality-assurance and control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 - 2. Specified tests, inspections and related actions do not limit Contractor's other quality-assurance and control procedures that facilitate compliance with the Contract Document requirements.
 - 3. Requirements for Contractor to provide quality-assurance and control services required by Architect, Owner, Construction Manager or authorities having jurisdiction are not limited by provisions of this Section.
- C. Related Sections include the following:
 - 1. Division 01 Section "Cutting and Patching" for repair and restoration of construction disturbed by testing and inspecting activities.
 - 2. Divisions 02 through 33 Sections for specific test and inspection requirements.

1.3 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality-Control Services: Tests, inspections, procedures and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect or Construction Manager.
- C. Mockups: Full-size, physical assemblies that are constructed on-site. Mockups are used to verify selections made under sample submittals, to demonstrate aesthetic effects and, where indicated, qualities of materials and execution, and to review construction, coordination, testing or operation; they are not Samples. Approved mockups establish the standard by which the Work will be judged.
 - 1. Integrated Exterior Mockups: Mockups of the exterior envelope erected separately from the building but on Project site, consisting of multiple products, assemblies, and subassemblies.
- D. Preconstruction Testing: Tests and inspections that are performed specifically for the Project before products and materials are incorporated into the Work to verify performance or compliance with specified criteria.
- E. Product Testing: Tests and inspections that are performed by a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with industry standards.
- F. Source Quality-Control Testing: Tests and inspections that are performed at the source, ie., plant, mill, factory or shop.
- G. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- H. Testing Agency: An entity engaged to perform specific tests, inspections or both. Testing laboratory shall mean the same as testing agency.
- I. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, or Sub-Contractor, to perform a particular construction operation, including installation, erection, application and similar operations.
 - 1. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a

corresponding generic name such as “carpenter”. It also does not imply that requirements specified apply exclusively to tradespeople of the corresponding generic name.

1.4 CONFLICTING REQUIREMENTS

- A. General: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to the Construction Manager for a decision before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to the Construction Manager for a decision before proceeding.

PART 2 – NOT USED

PART 3 – EXECUTION

3.1 INFORMATION SUBMITTALS

- A. Qualification Data: For Contractor’s quality control personnel.
- B. Qualification Data: For testing agencies specified in “Quality Assurance” Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- C. Schedule of Tests and Inspections: Prepare in tabular form and include the following:
 - 1. Specification Section number and title
 - 2. Description of test and inspection
 - 3. Identification of applicable standards
 - 4. Identification of test and inspection methods
 - 5. Number of tests and inspections required
 - 6. Time schedule or time span for tests and inspections
 - 7. Entity responsible for performing tests and inspections
 - 8. Requirements for obtaining samples
 - 9. Unique characteristics of each quality-control service

3.2 REPORTS AND DOCUMENTS

- A. Reports: Prepare and submit certified written reports that include the following:
1. Date of issue
 2. Project title and number
 3. Name, address and telephone number of testing agency
 4. Dates and locations of samples and tests or inspections
 5. Names of individuals making tests and inspections
 6. Description of the Work and test and inspection method
 7. Identification of product and Specification Section
 8. Complete test or inspection data
 9. Test and inspection results and an interpretation of test results
 10. Record of temperature and weather conditions at time of sample taking and testing and inspecting
 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements
 12. Name and signature of laboratory inspector
 13. Recommendations on re-testing and re-inspecting
- B. Permits, Licenses and Certificates: For Owner's records, submit to the Construction Manager copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

3.3 QUALITY ASSURANCE

- A. General: Qualifications paragraphs in this Article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Installer Qualifications: A firm or individual experienced in installing, erecting or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in- service performance.
- C. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in- service performance, as well as sufficient production capacity to produce required units.
- D. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

- E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly or product that is similar to those indicated for this Project in material, design and extent.
- F. Specialists: Certain sections of the Specifications require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
1. Requirements of authorities having jurisdiction shall supersede requirements for specialists.
- G. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 548; and with additional qualifications specified in individual Sections; and where required by authorities having jurisdiction, that is acceptable to authorities.
1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
 2. NVLP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.
 3. Meet requirements of ASTM E329, current edition "Standards of Recommended Practice for Inspection and Testing Agencies for Concrete, Steel and Bituminous Materials as used in Construction."
 4. Laboratory qualifications for inspection, sampling and testing of soils and aggregates shall be comparable to the requirements of ASTM E329.
 5. Testing Equipment: Calibrated at maximum 12-month intervals by devices of accuracy acceptable to the Architect.
 6. Submit documentation of specified requirements.
 7. All testing and inspection performed by testing laboratory shall be under direct supervision of a professional engineer licensed in state where Project is located. This professional engineer shall submit a letter certifying that all testing services are in conformance with standards and specifications as specified in these Contract Documents. Letter shall also certify that all tested and inspected items and procedures conform to Contract Documents, except where specifically noted on inspection reports.

8. All inspectors shall have at least one year of experience performing type of inspections to be performed on this Project. Qualifications and experience of proposed inspectors shall be submitted to the Architect for approval prior to beginning of the testing.
- H. Manufacturer's Technical Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- I. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- J. Preconstruction Testing: Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:
 1. Contractor responsibilities include the following:
 - a. Provide test specimens representative of proposed products and construction.
 - b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
 - c. Provide sizes and configurations of test assemblies, mockups and laboratory mockups to adequately demonstrate capability of products to comply with performance requirements.
 - d. Build site-assembled test assemblies and mockups using installers who will perform same tasks for the Project.
 - e. When testing is complete, remove test specimens, assemblies, mockups and laboratory mockups; do not re-use products on Project.
 2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection and similar quality-assurance service to Architect, through Construction Manager, with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.

- K. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
1. Build mockups in location and of size indicated or, if not indicated, as directed by the Architect or Construction Manager.
 2. Notify the Architect and Construction Manager seven (7) days in advance of dates and times when mockups will be constructed.
 3. Employ supervisory personnel who will oversee mockup construction. Employ workers that will be employed during the construction of the Project.
 4. Demonstrate the proposed range of aesthetic effects and workmanship.
 5. Obtain the Architect's and Construction Manager's approval of mockups before starting work, fabrication or construction.
 - a. Allow seven (7) days for initial review and each re-review of each mockup.
 6. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
 7. Demolish and remove mockups when directed, unless otherwise indicated.
- L. Integrated Exterior Mockups: Construct integrated exterior mockup according to approved Shop Drawings. Coordinate installation of exterior envelope materials and products for which mockups are required in individual Specification Sections, along with supporting materials.

3.4 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
1. Owner will furnish Contractor with names, addresses and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
 2. Payment for these services will be the responsibility of the Owner.

3. Costs for re-testing and re-inspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.
- B. Contractor's Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities required to verify that the Work complies with requirements, whether specified or not.
1. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
 2. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
 - a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
 3. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
 4. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
 5. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 6. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
 7. Contractor shall retain testing services for building foundation and pavement soils and subgrade from testing engineer and author of geotechnical investigation, of record, per Section 003100.
- C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Division 01 Section "Submittal Procedures".
- D. Manufacturer's Technical Services: Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's services include participation in preinstallation conferences, examination of substrates and conditions, verification of materials, observation of

Installer activities, inspection of completed portions of the Work, and submittal of written reports.

- E. Re-testing/Re-inspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including re-testing and re-inspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- F. Testing Agency Responsibilities: Cooperate with Architect, the Construction Manager and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
 - 1. Notify Architect, the Construction Manager and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 - 2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
 - 3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
 - 4. Submit a certified written report of each test, inspection, and similar quality-control service through the Procore online Project collaboration website.
 - 5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
 - 6. Do not perform any duties of Contractor.
- G. Associated Services: Cooperate with agencies performing required tests, inspections and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
 - 1. Access to the Work
 - 2. Incidental labor and facilities necessary to facilitate tests and inspection
 - 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 - 4. Facilities for storage and field curing of test sample

- 5. Preliminary design mix proposed for use for material mixes that require control by testing agency
- 6. Security and protection for samples and for testing and inspecting equipment at Project site
- H. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
 - 1. Schedule times for tests, inspections, obtaining samples and similar activities.
- I. Schedule of Tests and Inspections: Prepare a schedule of tests, inspections and similar quality-control services required by the Contract Documents. Submit schedule within 30 days of date established for the Notice to Proceed.
- J. Distribution: Distribute schedule to Construction Manager, testing agencies and each party involved in performance of portions of the Work where tests and inspections are required.

3.5 SPECIAL TESTS AND INSPECTIONS

- A. Special Tests and Inspections: Owner will engage a qualified testing agency or special inspector to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of Owner, and as follows:
 - 1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures and reviewing the completeness and adequacy of those procedures to perform the Work.
 - 2. Notifying the Architect, Construction Manager and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
 - 3. Submitting a certified written report of each test, inspection and similar quality-control service to the Architect, through the Construction Manager, with copy to Contractor and to authorities having jurisdiction.
 - 4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
 - 5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.

6. Re-testing and re-inspecting corrected work.

3.6 TEST AND INSPECTION LOG

- A. Prepare a record of tests and inspections. Include the following:
 1. Date test or inspection was conducted
 2. Description of the Work tested or inspected
 3. Date test or inspection results were transmitted to the Architect
 4. Identification of testing agency or special inspector conducting test or inspection
- B. Maintain log at Project site. Post changes and modifications as they occur. Provide access to test and inspection log for the Architect's and Construction Manager's reference during normal working hours.

3.7 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking and similar services, repair damaged construction and restore substrates and finishes.
 1. Provide materials and comply with installation requirements specified in other Specification Sections. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible.
 2. Comply with the Contract Document requirements for Division 01 Section "Cutting and Patching".
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are the Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000

SECTION 014510 – TESTING LABORATORY SERVICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Division 00 and 01 Specification Sections, apply to this Section.
- B. Related work specified in Section 014000 – Quality Requirements
- C. The Work of this Section shall be included as a part of the Contract Documents of each Contractor on this Project. Where such Work applies to only one Contractor, it shall be defined as to which Contractor the Work belongs.

1.2 RELATED REQUIREMENTS

- A. The Owner, through the Construction Manager, will employ and pay for services of an independent testing laboratory to perform specified inspection, sampling, and testing services.
- B. Inspections and testing required by laws, ordinances, rules, regulations or orders of public authorities: General Conditions.
- C. Certification of products and mill test reports: Respective Specifications Sections.
- D. Test, adjust, and balance of equipment: Respective Specification Sections.
- E. Inspection, sampling, and testing: Respective Specification Sections.

PART 2 – NOT USED

PART 3 – EXECUTION

3.1 QUALIFICATIONS OF LABORATORY AND SUBMITTALS

- A. Meet requirements of ASTM E329, current edition, "Standards of Recommended Practice for Inspection and Testing Agencies for Concrete, Steel and Bituminous Materials as used in Construction."
 - 1. The term "agency" as used in Section 4 of ASTM E329 shall mean the local or closest office of said agency.

- B. Laboratory qualifications for inspection, sampling, and testing of soils and aggregates shall be comparable to the requirements of ASTM E329.
- C. Testing Equipment.
 - 1. Calibrated at maximum 12-month intervals by devices of accuracy acceptable to the Architect.
- D. Submit documentation of specified requirements.

3.2 LABORATORY DUTIES, LIMITATIONS OF AUTHORITY

- A. Provide qualified personnel promptly on notice.
- B. Perform specified inspections, sampling and testing of materials and methods of construction.
 - 1. Comply with specified standards; ASTM, other recognized authorities, and as specified.
 - 2. Ascertain compliance with requirements of Contract Documents.
- C. Promptly notify Construction Manager, Architect, and Contractor of irregularities or deficiencies of Work which are observed during performance of services.
- D. Promptly submit three (3) copies of reports of inspections and tests to the Construction Manager through the online Project Management Software, Procore, including the following information, as applicable.
 - 1. Date issued
 - 2. Project title and number
 - 3. Testing laboratory name and address
 - 4. Name and signature of inspector
 - 5. Date of inspection or sampling
 - 6. Record of temperature and weather
 - 7. Date of test
 - 8. Identification of product and Specification Section
 - 9. Location in project
 - 10. Type of inspection or test
 - 11. Observations regarding compliance with Contract Documents
- E. Perform additional services as required by Owner.

F. Laboratory is not authorized to:

1. Release, revoke, alter, or enlarge on, requirements of Contract Documents
2. Approve or accept any portion of Work
3. Perform any duties of the Contractor

3.3 SUBCONTRACTORS' RESPONSIBILITIES

- A. Cooperate with laboratory personnel to provide access to Work and to manufacturer's operations.
- B. Assist laboratory personnel in obtaining samples at the site.
- C. Notify laboratory sufficiently in advance of operations to allow for their assignment of personnel and scheduling of tests.
- D. Should the Contractors fail to schedule laboratory services or fail to cancel laboratory services, if the need arises, all additional costs shall be borne by the Contractors.
- E. Employ and pay for services of a separate, equally qualified independent testing laboratory to perform additional inspections, sampling and testing required when initial tests indicate work does not comply with Contract Documents.
 1. Separate laboratory shall be approved by the Owner, Architect and the Construction Manager.

END OF SECTION 014510

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Division 00 and 01 Specification Sections, apply to this Section.
- B. The Work of this Section shall be included as a part of the Contract Documents of each Contractor on this Project. Where such Work applies to only one Contractor, it shall be defined as to which Contractor the Work belongs.

PART 2 – NOT USED

PART 3 – EXECUTION

3.1 TEMPORARY EQUIPMENT AND WORK ITEMS

- A. Provide the following listed temporary equipment and work items; maintain and remove same at completion where applicable.
 - 1. Temporary heat, protective enclosures, concrete blankets, straw, etc., for specific items of work such as masonry, drywall, and concrete on the exterior and in the interior prior to the enclosure of the building while cold or inclement weather conditions are encountered while proceeding with work as scheduled.
 - 2. Temporary heat for field offices and storage buildings.
 - 3. Grounded UL approved extension cords from work area to power source and any additional lighting required to perform the work, and as required by applicable laws, in addition to that provided in Section 01 51 10.
 - 4. Restoration of areas damaged by construction operations.
 - 5. Removal of snow, frost and ice for work continuance.
 - 6. Drinking water for own employees if otherwise not available.
 - 7. Receiving of materials at the site.

8. Barricades for protection of people and property, including fall protection at roofs, warning signs, traffic control signs, flashers, etc., in addition to barricades specified in Section 01 53 30.
 9. Acceptable fire protection within five feet (5') of any burning, welding, cutting, or soldering operations.
 10. Replace barricades removed for convenience or for access to the work.
 11. Materials hoisting systems as required to expedite the work.
 12. Fences around excavations.
 13. Ladders, scaffolding and similar items for own employees in addition to the facilities provided under Section 01 52 10.
- B. The Contractor erecting structural steel shall provide wire rope perimeter cabling in accordance with OSHA Standards, at the perimeters of elevated floors, elevated floor openings, and mezzanines.

3.2 SPECIAL TOOL REQUIREMENTS

- A. Furnish all necessary power and hand tools to properly perform the work.
- B. Certain electrical power requirements will be furnished by the Electrical Contractor under Section 01 51 10. It is the individual Contractor's responsibility to make his own arrangements with the Electrical Contractor in the event special power requirements are needed for his special tools.

END OF SECTION 015000

SECTION 015113 - TEMPORARY ELECTRICITY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Division 00 and 01 Specification Sections, apply to this Section.
- B. The Work of this Section shall be included as a part of the Contract Documents of each Contractor on this Project. Where such Work applies to only one Contractor, it shall be defined as to which Contractor the Work belongs.
 - 1. This Work shall be included as part of Bid Category No.11 – Electrical Systems.

PART 2 – NOT USED

PART 3 – EXECUTION

3.1 TEMPORARY ELECTRICAL AND LIGHTING

- A. Provide temporary electric service to each of the areas of construction and provide temporary lighting and power to be used by all trades for all construction work. Tie-in may be made to Owner's existing permanent service provided that such tie-in does not interfere with the Owner's use of the existing building. If power cannot be made available through Owner's existing service, arrange with utility company for temporary service.
 - 1. Maintain the temporary system, relocate the system as required for construction progress, and remove system at completion of Project.
- B. The energy cost of power consumed during construction shall be paid by the Owner.
- C. Provide a minimum of three (3) 200 AMP, 120/240 volt, single phase grounded system for temporary light and power distribution.
 - 1. The service amperage shall be adequate for the construction of the Project and the testing of the permanent equipment.
 - 2. Temporary lighting shall be sufficient to enable all trades to complete their work. Minimum lighting requirements are one (1) 150 watt A-21 lamp installed per room or in areas over 300 square feet, stringers shall be installed in rows

twenty feet (20') apart with lights spaced fifteen feet (15') apart on the stringers. No more than eight (8) lamps shall be installed on any 20 amp circuit. Lamps for temporary lighting shall be provided and maintained by the Contractor at his expense. Every temporary lamp outlet must be properly lamped throughout construction; dark or burned-out lamps shall be immediately replaced. Number 12 wire may be used for temporary lighting circuits.

- a. Additional lighting required to perform the work, and as required by applicable laws, is specified in Section 01 50 50.
3. Temporary power shall be sufficient to enable all trades to complete their work. A minimum of a two gang, duplex grounded convenience outlet having 3-wire grounded type receptacles shall be installed within seventy-five feet (75') of outside walls and one hundred fifty feet (150') spacing in any direction within the building. They shall be installed in such a manner that a 100' extension cord connection can reach any part of the building, including enclosed areas, such as offices.
 4. In addition to the above temporary power and lighting, provide and subsequently remove circuits for:
 - a. Temporary safety lighting and security lighting. Security lights to work at all hours of darkness; safety lighting shall be continuous during working hours.
 - b. Testing and checking permanent equipment.
 5. Complete temporary electrical system, including lighting, power outlets, wiring, etc. shall comply with all federal regulations as issued by the Department of Labor dealing with safety and health for construction projects, and any portions of state and local safety and health regulations that are more stringent.
- D. Provide minimum of 100 AMP service for the Construction Managers Project office trailer.
- E. Contractors requiring power requirements other than the above or in Division 26, will make arrangements with the Electrical Contractor and pay for any such electrical services. Such services are listed below but not limited to the examples shown:
1. Power to temporary offices.
 2. Special power for masonry saws or mixers, floor grinders, floor sanders, welders, etc.
 3. Cost of power for temporary electric heat.

3.2 TEMPORARY WARNING SYSTEMS

- A. Contractor shall provide temporary emergency systems, warning systems, and fire alarm systems in accordance with IOSHA / OSHA standards. Contractor to provide alarm stations consisting of an area plan showing alarm station locations, escape routes to nearby exits, and a distinctive alarm capable of being heard above ambient noise levels. Remove temporary systems after permanent systems are operational. Refer to Specifications Section 01 57 60 for alarm codes to be included on area plan.

3.3 MAINTENANCE AND REMOVALS

- A. All portions of electricity, lighting and warning systems, not part of the permanent systems, shall be removed when the period of usefulness is over. Relocate components as required to prevent interference with continuing construction. Restore any compromised surfaces and patch penetrations.

END OF SECTION 015113

SECTION 015116 - TEMPORARY FIRE PROTECTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Division 00 and 01 Specification Sections, apply to this Section.
- B. The Work of this Section shall be included as a part of the Contract Documents of each Contractor on this Project. Where such Work applies to only one Contractor, it shall be defined as to which Contractor the Work belongs.

PART 2 – NOT USED

PART 3 – EXECUTION

3.1 TEMPORARY FIRE PROTECTION

- A. Provide adequate fire protection and fire prevention for the Project and in no case less than that required by applicable federal law(s).
 - 1. Minimum provisions, unless otherwise required by law(s), shall be 10# capacity ABC type fire extinguishers, plainly marked and easily accessible, in each area where work is in progress.
 - 2. Provide wood standards for fire extinguishers and emergency alarm stations.

END OF SECTION 015116

SECTION 015123 - TEMPORARY HEATING, VENTILATION AND COOLING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Division 00 and 01 Specification Sections, apply to this Section.
- B. The Work of this Section shall be included as a part of the Contract Documents of each Contractor on this Project. Where such Work applies to only one Contractor, it shall be defined as to which Contractor the Work belongs.
 - 1. This Work shall be included as part of Bid Category No. 10– Plumbing and Mechanical.

PART 2 – NOT USED

PART 3 – EXECUTION

3.1 TEMPORARY HEAT

- A. Temporary heat shall be provided for enclosed building spaces as required for installation of any material and for working conditions required by any trade or trades working on the Project. This does not include heat or protection as required by Section 01 50 50, Paragraph 1.02.A.1. The minimum period that temporary heat must be made available for enclosed spaces (not permanently heated) begins November 1 and ends May 15th each heating season.
- B. An enclosed building space shall be defined as having a roof and all exterior openings closed by either temporary or permanent means.
- C. The following temperatures shall be maintained:
 - 1. 50°F minimum during working hours and 40°F during non-working hours.
 - 2. For a period of seven (7) days prior to interior finishing (wall coverings, resilient tile, acoustical ceilings, etc.), and until final acceptance or occupancy by the Owner, spaces shall be kept 60°F to 75°F during working hours and 60°F minimum at all other times.

- D. After the building or any designated portion has been enclosed and temporary heat is required, the Contractor shall provide and maintain all temporary heating systems using one or more of the following methods:
1. Portable heaters: smokeless type, thermostatically controlled, electric blower operated, of type approved by fire and health authorities for use without vents. This Contractor shall include necessary electrical wiring and controls. Relocate heaters and components as necessary to prevent interference with continuing construction.
 2. Temporary heating system consisting of approved electric or gas fired unit heaters, direct fired make-up air units, boilers and unit heaters or other similar approved equipment. All such units shall be properly vented to the exterior, piped, wired, thermostatically controlled and have all required safety controls.
 3. The permanent heating system and its component parts may be used for temporary heat where available. The building shall be in the finishing stages and the permanent heating system must be installed as designed when used to supply temporary heat. This shall include permanent power wiring connections to a permanent power source. Provide all phases of operation, maintenance, control and items of like nature during the time the permanent system is used to furnish temporary heat.
 - a. At the termination of the use of the permanent system as a temporary heating system, the system shall be thoroughly cleaned, equipped with new filters, new belts if required, etc., and any damage repaired or replaced.
 - b. The use of the permanent heating system for temporary heat shall not affect the warranty period which begins on the date of Substantial Completion of the Project.
 - c. Refer to Division 23 for other requirements that may affect the use of the permanent system.

3.2 TEMPORARY VENTILATION AND COOLING

- A. Temporary ventilation and cooling shall be provided for enclosed building spaces as required for installation of finish building materials. The minimum period that temporary ventilation and cooling must be made available for building spaces receiving finish materials begins May 15th and ends September 30th each cooling season.

- B. For a period of seven (7) days prior to interior finishing (wall coverings, resilient tile, acoustical ceilings, etc) maintain a maximum of 75°F in that respective space until final acceptance or occupancy by the Owner.
- C. The permanent ventilation and cooling system components may be used for temporary ventilation and cooling where available. The building shall be in the finishing stages and the permanent system must be installed as designed when used to supply temporary ventilation or cooling. This shall include permanent wiring connections to a permanent power source. Provide all phases of operation, maintenance, control, and items of like nature during the time the permanent system is used to furnish temporary ventilation or cooling.
 - 1. At the termination of the use of the permanent system as a temporary ventilation or cooling system, the system shall be thoroughly cleaned, equipped with new filters, new belts if required, etc., and any damage repaired or replaced.
 - 2. The use of the permanent system for temporary ventilation or cooling shall not affect the warranty period which begins on the date of Substantial Completion of the Project.
 - 3. Refer to Division 23 for other requirements that may affect the use of the permanent system.

3.3 COST OF FUEL AND ELECTRIC POWER

- A. The cost of all fuel and power consumed for temporary heat, ventilation and cooling will be paid by the Construction Manager. Equipment and tank rental is the responsibility of this Contractor.
- B. Refer to Section 01 21 00 - Allowances for a possible fuel allowance.

3.4 MAINTENANCE AND REMOVALS

- A. All portions of temporary heating, ventilation and cooling systems, not part of the permanent systems, shall be removed when the period of usefulness is over. Relocate components as required to prevent interference with continuing construction. Restore any compromised surfaces and patch penetrations. Keep temporary air filters in place and change as often as necessary. Install a clean set of permanent filters prior to air balancing.

END OF SECTION 015123

SECTION 015133 - TEMPORARY TELEPHONE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Division 00 and 01 Specification Sections, apply to this Section.
- B. The Work of this Section shall be included as a part of the Contract Documents of each Contractor on this Project. Where such Work applies to only one Contractor, it shall be defined as to which Contractor the Work belongs.

PART 2 – NOT USED

PART 3 – EXECUTION

3.1 TEMPORARY PROJECT TELEPHONE - Not applicable

3.2 CONTRACTORS TELEPHONES

- A. Contractors and subcontractors may provide any additional temporary telephone service they may require if approved by the Construction Manager.

3.3 COSTS OF INSTALLATION AND OPERATION

- A. Contractor shall pay costs of installation, maintenance, and removal of equipment which they require.
- B. Party placing toll calls pays costs of tolls.

END OF SECTION 015133

SECTION 015136 - TEMPORARY WATER

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Division 00 and 01 Specification Sections, apply to this Section.
- B. The Work of this Section shall be included as a part of the Contract Documents of each Contractor on this Project. Where such Work applies to only one Contractor, it shall be defined as to which Contractor the Work belongs.

PART 2 – NOT USED

PART 3 – EXECUTION

3.1 TEMPORARY CONSTRUCTION WATER

- A. This Work shall be included as part of Bid Category No. – Plumbing and Mechanical.
- B. Provide temporary water service at a convenient location, maintain the service and remove same at completion.
 - 1. Tie-in may be made to the Owner's existing system.
 - 2. The Owner will pay for all temporary construction water usage.
- C. If it is not practical to tie into Owner's existing water service, the Contractor shall make arrangements for a temporary service as required, pay for all water usage, and remove temporary service before final clean-up of the Project.

3.2 DRINKING WATER

- A. This Work shall be included by every Contractor and subcontractor.
- B. Provide chilled potable drinking water for all construction personnel in general location.

END OF SECTION 015136

SECTION 015139 - TEMPORARY SANITARY FACILITIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Division 00 and 01 Specification Sections, apply to this Section.
- B. The Work of this Section shall be included as a part of the Contract Documents of each Contractor on this Project. Where such Work applies to only one Contractor, it shall be defined as to which Contractor the Work belongs.

PART 2 – NOT USED

PART 3 – EXECUTION

3.1 TEMPORARY SANITARY FACILITIES

- A. Temporary sanitary facilities will be provided by the Construction Manager.
- B. Provide portable type toilets until sewer service is available.
- C. Provide temporary flushing type toilets when water and sewer service is available at a permanent location in the building.
- D. Maintain lavatories when existing facilities are approved for use.
- E. Adequate facilities shall be provided for all workmen on the Project and in no case less than those required by applicable federal law(s).
- F. The Construction Manager will provide necessary paper goods and soap.
- G. Keep facilities clean and sanitary

END OF SECTION 015139

SECTION 015200 – PROJECT OFFICE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Division 00 and 01 Specification Sections, apply to work of this Section.

1.2 TEMPORARY OWNER'S CONSTRUCTION OFFICE

- A. The Owner will provide and maintain adequate office space for the representatives of the Architect and the Owner for their exclusive use and equipped as follows:
 - 1. Heated and air conditioned with operating windows and a locked door.
 - 2. Plan tables, racks for drawings, desks, chairs, file cabinets, and similar items.
- B. This office space will also be used for Progress Meetings unless notified otherwise.

1.3 TEMPORARY CONSTRUCTION MANAGER'S CONSTRUCTION OFFICE

- A. The Owner, through the Construction Manager, will provide and maintain adequate on-site office space for the representatives of the Construction Manager for their exclusive use and equipped as follows:
 - 1. Heated and air conditioned with operating windows and a locked door.
 - 2. Plan tables, racks for drawings, desks, chairs, file cabinets, and similar items.

PART 2 – NOT USED

PART 3 – NOT USED

END OF SECTION 015200

SECTION 015213 – OFFICES AND SHEDS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Division 00 and 01 Specification Sections, apply to work of this Section.

1.2 TEMPORARY STRUCTURES

- A. Temporary structures required for offices, storage or other purposes in the performance of the Work, shall be located and erected only with approval of the Construction Manager and Owner and shall be removed and the premises shall be cleaned of all debris when directed. The vacated area shall be restored to the original condition when necessary.
- B. All temporary work sheds and offices, if of combustible construction, shall be located at least thirty feet (30') from the building.
- C. Contractors requiring power to temporary structures will make their own arrangements for such power as provided in Section 015113 – Temporary Electricity.

PART 2 – NOT USED

PART 3 – NOT USED

END OF SECTION 015213

SECTION 015260 – RUBBISH CONTAINER

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Division 00 and 01 Specification Sections, apply to this Section.

PART 2 – NOT USED

PART 3 – EXECUTION

3.1 RUBBISH CONTAINER

- A. Construction Manager will provide dumpster type rubbish container or containers sized adequate for the general Project waste, debris and rubbish for the life of the Project.
 - 1. Select Contractors will be required to provide their own dumpsters for their scope of Work. See Section 002413 – Bid Category Scopes of Work for Contractor requirements.
- B. Dispose of container contents weekly or at more frequent intervals if required by inadequate container capacity.

3.2 TRASH CHUTES

- A. Erect suitable, closed, relatively dust-free chutes for the use by all trades during construction above ground floor. No material or debris will be permitted to drop free.
 - 1. Coordinate this installation with the Construction Manager and other Contractors.

END OF SECTION 015260

SECTION 015400 – CONSTRUCTION AIDS AND TEMPORARY ENCLOSURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Division 00 and 01 Specification Sections, apply to this Section.
- B. The Work of this Section shall be included as a part of the Contract Documents of each Contractor on this Project. Where such Work applies to only one Contractor, it shall be defined as to which Contractor the Work belongs.

PART 2 – NOT USED

PART 3 – EXECUTION

3.1 CONSTRUCTION AIDS

- A. Provide and maintain temporary gang ladders, stairs, ramps, runways, platforms and other such facilities and equipment for proper access to the Work for all Contracts, and in no case less than those required by applicable Federal, State, and local law(s).
- B. When permanent stair framing is in place, provide temporary treads, platforms and railings for use by construction personnel.

3.2 TEMPORARY ENCLOSURES

- A. Provide reinforced plastic or plywood covered frames for window openings and hinged plywood or batten doors with locks to maintain temperatures necessary to perform the work and provide security.
 - 1. Provide protection against all kinds of adverse weather so that the building and materials will not be damaged, and against unauthorized entry.
 - 2. Protection shall be provided well in advance of finishing operations.
- B. Provide temporary enclosures to separate work areas from finished areas and from areas occupied by Owner; to prevent penetration of dust or moisture into finished and occupied areas, and to protect the public from construction work.

1. Temporary partition and ceiling enclosures: framing and sheet materials which comply with structural and fire rating requirements of applicable codes and standards.
2. Close joints between sheet materials, and seal edges and intersections with existing surfaces, to prevent penetration of dust or moisture.

3.3 RELOCATION AND REMOVAL

- A. Relocate as required by progress of construction, by storage or work requirements, and to accommodate legitimate requirements of Owner and other contractors employed at the site.
- B. Completely remove when construction needs can be met by use of permanent construction.
- C. Clean and repair damage caused by installation or by use.
- D. Restore existing facilities used for temporary purposes to specified or to original condition.
- E. Restore permanent facilities used for temporary purposes to specified condition.

END OF SECTION 015400

SECTION 015500 – ACCESS ROADS AND PARKING AREAS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Division 00 and 01 Specification Sections, apply to this Section.

1.2 REQUIREMENTS INCLUDED

- A. Access Roads
- B. Parking
- C. Existing Pavements and Parking Areas
- D. Permanent Pavements and Parking Facilities
- E. Maintenance
- F. Removal, Repair

PART 2 – PRODUCTS

2.1 MATERIALS

- A. For Temporary Construction: Contractor's option of crushed stone or gravel.
- B. For Permanent Construction: As specified in the Contract Documents.

PART 3 – EXECUTION

3.1 PROTECTION PREPARATION

- A. Clear areas, provide surface (and storm) drainage of premises and adjacent areas.
- B. When practicable, coordinate use of permanent roads and parking areas with Paving Contractor.

3.2 ACCESS ROADS

- A. Construct temporary (all-weather) access roads from public thoroughfares to serve construction area, of a width and load- bearing capacity to provide unimpeded traffic for construction purposes.
- B. Construct temporary bridges and culverts to span low areas and allow unimpeded drainage.
- C. Extend and relocate as work progress requires, provide detours as necessary for unimpeded traffic flow.
- D. Location as approved by Construction Manager.
- E. Provide unimpeded access for emergency vehicles. Maintain twenty-foot (20') width driveways with turning space between and around combustible materials.
- F. Provide and maintain access to fire hydrants and control valves free of obstructions.
- G. Contractors rutting the access road must back drag the access road daily.

3.3 PARKING

- A. Contractor vehicles will not be permitted to park on the public streets surrounding the Project site.
- B. Contractors will be allowed one (1) parking space on the Project site for their field supervisor's vehicle. No other vehicles will be allowed on the Project site.

(Blank space is intentional)

- C. Contractor parking will be available at:

(Blank space is intentional)

- D. Location as approved by Construction Manager.
- E. Contractors will be responsible for all costs associated with parking and transporting their employees from the Contractor parking locations to the Project Site.

3.4 EXISTING PAVEMENTS AND PARKING AREAS

- A. Designated existing onsite streets and driveways may be used for construction traffic. Tracked vehicles are not allowed.

3.5 PERMANENT PAVEMENTS AND PARKING FACILITIES

- A. Prior to Substantial Completion, base for permanent roads and parking areas may be used for construction traffic. Avoid traffic loading beyond paving design capacity. Tracked vehicles not allowed.

3.6 MAINTENANCE

- A. Maintain traffic and parking areas in sound condition, free of excavated material, construction equipment, products, mud, snow, and ice.
- B. Maintain existing and permanent paved areas used for construction, promptly repair breaks, potholes, low areas, standing water, and other deficiencies, to maintain paving and drainage in original or specified condition.

3.7 REMOVAL, REPAIR

- A. Remove temporary materials and construction when permanent paving is usable.

- B. Remove underground work and compacted materials to a depth of two feet (2'); fill and grade site as specified.
- C. Repair existing and permanent facilities damaged by usage to original and specified condition.

END OF SECTION 015500

SECTION 015623 – BARRICADES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Division 00 and 01 Specification Sections, apply to this Section.

PART 2 – NOT USED

PART 3 – EXECUTION

3.1 BARRICADES

- A. The Structural Steel Contractor shall furnish and install wire rope perimeter cabling in accordance with OSHA at elevated floor slab edges and openings framed of steel.
 - 1. Cabling shall be erected prior to placing of concrete slabs.
 - 2. Cabling shall be maintained by the Structural Steel Contractor while they are on-site performing their Work.
- B. The Concrete Contractor shall provide and maintain OSHA approved toe boards at all elevated floor slab edges and openings after finishing of slabs on metal decks.
 - 1. Maintain and relocate as the work progresses the cabling installed by the Structural Steel Contractor and toe boards installed by this contract.
 - 2. Dismantle and discard the cabling installed by the Structural Steel Contractor and toe boards installed by this contract when no longer of service.
- C. The Concrete Contractor shall provide and maintain OSHA approved top rail, mid rail and toe boards at all elevated floor slab edges and openings of elevated concrete slabs.
 - 1. Maintain and relocate as the work progresses the railing and toe boards installed by this contract.
 - 2. Dismantle and discard when no longer of service.

- D. Any Contractor creating a fall hazard not addressed above shall provide and maintain OSHA approved top rail, mid rail and toe boards at all elevated floor slab edges and openings.
 - 1. Maintain and relocate as the work progresses the railing and toe boards installed by this contract.
 - 2. Dismantle and discard when no longer of service.

END OF SECTION 015623

SECTION 015626 – FENCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Division 00 and 01 Specification Sections, apply to this Section.

1.2 SCHEDULING

- A. Construction Manager shall provide temporary fencing to outline limits of site usage prior to start of work.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION 015626

SECTION 015639 – TREE AND PLANT PROTECTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Division 00 and 01 Specification Sections, apply to this Section.

1.2 JOB CONDITIONS

- A. Existing Conditions
 - 1. Inspect all trees and plants near building site.
- B. Scheduling
 - 1. Protective fencing shall be in place before commencement of any other work.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Fencing shall be new plastic snow-type fencing, 4' high. Posts shall be heavy-duty studded steel T-posts, 1-3/8" x 1-3/8" x 7/64" thick by 4' tall.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. Trees to be protected shall have fencing placed completely around the tree at the full spread of the branches.
- B. Plants to remain shall have fencing placed completely around individual or groups of plants one foot (1') beyond edge of plants.
- C. Existing lawn and other areas to be left undisturbed shall have fencing placed where indicated or as required for protection.
- D. Space posts six feet (6') on center and drive three feet (3') into the ground. Fasten fence to each post with five (5) fasteners.

- E. Place warning signs on tree protective fencing stating "Do Not Store Materials Within Fence".

3.2 MAINTENANCE

- A. Maintain fencing in good repair until completion of the Project unless directed otherwise by the Construction Manager.
- B. Relocate fencing if necessary due to construction progress when directed by the Construction Manager.
- C. Remove fencing when directed by the Construction Manager.
- D. Any Contractor responsible for damages to the fence will be responsible to repair the damages.
 - 1. Contractor may make the repairs themselves.
 - 2. Construction Manager may make the repairs and charge the Contractor for the cost of the repairs.

END OF SECTION 015639

SECTION 015713 – ENVIRONMENTAL PROTECTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Division 00 and 01 Specification Sections, apply to this Section.

PART 2 – NOT USED

PART 3 – EXECUTION

3.1 APPLICABLE REGULATIONS

- A. In order to prevent, and to provide for abatement and control of any environmental pollution arising from the construction activities of the Contractor and his Contractors in the performance of this Contract, they shall comply with all applicable federal, state, and local laws, and regulations concerning environmental pollution control and abatement as well as the specific requirements stated elsewhere in the Contract Documents.

3.2 RECORDING AND PRESERVING HISTORICAL AND ARCHAEOLOGICAL FINDS

- A. All items having any apparent historical or archaeological interest which are discovered in the course of any construction activities shall be carefully preserved. The Contractor shall leave the archaeological find undisturbed and shall immediately report the find to the Architect so that the proper authorities may be notified.

3.3 PROTECTION OF WATER RESOURCES

- A. The Contractor shall not pollute water resources with fuels, oils, bitumens, calcium chloride, acids, or harmful materials. It is the responsibility of the Contractor to investigate and comply with all applicable federal, state, county, and municipal laws concerning pollution of rivers and streams. All Work under this Contract shall be performed in such a manner that objectionable conditions will not be created in water resources through or adjacent to the Project areas.
 - 1. Spillages: At all times of the year, special measures shall be taken to prevent chemicals, fuels, oils, grease, bituminous materials, waste washings, herbicides and insecticides, and cement from entering water resources.

2. Disposal: If any waste material is dumped in unauthorized areas, the Contractor shall remove the material and restore the area to its original condition. If necessary, contaminated ground shall be excavated, disposed of as directed by the Architect, and replaced with suitable fill material, compacted and finished with topsoil, all at the expense of the Contractor.

3.4 PROTECTION OF FISH AND WILDLIFE

- A. The Contractor shall at all times perform all work and take such steps required to prevent any interference or disturbance to fish and wildlife. Fouling or polluting of water will not be permitted. Wash waters and wastes shall be processed, filtered, ponded, or otherwise treated prior to their release into the storm sewers or streams.

3.5 PROTECTION OF MONUMENTS, MARKERS AND ART WORK

- A. Monuments and markers shall be protected before beginning operations near them.

3.6 MAINTENANCE OF ENVIRONMENT PROTECTION CONTROL FACILITIES DURING CONSTRUCTION

- A. During the life of this Contract, the Contractor shall maintain all facilities constructed for pollution control under this Contract as long as the operations creating the particular pollutant are being carried out or until the material concerned has become stabilized to the extent that pollution is no longer being created.

END OF SECTION 015713

SECTION 015726 – DUST CONTROL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Division 00 and 01 Specification Sections, apply to work of this Section.

1.2 QUALITY ASSURANCE

- A. Comply with the requirements of authorities having jurisdiction.

PART 2 – NOT USED

PART 3 – EXECUTION

3.1 PROTECTION PREPARATION DUST CONTROL

- A. The Contractor will be required to maintain all excavations, embankments, stockpiles, haul roads, permanent access roads, plant sites, waste areas, borrow areas, and all other work areas on or off site free of dust.
- B. Approved temporary methods of stabilization consisting of sprinkling, chemical treatment, light bituminous treatment, or similar methods will be permitted to control dust. Sprinkling, to be approved, must be repeated at such intervals as to keep all parts of the disturbed area at least damp at all times; and the Contractor must have sufficient competent equipment on the job to accomplish this if sprinkling is used. Sprinkling that causes much tracking of public roads will not be allowed and other approved methods must be used.

END OF SECTION 015726

SECTION 015729 – WATER CONTROL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Division 00 and 01 Specification Sections, apply to work of this Section.

1.2 QUALITY ASSURANCE

- A. Comply with the requirements of authorities having jurisdiction.

PART 2 – NOT USED

PART 3 – EXECUTION

3.1 PROTECTION PREPARATION DUST CONTROL WATER CONTROL

- A. Protect excavations, trenches and structure from damage by rain water, ground water, backing-up of drains and sewers and from all other water. Provide pumps, well points, equipment and enclosures to provide protection for the Work.
- B. Install approved temporary erosion control devices when discharge velocity of pumping equipment causes soil erosion at the point of discharge.

END OF SECTION 015729

SECTION 016000 – PRODUCT REQUIREMENTS**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

- A. The Work of this Section shall be included as a part of the Contract Documents of each Contractor on this Project. Where such Work applies to only one Contractor, it shall be defined as to which Contractor the Work belongs.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements governing the Contractor's selection of products for use in the Project.
 - 1. Product standards and quality
 - 2. Substitutions
 - 3. Manufacturer's directions
 - 4. Warranties
 - 5. Material delivery and responsibilities
 - 6. Protection
 - 7. Acceptance of equipment or systems
- B. It is the intent of the Specifications and Drawings to accomplish a complete and first-grade installation in which there shall be installed new materials and products of the latest and best design and manufacturer. Workmanship shall be thoroughly first- class and complete, executed by competent and experienced workmen.
- C. Equipment, specialties, and similar items shall be checked for compliance and fully approved prior to installation. Contractors are cautioned that work or equipment installed without approval is subject to condemnation, removal, and subsequent replacement with an approved item without extra remuneration.
- D. Related Work Specified Elsewhere
 - 1. Section 002113 - Instructions to Bidders
 - 2. Section 013300 - Submittal Procedures

1.3 DEFINITIONS

- A. Definitions used in this Article are not intended to change the meaning of other terms used in the Contract Documents, such as “specialties,” “systems,” “structure,”

“finishes,” “accessories,” and similar terms. Such terms are self-explanatory and have well recognized meanings in the construction industry.

1. “Products” are items purchased for incorporation in the Work, whether purchased for the project or taken from previously purchased stock. The term “product” includes the terms “material,” “equipment,” “system,” and terms of similar intent.
2. “Named Products” are items identified by the manufacturer’s product name, including make or model number or other designation, shown or listed in the manufacturer’s published product literature, that is current as of the date of the Contract Documents.
3. “Materials” are products substantially shaped, cut, worked, mixed, finished, refined, or otherwise fabricated, processed, or installed to form a part of the Work.
4. “Equipment” is a product with operational parts, whether motorized or manually operated, that require service connections, such as wiring or piping. Drawings and general provisions of the Contract, including Division 00 and 01 Specification Sections, apply to work of this Section.

1.4 QUALITY ASSURANCE

- A. Source Limitations: To the fullest extent possible, provide products of the same kind from a single source.
- B. Compatibility of Options: When the Contractor is given the option of selecting between 2 or more products for use on the project, the product selected shall be compatible with products previously selected, even if previously selected products were also options.
 1. Each Contractor is responsible for providing products and construction methods that are compatible with products and construction methods of other prime or separate contractors.
 2. If a dispute arises between Contractors over concurrently selectable, but incompatible products, the Architect will determine which products shall be retained and which are incompatible and must be replaced.

1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products according to the manufacturer’s recommendations, using means and methods that will prevent damage, deterioration, and loss, including theft.

1. Schedule delivery to minimize long term storage at the site and to prevent overcrowding of construction spaces.
2. Coordinate delivery with installation time to assure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
3. Deliver products to the site in an undamaged condition in the manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
4. Inspect products upon delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
5. Store products of the site in a manner that will facilitate inspection and measurement of quality or counting of units.
6. Store heavy materials away from the project structure in a manner that will not endanger the supporting construction.
7. Store products subject to damage by elements above ground, under cover in a weathertight enclosure, with ventilation adequate to prevent condensation. Maintain temperature and humidity within range required by manufacturer's instructions.

PART 2 – PRODUCTS

2.1 PRODUCT STANDARDS AND QUALITY

- A. The Contract is based on the materials, equipment, and methods described in the Contract Documents.
- B. Where in the Drawings and Specifications certain products, manufacturer's trade names, or catalog numbers are given, it is done for the expressed purpose of establishing a basis of quality, durability, and efficiency of design in harmony with the work outlined and is not intended for the purpose of limiting competition.
- C. The Architect will consider proposals for substitution of materials, equipment, and methods only when such proposals are accompanied by full and complete technical data and all other information required by the Architect to evaluate the proposed substitution.

- D. Do not substitute materials, equipment, or methods unless such substitution has been specifically approved for this Work by the Architect.
 - 1. Refer to Section 002113 - Instructions to Bidders.
- E. "Or equal":
 - 1. Where the phrase "or equal" or "or equal as approved by the Architect" occurs in the Contract Documents, do not assume that material, equipment, or methods will be approved as equal by the Architect unless the item has been specifically approved for this Work by the Architect in an Addendum.
 - 2. The decision of the Architect shall be final.
- F. Availability of Specified Items:
 - 1. Verify prior to bidding that specified items will be available in time for installation during orderly and timely progress of the Work.
 - 2. In the event specified item or items will not be so available, so notify the Architect prior to receipt of bids.
 - 3. Costs of delays because of non-availability of specified items, when such delays could have been avoided by the Contractor, will be back charged as necessary and shall not be borne by the Owner.
- G. Separate Substitute Bids: Bidders may, if they wish, submit additional, completely separate bids using materials and methods other than those described in these Contract Documents, provided that substitutions are clearly identified and described and that the bid is in accordance with the provisions of the Contract Documents. Refer to 002113 Instructions To Bidders.
- H. Where the questions of appearance, artistic effect, or harmony of design are concerned, the Architect reserves the right to refuse approval of substituted products proposed to be substituted for that specified, if in his opinion the item to be substituted is not harmonious to the finished effect and appearance desired, as portrayed in the Drawings and Specifications. The Architect's said refusal to approve, established by this paragraph, is final and not subject to arbitration.

2.2 SUBSTITUTIONS

- A. Substitutions: Changes in products, materials of construction required by the Contract Documents proposed by the Contractor after award of the Contract are considered to

be requests of substitutions. The following are not considered to be requests for substitutions.

1. Substitutions requested during the bidding period, accepted by Addendum prior to award of the Contract, are included in the Contract Documents and are not subject to requirements specified in this Section for substitutions.
 2. Revisions to the Contract Documents requested by the Owner or Architect.
 3. Specified options of products and construction methods included in the Contract Documents.
 4. The Contractor's determination of and compliance with governing regulations and orders issued by governing authorities.
- B. Conditions: The Construction Manager will receive and consider the Contractor's request for substitution when one or more of the following conditions are satisfied, as determined by the Construction Manager. If the following conditions are not satisfied, the Architect will return the requests without action except to record noncompliance with these requirements:
1. Extensive revisions to the Contract Documents are not required.
 2. Proposed changes are in keeping with the general intent of the Contract Documents.
 3. The request is timely, fully documented, and properly submitted.
 4. The specified product or method of construction cannot be provided within the Contract Time. The Architect will not consider the request if the product or method cannot be provided as a result of failure to pursue the Work promptly or coordinate activities properly.
 5. The requested substitution offers the Owner a substantial advantage, in cost, time, energy conservation, or other considerations, after deducting additional responsibilities the Owner must assume. The Owner's additional responsibilities may include compensation to the Architect for redesign and evaluation services, increased cost of other construction by the Owner, and similar considerations.
 6. The specified product or method of construction cannot receive necessary approval by a governing authority, and the requested substitution can be approved.

7. The specified product or method of construction cannot be provided in a manner that is compatible with other materials and where the Contractor certifies that the substitution will overcome the incompatibility.
8. The specified product or method of construction cannot provide a warranty required by the Contract Documents and where the Contractor certifies that the proposed substitutions provides the required warranty.
9. Where a proposed substitution involves more than one Contractor, each Contractor shall cooperate with the other Contractors involved to coordinate the Work, provide uniformity and consistency, and assure compatibility of products.

2.3 MANUFACTURER'S DIRECTIONS

- A. Manufactured products shall be applied, installed, connected, erected, used, cleaned, and conditioned in accordance with the manufacturer's printed directions, unless herein specified to the contrary. Where manufacturer's printed directions are available and where reference is made to manufacturer's directions in the Specifications, the Contractor shall submit two 2 copies of such directions through the Construction Manager to the Architect prior to the beginning of Work covered thereby.
- B. Where specific installation instructions are not part of these Specifications and Drawings, equipment shall be installed in strict accordance with instructions from the respective manufacturers. Where installation instructions included in these Specifications or Drawings are at a variance with instructions furnished by the equipment manufacturer, the Contractor shall make written request for clarification from the Architect.
- C. In accepting or assenting to the use of apparatus or material, or make, or arrangement thereof, the Architect in no way waives the requirements of these Specifications or the warranty embodied therein.

2.4 WARRANTIES

- A. Specific warranties or bonds called for in the Contract Documents, in addition to that falling under the general warranty as set forth in General Conditions, shall be furnished in accordance with the requirements of the Specifications.
 1. Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products. Manufacturer's disclaimers and limitations on product warranties do not relieve suppliers, manufacturers, and Contractors required to countersign special warranties with the Contractor.

2. Owner's Recourse: Expressed warranties made to the Owner are in addition to implied warranties and shall not limit the duties, obligations, rights, and remedies otherwise available under law. Expressed warranty periods shall not be interpreted as limitations on the time in which the Owner can enforce such other duties, obligations, rights, or remedies.
 - a. Rejection of Warranties: The Owner reserves the right to reject warranties and to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
- B. Each Contractor shall and does hereby agree to warrant for a period of one year, or for longer periods, where so provided in the Specifications, as evidenced by the date of Substantial Completion issued by the Construction Manager, products installed under the Contract to be of good quality in every respect and to remain so for periods described herein.
- C. Should defects develop in the aforesaid Work within the specified periods, due to faults in products or their workmanship, the Contractor hereby agrees to make repairs and do necessary Work to correct defective Work to the Architect's satisfaction, in accordance with the Contract Documents. Such repairs and corrective Work, including costs of making good other Work damaged by or otherwise affected by making repairs or corrective Work, shall be done without cost to the Owner or Construction Manager and at the entire cost and expense of the Contractor within fourteen (14) days after written notice to the Contractor by the Construction Manager.
 1. Related Damages and Losses: When correcting failed or damaged warranted construction, remove and replace construction that has been damaged as a result of such failure or must be removed and replaced to provide access for correction of warranted construction.
 2. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.
- D. Nothing herein intends or implies that the warranty shall apply to Work which has been abused or neglected or improperly maintained by the Owner or his successor in interest.
- E. Where service on products is required under this Article, it shall be promptly provided when notified by the Owner and no additional charge shall be made, unless it can be established that the defect or malfunctioning was caused by abuse or accidental damage not to be expected under conditions of ordinary wear and tear.

- F. In the event movement in the adjoining structure or components causes malfunctioning, the Contractor responsible for the original installation of the adjoining structure or components shall provide such repair, replacement, or correction necessary to provide for proper functioning to bring the equipment back into the same operating condition as approved at the completion of the building.
- G. The manufacturer and supplier expressly warrants that each item of equipment furnished by him and installed in this Project is suitable for the application shown and specified in the Contract Documents and includes features, accessories, and performing characteristics listed in the manufacturer's catalog in force on the date bids are requested for the Work. This warranty is intended as an assurance by the manufacturer that his equipment is not being misapplied and is fit and sufficient for the service intended. This warranty is in addition to and not in limitation of other warranties or remedies required by law or by the Contract Documents. It shall be the responsibility of the Contractor for the particular equipment to obtain this warranty in writing.
- H. In case the Contractor fails to do Work so ordered, the Construction Manager may have work done and charge the cost thereof against monies retained as provided for in the Agreement and, if said retained monies shall be insufficient to pay such cost or if no money is available, the Contractor and his Sureties shall agree to pay to the Construction Manager the cost of such Work.

2.5 MATERIAL DELIVERY AND RESPONSIBILITIES

- A. Each Contractor shall be responsible for materials he orders for delivery to the jobsite. Responsibility includes, but is not limited to, receiving, unloading, storing, protecting, and setting in place; ready for final connections. Each Contractor will coordinate jobsite storage with the Construction Manager.
 - 1. The Construction Manager will not be responsible for deliveries related to the construction or operation of the Contractor. The Construction Manager cannot sign delivery forms for the Contractor.
- B. Contractors shall insure that products are delivered to the Project in accordance with the Construction Schedule of the Project. In determining date of delivery, sufficient time shall be allowed for shop drawings and sample approvals, including the possibility of having to resubmit improperly prepared submittals or products other than those specified and the necessary fabrication or procurement time along with the delivery method and distance involved.

2.6 PROTECTION

- A. Each Contractor shall protect building elements and products when subject to damage. Should workmen or other persons employed or commissioned by one Contractor be

responsible for damage, the entire cost of repairing said damage shall be assumed by said individual Contractor. Should damage be done by a person or persons not employed or commissioned by a Contractor, the respective Contractors shall make repairs and charge the cost to the guilty person or persons. The affected Contractors shall be responsible for collecting such charges. If the person or persons responsible for damage cannot be discovered, full and satisfactory repairs shall be made by the respective Contractor, and the cost of Work shall be prorated against each Contractor.

- B. The respective Contractors shall protect their products prior to installation and final acceptance. Storage shall be dry, clean, and safe. Materials or equipment damaged, deteriorated, rusted or defaced due to improper storage, shall be repaired, refinished, or replaced, as required by the Architect. Products lost through theft or mishandling shall be replaced by the Contractor without cost to the Construction Manager.

2.7 ACCEPTANCE OF EQUIPMENT OR SYSTEMS

- A. The Construction Manager will not accept the start of the warranty period on systems or equipment until Substantial Completion is issued to the respective Contractor(s) for Owner's occupancy of the building, in part or whole. Each Contractor shall make such provisions as required to extend the manufacturer's warranty from time of initial operation of systems or equipment until Substantial Completion is given in writing.

PART 3 – NOT USED

END OF SECTION 016000

SECTION 017123 – FIELD ENGINEERING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Division 00 and 01 Specification Sections, apply to work of this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for field engineering services including, but not limited to, the following:
 - 1. Construction layout.
 - 2. Field engineering and surveying.
 - 3. Anchor bolt location survey.

1.3 SUBMITTALS

- A. Qualification Data: For land surveyor to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects, owners, and Construction Managers and other information specified.
- B. Record Log: upon request
- C. Anchor Bolt Survey: upon completion of the Anchor Bolt installation.
- D. Certified Survey of foundation walls and site improvements: upon completion.
- E. Report discrepancies found during Construction Layout to the Architect and Construction Manager in writing before proceeding with the work.
- F. Request for Information: Upon discovery of items needing clarification in the Contract Documents.

1.4 QUALITY ASSURANCE

- A. Land Surveyor Qualifications: A professional land surveyor who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing land-surveying services of the kind indicated.

PART 2 – NOT USED**PART 3 – EXECUTION****3.1 EXAMINATION**

- A. Existing Conditions: The existence and location of site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other construction affecting the Work.
 - 1. Before construction, verify the location and points of connection of utility services.
- B. Existing Utilities: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities and other construction affecting the Work.
 - 1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; and underground electrical services.
 - 2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.

3.2 PREPARATION

- A. Existing Utility Information: Furnish information to Construction Manager that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. Field Measurements: Within sufficient time as to not delay the construction schedule, take field measurements as required to fit the Work properly. Where portions of the Work are indicated to fit to existing construction, verify dimensions of existing construction by field measurements before proceeding with the Work.
- C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to

Construction Manager. Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents.

3.3 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Architect and Construction Manager promptly.
- B. General: Engage a land surveyor to lay out the Work using accepted surveying practices.
 - 1. Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.
 - 2. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
 - 3. Inform installers of lines and levels to which they must comply.
 - 4. Check the location, level and plumb, of every major element as the Work progresses.
 - 5. Notify Architect and Construction Manager when deviations from required lines and levels exceed allowable tolerances.
 - 6. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.
- C. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and invert elevations.
- D. Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.
- E. Anchor Bolt Survey Location: On completion of anchor bolt installation and prior to erecting steel, prepare a certified survey showing dimensions, locations, angles, and elevation of anchor bolts.
- F. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Make the log available for reference by Architect and Construction Manager.

3.4 FIELD ENGINEERING

- A. Identification: Construction Manager will identify existing benchmarks, control points, and property corners.
- B. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.
 - 1. Do not change or relocate existing benchmarks or control points without prior written approval of Construction Manager. Report lost or destroyed permanent benchmarks or control points to Construction Manager before proceeding.
 - 2. Replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points.
- C. Benchmarks: Establish and maintain a minimum of two permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.
 - 1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
 - 2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.
 - 3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.
- D. Certified Survey: On completion of foundation walls, major site improvements, and other work requiring field-engineering services, submit in triplicate, a certified survey showing dimensions, locations, angles, and elevations of construction and sitework.

END OF SECTION 017123

SECTION 017123.13 – WORK LAYOUT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Division 00 and 01 Specification Sections, apply to work of this Section.

PART 2 – NOT USED

PART 3 – EXECUTION

3.1 EXAMINATION LAYOUT

- A. Each Contractor shall be responsible for the layout of his work and the coordination of his work with other trades.
- B. Verify all grades, lines, levels and dimensions as shown on Drawings and report any errors or inconsistencies to the Construction Manager before commencing work.
- C. Dimensions shall not be scaled from the Drawings.

END OF SECTION 017123.13

SECTION 017133.13 – UTILITY PROTECTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Division 00 and 01 Specification Sections, apply to this Section.

PART 2 – NOT USED

PART 3 – EXECUTION

3.1 PROTECTION

- A. Existing utility lines and structures indicated or known, and utility lines constructed for this Project shall be protected from damage during construction operations.
- B. Locate and flag all lines and structures before beginning excavation and other construction operations.

3.2 REMOVAL AND RELOCATION

- A. When utility lines and structures that are to be removed or relocated are encountered within the area of operations, notify the Construction Manager and affected utility in ample time for the necessary measures to be taken to prevent interruption of the services.

3.3 UNKNOWN LOCATIONS

- A. Damage to existing utility lines or structures not indicated or known shall be reported immediately to the Construction Manager and the affected utility. If determined that repairs are required under the Contract, the cost of such repairs will be covered by Change Order.
- B. Record locations of utility lines or structures on "Project Record Drawings" maintained at the jobsite by the Construction Manager.

END OF SECTION 017133.13

SECTION 017329 – CUTTING AND PATCHING**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including Division 00 and 01 Specification Sections, apply to work of this Section.

1.2 CUTTING AND PATCHING

- A. Definition: "Cutting and Patching" includes cutting into existing construction to provide for the installation or performance of other work and subsequent fitting and patching required to restore surfaces to their original condition.
 - 1. "Cutting and patching" is performed for the coordination of the Work, to uncover work for access or inspection, to obtain samples for testing, to permit alterations to be performed or for other similar purposes.
 - 2. Cutting performed during the manufacture of products, or during the initial fabrication, erection or installation process is not considered to be "cutting and patching" under this definition. Drilling of holes to install fasteners and similar operations is also not considered to be "cutting and patching".
 - 3. "Demolition" and "Selective Demolition" are recognized as related - but - separate categories of work, which may or may not require cutting and patching as defined in this Section; refer to "Demolition" and "Selective Demolition" Sections of Division 2.
- B. Refer to other Sections of these Specifications for specific cutting and patching requirements and limitations applicable to individual units of work.
 - 1. Unless otherwise specified, requirements of this Section apply to mechanical and electrical work. Refer to fire suppression, plumbing, heating, ventilating, air conditioning, electrical, communications, and electronic safety/security specifications for additional requirements and limitations on cutting and patching of mechanical and electrical work.

1.3 QUALITY ASSURANCE

- A. Requirements for Structural Work: Do not cut and patch structural work in a manner that would result in a reduction of load-carrying capacity or of load-deflection ratio.

- B. Before cutting and patching the following categories of work, obtain the Architect/Engineer's approval to proceed with cutting and patching as described in the procedural proposal for cutting and patching:
1. Structural steel
 2. Miscellaneous structural metals, including lintels, equipment supports, stair systems and similar categories of work
 3. Structural concrete
 4. Foundation construction
 5. Timber and primary wood framing
 6. Bearing and retaining walls
 7. Structural decking
 8. Piping, ductwork, vessels and equipment
 9. Structural systems of special construction, as specified by Division-13 Sections
- C. Operational and Safety Limitations: Do not cut and patch operational elements or safety related components in a manner that would result in a reduction of their capacity to perform in the manner intended, including energy performance, or that would result in increased maintenance, or decreased operational life or decreased safety.
- D. Before cutting and patching the following elements of work, and similar work elements here directed, obtain the Architect/Engineer's approval to proceed with cutting and patching as proposed in the proposal for cutting and patching.
- E. Visual Requirements: Do not cut and patch work exposed on the building's exterior or in its occupied spaces, in a manner that would, in the Architect/Engineer's opinion result in lessening the building's aesthetic qualities. Do not cut and patch work in a manner that would result in substantial visual evidence of cut and patch work. Remove and replace work judged by the Architect/Engineer to be cut and patched in a visually unsatisfactory manner.

1.4 SUBMITTALS

- A. Procedural Proposal for Cutting and Patching: Where prior approval of cutting and patching is required, submit proposed procedures for this work well in advance of the time work will be performed and request approval to proceed. Include the following information, as applicable, in the submittal:
1. Describe nature of the work and how it is to be performed, indicating why cutting and patching cannot be avoided. Describe anticipated results of the work in terms of changes to existing work, including structural, operational and visual changes as well as other significant elements.

2. List products to be used and firms that will perform work.
3. Give dates when work is expected to be performed.
4. List utilities that will be disturbed or otherwise affected by work, including those that will be relocated and those that will be out of service temporarily. Indicate how long utility service will be disrupted.
5. Where cutting and patching of structural work involves the addition of reinforcement, submit details and engineering calculations to show how that reinforcement is integrated with original structure to satisfy requirements.
6. Approval by the Architect/Engineer to proceed with cutting and patching of work does not waive the Architect/Engineer's right to later require complete removal and replacement of work found to be cut and patched in an unsatisfactory manner.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. General: Except as otherwise indicated, or as directed by Architect/Engineer, use materials for cutting and patching that are identical to existing materials. If identical materials are not available, or cannot be used, use materials that match existing adjacent surfaces to the fullest extent possible with regard to visual effect. Use materials for cutting and patching that will result in equal or better performance characteristics.

PART 3 – EXECUTION

3.1 INSPECTION

- A. Before cutting, examine the surfaces to be cut and patched and the conditions under which the work is to be performed. If unsafe or otherwise unsatisfactory conditions are encountered, take corrective action before proceeding with the work.

3.2 PREPARATION

- A. Temporary Support: To prevent failure, provide temporary support of work to be cut.
- B. Protection: Protect other work during cutting and patching to prevent damage. Provide protection from adverse weather conditions for that part of the Project that may be exposed during cutting and patching operations.

1. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- C. Take precautions not to cut existing pipe, conduit or duct serving the building but scheduled to be relocated until provisions have been made to bypass them.

3.3 PERFORMANCES

- A. General: Employ skilled workmen to perform cutting and patching work. Except as otherwise indicated or as approved by the Architect/Engineer, proceed with cutting and patching at the earliest feasible time and complete work without delay.
- B. Cutting: Cut the work using methods that are least likely to damage Work to be retained or adjoining Work. Where possible, review proposed procedures with the original installer; comply with original installer's recommendations.
1. In general, where cutting is required, use hand or small power tools designed for sawing or grinding, not hammering and chopping. Cut through concrete and masonry using a cutting machine such as a carborundum saw or core drill to ensure a neat hole. Cut holes and slots neatly to size required with minimum disturbance of adjacent work. To avoid marring existing finished surfaces, cut or drill from the exposed or finished side into concealed surfaces. Temporarily cover openings when not in use.
 2. Comply with requirements of applicable Section of Division 2 where cutting and patching is required in excavating and backfilling.
 3. Bypass utility services such as pipe and conduit, before cutting, where such utility services are shown or required to be removed, relocated, or abandoned. Cut-off conduit and piping in wall or partitions to be removed. After bypass and cutting, cap, valve or plug and seal tight remaining portion of pipe and conduit to prevent entrance of moisture or other foreign matter.
- C. Patching: Patch with seams which are durable and as invisible as possible. Comply with specified tolerances for the work.
1. Where feasible, inspect and test patched areas to demonstrate integrity of work.
 2. Restore exposed finishes of patched areas and where necessary extend finish restoration into retained adjoining work in a manner which will eliminate evidence of patching and refinishing.

3. Where removal of walls or partitions extends from one finished area into another finished area, patch and repair floor and wall surfaces in the new space to provide an even surface or uniform color and appearance. If necessary to achieve uniform color and appearance, remove existing floor and wall coverings and replace with new materials.
 - a. Where patch occurs in a smooth painted surface, extend final paint coat over entire unbroken surface containing patch after patched area has received prime and base coat.
- D. Plaster installation: Comply with manufacturer's instructions and install thickness and coats as indicated.
 1. Unless otherwise indicated, provide 3-coat work.
 2. Finish gypsum plaster with smooth-troweled finish.
 3. Cut, patch, point and repair plaster as necessary to accommodate other work and to restore cracks, dents, and imperfections.

3.4 CLEANING

- A. Thoroughly clean areas and spaces where work is performed or used as access to work. Remove completely paint, mortar, oils, putty, items of similar nature. Thoroughly clean piping, conduit, and similar features before painting or other finishing is applied. Restore damaged pipe covering to its original condition.

END OF SECTION 017329

SECTION 017413 – HOUSEKEEPING AND SAFETY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Division 00 and 01 Specification Sections, apply to work of this Section.

1.2 PURPOSE

- A. The purpose of this Section is to define and emphasize the responsibilities of the Construction Manager and each Contractor to keep the work site orderly, clean and safe for everyone.

1.3 HOUSEKEEPING REQUIREMENTS

- A. Each Contractor shall execute housekeeping to keep their Work, the site and adjacent properties free from accumulations of construction operations and as follows:
 - 1. Clean up all waste materials, rubbish and debris resulting from their own operations at such frequencies as required by the Construction Manager; but as a minimum on a daily basis.
 - 2. Place waste materials, rubbish and debris in trash carts and deliver trash carts outside the building to rubbish containers, as provided under Section 015260.
 - 3. Organize and secure materials, equipment, offices in assigned areas. Maintain administrative areas in an orderly fashion and relocate as necessary to facilitate the sequence of construction.
 - 4. Repair, patch, and touch up marred surfaces to match adjacent finishes damaged by their own operations.
 - 5. Leave all work areas in a "broom clean" condition at the completion of their work for the day.
 - 6. Participate in joint clean up as directed by the Construction Manager.
 - 7. Utilized established break areas and ensure employees and Contractors do not bring food or drink into the work area.

8. Enforce no smoking, no tobacco use policies.
- B. The Construction Manager shall be responsible for the following items:
1. Assign locations of and responsibility for site operations and logistics to include parking, storage, project offices, break areas, rubbish containment facilities and other administrative project requirements.
 2. Oversee cleaning and ensure the building and grounds are maintained free from accumulations of waste materials, rubbish, and debris.
 3. The Construction Manager may, from time to time schedule joint trade clean-up times in which all Contractors shall provide labor, in proportion to the manpower employed during the time period, to clean up all debris.
- C. Each Contractor is financially responsible for their own housekeeping operations. Clean-up must be timely as well as thorough in order to meet safety regulations and permit other Contractors to perform without hindrance from dirt and debris. Failure to perform daily cleaning to the satisfaction of the Construction Manager will result in a \$500/day fine.
- D. The cost of this work shall be included in the Contractor's Bid and must appear as a line item on the "Schedule of Values" as 1% of the total contract amount.

1.4 SAFETY REQUIREMENTS

- A. Each Contractor is responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of their work including:
1. Protection of their employees and those around them that may be affected by their work.
 2. Providing and maintaining an up-to-date HAZCOM and Safety Plan on file in the Construction Managers office. No contractor may mobilize or work on the site without said plan on file in the Construction Managers Office. MSDS must be kept current for materials utilized on the job site.
 3. Identifying and notifying the Construction Manager of hazards whether a result of their operations or operations affecting or may affect their employees on project.
 4. Each Contractor will employ and identify a "competent person" as defined by OSHA for each of its operations in accordance with OSHA/IOSHA/MIOSHA regulations.

- B. Construction Manager will coordinate the safety plans of each contractor and notify the Owner of any known hazards that may affect the site.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.
- B. Use only those cleaning materials which will not create hazards to health or property, and which will not damage surfaces.
- C. Each Contractor shall provide their own cleaning materials and equipment.
- D. Ensure that current Material Safety Data Sheets are on file in the HAZCOM and Safety Plan in the Construction Manager's Office.

PART 3 – EXECUTION

3.1 DURING CONSTRUCTION

- A. Execute cleaning to ensure that building, grounds, public and adjacent properties are maintained free from accumulations of waste materials and rubbish.
- B. Wet down dry materials and rubbish to lay dust and prevent blowing dust.
- C. Daily during progress of Work, clean site and public properties and deliver waste materials, debris and rubbish to dumpster.
- D. Leave no trash or debris in the building or uncontained on the site overnight.
- E. Remove debris from concealed spaces before enclosing the space.
- F. Handle materials in a controlled manner with as few handlings as possible; do not drop or throw materials from heights.
- G. Schedule cleaning operations so that dust and other contaminants resulting from cleaning process will not fall on wet, newly painted surfaces or affect the HVAC systems.
- H. Place no new work on dirty surfaces.
- I. Store volatile wastes in covered metal containers and remove from premises daily.

- J. Prevent accumulation of wastes which create hazardous conditions.
- K. Provide adequate ventilation during use of volatile or noxious substances.
- L. Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws.
 - 1. Do not burn or bury rubbish and waste materials on Project site.
 - 2. Do not dispose of volatile wastes such as mineral spirits, oil, or paint thinner in storm or sanitary drains.
 - 3. Do not dispose of wastes into streams or waterways.
- M. Clean exposed surfaces and protect as necessary to maintain them free from damage and deterioration through Substantial Completion.

END OF SECTION 017413

SECTION 017423 – FINAL CLEANING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Division 00 and 01 Specification Sections, apply to work of this Section.

1.2 SAFETY REQUIREMENTS

- A. Hazards Control.
 - 1. Store volatile wastes in covered metal containers and remove from premises daily.
 - 2. Prevent accumulation of wastes, which create hazardous conditions.
 - 3. Provide adequate ventilation during use of volatile or noxious substances.
- B. Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws.
 - 1. Do not burn or bury rubbish and waste materials on Project site.
 - 2. Do not dispose of volatile wastes such as mineral spirits, oil, or paint thinner in storm or sanitary drains.
 - 3. Do not dispose of wastes into streams or waterways.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Use only cleaning materials recommended by manufacturer of surface to be cleaned.
- B. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.
- C. Use only those cleaning materials which will not create hazards to health or property, and which will not damage surfaces.

- D. Ensure that current Material Safety Data Sheets are on file in the HAZCOM and Safety Plan in the Construction Manager's Office.

PART 3 – EXECUTION

3.1 DURING CONSTRUCTION FINAL CLEANING

- A. Employ professional cleaners for final cleaning.
- B. In preparation for substantial completion or occupancy, conduct final inspection of interior and exterior surfaces and of concealed spaces.
- C. Remove grease, dust, dirt, stains, labels, fingerprints, and other foreign materials from interior and exterior finished surfaces. Clean all surfaces exposed to the accumulation of dirt, dust or debris whether or not easily with-in sight.
- D. Clean all areas of glass.
- E. Broom clean paved surfaces; rake clean other surfaces of grounds.
- F. Maintain cleaning until Project, or portion thereof, is accepted by the Construction Manager.
- G. Immediately bring to the attention of the Construction Manager any items requiring repair that are discovered during the process of final cleaning.
- H. When final cleaning involves use of volatile or noxious products and there exists a possibility of fumes entering adjacent occupied areas, coordinate with Owner, through Construction Manager, for additional ventilation requirements or a more acceptable time, including off hours, to perform the work.

END OF SECTION 017423

SECTION 017700 – CONTRACT CLOSEOUT**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including Division 00 and 01 Specification Sections, apply to work of this Section.
- B. The Work of this Section shall be included as a part of the Contract Documents of each Contractor on this Project. Where such Work applies to only one Contractor, it shall be defined as to which Contractor the Work belongs.
- C. Refer to the amended General Conditions of the Contract for Substantial Completion and final payment.
- D. Specification Section 013300 Submittal Procedures.

1.2 SUMMARY

- A. Closeout is one of the most important aspects of the project. Preparation for Closeout starts from the beginning of the project and includes all the activities for final acceptance, final payment, normal termination of contract, occupancy by Owner, and similar actions evidencing completion of the Work. Specific requirements for individual units of Work are specified in the contract documents. Time of closeout is directly related to "Substantial Completion."
- B. This Section includes administrative and procedural requirements for contract closeout including, but not limited to, the following:
 - 1. Prerequisites to substantial completion
 - 2. Prerequisites to final payment
 - 3. Punch list
 - 4. Correction of Work period
 - 5. Project record documents
 - 6. Certification of code compliance
 - 7. Operation and maintenance manuals
 - 8. Instructions for the Owner's personnel
- C. All closeout documentation shall be submitted electronically. Each electronic submittal transmittal shall include the following information:

1. Date submitted.
2. Project title and number.
3. Contractor's name and address.
4. Identification by Specification Section and quantity submitted for each submittal including name of Contractors, manufacturer, or supplier.
5. Notification of deviations from the Contract Documents for each submittal.

1.3 PREREQUISITES TO SUBSTANTIAL COMPLETION

- A. General: Prior to requesting Construction Manager inspection for certification of Substantial Completion (for either entire Work or portions thereof), complete the following and list known exceptions in request:
1. In the Application for Payment that coincides with, or first follows the date Substantial Completion is claimed, show 100 percent completion for the Work claimed as substantially complete.
 - a. Include supporting documentation for completion as indicated in those Contract Documents and a statement showing an accounting for changes to the Contract sum.
 - b. If 100 percent completion cannot be shown, include a list of incomplete items, the value of incomplete construction, and reasons the Work is not complete.
 2. Advise Owner of pending insurance changeover requirements.
 3. Submit specific warranties, workmanship/maintenance bonds, maintenance agreements, agreements, final certifications, and similar documents.
 4. Obtain and submit releases enabling Owner's full and unrestricted use of the Work and access to services and utilities, including occupancy permits, operating certificates, and similar releases.
 5. Submit record drawings, maintenance, operating instructions, and similar final record information.
 6. Deliver tools, spare parts, extra stocks of materials, and similar physical items to Owner. Complete receipt for extra stock form, at the end of this Section.
 7. Make final changeover of locks and transmit keys to Construction Manager and advise Owner's personnel of changeover in security provisions.

8. Complete start-up testing of systems and instructions of Owner's operating/maintenance personnel. Discontinue and remove from project site temporary facilities and services, along with construction tools, mock-ups, and similar elements.
 9. Complete final cleaning-up requirements. Refer to Section 01 71 50 – Final Cleaning.
 10. Touch up and otherwise repair and restore marred, exposed finishes.
- B. Inspection Procedures: On receipt of a request for inspection, the Architect will either proceed with inspection or advise the Contractor of unfulfilled requirements. The Architect will prepare the Certificate of Substantial Completion following inspection or advise the Contractor of construction that must be completed or corrected before the certificate will be issued.
1. The Construction Manager will repeat inspection when requested and assure that the work is substantially complete.
 2. Results of the completed inspection will form the basis of requirements for final acceptance.

1.4 PREREQUISITES TO FINAL PAYMENT

- A. General: Prior to requesting Construction Manager final inspection for certification of final payment, complete the following:
1. Submit final payment request, with releases and supporting documentation not previously submitted and accepted. Include insurance certificates for products and complete operations where required.
 2. Submit copy of Construction Manager final punch list of itemized work to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance.
 3. Submit record drawings, maintenance manuals, and similar final record information.
 4. Certification of code compliance for Mechanical, Plumbing and Electrical work.
 5. Submit certification stating that no materials containing asbestos were incorporated into the work.

6. Plumbing Contractor shall submit certification stating that no flux or solder used for drinking water piping contained more than 0.2 percent lead, and that no pipe or fittings used for drinking water piping contained more than 8.0 percent lead.
 7. Firestopping Contractor's letter of certification stating that all Firestopping systems have been installed in accordance with the Contract Documents.
 8. Submit final meter readings for utilities, a measured record of stored fuel, and similar data as of the date of Substantial Completion of when the Owner took possession of and assumed responsibility for corresponding elements of the work.
 9. Submit consent of surety to final payment.
 10. Submit evidence of final, continuing coverage complying with insurance requirements.
 11. Submit a final liquidated damages settlement statement, if applicable. Final unconditional waiver of liens, prepared on AIA Documents G706, G706A, and Consent of Surety G707.
- B. Re-inspection Procedure: The Construction Manager will re-inspect the work upon receipt of notice that the work, including inspection list items from earlier inspections, has been completed, except for items whose completion is delayed under circumstances acceptable to the Construction Manager.
1. Upon completion of re-inspection, the Construction Manager will prepare a certificate of final acceptance. If the work is incomplete, the Construction Manager will advise the Contractor of work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance.

PART 2 – NOT USED

PART 3 – EXECUTION

3.1 PUNCH LIST

- A. Prior to the Construction Manager's preparation of a Project Punch List, Construction Manager shall prepare a Work Completion List for use by Contractors and Contractors to facilitate completion of the Work.
- B. The Construction Manager's inspection shall be as thorough as possible, in accordance with their desire to provide first-class workmanship.

- C. After receipt of the Construction Manager's Work Completion List, the Contractors shall bring their work to 100% completion or list those items they cannot complete to 100% with the reasons why and inform the Construction Manager they are ready for final inspection.
- D. Construction Manager shall observe the Work and prepare the Project Punch List for use by the Construction Manager, Contractors, and their Contractors to expedite proper completion of the Work.
- E. Contractors will designate one or more individuals as required to complete the listed items within the specified time limits herein. This individual will be specifically assigned to the completion and correction of punch list items and have no other assignments. This individual will report to the Construction Managers designated Punch List Supervisor on a daily basis to report progress and removal of punch list items.
- F. The time fixed by the Architect and Construction Manager for the completion of all items referenced on the Certificate of Substantial Completion shall not be greater than 21 days. The Contractor shall complete items on the list within such 21-day period. The Contractor shall begin completion and correction activities within 7 days of receipt of the lists and complete all activities within the 21-day period specified. If the Contractor fails to do so, the Owner in its discretion may perform the Work by itself or others and the cost thereof shall be charged against the Contractor. If more than one inspection by the Construction Manager for the purpose of evaluating corrected work for a Contractor is required by the subject list of items to be completed or corrected, it will be performed at the Contractor's expense.
- G. At the time the Construction Manager commences the Substantial Completion Inspection, if the Construction Manager discovers excessive additional items requiring completion or correction, the Construction Manager may decline to continue the inspection, instructing the Contractor as to the general classification of deficiencies which must be corrected before the Construction Manager will resume the Substantial Completion Inspection. If the Contractor fails to pursue the Work so as to make it ready for Substantial Completion Inspection in a timely fashion, the Construction Manager shall, after notifying the Contractor, conduct inspections and develop a list of items to be completed or corrected. This list of items shall be furnished to the Contractor who shall proceed to correct such items within 21 days. The Architect will conduct additional inspections as required to determine that the Work is ready for Substantial Completion Inspection.
- H. The Contractor shall reimburse the Construction Manager from the amounts due the Contractor under the Contract Documents for (1) the cost of inspections between the termination of the initial Substantial Completion Inspection and the commencement of

the satisfactory Substantial Completion Inspection, (2) The cost of inspection or review after the 21 day period established for the completion of the list by the Contractor.

- I. Contractors will continue to attend progress meetings with the Owner, Architect and Construction Manager until they are 100% complete with their contract.
- J. Contractors failing to actively participate in the correction of the punch list delaying the close out of the project beyond the 21-day period will also reimburse the Construction Manager for additional time of the Construction Manager required to facilitate the closeout of the Project.

3.2 CORRECTION OF WORK PERIOD (WARRANTY)

- A. Prior to the expiration of the one-year correction of work period (warranty), the Architect and Construction Manager will check to see if additional Work by the Contractor(s) is needed to make good on the warranties. An itemized list will be furnished to the Contractor for corrective or replacement work.
- B. This Work shall be completed immediately by the Contractor(s) after receiving notification.

3.3 PROJECT RECORD DOCUMENTS

- A. Project Record Documents include drawings, project manual, product data, and samples.
- B. Each Contractor shall update "Project Record Drawings" on separate blue or black line prints set-aside especially for this purpose on the job. Drawings shall incorporate changes made in the Work of the respective trades during the construction period. Such changes shall be indicated at the time they occur.
 - 1. Accurately record information in an understandable drawing technique.
 - 2. Record data as soon as possible after obtaining it. Record and check markup prior to enclosing concealed installations.
- C. The Construction Manager shall maintain at the jobsite one copy of Drawings, Project Manual, addenda, final shop drawings, change orders, field orders, other contract modifications, and other documents submitted by the Contractor, in compliance with various Sections of the Project Manual.
- D. Project Record Drawings shall be clearly marked "Project Record Document", maintained in good condition; available for observation by the Architect; and shall not be used for construction purposes. Mark these drawings to show the actual installation

where the installation varies from the installation shown originally. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later. Items required to be marked include, but are not limited to, the following:

1. Dimensional changes to the Drawings.
2. Significant detail not shown in the original Contract Documents including Change Orders or Construction Change Directives.
3. The location of underground utilities and appurtenances dimensionally referenced to permanent surface improvements.
4. The location of internal utilities and appurtenances concealed in building structures, referenced to visible and accessible features of the structures.
5. When elements are placed exactly as shown on Drawings, so indicate; otherwise show changed location.
6. Revisions to details shown on the Drawings.
7. Depths of foundations below the first floor.
8. Revisions to routing of piping and conduits.
9. Revisions to electrical circuiting.
10. Actual equipment locations.
11. Duct size and routing.
12. Changes made following the Architect's written orders.
13. Details not on original Contract Drawings.
14. Charts and locations of concealed work.
 - a. The plumbing and HVAC Contractors shall prepare a suitable chart identifying and locating each concealed control or other concealed item requiring repair, adjustment, and maintenance. Charts shall be mounted in suitable frames with glass covers secured to wall where directed.
 - b. Charts shall list each item, together with its function, item number, and location.

- c. Locations throughout the building shall be identified on the wall or ceiling by permanent non-obstructive plates, labels, or other approved means secured in a permanent manner.
 - d. Chart details, identification methods, locations, and methods of attachment shall be as approved by the Architect's representative at the jobsite upon full submission of proposed procedures and proper execution of same.
- E. Keep project record documents current. Do not permanently conceal work until the required information has been recorded. Mark record prints of Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. Where shop drawings are marked, show cross reference on Contract Drawings location.
 - 1. Mark record sets with red, or color that may be photo copied, erasable colored pencil. Use other colors (no blue) to distinguish between changes for different categories of the work at the same location.
 - 2. Note Construction Change Directive numbers, alternate numbers, change order numbers, and similar identification.
- F. During the construction period, maintain one copy of the Project Manual, including addenda and modifications issued, for Project Record Documents purposes.
 - 1. Mark the Specifications to indicate the actual installation where the Installation varies from that indicated in Specifications and modifications issued. Note related project record drawings information, where applicable. Give particular attention to substitutions, selection of product options, and information on concealed installations that would be difficult to identify or measure and record later.
- G. Record Sample Submittal: Immediately prior to date of Substantial Completion, meet with the Architect and Owner's personnel at the site to determine which of the samples maintained during the construction period shall be transmitted to the Owner for record purposes. Comply with the Architect's instructions for packaging, identification marking, and delivery to the Owner's samples storage space. Dispose of other samples in a manner specified for disposing samples and waste materials.
- H. Monthly record on the Construction Manager's "Project Record Documents" changes made to the contract documents.

1. Title sheets shall be labeled "Project Record," dated, and signed by the Contractor(s).
2. The Construction Manager's record drawings will be submitted to the Owner.
- I. Prior to final completion the Contractors for Mechanical, Plumbing, Fire Protection and Electrical Work shall update their working drawings with changes made in his Work. Contractors will submit record drawings as agreed upon with the Owner, Architect, and Construction Manager, and/or as required elsewhere in the Contract Documents.
 1. Each drawing shall be labeled "Project-Record," dated and signed by the Contractor.

3.4 CERTIFICATION OF CODE COMPLIANCE

- A. Prior to final payment the Contractors indicated below shall submit through the Construction Manager to the Architect (in duplicate) letters of certification of code compliance as follows:
 1. The Contractor(s) for Mechanical and Plumbing Work shall submit letter certifying mechanical installations comply with UMC current applicable editions.
 2. The Contractor(s) for Electrical Work shall submit letters certifying that electrical wiring complies with NEC current applicable editions.
 3. The Contractor(s) for Electrical Work shall submit letters certifying that alarm systems, smoke and heat detection systems comply with Chapter 31 (Regulations No. 7) of UBC, current applicable edition, as supplemented by NFPA Standards 72A, B, C, D, and E.

3.5 MAINTENANCE AND OPERATING INFORMATION

- A. The Contractors shall submit Maintenance and Operating Information presenting complete directions and recommendations for the proper care and maintenance of visible surfaces as well as maintenance and operating instructions for equipment items which he has provided.
 1. If the project is being constructed in Phases, Maintenance and Operating Information shall be submitted for each Phase of Work.
 2. Operations and Maintenance information will be submitted as part of the submittal process in accordance with requirements of the submittal process.

- B. Operating instructions shall include necessary printed directions for correct operations, adjustment, servicing, and maintenance of movable parts. Also included shall be suitable parts lists, diagrams showing parts location and assembly, information specified in individual Specification Sections and the following:
1. Emergency Instructions.
 2. Wiring diagrams.
 3. Recommended maintenance procedures and turnaround times. Mechanical contractors will submit a comprehensive periodic maintenance, filters, belts and consumables matrix for all major Mechanical components. Matrix should depict equipment, recommended service intervals, filters, belts or other consumable products required in the periodic maintenance. Matrix should include quantity and part numbers of filters, belts and other consumables required for each piece of equipment and for each periodic maintenance time period.
 4. Inspection and system test procedures.
 5. Precautions against improper maintenance and exposure.
- C. For each titled item or work portion the contractor submits, the O & M information shall include:
1. The names, addresses, and phone number of the following parties:
 - a. Contractor/Installer
 - b. Manufacturer
 - c. Nearest dealer/supplier
 - d. Nearest agency capable of supplying parts and service
 2. Label each item with the following information:
 - a. Project name and address
 - b. Specification Section and Title
 - c. Name of specific component or item
 - d. Owner's name
 - e. Name and address of Architect
 - f. Name and address of Construction Manager
 - g. Name and address of Contractor
 - h. Date of submission

3.6 WARRANTY, GUARANTEES, CERTIFICATIONS, RECIEPTS AND VERIFICATIONS

- A. Prior to Substantial Completion the contractors shall submit the following:
1. All warranties for the contractor's scope of work, including 1-year comprehensive parts and labor, special and long-term manufacturers warranties or guarantees as provided for in the project specifications.
 2. Certificates of Code Compliance for Plumbing, Mechanical, Electrical and Fire Protection Systems
 3. Firestopping Sealant Certifications
 4. Receipts for Extra Stock
 5. Verification of Owner Training
 6. Certificate of Occupancy (if applicable)
 7. Other information as required by the Owner, Architect or Construction Manager

3.7 INSTRUCTIONS FOR THE OWNER'S PERSONNEL

- A. Arrange for each Installer of equipment that requires regular maintenance and noted in technical sections, to meet with the Owner's personnel to provide instruction in proper operation and maintenance. Provide instruction by manufacturer's representatives if Installers are not experienced in operation and maintenance procedures. Include a detailed review of the following items:
1. Maintenance manuals
 2. Record documents
 3. Spare parts and materials
 4. Tools
 5. Lubricants
 6. Fuels
 7. Identification systems
 8. Control sequences
 9. Hazards
 10. Cleaning
 11. Warranties and bonds
 12. Maintenance agreements and similar continuing commitments
- B. As part of instruction for operating equipment, demonstrate the following procedures:
1. Startup
 2. Shutdown
 3. Emergency operations

4. Noise and vibration adjustments
 5. Safety procedures
 6. Economy and efficiency adjustments
 7. Effective energy utilization
- C. Each contractor shall provide video record of all in-service training and maintenance demonstrations provided to the Owner. Submit to the Construction Manager electronic files for all such training.

3.8 Complete Verification of Owner Training form, at the end of this Section.

END OF SECTION 017700