

900 - Phase D Checklist

This checklist is to be used by the Architect-Engineer during Phase D of the Project.

Project Administration:

- | Complete | N/A | |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | Review: Requirements in Chapter 9 – Phase D Construction, of the Capital Construction Project Procedures Manual have been reviewed. |
| <input type="checkbox"/> | <input type="checkbox"/> | Phase D Authorization: Phase D authorization has been received from Project Manager. |
| <input type="checkbox"/> | <input type="checkbox"/> | Unresolved Issues: Any unresolved or incomplete issues from Phase C have been reviewed and resolved. |
| <input type="checkbox"/> | <input type="checkbox"/> | Contract: The Construction Contract has been issued to the Contractor, copy to Architect-Engineer. |
| <input type="checkbox"/> | <input type="checkbox"/> | Resident Observer: Architect-Engineer provides full time Resident Observation services, if required. |
| <input type="checkbox"/> | <input type="checkbox"/> | Project Directory: The updated Project Directory has been distributed. |
| <input type="checkbox"/> | <input type="checkbox"/> | Communication: A system of routing and distribution for project construction correspondence and submittals has been developed and implemented. |
| <input type="checkbox"/> | <input type="checkbox"/> | Pre-Construction Conference: The Pre-Construction Conference has been scheduled and conducted. Architect-Engineer writes and distributes Pre-Construction Conference minutes. |
| <input type="checkbox"/> | <input type="checkbox"/> | Progress Meetings: Phase D Construction Progress Meetings have been scheduled and conducted with Contractor, Owner, Using Agency and Design Team. Architect-Engineer writes and distributes meeting minutes. |
| <input type="checkbox"/> | <input type="checkbox"/> | Commissioning Conference: Phase D Commissioning Conference has been scheduled. Commissioning Authority conducts meeting; writes and distributes meeting minutes. |
| <input type="checkbox"/> | <input type="checkbox"/> | Construction Schedule: Contractor's Construction Schedule has been received and distributed. The Architect-Engineer shall review the updated construction schedule monthly. |
| <input type="checkbox"/> | <input type="checkbox"/> | Responsibilities: Contract administration and site observation responsibilities have been assigned. |
| <input type="checkbox"/> | <input type="checkbox"/> | Contractor's Submittal Schedule: The Contractor's submittal schedule has been obtained and reviewed. |
| <input type="checkbox"/> | <input type="checkbox"/> | Contractor's Schedule of Values: Prior to the first application for payment, receive and review Contractor's Schedule of Values. |
| <input type="checkbox"/> | <input type="checkbox"/> | Contractor's Application for Payment: The Contractor's Applications for Payment have been received, reviewed and approved. See Section 916. |
| <input type="checkbox"/> | <input type="checkbox"/> | Tests and Inspections: Required tests and inspection reports have been obtained and reviewed. |
| <input type="checkbox"/> | <input type="checkbox"/> | Drawings and Submittals: Receive Shop drawings, samples and submittals have been received and reviewed. Appropriate action has been taken and returned to Contractor. |
| <input type="checkbox"/> | <input type="checkbox"/> | Recordkeeping: Shop drawing, RFI, and Change Order logs have been maintained. |
| <input type="checkbox"/> | <input type="checkbox"/> | Change Orders: Change Order proposals have been reviewed and an appropriate response given. |

Construction Contract Administration Files: The Architect-Engineer shall create construction contract administration files including but not limited to the following:

- | Complete | N/A | |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Correspondence and Meeting Minutes |
| <input type="checkbox"/> | <input type="checkbox"/> | Construction Schedules |
| <input type="checkbox"/> | <input type="checkbox"/> | Field Reports |
| <input type="checkbox"/> | <input type="checkbox"/> | Project Photography |
| <input type="checkbox"/> | <input type="checkbox"/> | Requests for Information (RFI's) |
| <input type="checkbox"/> | <input type="checkbox"/> | Requests for Proposals (RFP's) |
| <input type="checkbox"/> | <input type="checkbox"/> | Construction Change Directives or Architects Supplemental Instructions (ASI) |
| <input type="checkbox"/> | <input type="checkbox"/> | Testing and Inspection Reports |
| <input type="checkbox"/> | <input type="checkbox"/> | Submittals |
| <input type="checkbox"/> | <input type="checkbox"/> | Regulatory Inspections, Permits and Approvals |
| <input type="checkbox"/> | <input type="checkbox"/> | Applications for Payment |
| <input type="checkbox"/> | <input type="checkbox"/> | Contract Agreements |
| <input type="checkbox"/> | <input type="checkbox"/> | Schedule of Values |
| <input type="checkbox"/> | <input type="checkbox"/> | Certificates of Insurance |
| <input type="checkbox"/> | <input type="checkbox"/> | Project Closeout |
| <input type="checkbox"/> | <input type="checkbox"/> | Other files as necessary |

Phase D Completion Checklist:

- | Complete | N/A | |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | The Contractor shall provide notification of substantial completion and provide the Architect-Engineer a list of items to be completed or corrected. |
| <input type="checkbox"/> | <input type="checkbox"/> | The Architect-Engineer shall provide a punch list inspection to verify substantial completion. The Architect-Engineer's shall issue the punch list. |
| <input type="checkbox"/> | <input type="checkbox"/> | The Architect-Engineer shall provide the Final Inspection to verify completion or correction of punch list items. |
| <input type="checkbox"/> | <input type="checkbox"/> | When the project is judged to be substantially complete, a Certificate of Substantial Completion shall be issued. |
| <input type="checkbox"/> | <input type="checkbox"/> | The Contractor's record drawing mark-up prints shall be received and reviewed. |
| <input type="checkbox"/> | <input type="checkbox"/> | Architect-Engineer shall transfer Contractor's record drawing mark-ups to AutoCAD files. |
| <input type="checkbox"/> | <input type="checkbox"/> | Contractor's close-out submittals shall be reviewed for completeness. |
| <input type="checkbox"/> | <input type="checkbox"/> | The Contractor has obtained a Certificate of Occupancy or occupancy permit. |
| <input type="checkbox"/> | <input type="checkbox"/> | The Contractor's application for final payment, including lien waivers, consent of surety and final affidavit, has been reviewed and signed. |

Commissioning Authority:

- | Complete | N/A | |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | Updated Owner's Project Requirements & Manual |
| <input type="checkbox"/> | <input type="checkbox"/> | Submittals and Shop Drawing Review Summary |
| <input type="checkbox"/> | <input type="checkbox"/> | Construction Checklist Distribution and Reviews |
| <input type="checkbox"/> | <input type="checkbox"/> | Systems Commissioning Test Schedules |
| <input type="checkbox"/> | <input type="checkbox"/> | Owner Training Schedule |

Commissioning Authority: (continued)

Complete	N/A	
<input type="checkbox"/>	<input type="checkbox"/>	Commissioning Progress Meetings
<input type="checkbox"/>	<input type="checkbox"/>	Construction Phase Support / Testing / Inspections
<input type="checkbox"/>	<input type="checkbox"/>	Progress Reports
<input type="checkbox"/>	<input type="checkbox"/>	Operations and Maintenance Documentation
<input type="checkbox"/>	<input type="checkbox"/>	Approved Record Documents
<input type="checkbox"/>	<input type="checkbox"/>	Commissioning Report
<input type="checkbox"/>	<input type="checkbox"/>	Updated Systems Manual
<input type="checkbox"/>	<input type="checkbox"/>	Systems Maintenance Turnover Plan
<input type="checkbox"/>	<input type="checkbox"/>	Case Study

Facility Services Subgroup:

Division 21 Fire Suppression:

Complete	N/A	
<input type="checkbox"/>	<input type="checkbox"/>	Construction Phase Testing / Review / Approvals
<input type="checkbox"/>	<input type="checkbox"/>	Operating & Maintenance Manual Review / Approval
<input type="checkbox"/>	<input type="checkbox"/>	Contractor's Submittals & Shop Drawings Reviews / Approvals
<input type="checkbox"/>	<input type="checkbox"/>	Commissioning Report Review / Approval
<input type="checkbox"/>	<input type="checkbox"/>	Owner's Training Program Approval

Division 22 Plumbing:

Complete	N/A	
<input type="checkbox"/>	<input type="checkbox"/>	Construction Phase Testing / Review / Approvals
<input type="checkbox"/>	<input type="checkbox"/>	Operating & Maintenance Manual Review / Approval
<input type="checkbox"/>	<input type="checkbox"/>	Contractor's Submittals & Shop Drawings Reviews / Approvals
<input type="checkbox"/>	<input type="checkbox"/>	Commissioning Report Review / Approval
<input type="checkbox"/>	<input type="checkbox"/>	Owner's Training Program Approval

Division 23 HVAC:

Complete	N/A	
<input type="checkbox"/>	<input type="checkbox"/>	HVAC Systems TAB Report / Review / Approval
<input type="checkbox"/>	<input type="checkbox"/>	Witnessed Equipment Factory Performance Tests
<input type="checkbox"/>	<input type="checkbox"/>	Construction Phase Testing / Review / Approvals
<input type="checkbox"/>	<input type="checkbox"/>	Operating & Maintenance Manual Review / Approval
<input type="checkbox"/>	<input type="checkbox"/>	Contractor's Submittals & Shop Drawings Reviews / Approvals
<input type="checkbox"/>	<input type="checkbox"/>	Commissioning Report Review / Approval
<input type="checkbox"/>	<input type="checkbox"/>	Owner's Training Program Approval

Facility Services Subgroup: (continued)

Division 25 Integrated Automation:

- | | | |
|--------------------------|--------------------------|---|
| Complete | N/A | |
| <input type="checkbox"/> | <input type="checkbox"/> | Construction Phase Testing / Review / Approvals |
| <input type="checkbox"/> | <input type="checkbox"/> | Operating & Maintenance Manual Review / Approval |
| <input type="checkbox"/> | <input type="checkbox"/> | Contractor's Submittals & Shop Drawings Reviews / Approvals |
| <input type="checkbox"/> | <input type="checkbox"/> | Commissioning Report Review / Approval |
| <input type="checkbox"/> | <input type="checkbox"/> | Owner's Training Program Approval |

Division 26 Electrical:

- | | | |
|--------------------------|--------------------------|---|
| Complete | N/A | |
| <input type="checkbox"/> | <input type="checkbox"/> | Construction Phase Testing / Review / Approvals |
| <input type="checkbox"/> | <input type="checkbox"/> | Operating & Maintenance Manual Review / Approval |
| <input type="checkbox"/> | <input type="checkbox"/> | Contractor's Submittals & Shop Drawings Reviews / Approvals |
| <input type="checkbox"/> | <input type="checkbox"/> | Commissioning Report Review / Approval |
| <input type="checkbox"/> | <input type="checkbox"/> | Owner's Training Program Approval |

Division 27 Communications:

- | | | |
|--------------------------|--------------------------|---|
| Complete | N/A | |
| <input type="checkbox"/> | <input type="checkbox"/> | Construction Phase Testing / Review / Approvals |
| <input type="checkbox"/> | <input type="checkbox"/> | Operating & Maintenance Manual Review / Approval |
| <input type="checkbox"/> | <input type="checkbox"/> | Contractor's Submittals & Shop Drawings Reviews / Approvals |
| <input type="checkbox"/> | <input type="checkbox"/> | Commissioning Report Review / Approval |
| <input type="checkbox"/> | <input type="checkbox"/> | Owner's Training Program Approval |

Division 28 Electronic Safety & Security:

- | | | |
|--------------------------|--------------------------|---|
| Complete | N/A | |
| <input type="checkbox"/> | <input type="checkbox"/> | Construction Phase Testing / Review / Approvals |
| <input type="checkbox"/> | <input type="checkbox"/> | Operating & Maintenance Manual Review / Approval |
| <input type="checkbox"/> | <input type="checkbox"/> | Contractor's Submittals & Shop Drawings Reviews / Approvals |
| <input type="checkbox"/> | <input type="checkbox"/> | Commissioning Report Review / Approval |
| <input type="checkbox"/> | <input type="checkbox"/> | Owner's Training Program Approval |

End of Phase D Checklist

901 – Architect - Engineer Phase D Authorization

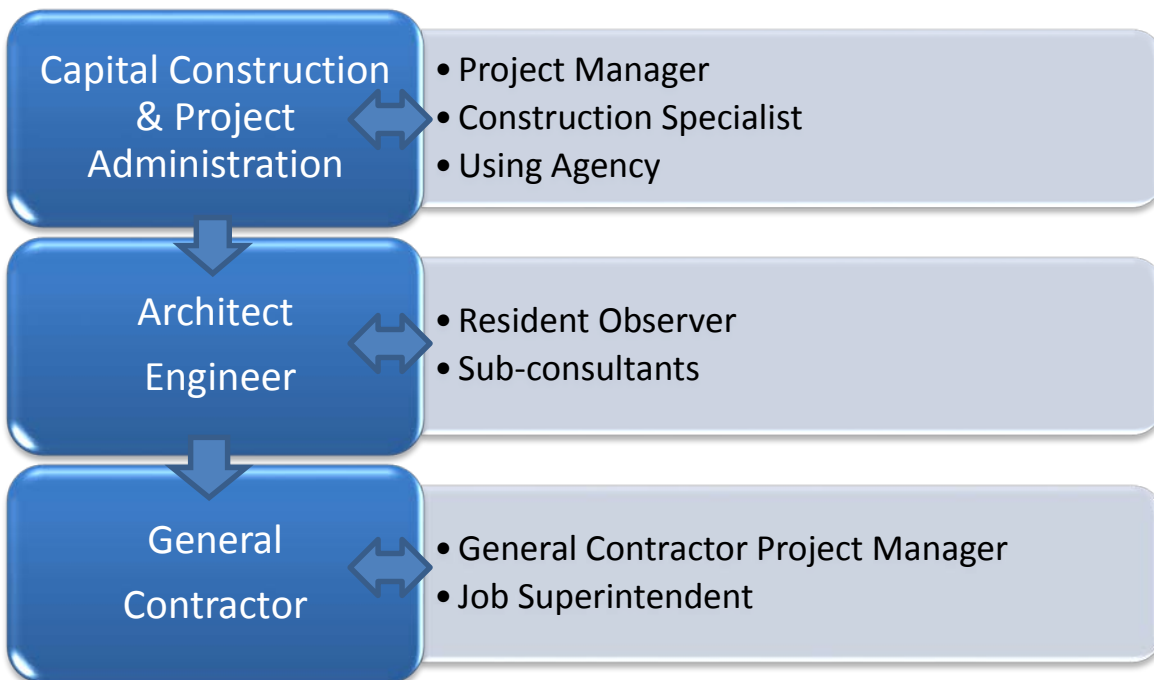
Authorization for the Architect–Engineer to commence with Phase “D” work shall be by letter from CCPA after award of the Construction Contract.

902 – Phase D Roles and Relationships

902.1 Relationships:

- The Architect-Engineer to Contractor relationship shall be as set forth in the General Conditions of the Construction Contract.
- The Owner to Contractor relationship shall be as set forth in the General Conditions of the Construction Contract.
- The Owner to Architect-Engineer relationship shall be as set forth in the General Conditions of the Construction Contract and in the Agreement between the Owner and Architect-Engineer.
- The Using Agency relationship to the Owner shall remain unchanged from the design phases. The Using Agency will not give direction to the Architect-Engineer or the Contractor during this phase.
- The Architect-Engineer will have continued interaction with the Project Manager during the construction of the Project. The Architect-Engineer's relationship to the Project Manager will not change.

902.2 Roles and Relationships Diagram:



903 – Resident Observation

903.1 Resident Observation Services: During the construction period, resident observation services may be required to be provided through the Architect-Engineer. In general, full-time resident observation services will typically be authorized when the cost of the project exceeds \$2,000,000.; however, unusual projects under \$2,000,000 requiring considerable inspection of coverable work may require full-time inspection for certain portions of the Project.

When requested to provide resident observation services, the Architect-Engineer shall furnish a written proposal stating the name of the proposed Resident Observer, salary requirements, and a brief resume of his working experience. A formal Change Order will be executed to the Architect-Engineer's contract upon approval of the resident observation proposal.

Payments for the services of the Resident Observer shall be according to provisions in the Architectural/ Engineering Agreement.

The Architect-Engineer shall not restrict direct communication between the Resident Observer and the Project Manager.

903.2 Duties and Responsibilities of the Resident Observer: When required, the Resident Observation Services are provided through a full-time employee stationed at the Project site. Resident Observer duties and responsibilities include:

- Perform on-site observations of the progress and quality of the Work as necessary to determine if materials, equipment and workmanship conform to requirements of the Contract Documents. Any observed deficiencies in the Work are to be reported immediately to the Architect-Engineer and the Project Manager. **See Section 904 for an Example Resident Observer Daily Report Form.**
- Review drawings, specifications, addenda, Change Orders, Field Orders and directives, Shop Drawings, construction schedules, meeting minutes, Project correspondence and other Project related information for the purpose of being familiar with the work to be accomplished by the Contractor.
- Any observed deviations from the Contract Documents shall be reported immediately to the Architect-Engineer and the Project Manager.
- Monitor the Contractor's construction schedule on an ongoing basis. Alert the Architect-Engineer and Project Manager to conditions that may lead to delays in completion of the Work.
- Accompany officials of local, state or federal agencies during their presence on site for the purpose of inspection, observation or coordination. Record the on-site visit or inspection and report to the Architect-Engineer the results or conclusions reached by the official(s).
- Attend and participate in all construction related Project meetings as directed by the Architect-Engineer.
- Maintain in an orderly fashion and make available for on-site review, a complete set of original Contract Documents (with addenda) plus supplementary drawings, Change Orders, Field Orders and directives, Shop Drawings, product data, requests for payment and other Project correspondence issued after the award of Contract.
- Maintain the drawings approved by the Department for Housing, Buildings, and Construction or other authority having jurisdiction. Update these drawings with supplemental information from the authority having jurisdiction that approves any changes to the construction or that provides a waiver or variance to the work.

- Review the Contractor's maintenance of Record Drawings for accuracy and timeliness. Report status at every progress meeting before approval of the Application for Payment.
- Complete and maintain daily field reports that indicate Work underway, weather and site conditions, construction issues that arose or were resolved, work inspected, governmental inspections, deliveries of materials and equipment, workers on site, etc. Send copies of these reports, on at least a weekly basis, to the Architect-Engineer. Simultaneously send copies directly to the Project Manager. Keep one complete set of reports at the job site.
- Maintain material samples which are required to be received at the Project site. Record the receipt of these samples including dates, times, and by who received. Notify the Architect-Engineer upon arrival of the samples so that the samples can be approved or rejected.
- Review Contractor's payment requests and forward with recommendations to the Architect-Engineer. Keep a record set of each approved Application for Payment on the job site.
- During the roofing phase of the project, provide full-time inspection of the roof and related flashing and will indicate either by detailed description or by rough sketch on his daily report, the roof areas worked by the Contractor each day.
- Take digital photographs of representative construction events and any noted deficiencies. Maintain digital photo files in an organized manner, accessible to the Architect-Engineer and Project Manager.
- Assist the Architect-Engineer in conducting inspections to determine Substantial Completion and Final Completion.

903.3 Limits of Authority: The Resident Observer shall not exceed the authority of the Architect-Engineer and shall NOT:

- Authorize any deviations or changes to the Construction Contract, including Change Orders or Field Orders.
- Approve substitute materials or equipment except as authorized in writing by the Architect-Engineer.
- Assume any area of responsibility of any Contractor or Subcontractors, Superintendent or Foreman.
- Participate in efforts to expedite any Contractor's or Subcontractor's Work.
- Have control over or charge of or be responsible for construction means, methods, techniques, sequences or procedures.
- Provide advice or issue directives concerning any aspect of construction or safety precautions in connection with the Project. The Resident Observer shall notify the Contractor and Architect-Engineer if safety violations are observed but shall not direct correction of such violations.
- Authorize or suggest that the Using Agency occupy any part of the Project prior to the established Substantial Completion Date.
- Conduct any tests unless specifically authorized by the Architect-Engineer.
- Issue a Certificate for Payment or Certificate of Substantial Completion.

903.4 Resident Observer Constraints: The Resident Observer's duties shall not include the following (unless specifically directed by the Project Manager):

- Physical involvement in constructing or maintaining the Contractor's temporary facilities.
- Recording, compiling and/or disbursing of meeting minutes or other Project correspondence.
- Reviewing and approval of Shop Drawings and other submittals made by the Contractor in compliance with the requirements of the Contract Documents. After approval of the Shop Drawings by the Architect-Engineer, the Resident Observer shall review the Shop Drawings to become familiar with the upcoming construction.
- Preparation of supplemental drawings, instructions or directives to the Contractor.
- Preparation of proposal requests, Change Orders, Field Orders and directives, etc. which are used by the Architect-Engineer to make modifications to the Work after Award of Contract.
- Compiling of punch lists or other such documents unless specifically directed by the Architect-Engineer or the Project Manager. The Resident Observer may act as an assistant to the Architect-Engineer during review of the Project and compilation of punch lists for the purpose of certifying Substantial Completion or Final Completion.

903.5 Resources and Documentation: The Project Manager and/or Construction Specialist will verify that the Resident Observer has the following:

- Copies of all Project construction related correspondence.
- The entire approved (Department of Housing, Buildings and Construction stamped) set of plans, specifications and Shop Drawings (for items reviewed by HBC).
- Copies of Architect-Engineer approved Shop Drawings and executed Change Orders.
- Adequate records of daily job progress and activities.
- Records concerning deliveries to the Project site.
- Copies of all test reports, inspection reports by governmental authorities, and product data safety sheets.
- Supplemental reference sheets as required by the specifications.
- Supplemental roof installation information such as kettle temperatures for asphalt and coal tar, etc.
- Supplemental material installation information such as Project conditions prior to installation, protection of installed materials, etc. (This would apply to items such as gypsum drywall, flooring, ceilings, etc.).

904 - Resident Observer Daily Field Report

The following outline is the required minimum information to be included in the daily Field Report of the Resident Observer.

Project Name:

Project Location:

RCF No:

Org Code/Account Code:

Architect-Engineer Name:

General Contractor:

Resident Observer:

Temperature/ Weather Conditions:

Visitors on site:

Contractors on Site:

No. of Workers:

Description of day's work:

General Contractor:

Subcontractor:

Subcontractor:

(Add as Needed)

Materials Stored on site:

Equipment on Site:

Observations:

Action items:

Progress Photos:

905 – Construction Schedule

The Contractor shall maintain an accurate and current construction schedule, which reflects all schedule modifications. The Architect-Engineer shall review the construction schedule at least monthly, and the current schedule shall be available for discussion at the Project progress meetings.

The following is an excerpt from the General Conditions of the contract:

'37. Schedules

'37.1 The Contractor, within fifteen (15) days of the Date of Commencement shall prepare and submit for the Owner and Architect's approval a construction schedule for completing the Work. The schedule shall indicate the starting and completion dates of the various stages of the Work, shall not exceed time limits established by the Contract Documents for the various stages of Work, shall be updated monthly and furnished to the Owner and Architect, shall be related to the Work of any other contractors on the Project to the extent required by the circumstances, and shall provide for expeditious and practicable execution of the Work. The original schedule shall be accompanied by a proposed schedule of values as described in Article 41.1. The Contractor shall promptly notify the Architect and Owner if the Contractor is materially ahead of, or behind the updated construction schedule. Failure to so notify the Architect and Owner shall relieve the Owner from liability for damages caused by delay or impact. Strict compliance with the requirements of this paragraph shall be a condition precedent to payment to the Contractor, and failure by the Contractor to strictly comply with said requirements shall constitute a material breach of the Contract.

'37.2 A schedule indicating proposed sequence of operations and details for dust and noise control protection for all the work must be submitted for review prior to start of work.

'37.3 For projects with a contract amount of \$1,000,000 or greater the schedule shall be in critical path format. The schedules shall include all activities necessary for performance of the work showing logic (sequences, dependencies, etc.) duration of each activity with the critical path highlighted. The schedules shall include, but not be limited to, submittal processing, fabrication and delivery of materials, construction, testing clean-up, work and/or materials to be provided by the Owner, dates and durations for major utility outages requiring coordination with the Owner and the Owner's operations, and significant milestones related to the completion of the Project.

'37.4 Work can be conducted between daylight and dark during week days. If work after dark and/or weekend is required, the owner must be notified within 48 hours of scheduled work and must agree to do so.

906 – Testing and Special Inspections Procurement

906.1 Inspection and Testing of Materials: All inspection and testing costs, except Special Inspections and Testing and Balancing, required by the Contract Documents shall be paid for by the Contractor. Testing reports shall be transmitted directly to the Architect-Engineer and the Project Manager by the testing agency. Reports shall also be transmitted to the Contractor and/or appropriate Subcontractors. The Project Manager shall approve all proposed testing agencies prior to the work being performed.

906.2 Electrical Inspections: The Contractor shall not use private inspectors. All electrical inspections will be performed by inspectors from the Kentucky Division of Building Code Enforcement, Electrical Inspections.

The contractor shall be responsible for requesting, scheduling and coordinating all electrical inspections through the Electrical Inspections Section.

906.3 Special Inspections: The following is an excerpt from the Kentucky Building Code:

SECTION 1704 - SPECIAL INSPECTIONS

1704.1 General. Special inspections are required for all buildings and structures that require the services of a registered design professional per Section 106, Section 122 and Table 122.1. Where application is made for construction as described in this section, the owner or the registered design professional in responsible charge acting as the owner's agent, shall employ one or more special inspectors, as defined in 1702, to provide inspections during construction on the types of work listed under Section 1704. These inspections are in addition to the inspections specified in section 109.

It is the responsibility of the Architect-Engineer to include in the specifications the Special Inspections required by the Kentucky Building Code.

Special inspections will be contracted as one of the following:

- Architect-Engineer subcontractor*
- Separate contract with the Special Inspection firm*
- A combination of the A/E contract and a separate contract with the Special Inspections firm depending on the specific inspections required.*

906.4 Other Required Inspections: The Contractor shall provide and pay for any other inspections required by the Contract Documents and applicable building codes including HVAC and Plumbing inspections required by the Department of Housing Building and Construction.

907 – Pre-Construction Conference

Sample Agenda: See Section 907.1 Pre-Construction Conference - Sample Agenda for a suggested agenda for the Pre-Construction Conference: The Architect-Engineer is responsible for adding to and editing this agenda as necessary.

Meeting and Agenda: The Architect-Engineer shall conduct the Pre-Construction Conference and shall prepare an agenda to be distributed at the beginning of the meeting. The Architect-Engineer shall forward a copy of the proposed agenda to the Project Manager and Using Agency at least two working days prior to the meeting to allow for addition or comment.

Coordination: The Architect-Engineer shall coordinate with the Project Manager, Using Agency and Contractor to initiate a Pre-Construction Conference. This conference will normally be held at the Project site immediately after (within ten calendar days) or concurrent with award of the Contract. It may be held early, if all parties agree, but should not be held before the Owner has received proper bonds and insurance certificates from the proposed Contractor.

Attendance: The meeting shall be attended by the Project Manager, Construction Specialist, Using Agency Representative, Commissioning Authority, Architect-Engineer representatives including each discipline, Resident Observer, Contractor's management and field personnel, and all major or significantly critical Subcontractor representatives.

Hazardous Material Construction Guidelines: See Section 907.2 Hazardous Material Construction Guidelines. This document shall be distributed at the Pre-Construction Conference. It is to be discussed as a part of the Pre-Construction Conference. All contact information shall be completed and distributed to all appropriate parties.

Evaluation: The General Contractor and Sub-contractors may be evaluated by CCPA at the end of the Project.

907.1 – Pre-Construction Conference - Sample Agenda

The Contractor shall confirm status of the Construction Contract prior to this meeting. The Following is a Suggested Agenda for the Pre-Construction Conference:

1. Record of attendance and introduction of representatives:

- Project Manager
- Supporting personnel from CCPA
- Construction Specialist
- Using Agency Representative(s)
- Facility Staff
- Commissioning Authority
- Architect-Engineer Representatives
- Resident Observer
- Contractor Representatives
- Subcontractor Representatives
- Special Inspections Contractor and/or Contractors

2. Communication:

- All project communication from the Contractor shall be through the Architect-Engineer.
- All correspondence shall bear project title and RCF/Org/Account number(s).
- All correspondence shall be copied to the Project Manager, Using Agency Representative and others designated by the Project Manager.
- Representatives shall exchange project phone numbers, including site, office, cell and emergency numbers.
- Any communication with the press shall be directed to and coordinated with the Project Manager of CCPA.

3. Drawings:

- Confirm that the Contractor has an official set of Contract Documents.
- Confirm that the approved Housing Building and Construction contract documents are on the Project site at this meeting and that they shall remain at the site for the duration of the construction.
- Check Contractors need for additional drawings, including what is needed for Record Drawings Set.

4. Discussion of Plan of Operations: shall include a general overview of construction schedule, procedures, use of site, etc.

Storm Water Pollution Prevention Plan (SWPPP):

- The contractor shall submit a copy of the SWPPP and discuss how these measures will be maintained.
- The certification of Contractors and Sub-contractors of the project shall be edited for the specific Project and included in the contract documents. The Contractor shall sign the

certification statement that they will implement all BMP control measures before performing any work on the Project site.

5. Construction Schedules:

- Contract Time – for the Work or for Phases, if any
- Critical Work Sequencing and long-lead items (No extension of time will be allowed due to late order of materials which results in late delivery)
- Coordinate all shut down times with the Using Agency. (72 hours advance notice of shut down required)
- Phasing
- Initial Progress Schedule
- Major equipment deliveries and priorities
- Coordination with other contracts and/or Owner
- Required Substantial Completion
- Projected Final Completion
- Discussion of time delays. All delay requests and approvals shall be documented by Change Order as they occur. Late requests for extensions of time will not be honored. Do not wait until the end of the Project to deal with time extensions.

6. Contractor's Use of Premises:

- Site limitations
- Facility Policies and Procedures
- Security
- Housekeeping
- Responsibility for temporary facilities, utilities and controls
- Anticipated activity on site by the Using Agency or general public (if any)
- Areas of site that will be used by others for specific periods of time (if any)

7. Progress Meetings and Other Meetings:

- Establish date for Progress Meetings – one per month unless more are necessary.
- Architect-Engineer shall compile and distribute meeting minutes within seven days of meeting. Discussion of who receives minutes. The Project Manager and Using Agency Representative shall receive copies of all minutes.
- Discuss required pre-installation meetings (i.e. pre-waterproofing, pre-roofing, pre-controls, pre-concrete etc).
- Special coordination meetings, if required.

8. Pre-Roofing Conference:

- Schedule at least four weeks prior to start of roofing installation.
- Roofing superintendent and manufacturer representative shall attend along with all trades that are affected by roofing work.
- Discussion of who performs flashing
- Inspection of the deck by Architect-Engineer prior to roofing.

9. Applications for Payment: See Section 916

- Schedule of Values must be completed and submitted by the Contractor and approved by the Architect-Engineer and Project Manager prior to submittal of the first Application for Payment.
- Application shall be made on University provided forms.
- A bar chart shall be submitted showing both planned and actual progress. This chart shall be submitted with each Application for Payment.
- A Critical Path Method (CPM) format shall be used on projects in excess of \$1,000,000.
- Draft Copies of Application for Payment may be submitted to the Architect-Engineer and Sub-consultants in advance for preliminary review.
- Suggest the monthly billing schedule correspond to the monthly Progress Meetings.
- Retainage attachments to payment applications.
- All stored materials shall be properly secured and protected from the weather.

10. Off-site storage: Payment for off-site storage requires that the following criteria be met:

- Materials are clearly marked as belonging to Eastern Kentucky University and the name of the Project is clearly indicated.
- Materials are stored in a bonded warehouse, and are inspected by the Architect-Engineer, Project Manager and/or other designee of CCPA.
- An insurance certificate shall be attached to the Application for Payment in the amount of the value of the stored materials.
- See General Conditions for Payment requirements.

11. Payroll and Wage Scales:

- Contractor shall submit all required information directly to the Department of Labor.

12. Submittals:

- List of Subcontractors and suppliers.
- Submittal Schedule.
- Shop Drawing Log shall be maintained and submitted by the Contractor.
- Establish number and format of submittals. Contractor shall keep three approved copies of submittals, for delivery to the state upon completion of the Project.
- Additional copies of approved submittals for respective disciplines may be requested by support personnel from CCPA.
- Discuss actual routing of all submittals.
- Expected review time.

- Discuss Department of Housing Building and Construction review and approval process. i.e. sprinkler system, fire alarm, elevator, and boiler. These submittals shall be approved by the appropriate consultant prior to submittal to HBC.
- Approved copies of each submittal shall be kept on job site.
- Payment will not be approved for Work performed or installed without approved Shop Drawings.

13. Systems and Equipment:

- The contractor shall provide adequate maintenance access points for all mechanical and electrical equipment. If there are site conditions that make equipment maintenance points difficult it shall be brought to the attention of the Architect-Engineer for resolution.
- All mechanical and electrical equipment shall be kept clean and dry as stored materials and in place during installation.

14. Safety Issues:

- Contractor is responsible to maintain a safe and clean site.
- Safety meetings encouraged to be held weekly.
- Reporting of accidents (major and minor).
- Review any security policies on special projects such as correctional facilities.
- Complete and distribute the Hazardous Materials Construction Guidelines for Capital Construction Projects that is located in 907.2. The Contractor shall contact all parties listed in this guideline in the event hazardous materials are encountered.

15. Procedures for Requests for Information (RFI):

- Requests for Information, issues and instructions.
- Contractor shall maintain a log of Requests for Information.

16. Change Orders:

- Initial request shall come from the Contractor, Architect-Engineer, Using Agency Representative or Project Manager.
- The Project Manager shall authorize the Request for Proposal.
- Contractor submits proposal to the Architect-Engineer for review and recommendation.
- Project Manager has final approval on whether to accept the proposal.
- If directed by the Project Manager, the Architect-Engineer shall prepare the Change Order on the official form. After signature by the Contractor, the Architect-Engineer shall sign and forward the form directly to the Project Manager.
- Every item shown on the Change Order shall have a justification written on the Change Order form. "Owner request" is not an acceptable reason.
- The total allowable overhead and profit markup for a Change Order is 15%. This may be split between the Contractor and Subcontractor.
- The Contractor shall provide sufficient itemized cost detail to allow for confirmation of appropriate cost.
- Change Orders are generally processed and returned to the Contractor and Architect-Engineer within 15 days.

- Extensions of time will require a Change Order and shall be determined at the time of request.
- Contractor shall maintain a Change Order log.
- Sub-contractors, manufacturers or vendors that have been listed in the Form of Proposal cannot be changed unless approved by CCPA. Any change in sub-contractors will require a Change Order.

17. Field Orders and/or Architects Supplemental Instructions (ASI):

- All changes in the Work that are for the purpose of clarification and/or minor changes, that **DO NOT** involve added costs and/or time extensions shall be documented by AIA document, Architects Supplemental Instructions G710 or other Architects standard format.

18. Testing Materials, Inspections, Laboratory Reports, and Certificates:

- Special Inspections testing including concrete and soils testing shall be paid by CCPA. All test reports shall be sent directly to the Architect-Engineer and the Project Manager at the same time it is sent to the Contractor.
- All other testing required by the Contract Documents shall be paid for by the Contractor. The testing service shall be approved by Architect-Engineer and the Project Manager prior to testing. All test reports shall be sent directly to the Architect-Engineer and the Project Manager at the same time it is sent to the Contractor.
- The Contractor shall not use private inspectors. All electrical inspections will be performed by inspectors from the Kentucky Division of Building Code Enforcement, Electrical Inspections.

The contractor shall be responsible for requesting, scheduling and coordinating all electrical inspections through the Electrical Inspections Section.

- HVAC Testing, Adjusting and Balancing: These services shall be obtained and paid by separate contract by CCPA. The Contractor shall coordinate with the selected TAB Contractor in accordance with the Specifications. The Contractor will be back-charged for unproductive site visits by the TAB Contractor if coordination procedures are not properly followed.
- The Contractor is responsible for coordinating and scheduling all Plumbing Inspections.
- The Contractor is responsible for coordinating and scheduling all inspections by the Department of Housing Building and Construction.
- The Contractor shall perform roof cores if necessary to determine the existing conditions prior to the work beginning to provide a proper installation.

19. Architect Engineer: The Architect-Engineer shall be main point of contact and discuss communication hierarchy. **See Section 902.** The Architect-Engineer shall:

- Monitor Project progress and conformance to contract requirements.
- Supervise Resident Observer.
- Process Shop Drawings, applications for payment, Change Orders, etc. in a timely fashion.
- Prepare minutes of progress meetings.
- Provide field observation reports of site visits. Minimum of 2 visits per month.

- Provide Contract Document clarifications and supplemental instructions as necessary.
- Prepare agenda and facilitate monthly progress meetings.

20. Resident Observer: See Section 903

- The Resident Observer shall be employed by and is responsible to the Architect-Engineer.
- The Resident Observer shall keep daily records of job site activities, weather, visitors, etc.
- Duties include inspecting the Work for compliance to Contract Documents.
- Office, phone and data access shall be provided by the Contractor for the use of the Resident Observer.

21. Job Superintendent:

- Contractor shall submit the resume of the Job Superintendent to the Architect-Engineer for review and approval.
- Superintendent shall be full time on this Project and shall be on site whenever work is underway.

22. Conduct of Workers:

- No contraband (alcohol, recreational drugs, weapons, etc.) allowed on site.
- Proper dress for site and weather conditions.
- No fraternization with Owner/Using Agency staff.
- No sexual harassment.
- No Smoking

23. Safety: Contractor is responsible for safety of workers, visitors and others on site.

24. Record Drawings:

- It is the Contractor's responsibility to ensure that Record Drawings are kept up to date.
- Architect-Engineer shall inspect Record Drawings at monthly intervals to verify timely documentation of field modifications and changes. The Architect-Engineer shall adjust the Contractor's application for payment if necessary to ensure compliance.

25. Temporary Utilities and Field Office: Verify that Contract Documents correctly identify who provides and pays for:

- Water
- Gas
- Electric
- Heating/Cooling
- Phone
- Field Office
- Data access

Discussion of temporary heating and/or cooling during construction: The new heating and cooling system shall not be used for temporary heat and/or cooling unless approved by the Architect-Engineer and the Project Manager.

- If the new system is to be used then documentation of how that system is to be protected and maintained shall be submitted and approved by the Architect-Engineer and Project Manager.
- The Contractor shall take steps to conserve and minimize use of Owner provided utilities.

26. Project Signage:

- **See Section 608.21 Project Sign** for the format.
- Project sign format drawing is a guide. Reasonable modifications to this format may be approved by the Project Manager.

27. Substantial Completion Inspection (Punch List):

- Review what constitutes Substantial Completion
- Work is complete such that Using Agency may occupy and use the facility as intended.
- Punch list inspection has been made.
- CCPA, Using Agency and Architect-Engineer must agree that Substantial Completion has been reached.
- Temporary or permanent Certificate of Occupancy has been issued.
- Contractor shall run his own punch list and work it off prior to requesting inspection by Architect-Engineer.
- Contractor shall not request Substantial Completion Inspection until Project is ready.
- Architect-Engineer punch list shall utilize continuity of numbered items to distinguish between old and new.

28. Retainage: The following are excerpts from the General Conditions of the contract:

18.5 Held Retainage/ Retainage Reduction. *Until fifty percent (50%) of the construction work has been completed in accordance with the contract, the Owner may withhold no more than ten percent (10%) retainage from the amount of any undisputed payment due, and retainage held after fifty-one percent (51%) of the construction project has been completed shall not be more than five percent (5%) of the total contract amount.*

18.5.1 *Subsequently, the Contractor shall withhold no more than ten percent (10%) retainage from the amount of any undisputed payment due to a subcontractor, and retainage held after fifty-one percent (51%) of the construction project has been completed shall not be more than five percent (5%) of the total amount contracted with a subcontractor.*

Upon Certification of Substantial of Completion by the Architect-Engineer, the retainage may be reduced to a sufficient lump sum (cost of the work times 2) to cover the value of the punch list items.

29. Transfer of Insurance: Owner will assume responsibility for insurance and utilities on the date of Substantial Completion.

30. Certificates of Compliance and Acceptance: The Contractor shall be responsible for providing certificates of compliance for the following:

- Plumbing
- Electric
- Boiler (if applicable)
- Other (sprinkler, fire alarm, elevator, kitchen exhaust hood, etc.)
- Special guarantees as required by Contract Documents

- Certificate of Occupancy

31. Final Payment Contingent Upon:

- Punch list items completed, corrected or otherwise satisfactorily addressed.
- Submittal of Project close-out documents (warranties, operation and maintenance manuals, Record Drawings, certificates and approvals, etc.).
- Completion of owner/user training sessions.
- Affidavit of Final Payment.

32. LEED: For Projects seeking LEED certification, discuss the LEED checklist and the responsibilities of the contractor to comply with the LEED requirements during construction.

33. Commissioning:

- Introduce the Commissioning Authority and discuss the Commissioning process that will be utilized throughout the construction process.
- Schedule the Construction Phase Commissioning Conference.

34. Additional Items: In addition to the above items, the Contractor, Project Manager or Construction Specialist may have additional items for discussion. The Architect-Engineer should contact these entities prior to the meeting to identify any items that should be included in the agenda for the meeting.

35. Meeting Minutes: The Architect-Engineer shall prepare minutes of the Pre-Construction meeting and distribute the minutes to all meeting attendees within five working days following the meeting. These minutes shall include a summary of all discussions and issues that occurred during the meeting. The minutes shall include a record of all attendees.

36. Corrections or Modifications: Should anyone believe that a correction or modification is required to make the distributed minutes accurately reflect the proceedings of the meeting; a written request shall be promptly forwarded to the Architect-Engineer. The Architect-Engineer shall prepare a supplement to the meeting minutes that precisely reflects the requested correction. This supplement shall be forwarded to all meeting attendees. Should there be no requests for corrections or modifications, the written minutes as distributed shall stand and become an official project record.

907.2 Hazardous Material Construction Guidelines

This document shall be distributed at all Pre-Construction Conferences.

General Contractors and all subcontractors engaged in construction projects administered CCPA shall adhere to the following general guidelines pertaining to hazardous materials. These guidelines do not in any way relieve the contractor of his responsibilities imposed by regulatory agencies such as OSHA and EPA.

1. At the preconstruction meeting, the Using Agency Representative and the Project Manager shall provide the Contractor with copies of all known surveys, sample results, reports, and any other information identifying hazardous materials within the project area. If such information exists, the Contractor (s) shall familiarize himself with the types and locations of the hazardous materials.
 - If asbestos, PCB or similar materials must be disturbed during the performance of the contract work; the Contractor shall notify the Project Manager. The Project Manager shall have the responsibility of notifying the Hazardous Materials Coordinator and securing qualified abatement contractors to remove, or render harmless, the material affected by the work. The Contractor shall do no work in the affected area until such abatement has been accomplished. The Contractor shall not be required to perform any work relating to asbestos or polychlorinated biphenyl (PCB).
 - If lead based paint (0.5% by weight) is identified on material to be scraped or drilled, the Contractor shall notify the Project Manager. The Project Manager shall have the responsibility of notifying the Hazardous Materials Coordinator to arrange for the abatement of the material. The Contractor shall not be required to perform work categorized as lead paint abatement. Material containing lead required to be demolished may be treated as normal construction debris.
 - If information concerning the presence of hazardous material does not exist, the Project Manager shall arrange for the Hazardous Materials Coordinator to conduct an inspection of the project and identify all materials considered to be potentially hazardous. These materials shall not be disturbed until they are determined to be non-hazardous. If materials are found to be hazardous then the Hazardous Materials Coordinator and the Project Manager shall arrange for abatement.
2. Familiarize yourselves with Article No. 13 of the General Conditions which states the following:

Article 13 - Protection of Work, Property, Employees and Public

Hazardous Materials. In the event the Contractor unexpectedly encounters on the site material reasonable believed to be asbestos, polychlorinated biphenyl (PCB) or other classified hazardous substances/materials which have not been rendered harmless, the Contractor shall immediately stop work in the area affected and report the condition to the Owner and Architect in writing. The work in the affected area shall not thereafter be resumed except by written agreement of the Owner and Contractor if in fact the material is asbestos, polychlorinated biphenyl (PCB), or other classified hazardous substances/materials which have not been rendered harmless. The work in the affected area shall be resumed in the absence of any classified hazardous substances/materials or when it or they have been rendered harmless, by written agreement of the Owner and Contractor.

- In instances when both asbestos containing and non-asbestos containing building materials of the same type (such as pipe fittings) have been identified, all such materials should be treated as potentially asbestos-containing until tested and proved otherwise.

3. In the event the Contractor should accidentally disturb material during the course of the work that is known to contain asbestos or is thought to potentially contain asbestos, he should immediately do the following:

Vacate and isolate the area. Post warning signs.

- Notify the Project Manager so he may contract with a qualified abatement contractor to ascertain if the material is asbestos and to clean and decontaminate the area.

4. CCPA, the Using Agency and the Contractor shall comply with the requirements of the OSHA Hazard Communication Standards (29 CFR 1910.1200).

A list of the hazardous chemicals to which the Contractor's employees may be exposed shall be provided to the Contractor by the Using Agency Representative.

The Contractor shall provide the Project Manager and the Using Agency Representative with list of any hazardous chemicals they will bring on the job site.

5. **If during the Work hazardous materials are encountered, disturbed or released, the Contractor shall contact each of the following persons as soon as possible:**

Architect-Engineer:

Phone: _____

Fax: _____

Email: _____

Using Agency Representative:

Phone: _____

Fax: _____

Email: _____

Project Manager:

Phone: _____

Fax: _____

Email: _____

Received on behalf of Contractor:

Signature: _____

Printed Name: _____

908 – Construction Phase Commissioning Conference

The Commissioning Authority schedules a Construction Phase Commissioning Conference after the award of the Construction Contract. The Conference shall be scheduled within sixty (60) days of Contract award. The purpose of the conference is to introduce members of the Commissioning Team for Phase D and to review the Commissioning Process requirements of the Project.

908.1 Team Members: The Commissioning Team for Phase D may include, but not be limited to:

- Commissioning Authority
- Project Manager
- Construction Specialist
- Using Agency Representative
- Architect-Engineer
- Contractor
- Sub-contractors
- Testing agencies
- Commissioning test specialists
- Vendor representatives

908.2 Agenda: The Commissioning Authority creates an agenda that includes an overview of the Phase D Commissioning Process activities. Topics may include:

- The Owner's Project Requirements
- The Systems Basis of Design Document, and unique contract documents
- Identification of roles in the Commissioning Process
- Explanation of commissioning tests and test documentation procedures
- Description of the schedules and methods for testing commissioned systems and assemblies
- Explanation of how to use the test procedures, forms, and checklists identified in the Contract specifications to document test results
- How the Commissioning process is a required part of the LEED certification.

908.3 Meeting Minutes: The Commissioning Authority will record minutes and distribute to Commissioning Team members and to conference attendees within five (5) workdays of the conference.

908.4 – Commissioning Forms and Checklists

The commissioning forms and checklists are created for each Project to document and verify the progress of the design and construction.

The Commissioning Authority shall distribute all commissioning forms and checklists to the appropriate parties. Copies of the specific commissioning forms and checklists will be included in the Commissioning Plan.

All forms and checklists must be completed and accepted before the Project phase will be considered complete. The Commissioning Team decides the impact of the forms and checklists on the Design Team's authorizations to proceed and the Contractor's authorization of payment requests.

Commissioning forms and checklists shall be developed from the Owner's Project Requirements. ASHRAE Guideline 0 includes guidelines for developing these forms and checklists.

909 – Phase D Responsibilities of the Using Agency

During Phase D, the Using Agency, through assigned staff, performs the following functions during the construction process:

- Provides funding of the Construction, monitors funding levels and insures that current on-hand funds are adequate to support the construction requirements during the construction phase.
- Consults with CCPA during the Construction Process. Offers opinions related to the construction as it relates to the intended function and use of the Project.
- Attends Project meetings and conferences.
- Provides coordination between the Using Agency activities within the Project area with the Contractor's work schedule.
- Procures furnishings, telecommunications equipment and moveable equipment.
- Assumes operation of the facility upon Substantial Completion. Arranges for the proper insurance coverage of the facility.
- Is responsible for moving into the facility.
- For projects seeking LEED certification, provides information required on the LEED checklist.

910 - Phase D Responsibilities of CCPA

910.1 Project Manager: The Project Manager performs the following functions during the construction process:

- Monitors the performance of the Architect-Engineer and construction progress of the Contractor for compliance with the requirements, terms and conditions of each respective contract.
- Attends all design and construction progress meetings.
- Is the Owner's Representative for all construction-related issues.
- Keeps the Using Agency and other interested entities informed of significant Project developments.
- Reviews and makes recommendations for the acceptance of Change Orders.
- Acts as arbiter of the Contract Documents when an issue of design errors and omissions arises, or when the Contractor and Architect-Engineer are in disagreement.
- Coordinates construction issues with the Using Agency.
- Monitors funding of the Project. Continually updates the project budget.
- Approves payments to the Contractor and Architect-Engineer for Work completed.
- Authorizes final acceptance of the Project and conducts transfer of the Project to the Using Agency.
- Provides the Using Agency with copies of warranties, guarantees and operations/maintenance manuals, etc.
- Verifies that the Contractor (and Resident Observer, when applicable) has the required documents on the job site.
- Makes payments of various construction related expenses (i.e. code review and inspection fees).
- Processes Change Orders for the Architect-Engineer Contract.
- Processes Change Orders for the Construction Contract.

911 – Phase D Responsibilities of the Commissioning Authority

911.1 Owner's Project Requirements: The Commissioning Authority shall:

- Revise the Owner's Project Requirements to reflect decisions made during Bid Solicitation.
- Periodically update the Owner's Project Requirements to reflect decisions made during Phase D.
- Inform Commissioning Team members of decisions that alter the Owner's Project Requirements.
- Review changes, clarifications, and additions to the Systems Basis for Design and Systems Manual for compliance with the Owner's Project Requirements:
- Incorporate approved changes into the Owner's Project Requirements. Changes inconsistent with the Owner's Project Requirements should be documented and reported to the Project Manager for resolution.

911.2 Schedule: The Commissioning Authority shall:

- Incorporate changes to the Project Schedule into the Owner's Project Requirements.
- Alter Commissioning Process activities as required by revised schedule.
- Finalize the schedule for Phase D Commissioning Process activities after the Pre-Construction Commissioning Meeting.
- Schedule initial owner training session.
- Schedule Phase D reviews of submittals for compliance with the Owner's Project Requirements.

911.3 Meetings: The Commissioning Authority shall:

- Conduct Commissioning Team meetings.
- Attend Construction Progress meetings as determined by CCPA.

911.4 Document: The Commissioning Authority shall:

- Document changes inconsistent with the Owner's Project Requirements and report to the Project Manager for resolution.
- Prepare minutes of activities and decisions and distribute to Commissioning Team members and attendees within five (5) workdays of event
- Incorporate submittals into the System Manual.
- Revise the Commissioning Plan to incorporate updates and changes to Project information.
- Write final Commissioning Process report for Phase D and distribute to all Commissioning Team members.

911.5 Commissioning Process: The Commissioning Authority shall:

- Witness system and assembly installation and testing.
- Verify test results and test data reports. Deficiencies shall be documented and reported to the Project Manager for resolution.
- Verify completion of installation checklists by contractors.
- Supervise completion of Performance Tests. Collect test forms.

- Verify training of operation and maintenance personnel and occupants.
- Finalize plan for off-season functional test procedures.
- Implement off-season functional test procedures.
- Verify completion of **Phase D checklist Section 900**.

911.6 LEED: For Projects seeking LEED certification, the Commissioning Authority shall:

- Provide assistance as required to the Architect-Engineer in preparing the LEED submittal to the USGBC for review and approval.

912 – Phase D Responsibilities of the Architect-Engineer

912.1 Contract Administration: During the construction period (Phase D), the Architect-Engineer performs contract administration services as prescribed by the Architect-Engineer contract. These include but are not necessarily limited to the following:

- Provide professional services as required to coordinate, facilitate, expedite, and verify the process of construction. However, the Architect-Engineer is not expected to perform the services expected of the General Contractor during construction.
- Facilitate Project communications by providing information (including copies of documents) to the Project Manager, Construction Specialist, Using Agency Representative, Resident Observer and other Project participants as needed.
- Serve as the first line of communication between the Contractor and the Project Manager. All correspondence from the Contractor shall be directed to the Architect-Engineer.
- Act as arbiter of the Contract Documents.
- Provide periodic observation of the Work by the applicable registered professionals and other personnel.
- Monitor the Contractor's performance and progress as it relates to schedule, and periodically report same to the Project Manager.
- Schedule, coordinate and conduct Progress Meetings and other required Project meetings and conferences.
- Prepare and distribute minutes of every Project meeting and conference. **See Section 914 Progress Meetings.**
- Review Shop Drawings, samples and other submittals for conformance with the Contract Documents.
- Prepare color and material selection proposals for approval.
- Provide timely responses to Requests for Information.
- Issue Field Orders.
- Review and sign Change Order proposals and make acceptance recommendations to the Project Manager.
- Prepare accepted Change Orders for processing.
- Review the Contractor's Application for Payment (progress payment) and makes recommendations for approval to the Project Manager.
- Compile punch lists and verify compliance with noted deficiencies.
- Certify Substantial Completion of the Work.
- Certify Final Completion of the Work.
- Maintain the official Project record file for a minimum of seven (7) years after Final Completion.

912.2 Resident Observer: The Architect-Engineer shall provide timely compensation to the Resident Observer as per their contract/agreement. The Architect-Engineer shall pay the Resident Observer on the agreed dates, without regard to the status of reimbursement from the Commonwealth. The Architect-Engineer shall not consider the Resident Observer as a Sub-consultant. **See Section 903 for the duties and responsibilities required of the Resident Observer.**

912.3 Extended Phase D Services during the Warranty Period: The Architect/Engineer shall conduct a one year warranty inspection of the Project to determine if remedial work is required to satisfy Project guarantees and warranties.

912.4 LEED: For projects Seeking LEED Certification, the Architect/Engineer shall perform the following during Phase D:

- At the pre-bid conference provide written (specifications) and a verbal summary, of the LEED process and documentation that is required by the Contract. This is for the purpose of educating potential bidders on LEED requirements for the Project.
- Review with the Contractor, at the Pre-Construction Conference, the LEED submittal requirements for the Project.
- Provide updates to the Project Manager on the status of LEED certification as a part of the monthly Construction Progress Meetings.
- Respond to the USGBC Design Review within 25 Business days of receipt of review comments.
- Initiate USGBC Design Application Appeal as/if necessary.

The Architect/Engineer shall perform the following Extended Phase D services during the one year warranty period:

- Prepare and submit, in association with the Contractor, the LEED Construction Application to the USGBC. A copy of this application and any correspondence with the USGBC shall be sent to the Project Manager.
- The Architect/Engineer shall respond to the USGBC Construction Review within 25 business days of receipt of review comments.
- The Architect/Engineer shall initiate the Construction Application Appeal if necessary. The Architect-Engineer shall assist the Commissioning Authority as necessary.

913 - Periodic Observation

913.1 Quality Control: During construction, the Architect-Engineer shall:

- Become familiar with the progress and quality of the Work of the Contractor
- Determine the quality and quantity of the work in place, compared to the requirements of the Contract Documents, and endeavor to protect the Owner from the Contractor's continuing deficient or defective work, unexcused delays in the construction schedule or overpayment to the Contractor.

913.2 Site Visits: Visit the site a minimum of twice per month and more if necessary to facilitate construction activities. Site visits shall be at intervals appropriate to the stage of construction.

913.3 Field Reports: Following each site visit, the Architect-Engineer shall submit a written field report to the Project Manager and the Using Agency Representative that includes the observations of all sub-consultants, and documents all site observations, along with any appropriate comments or recommendations.

913.4 Site Observations: The Architect-Engineer shall not be required to make exhaustive or continuous on site observations to check the quality or quantity of the work.

914 - Progress Meetings

Construction progress meetings shall be held on the job site at least once per month, or more often as the Project conditions require and as directed by the Project Manager.

The Architect-Engineer shall prepare and distribute an agenda and sign in sheet in advance, and conduct the meeting. Minutes of the meeting shall be prepared and distributed by the Architect-Engineer and shall accurately reflect all discussion related to the items on the agenda. The Architect-Engineer shall distribute the minutes within seven days of the meeting.

The following items shall be discussed:

914.1 Work in Place and Observations:

- The Contractor shall give a brief description of major categories of work accomplished by the Contractor and the anticipated work during the next thirty-day period.
- The Contractor's organization, supervision, and work force.
- Quality of the work in place and adequacy of on-site storage of materials.
- Dates of site observations by the Architect-Engineer.
- Status of required inspections, special inspections and testing.
- Summary of significant problems, including deficiencies observed by the Resident Observer, Architect-Engineer, Project Manager, Construction Specialist, Using Agency Representative, and code authorities.
- Notation of any work being installed without approved shop drawings or proper authorization (if any).
- Coordination status between Contractor and other Owner-initiated work, including separate contracts and/or work being conducted by the Owner's forces.
- Other comments from all participating parties.
- Contractor's report on safety and accident issues.

914.2 Changes, Submittals and Logs: Logs shall be kept for all the following:

- Field Orders
- Requests for Information
- Change Orders
- Shop-drawings

914.3 Schedule:

- Actual progress versus scheduled progress. If the Work is behind schedule, explain the conditions causing the delay including critical path issues and the Contractor's plan to bring the Project back to the scheduled progress.
- Status of any portions of the Work planned for early acceptance by the Owner.
- Anticipated or actual delays due to weather, delivery of materials or other causes including potential delays caused by the Using Agency or CCPA.
- It may be useful to consult the following link for monthly station climate histories. <http://hurricane.ncdc.noaa.gov/cgi-bin/climatenormals/climatenormals.pl>. These monthly station climate summaries are provided in PDF format. This information includes means,

median (precipitation and snow elements), extremes, mean number of days exceeding threshold values, and probabilities for monthly precipitation and freeze data.

914.4 Review: The Architect-Engineer shall review the following each month:

- Schedule of values and monthly Application for Payment.
- LEED requirements as included in the Project specifications.
- Contractor's annotated Record Drawings.

915 – Submittal Review

The Architect-Engineer and Sub-consultants shall promptly review and return (typically within fourteen (14) calendar days) Shop Drawings, samples and other submittals from the Contractor.

The Architect-Engineer shall not hold incomplete submittals. If additional information is required, it is acceptable to hold the item briefly (e.g. waiting for faxed clarification), but if the requested information is not promptly received, the submittal shall be rejected and returned to the Contractor for revision.

916 – Contractor Application for Payment

916.1 Schedule of Values: The Schedule of Values is a zero-dollar invoice that outlines the labor and material components of the Contract amount, usually by specification division. After approval by the Contractor, Architect-Engineer, and CCPA, this document becomes the basis for all Applications for Payment. The Schedule of Values must be completed and approved prior to the submittal of the first Application for Payment.

916.2 Applications for Payment: Payment to the Contractor will be made either in one lump sum payment upon Final Completion or periodic payments where the Contractor applies for partial payment for Work completed to a specified date.

The Contractor may present the Architect-Engineer with a draft copy of the Application for Payment for work performed and/or materials furnished during the preceding month. This draft copy should be submitted for review prior to the Progress Meeting. This will facilitate the review of the Application for Payment at the Project Progress Meeting.

916.3 Routing Procedures: The procedures for routing the Application for Payment include the following:

- Contractor shall complete the form and sign.
- Architect-Engineer shall review and sign the Application for Payment.
- Architect-Engineer shall ensure that Sub-consultants have reviewed and approved the appropriate items in the Application for Payment.
- A bar chart shall be attached to the Application for Payment showing both planned and actual progress. This chart shall be submitted with each Application for Payment.

In accordance with the provisions of the General Conditions, the Contractor for a Project may submit one (1) payment application in each thirty-calendar day period.

916.4 Application for Payment Forms: The EKU Application for Payment forms shall be used.

916.5 Stored Materials: The Contractor is entitled to receive payment for work completed by the date of the application, for materials stored on site and in certain instances for materials stored off site.

Payment for offsite storage requires that the following criteria be met:

- Materials are clearly marked as belonging to EKU and the name of the Project is clearly indicated.
- Materials are stored in a bonded warehouse, and are inspected by the Architect-Engineer, the Project Manager, or a designee from CCPA.
- An insurance certificate shall be attached to the Application for Payment in the amount of the value of the stored materials.

916.6 Retainage Reduction: The following are excerpts from Article 41 (Payment) of the General Conditions:

41.5 Held Retainage/Retainage Reduction. *Until fifty percent (50%) of the construction work has been completed in accordance with the contract, the Owner may withhold no more than ten percent (10%) retainage from the amount of any undisputed payment due, and retainage held after fifty-one percent (51%) of the construction project has been completed shall not be more than five percent (5%) of the total contract amount.*

18.5.1 *Subsequently, the Contractor shall withhold no more than ten percent (10%) retainage from the amount of any undisputed payment due to a subcontractor, and*

retainage held after fifty-one percent (51%) of the construction project has been completed shall not be more than five percent (5%) of the total amount contracted with a subcontractor.

Upon Certification of Substantial of Completion by the Architect-Engineer, the retainage may be reduced to a sufficient lump sum (cost of the work times 2) to cover the value of the punch list items.

917 – Changes in the Work

Change Orders and Field Orders/Architects Supplemental Instructions are the only two means of changing the Work. This Chapter explains the use of and implementation of these changes.

917.1 Field Orders and/or Architects Supplemental Instructions (ASI): All changes in the Work that are for the purpose of clarification and/or minor changes, that DO NOT involve additive or deductive costs and/or time extensions shall be documented by AIA Document, Architects Supplemental Instructions G710 or other Architect-Engineer format.

917.2 Change Orders: All changes in the Work, involving costs and/or time extensions, shall be documented by means of a Change Order. All changes shall receive the approval of the Project Manager prior to the commencement of the Change Order work. Changes made without prior approval by the Project Manager may become the responsibility of the Architect/Engineer or Contractor. Executed Change Orders are legal documents and are part the Contract. They are subject to the same scrutiny as applies to the Contract.

Change Orders shall:

- Be germane to the existing Contract scope.
- Be minor in scope and cost, compared to the total Contract unless they are necessary for continuation of the Project.
- Identify the nature, justification, time and the cost of the change.

917.3 Directives to the Contractor:

- Change Orders and Field Orders/ASI's shall be addressed to the General Contractor, not to individual subcontractors.
- The Contractor shall issue the Change Order and Field Orders/ASI's to the appropriate Subcontractor.
- Written authority is required from the Project Manager prior to proceeding with any directive that affects substitution of materials, fixtures, appliances or equipment.
- Change Orders shall be promptly processed, allowing for payment to the Contractor.
- Multiple items may be incorporated into one Change Order, as long the Work is not delayed.

917.4 Change and Field Order Logs: The Architect-Engineer shall maintain a list of all pending and/or anticipated change proposals and consider their impact on the project budget.

917.5 Justification: The Architect-Engineer shall present justification for all Change Orders to the Project Manager for concurrence. The justification may fall under one of the following categories:

- Remedy a found condition.
- Correct an error or omission to the Contract Documents.
- Comply with a request by the Project Manager or Using Agency. If the Using Agency request is allowed it shall be described fully in the reason for the Change Order. Utilize a subcontractor or supplier different than those indicated in the form of proposal. A change in subcontractor or supplier requires a written release from the listed subcontractor or supplier.
- Delete work no longer deemed necessary.
- Adjust the contract for an allowance.
- Adjust the Contract for time.

917.6 Implementation: For a change in Contract time or Contract Sum, the Architect-Engineer shall obtain a proposal from the Contractor describing the proposed change in the work. This explanation shall be attached to the Contractor's proposal and included in the Change Order.

For a change in Contract time, the Contractor's proposal shall explain:

- The direct relationship to time needed to procure materials.
- The labor and equipment time required to perform the Work.
- The resultant effect on the required Substantial Completion Date.

For change in Contract Sum, the Contractor's proposal shall include:

- The cost subtotal including overhead and profit for each major category.
- The itemized cost breakdowns for all portions of the Work completed to show values of direct cost to Contractor and subcontractors. The itemizations shall breakout the costs for materials, equipment and labor separately.

The Architect-Engineer shall not submit a Change Order until such time that the Architect-Engineer and the Contractor agree on the proposed amounts. The Architect-Engineer shall undertake negotiations with the Contractor in the best interest of the Owner to obtain the most reasonable price for the proposed change.

The Architect-Engineer shall keep the Project Manager fully informed of discussions between the Contractor and the Architect-Engineer where there is a disagreement in the Change Order amount.

917.7 Executing Change Order Forms: Change Orders shall be produced on a CCPA form.

The Change Order document shall include the following information:

- Description of the change(s) in Work: either completely, or briefly with reference to a fully descriptive attachment and identifying proposal documentation.
- Statement of the change in Contract Sum and Contract time, both per item and total. The brief summary of changes at the bottom of the form does not take the place of the statement included in the body of the form.
- Reasons for each change. Reasons shall be concise and descriptive. If the Using Agency request is allowed it shall be described fully in the reason for the Change Order. The words "Agency Request" is not a legitimate standalone reason.
- Separate items for extensions of time unrelated to change in Work, such as delays or suspensions of the Work, beyond the control of the Contractor.
- Number of days extension of contract and new Substantial Completion Date located in the lower left corner of the Change Order form.
- Reference to supporting document attachments.

All attachments to a Change Order shall be clearly referenced to the specific item and Change Order number. Attachment references should be adequately descriptive to provide the clear meaning of the attachment and its use in supporting the proposed change. Attachment contents should be limited to a complete description of the proposed change(s) in the Work. No issues or items shall be included which are not associated with the contents of the Change Order.

917.8 Change Order Review: The Project Manager and Using Agency will scrutinize the following:

- Extended overhead or damage claims.
- Critical time extensions and effect on overall Project.

- Changes inconsistent with original design intent or scope.
- Changes requested after Substantial Completion.
- Changes resulting from apparent Architect-Engineer errors or omissions.
- Changes resulting from delays caused by Architect-Engineer response times.
- Individual or cumulative changes approaching 15% of original Contract Sum or significantly impacting construction contingencies.

917.9 Change in Contract Time Based on Delays beyond the Control of the Contractor: In the event of delays based on adverse weather, government actions, embargoes, strikes, acts of God, or other such events beyond the control of the Contractor, the Contractor shall provide an initial letter making claim for extension of time. The letter shall be submitted within twenty-one (21) calendar days after commencement of delay, and state the nature of the delay, immediate impact on the Project, and whether delay is isolated or continuing.

The Contractor must support his claim with the following data:

- Contractor's daily work logs documenting delay, if applicable.
- For weather related delays, a monthly summary of local climatological data as reported by the National Weather Service for the reporting station nearest the affected location (Project site). This information will serve as the impartial basis for evaluating weather conditions, when applicable. See the following link for monthly station climate histories. <http://hurricane.ncdc.noaa.gov/cgi-bin/climatenormals/climatenormals.pl>. Click on Monthly Station Climate Summaries. Then select a state and then a station/city. These monthly station climate summaries are provided in PDF format. This information includes means, median (precipitation and snow elements), extremes, mean number of days exceeding threshold values, and probabilities for monthly precipitation and freeze data.
- If an unusual and not reasonably anticipatable manufacturing or delivery delay occurs, a letter from the manufacturer or shipping company explaining the delay. When this delay is based on weather, climatological data as stated above will be required.
- If days for soil drying are requested, supporting documentation from on-site observations must be included as a part of the request.

The Architect-Engineer shall review the entire Contractor's supporting data and prepare a letter of evaluation and recommendation. The letter shall be addressed to the Project Manager. The letter should state the following:

- The Architect-Engineer's recommendation concerning the Contractor's claim.
- The Contractor's claim is based in whole or part on daily work logs or climatological data.

917.10 Change Orders after Substantial Completion: Adding Work to the Project or making modifications to the Work after Substantial Completion is strongly discouraged. When it is absolutely necessary to initiate such a change to the Contract, the added work or modification shall be identified as either part of the existing contract time frame or as a separate phase.

If the change is sought as a separate Phase, a specific interval of time for Substantial Completion of that phase, and a specific amount for liquidated damages shall be identified. The Architect-Engineer shall attach an explanation of the change and why the change should be added to the Project after Substantial Completion.

917.11 Design Errors and Omissions: The Architect-Engineer shall provide an evaluation of any problem resulting from what CCPA considers a design error or omission. The evaluation shall include the following:

- A brief description of the problem and the status of the construction at the time of its discovery.
- A complete and detailed analysis of the problem. Background facts such as circumstances, conditions, dates, personnel involved and cost data shall be included, if pertinent. Design conflicts, errors, omissions, and/or ambiguities contributing to the problem shall be identified.
- Recommended corrective actions. Attach sketches or drawings, if appropriate.
- The rationale and justification for whether or not the problem should be considered a design deficiency.

The University will make the determination of Architect-Engineer liability in connection with this problem. Any evidence or information the Architect-Engineer wishes the University to consider should be addressed here.



Eastern Kentucky University
Capital Construction & Project Administration

CHANGE ORDER
(Advice of Change)

Date: 16-Sep-15

Page 1 of 1

Purchase Order Number
P0026714
RCF Number
1170

Change Order No: 1

FOR OFFICE USE ONLY							
FY	CHART	FUND	ORG	PROGRAM	ACCOUNT	ACTIVITY CODE	CURRENT AMOUNT
15	E	910200	512595	76	742040		\$ 415,000.00

VENDOR NAME Grants Excavating, Inc. PO Box 298 Richmond KY 40476 Complete Mailing Address		EKU Vendor ID 901429040	
		Location: <input checked="" type="checkbox"/> Main Campus <input type="checkbox"/> Extended Campus <input type="checkbox"/> Other:	

Project Title: Noel Studio Arch

THIS DOCUMENT SHALL BECOME AN AMENDMENT TO THIS CONTRACT AND ALL PROVISIONS OF THIS CONTRACT WILL APPLY THERETO

Item No	Itemized Description of Change(s)* (Attach Additional Documentation if Necessary)	Amount (+/-) of Change
1	Labor and Materials to Install Additions Foundations per Engineer Provided Sketch Additional Excavation for Lean Concrete installation per hour (2hrs x 236.25) Labor for Lean Concrete Installation per hour (8hrs x 61.50) Lean Concrete per CY (10 x 110.80) New 1'6" mat Foundation Labor per hour (45hrs x 61.45) Additional Concrete Material per CY (17 x 132.00) Additional Rebar per TN (2.25 x 1525.00) Additional Misc. material Forms, Epoxy etc. each (1 x 708.50)	\$ 472.50 \$ 492.00 \$ 1,108.00 \$ 2,765.25 \$ 2,244.00 \$ 3,431.25 \$ 708.50

COMPLETION OF THIS BLOCK NOT REQUIRED WHEN AMENDING A/E CONTRACT	** APPROVED **	
To the best of my knowledge and belief, the cost or pricing data submitted is accurate, complete and current.		Net Increase: \$ 11,221.50
Signed: _____ Contractor Date	Project Manager-Capital Construction & Project Admin. Date	Net Decrease: \$ -
Signed: _____ Architect/Engineer-Consultant Date	Architect/Engineer-Capital Construction & Project Admin. Date	
	Director-Capital Construction & Project Admin. Date	\$ 415,000.00
Consulting Firm Name		Original Purchase Order Price
		\$ 11,221.50
CONTRACT COMPLETION DATE IS ALTERED BY _____ CALENDAR DAYS		Previous Change Order (Net)
REVISED COMPLETION DATE:		\$ 426,221.50
		Revised Purchase Order Price

*Reason for change(s) must be printed or typed on the front of this form. Do not state reason(s) as: Requested by University.

918 – Responsibilities of the Contractor

The Contractor's Responsibilities shall be as identified in the Construction Contract.

918.1 Recordkeeping: The Contractor shall maintain the following at the job site:

- Project Directory.
- An Official Department of Housing, Buildings and Construction stamped set of plans, specifications and Shop Drawings (for items reviewed by HBC).
- Copies of Architect-Engineer approved Shop Drawings and executed Field Orders and Change Orders.
- Adequate records of day-by-day job progress and activities. Records concerning deliveries to the Project site.
- Record Drawings marked-up field set. Revisions to the Record Drawings field set shall be kept up to date.
- Copies of all test reports, inspection reports by governmental authorities, Material Safety Data Sheets (MSDS) and other product data safety sheets.
- Reference and cut sheets as required by the specifications.
- Roof installation information, such as kettle temperatures for asphalt, etc.
- Material installation information such as Project conditions prior to installation, protection of installed materials, etc. (This would apply to items such as gypsum drywall, flooring, ceilings, etc).
- Copies of all construction-related Project correspondence including all e-mails.
- Daily work logs and daily weather conditions.

918.2 LEED: For Projects seeking LEED certification, the contractor shall provide to the Architect-Engineer the information required by the Contract Documents for submittal to the USGBC to obtain the required LEED certification.

919 - Building / Systems Commissioning and Testing

919.1 Pre-functional Testing: Pre-functional checks are important to ensure and document that the commissioned equipment and systems are connected and operational. In addition, pre-functional tests allow the functional performance testing to proceed without unnecessary delays. Each piece of commissioned equipment shall receive full pre-functional checkout by the Contractor. In general, the pre-functional testing for a commissioned system must be successfully completed prior to formal functional performance testing of equipment or subsystems of the system.

The Commissioning Process requires that the pre-functional checks for commissioned systems be documented in writing by the installing contractor. Pre-functional checks shall be documented by means of start-up plans and pre-functional checklists

919.2 Functional Testing: Functional testing is the dynamic testing of commissioned systems (rather than just components) under full operation (e.g., the chiller pump is tested interactively with the chiller functions to see if the pump ramps up and down to maintain the differential pressure set point). Commissioned systems are tested under various modes, such as low cooling or heating loads, high loads, component failures, varying occupancy levels, varying outside air temperatures, fire alarms, power failures, etc. The systems are run through all of the control system's sequences of operation and components are verified to be responding as the sequences state.

919.3 Facility Staff Participation: The University's Facilities Services staff are encouraged to attend and participate in the testing process. They will be notified when the commissioning events will occur, in accordance with the Commissioning Plan.

920 - Owner Training

920.1 Training Manual: The Commissioning Plan shall identify the party responsible for developing the Project training manual and the schedule for its submittal for owner review. If Commissioning is not required for the Project then the Architect-Engineer shall develop the Project training manual and the schedule for its submittal for owner review.

The project training manual shall identify appropriate training requirements including:

- The quantity of training required
- The approximate “Project cycle” training schedules
- The identification of systems and components requiring training
- Delivery, documentation and recording requirements
- Training agenda covering subject matter, support materials, and documentation requirements
- Audience: the Using Agency maintenance and operations staff.
- Acceptance procedures
- Method of evaluating training effectiveness

920.2 Training Delivery and Recording Requirements: Training meetings shall be recorded and shall have a:

- Sign In Sheet
- Training agenda
- Professionally Edited Video Training with spliced screen shots that shall be of a quality that is usable by the Using Agency staff. This video shall be provided as a DVD or MPG4 Standard.

920.3 Contractor’s Responsibilities: The training requirements that impact the Contractor’s scope shall be identified in the Contract Documents.

921 - Substantial Completion

921.1 Process for Accomplishing the Substantial Completion Punch List: The process should be reviewed with the Contractor, A/E, Using Agency and CCPA at the following times (as a minimum):

- Pre-Construction Meeting
- At the Progress Meeting which is held at least one month (1) prior to the Date of Substantial Completion as defined in the Special Conditions of the Contract Documents.
- On the Date of Substantial Completion as defined in the Special Conditions of the Contract Documents.
- On the Date the Substantial Completion Punch List is being accomplished.

921.2 Who must attend the Substantial Completion Punch List Meeting:

- The Contractor, major Sub-contractors, the Architect and all Sub-consultant discipline representatives, CCPA Project Manager, Construction Specialist and Using Agency Representative.
- **At a minimum**, at least one (1) representative of the A/E, the CCPA Project Manager and the Using Agency Representative should be present and participate in the official Substantial Completion Punch List.
- **The mechanical, electrical and plumbing inspections for Substantial Completion** may be conducted by a separate team of representatives (with A/E representation of **EACH** discipline) but should be performed in conjunction with and simultaneously to the Architectural Substantial Completion Punch List Inspection.

921.3 Date of Substantial Completion vs. Date of Certificate of Occupancy:

- **The Certificate of Occupancy** issued by the Department of Housing, Buildings and Construction is a requirement for Substantial Completion. However, Substantial Completion is not determined by the date on which the Certificate of Occupancy is issued.
- **The Date of Substantial Completion** can be on the date when the Certificate of Occupancy is issued or LATER, but never earlier.
- **The issuance of a “Temporary Certificate of Occupancy”** by the Department for Housing, Buildings and Construction which allows a limited use of the building by occupants should not be confused or accepted in lieu of a “Certificate of Occupancy” for complying with the requirement for obtaining a Certificate of Occupancy prior to Substantial Completion except in rare circumstances and with the approval of CCPA.

921.4 Prerequisites for the Substantial Completion Punch List Meeting.

Contractors responsibility is to provide the following prior to the Substantial Completion inspection.

- Written assertion to the Architect-Engineer that the Work is Substantially Complete.
- A written list of items to be completed or corrected and the schedule for completion.
- All Operations and Maintenance Manuals.
- Written certification that orientation and training for designated facility maintenance personnel has been completed prior to punch list inspection.

Architect-Engineer responsibility: Once the Contractor’s responsibilities have been met, the Architect-Engineer shall schedule a Substantial Completion Punch List inspection with the Contractor, major Sub-contractors, all Sub-consultants, Project Manager, Construction Specialist and Using Agency Representative.

For large or complex projects: the Architect-Engineer may inspect the work prior to the Substantial Completion inspection meeting in order to create a list for review of Work that should be

completed prior to the Substantial Completion Punch List Meeting. **This list shall not be titled “Punch List”** and shall not be viewed as a complete definition of all Work required for completion of the project. Additional Architect-Engineers responsibilities include the following:

- **It is important to indicate to all participants** that the Punch List that is being compiled at this date will be the official Punch List and shall be for the purpose of defining the Corrective Work necessary for the Work of this project to be deemed complete.
- **On the date requested by the Contractor for the Official Substantial Completion Punch List**, if the team discovers that the Work is not Substantially Complete to the degree that allows for a Punch List of reasonable length, the team should not perform the Substantial Completion Punch List and the A/E shall inform the Contractor in writing that the Work is not Substantial Complete.

921.5 Notification of Non-Compliance for Substantial Completion: At the first opportunity for discovery prior to the date established by the Construction Contract for Substantial Completion, preliminary and official discussions with the Contractor should be started to notify him that it appears that Substantial Completion will not be achieved.

As part of these discussions:

- The Contractor shall be reminded that Liquidated Damages per the Contract will be assessed if in fact the Date for Substantial Completion is not met.
- When practical, the Contractor should be advised of the portion of the Work that appears to be behind schedule.
- The Contractor is to be required to provide a detailed plan of action that he intends to undertake to improve his progress and meet the Date of Substantial Completion per his Construction Contract.
- **During the progress of the Work, as situations arise** that delay the Work on the critical path and are not in the control of the Contractor, the Date for Substantial Completion established by the Construction Contract must be modified by Change Order.
- **During the progress of the Work, as situations arise** that delay the Work on the critical path that are in the control of the Contractor, the A/E should inform the Contractor that it appears the Work is behind schedule and require that the Contractor provide a plan of action he intends to undertake to improve his progress sufficiently to enable him to meet the Date of Substantial Completion per his Construction Contract.

921.6 Substantial Completion Punch List Meeting

Significant Work defined in the Contract Documents must be substantially completed prior to the punch list meeting. If there is significant Work to be completed and cannot for a justified reason be accomplished prior to Substantial Completion, the Contractor shall notify the Architect/Engineer and the CCPA Project Manager in writing of this fact and a determination made to excuse that portion of the work from the Substantial Completion Requirements.

- **The Contractor in making this written notice** shall provide explanation of the reason this work cannot be accomplished and a scheduled date for the completion of this item of Work.
- **The awarding of a waiver excusing** an item of significant Work from the requirements for Substantial Completion must be contingent upon the Contractor's completion of that item of Work on or before the agreed time for late completion of that item of Work.
- **The A/E's written notification to the Contractor** that the team was unable to perform the Substantial Completion Inspection requested by the Contractor should contain sufficient detail including written explanation and photographs to document the fact that the Work was not Substantially Complete at the date requested for Substantial Completion.

After the passing of the Date established by the Construction Contract for Substantial Completion, should the Contractor request a date for the Substantial Completion Punch List to be performed (allowing reasonable time for the scheduling of the meeting) and the team cannot convene for the purpose of performing the Substantial Completion Punch List Inspection, the following criteria shall be used to establish the Date of Substantial Completion:

- When the team convenes for the purpose of performing the Substantial Completion Punch List, it **finds that the Work is Substantially Complete**; the Date of Substantial Completion shall be the date the Contractor requested the inspection.
- When the team convenes for the purpose of performing the Substantial Completion Punch List at a date later than the Contractor requested, it **finds that the Work is not Substantially Completed**, the Contractor shall be charged by a credit Change Order for the costs incurred by the University for the team to convene to make that determination.

921.7 Substantial Completion Inspection (Punch List) in this Procedures Manual indicate that:

- **The Architect-Engineer shall fully coordinate** the inspection of the Work and compile a Substantial Completion Punch List of remaining items and/or corrections of the Work.
- **The completed Substantial Completion Punch List** shall be distributed to the Contractor, the Architect's Sub-Consultants, CCPA Project Manager, Construction Specialist, and Using Agency Representative. (This distribution should occur as quickly as possible following the inspection, but no later than three working days following the inspection). The Contractor shall distribute the Punch List to all Subcontractors as applicable.
- **This Punch List shall be titled "Substantial Completion Punch List"** and shall be comprehensive in detailing the Corrective Work necessary for the Contractor to accomplish Final Completion.
- **Once the Punch List is distributed, the list shall not be modified.**
- **When Corrective Work on the list is determined to be accomplished**, an indication is to be made on the list that the item is acceptable and shall be dated and initialed by the reviewer. (The accomplished item should not be removed from the list).
- **The Owner and/or Architect-Engineer may make additions** to the Punch List for Work clearly within the scope of the Project or needing correction until the time of Final Acceptance.
- **In case of disagreement**, the Contractor shall prepare a written response to each item, to be submitted to the Architect-Engineer and CCPA Project Manager for review and response.
- If following this review, the A/E and CCPA Project Manager determine that the Contractor is correct for a particular item, the item is to be noted on the Punch List as "waived" and dated. (The waived item should not be removed from the list).
- **The Date of Substantial Completion according to the Construction Contract** is officially the date in which Substantial Completion of the Work is to be accomplished.
- **It is critical that on this Date (per the Construction Contract) that the status of the Work is documented as either "Substantially Complete" or "Not Substantially Complete"**.
 - When it is obvious that the Contractor has not accomplished Substantial Completion on the Date of Substantial Completion per the Contract, it is important that the A/E perform at least a cursory review of the work on that date and document in writing that the Contractor is not Substantially Complete.
 - The A/E's written notification to the Contractor that the Work is not Substantially Complete on the Date established by the Construction Contract for Substantial Completion must contain sufficient detail to document the fact that the Work was not Substantially Complete at the date. (It is not intended that the A/E compile a comprehensive "Substantial Completion Punch List" as proof that the Work is not

Substantially Complete, but in general terms the A/E shall provide sufficient detail to document that Substantial Completion has not been accomplished on that date).

921.8 Proposals Requests and Executed Change Orders and their effects on the Date of Substantial Completion:

- It is important that whenever possible, Proposal Requests and Change Orders should be undertaken with sufficient time remaining on the Construction Schedule to allow for the accomplishment of the Work prior to the Date established by the Construction Contract for Substantial Completion.
- **At the time of execution of any Change Order**, if additional time is determined to be required to perform Work that is on the critical path, a reasonable time extension should be granted to the Contractor and the Change Order should reflect a change in the Construction Contract Time.
- **When by necessity (although this should be an exception to the rule)**, Proposal Requests and Change Orders must be undertaken without sufficient time remaining on the Construction Schedule to allow for the accomplishment of the Work prior to the Date established by the Construction Contract for Substantial Completion and when this work is not on the critical path of the Construction Schedule a determination must be made as to how to address the time of completion of this specific work as it relates to the Date of Substantial Completion of the entire Work.
- **When by mutual agreement** of the A/E, CCPA Project Manager and Contractor it is determined that the additional Work is not critical to the Substantial Completion of the entire Work, the Change Order executed for this specific item of Work should indicate that the Work defined by the Change Order does not modify the Contractual Date for Substantial Completion. Additionally, the Change Order should establish the time frame for the accomplishment of this specific item of Work outside the time established for Substantial Completion.

922 - Record Drawings

922.1 Contractor's Responsibility: The Contractor shall be responsible for updating and maintaining the Record Drawings field set throughout the construction period. The Record Drawings field set shall reflect all changes caused by addenda, Change Orders, and other modifications and observed changes.

The Contractor shall provide the Record Drawings field set to the Architect-Engineer so they may produce the final Record Drawings to be submitted to CCPA.

922.2 Architect-Engineer's Responsibility: The Architect-Engineer shall be responsible for:

- Monitoring, during construction period, the Record Drawings field set compiled by the Contractor. This monitoring shall be on a monthly basis and compensation to the contractor may be adjusted as necessary to insure that the Record Drawings field set is kept up to date.
- Making updates to the original construction drawings, or generating revised drawings after receipt of the Record Drawings field set from the Contractor.
- Providing Record Drawings to the Owner at completion of the Project.
- Submitting all Record Drawings in hard copy on 4 mil Mylar.
- Providing a complete set of Record Drawings in electronic format on CD-R or removable disk (thumb drive) in both AutoCAD and PDF format. All drawings shall be titled and include sheet numbers and file numbers.
- Verifying with the Project Manager, prior to submitting electronic files, the required format/version of AutoCAD files. The CD-R or removable disk (thumb drive) shall be transmitted with a complete index of drawings on the CD, including the File Name, drawing title, drawing sheet number, and date.
- Submitting Record Drawings to the Project Manager within 60 days from Final Completion.
- Submitting Record Drawings prior to the final payment to the Architect-Engineer.

922.3 Record Drawing Requirements: The Record Drawings shall:

- Comply with the CADD Standards listed in this manual. **See Section 108.**
- Have Architect-Engineer stamps and signatures on both Mylar and PDF versions.
- Bear a stamp "As-Builts" or "Record Drawings" with a revision date on each sheet near the title block.
- In the case where half-size or 11'x17" drawings are distributed for bidding and contract administration purposes, the official record documents submitted to CCPA shall be on a minimum sheet size of 24" x 36".

923 - Construction Closeout

923.1 Contractor Requirements: The Contractor is required to provide Project close-out documents in accordance with the Contract Documents. The Contractor shall collect the necessary documents from Subcontractors and shall verify the documents for accuracy and completeness prior to submitting them to the Architect-Engineer.

923.2 Close-out Documents: Although Close-out documents may vary due to specific Project circumstances, these generally include, but are not necessarily limited to the following:

- Record Drawings
- Shop Drawings
- Roof Warranty
- Warrantees
- Maintenance and Operation Manuals
- Special Inspection Reports
- Maintenance agreements
- Final certifications as required by code
- Damage and settlement surveys, if applicable
- Final Completion Property Survey, if applicable
- All documents required to obtain the specified LEED Certification (if the project is required to seek LEED Certification)

923.3 Architect-Engineer Responsibilities:

- Receive the close-out documents from the Contractor, review and verify the information provided by the Contractor then submit the Close-out Documents to the Using Agency.
- Submit the original Roof Warranty to the Project Manager of CCPA.
- Submit the original Mylar Record Drawings to the Project Manager. The drawings shall be signed and sealed by the appropriate responsible design professional. **See Section 922 Record Drawings.**

924 - Final Completion / Owner Acceptance

The Date for Final Completion is determined by the Contract Documents.

924.1 Contractors Responsibility: Prior to the Final Completion Inspection the Contractor shall provide written documentation that:

- Work is complete and in accordance with the Contract Documents is ready for final inspection.
- Record Drawings reflecting “as-built” conditions are complete and acceptable to the Architect-Engineer.
- All required Project Close-out Documentation is complete.
- Full Occupancy Permit from the Department for Housing, Buildings and Construction has been obtained.
- All additional materials required by the specifications have been delivered to the Using Agency, i.e. Spare parts, ceiling tile, floor tile, etc.
- All Using Agency training has been completed.
- All LEED certification documents required of the contractor have been submitted to the Architect-Engineer for inclusion in the LEED submittals.

924.2 Final Completion Inspection: The Architect-Engineer shall schedule an inspection with the Contractor, major Subcontractors, Sub-consultants, Construction Specialist, Using Agency Representative and Project Manager. The inspection shall:

- Verify that all items listed in the substantial completion Punch List have been completed.
- Review results of inspection and schedule re-inspection if work is considered incomplete.
- Review the status of Contract Time
- Verify operation of equipment and systems.
- Verify completeness of O& M Manuals.
- Verify and document delivery of surplus stock to Owner.
- Verify completeness of Close-out and Record Documents.
- Set tentative date for Year-warranty review.
- Review status of Liquidated damages if applicable.