Chapter 6

CONSTRUCTION

6.01 INTRODUCTION

A. The Designer's relationship to the Contractor shall be as set forth in the Conditions of the contract for construction.

B. Refer to Chapter 1 for a discussion of roles of Owner staff.

C. Review this for T 100 For new construction and additions, look ahead to the transfer of possession and responsibilities for insurance coverage (in 6.18.C of this Chapter). Administrative Form F691 can be started as early as possible.

6.02 PRE-CONSTRUCTION CONFERENCE

A. Setting Up. Designer shall coordinate with the CPCA and Contractor to initiate a Pre-Construction Conference. Hold the conference meeting on the site immediately after or concurrent with award of contract. If all parties agree, hold it early, but not before Owner has received proper bonds, insurance certificates, and the signed agreement from the proposed contractor. Designer shall take minutes of the Conference.

B. Special Participants. When setting up the Pre-Construction Conference, verify whether special requirements for Commissioning or a SWPPP apply to this work. Also, consider and try to identify any institutional staff who will have essential direct interaction with the Contractor. If so, take into account the additional coordination required to involve these people in the Pre-Construction Conference and any follow-up meetings that might be required immediately after the Conference.

C. Giving Notice. If TDOT or Federal Prevailing Wage Determination is in effect, when the Pre-Construction Conference is scheduled or changed, give at least a week advance notice to the CPCA.

D. What to take to the Conference:

1. Administrative Forms F612 Pre-Construction Conference Discussion Guide for reference in covering the topics on the Agenda, not as a handout.

2. Administrative Forms F615 Pre-Construction Data Sheet filled-out in advance as much as possible, with the rest to be filled-out at the Conference.

3. If available, a page of contact information of the various institutional staff with whom the Contractor is expected to coordinate various on-site activities.

4. If all parties agreed in advance on a suitable date, a Notice to Proceed. Refer to 6.03 below.
E. Conduct the Conference consistent with the Pre-Construction Conference Agenda

1. Record of Attendance
2. Fill out the Pre-Construction Data (form F615):
   a. Project title
   b. Contact persons (supplemented with a separate page of institutional contacts)
   c. Contractor’s copies of Contract Documents including stamped State Fire Marshal set and Contractor’s related information
   d. Status of permits (See #8 below)
   e. Schedule for Progress Meetings
3. Chain of Communication
4. Wage Rates and payrolls
5. Builders’ Risk insurance
6. Scope of Work
   a. Contract Time and stipulated Phases
   b. Mobilization and use of the site
   c. Temporary utilities and accommodations
   d. Unit Prices and other allowances
   e. Special construction and delivery methods
   f. Possible programmatic add-ins
   g. Coordination of other work and move-in
   h. Permanent utilities and operational turnover
7. Contractor’s initial submittals:
   a. Subcontractors and suppliers
   b. Construction schedule
   c. Schedule of submittals
   d. Schedule of values, and specified delineation of phases, buildings, allowances, and change orders
8. Building permits:
   a. Local jurisdictions
   b. State, including:
      1) Fire Marshal
      2) Electrical Inspections
      3) Storm Water (TDEC CGP-NOC & ARAP)
   c. Federal
9. Visitor's Log
10. Weather Delay Reports
11. Laboratory reports
12. Shop drawings
13. Construction record documents
14. Field reports
15. Progress meetings
16. Applications for Payment
   a. basic forms and required attachments
   b. If phased, the effect on listing change orders and reducing retainage on phases
17. Retainage
   a. 5% until SC, then 2%
   b. setting up escrow if >$500k
18. Modifications
19. Commissioning
20. Demonstrations and Training, and Verification
21. Pre-Close-out Submittals
22. Liquidated Damages
23. Substantial Completion
24. Work without proper authorization
25. Additional work after substantial completion
26. Sustainable Design closeout verification
27. Final Inspection
28. Roof warranty
29. Minority participation
30. Final payment
31. Evaluations of Contractor and Designer

F. Following the Pre-Construction Conference, e-mail to the CPCA a completed Form F615 Pre-Construction Data Sheet and a copy of the Notice to Proceed.
6.03 NOTICE TO PROCEED and CONTRACT TIME

A. Issue a Notice to Proceed after the following:
   1. The contract is fully executed and awarded.
   2. Request customary approvals from local regulatory authorities.
   3. Obtain required approvals from state regulatory authorities.
   4. The NTP is the last order of business of a Pre-Construction Conference.

B. Notice to Proceed shall be a written order from the Designer to the Contractor that identifies the project and instructing the Contractor to commence Work and the Contract Time. Do not delve into other subjects. For example:
   "This is your Notice to Proceed, effective February 7, 2000, which is day 1 of the Contract Time. You may occupy the site and commence Work on that date."

C. Count Contract Time "...from and including..." the date of commencement, so the above Notice to Proceed, with 3 days Contract Time, would require a Substantial Completion date of February 9, 2000.

D. Issue the Notice to Proceed to the Contractor and send the CPCA an e-mail copy and Form F615 per 6.02.F above.

6.04 LOGS, PROGRESS OBSERVATIONS, AND FIELD REPORTS

A. The Designer shall initiate the following logs at commencement of construction and maintain these through completion. The Administrative Forms contains suggested forms:
   F637 CPO Log: to track commissioning issues.
   F641 Action Item Log: to track the development and resolution of construction concerns.
   F642 RFI Log: to track Requests for Information.
   F643 Minor Orders Log: to track ASIs, Field Orders, and related items.
   F644 RFP Log: to track the development and resolution of Requests for Proposals, proposals, change orders, and directives.

   Submittal Log:

B. The Designer (and the Designer’s consultants, to the extent necessary) shall perform Project observations at least twice each month.
   1. Check whether materials, equipment, and systems are installed in a manner that meets building codes, standards, and specs. Determine if the contractor has protected them from the elements and damage.
   2. On exterior building envelopes, conduct field verifications in accordance with Administrative Procedures Appendix 3 Building Envelope Design Guidelines.
   3. If a SWPPP is in effect, determine that the Contractor has completed the twice-weekly inspection reports (form in the NPDES guidebook) and is keeping copies of the site auditor’s monthly checklists (the Owner’s MS4 site auditor will use Administrative Forms F686).
   4. Note deficiencies, problems, deviations from specifications, and other concerns. Notify Contractor of problems and its responsibility to respond and correct them in a timely manner. Administrative Forms document F637 provides a list of minimum items of observation. Though the form is designed for basic commissioning without a third-party commissioning agent, the Owner recommends using it on any project that has the systems it mentions. It can expand into an even more comprehensive checklist.
C. **SWPPP Site Assessment**, if a SWPPP applies

1. The Contract Documents shall have one or more features requiring a Site Assessment by the Designer. If the Contractor has a feature ready and gives notice in time, the Designer can make an Assessment as a part of the twice-monthly field observations.

2. The person making the Site Assessment must have at least the same qualifications as specified in Section 01 57 23 for making the twice-weekly inspections. This person must be either a qualified employee of the Consultant that prepared the SWPPP or a contractually named principle of the Designer’s firm itself.

3. In making the Site Assessment, fill-out a report using the same form specified in Section 01 57 23 for making the twice-weekly inspections, noting it as a Site Assessment. Leave a copy of the report in the SWPPP box.

D. **On every site visit**, sign the Contractor’s Visitor Log. Afterward, write a field report and submit a copy of the report to the CPCA (per subparagraph 2-1-33 of the standard designer contract Terms and Conditions). *Administrative Forms* Document **F632** provides a report form on page 1 and an example report on page 2. See also 6.06.E below regarding field reports.

6.05 **INITIAL SUBMITTALS**

When the Contractor submits the initial Progress Schedule, initial Schedule of Values, and list of manufacturers, products, and installers, forward a copy immediately to the CPCA.

6.06 **RESPONSE EXPECTATIONS**

All responses shall be in writing and according to these timeframes:

A. **RFI**: The Designer shall respond no later than seven (7) calendar days from receipt of a Request for Information from the Contractor.

B. **Minor Orders**: The Designer shall issue an Architect’s Supplemental Instruction or Engineer’s Field Order or shall similarly order minor changes in the Work, per Conditions Article 7, no later than seven (7) calendar days from receipt of notification of the issue.

C. **RFP**: The Designer shall respond no later than seven (7) calendar days from receipt of a pricing proposal from the Contractor in response to a Request for Proposal, providing a recommendation that evaluates the fairness of the pricing and the acceptability of the proposal.

D. **CPO**: (See Form **F637**) The Designer and its Consultants shall submit deficiencies and concerns to the Contractor no later than seven (7) calendar days after the date of observation.

E. **Field Reports**: The Designer and its Consultants shall submit in a timely fashion commensurate with the significance of non-compliance problems(s) raised in the report. Even in the absence of a non-compliance problem, see also 6.04.D above regarding field reports. The Designer shall attach a copy of the reports for all site visits made during the billing period to the Designer’s pay requests. (See instructions for Payments to Designer elsewhere in *Designers’ Manual*.)

F. **Meeting minutes**: The Designer shall prepare and issue meeting minutes no later than seven (7) days after a meeting.

G. **Contractor Pay**: The Designer shall review the Contractor’s applications for payment and issue a Certificate for Payment during the progress meetings.
6.07 ALLOWANCES (including Unit Prices)

The Designer shall provide direct supervision to determine the fulfillment of Bulk allowances (section 01 21 15), and Unit Price Base Quantity allowances (section 01 22 15). The Designer shall provide daily monitoring of Work under the allowances. The Designer is responsible for the contractor not exceeding the contract limits. If an allowance is insufficient to achieve the necessary Work it is intended to address, initiate an interim change order to make the needed increase before the allowance limit is reached.

6.08 PLANNING FOR CHANGES IN WORK

A. The Owner will give the Designer budget information. The Designer shall keep track of pending changes, their justification, and their effect on the Owner's budget. Do not hoard changes over a long period for a multi-item change order because it might hinder the Contractor. Issue RFPs for needed or requested changes and act on change proposals as soon as possible.

B. Creating Phases after Work is under Contract.

1. If adding work as a phase, and the existing Work was not defined in phases, it is normally necessary to re-define the existing portion as Phase 1 and the added portion as Phase 2. This normally requires re-aligning time and liquidated damages.

2. Assign phases a sequential integer name (if there are 2 already, make it #3), a caption, a specific Time for completion, and a specific amount for Liquidated Damages (such as "Phase 3, Paving, to be Substantially Complete 10 days from and including date of a Phase-specific notice to proceed, subject to $37 per day Liquidated Damages").

3. When adding a Phase, even after substantial completion of the entire existing Work, normally extend the overall Contract Time, so that all Phases exist within the overall Contract Time.

C. If adding work after Substantial Completion, identify the added work as an addition to the punch list or as a separate Phase. If adding to the punch list, determine whether to extend the deadline for final completion from what was agreed in the certificate of substantial completion.

D. Special Endorsements: Owner normally requires the following:


2. Endorsement of the MTSU Project Manager for any elective change to the work program.

3. Endorsement from Scheduler for extensions on projects with Owner Assisted Scheduling.

4. More time needed to scrutinize:

   a. Changes inconsistent with original design intent or scope
   b. Critical time extensions
   c. Changes ordered after Substantial Completion
   d. Class 1 Time-Related Expenses (defined in the Contract Conditions)
   e. Damage claims
   f. Assessments of Liquidated Damages
   g. Changes requiring a redistribution or increase in budget
   h. Reduction of contingency to a level that may not sustain completion of the project
   i. Redistribution of space among departments within the client institution.
6.09 SUBCONTRACTOR REPLACEMENT

A. When the statute requires a Subcontractor’s name on the bid envelope, the Contractor must use that subcontractor in the capacity listed. If circumstances force a substitution, require a written reason for the change and identify the new subcontractor’s name, license number with expiration date, and classification. When possible, obtain a separate written statement from the subcontractor being replaced that explains their reasons for withdrawing and their intent to not protest the change. Forward these to the CPCA.

B. In the case of the roofing subcontractor, statute requires that they be licensed but does not require listing them on the envelope. MTSU requires the listing in order to validate license compliance. However, if in the Designer’s opinion the justification is sound and the license is appropriate, then the Designer can approve the substitution on behalf of the Owner, acting as the Owner’s representative in accordance with Conditions 00 72 13 / 4.2.1. The Designer may order this minor change in accordance with Conditions 00 72 13 / 4.2.8 and 7.4.

C. Other subcontractors listed on the bid envelope are there because the license law requires it, and they are subject to SBC Policy requiring State Architect approval of the change. After forwarding the request to the CPCA, the Designer shall forward a recommendation that the justification is sound, the license is appropriate, and then request approval. The Owner will seek the approval, which normally takes only a few days.

6.10 DESIGNER’S ORDER FOR A MINOR CHANGE

Issue orders for a minor change on AIA document G710 Architect’s Supplemental Instructions. For those without access to AIA forms, Administrative Forms Document F656 provides a suitable substitute form on page 1 and instructions on page 2. General Work (Conditions 4.3 and 7.4) requires written authority from Owner to proceed if there is an effect upon Contract Sum or Contract Time. Non-Construction (Conditions 7.1) bar the Designer from ordering changes that affect Contract Sum or Contract Time.

6.11 REQUEST FOR PROPOSAL (RFP)

A. Using Administrative Forms document F654, or a comparable form from AIA or other industry standard, the Designer shall issue an RFP that fully and clearly details a potential change in Work arising from construction necessity or Owner’s request, to which the Contractor can reply with a proposal for corresponding change in Contract Sum and Contract Time. Most RFP forms, including CPCAs’s and AIA’s, provide the standardized text requesting the proposal and only a description of the change in work needs to be written.

B. Each RFP should address a single intended change or set of indivisibly related changes.

C. For ease of reference, number RFPs sequentially numbered in integers and provide a short name for the change. A simple RFP might be able to contain an adequate description of the intended change in the one document. In many cases, it is necessary to attach supplemental specifications and drawings. The RFP must suitably reference the attachments and must clearly differentiate work that:

1. Is already required in the contract and will remain in the contract.
2. Is already required in the contract and will be deleted from the contract.
3. Adds work to the contract.

D. Designers shall log and tack RFPs using Administrative Forms document F644.
E. When the Contractor submits a proposal that provides Cost and Time for a change that differs from what the RFP requested, the Designer shall review it for adequacy of detail. It might be necessary for the Designer to issue a superseding RFP; or it might be adequate to describe only the differences in the recommendation letter to the Owner.

6.12 CLAIMS AND PROPOSALS

A. Process claims in as timely a fashion as possible to protect the schedule and the Owner’s contingency. Evaluate claims that are continuing, such as correction of unsuitable subgrade, discovery of hidden hazardous materials, and other hidden conditions to establish an anticipated upper extent or maximum that might include extending quantity allowances for unit price work when the established base quantity is about to exceed its limits. Before making corrections, issue an interim change order to make the ongoing corrections a part of the Work, the Time, and the Contract Sum.

B. The procedures for claims are detailed in the General Work Conditions of Contract. The Non-Construction Conditions (paragraph 4.5) addresses claims superficially. A similar, but streamlined, approach to claims is advised. The following flow chart may serve to illustrate the process:

C. Contractor proposals for change in Contract Time, Contract Sum, or both, based on a requested or ordered change in the Work, should include the following:

1. For change in Contract Time: explain the effect of the change in Work upon the critical path of the construction schedule, correlated to the labor and equipment hours shown in the cost itemization and time required to procure materials.

2. For change in Contract Sum: separate itemization(s) of cost from the general contractor and each involved subcontractor, using forms specified in Sections 01 26 50 through 01 26 59. Show units, costs, quantities, and subtotal for each item of materials, equipment, and labor. Do not submit Lump Sums in the itemization.
D. Contractor’s proposal or claim for a change in Contract Time based on delays shall include the following:

1. Contractor’s initial letter making claim for extension of time within 21 days after commencement of delay that states nature of delay, immediate effect, and whether delay is isolated or continuing. If it is a continuing delay, include Contractor’s subsequent letter detailing projected or actual full scope of delay.

2. Contractor’s supporting data shall include the following:
   a. Weather Delay Report and daily work logs as needed to document delay.
   b. For weather, comparative data on trends, if not included in Contract Documents. Actual monthly summary of local climatological data as reported by the National Oceanic and Atmospheric Administration from the reporting station nearest the project location.
   c. If it is a shipping delay beyond the contractor’s or supplier’s control, submit a letter from the shipper explaining the delay. If based on weather, submit climatological data as stated above for the intended shipping route.

E. Except those that require a response in the form of an RFP, the Designer shall respond to proposals and claims with a letter of evaluation and recommendation, similar to Administrative Forms document F664:

1. Show that the Designer has found the proposed changes in Contract Time and Contract Sum to be appropriately documented and reasonable compared to local norms for similar work.

2. Explain the justification for the change with one of the following types:
   a. If a code official requests a change, the justification shall provide the official’s name, their authority, their instructions, and specific codes being enforced.
   b. If the contractor uncovers a hidden condition, the justification shall describe why the additional work is necessary and how the designer failed to detect the condition or anticipate the possibility of such a condition.
   c. If an omission drives a change, the justification shall describe why the additional work is necessary and why the designer failed to include it.
   d. If a change is the result of designer error, the justification shall describe why the work will not function appropriately as designed and how the designer made the error.
   e. If the Owner requests a programmatic change, the justification shall describe how it affects the project aesthetically or functionally and whether it was considered during design and deferred for cost considerations.
   f. For other miscellaneous changes, such as weather delays, taking liquidated damages, and liquidating unused portions of allowances, the justification shall summarize the change and explain pertinent facts or calculations that are not evident in other back-up information.
F. Never settle Claims that result in the Contractor compensating the Designer or the Designer compensating the Contractor with a direct payment between the two parties. The Owner will make all such adjustments by means of construction contract modification and the appropriate modification of the Designer’s contract.

G. Claims can result from delays in processing change orders themselves.

1. CPCA will typically process within a few days a contractor’s proposal that is correctly prepared, promptly reviewed, and a complete recommendation from the Designer. It can take a few days more if the change order’s dollar value reaches a threshold requiring higher level approvals, such as the Office of the State Architect (OSA). Since these factors are dynamic, confer with CPCA and ascertain to what extent they affect approval time.

2. First and foremost, if an RFP is in response to time-sensitive work, issue the RFP quickly, demand a quick proposal and quickly respond to the proposal. When issuing the RFP, it might even be appropriate to instruct the Contractor to determine a time limit to the approval process, in which the RRP pricing will remain valid.

3. If the Contractor identifies a proposal as time-sensitive, the Designer shall determine if the parties can reasonably complete an approval within the time limit the Contractor has identified. In a critically time-sensitive situation, the Contractor can even include a per-day estimate of the costs of further delays in the approval. How well the Contractor documents the critical path effect in its initial proposal can affect its further claim. Challenge and give no merit to a generalized statement by the Contractor that it reserves the right to make later claims for time and cost after assessing the full effect of the change.

4. Once the Owner distributes an e-mail copy of the modification, the Contractor is authorized to proceed. If the Contactor has an additional claim then he should not sign the modification, let it stand as a construction change directive (CCD). This action preserves the Contactor’s right to disagree with the compensation while proceeding with the change in Work. Upon receiving the preview copy, if the Contractor believes there is reason for claim of additional costs, time or both, the Contractor shall submit it in writing to the Designer. Usually in the response to such a claim, the Owner will issue an additional modification. By signing it, the Contractor also accepts the prior CCD as a change order. This resolves initial disagreement.

6.13 AMENDMENTS

1. The Owner issues Amendments to existing CM/GC contracts for a limited scope in a fast-track methodology. An amendment might add a major portion of scope as a “Bid Package” that releases the CM/GC to solicit Trade bids and develop a proposal for increasing the Guaranteed Maximum Price.

2. A CM/GC submits a GMP for amendment directly to both the Designer and Owner. The Owner will evaluate it parallel to the Designer. If the Designer recommends the award of amendment(s), the Owner will require, an evaluation of the progression of the award and amendment(s) and possible future amendments. The Designer shall examine the GMP scope for correctness and determine appropriateness of itemized costs of non-bid trades, self-performance, and general conditions that deviate from baseline.
6.14 CHANGE ORDERS AND DIRECTIVES

A. Reserve Directives for emergency situations. Issue Directives on the same form as Change Orders.

B. Document Structure

1. Change Order face sheet, similar to Section 01 26 40, briefly lists changes in Work, Contract Sum, and Contract Time with reference to RFP or other underlying document providing primary detail.

2. Supporting documents include
   a. Endorsements, recommendations, and proposals, which justify changes but are not part of the Change Order.
   b. The RFP or other underlying document, and supplemental specifications and drawings that it references, which are incorporated by reference as a part of the Change Order.

C. Process:

1. The CPCA obtains special endorsements from MTSU, when needed, assembles and submits a package of supporting documents, and assists in writing, explaining, and justifying the Change Order.

2. CPCA prepares and signs three (3) counterparts and brings them to the next Progress Meeting for signing, unless there is an earlier opportunity.

3. Designer and Contractor sign, and each retains a counterpart.

4. CPCA retains the third counterpart.

D. Below is a flow chart of the change order process. Refer also to previous flow chart of the Claims process, which can lead up to a change order.
6.15 CM/GC CONTINGENCY, RESERVE FUNDS, AND PUSHES

A. GMP Contingency definition and usage.
   1. Is defined in the CM/GC Master Contract standard Scope of Services and Deliverables subparagraph 1.9.2.
   2. It is a distinct part of the Contract Sum and entirely separate from Owner’s Contingency.
   3. It covers most extra construction cost necessities except Code changes, such as State Fire Marshal late requirements and Programmatic changes elected by Owner. Errors & omissions by both Designer and CM/GC are normally covered by the GMP contingency.
   4. Normal charges by a CM/GC to its Contingency require only reporting the fact to Designer and Owner. By Contract, reporting shall occur before incurring the charge.
   5. List all Changes in the GMP Contingency Log required by Section 01 29 16. Use the log for prior reporting.
   6. See also “Push”, in paragraph C, below.

B. Reserve Fund’s definition and usage.
   1. Is defined in the CM/GC Master Contract standard Scope of Services and Deliverables subparagraph 2.2.1.
   2. When the GMP includes estimated value(s) for one or more Trades, instead of actual bids, and the actual bids are cheaper, the savings go into Reserve Fund.
   3. Whenever an allowance is fulfilled and there are remaining funds, initiate a change order to extract the remainder from the Contract. Do not allow the CM/GC to assign the remainder to Reserve Fund. This can be at any time, but it shall be part of the Progress Meeting review of allowances.
   4. If the Reserve Fund plus CM/GC Contingency rises above 10% of the GMP, initiate a Modification to reduce the Reserve.
   5. Only the Owner authorizes expenditures from the Reserve Fund, which normally requires the same approval as a program change order.

C. Push definition and usage.
   1. Push is defined as any cost pushed into GMP Contingency that is not an inherently normal charge, as described in the CM/GC Master Contract standard Scope of Services and Deliverables subparagraph 1.9.2.c.
   2. A Push requires Owner prior approval in addition to the notice required for normal charges.
   3. If the CM/GC allows abnormal charges into the GMP Contingency, it takes on that risk and the resulting loss of its contingency.
   4. A Push is not a temporary use of GMP Contingency subject to later reimbursement from the Owner Contingency, and the Owner or end-user representatives cannot induce the CM/GC to use it in this manner. Stop any attempt to use a Push in this manner and correct any misunderstanding that a Push may be used in this manner.

D. The Owner shall receive any unused balance of GMP Contingency and Reserve at the end of the project.
CONTRACTOR APPLICATIONS FOR PAYMENT

A. At the progress meetings, review applications for payment and either certify or reject them, as indicated in the agenda for Progress Meetings next in this Chapter. Look for the following:

1. **Contractor identification**, with the remittance address it provided in its ACH form. This address is indicated on page 1 of the Construction Agreement. If addresses do not match, this will delay payment.

2. **Project identification** is the SBC number shown prominently and correctly.

3. **End-date** of application relative to completion deadlines.

4. **Contract Sum** must correctly reflect all executed modifications and exclude any that are unapproved or pending.

5. **Total completed and stored to date** include the following:
   a. G703 Schedule of Values, with phases, buildings, allowances, change orders, and other line items in accordance with specifications.
   b. Represents work completed.
   c. On-site stored materials evident.
   d. Off-site stored materials documented with bills of sale & insurance.
   e. Amounts claimed on allowances properly documented.
      (and are any approaching limits with more work to do).
   f. A comparison of the percentages of completion with remaining time for an indication of whether the project is on schedule.

6. **Retainage** is 5% until Substantial Completion and then drops to 2% until final, and then it goes to zero (individual retainage on line items of continuation sheet are not needed but should appear for subtotals of phases).

7. **Prior payments** are according to actual payment, not just previous billing.

8. Signed and notarized by the contractor.

9. Attachments include, but not limited, to the following:
   a. GMP Contingency Log if CM/GC.
   b. Allowances documentation.
   c. Off-site storage documentation.
   d. Off-site storage insurance.
   e. Surety Consent if retainage reduced.
   f. Further progress attachments required on construction only (not “Non-Construction”)
      1) Visitor Log.
      3) Progress schedule.
      4) Submittal Log.

B. If certifying an amount other than the amount for which applied, mark all affected line items in the Application and in the Continuation Sheet. An explanatory cover letter might be necessary.

C. If in good order, the Designer should certify all 5 counterparts, retain one, give one to the Contractor, and give 3 copies to the CPCA representative for timely processing.
6.17 PROGRESS MEETINGS

A. Hold Progress Meetings regularly throughout the project from commencement until final completion. Progress meetings are an opportunity for the contract parties to identify and correct any impediments to the project schedule. It is a time to submit and review applications and their attachments for payment, and for a general review of pending change orders, proposals, and progress of Work.

B. The Designer shall provide at each Progress Meeting an assigned licensed professional to serve as its qualified employee providing professional services. This person does not have to be a principal named in the Designer’s Agreement, but this person shall have the authority to sign modifications and certify applications for payment on site during each Progress Meeting.

C. Keep all of the special participants (See 6.02.B) included in the Pre-Construction Conference equally advised of the schedule for Progress Meetings. All of them are welcome to attend and contribute to the meeting.

D. The Following is a suggested Progress Meeting Agenda:

1. Review progress since previous meeting:
   a. construction and field observations.
   b. weather delays.
   c. allowances, including unit price base quantities, (see 6.07, 6.12.A, 6.15.A.3, & 6.15.B.3), and need for interim increase or readiness for final reconciling decrease.
   d. environmental permits compliance, including storm water when applicable.

2. Anticipated progress until the next meeting:
   a. Review updated progress schedule.
   b. Problems, conflicts, impediments.
   c. Corrections to restore the schedule.
   d. Revisions to the schedule.
   e. Commissioning and due data.
   f. Closeout issues if Substantial Completion is due soon (See 6.18 in particular).

3. Submittal review items:
   a. Pending from contractor and
   b. Pending with Designer

4. Review Project Logs (See 6.04):
   a. CPO – Commissioning observed.
   b. Action Items.
   c. RFI – Requests for information.
   d. Minor Changes.
   e. RFP – Requests for proposals.
   f. Submittal Log.

5. Check status of Sustainable Design conformity for closeout verification.
6. Confirm appointment for next meeting.
7. Check whether record documents are current.
8. Sign unexecuted Change Orders.
9. Review and certify the current Application for Payment (see 6.16).
6.18 PRE-CLOSE-OUT SUBMITTALS

A. For General Work, Section 01 77 70 requires Pre-Close-Out Submittals for spare parts delivery, demonstrations and training, and data binder content. Review these for conformance to Contract, provide timely response, and inform Owner’s affected personnel as soon as possible. F695 Project Closeout Checklist in Designers’ Manual Administrative Forms might be helpful.

B. If a SWPPP applies, take the preliminary post-construction Storm Water Operation & Maintenance Plan (SWOMP) that was prepared during design and update it for changes that occurred during construction. Finalize it for inclusion in the O&M Data Binders.

C. REMOVED and REPLACE this. For new construction or addition, before Substantial Completion, start filling out an Administrative Forms F691, known to State insurers as a “T-100 Form”, as its page 2 instructs. The Facility Contact to be identified in the form is the Facility Coordinator. Email the filled-out form to the CPCA.

D. When commissioning is specified, the completion thereof is a prerequisite for Substantial Completion. If the project has Enhanced Commissioning with a third-party commissioning agent or Basic Commissioning without an agent, the Designer shall participate and monitor the progress to ensure that it is on pace for substantial completion. Under both processes, produce a functional performance test certification report in triplicate, with two sets inserted into the two sets of O&M data binders, and the Designer shall send the third as a PDF via email to the CPCA.

6.19 SUBSTANTIAL COMPLETION

A. Standard provisions for Substantial Completion inspection procedures and payment are in the Conditions Article 9. For General Work, see the specification sections 01 29 76 and 01 77 70. Require videotaping or other special requirements relative to equipment demonstrations in a 01 79 series section.

B. Schedule an inspection with Contractor and Owner’s representatives when the Contractor has done the following:

1. Submit a written assertion that Work is Substantially Complete.

2. Submit a Punch List of items to be completed or corrected with dates scheduled for completion or correction of each item. General Work Conditions 9.8 requires a Contractor’s list before the inspection. Non-Construction Conditions 9.5.2, require the list before the Designer will even schedule the inspection. Quality of the list is specific, and short-sighted interests sometimes beg to ignore the requirement. Still, the Designer shall insist upon this list as a starting point for inspection.

3. Submit a written certification that orientation and training for facility maintenance personnel is complete or written assertion that it will be before an inspection.

4. Produce Operating & Maintenance Data Binder(s) or written assertion that they will be complete and available before an inspection.

5. When applicable, submit the State Fire Marshal’s Certificate of Occupancy, or written assertion that it will be available before an inspection.

6. The Contractor shall submit an application for payment at the inspection.

7. When there is Commissioning, the Contractor shall affirm that the Commissioning requirements are complete according to season or will be before an inspection. Set a date for 10-month warranty inspection.

8. If a SWPPP applies, submit a statement of the status of final stabilization required under the Storm Water Pollution Prevention Plan (SWPPP) for the TDEC Construction General Permit (CGP) Notice of Termination (NOT).
C. The following is a suggested agenda for a **Substantial Completion Inspection** meeting:

1. **Preliminary:**
   b. Review Contractor's list of incomplete items. (See 6.19.B.2 about the Punch List).
   c. Verify demonstration of equipment and systems.
   d. Verify Commissioning of equipment and systems.
   e. Verify completeness of Operation & Maintenance Data Binders (Once checked and verified by the Designer, turn them over CPCA).
   f. Contractor must submit a substantial completion pay application at meeting.


3. Review results of inspection (reschedule if incomplete):
   a. Discuss Punch List of incomplete construction activity and documentation.
      1) Operation & Maintenance Data Binders are prerequisite to Substantial Completion. Issuance of a Certificate of Substantial Completion constitutes certification that both the construction activity and the Binders are Substantially Complete.
      2) Include notations in punch list regarding Binders and other closeout documents, so that the punch list addresses the whole Work, not just construction activity.
      3) If a SWPPP applies, confirm status of final stabilization for the TDEC Construction General Permit (CGP) Notice of Termination (NOT).
   b. Discuss Substantial Completion certification and determine the following:
      1) Date to be certified (check against Contract Time requirements).
      2) Extent of certification (entire project or a portion).
      3) Value of punch list.
      4) Time frame for completing punch list work (and secondary LDs on General Work).
      5) Warranty exceptions.
      6) Transfer of possession and responsibilities from Contractor to Owner.
      7) Timeline for documentation.
   c. Review and adjust Contractor's application for payment. Make sure “Total Completed and Stored to Date” equals the Contract Sum less the value of “punch list” work. Withhold accrued liquidated damages and unsettled claims.

4. Unfinished construction business items could include the following:
   a. Review requirements for completion of warranty documents and data binders.
   b. If there is no punch list, review the requirements for final completion in Chapter 7 to determine if this is also a Final Inspection; otherwise, do the remaining items below.
   c. Schedule Progress Meetings to continue until Final Inspection.
   d. Schedule the Final Inspection.
   e. If the contract is written as *General Work*, discuss 25% Liquidated Damages.
   f. If the contract was awarded under $100,000 and has no bond, discuss requirement to advertise Notice of Settlement before making final payment.
   g. Discuss execution of the HPBr Check List, which could occur anytime between now and Final Inspection, as the Designer sees fit.

5. If a SWPPP applies, review status of Designer’s finishing of the Storm Water Operation & Maintenance Plan (SWOMP) and As-Built Certification.

6. REMOVE or Change If new construction or addition, verify completion of the T-100 Form (See 6.18.C).
D. **Recommended format for Punch List**

1. To the greatest extent possible, follow this protocol:
   a. Members of the Designer’s inspection team shall organize lists by both professional discipline and space. Choose a means of documentation that facilitates prompt, accurate communication of a finite list.
   b. The Designer shall gather the various lists immediately and share copies, even if they are only preliminary lists.
   c. The Designer shall compile the various lists in a comprehensive final Punch List no later than one week after the inspection and certify the Punch List before attaching it to the Certificate of Substantial Completion. Compilation does not require consolidation.

E. **Certifying Substantial Completion**

1. Write the Certificate of Substantial Completion on form **CPCA F704** included in the Administrative Forms. Produce the certificate not later than a week after the successful inspection, in four (4) counterparts (See **E.2.b** below). Do not modify or amend the Punch List thereafter and perform the following:
   a. Fill-in project contract identification with SBC project number, institution name or abbreviation, and job name.
   b. Mark one of the three boxes to indicate whether a SWPPP does not apply, or if a SWPPP applies, whether the Final Stabilization is finished or still pending.
   c. Mark one of the three boxes to indicate if Commissioning does not apply, or is complete, or has minimal punch-list work remaining.
   d. Fill-in the date certified.
   e. Indicate whether certification is for all of the Work or only a portion. If the latter, clearly identify the particular Phase or ad hoc portion being certified.
   f. Indicate whether there is a Punch List. If none, then this is by default also a final inspection. If there is a Punch List, it needs the following:
      1) Indicate an estimated dollar value of punch list.
      2) Stipulate a reasonable and agreeable date by which the contractor shall complete the punch list work. Secondary liquidated damages on General Work accrue beginning at 30 days or the end of the period stipulated, whichever is later.
      3) Attach a copy of the punch list to each counterpart of the Certificate.
   g. Indicate whether there are exceptions to the normal commencement of warranties. If there are, attach a distinct list of the exceptions.
   h. Indicate whether there are exceptions to the normal transfer of possession and responsibilities. If there are, attach a distinct list of the exceptions.
   i. Fill-in the company name of each of the Parties under the line where persons will sign for each. The signatory for MTSU will be one of the persons empowered to sign change orders.

2. Execution includes the following:
   a. Review the draft certificate with the CPCA.
   b. Sign at least four (4) counterparts of the Certificate.
   c. Obtain the Contractor’s signature on all counterparts, and allow the Contractor to keep one (1) counterpart.
   d. Send three (3) counterparts of the Certificate to CPCA.
e. CPCA will send certificates to MTSU Business and Finance Office.
f. CPCA will sign for the Owner, keep one (1) counterpart for its uses, and return the other two (2) counterparts, one (1) each, to the Designer and the Contractor.

F. Related Documents due at substantial completion

1. If a SWPPP applies, and the Work is ready for a Notice of Termination (NoT):
   a. Prepare the NoT for signature by the appropriate ranking authority at the institution.
   b. Write a letter to that ranking authority and transmit the NoT form. Explain to them that you have examined the SWPPP measures and found them sufficiently ready for them to sign the NoT.
   c. Obtain the signed NoT from the ranking authority. Send the NoT to TDEC. Email a PDF copy to the CPC.
   d. Complete the Storm Water Operation & Maintenance Plan (SWOMP) for inclusion in the O&M Data Binders.
   e. Prepare the As-Built Certification, as shown in Administrative Forms F723, for inclusion in the Project Data Binders.

2. If Commissioning applies, it is prerequisite to Substantial Completion whether performed with a Commissioning Agent (Enhanced Commissioning) or not (Basic Commissioning). Some minor Commissioning follow-up can be on the punch list:
   a. There should already be two sets of functional performance test data and certifications in the two sets of O&M Data Binders, even if incomplete and subject to additional documentation to follow.
   b. There should be a third copy of functional performance test data and certifications separately bound. Send this third copy as a PDF to the CPC.
   c. If there is additional documentation to follow during punch, ensure that it is provided in triplicate to add to the two sets of O&M Data Binders with the third set sent as a PDF to the CPC.

3. After checking and verifying the completeness of Operation & Maintenance Data Binders, deliver them to the CPC, using a cover letter consistent with Administrative Forms F754.

4. REMOVE or replace If new construction or addition, confirm that T-100 form has been submitted (See 6.18.C).

CHAPTER 6 END