

## **9.0 CONTRACT COMPLETION AND CLOSEOUT**

Contract completion and closeout is a critical element in the life of a construction project. It is not unknown for a team to build excellent relationships during the construction process only to have that relationship destroyed by a poor closeout procedure. As the end of a project approaches, the Construction Manager must maintain project control and attention to detail. The Contractor will often transfer key people to other projects and leave insufficient resources to supervise closeout. As the workload diminishes, a reduction in project staff must be expected, and this is normal and proper. It is essential is that there be a clearly defined closeout plan with procedures in place to allow the remaining staff to close out a project efficiently and effectively.

The time to start to plan the closeout of the project begins at the commencement of the project. The CM team shall, in the early days, begin to develop the closeout plan and procedures. This will begin with a thorough knowledge of the contract requirements relating to closeout. This will be followed by the insistence that the project schedule prepared by the Contractor includes all closeout activities and that the activities have adequate durations and resources assigned and that the logic and interfaces will permit timely conclusion.

Other major elements include insisting that non-conforming work be corrected within a reasonable period after notification. This will avoid a buildup of punch list items at the end of the project. Closeout punch lists should only refer to work installed within the last few weeks.

As-built drawings should be checked monthly through the life of the project to ensure that they are marked up regularly and are current.

### **9.1 CLOSEOUT PROCEDURES**

Each project will normally specify the closeout procedures in the construction contract. The CM team shall become thoroughly familiar with the closeout procedures at the beginning of the project and manage the project with closeout in mind. A closeout checklist (as shown in Appendix) should be used during planning and during the closeout process.

The CM team shall prepare a punch list during the finish stages of a contract to indicate all work or corrective action remaining before acceptance of the project. A copy should be submitted to the DDOT team leader, EOR, and FHWA DC Division office.

The Contractor shall submit to the CM team a notification of completion, which indicates that the contractor is ready for final inspection.

The CM team shall do a final inspection. The DDOT team leader should be encouraged to participate in the final inspection. The FHWA Area Engineer should be invited to participate in the final inspection. The Construction Manager shall also schedule a final inspection by a DOEE inspector for those projects with DOEE permits.

The CM team shall establish a specific date of substantial completion and prepare a letter to the contractor to be signed by the contracting office. The date of substantial completion is when the construction is sufficiently completed, in accordance with the contract documents, as modified by change orders agreed to by both parties, and the owner can occupy or use the project as intended. This date also starts any applicable warranties required of the Contractor. The date of warranty commencement for items on the punch list will be the date of final payment unless otherwise agreed. The Construction Manager shall draft for DDOT a substantial completion letter (as shown in Appendix) for sending to the FHWA DC Division office.

If a substantial completion date is after the contract completion date, the CM team must either apply liquidated damages or process a contract modification with justification for a time extension.

## **9.2 AS-BUILT DRAWINGS AND RECORD DRAWINGS**

As-built, record, and utility drawings are an essential requirement of those who manage and maintain facilities. It is usually a requirement of the construction contract that the Contractor maintains these records and drawings and deliver them to the CM team in electronic version upon completion of the project.

The CM team shall take responsibility for ensuring that the complete as-built, record drawings are delivered to CA and receipt acknowledged in writing.

## **9.3 WARRANTIES, GUARANTEES, AND OPERATING START-UP**

The technical specifications normally stipulate the requirements for warranties and guarantees. The CM team shall prepare a list of warranties and guarantees required by contract, including the format and periods of warranty/guarantee, as part of the closeout plan. Before project completion, the CM team shall begin coordinating with the Contractor the delivery of warranties/guarantees. The intent is to have all warranties/guarantees in hand, properly bound, at contract completion, ready to transmit to DDOT.

Warranties/guarantees usually become effective on the date of substantial completion. One notable exception is the guarantee period for Vegetation/Plantings/Grass/Sod/Stormwater LID. The guarantee in this case is effective beginning with planting Acceptance through the applicable period. This may not necessarily be the date of overall project Substantial Completion. The contract may allow commencement of the warranty/guarantee period from date of start-up of project elements put into early use, particularly if this is for the benefit of the District.

If there is no provision in the contract, or if the contract clearly states that warranty/guarantee periods will commence on the date of final completion, the Contractor should be required to submit plans for maintaining the warranty/guarantee period on equipment/systems put to early use. This shall include plans for maintenance and replacement, if required, of guaranteed vegetation. This matter should be raised early in the contract before the Contractor has made final purchases of equipment/systems. The Contractor will then have the opportunity to negotiate extended warranties/guarantees.

Upon receipt of warranties/guarantees, they should be carefully reviewed to confirm that the warranty/guarantee is in accordance with the contract specifications. Attention must be given to the fine print to ensure that there are no provisions that would limit or reduce the protection to the District as stipulated in the specifications. The CM team shall reject such warranties/guarantees and advise the Contractor that the final certificate and final payment cannot be released until all warranties/guarantees comply with the contract. All warranties shall be transmitted to the CA.

For projects with mechanical and electric equipment that requires start up by the Contractor, the CM team shall be familiar with those requirements and should notify the maintaining agent and CA of any training and testing to be supplied by the Contractor.

## **9.4 CONTRACTOR'S FINAL PAYMENT/FINAL ESTIMATE**

Release of the Contractor's final payment/final estimate usually signifies the completion of the contract and the settlement of all outstanding issues. The construction contract will usually stipulate the requirements for release of final payment. The CM team shall be familiar with these requirements and incorporate them into the closeout plan. The Contractor should be thoroughly educated in these requirements well before contract completion and advised that all requirements for release of final payment must be met.

The final payment will take into account all changes to the contract. It is therefore important that change orders and claims be resolved as they arise and not dealt with late in the contract. Early

resolution of changes and claims will contribute to a swift and efficient preparation of the final payment/final estimate documentation.

Release of final payment cannot occur until all contract requirements have been met and the CM team must make certain that all requirements have been met in full accordance with the contract requirements. The ability to require Contractor compliance after release of final payment is severely diminished.

## **9.5 FINAL MEASUREMENT BY SURVEYORS**

Final payment should include adjustments, if any are necessary, to reconcile progress payment quantities with final quantities established by survey or other means. Any discrepancies between the Contractor's survey data and the DDOT's surveying contractor must be reconciled. The CM team should coordinate the reconciliation.

## **9.6 CLOSEOUT DOCUMENTATION**

For the CM team, there are two phases to closeout documentation. The first phase is the documentation required from the Contractor prior to release of final payment. The second phase is the delivery of the total document record for the project to appropriate DDOT representatives.

The contract conditions will specify the documentation required for closeout. This will usually include an affidavit of payment of payroll, materials, equipment, etc.; consent of surety to release of retained and final payment; lien waivers; warranties and guarantees; operation and maintenance manuals, spare parts and as-built drawings. The CM team shall utilize the closeout checklist shown in Appendix in coordinating the closeout.

The CM team shall institute procedures for documenting receipt of closeout documentation and marking off the checklist. The checklist should indicate any partial submittals, dates all submittals are required and when actually submitted by the Contractor. The CM team shall not recommend release of final payment until the checklist is complete.

The second phase of closeout documentation involves completeness of electronic copies of contract records in the DDOT document management system. The CM team shall scan all hard copies (such as delivery tickets) into electronic copies daily during construction period, and the CM team shall ensure that all construction records are uploaded in the DDOT document management system.

## 9.7 FHWA REQUIREMENTS FOR PROJECT CLOSEOUT

If a project is funded with federal-aid monies, FHWA has requirements for certain documentation so that they can help to close the project. The FHWA Area Engineer should participate in the final inspection because they must write a final inspection report. A copy of the FHWA Final Inspection Report will be sent to the DDOT Team Leader. In that report, the requirements for moving forward to a FHWA Final Acceptance Report will be clearly stated.

All projects require a material certificate documenting that all materials used in the project were tested and found to be satisfactory. In the case of a failing test, the materials certificate should discuss that either a passing retest was done or there is reasonable certainty that the material was improved/reworked and would have passed a retest.

Often FHWA will request a copy of all executed change orders at the time of final inspection so that their records are complete. This helps final acceptance.