

CONSTRUCTION MANAGEMENT

CHAPTER 8

Introduction

If the Local Agency is identified for construction management responsibilities in the CDOT/Local Agency IGA, then the Local Agency may fulfill this responsibility with qualified staff or may contract with a consultant for these services. Construction management consists of inspection and testing services. The Local Agency Project Manager should refer to the latest version of the *CDOT Construction Manual* and CDOT Field Materials Manual for more detailed information on construction management and materials testing. Section 122 of the Construction Manual contains information specific to the administration of Local Agency projects.

Upon CDOT authorization to proceed, the Local Agency is able to charge eligible costs to the project.

8.1 Issue Notice to Proceed to the Contractor

The Local Agency shall issue a Notice to Proceed to the Contractor. The Contractor may not commence work prior to receiving the Notice to Proceed. Follow the *Project Special Provisions* and the *CDOT Standard Specifications*, subsection 108.02, to ensure this notice contains the correct information. The Resident Engineer shall be copied on the Notice to Proceed. (NTP) A sample Notice to Proceed is in Appendix B of this *Manual*.

8.2 Project Safety

Before construction commences on the project, the Contractor must submit a Project Safety Management Plan compliant with the standard special provision titled Revision of Section 107 – Project Safety Planning. The Contractor is expected to comply with the Plan at all times. Safety is of the highest priority on CDOT projects, which includes Local Agency projects. CDOT Construction Bulletin #2005-6 (available at: <http://www.dot.state.co.us/DesignSupport/Construction%20Bulletins/Current/Current%20Construction%20Bulletins.htm>) contains additional information as to how Local

Agency and CDOT Project Engineers should evaluate Project Safety Management Plans and encourage safety on a project.

8.3 Conduct Conferences

Preconstruction Conference

The Local Agency shall conduct the Preconstruction Conference and shall invite CDOT, usually the Project Manager or Resident Engineer. The FHWA should also be invited to the conference if the project is under its oversight. See the *CDOT Construction Manual* for the Preconstruction Conference agenda (Appendix A), information on conducting the conference and for the required Contractor Submittals. Following the conference, a completed copy of the agenda and minutes should be sent to each attendee. One copy should also be sent to the FHWA for all federal oversight projects.

Posters for the Contractor's bulletin board can be accessed on CDOT's web site at <http://www.dot.state.co.us/Bidding/PostBid/PostBid.htm> .

It is recommended the Local Agency require submittals be turned in at least three working days prior to the Preconstruction Conference. Submittals can then be reviewed and any deficiencies discussed at the conference. The following submittals are required from the Contractor (see Appendix A of this *Manual* for copies of the forms):

1. List of Contractor's representatives identified in the Preconstruction Conference agenda (see Appendix B of this *Manual*).
2. CDOT Form 205 – Permit Sublet Application. If the Contractor is subcontracting any work, this form must be submitted and approved before the subcontractor can begin work. The Contractor needs to complete a separate Form 205 for each subcontractor. If the subcontractor or broker/supplier is a certified DBE, a CDOT Form 713 – Contractor DBE Subcontract, Supply and Service Contract Statement must be provided with the Form 205.

The Local Agency shall check each form and submit the original signed forms to the CDOT Resident Engineer who will forward them to the Region Civil Rights

- Manager. The subcontractor cannot begin work until the Form 205 has been reviewed by the CDOT Region Civil Rights Manager, approved by the Project Engineer, and the subcontract has been fully executed between the Contractor and the subcontractor.
3. List of suppliers. The list must include all material sources and suppliers. Include the item to be supplied, company name, address, telephone number, contact person, and minority/non-minority status. See the "Special Notice to Contractors" in the *CDOT Field Materials Manual*, and subsection 106.01 of the *CDOT Standard Specifications*.
 4. Letter to the Project Manager or Local Agency stating names, trades, and approved programs to be used for required trainees on this project. This is needed if trainees are required on the project.
 5. Procedure for handling EEO complaints. The procedure needs to detail who, what, when, where, and how an employee can file a complaint within the Contractor's organization and also a means for filing a complaint outside of the company.
 6. Method of monitoring subcontractor EEO compliance. The Contractor needs to outline its process to monitor subcontractor compliance with all the regulations.
 7. CDOT Form 465 – Non-discrimination in Employment Notice (Labor Unions or other Worker's Organizations). If the Form 465 is being used for recruitment, it should be addressed to the recruitment source. If the form is not being used to recruit applicants, it should be addressed to Employees/Applicants.
 8. Contractor Supervisory EEO Meeting minutes and attendance roster. The Local Agency is responsible for ensuring that a meeting was conducted in the past year, all EEO issues were addressed, and the supervisor/superintendent for the project is on the list of attendees.
 9. An agenda and tentative date for the Contractor's First Project EEO Meeting. This meeting must be conducted as soon as a representative workforce is on the project. After the meeting is held, the Contractor must submit the minutes and the

attendance roster to the Local Agency showing that a majority of the workforce attended the meeting. Subcontractors who are not present for the initial meeting must conduct their own EEO meeting and documentation of the meetings must be provided to the Local Agency.

10. Contractor's Method of Handling Traffic. A different Method of Handling Traffic (MHT) must be submitted for each traffic situation as detailed by the traffic control plan in the Contract. The Local Agency must review the MHT and either approve or return it for revisions. Once the Method of Handling Traffic is approved, the Contractor, traffic control supervisor, and the Local Agency Professional Engineer must sign it.
11. Work schedule bar chart or Critical Path Method schedule, and a methods statement. The statements are required at least ten working days prior to the start of work. Schedules and methods statements are described in subsection 108.03 of the *CDOT Standard Specifications*.
12. Certificate of Insurance (subsection 107.15 of the *CDOT Standard Specifications*). The Local Agency shall obtain the Certificate of Insurance from the Contractor prior to the Notice to Proceed or commencement of work. The Local Agency must check the expiration date on this document to make sure that insurance coverage does not expire prior to project completion. The policy shall name the Local Agency as primary insured and CDOT as an additional insured. Should coverage expire, the Local Agency must receive from the Contractor a renewal certificate.
13. Concrete and asphalt mix designs.

Other Conferences

One or more of the following conferences may be required depending upon the nature of the project: Presurvey, Construction Staking, Monumentation, Partnering, Structural Concrete Pre-Pour, Concrete Pavement Pre-Paving, and Hot Mix Asphalt Pre-Paving. See the *CDOT Construction Manual* for further information and sample agendas.

8.4 Develop and Distribute Public Notice of Planned Construction to the Media and Local Residents

The Local Agency should distribute a public notice announcing the project to affected parties such as adjacent property owners or businesses. This can be accomplished with a newspaper item, fliers distributed by hand, email, city or county website, and/or other means of mass communication.

8.5 Supervise Construction

The Local Agency shall notify the Resident Engineer prior to commencement of work, and shall update the Resident Engineer when issues arise on the project.

A Professional Engineer registered in Colorado shall be “in responsible charge of construction supervision.” See the Local Agency Contract Administration Checklist.

The Local Agency shall provide competent, experienced staff that will ensure the contract work is constructed in accordance with the plans and specifications.

CDOT Policy Memos 25 and 25a describe CDOT’s Construction Inspector Qualification Program. Certain Local Agency projects require inspectors to have successfully completed training and certification. For projects that are constructed partially or entirely within CDOT right of way, within any roadway template, that add lanes, or have other work activities as determined by the CDOT Resident Engineer, this certification is required. See the Policy Memos for additional details. Copies of the Policy Memos are in Appendix B.

Construction Inspection and Documentation Responsibilities

The Local Agency shall be responsible for inspecting and documenting the Contractor's work. The *CDOT Construction Manual* gives guidelines on how each item should be inspected and documented.

The Local Agency shall have written documentation to support all Contractor payments. Section 100 of the CDOT Construction Manual contains guidelines on how to document pay quantities. Item documentation shall include project number, item number, work

description, date, specific location on the project, method of measurement, quantity paid, and signature of inspector.

Force Account Work

For force account work by the Contractor, Federal funds cannot be used for equipment rental rates that exceed those in The Rental Rate Blue Book for Construction Equipment. Rates for owned or long-term leased equipment that exceed the Blue Book rates are not eligible for Federal participation. Actual rental rates may be reimbursed at rental rate invoice cost for that specific task. CDOT can assist with providing rental rate information. Work that will be paid by Force Account must be carefully tracked using CDOT Form 10 – Inspector’s Report for Force Account Work. Certified payrolls must be submitted for force account work performed by the Contractor.

Maintain Diaries

The Local Agency should keep daily diaries of all activities on the project. Refer to Section 100 of the *CDOT Construction Manual*. Diaries assist Local Agencies in cases of disputes, claims and lawsuits.

Time Counts

Refer to the Contract documents for time count requirements. Most contracts require the Local Agency to furnish a weekly statement to the Contractor showing the days charged. A weekly statement may not be required on a completion date project. The CDOT Form 262 – Weekly Time Count Report – Work Days and CDOT Form 263 – Weekly Time Count Report – Calendar Days are presented in Appendix A of this *Manual*. Refer to subsection 108.07 of the *CDOT Standard Specifications*, and Section 100 and Appendix B of the *CDOT Construction Manual* for a more thorough explanation of time counts.

Submit Project Schedule and Conduct Progress Meetings

The Contractor must submit a project schedule to the Local Agency before the project begins, and monthly schedule updates before payments are made. It is recommended

that weekly progress meetings be conducted to monitor progress and plan effectively. Refer to the Contract and also Section 100 of the *CDOT Construction Manual* for more information. Accurate, realistic schedules and updates are critical to evaluating disputes and claims.

Utility/Railroad Coordination

Contact involved utility and railroad representatives to schedule the performance of the work as set forth in the project plans and specifications. Coordinate the work with the construction activities.

Monitor Construction/Civil Rights Compliance

See Chapter 10 of this *Manual* for monitoring requirements.

8.6 Approve Shop Drawings

“Shop drawing” is a general term that includes drawings, diagrams, illustrations, samples, schedules, calculations and other data that provide details of the construction of the work and details to be used for inspection. Shop drawings are submitted by the Contractor for formal review and returned for action. Subsection 105.02 of the *CDOT Standard Specifications* defines which items require shop drawings. The Local Agency will review and mark the shop drawings, and return them to the Contractor in accordance with the CDOT Standard Specifications. The drawings shall be marked with one of the following:

MARK	MEANING
Reviewed, no exception taken	Shop drawings have been reviewed and do not require resubmittal
Reviewed, revise as noted	Shop drawings have been reviewed and the Contractor shall incorporate the comments noted in the shop drawings into the work. The shop drawings do not require resubmittal.
Resubmit, revise as noted	Shop drawings require correction or redrawing and shall be resubmitted for review. If shop drawings are returned for correction or redrawing, corrections shall be made and the shop drawings shall be resubmitted by the Contractor in the same manner as the first submittal. Specific notation shall be made on the shop drawing to indicate the revisions

8.7 Perform Traffic Control Inspections

All Methods of Handling Traffic shall be reviewed and approved by the Local Agency Project Engineer prior to use. The Local Agency shall verify that all traffic control is in accordance with the *Manual on Uniform Traffic Control Devices (MUTCD)* and Contract requirements. If a Method of Handling Traffic shows that a vertical or horizontal clearance will be restricted by construction activities (see subsection 630.09, items (7) and (8) of the CDOT Standard Specifications for Road and Bridge Construction), the Local Agency Project Engineer must use the notification procedures described in CDOT's Construction Bulletin titled "Vertical and Horizontal Clearance Restrictions During Construction."

If a speed limit reduction is specified in an MHT, a Form 568, *Authorization and Declaration of Temporary Speed Limits*, must be executed.

The Local Agency Project Engineer and the CDOT Project Manager/Resident Engineer shall make joint Traffic Control Reviews once each calendar year for each active construction project, including Local Agency projects. See Section 630 of the *CDOT Construction Manual* for more information. A copy of the Traffic Control Review Form is included in Appendix B. The Local Agency may use this form as a reference when checking traffic control.

8.8 Perform Construction Surveying

Construction survey work consists of performing surveying, related computations, and staking necessary for the construction of all elements of the project.

8.9 Monument Right-of-Way

Final monumentation shall be done after the right-of-way is purchased. Right-of-way monuments shall be set at each point designated on the right-of-way plans and in accordance with the Colorado Revised Statutes. This work shall be performed under the direct supervision of a Professional Land Surveyor, registered in the State of Colorado.

8.10 Prepare and Approve Interim and Final Contractor Pay Estimates

The Local Agency Project Engineer shall certify, on each Contractor estimate or billing, that the work has been completed in reasonably close conformity with the plans and specifications.

The Local Agency is responsible for all estimate payments to the Contractor. The Local Agency shall review quantities with the Contractor, and the billing shall address required retainage or securities. Retainage or securities amount will not be less than those required by CDOT contracts. Before payment is made, the Contractor shall submit suitable schedule updates and materials certifications in accordance with the *CDOT Standard Specifications*.

Contractors are required to pay subcontractors for the items included in the estimate within 7 days of receipt of the payment according to the prompt payment law, CRS 24-91-103(2).

8.11 Prepare and Approve Interim and Final Utility and Railroad Billings

Verify that the work was performed as stated in the Contract and that the billing is for actual work performed. Refer to the project agreement for billing and payment arrangements.

8.12 Prepare Local Agency Reimbursement Requests

Billing charges are submitted once a month or less frequently to the CDOT Project Manager during project construction and at completion. Billing procedures and required documentation will be established during CDOT/Local Agency Agreement negotiations. It will take approximately 45 days for CDOT to review and approve project billings submitted by the Local Agency.

The final bill shall be marked "**FINAL.**" The Local Agency shall bill for 100 percent of eligible costs noting the percentage of local funding share. CDOT's Resident Engineer will verify the reimbursement according to the established matching ratio specified in the Inter-Agency Government Agreement. If applicable, there shall be an itemized list of other miscellaneous project charges; i.e., utility relocation or construction engineering. These charges shall be substantiated by the supporting documentation.

See Appendix B of this *Manual* for a sample Local Agency billing package.

8.13 Prepare and Authorize Change Orders

Change orders are needed for specification changes, design changes, changes in the scope of work, changes in the typical section, and additional work. The Local Agency shall call the CDOT Project Manager/Resident Engineer to ascertain the Region requirements regarding the handling of change orders. The Local Agency may use its own form or CDOT's Form 90 when executing a change order.

The following statement, included in the body of the change order, must be signed by a qualified representative of the Local Agency for all change orders that involve the expenditure of Local Agency funds before the work covered by the change order commences:

Should Federal funds not be available to cover these additional costs, or the FHWA decides not to participate in these costs, the Local Agency agrees to provide the required funds.

The _____
(Name of Local Agency)

approves this Change Order No. _____ by signing below.

Authorized Signature

Title

Date

8.14 Approve All Change Orders

The CDOT Resident Engineer's pre-approval must be received prior to commencing any work if the funding entails Federal participation.

The Local Agency will submit the original change order, along with a letter of explanation addressing the reason for the change order and any budgetary implications, to the CDOT Resident Engineer for review and signature.

The CDOT Project Manager/Resident Engineer will distribute approved change orders as follows:

- Local Agency, original;
- Project Development Area Engineer (review and forward to Record Center); and
- Region Program Engineer/Region Finals Engineer.

The Local Agency shall forward a copy to the Contractor.

Refer to Section 120.7 of the *CDOT Construction Manual* for detailed information on change orders.

8.15 Monitor Project Financial Status

The Local Agency shall continually monitor the financial status of the project. If additional funds are needed, the Local Agency is responsible for assuring the funds are

available in as timely a manner as possible. The Local Agency shall provide the additional funding unless Federal participation has been approved. See Chapter 3 for additional information on financial responsibility.

8.16 Prepare and Submit Monthly Progress Reports

By the first of every month, the Local Agency shall prepare and submit to the CDOT Project Manager/Resident Engineer an update for every active construction project. The update should include work progress over the past month, percent completed, time charged, outstanding issues, and projected completion date of the project.

8.17 Resolve Contractor Claims and Disputes

The Local Agency shall follow the claims procedure established and contained in the construction Contract. The Local Agency can use the CDOT Disputes and Claims procedure. Resolution of claims that involve federal participation must be coordinated with CDOT.

All claim payments made shall be documented on a properly executed change order.

8.18 Conduct Routine and Random Project Reviews

CDOT will conduct routine and random project reviews to ensure the project is being administered in accordance with the terms of the Contract and the approved project specific agreement between CDOT and the Local Agency. FHWA may participate in these reviews, or conduct their own separate reviews.