# State of Louisiana Department of Transportation and Development



# CONSTRUCTION CONTRACT ADMINISTRATION

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3.5 Project Closeout
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# i. Purpose of the CCA Manual

The Construction Contract Administration (CCA) Manual (referred to herein as "the CCA Manual") provides guidance to personnel who inspect and administer Louisiana Department of Transportation and Development (also "LADOTD" or "Department") contract provisions. Further, it establishes specific responsibilities of the Project Engineer (PE) regarding contract administration and Construction Engineering and Inspection (CE&I). It is an administrative guide and reference describing acceptable methods and procedures for the preparation of records and reports by both Department and consultant personnel engaged in the administration and construction of projects under the supervision of the LADOTD.

The term "Project Engineer" or "PE" is used in the CCA Manual to describe both the Project Engineer employed by the Department and a Consultant Project Engineer contracted with the Department to provide Construction Engineering and Inspection (CE&I) services. The CCA Manual is generally written for the PE and all actions are to be performed by the PE unless otherwise noted. In general, project personnel should use good engineering judgment and common sense. The PE must also document work performed and decisions made. When in doubt or when situations occur outside those subjects covered in the CCA Manual, advice should be sought from an immediate supervisor.

The CCA Manual refers to general information, instructions, guidelines, and regulations found in other publications and includes references and links to Standard Specifications, Department policies and procedures, and other supporting documents and websites, including regulatory requirements and conditions of the Department's Federal Aid agreements.

Information included in this CCA Manual is not to be interpreted as replacing, modifying, or superseding any part of the construction contract. The construction contract governs the relationship between the Department and the Contractor and the terms of the contract take precedence over instruction contained in this CCA Manual. It is strongly recommended the construction contract be read before looking to the CCA Manual for guidance.

# ii. Terms and Definitions

The following terms and definitions are used throughout this CCA Manual. Additional terms and their definitions can also be found in other locations of this CCA Manual or its appendices.

<u>3R (Resurfacing/Restoration/Rehabilitation) Guidelines</u> – Design guidelines desired for replacement or major rehabilitation work on Non-Interstate NHS routes.

<u>2059 Report</u> – Completed Sampling Plan showing all testing and sampling that has been taken, with resolution for any failing or missing tests.

-A-

<u>Average Daily Traffic (ADT)</u> - The total volume of vehicle traffic of a highway or road for a year, divided by 365 days.

<u>Americans with Disabilities Act of 1990 (ADA)</u> – Prohibits discrimination and guarantees that people with disabilities have the same opportunities as everyone else to enjoy employment opportunities, to purchase goods and services, and to participate in State and local government programs and services.

<u>Assistant District Administrators</u> – Each District of DOTD has an Assistant District Administrator of Operations, an Assistant District Administrator of Engineering, and an Assistant District Administrator of Business.

<u>Area Engineer (AE)</u> – Each District AE is the direct supervisor of several District PEs and District Maintenance crews. HQ AEs provide assistance and expertise to PEs as needed during contract administration.

AGC - Associated General Contractors

<u>Advance Check Prints (ACP)</u> - Project plans and technical specifications that are approximately 95% complete. ACP's are developed from preliminary plans and become part of the Contract Bid Document Package when they are 100% complete.

<u>American Association of State Highway & Transportation Officials (AASHTO)</u> - A nonprofit, nonpartisan association representing highway and transportation departments in the 50 states, the District of Columbia, and Puerto Rico. It represents all five transportation modes: air, highways, public transportation, rail and water. Its primary goal is to foster the development, operation, and maintenance of an integrated national transportation system.

Asphalt Cement (AC) – See Parts V and X of the Standard Specifications.

<u>Approved Materials List (AML)</u> – Lists maintained by the Department's Materials and Testing Section for approved products, materials, and supplies which receive preliminary testing and/or review of company procedures. The AML replaces the former lists known as the QPL.

<u>As-Built Plans</u> – Plans developed by the PE during construction of a project to document the variance between what was constructed and what the plans show

<u>ASTM</u> – American Society for Testing and Materials

ATSSA – American Traffic Safety Services Association

<u>Area of Disturbance</u> - Activities subject to National Pollutant Discharge Elimination System (NPDES) or Louisiana Pollution Discharge Elimination Systems (LPDES) Construction Permits. Construction projects resulting in land disturbance of one or more acres of total land area. Such activities include but are not limited to clearing and grubbing, grading, excavating, and demolition.

-B-

<u>Baseline Schedule-</u> The required schedule of work activities that is initiated by the Contractor prior to beginning construction. This schedule defines the Contractor's plan to complete the

construction project within the allotted time consistent with the contract documents.

Blended Calcium Sulfated (BCS) – See Part II and X of the Standard Specifications.

Benchmark (BM) – An officially recognized fixed point with a known elevation and location.

<u>Best Management Practices (BMP)</u> – Usually used to describe effective procedures at controlling releases of pollutants to receiving waters as part of the NPDES program.

#### -C-

<u>CCS (Consultant Contract Services)</u> – The Section of the Department responsible for procuring contracts with consultants.

<u>CD (Cairo Datum)</u> – Originally based on a benchmark at an US ACE facility in Cairo, Illinois. In 1879 an elevation survey was conducted down the Mississippi River from Cairo to New Orleans. The elevation of the Cairo benchmark was arbitrarily raised to ensure there would be no negative elevations in the New Orleans area. The difference between the elevation from Cairo and the Mean Sea Level at the time was found to be 20.43 feet. The Cairo Datum currently used in the New Orleans area is just an artificial means for keeping the elevations positive, hence making mathematic calculations easier.

<u>Certificate of Analysis (CA)</u> – Certificate from the manufacturer or supplier of actual test results of the material properties.

<u>Certificate of Compliance (CC)</u> – Certificate from the manufacturer or supplier stating that the material complies with the required specifications.

<u>Certificate of Delivery (CD)</u> – Certification on a Department approved form from a manufacturer or supplier listing particular materials shipped. A lab number on a CD relates an approved specific quantity to a set of test results for purposes of tracking. It may contain statements concerning the materials' compliance with specifications.

<u>Change Orders (CO)</u> - Any changes to the plans or specifications will require a change order. The PE is responsible for writing all change orders and submitting them for approval. Extra work should not be started until Change Order approval has been received.

<u>Code of Federal Regulations (CFR)</u> - The codified administrative regulations of the Federal government; a compilation of the general and permanent rules of the executive departments and agencies of the Federal Government as published in the Federal Register. The Federal Highway Administration's regulations are contained in Title 23 of the CFR.

<u>Competent Person</u> – Per OSHA guidelines, an individual who is capable of identifying existing and predictable hazards or working conditions that are hazardous, unsanitary, or dangerous to employees and who is authorized to take prompt corrective measures to eliminate or control these

hazards and conditions.

<u>Community</u> - A major subdivision of a municipality, composed of neighborhoods, considered as a unit for planning purposes.

<u>Complete Streets Policy</u> - A policy to create a comprehensive, integrated, connected transportation network for Louisiana that balances access, mobility, health, and safety needs of motorists, transit users, bicyclists, and pedestrians of all ages and abilities, including users of wheelchairs and mobility aids. <u>Complete Streets Policy</u>

<u>Construction</u> - The supervising, inspecting, and actual building of a highway. It includes related activities such as locating, surveying, and mapping, resurfacing, restoration, and rehabilitation, acquisition of rights-of-way, acquisition of replacement housing sites, acquisition and rehabilitation, relocation, and construction of replacement housing, relocation assistance, elimination of hazards at railway grade crossings, elimination of roadside obstacles, and improvements which directly facilitate and control traffic flow, such as grade separation of intersections, widening of lanes, channelization of traffic control systems, and passenger loading and unloading areas.

<u>Control of Access</u> – The condition where the right of owners or occupants of abutting land or other persons to access, light, air, or view in connection with a highway is controlled by public authority.

<u>Construction Contract Administration</u> <u>Manual (CCA Manual)</u> – Contains detailed instruction of contract administration, DWRs, Contractor payments, COs, final estimates, etc.

<u>Construction Engineering and Inspection (CE&I)</u> - The supervision and inspection of construction activities to ensure the Contractor conforms to the provisions of the contract documents. This includes direct administration of the construction contract, field engineering, detailed inspection, on-site field testing of materials, field measurement and collection of data necessary to submit estimates and progress reports, review of shop drawings, preparation of record plans showing all changes from the contract plans, and maintaining a diary describing the progress of the work, specific problems encountered, and all other pertinent information relative to the execution of the contract work.

<u>Consultant</u> - An individual, public or private organization, or institution of higher learning having expertise in professional disciplines applicable to transportation programs that may be or has been selected to provide architectural, engineering, environmental, or other related professional or technical services for a project administered by a project sponsoring entity.

<u>Consultant Service</u> - Utilization of professional expertise external to an agency, on a contract basis, to perform a specific study, project, or task.

<u>Contract Administration</u> - The overall management of the work required to implement a federal aid project agreement. The tasks required of such administration may include execution of the contract(s); control of work and material; and making payments to the Contractor and/or consultant.

<u>Contract Bid Documents</u> - Documents prepared to obtain bids from Contractors to construct a federal aid project. The documents include plans, specifications, special provisions, special notes, items and quantities, federal aid contract requirements, and general contract provisions.

<u>Claim</u> - A demand by the Contractor for additional compensation or other contract adjustment brought under the terms of a contract between a sponsoring entity and its consultant

<u>Claim Award</u> - An amount to be paid by a sponsoring entity to a consultant or Contractor on account of the resolution, by administrative or judicial means, of a Contract Claim.

<u>Contractor</u> - A business organization that may be selected to provide Construction goods and services for a project.

<u>Controlling Work Items</u>: In a Critical Path Method Schedule, these work items or activities are on the critical path. A delay to a critical work item will cause an increase in the project duration.

<u>Cost Estimate</u> - A prediction of all costs and the value of any resources needed to complete the design, right-of-way activities, environmental studies, construction, project management, etc. as well as costs and resources paid to others for work related to a project such as utility adjustments, environmental mitigations, and railroad relocations.

<u>Critical Path Method (CPM) Schedule</u>: A specification for critical path scheduling is used for most projects and always on more complex projects. With large projects, compressed time, or incentive/disincentive projects the Department is looking for assurance that the Contractor will manage the project in a manner that will assure timely completion. Management at this level of complexity is very difficult without a tool like *CPM*. The *CPM* schedule will also provide additional documentation needed for negotiating contract changes and claims.

#### -D-

<u>Daily Diary</u>: Term used in SiteManager to refer to a collection of all Daily Work Reports and presents information on contract activity for a given day. The diary should contain information on significant events, conditions or circumstances which immediately affect or have future impact on the project or contract. See Daily Work Report

<u>Daily Work Report (DWR)</u> – Referred to as a DWR in SiteManager, a DWR presents information on contract activity for a given day. The diary should be kept daily, recording the work done each day with quantities, equipment, personnel on the project, weather conditions, time charge information, and any significant events, conditions, or circumstances which immediately affect or have future impact on the project.

<u>Disadvantaged Business Enterprise (DBE)</u> - A small business concern: (a) which is at least 51 percent owned by one or more socially and economically disadvantaged individuals, or, in the case of any publicly-owned business, at least 51 percent of the stock of which is owned by one or more socially and economically disadvantaged individuals; and (b) whose management and daily business operations are controlled by one or more of the socially and economically disadvantaged

individuals who own it. Program is mandated by the US DOT Financial Assistance Programs.

<u>Direct Costs</u> – Direct costs are activities or services that are identified with a single, final cost objective (project) or incurred specifically for a contract.

<u>Director of Local Public Agency Programs</u> - Coordinates all LPA programs in LADOTD and ensures LADOTD stewardship and oversight for the LPA programs.

 $\underline{\text{District}}$  - A subdivision of the Louisiana Department of Transportation and Development (LADOTD) organized to administer Departmental affairs for a specific geographical area and to interact with the local agencies in that area. There are nine LADOTD Districts that cover the state.

District Administrator - The engineer in charge of one of the nine LADOTD Districts in the state.

<u>District Project Coordinator</u> – An engineer from the LADOTD that provides oversight for the construction project and is a resource to the LPA Responsible Charge person and their PE.

#### -E-

<u>Engineer of Record (EOR)</u> - The Engineer of Record is a licensed, Professional Engineer responsible for the direct control and personal supervision of engineering work.

<u>Engineering Directives and Standards Manual (EDSM)</u> - Contains directives impacting the engineering functions of the LADOTD. It consolidates all directives containing policies, procedures, standards, and guides.

<u>Enterprise Support Services</u> – A Section of the DOTD that includes Enterprise Support Services, the HQ Mail Room, Reproduction Services, and that administers copier contracts and HQ parking

<u>Entity</u> - Any state or local government; any department, agency, special purpose district, or other instrumentality of one or more state or local governments; and the National Railroad Passenger Corporation (Amtrak) and any commuter authority.

Entity-State Agreement (ESA) – This document is a legally binding, written, signed, agreement between the State and the Local Public Agency identifying the funding provisions and responsibilities of each party to allocate state or federal funds to a transportation project. Entity-State Agreements are the means by which the State reimburses or disperses the Sponsoring Entity for all Federal or State-aided Locally Administered projects. Every project must have an agreement signed by both parties before a project can move forward. The agreement must be executed prior to a reimbursable stage of a project.

<u>Equal Employment Opportunity (EEO)</u> - A federal law enacted to prohibit federal Contractors from discriminating against employees on the basis of race, sex, creed, religion, color, or national origin.

-F-

Federal Aid - As used in this CCA Manual, this refers to federal funds provided for the development

of Surface Transportation Projects and administered by the FHWA.

<u>Federal Highway Administration (FHWA)</u> – A branch of the United States Department of Transportation that administers the Federal Aid Highway Program, providing financial assistance to states to construct and improve highways, urban and rural roads, and bridges. FHWA is responsible for administering the highway transportation programs of the Department of Transportation under pertinent legislation. Website: <u>FHWA</u>

<u>Field books/Level Books/Cross Section Books</u> – Numbered books provided by the LADOTD Enterprise Support Services Section for the project. The information required in this book is in accordance with this Manual and includes such documentation as the pay item quantities, date of installation, who was in the field, etc.

<u>Final Acceptance</u> - Official acceptance of a construction project by the DOTD, as defined by <u>EDSM III.5.1.5</u>. For LPA projects, the LPA must pass a resolution accepting the project before it can be accepted by the DOTD.

<u>Final Inspection</u> - Final inspection and acceptance meeting for the project when it is complete. Required parties will attend the Final Inspection and have the opportunity to provide comments or ask questions, which shall be resolved before Final Acceptance.

<u>Force Account</u> - A method of performing construction work through the use of the sponsoring entity's employees and purchased or delivered materials in place. Also, Force Account work provides a basis of payment for the construction work not covered in the contract documents and of a type not amenable to definition by a change order. Force-account reimbursement is used when it is difficult to provide adequate measurement or to estimate the cost of certain items of work. The Contractor is reimbursed for the cost of the work plus overhead and profit using established weighted wage rates, equipment-rental rates, and the invoice cost of materials.

#### -G-

## -H-

HQ (Headquarters) – The LADOTD HQ building is located at:

1201 Capitol Access Road Baton Rouge, Louisiana 70802 (225) 379-1200

#### -I-

<u>Improvement</u> - Betterment in traffic service without major changes in the existing facility. This includes widening, signals, illumination, curbs, gutters, drainage, sidewalks, and other items which add value to the existing facility.

<u>Independent Assurance (IA)</u> – Sampling and testing for the purpose of making an independent random check on the reliability of results obtained in acceptance sampling and testing. IA testing is required on projects that are on the National Highway System (NHS) as designated by the FHWA. IA results do not independently form a basis for determining the acceptability of materials

and construction work, but supplement acceptance results in accomplishing such determinations.

<u>Indirect Costs</u> – An indirect cost is any cost not directly identified with a single, final cost objective (project), but identified with two or more final cost objectives or an intermediate cost objective.

### -K-

#### -J-

Joint Project Agreement (JPA) – An agreement between governmental agencies.

#### -L-

<u>Liquidated Damages</u> - Amounts of money to be assessed against a Contractor for late completion. These amounts must be related to the actual damages suffered by the owner because of the late completion.

Local Public Agency (LPA), City/Parish (CP), or Agency - Any municipal corporation within the state of Louisiana.

<u>LPA Project Engineer (LPA PE)</u> – A licensed engineer in the State of Louisiana assigned by the Entity to provide contract administration for a construction engineering and inspection contract.

- 1. In accordance with LADOTD policies, this person is responsible for the administration of the contract in accordance with LADOTD's Contract Administration CCA Manual.
- 2. Person may be an Entity engineer or a hired consulting engineer by the Entity.

#### -M-

<u>Maintenance</u> - Defined in the United States Code as the preservation of the entire highway, including surface, shoulders, roadsides, structures, and such traffic control devices as are necessary for its safe and efficient utilization. Its activities ensure that the right-of-way and each type of roadway, roadway structure, and facility remain, as nearly as practical in its original, as constructed condition, or its subsequently improved condition, and the operation of roadway facilities and services to provide satisfactory and safe motor vehicle transportation.

<u>Manual for Assessing Safety Hardware (MASH)</u> – The new state of the practice for the crash testing of safety hardware devices for use on the NHS. It updates and replaces NCHRP Report 350.

<u>Manual of Uniform Traffic Control Devices (MUTCD)</u> - A Manual developed identifying a uniform system of traffic control devices adopted by LADOTD for use on highways in Louisiana in accordance with *Louisiana State Vehicle and Traffic Law*.

<u>Materials Sampling Manual</u> – The manual used to establish and standardize construction and maintenance sampling and material acceptance requirements for the Department.

<u>Materials Test System</u> (MATT) - An online computer-based system through which data generated on construction projects can be entered, corrected, updated, and retrieved through the Department's terminal network.

<u>Mil</u> – A unit of thickness primarily used for pavement markings; 1 mil = 0.025 mm = 0.001 in

-N-

<u>National Cooperative Highway Research Program (NCHRP)</u> – A national forum for coordinated and collaborative research, which addresses issues integral to state Departments of Transportation and transportation professionals at all levels of government and the private sector.

<u>National Highway System (NHS)</u> - The NHS includes the Interstate Highway System as well as other roads important to the nation's economy, defense, and mobility. The NHS was developed by the US DOT in cooperation with the states, local officials, and MPOs.

<u>National Pollutant Discharge Elimination System (NPDES)</u> – The Clean Water Act requires the United States Environmental Protection Agency (EPA) to administer and the Louisiana Pollutant Discharge Elimination System (LPDES) Surface Water Discharge Permit to be issued by the Louisiana Department of Environmental Quality (LDEQ). The LPDES restricts discharge of sediment or other pollutants resulting from construction activities into state waters, including wetlands and groundwater. These permits are required if the projected area of disturbance during construction is greater than or equal to 1 acre; this is not necessarily the entire area owned at the project site. It is required when the ground disturbed is exposed to erosive forces of wind or water. Examples of activities include, but are not limited to: grubbing, excavation, grading, and utilities and infrastructure installation. Website: LPDES

<u>New Construction</u> - The building of a new roadway or structure on substantially new alignment, or the upgrading of an existing roadway or structure by the addition of one or more lanes. If 50 percent or more of the project length involves vertical or horizontal alignment changes, the project is new construction. The following types of projects are not classed as new construction, and the Resurfacing, Restoration, Rehabilitation (3-R) Guidelines apply:

- 1. Modernization of an existing street or road by resurfacing, widening lanes, adding shoulders, or adding turn lanes at intersections.
- 2. Temporary replacement of a street or roadway, immediately after the occurrence of a natural disaster or catastrophic failure, to restore the facility for the health, welfare, and safety of the public.

Non-Participating Items - Items of project work that are not a part of the Federal Aid funding.

Notice of Completion Letter - A letter notifying the construction Contractor that a project is complete.

<u>Notice to Proceed</u> - Approval in writing from LADOTD to start incurring costs for a reimbursable phase of a project.

## -0-

<u>OMF-1A</u> – A sublet request form to be used for any Subcontractor on a project.

OMF-2A – An EEO certification that is required if the Subcontractor is performing over \$10k worth of work on any federally funded job.

<u>Occupational Safety & Health Administration (OSHA)</u> – Created by Congress in the Occupational Safety and Health Act of 1970, OSHA was formed to assure safe and healthful working conditions for working men and women by setting and enforcing standards and by providing training, outreach, education, and assistance.</u>

<u>Oversight</u> - The act of ensuring that the Federal Aid highway program is delivered consistent with laws, regulations, and policies.

## -P-

<u>Partial Estimate</u> - Developed each month by the PE in SiteManager to compensate the Contractor for accepted work.

<u>Pavement Structure</u> - The combination of subbase, base course, and surface course pavement placed on a subgrade to support the traffic load and distribute it to the roadbed.

<u>Payment</u> - The sponsoring entity is responsible for paying the Contractor correctly and on time (within 30 days) for work performed on a monthly basis

<u>Plan Change (PC)/Change Order</u> - A written agreement between the sponsoring entity and the general Contractor to change a construction contract. Plan changes add to, delete from, or otherwise alter the work set forth in the contract documents at the time that the construction contract was signed. Plan changes are the legal means for changing contracts and are standard in the construction. LADOTD and FHWA (if applicable) must be involved in any plan change/change order.

<u>Project Engineer (PE)</u> – The engineer assigned to represent the Chief Engineer in the administration of the contract.

<u>Personal Protective Equipment (PPE)</u> – Equipment worn to minimize exposure to a variety of hazards. Examples of PPE include such items as gloves, foot and eye protection, protective hearing devices (earplugs, muffs), hard hats, respirators, and full body suits

# -Q-

<u>Quality Assurance Program</u> - A sampling and testing program that provides assurance that the materials and workmanship incorporated in each highway construction project are in conformance with the contract specifications. The main elements of a Quality Assurance Program are acceptance testing and independent assurance sampling and testing.

<u>Quality Assurance/Quality Control (QA/QC)</u> - A program developed by the contractor that incorporates the contractor's Quality Control (QC) and Department Acceptance to ensure that a project adheres to the contract requirements.

- 1. QC is the process used by the contractor to monitor, assess and adjust material selections, production and project construction to control the level of quality so that his product continuously and uniformly conforms to specifications.
- 2. QA is the process of sampling, testing and inspection to determine the degree of compliance with the specifications for acceptance of materials and/or the contractor's work. Website: <u>QA Manuals</u>. Available on line.

#### -R-

<u>Responsible Charge</u> - The person designated as being in "responsible charge" is expected to be a public employee who is accountable for a project. For locally administered projects, the regulation requires that the person in "responsible charge" be a full time employee of the LPA. The regulation is silent about engineering credentials. Thus, the person in "responsible charge" of LPA administered projects need not be an engineer. This requirement applies even when consultants are providing construction engineering services. The responsible charge oversees and makes final decisions on engineering services work performed by in-house design or a consulting firm on any of the following areas: project development, project administration, design, survey, construction inspection.

<u>Resurfacing</u> - The addition of a layer or layers of paving material to a roadway to provide additional structural integrity, improved serviceability, and rideability.

<u>RFI Process</u> - The Contractor on a project has the right to submit questions to the Project Engineer for any reason through the RFI process detailed in Section 105.19 of the Standard Specifications. These questions may deal with perceived/actual plan errors, differences in field conditions, proposed better techniques and cost saving measures, etc. It will be the PE's responsibility to distribute the question to the proper person, such as, the engineer of record for plan questions. Once the question is answered, the PE shall disseminate the answers to the appropriate persons. RFI's should be kept in a project folder and submitted with the final paperwork to the Final Audit Section

<u>Right-of-Way (ROW)</u> - Land and/or property rights required by the state or local government for inclusion in a transportation project. It consists of both properties already part of an existing transportation facility as well as property outside of the existing facility that is required for the project.

<u>Risk Management</u> – The systematic identification, assessment, planning, and management of threats and opportunities faced by LADOTD projects and programs

<u>Roadbed</u> - The graded portion of a highway within top and side slopes, prepared as a foundation for the pavement structure and shoulder.

### -S-

<u>Sampling Plan</u> - A project-specific document denoting the minimum number of samples and certificates required for each contract item to ensure adequate representation and quality of all materials incorporated into the project.

<u>SiteManager</u> – A required tool used by the PE for the tracking of project quantities, diaries, and estimates. Contact HQ Construction Office to obtain an identification number to access SiteManager.

<u>Small Business Element (SBE) program</u> - As defined by Section 3 of the US Small Business Act and US SBA regulations, a for-profit business that is at least 51 percent owned by one or more individuals who are economically disadvantaged, and whose company is a small business concern in accordance with 49 CFR Section 26.65.

<u>Special Provisions</u> - A portion of the construction contract specifications separate from the General Provisions and covering conditions unique to a specific project. Approved additions and revisions to the *Standard Specifications* and supplemental specifications that initially apply only to an individual project or a small group of projects (special provisions that are found to have statewide application to other projects may be incorporated into the supplemental specifications and standard specifications)

<u>Specification Book</u> - The compilation of provisions and requirements for the performance of prescribed work and the basis of payment for the work approved for general application and repetitive use.

<u>Standard Specifications</u> - Typical construction contract specifications.

<u>State Administered</u> - Projects that have been delegated under 23 U.S.C. 106(c). Projects that do not require FHWA to review and approve actions pertaining to design, plans, specifications, estimates, right-of-way certification statements, contract awards, inspections, and final acceptance of Federal-aid projects on a project by project basis.

<u>State Project Number (S.P. No.)</u> - A unique number assigned to each project by the LADOTD Headquarters office, used in LADOTD's financial management system.

<u>Statewide Transportation Improvement Program (STIP)</u> - A staged, four-year, statewide, intermodal program of transportation projects, consistent with the statewide transportation plan and planning processes as well as metropolitan plans (TIPs) and processes. It is submitted every two years and lists the projects proposed by MPO's and the LADOTD that are approved and adopted by FHWA.

<u>Stewardship</u> - The efficient and effective management of public funds that have been entrusted to the FHWA and LADOTD through the stewardship agreement.

Storm Water Pollution Prevention Plan (SWPPP) – A written, signed, and certified plan developed

by the Contractor and approved by the Department that must be implemented before earth disturbing activities begin. See Sections 107.14 and 204 of the Standard Specifications for more information.

<u>Subgrade</u> - The top surface of a roadbed on which the pavement structure and shoulders, including curbs, are constructed.

<u>Subbase</u> - The layer or layers of specified or select material of designed thickness placed on a subgrade to support the base course.

<u>Select Material</u> - Suitable native material obtained from roadway cut or borrow areas or other similar material used for subbase, roadbed material, shoulder surfacing, slope cover, or other specific purposes.

<u>Sub-contracting</u> – Assigns part of the obligations and tasks under a contract to another party known as a subcontractor

<u>Supplemental Specifications</u> - Approved additions and revisions to the *Standard Specifications* used to update the standard specifications between publications

<u>Surety Bond</u> - A financial obligation by a financial institution (for example a bonding company) that secures the performance of a contract obligation by a Contractor in the event of the Contractor's default in the performance of the contract or in the payment of subcontractors and suppliers. Other forms of security may serve the same function, such as cash, letters of credit or liquidable securities, depending on applicable laws and practices.

<u>Surface Transportation Program (STP)</u> – Provides flexible funding that may be used by localities for projects on any Federal Aid eligible road, including the NHS, bridge projects on any Federal Aid eligible public road, transit capital projects, and intra-city and intercity bus terminals and facilities. It can be used for a broad array of highway purposes, and flexibly used for major transit purposes as well.

-**T**-

<u>Temporary Benchmark (TBM)</u> – A fixed point with a known elevation and location used for level control during construction works and surveys.

<u>Traffic Control Plans (TCP)</u> - Required for all projects to facilitate pedestrian, bicycle, and motor vehicle traffic during the construction of a project. See Section 713 of Standard Specifications

<u>Traffic Control Supervisor (TCS)</u> – Criteria to be a Traffic Control Supervisor includes: 1) Successful completion of work zone traffic control supervisor course (approved by LADOTD – ATTSA & AGC); 2) pass a written exam on the above course; 3) Minimum of one year full-time field experience in work zone traffic control

Traffic Control Technician (TCT) – Criteria to be a Traffic Control Technician includes: 1)

successful completion of work zone traffic control technician course (approved by LADOTD) and 2) pass a written exam on the above course.

<u>Traffic Maintenance Aggregate</u> – Aggregate used for maintenance of traffic, as described in Section 402 of the Standard Specifications.

<u>Traffic Management Plan (TMP)</u> - A project specific, written plan containing a set of coordinated transportation management strategies (temporary traffic control measures and devices, public information and outreach, and operational strategies such as travel demand management, signal retiming, and traffic incident management) and describing how they will be used to manage the work zone impacts of a road project. The scope, content, and level of detail of a TMP may vary based on LADOTD's work zone policy and the anticipated regional and project level work zone impacts of the project. Website: EDSM VI.1.1.8

#### -U-

#### -V-

<u>Value Engineering (VE)</u> - A federally mandated activity using an independent team to evaluate the best means of achieving the project objectives on projects greater than \$25 million dollars on the National Highway System.

#### -W-

<u>Wetlands</u> - Lands covered or partially covered by shallow water, or lands where the water table is at or near the surface; includes marshes, swamps, bogs, natural ponds, wet meadows, and river overflow. The water can be saltwater, freshwater or brackish. They have biologically diverse plant and animal life. Examples of plants include water lilies, cattails, cypress, gum, and others. The animal life can include amphibians, reptiles, birds, insects, and mammals.

# PART I: GENERAL INFORMATION

## **1.1** Introduction

Construction contract administration for the Department of Transportation and Development includes both contract management and construction management. This CCA Manual is intended to facilitate construction personnel's conformity to a uniform method of management in building our highway system. This CCA Manual will help construction personnel in accomplishing the goal of safely producing the best quality work in the shortest amount of time and for the least cost.

This CCA Manual is intended to set forth LADOTD's construction contract administration process. The process outlined in this CCA Manual closely follows the AASHTO-accepted process made up of six key elements:

- 1.) Contract Administration;
- 2.) Daily Work Reports;
- 3.) Contractor Payments (Partial Estimates);
- 4.) Change Orders;
- 5.) Civil Rights; and,
- 6.) Materials Management.

In addition to this CCA Manual, the Project Engineer must also refer to the abundance of information contained in the Standard Specifications for Roads and Bridges, training courses, handbooks, Engineering Directives and Standards CCA Manual (EDSM), and "LADOTD Construction Memorandums." When there is a discrepancy, the contract and specifications govern over Construction Memorandums; Construction Memorandums govern over EDSM's; EDSM's govern over this CCA Manual; and this CCA Manual governs over training courses.

# 1.2 Roles and Responsibilities

## 1.2.1 Chief Engineer:

Directs all engineering activities of DOTD and reports directly to the DOTD Secretary.

# 1.2.2 Chief Construction Engineer:

The engineer who serves to manage all District functions pertaining to construction of Department projects managed by either in-house or Consultant CEI personnel.

## 1.2.3 District Area Engineer:

Direct supervisor over several District PEs and District Maintenance crews.

# 1.2.4 Head Quarters Area Engineer:

Provides assistance and expertise to PEs as needed during the course of contract administration. In the chain of approval for Category 1 Change Orders. Report to Chief Construction Engineer.

## 1.2.5 Project Engineer:

The PE oversees and directs inspection objectives, Contractor compliance with the plans and

specifications, and maintains open effective communications with all parties involved in the process. The Project Engineer will also have the responsibility to ascertain that his staff is qualified to perform their duties, that each is familiar with project plans and specifications, and that they perform their duties in a proper and efficient manner, always striving to maintain a businesslike relationship of mutual cooperation with the Contractor, the public, utility agencies as well as any other parties involved in the project. The Project Engineer must promptly, fairly, and justly address conflicts and escalate to the District or HQ Area Engineer as needed.

The PE is the Department's representative on the project and operates under the supervision of the District Area Engineer. The PE coordinates activities with the District Area Engineer on all matters affecting the project scope, schedule, and budget.

As the Department's representative, the PE will have frequent personal contacts with the Contractor, property owners, municipal and utility representatives, and the public. It is important the conduct of these associations be of a character reflecting positively on the PE and the Department.

The PE supervises inspection staff, performs inspections and testing as needed, and assists the District Area Engineer with administrative duties as directed.

# 1.2.6 Inspector:

Work and materials are inspected to determine acceptability in accordance with the contract requirements. It is the responsibility of the inspector to determine the work is performed in accordance with specified requirements. The inspector has no authority to accept work, but has the authority and responsibility to reject work or materials until an acceptance determination can be made by the PE.

The inspector is directly responsible to the Project Engineer but may work under the direct supervision of a Field Engineer or other personnel assigned to specific construction operations. Inspector's duties include inspection and observation, sampling and/or testing of materials, documenting and making necessary records or reports of operations, and other duties as directed by the Project Engineer.

Inspectors must have a good understanding and knowledge of work required by the contract. Before construction starts, inspectors should study the plans, specifications, and contract provisions to familiarize themselves with the requirements and be prepared to readily answer any questions concerning the work. Inspectors should consult with the PE before the work is started for clarification of provisions or requirements that may be unclear or not completely understood.

Most work inspection requires the inspector to be present during the operations where the inspector can observe details of the work. The inspector should make certain all materials and work is in compliance with the contract. The Contractor's operations affecting or important to quality should be closely observed tested, measured, and documented. Operations that can be inspected and tested after the fact should be handled in this manner. If the operation provides little or no consequence to quality, an appropriate level of testing, observation, and documentation should be performed.

Members of the inspection staff should not act as supervisors for the Contractor by directing or supervising workers in accomplishing their tasks, or assisting the workers or performing any task or duty for the Contractor.

The inspector must provide documentary evidence to support that all work and materials is in compliance with the approved plans and specifications. The PE uses this information in determining acceptance. Unacceptable work and materials should immediately be brought to the Contractor's attention for prompt correction. If not promptly corrected, the situation should be brought to the attention of the PE for resolution.

Unsafe working conditions should also immediately be brought to the attention of the Contractor for instant correction. The circumstances should be noted in the inspector's diary. If the unsafe conditions are not immediately corrected, the situation should be brought to the attention of the PE for resolution.

The importance of the inspector keeping a neat, complete, up-to-date and accurate diary and submitting reports in a timely manner cannot be over-emphasized. If there are disputes, the inspector's daily records are the legal documents with which the matter may be resolved.

# 1.2. 7 Office Manager:

The office manager is directly responsible to the Project Engineer. Office manager duties include assigning document attributes for Content Manager and making certain complete electronic documentation is maintained throughout project construction in SiteManager and MATT. The office manager must make certain project administration and accounting documentation meets the contract requirements and verifies labor compliance, certified payrolls, and EEO interviews on Federal-aid projects. The office manager also verifies Contractor pay estimates and assists the PE with project administration tasks as directed.

The position also manages project documents in accordance with the filing section of this CCA Manual.

# 1.2.8 FHWA:

On a project for which the federal government makes all or part of the funding available, the <u>FHWA/LADOTD Stewardship and Oversight Agreement</u> formalize the roles and responsibilities of the FHWA and LADOTD in administering the Federal-aid Highway Program. The agreement outlines a consistent approach for the FHWA and LADOT to effectively manage public funds and assure the Federal-aid highway program is delivered in accordance with applicable laws, regulations, policies, and good business practices.

Administering construction is a function of the Department, its engineers, and inspectors. However, regardless of delegated responsibilities, FHWA engineers can make inspections of any Federal-aid project at any time.

The relationship between the FHWA and the Department does not directly involve the Contractor. FHWA representatives inspect the project for purposes of reviewing the Department's procedures and assuring the project is constructed in accordance with commitments contained in LADOTD's

agreement with the FHWA. The FHWA has neither responsibility nor authority to direct or supervise the Contractor's work through either oral or written direction or to otherwise deal directly with the Contractor.

# 1.2.9 Compliance Office:

Responsible for developing, administering, and implementing Civil Rights programs mandated on projects which receive Federal Aid. Website: <u>Compliance Office</u>

## 1.2.10 Construction Audit:

Processes partial estimates and Change Orders, activates contract in SiteManager and LaGov, and performs a final audit to verify that all required project documents are correctly completed and included in the project files.

## 1.3 Chain-of-Command

The "chain-of-command" in construction contract administration is a functional chain established by the Chief Engineer and is unrelated to the organizational chart of the Department. In descending level-of-authority, the chain is Chief Engineer to Chief Construction Engineer to HQ Area Engineer to District Area Engineer to Project Engineer. This chain of command applies only to contract administration matters administered through the Construction Division. In all other matters, the chain is as shown by the organizational chart of the Department. Org Chart Link: <u>organizational chart</u>

In this unique chain-of-command, only the Project Engineer is authorized to act as a direct representative of the Chief Engineer in contract administration. This means that the Project Engineer can speak to the Contractor with the full power and authority of the Chief Engineer, but it does not mean that he has the power and authority of the Chief Engineer. On the contrary, the limits of the Project Engineer's authorities and duties are clearly outlined in the Standard Specifications and LADOTD written policies and care must be taken to not go beyond those delegated limits.

All written and verbal communications within the Department relating to specific construction projects must follow the contract administration chain-of-command. Written communications that originate at Headquarters must be addressed to the District Area Engineer; the Project Engineer must address his writings to the District Area Engineer.

Construction problems beyond the expertise or authority of the Project Engineer are to be solved by or through the District Area Engineer. If applicable, the District Area Engineer, not the Project Engineer, will refer the matter to the HQ Area Engineer. If beyond the authority of the HQ Area Engineer, he will refer the matter to the Chief Construction Engineer. If beyond the authority of the Chief Construction Engineer, he will refer the matter to the Chief Engineer.

The HQ Construction Section provides guidance and assistance to District construction forces in three main divisions:

- 1. Systems Roadway construction and SiteManager
- 2. Audit Estimate processing, project files audit, and Work Zone safety

3. Structures – Fabrication, structural construction, electrical components, and construction scheduling

# 1.4 Federal Aid Project Guidelines

# 1.4.1 General Information –

When there is Federal Aid on a project, the Department is responsible for contract administration but the work is subject to the inspection and approval of FHWA. The FHWA is not a party to the contract with the Contractor but has a separate agreement with the Department

# 1.4.2 Communications with FHWA -

Neither project personnel nor district personnel may directly correspond with the FHWA or Federal Aviation Administration; the correspondence must be through Headquarters. This rule does not apply to routine distribution of copies of documents that have been previously requested by those agencies. This rule is not intended to discourage discussion by the project personnel of the project problems with the Area Engineers or other representatives of these two Federal agencies. It is especially important to discuss the problems that could escalate into major expense items that will be shared with these agencies.

All documents related to a Federal Aid project must include the Federal Aid project number.

# 1.4.3 Buy America Contract Provision

If there is a Buy America Contract Provision, all steel products used on the project shall be produced in the United States. The documentation furnished to the project engineer by the Contractor shall include a mill test report for the material and a notarized certification with the statement "All material listed above was produced and fabricated in the United States". This will be the only statement accepted.

# 1.5 Project Plans and Specifications

After a project is let, the PE is furnished complete sets of plans and specifications. Location field notes may also be furnished; if not furnished, they can be obtained from Enterprise Support Services.

In case of discrepancy between plans and specifications, calculated dimensions will govern over scaled dimensions; plans will govern over standard plans, standard specifications or supplemental specifications; supplemental specifications will govern over standard specifications; and special provisions will govern over standard specifications, supplemental specifications, and plans.

Parts of the Contract (Order of Precedence) - Found in the Standard Specifications

• Special Provisions- Approved additions and revisions to the *Standard Specifications* and supplemental specifications that initially apply only to an individual project or a small group of projects (special provisions that are found to have statewide application to other projects may be incorporated into the supplemental specifications and standard specifications). These are incorporated and part of the contract.

- Plans- Bid set plus change order sheets of Construction plans
- Supplemental Specifications- Approved additions and revisions to the *Standard Specifications* made between publications. These are incorporated and part of the contract.
- Standard Specifications- the latest edition of the LOUISIANA STANDARD SPECIFICATIONS for ROADS and BRIDGES which is the compilation of provisions and requirements for the performance of prescribed work and the basis of payment for the work approved for general application and repetitive use
- Standard Plans- the latest edition of the Louisiana Standards, see <u>Standard</u> <u>Plans/Special Details</u>

# 1.5.1 As-Built Plans-

One set of plans should be set aside to be used in preparing as-built plans (see "As-Built Plans"), and one copy of the plans and contract should be reserved for office use. Another copy of each should be kept at the project field laboratory or by the inspector assigned to the project. The remaining copies are used as needed, and additional copies may be obtained from Enterprise Support Services at HQ. (Note: Additional copies should be requested early in the project, since Enterprise Support Services at HQ may still have extras. Later, because of sheets revised after the project was let, it may be impossible to make exact copies of the as-let plans.)

The Project Engineer and inspectors must be familiar with the contract on their projects in such that they are aware of which specifications govern on an individual project.

# 1.6 Public Relations

An important part of contract administration is concern for the public; both the traveling public and property owners directly affected by the construction. The public is so important as to warrant a special subsection in the Standard Specifications.

Beyond the absolute requirements of the specifications, the Contractor's cooperation in holding inconveniences to a minimum should be actively solicited. Additionally, project personnel should always courteously listen and respond to the public questions, requests, or complaints. Complaints not resolved by project personnel should be promptly referred to higher authority. All LADOTD personnel must avoid inappropriate actions that, in the eyes of the public, cast a bad light on LADOTD. The Project Engineer or other supervisors of personnel working in view of the public must take steps to ensure public interactions are professional and courteous and curb behaviors that violate this objective.

# 1.7 Safety Items

# 1.7.1 Contractors Safety Plan and Personal Protective Equipment (PPE)

The Contractor is responsible for submitting a Safety Plan for the project at the Pre Construction Conference. The Contractor is also required to provide a safety orientation to the Department's project personnel on the jobsite safety rules and procedures. The Department's project staff, including the inspectors, PE, and LADOTD visitors are responsible for following the Contractors

Safety Plan. All required safety supplies needed for the project, including the Contractors PPE requirements, shall be coordinated and readily available for use as construction starts.

# 1.7.2 Work Zone Incidents and Accidents

The Federal Highway Administration (FHWA) requires that each State develop a system to report traffic crashes in construction work zones. The crash reports are reviewed to locate and isolate problem areas to evaluate and enhance the safety measures in the work zone, if deemed necessary. 23 Code of Federal Regulations (CFR), Part 630, Subpart J

## 1.7.2.1 Reporting Traffic Crashes

(1) Fill out the <u>Work Zone Crash/Fatality Sheet</u>, along with detailed diagrams and narratives. Include digital photos and a copy of the Traffic Control Plan of the immediate area of the crash.

(2) Do not fill out the *Work Zone Crash/Fatality Sheet* for minor occurrences such as skid marks, damaged barricades, etc. However, if these incidents begin to be localized, then the traffic control plan and traffic movements should be analyzed to determine the cause and subsequent cure. It is recommended that a project file be kept of minor occurrences for future reference.

(3) Appropriate corrective action is to be taken immediately and noted on the form.

(4) Obtain all supporting documents if possible, such as police reports, etc., and attach to the *Work Zone Crash/Fatality Sheet*. Complete the report immediately and add supporting documents as they become available.

(5) When a police report contains information contrary to the facts that project personnel are aware of, be sure to amend the *Work Zone Crash/Fatality Sheet* 

(6) Discuss crashes at the weekly Progress Meetings.

## 1.7.2.2 Traffic Control Plan Evaluation at Crash Site

When the Project Engineer becomes aware that a crash occurred, all possible steps shall be taken to determine its cause and to make corrections that will reduce the probability of additional crashes. However, the occurrence of a crash does not automatically mean that a change in work zone traffic controls is required. Crashes usually are a result of a combination of factors.

The Project Engineer shall examine the relationship of the crash to the existing work zone traffic controls and evaluate all warning signs, pavement markings, barricades, and lights in the immediate vicinity of the crash site. A night inspection is required if the crash occurred at night. If any enhancements or corrective measures are to be taken, list them on the *Work Zone Crash/Fatality Sheet\_*and document the action on the Daily Work Report in SiteManager.

No changes to the Traffic Control Plans shall be made which will change traffic patterns or movements without the approval of the Engineer of Record.

# 1.7.3 Third Party Damage Claims

Section 107.02 of the Standard Specifications requires the Contractor to maintain certain minimum insurance coverages that are to protect the State of Louisiana and/or the LADOTD. One of the

required insurances is a separate Owner's and Contractor's Protective (OCP) Liability Policy that names the LADOTD as the named insured.

These insurance requirements were instituted at the Division of Administration's request. The Division of Administration, through their Office of Risk Management, administers the State of Louisiana's liabilities.

If a call is received concerning a damage claim, the following action will be taken: Refer the claimant to the Office of Risk Management and to the Contractor (name and phone number); then notify the Contractor of the call/claim. The Project Engineer should discuss this at the Pre-Construction Conference with the Contractor.

# 1.7.4 Trench Safety

The Contractor shall adhere to all state and federal guidelines in providing protection against the cave-in of any excavated area. The Contractor shall not conduct operations in the trench unless adequate shoring is in place when needed, all safety provisions are met, and all federal and state guidelines for protection are met. The safety of the excavation depends on the characteristics of the material in which the excavation is made, seepage, depth of excavation, and side slopes. Trenches shall be braced when needed to prevent the sloughing of side or top material. The Contractor shall take all measures necessary to protect workers in the trench area and shall provide them with safety equipment as needed. The design of shoring in no way affects the specification density requirements for the full width and depth of the trench.

Do not enter an unprotected trench. Trenches 5 feet deep or greater require a protective system unless the excavation is made entirely in stable rock. Trenches 20 feet deep or greater require that the protective system be designed by a registered Professional Engineer or be based on tabulated data prepared and/or approved by a registered Professional Engineer.

## 1.7.4.1 Protective Systems

There are different types of protective systems.

- 1. Sloping involves cutting back the trench wall at an angle inclined away from the excavation.
- 2. Shoring requires installing aluminum, hydraulic or other types of supports to prevent soil movement and cave-ins.
- 3. Shielding protects workers by using trench boxes or other types of supports to prevent soil cave-ins.

Designing a protective system can be complex because you must consider many factors: soil classification, depth of cut, water content of soil, changes due to weather or climate, surcharge loads (e.g., spoil, other materials to be used in the trench) and other operations in the vicinity.

## 1.7.4.2 Competent Person

OSHA standards require that trenches be inspected daily and as conditions change by a competent person prior to worker entry to ensure elimination of excavation hazards. A competent person is an individual who is capable of identifying existing and predictable hazards or working conditions that are hazardous, unsanitary, or dangerous to employees and who is authorized to take prompt

corrective measures to eliminate or control these hazards and conditions.

### 1.7.4.3 Access and Egress

OSHA requires safe access and egress to all excavations, including ladders, steps, ramps, or other safe means of exit for employees working in trench excavations 4 feet or deeper. These devices must be located within 25 feet of all workers.

### 1.7.4.4 General Trenching and Excavation Rules

- Keep heavy equipment away from trench edges.
- Keep surcharge loads at least 2 feet from trench edges.
- Know where underground utilities are located.
- Test for low oxygen, hazardous fumes, and toxic gases.
- Inspect trenches at the start of each shift.
- Inspect trenches following a rainstorm.
- Do not work under raised loads.

## 1.8 Utilities

## 1.8.1 Conflicts

Some utility conflicts are anticipated by the Standard Specifications and the Contractor is charged with the responsibility of bidding accordingly. However, utility companies do not always comply with their agreements and can cause substantial delays to the Contractor. If this happens, refer to <u>EDSM III.3.1.1</u>"Documenting Utility Conflicts on Construction Projects" and <u>EDSM III.5.1.8</u> "Conversion of a Project Diary".

## 1.8.2 Relocations

All adjustments and relocations shall be tracked in accordance with <u>EDSM III.3.1.2</u> "Field Records for Utility Adjustment and Relocations."

# 1.9 Right-Of-Way Agreements and Right of Entry's

## 1.9.1 Pre Construction Agreements

In the course of obtaining right-of-way for proposed construction, the Department often agrees to special construction for the benefit of property owners. These special features are normally included in the construction plans but occasionally an agreement will be overlooked. This possibility is one of the reasons why the <u>Real Estate Section</u> furnishes the Project Engineer a copy of all right-of-way agreements; so they can be reviewed during construction and complied with (by change order) if not provided for in the construction contract. The Project Engineer should verify with the Real Estate Section that all special agreements have been obtained.

During construction, the Project Engineer may discover that some of these special features were not included in the construction plans. During the change order process needed to correct this oversight, the LADOTD Design Project Manager must be notified so that improvements to the plan preparation process can be made.

# 1.9.2 Right of Entry During Construction

During the course of construction, the Department or the Contractor may find the need to enter private property. This may be for tying in drives and/or walks, using the property for temporary purposes such as driving equipment around an obstruction or travel lane, or if the Contractor makes an agreement with a landowner for other purposes. In these instances, Form 4206 must be executed in accordance with EDSM III.1.1.4 "Form No 4206 Right of Entry."

# 1.10 Surveying and Construction Layout

# 1.10.1 Layout Requirements

Most contracts require the Contractor to perform construction surveying. Whether done by the Contractor or the Department, horizontal and vertical control surveying notes must be kept in numbered field books and the procedures and notes must be in keeping with generally accepted surveying and engineering practices. The alignment should be recorded in a "Field Book" as issued by Enterprise Support Services, and bench leveling in a "Level Book". All surveying must be done using stations and all field books must use stationing (not log miles). All equations, exceptions, railroad grade crossings and bridges must be stationed and so recorded in plans and field books.

For the purposes of this rule, paper printouts from standard electronic surveying software may be substituted for the required field books, level books, and cross- section books. These paper printouts must include all of the data normally found in the field books, as interpreted by the Project Engineer. The documents should be sequentially numbered so that reconstruction of the survey data is facilitated. These paper printouts may be in formats normally used by Professional Land Surveyors. At the time of the submittal, the Contractor must sign the documents and upon receipt, the Project Engineer must sign and date these documents for receipt purposes.

All leveling work, for whatever purpose, must be recorded in field books. Leveling must be "tied back in" to a benchmark and no leveling circuit may be completed with only one set-up of the instrument. This policy applies not only to major work – such as setting temporary benchmarks and taking cross-sections – it applies to all leveling.

On projects requiring construction to specific elevations, it is usually necessary that temporary benchmarks be established. The elevations of those temporary benchmarks are to be determined by leveling from a benchmark shown in the construction plans. The temporary benchmarks are to be numbered and well described in the leveling book.

All temporary benchmarks are to be set throughout the project and their elevations proven before any cross-sections are taken or verified, and before any construction needing elevations begins.

It is the responsibility of the field party to check all level notes, including leveling for crosssections. The bench level notes and all heights-of-instruments (HIs) are to be checked before the field books are submitted to the Construction Audit Section. The checker must initial the bottom of each page. A numbered "Level Book" (issued by Enterprise Support Services) should be used for leveling notes and a numbered "Cross-Section Book" for cross-sections.

All cross-sections are to be recorded in numbered "Cross-Section Books" as issued by Enterprise Support Services, or by electronic survey data collectors. If field books are used, the page heading in the cross-section book is to be filled out at the start of each day.

When the final cross-sections are taken on the finished grade, adjustments in rod readings to subgrade readings should be made in green pencil (in the cross-section book) and the revised readings circled. When taking the cross-sections, allow adequate space in the field book to avoid crowding the data.

# 1.10.2 Existing Survey Marks and Monuments

When any control monument is encountered within the construction limits of a project, whether shown on the plans or not, the Project Engineer must immediately notify the Location and Survey Administrator in writing, providing them with the construction project number and all information printed on the monument, in order that an investigation may be made and proper disposition determined.

It is imperative that the Contractor be prevented from damaging markers until sufficient time has been allowed for the relocation of the monument or, if appropriate, receipt of authorization to destroy the monument.

# PART II: PRE-CONSTRUCTION ACTIVITIES

# 2.1 Plan-in-Hand (PIH)

Although not part of contract administration, a "plan-in-hand" is an important milestone. This is often the Project Engineer's first knowledge of the project and is his best opportunity to have an influence in the relevancy, constructability, and completeness of the project plans and specifications. A plan-in-hand inspection is a field inspection made with preliminary plans of the proposed project by representatives of the Design Sections (Bridge and/or Road), Construction Section, District, Consultant (if applicable), and Federal Highway Administration (if applicable). In order to efficiently and effectively accomplish the inspection, it will be the policy of the Department to limit the number of participants for a plan-in-hand party to the minimum possible at all times. Therefore, the designated members of the party should not invite any members of their staff, or others, unless their presence is imperative.

The success of the PIH is enhanced by the Project Engineer's participation. The most successful PIHs are those in which the Project Engineer has reviewed the plans, made a prior field inspection, and identified sites, including layout of the project. These efforts should be given high priority by the PE, as an effective PIH meeting not only benefits the design of the project but the quality of the completed plans he will be responsible for constructing.

Plan-in-hands are held in accordance with <u>EDSM I.2.1.1</u> "Policies for Plan-in-Hand Inspections".

# 2.2 Advance Check Print Review (ACP)

Another important milestone to contract administration is the review of the ACPs. At this stage, the Project Engineer can make certain that the project personnel PIH comments are included in the current edition of the plans. In addition, changes to the site, changes to standards, and changes to traffic or site conditions can be included in the plans. For example, are there any new driveways or signalized intersections.

# 2.3 Proposal Review

Another precedent to contract administration is proposal review. Prior to receipt of bids the Project Engineer is furnished one copy of the proposal (project plans and specifications) for review. The review, including field inspection if possible, should be given high priority by the PE, as he and the Contractor will be working together with the plans and contract during the life of the project. Discrepancies or omissions of consequence should be discussed with the District Area Engineer and followed up in writing.

Prior to bidding, any questions or concerns about project plans and specifications by the Contractor, supplier, etc. should be directed to the Project Manager through Falcon where the project plans and contract specifications will be available to Contractors and Departmental personnel. The Project Manager is responsible to provide answers, either from his knowledge of the project or after consulting with the others in the Department. Discrepancies or omissions of consequence should be discussed with the District AE and followed up in writing.

## 2.4 Constructability Review

Purpose of Constructability Reviews:

• To provide construction expertise in analyzing any risk factors associated with the project and identifying any foreseeable conflicts or conditions that may cause a delay or time extension. Construction knowledge and expertise is important input in the design process.

• To provide questions to stimulate discussion of potentially problematic areas.

• To provide questions and comments to stimulate checking details and items required to complete the design portion of the project.

- To provide aid during design for QA/QC for design.
- To provide primary discussion for the plan-in-hand meeting

Constructability reviews will normally include analysis of site access, construction staging, temporary facilities, utilities, permits, specialty items, contract packaging, scope of work, and specification clarity, including review of the general conditions, special conditions, and technical specifications. Constructability reviews should address the coordination between the contract documents and the actual site conditions. Site and project specific issues should be addressed during the reviews along with any impacts that conditions may have on the project along with proposed solutions to the identified issues. Special conditions do not remain the same from project to project and need to be reviewed accordingly.

EDSM III.1.1.32 addresses the procedure and the process.

Project managers will collect all review forms, insert responses to any comments, and copy all reviewers.

## 2.5 Pre-Construction Conference

A Pre-Construction Conference will be held on all projects. These conferences should be scheduled sufficiently in advance to permit the attendance of all parties concerned. Website: EDSM III.1.1.7 . "Pre-construction Conference."

Upon Notice of Contract Execution, the Project Engineer and District Area Engineer should confer and arrange a preconstruction conference to be held in advance of any work on the project, if possible.

Compliance Office personnel must be notified in order that their representatives may attend to discuss the EEO contract requirements and the DBE/SBE provisions of the contract. On Federal Aid Projects, the Area Engineer shall be notified of the time, date and location of the conference so that representatives of the Federal Highway Administration may attend if they so wish.

On all airport projects, the FAA representatives and LADOTD Assistant Secretary of the Office of Aviation, will be given a minimum of two (2) weeks advance notice of the date, time, and

location of the Pre-Construction Conference.

Headquarters and District utility personnel should be notified.

Utility Companies shall be notified well in advance of the conference in order that their representatives can make arrangements to attend. It is vitally important on most projects that the utility representatives attend the conference, where sequences of construction may be developed to provide for the orderly relocations of utilities to minimize delays.

On an as needed basis, in the PE best judgement, local parties can be invited. The engineer of record should also be invited.

The Contractor should be requested to urge any subcontractor to attend. Subcontractor requirements and anticipated usage should be discussed at the conference.

Minutes of the conference will be documented by a report, a copy of which will be transmitted to the office of the Chief Construction Engineer.

Prior to the Pre-Construction Conference, the Project Engineer should prepare items to be discussed. The Project Engineer must use the "<u>LADOTD Pre-Construction Conference</u> <u>Checklist</u>. Items to be discussed may vary depending on the project, Contractor and Department personnel. However, the specifications require that four items be furnished to the Department prior to or at the meeting:

- 1. Superintendent's name and home telephone number, and/or other field representatives in responsible positions on the project.
- 2. Baseline Schedule (See Specification for exact requirements)
- 3. Shop drawing submittal schedule (to Bridge Design prior to meeting)
- 4. Pile installation plan (if not at this meeting than, no later than 30 days prior to driving piles)

Other items to be discussed will be determined in the District. A successful pre- construction conference should result in both the Contractor and the Department personnel having a clear understanding of the plan of construction and expectations and responsibilities of all parties.

## 2.6 Partnering

It is the Louisiana Department of Transportation and Development's (LADOTD) policy to use the principles of partnering to guide the management of construction projects within the parameters covered by the laws, regulations, and other policies that govern work in the public sector.

These partnering principles are intended to promote quality through continuous improvement at all stages of design and construction. The goal of the LADOTD is to complete projects in the most efficient, timely, safe, and cost effective manner to the mutual benefit of the Contractor and the LADOTD, meaning a quality project delivered on time, within budget, and without significant disputes.

None of the actions identified as part of, or taken in the course of, partnering will be construed to alter, modify, delete, or waive any of the provisions or requirements of contract documents or any applicable laws or regulations.

The LADOTD and the Contractor will manage the contract in a cooperative manner utilizing the following principles of Project partnering:

- A) Establish communications with all involved parties early in the partnering process;
- B) Establish a relationship of shared trust, equity, and commitment;
- C) Develop strategies for identifying mutual goals;
- D) Develop strategies for timely communications and decision-making;
- E) Establish a process for timely response to changes or variations in field conditions;
- F) Solve potential problems at the lowest level before they negatively impact the Project;
- G) Encourage the use of products, technology, and processes that provide a demonstrated level of improved quality; and
- H) Develop a plan for periodic joint evaluation based on mutually agreed goals.

The process is to be implemented in an equitable fashion that recognizes the problems that are inherent in construction, addresses the different-than-expected field conditions, resolves disputes in an open communications manner, and makes Contract adjustments in a timely and fair manner consistent with the terms of the Contract.

The Contractor shall be responsible for creating and implementing, with input and comment from the LADOTD, a partnering program for use during a project. The costs of such partnering program will be borne by the Contractor and reimbursed according the project specifications. The LADOTD will consider the incorporation of partnering into the coordination and cooperation required with third parties such as subcontractors, suppliers, utility owners, railroads, and other Stakeholders.

See the project specifications for details and requirements, and the payment process.

## 2.7 Materials Sampling Plan

The District Lab Engineer/District Project Coordinator will assist the P.E. in developing a Sampling Plan, in accordance with <u>EDSM III.5.1.2</u>

## 2.7.1 Material Sampling Manual

This Manual is used to provide guidance in the sampling and testing of materials. When completing a Sample ID (Identification Form) or completing a 2059 Report (project sample summary). The materials sampling Material Sampling Manual is arranged by:

- Contract item number. Example 502-01-00100 is used for Asphalt Concrete.
- Material Example: Size 1.2 or3 aggregate

- Tested by Example: District lab in accordance with 507.01 and 1003.05
- The purpose Example -- acceptance, information, design, quality control, etc....
- Method of sampling
- Minimum frequency of sampling Example -- 1/1000 Cubic Yards
- Sample quantity (size) Example – 1 quart plastic bottle or1 sack
- Typical Handling time Example: 5 days
- Certificate requirements: CA, CC, or CD

## **CERTIFICATES**

- CA Certificate of Analysis Manufacturer test results
- CC Certificate of Compliance "We promise that we comply with specs."
- CD Certificate of Delivery LADOTD tested it, and it includes LADOTD Lab Number (Not a bill of lading.)
- Distribution of paperwork
  - 1. Code
  - 2. Project Engineer receives one legible copy, reviews, approves and files for documentation.

# 2.7.2 Approved Materials List (AML) (formally the Qualified Products List (QPL))

A listing of material companies which have been prequalified by LADOTD. Inclusion on this list does not necessarily eliminate the requirement for testing. It means prior testing has shown that the company is capable of producing an acceptable product.

## 2.7.3 Sampling Plan

The Materials Sampling Manual is used to create a project-specific Sampling Plan based on the contract items and quantities. It identifies the materials allowed and selected, and the contract item quantity. Using the quantity it determines the minimum sampling frequency and timing of the sampling.

# PART III: CONTRACT ADMINISTRATION

## 3.1 Notice to Proceed

The District in which the work is to be performed will issue all Notices to Proceed to the Contractor, with the following exceptions. The Contracts and Specification Section at Headquarters will issue Notices to Proceed on statewide projects. The specific entity or project sponsor will issue Notices to Proceed on projects to which the Department is not a signatory, such as Urban Systems Projects and Enhancement Projects, after they are notified that the contracts have been executed. In any other unusual circumstance that lends itself to a Headquarters issued document, Contracts and Specification Section will issue the Notices to Proceed. See <u>EDSM</u> <u>III.1.1.30</u> Construction and Maintenance Projects; Notice to Proceed/Conditional Notice to Proceed/Notice of Contract Execution.

The District Administrator or his designated representative will issue NTPs issued by the District after considering local factors and the Contractor's input. Every effort will be made to issue the notice within fourteen (14) calendar days of the contract execution date indicated in the "Notice of Contract Execution"; however, all notices for Department construction and maintenance projects must be issued, in writing to the Contractor, within thirty (30) calendar days of the contract execution". If circumstances dictate that the notice(s) needs to be delayed beyond thirty calendar days, the District Administrator shall provide timely written justification and request approval of the delay through the Chief Construction Engineer.

In no case shall the NTP be delayed beyond sixty (60) calendar days past the contract award date without the written mutual consent of both the Contractor and the Department. If an approved change order provides for an adjustment to the days provided in the contract under a "Conditional Notice to Proceed", the adjustment must be reflected in both the "Conditional Notice to Proceed", by revision if necessary.

The "Notice of Contract Execution" will be issued by the Contracts and Specification Section for Headquarters bid projects and by the District Administrator or his designee for projects bid in the District.

See examples of the typical "Notice to Proceed" and "Conditional Notice to Proceed" in <u>EDSM III.1.1.30</u>. These written notices to the Contractor shall essentially be of the same form and content as that of the attached examples with copies distributed as indicated on the examples.

A Contractor without a license can be awarded a contract and execute a contract, but a Notice to Proceed shall not be issued without the license.

## 3.1.1 Assembly Period Adjustments

An assembly period extension has to be executed prior to the expiration of the original assembly period. Once contract time starts the assembly period cannot be extended. A Category 1 change order is necessary to extend the assembly period.

## 3.2 Filing System

A standard and uniform filing system will minimize complications as a result of reassignments, and a system that will assist in the review of final estimates, Summary of Laboratory Reports (Form 2059), and other acceptance and audit processes. Since unusual projects may require additional files. It is the responsibility of the PE to set these up as needed and maintain.

## 3.2.1 Construction Project Files

Each project should have the files listed below, provided the contract quantities are such that more than 10 documents will be generated for each file. The standard construction files are:

- Contract File
- General Correspondence In
- General Correspondence Out
- E.E.O. File (for Federal Projects only)
- Daily Diary Reports
- Utility Agreements Files. Separate files should be maintained for each utility agreement. These files should contain each respective agreement and utility inspector's daily reports. (See also Chapter IV of the Construction CCA Manual.)
- Partial Estimate File
- Test Pile Reports
- Contractors Payrolls
- Change Orders Pending
- Change Orders Approved
- Right of Entry Forms
- Final Estimates File
- Wage Rate Interview File
- Accident/Incident Reports with supporting documentation including photos.
- Pre-Construction photos and videos
- Materials Quality Control Documents
- Request for Information (RFI)
- Construction Schedules (Baseline and Progress)
- Environmental Documents
- Traffic Control Inspections
- Other as needed files that may be project specific.

## 3.2.2 General Administrative Files

In addition to construction project files, the PE must maintain general administrative files as follows:

- General Personnel consisting of correspondence on overtime, training and general personnel information, Civil Service, retirement, etc.
- Employee Personnel File (consisting of one folder for each employee for personnel records, including training records)
- Payroll and Requests for Leave
- Expense Accounts
- Materials Used Reports
- Property Inventory, Equipment Transfer, and Instrument Assignment Records
- Passenger Equipment Assignments
- Small Tools and Accountable Items
- Safety Meeting Records
- Petty Cash
- Standard State Invoices
- Nuclear Density Radioactive Source Certificates
- LADOTD Construction Memorandums
- Miscellaneous Memorandums Receipt

## **3.3 Contract Documentation**

### 3.3.1 Overview

The purpose of this section is to provide a uniform standard for daily and weekly construction project reporting and documentation and record keeping as it relates to all contract specifications; including subcontracts, compliance, schedules, time and materials.

## 3.3.2 Daily Work Report (SM) or Project Diary

Complete field records of the Contractors' work are necessary for determination of pay quantities, to document that the work was performed, and to show "as built" records for future reference. Field records consist of the project diary, field book records, and any other information recorded in the field to document the work performed.

Field records must be accurate, neat, and clear enough so that they can be easily read and understood and so that everyone who reviews the records will interpret the information the same.

#### 3.3.2.1 Project Diary

The project diary is an extremely important record of the project in conjunction with other field records; it is especially important in the resolution of contract disputes and in litigation matters. Inspectors should be made aware of the importance of the document and the details needed. The Project Engineer should review the document thoroughly before approving to ensure completeness of this important document. Current procedures are:

- The DWR or project diary must be filled out each day throughout the life of the contract in SiteManager.
  - The reports shall be filed daily, and chronologically, with the latest date on top.
  - The original copies of the reports are to be stored in the Project Engineer's office until turned in with the final estimate. The diary must be completely filled out by LADOTD personnel for each day that there is activity on the project, whether the activity is by the Contractor or others. Most entries are self-explanatory on the form, but some clarification to selected items may be needed as follows:
  - Contractor's Force and Equipment Enter Contractor work force by payroll classification. Indicate in parenthesis after each entry the total number available on the job. Enter major types of equipment the Contractor uses that day. Indicate in parenthesis the total number available on the job.
  - Location of Work Station to Station Enter both station numbers that the work location falls between. Use a different column if the location changes, being sure to include the new station numbers. Under the "Station to Station" columns are squares that are to be filled in with the actual number of personnel or pieces of equipment that the Contractor used that day at that location. If the same number of personnel and equipment are used at the next location (new station numbers) do not repeat the original information entered, just draw a line across the next square to indicate the same number of personnel and pieces of equipment were used. The total number of personnel and available equipment on the job can be calculated by adding the numbers in parenthesis behind each entry in the "Contractor's Force and Equipment" section.
  - Approximate Work Accomplished Enter a brief description of the work accomplished, approximate quantity of work completed, and comments on adequacy of the Contractor's work force and equipment. Show when specific work items are started and when they are completed.
  - Comments on Time Charges Fill in only if Contractor is not charged a day. A complete explanation for not charging a contract day must be given.
  - Controlling Work Item Enter controlling work item based on Contractor's approved progress schedule. The progress schedule shall be revised if it is not representative of actual work in progress.
  - Weather Enter description of weather conditions during the day. These conditions shall be clear, partly cloudy, cloudy, rain, sleet, snow, humid (painting), fog, rain, sleet, or snow. Always indicate the time to and form of the weather event. Show water elevations on bridge projects.

In addition to the above, the Project Engineer and/or inspector should add any supplemental information on the report. If some or all of the supplemental information to be included is on a separate attached sheet, the diary should refer to the attachment. This additional information covers any extraordinary events that occurred on that date. This will include any relevant discussions and instructions, comments on utility conflicts, delays, or any other information deemed necessary to record. All such information may

be valuable in the event of future disputes or litigation. Additionally, the following information must be included on each diary:

- Recording of accidents giving the time of day, weather conditions, road conditions, warning signs, visibility, names of witnesses, etc.
- Signs and barricades, a brief statement made each day. If there are no deficiencies, insert the statement "Signs and Barricades are in Place."
- Note any situations that have occurred which the Contractor might later construe as a change.
- Keep records of hours of use (or non-use) or equipment and labor when a controversy develops, or a delay occurs, or if it likely that the Contractor will later request additional compensation for the work or file a delay claim.
- Make note of condition of Erosion Control, particularly following storms

## 3.3.3 Field and Level Book Recordkeeping

Currently, the Department requires that construction field records be kept in numbered "Field Books" when practical. Complete records are required on all contract items and entries must be made in the book at the time the work is done. Entries are to be dated and initialed or signed by the inspector responsible for inspecting the work.

When field book records are used, the same book may be used for documentation of several items with each item in a separate part of the book, provided the book does not become cluttered.

Major items, especially those requiring considerable records, are normally kept in separate field books. Miscellaneous small items, especially like-items that will be inspected by the same inspector or unlike items that will be inspected during different phases of the work, are usually combined in a single book or books. Field books for other items are used as needed.

Some of the general rules for field books follow:

1. Each office shall keep a continuing log showing receipt and disposition of numbered field books.

When a book is first received, its number and type must be entered in the log and its source shown. Thereafter, when it is assigned to a project, disposed of in any way (lost, transferred to another office or engineer, sent in with a survey or final estimate, etc.), the date and disposition must be entered in the log.

Lost field books must be immediately reported, by letter, to Enterprise Support Services. The recovery of a lost book must also be reported.

- 2. All field books must be numbered by Enterprise Support Services and if possible, obtained from Enterprise Support Services. If a field book is obtained from any other source, and has not been numbered by Enterprise Support Services, the book must be sent to Enterprise Support Services for numbering.
- 3. Each field book used on construction or in surveying must be indexed and the state and federal project numbers inked on the outside cover

- 4. Erasures or obliterations in field books are not permitted. If an error is found, a line should be drawn through the incorrect data, the correction written above, and the correction initialed. Deletion of incorrect data can also be made by writing "Void" and circling or drawing a single line through the incorrect data, and initialing. Take care when recording information into field books to minimize the need for corrections.
- 5. Sketches must be made of all irregular areas to be removed under pay items, or constructed as a pay item. Correct computations can be made by averaging the sides and ends of an irregular figure and multiplying the averages.
- 6. Measurements must be made before the item is removed or hidden by subsequent construction activities.
- 7. All measurements shall be in keeping with good engineering practices, so made that they can be used for computation of areas if applicable.
- 8. A typical field book entry will include the following:
  - The date the work was performed.
  - The location of the work, by station number if possible.
  - Quantity of work done or materials used.
  - The signature or initials of the responsible inspector.
- 9. Each item in the field book must have a final pay quantity (if the item is measured for payment) and should be used as a final reference in final estimate book.

For examples of specific field book records, see Appendix A.

### 3.4 Subcontracts

There are essentially two kinds of subcontracts. The first is the standard subcontract completed on each subcontractor. The second is the DBE Subcontracting process. The sub sections below gives instructions to the process for each.

A Prime Contractor must perform 50% of the contract amount work. Suppliers and truckers do not count towards the 50% limit. Also, in accordance with Standard Specifications Section 108.01, the specialty items are subtracted from the total contract amount and then the sublet amount is calculated. Therefore, the specialty items performed by subcontractors do not count towards the 50% limit. Specialty items vary and are determined on a project by project basis. They can be found in the construction proposals under "Subletting of Contract".

### 3.4.1 DBE Subcontracts

A project DBE/SBE goal is set prior to advertisement of the project by a DBE/SBE Goal Committee. The project is examined to determine the location and scope of services. The DBE/SBE certified directories are examined to determine the number of DBE/SBE's certified in the specific items listed in the scope of work and the number of DBE/SBE's located in the surrounding area of the project. A goal percentage is determined based on these findings. The following is the process for approving DBE Subcontracts:

1. The bid letting is typically the 2nd Wednesday of every month

- 2. The lowest bidder is selected
- 3. When a low bidder is selected on a DBE/SBE Goal Project, they then have five (5) workings days to complete and return a signed CS-6AAA to the Compliance Office through their fully automated process. The CS-6AAA is the commitment documentation to the DBE/SBEs that will be used on the project in order to meet the project goal
  - a. The chosen DBE/SBE must be certified in the particular item in order for it to count towards goal credit.
  - b. Suppliers count for 60% of the goal credit and as long as the word "supply" is in the description the automated system with automatically calculate the total.
  - c. Truckers that are hauling count for 100% of the goal credit.
- 4. BEFORE work begins:
  - a. DBE/SBE Suppliers require a supplier's agreement
  - b. DBE/SBE Truckers require a trucker's agreement
  - c. All other subcontractors require the OMF-1A and OMF-2A Forms

d. All electrical/mechanical/plumbing work over \$10k and all other construction work over \$50k requires a LA Contractor's license

**ALL** subcontractors must be approved by the Compliance Office BEFORE they begin working on the job. This includes all DBE/SBE on the CS-6AAA and all other DBE/SBE's and regular subcontractors doing work on the project. It is the Prime Contractor's responsibility to fill out the required forms.

DBE/SBE Suppliers require a supplier's agreement. DBE/SBE Truckers require a trucker's agreement. Both forms can be found on the Compliance Programs website and completed through the online process. The OMF-1A and 2A will only be accepted through our online process. OMF-1A is a sublet request form to be used for any subcontractor on a project and the OMF-2A is an EEO Certification that is required if the subcontractor is performing over \$10,000 worth of work on any federally funded job.

5. It is the responsibility of the P.E. to monitor all subcontractors and to make sure that the DBEs are performing the work committed to them on the CS-6AAA without any assistance from the prime Contractor or leasing any equipment from the prime without approval from the LADOTD Compliance Section. If there is any question, contact the LADOTD Compliance Section. They will investigate any potential issues.

<u>CS-6AAA online tool</u> is provided for the bidder's use in completing these

documents prior to the required submittal date. It is the Bidders responsibility to check the final created document for any errors in subcontractor(s) selected, items listed, quantities, unit prices, and dollar value.

The Bidder will login to the CS-6AAA web application tool using the same criteria required to login to Bidder registration.

The Bidder is responsible for filling out the CS-6AAA forms within the required five (5) calendar days, excluding State and Federal holidays, of the contract letting date whether the CS-6AAA Web Application tool is used or not.

The signed CS-6AAA form with signatures of the prime Contractor and all DBE subcontractors must be scanned and emailed to the Compliance Programs Section by 5:00 PM on the date as indicated in the return e-mail from Compliance Programs.

# 3.4.2 Standard Subcontract Work

A Contractor shall not sublet any portion of a contract without written consent. Only the Compliance Programs Office may approve the subletting and that no subcontractor will be allowed to begin work until written approval is received. Form <u>OMF-1A</u> and OMF-2A must be completed and approved by the Compliance Office for each subcontract. Contractors should refer to:<u>OMF-1A</u> (Sublet Request) and OMF-2A (EEO Certification) Online Submittal User Manual.

Subcontractors should not work on the project until this is completed by the Contractor. (See Specification 108.01 and EDSM III.1.1.3)

## 3.5 Quality Assurance

A primary duty of personnel performing construction engineering and inspection is to ensure the quality of construction. The requirements and duties are complex and contain detail. Processes and requirements are contained in other Manuals and are beyond the scope of this CCA Manual. Refer to the following documents:

Quality Assurance – Reference Manuals

- LA Standard Specifications Section 106 <u>Standard Specifications</u>
- Materials Sampling Manual
   <u>LADOTD Materials Sampling Manual</u>
- Test Procedures Manual
   <u>LADOTD Testing Procedures Manual</u>
- Approved Materials List (Qualified Products List)
   <u>LADOTD Approved Materials List</u>
- Engineering Directives & Standards Manual, EDSM III.5.1.2 LADOTD EDSMs

Consistent with current department policy, LADOTD personnel holding valid certifications shall be physically present on the job whenever construction are as follows:

- Certified Embankment and Base Course Inspector.
- Certified Portland Cement Concrete (PCC) Paving Inspector
- Certified Structural Concrete Inspector
- Certified Asphalt Concrete Paving Inspectors
- Certified Asphalt Concrete Plant Inspectors (This technician rotates plants, does not have to be onsite during production of asphalt)

A registered engineer is not the same as a certified inspector.

These requirements also apply to consulting engineers doing construction inspection on projects.

Quality Assurance includes sampling and testing, inspection, personnel qualification, equipment qualification and documentation.

### 3.5.1 Quality Assurance Sampling and Testing

- Acceptance Testing Performed by the Department to determine the degree of compliance with the specifications for acceptance of materials and/or the Contractor's work. It can be a pass/fail or pay adjustment for partially accepted work.
- Quality Control Testing Performed by the Contractor to monitor, assess, and adjust material selection and production to control the level of quality so that the product continuously conforms to specifications
- Verification Testing Performed by the Department to verify procedures and equipment, and for material quality. Non-verifying results may warrant investigation and additional testing
- Independent Assurance Testing- Performed by the LADOTD District Lab and is required by FHWA on NHS routes to check the testing equipment and the procedures and make an independent random check on the *reliability of results*.

## 3.5.2 The 2059 Report (Project Sample Summary)

2059 Report Cover Sheet

Attached to all 2059 documents, the cover sheet is signed by the PE, the District Lab Engineer, and the District AE.

The cover shall state, "All material used was in conformity with the contract, except..."It identifies if the report include the Disposition of Failing Reports (Disposition: Attached or N/A)

It shall also identify if the report includes Errors and Omissions (E & O: Attached or N/A)

### 3.5.2.1 2059 Report

The Sampling Plan established at the beginning of the project is provided.

It includes the SiteManager Materials Printout Summary of Test Results which is a list of test results by type of material and is printout from the SiteManager Materials system. It includes the

- 1. Date Sampled
- 2. Contract Item #
- 3. Quantity Represented
- 4. Test Results
- 5. Pass/Fail or % Pay

If a private lab performs the tests, a summary of test results taken from the private lab is included on the 2059 and must be similar to the MATT system printout.

#### 3.5.2.2 Disposition of Failing Results

Any failing test results have to be explained. It needs to identify how it was resolved. Examples:

- 1. "Material not used on project."
- 2. "The stockpile was reworked. Subsequent samples passed. See lab #'s..."
- 3. "Material was accepted at 90% pay."
- 4. "PE determined it was acceptable for the intended use."
- 5. Do not say, "PE waived the sample."

#### 3.5.2.3 Errors & Omissions

Errors and omissions explain why some materials were not sampled and/or why certificates were not obtained. Examples:

- 1. "Due to miscommunication no one was at the asphalt plant on May 9, 2012. Tests for lot 980 were not obtained."
- 2. "Inspector failed to get base density tests before the Contractor poured the roadway. After a year, and varied and extreme weather conditions, the road is still performing very well. There are no signs of subsidence."
- 3. "Although 20 concrete cylinders were required, only 15 were taken. Error was not realized until the end of the project. All acceptance samples and all of the Contractor's quality control samples met the compressive strength required."

#### 3.5.2.4 2059 Report Process

- 1. Signed by PE
- 2. LADOTD Lab Engineer
- 3. LADOTD Area Engineer
- 4. PE to be added to final close-out package

#### 3.5.2.5 Random Sampling

Samples cannot be taken continuously. A few samples are taken and considered to be representative of a larger quantity of material; from these few samples assumptions are made. For these assumptions to be reasonably valid, the samples must be random. Each choice must have an equal chance of being selected.

The PE has the authority to take more tests than the minimum required if something about the installed material is questionable, but the minimum testing requirements should be random to best represent the entire quantity.

### 3.5.2.6 "Buy America" Provisions

All steel and iron materials permanently installed on FAPs shall be manufactured, including application of a coating, in the United States, unless a waiver of these provisions is granted. Review the contract Special Provisions for specific information on these requirements.

#### 3.5.2.7 Concrete & Asphalt Plants

The LADOTD District Lab certifies plants every two (2) years. The LADOTD District Lab approves asphalt job mix formulas and approves concrete mix designs. See <u>EDSM III.1.1.16</u>

## 3.5.3 Other Inspection Items

In addition to sampling and testing and documentation, the following also applies:

- 1. Inspection A passing sample does not override a failing inspection
- 2. Personnel Qualification Inspection and testing personnel must be qualified to sample and to test for the testing to be valid.
- 3. Equipment Qualification Haul trucks, concrete trucks, profilers, paving equipment, lab equipment, etc....must be certified.

## 3.6 Federal Aid Documentation Requirements

The purpose of this section is to provide a uniform process for compliance with Federal- Aid project documentation requirements.

### 3.6.1 Correspondence

On Federal-Aid Projects, all correspondence shall include the Federal-Aid Project Number, as well as, the State Project Number. All other appropriate project reference information shall be included in the subject heading as well.

## 3.6.2 Federal Aid Participating/Non-Participating

Certain work included in a Federal-Aid Project may be designated as Participating or Nonparticipating during the design phase, the Plans & Specifications & Estimates Review phase, or when contract modifications are necessary during construction. The designer will document the appropriate breakdown in the plans. Examples of such work are: work being done for and paid for by another agency under the joint project agreement; work on a cross street beyond the limits considered necessary to develop an adequate crossing; salvage value of materials or equipment originally purchased with federal funds which are to be salvaged into a Department warehouse; and work which the FHWA deems to be a periodic maintenance function.

All project financial documents, such as change orders, partial progress estimates, monthly billing to the FHWA, final estimates and final billing to FHWA, must accurately reflect all costs which have been determined to be Federal-Aid Participating and Non- participating. In accordance with this requirement, plan preparation procedures and the integrated contract system

have been modified to allow designation of those pay items which are Federal-Aid Nonparticipating and to split pay quantities for those items with partial Federal-Aid Participation.

The Project Engineer shall properly separate Federal-Aid non-participating items and/or quantities from participating items and/or quantities when preparing a change order.

On FHWA Projects of Division Interest, it is essential that the Project Engineer make every effort to obtain from the FHWA Transportation Engineer a determination as to Federal-Aid Participating or Non-Participating for contract modifications.

# 3.6.3 DBE CP-1A

The Contractor is required to submit Form CP-1A, the *Contractor's Monthly DBE/SBE Participation Form.* This form is to be submitted to and reviewed by the PE and should reflect the monthly payments actually made to the DBEs on the project. Once the PE verifies that the CP-1A is accurate it should be submitted to the HQ Compliance Programs Section.

State law requires prime Contractors to pay their subcontractors no later than fourteen (14) days after receipt of payment from LADOTD for satisfactory performance. The P.E. will review and approve CP1-A forms and send them to the LADOTD Compliance Section for entry into the system. CP-1As are required for every estimate even if DBE/SBE work was not performed. It is the responsibility of the P.E. to make sure that the CP-1As are turned in before they approve the monthly estimates. When these are not submitted monthly the partial estimate for the prime Contractor is subject to being held up in processing by the HQ Compliance Section.

## 3.6.4 DBE CP-2A and Commercially Useful Function (CUF)

Every Federal Aid project with a DBE performing work whether there is a DBE goal or not, is required to have a CUF review. Commercially Useful Function reviews are performed to ensure that the DBE is being held responsible for the work involved in their contract by performing, managing, and supervising. The DBE must use its own workforce, equipment, and material.

The P.E. should perform CUF's on every DBE at least once during the life of a project.

The HQ Compliance Section has a contract employee on staff that assists with the CUF reviews, as well as investigates any problems/issues/complaints that they may receive.

After the DBE/SBE portion of the job is complete or the job is accepted by LADOTD and finalized, an original, notarized CP-2A which shows the final payment should be mailed directly to the HQ Compliance Section with the following addressed:

a. If the DBE/SBE goal was not met, then correspondence as to why this was not done should be attached.

i. Acceptable reasons for not meeting the goal would be:

- 1. Underruns on items committed to DBE/SBE
- 2. Unable to find another DBE/SBE after one was unwilling or unable to

complete the job (Good faith effort documentation must be provided)

ii. These are reviewed on a case by case basis and must have supporting documentation.

b. If the goal is not met and the reasons are unacceptable, then monies could be held from this project, future projects, or any other remedy deemed appropriate by LADOTD.

c. The LADOTD may, at any time, request cancelled checks and/or other proof of payment to DBE/SBEs.

## 3.6.5 Other DBE/SBE Requirements

- 1 Retainage cannot be held on any DBE/SBE Federal Aid Project.
- 2 The prime Contractor cannot lease equipment to the DBE/SBE subcontractor on their project without prior approval by the HQ Compliance Section.
- 3 The P.E. is responsible for making sure that all prior approvals have been received from the HQ Compliance Section on leased equipment.
- 4 Issuing joint checks for material supplying is common but <u>MUST</u> have prior approval from the HQ Compliance Section.

## 3.6.6 Certified Payroll

The "D" pages of the Contractors Contract will have the prevailing wage rates for the applicable parishes the work is being performed in. The requirements for reporting will also be listed in this section of the contract.

- 1. Certified Payrolls are required on Federal Aid projects, unless otherwise noted on the "D" pages in the contract under *Prevailing Wage Rates Section*.
- 2. Certified payrolls and a Statement of Compliance form are required on Federal Aid projects that have a Wage Determination. The Statement of Compliance is required by the Copeland Act and 29 CFR. A signed Statement of Compliance indicates that the payrolls are correct and complete and that each laborer or mechanic has been paid not less than the proper Davis-Bacon prevailing wage rate for the work performed.
- 3. The P.E., and the HQ Compliance Section will perform a review of the certified payrolls for accuracy, completeness and true representation of the facts. Review of the payrolls ensures that the payrolls contain such information as names, addresses, job classification, hourly wages and hours worked during the payroll period, etc. Additionally the wage rates should be compared against those listed on the wage determination. Should certified payroll submittals have discrepancies or not submitted for the period; the partial estimate will be held until discrepancies are resolved and/or until payrolls are submitted.
- 4. Prime Contractors are required to submit payrolls even if they did not work. They would indicate "no work performed" on the Statement of Compliance. The prime Contractor's certified payrolls must be up to date within two (2) weeks of the subcontractor's payrolls in order to process the payrolls. The subcontractor's only need payrolls for their weeks worked. Subcontractors are not required to submit a "no work performed" Statement of Compliance.

- 5. Failure to submit certified payrolls to the Department's online process will result in the partial estimates being held
- 6. See <u>EDSM III.1.1.11</u>"Fringe Benefit Payments Wage Classification" for additional information on Fringe Benefits paid on particular wage classifications.

# 3.6.7 Annual EEO Report Form 1391

Every Federal-Aid Highway Construction Project where the prime and/or the subcontractor perform work during the last (2) two weeks in July must complete the Contractor's Annual EEO Report or 1391 Form which must be submitted to the Compliance Programs Section. This report shows the prime or subcontractors work force that actually performed work on a specific highway construction project during the last (2) two weeks of July. This report shows a breakdown of the workforce by job classification, race and gender. Additionally, if the prime Contractor has any Trainees and/or Apprentices those are also reflected in this report. Failure to electronically submit the required 1391 Form will result in payment being withheld from the Prime until the required forms are submitted.

In May, the annual "Notice to Contractors" Form and instructions for online submittal of the Contractor's Annual EEO Report or 1391 Form is sent to the P.E. to disseminate to all Contractors. A copy of the completed of each "Notice to Contractors" Form <u>must be</u> emailed to <u>Tanya.StAngelo@la.gov.</u>

The instructions for on-line submittal of the 1391 Form is to be disseminated to all Contractors and required that they provide it to their sub-Contractors.

Every Contractor (prime or sub) that works on a project during in the last two weeks of July <u>must</u> <u>submit</u> a 1391 form on-line. Instructions for submitting a 1391 form on-line is available at: <u>http://www.LADOTD.la.gov/administration/compliance/ContractComplianceUnit.aspx</u>

The 1391 form is only required for Federal Aid highway construction projects from Contractors (prime and subs) who worked during the last two weeks in July (even if only for one day).

# 3.6.8 On the Job Training Program (OJT)

In 2008, the LADOTD, Louisiana Associated General Contractors (LAGC), FHWA, and Contractors partnered to create the on-the-job training (OJT) program to be utilized on LADOTD's construction projects.

The OJT program was developed in conformity with FHWA requirements and also addresses the concerns of the contracting community in regard to work force issues such as recruitment, employment, retention, and training needs.

Each project is reviewed to determine if the project contains certain thresholds of quantities of work in different areas (e.g., Clearing & Grubbing, Portland Cement, Reinforcing Steel, etc.). This is used by the Compliance Programs Section to determine if the amount of work to be performed by the project will support either a trainee or trainee hours. If it can, the contract will include the

Supplemental Specifications for OJT training in the contract.

Directions and forms for enrolling an employee is listed in the Supplemental Specification of the Construction Contract. The Contractor must also submit the Contractor's OJT Weekly Reporting Form on a weekly basis. The PE keeps a copy and forwards one to the Compliance Office.

The following reports must be completed by the PE or designated employee and forwarded to the Compliance Programs Section once completed:

- 1. Training Report
- 2. Training Records by Payroll records
- 3. LADOTD OJT Monthly Reporting Form

These forms can be accessed in the LADOTD <u>On the Job Training Program Manual</u>. This information is also in the Contractors contract. <u>EDSM III.1.1.25</u> also addresses the Project Engineer's responsibilities.

### 3.6.9 Labor Compliance Interviews

The <u>EDSM III.1.1.9</u> directive defines the purpose and the procedure for performing the labor compliance reviews. The P.E. will determine the classification and wage in the contract for the employee interviewed.

Project Site interviews shall be made once per quarter, per contract.

The employees wage classification can also be used to verify proper payment on the Statement of Compliance forms submitted with the weekly certified payrolls.

## 3.6.9.1 Required Notices and Posters – Bulletin Board (Federal Aid Projects only)

The Contractor is required to erect and maintain a project bulletin board displaying required notices and posters. Required notices and posters are listed below. The required notices and posters must be posted on the project in a conspicuous place so that interested persons may be readily aware of their contents. The PE should perform a review within the first (2) two weeks after beginning work on the project to verify the Contractor's compliance with these requirements. The PE must notify the Contractor immediately of any deficiencies and follow up with another review.

Posters for the construction site can be found through the Compliance Programs Section website.

 THE LAW English/Spanish
 WAGE RATE INFORMATION FEDERAL-AID HIGHWAY PROJECT
 NOTICE - TITLE 18 UNITED STATES CODE, SECTION 1020
 JOB SAFETY AND HEALTH PROTECTION
 NOTICE TO ALL EMPLOYEES
 NOTICE EMPLOYEE POLYGRAPH PROTECTION ACT
 YOUR RIGHTS UNDER THE FAMILY AND MEDICAL LEAVE ACT OF 1993 8. LOUISIANA PROHIBITS DISCRIMINATION IN EMPLOYMENT DUE TO GENETIC INFORMATION
9. WORKERS' COMPENSATION FRAUND
10. NOTICE TO WORKERS UNEMPLOYMENT INSURANCE BENEFITS
11. OSHA
12. USERRA

## 3.7 Contract Time Documentation

The charging of a contract day will be in accordance with the specifications, special provisions and <u>EDSM III.1.1.19</u>. There are two different types of contract time specified, depending on the project; working day and calendar day.

## 3.7.1 Working Day Projects

The charging of a contract day will be in accordance with the contract documents and the Standard Specifications. Documentation is required each day to justify decisions to charge days on working day projects. Time is to be charged in accordance with the contract on a day-by-day basis with no prejudice. No prejudice means that the Project Engineer cannot give the Contractor a break because of bad luck or bad planning, or for any other reason. No prejudice also means that the Project Engineer cannot use time charges in a punitive manner to harm a Contractor perceived to be non-cooperative or for any other reason. Contract time should be charged based on the current approved progress schedule and project conditions. In the event of a borderline call, the policy is to give the Contractor the benefit of the doubt. Some examples of conditions beyond the control of the Contractor are:

• Weather and working conditions, applies to calendar day jobs.

• Industry-wide or area-wide strikes. These must be documented showing the beginning and ending dates and the controlling item or items of work directly affected. Strikes involving a single Contractor will be considered on an individual basis and must be documented in a similar manner giving reason for the strike. Strikes involving a single local material supplier will not normally be considered justification for not charging contract time unless there are unusual circumstances involved. If such is the case, it will be handled in the same manner as strikes involving a single Contractor.

• Material shortages. The only shortages that can considered are those occurring after the contract is let, are unforeseeable by the Contractor and when no other source is available for immediate delivery.

• Delays on delivery of specialty items or manufactured products. The Chief Engineer may approve granting of additional contract time provided adequate documentation is submitted at the time the delays are occurring and their effect on the progress of controlling item(s) of work.

• Specified waiting or curing period. Waiting periods, such as specified curing of concrete, will not be charged if it affects the controlling item.

• Delays in utility relocations that significantly affect the controlling item or items of work. These situations should be properly documented and may be considered just cause for not charging contract time. (Please note - Unless the utility is significantly affecting progress of work, time charges will not be suspended.)

## 3.7.2 Calendar Day Projects

Contract time will be counted in accordance with the Contract and LADOTD Standard Specifications where every day on the calendar is a contract day including Saturdays, Sundays, holidays and non-work days. When conditions beyond the control of the Contractor are encountered, the Contractor should make a written request for extension of contract time to the Project Engineer and this matter will be resolved at the time the condition exists. However, no extension will be granted for the required distribution of adverse weather days as stipulated in the contract Special Provisions. It is a good idea to provide the same documentation of weather and working condition on calendar day projects as for working day projects to be used in the event of future claims. Weather days that are beyond the days accounted for in the Special Provisions will be granted by CO at the end of the project.

### 3.7.2.1 Weather Days for Calendar Day Projects

Weather days are accounted for in the special provisions of the contract. The days are tracked monthly as shown on the Weather and Workday Report and in the Daily Work Report. Weather days that are beyond the days accounted for in the special provisions will be granted by change order at the end of the project.

## 3.7.3 Reporting of Contract Time

At the end of each estimate period, the Project Engineer will prepare a *LADOTD SiteManager Weather and Workdays Report*. On working day projects the *LADOTD SiteManager Weather and Workdays Report* will be forwarded to the Contractor for his signature. He will be advised that he has fourteen (14) days in which to either sign and return the original copy, or file a written protest setting forth his objections. He will also be advised that if no protest is filed during this period, or if he fails to respond, time charges shall stand as submitted.

When the Contractor returns the signed *LADOTD SiteManager Weather and Workdays Report* without protest, or fails to respond, the Project Engineer is to fill in the entry for "Days Disputed" with zero. The report is then submitted to the Construction Estimates Section. If the Contractor timely protests the report, the following procedures apply:

• If the dispute has not been resolved within the thirty (30) day time limit described hereinafter, the PE is to type the words "Disputed Day" next to each of the actual days in dispute, add the number of days in dispute, and submit the report to the HQ Construction Estimates Section, with a copy of the Contractor's letter disputing the time charges attached.

- If the contract time dispute is resolved at the Project or District level within twenty (20) days after the partial estimate due date, a summary of the discussions and the results will be documented in the project diary and recorded with the *LADOTD SiteManager Weather and Workdays Report* by attached letter. This final *LADOTD SiteManager Weather and Workdays Report*, showing zero disputed days, is then submitted to the HQ Construction Estimates Section, along with the Contractor's letter disputing the originally charged contract time.
- If the contract time dispute cannot be resolved at the Project or District level within twenty (20) days after the partial estimate due date, the DA shall submit the appropriate information to the Chief Construction Engineer. A representative of the HQ Construction Section will then hold a meeting of all concerned parties and recommendations shall be made to the Chief Construction Engineer. The Chief Construction Engineer will make the final determination and notify all concerned parties.
- A final *LADOTD SiteManager Weather and Workdays Report* for the period will then be submitted with the contract time charges revised and the total number of days charged corrected, if necessary, to reflect the Chief Construction Engineer's decision. The current total number of days charged as shown in the project diary must also be revised to reflect this decision and cross-referenced to the *LADOTD SiteManager Weather and Workdays Report*.
- All contract time disputes must be resolved within thirty (30) days following the date the *LADOTD SiteManager Weather and Workdays Report* was furnished to the Contractor, or the contract time will stand as recorded at the end of the thirty (30) day period. However, if conditions beyond the control of the Contractor or the Department prevent the final disposition of disputed days within the allotted time, the time charges in question will be considered as "charged time" until the dispute is resolved.

If additional work is added with an increase in time on a calendar day project, the time charges for this additional work will be like a working day project. The risk for working conditions is the Contractors' when he bids, but the weather delays switch to LADOTD for the added work and time provided it is the controlling item.

# 3.7.4 Holidays and Special Events

On occasion a holiday or special event that is not identified in the special provisions will arise. These days are tracked in SiteManager in the DWR and followed up with a Change Order for time extension. Examples would be local events that may affect the traffic in the area of the project such as the Super Bowl, annual sugar cane harvest, etc.

# 3.7.5 Liquidated Damages

The decision to waive stipulated damages can only be approved by the Chief Engineer. There are conditions that justify stopping contract time, such as awaiting final inspection, waiting on test

reports, etc. However, suspension of time for any reason under the control of the Contractor (such as dressing up, erosion control, clean up, etc.) can only be approved by the Chief Engineer by Change Order. Section 108.08 provides only that the Contractor may request a waiver of stipulated damages that accrue after the work can be used for its intended purposes. Pending weather days owed to the contractor are not a reason to stop to contract time. Those days can only granted through a change order after contract time expires.

## 3.8 Schedule Reviews and Approvals

On most projects, the Department specifies a contract time in which the project is to be built. This is the basis for the schedule, and LADOTD and the Contractor must manage the project to meet the schedule; otherwise the objective of the contract has not been met. The Standard Specifications and Special Provisions of a contract, require that the Contractor submit a baseline schedule for approval and progress schedules giving a satisfactory schedule of operations that provides for completion of the work within the allotted contract time. On some projects, the Special Provisions require a CPM schedule.

## 3.8.1 Standard (Bar Chart) Construction Progress Schedule

This schedule will be used as the basis of establishing the controlling items of work, assessing contract time and as a check on the progress of the work. The Contractor's schedule shall be similar to this form, in the opinion of the Department.

The Contractor must either follow the approved schedule or submit a revised one. If a schedule (either original or revised) is acceptable, the Project Engineer should print or type, "APPROVED" on it, then sign and date. The Project Engineer should retain the original, send one copy to the Contractor and one to the Chief Construction Engineer.

Approval of the schedule means only that the Department agrees that if the Contractor can and does follow the schedule, the project will be completed within the allotted contract time. The schedule must list major items or preferably, groups of related items. These "major items" need not be "major items" as defined by the specifications. Non-related items (such as asphaltic concrete and shoulder gravel) may not be grouped together. The number of items should be kept to a practical minimum.

The Construction Progress Schedule should give a satisfactory schedule of operations that provides for the completion of the work within the contract time. The schedule must not conflict with any requirements of the contract.

Bars should be used to show durations. Heavy lines with arrows (both ends) may be used if they can be readily distinguished from the chart gridlines. At the bottom of the schedule, at the controlling items, both numbers and items of work are preferred, but numbers only are acceptable. The schedule may show only one item controlling during a given period.

Durations shown on the schedule are considered maximums, not minimums. Contractors can and often do finish work items, and the project ahead of schedule. Should a controlling work item be completed early, the controlling work item automatically goes forward to the next controlling work item. A revised schedule is not required when work is completed early, but is allowed. If a revised

schedule is submitted, it must again give a satisfactory schedule of operations that provides for the completion of the work within the contract time.

Proposed schedules will sometimes show an item of work to be controlling for what may appear to be an excessive duration. This is acceptable because unless otherwise required by the contract, the Department does not specify rate of progress on the individual items of work in the contract. The specifications only require that the entire work be completed within the allotted contract time.

However, by definition a controlling work item is an item of construction that should be in progress at the time, as essential to the orderly completion of the work. If as the project develops the "long duration" work continues to meet the definition of a controlling work item, then it should be used in assessing contract time. If it does not, a revised schedule should be requested.

On a given controlling work item, contract time charges will be based on that item until the item is either (a) complete or (b) complete to the point where another item becomes the controlling work item, whichever is shown in the schedule.

If the schedule shows that an item is to be completed before the next controlling item begins, but for whatever reason the Contractor begins work on a second controlling item before the first is complete, contract time charges should be assessed against the first item until either (a) the Contractor is no longer working on the first item with full forces or (b) the Contractor is effectively working on the second item and the second item is contributing more to the completion of the project

During a specific period the Contractor may work on any number of contract items, but only one of those shall be considered the controlling work item. The order of controlling work items is portrayed by the Contractor in the progress schedule. If the work simultaneously underway is governed by the Contractor's resources and job conditions, then the controlling work item may have changed. In this case, the Project Engineer must ask for a revised progress schedule so that time charges can be properly determined.

## 3.8.2 Critical Path Method

A CPM schedule is required only when the CPM Special Provision is included in the contract. On a working day job, the critical path of the schedule is used in the same way as the controlling items in the "Bar Graph" presented in Section 3.8.1.

### 3.8.2.1 Acceptance of the Schedule

Project personnel must verify that the baseline CPM schedule and its attachments meet the detailed requirement of the specification. In addition, project personnel must examine the CPM schedule details to make certain that each activity is a fair and reasonable representation of that portion of the work and that the activity is fairly and reasonably linked to its proper predecessors and its successors. Special attention must be given to insignificant or peripheral items of work that are critical in status.

If the schedule, either baseline or revised, is acceptable, the Project Engineer should write a letter to the Contractor approving and naming the particular schedule name and revision date. The Project Engineer should keep one copy, and one to the Chief Construction Engineer.

The Project Engineer's letter should include the statement approval of the CPM schedule means only that the LADOTD agrees that if the Contractor can and does follow the schedule, the project will be completed within the calculated time.

The number of activities is maximized in the best CPM schedules. The CPM schedule must not conflict with any requirements of the contract.

The CPM schedule, by contract requirement, must be recalculated in conjunction with each pay estimate. The recalculated CPM schedule should be revised for continued conformity to the contract, for changes to the logic, and for changes to the critical path. Changes to the logic include, change to duration, predecessors, successors, driving resources, etc.

Requests for additional time must be proven by insertions of the added or changed activities into the most recent updated schedule showing the completion date of the project is extended past the baseline completion date.

## 3.9 Environmental Requirements and Reporting

Section 204.06.12 Maintenance of Erosion Control Features of the Standard Specifications, states that the Contractor is required to inspect temporary erosion control features at least once every fourteen (14) calendar days and within twenty-four (24) hours after a rainfall event of 0.5 inch or greater. Documentation of these inspections must be maintained in the field office and provided to the Department for review. The Contractor is required to repair and maintain temporary erosion control features within seven (7) calendar days after being instructed to do so by the engineer.

Documentation of the Department's review and the Contractor's repair and maintenance of the erosion control feature(s) shall be documented in the DWRs. The PE is responsible for the daily inspection of the erosion control features particularly for maintenance and repair after a  $\frac{1}{4}$ " rain event. A written request for maintenance items shall be sent to the Contractor and documented in the DWR.

### 3.10 SiteManager

The <u>LTRC website</u> has a complete user manual explaining full functionality of the use of SiteManager. For purposes of this CCA Manual, a general overview and highlight of key details is explained. Refer to the complete SiteManager Manual at the following website for detailed information on completing any part of the program.

The SiteManager Manual gives a step by step set of instructions for use of each application in SiteManager.

### 3.10.1 SiteManager – Access/Login Quick Reference

### 3.10.1.1 Requesting Login to Citrix and SiteManager

If you are a LADOTD employee, contact your PE or Office Manager. They will request a SiteManager ID for you.

### 3.10.1.2 Consultants, Contractors and LPA's

Check to see if your company has already filled out the Contractor/Consultant Designation Form. If so, please contact our company's designated contact person. If your company has not been set up with Site Manger access, send an email to Alan Rusch at <u>Alan.Rusch@la.gov</u> requesting a copy of the Contractor/Consultant Designation Form.

For Contractors the PE will have to make the request for each of the Contractor's employees that will need Citrix and SiteManager access.

### 3.10.2 Site Manager Personnel Roles

The following are general roles for project personnel associated with a construction project:

- 1. Inspector The inspector can creates daily work reports DWRs.
- 2. Office Manager The office manager can create DWRs, generate and approve the estimate.
- **3.** Project Engineer The PE can create and approve DWRs, create and approve change orders, and approve estimates.
- 4. District Area Engineer The District Area Engineer can approve change orders, verify funds, and coordinate with the LADOTD Compliance Programs Section and LADOTD Construction Audit Section.
- 5. Contractor The Contractor reviews & approves change orders and estimates.
- HQ Area Engineer / HQ Chief Construction Engineer / HQ Chief Engineer / FHWA Area Engineer – These personnel generally review & approve change orders.

## 3.10.3 Approval Chain

### 3.10.3.1 Partial Estimate Approvals

- Office Manager creates/approves partial estimate

   Draft hard copy sent to Contractor
- 2. PE approves partial estimate
- 3. Contractor approves partial estimate
- 4. LADOTD Compliance Programs approves partial estimate
- 5. LADOTD Construction Audit Section approves partial estimate

\*PE has approval authority for first 2 levels.

### 3.10.3.2 Change Order Approvals

- Approval of change orders is set by the generator in SiteManager, typically by the PE.
- The PE prints a draft copy, sends it to the Contractor, and the Contractor signs and returns it to PE. PE scans it into SiteManager as an attachment

• The PE is to get documented approval for additional funds and attach it to the change order to ensure there are sufficient funds for the Change Order.

#### 1. Category 3 (Lowest level – normal quantity adjustments <\$50,000)

- a. PE creates/notifies Contractor
- b. Contractor approves
- c. Project Engineer or designee approves

### 2 Category 2

- a. PE creates/notifies Contractor
- b. Contractor approves
- c. Project Engineer approves
- d. District Area Engineer approves
- e. FHWA (if required)

#### 3 **Category 1 (Major changes)**

- a. PE creates/notifies Contractor
- b. Contractor approves
- c. Project Engineer approves
- d. District Area Engineer approves
- e. HQ Area Engineer approves
- f. Chief Construction Engineer approves
- g. Chief Engineer approves
- h. FHWA (if required)

\*FHWA approval required on Category 1 & 2 if Federal oversight is required on a project.

## 3.10.4 SiteManager Remote Reports

The reports section provides useful reports in SiteManager for monitoring progress of the contract. The following is a general list:

- 1. Change Order Report
  - a. Summarizes the change order
  - b. Shows the status; approved, pending, draft or denied
  - c. Lists the quantity and cost
- 2. Partial Estimate Quantities
  - a. Break down of items paid monthly
  - b. Quantity status; original vs. paid
  - c. Paid to date
- 3. Dairy Preview Report
  - a. Combines Daily Work Reports
  - b. Lists of Inspectors and Line Items
  - c. General Remarks
- 4. Weather and Workday Reports (also known as E-14)
  - a. Lists chargeable and non-chargeable days
  - b. Remarks on non-chargeable days

- c. Primary work item listed
- d. Must be approved monthly by Contractor with Partial Estimate
- 5. Item Overrun/Underrun
  - a. Compares Installed vs. Original Quantities vs. Authorized to Pay Quantities
  - b. Price and percentage differentials
- 6. Item Detail Report
  - a. Report runs per single item
  - b. Shows a breakdown of DWR dates with quantities
  - c. Summarizes the item
- 7. Fuel and Asphalt Adjustment Reports
  - a. Covers any change in fuel cost during the estimate period
  - b. Required anytime there is a change from estimate to estimate
- 8. Stockpiled Material Report
  - a. Lists adjustments in stockpile material
  - b. Run after each estimate
- 9. Traffic Control Log Book
  - a. Completed by Contractor's TCS
  - b. Daily record of all traffic control activities and devices
- 10. Traffic Control Log Entries
  - a. DOTD personnel can access these reports (Reports 38 & 39) on the Intranet
  - b. Non-Departmental personnel access and view these reports through Citrix

# **Part IV. Partial Estimates**

The Standard Specifications provide that monthly progress payments (partial estimates) be made proportionate to the value of the work performed through the ending date of the current estimate period. The current estimate period is the month that has elapsed since the last partial estimate, except for the first partial estimate. The date of the first partial estimate is set as specified in EDSM III.4.1.3 "Policy for Determining Due Dates on Partial Estimates".

## 4.1 General

The quantities of work paid for should come from the *DWRs* in SiteManager in most cases and payment should be documented in the same records. Only work that is deemed acceptable will be paid for on partial estimates.

Partial estimates are numbered in sequence, the first always being number one (1). Partial estimates are required even when there are no earnings for a current estimate period (current earnings are shown as zero). The letter of transmittal for the estimate must confirm that there are no current earnings.

If a job is completed in less than one (1) estimate period, a partial estimate can be submitted on completion of the job.

The estimates are computer transmitted directly to the Construction Audit Section and must be received by them within **five (5) days after the close of the estimate period.** 

Estimates use Form 03-42-0651 "Schedule of Work Items" on all except railroad force account projects. On those projects, use Form 03-42-0650 "Estimate Summary Sheet".

On Federal Aid projects, a further breakdown is necessary to show participating and non-participating items.

The Standard Specifications allow progress payments on certain specific lump sum items when total contract earnings reach specified percentages of the total contract amount. When computing percent complete for this purpose (to determine if the Standard Specifications allow an additional payment), include previous payments on all these lump sum items and payments for stockpiled material, but do not include potential payments on any of these lump sum items.

Partial estimates are not to be delayed while waiting for approval of change orders.

## 4.2 Monthly Time Charges

Time charges are auto generated in SiteManager from the DWR entries. Subsection 108.08 "Failure to complete on time" of the Standard Specifications requires the amount of stipulated damages to be deducted from payments for work under the contract or any other contract the Contractor has with the Department. The intent of this specification is that deductions for stipulated damages are to be made monthly on Partial Estimates as the damages occur. The project engineer must contact the Construction Audit Section in order to establish an item to make the deduction on the partial estimate.

### 4.3 Steps to develop a Partial Estimate

### Step 1 – Daily Work Report (DWR

Quantities are entered into the Field Book or Spreadsheet daily. They are also entered into SiteManager by the Inspector on the DWR screen

## <u>Step 2 – PE Creates Estimate</u>

The Office Manager generates the partial estimate every 30 days and approves it. The Project Engineer approves it. Then the Contractor approves it. This step includes generating the LADOTD SiteManager Weather and Workdays Report for time charges.

					_	
Line Number	Item Number	Unit	Contract Quantity		Unit Price	\$ Pay
0901	701-15-00100 Concrete Collar – Concrete Pipe Collar	EACH (ENGLISH)	8.000	8.000	\$244.32000	\$1,954.56
901	727-01-00100 Mobilization – Re- Mobilization	LUMP SUM - QUANTITY MUST ALWAYS BE 1	1.000	1.000	\$500.00000	\$500. <b>0</b> 0
			Federal Funds: Local Funds: Project Total: Project Total to Date: Grand Total This Estimate: Grand Total To Date:		timate:	\$1,963.65 \$490.91 \$2,454.56 \$133,376.28 \$2,454.56 \$133,376.28

### Partial Estimate Example Contract Time

Summary of Contract Time				
Contract Time Allowed:	75			
Time Charged This Estimate:	15			
Time Charged to Date:	30			
Elapsed Calendar Days:	60			
Percent Time Used:	60%			
Percent Project Complete:	65%			

### Step 4 - LADOTD Partial Estimate Approval

All projects with Federal Aid are required to submit certified payroll

•

documentation on both prime and subcontractors. The LADOTD Compliance Programs Section reviews the payroll documents. These documents must be submitted to the Compliance Programs Office two weeks prior to a partial estimate submittal for the review period. Failure to do so will result in the partial estimates being held.

• Once the LADOTD Compliance Programs Section approves payroll documentation for the partial estimate in SiteManager, the LADOTD Construction Audit Section is notified in SiteManager of pending partial estimates.

- The LADOTD Construction Audit Section will begin their Section review.
- 1. They will review if any item is over or under by 5%. If it is they will notify the PE to submit a change order for the next partial estimate.
- 2. They will ensure there is sufficient total project budget to cover the payment. If there is insufficient budget, the estimate is held until funding is available.
  - a) If change orders are submitted, adequate funds must be available to allow the LADOTD Construction Audit Section to process the partial estimate
  - b) To ensure there is adequate money, SiteManager has reports that can be used
    - i. Partial Estimate Verification Report Ensure enough Change Orders are approved to cover the amount of partial estimate payment required (Sufficient funds must be available in the total project budget)
    - ii. SiteManager Report Partial Estimate Verification Report Example
    - iii. Summary of Change Orders Report <u>Purpose:</u> To compare current approved amount (original contract + approved change orders) to the partial estimate total paid to date to determine if there are sufficient change orders to cover the increased cost.
- 3. They will ensure the advancement of stockpile has proper documentation:
  - a) Request for advance payment
  - b) Copies of invoices of material attached in Content Manager
  - c) Right-of-Entry if stored off of jobsite
  - d) Certified inspection certification
  - e) Certified paid invoices signed by the supplier of the material
  - f) LADOTD Partial Estimate Approval
- 5. They will determine if the partial estimate is either 5-days from completion or the allowed contract time
- 6. The Construction Audit Section will send notification to the PE that stipulated damages will be assessed if contract time has expired
- 7. LADOTD Construction Audit Section processes payment once all required documents are approved.

Step 5- Obtain Signed copies from Contractor.

Obtain signed copies of the Partial Estimate and the E-14 from the Contractor and forward a copy to the Construction Audit Section.

## 4.4 Material Haul Measurement

The method of measurement for some materials and work require that a material be measured by weight or volume at the point of delivery. This requires the use of "haul tickets". Haul tickets

are typically used as the method of measurement for some materials, however, with concurrence from the Contractor and the LADOTD Chief Construction Engineer, other methods may be used. The only other approved method at this time is the "punch card" method in which a card prepared for a specific truck is punched or marked upon each delivery

### 4.4.1 Haul Tickets

Normally, the procedure is an exchange of tickets: the hauler of the material will give the inspector the haul ticket that he received when the vehicle was loaded or weighed; the inspector will issue the operator a LADOTD haul ticket. There are special haul tickets with specific rules and procedures for some materials. For example, special haul tickets are used to document the delivery of asphaltic concrete. With those few exceptions, the general rules for haul tickets are as follows:

- 1. Form 03-40-0574, "Haul Ticket Book", is generally used.
- 2. The haul ticket must be written and exchanged when the material is placed on the road or otherwise incorporated into the work, or immediately thereafter.
- 3. Haul tickets may not be issued before the material is placed, nor may several Contractor haul tickets be collected before matching tickets are issued.
- 4. The haul ticket must be filled out in duplicate, signed by an inspector who witnessed the placement of the material, and the original copy of the ticket issued to the operator of the vehicle.
- 5. The haul ticket must be completely filled out. (Payment will not be allowed if the ticket is not properly completed and signed.)
- 6. The operator of the vehicle must give the inspector a haul ticket that shows the project number, date, cubic yards, pounds or tons loaded on the vehicle, and the LADOTD certified vehicle number.
- 7. The Contractor's haul ticket number must be written on the LADOTD haul ticket and the corresponding LADOTD ticket number on the Contractor's ticket – for cross-referencing in case tickets are misplaced or inserted in the wrong ticket book.
- 8. The inspector must keep the duplicate of the issued haul ticket and the Contractor's matching ticket. The matching tickets are not to be attached to the duplicates; they should be grouped together and fastened to the back cover of the haul ticket book.
- 9. Haul ticket books are to be left intact; no pages (other than the originals issued the Contractor) may be removed.
- 10. Each pay item or material requires a separate haul ticket book; the same book may not be used for multiple items.
- 11. When the material is being paid for by the cubic yard (vehicular measurement) the hauling vehicle and its load must comply in all respects with <u>EDSM III.1.1.12</u>"Enforcement of Legal Load Requirements on Construction and Maintenance Construction Projects" and EDSM III.5.1.3 "Material Measurement Based on Truck Bed Measurements".
- 12. When the material is being paid for by weight, the hauling vehicle and its load must comply in all respects with EDSM III.1.1.12 "Enforcement of Legal

Load Requirements on Construction and Maintenance Construction Projects" and it must be verified that the scales that weighed the truck are certified.

## 4.4.2. Punch Cards

The Department allows the use of "punch cards" anytime repetitious volumetric hauling is being performed. One punch card replaces 25 individual haul tickets and has the potential to save considerable time and effort in the field. The procedures for using punch cards are as follows:

- 1. A punch card is completed for each vehicle on a daily basis.
- 2. A number is marked out with an "X" and initialed by the inspector for each load starting with number 1.
- 3. Uniform loads are hauled and material is paid by cubic yards or by meters.
- 4. A standard haul ticket (Form 03-40-0574) is completed for each punch card.
- 5. Haul vehicles and loads comply with EDSM III.1.1.12

Punch cards and haul ticket books are retained in the Project Engineer's office for five years after Project Acceptance.

Some vehicles, most notably those that operate only within the limits of the project (water trucks, for example), have not been certified for volume. It is permissible that these trucks are measured on the jobsite.

The following is a list of contract items requiring haul tickets and/or punch cards:

*203-07Borrow, vehicular measurement*204-01Temporary sandbagging, cubic yard*204-02Temporary Hay or Straw Bales, each204-01Lime tor
*204-02 Temporary Hay or Straw Bales, each
1 5 5
204.01 Lines ton
304-01 Lime, ton
401-02 Aggregate surface course, Adj. Veh. Measurement
402-01 Traffic Maintenance Aggregate, Adj. Veh Measurement, cubic yard
402-03 Aggregate Roadway Surfacing, cubic yard
502-01 Superpave Asphaltic Concrete. Ton
502-04 Asphalt Concrete (SMA) Wearing Course, ton
602-12 Undersealing Pavement, Ton
602-13 Slab Jacking Pavement, ton
710-01 Flowable Fill, cubic yard
711-02 Riprap, cubic yard
711-03 Riprap, ton
715-01 Topsoil, cubic yard
*717-01 Seeding, pound
*718-01 Fertilizer, pound
*718-02 Agricultural lime, ton
*721-01 Asphalt mulch, gallon
723-02 Granular material (vehicular measurement)
738-01 Mulch Sodding, cubic yard

\*Haul tickets are to be issued and the Contractor's matching haul tickets, collected daily (per batch on Item 204-04 Temporary Sandbagging), in accordance with standard procedures except:

- A single haul ticket may be issued to cover several Contractor haul tickets.
- A single haul ticket book may be used for more than one item.
- The ticket books are to be stored by the Project Engineer for a minimum of five years after payment of the final estimate and they must be destroyed by the Project Engineer after receipt of an approval from the Chief Construction Engineer.

## 4.5 Partially Completed Items of Work

Partial payment may be made on incomplete contract items discussed below. In general, the percent complete of a lump sum item is calculated using fair estimating practices for the specific item. These estimating practices are subject to limitations specified on partial payments for the item, if any. The method of computation used to calculate the percent complete of a lump sum item must be recorded and maintained in a field book.

#### SECTION 200.

<u>Excavation and embankment items</u>: allow fair estimate based on limited field measurements. Random elevations or cross-sections should be taken and quantities roughly computed. As a check, the inspector should also estimate and record the amount hauled or excavated daily. Estimates based solely on the Contractor's load counts or estimates are not acceptable. In addition, the partial payment estimates for excavation and embankment should be reduced by 5%. The 5% will be held back for dressing of the excavation and embankment areas.

Payment for clearing and grubbing should be limited to 70% until all debris has been disposed of and 90% until the area is dressed.

### SECTION 300.

<u>Soil cement or cement treated base courses</u>: allow 50% when the material has been placed on the roadway and conforms to specifications, but has not been stabilized. Once stabilized, verified to grade and testing passed the second 50% is paid.

<u>Sand-clay-gravel</u>, shell, sand-shell and stone base courses: allow 90% when the material has been placed on the roadway and conforms to specifications, but has not been compacted. The final 10% is paid when the material is fine graded, final grade verified and tests passed

<u>In-place cement stabilized base course</u>: allow 50% when roadbed preparation and pulverization is complete and the material is ready for stabilization, but has not been stabilized. This partial payment is allowed only if the existing base to be pulverized is soil cement or all of an existing asphaltic concrete surface course is incorporated into the new base course. Once stabilized, verified to grade and testing passed the second 50% is paid.

#### SECTION 400.

<u>Aggregate surface courses</u>: allow 90% when the material has been placed on the roadway and conforms to specifications, but has not been compacted. The remaining 10% can be paid when all material and testing has passed specification requirements.

#### SECTION 600.

<u>Portland cement concrete paving</u>: allow 100% when the work is complete except for placement of joint material, curing, and form removal.

#### **SECTION 700.**

Field laboratory: allow 85% when the building is in place and usable.

<u>Manholes, inlets, catch basins, junction boxes and similar</u>: allow 25% when bottom is complete, 50% for bottom and walls, 75% for top, and 100% when complete (includes all backfilling and inverts are poured) except for asphaltic varnishing or metal painting.

<u>Sidewalks</u>, <u>driveways</u>, <u>curbs</u>, <u>curbs</u> and <u>gutters</u> and <u>similar</u>: allow 100% when all work is finished except for curing and form removal.

<u>Steel railing and similar</u>: allow 90% when in place but has not been painted. The remaining 10% can be paid when the material has been painted.

<u>Conduit with Conductors</u>: allow 50% when conduit (including backfill) complete, 100% when conduit pulled with conductors.

<u>Temporary detour roads and bridges</u>: allow a maximum of 90% when in place and ready for traffic. Less should be allowed if high maintenance costs are expected. The remaining 10% can be paid when the detours are removed.

<u>Mobilization, Construction Layout, Temporary Signs & Barricades payment schedules:</u> These items are all LS items and paid in accordance with the following: Standard Specification 727.05 for mobilization payment schedule, Standard Specification 740.04 for Construction Layout payment schedule, and Standard Specification 713.12 for Temporary Signs & Barricades.

#### SECTION 800.

Cast-in-place Box Culverts: 25% bottom pour, 50% bottom and walls, 75% when top poured, 100% when backfilled

Pre-cast Box Culverts: 75% in place, 100% when backfilled.

<u>Reinforcing Steel</u>: 90% \* when in place, substantially ready for concrete pour, 100% after the pour. \* P.E. may reduce further, depending on required cleaning or likelihood of damage.

#### **SECTION 807.**

<u>Cleaning and painting structural steel, if not otherwise specified in the contract</u>: For cleaning and first prime coat, allow 80% of lump sum amount based on "length primed / total length" or "pounds primed / total pounds"; allow 10% for second prime coat and 10% for top coat. If a two-coat system, allow 80% and 20%. If a four-coat system, allow 70%, 10%, 10% and 10%.

## 4.6 Number of Decimals

The required number of decimals on estimates, for pay purposes, should mirror those in the schedule of bid items in the contract. In calculating quantities, sub- totals should generally contain one more significant figure (decimal). The rounding of numbers to the specified number of decimals shall be in accordance with the following rounding rules: TO ROUND OFF DECIMALS.

• <u>First</u>: Find the place of value you want (the "rounding digit") and look at the digit just to the right of it;

• <u>Second</u>: If that digit is less than 5, do not change the rounding digit but drop all digits to the right of it; or

• <u>Third</u>: If that digit is greater than or equal to 5, add one to the rounding digit and drop all digits to the right of it.

### TO ROUND OFF WHOLE NUMBERS

• <u>First</u>: Find the place of value you want (the "rounding digit") and look to the digit just to the right of it;

• <u>Second</u>: If that digit is less than 5, do not change the "rounding digit" but change all digits to the right of the "rounding digit" to zero; or

• <u>Third</u>: If that digit is greater than or equal to 5, add one to the rounding digit and change all digits to the right of the rounding digit to zero.

The required number of decimals on estimates, for pay purposes, are as follows:

Method of Measurement	Number of Decimals
cubic yard, except Section 800 items	1
cubic yard, Section 800 pay items	2
double gate	
each, partial payments allowed	
each, partial payments not allowed	
gallon, except M gal	
hour, except trainee hour	
hour, trainee hour	
linear foot	
lump sum, partial payments allowed	
lump sum, partial payments not allowed	
MFBM	
mile	
pound	
span	
square foot	
square yard	
station	-

ton	1
unit, partial payments allowed	2
unit, partial payments not allowed	0

## 4.7 Forms to Accompany Partial Estimate

The following must be included with all partial estimates, except estimates on railroad force account projects:

- Schedule of Work Items, created in SiteManager.
- Estimate Summary Sheet, Form 03-42-0650.
- Weather and Working Day Report, created in SiteManager.

• If Federal Aid project, Statement of Compliance, Form 03-26-2054, and copies of payrolls, submitted to the Compliance Section. See Section 4.8

• Documentation required, by specifications, to accompany requests for payment on stockpiled materials. See Section 4.9

• Extra Work by Force Account, Form 03-40-0664, with specification required documentation.

• Fuel and Asphalt Adjustments, created in SiteManager with specification required documentation. See Section 4.13

#### 4.8 Statement of Compliance

On Federal Aid projects the Contractor (and active subcontractors) must submit, monthly, copies of certified payrolls and Form 03-26-2054, "Statement of Compliance." See applicable provisions of the contract and the Department's <u>Labor Compliance Manual</u>. Beginning January 2017 all certified payrolls and the Statement of Compliance will be required to be submitted online. The software is AASHTOWare web Trns•port<sup>TM</sup> (to be renamed AASHTOWare Project<sup>TM</sup>). Directions for the Contractor can be found on the Certified Payroll portion of the Compliance Programs Sections website, <u>Certified Payroll</u>.

The certified payrolls must be for each payroll period that ends within thirty (30) days before the close of the current estimate period. After checking the payroll for possible violations, transmit one copy of each Statement of Compliance (signed and dated by Project Engineer) and associated payroll documents with the partial estimate.

For the prime Contractor the certified payroll and Statement of Compliance are required from the date of the NTP to project final inspection (as defined by FHWA form 1273 part IV (3)",...during the course of the work...") and must be submitted for each payroll period whether or not the Contractor worked during that period.

Certified Payrolls and Certificates of Compliances are required from active subcontractors only. The Project Engineer will be the judge of whether the subcontractor is active or not.

The following is the procedure for reviewing the submittal of Contractors' payrolls and the transmittal of partial estimates:

Failure of the prime Contractor to submit the certified payroll will result in the non- payment of the partial estimate by the PE until such time that the prime Contractor is in compliance. The PE will immediately transmit the partial estimate once the prime Contractor is in compliance.

Failure of a subcontractor to submit the required payrolls will result in the partial estimate being submitted and any monies earned by the non-complying subcontractor being withheld from the partial estimate by the project engineer. After the subcontractor is in compliance, monies earned by the subcontractor will be paid on the next estimate.

It is the responsibility of the PE to email the estimate section and the Contractor to inform them of any non-compliance occurrences.

#### 4.9 Stockpiled Material

Advance payments may be made for stockpiled material. Advance payments shall be made only for durable (non-perishable) materials, and the materials must represent a significant portion of the project cost and anticipated to be stored for periods in excess of 30 calendar days. Prior to recommending advance payments for natural material, such as aggregate, the Project Engineer shall visually verify that the stated quantity is reasonably correct and must receive proof, such as test reports or other acceptable documentation, that the material meets specification requirements.

If this request is for stockpiled precast/prestressed members inspected by the structural fabrication unit of the construction section, it must be accompanied by a letter from the Structural Fabrication Engineer stating that the requested material has been inventoried and the material meets the requirements of the specifications.

A request for payment must be made in writing from the Contractor. The following documents must accompany the partial estimate:

- The written request.
- Copy of invoices from the supplier or manufacturer.
- Copy of lease or agreement granting LADOTD right of entry.
- If stored outside of Louisiana, approval from the Chief Engineer.

After advance payment, the portion of the stockpiled material that was incorporated into the work during the current estimate period must be deducted in the current estimate. Deductions are shown as "minus" quantities and amounts. Full recovery must have been made when the last of the material has been incorporated into the work.

The Department will allow payment of stockpiled aggregates at hot mix plants and/or concrete plants under the following guidelines:

1) Dedicated stockpiles, for state use only, shall be required. Stockpiles dedicated to more than one state project will be acceptable.

- 2) The dedicated stockpiles may be used on one or more state projects provided the Contractor and project engineer can develop a system to account for materials as used.
- 3) The Contractor shall certify in writing stating what state projects the dedicated stockpiles apply to, and that no other projects (state, private or other) shall receive materials from this dedicated stockpile.
- 4) Under no circumstance shall the Department allow stockpile payment for a working stockpile.

## 4.10 Material Memorandums

Material memorandums (Form 03-42-0653) are no longer required.

## 4.11 Releases for Entry to Private Property

In general, if the performance of contract work requires work beyond the project's right-of-way, the Contractor must furnish the Project Engineer a release signed by the owner or owners of the property before payment can be made on the contract item. (Releases are not required for fences if the fence is placed in its normal location: immediately outside the right-of-way.)

Section 202 of the Standard Specifications will normally require a disposal release, as will disposal items added by change order. Salvaged items require a letter of receipt from the receiving party. Un-salvaged material disposed of within the right-of-way or on other public property or in a commercial dump or landfill will be noted on letter by Project Engineer.

The specifications specifically require releases for work done on railroad property and for each "relocated structure", but not for "demolished" structures, except when the demolished structure was scheduled to be moved. However, even when an "off the right-of-way" structure is demolished as a contract item, the work was on private property and a release is required.

If the Contractor utilizes private property for storage of equipment or materials (other than topsoil), damages private property adjacent to the right-of-way, renders unsightly private property adjacent to the right-of-way, obtains borrow (or other natural materials) from other than a commercial pit, the site must be left in a condition acceptable to the Project Engineer. If the condition of the site is questionable, the Project Engineer will require that the Contractor furnish a release, signed by the owner or owners of the property. The Project Engineer will sign a copy of this release and his signature will be noted as accepting receipt only.

If the Contractor is unable to obtain a release from the railroad or property owner, and the Project Engineer is satisfied that the Contractor has fulfilled his responsibilities, the Contractor's affidavit may be accepted in lieu of a release. Form03-40-0672 "Contractor's Affidavit, Removal and/or Relocation of Buildings", is used in lieu of a <u>Certificate of Release</u> and Form 03-42-0001 <u>Contractor's Affidavit</u> is used in lieu of railroad releases. The Project Engineer will sign a copy of this affidavit and his signature will be noted as accepting receipt only.

If the Department has no objections the Contractor and the property owner may make an agreement to leave in place (if off the right-of-way), to demolish, or to alter (cut off porches,

overhangs, etc.) any removal and relocation contract item. (Note: If there is good reason for moving the item, such as it is an "eyesore" or is blocking natural drainage, it must be moved or demolished.) The Contractor must record the agreement on Form 03-40-0673, Demolition, Alteration, e tc of Buildings and Miscellaneous Structures", and the agreement must be fully executed before the work can proceed. Before payment can be allowed, a change order that revises the description of the work from "remove and relocate" to "leave in place" (or whatever), with equitable price adjustment, must have been approved and a release received.

## 4.12 Partial Estimates and Overruns

EDSM III.4.1.1 states that overruns on a major item of work greater than 5% requires a change order prior to payment of the amount over 5% or \$50,000. On a minor item of work quantities greater than 100% or \$50,000, whichever is less requires a change order prior to payment. Section 109.03 of the Standard Specifications defines major and minor items of work.

#### 4.13 Fuel and Material Adjustments

Special Provisions of the contract provide the fuel and asphalt material price adjustments for a particular project. Monthly price indices are established by the Department for making price adjustments on partial estimates. The Department will make price adjustments on each applicable monthly/progress estimate to reflect either increases or decreases in the price of gasoline or diesel from those in effect for the month in which bids were received. When an estimate is generated, Fuel Adjustments will be automatically calculated per specifications using pre-determined fuel factors for applicable pay items and the Price Index Tables. Indices can be found on the LADOTD website on the Construction Letting Info tab.

## 4.13.1 Checking Asphalt & Fuel Adjustments

Check in the Contract Special Provisions of the construction proposal to see if the project is eligible for adjustments, Section 109.09. If so check the contract to see if the Contractor elected to participate in the adjustments.

If the Contractor elected to participate, make a note of the letting date (month/year), the price indices for that month are the base prices to be used in adjustment calculations. Section 109.09 of the Special Provision gives the formula for asphalt & fuel adjustments and the items that are eligible for adjustments. The monthly price indices can be found on the LADOTD web page. LADOTD@la.gov Construction Home page <u>Monthly Price Indices</u> for Asphalt & Fuel with a listing for the past 2 years.

There is a 5% plus or minus variance of the base price, when the monthly price falls within this variance, no adjustments are due. If the monthly price is over the variance then it's a rebate to the Contractor, if it falls below the variance then it's a rebate to LADOTD.

Items added by change order maybe eligible for adjustments, however unless the wording of the change order specifically states that the contract base prices are to be used then the base prices for those items is the date of the change order (date shown in upper right hand of change order form), not the letting date.

It is important to remember that the monthly price indices used is the month the estimate period starts, (for example- the estimate period runs from 03/12/11 to 04/11/11, the monthly price used is for March 2011, even for work done in April, the latter part of the estimate period). This is important to remember in cases where the work was done during one estimate period but not necessarily paid during that estimate period. (100 tons of asphalt laid during est. #3 02/12/11-03/11/11, but only 75 tons paid for. On the next estimate period, #4, 03/12/11-04/11/11, 50 tons were put down but 75 tons paid for, 50 tons from this period, 25 tons from previous period, in this case the 25 tons laid during est. #3 is to be adjusted using the February price and the remaining 50 tons at the March price)

Estimate periods should only run for 30 days, if an estimate period runs for longer, several months (01/12/11-04/11/11) and work is done in the latter part of the estimate period (April), use the monthly price indices that the estimate period starts in (January) for the adjustments.

## 4.13.2 Asphalt Adjustments-

Any amount of asphalt quantities paid on an estimate is due an adjustment. (The formula is based on tons/mg, items paid by different units need to be converted). See the special provisions for qualifying items.

The field record should show the lot numbers for material being laid. Take the lot numbers and go to the plant reports for the sequence and Job Mix Formula {JMF} numbers as well as the plant number(s). It is important that all JMF's used on the project are in the 2059 Report. Once you have the JMF numbers go to the 2059 and pull the JMF's, from there you will find the grade and % of virgin AC in the mix (this does not include any% from additives or RAP), you should also make a note of the Gmm/Theoretical Gravity number, see <u>Standard Specification 502.14 Measurement</u>.

It is important to remember that the tonnage adjusted for the asphalt adjustments is the actual tons laid before any Gmm/theoretical gravity factor is applied. The fuel adjustment on asphalt items however uses the adjusted pay quantity. Lots with the same JMF used per estimate period can be adjusted together, also if they have different JMF's but use the same grade and % AC can be calculated together. If different JMF's have different grades and % of AC, then the lots have to be calculated separately and the adjustment totals added up for the total adjustments that estimate period.

#### 4.13.3 Fuel Adjustments-

The fuel usage chart in the Special Provisions with the minimum original contract quantities for adjustments applies to the fuel adjustments only. For the earthwork items 203-01 and 203-03, that only one is eligible for adjustments, the one with the larger original contract quantity. All line items paid under an item number are to be added together for minimum quantity eligibility. (502-01-0010, 502-01-0020, etc.)

Fuel adjustments on asphalt items have a couple of variables; (1) depending on the type of fuel used in the plant to dry the aggregate you have two different fuel usage factors for diesel-1.67 for

natural gas or coal and 2.40 for fuel oil, diesel, propane or butane. If a plant can use either type of fuel (nat. gas or diesel) you will need certification from the Contractor as to what type of fuel was used to produce the lots in question. Waste oil is not eligible for the diesel portion of the fuel adjustment. (2) If the theoretical gravity factor is other than 100% then the tonnage laid is adjusted by the factor and this adjusted total is what is paid and the quantity is what is used for the fuel adjustments.

At the end of the job it is sometimes necessary to pro-rate the adjustments on certain items. This may be due to the fact that we don't adjust negative quantities and are unable to ascertain what estimate period this work was originally adjusted at, and on some items, usually the earthwork items, a percentage of the work is paid during the life of the project and at the end the total is calculated and a payment made, because this payment is made well after the work has been done and not during the estimate period that it's being paid on, spread the adjustment among the estimates where the work was actually done.

All documentation of the calculations used to figure these adjustments are to be included with the final pay records.

## 4.14 Penalties

Pay adjustments for failing test on stipulated items of work are calculated on a monthly basis in accordance with the appropriate specification. For example: Table 601-1 for Portland Cement Concrete Pavement (PCCP) penalties. A new pay item documented in a change order is required to create the pay item.

#### 4.15 SiteManager Partial Estimate Personnel Roles

- 1. <u>Inspector</u> The inspector creates daily work reports (DWRs).
- 2. <u>Office Manager</u> The office manager generates the estimate and approves the estimate.
- 3. Project Engineer The project engineer approve estimates and coordinate with Compliance Section and LADOTD Audit Section.
- 4. Contractor The contractor reviews and approves the estimate and time charges

## **Part V. Control of Work and Materials**

## 5.1 Construction Administration and Inspection (Construction Management)

Construction Management consists of managing the project to achieve Quality, Budget, and Schedule. Though the Contractor is charged with the management of his activities to comply with the terms of the contract, the contract itself requires the Department to be involved in the construction management process.

The contract documents contain specifications or references for all materials that are to be incorporated into a project. The <u>LADOTD Materials Sampling Manual</u>, indicates who samples and tests each of these materials and at what frequency. See Section 3.5 for Quality Assurance requirements.

Section 1.2 establishes the PE's and inspector's duties and authority, project acceptance, claims for additional compensation or contract adjustment, and the Contractor's safety person requirements.

The PE and staff should never discuss the Contractor's methods of handling work with the Contractor's competitors or persons not directly involved with the project. Any instructions to the Contractor are issued to the superintendent or foreman, not to workers on the project. Suggested changes or instructions pertaining to the work should be for the benefit of the project, supported by the contract specifications, and based on sound judgment. A written record should be maintained of specific instructions or orders issued.

## 5.2 FHWA Construction Inspection Expectations from LADOTD

The purpose of an on-site inspection is to evaluate the project activities, determine the quality and progress of the work and follow-up on any findings from previous inspections. The inspection will combine a field review of the physical work and actual conditions with an office review of administrative actions and documents supporting the field work such as field books and diaries, material certifications and invoices and payrolls.

The data gathered from the inspections is useful for many things. Information is acquired on problems and construction changes. It provides an opportunity for timely remedial action where applicable. It documents the solutions to problems or commitments. It encourages the PE involvement and awareness of problems to avoid future reoccurrence. It evaluates the Departments abilities and effectiveness in managing Federal-aid construction projects with respect to items such as: qualifications-training, certification, written guidance, staffing, equipment, facilities, performance, project documentation, including inspection diaries, test reports, etc.

Inspections are also used to offer technical and procedural advice. It allows for the transfer of knowledge on special or innovative construction materials, methods, procedures, new equipment, and other technological innovations

All inspections must be documented on the DWR, photos, project documents and project staff interviews (LADOTD and Contractors) in accordance with this CCA Manual.

## 5.2.1 Typical Types of FHWA Inspection

<u>Initial Inspections</u> – This is the first inspection of an active construction project. Actual construction work may be limited due to the early stage. This first inspection establishes the scope, communications and commitments

<u>Intermediate Inspections</u> – These are recurring project construction inspections. The frequency is established by the Stewardship Agreement. In Louisiana, a minimum of once every 3 months was established for interstate, NHS projects and other full federal oversight projects. The inspections encompass all aspects of the project.

<u>In-Depth Inspections</u> – These are detailed inspections. It involves the review of the specifications, procedural Manuals, and the specific contract requirements. Some of the subjects for these inspections may include: bridge decks, structural concrete, hot mix and Portland cement concrete pavement, aggregate bases, earthwork, erosion and sediment control. These may be made on an individual projects basis or may be part of a statewide federal process review effort.

<u>Final Inspections</u> – A final inspection is used to determine the extent and obtains assurance that the project has been completed in reasonably close conformance with the plans, specifications and authorized changes and extra work. A final inspection may be accomplished by an on-site review conducted at or near the completion of work and a review of project records that are provided by the State at the completion of work. This inspection provides a basis for the acceptance of the project and reimbursement of the project costs with Federal-aid funds.

<u>Specialty Inspections</u> – An inspection may be performed on any experimental or innovative construction feature or procedure.

## 5.2.2 Items FHWA Considers During Inspection

- Progress and quality of work
- Workmanship
- Changes and extra work including time extensions
- Claims and potential claims
- Project Records and Documentation
  - Quantity and quality of materials delivered, used and rejected
  - Construction work performed
  - Methods and frequencies of checks on scales and other measuring devices
  - o Adequacy of field notes, diaries, and records supporting pay quantities
  - Subcontracting
  - o Labor compliance, equal employment opportunity, and on-the-job-training
- Compliance with Americans with Disabilities Act (ADA) commitments and permit stipulations (erosion/pollution control, Section 106 Cultural SHPO, Section 404 permits ACOE, Section 7 –FWS, etc.)

- Compliance with contract requirements (number of lanes, width of roadway/shoulders, clearance on structures, etc.)
- Staffing, and inspection qualifications
- Review of work Items
- Right-of-way clearance, demolition
- Utility relocations
- Clearing and grubbing
- Earthwork and grading
- Environmental
  - $_{\odot}\,$  Erosion and sediment control
  - Dust abatement
  - Construction noise
  - o Other environmental commitments
- Drainage and minor structures
- Major structures
- Sub-base and base
- Paving
  - o Flexible
  - o Rigid
- Work Zones
  - o Traffic management and traffic control planning
  - o Installation and maintenance of traffic control devices
  - o Worker and traveling public safety
- Appurtenances
  - o Signs and Signals
  - o Lighting
  - o Fencing and Guardrail
  - o Intelligent transportation system (ITS) features
- Disadvantaged Business Enterprise Performance
  - o Verify that DBE on the job matches DBE as proposed in bid
  - o Performing a commercially useful function
  - o Performing work in accordance with contract commitments
  - o Directing its own activities

## 5.2.3 LADOTD Construction Inspection Expectations from the LPA

The LADOTD will assume the role of the FHWA for LPA projects. (Please see FHWA actions listed above). If the project is on a state route or programmatically the standard procedure and LADOTD has the resources, LADOTD may choose to perform the inspection instead of the LPA.

If the LPA or his consultant performs the inspection, the LADOTD may review all of the items to be considered and documentation listed above to ensure that the federal funds are prudently spent and the project is built with reasonably close conformance with the plans, specifications and authorized changes, and extra work.

The Responsible Charge and the LPA Project Engineer consultant are responsible for coordinating with the LADOTD District Coordinator to submit the required project documentation and payment requests through SiteManager that is listed in the proposal. The LADOTD District Coordinator is an approver of the partial estimates and change orders.

## 5.3 Work Zone Safety

Every project must have a Work Zone Traffic Control Plan that details how the project will be made safe for workers and motorists. It will include traffic control devices (signs, barrels, barricades, etc.), and specifically how, when and where they will be installed. No on-site work can start on the project without first having the appropriate traffic control devices in place.

A suggested sequence of construction is generally provided in the plans for the Contractor. If the suggested sequence of constructions is not intended to be used by the Contractor, the actual traffic control plan used must be in accordance with Section 713, Temporary Traffic Control and the MUTCD.

#### 5.3.1 Responsibilities to Make the Work Zone Safe

It is the responsibility of the Contractor's <u>Traffic Control Supervisor</u> to ensure that the Traffic Control Plan is implemented

- 1) Project Engineer ensures this is being done
- 2) HQ Traffic Control Specialist makes random inspections.

## 5.3.2 Traffic Control Supervisor (TCS)

The TCS shall be provided by the Contractor to patrol the project to assure that the traffic control devices are properly placed in accordance with the traffic control plans and standards. Record daily documentation in SiteManager regarding traffic control.

Highway work zone safety is important to ensure a safe environment for workers AND motorists who drive through the work zone on a project, so they can navigate through easily and to prevent crashes from beginning to end of the highway project under construction

#### 5.3.2.1 TCS Authorization

Prior to the start of construction work, the Contractor shall submit to the PE a copy of the TCS's and TCT's current certifications.

5.3.2.2 Traffic Control Supervisor (TCS) Duties

The TCS duties include but are not limited to:

- The TCS shall personally provide traffic control management and supervision services at the project site
- The TCS may have other assigned duties, but must be readily available at all times to perform TCS duties as required in the contract
- A minimum of one TCS or Traffic Control Technician (TCT) shall be required on site during working hours. Someone must be in charge of work zone traffic control *at all times* 
  - The TCS is responsible for the training of flagging personnel
- The TCS ensures that all flagging done on the project is in compliance with the MUTCD and the Louisiana Work Zone Traffic Control Details

• The TCS coordinates all traffic control operations for the duration of the contract. This includes *subcontractors, utility companies, and suppliers*.

- They are responsible for notifying the PE immediately of vehicular crashes and documenting in the traffic control diary
- They are responsible for maintenance, cleanliness, replacement, and removal of traffic control devices during working AND non-working hours.
  - The TCS ensures that workers are wearing proper, reflective safety garments

#### 5.3.3 Location of Contract Requirements for Work Zones

- LADOTD Standard Specification (Blue Book) Section 713, Temporary Traffic Control
- LADOTD Supplemental Specifications Section 713.08, Traffic Control Management
- Standard Plans for Temporary Traffic Control
- Suggested Sequence of Construction in the Contract Plans

#### 5.3.4 Required Documents

Traffic Control Supervisor (TCS) shall have:

1. A set of all current contract documents relating to work zone traffic control and/or traffic staging;

- 2. A current copy of the MUTCD (Manual on Uniform Traffic Control Devices)<u>MUTCD</u>
- 3. A current copy of Louisiana Work Zone Traffic Control Details.

#### 5.3.5 Inspection of Traffic Control

- The TCS is responsible for the inspection of all traffic control devices **every** <u>Calendar</u> <u>day</u>. The inspection may be delegated to the TCT.
- The "*Quality Guidelines for Work Zone Traffic Control Devices*" standards by ATSSA is the tool used to evaluate the condition of the traffic control devices to determine if they are acceptable for use.
- Traffic Control should be inspected by the TCS on <u>weekends</u>, <u>holidays</u>, or other <u>non-work days</u> at least <u>once per day</u>
- Traffic Control should be inspected by the TCS at least once a week during <u>nighttime periods</u> and the same night after any modifications or changes have

been made in the traffic control devices

#### 5.3.5.1 Traffic Control Diary

- The TCS maintains a project traffic control diary in LADOTD's SiteManager Program (this is like their daily work report). The TCS keeps the traffic control diary current on a daily basis, and signs each daily entry. It should be available at all times for inspection by the PE. The diary shall be reviewed with the PE on a weekly basis.
- SiteManager User ID and password assistance can be obtained by contacting Mr. Alan Rusch from LADOTD at 225-379-1592.
- Any and all deficiencies noted in the traffic control diary shall <u>also</u> be noted in the Contractor's diaries
- The diary is subject to LA R.S. "Filing or Maintaining False Public Records
- A penalty of \$150/calendar day stipulated damages will be assessed if there is a failure to complete the Traffic Control Dairy and/or there is no contemporaneous record keeping. (It should not be written "after the fact".)
- The Traffic Control Diary should summarize all the duties of the TCS, including the following items:
  - Type of work being performed that day
  - Traffic control plan used (beginning & ending stations for each)
  - Traffic Control Devices (the number of each, if they in the correct location, if there are any missing/damaged, condition of the devices)
  - Permanent or temporary striping removed or placed (from beginning to ending station)
  - Crashes, memos or change orders
- The PE is responsible to enforce the specification and should review the TCS diaries weekly.
- All Traffic Control Diaries must be accounted for at the end of the project.

#### 5.3. 6 Failure to Comply with Work Zone Safety requirement

- The PE, LADOTD Work Zone Engineer, or LADOTD Traffic Control Specialist may suspend <u>all or part of</u> Contractor's operation(s) for failure to comply with the approved "Traffic Control Plan" or failure to correct unsafe traffic conditions within a reasonable period of time
- Notification is given to the Contractor either verbally or written and is followed up in writing.
- Serious deficiencies shall constitute the Contractor's operations being shut down until such time as he can demonstrate that he can meet the specification in its entirety
- **LADOTD may revoke or de-certify the TCS for gross neglect of his/her duties.** If that happens they must take TCS course again, they will have a 90 day probationary period at LADOTD's discretion. If revocation happens during a project, the Contractor will not be allowed to work without a TCS but time still keeps being charged.

## 5.3.7 Eligibility Letters for Temporary Traffic Control Devices

• <u>Standard Specifications Section 713.07</u> requires certification for traffic control devices,

- Temporary traffic control devices (i.e. barricades) must be crash tested to ensure crashworthiness
- If device passes the crash test (NCHRP 350 & MASH), FHWA will issue an eligibility letter for use of federal-aid projects
- Contractor needs to provide these letters for each device to the PE prior to 1<sup>st</sup> estimate & before installation of the traffic control devices on the project
- Crash Testing
  - NCHRP 350 National Cooperative Highway Research Program Report 350: <u>http://safety.fhwa.dot.gov/roadway\_dept/policy\_guide/road\_hardware/nchr</u> <u>p\_350/</u>
  - MASH Manual for Assessing Safety Hardware Jan 1, 2011: <u>http://safety.fhwa.dot.gov/roadway\_dept/policy\_guide/road\_hardware/nchr</u> <u>p\_350/</u>

## 5.3.8 Public Convenience & Safety Special Provision

If Law Enforcement Officers are to be hired is discussed and agreed upon at the pre- construction conference. To hire law enforcement officers, there are specific requirements listed below:

- 1. Officers must be certified by LADOTD.
- 2. They must take the training course.
- 3. They will be needed to have a presence if any of the following exist
  - a) Multi-lane highway/interstates with posted 50 mph and greater
    - b) Lane closure
    - c) PE anticipates a queue (a line of traffic)
    - d) They are hired for enforcement. To ensure safe operation they may be required to write tickets.
    - e) They will be involved in traffic control; detours or diversion.
- 4. Their compensation is \$40/hr. + \$25/vehicle (max or agency policy)

#### 5.4 Budget

The Project Engineer and other field personnel must recognize that the Department has a budget and that they must strive to complete the project within this budget. These are changes to the work that should be avoided:

- Scope Creep adding work to the project not planned for in the original plans. Some extras are necessary, especially if a safety item needs to be addressed. However, limiting the extra work should always be considered.
- Delay Claims due to LADOTD not taking timely actions or making timely decisions. The PE should always monitor review periods on all submittals and RFIs to ensure the Contractor has timely answers and not being delayed.
- Quantity overruns in high volume unit pay items require that project personnel pay close attention to yield control. As soon as possible, overruns should be identified so the PE can give proper attention to minimizing the overrun.

## 5.5 Value Engineering

A Value Engineering Committee at HQ will review all proposed Value Engineering submittals and recommend either adoption or rejection. One committee member is selected from Road Design; one from Bridge Design; one from FHWA for Federal Aid Projects; and one from Construction who is Chairman.

The Contractor has the option of submitting a conceptual VE proposal to the Committee for review prior to making a formal submission or submitting the formal VE Proposal directly. Under normal circumstances, the process is as follows:

- 1. The Contractor submits 6 copies of the VE Proposal to the Project Engineer;
- 2. The Project Engineer reviews the VE Proposal with the District Construction Engineer;
- 3. The Districts' comments are submitted with 5 copies of the Proposal to the Committee Chairman;
- 4. If the Committee disagrees with the District's comments, the Committee will meet with the Project Engineer and/or District construction Engineer within 10 working days;
- 5. If necessary, the Committee will request a meeting with the Contractor;
- 6. The Committee will render a decision within 5 working days after these meetings. If the VE Proposal is recommended for approval, the District will be advised to prepare a Category 1 Plan Change Please refer to Subsection 105.19, Value Engineering Proposals, for specification requirements.

#### 5.6 Submittals and Mix Designs

The PE ensures that the parties involved perform timely reviews as well as track submittals and mix designs through each stage of review and approval. The PE should remind the Contractor that Specification 801 requires the submittal of shop drawing and final approval prior to starting work on that item. A standing agenda item for discussion of the status of shop and erection drawings should be part of weekly construction progress meetings. Also at the meeting, the priority of submittals should be reviewed and adjustments to priorities agreed to with the Contractor.

All mix designs are submitted to the Materials Lab and copied to the PE.

The CPM specification has specific requirements on activates for shop drawings and mix designs. See the CPM for specification for the project requirements.

The PE shall ensure that all approved shop and erection drawings are incorporated in the final As-Built drawings where appropriate.

#### 5.7 Contract Time

The monitoring of contract time is performed in accordance with the approved baseline CPM and the contract. All changes in time are documented in change orders. See Section VI for requirements in adding contract time.

## 5.7.1 Placing Contractor in Default Insofar As Contract Time

Five working days (or calendar days if a calendar day project) prior to the date when contract time will elapse, the Project Engineer must send an email to Construction Estimates Engineer with a copy to the District Construction Engineer before noon advising him that the Contractor will have used all contract time within the next five working (calendar) days; also, the percent time elapsed and the percent complete for the project. The five-day notice should include all days included by changes orders or the best estimate of added change order days. The Construction Estimates Engineer shall immediately notify the Contractor. The Construction Estimates Section will log the date and time of receipt of information.

On the last contract day, the Project Engineer must email the Construction Estimates Engineer before noon and advise him that the Contractor has used all contract time and give him the estimated percent complete. He shall then immediately call and advise his District Construction Engineer. The District Construction Engineer shall immediately confirm this information to the Construction Estimates Engineer by email, who shall immediately advise the Contractor.

#### 5.7.2 Contractor Disqualification Resulting From Contract Default

Once the Contractor has been advised of contract default due to the elapse of contract time, the Construction Estimates Engineer will email and fax a request to the Project Engineer for project information. The Project Engineer must assemble the following project-related information and/or documents:

- Any project issues that may have contributed to contract default by the Contractor;
- Any claims verbally communicated and/or submitted Contractor by Contractor;
- Any outstanding change orders for work that has been completed and/or remains to be completed;
- Any disputed time charges;
- Any scheduled work on key contract items, such as high cost items that could potentially move the Contractor back within the time limits (specify items, including start time, time required to meet schedule limits, and estimated completion date); and
- Any delays caused by processing Change Orders.

The Project Engineer will send the project-related information to the Construction Estimates Engineer for review. The Construction Estimates Engineer will then forward all information and a recommendation to the Chief Construction Engineer. The Chief Construction Engineer, recommends to the Chief Engineer who then writes the disqualification letter to the Contractor.

# 5.8 Construction Administration and Inspection Performed by Others (non-LADOTD)

This applies to projects administered by LADOTD where construction is supervised by consultants, municipalities, parishes, or other governing bodies. There is generally an agreement with LADOTD for the outsourced construction engineering and inspection (CE&I).

LADOTD will assign a Project Coordinator who will manage the work performed by the

outsourced CE&I. Prior to beginning construction, the Project Coordinator is to receive documentation from the Agency/Consultant CEI that all inspectors possess the appropriate current LADOTD certification for performing their respective duties. Generally, the same duties and responsibilities as contained in this entire CCA Manual apply to the non- LADOTD CE&I personnel. The LADOTD project coordinator shall furnish upon request copies and examples of DWR, Traffic Control Report, Estimate Book, Form 2059, etc. to illustrate acceptable documentation.

The Department of Transportation & Development is to do Laboratory testing of materials on these projects if stated in the agreement between the CE&I Agency/Firm and LADOTD or on Consultant CEI projects. The CEI PE is responsible for all field-testing.

The LADOTD, through the Project Coordinator or his representative, shall make periodic inspections of the work, field records, and sampling and testing. Such inspections shall be made in such a manner to avoid putting the Department in a position of relieving the CE&I Agency/Firm and the Project Engineer of their responsibility for the project. The Project Coordinator shall also review all pay estimates. Estimates shall be prepared by the Project Engineer and entered into SiteManager.

The Project Coordinator will advise the Project Engineer or inspector assigned to the project of any deficiencies noted and of acceptable methods of keeping written records of project activities.

Neither the Project Coordinator nor his representative will issue instructions to Contractor's superintendent, foreman, or any of his personnel, nor will he direct work in any manner other than advising CE&I Agency/Firm project personnel that work does not conform to specifications and/or plans.

Upon detecting non-conforming work, the Project Coordinator will immediately advise the CE&I Agency/Firm with a copy to the Project Engineer, that work performed does not conform to specifications and will be nonparticipating until corrected.

Change orders, when required, will be prepared by the Project Engineer in SiteManager and forwarded to the Project Coordinator's office for review. The Project Coordinator will approve the change order and submit to the District in the same manner as other change orders. Upon notification that the project is complete and ready for final inspection, the Project Coordinator shall advise the District Office, and both the District Construction Engineer and should make arrangements to attend the final inspection, if practical. If it is agreed that the project has been substantially completed in accordance with contract requirements, the District Construction Engineer shall notify LADOTD Construction Section in the normal manner that final acceptance is recommended.

Final estimates will be assembled by the Project Engineer and carried to the LADOTD Construction Audit Section along with the final submittal of Form 2059 within 30 days after final acceptance. If requested by the CE&I Agency/Firm or Project Engineer, the Project Coordinator will answer questions and may be allowed to give limited assistance in the preparation and checking of the estimate, if approved by the District Administrator. Such assistance shall not relieve the Project Engineer of the responsibility of preparing the estimate, and this shall be made clear to the CE&I Agency/Firm . In no case shall the coordinator prepare the final estimate or any substantial part of the estimate entirely with LADOTD forces.

If the project is not on the Department's MATT System, the Project Engineer will prepare a final

Form 2059 in the same format or style as that of the Department.

#### 5.9 Final Inspection and Acceptance

The specifications allow both partial and final project acceptances and both require final inspections. For partial acceptance, a final inspection is made on part of the project, and this must be boldly displayed on both the completed Form 03-40-4217 "Project Certification" (Form 4217) and the final inspection letter. Special attention is required on the following items:

Final inspection shall not be made until the Project Engineer has completed Form 4217. The Project Certification form must be signed by the Project Engineer and District Administrator or authorized representative and submitted to the LADOTD Construction Engineering Administrator, with a copy to the District Maintenance Engineer. Information necessary for the final acceptance letter must be included on the project certification:

- 1. Contractor's surety
- 2. Contract date
- 3. Inspection party
- 4. Agency or party designated to maintain the road or facility
- 5. Where the contract was awarded (Headquarters, District, or other)

Final inspection shall not be made until all traffic control devices, as well as safety appurtenances such as signs, pavement markers, pavement markings, guardrail, etc. are in place within the limits of the project, regardless of whether the work is to be done by the Contractor, the Department, or other.

The Contractor shall be verbally advised that the project is being accepted and will be instructed to remove all construction signs and barricades.

Partial acceptance may be done only with an approved change order. A final inspection must be made on the portion of the project to be accepted and a message promptly sent to the LADOTD Chief Construction Engineer.

If the project belongs to another governing body such as police jury or city, a representative of that governing body must be present at the time of the inspection

## PART VI: Contract Modifications and Change Orders

## 6.1 Introduction

In spite of best efforts to prepare complete and error-free plans and specifications and to construct projects in accordance with plans and specifications, quantities are only best-estimates, field conditions change, and errors are made. Revisions to the plans and specifications require "change orders". Change orders, after being signed by the Contractor and the approving authority of LADOTD, become a legally binding document just as the original contract. A change order is not required for an item overrun/under run of less than 5%.

Change Orders are created in SiteManager and all approvals are made in SiteManager. See Section 3.10.2 for necessary approvals. Once a Change Order is approved by all parties, the Contractor must sign and return one copy to the Department.

#### 6.2 Procedures

#### 6.2.1 General

Change Orders are used to record and authorize changes. Examples of revisions that require change orders, and the procedure to be followed, are given in <u>EDSM III.1.1.1 "Procedure for</u> <u>Changing Contract Plans and Specifications for Construction Projects"</u>. Except as delegated in EDSM III.1.1.1, the authority to approve revisions is retained by the Chief Engineer.

*Change order work should not be started until approval has been obtained.* If warranted by the conditions, verbal approval may be sought. If given, the fact is to be noted in the change order. Included in the change order shall be the name of the person giving the approval and the date of approval. If the change order has been discussed with the Chief Engineer or the Chief Construction Engineer, notation of the discussion, including date, shall be made in the change order.

#### 6.2.2 Numbering

Change orders are to be numbered consecutively in SiteManager. When a change order is returned without approval, the change order may be revised and resubmitted, voided, or, in some cases, resubmitted without revisions. A resubmitted change order should indicate this by placing in parenthesis, behind the change order number, (revised) or (resubmitted). Change orders are created in SiteManager by the Project Engineer and in the case of multiple project contracts; the change order number should appear on each project number. If voided, the Project Engineer or District Construction Engineer must notify the Construction Audit Section, in writing or by telephone, that the change order is void. The number that was assigned to the change order may not be used again.

## 6.2.3 Completion of the Change Order

The "Original" quantity is always the current contract quantity, including approved and pending change orders (pending change orders with a change order number lower than this change order number).

*The date assigned to the change order* should be the date the Project Engineer signs the change order, which should be prior to sending to the Contractor for his signature. The date should be

by numbers, instead of wording, and should appear as dates show up in SiteManager (e.g. 03/15/04).

On multiple project contracts, only the smallest project number (State and FAP) should be entered.

It will be the responsibility of the Project Engineer to ensure that the change order category is determined correctly. The worksheet "Change Order Category Worksheet" has been prepared to assist in this determination and is available, through Construction Division Intranet, to all Project Engineers. The completed worksheet must be attached to the change order in SiteManager. It will also be the responsibility of the PE to enter the cause for the change order in the field provided for such. A list that provides the codes and their explanations can be found on the statewide construction page.

Non-participating items and quantities must be clearly identified in the change order by tabulation and if necessary for clarity, by identifying an item as "N.P." or "non-participating". If an item is to be reimbursed by others, add a note.

When one revision will increase or decrease the quantity of any other contract item – no matter how slight – that item must also be included in the change order.

When the change order results in no additional cost to LADOTD, the change order should state this.

#### 6.2.4 FHWA Oversight

The Federal Highway Administration has oversight on NHS and IM federally funded projects only. Change orders for these federally funded projects should be discussed in the field with the Area Engineer of the Federal Highway Administration before they are submitted. Notation of the discussion, including the name of the person, should be made in the change order.

#### 6.2.5 Other Agencies

Agencies other than the Department and the Federal Highway Administration may have financial interest in the project, or the contract may be in the name of an agency other than the Department, or the work may be for another agency though the contract is in the name of the Department. Under most of these conditions the change order will require a resolution or approving signature of the concerned agency, as described in various EDSM's and memoranda

#### 6.3 Engineering Reason, Justification and Proper Backup Documentation

The change order must give an explanation and reason for the change. The reason should be an engineering reason. The explanation must be meaningful, specific and understandable – without need for verbal explanation from District or Project Engineer. A reason such as "requested by the Contractor" or "requested by the city" is not a sufficient explanation.

The detail required in the description and reason should vary proportionally with the details normally included in the plans. For instance, traffic maintenance aggregate is normally shown only in the summary of estimated quantities, with no other detail of quantities, and therefore to increase the quantity, the explanation of "plan quantity was not sufficient" would be adequate.

On the other hand, to increase the number of catch basins on an urban project, the locations of the catch basins and the reason for adding each structure should be included. The location of the change must be given, by station or sheet number in this case.

As an example, the explanation and reason explaining an overrun in concrete drives should be something similar to:

"12 ft. wide drives were added at Sta. 100+00 Rt., 111+00 Lt., and 120+00 Rt. to accommodate residences that were constructed after the plans were prepared". Notice that the locations of the drives are as specific as the plans would normally be. An unacceptable explanation would be, "several drives were added to the project."

Additional information as necessary to make the change order complete and understandable should be listed in the change order and attached. Typically, the additional information will include letters, memoranda, sketches, part or full-page copies of one or more plan sheets; special provisions, failing test reports, and cost breakdowns for new unit prices with supporting quotes from suppliers and subs.

For purposes of process improvement, the form "CHANGE ORDER REASON(S) CODE CHART" has been prepared and is available, through Construction Division Intranet, to all Project Engineers. The completed worksheet must be attached to the change order in SiteManager.

#### 6.4 New Items and Extra Work Price

Extra work can be new items of work added by the Department, an unforeseen condition, or delay from utilities or other reason beyond the Contractor or LADOTD's control. This work can be priced in several different ways.

- 1. Unit Prices;
- 2. Force Account; or
- 3. Negotiated Price

#### 6.4.1 Unit Price Work

If a new item of work is added and it corresponds exactly with a standard contract item as listed in the Standard Specifications, or in the Schedule of Bid Items of the Highway Specification Workbook (also in CICSPROD), the standard contract item number should be used and no specifications for the work need be attached.

#### 6.4.2 Force Account

- 1. Unit prices for specialty items or unit prices that cannot be verified by the methods listed above, will require a complete breakdown of the materials, equipment, and labor. <u>EDSM III.1.1.15</u> addresses Force Account Work and Emergency Repair Contracts.
  - a. Labor breakdown must show the number of workmen by classification, hourly wage, total number of hours, and total cost. The Force Account labor is tracked on Form ???
  - b. Equipment rental rates from the Data Quest Blue Book, adjusted as set forth in <u>EDSM III.1.1.27</u>, Section 4B, may be used for all equipment and each piece of equipment must be shown with the number of hours it will be used,

cost per hour, and total cost.

- c. Materials will be based on estimated cost and each type of material to be used will be listed.
- d. Additives for profit, insurance, etc. will be allowed in accordance with Section 109.04 of the Standard Specifications.
- 2. Subcontractor's prices must be verified in the same manner.

#### 6.4.3 Negotiated Price

If the new item does not exactly correspond to a standard construction item, it must be assigned an NS-number and specifications for the work attached. When the item is very similar to a standard contract item, its specifications might consist of a statement similar to the following:

"This work shall be in accordance with Section (or Subsection) xxx of the Standard Specifications except as follows:"

If item quantities are increased or new items added by a change order, all costs are considered to be included in the established prices; for example overhead ,field office, etc.

The unit price for a new item can be verified as listed below with the preferred method listed first:

- 1. The unit price being established is less than or reasonable close to the quarterly and/or year to date weighted averages for that item.
- 2. The unit price being established is somewhat higher that the weighted average, but justification is provided for the increase because of mobilization cost, other added expenses, or the quantity is small and would affect production, or other valid reason.
- 3. The new unit price must be substantiated by comparison of bid prices or negotiated prices from other projects with similar quantities, type of work, and degree of difficulty and in the same geographical area.

4. Overhead for delays are calculated using Section 109.04 of the Standard Specifications. All delays must be verified in the CPM prior to compensating a Contractor for overhead.

To change a contract unit price (except lump sum items), the plan quantity for the item with the original unit price should be decreased to zero, and a new item added. **Do not delete the item.** The new item number should be the same as the old one, except followed with an X, Y, Z, or a combination of these letters. For example, contract Item 702-01 might be reduced, and Item 702-01-X added.

To change a lump sum unit price, one of two methods may be used:

(1) The original item should be decreased to zero and a new item added, or

(2) simply add a new item for the extra work in the item. The method to be used will be the one that best fits the situation. The new item number should be the same as the old one, except followed by an X, Y, Z, or a combination of these letters.

The project specifications require creation of certain new pay penalty contract items. Examples are accepting work or material using reduced pay schedules and payment for piling cut-offs. These created item numbers should be the same as the parent number, followed by X, Y, or Z, as above. Some pay items such as Superpave and PWL do not lend themselves to using reduced pay schedules. These items should be paid at 100% of the pay item price and the Project Engineer must create lump sum rebate items that represent the sum of all the penalties charged against the item.

#### 6.5 Revised Plan Sheets

Revised plan sheets must be incorporated into the contract by change order. The change order should briefly state the changes in the revised sheets, why the changes are being requested, who requested them, and their effect on quantities and costs. The change order could be stated similar to the following example:

"Incorporate revised plan sheets 118A and 119A, both dated 11/21/03, into the contract, replacing original plan sheets 118 and 119. These sheets revise the configuration of the 401 stirrup bars in the bottom of concrete caps and were requested by the Bridge Design Engineer (see attached memorandum dated November 5, 2001). These changes will not affect contract quantities or unit prices except as follows:

Increase Item 806-01, Deformed Reinforcing Steel, by 3,566 pounds or 6.1%."

#### 6.6 Format and Language

Because most change orders are unique, standard format and language cannot always be used. However, the opening statement of the change order should usually tell what the change order is about, such as "The purpose of this change order is to adjust plan quantities to asbuilt quantities," or "This change order will extend Bridge No. 1 by one span to Station 132+40." For the purpose of this CCA Manual, change orders can be separated into two types that usually must be treated differently: a change order for a specific change or extra work and a final change order which basically adjusts final quantities.

The preferable format is for the change order to list the items affected, immediately after the opening statement; for example:

"This change order is needed to provide drainage of water trapped behind the curb, Station 203+00 B 204+00 right of centerline."

Increase Item 701-15-E, R.C. Pipe (15") by 32 L.F., 15% Increase. Add Item 702-03-A, Catch Basin (CB-01), 1 each, 100% Increase. Increase Item 702-03-B, Catch Basin (CB-02), 2 each, 15% Increase.

Then a detailed explanation for the reason for the change should follow, if not completely covered in the opening statement.

Whenever possible, the items and changes to quantities listed in the tabulated area defined on the lower half of the page should correspond to the description of items presented in the space provided on the top half of the page under Engineers "Description and Explanation." Sometimes this is not possible when long explanations are required. In such cases, either limit the items listed in the table to only the items explained at the top or use brief explanations with attachments for further explanation.

If the intent of the change order is to accept work with failing tests results without a penalty, the wording should be "the department will accept as 100% pay." Do not use the wording "the department will waive the specifications".

#### 6.7 Final Change Order

Most projects will require a final "record keeping" change order to cover minor overruns and underruns, and non-controversial specification created contract items such as items created to pay for piling cut-offs and items created to pay for non-conforming work or materials using reduced pay schedules. This final change order must contain no new items other than those provided for in the specification, such as pay adjustment items and piling cut-offs mentioned above.

The change order is to be submitted to the District Construction Engineer for his signature, and a copy sent to the Contractor.

After the District Construction Engineer signs the original, it should be transmitted to the Chief, Construction Division with a note attached stating that it is a final change order.

#### 6.8 Contract Time

The change order may request additional contract time. The Contractor must provide a letter requesting and justifying any additional time along with a CPM to back up the request. The CPM must show the critical path was extended to contract time requested. A formal review of the CPM must be performed prior to preparing a Chang Order for a contract extension.

When no additional contract time is required, the statement "No additional contract time is necessary" must be made on the Form 655, and "NONE" entered in the space for "Additional Contract Days Requested".

A Change Order is issued at the end of original contract time to grant the Contractor a time extension for the weather days that the controlling item of work was affected and documented in the DWR as so. Supplemental Specification provides for weather days in the contract. Days to be granted in the Change Order are days in excess of these days.

#### 6.9. Claims

LADOTD has an established claims procedure (EDSM III.1.1.28) that involves an independent evaluation of the claim at the LADOTD HQ Construction Section level.

LADOTD's Engineering Directives and Standards (EDSM) III.1.1.28, Contract Disputes, and Requests for Additional Compensation (RAC) establishes notification and documentation procedures that are to be followed in the event of a contract dispute, and/or Contractor's submission of a Request for Additional Compensation ("RAC") as provided for in Section 105.18 of the Standard Specifications.

LADOTD Standard Specifications Section 105.18 Claims, references EDSM III.1.1.28,

EDSM III.1.1.27, Equipment Rental Rates gives guidance on allowable equipment rental rates for changes to the contract.

LADOTD Policy allows additional compensation for work, material, delays, inefficiencies, disruptions, other additional costs or expenses, and extra work. The Contractor must give notification before beginning the work and immediately upon encountering the conditions to allow

the PE properly resolve the issue and keep documentation of the issue.

There are other circumstances that are not usually governed by the general specifications that have resulted in damages such as delays from action or inaction of LADOTD, plan errors, disagreements with LADOTD's interpretation of the plans and specifications, or other causes.

The Contractor's notification of contract dispute is initially filed with the Project Engineer, & LADOTD District Area Engineer. A detailed record of contract activities and costs shall be tracked with the actions taken to resolve the issue

#### 6.9.1 Dispute Resolution Procedure

- The dispute must be filed with the PE initially so detailed records of contract activities and costs can be established along with actions taken to resolve the dispute. Form titled Contractor's Notification of Contract Dispute should be used for notification. (See EDSM III.1.1.28 for the form). This notification is also sent by the Contractor to the District Area Engineer, the LADOTD Chief Construction Division and the LADOTD Chief Engineer.
- 2. The PE reviews within 2 weeks with the District Area Engineer. If a resolution is reached with the Contractor a Change Order is written.
- 3. If the dispute is not resolved within a month, the PE shall send a written analysis with supporting documentation to the Chief Construction Engineer and notify the Contractor of such action.
- 4. The Claims Manager in the Chief Construction Engineers office shall perform an analysis and recommendation with one month and forward to the Chief Engineer and Chief Construction Engineer. At this time the Contractor is notified.
- 5. If the decision is mutually agreeable a change order is written.

## 6.9.2 A Request for Additional Compensation (RAC):

After submitting a Contractors Notification of Contract Dispute form the Contractor may subsequently submit a formal Request for Additional Compensation (RAC). The RAC shall include:

- 1. All work activities
- 2. The impact on the project schedule shown in the CPM, see CPM specification,
- 3. All labor, equipment, material, subcontractor, and other direct or indirect cost elements,
- 4. The dollar amount and method of computation,
- 5. Documentation supporting each fact, assertion, cost, or delay, in material quotes,
- 6. The statement or schedule shall be certified and sworn under oath by the Contractor to be true and correct as to all facts, records, representations and amounts claimed therein, and
- 7. Any subcontractor RAC must be filed by the Prime Contractor.

## **PART VII: Project Closeout**

## 7.1 Overview

The PE is in charge of scheduling and holding the final inspection. The PE is responsible for entering the final inspection information into the LADOTD system which is necessary for the closeout process to begin. The PE enters when the meeting was held and lists the attendees. In addition to this action by the PE, a letter from the Entity is required to begin the final estimate audit process. The letter must be on letterhead stating that a final inspection has been held and they have accepted the project for maintenance. It must be signed by a Department representative in authority.

## 7.2 Completion List (Punchlist)

Prior to final acceptance a final walk through inspection with the Contractor and LADOTD staff shall be performed. From the final walk through inspection a final completion list (punchlist) of work to be completed must be prepared and given to the Contractor. Contract time cannot be stopped until all this work is complete. This list shall not consist of new or additional work that is not part of the original contract. Once this list of work is completed, inspected and accepted by the Department can cease to charge contract time

During this time all temporary traffic control devices and temporary erosion devises shall be maintained by the Contractor.

#### 7.3 Partial Acceptance

There are projects that the Contractor or the Department may want to Partially Accept a portion of a project. <u>EDSM III.5.1.6</u> address the procedure. Only the Chief Engineer has the authority to make partial acceptance of construction projects.

#### 7.4 Final Acceptance

Final acceptance is made on a project in accordance with <u>EDSM III.5.1.5</u> Acceptance of Construction Projects.

Part of the procedure on a Federal Aid project is to have a final review of the DBE goal by the Compliance Section. The DBE goal should have been met at this point in the construction and if not a process for showing good faith effort has to be completed by the Contractor. This procedure and forms can be found in the Compliance Sections portion of the LA LADOTD website. Final Acceptance cannot be made until the Compliance Section has received all supporting documents for the DBE goal requirement and are satisfied the goal has been met.

#### 7.5 Final Estimates (General)

From the date of recordation of the acceptance of a project, the law requires a lien period of fortyfive days before the final estimate can be paid, and requires that it be paid within ninety days of acceptance. The Department allots thirty of these days to the Project Engineer for preparing and submitting the final estimate for projects under \$2 million and 60 days for projects over \$2 million.

Except for overlay and other miscellaneous projects, all final estimates are to be hand-delivered and checked into the Construction Audit Section by the Project Engineer or a person very familiar

with the project and the final estimate. The final estimate on overlay projects may be mailed, however, if it is not complete and correct it will be returned for correction. After corrections have been made it must be hand-carried back to the Construction Audit Section.

The final estimate is a compilation of all partial estimates - it cannot make payments. If additional payments (or deductions) are due, another partial estimate must be prepared. This "last" partial estimate may be submitted with the final estimate but it must be kept separate because it is not part of the final.

#### 7.5.1 Final Estimate Quantities

The final quantities must be accurate and derived from field records, including field notes, sketches, computations, and as-built plans. All information necessary to verify quantities must be included in the field records. On most items, work is measured and recorded on a daily basis by the inspector and the final quantity is the summation of all daily quantities. Lump Sum items that cannot be broken down into identifiable work elements (mobilization for example) are not recorded on a daily basis, and the final quantity is simply the plan quantity.

#### 7. 5.2 Final Earthwork Quantities

The standard specifications allow the final earthwork quantity determination to be plan quantity; with some verification that plan quantity was determined with sufficient accuracy. If there is a question about the accuracy of plan quantity by the Contractor or the Project Engineer, either party may recalculate the quantity in accordance with accepted procedures and have the quantities amended by change order. The approved change order quantity then becomes the new plan quantity. Changes can be made by recalculating the earthwork for the entire project or isolated sections within the project where the error is found.

The Project Engineer must manage the activities of his staff throughout this process to not expend unnecessary resources tracking down insignificant quantity changes while at the same time being reasonably sure that there are no major quantity errors. The Project Engineer must also ensure that when recalculation of quantities by the Contractor in isolated area, the Contractor has not "shopped around" for areas with quantity increases and discounted other areas where quantities are decreased.

Earthwork quantities are determined by the average end area method and are based on the location (or original) and theoretical finished (or final) cross sections. When final quantity is based on location sections, the sections must be verified in some manner. Method of measurements and payments for earthwork items is covered in the specifications, EDSM 111.2.1.1 "Determination of Quantities for Payment of Excavation and Embankment (Net Section)" and EDSM 111.2.1.2 "Procedure for Obtaining Template Grades, Revised Plan Cross Sections and Revising Quantities". If the location sections are usable, the original cross-sections used in determining the "Average Elevation" are to be plotted on the corresponding location cross-sections.

Theoretical pay lines for computing volume of earthwork are based on the plan-profile grades and typical section. The theoretical pay line is often referred to as the plan template.

Final verification sections are plotted on the corresponding theoretical cross-sections, in green.

When final verification profiles are used, a "profile differential sheet" which shows the final template grade and the as-constructed subgrade elevation must be prepared and submitted with

other cross-section data. This sheet must show the algebraic difference in grade for the entire project.

In plotting cross-sections, original (or location) sections are to be in black; theoretical (template) lines in red; tie points and interpolated sections in blue; and undercuts, template, and final sections in green.

End areas are to be recorded on Form 03-42-0652, "Earthwork Computations", and volumes computed using that form, except when a computer program is being used.

All computations used in arriving at the final pay quantity for earthwork must be submitted, including a detailed recapitulation of the quantities.

Cross-sections are part of as-built plans and thus the Project Engineer must sign each cross-section sheet.

#### 7.5.3 Forms to Accompany Final Estimate

- 1. **SIGNED ORIGINAL** SCHEDULE OF WORK ITEMS (Generated from SiteManager)
- SIGNED ORIGINAL RECAPITULATION OF WEATHER & WORKING DAYS (Generated from SiteManager) <u>NOTE</u>: Signed by the Project Engineer of record (registered Professional Engineer in the State of Louisiana). (The PE of record can sign for LADOTD District Area Engineer if no Stipulated

(The PE of record can sign for LADOTD Damages are assessed)

- 3. ALL FIELD BOOKS Ensure First Two Title Pages are Filled Out \*Spreadsheets are also acceptable
- 4. **SIGNED AND CORRECTED** AS-BUILT PLANS OR "PLANS IN CONTRACT" NOTE: Blue line or Stamped Signature is not acceptable
  - a) Each Sheet MUST be signed in INK.
  - b) SUMMARIES FINAL QUANTITY, DRAINAGE & BRIDGE ARE CORRECT.
  - c) PROJECT LENGTH FORM FOR "PLANS IN CONTRACT".
  - d) COVER SHEET
  - e) 730 ITEMS Require Electrical As-Builts
  - f) Every Page Must be in Correct Numbered Order (1, 2, 3 not 1a, 1b, 2a, 2b etc.) Index Sheet Must Also Match Numbered Pages. (The sheets are renumbered sequentially removing the "a, b, c…")
- 5. PROJECT DIARY It can be kept electronically. Do not send hard copies with SiteManager Projects.
- 6. CORRESPONDENCE In & Out
- 7. CONSTRUCTION LAYOUT Obtain and complete the information in the "Numbered Notebooks (Field books)" from LADOTD for the construction layout. If the layout is computer generated, the PE SIGNS Computer Printout NOTE: If Records are Non-Existent at the Time of the Final Audit, Follow Procedure as Stated in Memorandum Signed May 5, 2009.8. CERTIFICATES OF OF RECEIPT WARRANTIES, RELEASE. LETTERS & REOUIRED BY SPECIFICATIONS (Forms can be found on the LADOTD website: Publications and CCA Manuals/Construction/).

- a) If Material was Salvaged, We Will Need a Receipt from Whomever Received Material
- b) RAILROAD RELEASE OR CONTRACTORS AFFIDAVIT Unless Subsection P is Waived See Railway/Highway Provision Clause in Contract
- c) RIGHT-OF-WAY MONUMENTS Receipt Verifying Filed at Courthouse
- d) COLD PLANING RECLAIMED ASPHALT See Construction Notes (Need to have a certificate of release identifying where the material was placed)
- e) For bid items used that must be returned, a document certifying their return is required. (Example materials: Message Signs, Glare Paddles, Impact Attenuators, Concrete Barriers, Etc.)
- f) CONTAMINATED MATERIAL Chain of custody required
- 9. EARTHWORK: Plan Quantity is used unless the quantities are contested by the Contractor. If it is contested the following is required:
  - a) Computations
  - b) **SIGNED** Benchmark List
  - c) **SIGNED** Cross-Section Sheets, including "Profile Differential"
- 10. ASPHALTIC CONCRETE PLANT REPORTS

11. Approved 2059 must be submitted – PE, District Lab Engineer, District Area Engineer signed original

- 12. REINFORCING STEEL BAR LIST (Cut Sheets)
- 13.MASTER STRUCTURES FILE A Bridge Maintenance bridge replacement form that includes the structure number of the replaced structure

14. CHANGE ORDER/PLAN CHANGE IMPLEMENTED - <u>SIGNED ORIGINALS</u> must be submitted

15. FINAL ACCEPTANCE LETTER

16.POLICE INVOICES

17.TRAFFIC CONTROL LOG – SP # must be written on every sheet

18. TRANSMITTAL SHEET – List everything that is submitted with project

#### 7.6 Railroad Project Final Estimates

Final estimates on railroad force account projects are prepared in accordance with <u>EDSM III.6.1.5</u>, "Partial and Final Inspections, and Progressive and Final Payments for Railway-Highway Force Account Projects", using Form 03-42-0650, "Estimate Summary Sheet". Form 03-42-0651, "Schedule of Work Items", is used on all other projects. The estimate number of the field estimate continues the numerical sequence of the partial estimates: its number will be one (1) greater than the final partial estimate. The inclusive dates of the estimate are date of notice-to-proceed to date of final acceptance.

#### 7.7 Forms and Information to Accompany Final Estimate

Final estimates should include only data actually needed to audit the project and documents that should become part of the permanent record. In general, the transmittal should be restricted to the following:

- Final estimate forms.
- All field books, ensure that the first two title pages are also filled out.
- A s-built plans or corrected and signed "plans-in-contract" plans, each plan sheet signed.

- Cross-sections, including "Profile differential sheet," each sheet signed
- Computations verifying final pay quantities, when required.
- All "Asphaltic Concrete Plant Reports", Form 03-22-3085.
- Releases, warranties, guarantees, letters of receipt, etc. required by the project specifications.
- "In" and "Out" correspondence
- Project Diary, Form 03-40-3093.
- Bar lists on reinforcing steel.
- Signed and approved Form 2059, "Summary of Laboratory Reports."

Contractor • Contractor 's construction layout books.

• Verification of R/W monuments recordation in courthouse.

Forms that are normally transmitted with final estimates are:

- Schedule of Work Items, Form 03-42-0651.
- Estimate Summary Sheet, Form 03-42-0650.
- Earthwork Computations, Form 03-42-0652 (unless computerized).<sup>3</sup>

• Recapitulation of Weather and Working Days to Complete Project, Form 03-42-0657, signed by the Project Engineer and District Construction Engineer.

• And, if applicable:

- <sup>-</sup> Forms 1, 2, and 3, "Master Structure File Data Base (Bridges)".
- Right of Entry, Form 03-40-4206.
- Warranties and guarantees required by the specifications.
- Letter of approval from the Parish Health Unit, for water wells.
- Copies of agreements with property owners (for debris disposal, etc.
- Demolition, Alteration, Etc. of Buildings and Miscellaneous Structures, Form 03-40-0673.<sup>3</sup>
- Certificate of Release, Form 03-42-0671 or Contractor's Affidavit, Removal and or Relocation of Buildings, Form 03 40 0672.<sup>3</sup>
- Railroad's release or Contractor's Affidavit, Form 03 42 0001.<sup>3</sup>
- Information required by EDSM 111.2.5.8, "Verification of Navigation Clearances."

Documents and items not required for transmittal with the final estimate are to be maintained for at least five years in the Project Engineer's office.

The form, "Master Structure File Data Base (Bridges)", is required if work has been done at or on a bridge, or if a new bridge has been constructed. Contact the District Bridge Inspector for assistance in preparing the form.

The construction audits unit of the construction division will no longer serve as a depository for incomplete final estimates. All final estimates must be complete or they will not be accepted.

## 7.8 Final Estimate Book

A "Final Estimate Book" is part of the final estimate and is required on all projects other than railroad force account projects.

The Final Estimate Book is a recapitulation of quantities paid on all contract items and an index to records relating to those items. Verification of pay quantity must be by actual field measurement, actual field count, haul tickets, detailed computations, referenced plan quantity, and/or field book records.

If plan quantity, reference must be made to the as-built plan sheet that shows the plan quantity (see "As-Built Plans").

Partial estimates may not be used as reference to final pay quantities.

#### 7.9 As-Built Plans

As part of the final estimate the Department requires "as-built" plans. As-built plans are a set of the project plans (prints) corrected to show as-built conditions.

All changes made during construction must be shown by correction of notes, data or details shown in the plans, or by adding notes, details or plan sheets. All changes (corrections) to the prints are to be made using a red pencil or pen.

Notes, data and details that were not changed are to be "checked off" to indicate that the note, data or detail is correct and as-constructed. The check marks are to be made using a red pencil or pen.

All relocated buildings or other items must be shown in their new location except when the new location is beyond the limits of the plan sheet.

Examples of typical changes that must be shown in the as-built plans are changes in right-of-way, alignment, grade, stationing, equations, exceptions, typical sections, drainage structures (both size and location), and structural details. Most changes will require corrections or revisions of several sheets.

• The sheets of the as-built plans are to be arranged in the same order as the original plans, and are to include voided sheets, revised sheets, and sheets added by change order. The applicable revised sheet or sheets should immediately follow a voided sheet.

Each sheet of the as-built plans must be signed and dated (usually in the lower right corner) by the Project Engineer in ink.

A cover sheet is required for the as-built plans. Two cover sheets are available from Enterprise Support Services; one for highway projects, and one for airport projects. For other projects, project personnel should prepare a cover sheet.

The above rules apply also to plans that are "included in the contract" except (a) the plans are removed from the contract and (b) no cover sheet is required.

## Part VIII Local Public Agency (LPA) Projects.

Local public agency means any city, county, township, municipality, or other political subdivision that may be empowered to cooperate with the State Transportation Agency in highway matters. [23 CFR 635.102] An LPA-administered project is a Federal-aid project that the LADOTD has formally agreed to allow an LPA to administer in whole or part, including but not limited to project phases such as design, right-of-way, and construction. The <u>LPA Manual</u> can be found on the Inernet.

The construction contract is executed and owned by the LPA. The LPA is responsible for the contract administration for the construction engineering and inspection for these projects. LADOTD provides oversight. Project Contracts are executed between the LPA and the Contractor/consultant.

The LADOTD Director of Local Public Agency Programs can assist with any questions or issues.

#### 8.1 Responsible Charge

23CFR635.105 requires that LADOTD and the LPA provide a full time employee of the public agency to be in *responsible charge* of the project. This requirement applies even when consultants are providing design or construction engineering and inspection services or when a consultant is hired to act as entity engineer. This person does not need to be an engineer. Key roles of the LPA Responsible Charge for construction are:

- Primary point of contact for the Entity with the LLADOTD Project Manager & District Project Coordinator.
- Attends all key project meetings—if not in attendance, meeting will be cancelled. LPA Project Manager will identify required key project meetings—such as: Project Kickoff meeting, Project field inspection, etc.
- Must be involved in and/or knowledgeable of key project decisions.
- Records contract in Clerk of Court's office
- Schedules Pre-Construction meeting
- Attends all meetings when a decision is needed (Responsible Charge from Entity must attend)
- Ensures project is constructed in accordance with the plans & specifications
- Reviews & recommends approval of change orders (Responsible Charge)
- Ensures Work Zone safety
- Ensures Contractor's monthly estimate documentation is provided to LADOTD
- Pays Contractor's monthly partial payments (Responsible Charge)
- Prepares/submits Cost Disbursement Certification to LADOTD (Responsible Charge)
- Attends Final Inspection (Responsible Charge)
- Records Final Acceptance of project in Clerk of Court's office
- Ensures Final Estimate & complete documentation is transmitted to LADOTD timely.

## 8.2 LADOTD District Project Coordinator

The District Project Coordinator is the LADOTD engineer that is charged with the oversight of the LPA project and provides assistance to the LPA Responsible Charge person and their Project Engineer. The duties of the District Project Coordinator include:

- Attends Pre-Construction meeting
- Attends all meetings when a decision is needed
- Verifies that Entity ensures project is constructed in accordance with the plans & specifications
- Disburses funds to the Entity, based on monthly estimates
- Reviews & approves change orders
- Verifies that Entity ensures Work Zone safety
- Attends Final Inspection
- Audits final estimate

The LPA sponsored projects must be compliant with all applicable federal and state requirements. Non-compliance can result in partial or complete withdrawal of federal participation in the project. In the event of the LPA's noncompliance with applicable requirements, LADOTD may impose such contract sanctions as it, or the Federal Highway Administration (FHWA), may determine to be appropriate, including but not limited to withholding of payments to the LPA until the LPA complies; and/or cancellation, termination or suspension of the Entity-State Agreement, in whole or in part. Where reimbursements have been made, FHWA has the authority to seek repayment from LADOTD for non-compliance. LADOTD has the authority to seek repayment if the LPA's noncompliance is not resolved.

Therefore, if the LADOTD Project Coordinator observes non-conforming work or materials, the LADOTD Project Coordinator will immediately advise the Entity Responsible Charge Person with a copy to the LPA Project Engineer and HQ Construction Audit that work does not conform to plans and/or specifications and LADOTD/FHWA will be non-participating until corrected.

## Prior to beginning work, the LADOTD Project Coordinator will receive the following documentation from the LPA:

- Verification that all inspectors and Traffic Control Supervisor /Technicians who possess the appropriate current LADOTD certification for performing their respective duties
- Verification of a LADOTD Certified lab being used (if not a LADOTD lab)
- A project quality control plan
- A project quality assurance plan, in accordance with LADOTD's Material's Sampling CCA Manual

#### Prior to the pre-construction conference, the LADOTD Project Coordinator will:

- Read the Entity/State agreement
- Identify the roles and responsibilities LADOTD will perform, i.e., prepare construction proposal, laboratory testing, etc.
- Upon request from the LPA assess if LADOTD is able to perform additional technical

assistance on the project such as material testing

- Provide the LPA project engineer with the preconstruction checklist
- Reviews the construction contract to determine if there is a DBE/SBE project goal.
- Review CS-6AAA
- Review Bidders Assurance of DBE Participation
- Will support the LPA who will verify DBE/SBE performing commercially useful functions by observing who performs work during site visits.
- Ensure LPA Project Engineer is aware of monthly reports and verify conformity with first estimate involving DBE work, by reviewing the Form CP-1A, Contractors Monthly DBE Participation

#### **During Construction, the LADOTD Project Coordinator will:**

- LADOTD Project Coordinator will review with the LPA Project Engineer the payrolls for conformity with the first estimate.
- LADOTD Project Coordinator will review the "chain-of-command" in construction contract administration at the Pre-Construction Conference. In descending level-of-authority, the chain is Chief Engineer to Chief, Construction Division to District Area Engineer to LADOTD Project Coordinator.
- LADOTD Project Coordinator or his/her representative shall attend any meeting requested by the Responsible Charge Person or LPA Project Engineer.
- LADOTD Project Coordinator or his representative will make periodic inspections (varies based on the scope and complexity of the project) of the work and document the inspection, and verify
  - The project is being administered properly in accordance with approved methods and within the requirements of the plans and specifications (see checklist)
  - Field records are being properly kept
  - Sampling & testing requirements are being met
  - Traffic Control Management requirements are being met
- LADOTD Project Coordinator will review, upon inspection, all pay estimates and field documentation.
- LADOTD Project Coordinator will advise the LPA Project Engineer or LPA inspector of any noted construction deficiencies & unacceptable methods of written records/field documentation.
- Upon observing non-conforming work or materials, the LADOTD Project Coordinator will immediately advise the LPA Responsible Charge Person with a copy to the LPA Project Engineer and HQ Construction Audit that work does not conform to plans and/or specifications and LADOTD/FHWA will be non-participating until corrected.
- LADOTD Project Coordinator will not issue instructions to the Contractor's superintendent, foreman or any of his personnel, nor direct work in any manner other than advising the Entity's project personnel that the Contractor's work does not conform to plans and/or specs.
- Change orders will be prepared by the LPA Project Engineer in SiteManager. (There are no category 3 change orders for LPA projects, only category 1 and 2.)
- The LADOTD Project Coordinator will give direction to the LPA Project Engineer, as to how to setup the change order authorizations for Category1 and 2 change orders.
- Upon notification by the LPA Project Engineer the project is complete and ready for final

inspection, the LADOTD Project Coordinator shall advise the LADOTD District Administrator. The LADOTD Project Coordinator shall attend the final inspection, and the LADOTD Area Engineer, if practical.

• LPA Project Engineer is responsible for preparing the form 2059 and hand- delivering with all backup documentation to the LADOTD Project Coordinator for review and approval. LADOTD Project Coordinator will answer questions regarding the 2059 and may be allowed to give limited assistance in the preparation and checking of the 2059, if approved by his/her District Administrator. In no case, shall the LADOTD Project Coordinator prepare the 2059 or any substantial part entirely with LADOTD staff.

Note: <u>LADOTD Construction Contract Administration CCA Manual</u> should be referenced for further details on project engineer duties and requirements for proper contract administration.

## 8.3 Change Orders on a LPA Project

One important difference from a LADOTD administered project, is the approval process for a change order. The LPA approves the change order as the Contractor. The LPA PE performs all other duties as described in this CCA Manual in preparation of the change order. The LADOTD Project coordinator will approve after the LPA (as Contractor). There are no category 3 change orders for LPA projects, only category 1 and 2.

#### 8.4 Estimates on LPA Projects

No action is required by the LADOTD Project Coordinator for partial estimates. The LPA responsible party is responsible for submittal of the estimate and supporting documentation to the Construction Estimates Section.

#### 8.5 Project Closeout

The LPA Responsible Charge is responsible for scheduling the final inspection and walk through with the Contractor and LADOTD Project Coordinator.

The LPA Responsible Charge is also responsible for hand delivering the final estimate package to the LADOTD HQ.