

## **1901 MEASUREMENT OF QUANTITIES**

Unless otherwise specified, the Engineer will measure in accordance with this section.

The Engineer will determine quantities of acceptable Work using one of the following methods:

- (1) Plan dimensions — for Contract Items or portions of Contract Items designated as “P” in the Statement of Estimated Quantities on the Plans, the Department will use the Plan quantities for payment;
- (2) Field measurement — for Contract Items with no “P” designation shown on the Plans, the Engineer will field measure quantities of Work performed; or
- (3) A combination of Plan dimensions and field measurements.

The Engineer may adjust quantities for portions of the Work or the entire Project. The Engineer will not adjust quantities if a difference results from use of commonly accepted dimensional approximations.

The Engineer will determine quantities using the US customary system of weights and measures or the metric system. The units and the methods of measurement in the Contract for each class of work will supplement or modify the provisions in this section by the following:

- (1) Imposing measurement limitations;
- (2) Describing measurements or computation procedures;
- (3) Establishing conversion factors or adjustment conditions; and
- (4) Providing for the determination of accurate and representative pay quantities.

Item names for pay quantities may include designated terms to indicate the basis for unit measurements, such as where or when the Engineer will take the unit measurements or make computations. Unless otherwise required by the Contract, the Engineer will make measurements and computations as specified in this section.

The Contractor may dispute the Engineer's determination of pay quantities by submitting a written request to the Engineer. The Contractor shall state the Contract Item and sections of the Project disputed and provide details to justify the Engineer's review of the pay quantity. The request must be consistent with conditions governing the Contract Item. The Engineer will not review quantities unless the Contractor provides evidence substantiating that the quantity is incorrect.

### **1901.1 “P” QUANTITIES**

If the Department places a “P” designation on individual Contract Items or specific portions of Contract Items in the Statement of Estimated Quantities on the

Plans, the Department will use the Plan dimensions to calculate the pay quantity for that Contract Item. The Department will limit use of the "P" designated quantities to Contract Items with specified dimensions and controlled by field checks during, or after construction.

The purpose of the Department's use of "P" designated quantities is to avoid the expense of measuring dimensions, if original Plan dimensions remain valid. The Engineer will determine the quantities of Contract Items that do not have a "P" designation, using the methods of measurement required by the Contract, unless otherwise agreed in writing. The Engineer will use Plan dimensions as applicable for completed Work. The Engineer will only use field dimensions if required by the Contract or as necessary to accurately dimension completed Work.

The Engineer will adjust a "P" designated quantity if the Engineer revises the dimensions of the Work or decides the "P" designated quantity is incorrect. The Engineer will only adjust quantities for the revised or corrected portions of the "P" designated Contract Item.

## **1901.2 AREAS**

For longitudinal measurements, the Engineer will measure horizontally for computing an area and will not make deductions for Structures with an area no greater than 1 sq yd [1 sq. m]. For transverse measurements, the Engineer will use the neat line dimensions shown in the Plans or ordered by the Engineer.

## **1901.3 STRUCTURES**

The Engineer will measure Structures using the neat line dimensions shown on the Plans, or the dimensions as altered to fit field conditions.

## **1901.4 LENGTH**

The Engineer will measure Contract Items requiring a linear unit of measure, such as pipe culverts, guardrail, and underdrains, parallel to the base or foundation on which the Structure is placed.

## **1901.5 VOLUME**

### **A Excavated Volume (EV) — Cubic Yard [Cubic Meter]**

The Engineer will determine the cubic yards [cubic meters] of Excavated Volume (EV) using the cross-section method or digital surface model method to measure the material in its original position.

**B Compacted Volume (CV) — Cubic Yard [Cubic Meter]**

The Engineer will determine the cubic yards [cubic meters] of Compacted Volume (CV) using the cross-section method or digital surface model method to measure the compacted material in its final position, in accordance with the placement dimensions required by the Contract or directed by the Engineer.

**C Loose Volume in Vehicular Measure — Cubic Yard [Cubic Meter]**

The Engineer will determine the cubic yards [cubic meters] of Loose Volume (LV) using the vehicular measure method. The Contractor shall haul material in Engineer-approved vehicles as specified by 1513, "Restrictions on Movement and Storage of Heavy Loads and Equipment." The Engineer will measure the material at the point of delivery to the nearest 0.13 cu yd [0.1 cu m]. The Contractor may use vehicles for hauling material to the Project of any size or type approved by the Engineer if the Engineer can easily determine the vehicle body capacity and view the contents. The Engineer will determine the struck capacity for each vehicle. The Contractor shall mark the struck or level perimeter line on the inside of the box of each vehicle.

The Contractor shall load the vehicle and level the load as directed by the Engineer. The Contractor shall provide over-allowance for settlement of the load during transit. If the Engineer directs, the Contractor shall level each load upon arrival at the point of delivery. The Engineer will not measure material heaped above the struck capacity of the vehicle. The Engineer will make deductions in 0.65 cu. yd [0.5 cu. m] increments on loads that contain less than the struck capacity. The Contractor shall provide hauling vehicles with a conspicuous, legible identification mark that is acceptable to the Engineer.

**D Stockpiled Volume (SV) — Cubic Yard [Cubic Meter]**

The Engineer will determine the cubic yards [cubic meters] of Stockpiled Volume (SV) using the cross section method or the digital surface model method to measure material in the stockpiled position. The Contractor shall shape the stockpile to a condition directed by the Engineer before measurement.

**1901.6 (BLANK)****1901.7 (BLANK)****1901.8 MASS**

For measuring or proportioning Material by mass, the Contractor shall provide certified weights or weigh Material on calibrated, approved scales. The Department

will not allow the use of front-end loader scales. The Contractor shall give the Engineer a copy of the inspection certificate.

The Contractor shall provide an automated weighing device for Materials hauled in trucks and paid for by mass.

### **A Certified Weights**

If the Contractor includes a Department-approved delivery ticket form, certified by the weigh master, or if the Contractor delivers the Material in original containers marked with the certified weight, the Contractor may provide certified weights as an alternative to weighing the Material in the presence of the Engineer. The Contractor shall not unseal Material delivered in sealed containers until the Engineer approves. If the Engineer suspects a loss of Material, the Engineer will require the Contractor to reweigh the Material.

### **B (Blank)**

### **C Scale Testing and Calibration**

The Contractor shall ensure an authorized person tests and calibrates scales before use on the Project. The Contractor shall provide test weights, accessories, and assistance required for testing and calibrating the scales. The Contractor shall test and calibrate the scales in accordance with the frequency, criteria, tolerances, and sensitivity requirements in this section.

#### **C.1 Authorized Person**

An authorized person, as defined by one of the following descriptions, shall test and calibrate the scales:

- (1) A scale service person with a valid placing-in-service registration issued by the Minnesota Department of Commerce, or
- (2) The Contractor, with approval of the Engineer and under the supervision of the Engineer.

#### **C.2 Frequency**

The Contractor shall test and calibrate the scales in accordance with the following:

- (1) Inspect, test, and calibrate the scales each year before use on the Project,
- (2) Spot check scales for accuracy and sensitivity at the discretion of the Engineer as Work progresses,
- (3) Check the vehicle tare and gross mass at a frequency directed by the Engineer for Materials weighed in the hauling vehicle,

- (4) Test and calibrate scales at three-month intervals for the duration of the Project, unless otherwise approved by the Engineer, and
- (5) Test and calibrate scales as specified by these Standard Specifications.

### **C.3 Testing and Calibration Criteria**

The authorized person shall test and calibrate the scales with calibrated test weights. The Contractor shall provide calibrated test weights certified by the Minnesota Department of Commerce within the preceding 12 months, unless otherwise allowed by the Engineer. The authorized person may weigh the supplemental mass of Material or Equipment on the scales after initial calibration and use to supplement the calibrated test weights.

The Contractor shall verify commercial scales have current approval from the Minnesota Department of Commerce before the Engineer will allow use on the Project.

#### **C.3.a Testing and Calibration by Registered Scale Service Person**

If a registered scale service person performs testing and calibrating, the service person shall test scales up to the maximum expected load weighed on the Project. The Contractor shall provide evidence to the Engineer that scales meet the Contract requirements.

##### **C.3.a(1) Truck Scales**

The registered scale service person shall use at least 22,050 lb [10,000 kg] of calibrated test weights along with the supplemental mass.

##### **C.3.a(2) Batch Scales**

The registered scale service person shall use at least 1,100 lb [500 kg] of calibrated test weights along with the supplemental mass.

#### **C.3.b. Testing and Calibration by the Contractor**

If the Contractor tests and calibrates the scales, the Contractor shall perform a comparison test. The Contractor shall perform the comparison test at the minimum and maximum expected loads weighed during the Project.

##### **C.3.b(1) Truck Scales**

The Contractor shall weigh an empty truck and a loaded truck of the size and capacity the Contractor will use on the Project on an approved commercial scale, then, weigh the same empty truck and loaded truck on the scale the Contractor will use on the Project.

### **C.3.b(2) Batch Scales**

The Contractor shall make calibrated test weights available at each scale installation, at all times to provide a total test mass of 30 percent of the net load the Contractor will weigh not exceeding 1,100 lb [500 kg] of test weights. The Engineer may allow the Contractor to weigh a load, or series of loads, in a hopper then drop the load into a truck that has been weighed on an approved commercial scale. The Contractor shall weigh the loaded truck on the same approved scale.

### **C.4 Scale Tolerance**

#### **C.4.a Calibration with Calibrated Test Weights**

The Contractor shall use scales with scale indications within 1 percent of the value of the calibrated and supplemental test weights applied to the scale.

#### **C.4.b Calibration with an Approved Commercial Scale**

Indicated loads on the calibrated scale shall agree within 1 percent with the indicated loads on the approved commercial scale.

### **C.5 Scale Sensitivity**

#### **C.5.a Weighbeam Indicators**

The scale indicator, at the normal minimum and maximum loads, shall sense a change in load equal to 0.2 percent of the load on the scale.

#### **C.5.b Dial or Digital Indicators**

A sensitivity test is not applicable, but the dial or digital indicator shall respond uniformly and smoothly to changes in loads on the scale.

### **D Automated Weighing Device**

If the Department pays for Materials, hauled in trucks, by mass, the Contractor shall provide scales integrated with a ticket printer. Tickets shall include the date, Project number, Contract Item number, truck or tractor and trailer identification, truck tare, and net mass. The truck driver shall give the ticket to the Inspector on the Project.

## **1901.9 BITUMINOUS MATERIALS**

The Engineer will measure bituminous Materials by the gallon [liter] or ton [metric ton], and make corrections for loss, waste, foaming, and quantities not incorporated in the Work. The Engineer will make volumetric measurements of bituminous Materials at 60 °F [15.6 °C] or will correct the amount based on a volume at 60 °F [15.6 °C], using the Bituminous Manual.

The Engineer will determine the volumetric content of transport and storage tanks using the tank manufacturer's calibrated measuring devices and outage tables, based on the computed or certified tank capacity, or the Engineer will compute the content from the density factors derived from tests.

#### **1901.10 (BLANK)**

#### **1901.11 OTHER BASIS OF MEASUREMENT**

If the Contractor and Engineer mutually agree in writing, the Engineer may measure Materials in units other than the units of measure specified as the basis of payment. The Engineer will convert the measured quantities to the unit of measure specified in the method of measurement section. The Engineer will establish the factors for conversion from one unit of measurement to another and the Contractor shall agree.

#### **1901.12 (BLANK)**

#### **1901.13 TIMBER AND LUMBER**

The Engineer will measure timber and lumber by at least one of the following:

- (1) Each,
- (2) Lump sum,
- (3) Area in square feet [square meters], or
- (4) Volume in cubic yards [cubic meters] in the structure based on the nominal width, thickness, and the extreme length of each piece in the finished Structure.

#### **1901.14 LUMP SUM**

If used as a unit of measure, the term "lump sum" shall mean complete payment for the Contract Item as described in the Contract.

#### **1901.15 INDIVIDUAL UNIT OR EACH**

If a complete Structure, Contract Item, or lump sum unit is specified as the unit of measure, the Engineer will measure the unit based on physical count and will include fittings and accessories.

#### **1901.16 RENTAL EQUIPMENT**

The Engineer will measure rental Equipment based on time in hours of actual working time and traveling time of the Equipment within the Project.

**1901.17 STANDARDS AND TOLERANCES ..... 1503 & 1603**

If the Contract specifies standard manufactured items, such as fencing, wire, plates, rolled shapes, pipe conduit, unit mass and section dimensions, the Engineer will consider the identification of these items as nominal.

**1902 SCOPE OF PAYMENT**

The Contractor shall receive compensation provided for in the Contract as full payment for providing Materials and performing Work in accordance with the Contract requirements. This includes compensation for all risk, loss, damage, and expense incurred by the Contractor for performing the Work required by the Contract subject to 1720, "No Waiver of Legal Rights."

**1903 COMPENSATION FOR ALTERED QUANTITIES**

If the Department pays for the Work of a Contract Item on an actual quantity basis and the accepted quantities of Work vary from the quantities in the Contract but do not exceed the limits established for significant changes in 1402.3, "Significant Changes in the Character of Work," the Department will pay for the work of the Contract Item as follows:

- (1) The Department's payment based on the Contract Unit Prices is payment in full for the quantities of work performed by the Contractor and accepted by the Engineer.
- (2) The Department will not pay for increased expenses, loss of expected reimbursement, or loss of anticipated profits or overhead suffered or claimed by the Contractor due to differences between the actual quantities of Work and the quantities in the Contract.
- (3) The Department will not pay for loss of expected reimbursements from unbalanced allocation of costs among the Contract Items due to differences between the actual quantities of Work and the quantities in the Contract.

**1904 COMPENSATION FOR CONTRACT REVISIONS**

**1904.1 GENERAL**

If the Department revises the Contract as provided in 1402, "Contract Revisions," the Department will compensate the Contractor for the Contract revision following the

sequence specified in 1904.2 through 1904.4. Such compensation for the Contract revision constitutes final and full compensation for performing the revised Work, delay costs, and all other costs not expressly precluded by 1904.5, "Non-Allowable Charges."

If the Contract revision includes a time extension for compensable delays as provided by 1806, "Determination and Extension of Contract Time," the Department will compensate the Contractor for the costs associated with the time extension in accordance with 1904.6, "Compensation for Delay."

## **1904.2 CONTRACT UNIT PRICES**

Before proceeding to another pricing method, the Engineer will attempt to price and pay for the Contract revision using Contract Unit Prices.

## **1904.3 NEGOTIATED PRICES**

If the Engineer and Contractor are unable to agree on compensation in accordance with 1904.2, "Contract Unit Prices," they will attempt to negotiate unit or lump sum prices using one or more of the following methods:

- (1) Original Contract Unit Prices for similar Contract Items adjusted for increased or decreased Material costs;
- (2) State-wide average unit prices awarded for the Contract Item(s) as listed in the Department's annual "Summary of Contracts Awarded;"
- (3) The average of unit prices awarded on three different projects of similar work and quantity;
- (4) Unit prices computed by the Office of Estimating; or
- (5) Cost analysis of labor, material, equipment, and mark ups as allowed in 1904.4, "Force Account."

The Department will not compensate by a negotiated price for Contract Revision work performed by a subcontractor that includes a Contractor mark-up that exceeds that provided for in 1904.4.H, "Contractor Mark-Up." Negotiated prices shall be comparable to prices that would have resulted from a competitive bid Contract.

Within 5 business days of the Department's request, the Contractor shall submit proposed pricing and cost justification for the Contract revision. The Department will respond within 5 business days after receipt of the Contractor's submittal. The Department and the Contractor can mutually agree to extend these 5-business-day time limits.

#### **1904.4 FORCE ACCOUNT**

If the Engineer and Contractor are unable to negotiate a price for the Contract revision in accordance with 1904.3, "Negotiated Prices," the Engineer may direct the Contractor to perform all or part of the revised Work on a force account basis. When the Engineer directs the Contractor to perform revised Work on a force account basis, the Department will pay the Contractor as specified in 1904.4.A through 1904.4.J.

Before beginning the revised Work, the Contractor shall submit a written proposal for the revised Work that includes a cost estimate of the revised Work (labor, Materials, Equipment, and any other costs as identified in 1904.4.A through 1904.4.J) and a schedule of the revised Work in accordance with 1803, "Progress Schedules."

##### **A Labor**

The Department will compensate the Contractor for labor at the actual rate of wage paid and shown on the payroll for every hour that the labor and foreman are actually engaged in the revised Work. The foreman must be in direct charge of the specific operations and must be at the Project Site in order to be included in this compensation. Unless already included in the wage rates paid, the Contractor will also receive the actual labor-related costs incurred by reason of subsistence and travel allowances, health and welfare benefits, pension fund, or other fringe benefits, provided those payments are required by collective bargaining agreement or other employment contract generally applicable to the classes of labor employed on the Work.

The Department will prorate the wages of any foreman who is employed partly on the revised Work and partly on other Work. The Department will determine the prorated wage based on the number of workers employed on each class of Work as shown by the payrolls. The Department will prorate any subsistence or travel allowances paid to the foreman on the same basis as the prorated direct wages.

The Department will pay the Contractor an amount equal to 62 percent of the actual taxable rate of wage as full compensation for overhead, profit, additional bond, property damage and liability insurance premiums, workers' compensation insurance premiums, unemployment insurance contributions, employer Social Security taxes, and other indirect labor force costs. This compensation is based on a Workers' Compensation insurance premium of \$21.00 per \$100.00 of payroll. If the revised Work involves labor in a classification with a higher premium rate, the Contractor may submit a written request in accordance with 1403, "Notification for Contract Revisions," for the additional premium amount. The request shall include:

- (1) A certified copy of the Contractor's latest Workers' Compensation Final Insurance Audit, and

- (2) A certification from the insurance carrier, listing the Workers' Compensation classification code numbers and the premium rates that are being paid in the current year.

## **B Materials**

The Department will pay the Contractor the actual cost of acceptable Materials delivered and used in the revised Work, including transportation charges paid by the Contractor (exclusive of equipment rentals), plus an additional 15 percent for field and home office overhead costs and profit.

## **C Equipment**

The Department will pay the Contractor for Equipment at the rental rates established by the Commissioner's Equipment Rental Schedule available on the Department's website and effective on the date the two parties execute the force account agreement (Supplemental Agreement or Work Order). This compensation is for Equipment, fuel, and lubricants that the Engineer authorizes and the Contractor uses on the Project. The Department will not pay for small tools. The Department will pay for the actual time the Equipment is in operation on the revised Work, plus travel time or transportation allowances. The Department will not pay for any additional Equipment costs except as provided under 1904.4.D, "Miscellaneous Compensation."

If the Equipment is moved to and from the location of the revised Work under its own power, the Department will pay for the travel time at the above rental rates. If the Equipment is moved to and from the location of the revised Work by means other than its own power, the Department will pay for the actual operating time during periods of loading and unloading at the above rental rates and will pay for the actual transportation costs.

## **D Miscellaneous Compensation**

If the Engineer directs the Contractor to perform the revised Work on the right of way of a railroad, in addition to the compensation for labor, Materials, and Equipment, the Department will pay the Contractor for actual costs related to satisfying the requirements of 1708, "Railroad-Highway Provisions." The Department will only pay for these costs to the extent that there is no duplication or overlapping of charges provided under 1904.4.A, "Labor," 1904.4.B, "Materials," and 1904.4.C, "Equipment," or by any existing contract items.

The Department will pay the Contractor for the actual cost of miscellaneous fees incurred in performing the revised Work, including but not limited to dump fees, permits, and licenses.

The Department will not pay the Contractor for other miscellaneous costs that the Contract does not provide for specifically.

### **E Daily Records**

The Engineer and Contractor will document the labor, Materials, and Equipment used in performing the revised Work on a *Daily Force Account Record* (Form 2137). At the end of each workday, the Engineer and Contractor will compare and sign the *Daily Force Account Record*. *Daily Force Account Records* signed by both the Department and Contractor will govern over other Department and Contractor records.

In the event the Contractor declines to sign the *Daily Force Account Record*, the Department's records shall govern.

### **F. Payments**

The Department will not pay for the revised Work until the Engineer has accepted the revised Work and the Contractor has submitted to the Engineer itemized statements of the cost, including the following:

- (1) Name, classification, date, daily hours, total hours, rate, and extension for each laborer and foreman.
- (2) Designation, dates, daily hours, total hours, rental rate, and extension for each unit of Equipment.
- (3) Quantities of acceptable Materials, prices, and extensions.
- (4) Transportation costs of Materials and Equipment.
- (5) Invoices for Materials used and for transportation charges. If the Contractor uses Materials on the revised Work that the Contractor did not specifically purchase for the Work but were taken from the Contractor's stock, the Contractor shall submit an affidavit certifying that such Materials were taken from the Contractor's stock, that the quantity was actually used, and that the price and transportation costs represent the actual costs to the Contractor.

### **G Specialty Contract Work**

If the Contractor uses specialty contracting firms to perform the revised Work, the Department will pay the Contractor by reasonable invoice at the discretion of the Engineer. "Specialty work" is unique work that cannot be performed by the Contractor, its subcontractors, or other contracting firms that generally perform work on highway construction projects.

The provisions of 1904.4.A through 1904.4.F shall not apply to payments made by reasonable invoice. All firms or contractors paid under these provisions and working on the Project are subject to all Labor Provisions required by the Contract.

The Contractor shall provide the Engineer with a cost estimate of the specialty Work or service and obtain the Engineer's approval before performing the specialty Work or service. As a minimum, the cost estimate shall include a complete description of types of Equipment to be used, the number and job classifications of employees who will perform the specialty Work, and all Material costs.

## **H Contractor Mark-Up**

For any force account work performed by a subcontractor (including work performed by a specialty contractor), the Department will pay the Contractor one additional mark-up on revised Work performed by a subcontractor to cover administration, general superintendence, overhead, profit, and expenses not otherwise recoverable. The additional mark-up will be a percentage of the total force account invoice for the subcontractor's portion of the revised Work equal to 10 percent of the first \$50,000.00 plus 2 percent of the balance in excess of \$50,000.00.

## **I Acceleration**

The Engineer may order the Contractor to accelerate the Work to avoid delay costs or to complete the Project early. The Department will pay for accelerations in accordance with this section (1904).

## **J Inefficiency**

The Department will compensate the Contractor for inefficiency or loss of productivity resulting from 1402, "Contract Revisions." Use the Measured Mile analysis comparing the productivity of work impacted by a change to the productivity of similar work performed under unimpacted (unchanged) conditions to quantify the inefficiency. The Department will pay for inefficiencies in accordance with this section (1904).

## **1904.5 NON-ALLOWABLE CHARGES**

The Department will not pay the Contractor for the following, regardless of the method of payment for the revised Work:

- (1) Field or home office overhead and profit exceeding that specified in 1904.4, "Force Account;"
- (2) Loss of anticipated profits;
- (3) Home office overhead or extended home office overhead calculated using the Eichleay formula or other formula;
- (4) Consequential damages, including loss of bonding capacity, loss of bidding opportunities, and insolvency;
- (5) Indirect costs;
- (6) Attorneys fees, claims preparation expenses, or costs of litigation; and

(7) Interest.

Per 1402.4, "Suspensions of Work Ordered by the Engineer," the Department will not pay the Contractor for profit on suspensions or delays ordered by the Engineer. The Department will remove profit from the mark-ups in 1904.4.A, "Labor," 1904.4.B, "Materials," and 1904.4.H, "Contractor Mark-Up," by reducing the mark-up percentages as follows:

- (1) Labor: from 62 percent to 57 percent;
- (2) Materials: from 15 percent to 10 percent; and
- (3) Contractor mark-up: from 10 percent for the first \$50,000.00 to 5 percent for the first \$50,000.00.

## **1904.6 COMPENSATION FOR DELAY**

### **A General**

For compensable delays as identified in 1806, "Determination and Extension of Contract Time," the Department will pay for the costs specified in 1904.6.B, "Allowable Delay Costs." The Department will not pay for non-allowable charges specified in 1904.5, "Non-Allowable Charges," or duplicate payment made under 1904.2 through 1904.4.

The Department will not pay for delay costs before the Contractor submits an itemized statement of those costs. The Contractor shall include the following content for the applicable items in the statement.

### **B Allowable Delay Costs**

#### **1 Extended Field Overhead**

The Department will pay the Contractor for extended field overhead costs that include costs for general field supervision, field office facilities and supplies, and for maintenance of field operations.

General field supervision labor costs include, but are not limited to, field supervisors, assistants, watchman, clerical, and other field support staff. The Contractor shall calculate these labor costs as specified in 1904.4.A, "Labor." For salaried personnel, the Contractor shall calculate the daily wage rate actually paid by dividing the weekly salary by 5 days per week.

Field office facility and supply costs include, but are not limited to, field office trailers, tool trailers, office equipment rental, temporary toilets, and other incidental facilities and supplies. The Contractor shall calculate these costs to provide these services on a calendar-day basis using actual costs incurred due to the delay.

Maintenance of field operations costs include, but are not limited to, telephone, electric, water, and other similar expenses. The Contractor shall calculate these costs to maintain these services on a calendar-day basis using actual costs incurred due to the delay.

## **2 Idle Labor**

The Contractor shall calculate labor costs during delays as specified in 1904.4.A, "Labor," for all non-salaried personnel remaining on the Project as required under collective bargaining agreements or for other Engineer-approved reasons.

## **3 Escalated Labor**

To receive payment for escalated labor, the Contractor shall demonstrate that the Department-caused delay forced the work to be performed during a period when labor costs were higher than planned at the time of bid. The Contractor shall provide adequate support documentation for labor costs, allowances, and benefits.

## **4 Idle Equipment or Equipment Demobilization**

The Department will pay the Contractor for equipment, other than small tools, that must remain on the Project during Department-caused delays at the idle Equipment rate calculated in 1904.4.C, "Equipment." The Department will pay the Contractor's transportation costs to remove and return Equipment not required on the Project during Department-caused delays.

## **5 Materials Escalation or Material Storage**

The Department will pay the Contractor for increased Material costs or Material storage costs due to the Department-caused delay. The Contractor shall obtain the Engineer's approval before storing Material due to a delay.

# **1905 COMPENSATION FOR ELIMINATED ITEMS**

The Department will compensate the Contractor for eliminated items in accordance with the following:

- (1) For completed quantities of eliminated Contract Items, the Department will compensate the Contractor for the accepted quantities at the Contract Unit Price.
- (2) For materials that the Contractor has ordered but not incorporated in the Work, the Department will compensate the Contractor in accordance with 1907, "Payment for Surplus Material."

- (3) For partially completed quantities of eliminated Contract Items, the Department will compensate the Contractor for that portion of the quantity of the work the Contractor has performed on the eliminated Contract Item on the basis of a percentage of the Contract Unit Price equal to the percentage of work performed toward completion of that quantity of the Contract Item. To calculate this percentage, the Engineer will consider the value of materials incorporated in the partially completed quantity of the eliminated Contract Items to be the invoice cost of the materials plus transportation costs. The Engineer will add a 15 percent mark-up to the sum of the invoice and transportation costs.
- (4) For the cost of equipment, mobilization, and overhead that the Engineer considers directly attributable to the eliminated Contract Items and that the Department has not compensated the Contractor for through provisions (1), (2), and (3) of this list, the Department will compensate the Contractor in accordance with 1904, "Compensation for Contract Revisions."

The Department will not compensate the Contractor for loss of anticipated profits on completely or partially eliminated Work. The Department's compensation to the Contractor for completed or partially completed quantities of Work on eliminated Contract Items in accordance with 1905 constitutes final and full compensation for the Work the Contractor has performed on eliminated or partially eliminated Contract Items.

The Contractor shall allow the Department free access to the Contractor's cost records and other data relating to the Contract as needed by the Department to determine compensation for eliminated Work.

## **1906 PARTIAL PAYMENTS**

### **1906.1 GENERAL**

At least once a month at regular intervals, the Engineer will prepare an estimate of the value of the Work completed to date. Each estimate will show the documented quantity of Work completed or substantially completed under each Contract Item.

The Department will make partial payments once per month based on the amount of Work performed, unless the Engineer authorizes semi-monthly partial payments.

The Department reserves the right to withhold partial payments under this Contract if the Contractor fails to provide documents as required by any other contract with the Department that prevent the Department from making the Final Estimate or executing the Certificate of Final Acceptance for the other contract.

The Department reserves the right to deduct, from any payment due to the Contractor, such amount to protect the Department's interests in consideration of charges or assessments against the Contractor, whether arising from this Contract or any other contract with the Department. The Department may withhold payment of such amount until the Contractor pays or satisfies the charges or assessments.

The Department's payment of partial estimates does not relieve the Contractor from the sole responsibility for all Materials and Work for which payments have been made or for the restoration of any damaged Work. The payments are not a waiver by the Department of any provision of the Contract or of the Department's rights to require the Contractor to fulfill all terms of the Contract.

The Contractor's acceptance of partial payment constitutes a certification by the Contractor that the Work covered by the partial payment meets the Contract requirements.

## **1906.2 MATERIAL ON HAND**

The Contractor may request partial payments for the value of "materials on hand," defined as acceptable Materials produced for or provided to the Project, but not yet incorporated into the Work.

The Department will pay for Materials on hand when the Contractor meets the following requirements:

- (1) Requests payment for at least \$5,000;
- (2) Provides Materials specifically manufactured, produced, or supplied for the Project;
- (3) When the Contractor provided storage as approved by the Engineer for Materials delivered to, or adjacent to, the Project Site;
- (4) When the Contractor irrevocably assigns the Materials to the Project, stores the Materials separately from other similar Materials, ensures the Materials are not available for use on other projects, and makes the Materials available for inspection by the Department at the material storage location for Materials not yet delivered to, or adjacent to, the Project Site; and
- (5) Provides Materials as shown on the Plans and in accordance with the Specifications.

The Contractor shall provide the following actual, authentic, customary, and auditable documents, produced in the normal course of business, to receive payment for Materials on hand:

- (1) Invoices and proof of payment for the Materials,
- (2) An itemized list detailing the cost of Contractor-produced Material, and

- (3) Documents containing complete Material description and identification.

The Department will pay for Materials on hand in an amount not greater than the delivered cost of the Material as verified by Contractor-provided invoices or not greater than the Contract Unit Price for the Material complete in place. The Department reserves the right to recover payments made by the Department for Materials on hand if the Department believes the Contractor has not paid its Subcontractors or suppliers for the Materials on hand. The Department may recover the applicable payment by deducting such amount from the next partial payment.

### **1907 PAYMENT FOR SURPLUS MATERIAL**

The Department will pay for Materials ordered for the Work, but not used, if the Engineer cancels a portion of the Work or the Contract, orders the termination of the Work before completion of the entire unit, or orders a quantity greater than the quantity needed for the Work, in accordance with the following:

- (1) If the Contract Item only includes providing and delivering the Material, the Department will pay for purchased surplus Materials shipped or delivered to the Project at the Contract Unit Price;
- (2) If the Contract Unit Price includes the cost of providing and placing of the Material, the Department will perform the following:
  - (2.1) Take possession of the purchased surplus Material shipped or delivered to the Project, or
  - (2.2) Order the Material returned to the supplier for credit and pay the Contractor the actual purchase price and transportation costs plus 15 percent of the total, less credits the Contractor received for the returned Materials.
- (3) The Department will pay for Materials ordered but not consigned for shipment upon delivery, only if the supplier refuses to cancel or modify the order for Materials requiring special manufacture, fabrication, or processing, making the Materials unsuitable for general use.

The Department will not pay for Materials ordered for the Work, but not used, if the Contractor or supplier takes possession of the surplus Material at no additional cost to the Department.

The Department will pay an amount for surplus Materials not greater than the Contract Unit Price for the same quantity of Materials complete in place. The Contractor shall provide receipted invoices or an affidavit showing the purchase price

and transportation charges for surplus Materials that will become the property of the Department.

The Contractor shall deliver surplus Materials that the Department purchases to the storage sites designated by the Engineer.

The Department will only pay for Materials incorporated in the Work, except as otherwise specified in this section.

The Department will only pay for surplus materials approved by the Engineer and for material properly preserved, stored, and maintained in accordance with 1606, "Storage of Materials," and 1607, "Handling Materials," until delivered to the Department.

## **1908 FINAL ESTIMATE AND PAYMENT – CONDITIONS AND PROCESS**

### **1908.1 GENERAL**

The Department will initiate the final estimate and payment process in accordance with this section after the Contractor achieves Project acceptance as specified in 1516.2, "Project Acceptance."

The Department may make corrections to estimates for partial payments in the final estimate.

If the final estimate shows that the total of all partial payments exceeds the total amount due the Contractor, the Contractor shall promptly refund the overpayment. If the Contractor fails to refund the overpayment, the Department may deduct the amount of overpayment from any moneys due or becoming due to the Contractor under any other contract. This right survives the completion and closeout of the Contract.

### **1908.2 SEMI-FINAL ESTIMATE FOLLOWING PROJECT ACCEPTANCE**

After granting Project acceptance in accordance with 1516.2, "Project Acceptance," the Engineer will prepare a semi-final estimate showing the accepted quantity and value of each Contract Item performed by the Contractor, and the amounts the Department will retain or deduct as required by the Contract. The Contractor shall review and comment on the semi-final estimate.

### **1908.3 FINAL ESTIMATE FOLLOWING COMPLETION OF WORK**

The Department will review records and other factors indicating compliance with the requirements of 1516.3, "Completion of the Work." The Department will prepare and provide the final estimate and Certificate of Final Acceptance to the Contractor after the Contractor completes the Work in accordance with 1516.3, "Completion of the Work." The Contractor shall execute and return the Certificate of Final Acceptance to the Department within 90 calendar days of receipt. If the Contractor does not return the executed Certificate of Final Acceptance within the time specified in this section, the Department will deem the Certificate accepted by the Contractor.

The Contractor's acceptance of the final payment constitutes a certification by the Contractor that the Contractor performed the Work in accordance with all Contract requirements.

The Department will make final payment to the Contractor after the Contractor executes and returns the Certificate of Final Acceptance or the Department deems the certificate accepted.

Creating the final estimate and making final payment shall not relieve the Contractor of financial liabilities imposed by statute or waive Department claims, under Minnesota Statutes Chapter 15C or otherwise, with respect to any overcharges or any claims made by the Contractor under or related to the Contract. Final payment and Contract closeout by the Department does not affect the rights of any claimants under Minnesota Statutes §177.44.

### **1909 ASSIGNMENT OF PAYMENTS**

The Department will not recognize assignments or orders executed by the Contractor that direct payments of money due to the Contractor under the Contract, unless the Surety's consent is attached to the assignment or order by endorsement or other means, or the assignment or order is of an account defined in the Uniform Commercial Code as enacted in Minnesota.

The Department may accept or reject orders or assignments, except in cases where acceptance is required by law.

### **1910 COST ESCALATION**

The Department will not make adjustments for cost escalation, unless the Contract requires otherwise.

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