



ADMINISTRATION TEAM MINUTES

Date: May 15, 2009
Time: 9:00 am
Place: Tacoma AGC Building

Attending:

	Mark Borton		Dave Mariman	X	Anthony Sarhan
	Jerry Brais		Darrel McCallum		Glenn Schneider
	Forrest Dill	X	Craig McDaniel	X	Mark Scoccolo
X	Paul Gonseth	X	Tina Nelson	X	Dave Standahl
	Mike Hall		Roger Palfenier	X	Andy Thompson
X	Tim Hayner		Mark Rohde	X	Greg Waugh

Guests: None

Opening Comments: (WSDOT Cost Savings and ARRA Projects)

WSDOT Cost Saving:

Craig McDaniel explained to the group the budget reduction exercise that WSDOT is going through with a 10% to 20% reductions in spending across each department section.

Earned Value for projects was discussed and Craig stated that in the future projects with over \$15 million will be required to have earned value in the budget.

The team was asked about postponing the printing of the 2010 Book as a cost saving measure and either continuing on with amendments every four months or printing a companion book to catch the amendments up to August 3rd 2009 and use it along with the 2008 Book for the next year or more. The team supported publishing the 2010 book. They don't want another companion book in addition to the Standard Specification book, the special provisions, the pink sheets, addendums, etc. They count on the book being published every two years. Discussions were held on the size of the book. The team likes its current size for use in the field and don't want it to go to an 8 1/2" x 11" size, bound in a binder. The team strongly supports publishing the 2010 Book, this fall, at the current size.

Team members express a concern over the number of copies they get concerning updates to the QPL. They primarily use On-Line QPL and at most one copy of revisions is enough per Contractor Office. Craig stated he would inform Bob Briggs.

ARRA Projects:

Anthony Sarhan discussed ARRA by informing the team that there are 183 ARRA projects in the State of Washington, between WSDOT and local agencies, and FHWA will be visiting all of them. FHWA wants to be sure that they are a visible presence on ARRA projects. All ARRA State projects will get a FULL inspection which will look hard at quality of work, Documentation, Change Orders and other.

Greg Waugh noted that reporting of labor on ARRA could get confusing as people may work on an ARRA project as one of several projects that they maybe working on.

Andy Thompson thanked Craig for setting up share point for ARRA posting. Craig made a point to mention that was Dan Gasche's doing and he would let him know.

Craig informed the team that the documentation needed for ARRA was important and that funds would be withheld if not turned in.

April 17, 2009 Minutes:

The team was asked about comments concerning the 4-17-09 Minutes. Dave Standahl asked about the transition section, which proposed DB, for the AWW Holgate to King Street Stg 2 Project, which was presented by Ali Amiri in the 4-17-09 meeting, wondering how bonding and insurance was to be done. Anthony Sarhan stated that was one of his concerns with a DB as part of a DBB project and possibly the Brook's Act would be in conflict. Other members stated that design (DB) is already being done in contracts with MSE Walls, and other submittal requirements.

Tina asked Craig M if he had talked with Dave Mounts about DRB. Craig stated he hasn't yet. Craig stated he will discuss with Dave M. when he gets back.

Craig McDaniel informed team that he had discussed the Steel Escalation Clause with Linea. Linea wants an overall plan concerning all the clauses (Steel, Asphalt and Fuel) before making or removing them. Mark S. stated that the State has been reactionary in the past with escalation clauses, and that they want to make sure that there is consistency in the future with these clauses.

Old Business Discussions: (Electronic Bidding, Electronic Specifications, Region Ticket Taker GSP and changes to Weighing Equipment Specification 1-09.2)

Electronic Bidding:

The team discussed electronic bidding and seemed to feel for the most part it was working well for them. Some members asked if there could be more than one day for bid openings in a week, as there is just too much out there now.

Electronic Specifications:

Greg Waugh asked about the status of paperless documentation we need to get away from stamps and signatures being required on hard copies. Mike G informed Greg that this was a Department wide issue being reviewed. Craig and Mike will see what the status is with other sections of the Department.

Weighing Specification and Region Ticket Taker GSPs:

Anthony Sarhan was concerned with the elimination of the ticket taker for example how was yield being accounted for and how was verification of trucks being tracked once they left the scales. Paul Gonseth stated that in their Region they don't eliminate the ticket taker employ from the project, they just assign them another task which is to keep a tally of trucks coming to the site by truck number and time arrived and they have them calculate yield. He stated that where they had completely eliminated the employ from the work, they overran HMA by 25%.

The team had reviewed Dave Marimans revision to specification 1-09.2. Some members of the team felt that the Scalemans Daily Report should be eliminated with the current electronic scales since the ticket produces has all the information that the salesman's report would have. Most members felt the changes to the specification could move forward for FHWA review. The major changes to specification are:

1. Eliminates tare weight from twice a day to once a day.
2. Requires the Contractor to provide the Scale operator and not Contracting Agency.
3. Eliminates the daily Scale Verification Check from once a day to once within the project and allows for other options to verify the scale other than requiring that they scale be verified by another platform scale.
4. A new section called *Random Scale Verification Checks* were added to existing specification as part of Dave's changes. These checks would allow the Engineer to verify a weight if they had concerns, however a force account pay item was added to the existing specification to pay the Contractor for these Random Scale Verification Checks if the load in question was not out of accepted tolerances.

Anthony Sarhan, responded that he would need sometime to review this Weighing Equipment change to 1-09.2 in conjunction with the Region GSPs on eliminating ticket taker. Anthony stated that weight fraud is a most common fraud nation wide and time sensitive deliveries are a concern.

Mike G stated that he would like to go over Dave's proposed specification changes with Craig to assure that they are alright with it before sending to Anthony for FHWA review. There are some concerns from the Regions on the FA payment for Random Scale Verification Checks that need to be gone over.

New Business (Setting Fall Calendar Dates for AGC Meetings):

Before adjourning the team set the Fall 2009 dates for future meetings which are:

- September 18, 2009
- October 16, 2009
- November 20, 2009

ACTION Items captured from Meeting:

Craig will discuss with Dave Mounts and Bill Attridge about DRB.

Weighing Specification will begin process to go forward for FHWA Review.

Meeting adjourned 12:00 pm.

Future Meetings: September 18, 2009

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DIVISION 1
GENERAL REQUIREMENTS

HMA Ticket Receiver

MEASUREMENT AND PAYMENT

Weighing Equipment

General Requirements for Weighing Equipment

The last sentence of Section 1-09.2(1) under **Trucks and Tickets** is replaced with the following:

(*****)

When the Contractor delivers HMA, the vehicle operator shall write on the ticket the time material arrived at the material delivery point. All tickets shall be in legible condition and verify daily totals. The Contractor shall collect and deliver all tickets, in numerical sequence, for each days work to the Engineer no later than the beginning of the next working day.

1 **MEASUREMENT AND PAYMENT**

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3 **Weighing Equipment**

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5 (OR October 1, 2008)

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General Requirements for Weighing Equipment

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The first sentence of the last paragraph of Section 1-09.2(1) under **Trucks and Tickets** is deleted. The last paragraph of Section 1-09.2(1) under **Trucks and Tickets** is supplemented with the following:

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When the Contractor delivers *** \$\$1\$\$ **, the vehicle operator shall write on the ticket the time material arrived at the material delivery point. During the daily work shift the scale operator shall keep a running tally of the *** \$\$1\$\$ ** being delivered to the work site during each shift. The running tally shall be made available to the Engineer upon request. For materials listed in this specification, the Contractor shall collect all tickets in legible condition and verify daily totals prior to delivery to the Engineer. The Contractor shall deliver all tickets, in numerical sequence, for each shift to the Engineer no later than three hours following the work shift. The next day's shift operations may not commence until tickets have been delivered to the Engineer and any discrepancies have been resolved.

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For all other materials measured and paid for by weight the vehicle operator shall deliver the tickets in legible condition to the material receiver at the material delivery point.

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09021.GR1

General Requirements for Weighing Equipment

[\(New Date\)](#)

If the Region chooses, the General Special for Contractor Weighing can be inserted. This provision requires the Contractor to supply an operator. But it goes much further. If this specification is used, the entire weighing operation becomes an end product specification. The Contractor weighs the trucks and issues the tickets without oversight of the scale, the operator or the operation while it's going on. The oversight occurs after the truck leaves the scale, when the inspector will randomly select loads and send them to an independent scale. Variations between the ticket and the check weights will result in pay adjustments. *Must include 09021A.FR1 or 09021B.GR1. Must also use 09022.GR1, 09023.GR1, 09024.GR1, 09025.GR1 and 09026.GR1.*

Deleted: August 6, 2001

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09021A.FR1

(Designated Scale)

(August 6, 2001)

The location and quality of the check scale become important. It will be up to the Region to find an independent scale and arrange for its use (including an agreement to pay fees). This selection will have to be made jointly with the Construction PE, taking into account convenience and haul time to get to the scale. The decision is communicated to bidders through a second GSP designating a scale location. Fill-in is scale location. *Must use with 09021.GR1, if 09021B.GR1 is not used.* (1 fill-in).

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09021B.GR1

(Installed Scale)

[\(New Date\)](#)

If the Region desires to use Contractor weighing and cannot find a convenient scale, then an alternate to the designated scale has been prepared. The GSP for installed scale directs the Contractor to provide and install the check scale at a designated location. This provision contains a lump sum pay item for the work. *Must use with 09021.GR1 if 09021A.FR1 is not used.*

Deleted: August 6, 2001

09022.GR1

Specific Requirements for Batching and Hopper Scales

(August 6, 2001)

Must use with 09021.GR1.

09023.GR1 **Specific Requirements for Platform Scales**
(August 6, 2001)
Must use with 09021.GR1.

09024.GR1 **Specific Requirements for Belt Conveyor Scales**
(August 6, 2001)
Must use with 09021.GR1.

09025.GR1 **Measurement**
[\(New Date\)](#)
Must use with 09021.GR1.

Deleted: August 6, 2001

09025B.GR1 (Installed Scale)
(August 6, 2001)
Must use with 09021B.GR1 and 09026B.GR1.

09026.GR1 **Payment**
[\(New Date\)](#)
Must use with 09021.GR1.

Deleted: August 6, 2001

09026B.GR1 (Installed Scale)
[\(New Date\)](#)
Must use with 09021B.GR1 and 09025B.GR1.

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09021.GR1

(New Date)

General Requirements for Weighing Equipment

Section 1-09.2(1) is revised to read:

Deleted: August 6, 2001

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Unless otherwise specified, any highway or bridge construction materials to be proportioned or measured and paid for by weight, shall be weighed on scales. The Contractor shall provide, set up, operate, and maintain the scales necessary to perform the weighing or shall designate permanently installed, certified commercial scales for the purpose. Each truck to be weighed shall bear a unique identification number. This number shall be legible and in plain view of both the scale operator and the person receiving the material at the jobsite.

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Deleted: These materials include natural, manufactured or processed materials obtained from natural deposits, stockpiles, bunkers, or mixing plants.

Scales provided or designated by the Contractor shall be accurate to within one-half of one percent of the correct weight throughout the range of use. If platform scales are used, each platform scale shall be able to weigh the entire hauling vehicle or combination of connected vehicles at one time. No part of the vehicle or vehicle combination will be permitted off the platform as it is weighed.

An agent of the scale manufacturer shall test and service any scale before its use at each new site and then at 6-month intervals. The Contractor shall provide the Engineer a copy of the final results after each test.

All initial weighing at the dispatch site or at another site approved by the Engineer shall be performed by a Contractor employee or by another person designated by the Contractor. The designated weigher shall prepare a weigh or load ticket to accompany each load. Each ticket shall contain the truck identification number, the date and time of weighing the load, a description of the material being weighed and the signature or initials of the weigher.

Each weigh or load ticket shall also contain a determination of the net weight of the load. This shall be a reading from any device which weighs as material is loaded or a calculation including gross weight and tare weight when the method of loading does not include weighing. It shall also identify the weighed material. When used, tare weights shall be taken of each hauling vehicle at least once, each day. A record of each day's tare weights shall be furnished to the Project Engineer daily using Form 422-027 EF, or on an alternate form approved by the Project Engineer.

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The vehicle operator shall deliver the ticket to the material receiver, at the material delivery point. The material delivery point is defined as the location where the material is incorporated into the permanent work.

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Except as noted below, all weighing shall be subject to confirmation testing through random checks made with a secondary scale. The secondary scale shall be described in the contract provisions, either as a designated independent commercial scale or as a platform scale installed by the

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Contractor at a location named in the provisions. The inspector will select loaded trucks at random and weigh them with the secondary scale. The same trucks will be weighed empty when the tested load has been delivered. The frequency of confirmation testing will be such that at least one test is performed for each contract item paid by weight for each \$50,000 of payment for that item and at least one test weekly for each weighed contract item performed during that week.

Confirmation testing will not be routinely conducted for small quantities of weighed material. A small quantity shall be defined as one whose estimated proposal quantity, multiplied by its unit price, has a value of less than \$20,000. The inspector may choose to apply confirmation testing to a minor quantity item if, in the inspector's judgment, there is reason to suspect that the ticket weight might be incorrect.

09021A.FR1
(August 6, 2001)

Section 1-09.2(1) is supplemented with the following:

The Contracting Agency has selected the following independent commercial scale for the purpose of conducting confirmation testing for weighed materials on this project. The Agency will pay any fees required by the owner of the scale. All other costs associated with complying with the confirmation testing requirement shall be borne by the Contractor and shall be included in the bid price for the material being hauled.

*** \$\$1\$\$ ***.

09021B.GR1
(New Date)

Section 1-09.2(1) is supplemented with the following:

The Contractor shall install a platform scale on or near the jobsite at a specific location to be designated by the Engineer. The Contractor shall provide, set up, operate, and maintain the scales. Scales shall:

1. Be accurate to within one-half of one percent of the correct weight throughout the range of use;
2. Not include spring balances;
3. Include beams, dials, or other reliable readout equipment;
4. Be built to prevent scale parts from binding, vibrating, or being displaced and to protect all working; and
5. Be carefully maintained, with (a) bunkers and platforms kept clear of accumulated materials that could cause,

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Deleted: 4. Be arranged so that operators and inspectors can safely and easily see the dials, beams, rods, and operating scale mechanisms;¶

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The scale shall be able to weigh, at one time, any hauling vehicle or combination of connected vehicles that will be utilized for weighed materials on the project. No part of a vehicle or vehicle combination will be permitted off the platform as it is weighed.

The scale shall be installed and maintained with the platform level and with rigid bulkheads at either end to prevent binding or shifting. The readout device shall be marked at intervals of no more than 40 pounds. Test records shall show results to the nearest 20 pounds.

Before use at its new location and then at 6-month intervals, the scale shall be: (a) approved under rules of the Washington State Department of Agriculture's Weights and Measures Section, or (b) serviced and tested with at least 10,000 pounds by an agent of its manufacturer. In either case, the Contractor shall provide the Engineer with a copy of the final test results.

When notified by the Engineer that all confirmation testing has been completed for the project and that the scale is no longer needed, the Contractor shall remove the equipment and restore the site to a satisfactory condition. The scale equipment shall be removed from the jobsite and shall remain the property of the contractor.

09022.GR1

(August 6, 2001)

Specific Requirements for Batching and Hopper Scales

Section 1-09.2(2) is deleted.

09023.GR1

(August 6, 2001)

Specific Requirements for Platform Scales

Section 1-09.2(3) is deleted.

09024.GR1

(August 6, 2001)

Specific Requirements for Belt Conveyor Scales

Section 1-09.2(4) is deleted.

09025.GR1

(New Date)

Measurement

Section 1-09.2(5) is revised to read as follows:

Deleted: August 6, 2001

If confirmation testing shows the initial scale has been underweighing, the on-site representative of the Contractor shall be notified. The Contractor shall not be compensated for any loss from underweighing.

If the initial scale has been overweighing, the on-site representative of the Contractor shall be notified and the Contracting Agency will calculate a price adjustment. ~~The combined weight of all materials weighed after the last test showing accurate results through the load preceding the next confirmation test shall be calculated. This combined weight will then be reduced by the percentage of weighing error that exceeds one-half of one percent. If subsequent confirmation tests continue to show overweighing, then the highest correction factor calculated from all tests shall be applied to all loads weighed after the last successful test and before a new confirmation test that shows accurate results.~~

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If the specifications and plans require weight measurement for minor construction items, the Contractor may request permission to convert volume to weight. If the Engineer approves, an agreed factor may be used to make this conversion.

09025B.GR1
(August 6, 2001)

Section 1-09.2(5) is supplemented with the following:

No specific measurement of a unit will apply to the lump sum item "Confirmation Scale".

09026.GR1
(New Date)

Payment

Section 1-09.2(6) is revised to read:

Unless otherwise specified, the Contracting Agency will pay for no materials received by weight unless they have been weighed in accordance with the requirements of this section.

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Unit contract prices for the various pay items of the project cover all costs related to weighing and proportioning materials for payment. These costs include those for furnishing, installing, certifying, maintaining and operating scales for initial weighing, those for extra haul distance and time involved in complying with confirmation testing requirements, and those for any other related item specified in this section.

09026B.GR1
(New Date)

Section 1-09.2(6) is supplemented with the following:

Payment will be made in accordance with Section 1-04.1 for the following bid item when included in the proposal:

"Confirmation Scale," Lump Sum

Deleted: August 6, 2001

| The lump sum payment for this item shall be full compensation for all costs related to the procurement, installation, testing, maintenance, [operation](#) and removal of the scale in accordance with the provisions.

TICKETS.DT3

TRUCKS AND TICKETS

(Section 1-09 **MEASUREMENT AND PAYEMENT**) (10/01/08)

Use in projects when large quantities of weighed materials are to be incorporated into the project. Contact the Olympic Region construction office for guidance.

This provision modifies the standard specifications requirements for ***Trucks and Tickets*** for selected highway materials to be proportioned or measured and paid for by weight.

\$\$\$ should include any materials of significant quantity; natural, manufactured or processed materials obtained from natural deposits, stockpiles, or bunkers.

The project office will need to modify inspection duties to include tabulation of a material delivery list that will record truck numbers, time of delivery, station location of placement, plan width, plan depth, HMA Temps (if applicable), and cyclic temperature stations (if applicable). Tons and yields will be completed at the end of shift after the Contractor has delivered the full package of tickets as required by this specification. The project office is encouraged to purchase a two way radio and keep in communication with the incoming trucks and scale operators.

I applaud the reduction in scale checks, However, I think the addition of the "random" checks and subsequent payment by force account if they don't verify is going to be an administrative nightmare. In order to make payment a change order would need to be written. Also, who is responsible for finding and certify the second scales. If it's the contractor are we paying for that process also? How do we track an item that we may or may not pay?

My recommendation is that the new random scale verification check process be eliminated. Leave the current language in the specifications.

Take a look at the second sentence of section 1-09.2(5). I think it is possible to read this as if the verification is optional. I think it would be less ambiguous if it were stated "The method of verification will be one of the following, as selected by the Contractor".

In section 1-09.2(6) I think it needs to be clarified whether the Contractor will be compensated for Scale Verification Checks. I don't think they should be. I just don't think it is clearly stated that it is included in the unit price of the other items.

The specification does clarify how payment for Random Scale Verification Tests will be handled. I suppose I agree with this considering the possible impacts to a contractor if an overzealous inspector calls for numerous random verification checks, thereby causing delays to the contractor's operation. I can't think of any other reason to be paying for the checks. I suspect there will be very few random checks conducted due to this payment issue. If so, is this good or bad? I don't know.

- Have we proven by looking at other large quantity WSDOT projects that taking a tare weight once a day will reflect overall accurate quantities ?

- Why are we paying force account for making scale checks when they are within tolerance. In my opinion this is something that the contractor can bid and it can be reflected in their per ton prices for the project. Force Account is just another item to worry about and **way too much additional work for the PE and Local Agency offices**. Also, do our inspectors have time to observe all this force account work? I know the locals do not.

- Also, shouldn't we always have a bid item "FA- Scale Verification" Est. if we were to go this way so a Change Order did not have to be written?

I see potential conflict between WSDOT & contractor with this. By not having a set duration between verification tests there could be potential for large amount of quantity adjustment if scale over weighing. If a verification test is done at beginning of project (which is in spec) & then another done several months later (which is out of spec) then there is potential for a considerable amount of adjustment, if large quantity weighed during this time period.

If contractor can demonstrate the defect was present for lesser time, does this means he's aware of the problem and should have had it fixed prior to the second verification test?

1-09.2 Weighing Equipment

1-09.2(1) General Requirements for Weighing Equipment

Unless specified otherwise, any Highway or bridge construction materials to be proportioned or measured and paid for by weight shall be weighed on a scale.

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Scales

Scales shall:

1. Be accurate to within 0.5-percent of the correct weight throughout the range of use;
2. Not include spring balances;
3. Include beams, dials, or other reliable readout equipment;

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4. Be built to prevent scale parts from binding, vibrating, or being displaced and to protect all working parts and;

Deleted: 4. Be arranged so that operators and inspectors can safely and easily see the dials, beams, rods, and operating scale mechanisms;

5. Be carefully maintained, with bunkers and platforms kept clear of accumulated materials that could cause errors.

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Scale Operations

“Contractor provided scale operations” are defined as operations where a scale is set up by the Contractor specifically for the project and most, if not all, material weighed on the scale is utilized for Contract Work. In this situation, the Contractor shall provide a person to operate the project scale, write tickets, perform scale checks and prepare reports.

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“Commercial scale operations” include the use of established scales used to sell materials to the public on a regular basis. In addition, for the purposes of this specification, all batch, hopper, and belt scales are considered to be commercial scales. When a commercial scale is used as the project scale, the Contractor may utilize a commercial scale operator provided it is at no additional cost to the contracting agency.

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In addition, the Contractor shall ensure that:

1. the Engineer is allowed to observe the weighing operation and check the daily scale weight record;
2. scale verification checks are performed at the direction of the Contracting Agency (see “1-09.2(5) Measurement”);
3. several times each day, the scale operator makes certain the platform scale balances and returns to zero when the load is removed; and
4. test results and scale weight records for each day’s hauling operations are provided to the Engineer daily. Unless otherwise approved, reporting shall utilize form 422-027, Scalesman’s Daily Report.

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Trucks and Tickets

Each truck to be weighed shall bear a unique identification number. This number shall be legible and in plain view of the scale operator. Each vehicle operator shall obtain a weigh or load ticket from the scale operator. The Contracting Agency will provide item quantity tickets for scales that are not self-printing. The Contractor shall provide tickets for self-printing scales. All tickets shall, at a minimum, contain the following information:

1. date of haul;
2. contract number;
3. contract unit Bid item;
4. unit of measure;
5. identification number of hauling vehicle; and
6. weight delivered
 - a. net weight in the case of batch and hopper scales
 - b. gross weight, tare and net weight in the case of platform scales (tare may be omitted if a tare beam is used)
 - c. approximate load out weight in the case of belt conveyor scales

The vehicle operator shall deliver the ticket in legible condition to the material receiver at the material delivery point. The material delivery point is defined as the location where the material is incorporated into the permanent Work.

1-09.2(2) Specific Requirements for Batching Scales

Each batching scale shall be designed to support a weighing container. The arrangement shall make it convenient for the operator to remove material from the weighing container while watching readout devices. Any weighing container mounted on a platform scale shall have its center of gravity directly over the platform centerline. Batching scales used for Portland cement concrete or hot mix asphalt shall not be used for batching other materials.

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Readout devices used for batching or hopper scales shall be marked at intervals evenly spaced throughout and shall be based on the scale's nominal rated capacity. These intervals shall not exceed one-tenth of 1 percent of the nominal rated capacity. Before use at a new site and then at 6-month intervals, all batching and hopper scales shall be approved under rules of the Weights and Measures Section of the Washington State Department of Agriculture, or serviced and tested with at least 10,000 pounds by an agent of its manufacturer. In either case, the Contractor shall provide the Engineer with a copy of the final test results.

1-09.2(3) Specific Requirements for Platform Scales

Each platform scale shall be able to weigh the entire hauling vehicle or combination of connected vehicles at one time. No part of the vehicle or vehicle combination will be permitted off the platform as it is weighed. A tare weight shall be taken of each hauling vehicle at least once daily.

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Any platform scale shall be installed and maintained with the platform level and with rigid bulkheads at either end to prevent binding or shifting. The readout device shall be marked at intervals of no more than 40 pounds. Test records shall show results to the nearest 20 pounds. During weighing operations, weights shall be read and recorded to the nearest 100 pounds. Before use at a new site and then at 6-month intervals, any platform scale shall be approved under rules of the Washington State Department of Agriculture's Weights and Measures Section, or serviced and tested with at least 10,000 pounds by an agent of its manufacturer. In either case, the Contractor shall provide the Engineer with a copy of the final test results.

Deleted: Any Contractor-supplied scale shall include a scale house with a floor space of at least 6 by 10-feet. The scale house shall be wind and weather tight, shall have windows for light and ventilation, shall include a door, and shall be lockable. It shall include a table, a chair, electrical power, and a space heater. The Contractor shall provide a rest room near the scale house.¶

1-09.2(4) Specific Requirements for Belt Conveyor Scales

The Engineer may approve conveyor-belt weighing of untreated materials if the method and device meet all general requirements for weighing equipment. The recording tape, odometer, totalizer, calibration adjustment, and clock-time imprinter shall be kept locked and the Engineer shall retain all keys. All belt-conveyor scales shall comply with the requirements for Belt-Conveyor Scales in the National Institute of Standards and Technology (NIST) Handbook No. 44, except where these specifications modify those requirements.

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A static load test shall be made: each day after the belt-conveyor has run continuously for about 30 minutes, and again, immediately after the air temperature changes significantly. If the static load test reveals a need for adjustment, the Contractor shall perform a chain test. The Contractor shall make the computation of the test chain calibration, the calibration procedures and results, and related records available for the engineer's review. The test chain shall be clearly marked with its calibration, carried in a suitable container, and kept immediately available for testing.

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1-09.2(5) Measurement

Scale Verification Checks

The Engineer will verify the accuracy of each batch, hopper or platform scale at least once on every project. This verification will consist of one of the following methods and be at the contractor's option.

1. Weigh a loaded truck on a separate certified platform scale designated by the contractor for the purpose of scale verification.
2. Weigh a vehicle that weighs at least 10,000 pounds on a separate certified scale and then check the project scale with it.
3. Establish a certified fixed load weighing at least 10,000 pounds as a check-weight. The certification shall consist of an affidavit affirming the correct weight of the fixed load.

Should the scale verification check reveal a weight difference of more than 0.5-percent, a second scale verification check shall be performed immediately. If the weight differences of both comparison checks exceed the 0.5-percent limit, the Contractor shall immediately stop weighing and the scale shall be recertified at the Contractor's expense.

Deleted: Regardless of the type of scale used, a scale verification test shall be performed daily. The Contractor shall designate a separate, certified, platform scale or a separate commercial platform scale, independent of the scale used for weighing construction materials, to be used for scale verification checks. Each batch, hopper or platform scale will be tested by routing a loaded truck onto a separate certified platform scale or a separate commercial platform scale and comparing the weights.

Deleted: If such a separate scale is not reasonably available, the Engineer may approve a Contractor request to use an alternate method of scale verification checks as described on Form 422-027, "Scaleman's Daily Report" and as appropriate for the type of scale.¶

Random Scale Verification Checks

The Project Engineer may require additional random verification checks of each batch, hopper or platform scale. The Engineer will randomly select a loaded truck to be reweighed on a second certified scale and the weight shall be compared against the weight on the first scale ticket. If the weight differences exceed 0.5-percent, the Contractor shall immediately stop weighing and the scale shall be recertified at the Contractor's expense.

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Belt Scales

To test the accuracy of a belt-conveyor scale, the Contractor shall weigh five or more payloads from sequential hauling units and compare these weights with weights of the same payloads taken on a separate certified platform scale. If the test results fluctuate, the engineer may require more than five check loads. Conveyor weights will be based on tonnage values taken from the sealed odometer at the beginning and end of each check period.

Deleted: The Contractor shall not be compensated for any loss from under weighing.

If scale verification checks show the scale has been under weighing, it shall be adjusted immediately.

If scale verification checks show the scale has been overweighing, its operation will cease immediately until adjusted.

Deleted: The contracting agency will calculate the combined weight of all materials weighed after the last verification check showing accurate results. This combined weight will then be reduced for payment by the percentage of scale error that exceeds 0.5-percent unless the Contractor demonstrates to the satisfaction of the Engineer that the defect in the scale was present for a lesser period of time.

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Minor Construction Items

If the specifications and plans require weight measurement for minor construction items, the Contractor may request permission to convert volume to weight. If the Engineer approves, an agreed factor may be used to make this conversion and volume may be used to calculate the corresponding weight for payment.

1-09.2(6) Payment

Unless specified otherwise, the Contracting Agency will pay for no materials received by weight unless they have been weighed as required in this section or as required by another method the Engineer has approved in writing.

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If the random verification test shows the project scale to be within tolerance, the contractor shall be compensated for his costs to perform the tests by force account in accordance with Section 1-09.6.

The Contractor shall not be compensated for any loss from under weighing that is revealed by scale verification checks.

If scale verification checks reveal that the scale is over weighing, then payment for all material weighed since the last valid scale verification check will be adjusted. The contracting agency will calculate the combined weight of all materials weighed after the last verification check showing accurate results. This combined weight will then be reduced for payment by the percentage of scale error that exceeds 0.5-percent unless the Contractor demonstrates to the satisfaction of the Engineer that the defect in the scale was present for a lesser period of time.

Unit contract prices for the various pay items of the project cover all costs related to weighing and proportioning materials for payment. These costs include but are not limited to:

- furnishing, installing, certifying, and maintaining scales;
- providing a weigher to operate a contractor provided scale;
- providing a weigher to operate a commercial scale, if necessary;
- providing self-printing tickets, if necessary;
- rerouting a truck for random verification weighing if the project scale proves to be out of tolerance;
- assisting the engineer with scale verification checks;
- any other related costs associated with meeting the requirements of this section.

Deleted: furnishing a scale house

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