

## Proposed Specification Revisions May 2015

The CAS Bureau is proposing revisions to 13 Standard Specifications. These proposed revisions will be out for comment during the month of May, 2015.

1.	103.09.5	Release of Bid Documents to the Department	Contractor Representation
2.	105.08	Grade Checking	Require Verification Form
3.	105.17.2	Final Acceptance	Delete non-applicable bullets
4.	106.05	Field Laboratory	Power to Cure Boxes
5.	106.09	Domestic Materials	Requirements for Plants
6.	108.07.5	Extensions	Justification
7.	109.07	Stockpiled Materials	Same Units
8.	208	Water Pollution Control and ...	Add MPDES Special
9.	301.02.4	Aggregate Treatment	
10.	401.03.23(A)	Ride Specification	Average 2 results
11.	401.03	PMS Construction	Startup, Hamburg
12.	403.02(B)	Backer Rod	Remove Reference to Table
13.	407.03.3	Application of Emulsified Materials	Dilute at Factory

### 103.09.5 Release of Bid Documents to the Department

The bid documents in escrow are and will remain the property of the Contractor unless a Certified Claim is filed by the Contractor or litigation or arbitration is initiated under the contract. In the event that the Contractor submits a Certified Claim or litigation or arbitration is initiated under the contract; the bid documents included in the escrow become the property of the Department for its use, specifically including use in preparing for and conducting of all claims, disputes, arbitration or litigation. Failure to submit all bid documents as defined in Subsection 101.03 and the Bid Documentation Inventory Affidavit as required, or failure to include the items indicated by the Bidder on the Bid Documentation Inventory Affidavit in the documents that are placed in escrow, will be a material breach of the contract, is a failure to comply with a condition precedent to filing a claim or lawsuit, acts as a total and final waiver of all claims or disputes involving matters that would have been included (e.g. claims of delay, changed site conditions, loss of productivity, etc.), and subjects the Contractor to action under Section 18.3.101 ARM et seq.

Within three calendar days of the Escrow Agent's notification that the Bid Documents will be released to the Department, the Contractor may request to the Department that the Contractor have a representative present during the opening of the bid documents.

**Deleted:** Upon the Department's receipt of the bid documents, the Contractor will be notified and must have a representative present during the opening, unless the representation is waived. Failure to appear at the date and time designated for the opening will be considered a waiver.

## 105.08 CONSTRUCTION STAKES, LINES AND GRADES

Maintain all survey controls required to control alignment and grade using survey personnel that are trained, experienced, and skilled in construction layout and staking. Do not hire Department personnel to perform any survey work.

Staking requests must be submitted on form CSB105\_08\_1. Department construction staking will be performed once for a given type and location. If construction staking is required more than once, submit an additional request to the Project Manager in writing with justification.

### 105.08.6 Survey Tolerances and Inspection

Perform and submit grade check verifications on form MDT-CON-105-08-X for all completed sections meeting the tolerances listed below for Subgrade, Special Borrow and Aggregate Surfacing.

The Department will perform finish grade checks based on the following:

- A. Subgrade.** Three random stations per 1,000-foot (300 m) section will be checked. The 1,000-foot (300 m) section will be accepted if 80% or more of the points checked are within a vertical tolerance range of + 0.05 to - 0.10 foot (+ 15 to - 30 mm), and the horizontal alignment is within 0.30 foot (90 mm) of the true line. If not within required tolerances, rework the entire 1,000-foot (300 m) section. Three new random stations will be checked after rework is completed. Random checks will be performed for finish ditch grade control to ensure proper drainage.
- B. Special Borrow.** Three random stations per 1,000-foot (300 m) section will be checked. The 1,000-foot (300 m) section will be accepted if 80% or more of the points checked are within a vertical tolerance range of + 0.05 to - 0.10 foot (+ 15 to 30 mm), and the horizontal alignment is within 0.30 foot (90 mm) of the true line. If not within required tolerances, rework the entire 1,000-foot (300 m) section. Three new random stations will be checked.
- C. Aggregate Surfacing.** Six random stations per 1,000-foot (300-m) section will be checked. Each 1,000-foot (300-m) section will be accepted if 85 percent or more of the points checked meet the requirements listed in Table 301-1, and the horizontal alignment is within 0.30 foot (90 mm) of the true line. If not within required tolerances, rework the entire 1,000-foot (300 m) section. Six new random stations will be checked.

Sections that are obviously defective may or may not be checked by the Department prior to rejection.

A station check consists of centerline, shoulders, any break in cross slope, and intermediate points not to exceed intervals of 20 feet (6 m). All elevation checks are taken on the material, not on the finish grade control. The Project Manager may increase or decrease the number of stations being checked by the Department. After receiving notification of a completed section, the Project Manager will perform the finish grade check by the close of the following business day. The Department checks will be independent and random from the stations checked by the Contractor. Contract time will be extended day for day, without any other compensation, for Department caused delays beyond the allotted time to perform the finish grade check.

The Department will check each section one time at no cost to the Contractor. If additional checks are required, the Contractor may be charged the Department's cost for the rechecking.

### 105.17.2 Final Acceptance

When the Final Walk-through Process is complete (conditional final acceptance), all project-specific warranties have expired, and all warranty issues have been resolved, submit the Contractor's Certificate of Work Complete using form MDT-CON-105\_17\_2. Before the form will be approved by the Department, the contractor's representative must provide a sworn and notarized certification that the following items have been completed:

1. The work has been completed in accordance with the contract's specifications, and the required materials have been used, both in quality and quantity.
2. The Department and the Contractor have completed the final walk-through process, and the Contractor has corrected all deficiencies to the satisfaction of the Project Manager or payment will be deducted for outstanding deficiencies.
3. The project has been inspected for compliance with the MPDES/NPDES Storm Water Permit, all necessary corrective actions taken.
4. There are no known environmental violations. The Contractor is responsible for any violations issued for damages or non-compliance with permit requirements and conditions prior to the transfer of the MPDES/NPDES Storm Water Permit. The Contractor will defend and hold the Department harmless from any violations, claims, enforcement actions, penalties or fines issued for Contractor activities or recordkeeping that occurred prior to the transfer of the MPDES/NPDES Storm Water Permit; this does not include activities specifically directed by the Department in writing.
5. Liquidated damages have or have not been assessed, and damages that have been assessed either are or are not disputed by the Contractor.
6. The contract does or does not include any contract specific warranties (non-manufacturer). If it does, all contract specific warranties have expired and all corrective actions have been completed.

Deleted: <#>There are no pending investigations referencing alleged nonpayment to subcontractors or suppliers.¶  
<#>There are no pending labor compliance or nonpayment claims on the contract.¶

**106.05 FIELD LABORATORY**

The Department will furnish all field offices, laboratories and cure boxes.

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Furnish and install electrical power to field offices and laboratories as directed:

- A continuous 200-ampere, 220 to 230 volt, single phase, 60-hertz power supply using a four wire connector; or
- A 110 to 120 volt alternating current of sufficient capacity.

Have the source connected by a Montana licensed electrician.

Furnish a potable water supply to operate all testing equipment for the offices and laboratories.

Notify the Project Manager at least 2 business days prior to producing material to be tested in the field laboratory or cured in the cure boxes. Do not begin production until the test trailer or cure box is fully operational.

No additional payment will be made for providing power and water to the field office, laboratories or cure boxes. Include these costs in the other items on the project.

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### 106.09 DOMESTIC MATERIALS

Material inspection of pre-cast products, prefabricated steel products, or prefabrication plants will take place at the point of manufacture. The District Materials Lab, Helena Materials Bureau, or Department representative will inspect the manufacturing of these items and verify that the fabricator is maintaining supporting documentation. All precast products containing steel and prefabricated steel products delivered to the project must be accompanied by signed documentation from the end product manufacturer (precast plant or prefabrication plant) which states that all steel used in the product has been melted/recycled and manufactured entirely in the United States and they have maintained supporting documentation. Original mill test reports from steel fabricators or suppliers are not required to be submitted for precast and prefabricated steel products. Submit a Form 406 with signed documentation by the end product manufacturer or prefabrication plant that all steel incorporated has been melted/recycled and manufactured entirely in the United States. All supporting documentation (original mill test reports) must be maintained by the fabricator and made available to the Department as requested.

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### 108.07.5 Extensions

The contract time will be modified based on the quantity and difficulty of added or deleted work and how it impacts the critical activities of the Contractor's operation as shown on the most current work schedule as required under Subsection 108.03 or as justified to the Project Manager.

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### **109.07 STOCKPILED MATERIALS**

Partial payment will be made for the invoice price, or for the manufacturing costs incurred by the Contractor. Payment for stockpiled materials will not exceed the contract unit price or the amount justified to the Project Manager. When stockpiled material has been produced by crushing operations, payment will not exceed 40% of the contract unit price. Maximum payment for materials in storage will be based on quantities that will be measured for payment. Submit stockpiled materials requests in same units as contract.

### 208.03.2 Water Pollution Control

Contractor failure to provide erosion, sediment, and water pollution controls may cause the Department to provide the work and deduct those costs from monies due or to become due the Contractor, or otherwise billed to the Contractor. The Department may also stop the work or withhold any payments due until acceptable corrective action is taken.

**C. Construction General Permit.** MPDES permits are issued by the DEQ for discharges within the state of Montana, not including Indian Countries. NPDES permits are issued by the EPA for discharges inside the boundaries of Indian Countries. Some Tribal governments also have NPDES review authority and/or separate permitting authority. If the bid package contains a lump sum erosion control bid item, a storm water discharge permit authorization will be required. If not, a storm water discharge permit authorization may be required for the project depending on the Contractor's operations. Sum the disturbance area (as defined by the applicable regulatory agency) identified in the contract with the area of disturbance caused by contractor operations to determine if the permit acreage threshold is exceeded. Regardless of the area of disturbance, also consider whether a storm water discharge from construction activities has the potential to cause pollution of state waters. If either criterion is met, obtain MPDES and/or NPDES permit coverage.

1. MPDES. Use the DEQ authorization to discharge under the MPDES General Storm Water Permit for this project. Separate Notice Of Intent (NOI) packages are required for areas within the right-of-way and areas outside of the right-of-way. A NOI package includes a Notice of Intent, with a topographic map, a Storm Water Pollution Prevention Plan (SWPPP), the erosion control plans, and supporting documentation.
  - a. Submit one NOI package and the associated fees to DEQ for ground disturbance areas shown in the plans or within the right-of-way. Complete the SWPPP using DEQ's SWPPP Form. For ground disturbance areas shown in the plans and any other areas within the right-of-way where Contractor activities causing ground disturbance are planned, the Contractor is the sole permittee until construction is complete and the General Permit authorization is transferred to the Department or another entity. Do not begin construction activities until the required copy of the NOI package submitted to DEQ and confirmation of receipt of a complete NOI Package from DEQ is received by the Project Manager.
  - b. Submit a separate NOI package and the associated fees to DEQ for ground disturbance outside of the right-of-way and not shown in the plans. Contractor furnished material sources, staging areas, plant sites, or any other Contractor caused ground disturbance outside of the right-of-way and not shown in the plans, are the Contractor's responsibility and must be submitted under a separate NOI package from the ground disturbance within the right-of-way. Be responsible for all temporary erosion, sediment, and pollution prevention controls for Contractor furnished material sources, staging areas, plant sites, or any other Contractor caused ground disturbance outside the right-of-way and not shown in the plans. The Contractor is the sole permittee until stabilization is complete and the general storm water permit authorization is terminated or transferred to another entity. Provide a copy of the NOI Package submitted to DEQ and confirmation of receipt of a complete NOI Package from DEQ to the Project Manager prior to conducting any ground disturbing activities.

c. Complete and documents all inspections in accordance with the requirements of the General Permit. Use DEQ's Self Inspection Form included in Attachment D of the SWPPP Form. Provide a copy of all inspection reports to the Project Manager.

**2. NPDES.** The blank erosion control plans and SWPPP supplied by MDT do not include Contractor furnished material sources, staging areas, plant sites, or any other site that is not within the project limits. Permit these sites separately.

a. Complete the erosion control plans and "Contractor sections" of the MDT supplied SWPPP. Ensure the "Contractor sections" of the SWPPP do not conflict with the information MDT provided. Do not modify the SWPPP or MDT's responses. Return the completed signed SWPPP to the Department at the following address:

Environmental Services Bureau  
Attention: Field Services Engineer  
Montana Department of Transportation  
2701 Prospect Ave  
PO Box 201001  
Helena, MT 59620-1001

Within 7 business days of receiving the completed signed SWPPP, the Department will review the SWPPP. If the Contractor's portions of the SWPPP are not complete, the SWPPP will be returned to the Contractor for completion. If the Contractor's portion of the SWPPP is complete, MDT will sign and certify the SWPPP and send the executed SWPPP to the Project Manager. The Department's review of the Contractors' portion of the SWPPP is limited to the completeness of responses. The Contractor is responsible for the accuracy.

b. Notify tribes as specified in Section 9.5 of the CGP. Obtain any necessary tribal reviews and approvals as specified.

c. After the SWPPP has been signed and certified by both parties, submit the certified NOI to EPA at least 14 calendar days prior to commencing earth-disturbing activities and any applicable tribal authorities as specified in the General Storm Water Permit. Electronic NOI submittals to EPA may be completed through EPA's Electronic Notice of Intent (eNOI) Home Page at: <http://water.epa.gov/polwaste/npdes/stormwater/EPAs-Electronic-Construction-General-Permit-Notice-of-Intent-eNOI-Home-Page.cfm>.

d. If EPA or applicable tribes require revised or additional information, submit updated copies of this information to the Project Manager and Environmental Services Bureau within 5 business days of correspondence.

e. Submit to the Project Manager confirmation from EPA that coverage under the construction general permit is now active. Do not begin ground disturbing activities until confirmation from EPA is provided to the Project Manager and Environmental Services Bureau stating coverage under EPA's General Storm Water Permit is active for both the contractor and MDT.

f. Be responsible for all temporary erosion, sediment, and pollution prevention controls for Contractor furnished material sources, staging areas, plant sites, or any other Contractor caused ground disturbance outside the right-of-way and not shown in the plans.

g. Complete and document all inspections in accordance with the requirements of the General Storm Water Permit. Use the Department's form or another form that conforms to permit requirements. Provide a copy of all inspection reports to the Project Manager.

Comply with the conditions of the MPDES and/or NPDES General Storm Water Permit(s) and implement the SWPPP. Revise and/or update the SWPPP to reflect current conditions, pollution prevention measures, and installed BMPs in accordance with permit requirements. Submit all changes to the Project Manager.

Report potential noncompliance in accordance with applicable regulations, guidance, and permit conditions. Submit to the Project Manager within seven day sof sending or receiving all correspondence to or from regulatory agencies regarding potential noncompliance or violations.

Do not transfer or terminate the General Storm Water Permit coverage until the BMPs are inspected and accepted and all records required under the permit, including inspection and monitoring reports, are furnished to the Project Manager. The Department may require that certain BMPs be removed and/or replaced by another type of BMP as a condition of permit transfer.

Upon acceptance of site conditions, measures, devices and all pertinent records, submit a signed copy of the permit Transfer Notification Form provided by the Department. When submitting the MPDES General Storm Water Permit transfer package/application to the Department, include a check for the permit transfer fee. Make the check for the amount of the fee payable to the DEQ. MDT will not be liable for the completeness or accuracy of Contractor records completed prior to the permit transfer. Upon receipt of the signed form, the Department will obtain signature of the new permit owner and submit to DEQ. Ensure permit conditions and responsibilities are met until confirmation of the transfer is received from DEQ.

If the Department concurs that final stabilization has been met during the final walk-through, the Contractor may submit a Notice of Termination form to DEQ. Pay the annual fee invoice due at the time of termination. Submit the annual fee invoice to the Project Manager for reimbursement.

**D. Inspections. Complete and document all inspections in accordance with the requirements of the General Permit for Storm Water Discharges Associated with Construction Activity.**

When no permit is required, conduct inspections to evaluate performance and maintenance needs of water pollution controls in accordance with the following schedule:

- At least once per month; and
- Within 24 hours of a storm event of 0.25 inches (6.5 mm) or greater.

Use the Department's most current SWPPP Inspection Report, when no permit is required. For MPDES permits, use DEQ's Self-Inspection Form included in Attachment D of the SWPPP Form. For NPDES permits, use the Department's form or another form that conforms to permit requirements. Provide one copy of the signed inspection report to the Project Manager.

Failure to conduct inspections and submit inspection reports renders the BMPs unacceptable.

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Immediately report potential noncompliance in accordance with applicable regulations, guidance, and permit conditions. The Contractor is wholly responsible for all violations including but not limited to those that result during the times when the required monitoring is not conducted, inspection report forms are not submitted, BMPs are ineffective, required maintenance or monitoring of BMPs is not performed.

BMPs will be inspected during construction and during the final inspection to ensure they are installed, maintained, and functioning as required by the contract and permits. BMPs will be inspected as part of the final walk-through to ensure they are adequate, maintained, and functioning properly.

**E. Erosion Control Plan.** Use Department furnished blank erosion control plans to complete the SWPPP as required by the General Permit.

### 208.03.3 Aquatic Resource Protection

**B. Temporary Facilities and Construction Activities.** Obtain required permits and authorizations for the installation, maintenance, operation, and removal of temporary facilities such as work bridges, work pads, cofferdams, temporary detours, diversions, etc. Department obtained permits and authorizations do not typically include removal and disposal of existing structures, access to and from authorized locations, sequencing and construction methodology to construct authorized features, impacts to areas outside of the planned construction footprint, and other items potentially affecting an aquatic resource. Submit Temporary Facility and Construction Activity permit applications for COE 404 and SPA 124 Notifications in accordance with Subsection 107.11.2.

Plan temporary construction facilities to:

1. Minimize disturbance to regulated aquatic resources;
  2. Not restrict or impede fish passage in streams;
  3. Not restrict water flow anticipated during use; and
  4. Remove temporary facilities as soon as practicable once they are no longer needed.
- Complete application forms in accordance with the permitting agency requirements. Plans included as part of the application forms must at a minimum contain the following information:
1. Details depicting regulated aquatic resource features before installation of temporary construction facilities and after removal;
  2. Location of facilities relative to permanent work and regulated aquatic resources;
  3. Plan and elevation views of facilities showing regulated aquatic resources;
  4. Anticipated high water elevation during use of the facilities;
  5. Waterway openings and clearances;
  6. Type of bridge bent, pier, and superstructure construction (wood, steel, concrete, etc.);
  7. Quantity and type of material proposed for use;
  8. Written description for installing, operating, maintaining, and removing facilities including proposed construction techniques, containment plans, equipment, stockpile and storage areas, temporary erosion and sediment control measures, site re-vegetation/restoration and weed control plans;
  9. Estimated time the temporary facilities are to be in place; and
  10. A plan for and written description of existing structure removal, if applicable, as described in Subsection 208.03.4(C).

**Deleted:** MPDES permits are issued by the DEQ for discharges within the state of Montana not including Indian Countries. NPDES permits are issued by the EPA for discharges inside the boundaries of Indian Countries. Some Tribal governments also have NPDES review authority and/or separate permitting authority. For projects requiring MPDES and/or NPDES General Storm Water Permit coverage, submit one NOI package and the associated fees for ground disturbance areas within the project limits to the appropriate permitting agency.

**Deleted:** Provide a copy of the NOI package submitted and confirmation for receipt of a complete NOI package from the permitting agency to the Project Manager and Environmental Services Bureau prior to conducting any ground disturbance activities.

**Deleted:** ¶ Be responsible for erosion, sediment, and water pollution control for Contractor furnished material sources, staging areas, plant sites, or any other Contractor caused ground disturbance outside the project limits. Submit a separate NOI package and the associated fees to the permitting agency for ground disturbance areas outside the project limits. Contractor furnished material sources, staging areas, plant sites, or any other Contractor caused ground disturbance outside the project limits, are the Contractor's responsibility and must be submitted under a separate NOI package from the ground disturbance within the project limits. Although these areas are permitted separately, the areas of disturbance are considered cumulative with the project disturbance area when determining the requirement for permit coverage.¶  
Comply with the conditions of the permit. Revise and/or update the SWPPP to reflect current conditions, pollution prevention measures, and installed BMPs in accordance with permit requirements. Submit all changes to the Project Manager.¶ Do not transfer or terminate the General Storm Water Permit coverage until the BMPs are inspected and approved and all records required under the permit, including inspection and monitoring reports, are furnished to the Project Manager. The Department may require that certain BMPs be replaced by another type of BMP as a condition of permit transfer.¶  
When submitting the General Storm Water Permit transfer package/application to the Department, include a check for the permit transfer fee. Make the check for the amount of the fee payable to the DEQ.

Shape and contour areas disturbed by the installation or removal of temporary construction facilities to match adjacent undisturbed ground upon removal of the facilities.

Submit copies of the plans and application packages, their modifications, or their revisions to the Project Manager. The Department will review each submittal of the plans and application packages, their modifications, or their revisions, and either request revisions or submit to applicable resource and regulatory agencies within 21 calendar days. Resource and regulatory agency review time does not begin until the Department submits the application to the applicable agencies. Do not begin work on temporary construction facilities or modifications to approved plans until receiving written notification from the Project Manager that all of the required approvals from the regulatory and resource agencies have been obtained and distributed. The Department will distribute COE 404 and SPA 124 approvals within 5 business days of receipt of all required approvals.

#### 208.04 METHOD OF MEASUREMENT

If a temporary erosion control bid item is included, temporary erosion and sediment control devices for use within the project limits are measured as lump sum and will not be measured separately. If no temporary erosion control bid item is included, payment for necessary erosion control will be determined by the erosion control rate schedule.

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Only erosion and sediment controls within the project right-of-way and installed in accordance with the contract or manufacturer specifications will be paid for. BMPs and associated permit costs for Contractor furnished material sources, staging areas, plant sites, or any other site not within project limits are not measured for payment.

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Permit fees and monitoring costs associated with obtaining and maintaining permit coverage for ground disturbance areas both within and outside the project limits are considered incidental to the project and are not measured separately for payment.

Normal maintenance of BMPs, in accordance with permit requirements and the contract, are considered incidental to the work and no additional measurements will be made. Maintenance includes:

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- Removal of BMPs no longer required;
- Removal of sediment and debris in front of and around BMPs;
- Repair and replacement of incorrectly installed or inadequate devices;
- Mobilization and travel for inspections and maintenance; and
- Maintenance until the permit is terminated or transferred.

Replacement of satisfactory BMPs requested by the Department at the final inspection will be measured in accordance with the Erosion Control Rate Schedule.

#### 208.05 BASIS OF PAYMENT

No additional payment will be made for the fees or monitoring and maintenance costs associated with the General Permit for storm water discharges associated with construction activity. Include these costs in the temporary erosion control bid item. Include fees associated with transferring the permit in the Lump Sum Temporary Erosion Control bid item.

#### 301.02.4 Aggregate Treatment

Choose the material that will be used to treat the aggregate, which may include MC-70, emulsified prime ~~or calcium or magnesium chloride.~~

Furnish liquid magnesium or calcium chloride in accordance with Subsection 713.03 requirements. Furnish liquid asphalt in accordance with Section 702 requirements. If used, furnish MC-70 listed on the QPL.

Blotter material is material with 100% passing the ½-inch (12.5 mm) screen and having a PI of 6 or less.

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#### 401.03.23 Surface Tolerance for Flexible Pavement

##### A. Ride Specification.

The Department will test for surface smoothness and surface profile prior to the placement of seal and cover or plant mix seal on the final lift of plant mix surfacing pavement. Testing will consist of 2 passes in each travel lane. ~~For each pass, data collected for each wheel path will be averaged for that lane. The results of the two passes will then be averaged to arrive at a result for that lane.~~ Tests will be performed within 10 business days (extended by rain or other inclement weather conditions) of completion of all mainline paving. The Department will test divided highways within 10 business days (extended by rain or other inclement weather conditions) of completion of mainline paving for each direction of travel. Ensure that the entire finished lane width to be tested is not impeded and is available to Department personnel at the time of testing. Test results will be furnished within 2 business days.

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### 401.03 CONSTRUCTION REQUIREMENTS

Produce plant mix in accordance with Table 701-15, Table 701-16 Table 701-17, Table 701-18 and form CB30QA-VM (S).

Produce plant mix in a plant capable of accurately proportioning and uniformly mixing all ingredients. Do not begin plant mix production until receiving notification that the Department's mix design verification is complete.

For commercial mix, produce plant mix with actual asphalt cement content within +/- 0.3% of the mix design or field established job mix formula.

For non-commercial mix, set the initial job mix targets before producing more than 2000 tons (2000 MT) of plant mix surfacing. Plant mix produced prior to setting initial targets is defined as start-up mix. Furnish the Project Manager 1 copy of form CB30QA-VM (S) with the proposed job mix targets for VMA, VFA, VTM, and D/A. Once the job mix targets are set, Quality Assurance (QA) will be applied to all subsequent plant mix produced. No pay incentive will be applied to the plant mix until the targets are set. Produce start-up mix meeting the criteria listed in accordance with the Start-Up Job Mix Range in Table 701-18. A Hamburg wheel track test (Hamburg) will be run on the applicable gyratory pucks and/or the in-place mix represented by the pucks, when the produced mix does not meet all the criteria specified in accordance with the start-up job mix range in Table 701-18.

The Contractor may revise the job mix targets one time during the contract. Submit revised job mix targets no later than 2 business days following completion of plant mix production, or initial job mix targets will be used to determine payment. If more than one project is included in the contract (tied projects), the job mix targets may be revised for each project only if the projects use different mix designs. Submit to the Project Manager 1 signed copy of form CB30-QA-VM (S) with the revised job mix targets for VMA, VFA, VTM and D/A. The revised targets will be applied retroactively to all plant mix produced after the initial targets are set, and payment will be recalculated.

No monetary, time or other compensation will be allowed for Department actions required due to the setting of initial targets, (e.g. P-value shutdowns, etc.).

#### 401.03.2 Hamburg Wheel Track Testing (Hamburg)

Furnish a sample of plant mix surfacing material for Hamburg acceptance, as directed by the Project Manager. The Department may require Hamburg samples at any time, including during the production of start-up mix.

If plant mix fails the Hamburg, make adjustments to produce plant mix meeting the requirements specified in the contract. After a failing Hamburg no more than 300 tons (300 MT) of plant mix may be produced until passing Hamburg results are received.

When 2 consecutive Hamburg samples do not meet the requirements, suspend production and submit a revised mix design and samples for verification and Hamburg testing. The initial mix design requirements will be used for verification. Do not resume production until the revised mix design is verified and Hamburg mix design requirements are met.

Plant mix lots represented by samples that do not meet Hamburg specifications are not eligible for QA incentives including ride and density incentives.

Remove and replace any plant mix represented by a failing Hamburg test. Plant mix removal and replacement is at no cost to the Department.

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#### 401.03.6 Acceptance of Non-Commercial Plant Mix Surfacing (QA)

For the start-up mix, a \$3.00/ton price reduction (\$9.00/ton maximum) in the unit bid price for plant mix surfacing will be applied for each test not meeting the VMA, VFA, VTM, or D/A specified. Price reductions will be assessed on the quantity of material represented by each failing sample. The quantity of material represented by each sample is the total tons of start-up mix produced divided by the total number of samples representing the material.

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Once targets have been set, the properties listed in Table 701-18 for non-commercial plant mix are designated for acceptance on a lot-by-lot basis in accordance with Subsection 105.03.2. The pay factor in Table 401-1 is applied to plant mix surfacing lots for VMA, VFA, VTM and D/A. The asphalt content used for calculations is determined in accordance with MT 319. The D/A is calculated in accordance with MT 319, and the gradation determined in accordance with MT 320 on the aggregate remaining after the ignition oven test.

#### 401.03.17 Tack Coat

Apply tack coat in accordance with Section 407 and the contract.

Apply tack coat on aggregate treated surfaces, existing surfacing to be overlaid and between lifts when pavement is constructed in multiple lifts.

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**403.02 MATERIALS**

- A. Crack Sealant.** Use a sealant that is listed on the QPL and in accordance with Subsection 707.01.
- B. Backer Rod.** Furnish backer rod that is listed on the QPL. **Furnish backer rod in accordance with ASTM D5249, Type 1.** The backer rod **used** must be compatible with the crack sealant placement temperature and sized for cracks in accordance with Subsection 403.03.4.

**Deleted:** listed in Table [403-1](#).

**Deleted:** also meet ASTM D5249, Type 1,

### **407.03.3 Application of Emulsified Materials**

Dilute emulsified asphalt to a 50-50 ratio with water, unless other approved proportions are directed by the Project Manager. Ensure dilution occurs prior to the emulsified material leaving the supplier. Apply diluted emulsified asphalt for tack coat as specified by the Project Manager at a minimum rate of 0.1 gallon per square yard (0.45 L/m<sup>2</sup>).

When a double shot of emulsion is called for in the contract, apply 2 applications at the minimum rate specified above. Ensure the first shot is cured prior to applying the second.