

Specification Revisions
April 23,2020

The Department has revisions to 24 Standard Specifications.

1. 102.14 Wage Rates Add Special to Specs
2. 103.07 Execution and Approval of Contract Clarification
3. 105.08.1 Department Furnished Survey and Layout Construction Staking
4. 108.07 Contract Time Holiday Assessment Table 108-3 applies to all
5. 108.07.5 Extensions Time Extension Requests
6. 108.08 Failure to Complete on Time Update
7. 109.04.2 Force Account Basis Update
8. 203.03.2C Embankment Clarification
9. 208.03.4 Seeding Update
10. 301.03.4A Optional Blended Base Course Add Special to Specs
11. 401.03.23 Surface Tolerance changes Update
 - a) (Full travel lane width)
 - b) Class 1 Road Profiler
12. 401.03.24 Rumble strips
13. 402.03.9 Fog Seal and Tack Coat Residual Add Special to Specs
14. 551.03.8(B)(1) CLSM Testing Clarification
15. 556.03.9 Welded Stud Shear Connectors Procedural change
16. 558.03.7 Permanent Casing Finish coat of paint
17. 558.04 Drilled Shaft Casing Payment changes
18. 559.04 Furnish Pile Payment changes
19. 603 Bedding and Backfill Payment changes
20. 604 Manholes Payment changes
21. 606.03.1 Guardrail installation instructions Required
22. 621.02 Materials Use of wood shims
23. 707.01 Joint Materials ASTM Standards
24. 713.08 Seed QPL requirement

Effective April 23, 2020

No Changes to the Proposed Draft – Final Acceptance

102.14 WAGE RATES – CONSTRUCTION TYPES

Prevailing wage rates for the work must be in accordance with the United States Department of Labor Current Prevailing Wage Publications and will be classified as follows:

- 1) Workers performing grading work (excavation, embankment, borrow),
- 2) pavement work (removal, cold milling, recycling, placement),
- 3) erosion control, re-vegetation work (seeding, topsoil, landscaping, irrigation),
- 4) production and placement of aggregates (CAC, riprap),
- 5) utility work (installation/removal of underground utilities, culverts, manholes), or
- 6) traffic control, pavement markings, signing, and appurtenances (installation/removal of sidewalk and associated handrail, curb & gutter) are considered working under Highway Construction wage rates.

Workers performing a type of work not listed above and inside the drip line of the structure are considered working under Building Construction wage rates.

REASON: Add current Special, to Standard Specs

Proposed Draft

103.07 EXECUTION AND APPROVAL OF CONTRACT

A. General. Return to the ~~Contract Plans~~ Engineering Construction Contracting Bureau in Helena no later than 5:00 p.m. on the 20th calendar day after ~~receipt~~ award, not counting the date of receipt of the contract documents:

1. The signed contract;~~and~~
2. The contract bond;and
- ~~2.3. Evidence of the required insurance.~~

A proposal is not binding unless all the above requirements have been satisfied.

Do not begin work before:

- a. The contract is executed;
- b. The Contract ~~contract~~ bond is completed;~~and~~
- c. ~~Evidence of the required insurance is provided~~

REASON: Clarification

FINAL DRAFT

103.07 EXECUTION AND APPROVAL OF CONTRACT

A. General. Return to the Engineering Construction Contracting Bureau in Helena no later than 5:00 p.m. on the 20th calendar day after ~~receipt~~award, not counting the date of receipt of the contract documents:

1. The signed contract;~~and~~
2. The contract bond;and
3. Evidence of the required insurance.

A ~~proposal~~contract is not binding unless all the above requirements have been satisfied.

B. Requirements to Begin Work. Do not begin work before:

1. The contract is executed;
2. ~~Contract~~The contract bond is completed; and
3. Evidence of the required insurance is provided.

INTENT: Require contractor to submit evidence of the required insurance within 20 calendar days of award and proof of being insured before beginning work.

No Changes to the Proposed Draft – Final Acceptance

105.08.1 Department Furnished Survey and Layout

Unless otherwise stated, the Department will furnish the following:

- All right of way and monumentation surveys
- Centerline coordinates
- Benchmarks at the beginning, end and near midpoint of the project
- Construction stakes for establishing ~~lines~~ slopes, clearing limits and stationing and profile grade (excluding finish grade control)
- Construction stakes for culverts, structures and appurtenances
- Wetland delineation

INTENT: The Department is moving to stalkless construction, but is not eliminating stake usage.

No Changes to the Proposed Draft – Final Acceptance

108.07 CONTRACT TIME AND DETERMINATION OF COMPENSATION AND EXTENSION OF CONTRACT TIME FOR EXCUSABLE, NONCOMPENSABLE, AND COMPENSABLE DELAYS

The contract provisions state the contract completion date, or the allowable number of Calendar or Working Days allotted for completion of the contract work.

Do not resume work during an authorized suspension of work without approval from the Project Manager.

Do not work on Sundays and Holidays without written approval from the Engineer. Travelway maintenance in accordance with Subsection [104.05.2](#), stormwater BMP maintenance, and providing protection for the public are exempt work items and may be performed on No-Work Days without assessment of contract time.

Meet the requirements in Table 108-3

TABLE 108-3
HOLIDAY CONTRACT TIME ASSESSMENT

<u>Holiday:</u>	<u>Stop Work by:</u>	<u>Return to Work:</u>
<u>Memorial Day</u>	3:00pm on the Preceding Friday ¹	<u>Tuesday</u>
<u>Labor Day</u>	3:00pm on the Preceding Friday ¹	<u>Tuesday</u>
<u>When July 4 Occurs On:</u>	<u>Stop Work by:</u>	<u>Return to Work²:</u>
<u>Monday</u>	3:00pm on the Preceding Friday ¹	<u>Tuesday</u>
<u>Tuesday</u>	The end of day on the Preceding Friday	<u>Wednesday</u>
<u>Wednesday</u>	3:00pm on the Preceding Tuesday ¹	<u>Thursday</u>
<u>Thursday</u>	3:00pm on the Preceding Wednesday ¹	<u>Monday</u>
<u>Friday</u>	3:00pm on the Preceding Thursday ¹	<u>Monday</u>
<u>Saturday</u>	3:00pm on the Preceding Thursday ¹	<u>Monday</u>
<u>Sunday</u>	3:00pm on the Preceding Friday ¹	<u>Tuesday</u>

Note 1: If all work operations are stopped before 12:00pm (noon), contract time will not be assessed on this day.

Note 2: Contract time will not be assessed between the stop work by and return to work days.

108.07.1 Completion Date Contracts

108.07.2 Calendar Day Contracts

108.07.3 Working Day Contracts

Meet the requirements in Table 108-3:

**TABLE 108-3
HOLIDAY CONTRACT TIME ASSESSMENT**

Holiday:	Stop Work by:	Return to Work:
Memorial Day	3:00pm on the Preceding Friday*	Tuesday
Labor Day	3:00pm on the Preceding Friday*	Tuesday
When July 4 Occurs On:	Stop Work by:	Return to Work²:
Monday	3:00pm on the Preceding Friday*	Tuesday
Tuesday	The end of day on the Preceding Friday	Wednesday
Wednesday	3:00pm on the Preceding Tuesday*	Thursday
Thursday	3:00pm on the Preceding Wednesday*	Monday
Friday	3:00pm on the Preceding Thursday*	Monday
Saturday	3:00pm on the Preceding Thursday*	Monday
Sunday	3:00pm on the Preceding Friday*	Tuesday

~~Note-1: If all work operations are stopped before 12:00pm (noon), contract time will not be assessed on this day.~~

~~Note-2: Contract time will not be assessed between the stop work by and return to work days.~~

REASON: Table 108-3 clarification applies to all contracts (Completion Date Contracts, Calendar Day Contracts, and Working Day Contracts)

INTENT: Table 108-3 applies to all contracts.

Proposed Draft

108.07.5 Extensions

Provide a written request detailing the reasons for requesting a time extension. A plea that insufficient contract time was specified is not a valid reason for a time extension. If the Department finds that the work was delayed because of conditions beyond the control of and not the fault of the Contractor, the contract time will be extended in the amount justified. The extended time for completion is in full force and effect as though it were the original time for completion.

Time extension requests must be ~~made requested when the next schedule update is required in accordance with Subsection 108.03 within 10 business days of the alleged delay.~~ The time extension request must be accompanied with a written narrative, ~~and an updated schedule.~~

REASON: *Contractors may not know a delay has occurred until schedules are updated.*

FINAL DRAFT

108.07.5 Extensions

Provide a written request detailing the reasons for requesting a time extension. A plea that insufficient contract time was specified is not a valid reason for a time extension. If the Department finds that the work was delayed because of conditions beyond the control of and not the fault of the Contractor, the contract time will be extended in the amount justified. The extended time for completion is in full force and effect as though it were the original time for completion.

Time extension requests must be made when the next schedule update is required in accordance with Subsection 108.03 or within 10 business days of the alleged delay, whichever is greater. The time extension request must be accompanied with a written narrative, ~~and an updated schedule.~~

INTENT: Allow contractor 10 business days to request an extension once they know of an alleged delay.

No Changes to the Proposed Draft – Final Acceptance

108.08 FAILURE TO COMPLETE ON TIME

If the contract time is exceeded, including approved adjustments, a daily charge will be made against the contract until final acceptance under Subsection [105.17.2](#). This daily charge, determined from Table 108-4, will be deducted from any money due the Contractor. This deduction is for liquidated damages for added Department contract administration costs, etc. for failure to complete the work on time.

**TABLE 108-4
SCHEDULE OF LIQUIDATED DAMAGES**

ORIGINAL CONTRACT AMOUNT		DAILY CHARGE
From More Than	To and Including	Working Day or Calendar Day
\$ 0	\$ 100,000	\$ 1,116
\$ 100,000	\$ 300,000	\$ 1,430
\$ 300,000	\$ 700,000	\$ 1,629
\$ 700,000	\$ 1,500,000	\$ 1,898
\$ 1,500,000	\$ 3,000,000	\$ 2,066
\$ 3,000,000	\$ 5,000,000	\$ 2,501
\$ 5,000,000	\$ 10,000,000	\$ 3,053
\$ 10,000,000	—	\$ 3,850

Permitting the Contractor to continue and complete the work after the specified contract completion time or approved extensions granted, does not waive the Department's rights under the contract. Any disputes regarding the assessment of liquidated damages are part of the normal claims process.

~~If the Contractor disputes the liquidated damages on the approved "Contractor's Certificate of Work Complete" form, the CES Bureau will send a final notification in writing to the Contractor of the number of days to be assessed and the dollar amount of proposed liquidated damages. Submit any objections of the assessment to the CES Bureau in writing within 30 calendar days of receipt of the Department's notification. Include with the objection the justification and all information to support an adjustment to the assessment. The Department will review the Contractor's information and perform a final analysis.~~

REASON: *To follow the normal claims process.*

INTENT: A contractor must go through the normal claims process if they dispute liquidated damages assessments.

Proposed Draft

109.04.2 Force Account Basis

Approved extra work paid for on a force account basis will be accounted for daily. The daily report sheets are the true record of extra work. The payments below are full compensation and include profit and overhead. No additional profit will be added. Extra work on a force account basis ordered by the Project Manager in writing, under Section 104, is paid for as follows:

A. Labor. The Contractor is paid ~~at the wage rates~~applicable USDOL Wage Decision classification rate for all labor and foremen assigned exclusively to performing the extra work for the total hours worked on-site plus 80% of the total. If it can be shown on a certified payroll that the individual performing the force account work is normally paid at a higher rate than the classification rate, the hourly rate paid may be increased to the normally paid rate or \$50.00 per hour, whichever is less. Reimbursement for individuals onsite to manage the contract will not be made, unless they are performing the physical force account work.

The 80% surcharge may be increased if supporting documentation is submitted by a certified public accountant (CPA) showing that a higher percentage surcharge is needed to cover labor costs. This documentation may be audited to determine compliance of allowable surcharges. The wage rates used for the above computation will not include travel pay (unless included in the USDOL wage decision) or fringe benefits, whether or not paid directly to the employees. Payment as described above is full compensation for all labor related expenses incurred including but not limited to premiums for worker's compensation insurance, public liability and property damage insurance, social security, unemployment compensation, health and welfare expenses, and other expenses imposed by federal or state laws or both.

Submit evidence of the actual wage rates paid. Only labor on ~~certified~~certified payrolls is eligible. ~~The rate paid will be that which is listed on the certified payroll.~~

REASON: New spec update

FINAL DRAFT

109.04.2 Force Account Basis

Approved extra work paid for on a force account basis will be accounted for daily. The daily report sheets are the true record of extra work. The payments below are full compensation and include profit and overhead. No additional profit will be added. Extra work on a force account basis ordered by the Project Manager in writing, under Section 104, is paid for as follows:

- A. Labor. The Contractor is paid **at the applicable USDOL Wage Decision classification rate** for all labor and foremen assigned exclusively to performing the extra work for the total hours worked on-site plus 80% of the total.

Reimbursement for salaried individuals onsite to manage the contract will be paid at their normal salary rate or \$50.00 per hour whichever is less.

Reimbursement for hourly employees - If it can be shown on a certified payroll that the individual performing the force account work is normally paid at a higher rate than the classification rate, the hourly rate paid will be increased to the normally paid rate. If the Force Account work puts the employee into Overtime, the contractor will be reimbursed at the Overtime rate.

The 80% surcharge may be increased if supporting documentation is submitted by a certified public accountant (CPA) showing that a higher percentage surcharge is needed to cover labor costs. This documentation may be audited to determine compliance of allowable surcharges. The wage rates used for the above computation will not include travel pay (unless included in the USDOL wage decision) or fringe benefits, whether or not paid directly to the employees. Payment as described above is full compensation for all labor related expenses incurred including but not limited to premiums for worker's compensation insurance, public liability and property damage insurance, social security, unemployment compensation, health and welfare expenses, and other expenses imposed by federal or state laws or both.

Submit evidence of the actual wage rates paid. Only labor on Certified payrolls is eligible. The rate paid will be that which is listed on the certified payroll. **For salaried employees on-site to manage the contract, the contractor may submit a certified payroll report from their payroll system showing the supervisor's salaried rate.**

INTENT: Force Account work will be administrated consistently throughout the state.

No Changes to the Proposed Draft – Final Acceptance

203.03.2 Embankment

C. Preparation of Embankment Foundations.

Clear the full width of the subgrade of sod and vegetative matter. Scarify the top 8 inches (200 mm) of the embankment foundation and compact in accordance with Subsection 203.03.3. ~~before constructing embankments 4 feet (1.2 m) high or less, or embankments placed on soils having less than 95% maximum density, determined by MT-210.~~

REASON: *Scarify all ground prior to placing embankment.*

No Changes to the Proposed Draft – Final Acceptance

208.03.4 Seeding

- A. Temporary Seeding.** Temporarily seed or implement other soil stabilization measures approved by the Project Manager on all disturbed soil areas as required by permits/authorizations. When no permit is required, temporarily seed or implement other soil stabilization measures approved by the Project Manager on all disturbed soil areas when grading activities will not resume for a period of 14 calendar days or more by the 14th day after the last disturbance. Permanently seed areas not requiring further disturbance, if they fall within the seeding dates. Temporarily seed using a sterile variety of Triticale at a rate of 25 lbs. PLS per acre drilled or 50 lbs. PLS per acre broadcast.
- B. Erosion Seeding.** Conduct erosion seeding on freshly exposed slopes steeper than 3H:1V that will not be top soiled or re-disturbed, unless implementing other soil stabilization measures in accordance with permits or as approved by the Project Manager. Manually broadcast seed the disturbed areas at the completion of each day, regardless of season. Excessively rocky slopes that cannot be excavated by ripping are exempt from erosion seeding. Broadcast seed with the following mixture and rates: a sterile variety of Triticale at rate of 50 lbs PLS per acre.

<u>Species</u>	<u>lbs PLS per acre</u>
Cereal barley	10.0
“Pryor” slender wheatgrass	5.0
“MT origin” Canada wildrye	10.0

REASON: Update

No Changes to the Proposed Draft – Final Acceptance

301.03.4 Crushed Aggregate Course

When crushed aggregate course is a bid item, construct the aggregate surfacing section to the specified typical cross section and profile grade.

Select one of the following two options to construct the aggregate section:

1. Full depth crushed base course.
2. Top 0.15 foot (45 mm) crushed top surfacing, remaining depth crushed base course.

Indicate the selected option and the grade of crushed base course (Type “A” grade 5, Type “A” grade 6, or Type “A” grade 7) before beginning aggregate production. Only one grade of crushed base course will be permitted. If option 2 is selected use Type “A” grade 2 crushed top surfacing.

Quality assurance lot sizes, test intervals and material tolerances will be based upon the materials selected.

- A. Optional Blended Base Course.** Blending RAP or Recycled Concrete Aggregate with existing crushed aggregate course, additional aggregate course, or a combination of these. Produced aggregate must meet the requirements of Subsections 701.02.1 and 701.02.4.
1. Recycled products must be pugmilled with existing or virgin aggregates to produce a uniform mixture.
 2. Blend no more than 40% RAP or 50% concrete by weight with existing or virgin aggregates.
 3. Total recycled mixtures may not exceed 50% by weight of the blended base course.
 4. Use weighing or metering devices to control the recycled material introduced into the mix within the specified limits.
 5. Meet the compaction requirements of Subsection 301.03.5.

REASON: Add current Special, to Standard Specs

Proposed Draft

401.03.23 Surface Tolerance for Flexible Pavement

A. Ride Specification.

Correct surface profile defects greater than 0.40 inches (10 mm) in a distance of 25 feet (7.62 m) within 30 calendar days of notification but prior to seal and cover or plant mix seal operations. Correct surface profile defects by milling and filling deficient pavement depths or by diamond grinding excess pavement depths full travel lane width. Corrected surface profile defects will be retested and evaluated. Pavement thickness will be measured after profile corrections are made. Ensure corrected pavements do not create a transverse height difference between adjacent lanes exceeding $\frac{1}{8}$ -inch (3 mm). Fog seal corrected areas if the roadway is not chip sealed prior to winter suspension.

B. Surface Smoothness

Surface smoothness ~~is measured~~ will be evaluated using a Class I laser road profiler following Department procedures or longitudinally in 100-foot (30.5 m) sections at 10-foot (3 m) intervals, and transversely at 4-foot (1.2 m) intervals. Correct out of specification plant mix surfacing by diamond grinding, cold milling a minimum depth of 0.15 feet (45 mm) the full width of the defect but not less than the paver width, or other approved method. If removing and replacing, extend the repair area for a minimum of 50 feet (15.2 m) each side of the defective pavement and fill with like material compacted to the specified density.

FINAL DRAFT

401.03.23 Surface Tolerance for Flexible Pavement

A. Ride Specification.

Correct surface profile defects greater than 0.40 inches (10 mm) in a distance of 25 feet (7.62 m) within 30 calendar days of notification but prior to seal and cover or plant mix seal operations. Correct surface profile defects by milling and filling deficient pavement depths or by diamond grinding excess pavement depths full travel lane width or at the discretion of the Project Manager. Corrected surface profile defects will be retested and evaluated. Pavement thickness will be measured after profile corrections are made. Ensure corrected pavements do not create a transverse height difference between adjacent lanes exceeding 1/8-inch (3 mm). Fog seal corrected areas if the roadway is not chip sealed prior to winter suspension. applicable

B. Surface Smoothness

Surface smoothness ~~is measured~~ will be evaluated using a Class I laser road profiler when appropriate following Department procedures or longitudinally in 100-foot (30.5 m) sections at 10-foot (3 m) intervals, and transversely at 4-foot (1.2 m) intervals. Correct out of specification plant mix surfacing by diamond grinding, cold milling a minimum depth of 0.15 feet (45 mm) the full width of the defect but not less than the paver width, or other approved method. If removing and replacing, extend the repair area for a minimum of 50 feet (15.2 m) each side of the defective pavement and fill with like material compacted to the specified density.

INTENT: Correct surface profile defects across full lane width, not only in wheel paths.

No Changes to the Proposed Draft – Final Acceptance

401.03.24 Rumble Strips

~~Do not cut rumble strips if the seal and cover operation will not be completed before winter suspension.~~ If seal and cover is not scheduled to be completed within 10 business days after cutting rumble strips, fog seal the finished rumble strips.

Apply fog seal to finished rumble strips as follows:

1. Apply a double shot of emulsified asphalt meeting Section [407](#) for fog seal.
2. Keep traffic off the fog seal until the emulsion has cured to no-tack.
3. Apply the fog seal to the rumble strip for each lane in the direction of travel for that lane

REASON: *Allow rumble strip installation before winter shutdown.*

No Changes to the Proposed Draft – Final Acceptance

402.03.9 Fog Seal and Tack Coat Residual

Furnish and apply emulsified asphalt in accordance with Table 402-3.

TABLE 402-3

MINIMUM RESIDUAL FOR EMULSIFIED ASPHALT

Bid Item	Materials Allowed	Minimum Diluted Residue ¹	Undiluted Shot Rate	
Tack Coat ³	SS-1h, CSS-1h	28.5%	0.05 gal/sy ²	
Fog Seal			over chip seal	over rumble strips
			0.075 gal/sy	0.05 gal/sy ²

Note 1: If diluted, as tested out of the distributor, as applied.

Note 2: Apply a double shot of emulsion on concrete surfaces and over rumble strips.

Note 3: When placing tack coat for microsurfacing operations, CQS-1h may also be used.

The contractor may dilute the material as needed to achieve the required undiluted shot rate. Notify the Project Manager of any dilution and the percentage before applying the material. Ensure the dilution rate, if applicable, is indicated on the bill of lading and/or certificate of compliance.

When fog sealing a chip sealed surface, if the material will be diluted, furnish emulsion that has been diluted at the supplier.

When applying tack coat, meet all requirements of Subsection 407.03 other than the dilution and shot rate requirements.

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. The minimum undiluted residue is applicable to each shot. If an undiluted emulsion is applied, one shot at twice the minimum rate may be used if approved by the Project Manager.

REASON Add Special to Standard Specs

COMMENTS

No Changes to the Proposed Draft – Final Acceptance

551.03.8 Testing and Acceptance of Concrete

- 1. Compressive Strength Testing.** Furnish samples for determining compressive strength following AASHTO R 60. Test cylinders will be cast and cured following [MT 101](#) and tested in accordance with AASHTO T 22 at a frequency determined by [MT 601](#). Test cylinders for SCC will be cast and cured in accordance with [MT 117](#). [Test cylinders for CLSM will be cast and cured in accordance with ASTM D4832.](#) Compressive strength tests may be molded at any time if inconsistency between batches is identified or suspected. A compressive strength set consists of 4 test cylinders made at the same time from the same batch of concrete. Tests for plastic properties will also be run from the same sample used for compressive strength tests.

REASON: *Test Method Clarification.*

COMMENTS:

PROPOSED DRAFT

556.03.9 Welded Stud Shear Connectors

The type, size or diameter, and length of stud shear connectors are specified in the contract. Furnish fabrication material and perform welding in accordance with Section 624.

- A. Shop Drawing Review.** Provide alternate stud locations that will avoid conflict with safety and lifting devices. Obtain approval from the Bridge Bureau before installing any studs in these alternate locations.
- B. Field Removal.** Stud shear connectors that are removed in the field must use one of the following removal methods:
 - a.** Cut completely through the stud above the weld.
 - b.** Partially cut the stud above the weld and break off the stud the rest of the way. Prevent damaging the base metal during stud removal.
- C. Field Replacement.** Replace all stud shear connectors that are removed in the field. Replacement shear studs must be within 3 inches (76 mm) of the original stud location, no closer than 1½ inches (38 mm) from base metal edges, and at least 1 inch (25 mm) between adjacent studs. Follow all the surface preparation, field welding, and testing requirements in accordance with AWS D1.5.
- D. Additional Payment.** No additional payment will be made for field removal and replacement of stud shear connectors and base metal inspection, repair, or replacement.

FINAL DRAFT

556.03.9 Welded Stud Shear Connectors

The type, size or diameter, and length of stud shear connectors are specified in the contract. Furnish fabrication material and perform welding in accordance with Section 624.

- A. Shop Drawing Review.** Provide alternate stud locations that will avoid conflict with safety and lifting devices. **Ensure that all shear studs are a minimum of 6 inches away from top flange shop splices.** Obtain approval from the Bridge Bureau before installing any studs in these alternate locations.
- B. Field Removal.** Stud shear connectors that are removed in the field must use one of the following removal methods:
 - a. Cut completely through the stud above the weld.
 - b. Partially cut the stud above the weld and break off the stud the rest of the way. Prevent damaging the base metal during stud removal.
- C. Field Replacement.** Replace all stud shear connectors that are removed in the field. Replacement shear studs must be within 3 inches (76 mm) of the original stud location, no closer than 1½ inches (38 mm) from base metal edges, and at least 1 inch (25 mm) between adjacent studs. Follow all the surface preparation, field welding, and testing requirements in accordance with AWS D1.5.
- D. Additional Payment.** No additional payment will be made for field removal and replacement of stud shear connectors and base metal inspection, repair, or replacement.

REASON: Contractors sometimes want to remove stud(s) in order to attach picking devices, fall protection systems or other reasons. Currently, the contractor would have to re-weld the stud in the same location (because that is the location shown on the approved shop drawing), unless they request and receive approval to change the location. The first sentence will allow them to move a stud 3 inches without having to get approval. The remainder of the revision restates what is already in the welding code to make it more visible. The welding code is already part of the contract so in effect the **only** change this supplemental is making is to give the contractor the option to move a stud up to 3 inches

PROPOSED DRAFT

558.03.7 Permanent Casing

5. Repair paint damage caused by transport, handling, ~~and~~ welding and installation following the paint manufacturer's recommendations before applying the finish coat. Field apply the finish coat from the top of casing to the ordinary low water level for casing installed in a water channel and from the top of casing to 1 foot below ground elevation for casing installed outside of a water channel following the paint manufacturer's recommendations.

REASON:

FINAL DRAFT

558.03.7 Permanent Casing

- A. Furnish and install permanent casing when specified in the contract. Permanent casing remains in place and is included in the design of the drilled shaft. The permanent casing diameter may be oversized up to 3 inches (75 mm) if necessary, to facilitate temporary casing installation.
- B. Limit the excavation in advance of the casing tip to no more than 10 feet (3 m) unless synthetic slurry is being used.
- C. If field welding, submit 4 copies of the weld procedures to the Project Manager for approval 30 calendar days prior to welding.
- D. Provide corrosion protection for all permanent casing. Galvanize the permanent casing to AASHTO M 111 and ASTM A653 specifications or paint. If painting, meet the following requirements:
 1. Furnish paint in accordance with Subsection 710.02(B)(3).
 2. Prepare the casing surface and apply three paint coats following the paint manufacturer's recommendations.
 3. ~~Follow the paint manufacturer's recommendations for paint application.~~ Apply paint to the casing ~~before installation, starting 24 inches (610 mm) below ground surface, continuing to the from the~~ top of exposed steel. to the ordinary low water level for casing installed in a water channel and from the top of exposed steel to 1 foot below ground elevation for casing installed outside of a water channel.
 4. ~~Apply the first two paint coats to produce a minimum 12 mil (0.300 mm) dry film thickness. Provide 2 copies of the painter's certification that the paint was applied following the manufacturer's recommendations and the paint coat thickness on the casing.~~
 5. ~~Repair paint damage caused by transport, handling and welding following the paint manufacturer's recommendations before applying~~ Apply the finish coat.
 4. For the finish coat, use using the same paint or paint compatible with the first 2 coats. Provide a finish coat with a minimum 3 mil (75 µm) dry film thickness. Provide the finish coat paint that meets Federal specification 595B, pigment code 36440 (concrete gray). If applied in the shop, provide 2 copies of the painter's certification that the paint was applied following the manufacturer's recommendations and the paint coat thickness on the casing.
 5. Repair paint damage caused by transport, handling, welding, and installation following the paint manufacturer's recommendations at no cost to the Department.

INTENT: After the casing is finished being installed it has a 15 mil dry film thickness of paint on it. .

No Changes to the Proposed Draft – Final Acceptance

558.04.4 Drilled Shaft Casing

Permanent drilled shaft casing will be measured by the ~~linear-foot~~ pound (mkg) of permanent casing installed as shown in the contract or as directed by the Project Manager in writing.

558.05 BASIS OF PAYMENT

<u>Pay Item</u>	<u>Pay Unit</u>
Drilled Shaft Casing	Linear-Foot <u>Pound (kgm)</u>

REASON: *Change payment basic from foot to pound.*

No Changes to the Proposed Draft – Final Acceptance

559.04.2 Furnish Pile

Furnish pile is measured by the ~~foot-pound~~ (~~kgm~~) based on the plan quantity.

559.04.3 Drive Pile

Drive pile is measured by the foot (m) of pile driven into the ground. Drive pile is measured by the foot (m) of pile driven through pile drill and socket pilot holes. Pile driven through pre-bore holes is not measured for payment.

559.05 BASIS OF PAYMENT

<u>Pay Item</u>	<u>Pay Unit</u>
Drive Pile	Foot (m)
Furnish Pile	Foot-Pound (mk g)

REASON: *Change payment basic from foot to pound.*

PROPOSED DRAFT

603.03.4 Backfilling

- A. **General.** Backfill material is placed above the bedding material and around the exposed pipe. Use backfill material free of sticks, sod, frozen soil, or other deleterious matter. Do not permit stones, rocks, chunks of broken concrete, or other material larger than 3 inches (75 mm) within the top 2 feet (610 mm) of the top of water and sanitary sewer lines and within 1-foot (305 mm) of the pipe top for all other installations.

Replace the top 2 feet (610 mm) of backfill for excavations in existing roadway sections "in-kind".

Place backfill material in maximum 6-inch (150 mm) layers loose thickness and compact. ~~Firmly tamp the backfill under the pipe haunches.~~ Extend the backfill material placed above the excavation limits or the ground line beyond each side of the pipe equal to twice the pipe diameter or 12 feet (3.7 m), whichever is less.

603.04.3 Granular Bedding, Bedding, and Foundation Material

A. **Granular Bedding.** Granular bedding material is measured by the neat line in cubic yard (m³) in place for pipes 54-inch (1370 mm) and greater ~~than 48-inch (1.2 m)~~ in diameter, ~~and for all sizes of storm drain trunklines and laterals.~~ Include the cost of granular bedding material for pipes less than 54-inch (1370 mm) diameter in the cost of the pipe.

B. **Bedding material.** Include the cost of bedding material for pipes ~~48~~less than 54-inch (1.2 m/1370mm) diameter ~~or less~~ in the cost of the pipe.

C. **Foundation material.** Foundation Material is measured by the neat line cubic yard (m³) in place.

FINAL DRAFT

603.03.4 Backfilling

B. **General.** ~~Use backfill material is placed above the bedding material and around the exposed pipe.~~ Use backfill material free of sticks, sod, frozen soil, or other deleterious matter. Do not permit stones, rocks, chunks of broken concrete, or other material larger than 3 inches (75 mm) within the top 2 feet (610 mm) of the top of water and sanitary sewer lines and within 1-foot (305 mm) of the pipe top for all other installations.

Replace the top 2 feet (610 mm) of backfill for excavations in existing roadway sections “in-kind”.

Place backfill material in maximum 6-inch (150 mm) layers loose thickness and compact. ~~Firmly tamp the backfill under the pipe haunches.~~ Extend the backfill material placed above the excavation limits or the ground line beyond each side of the pipe equal to twice the pipe diameter or 12 feet (3.7 m), whichever is less.

603.04.4 Granular Bedding, Bedding, and Foundation Material

A. **Granular Bedding.** Granular bedding material is measured by the neat line in cubic yard (m³) in place for pipes 54-inch (1370 mm) and greater than 48-inch (1.2 m) in diameter, and for all sizes of storm drain trunklines and laterals. Include the cost of granular bedding material for pipes less than 54-inch (1370 mm) diameter in the cost of the pipe. Firmly tamp the granular bedding under the pipe haunches.

B. **Bedding material.** Include the cost of bedding material for pipes less than 54-inch (1.2 m 1370mm) diameter or less in the cost of the pipe. Firmly tamp the bedding material under the pipe haunches.

C. **Foundation material.** Foundation Material is measured by the neat line cubic yard (m³) in place.

REASON: Ensure bedding is placed around the pipe, and backfill is placed above bedding material.

PROPOSED DRAFT

604.04 METHOD OF MEASUREMENT

604.04.1 Manhole and Inlet Structure Bases

~~Manholes, combination manholes~~ Manhole and Inlet Structure bases are measured by the unit for each specified type, complete for the first 5 vertical feet (1520mm) of the structure. Manhole and Inlet Structures less than 5 feet from the lowest inside invert to top lid or grate elevation is one manhole or inlet base. Structures in place, excess of 5 feet will include an additional barrel.

604.04.2 Additional Barrel

Additional Barrels are measured by the foot (m) to the nearest 0.1 foot (30 mm). The measurement of additional barrels is the vertical height of the manhole or inlet from the lowest inside invert to the top lid or grate elevation minus the 5 feet included with the base.

604.04.3 Concrete Apron

Concrete Apron is measured by the each.

604.04.4 Curb and Drop Inlet Frame and Grate, and Manhole Frame and Lid

Curb and Drop Inlet Frame and Grate, and Manhole Frame and Lid are measured by the each.

604.04.5 Slotted Drain

Slotted drain, as shown in the Detailed Drawings, is measured by the foot (m) and includes the end cap and the elbow connection to the inlet.

604.04.6 Median Inlet

Median Inlets as shown in the detailed drawings and backfill plans are not measured for payment by the each and include all materials.

604.05 BASIS OF PAYMENT

Payment for the completed and accepted quantities is made under the following:

<u>Pay Item</u>	<u>Pay Unit</u>
<u>Manhole, Structure Base</u>	<u>Each</u>
<u>Inlet Structure Base</u>	<u>Each (m)</u>
<u>Additional Barrel</u>	<u>0.1 Foot (m)</u>
<u>Concrete Apron</u>	<u>Each</u>
<u>Curb Inlet Frame and Grate</u>	<u>Each</u>
<u>Drop Inlet Frame and Grate</u>	<u>Each</u>
<u>Manhole Frame and Inlet, and Inlet Lid</u>	<u>Each</u>
<u>Slotted Drain</u>	<u>Foot-(m)</u>
<u>Median Inlet</u>	<u>Each</u>

Payment for all costs associated with excavation and backfill required for manholes, manhole and inlets, inlets, and slotted drains the above items is included in the contract unit price of each respective drainage item.

Payment at the contract unit price is full compensation for all resources necessary to complete the item of work in accordance with the contract.

FINAL DRAFT

604.04 604.04 METHOD OF MEASUREMENT

~~Manholes, combination manholes~~ **604.04.1 Manhole and inlets, Inlet Structure Bases**

Manhole and inlets, Inlet Structure bases are measured by the unit for each specified type, complete for the first 5 vertical feet (1520mm) of the structure. Manhole and Inlet Structures less than 5 feet from the top of the floor slab to the top of the roof slab or additional barrel is one manhole or inlet base.

Structures in place, excess of 5 feet will include an additional barrel.

604.04.2 Additional Barrel

Additional Barrels are measured by the foot (m). The measurement of additional barrels is the vertical height of the manhole or inlet from the top of floor slab to the top of the roof slab or additional barrel minus the 5 feet included with the base.

604.04.3 Concrete Apron

Concrete Apron is measured by the each.

604.04.4 Curb and Drop Inlet Frame and Grate, and Manhole Frame and Lid

Curb and Drop Inlet Frame and Grate, and Manhole Frame and Lid are measured by the each.

604.04.5 Slotted Drain

Slotted drain, as shown in the Detailed Drawings Detailed Drawings, is measured by the foot (m) and includes the end cap and the elbow connection to the inlet.

~~604.04.2 Excavation and backfill are not measured for payment.~~

604.04.6 604.05 Median Inlet

Median Inlets as shown in the detailed drawings and plans are by the each and include all materials.

604.05 BASIS OF PAYMENT

Payment for the completed and accepted quantities is made under the following:

Pay Item	Pay Unit
<u>Manhole, Structure Base</u>	<u>Each</u>
<u>Inlet Structure Base</u>	<u>Each</u>
<u>Additional Barrel</u>	<u>Foot (m)</u>
<u>Concrete Apron</u>	<u>Each</u>
<u>Curb Inlet Frame and Grate</u>	<u>Each</u>
<u>Drop Inlet Frame and Grate</u>	<u>Each</u>
<u>Manhole Frame and Inlet, and Inlet Lid</u>	<u>Each</u>
<u>Slotted Drain</u>	<u>Foot-(m)</u>
<u>Median Inlet</u>	<u>Each</u>

Payment for all costs associated with excavation and backfill required for ~~manholes, manhole and inlets, inlets, and slotted drains~~ above items is included in the contract unit price of each respective drainage item.

Payment at the contract unit price is full compensation for all resources necessary to complete the item of work in accordance with the contract.

PROPOSED DRAFT

606.03.1 General

Install guardrail meeting the requirements of [Detailed Drawings](#) and the contract. Install all guardrail, terminal sections and impact attenuators according to the manufacturer's instructions. ~~When requested by the Project Manager, submit~~ Submit 2 copies of the installation instructions at least 15 calendar days prior to the installation

REASON:

COMMENTS:

FINAL DRAFT

606.03.1 General

Install guardrail meeting the requirements of [Detailed Drawings](#) and the contract. Install all guardrail, terminal sections and impact attenuators according to the manufacturer's instructions. ~~When requested by the Project Manager, submit~~ Submit electronic copies of the installation instructions at least 15 calendar days prior to the installation

INTENT: Ensure installation instructions are available to field staff for use during the item inspection.

No Changes to the Proposed Draft – Final Acceptance

621.02 MATERIALS

Use the materials specified in the contract. ~~Materials not specified and used in the work must be equal and comparable to those found in the existing work.~~ The use of wood shims and other degradable materials are prohibited.

Obtain the Project Manager's approval before using material not specified in the contract substitutions.

INTENT: Prevent shims degradation if shims are left in place.

No Changes to the Proposed Draft – Final Acceptance

707.01 CONCRETE JOINT FILLERS

707.01.1 Concrete Pavement

A. Expansion Joint Filler. Furnish expansion joint filler Type II cork in accordance with AASHTO M 153 **or in accordance with ASTM D8139.**

707.01.2 Concrete Curbs, Gutters, and Sidewalks

Use preformed expansion joint filler for concrete curbs, gutters, and sidewalks in accordance with AASHTO M 213 **or in accordance with ASTM D8139.**

REASON: *ASTM update*

No Changes to the Proposed Draft – Final Acceptance

713.08 RECLAMATION SEED

Furnish all seed that meets and is labeled under Montana Seed Law and meeting the contract requirements.

Furnish seed originating from the North American Continent above 41 degrees latitude. Make written request for waivers of the above requirements to the Project Manager who will work with the Department Agronomist. Do not furnish seed, grown or originating, from production fields outside of North America.

Furnish seed free of prohibited noxious weed seed with restricted weed seed not exceeding Montana Seed Law.

Wet, moldy, or otherwise damaged seed will be rejected.

Calculations of “pure live seed” may be made based on either a germination test or a tetrazolium test, in addition to the purity analysis.

Submit a purity analysis and germination test of the seed proposed for use. A germination test must have been performed within 12 months of the seeding date.

Apply seed on a “pure live seed” basis. The quantity of “pure live seed” per 100 pounds (45.4 kg) of seed is determined as follows:

% Pure Live Seed = Germination % x Purity x 100

Bulk Seed Needed = Total Lbs. Pure Live Seed Required / % Pure Live Seed x 100

Submit a written notification of the seed source and the approximate date the seeding is planned to begin. Do not begin seeding until the germination and purity test results are known and a Department seed blend report is furnished to the Project Manager.

Store all seed under weather-proof cover until time of seeding. Seed bags exposed to rain or snow will be rejected.

713.08.1 Reclamation Seed

Furnish reclamation seed from suppliers listed on the QPL.

713.08.2 Landscaping Seed

Seed used for landscaping is not required to be on the QPL.

REASON: Require Suppliers of reclamation seed be on the QPL.