#### INVITATION TO BID YELLOWSTONE COUNTY, MONTANA 2026 RSID CHIP SEAL AND CRACK SEAL PROJECT

Notice is hereby given that the Board of County Commissioners of Yellowstone County, Montana is currently soliciting bids for chip sealing approximately 26 miles of County roadway and other associated items including crack sealing. This project includes roads in Rural Special Improvement Districts (RSID). A list of the roads and / or subdivisions to be chip sealed and crack sealed are as follows:

- RSID 661 Fischer Sub
- RSID 660 Sticka Sub
- RSID 675 Oak Ridge Estates Sub
- RSID 787 Oak Ridge Estates Sub, Phase II
- RSID 773 West Meadows Sub
- RSID 715 Tanglewood Lake Estates Sub
- RSID 786 Grizzly Creek Sub
- RSID 653 High Point Sub
- RSID 663 Montana Meadows Sub
- RSID 804 Montana Meadows Sub Phase 2
- RSID 785 Riverview Estates Sub Area
- RSID 672 R.F. Development Properties Sub
- RSID 677 Titan Sub, Amended
- RSID 574 Emerald Hills Westgate Sub
- RSID 752 Emerald Hills Sub Forest Hills Drive
- RSID 839 Emerald Hills Drive
- RSID 855 Emerald Hills Sub
- RSID 795 T Bar J Sub
- RSID 833 Silver Fox
- RSID 776 Pryor Creek Estates Sub

Specifications for "CRACK SEAL" and "CHIP SEAL" are attached. Maps showing the roads to be crack sealed and chip sealed are available at the Yellowstone County Public Works office.

All bids must be labeled '2026 Chip Seal and Crack Seal Project' and mailed in triplicate (1 original and 2 copies) to the Board of County Commissioners, PO Box 35000, Billings, MT 59107 or delivered to their office, Room 3101, located on the third floor of City Hall, 316 N 26<sup>th</sup> Street, Billings, MT 59101, to be received no later than 3:00 p.m. November 17, 2025. All bids received by this time and date will be opened and read aloud at 9:00 a.m. November 18, 2025 in the Commissioners Board Room, Room 3108 of City Hall, 316 N 26<sup>th</sup> Street. Bids received after the aforementioned time and date will not be considered. No bid may be withdrawn after the scheduled time for receipt of the bids.

All bids must include a Bid Bond in favor of Yellowstone County in an amount equal to ten percent (10%) of the total Bid. The security may consist of cash, a cashier's check, a certified check, a bank money order, a certificate of deposit, a money market certificate, or a bank draft. The security must be: a) drawn and issued by a federally chartered or state chartered bank or savings and loan association that is insured by or for which insurance is administered by the Federal Deposit Insurance Corporation; or b) drawn and issued by a credit union insured by the National Credit Union Share Insurance Fund; or c) a bid bond or bonds, original only, no photocopies, executed by a surety company authorized to do business in the State of Montana. Facsimiles, personal and/or business checks are not an acceptable form of security. All bonds of the unsuccessful bidders will be returned within 10 days of the signing of a contract with the successful bidder.

No bid may be withdrawn prior to sixty (60) days after the scheduled time for receipt of the bids.

Each bidder must have a current Montana Public Contractor's Registration number when submitting their bid. The number must appear on the bid. All subcontractors, if any, must obtain a registration number prior to beginning any work on the project. Bid only registrations are acceptable for the bidding process.

The successful bidder will be required to provide the County with a performance bond and labor and materials payment bond, both in 100% of the contract amount, within ten days of the execution of the contract and prior to starting any work on the project.

All Montana laws pertaining to resident bidders, both state and county, will be adhered to if applicable.

The successful bidder will be required to follow all the directives included in section 18-2-422 of the Montana Code Annotated concerning Montana Prevailing Wages. Those directives are as follows:

- (1) the contractor and any subcontractors are required to pay the standard prevailing wage rate, including fringe benefits, for each job classification as stated in the current prevailing wage rate schedules. This information is included in the four prevailing wage rate schedules that are being provided to each bidder as part of this bid package. The current schedules are also available at the State of Montana web-site <a href="https://erd.dli.mt.gov/labor-standards/state-prevailing-wage-rates/">https://erd.dli.mt.gov/labor-standards/state-prevailing-wage-rates/</a>. It is the responsibility of the contractors to obtain and use the applicable Wage Rate Schedules.
- (2) each contractor and subcontractor is required to maintain payroll records in a manner readily capable of being certified for submission under statute 18-2-423, for not less than 3 years after the contractor's and subcontractor's completion of work on the project;
- (3) each contractor is required to post a statement of all wages and fringe benefits in compliance with statute 18-2-423.

Statute 18-2-423 is as follows: If a complaint is filed with the department alleging noncompliance with 18-2-422, the department may require the project to submit to it certified copies of the payroll records

for workers employed on that project. A contractor or a subcontractor shall pay employees receiving an hourly wage on a weekly basis. If a wage violation complaint is filed with the department, the contractor or subcontractor shall provide the employee's payroll records to the department within 5 days of receiving the payroll request from the department.

The successful bidder will be required to give preference to the employment of bona fide Montana residents in the performance of the work on this project.

All state laws pertaining to Resident Bidders, both State and County will be adhered to if applicable.

A 5% retainage fee will be withheld from all progress payments made to the successful bidder. The fee will be returned to the contractor upon completion of the project and acceptance of the project by the County. The successful bidder will be required to pay the State of Montana a sum equal to 1% of the gross receipts from the public contract. The County will withhold this amount and forward it to the State of Montana.

The Contractor must, in performance of work under this contract, fully comply with all applicable federal, state or local laws, rules, regulations, including the Montana Human Rights Act, Civil Rights Act of 1964, the Age Discrimination Act of 1975 and the American with Disabilities Act of 1990. Any subletting or subcontracting by the Contractor subjects subcontractors to the same provisions. In accordance with section 49-3-207, MCA, the Contractor agrees that the hiring of persons to perform the contract will be made on the basis of merit and qualifications and there will be no discrimination based upon race, color, religion, creed, political ideas, sex, age, marital status, physical or mental disability, or national origin by the persons performing under the contract.

The Board of County Commissioners reserves the right to reject any or all bids received, to waive informalities to evaluate the bids submitted, and to accept the bid that best serves the interests of Yellowstone County. Yellowstone County intends to award all work to one (1) contractor. It is the intention of the County to undertake and complete all portions of this project in 2026 but if that is not possible either because of weather, funding, or availability of materials; the lowest bid submitted for the overall project will considered first. A preconstruction meeting will be held after bid opening and prior to the County giving Contractor the Notice to Proceed.

Done by order of the Board of County Commission 2025.	ners, Yellowstone County, Montana this 28th day of October
	Board of County Commissioners Yellowstone County, Montana
(Seal) Attest:	Mark Morse, Chair
Jeff Martin, Clerk and Recorder	

### INSURANCE REQUIREMENTS

The following insurance coverage must be in force throughout the project. Coverage may be obtained through either a general liability policy or excess liability umbrella coverage.

### **General Liability**

Commercial General Products-Comp/C	,	General Aggregate		,000,000
Occurrence	Personal & A	Adv Injury	\$1,	,000,000
Each Occurrence			\$1,	,000,000
Fire Damage (any	one fire)		\$	100,000
Medical Expense (	any one perso	n)	\$	5,000
Automobile Liability (Hired and non-ov	vned autos)		\$1,	,000,000

#### **Workers Compensation**

State	Statutory
Federal	Statutory
Employer's Liability	\$ 500,000

#### **CHECK LIST**

Please be sure you have completed the following prior to submitting your bid.

- 1. Read and understand the specifications.
- 2. Enclosed a ten (10) percent bid bond.
- 3. Have made yourself familiar with any State or County laws that pertain to the bid.
- 4. Asked and received answers to any questions regarding the bid procedure, specifications or general information.
- 5. Addressed and mailed or delivered your bid to be received at the correct address by the time and date indicated in the Invitation to Bid.

# Yellowstone County 2026 Chip Seal and Crack Seal Project Price Sheet (1 of 4)

Please include this sheet (these sheets) with your other documents when submitting your proposal.

Please place bid price sheet(s) in the front or your proposal.

Bidder to perform all of the work described in the Specifications and shown on the Plans for the following amount.

RSID#	Subdivision Name	Item No.	Quantity	Unit of Measure	Item Description	Total Price
	1 (62220	1	1	LS	Crack Seal	
661M	Fischer Sub	2	1	LS	Chip Seal using "pick up" broom	
< < 0.3. T		3	1	LS	Crack Seal	
660M	Sticka Sub	4	1	LS	Chip Seal using "pick up" broom	
	Oak Ridge	5	1	LS	Crack Seal	
675M	Estates Sub	6	1	LS	Chip Seal using "pick up" broom	
	Oak Ridge	7	1	LS	Crack Seal	
<b>787M</b>	Estates Sub, Phase II	8	1	LS	Chip Seal using "pick up" broom	
	West	9	1	LS	Crack Seal	
773M Meadows Sub		10	1	LS	Chip Seal using "pick up" broom	
		11	1	T.G.	G 1.G 1	
	Tanglewood	11	1	LS	Crack Seal	
715M Lake Estates Sub		12	1	LS	Chip Seal using "pick up" broom	
<b>=</b> 0.43.5	<b>Grizzly Creek</b>	13	1	LS	Crack Seal	
786M Estates Sub		14	1	LS	Chip Seal using "pick up" broom	
	TI'L D'	15	1	LS	Crack Seal	
653M	High Point Sub	16	1	LS	Chip Seal using "pick up" broom	
	Montana	17	1	LS	Crack Seal	
663M	Meadows Sub	18	1	LS	Chip Seal using "pick up" broom	

# Yellowstone County 2026 Chip Seal and Crack Seal Project Price Sheet (2 of 4)

Please include this sheet (these sheets) with your other documents when submitting your proposal.

Please place bid price sheet(s) in the front or your proposal.

Bidder to perform all of the work described in the Specifications and shown on the Plans for the following amount.

RSID#	Subdivision Name	Item No.	Quantity	Unit of Measure	Item Description	Total Price
	Montana	19	1	LS	Crack Seal	
804M Meado	Meadows Sub Phase 2	20	1	LS	Chip Seal using "pick up" broom	
	Riverview	21	1	LS	Crack Seal	
785M	Estates Sub Area	22	1	LS	Chip Seal using "pick up" broom	
	D.E.	23	1	LS	Crack Seal	
672M	R.F. Development Properties Sub	24	1	LS	Chip Seal using "pick up" broom	
<b>677M</b>	Titan Sub, Amended	25 26	1	LS LS	Crack Seal Chip Seal using "pick up" broom	
574M	Emerald Hills Westgate Sub	27	1	LS LS	Crack Seal Chip Seal using "pick up" broom	
		20	1	IC	Cwash Saal	
752M	Emerald Hills Sub, Forest Hill Drive	30	1	LS	Crack Seal  Chip Seal using "pick up" broom	
839M	Emerald Hills Drive	31 32	1	LS LS	Crack Seal Chip Seal using "pick up" broom	
855M	Emerald Hills Sub	33	1	LS LS	Crack Seal Chip Seal using "pick up" broom	

## Yellowstone County 2026 Chip Seal and Crack Seal Project Price Sheet (3 of 4)

Please include this sheet (these sheets) with your other documents when submitting your proposal.

Please place bid price sheet(s) in the front or your proposal.

Bidder to perform all of the work described in the Specifications and shown on the Plans for the following amount.

RSID#	Subdivision Name	Item No.	Quantity	Unit of Measure	Item Description	Total Price
795M	T Bar J Sub	35	1	LS	Crack Seal Chip Seal using	
		36	1	LS	"pick up" broom	
	Silver Fox	37	1	LS	Crack Seal	
833M	Subdivision	38	1	LS	Chip Seal using "pick up" broom	
ALTERNATE FOR SEAL COAT OF SILVER FOX SUBDIVISION						
833M	Silver Fox Subdivision	38A	1	LS	Seal coat only, in lieu of chip seal	
	Pryor Creek	39	1	LS	Crack Seal	
776M	Estates Sub	40	1	LS	Chip Seal using "pick up" broom	

Please include this sheet (these sheets) with your other documents when submitting your proposal.

Please place bid price sheet(s) in the front or your proposal.

Bidder to perform all of the work described in the Specifications and shown on the Plans for the following amount.

BASIS OF AWARD: The Board of County Commissioners reserves the right to reject any or all bids received, to waive informalities to evaluate the bids submitted, and to accept the bid that best serves the interests of Yellowstone County. Yellowstone County intends to award all work to one (1) contractor. It is the intention of the County to undertake and complete all portions of this project in County Fiscal Year 2026 (ending June 30, 2026) but if that is not possible either because of weather, funding, or availability of materials; the lowest bid submitted for the overall project will be considered first. A preconstruction meeting will be held after bid opening and prior to the County giving Contractor the Notice to Proceed.

# Yellowstone County 2026 Chip Seal and Crack Seal Project Price Sheet (4 of 4)

Please include this sheet (these sheets) with your other documents when submitting your proposal.

SIGNATURE OF BIDDER	₹:		
If an Individual:			, doing
business			
	as		
If a Partnership:			
	by		, partner
If a Corporation:			
	(a		Corporation)
	by		(SEAL &)
	Title		(ATTEST)
Business Address and Pl	none Number of	Bidder	
_	s receipt of the fo	ollowing Addenda, which	have been considered in
preparation of this Bid:  No.		Dated	
No.			
Submitted this c	lay of		20



# **CRACK SEAL**

# **SPECIAL PROVISIONS**

**DESCRIPTION:** This item shall consist of preparing the road surface for chip sealing. 1) This includes patching all potholes and replacing all failed pavement areas; in addition to sealing cracks in asphalt pavements for the following roads:

Roads to be crack sealed are as follows (maps showing the roads to be crack sealed are available at the Yellowstone County Public Works office):

- RSID 661 Fischer Sub
- RSID 660 Sticka Sub
- RSID 675 Oak Ridge Estates Sub
- RSID 787 Oak Ridge Estates Sub, Phase II
- RSID 773 West Meadows Sub
- RSID 715 Tanglewood Lake Estates Sub
- RSID 786 Grizzly Creek Sub
- RSID 653 High Point Sub
- RSID 663 Montana Meadows Sub
- RSID 804 Montana Meadows Sub Phase 2
- RSID 785 Riverview Estates Sub Area
- RSID 672 R.F. Development Properties Sub
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- RSID 839 Emerald Hills Drive
- RSID 855 Emerald Hills Sub
- RSID 795 T Bar J Sub
- RSID 833 Silver Fox
- RSID 776 Pryor Creek Estates Sub

This portion of the project shall be bid lump sum per each RSID.

- Crack Seal Lump Sum
- **POTHOLE PATCHING:** The contractor and a representative of the Yellowstone 2) County Public Works Department shall mark with paint the potholes to be patched.

The contractor shall remove any loose asphalt material, remove any standing water, compact existing road base material (not required if an asphalt surface is visible and appears solid), tack all asphalt edges (and surfaces), and then place and compact hot mix asphalt in the marked locations. No measurement or payment shall be made for this item but it shall be included in the cost of the other bid items.

The contractor shall not chip seal over patched potholes prior to verification (from a representative of the Yellowstone County Public Works Department) that all marked potholes have been patched.

REPLACING FAILED PAVEMENT AREAS: 3) The contractor and a representative of the Yellowstone County Public Works Department shall mark with paint the failed pavement areas where the road section is to be replaced.

> Maps of the various RSID's are available from the Public Works Department and these maps note the dimensions of failed pavement areas at the time the bid documents were prepared. It is these areas that the contractor and a representative of the Yellowstone County Public Works Department shall mark.

This shall consist of removing existing failed pavement areas of road in need of repair and replacing with a specified road section of the greater of either the existing section or the following:

> 3 inches of B-Modified asphalt; over 3 inches of 1 ½ inch minus road base: over 12 inches of 3 inch minus road base.

The contractors' equipment and methods for the preparation and handling of the asphaltic concrete mixture shall conform to Section 02510 of the Montana Public Works Standard Specifications.

The existing asphaltic pavement shall be cut in a straight line using equipment that will obtain a reasonably straight, square, and clean break.

The base and subgrade shall be compacted to at least 95% of maximum density as determined by AASHTO T 99, Method A or C.

Edges of existing asphalt and of gutter (if any) shall be tacked. The tack coat shall be allowed to cure properly before any further operation is done.

The asphaltic pavement shall be a minimum compacted thickness as specified of an approved hot plant mix asphaltic concrete. After placing the asphaltic concrete, the course shall be compacted with approved self-propelled rollers. Such rolling shall be such as to produce at least 97 percent of the Marshall density. If repaired areas are too small for selfpropelled rollers, other approved equipment may be used but the minimum density must still comply with Section 02510 of the Montana Public Works Standard Specifications.

The contractor shall not chip seal over replaced failed pavement areas prior to verification (from a representative of the Yellowstone County Public Works Department) that all marked failed pavement areas have been completed. No measurement or payment shall be made for this item but it shall be included in the cost of the other bid items.

Other failed areas that might need to be replaced will be treated separately by Contract Change Order(s) along with payment per said change order(s).

4) **CRACK SEAL GENERAL:** This item shall consist of the cleaning and sealing of cracks before the application of other surfacing (chip seal, micro slurry seal, pavement overlay, etc.).

**CRACK SEAL MATERIALS:** The crack sealant used must meet or exceed the following specifications:

#### Crack Sealant

Use sealant meeting the following specifications when sampled and prepared in accordance with ASTM D 3405 specifications, or an approved equal that will produce the desired finished product and meets all of this specifications requirements:

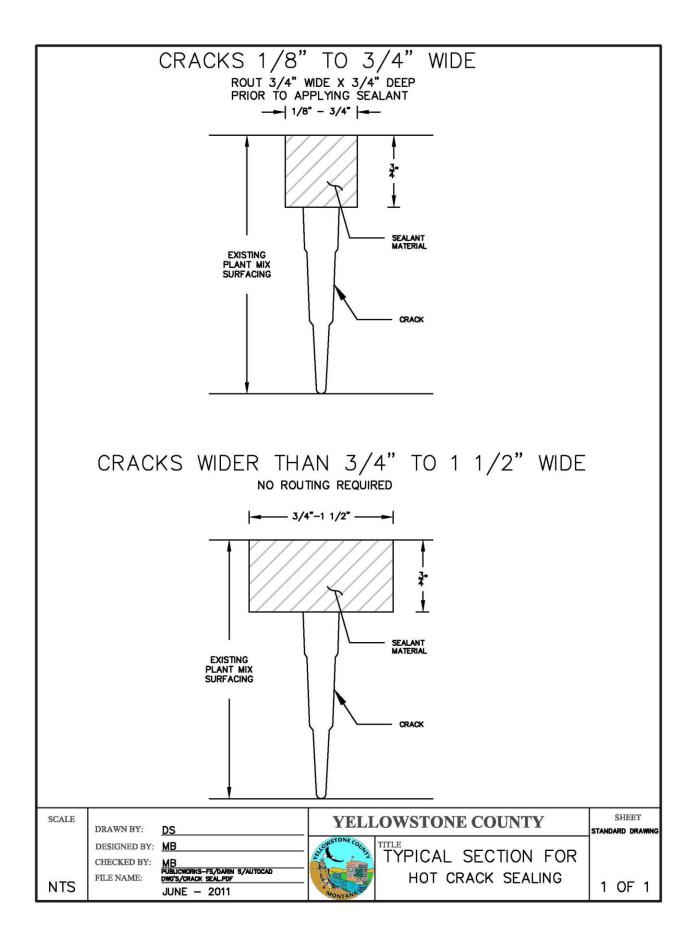
Cone Penetration, 77°F (25°C), dmm (ASTM D3407) 90 max. Flow, 140°F (60°C), (ASTM D3407) 3 mm max. Resilience, (ASTM D3407) 60% min. Bond,  $0^{\circ}(-18^{\circ})$ , 100% ext. (ASTM 3407) Pass 3 cycles Bond, -20°F (-29°C), 50% ext. (ASTM D3407) Pass 3 cycles Recommended Pour Temperature 380°F Safe Heating Temperature 400°F Asphalt Compatibility (ASTM D3407) Pass

#### **Sampling**

Testing of material will be at the discretion of the engineer or inspector on the job site. Testing may be completed by an independent certified testing firm. If there is a failure of the installed crack seal, or if the engineer or inspector has concerns of failure of the installed crack seal material, testing will be required and the cost of said testing will be the responsibility of the contractor.

**CONSTRUCTION METHODS:** Traffic can use the road as soon as the crack is 4a) filled and covered with blotter sand (or other approved blotter material) and the crack fill material has "cured". The amount of cure time needed or required before additional surface treatment (chip seal, micro slurry seal, pavement overlay, etc.), is the responsibility of the Contractor to determine and control other project schedule related coordination, and is dependent on weather and other site specific parameters.

- i) **Surface Preparation:** The cleaning and preparation of the road surface required by the specifications shall include the removal of grass and other vegetative matter growing in any cracks in the road surface. Any vegetative material in the roadway area where cracks are to be sealed must be sprayed with appropriate materials with a color dye additive to allow visual observation of the Engineer or other authorized representative of the Owner that said vegetative material has been sprayed.
  - (1) When blowing the cracks clean, material cannot be blown into the open traffic lanes.
  - (2) Ensure that both the reservoir and crack are dry and free of dust, dirt and loose materials immediately before applying the sealant.
  - (3) Use air equipment producing at least 100 CFM and a continuous line pressure of at least 125 PSI. The air must be oil and water free.
  - (4) The subsequent crack sealing process shall not proceed until a reasonable period of time has passed so as to allow full kill of all said vegetative material. Contractor shall clean the roads to be crack sealed prior to the crack seal. No measurement or payment shall be made for this item but it shall be included in the cost of the other bid items.
- ii) Sweeping After Crack Sealing: After a reasonable crack sealing cure time, all roads shall be swept by the Contractor to remove excess blotter sand (or other blotter materials – if used), and any other materials from the surface of the road. measurement or payment shall be made for this item but it shall be included in the cost of the other bid items.
- iii) **Routing:** Routing will be required for cracks of 1/8 inch wide up to  $\frac{3}{4}$  inch wide. Cracks of width greater than 3/4 inch in width up to 1 1/2 inches in width may be filled without routing (see the attached detail drawing of a typical section).
- **METHOD OF MEASUREMENT AND BASIS OF PAYMENT:** This item 5) shall be measured and paid for by the lump sum basis for all roads that are being crack sealed and used in the completed work, at the contract lump sum price bid for "Crack Seal". The price and payment shall constitute full compensation for all storage, handling, and other charges, materials (including sand, blotter materials, etc.,), tools, equipment, labor, and the performance of all work necessary or incidental to complete this work.





# **CHIP SEAL SPECIAL PROVISIONS**

#### **Summary of Work:** 1.

Roads to be chip sealed are as follows (maps showing the roads to be chip sealed are available at the Yellowstone County Public Works office):

- RSID 661 Fischer Sub
- RSID 660 Sticka Sub
- RSID 675 Oak Ridge Estates Sub
- RSID 787 Oak Ridge Estates Sub, Phase II
- RSID 773 West Meadows Sub
- RSID 715 Tanglewood Lake Estates Sub
- RSID 786 Grizzly Creek Sub
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- RSID 663 Montana Meadows Sub
- RSID 804 Montana Meadows Sub Phase 2
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- RSID 839 Emerald Hills Drive
- RSID 855 Emerald Hills Sub
- RSID 795 T Bar J Sub
- RSID 833 Silver Fox
- RSID 776 Pryor Creek Estates Sub

This portion of the project shall be bid lump sum, per each bid item.

• Chip Seal – Lump Sum, sweep after using "pick-up" broom

Any project that has a total contract amount that exceeds \$25,000 will require the Contractor to pay State prevailing wages to all employees and / or subcontractors employees per State law.

- 2. **Guarantee:** All work shall be guaranteed for a period of one (1) year. Defective construction observed before the expiration of the one (1) year guarantee shall be removed and replaced at no cost to the owner.
- 3. **Coordination with Other Contractors:** The Contractor shall coordinate his work on this project with the work of other contractors in the area to assure orderly completion of the work and to maintain safe conditions with reasonable traffic flow.
- **Date of Completion:** The entire work shall be completed within the time stated in the 4. Agreement Form.
- 5. Claims for Extra Work: No claim for extra work will be allowed unless it is presented before the final progress payment estimate and is accompanied by a written order given by the Owner for such extra work. The order must state the approximate amount and the price to be paid for the same. The Owner reserves the right to contract with any person or firm, other than the Contractor, for any or all extra work. The Montana Public Works Standard Specifications shall determine the methodology for any extra work and therefore provide the basis for the cost of extra work.
- **Testing:** All quality control and compliance testing of work accomplished will be 6. performed by Contractor, or its designated representative, at no cost to the Owner. All testing costs are to be included in the lump sum price for the work to be done under this contract and no additional compensation will be allowed for testing.
- **Responsibility to Property Owners:** The Contractor shall, at all times, conduct his 7. work so as to insure, in the greatest possible degree, the uninterrupted convenience and safety of the property owners adjacent to the work. Access for these property owners shall be maintained at all times.
- 8. **Notification of Property Owners:** It shall be the Contractor's responsibility to notify property owners and/or tenants 48 hours in advance of their approaching road work operations in order to arrange for the removal of parked vehicles or other items in the road that would interfere with his operations.
- 9. **Special Considerations:** Several public works projects may be under construction during the same time period in and near the areas proposed for this project. It may be necessary for the Contractor to coordinate his activities in those circumstances.

- **Traffic Control:** Traffic control on this project shall be in accordance with Section 10. 01570 of the Montana Public Works (MPW) Standard Specifications. No measurement or payment shall be made for this item but it shall be included in the cost of the other bid items.
- **Chip Seal:** The following provisions shall be applicable to the application of the chip seal and shall be in addition to Section 02504 of the MPW Standard Specifications.
  - A) **Surface Preparation:** The cleaning and preparation of the road surface required by the specifications shall include the removal of grass and other vegetative matter growing along any gutters (curb or valley) or elsewhere in the road surface. The Contractor shall clean the roads to be chip sealed prior the chip seal. No measurement or payment shall be made for this item but it shall be included in the cost of the other bid items.
  - B) **Stone Chips:** The aggregate for the chip seal shall meet the following gradation:

#### Percent Passing, by Weight

Sieve Size	Percent Passing
3/8 inch	100
No. 4	0-20
No. 10	-
No. 100	-
No. 200	0-2

Of the fraction retained on the No. 4 sieve, a minimum of 75% of the particles by weight shall have at least one fractured face and a minimum of 50% of the particles by weight shall have at least two fractured faces. The chips shall be of uniform quality throughout and shall be clean. The Contractor shall furnish test results for compliance daily during production.

- C) **Emulsified Asphalt:** The Contractor shall submit to the Owner all volume tickets for each load of emulsified asphalt delivered. The spraying of emulsified asphalt shall be so conducted as to provide a seal at the joint between the edge of the concrete gutter and the adjoining road surface. Spraying widths necessary to cover the width of the road shall be calculated so as to keep the amount of oil on any gutters (or other concrete surfaces) to a minimum. Hand spraying may be necessary where road widths are irregular. The type of emulsified asphalt shall be CRS - 2P.
- D) **Estimated Application Rates:** The application rates for this project shall be determined in the field by the Contractor, warranted by what road conditions necessitate. The following are approximate minimum requirements.

Emulsified Asphalt 0.40 gal. / S.Y. 23 lbs. / S.Y. Seal Coat Aggregate

The actual quantities required may be more than the estimated application rates above. Payment will be made at the lump sum price for this project.

No asphalt material shall be applied if the atmospheric temperature in the shade is less than 65°F. Chips shall be applied at appropriate rates to prevent pick up by the construction equipment. Rolling shall proceed immediately after application to ensure maximum embedment of the aggregate. Traffic can be permitted on the completed surface in four hours or as directed by the Contractor.

E) Sweeping (1st Time) After Chip Sealing: Within 48 hours after chip sealing, all roads shall be swept by the Contractor to remove excess (unattached) chips from the surface of the road. No measurement or payment shall be made for this item but it shall be included in the cost of the other bid items.

The method of sweeping is by "pick-up broom".

F) Sweeping (2<sup>nd</sup> Time) After Chip Sealing: Thirty (30) days after 1<sup>st</sup> sweeping, all roads shall be swept a 2<sup>nd</sup> time by the Contractor to remove excess (unattached) chips from the surface of the road. No measurement or payment shall be made for this item but it shall be included in the cost of the other bid items.

The method of sweeping is by "pick- up broom".

Cul – de – sac Treatment / Sealing: Any roads with cul-de-sacs or "bulb" areas that 12. are mainly used for vehicles turning around shall not be chip sealed. These areas shall be sealed with a Type II Emulsified Asphalt Slurry Seal using the performance guideline specifications as detailed by the International Slurry Surfacing Association, under "Recommended Performance Guideline for Emulsified Asphalt Slurry Seal A105 (Revised 2010)", published by the International Slurry Surfacing Association of Annapolis, MD.

Contractor shall include compensation for this work in the lump sum price for chip seal. The Contractor shall be responsible for his own layout and control in the field. No measurement or payment shall be made for this work item but shall be included in the cost of the other bid items.

**Pavement Marking:** Any roads with existing pavement markings shall be repainted with **epoxy** paint after the chip seal. Contractor shall include compensation for this work in the lump sum price for chip seal. The Contractor shall be responsible for his own layout and control in the field. No measurement or payment shall be made for permanent pavement markings but shall be included in the cost of the other bid items.

Temporary center-line (yellow) and lane marks (white) shall be applied wherever any existing striping is removed or covered prior to opening the area to traffic. When road surface is covered (due to patching, chip sealing, or overlaying), and prior to opening the area to traffic, yellow and white tabs must be installed every 10 to 15 feet. No measurement or payment shall be made for temporary markings but shall be included in the cost of the other bid items.

Manhole Adjustment: Manholes shall be adjusted to grade in accordance with Section 14. 02113 of the MPW Standard Specifications. If feasible, adjustment shall be made with a two-inch concrete adjusting ring. Use of brick and mortar for adjustment will be allowed if concrete adjusting rings will not provide the proper height adjustment. Manholes may be adjusted to final grade before or after pavement overlay, however, final grade must be within 1/4 inch below finished road surface. No measurement or payment shall be made for this item but it shall be included in the cost of the other bid items.

Water Valve and Monument Adjustment: Water valves and monument boxes 15. shall be adjusted to grade in accordance with Section 02113 of the MPW Standard Specifications. Adjustment shall be made by screwing the extension up or down as necessary to adjust the valve box to the finished grade of the asphalt surface. Water valves shall be excavated and exposed so as to readily determine whether height adjustment can be made without substituting a longer section. No measurement or payment shall be made for this item but it shall be included in the cost of other bid items.