

Roscommon County Road Commission

Scott Eckstorm, Commissioner
James Porath, Commissioner
Justin Wykoff, Commissioner
Clint Stauffer, Commission
Brian Vaughn, Commissioner

820 E. West Branch Road
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NOTICE TO BIDDERS

The Roscommon County Road Commission will receive sealed bids until 2:00 p.m. on February 22, 2024. Bids will be opened for tabulation and review at the Roscommon County Road Commission's regularly scheduled board meeting on February 22, 2024 beginning at 7:00 p.m. Our office is located at 820 E. West Branch Road, Prudenville, MI 48651.

2024 Chip Seal & Fog Seal

Specifications may be obtained by contacting the Roscommon County Road Commission at the above address, on our website, www.roscommoncrc.com or by calling (989)-366-0333 ext. 1007 or emailing DahlstromB@roscommoncrc.com.

Submit bids in sealed envelope that is clearly marked with the words "**2024 Chip Seal & Fog Seal**". The Roscommon County Road Commission reserves the right to reject any or all bids, to waive irregularities in any bid, to waive details in the specifications, and to accept the bid deemed to be in the best interest of Roscommon County. Quantities may include work on MDOT Trunklines. **Bids may be extended for an additional year with mutual agreement.**

The Roscommon County Road Commission has adopted a "Local Contractors Preference Policy". Please go to Adopted Policies, at www.roscommoncrc.com for details and application forms.

ROSCOMMON COUNTY BOARD
OF ROAD COMMISSIONERS

Jim Porath, Chair
Brian Vaughn, Vice Chair
Justin Wykoff, Member
Clint Stauffer, Member
Scott Eckstorm, Member

Bid Requirements

The Roscommon County Road Commission (RCRC) will receive sealed bids until 2:00 p.m. on February 22, 2024. Bids will be opened for tabulation and review at the Roscommon County Road Commission's regularly scheduled board meeting on February 22, 2024 beginning at 7:00 p.m. Our office is located at 820 E. West Branch Road, Prudenville, MI 48651.

2024 Chip Seal & Fog Seal

The contractor will be responsible for all materials, equipment and labor necessary for the surface preparation and application for Chip Seal and Fog Seal. The contractor must meet the requirements of the Michigan Department of Transportation 2020 Standard Specifications for Construction, RCRC Special Provision for Seal, Single Chip and RCRC Special Provision for Seal, Fog.

Start Date: May 15, 2024 (or as approved by the Roscommon County Road Commission)

Completion Date: August 9, 2024 (or as approved by the Roscommon County Road Commission)

Contractor will provide flag control, temporary prismatic signs, minor traffic devices, and temporary raised pavement markers and is considered incidental to the unit prices submitted and must conform to the MMUTCD manual.

Contractor is required to have a Preconstruction Meeting with Roscommon County Road Commission before any work begins.

Contractor must contact RCRC within 72 hours in advance of a start date and provide a progress schedule for the work. No work shall be done Friday, Saturday or Sunday without approval from the Roscommon County Road Commission.

The Roscommon County Road Commission reserves the right to add or delete quantities and projects to the bid list at the unit prices quoted.

The Roscommon County Road Commission reserves the right to perform acceptance testing on any materials being incorporated into the work for quality assurance purposes and reserves the right to reject any material found to be non-conforming.

Contractor will provide Certificate of Insurance prior to commencing production.

Certificate shall include:

- Board of County Road Commissioners and Roscommon County Road Commission and all employees named as additionally insured on all coverage.
- General Liability = (or greater than) \$1,000,000 each occurrence.
- Automotive Liability = (or greater than) \$1,000,000 each occurrence.
- Workers Compensation = statutory limits.

All incidental spills of hazardous materials shall be the Contractor's responsibility. Notification to the proper authorities and clean up shall conform to the Michigan Department of Environmental Control Response Act "Polluter's Pay Act" as amended. Any costs incurred through such notice, litigation, etc., shall be the responsibility of the Contractor.

Submit bids in an envelope that is clearly marked "2024 Chip Seal & Fog Seal". The RCRC reserves the right to reject any and all bids, to waive irregularities in the bids, to waive details in the specifications and to accept the bid deemed to be in the best interest of the Roscommon County Road Commission.

2024 Chip Seal Bids
Roscommon County Road Commission

Road Name/ Township	Limits/Location	Length (Feet)	Road Width (Feet)	Item #1 34CS or 29A Chip Seal Syd	Item # 2 Leveling CS-T Chip Seal Syd	Item # 2 Top CS-T Chip Seal Syd	Item # 3 Fog Seal Syd
BACKUS TOWNSHIP							
Nestel Rd	CR 107 (Roscommon Rd) to end of HMA	1,342	22			3,410	3,410
Woodcock Way and Starwood Ct	Nestel Rd to end of HMA	916	22			2,450	2,450
DENTON TOWNSHIP							
Beverly Dr	M-55 to end of HMA	2,058	22 / 20			4,932	4,932
Burrill Dr	M-55 to end of HMA	2,956	21 / 20			6,895	6,895
Cottage Dr	M-55 to end of HMA	2,838	24 / 21			7,007	7,007
Devonshire Dr	M-55 to end of HMA	3,359	21			7,890	7,890
Dollena Ave	M-55 to CR 401 (Houghton View Dr)	934	21			2,378	2,378
Edgewood Dr	M-55 to end of HMA	1,838	22 / 21			4,408	4,408
Holly Ln	Over The Top to M-55	1,047	11 / 14			1,563	1,563
Irma St	M-55 to CR 401 (Houghton View Dr)	634	21			1,614	1,614
Kimberly Dr	M-55 to end of HMA	3,155	22 / 21			7,450	7,450
Liberty St	M-55 to CR 401 (Houghton View Dr)	791	22			2,053	2,053
Maplebluff Ave	M-55 to CR 401 (Houghton View Dr)	1,239	25 / 21			3,001	3,001
Oakridge Ave	M-55 to CR 401 (Houghton View Dr)	1,066	21			2,548	2,548
Peninsula Dr	Widdis Dr N to Widdis Dr S	1,095	21			2,672	2,672
Pleasant View Dr	Arrowhead Dr to M-55	283	21			716	716
Sheridan Dr	M-55 to end of HMA	2,480	21			5,855	5,855
Stanley Ave	M-55 to CR 401 (Iroquois Ave)	942	20.5 / 22			2,214	2,214
Stratford Dr	M-55 to end of HMA	2,643	20.5 / 22			6,320	6,320
Tudor Dr	M-55 to end of HMA	2,260	21 / 22			5,501	5,501
Widdis Dr N and Arrowhead Dr	M-55 to Widdis Dr N	2,249	21			5,377	5,377
Widdis Dr S	Arrowhead Dr to end of cul-de-sac	855	12 / 21			1,813	1,813
Wreath St and Hillside Ave	M-18 to Over The Top	1,699	11 / 14			2,624	2,624
GERRISH TOWNSHIP							
Bayer Rd N	Start of HMA to N Higgins Lake Dr	434	22			1,184	1,184
Candlewood Dr	Chase Blvd to CR 100 (N Cut Rd)	1,126	22			2,842	2,842
Chase Blvd and Southcrest Dr	Burdell Rd to CR 100 (N Cut Rd)	2,286	23			6,072	6,072
Grouse Trl	Start of HMA to Maplehurst Dr	285	18			668	668
Kenwood Dr	Start of HMA to Maplehurst Dr	512	21			1,224	1,224
Meadowlark Dr	Start of cul-de-sac to CR 100 (N Cut Rd)	1,819	19 / 23			4,768	4,768
Pinehaven Dr and Firewood Dr	Woodcrest Dr to Burdell Rd	1,912	20.5			4,430	4,430
Pinewood Dr W	Start of HMA to CR 103 (E Higgins Lake Dr)	2,580	21			6,144	6,144
Santee Dr	Chase Blvd to end of HMA	100	18			260	260
Sparrow Ave	Start of HMA to Maplehurst Dr	338	20.5			780	780
Woodcrest Dr and Pinehaven Dr	CR 103 (E Higgins Lake Dr) to Firewood Dr	1,168	20.5 / 21			2,788	2,788
Woodlawn Ave	Start of HMA to Maplehurst Dr	648	18 / 21			1,508	1,508
LYON TOWNSHIP							
Albermarle Blvd	Ironwood Ave to Ash Ave	640	20			1,426	1,426
Ash Ave	Albermarle Blvd to Michigan Central Park Blvd	236	20			550	550
Benjamin Ave	CR 200 to Michigan Central Park Blvd	404	18			838	838
Cooke Ave	CR 200 to Treasure Blvd	616	22			1,564	1,564
Elm Ave	CR 200 to Michigan Central Park Blvd	1,455	15 / 16.5			2,622	2,622
Evens Ave	CR 200 to End	857	17			1,610	1,610
Fox Ave	Old 27 to CR 200	158	22			516	516
Goebel Ave	CR 200 to Michigan Central Park Blvd	362	16			682	682
Haines Ave	CR 200 to End	900	16 / 17			1,660	1,660
Harrots Ave	Old 27 to CR 200	148	21 / 22			442	442
Ironwood Rd	CR 200 to End	1,276	17 / 22			2,484	2,484
Jones Ave	CR 200 to End	868	17			868	868
Kenmore Ave	CR 200 to Lake	642	16			1,162	1,162
Leslie Ave	CR 200 to Higgins Lake	164	29			598	598

Road Name/ Township	Limits/Location	Length (Feet)	Road Width (Feet)	Item #1 34CS or 29A Chip Seal Syd	Item # 2 Leveling CS-T Chip Seal Syd	Item # 2 Top CS-T Chip Seal Syd	Item # 3 Fog Seal Syd
LYON TOWNSHIP CONT.							
Myrtle Ave	Old 27 to CR 200	158	21			594	594
Pingree St	CR 200 to Bismark Blvd	1,117	19 / 21			2,833	2,833
Swanson Ave	CR 200 to Michigan Central Park Blvd	389	16			740	740
Thorpe Ave	CR 200 to End	1,184	16			2,094	2,094
Treasure Blvd	Kenmore Ave to Walnut Ave	2,975	16 / 17			5,374	5,374
W Ausable Rd	Start of Pavement to Old 27	1,311	21.5			3,222	3,222
W Higgins Lk Dr S	Ironwood Ave to Albermarle Blvd	1,665	22.5 / 25			4,542	4,542
W Higgins Lk Dr	Legion Dr to N Higgins Lk Dr	1,400	29			4,834	4,834
Walnut Ave	End of Pavement to Treasure Blvd	462	21			1,090	1,090
Wilson Ave	CR 200 to End of Pavement	496	17			946	946
Wire Ave	CR 200 to Michigan Central Park Blvd	315	20			722	722
MARKEY TOWNSHIP							
Crooked Oak Ct	Great Oak Dr to Great Oak Dr	1,102	23			2,890	2,890
Great Oak Dr	Lansing Rd to CR 100 (N Markey Rd)	2,153	23			5,562	5,562
Maplewood Dr	Flint Rd to Maplewood Dr	251	20.5			902	902
Maplewood Dr and Shady Grove Ln	Shady Grove Ln to Maplewood Dr	5,012	21			11,890	11,890
ROSCOMMON TOWNSHIP							
Barcome Ave	Crestview Dr to M-55	1,021	20 / 22			2,384	2,384
Broken Arrow Trl, Blackhawk Trl	Keweenaw Trl to CR 304 (Knapp Rd)	1,700	20			3,832	3,832
Chippendale Dr	Silverhill Dr to Teaberry Ln	2,406	20			5,680	5,680
Clarissa Ln	Marigold Ln to Butterfield Ln	1,290	21			3,260	3,260
Cloverleaf Ln, Happenstance Dr	Start of pavement to M-55	4,454	21			11,454	11,454
Crestview Dr	Towerhill Rd to M-55	3,638	21			8,622	8,622
Forestville Ln	Goldenrod Dr to Butterfield Ln	1,688	21			4,098	4,098
Grand Hill Ave	Crestview Dr to M-55	1,376	20			3,072	3,072
Harvey Ave	Crestview Dr to Terrace Dr	494	22			1,238	1,238
Keweenaw Trl	CR 304 (Knapp Rd) to end of pavement	437	20			1,008	1,008
King St	Roosevelt Dr to McKinley St	225	20			592	592
Knapp Rd	M-55 to end of Knapp Rd	1,168	21 / 20			3,090	3,090
Marigold, Acorn, Butterfield	Forestville Dr to Silverhill Dr	3,457	20 / 21			8,026	8,026
McKinley St	CR 305 (Federal Ave) to M-55	586	20			1,404	1,404
Pepperell Dr	Goldenrod Dr to Goldenrod Dr	3,940	21			9,462	9,462
Radcliff Dr	Redwine Dr to Redwine Dr	2,820	21			6,728	6,728
Redwine Dr	CR 306 (Loxley Rd) to Goldenrod Dr	2,823	20			6,380	6,380
Roosevelt Dr	CR 305 (Federal Ave) to M-55	295	18			750	750
Russell Ave	Crestview Dr to M-55	1,493	20			3,428	3,428
Silverhill Dr	Goldenrod Dr to Whitebirch Dr	2,073	21 / 22			5,066	5,066
Snowflake Way	Goldenrod Dr to Goldenrod Dr	2,392	20			5,544	5,544
Stoneschool Rd	CR 306 (Loxley Rd) to M-55	2,410	22			6,148	6,148
Teaberry Ln	Silverhill Dr to Goldenrod Dr	2,175	21			5,722	5,722
Terrace Dr	Towerhill Rd to Barcome Ave	2,085	20			4,712	4,712
Terrace Dr (East)	Crestview Dr to end of pavement	521	20			1,202	1,202
Towerhill Rd	End to CR 400 (Emery Rd)	9,154	20 / 22	21,742			21,742
Venus Ln	Goldenrod Dr to Acorn Ln	349	20			1,118	1,118
Westview Dr	Cloverleaf Ln to end of cul-de-sac	1,267	20			3,100	3,100
Winding Dr	Goldenrod Dr to Chippendale Dr	2,080	20			4,786	4,786
TOTAL QTY				21,742	-	310,522	332,264

**ROSCOMMON COUNTY ROAD COMMISSION
2024 CHIP & FOG SEAL APPLICATIONS INCLUDING MATERIALS**

#1 Chip Seal Application (Approx. 21,742 Syd)

Seal, Single Chip with CM-90 and 34CS Natural Aggregate \$_____per Syd.
Seal, Single Chip with CM-90 and 34CS Blast Furnace Slag \$_____per Syd.
Seal, Single Chip with CM-90 and 29A Natural Aggregate \$_____per Syd.
Seal, Single Chip with CM-90 and 29A Blast Furnace Slag \$_____per Syd.
Seal, Single Chip (Alternate)_____ \$_____per Syd.
Seal, Single Chip (Alternate)_____ \$_____per Syd.

#2 Chip Seal Application (Approx. 310,522 Syd)

Seal, Single Chip with CM-90 and CS-T Natural Aggregate \$_____per Syd.
Seal, Single Chip with CM-90 and CS-T Blast Furnace Slag \$_____per Syd.
Seal, Single Chip (Alternate)_____ \$_____per Syd.

#3 Fog Seal Application (Approx. 332,264 Syd)

Fog Seal (CSS-1H)_____ \$_____per Syd.
Fog Seal (Alternate)_____ \$_____per Syd.
Fog Seal (Alternate)_____ \$_____per Syd.

#4 Pick-up Sweeping (Approx. As-Needed Syd)

Pick-up Sweeping_____ \$_____per Syd.

Company Name

Telephone Number

Mailing Address

Fax Number

City, State, Zip

Email Address

Company Contact Person

Date

Authorized Company Representative's Signature

ROSCOMMON COUNTY ROAD COMMISSION

SPECIAL PROVISION FOR **Seal, Single Chip**

RCRC: BDD

1 of 4

1-23-24

a. Description.

The work consists of furnishing all materials, equipment and labor necessary for the surface preparation and application of a Seal, Single Chip. This work shall conform to the requirements of sections 505, 902 and 904 of the Standard Specifications for Construction and this Special Provision.

b. Equipment.

All equipment must meet the requirements under section 505 of the Standard Specifications for Construction, except as modified herein:

Pressure Distributor:

The pressure distributor shall have a computerized application rate and speed control device interconnected with the liquid asphalt pump such that the specified application rate will be supplied at any speed. This control shall have a radar ground sensing device that controls the application rate regardless of ground speed or spray bar width. The pressure distributor shall be capable of maintaining the asphalt at the specified temperature. The spray bar nozzles shall produce a uniform fan spray, and the shutoff shall be instantaneous with no dripping. Each pressure distributor shall be capable of maintaining the specified rate of application within +/- 0.015 gallons per square yard for each load.

Broom/Sweeper:

The use of a rotary-powered broom is required to remove the loose material from the surface to be treated and for removing loose aggregate after the work has been completed.

Pilot Car:

The pilot car will be omitted from this project.

c. General Placement Operations.

1. The Contractor shall establish 1,000 foot intervals along the entire length of the project, prior to placing materials. The stations shall be clearly identified and maintained until project completion.
2. Keep all vehicles and equipment involved in the chip sealing operation as close to each other as practical. Keep the asphalt emulsion distributor within 100 feet of the chip spreader. Do not place cover aggregate on asphalt after it has cured.
3. Perform rolling within five minutes of placing the aggregate and before the asphalt has begun to cure. Make a minimum of two complete passes over the aggregate. A complete pass is one trip, forward and backward, over the same path.

4. Overlap each pass by one-half the width of the roller. Use a minimum of two rollers and proceed in a longitudinal direction at a speed not greater than 5 mph.

d. Quality Control.

The following measures shall be taken by the Contractor to maintain quality control and uniformity. If a condition is identified that causes an unsatisfactory chip seal, all production work shall stop and corrective action must immediately be taken. The Contractor shall perform the correction action at no additional cost to the contract.

1. **Liquid Asphalt.** The contractor shall apply the liquid at a temperature between 260°F and 300°F.
2. **Visible Dust.** During normal traffic operations any dust that is a nuisance or slightly impairs visibility is unsatisfactory. The roadway must be wet broomed until the condition is eliminated.
3. **Loose Stone.** During normal operations any stone picked off the surface by vehicles is unsatisfactory. The roadway must be wet broomed until the condition is eliminated.
4. **Bleeding or Tracking.** During normal operations any bleeding or tracking is unsatisfactory. The roadway must be sanded and swept clean. If the surface conditions call for further action, a heated aggregate meeting the physical properties of Special Provision, Table 2, shall be applied, rolled and broomed.
5. **Rough Joints.** Transverse and longitudinal construction joints formed in a chip seal application that creates a bump or poor riding joint is unsatisfactory. The bump shall be removed by grinding the surface and lightly applying a fog seal over the ground area.
6. **Surface Patterns.** Any asymmetric appearance seen in the chip seal surface characterized by longitudinal grooves or ridges in the surface is unsatisfactory. The spray bar and nozzles must be readjusted to eliminate the surface pattern problem.

e. Liquid Asphalt.

The liquid asphalt to be used shall be CM-90 or approved equal. The asphalt must meet the requirements stated in the Special Provision, Table 1. The Contractor shall apply the liquid asphalt at a temperature between 260°F and 300°F, followed by a uniform application of coarse aggregate. The CM-90 or approved equal placement rate shall be within a residual target range of 0.27 to 0.29 gallons per square yard for the 34 CS or 29A (after correction for temperature expansion and distillate loss). Construct a 100 foot test strip at the residual target rate of 0.28 gallons per square yard followed by a uniform application of coarse aggregate and review the application. The CM-90 or approved equal placement rate shall have a target rate of 0.20 gallons per square yard for CS-T. If this target rate is not the optimum application rate due to the gradation of the coarse aggregate or due to existing surface condition of the pavement, the Contractor shall notify the Engineer immediately and prior to any further application.

Upon approval of the adjustments to the application rate by the Engineer, the Contractor shall then document the new JMF rate(s) by stationing and resume the application at the new rate. The Contractor shall continue to monitor the new application rate and report any noticeable changes to the Engineer. All truck demurrage will be the responsibility of the Contractor.

Table 1 – Chip Seal Matrix Modified Asphalt (CSMMA) – CM 90 or Approved Equal

Tests	Requirements CM-90 or Approved Equal
Modified Koppers Vacuum Viscosity, 25°C, P, ASTM D 4957	2,000 to 20,000
Flash Point, °C	
Tag Flash Point, °C, min, ASTM D 3143-98	65.5
Water in Petroleum, ASTM D 95-05, %, max	1.0
Cut-back Distillation, ASTM D 402-02	
Distillate, % by Vol of Total Distillate to 360°C	
To 225°C	0-2
To 260°C	0-5
To 315.5°C	10-65
Residue from Distillation to 360°C, min	90
Test on Residue from Distillation, ASTM D 402	
Penetration, 25°C, 100 r, 5 sec, ASTM D5 113	90-150
Ductility at 25°C, cm, min, ASTM D5 113	Report
Solubility in Trichloroethylene, %, min, ASTM D 2042-01	99.0
Softening Point, °C, min, ASTM D 36-95	60
Float Test, 60°C, sec, min, ASTM D 139-95	1200

f. Coarse Aggregate.

Cover material to be used shall be approved 34CS or 29A per section 902 of the Standard Specifications for Construction. The 34CS or 29A placement rate shall be within the range of 20 to 24 pounds per square yard with a target rate of 22 pounds per square yard. If the target rate is not the optimum application rate due to the gradation of the coarse aggregate or due to existing surface conditions of the pavement, the Contractor shall notify the Engineer immediately and prior to any further application.

Upon approval of changes by the Engineer, the Contractor shall then document the new JMF rate(s) by stationing and resume the application at the new rate. The Contractor shall continue to monitor the new application rate and report any noticeable changes to the Engineer.

g. Aggregate.

Cover material to be used shall be approved CS-T per Table 902-7 and Table 902-8 of the Standard Specifications for Construction. The CS-T placement rate shall have a target rate of 16 pounds per square yard. If the target rate is not the optimum application rate due to the gradation of the coarse aggregate or due to existing surface conditions of the pavement, the Contractor shall notify the Engineer immediately and prior to any further application.

Upon approval of changes by the Engineer, the Contractor shall then document the new JMF rate(s) by stationing and resume the application at the new rate. The Contractor shall continue to monitor the new application rate and report any noticeable changes to the Engineer.

h. Delayed Acceptance.

The delayed acceptance will not occur until after 30 days from the time of placement of the fog seal.

i. Measurement and Payment.

Completed work, as measured, will be paid for at the contract unit price for the following contract items:

<u>Pay Item</u>	<u>Pay Unit</u>
Seal, Single Chip	Square Yard (Syd)

Payment for the Seal, Single Chip includes all equipment, labor and materials for placement of a single application of liquid asphalt and aggregate, brooming, establishment of yield intervals, documentation and delayed acceptance inspection.

No adjustments in the unit price will be made for approved rate of liquid asphalt and/or aggregate that are within the ranges identified in Liquid Asphalt and Aggregate Application.

ROSCOMMON COUNTY ROAD COMMISSION

SPECIAL PROVISION FOR **Seal, Fog**

RCRC: BDD

1 of 3

12-20-21

a. Description.

The work consists of furnishing all materials, equipment and labor necessary for the surface preparation and application of a Seal, Fog. This work shall conform to sections 505 and 904 of the Standard Specifications for Construction.

b. Equipment.

All equipment must meet the requirements under section 505 of the Standard Specifications for Construction, except as modified herein:

Pressure Distributor:

The pressure distributor shall have a computerized application rate and speed control device interconnected with the liquid asphalt pump such that the specified application rate will be supplied at any speed. This control shall have a radar ground sensing device that controls the application rate regardless of ground speed or spray bar width. The pressure distributor shall be capable of maintaining the asphalt at the specified temperature. The spray bar nozzles shall produce a uniform fan spray, and the shutoff shall be instantaneous with no dripping. Each pressure distributor shall be capable of maintaining the specified rate of application within +/- 0.015 gallons per square yard for each load.

c. General Placement Operations.

1. Seal, Fog completed chip seal areas, after brooming and before placement of permanent pavement markings. Allow the chip seal to cure a minimum 24 hours before Seal, Fog is placed. Remove the protective covers from the temporary pavement marker tab after Seal, Fog placement. Removal of the protective covers shall be done within a lane closure. Allow a minimum of 3 days before placing permanent pavement marking.
2. Seal, Fog shall not be applied when the air temperature is below 60° F. Seal, Fog shall be applied to a clean, dry pavement surface. Do not apply Seal, Fog when precipitation is imminent. If precipitation occurs, prior to the emulsion breaking, the affected areas shall be re-applied at the Contractors expense.
3. Seal, Fog shall be applied so there is a minimum of a 1 foot overlap at the centerline of the roadway.
4. Traffic shall not be allowed on the Seal, Fog until the emulsion has fully cured.
5. The Seal, Fog emulsified asphalt shall be applied at the temperature recommended by the supplier.

d. Seal, Fog Application Rate.

The fog seal shall be a Cationic Emulsified Asphalt, CSS-1h (at 50% dilution) as specified in Table 904-6 of the Standard Specifications for Construction. The CSS-1h shall be spread at a target rate of 0.135 gallons per square yard and review the application. If this target rate is not the optimum application rate due to the gradation of the course aggregate or due to existing surface condition of the pavement, the Contractor shall notify the Engineer immediately, prior to any further application. Upon approval of adjustments to the application rate by the Engineer, the Contractor shall then document the new JMF rate(s) by stationing and resume the application at the new rate. The Contractor shall continue to monitor the new application rate and report any noticeable changes to the Engineer. All truck demurrage will be the responsibility of the Contractor.

e. Submittals.

Upon completion, the Contractor shall provide an inspector's daily report for each day's work performed containing the following information:

- Control Section / Project Number / Road Name
- Date / Air Temperature / Pavement Temperatures / Humidity
- Asphalt Emulsion Temperature
- Beginning and ending stations
- Yield checks on asphalt emulsion
- Length / Width / Total Square Yards
- Contractor Signature

Provide the following additional materials documentation:

- Asphalt emulsion: per current acceptance procedures
- Bill of lading or delivery tickets for asphalt emulsion

The above submittals shall be placed in order by date in a folder with the certification statement of the back.

f. Protection of Motor Vehicles.

The Contractor is responsible for claims of damage to vehicles until the roadways and shoulders have been swept free of loose aggregate, Seal, Fog has been applied and the permanent pavement markings have been applied.

g. Delayed Acceptance.

A minimum of 30 days after placement of Seal, Fog, the Engineer will inspect the project with the Contractor for surface flushing, surface patterns, or lost stone. If any deficiencies are found, corrective work is required.

Complete all corrective work within seven working days of the review, or by an agreed upon date. All costs associated with completing this corrective work, to the satisfaction of the Engineer, will be borne by the Contractor.

h. Measurement and Payment.

Completed work, as measured, will be paid for at the contract unit price for the following contract items:

<u>Pay Item</u>	<u>Pay Unit</u>
Seal, Fog	Square Yard (Syd)

Payment for the Seal, Fog includes all equipment, labor, testing and materials for placement of a Cationic Emulsified Asphalt, CSS-1h (at 50% dilution), brooming, establishment of yield intervals, documentation, and delayed acceptance inspection.

No adjustments in the unit price will be made for approved rate of Cationic Emulsified Asphalt, CSS-1h (at 50% dilution) that is within the ranges identified in section d. Seal, Fog Application Rate of this special provision.

The contact unit price shall be payment in full for all labor and equipment needed to accomplish the work.