LEWIS COUNTY PURCHASING DEPARTMENT
P: 315-376-5144

Brian Hanno
Purchasing Director
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February 12, 2026
To all Bidders:

Enclosed are bid specs for the following item:

- **#1 Bituminous Material**
- **#2 Reprofiling of Existing Roadways**
- **#3 Crack Filling**
- **#4 Micro Surfacing**
- **#5 Quick Set Slurry Seal**

The bids are due:

March 10, 2026, at 10:00 a.m.

All sealed proposals are to be mailed to: Cassandra Moser, Clerk of the Board; 7660 North State Street; 2nd Floor, Room 225; Lowville NY 13367 or delivered in person between the hours of 8:30 AM and 4:30 PM, Monday through Friday.

Late proposals will not be considered.

The bid opening will take place at 7660 N. Street, Lowville NY 13367, Boardroom, second floor of the old courthouse, on March 10, 2026 at 10:00 a.m.
If you have any questions or concerns, please feel free to call: (315)376-5144
Thank you

Brian Hanno
Lewis County Purchasing Director

INSTRUCTIONS TO BIDDERS AND QUALIFICATIONS OF BIDDERS

1. Bids shall be submitted in a sealed envelope plainly marked "BIDS ON BITUMINOUS MATERIALS".

2. All bids must be submitted on forms provided by this office. All bids must be submitted with a certificate of non-collusion, which must be properly signed and dated.

3. **Cooperative Bidding**- It is understood and agreed that in addition to the County of Lewis, other County agencies as well as Municipalities and School Districts throughout New York State may also "piggyback" off this contract and enter into its own contract with the successful Bidder.

   Lewis County reserves the right to allow all municipal and not for profit organizations and School Districts authorized under General Municipal Laws of the State of New York, to purchase any goods and/or services awarded as a result of this bid in accordance with the latest amendments to NYS GML 100 through 104. However, it is understood that the extension of the contract to a Municipality or School is at the discretion of the Vendor and the Vendor is only bound to any contract between the County of Lewis and the Vendor.

   No officer, board or agency of a county, town, village, or school district shall make any purchase through a County contract unless such purchase is made based on the same terms, conditions, and specifications as the County's contract award.

4. Proposals that contain any omissions, erasures, alterations, additions, or items not called for in the itemized proposal or that contain irregularities of any kind may be rejected as informal.

5. Prices bid herein shall remain in effect for one year and there after until 30 days after receipt of written notice of supplier's intent to cancel or until public notice is published by the County Superintendent for the receipt of new bids for items mentioned herein, but in no event shall said contract extend for more than 3 years.

6. PRICE ADJUSTMENTS:
   Unless otherwise stated in this document, at no time during the term of any contract arising from an award by the County Board of Legislators may any of the contract pricing be changed for any reason without prior written approval by the County. The vendor may request a price adjustment alter the first six months of a contract term. However. the vendor may only make one such request per contract term. If a price adjustment request is made. the vendor shall give the County a minimum of thirty-(30) calendar days notification of any request for a price adjustment. Said adjustment may at no time exceed the Consumer Price Index for all items as calculated by the County Purchasing Department. Should the County deem the requested adjustment unacceptable. the County reserves the right to terminate the contract in accordance with the term of this bid and seek pricing from whatever sources legally available.

7. The right is reserved to purchase that type (or types) of Bituminous Materials which in the judgement of the Purchaser are best suited for his particular requirements.

8. **All bidders will submit with their bid a certified check or a bid bond in the amount of $5,000.00. The unsuccessful bidders will have their checks returned after acceptance of the successful bid by the Lewis County Legislature. The successful bidder will have his check**

returned upon receipt of the required performance bond of up to $100,000.00 to guarantee delivery.

9. On all purchases of materials which are to be furnished and applied, the vendor shall furnish:

    a) Public Liability Insurance Policy in the amount of One Million Dollars ($1,000,000.00) for an individual claim and an amount not less than one Million Dollars ($1,000,000.00) for aggregate claims and One Million Dollars ($1,000,000.00) for property damage. All said insurance policies shall name the purchaser as the Primary & Non-contributory Additional Insured including Completed Operations for General & Umbrella Liability as required by written contract. Project: ( ). Said policies of insurance shall contain the following clause:

    "In the event of any material alteration or cancellation of this policy, at least 5 day's notice thereof shall be given to the County Highway Superintendent at his office."

    b) Vendor shall also furnish the purchaser with Certificate of Insurance indicating he is covered by Workman's Compensation.

    c) All policies of insurance, together with endorsements thereon, must contain autograph counter signatures.

10. The bidder shall conform to Section 220 of the New York State Prevailing Wage Rates for Lewis County as provided by the New York State Department of Labor. The supplier shall maintain appropriate payroll records on each employee and file a certified payroll weekly. Each payroll record must be affirmed as true under the penalties of perjury, which means a notarized signature to that effect. If during the period of the contract the low bidder is cited by the NYS Department of Labor for a willful violation of the laws and regulations applicable to the bidding process, pricing policies, or in any way applicable to the services or supplies rendered pursuant to this contract, the County shall have the option to deem the bidder as irresponsible, and any other work will be awarded to the next low bidder and the original low bidder will be charged for the difference in bid prices.

11. The bidder must be on NYSDOT APPROVED LIST OF LIQUID BITUMINOUS MATERIAL PRIMARY SOURCES.

12. The bidder must be an approved NYSDOT supplier.

13. The bidder shall comply with current NYSDOT Group Specifications for Commodity Group 31501 – Liquid Bituminous Materials (delivered) and (F.O.B. Storage Facility).

14. All emulsified asphalt materials shall meet New York State Department of Transportation Standard Specification, dated January 1, 2020, as amended. All materials supplied shall be tested, inspected, and approved for use by the supplier. Test results shall be maintained on file at the source for a minimum of two (2) years available to County Superintendent for review.

15. The bidders emulsion plant shall have approved individual tanks of at least 20,000 gallons capacity for each item required on the bid sheet. Each tank shall be properly numbered, heated, and equipped with necessary thermometers, sampling devices and pumps. The emulsion plant shall

have a minimum emulsion storage of 300,000 gallons and during the operation season shall store a sufficient supply of each item to insure prompt delivery.

16. If County-owned or controlled trucks and equipment are delayed for more than forty minutes at the contractor's plant or at the job site, then the contractor shall be required to pay to the County the agreed upon liquidated damages of $150.00 per truck for each delay. The liquidated damages herein prescribed are established as a reasonable approximation, at the time of the letting of the contract, of the damages which the County will sustain as a result of the failure to timely use its' trucks and equipment. Said sum, in view of the difficulty of accurately ascertaining the loss which the County will suffer by reason of said delay, is hereby fixed and agreed upon by the parties hereto as the liquidated damages that will be suffered by reason of such delay and not as a penalty. The County will deduct and retain out of the monies, which may become due hereunder, the amount of any such liquidated damages and in case the amount of liquidated damages suffered exceeds the amount due, the contractor shall be liable to pay the difference upon demand by the County.

17. The bidder shall maintain offices at his location and have a dispatcher on duty from 7:00 a.m. to 5:00 p.m. Monday thru Friday, except on legal holidays. The emulsion plant must have scales capable of accurately determining quantities for loaded distributors and transport trucks of the sizes required for this contract. The scales must be tested and certified by the local County Sealer of Weights and Measures, as required by NYSDOT Group Specifications for Commodity Group 31501-Liquid Bituminous Materials. Deliveries may be required on 2 to 8 hours notice within any 24 hour period.

18. Each load shall be sampled and tested. All sampling, testing, inspection, certifying and shipping shall be in accordance with Material Method NY8.1 and 8.2. Each truck or distributor shall be properly equipped with a sampling device. When materials furnished do not conform to these specifications or are deemed unsatisfactory by the County Superintendent of Highways, payment due will be withheld and the contractor will be charged for any damage involved. The supplier shall provide the Lewis County Highway Superintendent with certified copies of test results of all asphalt emulsions shipped to the Lewis County Highway Department. The supplier shall provide the Lewis County Highway Superintendent with certified copies of test results of each aggregate pile sampled and extraction results of mixes on a daily basis.

19. The bidder shall own, operate and maintain a working laboratory. The laboratory shall be equipped with all equipment necessary to perform all specified tests on any emulsion sample. As a minimum, this shall include the following equipment:

    1) Saybolt-Furol Viscometer 2) distillation equipment 3) penetration apparatus and, 4) all necessary equipment and supplies to comply and perform the tests outlined in ASTM (see attached Supplement.) The laboratory shall be operated by a full time qualified technician and shall be available for use by any County personnel. The Laboratory shall also include sufficient equipment to test aggregates and mixes required by NYSDOT Materials Method 5.

    In addition, the Superintendent of Highways may have samples tested by a certified independent testing lab. Such laboratory tests shall be made at the expense of the bidder. Such requests will be at the discretion of the Superintendent of Highways or his designee, but shall not exceed one (1) tested sample per delivered load of emulsion. The Superintendent of Highways shall determine who shall deliver samples to the testing laboratory. Failure to meet appropriate specification (NYSDOT & ASTM) may be grounds for rejection and non-payment for the delivered materials. In any case, payment, by the County Highway Department for any materials delivered shall not be construed as acceptance thereof.

20. The successful bidder shall employ experienced labor and shall furnish material and equipment for safe and proper operation. All work and operations called on the part of the successful bidder shall be performed in a first class workmanlike manner, and in accordance with the best usage's of the trade.

All distributors shall meet NYSDOT Specifications under section 405-1 Bituminous Surface Treatment. The equipment listed for mixing in place Pug mill mixing will be of modern design and conform to the current NYSDOT Specifications. The traveling pug mill mix plant to be used on any project will be available for inspection at any time prior to commencing work.

21 All materials shall be delivered under the direction and supervision of the County Superintendent of Highways or some person authorized by him to direct and superintend same.

22 Each load delivered shall have a printed, numbered, delivery ticket meeting NYSOGS Commodity Group 31501 specifications showing date, road name or project, gallons, temperature, application rate, and grade of product. Each ticket must be signed by bidder's driver and the Superintendent of Highways or his representative.

23 All equipment used by the bidder for the fulfillment of this contract shall be owned and operated by the bidder and shall be modern equipment and in proper repair and sufficiently well maintained at all times to produce satisfactory work. The equipment to be used shall be inspected by the County Superintendent of Highways before this bid will be awarded.

24 The Superintendent of Highways or his representative will make necessary field measurements to ascertain volumes actually delivered or applied. These measurements will be made prior to commencing and upon completion, using a calibrated tank stick gauge, which must be carried on each transport or distributor. Bidder's driver will provide access to tanks by opening the dome to permit measurement by County personnel.

25 Failure of the contractor to supply materials within a reasonable time frame when and as needed, or as directed by the Superintendent of Highways may be deemed a declaration on the part of the contractor that he does not intend to perform his contract and the County may then secure the types of material elsewhere. The contractor will reimburse the County for any differential in charges between their bid and the acceptable supplier for the materials.

26 When material furnished does not conform with specifications or is deemed unsatisfactory by the County Superintendent of Highways, material will be purchased from the next lowest competent bidder, and payments due will be withheld and the contractor will be charged for all excess costs and all damage involved.

27 The Superintendent of Highways reserves the right to make any investigations or inquiries necessary to determine the competence and ability of the bidder to properly perform the work. If after said investigation the Superintendent of Highways is not satisfied that the bidder is properly qualified to meet all requirements contained herein and to perform all work in a satisfactory manner, he may recommend to the Highway Committee that the bidder be rejected as unsatisfactory.

28 When the bid reads "furnished and applied", it is intended that the materials will be furnished, delivered, heated, and applied on any road in the County of Lewis, in single truckload lots or part truckload lots upon three hour's notice. It will be the bidder's responsibility to deliver and supply the

distributor as ordered by the County Highway Superintendent. Price per gallon applied will apply to all items for spray patching under this item.

29 The supplier shall provide to Lewis County a qualified technical person that has five years experience in directly working with the materials and the processes that are being requested by Lewis County. There must be documentation illustrating the names, products, and locations of the experience. At the County Highway Superintendents request, this person will be responsible to assist in training county employees on asphalt emulsion applications, calibrating equipment and recommending to the County Highway Superintendent specific expertise on uses of asphalt emulsions. Prior to commencing any project, the asphalt emulsion supplier shall provide the Lewis County Highway Superintendent with their recommendations for the project. As a minimum, this would include target aggregate graduation and quantity and type of asphalt emulsions to be used. Acceptance of the job mix formula by the Superintendent of Highways is solely for the purpose of quality control, and in no way releases the contractor from responsibilities.

30 Payment for mixing grade materials – the unit price per gallon will only be paid on the quantity delivered within the range of various mixtures in the table 405-1. The County will only be responsible to pay for the maximum quantity in gallons per ton set forth in the table 405-1

31 The bidder will supply with the bid documentation showing that the bidder has supplied and applied NYSDOT specification items and certifies that they have experience with the products. This documentation will show name, location, and quantities plus date of completion and person to contact for verification. Any bid on non NYSDOT specification items, which is not documented as above may be considered unresponsive to this specification and may be rejected.

32 Price adjustment will be allowed as part of the bid in accordance with current NYSDOT & OGS policy as attached.

33 In the event material will not go through a mixing machine after two tries, or clogs the machine preventing it from properly mixing the emulsion and stone, the remainder of that lot will be suspended from further use by the County. The County reserves the right to then go to the next lowest bidder if that company can provide material to continue the paving and or mixing operation before the low bidder can get another lot to the job site.

34 All Cold Mixes Produced shall be within the ranges set forth in Table 405-1. In addition, the produced mixtures shall not exhibit an excessive amount of Asphalt Emulsion/water Run-off when produced. The mixtures shall have sufficient workability to be placed in normal methods without screed or roller marks and be able to be compacted and opened to traffic within two hours without rutting or picking. If the placed mixture is not satisfactory to the Superintendent of Highways or his representative, the Superintendent shall notify the supplier and all work shall cease. If the supplier cannot exhibit his ability to produce a satisfactory mix, the Superintendent reserves the right to go to the next lowest bidder if that company can provide acceptable material to continue the paving process. The low bidder will be charged the loss of the Counties equipment time and the differential in price between his bid and the second bidder.

35 The pug mill mix equipment shall be placed at a site designated by the Superintendent and shall remain at the site for the entire construction project, or as directed by the Superintendent of Highways. The pug mill shall be capable of producing 4.5 tons per minute for various graded mixes.

AGREEMENT

PARTIES

THIS AGREEMENT is made as of the _____day of _____, 202__
by _____ and between _____ a
New York Corporation having its principal place of business at
_____
(hereinafter called "The Bidder") and
_____
(hereinafter called "The Department").

RECITALS

Under the terms of a bid dated _____("the Bid") The Bidder has offered to supply to and apply bituminous materials for the Department, and Reprofile existing roadways and the Department, by acceptance dated _____ ("the Acceptance"), has agreed to accept and pay for the bituminous materials and reprofiling as provided in the Bid and Acceptance. The Bidder shall warrant and guarantee the material to be supplied and the performance to be given by it, and the Department shall accept The Bidder's warranties and shall assume certain obligation, as hereinafter set forth.

THE BIDDER'S WARRANTIES AND OBLIGATIONS

(a) Specifications: The Bidder warrants that all Bituminous material and equipment used by it to fulfill its agreement with the Department as evidence by the Bid and Acceptance and this Agreement shall meet the specifications set forth in the Schedule attached hereto and made a part hereof.

(b) Materials and Workmanship: The Bidder warrants, for a period of two (2) years from the date hereof or such date as the parties in writing shall agree upon as the commencement date (the "warranty Commencement Date"), that the bituminous material supplied by it and used in the production of said materials and the workmanship in the application of material to the pavement by it, its agents and employees under this Agreement and under the terms of the Bid and Acceptance shall be free from defects.

(c) Recommendations: The Bidder will make specific recommendations to the department regarding (i) application rates to be used for liquid bituminous material aggregate and mixtures; (ii) aggregate gradation and acceptability; (iii) proper procedures and techniques for each projects; and (iv) any other information deemed by The Bidder to be pertinent to the fulfillment of this Agreement and the terms and conditions of the Bid and Acceptance.

2. Department's Obligations.

(a) The Department shall be solely responsible for all structural, subgrade and drainage conditions of the pavement structure and conditions associated therewith and arising therefrom.

(b) The Department, its agents, contractors and employees shall fully conform with procedures and techniques established by the New York State Department of Transportation for use and application of liquid bituminous materials for surface treating, crack sealing, micro surface and cold mix work.

(c) The Department, its agents, contractors, and employees shall fully comply with all recommendations provided by The Bidder under Section 1 (c) of this agreement.

3. Conditions to the Bidders Obligations: The Bidder shall be relieved of all liability and obligations under this agreement:

(a) with respect to any failure or defect caused by pavement structure deficiencies:

(b) with respect to any failure or defect in application performed by someone other than The Bidder, its authorized agents or employees; or

(c) in the event of the failure of the Department, its agents, contractors or employees to fully perform the Department's obligations set forth in Section 2 of this Agreement.

4. Remedies: The Bidders liability under this Agreement is limited to the replacement of all bituminous material (with similar material free from the defect in question), at its expense, of any defects in material or workmanship which became apparent and of which The Bidder is given notice within two (2) years of the Warranty Commencement Date. The bidder shall make such replacements of all bituminous material with reasonable care and dispatch.

5. Exclusivity of Warranties and Remedy: The warranties and obligations of The Bidder provided in this Agreement and the remedies available with respect to them are the sole and exclusive warranties, obligations and remedies. THE DEPARTMENT HEREBY WAIVES AND THE BIDDER EXCLUDES AND DISCLAINS ALL OTHER WARRANTIES, GUARANTIES, CONDITIONS OR REMEDIES EXPRESS IMPLIED OR STATUTARY, ARISING IN LAW OR IN FACT, UNDER THE UNIFORM COMMERCIAL CODE, OR OTHERWISE (INCLUDING, WITHOUT LIMITATION, THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND ANY OBLIGATIONS OR LIABILITIES OF THE BIDDER WITH RESPECT TO COMPENSATORY OR CONSEQUENTIAL DAMAGES OR DAMAGES FOR INJURY TO PERSON OR PROPERTY). The warranties, obligations and remedies provided under this Agreement shall not be extended, altered or varied except by a written instrument signed by the Bidder and the Department.

6. Governing Law and Binding Effect. This Agreement shall be construed according to the laws of the State of New York. This Agreement shall be binding upon and inure to the benefit of the undersigned, their successors and assigns. This agreement represents the entire agreement of the parties, and it may not be amended, changed or modified except by a writing signed by the parties.

IN WITNESS WHEREOF, the undersigned have executed this Agreement effective as of the date first above written.

_____
(bidder)

BY: _____
(department)

PRICE ADJUSTMENT – BITUMINOUS MATERIALS

1. Asphalt Price adjustments allowed will be based on the February 1, 2026, base average of the F.O. B. terminal price per ton of unmodified PG64-22 binder without anti-stripping agent (base average F.O.B. terminal price). The new monthly average terminal price will be determined by the New York State Department of Transportation based on prices of preapproved primary sources of performance graded binder in accordance with the New York State Department of Transportation Standard Specification.

   The February 1, 2026 base average is $638.00 per English ton.

   NOTE: The same grade of asphalt cement used in establishing the base average F.O.B. terminal price shall be used in establishing the new average F.O.B. terminal price.

   In the event that one or more of the New York State Department of Transportation preapproved sources discontinue posting a price for asphalt cement, the base average F.O.B. terminal **price shall not be recalculated.**

2. The new average F.O.B. terminal price will be determined based on the above F.O.B. terminal prices posted on the 20th of each monthly, thereafter known as the "Adjustment Date", during the contract period. However, Asphalt Price Adjustments, in accordance with the formula below, will be effective for deliveries made on and after the first of the month following the adjustment date.

3. The unit prices of bituminous materials purchased from any award based on this specification will be subject to adjustment based on the following formula:

Price Adjustment =	New Average	Base Average	Total % Asphalt
Per square yard	F.O.B	F.O.B.	plus
	Terminal Price –	Terminal Price	x Fuel Allowance / 235

NEW AVERAGE F.O.B. TERMINAL PRICE:
The average F.O.B. terminal price for unmodified PG64-22 binder without anti-stripping agent as determined by the New York State Department of Transportation per New York State Department of Transportation Standard Specifications.

BASE AVERAGE F.O.B. TERMINAL PRICE;
The average F.O.B. terminal price of unmodified PG64-22 binder without anti-stripping agent as determined by the New York State Department of Transportation as of February 1, 2026.

1. If at any time after February 1, 2026 the average posted price of asphalt cement at the aforementioned terminals increases or decreases by $4.00 per ton or more over or under the last average posted price utilized by the State for adjustment purposes, the State shall publish a special price adjustment which shall be effective eight days subsequent to the date on which the change in the average posted price became effective.

2. All price adjustments will be computed to four decimals and rounded to three decimals.

3. The price paid will be the awarded price plus or minus the adjustment in effect at the time of delivery

4. Should these provisions result in a price structure which becomes unworkable, detrimental or injurious to the County or in prices which are not truly reflective or market conditions or which are deemed by the Commissioner to be unreasonable or excessive and no adjustment in price is mutually agreeable, the Commissioner reserves the sole right upon ten days written notice mailed to the contractor to terminate any contract resulting from this bid opening.

5. Total percentage of Asphalt will be calculated using the state specification for the product.

GENERAL SPECIFICATION FOR LIQUID BITUMINOUS MATERIALS & EQUIPMENT DESCRIPTION:

This work shall consist of furnishing liquid bituminous materials in accordance with these specifications.

BITUMINOUS MATERIALS:
The bituminous materials shall meet the general requirements of NYSDOT Section 702, Bituminous Materials. The type and grade of bituminous materials used shall be as specified by the Superintendent of Highways.

QUALIFICATIONS OF BIDDER:
No bid will be considered unless the bidder complies with the attached "Instruction to Bidders", and "Qualification of Bidder of Liquid Bituminous Materials."

EQUIPMENT:

1. Asphalt distributors shall meet NYSDOT Section 405-3 specifications for equipment for Bituminous Surface Treatments. Sufficient distributors and transports shall be provided to ensure continuous operations and minimize idle time by county forces.

2. Mixing equipment shall meet NYSDOT Section 405-3 specifications for equipment for Cold Mix Bituminous Pavement. In addition, when mixing more than two aggregates the aggregate feed system must contain a minimum of two (2) compartments or bins; each compartment or bin shall have adjustable feed gates so that aggregates can be proportioned at the specified rate. The capacities of the cold feed bins shall be sufficient to maintain a continuous flow of materials. Each bin shall have a mechanical device for uniform feeding of the aggregate. The mixer unit shall be approved by the Superintendent of Highways or his representative prior to commencing any work. Mixing or blending of aggregates in a stockpile will not be permitted.

3. The aggregate spreader shall be a self-propelled unit capable of uniformly spreading the aggregate at a rate specified by the Highway Superintendent. The machine shall have a sufficient power and traction to pull a loaded aggregate truck on any county road and supplied with one operator.

4. Compaction equipment and its operation shall be in compliance with NYSDOT Section 401-3.06 Rollers, and Section 401-3.12 Compactors shall be of a size and number of satisfactorily complete the work as specified by the Superintendent of Highways.

5. The bituminous paver shall be a Barber-Greene 260 or equal equipped with automatic transverse slope and longitudinal grade screed controls and two operators. The paver shall be equipped with a screed that is fully extendible from 18 feet to 20 feet . Heat and vibration shall be provided for the full extended width. The extensions shall have independent slope control and on the go capabilities to change width and slope.

MAINTENANCE AND PROTECTION OF TRAFFIC
Maintenance and protection of Traffic shall include all labor and equipment required. M&PT shall be billed by the day. The County reserves the option of providing M&PT.

GUARANTEE:
The bidder shall guarantee that all materials and equipment used to fulfill this contract meets the enclosed specifications.

A two-year guarantee, for defective or inferior bituminous material and/or workmanship shall apply to all bituminous materials supplied and applied under this contract. The limits and conditions of this guarantee are fully covered in the "Agreement" attached hereto, which will be entered into with the successful bidder.

Upon completion the successful bidder will provide a two-year maintenance bond in the amount of the total purchase to the department and each political subdivision under this contract.

GENERAL SPECIFICATION FOR Application of Liquid Bituminous Materials

Application:

1. Application for a minimum of 24 miles of single surface application of chip seal
2. Vendor will provide traffic control meeting federal MUTCD guidelines
3. Vendor will haul all aggregate from quarry to application
4. Vendor will furnish a minimum of two rubber tire rollers for compaction of surface treatment
5. Vendor will supply appropriate number of distributors so that there is a continuous application
6. Vendor will provide a power chipper capable of spreading stone over an entire 20' road surface in one pass.
7. All work will be completed in a continuous time frame to start on May 15th or as soon as weather permits.
8. All roads will be swept with a drag broom prior to the application of a second surface treatment
9. All roads to be surface treated will be agreed upon and discussed with highway superintendent
10. Vendor will apply a minimum of 100,000 square yards per day

Lewis County will provide:

1. Purchase of Stone
2. Purchase of Emulsion
3. Fresh Oil & Loose Stone Signs
4. Pre Road-Sweeping
5. Post road Sweeping if needed

LIQUID BITUMINOUS BID FORM

Subject to all requirements of the attached specifications on the following bituminous materials, it is understood that the price submitted is for the season's requirements of the County of Lewis.

All bituminous materials shall equal or exceed New York State Specifications latest edition and addendum or County specifications.

These prices are for bituminous materials furnished, heated and applied any place in the County of Lewis for the County Highway Dept., Towns, Villages and School Districts. The unit prices bid shall include the cost of the pug mill whenever it is required.

ITEM	GRADE	PRICE PER GALLON
1	AEDC	_____
2	HFRS-2	_____
3	HFRS-2P	_____
4	HFRS-2P (Greater than 100,000 Gallons)	_____
5	HFMS-2ST	_____
6	HFMS-2C	_____
7	HFMS-2GH	_____
8	HFMS-2GWS	_____
9	HFRA	_____
10	HFMS-S	_____
11	RS-2P	_____
12	RS-2P (Greater than 100,000 Gallons)	_____
13	CRS2P	_____
14	CRS2P (Greater than 100,000 Gallons)	_____
11	CRS2	_____
12	CMS2	_____
13	SK MODIFIED	_____
14	HIGH PERFORMANCE COLD PATCH	_____
15	CM-300	_____
16	_____	_____
17	_____	_____

Hourly rate for Spray Patching (Distributor plus one Operator) _____

Liquid Calcium Chloride (Delivered and Applied): Summer (34%) _____

Winter (32%) _____

EQUIPMENT: (operated)	Daily (10 hours)	Hourly
Paver	_____	_____
Roller (Vibratory)	_____	_____
Chipper	_____	_____
Roller (Rubber Tire)	_____	_____
Drag Box Paver	_____	_____
Skid Steer	_____	_____

Application:

Per Square Yard _____

BIDDERS INFORMATION:

Signature:_____ Date:_____

Printed Name:_____Title:_____

Company Name:_____

Address:_____

City, State, Zip:_____

Telephone:_____ Fax:_____

SPECIFICATIONS
Cold Mix Paving

DESCRIPTION
This work shall consist of placing one or more courses of cold mix bituminous pavement, and preparing the roadway surface on which the courses are to be placed. The bituminous pavement is defined by two items, the aggregate item, and the asphalt item. They are to be used in conjunction only.

MATERIALS
Bituminous Material
Use a medium setting asphalt emulsion meeting the requirements of Section 702 Bituminous Materials with the following exceptions
The emulsion will have a minimum asphalt content of 70% and a penetration of 60 - 140.

Aggregates
The aggregates shall be Department approved aggregates meeting the requirements of § 703-02, Coarse Aggregates, for the sizes specified. Screened gravel shall not be permitted unless specified in the contract documents. Material shall consist of crushed aggregates having a minimum angularity of 40.

Composition of Mixtures
The mix will be proportioned as specified in the table below.

COMPOSITION OF COLD BITUMINOUS MIXTURES			
Sieve Size	Mixes		
	Type 1General Limits % passing.1	Type 2 General Limits % passing. 1	Type 3 General Limits % passing 1
2 in	-	-	100
1 1/2 in	-	100	90-100
1 in	100	90-100	70-90
1/2 in	90-100	60-90	50-75
1/4 in	30-70	30-65	30-60
1/8 in	20-50	20-50	20-50
No. 200	1-5	1-5	1-5
Bituminous Material 2•3	4.7-7.0	4.0-6.0	3.5-5.5

Percentage based on total aggregate weight.
Total Emulsion Percentage based on total mix weight.
When crushed air-cooled blast furnace slag aggregate is selected, the above bituminous material content shall be increased approximately 25%.

CONSTRUCTION REQUIREMENTS
Weather Limitations
Mixture shall not be applied under any of the following conditions;
Soft or unsupported base
Wet surfaces
Surface temperature below 45°F
Other weather conditions would prevent proper construction of the pavement.

Equipment
The following equipment shall be required:
Either central pugmill mixer and bituminous paver or travel plant mixer and grader
Steel wheeled roller, 8-12 Ton or Approved vibratory roller
Power broom
Miscellaneous equipment to perform the work

All equipment and the condition of the equipment for this work shall be subject to the approval of the Highway Superintendent. The bituminous material shall be incorporated into the mix using a calibrated totalizing meter. The calibration shall be submitted to the Engineer prior to work and be good for up to 90 days after calibration.

The pugmill mixer, either traveling or central type, shall be provided with weighing, volumetric or other gauging equipment which shall be capable of providing accurate control at all times of the amount of aggregate entering the mixer per time interval. The mixer shall accurately proportion the mix by volume or weight and provide a thorough and uniform coating.

When using a central continuous type pugmill, a mechanically operated discharge hopper will be provided.

Preparation of the Roadway Surface
The roadway surface to be covered shall be free from holes, depressions, bumps, waves and corrugations. Any unsuitable surface areas shall be repaired by replacement of the unstable materials or by patching with a material to produce a tight surface having the same elevation as the surrounding surface. The roadway surface shall be broomed when ordered by the Highway Superintendent to remove loose material.

Mixing and Spreading
The aggregate and asphalt shall be thoroughly mixed so that the bituminous material is uniformly distributed throughout, and all aggregate particles are uniformly coated.

The mixture shall be deposited on the prepared base either in a windrow at the back of the travel mixer or mechanically spread in a uniform layer so as to produce the specified thickness after compaction. If deposited in a windrow, it shall be spread over the entire roadway surface by grader or other approved spreader to produce the specified thickness after compaction.

The maximum allowable compacted thickness shall be 2.25 inches for the Type 1 mix, and 4 inches for the Type 2 and Type 3 mixes.

Compaction
After spreading, the mixture shall be thoroughly and uniformly compacted with a self-propelled steel-wheeled roller or an approved vibratory roller. The number of rollers passes to achieve the desired compaction shall be approved by the Highway Superintendent.

Surface Testing
The finished surface of the pavement shall be tested with a 16 foot straight edge laid parallel with the center line of the pavement. Any area exceeding a l/4 inch variation from the surrounding area shall be satisfactorily corrected or removed and replaced, at no additional cost to the State.

METHOD OF MEASUREMENT
The bituminous cold mix pavement will be measured by the number of tons of compacted aggregate placed in accordance with the specifications. The tons of compacted cold mix will be determined by use of a certified scale or by another calibrated method acceptable to the Highway Superintendent.

The liquid bituminous material will be measured by the number of 60°F gallons incorporated into the work.

BASIS OF PAYMENT
The unit price bid for Cold Mix Bituminous Pavement shall include the cost of furnishing all labor, materials, and equipment necessary to satisfactorily incorporate the liquid bituminous material into the work.

The unit price bid for Liquid Bituminous Material shall include the cost of furnishing all labor, materials, and equipment necessary to satisfactorily incorporate the liquid bituminous material into the work.

Payment will be made under:

Item No.
405.01000003
405.02000003

Item
Cold Mix Bituminous Pavement Liquid Bituminous Material

Pay Unit Tons Gallons Price Per Ton (Based on 12 gallons per ton, adjustments will be made based on field conditions as long as it is within specifications)

	Per Ton Price
Type 1	_____
Type 2	_____
Type 3	_____

BIDDERS INFORMATION:

Signature:_____ Date:_____

Printed Name:_____Title:_____

Company Name:_____

Address:_____

City, State, Zip:_____

Telephone:_____ Fax:_____

SPECIFICATIONS
REPROFILING OF EXISTING PAVEMENT AND SUBBASE

1.0 SCOPE:

This specification covers the systems needed to Reprofile an existing bituminous pavement and/or subbase to a pre-determined depth. These Reprofiling systems and necessary equipment shall have the capability of incorporating additional aggregate and / or liquid additive (as required) to Reprofile, blend, proportion, shape, and compact the Reprofiled pavement and/or subbase mixture.

All Reprofiling and equipment will conform to NYS DOT Standard Specifications

2.0 MATERIALS;

All materials introduced into the Reprofiling system shall meet or exceed the NYSDOT Standard Specifications for Construction and Materials, latest edition, and applicable ASTM standards.

3.0 DESIGN AND TESTING:

3.1 The Contractor shall provide the Highway Superintendent with a certified Reprofiling Mix Design prior to commencing System III or IV, projects.

3.2 The RMD shall be based on field cores of the pavement and subbase to be reprofiled inclusive of depth of cut. Cores shall be obtained from alternating lane locations at a minimum of 2,500 centerline feet for the length of the project. It shall be the responsibility of the Contractor to obtain sufficient core samples to ensure representation of the pavement and subbase to be reprofiled.

3.3 Laboratory analysis of the pavement and subbase cores shall include as a minimum, and in accordance with NYSDOT and ASTM Standards, the following:
(1) Percent asphalt residue
(2) Sieve analysis

3.4 The certified RMD shall include the following:
(1) Type of aggregate to be added (if any)
(2) Amount of aggregate to be added per square yard (including depth)
(3) Combined aggregate gradation
(4) Type and amount of asphalt emulsion and/or addition to be included.
(5) Percent of asphalt residue in finished mix. (Maximum not to exceed 6.5% by weight of the finished mix).

3.5 Acceptance of the RMD by the Superintendent of Highways is solely for purpose of quality control, and in no way releases the contractor from his responsibilities.

3.6 The finished product shall approximate the RMD and shall be agreed upon by the Contractor and Highway Superintendent prior to commencement of work.

4.0 QUALITY CONTROL (QC):

4.1 Sample(s) from the first day of the operation shall be taken and tested to insure that the processed material approximates the RMD.

4.2 The Contractor shall provide a complete certified test analysis of samples tested.

4.3 Certification shall be submitted prior to authorization for payment of the project.

5.0 REPROFILING SYSTEM EQUIPMENT:

5.1 The equipment shall include but not be limited to one or more of the following.

5.2 Reprofiling Machine – the machine shall have an established capability of recycling bituminous pavements, in-place, to produce a crushed or pulverized material conforming to the following gradations:

Sieve Designations	% Passing
2”	100%
¼”	30-65%
#200	0-15%

The equipment shall have the capability of changing the depth of cut and forward speed to allow for the adjustment of gradation. The machine shall have a minimum of 650 horse power and be equipped with four-wheel drive and four-wheel steering which has a bi-directional design and works in either travel direction. The cutting rotor shall have a minimum width of 120 inches and include a dual direction feature which will allow for upcutting action as well as downcutting. The machine must be capable of recycling pavement to a depth of 14”. The machine must have fill ports for connections from tanker trucks for injection of liquid additives. The gross weight of the machine shall be in excess of 60,000 pounds to hold the rotor in place for stable high production deep cutting operations.

5.3 Grader – where required, the grader shall be of sufficient size and power to be compatible with the Reprofiling system. In the event of Reprofiling depths in excess of six inches (6") the grader shall be capable of carrying sufficient material aside to allow for compaction in two lifts.

5.4 Compaction Equipment – shall be of the size, weight and type necessary to achieve desired compaction. All Reprofiling operations performed at depths in excess of six inches (6") shall be compacted in two lifts.

5.5 Other Equipment – shall be included to proportion asphalt materials as needed: to provide for measured amounts of virgin aggregate, and to insure maximum chunk size of 2" at time of placement, and to otherwise insure the successful completion of the Reprofiling project.

6.0 CONSTRUCTION METHODS:

6.A All Systems

6.A.1 The roadway to be Reprofiled shall be to the length, width and depth as specified by the Highway Superintendent. The Contractor shall be equipped to verify the actual depth of cut at any point throughout the project.

6.A.2 Rideability/crown: the rolled surface shall be smooth and free of bumps and rough mismatched seams both longitudinally and transversely. The crown from centerline to edge of pavement shall be maintained at 3 – 5%, unless otherwise specified. Unless on a super elevated curve, no water shall drain toward the center of the roadway.

6.A.3 Reprofiling will not occur when temperature or other weather conditions are such that may restrict curing or otherwise harm the processed material.

6.A.4 Any operation or function in the scope of work performed by the contracting agency shall remove liability from the Contractor for that operation or function.

6.B Systems I & II

6.B.1 These Systems shall include Reprofiling the existing roadway only (System I) and addition of required aggregate (System II).

6.B.2 There shall be no RMD, however the finished product will meet the previously stated gradation.

6.C Systems III & IV

6.C.1 These systems shall include Reprofiling the existing roadway and addition of liquid additive (System III) plus required virgin aggregate (System IV) to improve the load bearing strength of the existing roadway.

6.C.2 These systems require the RMD be submitted and approved by the Highway Superintendent prior to commencement of work.

6.C.3 Excessive dry or raveled surfaces will be fog sealed as necessary to ensure pavement integrity.

7.0 METHOD OF MEASUREMENT:

7.1 The unit price bid for Reprofiling shall be measured by the number of square yards of Reprofiled pavement placed in accordance with these specifications.

7.2 Additional equipment as required in each Reprofiling System shall be measured by the number of square yards of Reprofiled pavement placed.

7.3 One cubic yard of virgin aggregate shall be calculated at 3,000 lbs. per cubic yard.

7.4 All liquid addative shall be measured by the gallon.

7.5 Maintenance and Protection of traffic shall be billed by the square yard.

8.0 METHOD OF PAYMENT:

8.1 The unit price per square yard for Reprofiling shall include the required labor and Reprofile Machine as previously specified in section 5.2.

8.2 The unit price per gallon for liquid additive shall include equipment and labor necessary to heat, haul and apply the desired material.

8.3 The unit price per square yard for additional items shall include all equipment and labor specified for grading, compacting or traffic control along with any optional items identified on the bid page.

8.4 The unit price per ton for additional aggregate shall include all labor, equipment and materials required to deliver and place the specified aggregate.

9.0 PRICE SUBMITTALS:

9.1 For the purpose of this turnkey operation, due to the nature and scope of work, the bid price requested shall be based on a minimum project size of one (1) mile for any road in Lewis County.

9.2 Price bid for Liquid Bituminous Material(s) added to the mix shall be subject to New York State O.G.S. Price Adjustments. Base price of asphalt is $521.00 (English ton) as of January 1, 2020.

9.3 Each billing will include invoices validating any change in the base price of asphalt and price per gallon.

9.4 All cost(s) not specifically mentioned, incurred throughout the pavement Reprofiling project, shall be included in the bid.
9.5 Traffic control; signage shall be in accordance with the manual of Uniform Traffic Control Devices (MUTCD). A minimum of 2 flaggers will be provided. All traffic control measures will be consistent with the MUTCD's description of "A Work Zone Traffic Control". The County reserves the option to provide traffic control.
9.6 Additional aggregate will be of the type and gradation provided in the RMD.

10.0 PERFORMANCE GUARANTEE:

The bidder guarantees that all material and equipment used fulfills this specification.

BID FORM
REPROFILING OF EXISTING BITUMINOUS PAVEMENT AND SUBBASE

Depth of Reprofiling:	System I	System II	System III	System IV
0”-4”	_____	_____	_____	_____
5”-6”	_____	_____	_____	_____
7”-8”	_____	_____	_____	_____
9”-10”	_____	_____	_____	_____

Additive:	Price Per Gallon
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Additional Aggregates	Price Per Ton
Item 304.05 Sub-base course type 4	_____
Washed Crushed Stone	_____
Other (Specify)	_____

Additional Items:	Price Per Square Yard
Motor Grader (operated)	_____
Roller (operated)	_____
M & P of Traffic	_____
Other (Specify)	_____
120” Reprofiling machine (operated)	_____ per 10 hour day
96” Reprofiling machine (operated)	_____ per 10 hour day

BIDDERS INFORMATION:

Signature:_____ Date:_____

Printed Name:_____Title:_____

Company Name:_____

Address:_____

City, State, Zip:_____

Telephone:_____ Fax:_____

FILLING CRACKS

USING FIBER REINFORCED MODIFIED ASPHALT CEMENT

DESCRIPTION:

This work shall consist of cleaning and filling cracks in existing asphalt concrete pavement or asphalt concrete overlays with fiber reinforced modified asphalt cement.

MATERIALS:

The material used shall meet the following requirements:

Asphalt Cement: The asphalt cement shall be a modified asphalt cement meeting the attached specifications:

Materials Designation	Viscosity Grade
MULTIGRADE	MG10-30 or PG 64S
MULTIGRADE RESILIENT	D3405 or D6690

Fibers: The fibers may be composed of either polypropylene or polypropylene or polyester. The contractor shall submit the following fiber information to the Highway Superintendent for approval prior to beginning the work:

Brand Name
Composition
Tensile Strength
Specific Gravity
Melt Temperature
Elongation
Length of Fiber

Fiber content will be 5% by weight of Modified Asphalt

Mixing Temperatures: The sealant shall be mixed at the temperatures recommended by the fiber manufacturer but shall not exceed 325F.

CONSTRUCTION DETAILS:

Crack Preparation: Prior to application of the sealant all cracks shall be thoroughly cleaned by air blasting such that all dust, dirt and moisture is removed. The cracks shall be cleaned a minimum of ¾" deep and all debris removed from the crack shall be removed from the pavement to prevent recontamination of the crack.

Preparation of Asphalt Fiber Mixture: The contractor shall obtain a copy of the manufacturer's recommendations pertaining to the heating, mixing, and application of the sealant. These recommendations shall be adhered to and followed by the contractor, with such expectations as this specification may require.

The sealant shall be heated in a melter constructed as a double boiler, with the space between the inner and outer shells filled with oil or other heat transfer medium. Direct heating will not be used. Positive temperature control, mechanical agitation, and a recirculating pump shall be used. The unit shall be provided with separate thermometers to indicate the temperature of the heat transfer medium and the sealant material in the hopper. The mixing unit shall be capable of maintaining the specified mixing temperature, with an allowable variation of 10F. Storage and subsequent reheating of the fiber mixture will be allowed only if, after reheating, the fiber mixture meets all of the requirements listed in this specification.

The application wand shall produce a band aid type appearance of at least 11/2 inches on each side of the crack, as well as filling the crack. The process is called extruding.

The discharge hose shall be equipped with a controlled heating apparatus or shall be insulated sufficiently to maintain the proper sealant temperature. The application wand shall be returned to the machine and the material recirculated immediately upon completion of each crack sealed.

Application of Sealant: The sealant shall not be placed when pavement or ambient temperatures fall below 43F or when moisture is present in the crack to be filled. The sealant shall be pumped directly into the crack or joint from the mixing unit. The sealant shall overlay the crack at the pavement surface. The height of the sealant above the pavement surface shall not exceed 2/8".
Blotting with fine aggregate shall directly follow sealant application if traffic results in tracking of the crack sealing material.

For cracks exceeding a width of 3", Type 1A stone shall be added to the sealant material.

METHOD OF MEASUREMENT:

The quantity to be paid for shall be the actual number of gallons of sealant used to complete the work.

No payment will be made for waste material.

BASIS OF PAYMENT:

The unit price bid per gallon shall include the cost of all labor, equipment and materials necessary to complete the work. Maintenance and protection of traffic is bid separately and is not to be included in the per gallon price. The County reserves the option to provide maintenance and protection of traffic.

BID FORM
FILLING CRACKS

Quantity/Gallons PER DAY	PRICE PER GALLON MG10-30	PRICE PER GALLON D3405
0-300 gallons	_____	_____
301-600 Gallons	_____	_____
601-1,000 Gallons	_____	_____
1,000+ Gallons	_____	_____

LUMP SUM PRICE FOR MAINTENANCE AND PROTECTION OF TRAFFIC:

PER 8 HOUR DAY _____

PER HOUR OVER 8 HOURS PER DAY _____

BIDDERS INFORMATION:

Signature:_____ Date:_____

Printed Name:_____Title:_____

Company Name:_____

Address:_____

City, State, Zip:_____

Telephone:_____ Fax:_____

MICRO SURFACING SPECIFICATION

1. DESCRIPTION:
The micro-surfacing surface shall consist of a mixture of polymer modified asphalt emulsion, mineral aggregate, mineral filler, additives and water; and it shall be properly proportioned, mixed and spread on an existing surface in accordance with plans, specifications, and as ordered by the Highway Superintendent. The references are made herein to New York State Department of Transportation, Standard Specifications, Construction and Materials.

2. MATERIALS:

2.1 Bituminous Materials

2.1.1 Bituminous material selection – The bituminous material shall be obtained from a storage facility that has been approved by the Director, Materials Bureau within the current calendar year, prior to the start of work.

2.1.2 Bituminous material selection – The bituminous material shall be a polymer modified asphalt emulsion meeting the following specification for MSE (Micro-surfacing Emulsion) and intended for use in the micro-surfacing system.

SPECIFICATION FOR MICRO-SURFACING EMULSION (MSE)

	MIN	MAX
Viscosity, Saybolt Furol @ 77 F, sec.	20	100
Storage Stability Test, 1 day		1.0
Particle Charge	Positive	
Sieve, %		0.1
Residue by distillation, %	62	
Mixing Test (a)		
Break Time (sec)	40	120
Set Time (min)		10
Set/cure direction	Bottom to Top	
Cohesion (min)		20
% Polymer (b)	3.0	
Test on Residue from Distillation @ 350 F ©		
Penetration, 77 F, 100g, 5 sec	40	
Ductility, 77F 5 cm/min, cm	60	
Absolute Viscosity @ 140 F-poise	8000	
Solubility in Trichloroethylene	97.5	
Softening point, Ring & Ball, F	140	

Notes: a, b, & c additional

(a) All mixing tests shall be performed using approved job aggregate and materials.

(b) Polymers shall not be post-added to the finished emulsion. All polymers shall be incorporated, during the milling process, at the producer's manufacturing facility.

(c) AASHTO T 59 modified to maintain a 350 F +/- 10F maximum temperature for 15 minutes.

2.2 Aggregates

2.2.1 Aggregate Approval – The aggregates for micro-surfacing shall conform to the requirements of Section 703-01 “Fine Aggregate”, 703.02 “Course Aggregate” and 703.08 “Mineral Filler” and be from an approved source. The Aggregate shall be manufactured crushed stone such as granite, slag, limestone, chat or other high quality aggregate of combination thereof. Not less than 20% of the course aggregate shall be non-carbonate for surface courses.

2.2.2 Aggregate Selection – The mineral aggregate used shall be of the type and gradation specified for micro-surfacing.

2.2.3 Aggregate Physical Properties

a. The aggregate selected shall have a minimum sand equivalent value of 65 when tested by ASTM D-2419.
b. The aggregate shall have a weighted loss of not more than 20% using the magnesium sulfate test.
c. The aggregate wear, from resistance to abrasion, shall be a maximum of 35% when tested by ASTM C-131.
d. The aggregate shall have a maximum methylene blue value of 15.

2.3 Mineral Filler

Mineral filler shall be added to the mineral aggregate and may be any recognized brand of Non air entrained portland cement or hydrated lime that is free of lumps, or other approved mineral additive. It may be accepted upon visual inspection. The amount of mineral additive needed shall be determined by the laboratory mix design and will be considered as part of the material gradation requirements.

2.4 Water

The water shall be potable and shall be free of harmful soluble salts.

2.5 Polymer Modifier

A minimum of 3.0% polymer solids content based on bitumen weight content, certified from the emulsion supplier, along with special quick-setting emulsifier agents shall be milled into the asphalt emulsion during manufacture. The emulsified asphalt shall be so formulated that when the paving mixture is applied at a thickness of one inch and the ambient air temperature of at least 75 degrees F. the material will cure sufficiently so that rolling traffic can be allowed in one hour with no damage to the surface, as verified by the Highway Superintendent.

2.6 Additives

These additives are any other materials that are added to the emulsion mix or to any of the components materials to provide the specified quick-set properties. The additives shall be supplied and certified by the emulsion manufacturer as being compatible with the emulsion and the mixture and included as part of the mix design.

2.7 Micro-Surfacing Mixture

The micro-surfacing mixture shall conform to the following limits.

Screen Size	Micro Type II % Passing *	Micro Type III % Passing *
3/8”	100	100
#4	90-100	70-90
#8	65-90	45-65

#16	40-65	30-50
#30	25-45	19-34
#50	15-30	12-25
#100	10-21	7-18
#200	5-13	4-12

Residual Asphalt	5% to 9% by dry weight of aggregate
Mineral Additive	0-5% to 3% by dry weight of aggregate
Polymer Modifier	Minimum 3% by weight
Field Control Additive	As required to provide the specified properties
Water	As required to produce consistency

- The percent of aggregate passing shall not go from the high end to the low end of the specified range on any two successive sieves.

Suggested Application and Rate:

Type II – Urban and Residential Streets: (20-30 lbs. per sq. yd.)

Type III – Primary and Interstate Routes: (30-40 lbs. per sq. yd.)
Wheel Ruts: Application rates as required.

3.0 MICRO-SURFACING MIX DESIGN

The Contractor shall be responsible for selecting an asphalt emulsion and aggregate within the specification limits which are compatible and capable of being combined to provide a micro-paving mixture which will be homogeneous, fill cracks and voids, adhere firmly to the existing pavement surface and be resistant to abrasion from traffic. Prior to beginning work, the Contractor shall submit the names of sources and suppliers of all materials to be used to the Highway Superintendent for review and approval by the Regional Materials Requirements noted above.

3.1 Mix Design

Before work commences, the contractors shall submit a certified mix design covering the specific materials to be used on the project. This design shall be performed by a qualified laboratory. Once the materials are approved, no substitution will be permitted unless first tested and approved by the laboratory preparing the mix design and the Buyers Engineer. The qualified laboratory shall develop the job mix design and present certified test results for the contractors approval. Compatibility of the aggregate and emulsion shall be verified by the mix design. The job mix formula shall provide a minimum Marshall stability of 1,800 pounds and a flow of 6 to 16 units then tested according to the ASTM 1559 or AASHTO 245 procedure as modified. All component materials used in the mix design shall be representative of the material proposed by the contractor for use on the project.

In addition to meeting the requirements for the micro-surfacing mixture, the mixture shall exhibit the following properties:

Break Time	40-120 seconds
Set Time	10 minutes maximum
Set-cure direction	Bottom to top
Cohesion	
30 minutes	12 kg-cm minimum

60 minutes	20 kg-cm minimum
Wet Track Abrasion Loss	
1 hour soak	50g/ft2 maximum
6 day soak	75g/ft2 maximum

Schulze-Breuer	
Void Volume, %	17-22
Water Absorption, %	5 maximum
Abrasion loss, %	9 maximum

3.1 Reporting

A complete laboratory analysis and report accompanied by samples of the components and abraded and unabraided micro-surfacing test samples shall be submitted to and approved by the Buyers Highway Superintendent to beginning work. The report shall include the following minimum data:

1. Type of and sieve analysis for aggregate (washed gradation).
2. Sand Equivalency test value (ASTM D2419).
3. Magnesium sulfate test loss.
4. Methylene blue value.
5. Type of and percentage of mineral filler needed, if any.
6. Type of and percentage of additive used, if any.
7. Grade of asphalt emulsion and percentage of asphalt residue.
8. Percentages of asphalt emulsion and water needed.
9. Unit weight of dry aggregate (loose and compacted).
10. Results from the break time, set time, set cure direction, cohesion, modified Marshall, and Schulze Breuer tests.
11. Average coverage of dry aggregate in pounds per square yard based on unit weight of aggregate sampled.

4. EQUIPMENT:

4.1 General

All equipment, tools, and machines used in the performance of this work shall be maintained in satisfactory working condition at all time to ensure a high quality product. All micro-surfacing mixing and spreading equipment shall be approved by the Highway Superintendent prior to beginning work.

4.2 Mixing Equipment

The material shall be mixed by a self-propelled or truck mounted micro-surfacing mixing machine which shall be a continuous flow mixing unit able to accurately deliver and proportion the aggregate, emulsified asphalt, mineral and field control additives, and water to a revolving multi-blade twin shafted mixer and discharge the mixed product on a continuous flow basis. The machine shall have sufficient storage capacity for aggregate, emulsified asphalt, mineral and field control additives, and water to maintain an adequate supply to the proportioning controls. The machine shall be equipped with self-loading devices which provide for the loading of materials while continuing to lay micro-surfacing, thereby minimizing construction joints. When truck mounted machines are used, a minimum of two (2) machines shall be provided to maintain continuity of the project. The mixing machine shall be equipped with a water pressure system and fog spray bar which can completely fog spray the existing surface prior to placing the slurry. During the spraying process, water puddles will not be permitted.

4.3 Proportioning Devices

Individual volume or weight controls for proportioning each material to be added to the mix, i.e. aggregate, emulsified asphalt, mineral and field control additives, and water shall be provided and properly marked. These proportioning devices are usually revolution counters or similar devices and are used in material calibration and determining the materials output at any time.

4.4 Emulsion Pump

The emulsion pump shall be a heated positive displacement type.

4.5 Spreading Equipment

The surfacing mixture shall be spread uniformly by means of a mechanical type spreader box attached to the mixer, equipped with paddles to agitate and spread the materials throughout the box. A front seal shall be provided to insure no loss of the mixture at the road contact point. The rear seal shall act as final strike off and shall be adjustable. The mixture shall be spread to fill cracks and minor surface irregularities and leave a uniform skid resistant application of material on the surface. The spreader box and rear strike off shall be so designed and operated that a uniform consistency is achieved to produce a free flow of material to the rear stride off. The longitudinal joint where two passes join shall be neat appearing, uniform and lapped. All excess material shall be removed from the job site prior to opening the road. The spreader box shall have suitable means provided to side shift the box to compensate for variations in pavement width and longitudinal alignment. The spreader box shall be kept clean and buildup of emulsion and aggregate on the box will not be permitted.

4.6 Machine Calibration

Each mixing unit to be used in performance of the work shall be calibrated in the presence of the Highway Superintendent prior to construction, or previous calibration documentation covering the exact materials to be used may be acceptable provided they were made during that calendar year. The documentation shall include the individual calibration of each material at various settings, which can be related to the machine metering devices.

5. CONSTRUCTION DETAILS

5.1 Weather Limitations

The micro-surfacing shall not be placed in the rain or when rain is threatening and it shall not be placed if, either the pavement or air temperature is 50F and falling, and there is no forecast of temperatures below 32F with 24 hours from the time or placement of the mixture. The Contractor shall be responsible for constructing and curing the micro-surfacing under proper weather conditions. Any areas of micro-surfacing that do not cure within a period acceptable to the Highway Superintendent shall be replaced by the Contractor at his/her expense. Micro-surfacing shall be placed only during the period of May 1 up to and including the last Saturday of September.

5.2 Preparation of Surface

Immediately prior to applying micro-surfacing, the surface shall be cleaned of all loose materials, silt spots, vegetation, and other objectionable materials. Any standard cleaning method used to clean pavements will be acceptable, except water flushing will not be permitted in areas where considerable cracks are present in the surface. Cleanliness of the surface will be determined by the Highway Superintendent at the time of placement.

Manhole covers, drop inlets, catch basins, curbs and other structures within the area shall be protected against the application of micro-surfacing materials.

If required by the Highway Superintendent or plans, crack sealing will be done prior to the application of the micro-surface as detailed in Section 663. Crack filling will be paid under its appropriate item.

5.3 Tack Coat

If required by the plans, the Contractor shall apply a tack coat consisting of one part emulsified asphalt and one part emulsifier solution with a distributor at .05-.15 gallons per square yard. The tack coat shall meet the requirements of 702-90. A tack coat shall always be applied to a concrete or brick surface.

5.4 Application:

The Contractor shall stockpile aggregates in an area that is free draining and shall be kept free from contamination by unsuitable materials and excessive moisture. Segregation of aggregate particle sizes in the stockpiles will not be permitted. All aggregate shall be screened just prior to loading for job site delivery.

The amount of asphalt emulsion to be blended with the aggregate shall be that as determined by the laboratory report after final adjustment in the field. Water shall be added as necessary to obtain a fluid and homogeneous mixture. The final rate of application will be approved by the Highway Superintendent.

Prior to initial placement of the micro-surface, the Contractor shall provide tests strips as specified.

The surface should be pre-wetted by fogging ahead of the spreader box when required by local conditions. The rate of application of the fog spray shall be adjusted during the day to suit temperatures, surface texture, humidity, and dryness of the pavement surface.

A sufficient amount of micro-surface mixture shall be carried in all parts of the spreader at all times so that a complete coverage is obtained.

No lumping, balling or unmixed aggregates will be permitted. No segregation of the emulsion and aggregate will be permitted. If the coarse aggregate settles to the bottom of the mix, the micro-surface shall be removed from the pavement. No excessive breaking of the emulsion will be allowed in the spreader box. No streaks such as caused by oversized aggregate shall be left in the finished pavement.

Every effort shall be made to prevent the micro-surface from spilling onto the adjacent pavement or curbs. Should spillage occur, it shall be cleaned to the satisfaction of the Highway Superintendent.

During production, the actual percentage of asphalt residue shall not vary by more than 1% of that indicated in the approved mix and must remain within the general limits.

5.5 Test Strips

Test strips shall be placed prior to commencing the project to ensure that the equipment is properly calibrated and that the mixture has the indicated properties of the approved mix design. The test strips shall be provided as required by the Highway Superintendent in or near the work site and shall be representative of the traffic and pavement conditions of the project.

The finished micro-surfacing mixture shall accept rolling traffic within one (1) hour whether for surface or rut fill application.

For rut fill applications the contractor may remove 1-1/2” of material a minimum of (3) feet wide by grinding for a test section.

5.6 Workmanship

No excessive buildup, uncovered areas or unsightly appearances shall be permitted longitudinal or transverse joints. The contractor shall provide suitable width spreading equipment to produce a minimum number of longitudinal joints throughout the project. When possible, longitudinal joints shall be placed on lane lines. Half passes and odd widths passes will be used only in minimum amounts. If half passes are used, they shall not be the last pass of any paved area.

The micro-surfacing mixture shall possess sufficient stability so that premature breaking of the material in the spreader box does not occur. The mixture shall be homogeneous during the following mixing and spreading. It shall be free of excess water or emulsion and free of segregation of the emulsion and aggregate fines from the coarser aggregate.

Areas which cannot be reached with the mixing machine shall be surfaced using hand squeegees to provide complete and uniform coverage. The area to be hand worked shall be lightly dampened prior to mix placement. Care shall be exercised to leave no unsightly appearance from handwork.

The same type finish as applied by the spread box shall be required. Handwork shall be completed at the time of the machine applying process.

Care shall be taken to insure straight lines along curbs and shoulders. No runoff on these areas will be permitted. Lines at intersections will be kept straight to provide a good appearance.

If required by the plans, specified areas shall be rolled by a self-propelled 10 ton pneumatic roller with a tire pressure of 50 PSI and equipped with a water spray system.

6. QUALITY CONTROL

6.1 Materials

The Contractor will permit the Highway Superintendent to take samples of the aggregate and asphalt emulsion to be used in the project at the Highway Superintendent's discretion. Gradation and sand equivalent tests may be run on the aggregate and residual asphalt content test on the emulsion. Test results will be compared to specifications.

Tests will be run by a qualified laboratory at the expense of the buyer. The buyer must notify the contractor immediately if any test failed to meet the specifications.

6.2 Micro-Surfacing Mixture

Samples of the mixture will be taken daily and will be taken directly from the mixing unit(s). Consistency and residual asphalt content test will be made on the samples and compared to the mix design and specifications. The Highway Superintendent will notify the Contractor immediately if any test fails to meet specifications and the job will cease until corrective action is taken.
The Highway Superintendent may use the recorders and measuring facilities of the unit to determine application rates, asphalt emulsion content, mineral and field control additives, and water.

6.3 Non-Compliance

If any two successive tests fail on the stockpile material, the job shall be stopped. It is the responsibility of the Contractor, at his own expense, to prove to the Highway Superintendent that the conditions have been corrected. If any two successive tests on the mix from the same machine fail, the use of the machine shall be suspended. It will be the responsibility of the contractor, at his own expense, to prove to the Highway Superintendent that the machine is working properly.

7. Submittal

Bidder shall at the time of the bid submit the following:
1. Bidder Qualifications
2. Bidders Checklist page
3. Sample of specifications, emulsion and aggregate.
4. Certified letter attesting that these are materials intended fur use on bid project.

8. Performance Warranty

The Contractor must furnish the following warranty after completion of the work and prior to final payment:

The Contractor hereby warrants that all workmanship and all materials furnished under the Contract comply fully with requirements of these Micro-Surfacing Specifications. If at any time within two years after the date of the final inspection, any unfaithful or defective work should appear, which in the opinion of the Highway Superintendent is due to inferior materials, equipment malfunction, or workmanship, the Contractor warrants to do whatever is necessary to remedy the defects immediately without cost to the Buyer. The Highway Superintendent will notify the Contractor in writing of the defects and the repairs to be made, and the Contractor will begin repairs within a mutually agreed time frame.

9. METHOD OF MEASUREMENT

9.1 Aggregate

The quantity of aggregate used in the accepted portions of the work shall be measured by net ticket weight of each individual load of aggregate shipped to the project from the approved job site scale. The weight of mineral additive used shall be calculated and included in the total aggregate weight.

9.2 MSE (Micro-Surfacing Emulsion)

The quantity of MSE used in the accepted portion of the work shall be measured by gallons or tons of material based on the accepted load tickets issued from the manufacturer. At the completion of the project any unused emulsion shall be weighted back and that quantity deducted from the accepted emulsion quality delivered.

10. BASIS OF PAYMENT

The accepted quantity of mixture used in the “Micro-Surfacing” will be paid for at the contract unit price per ton for the type material specified. The unit price shown in the contract shall be full compensation for all materials; including emulsion, modifiers, mineral additives, labor, tools, equipment, traffic control, and all other incidentals necessary to complete the work.

Item No.	Item	Pay Unit
---.01	Micro-Surfacing Type II Surface	Ton
---.02	Micro-Surfacing Type III Surface	Ton
---.03	Micro-Surfacing Rut Fill	Ton

BIDDER QUALIFICATIONS

No bid will be considered unless the firm submitting the bid meets the following conditions:

1. Has in operation an organization including supervision, labor and equipment devoted to the type of work described in the proposal and specification.

2. Has been engaged in the type of work described in the proposal and specification for a period of two (2) years unless a subsequent investigation by the Department indicated that the bidder's firm is, in fact, reputable in its field and capable of satisfactorily completing the contract.

3. Submits with the bid a list of equipment to be used on the project including make, Model, year and serial number.

4. Submits with the bid a listing of four (4) successful Micro-surfacing projects completed by the Contractor, two of which are similar traffic volumes, road conditions and project size tot he proposal. The submission shall include location, number of square yards, date completed and contact person.

5. The bidder must submit to the Engineer acceptable skid resistant values of previous jobs demonstrating the ability to maintain skid resistance after a minimum of one (1) year.

BID FORM
MICRO SURFACING

Type II	PRICE PER TON
Quantity to be placed under 100 tons	$_____
Quantity to be placed 101-300 tons	$_____
Quantity to be placed 301-500 tons	$_____
Quantity to be placed over 500 tons	$_____

Type III	PRICE PER TON
Quantity to be placed under 100 tons	$_____
Quantity to be placed 101-300 tons	$_____
Quantity to be placed 301-500 tons	$_____
Quantity to be placed over 500 tons	$_____

Rut fill	PRICE PER TON
Quantity to be placed under 100 tons	$_____
Quantity to be placed 101-300 tons	$_____
Quantity to be placed 301-500 tons	$_____
Quantity to be placed over 500 tons	$_____

BIDDERS INFORMATION:

Signature:_____ Date:_____

Printed Name:_____Title:_____

Company Name:_____

Address:_____

City, State, Zip:_____

Telephone:_____ Fax:_____

QUICK SET SLURRY SEAL SPECIFICATION

DESCRIPTION

The slurry seal surface shall consist of a mixture of emulsified asphalt, mineral aggregate, and water; properly proportioned, mixed and spread evenly on the surface specified. The cured slurry shall have a homogeneous appearance, adhere firmly to the surface and have a skid resistant texture.

APPLICABLE SPECIFICATIONS:

The following specifications, as to methods, and material, form a part of this overall specification.

ASTM AMERICAN SOCIETY OF TESTING METHODS.

ISSA INTERNATIONAL SLURRY SEAL ASSOCIATION.

ASTM D 75 Sampling stone, slag, gravel, sand and stone block for use as Highway Materials

ASTM C 136 Sieve analysis of fine or course aggregate.

ASTM C 117 Amount of Material finer than no. 200 Sieve in Aggregate.

ASTM D 2419 Sand Equivalent Value of Soils and Fine Aggregate.

ASTM C 128 Specific Gravity and Absorption of Fine Aggregates.

ASTM C 29 Unit Weight of Aggregate.

ASTM C 131 Abrasion of Coarse Aggregate, by use of the Los Angeles Machine.

ASTM C 183 Sampling of Hydraulic Cement.

ASTM D 546 Sieve analysis of Mineral Filler.

Specifications for Mineral Fillers:

ASTM D 242 Mineral Filler for Bituminous Paving Mixture.

Test Methods for Asphalt Emulsions:

ASTM D 140 Sampling Bituminous Materials

ASTM D 244 Testing Emulsified Asphalt.

ISSA-TB #102 “Quick Set” Emulsified Asphalt

Test Methods for Bituminous Slurry Surfaces

ASTM D 3910 Design, Testing, and Construction of Slurry Seal.

ASTM D 2172 Bitumen Content of Paving Mixture, Method B

ASTM C 136 Sieve Analysis of Fine & Course Aggregate.

ISSA TB A105 Guide Specifications

Specifications for Asphalt Emulsions:

ASTM D 077 Specifications for Anionic Emulsified Asphalt.

ASTM D 2397 Specifications for Cationic Emulsified Asphalt.

ISSA TB116 Specifications for Quick-Set Emulsified Asphalt Slurry Seal Systems.

MATERIALS:

1. Asphalt Emulsion. The emulsified asphalt shall conform to ASTM specifications for CSS-1h or SS-1h except that they shall be of the QUICK SET SLURRY SEAL EMULSION TYPE, and in conformance with ESSA Technical Bulletin # 102.

2. Aggregate. The mineral aggregate shall consist of 100% stone screenings, crushed gravel or slag. The aggregate shall be clean and free from vegetable matter and other deleterious substances. When tested by ASTM D 2419, the aggregate blend shall have a sand equivalent of not less than 45.When tested according to AASHTO T196, the aggregate shall show a LA Abrasion loss of not more than 35%. When tested in accordance with AASHTO T90, aggregate shall be non plastic.

Mineral fillers or liquid retarding and accelerating agents shall be considered as part of the blended aggregate, and shall be used in minimum required amounts. Mineral fillers shall only be used if needed to improve the workability of the mix or gradation of the aggregate, and shall be graded sufficiently fine to effect complete dispersion through the mixture. The aggregate proposed for use in the work shall have a proven durability record for the conditions and traffic expected.

The combined mineral aggregate shall conform to the following dry gradation when tested by ASTM C 136:

	Percent Passing (dry basis)	
Sieve	Type 2	Type 3
3/8	100	100
No. 4	90-100	70-90
No. 8	65-90	45-70
No.16	45-70	28-50
No. 30	30-50	19-34
No. 50	18-30	12-25
No. 100	10-21	7-18
No. 200	5-15	5-15

Residual Asphalt Content, % extracted by dry wgt. of agg.:	Type 2	7.5-13.5
	Type 3	6.5-12.0
Application Rate, #/sy, dry	Type 2	12-16 (+/- 4)
	Type 3	16-27 (+/- 4)

3. Water: All water used with the slurry mixture shall be potable and free from harmful soluble salts.

4. Stockpiling of Aggregate: When stockpiling aggregate, care shall be taken so that the aggregate stockpile will not become contaminated with oversize materials or other contamination. Segregation of the aggregate will not be permitted.

5. Storage of Asphalt Emulsion: The Contractor shall provide suitable storage facilities for the asphalt emulsion. The container shall be equipped to prevent water from entering the emulsion. Suitable heat shall be provided if necessary to prevent freezing.

6. Sampling: Samples of materials and of the finished slurry surface shall be furnished by the Contractor as directed by the Highway Superintendent during progress of the work. Test reports may be requested from the Contractor as additional materials arrive.

DESIGN, CERTIFICATIONS AND DEMONSTRATIONS:

1. Prior to Construction: Sources of all materials shall be selected prior to the time the materials are required for use in the work. All materials shall be pre-tested in a qualified laboratory as to their suitability for use in slurry. A job mix formula for the slurry mixture shall be prepared prior to construction. More specifically:
    a. The Contractor shall furnish the Superintendent of Highways prior to the start of work, a certified statement from the emulsion manufacturer giving analysis of the base asphalt used in the manufacture of the emulsion.. The statement shall also certify that the material represented is a true Quick Set Emulsion, passing all above procedures.
    b. The Contractor shall furnish the Superintendent of Highways prior to the start of work, a certified testing data sheet from a qualified laboratory. The data sheet will show that their test methods and results on the emulsion and the aggregate conform to the requirements of the specifications.
    c. The Contractor shall furnish the Superintendent of Highways prior to the start of work, a job mix formula for the slurry mixture. Acceptance of the formula by the Superintendent is solely for the purpose of quality control and in no way releases the Contractor from his responsibilities.
        1. Sieve analysis of aggregate used
        2. % of mineral filler
        3. % of water
        4. % of asphalt emulsion
        5. Unit weight of dry aggregate in lb./cu. ft. loose and compacted.
        6. Sample mixes should be evaluated by acceptable testing procedures as to their consistency, set time, mix time, cure time, wet track abrasion loss, Excess Asphalt by LWT Sand Adhesion, and Wet Cohesion.
        7. Application rate of dry aggregate in lb./sy.

Acceptance of the mix formula by the Superintendent must be done prior to construction start-up. If not, the contractor takes full responsibility for all costs incurred if application of slurry is done prior to this acceptance.

    d. The Contractor shall submit along with the required written materials analysis and proposed Job Mix Formula the following physical specimens.
        1. 5 kg. of the proposed aggregate selected
        2. 4 liters of the proposed emulsion selected
        3. ½ kg. of the filler selected if applicable

Designs, Certifications and Demonstrations (cont.):

Each specimen shall be indelibly identified with the date and source. The Superintendent of Highways shall waive the design submittals provided the bidder has previously satisfactorily designed and applied slurry with the same materials proposed for this work. The bidder shall submit a list of completed projects and sources used to the Superintendent of Highways if the design requirement is waived. In any case, untried materials may not be introduced into this work without complete analysis and design of a Job Mix Formula for each new material approved by the Superintendent of Highways.

2. During Construction
    a. Contractor shall provide extraction tests by a qualified laboratory as required by the Superintendent of Highways. At least one test per day or every 25,000 s.y. of work shall be performed and results documented. If asphalt content or other parameter is found to be out of

specifications and not in conformance with job mix, immediate corrections shall be taken on remainder of work and all work already in place shall be evaluated for possible reapplication of slurry, at no additional cost to the Highway Department. The Superintendent of Highways shall also have authority to make equitable adjustment in contract price for deficient work based upon test results. Test results are to e submitted to the Superintendent of Highways within one week after the sample is taken.

b. The contractor, as directed by the Superintendent of Highways during progress of the work, shall furnish samples of materials and of the finished slurry surface. The Superintendent may request test reports from the contractor as additional materials arrive.

GUARANTEE:

The bidder shall guarantee that all material and equipment used to fulfill this contract meets the enclosed specifications.

A two-year guarantee for defective or inferior bituminous material and/or workmanship shall apply to all bituminous materials supplies applied under this contract.

Upon completion, the successful bidder will provide a two-year maintenance bond to the department and each political subdivision purchasing under this contract.

EQUIPMENT, TOOLS AND MACHINES:

The equipment, tools, and machines needed in the performance of the work shall be provided by the contractor, shall be subject to approval by the Superintendent of Highways, and shall be maintained in a satisfactory working condition at all times.

Equipment, Tools and Machines (cont.):

1. Mixing and Application Machines: The slurry mixing and application machine shall be a self propelled continuous-flow unit capable of interlocking and accurately delivering a predetermined proportion of aggregate, water, and asphalt emulsion to the mixing chamber and of discharging the thoroughly mixed product on a continuous basis. No violent mixing shall be permitted. Each material function of the machine (fines, aggregate, emulsion and water) shall be accurately metered. The machine shall be automated with time delays so that all functions can be controlled by one switch.

2. Fines Feeder: The slurry seal machine shall be equipped with a fines feeder that provides an accurate metering device or method to introduce a predetermined proportion of mineral filler into the mixer at the same time and location as the aggregate. The fines feeder shall be used whenever mineral filler is a part of the aggregate blend.

3. Fogging: The slurry seal machine shall be equipped with a water pressure system and fog-type spray bar adequate for complete fogging of the pavement surface with a maximum application of 0.05 gal./s.y. The spray bar shall be so mounted on the mixing machine that fogging will immediately precede application of the slurry seal mix.

4. Storage Capacity on Machine: Slurry mixing equipment shall have a minimum 5 cu. yd. fines hopper, 400 lb. cement hopper, with a 600 gal. emulsion tank and a 600 gal. water tank.

5. Slurry Spreading Equipment: A variable-width mechanical type squeegee spreader box shall be attached to the slurry seal mixing machine. The spreader box shall have the ability to extend from nine (9) feet to fifteen (15) feet in width without stopping the slurry seal operation. The spreader box shall be equipped and maintained with flexible material in contact with the pavement surface to prevent loss of slurry from the spreader box on varying grades and crown. The spreader box shall be equipped for lateral distribution of the slurry mixture within the spreader box regardless of spreader box width or crown or bank or the pavement surface. The spreader box

shall be kept clean and build-up of asphalt and aggregate on either squeegee or spreader box shall not be permitted. Burlap drags or other drags shall be provided and shall be approved by the Superintendent of Highways. The drag shall be cleaned or replaced as needed to prevent accumulations or crusts of slurry seal mix on the drag.

6. Equipment Requirements: The contractor must own and have available a minimum of three (3) continuous flow five (5) cubic yard slurry machines, so that the delay or inconvenience to the public will be held to a minimum.

7. Auxiliary Equipment: Hand squeegees, shovels, and other hand equipment shall be provided by the contractor as necessary to perform work.

8. Calibration: Calibrate each mixing unit and submit a completed calibration document to the Superintendent of Highways prior to the start of work. Calibration documents shall be current for the year of proposed work. Calibration documents using the same materials may be accepted by the Superintendent of Highways providing that the calibration was performed in the same calendar year.

COMPOSITION AND APPLICATION OF SLURRY MIX:

1. Composition / Rate of Application: The amount of asphalt emulsion to be blended with the aggregate shall be that determined by the laboratory report provided by the contractor, subject to final adjustment in the field, to allow absorption by the existing surface. The amount of water added must be controlled accurately to insure production of readily spreadable, yet completely stable slurry. The slurry shall be a homogeneous mixture, sufficiently stable during the entire mixing and spreading period that the emulsion does not break; that there is no segregation of the fines from the coarser aggregate and the liquid portion of the mix does not float to the surface. Total time of mixing, from introduction of emulsion to spreading, shall be two minutes or less. Mixtures shall be adjusted as required on grades of 8% or more.

2. Application: Sufficient quantities of the slurry seal mixture shall be fed into the spreader box such that a uniform and complete coverage of the pavement is obtained. The slurry seal machine shall be operated at such a speed that the amount of slurry in the spreader box shall remain essentially constant. The slurry mixture shall be of the desired consistency as it leaves the mixer and no additional elements shall be added. A sufficient amount of slurry shall be carried in all parts of the spreader at all times so that complete coverage is obtained. No lumping, balling, or unmixed aggregate shall be permitted. No segregation of the emulsion and aggregate fines from the coarse aggregate will be permitted. If the coarse aggregate settles to the bottom of the mix, the slurry will be removed from the pavement, and shall be replaced with a proper mix at no additional cost to the Highway Department. No excessive breaking of the emulsion will be allowed in the spreader box. No buildup of cured slurry seal mix shall be allowed to collect in spreader box. No streaks caused by oversize aggregate particles or build-up of slurry mix on squeegees shall be left in the finished surface.

3. Joints: The longitudinal joint between adjacent lanes shall have no visible lap, pinholes, or uncovered areas. Thick spots caused by overlapping shall be smoothed immediately with hand squeegees before the emulsion breaks, so that a uniform surface is obtained which contains no breaks or discontinuities.

4. Hand Work: Approved squeegees shall be used to spread slurry in non accessible areas to the slurry mixer. Care should be exercised in leaving no unsightly appearance from handwork. Handwork will also be required on radii, along curb and gutter lines and around fixtures.

5. Curing: Completed slurry seal shall be protected from traffic by barricades and markers for the period of time necessary for complete curing of material and longer when weather conditions and thickness or slurry seal require additional time for proper drying.

Composition and Application of Slurry Mix (cont.):

6. Protection of Fixtures: Special care shall be taken around road fixtures, such as catch basins, manholes, water boxes, gas valves, etc., so as not to cover, or impair from operation. All structures, which may become marred by the slurry shall be marked prior to slurry application and cleaned immediately after application by sweeping, shoveling, wiping, etc., and all disturbances to the uncured surface caused by this activity shall be touched up by hand work.

7. Weather Limitations: No slurry shall be applied, a) when there is any danger that the finished product will freeze before it cures completely; b) when the pavement or air temperature is below 50 F and falling, but may be applied when both air and pavement temperatures are 45 F and rising, or c) in the period following a rain while puddles of water remain on the surface to be coated. Slurries that cure by evaporation should not be laid during periods of abnormally high humidity, or when rain may fall within a few hours. However, in the event that the contractor elects to proceed, it shall be the contractor's responsibility to replace any failed slurry.

8. Time: Anticipated schedule of slurry application listing streets to be slurried per day will be submitted to the Superintendent of Highways prior to commencement of operation. This will be used strictly for information purposes of the Department.

9. Traffic Control: Suitable methods such as barricades, flagmen, pilot cars, etc., shall be used to protect the uncured slurry and will be the responsibility of the Contractor. The Contracting Office shall give final approval to the method used. If damage occurs where suitable means have been made to protect the uncured slurry, violators will be prosecuted and the Contractor will be reimbursed for the amount of damages.

10. Cleaning Equipment: Power brooms, power brushes, power blowers, water flushing equipment and hand brooms shall be suitable for cleaning the surface and cracks of the old surface. High-pressure water (Minimum 10 gal/min at 7000 psi) shall be the only approved method for removal of mud and adhesive clays.

BIDDER QUALIFICATIONS:

The bidder shall show evidence of his company's qualifications in his bid proposal by completing or submitting the following at the time of the bid opening:

1. A competent slurry seal experienced work force to be utilized during entire slurry operation performed under this contract. All shall have full knowledge of application and shall be supervised by a competent superintendent, present of the job at all times.

2. A list of company owned and maintained equipment to be used on the project, including make and year.

3. List below the completion of four (4) successful Quick-Set Slurry Seal projects in the past two (2) years by the contractor and/or his superintendent (specified above, indicating a total minimum annual volume by the contractor and/or his superintendent of 250,000 square yards of slurry seal during these past two (2) years.

4. The bidder at the time of bidding will own and operate an emulsion manufacturing plant, The particular plant shall have been owned and operated by the bidder for at least five (5) years. The plant shall be a permanent facility.

	Name of Project Location	Contact Person Telephone No.	Square Yards	Date Completed
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____

MEASUREMENT:
Work prescribed by this item will be measured by the square yard of surface area. The yard calculations will be based on dimensions determined from measurements of the actual area slurry sealed as authorized.

PAYMENT:
The work performed as prescribed by this item, measured as provided above, will be paid for at the unit price bid per square yard. Measurement and payment will be limited to the longitudinal length and width of which there is a definite texture present. The payment per square yard shall include aggregate, equipment and necessary labor to complete the work as specified. Maintenance and protection of traffic is not to be included in the square yard price but is priced separately. The County reserves the option of providing Maintenance and Protection of Traffic.

FINANCIAL RESPONSIBILITY:

Prior to the award the contractor shall submit the following certificates of insurance covering his equipment and operations:

a. Public Liability Insurance Policy in the amount of One Million dollars ($1.000.000/00) single limit for bodily injury and property damage.
b. Automotive Liability Insurance Policy in the amount of One Million dollars ($1,000,000.00) single limit for bodily injury and property damage.
c. All said insurance policies shall name the County of Lewis as an additional insured.
d. Vendor shall also furnish the purchaser with certification of insurance indicating he is covered by Workers/ Compensation.
e. All said insurance policies shall contain the following clause:

"In the event of any material alteration or cancellation of this policy at least thirty days notice thereof shall be given to the County Superintendent of Highways at his office in Lowville, New York.

On all "applied" work the Bidder shall conform to Section 220 of the New York State Prevailing Wage Rates for Lewis County as provided by the New York State Department of Labor, as contained in this proposal. The supplier shall maintain appropriate payroll records on each employee and file a certified payroll weekly. Each payroll record must be affirmed as true under the penalties of perjury, which means a notarized signature to that effect. If during the period of the contract the low bidder is cited by the NYS Department of Labor for a willful violation of the laws and regulations applicable to the bidding process, pricing policies, or in any way applicable to the services or supplies rendered pursuant to this contract, the County shall have the option to deem the Bidder/Contractor irresponsible and any other work will be awarded to the next low bidder and the original low bidder will be charged for the difference in bid price.

EXTENSION OF PRICES:

The successful bidder shall extend these prices to any Municipality in Lewis County.

The prices quoted here in shall remain in effect for one year from agreement signing and thereafter until 30 days after receipt of written notice of a vendor's intent to cancel or until public notice as published by the County of Lewis for the receipt of new bids for items mentioned herein, The County reserves the right to extend this contract, upon mutual agreement with the successful bidder, for two (2) additional one year periods.

LEWIS COUNTY HIGHWAY DEPARTMENT
BID SHEET
QUICK SET SLURRY SEAL

AREA QUANTITIES	PRICE PER SQUARE YARD TYPE II	TYPE III
0-5,000 SQ.YDS.	$_____	$_____
5,001-10,000 SY.YDS.	$_____	$_____
10,001-25,000 SY.YDS.	$_____	$_____
25,001-50,000 SY.YDS.	$_____	$_____

LUMP SUM PRICE FOR MAINTENANCE AND PROTECTION OF TRAFFIC:

1 4- FLAGGERS AND PILOT DRIVER WITH VEHICLE

PER 8 HOUR DAY: _____

PER HOUR OVER 8 HOURS PER DAY: _____

2 ADDITIONAL FLAGGER

EACH - PER DAY: _____

BIDDERS INFORMATION:

Signature:_____ Date:_____

Printed Name:_____Title:_____

Company Name:_____

Address:_____

City, State, Zip:_____

Telephone:_____ Fax:_____