

ITEM A-82-23 HOT IN-PLACE ASPHALT RECYCLING

DATED: JANUARY 2023

CONTRACT PERIOD: 3/31/23 - 3/30/24

INTENT

It is the intent of this bid proposal to solicit bids for an hot in-place recycled asphalt road pavement, which will serve as a truing and leveling course for a surface treatment or asphalt overlay to be applied separately.

SCOPE OF WORK:

The work shall be a multi-step process of asphalt surface rehabilitation that consists of softening the existing flexible pavement with heat and thoroughly stirring, spinning or tumbling the mixture, applying an asphalt plasticizing or softening agent, milling/remixing and reshaping and compacting the rehabilitated flexible surface.

SUPERVISION

The Montgomery County Commissioner of Public Works, hereinafter referred to as the "Commissioner", shall designate a representative who will oversee and be responsible for the construction of the stabilized base course.

QUALIFICATION OF BIDDER

When requested by the Commissioner, the bidder must present evidence of experience, ability and financial standing, and a statement as to equipment.

MIX DESIGN

After receiving the request for a mix design, the successful bidder must provide it in a timely fashion. Core holes drilled by the bidder to derive information for said mix must be filled immediately with a cold mix bituminous concrete approved by the Commissioner. Traffic control for the coring operation shall be performed by the bidder with prior approval of the lane closure scheme by the Commissioner.

PRE-CONSTRUCTION CONFERENCE

After the acceptance of the mix design by the Commissioner and at least one week prior to the start of the asphalt rehabilitation project, the successful bidder shall schedule a pre-construction conference with the Commissioner and/or his designated representative. The bidder shall present his proposed schedule, and maintenance and protection of traffic plan, if applicable, at that time.

OPTIONAL MAINTENANCE & PROTECTION OF TRAFFIC

The Commissioner may elect to have the bidder provide maintenance and protection of traffic for a specific project, in which case traffic shall be maintained in accordance with Sections 619-1 through 619-3 pf the New York State Standard Specifications and the New York State Manual of Uniform Traffic Control Devices (MUTCD).

MATERIALS

Emulsified Recycling Agents

These specifications cover emulsified recycling agents to be used in cold mix recycling or hot in-place recycling. The final acceptance of these materials shall be based on their performance to (a) restore the aged "old" asphalt characteristics to a consistency level appropriate for construction purposes, (b) restore the aged asphalt to its optimal chemical characteristics for durability (c) provide sufficient additional binder to coat new aggregate that is added to the recycled mixture, and (d) provide sufficient additional binder to satisfy mixture design requirements.

Note: All samples shall be shipped and stored in clean air-tight sealed wide mouth jars or bottles made of plastic. The specific gravity of the emulsified recycling agent shall be reported for each shipment. The rejuvenating agent for hot in-place asphalt recycling shall be Koch Pavement Solutions product ERA-25P or approved equivalent.

TEST	ASTM METHOD	ERA-5		ERA-25P	
		MIN.	MAX.	MIN.	MAX.
Viscosity, Saybolt Furol @ 25C. sec.t	D244	15	85	15	85
Storage Stability Test, 1 Day	D244		1.0		1.0
Sieve Test, Retained on No. 20 Sieve Percent	D244		0.1		0.1
Cement Mixing Test, Percent	D244		2.0		2.0
Residue by Evaporation Percent	D244	65		65	
Tests on Residue Viscosity @ 60 C cst	D2170	200	800	1000	5000
Torsional Recovery			20		
Base Recycling Agent (ie. prior) to emulsification	D4552	RA-5		RA-25	

EQUIPMENT REQUIREMENTS

A. Preheater: The preheating machine shall be one self-contained machine specifically designed to heat the upper layers of the existing asphaltic pavements. The preheating machine shall be a self-propelled and completely self-contained unit capable of operating at speeds from ten (10') feet to twenty-five (25') feet per minute while uniformly heating the existing surface of the asphalt.

The heating unit shall consist of multi-rows of burners of a type specifically designed for and capable of producing 48 million BTUH; LPG will be used for the heating fuel to prevent detrimental sooting or oil coating of aggregate or asphaltic materials and to be in compliance with the standards of the State's Air Pollution Control Laws. The BTUH production rate is based upon

heating twelve (12') feet wide. Burners shall be located on the front of the heater boxes spaced no more than ten (10") inches apart to achieve proper heat penetration at the required temperature while causing no injury due to overheating the asphaltic surface.

The entire burner assembly shall be so designed so that it may be raised or lowered by a single control and capable of articulation. The burner assembly shall be adjustable in width from eight (8') to fourteen (14') feet. The entire heating unit shall be enclosed and vented to contain the heat and prevent damage to plant material or any structures along the roadway. Each unit shall be equipped with an on board 500 gallon water system to be used to adequately reduce the temperature of the exhaust in the venting system thereby preventing desiccation of trees and shrubs by evapotranspiration due to high heat. Hand hoses with adjustable nozzles will be placed on each unit to allow for prewetting of specific plants or objects.

B. Heater-Scarifier: The heater-scarifier machine shall be one self-contained machine specifically designed to reprocess upper layers of existing asphalt pavements. The heater-scarifier machine shall be a self propelled and completely self contained unit capable of operating at speeds of ten (10') to twenty-five (25') feet per minute while uniformly heating, scarifying, applying plasticizer, mixing, and screeding the existing pavement to a minimum depth of one (1") to one and one-half (1-1/2") inches at a minimum temperature of 250 degrees F. The wheelbase shall not be less than eighteen (18') feet and the total weight shall not be less than 35,000 pounds.

The heating unit shall consist of multi-rows of burners of a type specifically designed for and capable of producing 48 million BTUH; LPG will be used for the heating fuel to prevent detrimental sooting or oil coating of aggregate or asphaltic materials and to be in compliance with the standards of the State's Air Pollution Control Laws. The BTUH production rate is based upon heating twelve (12') feet wide. Burners shall be located on the front of the heater boxes spaced no more than ten (10") inches apart to achieve proper heat penetration at the required temperature while causing no injury due to overheating the asphaltic surface.

The entire burner assembly shall be so designed so that it may be raised or lowered by a single control and capable of articulation. The burner assembly shall be adjustable in width from eight (8') to fourteen (14') feet. The entire heating unit shall be enclosed and vented to contain the heat and prevent damage to plant material or any structures along the roadway.

All equipment shall conform to Federal, State, and local DOT and Fire Marshal regulations, and laws relative to the transportation of LPG.

C. Scarifying Unit: The scarifying unit shall consist of no less than two rows of spring loaded teeth adjustable in width from eight to fourteen feet in increments of one inch and construction in one foot sections to conform to the pavement contour to insure uniform penetration of the teeth and prevent damage to utility structures.

D. Spraying Unit: Immediately behind the teeth of the scarifying unit, an application of plasticizing or softening agent shall be applied to the newly remixed area. Nozzle size on the spray bar and pump shall be a combination

that will deliver the approved rate of application according to the forward speed of the machine. The tank on the machine shall be heated, and the heating unit on the storage tank for the plasticizing or softening agent shall be mixed into the scarified material by mixing tines that are located immediately behind the spray bar.

In addition to the above, it will be required that the spraying unit on the machine be equipped with an electronic, digital measuring system (computer) to constantly monitor the quantity of rejuvenating agent being applied. This device will be calibrated to show gallons used to the nearest tenth.

E. Screed & Initial Compaction Unit: Immediately following the application of the recycling agent, a dual-drum enclosed mill shall mill the heated asphalt to the depth of the heat, thoroughly mixing the rejuvenating agent with the scarified and milled material. This mill-remixer system shall be an integral part of the scarifying machine and shall be located between the spraying system, which applies the rejuvenator, and the screed. This mill/remixer system shall be fully hydraulically operated and shall be able to work at variable speeds from 0 to 60 rpm, and shall be retractable from 14.6 ft. to 8.6 ft. wide. This mill shall also be able to break in the center to allow for quarter point and crown control.

No heater scarification can take place without this unit present and in operating condition.

F. Screed & Initial Compaction Unit:

1. Screed: The hot scarified material shall be uniformly distributed to the best-desired longitudinal and transverse section by the use of a heated augered screed. The screed must be equipped with an adjustable crown control, and each end of the screed must have hand wheel adjusting screws for providing the desired longitudinal and transverse section.
2. Compaction Unit: Immediate compaction shall take place with rolling equipment of sufficient type and size to compact the recycled bituminous material to the required density. Normally this can be accomplished with the application of an eight (8) to twelve (12) ton vibratory roller. State specifications for bituminous concrete surfaces shall apply.

CONSTRUCTION REQUIREMENTS

A. Pavement Preparations: The entire area to be resurfaced shall be cleaned of all deleterious material. If required, the Owner shall broom clean the area prior to commencement of work or specify the contractor to do the same.

B. Heating, Scarifying, Leveling, & Rejuvenation: The existing asphaltic material shall be heated, scarified and mixed to a minimum depth of one inch. Under no circumstances shall the scarifying teeth penetrate into the existing base.

The heated plasticizing or softening agent shall be applied immediately following the scarifying teeth. Under no circumstances shall a cold agent be considered.

The hot scarified material shall then be mill-remixed immediately following the application of the recycling agent to eliminate premature compaction of the hot recycled asphalt resulting in final differential compaction and to the desired longitudinal and transverse section by the use of an attached, heated, augered screed. Directly behind the screeding process shall be an 8 to 12 ton roller for compaction.

C. Overlay: The application of the final wearing surface consisting of either hot mix asphalt pavements, nova-chip, micro-paving, or chip seals, follow after a prescribed interval or delay. These materials are applied with conventional equipment in conformance with standard construction methods.

NOTE: Surface treatment not included in unit price (Work to be done by others).

To all manholes, valve boxes, etc., the finished grade of the heater-scarifying process shall be transitioned to blend into the existing grade.

WEATHER CONDITIONS

The recycling work shall not be conducted when raining, or when the air temperature is below 40° and falling, or when in the opinion of the Commissioner the weather conditions would prevent the proper construction of the stabilized base.

AWARD OF CONTRACT

Award of contract will be made only to the lowest responsible bidder as will promote the public interest. The County of Montgomery reserves the right to reject any and all proposals, or award to other than the low bidder, to waive minor informalities, to advertise for new proposals, or to proceed to do the work otherwise if, in its opinion, the best interest of the County will thereby be promoted.

METHOD OF MEASUREMENT

The quantity of recycled pavement to be paid for will be the number of actual square yards of surface area completed.

INSURANCE

Before the actual commencement of work, the contractor shall file with the Commissioner **LIABILITY INSURANCE POLICIES**, with limits not less than the following amounts as indicated:

Types of Policies

- a. Contractor's Liability Insurance
- b. Contractor's Protective Liability Insurance
- c. Completed Operations Liability Insurance
- d. Protective Liability Insurance for the County
- e. Owner, Landlords and Tenants Liability Insurance

Minimum Limits

<u>Bodily Injury Liability</u>		<u>Property Damage Liability</u>	
Each Person	Each Accident	Each Accident	Aggregate
\$1,000,000.00	\$2,000,000.00	\$1,000,000.00	\$2,000,000.00

PAYMENT

Payment under this item shall be for the total number of square yards of surface area actually recycled, based on the design.

PRICE BID

On their proposal, the bidder shall indicate a price per square yard for the recycling, grading and rolling the treated base, and supplying maintenance and protection of traffic as specified.

On their proposal, the bidder shall also indicate a price per square yard deduction to be used should the County elect to provide maintenance and protection of traffic.

OTHER MUNICIPALITIES

All provisions of this specification and the ensuing contract, including insurance, shall be extended to all municipalities in the County of Montgomery, and work ordered by them, shall be furnished according to their needs at the prices and terms of the contract.

CONTRACT EXTENSION

The County of Montgomery reserves the right to extend any contract issued, based on this specification, under the same terms and conditions for a one year period from date of expiration, provided such extension is mutually agreeable to both County and Contractor.

PREVAILING RATES SCHEDULE

Successful contractors shall pay not less than the prevailing wage rate established by the New York State Department of Labor, Bureau of Public Works. The Wage Rate Schedule as prepared by the Department of Labor hereby becomes a part of the contract, and is included herein.

**PROPOSAL FORM ITEM A-82-23
HOT IN-PLACE ASPHALT RECYCLING
Sheet 1 of 2**

Deliver Proposals to: Montgomery County Purchasing Department
P.O. Box 1500
Fonda, NY 12068-1500

Sir:

The undersigned has read and understands the Information and Instructions to Bidders and the specifications for the furnishing of Item A-82-23 Hot In-Place Asphalt Recycling and proposes to furnish the item at the price shown hereon.

This proposal is subject to acceptance within forty-five (45) days of the time set for the opening of bids.

FIRM NAME: _____

ADDRESS: _____

TELEPHONE: _____

SIGNATURE OF AUTHORIZED REPRESENTATIVE: _____

NAME AND TITLE: _____

DATE: _____

BIDDERS FEDERAL ID NO.
OR SOCIAL SECURITY NO.: _____

IS FIRM INCORPORATED? _____

IS FIRM MINORITY OWNED? _____

(Minority ownership refers to ethnic origin NOT gender)

**PROPOSAL FORM ITEM A-82-23
HOT IN-PLACE ASPHALT RECYCLING
Sheet 2 of 2**

PROPOSAL OF: _____

ALL PRICES SHALL BE PER SQUARE YARD

	With Roller & Operator	Without Roller & Operator
0 - 20,000 Sq Yds	\$ _____	\$ _____
20,001 Sq Yds & Over	\$ _____	\$ _____

Deductions:

County-supplied maintenance & protection of traffic-\$ _____/Sq Yd