

Tonganoxie Asphalt Rejuvenating Project 2018

Primary Work

1. Application of Asphalt Rejuvenating product per the standard specifications that follow.

Sweeping will be the responsibility of the City of Tonganoxie.

Potential Contract and Terms

- 1) Contractor shall furnish a performance bond to the City executed by surety for the contract amount.
- 2) Contractor shall provide proof of commercial general liability and auto liability insurance for the amount of \$1,000,000 per occurrence.
- 3) A project tax exemption number will be provided.
- 4) Work is anticipated to begin approximately October 8th, 2018 with the work being completed before December 1st, 2018.
- 5) The City of Tonganoxie holds the right to reject all bids and negotiate with the winning bidder.

Bids shall be sealed and sent to:

City of Tonganoxie

Box 326

Tonganoxie Ks, 66086

Or hand delivered to City Hall at 526 E 4th St. By 1:00 PM Wednesday September 26th, 2018.

Bids will be opened Wednesday September 26th, at 1:00 PM in the Tonganoxie Council Chambers @ 325 S. Delaware St.

Questions can be directed to Kent Heskett, Public Works Superintendent, at 913-208-6590 or kheskett@tonganoxie.org. All questions and answers will be posted on the City website.

Location of work

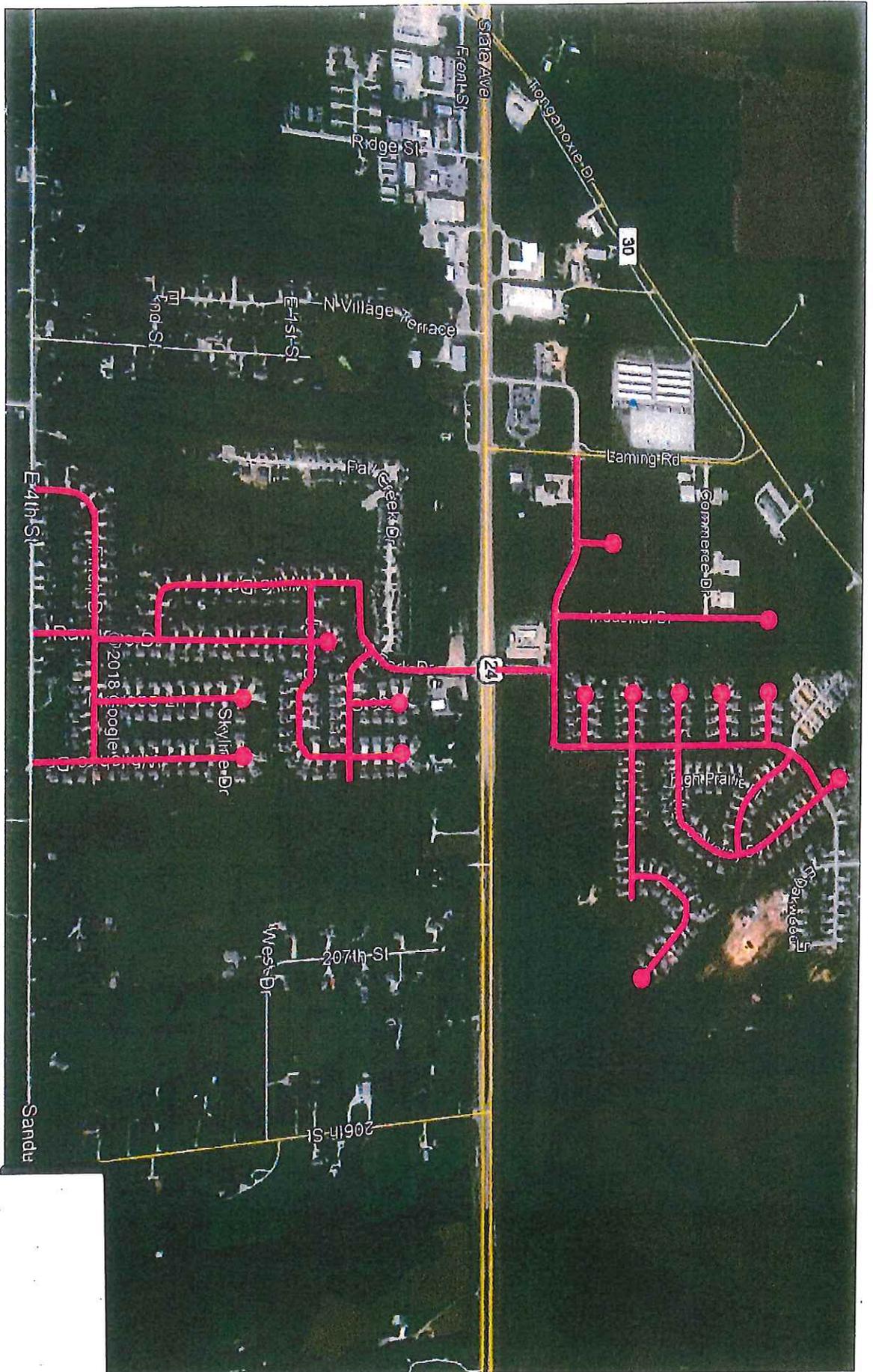
1. Finch Dr
2. Wilshire Dr
3. Skyline Dr
4. Melrose Pl

5. Rawlings Dr
6. Willis Dr
7. Joles Dr
8. Jackson Dr
9. Grae Ct
10. South Park Dr
11. Stone Creek Ave
12. Woodfield Dr
13. Michaels Ct
14. Industrial Dr
15. High Prairie Pl
16. Hidden Valley Dr
17. Valley View Dr
18. Rock Creek Dr
19. Rock Creek Ct
20. Bradley Ct
21. Brook Ridge Ct
22. Hidden Valley Ct
23. Copper Creek Ct
24. Country View Ct
25. Willow Bend Dr

The attached map shows the streets, highlighted in red, to be treated.

All measurements shall be verified by contractors and are final upon the bid deadline.

Bid amount shall be good and valid for sixty (60) days from the bid deadline.



STANDARD SPECIFICATIONS

FOR

ASPHALT SURFACE MAINTENANCE

WITH AN

ASPHALT REJUVENATING AGENT

ASPHALT REJUVENATING AGENT

I. Scope:

This work shall consist of furnishing all labor, material, and equipment necessary to perform all operations for the application of an asphalt rejuvenating agent to asphaltic concrete surface courses. The rejuvenation of surface courses shall be by spray application of a cationic rejuvenating agent composed of petroleum oils and resins emulsified with water. All work shall be in accordance with the specifications, the applicable drawings, and subject to the terms and conditions of this contract.

II. Material Specifications:

The asphalt rejuvenating agent shall be an emulsion composed of a petroleum resin oil base uniformly emulsified with water. Each bidder must submit with his bid a certified statement from the asphalt rejuvenator manufacturer showing that the asphalt rejuvenating emulsion conforms to the required physical and chemical requirements.

SPECIFICATIONS

<u>Tests</u>	<u>Test Method</u>		<u>Requirements</u>	
	<u>ASTM</u>	<u>AASHTO</u>	<u>Min.</u>	<u>Max.</u>
Tests on Emulsion:				
Viscosity @ 25° C, SFS	D-244	T-59	15	40
Residue, % W ¹		D-244(Mod.) T-59(Mod)	60	65
Miscibility Test ²	D-244(Mod.)	T-59(Mod)	No Coagulation	
Sieve Test, %W ³	D-244(Mod.)	T-59(Mod)	-	0.1
Particle Charge Test	D-244	T-59	Positive	
Percent Light Transmittance ⁴	GB	GB	-	30
Tests on Residue from Distillation:				
Flash Point, COC, ° C	D-92	T-48	196	-
Viscosity @ 60° C, cSt	D-445	-	100	200

Asphaltenes, %w	D-2006-70	-	-	1.00
Maltene Dist. Ratio	D-2006-70	-	0.3	0.6

$$\frac{PC + A_1^5}{S + A_2}$$

PC/S Ratio ⁵	D-2006-70	-	0.5	-
Saturated Hydrocarbons, S ⁵	D-2006-70	-	21	28

¹ ASTM D-244 Modified Evaporation Test for percent of residue is made by heating 50 gram sample to 149 C (300 F) until foaming ceases, then cool immediately and calculate results.

² Test procedure identical with ASTM D-244-60 except that .02 Normal Calcium Chloride solution shall be used in place of distilled water.

³ Test procedure identical with ASTM D-244 except that distilled water shall be used in place of two percent sodium oleate solution.

⁴ Test procedure is attached.

⁵ Chemical composition by ASTM Method D-2006-70:

PC = Polar Compounds, A₁ = First Acidaffins

A₂ = Second Acidaffins, S = Saturated Hydrocarbons

III. Material Performance:

The rejuvenating agent shall have a record of at least five years of satisfactory service as asphalt rejuvenating agent and in-depth sealer. Satisfactory service shall be based on the capability of the material to decrease the viscosity and increase the penetration value of the asphalt binder as follows. The viscosity shall be reduced by a minimum of 45 percent and the penetration value shall be increased by a minimum of 25 percent. Testing shall be performed on extracted asphalt cement from a pavement to a depth of three eighths inch (3/8"). In addition, the pavement shall be in-depth sealed to the intrusion of air and water.

The bidder must submit with his bid the manufacturer's certification of compliance that the material proposed for use is in compliance with the specification requirements.

RECLAMITE®, manufactured by Tricor Refining, LLC is a product of known quality and accepted performance.

IV. Applicator Experience:

The asphalt-rejuvenating agent shall be applied by an experienced applicator of such material. The bidder shall have a minimum of three years experience in applying the product proposed for use.

V. PRODUCT STANDARDS AND ALTERNATES:

The product "Reclamite"®, as manufactured by Tricor Refining, LLC for the asphalt rejuvenating agent is the standard for these specifications and the prices quoted on the Bid Sheet Base Bid shall be for this standard. Should a bidder wish to submit a bid for alternates to the Standard, said prices shall be entered on the BID SHEET as the "Alternate Bid" for each item. In the event that the bidder submits no bid for the Standard, only the "Alternate Bids" should be completed.

Bidders may offer an ALTERNATE for the Standard specified in the Specifications provided the bidder adheres to the following and submits same with his bid.

(a) List the proposed alternate on the BID SHEET form giving the product name and price.

(b) Furnish complete specifications and descriptive literature for the alternate as well as a one-gallon sample of the material proposed for use. Such descriptive and detailed information shall be complete and at least equal in detail to the city's requirements for the standard item for which the alternate is offered.

(c) Submit a current Material Safety Data Sheet for the alternate materials.

The City will give the alternate consideration. The Contractor may furnish only those alternate items included in his proposal and approved by the City prior to award of a contract.

If no ALTERNATE is indicated on the BID SHEET, the Contractor shall furnish the STANDARD (brand) specified in the attached specifications.

Should the ALTERNATE offered be found unacceptable based on the data submitted with the bid and no bid is entered on the BID SHEET for the Standard, then said bid will be considered non-responsive.

VI. APPLICATION TEMPERATURE/WEATHER LIMITATIONS:

The temperature of the asphalt rejuvenating emulsion, at the time of application shall be as recommended by the manufacturer. The asphalt-rejuvenating agent shall be applied only when the existing surface to be treated is thoroughly dry and when it is not threatening to rain. The asphalt-rejuvenating agent shall not be applied when the ambient temperature is below 40° F.

VII. HANDLING OF ASPHALT REJUVENATING AGENT:

Contents in tank cars or storage tanks shall be circulated at least forty-five minutes before withdrawing any material for application. When loading the distributor, the asphalt rejuvenating agent concentrate shall be loaded first and then the required amount of water shall be added. The water shall be added into the distributor with enough force to cause agitation and thorough mixing of the two materials. To prevent foaming, the discharge end of the water hose or pipe shall be kept below the surface of the material in the distributor that shall be used as a spreader. The distributor truck will be cleaned of all of its asphalt materials, and washed out to the extent that no discoloration of the emulsion may be perceptible. Cleanliness of the spreading equipment shall be subject to the approval and satisfaction of the Engineer.

VIII. RESIDENT NOTIFICATION:

The contractor shall distribute by hand, a typed notice to all residences and businesses on the street to be treated. The notice will be delivered no more than 24 hours prior to the treatment of the road. The notice will have a local phone number that residents may call to ask questions. The notice shall be of the door hanger type that secures to the door handle of each dwelling. Unsecured notices will not be allowed. The contractor shall also place the notice on the windshield of any parked cars on the street. Hand distribution of this notice will be considered incidental to the contract.

IX. APPLYING EQUIPMENT:

The distributor for spreading the emulsion shall be self-propelled, and shall have pneumatic tires. The distributor shall be designed and equipped to distribute the asphalt rejuvenating agent uniformly on variable widths of surface at readily determined and controlled

rates from 0.05 to 0.5 gallons per square yard of surface, and with an allowable variation from any specified rate not to exceed 5 percent of the specified rate.

Distributor equipment shall include full circulation spray bars, pump tachometer, volume measuring device and a hand hose attachment suitable for application of the emulsion manually to cover areas inaccessible to the distributor. The distributor shall be equipped to circulate and agitate the emulsion within the tank.

A check of distributor equipment as well as application rate accuracy and uniformity of distribution shall be made when directed by the Engineer.

The truck used for sanding shall be equipped with a spreader that allows the sand to be uniformly distributed onto the pavement. The spreader shall be able to apply 1/2 pound to 3 pounds of sand per square yard in a single pass. The spreader shall be adjustable so as not to broadcast sand onto driveways or treelawns.

The sand to be used shall be free flowing, without any leaves, dirt, stones, etc. Any wet sand shall be rejected from the job site.

Any equipment that is not maintained in full working order, or is proven inadequate to obtain the results prescribed, shall be repaired or replaced at the direction of the Engineer.

X. APPLICATION OF REJUVENATING AGENT:

The asphalt-rejuvenating agent shall be applied by a distributor truck at the temperature recommended by the manufacturer and at the pressure required for the proper distribution. The emulsion shall be so applied that uniform distribution is obtained at all points of the areas to be treated. Distribution shall be commenced with a running start to insure full rate of spread over the entire area to be treated. Areas inadvertently missed shall receive additional treatment as may be required by hand sprayer application.

Application of asphalt rejuvenating agent shall be on one-half width of the pavement at a time. When the second half of the surface is treated, the distributor nozzle nearest the center of the road shall overlap the previous application by at least one-half the width of the nozzle spray. In any event the centerline construction joint of the pavement shall be treated in both application passes of the distributor truck.

Before spreading, the asphalt rejuvenating agent shall be blended with water at the rate of two (1) part rejuvenating agent to one (1) part water, by volume or as specified by the manufacturer. The combined mixture of asphalt rejuvenating agent and water shall be spread at the rate of 0.05 to 0.10 gallons per square yard, or as approved by the Engineer following field testing.

Where more than one application is to be made, succeeding applications shall be made as soon as penetration of the preceding application has been completed and the Engineer grants approval for additional applications.

Grades or super elevations of surfaces that may cause excessive runoff, in the opinion of the Engineer, shall have the required amounts applied in two or more applications as directed.

After the street has been treated, the area within one foot of the curb line on both sides of the road shall receive an additional treatment of the asphalt rejuvenating emulsion. Said treatment shall be uniformly applied by a method acceptable to the Engineer.

After the rejuvenating emulsion has penetrated, a coating of dry sand shall be applied to the surface in sufficient amount to protect the traveling public as required by the Engineer.

The Contractor shall furnish a quality inspection report showing the source, manufacturer, and the date shipped, for each load of

asphalt rejuvenating agent. When directed by the Engineer, the Contractor shall take representative samples of material for testing.

XI. STREET SWEEPING:

The City of Tonganoxie shall be responsible for sweeping and cleaning of the streets prior to, and after treatment.

Prior to treatment, the street will be cleaned of all standing water, dirt, leaves, foreign materials, etc. This work shall be accomplished by hand brooming, power blowing or other approved methods. If in the opinion of the Engineer the hand cleaning is not sufficient than a self-propelled street sweeper shall be used.

All sand used during the treatment must be removed no later than 48 hours after treatment of the street. This shall be accomplished by a combination of hand and mechanical sweeping. All turnouts, cul-de-sacs, etc. must be cleaned of any material to the satisfaction of the Engineer. Street sweeping will be included in the price bid per square yard for asphalt rejuvenating agent.

If, after sand is swept and in the opinion of the Engineer a hazardous condition exists on the roadway, the contractor must apply additional sand and sweep same no later than 24 hours following reapplication. No additional compensation will be allowed for reapplication and removal of sand.

XII. TRAFFIC CONTROL:

The Contractor shall schedule his operations and carry out the work in a manner to cause the least disturbance and/or interference with the normal flow of traffic over the areas to be treated. Treated portions of the pavement surfaces shall be kept closed and free from traffic until penetration, in the opinion of the Engineer, has become complete and the area is suitable for traffic.

When, in the opinion of the Engineer, traffic must be maintained at all times on a particular street, then the Contractor shall apply asphalt rejuvenating agent to one lane at a time. Traffic shall be maintained in the untreated lane until the traffic may be switched to the completed lane.

The Contractor shall be responsible for all traffic control and signing required to permit safe travel. The contractor shall notify the police and fire departments as to the streets that are to be treated each day.

If, in the opinion of the Engineer, proper signing is not being used, the Contractor shall stop all operations until safe signing and barricading is achieved.

XIII. METHOD OF MEASUREMENT:

Asphalt rejuvenating agent will be measured by the square yard as provided for in the Contract Documents.

XIV. BASIS FOR PAYMENT:

The accepted quantities, measured as provided for above, will be paid for at the contract unit price for asphalt rejuvenating agent.

Asphalt rejuvenating agent shall be paid for PER SQUARE YARD, which shall be full compensation for furnishing all materials;

equipment, labor and incidentals to complete the work as specified and required.

BID SHEET

The undersigned proposes to furnish material, labor, etc. according to the terms and conditions of the attached (agency) _____ Specifications at the following unit prices, to wit:

BASE BID

__65,591_____ SQUARE YARDS, MORE OR LESS, CONSTRUCTION SEALING WITH ASPHALT REJUVENATING AGENT FURNISHED AND APPLIED.

_____ \$ _____ PER SQ. YD.

Product Name

CONTRACTOR CAN BEGIN WORK _____ DAYS AFTER WRITTEN NOTICE.

CONTRACTOR WILL COMPLETE WORK BY YES_____ OR NO_____

PRICE TERMS: _____

ALTERNATE BID

_____ SQUARE YARDS, MORE OR LESS, CONSTRUCTION SEALING WITH ASPHALT REJUVENATING AGENT FURNISHED AND APPLIED.

_____ \$ _____ PER SQ. YD.

Product Name

CONTRACTOR CAN BEGIN WORK _____ DAYS AFTER WRITTEN NOTICE.

CONTRACTOR WILL COMPLETE WORK BY YES_____ OR NO_____

PRICE TERMS: _____

BIDDER AUTHORIZED AGENT

BUSINESS ADDRESS

PHONE NUMBER