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It is the purpose of these specifications to describe a new self-contained, truck mounted spray-injection patching machine. All parts not specifically mentioned which are necessary to provide a complete unit or which are normally furnished as standard equipment shall be furnished by the successful bidder and shall conform in strength, quality of material, and workmanship to what is provided by the industry in general. The following specifications cover a high performance truck mounted spray-injection patching machine designed for street and road maintenance.

	<u>Comply</u>	<u>Does Not Comply</u>
<b>1. GENERAL SPECIFICATIONS</b>		
A. This machine will be the manufacturer's current production model.	_____	_____
B. The machine will use compressed air to clean cracks and work area surfaces.	_____	_____
C. The machine will spray heated emulsion over an area to provide a tack coat.	_____	_____
D. The machine will apply a fully coated patch material mixture.	_____	_____
E. The machine will provide adequate control and workability to ensure that application of material is at grade level and proper patch density is achieved.	_____	_____
F. Approximate ship weight is 6,600 LB with dimensions of 192" long, 90" wide and 88" high.	_____	_____
G. Unit shall be capable of operating at temperatures down to 10°F.	_____	_____
<b>2. WORKING AREA</b>		
A. Shall be a minimum of 1,000 square feet.	_____	_____
B. Other _____	_____	_____
<b>3. BOOM</b>		
A. Shall be a low-effort, rear mounted tri-fold articulating boom with fully counterweighted arm.	_____	_____
B. Radius: Minimum 19 feet- 1,000-sq. ft. working area.	_____	_____
C. Vertical Stroke: 5 feet above to 2 feet below pavement level.	_____	_____

	<u>Comply</u>	<u>Does Not Comply</u>
D. Counterweighted Arm: To be fully self-supporting, capable of remaining in position anywhere within the vertical stroke without any operator pressure.	_____	_____
E. Operator Controls: Boom mounted to contain asphalt, aggregate, throttle, hydraulic, horn controls and air powered vibrator.	_____	_____
F. Operating Position: Shall be minimum of 6 feet from material spray.	_____	_____
G. All emulsion lines shall be heated by circulating transfer fluid and fully insulated from the asphalt emulsion tank to the spray nozzle.	_____	_____
Other: _____ _____	_____	_____

**4. DISCHARGE NOZZLE AND COATING SYSTEM**

A. Atomized asphalt spray shall be capable of 100% coating of the aggregate prior to discharge.	_____	_____
B. Coating system shall have 90 to 100 PSI pressure and internal spray ring at the nozzle to create a high pressure spray bath to achieve full coating.	_____	_____
C. Shall have a machined aluminum nozzle and internal spray ring with ten evenly spaced emulsion openings for full and even coating. Nozzle to be tapered to accelerate material flow.	_____	_____
D. Unit must be capable of placing up to 5.25 tons of patching mixture per hour.	_____	_____
Other: _____ _____	_____	_____

**5. TANKS**

A. Shall have a minimum 250 gallon pressurized, (ASME coded Vessel) completely insulated asphalt emulsion tank with steel cover and safety pressure relief valve.	_____	_____
B. Emulsion Tank: To be tested to 300 PSI with a coded ASME approved working pressure of 200 PSI for operator safety.	_____	_____
C. Insulation: Emulsion storage tank shall have minimum R-Value 19 insulation.	_____	_____
D. Emulsion, flush and tack wand controls to be rear mounted for operator convenience.	_____	_____
E. Overnight heaters must be thermostatically controlled from 1500-watt @ 120V standard or 6,000-watt @ 240V optional electric heating elements positioned inside tank.	_____	_____

	<u>Comply</u>	<u>Does Not Comply</u>
F. Heating element housing shall be in an ASME pressure tested-tube. Heating element shall not be in direct contact with the asphalt emulsion to allow for heating element removal without draining tank and to prevent charring of asphalt.	_____	_____
G. Must have minimum 30 gallon pressurized flush tank.	_____	_____
H. Flush Tank: To be tested to 300 PSI with a coded ASME approved working pressure of 200 PSI for safety.	_____	_____
I. Emulsion to be pressure fed to nozzle eliminating the use of a mechanical feed pump.	_____	_____
J. Emulsion tank and lines shall be heated with transfer fluid circulated directly from diesel engine.	_____	_____
K. Emulsion tank shall have 8-inch easy access lid, and 2-inch bottom discharge gate valve for clean out.	_____	_____
Other: _____ _____	_____	_____

**6. COMPRESSOR**

A. Unit shall contain minimum 13.2 CFM direct drive with governor regulator control and have capabilities to piggyback a hydraulic pump.	_____	_____
B. Maximum pressure 150 PSI.	_____	_____
C. Compressor shall be able to pressurize ½ full emulsion tank from 0 to 100 psi in no more than 11 minutes.	_____	_____
Other: _____ _____	_____	_____

**7. AGGREGATE HOPPER**

A. Minimum 6.5 cubic yard capacity, centered over rear axle, gravity feed with no mechanical assistance.	_____	_____
B. Pneumatic educator venturi to be rear-mounted, fully machined from solid stock steel. Discharge to be tapered to reduce air turbulence and wear. Venturi to convey aggregate from aggregate hopper through emulsion spray bath and out tapered nozzle with no moving parts.	_____	_____
C. Aggregate flow controlled by single air actuated slide plate. The slide plate control switch shall be located on articulated boom at the operator's finger tips.	_____	_____
D. Unit shall have adequate screening installed to prevent large aggregate or debris from entering the venturi.	_____	_____

	<u>Comply</u>	<u>Does Not Comply</u>
Other: _____ _____	_____	_____

**8. BLOWER**

- |   |       |       |
|---|-------|-------|
| A. Maximum output 546-CFM.  | _____ | _____ |
| B. Unit shall have a high volume lobe type blower, belt driven from the engine. | _____ | _____ |
| C. Unit must be equipped with heavy-duty silencer.                              | _____ | _____ |
| Other: _____<br>_____   | _____ | _____ |

**9. ENGINE**

- |   |       |       |
|---|-------|-------|
| A. Shall be minimum 80 HP water cooled diesel operated. | _____ | _____ |
| B. Unit shall be equipped with 1000 CCA battery.        | _____ | _____ |
| C. Unit shall have a 25 Gallon fuel tank.               | _____ | _____ |
| Other: _____<br>_____                                   | _____ | _____ |

**10. FRAME**

- |   |       |       |
|---|-------|-------|
| A. Shall be heavy duty reinforced 8" I beam with fully welded cross bracing.  | _____ | _____ |
| B. Shall have brake lights, tail lights, clearance lights and directional lights with connections to meet FMVSS108. | _____ | _____ |
| C. Unit shall come equipped with controllable directional safety arrow board.                                       | _____ | _____ |

**11. FILTERS**

- |                       |       |       |
|-----------------------|-------|-------|
| A. Engine: Dry type   | _____ | _____ |
| B. Blower: Dry type   | _____ | _____ |
| Other: _____<br>_____ | _____ | _____ |

**12. HOSES**

- |   |       |       |
|---|-------|-------|
| A. Material hose shall be 3 ½ inch I.D. neoprene rubber that resists curling and twisting, is adequately reinforced and rubber lined. | _____ | _____ |
| B. Material hose length: Shall be 14 feet in length with 4 foot metal extension.  | _____ | _____ |
| C. Emulsion: 3/8 inch ID plastic, 32 feet in length.  | _____ | _____ |

	<u>Comply</u>	<u>Does Not Comply</u>
D. Emulsion lines heated with transfer fluid circulated directly from diesel engine.	_____	_____
E. All pressure hoses shall have high-pressure fittings.	_____	_____
Other: _____ _____	_____	_____

**13. COLOR**

A. Shall be Nason two part urethane Crafco Red, primer is a Dupont Corlar Epoxy-934S and the activator is Dupont Corlar - 936S.	_____	_____
Other: _____ _____	_____	_____

**14. CRACK FILLING ATTACHMENT (OPTIONAL)**

A. Unit shall come equipped with 25-foot emulsion hose on retractable reel with 4-foot hand wand.	_____	_____
Other: _____ _____	_____	_____

**OPTIONS (X if to be included)**

- \_\_\_\_\_ Strobe light kit, Class II                      \_\_\_\_\_ Strobe light kit, Class I/CA Title 13
- \_\_\_\_\_ Water/fuel separator
- \_\_\_\_\_ Electric throttle
- \_\_\_\_\_ Crack Filling Attachment
- \_\_\_\_\_ 4 cubic yard capacity aggregate hopper
- \_\_\_\_\_ 5 cubic yard capacity aggregate hopper

**MISCELLANEOUS**

1. Truck must have a minimum 33,000 lb (14966 KG) GVWR.
2. Truck frame rail width must be 34 inches (85 CM) outside to outside dimension.
3. The truck frame length from back of cab to end of frame must be a minimum of 175 inches (444 CM).
4. Back of cab to center of rear axle length must be a minimum of 140 inches (355 CM).

Following the truck size guidelines, the center of mass will be between the front and rear axles of the truck with the hopper empty or full. Truck fenders, mud flaps and miscellaneous mounting hardware to be supplied by the truck supplier. Bidder or customer shall furnish with bid a minimum of six governmental references for whom bidder has supplied equipment meeting the specifications listed in this bid package. Names of the agency, contract name, and telephone number must be included with the bid for all six references listed. The successful bidder shall furnish at the time of delivery a copy of the parts and service manual.

The \_\_\_\_\_ reserves the right to inspect the equipment tendered by the successful bidder to ensure that it conforms to the specifications herein before mentioned above.