

THE \_\_\_\_\_ PURCHASING DIVISION IS SOLICITING BIDS FOR  
SMITH FS351 (or equal), Groove-inlay Slot Cutting Equipment with HEPA Vacuum

INVITATION TO BID NO. \_\_\_\_\_

F.O.B. \_\_\_\_\_

Release Date: \_\_\_\_\_

Opening Date: \_\_\_\_\_ @ \_\_\_\_\_ .M.

Requisition No. \_\_\_\_\_

For additional information or to obtain a copy of this Invitation to Bid, please contact:

Buyer: \_\_\_\_\_ Email: \_\_\_\_\_ Phone: \_\_\_\_\_

Company Name: \_\_\_\_\_

Contact Name: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Telephone (\_\_\_\_) \_\_\_\_\_ Fax (\_\_\_\_) \_\_\_\_\_

Prices contained in this bid are subject to acceptance within \_\_\_\_\_ calendar days.

Delivery will be completed within \_\_\_\_\_ calendar days after receipt of purchase order.

Payment Terms \_\_\_\_\_ Date \_\_\_\_\_

I have read, understand, and agree to all terms and conditions herein.

Signed \_\_\_\_\_ Print Name & Title \_\_\_\_\_

Reference to a specific manufacturer, product or model in the bid specifications does not restrict bidders to that manufacturer, product or model. This method is used to indicate the functional requirements (e.g., type, design, characteristics, quality) of the article desired. Bidders may submit a bid response for an alternative article; however the bid response will only be considered provided the bidder takes exception to the specific manufacturer, product or model **and** provides detailed, comparative documentation for use by the Purchasing Division in determination of the functional equivalency of the product or model proposed. Equivalent items must meet or exceed the following specifications and will be subject to performance testing. Complete and detailed comparative documentation for equipment other than that requested in this solicitation is **required to be submitted with the bid response**. Failure to comply with this request may be cause for rejection of bid.

Prior to bid award, the agency will request an on-site demonstration of a like model unit. Upon request from the agency, prospective bidders will have no more than 30 days to provide a demonstration at a location designated by the agency.

**SPECIFICATIONS FOR  
SMITH FS351 (or equal), Groove-inlay Slot Cutting Equipment with HEPA Vacuum**

The following specification is written around the SMITH Manufacturing, Pompano Beach, FL. Model SMITH FS351, Groove-inlay Slot Cutting Equipment with HEPA Vacuum. Unit shall be capable of preparing a grooved inlaid slot to recess pavement markings (Long, Short, Transverse and Intersection, Legends and Symbols) on concrete and asphalt surfaces from 4" to 60" wide. Approved equipment shall be capable of producing the total groove dimensions and base profiles in one or multiple passes that are uniform and consistent dimensional width, depth, straightness and surface finish. The equipment shall produce minimal surface vibration to prevent micro-cracking on the target pavement surface. The final groove tolerance shall reveal a consistent profile (refer to SP1-SP10 profile scale at <http://smithmfg.com/profiles.php>) designed for the new coating, binder or preform marking system to bond.

The equipment shall be capable of at least a 16" width groove in a single pass using Dry-cut diamond segmented multi-surface blades stacked or ganged on an arbor. The arbor should be capable of mounting a variety of blade types designed for the surface hardness and treatment of the target medium. The cutting blade package shall vertically cut a controlled groove of specified width and depth with special emphasis on the groove base or bed. The base is to be profiled flat or with slight lateral undulations (less than a 10 mil rise variance in the SP profile scale (SP1 - SP10) per the installed marking material requirement. The spacer gap between each stacked blade shall be such that will produce less than a 10 mil rise variance in the finished groove between the blades. The equipment shall be capable of quickly field replacing diamond drum arbors in less than 15 minutes.

The equipment shall include a twin independent pitch and depth control mechanism along the cutter drum axis to hold uniform depth consistencies for single and multiple inline passes without continual operator adjustment. This allows a repeatable seamless overlap for one or multiple passes to complete the final specified groove width and length. Control mechanisms shall be capable of adjustments as fine as .010" (10 mils) minimum. All airborne dust from the grooving operations shall be contained and HEPA filtered to protect operators and work environment. The removed asphalt or concrete material shall be extracted from the grooved slot with a secondary vacuum hose attached to the equipment. Any remaining materials shall be collected with a secondary operation. Prior to the installation of the marking material, all remaining loose materials or debris must be removed using a vacuum or compressed air or blower as long as it does not create a nuisance. If the slot is exposed to traffic or adverse weather conditions overnight, the Contractor shall clean and dry the groove slot prior to priming and applying the marking materials.

The equipment shall not be manually propelled but will include a hydraulic drive system with variable speed controls to ensure uniform and consistent width, depth, straightness and surface finish. To confirm the pre-set cut depths are accurate, depth plates shall be provided by the contractor. The approximate working removal speed for grooving Asphalt/Concrete at 100 mills using a 40HP power unit and 12" diameter diamond multi-surface combo blades are as follows: (a) 5" cut path 800 – 1050 Ft/Hr (b) 16" cut path 500 - 600 Ft/Hr (c) 25" cut path 250 - 325 Ft/Hr.

Bidder shall furnish and deliver one (1) current model (no prototypes will be accepted), SMITH FS351 (or equal), Groove-inlay Slot Cutting Equipment with HEPA Vacuum, equipped with 40 hp (min) gas engine with electric start, tachometer, hour meter, two 16" width diamond drum arbor assemblies with 1 outfitted with 16" cut path and 1 with a 8" width cutting path, machine and cutter drum wear parts kit containing all key wear components, heavy duty trailer containing HEPA Gas Powered Vacuum System offering minimum of 550 CFM with separate cyclone separator frame, collection bags, 50 feet of heavy-duty collection hoses and pick-up wand accessories for operation with FS351.

**MINIMUM REQUIREMENTS:** Unit(s) must be in production for over 3 years and meet the following minimum requirements to be considered:

Power	40 HP Subaru Gas Engine w electric start, Tachometer with timer	Complies: Yes ___ No___
Dimension:	48" L x 26" W x 44" H	Complies: Yes ___ No___
Weight:	650 lbs w/o drum 950 lbs w/ drum	Complies: Yes ___ No___
Cutting width:	up to 16.1" per pass	Complies: Yes ___ No___
Drive System	Direct hydrostatic "no-fault" drive with variable F/N/R speed	Complies: Yes ___ No___
Frame	All-steel 1/2" thick chassis with industrial powder coat with Rapid lifting carriage integrated depth controls	Complies: Yes ___ No___
Removal Speed	16" cut path 550 ft/Hr 5" cut path 800 ft/Hr	Complies: Yes ___ No___
Vacuum port	Dual, left or right side pickup location ports	Complies: Yes ___ No___
Wheels	Steel hub drive wheels and front depth setting wheels plus lockable drum axis height control wheels.	Complies: Yes ___ No___
Depth and level adjusters	Center depth controls for precision multi-pass removal with lockable cut-depth controls to remove in the impact zone	Complies: Yes ___ No___
Bearing Drive System	Maintenance-free, left and right side, triple-sealed high temperature bearings	Complies: Yes ___ No___
Drum Changeout	Under 15 minute Quick-change diamond or cutter drum assemblies	Complies: Yes ___ No___
Cutter Drums	Dry-cut Asphalt and Concrete 10" and 12" OD Diamond Drum Assembly for installing 3M Preform Tape and other binders adjustable up to 16" wide	Complies: Yes ___ No___
HEPA Vacuum System	13 HP Gas powered self contained 550 CFM Vacuum with cyclone separator	Complies: Yes ___ No___
Warranty	1-year manufacturer standard	Complies: Yes ___ No___
Production Model	Current production model min 3 years	Complies: Yes ___ No___
Training	6 hours on site after delivery	Complies: Yes ___ No___

	<u>Description</u>	<u>Quantity</u>	<u>Unit Price</u>	<u>Extended Price</u>
1.	<b>Groove-inlay Slot Cutting Equipment:</b> SMITH FS351 (or equal), Groove-inlay Slot Cutting Equipment with 40 HP gas powered electric start engine in accordance with specifications Dims: 48" x 26" x 44"; weight: 695 lbs. (w/o drum). Bidder to List Make, Year, Model:	1 each	_____	_____
2.	Standard Groove-Inlay tools: Diamond Drum Arbor Assembly with 16" width dry-cutting grooving blades for use on DOT concrete and asphalt surfaces lasting minimum of 100,000 LF at 1/8" per pass.	1 each	_____	_____
3.	Standard Groove-Inlay tools: Diamond Drum Arbor Assembly with 8" width dry-cutting grooving blades for use on DOT concrete and asphalt surfaces lasting minimum of 100,000 LF at 1/8" per pass.	1 each	_____	_____
4.	Wear Parts Kit for Groove Equipment Includes: complete set of drive belt, set of drive bearings, set of 4 wheels	1 each	_____	_____
5.	HEPA Gas Powered Vacuum System, MV-5500.H13 + MV.SB or equal, 13 HP Honda gasoline with electric start (battery supplied by customer) HEPA vacuum on heavy duty trailer with cyclone separator and tools per specifications, Airflow: 550 CFM	1 each	_____	_____
7.	Freight	1 each	_____	_____
8.	Training (6 hours on site)	1 each	_____	_____
	Total Bid Price (excluding sales tax)			_____

**DELIVERY:** \_\_\_\_\_ **DAYS AFTER RECEIPT OF ORDER**

I have read, understand and agree to comply with the terms and conditions specified in this Bid Request.

Print Name & Title: \_\_\_\_\_ Date: \_\_\_\_\_

AUTHORIZED SIGNATURE \_\_\_\_\_

EXCEPTIONS: Attach additional sheets if necessary.



**FS351™**

# Self-Propelled Surfer

Scarify / Plane / Shave / Groove / Prep



**SMITH FS351™** self-propelled Surfer accurately prepares surfaces with a variety of cutting tools for diamond shaving, roto-planing, carbide scarifying or milling and leveling operations.

The FS351™ provides uniform and consistent dimensional width, depth, straightness and surface finishes for precise groove dimensions and base profiles in one or multiple passes with minimal surface vibration to prevent micro-cracking on the target pavement surface.

Vacuum pickups to contain debris and dust from cutting operation.

