A REQUEST FOR PROPOSAL
FOR
PROFESSIONAL SERVICES CONTRACT

Department of Highways
Professional Services Procurement Bulletin 2021-08
Aviation Pavement Engineering

This document constitutes a Request for Proposals for a Professional Service Contract from qualified individuals and organizations to furnish those services as described herein for the Commonwealth of Kentucky, Department of Highways.

I. PROJECT DESCRIPTION

This statewide contract is to provide necessary Aviation Pavement Engineering. One (1) consultant will be selected to provide these services on an as-needed basis for two years.

II. PROJECT INFORMATION

Project Manager - Jake Dahl, P.E.
User Division - KY Department of Aviation
Approximate Fee - $200,000 per contract (Upset Limit)
Work will be assigned via Letter Agreement, not to exceed $75,000 per Letter Agreement
Project Funding - State Funds
Contract Term - Two Years

III. PURPOSE AND NEED

Assist the KY Department of Aviation with pavement engineering analyses and services beyond the expertise and/or time constraints of existing personnel.

IV. DBE REQUIREMENT

None.

V. SCOPE OF WORK

The selected Consultant will be required to provide pavement engineering services at public-owned airports throughout the Commonwealth on an as-needed basis, provide pavement engineering assistance to the Department of Aviation for development of pavement specifications and pavement policy documents for implementation by the Department of Aviation, and assist the Department of Aviation in cataloging and monitoring pavements with innovative / experimental features at General Aviation Airports and state owned airports.

Airport pavements differ from highway pavements in that most of the runway and taxiway gets little (if any) traffic. Perhaps 25-40% of the pavement surface area experiences any wheeled

traffic on a regular basis. Thus, airport pavements are subject to both wheel traffic loads as well as environmentally induced distresses associated with heat, sun and weather, which contributes to oxidization and related cracking. The primary distress that the Kentucky Department of Aviation has observed in recent years has been raveling and micro-cracking which are more related to environmental and weather related conditions as opposed to load related distresses from aircraft gear loads.

Aprons and helicopter pads also represent more severe loading conditions and may need to be addressed separately in the specifications.

Specific tasks may include but are not limited to:

- **Development of applicable pavement specifications for asphalt surface and base layers that are predicated on Kentucky Department of Highways specifications.**

    - It has been Department of Aviation past experience that the performance of traditional KYTC roadway asphalt pavement mixtures have not provided the desired durability and performance but generally have been more cost effective when compared with FAA P-401 specifications. The Department of Aviation desires a set of asphalt pavement specifications that addresses the special needs of airports but that also is more in line with KTYC highway specifications and likely more cost effective than the existing FAA requirements. The existing FAA P-401 specifications typically result in a mixture that is sandy, soft and susceptible to rutting on hot days and under heavy loads. The specifications also require testing and utilizes certain equipment not typically used in Kentucky which adds uncertainty and costs to bids.

        - ✓ Specifics regarding specification development includes:
            - A specification for asphalt surface mixtures on runways at General Aviation airports,
            - A specification for asphalt surface mixtures on taxiways at General Aviation airports, and
            - A specification for asphalt surface mixtures on aprons with high traffic or heavy loading conditions for General Aviation airports.
            - A specification for asphalt base mixtures at General Aviation airports,
            - As appropriate, incorporate a balanced mix design approach in order to achieve the optimum asphalt content necessary to address the cracking and raveling issues.
            - Include performance testing (crack testing with IDEAL-CT and rut testing with the Hamburg device) as an element of the specifications.
            - The specifications should include specific limitations on the amount of reclaimed asphalt pavement (RAP) in each asphalt mixture.
            - The specifications should include options to include fibers in high pavement stress areas.
            - Consider using the FAA P-410 Gradation #2 for a 0.5” surface mixture in the specification but make appropriate adjustments to the finer sieves to ensure a more fine-graded mixture.
            - Consider changes from the specifications to KYTC Highway Pavements in the sizes of lots/sublots to better represent General Aviation airport projects
            - Development of the specification in the format of a KTYC Special Note so that it can be included in proposals as a stand-alone document.

- **The Department of Aviation also frequently works with local Airport Boards for General Aviation Airports in implementing innovative pavement treatments and/or materials. The Department of Aviation desires to develop an inventory of innovative / experimental pavement features at General Aviation airports and document their performance.**

    - ✓ These include features / treatments such as:

        - Projects using the new specifications and construction techniques,
        - Reflective crack relief layers,
        - Fibers in asphalt mixtures,
        - Geogrids in asphalt pavement mixtures,
        - Paving fabrics, and
        - Other pavement conditions / features as may be assigned.

    - ✓ Coordinate with the KYTC Department of Aviation Statewide Pavement Management Consultant to correlate pavement management data with specific unique or innovative pavement engineering features and treatments.

    - ✓ As appropriate, complete field reviews / assessment of pavement conditions to correlate pavement performance with specific pavement features and treatments.

    - ✓ Prepare an annual report for the Kentucky Department of Aviation on the status of these unique or experimental features.

- **Work with Kentucky Department of Aviation Staff to form a Pavement Engineering Advisory Committee to work with the paving industry for review of proposed pavement specifications and policy recommendations.**

- **Evaluate the need for similar analyses for concrete pavements.**

VI. SPECIAL INSTRUCTIONS

One (1) consultant will be selected to provide these services for a period of two (2) years with no new work assigned after two years from the Notice to Proceed, although the contract may be extended for time to complete work already assigned. Contracts will have an upset limit of $200,000. Once the upset limit is reached or the two year term has expired, services may be re-advertised and no additional Letter Agreements will be executed under the contract. Contracts will not be modified to increase the upset limit or extended for time to assign new work. No Letter Agreement shall exceed $75,000 without written approval from the State Highway Engineer.

The Selection Committee will randomly draw from the pool of selected Consultants and list in consecutive order to determine the initial order for which projects will be assigned. Projects will generally be assigned on a rotational basis. The Department reserves the right to select one of the firms outside of the assignment order for a particular project if it is to the benefit of the Department. That firm, if selected out of order, will be skipped in the rotation when their turn comes and the regular order will be followed thereafter. The Department of Aviation reserves the right to group multiple projects together as one offering if it is advantageous to the Department. The Department may also add additional work to an existing Letter Agreement, if needed. A firm will not be offered an additional project until the remaining firms on the list have been offered a

project. If a firm declines to accept a project, that firm will not be eligible to accept another project until the remaining firms on the list have been offered a project. If a firm declines a project or does not respond to an invitation to perform services for a project within five (5) business days, documentation shall be provided in the project files and the next firm on the rotating list shall be offered the project.

Instructions for Response to Announcement can be found at:
https://transportation.ky.gov/ProfessionalServices/Pages/Respond-to-an-Announcement.aspx

VII. PREQUALIFICATION REQUIREMENTS

To respond to this project, the Consultant must be prequalified in the following areas by the response due date of this advertisement.

AVIATION
- Airport Design

ROADWAY DESIGN
- Surveying

VIII. PROCUREMENT SCHEDULE

Dates other than Response Date are tentative and provided for information only.

- Advertisement Posted: February 9, 2021
- Response Date: March 3, 2021 by 4:30 PM ET (Frankfort Time)
- First Selection Meeting: March 8, 2021
- Final Selection: March 24, 2021
- Pre-Design Conference: March 31, 2021
- Notice to Proceed: April 21, 2021

IX. PROJECT SCHEDULE

Individual project schedules will be defined by Letter Agreement on a project-by-project basis.

X. EVALUATION FACTORS

Consultants will be evaluated by the selection committee based on the following, weighted factors:

1. Relative experience of consultant personnel assigned to project team with pavement engineering experience on projects for Kentucky Department of Aviation and/or federal, local or other state governmental agencies. (40 Points)

2. Relative experience of consultant personnel assigned to project team with aviation engineering projects for Kentucky Department of Aviation and/or federal, local or other state governmental agencies. (40 Points)

3. Knowledge of, and experience with, various procedures (FAA, FHWA, AASHTO, and Kentucky) and criteria regarding to pavement engineering for aviation projects. (10 points)

4. Knowledge and experience of airports within the KY Air Transportation System. (5 Points)

5. Available team workload capacity to comply with project schedule. (5 Points)

XI. SELECTION COMMITTEE MEMBERS

1. Jake Dahl, P.E., User Division
2. Joe Carter, P.E., User Division
3. Erika Drury, P.E., Secretary's Pool
4. Larry Krueger, P.E., Secretary's Pool
5. John Greenwell, P.E., Governor's Pool