Kansas
Department of Transportation

CONSULTANT PRE-QUALIFICATION CATEGORIES

2026 EDITION

TRANSPORTATION PLANNING

Transportation Facilities Planning

161 Corridor/Area Planning and Studies

Scope

This service will include a variety of functions associated with corridor/project feasibility studies. The assignments may include determining the feasibility/need for the proposed facility, possible alternatives including multimodal options, estimates of current and future use of the facility, and estimates of the cost. This service may also include development of a preliminary design concept for the facility, environmental evaluations, discovery of major corridor/project development impediments, and an assessment of whether the planned facility is consistent with the long-range transportation and land use plans of the community or state. Environmental evaluations may extend to preparation of National Environmental Policy Act (NEPA) documents. Projects will also include conducting public input/involvement activities concerning the proposed facility.

Qualifications

The consultant must be staffed with a professional engineer licensed in Kansas.

Personnel employed by the consultant shall have demonstrated experience, knowledge and expertise in transportation engineering/planning and studies, including innovative financing, preliminary design and environmental analysis, estimating future travel demand/usage, regional travel demand modeling, subarea analysis, traffic simulation modeling, transit planning studies, and benefit/cost analysis. The consultant shall have knowledge of current federal planning and environmental regulations, requirements and guidance. Personnel shall also have knowledge of KDOT and FHWA policies, procedures and practices.

The services in this category require that the consultant have an engineer responsible for the project, and normally require multiple personnel in the appropriate areas with qualifications as described above.

162 Long Range Planning

Scope

This service will include a variety of functions associated with preparation and/or update of required statewide, regional or metro long-range transportation plans. These studies must include a minimum twenty-year planning horizon and must include intermodal and multimodal planning, financial capacity analysis, land use and environmental issues, and travel demand modeling. Projects will also include conducting public input/involvement activities related to the assignments.

Qualifications

The consultant must be staffed with a professional engineer licensed in Kansas and a planner certified through the American Society of Certified Planners.

The consultant is required to have planners and engineers on staff with demonstrated knowledge, experience and expertise in long-range planning, including travel demand modeling, transit planning studies, land use planning, and environmental analysis. The consultant shall have the necessary expertise and physical resources to effectively estimate future travel demand/usage and shall have knowledge of current federal planning and environmental regulations, requirements, and guidance. Personnel shall also be aware of KDOT policies, procedures and practices.

The services in this category require that the consultant has an engineer or planner responsible for the project and normally require multiple personnel in the appropriate areas with qualifications as described above.

163 Congestion Management/ITS

Scope

This service will include a variety of functions associated with the development of metro areas and statewide congestion management plans and systems, feasibility studies for various intelligent transportation systems, and designs and deployment of intelligent transportation projects.

Qualifications

The consultant must be staffed with a professional engineer licensed in Kansas.

Personnel employed by the consultant shall have demonstrated knowledge, experience and expertise in transportation planning and traffic engineering to include specific experience in analysis of and implementation and deployment of intelligent transportation technologies. The consultant shall have the necessary expertise and physical resources to effectively participate in ITS feasibility studies, preliminary engineering, project development/deployment, and construction engineering. Personnel shall have knowledge of KDOT policies, procedures and practices.

The services in this category require that the consultant has an engineer or planner responsible for the project and normally require multiple personnel in the appropriate areas with qualifications as described above.

Environmental Impact Studies

171 Environmental Documentation

Scope

This service will include the coordination and preparation of environmental assessments and environmental impact statements as defined in 23 CFR 771.115.

Qualifications

The consultant must be staffed with a professional engineer licensed in Kansas.

The personnel employed by the consultant shall have training, experience, knowledge, and expertise in the appropriate areas necessary to do the projects in accordance with AASHTO, FHWA and other appropriate policies, procedures, practices and standards. Personnel shall have knowledge of KDOT policies, procedures and practices.

This service will require technical document writing. Personnel will consider highway geometrics and environmental tradeoffs to provide optimal solutions.

172 Hazardous Site Assessments & Remediation

Scope

This service will include a variety of environmental tasks associated with the investigation of underground storage tanks and other potentially hazardous waste sites. The investigations shall be performed in accordance with EPA and Kansas Department of Health and Environment (KDHE) approved procedures and specifications and result in an accurate characterization and/or practical remediation of impacted sites.

Qualifications

The consultant must be staffed with a professional engineer licensed in Kansas.

The personnel employed by the consultant shall possess the educational requirements recommended by the EPA and KDHE for performing these assignments. In addition, they must have completed all certified training necessary to comply with EPA, KDHE and OSHA requirements.

The consultant shall possess the experience necessary to perform the various phases of on-site field investigations required by KDOT and requires familiarity with all aspects of the required scope of services.

The consultant shall have engineering training, experience, knowledge and expertise in the appropriate areas necessary to do the project in accordance with AASHTO, FHWA and other appropriate design policies, procedures, practices and standards. Personnel shall also have knowledge of KDOT policies, procedures and practices. They must be able to seek/discover obstacles/problems and needs of the project and provide feasible concepts followed by practical, detailed solutions.

173 Noise Impact Analysis

Scope

This service will include the analysis of traffic noise impacts on “Type I Projects” as outlined in 23 CFR 772, and the completion of traffic noise reports, including an evaluation of possible abatement measures.

Projects of this category will normally require complex noise analysis, including the design of noise barriers, and/or require expert witness associated with litigation concerning highway traffic noise.

Qualifications

The consultant must be staffed with a professional engineer licensed in Kansas.

The personnel employed by the consultant shall have training, experience, knowledge and expertise in the appropriate areas necessary to do the project in accordance with AASHTO, FHWA and other appropriate policies, procedures, practices and standards. Personnel shall have knowledge of KDOT policies, procedures and standards. They need to have the ability to provide innovative concepts followed by practical, detailed mitigations for highway noise impacts.

174 Habitat and Biological Assessment

Scope

This service will include variable tasks related to habitat and biological assessment for impacts to wildlife, fish, and plant species. The service will include on-site field investigation, office review, and report writing for assessment of species and habitat impacts.

Qualifications

The consultant must be staffed with biologist, geologist, or environmental scientist possessing a bachelor's degree or higher level of education in one or more of these fields of study. The consultant shall possess the experience and expertise necessary to perform the on-site field investigation in accordance with the guidance from the Kansas Department of Wildlife and Parks (KDWP), U.S. Fish and Wildlife Service (USFWS), and KDOT.

TRANSPORTATION ENGINEERING AND DEVELOPMENT

Pre-Construction Engineering & Project Management

201 Discovery Phase – Design Concept Studies

Scope

This service will include a variety of engineering and associated functions relating to location studies for transportation projects. The assignment shall result in a thorough and complete documentation of the basis for the selected alternate and information necessary to proceed to the preliminary design phase. The results shall fulfill the agency's intended purpose, safely and efficiently serve the public, and meet current best practices, prevailing criteria and standards.

Corridor and location studies will normally involve one or more complex features and may be either rural or urban in nature. The studies will be based on social, economic and environmental factors, and must discuss and evaluate the various inputs to the study process, describe and analyze the various alternatives developed and document the basis for the selected alternate.

Qualifications

The consultant must be staffed with a professional engineer licensed in Kansas.

The personnel employed by the consultant shall have training, experience, knowledge and expertise in the appropriate areas necessary to do the project in accordance with AASHTO, FHWA and other appropriate planning location and design policies, procedures and regulations. Personnel shall also be aware of KDOT policies, procedures and practices. They must be able to anticipate/discover obstacles, problems and needs of the project and provide innovative concepts followed by practical, detailed solutions.

Location studies require that the consultant have an engineer directly responsible for the project and normally require multiple personnel in the appropriate discipline with qualifications as described above. The project manager should be a senior person experienced and actively involved in the transportation design/study process.

Location studies include areas of expertise such as knowledge and use of environmental studies (includes consideration of avoidance, mitigation, and replacement options), environmental documentation, public involvement, interaction with regulatory agencies, hydrology and hydraulics, floodplain analysis and street crossing selection, road design and bridge design issues, right-of-way issues, existing and future land use, knowledge and use of traffic data, constructability, cost estimating, capacity analysis, urban planning, etc.

203 Value Engineering

Scope

This service will be to lead or conduct a Value Engineering (VE) study for a transportation project and provide a formal presentation as well as a written report of the study for the Kansas Department of Transportation (KDOT). The analysis will consist of a study of the project during its design phase by a multi-disciplined team who will provide recommendations for evaluation by the KDOT. A variety of engineering and associated skills relating to location studies, major highway facility design, and bridge design, as well as construction knowledge, will be needed to evaluate the project. The results of the study shall fulfill the agency's intended purposes of safely and efficiently serving the public, meeting prevailing criteria and standards, and providing a thorough, complete, and documented study of alternatives.

Qualifications

The VE consultant shall have a PE registered in KS and have a Certified VE Specialist who is also a PE (not necessarily in KS).

They shall provide the team leader who is a licensed professional engineer, is knowledgeable in transportation design, and is a certified Value Specialist. The team leader shall serve as the primary contact.

Multi-disciplined team members furnished by the VE consultant shall be trained and experienced in the principles of VE and shall be experienced with transportation planning, design, operations, and construction.

The VE consultant shall have sufficient expertise, experience and resources to conduct the VE study and provide a written report which details the findings.

211 Highway Design – Major Facility

Scope

This service will include a variety of engineering functions associated with the design of a major highway facility. The design shall result in a complete and accurate set(s) of plans to construct a project which fulfills the agency's intended purpose, safely and efficiently serves the public, and meets current best practices and prevailing criteria and standards.

Projects of this category will normally involve one or more complex features, may be either rural or urban in nature, and may be two-lane or multi-lane. They will generally be new construction or major reconstruction.

Qualifications

The consultant must be staffed with a minimum of two professional engineers, one of which shall be licensed in Kansas.

The personnel employed by the consultant shall have engineering training, experience, knowledge, and expertise in the appropriate areas necessary to do the project in accordance with AASHTO, FHWA and other appropriate design policies, procedures, practices and standards. Personnel shall also be aware of KDOT policies, procedures and standards. This shall include a staff of licensed professional engineers and technicians. They must be able to anticipate/discover obstacles, problems, and needs of the project and provide innovative concepts followed by practical, detailed solutions.

Designs of this category require that the consultant have a professional engineer licensed in Kansas directly responsible for the project and normally require multiple personnel in the appropriate design areas with qualifications as described herein.

Designs in this category include horizontal and vertical geometrics for roadways, interchanges and intersections, roadside safety, hydrology and hydraulics, traffic engineering, traffic accommodations/construction sequencing, right-of-way issues (such as access, avoidance, etc.), environmental documentation, public involvement, etc.

212 Highway Design – Minor Facility

Scope

This service will include a variety of engineering functions associated with the design of a minor highway facility. The design shall result in a complete and accurate set(s) of plans to construct a project which fulfills the agency's intended purpose, safely and efficiently serves the public, and meets current best practices, prevailing criteria and standards.

Projects of this category may involve some complex features but generally follow normal engineering practices and procedures, may be either rural or urban in nature and are usually two-lane facilities but may include four-lane, less complicated urban facilities. Examples of these types of projects could be a bridge replacement (including culvert and box bridges) a low-volume two-lane rural roadway reconstruction, an urban four-lane without raised medians, or an intersection improvement involving moderate to low traffic volumes.

Qualifications

The consultant must be staffed with a professional engineer licensed in Kansas who is directly responsible for the project and one or more persons with experience in the appropriate design areas.

The personnel employed by the consultant shall have engineering training, experience, knowledge and expertise in the appropriate areas necessary to do the project in accordance with AASHTO, FHWA and other appropriate design policies, procedures, practices and standards. Personnel shall also be aware of KDOT policies, procedures and practices. This shall include a staff of licensed professional engineers and technicians. They must be able to seek/discover obstacles, problems and needs of the project and provide feasible concepts followed by practical, detailed solutions.

Designs in this category include horizontal and vertical geometrics for roadways and intersections, roadside safety, hydrology and hydraulics, basic traffic engineering, traffic accommodation/construction sequencing (usually for moderate to low traffic volumes), right-of-way issues (such as access, avoidance, etc.), environmental documentation (usually limited to Environmental Assessments, Programmatic Section 4(f) Statement(s), occasional public informational meetings, etc.).

221 Complex Structural Design

Scope

This service includes post-tensioned structures, curved or skewed open span structures, spans over 175 feet, or unique foundations (cofferdams, seals, etc.).

Any special design bridge will be included for this category. Examples of special design bridges will include:

1. post tensioned;
2. steel welded plate with over 175-foot spans;
3. cofferdams;
4. sloped leg steel structures; and
5. trusses, arches, etc.

Qualifications

The consultant must be staffed with a minimum of two professional engineers, one of which shall be registered in Kansas, with experience in continuous open span type structure design, open channel flow, hydraulic sizing of structures and scour analysis.

The personnel employed by the consultant shall have engineering training, experience, knowledge and expertise in the appropriate areas necessary to do the project in accordance with AASHTO, FHWA and other appropriate design policies. Personnel shall have the experience and training in Load Resistance Factor Design (LRFD). Personnel shall also be aware of KDOT policies, procedures and practices. This shall include a staff of registered professional engineers and technicians. They must be able to seek/discover obstacles, problems, and needs of the project and provide feasible concepts followed by practical, detailed solutions.

Designs of this category require that the consultant have a professional engineer licensed in Kansas directly responsible for the project and one or more persons in the appropriate design areas with qualifications as described above.

222 Structural Design

Scope

This service includes typical open span type structures such as slab, prestress, steel beam, and uniform depth welded plate girders with webs less than or equal to 5 feet deep. Also includes special culvert/box bridge designs and retaining wall designs.

Examples of services to be included:

1. special culvert designs with foundation problems;
2. retaining wall designs;
3. slab spans, steel, and prestressed beam spans, uniform depth welded plate girder spans;
4. typical “land type” pier substructures (non-cofferdammed);
5. review of falsework and shop drawings;
6. rating of beam spans; and
7. geotechnical and foundation designs of substructural and retaining walls.

Qualifications

The consultant must be staffed with a minimum of a professional engineer licensed in Kansas and a graduate engineer both with experience in continuous open span type structure design, open channel flow and hydraulic sizing of structures.

The personnel employed by the consultant shall have engineering training, experience, knowledge and expertise in the appropriate areas necessary to do the project in accordance with AASHTO, FHWA and other appropriate design policies, procedures, practices and standards. Personnel shall have the experience and training in Load Resistance Factor Design (LRFD). Personnel shall also be aware of KDOT policies, procedures and standards.

Designs of this category require that the consultant have a professional engineer licensed in Kansas directly responsible for the project and one or more persons in the appropriate design areas with qualifications as described above.

Traffic Engineering

231 Traffic Control Analysis and Design (Traffic Studies)

Scope

This service includes the analysis and design for traffic signals and associated geometrics, highway lighting, pavement markings, signing, access management, and work zone traffic control.

This service includes field and office investigations to determine the traffic control that would alleviate traffic problems at a specific location. Perform capacity analysis of a roadway and/or intersection. Develop a comprehensive design concept of geometric and traffic control measures.

Qualifications

The consultant must be staffed with a minimum of two professional engineers, one of which is licensed in the state of Kansas. Consultants staffed with a Professional Traffic Operations Engineer (PTOE) are preferred. One of these engineers will be directly responsible for the project and one or more people in the appropriate design areas will have qualifications as described below.

The engineering team must have demonstrated expertise in traffic systems and a thorough knowledge of Synchro or PTV Vistro. In addition, the engineer should have a thorough knowledge of the following:

- Manual on Uniform Traffic Control Devices (MUTCD) and supporting documents
- Highway Capacity Manual (HCM) and software that implements HCM
- AASHTO Policy on Geometric Design of Highway and Streets
- AASHTO Highway Safety Manual
- ITE Traffic Engineering Handbook and Traffic Control Devices Handbook
- ITE Trip Generation Handbook and Manual
- KDOT Access Management Policy and Active Transportation Policy
- FHWA Traffic Signal Timing Manual
- FHWA Roadside Design Guide

Additional desired experience includes:

- PTV Vissim
- Interactive Highway Safety Design Model (IHSDM)
- Interactive Safety Analysis Tool (ISAT)

Equipment

Special equipment and operators may be necessary for some tasks in this area. Assurance of the availability of this equipment and operators is required. Assurance of adequate staffing in general is also required.

241 Construction Inspection and Testing

Scope

This service will include a variety of inspection and testing functions associated with construction of projects administered by KDOT. The inspection and testing of a project shall result in the completion of a quality product built to the specifications as outlined in the plans, specifications and contract documents.

Qualifications

The consultant must be staffed with a professional engineer licensed in Kansas, and at least one inspector certified under KDOT's Certified Inspection and Testing Training (CIT2) Program in Basic Inspection (BI), Structures Inspection (STR), Asphalt Pavement Inspection (API) and Concrete Pavement Inspection (CPI).

An adequate level of staff shall be provided to perform the necessary construction duties. The staff shall conform to the "Policy and Procedures Manual for The Certified Inspection and Testing Training (CIT2) Program" (latest version). Any inspection or test is to be completed by personnel certified to perform that inspection or test.

The staff shall have the minimum qualifications to provide the necessary construction inspection and testing services required for the type of work shown in the contract.

PROFESSIONAL-TECHNICAL SUPPORT SERVICES

Surveying

301 Land Surveying

Scope

The Kansas Department of Transportation recognizes the “Practice of Land Surveying” as defined in Kansas Statute 74-7003(k).

Qualifications

The consultant must be staffed with a land surveyor registered in Kansas.

Land surveying services shall be conducted under the direct supervision of a registered land surveyor, registered to practice in the State of Kansas. All land surveys shall adhere to the *Minimum Standards for the Practice of Land Surveying* adopted by the Kansas State Board of Technical Professions. The consultant shall be able to demonstrate experience and ability in working in a roadway environment, with emphasis on traffic control and recovery of existing monumentation beneath hard surface roads. The survey crew shall be equipped with traverse type survey equipment, including an electronic distance-measuring instrument for measurement of distances encountered on the survey and GPS equipment.

Personnel shall also have knowledge of KDOT policies, procedures and practices.

302 Engineering Surveying

Scope

The Kansas Department of Transportation (KDOT) recognizes the definition of "Engineering Surveys" as defined in Kansas Statute 74-7003(i).

Qualifications

The consultant must be staffed with a land surveyor registered in Kansas. The land surveyor must exercise direct supervision of the engineering surveying activities.

The survey activities included in this definition are those required to support the sound conception, planning, and design of engineered projects. Consultants seeking qualification in this area shall demonstrate ability and past experiences of key staff in charge of these types of surveys. A minimum of five years of route design survey experience is required of the Party Chief position. The consultant shall be able to demonstrate experience and ability in working in a roadway environment, with emphasis on traffic control and recovery of existing monumentation beneath hard surface roads. The survey crew shall be equipped with traverse-type survey equipment, including an electronic distance-measuring instrument for distances encountered on the survey and GPS equipment. Personnel shall also have knowledge of KDOT policies, procedures and practices.

Geotechnical & Materials Testing

311 Geotechnical Engineering Services

Scope

This service consists of performing geotechnical investigation on an as-needed basis, according to guidelines provided by the Kansas Department of Transportation's (KDOT's) Bureau of Materials and Research, Geotechnical Unit.

Investigations will identify and locate, both horizontally and vertically, significant soil and rock types and ground water conditions present, and establish the characteristics of the subsurface materials visually, by sampling, and by laboratory and in-situ testing.

Qualifications

The consultant must be staffed with a professional engineer and a professional geologist licensed in Kansas.

Services under this category require that consultant personnel have training, experience, knowledge and expertise in the field of geotechnical engineering. Personnel shall also have knowledge of KDOT policies, procedures and practices. The individuals directly responsible for the projects should be graduate civil engineers and/or geologists, but may be others, if judged to possess necessary skills. If the consultant is not staffed with this type of personnel, the consultant shall not be permitted to perform geotechnical engineering services in areas where the geological conditions are considered complex by the Geotechnical Unit of the KDOT Bureau of Materials and Research.

Drilling operations under this category shall be supervised by an individual (a geologist or an engineer) experienced in obtaining rock cores, standard penetration tests, thin-walled tube samples, soil profile samples, pavement coring and installing cased observation wells.

The consultant must provide evidence of recent experience in geotechnical engineering and drilling services for highway projects (roadway and bridge).

The consultant is required to submit a list of equipment for qualification in the geotechnical engineering services category.

312 Materials Laboratory Testing Services

Scope

This service consists of testing a variety of materials according to KDOT, AASHTO and ASTM standards. These materials may include the following: aggregates, bituminous materials, cement, concrete, concrete admixtures, curing materials, geosynthetics, fly ash, lime, metals, paints, reflective materials, soils, sealants, wood, water and any other materials required to construct and maintain the Kansas roadway system.

Qualifications

The consultant must be staffed with a professional engineer licensed in Kansas.

Geotechnical consultants must also be staffed with an individual skilled in the field of geotechnical laboratory testing. This individual is expected to possess a civil engineering degree. However, the individual may substitute another degree if the individual is judged to possess the necessary skills. Personnel shall also be aware of KDOT policies, procedures and practices.

The consultant shall be accredited to perform materials testing by the AASHTO Accreditation Program, as outlined in AASHTO R-18, Establishing and Implementing a Quality System for Construction Materials Testing Laboratories, or by a comparable laboratory accreditation program approved by the FHWA.

KDOT's Materials Quality Assurance Engineer and staff must be allowed the opportunity to verify the laboratory technician experience and equipment calibration and view the proficiency sampling and on-site inspection reports as required in AASHTO R-18 before the consultant is granted qualification status. You are required to submit a listing of equipment and accreditation for qualification in the Materials Laboratory Testing Services.

Bridge Evaluation Services

321 Bridge Structural Analysis

Scope

Structures will include any span and/or box bridge type(s) included in Category 221, Non-Standard Span Bridge Design and Category 222, Standard Span Bridge Design. A special report of the analysis and/or the load rating may be required, which must be written and sealed by a Kansas licensed professional engineer. The consultant will be recruited based on prequalification in Category 221 or 222 and the complexity of the structure being analyzed.

Qualifications

The consultant must be staffed with professional engineers licensed in Kansas (as required in category 221 or 222) and experienced with the task complexity level of the structure(s).

The personnel employed by the consultant shall have engineering training, experience, knowledge and expertise in the appropriate areas necessary to do the project in accordance with AASHTO, FHWA, KDOT policies, procedures and practices, and any other appropriate design policies.

Analysis done in this category require that the consultant have a professional engineer licensed in Kansas directly responsible for the project and one or more persons in the appropriate design areas with qualifications as described above.

322 Bridge Inspection

Scope

This service will include the preparation and sealing of reports including the National Bridge Inventory (NBI) data, the Element Level inspection data, and special structures (signs structures, light towers, signal mast arms, etc.).

Qualifications

The consultant must be staffed with a professional engineer licensed in Kansas and the consultant must be experienced in and qualified to perform inspections according to the National Bridge Inspection Standards. Qualification must also include successful completion of the applicable FHWA course(s) for bridge inspection.

The personnel employed by the consultant shall have engineering training, experience, knowledge and expertise in the appropriate areas necessary to do the project in accordance with AASHTO, FHWA and other appropriate design policies, procedures, practices and standards. Personnel shall have knowledge of KDOT policies, procedures and practices. This shall include a staff of licensed professional engineers and technicians. They must be able to seek/discover obstacles, problems and needs of the project and provide feasible concepts followed by practical, detailed solutions.

The responsible person shall be a qualified Bridge Inspection Team Leader per National Bridge Inspection Standards (NBIS) requirements.

Bridge inspections in this category require that the consultant employ a professional engineer licensed in Kansas directly responsible for the project and one or more persons in the appropriate design areas with qualifications as described above.

323 Underwater Bridge Inspection

Scope

This service will include preparation and sealing of reports including the National Bridge Inventory (NBI) data and the Element Level inspection data.

This service requires qualified commercial divers and engineers or technicians to evaluate conditions.

Qualifications

The consultant must be staffed with a professional engineer licensed in Kansas with experience in structure condition evaluation at the site.

Consultants must have qualification status in Category 322, Bridge Inspection, to be eligible for this category.

The consultant must have a professional engineer licensed in Kansas with experience in structurally complex structures, stream stability and scour at highway bridges, and complex drainage models where state-of-the-art software is used. This engineer must directly supervise and coordinate the work of subordinate engineers, hydrologists and certified technicians. Qualification includes successful completion of the applicable FHWA course(s) for bridge inspection, as well as applicable FHWA certifications for Underwater Bridge Inspection.

Divers are qualified by certification as commercial divers, in accordance with ANSI/ACDE-01-1993, commercial diver training-minimum standard. Divers should be commercial divers only and not certified as recreational divers (SCUBA). Diving operations shall conform to the requirements of Subpart T, Commercial Operations, Occupational Safety and Health Administration Standards.

The responsible person shall be a qualified Bridge Inspection Team Leader per National Bridge Inspection Standards (NBIS) requirements.

325 Hydraulic and Hydrologic Studies

Scope

This service requires some knowledge beyond the usual Hydraulic Assessment Checklist required for projects. A Designer's Report must be prepared and sealed.

Qualifications

The consultant must be staffed with a professional engineer licensed in Kansas with experience in stream stability and scour at highway bridges, and experienced with complex drainage models where state-of-the-art software is used. The consultant shall have authored at least three Designer's Reports or Hydraulic Study Reports.

The consultant shall have experience with WSPRO, HEC-1, HEC-2, HEC-RAS, HEC-18, HEC-20 (and/or equivalents) and FEMA regulations and requirements.

The personnel employed by the consultant shall have engineering training, experience, knowledge and expertise in the appropriate areas necessary to do the project in accordance with KDOT, AASHTO, FHWA and other appropriate design policies, procedures, practices and standards.

Designs of this category require that the consultant has a professional engineer licensed in Kansas directly responsible for the project and one or more people in the appropriate design areas with qualifications as described above.

333 Geotechnical Specialty Services

Scope

This service consists of conducting specialty surveys and services concerning geophysical or nondestructive testing and pavement condition inventory. The service requirements will include geophysical surveys (seismic, resistivity, sonic, magnetic), ground penetrating radar surveys, thermography surveys and automated pavement condition surveys and providing analysis and comprehensive report on results of surveys.

Qualifications

The consultant must be staffed with a professional engineer licensed in Kansas.

The responsible party for the service provided should have transportation experience and be an electrical, mechanical, or civil engineer; a geologist; or a geophysicist.

Equipment

Special equipment and operators are necessary for some tasks under this area. Assurance of the availability of this equipment and operators is required. Assurance of adequate staffing is required.

The consultant is required to submit a list of equipment for qualification in the geotechnical specialty services category.

334 Subsurface Utility Engineering

Scope

This service consists of conducting specialty surveys and location services concerning sub-surface utility engineering (SUE) investigations in highly congested urban utility areas using geophysical or nondestructive investigative methods. The service may require using several techniques to achieve the level of accuracy necessary for the plan and profile location of utilities or other underground features. Investigative survey techniques to locate subsurface utilities may include using soil vacuuming, probing, magnetic, electro-magnetic, radio, seismic, electro-resistivity, fiber optic video, ground penetrating radar surveys, thermography surveys, ordinary engineering surveying, and global positioning surveys and providing a comprehensive report and details on results of surveys.

Qualifications

The responsible party for the service provided should have transportation design experience, equipment and ability to perform FHWA level A investigations, and be a professional engineer licensed in Kansas.

Equipment

Special equipment, operators, and surveyors are necessary for some tasks in this area. Assurance of the availability of this equipment and operators is required. Assurance of adequate staffing is required.

The consultant is required to submit a listing of equipment for qualification in the subsurface utility engineering category.

337 Pavement Design

Scope

This service consists of performing rigid and/or flexible pavement design on an as-needed basis, according to guidelines provided by KDOT's Bureau of Road Design, Pavement Section.

Projects include pavement design for major modification and/or system enhancement updates of statewide or regional transportation roadways. Projects could involve the rehabilitation of an existing pavement, reconstruction of a pavement on an existing alignment, reconstruction of a pavement on an offset alignment, the addition of new lanes to an existing pavement, construction of an entirely new pavement on a new alignment, shoulder addition and/or widening, temporary pavement sections, or any other pavement sections necessary for the project.

The services requested on Form 687 are to be provided to KDOT in the form of a written report of pavement investigations. The proposed pavement design alternates and all items of work included in the service requisition should be addressed in the written report. A Surfacing Selection Committee may be scheduled to select the pavement type for projects greater than one mile in length. The structure and content of the Report of Pavement Investigation is discussed in detail in Section 12 of the KDOT Pavement Design Manual.

Qualifications

The consultant must be staffed with a professional engineer licensed in Kansas.

The consultant is required to have engineers or personnel on staff with experience, knowledge, and expertise in both flexible and rigid pavement design. The Pavement Engineer/Designer must design the pavement in accordance with AASHTOWare Pavement ME for rigid pavement and with the 1993 AASHTO pavement design procedures for flexible pavement within the parameters established by the Bureau of Road Design.

338 Pavement Design Coring

Scope

This service consists of performing pavement coring on an as-needed basis specifically for pavement design projects, according to guidelines provided by KDOT's Bureau of Materials and Research, Geotechnical Unit as well as KDOT's Bureau of Road Design, Pavement Section.

Investigations will assist the Pavement Engineer/Designer by identifying and locating pavement cores, both horizontally and vertically, to determine the existing pavement structure conditions and pavement layer depths to assist in the development of appropriate pavement treatments or confirm the adequacy of proposed surfacing methods. Cores can be taken in a variety of areas across the roadway limits – these areas may include the existing travel lanes, various locations within the lanes, shoulders (for potential traffic staging or widening), exit and access ramps of highway sections, transverse joints, as well as through different distresses that could be present. Coring services shall be provided at locations that may require either lane closures or no lane closures, as determined by KDOT. Findings will be included in the Report of Pavement Investigation in accordance with the KDOT Pavement Design Manual.

Qualifications

The consultant must be staffed with a professional engineer licensed in Kansas.

Services under this category require that consultant personnel have training, experience, knowledge, and expertise in the field of geotechnical engineering. Personnel shall also have knowledge of KDOT policies, procedures, and practices. The individuals responsible for the projects should be graduate civil engineers and/or geologists, but may be others, if judged to possess necessary skills.

Drilling operations under this category shall be supervised by an individual (a geologist or an engineer) experienced in obtaining pavement coring. The consultant must provide evidence of recent experience in drilling services for highway projects.

401 Landscape, Seeding and Erosion Control

Scope

This service will include a variety of landscape architectural, horticultural and agronomic functions associated with the design of highway roadsides, rest areas and overlooks. The design shall result in a complete and accurate set(s) of plans and specifications to construct a project which fulfills the agency's intended purpose, safely and efficiently serves the public, and meets current best practices and prevailing criteria and standards.

Projects of this category will normally involve one or more features and may be either rural or urban in nature.

Qualifications

The consultant must be staffed with a professional engineer or a landscape architect, registered in Kansas.

The consultant personnel shall have training, experience, knowledge and expertise in the appropriate areas necessary to do the project in accordance with AASHTO, FHWA and other appropriate design policies, procedures, practices and standards. Personnel shall have knowledge of KDOT policies, procedures and practices. They must be able to anticipate/discover obstacles and needs of the project and provide innovative concepts followed by practical, detailed solutions.

Consultant personnel shall have demonstrated experience, knowledge and expertise of plant materials, planting design, horticulture and agronomy, with a familiarity of requirements necessary to address conditions in the highway environment related to erosion control, revegetation of disturbed areas, safety and maintenance.

Areas of service in this category are roadside safety and landscape development.

Equipment, office facilities and other resources shall be adequate to support the project.

411 Pedestrian and Bicycle Facility Design

Scope

This service will include a variety of engineering functions associated with the design of linear pedestrian and bicycle trails/paths and on-street bicycle lanes. The design shall result in a complete and accurate set(s) of plans and specifications to construct a project which fulfills the agency's intended purpose, safely and efficiently serves the public, and meets current best practices and prevailing criteria and standards. Projects of this category will normally involve one or more features, may be either rural or urban in nature, and are usually two-directional facilities, which may or may not interface with roadways and bridge structures.

Qualifications

The consultant must be staffed with a professional engineer or a landscape architect, licensed in Kansas.

Consultant personnel shall have training, experience, knowledge and expertise in the appropriate areas necessary to do the project in accordance with AASHTO, FHWA and other appropriate design policies, procedures, practices and standards. Personnel shall also have knowledge of KDOT policies, procedures and practices. They must be able to anticipate/discover obstacles, problems and needs of the project and provide innovative concepts followed by practical, detailed solutions.

Areas of design in this category include horizontal and vertical geometrics for trails/paths, intersections and parking areas, grading, roadside safety, small structures, pedestrian and bikeway bridges (see Category 222, Structural Design), hydrology and hydraulics, basic traffic engineering, park amenities, electrical service, lighting, landscape development (see Category 401, Landscape Seeding and Erosion Control), right-of-way issues, environmental documentation, occasional public informational meetings, etc.

Equipment, office facilities and other resources shall be adequate to support the services.

REVISION HISTORY

Revision No.	Description	Date
1	Category 331 “Aerial Photogrammetry” removed	1/21/2025