

GENERAL PROVISIONS

I. TERMS OF REFERENCE

- A. The term "Consultant" shall mean and include the consulting engineer or the authorized representative.
- B. The term "Engineer" shall mean and include the State Highway Engineer or the authorized representative.
- C. The term "Cabinet" shall mean and include the Commonwealth of Kentucky, Transportation Cabinet, Department of Highways, or its authorized representative.
- D. The term "Federal Highway Administration" (FHWA), shall mean and include the Federal Highway Administrator, United States Department of Transportation, or his authorized representative.

II. AUTHORITY OF THE ENGINEER

- A. All work under this agreement shall at all times be subject to the general supervision and direction of the Engineer and shall be subject to his review and approval.
- B. The Consultant shall *report to the Project Engineer on a monthly basis and provide Progress Reports, which describe the work performed on each task.* The Consultant shall prepare and present such information, studies, recommendations and supporting analyses as may be pertinent and necessary or as may be requested by the Engineer to enable him to pass critical judgment on the features of the work. The Consultant shall make such changes, amendments or revisions in the detail of the work as may be required by the Engineer. When alternates are being considered, the Engineer shall have the right of selection.
- C. At the request of the Engineer, the Consultant, during the progress of the work, shall furnish such maps, portions of plans and other information or data in such detail as may be required to enable the Engineer to carry out or to proceed with related phases of the project and to enable the Engineer to furnish information to the Consultant which may be needed to proceed with work.
- D. Conferences shall be held at the request of either party and may include visits to the site and inspection of the work at any time. All conferences, inspections, site visits, etc., shall be scheduled at reasonable times and locations.

- E. The work under this agreement shall be subject to the approval of the FHWA when the project is to be financed in whole or in part with Federal Aid funds. FHWA shall have the right to participate in conferences between the Consultant and the Engineer and to participate in the review of examination of the work in progress.
- F. The Consultant shall maintain a local office in Kentucky or at a location, which shall be acceptable and convenient to the Engineer and FHWA for the purpose of reviewing the design and progress of this project any time. Such office shall be staffed on a full-time basis with a competent engineer registered to practice in the Commonwealth of Kentucky and adequate staff to ensure that the services in this agreement are fulfilled. The registered engineer may be furnished by the consultant or the sub-consultant.
- G. The Consultant Engineering Firm shall be appropriately registered with the Kentucky State Board of Professional Engineers and Land Surveyors.
- H. Compliance with all of the foregoing shall be considered to be within the purview of this agreement and shall not constitute a basis for additional or extra compensation.

III. GENERAL SCOPE OF WORK

- A. The location of this project shall generally be as recommended on the attached project map, but the final location of the alignment will be the result of the studies to be made by the Consultant.
- B. Work embraced in this agreement may include, but is not limited to, alignment location studies; surveys; geotechnical services; environment studies; design plans for roadway; structures and surface; lighting plans; systems integration and deployment; right-of-way plans and deed descriptions; and utility plans.
- C. The Consultant shall furnish all engineering and related services and labor necessary to conduct and complete the work. He shall also furnish all materials, equipment, supplies and all incidentals except those, which are specifically designated in this agreement to be furnished by the Cabinet.
- D. The Consultant shall direct inquiries to other agencies of government and to public and private utilities regarding information that may affect the design of this project and shall obtain information pertaining to existing or proposed facilities and ***obtain all necessary permits.***

- E. The Consultant shall perform all phases of work described in this agreement necessary to accomplish the complete design of the project in conformity with the policies, criteria and standards of the Cabinet and FHWA in effect on the date of the execution of this agreement, except as provided in ARTICLE XI, "Extra Work or Fee Adjustment."
- F. During the course of performing the work covered by this agreement, the Consultant may encounter unusual physical conditions or problems that warrant special design or treatment. The Consultant shall evaluate the problem and furnish the Engineer with his analyses and recommendations concerning these conditions.
- G. Key Personnel – The Consultant’s work shall be performed and directed by the key personnel identified in the proposal presentations by the Consultant. Any changes in the indicated personnel shall be subject to review and approval by the Department.
- H. Progress Reporting – The Consultant shall report to the Department on a monthly basis and provide written progress reports, which describe the work performed on each task. Progress reports shall be delivered to the Department concurrently with the monthly invoice. Judgment on whether work of sufficient quality and quantity has been accomplished will be made by the Project Manager by comparing the reported percent complete against actual work accomplished.
- I. Ownership of Documents – All data collected by the Consultant and all documents, notes and reports collected or prepared in connection with these services shall become the property of the Department; and the Department shall not be restricted in any way in its use of such material. Upon final approval of any document, the original, camera-ready manuscript, including exhibits, shall be furnished to the Department in both paper form and electronic form.

IV. ITEMS OF WORK

A. ALIGNMENT LOCATION STUDIES

- 1. Alignment Location Studies shall consist of conducting investigations, studies or reconnaissance of an area between the approximately designated termini upon which a determination for the locations of the highway can be made.

2. Alignment Location Studies shall include the presentation of feasible alternate locations, including a description of each location presented. The feasible alternates shall be presented on a map drawn to a suitable scale and shall portray the approximate alignment and profile; topographical, geological and cultural features which may have an influence on geometrics of the highway; and costs of right-of-way, construction, future operation, maintenance and traffic service. The maps shall be accompanied by a report supplementing the information on the maps and comparative estimates of cost based on approximations of the quantities of the major items of construction and right-of-way costs. The estimates of cost for bridges shall be based on the approximate quantities of the items rather than on the surface area of the roadway.

B. ENVIRONMENTAL STUDIES

1. GENERAL SCOPE OF WORK

- a. The Consultant shall perform, or cause to be performed, those services required for consideration of all social, economic, and environmental effects as well as mitigation required by the FHWA and/or Cabinet and the required environmental assessments, reports, and other required documentation.
- b. All work performed by Consultants in the environmental phase is governed primarily by the National Environmental Policy Act of 1969; FHWA Final Rule on Environmental Impacts and Related Procedures (23 CFR Part 771) and (49 CFR Part 662); Federal Endangered Species Act of 1973; Clean Water Act of 1977; Department of Transportation Act; Section 4(f); Federal *Clean Air Act*; and Section *106* of the National Historic *Preservation Act*.
- c. In order to identify and evaluate all potential impacts which the project will have on the environment, the Consultant may be asked to perform the following studies: an environmental overview to develop viable alternatives in consideration of the potential for social, economic, and environmental impacts; base studies including Terrestrial and Aquatic Ecosystems Analyses, Noise Analyses, Air Quality Analysis, Socioeconomic Impact Analysis, Architectural and Historic Resource Analysis, Archaeological Resource Analysis, and an analysis of Underground Storage Tanks/Hazardous Materials. The Cabinet will furnish the Consultant with a copy of the General Scope of Services for Project Environmental

Requirements.

- d. All base studies will be reviewed by the Cabinet, Division of Environmental Analysis. Approved base studies will be incorporated by the Consultant into appropriate environmental *document(s)*. Procedures for review and approval of documents are contained in the Cabinet's General Scope of Services for Project Environmental Requirements.

2. ADDITIONAL GUIDANCE

- a. Project Schedule - Within ten (10) days after the Notice to Proceed, the Consultant shall provide a schedule of calendar deadlines for environmental documents and approvals accompanied by an anticipated payoff curve. The Department shall review the schedule, modify as necessary and return it to the Consultant.
- b. Key Personnel - The Consultant's work shall be performed and directed by the key personnel identified in the proposal presentations by the Consultant. Any changes in the indicated personnel shall be subject to review and approval by the Department.
- c. Progress Reporting - The Consultant shall report to the Department on a monthly basis and provide written progress reports, which describe the work performed on each task. Progress reports shall be delivered to the Department concurrently with the monthly invoice. Judgment on whether work of sufficient quality and quantity has been accomplished will be made by the Project Manager by comparing the reported percent complete against actual work accomplished.
- d. Correspondence - Copies of all written correspondence between the Consultant and any party pertaining specifically to *the environmental study* shall be provided to the Department for their records within one (1) week of the receipt of mailing of said correspondence.
- e. Special Conditions - The Consultant shall completely evaluate all alternatives and endeavor to avoid any involvement with those lands as defined in Section 4(f) of the Department of Transportation Act of 1966. However, if an involvement with Section 4(f) lands is unavoidable, then the required Section 4(f) statement shall be included within the environmental document prepared (to be self-contained to the extent practicable) as provided by 23 CFR 771. Separate negotiations will be conducted for this extra work and a

Change Order prepared.

General procedures for developing the Section 4(f) statement are outlined in Section VII.

- f. Ownership of Documents - All data collected by the Consultant and all documents, notes and reports collected or prepared in connection with these environmental services shall become the property of the Department; and the Department shall not be restricted in any way in its use of such material. Upon final approval of the final environmental document, the original, camera-ready manuscript, including exhibits, shall be furnished to the Department.
- g. Accuracy of Work - The Consultant shall be responsible for the accuracy of his work and shall promptly make necessary revisions or corrections resulting from errors and omissions on his part without additional compensation. Acceptance of the work by the Department will not relieve the Consultant of the responsibility for subsequent correction of any such errors and the clarification of any such errors and the clarification of any ambiguities and the supplying of any omissions.
- h. Acceptability of Work - Acceptability of environmental services performed by the consultant shall be determined by the Division of Environmental Analysis. *Payment will only be made to the contractor upon approval of work by Division of Environmental Analysis.*
- i. Benchmarks, Payments and Schedules - Payments for environmental services shall be made based on adequacy of work received and percentage of completion utilizing the Division of Environmental Analysis's Criteria for Pay Estimate Approval, copies of which were explained and provided *at the Scoping Meeting* to the Consultant. The Consultant will prepare a project completion schedule and submit to KTC for approval.

C. SURVEYS

- 1. Surveys shall be complete with respect to detail and to such degree of precision and accuracy as is necessary to develop the plans for the design of the project to the usual standards of the Cabinet, to yield the data necessary for the computation of the quantities of the several items of work embraced in the construction of the project and to yield the physical information necessary for the acquisition of right-of-way.

2. The Consultant shall *prepare* special studies and analyses of the horizontal and vertical alignment so as to establish the most economical and beneficial alignment.
3. The alignment shall be established for a minimum distance of approximately 600 meters beyond the termini of this project whenever feasible.
4. The Consultant shall meet with the engineers of adjoining *Design Sections* to coordinate the design and obtain any information necessary to establish the horizontal and vertical alignment, grade and elevation with adjoining sections.
5. When services include the design of a divided multi-lane facility, the Consultant shall make sufficient studies of the topography and other elements of design to determine the feasibility of separate and independent roadways, both horizontally and vertically. When directed by the Engineer, the Consultant shall prepare plans for separate and independent roadways.
6. The degree of accuracy for the horizontal and vertical alignment shall be established within the limits of *third order accuracy or greater*.
7. The vertical alignment shall be tied to *National Geodetic Survey (NGS)* bench marks for elevation, except that for interstate projects, the horizontal and vertical alignments shall be tied to *National Geodetic Survey (NGS)* stations for positions and elevations.
8. The Cabinet will furnish the Consultant with the *most current copy* of the Cabinet's Division of Highway Design Guidance Manual and a copy of the Cabinet's Drainage Design Guidance Manual. Said manuals are incorporated herein and made a part hereof as though copied at length herein. *The Contractor is bound to follow any and all procedures and/or criteria in said manuals. Failure to utilize proper criteria and/or procedures in this manual may, at the Engineer's discretion result in penalties and/or payment withholding to the Consultant.* The Cabinet will furnish a sample Drainage Folder and sufficient forms, including covers, for the assembly of Drainage Folders. The Cabinet will furnish a copy of the Standard Drawings. The Cabinet will also furnish one copy each of the Cabinet's standard title sheet, first plan sheet and first cross section sheet.
9. After all services contained in this agreement have been completed, the complete original survey notes shall be furnished to the Cabinet and any

notes furnished to the Consultant by the Cabinet shall be returned to the Cabinet.

10. Cross section notes shall be in a form that is acceptable to the Cabinet's Division of Highway Design, CADD Section, in accordance with the Cabinet's Instructions for Filling out Cross Section Sheets.
11. If the Consultant is to provide aerial surveys and photogrammetry, the Cabinet's Specifications for Aerial Surveys and Mapping by Photogrammetric Methods for Highway Design shall apply. When aerial photography is used in connection with this agreement, the Consultant shall furnish to the Cabinet the film negatives and *one* (1) set of contact prints. When stereophotography is used, the auto positive plates and the ground control applicable to them shall be made available to the Cabinet on an indefinite loan basis.

D. GEOTECHNICAL SERVICES

1. The Geotechnical Consultant shall make necessary geotechnical investigations to provide appropriate recommendations with regard to embankment and structure foundations, cut and embankment slopes, problem areas such as potential slides, subgrade stabilization and ground modification and materials to be encountered during construction. Also, it shall include any other related work deemed necessary for the best design of the roadway structures.
2. **Investigations** shall include subsurface explorations necessary to establish the position and extent of rock in excavation areas, and recommendations for treatment of explored areas.
3. **Investigations** shall include the inspection of all drill data, cores, tests and performance analyses necessary for the Consultant to provide recommendations for structures including, but not limited to, type of foundation, bearing elevations and estimated allowable bearing pressures for soil or rock, estimated test pile length and capacity, negative skin friction, material and construction specifications and consolidation potential. The recommendations shall be in letterform with drill data on subsurface data sheets.
4. **Investigations** shall include the inspection of all drill data, cores, tests and

performance analyses necessary for the Consultant to provide recommendations for retaining walls. The analyses shall include slope stability, bearing capacity, sliding and overturning. All drill data shall be depicted on retaining wall stability sections that will be incorporated in the roadway plans.

5. The Consultant shall perform drilling and sampling, testing, analyses and evaluations necessary for C.B.R. sub-grade design, shrinkage and swell values and otherwise conform to the Cabinet's Geotechnical Guidance Manual.
6. All data, including cores, shall be clearly indexed, tagged or marked and then submitted to the Cabinet at a location designated by the Engineer together with log and field book records. The cores shall be boxed in a manner that will permit the Cabinet to store the materials in a retrievable manner.

E. PLANS

1. GENERAL
 - a. The engineer will designate the basic premises and criteria for the design. Plans shall be developed to the extent that is practical and feasible in accordance with or be coordinated to the current edition of the Cabinet's Standard Specifications for Road and Bridge Construction. Plans for temporary and permanent railroad bridges, when included in this agreement, shall be designed in accordance with the pertinent specifications of the American Railway Engineering Association, except that to the extent coverage is provided in the Cabinet's Standard Specifications for Road and Bridge Construction the provisions of the latter with regard to construction, workmanship and materials shall apply.
 - b. The plans shall be designed in accordance with the principles set forth in the current edition of A Policy on Geometric Design of Highways and Streets of the American Association of State Highway and Transportation Officials and in accordance with the Cabinet's Division of Highway Design Guidance Manual and Standard Drawings for roadway design to the extent that such principles are applicable and not in conflict with other specific instructions of requirements of the engineer.
 - c. Plans shall be prepared with respect to detail and mode of presentation in a

manner that is in conformance with customary practices of the Cabinet for plans prepared by its own staff. Plans shall be prepared on sheets furnished by the Cabinet. If reproductions are employed, .004 of an inch or greater thickness mylar film shall be used. The Cabinet will not furnish reproduction materials.

- d. The plans shall be prepared with such precision and in such detail as to permit the convenient layout in the field for construction and other purposes with the customary degree of accuracy. They shall also be of such character as to provide for the production of an accurate estimate of quantities for all pertinent items of work to be performed in the construction of the project.
- e. The scales to be used, lettering and general delineation of the plans shall be such as to provide readily legible reproductions when the plans are reduced to one-fourth of their original size.
- f. The Consultant shall prepare sketches or preliminary plans with reproductions thereof to be furnished to the Engineer of situations or locations that may require special study or treatment prior to the determination of the final design.
- g. The Consultant shall furnish other pertinent information and data with respect to the plans and design as the engineer may request.
- h. The Consultant shall make such revisions, changes, or amendments to the plans as the may require.
- i. The Consultant shall prepare all plans, specifications and estimates in such form that separate construction contracts can be let in accordance with the approved recommendations of the preliminary studies and such subsequent decisions as the Engineer may deem appropriate. The Consultant shall prepare an estimate of cost of each of the bid items required by the plans.
- j. All plans, except structure plans, shall be drawn on Polyester drafting film or its equivalent.
- k. If drafting film is used, the film shall be standard plan sheet size and its thickness shall be .004 of an inch or greater.
- l. Plans shall include soil profile, cut and embankment stability section sheets, in accordance with the Cabinet's Geotechnical Guidance Manual.

- m. Plans shall be subject to review and examination by the Engineer. Such review and examination may be made on the project site.
- n. The front sheet of each separate set of plans shall bear the professional seal and signature of a responsible member of the Consultant's firm.
- o. The original tracings of all sheets comprising the set of plans, together with pertinent reports, drawings, books, notes, studies, memoranda and other data pertaining to the project, including an index of these items and sufficient references for future retrieval of data input and output from machine processed computations, shall be delivered to the Cabinet and shall become the property of the Cabinet.
- p. The Consultant shall submit any special notes and other pertinent information related to the project along with the final plans.

2. ROADWAY PLANS

- a. Roadway plans shall consist of a title sheet, sheets showing the estimate of quantities, miscellaneous quantities, typical sections, special sections, special details, other than standard details available from the Cabinet's stock, special layout plan and profile and detail cross sections.
- b. All horizontal and vertical scales necessary for any aspect of the project plan development shall be in accordance with scales to be established at the Pre-Design Conference to be held on the project after the consultant selection.
- c. Because of the limited space in which to show all pertinent soil information (soil profile, cut and embankment stability sections), sheets shall be prepared such that:
 - The scale used for the cut and embankment stability sections will permit the entire section to be plotted on a sheet without the use of match lines. Where possible, more than one section shall be depicted on a sheet.
 - The original soil profile sheets shall be submitted to the Division of Materials by the designer. The ground line elevations, percent grades, P.I. elevations and length of vertical curves shall be shown, but the finished grade elevations need not be shown.

- d. The Consultant shall show the present and projected *Average Daily Traffic* (ADT), including the *Daily Hourly Volume* (DHV), and shall show the directional flow and percent of trucks during the *Daily Hourly Volume* (DHV) for the mainlines, crossroads, frontage roads, service roads and blocked roads as furnished by the Engineer. Interchanges shall show the traffic pattern indicating thereon the projected *Average Daily Traffic* (ADT) and *Daily Hourly Volume* (DHV) for all movements.

3. STRUCTURE PLANS

- a. The Consultant shall make economic studies, detailed cost estimates and drawings of different and feasible types of structures and justification for the selection of a particular type and design.
- b. Structure plans shall be developed on a CADD system using mylar film or its equivalent with a thickness of .004 of an inch or greater. If photographic reproductions are employed, mylar film or its equivalent shall be used and its thickness shall be .004 of an inch or greater.
- c. Structure plans shall consist of plans for reinforced concrete box culverts, rigid frame culverts, arch culverts, pedestrian tunnels, vehicular tunnels, highway grade separation bridges, railroad grade separation bridges, pedestrian bridges, stream crossing bridges, crib walls, retaining walls and any special structures required by the highway design which are not included as incidental structures in the road plans. Plans for sign structures shall be required only when so stated elsewhere in the agreement; however, conduit installations for future signing and lighting where necessary must be included in the structure plans and where overhead sign structures and lighting standards or under-bridge lighting must be located on the bridge structures, provisions for the attachment of these items to the bridge structure must be included in the structure plans.
- d. Structure plans shall be designed in accordance with the *most current Standard Specifications for Highway Bridges* published by the American Association of State Highways Officials, including interim revisions and including modifications to the design specifications, as required by any special type of structure design standards of the American Railroad Engineering Association in effect at the time such design is undertaken, subject however, to the approval of the railroad company involved.
- e. The Cabinet will furnish the Consultant with the *most current* copy of the

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Cabinet's Division of Bridge Design Guidance Manual and with copies of Standard Drawings, which apply to the work. The Cabinet will also furnish, when required, a supply of drafting film, plans sheets 22" x 36" in size and preprinted with the standard title block.

- f. Structure plans shall be fully dimensioned and shall include complete construction elevations satisfactory to the Engineer for the constructing of the bridge substructure and superstructure, and these elevations shall include all necessary dead load camber.
- g. Structure plans shall include schedules of bar steel reinforcement. Such schedules shall provide all of the necessary detail required for the fabrication of reinforcement without the necessity of making separate shop drawings for that purpose.
- h. Structure plans involving the use of structural steel shall contain such detail of the structure steel that shop detail drawings can be prepared without additional design being necessary.
- i. When the Consultant has completed the preliminary layout of a bridge structure showing plan elevations, typical cross section and all pertinent data that shall appear on the first sheet of the completed structure plans, two or more prints as required shall be submitted to the Engineer for review. If the structure survey is made by the Consultant, copies or reproductions of all the structure survey data shall be submitted to the Engineer with the preliminary layout. The Engineer will review this preliminary layout and return one print to the Consultant showing any requested revisions.
- j. Along with the final detail structure plans, the Consultant shall submit one indexed copy of reproduction of the structure design computations, geometric computations and quantity computations for the Cabinet's review and permanent file. The copy of the computation submittal shall include sufficient references for future retrieval of data input and output from machine processed computations.
- k. In connection with and as a part of the work embraced in the preparation of structure plans, the Consultant shall prepare and furnish to the Cabinet specifications for items of work included in the plans which are not covered by the standard specifications of the Cabinet, and such amendments to or revisions of the standard specifications as required to cover properly the work contemplated by the plans. For the design of either unusual or long-span structures, the Consultant shall prepare modifications to the American Association of State Highway Officials' Standard Specifications for the *most*

current copy of the Design of Highway Bridges.

- l. The Consultant shall be required, when bridges spanning navigable waters are included in this agreement, to furnish the original set of tracings and four sets of prints properly marked in colored ink to accompany the Engineer's application to applicable agencies for permission to build the structure.
- m. When the roadway plans are to be prepared by someone other than the Consultant, the Cabinet and the Consultant shall provide each other with the necessary, pertinent information to effect the proper correlation between the roadway plans and the structure plans.
- n. The Cabinet will furnish the Consultant with an adequate supply of the necessary printed form sheets for use in producing the required plans such as data forms, title sheets and film on which structure plans are to be prepared when required.
- o. When checking of drawings is a part of this agreement, the Consultant shall check shop drawings submitted by the contractor during the construction phase of the work. The check shall consist of reviewing the shop drawings and recommending any modifications necessary for conformance to the design requirements of the contract plans and specifications. The checking of shop drawings shall be performed in accordance with engineering practices acceptable to the Cabinet. The items reviewed shall include, but are not limited to design, materials, specifications, material shapes and sizes, connections and welding procedures. Modifications shall be marked on all of the various copies of the shop drawings submitted and returned with disapproval of the submittal. This process shall continue until all shop drawing submittals have been approved. The Consultant shall be responsible for providing a prompt review and response to each of the various submittals of shop drawings for checking.

4. SURFACING PLANS

- a. The Consultant shall furnish to the Cabinet all necessary plan and profile sheets with surfacing details shown thereon and layout or title sheet, typical section sheets, summary sheets showing quantities for all mainlines, ramps, connectors, cross roads, service roads or frontage roads, and all detail sheets that are necessary to complete the surfacing plans.
- b. When required by the Engineer, the Consultant shall prepare complete surfacing plans separate from the grade and drain plans. The plans shall include all features necessary, in accordance with the standard practices of the Cabinet, to provide plans sufficient for surface construction contracts

separate from grade and drain construction contracts.

5. LIGHTING PLANS

- a. The Consultant shall prepare plans covering all the necessary lighting of this project, as designated in the "Special Provisions."

- b. These lighting plans shall be prepared in accordance with standard practices and specifications as shown *in the most current copy of the American Standard Practice for Roadway Lighting* and in accordance with the A.A.S.H.T.O. policy booklet known as An Information Guide for Lighting Controlled Access Highways.

6. RIGHT-OF-WAY PLANS AND DEED DESCRIPTIONS

- a. Preliminary Right-of-Way Plans - One reproducible set for right-of-way plans, so labeled, shall be furnished at the time of the preliminary line and tentative grade inspection.
- b. Final Right-of-Way Plans - One reproducible set of final right-of-way plans, shall be furnished.
- c. All Right-of-Way plans shall be prepared according to instructions set out in the Division of Highway Design Guidance Manual, revisions thereto, or applicable "Design Memorandums."
- d. Deed Descriptions - This agreement shall include the writing of legal descriptions for right-of-way to be acquired, and the right-of-way for the project. Descriptions shall be by metes and bounds or may be developed around a properly or suitable described referenced line such as the centerline of the highway improvement, or in the case of platted property, by suitable reference to the platted area, as determined by the Engineer.

Deeds shall be submitted using electronic format utilizing and ASCII format with a maximum of eighty (80) characters per line. The Cabinet shall specify the medium at the Pre-Design Conference.

7. UTILITY PLANS

A separate set of plans may be required to show existing and relocated utilities on the project.

Final right-of-way plans shall be sufficient for use as utility plans. A separate set of reproducible plans shall be provided for the use of the utility section.

V. JOINT INSPECTION

A. PRELIMINARY LINE AND GRADE INSPECTION

The Consultant shall set all necessary stakes and markings on the mainline, crossroads and other surveys as required by the Engineer for the preliminary line and grade inspection. When preliminary plans have been completed, a joint field inspection for approval of the alignment and tentative approval of the grade will be made by the Engineer and the Consultant; and if the project is an interstate route, also with FHWA.

B. FINAL JOINT INSPECTION (Plans-in-Hand)

When roadway plans and structure plans have been developed to a stage sufficient to conduct a comprehensive field inspection, a final joint inspection will be made and changes requested at that time shall be made by the Consultant without additional compensation, provided they are not beyond the original intent of this agreement.

C. REVIEW AND APPROVAL

1. Reviews and approval action taken prior to receipt of the final plans will be based on the best information available and the approval action taken at the time will be given with the understanding that any revisions necessary to provide a satisfactory and properly integrated set of completed plans, specifications and estimates will be made prior to the granting of final approval of the services to be done under the purview of the agreement.
2. Changes required providing a satisfactory and properly integrated set of plans, specifications and estimates because of an oversight on the part of the Consultant should be made without additional compensation.

VI. NOTICE TO PROCEED

The Consultant shall not begin work on this project prior to the date of a written notice to proceed from the Division of Professional Services. Upon receipt of notice to begin work, the Consultant shall notify the Cabinet in writing of its authorized representative who shall act as project engineer and liaison representative between the Consultant and the Cabinet.

VII. NOTICE OF APPROVAL OF PAYMENT

The Consultant shall not submit invoices for payment to the Cabinet prior to the date of a written *Notice to Bill from the Cabinet and that payment can be approved*. Upon receipt of the Cabinet's letter authorizing the Consultant to submit Engineer Pay Estimates, the Consultant shall notify the Cabinet in writing those personnel authorized to sign the Pay Estimates. If at any time during the life of this contract the project engineer or authorized representative changes, the Consultant shall immediately notify the Cabinet in writing.

VIII. TIME OF COMPLETION

The Consultant shall complete the services contained in this agreement within the specified times of completion. The time of completion listed herein either for all services or for each phase of work shall be construed to begin ten days after the date of the notice from the Engineer to proceed with the work. The allotted time shall not be extended because of any unwarranted or avoidable delay attributable to the Consultant, but may be extended by the Engineer in the event of a delay attributable to the Engineer or because of an avoidable delay caused by an act of nature, war, government or other conditions beyond the control of the Consultant.

IX. PROGRESS REPORTS

Monthly progress reports shall be submitted to the Cabinet by the Consultant on forms to be furnished by the Cabinet. The progress reports shall show the latest status of progress of the various phases and shall be submitted at *the end of every calendar month after the initial Notice to Proceed was issued by the Cabinet. Failure of the contractor to provide said reports may result in a delay in payment.*

X. PAYMENT

- A. The total payment for services contained in this agreement shall be shown on the face of the agreement and shall be considered full compensation for work performed or services rendered and for all labor, materials, supplies, equipment and incidentals necessary to complete the work.
- B. The Consultant *shall* submit invoices to the Cabinet no more than once a month during the progress of work for partial payment for the work completed to date. These invoices shall represent the value of the partially completed work based on the proportion which its approved percent of completion bears to the total cost or the total estimated cost of the fully completed work.

Invoices must be reconciled with the progress reports and the percent of completion shown on the invoices shall be limited to the approved percent of completion shown in the agreement and on the progress reports. The invoices will be checked by the Cabinet and when approved, payment will be made in an amount equal to the value of the completed work, and less any amounts previously paid unless otherwise specifically agreed to in the agreement.

- C. After completion of all services contained in the agreement and acceptance by the Engineer and after the Cabinet has received all plans, maps, reports, notes and other related documents required by this agreement, *the* Consultant will be paid an amount equal to 100 percent of the total agreement fee, including any adjustments and less any amounts previously paid. When checking of shop drawing services are included in the agreement, they shall be considered for payment purposes as being entirely separate from design services and shall not affect any payments for design services, including payments of any amounts retained on the design services. Payment for checking of shop plans are to be invoiced to the Division of Bridge Design for payment.
- D. When plan completion or presentation for any single phase of the work has not met the scheduled milestone finish date based on the calendar day time limits outlined in the Pre-Design Conference Minutes and Negotiation Minutes referenced in the "Special Provisions," all invoice approvals and payments will be deferred until that phase of the work has been completed or until after a formal application in writing for extension of contract time has been approved by the Cabinet.

XI. EXTRA WORK OR FEE ADJUSTMENT

- A. The Cabinet may desire to have the Consultant perform work or render services in connection with this project other than provided by the expressed intent of this agreement. Such work shall be considered as "Extra Work," subject to a change order, supplemental to this agreement, setting forth the character and scope thereof and the compensation thereof. Work under such change orders shall not proceed until written authorization given by the *Department*.
- B. Should the Engineer find it desirable to have previously satisfactorily completed and accepted plans or parts thereof revised, the Consultant shall make such revisions as directed in writing by the *Department*. This work shall be considered as "Extra Work" and shall be paid as such.
- C. "Extra Work" shall be paid for by the Cabinet on the basis of a fixed fee, the amount of which shall be determined by negotiation. The *Department* shall have the right to negotiate alternate methods of payment for "Extra Work," if the *Department* determines that the fixed fee basis is not feasible. If federal funds are to participate in the cost of "Extra Work," the method of payment shall be in accordance with FHWA requirements.
- D. In the event the Engineer and the Consultant are unable to agree upon the amount of payment for "Extra Work," then the amount of such payment shall be determined as set forth in ARTICLE XIII, "DISPUTES," of this agreement.

XII. ACCURACY OF CONSULTANT'S WORK

- A. The Consultant shall be responsible for the accuracy of all calculations, reports, estimates and information prepared by either the prime consultant, or sub-consultant. The Consultant shall require all sub-consultants to meet all applicable Cabinet requirements and standards. By submission of the calculations, reports, estimates and information to the Department, the Consultant is verifying to the Department that all work is accurate and has been checked by the prime Consultant or checked by the sub-consultant.
- B. The Consultant shall promptly make necessary revisions or corrections resulting from errors, omissions, or negligent acts without additional compensation. Acceptance of the work by the Department will not relieve the consultant of the responsibility for subsequent correction of any such errors or omissions or for clarification of any ambiguities.
- C. At any time during construction or during any phase of work performed by others

based on data provided by the Consultant, the Consultant shall confer with the Department when necessary for the purpose of interpreting the information secured and/or to correct any errors and/or omissions made by him. The Consultant shall prepare any plans or data needed to correct his errors and/or omissions without added compensation, even though the Consultant may have received final payment. The Consultant shall give immediate attention to these changes to minimize delay.

- D. If any errors, omissions and/or negligent acts are made by the Consultant in any phase of the work, the correction of which may require additional field or office work, the Consultant will be promptly notified and will be required to perform such additional work as may be necessary to correct these errors, omissions and/or negligent acts without undue delay and without additional costs to the Department.
- E. The Consultant shall be responsible for any damages incurred as a result of the Consultant's errors, omissions and/or negligent acts and for any losses or cost to repair or remedy construction as a result of the Consultant's errors, omissions and/or negligent acts. Acceptance of the work will not relieve the Consultant of the responsibility for subsequent correction of any such errors, omissions and/or negligent acts or of his liability for loss or damage resulting therefrom.
- F. Disputes between the Consultant and Cabinet concerning the responsibility of the Consultant under this section *may* be resolved utilizing Alternative Dispute Resolution (ADR) methodologies, *to include* negotiation between the Department and the Consultant *or* non-binding mediation .

XIII. DISPUTES

- A. Except as otherwise provided in this agreement, all disputes arising under or relating to this contract shall be resolved under this clause.
- B. "Claim," used in this clause, means a written demand or written assertion by one of the contracting parties seeking, as a matter of right, the payment of money in a sum certain, the adjustment or interpretation of contract terms, or other relief arising under or relating to this contract.
- C. A claim by the Consultant *may* be made in writing *and specifically stating in detail the relief requested* and submitted to the Engineer for a written decision prior to submission of the Final Pay Estimate. A claim by the Cabinet against the Consultant shall be subject to a written decision by the Engineer.

- D. The Engineer's decision shall be final unless the Consultant appeals in writing to the Secretary of Transportation within ten (10) working days of the date of the Engineer's decision.
- E. When a claim by the Consultant is submitted to the Secretary of Transportation or a claim by the Cabinet is presented to the Consultant, the parties, by mutual consent, may agree to use Alternative Dispute Resolution (ADR) methodologies *to include negotiation between the Department and the Consultant **or non-binding mediation.***
- F. If the parties do not agree to use alternative means of dispute resolution, the Secretary shall make his final decision in accordance with Subsection XIII (G).
- G. If the parties do not agree to use ADR, the Secretary of Transportation shall decide the claim within 30 days or notify the Consultant when a decision will be made. The Secretary of Transportation's decision shall be final unless determined by a court of competent jurisdiction to have fraudulent, capricious, arbitrary or so grossly erroneous as necessarily to imply bad faith. Any appeals to the Court from the Secretary's decision shall be filed in Franklin Circuit Court within ten (10) days of the Secretary's decision.
- H. The Consultant shall proceed diligently with performance of this contract, pending final resolution of any request for relief, claim, appeal, or action arising under or relating to this contract, and comply with any decision of the Engineer.

XIV. LEGAL RESPONSIBILITIES

- A. The Consultant shall familiarize himself with and shall at all times comply with all federal, state and local laws, ordinances and regulations which in any manner affect the services of this agreement.
- B. The Consultant shall indemnify and save harmless the Commonwealth of Kentucky and all of its officers, agents and employees from all suits, actions or claims of any nature whatsoever incurred in the construction as a result of the negligent design of the project or any injuries or damages received by any person, persons, or property which suits, actions, claims, injuries or damages result from the negligence of the Consultant or any of his sub-consultants in prosecuting the work under this agreement.

XV. SUBLETTING OR ASSIGNMENT

- A. The Consultant shall not subcontract more than fifty (50) percent of the work, based upon dollar value, to be provided under this agreement unless approved by the Director of the Division of Professional Services.
- B. The Consultant shall not attempt to perform any services contained in this agreement for which he has not been pre-qualified by the Cabinet's Consultant Pre-qualification Committee. Any services for which the Consultant has not been pre-qualified by the Cabinet shall be sublet or assigned to a consultant who has been pre-qualified.
- C. The Consultant shall obtain written approval prior to subletting or assigning any services contained in the agreement and consent to sublet or assign any part of this agreement shall not be construed to relieve the Consultant of any responsibility for compliance with the provisions of this agreement.

XVI. TERMINATION OF AGREEMENT

- A. The Engineer reserves the right to terminate the agreement at any time upon a 14-day written notice to the Consultant either by delivery *to the Corporate Headquarters* or from the date of *mailing*.
- B. In the event the agreement is terminated by the Engineer without fault on the part of the Consultant, the Consultant shall be paid for the work performed, or services rendered, an amount bearing the same ratio to the total agreement fee as the amount of work completed or partially completed and delivered to the Engineer is to the total amount of work provided for herein, as determined by mutual agreement between the Engineer and the Consultant. The Consultant shall be paid for any negotiated direct costs incurred or for which the Consultant is obligated to make all or part payment. The Consultant shall be paid a demobilization fee equal to 10% of the remaining balance of the contract not to exceed \$25,000.
- C. In the event the services of the Consultant are terminated by the Engineer for fault on the part of the Consultant, the Consultant shall be paid reasonable value of the work performed on services rendered and delivered and the amount to be paid shall be determined by the Engineer.
- D. Delays grossly affecting the completion of the work within the time specified for completion attributable to or caused by one of the parties hereto may be considered as cause for the termination of the agreement by the other party.

- E. In the event of the death of any member or partner of the Consultant's firm, the surviving members shall complete the work unless otherwise mutually agreed upon by the Engineer and the survivors.
- F. In the event the Consultant shall terminate the agreement because of gross delays caused by the Engineer, or should the survivors of the deceased member or partner of the Consultant's firm be allowed by the Engineer to terminate this agreement, the Consultant shall be paid as set forth in Paragraph B.
- G. If the agreement is terminated prior to completion of the work, as herein before provided, the Consultant shall be released from all obligations that have been agreed upon in the agreement, except requirements contained in ARTICLE XII, "ACCURACY OF CONSULTANT'S WORK," and ARTICLE XIV, "LEGAL RESPONSIBILITIES," of this agreement.

XVII. WARRANTS

A. SOLICITATION

The Consultant warrants that he has neither retained nor employed any company or person, other than a bona fide employee working solely for the Consultant, to solicit or secure the agreement and that he has neither paid nor agreed to pay any company or person, other than a bona fide employee working solely for the Consultant, any fee, commission, percent, brokerage fee, gifts or any other consideration contingent upon or resulting from the award or making of this agreement. For breach of *non-compliance* of this warranty, the Cabinet shall have the right to *terminate* this contract *immediately* without liability or, in its discretion, to deduct from the contract price on consideration, or otherwise recover the full amount of such fee, commission, percentage, brokerage fee, gift or contingent fee.

B. SECURITY CLAUSE

The Consultant certifies that he shall not at any time release or divulges any information concerning the services covered by this agreement to any person or any public or private organization except the Engineer or FHWA without prior approval of the Engineer.

C. ABILITY

The Consultant certifies that he has or will have acquired sufficient employees, materials and equipment to prosecute these services within the time limits as shown in this agreement prior to the issuance of a notice to proceed and further certifies that the present work load of this firm will not interfere with the completion of the

services as outlined in this agreement.

D. EMPLOYMENT

During the period of a contractual agreement with the Cabinet, the firm shall not engage any person who is an employee of the Cabinet as defined by KRS 18A.

E. ACCESS TO RECORDS AND OWNERSHIP OF DOCUMENTS

The Consultant and his sub-consultants shall maintain all books, documents, papers, accounting records and other evidence pertaining to cost incurred and make such materials available at their respective offices at all reasonable times during the contract period and for three years from the date of final payment under the contract for inspection by the Cabinet, FHWA or any authorized representatives of the federal government and copies thereof shall be furnished. Failure to maintain such records for three years after the date of final payment may be grounds for the Cabinet to disqualify the Consultant from consideration for *future* engineering contracts *for non-compliance with this paragraph*. All data collected by the Consultant and all documents, notes and reports collected or prepared in connection with these environmental services shall become the property of the Department; and the Department shall not be restricted in any way in its use of such material. Upon final approval of the final environmental document, the original, camera-ready manuscript, including exhibits, shall be furnished to the Department.

F. NONDISCRIMINATION

The Consultant in the performance of this contract agrees to comply with Title VI of the Civil Rights Act of 1964, Transportation Cabinet's regulations as set out in Appendix A, and the Governor's Code of Fair Practices, Appendix B which are attached hereto.

G. DISADVANTAGED BUSINESS ENTERPRISES

In an agreement financed in whole or part with federal funds, the Consultant shall comply with the federal requirements 49 CFR Part 23 as set out in Appendix C that is attached hereto.

H. CONTRIBUTIONS TO CAMPAIGNS OF GUBERNATORIAL CANDIDATES

The Consultant certifies that neither he nor any member of his immediate family

having an interest of 10 percent or more in any business entity involved in the performance of this contract contributed more than the amount specified in KRS 121.056(2) to the campaign of the gubernatorial candidate elected in the election last preceding the date of this contract.

APPENDIX A

During the performance of this contract, the Consultant for itself, its assignees and successors in interest agree as follows:

- (1) Compliance with Regulations: The Consultant shall comply with the regulations of the Transportation Cabinet, Department of Highways, relative to non discrimination in federal-assisted programs of the Transportation Cabinet, Department of Highways (Title 49, Code of Federal Regulations, part 21, hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.
- (2) Nondiscrimination: The Consultant, with regard to the work performed after award and prior to completion of the contract work, shall not discriminate on the grounds of race, sex, color or national origin in the selection and retention of sub-consultants, including procurement of materials and leases of equipment. The Consultant will not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of Regulations.
- (3) Solicitations for Subconsultants, Including Procurement of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by the Consultant for work to be performed under a subcontract, including procurement of material or equipment, each potential sub-consultant or supplier shall be notified by the Consultant of the Consultant's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, sex, color or national origin.
- (4) Information and Reports: The Consultant shall provide all information and reports required by the Regulations or orders and instructions issued pursuant thereto and shall permit access *and inspection* to its books, records, accounts, other sources of information and its facilities as *requested* may be determined by the Transportation Cabinet, Department of Highways, or the Federal Highway Administration to be pertinent to ascertain compliance with such regulations, orders and instructions. Where any information required of a Consultant is in the exclusive possession of another who fails or refuses to furnish this information, the Consultant shall so certify to the Federal Highway Administration as appropriate and shall set forth what efforts it has made to obtain the information.

- (5) Sanctions for Noncompliance: In the event of the Consultant's noncompliance with the nondiscrimination provisions of this contract, the Transportation Cabinet, Department of Highways, shall impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate including but not limited to:
- a. Withholding of payments to the Consultant under the contract until the Consultant complies and/or
 - b. Cancellation, termination or suspension of the contract in whole or part.
- (6) Incorporation of Provisions: The Consultant shall include the provisions of paragraph (1) through (6) in every subcontract, including procurement of materials and leases of equipment, unless exempt by the Regulations, order or instructions issued pursuant thereto. The Consultant shall take such action with respect to any subcontract or procurement as the Transportation Cabinet, Department of Highways, or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. In the event a Consultant becomes involved in or is threatened with litigation with a subconsultant or supplier as a result of such direction, the Consultant may request the state to enter into such litigation to protect the interests of the state and in addition, the Consultant may request the United States to enter into such litigation to protect the interests of the United States.

APPENDIX B

During the performance of this contract, the Consultant agrees as follows:

- (1) The Consultant will not discriminate against any employee or application for employment because of race, color, religion, national origin, sex, age (over 40) or disability. The Consultant will take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their race, color, religion, national origin, sex, age (over 40) or disability. Such action shall include but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeships. The Consultant agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

- (2) The Consultant will state that all qualified applicants will receive consideration for employment without regard to race, color, religion, national origin, sex, age (over 40) or disability *in all solicitations or advertisements for employees placed by or on behalf of the Consultant.*
- (3) The Consultant will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding a notice to be provided advising the said labor union or worker's representative of the Consultant's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment. The Consultant will take such action with respect to only subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance.
- (4) The Consultant will conform with the Americans with Disabilities Act, Public Laws 101-336.

APPENDIX C

During the performance of the agreement, the Consultant agrees as follows:

- (1) Disadvantaged Business Enterprise (DBE), as defined in 49 CFR Part 26, shall have the maximum opportunity to participate in the performance of this agreement as a prime consultant or a sub-consultant. The Disadvantaged Business Enterprise requirements of 49 CFR part 26 shall apply to this agreement.
- (2) The Consultant shall take all necessary and reasonable steps in accordance with 49 CFR Part 26 to ensure the DBE has the maximum opportunity to compete for and participate in this agreement as a sub-consultant.
- (3) Consultants shall not discriminate on the basis of race, color, national origin, sex or disability in the award and performance of this agreement.
- (4) Failure by the Consultant or sub-consultant to carry out the requirement set forth in 49 CFR Part 26 shall constitute a breach of contract, after notification to the Consultant by the Cabinet, and may result in termination of agreement or such other remedy as the Cabinet deems appropriate.
- (5) When a Consultant, who has executed an agreement with a DBE to perform a specified portion of the design work, encounters difficulties with the DBE and the DBE fails to complete the DBE agreement, the Consultant shall be required to arrange for another prequalified and certified DBE (with prior Cabinet consent) to complete the balance of the previous DBE's contract work.

APPENDIX D

By signature on this agreement the "Consultant", being duly sworn, hereby certifies that, except as noted below, the "Consultant" or any person associated therewith in the capacity of owner, partner, director, officer, project director, manager, auditor, or any person involving the administration of federal funds:

- Is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any federal agency.
- Has not been suspended, debarred, voluntarily excluded or determined ineligible by any federal agency within the past three (3) years.
- Does not have a proposed debarment pending.
- Has not been indicted, convicted, or has a civil judgement rendered against the "Consultant" by a court of competent jurisdiction in any matter involving fraud or official misconduct with in the past three (3) years.

EXCEPTIONS:

Exceptions will not necessarily result in denial of selection but will be considered in determining Consultant responsibility. For any exception noted, indicate below to whom it applies, initiating agency and dates of action. Providing false information may result in criminal prosecution or administrative sanctions.

APPENDIX E

CERTIFICATION FOR FEDERAL-AID AGREEMENT

The Consultant certifies, by signing and submitting this agreement, to the best of his or her knowledge and belief, that:

1. No federal appropriated funds have been paid or will be paid by or on behalf of the undersigned to any person for influencing or attempting to influence any officer or employee or any federal agency, a member of Congress, an officer or employee of Congress, or any employee of a member of Congress in connection with the awarding of any federal agreement, the making of any federal grant, the making of any federal loan, the entering into any cooperative agreement and the extension, continuation, renewal, amendment or modification of any federal agreement grant loan or cooperative agreement.

2. If any funds other than federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any federal agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with this federal agreement, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The Consultant also agrees by submitting his or her agreement that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such sub-recipients shall certify and disclose accordingly.

APPENDIX F

During the performance of the contract, the consultant agrees to comply with applicable provisions of:

1. KRS *Chapter* 136 Corporation and Utility Taxes
2. KRS *Chapter* 139 Sale and Use Taxes
3. KRS *Chapter* 141 Income Taxes
4. KRS *Chapter* 337 Wages and Hours
5. KRS *Chapter* 338 Occupational Safety and Health of Employees
6. KRS *Chapter* 341 Unemployment Compensation
7. KRS *Chapter* 342 Workers Compensation

Any final determinations of a violation by the consultant within the previous five (5) years pursuant to the applicable statutes above are revealed as follows:
