This Sample Scope of Services contains directions for the preparer and blank information, which must be completed when preparing the scope of services. This sample scope includes services for a generic location/environmental study. The preparer should delete any services which are not required for a specific study, delete all instruction lines, and be sure that all paragraphs and subparagraphs are in numerical or alphabetical order.

**GENERAL GUIDELINE FOR**

**SCOPE OF SERVICES**

**LOCATION/ENVIRONMENTAL STUDY**

**General Note:**

This scope of services represents tasks to be performed in completion of the location/environmental study. The order in which the tasks are completed may or may not correspond to the sequence of the task numbers in the scope of services. In fact, MoDOT expects that many tasks listed within the scope of services will be prepared concurrently by the consultant in order to expedite the preparation of the location/environmental document. Items of work, which may be listed in more than one task in the scope of services, are done so solely for the purposes of clarification. It should not be assumed that this is an indication that the items of work must be performed multiple times. However, the results from any item of work may be incorporated into multiple tasks within the scope of services.

A more detailed description of the process and requirements used by MoDOT for completion of the location/environmental study process may be found in the MoDOT Project Development Manual. The consultant is encouraged to review the appropriate sections of this manual as a means to supplement the information contained in the scope of services and provide additional guidance in the requirements and expectations of MoDOT for completion of the location/environmental document.

This scope of services is intended to be an accurate description of the items and tasks required for completion of the location/environmental document. However, each project is unique and may require more or less effort in an individual task to complete the location/environmental document. The overall intent of this contract is that the consultant will provide the necessary services to produce the end product of an approved location/environmental document (i.e., one which fulfills the requirements of the National Environmental Policy Act or NEPA) in the time specified.

Services rendered by the consultant, which are considered as additional services, will be addressed per paragraph (3), Additional Services of the Project Design Consultant Agreement. The provisions of the Design Consultant Agreement outlining the responsibilities of the consultant regarding the quality and accuracy of the study's products shall apply to any decisions regarding determinations of additional services.

Preparation of a supplemental agreement is necessary prior to performance of any work, which is considered as additional services, not included in the original scope of services. The consultant will not be compensated for additional services performed prior to execution of a supplemental agreement. Only additional services, which are required due to changed or unforeseen conditions or are due to a change in the specified end product, will be considered for inclusion in a supplemental agreement.

**TASK 1 - LOCATION STUDIES**

1.1 Corridor Width for Study Alternatives

1.1.1 For all highway relocation alternatives, the consultant shall perform initial screening for the entire study area. Using engineering and environmental constraints identified in agency scoping, public information meetings and through other means, the consultant shall identify corridors with a width of approximately (1000 feet)\* for each alternative location within the study area for more detailed studies. After the reasonable alternatives have been identified, the corridor width for detailed environmental analysis shall be narrowed to approximately (500 feet)\*. This will allow for adequate flexibility to develop an alignment with a minimum (250 feet)\* right-of-way that provides the best fit from both engineering and environmental perspectives.

***\*Note to the Preparer:***

***(These widths are based on a new four lane divided highway project and should be adjusted to correspond to the actual type of alternatives being studied)***

1.1.2 For all highway "add-a-lane for dual" alternatives, the consultant shall assume a reasonable alternative exists on each side of the existing facility. A corridor width of approximately (500 feet)\*\* on each side of the centerline of the existing lane will be studied. The consultant shall use this corridor width for both the initial screening and detailed environmental analysis. This will allow placement of alternatives that can shift from one side of the existing lane to the other to accommodate engineering and environmental constraints and allow selection of a least environmentally damaging alternative while maximizing flexibility in engineering.

***\* Note to the Preparer:***

***(This width is based on a four lane divided highway project and should be adjusted to correspond to the actual type of alternatives being studied. If the project is not a four lane divided highway project this section should be deleted from the scope of services.)***

1.1.3 In addition to these corridor widths, an additional 100 feet on both sides of the corridors described above for each stage shall be examined for the corridor's effect on architectural structures due to the proximity of the improvements. This Area of Potential Effect (APE) for architectural structures may be adjusted larger or smaller by MoDOT in consultation with the Missouri Department of Natural Resources Historic Preservation Program (HPP) as the study progresses.

1.2 Definition of Alternatives

1.2.1 Define the project study area. This task will include establishing the limits of the study area based upon the needs established in the draft "Purpose and Need" statement supplied by MoDOT and development of the project "Purpose and Need" statement. Obtain review and concurrence of the limits of the study area from MoDOT. All work shall conform to FHWA Regulation 23 CFR 771, procedures outlined in the FHWA Technical Advisory T6640.8A, or any more current FHWA regulations and guidance, and any MoDOT policies, protocols and procedures (e.g., Noise Policy and Procedures).

1.2.2 The consultant shall modify and/or update the draft "Purpose and Need" statement as additional information is developed and incorporate the information into the location/environmental document. This Purpose and Need information can change through the course of the study. However, it is deemed firm by the time of the approval of the final environmental document. For studies that require substantial time to complete, the consultant will be required to present the latest data available to assure that informed decisions are made.

1.2.3 Through research of existing data and information gathered in the pre-location (Task 6) and scoping meetings (Task 2.2.7), record all known environmental and engineering constraints along the corridor on 1"= feet scale USGS base maps. Prepare environmental and engineering constraints map and narrative to be included in the location/environmental document.

1.2.4 Determine design standards that are appropriate for the type of roadway facility needed to carry the projected traffic volumes in the corridor for all roadway alternatives. Design criteria may include number of lanes, design speed, level of access, intersection/interchange spacing, typical cross sections, right- of- way width, horizontal and vertical curvature limits, drainage criteria, and selection of bridge types, widths and lengths.

1.2.5 Identify potential alternatives within constraints and indicate these on the base maps prepared above. The alternatives to be considered will include the "No Action" alternative, improving and supplementing the existing facility route, mass transit, transportation systems management (TSM), and build alternatives. The objective of this initial phase will be to identify reasonable alternatives that may have potential for serving the project needs and fulfilling the purpose of the proposed improvements as detailed in the "Purpose and Need" statement.

1.3 Documentation of Screening Process

1.3.1 Prepare an environmental and engineering evaluation of initial alternatives.

1.3.2 Prepare a traffic evaluation of the initial alternatives.

1.3.3 Prepare an economic evaluation of the initial alternatives.

1.3.4 Identify all reasonable alternative alignments for detailed evaluation.

1.4 Alignment Studies

1.4.1 Obtain aerial photography of the corridor adequate to cover the reasonable alternate alignments to be studied in detail.

1.4.2 Prepare base maps for alignment studies at a useful and reasonable scale (e.g. 1"=1000').

1.4.3 Develop preliminary line and grade of reasonable alternatives, adequate for cost estimating.

1.4.4 Identify possible crossroad relocation and determine the horizontal and vertical alignments of each.

1.4.5 Determine crossroads intersection locations and types of access (at grade or interchange). This information will be used to assist in determining right of way impacts to adjacent properties.

1.4.6 Coordinate line and grade with hydraulic studies (Task 1.5).

1.4.7 Coordinate line and grade with bridge studies (Task 1.6).

1.4.8 Identify major utilities.

1.4.9 Prepare a preliminary estimate of the right of way, utility, and construction costs for the reasonable alternatives. Estimates should be prepared for each alternate, which is still under consideration. All estimates should be broken into segments that correspond to the description of the alternates. Cost estimates will be broken into the following categories: Grading & Drainage, Base & Surface, Bridges, Miscellaneous, Utilities, and Right of Way (with relocation costs as a separate item) per Figure 1-02.1 of the MoDOT Project Development Manual, unless agreed to estimate otherwise.

Proper documentation of cost estimates must be maintained and submitted to the MoDOT project manager upon request. Periodic updates of the cost estimates must be made as the alternatives are developed in more detail or annually as required by the MoDOT Project Development Manual (PDM).

1.5 Hydrology/Hydraulics Studies for Reasonable Alternatives

1.5.1 Delineate drainage areas using current USGS maps or Digital Terrain Model if available.

1.5.2 Identify major stream crossings which will require boxes with expected span lengths equal to or greater than 20' or bridge locations.

1.5.3 Prepare cost estimates using typical per square foot costs for all structures with a span length equal to or greater than 20'. The cost for all other cross road structures and other drainage items will be included in the cost per linear mile of roadway Grading and Drainage.

1.6 Bridge Studies for Reasonable Alternatives

1.6.1 Perform engineering analysis to identify all bridges at grade separations and water crossings as required by roadway alignment and existing terrain.

1.6.2 Perform bridge type studies based on economic considerations. Where applicable, include an evaluation of the cost of structure vs. cost of embankment.

1.6.3 Prepare an estimate of probable construction cost for each structure based on historical cost per square foot per Figure 1-02.1 of the PDM, unless agreed to estimate otherwise.

1.6.4 Consider alternate bridge design.

1.7 Preliminary Geotechnical Studies for Reasonable Alternatives

1.7.1 Conduct a literature search for existing surface and subsurface information along the proposed corridor. Analyze data and develop general geologic conditions. Provide input into evaluation of initial alternatives.

1.7.2 Perform a records search relating to mining operations and mineral deposits in the study area. Identify locations, incidence of subsidence and other geologic information of record. During environmental field reconnaissance be aware of indications of past mining operations. Conduct selected interviews with local residents having knowledge of mining operations in the area.

1.7.3 Provide highway bridge preliminary support in the evaluation of final alternatives.

1.7.4 Develop a suggested final exploration program format for the entire corridor. It is anticipated that there will not be any soil borings required for this study.

1.8 Evaluation of Alternatives for Reasonable Alternatives

1.8.1 Evaluate reasonable alternative alignments including the no action and improving/supplementing the existing facility alternatives, mass transit, TSM, and build actions alternatives in terms of how effectively they satisfy the stated "Purpose and Need" of the project.

1.8.2 The location/environmental document should include a discussion of how each alternative satisfies or fails to satisfy the stated "Purpose and Need" developed for the project.

1.8.3 Identify the preferred alternative in the draft environmental document, if one is apparent.

1.8.4 Make refinements, as practicable, to all reasonable alternatives to assess projected actual impacts.

1.8.5 Refine cost estimates. Proper documentation of cost estimates must be maintained and submitted to the MoDOT project manager upon request. Periodic updates of the cost estimates must be made as the alternatives are developed in more detail or annually as required by Section 1-02 of the MoDOT Project Development Manual.

1.8.6 Determine impacts alternatives will have with regard to disposition of the existing roadway and local receptivity to proposed disposition in accordance with Section 2-02.4(6)(c) of the MoDOT Project Development Manual. The draft location study/environmental document will indicate that disposition of the existing roadways has been discussed with local authorities. The final location study/environmental document will indicate the commitments for handling the existing facility.

1.9 Location Study Information

1.9.1 Identify implementation strategies for logical construction projects and phased/staged construction opportunities.

1.9.2 Include Location Study information within the preliminary draft, draft, preliminary final and final environmental document.

1.9.3 Revise the Location Study information based on review comments and incorporate into the Final Environmental Document.

1.10 Value Engineering Study

1.10.1 This project **(may/will)** be subject to a Value Engineering (VE) Study prior to the approved Draft Environmental document (contact the VE Administrator). The VE Study will be conducted by a multi-disciplined team of MoDOT personnel and a representative from the consultant. The purpose of the team will be to consider cost improvements and develop alternate designs.

The VE study is an event oriented function that will occur during the Location study stage. The total CONSULTANT VE Study support services required are outlined in the specific numbered tasks below:

1.10.2 Preparation of project data and drawings - The CONSULTANT will assemble needed project reference material, design data, cost estimates and documentation developed during the preparation of the Location Study. Three (3) sets of data and drawings will be submitted to the MoDOT District Office two (2) weeks prior to the start of the VE Study.

1.10.3 CONSULTANT VE Study Team Member - The CONSULTANT will be represented on the VE Study team by an Engineer employed by their organization. The VE Study team will most likely meet for five consecutive days.

1.10.4 Presentation of the Project to the VE Team - The CONSULTANT'S Project Manager and any other key project personnel shall meet with the VE team during the first day of the study to explain project's preliminary design features and the rationale used.

1.10.5 VE Study Communications - The CONSULTANT will make available, during the course of the VE Study, telephone and written communications, and CAD services to respond to VE team inquiries.

1.10.6 VE Study Presentation - The CONSULTANT'S Project Manager will attend the VE Study presentation of recommendations to MoDOT management. The presentation will be given the last day of the study.

1.10.7 Review VE Recommendations - The CONSULTANT'S Project Manager will review the VE recommendations and respond in writing to the District Office with their opinion. The consultant will respond to each recommendation with either an approval, disapproval or modification.

1.10.8 COMMISSION Location Study Review - The COMMISSION will ultimately approve, disapprove or modify any recommendation made by the VE Study team as part of Location Study approval.

**TASK 2 - ENVIRONMENTAL PLANNING**

2.1 Project Scoping and Data Collection

2.1.1 Identify land use and zoning classifications along the corridor. Obtain plat maps and property ownership information. Specify agency (federal or state) properties.

2.1.2 Identify potential Section 4(f) properties and provide MoDOT with information for Section 4(f) determination by FHWA.

2.1.3 Verify Section 6(f) properties with Section 6(f) county listings provided by MoDOT. Provide details on verified Section 6(f) property boundaries.

2.1.4 Prepare environmental base maps at 1"= ft USGS and 1"= ft aerial photo mosaic.

2.1.5 Prepare environmental constraints map and narrative to be included in the environmental document.

2.1.6 Prepare and distribute early coordination letters to resource and review agencies in coordination with MoDOT (District and General Headquarters Design).

2.1.7 Prepare for and conduct Scoping meeting(s) in coordination with MoDOT (District and General Headquarters Design).

2.2 Environmental Evaluation

2.2.1 Conduct preliminary environmental analysis of all reasonable alternatives.

2.2.2 Develop matrix in conjunction with Task 1.8 for environmental and engineering analysis.

2.2.3 Refine reasonable alternatives to avoid or minimize environmental impacts, then reevaluate environmental and engineering impacts of reasonable alternatives.

2.3 Environmental Impact Studies

* + 1. Gather information by phone, letter or database or conduct limited field studies of specific environmental issues, if warranted, including, but not limited to the examples listed below. Refer to the EIS checklist provided by MoDOT for a comprehensive outline of study components. If needed, consult with MoDOT on the extent of information gathering of a study component for the project study.
* Verify presence and approximate size of vegetated wetlands and other special aquatic sites shown on maps by "windshield survey". This is to be accomplished without trespass on private property.
* Location of springs, caves, sinkholes, and other unique features.
* Identification of specific (threatened, endangered, and rare) wildlife habitats and terrestrial natural communities.
* Location of sensitive noise receptors.
* Location of publicly owned recreation areas, wildlife refuges and management areas, campgrounds, historic sites, etc.
* Develop preliminary list of important community and social institutions and services such as schools, emergency services, hospitals, and shelters. Identify sensitive and protected populations as defined by Title VI, Environmental Justice and ADA (Americans With Disabilities Act).

2.3.2 Wetland Information - Present in the draft environmental document the initial screening information obtained from MoDOT on stream wetland and hydric soils for all reasonable alternatives. MoDOT will provide criteria for identifying locations to be field checked for streams and jurisdictional wetlands. Conduct, and submit to MoDOT, a wetland delineation (after the Location Public Hearing and decision on the preferred alternative) including:

* Identification of jurisdictional wetlands according to the currently accepted procedures.
* Completion of appropriate preliminary jurisdictional wetland determination forms with summary report suitable for submission to U.S. Army Corps of Engineers for Clean Water Act Section 404 permit application. This report should also identify and briefly describe all waters of the U.S. other than wetlands and differentiate between intermittent streams, perennial streams, ponds not contiguous with another water of the U.S., ponds contiguous with vegetated wetlands or other water of the U.S. vegetated wetlands, and other special aquatic sites. This item is considered complete only after COE has accepted as final the delineation of all waters of the U.S., including wetlands.
* Identification of delineated wetlands locations in map format suitable for use in roadway design decision making and Section 404 permit application
* Provide Only Practicable Alternative Finding regarding wetland impacts in accordance with Executive Order 11990 to be included within the environmental document.
* Provide sufficient impact analysis on alternatives for waters of the U.S. and other environmental impacts so that the COE is able to concur with selection of preferred alternative for the purposes of Section 404(b)(1) alternative analysis.

2.3.3 Displacement and Relocation Impacts - Refine displacement and relocation impacts including homes, not-for-profit organizations and businesses. Review relocation assistance programs administered by the state. Discuss comparable available housing in the area for households and businesses. Further define impacts to the affected communities and neighborhoods. Ensure that the public involvement efforts appropriately access the affected population.

2.3.4 Conduct Visual Assessment - Describe the visual environment character. Identify existing sensitive visual resources, if any, and indicate if project is in a visually sensitive urban or rural setting. Identify potential visual quality impacts, if any, by describing the relationship of the impacts to viewers from the roadway and of the roadway. Indicate the visual assessment methodology used, if any.

2.3.5 Noise Impacts - Conduct noise study and assess impacts at noise-sensitive receptors in accordance with the current MoDOT Noise Policy Procedures (found in Section 2-04.4 of the PDM). Calculate predicted noise levels for the no-action and all reasonable alternatives using the current FHWA Highway Traffic Noise Prediction Model [STAMINA 2.O (Revised, March 1983)]. If noise walls appear warranted, conduct a noise wall assessment using the FHWA OPTIMA Model.

2.3.6 Air Quality Assessment - The sample statement agreed to by MDNR, MoDOT and FHWA will be adhered to except in non-attainment areas. In non-attainment areas the project must conform to the TIP and the STIP as administered by the MPO. The agreement states: A detailed air quality analysis, for inclusion in an environmental document, will only be prepared on Federally Funded highway projects when the present or predicted Average Daily Traffic volume on the project exceeds 54,000 vehicles in the year of project construction or 72,700 vehicles in the 20th year following the project construction.

2.3.7 Farmland Impacts - Assess and describe the impact of farmland conversion as required under the Farmland Protection Policy Act (FPPA). Complete Parts I and II of Form SCS-CPA-106 and submit with USGS quadrangle maps, with the reasonable alternates delineated, to Natural Resources Conservation Service (NRCS) state office. After NRCS has completed their portion of the form and returns it, apply site assessment criteria and determine scores for each alternate. Compare scores for the alternates to the 160-point threshold for the consideration of farmland protection measures. Describe also the degree of farm operation severance that may occur with each reasonable alternative.

2.3.8 Section 4(f) Impacts - Develop Draft and Final Section 4(f) Evaluation for properties impacted by the preferred alternative when Section 4(f) is determined applicable by FHWA (see task 2.1.2). If no preferred is identified in the draft environmental document, a Draft Section 4(f) Evaluation must be prepared for each of the reasonable alternatives affecting a Section 4(f) property. Include Section 4(f) evaluation as part of the Draft and Final Environmental Documents. The Final Section 4(f) Evaluation will be required if the preferred alternative impacts Section 4(f) property.

2.4 Hazardous Waste Assessment

2.4.1 Review appropriate Environmental Protection Agency (EPA) and Missouri Department of Natural Resources (MDNR) lists of major known hazardous waste, hazardous material, or solid waste disposal locations within the study area. For example, superfund sites; hazardous waste treatment, storage, or disposal facilities; or solid waste landfills that could impact the transportation alternatives location. Petroleum underground storage tanks, hazardous waste generators, small rural dumps, etc. would not normally impact location of the transportation alternatives. The major sites shall be depicted on the environmental constraints map. A limited amount of non-intrusive field work (windshield surveys) may be required to determine the exact location and obvious limits of contamination to be shown on the constraints map.

2.4.2 After the reasonable alternatives have been selected the consultant shall identify all sites that impact the build alternatives. Also, the consultant shall verify the presence or absence of unrecorded hazardous waste, hazardous material, or solid waste disposal sites through interviews and land record investigations.

2.4.3 The consultant shall then prepare a summary comparing the following:

* The relative ease (e.g., low, medium or high) of avoiding the hazardous waste sites within each of the alternative corridors.
* The relative clean-up effort (e.g., low, medium or high) for each site.

This information will be used in combination with other environmental and engineering constraints to select a preferred alternative.

2.5 Geotechnical Support

2.5.1 Perform, as necessary, an investigation of existing geotechnical records (e.g., MoDOT boring logs, water districts) for the support of environmental evaluation of the reasonable alternatives. Contact the district geologist for previous investigations relative to the corridor study area.

2.5.2 Review and coordinate Geotechnical input with hazardous waste assessment, and hydrogeologic studies.

* 1. Cultural Resources Documentation

Tasks 2.6.1 through 2.6.4 will be done for the Draft Environmental Document. If a Memorandum of Agreement (MOA) is required, the consultant shall develop one MOA to address all National Register of Historic Places (NRHP) eligible resources, unless through consultation with the MoDOT cultural resources staff it is determined that separate MOAs will be required. The results of the architectural, bridge, and archaeological investigations can be presented in a single, or separate reports. It is recommended that the cultural resource consultant meet with the MoDOT cultural resources staff at the outset of the study to outline the effort expected in these tasks.

2.6.1 A general historical overview will be developed to generate historical themes and provide a cultural context for the evaluation of cultural resources identified in the project vicinity.

2.6.2 Develop a brief (approximately 2-4 pages) archaeological background for the project area.

* + Review and summarize the existing archaeological records for the study area.
  + Identify previously reported archaeological sites within the study area and assess their present condition through a brief field check for each alternative.
  + Prepare a brief generalized predictive model based upon existing information that will estimate the potential for the presence of archaeological sites, for buried sites, for sites containing human burials, and for sites potentially requiring extensive mitigation for all alternatives.
  + Analyze each reasonable alternative through the predictive model and indicate results, preferably in table format.

2.6.3 Architectural investigations will be completed to identify and document all architectural resources (i.e., buildings, structures, objects, sites, and districts/landscapes) located within each reasonable alternative that are fifty or more years of age within a report, which shall include a summary table.

* Review and summarize the existing architectural records for the study area.
* Record the location of cemeteries identified during the architectural investigations.
* Consult with MoDOT staff to develop the area of potential effects (APE) for each reasonable alternative.
* Develop Evaluations of Eligibility (EOEs) for all architectural resources fifty or more years of age within the APE of each reasonable alternative for the Draft Environmental Document. An EOE will be based on the evaluation of a resource's significance by the cultural resource consultant and MoDOT staff.
* Determine the impact of the project, if any, on the eligible property or properties.
* Prepare a draft Section 4(f) Evaluation, including a draft MOA (unexecuted), covering those architectural resources affected by the preferred alternative that are listed or evaluated as being eligible to the NRHP.
* Construct a table listing all architectural resources considered NRHP eligible with a brief description, the alternate (or links if developed) containing it, the impact, if any, the project will have on it, and the criteria under which it is considered eligible.

2.6.4 Historic bridge investigations will be completed to identify and document all bridge resources (i.e., highway, railroad and pedestrian bridges, viaducts and culverts, excluding metal, plastic and reinforced concrete pipes) located within each reasonable alternative that are fifty or more years of age. This information will be included within a report (either separate or within the comprehensive cultural resources report), which shall include a summary table.

* Contact MoDOT’s Historical Bridge Coordinator at the beginning of the investigation as a large amount of data on bridge recourses is already available, including potential NRHP eligibility.
* Work with MoDOT staff to develop EOEs for all bridge resources fifty or more years of age within the APE of each reasonable alternative for the Draft Environmental Document.
* Determine the impact of the project, if any, on the eligible bridge resources.
* Prepare a draft MOA covering those bridge resources affected by the preferred alternative that are evaluated as being eligible to the NRHP.
* Coordinate with MoDOT staff in the preparation of a draft request to the FHWA for a Programmatic Section 4(f) Evaluation Statement.
* Construct a table listing all bridge resources considered NRHP eligible; the alternate (or links if developed) containing it; the impact, if any, the project will have on it; and the criteria under which it is considered eligible.

Following FHWA's signature of the Draft Environmental Document, Tasks 2.6.5 through 2.6.7 will be done for the Final Environmental Document. Consult with the MoDOT cultural resources section to determine the date to begin this work.

2.6.5 The consultant will complete a full Phase I archaeological survey for the preferred alternative identifying prehistoric and historic sites. For archaeology, this current scope of services covers only consultant services through the Phase I survey and the subsequent Phase I survey report. MoDOT reserves the right to negotiate a supplemental agreement with the current consultant or enter into a separate agreement with a different consultant for Phase II archaeological investigations, if required.

* Consult with MoDOT staff following the completion of the survey on preliminary NRHP evaluations for each identified archaeological site.
* Determine the impact, if any, that the project will have on eligible or potentially eligible sites.
* Record location of cemeteries identified during the archaeological investigations.
* Submit a Phase I Archaeological Survey Report to MoDOT with NRHP site eligibility recommendations for each archaeological site that is in the preferred alternative. Unacceptable reports will be returned for revisions; no additional costs can be billed by the consultant for these revisions. MoDOT will forward an acceptable Phase I report to the Missouri State Historic Preservation Officer (SHPO) for their concurrence with the recommendations. If MoDOT and the consultant cannot agree upon site recommendations, the report will be submitted with the consultant's recommendations, while MoDOT will present its own recommendations in a cover letter.
* Draft a proposed Phase II testing program for those sites in the preferred alternative that are determined to be potentially NRHP eligible.
* Prepare a draft (unexecuted), and subsequent final (executed), MOA covering those archaeological sites affected by the preferred alternative that are evaluated as being eligible to the NRHP to be merged with the architectural and/or bridge MOA if required.
* Construct a table listing NRHP eligibility determinations, or preliminary evaluations, for each archaeological site identified during the archaeological investigations, a brief description, and the alternate (or links if developed) containing it. Include the project's impact on each site.

2.6.6 The architectural survey for the preferred alternative will be completed with all architectural resources located within the alternative being photographed, regardless of their age.

* + - Coordinate with MoDOT to prepare the Determinations of Eligibility (DOEs) for all recommended NRHP eligible architectural resources within the APE of the preferred alternative, and secure the concurrence of the relevant review agency (i.e., SHPO, the Keeper of the NRHP, or the Advisory Council on Historic Preservation) with the DOEs.
    - Prepare a final Section 4(f) Evaluation, with a fully executed MOA, covering those resources adversely affected by the preferred alternative.
    - Present all eligible buildings within the preferred alternate in both table and text format in the report.

2.6.7 The historic bridge survey for the preferred alternative will be completed with all bridge resources (regardless of age) located within the alternative being photographed.

* + Coordinate with MoDOT to prepare the DOEs for all recommended NRHP eligible bridges within the APE of the preferred alternative, and secure the concurrence of the relevant review agency (i.e., SHPO, the Keeper of the NRHP, or the Advisory Council on Historic Preservation) with the DOEs.
  + Prepare a provisional Programmatic Section 4(f) Evaluation Statement issued by the FHWA, with a fully executed MOA, covering those NRHP eligible bridges adversely affected by the preferred alternative.
  + Present all eligible bridges within the preferred alternate in both table and text format in the report.

All cultural resource work will be discussed in the draft and final environmental documents for the proposed project. Any Section 4(f) Evaluation prepared for the project will be included as part of the draft and final environmental documents.

2.7 Floodplain Studies

2.7.1 Prepare an exhibit which displays the alternatives and the approximate 100-year floodplain limits that will be provided by MoDOT. Include limits on graphics incorporated in the Draft and Final Environmental Document.

2.7.2 For each of the reasonable alternatives with encroachments, provide a summary of the risk or significance of the environmental impacts including:

* The risks associated with the implementation of the action.
* The impacts on natural and beneficial floodplain values.
* The support of probable incompatible floodplain development.
* The measures to minimize floodplain impacts associated with the alternative.
* The measures to restore and preserve the natural and beneficial floodplain values impacted by the alternative.

2.7.3 For each alternative encroaching on a designated or proposed regulatory floodway, and commensurate with the level of encroachment, document the consistency with the National Flood Insurance Program (NFIP) standards and the coordination with the Federal Emergency Management Agency (FEMA), State Emergency Management Agency (SEMA) and local agencies.

2.7.4 For encroachments, identified by FHWA to be significant, the Final Environmental Document shall include a finding that the proposed encroachment of the Preferred Alternative is the only practicable alternative in accordance with Executive Order 11988. This finding should be supported by the following information:

* The reasons why the proposed alignment must be located in the floodplain.
* The alternatives considered and why they were not practicable.
* A statement indicating whether the action conforms to applicable State or local floodplain protection standards.

2.8 Water Quality

2.8.1 Review previous studies, such as the State Water Plan and 305B Report from the Missouri Department of Natural Resources (MDNR), or other reports prepared by the Environmental Protection Agency (EPA), National Park Service (NPS), and U.S. Geological Survey (USGS) regarding ambient water quality within the geographic region of each alternative.

. 2.8.2 Summarize information from Task 2.8.1 in narrative form so as to characterize the general background conditions of the area.

2.8.3 Using information sources in Task 2.8.1, identify significant water resources such as recreational lakes, high quality streams and wellhead areas which may require special protection measures during or after construction. This information will be used in combination with other environmental and engineering constraints to select the reasonable alternatives.

2.8.4 Identify and speculate on the magnitude of anticipated impacts to local water resources from activities during construction.

2.8.5 Evaluate the potential positive and negative impacts on water quality from roadway runoff, accidental spills and other pollutants associated with highways after construction of the project.

2.9 Environmental Mitigation/Enhancement Proposals and Program

2.9.1 Include mitigation/enhancement commitments, as needed, for impacts. The draft environmental document should include general mitigation statements that would be appropriate for any of the reasonable alternatives. The final environmental document should detail, as much as possible at the location stage, mitigation commitments for the Recommended Alternative. The following are some of the impacted resources that could involve mitigation commitments. If needed, consult with MoDOT on the level and specifics of commitments.

* Cultural resources
* Floodplain
* Water quality
* Noise mitigation plan
* Pedestrian/bicycle considerations, if any
* Recreational considerations
* Section 4(f) properties
* Visual quality
* Community and neighborhood impact mitigation
* Mitigation for impacts to protected populations
* Relocation plan for displaced households, businesses, and not for profit organizations

**NOTE:** If it is determined that a wetland mitigation plan is required for the Section 404 permit application, MoDOT reserves the right to have the prime consultant negotiate a supplemental agreement.

**TASK 3 - TRAFFIC STUDIES**

***Note to the Preparer:***

***(MoDOT Transportation Planning should be consulted during the development of the scope of services to see if MoDOT will be able to provide traffic data and forecasts from the statewide traffic model. If Transportation Planning will not be able to supply the required traffic data, then Section 3.2 of the scope of services must be modified to include traffic forecasts by the consultant. Item number 16 of the Services Provided by MoDOT must also be adjusted to properly reflect the traffic information being provided.)***

3.1 Traffic Data

3.1.1 Obtain existing and current traffic data, including accident data, annual average daily traffic (AADT), turning movements, vehicle type, and seasonal variations. (This data will be provided by MoDOT and is subject to availability).

3.2 Traffic Forecasts

3.2.1 Provide a location sketch showing limits where projected traffic volumes are needed. MoDOT will provide projected traffic volumes, including percentage trucks, peak hour factor, seasonal breakdown and directional distribution.

3.2.2 Identify deficiencies for the planning horizon on the no-action alternative, and identify various transportation improvements to eliminate such deficiencies. Quantify the benefits of each improvement, including reduction of travel time, travel distance, and accidents.

3.3 Safety and Traffic Operations Analysis

3.3.1 Calculate accident rates for the last five (5) calendar years of available data for defined sections and major intersecting routes and compare to data (i.e., statewide average(s)) on similar routes.

3.3.2 Calculate construction year and design year Levels of Service for defined sections and for major intersections along the route for all reasonable alternatives including the "No Action" alternative. The Level of Service shall also be calculated for the residual traffic on the existing route for all reasonable alternatives. Define those Levels of Service for presentation in the location/environmental document.

3.3.3 Prioritize the need for improvements to defined sections of the existing route based on accident rates, levels of service, and roadway condition.

3.3.4 Accident and traffic data must be updated during the life of the study as new data becomes available. This updated data will then be used to revise the safety and traffic operations analysis. The duration of this location/environmental study and the availability of more current data will determine the number of times which the data must be updated. At any stage, the location/environmental document shall contain data which is no more than 1 year older than the most current data available.

3.4 Transportation System Management (TSM) Alternatives

3.4.1 Explore the ability of less highway intensive strategies, such as TSM, in sufficient detail to permit planners to answer the question of whether such strategies could address the need for various transportation improvements. Define TSM alternatives. [Note that TSM alternatives do not include substantial construction efforts, such as turning lanes, climbing lanes, etc.] Incorporate these investigations into the alternative analyses for the Draft and Final Environmental Document.

3.5 Technical Coordination and review

3.5.1 Provide traffic support for air and noise analyses, as necessary.

3.5.2 Develop appropriate reports, graphics, and related traffic study products.

3.5.3 Develop overview of traffic analysis.

The "Purpose and Need" statement must be examined and, if necessary, modified to reflect the updated traffic studies information to assure the purpose and need for the proposed action is still justified.

**TASK 4 - SOCIAL AND ECONOMIC STUDIES**

The following evaluations shall be performed where there are foreseeable social or relocation impacts. The socioeconomic analysis shall be completed in a step-wise manner in order to achieve the appropriate level of analysis. The initial analysis shall include the qualitative assessment of the project area as well as the descriptive data for the social and economic parameters outlined below. Advanced socioeconomic and demographic modeling (Task 4.4) is contingent upon the results of the preliminary analysis and shall be reviewed with MoDOT. If needed, a supplemental agreement will be negotiated between MoDOT, the primary consultant, and the necessary sub-consultants to address regional economic and demographic modeling.

When statistical models, and economic and demographic forecasting models are incorporated in the analysis, a technical report is required for review by MoDOT.

4.1 Social Impacts

4.1.1 Determine impacts to neighborhood and community settings and characterize the impacted population

4.1.2 Examine changes in travel patterns and accessibility (e.g. vehicular, commuter, bicycle, or pedestrian) for each of the reasonable alternatives.

4.1.3 Compare impact of reasonable alternatives on school districts, recreation areas, churches, businesses, police and fire protection, etc.

4.1.4 Assess the impact of the alternatives on highway and traffic safety as well as on overall public safety.

4.1.5 Present demographic data profiling the project area and the region using census data. Block group and tract level data is preferred.

4.1.6 Determine whether any low income, minority, or unique social group would be disproportionately adversely impacted by the alternatives. Follow MoDOT and FHWA guidance on best practices for environmental justice considerations.

4.2 Right of Way Acquisition and Displacement Impacts

4.2.1 For each reasonable alternative estimate the number of businesses and number of households to be displaced, include household and business characteristics (e.g., minority, ethnic, disabled, elderly, large family, income level, owner/tenant status, replacement and relocation costs, number and racial group of displaced employees). Also estimate the number of partial takes.

4.2.2 Compare the availability (for sale, rent) of residential and commercial properties in the area with the housing, business, and not-for-profit organization needs of those that will be displaced. Address the need for last resort housing, if any.

4.2.3 Inventory the neighborhoods, public facilities, non-profit organizations, and families having special composition, which may require special relocation considerations.

4.2.4 Characterize access and parking impacts for residential and commercial properties.

4.3 Economic Data

4.3.1 Conduct a business inventory in each community along the corridor. This inventory will detail type, capacity, and, where possible, historical sales data. Existing business turnover rates also will be examined. Also included in this task is:

* Estimate economic impact of alternatives on the area and region;
* Characterize the area's dependence on the existing facility;
* Estimate consequences of tax base losses due to displacements;
* Discuss impact of residential and commercial displacements to economic base;
* Describe construction period economic impacts (short-term horizon);
* Characterize long-term impacts in terms of community growth in the area (long-term horizon).

4.4 Special Circumstances - Community and Economic Studies

4.4.1 In circumstances where community and economic impacts are of special importance, additional tasks will be completed based on coordination with MoDOT. Examples of this type of extended work effort include but are not limited to community bypass studies, benefit/cost analysis in conjunction with economic modeling, and environmental justice studies.

**TASK 5 - LOCATION/ENVIRONMENTAL DOCUMENT**

General Guidance for Document Preparation - The location study information should be combined with the environmental information to form one location/environmental document. The evaluation of alternatives in the location/environmental document should focus on how well the alternatives satisfy the "Purpose and Need" of the project and the amount of impact on the natural and human environment.

Location/environmental documents shall be prepared using English units of measurement with the metric equivalent shown in parentheses. The predominant system of measurement shall be English with a soft conversion to the metric equivalent.

If there is a possibility of changing the environmental classification of the location/environmental study to one which requires less man-hours, MoDOT and the consultant will meet to discuss the division of labor and which tasks shall be under run.

The majority of the work performed in Task 5 is the compilation of the document. Much of the text development for the sections of the document are expected in other tasks of this scope of services.

5.1 Draft Location/Environmental Document

5.1.1 Prepare two versions of the preliminary draft document in the format specified by the latest FHWA guidelines governing environmental documents (Currently Technical Advisory T6640.8A) and according to MoDOT's requirements. Any additional preliminary draft documents required due to failure to meet requirements will not be considered a supplemental billable cost. Prepare eight (8) copies of the first version of the preliminary draft document. Submit six (6) to the MoDOT General Headquarters Design in Jefferson City and two (2) copies to the MoDOT district office responsible for the project. The second version will address MoDOT comments and be submitted to FHWA [four (4) copies], MoDOT General Headquarters Design [three (3) copies] and the district [one (1) copy], plus any cooperating agency [two (2) copies for each].

5.1.2 Prepare draft environmental document. The preliminary draft environmental document will be revised per the review comments provided by the MoDOT, FHWA and any cooperating agencies. One (1) draft environmental document will be submitted to MoDOT and FHWA for final approval and signing before printing. Refer to page entitled "Number of Reports to be Prepared" for copy numbers of the approved draft environmental document for circulation to all appropriate agencies, groups and individuals. The consultant will be responsible for distribution of the draft document. One (1) reproducible, unbound copy of the draft document will also be submitted to MoDOT General Headquarters Design in Jefferson City.

5.1.3 Following the required public review process for the draft environmental document and the Location Public Hearing, the preliminary final environmental document will be prepared. This document will include a summary of the Public Hearing (s), public and agency comments, answers to substantive issues raised by the public or agencies, and a commitment to mitigation measures and other necessary changes. The consultant may have responsibilities to prepare direct responses to public and agencies, in coordination with MoDOT, or for inquiries requesting a direct response. Prepare two versions of the preliminary final environmental document in the format specified by the latest FHWA guidelines governing environmental documents (Currently Technical Advisory T6640.8A) and according to MoDOT's requirements. Any additional preliminary final documents required due to failure to meet requirements will not be considered a supplemental billable cost. Prepare eight (8) copies of the first version of the preliminary final environmental document. Submit six (6) to MoDOT General Headquarters Design in Jefferson City and two (2) copies to the district office responsible for the project. The second version will address MoDOT comments and be submitted to FHWA [four (4) copies], MoDOT General Headquarters Design in Jefferson City [three (3) copies] and the district office [one (1) copy], plus any cooperating agency [two (2) copies for each].

5.1.4 Prepare a final environmental document after all MoDOT and FHWA comments have been addressed and approved by MoDOT and FHWA. One (1) document will be submitted to MoDOT and FHWA for final approval and signing before printing. Refer to the page titled "Number of Reports to be Prepared" for copy numbers for circulation to all appropriate agencies, groups and individuals. The consultant will be responsible for distribution of the document. One reproducible, unbound copy of the final environmental document will also be submitted to MoDOT.

5.1.5 The consultant will complete a Record of Decision (ROD) or a Finding of No Significant Impact (FONSI) to finalize the environmental document process. A draft ROD, for review, will accompany the FEIS copies sent to MoDOT and FHWA. Twenty (20) copies of the approved ROD will be printed and distributed as directed by MoDOT. One unbound, reproducible copy of the FONSI or ROD will also be submitted to the MoDOT General Headquarters Design in Jefferson City. The FONSI sheet, approved by the FHWA, will be placed on top of the signature page of the FEA for reproduction with all copies of the approved FEA.

**TASK 6 - COMMUNITY INVOLVEMENT PROGRAM**

NOTE: Most assignments shown in this section are tentative. Those required by the National Environmental Policy Act (NEPA), FHWA requirements and MoDOT requirements are not. Refer to Section 2-03 ("Public Hearings and Meetings") of the PDM for specific current MoDOT requirements. The purpose and scope of the other public involvement assignments will be defined by the Public Affairs Division of MoDOT, and the assignments will be carried out under the direction of the Public Affairs Division. If assignments, different from those shown are needed, costs will be negotiated subject to approval as required.

The consultant will provide a description of the processes involved in each step of the public involvement portion. This description must include the number and titles of people involved in the work and explain the rationale for cost and time allotted to each task.

In order to help follow public involvement costs, the consultant shall provide a breakdown of Task 6 expenses on their invoice according to the subdivisions shown in the Task Breakout.

6.1 Public Information

6.1.1 Prepare a Public Involvement Plan (PIP) for the proposed action with the approval of MoDOT. The plan will outline the community involvement program, identifying key contacts with agencies, the news media, citizens groups and the general public. The various methods and media will be outlined including basic information included in each.

6.1.2 If deemed necessary, prepare and distribute **(insert number)** newsletters about the project to area residents and interested parties on behalf of the MoDOT. Produce **(insert number)** copies of each.

6.1.3 Prepare project information handouts for informational meetings and news media briefings, if warranted.

6.1.4 Conduct ongoing liaison with community residents, business owners, public officials, and news media.

6.1.5 Prepare audio/visual and/or a slide presentation, if warranted, for meetings and public hearing(s).

6.1.6 Prepare exhibits and presentation for **(insert number)** meetings of civic organizations as requested and approved by the MoDOT District Office.

6.1.7 Incorporate public concerns and information into the planning process and document these efforts in a Public Involvement Log.

6.2 Pre-Location Public Meetings

6.2.1 Organize and coordinate pre-location public meetings (number will depend on size of corridor), including making arrangements for adequate facilities, advertising the meetings, preparing exhibits for the meetings, and preparing and giving an oral presentation. An open house format will be utilized for the public meetings. (See Section 2-03.2 of the PDM)

6.2.2 Participate with MoDOT in conducting public meetings. A rehearsal (dry run) session will be held at the MoDOT District Office prior to each meeting.

6.2.3 Prepare and distribute postage-paid comment cards for each meeting, unless deemed unnecessary by MoDOT. Prepare written summary of each public meeting to be included in the location/environmental documents.

6.2.4 Provide informal recording services to document public comment for those persons choosing to make oral comments.

6.3 Workshops and Public Information Meetings

6.3.1 Organize and coordinate workshops/public information meetings, if deemed necessary by MoDOT. This includes making arrangements for adequate facilities, advertising the meetings, preparing exhibits for the meetings, and preparing and giving an oral presentation. An open house format will be utilized for the workshops/information meetings.

6.3.2 Participate with MoDOT in conducting the workshops/information meetings. A rehearsal (dry run) session will be held at the MoDOT District Office prior to each meeting.

6.3.3 Prepare and distribute postage-paid comment cards for each meeting, unless deemed unnecessary by MoDOT. Prepare written summary of each public meeting to be included in the location/environmental documents.

6.3.4 Provide informal recording services to document public comment for those persons choosing to make oral comments.

6.4 Location Public Hearing(s)

The location public hearing is required by the National Environmental Policy Act (NEPA) for all projects being processed with an Environmental Impact Statement (EIS) or an Environmental Assessment (EA). Refer to Section 2-03 of the PDM for specific details and requirements about the location public hearings. Some NEPA Categorical Exclusions (CEs) may also warrant holding a location public hearing or else a combined location and design public hearing. Refer to the PDM for MoDOT requirements regarding these hearings.

6.4.1 Organize and coordinate location public hearing, including meeting arrangements for adequate facilities, advertising the public hearing, and preparing exhibits for the open house public hearing.

6.4.2 Participate with MoDOT in conducting the public hearing(s). Have adequate staff in attendance to answer questions about environmental, roadway, bridge, right of way and other concerns.

6.4.3 Prepare and distribute postage-paid comment cards for the meeting and prepare a written transcript, summary of comments, and responses (when deemed appropriate by MoDOT) to comments from the location public hearing. Section 2-03.10 of the PDM provides details on the preparation of the hearing transcript and its coordination with the NEPA process.

6.4.4 Provide court reporter services to document oral public comments for all location public hearings.

6.4.5 Provide hearing transcripts to MoDOT personnel for their review. The consultant will prepare draft responses to substantive comments for inclusion in the location/environmental document for review by MoDOT and FHWA staff. The final responses will be included by the consultant in the final environmental document.

6.5 Management and Coordination

6.5.1 Coordinate community involvement activities with technical activities, including key dates, announcements, and meetings with the MoDOT District Office. Assure that summaries of this involvement are included in the location/environmental document.

6.5.2 Maintain communication and coordination with MoDOT's Public Affairs Director regarding community involvement activities.

6.5.3 Maintain Public Involvement Log and review and update Public Involvement Plan as necessary throughout the project.

**TASK 7 - PROJECT MANAGEMENT AND COORDINATION**

7.1 Managing and Coordinating the Study

The consultant will assure that the diverse efforts of the location/environmental study team will be coordinated and comprehensive. Coordination among the diverse work groups, including environmental and cultural studies, engineering, public involvement and others, will be assured by the consultant to ensure that the study progresses expeditiously and its conclusions are sound. The diverse parties in the study will be advised of developments by the consultant using the MoDOT project manager as the conduit. Any field reconnaissance necessary to address concerns and reach decisions will be coordinated by the consultant through the project manager. The consultant's study manager will document the progress of the study and the decisions that are made for it. Such documentation is essential to assure that MoDOT and FHWA are conducting the study according to required regulations and processes, and that they are making decisions that are well reasoned and sound, not arbitrary and capricious.

7.2 Meetings

7.2.1 In addition to the meetings specifically described in this section, the consultant is required to attend or conduct any meetings, which the MoDOT project manager determines is necessary to properly coordinate the development of the location/environmental study. Attendance at coordination meetings beyond the number included in the consultant's estimate of cost shall not be considered a valid reason to justify a supplemental agreement to the contract.

7.2.2 Prepare for and attend periodic (monthly or less frequent) project progress meetings as required by the MoDOT project manager. Project progress meetings may be handled by conference calls or other methods when agreeable to both the MoDOT project manager and the consultant. Prepare and distribute meeting minutes.

7.2.3 Prepare for and conduct preliminary alternative evaluation and selection meeting. Prepare written report for MoDOT and prepare and distribute meeting minutes.

7.2.4 Preparation for and attendance at project team coordination meetings as required by the MoDOT project manager. Prepare and distribute meeting minutes.

7.2.5 Prepare for and attend Agency coordination meeting (s) as required by the MoDOT project manager. The MoDOT project manager may require the consultant to conduct this meeting. Prepare and distribute meeting minutes.

7.2.6 Prepare for and attend meeting(s) to discuss alternate locations with MoDOT upper management as required by the MoDOT project manager and the PDM. The MoDOT project manager may require the consultant to present the alternate locations at this meeting.

7.3 Quality Reviews

7.3.1 Technical adequacy

7.3.2 Conformance with project criteria

7.3.3 Cost controls for budget compliance

7.4 Field Check Activities

7.4.1 Coordinate and participate in combined field check(s) with consultant and MoDOT personnel prior to selection of preferred alternative, and at other times as may be mutually beneficial.

7.5 Agency Approvals

7.5.1 Submit documentation of agency coordination activities and approvals.

7.6 Project Management

7.6.1 Identify and maintain project requirements related to overall project scope activities, schedules and resources.

7.6.2 Coordinate the project requirements including identification and implementation of activities of the project team and coordinating/reviewing agencies or groups.

7.6.3 Through briefing meetings and reports, provide MoDOT and other officials with an opportunity to share ideas/concerns and to track progress. The meetings and reports include presentation of the project technical, administrative, and project cost control status.

7.7 Administration and Cost Control

7.7.1 Administer project contracts and subcontracts.

7 7.2 Coordinate requirements with MoDOT and project team.

7.7.3 Establish/maintain a project cost control system to process and track project costs including implementation and coordination of financial reporting requirements and formats; reporting policies and guidelines; and, invoicing and payment of project costs. Separately report on time spent and resources associated with Task 6 - Community Involvement Program (Public Involvement). Report time under this task on the monthly invoices.

7.7.4 Prepare invoicing and payment requests and number submittals sequentially. Attach copy of progress report and bar chart to each invoice to support the calculation of overall percentage of the contract completed to date.

7.7.5 Prepare progress reports including narrative descriptions, financial reports, expenditures, and progress bar charts indicating the overall percent of project completion as well as the percent completion of individual tasks. The reports will provide all levels of management within MoDOT and the consultant with sufficient, timely financial data so that managerial decisions concerning control of various aspects of the project can be made. At the completion of the study, provide complete summary of all time and resources spent on preparation of the location/environmental document.

**NUMBER OF REPORTS AND DELIVERABLES TO BE PREPARED**

Draft and Final Water Quality/Ecology Technical Report, if warranted (10 copies of each and 1 reproducible copy).

Draft and Final Hazardous Waste Summary Report, if warranted (10 copies of each and 1 reproducible copy).

Cultural Resources Report(s), 2 draft copies and 10\* final copies with an additional unbound, reproducible final copy of both the Phase I Archaeological Survey Report and the Phase II Archaeological Site Testing Report (if warranted); and 2 draft copies and 5 final copies with an additional unbound, reproducible final copy of both the Architectural Studies Report and the Bridge Studies Report. If additional draft copies are required, MoDOT shall not be billed beyond the original 2 draft copies required for each report. If possible, these reports will be combined, depending on the course of action agreed upon by MoDOT and the consultant.

***(\* Certain studies will require up to 50 final copies due to professional interest in the area. The precise number of final reports will be established before a cost proposal is submitted.)***

Draft and Final EA (50 copies) or Draft and Final EIS (100 copies). Incorporate the Location Study and, if applicable, Section 4(f) Evaluation into the environmental document. One (1) reproducible, unbound copy of the approved draft and approved final environmental document will be submitted to MoDOT. Some study areas may require more copies, the precise number of reports will be established before a cost proposal is made.

Record of Decision (ROD), twenty (20) copies of the approved ROD and one (1) reproducible copy.

For a FONSI, place a copy of the approved FONSI sheet(s) as the very top page of each Final EA.

Preliminary jurisdictional wetland determination report, if warranted (3 copies including 1 reproducible, unbound copy).

**SERVICES PROVIDED BY MISSOURI DEPARTMENT OF**

**TRANSPORTATION**

**LOCATION AND ENVIRONMENTAL STUDY**

1. MoDOT will provide the consultant with an approved draft "Purpose and Need" Statement.

2. MoDOT will prepare Notice of Intent (NOI) for studies requiring an EIS. MoDOT will submit the NOI to FHWA for subsequent publication in the Federal Register.

3. MoDOT will obtain and provide stream wetland and hydric soil information from Natural Resources Conservation Service (NRCS), offices, USGS and National Wetland Inventory (NWI) mapping for initial screening.

4. MoDOT will identify and provide approximate 100-year floodplain limits and regulatory floodways using National Floodplain Insurance Program (NFIP) Maps.

5. MoDOT will contact by letter, the Missouri Department of Conservation (MDC), and U.S. Fish and Wildlife Service (FWS) to obtain information on threatened/endangered species locations. Any response letters from the agencies will be provided to the consultant.

6. MoDOT may review or provide the consultant with any pertinent existing reports and data from MDNR, MDC, FWS, and other sources. MoDOT will provide the consultant with any usable information for the study if MoDOT reviews.

7. MoDOT will develop and provide a list of relevant environmental resource and review agencies and individuals to be contacted. The MDC and the FWS may need to be contacted outside the conditions of item # 5.

8. MoDOT will develop strategy for environmental review and documentation with FHWA, and environmental resource agencies.

9. MoDOT in conjunction with the consultant and FHWA, will contact the U.S. Army Corps of Engineers (and any other applicable agency) requesting their participation as a cooperating agency in the Environmental process.

10. Upon request, MoDOT will provide Microfilm prints or record drawings of existing roadway plans and bridge TS&Ls.

11. MoDOT will provide the consultant with a copy of the DEIS checklist.

12. MoDOT will provide a copy of the Protocol For Cultural Resources Investigations Associated With Environmental Assessment Or Environmental Impact Statement Corridor Studies (MoDOT).

13. MoDOT will provide design criteria and typical roadway sections in addition to access to the MoDOT Project Development Manual.

14. MoDOT will provide pavement type selection data including current pavement sufficiency ratings.

15. MoDOT will provide County maps (scale 1/2" = 1 mile).

16. If Task 3 - Traffic Studies - of the scope of services requires the consultant to make the assignment of the construction year and design year traffic volumes for the specific locations throughout corridors, MoDOT will provide the following:

* Available machine traffic volume counts for the study route and adjacent state routes
* Available manual turning movement counts
* Historical data trends at count locations
* Seasonal travel variations
* Available vehicle classification for the route
* Other available incidental information that may be on file with the MoDOT Transportation Planning

***Note to Preparer:***

***(If Task 3 - Traffic Studies - of the scope of services states that MoDOT will provide all traffic projections and data, this item shall be modified to reflect the traffic data provided by MoDOT.)***

17. MoDOT will provide, upon request, a sampling of current Environmental Documents for use as examples.

18. MoDOT will provide, upon request, ARAN videotapes of existing routes in VHS format.

19. The MoDOT district responsible for the project will provide, upon request, available soil boring data and geotechnical analyses for project corridor.

20. MoDOT will provide copies of existing reports, plans, and documents pertinent to the project including air, noise, environmental, traffic, etc.

21. MoDOT will provide existing roadway and bridge inventories, reports, sufficiency reports, bridge ratings, etc.

22. MoDOT will provide accident data within project corridor for the most recent 5-calendar year period, statewide accident rates, and accident cost data. The consultant must request and use, during the course of the study, the most recent data available for the environmental document (Draft and Final).

23. MoDOT will provide typical per-mile construction costs for various types of roadways and roadway elements, interchange construction costs, per-mile right-of-way costs, per-square footbridge construction costs, and other appropriate cost data. The consultant must request and use, during the course of the study, the most recent data for the environmental document (Draft and Final).

24. MoDOT will provide a current National Park Service listing of Section 6(f) properties for each county in the study.

25. MoDOT will provide a copy of the Missouri Action Plan (1991 Draft) if requested by the consultant.

**SAMPLE FORMAT**

**ESTIMATE OF COST**

Man-hours Rate Cost

Task 1

Partner

Engineer

Technician

Typist

Task 2

Partner

Engineer

Technician

Clerk

Task 3

Partner

Engineer

Technician

Typist

Task #

Partner

Engineer

========= =========

Subtotals

Payroll Overhead (Est. at \_\_\_\_\_\_\_ %)

General and Admin. Overhead (Est. at \_\_\_\_\_\_\_ %)

=========

Subtotal

Other Direct Costs

Travel, \_\_\_\_\_\_\_ trips @

Printing

Subcontracts

Subcontracted Services (Name of Firm \_\_\_\_\_\_\_\_\_\_ Man-hours)

Others (Name of Firm \_\_\_\_\_\_\_\_\_\_ Man-hours\_\_\_\_\_\_\_)

Subtotal Direct Costs =========

Fixed Fee =========

## SAMPLE FORMAT FOR OVERHEAD RATE BREAKDOWN

FOR YEAR 20\_\_\_\_\_

PAYROLL ADDITIVES

\_\_\_\_\_\_\_%

\_\_\_\_\_\_\_%

\_\_\_\_\_\_\_%

\_\_\_\_\_\_\_%

Total Payroll Additives \_\_\_\_\_\_\_\_\_%

GENERAL AND ADMINISTRATIVE OVERHEAD

\_\_\_\_\_\_%

\_\_\_\_\_\_%

\_\_\_\_\_\_%

\_\_\_\_\_\_\_\_\_%

Total General and Administrative Overhead \_\_\_\_\_\_\_\_\_%

TOTAL OVERHEAD \_\_\_\_\_\_\_\_\_%

Less Unallowable Items \_\_\_\_\_\_%

\_\_\_\_\_\_%

\_\_\_\_\_\_%

\_\_\_\_\_\_%

TOTAL ALLOWABLE OVERHEAD \_\_\_\_\_\_\_\_\_%

**PERIOD OF SERVICE**

The phases of work will be completed in accordance with the following schedule:

**(A detailed listing or a graphical representation of the anticipated completion dates for milestones should be included here)**

The COMMISSION will grant time extensions for unavoidable delays beyond the control of the CONSULTANT. Requests for extensions of time shall be in writing by the CONSULTANT, before plans are due, stating fully the reasons for the request.