

This document has been prepared for the purposes of the **PPP IN INFRASTRUCTURE RESOURCE CENTER FOR CONTRACTS, LAWS AND REGULATION (PPPIRC)** website. It is a sample document FOR REFERENCE PURPOSES ONLY and SHOULD NOT BE used as a "model". The inclusion of any legal materials on the PPPIRC website does not mean that they are in any way approved, endorsed or recommended by the World Bank Group or its affiliates. Legal advice should be sought to determine whether a particular legal document is appropriate for any given project, and how the specific terms of the document should be adapted to fit the circumstances of that project.

PROPOSED TERMS OF REFERENCE FOR REFINED [CITY] BY-PASS FEASIBILITY STUDY

Introduction

1. This section of the Phase 1 report presents a consolidated terms of reference for preparing a refined feasibility study for the proposed [CITY] By-pass. These terms of reference document is predicated on the fact that most of the required information for a solid feasibility study has already been prepared. Therefore most of the additional effort required to prepare a refined feasibility *study* will be directed at presenting the facts and analysis within an improved report structure to present the case for the proposed by-pass.

2. The proposed terms of reference is based on a recommended feasibility study outline as presented in Section 1 (“Introduction”) of this report and as shown immediately below. All consultant task descriptions are based on this study outline and the consultant shall be required to produce reports based on this outline. See paragraph 7 (which follows the “Task Descriptions”) which describes the required reports and proposed reporting timetable).

Proposed Outline of the Feasibility Study

1. Executive Summary
2. Introduction and Study Objectives
3. Existing Traffic Conditions and the Need for a By-Pass
4. Regional Development Potentials as a Justification for the By-Pass
5. Identification and Description of By-Pass Options
6. Introduction of the PPP Concept and Review of the PPP Framework
7. Traffic Forecasts and Assignments to the By-Pass Options
8. Assessment of the By-Pass Options and Selection of the Preferred Option
9. Refined Design, Costs, and Tolls for the Preferred By-Pass Option
10. Financial Analysis and PPP Assessment of the Preferred By-Pass Option
11. Environmental Impact Assessment
12. Social Impact Assessment and Resettlement Action Plan
13. Cultural Heritage Assessment
14. Summary of Recommendations and Proposed Next Steps

Annexes

3. The main body of the refined feasibility study should be prepared as a single highly readable document rather than a compendium of several documents. Supporting material, which is likely to be bulky, can be provided in a separate compendium of annex documents.

This document has been prepared for the purposes of the **PPP IN INFRASTRUCTURE RESOURCE CENTER FOR CONTRACTS, LAWS AND REGULATION (PPPIRC)** website. It is a sample document FOR REFERENCE PURPOSES ONLY and SHOULD NOT BE used as a "model". The inclusion of any legal materials on the PPPIRC website does not mean that they are in any way approved, endorsed or recommended by the World Bank Group or its affiliates. Legal advice should be sought to determine whether a particular legal document is appropriate for any given project, and how the specific terms of the document should be adapted to fit the circumstances of that project.

4. The tasks described in these terms of reference are drafted with the intention that the consultant will also take into consideration the detailed review of the current feasibility study as presented in the preceding sections of this report. This information is intended as guidance to the consultant in preparing a refined feasibility study. Cross-references to the appropriate sections of this report are provided at the beginning of each of the tasks descriptions provided below.

5. The tasks described below represent the best efforts of World Bank team in recommending feasibility report structure and content. However, it is recognized that some of the task descriptions may not be easily accomplished or might be too expensive to research in relationship to likely benefits. For this reason the World Bank team suggests that these terms of reference should be carefully reviewed and discussed in depth prior to being finalized. Also to be considered is the likely additional costs of consultant services for this additional work. Beyond reaching agreement on the final terms of reference and addressing study costs, there is a need to determine the schedule for producing the various sections of the feasibility study and the methods and timing of interaction between the [PROVINCE] Administration, the consultants hired by the [MUNICIPALITY] Administration, and the World Bank team in preparing the refined feasibility study.

Task Descriptions

6. The consultant shall prepare a consolidated feasibility study report based on the task descriptions provided below and according to the report structure and timetable as presented in paragraph 7 located immediately after these task descriptions.

Task #1: Executive Summary

This section of the feasibility study should summarize in succinct fashion the key findings of the feasibility study in a highly readable format to encourage the widest possible audience for the report and especially to encourage senior decision makers to read the document. It is expected that this document should not exceed 10 pages in length. The proposed by-pass option along with the basic design parameters, the estimated cost, the proposed method of financing, the roles of the public and private sector, and other important findings should be summarized here. This section of the feasibility study should be prepared after completion of the main body of the document in order to capture the key study findings.

Task #2: Introduction and Study Objectives

Objective

The purpose of this section of the feasibility study is to set the stage for the main body of the refined feasibility study to be prepared under these terms of reference. This section of the study (which should be short) will let the reader know why this refined feasibility study is being conducted, the objectives of the study, key background information, and the structure of the report.

This document has been prepared for the purposes of the **PPP IN INFRASTRUCTURE RESOURCE CENTER FOR CONTRACTS, LAWS AND REGULATION (PPPIRC)** website. It is a sample document FOR REFERENCE PURPOSES ONLY and SHOULD NOT BE used as a "model". The inclusion of any legal materials on the PPPIRC website does not mean that they are in any way approved, endorsed or recommended by the World Bank Group or its affiliates. Legal advice should be sought to determine whether a particular legal document is appropriate for any given project, and how the specific terms of the document should be adapted to fit the circumstances of that project.

Tasks

The consultant shall prepare this section of the feasibility study which should include at least the following subject matter:

- Background
 - Current traffic conditions leading to proposals for a [CITY] by-pass
 - Status of the current feasibility study
- Primary objectives of the feasibility study
 - To determine the most feasible by-pass option for improving conditions for through transit travel around [CITY]
 - To secure Federal funding assistance for the proposed by-pass
- Secondary objectives of the feasibility study
 - To reduce traffic congestion within [CITY]
 - To open up more land for urban development
- Potential role of the private sector under PPP arrangements
- Structure of the refined feasibility study report
 - (See proposed outline of the feasibility study as shown in paragraph 2 above.)

Task #3: Existing Traffic Conditions and the Need for a By-Pass¹

Objectives

This section of the feasibility study has two objectives; first to clearly document existing traffic conditions in sufficient detail to establish a preliminary case for the proposed by-pass; and secondarily to establish a firm factual foundation for preparing future traffic projections and traffic assignments. Documentation of existing traffic conditions is especially important as this information cannot easily be disputed as being biased in favor of a proposed by-pass if it is based on actual (as opposed to estimated or projected) traffic information.

Tasks

To accomplish these objectives the consultant shall:

- Present a brief description of [METROPOLITAN AREA] including the current population and economic situation and trends. (This description can be short).
- Present a general overview of existing traffic conditions
 - Describe and show on a map current average daily traffic volumes on (a) all major approach roads to [CITY] and (b) major cross-town traffic arteries within [CITY]

¹ See Section 4 (“Current Traffic Conditions, Traffic Forecasts, and Traffic Assignments”) of this report for guidance in preparing this portion of the feasibility study.

This document has been prepared for the purposes of the **PPP IN INFRASTRUCTURE RESOURCE CENTER FOR CONTRACTS, LAWS AND REGULATION (PPPIRC)** website. It is a sample document FOR REFERENCE PURPOSES ONLY and SHOULD NOT BE used as a "model". The inclusion of any legal materials on the PPPIRC website does not mean that they are in any way approved, endorsed or recommended by the World Bank Group or its affiliates. Legal advice should be sought to determine whether a particular legal document is appropriate for any given project, and how the specific terms of the document should be adapted to fit the circumstances of that project.

- Describe and show on a map the percentage and total volume of traffic on each of these road segments which has neither an origin nor a destination within [CITY] (i.e. by-passable traffic)
- Indicate the rate of traffic growth the last few years based on actual traffic count surveys
- Indicate the adverse impacts of existing traffic conditions and prepare a preliminary justification for a by-pass
 - Indicate which routes are already congested and provide some indication of the level of service² (both in descriptive terms and on a map)
 - Indicate travel time speeds on the principal cross town routes carrying transiting traffic (this should be based on actual moving vehicle surveys)
 - Estimate the total timesavings that could occur with a by-pass not encumbered by congestion of roads with inherent low operating speeds.
 - Total hours of time savings per annum
 - The value of time savings in [CURRENCY]
- Present in greater detail (some of which could be placed in an annex) existing traffic conditions and traffic count information
 - 16 hour traffic classified counts by vehicle type by road section by time of day
 - Relevant accident data (deaths and injuries) if significant
 - Trends in the accident rate on the by-pass routes over time
 - Location of high accident frequencies on by-pass routes

Task #4: Regional Development Potentials as a Justification for the By-Pass³

Objectives

This section of the feasibility study should attempt to firmly establish the case that the proposed by-pass would be a substantial asset in spurring regional development in [METROPOLITAN AREA], and that this land development would be positive for the regional economy. Furthermore, this report section should quantify the additional amount of traffic that this land development would generate and the additional traffic that would use the by-pass, thus increasing the need for the by-pass.

² Level of service can be defined in many ways. The most important single criterion is “percent of travel time delay” which is the percent of total travel time that all motorists are delayed in platoons while travelling on a road segment. Broader or more holistic versions of level of service measure (a) the degree to which individual motorists are affected by others in the traffic stream (often viewed as a percentage of roadway capacity), (b) the freedom to select desired speeds and to maneuver within traffic streams, and (c) the general level of comfort and convenience provided to motorists, passengers, or pedestrians.

³ See Section 2 (“Review of the Regional Development Plan as a Justification for the Proposed By-pass”) of this report for guidance in preparing this portion of the feasibility study.

This document has been prepared for the purposes of the **PPP IN INFRASTRUCTURE RESOURCE CENTER FOR CONTRACTS, LAWS AND REGULATION (PPPIRC)** website. It is a sample document FOR REFERENCE PURPOSES ONLY and SHOULD NOT BE used as a "model". The inclusion of any legal materials on the PPPIRC website does not mean that they are in any way approved, endorsed or recommended by the World Bank Group or its affiliates. Legal advice should be sought to determine whether a particular legal document is appropriate for any given project, and how the specific terms of the document should be adapted to fit the circumstances of that project.

Tasks

Pursuant to these objectives the consultant shall:

- Present the rationale for the regional land development proposal as part of the by-pass scheme:
 - It would open up a large area for new development
 - It would encourage constrained land users in [CITY] to move out to better locations
 - It would improve the tax base of the [REGION]
 - It would create new jobs
- Indicate (and quantify) as clearly as possible the benefits to the [PROVINCE]
 - Jobs
 - Tax revenue
 - Pollution reductions
 - Other benefits.
- Present in as much detail as possible specific private sector commitments (and in map form if possible) to develop in the by-pass impact zone as a result of the by-pass
 - List names of companies / organizations that have made commitments
 - Type of scale the proposed investment
 - Likely employment level
 - Estimated cost of the development
 - Indicate the process that each private sector developer has undergone with PROVINCE / MUNICIPAL] authorities to ensure that these commitments are reasonably secure
 - Indicate the likely timetable for these commitments to be realized
- Indicate specific public sector commitments (along with a proposed timetable) to accompany the by-pass as measures to encourage land development in the by-pass impact zone (and map these commitments to the extent possible):
 - Additional roads
 - Utilities
 - Public transport services
 - Parks and recreational facilities
 - Schools
- Propose incentives to the private sector developers and the selected by-pass concessionaire (present this only if these incentives are seriously being considered)
 - Specific short or medium term tax breaks
 - Granting selected publicly held land to the road concessionaire as a means to encourage private sector financing of the toll road
- Discuss the implications of charging tolls on spurring land development (Would charging tolls on the by-pass materially reduce the attractiveness of the by-pass for land development?)
- Estimate additional traffic generation due to land development in the by-pass impact zone and the share of that additional traffic which would use the by-pass.

This document has been prepared for the purposes of the **PPP IN INFRASTRUCTURE RESOURCE CENTER FOR CONTRACTS, LAWS AND REGULATION (PPPIRC)** website. It is a sample document FOR REFERENCE PURPOSES ONLY and SHOULD NOT BE used as a "model". The inclusion of any legal materials on the PPPIRC website does not mean that they are in any way approved, endorsed or recommended by the World Bank Group or its affiliates. Legal advice should be sought to determine whether a particular legal document is appropriate for any given project, and how the specific terms of the document should be adapted to fit the circumstances of that project.

Task #5: Identification and Description of By-Pass Options⁴

Objective

This section of the feasibility study should establish the case for proposing by-pass options, present the rationale for selecting the specific options, describe the options, present the overall design standards and costs for each option, and present the framework for assessing the options.

Tasks

More specifically the consultant shall:

- Present the rationale for undertaking option analysis
 - To demonstrate that all reasonable alternatives have been considered
 - To establish the potential for an alternative which is less costly if funds for the preferred option do not become available
- Briefly describe each by-pass option (see box below)
 - Indicate the rationale for selection
 - Show each by-pass option on a map
- Provide details for each option:
 - Indicate design standards
 - Prepare a preliminary cost estimate
- Discuss the implications of the proposed *[CAPITAL]* to *[CITY]* motorway with regard to the proposed *[CITY]* by-pass
 - The possible timing of the *[CAPITAL]* to *[CITY]* motorway
 - Relationship to the proposed by-pass options
- Present a framework for undertaking and analysis of each option (to be developed further in the Assessment of By-pass Options section – Task #8 -- of the feasibility study)
 - Traffic assignments and traffic impacts
 - Preliminary design and cost estimates
 - Economic rate of return
 - Financial rate of return
 - Sources of finance
 - Special requirements for federal assistance
 - Safeguard measures
 - Other evaluation criteria

⁴ See Section 3 (Option Identification and Analysis) of this report for guidance in preparing this portion of the feasibility study.

This document has been prepared for the purposes of the **PPP IN INFRASTRUCTURE RESOURCE CENTER FOR CONTRACTS, LAWS AND REGULATION (PPPIRC)** website. It is a sample document FOR REFERENCE PURPOSES ONLY and SHOULD NOT BE used as a "model". The inclusion of any legal materials on the PPPIRC website does not mean that they are in any way approved, endorsed or recommended by the World Bank Group or its affiliates. Legal advice should be sought to determine whether a particular legal document is appropriate for any given project, and how the specific terms of the document should be adapted to fit the circumstances of that project.

Options Proposed for Testing⁵

- **Option A: Do nothing significant to improve the existing road network with the exception of routine maintenance.** Under this option no improvements to the existing road network, other than routine maintenance, would be undertaken. While a by-pass is likely to be needed, a good feasibility study should test all options against the “do-nothing” option.
- **Option B: Build the by-pass in the alignment and to standards as proposed in the current feasibility study.** This facility would be approximately [DISTANCE] in length, constructed to motorway standards with 4 lanes divided. All access to and from this roadway would be via grade-separated interchanges. This is the stated preferred alternative against which other alternatives will be evaluated. This option should be evaluated with tolling and non-tolling sub-options.
- **Option C: Build the by-pass in the alignment as proposed in the current feasibility study but to significantly lower design standards.** This option would permit the eventual construction of the by-pass to the standards proposed in option B when traffic volumes will be higher by securing the same right of way alignment and width, but with initially constructing the roadway to much lower design standards. Various design sub-options should be considered including the elimination of some if not all grade separated interchanges, reducing median and lane widths, and possibly reducing the number of total travel lanes to only two in the least traveled sections. No road tolling would be considered under this option.
- **Option D: Build only part [] of Option B.** This facility would extend from [] Road to [] Road, approximately [DISTANCE]. The rationale for selecting this option is that it might attract a very high proportion of transiting traffic around [CITY] at far lower total cost. This option should be evaluated with tolling and non-tolling sub-options.
- **Option E: Build only part [] of Option B.** This facility would extend from [] Road to [] Road; approximately [DISTANCE]. This option has been proposed since design work is well advanced and consequently could be constructed earlier than either Option B or Option C. This option should be evaluated with tolling and non-tolling sub-options.
- **Option F: Construct the proposed southern extension of the 3rd Longitudinal.** This option envisions the extension of the existing 3rd Longitudinal approximately [DISTANCE] from [] to []. This should include a bridge over the [WATERWAY]. The roadway should be 4 or 6 lanes with grade separations at the major road intersections. The more recently proposed alignments around difficult

⁵ The consultant shall present and test these options unless otherwise agreed with the client.

This document has been prepared for the purposes of the **PPP IN INFRASTRUCTURE RESOURCE CENTER FOR CONTRACTS, LAWS AND REGULATION (PPPIRC)** website. It is a sample document FOR REFERENCE PURPOSES ONLY and SHOULD NOT BE used as a "model". The inclusion of any legal materials on the PPPIRC website does not mean that they are in any way approved, endorsed or recommended by the World Bank Group or its affiliates. Legal advice should be sought to determine whether a particular legal document is appropriate for any given project, and how the specific terms of the document should be adapted to fit the circumstances of that project.

topography should be used. This option relies extensively on existing road infrastructure and may provide more traffic relief to [CITY] than Options B, C, or D.

- **Option G: Upgrade and extend the 3rd Longitudinal.** This option should include all of Option E plus the selective upgrading of the existing 3rd longitudinal over the [DISTANCE] from [] to []. The upgrading should include widening of all road sections to 4 lanes where this is not currently the case, pavement rehabilitation if required, provision of a grade separation under the railway crossing north of [CITY] (or overpass if this would be less costly), and an improved intersection at [CITY] (possibly grade separated if this is required to adequately maintain a good level of service). This option has been selected largely for the same reason as the selection of Option E and also provides a more realistic alternative to the preferred Option B.
- **Option H: Construct by-pass Option D and the Southern Extension of the 3rd Longitudinal (Option F).** Under this option only the [CITY] to [CITY] (Option D) sections (from [ROAD] to [ROAD]) of the by-pass would be constructed along with Option F portion of the 3rd Longitudinal. This option may be less costly than Option B while possibly providing the most traffic relief to [CITY]. The portion of this option containing Option D should be tested with tolling and non-tolling options.

Task #6: Introduction of the PPP Concept and Review of the PPP Framework⁶

Objective

This section of the feasibility study should review the PPP Framework to ensure that the legal, regulatory and institutional environment in [CITY] does not prevent or unduly constrain any proposed PPP project from taking place.

Tasks

The consultant shall review the PPP Framework including the following tasks:

- Review the existing policy framework in [PROVINCE] with respect to private participation in the road sector, highlight any deficiencies and make appropriate recommendations for policy changes if required;
- Review the administrative structure for the road sector and recommend structural changes that would promote private participation; and
- Review the existing legislation as relevant to the introduction of the private sector participation, make recommendation on legislative changes if needed, and draft proposed legislations.

The policy framework review will be undertaken with a view to ensuring that the proposed project fits into a coherent transport strategy. The focus will be to assess the impact of key policy decisions on potential for private participation. Given the probability that the [PROVINCE] does not have such framework, the consultants will make recommendations on key elements that should be defined

⁶ See Sections 6 and 7 (“Introducing PPP and Implications for the [PROVINCE]” and “Review of PPP Models Applicable to the By-Pass”) of this report for guidance in preparing this portion of the feasibility study

This document has been prepared for the purposes of the **PPP IN INFRASTRUCTURE RESOURCE CENTER FOR CONTRACTS, LAWS AND REGULATION (PPPIRC)** website. It is a sample document FOR REFERENCE PURPOSES ONLY and SHOULD NOT BE used as a "model". The inclusion of any legal materials on the PPPIRC website does not mean that they are in any way approved, endorsed or recommended by the World Bank Group or its affiliates. Legal advice should be sought to determine whether a particular legal document is appropriate for any given project, and how the specific terms of the document should be adapted to fit the circumstances of that project.

(such as a coherent policy for user charges, or defined roles for the private sector).

The administrative review will assess the capacity of the various agencies that would be involved in preparing, procuring and monitoring the project. This review will specifically identify gaps in terms of staffing and expertise and will make concrete recommendations to set-up a dedicated team to prepare the project (in collaboration with transaction advisers).

The legal review will focus on laws and regulations of the [PROVINCE] and ensure that they do not conflict with the requirements (and Concession Law) to implement the project as PPP. The review would include laws and regulations specific to the road sector.

Task #7: Traffic Forecasts and Assignments to the By-Pass Options⁷

Objective

This section of the feasibility study report is critical in the development of a credible feasibility study outcome that will be respected by those reviewing the findings, especially proposed by-pass investors. The feasibility study team needs to clearly establish that the estimated traffic volumes and assignments to the optional by-pass networks are reasonably accurate and that they are based on sound assumptions and methodology.

Tasks

More specifically the consultant shall:

- Describe in detail the traffic forecast assumptions and methodology⁸
 - Basis for estimating traffic growth
 - Basis for origin-destination determination
 - Describe the model used for assignments
 - Indicate the methods of model calibration
- Present traffic assignments to each proposed by-pass option (See Task #5 which presents the by-pass options to the tested)
 - Charts showing the results of the traffic assignments over time
 - Maps showing the results of the traffic assignments over time
- Assess the significance of the assignments to each of the by-pass options
 - Indicate in preliminary form which by-pass options appear to perform the best
 - Highlight road sections under each option where traffic is likely to remain a problem even with the proposed by-pass solution

⁷ See Section 4 (“Current Traffic Conditions, Traffic Forecasts, and Traffic Assignments”) of this report for guidance in preparing this portion of the feasibility study.

⁸ Since this presentation will need to be detailed a summary should be prepared for the main body of the feasibility study report and the more detailed explanation in an annex.

This document has been prepared for the purposes of the **PPP IN INFRASTRUCTURE RESOURCE CENTER FOR CONTRACTS, LAWS AND REGULATION (PPPIRC)** website. It is a sample document FOR REFERENCE PURPOSES ONLY and SHOULD NOT BE used as a "model". The inclusion of any legal materials on the PPPIRC website does not mean that they are in any way approved, endorsed or recommended by the World Bank Group or its affiliates. Legal advice should be sought to determine whether a particular legal document is appropriate for any given project, and how the specific terms of the document should be adapted to fit the circumstances of that project.

- Indicate dates in the future when traffic could become a problem on specific road sections under each option if it is not be a problem in the early years.

Task #8: Assessment of the By-Pass Options and Selection of the Preferred Option⁹

Objective

The primary purpose of this section of the feasibility study is to select the preferred by-pass option (or options) based on an assessment of several factors. This section of the report also will set the stage for the following chapters which will develop proposals in greater detail for the preferred by-pass option. It is suggested that the assessment of the options and selection of the preferred option should start with the assumption that the required funds for all by-pass options could be made available and, when this assessment is completed, then assess the options under various funding constraints.

Tasks

The consultant shall assess the by-pass options as set out in Task #5, and based on this assessment recommend the preferred by-pass option.

Assessment of the Options

The consultant shall undertake a multi-criteria assessment of the identified by-pass options as set out in Task #5. The assessment of these options should include at least the following:

- Traffic Assignments and Traffic Impacts. As indicated in Task #7, traffic assignments should be made for all these options reflecting near term and longer-term traffic conditions.¹⁰ Solid traffic assignments based on a careful assessment of existing traffic conditions and a well-calibrated traffic model are particularly important. While traffic volume assignments are important, it is equally important to assess the actual impact of these by-pass investments on the quality of traffic operations. More specifically, the level of service (travel speed and delay indicators) afforded to motorists wishing to transit [CITY] should be assessed, as well as the potential improvement of traffic operations on city streets relieved from carrying by-passing traffic.

⁹ See especially Sections 3, and 4 (“Option Identification and Analysis” and “Current Traffic Conditions and Traffic Forecasts, and Traffic Assignments”) of this report for guidance in preparing this portion of the feasibility study. Also refer to later sections of the report (Section 5 and beyond) for additional assistance in developing this portion of the study.

¹⁰ Since the preferred option (Option B) is proposed as a toll road, traffic assignments for this option should be prepared with and without tolls.

This document has been prepared for the purposes of the **PPP IN INFRASTRUCTURE RESOURCE CENTER FOR CONTRACTS, LAWS AND REGULATION (PPPIRC)** website. It is a sample document FOR REFERENCE PURPOSES ONLY and SHOULD NOT BE used as a "model". The inclusion of any legal materials on the PPPIRC website does not mean that they are in any way approved, endorsed or recommended by the World Bank Group or its affiliates. Legal advice should be sought to determine whether a particular legal document is appropriate for any given project, and how the specific terms of the document should be adapted to fit the circumstances of that project.

- Preliminary Design and Cost Estimates. Good estimates of the cost of constructing the proposed by-pass options (as well as associated maintenance costs) will be especially important both to assess the cost-benefit relationship of each option, as well as to determine the level of financial contribution required from potential government and private sector participants. Description of this assessment measure is presented in Task #9.
- Economic Rate of Return The economic feasibility of each option against the do-nothing option should be established. This assessment measure is particularly important to show where alternative solutions might generate more value per unit of investment. A description of this important assessment measure is provided below. Both the EIRR (Economic Internal Rate of Return) and the NPV (Net Present Value) should be calculated for each option.
- Financial Rate of Return. The financial rate of return should be calculated for those options on which toll facilities are proposed.
- Sources of Public Finance. Possible sources of funding for each option should be assessed along with a candid assessment of the likelihood of receiving this funding.
- PPP Potential. The potential for Public-Private-Partnership (PPP) arrangements will be assessed for all candidate by-pass options. (See Task #10)
- Special Requirements for Federal Financial Assistance. Beyond the above assessment measures there are additional special Federal Government requirements to qualify for this assistance. Each option should be assessed with regard to these specific measures (including economic, financial, and fiscal efficiency indicators.) These assessments should include both qualitative and quantitative measures.
- Safeguard Measures. The [STATE] Government as well as the World Bank and other international financing organizations require addressing certain environmental, social, and cultural heritage measures to ensure the proposed by-pass does not cause significant adverse impacts. (See Tasks #11, #12, and #13 of this TOR for details.) During the options evaluation stage it will be important to identify any significant adverse impacts that would affect the selection of the preferred by-pass option (or options). Once the preferred by-pass option is selected, mitigation measures, if needed, would need to be implemented to address any negative impacts.
- Other Evaluation Criteria. Additional evaluation criteria which the [PROVINCE] may find to be significant, especially those related to the regional development plan, could be considered.

Assessment Summary and Selection of the Preferred Options (or Options)

Based on the above assessments, the consultant shall establish the relative merits of the various by-pass options. The options assessments should first consider the merits of each option assuming the necessary funds could be made available (i.e. making assessments principally on the basis of the economic rate of return and other evaluation criteria other than availability of funds). After this, another assessment should

This document has been prepared for the purposes of the **PPP IN INFRASTRUCTURE RESOURCE CENTER FOR CONTRACTS, LAWS AND REGULATION (PPPIRC)** website. It is a sample document FOR REFERENCE PURPOSES ONLY and SHOULD NOT BE used as a "model". The inclusion of any legal materials on the PPPIRC website does not mean that they are in any way approved, endorsed or recommended by the World Bank Group or its affiliates. Legal advice should be sought to determine whether a particular legal document is appropriate for any given project, and how the specific terms of the document should be adapted to fit the circumstances of that project.

be undertaken taking into account the likelihood of alternative possible sources of public and private sector funding. The final step of this assessment should be a recommendation on the preferred by-pass option (or options).

Multi-Criteria Assessment Matrix

Option A	Option B	Option C	Option D	Option E	Option F	Option G	Option H	Evaluation Criteria
								Traffic Impact (which options provide best solution for transiting traffic and secondarily provide the most relief for city traffic)
								Cost of Road Construction and Maintenance
								Economic Rate of Return (internal rate of return and net present value)
								Financial Rate of Return (for those options proposed with tolling)
								Likely Availability of Public Sector Sources of Finance (Federal, <i>[PROVINCIAL]</i>)
								Public-Private-Partnership (PPP) potential
								Meeting Special Qualitative Requirements for Federal Financial Assistance (including substantiating that the project would be impossible without Investment fund budgetary assistance)
								Meeting Special Quantitative Federal Financial Assistance Criteria for Financial Assistance (financial efficiency, budgetary efficiency, and economic efficiency as defined)
								Addressing Safeguard Measures (environmental, social, cultural heritage)
								Other Proposed Evaluation Criteria (speed of implementation, etc.)

Task #9: Refined Design, Costs, and Tolls for the Preferred By-Pass Option¹¹

Objective

The purpose of this section of the feasibility study is to refine the design, cost estimates, methods of toll collection, and estimated tolls for the preferred by-pass option as a basis for a final financial and PPP assessment of this option. It is expected that once the preferred by-pass option is selected that some alterations to the design and associated costs are likely to make the proposed option more cost efficient and acceptable to funding authorities.

¹¹ See Sections 5 and 6 (Technical Solution and Toll Rate Assessment and Construction and Maintenance Cost Estimates of this report for guidance in preparing this portion of the feasibility study.

This document has been prepared for the purposes of the **PPP IN INFRASTRUCTURE RESOURCE CENTER FOR CONTRACTS, LAWS AND REGULATION (PPPIRC)** website. It is a sample document FOR REFERENCE PURPOSES ONLY and SHOULD NOT BE used as a "model". The inclusion of any legal materials on the PPPIRC website does not mean that they are in any way approved, endorsed or recommended by the World Bank Group or its affiliates. Legal advice should be sought to determine whether a particular legal document is appropriate for any given project, and how the specific terms of the document should be adapted to fit the circumstances of that project.

Tasks

The consultant shall review, inter-alia, the following aspects of the preferred by-pass design and recommend adjustments as appropriate to improve the potential acceptability of this option:

- Route alignment
 - To reduce costs
 - To reduce potential adverse environmental, social, or cultural heritage impacts
- Design standards by road segment
 - Interchange design
 - Pavement design
 - Pavement, shoulder, and median widths
- Cost estimates
- Alternative toll collection methods
- Alternative toll levels
 - By Vehicle type
 - By level of congestion
- Estimated tolls and estimated traffic based on the tolls

Task #10: Financial Analysis and PPP Assessment of the Preferred By-Pass Option¹²

Purpose of a PPP Assessment

The purpose of this section of the feasibility study is to determine whether the project should be implemented as a PPP, or whether to proceed using traditional procurement (100% public sector financing). PPPs are not always the solution and although they can bring private investment, they also come with potentially high fiscal risk. If the PPP option is determined to be feasible this section of the feasibility study will also establish the basic structure of the proposed PPP arrangements.

¹² See Sections 7 and 8 (“Introduction of PPP and Implications for the [PROVINCE]” and “Review of PPP Models Applicable to the By-Pass”) of this report for guidance in preparing this portion of the feasibility study.

This document has been prepared for the purposes of the **PPP IN INFRASTRUCTURE RESOURCE CENTER FOR CONTRACTS, LAWS AND REGULATION (PPPIRC)** website. It is a sample document FOR REFERENCE PURPOSES ONLY and SHOULD NOT BE used as a "model". The inclusion of any legal materials on the PPPIRC website does not mean that they are in any way approved, endorsed or recommended by the World Bank Group or its affiliates. Legal advice should be sought to determine whether a particular legal document is appropriate for any given project, and how the specific terms of the document should be adapted to fit the circumstances of that project.

Tasks

To accomplish the PPP assessment the consultant will undertake the following tasks:

a. General Framework

The consultant will undertake a PPP assessment of the preferred by-pass option¹³, based on the following framework:

- Value for money generated by the PPP solution
- Appropriate risk allocation between the public and private sector
- Affordability for the [PROVINCE]

At the same time, the PPP project should be financially attractive to the private sector, which includes:

- Generating a high enough return to equity holder
- Having a Debt-Service Coverage ratio above a minimum level

The consultants will prepare a preliminary **Value-for-Money (VfM) assessment**. VfM means that the provision of the service by the private party results in a net benefit to the [PROVINCE], defined in terms of cost, price, quality, quantity, or risk transfer or a combination of these. The value for money assessment can be qualitative, quantitative (using a public-sector comparator) or a combination of these.

The consultant will prepare a **risk allocation matrix**. Individual risk will be identified and allocated to the party (private sector or [PROVINCE]) best able to manage it. The consultants will not seek maximum risk transfer to the private sector but the allocation that will be realistic (based on the country, region and project characteristics) as well as the stated interests of the [PROVINCE]. The objective of the risk allocation exercise is to minimize the overall cost for the [PROVINCE] and ensure that the project will generate interest from private investors.

The consultant will assess the **affordability** of the project and alternative options. Affordability is the driving constraint in PPP projects. The risk-adjusted expected net financial contribution from the [PROVINCE] to the project should be compared to the expected budget over the life of the concession. Affordability should ensure that there are sufficient funds to undertake the required future expenditure and investment in addition to the proposed project.

b. Financial Analysis

In order to assess the affordability of the project and determine its attractiveness to the private sector, the consultant will undertake a financial analysis.

The consultant will identify the potential sources of financial contribution to the project, including additional taxes and land transactions, and will quantify the potential revenue that can contribute to the financing of the project.

¹³ The consultant might also be requested to undertake a PPP assessment of other by-pass options than the preferred option if these alternative options appear very promising as reasonable alternatives to the preferred option.

This document has been prepared for the purposes of the **PPP IN INFRASTRUCTURE RESOURCE CENTER FOR CONTRACTS, LAWS AND REGULATION (PPPIRC)** website. It is a sample document FOR REFERENCE PURPOSES ONLY and SHOULD NOT BE used as a "model". The inclusion of any legal materials on the PPPIRC website does not mean that they are in any way approved, endorsed or recommended by the World Bank Group or its affiliates. Legal advice should be sought to determine whether a particular legal document is appropriate for any given project, and how the specific terms of the document should be adapted to fit the circumstances of that project.

The consultant will also prepare several scenarios based on:

- The by-pass options being tested
- Potential revenues from various sources
- Available fiscal envelope (*[PROVINCE]*) for the proposed project
- Changes in assumptions (incl. inflation, higher capex, lower traffic etc...)

A base case scenario, corresponding to the most likely scenario (not the most optimistic one) will be fully tested to determine the likely contribution from the *[PROVINCE]* to the project. The focus would be on testing if that scenario is financially affordable for the *[PROVINCE]*.

Structuring PPP options that have an implication on the total amount (and flow of funds) from the *[PROVINCE]* will be tested and will include at least the following:

- Financial implications of providing a minimum revenue guarantee vs. an availability payment mechanism
- Various levels of contributions to capital expenditure combined with financial contributions during operations

The list of scenarios and assumptions will be agreed with the *[PROVINCE]* before undertaking the analysis. A key output will be the identification of the structuring options that would make the proposed solution attractive to the private sector, meet requirements for Federal funding, and minimize financial contributions from the *[PROVINCE]*.

The estimated financial contributions will be compared to the maximum available budget for the *[PROVINCE]* road sector determined during the public expenditure review (see below). If the proposed solution is not assessed as affordable, the analysis will recommend realistic options for the *[PROVINCE]* (such as selecting a less expensive solution). The consultants will then agree with the *[PROVINCE]* on one or several alternative scenarios and will update the analysis. One of the possible scenarios is to investigate non-PPP options from the option analysis, that are more affordable and would result in lower payments from the *[PROVINCE]*: it is possible that a cheaper project, even without a toll, implemented with only public funds would have a lower budget impact for *[PROVINCE]* than an expensive solution for which tolls can be charged.

c. Public Expenditure Review

Given that the *[PROVINCE]* will likely be requested to contribute financially to the project, the consultant will prepare a public expenditure review of the *[PROVINCE]* highway sector to assess the fiscal space available during the life of the concession. This analysis will be essential to assess the affordability of any solution (PPP or with public funds).

The consultant will review the *[PROVINCE]* capital and recurrent projected expenditure, and the prioritization of projects. The objective is to determine how much from the *[PROVINCE]* budget could contribute to the capital cost of the project. This analysis should be independent from the amount of grant that is expected from Federal Funds.

This document has been prepared for the purposes of the **PPP IN INFRASTRUCTURE RESOURCE CENTER FOR CONTRACTS, LAWS AND REGULATION (PPPIRC)** website. It is a sample document FOR REFERENCE PURPOSES ONLY and SHOULD NOT BE used as a "model". The inclusion of any legal materials on the PPPIRC website does not mean that they are in any way approved, endorsed or recommended by the World Bank Group or its affiliates. Legal advice should be sought to determine whether a particular legal document is appropriate for any given project, and how the specific terms of the document should be adapted to fit the circumstances of that project.

The consultant will also undertake a preliminary assessment of how much could be allocated to the project during the life of the concession. Given the expected length of the concession, the analysis will be based on a set of assumptions and a methodology to be agreed with the [PROVINCE].

d. Financial Model

The consultant will prepare a financial model to assess the attractiveness of the project to private investors and if the PPP option is viable for the [PROVINCE].

The financial model will be designed using Microsoft Excel and will respond to the requirements set in the section "Financial Analysis and PPP Assessment". The model will be made available to the [PROVINCE] and will not contain any locked or hidden cells.

Prior to developing the financial model, the consultant will prepare a model book that will be discussed and agreed upon with the [PROVINCE]. The model book will describe the structure of the model, the calculation that will be performed and the list of assumptions.

Task #11: Environmental Impact Assessments¹⁴

Objective and Scope of the Assignment

The purpose of this section of the feasibility study is to (a) prepare preliminary environmental impact assessments for each of the proposed by-pass options as inputs to Task #8 ("Assessment of the By-Pass Options and Selection of the Preferred Option") and (b) a more detailed environmental assessment (EA) report as well as a preliminary environmental management plan (EMP) for the preferred by-pass option consistent with accepted international good practice as summarized in the Equator Principles.

Tasks

a. Conduct Preliminary Environmental Impact Assessments

The Consultant will perform preliminary environmental impact assessments of all proposed by-pass options in sufficient detail to assist in the selection of the preferred by-pass option. See Task #8 ("Assessment of the By-Pass Options and Selection of the Preferred Option"). The primary purpose of this preliminary task is to identify significant potentially adverse environmental impacts as well as indicative costs of remediation.

¹⁴ See Section 12 ("Environmental Assessment") of this report for guidance in preparing this portion of the feasibility study.

This document has been prepared for the purposes of the **PPP IN INFRASTRUCTURE RESOURCE CENTER FOR CONTRACTS, LAWS AND REGULATION (PPPIRC)** website. It is a sample document FOR REFERENCE PURPOSES ONLY and SHOULD NOT BE used as a "model". The inclusion of any legal materials on the PPPIRC website does not mean that they are in any way approved, endorsed or recommended by the World Bank Group or its affiliates. Legal advice should be sought to determine whether a particular legal document is appropriate for any given project, and how the specific terms of the document should be adapted to fit the circumstances of that project.

b. Prepare an Environmental Impact Assessment and Preliminary Environmental Management Plan for the Preferred By-Pass Option

Once the preferred by-pass option is selected that consultant will prepare a more detailed environmental assessment and a preliminary environmental management plan for this option. Specific activities under this task will include the following specific tasks:

- Determine the nature of *[STATE]* Legal Framework governing key issues such as protected areas, surface water bodies, forests, sensitive habitats (even if not protected), parks and other natural features. Establish if the project, as currently designed, satisfies those requirements, and how these compare to international good practice. If major gaps and discrepancies are detected, determine what measures/modifications are necessary to assure compliance. This information should be incorporated into a “Policy, Institutional and Legal Framework” section of the Environmental Assessment (EA) report and should be obtained by reviewing existing legislation or, if required, meeting representatives of the relevant authorities.
- Review international environmental treaties to which the *[STATE]* is a signatory (e.g. the Ramsar Convention on wetlands and migratory birds) to verify how the project and road alignment might be affected by any international environmental commitments.
- Review the existing data pool to assess the completeness, quality and relevance of this information and to identify inconsistencies and/or gaps as the basis for the EA report and EMP. This should include field data retrieved from investigation campaigns, analytical data (chemical analyses of environmentally relevant parameters), published data and information on regional / local environmental conditions.
- Prepare an impact assessment, propose mitigation measures and prepare a preliminary Environmental Management Plan (EMP) based on key environmental issues along the road alignment, such as wetlands and other sensitive habitats, surface water network, river and canal crossings, agricultural areas, settlements, forests, as well as indirect and induced impacts such as quarries, borrow pits and associated haulage roads, storage areas, aggregate plant and waste/spoils deposit areas.
- Investigate the connection between the proposed bypass and the regional development master plan and induced development caused by the by-pass. Some of the induced developments of the bypass (e.g. residential and infrastructure developments along new corridor, triggered by improved traffic connectivity) may have impacts of significant scale.
- Conduct a preliminary consultation process to assure that key aspects of the EA are fully documented in accordance with Equator Principles and demonstrate the validity of the process while respecting local values.
- Prepare recommendations for further safeguards work on the bypass project assuming that this project will receive funding for final detailed engineering and construction.

This document has been prepared for the purposes of the **PPP IN INFRASTRUCTURE RESOURCE CENTER FOR CONTRACTS, LAWS AND REGULATION (PPPIRC)** website. It is a sample document FOR REFERENCE PURPOSES ONLY and SHOULD NOT BE used as a "model". The inclusion of any legal materials on the PPPIRC website does not mean that they are in any way approved, endorsed or recommended by the World Bank Group or its affiliates. Legal advice should be sought to determine whether a particular legal document is appropriate for any given project, and how the specific terms of the document should be adapted to fit the circumstances of that project.

Task #12: Social Impact Assessment and Resettlement Action Plan¹⁵

Objectives

The purpose of this section of the feasibility study is to (a) prepare preliminary social impact assessment for each of the proposed by-pass options as inputs to Task #8 (“Assessment of the By-Pass Options and Selection of the Preferred Option”) and (b) a more detailed social impact assessment and resettlement action plan (RAP) for the preferred by-pass option. The (RAP) will be developed to minimize dislocation associated with the road construction and create internal institutional mechanisms to mitigate likely misunderstandings/discontent.

Tasks

The Consultant shall perform the following specific tasks:

a. Preliminary Social Impact Assessments

The Consultant will perform preliminary social impact assessments of all proposed by-pass options in sufficient detail to assist in the selection of the preferred by-pass option. See Task #8 (“Assessment of the By-Pass Options and Selection of the Preferred Option”). The primary purpose of this preliminary task is to identify significant potentially adverse social impacts as well as the indicative costs of remediation.

b. Social Impact Assessment and Preliminary Resettlement Action Plan for the Preferred By-Pass Option

Specifically, the Consultant will carry out a **social screening exercise** to:

- **Determine the area and the population** affected by the road construction.
- **Assess the positive/negative impacts of** the road construction on the population of the affected areas.
- Separate **long-term effects**, such as resettlement/loss of income stream/livelihood from **the short-term benefits/dislocation** associated with the road construction.
- **Analyze risks and impacts of the road** construction/operation in the context of specific project cycles (pre-construction, construction, operations).
- **Conduct disclosure and consultation** meetings with the affected communities.
- On the basis of the above listed fact-finding activities create a **Resettlement Action Plan (RAP)** for resettlement/compensations provided to identified households

The RAP is intended to ensure that there is no harm done as a result of the investment project. It addresses concerns for the most vulnerable and ensures that post-project livelihood would at least

¹⁵ See Section 13 (“Social Assessment”) of this report for guidance in preparing this portion of the feasibility study.

This document has been prepared for the purposes of the **PPP IN INFRASTRUCTURE RESOURCE CENTER FOR CONTRACTS, LAWS AND REGULATION (PPPIRC)** website. It is a sample document FOR REFERENCE PURPOSES ONLY and SHOULD NOT BE used as a "model". The inclusion of any legal materials on the PPPIRC website does not mean that they are in any way approved, endorsed or recommended by the World Bank Group or its affiliates. Legal advice should be sought to determine whether a particular legal document is appropriate for any given project, and how the specific terms of the document should be adapted to fit the circumstances of that project.

be equal to the situation before the project. It will include grievance redress mechanisms and institutional arrangements for the implementation of the RAP, stating the responsibilities of each stakeholder. It will also include cost-effective communication mechanisms, as well as the monitoring and evaluation mechanisms.

The consultant should undertake the following tasks in preparing the RAP:

- Description of **local socioeconomic conditions**, as identified during the social screening.
- Assessment of the **national and regional legal framework**.
- **A matrix of additional activities** needed to bring RAP to **international standards**.
- **Methods of impact measurement** and property valuation that will be used under the project
- **Institutional arrangements**, which describes **roles of relevant stakeholders** - regional government agencies, local authorities, project-affected people, community representatives, and other NGOs/ civil society organizations, in terms of consultation, implementation, monitoring, and budgeting.

- **Cost estimates**, which should include indicative costs of compensation for lost assets and provision of rehabilitation measures, and budgeting sources.
- **Implementation schedule** in line with physical investment schedule.
- **“Green light conditions”** which describes a list of conditions that should be met before specific project activities are allowed to be implemented, which should be fine-tuned to construction and resettlement schedule.
- **Communication Strategy**, which should identify a list of communication channels that enable government agencies effectively to deliver right information to project-affected people, and project affected people to inform government agencies of their preference and perceptions. The Consultant should pay particular attention to communication between government agencies and representatives of project-affected people, and between Project-Affected People and their representatives, to ensure sound flow of information. The strategy should detail at which stage what information would be published and brought forth for public discussion.
- **Grievance redress mechanisms** that describe processes, procedures and responsibilities to identify and address grievance of the project-affected people about the compensation/ rehabilitation measures.
- **Entitlement Matrix**, which describes the kinds/volume of compensation/rehabilitation measures agreed by both project-affected people and relevant government agencies as mutually satisfactory. A sample Entitlement Matrix is attached below in Figure 1.
- **Monitoring and evaluation mechanisms**, which describe both internal monitoring mechanisms within the responsible government agency to keep track of the implementation of RAP, and ex post evaluation by a third party.

This document has been prepared for the purposes of the **PPP IN INFRASTRUCTURE RESOURCE CENTER FOR CONTRACTS, LAWS AND REGULATION (PPPIRC)** website. It is a sample document FOR REFERENCE PURPOSES ONLY and SHOULD NOT BE used as a "model". The inclusion of any legal materials on the PPPIRC website does not mean that they are in any way approved, endorsed or recommended by the World Bank Group or its affiliates. Legal advice should be sought to determine whether a particular legal document is appropriate for any given project, and how the specific terms of the document should be adapted to fit the circumstances of that project.

Figure 1: Sample Entitlement Matrix

Type of Losses	Level of Impact	Entitled Persons	Entitlement Policy and Standards	Implementation Issues
Permanent loss of land	Impact severe	Private persons with official titles		
		Private persons without official titles		
		Vulnerable households		
		Private enterprises		
		Municipality		
	Impact minor	Private persons with official titles		
		Private persons without titles		
		Vulnerable households		
		Private enterprises		
		Municipality		
Demolition of residential structure				
Demolition of commercial structure				
Loss of income				

Suggested Table of Contents for Resettlement Action Plan

1. Project description
2. Baseline socioeconomic information of the project areas.
3. Avoidance or reduction of displacement
4. Identification of Project-Affected People, including vulnerable groups
5. Consultation and participation
6. Land acquisition/ resettlement mechanisms
7. Entitlement Matrix
8. "Greenlight conditions" of resettlement
9. Coordination with civil works

This document has been prepared for the purposes of the **PPP IN INFRASTRUCTURE RESOURCE CENTER FOR CONTRACTS, LAWS AND REGULATION (PPPIRC)** website. It is a sample document FOR REFERENCE PURPOSES ONLY and SHOULD NOT BE used as a "model". The inclusion of any legal materials on the PPPIRC website does not mean that they are in any way approved, endorsed or recommended by the World Bank Group or its affiliates. Legal advice should be sought to determine whether a particular legal document is appropriate for any given project, and how the specific terms of the document should be adapted to fit the circumstances of that project.

10. Institutional arrangement
11. Training
12. Monitoring and reporting
13. Grievance procedures and communication strategy
14. Budget and funding
15. Contingencies and flexibility

Task #13: Cultural Heritage Assessment¹⁶

Objective

The purpose of this section of the feasibility study is to devise a detailed management plan for safeguarding the cultural and historical heritage assets that could be impacted by the proposed [CITY] by-pass. This should be with regards to such assets, be they above or below ground, with specific attention to be given to chance archaeological and other sub-soil finds.

Tasks

The consultant is expected to conduct both research and analytical activities based on a combination of primary and secondary data subject to task relevance. Thus the consultant will undertake the following tasks:

a. Preliminary Cultural Heritage Assessments

The Consultant will perform preliminary cultural heritage assessments of all proposed by-pass options in sufficient detail to assist in the selection of the preferred by-pass option. See Task #8 (“Assessment of the By-Pass Options and Selection of the Preferred Option”). The primary purpose of this preliminary task is to identify significant potentially adverse cultural heritage impacts as well as the indicative costs of remediation.

b. Cultural Heritage Management Plan for the Preferred By-Pass Option

The consultant will undertake the following tasks in preparing a cultural heritage management plan for the preferred by-pass option:

- Establishment of Base Line Data

This portion of the tasks combines both research and analysis. The research will consist mostly of an

¹⁶ See Section 14 (“Cultural Heritage Assessment”) of this report for guidance in preparing this portion of the feasibility study. See also Annex #2 which presents charts on cultural heritage requirements, assessment/mitigation measures, and additional sources of information.

This document has been prepared for the purposes of the **PPP IN INFRASTRUCTURE RESOURCE CENTER FOR CONTRACTS, LAWS AND REGULATION (PPPIRC)** website. It is a sample document FOR REFERENCE PURPOSES ONLY and SHOULD NOT BE used as a "model". The inclusion of any legal materials on the PPPIRC website does not mean that they are in any way approved, endorsed or recommended by the World Bank Group or its affiliates. Legal advice should be sought to determine whether a particular legal document is appropriate for any given project, and how the specific terms of the document should be adapted to fit the circumstances of that project.

identification of the cultural and historical heritage at and in the vicinity of project site. In view of the strong probability of encountering buried products of human cultural activity (such as utilitarian objects and weapons) during excavations this identification is to include both visible and invisible physical cultural resources. Furthermore, due to specific nature of the site that might cover former battle areas, sub-soil finds may include human remains that for the purposes of this assignment are to be considered an integral part of the cultural landscape implying that they should be taken into consideration in the context of the identification process. Whereas visible cultural expressions can be identified through mere observation during field surveys, the presence of sub-soil artifacts necessitates different surveying tools. To the extent possible, the use of non-invasive documentation techniques such as aerial (satellite picture analysis) and low impact walkover ground surveys and geophysical prospecting including sampling and laboratory analysis of transects is recommended. Additionally, the consultant should ensure that identification techniques used are in compliance with local and national regulations.

The base line data should also provide information pertaining to land ownership. This may be apportioned in three broad categories: Federal, Municipal and/or private; and indicate if any parcels of land are classified (see the *[LAW]*) and determine whether other provisions may be triggered (for example see *[LAW]*).

The analytical portion of this task will make use of the above data to: i) assess the significance of the historical and cultural heritage with particular reference to the local social, legal, regulatory and institutional framework, ii) identify targeted additional types of expertise that may be needed during project preparation and/or implementation, iii) assess the potential impacts the project may have on such resources, and iv) establish the conditions of the site prior to interventions that will subsequently be used as part of the overall monitoring process.

- Identification and Review of the Applicable Laws, Regulations and Policies

First and foremost this pertains to national and local legal and regulatory provisions. However in view of the range of investors foreseen, the consultant will review all relevant policies and procedures pertaining to the protection of cultural heritage that may apply in order to ensure that there are no gaps between various stakeholders' requirements. The consultant is expected to make use of analytical skills, comment and provide recommendations on how to address in practical ways any such gaps that may surface. Particular attention should be given to the procedures for chance finds be they of an archaeological or forensic nature in order to incorporate them as standard provisions in construction contracts if applicable.

- Identification of the Institutional Framework

Having identified the rules and regulations pertaining to the protection of historical and cultural heritage (including human remains), the consultant will proceed to investigate which are the local (and/or national subject to the above findings) administrative authorities responsible as well as the specific role of local agencies. This identification should be accompanied by an institutional capacity assessment to determine whether there is a need for specific expertise such as forensic archeologists, for example, or for targeted training. As previously mentioned, in the case of this project it is very important to review the national procedures for chance finds including notification, study/waiting period, preservation, storage, restitution. However in the context of this task the focus shall be on administrative procedures, giving details on the roles and responsibilities of relevant agencies and individuals in charge of every step of the chance find

This document has been prepared for the purposes of the **PPP IN INFRASTRUCTURE RESOURCE CENTER FOR CONTRACTS, LAWS AND REGULATION (PPPIRC)** website. It is a sample document FOR REFERENCE PURPOSES ONLY and SHOULD NOT BE used as a "model". The inclusion of any legal materials on the PPPIRC website does not mean that they are in any way approved, endorsed or recommended by the World Bank Group or its affiliates. Legal advice should be sought to determine whether a particular legal document is appropriate for any given project, and how the specific terms of the document should be adapted to fit the circumstances of that project.

procedures. In case there are no national or local provisions and procedures for such finds, this should be clearly indicated and the consultant is expected to devise a detailed mechanism) to be included as part of the Management Plan (see below).

- Elaboration of a Management Plan

The management plan is developed based on the research and analysis undertaken with an emphasis on which measures should be taken to mitigate potential adverse impacts to the cultural and historical heritage. Its purpose is to ensure that project implementation is carried out in compliance with all relevant requirements to the protection of cultural and historical heritage from all stakeholders' perspectives and to ensure that proper accountability mechanisms are established. An integral management plan implies undertaking stakeholder consultation prior to its elaboration, which will be expected as part of the consultant's activities. Additionally, in view of the significance of this cultural landscape, a public information campaign plan is also expected to be developed by the consultant. While the most important part of the management plan pertains to the identification of potential impacts and the relevant mitigation measures devised, the plan is intended as a detailed and practical tool charting activities and consequences as well as administrative and budgetary responsibilities. Therefore the plan is expected to include *inter alia*: the inventory of the areas likely to be subject to impact, the nature of the activity likely to have an impact (installation of cables, drainage, temporary structures, etc.), the type of impact (short term, medium term), measures taken to mitigate such impacts, reasons for mitigation, implementation responsibilities, financial responsibilities and monitoring procedures.

- Outputs

Based on the above tasks, the Consultants shall prepare a report containing the following:

- The database of cultural and historical heritage. It should provide details on the techniques used and be supported by visual evidence.
- A gap chart including recommendations whenever applicable. The original text of all legislation, rules and regulations pertaining to the protection of heritage relevant to this project specifying the origin of the data should be attached, preferably in their electronic version whenever possible.
- A summary of the consultations undertaken, highlighting any significant issues.
- A list of all institutions and authorities responsible for historical and cultural heritage relevant to the project, explaining the roles and responsibilities of each one (fiscally and academically). This portion should also identify which are the essential (scientific) experts and instruments necessary for the monitoring of activities. In case capacity weakness is identified, a training proposal should be submitted.
- A Management Plan including a chart describing the possible impact of the project on the historical, cultural and archaeological heritage and elaborating on a set of mitigation measures (see Annex 2).
- A detailed plan for chance find procedures including notification, study/waiting period, preservation, storage, restitution and general administration (e.g., responsible institutions). In addition to a textual description, and in order to facilitate an "at-a-glance" grasp of these procedures' implementation, they are expected to be graphically illustrated by a diagram as

This document has been prepared for the purposes of the **PPP IN INFRASTRUCTURE RESOURCE CENTER FOR CONTRACTS, LAWS AND REGULATION (PPPIRC)** website. It is a sample document FOR REFERENCE PURPOSES ONLY and SHOULD NOT BE used as a "model". The inclusion of any legal materials on the PPPIRC website does not mean that they are in any way approved, endorsed or recommended by the World Bank Group or its affiliates. Legal advice should be sought to determine whether a particular legal document is appropriate for any given project, and how the specific terms of the document should be adapted to fit the circumstances of that project.

- an integral part of the Management Plan. Provisions ensuring the safety of site workmen in the event of finding undetonated explosives should also be included.
- A public information campaign plan.
 - A monitoring plan.

Task #14: Summary of Recommendations and Proposed Next Steps

Objective

The primary purpose of this section of the feasibility study is to summarize in succinct fashion the principal recommendations of the feasibility study and then to outline proposed next steps leading to the funding and implementation of the proposed by-pass.

Tasks

The consultant shall:

- Summarize the principal recommendations of the study:
 - The preferred by-pass option
 - Other by-pass options that could be considered
 - The design standards and costs of the preferred option
 - The proposed method of financing the option
 - Timetable for project implementation
- Outline the scope and sequence of steps needed for practical implementation of the by-pass:
 - Obtaining final approvals of the by-pass for federal or other assistance
 - Additional investigations that might be required
 - Establishing institutional arrangements for by-pass implementation
 - Preparing detailed engineering and bidding documents
 - Detailing the procurement process
 - Project management & supervision

Reports, Reviews, and Emphasis

7. The consultant will prepare each section of the feasibility study as described in the above task descriptions and according the schedule as summarized in the table below. The report shall be in the [_____] language. Upon completion of a draft version of each section of the report 6 hard copies in the [_____] language will be presented to the client, and all sections will additionally be made available electronically.

8. All drafts of each section of the feasibility study report will be subject to timely reviews by the [ADMINISTRATIVE DIVISION] Transport Department and by the World Bank. Formal reviews by both the client and the World Bank are proposed at 6 stages of the reporting process as shown in the table

This document has been prepared for the purposes of the **PPP IN INFRASTRUCTURE RESOURCE CENTER FOR CONTRACTS, LAWS AND REGULATION (PPPIRC)** website. It is a sample document FOR REFERENCE PURPOSES ONLY and SHOULD NOT BE used as a "model". The inclusion of any legal materials on the PPPIRC website does not mean that they are in any way approved, endorsed or recommended by the World Bank Group or its affiliates. Legal advice should be sought to determine whether a particular legal document is appropriate for any given project, and how the specific terms of the document should be adapted to fit the circumstances of that project.

below. The consultant will be obligated to make revisions to the report based on these reviews. Upon completion of the final approved feasibility study document the consultant shall provide 50 hard copies to the *[ADMINISTRATIVE DIVISION]* and additionally the report will be made available electronically and on a designated web site.

9. Beyond preparation of each section of the feasibility study the consultant shall prepare monthly progress reports indicating the status of preparing each section of the feasibility study, problems that need to be addressed, and any other information pertaining to the timely execution of the study.

This document has been prepared for the purposes of the **PPP IN INFRASTRUCTURE RESOURCE CENTER FOR CONTRACTS, LAWS AND REGULATION (PPPIRC)** website. It is a sample document FOR REFERENCE PURPOSES ONLY and SHOULD NOT BE used as a "model". The inclusion of any legal materials on the PPPIRC website does not mean that they are in any way approved, endorsed or recommended by the World Bank Group or its affiliates. Legal advice should be sought to determine whether a particular legal document is appropriate for any given project, and how the specific terms of the document should be adapted to fit the circumstances of that project.

Required Reports and Reviews¹⁷

Task	Months from Contract Award to Completion of Task	Estimated Percent of Total Consultant Inputs
Monthly Progress Reports	---	1
#1: Executive Summary	Prepared at end of study	---
#2: Introduction and Study Objectives	0.5	2
#3: Existing Traffic Conditions and Need for a By-Pass	1.5	5
#4: Regional Development Potentials as a Justification for the By-Pass	1.5	10
#5: Identification and Description of the By-Pass Options	1.5	12
#6: Introduction of the PPP Concept and Review of the PPP Framework	1.5	5
<i>Client and World Bank Review</i>	2.0	
#7: Traffic Forecasts and Assignments to the By-Pass Options	2.5	15
#8: Assessment of the By-Pass Options and Selection of the Preferred Option	3.0	20
<i>Client and World Bank Review</i>	3.5	
#9: Refined Design, Costs, and Tolls for the Preferred By-Pass Option	4.0	5
#10: Financial Analysis and PPP Assessment of the Preferred By-Pass Option	4.5	5
<i>Client and World Bank Review</i>	5.0	
#11: Environmental Impact Assessment	5.5	5
#12: Social Impact Assessment and Resettlement Action Plan	5.5	5
#13: Cultural Heritage Assessment	5.5	5
<i>Client and World Bank Review</i>	6.0	
#14: Summary of Recommendations and Recommended Next Steps	6.5	3
#1: Executive Summary	6.5	2
<i>Client and World Bank Review</i>	7.0	--
Total	---	100

¹⁷ The report schedule may be adjusted at the time of contract negotiations or after the completion of the inception report.

This document has been prepared for the purposes of the **PPP IN INFRASTRUCTURE RESOURCE CENTER FOR CONTRACTS, LAWS AND REGULATION (PPPIRC)** website. It is a sample document FOR REFERENCE PURPOSES ONLY and SHOULD NOT BE used as a "model". The inclusion of any legal materials on the PPPIRC website does not mean that they are in any way approved, endorsed or recommended by the World Bank Group or its affiliates. Legal advice should be sought to determine whether a particular legal document is appropriate for any given project, and how the specific terms of the document should be adapted to fit the circumstances of that project.

Study Administration

Study Management

9. The client for this study is the [ADMINISTRATIVE DIVISION]. The [ADMINISTRATIVE DIVISION] will designate a study manager to provide technical guidance to the consultants on the conduct of the study. In addition to the study manager, the [ADMINISTRATIVE DIVISION] will designate a Steering Committee comprised of relevant government officials and other important stakeholders to review the consultant's findings and to provide guidance on final recommendations throughout the study.

Resources Provided by Client

10. The following resources will be provided by the client:
- (a) Staff Assigned to the Consultant. At the outset of the study the client will provide the names of the staff whom will be available to work full time (or part time) with the consultant.
 - (b) Suitable Office Space. The client will provide adequate office space and furniture for all the Consultants. [This needs to be verified and the amount of space determined].
 - (c) Legislation. Copies of existing legislation and regulations that could impact of the study.
 - (d) Other. (To be determined)

Resources Provided by the Consultant

11. The following resources will be provided by the Consultant:
- (a) Computers and Printers for Own Use. The Consultant will provide all required computers and printers for their own use.
 - (b) Printers and Paper for Report Production. The Consultant will provide suitable equipment and paper for all report production required under the project, and will print all required reports.
 - (c) Other. (To be determined)

Team Qualifications and Composition

12. The selected consulting firm (or consortium) should have extensive experience in

This document has been prepared for the purposes of the **PPP IN INFRASTRUCTURE RESOURCE CENTER FOR CONTRACTS, LAWS AND REGULATION (PPPIRC)** website. It is a sample document FOR REFERENCE PURPOSES ONLY and SHOULD NOT BE used as a "model". The inclusion of any legal materials on the PPPIRC website does not mean that they are in any way approved, endorsed or recommended by the World Bank Group or its affiliates. Legal advice should be sought to determine whether a particular legal document is appropriate for any given project, and how the specific terms of the document should be adapted to fit the circumstances of that project.

preparation of feasibility studies for both rural and urban highway projects. Fluency in the [_____] language is essential and prior experience in seeking [STATE] financial assistance for projects is highly desirable.

13. The following specific qualifications should be demonstrated in the feasibility study team
- Strong team leader with proven multi-disciplinary management skills in rural and urban road feasibility studies.
 - Highway design engineering
 - Urban traffic management
 - Traffic modeling
 - Urban land development planning
 - PPP concession design for road projects
 - Environmental, social, and cultural heritage impact specialists¹⁸
 - Legal (especially for concessions and impact assessment requirements)

¹⁸ It is possible that the environmental, social, and cultural heritage assessments might be conducted under separate study terms of reference.

This document has been prepared for the purposes of the **PPP IN INFRASTRUCTURE RESOURCE CENTER FOR CONTRACTS, LAWS AND REGULATION (PPPIRC)** website. It is a sample document FOR REFERENCE PURPOSES ONLY and SHOULD NOT BE used as a "model". The inclusion of any legal materials on the PPPIRC website does not mean that they are in any way approved, endorsed or recommended by the World Bank Group or its affiliates. Legal advice should be sought to determine whether a particular legal document is appropriate for any given project, and how the specific terms of the document should be adapted to fit the circumstances of that project.

ANNEXES TO THE TERMS OF REFERENCE

Annex 1: Cultural Heritage Assessment

Attachment 1: Comparative Chart on requirements pertaining to the protection of cultural and archaeological heritage - Data and presentation format sample

[STATE] Federal Legislation, Law Nr. xxx for Cultural Heritage	World Bank Safeguard OP/BP 4.11	IFC Performance Standard 8 (Cultural Heritage)	EBRD Performance Requirement 8 (Cultural Heritage)	Comments
Art. X (collaboration of local governments units with relevant Institutes)	If there is any question of cultural property in the area, a brief reconnaissance survey should be undertaken in the field by a specialist.			(Urban) Development plans and planners do not incorporate nor actively collaborate <u>in planning process</u> with relevant CH institutions.
Art. X on authority permitted to carry out excavations	The management of cultural property of a country is the responsibility of the government.			Partial correspondence
Art. X on ownership of archaeological finds				
Art. X on mandatory reporting of random chance finds of individual objects				Correspondence
Art. X on provisions and temporary measures pertaining to chance finds during larger works - e.g. agricultural diggings, engineering construction works, buildings construction - outside the jurisdiction of relevant Institutes.	In some cases, the project is best relocated in order that sites and structures can be preserved, studied, and restored intact in situ. In other cases, structures can be relocated, preserved, studied, and restored on alternate sites. Often, scientific study, selective salvage, and museum preservation before destruction is all that is necessary. Most such projects should include the training and strengthening of institutions entrusted with safeguarding a nation's cultural patrimony. Such activities should be directly included in the scope of the project, rather than being postponed for some possible future action, and the costs are to be internalized in computing overall project costs.			No Correspondence

This document has been prepared for the purposes of the **PPP IN INFRASTRUCTURE RESOURCE CENTER FOR CONTRACTS, LAWS AND REGULATION (PPPIRC)** website. It is a sample document FOR REFERENCE PURPOSES ONLY and SHOULD NOT BE used as a "model". The inclusion of any legal materials on the PPPIRC website does not mean that they are in any way approved, endorsed or recommended by the World Bank Group or its affiliates. Legal advice should be sought to determine whether a particular legal document is appropriate for any given project, and how the specific terms of the document should be adapted to fit the circumstances of that project.

Attachment 2:
Impact Assessment and Mitigation Measures - Data and presentation format sample

Activity	Possible Impact	Mitigation Measure	Reason for mitigation	Implementing responsibility	Budget responsibility

Attachment #3:
List of sites

- http://www.international.icomos.org/centre_documentation/coe_eng.htm
- http://www.international.icomos.org/e_archae.htm
- http://portal.unesco.org/en/ev.php-URL_ID=13062&URL_DO=DO_TOPIC&URL_SECTION=201.html
- <http://conventions.coe.int/Treaty/en/Treaties/Html/143.htm>
- <http://www.ifc.org/ifcext/sustainability.nsf/Content/SustainabilityPolicy>
- <http://www.ebrd.com/about/policies/enviro/policy/index.htm>
- http://web.worldbank.org/WBSITE/EXTERNAL/PROJECTS/EXTPOLICIES/EXTSAFEPOL/0,,contentMDK:20543961~menuPK:1286639~pagePK:64168445~piPK:64168309~theSitePK:584435_00.html