

TENDER DOCUMENT

Road Construction Project

Tender ID:	TEN20250330154012
Issuing Authority:	Public Works Department (PWD), State Government
Tender Amount:	■100,000,000.00
Bid Start Date:	25-02-2025
Bid End Date:	09-05-2025

Executive Summary

- • *Executive Summary

The proposed road construction project aims to develop a 20-kilometer stretch of road with asphalt paving, drainage systems, and necessary signage, enhancing the connectivity and accessibility of the region. This ambitious project, valued at ₹100,000,000, requires a highly skilled and experienced contractor to ensure timely completion, adherence to environmental and safety standards, and delivery of a high-quality infrastructure.

- • *Project Overview

The project involves the construction of a 20-kilometer stretch of road, which will cater to the growing needs of the regional population and facilitate economic growth. The scope of work includes:

- • Asphalt paving for the entire stretch of road
- • Installation of drainage systems to prevent waterlogging and ensure a smooth driving experience
- • Provision of necessary signage, including direction boards, warning signs, and speed limit boards
- • Construction of retaining walls and embankments as required
- • Environmental and safety management in accordance with industry standards and regulations

- • *Key Requirements

To successfully execute this project, the contractor must demonstrate the following key requirements:

- • Experience in Road Construction: The bidder must provide proof of experience in road construction projects with a similar scope and scale. A minimum of 5 years of experience in asphalt paving and drainage system installation is required.
- • Qualified Labor: The contractor must provide a team of qualified and experienced laborers, engineers, and supervisors who are capable of executing the project scope.
- • Machinery and Equipment: The bidder must provide a fleet of modern and well-maintained machinery and equipment, including asphalt pavers, rollers, excavators, and dump trucks.
- • Environmental and Safety Management: The contractor must adhere to environmental and safety standards, including:

+ Compliance with the Environmental Protection Act, 1986

+ Adherence to the Factories Act, 1948, and the Mines Act, 1952

+ Implementation of a robust safety management system, including risk assessment and mitigation measures

- •*Project Timeline and Milestones

The project is expected to be completed within 12 months from the commencement date.

The key milestones are:

- • Phase 1 (Months 1-3): Site preparation, drainage system installation, and asphalt paving
- • Phase 2 (Months 4-6): Signage installation, retaining wall construction, and embankment building
- • Phase 3 (Months 7-12): Final inspection, testing, and handover of the project
- •*Industry Standards and Best Practices

The project will be executed in accordance with the following industry standards and best practices:

- • Indian Roads Congress (IRC) Standards: The project will be designed and constructed in accordance with the IRC standards for road construction, including IRC: 73-2012, IRC: 80-2012, and IRC: 112-2011.
- • American Society of Civil Engineers (ASCE) Guidelines: The project will be managed and executed in accordance with the ASCE guidelines for road construction, including the ASCE 32-01 and ASCE 54-01.

By partnering with a qualified and experienced contractor, we are confident that this project will be executed efficiently, effectively, and in accordance with the highest industry standards.

Project Overview and Objectives

- •*Project Overview and Objectives
- •*Project Title: Road Construction Project - 20-kilometer Stretch
- •*Project Overview:

The proposed Road Construction Project aims to construct a 20-kilometer stretch of road connecting [Town/City A] to [Town/City B]. The project scope includes the construction of a high-quality, asphalt-paved road with an integrated drainage system and essential signage. This infrastructure development project will improve connectivity, enhance road safety, and reduce travel time between the two towns. The project will also create employment opportunities and stimulate local economic growth.

- •*Project Objectives:

The primary objectives of this project are to:

- • Construct a 20-kilometer stretch of road with asphalt paving, drainage systems, and necessary signage within the stipulated timeframe and budget.
- • Ensure the road is designed and constructed to meet the Indian Roads Congress (IRC) standards and guidelines for road construction.
- • Provide a safe and durable road surface that minimizes the risk of accidents and promotes smooth traffic flow.
- • Implement an efficient drainage system that can handle the rainfall and floodwater runoff.
- • Construct necessary signage, including traffic signals, pedestrian crossings, and directional signs, to ensure road safety and user convenience.
- • Adhere to environmental and safety standards, including minimizing noise pollution, preventing soil erosion, and ensuring worker safety.
- • Provide a minimum of 5 years maintenance warranty for the constructed road.
- • *Key Performance Indicators (KPIs):

The following KPIs will be used to measure the project's success:

- • Completion of road construction within 18 months from the commencement of work.
- • Achieving a smooth, durable, and safe road surface with a minimum of 10 years lifespan.
- • Reducing traffic congestion by 30% and travel time by 25%.
- • Maintaining a safety record with zero fatalities and injuries during construction.
- • Achieving a minimum of 95% compliance with environmental and safety standards.
- • *Project Location:

The project site is located between [Town/City A] and [Town/City B], spanning a total distance of 20 kilometers. The project will be constructed on existing land, and the bidder must ensure that all necessary permissions and approvals are obtained from the relevant authorities.

- • *Project Budget:

The approved project budget is **■100,000,000.0**, which includes the following components:

- • Road construction: **■70,000,000.0 (70%)**
- • Drainage system: **■15,000,000.0 (15%)**
- • Signage and traffic signals: **■5,000,000.0 (5%)**
- • Environmental and safety measures: **■5,000,000.0 (5%)**
- • Contingency fund: **■5,000,000.0 (5%)**

- • *Project Schedule:

The project is expected to commence on [Start Date] and complete within 18 months. The project schedule will be as follows:

- • Project planning and preparation: 2 months
- • Site clearance and excavation: 3 months
- • Road construction and drainage system: 8 months
- • Signage and traffic signals installation: 2 months
- • Testing and commissioning: 1 month
- • Maintenance and warranty period: 5 years
- • *Bidder Requirements:

The bidder must provide proof of experience in road construction, qualified labor, and machinery for the job. The bidder must also ensure adherence to environmental and safety standards, including minimizing noise pollution, preventing soil erosion, and ensuring worker safety. The bidder must provide a detailed project plan, including a timeline, budget, and resource allocation plan.

Detailed Technical Specifications

- • *Detailed Technical Specifications
- • *Section 1: Road Construction

The project involves the construction of a 20-kilometer stretch of road with asphalt paving, drainage systems, and necessary signage. The detailed technical specifications for the road construction are as follows:

- • Road Bed: The road bed shall be constructed using a granular sub-base layer, consisting of compacted crushed stone or gravel with a thickness of not less than 150 mm.
- • Sub-Base Layer: The sub-base layer shall be constructed using a mixture of compacted aggregate and sand with a thickness of not less than 75 mm.
- • Base Course: The base course shall be constructed using a hot mix asphalt (HMA) with a thickness of not less than 50 mm.
- • Surface Course: The surface course shall be constructed using a HMA with a thickness of not less than 30 mm.
- • Drainage Systems: The drainage systems shall include storm drains, culverts, and catch basins, designed to handle a minimum of 10 mm of rainfall per hour.
- • Signage: The necessary signage shall include directional signs, warning signs, and information signs, conforming to the standards specified by the Ministry of Road

- Transport and Highways (MoRTH).
- • *Section 2: Asphalt Paving

The asphalt paving shall be carried out using a HMA with the following specifications:

- • Mix Design: The mix design shall be designed to meet the requirements of MoRTH, with a mix of 80/100 asphalt.
- • Temperature Control: The asphalt shall be laid at a temperature range of 140°C to 160°C.
- • Compaction: The asphalt shall be compacted using a roller compactor, with a minimum of three passes.
- • *Section 3: Drainage Systems

The drainage systems shall be designed and constructed to handle a minimum of 10 mm of rainfall per hour. The specifications for the drainage systems are as follows:

- • Storm Drains: The storm drains shall be constructed using precast concrete pipes with a diameter of not less than 600 mm.
- • Culverts: The culverts shall be constructed using precast concrete pipes with a diameter of not less than 600 mm.
- • Catch Basins: The catch basins shall be constructed using precast concrete pipes with a diameter of not less than 300 mm.
- • *Section 4: Safety Features

The contractor shall ensure that all safety features are incorporated into the project, including:

- • Guardrails: Guardrails shall be installed along the road, with a height of not less than 1.2 meters.
- • Crash Barriers: Crash barriers shall be installed at intersections and roundabouts.
- • Traffic Management: The contractor shall implement traffic management plans to minimize disruptions to traffic.
- • *Section 5: Environmental Protection

The contractor shall ensure that all environmental protection measures are implemented, including:

- • Water Conservation: The contractor shall implement water conservation measures, such as drought-resistant landscaping.
- • Waste Management: The contractor shall implement waste management plans to minimize waste and ensure proper disposal.
- • Noise Pollution: The contractor shall implement noise pollution control measures, such as sound barriers.

- • *Section 6: Quality Control

The contractor shall ensure that all quality control measures are implemented, including:

- • Regular Testing: Regular testing shall be carried out to ensure that all materials and workmanship meet the specified standards.
- • Documentation: All test results and documentation shall be maintained for a period of five years.
- • Corrective Action: The contractor shall take corrective action in case of any defects or non-conformance.
- • *Section 7: Schedule and Milestones

The project schedule and milestones are as follows:

- • Project duration: The project shall be completed within 18 months from the date of commencement.
- • Key milestones: The key milestones shall include the completion of road bed, sub-base layer, base course, surface course, drainage systems, and signage.
- • *Section 8: Technical Requirements

The technical requirements for the project are as follows:

- • Labor: The contractor shall provide qualified labor with experience in road construction.
- • Machinery: The contractor shall provide necessary machinery for the job, including pavers, rollers, and excavators.
- • Equipment: The contractor shall provide necessary equipment for the job, including cranes, drills, and generators.
- • *Section 9: Performance Guarantee

The contractor shall provide a performance guarantee of 10% of the contract value, to be released upon completion of the project.

- • *Section 10: Warranty and Maintenance

The contractor shall provide a warranty of five years for all materials and workmanship. The contractor shall also provide maintenance services for a period of two years from the date of completion of the project.

By complying with these detailed technical specifications, the contractor shall ensure that the project is completed to the satisfaction of the client and meets the required standards and specifications.

Implementation Methodology

- • *Implementation Methodology for Road Construction Project

• • *Introduction

Our company, [Company Name], is committed to delivering a high-quality road construction project that meets the client's requirements and expectations. The implementation methodology outlined below outlines the approach, timelines, and key performance indicators (KPIs) for the successful completion of the project.

• • *Project Organization Structure

The project will be managed by a project manager who will be responsible for the overall direction and coordination of the project. The project manager will be supported by a team of experienced engineers, technicians, and laborers who will be assigned specific tasks and responsibilities.

- • Project Manager: Responsible for overall project management, including planning, coordination, and control.
- • Site Engineers: Responsible for site supervision, quality control, and assurance.
- • Laborers: Responsible for construction activities, including excavation, grading, and paving.
- • Technicians: Responsible for maintenance and operation of machinery and equipment.

• • *Project Phasing

The project will be divided into five phases:

1. Pre-Construction Phase: This phase will include site preparation, clearance, and demolition of existing infrastructure. The duration of this phase will be 4 weeks.
2. Excavation and Grading Phase: This phase will include excavation, grading, and embankment construction. The duration of this phase will be 8 weeks.
3. Drainage and Signage Phase: This phase will include the installation of drainage systems and signage. The duration of this phase will be 6 weeks.
4. Asphalt Paving Phase: This phase will include the construction of asphalt pavement. The duration of this phase will be 12 weeks.
5. Completion and Testing Phase: This phase will include completion of all construction activities, testing, and commissioning of the road. The duration of this phase will be 4 weeks.

• • *Implementation Timeline

The project timeline is outlined below:

Phase	Start Date	End Date	Duration
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Pre-Construction	01-Apr-2024	28-Apr-2024	4 weeks

| Excavation and Grading | 29-Apr-2024 | 27-Jun-2024 | 8 weeks |

| Drainage and Signage | 30-Jun-2024 | 11-Aug-2024 | 6 weeks |

| Asphalt Paving | 12-Aug-2024 | 10-Dec-2024 | 16 weeks |

| Completion and Testing | 11-Dec-2024 | 14-Jan-2025 | 4 weeks |

- • *Quality Control and Assurance

Quality control and assurance will be implemented through the following measures:

- • Regular site inspections by site engineers and project manager.
- • Testing of materials and workmanship.
- • Implementation of a quality management system.
- • Training of laborers and technicians on quality control and assurance procedures.
- • *Safety and Environmental Management

Safety and environmental management will be implemented through the following measures:

- • Implementation of a safety management system.
- • Regular safety inspections and training of laborers and technicians.
- • Compliance with environmental regulations and standards.
- • Implementation of waste management and recycling procedures.
- • *Performance Metrics and KPIs

The following performance metrics and KPIs will be used to measure the success of the project:

- • Project completion rate.
- • Quality of workmanship.
- • Safety performance.
- • Environmental impact.
- • Cost control.
- • *Risk Management

The following risks have been identified and will be mitigated through the implementation of the following measures:

- • Risk of delays: Regular site meetings and progress monitoring will be implemented to ensure that the project is on schedule.
- • Risk of cost overruns: Regular cost monitoring and control measures will be implemented to ensure that the project is completed within budget.

- • Risk of safety incidents: Regular safety inspections and training of laborers and technicians will be implemented to ensure that safety standards are met.
- • *Conclusion

The implementation methodology outlined above outlines the approach, timelines, and key performance indicators for the successful completion of the road construction project. The project will be managed by a project manager who will be responsible for the overall direction and coordination of the project. The project will be divided into five phases, and the implementation timeline will be as outlined above. Quality control and assurance, safety and environmental management, and risk management will be implemented through the measures outlined above.

Quality Control and Standards

- • *Quality Control and Standards
- • *1.0 Introduction

The Road Construction Project, valued at █100,000,000.0, requires a robust Quality Control and Standards (QCS) system to ensure that the constructed road meets the specified requirements and standards. This section outlines the QCS requirements and expectations for the bidder.

- • *2.0 Quality Control Plan

The bidder must submit a comprehensive Quality Control Plan (QCP) that outlines the procedures, processes, and personnel responsible for ensuring the quality of the road construction works. The QCP must include the following:

- • Scope of Work: A detailed description of the scope of work, including the construction of 20 kilometers of road with asphalt paving, drainage systems, and necessary signage.
- • Quality Objectives: Specific quality objectives, including the achievement of a minimum pavement thickness of 150 mm, a maximum pavement surface texture depth of 2.0 mm, and a minimum drainage system capacity of 1.0 million liters per hour.
- • Responsibilities and Accountabilities: A clear definition of the roles and responsibilities of personnel involved in the QCP, including the Quality Manager, Site Engineers, and Supervisors.
- • Training and Certification: Proof of training and certification of personnel involved in the QCP, including quality control specialists, lab technicians, and equipment operators.
- • Equipment and Tools: A list of equipment and tools required for the QCP, including paving machines, rollers, graders, and asphalt mixing plants.
- • *3.0 Quality Control Metrics

The bidder must establish and maintain a system of quality control metrics to measure the performance of the QCP. The following metrics must be tracked and reported quarterly:

- • Pavement Thickness: Average pavement thickness, maximum pavement thickness, and minimum pavement thickness.
- • Pavement Surface Texture: Average pavement surface texture depth, maximum pavement surface texture depth, and minimum pavement surface texture depth.
- • Drainage System Capacity: Average drainage system capacity, maximum drainage system capacity, and minimum drainage system capacity.
- • Defect Density: Number of defects per kilometer, type of defects, and location of defects.
- • Labor Productivity: Labor productivity metrics, including hours worked, materials used, and work completed.
- • *4.0 Industry Standards and Codes

The bidder must adhere to the following industry standards and codes:

- • Indian Roads Congress (IRC) Specifications: IRC:SP:24 (Third Revision) - Specifications for road works.
- • Ministry of Road Transport and Highways (MoRTH) Guidelines: Guidelines for the design, construction, and maintenance of highways.
- • ISO 9001:2015: Quality Management System (QMS) standard.
- • ISO 14001:2015: Environmental Management System (EMS) standard.
- • OHSAS 18001:2007: Occupational Health and Safety Management System (OHSMS) standard.
- • *5.0 Environmental and Safety Standards

The bidder must adhere to the following environmental and safety standards:

- • Environmental Impact Assessment (EIA): An EIA must be conducted to identify potential environmental impacts and mitigation measures.
- • Noise Pollution: Noise levels must be monitored and controlled to ensure compliance with regulations.
- • Air Pollution: Air quality must be monitored and controlled to ensure compliance with regulations.
- • Waste Management: Waste must be disposed of in a responsible and environmentally friendly manner.
- • Safety Management: A safety management system must be implemented to ensure the safety of personnel, contractors, and the general public.
- • *6.0 Quality Control Documentation

The bidder must maintain accurate and complete documentation of all quality control activities, including:

- • Quality Control Records: Records of quality control metrics, including pavement thickness, pavement surface texture, drainage system capacity, and defect density.
- • Inspection Reports: Reports of inspections conducted to ensure compliance with industry standards and codes.
- • Test Reports: Reports of tests conducted to ensure compliance with industry standards and codes.
- • Corrective Action Reports: Reports of corrective actions taken to address quality control issues.
- • *7.0 Compliance and Audits

The bidder must demonstrate compliance with the QCS requirements and undergo regular audits to ensure the effectiveness of the QCS system. The following audits must be conducted:

- • Pre-Construction Audit: An audit must be conducted before construction commences to ensure compliance with the QCS requirements.
- • Regular Audits: Regular audits must be conducted to ensure compliance with the QCS requirements.
- • Third-Party Audits: Third-party audits must be conducted to ensure compliance with industry standards and codes.
- • *8.0 Quality Control Plan Submission

The bidder must submit a comprehensive Quality Control Plan (QCP) that outlines the procedures, processes, and personnel responsible for ensuring the quality of the road construction works. The QCP must be submitted in the format specified in the tender documents.

- • *9.0 Quality Control Plan Review and Approval

The bidder's Quality Control Plan (QCP) will be reviewed and approved by the Employer. The QCP must be approved before construction commences.

- • *10.0 Quality Control Plan Implementation

The bidder must implement the approved Quality Control Plan (QCP) and ensure that all personnel involved in the QCP understand their roles and responsibilities.

By submitting a comprehensive Quality Control Plan (QCP) that outlines the procedures, processes, and personnel responsible for ensuring the quality of the road construction works, the bidder demonstrates a commitment to delivering a high-quality road construction project that meets the specified requirements and standards.

Risk Management Framework

- • *Risk Management Framework

- • *Introduction

The Road Construction Project is a significant undertaking with a value of **■100,000,000.0**. As such, it is essential to establish a comprehensive Risk Management Framework to identify, assess, mitigate, and monitor potential risks that may impact the project's success. This framework will provide a structured approach to managing risks, ensuring that the project is delivered on time, within budget, and to the required quality standards.

- • *Risk Management Policy

Our organization is committed to managing risks in a proactive and responsible manner. The Risk Management Policy outlines the principles and procedures for identifying, assessing, and mitigating risks associated with the project. The policy is guided by the following objectives:

- • Identify and assess potential risks that may impact the project
- • Develop and implement risk mitigation strategies
- • Monitor and review risk management processes
- • Ensure compliance with industry standards and regulations
- • *Risk Identification and Assessment

The risk identification and assessment process will involve the following steps:

- • Risk Register: A comprehensive Risk Register will be maintained to document and track all identified risks. The Risk Register will include the following information:

+ Risk description

+ Risk category (e.g., construction, environmental, safety)

+ Risk likelihood (high, medium, low)

+ Risk impact (high, medium, low)

+ Risk mitigation strategies

+ Risk owner

- • Risk Assessment Matrix: A risk assessment matrix will be used to categorize risks based on their likelihood and impact. The matrix will be used to identify high-risk areas and prioritize mitigation efforts.
- • Risk Identification Workshop: A risk identification workshop will be conducted with key stakeholders, including the project team, contractors, and suppliers.
- • *Risk Mitigation and Management

The following risk mitigation and management strategies will be implemented:

- • Risk Mitigation: Mitigation strategies will be developed to reduce the likelihood or impact of identified risks. Examples of mitigation strategies include:
 - + Providing additional resources (e.g., personnel, equipment)
 - + Implementing contingency plans
 - + Conducting regular safety audits and inspections
 - + Ensuring compliance with industry standards and regulations
- • Risk Monitoring: Regular risk monitoring and review will be conducted to ensure that risks are being effectively managed. This will include:
 - + Reviewing the Risk Register and Risk Assessment Matrix
 - + Conducting regular risk audits and inspections
 - + Monitoring project progress and performance indicators
- • *Risk Acceptance Criteria

The following risk acceptance criteria will be used to determine whether a risk is acceptable or not:

- • Risk Acceptance: A risk will be considered acceptable if it meets the following criteria:
 - + The risk is unlikely to occur (low likelihood)
 - + The risk has a low impact if it were to occur
 - + The risk is being effectively mitigated
- • Risk Tolerance: The project team will maintain a risk tolerance level of 5% for the project, meaning that up to 5% of the project's value can be allocated to risk.
- • *Industry Standards and Regulations

The following industry standards and regulations will be adhered to:

- • Indian Road Congress (IRC) Standards: The project will be designed and constructed in accordance with IRC standards.
- • Environmental Protection Act: The project will be designed and constructed to minimize environmental impact and ensure compliance with environmental regulations.
- • Occupational Safety and Health Act: The project will be designed and constructed to ensure compliance with occupational safety and health regulations.
- • *Metrics and Performance Indicators

The following metrics and performance indicators will be used to measure the effectiveness of the Risk Management Framework:

- • Risk Register: The Risk Register will be reviewed and updated regularly to ensure that risks are being effectively managed.
- • Risk Assessment Matrix: The risk assessment matrix will be reviewed regularly to ensure that risks are being effectively mitigated.
- • Project Performance Indicators: Project performance indicators will be monitored regularly to ensure that the project is being delivered on time, within budget, and to the required quality standards.
- • *Conclusion

The Risk Management Framework outlined in this document provides a comprehensive approach to managing risks associated with the Road Construction Project. By identifying, assessing, mitigating, and monitoring risks, we can ensure that the project is delivered successfully, safely, and to the required quality standards.

Financial Terms and Conditions

- • *FINANCIAL TERMS AND CONDITIONS

The Contractor (as defined below) shall comply with the following financial terms and conditions for the execution of the Road Construction Project (the "Project") with a value of ■100,000,000.0:

- • *DEFINITIONS

For the purpose of this Financial Terms and Conditions Section, the following terms shall have the meanings assigned to them:

- • "Contractor" means the successful bidder who executes this Contract with the Employer (as defined below).
- • "Employer" means the [Name of Employer] having its registered office at [Address of Employer].

- • *PAYMENT TERMS

1. Payment Schedule: The Employer shall pay the Contractor in accordance with the payment schedule set out in the Contract Schedule (as defined below). The payment schedule shall be as follows:

Payment	Percentage of Total Contract Value	Payment Due Date
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1st Instalment	30%	Upon signing of this Contract
2nd Instalment	40%	Upon completion of 50% of the Project
3rd Instalment	20%	Upon completion of 90% of the Project
4th Instalment	10%	Upon completion and acceptance of the Project

2. Payment Method: The Employer shall make payments to the Contractor by way of Bank Transfer to the Contractor's bank account as specified in the Contract Schedule.

3. Payment Terms: The Employer shall make payments within 30 days from the due date specified in the payment schedule.

- • *PRICING AND VARIATIONS

1. Contract Price: The Contractor shall execute the Project for a contract price of ■100,000,000.0.

2. Price Variations: In the event of any variation to the Contract, the Contractor shall be entitled to a price variation of not more than 10% of the contract price. The Contractor shall provide a detailed breakdown of the price variation to the Employer for approval.

- • *RETENTION

1. Retention Amount: The Employer shall retain 5% of the contract price as retention money.

2. Release of Retention: The Employer shall release the retention money to the Contractor upon completion and acceptance of the Project.

- • *INSURANCE

1. Contractor's Insurance: The Contractor shall maintain insurance coverage for the Project, including but not limited to:

- • Public Liability Insurance with a minimum sum insured of ■50,000,000.0
- • Workmen's Compensation Insurance
- • Employer's Liability Insurance

2. Insurance Certificates: The Contractor shall provide the Employer with certificates of insurance as required by the Employer.

- • *TAXES AND DUTIES

1. Taxes: The Contractor shall comply with all applicable taxes and duties in relation to the Project.

2. Tax Invoices: The Contractor shall provide the Employer with tax invoices for all payments due under the Contract.

- • *CLAIMS AND DISPUTES

1. Claims: The Contractor shall submit all claims in writing to the Employer within 14 days from the date of occurrence of the event giving rise to the claim.

2. Dispute Resolution: Any disputes arising out of or in connection with the Contract shall be resolved through arbitration in accordance with the Indian Arbitration and Conciliation Act, 1996.

- • *CASH WITHDRAWAL

The Contractor shall not withdraw cash from the site in excess of ■50,000.0 in any one transaction.

- • *AUDIT

The Employer shall be entitled to audit the Contractor's accounts and records in relation to the Project.

- • *GOVERNING LAW

This Financial Terms and Conditions Section shall be governed by and construed in accordance with the laws of India.

- • *NOTICES

All notices to be given by the Contractor to the Employer shall be in writing and addressed to the Employer at [Address of Employer]. All notices to be given by the Employer to the Contractor shall be in writing and addressed to the Contractor at [Address of Contractor].

- • *ACCEPTANCE

The Contractor acknowledges that it has read, understood, and agreed to be bound by the terms and conditions of this Financial Terms and Conditions Section.

By signing below, the Contractor accepts and agrees to be bound by the Financial Terms and Conditions Section.

- • *Signature of Contractor
- • *Name of Contractor
- • *Date
- • *Contractor's Stamp

Note: This is a sample Financial Terms and Conditions Section and should be reviewed and customized to suit the specific requirements of the Project and the Contractor.

Legal and Compliance Requirements

- • *Legal and Compliance Requirements

The Road Construction Project is subject to various legal and compliance requirements, which must be adhered to by the bidder and subsequently by the selected contractor. The following sections outline the key requirements:

- • *1. Contractual Requirements
- • The contract shall be governed by and construed in accordance with the laws of [State/Union Territory], India.
- • The contract shall be subject to the jurisdiction of the courts at [City], [State/Union Territory], India.

- • The bidder shall ensure that they have the necessary licenses and permits to undertake road construction projects in the state of [State/Union Territory].
- • The contract shall be executed on a lump-sum turnkey basis, where the contractor shall be responsible for the design, construction, commissioning, and testing of the road.
- • *2. Environmental Compliance
- • The bidder shall ensure that their construction activities comply with the Environmental Impact Assessment (EIA) Notification, 2006, and the Environment (Protection) Act, 1986.
- • The contractor shall obtain all necessary environmental clearances and permits before commencing construction work.
- • The bidder shall implement measures to prevent soil erosion, water pollution, and air pollution during the construction process.
- • The contractor shall ensure that all construction waste is disposed of in accordance with the Solid Waste Management Rules, 2016.
- • *3. Safety and Health
- • The bidder shall ensure that their construction activities comply with the Factories Act, 1948, and the Occupational Safety, Health and Working Conditions Code, 2020.
- • The contractor shall implement a safety management system that includes regular safety audits, risk assessments, and employee training programs.
- • The bidder shall ensure that all construction personnel wear personal protective equipment (PPE) and follow safe working practices.
- • The contractor shall maintain a first-aid room and ensure that all employees have access to medical facilities.
- • *4. Labor Laws
- • The bidder shall ensure that their construction activities comply with the Minimum Wages Act, 1948, and the Industrial Disputes Act, 1947.
- • The contractor shall register all construction personnel with the relevant labor authorities and provide them with social security cover.
- • The bidder shall ensure that all construction personnel are paid according to the rates prescribed by the state government.
- • The contractor shall maintain a fair and transparent system for resolving labor disputes.
- • *5. Taxation and Accounting
- • The bidder shall ensure that their construction activities comply with the Goods and Services Tax (GST) Act, 2017.

- • The contractor shall maintain accurate and complete records of all financial transactions, including invoices, receipts, and bank statements.
- • The bidder shall ensure that all taxes, including GST, are paid on time and in full.
- • The contractor shall submit regular financial reports to the project authorities.
- • *6. Insurance and Indemnity
- • The bidder shall ensure that they have adequate insurance coverage for their construction activities, including public liability insurance, employer's liability insurance, and contractor's all-risk insurance.
- • The contractor shall indemnify the project authorities against any losses or damages arising from their construction activities.
- • The bidder shall ensure that their insurance policies comply with the Insurance Regulatory and Development Authority of India (IRDAI) regulations.
- • *7. Intellectual Property Rights
- • The bidder shall ensure that they have not infringed any intellectual property rights of third parties in the design, construction, or commissioning of the road.
- • The contractor shall ensure that all materials, including software, used in the construction process are licensed and compliant with Indian laws.
- • The bidder shall ensure that they have the necessary permissions and licenses to use any proprietary technology or software.
- • *8. Compliance with Industry Standards
- • The bidder shall ensure that their construction activities comply with the Indian Roads Congress (IRC) standards for road construction.
- • The contractor shall ensure that all materials used in the construction process meet the relevant IRC standards.
- • The bidder shall ensure that their construction activities comply with the National Highways Authority of India (NHAI) specifications for road construction.
- • *9. Bidders' Obligations
- • The bidder shall ensure that they have the necessary financial resources, technical expertise, and management capabilities to undertake the project.
- • The contractor shall ensure that they have the necessary licenses, permits, and clearances to undertake the project.
- • The bidder shall ensure that they have not been blacklisted by any government agency or public sector undertaking.
- • *10. Sanctions and Penalties

- • The bidder shall ensure that they have not been involved in any corrupt practices, including bribery, kickbacks, or embezzlement.
- • The contractor shall ensure that they have not been convicted of any offense related to environmental degradation, labor laws, or taxation.
- • The bidder shall ensure that they have not been penalized or sanctioned by any regulatory authority in the past five years.
- • *11. Post-Construction Requirements
- • The contractor shall ensure that the road is handed over to the project authorities in a condition that meets the specified standards.
- • The bidder shall ensure that they have obtained all necessary certifications and approvals from the project authorities before commencing construction work.
- • The contractor shall ensure that they have maintained accurate records of all construction activities, including labor, materials, and equipment used.

By submitting their bid, the bidder acknowledges that they have read, understood, and will comply with all the legal and compliance requirements outlined above. The bidder shall ensure that they have the necessary licenses, permits, and clearances to undertake the project.

Performance Metrics and SLAs

- • *Performance Metrics and SLAs - Road Construction Project
- • *Introduction

The successful Bidder (hereinafter referred to as "the Contractor") will be required to meet specific performance metrics and Service Level Agreements (SLAs) outlined in this section. These performance metrics and SLAs are designed to ensure that the Contractor delivers a high-quality road construction project that meets the needs and expectations of the Employer (the Government of [State/Province]).

- • *Performance Metrics

The following performance metrics will be used to evaluate the Contractor's performance during the project:

- • Quality of Work: The Contractor shall ensure that the road construction work meets the specified standards and quality requirements. This shall include:

+ Asphalt paving: The Contractor shall ensure that the asphalt pavement meets the Indian Road Congress (IRC) standards, with a minimum thickness of 50 mm and a surface texture that meets the specified standards.

+ Drainage systems: The Contractor shall ensure that the drainage systems are designed and installed to meet the specified standards, with a minimum of 2% gradient for

stormwater flow.

+ Signage: The Contractor shall ensure that all signage is installed in accordance with the specified standards, including clear visibility and durable materials.

- • Schedule: The Contractor shall ensure that the project is completed within the specified timeframe. This shall include:

+ Completion of groundwork: The Contractor shall ensure that the groundwork is completed within 12 weeks from the commencement of the project.

+ Asphalt paving: The Contractor shall ensure that the asphalt paving is completed within 16 weeks from the commencement of the project.

+ Final inspection and completion: The Contractor shall ensure that the final inspection and completion of the project is done within 20 weeks from the commencement of the project.

- • Safety: The Contractor shall ensure that the project is executed in a safe and healthy manner. This shall include:

+ Compliance with safety standards: The Contractor shall ensure that all workers and personnel on the site comply with the specified safety standards, including the wearing of personal protective equipment (PPE).

+ Incident reporting: The Contractor shall ensure that all incidents, including accidents and near-misses, are reported to the Employer in a timely manner.

- • Environmental: The Contractor shall ensure that the project is executed in an environmentally responsible manner. This shall include:

+ Compliance with environmental standards: The Contractor shall ensure that all activities on the site comply with the specified environmental standards, including noise pollution and waste management.

+ Environmental impact assessment: The Contractor shall ensure that an environmental impact assessment is conducted prior to the commencement of the project.

- • *Service Level Agreements (SLAs)

The following SLAs shall apply to the project:

- • Response Time: The Contractor shall respond to all queries and requests from the Employer within 24 hours of receipt.
- • Incident Resolution: The Contractor shall resolve all incidents, including accidents and near-misses, within 72 hours of occurrence.
- • Quality of Work: The Contractor shall ensure that the quality of work meets the specified standards, with a minimum of 95% satisfaction rate.
- • Schedule: The Contractor shall ensure that the project is completed within the specified timeframe, with a minimum of 90% completion rate.

- • Safety: The Contractor shall ensure that the project is executed in a safe and healthy manner, with a minimum of 95% compliance rate with safety standards.
- • Environmental: The Contractor shall ensure that the project is executed in an environmentally responsible manner, with a minimum of 95% compliance rate with environmental standards.
- • *Key Performance Indicators (KPIs)

The following KPIs shall be used to measure the Contractor's performance during the project:

- • Quality Index (QI): The Contractor shall ensure that the QI is maintained at a minimum of 80% throughout the project.
- • Schedule Performance Index (SPI): The Contractor shall ensure that the SPI is maintained at a minimum of 80% throughout the project.
- • Safety Index (SI): The Contractor shall ensure that the SI is maintained at a minimum of 80% throughout the project.
- • Environmental Index (EI): The Contractor shall ensure that the EI is maintained at a minimum of 80% throughout the project.
- • *Industry Standards

The following industry standards shall be applied to the project:

- • Indian Road Congress (IRC) standards: The Contractor shall ensure that all road construction work meets the specified IRC standards.
- • American Society for Testing and Materials (ASTM) standards: The Contractor shall ensure that all materials used in the project meet the specified ASTM standards.
- • Occupational Safety and Health Administration (OSHA) standards: The Contractor shall ensure that all workers and personnel on the site comply with the specified OSHA standards.
- • *Penalties and Incentives

The Contractor shall be subject to penalties and incentives as follows:

- • Penalties: The Contractor shall be penalized for non-compliance with the performance metrics and SLAs. The penalties shall be calculated as follows:
 + 1% of the contract value for each week of delay in completion.
 + 5% of the contract value for each day of non-compliance with safety and environmental standards.
- • Incentives: The Contractor shall be incentivized for meeting the performance metrics and SLAs. The incentives shall be calculated as follows:
 + 2% of the contract value for each week of early completion.

+ 10% of the contract value for each day of compliance with safety and environmental standards.

- • *Acceptance Criteria

The project shall be deemed accepted by the Employer if the Contractor meets the specified performance metrics and SLAs. The acceptance criteria shall be as follows:

- • Quality of Work: The Contractor shall ensure that the quality of work meets the specified standards, with a minimum of 95% satisfaction rate.
- • Schedule: The Contractor shall ensure that the project is completed within the specified timeframe, with a minimum of 90% completion rate.
- • Safety: The Contractor shall ensure that the project is executed in a safe and healthy manner, with a minimum of 95% compliance rate with safety standards.
- • Environmental: The Contractor shall ensure that the project is executed in an environmentally responsible manner, with a minimum of 95% compliance rate with environmental standards.
- • *Termination

The Employer reserves the right to terminate the contract if the Contractor fails to meet the specified performance metrics and SLAs. The termination shall be in accordance with the specified terms and conditions of the contract.

By signing below, the Contractor acknowledges that they have read, understood, and agreed to the performance metrics and SLAs outlined in this section.

- • *Contractor's Signature: _____
- • *Date: _____

Testing and Acceptance Criteria

- • *Testing and Acceptance Criteria
- • *Introduction

The successful bidder shall be responsible for conducting thorough testing and inspections to ensure that the road construction project meets the specified requirements and standards. The acceptance criteria outlined below are non-negotiable and shall be strictly adhered to.

- • *Pre-Construction Testing

Prior to the commencement of construction, the bidder shall conduct the following tests to ensure that the site is suitable for construction:

- • Geotechnical Investigation: A comprehensive geotechnical investigation shall be conducted to determine the soil conditions, bearing capacity, and groundwater levels.

- The investigation shall include:
- + Visual inspection of the site
- + Soil sampling and laboratory testing
- + In-situ testing (e.g., standard penetration test, cone penetration test)
 - • Environmental Impact Assessment: An environmental impact assessment shall be conducted to identify potential environmental risks and develop strategies to mitigate them.
 - • Safety Audit: A safety audit shall be conducted to identify potential hazards and develop strategies to mitigate them.
 - • *Construction Testing

During the construction phase, the bidder shall conduct regular testing and inspections to ensure that the work is in accordance with the specifications. The following tests shall be conducted:

- • Pavement Testing: The bidder shall conduct regular pavement testing to ensure that the asphalt pavement meets the specified requirements. The testing shall include:
 - + Thickness testing (e.g., core sampling, non-destructive testing)
 - + Density testing (e.g., nuclear density gauge, sand cone test)
 - + Moisture content testing
 - + Texture testing (e.g., texture depth meter, texture analyzer)
 - • Drainage Testing: The bidder shall conduct regular drainage testing to ensure that the drainage systems are functioning correctly. The testing shall include:
 - + Flow rate testing
 - + Pressure testing
 - + Leak detection testing
 - • Quality Control Testing: The bidder shall conduct regular quality control testing to ensure that the materials used meet the specified requirements. The testing shall include:
 - + Material sampling and laboratory testing (e.g., aggregate gradation, asphalt binder content)
 - + Dimensional tolerance testing (e.g., thickness, width, length)
 - • *Acceptance Criteria

The completed road construction project shall be accepted by the client upon satisfactory completion of the following criteria:

- • Pavement Quality: The asphalt pavement shall meet the following specifications:

- + Thickness: Minimum 80 mm
- + Density: Minimum 95%
- + Moisture content: Maximum 5%
- + Texture: Minimum 1.0 mm
 - • Drainage System: The drainage system shall meet the following specifications:
- + Flow rate: Minimum 50% of design flow rate
- + Pressure: Maximum 100 kPa
- + Leak detection: No leaks detected
 - • Quality Control: The materials used in the construction of the road shall meet the following specifications:
- + Aggregate gradation: Compliant with IS 2386
- + Asphalt binder content: Compliant with IS 8887
- + Dimensional tolerance: Compliant with IS 12435
 - • *Testing Frequency

The bidder shall conduct regular testing and inspections at the following frequencies:

- • Daily: Quality control testing
- • Weekly: Pavement testing, drainage testing
- • Monthly: Quality control testing, pavement testing, drainage testing
- • *Industry Standards

The testing and acceptance criteria outlined above shall be conducted in accordance with the following industry standards:

- • IS 2386: Indian Standard for Aggregate and its Test
- • IS 8887: Indian Standard for Asphalt and its Test
- • IS 12435: Indian Standard for Pavement Construction
- • AASHTO: American Association of State Highway and Transportation Officials
- • ASTM: American Society for Testing and Materials
- • *Certification

The bidder shall provide certification from a recognized testing laboratory that the road construction project meets the specified requirements and standards. The certification shall include:

- • Test report: A comprehensive test report detailing the results of the testing and inspections

- • Certificate of compliance: A certificate of compliance with the specified requirements and standards

Additional Details

Contact Information

For queries, contact:

PWD Office, City Road, ABC

Email: tenders@pwdabc.com

Phone: +91 123 456 7890

Eligibility Criteria

Bidders must have completed at least 3 similar road construction projects with a value of **■**5,00,00,000 or more in the last 5 years.

MVP Requirements

The MVP will include the construction of the initial 5-kilometer stretch of road, with a completed drainage system and road base layer.

Milestone Deliverables

Completion of initial site survey and soil testing within 2 weeks.

Submission of design plans within 1 month.

Liquidated Damages

In case of project delay beyond the agreed timeline, liquidated damages of **■**5,00,000 per week will be charged.