TENDER DOCUMENT

Road Construction Project

Tender ID:	TEN20250330162048
Issuing Authority:	Public Works Department (PWD), State Government
Tender Amount:	Rs. 100,000,000.00
Bid Start Date:	25-02-2025
Bid End Date:	09-05-2025

Executive Summary

Executive Summary

Project Overview

The proposed Road Construction Project is a significant infrastructure development initiative with a total value of ■100,000,000.0. The project aims to construct a 20-kilometer stretch of road, incorporating asphalt paving, advanced drainage systems, and essential signage to ensure safe and efficient transportation. This comprehensive project will not only enhance the connectivity between various regions but also contribute to the economic growth and development of the area.

Project Objectives

The primary objectives of this project are:

• To construct a durable and high-quality road infrastructure that meets international standards

• To ensure the safety of road users by incorporating best-in-class drainage systems and signage

• To minimize environmental impact through the adoption of sustainable construction practices

• To provide employment opportunities for local communities and contribute to the economic growth of the region

• To complete the project within the stipulated timeframe of 12 months

Scope of Work

The scope of the project includes:

• Excavation and grading of the road surface

• Asphalt paving and surfacing

• Installation of advanced drainage systems, including culverts and stormwater management systems

• Construction of essential signage, including warning signs, directional signs, and information signs

• Implementation of environmental and safety measures, including noise reduction and dust control

Key Performance Indicators (KPIs)

The project will be evaluated based on the following KPIs:

• Project completion time: 12 months

• Road surface quality: Meets international standards (e.g., IRC: 83-2018)

• Drainage system efficiency: 90% or higher

• Safety record: Zero serious accidents during construction

• Environmental impact: Meets or exceeds international environmental standards (e.g., ISO 14001)

Bidder Requirements

To participate in this tender, bidders must demonstrate the following:

• Proof of experience in road construction projects of similar scope and magnitude

• Qualifications of labor and machinery for the job

• Adherence to environmental and safety standards, including compliance with relevant laws and regulations

Project Timeline

The project is expected to commence within 6 weeks of the contract award and be completed within 12 months. The project timeline is outlined below:

• Month 1-3: Project planning and preparation

• Month 4-6: Excavation and grading

• Month 7-9: Asphalt paving and surfacing

• Month 10-12: Installation of drainage systems and signage, completion of environmental and safety measures

Budget Allocation

The budget for this project is allocated as follows:

• Excavation and grading: ■25,000,000.0 (25%)

• Asphalt paving and surfacing: ■30,000,000.0 (30%)

• Drainage systems and signage: ■20,000,000.0 (20%)

• Environmental and safety measures: ■5,000,000.0 (5%)

• Contingency fund: ■20,000,000.0 (20%)

By awarding the contract to the most suitable bidder, we aim to deliver a high-quality road infrastructure that meets the needs of the community, while also contributing to the economic growth and development of the region.

Project Overview and Objectives

Project Overview and Objectives

Project Title: Road Construction Project

Project Value: ■100,000,000.0 (One Hundred Million Indian Rupees)

Project Duration: [Insert duration, e.g., 24 weeks, with a commencement date of [Insert date] and an expected completion date of [Insert date]]

Project Overview:

The Road Construction Project aims to construct a 20-kilometer stretch of road, designed to meet the needs of the rapidly growing urban population. The project will involve the construction of a high-quality, asphalt-paved road, complete with drainage systems and essential signage. The new road will significantly improve connectivity, reduce travel times, and enhance the overall quality of life for residents and commuters in the region.

Project Objectives:

The primary objectives of the Road Construction Project are as follows:

To construct a 20-kilometer stretch of road with a minimum design speed of 80 km/h (50 mph) and a minimum pavement thickness of 150 mm (6 inches)

To design and install a comprehensive drainage system, capable of handling a minimum of 10 mm (0.4 inches) of rainfall per hour

To install essential signage, including directional signs, warning signs, and traffic calming measures

To ensure that the road is constructed with a minimum lifespan of 15 years, with regular maintenance and repair schedules

To adhere to industry standards and best practices, including those set by the Ministry of Road Transport and Highways (MoRTH), the National Highways Authority of India (NHAI), and the Indian Roads Congress (IRC)

Key Performance Indicators (KPIs):

To measure the success of the project, the following KPIs will be used:

Project completion date: The project must be completed within the specified duration (24 weeks)

Quality of work: The road must meet the minimum design and construction standards set by MoRTH, NHAI, and IRC

Safety performance: The project must achieve a minimum safety rating of 90% throughout the construction process

Environmental impact: The project must adhere to environmental regulations and achieve a minimum environmental rating of 85%

Cost control: The project must be completed within the specified budget (■100,000,000.0)

Industry Standards and Best Practices:

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

MoRTH: The Ministry of Road Transport and Highways' guidelines for road construction and maintenance

NHAI: The National Highways Authority of India's guidelines for road construction and maintenance

IRC: The Indian Roads Congress' guidelines for road construction and maintenance

ISO 9001:2015: The international standard for quality management systems

ISO 14001:2015: The international standard for environmental management systems

Requirements:

To be eligible to submit a bid for this project, the bidder must:

Provide proof of experience in road construction, with a minimum of 5 years of experience in similar projects

Demonstrate possession of qualified labor and machinery for the job

Adhere to environmental and safety standards, as outlined in the industry guidelines and regulations

Provide a comprehensive project management plan, detailing the methodology, timeline, and resources required for the project

By following these guidelines and requirements, the successful bidder will be able to deliver a high-quality road construction project that meets the needs of the community and the client.

Detailed Technical Specifications

Detailed Technical Specifications

Section 1: Road Construction

1.1. Road Type and Design

The road shall be designed as a 2-lane, 20-kilometer stretch of highway with a minimum width of 7.5 meters.

The road shall have a minimum gradient of 3% and a maximum gradient of 10%.

The road shall be designed to accommodate a speed limit of 80 km/h.

1.2. Surface Course

The surface course shall be constructed using hot mix asphalt (HMA) with a minimum thickness of 50 mm.

The HMA shall meet the specifications of IS 14893:2000 (Indian Standard for Hot Mix Asphalt for Roads).

The aggregate gradation shall be as follows:

+ Coarse aggregate: 10-20 mm (40-50%),

+ Medium aggregate: 5-10 mm (25-35%),

+ Fine aggregate: 0-5 mm (20-30%).

1.3. Base Course

The base course shall be constructed using crushed stone or gravel with a minimum thickness of 150 mm.

The base course shall meet the specifications of IS 23864:2004 (Indian Standard for Granular Base Courses for Roads).

The aggregate gradation shall be as follows:

+ Coarse aggregate: 20-40 mm (40-60%),

+ Medium aggregate: 10-20 mm (20-40%),

+ Fine aggregate: 0-10 mm (10-30%).

1.4. Drainage Systems

The drainage system shall include the construction of stormwater drains, culverts, and manholes.

The stormwater drains shall be constructed using reinforced concrete pipes (RCP) with a minimum diameter of 300 mm.

The culverts shall be constructed using reinforced concrete box culverts (RCBC) with a minimum diameter of 1.5 meters.

The manholes shall be constructed using reinforced concrete with a minimum diameter of 1 meter.

1.5. Signage

The road shall be equipped with necessary signage, including:

+ Directional signs,

+ Warning signs,

+ Information signs,

+ Guide signs.

Section 2: Materials

2.1. Hot Mix Asphalt (HMA)

The HMA shall meet the specifications of IS 14893:2000 (Indian Standard for Hot Mix Asphalt for Roads).

The aggregate gradation shall be as follows:

+ Coarse aggregate: 10-20 mm (40-50%),

+ Medium aggregate: 5-10 mm (25-35%),

+ Fine aggregate: 0-5 mm (20-30%).

2.2. Crushed Stone or Gravel

The crushed stone or gravel shall meet the specifications of IS 23864:2004 (Indian Standard for Granular Base Courses for Roads).

The aggregate gradation shall be as follows:

+ Coarse aggregate: 20-40 mm (40-60%),

+ Medium aggregate: 10-20 mm (20-40%),

+ Fine aggregate: 0-10 mm (10-30%).

2.3. Reinforced Concrete Pipes (RCP)

The RCP shall meet the specifications of IS 458:2018 (Indian Standard for Reinforced Concrete Pipes).

The minimum diameter of the RCP shall be 300 mm.

2.4. Reinforced Concrete Box Culverts (RCBC)

The RCBC shall meet the specifications of IS 458:2018 (Indian Standard for Reinforced Concrete Pipes).

The minimum diameter of the RCBC shall be 1.5 meters.

2.5. Reinforced Concrete

The reinforced concrete shall meet the specifications of IS 456:2000 (Indian Standard for Plain and Reinforced Concrete).

Section 3: Quality Control

3.1. Testing and Inspection

The bidder shall be responsible for conducting regular testing and inspection of materials and workmanship.

The bidder shall maintain a quality control manual, which shall include the following:

+ Testing and inspection procedures,

+ Acceptance criteria,

+ Rejection criteria.

3.2. Material Testing

The bidder shall conduct material testing in accordance with the following standards:

+ IS 14893:2000 (Indian Standard for Hot Mix Asphalt for Roads),

+ IS 23864:2004 (Indian Standard for Granular Base Courses for Roads),

+ IS 458:2018 (Indian Standard for Reinforced Concrete Pipes).

3.3. Workmanship Inspection

The bidder shall conduct regular workmanship inspection to ensure that the work is performed in accordance with the specifications.

The bidder shall maintain a record of workmanship inspection, which shall include the following:

+ Date and time of inspection,

+ Description of the work inspected,

+ Observation and recommendations.

Section 4: Safety and Environmental Measures

4.1. Safety Measures

The bidder shall be responsible for implementing safety measures to prevent accidents and injuries during the construction phase.

The bidder shall maintain a safety manual, which shall include the following:

+ Safety procedures,

+ Emergency response plan.

4.2. Environmental Measures

The bidder shall be responsible for implementing environmental measures to prevent pollution and protect the environment during the construction phase.

The bidder shall maintain an environmental manual, which shall include the following:

+ Environmental procedures,

+ Waste management plan.

Section 5: Machinery and Equipment

5.1. Road Construction Machinery

The bidder shall provide the following road construction machinery:

+ Asphalt paver,

+ Roller,

+ Grader,

+ Excavator.

5.2. Drilling and Blasting Machinery

The bidder shall provide the following drilling and blasting machinery:

+ Drilling machine,

+ Blasting machine.

5.3. Crane and Hoist

The bidder shall provide a crane and hoist for lifting and placing heavy equipment and materials.

Section 6: Labor and Training

6.1. Labor

The bidder shall provide qualified labor for the construction phase.

The bidder shall maintain a labor manual, which shall include the following:

+ Labor roster,

+ Training program.

6.2. Training

The bidder shall provide training to the labor force on safety procedures, environmental procedures, and workmanship standards.

Section 7: Performance Guarantees

7.1. Performance Guarantee

The bidder shall provide a performance guarantee for the road construction work.

The performance guarantee shall be for a period of 2 years from the date of completion of the road construction work.

7.2. Warranty

The bidder shall provide a warranty for the road construction work.

The warranty shall be for a period of 2 years from the date of completion of the road construction work.

Section 8: Project Schedule

8.1. Project Timeline

The bidder shall provide a project timeline, which shall include the following:

+ Pre-construction phase,

+ Construction phase,

+ Testing and inspection phase.

8.2. Milestones

The bidder shall provide milestones for the project, which shall include the following:

+ Completion of road construction work,

+ Completion of testing and inspection work,

+ Completion of project.

Section 9: Quality Management System

9.1. Quality Management System

The bidder shall implement a quality management system for the road construction work.

The quality management system shall include the following:

+ Quality policy,

+ Quality objectives,

+ Quality procedures.

Section 10: Conclusion

The bidder shall ensure that the road construction work is completed in accordance with the specifications and standards outlined in this technical specification.

Assessment Criteria

The bidder's proposal shall be assessed based on the following criteria:

Technical merit (40%),

Experience and qualifications (30%),

Price (30%).

References

The following standards and specifications shall be referred to during the construction phase:

IS 14893:2000 (Indian Standard for Hot Mix Asphalt for Roads),

IS 23864:2004 (Indian Standard for Granular Base Courses for Roads),

IS 458:2018 (Indian Standard for Reinforced Concrete Pipes),

IS 456:2000 (Indian Standard for Plain and Reinforced Concrete).

Note: The above technical specification is a sample and may be modified as per the requirements of the project.

Implementation Methodology

Implementation Methodology for Road Construction Project

Introduction

The successful bidder will be required to execute the Road Construction Project in a timely, efficient, and high-quality manner. The Implementation Methodology outlined below will serve as a framework for the project execution, ensuring compliance with the scope, requirements, and industry standards.

Pre-Construction Phase (Weeks 1-4)

1. Site Preparation and Planning

Conduct site surveys to identify potential environmental and geological hazards.

Conduct geotechnical investigations to determine the soil conditions and design the foundation for the road.

Prepare a detailed project schedule, including milestones and deadlines.

Establish a quality management plan to ensure adherence to the project specifications.

2. Labor and Resource Allocation

Ensure that all laborers are properly qualified, trained, and certified to perform the required tasks.

Allocate resources, including machinery, equipment, and materials, to meet the project schedule and specifications.

Develop a comprehensive risk management plan to mitigate potential risks and ensure a safe working environment.

3. Environmental and Safety Preparations

Conduct environmental impact assessments to identify potential risks and develop strategies to mitigate them.

Develop a comprehensive safety plan, including emergency response procedures and risk assessments.

Construction Phase (Weeks 5-40)

1. Site Development and Excavation

Conduct site development, including clearing and grubbing, to prepare the site for construction.

Excavate and grade the roadbed to the required specifications.

Install drainage systems, including culverts and ditches.

2. Subgrade Preparation and Asphalt Paving

Prepare the subgrade, including compaction and stabilization, to ensure a stable foundation for the asphalt pavement.

Install asphalt pavement, including the base course, intermediate course, and surface course.

Conduct regular quality control checks to ensure compliance with the project specifications.

3. Signage and Marking

Install necessary signage, including traffic signs, warning signs, and directional signs.

Apply pavement markings, including lane dividers and arrows.

Quality Control and Assurance

1. Regular Quality Inspections

Conduct regular quality inspections to ensure compliance with the project specifications.

Document all quality control activities, including test results and inspection reports.

2. Testing and Verification

Conduct testing and verification of materials and workmanship to ensure compliance with the project specifications.

Document all test results and verification reports.

Metrics and Performance Indicators

1. Project Schedule

The project schedule will be monitored and updated regularly to ensure that the project is completed on time.

The project schedule will be measured against the established milestones and deadlines.

2. Quality

The quality of the work will be monitored and measured against the project specifications.

Regular quality inspections will be conducted to ensure compliance with the project specifications.

3. Safety

The safety performance will be measured against the established safety metrics, including injuries, illnesses, and near misses.

Regular safety inspections will be conducted to identify potential hazards and develop strategies to mitigate them.

Industry Standards and Compliance

1. Indian Roads Congress (IRC) Standards

The project will be executed in compliance with the IRC standards for road construction.

Regular quality inspections will be conducted to ensure compliance with the IRC standards.

2. Environmental and Safety Regulations

The project will be executed in compliance with the environmental and safety regulations, including the Environmental Protection Act and the Occupational Safety, Health and Working Conditions Code.

Regular environmental and safety inspections will be conducted to identify potential risks and develop strategies to mitigate them.

Conclusion

The Implementation Methodology outlined above will serve as a framework for the successful execution of the Road Construction Project. By following this methodology, the bidder will be able to ensure a timely, efficient, and high-quality project execution, ensuring compliance with the scope, requirements, and industry standards.

Quality Control and Standards

Quality Control and Standards

1.0 Introduction

The Road Construction Project requires a high level of quality control and adherence to industry standards to ensure a durable, safe, and environmentally friendly road infrastructure. Bidders must demonstrate their ability to meet the following quality control and standards requirements.

2.0 Quality Control Process

The bidder shall establish and implement a quality control process that includes the following:

Pre-Construction Quality Control: The bidder shall conduct a thorough site investigation to identify potential environmental and safety hazards, and develop a plan to mitigate these risks.

Construction Quality Control: The bidder shall implement a quality control plan that includes regular inspections, testing, and monitoring of materials and workmanship to ensure compliance with industry standards and specifications.

Post-Construction Quality Control: The bidder shall conduct a final inspection and testing to ensure that the road meets the required standards and specifications.

3.0 Quality Control Metrics

The bidder shall meet the following quality control metrics:

Pavement Thickness: The pavement thickness shall be a minimum of 10 cm for the asphalt layer and 20 cm for the base course.

Surface Texture: The surface texture shall meet the Indian Road Congress (IRC) standards for skid resistance.

Drainage System: The drainage system shall be designed and installed to ensure that the road is free from waterlogging and flooding.

Safety Features: The road shall be equipped with safety features such as guardrails, crash barriers, and warning signs.

4.0 Industry Standards

The bidder shall comply with the following industry standards:

Indian Road Congress (IRC) Standards: The bidder shall comply with the IRC standards for road construction, including IRC: 58-2011 (Pavement Design), IRC: 37-2012 (Drainage), and IRC: 82-2013 (Safety Features).

American Association of State Highway and Transportation Officials (AASHTO) Standards: The bidder shall comply with the AASHTO standards for road construction, including AASHTO M 29-13 (Asphalt Mixture), AASHTO M 32-14 (Aggregate Materials), and AASHTO M 82-13 (Drainage Materials).

ISO 9001:2015 Quality Management System: The bidder shall implement a quality management system that meets the requirements of ISO 9001:2015.

5.0 Environmental Standards

The bidder shall comply with the following environmental standards:

Conservation of Water: The bidder shall take measures to conserve water during the construction process, including the use of rainwater harvesting systems and efficient irrigation systems.

Minimization of Waste: The bidder shall minimize waste generation during the construction process, including the recycling of materials and proper disposal of hazardous waste.

Protection of Biodiversity: The bidder shall take measures to protect biodiversity during the construction process, including the conservation of natural habitats and the protection of endangered species.

6.0 Safety Standards

The bidder shall comply with the following safety standards:

Occupational Health and Safety: The bidder shall implement a health and safety program that meets the requirements of the Factories Act, 1948 and the Occupational Safety, Health and Working Conditions Code, 2020.

Personal Protective Equipment: The bidder shall ensure that all workers wear personal protective equipment (PPE) during the construction process.

Emergency Response Plan: The bidder shall develop an emergency response plan that includes procedures for responding to accidents, fires, and other emergencies.

7.0 Quality Control and Standards Certification

The bidder shall provide certification from a recognized third-party organization that they have implemented a quality management system that meets the requirements of ISO 9001:2015. The bidder shall also provide certification from a recognized third-party organization that they have implemented a health and safety management system that meets the requirements of the Occupational Safety, Health and Working Conditions Code, 2020.

8.0 Quality Control and Standards Documentation

The bidder shall provide the following documentation:

Quality Control Plan: The bidder shall provide a comprehensive quality control plan that includes procedures for inspecting, testing, and monitoring materials and workmanship.

Material Specifications: The bidder shall provide specifications for all materials used in the construction process, including asphalt, aggregate, cement, and steel.

Installation and Testing Procedures: The bidder shall provide procedures for installing and testing all systems and components, including drainage systems, lighting systems, and traffic management systems.

9.0 Quality Control and Standards Warranty

The bidder shall provide a warranty for a period of two years from the date of completion of the project, during which time the bidder shall be responsible for any defects or deficiencies in the workmanship or materials used.

By submitting a bid for this project, the bidder acknowledges that they have read, understood, and agree to comply with the quality control and standards requirements outlined above.

Risk Management Framework

Risk Management Framework

Objective:

The objective of this Risk Management Framework is to identify, assess, mitigate, and monitor risks associated with the Road Construction Project, ensuring the successful delivery of the project within the stipulated timeline, budget, and quality standards.

Risk Management Policy:

The Bidder shall adopt a proactive risk management approach to identify, assess, and mitigate risks that may impact the project. The Bidder shall establish a risk management team to oversee the risk management process and ensure that all risks are identified, assessed, and mitigated.

Risk Identification:

The Bidder shall identify potential risks associated with the project, including:

Project Risks:

+ Delays in project execution

+ Cost overruns

+ Insufficient labor or machinery

+ Adverse weather conditions

+ Changes in project scope

Construction Risks:

+ Poor quality of construction materials

+ Labor disputes

+ Machinery failures

+ Environmental hazards

Financial Risks:

+ Inflation

+ Currency fluctuations

+ Unforeseen expenses

Regulatory Risks:

+ Changes in government regulations

+ Non-compliance with environmental and safety standards

Risk Assessment:

The Bidder shall assess the identified risks using the following criteria:

Risk Probability: The likelihood of the risk occurring (low, medium, high)

Risk Impact: The potential impact of the risk on the project (low, medium, high)

Risk Urgency: The urgency of mitigating the risk (low, medium, high)

Based on the assessment, the Bidder shall categorize the risks into:

High-Risk: Risks with high probability and impact

Medium-Risk: Risks with medium probability and impact

Low-Risk: Risks with low probability and impact

Risk Mitigation:

The Bidder shall develop a risk mitigation plan to address the identified high-risk and medium-risk items. The plan shall include:

Contingency Planning: Develop contingency plans to mitigate the risks

Risk Transfer: Transfer risks to third parties where possible

Risk Avoidance: Avoid risks by modifying the project scope or schedule

Risk Reduction: Reduce risks by implementing measures to minimize their impact

Risk Monitoring and Review:

The Bidder shall establish a risk monitoring and review process to:

Track Risks: Monitor and track the risks identified

Update Risk Assessment: Update the risk assessment as new information becomes available

Review Risk Mitigation Plans: Review the risk mitigation plans and update them as necessary

Metrics:

The Bidder shall establish metrics to measure the effectiveness of the risk management process, including:

Risk Identification Rate: The number of risks identified per month

Risk Assessment Rate: The number of risks assessed per month

Risk Mitigation Rate: The number of risks mitigated per month

Industry Standards:

The Bidder shall adhere to the following industry standards:

ISO 31000: Risk management standard

ISO 14001: Environmental management standard

OHSAS 18001: Occupational health and safety management standard

Documentation:

The Bidder shall maintain a risk management document, which shall include:

Risk Register: A register of identified risks, including their probability, impact, and mitigation plans

Risk Mitigation Plans: A document outlining the risk mitigation plans for each identified risk

Risk Monitoring and Review Reports: Reports detailing the risks identified, assessed, and mitigated, as well as the effectiveness of the risk management process.

By adopting this Risk Management Framework, the Bidder shall ensure that the Road Construction Project is delivered within the stipulated timeline, budget, and quality standards, while minimizing the risks associated with the project.

Financial Terms and Conditions

FINANCIAL TERMS AND CONDITIONS

1.0 GENERAL PROVISIONS

1.1 The bidder shall be responsible for submitting a comprehensive bid in accordance with the tender documents and requirements specified in this section.

1.2 The bid shall include a detailed breakdown of costs, including labor, materials, equipment, and overheads.

1.3 The bidder shall be responsible for ensuring that all financial obligations are met in accordance with the terms and conditions of this contract.

2.0 PRICING AND PAYMENT TERMS

2.1 The bidder shall provide a detailed breakdown of costs, including:

Labor costs: including wages, benefits, and other labor-related expenses.

Material costs: including the cost of raw materials, goods, and services.

Equipment costs: including the cost of machinery, tools, and other equipment.

Overheads: including office expenses, insurance, and other overhead-related costs.

2.2 The payment terms for this project shall be as follows:

50% of the total contract value shall be paid upon completion of the road construction work.

30% of the total contract value shall be paid upon completion of the asphalt paving work.

20% of the total contract value shall be paid upon completion of the drainage systems and signage work.

2.3 The bidder shall provide a progress payment schedule, detailing the payment milestones and dates.

2.4 The bidder shall be responsible for submitting regular financial reports, including income statements, balance sheets, and cash flow statements.

3.0 CONTRACT PRICE AND VARIATIONS

3.1 The contract price shall be ■100,000,000.0 (Rupees One Hundred Crores) as specified in the tender documents.

3.2 Any variations to the contract price shall be negotiated and agreed upon in writing by the bidder and the Employer.

3.3 The bidder shall be responsible for submitting a revised cost breakdown and payment schedule in the event of any variations to the contract.

4.0 TAXES AND DUTIES

4.1 The bidder shall be responsible for paying all applicable taxes and duties, including Goods and Services Tax (GST), Value-Added Tax (VAT), and other relevant taxes and duties.

4.2 The bidder shall be responsible for providing a tax identification number and other relevant documentation to the Employer.

5.0 INSURANCE

5.1 The bidder shall be responsible for obtaining and maintaining the following insurance policies:

Public Liability Insurance: ■50,000,000.0 (Rupees Fifty Crores) to cover third-party liabilities.

Employer's Liability Insurance: ■20,000,000.0 (Rupees Twenty Crores) to cover employer's liabilities.

Machinery Insurance: ■10,000,000.0 (Rupees Ten Crores) to cover machinery and equipment.

5.2 The bidder shall provide proof of insurance coverage to the Employer upon request.

6.0 BONDS AND GUARANTEE

6.1 The bidder shall provide a performance bond in the amount of ■50,000,000.0 (Rupees Fifty Crores) to ensure compliance with the contract terms and conditions.

6.2 The bidder shall provide a payment guarantee in the amount of ■30,000,000.0 (Rupees Thirty Crores) to ensure payment of the contract price.

6.3 The bidder shall provide a guarantee for any variations to the contract, in an amount to be determined by the Employer.

7.0 DEFAULT AND TERMINATION

7.1 The bidder shall be responsible for defaulting on any of the financial obligations specified in this contract.

7.2 In the event of default, the Employer shall have the right to terminate the contract and claim damages.

7.3 The bidder shall be responsible for paying all costs and expenses incurred by the Employer in connection with the default and termination of the contract.

8.0 DISPUTE RESOLUTION

8.1 Any disputes arising under this contract shall be resolved through arbitration in accordance with the Indian Arbitration and Conciliation Act, 1996.

8.2 The arbitration proceedings shall be conducted in accordance with the rules and regulations of the Indian Council of Arbitration.

9.0 GOVERNING LAW

9.1 This contract shall be governed by and construed in accordance with the laws of India.

9.2 The bid and contract shall be subject to the jurisdiction of the courts in India.

By accepting this contract, the bidder acknowledges that they have read, understood, and agreed to the terms and conditions specified in this Financial Terms and Conditions section.

Legal and Compliance Requirements

Legal and Compliance Requirements

This section outlines the legal and compliance requirements that must be adhered to by the Tenderer for the Road Construction Project. The Tenderer must ensure that they have the necessary licenses, permits, and certifications to perform the work.

1. Government Regulations and Laws

The Tenderer must comply with all relevant government regulations and laws, including but not limited to:

The Companies Act, 2013

The Contract Labour Act, 1970

The Building and Other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996

The Factories Act, 1948

The Environmental Protection Act, 1986

The Water Prevention and Control of Pollution Act, 1974

The Air Prevention and Control of Pollution Act, 1981

2. Environmental Compliance

The Tenderer must ensure that their activities do not harm the environment and comply with all relevant environmental regulations, including:

The Environmental Impact Assessment (EIA) Notification, 2006

The Hazardous Waste Management Rules, 2016

The Water (Prevention and Control of Pollution) Rules, 1975

The Air (Prevention and Control of Pollution) Rules, 1982

3. Safety Compliance

The Tenderer must ensure that their activities are conducted in a safe manner and comply with all relevant safety regulations, including:

The Factories Rules, 1950

The Building and Other Construction Workers' (Regulation of Employment and Conditions of Service) Rules, 1998

The Occupational Safety, Health and Working Conditions Code, 2020

4. Labor Laws

The Tenderer must ensure that their labor practices comply with all relevant labor laws, including:

The Contract Labour Act, 1970

The Building and Other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996

The Factories Act, 1948

5. Insurance and Bonding

The Tenderer must provide the following insurance and bonding coverages:

Public Liability Insurance: ■50,000,000.0

Workmen's Compensation Insurance: ■10,000,000.0

Performance Bond: ■50,000,000.0

Security Deposit: ■10,000,000.0

6. Tax Compliance

The Tenderer must comply with all relevant tax laws and regulations, including:

The Income-tax Act, 1961

The Goods and Services Tax Act, 2017

The Central Sales Tax Act, 1956

7. Company Structure and Organization

The Tenderer must provide the following information:

Company name and registration number

Address and contact details

Shareholding pattern

Management structure and organizational chart

Details of key personnel involved in the project

8. Experience and Qualifications

The Tenderer must provide proof of experience in road construction, including:

A minimum of 5 years of experience in road construction projects

At least 3 projects completed in the last 5 years

Qualifications and certifications of key personnel involved in the project

9. Financial Capacity

The Tenderer must provide proof of their financial capacity, including:

Audited financial statements for the last 3 years

Bank statements for the last 6 months

Proof of liquid assets and working capital

10. Compliance with Industry Standards

The Tenderer must comply with all relevant industry standards, including:

Indian Road Congress (IRC) standards

Bureau of Indian Standards (BIS) standards

Quality management systems (ISO 9001:2015)

Certifications and Licenses

The Tenderer must provide the following certifications and licenses:

ISO 9001:2015 certification

ISO 14001:2015 certification

OHSAS 18001:2007 certification

Construction Industry Development Council (CIDC) registration

National Highways Authority of India (NHAI) registration

Submission Requirements

The Tenderer must submit the following documents:

Proof of experience in road construction

Proof of qualified labor and machinery

Proof of adherence to environmental and safety standards

Proof of insurance and bonding coverages

Proof of tax compliance

Company structure and organization

Experience and qualifications of key personnel

Financial capacity

Compliance with industry standards

Certifications and licenses

The Tenderer must ensure that all documents submitted are authentic, up-to-date, and comply with the requirements specified above.

Performance Metrics and SLAs

Performance Metrics and SLAs

This section outlines the performance metrics and Service Level Agreements (SLAs) that the selected Tenderer must adhere to in order to successfully deliver the Road Construction Project. The performance metrics and SLAs are crucial to ensuring that the project is completed on time, within budget, and to the required quality standards.

Performance Metrics

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

Project Completion Rate: The proportion of the project completed against the total project scope. The target completion rate is 95% of the project scope within the scheduled timeframe.

+ Metric: (Actual completion / Total scope) x 100

+ Target: 95%

+ Measurement frequency: Bi-weekly

Quality of Work: The quality of the constructed road, including asphalt paving, drainage systems, and signage. The quality of work will be assessed against industry standards and regulatory requirements.

+ Metric: Quality score (out of 100) based on inspections and testing

+ Target: 90% or above

+ Measurement frequency: Monthly

Safety Performance: The number of safety incidents and near-miss events during the project. The goal is to minimize the risk of accidents and injuries.

+ Metric: Number of safety incidents and near-miss events per 100,000 man-hours worked

+ Target: ≤ 1.5 incidents per 100,000 man-hours

+ Measurement frequency: Monthly

Environmental Compliance: The level of compliance with environmental regulations and standards during the project.

+ Metric: Compliance score (out of 100) based on environmental audits and inspections

+ Target: 95% or above

+ Measurement frequency: Quarterly

Cost Performance: The actual cost of the project against the budgeted cost. The goal is to complete the project within the allocated budget.

+ Metric: (Actual cost / Budgeted cost) x 100

+ Target: ≤ 100%

+ Measurement frequency: Bi-weekly

Service Level Agreements (SLAs)

The following SLAs outline the expected service levels and performance standards for the project:

Response Time: The time taken by the Tenderer to respond to queries and requests from the Project Manager.

+ SLA: Respond to queries and requests within 2 hours during working hours (Monday to Friday, 9 am to 5 pm)

+ Measurement frequency: Weekly

Quality of Deliverables: The quality of the constructed road and other deliverables.

+ SLA: Deliverables must meet or exceed industry standards and regulatory requirements.

+ Measurement frequency: Monthly

Safety Performance: The number of safety incidents and near-miss events during the project.

+ SLA: Minimize the risk of accidents and injuries.

+ Measurement frequency: Monthly

Communication: The level of communication between the Tenderer and the Project Manager.

+ SLA: Regular progress reports and updates will be provided to the Project Manager on a bi-weekly basis.

+ Measurement frequency: Bi-weekly

Environmental Compliance: The level of compliance with environmental regulations and standards during the project.

+ SLA: Comply with environmental regulations and standards and maintain a compliance score of 95% or above.

+ Measurement frequency: Quarterly

Consequences of Non-Compliance

Failure to meet the performance metrics and SLAs outlined above may result in the following consequences:

Warning: The Tenderer will be issued a warning for non-compliance, with a specified timeframe to rectify the issue.

Penalty: The Tenderer will be subject to a penalty, which will be deducted from the payment schedule.

Termination: In extreme cases, the contract may be terminated, and the Tenderer may be liable for damages.

Industry Standards and Regulatory Requirements

The project will be carried out in accordance with the following industry standards and regulatory requirements:

Indian Roads Congress (IRC) Standards: The project will be carried out in accordance with the IRC standards for road construction.

National Highways Authority of India (NHAI) Regulations: The project will be carried out in accordance with the NHAI regulations for road construction.

Environmental Protection Act, 1986: The project will be carried out in accordance with the Environmental Protection Act, 1986.

Occupational Safety and Health Act, 1987: The project will be carried out in accordance with the Occupational Safety and Health Act, 1987.

By adhering to the performance metrics and SLAs outlined above, the Tenderer will be able to demonstrate their commitment to delivering a high-quality project that meets the required standards and regulatory requirements.

Testing and Acceptance Criteria

Testing and Acceptance Criteria: Road Construction Project

1. Introduction

The Testing and Acceptance Criteria document outlines the specific conditions and standards that must be met by the successful bidder for the Road Construction Project. The purpose of these criteria is to ensure that the constructed road meets the required quality standards, is safe for use, and complies with environmental regulations.

2. Acceptance Criteria

The constructed road shall be accepted based on the following criteria:

Geometric Requirements:

+ The road alignment shall be within ± 1% of the approved design alignment.

+ The road surface shall be within ± 1% of the approved design curve.

+ The road shall have a minimum camber of 1.5% and maximum camber of 2.5%.

Surface Requirements:

+ The asphalt paving shall have a minimum thickness of 40 mm and a maximum thickness of 60 mm.

+ The asphalt paving shall have a minimum density of 95% and a maximum density of 100%.

+ The asphalt paving shall have a minimum Marshall stability of 12 kN and a maximum Marshall stability of 16 kN.

Drainage Requirements:

+ The drainage system shall be designed to handle a minimum of 20 mm/hour rainfall intensity.

+ The drainage system shall have a minimum slope of 1% and a maximum slope of 2%.

Signage Requirements:

+ The road shall have a minimum of 10 km markings and a maximum of 20 km markings.

+ The road shall have a minimum of 5 km directional signs and a maximum of 10 km directional signs.

Environmental Requirements:

+ The project shall comply with the Environmental Impact Assessment (EIA) report.

+ The project shall comply with the Noise Pollution Control Rules, 2000.

Safety Requirements:

+ The project shall comply with the Occupational Safety, Health and Working Conditions Code, 2020.

+ The project shall provide a minimum of 5 km crash barriers along the road.

3. Testing and Inspection Requirements

The successful bidder shall conduct the following tests and inspections:

Laboratory Tests:

+ Asphalt paving: Marshall stability test, density test, and penetration test.

+ Aggregate: Los Angeles abrasion test, aggregate impact test, and aggregate crushing value test.

Field Tests:

+ Geometric tests: alignment, curve, and camber tests.

+ Surface tests: texture depth test, skid resistance test, and rut depth test.

+ Drainage tests: flow rate test, head loss test, and sedimentation test.

Inspections:

+ Daily inspections: to ensure compliance with safety and environmental regulations.

+ Weekly inspections: to ensure compliance with geometric and surface requirements.

+ Monthly inspections: to ensure compliance with drainage and signage requirements.

4. Acceptance Criteria Metrics

The following metrics shall be used to evaluate the acceptance criteria:

Geometric Requirements:

+ Alignment: ± 1% of approved design alignment.

+ Curve: ± 1% of approved design curve.

+ Camber: 1.5% to 2.5%.

Surface Requirements:

+ Asphalt paving thickness: 40 mm to 60 mm.

+ Asphalt paving density: 95% to 100%.

+ Asphalt paving Marshall stability: 12 kN to 16 kN.

Drainage Requirements:

+ Drainage system design: to handle 20 mm/hour rainfall intensity.

+ Drainage system slope: 1% to 2%.

Signage Requirements:

+ Road markings: 10 km to 20 km.

+ Directional signs: 5 km to 10 km.

5. Industry Standards and Regulations

The project shall comply with the following industry standards and regulations:

Indian Roads Congress (IRC) Standards:

+ IRC: 37-2012: Specification for road pavements.

+ IRC: 21-2013: Guidelines for environmental impact assessment of road projects.

Government of India Regulations:

+ The Environmental Impact Assessment (EIA) Notification, 2006.

+ The Noise Pollution Control Rules, 2000.

+ The Occupational Safety, Health and Working Conditions Code, 2020.

6. Testing and Inspection Schedule

The successful bidder shall conduct the following tests and inspections:

Laboratory Tests: to be conducted within 7 days of completion of asphalt paving work.

Field Tests: to be conducted within 14 days of completion of asphalt paving work.

Inspections: to be conducted daily, weekly, and monthly.

7. Acceptance Certificate

The acceptance certificate shall be issued by the Engineer-in-Charge based on the compliance of the acceptance criteria and the successful bidder shall be entitled to receive the payment as per the payment schedule.