



Project Prefeasibility Report

1. Project Details

Project Name	Roads: Cape Town Integrator R300 Ring Road
Location	City of Cape Town
Sector	Economic
Department	Department Of Infrastructure
Project Owner	Corrie Landsberg
Project Manager	Corrie Landsberg

1.1 Background & Justification

The Western Cape has experienced rapid and sustained population and economic growth over the past two decades, adding more than **2.1 million residents since 2000**. This growth has placed immense pressure on Cape Town's ageing transport network, which has not benefitted from major catalytic infrastructure investment since the **2010 FIFA World Cup**, and even then, improvements were limited and not transformative for the broader metropolitan road system.

The resulting strain on the road network--particularly on strategic mobility corridors such as the **N1 between the R300 and the N7**, which currently carries between **120 000 and 150 000 vehicles per day**--has led to severe congestion, extended peak periods, and declining levels of service. These conditions have contributed to higher road-user costs, increased vehicle operating costs, declining network resilience, and elevated safety risks for motorists due to congestion-induced driver frustration.

To address this growing infrastructure deficit, the Western Cape Government's Department of Infrastructure identified the **R300 North Freeway Extension - Phase 1** as a critical intervention within the broader **Cape Town Integrator (CTI) Programme**. The CTI seeks to integrate major mobility systems across the metropolitan area, unlock economic development, and create an efficient and equitable transport network supporting regional growth, job creation, and spatial transformation.

The R300 North Extension forms the first step toward completing Cape Town's only true **ring-road system**, ultimately linking the **R27, N7, N1, and M5**. Phase 1 covers an initial **5 km stretch between De Bron Road and Wellington Road**, bridging a critical gap in the regional mobility grid and providing alternative routing to relieve pressure on heavily congested nodes such as the **Wingfield Interchange**. The road reserve for this project was proclaimed in 1973 and preserved ever since, demonstrating longstanding strategic intent.

Beyond traffic relief, the extension is a powerful **catalytic infrastructure investment** with the ability to reshape land-use patterns, stimulate redevelopment, unlock dormant land parcels, and support emerging residential, commercial, and industrial growth--particularly around Durbanville, Fisantekraal, and the planned **Cape Winelands Airport** precinct. Catalytic road infrastructure of this nature typically induces secondary development, improves access to opportunity, and enhances urban efficiency.

Economic modelling using the **Social Accounting Matrix (SAM)** confirms the transformational impact of the project, estimating that construction-phase capital expenditure will generate:

- **R4.4 billion** in total production value
- Over **4 100 jobs** (direct, indirect, and induced)
- **R1.2 billion** in gross geographic product (GGP)
- **R464 million** in household income impacts

These outcomes affirm that the project will deliver substantial economic returns, both during construction and through long-term reductions in Road User Costs (travel time savings and lower VOCs). These benefits will expand further once future phases connect the R300 to the **N7** and **R27**, enabling efficient traffic distribution across the broader metropolitan network.

Despite its strategic importance, delivery of the R300 extension exceeds the Province's available funding, particularly given a **R34 billion road maintenance backlog** and ongoing climate-related damage to infrastructure. The Department has committed to fund approximately **25% of the Phase 1 cost**, but an additional **R1.0+ billion** is required from national sources over the next 4-5 years to complete the project without compromising maintenance of the existing 32 000 km provincial road network.

In summary, the R300 North Freeway Extension - Phase 1 is justified by:

- Severe regional congestion and inadequate capacity on key mobility corridors
- A rapidly growing population and urban expansion beyond the current road network's design limits
- Significant economic benefits, job creation, and developmental returns confirmed through modelling
- Strong alignment with NDP 2030, NATMAP 2050, Western Cape G4J Strategy, and national corridor priorities
- The need to unlock land for housing, industry, and logistics development, particularly around the north-east growth corridor
- The critical role of the R300 in establishing Cape Town's first true ring road

Collectively, these factors demonstrate that the project is **technically necessary, economically sound, spatially transformative, and essential to the long-term growth and resilience of the Western Cape**

1.2 Project Scope

Scope of Work

(R300 North Freeway Extension - Phase 1)

The Scope of Work for Phase 1 of the R300 North Freeway Extension covers all activities required to plan, design, procure and construct a new **6-lane freeway** between **De Bron Road** and **Wellington Road**, forming the first part of Cape Town's future northern ring road system. The work includes engineering, environmental, geotechnical, structural, and operational components required to deliver a fully compliant, high-standard provincial freeway.

1. Project Limits and Functional Description

- Construction of approximately **5 km** of new freeway between **De Bron Road (south limit)** and **Wellington Road (north limit)**.
- Integration with SANRAL-managed section from **Stellenberg Interchange (N1) to De Bron Road**.
- Formation of a strategically significant portion of the **regional R300 ring road**, ultimately linking the N1, N7, M5 and R27.

2. Roadworks and Freeway Construction

2.1 Freeway Geometry & Pavement Works

- Construction of a **6-lane dual carriageway freeway** with central median and appropriate shoulders.
- Earthworks, fills, cut-to-spoil, and shaping of the corridor based on geotechnical and vertical alignment studies.
- Stormwater management infrastructure, including culverts, side drains, attenuation features, and erosion protection.
- Pavement layerworks, road surfacing, and road furniture (barriers, signage, road markings).

2.2 Vertical Alignment

- Optimised vertical alignment to support **free-flow travel speeds**, considering adjacent land uses and interchange geometry.

3. Interchanges and Road Structures

3.1 New and Upgraded Interchanges

Design and construction of grade-separated interchanges at:

- **De Bron Road**
- **Legato Drive**
- **Amadeus Drive**
- **Wellington Road**

Interchange configurations evaluated include:

- Conventional diamond
- Diamond/clover
- Diverging diamond The **conventional diamond** configuration is the base solution, allowing future scalability.

3.2 Bridge and Structural Works

- Multiple bridge structures (road-over-road and road-over-freeway).
- Structural designs based on:
 - Longitudinal configuration studies
 - Aesthetic requirements
 - Span length efficiencies
- Foundation construction using **auger piles**, selected after comparative evaluation of CFA piles, precast piles, and DCIS piles.

4. Geotechnical Investigations and Earthworks

- Full geotechnical investigation across the corridor.
- Determination of piling requirements due to inadequate near-surface bearing capacity.
- Recommendations for fill material, cut-slope stability, foundation design, and settlement controls.

5. Environmental Compliance and Authorisations

- Completion of the **Basic Assessment Report (BAR)** for DEA\&DP approval.
- Management of environmental impacts relating to:
 - Vegetation removal and topsoil handling
 - Heritage and noise considerations
 - Stormwater quality management
 - Construction footprint minimisation
- Implementation of Environmental Management Programme (EMPr) responsibilities during construction.

6. Traffic Engineering and Transport Planning

- Traffic modelling to determine capacities, LOS improvements and interchange spacing justifications.

- Evaluation of long-term integration with:
 - N1 & N7 freeway systems
 - Future R300 Phase 2 & 3 segments
 - Local municipal road networks
- Design of temporary traffic accommodation during construction.

7. Public Transport and NMT Integration

- Provision for **future Bus Rapid Transit (BRT) infrastructure** as part of Cape Town's public transport system.
- Provision of **Non-Motorised Transport (NMT)** facilities at interchanges and adjacent community interfaces.

8. Utility Relocation and Services Coordination

- Identification, protection, and relocation of affected services:
 - Water
 - Sewer
 - Electricity
 - Telecommunications
- Coordination with utility owners and obtaining wayleave approvals.

9. Procurement, Contracting and Tender Documentation

- Development of full tender documentation using the **Design by Employer** strategy.
- Packaging of construction works into multiple CIDB-aligned contracts.
- Compliance with:
 - Western Cape Treasury Instructions
 - National Treasury Regulations
 - CIDB Standards
- Inclusion of requirements for:
 - B-BBEE
 - Targeted labour
 - EPWP work opportunities

10. Construction Phase Works

- Establishment of contractor site facilities.
- Execution of 42-month construction programme (June 2026 - Dec 2029).
- Ongoing quality control, contract administration, and health & safety management.
- Implementation of environmental controls and monitoring.
- Stakeholder and community engagement during construction.

11. Handover, Operations & Maintenance Preparation

- Final inspections, snagging, and commissioning of all assets.
- As-built drawings and operation manuals.

- Handover of the freeway to the Western Cape Department of Infrastructure for long-term operation and maintenance, funded through provincial road maintenance budgets.

2. Objectives & Key Focus Areas

Objective	Key Focus Area
Enhance Economic Growth and Job Creation	• Prioritising Infrastructure for Maximum Impact • Strengthening Municipal Infrastructure • Enhancing Private Sector Partnerships • Innovation & Futures Planning
Improve Mobility, Capacity and Regional Connectivity	• Prioritising Infrastructure for Maximum Impact • Strengthening Municipal Infrastructure
Improve Road User Safety	• Prioritising Infrastructure for Maximum Impact • Strengthening Municipal Infrastructure • Innovation & Futures Planning
Support Spatial Transformation and Land Use Integration	• Prioritising Infrastructure for Maximum Impact • Strengthening Municipal Infrastructure • Innovation & Futures Planning
Reduce Road User Costs (RUC) and Improve Network Efficiency	• Prioritising Infrastructure for Maximum Impact • Strengthening Municipal Infrastructure • Innovation & Futures Planning
Enable Public Transport Integration and Non Motorised Transport (NMT)	• Prioritising Infrastructure for Maximum Impact • Strengthening Municipal Infrastructure • Innovation & Futures Planning • Addressing Climate Change & Sustainability
Promote Long Term Economic Resilience and Regional Integration	• Prioritising Infrastructure for Maximum Impact • Strengthening Municipal Infrastructure • Innovation & Futures Planning
Ensure Environmentally and Technically Feasible Infrastructure	• Prioritising Infrastructure for Maximum Impact • Strengthening Municipal Infrastructure • Innovation & Futures Planning • Addressing Climate Change & Sustainability

3. Project Timeline & Cost

Estimated Duration	3 Year(s) & 6 Month(s)
Estimated Start Date	01 Jun 2026
Estimated Cost	R 1.27B

4. Project Stage-0 Submission & Approval

Submitted By	
Submitted On	

Signed By	
Approved On	

5. Environmental & Social Considerations

5.1 Environmental Considerations

- Environmental Authorisation Requirements
- Traffic-Induced Environmental Impacts
- Biodiversity Protection
- Regulatory Compliance - Aligns with NEMA, EIA Regulations, and the National Biodiversity Offset Guideline (2023).
- Sustainability - Long-term conservation management (minimum 30 years).
- Land Use & Zoning Compliance

5.2 Social Considerations

- Respect for human rights including labor, land, and indigenous rights
- Impacts on Local Economic Activity
- Safety and Personal Security
- Community Participation - Engages local communities in stewardship agreements and conservation activities.
- Job Creation - Creates employment for ecologists, land managers, restoration workers, and monitoring staff.
- Job Creation - Stimulates local economies through conservation-related services and eco-tourism.
- Gender-Responsive Procurement - Ensures procurement processes prioritize women's participation and empowerment.
- Assessment of community impacts such as displacement and livelihood loss
- Equity and Inclusion - Encourages fair benefit-sharing and avoids negative impacts on vulnerable communities.
- Promotion of social equity and fair distribution of development benefits
- Engagement with stakeholders throughout the project lifecycle
- Fair labor practices including wages, hours, and working conditions
- Support and compensation for involuntary resettlement

6. Regulatory & Environmental Approvals

6.1 National Level

- Public Finance Management Act (PFMA) / Municipal Finance Management Act (MFMA)
- Environmental Impact Assessment (EIA) Regulations (2014, as amended)
- Land Use Approvals - If private land is purchased or stewardship agreements are signed, approvals for land use change may be required.
- Rail Safety Regulator
- Environmental Management Inspectors (EMIs): Responsible for compliance and enforcement of environmental regulations
- National Environmental Management Act (NEMA): Governs environmental management and authorization processes, including Environmental Authorizations (EAs)
- Environmental Management Frameworks (EMFs): Strategic planning tools for land-use and environmental management decisions

6.2 Provincial and Local Levels

- City of Cape Town
- Provincial Transport Authorities / Regulatory Functions
- Municipal By-laws (Traffic, Informal Trading, Public Places, Noise)
- Western Cape Department of Environmental Affairs and Development Planning (DEA&DP)

- Western Cape Department of Infrastructure
- Municipal Land Use Approvals
- Municipal Environmental Management
- Municipalities: Play a role in environmental management, especially in land-use planning and development applications
- Community Engagement - Mandatory consultation with local communities for stewardship agreements and social impact considerations.
- Local Municipality / Provincial Roads Authority
- Department of Infrastructure (DOI)
- Provincial Treasury, Western Cape

6.3 Other Relevant Entities

7. Identify Key Stakeholders

7.1 Government

- Department Of Infrastructure
- Provincial Treasury
- Local Government
- Department of Environmental Affairs and Development Planning
- City of Cape Town – Local planning, building plan approval
- Provincial Regulatory Authority (Transport)

7.2 State-Owned Entities

7.3 Private Sector

- Construction Companies
- Private Landowners
- Environmental Consulting Firms
- Engineering Firms
- Financial Institutions
- Technology and ICT providers

7.4 Civil Society

- Civil society organizations advocating for community needs
- Environmental and Conservation Organisations
- Local Communities

7.5 Other Stakeholders

8. WCG Sector Priorities

Outcomes	Social	Energy & Water	Economic	Technology	Ecological
Infrastructure investment drives spatial transformation and improves spatial resilience			Long Term 15-30 YRS		
Mobility systems and transportation corridors provide safe and efficient connectivity to opportunities, services, and facilities			Long Term 15-30 YRS		

9. Infrastructure Type

9.1 Hard

1. Hard Infrastructure

Definition: Physical, engineered assets that support transport, energy, water, communications, and the movement of goods and people.

R300 Project Components Falling Into This Category:

- Construction of a **6-lane freeway** (earthworks, pavements, drainage).
- Interchanges at **De Bron, Legato, Amadeus, Wellington**.
- Bridges, structural works, and **piled foundations**.
- Stormwater systems and erosion protection.
- NMT facilities (walkways, cycling paths).
- Utility relocations (water, sewer, electricity, telecoms).

9.2 Soft

R300 Project Components Falling Into This Category:

- Environmental authorisation (BAR, EMPr).
- Public participation and stakeholder engagement processes.
- Socio-economic assessments and development planning.
- Governance and procurement frameworks (IDMS, CIDB standards, Treasury Instructions).
- EPWP, B-BBEE, and targeted labour obligations.

9.3 Critical

R300 Project Components Falling Into This Category:

- Formation of the first segment of Cape Town's **regional ring road**, linking N1, N7, R27, and M5.
- Relief of congestion on **strategic national corridors** (N1 between R300 and N7).
- Essential mobility access to growing residential and industrial zones (Durbanville, Fisantekraal, airport precinct).
- Significant impact on travel times, freight movement, and vehicle operating costs.
- Recognised as a **Strategic Infrastructure Project (SIP)** with national economic significance.

10. Project Stage-1 Submission & Approval

Submitted By	
Submitted On	
Signed By	
Approved On	

11. Geo Location

Geo Location	
Latitude	
Longitude	

12. Procurement Planning

- **Decentralized Preference Criteria** - Departments
- **IDMS**
Infrastructure Delivery Management System
- **CIDB**
Construction Industry Development Board
- **Design by Employer**

Full designs and specifications are developed by the employer and its professional team before construction procurement commences

- **Designated Groups**

13. Procurement Action

- **Procurement Planning**
- **Preferential Procurement Regulations (2022)** - Aligned : Yes
- **competitive bid tender process**

14. Social Impact

15. Property Availability

Has the land for the site been identified?: Yes

Remarks: Existing

16. Project Stage-2 Submission & Approval

Submitted By	
Submitted On	
Signed By	
Approved On	

17. Background & Justification

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18. Economic and Social Justification

- **Job creation**
- **Inclusive growth**
- **Reducing inequality**
- **Improving access**
- **Alignment with Provincial Economic Strategies**
- **Supporting Community Trust and Transparency**
- **Job Creation, Skills Development and Local Participation**
- **Improving Environmental Awareness and Behaviour**
- **Alignment with Provincial Economic Strategies**

19. Geographic Coverage

19.1 Regions

- City of Cape Town

19.2 Municipalities

District	Municipalities
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19.3 Communities

District	Communities
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20. Sector-specific analysis

21. Approval Bodies

21.1 Provincial Government Departments

- Department Of Infrastructure
- Provincial Treasury
- Local Government
- Department of Premier
- Department of Environmental Affairs and Development Planning
- City of Cape Town – Local planning, building plan approval
- Provincial Regulatory Authority (Transport)

22. Environmental Considerations

23. Social Considerations

23.1 Inclusive Economic Development

- Supports SMMEs, women- and youth-owned enterprises
- Encourages job creation through public procurement and infrastructure projects
- Local economic participation and value-chain inclusion

23.2 Public Participation and Equity

- Ensures community involvement in planning and decision-making
- Promotes equitable access to services and opportunities
- Transparency and stakeholder trust-building

23.3 Expanded Public Works Programme (EPWP)

- Provides short-term employment and skills development
- Targets vulnerable groups including youth, women, and persons with disabilities

24. Investment Needs

24.1 Infrastructure Development

- Roads, bridges, and public transport systems.

25. Policy Incentives

25.1 Sector-Focused Incentives

- Inclusive Infrastructure Development
- Gender-Responsive Procurement
- Youth Empowerment
- Economic Inclusion

25.2 Investment Ecosystem Support

- Western Cape Infrastructure Pipeline / DOI support
- WCIF 2050 Panoptic Evaluation framework

26. Scale And Complexity

26.1 Total Addressable Market (TAM)

- Population served by a transport corridor
- Data sources
 - Demographic
 - Geographic
 - Environmental and Biodiversity Data
 - Land Use and Spatial Planning Data
 - Regulatory and Compliance Data

26.2 Served Available Market (SAM)

- Location
- Capacity
- Which of the following criteria is being used to support this analysis in terms of Segmentation?
 - Travel Purpose & Network Role
 - Region
 - Ecological Segmentation
 - Geographic Segmentation
 - Development Impact Segmentation
 - Socio-Economic Segmentation

26.3 Demand Forecasting

26.4 Size

Project Type	New Project
Project Size	Mega - Total of R1 Bill or more

27. Challenges

27.1 Financial Complexity

2. Financial Complexity

2.1 Funding Gap and Budget Constraints

The project’s estimated value (~**R1.27 billion**) cannot be fully funded by the Province due to:

- A **R34 billion road maintenance backlog**
- Limited Medium-Term Expenditure Framework (MTEF) headroom
- The need to maintain 32 000 km of existing provincial roads

The Province commits ±25% of the cost, requiring ~**R1.0 billion** in additional funding from National Treasury over 4–5 years.

2.2 Competing Infrastructure Priorities

2023 climate disasters diverted funding from planned maintenance and capital projects toward emergency repairs. This:

- Reduces available capital for new builds
- Increases pressure to prioritise resilience over expansion

2.3 High Upfront Capital Intensity

Because the route includes:

- Multiple interchanges
- Major structures
- Large fills
- Complex piling requirements

...the unit cost per kilometre cannot follow standard R/km benchmarks and must instead rely on concept?

design?level cost schedules.

This increases uncertainty in early budgeting.

2.4 Limited Ability to Commit Beyond MTEF

Under the PFMA, the WCG cannot issue funding commitments beyond the MTEF period without formal approvals. This restricts long?term financial planning for a multi?year (42?month) construction period.

27.2 Operational Complexity

3. Operational Complexity

3.1 Multi?Stakeholder Governance

The project requires coordination between:

- Western Cape Department of Infrastructure
- SANRAL
- City of Cape Town
- Environmental authorities
- Communities and I&APs

This creates governance complexity across national, provincial, and local spheres.

3.2 Complex Procurement Environment

Procurement must comply with:

- Provincial Treasury Instructions
- CIDB standards
- National Treasury FIDPM
- B?BBEE and EPWP requirements

Multi?package competitive tendering increases workload for evaluation, adjudication, and contract management.

3.3 Public Participation and Social Expectations

Community expectations related to:

- Local labour
- Enterprise development
- NMT and public transport support
- Noise and safety impacts during construction

...must be managed through structured engagement processes.

3.4 Construction Sequencing and Traffic Accommodation

Construction must maintain safe traffic conditions while:

- Realigning the N1
- Closing/altering roads (e.g., Langeberg Road, Madeliefie Street)
- Constructing new overpasses

This increases risk to schedule, safety, and mobility during works.

3.5 Long-Term Operational Responsibilities

After construction, the Province assumes responsibility for:

- Maintenance
- Operations
- Performance monitoring

Given existing maintenance backlogs, this adds long-term operational pressure.

27.3 Technical challenges

1. Technical Challenges

1.1 Geotechnical Complexity

Geotechnical investigations confirm insufficient near-surface bearing capacity, requiring **piled foundations** for major structures. Four piling options were assessed, with **auger piles selected**, adding technical and construction complexity.

1.2 Interchange and Vertical Alignment Constraints

The corridor passes through a fully urbanised environment where:

- Interchange configurations must be compatible with constrained land parcels.
- Vertical alignment must ensure safe free-flow travel speeds while accommodating existing roads and developments.

This complexity is compounded by the need to coordinate interchange spacing with future phases and SANRAL's upgrades at the N1 Stellenberg Interchange.

1.3 Integration with Existing Road Network

Integration with SANRAL's systems requires:

- Coordinated realignment of the N1 between Old Oak and Brackenfell Boulevard.
- Synchronisation of structural levels at the stack interchange where the R300 must be inserted between layers of existing infrastructure.

1.4 Utility Relocations

Multiple bulk and municipal services (water, sewer, electrical, telecoms) must be relocated or protected. These relocations are high-risk due to:

- Unknown service depths
- Ageing infrastructure
- Required outages affecting communities

1.5 Climate-Related Engineering Risks

The Western Cape's 2023 flood events exposed vulnerabilities in existing road networks. Designs must incorporate:

- High-capacity drainage
- Erosion protection

- Resilient materials

This elevates engineering requirements beyond standard freeway design.

28. Phases

29. Project Stage-3 Submission & Approval

Submitted By	
Submitted On	
Signed By	
Approved On	