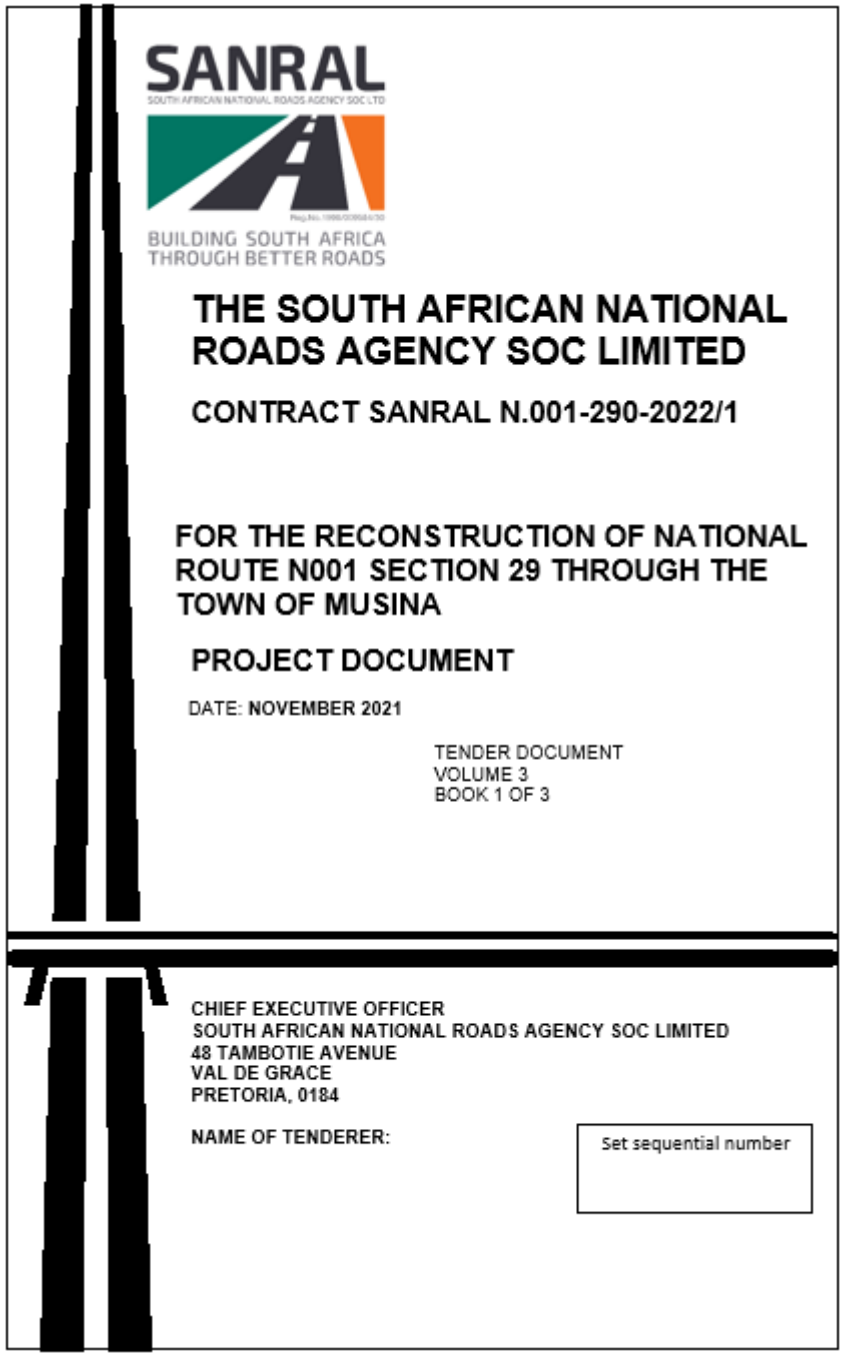
TENDER BRIEFING PRESENTATION

CONTRACT SANRAL N.001-290-2022/1

FOR THE RECONSTRUCTION OF NATIONAL ROUTE N001 SECTION 29 THROUGH THE TOWN OF MUSINA

12 NOVEMBER 2021



WELCOME

- **CONTRACT SANRAL N.001-290-2022/1**
- **FOR THE RECONSTRUCTION OF NATIONAL ROUTE N001 SECTION 29 THROUGH THE TOWN OF MUSINA**
- Introduction
  - The Client:
    - The South African National Roads Agency SOC Limited (SANRAL)
  - The Consultant Engineers:
    - KBK Engineers (Pty) Ltd (KBK)
- SANRAL Representatives:
  - Mr Hennie Kotze – The Project Manager
  - Me Ntombikayisa Faku – Biding procedure and Technical Enquiries Contact Person

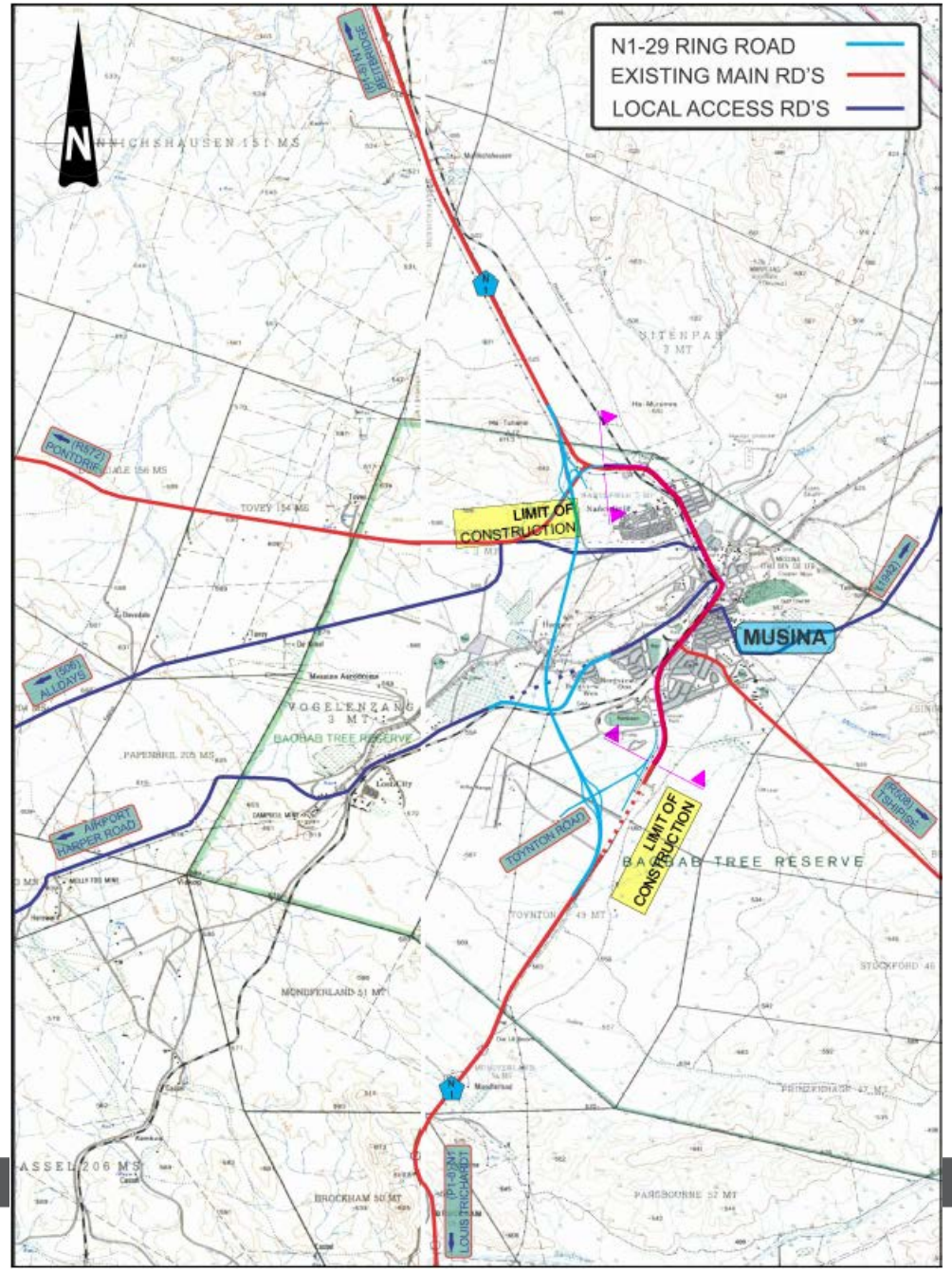
    Email: FakuN@nra.co.za

    Tel: (012) 426 6236
- KBK Representative:
  - Mr Martin Boonstra

AGENDA

- Introduction
- Tender Documentation
- Contractual Matters
- Description of the Works

LOCALITY PLAN OF THE PROJECT



INTRODUCTION

- **Project Description:**

  This project, for the reconstruction of the N1 section 29 through the town of Musina in the Limpopo Province, is located from Musina South (km 89.65) to Musina North (km 95.44) (total 5.8 km).

  The N1 between km 89.550 and km 95.440 can be categorised as:

  - urban between km 89.550 and km 91.700;
  - the Musina Central Business District (CBD) between km 91.700 and km 93.900; and
  - urban between km 93.900 and 95.440.

TENDER DOCUMENTATION

- **Documentation**

The following documents form part of this contract:

- Volume 1: (The Conditions of Contract: FIDIC 1999).
- Volume 2: (The Standard Specifications: COTO Draft Standard October 2020 edition)
- Volume 3: (The Project Document, Condition of Tender, Tender Data, Returnable Schedule, General and Particular conditions of Contract, Project Specification, Form of Offer, Pricing Schedule and Project Information)
- Volume 4: (The Road works Drawings)

TENDER DOCUMENTATION

- **The Tender (Part T1)**

  Tender Notice:

  – Closing time for submission of tender offers: @ **11h00 on Friday 10 December 2021**
  – Tenders to be submitted to SANRAL (Northern Region Office) located at 38 Ida Street, Menlo Park, Pretoria
  – Form A1.1: Certificate of Intention to Submit a Tender in Returnable Schedules to be completed and submitted prior to 19 November 2021. (Failure to comply may render tender non-responsive)
  – It is a requirement that a minimum of thirty percent (30%) of the work by the end of the contract be subcontracted to Targeted Enterprise(s)

TENDER DOCUMENTATION

- **The Tender (Part T2)**

  Tender Eligibility (Tender Data – Clause C.2.1):

  Only those tenderers who satisfy the following eligibility criteria are eligible to submit tenders:

  – CIDB contractor grading designation of CIDB 8CE or higher
  – Meet the minimum threshold designated for local production and content as stated in the Tender Data C.2.1.1
    Please note the new requirement that only (100%) locally produced or locally manufactured bagged and bulk cement to be used
  – Who is registered on the National Treasury Central Supplier Database
  – Tenderers with a B-BBEE contributor status level of 1, 2, 3 or 4. Tender Preferences points system applicable: 90/10 (Price/BBBEE Status Level)
  – Tenderer who submits a valid BBBEE Certificate

TENDER DOCUMENTATION

- **The Tender (Part T2 Continue)**

  - Tender Data Clause C.2.16: Tender offer validity period is 24 weeks
  - Form D5.1: Contractor's Experience Based on Completed Contracts:
    Must have completed 3 similar contracts after January 2016, with min contract value of R60million
    Note performance ratings to be provided (CIDB Performance Rating system)
  - Form D5.2: Contractor's Experience Based on Projects in Progress:
    Must have completed 3 similar contracts after January 2016, with min contract value of 80% of tender amount and R60million
    Note performance ratings to be provided (CIDB Performance Rating system)

TENDER DOCUMENTATION

- **Agreement and Contract Data (Part C1)**

  - Part A: General Conditions – FIDIC 1999
  - Part B: Particular Conditions of Contract
  - C1.2.2 Appendix to Tender: Contract Data
  - Performance Security – Demand Security required
  - Retention Money Guarantee may be provided. Tenderer to submit Alternative Offer with R800 000 discount offered.
  - Intra-programme dates penalties of R20 000 per day on STOP/GO activities
  - Lane occupation levy for non-compliance with restriction and requirements stated in Part C3
  - Accommodation of Traffic non-compliance penalties
  - Overloading penalties
  - Layer irregularity penalty/bonus
  - Term “fixed rate item” shall apply to all items of work listed in Pricing Schedule

TENDER DOCUMENTATION

- **Agreement and Contract Data (Part C1 Continue)**

Item	N.001-290-2022/1
Time for Completion	20 Months (Including a 2 month mobilisation period)
Amount of Performance Security	10% of the Accepted Contract Amount (excluding VAT)
Delay Damages	R35 000 per day
Retention	10% of value of completed work – maximum of 5% of tender amount
	Retention Guarantee permitted. Alternative Tender with discount of R800 000 offered
DAB	1 Member DAB

TENDER DOCUMENTATION

- **Pricing Schedule (Part C2)**

  - Pricing Schedule provided in PDF format
  - Pricing Schedule provided in Excel format
  - Term “Fixed Rate” apply to all rates
  - Pre-fix “P” indicate amendment of standard COTO pay item
  - Completed Pricing Schedules to be submitted in (1) hard copy, (2) PDF copy (electronic format) and (3) in Excel (electronic format)

TENDER DOCUMENTATION

- **Scope of Works (Part C3)**

  - SECTION A1: Is standard amendments issued by COTO
  - SECTION A2: Project specification amendments to the COTO Standard Specification
  - SECTION B: Specification Data. Project Specific Data provided where COTO Standard Specification requires the Contract Document to provide information
  - SECTION C: Environmental Management Plan
  - SECTION D: Stakeholder And Community Liaison, and Targeted Labour and Targeted Enterprises Utilisation and Development
  - SECTION E: Requirements of the Occupational Health and Safety Act and Regulations

TENDER DOCUMENTATION

- **Scope of Works (Part C3 Continue)**

  SECTION A2:

  – Clause A1.2.3.22: Contractor to utilize mobilization period to obtain necessary permits and wayleaves from utility service providers
  – Clause A1.2.3.23: Work in restricted areas. If extra over items or hand work items have been omitted it is deliberate and any additional cost deemed to be included in bulk rates
  – Clause A1.2.7.1: Note additional programme requirements
  – Pay Item PC1.4.1 Site Accommodation. Items measured per unit to be supplied complete in accordance with the drawings. Details indicated on the drawings include, content (e.g. stove, fridge, desks, chairs, etc), layout and dimensions of what needs to be provided.
  – Pay Item PC1.5.7.10 provide payment for temporary barriers. Barriers available from the Employers yard in Musina. Contractor to provide terminal sections, fish plates and bolts, and retroreflective plates
  – Moveable barricade signs measured under Item PC1.5.7.11, provide for chevron sign with arrow or road closed sign
  – Pay Item PC3.3.17 provide for pricing of inlet, outlets, transition and similar structures as per typical design

TENDER DOCUMENTATION

- **Scope of Works (Part C3 Continue)**

  SECTION A2:

  – Pay Item PC4.1.9 Also requires the Contractor to stockpile recovered material in accordance with material classification
  – Clause A9.1.6.7 the use of thermal blankets is obligatory when transporting asphalt
  – Clause A9.1.8.4 Note surface regularity requirements
  – Pay Item PC11.6.1 amended to indicate that the supply and erection of road sign support is included in the rates tendered
  – Clause A12.11.5.4 provide the geotextile grade classification requirements to be utilized
  – Clause A13.4.2 provide old (COLTO) and new (COTO) concrete class description
  – Pay Item PC20.1.5 the Tenderer can price a negative rate to indicate his contribution to the Laboratory. The reason for this is that the Contractor will also be allowed to utilize the independent laboratory for his own process control
  – Pay Item PC20.1.6 provide for a PC Sum for payment of the independent site laboratory provided by others.

TENDER DOCUMENTATION

- **Scope of Works (Part C3)**

  SECTION B:

  – Clause A1.2.3.3 Allowance for n-days N = 10
  – Clause A1.2.3.5 Note definition for urban and CBD sections
  – Clause A1.2.3.5 Accommodation of Traffic Restrictions will impact on programme and will also be subject to penalties
  – Clause A1.2.3.12 Contractor to dispose of non-usable assets
  – Clause A1.2.3.22 indicate Contractors responsibility for wayleaves and agreements
  – Chapter A1.5 Accommodation of Traffic Restrictions will impact on programme and will also be subject to penalties. Strict requirements on the use of STOP/GO measures
  – Chapter A2.1: Services to be located with Ground Penetrating Radar (GPR) prior to construction
  – Clause A2.1.3.2: Contractor shall notify the Service Owner within 14-days of the Commencement date of intention to start with work, request quotations for relocation and provide time lines
  – Clause A4.1.7 Part-time stockpile controller and excavation controller required
  – Clause A4.2.7 Test pit information provided in Part C4 – Appendices
  – Clause A5.3.8.5 Payment adjustment on listed items for meeting IRI specification

TENDER DOCUMENTATION

- **Scope of Works (Part C3 Continue)**

SECTION B:

- Clause A5.4.5.3 Stabilization agent application rate calculated at 3.5% cement and material MDD of 2280 kg/m³
- Clause A9.1.4

Permanent surfacing: **Sand skeletal** **Continuous graded** **Level II mix design** **10 mm NMPS** **A-R2 modified binder** **40 mm layer thicknesₛ**	**Permanent base:** **Sand skeletal** **Continuously graded** **Level II mix design** **20 mm NMPS** **A-E2 modified binder** **70 mm layer thickness**

- Clause C1004: Designated Environmental Officer required (DEO)
- Clause D1003.04 Note CPG Targets for Labour and Targeted Enterprises

TENDER DOCUMENTATION

- **Project Information (Part C4 Continue)**

Description of the Works

This project, for the reconstruction of the N1 section 29 through the town of Musina, is located from Musina South (km 89.65) to Musina North (km 95.44) (total 5.79 km).

Summary of existing cross-section

Km From	Km To	Northbound Widths (m)			Southbound Widths (m)		
		Parking / Shoulder	Outer Lane	Inner Lane	Inner Lane	Outer Lane	Parking / Shoulder
89.65	90.15	2.5	3.5	-	-	3.5	2.5
90.15	91.70	-	3.4 – 4.0 (ave. 3.7)	3.4 – 4.0 (ave. 3.7)	3.4 – 4.0 (ave. 3.7)	3.4 – 4.0 (ave. 3.7)	-
91.70	92.00	-	3.4 – 4.0 (ave. 3.7)	3.4 – 4.0 (ave. 3.7)	3.4 – 4.0 (ave. 3.7)	4.6 – 6.0	-
92.00	92.59	1.8 – 2.2 (ave 2.0)	5.2 – 5.5 (ave 5.4)	-	-	5.2 – 5.5 (ave 5.4)	1.8 – 2.2 (ave 2.0)
92.59	93.13	-	6.3 – 7.2 (ave 6.6)	-	-	6.3 – 7.2 (ave 6.6)	-
93.13	93.80	-	4.2 – 5.2 (ave 4.4)	3.2 – 3.8 (ave 3.4)	3.2 – 3.8 (ave 3.4)	4.2 – 5.2 (ave 4.4)	-
93.80	94.33	0.1 – 0.6 (ave 0.5)	3.4 – 3.9 (ave 3.6)	-	-	3.4 – 3.9 (ave 3.6)	0.1 – 0.6 (ave 0.5)
94.33	95.44	1.3 – 2.4 (ave 2.0)	3.3 – 3.8 (ave 3.5)	-	-	3.3 – 3.8 (ave 3.5)	1.3 – 2.4 (ave 2.0)

TENDER DOCUMENTATION

- **Project Information (Part C4 Continue)**

Description of the Works

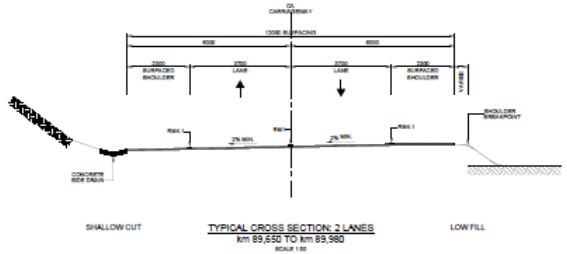
The final cross-section consists of a single carriageway that maintains the total existing road width (except at certain intersections), while establishing fixed lane widths in the various sections as summarised in the following table:

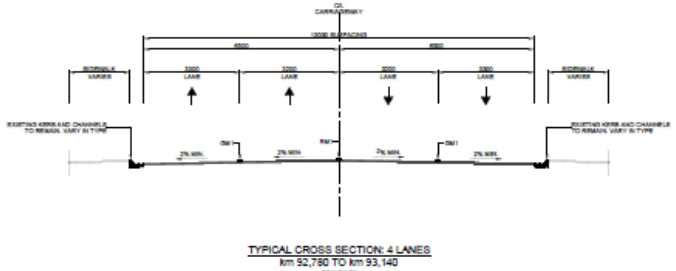
Km From	Km To	Northbound Widths (m)			Southbound Widths (m)		
		Parking / Shoulder	Outer Lane	Inner Lane	Inner Lane	Outer Lane	Parking / Shoulder
89.65	90.15	2.0	3.7	-	-	3.7	2.0
90.15	92.00	0.15 – 0.7	3.5	3.5	3.5	3.5	0.15 – 0.7
92.00	92.59	2.0	5.0 – 5.5 (ave 5.2)	-	-	5.0 – 5.5 (ave 5.2)	2.0
92.59	92.78	-	7.0 – 7.5	-	-	7.0 – 7.5	-
92.78	93.20	-	3.3	3.2	3.2	3.3	-
93.20	93.50	0.5	3.5	3.5	3.5	3.5	0.5
93.50	93.80	0.5 (+2.5 Gravel)	3.5	3.5	3.5	3.5	0.5 (+2.5 Gravel)
93.80	94.33	0.5 (+2.5 Gravel)	3.7	-	-	3.7	0.5 (+2.5 Gravel)
94.33	95.44	Varies (ave 1.5)	3.7	-	-	3.7	Varies (ave 1.5)

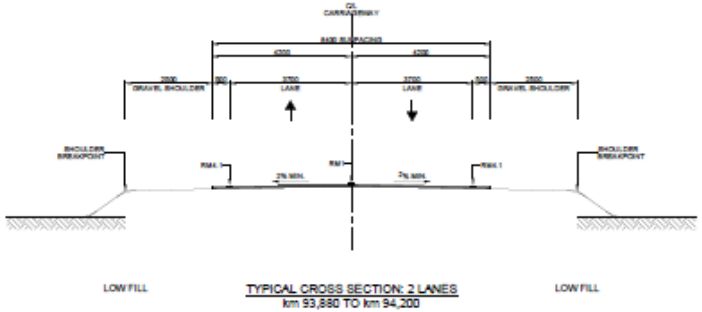
TENDER DOCUMENTATION

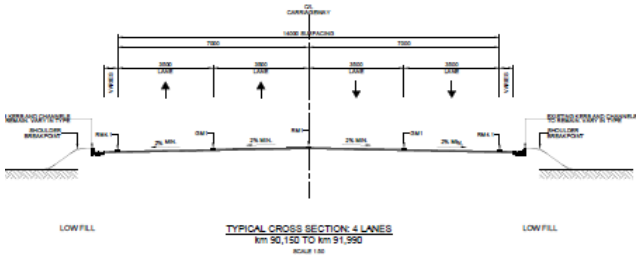
- **Project Information (Part C4 Continue)**

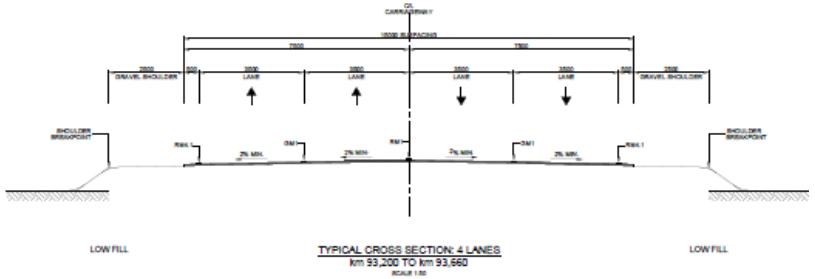
Typical Cross-sections

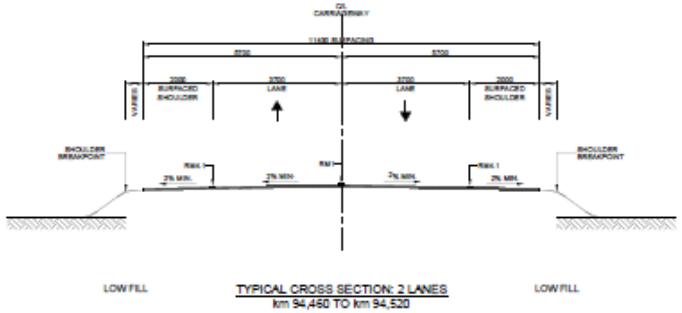


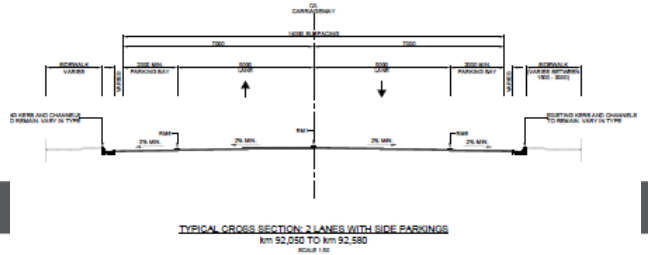












TENDER DOCUMENTATION

- **Project Information (Part C4)**

Description of the Works

- Only the existing road surface width is to be re-instated with no vertical alignment adjustment required. Final road levels are to tie-in with adjacent road infrastructure such as kerbs and sidewalks. Final road levels are therefore not provided.
- Several intersections and accesses are included along the route that must be maintained or improved to the final layout details included in the layout and road marking drawings in Volume 4.
- Only limited repairs to inlet and outlet headwall and wingwall elements along with general clearing of the culverts and inlet and outlet areas are required as part of this project.
- Approximately 2 830 m of various types of kerb and channel combinations are required along the route (1 270 m replacement of existing kerbs and 1 560 m of new kerbs). A further 3 510 m of 300mm wide concrete channel along existing kerbs require replacement.
- Only minor repairs are required in isolated areas for existing walkways. Approximately 2 300 m of new pedestrian walkways are required to formalise existing informal pedestrian paths.

TENDER DOCUMENTATION

- **Project Information (Part C4)**

Description of the Works

- Removal and re-instatement of existing guardrails with recovered and new guardrail material.
- New Road Markings and All road signs to be replaced.
- Detection and protection of existing services where required
- The typical construction process envisaged (including pavement layer details) for the various portions of the project is described below.

Km 89.65 to km 91.60 & km 93.20 to km 95.44 (portions south and north of Musina CBD):

a) Mill the existing surfacing layers to -40 mm and remove to spoil.

b) Excavate the existing upper pavement layers to -390 mm and remove to separate stockpile.

c) The stockpiled material shall be processed and screened to remove any oversized (granular and / or bituminous) and / or unsuitable material to approved spoil sites.

d) Reconstruct 150 mm of the in-situ material, within excavated box, as selected layer to -390 mm and compact to 95% of maximum dry density (MDD).

e) Construct 200 mm thick subbase (C3) using suitable processed, screened and make-up (where required) material stabilised with cement (CEM II B-M V-S 32.5N) and compact to 97% of MDD. The make-up material (G5A quality) from commercial sources will only be allowed if the quantity of required processed and screened material is insufficient.

f) Construct new 150 mm thick crushed stone (G1) base using material imported from commercial source and compact to 88% of apparent density (AD).

g) Construct new 40 mm thick asphalt surfacing (sand skeletal, 10 mm NMPS, A-R2 binder, level II mix design) and compact to min. 97% of maximum voidless density (MVD) minus design voids (max. 96% of MVD).

TENDER DOCUMENTATION

- **Project Information (Part C4)**

Description of the Works

- The typical construction process envisaged (including pavement layer details) for the various portions of the project is described below.

Km 91.60 to km 93.20 (portion in Musina CBD):

a) Mill the existing surfacing layers to -40 mm and remove to spoil.

b) Excavate the existing upper pavement layers to -310 mm and remove to separate stockpile.

c) The stockpiled material shall be processed and screened to remove any oversized (granular and / or bituminous) and / or unsuitable material to approved spoil sites.

d) Reconstruct 150 mm of the in-situ material, within excavated box, as selected layer to -310 mm and compact to 95% of maximum dry density (MDD).

e) Construct 200 mm thick subbase (C3) using suitable processed, screened and make-up (where required) material stabilised with cement (CEM II B-M V-S 32.5N) and compact to 97% of MDD. The make-up material (G5A quality) from commercial sources will only be allowed if the quantity of required processed and screened material is insufficient.

f) Construct new 70 mm thick asphalt base (sand skeletal, 20 mm NMPS, A-E2 binder, level II mix design) and compact to min. 97% of maximum voidless density (MVD) minus design voids (max. 96% of MVD).

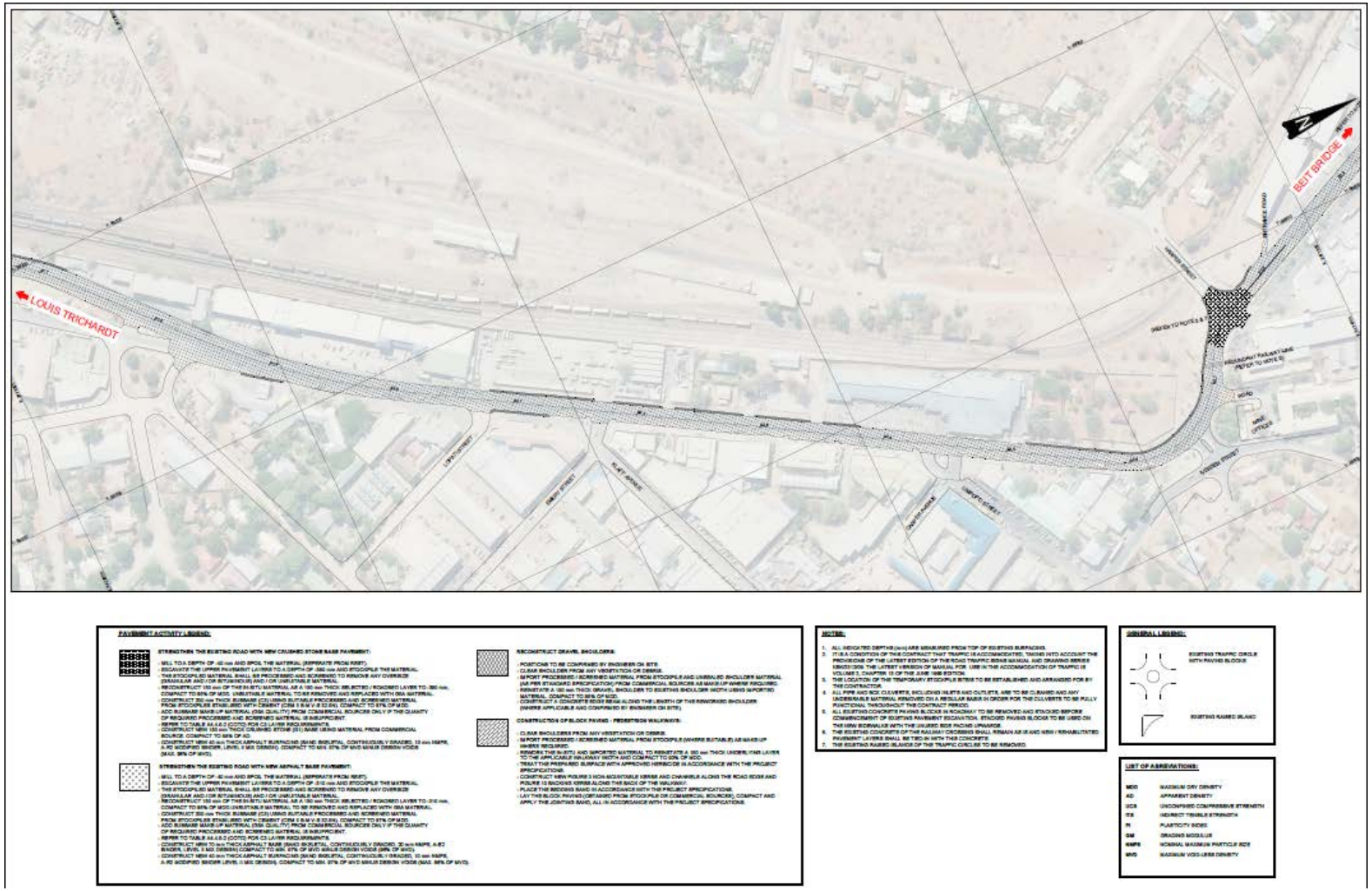
g) Construct new 40 mm thick asphalt surfacing (sand skeletal, 10 mm NMPS, A-R2 binder, level II mix design) and compact to min. 97% of maximum voidless density (MVD) minus design voids (max. 96% of MVD).

TENDER DOCUMENTATION

- **Project Information (Part C4)**

Description of the Works

- Activity plans provided for pavement rehabilitations work:

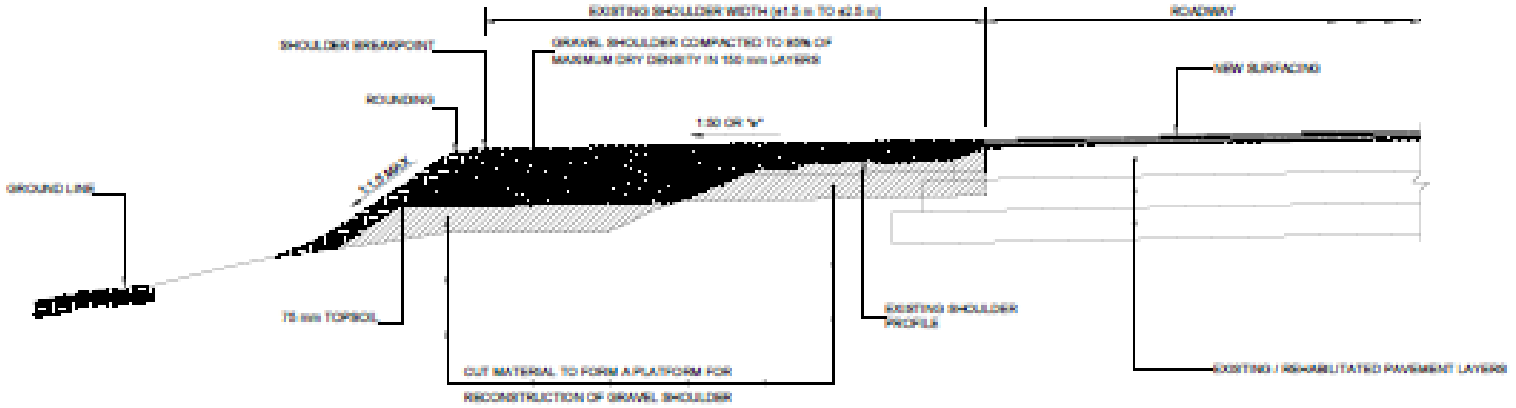


TENDER DOCUMENTATION

- **Project Information (Part C4)**

Description of the Works

Reconstruction of shoulders:

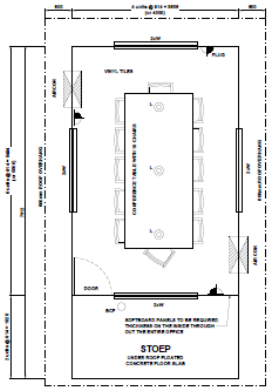


RECONSTRUCTION OF GRAVEL SHOULDERS (CASE 2)

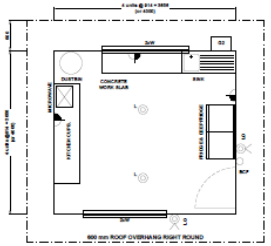
TENDER DOCUMENTATION

- **Project Information (Part C4 Continue)**

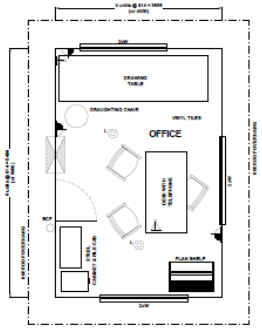
Camp Establishment (Typical drawings provided):
Contractor to make own arrangements to provide Offices an Lab in accordance with drawings



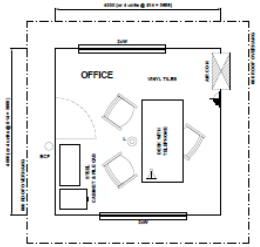
C1.4.1.1 (CONFERENCE ROOM)



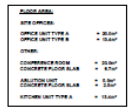
C1.4.1.8 KITCHEN UNIT TYPE A

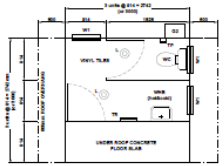


C1.4.1.2 (OFFICE UNIT: TYPE A)

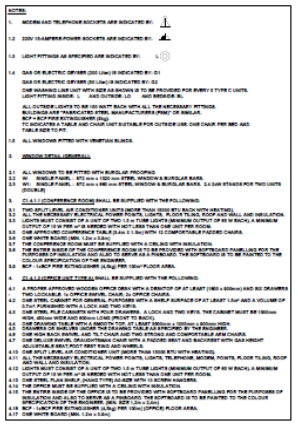


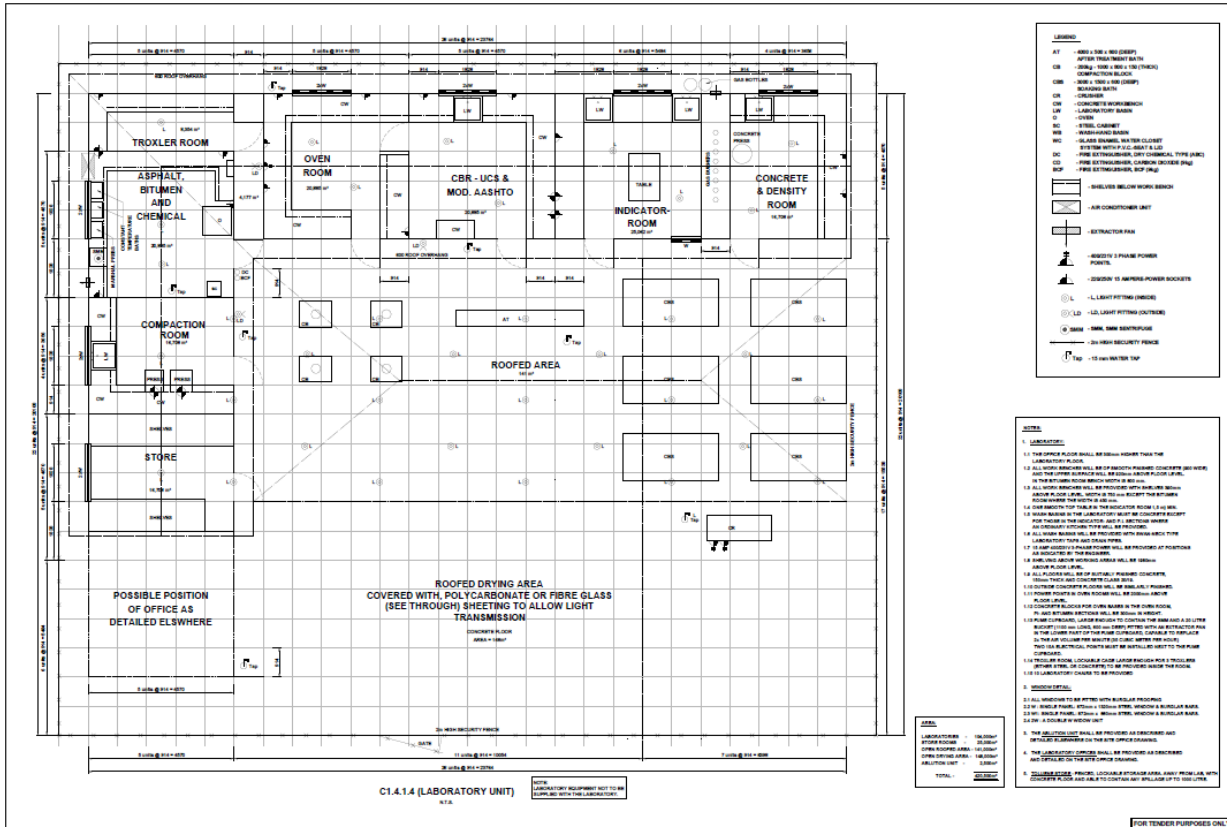
C1.4.1.3 (OFFICE UNIT: TYPE B)


FLOOR AREA



C1.4.1.6 (ABLUTION UNIT)


FOR TENDER PURPOSES ONLY



C1.4.1.4 (LABORATORY UNIT)

FOR TENDER PURPOSES ONLY

SANRAL
SOUTH AFRICAN NATIONAL ROADS AGENCY SOC LTD
BUILDING SOUTH AFRICA THROUGH BETTER ROADS

KBK ENGINEERS (Pty) Ltd.

TENDER DOCUMENTATION

- **Project Information (Part C4 Continue)**

Existing Traffic:

Contractor to accommodate traffic with information on existing traffic provided under Paragraph C4.6

Summary of Musina Urban and CBD traffic

Section	Chainage	AADT	% HV
Urban	km 89.550 to 91.700	3994 to 6 696	20%
CBD	km 91.700 to 93.900	14 436 to 15 247	8%
Urban	km 93.900 to 95.440	4040 to 4 106	17%

Number of vehicles that take access to and from some of the major intersections also provided under paragraph C4.6

TENDER DOCUMENTATION

- **Project Information (Part C4 Continue)** Traffic Accommodation:

The following was taken into consideration during the design of the traffic management during construction:

a) A total maximum of five (5) closures shall be allowed within the contract limits at any given time. Only two (2) closures shall be allowed within the CBD portion on the project (km 91.70 to km 93.90).

b) Only three (3) STOP/GO control sections may be operational within the Contract Limits at any given time, of which a maximum of two (2) shall be located within the CBD section of the project;

c) Within the CBD portion of the project, the limits of the closures shall be located at intersections with local streets with the length of closures varying between 150m and 450m;

d) Outside of the CBD area, the maximum length of work areas shall be 1.0 km. Due to design and access considerations these lengths will vary between 340 m and 1.0 km

e) The minimum distance between any two closures must be 400 m measured between the work areas

f) The existing lane configuration over the larger extent of the project is four (4) lanes and allows for two-way traffic to be accommodated with one (1) lane per direction;

TENDER DOCUMENTATION

- **Project Information (Part C4 Continue)** Traffic Accommodation (Continue):

The following was taken into consideration during the design of the traffic management during construction (Continue):

a) STOP/GO traffic accommodation measures shall only be allowed in areas where the existing road width does not allow for two-way traffic to be maintained during construction in this area;

b) Minimum lane width required is 3.3 m;

c) Temporary line markings should be painted in its final position if practically possible;

d) Deviation of traffic onto the adjacent Muncipal road network is not anticipated. Should it not be possible to accommodate traffic on the N1 through the urban and CBD sections, the Engineer may, in conjunction with the Muncipality, approve deviation of traffic onto the Municipal Road network. Proper pavement condition assessment of the Municipal roads is required before and after deviation.

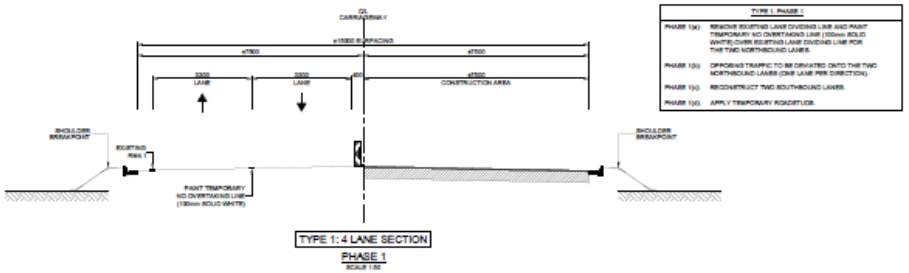
e) The Contractor will communicate lane closures details, accommodation of traffic measures and timelines with the Local Municipality and affected adjacent land and business owners. Such communication shall be completed at least 7-days before lane closures and accommodation of traffic measures is to be implemented in a specific area;

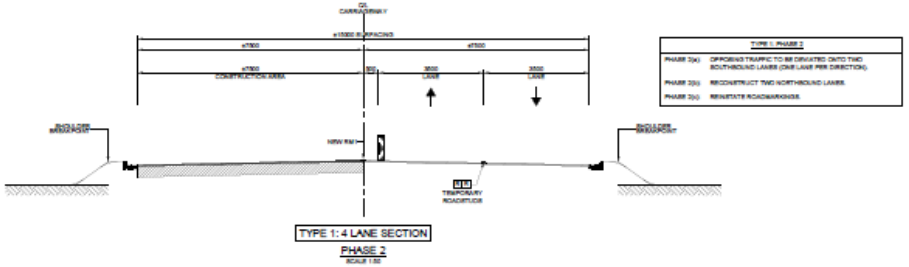
f) Temporary lane widths should be sufficient to safely accommodate buses; and

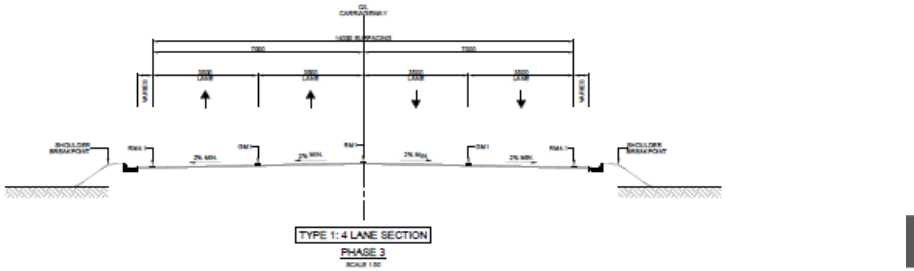
g) Continuous access should be provided to all properties at all times, also during STOP/GO conditions. The Contractor should note that several single access properties exist along the project section that will need to be accommodated without the use of alternative existing routes.

TENDER DOCUMENTATION

- **Project Information (Part C4 Continue)** Traffic Accommodation (Continue):







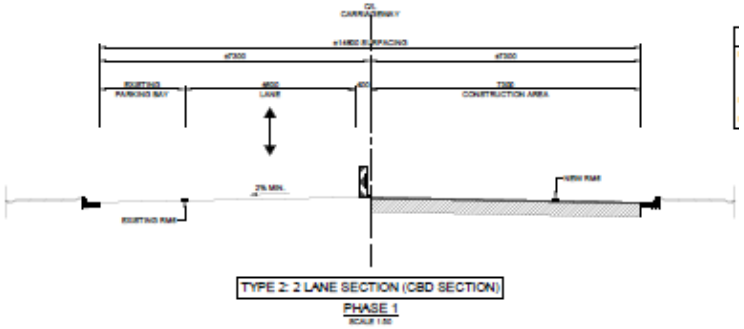
A phased construction proposal, to allow for traffic accommodation, is included in the Roadworks Drawings Volume 4 as per the following diagrams

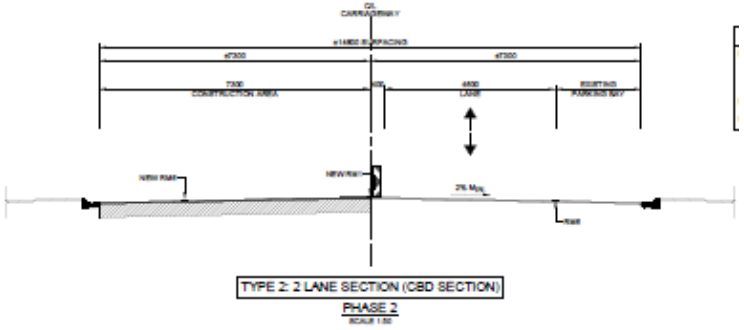
Types to be applied as per table below:

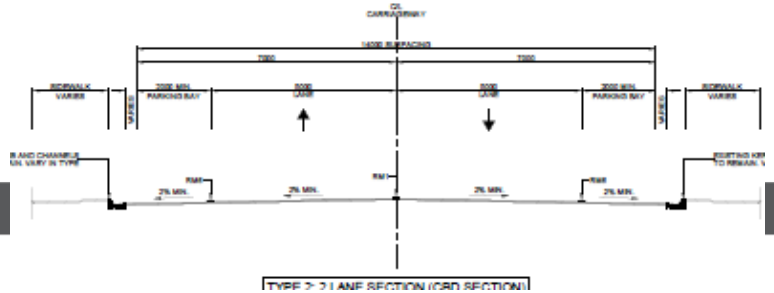
Nr	Km From	Km To	Length (m)	Type
1	89.650	90.150	500	3
2	90.150	92.000	1850	1
3	92.000	92.780	780	2
4	92.780	93.200	420	4
5	93.200	93.800	600	1
6	93.800	95.440	1640	3

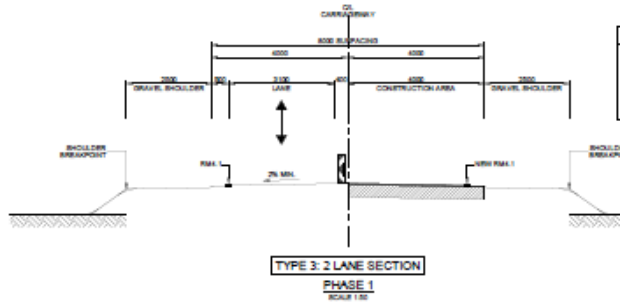
TENDER DOCUMENTATION

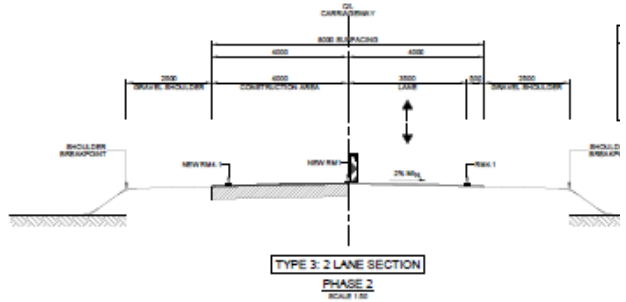
- **Project Information (Part C4 Continue)** Traffic Accommodation (Continue):

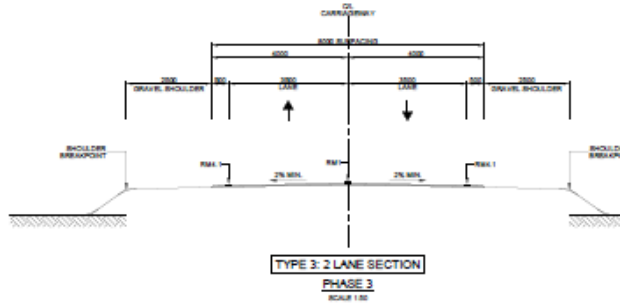












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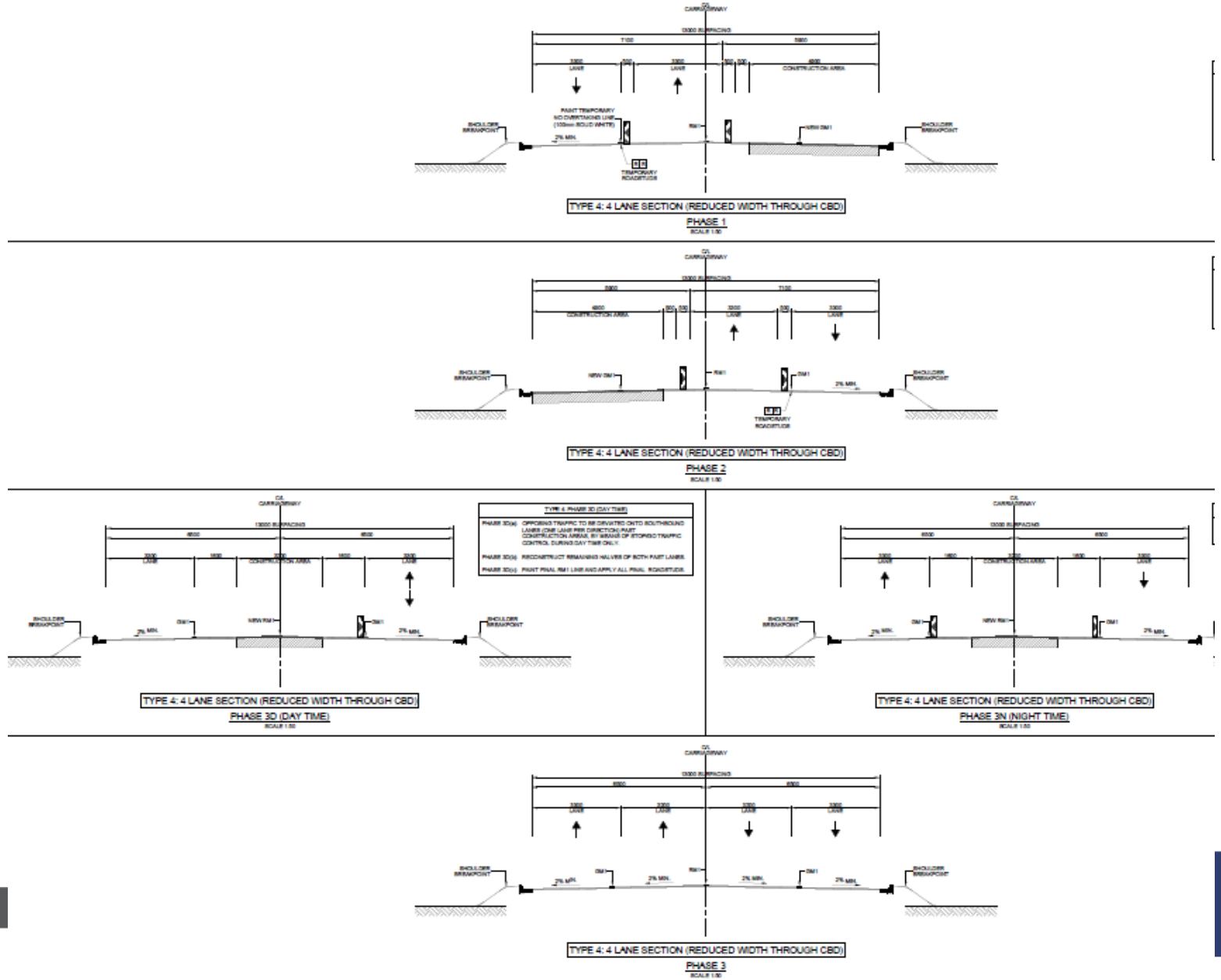
TENDER DOCUMENTATION

- **Project Information (Part C4 Continue)** Traffic Accommodation (Continue):



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KBK ENGINEERS (Pty) Ltd.

TENDER DOCUMENTATION

- **Project Information (Part C4 Continue)**

  Description of the Works: Other Information

- *WATER FOR CONSTRUCTION*

  From Municipal sources. Contact details provided in Part C4

- *MATERIAL SOURCES*

  It is anticipated that most of the selected, subbase and gravel shoulder pavement material will be obtained from material recovered from the existing pavement structure, processed by screening.

  Material for the construction of the G1 base layer, BTB Base, asphalt overlay, concrete and all aggregates will need to be obtained from commercial sources.

  Commercial suppliers indicated in Part C 4 that can produce a variety of materials. The quality of the various material types has not been verified and it remain the Contractor responsibility to confirm that the material complies with the requirements of the Contract.

TENDER DOCUMENTATION

- **Project Information (Part C4 Continue)** Summary of Major Works Quantities:

Item Description	Quantity
Asphalt base	5 040 ton
Asphalt overlay	9 630 ton
G1 Base	9 300 m^3
Remove existing pavement material and screen	30 300 m^3
Cold in-situ recycling (C3)	17 800 m^3
Cement	1 430 ton
Concrete lined side drains	80 m^3
Kerbs	5 200 m
Side walks (block paving)	4 780 m^3

PHOTO'S

CONCLUSION

- Any queries during tender period to be submitted in writing by email to Me. Ntombikayisa Faku:

  Email: FakuN@nra.co.za

  at least 7 working days before the closing date and time.

- Closing date: Friday 10 December 2021 @ 11h00.

- Intention to commence with construction after mobilization by June 2022

- Conclusion of the Briefing