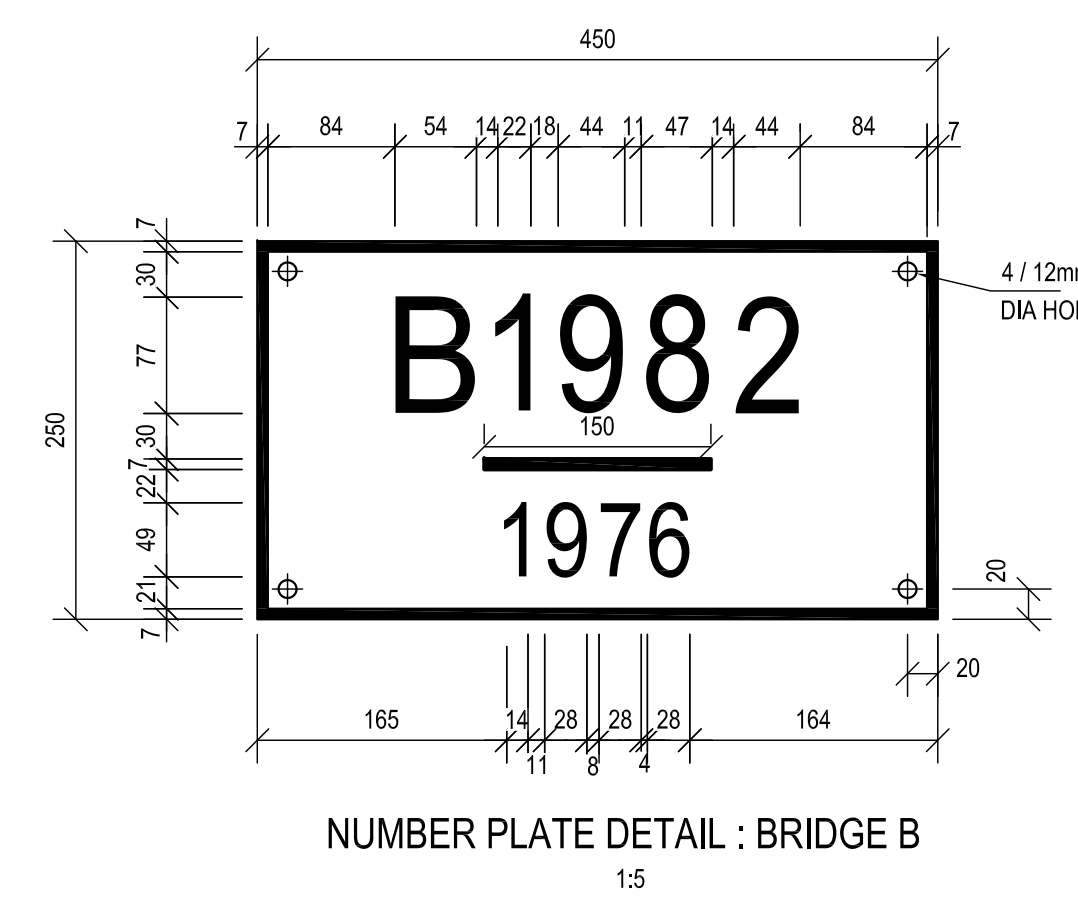


| GUARDRAIL POST ELEVATION |                       |
|--------------------------|-----------------------|
| POST NO                  | VERTICAL OFFSET Y(mm) |
| 1                        | 0                     |
| 2                        | 0                     |
| 3                        | 0                     |
| 4                        | 0                     |
| 5                        | 0                     |
| 6                        | 0                     |
| 7                        | 0                     |
| 8                        | 0                     |
| 9                        | 0                     |
| 10                       | 16                    |
| 11                       | 33                    |
| 12                       | 83                    |
| 13                       | 133                   |
| 14                       | 216                   |
| 15                       | 299                   |
| 16                       | 415                   |
| 17                       | 531                   |
| 18                       | 680                   |
| 19                       | 830                   |



NUMBER PLATE NOTES

1. GENERAL

1.1 LETTERS AND NUMERALS SHALL BE TYPE 'B' LETTERS TO DIN 1451 PART 2.

1.2 THE DATE ON THE BRIDGE NUMBERS SHALL BE THE YEAR IN WHICH THE BRIDGE WAS COMPLETED.

1.3 THE BRIDGE NUMBERS SHALL HAVE A WHITE BACKGROUND WITH BLACK LETTERS, NUMERALS AND BORDER.

2. MANUFACTURE OF NUMBER PLATES AND TEMPLATES

2.1 TYPE 1 : NUMBER PLATES

2.1.1 THE NUMBER PLATES SHALL BE MANUFACTURED FROM NON-METALLIC, UV RESISTANT MATERIAL.

2.2 TYPE 2 : PAINTED NUMBERS

2.2.1 THE TEMPLATES FOR THE PAINTED NUMBERS SHALL BE MANUFACTURED FROM VINYL DECAL IN NEGATIVE STENCIL FORM COMPLETE WITH APPLICATION TAPE.

3. CONSTRUCTION

3.1 TYPE 1 : NUMBER PLATES

3.1.1 THE BRIDGE NUMBER PLATES SHALL BE POSITIONED AS SHOWN.

3.1.2 THE NUMBER PLATE SHALL BE SECURELY FASTENED TO THE INSIDE FACE OF THE SHUTTER BY MEANS OF M10 ANCHOR BOLTS. THE PROTRUDING THREADS OF THE BOLTS SHALL BE COATED WITH AN APPROVED DEBONDING AGENT. ONCE THE CONCRETE HAS SET AND PRIOR TO STRIPPING THE SHUTTER THE M10 ANCHOR BOLTS SHALL BE REMOVED. THE BOLT HOLES SHALL BE MADE GOOD WITH EPOXY FILLER AND THE PAINT WORK TOUCHED UP.

- REPAIR AND PREVENTATIVE MAINTENANCE**
- REPAIR CONCRETE SPALLING DAMAGE ON THE FOLLOWING STRUCTURAL MEMBERS:
    - PARAPET ENDBLOCKS
    - KERBS
    - DECK SOFFIT EDGE (DAMAGED BY EXCESSIVE HEIGHT IMPACT LOAD)
  - EXTEND EXISTING DECK DRAINAGE HOLES
  - COVER THE VISIBLE SURFACES OF THE FOLLOWING MEMBERS WITH AN APPROVED ANTI-CARBONATION COATING:
    - ABUTMENTS AND RETURN WALLS
    - PIER
    - DECK SOFFIT AND SIDES
    - PARAPET ENDBLOCKS
    - KERB AND SIDEWALKS
  - REPLACE THE RUBBER GLANDS IN THE DECK EXPANSION JOINTS.
  - SEAL SIDEWALK EXPANSION JOINTS WITH AN APPROVED SILICONE SEALANT.
  - REPAIR OR REPLACE DAMAGED PARAPET STEEL MEMBERS.
  - PAINT THE EXISTING STEEL PARAPETS, AS FOLLOWS:
    - SURFACE PREPARATION - ABRASIVE BLAST CLEANING
    - PRIMER - INORGANIC ZINC WITH A 75 MICRON DRY FILM THICKNESS.
    - 2<sup>ND</sup> COAT - TWO COMPONENT CROSS-LINKED EPOXY WITH A 75 MICRON DRY FILM THICKNESS.
    - FINAL COAT - ALPHATIC ACRYLIC POLYURETHANE WITH A 40 MICRON DRY FILM THICKNESS.
  - INSTALL NEW GUARDRAILS ON THE APPROACH ROADS.
  - ATTACH GUARDRAILS TO ENDBLOCKS WITH M16 CONCRETE ANCHORS.
  - INSTALL NEW BRIDGE NUMBER PLATES.
  - INSTALL FOUR NEW HAZARD WARNING PLATES.

|                                      |  |  |  |                         |  |  |  |                           |  |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |                        |  |  |  |                |  |  |  |
|--------------------------------------|--|--|--|-------------------------|--|--|--|---------------------------|--|--|--|--|--|--|--|---|--|--|--|--|--|--|--|--|--|--|--|------------------------|--|--|--|----------------|--|--|--|
| CONSTRUCTION RECORD                  |  |  |  | DESIGNED BY             |  |  |  | CONSULTANT APPROVAL       |  |  |  | HEAD OFFICE  |  |  |  | NORTHERN REGION                                 |  |  |  | ACCEPTANCE   |  |  |  | PROJECT DESCRIPTION  |  |  |  | PROJECT NUMBER         |  |  |  | PROJECT NUMBER |  |  |  |
| WORKS CONTRACT ENGINEER              |  |  |  | NAME                    |  |  |  | NAME                      |  |  |  | 48 Tambotie Avenue<br>Val de Grace<br>Pretoria<br>0184 |  |  |  | 38 Ida Street<br>Menlo Park<br>Pretoria<br>0081 |  |  |  | THIS ACCEPTANCE IS FOR PROCEDURAL AND ADMINISTRATIVE REVIEW PURPOSES ONLY AND DOES NOT ATTRACT LEGAL LIABILITY OR LIABILITY OF ANY KIND FROM WHATSOEVER CAUSE OR HOWSOEVER ARISING |  |  |  | THE REPAIR AND RESURFACING OF NATIONAL ROAD N12 SECTION 20 FROM PETROPORT (km 20.0) TO OGIES (km 42.2) |  |  |  | DRAWING LOCATION DATA  |  |  |  | START          |  |  |  |
| Name :<br>Prof. Reg. No. :<br>Date : |  |  |  | Prof. Reg. No. : 910252 |  |  |  | Prof. Reg. No. : 20010154 |  |  |  | PO Box 415<br>Pretoria 0001<br>South Africa            |  |  |  | Private Bag X17<br>Lynwood Ridge<br>0040        |  |  |  | Date:  |  |  |  | R686 ARBOR BLESBOKFONTEIN I/C BRIDGE B1982 AT KM 25.855  |  |  |  | ROUTE                  |  |  |  | N12            |  |  |  |
| SANRAL PROJECT MANAGER               |  |  |  | CHECKED BY              |  |  |  | NAME                      |  |  |  | J.J. JANSE VAN RENSBURG                                |  |  |  | Prof. Reg. No. : 950018                         |  |  |  | Date:  |  |  |  | REPAIR GENERAL LAYOUT : SHEET 2  |  |  |  | SECTION                |  |  |  | 20             |  |  |  |
| Name :<br>Date :                     |  |  |  | NAME                    |  |  |  | NAME                      |  |  |  | D'VENTER   |  |  |  | D'VENTER  |  |  |  | Date:  |  |  |  | BRIDGE/STRUCTURE No.   |  |  |  | DRAWING TYPE           |  |  |  | 25.80          |  |  |  |
| V1 05/10/2021 ORIGINAL VERSION       |  |  |  | NAME                    |  |  |  | NAME                      |  |  |  | J.J. JANSE VAN RENSBURG                                |  |  |  | Prof. Reg. No. : 950018                         |  |  |  | Date:  |  |  |  | CONSULTANT DRAWING No.   |  |  |  | STRUCTURES-BRIDGES     |  |  |  | B1982          |  |  |  |
| No. DATE REVISION                    |  |  |  | Name :<br>Date :        |  |  |  | Name :<br>Date :          |  |  |  | Name :<br>Date :                                       |  |  |  | Name :<br>Date :                                |  |  |  | Name :<br>Date :   |  |  |  | SCALE : AS SHOWN   |  |  |  | CONSULTANT DRAWING No. |  |  |  | B1982/R2       |  |  |  |
| JR CONSULT. ENG.                     |  |  |  | Name :<br>Date :        |  |  |  | Name :<br>Date :          |  |  |  | Name :<br>Date :                                       |  |  |  | Name :<br>Date :                                |  |  |  | Name :<br>Date :   |  |  |  | SHEET 2 OF 2   |  |  |  | SANRAL DOCUMENT #      |  |  |  | VER            |  |  |  |
|                                      |  |  |  |                         |  |  |  |                           |  |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |                        |  |  |  |                |  |  |  |

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|                |                         |
|----------------|-------------------------|
| DESIGNED BY    |                         |
| NAME           | J.J. RAUTENBACH         |
| Prof. Reg. No. | 910252                  |
| CHECKED BY     |                         |
| NAME           | J.J. JANSE VAN RENSBURG |
| Prof. Reg. No. | 950018                  |
| DRAWN BY       |                         |
| NAME           | D'VENTER                |

|                     |             |
|---------------------|-------------|
| CONSULTANT APPROVAL |             |
| NAME                | J.J. VENTER |
| Prof. Reg. No.      | 20010154    |

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THROUGH BETTER ROADS

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for: SA NATIONAL ROADS AGENCY SOC LTD.

Date:

PROJECT DESCRIPTION

THE REPAIR AND RESURFACING OF NATIONAL ROAD N12 SECTION 20 FROM PETROPORT (km 20.0) TO OGIES (km 42.2)

R686 ARBOR BLESBOKFONTEIN I/C BRIDGE B1982 AT KM 25.855

REPAIR GENERAL LAYOUT : SHEET 2

SCALE : AS SHOWN

SHEET 2 OF 2

|                        |  |  |                    |  |  |
|------------------------|--|--|--------------------|--|--|
| PROJECT NUMBER         |  |  | N.012-200-2019/2F  |  |  |
| DRAWING LOCATION DATA  |  |  | START              |  |  |
| ROUTE                  |  |  | N12                |  |  |
| SECTION                |  |  | 20                 |  |  |
| DRAWING km DISTANCE    |  |  | 25.80              |  |  |
| DRAWING TYPE           |  |  | STRUCTURES-BRIDGES |  |  |
| BRIDGE/STRUCTURE No.   |  |  | B1982              |  |  |
| CONSULTANT DRAWING No. |  |  | B1982/R2           |  |  |
| SANRAL DOCUMENT #      |  |  | VER                |  |  |
|                        |  |  | V1                 |  |  |

100mm ON ORIGINAL DRAWING