

ROADS DETAILS

ROAD DETAILS: LIST OF DRAWINGS

DT 01/R	ROAD AND PAVEMENT DETAILS
DT 02/R	ROAD AND PAVEMENT DETAILS
DT 03/R	ROAD AND PAVEMENT DETAILS
DT 04/R	EARTHWORKS ON PAVEMENT
DT 05/R	GUARDRAIL
DT 06/R	GUARDRAIL DETAILS
DT 07/R	GUARDRAIL DETAILS



DEPARTMENT OF PUBLIC WORKS

Private Bag X65
Pretoria
0001
Tel (012) 337 2000

departmental
DIAGRAMMATIC CIVIL
ENGINEERING DETAILS
FOR DOLOMITIC SOILS

title
DRAWING LIST

scale

.

date

30-09-2017

drawing number / type number

TYPE NO DT 01/R



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title
ROAD AND PAVEMENT
DETAILS
(DIAGRAMMATIC)

scale
1 : 50

date
2017/09/30

drawing number / type number
TYPE NO DT 01/R

LAYER 01
BASE
SANS 1200 MF

3.3.2 CONSTRUCT A BASE LAYER OF 150mm GRADED CRUSHER STONE FROM COMMERCIAL OFF-SITE SOURCES, AND COMPACT TO 98% MOD AASHTO DENSITY AT OPTIMUM MOISTURE CONTENT..

LAYER 02
SUBBASE
SANS 1200 ME

3.2.1 CONSTRUCT 150mm THICK SUBBASE FROM MATERIAL FROM COMMERCIAL OFF-SITE SOURCES, COMPACT TO 95% MOD AASHTO DENSITY AT OPTIMUM MOISTURE CONTENT.
ALTERNATIVE - SUBBASE FROM CEMENT (CPC) STABILISED (2%) GRAVEL FROM SITE EXCAVATIONS.

LAYERS 03 & 04 & 05
EARTH WORKS (SUBGRADE)
SANS 1200 DM

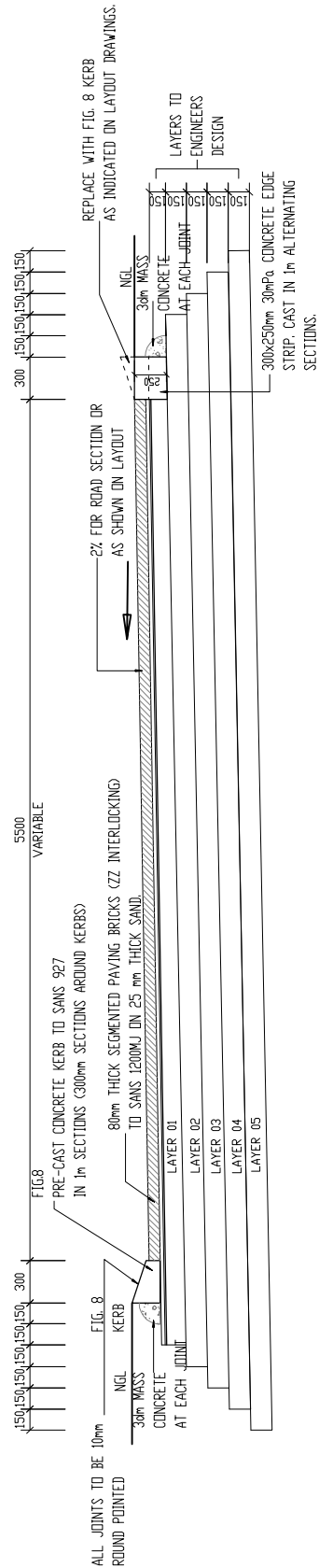
5.2.3.3 ROAD-BED TREATMENT - LAYER 05
RIP TO 150mm DEPTH THE IN-SITU MATERIAL OF AREA AND COMPACT TO 93% MOD AASHTO DRY DENSITY AT OPTIMUM MOISTURE CONTENT.
3.2.3 SELECTED LAYER
CONSTRUCT 150mm SELECTED LAYERS FROM EXCAVATION STOCKPILE AND COMPACT TO 93% MOD AASHTO DRY DENSITY AT OPTIMUM MOISTURE CONTENT.

ASPHALT SURFACING
SANS 1200 MH

3.1 PRIME COAT
APPLY A COAT OF TAR PRIME GRADE RTH 3/12P AT NOMINAL RATE OF 0.8 l/m².
5.5 PREMIX
PREMIX WEARING COURSE OF CONTINUOUSLY GRADED ASPHALT (TPA-MEDIUM) USING 80/100 BITUMEN BINDER (SMOOTHNESS ACCURACY II i.to. CLAUSE 6.3.6) FOR THICKNESS 30mm.

SEGMENTED BRICK PAVING
SANS 1200 MJ

3.1.2 (a) 80mm ZZ INTERLOCKING BRICKS (* 25MPa), TOP EDGES CHAMFERED, LAID IN HERRING BONE PATTERN.
* TO ENGINEERS DESIGN DEPENDING ON WHEEL LOAD.
3.3 BRICKS LAID ON 25mm COMPACTED THICKNESS WELL GRADED BEDDING SAND.



ROAD AND PAVEMENT DETAILS

DT 01/R



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drawing number / type number
TYPE NO DT 02/R

LAYER 01
BASE
SANS 1200 MF

3.3.2 CONSTRUCT A BASE LAYER OF 150mm GRADED
CRUSHER STONE FROM COMMERCIAL OFF-SITE SOURCES,
COMPACT TO 98% OF MOD AASHTO MAXIMUM DRY
DENSITY AT OPTIMUM MOISTURE CONTENT.

ASPHALT SURFACING

SANS 1200 MH

3.1 PRIME COAT
APPLY A COAT OF TAR PRIME GRADE RTH 3/12P AT
NOMINAL RATE OF 0.8 l/m².
5.5 PREMIX
PREMIX WEARING COURSE OF CONTINUOUSLY
GRADED ASPHALT (TPA-MEDIUM) USING 80/100
BITUMEN BINDER (SMOOTHNESS ACCURACY II i.e.o.
CLAUSE 6.3.6) FOR THICKNESS 30mm.

LAYER 02
SUBBASE
SANS 1200 ME

3.2.1 CONSTRUCT 150mm THICK SUBBASE
FROM MATERIAL FROM COMMERCIAL OFF-SITE SOURCES,
COMPACT TO 95% OF MOD AASHTO MAXIMUM DRY
DENSITY AT OPTIMUM MOISTURE CONTENT.
ALTERNATIVE - SUBBASE FROM CEMENT (OPC) STABILISED
(2%) GRAVEL FROM SITE EXCAVATIONS.

LAYERS 03 & 04 & 05
EARTH WORKS (SUBGRADE)
SANS 1200 DM

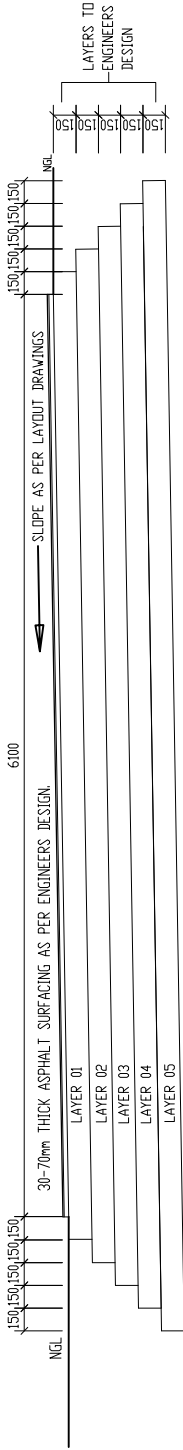
5.2.3.3 ROAD-BED TREATMENT - LAYER 05
RIP TO 150mm DEPTH THE INSITU MATERIAL OF AREA
AND COMPACT TO 93% OF MOD AASHTO MAXIMUM DRY
DENSITY AT OPTIMUM MOISTURE CONTENT.

3.2.3 SELECTED LAYER

CONSTRUCT 150mm SELECTED LAYERS FROM EXCAVATION
STOCKPILE AND COMPACT TO 93% OF MOD AASHTO
MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT.
FOR TYPE (REF TRH4)

G7 - LAYER 04

G5 - LAYER 03



ROAD AND PAVEMENT DETAILS

DT 02/R



title
ROAD AND PAVEMENT
DETAILS
(DIAGRAMMATIC)

date
2017/09/30

DT 03/R

33.2 CONSTRUCT A BASE LAYER OF 150mm GRADED CRUSHER STONE FROM COMMERCIAL OFF-SITE SOURCES. COMPACT TO 98% OF MOD AASHTO MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT.

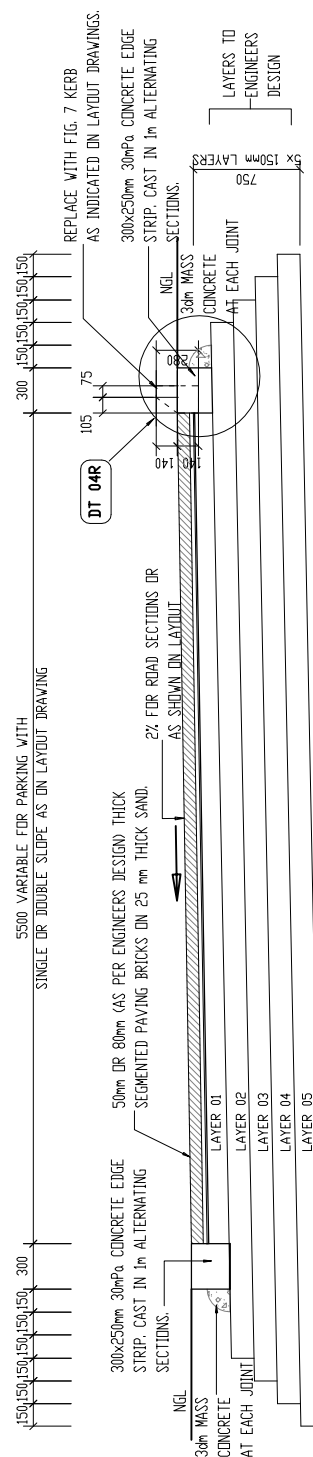
SANS 1200 MH
3.1 PRIME COAT
APPLY A COAT OF TAR PRIME GRADE RTH 3/12P AT
NOMINAL RATE OF 0.8 l/m².
5.5 PREMIX
PREMIX WEARING COURSE OF CONTINUOUSLY
GRADED ASPHALT (TPA-MEDIUM) USING 80/100
BITUMEN BINDER (SMOOTHNESS ACCURACY II i.o.
CLAUSE 6.3.6) FOR THICKNESS 30mm.

3.2.1 CONSTRUCT 150mm THICK SUBBASE FROM MATERIAL FROM COMMERCIAL OFF-SITE SOURCES. COMPACT TO 95% OF MOD AASHTO MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT. ALTERNATIVE – SUBBASE FROM CEMENT (GPC) STABILISED (2%) GRAVEL FROM SITE EXCAVATIONS.

3.3.3 SANS 1200 MJ
ZZ INTERLOCKING BRICKS (30MPa),
TOP EDGES CHAMFERED, LAID IN HERRING
BONE PATTERN.
BRICKS LAID ON 25mm COMPACTED THICKNESS
WELL GRADED BEDDING SAND.

5.2.3.3 ROAD-BED TREATMENT - LAYER 05
RIP TO 150mm DEPTH THE INSITU MATERIAL OF AREA
AND COMPACT TO 93% OF MOD AASHTO MAXIMUM DRY
DENSITY AT OPTIMUM MOISTURE CONTENT.

3.2.3 SELECTED LAYER
CONSTRUCT 150mm SELECTED LAYERS FROM EXCAVATION
STOCKPILE AND COMPACT TO 93% OF MOD AASHTO
MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT.
FOR TYPE (REF. TRH4)



ROAD AND PAVEMENT DETAILS



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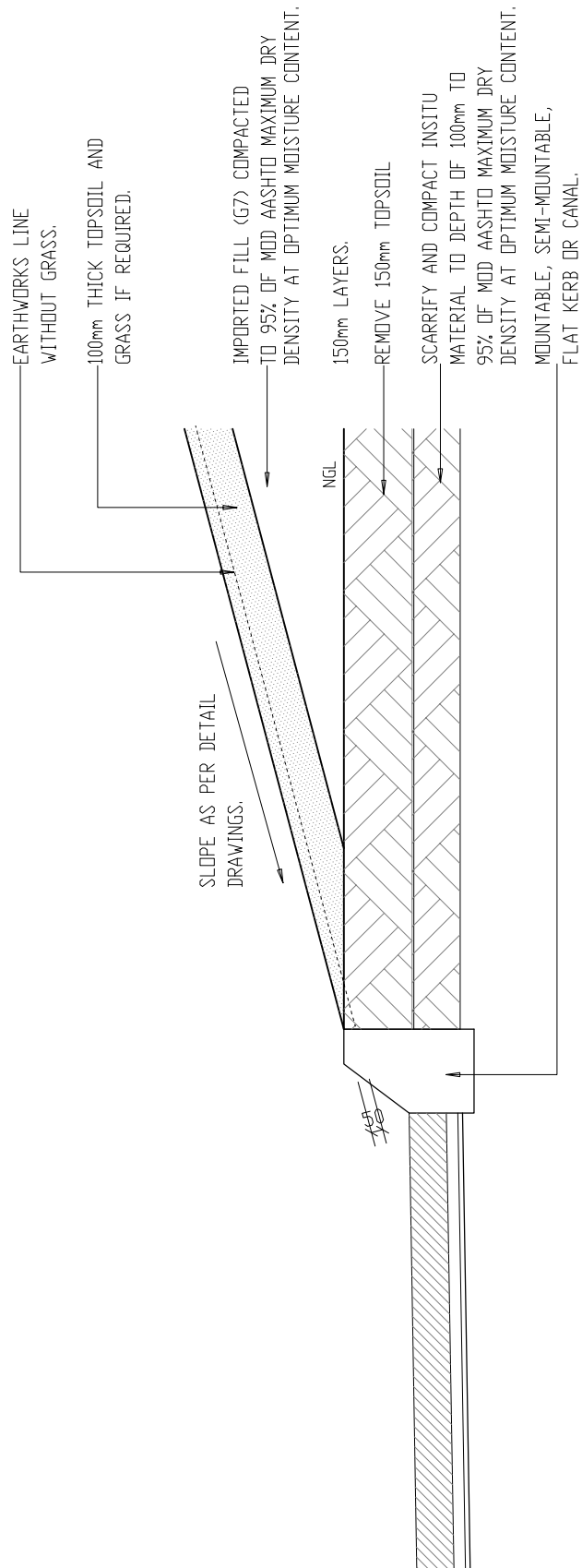
departmental
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FOR DOLOMITIC SOILS

title
EARTHWORKS ON PAVEMENT
(DIAGRAMMATIC)

scale
1 : 30

date
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drawing number / type number
TYPE NO DT 04/R



EARTHWORKS ON PAVEMENT

DT 04/R



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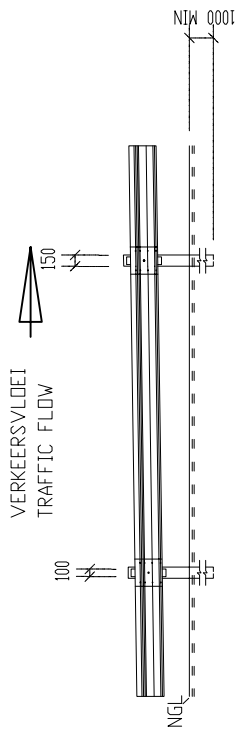
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title
GUARDRAIL DETAILS

scale
1 : 10

date
2017/09/30

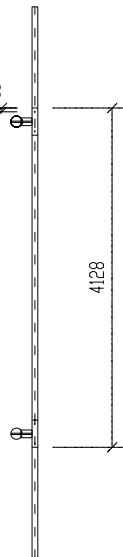
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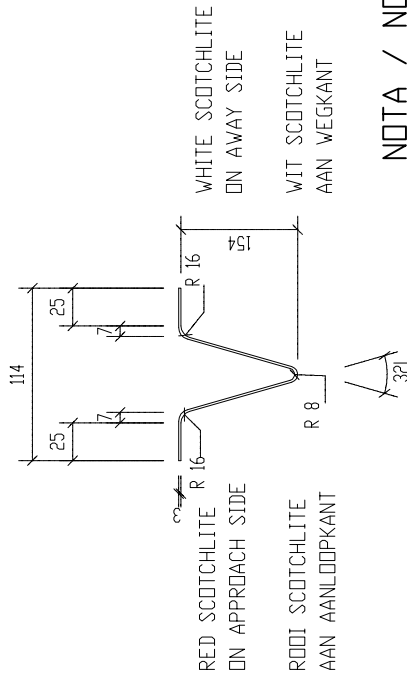
SKRAMRELING: VOORAANSIG GUARDRAIL: FRONT ELEVATION

SKAAL / SCALE 1:100

NOTA / NOTE
EEN WEERKAATSER IN DIE MIDDLE VAN ELKE
TWEDE LENGTE VAN 3.75m



SKRAMRELING: PLAN GUARDRAIL: PLAN



VOORAANSIG FRONT ELEVATION SKAAL / SCALE 1:10

SKRAMRELINGS WORD IN DIE VOLGENDE GEVALLE OPGERIG

- 1 WAAR DIE PAD IN N HOER OPVULLING AS 4m, EN SONDER HERSTEL AREA IS
- 2 WAAR WATER LANGS DIE PADFORMASIE DIEPER AS 1.5m IS
- 3 BY ALLE BRUE
- 4 AAN DIE BUTE KANT DRAAIE MET STRALE KLEINER AS 300m EN SONDER HERSTEL AREAS
- 5 WAAR VERSPERRINGS NADER AS 1m VANAF DIE SKOUER - KNAPPUNT VOORKOM
- 6 WAAR DIT LYK OF DIE VERSPERRING OP SIGSELF GE - VAARLIKER AS 'N SKRAMRELING SOU WEES

NOTA :

GOEDKEURING MOET VAN DIE DIREKTEUR VAN PAATJE VERKRY
WORD VOORDAT SKRAMRELINGS OPGERIG MAG WORD

GUARD RAILS ARE REQUIRED IN THE FOLLOWING CASES

- 1 WHERE THE FILL IS MORE THAN 4m WITH NO RECOVERY AREA
- 2 WHERE WATER NEXT TO THE ROAD FORMATION IS MORE THAN 1.5m
- 3 AT ALL BRIDGES
- 4 ON THE OUTSIDE OF CURVES WITH RADII LESS THAN 300m WITHOUT RECOVERY AREA
- 5 WHERE OBSTRUCTION ARE LESS THAN 1m FROM THE SHOULDER BRAKE POINT
- 6 WHERE AN OBSTRUCTION APPEARS TO BE MORE DANGEROUS THAN A GUARDRAIL WOULD BE

NOTE :

BEFORE GUARDRAILS MAY BE ERECTED APPROVAL MUST BE
OBTAINED FROM THE DIRECTOR OF ROADS



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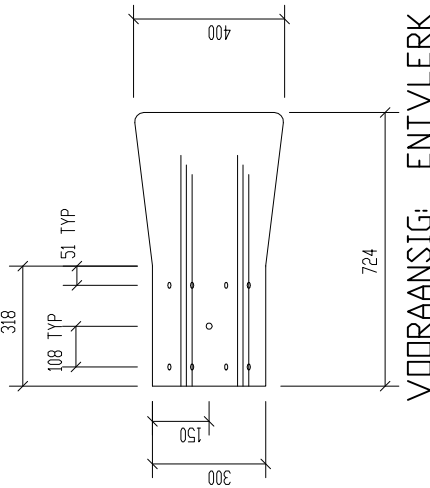
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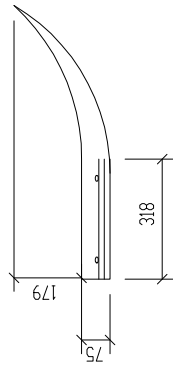
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2017/09/30

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TYPE NO DT 07/R

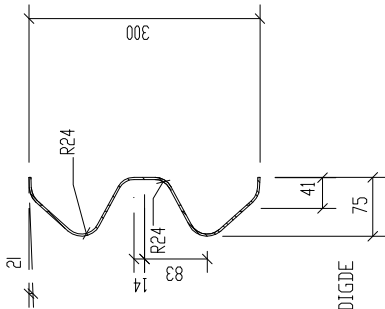


VOORAANSIG: ENTVLERK
FRONT ELEVATION END WING

SKAAL / SCALE 1:20

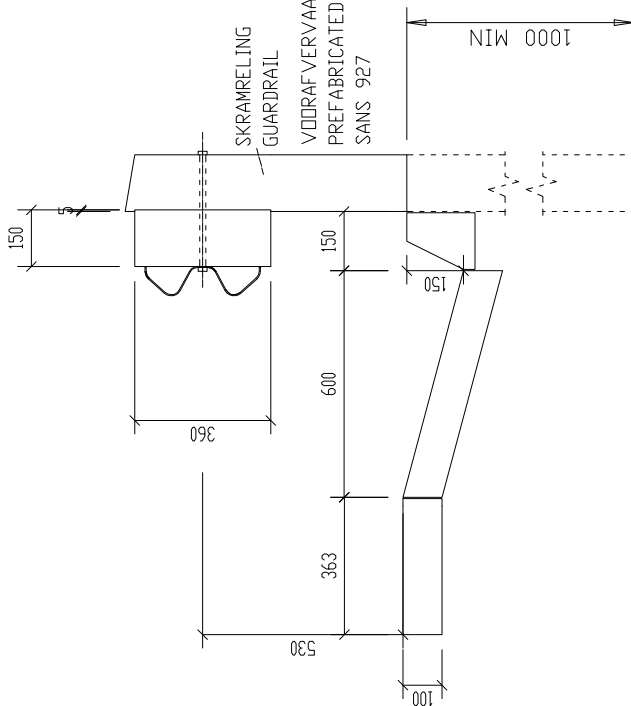


PLAN: ENTVLERK
PLAN: END WING
SKAAL / SCALE 1:20



DWARS SNIT VAN SKRAMRELING
CROSS-SECTION OF GUARDRAIL

SKAAL / SCALE 1:40



DETAIL VAN BETONGEUT
DETAIL OF CONCRETE DRAIN

SKAAL / SCALE 1:20

SPESIFIKASIES

1. BOUT HOOGSPANNINGSTAAL 16mm
2. WASTER STAAL VEER 10MM DIK
3. SPASIEERBLOK BLOEKOM OF DENNE HOUT
MET KREDSOOT BEHANDEL VOLGENS ENIGE
METODE VAN SANS 10005
4. PAAL 150mm TOT 230mm BLOEKOM OF DENNEHOUT
MET KREDSOOT BEHANDEL VOLGENS ENIGE METODE
VAN SANS 10005
5. ALLE SKRAMRELINGS MOET GEGALVANISEERD
WEES SOOS GESPEFIFISEER (NIE GEVERF NIE)

SPECIFICATIONS

1. BOLT HIGH TENSILE STEEL 16mm
2. WASHER STEEL SPRING 10MM THICK
3. SPACER BLOCK GUM OR PINE TRATED WITH
CREDSOTE ACCORDING TO ANY METHOD IN
SANS 10005
4. POLE 150mm - 230mm GUM OR PINE
TREATED WITH CREDSOTE ACCORDING TO
ANY METHOD IN SANS 10005
5. ALL GUARDRAILS SHALL BE GALVANIZED AS
SPECIFIED (NOT TO BE PAINTED)