



Bonneagar Iompair Éireann  
Transport Infrastructure Ireland

## TII Publications



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### Standard Construction Details - Series 100

April 2017

## Standard Construction Details (SCDs) – Series 100

TII Publications contains Standard Construction Details (SCDs) for use on National Road schemes in Ireland. This composite document brings together all the Series 100 SCDs from TII Publications current at the date of this document's publication, into a single location for convenience.

Every effort has been made to keep this composite document updated and available from the TII Publications website (<http://www.tiipublications.ie/>). Please note that the SCD drawings available from the TII Publications website (individually linked below) are the controlled versions for all SCDs.

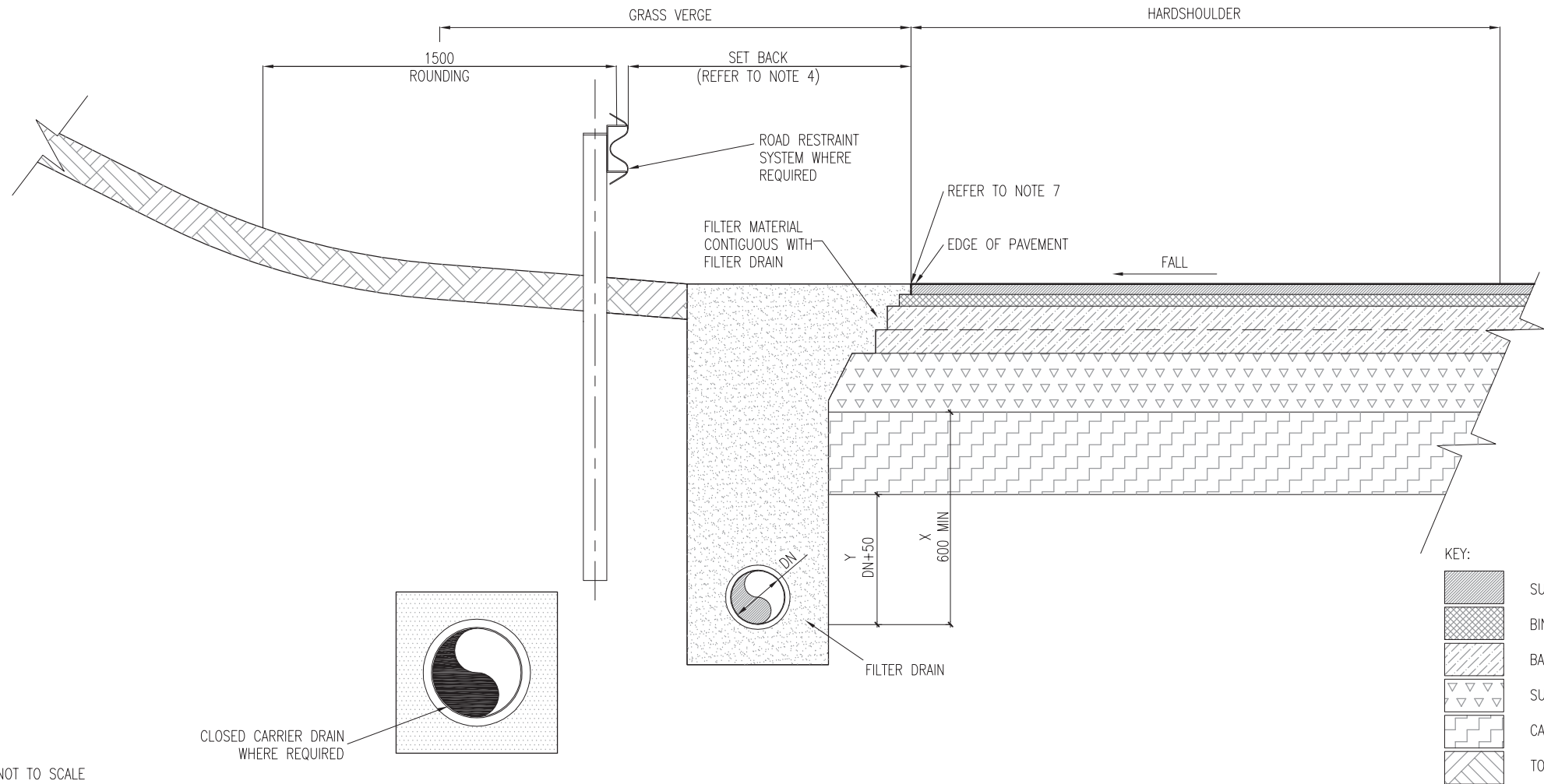
The SCDs contained in this document are as follows:

### Series 100 Edge of Pavement Details

<a href="#">CC-SCD-00101</a>	Edge of Pavement Details - Carriageway in Cutting Nearside Verge Detail with Filter Drain
<a href="#">CC-SCD-00102</a>	Edge of Pavement Details - Carriageway in Cutting Nearside Verge Detail Where Kerbed & with Closed Drainage System
<a href="#">CC-SCD-00103</a>	Edge of Pavement Details - Carriageway in Cutting or on Embankment Nearside Verge Detail with Surface Water Channel
<a href="#">CC-SCD-00104</a>	Edge of Pavement Details - Carriageway in Cutting or on Embankment Nearside Verge Detail with Grassed Surface Water Channel
<a href="#">CC-SCD-00105</a>	Edge of Pavement Details - Carriageway on Embankment Nearside Verge Detail with Over the Edge Drainage Detail
<a href="#">CC-SCD-00106</a>	Edge of Pavement Details - Carriageway on Embankment Nearside Verge Detail with Kerbing & Closed Drainage System
<a href="#">CC-SCD-00107</a>	Edge of Pavement Details - Carriageway on Embankment Nearside Verge Detail with External Kerbs and Drainage Channel Blocks
<a href="#">CC-SCD-00108</a>	Edge of Pavement Details - Carriageway in Cutting Nearside Verge Detail with Drainage Channel Blocks and Drains
<a href="#">CC-SCD-00109</a>	Edge of Pavement Details - Combined Kerb and Drainage System
<a href="#">CC-SCD-00110</a>	Edge of Pavement Details - Central Reserve Surface Water Channel for Flexible Carriageway
<a href="#">CC-SCD-00111</a>	Edge of Pavement Details - Central Reserve Drainage Channel Blocks and Drains
<a href="#">CC-SCD-00112</a>	Edge of Pavement Details - Central Reserve Detail of Superelevated Carriageways with Concrete Barrier Restraint

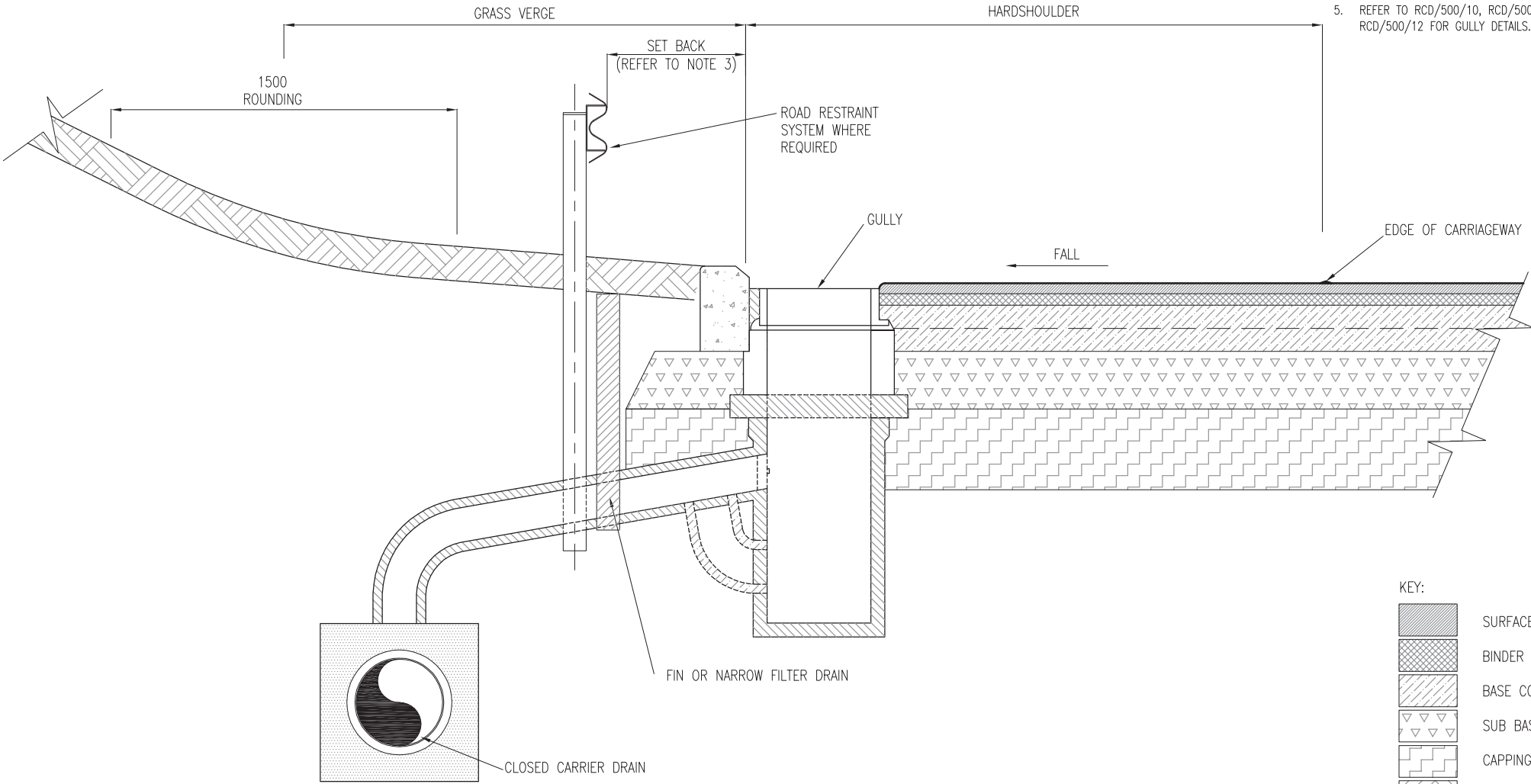
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- NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
  2. THE MINIMUM DEPTH OF INSTALLATION SHALL BE DN+50 TO INVERT BENEATH SUBFORMATION LEVEL OR 600mm TO THE INVERT BENEATH FORMATION LEVEL. WHERE THERE IS NO CAPPING LAYER THE DRAINS SHOULD BE LAID TO THE LOWER OF THOSE TWO DEPTHS.
  3. ROUNDING OCCURS OVER A 1500mm LENGTH 750mm EITHER SIDE OF INTERSECTION BETWEEN VERGE AND BATTER.
  4. SET BACK REQUIREMENTS IN ACCORDANCE WITH NRA TD 19.
  5. REFER TO RCD/500/20 FOR TRENCH AND BEDDING DETAILS FOR FILTER DRAIN.
  6. PERMITTED VERGE-SIDE EDGE DRAINAGE OPTIONS ARE INDICATED IN NRA HD 33.
  7. THE MAXIMUM DROP SHALL BE IN ACCORDANCE WITH RCD/700/1.



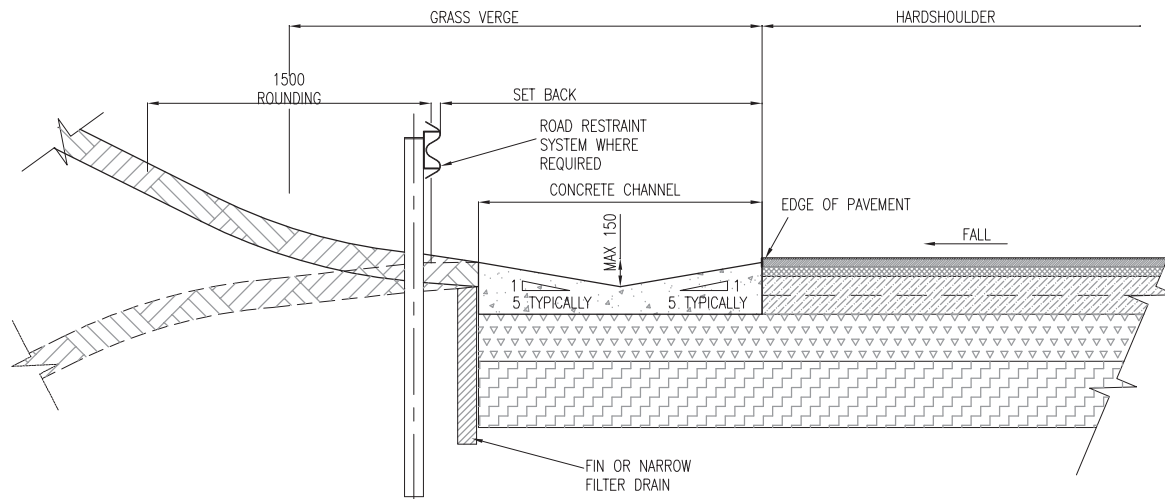
NOT TO SCALE

- NOTES:
- 1. ALL DIMENSIONS ARE IN MILLIMETRES.
  - 2. ROUNDING OCCURS OVER A 1500mm LENGTH 750mm EITHER SIDE OF INTERSECTION BETWEEN VERGE AND BATTER.
  - 3. SET BACK REQUIREMENTS IN ACCORDANCE WITH NRA TD 19.
  - 4. PERMITTED VERGE-SIDE EDGE DRAINAGE OPTIONS ARE INDICATED IN NRA HD 33.
  - 5. REFER TO RCD/500/10, RCD/500/11 AND RCD/500/12 FOR GULLY DETAILS.



NOT TO SCALE

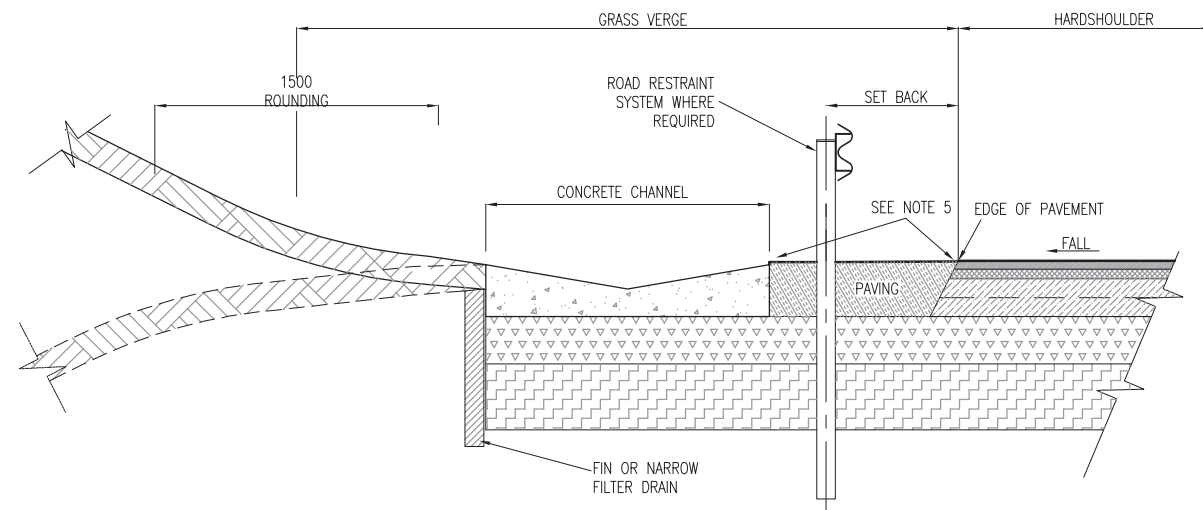
P3	03/15
Issue	Date



#### NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. THESE DETAILS ALSO APPLY TO RIGID CARRIAGEWAY WITH ADDITION OF SEPARATION MEMBRANE AND UNDER CHANNEL DRAINAGE LAYER. ALSO APPLIES TO FLEXIBLE COMPOSITE CARRIAGEWAY WITH ANY NECESSARY MODIFICATIONS.
3. PAVING BETWEEN THE SURFACE WATER CHANNEL AND THE HARDSHOULDER, HARDSTRIP OR CARRIAGEWAY SHALL BE AS DESCRIBED IN APPENDIX 5/3 OR SHOWN ON THE DRAWINGS.
4. DIMENSIONS OF CONCRETE CHANNEL SHALL BE AS DESCRIBED IN APPENDIX 5/3. GENERAL CRITERIA FOR CHANNEL REQUIRING SAFETY BARRIER PROTECTION IS THAT CHANNEL DEPTH EXCEEDS 150mm OR THAT CROSS-FALLS EXCEED 1:4. WHERE USED IN CONJUNCTION WITH A THIN SURFACING THE UNDER DRAINAGE DETAIL SHOWN IN RCD/500/43 SHALL APPLY IN FULL.
5. NOTWITHSTANDING OTHER TOLERANCES IN THE SPECIFICATION, THE FINISHED LEVEL OF THE CHANNEL SHALL NOT BE HIGHER THAN THE FINISHED LEVEL OF THE ADJACENT PAVING. SIMILARLY THE FINISHED LEVEL OF THE PAVING SHALL NOT BE HIGHER THAN THE FINISHED LEVEL OF THE ADJACENT HARDSHOULDER, HARDSTRIP OR CARRIAGEWAY. THE MAXIMUM DROP SHALL BE IN ACCORDANCE WITH RCD/700/1.
6. ROAD RESTRAINT SYSTEMS TO BE AS SHOWN ON THE DRAWINGS AND SCHEDULED IN APPENDIX 4/1.
7. DETAIL SHOWS CHANNEL IN VERGE LOCATION. FOR CHANNELS IN CENTRAL RESERVE LOCATION, THE POST AND CONCRETE POST FOUNDATIONS FOR A SAFETY BARRIER MUST NOT BE COINCIDENT WITH DRAIN TO DRAWINGS RCD/500/40 AND RCD/500/41.
8. ROUNDING OCCURS OVER A 1500mm LENGTH, 750mm EITHER SIDE OF INTERSECTION BETWEEN VERGE AND BATTER.
9. PERMITTED VERGE-SIDE EDGE DRAINAGE OPTIONS ARE INDICATED IN NRA HD 33.
10. EXTENSION OF CAPPING LAYER IN ACCORDANCE WITH RCD/100/5 IS ACCEPTABLE IN LIEU OF FIN OR NARROW FILTER DRAIN WHERE BASE OF CAPPING CAN BE EXTENDED TO THE EDGE OF EMBANKMENT ABOVE ADJACENT GROUND LEVEL.
11. A FILTER DRAIN MAY BE REQUIRED IN LIEU OF FIN OR NARROW FILTER DRAIN WHERE THESE DO NOT HAVE SUFFICIENT CAPACITY FOR SUBSURFACE DRAINAGE.

### SURFACE WATER CHANNEL WITHOUT PROTECTION



### SURFACE WATER CHANNEL WITH PROTECTION

#### KEY:

- SURFACE COURSE
- BINDER
- BASE COURSE
- SUB BASE
- CAPPING 6F
- TOPSOIL

NOT TO SCALE

II PUBLICATION NUMBER: CC-SCD-00103

ROAD CONSTRUCTION  
DETAILS

EDGE OF PAVEMENT  
DETAILS

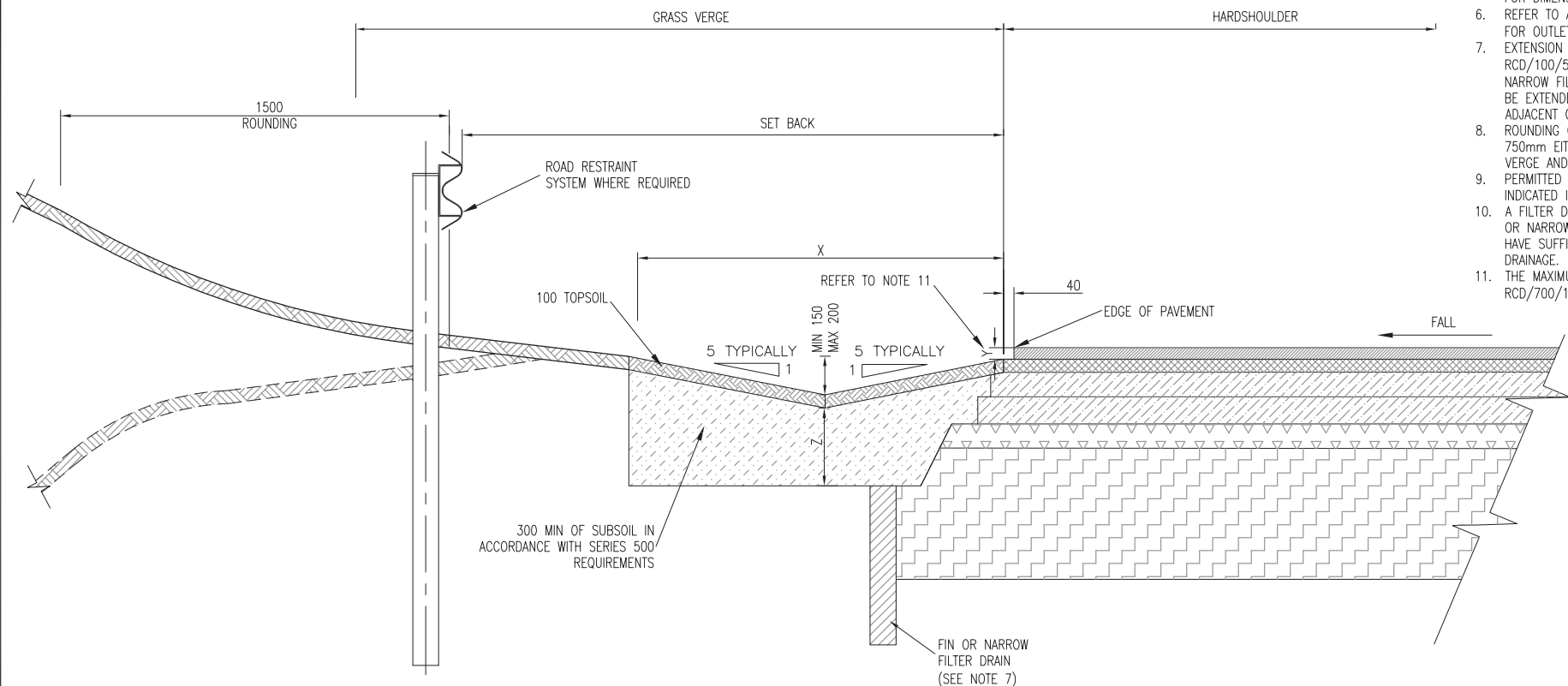
P3	03/15
Issue	Date

CARRIAGEWAY IN CUTTING  
OR ON EMBANKMENT  
NEARSIDE VERGE DETAIL WITH  
SURFACE WATER CHANNEL

Drawing No.

RCD/  
100/3

- NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
  2. THESE DETAILS ALSO APPLY TO RIGID CARRIAGEWAY WITH ADDITION OF SEPARATION MEMBRANE AND UNDER CHANNEL DRAINAGE LAYER. ALSO APPLIES TO FLEXIBLE COMPOSITE CARRIAGEWAY WITH ANY NECESSARY MODIFICATIONS.
  3. PAVING BETWEEN THE SURFACE WATER CHANNEL AND THE HARDSHOULDER, HARDSTRIP OR CARRIAGEWAY SHALL BE AS DESCRIBED IN APPENDIX 5/3 OR SHOWN ON THE DRAWINGS.
  4. ROAD RESTRAINT SYSTEMS TO BE AS SHOWN ON THE DRAWINGS AND SCHEDULED IN APPENDIX 4/1.
  5. REFER TO APPENDIX 5/3 OR DRAINAGE DRAWINGS FOR DIMENSIONS X, Y, Z.
  6. REFER TO APPENDIX 5/3 OR DRAINAGE DRAWINGS FOR OUTLET DIMENSIONS & NUMBER OF OUTLETS.
  7. EXTENSION OF CAPPING LAYER IN ACCORDANCE WITH RCD/100/5 IS ACCEPTABLE IN LIEU OF FIN OR NARROW FILTER DRAIN WHERE BASE OF CAPPING CAN BE EXTENDED TO EDGE OF EMBANKMENT ABOVE ADJACENT GROUND LEVEL.
  8. ROUNDING OCCURS OVER A 1500mm LENGTH, 750mm EITHER SIDE OF INTERSECTION BETWEEN VERGE AND BATTER.
  9. PERMITTED VERGE-SIDE EDGE DRAINAGE OPTIONS ARE INDICATED IN NRA HD 33.
  10. A FILTER DRAIN MAY BE REQUIRED IN LIEU OF FIN OR NARROW FILTER DRAIN WHERE THESE DO NOT HAVE SUFFICIENT CAPACITY FOR SUBSURFACE DRAINAGE.
  11. THE MAXIMUM DROP SHALL BE IN ACCORDANCE WITH RCD/700/1.



GRASSED SURFACE WATER CHANNEL

NOT TO SCALE



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An tÚdarás um Bóithre Náisiúnta  
National Roads Authority

## ROAD CONSTRUCTION DETAILS

## EDGE OF PAVEMENT DETAILS







P3	03/15
Issue	Date

CARRIAGEWAY IN CUTTING  
OR ON EMBANKMENT  
NEARSIDE VERGE DETAIL WITH  
GRASSED SURFACE WATER CHANNEL

Drawing No.
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RCD/  
100/4

KEY:

	SURFACE COURSE
	BINDER
	BASE COURSE
	SUB BASE
	CAPPING 6F
	TOPSOIL

TOPSOIL

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. 8-12% VERGE FALL REQUIRED. VERGE FILL MATERIAL IN ACCORDANCE WITH SERIES 600 REQUIREMENTS.
3. ROUNDING OCCURS OVER A 1500mm LENGTH, 750mm EITHER SIDE OF INTERSECTION BETWEEN VERGE AND BATTER.
4. PERMITTED VERGE-SIDE EDGE DRAINAGE OPTIONS ARE INDICATED IN NRA HD 33.
5. THE MAXIMUM DROP SHALL BE IN ACCORDANCE WITH RCD/700/1.
6. THE EXTENSION OF CAPPING SHALL BE CONTINUOUS LONGITUDINALLY ALONG THE ROAD.
7. EXTENDED CAPPING IS ONLY ALLOWABLE WHERE THE BASE OF THE EXTENDED CAPPING LAYER IS ABOVE THE ADJACENT GROUND LEVEL AND NOT SUBJECT TO GROUNDWATER INUNDATION.



**NRA**  
An tÚdarás um Bóithre Náisiúnta  
National Roads Authority

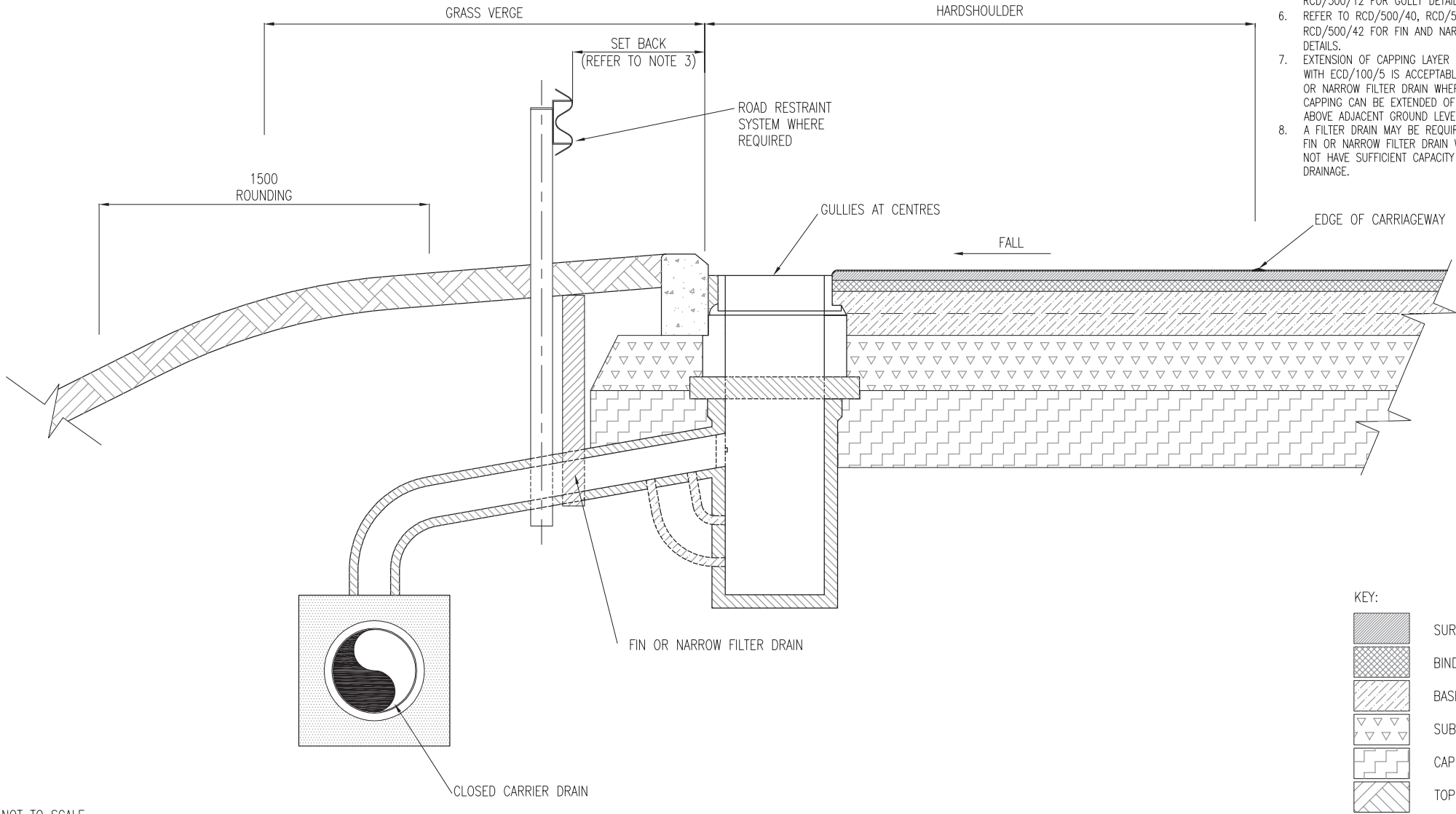
## EDGE OF PAVEMENT DETAILS

CARRIAGEWAY ON EMBANKMENT  
NEARSIDE VERGE DETAIL WITH  
OVER THE EDGE DRAINAGE DETAIL

RCD/  
100/5

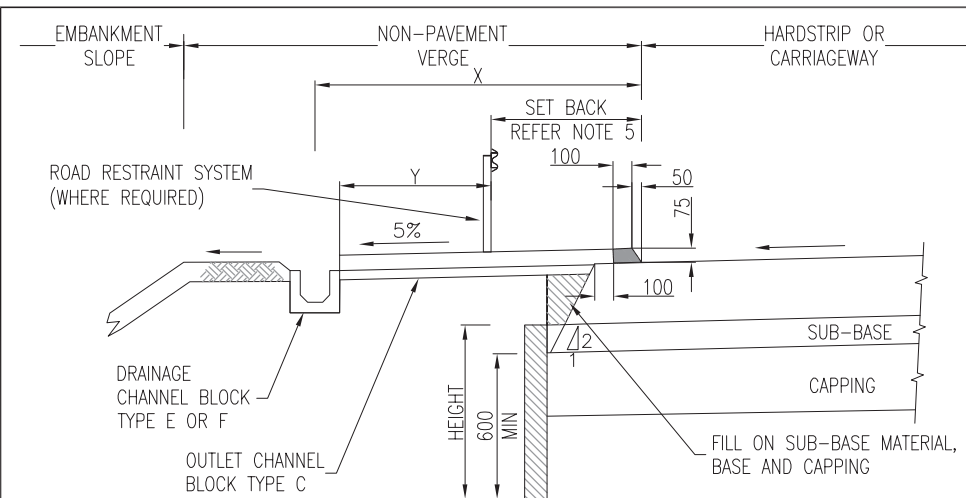


- NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
  2. ROUNDING OCCURS OVER A 1500mm LENGTH 750mm EITHER SIDE OF INTERSECTION BETWEEN VERGE AND BATTER.
  3. SET BACK REQUIREMENTS IN ACCORDANCE WITH NRA TD 19.
  4. PERMITTED VERGE-SIDE EDGE DRAINAGE OPTIONS ARE INDICATED IN NRA HD 33.
  5. REFER TO RCD/500/10, RCD/500/11 AND RCD/500/12 FOR GULLY DETAILS.
  6. REFER TO RCD/500/40, RCD/500/41 AND RCD/500/42 FOR FIN AND NARROW DRAIN DETAILS.
  7. EXTENSION OF CAPPING LAYER IN ACCORDANCE WITH ECD/100/5 IS ACCEPTABLE IN LIEU OF FIN OR NARROW FILTER DRAIN WHERE BASE OF CAPPING CAN BE EXTENDED OF EMBANKMENT ABOVE ADJACENT GROUND LEVEL.
  8. A FILTER DRAIN MAY BE REQUIRED IN LIEU OF FIN OR NARROW FILTER DRAIN WHERE THESE DO NOT HAVE SUFFICIENT CAPACITY FOR SUBSURFACE DRAINAGE.

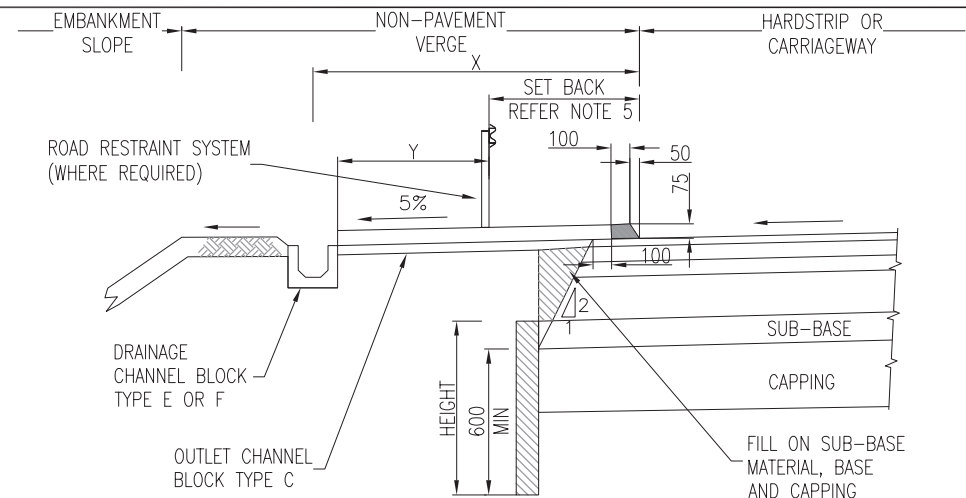


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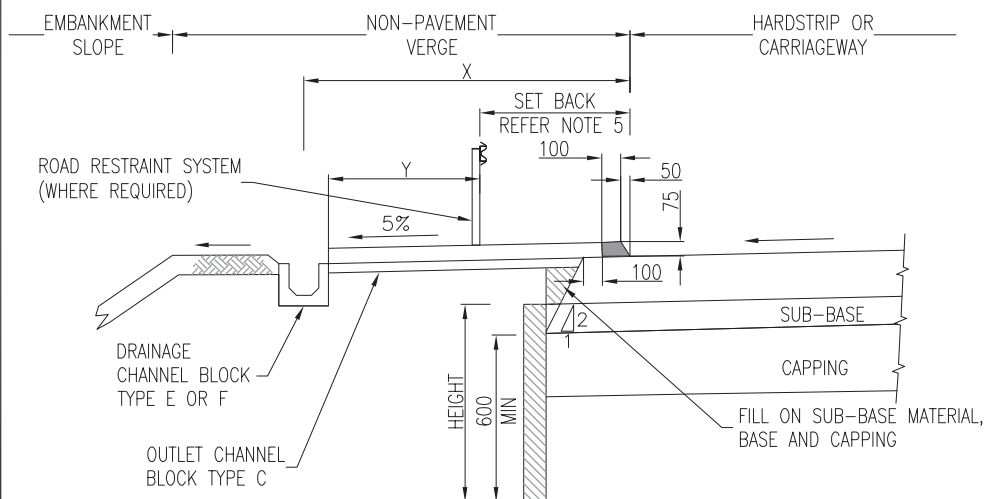




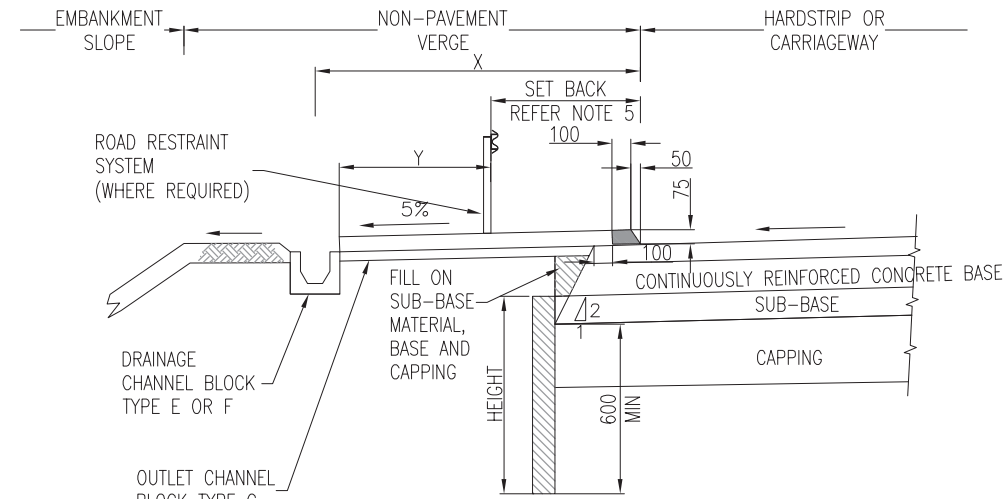
TYPE 21E  
(FLEXIBLE CARRIAGEWAY)



TYPE 21G  
(FLEXIBLE COMPOSITE CARRIAGEWAY)



TYPE 21F  
(RIGID CARRIAGEWAY)



TYPE 21H  
(RIGID COMPOSITE CARRIAGEWAY)

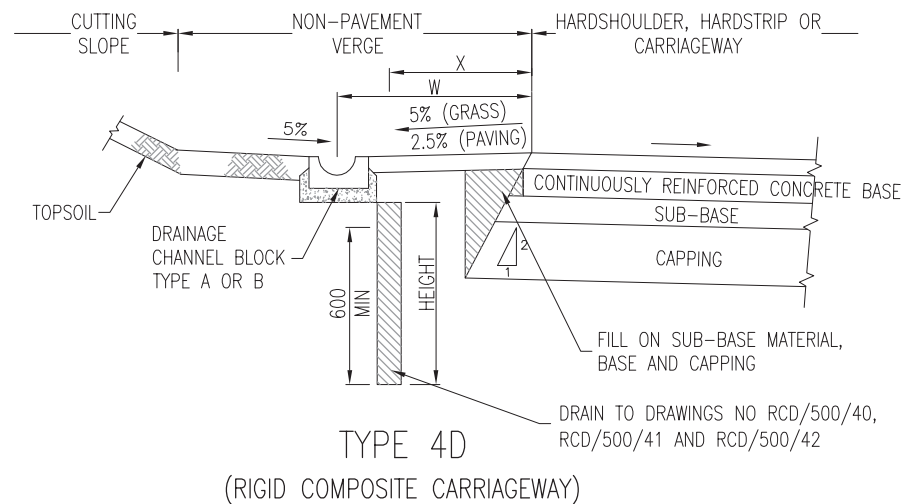
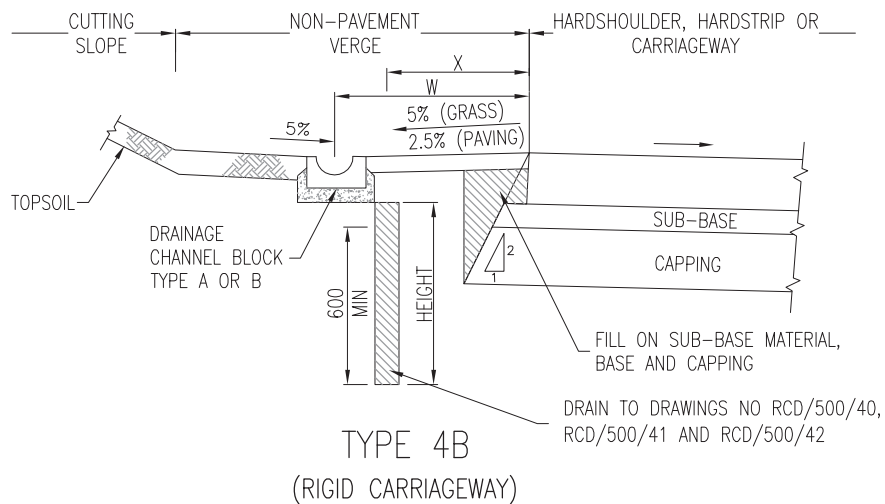
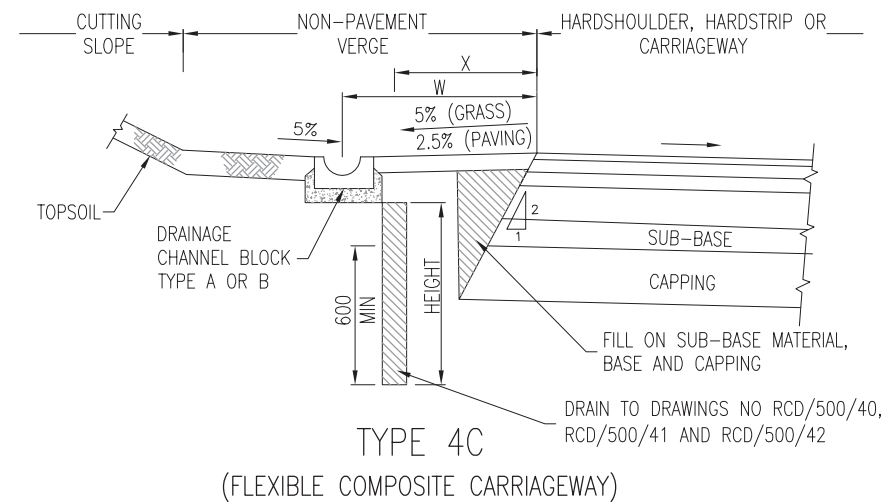
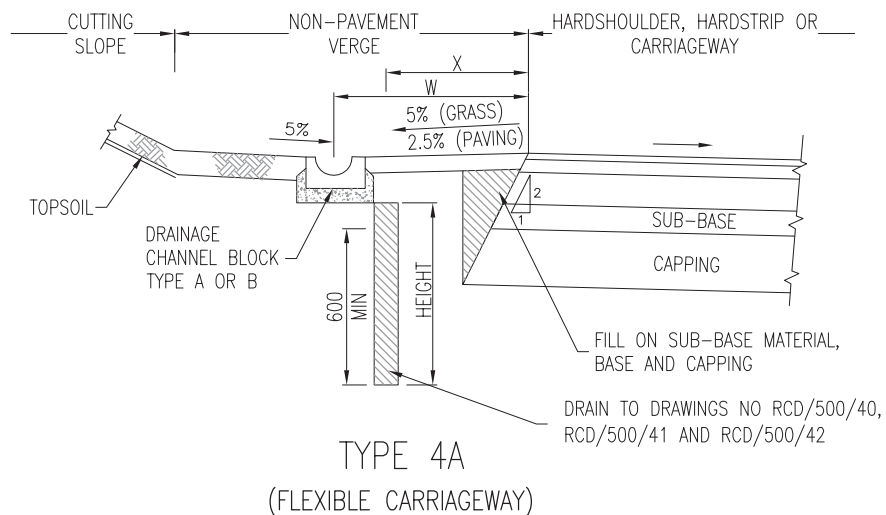
NOTES:

- ALL DIMENSIONS ARE IN MILLIMETRES.
- DRAINS SHALL COMPLY WITH DRAWING RCD/500/40, RCD/500/41 AND RCD/500/42.
- FOR DETAILS OF DRAINAGE CHANNEL AND BLOCKS SEE DRAWING RCD/500/23 AND RCD/500/24.
- DIMENSION X SHALL BE AS DESCRIBED IN APPENDIX 5/3.
- SET BACK REQUIREMENTS IN ACCORDANCE WITH NRA TD 19.
- PERMITTED VERGE-SIDE DRAINAGE OPTIONS ARE INDICATED IN NRA HD 33.
- EXTENSION OF CAPPING LAYER IN ACCORDANCE WITH RCD/100/5 IS ACCEPTABLE IN LIEU OF FIN OR NARROW FILTER DRAIN WHERE BASE OF CAPPING CAN BE EXTENDED TO EDGE OF EMBANKMENT ABOVE ADJACENT GROUND LEVEL.

- A FILTER DRAIN MAY BE REQUIRED IN LIEU OF FIN OR NARROW FILTER DRAIN WHERE THESE DO NOT HAVE SUFFICIENT CAPACITY FOR SUBSURFACE DRAINAGE.
- DIMENSION Y SHALL BE AS DESCRIBED IN APPENDIX 4/1.

NOT TO SCALE

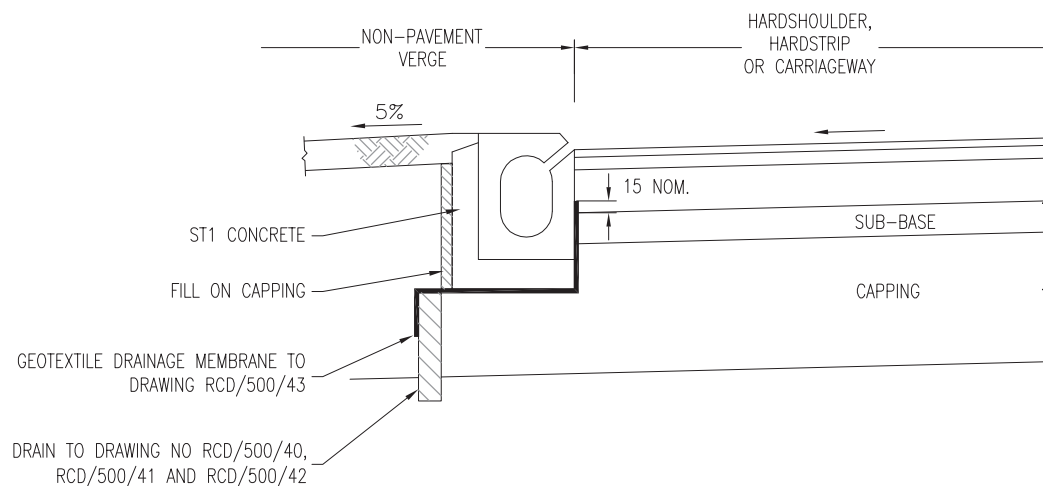
TII PUBLICATION NUMBER: CC-SCD-00107



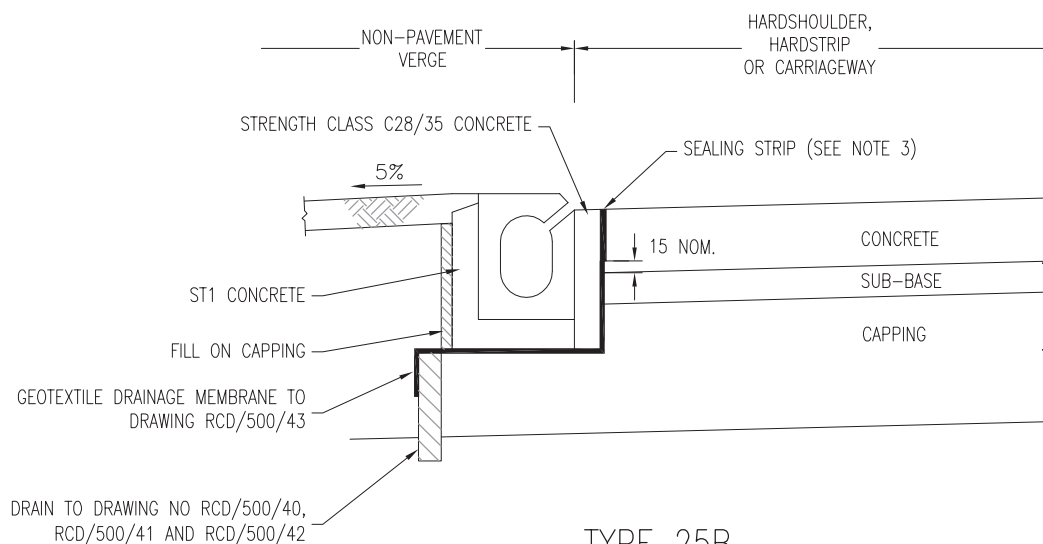
NOTES:

- ALL DIMENSIONS ARE IN MILLIMETRES.
- DIMENSIONS X AND W TO BE AS DESCRIBED IN APPENDIX 5/3.
- TOPSOIL OR PAVING IN VERGES SHALL BE AS DESCRIBED IN APPENDIX 5/3.
- FOR DETAILS OF CHANNEL BLOCKS A AND B SEE DRAWING RCD/500/23.
- PERMITTED VERGE-SIDE EDGE DRAINAGE OPTIONS ARE INDICATED IN NRA HD 33.
- A FILTER DRAIN MAY BE REQUIRED IN LIEU OF FIN OR NARROW FILTER DRAIN WHERE THESE DO NOT HAVE SUFFICIENT CAPACITY FOR SUBSURFACE DRAINAGE.

NOT TO SCALE



TYPE 25A  
(FLEXIBLE CARRIAGEWAY)



TYPE 25B  
(RIGID CARRIAGEWAY)

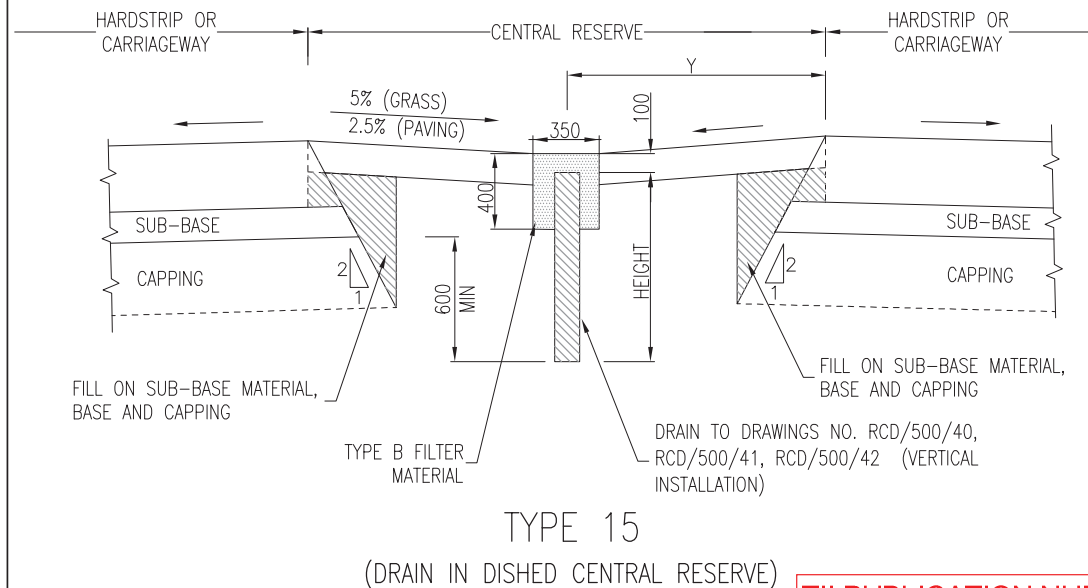
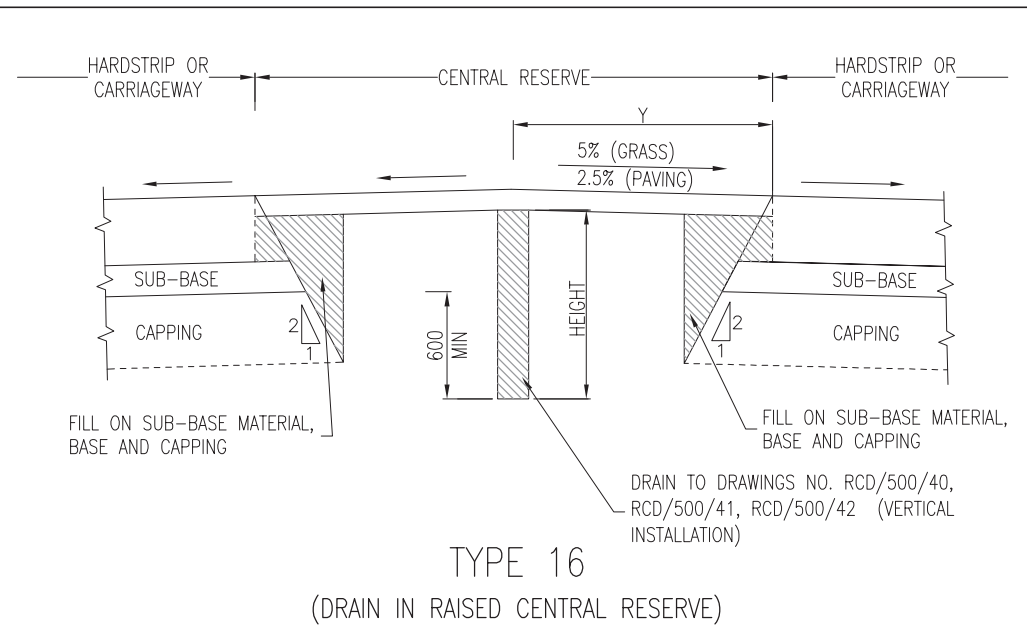
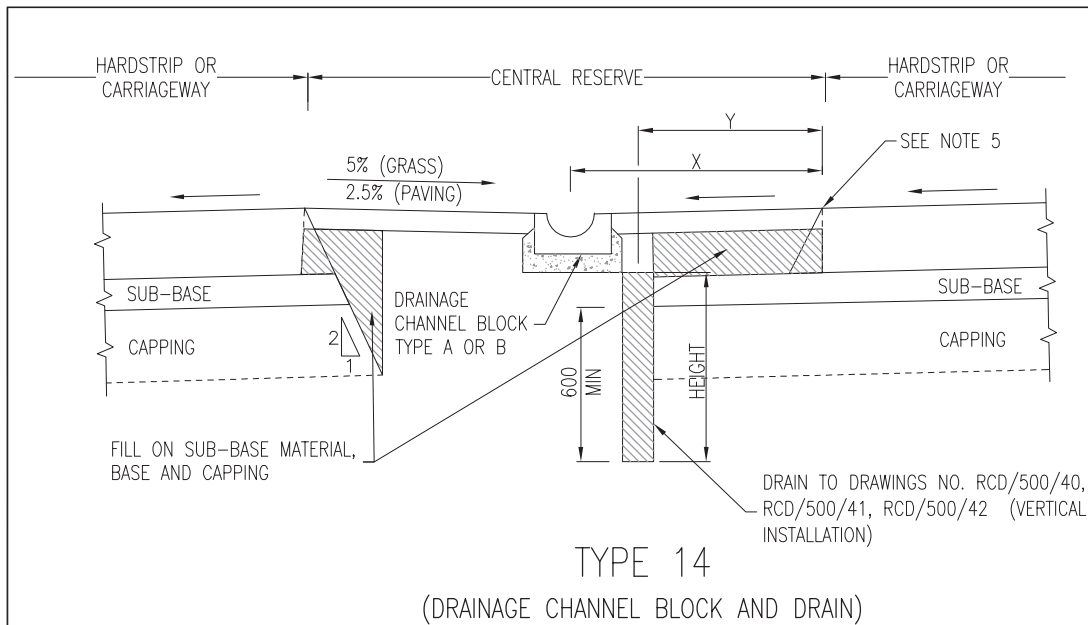
NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. THESE DETAILS ALSO APPLY TO FLEXIBLE COMPOSITE AND RIGID COMPOSITE CARRIAGEWAY WITH NECESSARY MODIFICATION. RIGID COMPOSITE AS TYPE 25B BUT WITH BITUMINOUS SURFACING LAID UP TO FRONT FACE OF BLOCK AS TYPE 25A, AND WITHOUT THE SEALING STRIP. FLEXIBLE COMPOSITE AS TYPE 25A DOWN TO TOP SURFACE OF BASE, LOWER DETAILS AS TYPE 25B.
3. THE SEALING STRIP AND VERTICAL PART OF GEOTEXTILE DRAINAGE MEMBRANE ARE SHOWN FOR WHEN BLOCK IS CONSTRUCTED BEFORE PAVEMENT. THEY SHALL BE FIXED TO PAVEMENT EDGE WHEN PAVEMENT CAST BEFORE BLOCK.
4. SEALING STRIP TO BE TO MCDRW, CLAUSE 1014.
5. WHERE USED IN CONJUNCTION WITH A THIN SURFACING THE UNDER DRAINAGE SHOWN IN RCD/500/43 SHALL APPLY IN FULL.
6. PERMITTED VERGE-SIDE EDGE DRAINAGE OPTIONS ARE INDICATED IN NRA HD 33.

NOT TO SCALE

TII PUBLICATION NUMBER: CC-SCD-00109



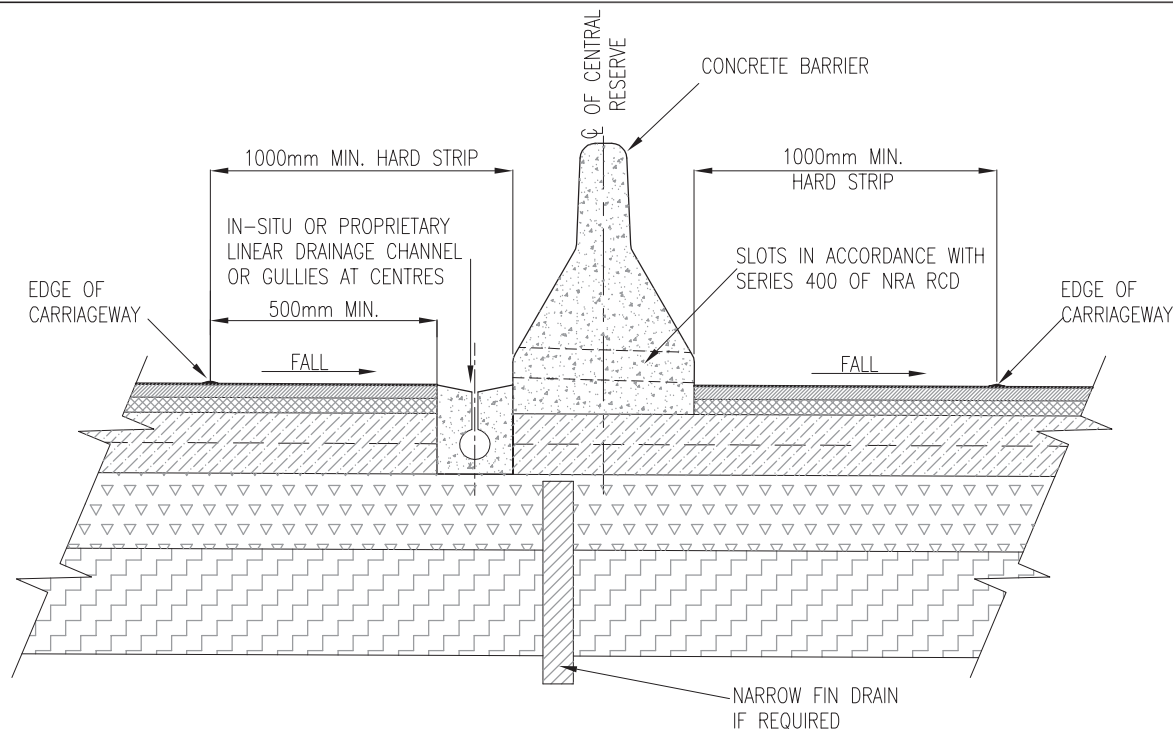


NOTES:

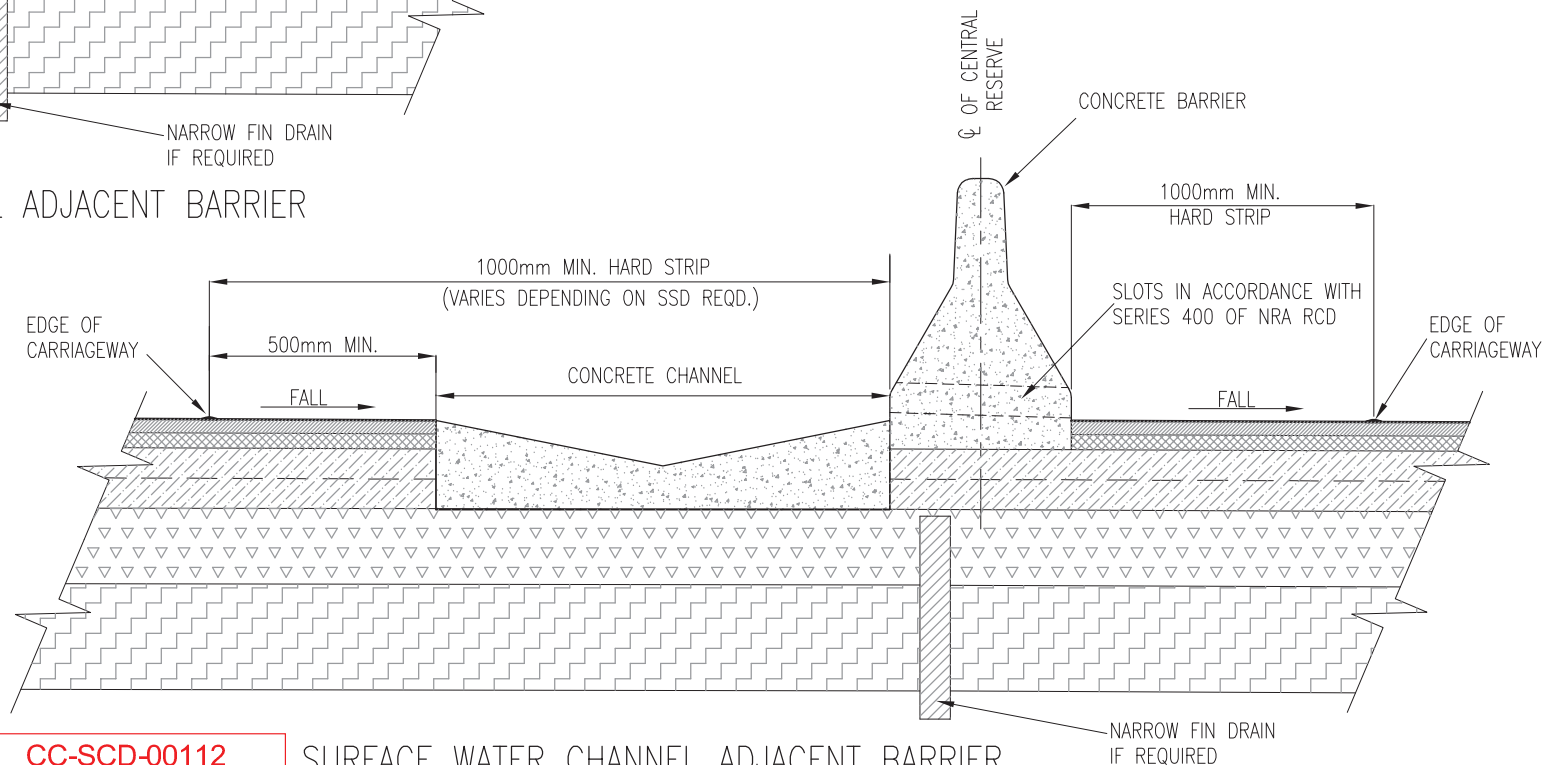
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. DIMENSIONS X AND Y TO BE AS DESCRIBED IN APPENDIX 5/3.
3. FOR DETAILS OF DRAINAGE BLOCKS SEE DRAWING RCD/500/23.
4. TOPSOIL OR PAVING IN THE CENTRAL RESERVE SHALL BE AS DESCRIBED IN APPENDIX 5/3.
5. WHERE THE CENTRAL RESERVE IS GRASSED AND CARRIAGEWAY SURFACE WATER IS TO FLOW OVER THE EDGE THE SURFACE OF THE CENTRAL RESERVE SHOULD BE SET BELOW ADJACENT HARDSTRIP OR CARRIAGEWAY IN ACCORDANCE WITH SERIES 700 REQUIREMENTS.
6. ROAD RESTRAINT SYSTEM NOT SHOWN FOR CLARITY BUT SHALL BE AS DESCRIBED IN APPENDIX 4/1.
7. PERMITTED CENTRAL RESERVE DRAINAGE OPTIONS ARE INDICATED IN NRA HD 33.






NOT TO SCALE

TII PUBLICATION NUMBER: CC-SCD-00111



LINEAR DRAINAGE CHANNEL ADJACENT BARRIER



- KEY:
-  SURFACE COURSE
  -  BINDER
  -  BASE COURSE
  -  SUB BASE
  -  CAPPING 6F

NOT TO SCALE

TII PUBLICATION NUMBER: CC-SCD-00112

SURFACE WATER CHANNEL ADJACENT BARRIER

- NOTES:
- ALL DIMENSIONS ARE IN MILLIMETRES.
  - LINEAR DRAINAGE CHANNELS, SURFACE WATER CHANNELS, GULLIES, ETC SHALL BE OFFSET A MINIMUM OF 500mm FROM THE TRAFFIC LANE.
  - PERMITTED CENTRAL RESERVE DRAINAGE OPTIONS ARE INDICATED IN NRA HD 33.
  - A FILTER DRAIN MAY BE REQUIRED IN LIEU OF FIN OR NARROW FILTER DRAIN WHERE THESE DO NOT HAVE SUFFICIENT CAPACITY FOR SUBSURFACE DRAINAGE.



Ionad Ghnó Gheata na Páirce,  
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