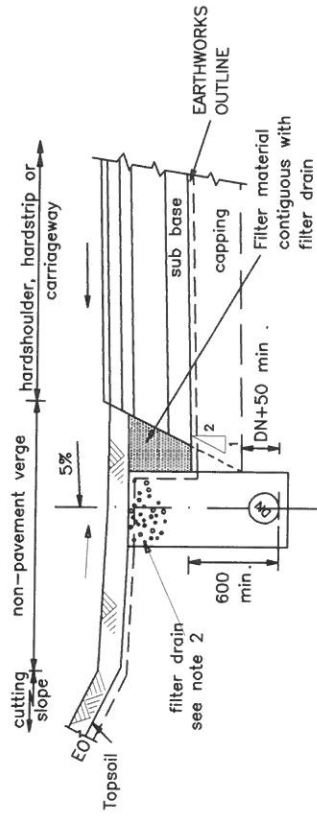
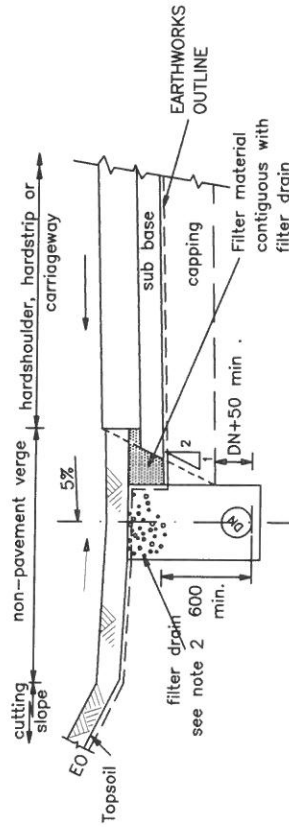


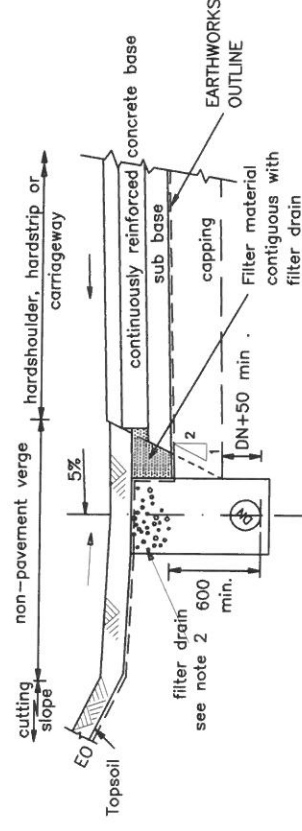
Type 1A (Flexible carriageway).



Type 1C (Flexible composite carriageway).



Type 1B (Rigid carriageway).



Type 1D (Rigid composite carriageway).

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. Alternative treatments to top of filter drains are shown on Drawing No. B15. Type V is shown on this Drawing.
3. 'DN' represents nominal diameter of the pipe.
4. Pipes shall be laid to the levels shown on the Drawings and schedules.

HIGHWAY CONSTRUCTION DETAILS

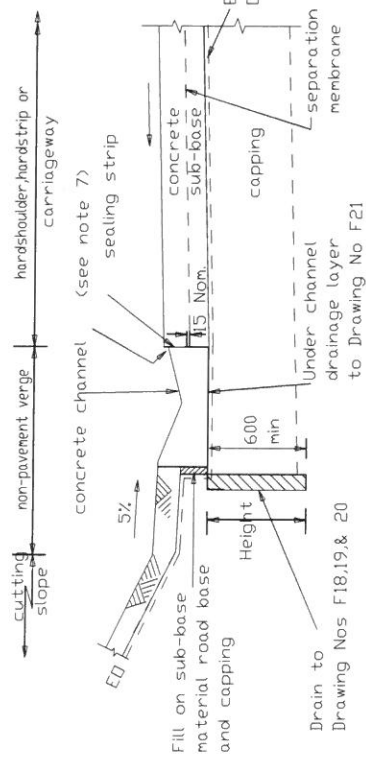
EDGE OF PAVEMENT
DETAILS

CUTTINGS – COMBINED SURFACE WATER
AND GROUND WATER FILTER DRAINS

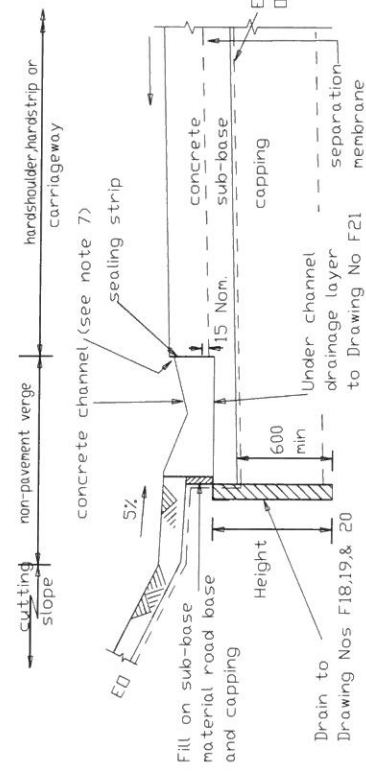
Drawing No.

B1

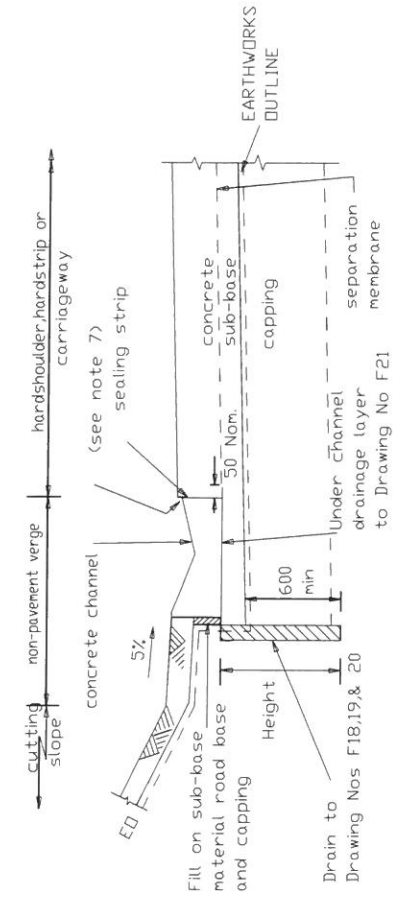
B	MAY 06	Date
A	DEC 91	Issue



TYPE 2A
(Channel formed on capping or formation layer)



TYPE 2B
(Channel base formed within sub-base layer)



TYPE 2C
(Channel formed on sub-base layer)

NOTES

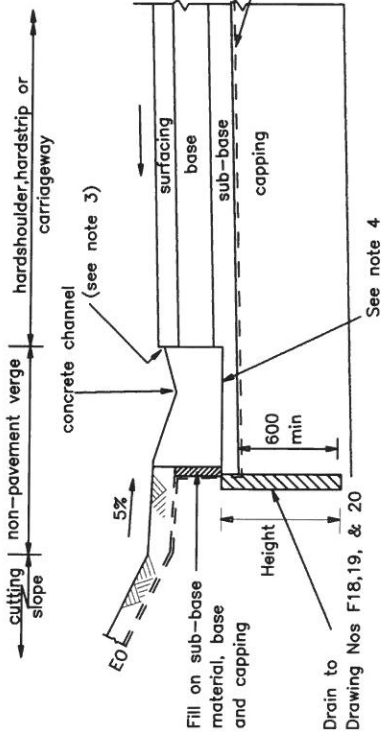
1. ALL DIMENSIONS ARE IN MILLIMETRES. These details also apply to rigid composite carriageway with any necessary modifications.
2. For details of concrete channel see Drawing No B14.
3. The sealing strip and the vertical part of under channel drainage layer shown for when channel is cast before pavement. They shall be fixed to pavement edge when pavement cast before channel.
4. Sealing strip to be to Clause 1014 of SH.W.
5. For details of under-channel drainage layer see Drawing No F21.
6. Channels may be freestanding or cast in one with the pavement. In the latter case the requirements of NOTES 3 & 4 may be ignored. Transverse joints in carriageway slabs shall be continued through channel sections cast in one with the slab.
7. Notwithstanding other tolerances in the Specification, the finished level of the channel shall not be higher nor more than 10mm lower than the finished level of the edge of the adjacent carriageway.

HIGHWAY CONSTRUCTION DETAILS

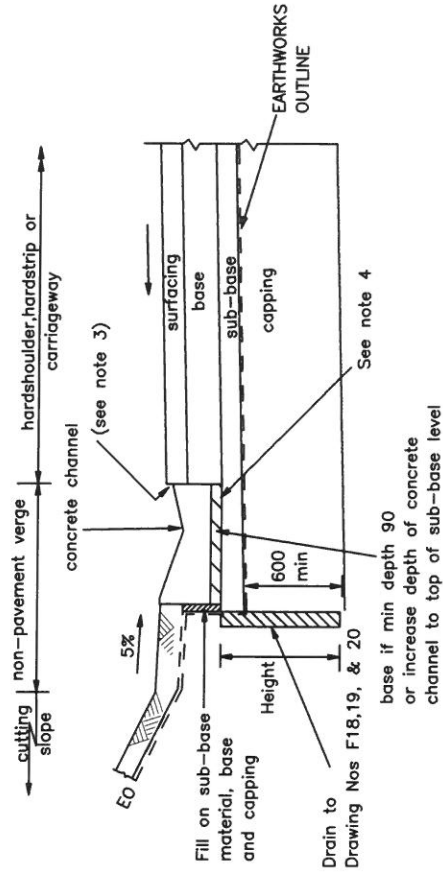
EDGE OF PAVEMENT
DETAILS

CUTTINGS - SURFACE
WATER CHANNEL FOR RIGID
CARRIAGEWAY

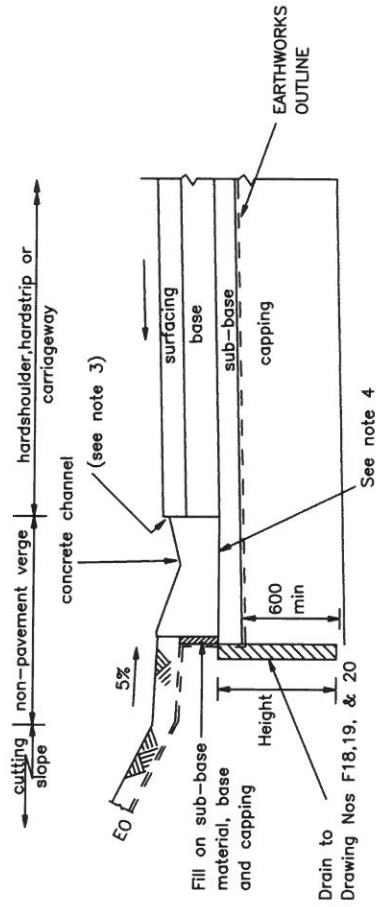
Drawing No.
B2



TYPE 3A
(Channel base formed within sub-base layer)



TYPE 3C
(Channel base formed on first base layer)



TYPE 3B
(Channel base formed on the sub-base layer)

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES. These details also apply to flexible composite carriageway with any necessary modifications.
2. For details of concrete channel see Drawing No B14.
3. Notwithstanding other tolerances in the Specification the finished level of the channel shall not be higher nor more than 10mm lower than the finished level of the adjacent carriageway.
4. Where used in conjunction with thin surfacing the under drainage detail shown in F21 shall apply in full.

HIGHWAY CONSTRUCTION DETAILS

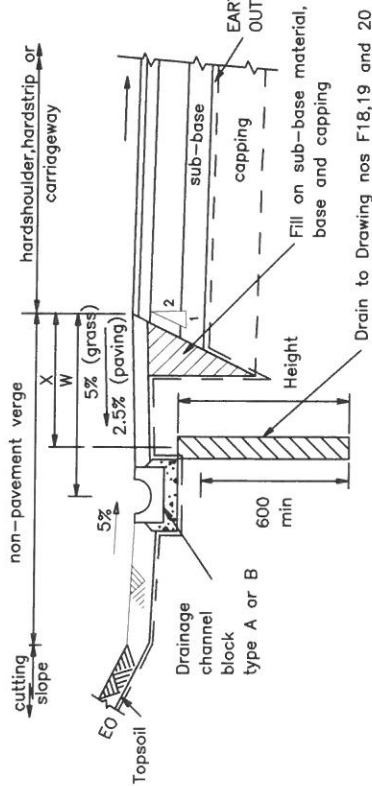
EDGE OF PAVEMENT
DETAILS

CUTTINGS - SURFACE
WATER CHANNEL FOR FLEXIBLE
CARRIAGEWAY

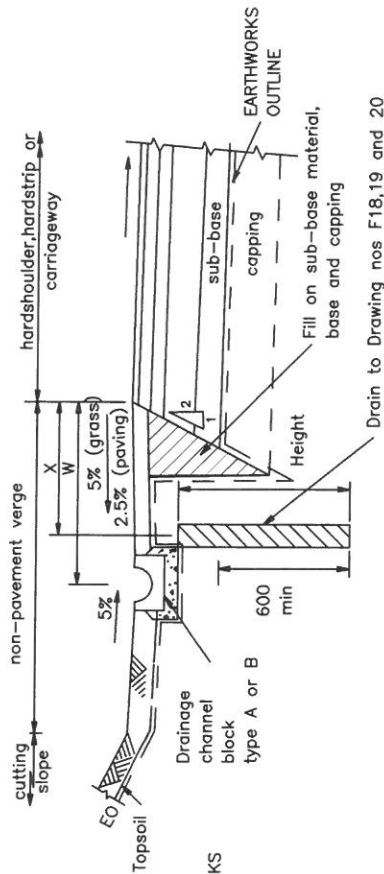
Drawing No.

B3

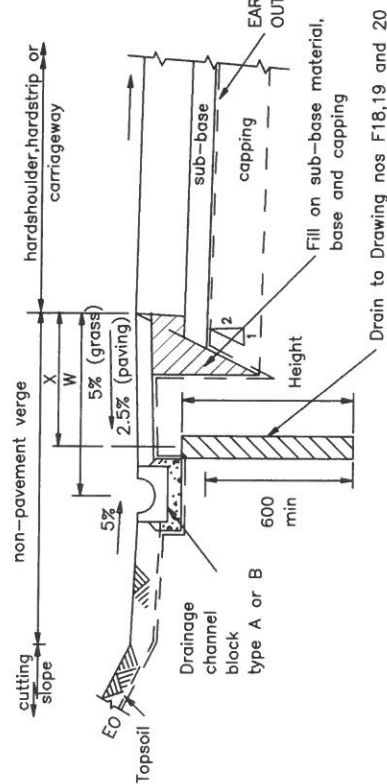
C	MAY 02
B	AUG 93
A	DEC 91
Issue	Date



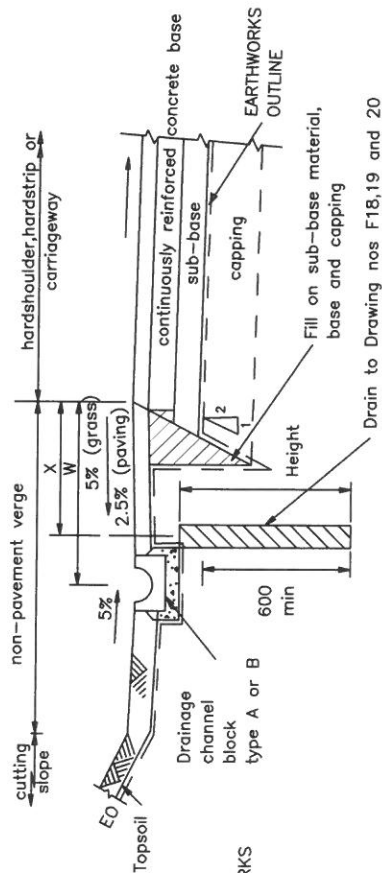
Type 4A (Flexible carriageway).



Type 4C (Flexible composite carriageway).



Type 4B (Rigid carriageway).



Type 4D (Rigid composite carriageway).

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. Dimensions X & W to be as described in Appendix 5/3.
3. Topsoil or paving in verges shall be as described in Appendix 5/3.
4. For details of channel blocks A and B see Drawing No. F15.

HIGHWAY CONSTRUCTION DETAILS

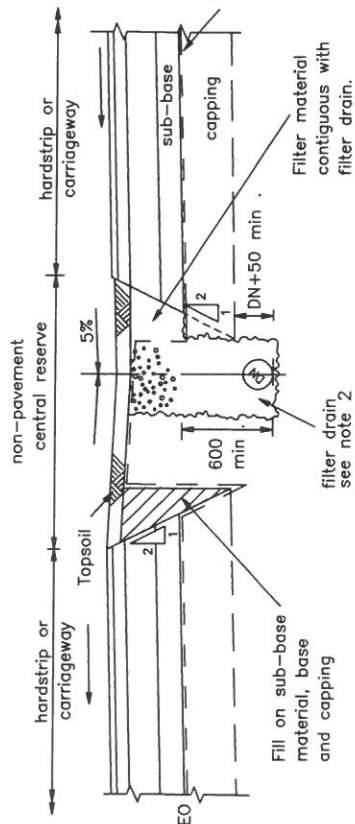
EDGE OF PAVEMENT
DETAILS

CUTTINGS – DRAINAGE
CHANNEL BLOCKS AND DRAINS

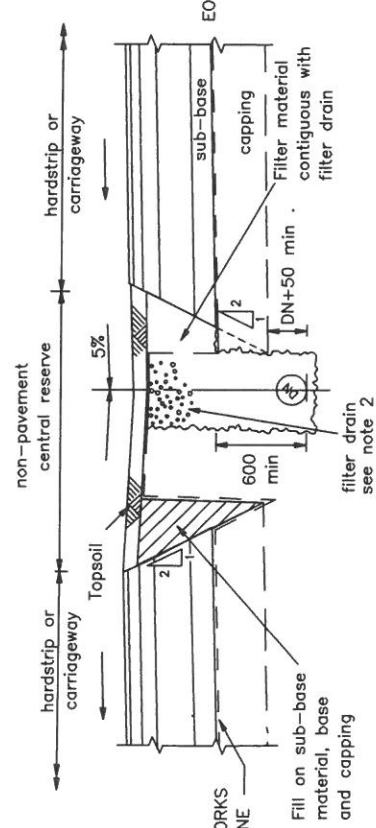
Drawing No.

B4

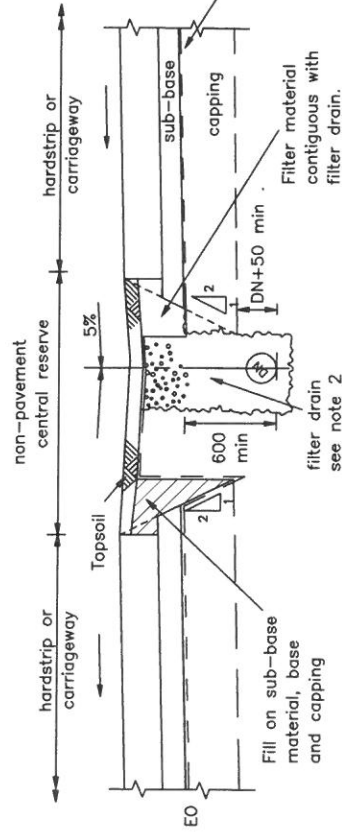
C	MAY 06
B	MAY 02
A	DEC 91
Issue	Date



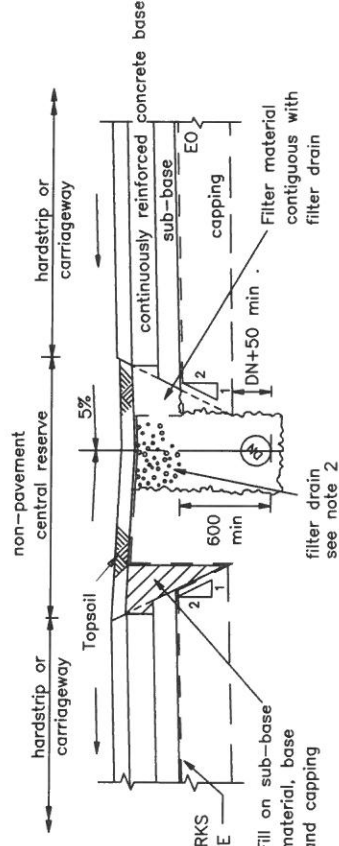
TYPE 11A (Flexible carriageway).



TYPE 11C (Flexible composite carriageway).



TYPE 11B (Rigid carriageway).

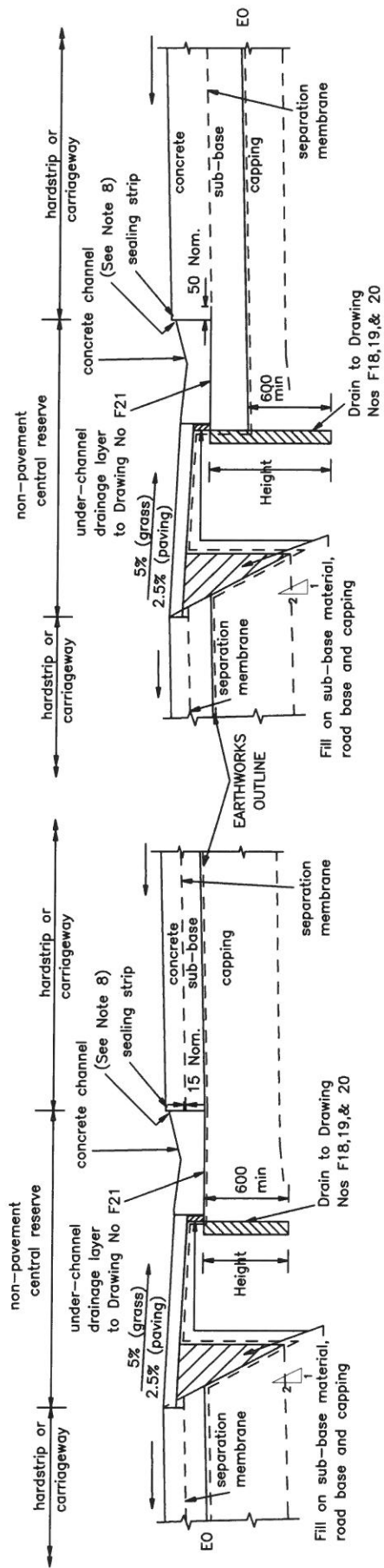


TYPE 11D (Rigid composite carriageway).

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. Alternative treatments to top of filter drains are shown on Drawing No. B15. Type V drain is shown on this Drawing.
3. 'DN' represents nominal diameter of pipe.
4. Pipes shall be laid to the levels shown on the Drawings and schedules.

HIGHWAY CONSTRUCTION DETAILS	EDGE OF PAVEMENT DETAILS			CENTRAL RESERVE - COMBINED SURFACE WATER AND GROUND WATER FILTER DRAIN	
	C	MAY 06	MAY 02	Drawing No. B5	
	B	MAY 02	DEC 91		
Issue				Date	

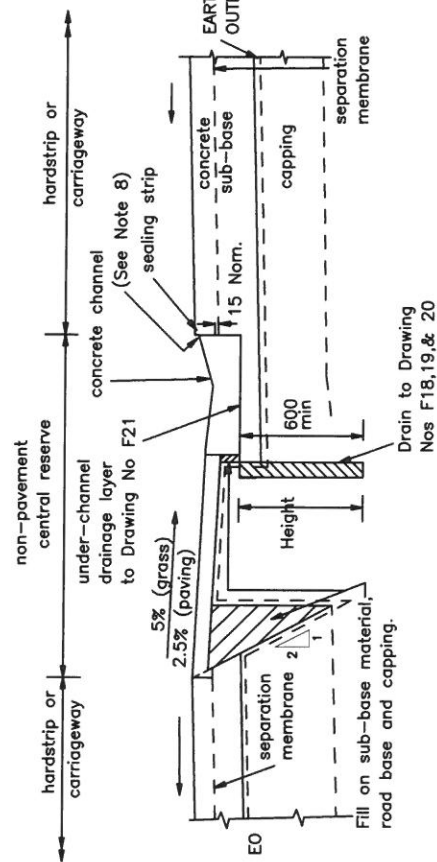


TYPE 12A

(Channel formed on capping or formation layer)

TYPE 12C

(Channel formed on sub-base layer)



TYPE 12B

(Channel base formed within sub-base layer)

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES
These details also apply to rigid composite carriageway with any necessary modifications.
2. For details of concrete channel see Drawing No B14.
3. The sealing strip and the vertical part of under channel drainage layer shown for when channel is cast before pavement. They shall be fixed to pavement edge when pavement cast before channel.
4. Sealing strip to be to Clause 1014 of S.H.W.
5. Where used in conjunction with a thin surfacing the under drainage detail shown in F21 shall apply in full.
6. Topsoil or paving in the central reserve shall be as described in Appendix 5/3

7. Channels may be freestanding or cast in one with the pavement. In the latter case the requirements of NOTES 3 & 4 may be ignored. Transverse joints in carriageway slabs shall be continued through channel sections cast in one with the slab.
8. Notwithstanding other tolerances in the Specification, the finished level of the channel shall not be higher nor more than 10mm lower than the finished level of the edge of the adjacent carriageway.

HIGHWAY CONSTRUCTION DETAILS

EDGE OF PAVEMENT
DETAILS

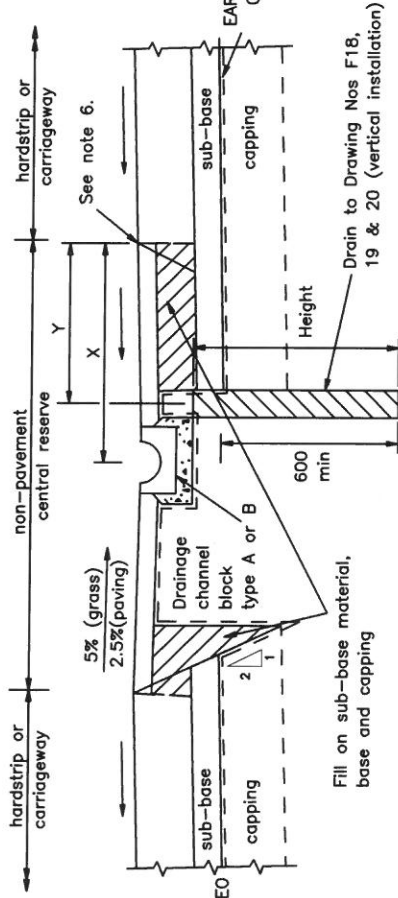
C	MAY 02
B	AUG 93
A	DEC 91
Issue	Date

CENTRAL RESERVE –
SURFACE WATER CHANNEL
FOR RIGID CARRIAGEWAY

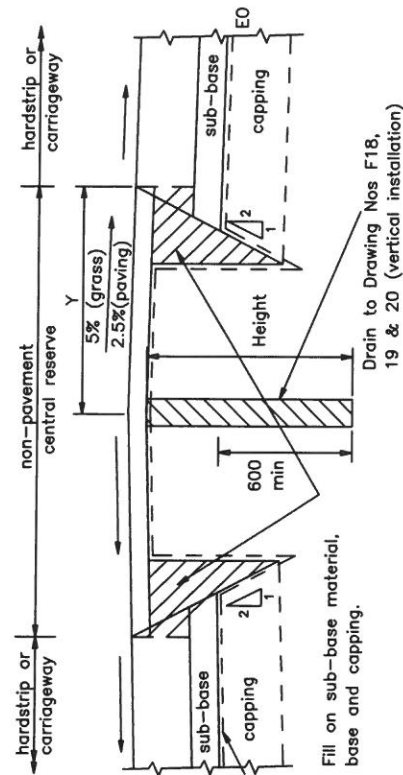
Drawing No.

B6

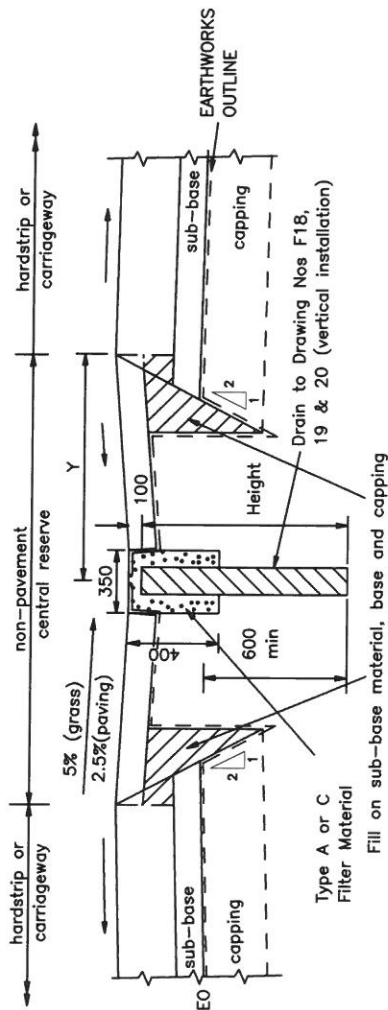
B7



TYPE 14
(Drainage Channel Block & Drain)



TYPE 16
(Drain in Raised Central Reserve)



TYPE 15
(Drain in Dished Central Reserve)

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. Dimensions X & Y to be as described in Appendix 5/3.
3. For details of drainage channel blocks see Drawing No. F15.
4. Flexible carriageway construction is shown. Variations for other constructions to be as shown on Drawing No B1.
5. Topsoil or paving in the central reserve shall be as described in Appendix 5/3.
6. 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 40mm below adjacent hardstrip or carriageway.

HIGHWAY CONSTRUCTION DETAILS

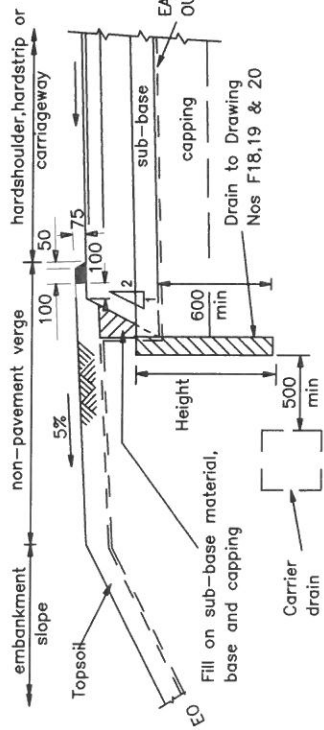
EDGE OF PAVEMENT
DETAILS

CENTRAL RESERVE –
DRAINAGE CHANNEL BLOCKS
AND DRAINS

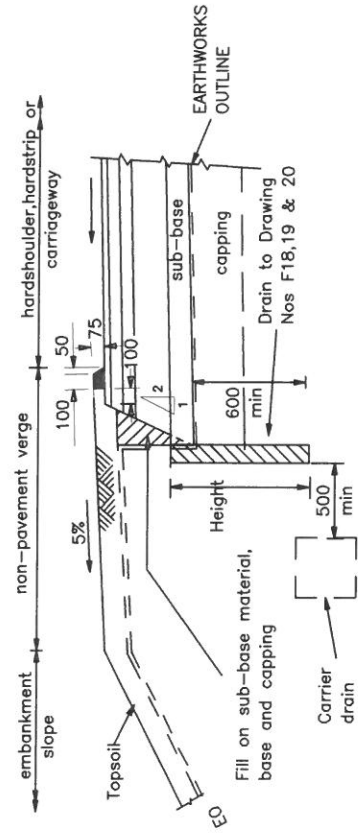
Drawing No.

B8

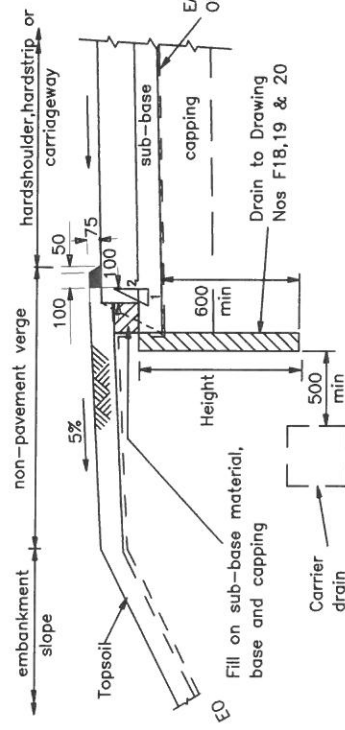
Issue	Date
B	MAY 02
A	DEC 91



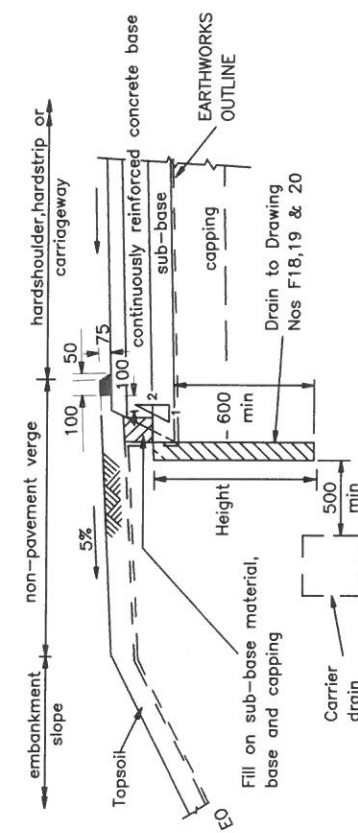
Type 21A (Flexible carriageway).



Type 21C (Flexible composite carriageway).



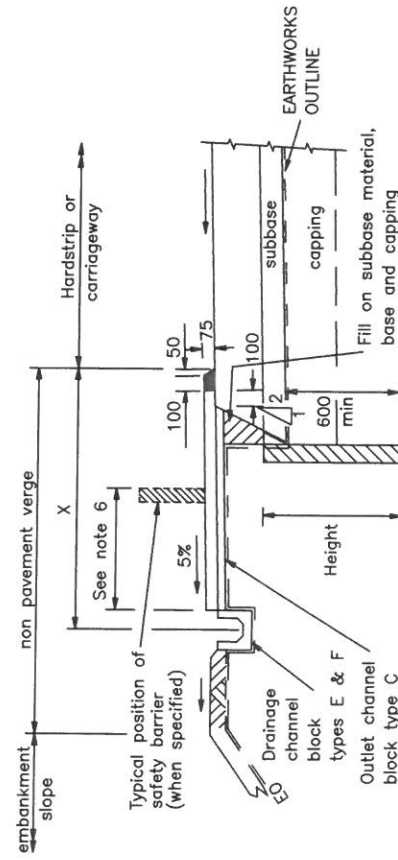
Type 21B (Rigid carriageway).



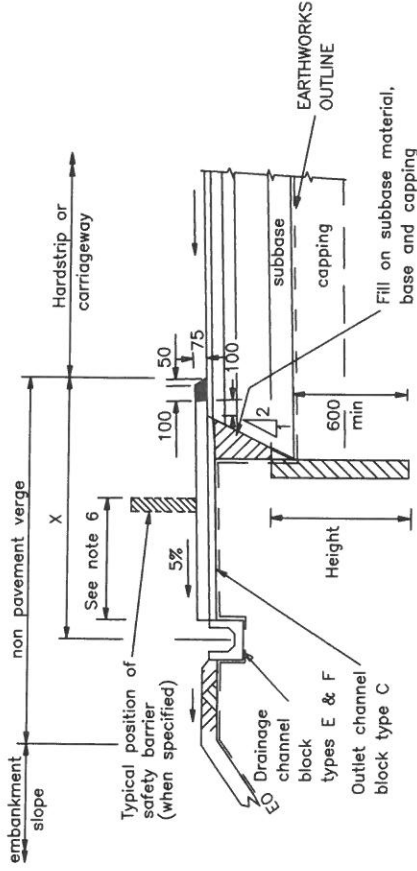
Type 21D (Rigid composite carriageway).

- NOTES
1. ALL DIMENSIONS ARE IN MILLIMETRES.
 2. Carrier drains shall be as detailed on the Drawings and schedules.

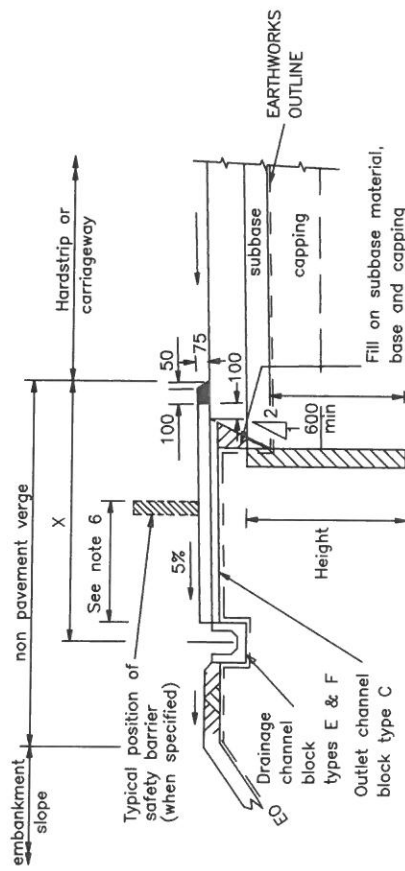
HIGHWAY CONSTRUCTION DETAILS	EDGE OF PAVEMENT DETAILS	EMBANKMENTS – CHANNELS FORMED BY KERBS				Drawing No.
		C	MAY 06			B9
		B	MAY 02			
		A	DEC 91			
		Issue	Date			



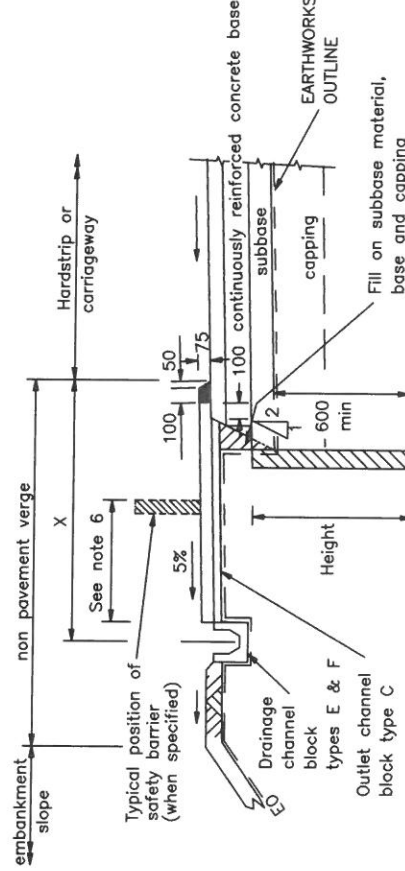
Type 21E (Flexible carriageway).



Type 21G (Flexible composite carriageway).



Type 21F (Rigid carriageway).



Type 21H (Rigid composite carriageway).

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. Drains shall comply with Drawing Nos F18,19 and 20.
3. For details of drainage channel blocks see Drawing Nos F15 and F16.
4. Dimension X shall be as described in Appendix 5/3.
5. Not applicable on motorways.
6. The distance between the traffic face of the safety barrier and the nearest vertical face of the collecting channel shall not be less than 75% of the Working Width Class as specified in Appendix 4/1.

HIGHWAY CONSTRUCTION DETAILS

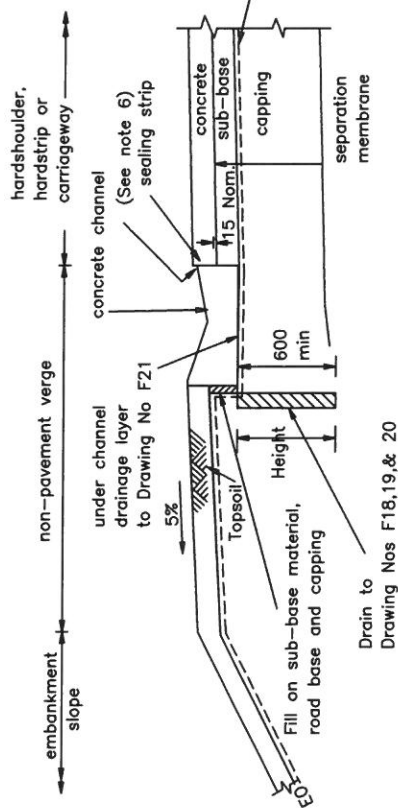
EDGE OF PAVEMENT
DETAILS

EMBANKMENTS – EXTERNAL
KERBS AND DRAINAGE
CHANNEL BLOCKS

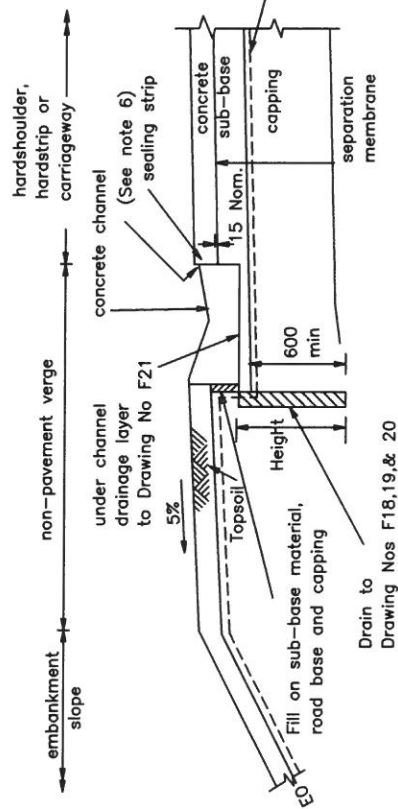
Drawing No.

B10

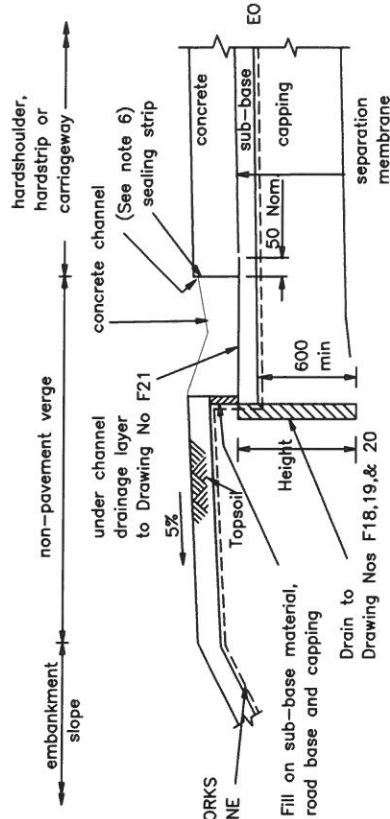
Issue	Date
E	MAY 06
D	NOV 04
C	MAY 04
B	MAY 02
A	MAR 98
A	DEC 91



TYPE 22A
(Channel formed on capping or formation layer)



TYPE 22B
(Channel base formed within sub-base layer)



TYPE 22C
(Channel formed on sub-base layer)

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES. These details also apply to rigid composite carriageway with any necessary modifications.
2. For details of concrete channel see Drawing No. B14.
3. The sealing strip and the vertical part of under channel drainage layer shown for when channel is cast before pavement. They shall be fixed to pavement edge when pavement cast before channel.
4. Sealing strip to be to Clause 1014 of S.H.W.
5. Where used in conjunction with a thin surfacing the under drainage detail shown in F21 shall apply in full.
6. Notwithstanding other tolerances in the Specification, the finished level of the channel shall not be higher nor more than 10mm lower than the finished level of the edge of the adjacent carriageway.
7. Channel may be freestanding or cast in one with the pavement. In the latter case the requirements of NOTES 3 & 4 may be ignored. Transverse joints in carriageway slabs shall be continued through channel sections cast in one with the slab.

HIGHWAY CONSTRUCTION DETAILS

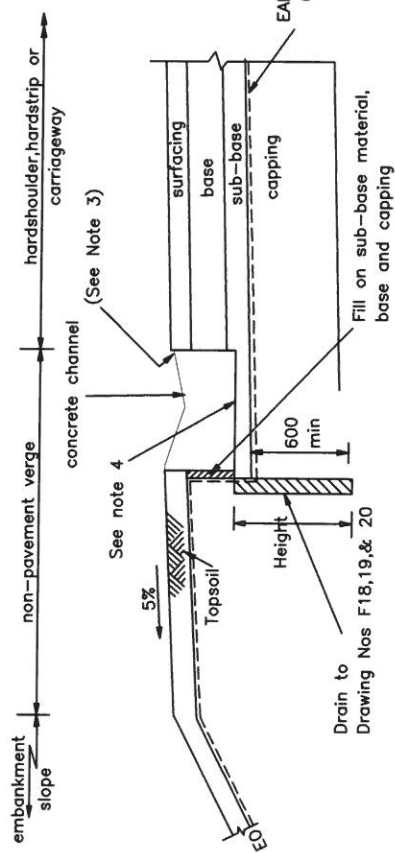
EDGE OF PAVEMENT
DETAILS

C	MAY 02
B	AUG 93
A	DEC 91
Issue	Date

EMBANKMENTS –
SURFACE WATER CHANNEL
FOR RIGID CARRIAGEWAY

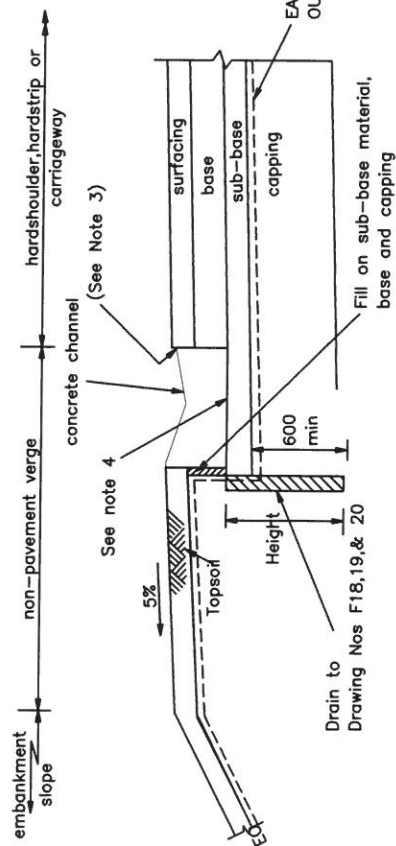
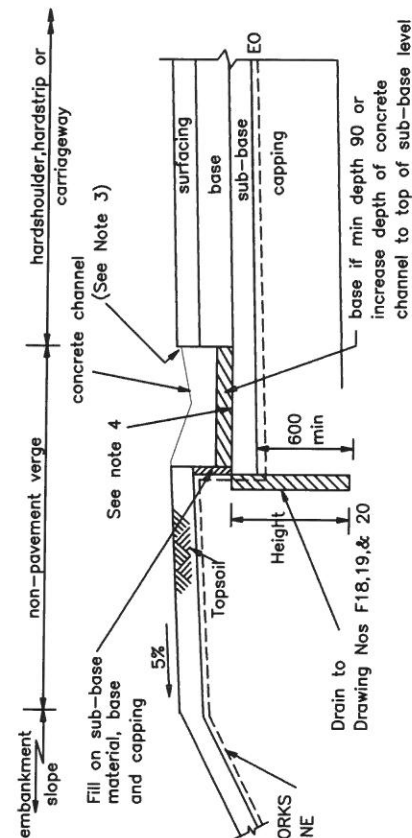
Drawing No.

B11



TYPE 23A
(Channel base formed within sub-base layer)

TYPE 23C
(Channel formed on first base layer)

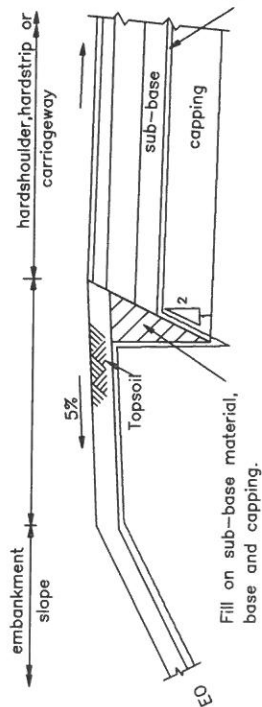


TYPE 23B
(Channel formed on the sub-base layer)

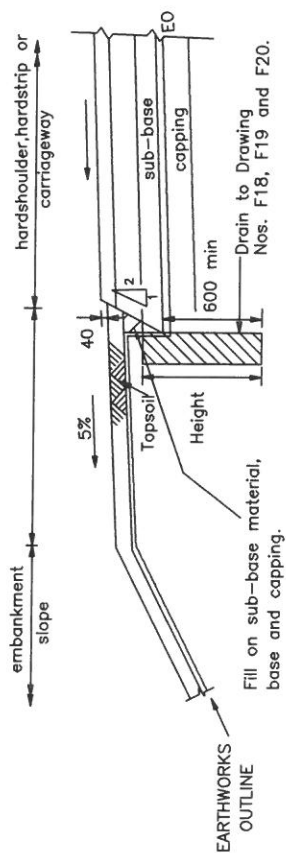
NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES. These details also apply to flexible composite carriageway with any necessary modifications.
2. For details of concrete channel see Drawing No.B14.
3. Notwithstanding other tolerances in the Specification the finished level of the channel shall not be higher nor more than 10mm lower than the finished level of the edge of the adjacent carriageway.
4. Where used in conjunction with a thin surfacing the under drainage detail shown in F21 shall apply in full.

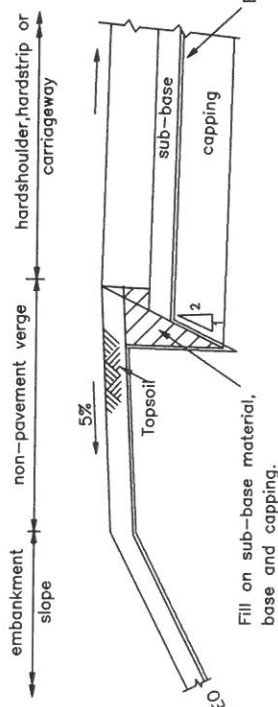
HIGHWAY CONSTRUCTION DETAILS	EDGE OF PAVEMENT DETAILS		EMBAKMENTS – SURFACE WATER CHANNEL FOR FLEXIBLE CARRIAGEWAY				Drawing No. B12
	Issue	Date	D	MAY 02	C	MAR 98	
	A	DEC 91			B	AUG 93	



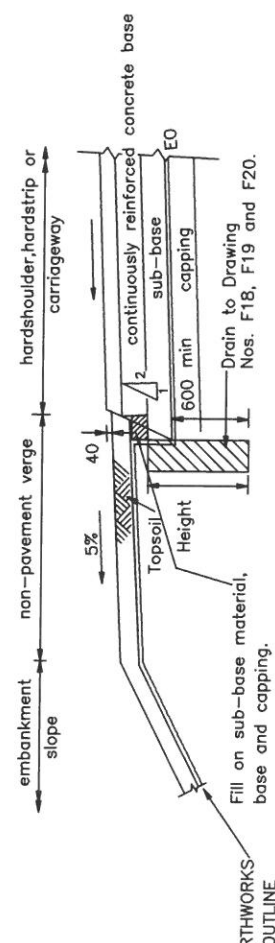
Type 24A (Flexible carriageway).



Type 24C (Flexible composite carriageway).



Type 24B (Rigid carriageway).



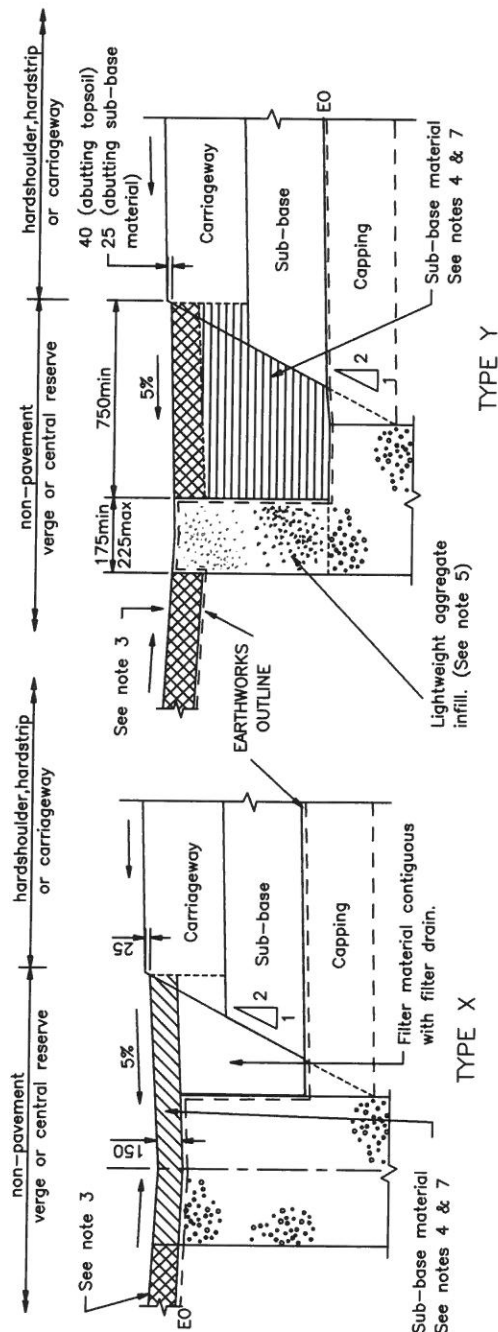
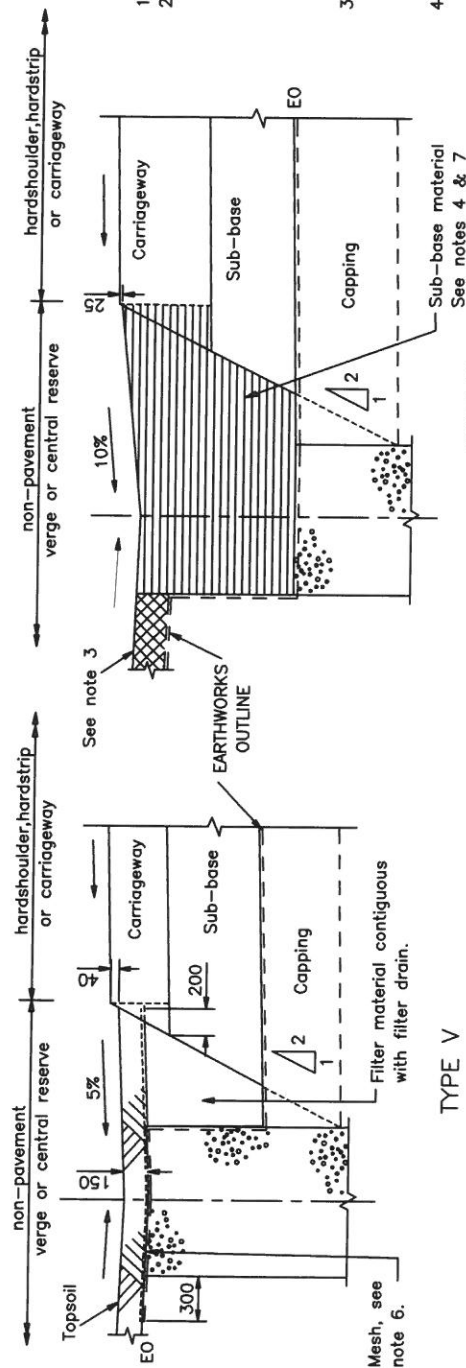
Type 24D (Rigid composite carriageway).

NOTES.

1. ALL DIMENSIONS ARE IN MILLIMETRES.

HIGHWAY CONSTRUCTION DETAILS	EDGE OF PAVEMENT DETAILS	C	MAY 06		EMBAKMENTS – VERGE DRAINAGE OR VERGE AND CARRIAGEWAY DRAINAGE OVER EMBANKMENT SLOPE	Drawing No. B13
		B	MAY 02			
		A	DEC 91			
		Issue	Date			

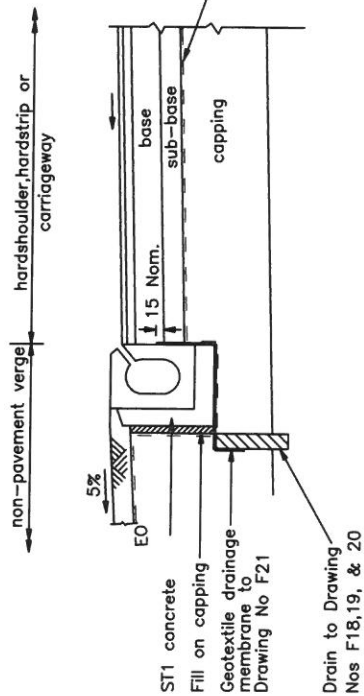
B14



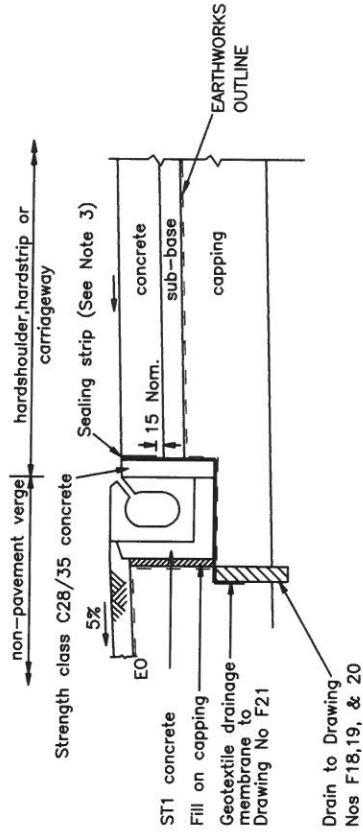
NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. The Drawing shows alternative treatments to top of drains shown on drawings B1 & B5 and is applicable to rigid and flexible carriageway options. Filter, sub-base and topsoil materials should be taken to the edge of pavement layer as appropriate.
3. Material in this layer may be topsoil or sub-base material and the depth and type shall be as described in Appendix 5/1
4. Sub-base material shall be unbound material as specified in Clause 801 of S.H.W.
5. Material in this infill shall be lightweight aggregate as described in Appendix 5/1.
6. The geotextile shall be as described in Appendix 5/1 and shall be fixed in a convenient pavement layer to give required topsoil thickness $\pm 50\text{mm}$.
7. Where described in Appendix 5/1 a geotextile membrane shall be provided between the type B filter material and overlying layers for drain types W, X & Y.
8. For dimensions of filter drain relative to pavement layer see Drawings B1 & B5.
9. Detail of lower section of filter drain shall be as types G, H or I in Drawing F2 or as described in Appendix 5/1.

HIGHWAY CONSTRUCTION DETAILS	EDGE OF PAVEMENT DETAILS			CUTTINGS AND CENTRAL RESERVE COMBINED SURFACE AND GROUND WATER FILTER DRAINS		Drawing No.
	B	MAR 98	A	DEC 91	Date	B15



TYPE 25A
(Flexible carriageway)



TYPE 25B
(Rigid carriageway)

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES.
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.
2. 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.
3. Sealing strip to be to Clause 1014 of S.H.W.
4. Where used in conjunction with a thin surfacing the under drainage shown in F21 shall apply in full.

HIGHWAY CONSTRUCTION DETAILS

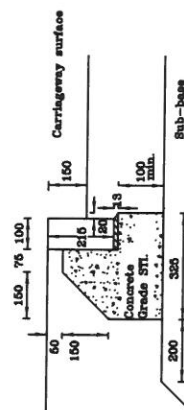
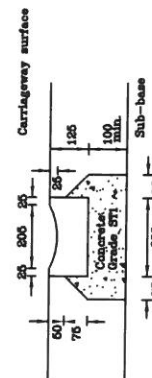
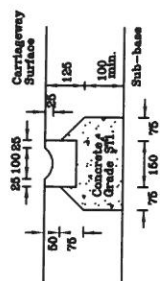
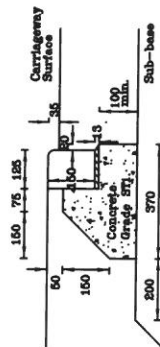
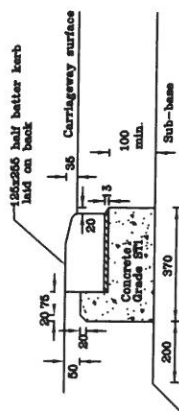
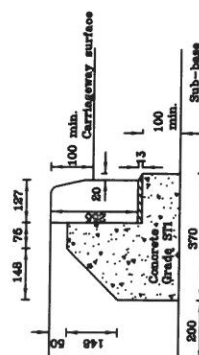
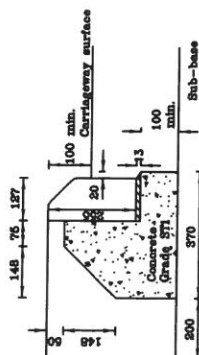
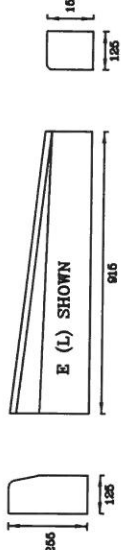
EDGE OF PAVEMENT
DETAILS

C	MAY 04
B	MAY 02
A	MAR 98
Issue	Date

EMBANKMENTS – COMBINED
DRAINAGE AND KERB BLOCKS

Drawing No.

B16

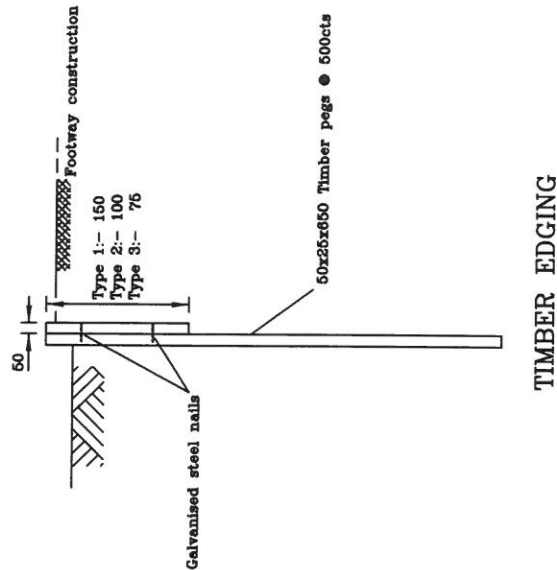
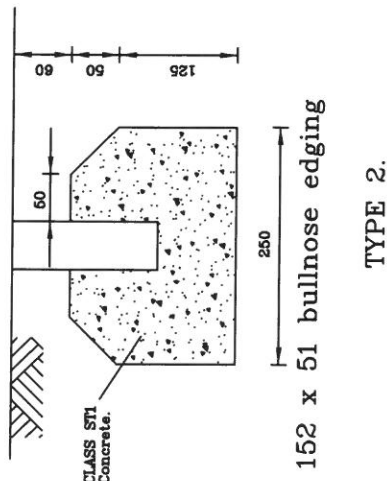
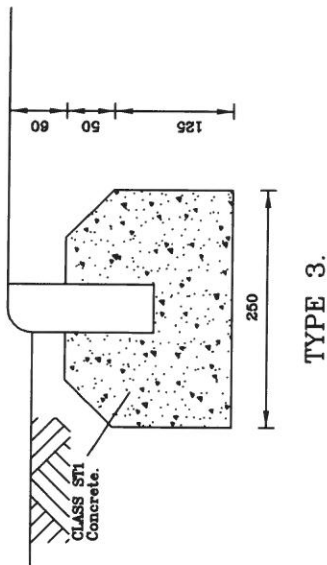
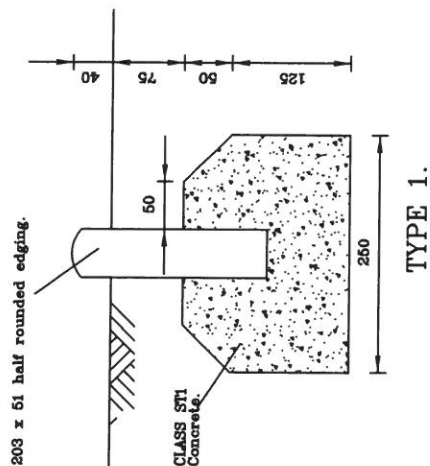


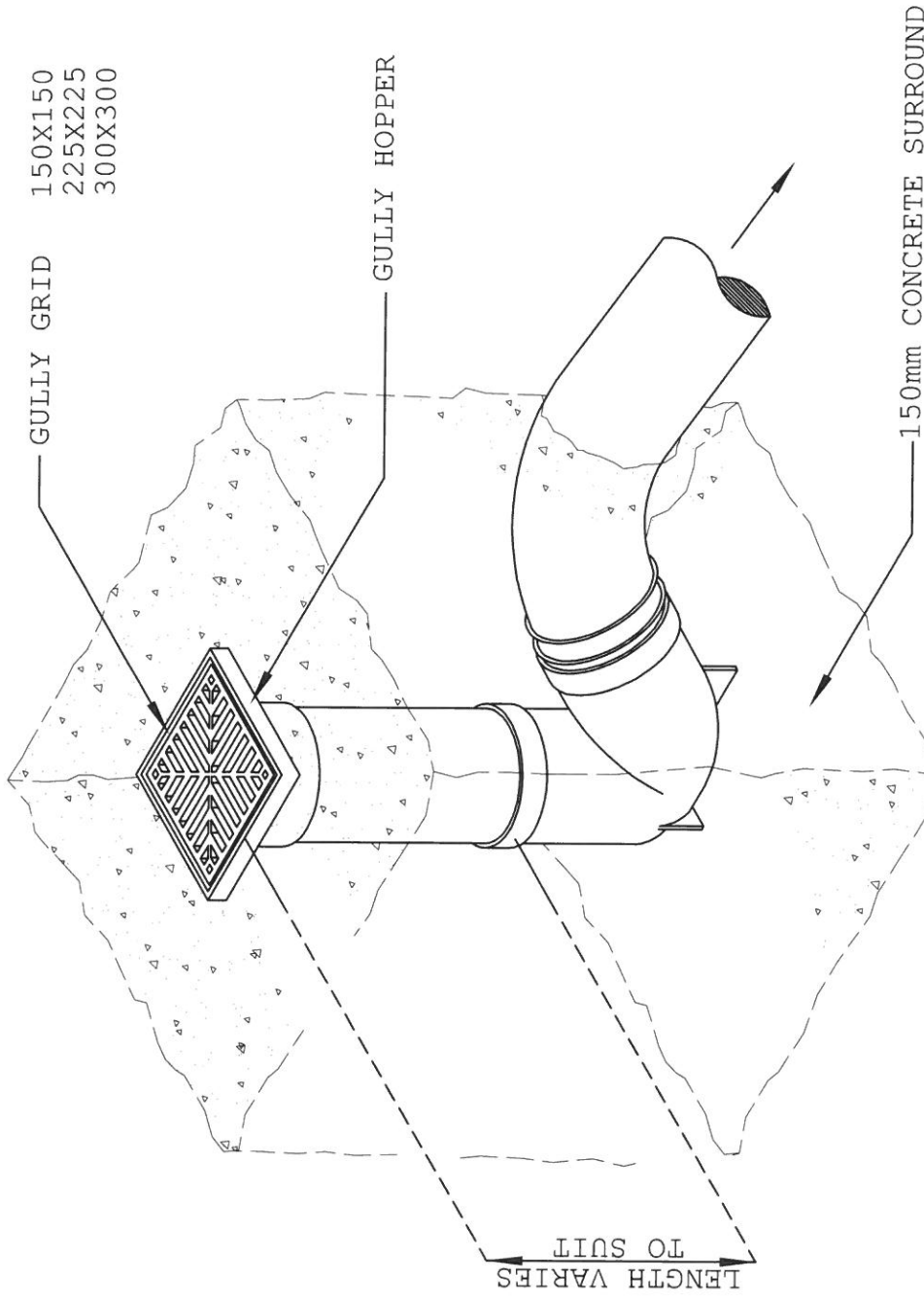
Notes:

1. Immediately prior to laying each new construction course the existing surface at its interface shall be dry and brushed clean of dirt and loose material.
2. Whenever the new construction course comprises of 30% or more of new material a tack coat of 30% spray grade cement emulsion shall be applied at a rate of 0.4 litres/sq m.
3. When removing the existing kerbs the Contractor shall take every effort to minimise overwork in the concrete.
4. The Contractor to allow in his rates for kerbing for any additional concrete bedding required as a result of over-excavation.
5. The levels of the new kerbs shall be agreed on with the Engineer's Representative.
6. All dimensions in millimetres.
7. Special kerbs to B.S. 7983 except for different size.
8. Standard kerbs to be bedded on a foundation which matches and merges in with the adjacent kerbs.
9. Kerbs intended to be Class mix S71, placed 24 hours after placing concrete.
10. Contractor to allow in his rates for formwork.
11. Kerbs to be bedded on 13 class 1 mortar to clause 20.2.
12. Subject to approval by the Overseas Organisation kerbs may be placed directly upon recently placed & compacted semi dry unformed Class mix S71 conc.
13. All materials used in construction to conform to the standards of BS 5896, 1960 or any amendments or equivalent.

Notes:

1. All dimensions in millimetres.
2. Concrete to be Class ST1.
3. All exposed surfaces to be F2 or U2 finish unless shown otherwise.
4. All external angles to have 25 x 25 chamfer.
5. All materials and construction shall be to specification for Highway Works 1991 or any amendments or revision thereof.





Drawing No.

B32

STANDARD DETAIL DRAWING - TYPICAL PLASTIC TRAP GULLY

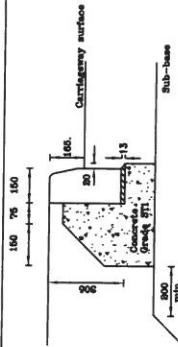
Date: April 2002

Drawn By: BZH

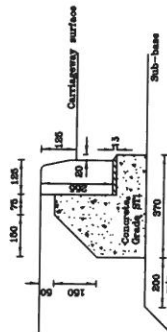
Checked By: BO

Scale: (Not to Scale)

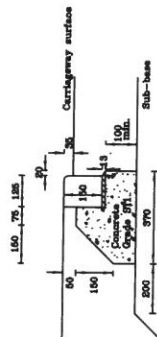
DRAINAGE



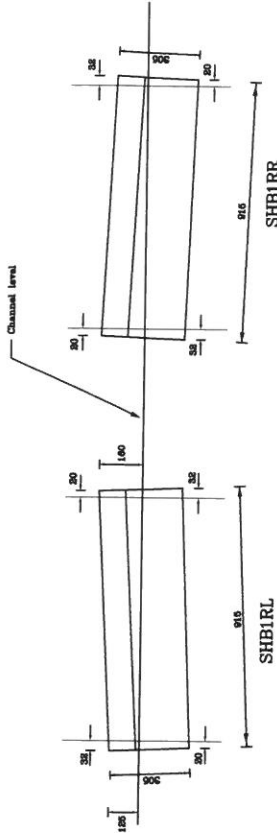
TYPICAL RAISED PLATFORM KERB (HB1)



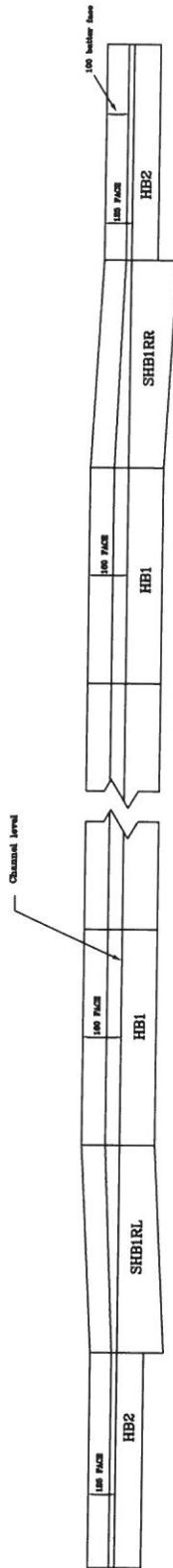
TYPE B HALF BATTER KERB (HB2)



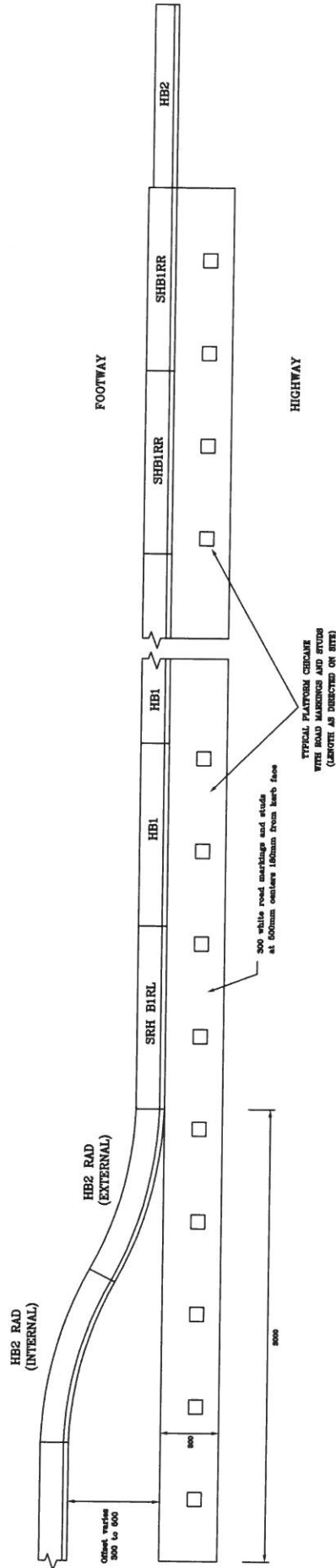
TYPE F BULLNOSE KERB (BN)



150x305 SPECIAL RAMP KERBS
Contractor to saw cut STD HB1 150x305 HB1 to form special ramp kerbs
(NOTE: Cost included in Bill of Quantities rates)



TYPICAL RAISED PLATFORM FRONTAL ELEVATION (LENGTH AS DIRECTED ON SITE)



TYPICAL RAISED PLATFORM PLAN VIEW



CYNGOR SIR
YNNYS MON
ISLE OF ANGLESEY
COUNTY COUNCIL

Standard kerb details and raised platform

DATE	REVISION	BY	CHECKED	APPROVED
May 2002	1	WRJ	RJH	Tafien
May 2002	2	WRJ	RJH	Tafien
May 2002	3	WRJ	RJH	Tafien
May 2002	4	WRJ	RJH	Tafien
May 2002	5	WRJ	RJH	Tafien
May 2002	6	WRJ	RJH	Tafien
May 2002	7	WRJ	RJH	Tafien
May 2002	8	WRJ	RJH	Tafien
May 2002	9	WRJ	RJH	Tafien
May 2002	10	WRJ	RJH	Tafien
May 2002	11	WRJ	RJH	Tafien
May 2002	12	WRJ	RJH	Tafien
May 2002	13	WRJ	RJH	Tafien
May 2002	14	WRJ	RJH	Tafien
May 2002	15	WRJ	RJH	Tafien
May 2002	16	WRJ	RJH	Tafien
May 2002	17	WRJ	RJH	Tafien
May 2002	18	WRJ	RJH	Tafien
May 2002	19	WRJ	RJH	Tafien
May 2002	20	WRJ	RJH	Tafien
May 2002	21	WRJ	RJH	Tafien
May 2002	22	WRJ	RJH	Tafien
May 2002	23	WRJ	RJH	Tafien
May 2002	24	WRJ	RJH	Tafien
May 2002	25	WRJ	RJH	Tafien
May 2002	26	WRJ	RJH	Tafien
May 2002	27	WRJ	RJH	Tafien
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May 2002	84	WRJ	RJH	Tafien
May 2002	85	WRJ	RJH	Tafien
May 2002	86	WRJ	RJH	Tafien
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May 2002	88	WRJ	RJH	Tafien
May 2002	89	WRJ	RJH	Tafien
May 2002	90	WRJ	RJH	Tafien
May 2002	91	WRJ	RJH	Tafien
May 2002	92	WRJ	RJH	Tafien
May 2002	93	WRJ	RJH	Tafien
May 2002	94	WRJ	RJH	Tafien
May 2002	95	WRJ	RJH	Tafien
May 2002	96	WRJ	RJH	Tafien
May 2002	97	WRJ	RJH	Tafien
May 2002	98	WRJ	RJH	Tafien
May 2002	99	WRJ	RJH	Tafien
May 2002	100	WRJ	RJH	Tafien