



Bonneagar Iompair Éireann
Transport Infrastructure Ireland

TII Publications



Standard Construction Details - Series 1000

April 2017

Standard Construction Details (SCDs) – Series 1000

TII Publications contains Standard Construction Details (SCDs) for use on National Road schemes in Ireland. This composite document brings together all the Series 1000 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.

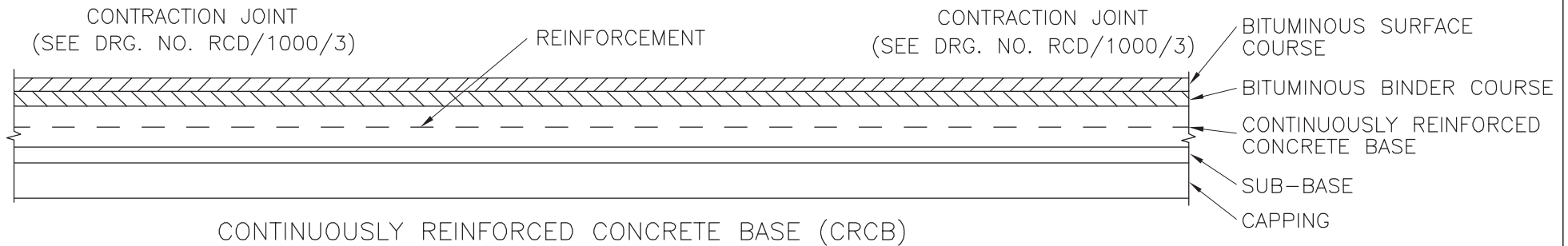
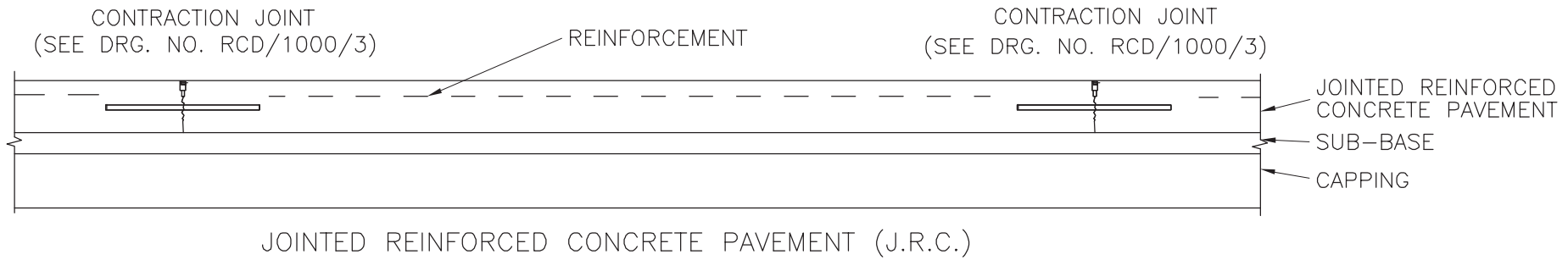
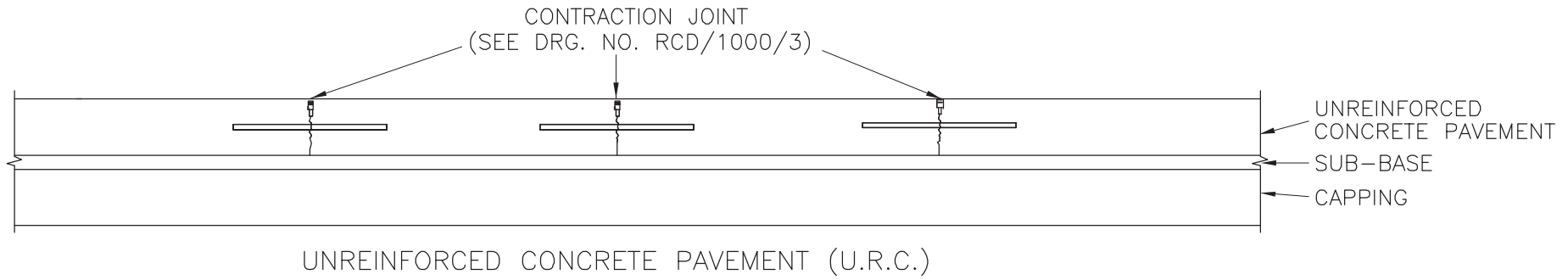
The SCDs contained in this document are as follows:

Series 1000 Road Pavements – Concrete Material

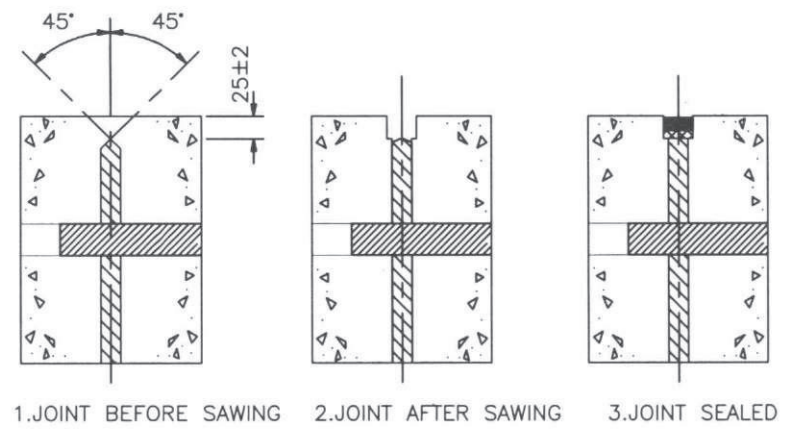
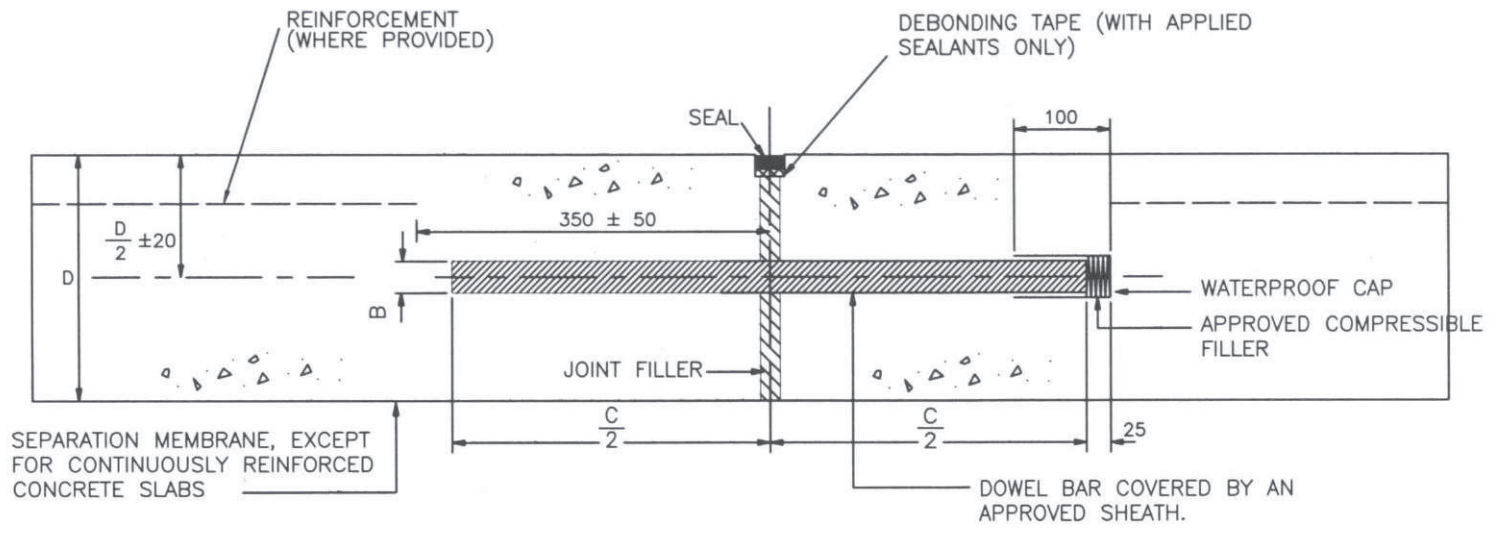
CC-SCD-01001	Concrete Pavements - Longitudinal Sections
CC-SCD-01002	Concrete Pavements - Expansion Joints
CC-SCD-01003	Concrete Pavements - Contraction Joints
CC-SCD-01004	Concrete Pavements - Warping Joints (Unreinforced Slabs Only)
CC-SCD-01005	Concrete Pavements - Emergency Transverse Construction Joint (Jointed Reinforced Slabs Only)
CC-SCD-01006	Concrete Pavements - Transitions from Rigid to Flexible Construction
CC-SCD-01007	Concrete Pavements - Longitudinal Joints
CC-SCD-01008	Concrete Pavements - Longitudinal Joints
CC-SCD-01009	Concrete Pavements - Longitudinal Joint Positions and Tolerances
CC-SCD-01010	Concrete Pavements - Typical Longitudinal Joint Positions in Unreinforced Slabs for Standard Single Carriageways with Climbing Lanes
CC-SCD-01011	Concrete Pavements - Typical Longitudinal Joint Positions in Unreinforced Slabs for Standard Single Carriageways with a Climbing Lane
CC-SCD-01012	Concrete Pavements - Typical Longitudinal Joint Positions in Unreinforced Slabs for Standard Single Carriageways with Junction
CC-SCD-01013	Concrete Pavements - Typical Longitudinal Joint Positions in Unreinforced Slabs for Standard Single Carriageways with Junction
CC-SCD-01014	Concrete Pavements - Typical Longitudinal Joint Positions in Unreinforced Slabs for Wide Single Carriageways with a Climbing Lane
CC-SCD-01015	Concrete Pavements - Typical Longitudinal Joint Positions, Unreinforced Slabs Wide Single Carriageway with Junction

TRANSPORT INFRASTRUCTURE IRELAND (TII) PUBLICATIONS

CC-SCD-01016	Concrete Pavements - Gullies in Jointed Concrete Pavement
CC-SCD-01017	Concrete Pavements - Manholes in Jointed Concrete Pavement
CC-SCD-01018	Concrete Pavements - Taper Construction and Joint Layout
CC-SCD-01019	Concrete Pavements - Joint Layout for Hardshoulders, Hardstrips and Lay-bys
CC-SCD-01020	Concrete Carriageway - Transverse Construction Joint (Continuously Reinforced Concrete Pavement or Base)
CC-SCD-01021	Concrete Carriageway - Transverse from Rigid CRCB to Flexible Construction
CC-SCD-01022	Concrete Carriageway - Transverse from Rigid CRCB to Flexible Construction with Porous Asphalt Surfacing
CC-SCD-01023	Concrete Carriageway - Longitudinal Joint (Continuously Reinforced Concrete Pavement or Base)
CC-SCD-01024	Concrete Carriageway - Longitudinal Joint (Continuously Reinforced Concrete Pavement or Base)
CC-SCD-01025	Concrete Carriageway - Continuously Reinforced Concrete Pavement Ground Beam Anchorage
CC-SCD-01026	Concrete Carriageway - Continuously Reinforced Concrete Pavement Ground Beam Anchorage Details
CC-SCD-01027	Concrete Carriageway - Continuously Reinforced Concrete Pavement Surface Slabs Universal Steel Beam Anchorage
CC-SCD-01028	Concrete Carriageway - Gullies in Continuously Reinforced Concrete Pavement or Reinforced Concrete Base
CC-SCD-01029	Concrete Carriageway - Manholes in Continuously Reinforced Concrete Pavement or Reinforced Concrete Base



TII PUBLICATION NUMBER: CC-SCD-01001



SAWN GROOVE FILLER DETAIL

- NOTES
1. ALL DIMENSIONS ARE IN MILLIMETRES.
 2. THE DOWEL BARS SHALL BE PLACED AT 300 CENTRES. THIS SPACING SHALL BE VARIED WHERE NECESSARY SO THAT NO DOWEL BAR IS WITHIN 150 OF A SLAB EDGE OR A JOINT PARALLEL TO THE BARS.

DOWEL BAR		
SLAB THICKNESS DIMENSION 'D'	DIMENSION 'B'	DIMENSION 'C'
150 TO 239	25	600
240 AND OVER	32	600

TII PUBLICATION NUMBER: CC-SCD-01002



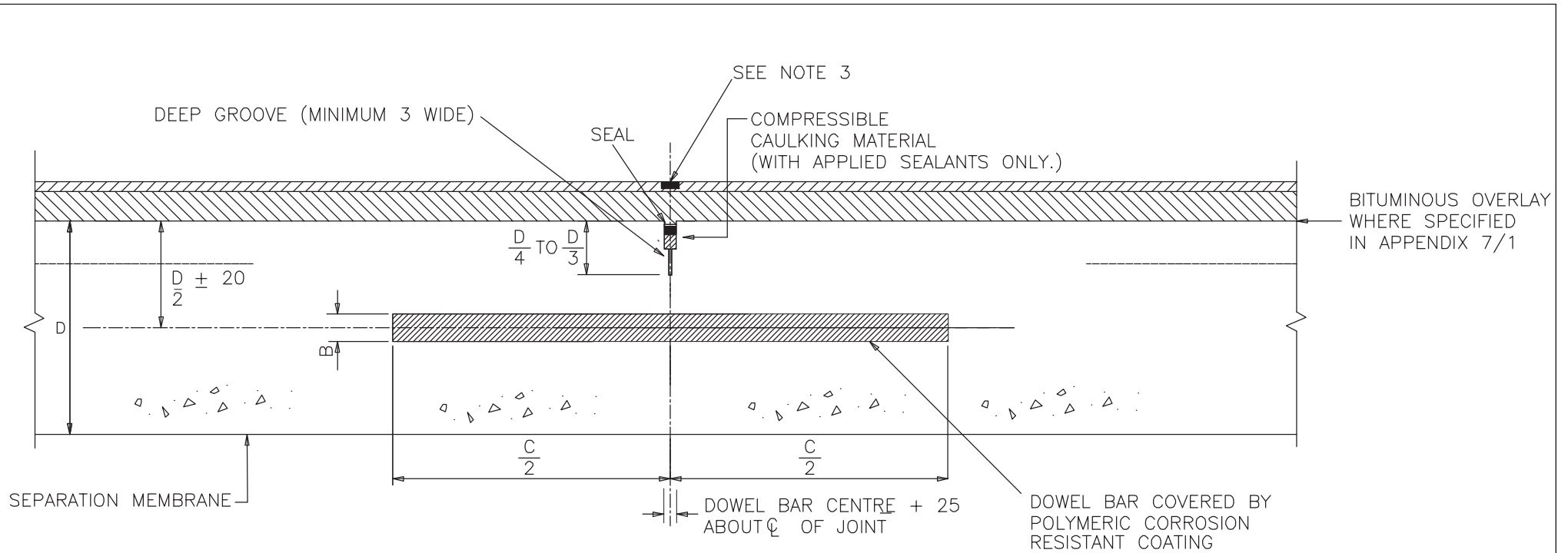
ROAD CONSTRUCTION
DETAILS

CONCRETE
PAVEMENTS

P1	03/00
Issue	Date

EXPANSION JOINTS

Drawing No.
RCD/
1000/2



CONTRACTION JOINT — WITH SAWN GROOVE

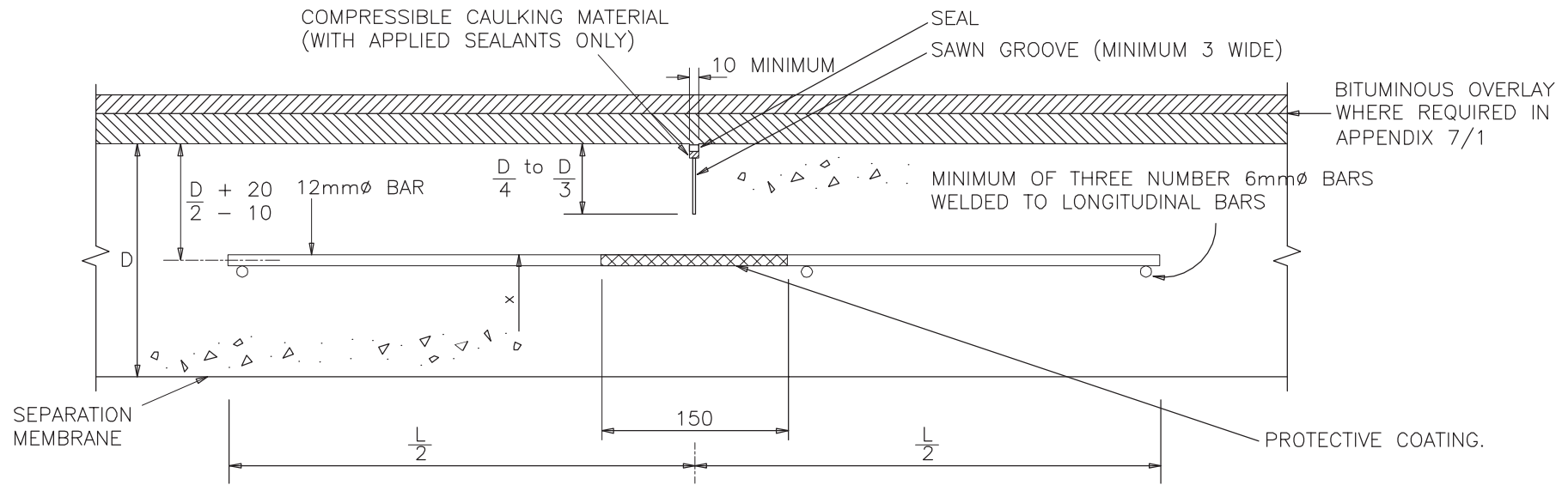
DOWEL BAR — MIN DIMS.		
SLAB THICKNESS DIMENSION D	DIMENSION B	DIMENSION C
150 TO 239	20	400
240 AND OVER	25	600

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. THE DOWER BARS SHALL BE PLACED AT 300 CENTERS. THIS SPACING SHALL BE VARIED WHERE NECESSARY SO THAT NO DOWEL BAR IS WITHIN 150 OF A JOINT PARALLEL TO THE BARS.
3. WHEN CONCRETE PAVEMENT IS OVERLAID WITH 40mm TO 180mm THICK BITUMINOUS SURFACING, THE OVERLAY SHALL BE SAW-CUT AND SEALED AT THE CONCRETE PAVEMENT JOINT IN ACCORDANCE CLAUSE 713.
4. DOWEL BARS SHALL CONFORM TO CLAUSE 1011.

SCALE 1:100

TII PUBLICATION NUMBER: CC-SCD-01003



WARPING JOINT - WITH SAWN GROOVE

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. WARPING JOINTS SHALL BE CONSTRUCTED AND SEALED IN ACCORDANCE WITH THE SPECIFICATION. THE TIE BAR SPACING SHALL BE VARIED WHERE NECESSARY SO THAT NO TIE BAR IS WITHIN 150 OF A SLAB EDGE OR A JOINT PARALLEL TO THE BARS.
3. REINFORCEMENT SHALL CONFORM TO CLAUSE 1008.

TIE BAR DIMENSIONS

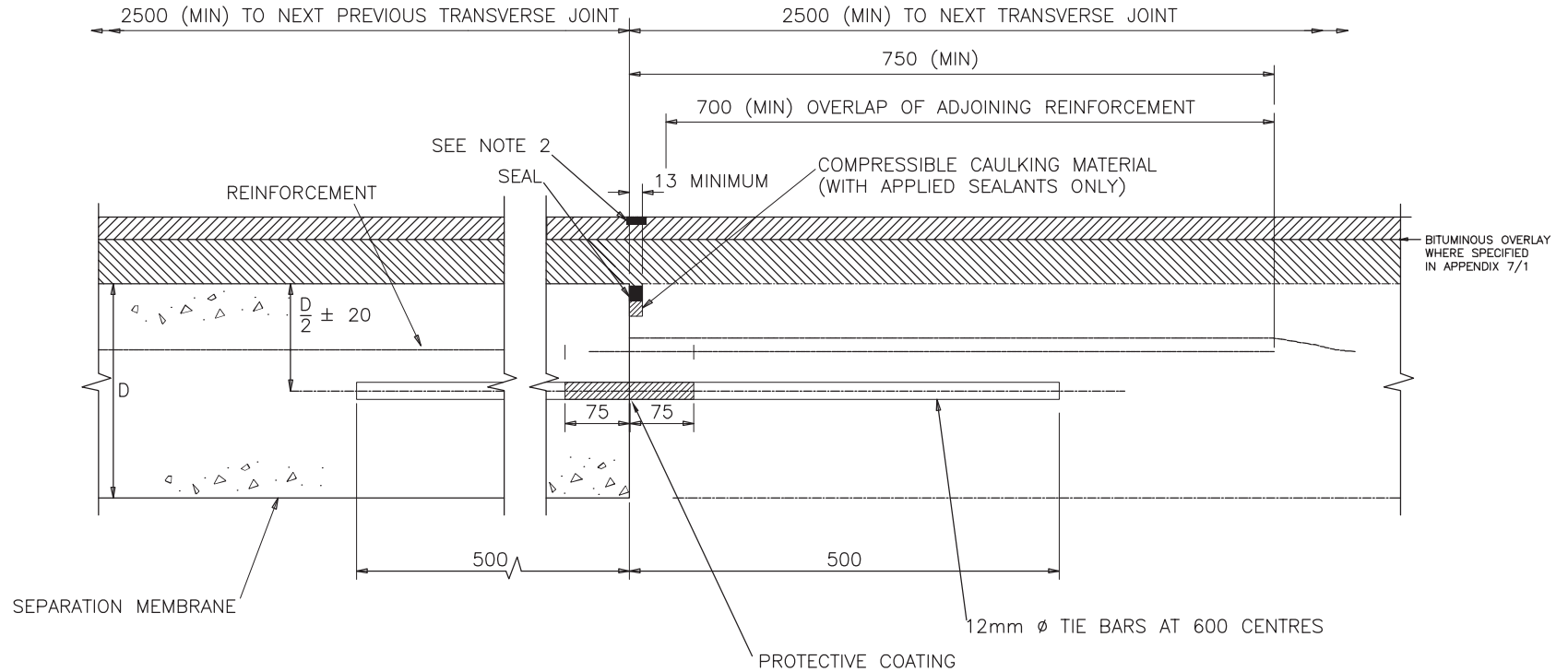
GRADE OF STEEL	B500B OR B500C
TIE BAR DIAMETER	12
TIE BAR LENGTH L	750

COVER TO TIE BARS

SLAB THICKNESS D	> 200	< 200
COVER X	30	20

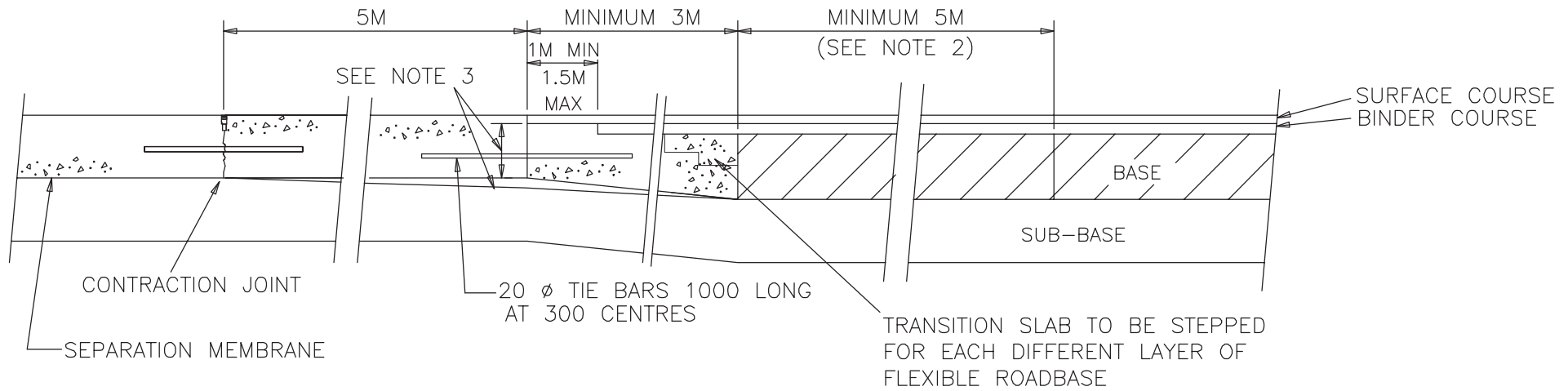
SCALE 1:125

- NOTES:
 1. ALL DIMENSIONS ARE IN MILLIMETRES.
 2. WARPING JOINTS SHALL BE CONSTRUCTED AND SEALED IN ACCORDANCE WITH THE SPECIFICATION. THE TIE BAR SPACING SHALL BE VARIED WHERE NECESSARY SO THAT NO TIE BAR IS WITHIN 150 OF A SLAB EDGE OR A JOINT PARALLEL TO THE BAR.
 3. REINFORCEMENT SHALL CONFORM TO CLAUSE 1008.



SCALE 1:200

TII PUBLICATION NUMBER: CC-SCD-01005



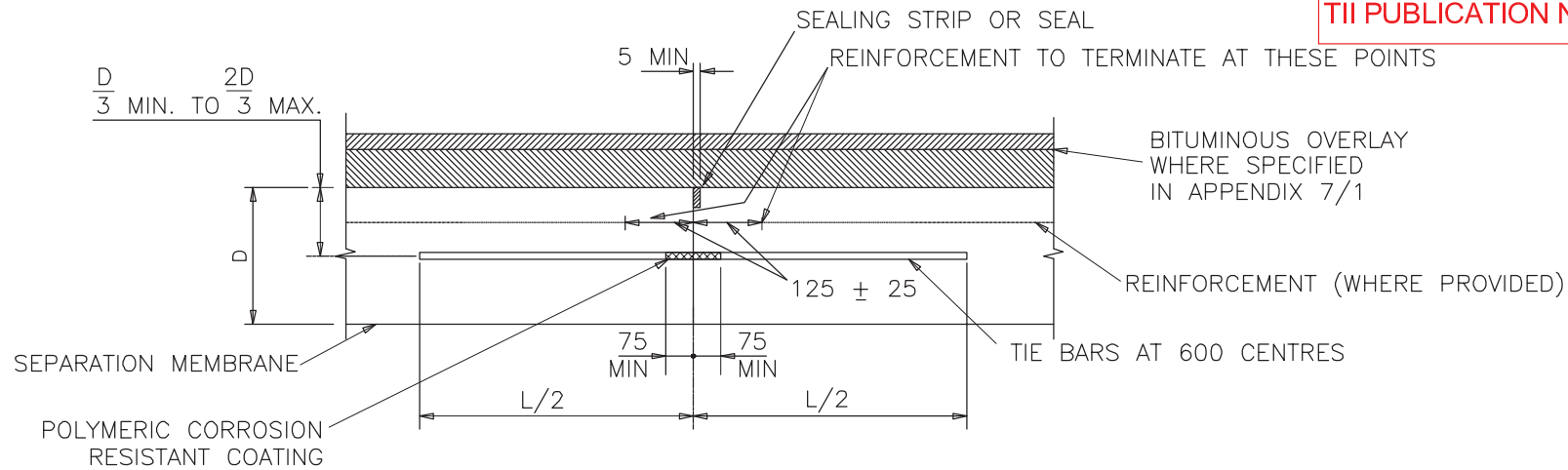
RIGID TO FLEXIBLE CONSTRUCTION (SURFACE SLABS)

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. AT UNDERBRIDGES THE BASE ADJACENT TO THE STRUCTURE SHALL BE 5M (MIN.) OF DENSE ASPHALT CONCRETE
3. THE DEPTH OF TRANSITION SLAB SHALL NOT BE LESS THAN 200. IF NECESSARY, THE THICKNESS OF THE LAST BAY OF RIGID PAVEMENT SHALL BE TAPERED TO MATCH, SO THAT THE SUB-BASE SURFACE LEVEL IS CONTINUOUS WITHOUT STEPS.
4. AT BURIED STRUCTURES THE BASE AND SUB-BASE SHALL BE CONTINUED OVER THE STRUCTURE. THE SUB-BASE SHALL BE ISOLATED FROM THE STRUCTURE BY NOT LESS THAN 150mm OF GRANULAR FILL.

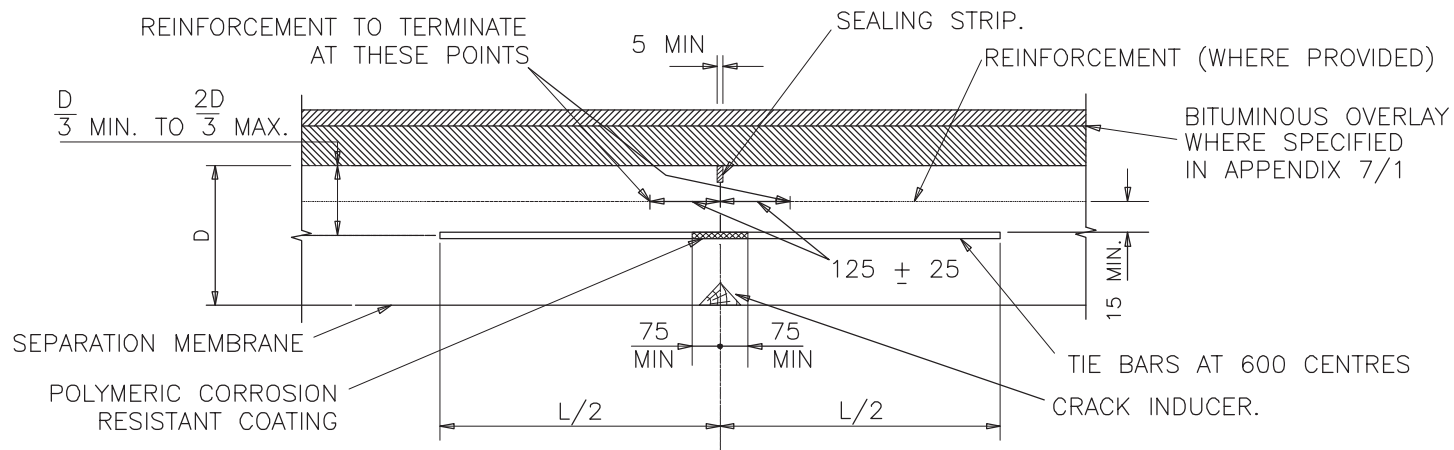
SCALE 1:2500

TII PUBLICATION NUMBER: CC-SCD-01006



TYPE 1

LONGITUDINAL CONSTRUCTION JOINT BETWEEN TWO SEPARATELY CONSTRUCTED UNREINFORCED OR JOINTED REINFORCED SLABS



TYPE 2

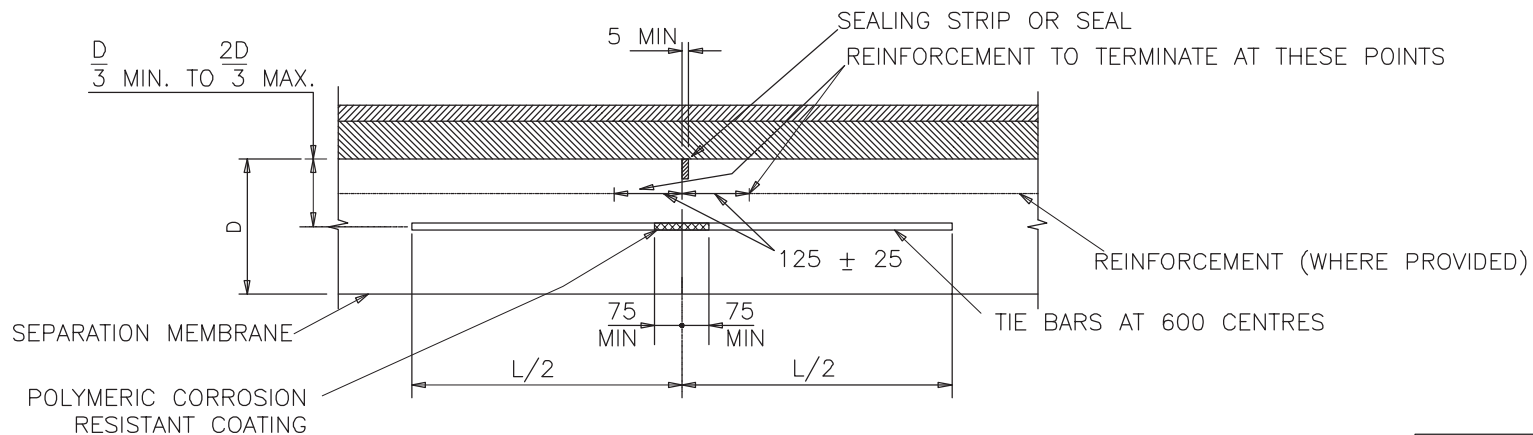
WET FORMED LONGITUDINAL JOINT FOR SLABS MORE THAN ONE LANE WIDTH CONSTRUCTED IN ONE OPERATION

SCALE 1:500

TIE BARS		
DIA.	LENGTH L	GRADE
12	750	B500B OR B500C
16	600	B500B OR B500C
20	500	B500B OR B500C

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. TIE BARS SHALL CONFORM TO CLAUSE 1012 MILLIMETRES.



TYPE 3

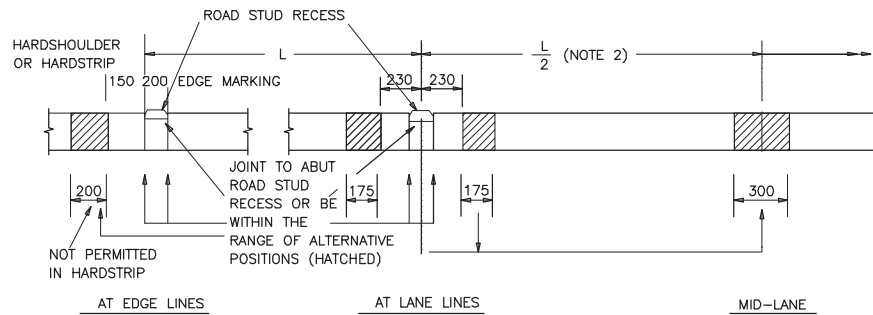
SAWN LONGITUDINAL JOINT FOR UNREINFORCED OR JOINTED REINFORCED SLABS
(MORE THAN ONE LANE WIDTH CONSTRUCTED IN ONE OPERATION)

TIE BARS		
DIA.	LENGTH L	GRADE
12	750	B500B OR B500C
16	600	B500B OR B500C
20	500	B500B OR B500C

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. TIE BARS SHALL CONFORM TO CLAUSE 1012

SCALE 1:500



PERMITTED ALTERNATIVE LONGITUDINAL JOINT POSITIONS
PAVEMENT SURFACE SLABS

LONGITUDINAL JOINT POSITIONS.

JOINTS SHALL BE POSITIONED BESIDE OR CLOSE TO EDGE OR LANE MARKINGS, ROAD STUDS OR THEIR RECESSES, OR IN MID-LANE SO THAT THE MAXIMUM SLAB WIDTH IS NOT EXCEEDED (SEE NOTE 3). PERMITTED ALTERNATIVE JOINT POSITIONS ARE SHOWN BY ARROWS ABOVE. TOLERANCES FOR ALTERNATIVE JOINT POSITIONS ARE SHOWN BY SHADING.

LANE MARKINGS AND REFLECTING ROAD STUDS

LANE AND EDGE MARKINGS SHALL BE PLACED AS SHOWN ON THE DRAWINGS. REFLECTING ROAD STUDS SHALL BE PLACED CENTRALLY IN LANE MARKINGS OR ADJACENT TO EDGE MARKINGS UNLESS OTHERWISE SHOWN ON THE DRAWINGS.

MINOR ADJUSTMENTS TO THE LANE LINE POSITION OF UP TO 100mm MAY BE MADE WHERE THE JOINT AND LANE LINE WOULD CONFLICT OR OTHERWISE FALL OUTSIDE THE PERMITTED TOLERANCES, PROVIDED THAT THERE ARE NO OFFSET DISCONTINUITIES IN THE MARKINGS.

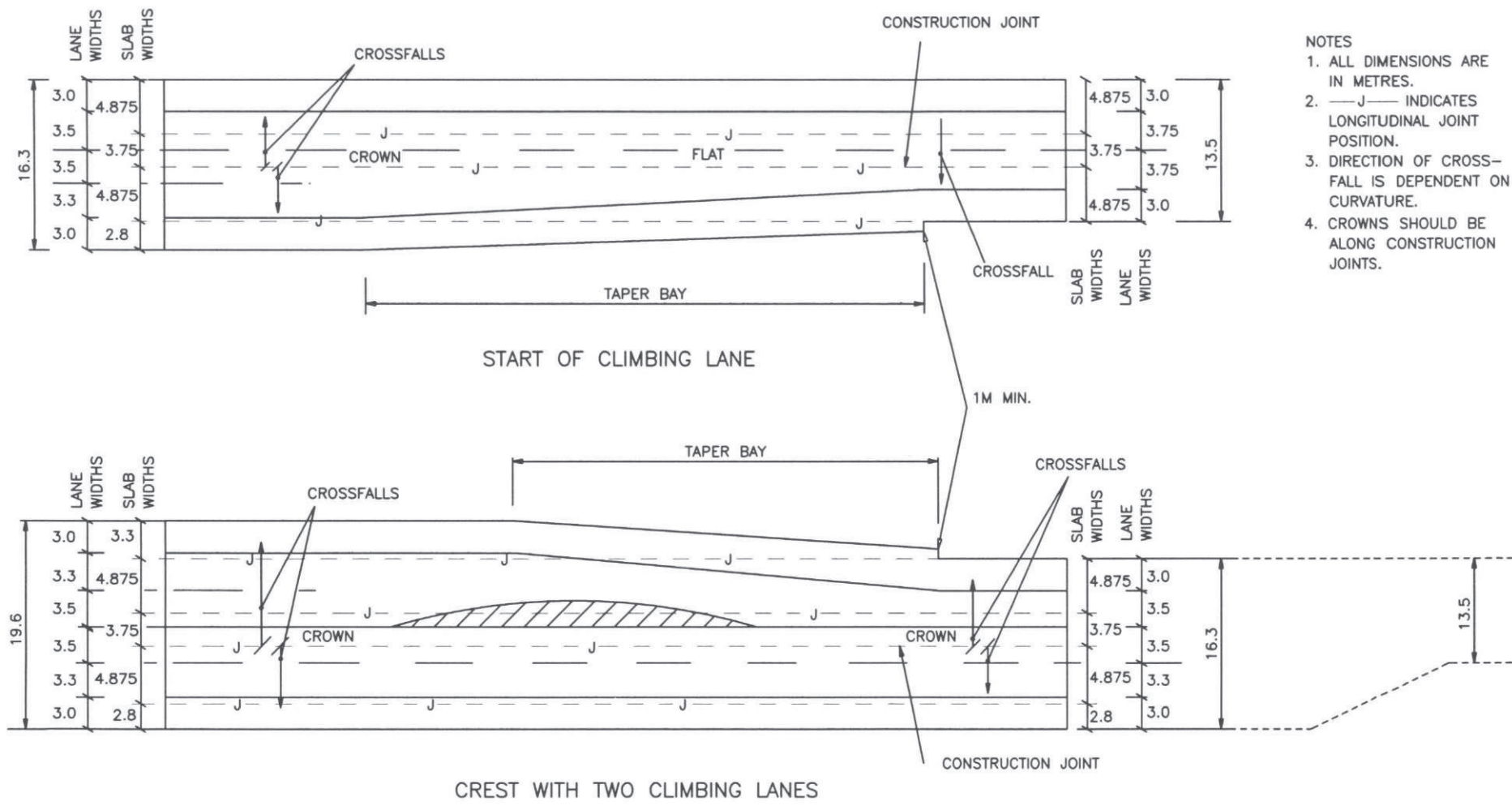
NOTES

- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
- L = LANE WIDTH. FOR DUAL CARRIAGEWAYS JOINT POSITION MAY BE AT L/2.
- MAXIMUM SLAB WIDTHS:

AGGREGATE-	LIMESTONE	ALL OTHERS
URC	5.0M	4.2M
JRC	7.6M	6.0M
CRCB	7.6M	6.0M
- FOR TRANSVERSE JOINT ARRANGEMENTS IN HARDSTRIPS SEE RCD/1000/3
- ROAD STUD RECESSES NOT TO BE WITHIN 150 MIN OF TRANSVERSE JOINTS.

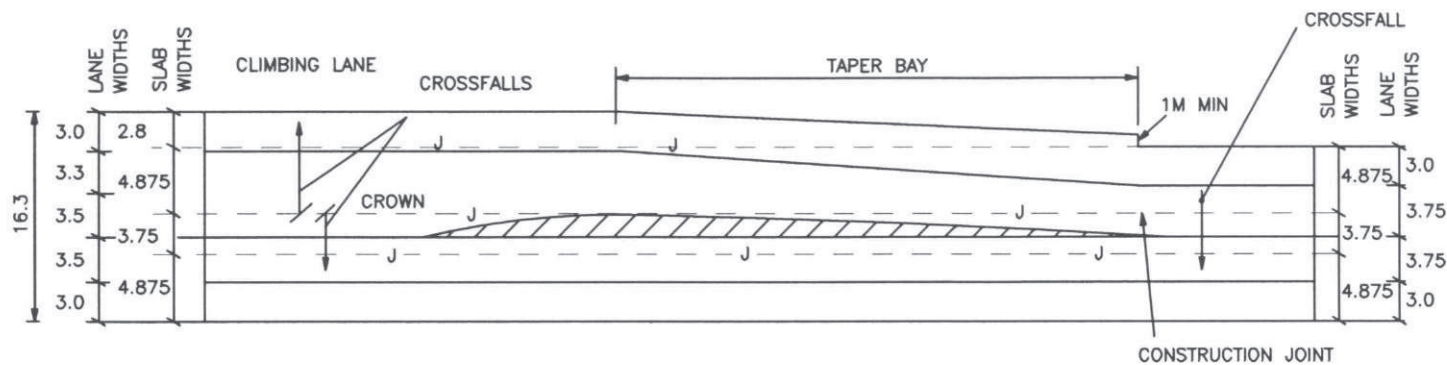
SCALE 1:1000

TII PUBLICATION NUMBER: CC-SCD-01009

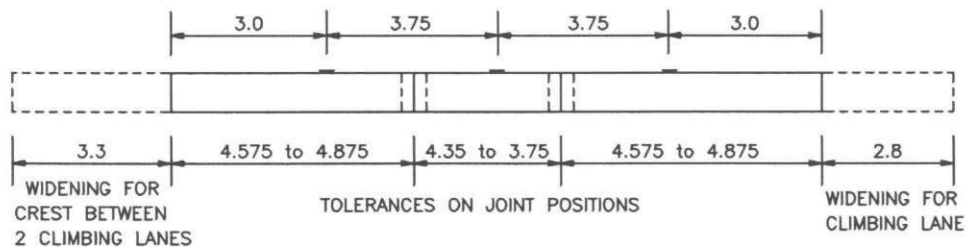


- NOTES**
1. ALL DIMENSIONS ARE IN METRES.
 2. — J — INDICATES LONGITUDINAL JOINT POSITION.
 3. DIRECTION OF CROSS-FALL IS DEPENDENT ON CURVATURE.
 4. CROWNS SHOULD BE ALONG CONSTRUCTION JOINTS.

TII PUBLICATION NUMBER: CC-SCD-01010



END OF CLIMBING LANE
REDUCTION TO STANDARD SINGLE CARRIAGEWAY WIDTH

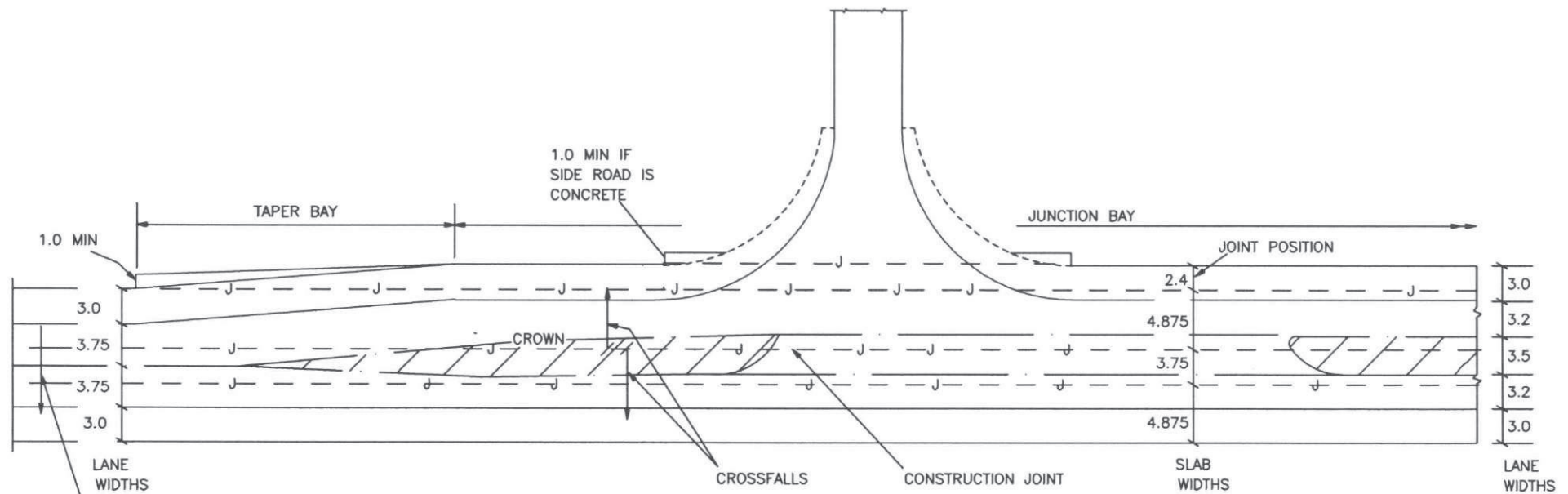


CROSS SECTION - STANDARD SINGLE CARRIAGEWAY

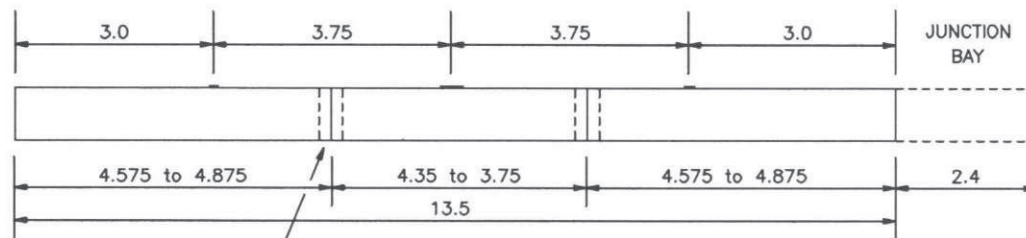
NOTES

1. ALL DIMENSIONS ARE IN METRES.
2. —J— INDICATES LONGITUDINAL JOINT POSITION.
3. DIRECTION OF CROSS-FALL IS DEPENDENT ON CURVATURE.
4. CROWNS SHOULD BE ALONG CONSTRUCTION JOINTS.

TII PUBLICATION NUMBER: CC-SCD-01011



CROSSFALL TO ONE SIDE, DIRECTION DEPENDING ON CURVATURE



TOLERANCE ON JOINT POSITION

PREFERRED JOINT POSITIONS
DIAGRAMMATIC ONLY. NOT TO SCALE.

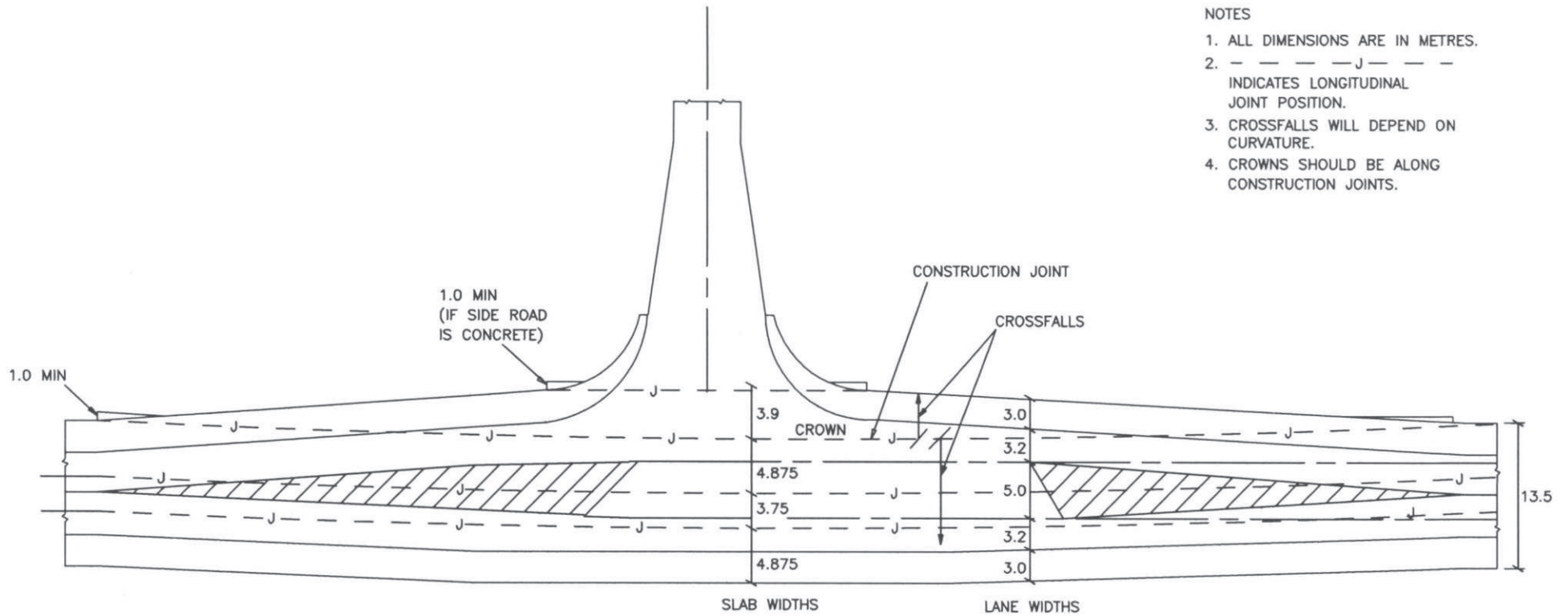
NOTES

1. ALL DIMENSIONS ARE IN METRES.
2. - - - J - - - INDICATES LONGITUDINAL JOINT POSITION.
3. CROSSFALLS WILL DEPEND ON CURVATURE.
4. CROWNS SHOULD BE ALONG CONSTRUCTION JOINTS.

TII PUBLICATION NUMBER: CC-SCD-01012

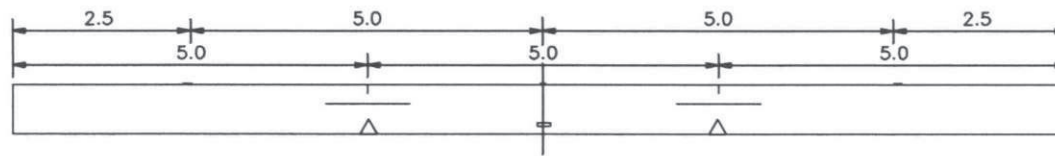
NOTES

1. ALL DIMENSIONS ARE IN METRES.
2. — — — — J — — — —
INDICATES LONGITUDINAL
JOINT POSITION.
3. CROSSFALLS WILL DEPEND ON
CURVATURE.
4. CROWNS SHOULD BE ALONG
CONSTRUCTION JOINTS.



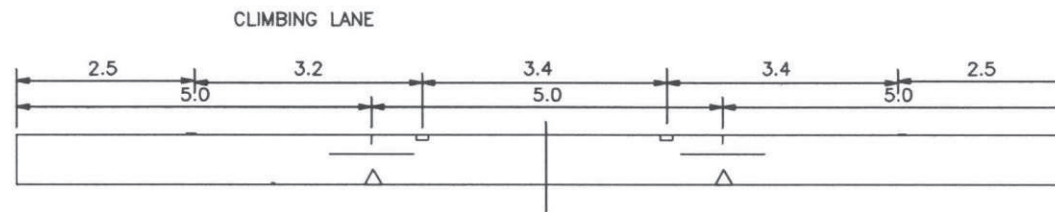
TYPICAL JOINT POSITIONS
DIAGRAMMATIC ONLY. NOT TO SCALE

TII PUBLICATION NUMBER: CC-SCD-01013

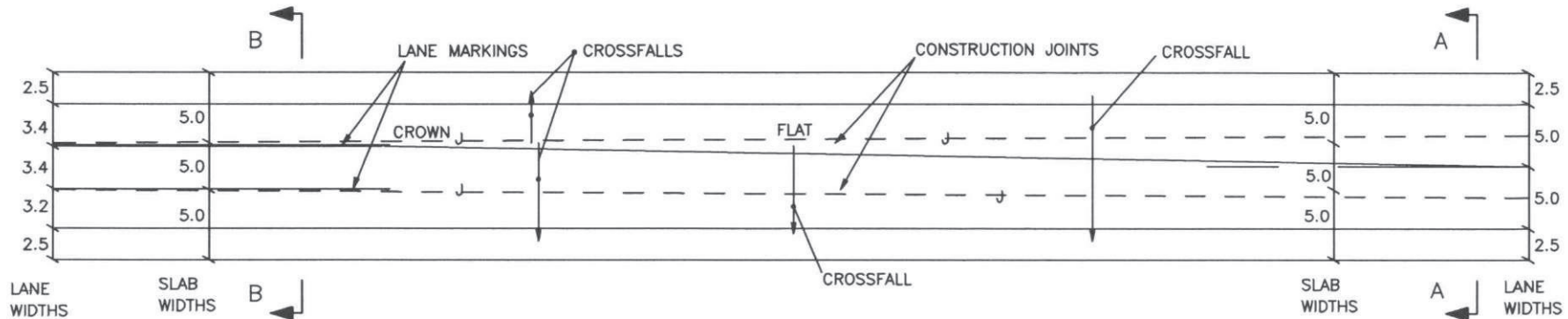


SECTION A-A
WIDE SINGLE CARRIAGEWAY

- NOTES
1. ALL DIMENSIONS ARE IN METRES.
 2. - - J - - DENOTES LONGITUDINAL JOINT POSITION.
 3. CROSSFALLS WILL DEPEND ON CURVATURE.
 4. CROWNS SHOULD BE ALONG CONSTRUCTION JOINTS.

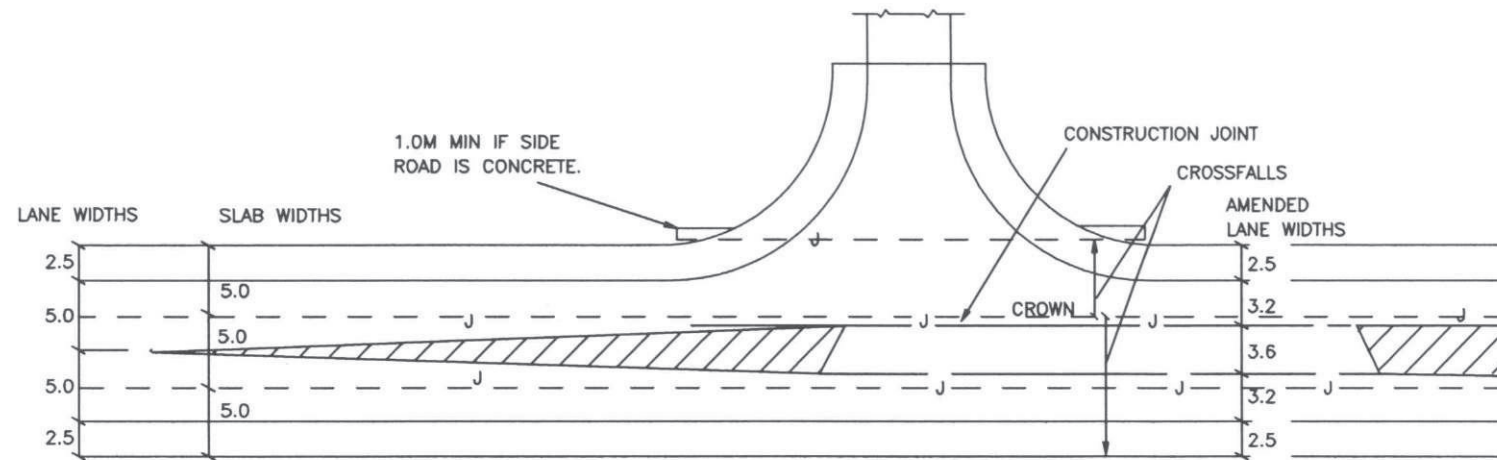


SECTION B-B
START OF CLIMBING LANE



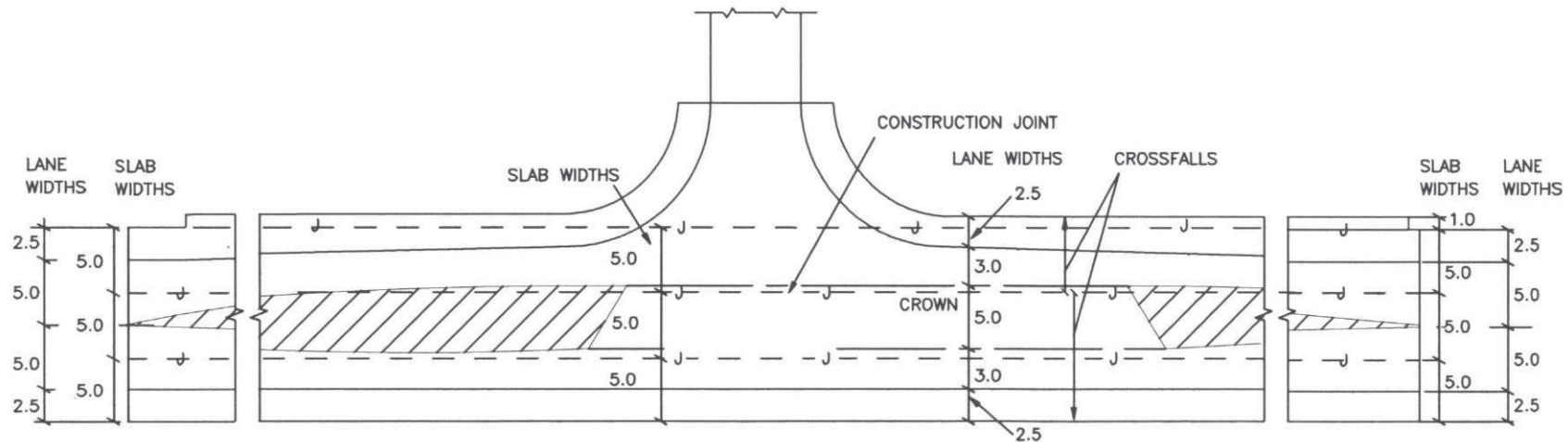
PLAN OF JOINT LAYOUT
FOR THE START OF CLIMBING LANE.

TII PUBLICATION NUMBER: CC-SCD-01014



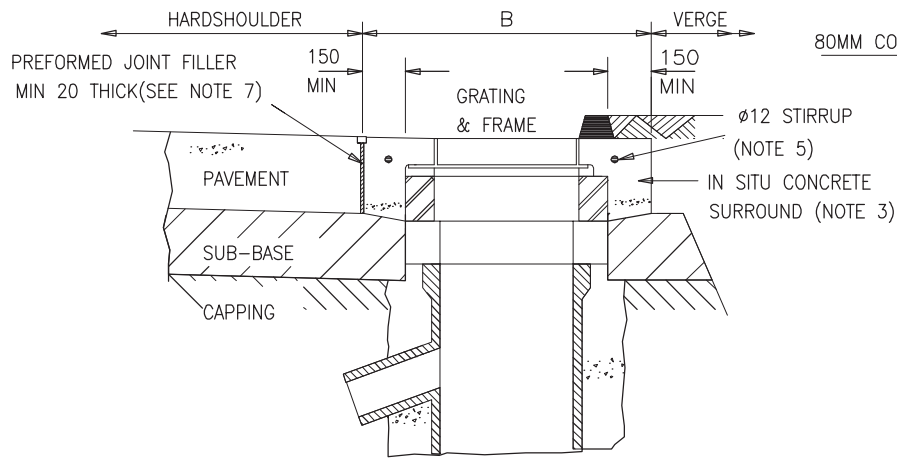
NOTES

1. ALL DIMENSIONS ARE IN METRES.
2. CROSSFALLS WILL DEPEND ON CURVATURE.
3. CROWNS SHOULD BE ALONG CONSTRUCTION JOINTS.



JUNCTION LAYOUTS WITH JOINT SPACING FOR CLIMBING LANE
DIAGRAMMATIC ONLY. NOT TO SCALE.

TII PUBLICATION NUMBER: CC-SCD-01015



SECTION A-A

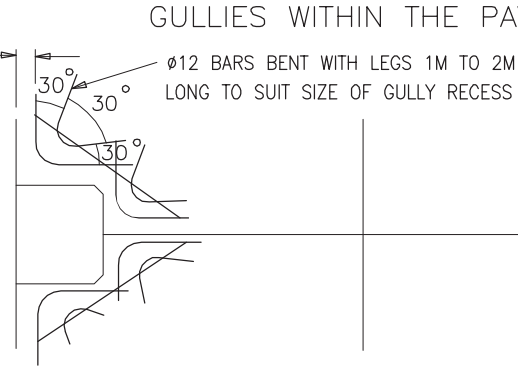


FIG. 1 JOINT WITHIN GULLY DIMENSION (PREFERRED POSITION)

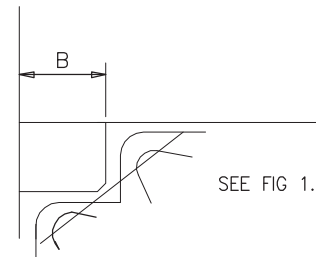


FIG. 2 JOINT ADJACENT TO GULLY

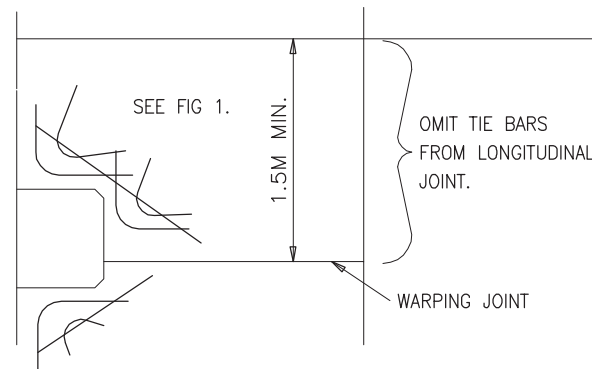
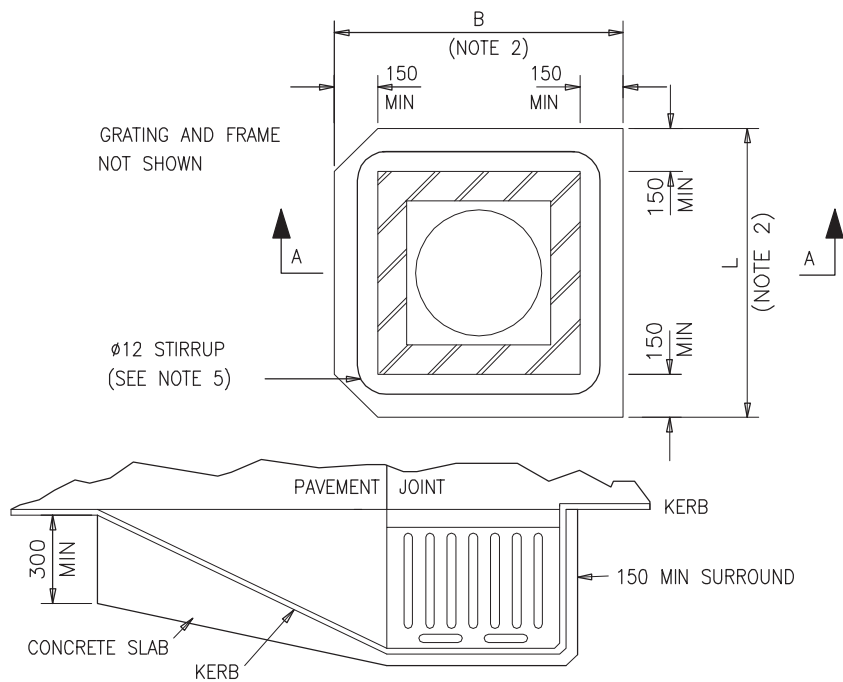


FIG. 3 EXTRA JOINT AT GULLY POSITION

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS STATED OTHERWISE.
2. THE OVERALL DIMENSIONS OF THE RECESS MAY VARY IN ACCORDANCE WITH THE TYPE OF GRATING USED.
3. CONCRETE SURROUND TO BE GRADE C32/40.
4. ALL REINFORCEMENT TO BE GRADE 250 BARS TO IS EN 10080 AND 4449. AND FIRMLY FIXED AT ALL BAR INTERSECTIONS. COVER TO BARS TO BE 60+10 VERTICALLY AND HORIZONTALLY.
5. THE $\phi 12$ STIRRUP SHALL BE CUT AND BENT TO SUCH DIMENSIONS AS ALLOW IT TO BE PLACED CENTRALLY WITHIN THE SURROUND. AN OVERLAP OF 450 SHALL BE PROVIDED IN CLOSING THE STIRRUP.
6. NORMAL JOINT POSITIONS MAY BE ADJUSTED BY UP TO 1M SO THAT THE GULLY IS ASTRIDE OR ADJACENT TO THE JOINT. IF THIS IS IMPOSSIBLE AN EXTRA JOINT SHALL BE FORMED IN THE LANE AT THE GULLY POSITION AND SHALL BE A TIED WARPING JOINT.
7. THE GULLY SLAB SHALL BE ISOLATED FROM THE PAVEMENT AT ALL JOINTS BY JOINT FILLER BOARD FOR THE FULL DEPTH OF THE SLAB AND JOINTS SHALL BE SEALED.
8. FOR DETAILS OF DRAINAGE SEE 500 SERIES DRAWINGS.

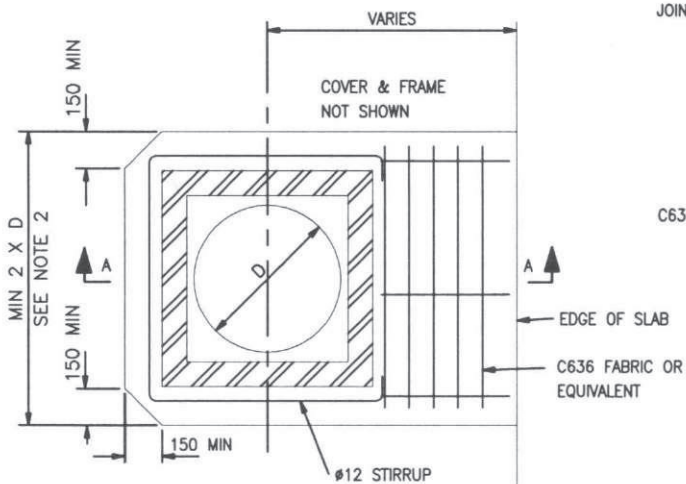
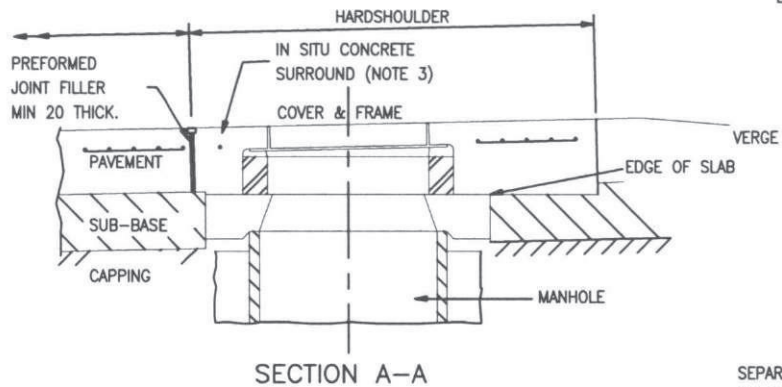


GULLY OUTSIDE EDGE OF PAVEMENT

TII PUBLICATION NUMBER: CC-SCD-01016

SCALE 1:1250

P2	11/10
P1	03/00
Issue	Date



INSITU CONCRETE SURROUND DETAILS

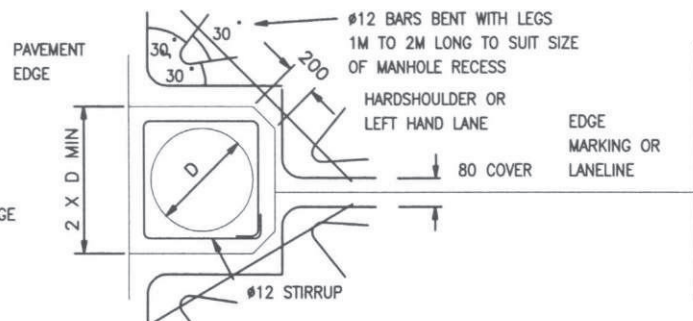


FIG. 1 JOINT WITHIN MANHOLE DIMENSION

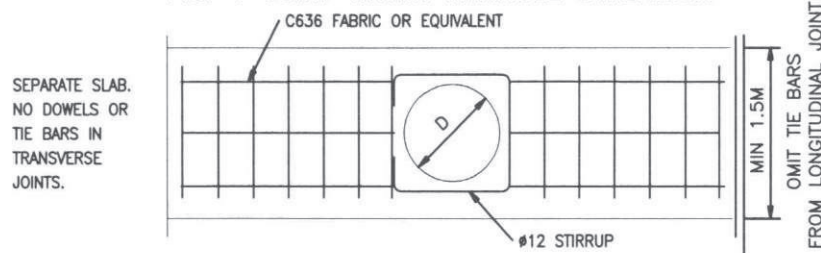


FIG. 2 JOINT ADJACENT TO MANHOLE SLAB

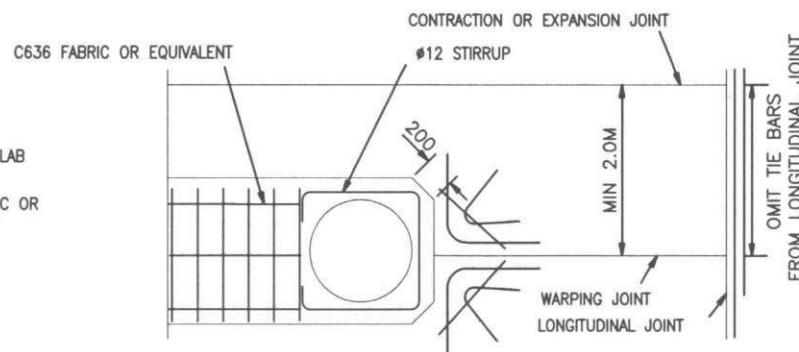
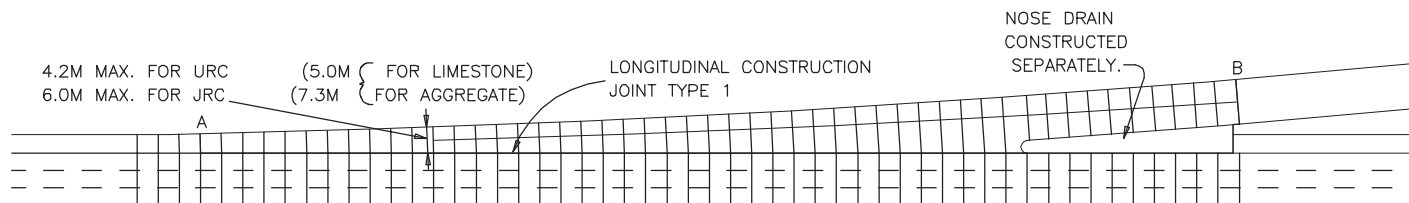
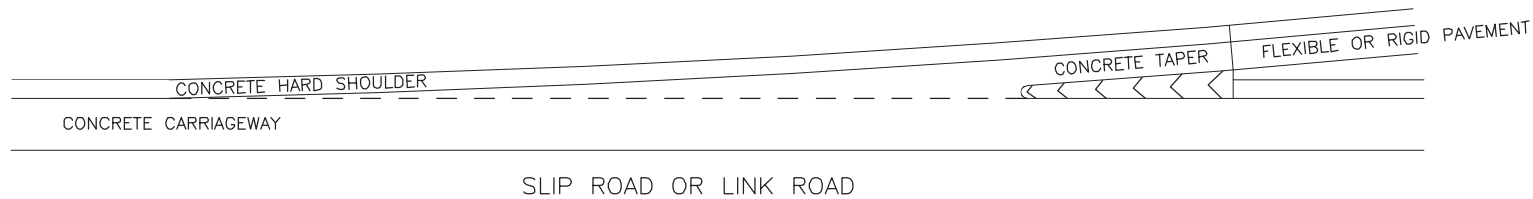


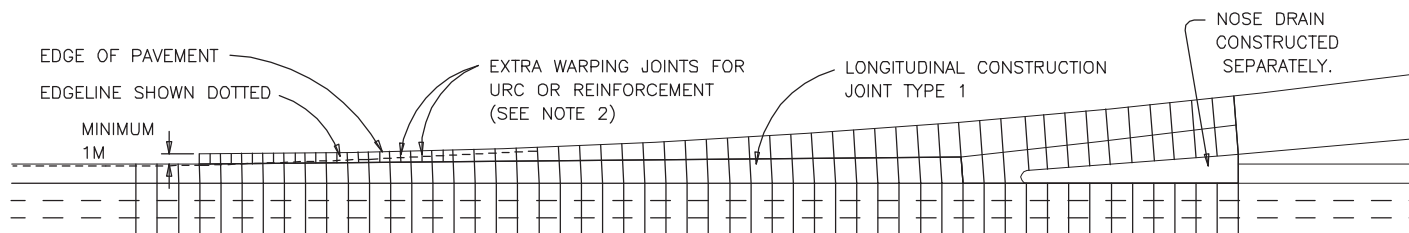
FIG. 3 EXTRA JOINT AT MANHOLE POSITION TO BE A WARPING JOINT

- NOTES
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS STATED OTHERWISE.
 2. THE OVERALL DIMENSIONS OF THE RECESS MAY VARY IN ACCORDANCE WITH THE TYPE OF MANHOLE AND COVER USED.
 3. CONCRETE SURROUND TO BE GRADE C40.
 4. ALL REINFORCEMENT TO BE GRADE 250 BARS TO BS 4449 AND FIRMLY FIXED AT ALL BAR INTERSECTIONS OR FABRIC TO BS 4483. COVER TO BARS TO BE 60 ± 10 VERTICALLY AND 80 ± 10 HORIZONTALLY.
 5. NORMAL JOINT SPACINGS MAY BE ADJUSTED BY UP TO 1M SO THAT THE MANHOLE IS ASTRIDE OR ADJACENT TO THE JOINT AS SHOWN IN FIGS 1 & 2. IF THIS IS NOT POSSIBLE AN EXTRA JOINT SHALL BE FORMED IN THAT LANE AT THE MANHOLE POSITION AS IN FIG. 3, AND THAT JOINT SHALL BE A WARPING JOINT.
 6. THE MANHOLE SLAB SHALL BE ISOLATED FROM THE PAVEMENT BY JOINT FILLER BOARD AT ALL JOINTS, WITHOUT DOWELS OR TIE BARS, AND THE JOINT SHALL BE SEALED.
 7. FOR MANHOLE DETAILS SEE 500 SERIES DRAWINGS.

TII PUBLICATION NUMBER: CC-SCD-01017



TYPICAL JOINT LAYOUT – TAPER CONSTRUCTED SEPARATELY
HARDSHOULDER OR HARDSTRIP OMITTED BETWEEN A AND B



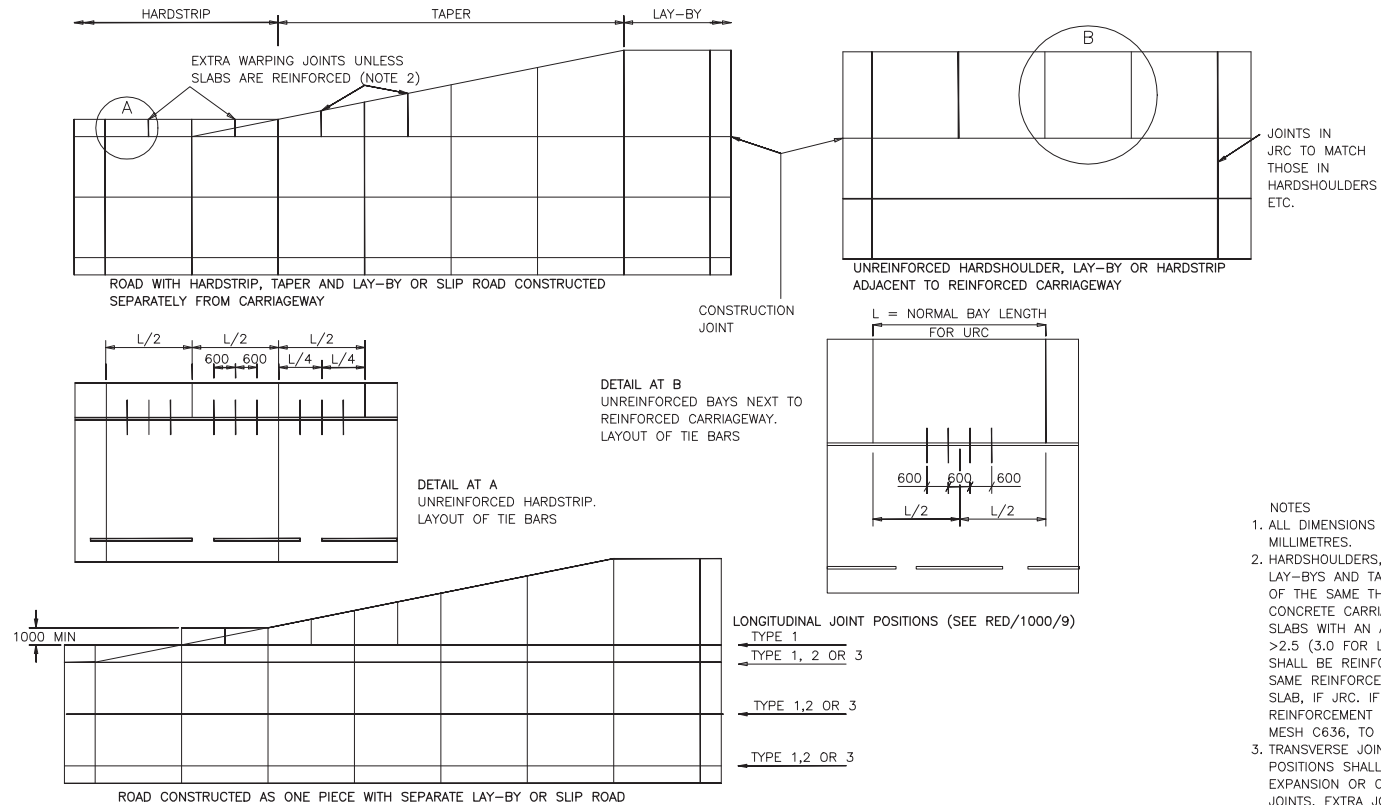
TYPICAL JOINT LAYOUT – TAPER ADDED TO STANDARD WIDTH PAVEMENT

NOTES

1. TYPICAL LAYOUT ONLY. SEE THE DRAWINGS FOR DIMENSIONED LAYOUT.
2. TAPERS SHALL BE OF THE SAME THICKNESS AS THE CONCRETE CARRIAGEWAY. IF UNREINFORCED, SLABS WITH AN ASPECT RATIO OF >2.5 (3.0 FOR LIMESTONE) SHALL BE REINFORCED AS IN RCD/1000/13.
3. THE TRANSITION BETWEEN RIGID AND FLEXIBLE CONSTRUCTION SHALL BE A TRANSITION BAY AS IN RCD/1000/6.
4. TRANSVERSE JOINT SPACINGS ARE SHOWN AS FOR URC. IF THE CARRIAGEWAY IS JRC OR CRC THE TAPER SHALL BE JRC, WITH APPROPRIATE JOINT SPACINGS. IF CARRIAGEWAY HAS CRCB, THE TAPER SHALL HAVE CRCB.

SCALE 1:25

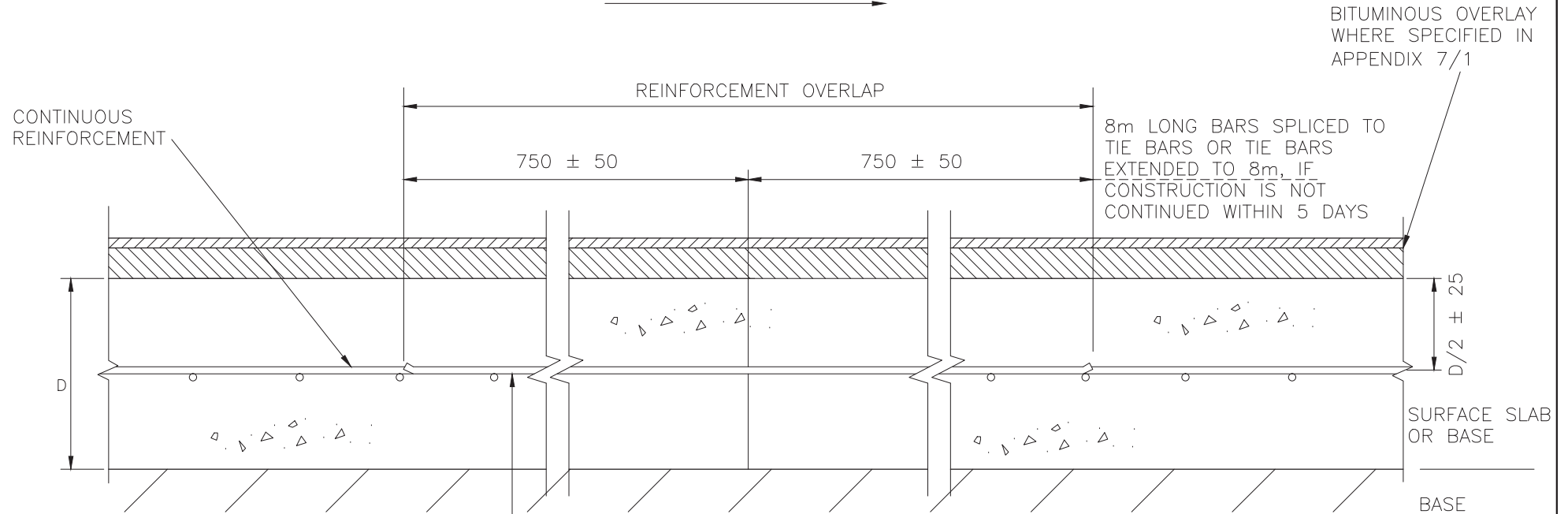
P2	11/10
P1	03/00
Issue	Date



SCALE 1:5000

TII PUBLICATION NUMBER: CC-SCD-01019

DIRECTION OF PAVING →

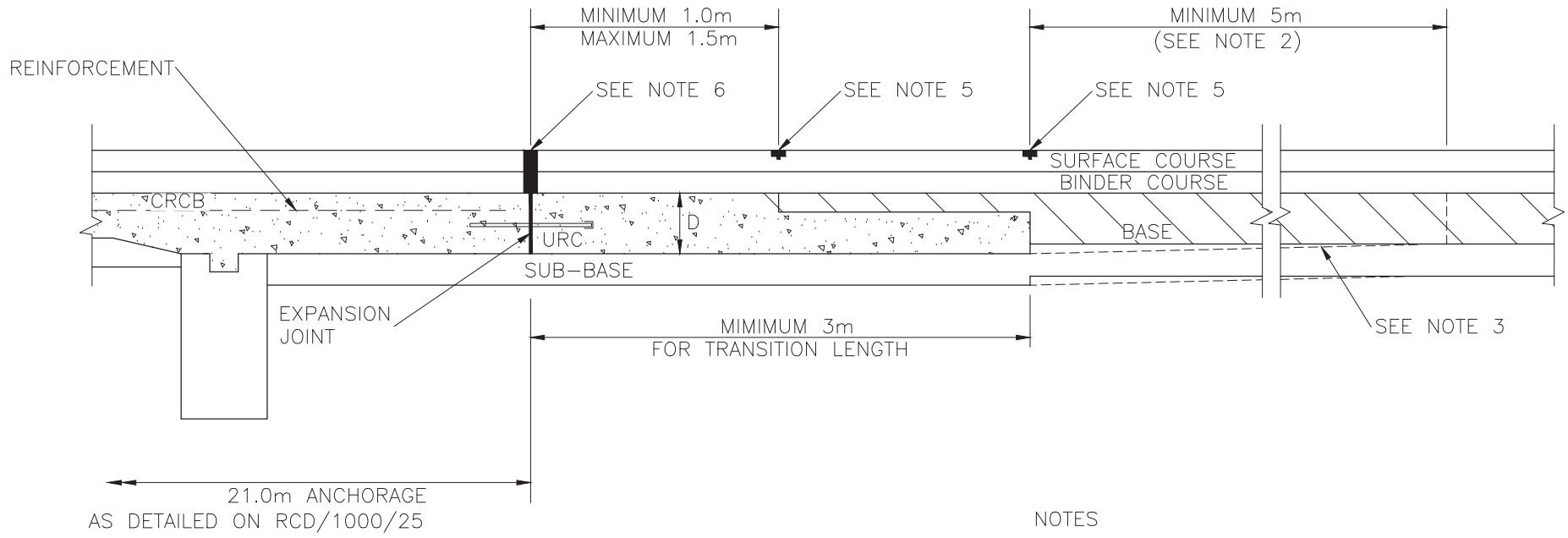


ADDITIONAL REINFORCEMENT 1.5m LONG OF SAME DIAMETER AS LONGITUDINAL BARS (FIXED BETWEEN ALTERNATE MAIN BARS) POSITIONED EQUALLY ABOUT THE JOINT ± 50

LONGITUDINAL SECTION

NOTES
 1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.

TII PUBLICATION NUMBER: CC-SCD-01020

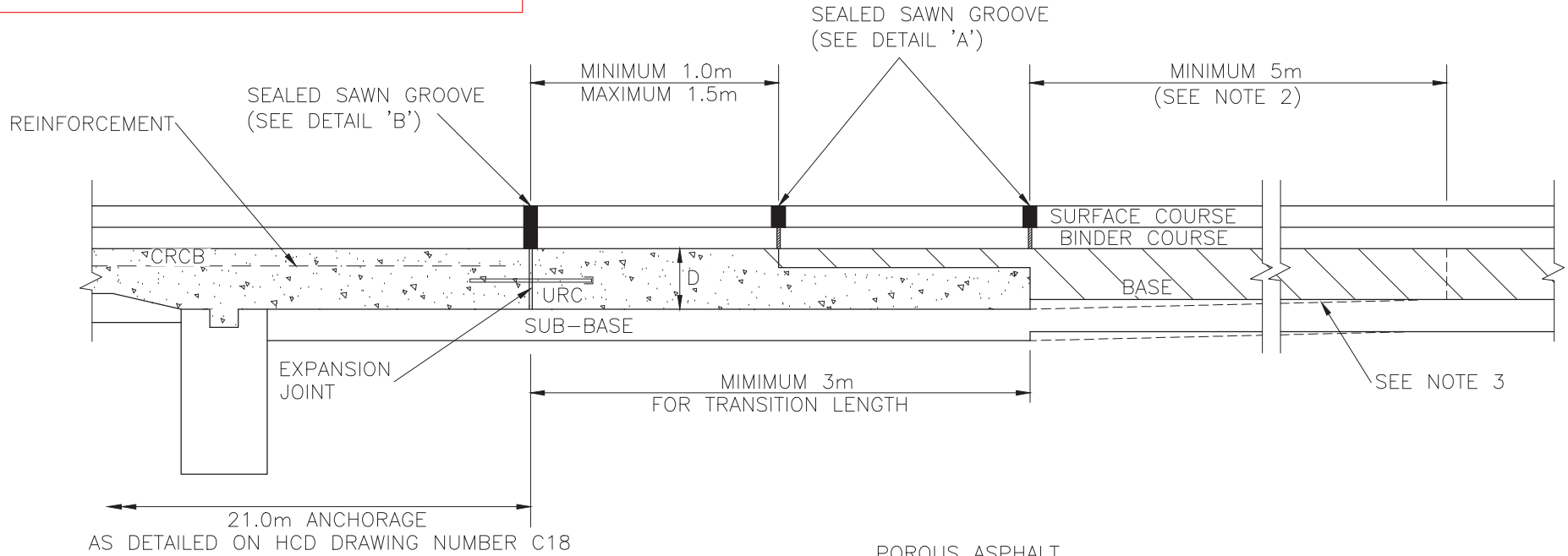


NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. AT UNDERBRIDGES WHERE THE LEVEL OF THE BRIDGE DECK IS APPROXIMATELY IN LINE WITH THE ROAD SURFACE, THE BASE ADJACENT TO THE STRUCTURE SHALL BE A MINIMUM OF 5m OF FLEXIBLE BASE. WHERE THE UNDERBRIDGES ARE BURIED UNDERBRIDGES SUCH AS BOX CULVERTS, THE CRCB CAN BE LAID CONTINUOUSLY OVER THE TOP.
3. THE DEPTH D OF TRANSITION LENGTH SHALL NOT BE LESS THAN 200. IF NECESSARY THE THICKNESS OF THE FLEXIBLE CONSTRUCTION BASE SHALL BE TAPERED TO MATCH, SO THAT THE SUB-BASE SURFACE LEVEL IS CONTINUOUS WITHOUT STEPS.

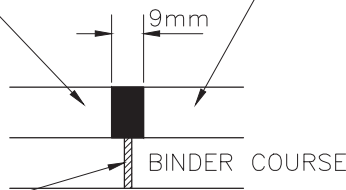
TII PUBLICATION NUMBER: CC-SCD-01021

	ROAD CONSTRUCTION DETAILS	CONCRETE CARRIAGEWAY			TRANSVERSE FROM RIGID CRCB TO FLEXIBLE CONSTRUCTION	Drawing No.
			P1	12/10		RCD/
			Issue	Date		1000/21



SAWN GROOVE FILLED WITH WELL RAMMED AND COMPACTED 0/6mm SIZE MEDIUM GRADED SURFACE COURSE TO BS 4987

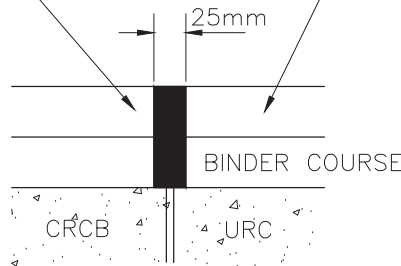
POROUS ASPHALT SURFACE COURSE



DETAIL 'A'
SEALED SAWN GROOVE

SAWN GROOVE FILLED WITH WELL RAMMED AND COMPACTED 6mm SIZE MEDIUM GRADED SURFACE COURSE TO BS 4987

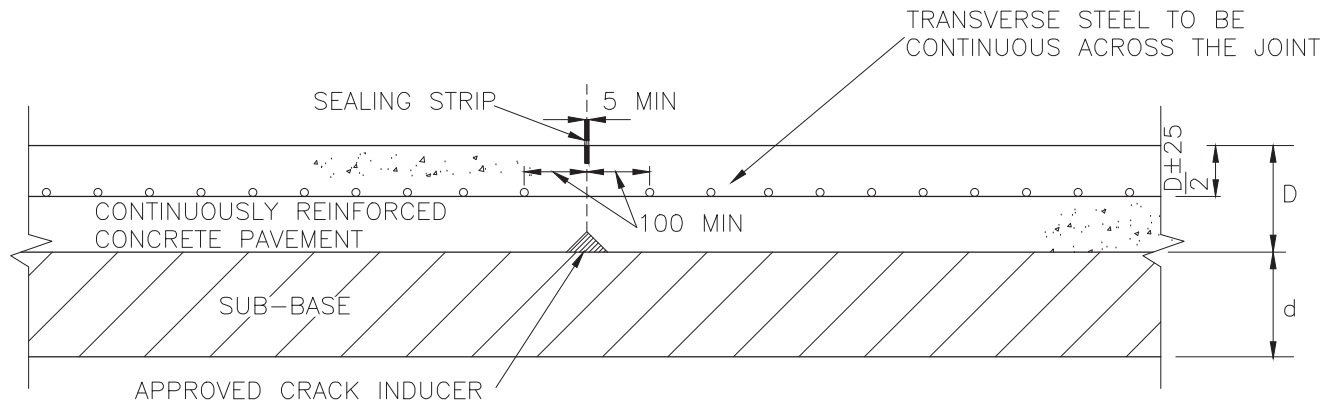
POROUS ASPHALT SURFACE COURSE



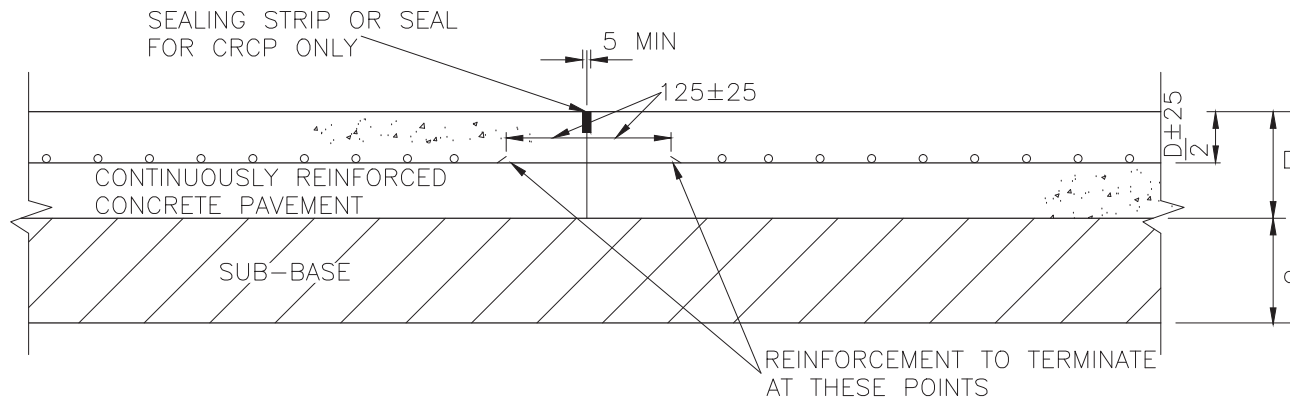
DETAIL 'B'
SEALED SAWN GROOVE OVER EXPANSION JOINT

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. AT UNDERBRIDGES WHERE THE LEVEL OF THE BRIDGE DECK IS APPROXIMATELY IN LINE WITH THE ROAD SURFACE, THE BASE ADJACENT TO THE STRUCTURE SHALL BE A MINIMUM OF 5m OF FLEXIBLE BASE. WHERE THE UNDERBRIDGES ARE BURIED UNDERBRIDGES SUCH AS BOX CULVERTS, THE CRCB CAN BE LAID CONTINUOUSLY OVER THE TOP.
3. THE DEPTH OF TRANSITION LENGTH SHALL NOT BE LESS THAN 200. IF NECESSARY THE THICKNESS OF THE END SECTION OF THE CRCB SHALL BE TAPERED TO MATCH, SO THAT THE SUB-BASE SURFACE LEVEL IS CONTINUOUS WITHOUT STEPS.



FORMED LONGITUDINAL JOINT FOR CRCP OR CRCB
(CONSTRUCTED IN MORE THAN ONE
LANE WIDTH IN ONE OPERATION)

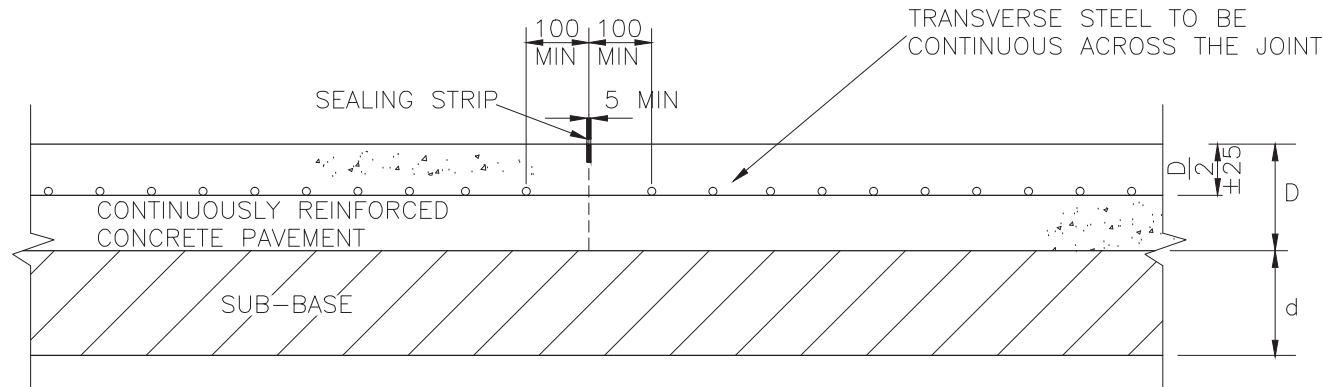


CRCP OR CRCB
BUTT TYPE CONSTRUCTION JOINT
(BETWEEN SEPARATELY CONSTRUCTED SLABS)

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. TIE BARS SHALL BE PLACED ABOUT THE JOINT ± 50 AT THE SAME SPACINGS AS AND ADJACENT TO THE TRANSVERSE REINFORCEMENT. PROTECTIVE COATING TO BE APPLIED TO THE CENTRE 150 (MIN) OF TIE BARS.
3. REINFORCEMENT SHALL CONFORM TO CLAUSE 1008.

TIE BARS		
DIA	LENGTH L	GRADE
12	750	B500B OR B500C
16	600	B500B OR B500C
20	500	B500B OR B500C

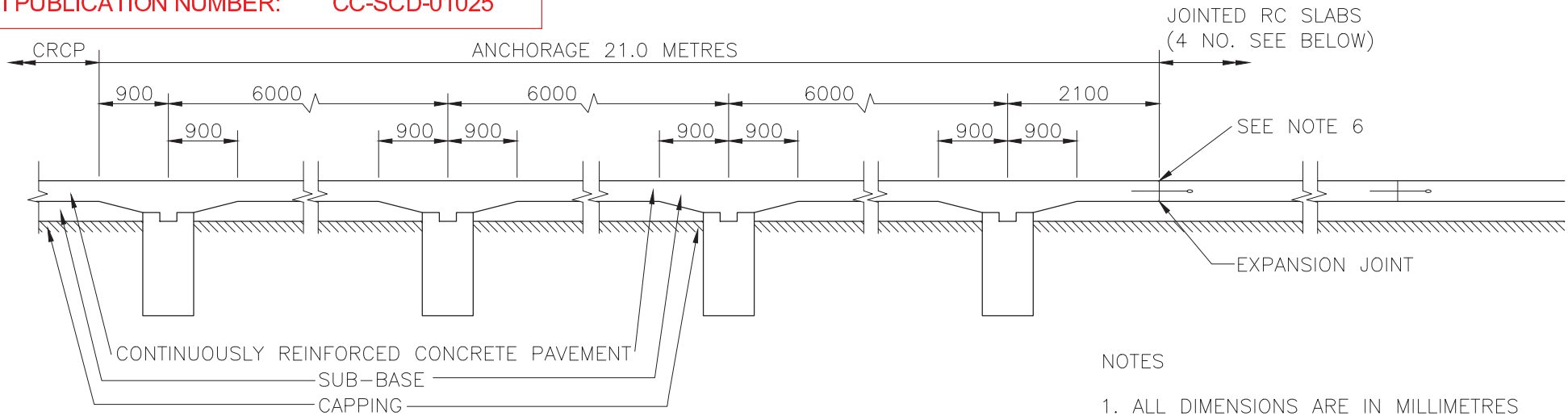


SAWN LONGITUDINAL JOINT FOR CRCP OR CRCB
(CONSTRUCTED IN MORE THAN ONE
LANE WIDTH IN ONE OPERATION)

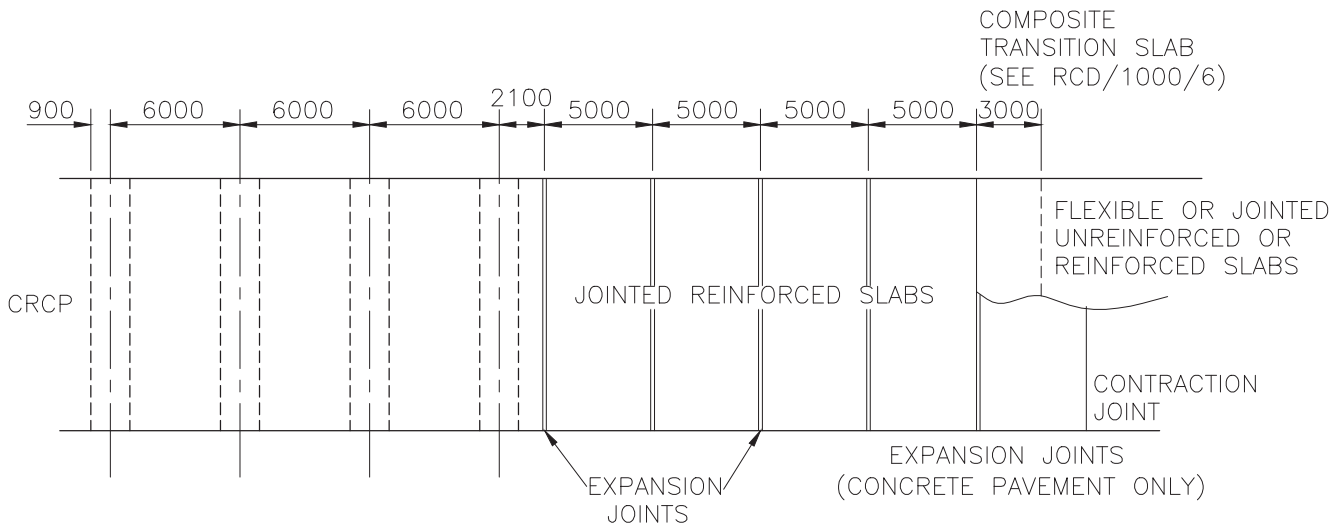
NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. TIE BARS SHALL BE PLACED ABOUT THE JOINT ± 50 AT THE SAME SPACINGS AS AND ADJACENT TO THE TRANSVERSE REINFORCEMENT. PROTECTIVE COATING TO BE APPLIED TO THE CENTRE 150 (MIN) OF TIE BARS.
3. REINFORCEMENT SHALL CONFORM TO CLAUSE 1008.

TIE BARS		
DIA	LENGTH L	GRADE
12	750	B500B OR B500C
16	600	B500B OR B500C
20	500	B500B OR B500C



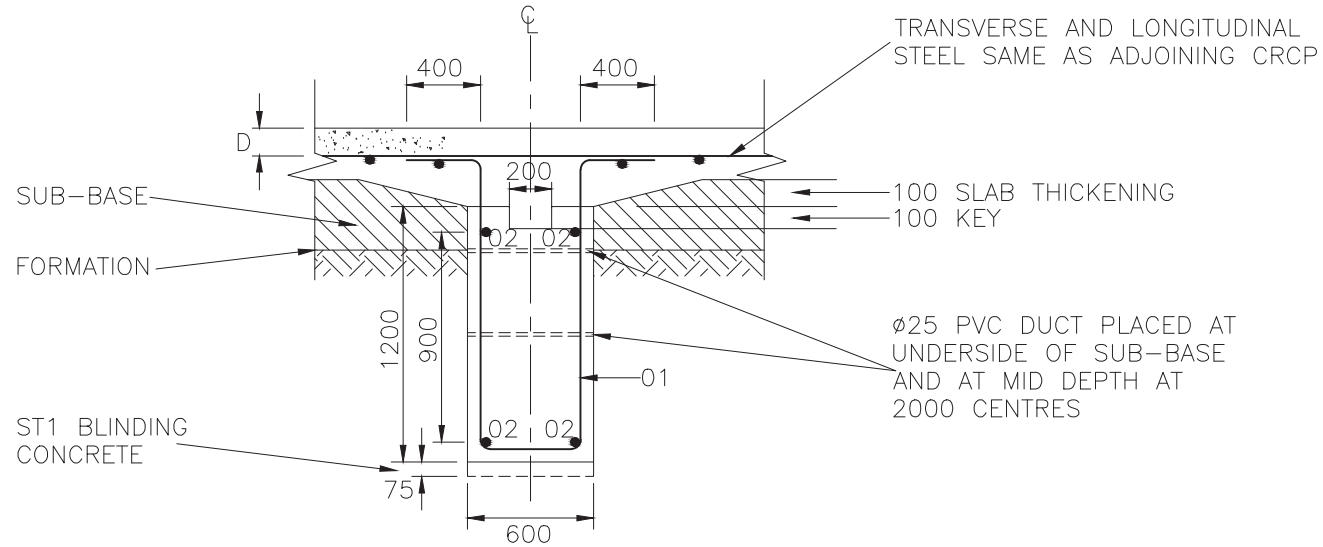
LONGITUDINAL SECTION OF ANCHORAGE
(GROUND BEAMS ARE TO BE CONSTRUCTED
ACROSS THE FULL WIDTH OF THE PAVEMENT)



PLAN OF ANCHORAGE AND ADJACENT SLABS

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. ANCHORAGES ARE REQUIRED AT
(a) EACH END OF A CRCP CARRIAGEWAY.
(b) CLOSE TO BOTH SIDES OF UNDERBRIDGES WHERE THE LEVEL OF THE BRIDGE DECK IS APPROXIMATELY IN LINE WITH THE ROAD SURFACE. ANCHORAGES ARE NOT REQUIRED ADJACENT TO BURIED UNDERBRIDGES SUCH AS BOX CULVERTS, WHERE THE CRCP CAN BE LAID OVER THE TOP.
3. WHERE ANCHORAGES ARE PROVIDED CLOSE TO UNDERBRIDGES, THE BASE ADJACENT TO THE STRUCTURE SHALL BE A MINIMUM OF 5m OF FLEXIBLE BASE.
4. FOR DETAILS OF GROUND BEAMS SEE RCD/1000/26.
5. WHERE A KERB IS REQUIRED ALONG THE ANCHORAGE THE ADDITIONAL WIDTH MAY BE UNREINFORCED IF TIED TO THE CRC SLAB.
6. WHEN CONCRETE PAVEMENT IS OVERLAID WITH 40mm TO 180mm THICK BITUMINOUS SURFACING, THE OVERLAY SHALL BE SAW-CUT AND SEALED AT THE CONCRETE PAVEMENT JOINT IN ACCORDANCE WITH RCD/100/2 AT EXPANSION JOINTS AND RCD/1000/3 AT CONTRACTION JOINTS.



GROUND BEAM
(4 NO. IN ANCHORAGE)

BAR SCHEDULE FOR REINFORCEMENT

MEMBER	BAR Mk	TYPE & SIZE	NO. OF Mbrs	NO. IN EACH	TOTAL NO.	LENGTH OF EACH #	SHAPE CODE	A*	B*	C*	D*	E*
BEAMS	01	H16	4	**	**	3900	44	400	1375	480	1375	-
BEAMS	02	H16	4	4	16	**	00	**	-	-	-	-

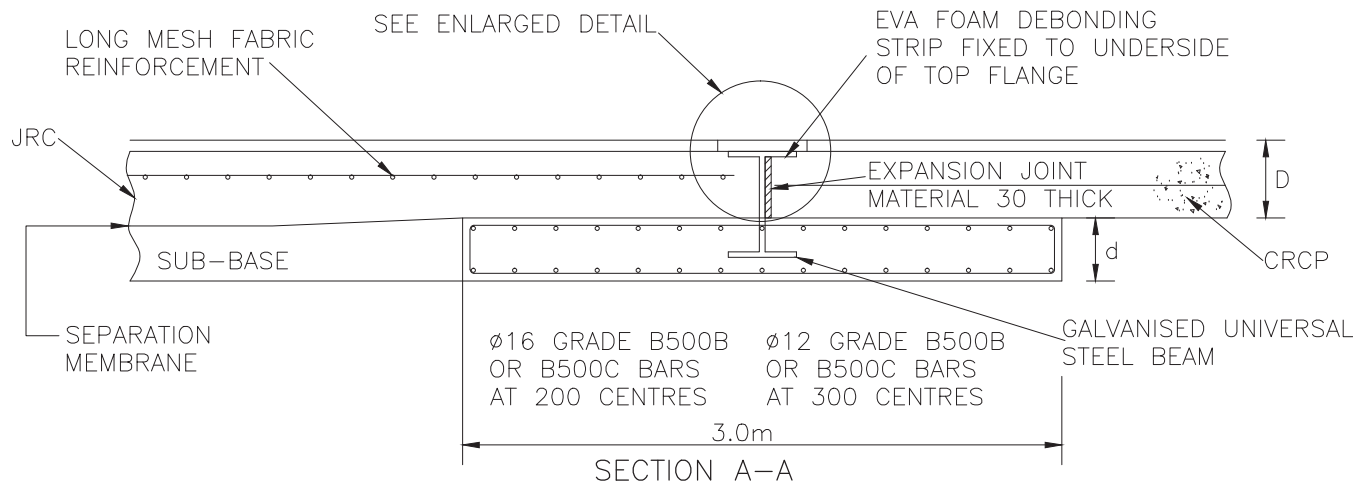
** VARIES WITH WIDTH OF ANCHORAGE

* SPECIFIED TO NEAREST 5mm

SPECIFIED TO NEAREST 25mm

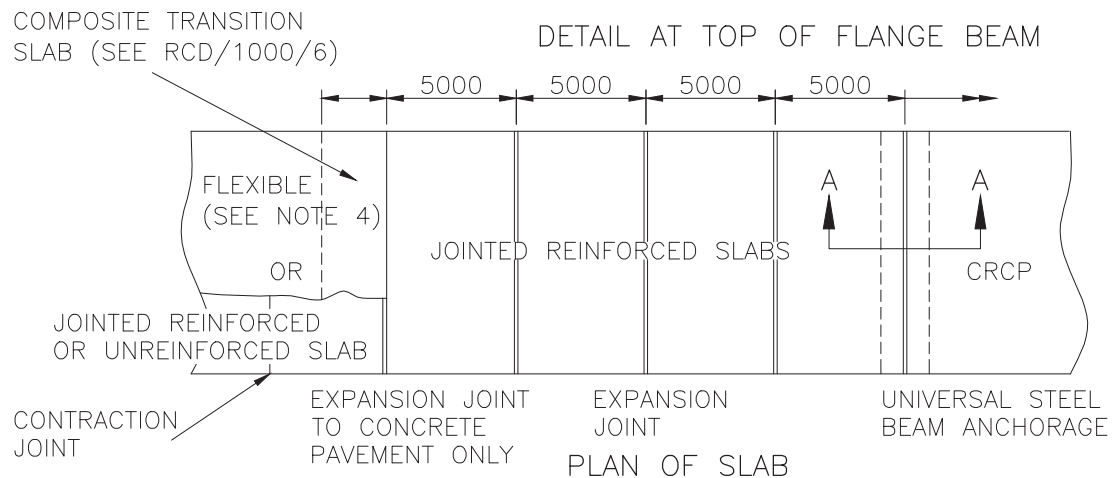
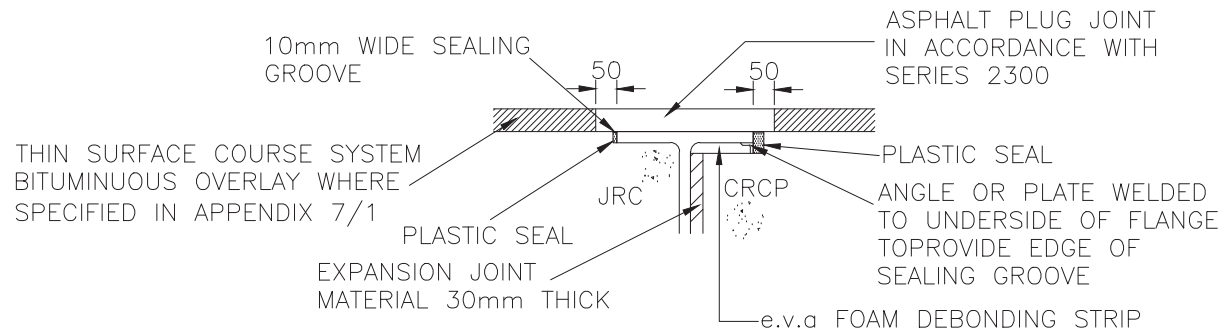
NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. CONCRETE IN GROUND BEAMS TO BE STRENGTH CLASS C25/30 CAST IN TRENCH BELOW FORMATION LEVEL OR SUB-BASE SURFACE.
3. REINFORCEMENT SHALL CONFORM TO CLAUSE 1008.
4. BEAM REINFORCEMENT COVER TO BE 60 ± 10 .



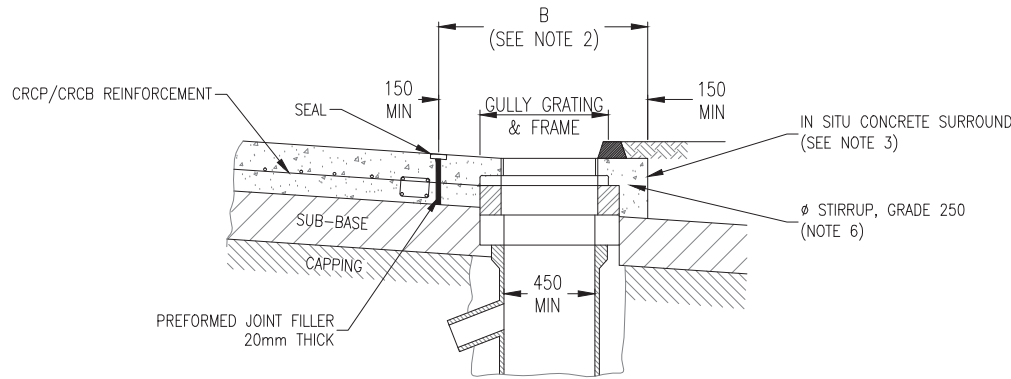
NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. THIS TYPE OF ANCHORAGE IS AN ALTERNATIVE TO THE GROUND BEAM ANCHORAGE (SEE RCD/1000/25 AND RCD/1000/26) FOR CRCP SURFACE SLABS ONLY.
3. MINIMUM COVER TO SLEEPER BEAM REINFORCEMENT TO BE 50.
4. ANCHORAGES ARE REQUIRED AT
 - (a) EACH END OF A CRCP CARRIAGEWAY.
 - (b) CLOSE TO BOTH SIDES OF UNDERBRIDGES WHERE THE LEVEL OF THE BRIDGE DECK IS APPROXIMATELY IN LINE WITH THE ROAD SURFACE. ANCHORAGES ARE NOT REQUIRED ADJACENT TO BURIED UNDERBRIDGES SUCH AS BOX CULVERTS, WHERE THE CRCP CAN BE LAID OVER THE TOP.
5. WHERE ANCHORAGES ARE PROVIDED CLOSE TO UNDERBRIDGES, THE BASE ADJACENT TO THE STRUCTURE SHALL BE A MINIMUM OF 5m OF FLEXIBLE BASE.
6. REINFORCEMENT SHALL CONFORM TO CLAUSE 1008

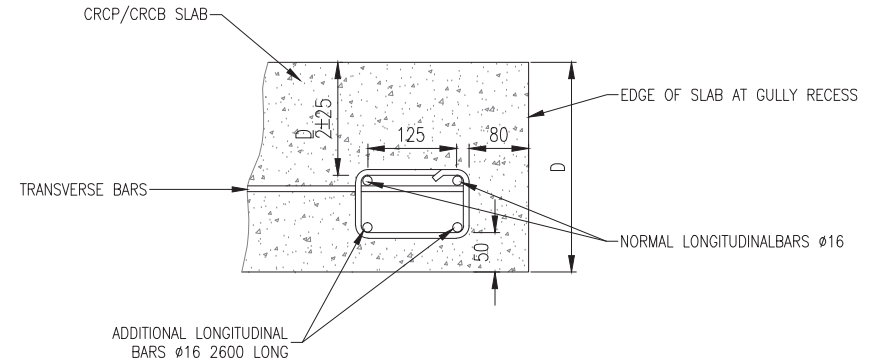


CRCP SLAB DEPTH D	MIN SLEEPER BEAM DEPTH d	BS4 UNIVERSAL BEAM SIZE
200	210	305
210	200	x 127
220	190	x 48
230	180	
240	220	356
250	210	x 171 x 67

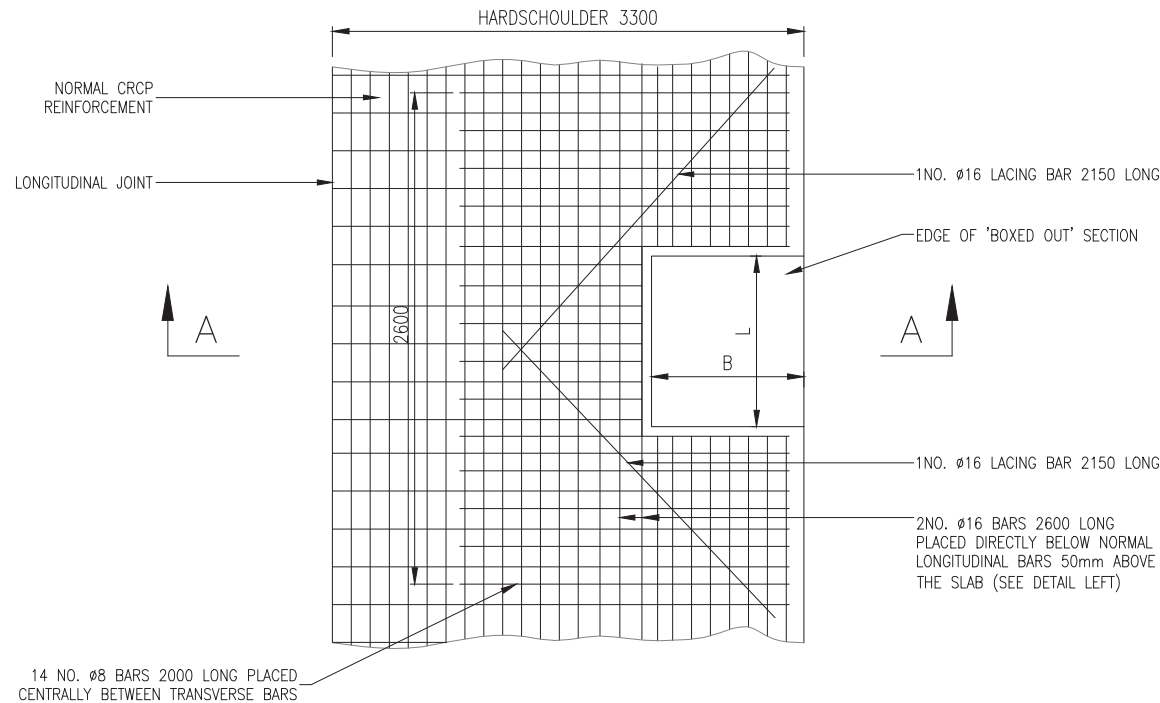
II PUBLICA ION NUMBER: CC-SCD-01027



SECTION A-A



LONGITUDINAL REINFORCEMENT ADJACENT TO OPENING



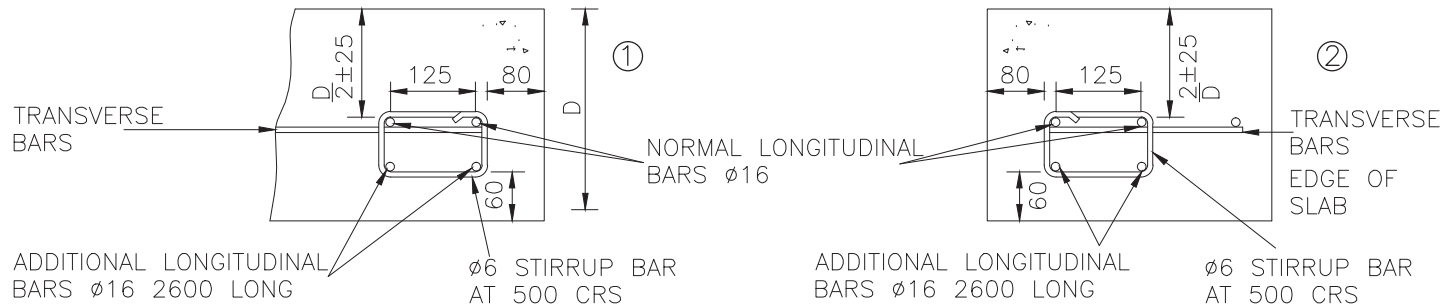
DETAILS OF GULLY RECESS & CRCP REINFORCEMENT

NOTES:

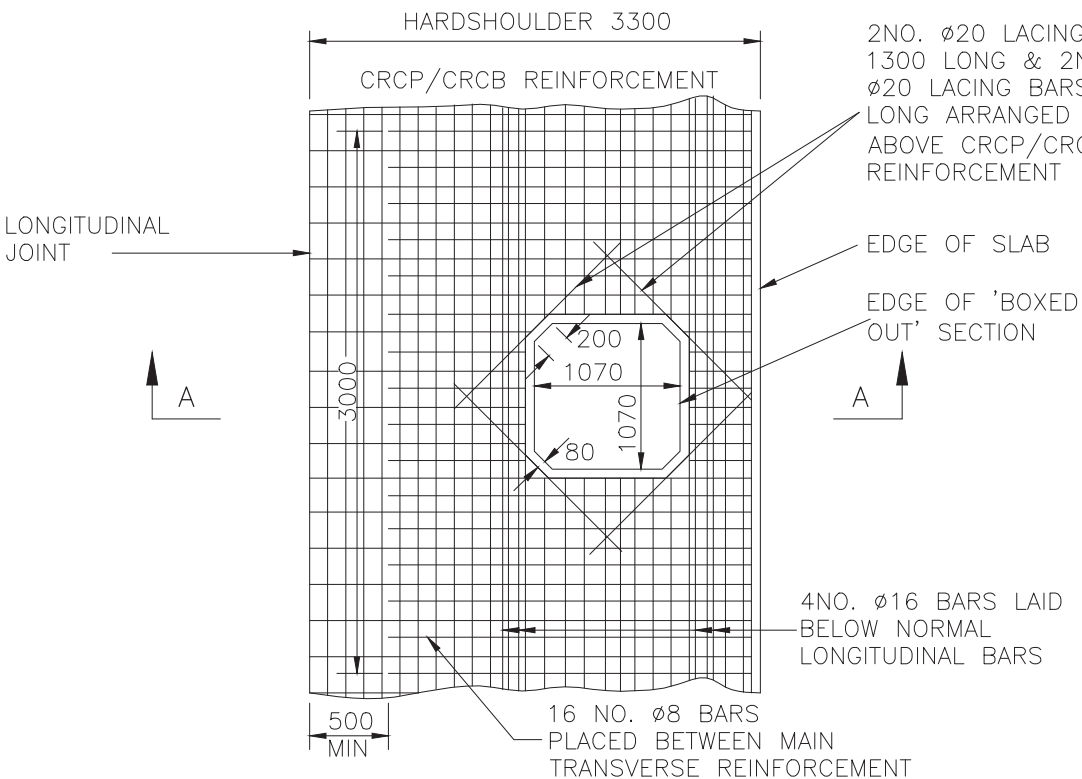
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. THE OVERALL DIMENSIONS OF THE OPENING MAY VARY IN ACCORDANCE WITH THE TYPE OF GULLY GRATING USED.
3. CONCRETE SURROUND TO BE STRENGTH CLASS C32/40.
4. NORMAL TRANSVERSE REINFORCEMENT NEAR OPENING TO BE STRENGTHENED BY ADDITIONAL ø8 BARS PLACED CENTRALLY BETWEEN THE TRANSVERSE BARS.
5. REINFORCEMENT SHALL CONFORM TO CLAUSE 1008.
6. THE ø12 STIRRUP SHALL BE CUT AND BENT TO SUCH DIMENSIONS AS ALLOW IT TO BE LOCATED CENTRALLY WITHIN THE SURROUND. 450 OVERLAP SHALL BE PROVIDED IN CLOSING THE STIRRUP.
7. FOR GULLY DETAILS SEE 500 SERIES DRAWINGS.

NOT TO SCALE

P2	03/15
P1	10/10
Issue	Date



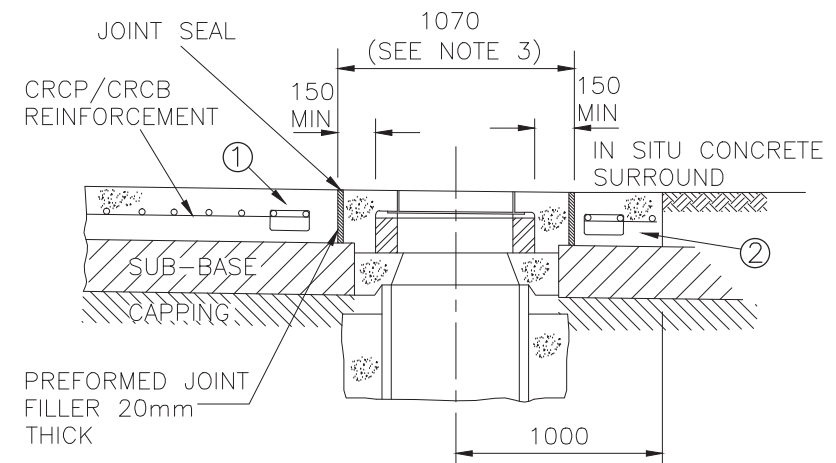
LONGITUDINAL REINFORCEMENT ADJACENT TO OPENING (DETAILS ① AND ②)



DETAILS OF MANHOLE RECESS & CRCP/CRCB REINFORCEMENT

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. THE DIMENSIONS OF THE SEALING GROOVE AND THE METHOD OF SEALING SHALL COMPLY WITH THE SPECIFICATION.
3. THE OVERALL DIMENSIONS IN THE OPENING MAY VARY IN ACCORDANCE WITH THE TYPE OF MANHOLE AND COVER USED.
4. CONCRETE TO BE PAVEMENT QUALITY CONCRETE STRENGTH CLASS C32/40.
5. NORMAL TRANSVERSE REINFORCEMENT NEAR OPENING TO BE STRENGTHENED BY ADDITIONAL $\phi 8$ BARS PLACED CENTRALLY BETWEEN THE TRANSVERSE BARS.
6. REINFORCEMENT SHALL CONFORM TO CLAUSE 1008.
7. FOR MANHOLE DETAILS SEE SERIES 500 RCD'S



SECTION A-A

TII PUBLICATION NUMBER: CC-SCD-01029



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